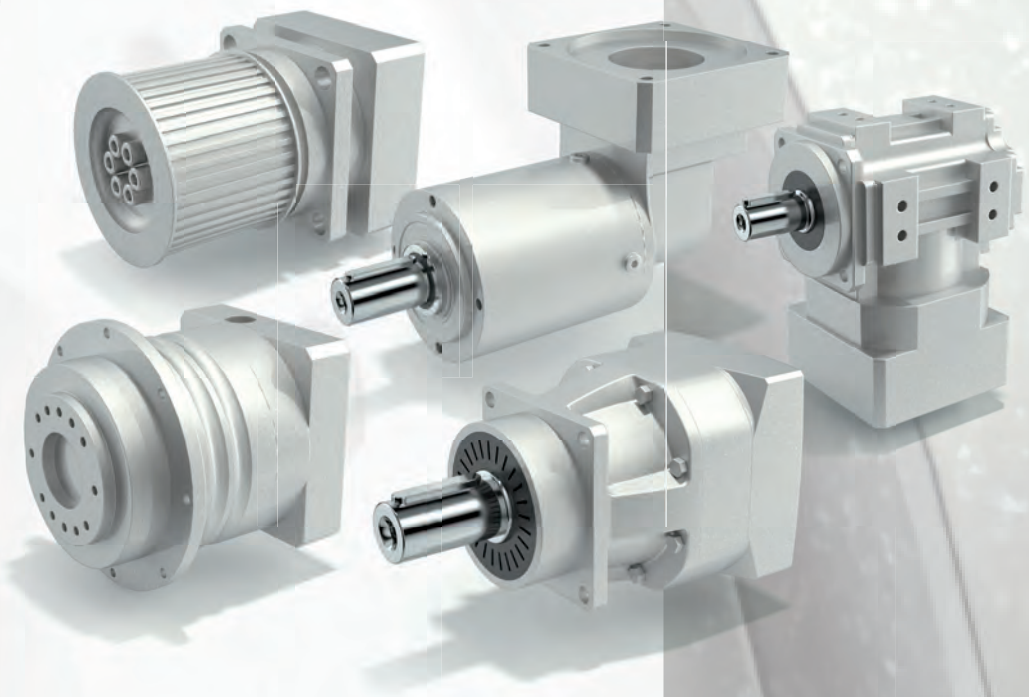
Bonfiglioli
Forever Forward



# Baureihe TQ-TQF-TQK TR-MP-LC-LCK-SL-KR

Spielarme Planetengetriebe

PRODUKTE & LÖSUNGEN



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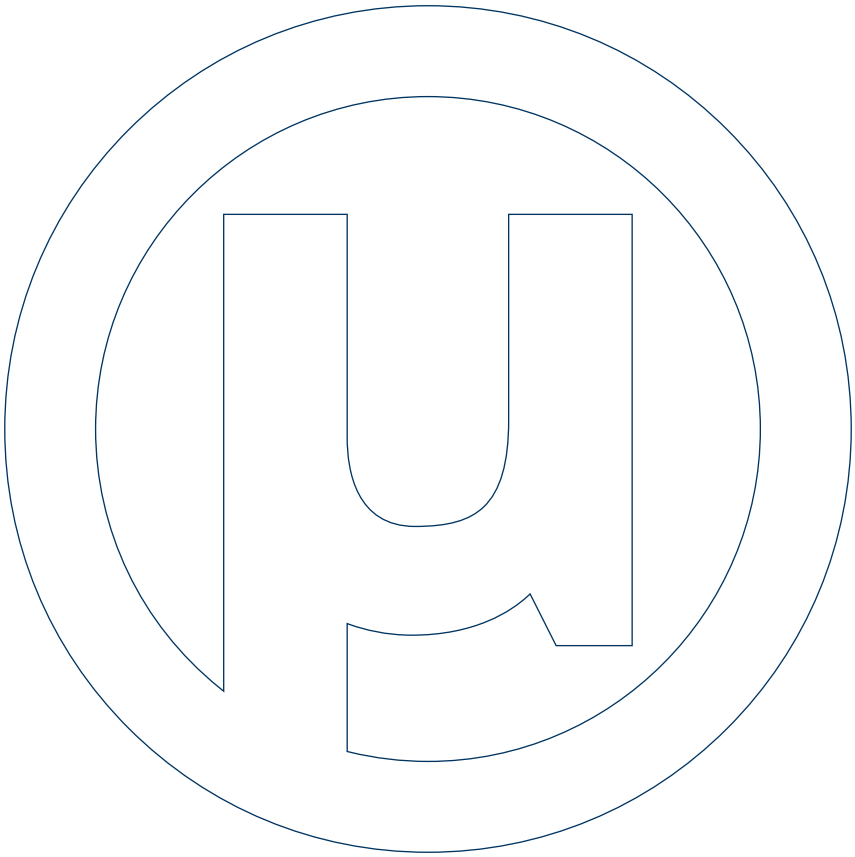
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## Änderungen

Das Revisionsverzeichnis des Katalogs wird auf Seite 224 wiedergegeben. Auf unserer Website www.bonfiglioli.com werden die Kataloge in ihrer letzten, überarbeiteten Version angeboten.



# WIR HALTEN DIE WELT IN BEWEGUNG

Bonfiglioli

Seit 1956 ist Bonfiglioli ein führender name in der Antriebstechnik mit dem Engagement als weltweit zuverlässiger Partner aufzutreten.

Unsere Best-in-Class-Lösungen beruhen auf fast 60 Jahren Fachkompetenz und profunden Branchenkenntnissen.



Hochinnovative und maßgeschneiderte Mechatroniklösungen von einem einzigen Anbieter für spezifische Anforderungen jeder Art.

| 1988 | 2002 | 2004 | 2008 | 2009 | 2010 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |  |  |
| **BGT**-REIHE | **MP/TR**-REIHE | **LC**-REIHE | **KR**-REIHE | **SL**-REIHE | **LCK**-REIHE | **TQ**-REIHE | **TQK**-REIHE | **TQF**-REIHE |

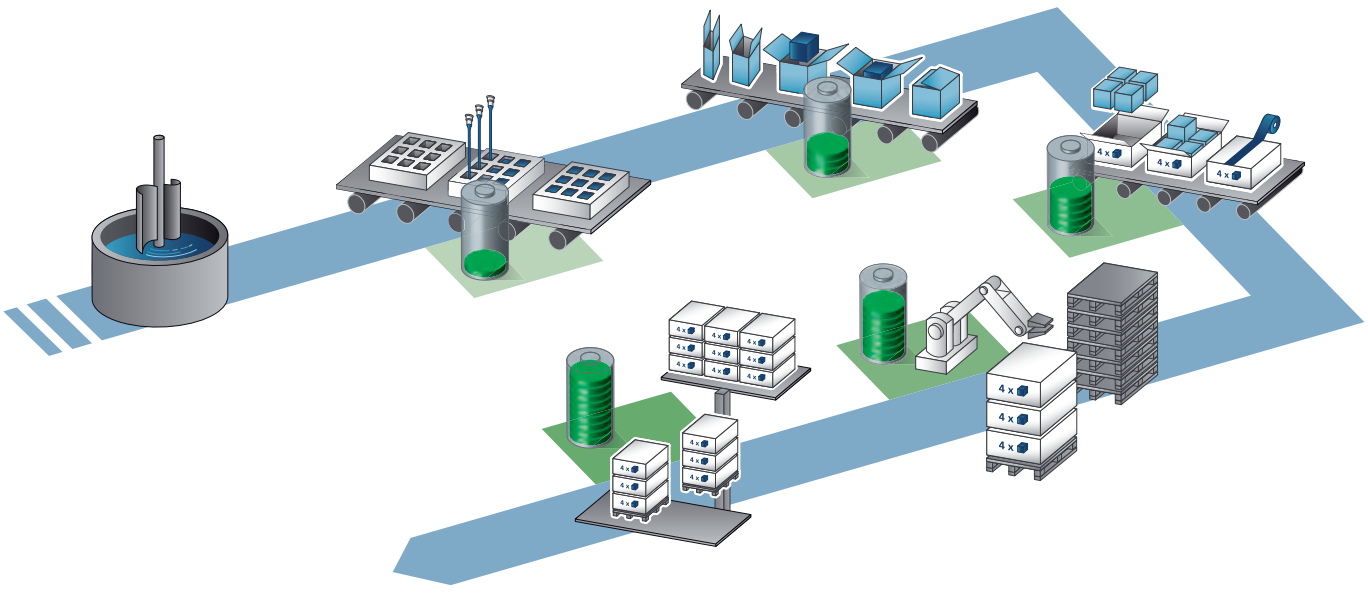
# MECHATRONIK
# DIE HERAUSFORDERUNG, IHREN ERFOLG SICHERZUSTELLEN

**Schneller, besser und günstiger – das sind die neuen Herausforderung für Maschinenentwickler!**

Steigende Anforderungen an die Produktivität, komplexere Systeme und flexiblere Maschinen, die mit höchstem Wirkungsgrad betrieben werden, erfordern neue und intelligente technische Lösungen, um zukünftiges Wachstum zu gewährleisten.
Bonfiglioli hat eine präzise und detaillierte Strategie umgesetzt, um genau dieses Ziel zu erreichen.
Mit dem Engagement, Ihr weltweit führender Partner für intelligente Mechatroniklösungen und Servosysteme zu sein, hat der Geschäftsbereich Industrial Business zwei Abteilungen eingerichtet, um die jeweiligen Märkte mit Fachkompetenz und Sorgfalt zu betreuen:
- Power Transmission Solutions (PTS)
- Mechatronic Drives & Solutions (MDS)

Zielsetzung unserer neuen Abteilung Mechatronic Drives & Solutions (MDS): Rentabilitätssteigerung, indem sie im Bereich der industriellen Automation als verlässlicher Partner und Anbieter energieeffizienter Lösungen für den gesamten Lebenszyklus auftritt.

- Systemintegration
- Fachkompetenz
- Energieeinsparung



Leistung, Zuverlässigkeit, Kostengünstigkeit, Robustheit, Effizienz und Nachhaltigkeit sind unverzichtbar.

**SCHULUNG** | **MECHANIK- UND MECHATRONIK-**STUDIEN | **PRODUKTANPASSUNG** | **PROTOTYPISIERUNG,** TEST- UND ANALYSEBERICHTE

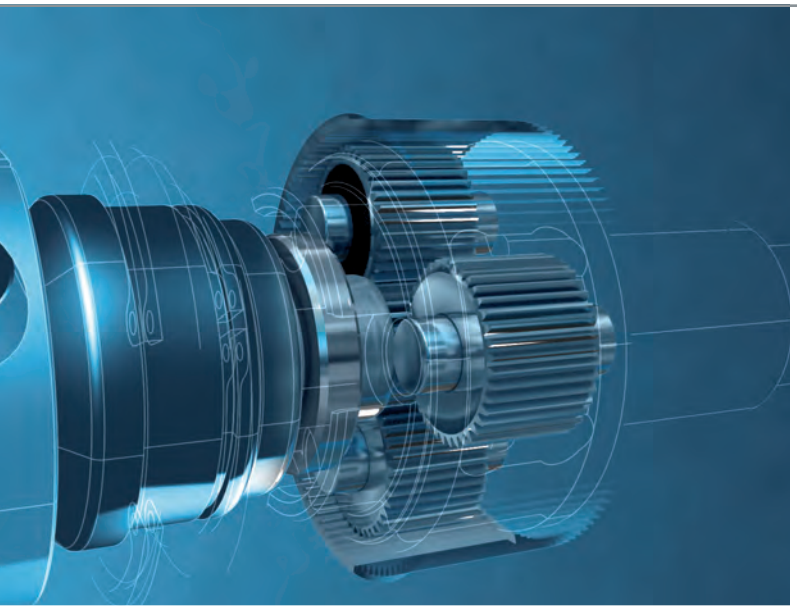
# UNSERE KOMPETENZ VON ANFANG BIS ENDE!

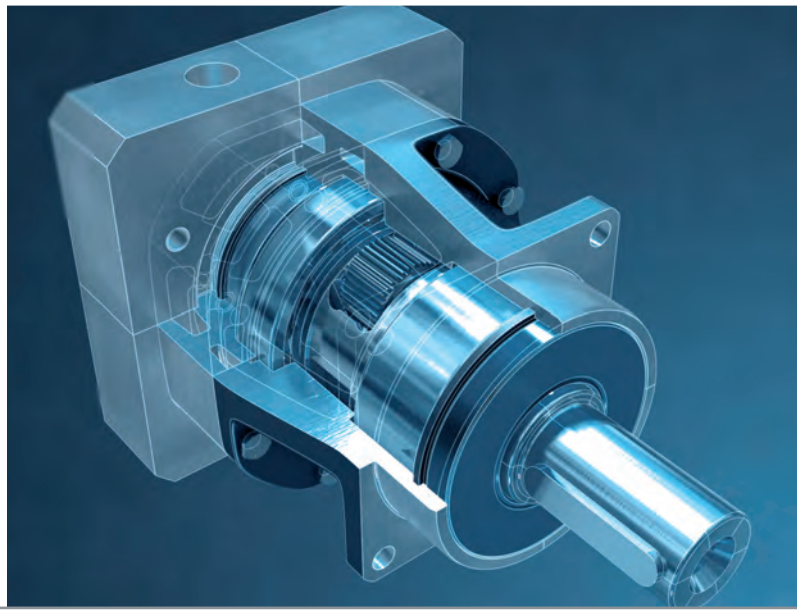
MDS-Innovationen werden durch zwei Kompetenzzentren vorangebracht:

- Bonfiglioli Vectron GmbH in Deutschland, mit ausgeprägten Kompetenzen in Technik, Forschung und Entwicklung sowie Fertigung von elektronischen Komponenten, insbesondere Umrichtern und Servoantrieben
- BMR (Bonfiglioli Mechatronic Research) in Rovereto (Trento, Italien), mit umfassenden Forschungs- und Entwicklungsmöglichkeiten, um innovative neue Lösungen für Ihre speziellen Bedürfnisse bereitzustellen. BMR ist eine Produktionsanlage, in der neue Mechatroniklösungen realisiert werden.

Der Schlüssel zu unserem Erfolg ist der herrausragende technische Support durch unsere DSC (Drive Service Center)-Spezialisten. Diese begleiten Sie während der gesamten Installationsphase – vom ersten Konzept bis zur abschließenden Inbetriebnahme.

**Bonfiglioli**
ist mit seinen weltweiten Niederlassungen und effizientem Kundendienst immer für Sie da.





VOR-ORT-SERVICE | TECHNISCHE BETREUUNG | INBETRIEBNAHME | INSTANDHALTUNG | KUNDENDIENST

# IHR ONE-STOP-SHOP FÜR MECHATRONIK ANWENDUNGEN

Als kompetenter Technologiepartner sorgen wir dafür, dass unsere Ingenieure **gemeinsam mit Ihnen maßgeschneiderte, zukunftsgerichtete und integrierte Lösungen realisieren, die Ihren individuellen Anforderungen entsprechen und energieeffiziente Mechatroniksysteme für Ihre Anwendung bereitstellen.**
Das Bonfiglioli Servo-Portfolio umfasst alle Komponenten, die für eine komplette Automatisierungslösung erforderlich sind:

- HMI – Bonfiglioli Mensch-Maschine-Schnittstelle
- Programmierbare Steuerung (ACU / ACT / AGL)
- Höchstdynamische geregelte Servomotoren (BMD-Reihe)
- Präzisions-Planetengetriebe (TQ, TQF, TQK, TR, MP, LC, LCK, SL)
- Präzisionskegelradgetriebe (KR)
- Konfektioniertes Zubehör (Kabel, Drosseln, Filter etc.)



**Ihre Vorteile:**

- Ihre Vorteile:
- Höchste Präzision & Dynamik
- Leistungsstark & Kompakt
- Höchste radiale und axiale Tragfähigkeiten
- Höchste Kippmomente
- Laufruhig



**Ihre Vorteile:**

- Hohe Präzision und Dynamik
- Häufige Drehrichtungswechsel
- Höchste Leistungsdichte



**Ihre Vorteile:**

- Energieeinsparung
- Einfache Systemlösung
- Hoher Drehmomentbereich
- Präzise Vierquadrant-Drehzahl- und Geschwindigkeitssteuerung
- Höchste Leistungsdichte

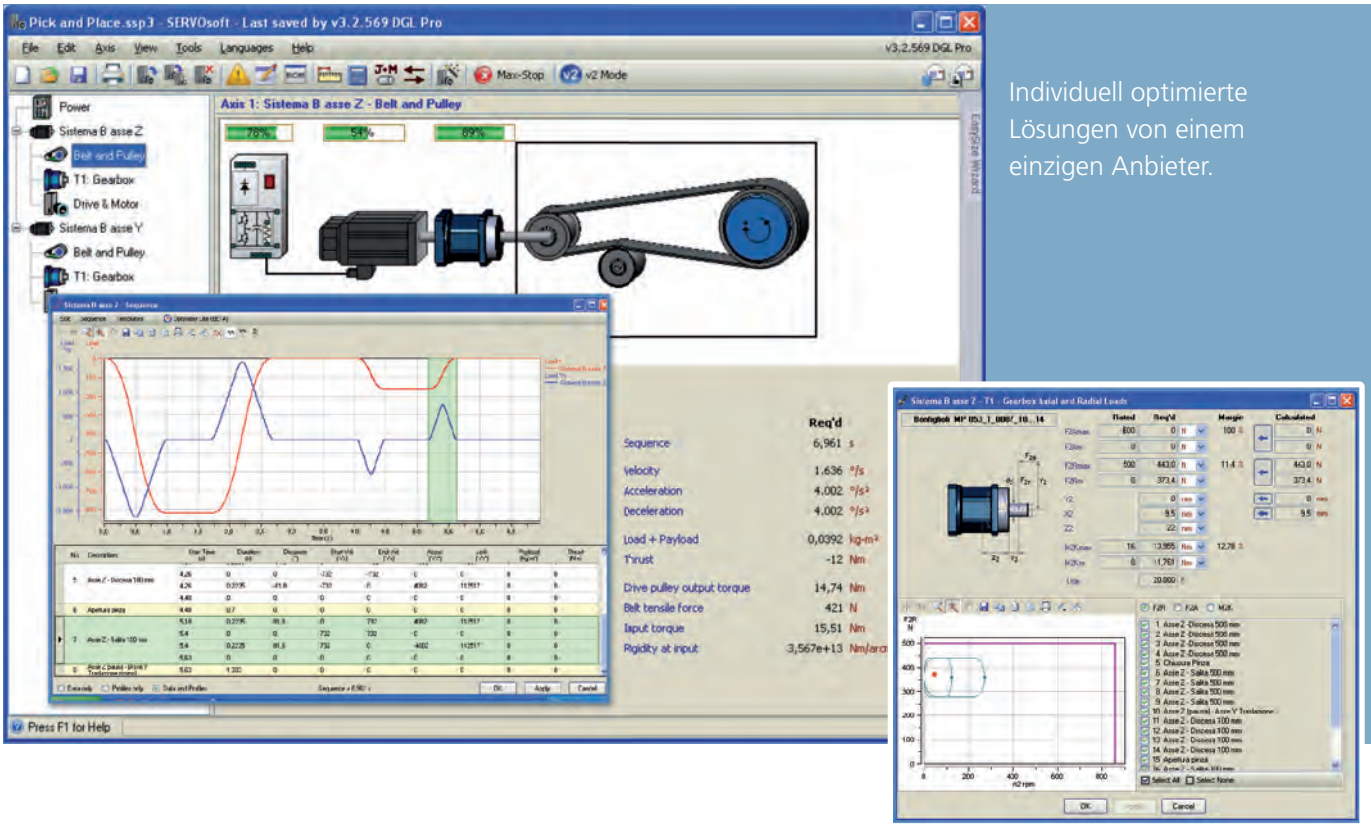
**Komplettes Automatisierungs-Paket von nur einem Anbieter!**

# LEISTUNGSFÄHIGERE, EFFIZIENTERE UND KOSTENGÜNSTIGERE KONZEPTE

Bonfiglioli ist Ihr Partner und unterstützt Sie bei der Dimensionierung, Optimierung und Auswahl des Antriebsstrangs.

Unser Schwerpunkt liegt nicht nur auf der Entwicklung und Fertigung von Produkten für Ihre Anforderungen, wir verfügen auch über Software-Tools, die Ihren Entwicklungsprozess vereinfachen.

Wir können Ihr Servo-Paket optimieren, um eine Überdimensionierung zu vermeiden, durch die sich sowohl die Anschaffungskosten als auch die laufenden Betriebskosten für ein Servosystem erhöhen würden.

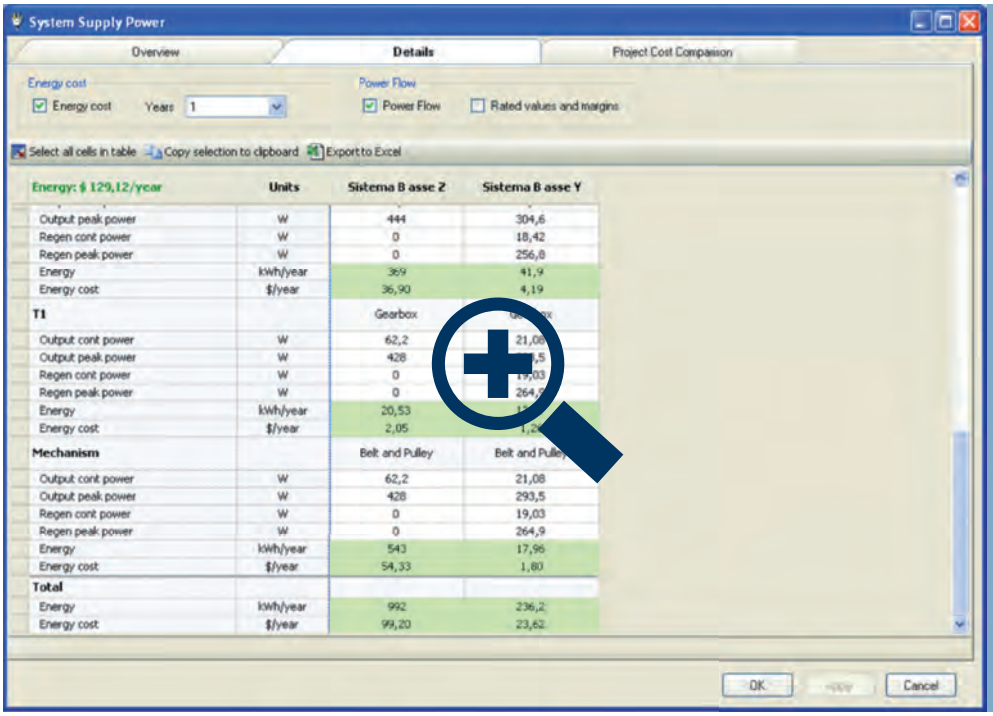



Individuell optimierte Lösungen von einem einzigen Anbieter.

# OPTIMIERUNG DES SERVO-SYSTEMS MITTELS ENERGIEKOSTENMODELL

Die meisten modernen Servosysteme sind dafür ausgelegt, elektrisch gekoppelt zu werden, um Energie zu sparen, unnötige oder überdimensionierte Komponenten weitgehend zu minimieren und sowohl die anfänglichen Hardwarekosten als auch die Betriebskosten durch eine verbesserte Energieeffizienz zu senken.

Mit den stetig steigenden Energiepreisen ist die Energieeffizienz zu einem vorrangigen Entwicklungsziel geworden. Energiekosten können bis zu **95% der Lebenskosten eines Servosystems ausmachen.**
**Bonfiglioli optimiert die Effizienz des gesamten Antriebsstrangs durch eine detaillierte Analyse, mit der das Energieeinsparpotenzial ermittelt und bewertet wird.**




Wie ist die Energieverteilung entlang der kinematischen Kette?

Wie groß ist das Optimierungspotenzial der Anwendung hinsichtlich Energieeinsparung?



# EIN ZUVERLÄSSIGER PARTNER FÜR IHR GESCHÄFT

Bonfiglioli verfügt über jahrzehntelange Erfahrungen mit Kunden aus den verschiedensten Industriesektoren.

Unsere Fachkompetenz besteht darin, dass wir Ihre Anwendungen kennen: Produkte und Anforderungen müssen aufeinander abgestimmt sein und eine Lösung darstellen, die Ihren Bedürfnissen gerecht wird. Mit unseren individuellen Lösungen erhalten Sie stets ein vollständiges Paket.



**Einige unserer Anwendungsbereiche:**

- Gewerbliche HLK-Systeme
- Werkzeugmaschinen
- Verpackung und Etikettierung
- Lebensmittel-, Getränke- und Tabakindustrie
- Textilien
- Glasbearbeitung
- Robotik
- Materialwirtschaft
- Gummi und Kunststoffe
- Papier und Kartonagen
- Förderanlagen
- Elektronik und Elektronikbauteile
- Krane und Hebebühnen
- Holzbearbeitung
- Energieerzeugung
- Erneuerbare Energie
- Materialumwandlung
- Bergbau
- Aufzüge

**Und viele weitere**

# ONE-STOP SHOP UNSER SERVICE

Alle Bonfiglioli-Systeme sind weltweit mit einer zeitnahen und zuverlässigen technischen Unterstützung verbunden.

Spezialisten mit profunden Fachkenntnissen des jeweiligen Markts stehen mit Serviceleistungen wie Beratung, Installation, Kundendienst und Benutzerdokumentation zur Verfügung.

Wir verfügen über ein umfassendes Angebot an Dienstleistungen, die auf die individuellen Wünsche und Bedürfnisse unserer Kunden zugeschnitten sind.

- Optimale Lieferfristen für Ihre Produkte und schnelle Lieferungen bei ungeplanten und dringenden Anfragen
- Ermittlung individueller Lösungen durch umgehende professionelle technische Unterstützung
- Kurze Reaktionszeit und rasche Lieferung von Ersatzeinheiten in zeitkritischen Situationen

VOR DER INBETRIEBNAHME | NACH DER INBETRIEBNAHME



Mechanik- und Mechatro-nik-Studien



Produktanpas-sung



Prototypisierung, Test- und Analy-seberichte



Unterstützung bei der Inbe-triebnahme



Instandhaltung

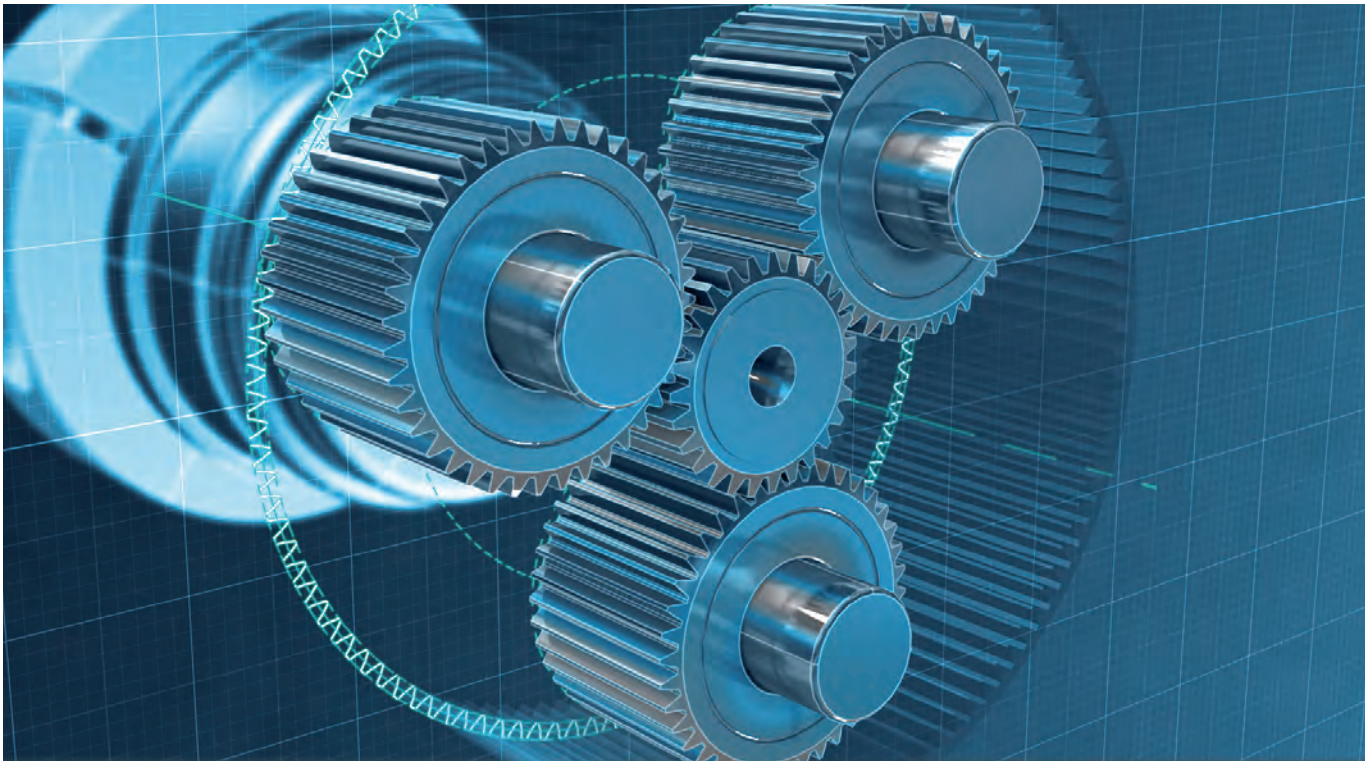


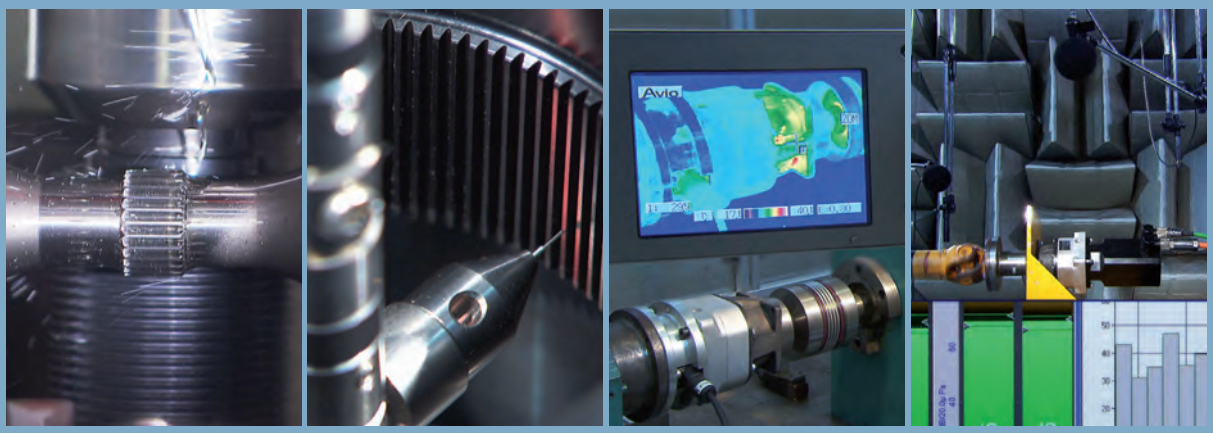
Kundendienst

SCHULUNG

# QUALITÄT UND TECHNOLOGIE

Produktzuverlässigkeit wird durch einen auf maximale Qualität ausgelegten Produktionsprozess erreicht.
Moderne Maschinen waren stets zentraler Bestandteil von Bonfiglioli's Produktionssystem.






Bonfiglioli räumt der Qualität und Effizienz seines Maschinenparks schon immer absoluten Vorrang ein und investiert entsprechend.

# UNSERE PRODUKTE AUF EINEN BLICK

HOHE LEISTUNGSDICHTE

| | PRODUKT | KOAXIAL | RECHTWINKLIG | PRODUKTMERKMALE | KONFIGURATIONEN |
|---|---|---|---|---|---|
| HOCHLEISTUNG | TQ  | Ja | | • Höchste Präzision und Dynamik<br>• Hohe Eingangsdrehzahl<br>• Höchste axiale und radiale Belastbarkeit<br>• Laufruhig<br>• Modulares Design für Ihre Anforderungen | • Vollwelle |
| | NEUE TQF  | Ja | | • Höchste Präzision & Dynamik<br>• Leistungsstark & Kompakt<br>• Höchste radiale und axiale Tragfähigkeiten<br>• Höchste Kippmomente<br>• Laufruhig | • Flanschwelle |
| | TQK  | | Ja | • Höchste Präzision und Dynamik<br>• Hohe Eingangsdrehzahl<br>• Höchste axiale und radiale Belastbarkeit<br>• Laufruhig<br>• Modulares Design für Ihre Anforderungen | • Vollwelle |
| PRÄZISION | TR  | Ja | Ja | • Hohe Leistungsfähigkeit<br>• Hohe Präzision<br>• Modulares Design für Ihre Anforderungen | • Vollwelle<br>• Hohlwelle<br>• Antriebsseitige Vollwelle |
| | MP  | Ja | Ja | • Hohe Leistungsfähigkeit<br>• Mittlere Präzision<br>• Modulares Design für Ihre Anforderungen | • Vollwelle<br>• Hohlwelle<br>• Antriebsseitige Vollwelle |
| FLEXIBILITÄT | LC  | Ja | | • Flexibel<br>• Mittlere Präzision<br>• Neue Option mit mehr Drehmoment verfügbar | • Vollwelle<br>• Antriebsseitige Vollwelle |
| | LCK  | | Ja | • Flexibel<br>• Mittlere Präzision<br>• Neue Option mit mehr Drehmoment verfügbar | • Vollwelle<br>• Antriebsseitige Vollwelle |
| | SL  | Ja | | • Dynamische Riemenanwendung<br>• Kompaktheit<br>• Mittlere Präzision<br>• Neue Option mit mehr Drehmoment verfügbar | • Vollwelle |
| | KR  | | Ja | Präzision, Dynamik und Kompaktheit zu einem unschlagbaren Preis | • Vollwelle<br>• Flansch<br>• Schrumpfscheibe |

| MAX. NENNDREHMOMENT<br>MAX. BESCHL.- MOMENT | ÜBERSETZUNG I | DREHM.-DICHTE | TORSIONSSTEIFIGKEIT | VERDREHSPIEL | KONFIGURATIONEN |
|---|---|---|---|---|---|
| [Nm] | [-] | | | [arcmin] | |
| 800<br>1200 | 3-100 | ●●●●● | ●●●● | STANDARD ≤ 4-6<br>REDUZIERT ≤ 2-4 | ●●●●● |
| 800<br>1200 | 4-100 | ●●●●● | ●●●●● | STANDARD ≤ 5-7<br>REDUZIERT ≤ 3-5 | ●●●●● |
| 800<br>1200 | 6-200 | ●●●●● | ●●●● | STANDARD ≤ 5-7<br>REDUZIERT ≤ 4-6 | ●●●●● |
| 1000<br>1200 | 3-1000 | ●●● | ●●● | STANDARD ≤ 5-7<br>REDUZIERT ≤ 3-5 | ●●● |
| 1000<br>1200 | 3-1000 | ●●● | ●●● | STANDARD ≤ 15-17<br>REDUZIERT ≤ 10-12 | ●●● |
| 450<br>700 | 3-100 | ●●● | ●●● | STANDARD ≤ 12-15<br>REDUZIERT ≤ 6-8 | ●●● |
| 450<br>700 | 6-100 | ●●● | ●●● | STANDARD ≤ 6-8 | ●●● |
| 155<br>300 | 3-100 | ●●● | ●●● | STANDARD ≤ 12<br>REDUZIERT ≤ 6 | ●●● |
| 120<br>170 | 1-5 | ● | ● | STANDARD ≤ 8 | ● |

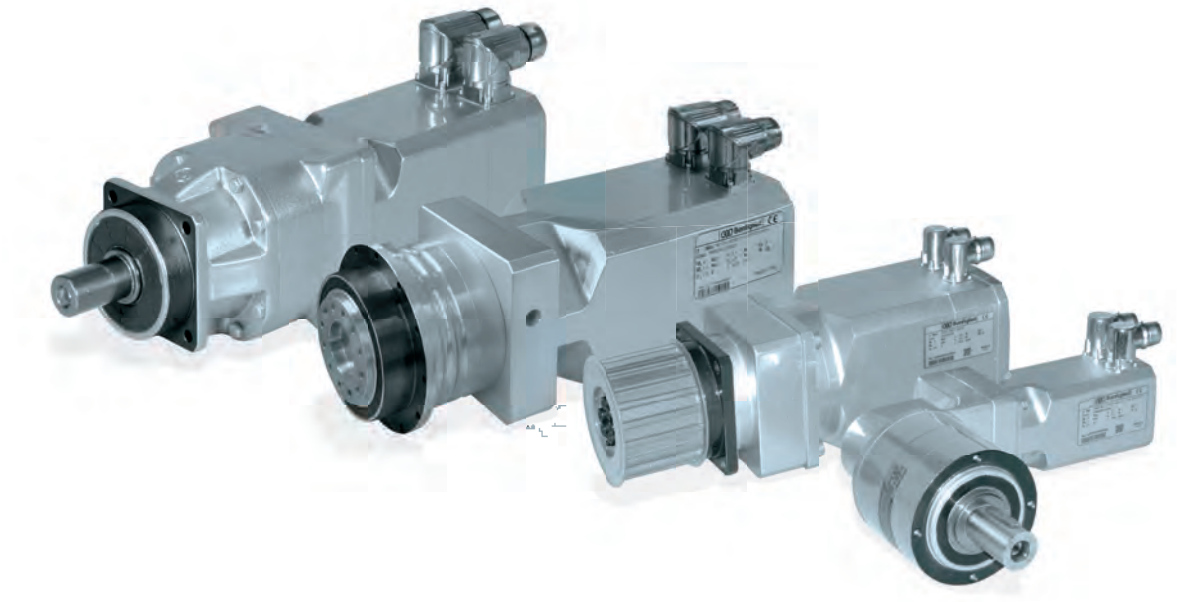
# SERVOGETRIEBE

Positionierungssanwendungen machen den Einsatz von spielarmen Planetengetrieben erforderlich, um Drehzahlen und Drehmomente anzupassen und gleichzeitig die anwendungsspezifische Präzision zu gewährleisten.

Bonfiglioli hat sich für den Einsatz von Präzisions-Planetengetrieben zusammen mit der Permanenteregnte-Synchronmotoren-Reihe BMD entschieden.

In Verbindung mit einer leistungsfähigen Antriebselektronik sind diese Getriebe für Servoanwendungen ausgelegt, die höchste Leistung hinsichtlich Dynamik, Präzision, Robustheit, Haltbarkeit und Lebensdauer erfordern .

Eine wichtige Voraussetzung für Automatisierungsanwendungen ist eine hohe Drehmomentkapazität als ein kompaktes und leichtes Paket. Diese hohe Drehmomentdichte (ein hohes Drehmoment/Volumen- oder Drehmoment/Gewicht-Verhältnis) ist wichtig, um bei Automatisierungsanwendungen mit hoher dynamischer Belastung zusätzliche Systemträgheit zu vermeiden.



# TECHNISCHE INFORMATIONEN





# 1 ALLGEMEINE INFORMATIONEN

## 1.1 SYMBOLE, EINHEITEN UND DEFINITIONEN

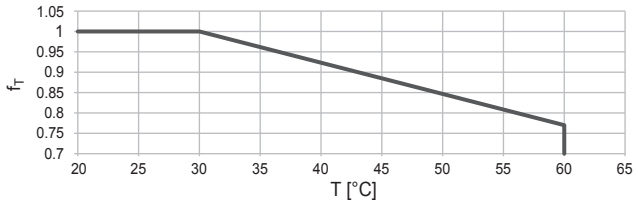
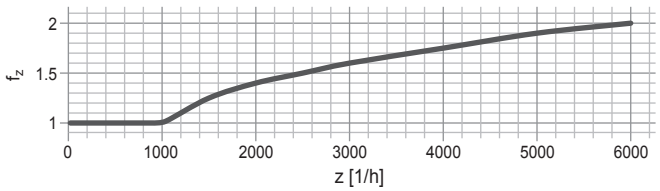
**Anwendungsspezifische Werte**

| bezeichnung | einheit | definition |
|---|---|---|
| $A_2$ | [N] | Axialkraft an der Abtriebswelle |
| $A_{2\ EQU}$ | [N] | Äquivalente Axialkraft an der Abtriebswelle |
| $A_{2\ MAX}$ | [N] | Maximale Axialkraft an der Abtriebswelle |
| $R_2$ | [N] | Radialkraft an der Abtriebswelle |
| $R_{2\ EQU}$ | [N] | Äquivalente Radialkraft an der Abtriebswelle |
| $R_{2\ MAX}$ | [N] | Maximale Radialkraft an der Abtriebswelle |
| **ED** | [s] | Belastungsdauer (ohne Bremse) |
| **ED%** | [%] | Einschaltdauer |
| $L_{10h\ TARGET}$ | [h] | Nominelle Ziellebensdauer der Abtriebswellenlager |
| $M_{1\ PEAK}$ | [Nm] | Maximales Eingangsdrehmoment (begrenzt durch Motorsteuerung) |
| $M_{2(1)}$ ... $M_{2(n)}$ | [Nm] | Ausgangsdrehmoment im Zeitfenster $t_1$ ... $t_n$ |
| $M_{2\ EQU}$ | [Nm] | Äquivalentes Abtriebsdrehmoment |
| $M_{2\ MAX}$ | [Nm] | Not-Aus-Moment |
| $M_{T2\ EQU}$ | [Nm] | Äquivalentes Kippmoment an der Abtriebswelle |
| $M_{T2\ MAX}$ | [Nm] | Maximales Kippmoment an der Abtriebswelle |
| $n_1$ | [$min^{-1}$] | Nominelle Eingangsdrehzahl |
| $n_2$ | [$min^{-1}$] | Ausgangsdrehzahl |
| $n_{2(1)}$ ... $n_{2(n)}$ | [$min^{-1}$] | Ausgangsdrehzahl im Zeitfenster $t_1$ ... $t_n$ |
| $n_{2\ EQU}$ | [$min^{-1}$] | Äquivalente Ausgangsdrehzahl |
| $n_{2\ MAX}$ | [$min^{-1}$] | Maximale Ausgangsdrehzahl |
| **T** | [C°] | Umgebungstemperatur |
| $t_1$ ... $t_n$ | [s] | Betriebsdauer |
| $t_\Sigma$ | [s] | Einschaltdauer inkl. Pause |
| **Z** | [1/h] | Zyklen pro Stunde |

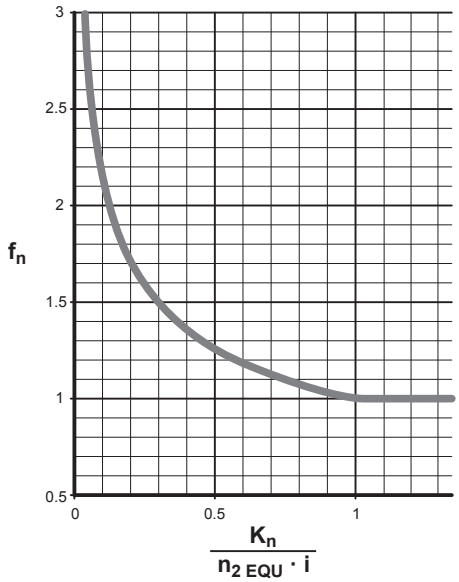
**Getriebespezifische Werte**

| bezeichnung | einheit | definition |
|---|---|---|
| $A_{2/3\ max}$ | [N] | Zulässige Axialkraft an der Abtriebswelle |
| $A_{2/3'\ max}$ | [N] | Gleichzeitig mit der Radialkraft einwirkende Axialkraft |
| $R_{1\ max}$ | [N] | Zulässige Radialkraft am Mittelpunkt der Eintriebswelle |
| $R_{2/3\ max}$ | [N] | Zulässige Radialkraft am Mittelpunkt der Abtriebswelle |
| $C_B$ | [Nm] | Konstante zur Berechnung der Lagerlebensdauer |
| $C_t$ | $\left[\frac{Nm}{arcmin}\right]$ | Torsionssteifigkeit |
| f | — | Verhältnis zwischen Axial- und Radialkraft |
| $f_n$ | — | Drehzahlfaktor |
| $f_z$ | — | Zyklusfaktor |
| $f_T$ | — | Temperaturfaktor |
| i | — | Getriebeübersetzung |
| $J_G$ | [kgcm²] | Massenträgheitsmoment des Getriebes |
| $K_n$ | — | Drehzahlkonstante |
| $L_{10h}$ | [h] | Allgemeine Lagerlebensdauer |
| $L_Z$ | [mm] | Faktor zur Berechnung der Lagerlebensdauer |
| $M_{a\ 2}$ | [Nm] | Maximal zulässiges Abtriebsbeschleunigungsmoment |
| $M_{n\ 2}$ | [Nm] | Nominelles Abtriebsdrehmoment |
| $M_{p\ 2}$ | [Nm] | Not-Aus-Moment<br>1000 mal während der Nutzungsdauer des Getriebes zulässig |
| $M_{T2\ max}$ | [Nm] | Maximal zulässiges Kippmoment an der Abtriebswelle |
| $n_{1\ max}$ | [$min^{-1}$] | Spitzen-Eingangsdrehzahl. Drehzahl, mit der die Einheit gelegentlich, unter sich nicht wiederholenden Bedingungen betrieben werden kann.<br>Im S5-Betrieb darf dies nicht länger als 30 Sekunden dauern. |
| p | — | Lagerlebensdauerexponent |
| $\eta$ | [%] | Getriebewirkungsgrad |
| $\varphi_R$ | [arcmin] | Reduziertes Flankenspiel, wird unter statischen Bedingungen und bei einem Drehmoment von 2% des Getriebenenndrehmoments ermittelt. |
| $\varphi_S$ | [arcmin] | Standard Flankenspiel, wird unter statischen Bedingungen und bei einem Drehmoment von 2% des Getriebenenndrehmoments ermittelt. |

## 1.2 GETRIEBEAUSWAHL

| | | | | |
|---|---|---|---|---|
| (a) | Übersetzung | i | — | $i = \frac{n_1}{n_2}$ |
| (b) | Äquivalentes Abtriebsdrehmoment | $M_{2\,EQU}$ | [Nm] | $M_{2EQU} = \sqrt[3]{\frac{\lvert n_{2(1)}\rvert \cdot t_1 \cdot \lvert M_{2(1)}\rvert^3 + ... + \lvert n_{2(n)}\rvert \cdot t_n \cdot \lvert M_{2(n)}\rvert^3}{\lvert n_{2(1)}\rvert \cdot t_1 + ... + \lvert n_{2(n)}\rvert \cdot t_n}}$ |
| (c) | Äquivalente Ausgangsdrehzahl | $n_{2\,EQU}$ | [$min^{-1}$] | $n_{2EQU} = \frac{\lvert n_{2(1)}\rvert \cdot t_1 + \lvert n_{2(2)}\rvert \cdot t_2 + ... + \lvert n_{2(n)}\rvert \cdot t_n}{t_\Sigma}$ |
| (d) | Drehzahlfaktor | $f_n$ | — | Wenn $\frac{K_n}{n_{2\,EQU} \cdot i} \geq 1 \Rightarrow f_n = 1$<br>Wenn $\frac{K_n}{n_{2\,EQU} \cdot i} < 1 \Rightarrow f_n$ = Dem Diagramm entnehmen |
| (e) | Temperaturfaktor | $f_T$ | — |  |
| (f) | Einschaltdauer<br>Belastungsdauer | ED%<br>ED | [%]<br>[s] | $ED\% = \frac{ED}{t_\Sigma} \cdot 100$<br>$ED = t_1 + t_2 + ... + t_n$ |
| (g) | Zyklen pro Stunde | Z | [1/h] | $Z = \frac{3600}{t_\Sigma}$ |
| (h) | Zyklusfaktor* | $f_z$ | — |  <br>*Für Z>6000 Bonfiglioli kontaktieren! |
| (i) | Maximales Eingangsmoment | $M_{1\,PEAK}$ | [Nm] | a) Maximal mögliches Anwendungsdrehmoment<br>b) Per Umrichter begrenztes Motordrehmoment<br>c) Maximales Motordrehmoment |

**$f_n$ - Drehzahlfaktor**



## $K_n$ - Drehzahlkonstante

| i | TQ 060 | TQ 070 | TQ 090 | TQ 130 | TQ 160 |
|---|---|---|---|---|---|
| **3** | 3500 | 3100 | 1050 | 1800 | 1100 |
| **4** | 3500 | 3300 | 1050 | 2000 | 1450 |
| **5** | 3500 | 3500 | 1700 | 2500 | 1650 |
| **7** | 4000 | 3500 | 3000 | 2800 | 2500 |
| **10** | 4000 | 3500 | 3000 | 2800 | 2500 |
| **16** | 4500 | 3500 | 3000 | 2800 | 2500 |
| **20** | 4500 | 3500 | 3000 | 2800 | 2500 |
| **25** | 4500 | 3500 | 3000 | 2800 | 2500 |
| **28** | 4500 | 3500 | 3000 | 2800 | 2500 |
| **35** | 4500 | 3500 | 3000 | 2800 | 2500 |
| **40** | 4500 | 3500 | 3000 | 2800 | 2500 |
| **50** | 4500 | 3500 | 3500 | 3200 | 2500 |
| **70** | 5000 | 4500 | 4000 | 3500 | 2500 |
| **100** | 5000 | 4500 | 4000 | 3500 | 2500 |

| i | TQK 060 | TQK 070 | TQK 090 | TQK 130 | TQK 160 |
|---|---|---|---|---|---|
| **6** | 2400 | 2400 | 2000 | 1600 | 1600 |
| **8** | 2400 | 2400 | 2000 | 1600 | 1600 |
| **10** | 2400 | 2400 | 2000 | 1600 | 1600 |
| **14** | 2400 | 2400 | 2000 | 1600 | 1600 |
| **18** | 2400 | 2400 | 2400 | 2000 | 1600 |
| **20** | 2400 | 2400 | 2400 | 1600 | 1600 |
| **24** | 2400 | 2400 | 2400 | 2000 | 1600 |
| **30** | 2400 | 2400 | 2400 | 2000 | 1600 |
| **40** | 2400 | 2400 | 2400 | 2000 | 1600 |
| **50** | 2400 | 2400 | 2400 | 2000 | 1600 |
| **70** | 2400 | 2400 | 2400 | 2000 | 1600 |
| **80** | 2400 | 2400 | 2400 | 2000 | 1600 |
| **100** | 2400 | 2400 | 2400 | 2000 | 1600 |
| **140** | 2400 | 2400 | 2400 | 2000 | 1600 |
| **200** | 2400 | 2400 | 2400 | 2000 | 1600 |

| i | TR / MP 053 | TR / MP 060 | TR / MP 080 | TR / MP 105 | TR / MP 130 | TR / MP 160 | TR / MP 190 |
|---|---|---|---|---|---|---|---|
| **3** | 1400 | 1400 | 2700 | 2500 | 1700 | 550 | 1500 |
| **4** | 2000 | 1600 | 1500 | 1600* | 500* | 350* | 1150 |
| **5** | 2300 | 2050 | 1750 | 1850* | 600* | 350* | 1300 |
| **6** | 2300 | 2500 | 2500 | 1050* | 150* | 150* | 1150* |
| **7** | 3800 | 3000 | 2100 | 1350 | 400* | 300* | 1600 |
| **9** | 4000 | 3300 | 2900 | 2500 | 2100 | 1600 | 1500 |
| **10** | – | 4000 | 4000 | 3500 | 3200 | 1150 | 2900 |
| **12** | 3300 | 3300 | 1500 | 1500 | 500 | 300* | 1050 |
| **15** | 3300 | 3300 | 1700 | 1750 | 600 | 350* | 1200 |
| **16** | 3500 | 3500 | 1950 | 2050 | 700 | 450* | 1400 |
| **20** | 3500 | 3500 | 2450 | 2550 | 850 | 300 | 1750 |
| **25** | 3500 | 3500 | 2800 | 2900 | 1000 | 350 | 2000 |
| **28** | 4000 | 4000 | 3450 | 3500 | 1200 | 450 | 2450 |
| **30** | – | 4000 | 4000 | 3500 | 3200 | 3000 | 1950 |
| **35** | 4000 | 4000 | 3950 | 3500 | 1350 | 500 | 2800 |
| **36** | 4000 | 3500 | 3200 | 1950 | 550 | 500 | 2300 |
| **40** | – | 4000 | 4000 | 3500 | 1700 | 650 | 2900 |
| **45** | 4000 | – | – | – | – | – | – |
| **48** | 4000 | 3500 | 3100 | 2800 | 2300 | 850 | 2100 |
| **50** | – | 4000 | 4000 | 3500 | 1950 | 750 | 2900 |
| **60** | 3500 | – | – | – | – | – | – |
| **64** | 3500 | 3500 | 3100 | 2800 | 2400 | 1000 | 2100 |
| **70** | – | 4000 | 4000 | 3500 | 2400 | 900 | 2900 |
| **75** | 3500 | 3500 | 3200 | 3000 | 2900 | 1350 | 2300 |
| **80** | 3500 | 3500 | 3100 | 2800 | 2400 | 1300 | 2100 |
| **81** | 4000 | – | – | – | – | – | – |
| **84** | 4000 | 4000 | 4000 | 3500 | 2900 | 1050 | 2900 |
| **90** | – | 4000 | 4000 | 3500 | 2850 | 3000 | 2900 |
| **100** | 3500 | 4000 | 4000 | 3500 | 3200 | 3000 | 2900 |
| **112** | 3500 | – | – | – | – | – | – |
| **120** | – | 4000 | 4000 | 3500 | 3200 | 2150 | 2900 |
| **125** | 3500 | 3500 | 3200 | 3000 | 2900 | 1800 | 2300 |
| **140** | 4000 | 4000 | 4000 | 3500 | 3200 | 2050 | 2900 |
| **144** | 4000 | – | – | – | – | – | – |
| **150** | – | 4000 | 4000 | 3500 | 3200 | 2200 | 2900 |
| **160** | – | 4000 | 4000 | 3500 | 3200 | 2550 | 2900 |
| **175** | 4000 | 4000 | 4000 | 3500 | 3200 | 2550 | 2900 |
| **180** | 4000 | – | – | – | – | – | – |
| **200** | – | 4000 | 4000 | 3500 | 3200 | 2900 | 2900 |
| **210** | – | 4000 | 4000 | 3500 | 3200 | 2700 | 2900 |
| **216** | 3500 | 3500 | 3200 | 3000 | 1900 | – | – |
| **225** | 4000 | – | – | – | – | – | – |
| **245** | 4000 | – | – | – | – | – | – |
| **250** | – | 4000 | 4000 | 3500 | 3200 | 3000 | 2900 |
| **252** | 4000 | – | – | – | – | – | – |
| **280** | – | 4000 | 4000 | 3500 | 3200 | 3000 | 2900 |
| **324** | 4000 | – | – | – | – | – | – |
| **350** | – | 4000 | 4000 | 3500 | 3200 | 3000 | 2900 |
| **400** | – | 4000 | 4000 | 3500 | 3200 | 3000 | 2900 |
| **405** | 4000 | – | – | – | – | – | – |
| **500** | | 4000 | 4000 | 3500 | 3200 | 3000 | 2900 |
| **567** | 4000 | – | – | – | – | – | – |
| **700** | – | 4000 | 4000 | 3500 | 3200 | 3000 | 2900 |
| **729** | 4000 | – | – | – | – | – | – |
| **1000** | – | 4000 | 4000 | 3500 | 3200 | 3000 | 2900 |

| i | TQF 060 | TQF 070 | TQF 090 | TQF 130 | TQF 160 |
|---|---|---|---|---|---|
| **4** | 3500 | 3300 | 1050 | 2000 | 1450 |
| **5** | 3500 | 3500 | 1700 | 2500 | 1650 |
| **7** | 4000 | 3500 | 3000 | 2800 | 2500 |
| **10** | 4000 | 3500 | 3000 | 2800 | 2500 |
| **16** | 4500 | 3500 | 3000 | 2800 | 2500 |
| **20** | 4500 | 3500 | 3000 | 2800 | 2500 |
| **25** | 4500 | 3500 | 3000 | 2800 | 2500 |
| **28** | 4500 | 3500 | 3000 | 2800 | 2500 |
| **35** | 4500 | 3500 | 3000 | 2800 | 2500 |
| **40** | 4500 | 3500 | 3000 | 2800 | 2500 |
| **50** | 4500 | 3500 | 3500 | 3200 | 2500 |
| **70** | 5000 | 4500 | 4000 | 3500 | 2500 |
| **100** | 5000 | 4500 | 4000 | 3500 | 2500 |

| i | LC 050 | LC 070 LC 070P | LC 090 / LC 090P | LC 120 / LC 120P | LC 155 / LC 155P |
|---|---|---|---|---|---|
| **3** | 1650 | 1400 | 2900 / 3500 | 2500 / 3000 | 1350 / 2100 |
| **4** | 2200 | 1600 | 2500 / 2000 | 2100 / 1700 | 900 / 2200 |
| **5** | 2900 | 2050 | 2700 / 1500 | 2300 / 1500 | 950 / 800 |
| **7** | 3700 | 3050 | 3500 / 1900 | 3000 / 1900 | 1250 |
| **9** | 4000 | 3300 | 2900 / 3500 | 2500 / 3000 | 2100 |
| **10** | – | 4000 | 4000 / 3500 | 3500 | 2500 / 3200 |
| **12** | 3300 | 3300 | 2900 / 3500 | 2500 / 3000 | 2100 |
| **15** | 3300 | 3300 | 2900 / 3500 | 2500 / 3000 | 2100 |
| **16** | 3500 | 3500 | 3100 | 2800 | 2400 |
| **20** | 3500 | 3500 | 3200 | 3000 | 2900 |
| **25** | 3500 | 3500 | 3200 | 3000 | 2900 |
| **28** | 3500 | 3700 | 3500 | 3500 | 3000 |
| **30** | – | 4000 | 4000 | 3500 | 3000 |
| **35** | 3700 | 4000 | 3500 | 3000 | 3000 |
| **36** | 4000 | – | – | – | – |
| **40** | – | 4000 | 4000 | 3500 | 3000 |
| **45** | 4000 | – | – | – | – |
| **50** | – | 4000 | 4000 | 3500 | 3000 |
| **70** | – | 4000 | 4000 | 3500 | 3000 |
| **81** | 4000 | – | – | – | – |
| **100** | – | 4000 | 4000 | 3500 | 3000 |

| i | LCK 050 | LCK 070 LCK 070P | LCK 090 LCK 090P | LCK 120 LCK 120P | LCK 155 LCK 155P |
|---|---|---|---|---|---|
| **6** | 2400 | 2400 | 2400 | 2000 | 1600 |
| **8** | 2400 | 2400 | 2400 | 2000 | 1600 |
| **10** | 2400 | 2400 | 2400 | 2000 | 1600 |
| **14** | 2400 | 2400 | 2400 | 2000 | 1600 |
| **20** | – | 2400 | 2400 | 2000 | 1600 |
| **24** | 2400 | 2400 | 2400 | 2000 | 1600 |
| **30** | 2400 | 2400 | 2400 | 2000 | 1600 |
| **50** | 2400 | 2400 | 2400 | 2000 | 1600 |
| **70** | 2400 | 2400 | 2400 | 2000 | 1600 |
| **80** | – | 2400 | 2400 | 2000 | 1600 |
| **90** | 2400 | – | – | – | – |
| **100** | – | 2400 | 2400 | 2000 | 1600 |

| i | SL 070 / SL 070P | SL 090 / SL 090P | SL 120 / SL 120P |
|---|---|---|---|
| **3** | 1400 | 2900 / 3500 | 2500 / 3000 |
| **4** | 1600 | 2500 / 2000 | 2100 / 1700 |
| **5** | 2050 | 2700 / 1500 | 2300 / 1500 |
| **7** | 3050 | 3500 / 1900 | 3000 / 1900 |
| **9** | 3300 | 2900 / 3500 | 2500 / 3000 |
| **10** | 4000 | 4000 / 3500 | 3500 |
| **12** | 3300 | 2900 / 3500 | 2500 / 3000 |
| **15** | 3300 | 2900 / 3500 | 2500 / 3000 |
| **16** | 3500 | 3100 | 2800 |
| **20** | 3500 | 3200 | 3000 |
| **25** | 3500 | 3200 | 3000 |
| **28** | 3700 | 3500 | 3000 |
| **30** | 4000 | 4000 | 3500 |
| **35** | 4000 | 3500 | 3000 |
| **40** | 4000 | 4000 | 3500 |
| **50** | 4000 | 4000 | 3500 |
| **70** | 4000 | 4000 | 3500 |
| **100** | 4000 | 4000 | 3500 |

| i | KR 010 | KR 020 | KR 030 | KR 040 |
|---|---|---|---|---|
| **1** | 1200 | 1200 | 1000 | 800 |
| **2** | 2400 | 2400 | 2000 | 1600 |
| **3** | 3000 | 3000 | 2800 | 2500 |

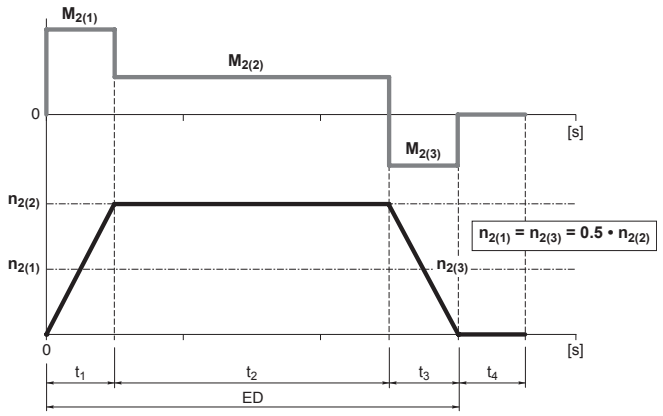
Im S1-Betrieb verringern die mit * gekennzeichneten Werte die durchschnittliche Lebensdauer der Lager.

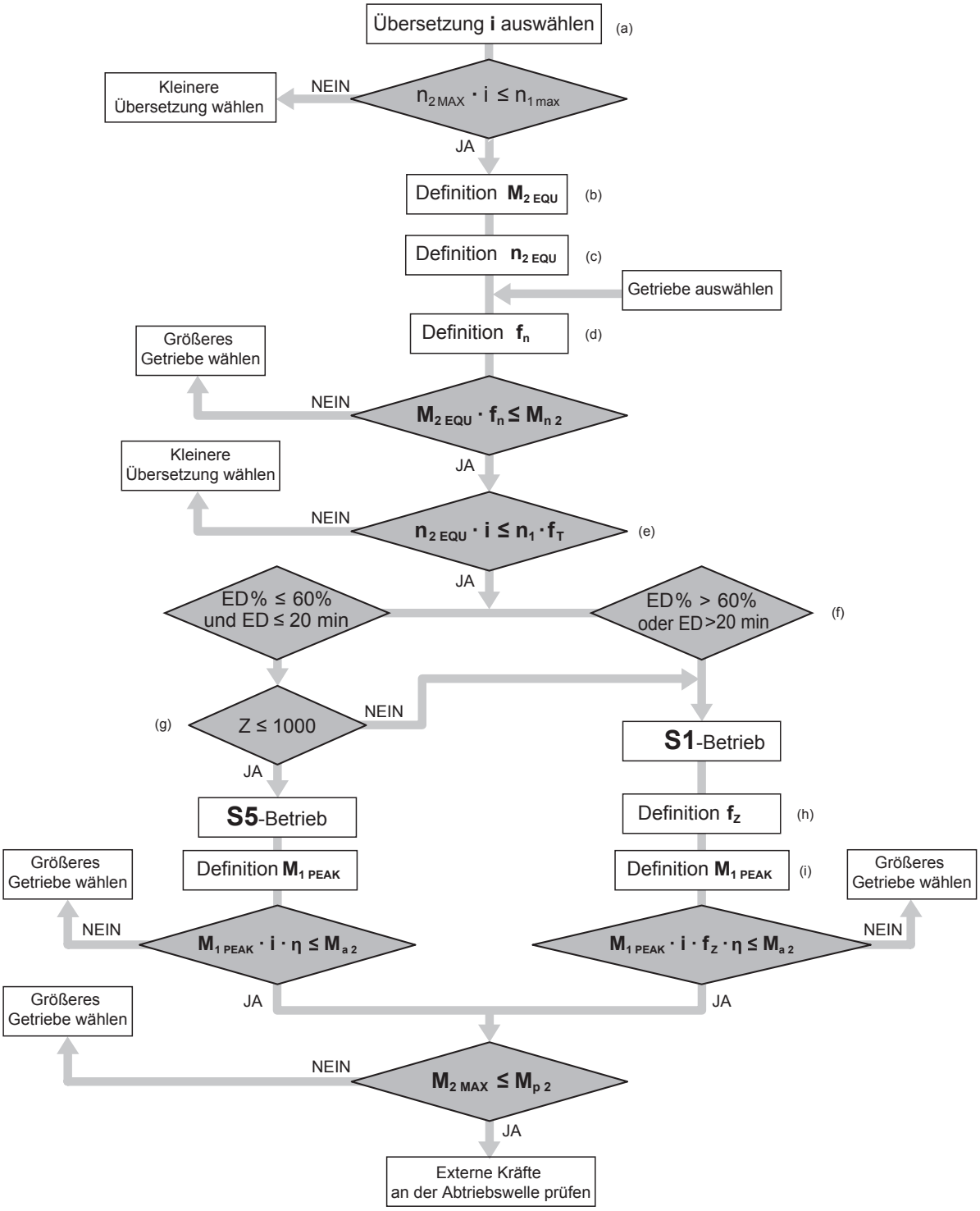
**Belastungsdiagramm**

**$M_2$:** Abtriebsdrehmoment

**Drehzahldiagramm**

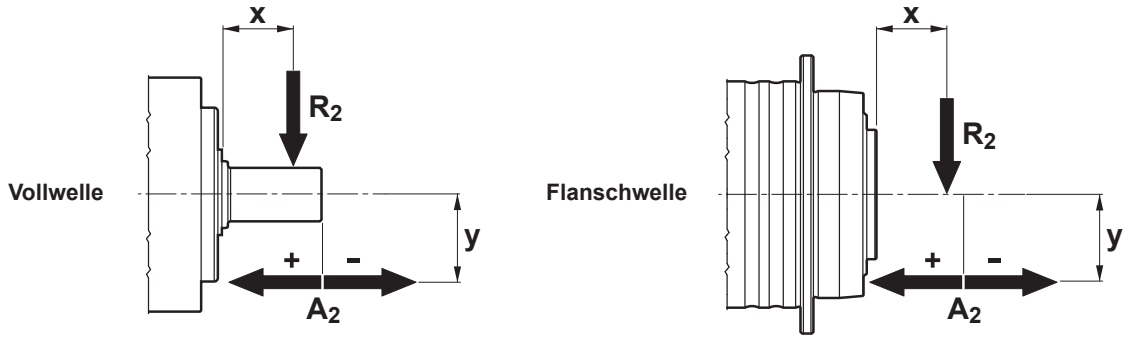
**$n_2$:** Ausgangsdrehzahl





## 1.3 LAGERLEBENSDAUER




| | | | | |
|---|---|---|---|---|
| (a) | Maximale Radialkraft an der Abtriebswelle<br>Maximale Axialkraft an der Abtriebswelle | $R_{2\,MAX}$<br>$A_{2\,MAX}$ | [N]<br>[N] | Bitte die spezifischen Bedingungen beachten (z. B. Riementriebe unter Beschleunigungsmoment) |
| (b) | Maximales Kippmoment an der Abtriebswelle | $M_{T\,2\,MAX}$ | [Nm] | $M_{T2\,MAX} = \frac{R_{2\,MAX} \cdot (x + L_Z) \pm A_{2\,MAX} \cdot y}{1000}$ |
| (c) | Äquivalente Kräfte an der Abtriebswelle | $R_{2\,EQU}$<br>$A_{2\,EQU}$ | [N]<br>[N] | $R_{2\,EQU} = \sqrt[3]{\frac{\lvert n_{2(1)}\rvert \cdot t_1 \cdot \lvert R_{2(1)}\rvert^3 + \ldots + \lvert n_{2(n)}\rvert \cdot t_n \cdot \lvert R_{2(n)}\rvert^3}{\lvert n_{2(1)}\rvert \cdot t_1 + \ldots + \lvert n_{2(n)}\rvert \cdot t_n}}$<br>$A_{2\,EQU} = \sqrt[3]{\frac{\lvert n_{2(1)}\rvert \cdot t_1 \cdot \lvert A_{2(1)}\rvert^3 + \ldots + \lvert n_{2(n)}\rvert \cdot t_n \cdot \lvert A_{2(n)}\rvert^3}{\lvert n_{2(1)}\rvert \cdot t_1 + \ldots + \lvert n_{2(n)}\rvert \cdot t_n}}$ |
| (d) | Äquivalentes Kippmoment an der Abtriebswelle | $M_{T\,2\,EQU}$ | [Nm] | $M_{T2\,EQU} = \frac{R_{2\,EQU} \cdot (x + L_Z) + A_{2\,EQU} \cdot y}{1000}$ |
| (e) | Äquivalente Ausgangsdrehzahl | $n_{2\,EQU}$ | [min$^{-1}$] | $n_{2\,EQU} = \frac{\lvert n_{2(1)}\rvert \cdot t_1 + \lvert n_{2(2)}\rvert \cdot t_2 + \ldots + \lvert n_{2(n)}\rvert \cdot t_n}{t_1 + t_2 + \ldots + t_n}$ |
| (f) | Allgemeine Lagerlebensdauer | $L_{10h}$ | [h] | $L_{10h} = \frac{16666}{n_{2\,EQU}} \cdot \left(\frac{C_B}{M_{T2\,EQU}}\right)^p$ |

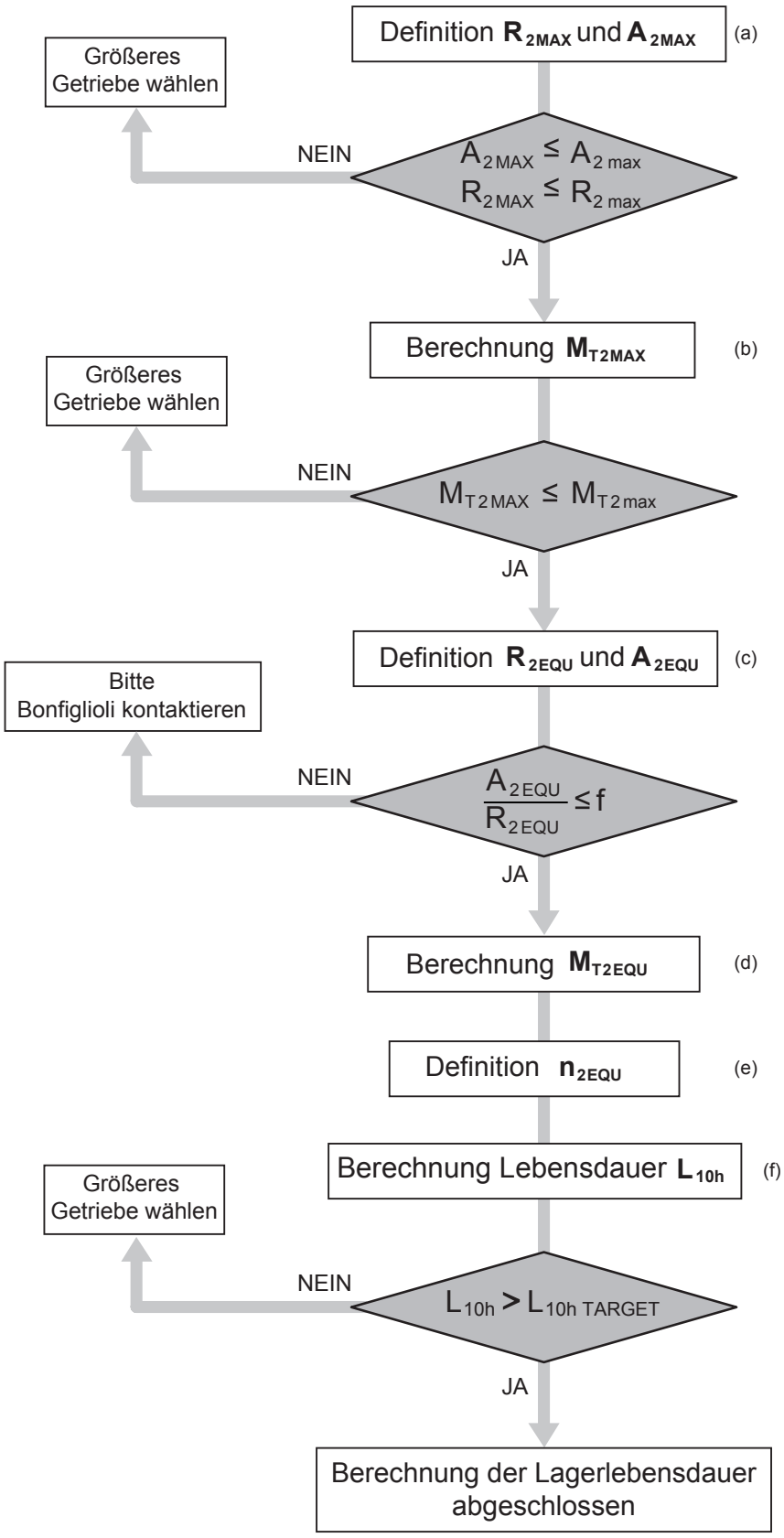
| | | TQ / TQK 060 | TQ / TQK 070 | | TQ / TQK 090 | | TQ / TQK 130 | TQ / TQK 160 |
|---|---|---|---|---|---|---|---|---|
| | | SB | SB | HB | SB | HB | SB | SB |
| $L_Z$ | [mm] | 56 | 67 | 64 | 95 | 89 | 96 | 114 |
| $M_{T\,2\,max}$ | [Nm] | 129.5 | 221 | 343 | 592 | 772 | 1233 | 2331 |
| $C_B$ | [Nm] | 632 | 1065 | 1510 | 2898 | 3325 | 6395 | 9795 |
| p | — | 3 | 3 | 3.33 | 3 | 3.33 | 3.33 | 3.33 |

| | | TQF 060 | TQF 070 | TQF 090 | TQF 130 | TQF 160 |
|---|---|---|---|---|---|---|
| $L_Z$ | [mm] | 48 | 72 | 78 | 100 | 128 |
| $M_{T\,2\,max}$ | [Nm] | 115 | 318 | 430 | 1200 | 3700 |
| $C_B$ | [Nm] | 490 | 1335 | 1815 | 5055 | 16200 |
| p | - | 3.33 | 3.33 | 3.33 | 3.33 | 3.33 |

| | | TR 053 SB | TR 060 SB | TR 080 SB | TR 105 SB | TR 130 SB | TR 160 SB | TR 190 SB |
|---|---|---|---|---|---|---|---|---|
| $L_Z$ | [mm] | 22 | 23 | 42 | 53 | 74 | 94 | 100 |
| $M_{T\,2\,max}$ | [Nm] | 16 | 23 | 155 | 278 | 515 | 739 | 1683 |
| $C_B$ | [Nm] | 91 | 143 | 994 | 2048 | 3893 | 5824 | 8680 |
| p | — | 3 | 3 | 3.33 | 3.33 | 3.33 | 3.33 | 3.33 |

| | | MP 053 | MP 060 | MP 080 | | MP 105 | | MP 130 | MP 160 | MP 190 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | SB | SB | SB | HB | SB | HB | SB | SB | SB |
| $L_Z$ | [mm] | 22 | 23 | 44 | 42 | 46 | 53 | 74 | 94 | 100 |
| $M_{T\,2\,max}$ | [Nm] | 16 | 23 | 83 | 155 | 99 | 278 | 515 | 739 | 1683 |
| $C_B$ | [Nm] | 91 | 143 | 407 | 994 | 637 | 2048 | 3893 | 5824 | 8680 |
| p | — | 3 | 3 | 3 | 3.33 | 3 | 3.33 | 3.33 | 3.33 | 3.33 |

| | | LC / LCK 050 | LC / LCK / SL 070 | LC / LCK / SL 090 | LC / LCK / SL 120 | LC / LCK 155 |
|---|---|---|---|---|---|---|
| $L_Z$ | [mm] | 22 | 28 | 30 | 39 | 46 |
| $M_{T\,2\,max}$ | [Nm] | 15 | 54 | 105 | 238 | 522 |
| $C_B$ | [Nm] | 106 | 280 | 298 | 813 | 1588 |
| p | — | 3 | 3 | 3 | 3 | 3 |

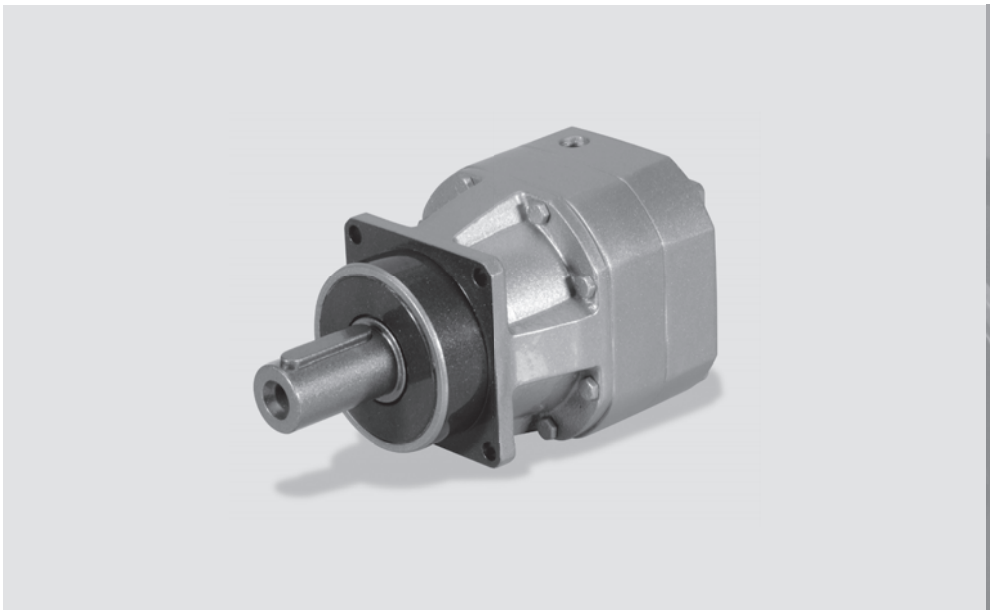



| f | TQ / TQK | TQF | TR | MP | LC / LCK | SL | KR |
|---|---|---|---|---|---|---|---|
| 0.26 | **060 SB ... 090 SB** | | **053 SB ... 060 SB** | **053 SB ... 105 SB** | **050 SB ... 155 SB** | **070 SB ... 120 SB** | **010 SB ... 040 SB** |
| 0.37 | **130 SB ; 160 SB 070 HB ; 090 HB** | **060 ... 160** | **080 SB ... 190 SB** | **130 SB ... 190 SB 080 HB ; 105 HB** | | | **020 HB ... 040 HB** |



# TQ
# KOAXIALE PRÄZISIONSPLANETENGETRIEBE

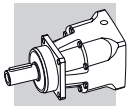
Die TQ Getriebe stehen an der Spitze des Produktportfolios. Ob Drehmoment, Steifigkeit oder Präzision – diese attraktive Produktreihe punktet in jeder Kategorie.





**Produktmerkmale:**

- Höchste Drehmomentdichte
- Höchstes Beschleunigungs- und Nenndrehmoment
- Höchste radiale und axiale Belastbarkeit
- Entwickelt für Zyklus- und Dauerbetrieb
- Höchste Verdrehsteifigkeit
- Niedriges Verdrehflankenspiel – unter 2 arcmin
- Laufruhig
- Einsetzbar in beliebiger Montageaposition



## 2 EIGENSCHAFTEN DER TQ-REIHE

TQ

Die spielarmen Planetengetriebe der TQ-Reihe vereinen herausragendes Leistungsverhalten mit charakteristischem italienischen Design, das sie von ähnlichen Produkten in der Branche unterscheidet.
Entwicklung und Konstruktion folgten dem Ziel eine Produktreihe mit uneingeschränkter und konstanter Qualität bereitzustellen, die den Wettbewerbsvorteil beim Einsatz in Ihren Maschinen und Systemen darstellt.

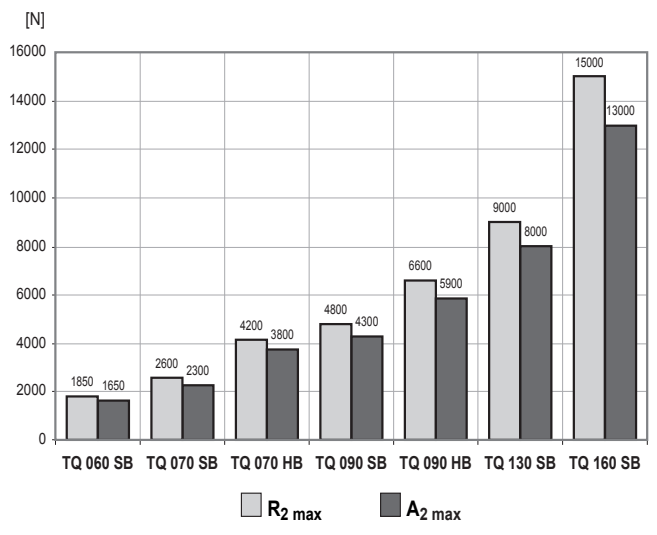
- Die TQ-Reihe hat zwei Präzisionsklassen, mit diesem Verdrehflankenspiel:
  1-stufige Getriebe: standard $\varphi_S \leq 3'$ reduziert $\varphi_R \leq 2'$ ( $\varphi_S \leq 4'$; $\varphi_R \leq 2'$ for TQ 060 and TQ 070)
  2-stufige Getriebe: standard $\varphi_S \leq 5'$ reduziert $\varphi_R \leq 3'$ ($\varphi_S \leq 6'$; $\varphi_R \leq 4'$ for TQ 060 and TQ 070)
- Eine hohe IP-Schutzklasse (IP65) sorgt dafür, dass innenliegende Teile vor Staub- und Flüssigkeitseintritt geschützt sind.
- Serienmäßige Fluorelastomer-Wellendichtungen an der Eingangswelle
- Schalldruckpegel 60 ≤ $L_p$ ≤ 70 dB(A). Gemessen in 1 m Abstand ohne Last und bei einer Eingangsdrehzahl von $n_1$ = 3000 $min^{-1}$; i = 10.
- Große Auswahl an Motoradaptern sorgt für den Anschluss an die marktgängigsten Servomotoren. Große Auswahl an Motoradaptern sorgt für den Anschluss an die marktgängigsten Servomotoren. Große Auswahl an Motoradaptern sorgt für den Anschluss an die marktgängigsten Servomotoren.
- Schmierung optimiert für die gewünschte Betriebsart.
  Ohne Verunreinigung muss das Schmiermittel nicht regelmäßig gewechselt werden.

| Betrieb | TQ 060 ... TQ 160 | andere Dichtungen |
|---|---|---|
| **S1** (kontinuierlich**)** | Synthetiköl Viskositätsklasse ISO VG 220 | Fluoroelastomer |
| **S5** (unterbrochen) | NLGI Fettkonsistenz 00 | NBR |

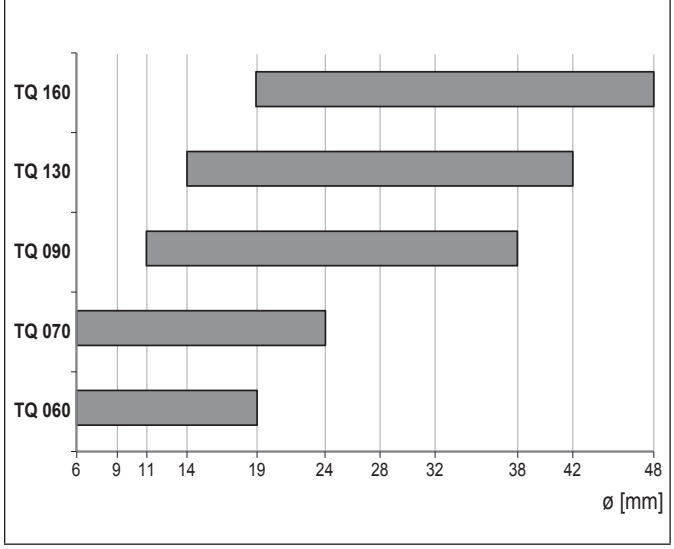
- Umgebungstemperatur min. -20°C, max. +30°C; bei Temperaturen höher als 30°C ist der Temperaturfaktor $f_T$ zu berücksichtigen.
- Die Gehäusetemperatur darf $T_{max}$ = 90°C nicht übersteigen.

| **Übersicht der Nenndrehmomente** $M_{n2}$ [Nm] | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| [i] | **3** | **4** | **5** | **7** | **10** | **16** | **20** | **25** | **28** | **35** | **40** | **50** | **70** | **100** |
| **TQ 060** | 21 | 30 | 30 | 25 | 20 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 25 | 20 |
| **TQ 070** | 45 | 70 | 70 | 60 | 40 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 60 | 40 |
| **TQ 090** | 130 | 200 | 180 | 160 | 110 | 200 | 180 | 180 | 200 | 180 | 200 | 180 | 160 | 110 |
| **TQ 130** | 260 | 400 | 400 | 360 | 280 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 360 | 280 |
| **TQ 160** | 530 | 800 | 800 | 750 | 550 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 750 | 550 |

**Verfügbare Motorwellendurchmesser**




**Übersicht der Nenndrehmomente**



## 2.1 BESTELLBEZEICHNUNG

**TQ** **130** **1** **3** **STD** **80A3** **CD** **19** **S5** **SB** **KL** **UH1**

SCHMIERSTOFF
- **–** Standard
- **UH1** Lebensmitteltaugliches Schmiermittel

ABTRIEBSWELLENKONFIGURATION
- **KL** Glatte Welle ohne Passfeder
- **KE** Welle mit Passfeder

LAGER DER ABTRIEBSWELLE
- **SB** Standard
- **HB** Verstärkt (TQ 070 - TQ 090)

BETRIEBSART
- **S1** Dauerbetrieb
- **S5** Kurzzeitbetrieb

BOHRUNGSDURCHMESSER EINGANGSWELLE
- **6 ... 48**

MOTORKOPPLUNG
- **CD** Klemmnabe

ANTRIEBSFLANSCH
- **30A ... 230A** Motorflansch
- **FM** Ohne Motorflansch

VERDREHSPIEL

| | 1 Getriebestufe | 1 Getriebestufe (nur TQ060, TQ070) | 2 Getriebestufen | 2 Getriebestufen (nur TQ060, TQ070) |
|---|---|---|---|---|
| **STD** | $\varphi_S \leq 3'$ | $\varphi_S \leq 4'$ | $\varphi_S \leq 5'$ | $\varphi_S \leq 6'$ |
| **LOW** | $\varphi_R \leq 2'$ | $\varphi_R \leq 2'$ | $\varphi_R \leq 3'$ | $\varphi_R \leq 4'$ |

GETRIEBEÜBERSETZUNG

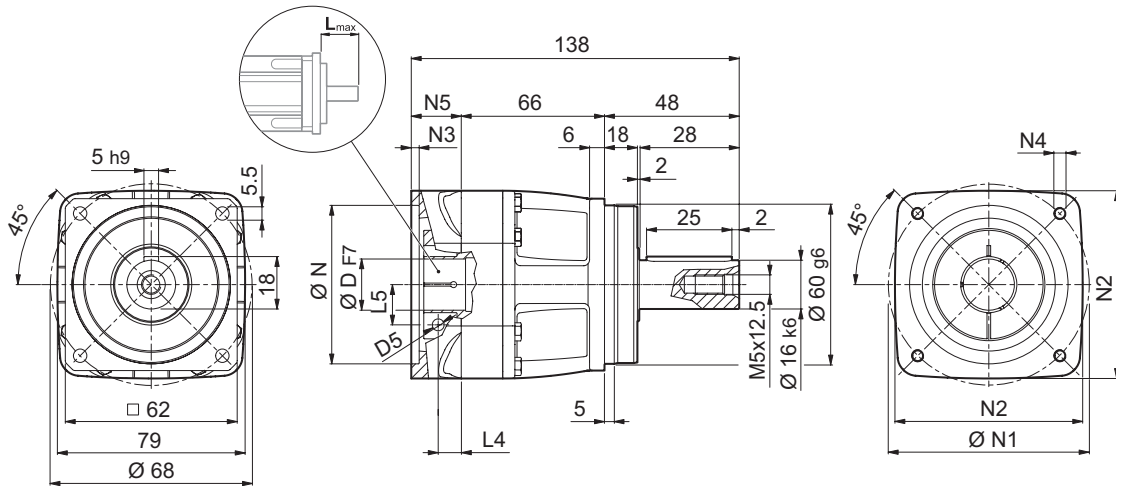
GETRIEBESTUFEN
- **1** **2**

BAUGRÖSSE
- **060** **070** **090** **130** **160**

REIHE
- **TQ**

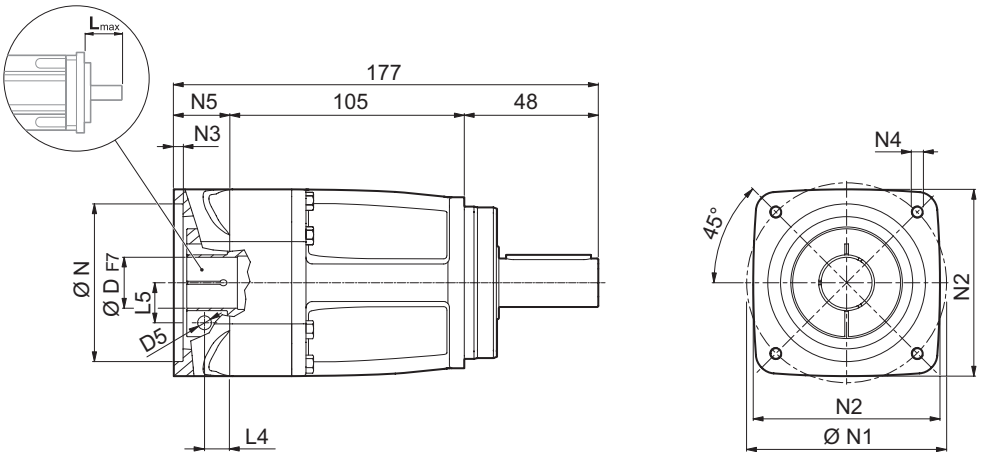
## 2.2 ABMESSUNGEN UND TECHNISCHE DATEN

# TQ 060




| | Kg |
|---|---|
| **TQ 060 1** | 2.5 |

## 30A ... 110B0



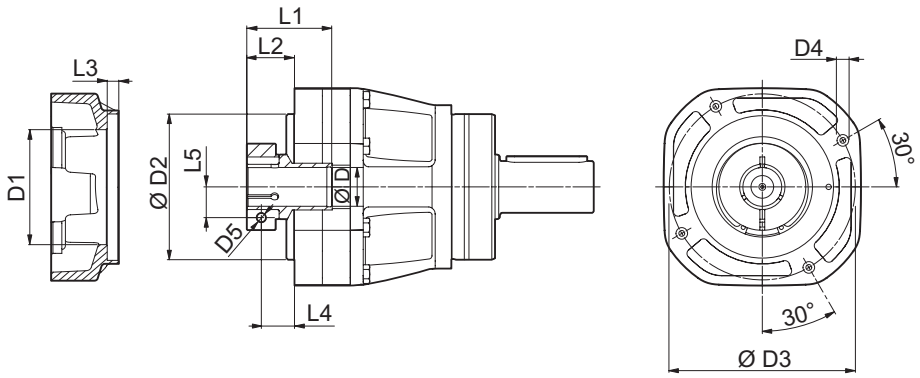

| | Kg |
|---|---|
| **TQ 060 2** | 3.5 |

| | D | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **30A** | 6 | – | – | – | – | 30 | 46 | 60 | 3.5 | M4x10 | 24 | 40 |
| **40B1** | 6 | 9 | 11 | 14 | – | 40 | 63 | 60 | 3.5 | M4x10 | 24 | 40 |
| **50A1** | 6 | 9 | 11 | 14 | – | 50 | 60 | 60 | 4.0 | M4x10 | 24 | 40 |
| **50C1** | 6 | 9 | 11 | 14 | – | 50 | 70 | 60 | 4.0 | M4x10 | 24 | 40 |
| **60A2** | 6 | 9 | 11 | 14 | 19 | 60 | 75 | 80 | 4.0 | M5x12 | 24 | 40 |
| **70B1** | 6 | 9 | 11 | 14 | 19 | 70 | 90 | 80 | 4.0 | M5x12 | 24 | 40 |
| **80A1** | 6 | 9 | 11 | 14 | 19 | 80 | 100 | 100 | 4.0 | M6x14 | 24 | 40 |
| **95A** | 6 | 9 | 11 | 14 | 19 | 95 | 115 | 100 | 4.0 | M8x24 | 24 | 40 |
| **110B0** | 6 | 9 | 11 | 14 | 19 | 110 | 145 | 120 | 4.0 | M8x24 | 24 | 40 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

# TQ 060

**FM**

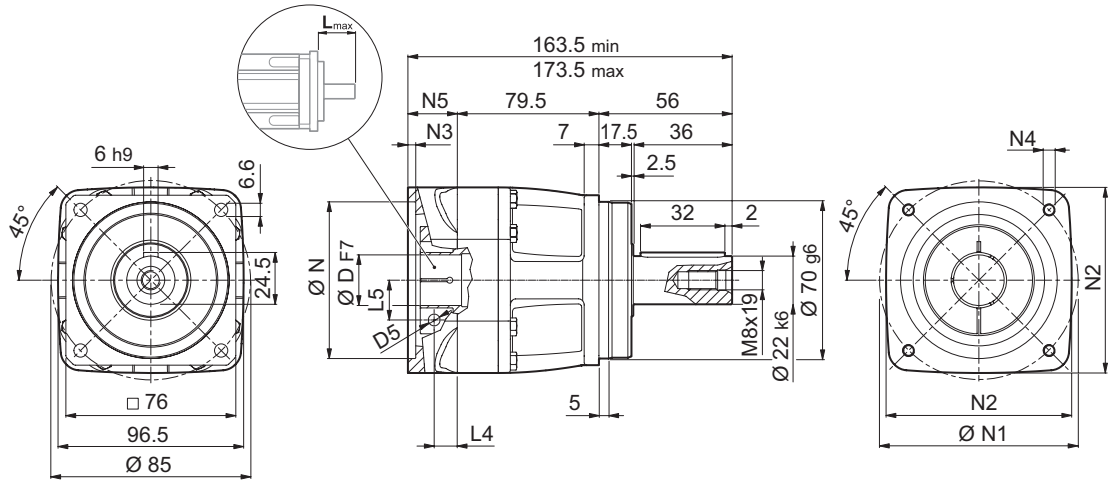



| D | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 37 | 59 | 72 | M5x11 | M4 | 31.5 | 15.5 | 4.5 | 10.5 | 8 |
| 9 | 49 | 59 | 72 | M5x11 | M5 | 35 | 19 | 4.5 | 11.5 | 10.5 |
| 11 | 49 | 59 | 72 | M5x11 | M6 | 35 | 19 | 4.5 | 11.5 | 12.5 |
| 14 | 49 | 59 | 72 | M5x11 | M6 | 35 | 19 | 4.5 | 11.5 | 14.5 |
| 19 | 54 | 59 | 72 | M5x11 | M6 | 35 | 19 | 4.5 | 11.5 | 16.5 |

| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ ≤ [arcmin] | $\varphi_R$ ≤ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 6 - 9 | D 11 - 14 | D 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TQ 060 1_3 | 21 | 32 | 60 | 3500 | 6000 | 4' | 2' | 4.8 | 1850 | 1650 | 97 | 0.36 | 0.47 | 0.51 |
| TQ 060 1_4 | 30 | 45 | 80 | 3500 | 6000 | 4' | 2' | 4.8 | 1850 | 1650 | 97 | 0.28 | 0.39 | 0.43 |
| TQ 060 1_5 | 30 | 45 | 80 | 3500 | 6000 | 4' | 2' | 4.8 | 1850 | 1650 | 97 | 0.25 | 0.36 | 0.40 |
| TQ 060 1_7 | 25 | 38 | 70 | 4000 | 6000 | 4' | 2' | 4.8 | 1850 | 1650 | 97 | 0.22 | 0.33 | 0.37 |
| TQ 060 1_10 | 20 | 30 | 55 | 4000 | 6000 | 4' | 2' | 4.8 | 1850 | 1650 | 97 | 0.21 | 0.32 | 0.36 |
| TQ 060 2_16 | 30 | 45 | 80 | 4500 | 6000 | 6' | 4' | 4.7 | 1850 | 1650 | 94 | 0.27 | 0.39 | 0.42 |
| TQ 060 2_20 | 30 | 45 | 80 | 4500 | 6000 | 6' | 4' | 4.7 | 1850 | 1650 | 94 | 0.27 | 0.39 | 0.42 |
| TQ 060 2_25 | 30 | 45 | 80 | 4500 | 6000 | 6' | 4' | 4.7 | 1850 | 1650 | 94 | 0.24 | 0.36 | 0.39 |
| TQ 060 2_28 | 30 | 45 | 80 | 4500 | 6000 | 6' | 4' | 4.7 | 1850 | 1650 | 94 | 0.22 | 0.33 | 0.37 |
| TQ 060 2_35 | 30 | 45 | 80 | 4500 | 6000 | 6' | 4' | 4.7 | 1850 | 1650 | 94 | 0.22 | 0.33 | 0.37 |
| TQ 060 2_40 | 30 | 45 | 80 | 4500 | 6000 | 6' | 4' | 4.7 | 1850 | 1650 | 94 | 0.21 | 0.32 | 0.36 |
| TQ 060 2_50 | 30 | 45 | 80 | 4500 | 6000 | 6' | 4' | 4.7 | 1850 | 1650 | 94 | 0.21 | 0.32 | 0.36 |
| TQ 060 2_70 | 25 | 38 | 70 | 5000 | 6000 | 6' | 4' | 4.7 | 1850 | 1650 | 94 | 0.21 | 0.32 | 0.36 |
| TQ 060 2_100 | 20 | 30 | 55 | 5000 | 6000 | 6' | 4' | 4.7 | 1850 | 1650 | 94 | 0.20 | 0.32 | 0.35 |

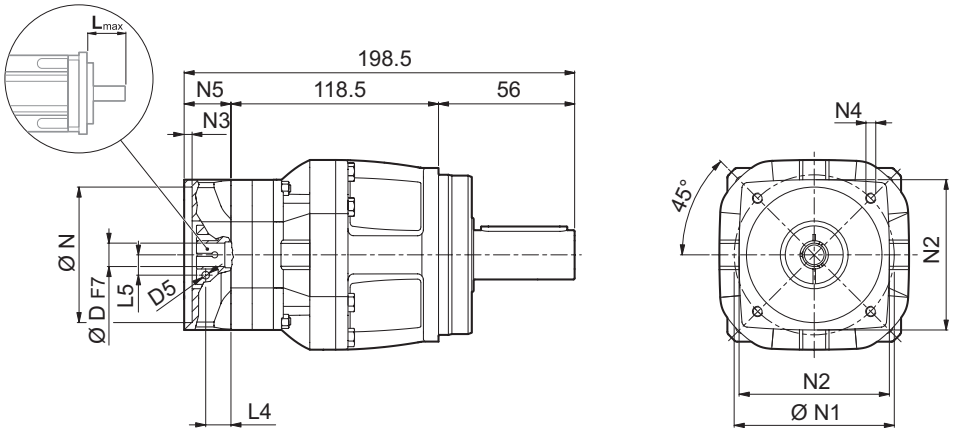
# TQ 070

## 50C ... 130A




| | Kg |
|---|---|
| TQ 070 1 | 3.6 |

## 30A ... 110B0



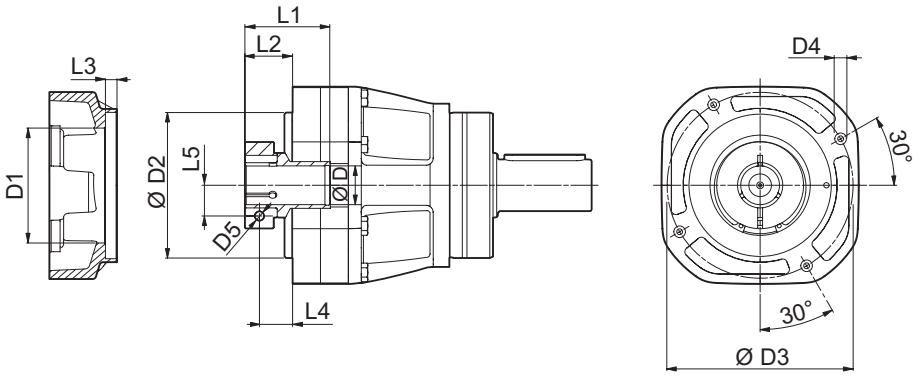

| | Kg |
|---|---|
| TQ 070 2 | 5.0 |

| | D | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TQ 070 1** | | | | | | | | | | | | | |
| **50C2** | 6 | 9 | 11 | 14 | – | – | 50 | 70 | 80 | 6.5 | M4x12 | 28 | 50 |
| **60A3** | 6 | 9 | 11 | 14 | 19 | – | 60 | 75 | 80 | 6.5 | M5x14 | 28 | 50 |
| **70B2** | 6 | 9 | 11 | 14 | 19 | – | 70 | 90 | 80 | 6.5 | M5x14 | 28 | 50 |
| **80A2** | 6 | 9 | 11 | 14 | 19 | – | 80 | 100 | 100 | 6.5 | M6x14 | 28 | 50 |
| **95A1** | 6 | 9 | 11 | 14 | 19 | 24 | 95 | 115 | 100 | 6.5 | M8x18 | 28 | 50 |
| **110A1** | 6 | 9 | 11 | 14 | 19 | 24 | 110 | 130 | 120 | 6.5 | M8x18 | 28 | 50 |
| **110B1** | 6 | 9 | 11 | 14 | 19 | 24 | 110 | 145 | 120 | 6.5 | M8x20 | 38 | 60 |
| **130A** | 6 | 9 | 11 | 14 | 19 | 24 | 130 | 165 | 140 | 6.5 | M10x19 | 28 | 50 |
| **TQ 070 2** | | | | | | | | | | | | | |
| **30A** | 6 | – | – | – | – | – | 30 | 46 | 60 | 3.5 | M4x10 | 24 | 40 |
| **40B1** | 6 | 9 | 11 | 14 | – | – | 40 | 63 | 60 | 3.5 | M4x10 | 24 | 40 |
| **50A1** | 6 | 9 | 11 | 14 | – | – | 50 | 60 | 60 | 4.0 | M4x10 | 24 | 40 |
| **50C1** | 6 | 9 | 11 | 14 | – | – | 50 | 70 | 60 | 4.0 | M4x10 | 24 | 40 |
| **60A2** | 6 | 9 | 11 | 14 | 19 | – | 60 | 75 | 80 | 4.0 | M5x12 | 24 | 40 |
| **70B1** | 6 | 9 | 11 | 14 | 19 | – | 70 | 90 | 80 | 4.0 | M5x12 | 24 | 40 |
| **80A1** | 6 | 9 | 11 | 14 | 19 | – | 80 | 100 | 100 | 4.0 | M6x14 | 24 | 40 |
| **95A** | 6 | 9 | 11 | 14 | 19 | – | 95 | 115 | 100 | 4.0 | M8x24 | 24 | 40 |
| **110B0** | 6 | 9 | 11 | 14 | 19 | – | 110 | 145 | 120 | 4.0 | M8x24 | 24 | 40 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

# TQ 070

**FM**

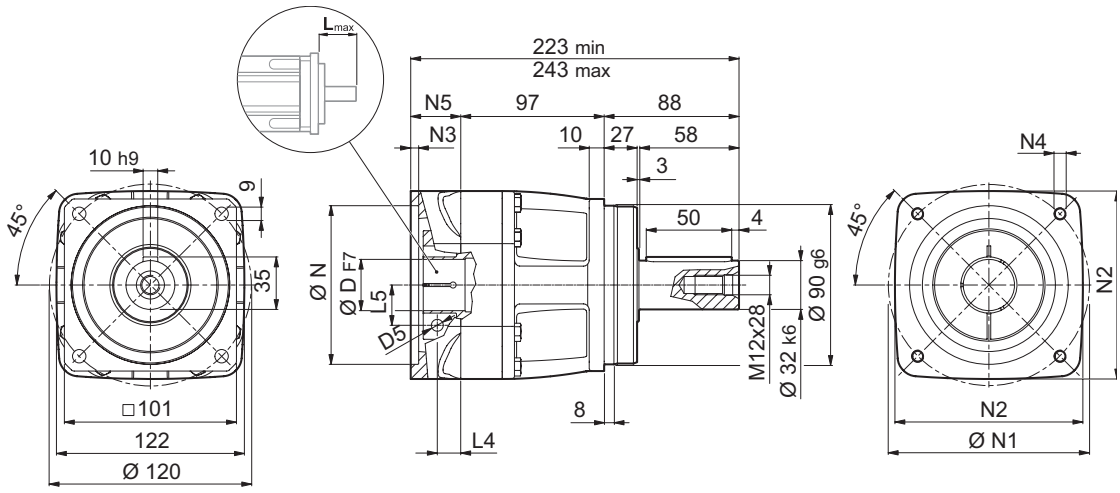



| D | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|
| **TQ 070 1** | | | | | | | | | | |
| 6 | 51 | 70 | 85 | M6x11 | M4 | 42 | 20 | 5 | 12.5 | 12.5 |
| 9 | 51 | 70 | 85 | M6x11 | M5 | 42 | 20 | 5 | 12.5 | 14.5 |
| 11 | 51 | 70 | 85 | M6x11 | M6 | 42 | 20 | 5 | 12.5 | 12.5 |
| 14 | 51 | 70 | 85 | M6x11 | M6 | 42 | 20 | 5 | 12.5 | 14.5 |
| 19 | 51 | 70 | 85 | M6x11 | M6 | 42 | 20 | 5 | 12.5 | 16.5 |
| 24 | 60 | 70 | 85 | M6x11 | M6 | 43.5 | 21.5 | 5 | 12.5 | 19 |
| **TQ 070 2** | | | | | | | | | | |
| 6 | 37 | 59 | 72 | M5x11 | M4 | 31.5 | 15.5 | 4.5 | 10.5 | 8 |
| 9 | 49 | 59 | 72 | M5x11 | M5 | 35 | 19 | 4.5 | 11.5 | 10.5 |
| 11 | 49 | 59 | 72 | M5x11 | M6 | 35 | 19 | 4.5 | 11.5 | 12.5 |
| 14 | 49 | 59 | 72 | M5x11 | M6 | 35 | 19 | 4.5 | 11.5 | 14.5 |
| 19 | 54 | 59 | 72 | M5x11 | M6 | 35 | 19 | 4.5 | 11.5 | 16.5 |

| i | $M_{n\,2}$ | $M_{a\,2}$ | $M_{p\,2}$ | $n_1$ | $n_{1\,max}$ | $\varphi_S$ ≤ | $\varphi_R$ | $C_t$ | SB $R_{2\,max}$ | SB $A_{2\,max}$ | HB $R_{2\,max}$ | HB $A_{2\,max}$ | $\eta$ | $J_G$ [kgcm²] D | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | [Nm] | [Nm] | [Nm] | [min⁻¹] | [min⁻¹] | [arcmin] | | [Nm/arcmin] | [N] | [N] | [N] | [N] | % | 6 - 9 | 11 - 14 | 19 | 24 |
| TQ 070 1_3 | 45 | 65 | 120 | 3000 | 6000 | 4' | 2' | 11.3 | 2600 | 2300 | 4200 | 3800 | 97 | – | 0.99 | 1.02 | 1.15 |
| TQ 070 1_4 | 70 | 100 | 180 | 3000 | 6000 | 4' | 2' | 11.3 | 2600 | 2300 | 4200 | 3800 | 97 | – | 0.76 | 0.79 | 0.92 |
| TQ 070 1_5 | 70 | 100 | 180 | 3000 | 6000 | 4' | 2' | 11.3 | 2600 | 2300 | 4200 | 3800 | 97 | – | 0.67 | 0.70 | 0.83 |
| TQ 070 1_7 | 60 | 90 | 160 | 3500 | 6000 | 4' | 2' | 11.3 | 2600 | 2300 | 4200 | 3800 | 97 | – | 0.59 | 0.62 | 0.75 |
| TQ 070 1_10 | 40 | 60 | 110 | 3500 | 6000 | 4' | 2' | 11.3 | 2600 | 2300 | 4200 | 3800 | 97 | – | 0.55 | 0.58 | 0.71 |
| TQ 070 2_16 | 70 | 100 | 180 | 3500 | 6000 | 6' | 4' | 11.3 | 2600 | 2300 | 4200 | 3800 | 94 | 0.28 | 0.40 | 0.43 | – |
| TQ 070 2_20 | 70 | 100 | 180 | 3500 | 6000 | 6' | 4' | 11.3 | 2600 | 2300 | 4200 | 3800 | 94 | 0.28 | 0.39 | 0.43 | – |
| TQ 070 2_25 | 70 | 100 | 180 | 3500 | 6000 | 6' | 4' | 11.3 | 2600 | 2300 | 4200 | 3800 | 94 | 0.25 | 0.36 | 0.40 | – |
| TQ 070 2_28 | 70 | 100 | 180 | 3500 | 6000 | 6' | 4' | 11.3 | 2600 | 2300 | 4200 | 3800 | 94 | 0.22 | 0.34 | 0.37 | – |
| TQ 070 2_35 | 70 | 100 | 180 | 3500 | 6000 | 6' | 4' | 11.3 | 2600 | 2300 | 4200 | 3800 | 94 | 0.22 | 0.34 | 0.37 | – |
| TQ 070 2_40 | 70 | 100 | 180 | 3500 | 6000 | 6' | 4' | 11.3 | 2600 | 2300 | 4200 | 3800 | 94 | 0.21 | 0.32 | 0.36 | – |
| TQ 070 2_50 | 70 | 100 | 180 | 3500 | 6000 | 6' | 4' | 11.3 | 2600 | 2300 | 4200 | 3800 | 94 | 0.21 | 0.32 | 0.36 | – |
| TQ 070 2_70 | 60 | 90 | 160 | 4000 | 6000 | 6' | 4' | 11.3 | 2600 | 2300 | 4200 | 3800 | 94 | 0.21 | 0.32 | 0.36 | – |
| TQ 070 2_100 | 40 | 60 | 110 | 4500 | 6000 | 6' | 4' | 11.3 | 2600 | 2300 | 4200 | 3800 | 94 | 0.21 | 0.32 | 0.36 | – |

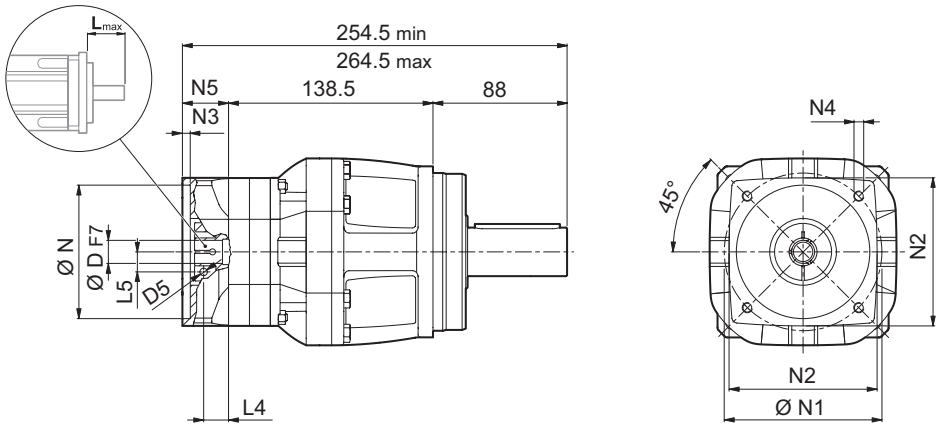
# TQ 090

## 60A4 ... 180A1




| | Kg |
|---|---|
| TQ 090 1 | 7.6 |

## 50C2 ... 130A



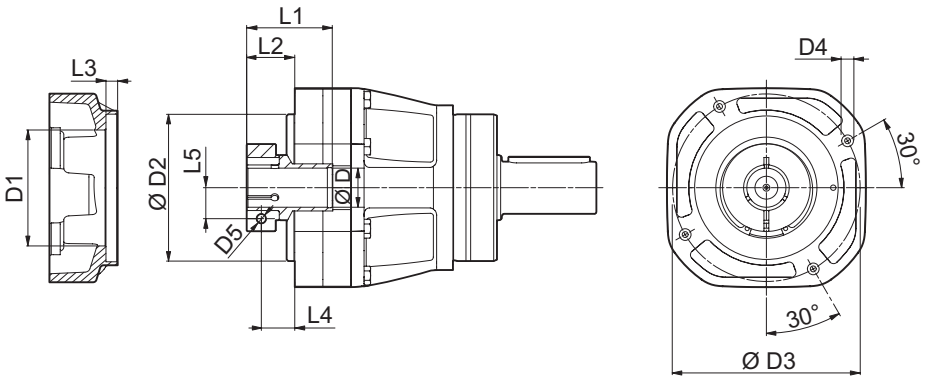

| | Kg |
|---|---|
| TQ 090 2 | 8.9 |

| | D | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TQ 090 1** | | | | | | | | | | | | | | |
| **60A4** | 11 | 14 | 19 | – | – | – | – | 60 | 75 | 100 | 6.5 | M5x14 | 38 | 60 |
| **80A3** | 11 | 14 | 19 | – | – | – | – | 80 | 100 | 100 | 6.5 | M6x14 | 38 | 60 |
| **95A2** | 11 | 14 | 19 | 24 | 28 | – | – | 95 | 115 | 100 | 6.5 | M8x18 | 38 | 60 |
| **110A2** | 11 | 14 | 19 | 24 | – | – | – | 110 | 130 | 122 | 6.5 | M8x20 | 38 | 60 |
| **110B1** | 11 | 14 | 19 | 24 | 28 | – | – | 110 | 145 | 122 | 6.5 | M8x20 | 38 | 60 |
| **130A1** | 11 | 14 | 19 | 24 | 28 | 32 | – | 130 | 165 | 140 | 6.5 | M10x20 | 38 | 60 |
| **180A** | 11 | 14 | 19 | 24 | 28 | 32 | – | 180 | 215 | 190 | 6.5 | M14x38 | 38 | 60 |
| **180A1** | 11 | 14 | 19 | 24 | 28 | 32 | 38 | 180 | 215 | 190 | 6.5 | M14x28 | 58 | 80 |
| **TQ 090 2** | | | | | | | | | | | | | | |
| **50C2** | 11 | 14 | – | – | – | – | – | 50 | 70 | 80 | 6.5 | M4x12 | 28 | 50 |
| **60A3** | 11 | 14 | 19 | – | – | – | – | 60 | 75 | 80 | 6.5 | M5x14 | 28 | 50 |
| **70B2** | 11 | 14 | 19 | – | – | – | – | 70 | 90 | 80 | 6.5 | M5x14 | 28 | 50 |
| **80A2** | 11 | 14 | 19 | – | – | – | – | 80 | 100 | 100 | 6.5 | M6x14 | 28 | 50 |
| **95A1** | 11 | 14 | 19 | 24 | – | – | – | 95 | 115 | 100 | 6.5 | M8x18 | 28 | 50 |
| **110A1** | 11 | 14 | 19 | 24 | – | – | – | 110 | 130 | 120 | 6.5 | M8x18 | 28 | 50 |
| **110B1** | 11 | 14 | 19 | 24 | – | – | – | 110 | 145 | 120 | 6.5 | M8x20 | 38 | 60 |
| **130A** | 11 | 14 | 19 | 24 | – | – | – | 130 | 165 | 140 | 6.5 | M10x19 | 28 | 50 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

# TQ 090

**FM**

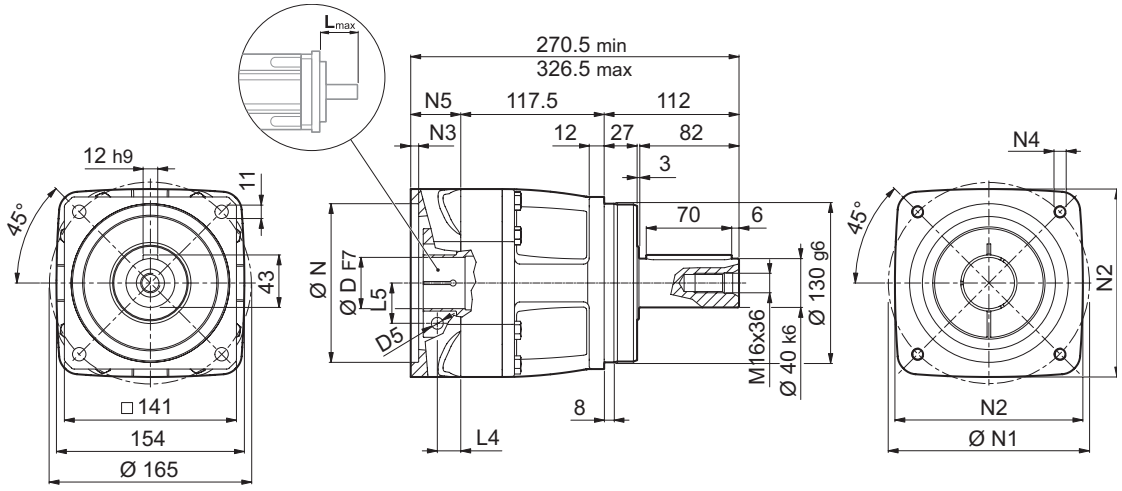



| D | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|
| **TQ 090 1** | | | | | | | | | | |
| 11 | 51 | 90 | 115 | M8x13 | M6 | 50 | 28 | 6.5 | 20.5 | 14.5 |
| 14 | 51 | 90 | 115 | M8x13 | M6 | 50 | 28 | 6.5 | 20.5 | 14.5 |
| 19 | 51 | 90 | 115 | M8x13 | M6 | 50 | 28 | 6.5 | 20.5 | 16.5 |
| 24 | 60 | 90 | 115 | M8x13 | M6 | 51.5 | 29.5 | 6.5 | 20.5 | 19 |
| 28 | 72 | 90 | 115 | M8x13 | M8 | 51.5 | 29.5 | 6.5 | 20.5 | 22.5 |
| 32 | 72 | 90 | 115 | M8x13 | M8 | 51.5 | 29.5 | 6.5 | 20.5 | 24.5 |
| 38 | 80 | 90 | 115 | M8x13 | M8 | 51.5 | 29.5 | 6.5 | 20.5 | 28 |
| **TQ 090 2** | | | | | | | | | | |
| 6 | 51 | 70 | 85 | M6x11 | M4 | 42 | 20 | 5 | 12.5 | 12.5 |
| 9 | 51 | 70 | 85 | M6x11 | M5 | 42 | 20 | 5 | 12.5 | 14.5 |
| 11 | 51 | 70 | 85 | M6x11 | M6 | 42 | 20 | 5 | 12.5 | 12.5 |
| 14 | 51 | 70 | 85 | M6x11 | M6 | 42 | 20 | 5 | 12.5 | 14.5 |
| 19 | 51 | 70 | 85 | M6x11 | M6 | 42 | 20 | 5 | 12.5 | 16.5 |
| 24 | 60 | 70 | 85 | M6x11 | M6 | 43.5 | 21.5 | 5 | 12.5 | 19 |

| i | $M_{n2}$ [Nm] | $M_{a2}$ [Nm] | $M_{p2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ ≤ [arcmin] | $\varphi_R$ ≤ [arcmin] | $C_t$ [Nm/arcmin] | SB $R_{2\,max}$ [N] | SB $A_{2\,max}$ [N] | HB $R_{2\,max}$ [N] | HB $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 11 | D 14 - 19 | D 24 | D 28 | D 32-38 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TQ 090 1_3** | 130 | 200 | 400 | 2500 | 4500 | 3' | 2' | 28 | 4800 | 4300 | 6600 | 5900 | 97 | – | 2.18 | 2.30 | 2.69 | 4.48 |
| **TQ 090 1_4** | 200 | 300 | 500 | 2500 | 4500 | 3' | 2' | 28 | 4800 | 4300 | 6600 | 5900 | 97 | – | 1.63 | 1.75 | 2.14 | 3.93 |
| **TQ 090 1_5** | 180 | 280 | 500 | 2500 | 4500 | 3' | 2' | 28 | 4800 | 4300 | 6600 | 5900 | 97 | – | 1.39 | 1.52 | 1.90 | 3.70 |
| **TQ 090 1_7** | 160 | 250 | 500 | 3000 | 4500 | 3' | 2' | 28 | 4800 | 4300 | 6600 | 5900 | 97 | – | 1.19 | 1.32 | 1.70 | 3.50 |
| **TQ 090 1_10** | 110 | 170 | 350 | 3000 | 4500 | 3' | 2' | 28 | 4800 | 4300 | 6600 | 5900 | 97 | – | 1.08 | 1.21 | 1.59 | 3.39 |
| **TQ 090 2_16** | 200 | 300 | 500 | 3000 | 4500 | 5' | 3' | 28 | 4800 | 4300 | 6600 | 5900 | 94 | 0.70 | 0.80 | 0.94 | – | – |
| **TQ 090 2_20** | 180 | 280 | 500 | 3000 | 4500 | 5' | 3' | 28 | 4800 | 4300 | 6600 | 5900 | 94 | 0.69 | 0.79 | 0.92 | – | – |
| **TQ 090 2_25** | 180 | 280 | 500 | 3000 | 4500 | 5' | 3' | 28 | 4800 | 4300 | 6600 | 5900 | 94 | 0.60 | 0.70 | 0.83 | – | – |
| **TQ 090 2_28** | 200 | 300 | 500 | 3000 | 4500 | 5' | 3' | 28 | 4800 | 4300 | 6600 | 5900 | 94 | 0.53 | 0.63 | 0.76 | – | – |
| **TQ 090 2_35** | 180 | 280 | 500 | 3000 | 4500 | 5' | 3' | 28 | 4800 | 4300 | 6600 | 5900 | 94 | 0.52 | 0.62 | 0.75 | – | – |
| **TQ 090 2_40** | 200 | 300 | 500 | 3000 | 4500 | 5' | 3' | 28 | 4800 | 4300 | 6600 | 5900 | 94 | 0.48 | 0.58 | 0.71 | – | – |
| **TQ 090 2_50** | 180 | 280 | 500 | 3500 | 4500 | 5' | 3' | 28 | 4800 | 4300 | 6600 | 5900 | 94 | 0.48 | 0.58 | 0.71 | – | – |
| **TQ 090 2_70** | 160 | 250 | 500 | 4000 | 4500 | 5' | 3' | 28 | 4800 | 4300 | 6600 | 5900 | 94 | 0.48 | 0.58 | 0.71 | – | – |
| **TQ 090 2_100** | 110 | 170 | 350 | 4000 | 4500 | 5' | 3' | 28 | 4800 | 4300 | 6600 | 5900 | 94 | 0.48 | 0.58 | 0.71 | – | – |

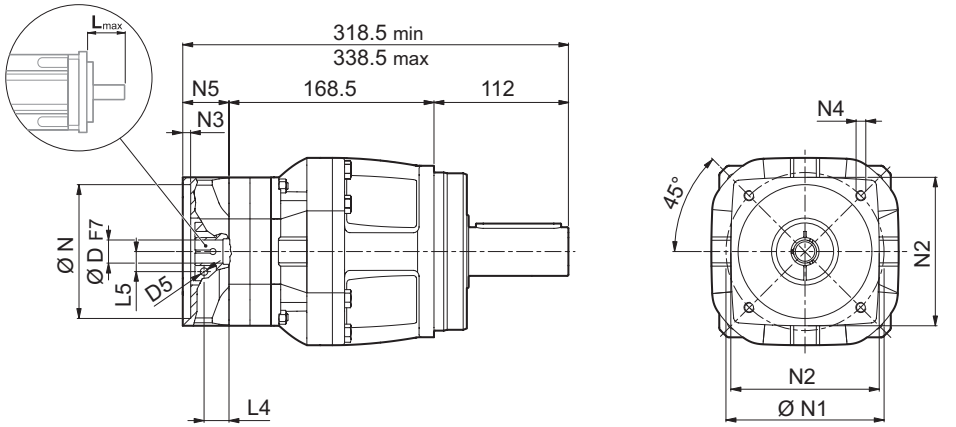
# TQ 130

## 80A3 ... 200A




| | Kg |
|---|---|
| **TQ 130 1** | 15.6 |

## 60A4 ... 180A1



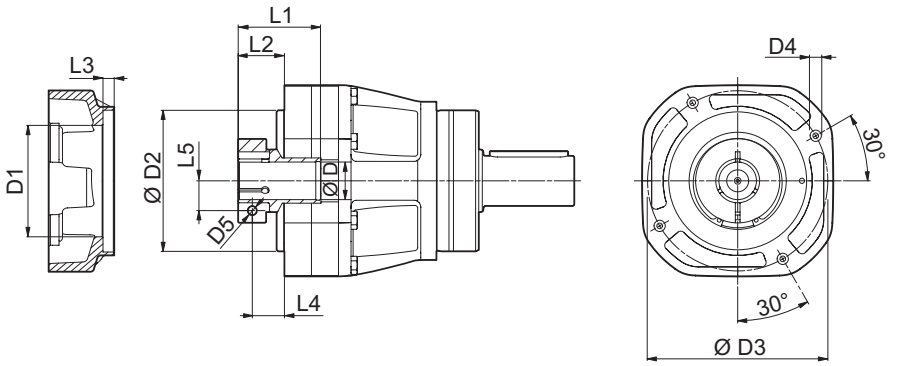

| | Kg |
|---|---|
| **TQ 130 2** | 19.1 |

| | D | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TQ 130 1** | | | | | | | | | | | | | | |
| **80A3** | 14 | 19 | – | – | – | – | – | 80 | 100 | 130 | 6.5 | M6x14 | 41 | 60 |
| **95A2** | 14 | 19 | 24 | 28 | – | – | – | 95 | 115 | 130 | 6.5 | M8x18 | 41 | 60 |
| **110A2** | 14 | 19 | 24 | – | – | – | – | 110 | 130 | 130 | 6.5 | M8x20 | 41 | 60 |
| **110B1** | 14 | 19 | 24 | 28 | – | – | – | 110 | 145 | 130 | 6.5 | M8x20 | 41 | 60 |
| **130A1** | 14 | 19 | 24 | 28 | 32 | – | – | 130 | 165 | 154 | 6.5 | M10x20 | 41 | 60 |
| **180A** | 14 | 19 | 24 | 28 | 32 | – | – | 180 | 215 | 190 | 6.5 | M14x28 | 41 | 60 |
| **180A1** | 14 | 19 | 24 | 28 | 32 | 38 | – | 180 | 215 | 190 | 6.5 | M14x28 | 61 | 80 |
| **200A** | 14 | 19 | 24 | 28 | 32 | 38 | 42 | 200 | 235 | 210 | 6.5 | M14x28 | 97 | 110 |
| **TQ 130 2** | | | | | | | | | | | | | | |
| **60A4** | 14 | 19 | – | – | – | – | – | 60 | 75 | 100 | 6.5 | M5x14 | 38 | 60 |
| **80A3** | 14 | 19 | – | – | – | – | – | 80 | 100 | 100 | 6.5 | M6x14 | 38 | 60 |
| **95A2** | 14 | 19 | 24 | 28 | – | – | – | 95 | 115 | 100 | 6.5 | M8x18 | 38 | 60 |
| **110A2** | 14 | 19 | 24 | – | – | – | – | 110 | 130 | 122 | 6.5 | M8x20 | 38 | 60 |
| **110B1** | 14 | 19 | 24 | 28 | – | – | – | 110 | 145 | 122 | 6.5 | M8x20 | 38 | 60 |
| **130A1** | 14 | 19 | 24 | 28 | 32 | – | – | 130 | 165 | 140 | 6.5 | M10x20 | 38 | 60 |
| **180A** | 14 | 19 | 24 | 28 | 32 | – | – | 180 | 215 | 190 | 6.5 | M14x38 | 38 | 60 |
| **180A1** | 14 | 19 | 24 | 28 | 32 | 38 | – | 180 | 215 | 190 | 6.5 | M14x28 | 58 | 80 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

# TQ 130

**FM**

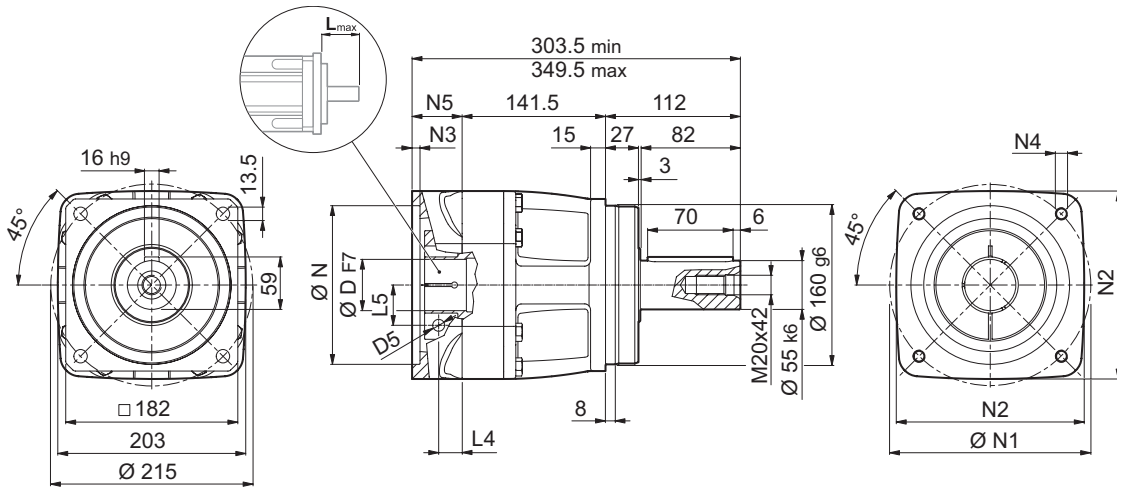



| D | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|
| **TQ 130 1** | | | | | | | | | | |
| 14 | 54 | 120 | 140 | M10x16 | M6 | 50 | 31 | 7.5 | 23.5 | 16.5 |
| 19 | 54 | 120 | 140 | M10x16 | M6 | 50 | 31 | 7.5 | 23.5 | 16.5 |
| 24 | 70 | 120 | 140 | M10x16 | M6 | 51.5 | 32.5 | 7.5 | 23.5 | 19 |
| 28 | 70 | 120 | 140 | M10x16 | M8 | 51.5 | 32.5 | 7.5 | 23.5 | 22.5 |
| 32 | 72 | 120 | 140 | M10x16 | M8 | 51.5 | 32.5 | 7.5 | 23.5 | 24.5 |
| 38 | 100 | 120 | 140 | M10x16 | M8 | 54 | 35 | 7.5 | 23.5 | 28 |
| 42 | 114 | 120 | 140 | M10x16 | M10 | 51.5 | 38.5 | 7.5 | 23.5 | 33 |
| **TQ 130 2** | | | | | | | | | | |
| 11 | 51 | 90 | 115 | M8x13 | M6 | 50 | 28 | 6.5 | 20.5 | 14.5 |
| 14 | 51 | 90 | 115 | M8x13 | M6 | 50 | 28 | 6.5 | 20.5 | 14.5 |
| 19 | 51 | 90 | 115 | M8x13 | M6 | 50 | 28 | 6.5 | 20.5 | 16.5 |
| 24 | 60 | 90 | 115 | M8x13 | M6 | 51.5 | 29.5 | 6.5 | 20.5 | 19 |
| 28 | 72 | 90 | 115 | M8x13 | M8 | 51.5 | 29.5 | 6.5 | 20.5 | 22.5 |
| 32 | 72 | 90 | 115 | M8x13 | M8 | 51.5 | 29.5 | 6.5 | 20.5 | 24.5 |
| 38 | 80 | 90 | 115 | M8x13 | M8 | 51.5 | 29.5 | 6.5 | 20.5 | 28 |

| i | $M_{n2}$ [Nm] | $M_{a2}$ [Nm] | $M_{p2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ ≤ [arcmin] | $\varphi_R$ ≤ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 14 | D 19 - 24 | D 28 - 32 | D 38 | D 42 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TQ 130 1_3 | 260 | 400 | 900 | 2100 | 4000 | 3' | 2' | 59 | 9000 | 8000 | 97 | – | 10.02 | 10.48 | 11.12 | 17.12 |
| TQ 130 1_4 | 400 | 600 | 1000 | 2100 | 4000 | 3' | 2' | 59 | 9000 | 8000 | 97 | – | 6.38 | 6.85 | 7.49 | 13.49 |
| TQ 130 1_5 | 400 | 600 | 1000 | 2500 | 4000 | 3' | 2' | 59 | 9000 | 8000 | 97 | – | 5.01 | 5.47 | 6.11 | 12.11 |
| TQ 130 1_7 | 360 | 550 | 950 | 2500 | 4000 | 3' | 2' | 59 | 9000 | 8000 | 97 | – | 3.82 | 4.28 | 4.93 | 10.93 |
| TQ 130 1_10 | 280 | 420 | 900 | 2500 | 4000 | 3' | 2' | 59 | 9000 | 8000 | 97 | – | 3.15 | 3.61 | 4.25 | 10.25 |
| TQ 130 2_16 | 400 | 600 | 1000 | 2800 | 4000 | 5' | 3' | 58 | 9000 | 8000 | 94 | 1.72 | 1.87 | 3.53 | 4.05 | – |
| TQ 130 2_20 | 400 | 600 | 1000 | 2800 | 4000 | 5' | 3' | 58 | 9000 | 8000 | 94 | 1.64 | 1.80 | 3.46 | 3.98 | – |
| TQ 130 2_25 | 400 | 600 | 1000 | 2800 | 4000 | 5' | 3' | 58 | 9000 | 8000 | 94 | 1.39 | 1.55 | 3.21 | 3.73 | – |
| TQ 130 2_28 | 400 | 600 | 1000 | 2800 | 4000 | 5' | 3' | 58 | 9000 | 8000 | 94 | 1.20 | 1.36 | 3.02 | 3.54 | – |
| TQ 130 2_35 | 400 | 600 | 1000 | 2800 | 4000 | 5' | 3' | 58 | 9000 | 8000 | 94 | 1.17 | 1.33 | 2.99 | 3.51 | – |
| TQ 130 2_40 | 400 | 600 | 1000 | 3200 | 4000 | 5' | 3' | 58 | 9000 | 8000 | 94 | 1.07 | 1.23 | 2.89 | 3.41 | – |
| TQ 130 2_50 | 400 | 600 | 1000 | 3200 | 4000 | 5' | 3' | 58 | 9000 | 8000 | 94 | 1.06 | 1.21 | 2.87 | 3.39 | – |
| TQ 130 2_70 | 360 | 550 | 950 | 3500 | 4000 | 5' | 3' | 58 | 9000 | 8000 | 94 | 1.05 | 1.20 | 2.86 | 3.38 | – |
| TQ 130 2_100 | 280 | 420 | 900 | 4000 | 4000 | 5' | 3' | 58 | 9000 | 8000 | 94 | 1.04 | 1.20 | 2.86 | 3.38 | – |

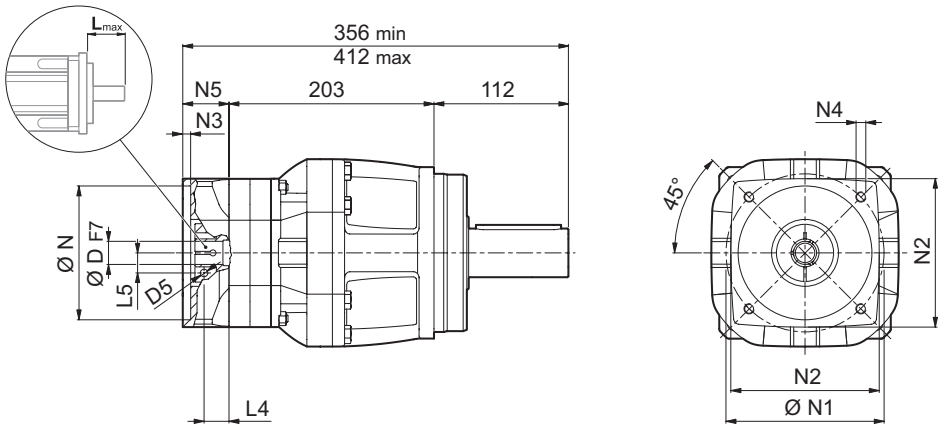
# TQ 160

## 95A2 ... 230A




| | Kg |
|---|---|
| **TQ 160 1** | 29.7 |

## 80A3 ... 200A



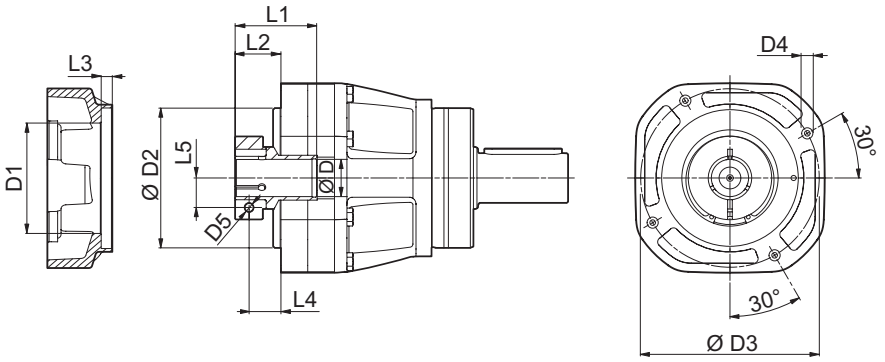

| | Kg |
|---|---|
| **TQ 160 2** | 37.4 |

| | D | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TQ 160 1** | | | | | | | | | | | | | | |
| **95A2** | 19 | 24 | 28 | – | – | – | – | 95 | 115 | 158 | 6.5 | M8x20 | 50 | 60 |
| **110A2** | 19 | 24 | – | – | – | – | – | 110 | 130 | 158 | 6.5 | M8x20 | 50 | 60 |
| **130A1** | 19 | 24 | 28 | 32 | – | – | – | 130 | 165 | 158 | 6.5 | M10x20 | 50 | 60 |
| **180A** | 19 | 24 | 28 | 32 | – | – | – | 180 | 215 | 203 | 6.5 | M14x28 | 50 | 60 |
| **180A1** | 19 | 24 | 28 | 32 | 38 | – | – | 180 | 215 | 205 | 6.5 | M14x28 | 60 | 80 |
| **200A** | 19 | 24 | 28 | 32 | 38 | 42 | 48 | 200 | 235 | 220 | 6.5 | M14x28 | 96 | 110 |
| **230A** | 19 | 24 | 28 | 32 | 38 | 42 | 48 | 230 | 265 | 240 | 6.5 | M14x28 | 96 | 110 |
| **TQ 160 2** | | | | | | | | | | | | | | |
| **80A3** | 19 | – | – | – | – | – | – | 80 | 100 | 130 | 6.5 | M6x14 | 41 | 60 |
| **95A2** | 19 | 24 | 28 | – | – | – | – | 95 | 115 | 130 | 6.5 | M8x18 | 41 | 60 |
| **110A2** | 19 | 24 | – | – | – | – | – | 110 | 130 | 130 | 6.5 | M8x20 | 41 | 60 |
| **110B1** | 19 | 24 | 28 | – | – | – | – | 110 | 145 | 130 | 6.5 | M8x20 | 41 | 60 |
| **130A1** | 19 | 24 | 28 | 32 | – | – | – | 130 | 165 | 154 | 6.5 | M10x20 | 41 | 60 |
| **180A** | 19 | 24 | 28 | 32 | – | – | – | 180 | 215 | 190 | 6.5 | M14x28 | 41 | 60 |
| **180A1** | 19 | 24 | 28 | 32 | 38 | – | – | 180 | 215 | 190 | 6.5 | M14x28 | 61 | 80 |
| **200A** | 19 | 24 | 28 | 32 | 38 | 42 | – | 200 | 235 | 210 | 6.5 | M14x28 | 97 | 110 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

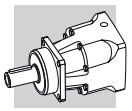
# TQ 160

**FM**



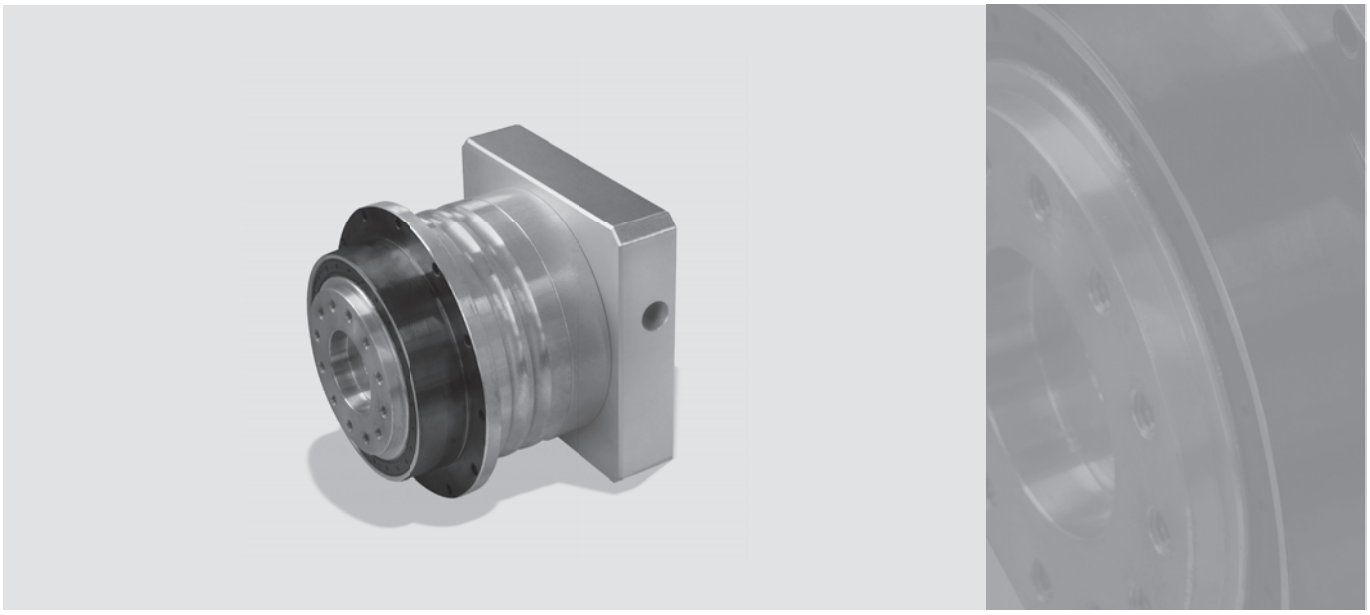

| D | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|
| **TQ 160 1** | | | | | | | | | | |
| 19 | 58 | 150 | 175 | M12x20 | M6 | 47 | 37 | 9.5 | 28 | 19 |
| 24 | 58 | 150 | 175 | M12x20 | M6 | 47 | 37 | 9.5 | 28 | 19 |
| 28 | 70 | 150 | 175 | M12x20 | M8 | 47 | 37 | 9.5 | 28 | 22.5 |
| 32 | 72 | 150 | 175 | M12x20 | M8 | 47 | 37 | 9.5 | 28 | 24.5 |
| 38 | 100 | 150 | 175 | M12x20 | M8 | 59.5 | 39.5 | 9.5 | 28 | 28 |
| 42 | 114 | 150 | 175 | M12x20 | M10 | 57 | 43 | 9.5 | 28 | 33 |
| 48 | 125 | 150 | 175 | M12x20 | M12 | 57 | 43 | 9.5 | 28 | 36.5 |
| **TQ 160 2** | | | | | | | | | | |
| 14 | 54 | 120 | 140 | M10x16 | M6 | 50 | 31 | 7.5 | 23.5 | 16.5 |
| 19 | 54 | 120 | 140 | M10x16 | M6 | 50 | 31 | 7.5 | 23.5 | 16.5 |
| 24 | 70 | 120 | 140 | M10x16 | M6 | 51.5 | 32.5 | 7.5 | 23.5 | 19 |
| 28 | 70 | 120 | 140 | M10x16 | M8 | 51.5 | 32.5 | 7.5 | 23.5 | 22.5 |
| 32 | 72 | 120 | 140 | M10x16 | M8 | 51.5 | 32.5 | 7.5 | 23.5 | 24.5 |
| 38 | 100 | 120 | 140 | M10x16 | M8 | 54 | 35 | 7.5 | 23.5 | 28 |
| 42 | 114 | 120 | 140 | M10x16 | M10 | 51.5 | 38.5 | 7.5 | 23.5 | 33 |

| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ ≤ [arcmin] | $\varphi_R$ ≤ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 19 | D 24 - 28 | D 32 - 38 | D 42 | D 48 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TQ 160 1_3** | 530 | 800 | 1500 | 1500 | 3500 | 3' | 2' | 170 | 15000 | 13000 | 97 | – | 29.58 | 29.99 | 32.89 | 45.99 |
| **TQ 160 1_4** | 800 | 1200 | 2000 | 1500 | 3500 | 3' | 2' | 170 | 15000 | 13000 | 97 | – | 18.03 | 18.44 | 21.33 | 34.44 |
| **TQ 160 1_5** | 800 | 1200 | 2000 | 1800 | 3500 | 3' | 2' | 170 | 15000 | 13000 | 97 | – | 11.76 | 12.17 | 15.06 | 28.17 |
| **TQ 160 1_7** | 750 | 1150 | 2000 | 2500 | 3500 | 3' | 2' | 170 | 15000 | 13000 | 97 | – | 9.27 | 9.68 | 12.58 | 25.68 |
| **TQ 160 1_10** | 550 | 850 | 1600 | 2500 | 3500 | 3' | 2' | 170 | 15000 | 13000 | 97 | – | 7.05 | 7.46 | 10.35 | 23.46 |
| **TQ 160 2_16** | 800 | 1200 | 2000 | 2800 | 3500 | 5' | 3' | 170 | 15000 | 13000 | 94 | 6.52 | 7.05 | 7.77 | 13.77 | – |
| **TQ 160 2_20** | 800 | 1200 | 2000 | 2800 | 3500 | 5' | 3' | 170 | 15000 | 13000 | 94 | 6.16 | 6.69 | 7.41 | 13.41 | – |
| **TQ 160 2_25** | 800 | 1200 | 2000 | 2800 | 3500 | 5' | 3' | 170 | 15000 | 13000 | 94 | 4.81 | 5.34 | 6.06 | 12.06 | – |
| **TQ 160 2_28** | 800 | 1200 | 2000 | 2800 | 3500 | 5' | 3' | 170 | 15000 | 13000 | 94 | 3.77 | 4.30 | 5.02 | 11.02 | – |
| **TQ 160 2_35** | 800 | 1200 | 2000 | 2800 | 3500 | 5' | 3' | 170 | 15000 | 13000 | 94 | 3.65 | 4.18 | 4.90 | 10.90 | – |
| **TQ 160 2_40** | 800 | 1200 | 2000 | 2800 | 3500 | 5' | 3' | 170 | 15000 | 13000 | 94 | 3.05 | 3.57 | 4.30 | 10.30 | – |
| **TQ 160 2_50** | 800 | 1200 | 2000 | 2800 | 3500 | 5' | 3' | 170 | 15000 | 13000 | 94 | 2.99 | 3.52 | 4.24 | 10.24 | – |
| **TQ 160 2_70** | 750 | 1150 | 2000 | 3000 | 3500 | 5' | 3' | 170 | 15000 | 13000 | 94 | 2.97 | 3.50 | 4.22 | 10.22 | – |
| **TQ 160 2_100** | 550 | 850 | 1600 | 3000 | 3500 | 5' | 3' | 170 | 15000 | 13000 | 94 | 2.95 | 3.48 | 4.20 | 10.20 | – |



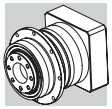
# **NEUE TQF-REIHE**
# KOAXIALE PRÄZISIONSPLANETENGETRIEBE MIT FLANSCHWELLE

Die TQF Getriebe stehen an der Spitze des Produktportfolios.
Ob Drehmoment, Steifigkeit oder Präzision – diese attraktive Produktreihe punktet in jeder Kategorie.



**Produktmerkmale:**

- Höchste Drehmomentdichte mit kompaktem Design
- Höchstes Beschleunigungs- und Nenndrehmoment
- Höchste radiale und axiale Belastbarkeit
- Höchstes Kippmoment und höchste Drehsteifigkeit
- Niedriges Verdrehflankenspiel – unter 3 arcmin
- Flanschwelle ähnlich EN ISO 9409
- Entwickelt für Zyklus- und Dauerbetrieb
- Höchste Verdrehsteifigkeit
- Laufruhig
- Einsetzbar in beliebiger Montageaposition



## 3 EIGENSCHAFTEN DER NEUEN TQF-REIHE

Die spielarmen Planetengetriebe der TQF-Reihe mit abtriebsseitiger Flanschwelle sind ideal für höchste Positioniergenauigkeit und dynamischen Zyklusbetrieb geeignet.
Entwicklung und Konstruktion folgten dem Ziel eine Produktreihe mit höchster Leistung, höchster Steifigkeit, geringem Spiel und kompaktheit zu schaffen.

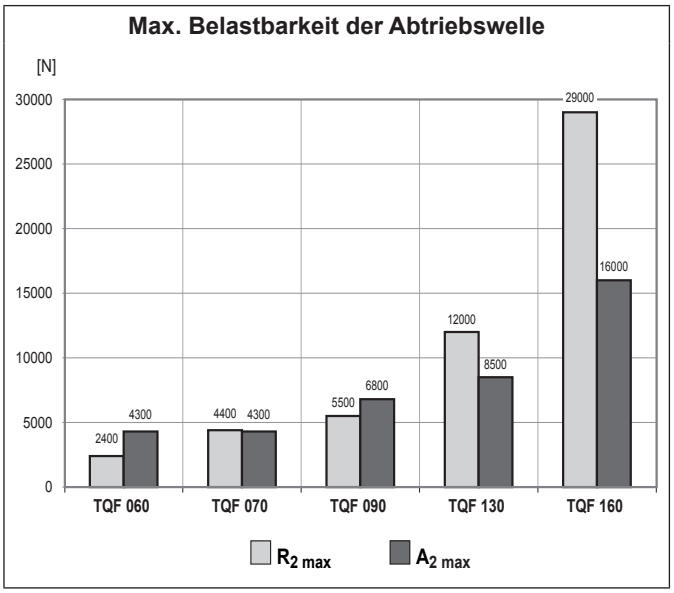


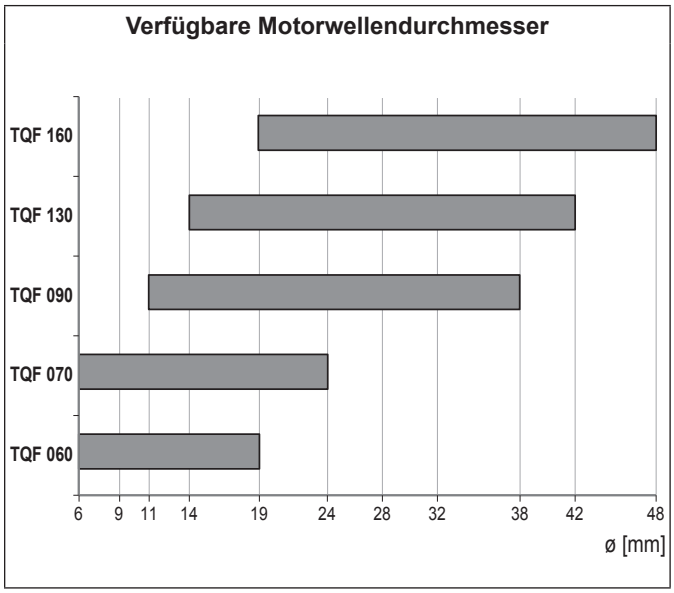
- Die TQF-Reihe hat zwei Präzisionsklassen, mit diesem Verdrehflankenspiel:
  1-stufige Getriebe: standard $\varphi_S \leq 5'$ reduziert $\varphi_R \leq 3'$
  2-stufige Getriebe: standard $\varphi_S \leq 7'$ reduziert $\varphi_R \leq 5'$
- Eine hohe IP-Schutzklasse (IP65) sorgt dafür, dass innenliegende Teile vor Staub- und Flüssigkeitseintritt geschützt sind.
- Serienmäßige Fluorelastomer-Wellendichtungen an der Eingangswelle
- Schalldruckpegel $60 \leq L_p \leq 70$ dB(A). Gemessen in 1 m Abstand ohne Last und bei einer Eingangsdrehzahl von $n_1 = 3000$ min$^{-1}$; i = 10.
- Große Auswahl an Motoradaptern sorgt für den Anschluss an die marktgängigsten Servomotoren.
- Schmierung optimiert für die gewünschte Betriebsart.
  Ohne Verunreinigung muss das Schmiermittel nicht regelmäßig gewechselt werden.

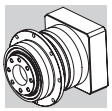
| Betrieb | TQF 060 ... TQF 160 | andere Dichtungen |
|---|---|---|
| **S1** (kontinuierlich) | Synthetiköl Viskositätsklasse ISO VG 220 | Fluoroelastomer |
| **S5** (unterbrochen) | NLGI Fettkonsistenz 00 | NBR |

- Umgebungstemperatur min. -20°C, max. +30°C; bei Temperaturen höher als 30°C ist der Temperaturfaktor $f_T$ zu berücksichtigen..
- Die Gehäusetemperatur darf $T_{max}$ = 90°C nicht übersteigen.

| **Übersicht der Nenndrehmomente $M_{n2}$** [Nm] | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| [i] | **4** | **5** | **7** | **10** | **16** | **20** | **25** | **28** | **35** | **40** | **50** | **70** | **100** |
| **TQF 060** | 30 | 30 | 25 | 20 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 25 | 20 |
| **TQF 070** | 70 | 70 | 60 | 40 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 60 | 40 |
| **TQF 090** | 200 | 180 | 160 | 110 | 200 | 180 | 180 | 200 | 180 | 200 | 180 | 160 | 110 |
| **TQF 130** | 400 | 400 | 360 | 280 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 360 | 280 |
| **TQF 160** | 800 | 800 | 750 | 550 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 750 | 550 |





### *3.1 BESTELLBEZEICHNUNG*

**TQF** | **130** | **1** | **4** | **STD** | **80A3** | **CD** | **19** | **S5** | **UH1**

SCHMIERSTOFF
- **–** Standard
- **UH1** Lebensmitteltaugliches Schmiermittel

BETRIEBSART
- **S1** Dauerbetrieb
- **S5** Kurzzeitbetrieb

BOHRUNGSDURCHMESSER EINGANGSWELLE
- **6 ... 38**

MOTORKOPPLUNG
- **CD** Klemmnabe

ANTRIEBSFLANSCH
- **40B1.. .180A1** Motorflansch
- **FM** Ohne Motorflansch

VERDREHSPIEL

| | 1 Getriebestufe | 2 Getriebestufen |
|---|---|---|
| **STD** | $\varphi_S \leq 5'$ | $\varphi_S \leq 7'$ |
| **LOW** | $\varphi_R \leq 3'$ | $\varphi_R \leq 5'$ |

GETRIEBEÜBERSETZUNG

GETRIEBESTUFEN
- **1** **2**

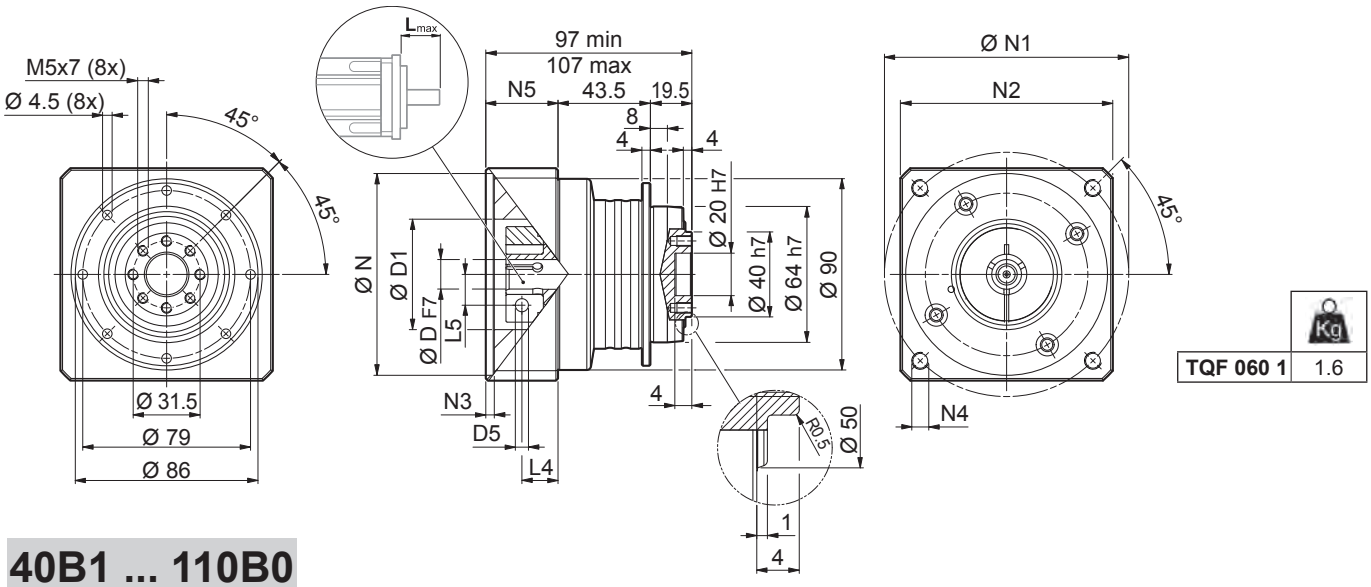
BAUGRÖSSE
- **060** **070** **090** **130** **160**

REIHE
- **TQF**

TQF

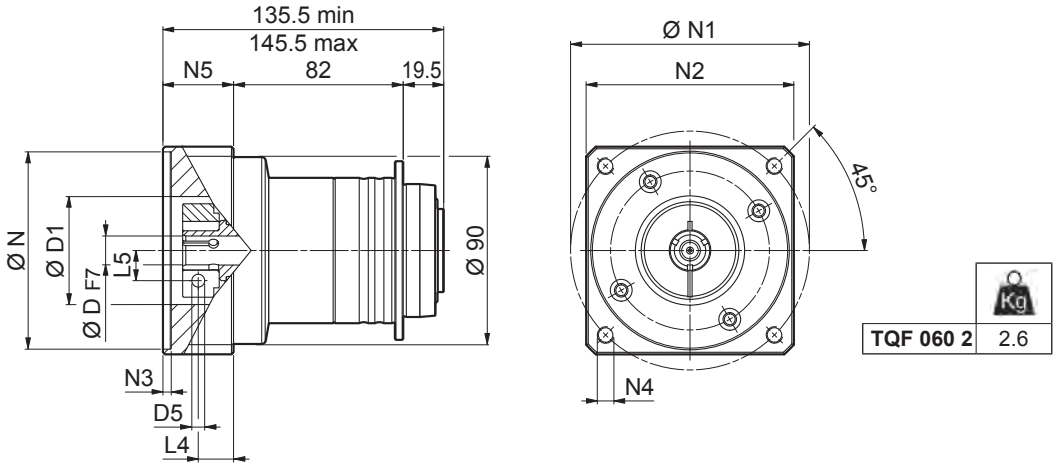
### 3.2 ABMESSUNGEN UND TECHNISCHE DATEN

# TQF 060




| | Kg |
|---|---|
| TQF 060 1 | 1.6 |

## 40B1 ... 110B0



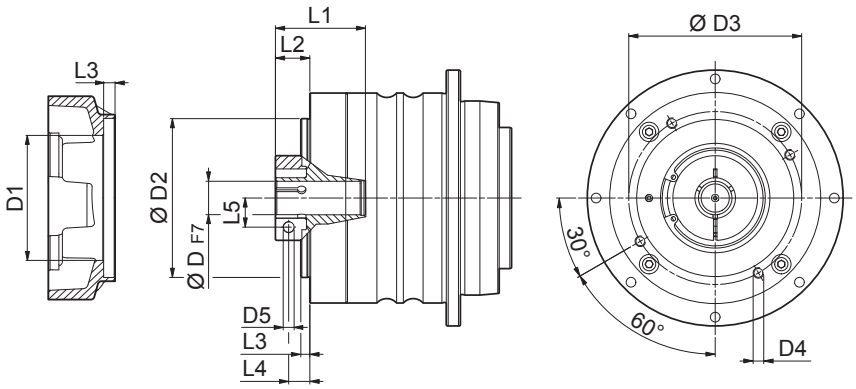

| | Kg |
|---|---|
| TQF 060 2 | 2.6 |

| | D | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **40B1** | 6 | 9 | 11 | 14 | - | 40 | 63 | 80 | 4 | M4x12 | 34 | 40 |
| **50A1** | 6 | 9 | 11 | 14 | - | 50 | 60 | 80 | 4 | M4x10 | 34 | 40 |
| **50C1** | 6 | 9 | 11 | 14 | - | 50 | 70 | 80 | 4 | M4x10 | 34 | 40 |
| **60A2** | 6 | 9 | 11 | 14 | 19 | 60 | 75 | 80 | 4 | M5x16 | 34 | 40 |
| **70B1** | 6 | 9 | 11 | 14 | 19 | 70 | 90 | 80 | 4 | M5x16 | 34 | 40 |
| **80A1** | 6 | 9 | 11 | 14 | 19 | 80 | 100 | 90 | 4 | M6x16 | 34 | 40 |
| **95A** | 6 | 9 | 11 | 14 | 19 | 95 | 115 | 100 | 6.5 | M8x20 | 34 | 40 |
| **110B0** | 6 | 9 | 11 | 14 | 19 | 110 | 145 | 120 | 6.5 | M8x20 | 44 | 40 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

# TQF 060

**FM**

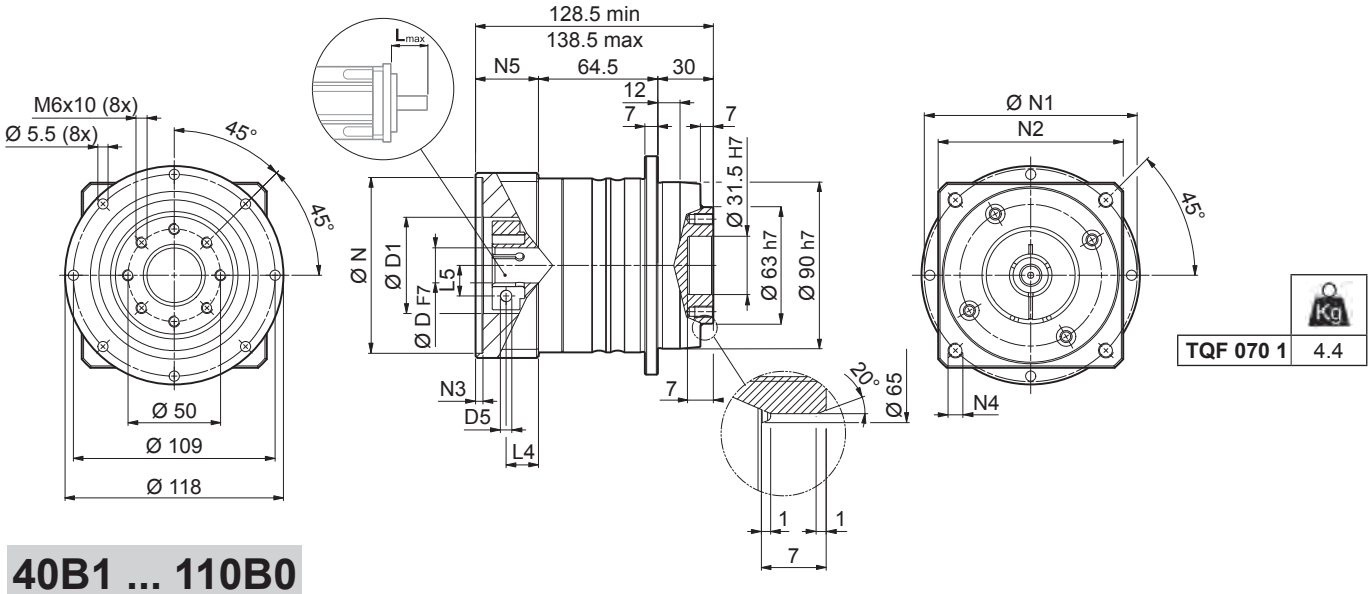



| D | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 37 | 68 | 76.5 | M6x12 | M4 | 31.5 | 21.5 | 7.5 | 16 | 8 |
| 9 | 49 | 68 | 76.5 | M6x12 | M5 | 35 | 24.5 | 7.5 | 17 | 10.5 |
| 11 | 49 | 68 | 76.5 | M6x12 | M6 | 35 | 24.5 | 7.5 | 17 | 12.5 |
| 14 | 49 | 68 | 76.5 | M6x12 | M6 | 35 | 24.5 | 7.5 | 17 | 14.5 |
| 19 | 54 | 68 | 76.5 | M6x12 | M6 | 35 | 24.5 | 7.5 | 17 | 16.5 |

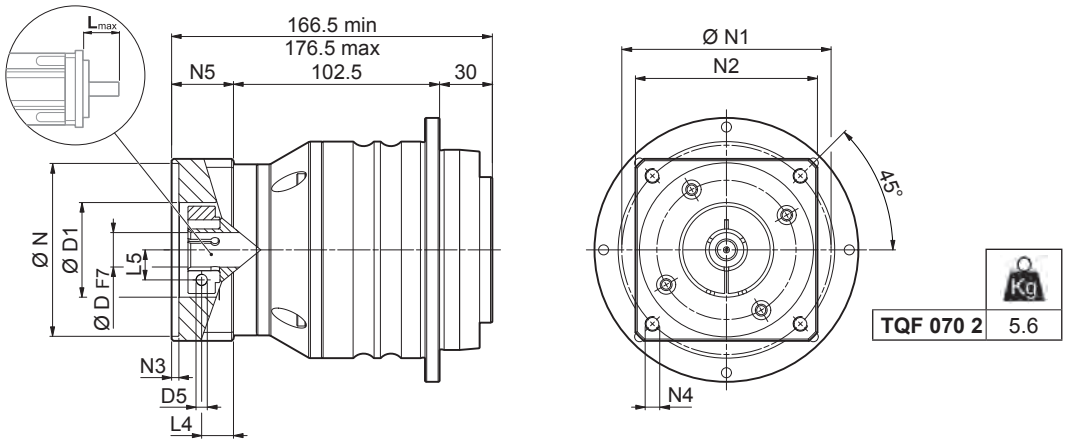
| i | $M_{n2}$ [Nm] | $M_{a2}$ [Nm] | $M_{p2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ ≤ [arcmin] | $\varphi_R$ ≤ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 6 - 9 | D 11 - 14 | D 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TQF 060 1_4 | 30 | 45 | 80 | 3500 | 6000 | 5' | 3' | 12 | 2400 | 4300 | 97 | 0.32 | 0.43 | 0.47 |
| TQF 060 1_5 | 30 | 45 | 80 | 3500 | 6000 | 5' | 3' | 12 | 2400 | 4300 | 97 | 0.27 | 0.39 | 0.42 |
| TQF 060 1_7 | 25 | 38 | 70 | 4000 | 6000 | 5' | 3' | 12 | 2400 | 4300 | 97 | 0.23 | 0.35 | 0.38 |
| TQF 060 1_10 | 20 | 30 | 55 | 4000 | 6000 | 5' | 3' | 12 | 2400 | 4300 | 97 | 0.21 | 0.33 | 0.36 |
| TQF 060 2_16 | 30 | 45 | 80 | 4500 | 6000 | 7' | 5' | 12 | 2400 | 4300 | 94 | 0.28 | 0.39 | 0.43 |
| TQF 060 2_20 | 30 | 45 | 80 | 4500 | 6000 | 7' | 5' | 12 | 2400 | 4300 | 94 | 0.27 | 0.39 | 0.42 |
| TQF 060 2_25 | 30 | 45 | 80 | 4500 | 6000 | 7' | 5' | 12 | 2400 | 4300 | 94 | 0.25 | 0.36 | 0,40 |
| TQF 060 2_28 | 30 | 45 | 80 | 4500 | 6000 | 7' | 5' | 12 | 2400 | 4300 | 94 | 0.22 | 0.34 | 0.37 |
| TQF 060 2_35 | 30 | 45 | 80 | 4500 | 6000 | 7' | 5' | 12 | 2400 | 4300 | 94 | 0.22 | 0.33 | 0.37 |
| TQF 060 2_40 | 30 | 45 | 80 | 4500 | 6000 | 7' | 5' | 12 | 2400 | 4300 | 94 | 0.21 | 0.32 | 0.36 |
| TQF 060 2_50 | 30 | 45 | 80 | 4500 | 6000 | 7' | 5' | 12 | 2400 | 4300 | 94 | 0.21 | 0.32 | 0.36 |
| TQF 060 2_70 | 25 | 38 | 70 | 5000 | 6000 | 7' | 5' | 12 | 2400 | 4300 | 94 | 0.21 | 0.32 | 0.36 |
| TQF 060 2_100 | 20 | 30 | 55 | 5000 | 6000 | 7' | 5' | 12 | 2400 | 4300 | 94 | 0.21 | 0.32 | 0.36 |

# TQF 070

## 50C2 ... 130A




## 40B1 ... 110B0

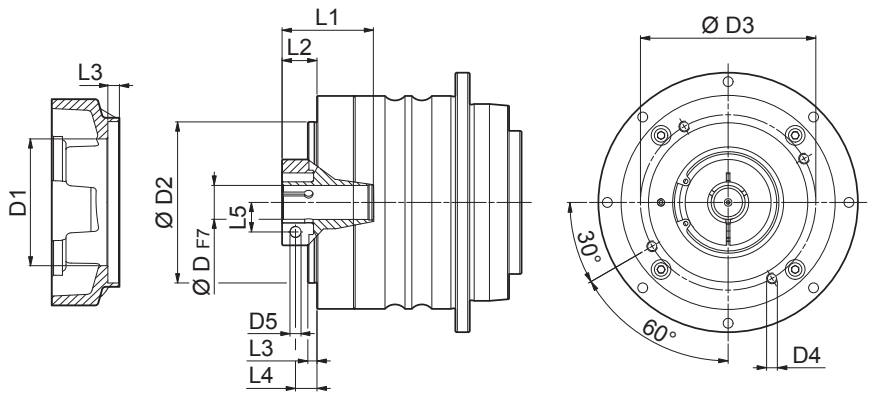



| | D | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TQF 070 1** | | | | | | | | | | | | | |
| **50C2** | 6 | 9 | 11 | 14 | - | - | 50 | 70 | 80 | 4 | M4x10 | 34 | 50 |
| **60A3** | 6 | 9 | 11 | 14 | 19 | - | 60 | 75 | 80 | 4 | M5x16 | 34 | 50 |
| **70B2** | 6 | 9 | 11 | 14 | 19 | - | 70 | 90 | 80 | 4 | M5x16 | 34 | 50 |
| **80A2** | 6 | 9 | 11 | 14 | 19 | - | 80 | 100 | 90 | 4 | M6x16 | 34 | 50 |
| **95A1** | 6 | 9 | 11 | 14 | 19 | 24 | 95 | 115 | 100 | 6.5 | M8x20 | 34 | 50 |
| **110A1** | 6 | 9 | 11 | 14 | 19 | 24 | 110 | 130 | 115 | 6.5 | M8x20 | 34 | 50 |
| **110B1** | 6 | 9 | 11 | 14 | 19 | 24 | 110 | 145 | 120 | 6.5 | M8x20 | 44 | 60 |
| **130A** | 6 | 9 | 11 | 14 | 19 | 24 | 130 | 165 | 140 | 6.5 | M10x19 | 34 | 50 |
| **TQF 070 2** | | | | | | | | | | | | | |
| **40B1** | 6 | 9 | 11 | 14 | - | - | 40 | 63 | 80 | 4 | M4x12 | 34 | 40 |
| **50A1** | 6 | 9 | 11 | 14 | - | - | 50 | 60 | 80 | 4 | M4x10 | 34 | 40 |
| **50C1** | 6 | 9 | 11 | 14 | - | - | 50 | 70 | 80 | 4 | M4x10 | 34 | 40 |
| **60A2** | 6 | 9 | 11 | 14 | 19 | - | 60 | 75 | 80 | 4 | M5x16 | 34 | 40 |
| **70B1** | 6 | 9 | 11 | 14 | 19 | - | 70 | 90 | 80 | 4 | M5x16 | 34 | 40 |
| **80A1** | 6 | 9 | 11 | 14 | 19 | - | 80 | 100 | 90 | 4 | M6x16 | 34 | 40 |
| **95A** | 6 | 9 | 11 | 14 | 19 | - | 95 | 115 | 100 | 6.5 | M8x20 | 34 | 40 |
| **110B0** | 6 | 9 | 11 | 14 | 19 | - | 110 | 145 | 120 | 6.5 | M8x20 | 44 | 40 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

# TQF 070

**FM**

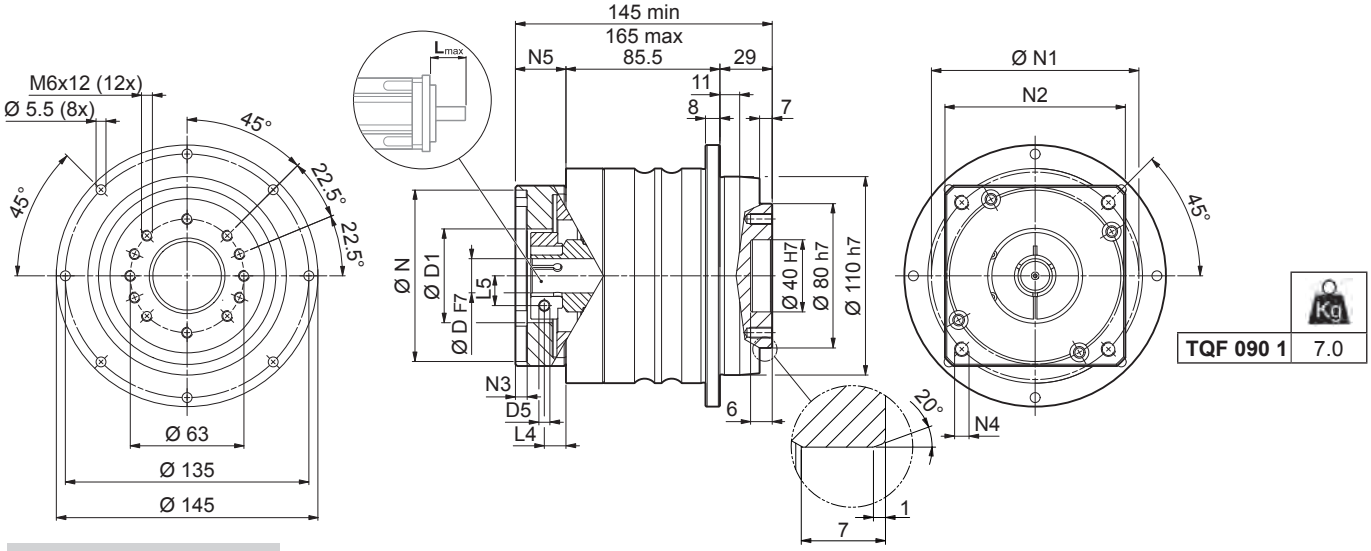



| D | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|
| **TQF 070 1** | | | | | | | | | | |
| 6 | 37 | 68 | 76.5 | M6x14 | M4 | 45 | 23 | 9 | 19 | 8 |
| 9 | 49 | 68 | 76.5 | M6x14 | M5 | 42 | 26 | 9 | 18.5 | 10.5 |
| 11 | 51 | 68 | 76.5 | M6x14 | M6 | 42 | 25 | 9 | 17.5 | 12.5 |
| 14 | 51 | 68 | 76.5 | M6x14 | M6 | 42 | 25 | 9 | 17.5 | 14.5 |
| 19 | 51 | 68 | 76.5 | M6x14 | M6 | 42 | 25 | 9 | 17.5 | 16.5 |
| 24 | 60 | 68 | 76.5 | M6x14 | M6 | 43.5 | 26.5 | 9 | 17.5 | 19 |
| **TQF 070 2** | | | | | | | | | | |
| 6 | 37 | 68 | 76.5 | M6x12 | M4 | 31.5 | 21.5 | 7.5 | 16 | 8 |
| 9 | 49 | 68 | 76.5 | M6x12 | M5 | 35 | 24.5 | 7.5 | 17 | 10.5 |
| 11 | 49 | 68 | 76.5 | M6x12 | M6 | 35 | 24.5 | 7.5 | 17 | 12.5 |
| 14 | 49 | 68 | 76.5 | M6x12 | M6 | 35 | 24.5 | 7.5 | 17 | 14.5 |
| 19 | 54 | 68 | 76.5 | M6x12 | M6 | 35 | 24.5 | 7.5 | 17 | 16.5 |

| i | $M_{n2}$ [Nm] | $M_{a2}$ [Nm] | $M_{p2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ ≤ [arcmin] | $\varphi_R$ ≤ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 6 - 9 | 11 - 14 | 19 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TQF 070 1_4 | 70 | 100 | 180 | 3000 | 6000 | 5' | 3' | 29 | 4400 | 4300 | 97 | - | 1.05 | 1.09 | 1.22 |
| TQF 070 1_5 | 70 | 100 | 180 | 3000 | 6000 | 5' | 3' | 29 | 4400 | 4300 | 97 | - | 0.85 | 0.88 | 1.01 |
| TQF 070 1_7 | 60 | 90 | 160 | 3500 | 6000 | 5' | 3' | 29 | 4400 | 4300 | 97 | - | 0.68 | 0.71 | 0.85 |
| TQF 070 1_10 | 40 | 60 | 110 | 3500 | 6000 | 5' | 3' | 29 | 4400 | 4300 | 97 | - | 0.59 | 0.62 | 0.75 |
| TQF 070 2_16 | 70 | 100 | 180 | 3500 | 6000 | 7' | 5' | 29 | 4400 | 4300 | 94 | 0.31 | 0.43 | 0.46 | - |
| TQF 070 2_20 | 70 | 100 | 180 | 3500 | 6000 | 7' | 5' | 29 | 4400 | 4300 | 94 | 0,30 | 0.41 | 0.45 | - |
| TQF 070 2_25 | 70 | 100 | 180 | 3500 | 6000 | 7' | 5' | 29 | 4400 | 4300 | 94 | 0.26 | 0.37 | 0.41 | - |
| TQF 070 2_28 | 70 | 100 | 180 | 3500 | 6000 | 7' | 5' | 29 | 4400 | 4300 | 94 | 0.23 | 0.35 | 0.38 | - |
| TQF 070 2_35 | 70 | 100 | 180 | 3500 | 6000 | 7' | 5' | 29 | 4400 | 4300 | 94 | 0.23 | 0.34 | 0.38 | - |
| TQF 070 2_40 | 70 | 100 | 180 | 3500 | 6000 | 7' | 5' | 29 | 4400 | 4300 | 94 | 0.21 | 0.33 | 0.36 | - |
| TQF 070 2_50 | 70 | 100 | 180 | 3500 | 6000 | 7' | 5' | 29 | 4400 | 4300 | 94 | 0.21 | 0.32 | 0.36 | - |
| TQF 070 2_70 | 60 | 90 | 160 | 4000 | 6000 | 7' | 5' | 29 | 4400 | 4300 | 94 | 0.21 | 0.32 | 0.36 | - |
| TQF 070 2_100 | 40 | 60 | 110 | 4500 | 6000 | 7' | 5' | 29 | 4400 | 4300 | 94 | 0.21 | 0.32 | 0.36 | - |

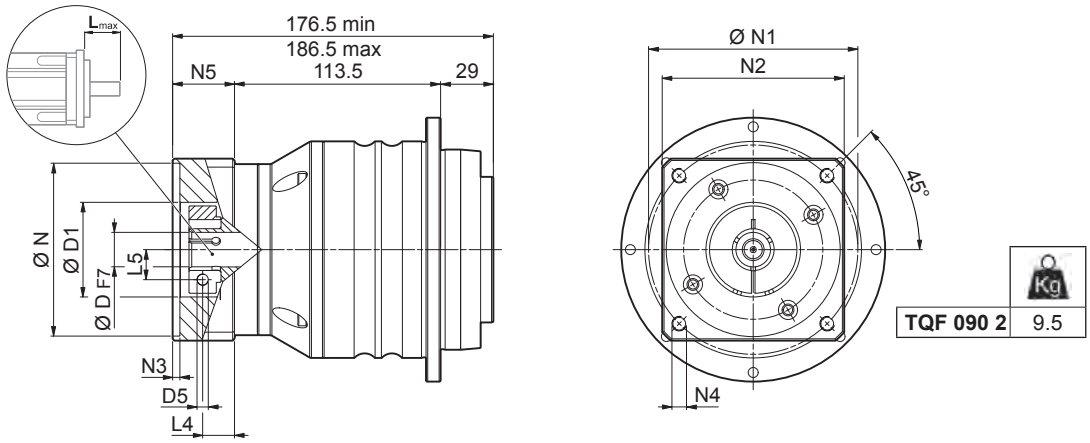
# TQF 090

## 60A4 ... 180A




| | Kg |
|---|---|
| TQF 090 1 | 7.0 |

## 50C2 ... 130A



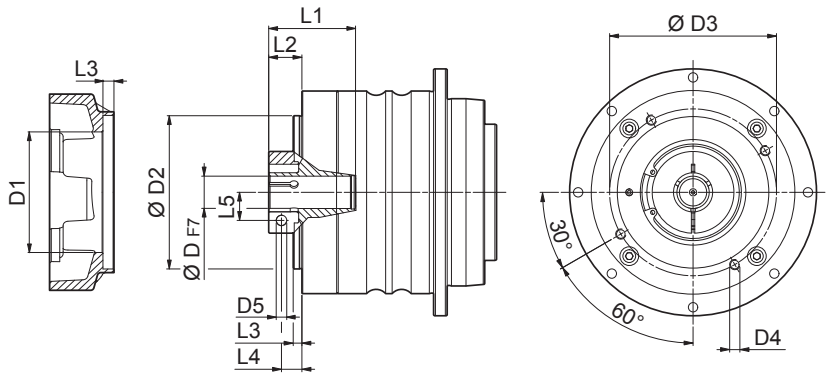

| | Kg |
|---|---|
| TQF 090 2 | 9.5 |

| | D | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TQF 090 1** | | | | | | | | | | | | | |
| **60A4** | 11 | 14 | 19 | - | - | - | 60 | 75 | 100 | 6.5 | M5x14 | 28 | 60 |
| **80A3** | 11 | 14 | 19 | - | - | - | 80 | 100 | 100 | 6.5 | M6x16 | 28 | 60 |
| **95A2** | 11 | 14 | 19 | 24 | 28 | - | 95 | 115 | 100 | 6.5 | M8x18 | 28 | 60 |
| **110A2** | 11 | 14 | 19 | 24 | - | - | 110 | 130 | 115 | 6.5 | M8x18 | 28 | 60 |
| **110B1** | 11 | 14 | 19 | 24 | 28 | - | 110 | 145 | 120 | 6.5 | M8x20 | 38 | 60 |
| **130A1** | 11 | 14 | 19 | 24 | 28 | 32 | 130 | 165 | 140 | 6.5 | M10x25 | 38 | 60 |
| **180A** | 11 | 14 | 19 | 24 | 28 | 32 | 180 | 215 | 190 | 6.5 | M14x28 | 48 | 80 |
| **TQF 090 2** | | | | | | | | | | | | | |
| **50C2** | 11 | 14 | - | - | - | - | 50 | 70 | 80 | 4 | M4x10 | 34 | 50 |
| **60A3** | 11 | 14 | 19 | - | - | - | 60 | 75 | 80 | 4 | M5x16 | 34 | 50 |
| **70B2** | 11 | 14 | 19 | - | - | - | 70 | 90 | 80 | 4 | M5x16 | 34 | 50 |
| **80A2** | 11 | 14 | 19 | - | - | - | 80 | 100 | 90 | 4 | M6x16 | 34 | 50 |
| **95A1** | 11 | 14 | 19 | 24 | - | - | 95 | 115 | 100 | 6.5 | M8x20 | 34 | 50 |
| **110A1** | 11 | 14 | 19 | 24 | - | - | 110 | 130 | 115 | 6.5 | M8x20 | 34 | 50 |
| **110B1** | 11 | 14 | 19 | 24 | - | - | 110 | 145 | 120 | 6.5 | M8x20 | 44 | 60 |
| **130A** | 11 | 14 | 19 | 24 | - | - | 130 | 165 | 140 | 6.5 | M10x19 | 34 | 50 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

# TQF 090

## FM

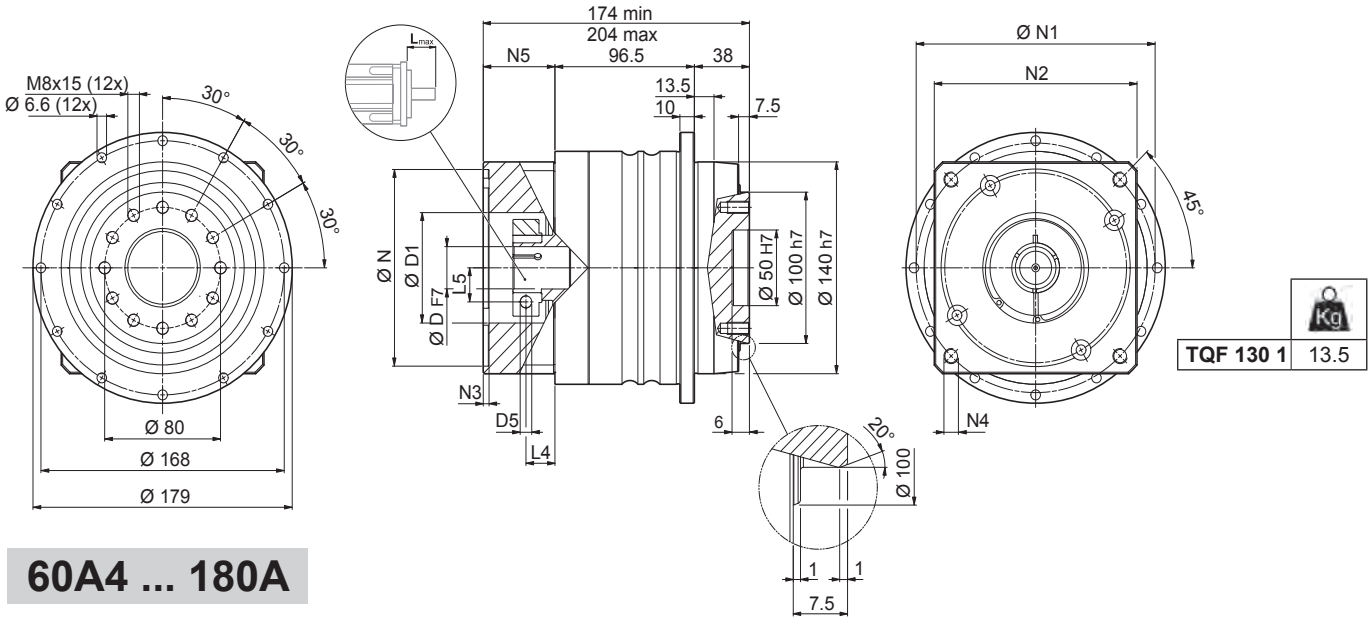



| D | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|
| **TQF 090 1** | | | | | | | | | | |
| 11 | 49 | 90 | 98 | M6x12 | M6 | 50 | 17 | 4 | 9.5 | 12.5 |
| 14 | 51 | 90 | 98 | M6x12 | M6 | 50 | 17 | 4 | 9.5 | 14.5 |
| 19 | 51 | 90 | 98 | M6x12 | M6 | 50 | 17 | 4 | 9.5 | 16.5 |
| 24 | 60 | 90 | 98 | M6x12 | M6 | 51.5 | 18.5 | 4 | 9.5 | 19 |
| 28 | 72 | 90 | 98 | M6x12 | M8 | 51.5 | 18.5 | 4 | 9.5 | 22.5 |
| 32 | 72 | 90 | 98 | M6x12 | M8 | 51.5 | 18.5 | 5 | 12 | 24.5 |
| 38 | 80 | 90 | 98 | M6x12 | M8 | 51.5 | 18.5 | 5 | 12 | 28 |
| **TQF 090 2** | | | | | | | | | | |
| 6 | 37 | 68 | 76.5 | M6x14 | M4 | 45 | 23 | 9 | 19 | 8 |
| 9 | 49 | 68 | 76.5 | M6x14 | M5 | 42 | 26 | 9 | 18.5 | 10.5 |
| 11 | 51 | 68 | 76.5 | M6x14 | M6 | 42 | 25 | 9 | 17.5 | 12.5 |
| 14 | 51 | 68 | 76.5 | M6x14 | M6 | 42 | 25 | 9 | 17.5 | 14.5 |
| 19 | 51 | 68 | 76.5 | M6x14 | M6 | 42 | 25 | 9 | 17.5 | 16.5 |
| 24 | 60 | 68 | 76.5 | M6x14 | M6 | 43.5 | 25 | 9 | 17.5 | 19 |

| i | $M_{n2}$ | $M_{a2}$ | $M_{p2}$ | $n_1$ | $n_{1\,max}$ | $\varphi_S$ ≤ | $\varphi_R$ ≤ | $C_t$ | $R_{2\,max}$ | $A_{2\,max}$ | $\eta$ | $J_G$ [kgcm²] D | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | [Nm] | [Nm] | [Nm] | [min⁻¹] | [min⁻¹] | [arcmin] | | [Nm/arcmin] | [N] | [N] | % | 11 | 14 - 19 | 24 | 28 | 32-38 |
| TQF 090 1_4 | 200 | 300 | 500 | 2500 | 4500 | 5' | 3' | 70 | 5500 | 6800 | 97 | - | 2,00 | 2.12 | 2.51 | 4,30 |
| TQF 090 1_5 | 180 | 280 | 500 | 2500 | 4500 | 5' | 3' | 70 | 5500 | 6800 | 97 | - | 1.63 | 1.76 | 2.14 | 3.94 |
| TQF 090 1_7 | 160 | 250 | 500 | 3000 | 4500 | 5' | 3' | 70 | 5500 | 6800 | 97 | - | 1.31 | 1.44 | 1.82 | 3.62 |
| TQF 090 1_10 | 110 | 170 | 350 | 3000 | 4500 | 5' | 3' | 70 | 5500 | 6800 | 97 | - | 1.14 | 1.27 | 1.65 | 3.45 |
| TQF 090 2_16 | 200 | 300 | 500 | 3000 | 4500 | 7' | 5' | 70 | 5500 | 6800 | 94 | 0.75 | 0.85 | 0.98 | - | - |
| TQF 090 2_20 | 180 | 280 | 500 | 3000 | 4500 | 7' | 5' | 70 | 5500 | 6800 | 94 | 0.72 | 0.82 | 0.96 | - | - |
| TQF 090 2_25 | 180 | 280 | 500 | 3000 | 4500 | 7' | 5' | 70 | 5500 | 6800 | 94 | 0.62 | 0.72 | 0.85 | - | - |
| TQF 090 2_28 | 200 | 300 | 500 | 3000 | 4500 | 7' | 5' | 70 | 5500 | 6800 | 94 | 0.54 | 0.64 | 0.77 | - | - |
| TQF 090 2_35 | 180 | 280 | 500 | 3000 | 4500 | 7' | 5' | 70 | 5500 | 6800 | 94 | 0.53 | 0.63 | 0.76 | - | - |
| TQF 090 2_40 | 200 | 300 | 500 | 3000 | 4500 | 7' | 5' | 70 | 5500 | 6800 | 94 | 0.49 | 0.59 | 0.72 | - | - |
| TQF 090 2_50 | 180 | 280 | 500 | 3500 | 4500 | 7' | 5' | 70 | 5500 | 6800 | 94 | 0.48 | 0.58 | 0.72 | - | - |
| TQF 090 2_70 | 160 | 250 | 500 | 4000 | 4500 | 7' | 5' | 70 | 5500 | 6800 | 94 | 0.48 | 0.58 | 0.71 | - | - |
| TQF 090 2_100 | 110 | 170 | 350 | 4000 | 4500 | 7' | 5' | 70 | 5500 | 6800 | 94 | 0.48 | 0.58 | 0.71 | - | - |

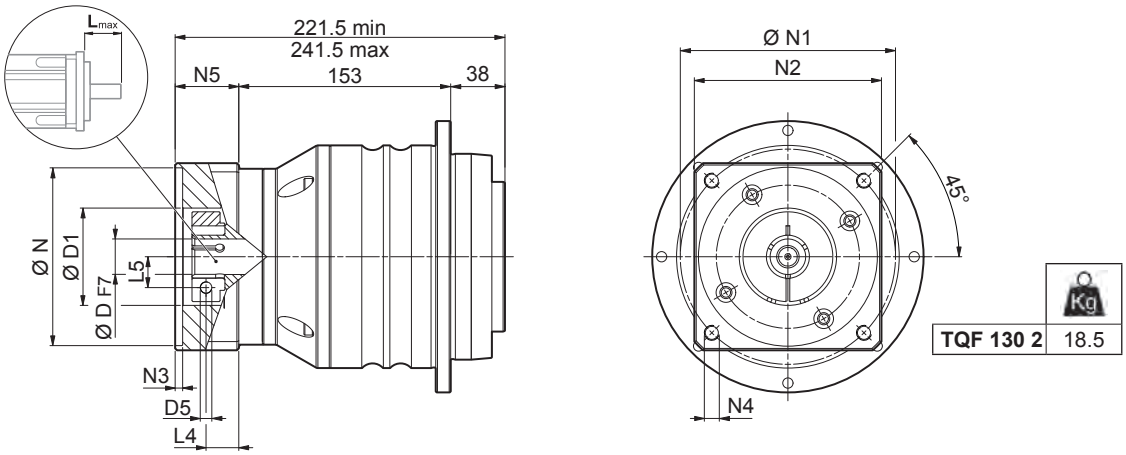
# TQF 130

## 80A3 ... 180A1




| | Kg |
|---|---|
| **TQF 130 1** | 13.5 |

## 60A4 ... 180A



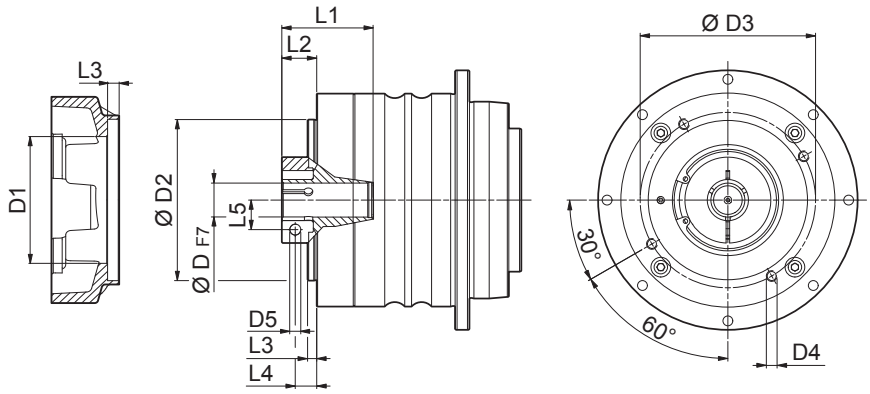

| | Kg |
|---|---|
| **TQF 130 2** | 18.5 |

| | D | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TQF 130 1** | | | | | | | | | | | | | |
| **80A3** | 14 | 19 | - | - | - | - | 80 | 100 | 130 | 4 | M6x15 | 39.5 | 60 |
| **95A2** | 14 | 19 | 24 | 28 | - | - | 95 | 115 | 130 | 6.5 | M8x20 | 39.5 | 60 |
| **110A2** | 14 | 19 | 24 | - | - | - | 110 | 130 | 130 | 4 | M8x20 | 39.5 | 60 |
| **110B1** | 14 | 19 | 24 | 28 | - | - | 110 | 145 | 130 | 6.5 | M8x20 | 49.5 | 60 |
| **130A1** | 14 | 19 | 24 | 28 | 32 | - | 130 | 165 | 140 | 4 | M10x20 | 39 | 60 |
| **180A** | 14 | 19 | 24 | 28 | 32 | 38 | 180 | 215 | 190 | 5.5 | M14x25 | 49.5 | 60 |
| **180A1** | 14 | 19 | 24 | 28 | 32 | 38 | 180 | 215 | 190 | 5.5 | M14x25 | 69.5 | 80 |
| **TQF 130 2** | | | | | | | | | | | | | |
| **60A4** | 14 | 19 | - | - | - | - | 60 | 75 | 100 | 6.5 | M5x14 | 28 | 60 |
| **80A3** | 14 | 19 | - | - | - | - | 80 | 100 | 100 | 6.5 | M6x16 | 28 | 60 |
| **95A2** | 14 | 19 | 24 | 28 | - | - | 95 | 115 | 100 | 6.5 | M8x18 | 28 | 60 |
| **110A2** | 14 | 19 | 24 | - | - | - | 110 | 130 | 115 | 6.5 | M8x18 | 28 | 60 |
| **110B1** | 14 | 19 | 24 | 28 | - | - | 110 | 145 | 120 | 6.5 | M8x20 | 38 | 60 |
| **130A1** | 14 | 19 | 24 | 28 | 32 | - | 130 | 165 | 140 | 6.5 | M10x25 | 38 | 60 |
| **180A** | 14 | 19 | 24 | 28 | 32 | - | 180 | 215 | 190 | 6.5 | M14x28 | 48 | 80 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

# TQF 130

**FM**

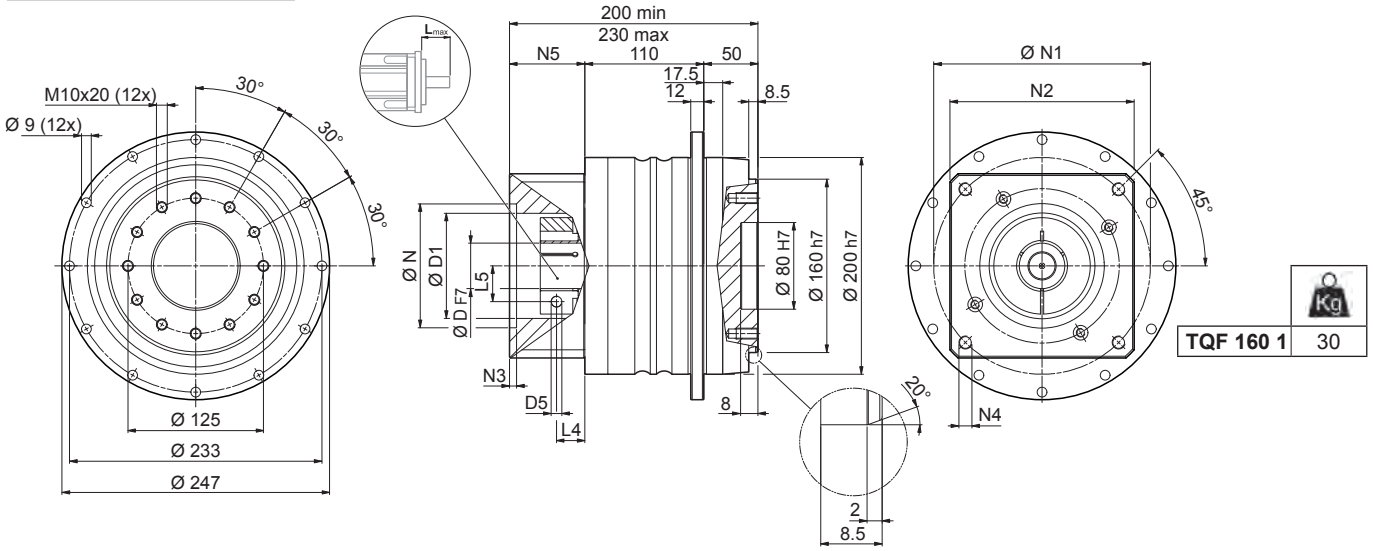



| D | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|
| **TQF 130 1** | | | | | | | | | | |
| 14 | 51 | 113 | 125.5 | M8x16 | M6 | 50 | 30.5 | 5 | 23 | 14.5 |
| 19 | 54 | 113 | 125.5 | M8x16 | M6 | 50 | 27.5 | 5 | 20 | 16.5 |
| 24 | 70 | 113 | 125.5 | M8x16 | M6 | 51.5 | 29 | 5 | 20 | 19 |
| 28 | 70 | 113 | 125.5 | M8x16 | M8 | 51.5 | 29 | 5 | 20 | 22.5 |
| 32 | 72 | 113 | 125.5 | M8x16 | M8 | 51.5 | 29 | 5 | 20 | 24.5 |
| 38 | 100 | 113 | 125.5 | M8x16 | M8 | 54 | 31.5 | 5 | 20 | 28 |
| 42 | 114 | 113 | 125.5 | M8x16 | M10 | 51.5 | 35 | 5 | 20 | 33 |
| **TQF 130 2** | | | | | | | | | | |
| 11 | 49 | 90 | 98 | M6x12 | M6 | 50 | 17 | 4 | 9.5 | 12.5 |
| 14 | 51 | 90 | 98 | M6x12 | M6 | 50 | 17 | 4 | 9.5 | 14.5 |
| 19 | 51 | 90 | 98 | M6x12 | M6 | 50 | 17 | 4 | 9.5 | 16.5 |
| 24 | 60 | 90 | 98 | M6x12 | M6 | 51.5 | 18.5 | 4 | 9.5 | 19 |
| 28 | 72 | 90 | 98 | M6x12 | M8 | 51.5 | 18.5 | 4 | 9.5 | 22.5 |
| 32 | 72 | 90 | 98 | M6x12 | M8 | 51.5 | 18.5 | 5 | 12 | 24.5 |
| 38 | 80 | 90 | 98 | M6x12 | M8 | 51.5 | 18.5 | 5 | 12 | 28 |

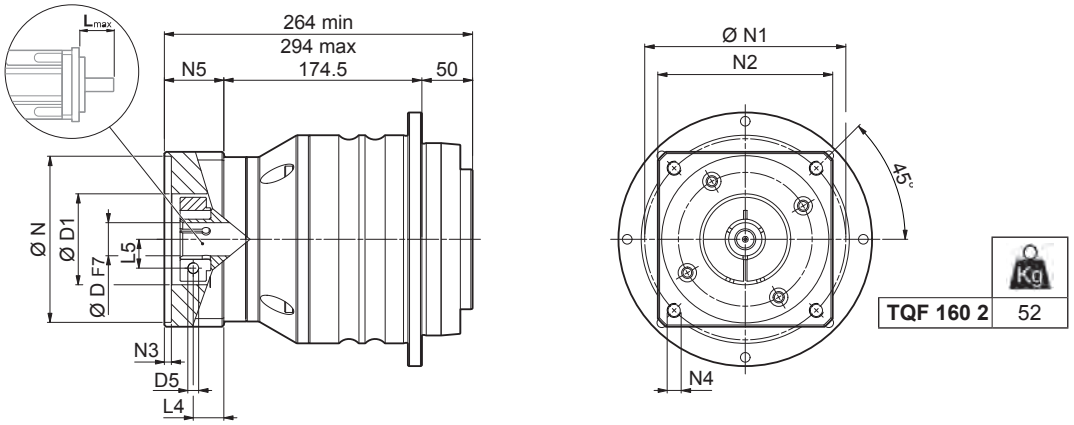
| i | $M_{n2}$ [Nm] | $M_{a2}$ [Nm] | $M_{p2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ ≤ [arcmin] | $\varphi_R$ ≤ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | η % | $J_G$ [kgcm$^2$] D 14 | 19 - 24 | 28 - 32 | 38 | 42 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TQF 130 1_4 | 400 | 600 | 1000 | 2100 | 4000 | 5' | 3' | 180 | 12000 | 8500 | 97 | - | 8.14 | 8.61 | 9.25 | 15.25 |
| TQF 130 1_5 | 400 | 600 | 1000 | 2500 | 4000 | 5' | 3' | 180 | 12000 | 8500 | 97 | - | 6.13 | 6.59 | 7.24 | 13.24 |
| TQF 130 1_7 | 360 | 550 | 950 | 2500 | 4000 | 5' | 3' | 180 | 12000 | 8500 | 97 | - | 4,40 | 4.86 | 5,50 | 11,50 |
| TQF 130 1_10 | 280 | 420 | 900 | 2500 | 4000 | 5' | 3' | 180 | 12000 | 8500 | 97 | - | 3.43 | 3.89 | 4.53 | 10.53 |
| TQF 130 2_16 | 400 | 600 | 1000 | 2800 | 4000 | 7' | 5' | 180 | 12000 | 8500 | 94 | 1.89 | 2.05 | 3.71 | 3.71 | - |
| TQF 130 2_20 | 400 | 600 | 1000 | 2800 | 4000 | 7' | 5' | 180 | 12000 | 8500 | 94 | 1.77 | 1.92 | 3.58 | 3.58 | - |
| TQF 130 2_25 | 400 | 600 | 1000 | 2800 | 4000 | 7' | 5' | 180 | 12000 | 8500 | 94 | 1.47 | 1.63 | 3.29 | 3.29 | - |
| TQF 130 2_28 | 400 | 600 | 1000 | 2800 | 4000 | 7' | 5' | 180 | 12000 | 8500 | 94 | 1.26 | 1.41 | 3.07 | 3.07 | - |
| TQF 130 2_35 | 400 | 600 | 1000 | 2800 | 4000 | 7' | 5' | 180 | 12000 | 8500 | 94 | 1.22 | 1.37 | 3.03 | 3.03 | - |
| TQF 130 2_40 | 400 | 600 | 1000 | 3200 | 4000 | 7' | 5' | 180 | 12000 | 8500 | 94 | 1,10 | 1.25 | 2.91 | 2.91 | - |
| TQF 130 2_50 | 400 | 600 | 1000 | 3200 | 4000 | 7' | 5' | 180 | 12000 | 8500 | 94 | 1.08 | 1.23 | 2.89 | 2.89 | - |
| TQF 130 2_70 | 360 | 550 | 950 | 3500 | 4000 | 7' | 5' | 180 | 12000 | 8500 | 94 | 1.06 | 1.22 | 2.88 | 2.88 | - |
| TQF 130 2_100 | 280 | 420 | 900 | 4000 | 4000 | 7' | 5' | 180 | 12000 | 8500 | 94 | 1.05 | 1.21 | 2.87 | 2.87 | - |

# TQF 160

## 95A2 ... 180A1




## 80A3 ... 180A1

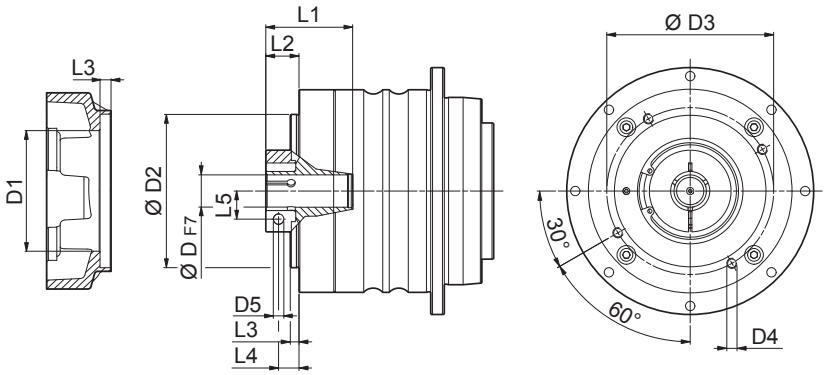



| | D | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TQF 160 1** | | | | | | | | | | | | |
| **95A2** | 19 | 24 | 28 | - | - | 95 | 115 | 140 | 6.5 | M8x20 | 39.5 | 60 |
| **110A2** | 19 | 24 | - | - | - | 110 | 130 | 140 | 5 | M8x20 | 39.5 | 60 |
| **130A1** | 19 | 24 | 28 | 32 | - | 130 | 165 | 140 | 5 | M10x20 | 39.5 | 60 |
| **180A** | - | 24 | 28 | 32 | - | 180 | 215 | 190 | 6.5 | M14x25 | 49.5 | 60 |
| **180A1** | 19 | 24 | 28 | 32 | 38 | 180 | 215 | 190 | 6.5 | M14x25 | 69.5 | 80 |
| **TQF 160 2** | | | | | | | | | | | | |
| **80A3** | 19 | - | - | - | - | 80 | 100 | 130 | 4 | M6x15 | 39.5 | 60 |
| **95A2** | 19 | 24 | 28 | - | - | 95 | 115 | 130 | 6.5 | M8x20 | 39.5 | 60 |
| **110A2** | 19 | 24 | - | - | - | 110 | 130 | 130 | 4 | M8x20 | 39.5 | 60 |
| **110B1** | 19 | 24 | 28 | - | - | 110 | 145 | 130 | 6.5 | M8x20 | 49.5 | 60 |
| **130A1** | 19 | 24 | 28 | 32 | - | 130 | 165 | 140 | 4 | M10x20 | 39 | 60 |
| **180A** | 19 | 24 | 28 | 32 | - | 180 | 215 | 190 | 5.5 | M14x25 | 49.5 | 60 |
| **180A1** | 19 | 24 | 28 | 32 | 38 | 180 | 215 | 190 | 5.5 | M14x25 | 69.5 | 80 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

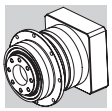
# TQF 160

**FM**




| D | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|
| **TQF 160 1** | | | | | | | | | | |
| 19 | 54 | 130 | 142.5 | M8x16 | M6 | 47 | 33.5 | 8 | 26 | 16.5 |
| 24 | 58 | 130 | 142.5 | M8x16 | M6 | 47 | 35 | 8 | 26 | 19 |
| 28 | 70 | 130 | 142.5 | M8x16 | M8 | 47 | 35 | 8 | 26 | 22.5 |
| 32 | 72 | 130 | 142.5 | M8x16 | M8 | 47 | 35 | 8 | 26 | 24.5 |
| 38 | 100 | 130 | 142.5 | M8x16 | M8 | 59.5 | 37.5 | 8 | 26 | 28 |
| 42 | 114 | 130 | 142.5 | M8x16 | M10 | 57 | 41 | 8 | 26 | 33 |
| 48 | 125 | 130 | 142.5 | M8x16 | M12 | 57 | 41 | 8 | 26 | 36.5 |
| **TQF 160 2** | | | | | | | | | | |
| 14 | 51 | 113 | 125.5 | M8x16 | M6 | 50 | 30.5 | 5 | 23 | 14.5 |
| 19 | 54 | 113 | 125.5 | M8x16 | M6 | 50 | 27.5 | 5 | 20 | 16.5 |
| 24 | 70 | 113 | 125.5 | M8x16 | M6 | 51.5 | 29 | 5 | 20 | 19 |
| 28 | 70 | 113 | 125.5 | M8x16 | M8 | 51.5 | 29 | 5 | 20 | 22.5 |
| 32 | 72 | 113 | 125.5 | M8x16 | M8 | 51.5 | 29 | 5 | 20 | 24.5 |
| 38 | 100 | 113 | 125.5 | M8x16 | M8 | 54 | 31.5 | 5 | 20 | 28 |
| 42 | 114 | 113 | 125.5 | M8x16 | M10 | 51.5 | 35 | 5 | 20 | 33 |

| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ ≤ [arcmin] | $\varphi_R$ ≤ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | η % | $J_G$ [kgcm$^2$] D 19 | 24 - 28 | 32 - 38 | 42 | 48 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TQF 160 1_4** | 800 | 1200 | 2000 | 1500 | 3500 | 5' | 3' | 500 | 29000 | 16000 | 97 | - | 27,10 | 27.51 | 30,40 | 43.51 |
| **TQF 160 1_5** | 800 | 1200 | 2000 | 1800 | 3500 | 5' | 3' | 500 | 29000 | 16000 | 97 | - | 18.22 | 18.63 | 21.52 | 34.63 |
| **TQF 160 1_7** | 750 | 1150 | 2000 | 2500 | 3500 | 5' | 3' | 500 | 29000 | 16000 | 97 | - | 13.46 | 13.87 | 16.77 | 29.88 |
| **TQF 160 1_10** | 550 | 850 | 1600 | 2500 | 3500 | 5' | 3' | 500 | 29000 | 16000 | 97 | - | 10.03 | 10.44 | 13.34 | 26.45 |
| **TQF 160 2_16** | 800 | 1200 | 2000 | 2800 | 3500 | 7' | 5' | 500 | 29000 | 16000 | 94 | 7.22 | 7.75 | 8.47 | 14.47 | - |
| **TQF 160 2_20** | 800 | 1200 | 2000 | 2800 | 3500 | 7' | 5' | 500 | 29000 | 16000 | 94 | 6.67 | 7,20 | 7.92 | 13.92 | - |
| **TQF 160 2_25** | 800 | 1200 | 2000 | 2800 | 3500 | 7' | 5' | 500 | 29000 | 16000 | 94 | 5.13 | 5.66 | 6.38 | 12.38 | - |
| **TQF 160 2_28** | 800 | 1200 | 2000 | 2800 | 3500 | 7' | 5' | 500 | 29000 | 16000 | 94 | 4,00 | 4.53 | 5.25 | 11.25 | - |
| **TQF 160 2_35** | 800 | 1200 | 2000 | 2800 | 3500 | 7' | 5' | 500 | 29000 | 16000 | 94 | 3.82 | 4.34 | 5.07 | 11.07 | - |
| **TQF 160 2_40** | 800 | 1200 | 2000 | 2800 | 3500 | 7' | 5' | 500 | 29000 | 16000 | 94 | 3.16 | 3.69 | 4.41 | 10.41 | - |
| **TQF 160 2_50** | 800 | 1200 | 2000 | 2800 | 3500 | 7' | 5' | 500 | 29000 | 16000 | 94 | 3.07 | 3,60 | 4.32 | 10.32 | - |
| **TQF 160 2_70** | 750 | 1150 | 2000 | 3000 | 3500 | 7' | 5' | 500 | 29000 | 16000 | 94 | 3.02 | 3.55 | 4.27 | 10.27 | - |
| **TQF 160 2_100** | 550 | 850 | 1600 | 3000 | 3500 | 7' | 5' | 500 | 29000 | 16000 | 94 | 2.99 | 3.52 | 4.24 | 10.24 | - |



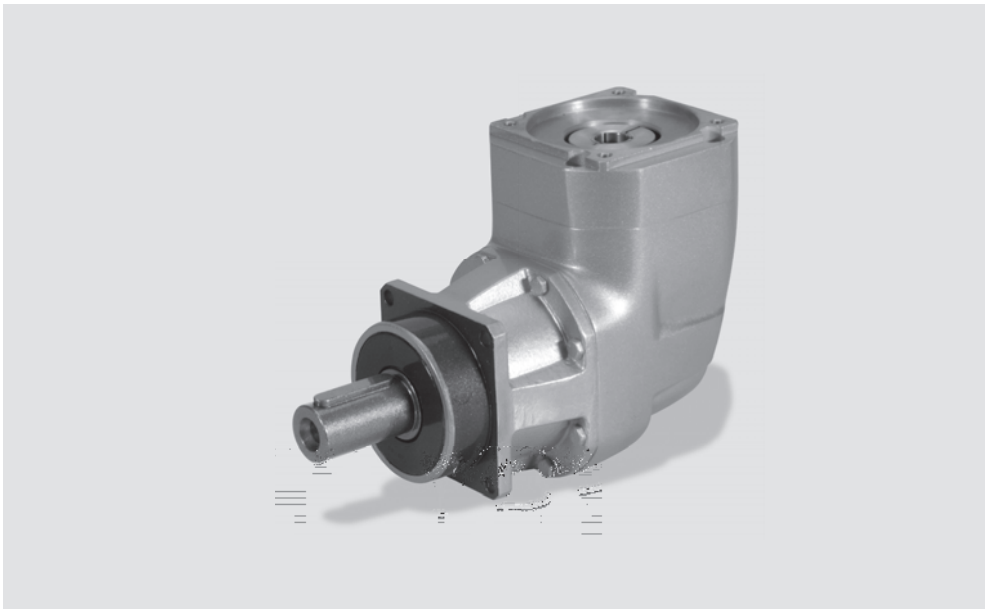
# TQK
## ABGEWINKELTES PRÄZISIONSPLANETENGETRIEBE



Die TQK Getriebe stehen wie die TQ Getriebe an der Spitze des Produktportfolios.

Dieses Getriebe ist die Lösung bei Platzproblemen, die die immer kompakteren Maschinen aufwerfen.

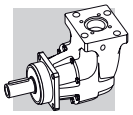
Ob Drehmoment, Steifigkeit oder Präzision – diese attraktive Produktreihe punktet in jeder Kategorie.





**Produktmerkmale:**

- Höchste Drehmomentdichte
- Höchstes Beschleunigungs- und Nenndrehmoment
- Höchste radiale und axiale Belastbarkeit
- Entwickelt für Zyklus- und Dauerbetrieb
- Höchste Verdrehsteifigkeit
- Niedriges Verdrehflankenspiel – unter 4 arcmin
- Laufruhig
- Einsetzbar in beliebiger Montageaposition



## 4 MERKMALE DER TQK-REIHE

Die spielarmen Kegelrad-Planetengetriebe der Baureihe TQK sind die Lösung bei Platzproblemen, die durch zunehmend kompaktere Maschinen immer häufiger auftreten.
TQK Getriebe vereinen ein extrem dynamisches Betriebsverhalten mit maximaler Präzision. Damit verleihen sie jeder Positioniermechanik, in die sie installiert werden, höchste Genauigkeit und Wiederholbarkeit.
Außer ihrer Robustheit und Verlässlichkeit haben TQK-Antriebe etwas unverkennbar Italienisches, das sie von ähnlichen Produkten in der Branche deutlich unterscheidet.

- Die TQK-Reihe hat zwei Präzisionsklassen, mit diesem Verdrehflankenspiel:
  2-stufige Getriebe: standard $\varphi_S \leq 5'$; reduziert $\varphi_R \leq 4'$ ($\varphi_S \leq 6'$; $\varphi_R \leq 5'$ für TQK 060 und TQK 070)
  3-stufige Getriebe: standard $\varphi_S \leq 7'$; reduziert $\varphi_R \leq 6'$ ($\varphi_S \leq 8'$; $\varphi_R \leq 7'$ für TQK 060 und TQK 070)
- Eine hohe IP-Schutzklasse (IP65) sorgt dafür, dass innenliegende Teile vor Staub- und Flüssigkeitseintritt geschützt sind.
- Serienmäßige Fluorelastomer-Wellendichtungen an der Eingangswelle
- Schalldruckpegel 60 ≤ $L_p$ ≤ 70 dB(A). Gemessen in 1 m Abstand ohne Last und bei einer Eingangsdrehzahl von $n_1$ = 3000 $min^{-1}$; i = 20.
- Große Auswahl an Motoradaptern sorgt für den Anschluss an die marktgängigsten Servomotoren.
- Schmierung optimiert für die gewünschte Betriebsart.
  Ohne Verunreinigung muss das Schmiermittel nicht regelmäßig gewechselt werden.

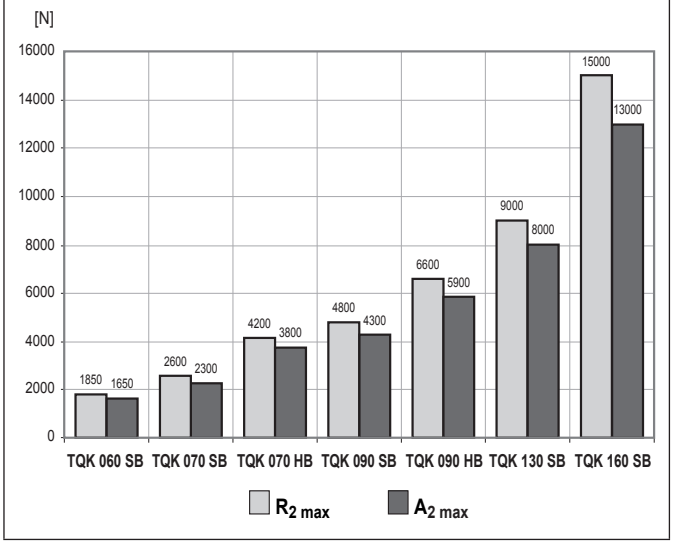
| Betrieb | TQK 060 ... TQK 160 | andere Dichtungen |
|---|---|---|
| **S1** (kontinuierlich) | Synthetiköl Viskositätsklasse ISO VG 220 | Fluoroelastomer |
| **S5** (unterbrochen) | NLGI Fettkonsistenz 00 | NBR |

- Umgebungstemperatur min. -20°C, max. +30°C; bei Temperaturen höher als 30°C ist der Temperaturfaktor $f_T$ zu berücksichtigen.
- Die Gehäusetemperatur darf $T_{max}$ = 90°C nicht übersteigen.

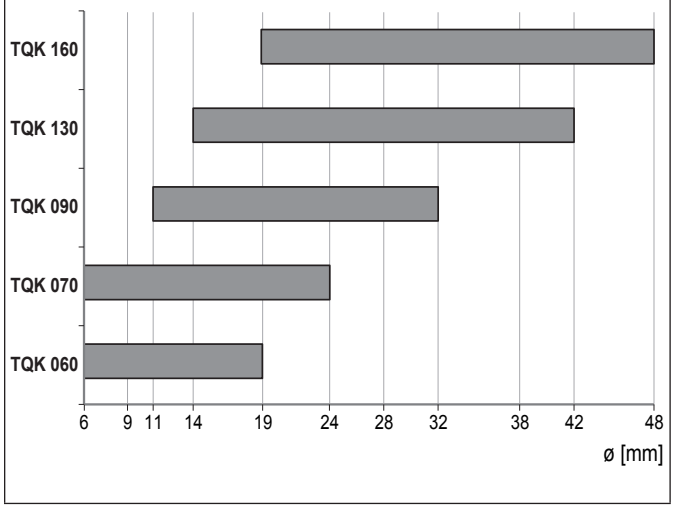
**Übersicht der Nenndrehmomente $M_{n2}$ [Nm]**

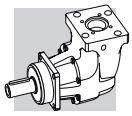
| [i] | 6 | 8 | 10 | 14 | 18 | 20 | 24 | 30 | 40 | 50 | 70 | 80 | 100 | 140 | 200 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TQK 060** | 21 | 28 | 30 | 25 | 21 | 20 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 25 | 20 |
| **TQK 070** | 45 | 60 | 70 | 60 | 45 | 40 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 60 | 40 |
| **TQK 090** | 110 | 150 | 180 | 160 | 130 | 110 | 200 | 180 | 180 | 180 | 180 | 200 | 180 | 160 | 110 |
| **TQK 130** | 255 | 340 | 400 | 360 | 260 | 280 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 360 | 280 |
| **TQK 160** | 420 | 560 | 700 | 750 | 530 | 550 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 750 | 550 |

**Max. Belastbarkeit der Abtriebswelle**




**Verfügbare Motorwellendurchmesser**





## *4.1 BESTELLBEZEICHNUNG*

**TQK 130 2 25 STD 80A3 CD 19 S5 SB KL UH1**

SCHMIERSTOFF
- **–** Standard
- **UH1** Lebensmitteltaugliches Schmiermittel

ABTRIEBSWELLENKONFIGURATION
- **KL** Glatte Welle ohne Passfedert
- **KE** Welle mit Passfeder

LAGER DER ABTRIEBSWELLE
- **SB** Standard
- **HB** Verstärkt (TQK 070 - TQK 090)

BETRIEBSART
- **S1** Dauerbetrieb
- **S5** Kurzzeitbetrieb

BOHRUNGSDURCHMESSER EINGANGSWELLE
- **6 ... 48**

MOTORKOPPLUNG
- **CD** Klemmnabe

ANTRIEBSFLANSCH
- **30A ... 230A** Motorflansch
- **FM** Ohne Motorflansch

VERDREHSPIEL

| | 2 Getriebestufe | 2 Getriebestufen (TQK060, TQK070 only) | 3 Getriebestufen | 3 Getriebestufen (TQK060, TQK070 only) |
|---|---|---|---|---|
| **STD** | $\varphi_S \leq 5'$ | $\varphi_S \leq 6'$ | $\varphi_S \leq 7'$ | $\varphi_S \leq 8'$ |
| **LOW** | $\varphi_R \leq 4'$ | $\varphi_R \leq 5'$ | $\varphi_R \leq 6'$ | $\varphi_R \leq 7'$ |

GETRIEBEÜBERSETZUNG

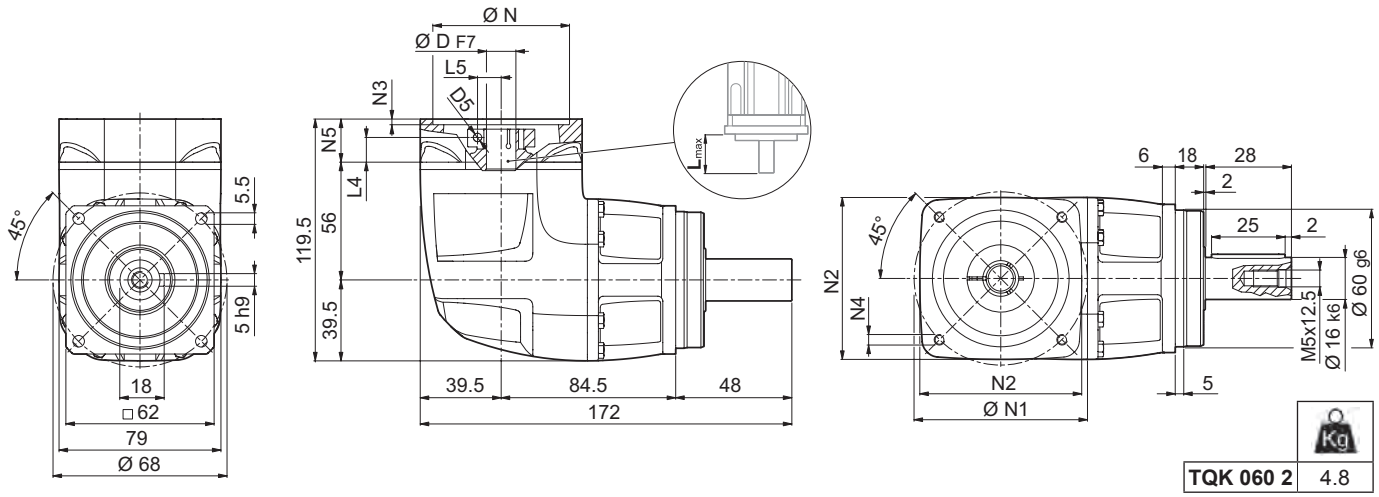
GETRIEBESTUFEN
- **2** **3**

BAUGRÖSSE
- **060** **070** **090** **130** **160**

REIHE
- **TQK**

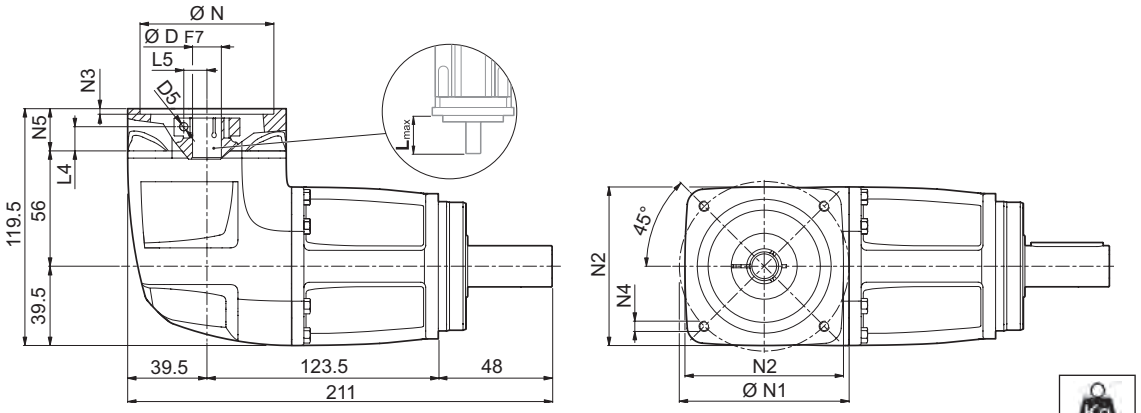
### *4.2 ABMESSUNGEN UND TECHNISCHE DATEN*

# TQK 060




| | Kg |
|---|---|
| **TQK 060 2** | 4.8 |

## 30A ... 110B0



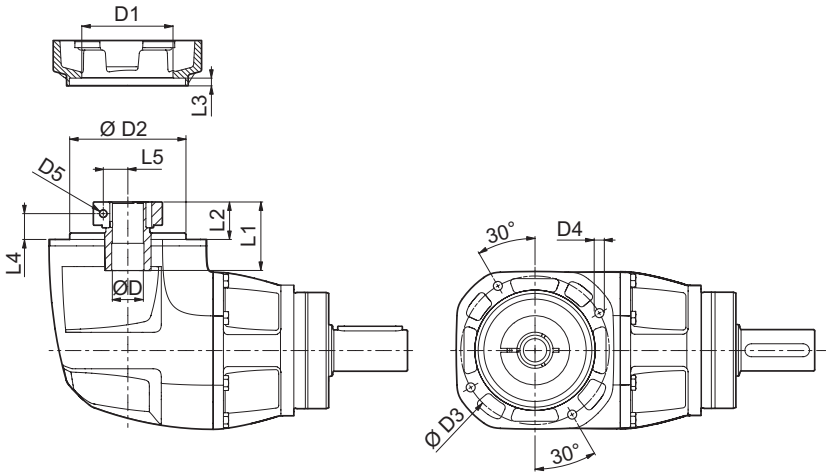

| | Kg |
|---|---|
| **TQK 060 3** | 5.9 |

| | D | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **30A** | 6 | – | – | – | – | 30 | 46 | 60 | 3.5 | M4x10 | 24 | 40 |
| **40B1** | 6 | 9 | 11 | 14 | – | 40 | 63 | 60 | 3.5 | M4x10 | 24 | 40 |
| **50A1** | 6 | 9 | 11 | 14 | – | 50 | 60 | 60 | 4.0 | M4x10 | 24 | 40 |
| **50C1** | 6 | 9 | 11 | 14 | – | 50 | 70 | 60 | 4.0 | M4x10 | 24 | 40 |
| **60A2** | 6 | 9 | 11 | 14 | 19 | 60 | 75 | 80 | 4.0 | M5x12 | 24 | 40 |
| **70B1** | 6 | 9 | 11 | 14 | 19 | 70 | 90 | 80 | 4.0 | M5x12 | 24 | 40 |
| **80A1** | 6 | 9 | 11 | 14 | 19 | 80 | 100 | 100 | 4.0 | M6x14 | 24 | 40 |
| **95A** | 6 | 9 | 11 | 14 | 19 | 95 | 115 | 100 | 4.0 | M8x24* | 24 | 40 |
| **110B0** | 6 | 9 | 11 | 14 | 19 | 110 | 145 | 120 | 4.0 | M8x24* | 24 | 40 |

* Durchgehend  Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

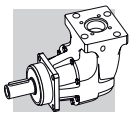
# TQK 060

**FM**



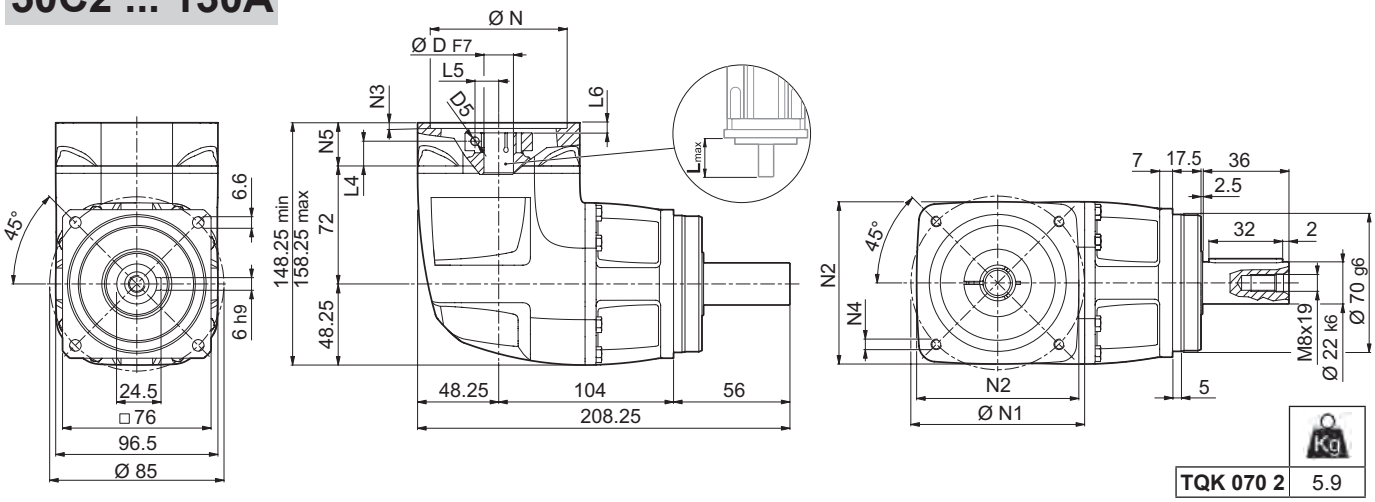

| D | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 37 | 59 | 72 | M5x11 | M4 | 31.5 | 15.5 | 4.5 | 10.5 | 8 |
| 9 | 49 | 59 | 72 | M5x11 | M5 | 35 | 19 | 4.5 | 11.5 | 10.5 |
| 11 | 49 | 59 | 72 | M5x11 | M6 | 35 | 19 | 4.5 | 11.5 | 12.5 |
| 14 | 49 | 59 | 72 | M5x11 | M6 | 35 | 19 | 4.5 | 11.5 | 14.5 |
| 19 | 54 | 59 | 72 | M5x11 | M6 | 35 | 19 | 4.5 | 11.5 | 16.5 |

| i | $M_{n2}$ [Nm] | $M_{a2}$ [Nm] | $M_{p2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ ≤ [arcmin] | $\varphi_R$ ≤ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 6 - 9 | 11 - 14 | 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TQK 060 2_6 | 21 | 30 | 45 | 2500 | 5000 | 6' | 5' | 4.3 | 1850 | 1650 | 94 | 0.76 | 0.78 | 0.78 |
| TQK 060 2_8 | 28 | 40 | 60 | 2500 | 5000 | 6' | 5' | 4.3 | 1850 | 1650 | 94 | 0.75 | 0.76 | 0.77 |
| TQK 060 2_10 | 30 | 45 | 70 | 2500 | 5000 | 6' | 5' | 4.3 | 1850 | 1650 | 94 | 0.73 | 0.75 | 0.75 |
| TQK 060 2_14 | 25 | 38 | 70 | 2500 | 5000 | 6' | 5' | 4.3 | 1850 | 1650 | 94 | 0.72 | 0.73 | 0.74 |
| TQK 060 2_20 | 20 | 30 | 55 | 2500 | 5000 | 6' | 5' | 4.3 | 1850 | 1650 | 94 | 0.71 | 0.72 | 0.73 |
| TQK 060 3_18 | 21 | 32 | 60 | 2500 | 5000 | 8' | 7' | 4.3 | 1850 | 1650 | 91 | 0.61 | 0.62 | 0.63 |
| TQK 060 3_24 | 30 | 45 | 80 | 2500 | 5000 | 8' | 7' | 4.3 | 1850 | 1650 | 91 | 0.61 | 0.62 | 0.63 |
| TQK 060 3_30 | 30 | 45 | 80 | 2500 | 5000 | 8' | 7' | 4.3 | 1850 | 1650 | 91 | 0.60 | 0.62 | 0.62 |
| TQK 060 3_40 | 30 | 45 | 80 | 2500 | 5000 | 8' | 7' | 4.3 | 1850 | 1650 | 91 | 0.60 | 0.61 | 0.62 |
| TQK 060 3_50 | 30 | 45 | 80 | 2500 | 5000 | 8' | 7' | 4.3 | 1850 | 1650 | 91 | 0.60 | 0.61 | 0.62 |
| TQK 060 3_70 | 30 | 45 | 80 | 2500 | 5000 | 8' | 7' | 4.3 | 1850 | 1650 | 91 | 0.60 | 0.61 | 0.62 |
| TQK 060 3_80 | 30 | 45 | 80 | 2500 | 5000 | 8' | 7' | 4.3 | 1850 | 1650 | 91 | 0.60 | 0.61 | 0.62 |
| TQK 060 3_100 | 30 | 45 | 80 | 2500 | 5000 | 8' | 7' | 4.3 | 1850 | 1650 | 91 | 0.59 | 0.61 | 0.61 |
| TQK 060 3_140 | 25 | 38 | 70 | 2500 | 5000 | 8' | 7' | 4.3 | 1850 | 1650 | 91 | 0.59 | 0.61 | 0.61 |
| TQK 060 3_200 | 20 | 30 | 55 | 2500 | 5000 | 8' | 7' | 4.3 | 1850 | 1650 | 91 | 0.59 | 0.61 | 0.61 |



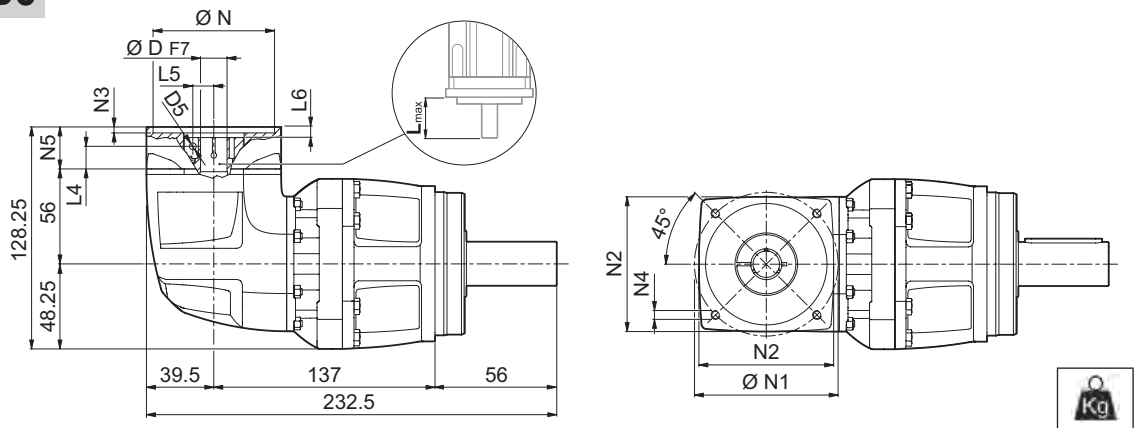
# TQK 070

## 50C2 ... 130A




| | Kg |
|---|---|
| **TQK 070 2** | 5.9 |

## 30A ... 110B0



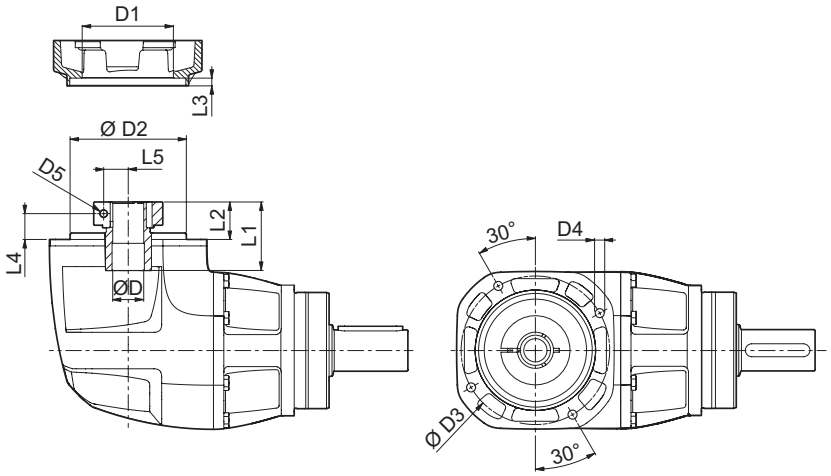

| | Kg |
|---|---|
| **TQK 070 3** | 7.3 |

| | D | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TQK 070 2** | | | | | | | | | | | | | |
| **50C2** | 6 | 9 | 11 | 14 | – | – | 50 | 70 | 80 | 6.5 | M4x12 | 28 | 50 |
| **60A3** | 6 | 9 | 11 | 14 | 19 | – | 60 | 75 | 80 | 6.5 | M5x14 | 28 | 50 |
| **70B2** | 6 | 9 | 11 | 14 | 19 | – | 70 | 90 | 80 | 6.5 | M5x14 | 28 | 50 |
| **80A2** | 6 | 9 | 11 | 14 | 19 | – | 80 | 100 | 100 | 6.5 | M6x14 | 28 | 50 |
| **95A1** | 6 | 9 | 11 | 14 | 19 | 24 | 95 | 115 | 100 | 6.5 | M8x18 | 28 | 50 |
| **110A1** | 6 | 9 | 11 | 14 | 19 | 24 | 110 | 130 | 120 | 6.5 | M8x18 | 28 | 50 |
| **110B1** | 6 | 9 | 11 | 14 | 19 | 24 | 110 | 145 | 120 | 6.5 | M8x20 | 38 | 60 |
| **130A** | 6 | 9 | 11 | 14 | 19 | 24 | 130 | 165 | 140 | 6.5 | M10x19 | 28 | 50 |
| **TQK 070 3** | | | | | | | | | | | | | |
| **30A** | 6 | – | – | – | – | – | 30 | 46 | 60 | 3.5 | M4x10 | 24 | 40 |
| **40B1** | 6 | 9 | 11 | 14 | – | – | 40 | 63 | 60 | 3.5 | M4x10 | 24 | 40 |
| **50A1** | 6 | 9 | 11 | 14 | – | – | 50 | 60 | 60 | 4.0 | M4x10 | 24 | 40 |
| **50C1** | 6 | 9 | 11 | 14 | – | – | 50 | 70 | 60 | 4.0 | M4x10 | 24 | 40 |
| **60A2** | 6 | 9 | 11 | 14 | 19 | – | 60 | 75 | 80 | 4.0 | M5x12 | 24 | 40 |
| **70B1** | 6 | 9 | 11 | 14 | 19 | – | 70 | 90 | 80 | 4.0 | M5x12 | 24 | 40 |
| **80A1** | 6 | 9 | 11 | 14 | 19 | – | 80 | 100 | 100 | 4.0 | M6x14 | 24 | 40 |
| **95A** | 6 | 9 | 11 | 14 | 19 | – | 95 | 115 | 100 | 4.0 | M8x24* | 24 | 40 |
| **110B0** | 6 | 9 | 11 | 14 | 19 | – | 110 | 145 | 120 | 4.0 | M8x24* | 24 | 40 |

* Durchgehend  Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

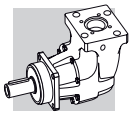
# TQK 070

## FM



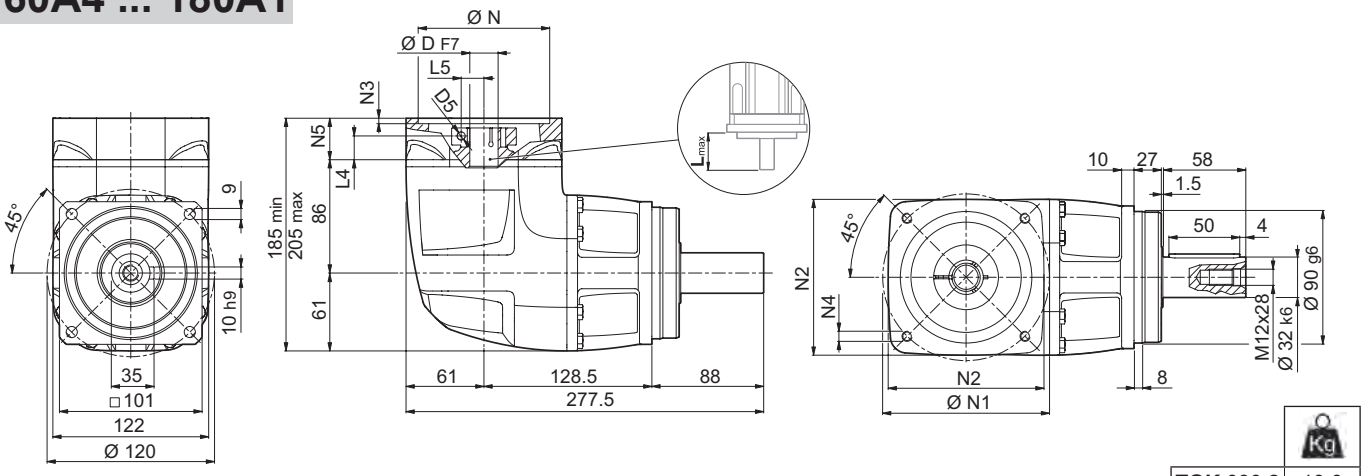

| D | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|
| **TQK 070 2** | | | | | | | | | | |
| 11 | 51 | 70 | 85 | M6x11 | M6 | 42 | 20 | 5 | 12.5 | 12.5 |
| 14 | 51 | 70 | 85 | M6x11 | M6 | 42 | 20 | 5 | 12.5 | 14.5 |
| 19 | 51 | 70 | 85 | M6x11 | M6 | 42 | 20 | 5 | 12.5 | 16.5 |
| 24 | 60 | 70 | 85 | M6x11 | M6 | 43.5 | 21.5 | 5 | 12.5 | 19 |
| **TQK 070 3** | | | | | | | | | | |
| 6 | 37 | 59 | 72 | M5x11 | M4 | 31.5 | 15.5 | 4.5 | 10.5 | 8 |
| 9 | 49 | 59 | 72 | M5x11 | M5 | 35 | 19 | 4.5 | 11.5 | 10.5 |
| 11 | 49 | 59 | 72 | M5x11 | M6 | 35 | 19 | 4.5 | 11.5 | 12.5 |
| 14 | 49 | 59 | 72 | M5x11 | M6 | 35 | 19 | 4.5 | 11.5 | 14.5 |
| 19 | 54 | 59 | 72 | M5x11 | M6 | 35 | 19 | 4.5 | 11.5 | 16.5 |

| i | $M_{n2}$ | $M_{a2}$ | $M_{p2}$ | $n_1$ | $n_{1\,max}$ | $\varphi_S$ ≤ | $\varphi_R$ ≤ | $C_t$ | SB $R_{2\,max}$ | SB $A_{2\,max}$ | HB $R_{2\,max}$ | HB $A_{2\,max}$ | $\eta$ | $J_G$ [kgcm²] D | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | [Nm] | [Nm] | [Nm] | [min⁻¹] | [min⁻¹] | [arcmin] | | [Nm/arcmin] | [N] | [N] | [N] | [N] | % | 6 - 9 | 11 - 14 | 19 | 24 |
| TQK 070 2_6 | 45 | 65 | 90 | 2500 | 5000 | 6' | 5' | 11 | 2600 | 2300 | 4200 | 3800 | 94 | – | 1.52 | 1.55 | 1.63 |
| TQK 070 2_8 | 60 | 85 | 120 | 2500 | 5000 | 6' | 5' | 11 | 2600 | 2300 | 4200 | 3800 | 94 | – | 1.44 | 1.47 | 1.55 |
| TQK 070 2_10 | 70 | 100 | 150 | 2500 | 5000 | 6' | 5' | 11 | 2600 | 2300 | 4200 | 3800 | 94 | – | 1.41 | 1.43 | 1.52 |
| TQK 070 2_14 | 60 | 90 | 160 | 2500 | 5000 | 6' | 5' | 11 | 2600 | 2300 | 4200 | 3800 | 94 | – | 1.38 | 1.41 | 1.49 |
| TQK 070 2_20 | 40 | 60 | 110 | 2500 | 5000 | 6' | 5' | 11 | 2600 | 2300 | 4200 | 3800 | 94 | – | 1.36 | 1.39 | 1.48 |
| TQK 070 3_18 | 45 | 65 | 120 | 2500 | 5000 | 8' | 7' | 11 | 2600 | 2300 | 4200 | 3800 | 91 | 1.28 | 1.39 | 1.42 | – |
| TQK 070 3_24 | 70 | 100 | 180 | 2500 | 5000 | 8' | 7' | 11 | 2600 | 2300 | 4200 | 3800 | 91 | 1.26 | 1.37 | 1.40 | – |
| TQK 070 3_30 | 70 | 100 | 180 | 2500 | 5000 | 8' | 7' | 11 | 2600 | 2300 | 4200 | 3800 | 91 | 1.25 | 1.36 | 1.39 | – |
| TQK 070 3_40 | 70 | 100 | 180 | 2500 | 5000 | 8' | 7' | 11 | 2600 | 2300 | 4200 | 3800 | 91 | 1.20 | 1.31 | 1.34 | – |
| TQK 070 3_50 | 70 | 100 | 180 | 2500 | 5000 | 8' | 7' | 11 | 2600 | 2300 | 4200 | 3800 | 91 | 1.19 | 1.31 | 1.33 | – |
| TQK 070 3_70 | 70 | 100 | 180 | 2500 | 5000 | 8' | 7' | 11 | 2600 | 2300 | 4200 | 3800 | 91 | 1.18 | 1.29 | 1.32 | – |
| TQK 070 3_80 | 70 | 100 | 180 | 2500 | 5000 | 8' | 7' | 11 | 2600 | 2300 | 4200 | 3800 | 91 | 1.17 | 1.29 | 1.31 | – |
| TQK 070 3_100 | 70 | 100 | 180 | 2500 | 5000 | 8' | 7' | 11 | 2600 | 2300 | 4200 | 3800 | 91 | 1.17 | 1.28 | 1.31 | – |
| TQK 070 3_140 | 60 | 90 | 160 | 2500 | 5000 | 8' | 7' | 11 | 2600 | 2300 | 4200 | 3800 | 91 | 1.16 | 1.27 | 1.30 | – |
| TQK 070 3_200 | 40 | 60 | 110 | 2500 | 5000 | 8' | 7' | 11 | 2600 | 2300 | 4200 | 3800 | 91 | 1.15 | 1.27 | 1.29 | – |



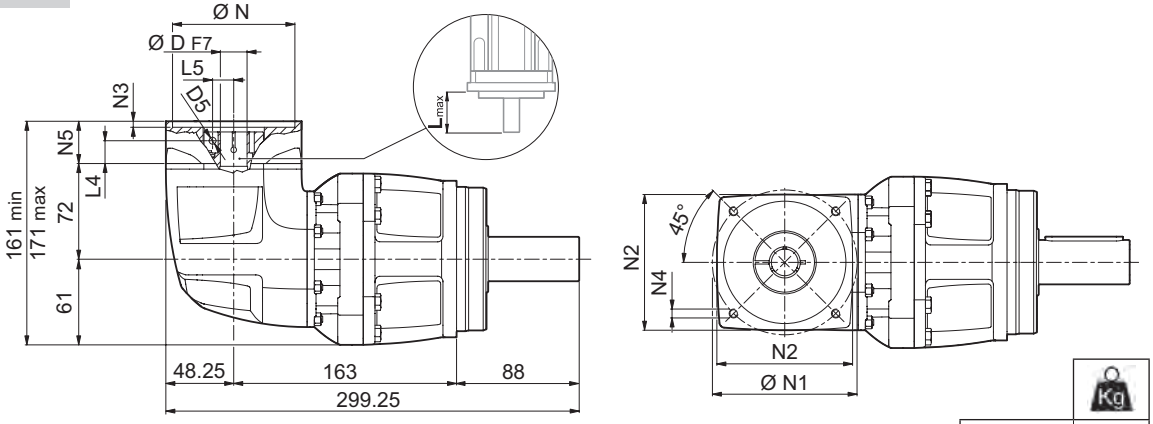
# TQK 090

## 60A4 ... 180A1




| | Kg |
|---|---|
| **TQK 090 2** | 10.0 |

## 50C2 ... 130A



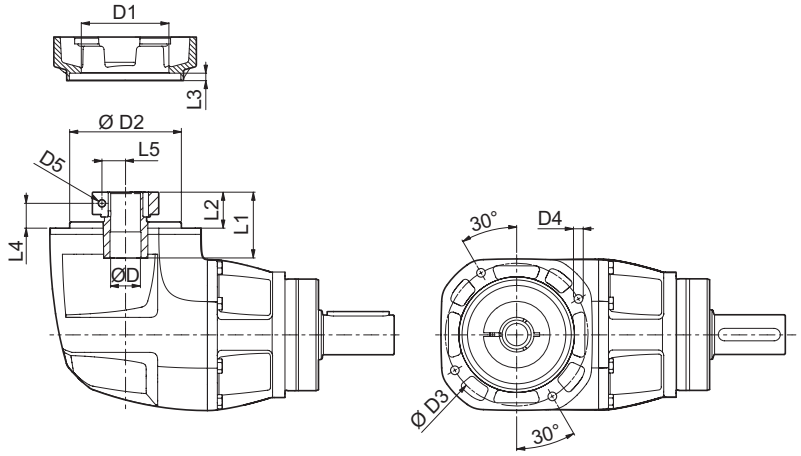

| | Kg |
|---|---|
| **TQK 090 3** | 11.7 |

| | D | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TQK 090 2** | | | | | | | | | | | | | |
| **60A4** | 11 | 14 | 19 | – | – | – | 60 | 75 | 100 | 6.5 | M5x14 | 38 | 60 |
| **80A3** | 11 | 14 | 19 | – | – | – | 80 | 100 | 100 | 6.5 | M6x14 | 38 | 60 |
| **95A2** | 11 | 14 | 19 | 24 | 28 | – | 95 | 115 | 100 | 6.5 | M8x18 | 38 | 60 |
| **110A2** | 11 | 14 | 19 | 24 | – | – | 110 | 130 | 122 | 6.5 | M8x20 | 38 | 60 |
| **110B1** | 11 | 14 | 19 | 24 | 28 | – | 110 | 145 | 122 | 6.5 | M8x20 | 38 | 60 |
| **130A1** | 11 | 14 | 19 | 24 | 28 | 32 | 130 | 165 | 140 | 6.5 | M10x20 | 38 | 60 |
| **180A** | 11 | 14 | 19 | 24 | 28 | 32 | 180 | 215 | 190 | 6.5 | M14x38* | 38 | 60 |
| **180A1** | 11 | 14 | 19 | 24 | 28 | 32 | 180 | 215 | 190 | 6.5 | M14x28 | 58 | 80 |
| **TQK 090 3** | | | | | | | | | | | | | |
| **50C2** | 11 | 14 | – | – | – | – | 50 | 70 | 80 | 6.5 | M4x12 | 28 | 50 |
| **60A3** | 11 | 14 | 19 | – | – | – | 60 | 75 | 80 | 6.5 | M5x14 | 28 | 50 |
| **70B2** | 11 | 14 | 19 | – | – | – | 70 | 90 | 80 | 6.5 | M5x14 | 28 | 50 |
| **80A2** | 11 | 14 | 19 | – | – | – | 80 | 100 | 100 | 6.5 | M6x14 | 28 | 50 |
| **95A1** | 11 | 14 | 19 | 24 | – | – | 95 | 115 | 100 | 6.5 | M8x18 | 28 | 50 |
| **110A1** | 11 | 14 | 19 | 24 | – | – | 110 | 130 | 120 | 6.5 | M8x18 | 28 | 50 |
| **110B1** | 11 | 14 | 19 | 24 | – | – | 110 | 145 | 120 | 6.5 | M8x20 | 38 | 60 |
| **130A** | 11 | 14 | 19 | 24 | – | – | 130 | 165 | 140 | 6.5 | M10x19 | 28 | 50 |

* Durchgehend  Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

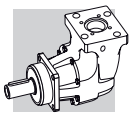
# TQK 090

**FM**



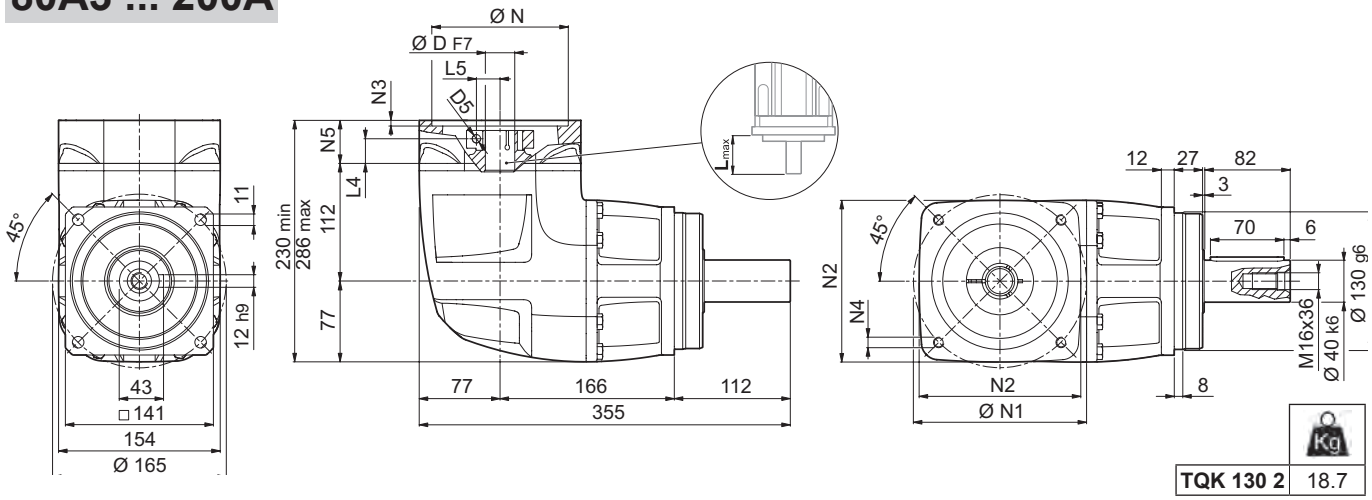

| D | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|
| **TQK 090 2** | | | | | | | | | | |
| 14 | 51 | 90 | 115 | M8x13 | M6 | 50 | 28 | 6.5 | 20.5 | 14.5 |
| 19 | 51 | 90 | 115 | M8x13 | M6 | 50 | 28 | 6.5 | 20.5 | 16.5 |
| 24 | 60 | 90 | 115 | M8x13 | M6 | 51.5 | 29.5 | 6.5 | 20.5 | 19 |
| 28 | 72 | 90 | 115 | M8x13 | M8 | 51.5 | 29.5 | 6.5 | 20.5 | 22.5 |
| 32 | 72 | 90 | 115 | M8x13 | M8 | 51.5 | 29.5 | 6.5 | 20.5 | 24.5 |
| 38 | 80 | 90 | 115 | M8x13 | M8 | 51.5 | 29.5 | 6.5 | 20.5 | 28 |
| **TQK 090 3** | | | | | | | | | | |
| 11 | 51 | 70 | 85 | M6x11 | M6 | 42 | 20 | 5 | 12.5 | 12.5 |
| 14 | 51 | 70 | 85 | M6x11 | M6 | 42 | 20 | 5 | 12.5 | 14.5 |
| 19 | 51 | 70 | 85 | M6x11 | M6 | 42 | 20 | 5 | 12.5 | 16.5 |
| 24 | 60 | 70 | 85 | M6x11 | M6 | 43.5 | 21.5 | 5 | 12.5 | 19 |

| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ ≤ [arcmin] | $\varphi_R$ ≤ [arcmin] | $C_t$ [Nm/arcmin] | SB $R_{2\,max}$ [N] | SB $A_{2\,max}$ [N] | HB $R_{2\,max}$ [N] | HB $A_{2\,max}$ [N] | η % | $J_G$ [kgcm$^2$] D 11 | D 14 | D 19 - 24 | D 28 - 32 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TQK 090 2_6 | 110 | 150 | 225 | 2000 | 4500 | 5' | 4' | 28 | 4800 | 4300 | 6600 | 5900 | 94 | – | 4.82 | 4.89 | 5.42 |
| TQK 090 2_8 | 150 | 208 | 300 | 2000 | 4500 | 5' | 4' | 28 | 4800 | 4300 | 6600 | 5900 | 94 | – | 4.56 | 4.63 | 5.16 |
| TQK 090 2_10 | 180 | 260 | 360 | 2000 | 4500 | 5' | 4' | 28 | 4800 | 4300 | 6600 | 5900 | 94 | – | 4.45 | 4.51 | 5.04 |
| TQK 090 2_14 | 160 | 250 | 500 | 2000 | 4500 | 5' | 4' | 28 | 4800 | 4300 | 6600 | 5900 | 94 | – | 4.34 | 4.41 | 4.94 |
| TQK 090 2_20 | 110 | 170 | 350 | 2000 | 4500 | 5' | 4' | 28 | 4800 | 4300 | 6600 | 5900 | 94 | – | 4.29 | 4.36 | 4.88 |
| TQK 090 3_18 | 130 | 200 | 400 | 2000 | 4500 | 7' | 6' | 28 | 4800 | 4300 | 6600 | 5900 | 91 | 3.56 | 3.63 | 3.70 | – |
| TQK 090 3_24 | 200 | 300 | 500 | 2000 | 4500 | 7' | 6' | 28 | 4800 | 4300 | 6600 | 5900 | 91 | 3.53 | 3.60 | 3.67 | – |
| TQK 090 3_30 | 180 | 280 | 500 | 2000 | 4500 | 7' | 6' | 28 | 4800 | 4300 | 6600 | 5900 | 91 | 3.52 | 3.59 | 3.66 | – |
| TQK 090 3_40 | 180 | 280 | 500 | 2000 | 4500 | 7' | 6' | 28 | 4800 | 4300 | 6600 | 5900 | 91 | 3.45 | 3.52 | 3.58 | – |
| TQK 090 3_50 | 180 | 280 | 500 | 2000 | 4500 | 7' | 6' | 28 | 4800 | 4300 | 6600 | 5900 | 91 | 3.42 | 3.49 | 3.56 | – |
| TQK 090 3_70 | 180 | 280 | 500 | 2000 | 4500 | 7' | 6' | 28 | 4800 | 4300 | 6600 | 5900 | 91 | 3.40 | 3.46 | 3.53 | – |
| TQK 090 3_80 | 200 | 300 | 500 | 2000 | 4500 | 7' | 6' | 28 | 4800 | 4300 | 6600 | 5900 | 91 | 3.38 | 3.45 | 3.52 | – |
| TQK 090 3_100 | 180 | 280 | 500 | 2000 | 4500 | 7' | 6' | 28 | 4800 | 4300 | 6600 | 5900 | 91 | 3.38 | 3.45 | 3.52 | – |
| TQK 090 3_140 | 160 | 250 | 500 | 2000 | 4500 | 7' | 6' | 28 | 4800 | 4300 | 6600 | 5900 | 91 | 3.38 | 3.45 | 3.52 | – |
| TQK 090 3_200 | 110 | 170 | 350 | 2000 | 4500 | 7' | 6' | 28 | 4800 | 4300 | 6600 | 5900 | 91 | 3.38 | 3.45 | 3.52 | – |



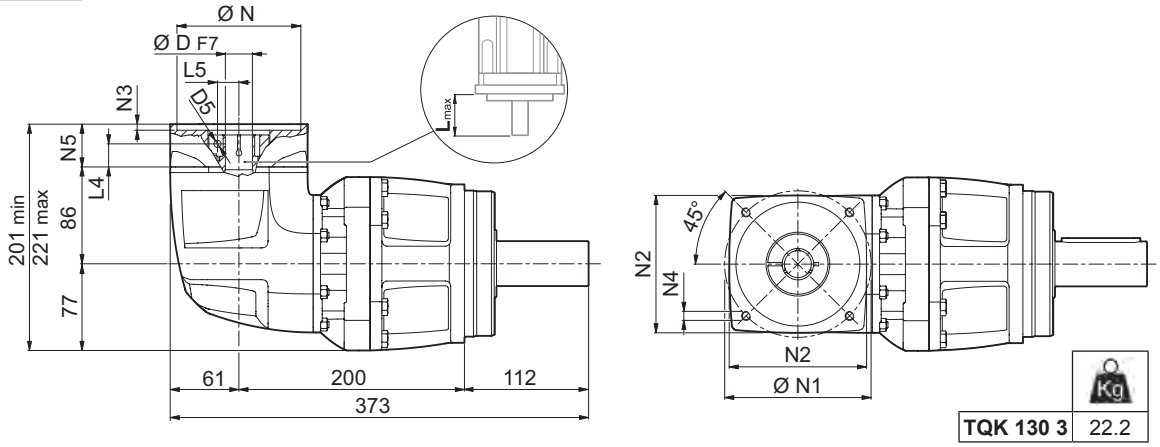
# TQK 130

## 80A3 ... 200A




| | |
|---|---|
| TQK 130 2 | 18.7 |

## 60A4 ... 180A1



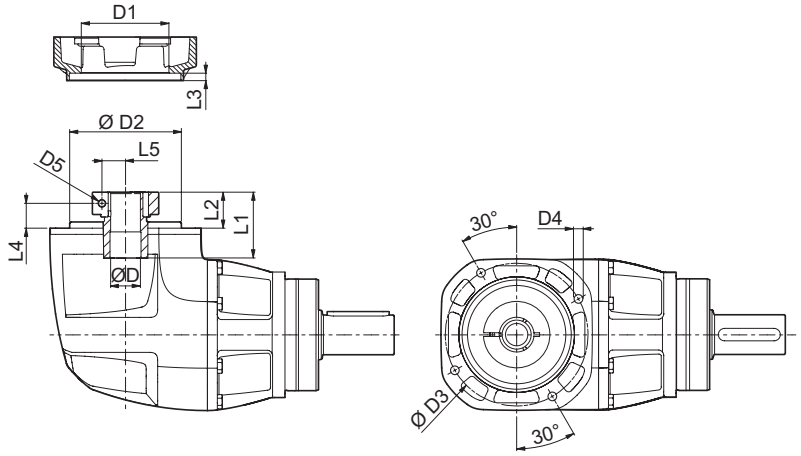

| | |
|---|---|
| TQK 130 3 | 22.2 |

| | D | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TQK 130 2** | | | | | | | | | | | | | | |
| **80A3** | 14 | 19 | – | – | – | – | – | 80 | 100 | 130 | 6.5 | M6x14 | 41 | 60 |
| **95A2** | 14 | 19 | 24 | 28 | – | – | – | 95 | 115 | 130 | 6.5 | M8x18 | 41 | 60 |
| **110A2** | 14 | 19 | 24 | – | – | – | – | 110 | 130 | 130 | 6.5 | M8x20 | 41 | 60 |
| **110B1** | 14 | 19 | 24 | 28 | – | – | – | 110 | 145 | 130 | 6.5 | M8x20 | 41 | 60 |
| **130A1** | 14 | 19 | 24 | 28 | 32 | – | – | 130 | 165 | 154 | 6.5 | M10x20 | 41 | 60 |
| **180A** | 14 | 19 | 24 | 28 | 32 | – | – | 180 | 215 | 190 | 6.5 | M14x28 | 41 | 60 |
| **180A1** | 14 | 19 | 24 | 28 | 32 | 38 | – | 180 | 215 | 190 | 6.5 | M14x28 | 61 | 80 |
| **200A** | 14 | 19 | 24 | 28 | 32 | 38 | 42 | 200 | 235 | 210 | 6.5 | M14x28 | 97 | 110 |
| **TQK 130 3** | | | | | | | | | | | | | | |
| **60A4** | 14 | 19 | – | – | – | – | – | 60 | 75 | 100 | 6.5 | M5x14 | 38 | 60 |
| **80A3** | 14 | 19 | – | – | – | – | – | 80 | 100 | 100 | 6.5 | M6x14 | 38 | 60 |
| **95A2** | 14 | 19 | 24 | 28 | – | – | – | 95 | 115 | 100 | 6.5 | M8x18 | 38 | 60 |
| **110A2** | 14 | 19 | 24 | - | – | – | – | 110 | 130 | 122 | 6.5 | M8x20 | 38 | 60 |
| **110B1** | 14 | 19 | 24 | 28 | – | – | – | 110 | 145 | 122 | 6.5 | M8x20 | 38 | 60 |
| **130A1** | 14 | 19 | 24 | 28 | 32 | – | – | 130 | 165 | 140 | 6.5 | M10x20 | 38 | 60 |
| **180A** | 14 | 19 | 24 | 28 | 32 | – | – | 180 | 215 | 190 | 6.5 | M14x38 | 38 | 60 |
| **180A1** | 14 | 19 | 24 | 28 | 32 | 38 | – | 180 | 215 | 190 | 6.5 | M14x28 | 58 | 80 |

* Durchgehend  Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

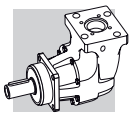
# TQK 130

**FM**



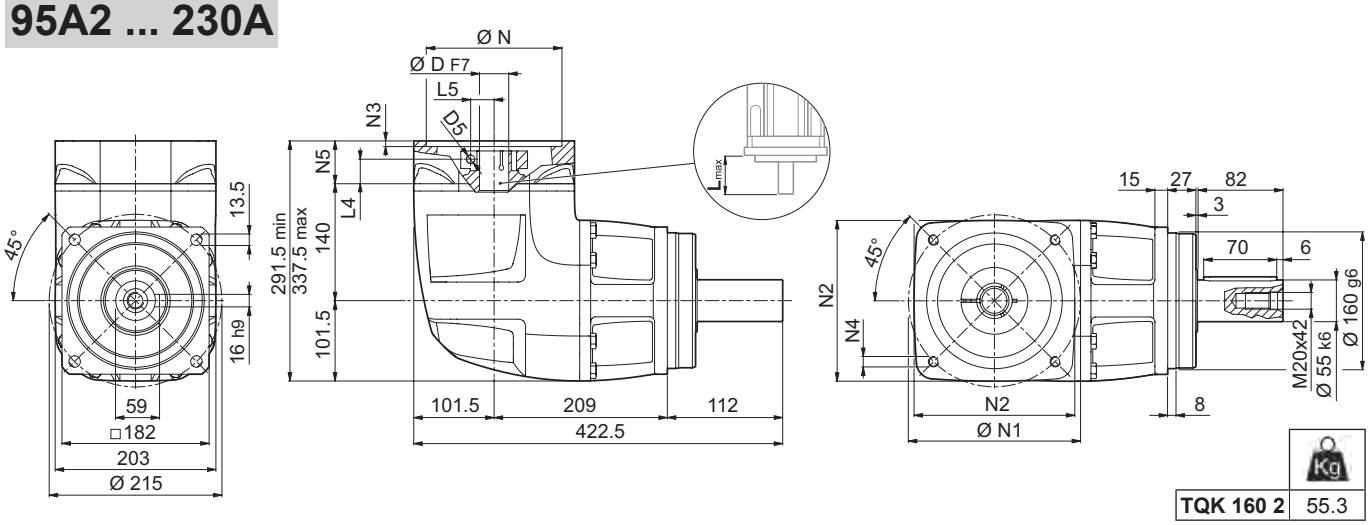

| D | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|
| **TQK 130 2** | | | | | | | | | | |
| 19 | 54 | 120 | 140 | M10x16 | M6 | 50 | 31 | 7.5 | 23.5 | 16.5 |
| 24 | 70 | 120 | 140 | M10x16 | M6 | 51.5 | 32.5 | 7.5 | 23.5 | 19 |
| 28 | 70 | 120 | 140 | M10x16 | M8 | 51.5 | 32.5 | 7.5 | 23.5 | 22.5 |
| 32 | 72 | 120 | 140 | M10x16 | M8 | 51.5 | 32.5 | 7.5 | 23.5 | 24.5 |
| 38 | 100 | 120 | 140 | M10x16 | M8 | 54 | 35 | 7.5 | 23.5 | 28 |
| 42 | 114 | 120 | 140 | M10x16 | M10 | 51.5 | 38.5 | 7.5 | 23.5 | 33 |
| **TQK 130 3** | | | | | | | | | | |
| 14 | 51 | 90 | 115 | M8x13 | M6 | 50 | 28 | 6.5 | 20.5 | 14.5 |
| 19 | 51 | 90 | 115 | M8x13 | M6 | 50 | 28 | 6.5 | 20.5 | 16.5 |
| 24 | 60 | 90 | 115 | M8x13 | M6 | 51.5 | 29.5 | 6.5 | 20.5 | 19 |
| 28 | 72 | 90 | 115 | M8x13 | M8 | 51.5 | 29.5 | 6.5 | 20.5 | 22.5 |
| 32 | 72 | 90 | 115 | M8x13 | M8 | 51.5 | 29.5 | 6.5 | 20.5 | 24.5 |
| 38 | 80 | 90 | 115 | M8x13 | M8 | 51.5 | 29.5 | 6.5 | 20.5 | 28 |

| | $M_{n\,2}$ | $M_{a\,2}$ | $M_{p\,2}$ | $n_1$ | $n_{1\,max}$ | $\varphi_S$ ≤ | $\varphi_R$ ≤ | $C_t$ | $R_{2\,max}$ | $A_{2\,max}$ | $\eta$ | $J_G$ [kgcm²] | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| i | [Nm] | [Nm] | [Nm] | [min⁻¹] | [min⁻¹] | [arcmin] | | $\left[\frac{Nm}{arcmin}\right]$ | [N] | [N] | % | 14 | 19 - 24 | 28 - 32 | 38 | 42 |
| TQK 130 2_6 | 255 | 360 | 510 | 2000 | 4500 | 5' | 4' | 56 | 9000 | 8000 | 94 | – | 17.44 | 18.02 | 18.55 | 24.47 |
| TQK 130 2_8 | 340 | 480 | 680 | 2000 | 4500 | 5' | 4' | 56 | 9000 | 8000 | 94 | – | 16.31 | 16.89 | 17.41 | 23.33 |
| TQK 130 2_10 | 400 | 600 | 850 | 2000 | 4500 | 5' | 4' | 56 | 9000 | 8000 | 94 | – | 15.77 | 16.35 | 16.88 | 22.80 |
| TQK 130 2_14 | 360 | 550 | 950 | 2000 | 4500 | 5' | 4' | 56 | 9000 | 8000 | 94 | – | 15.35 | 15.93 | 16.46 | 22.38 |
| TQK 130 2_20 | 280 | 420 | 900 | 2000 | 4500 | 5' | 4' | 56 | 9000 | 8000 | 94 | – | 15.13 | 15.71 | 16.23 | 22.15 |
| TQK 130 3_18 | 260 | 400 | 900 | 2000 | 4500 | 7' | 6' | 56 | 9000 | 8000 | 91 | 15.18 | 15.34 | 15.92 | 16.44 | – |
| TQK 130 3_24 | 400 | 600 | 1000 | 2000 | 4500 | 7' | 6' | 56 | 9000 | 8000 | 91 | 15.05 | 15.21 | 15.79 | 16.32 | – |
| TQK 130 3_30 | 400 | 600 | 1000 | 2000 | 4500 | 7' | 6' | 56 | 9000 | 8000 | 91 | 14.99 | 15.15 | 15.73 | 16.26 | – |
| TQK 130 3_40 | 400 | 600 | 1000 | 2000 | 4500 | 7' | 6' | 56 | 9000 | 8000 | 91 | 14.72 | 14.88 | 15.46 | 15.99 | – |
| TQK 130 3_50 | 400 | 600 | 1000 | 2000 | 4500 | 7' | 6' | 56 | 9000 | 8000 | 91 | 14.61 | 14.77 | 15.35 | 15.88 | – |
| TQK 130 3_70 | 400 | 600 | 1000 | 2000 | 4500 | 7' | 6' | 56 | 9000 | 8000 | 91 | 14.52 | 14.68 | 15.25 | 15.78 | – |
| TQK 130 3_80 | 400 | 600 | 1000 | 2000 | 4500 | 7' | 6' | 56 | 9000 | 8000 | 91 | 14.47 | 14.63 | 15.21 | 15.74 | – |
| TQK 130 3_100 | 400 | 600 | 1000 | 2000 | 4500 | 7' | 6' | 56 | 9000 | 8000 | 91 | 14.46 | 14.62 | 15.20 | 15.73 | – |
| TQK 130 3_140 | 360 | 550 | 950 | 2000 | 4500 | 7' | 6' | 56 | 9000 | 8000 | 91 | 14.46 | 14.62 | 15.20 | 15.73 | – |
| TQK 130 3_200 | 280 | 420 | 900 | 2000 | 4500 | 7' | 6' | 56 | 9000 | 8000 | 91 | 14.46 | 14.62 | 15.20 | 15.73 | – |



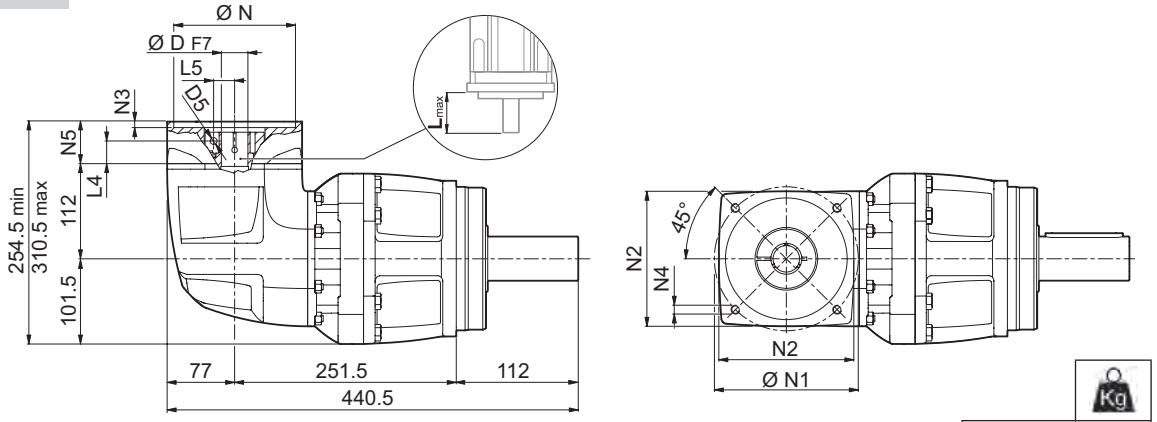
# TQK 160

## 95A2 ... 230A




| | Kg |
|---|---|
| **TQK 160 2** | 55.3 |

## 80A3 ... 200A



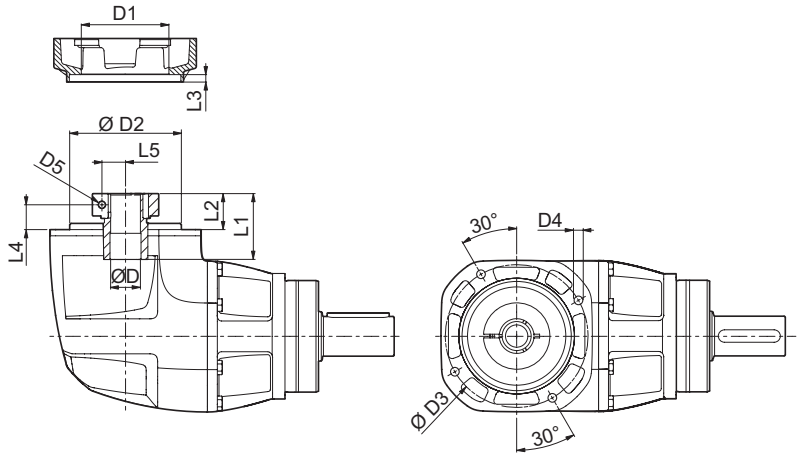

| | Kg |
|---|---|
| **TQK 160 3** | 63 |

| | D | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TQK 160 2** | | | | | | | | | | | | | | |
| **95A2** | 19 | 24 | 28 | – | – | – | – | 95 | 115 | 158 | 6.5 | M8x20 | 50 | 60 |
| **110A2** | 19 | 24 | – | – | – | – | – | 110 | 130 | 158 | 6.5 | M8x20 | 50 | 60 |
| **130A1** | 19 | 24 | 28 | 32 | – | – | – | 130 | 165 | 158 | 6.5 | M10x20 | 50 | 60 |
| **180A** | 19 | 24 | 28 | 32 | – | – | – | 180 | 215 | 203 | 6.5 | M14x28 | 50 | 60 |
| **180A1** | 19 | 24 | 28 | 32 | 38 | – | – | 180 | 215 | 205 | 6.5 | M14x28 | 60 | 80 |
| **200A** | 19 | 24 | 28 | 32 | 38 | 42 | 48 | 200 | 235 | 220 | 6.5 | M14x28 | 96 | 110 |
| **230A** | 19 | 24 | 28 | 32 | 38 | 42 | 48 | 230 | 265 | 240 | 6.5 | M14x28 | 96 | 110 |
| **TQK 160 3** | | | | | | | | | | | | | | |
| **80A3** | 19 | – | – | – | – | – | – | 80 | 100 | 130 | 6.5 | M6x14 | 41 | 60 |
| **95A2** | 19 | 24 | 28 | – | – | – | – | 95 | 115 | 130 | 6.5 | M8x18 | 41 | 60 |
| **110A2** | 19 | 24 | – | – | – | – | – | 110 | 130 | 130 | 6.5 | M8x20 | 41 | 60 |
| **110B1** | 19 | 24 | 28 | – | – | – | – | 110 | 145 | 130 | 6.5 | M8x20 | 41 | 60 |
| **130A1** | 19 | 24 | 28 | 32 | – | – | – | 130 | 165 | 154 | 6.5 | M10x20 | 41 | 60 |
| **180A** | 19 | 24 | 28 | 32 | – | – | – | 180 | 215 | 190 | 6.5 | M14x28 | 41 | 60 |
| **180A1** | 19 | 24 | 28 | 32 | 38 | – | – | 180 | 215 | 190 | 6.5 | M14x28 | 61 | 80 |
| **200A** | 19 | 24 | 28 | 32 | 38 | 42 | – | 200 | 235 | 210 | 6.5 | M14x28 | 97 | 110 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

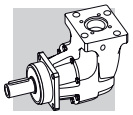
# TQK 160

**FM**




| D | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|
| **TQK 160 2** | | | | | | | | | | |
| 24 | 58 | 150 | 175 | M12x20 | M6 | 47 | 37 | 9.5 | 28 | 19 |
| 28 | 70 | 150 | 175 | M12x20 | M8 | 47 | 37 | 9.5 | 28 | 22.5 |
| 32 | 72 | 150 | 175 | M12x20 | M8 | 47 | 37 | 9.5 | 28 | 24.5 |
| 38 | 100 | 150 | 175 | M12x20 | M8 | 59.5 | 39.5 | 9.5 | 28 | 28 |
| 42 | 114 | 150 | 175 | M12x20 | M10 | 57 | 43 | 9.5 | 28 | 33 |
| 48 | 125 | 150 | 175 | M12x20 | M12 | 57 | 43 | 9.5 | 28 | 36.5 |
| **TQK 160 3** | | | | | | | | | | |
| 19 | 54 | 120 | 140 | M10x16 | M6 | 50 | 31 | 7.5 | 23.5 | 16.5 |
| 24 | 70 | 120 | 140 | M10x16 | M6 | 51.5 | 32.5 | 7.5 | 23.5 | 19 |
| 28 | 70 | 120 | 140 | M10x16 | M8 | 51.5 | 32.5 | 7.5 | 23.5 | 22.5 |
| 32 | 72 | 120 | 140 | M10x16 | M8 | 51.5 | 32.5 | 7.5 | 23.5 | 24.5 |
| 38 | 100 | 120 | 140 | M10x16 | M8 | 54 | 35 | 7.5 | 23.5 | 28 |
| 42 | 114 | 120 | 140 | M10x16 | M10 | 51.5 | 38.5 | 7.5 | 23.5 | 33 |

| i | $M_{n2}$ [Nm] | $M_{a2}$ [Nm] | $M_{p2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ ≤ [arcmin] | $\varphi_R$ ≤ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 19 | 24 - 28 | 32 - 38 | 42 | 48 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TQK 160 2_6** | 420 | 630 | 840 | 1600 | 4000 | 5' | 4' | 167 | 15000 | 13000 | 94 | – | 73.33 | 73.51 | 75.57 | 79.19 |
| **TQK 160 2_8** | 560 | 840 | 1120 | 1600 | 4000 | 5' | 4' | 167 | 15000 | 13000 | 94 | – | 69.49 | 69.66 | 71.73 | 75.34 |
| **TQK 160 2_10** | 700 | 1050 | 1400 | 1600 | 4000 | 5' | 4' | 167 | 15000 | 13000 | 94 | – | 67.98 | 68.16 | 70.22 | 73.83 |
| **TQK 160 2_14** | 750 | 1150 | 2000 | 1600 | 4000 | 5' | 4' | 167 | 15000 | 13000 | 94 | – | 66.68 | 66.85 | 68.92 | 72.53 |
| **TQK 160 2_20** | 550 | 850 | 1600 | 1600 | 4000 | 5' | 4' | 167 | 15000 | 13000 | 94 | – | 65.94 | 66.12 | 68.18 | 71.80 |
| **TQK 160 3_18** | 530 | 800 | 1500 | 1600 | 4000 | 7' | 6' | 167 | 15000 | 13000 | 91 | 66.84 | 67.17 | 67.34 | 69.41 | – |
| **TQK 160 3_24** | 800 | 1200 | 2000 | 1600 | 4000 | 7' | 6' | 167 | 15000 | 13000 | 91 | 66.47 | 66.79 | 66.97 | 69.03 | – |
| **TQK 160 3_30** | 800 | 1200 | 2000 | 1600 | 4000 | 7' | 6' | 167 | 15000 | 13000 | 91 | 66.30 | 66.63 | 66.80 | 68.87 | – |
| **TQK 160 3_40** | 800 | 1200 | 2000 | 1600 | 4000 | 7' | 6' | 167 | 15000 | 13000 | 91 | 65.41 | 65.73 | 65.91 | 67.97 | – |
| **TQK 160 3_50** | 800 | 1200 | 2000 | 1600 | 4000 | 7' | 6' | 167 | 15000 | 13000 | 91 | 64.99 | 65.32 | 65.49 | 67.56 | – |
| **TQK 160 3_70** | 800 | 1200 | 2000 | 1600 | 4000 | 7' | 6' | 167 | 15000 | 13000 | 91 | 64.67 | 65.00 | 65.17 | 67.24 | – |
| **TQK 160 3_80** | 800 | 1200 | 2000 | 1600 | 4000 | 7' | 6' | 167 | 15000 | 13000 | 91 | 64.51 | 64.84 | 65.01 | 67.08 | – |
| **TQK 160 3_100** | 800 | 1200 | 2000 | 1600 | 4000 | 7' | 6' | 167 | 15000 | 13000 | 91 | 64.49 | 64.82 | 65.00 | 67.06 | – |
| **TQK 160 3_140** | 750 | 1150 | 2000 | 1600 | 4000 | 7' | 6' | 167 | 15000 | 13000 | 91 | 64.48 | 64.81 | 64.99 | 67.05 | – |
| **TQK 160 3_200** | 550 | 850 | 1600 | 1600 | 4000 | 7' | 6' | 167 | 15000 | 13000 | 91 | 64.47 | 64.80 | 64.98 | 67.04 | – |



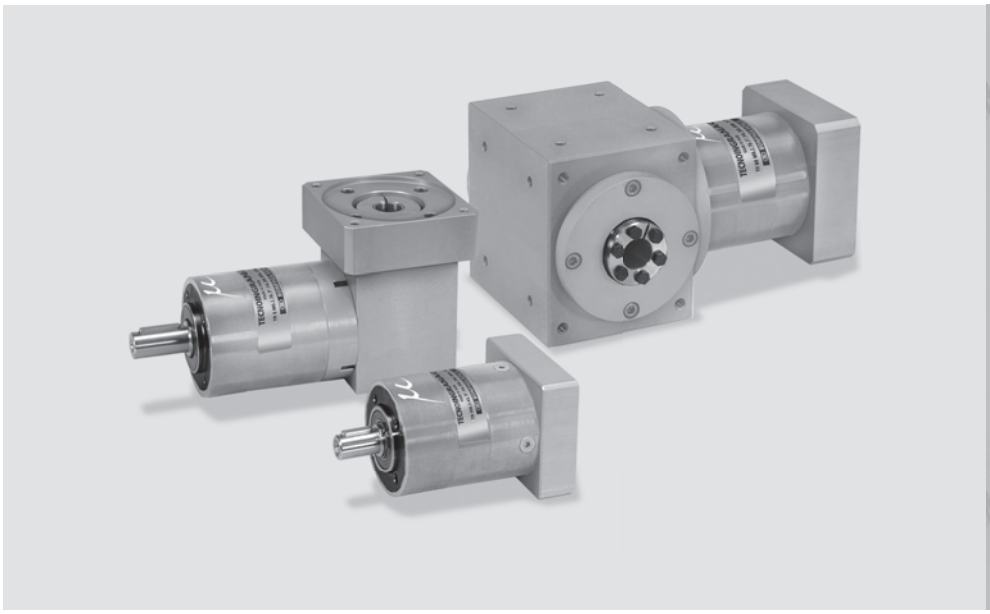
TQK

# TR
# PRÄZISIONSPLANETENGETRIEBE

TR-Präzisionsplanetengetriebe zeichnen sich durch ein extrem reduziertes Axialspiel, optimale Leistung, Laufruhe, einfache Motormontage und höchste Zuverlässigkeit aus.

Sie sind in verschiedenen Konfigurationen (Antrieb rechtwinklig, Abtrieb rechtwinklig, Hohlwelle, Eingangsvollwelle) und Motoradaptern erhältlich und so mit den mechanischen Schnittstellen der marktgängigsten Servomotoren kompatibel.

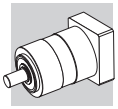






**Produktmerkmale:**

- Hohe Drehmomentdichte
- Hohes Beschleunigungs- und Nenndrehmoment
- Hohe radiale und axiale Belastbarkeit
- Entwickelt für Zyklus- und Dauerbetrieb
- Hohe Verdrehsteifigkeit
- Höchste Präzision dank des Verdrehflankenspiels von weniger als 3 arcmin
- Laufruhig
- Maximale Flexibilität (standard/reduziertes Flankenspiel; standard/verstärkte Lager)
- Verschiedene Varianten) für Ihre Anforderungen.



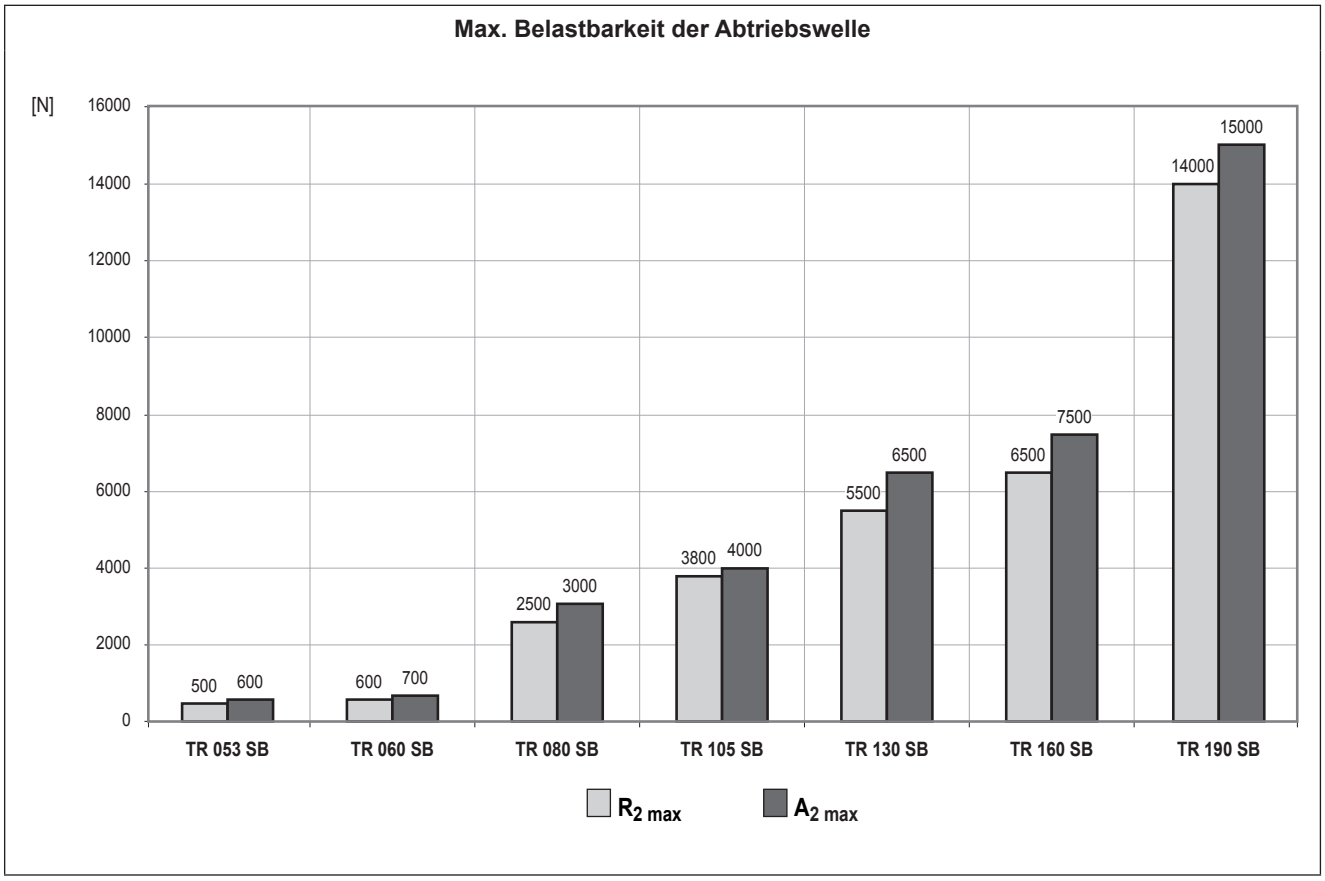
## *5 MERKMALE DER TR-REIHE*

Die Planetengetriebe der TR-Reihe zeichnen sich durch geringes Verdrehspiel, hohes übertragbares Drehmoment und hohe Getriebeübersetzungen aus.
Alle Getriebe sind laufruhig und gewährleisten eine lange und wartungsarme Nutzungsdauer. Die Motormontage ist einfach und erfordert keinerlei Spezialwerkzeug.

- Erhältlich mit standard (STD) oder reduziertem (LOW) Verdrehflankenspiel:
  1-Stufige Getriebe: standard $\varphi_S \leq 5'$; reduziert $\varphi_R \leq 3'$
  2-Stufige Getriebe: standard $\varphi_S \leq 5'$; reduziert $\varphi_R \leq 3'$
  3-Stufige Getriebe (nur G und MB): standard $\varphi_R \leq 5'$; reduziert $\varphi_R \leq 3'$
  3-Stufige Getriebe: standard $\varphi_S \leq 7'$; reduziert $\varphi_R \leq 5'$
  4-Stufige Getriebe (nur G und MB): standard $\varphi_S \leq 7'$; reduziert $\varphi_R \leq 5'$
- Eine hohe IP-Schutzklasse (IP65) sorgt dafür, dass innenliegende Teile vor Staub- und Flüssigkeitseintritt geschützt sind.
- Serienmäßige Fluorelastomer-Wellendichtungen an der Eingangswelle
- Schalldruckpegel $L_P \leq 70$ dB(A). Gemessen in 1 m Abstand ohne Last und bei einer Eingangsdrehzahl von $n_1 = 3000$ min$^{-1}$; i = 10.
- Lager für eine durchschnittliche Lebensdauer von von 20.000 Stunden unter normalen Betriebsbedingungen geeignet. Die folgende Tabelle zeigt die Lagertypen für die Abtriebswelle.

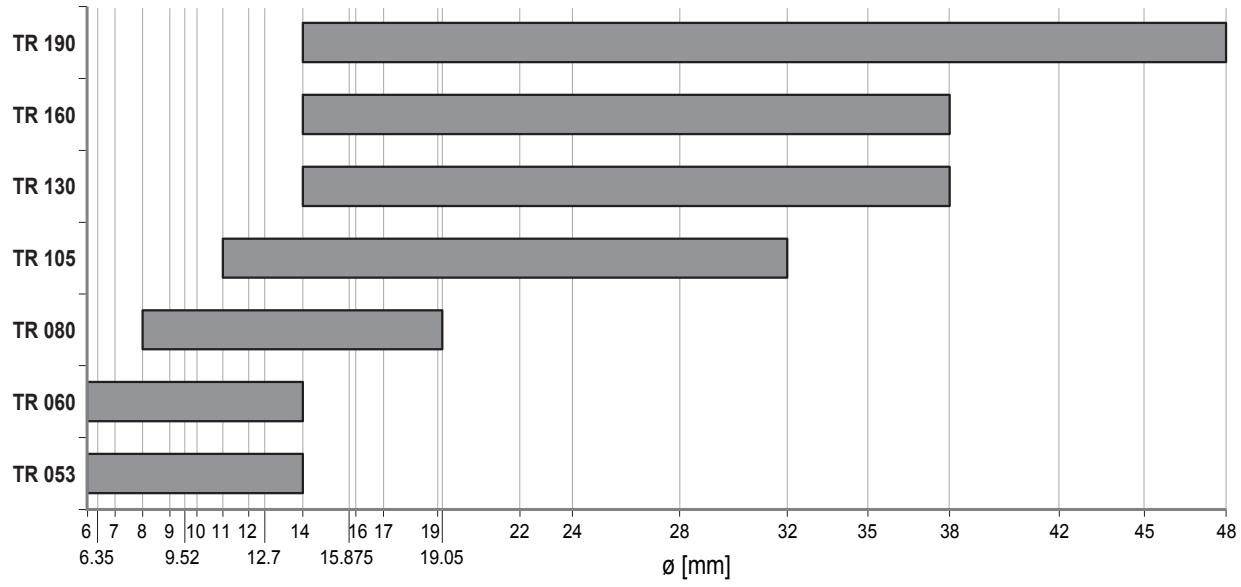


| | TR 053 | TR 060 | TR 080 | TR 105 | TR 130 | TR 160 | TR 190 |
|---|---|---|---|---|---|---|---|
| SB |  |  |  |  |  |  |  |



- Große Auswahl an Motoradaptern sorgt für den Anschluss an die marktgängigsten Servomotoren.

**Verfügbare Motorwellendurchmesser**




- Schmierung optimiert für die gewünschte Betriebsart.
  Ohne Verunreinigung muss das Schmiermittel nicht regelmäßig gewechselt werden.

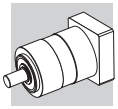
| Betrieb | TR 053 - TR 060 | TR 080 ... TR 190 | andere Dichtungen |
|---|---|---|---|
| **S1** (kontinuierlich) | NLGI Fettkonsistenz 00 | Synthetiköl Viskositätsklasse ISO VG 220 | Fluoroelastomer |
| **S5** (unterbrochen) | | NLGI Fettkonsistenz 00 | NBR |

- Umgebungstemperatur min. -20°C, max. +30°C; bei Temperaturen höher als 30°C ist der Temperaturfaktor $f_T$ zu berücksichtigen.
- Die Gehäusetemperatur darf $T_{max}$ = 90°C nicht übersteigen.

**Übersicht der Nenndrehmomente $M_{n2}$ [Nm]**

| [i] | 3 | 4 | 5 | 6 | 7 | 9 | 10 | 12 | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 36 | 40 | 45 | 48 | 50 | 60 | 64 | 70 | 75 | 80 | 81 | 84 | 90 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TR 053** | 12 | 15 | 15 | 15 | 15 | 12 | – | 20 | 20 | 20 | 20 | 20 | 20 | – | 20 | 15 | – | 20 | 20 | – | 20 | 20 | – | 20 | 20 | 12 | 20 | – |
| **TR 060** | 18 | 25 | 25 | 25 | 25 | 18 | 18 | 30 | 30 | 30 | 30 | 30 | 30 | 18 | 30 | 25 | 30 | – | 30 | 30 | – | 30 | 30 | 30 | 30 | – | 30 | 18 |
| **TR 080** | 40 | 50 | 50 | 50 | 50 | 40 | 40 | 70 | 70 | 70 | 70 | 70 | 70 | 40 | 70 | 50 | 70 | – | 70 | 70 | – | 70 | 70 | 70 | 70 | – | 70 | 40 |
| **TR 105** | 100 | 140 | 140 | 140 | 140 | 100 | 100 | 170 | 170 | 170 | 170 | 170 | 170 | 100 | 170 | 140 | 170 | – | 170 | 170 | – | 170 | 170 | 170 | 170 | – | 170 | 100 |
| **TR 130** | 215 | 380 | 380 | 380 | 380 | 215 | 215 | 450 | 450 | 450 | 450 | 450 | 450 | 215 | 450 | 380 | 450 | – | 450 | 450 | – | 450 | 450 | 450 | 450 | – | 450 | 215 |
| **TR 160** | 350 | 500 | 500 | 500 | 500 | 350 | 350 | 700 | 700 | 700 | 700 | 700 | 700 | 350 | 700 | 500 | 700 | – | 700 | 700 | – | 700 | 700 | 700 | 700 | – | 700 | 350 |
| **TR 190** | 500 | 700 | 700 | 700 | 700 | 500 | 500 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 500 | 1000 | 700 | 1000 | – | 1000 | 1000 | – | 1000 | 1000 | 1000 | 1000 | – | 1000 | 500 |

| [i] | 100 | 112 | 120 | 125 | 140 | 144 | 150 | 160 | 175 | 180 | 200 | 210 | 216 | 225 | 245 | 250 | 252 | 280 | 324 | 350 | 400 | 405 | 500 | 567 | 700 | 729 | 1000 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TR 053** | 20 | 20 | – | 20 | 20 | 20 | – | – | 20 | 20 | – | – | 20 | 20 | 20 | – | 20 | – | 20 | – | – | 20 | – | 20 | – | 12 | – |
| **TR 060** | 18 | – | 30 | 30 | 30 | – | 30 | 30 | 30 | – | 30 | 30 | 30 | – | – | 30 | – | 30 | – | 30 | 30 | – | 30 | – | 30 | – | 18 |
| **TR 080** | 40 | – | 70 | 70 | 70 | – | 70 | 70 | 70 | – | 70 | 70 | 70 | – | – | 70 | – | 70 | – | 70 | 70 | – | 70 | – | 70 | – | 40 |
| **TR 105** | 100 | – | 170 | 170 | 170 | – | 170 | 170 | 170 | – | 170 | 170 | 170 | – | – | 170 | – | 170 | – | 170 | 170 | – | 170 | – | 170 | – | 100 |
| **TR 130** | 215 | – | 450 | 450 | 450 | – | 450 | 450 | 450 | – | 450 | 450 | 450 | – | – | 450 | – | 450 | – | 450 | 450 | – | 450 | – | 450 | – | 215 |
| **TR 160** | 700 | – | 350 | 700 | 700 | – | 700 | 700 | 700 | – | 700 | 700 | – | – | – | 700 | – | 700 | – | 700 | 700 | – | 700 | – | 700 | – | 350 |
| **TR 190** | 1000 | – | 500 | 1000 | 1000 | – | 1000 | 1000 | 1000 | – | 1000 | 1000 | – | – | – | 1000 | – | 1000 | – | 1000 | 1000 | – | 1000 | – | 1000 | – | 500 |



## 5.1 BESTELLBEZEICHNUNG

**TR G 080 3 20 STD 95A CD 19 S1 OR SB KL UH1**

SCHMIERSTOFF
- **–** Standard
- **UH1** Lebensmitteltaugliches Schmiermittel

ABTRIEBSWELLENKONFIGURATION
- **KL** Glatte Welle ohne Passfeder
- **KE** Passfedernut (⛔ MB)

LAGER DER ABTRIEBSWELLE
- **SB** Standard

MONTAGEPOSITION
- **OR** Horizontal
- **VA** Vertikal mit Motor oben
- **VB** Vertikal mit Motor unten

BETRIEBSART
- **S1** Dauerbetrieb
- **S5** Kurzzeitbetrieb

BOHRUNGSDURCHMESSER EINGANGSWELLE
- **6 ... 48** (⛔ IS)

MOTORKOPPLUNG
- **CD** Klemmnabe (⛔ IS)

ANTRIEBSFLANSCH
- **25AH ... 180A1** Motorflansch
- **IS** Eingangsvollwelle (TR 053 ... TR 160) (⛔ K, G, MB)
- **FM** Ohne Motorflansch

VERDREHSPIEL

| | 1 Getriebestufe | 2 Getriebestufen | 3 Getriebestufen (nur K, G, MB) | 3 Getriebestufen | 4 Getriebestufen (nur K, G, MB) |
|---|---|---|---|---|---|
| **STD** | $\varphi_S \leq 5'$ | $\varphi_S \leq 5'$ | $\varphi_S \leq 5'$ | $\varphi_S \leq 7'$ | $\varphi_S \leq 7'$ |
| **LOW** (⛔ TR 053) | $\varphi_R \leq 3'$ | $\varphi_R \leq 3'$ | $\varphi_R \leq 3'$ | $\varphi_R \leq 5'$ | $\varphi_R \leq 5'$ |

GETRIEBEÜBERSETZUNG

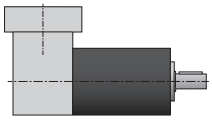
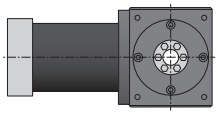
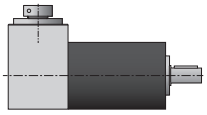
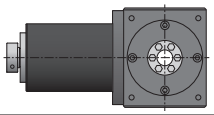
GETRIEBESTUFEN
- **1** **2** **3** **4**

BAUGRÖSSE
- **053** **060** **080** **105** **130** **160** **190**

VERSION
- **–** Koaxial
- **K** Rechtwinkliger Eingang (TR 053 ... TR 060)
- **G** Rechtwinkliger Eingang (TR 080 ... TR 160)
- **MB** Rechtwinkliger Ausgang (TR 080 ... TR 160)

REIHE
- **TR**

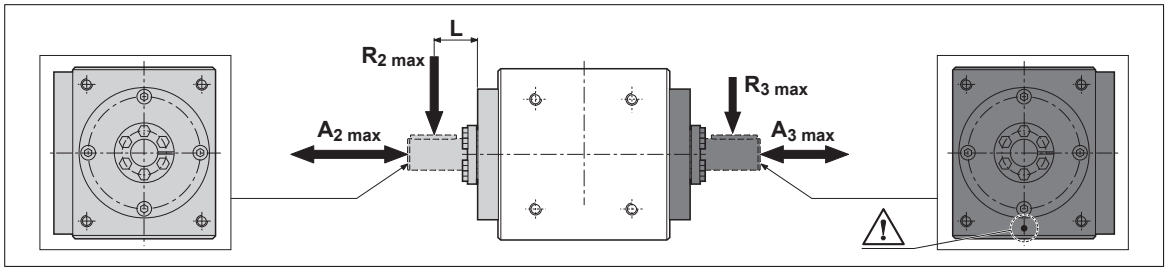
### 5.1.1 VERSIONEN UND ANTRIEBSSEITE

| | | VERSION | | |
|---|---|---|---|---|
| | | Koaxial **(—)** | Rechtwinkliger Eingang **(K - G)** | Rechtwinkliger Ausgang **(MB)** |
| ANTRIEBSFLANSCH | **25AH ... 180A1** |  |  |  |
| | **IS** |  | ⛔ | ⛔ |
| | **FM** |  |  |  |

### 5.1.2 MONTAGEPOSITIONEN

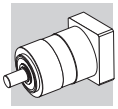
| | OR | VA | VB |
|---|---|---|---|
| **—** |  |  |  |
| **K - G** |  |  |  |
| **MB** |  |  |  |

### 5.2 ZULÄSSIGE RADIAL- UND AXIALKRÄFTE FÜR DIE MB-VERSION




| | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | L [mm] | $R_{3\,max}$ [N] | $A_{3\,max}$ [N] |
|---|---|---|---|---|---|
| **TR MB 080** | 6000 | 5000 | 60 | 5500 | 5000 |
| **TR MB 105** | 9000 | 7500 | 80 | 7500 | 7500 |
| **TR MB 130** | 13500 | 11500 | 100 | 11000 | 11500 |
| **TR MB 160*** | 15000 | 11500 | 100 | 12500 | 11500 |

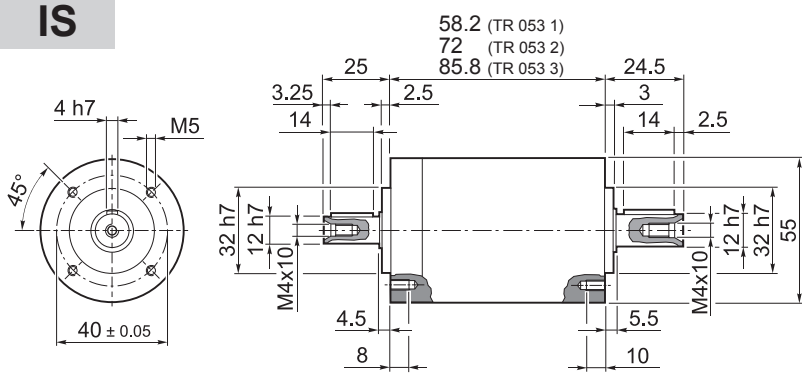
* Lager ausgelegt für eine durchschnittliche Lebensdauer von 10.000 Stunden unter normalen Betriebsbedingungen.





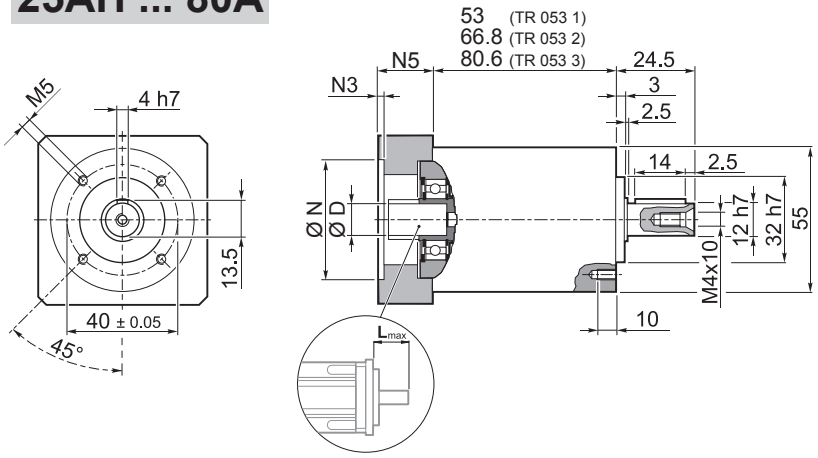
# TR 053

## IS




| | Kg |
|---|---|
| **TR 053 1** | 0.8 |
| **TR 053 2** | 1.0 |
| **TR 053 3** | 1.3 |

## 25AH ... 80A



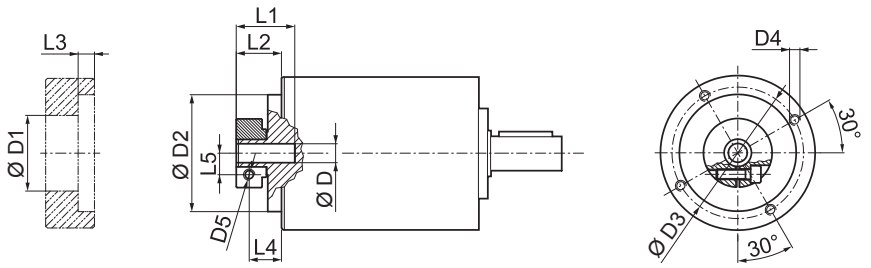

| | Kg |
|---|---|
| **TR 053 1** | 0.8 |
| **TR 053 2** | 1.0 |
| **TR 053 3** | 1.3 |

| | D | | | | | | | | | | | N | N1 | | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | min | max | | | | | |
| **25AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 25 | 36 | 48 | | | | | |
| **26AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 26 | 36 | 48 | | | | | |
| **28AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 28 | 36 | 48 | | | | | |
| **30AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 30 | 36 | 48 | | | | | |
| **32AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 32 | 38 | 48 | 55 | 3.5 | 4.5 | 25 | 25 |
| **34AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 34 | 40 | 48 | | | | | |
| **36AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 36 | 42 | 48 | | | | | |
| **38AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 38 | 44 | 48 | | | | | |
| **40AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 40 | 46 | 48 | | | | | |
| **38B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 38.1 | 66.6 | | 60 | 3 | M4x10 | 18 | 25 |
| **40B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 40 | 63 | | 60 | 3 | M4x10 | 18 | 25 |
| **50A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 50 | 60 | | 60 | 3 | M4x10 | 18 | 25 |
| **50B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 60 | 3 | M5x12 | 23 | 30 |
| **50BH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 60 | 4 | 5.5 | 23 | 30 |
| **50C** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 70 | | 60 | 3 | M4x10 | 23 | 30 |
| **50MH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 50 | 65 | | 55 | 2 | 5.5 | 16 | 23 |
| **60A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 60 | 75 | | 65 | 3 | M5x12 | 18 | 25 |
| **60AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 60 | 75 | | 65 | 3 | 5.5 | 18 | 25 |
| **60A1** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 75 | | 65 | 3 | M5x12 | 23 | 30 |
| **60AH1** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 75 | | 65 | 3 | 5.5 | 23 | 30 |
| **60B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 85 | | 75 | 3 | M5x12 | 23 | 30 |
| **60C** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **70A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 85 | | 75 | 3 | M6x15 | 23 | 30 |
| **70B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **73A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 73 | 98.4 | | 85 | 3 | M5x12 | 25 | 32 |
| **80A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 80 | 100 | | 85 | 3 | M6x15 | 23 | 30 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

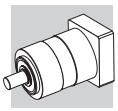
# TR 053

**FM**



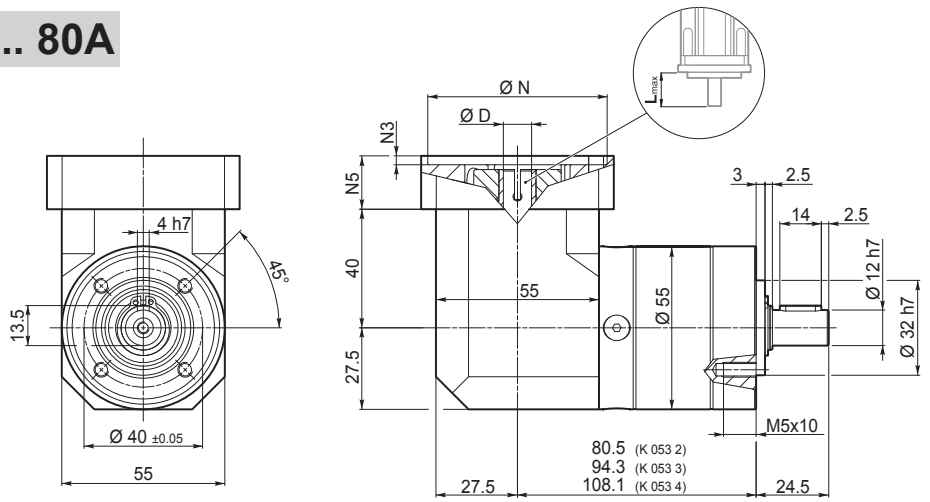

| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 6.35 | 7 | | 32.5 | 50 | 42.5 | M4x8 | M4 | 20.2 | 13.2 | 3 | 8.7 | 8 |
| 8 | 9 | 9.52 | 10 | 32.5 | 50 | 42.5 | M4x8 | M4 | 20.2 | 13.2 | 3 | 7.8 | 9 |
| 11 | 12 | 12.7 | | 35.5 | 50 | 42.5 | M4x8 | M4 | 20.5 | 13.5 | 3 | 8.5 | 11 |
| 14 | | | | 35.5 | 50 | 42.5 | M4x8 | M4 | 24 | 17 | 3 | 10.2 | 11.5 |

| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{1\,max}$ [N] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 6 ... 9.52 | $J_G$ [kgcm$^2$] D 10 ... 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TR 053 1_3 | 12 | 22 | 40 | 3300 | 4000 | 5' | 1.0 | 200 | 500 | 600 | 97 | 0.06 | 0.08 |
| TR 053 1_4 | 15 | 28 | 45 | 3500 | 5000 | 5' | 1.0 | 200 | 500 | 600 | 97 | 0.05 | 0.06 |
| TR 053 1_5 | 15 | 28 | 45 | 3500 | 5000 | 5' | 1.0 | 200 | 500 | 600 | 97 | 0.04 | 0.06 |
| TR 053 1_6 | 15 | 28 | 45 | 3500 | 5000 | 5' | 1.0 | 200 | 500 | 600 | 97 | 0.03 | 0.05 |
| TR 053 1_7 | 15 | 28 | 45 | 4000 | 6000 | 5' | 1.0 | 200 | 500 | 600 | 97 | 0.03 | 0.05 |
| TR 053 1_9 | 12 | 22 | 40 | 4000 | 6000 | 5' | 1.0 | 200 | 500 | 600 | 97 | 0.03 | 0.05 |
| TR 053 2_12 | 20 | 30 | 60 | 3300 | 4000 | 5' | 0.9 | 200 | 500 | 600 | 94 | 0.06 | 0.08 |
| TR 053 2_15 | 20 | 30 | 60 | 3300 | 4000 | 5' | 0.9 | 200 | 500 | 600 | 94 | 0.06 | 0.08 |
| TR 053 2_16 | 20 | 30 | 60 | 3500 | 5000 | 5' | 0.9 | 200 | 500 | 600 | 94 | 0.05 | 0.06 |
| TR 053 2_20 | 20 | 30 | 60 | 3500 | 5000 | 5' | 0.9 | 200 | 500 | 600 | 94 | 0.04 | 0.06 |
| TR 053 2_25 | 20 | 30 | 60 | 3500 | 5000 | 5' | 0.9 | 200 | 500 | 600 | 94 | 0.04 | 0.06 |
| TR 053 2_28 | 20 | 30 | 60 | 4000 | 6000 | 5' | 0.9 | 200 | 500 | 600 | 94 | 0.03 | 0.05 |
| TR 053 2_35 | 20 | 30 | 60 | 4000 | 6000 | 5' | 0.9 | 200 | 500 | 600 | 94 | 0.03 | 0.05 |
| TR 053 2_36 | 15 | 28 | 45 | 4000 | 6000 | 5' | 0.9 | 200 | 500 | 600 | 94 | 0.03 | 0.05 |
| TR 053 2_45 | 20 | 30 | 60 | 4000 | 6000 | 5' | 0.9 | 200 | 500 | 600 | 94 | 0.03 | 0.05 |
| TR 053 2_81 | 12 | 22 | 40 | 4000 | 6000 | 5' | 0.9 | 200 | 500 | 600 | 94 | 0.03 | 0.05 |
| TR 053 3_48 | 20 | 30 | 60 | 4000 | 5000 | 7' | 0.7 | 200 | 500 | 600 | 91 | 0.05 | 0.07 |
| TR 053 3_60 | 20 | 30 | 60 | 3500 | 5000 | 7' | 0.7 | 200 | 500 | 600 | 91 | 0.05 | 0.07 |
| TR 053 3_64 | 20 | 30 | 60 | 3500 | 5000 | 7' | 0.7 | 200 | 500 | 600 | 91 | 0.05 | 0.06 |
| TR 053 3_75 | 20 | 30 | 60 | 3500 | 5000 | 7' | 0.7 | 200 | 500 | 600 | 91 | 0.04 | 0.06 |
| TR 053 3_80 | 20 | 30 | 60 | 3500 | 5000 | 7' | 0.7 | 200 | 500 | 600 | 91 | 0.05 | 0.06 |
| TR 053 3_84 | 20 | 30 | 60 | 4000 | 6000 | 7' | 0.7 | 200 | 500 | 600 | 91 | 0.03 | 0.05 |
| TR 053 3_100 | 20 | 30 | 60 | 3500 | 5000 | 7' | 0.7 | 200 | 500 | 600 | 91 | 0.04 | 0.06 |
| TR 053 3_112 | 20 | 30 | 60 | 4000 | 6000 | 7' | 0.7 | 200 | 500 | 600 | 91 | 0.03 | 0.05 |
| TR 053 3_125 | 20 | 30 | 60 | 3500 | 5000 | 7' | 0.7 | 200 | 500 | 600 | 91 | 0.04 | 0.06 |
| TR 053 3_140 | 20 | 30 | 60 | 4000 | 6000 | 7' | 0.7 | 200 | 500 | 600 | 91 | 0.03 | 0.05 |
| TR 053 3_144 | 20 | 30 | 60 | 4000 | 6000 | 7' | 0.7 | 200 | 500 | 600 | 91 | 0.03 | 0.05 |
| TR 053 3_175 | 20 | 30 | 60 | 4000 | 6000 | 7' | 0.7 | 200 | 500 | 600 | 91 | 0.03 | 0.05 |
| TR 053 3_180 | 20 | 30 | 60 | 4000 | 6000 | 7' | 0.7 | 200 | 500 | 600 | 91 | 0.03 | 0.05 |
| TR 053 3_216 | 20 | 30 | 60 | 3500 | 5000 | 7' | 0.7 | 200 | 500 | 600 | 91 | 0.03 | 0.05 |
| TR 053 3_225 | 20 | 30 | 60 | 4000 | 6000 | 7' | 0.7 | 200 | 500 | 600 | 91 | 0.03 | 0.05 |
| TR 053 3_245 | 20 | 30 | 60 | 4000 | 6000 | 7' | 0.7 | 200 | 500 | 600 | 91 | 0.03 | 0.05 |
| TR 053 3_252 | 20 | 30 | 60 | 4000 | 6000 | 7' | 0.7 | 200 | 500 | 600 | 91 | 0.05 | 0.06 |
| TR 053 3_324 | 20 | 30 | 60 | 4000 | 6000 | 7' | 0.7 | 200 | 500 | 600 | 91 | 0.03 | 0.05 |
| TR 053 3_405 | 20 | 30 | 60 | 4000 | 6000 | 7' | 0.7 | 200 | 500 | 600 | 91 | 0.03 | 0.05 |
| TR 053 3_567 | 20 | 30 | 60 | 4000 | 6000 | 7' | 0.7 | 200 | 500 | 600 | 91 | 0.03 | 0.05 |
| TR 053 3_729 | 12 | 22 | 40 | 4000 | 6000 | 7' | 0.7 | 200 | 500 | 600 | 91 | 0.03 | 0.05 |



# TR K 053

## 25AH ... 80A

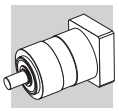



| | Kg |
|---|---|
| **TR K 053 2** | 1.3 |
| **TR K 053 3** | 1.5 |
| **TR K 053 4** | 1.8 |

TR

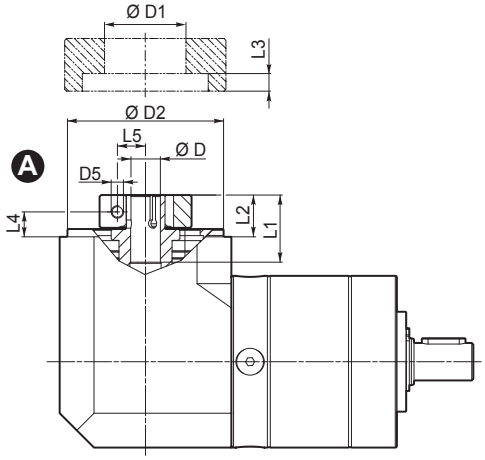
| | D | | | | | | | | | | | N | N1 | | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | min | max | | | | | |
| **25AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 25 | 36 | 48 | | | | | |
| **26AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 26 | 36 | 48 | | | | | |
| **28AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 28 | 36 | 48 | | | | | |
| **30AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 30 | 36 | 48 | | | | | |
| **32AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 32 | 38 | 48 | 55 | 3.5 | 4.5 | 25 | 25 |
| **34AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 34 | 40 | 48 | | | | | |
| **36AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 36 | 42 | 48 | | | | | |
| **38AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 38 | 44 | 48 | | | | | |
| **40AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 40 | 46 | 48 | | | | | |
| **38B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 38.1 | 66.6 | | 60 | 3 | M4x10 | 18 | 25 |
| **40B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 40 | 63 | | 60 | 3 | M4x10 | 18 | 25 |
| **50A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 50 | 60 | | 60 | 3 | M4x10 | 18 | 25 |
| **50B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 60 | 3 | M5x12 | 23 | 30 |
| **50BH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 60 | 4 | 5.5 | 23 | 30 |
| **50C** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 70 | | 60 | 3 | M4x10 | 23 | 30 |
| **50MH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 50 | 65 | | 55 | 2 | 5.5 | 16 | 23 |
| **60A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 60 | 75 | | 65 | 3 | M5x12 | 18 | 25 |
| **60A1** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 75 | | 65 | 3 | M5x12 | 23 | 30 |
| **60B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 85 | | 75 | 3 | M5x12 | 23 | 30 |
| **60C** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **70A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 85 | | 75 | 3 | M6x15 | 23 | 30 |
| **70B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **73A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 73 | 98.4 | | 85 | 3 | M5x12 | 25 | 32 |
| **80A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 80 | 100 | | 85 | 3 | M6x15 | 23 | 30 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

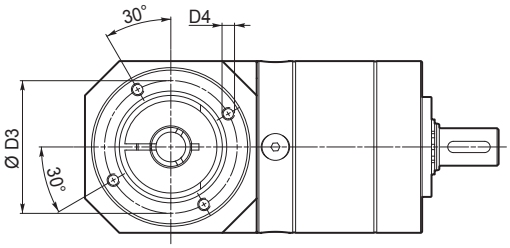


# TR K 053

**FM**



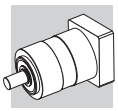

Sichtweise von A




| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 6.35 | 7 | | 32.5 | 50 | 42.5 | M4x8 | M4 | 20.2 | 13.2 | 3 | 8.7 | 8 |
| 8 | 9 | 9.52 | 10 | 32.5 | 50 | 42.5 | M4x8 | M4 | 20.2 | 13.2 | 3 | 7.8 | 9 |
| 11 | 12 | 12.7 | | 35.5 | 50 | 42.5 | M4x8 | M4 | 20.5 | 13.5 | 3 | 8.5 | 11 |
| 14 | | | | 35.5 | 50 | 42.5 | M4x8 | M4 | 24 | 17 | 3 | 10.2 | 11.5 |

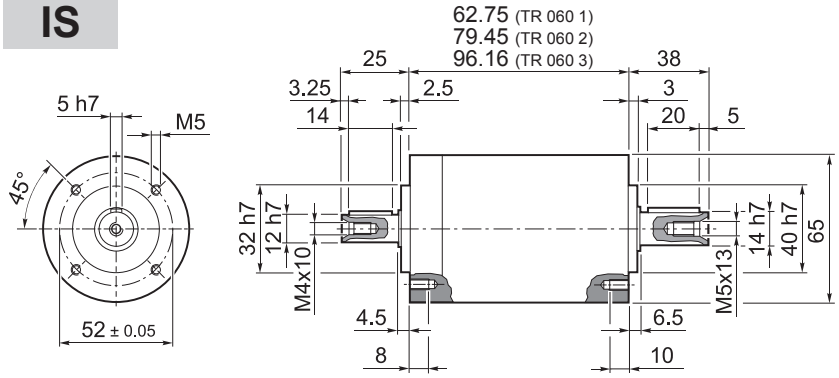
| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 6 ... 9.52 | $J_G$ [kgcm$^2$] D 10 ... 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TR K 053 2_3 | 12 | 22 | 40 | 3300 | 4000 | 5' | 1.0 | 500 | 600 | 94 | 0.18 | 0.20 |
| TR K 053 2_4 | 15 | 28 | 45 | 3500 | 5000 | 5' | 1.0 | 500 | 600 | 94 | 0.18 | 0.19 |
| TR K 053 2_5 | 15 | 28 | 45 | 3500 | 5000 | 5' | 1.0 | 500 | 600 | 94 | 0.17 | 0.19 |
| TR K 053 2_6 | 15 | 28 | 45 | 3500 | 5000 | 5' | 1.0 | 500 | 600 | 94 | 0.17 | 0.18 |
| TR K 053 2_7 | 15 | 28 | 45 | 4000 | 6000 | 5' | 1.0 | 500 | 600 | 94 | 0.17 | 0.19 |
| TR K 053 2_9 | 12 | 22 | 40 | 4000 | 6000 | 5' | 1.0 | 500 | 600 | 94 | 0.17 | 0.18 |
| TR K 053 3_12 | 20 | 30 | 60 | 3300 | 4000 | 5' | 0.9 | 500 | 600 | 91 | 0.18 | 0.20 |
| TR K 053 3_15 | 20 | 30 | 60 | 3300 | 4000 | 5' | 0.9 | 500 | 600 | 91 | 0.18 | 0.20 |
| TR K 053 3_16 | 20 | 30 | 60 | 3500 | 5000 | 5' | 0.9 | 500 | 600 | 91 | 0.17 | 0.19 |
| TR K 053 3_20 | 20 | 30 | 60 | 3500 | 5000 | 5' | 0.9 | 500 | 600 | 91 | 0.17 | 0.19 |
| TR K 053 3_25 | 20 | 30 | 60 | 3500 | 5000 | 5' | 0.9 | 500 | 600 | 91 | 0.17 | 0.19 |
| TR K 053 3_28 | 20 | 30 | 60 | 4000 | 6000 | 5' | 0.9 | 500 | 600 | 91 | 0.17 | 0.19 |
| TR K 053 3_35 | 20 | 30 | 60 | 4000 | 6000 | 5' | 0.9 | 500 | 600 | 91 | 0.17 | 0.19 |
| TR K 053 3_36 | 15 | 28 | 45 | 4000 | 6000 | 5' | 0.9 | 500 | 600 | 91 | 0.17 | 0.18 |
| TR K 053 3_45 | 20 | 30 | 60 | 4000 | 6000 | 5' | 0.9 | 500 | 600 | 91 | 0.17 | 0.19 |
| TR K 053 3_81 | 12 | 22 | 40 | 4000 | 6000 | 5' | 0.9 | 500 | 600 | 91 | 0.17 | 0.18 |
| TR K 053 4_48 | 20 | 30 | 60 | 4000 | 5000 | 7' | 0.7 | 500 | 600 | 89 | 0.18 | 0.19 |
| TR K 053 4_60 | 20 | 30 | 60 | 3500 | 5000 | 7' | 0.7 | 500 | 600 | 89 | 0.18 | 0.19 |
| TR K 053 4_64 | 20 | 30 | 60 | 3500 | 5000 | 7' | 0.7 | 500 | 600 | 89 | 0.17 | 0.19 |
| TR K 053 4_75 | 20 | 30 | 60 | 3500 | 5000 | 7' | 0.7 | 500 | 600 | 89 | 0.17 | 0.19 |
| TR K 053 4_80 | 20 | 30 | 60 | 3500 | 5000 | 7' | 0.7 | 500 | 600 | 89 | 0.17 | 0.19 |
| TR K 053 4_84 | 20 | 30 | 60 | 4000 | 6000 | 7' | 0.7 | 500 | 600 | 89 | 0.17 | 0.19 |
| TR K 053 4_100 | 20 | 30 | 60 | 3500 | 5000 | 7' | 0.7 | 500 | 600 | 89 | 0.17 | 0.19 |
| TR K 053 4_112 | 20 | 30 | 60 | 4000 | 6000 | 7' | 0.7 | 500 | 600 | 89 | 0.17 | 0.19 |
| TR K 053 4_125 | 20 | 30 | 60 | 3500 | 5000 | 7' | 0.7 | 500 | 600 | 89 | 0.17 | 0.19 |
| TR K 053 4_140 | 20 | 30 | 60 | 4000 | 6000 | 7' | 0.7 | 500 | 600 | 89 | 0.17 | 0.19 |
| TR K 053 4_144 | 20 | 30 | 60 | 4000 | 6000 | 7' | 0.7 | 500 | 600 | 89 | 0.17 | 0.18 |
| TR K 053 4_175 | 20 | 30 | 60 | 4000 | 6000 | 7' | 0.7 | 500 | 600 | 89 | 0.17 | 0.19 |
| TR K 053 4_180 | 20 | 30 | 60 | 4000 | 6000 | 7' | 0.7 | 500 | 600 | 89 | 0.17 | 0.18 |
| TR K 053 4_216 | 20 | 30 | 60 | 3500 | 5000 | 7' | 0.7 | 500 | 600 | 89 | 0.17 | 0.18 |
| TR K 053 4_225 | 20 | 30 | 60 | 4000 | 6000 | 7' | 0.7 | 500 | 600 | 89 | 0.17 | 0.18 |
| TR K 053 4_245 | 20 | 30 | 60 | 4000 | 6000 | 7' | 0.7 | 500 | 600 | 89 | 0.17 | 0.19 |
| TR K 053 4_252 | 20 | 30 | 60 | 4000 | 6000 | 7' | 0.7 | 500 | 600 | 89 | 0.18 | 0.20 |
| TR K 053 4_324 | 20 | 30 | 60 | 4000 | 6000 | 7' | 0.7 | 500 | 600 | 89 | 0.17 | 0.18 |
| TR K 053 4_405 | 20 | 30 | 60 | 4000 | 6000 | 7' | 0.7 | 500 | 600 | 89 | 0.17 | 0.18 |
| TR K 053 4_567 | 20 | 30 | 60 | 4000 | 6000 | 7' | 0.7 | 500 | 600 | 89 | 0.17 | 0.18 |
| TR K 053 4_729 | 12 | 22 | 40 | 4000 | 6000 | 7' | 0.7 | 500 | 600 | 89 | 0.17 | 0.18 |

TR



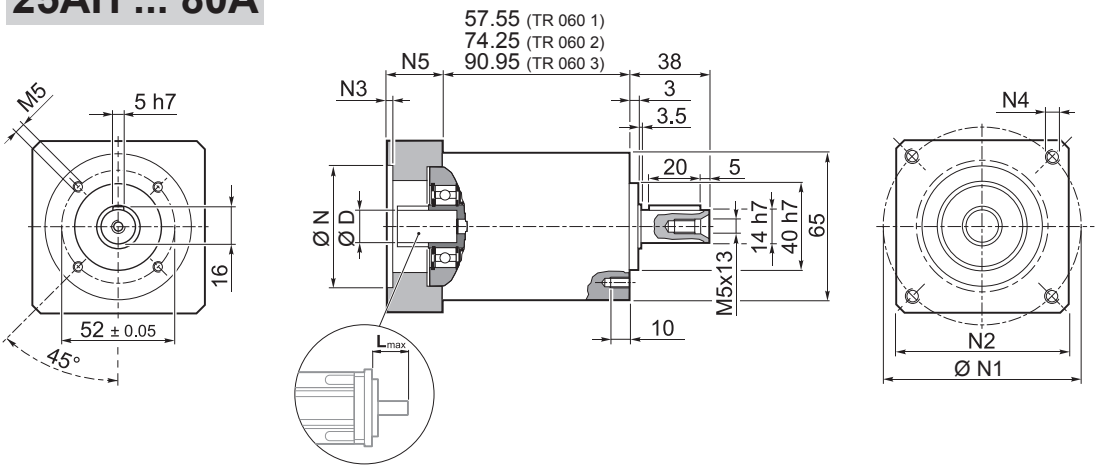
# TR 060

## IS




| | Kg |
|---|---|
| **TR 060 1** | 1.2 |
| **TR 060 2** | 1.7 |
| **TR 060 3** | 2.0 |

## 25AH ... 80A



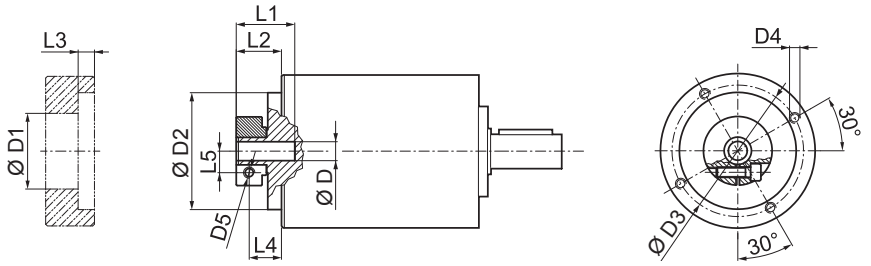

| | Kg |
|---|---|
| **TR 060 1** | 1.2 |
| **TR 060 2** | 1.7 |
| **TR 060 3** | 2.0 |

| | D | | | | | | | | | | | N | N1 | | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | min | max | | | | | |
| **25AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 25 | 39 | 56 | | | | | |
| **26AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 26 | 39 | 56 | | | | | |
| **28AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 28 | 39 | 56 | | | | | |
| **30AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 30 | 39 | 56 | | | | | |
| **32AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 32 | 39 | 56 | 65 | 3.5 | 4.5 | 25 | 25 |
| **34AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 34 | 40 | 56 | | | | | |
| **36AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 36 | 42 | 56 | | | | | |
| **39AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 39 | 45 | 56 | | | | | |
| **40AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 40 | 46 | 56 | | | | | |
| **38B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 38.1 | 66.6 | | 60 | 3 | M4x10 | 18 | 25 |
| **40B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 40 | 63 | | 60 | 3 | M4x10 | 18 | 25 |
| **50A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 50 | 60 | | 60 | 3 | M4x10 | 18 | 25 |
| **50B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 60 | 3 | M5x12 | 23 | 30 |
| **50BH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 65 | 3 | 5.5 | 25 | 32 |
| **50C** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 70 | | 60 | 3 | M4x10 | 23 | 30 |
| **55MH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 55 | 80 | | 65 | 2 | 5.5 | 16 | 23 |
| **60A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 60 | 75 | | 65 | 3 | M5x12 | 18 | 25 |
| **60AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 60 | 75 | | 65 | 3 | 5.5 | 18 | 25 |
| **60A1** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 75 | | 65 | 3 | M5x12 | 23 | 30 |
| **60AH1** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 75 | | 65 | 3 | 5.5 | 23 | 30 |
| **60B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 85 | | 75 | 3 | M5x12 | 23 | 30 |
| **60C** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **70A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 85 | | 75 | 3 | M6x15 | 23 | 30 |
| **70B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **73A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 73 | 98.4 | | 85 | 3 | M5x12 | 25 | 32 |
| **80A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 80 | 100 | | 85 | 3 | M6x15 | 23 | 30 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

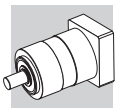
# TR 060

**FM**



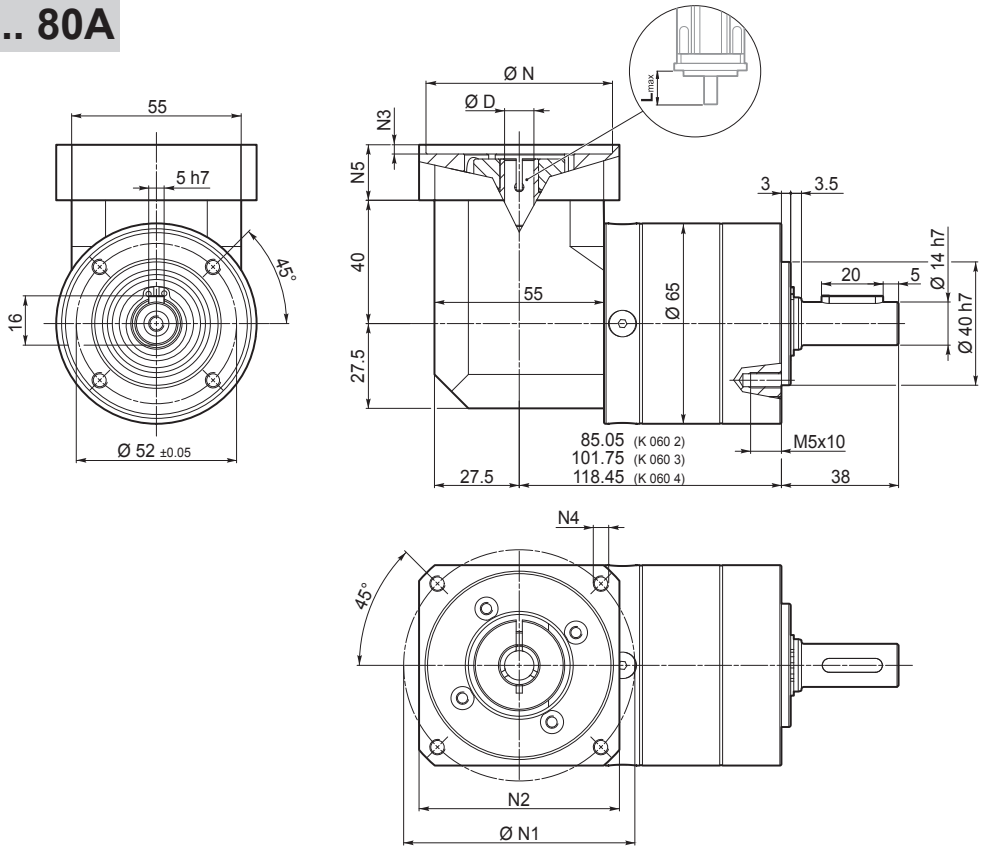

| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 6.35 | 7 | | 32.5 | 50 | 42.5 | M4x8 | M4 | 20.2 | 13.2 | 3 | 8.7 | 8 |
| 8 | 9 | 9.52 | 10 | 32.5 | 50 | 42.5 | M4x8 | M4 | 20.2 | 13.2 | 3 | 7.8 | 9 |
| 11 | 12 | 12.7 | | 35.5 | 50 | 42.5 | M4x8 | M4 | 20.5 | 13.5 | 3 | 8.5 | 11 |
| 14 | | | | 35.5 | 50 | 42.5 | M4x8 | M4 | 24 | 17 | 3 | 10.2 | 11.5 |

| i | $M_{n2}$ [Nm] | $M_{a2}$ [Nm] | $M_{p2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $\varphi_R$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{1\,max}$ [N] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 6 ... 9.52 | $J_G$ [kgcm$^2$] D 10 ... 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TR 060 1_3 | 18 | 35 | 70 | 3300 | 4000 | 5' | 3' | 3.0 | 200 | 600 | 700 | 97 | 0.10 | 0.11 |
| TR 060 1_4 | 25 | 40 | 90 | 3500 | 5000 | 5' | 3' | 3.0 | 200 | 600 | 700 | 97 | 0.06 | 0.08 |
| TR 060 1_5 | 25 | 40 | 90 | 3500 | 5000 | 5' | 3' | 3.0 | 200 | 600 | 700 | 97 | 0.05 | 0.07 |
| TR 060 1_6 | 25 | 40 | 90 | 3500 | 5000 | 5' | 3' | 3.0 | 200 | 600 | 700 | 97 | 0.04 | 0.06 |
| TR 060 1_7 | 25 | 40 | 90 | 4000 | 6000 | 5' | 3' | 3.0 | 200 | 600 | 700 | 97 | 0.04 | 0.06 |
| TR 060 1_10 | 18 | 35 | 70 | 4000 | 6000 | 5' | 3' | 3.0 | 200 | 600 | 700 | 97 | 0.03 | 0.05 |
| TR 060 2_9 | 18 | 35 | 70 | 3300 | 4000 | 5' | 3' | 2.5 | 200 | 600 | 700 | 94 | 0.10 | 0.12 |
| TR 060 2_12 | 30 | 45 | 100 | 3300 | 4000 | 5' | 3' | 2.5 | 200 | 600 | 700 | 94 | 0.10 | 0.11 |
| TR 060 2_15 | 30 | 45 | 100 | 3300 | 4000 | 5' | 3' | 2.5 | 200 | 600 | 700 | 94 | 0.09 | 0.11 |
| TR 060 2_16 | 30 | 45 | 100 | 3500 | 5000 | 5' | 3' | 2.5 | 200 | 600 | 700 | 94 | 0.06 | 0.08 |
| TR 060 2_20 | 30 | 45 | 100 | 3500 | 5000 | 5' | 3' | 2.5 | 200 | 600 | 700 | 94 | 0.05 | 0.07 |
| TR 060 2_25 | 30 | 45 | 100 | 3500 | 5000 | 5' | 3' | 2.5 | 200 | 600 | 700 | 94 | 0.05 | 0.06 |
| TR 060 2_28 | 30 | 45 | 100 | 4000 | 6000 | 5' | 3' | 2.5 | 200 | 600 | 700 | 94 | 0.04 | 0.06 |
| TR 060 2_30 | 18 | 35 | 70 | 4000 | 6000 | 5' | 3' | 2.5 | 200 | 600 | 700 | 94 | 0.03 | 0.05 |
| TR 060 2_35 | 30 | 45 | 100 | 4000 | 6000 | 5' | 3' | 2.5 | 200 | 600 | 700 | 94 | 0.04 | 0.06 |
| TR 060 2_36 | 25 | 40 | 90 | 3500 | 5000 | 5' | 3' | 2.5 | 200 | 600 | 700 | 94 | 0.04 | 0.06 |
| TR 060 2_40 | 30 | 45 | 100 | 4000 | 6000 | 5' | 3' | 2.5 | 200 | 600 | 700 | 94 | 0.03 | 0.05 |
| TR 060 2_50 | 30 | 45 | 100 | 4000 | 6000 | 5' | 3' | 2.5 | 200 | 600 | 700 | 94 | 0.03 | 0.05 |
| TR 060 2_70 | 30 | 45 | 100 | 4000 | 6000 | 5' | 3' | 2.5 | 200 | 600 | 700 | 94 | 0.03 | 0.05 |
| TR 060 2_100 | 18 | 35 | 70 | 4000 | 6000 | 5' | 3' | 2.5 | 200 | 600 | 700 | 94 | 0.03 | 0.05 |
| TR 060 3_48 | 30 | 45 | 100 | 3500 | 5000 | 7' | 5' | 2.0 | 200 | 600 | 700 | 91 | 0.06 | 0.08 |
| TR 060 3_64 | 30 | 45 | 100 | 3500 | 5000 | 7' | 5' | 2.0 | 200 | 600 | 700 | 91 | 0.06 | 0.08 |
| TR 060 3_75 | 30 | 45 | 100 | 3500 | 5000 | 7' | 5' | 2.0 | 200 | 600 | 700 | 91 | 0.05 | 0.07 |
| TR 060 3_80 | 30 | 45 | 100 | 3500 | 5000 | 7' | 5' | 2.0 | 200 | 600 | 700 | 91 | 0.06 | 0.08 |
| TR 060 3_84 | 30 | 45 | 100 | 4000 | 6000 | 7' | 5' | 2.0 | 200 | 600 | 700 | 91 | 0.04 | 0.06 |
| TR 060 3_90 | 18 | 35 | 70 | 4000 | 6000 | 7' | 5' | 2.0 | 200 | 600 | 700 | 91 | 0.03 | 0.05 |
| TR 060 3_120 | 30 | 45 | 100 | 4000 | 6000 | 7' | 5' | 2.0 | 200 | 600 | 700 | 91 | 0.03 | 0.05 |
| TR 060 3_125 | 30 | 45 | 100 | 3500 | 5000 | 7' | 5' | 2.0 | 200 | 600 | 700 | 91 | 0.05 | 0.07 |
| TR 060 3_140 | 30 | 45 | 100 | 4000 | 6000 | 7' | 5' | 2.0 | 200 | 600 | 700 | 91 | 0.04 | 0.06 |
| TR 060 3_150 | 30 | 45 | 100 | 4000 | 6000 | 7' | 5' | 2.0 | 200 | 600 | 700 | 91 | 0.03 | 0.05 |
| TR 060 3_160 | 30 | 45 | 100 | 4000 | 6000 | 7' | 5' | 2.0 | 200 | 600 | 700 | 91 | 0.03 | 0.05 |
| TR 060 3_175 | 30 | 45 | 100 | 4000 | 6000 | 7' | 5' | 2.0 | 200 | 600 | 700 | 91 | 0.04 | 0.06 |
| TR 060 3_200 | 30 | 45 | 100 | 4000 | 6000 | 7' | 5' | 2.0 | 200 | 600 | 700 | 91 | 0.03 | 0.05 |
| TR 060 3_210 | 30 | 45 | 100 | 4000 | 6000 | 7' | 5' | 2.0 | 200 | 600 | 700 | 91 | 0.03 | 0.05 |
| TR 060 3_216 | 30 | 45 | 100 | 3500 | 5000 | 7' | 5' | 2.0 | 200 | 600 | 700 | 91 | 0.04 | 0.06 |
| TR 060 3_250 | 30 | 45 | 100 | 4000 | 6000 | 7' | 5' | 2.0 | 200 | 600 | 700 | 91 | 0.03 | 0.05 |
| TR 060 3_280 | 30 | 45 | 100 | 4000 | 6000 | 7' | 5' | 2.0 | 200 | 600 | 700 | 91 | 0.03 | 0.05 |
| TR 060 3_350 | 30 | 45 | 100 | 4000 | 6000 | 7' | 5' | 2.0 | 200 | 600 | 700 | 91 | 0.03 | 0.05 |
| TR 060 3_400 | 30 | 45 | 100 | 4000 | 6000 | 7' | 5' | 2.0 | 200 | 600 | 700 | 91 | 0.03 | 0.05 |
| TR 060 3_500 | 30 | 45 | 100 | 4000 | 6000 | 7' | 5' | 2.0 | 200 | 600 | 700 | 91 | 0.03 | 0.05 |
| TR 060 3_700 | 30 | 45 | 100 | 4000 | 6000 | 7' | 5' | 2.0 | 200 | 600 | 700 | 91 | 0.03 | 0.05 |
| TR 060 3_1000 | 18 | 35 | 70 | 4000 | 6000 | 7' | 5' | 2.0 | 200 | 600 | 700 | 91 | 0.03 | 0.05 |



# TR K 060

## 25AH ... 80A

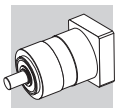



| | Kg |
|---|---|
| **TR K 060 2** | 1.7 |
| **TR K 060 3** | 2.2 |
| **TR K 060 4** | 2.5 |

TR

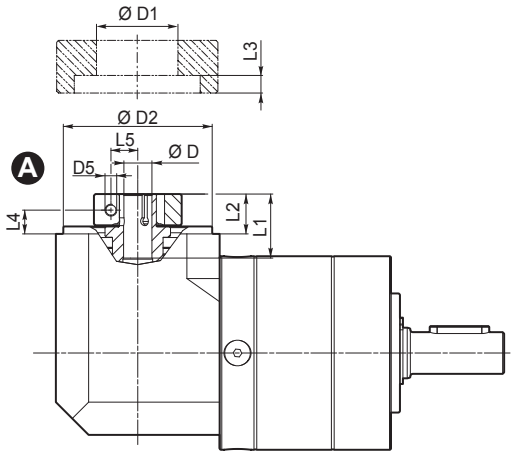
| | D | | | | | | | | | | | N | N1 | | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | min | max | | | | | |
| **25AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 25 | 39 | 56 | | | | | |
| **26AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 26 | 39 | 56 | | | | | |
| **28AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 28 | 39 | 56 | | | | | |
| **30AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 30 | 39 | 56 | | | | | |
| **32AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 32 | 39 | 56 | 65 | 3.5 | 4.5 | 25 | 25 |
| **34AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 34 | 40 | 56 | | | | | |
| **36AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 36 | 42 | 56 | | | | | |
| **39AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 39 | 45 | 56 | | | | | |
| **40AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 40 | 46 | 56 | | | | | |
| **38B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 38.1 | 66.6 | | 60 | 3 | M4x10 | 18 | 25 |
| **40B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 40 | 63 | | 60 | 3 | M4x10 | 18 | 25 |
| **50A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 50 | 60 | | 60 | 3 | M4x10 | 18 | 25 |
| **50B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 60 | 3 | M5x12 | 23 | 30 |
| **50BH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 65 | 3 | 5.5 | 25 | 32 |
| **50C** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 70 | | 60 | 3 | M4x10 | 23 | 30 |
| **55MH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 55 | 80 | | 65 | 2 | 5.5 | 16 | 23 |
| **60A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 60 | 75 | | 65 | 3 | M5x12 | 18 | 25 |
| **60A1** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 75 | | 65 | 3 | M5x12 | 23 | 30 |
| **60B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 85 | | 75 | 3 | M5x12 | 23 | 30 |
| **60C** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **70A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 85 | | 75 | 3 | M6x15 | 23 | 30 |
| **70B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **73A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 73 | 98.4 | | 85 | 3 | M5x12 | 25 | 32 |
| **80A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 80 | 100 | | 85 | 3 | M6x15 | 23 | 30 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

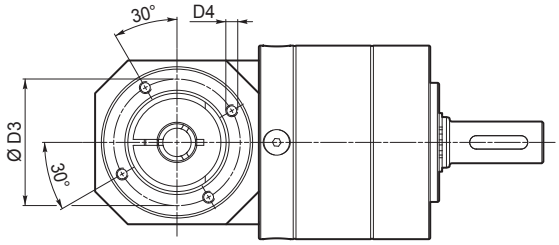


# TR K 060

**FM**

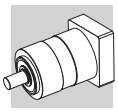



Sichtweise von A



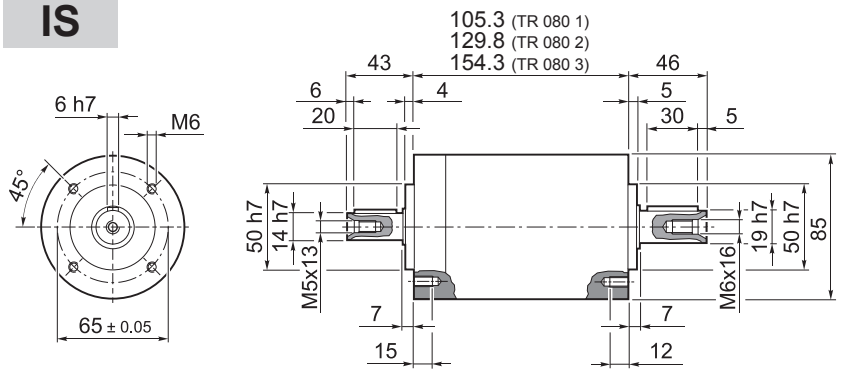

| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 6.35 | 7 | | 32.5 | 50 | 42.5 | M4x8 | M4 | 20.2 | 13.2 | 3 | 8.7 | 8 |
| 8 | 9 | 9.52 | 10 | 32.5 | 50 | 42.5 | M4x8 | M4 | 20.2 | 13.2 | 3 | 7.8 | 9 |
| 11 | 12 | 12.7 | | 35.5 | 50 | 42.5 | M4x8 | M4 | 20.5 | 13.5 | 3 | 8.5 | 11 |
| 14 | | | | 35.5 | 50 | 42.5 | M4x8 | M4 | 24 | 17 | 3 | 10.2 | 11.5 |

| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $\varphi_R$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 6 ... 9.52 | $J_G$ [kgcm$^2$] D 10 ... 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TR K 060 2_3 | 18 | 35 | 70 | 3300 | 4000 | 5' | 3' | 3.0 | 600 | 700 | 94 | 0.20 | 0.20 |
| TR K 060 2_4 | 25 | 40 | 90 | 3500 | 5000 | 5' | 3' | 3.0 | 600 | 700 | 94 | 0.18 | 0.20 |
| TR K 060 2_5 | 25 | 40 | 90 | 3500 | 5000 | 5' | 3' | 3.0 | 600 | 700 | 94 | 0.17 | 0.19 |
| TR K 060 2_6 | 25 | 40 | 90 | 3500 | 5000 | 5' | 3' | 3.0 | 600 | 700 | 94 | 0.17 | 0.19 |
| TR K 060 2_7 | 25 | 40 | 90 | 4000 | 6000 | 5' | 3' | 3.0 | 600 | 700 | 94 | 0.17 | 0.19 |
| TR K 060 2_10 | 18 | 35 | 70 | 4000 | 6000 | 5' | 3' | 3.0 | 600 | 700 | 94 | 0.17 | 0.18 |
| TR K 060 3_9 | 18 | 35 | 70 | 3300 | 4000 | 5' | 3' | 2.5 | 600 | 700 | 91 | 0.20 | 0.21 |
| TR K 060 3_12 | 30 | 45 | 100 | 3300 | 4000 | 5' | 3' | 2.5 | 600 | 700 | 91 | 0.20 | 0.21 |
| TR K 060 3_15 | 30 | 45 | 100 | 3300 | 4000 | 5' | 3' | 2.5 | 600 | 700 | 91 | 0.19 | 0.21 |
| TR K 060 3_16 | 30 | 45 | 100 | 3500 | 5000 | 5' | 3' | 2.5 | 600 | 700 | 91 | 0.18 | 0.20 |
| TR K 060 3_20 | 30 | 45 | 100 | 3500 | 5000 | 5' | 3' | 2.5 | 600 | 700 | 91 | 0.17 | 0.19 |
| TR K 060 3_25 | 30 | 45 | 100 | 3500 | 5000 | 5' | 3' | 2.5 | 600 | 700 | 91 | 0.17 | 0.18 |
| TR K 060 3_28 | 30 | 45 | 100 | 4000 | 6000 | 5' | 3' | 2.5 | 600 | 700 | 91 | 0.17 | 0.19 |
| TR K 060 3_30 | 18 | 35 | 70 | 4000 | 6000 | 5' | 3' | 2.5 | 600 | 700 | 91 | 0.17 | 0.18 |
| TR K 060 3_35 | 30 | 45 | 100 | 4000 | 6000 | 5' | 3' | 2.5 | 600 | 700 | 91 | 0.18 | 0.19 |
| TR K 060 3_36 | 25 | 40 | 90 | 3500 | 5000 | 5' | 3' | 2.5 | 600 | 700 | 91 | 0.18 | 0.19 |
| TR K 060 3_40 | 30 | 45 | 100 | 4000 | 6000 | 5' | 3' | 2.5 | 600 | 700 | 91 | 0.17 | 0.18 |
| TR K 060 3_50 | 30 | 45 | 100 | 4000 | 6000 | 5' | 3' | 2.5 | 600 | 700 | 91 | 0.17 | 0.18 |
| TR K 060 3_70 | 30 | 45 | 100 | 4000 | 6000 | 5' | 3' | 2.5 | 600 | 700 | 91 | 0.17 | 0.18 |
| TR K 060 3_100 | 18 | 35 | 70 | 4000 | 6000 | 5' | 3' | 2.5 | 600 | 700 | 91 | 0.17 | 0.18 |
| TR K 060 4_48 | 30 | 45 | 100 | 3500 | 5000 | 7' | 5' | 2.0 | 600 | 700 | 89 | 0.18 | 0.20 |
| TR K 060 4_64 | 30 | 45 | 100 | 3500 | 5000 | 7' | 5' | 2.0 | 600 | 700 | 89 | 0.18 | 0.20 |
| TR K 060 4_75 | 30 | 45 | 100 | 3500 | 5000 | 7' | 5' | 2.0 | 600 | 700 | 89 | 0.17 | 0.19 |
| TR K 060 4_80 | 30 | 45 | 100 | 3500 | 5000 | 7' | 5' | 2.0 | 600 | 700 | 89 | 0.18 | 0.20 |
| TR K 060 4_84 | 30 | 45 | 100 | 4000 | 6000 | 7' | 5' | 2.0 | 600 | 700 | 89 | 0.17 | 0.19 |
| TR K 060 4_90 | 18 | 35 | 70 | 4000 | 6000 | 7' | 5' | 2.0 | 600 | 700 | 89 | 0.17 | 0.18 |
| TR K 060 4_120 | 30 | 45 | 100 | 4000 | 6000 | 7' | 5' | 2.0 | 600 | 700 | 89 | 0.15 | 0.17 |
| TR K 060 4_125 | 30 | 45 | 100 | 3500 | 5000 | 7' | 5' | 2.0 | 600 | 700 | 89 | 0.17 | 0.19 |
| TR K 060 4_140 | 30 | 45 | 100 | 4000 | 6000 | 7' | 5' | 2.0 | 600 | 700 | 89 | 0.17 | 0.19 |
| TR K 060 4_150 | 30 | 45 | 100 | 4000 | 6000 | 7' | 5' | 2.0 | 600 | 700 | 89 | 0.17 | 0.18 |
| TR K 060 4_160 | 30 | 45 | 100 | 4000 | 6000 | 7' | 5' | 2.0 | 600 | 700 | 89 | 0.17 | 0.18 |
| TR K 060 4_175 | 30 | 45 | 100 | 4000 | 6000 | 7' | 5' | 2.0 | 600 | 700 | 89 | 0.17 | 0.19 |
| TR K 060 4_200 | 30 | 45 | 100 | 4000 | 6000 | 7' | 5' | 2.0 | 600 | 700 | 89 | 0.17 | 0.18 |
| TR K 060 4_210 | 30 | 45 | 100 | 4000 | 6000 | 7' | 5' | 2.0 | 600 | 700 | 89 | 0.17 | 0.18 |
| TR K 060 4_216 | 30 | 45 | 100 | 3500 | 5000 | 7' | 5' | 2.0 | 600 | 700 | 89 | 0.17 | 0.19 |
| TR K 060 4_250 | 30 | 45 | 100 | 4000 | 6000 | 7' | 5' | 2.0 | 600 | 700 | 89 | 0.17 | 0.18 |
| TR K 060 4_280 | 30 | 45 | 100 | 4000 | 6000 | 7' | 5' | 2.0 | 600 | 700 | 89 | 0.17 | 0.18 |
| TR K 060 4_350 | 30 | 45 | 100 | 4000 | 6000 | 7' | 5' | 2.0 | 600 | 700 | 89 | 0.17 | 0.18 |
| TR K 060 4_400 | 30 | 45 | 100 | 4000 | 6000 | 7' | 5' | 2.0 | 600 | 700 | 89 | 0.17 | 0.18 |
| TR K 060 4_500 | 30 | 45 | 100 | 4000 | 6000 | 7' | 5' | 2.0 | 600 | 700 | 89 | 0.17 | 0.18 |
| TR K 060 4_700 | 30 | 45 | 100 | 4000 | 6000 | 7' | 5' | 2.0 | 600 | 700 | 89 | 0.17 | 0.18 |
| TR K 060 4_1000 | 18 | 35 | 70 | 4000 | 6000 | 7' | 5' | 2.0 | 600 | 700 | 89 | 0.17 | 0.18 |



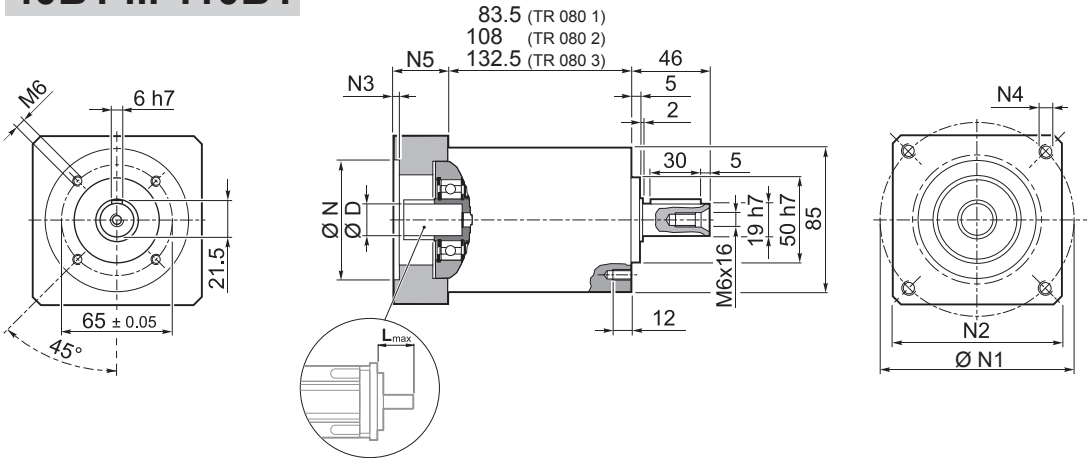
# TR 080

## IS




| | Kg |
|---|---|
| **TR 080 1** | 4.0 |
| **TR 080 2** | 4.6 |
| **TR 080 3** | 5.2 |

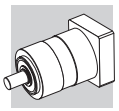
## 40B1 ... 110B1




| | Kg |
|---|---|
| **TR 080 1** | 4.0 |
| **TR 080 2** | 4.6 |
| **TR 080 3** | 5.2 |

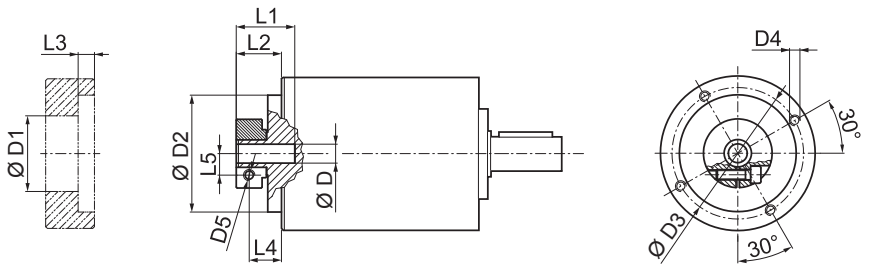
| | D | | | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **40B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 40 | 63 | 80 | 4 | M4x12 | 34 | 40 |
| **45A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | – | – | – | – | – | – | 45 | 63 | 80 | 4 | M4x12 | 34 | 40 |
| **50B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 65 | 80 | 4 | M5x16 | 34 | 40 |
| **50BH1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 65 | 80 | 4 | 5.5 | 34 | 40 |
| **50C1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 70 | 80 | 4 | M4x10 | 34 | 40 |
| **50D** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 95 | 80 | 4 | M6x20 | 34 | 40 |
| **55A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 55.5 | 125.7 | 105 | 4 | M6x20 | 34 | 40 |
| **60A2** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 60 | 75 | 80 | 4 | M5x16 | 34 | 40 |
| **60AH2** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 60 | 75 | 90 | 4 | 6.5 | 34 | 40 |
| **60B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | – | – | – | 60 | 85 | 80 | 4 | M5x16 | 34 | 40 |
| **60C1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | – | – | – | 60 | 90 | 80 | 4 | M5x16 | 34 | 40 |
| **70A1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 85 | 80 | 4 | M6x20 | 34 | 40 |
| **70AH1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 85 | 90 | 4 | 6.5 | 34 | 40 |
| **70B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 90 | 80 | 4 | M5x16 | 34 | 40 |
| **73A1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 73 | 98.4 | 85 | 4 | M5x16 | 34 | 40 |
| **80A1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 80 | 100 | 90 | 4 | M6x16 | 34 | 40 |
| **95A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 95 | 115 | 100 | 4 | M8x20 | 34 | 40 |
| **95B** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 95 | 130 | 115 | 4 | M8x20 | 34 | 40 |
| **110A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 130 | 115 | 4 | M8x20 | 34 | 40 |
| **110B** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 145 | 120 | 6.5 | M8x20 | 44 | 50 |
| **110B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 145 | 120 | 6.5 | M8x20 | 54 | 60 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.



# TR 080

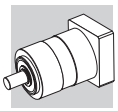
**FM**




| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 9 | 9.52 | | 38 | 68 | 76.5 | M6x12 | M6 | 32.2 | 26.3 | 9.5 | 19.3 | 10.5 |
| 11 | 12 | 12.7 | | 43 | 68 | 76.5 | M6x12 | M6 | 32.2 | 26.3 | 9.5 | 19.3 | 12.5 |
| 14 | 15.875 | 16 | 17 | 48 | 68 | 76.5 | M6x12 | M6 | 32.2 | 26.3 | 9.5 | 19.3 | 14.5 |
| 19 | 19.05 | | | 51 | 68 | 76.5 | M6x12 | M6 | 32.2 | 26.3 | 9.5 | 19.3 | 16.5 |

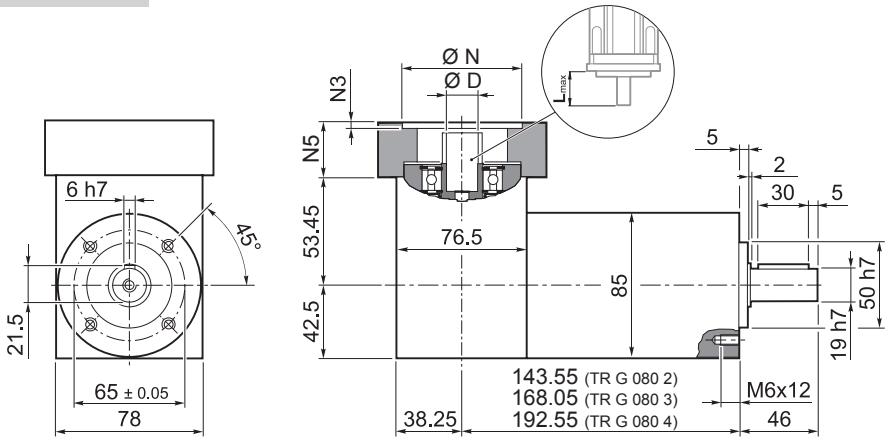
| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $\varphi_R$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{1\,max}$ [N] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 8 ... 12.7 | $J_G$ [kgcm$^2$] D 14 ... 19.05 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TR 080 1_3 | 40 | 80 | 180 | 2900 | 3500 | 5' | 3' | 8.0 | 400 | 2500 | 3000 | 97 | 0.50 | 0.59 |
| TR 080 1_4 | 50 | 80 | 200 | 3100 | 4500 | 5' | 3' | 8.0 | 400 | 2500 | 3000 | 97 | 0.34 | 0.43 |
| TR 080 1_5 | 50 | 80 | 200 | 3200 | 4500 | 5' | 3' | 8.0 | 400 | 2500 | 3000 | 97 | 0.28 | 0.37 |
| TR 080 1_6 | 50 | 80 | 200 | 3200 | 4500 | 5' | 3' | 8.0 | 400 | 2500 | 3000 | 97 | 0.21 | 0.30 |
| TR 080 1_7 | 50 | 80 | 200 | 4000 | 6000 | 5' | 3' | 8.0 | 400 | 2500 | 3000 | 97 | 0.23 | 0.32 |
| TR 080 1_10 | 40 | 80 | 180 | 4000 | 6000 | 5' | 3' | 8.0 | 400 | 2500 | 3000 | 97 | 0.20 | 0.29 |
| TR 080 2_9 | 40 | 80 | 180 | 2900 | 3500 | 5' | 3' | 6.5 | 400 | 2500 | 3000 | 94 | 0.49 | 0.58 |
| TR 080 2_12 | 70 | 100 | 250 | 2900 | 3500 | 5' | 3' | 6.5 | 400 | 2500 | 3000 | 94 | 0.47 | 0.56 |
| TR 080 2_15 | 70 | 100 | 250 | 2900 | 3500 | 5' | 3' | 6.5 | 400 | 2500 | 3000 | 94 | 0.46 | 0.55 |
| TR 080 2_16 | 70 | 100 | 250 | 3100 | 4500 | 5' | 3' | 6.5 | 400 | 2500 | 3000 | 94 | 0.32 | 0.41 |
| TR 080 2_20 | 70 | 100 | 250 | 3200 | 4500 | 5' | 3' | 6.5 | 400 | 2500 | 3000 | 94 | 0.27 | 0.36 |
| TR 080 2_25 | 70 | 100 | 250 | 3200 | 4500 | 5' | 3' | 6.5 | 400 | 2500 | 3000 | 94 | 0.27 | 0.36 |
| TR 080 2_28 | 70 | 100 | 250 | 4000 | 6000 | 5' | 3' | 6.5 | 400 | 2500 | 3000 | 94 | 0.22 | 0.31 |
| TR 080 2_30 | 40 | 80 | 180 | 4000 | 6000 | 5' | 3' | 6.5 | 400 | 2500 | 3000 | 94 | 0.20 | 0.29 |
| TR 080 2_35 | 70 | 100 | 250 | 4000 | 6000 | 5' | 3' | 6.5 | 400 | 2500 | 3000 | 94 | 0.22 | 0.31 |
| TR 080 2_36 | 50 | 80 | 200 | 3200 | 4500 | 5' | 3' | 6.5 | 400 | 2500 | 3000 | 94 | 0.20 | 0.29 |
| TR 080 2_40 | 70 | 100 | 250 | 4000 | 6000 | 5' | 3' | 6.5 | 400 | 2500 | 3000 | 94 | 0.20 | 0.29 |
| TR 080 2_50 | 70 | 100 | 250 | 4000 | 6000 | 5' | 3' | 6.5 | 400 | 2500 | 3000 | 94 | 0.19 | 0.28 |
| TR 080 2_70 | 70 | 100 | 250 | 4000 | 6000 | 5' | 3' | 6.5 | 400 | 2500 | 3000 | 94 | 0.19 | 0.28 |
| TR 080 2_100 | 40 | 80 | 180 | 4000 | 6000 | 5' | 3' | 6.5 | 400 | 2500 | 3000 | 94 | 0.19 | 0.28 |
| TR 080 3_48 | 70 | 100 | 250 | 3100 | 4500 | 7' | 5' | 5.5 | 400 | 2500 | 3000 | 91 | 0.33 | 0.42 |
| TR 080 3_64 | 70 | 100 | 250 | 3100 | 4500 | 7' | 5' | 5.5 | 400 | 2500 | 3000 | 91 | 0.32 | 0.41 |
| TR 080 3_75 | 70 | 100 | 250 | 3200 | 4500 | 7' | 5' | 5.5 | 400 | 2500 | 3000 | 91 | 0.27 | 0.36 |
| TR 080 3_80 | 70 | 100 | 250 | 3100 | 4500 | 7' | 5' | 5.5 | 400 | 2500 | 3000 | 91 | 0.32 | 0.41 |
| TR 080 3_84 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 400 | 2500 | 3000 | 91 | 0.23 | 0.32 |
| TR 080 3_90 | 40 | 80 | 180 | 4000 | 6000 | 7' | 5' | 5.5 | 400 | 2500 | 3000 | 91 | 0.20 | 0.29 |
| TR 080 3_120 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 400 | 2500 | 3000 | 91 | 0.20 | 0.29 |
| TR 080 3_125 | 70 | 100 | 250 | 3200 | 4500 | 7' | 5' | 5.5 | 400 | 2500 | 3000 | 91 | 0.27 | 0.36 |
| TR 080 3_140 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 400 | 2500 | 3000 | 91 | 0.22 | 0.31 |
| TR 080 3_150 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 400 | 2500 | 3000 | 91 | 0.20 | 0.29 |
| TR 080 3_160 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 400 | 2500 | 3000 | 91 | 0.20 | 0.29 |
| TR 080 3_175 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 400 | 2500 | 3000 | 91 | 0.22 | 0.31 |
| TR 080 3_200 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 400 | 2500 | 3000 | 91 | 0.20 | 0.29 |
| TR 080 3_210 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 400 | 2500 | 3000 | 91 | 0.20 | 0.29 |
| TR 080 3_216 | 70 | 100 | 250 | 3200 | 4500 | 7' | 5' | 5.5 | 400 | 2500 | 3000 | 91 | 0.20 | 0.29 |
| TR 080 3_250 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 400 | 2500 | 3000 | 91 | 0.19 | 0.28 |
| TR 080 3_280 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 400 | 2500 | 3000 | 91 | 0.19 | 0.28 |
| TR 080 3_350 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 400 | 2500 | 3000 | 91 | 0.19 | 0.28 |
| TR 080 3_400 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 400 | 2500 | 3000 | 91 | 0.19 | 0.28 |
| TR 080 3_500 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 400 | 2500 | 3000 | 91 | 0.19 | 0.28 |
| TR 080 3_700 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 400 | 2500 | 3000 | 91 | 0.19 | 0.28 |
| TR 080 3_1000 | 40 | 80 | 180 | 4000 | 6000 | 7' | 5' | 5.5 | 400 | 2500 | 3000 | 91 | 0.19 | 0.28 |

TR

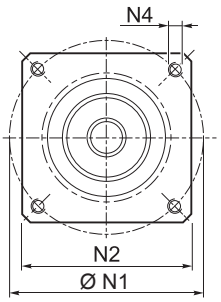


# TR G 080

## 40B1 ... 110B1



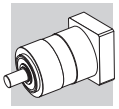

| | Kg |
|---|---|
| **TR G 080 2** | 5.2 |
| **TR G 080 3** | 5.8 |
| **TR G 080 4** | 6.4 |




TR

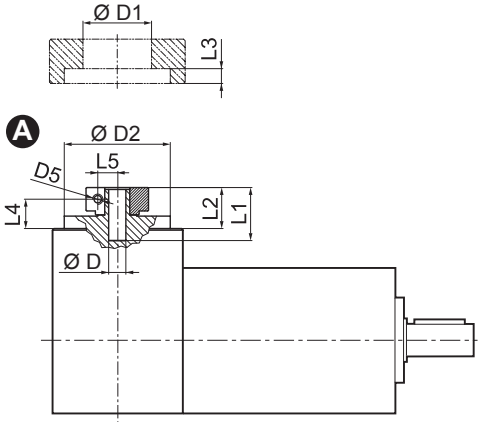
| | D | | | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **40B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 40 | 63 | 80 | 4 | M4x12 | 34 | 40 |
| **45A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | – | – | – | – | – | – | 45 | 63 | 80 | 4 | M4x12 | 34 | 40 |
| **50B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 65 | 80 | 4 | M5x16 | 34 | 40 |
| **50BH1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 65 | 80 | 4 | 5.5 | 34 | 40 |
| **50C1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 70 | 80 | 4 | M4x10 | 34 | 40 |
| **50D** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 95 | 80 | 4 | M6x20 | 34 | 40 |
| **55A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 55.5 | 125.7 | 105 | 4 | M6x20 | 34 | 40 |
| **60A2** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 60 | 75 | 80 | 4 | M5x16 | 34 | 40 |
| **60AH2** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 60 | 75 | 90 | 4 | 6.5 | 34 | 40 |
| **60B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | – | – | – | 60 | 85 | 80 | 4 | M5x16 | 34 | 40 |
| **60C1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | – | – | – | 60 | 90 | 80 | 4 | M5x16 | 34 | 40 |
| **70A1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 85 | 80 | 4 | M6x20 | 34 | 40 |
| **70AH1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 85 | 90 | 4 | 6.5 | 34 | 40 |
| **70B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 90 | 80 | 4 | M5x16 | 34 | 40 |
| **73A1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 73 | 98.4 | 85 | 4 | M5x16 | 34 | 40 |
| **80A1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 80 | 100 | 90 | 4 | M6x16 | 34 | 40 |
| **95A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 95 | 115 | 100 | 4 | M8x20 | 34 | 40 |
| **95B** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 95 | 130 | 115 | 4 | M8x20 | 34 | 40 |
| **110A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 130 | 115 | 4 | M8x20 | 34 | 40 |
| **110B** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 145 | 120 | 6.5 | M8x20 | 44 | 50 |
| **110B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 145 | 120 | 6.5 | M8x20 | 54 | 60 |

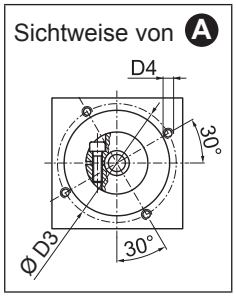
Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.



# TR G 080

**FM**

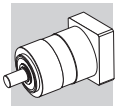



| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 9 | 9.52 | | 38 | 68 | 76.5 | M6x12 | M6 | 32.2 | 26.3 | 9.5 | 19.3 | 10.5 |
| 11 | 12 | 12.7 | | 43 | 68 | 76.5 | M6x12 | M6 | 32.2 | 26.3 | 9.5 | 19.3 | 12.5 |
| 14 | 15.875 | 16 | 17 | 48 | 68 | 76.5 | M6x12 | M6 | 32.2 | 26.3 | 9.5 | 19.3 | 14.5 |
| 19 | 19.05 | | | 51 | 68 | 76.5 | M6x12 | M6 | 32.2 | 26.3 | 9.5 | 19.3 | 16.5 |

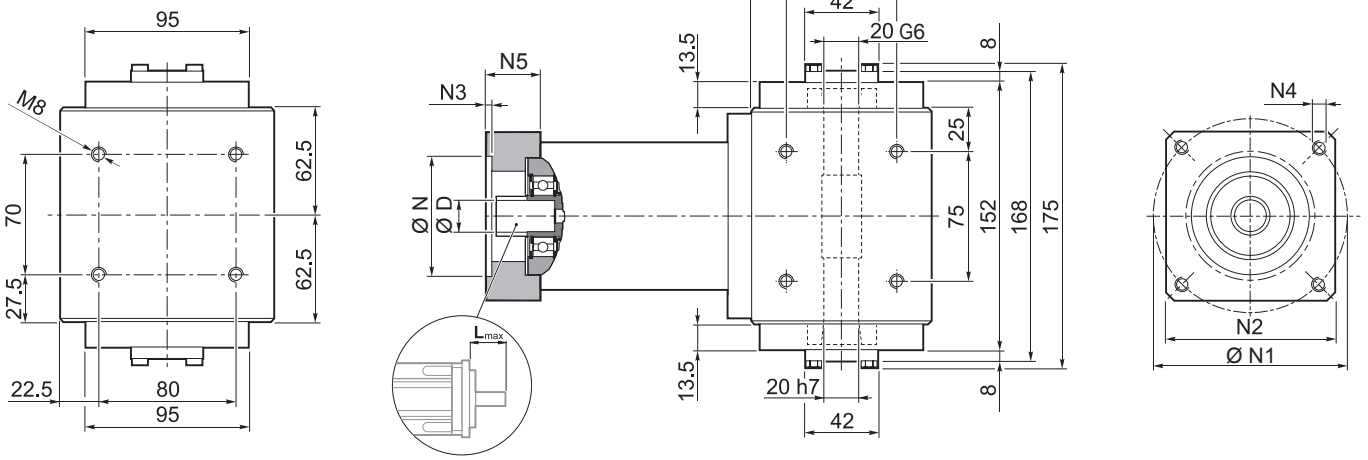
| i | $M_{n\,2}$ | $M_{a\,2}$ | $M_{p\,2}$ | $n_1$ | $n_{1\,max}$ | $\varphi_S$ | $\varphi_R$ | $C_t$ | $R_{2\,max}$ | $A_{2\,max}$ | $\eta$ | $J_G$ [kgcm²] D | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | [Nm] | [Nm] | [Nm] | [min⁻¹] | [min⁻¹] | [arcmin] | | [Nm/arcmin] | [N] | [N] | % | 8 ... 12.7 | 14 ... 19.05 |
| TR G 080 2_3 | 40 | 80 | 180 | 2900 | 3500 | 5' | 3' | 8.0 | 2500 | 3000 | 94 | 0.67 | 0.79 |
| TR G 080 2_4 | 50 | 80 | 200 | 3100 | 4500 | 5' | 3' | 8.0 | 2500 | 3000 | 94 | 0.62 | 0.75 |
| TR G 080 2_5 | 50 | 80 | 200 | 3200 | 4500 | 5' | 3' | 8.0 | 2500 | 3000 | 94 | 0.61 | 0.74 |
| TR G 080 2_6 | 50 | 80 | 200 | 3200 | 4500 | 5' | 3' | 8.0 | 2500 | 3000 | 94 | 0.58 | 0.71 |
| TR G 080 2_7 | 50 | 80 | 200 | 4000 | 6000 | 5' | 3' | 8.0 | 2500 | 3000 | 94 | 0.60 | 0.73 |
| TR G 080 2_10 | 40 | 80 | 180 | 4000 | 6000 | 5' | 3' | 8.0 | 2500 | 3000 | 94 | 0.60 | 0.72 |
| TR G 080 3_9 | 40 | 80 | 180 | 2900 | 3500 | 5' | 3' | 6.5 | 2500 | 3000 | 91 | 0.66 | 0.78 |
| TR G 080 3_12 | 70 | 100 | 250 | 2900 | 3500 | 5' | 3' | 6.5 | 2500 | 3000 | 91 | 0.75 | 0.87 |
| TR G 080 3_15 | 70 | 100 | 250 | 2900 | 3500 | 5' | 3' | 6.5 | 2500 | 3000 | 91 | 0.74 | 0.87 |
| TR G 080 3_16 | 70 | 100 | 250 | 3100 | 4500 | 5' | 3' | 6.5 | 2500 | 3000 | 91 | 0.60 | 0.73 |
| TR G 080 3_20 | 70 | 100 | 250 | 3200 | 4500 | 5' | 3' | 6.5 | 2500 | 3000 | 91 | 0.60 | 0.73 |
| TR G 080 3_25 | 70 | 100 | 250 | 3200 | 4500 | 5' | 3' | 6.5 | 2500 | 3000 | 91 | 0.64 | 0.76 |
| TR G 080 3_28 | 70 | 100 | 250 | 4000 | 6000 | 5' | 3' | 6.5 | 2500 | 3000 | 91 | 0.59 | 0.72 |
| TR G 080 3_30 | 40 | 80 | 180 | 4000 | 6000 | 5' | 3' | 6.5 | 2500 | 3000 | 91 | 0.60 | 0.72 |
| TR G 080 3_35 | 70 | 100 | 250 | 4000 | 6000 | 5' | 3' | 6.5 | 2500 | 3000 | 91 | 0.61 | 0.74 |
| TR G 080 3_36 | 50 | 80 | 200 | 3200 | 4500 | 5' | 3' | 6.5 | 2500 | 3000 | 91 | 0.57 | 0.70 |
| TR G 080 3_40 | 70 | 100 | 250 | 4000 | 6000 | 5' | 3' | 6.5 | 2500 | 3000 | 91 | 0.60 | 0.72 |
| TR G 080 3_50 | 70 | 100 | 250 | 4000 | 6000 | 5' | 3' | 6.5 | 2500 | 3000 | 91 | 0.59 | 0.71 |
| TR G 080 3_70 | 70 | 100 | 250 | 4000 | 6000 | 5' | 3' | 6.5 | 2500 | 3000 | 91 | 0.59 | 0.71 |
| TR G 080 3_100 | 40 | 80 | 180 | 4000 | 6000 | 5' | 3' | 6.5 | 2500 | 3000 | 91 | 0.59 | 0.71 |
| TR G 080 4_48 | 70 | 100 | 250 | 3100 | 4500 | 7' | 5' | 5.5 | 2500 | 3000 | 89 | 0.61 | 0.75 |
| TR G 080 4_64 | 70 | 100 | 250 | 3100 | 4500 | 7' | 5' | 5.5 | 2500 | 3000 | 89 | 0.60 | 0.73 |
| TR G 080 4_75 | 70 | 100 | 250 | 3200 | 4500 | 7' | 5' | 5.5 | 2500 | 3000 | 89 | 0.60 | 0.73 |
| TR G 080 4_80 | 70 | 100 | 250 | 3100 | 4500 | 7' | 5' | 5.5 | 2500 | 3000 | 89 | 0.60 | 0.73 |
| TR G 080 4_84 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 2500 | 3000 | 89 | 0.60 | 0.73 |
| TR G 080 4_90 | 40 | 80 | 180 | 4000 | 6000 | 7' | 5' | 5.5 | 2500 | 3000 | 89 | 0.60 | 0.72 |
| TR G 080 4_120 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 2500 | 3000 | 89 | 0.60 | 0.72 |
| TR G 080 4_125 | 70 | 100 | 250 | 3200 | 4500 | 7' | 5' | 5.5 | 2500 | 3000 | 89 | 0.60 | 0.73 |
| TR G 080 4_140 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 2500 | 3000 | 89 | 0.59 | 0.72 |
| TR G 080 4_150 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 2500 | 3000 | 89 | 0.60 | 0.72 |
| TR G 080 4_160 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 2500 | 3000 | 89 | 0.60 | 0.72 |
| TR G 080 4_175 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 2500 | 3000 | 89 | 0.59 | 0.72 |
| TR G 080 4_200 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 2500 | 3000 | 89 | 0.60 | 0.72 |
| TR G 080 4_210 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 2500 | 3000 | 89 | 0.60 | 0.72 |
| TR G 080 4_216 | 70 | 100 | 250 | 3200 | 4500 | 7' | 5' | 5.5 | 2500 | 3000 | 89 | 0.57 | 0.70 |
| TR G 080 4_250 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 2500 | 3000 | 89 | 0.59 | 0.71 |
| TR G 080 4_280 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 2500 | 3000 | 89 | 0.59 | 0.71 |
| TR G 080 4_350 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 2500 | 3000 | 89 | 0.59 | 0.71 |
| TR G 080 4_400 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 2500 | 3000 | 89 | 0.59 | 0.71 |
| TR G 080 4_500 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 2500 | 3000 | 89 | 0.59 | 0.71 |
| TR G 080 4_700 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 2500 | 3000 | 89 | 0.59 | 0.71 |
| TR G 080 4_1000 | 40 | 80 | 180 | 4000 | 6000 | 7' | 5' | 5.5 | 2500 | 3000 | 89 | 0.59 | 0.71 |

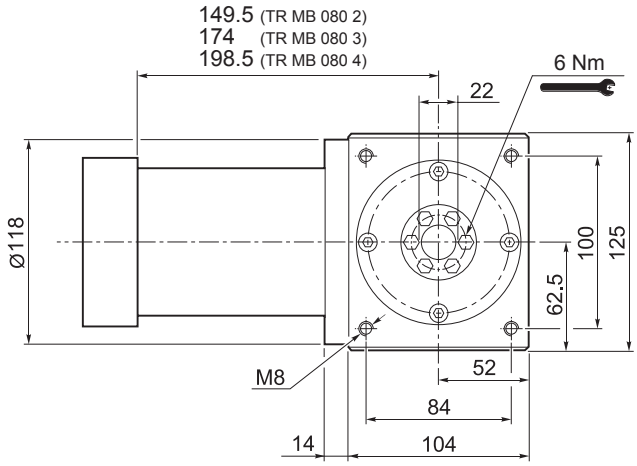
TR



# TR MB 080

## 40B1 ... 110B1

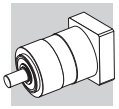



| | Kg |
|---|---|
| **TR MB 080 2** | 14.0 |
| **TR MB 080 3** | 15.0 |
| **TR MB 080 4** | 16.0 |

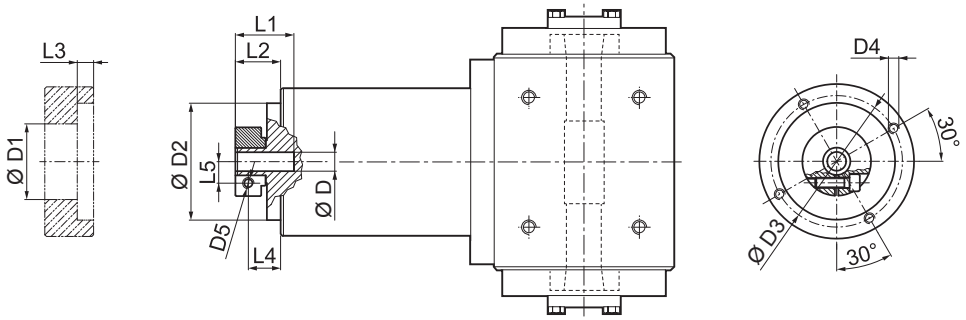
| | D | | | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **40B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 40 | 63 | 80 | 4 | M4x12 | 34 | 40 |
| **45A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | – | – | – | – | – | – | 45 | 63 | 80 | 4 | M4x12 | 34 | 40 |
| **50B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 65 | 80 | 4 | M5x16 | 34 | 40 |
| **50BH1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 65 | 80 | 4 | 5.5 | 34 | 40 |
| **50C1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 70 | 80 | 4 | M4x10 | 34 | 40 |
| **50D** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 95 | 80 | 4 | M6x20 | 34 | 40 |
| **55A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 55.5 | 125.7 | 105 | 4 | M6x20 | 34 | 40 |
| **60A2** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 60 | 75 | 80 | 4 | M5x16 | 34 | 40 |
| **60AH2** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 60 | 75 | 90 | 4 | 6.5 | 34 | 40 |
| **60B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | – | – | – | 60 | 85 | 80 | 4 | M5x16 | 34 | 40 |
| **60C1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | – | – | – | 60 | 90 | 80 | 4 | M5x16 | 34 | 40 |
| **70A1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 85 | 80 | 4 | M6x20 | 34 | 40 |
| **70AH1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 85 | 90 | 4 | 6.5 | 34 | 40 |
| **70B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 90 | 80 | 4 | M5x16 | 34 | 40 |
| **73A1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 73 | 98.4 | 85 | 4 | M5x16 | 34 | 40 |
| **80A1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 80 | 100 | 90 | 4 | M6x16 | 34 | 40 |
| **95A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 95 | 115 | 100 | 4 | M8x20 | 34 | 40 |
| **95B** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 95 | 130 | 115 | 4 | M8x20 | 34 | 40 |
| **110A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 130 | 115 | 4 | M8x20 | 34 | 40 |
| **110B** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 145 | 120 | 6.5 | M8x20 | 44 | 50 |
| **110B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 145 | 120 | 6.5 | M8x20 | 54 | 60 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.



# TR MB 080

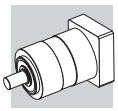
**FM**




| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 9 | 9.52 | | 38 | 68 | 76.5 | M6x12 | M6 | 32.2 | 26.3 | 9.5 | 19.3 | 10.5 |
| 11 | 12 | 12.7 | | 43 | 68 | 76.5 | M6x12 | M6 | 32.2 | 26.3 | 9.5 | 19.3 | 12.5 |
| 14 | 15.875 | 16 | 17 | 48 | 68 | 76.5 | M6x12 | M6 | 32.2 | 26.3 | 9.5 | 19.3 | 14.5 |
| 19 | 19.05 | | | 51 | 68 | 76.5 | M6x12 | M6 | 32.2 | 26.3 | 9.5 | 19.3 | 16.5 |

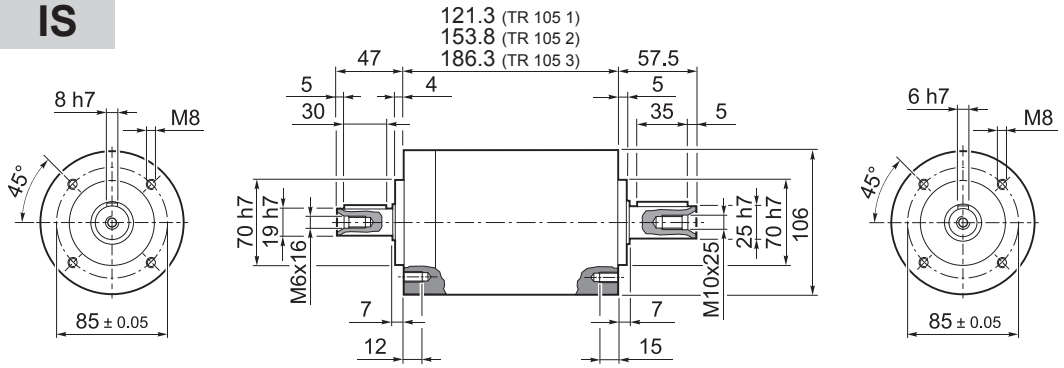
| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $\varphi_R$ [arcmin] | $C_t$ [Nm/arcmin] | $\eta$ % | $J_G$ [kgcm$^2$] D 8 ... 12.7 | $J_G$ [kgcm$^2$] D 14 ... 19.05 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TR MB 080 2_3 | 40 | 80 | 180 | 2900 | 3500 | 5' | 3' | 8.0 | 94 | 0.50 | 0.59 |
| TR MB 080 2_4 | 50 | 80 | 200 | 3100 | 4500 | 5' | 3' | 8.0 | 94 | 0.34 | 0.43 |
| TR MB 080 2_5 | 50 | 80 | 200 | 3200 | 4500 | 5' | 3' | 8.0 | 94 | 0.28 | 0.37 |
| TR MB 080 2_6 | 50 | 80 | 200 | 3200 | 4500 | 5' | 3' | 8.0 | 94 | 0.21 | 0.30 |
| TR MB 080 2_7 | 50 | 80 | 200 | 4000 | 6000 | 5' | 3' | 8.0 | 94 | 0.23 | 0.32 |
| TR MB 080 2_10 | 40 | 80 | 180 | 4000 | 6000 | 5' | 3' | 8.0 | 94 | 0.20 | 0.29 |
| TR MB 080 3_9 | 40 | 80 | 180 | 2900 | 3500 | 5' | 3' | 6.5 | 91 | 0.49 | 0.58 |
| TR MB 080 3_12 | 70 | 100 | 250 | 2900 | 3500 | 5' | 3' | 6.5 | 91 | 0.47 | 0.56 |
| TR MB 080 3_15 | 70 | 100 | 250 | 2900 | 3500 | 5' | 3' | 6.5 | 91 | 0.46 | 0.55 |
| TR MB 080 3_16 | 70 | 100 | 250 | 3100 | 4500 | 5' | 3' | 6.5 | 91 | 0.32 | 0.41 |
| TR MB 080 3_20 | 70 | 100 | 250 | 3200 | 4500 | 5' | 3' | 6.5 | 91 | 0.27 | 0.36 |
| TR MB 080 3_25 | 70 | 100 | 250 | 3200 | 4500 | 5' | 3' | 6.5 | 91 | 0.27 | 0.36 |
| TR MB 080 3_28 | 70 | 100 | 250 | 4000 | 6000 | 5' | 3' | 6.5 | 91 | 0.22 | 0.31 |
| TR MB 080 3_30 | 40 | 80 | 180 | 4000 | 6000 | 5' | 3' | 6.5 | 91 | 0.20 | 0.29 |
| TR MB 080 3_35 | 70 | 100 | 250 | 4000 | 6000 | 5' | 3' | 6.5 | 91 | 0.22 | 0.31 |
| TR MB 080 3_36 | 50 | 80 | 200 | 3200 | 4500 | 5' | 3' | 6.5 | 91 | 0.20 | 0.29 |
| TR MB 080 3_40 | 70 | 100 | 250 | 4000 | 6000 | 5' | 3' | 6.5 | 91 | 0.20 | 0.29 |
| TR MB 080 3_50 | 70 | 100 | 250 | 4000 | 6000 | 5' | 3' | 6.5 | 91 | 0.19 | 0.28 |
| TR MB 080 3_70 | 70 | 100 | 250 | 4000 | 6000 | 5' | 3' | 6.5 | 91 | 0.19 | 0.28 |
| TR MB 080 3_100 | 40 | 80 | 180 | 4000 | 6000 | 5' | 3' | 6.5 | 91 | 0.19 | 0.28 |
| TR MB 080 4_48 | 70 | 100 | 250 | 3100 | 4500 | 7' | 5' | 5.5 | 89 | 0.33 | 0.42 |
| TR MB 080 4_64 | 70 | 100 | 250 | 3100 | 4500 | 7' | 5' | 5.5 | 89 | 0.32 | 0.41 |
| TR MB 080 4_75 | 70 | 100 | 250 | 3200 | 4500 | 7' | 5' | 5.5 | 89 | 0.27 | 0.36 |
| TR MB 080 4_80 | 70 | 100 | 250 | 3100 | 4500 | 7' | 5' | 5.5 | 89 | 0.32 | 0.41 |
| TR MB 080 4_84 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 89 | 0.23 | 0.32 |
| TR MB 080 4_90 | 40 | 80 | 180 | 4000 | 6000 | 7' | 5' | 5.5 | 89 | 0.20 | 0.29 |
| TR MB 080 4_120 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 89 | 0.20 | 0.29 |
| TR MB 080 4_125 | 70 | 100 | 250 | 3200 | 4500 | 7' | 5' | 5.5 | 89 | 0.27 | 0.36 |
| TR MB 080 4_140 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 89 | 0.22 | 0.31 |
| TR MB 080 4_150 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 89 | 0.20 | 0.29 |
| TR MB 080 4_160 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 89 | 0.20 | 0.29 |
| TR MB 080 4_175 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 89 | 0.22 | 0.31 |
| TR MB 080 4_200 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 89 | 0.20 | 0.29 |
| TR MB 080 4_210 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 89 | 0.20 | 0.29 |
| TR MB 080 4_216 | 70 | 100 | 250 | 3200 | 4500 | 7' | 5' | 5.5 | 89 | 0.20 | 0.29 |
| TR MB 080 4_250 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 89 | 0.19 | 0.28 |
| TR MB 080 4_280 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 89 | 0.19 | 0.28 |
| TR MB 080 4_350 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 89 | 0.19 | 0.28 |
| TR MB 080 4_400 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 89 | 0.19 | 0.28 |
| TR MB 080 4_500 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 89 | 0.19 | 0.28 |
| TR MB 080 4_700 | 70 | 100 | 250 | 4000 | 6000 | 7' | 5' | 5.5 | 89 | 0.19 | 0.28 |
| TR MB 080 4_1000 | 40 | 80 | 180 | 4000 | 6000 | 7' | 5' | 5.5 | 89 | 0.19 | 0.28 |

TR



# TR 105

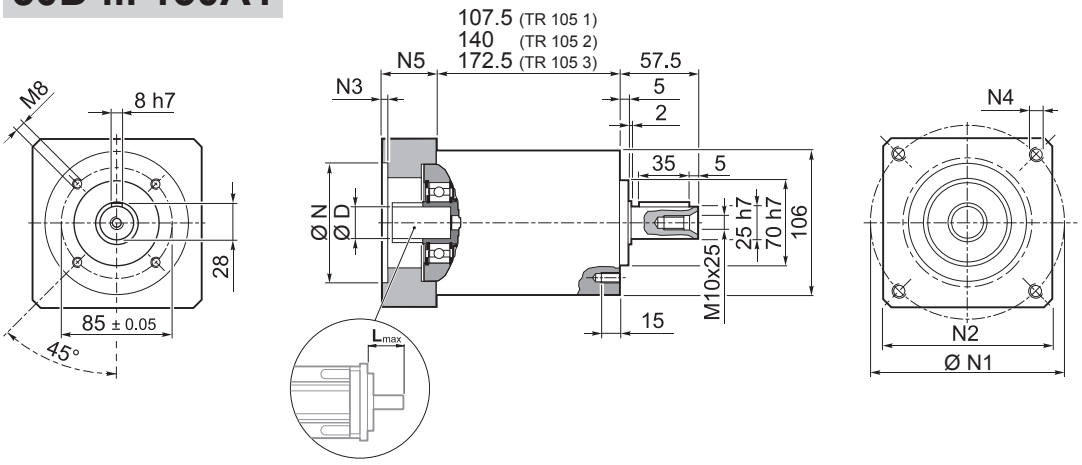
## IS




| | Kg |
|---|---|
| **TR 105 1** | 6.5 |
| **TR 105 2** | 8.5 |
| **TR 105 3** | 10.5 |

TR

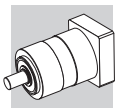
## 50D ... 130A1




| | Kg |
|---|---|
| **TR 105 1** | 6.5 |
| **TR 105 2** | 8.5 |
| **TR 105 3** | 10.5 |

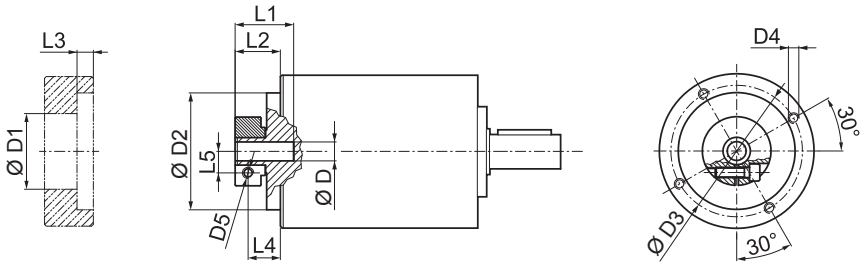
| | D | | | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **50D** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 50 | 95 | 100 | 5 | M6x14 | 28 | 40 |
| **55A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 55 | 125.7 | 105 | 5 | M6x16 | 28 | 40 |
| **60A2** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 60 | 75 | 100 | 6.5 | M5x14 | 28 | 40 |
| **60AH2** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 60 | 75 | 100 | 4 | 6.5 | 33 | 40 |
| **60B1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 60 | 85 | 100 | 6.5 | M5x14 | 28 | 40 |
| **70A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 70 | 85 | 100 | 6.5 | M6x14 | 28 | 40 |
| **70AH1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 70 | 85 | 100 | 4 | 6.5 | 33 | 40 |
| **70B1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 70 | 90 | 100 | 6.5 | M5x12 | 28 | 40 |
| **80A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 80 | 100 | 100 | 6.5 | M6x16 | 28 | 40 |
| **80AH1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 80 | 100 | 100 | 4 | 6.5 | 33 | 40 |
| **95A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 95 | 115 | 100 | 6.5 | M8x18 | 28 | 40 |
| **95A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 95 | 115 | 100 | 6.5 | M8x18 | 38 | 50 |
| **95B** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 95 | 130 | 115 | 6.5 | M8x18 | 28 | 40 |
| **110A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 110 | 130 | 115 | 6.5 | M8x18 | 28 | 40 |
| **110A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 110 | 130 | 115 | 6.5 | M8x20 | 38 | 50 |
| **110B** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 110 | 145 | 120 | 6.5 | M8x20 | 38 | 50 |
| **110B1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 28 | – | 110 | 145 | 120 | 6.5 | M8x20 | 48 | 60 |
| **130A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 130 | 165 | 140 | 6.5 | M10x20 | 38 | 50 |
| **130A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 130 | 165 | 140 | 6.5 | M10x25 | 48 | 60 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.



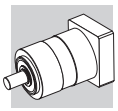
# TR 105

## FM



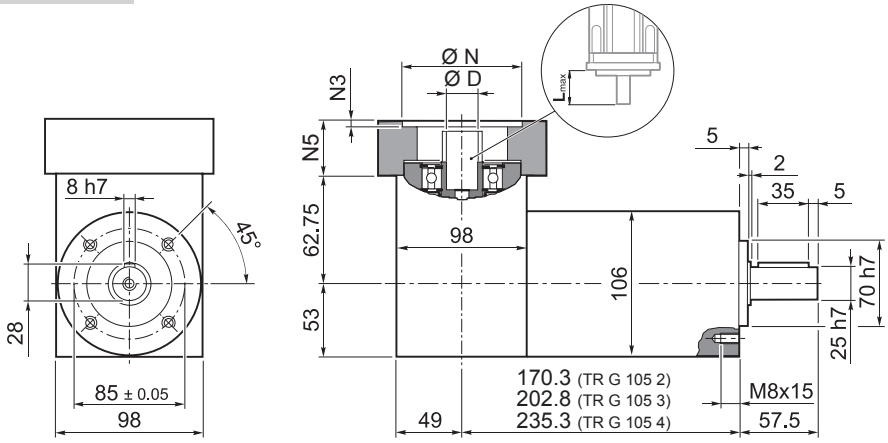

| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 12 | 12.7 | | 43 | 90 | 98 | M6x15 | M6 | 31.5 | 19.5 | 7.6 | 12 | 12.5 |
| 14 | 15 | 15.875 | 16 | 48 | 90 | 98 | M6x15 | M6 | 31.5 | 19.5 | 7.6 | 12 | 14.5 |
| 19 | | | | 51 | 90 | 98 | M6x15 | M6 | 31.5 | 19.5 | 7.6 | 12 | 16.5 |
| 22 | 24 | | | 56.5 | 90 | 98 | M6x15 | M6 | 35 | 23 | 7.6 | 12 | 19 |
| 28 | | | | 67 | 90 | 98 | M6x15 | M8 | 35 | 23 | 7.6 | 14 | 22.5 |
| 32 | | | | 71 | 90 | 98 | M6x15 | M8 | 37 | 25 | 7.6 | 16 | 24.5 |

| i | $M_{n2}$ | $M_{a2}$ | $M_{p2}$ | $n_1$ | $n_{1\,max}$ | $\varphi_S$ | $\varphi_R$ | $C_t$ | $R_{1\,max}$ | $R_{2\,max}$ | $A_{2\,max}$ | $\eta$ | $J_G$ [kgcm²] D | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | [Nm] | [Nm] | [Nm] | [min⁻¹] | [min⁻¹] | [arcmin] | | [Nm/arcmin] | [N] | [N] | [N] | % | 11 ... 12.7 | 14 ... 19 | 22 - 24 | 28 - 32 |
| TR 105 1_3 | 100 | 180 | 360 | 2500 | 3500 | 5' | 3' | 24.0 | 600 | 3800 | 4000 | 97 | 1.70 | 1.78 | 2.22 | 2.59 |
| TR 105 1_4 | 140 | 210 | 450 | 2800 | 4500 | 5' | 3' | 24.0 | 600 | 3800 | 4000 | 97 | 0.99 | 1.06 | 1.51 | 1.87 |
| TR 105 1_5 | 140 | 210 | 450 | 3000 | 4500 | 5' | 3' | 24.0 | 600 | 3800 | 4000 | 97 | 0.72 | 0.79 | 1.23 | 1.60 |
| TR 105 1_6 | 140 | 210 | 450 | 3000 | 4500 | 5' | 3' | 24.0 | 600 | 3800 | 4000 | 97 | 0.36 | 0.43 | 0.88 | 1.24 |
| TR 105 1_7 | 140 | 210 | 450 | 3500 | 5000 | 5' | 3' | 24.0 | 600 | 3800 | 4000 | 97 | 0.47 | 0.55 | 0.99 | 1.35 |
| TR 105 1_10 | 100 | 180 | 360 | 3500 | 5000 | 5' | 3' | 24.0 | 600 | 3800 | 4000 | 97 | 0.33 | 0.41 | 0.85 | 1.21 |
| TR 105 2_9 | 100 | 180 | 360 | 2500 | 3500 | 5' | 3' | 21.5 | 600 | 3800 | 4000 | 94 | 1.58 | 1.63 | 2.07 | 2.44 |
| TR 105 2_12 | 170 | 250 | 600 | 2500 | 3500 | 5' | 3' | 21.5 | 600 | 3800 | 4000 | 94 | 1.52 | 1.59 | 2.03 | 2.40 |
| TR 105 2_15 | 170 | 250 | 600 | 2500 | 3500 | 5' | 3' | 21.5 | 600 | 3800 | 4000 | 94 | 1.47 | 1.55 | 1.99 | 2.36 |
| TR 105 2_16 | 170 | 250 | 600 | 2800 | 4500 | 5' | 3' | 21.5 | 600 | 3800 | 4000 | 94 | 0.87 | 0.95 | 1.39 | 1.76 |
| TR 105 2_20 | 170 | 250 | 600 | 3000 | 4500 | 5' | 3' | 21.5 | 600 | 3800 | 4000 | 94 | 0.86 | 0.93 | 1.37 | 1.74 |
| TR 105 2_25 | 170 | 250 | 600 | 3000 | 4500 | 5' | 3' | 21.5 | 600 | 3800 | 4000 | 94 | 0.63 | 0.71 | 1.15 | 1.51 |
| TR 105 2_28 | 170 | 250 | 600 | 3500 | 5000 | 5' | 3' | 21.5 | 600 | 3800 | 4000 | 94 | 0.43 | 0.51 | 0.95 | 1.32 |
| TR 105 2_30 | 100 | 180 | 360 | 3500 | 5000 | 5' | 3' | 21.5 | 600 | 3800 | 4000 | 94 | 0.32 | 0.40 | 0.84 | 1.20 |
| TR 105 2_35 | 170 | 250 | 600 | 3500 | 5000 | 5' | 3' | 21.5 | 600 | 3800 | 4000 | 94 | 0.43 | 0.50 | 0.95 | 1.31 |
| TR 105 2_36 | 140 | 210 | 450 | 3000 | 4500 | 5' | 3' | 21.5 | 600 | 3800 | 4000 | 94 | 0.32 | 0.39 | 0.84 | 1.20 |
| TR 105 2_40 | 170 | 250 | 600 | 3500 | 5000 | 5' | 3' | 21.5 | 600 | 3800 | 4000 | 94 | 0.31 | 0.39 | 0.83 | 1.20 |
| TR 105 2_50 | 170 | 250 | 600 | 3500 | 5000 | 5' | 3' | 21.5 | 600 | 3800 | 4000 | 94 | 0.31 | 0.39 | 0.83 | 1.19 |
| TR 105 2_70 | 170 | 250 | 600 | 3500 | 5000 | 5' | 3' | 21.5 | 600 | 3800 | 4000 | 94 | 0.31 | 0.38 | 0.83 | 1.19 |
| TR 105 2_100 | 100 | 180 | 360 | 3500 | 5000 | 5' | 3' | 21.5 | 600 | 3800 | 4000 | 94 | 0.31 | 0.38 | 0.83 | 1.19 |
| TR 105 3_48 | 170 | 250 | 600 | 2800 | 4500 | 7' | 5' | 18.0 | 600 | 3800 | 4000 | 91 | 0.91 | 0.98 | 1.42 | 1.79 |
| TR 105 3_64 | 170 | 250 | 600 | 2800 | 4500 | 7' | 5' | 18.0 | 600 | 3800 | 4000 | 91 | 0.87 | 0.94 | 1.38 | 1.75 |
| TR 105 3_75 | 170 | 250 | 600 | 3000 | 4500 | 7' | 5' | 18.0 | 600 | 3800 | 4000 | 91 | 0.66 | 0.74 | 1.18 | 1.55 |
| TR 105 3_80 | 170 | 250 | 600 | 2800 | 4500 | 7' | 5' | 18.0 | 600 | 3800 | 4000 | 91 | 0.86 | 0.94 | 1.38 | 1.75 |
| TR 105 3_84 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 600 | 3800 | 4000 | 91 | 0.44 | 0.52 | 0.96 | 1.33 |
| TR 105 3_90 | 100 | 180 | 360 | 3500 | 5000 | 7' | 5' | 18.0 | 600 | 3800 | 4000 | 91 | 0.32 | 0.39 | 0.84 | 1.20 |
| TR 105 3_120 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 600 | 3800 | 4000 | 91 | 0.32 | 0.39 | 0.84 | 1.20 |
| TR 105 3_125 | 170 | 250 | 600 | 3000 | 4500 | 7' | 5' | 18.0 | 600 | 3800 | 4000 | 91 | 0.63 | 0.70 | 1.15 | 1.51 |
| TR 105 3_140 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 600 | 3800 | 4000 | 91 | 0.43 | 0.51 | 0.95 | 1.32 |
| TR 105 3_150 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 600 | 3800 | 4000 | 91 | 0.32 | 0.39 | 0.84 | 1.20 |
| TR 105 3_160 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 600 | 3800 | 4000 | 91 | 0.31 | 0.39 | 0.83 | 1.21 |
| TR 105 3_175 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 600 | 3800 | 4000 | 91 | 0.43 | 0.50 | 0.95 | 1.31 |
| TR 105 3_200 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 600 | 3800 | 4000 | 91 | 0.31 | 0.39 | 0.83 | 1.20 |
| TR 105 3_210 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 600 | 3800 | 4000 | 91 | 0.32 | 0.39 | 0.84 | 1.20 |
| TR 105 3_216 | 170 | 250 | 600 | 3000 | 4500 | 7' | 5' | 18.0 | 600 | 3800 | 4000 | 91 | 0.31 | 0.39 | 0.83 | 1.20 |
| TR 105 3_250 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 600 | 3800 | 4000 | 91 | 0.31 | 0.39 | 0.83 | 1.19 |
| TR 105 3_280 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 600 | 3800 | 4000 | 91 | 0.31 | 0.38 | 0.83 | 1.19 |
| TR 105 3_350 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 600 | 3800 | 4000 | 91 | 0.31 | 0.38 | 0.83 | 1.19 |
| TR 105 3_400 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 600 | 3800 | 4000 | 91 | 0.31 | 0.38 | 0.83 | 1.19 |
| TR 105 3_500 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 600 | 3800 | 4000 | 91 | 0.31 | 0.38 | 0.83 | 1.19 |
| TR 105 3_700 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 600 | 3800 | 4000 | 91 | 0.31 | 0.38 | 0.83 | 1.19 |
| TR 105 3_1000 | 100 | 180 | 360 | 3500 | 5000 | 7' | 5' | 18.0 | 600 | 3800 | 4000 | 91 | 0.31 | 0.38 | 0.83 | 1.19 |

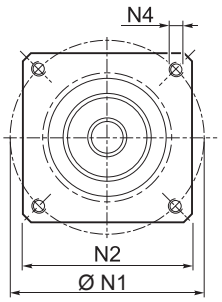


# TR G 105

## 50D ... 130A1




| | Kg |
|---|---|
| **TR G 105 2** | 8.5 |
| **TR G 105 3** | 10.5 |
| **TR G 105 4** | 12.5 |



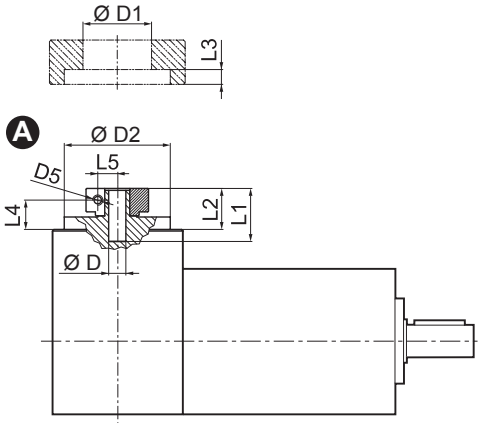

TR

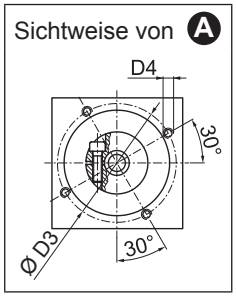
| | D | | | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **50D** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 50 | 95 | 100 | 5 | M6x14 | 28 | 40 |
| **55A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 55 | 125.7 | 105 | 5 | M6x16 | 28 | 40 |
| **60A2** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 60 | 75 | 100 | 6.5 | M5x14 | 28 | 40 |
| **60AH2** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 60 | 75 | 100 | 4 | 6.5 | 33 | 40 |
| **60B1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 60 | 85 | 100 | 6.5 | M5x14 | 28 | 40 |
| **70A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 70 | 85 | 100 | 6.5 | M6x14 | 28 | 40 |
| **70AH1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 70 | 85 | 100 | 4 | 6.5 | 33 | 40 |
| **70B1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 70 | 90 | 100 | 6.5 | M5x12 | 28 | 40 |
| **80A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 80 | 100 | 100 | 6.5 | M6x16 | 28 | 40 |
| **80AH1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 80 | 100 | 100 | 4 | 6.5 | 33 | 40 |
| **95A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 95 | 115 | 100 | 6.5 | M8x18 | 28 | 40 |
| **95A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 95 | 115 | 100 | 6.5 | M8x18 | 38 | 50 |
| **95B** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 95 | 130 | 115 | 6.5 | M8x18 | 28 | 40 |
| **110A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 110 | 130 | 115 | 6.5 | M8x18 | 28 | 40 |
| **110A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 110 | 130 | 115 | 6.5 | M8x20 | 38 | 50 |
| **110B** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 110 | 145 | 120 | 6.5 | M8x20 | 38 | 50 |
| **110B1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 28 | – | 110 | 145 | 120 | 6.5 | M8x20 | 48 | 60 |
| **130A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 130 | 165 | 140 | 6.5 | M10x20 | 38 | 50 |
| **130A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 130 | 165 | 140 | 6.5 | M10x25 | 48 | 60 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

# TR G 105

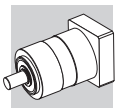
**FM**



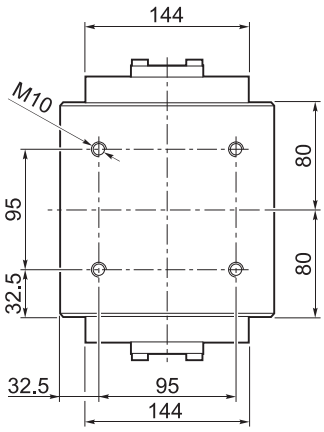

| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 12 | 12.7 | | 43 | 90 | 98 | M6x15 | M6 | 31.5 | 19.5 | 7.6 | 12 | 12.5 |
| 14 | 15 | 15.875 | 16 | 48 | 90 | 98 | M6x15 | M6 | 31.5 | 19.5 | 7.6 | 12 | 14.5 |
| 19 | | | | 51 | 90 | 98 | M6x15 | M6 | 31.5 | 19.5 | 7.6 | 12 | 16.5 |
| 22 | 24 | | | 56.5 | 90 | 98 | M6x15 | M6 | 35 | 23 | 7.6 | 12 | 19 |
| 28 | | | | 67 | 90 | 98 | M6x15 | M8 | 35 | 23 | 7.6 | 14 | 22.5 |
| 32 | | | | 71 | 90 | 98 | M6x15 | M8 | 37 | 25 | 7.6 | 16 | 24.5 |

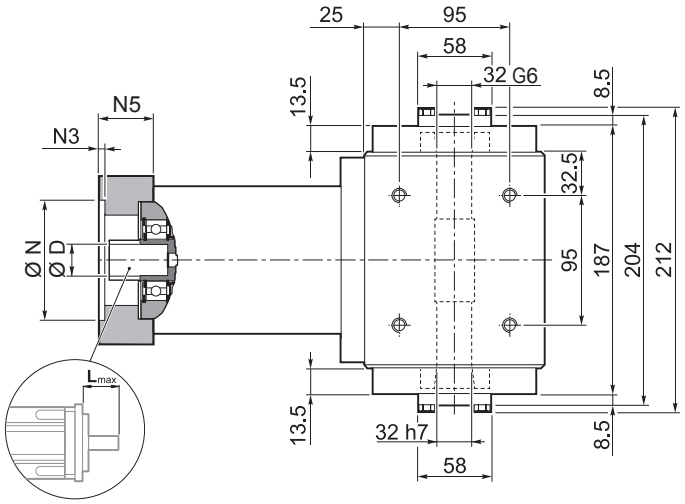
| i | $M_{n\,2}$ | $M_{a\,2}$ | $M_{p\,2}$ | $n_1$ | $n_{1\,max}$ | $\varphi_S$ | $\varphi_R$ | $C_t$ | $R_{2\,max}$ | $A_{2\,max}$ | $\eta$ | $J_G$ [kgcm²] D | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | [Nm] | [Nm] | [Nm] | [min⁻¹] | [min⁻¹] | [arcmin] | | [Nm/arcmin] | [N] | [N] | % | 11 ... 12.7 | 14 ... 19 | 22 - 24 | 28 - 32 |
| TR G 105 2_3 | 100 | 180 | 360 | 2500 | 3500 | 5' | 3' | 24.0 | 3800 | 4000 | 94 | 1.85 | 2.01 | 2.33 | 3.07 |
| TR G 105 2_4 | 140 | 210 | 450 | 2800 | 4500 | 5' | 3' | 24.0 | 3800 | 4000 | 94 | 1.14 | 1.29 | 1.62 | 2.35 |
| TR G 105 2_5 | 140 | 210 | 450 | 3000 | 4500 | 5' | 3' | 24.0 | 3800 | 4000 | 94 | 1.07 | 1.21 | 1.34 | 2.08 |
| TR G 105 2_6 | 140 | 210 | 450 | 3000 | 4500 | 5' | 3' | 24.0 | 3800 | 4000 | 94 | 0.87 | 1.02 | 1.16 | 1.89 |
| TR G 105 2_7 | 140 | 210 | 450 | 3500 | 5000 | 5' | 3' | 24.0 | 3800 | 4000 | 94 | 0.98 | 1.14 | 1.27 | 2.00 |
| TR G 105 2_10 | 100 | 180 | 360 | 3500 | 5000 | 5' | 3' | 24.0 | 3800 | 4000 | 94 | 0.94 | 1.09 | 1.23 | 1.95 |
| TR G 105 3_9 | 100 | 180 | 360 | 2500 | 3500 | 5' | 3' | 21.5 | 3800 | 4000 | 91 | 1.76 | 1.86 | 2.18 | 2.92 |
| TR G 105 3_12 | 170 | 250 | 600 | 2500 | 3500 | 5' | 3' | 21.5 | 3800 | 4000 | 91 | 1.60 | 1.75 | 2.14 | 2.88 |
| TR G 105 3_15 | 170 | 250 | 600 | 2500 | 3500 | 5' | 3' | 21.5 | 3800 | 4000 | 91 | 1.57 | 1.73 | 2.10 | 2.84 |
| TR G 105 3_16 | 170 | 250 | 600 | 2800 | 4500 | 5' | 3' | 21.5 | 3800 | 4000 | 91 | 1.02 | 1.18 | 1.50 | 2.24 |
| TR G 105 3_20 | 170 | 250 | 600 | 3000 | 4500 | 5' | 3' | 21.5 | 3800 | 4000 | 91 | 1.20 | 1.35 | 1.48 | 2.22 |
| TR G 105 3_25 | 170 | 250 | 600 | 3000 | 4500 | 5' | 3' | 21.5 | 3800 | 4000 | 91 | 1.13 | 1.29 | 1.42 | 2.15 |
| TR G 105 3_28 | 170 | 250 | 600 | 3500 | 5000 | 5' | 3' | 21.5 | 3800 | 4000 | 91 | 0.94 | 1.10 | 1.23 | 1.97 |
| TR G 105 3_30 | 100 | 180 | 360 | 3500 | 5000 | 5' | 3' | 21.5 | 3800 | 4000 | 91 | 0.93 | 1.08 | 1.22 | 1.94 |
| TR G 105 3_35 | 170 | 250 | 600 | 3500 | 5000 | 5' | 3' | 21.5 | 3800 | 4000 | 91 | 1.02 | 1.17 | 1.31 | 2.04 |
| TR G 105 3_36 | 140 | 210 | 450 | 3000 | 4500 | 5' | 3' | 21.5 | 3800 | 4000 | 91 | 0.83 | 0.98 | 1.12 | 1.85 |
| TR G 105 3_40 | 170 | 250 | 600 | 3500 | 5000 | 5' | 3' | 21.5 | 3800 | 4000 | 91 | 0.96 | 1.11 | 1.25 | 1.98 |
| TR G 105 3_50 | 170 | 250 | 600 | 3500 | 5000 | 5' | 3' | 21.5 | 3800 | 4000 | 91 | 0.96 | 1.11 | 1.25 | 1.98 |
| TR G 105 3_70 | 170 | 250 | 600 | 3500 | 5000 | 5' | 3' | 21.5 | 3800 | 4000 | 91 | 0.92 | 1.06 | 1.21 | 1.93 |
| TR G 105 3_100 | 100 | 180 | 360 | 3500 | 5000 | 5' | 3' | 21.5 | 3800 | 4000 | 91 | 0.92 | 1.06 | 1.21 | 1.93 |
| TR G 105 4_48 | 170 | 250 | 600 | 2800 | 4500 | 7' | 5' | 18.0 | 3800 | 4000 | 89 | 1.06 | 1.21 | 1.53 | 2.27 |
| TR G 105 4_64 | 170 | 250 | 600 | 2800 | 4500 | 7' | 5' | 18.0 | 3800 | 4000 | 89 | 1.02 | 1.17 | 1.49 | 2.23 |
| TR G 105 4_75 | 170 | 250 | 600 | 3000 | 4500 | 7' | 5' | 18.0 | 3800 | 4000 | 89 | 1.00 | 1.16 | 1.29 | 2.03 |
| TR G 105 4_80 | 170 | 250 | 600 | 2800 | 4500 | 7' | 5' | 18.0 | 3800 | 4000 | 89 | 1.01 | 1.17 | 1.49 | 2.23 |
| TR G 105 4_84 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 3800 | 4000 | 89 | 0.95 | 1.11 | 1.24 | 1.98 |
| TR G 105 4_90 | 100 | 180 | 360 | 3500 | 5000 | 7' | 5' | 18.0 | 3800 | 4000 | 89 | 0.93 | 1.07 | 1.22 | 1.94 |
| TR G 105 4_120 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 3800 | 4000 | 89 | 0.93 | 1.07 | 1.22 | 1.94 |
| TR G 105 4_125 | 170 | 250 | 600 | 3000 | 4500 | 7' | 5' | 18.0 | 3800 | 4000 | 89 | 0.97 | 1.12 | 1.26 | 1.99 |
| TR G 105 4_140 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 3800 | 4000 | 89 | 0.94 | 1.10 | 1.23 | 1.97 |
| TR G 105 4_150 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 3800 | 4000 | 89 | 0.93 | 1.07 | 1.22 | 1.94 |
| TR G 105 4_160 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 3800 | 4000 | 89 | 0.92 | 1.07 | 1.21 | 1.96 |
| TR G 105 4_175 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 3800 | 4000 | 89 | 0.94 | 1.09 | 1.23 | 1.96 |
| TR G 105 4_200 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 3800 | 4000 | 89 | 0.92 | 1.07 | 1.21 | 1.94 |
| TR G 105 4_210 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 3800 | 4000 | 89 | 0.93 | 1.07 | 1.22 | 1.94 |
| TR G 105 4_216 | 170 | 250 | 600 | 3000 | 4500 | 7' | 5' | 18.0 | 3800 | 4000 | 89 | 0.83 | 0.98 | 1.11 | 1.85 |
| TR G 105 4_250 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 3800 | 4000 | 89 | 0.92 | 1.07 | 1.21 | 1.93 |
| TR G 105 4_280 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 3800 | 4000 | 89 | 0.92 | 1.06 | 1.21 | 1.93 |
| TR G 105 4_350 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 3800 | 4000 | 89 | 0.92 | 1.06 | 1.21 | 1.93 |
| TR G 105 4_400 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 3800 | 4000 | 89 | 0.92 | 1.06 | 1.21 | 1.93 |
| TR G 105 4_500 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 3800 | 4000 | 89 | 0.92 | 1.06 | 1.21 | 1.93 |
| TR G 105 4_700 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 3800 | 4000 | 89 | 0.92 | 1.06 | 1.21 | 1.93 |
| TR G 105 4_1000 | 100 | 180 | 360 | 3500 | 5000 | 7' | 5' | 18.0 | 3800 | 4000 | 89 | 0.92 | 1.06 | 1.21 | 1.93 |

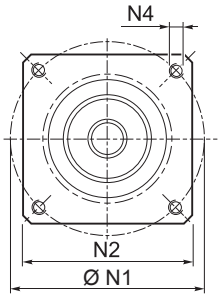


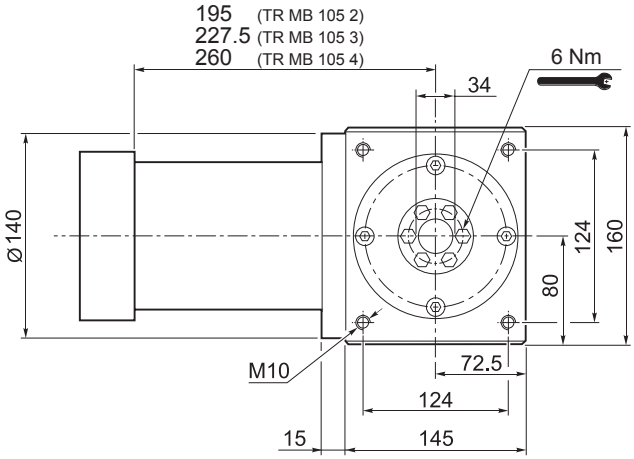
# TR MB 105

## 50D ... 130A1



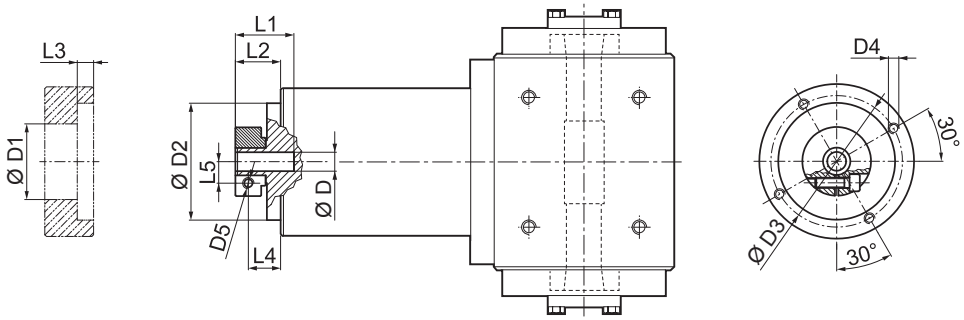

| | Kg |
|---|---|
| **TR MB 105 2** | 32 |
| **TR MB 105 3** | 34 |
| **TR MB 105 4** | 36 |

| | D | | | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **50D** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 50 | 95 | 100 | 5 | M6x14 | 28 | 40 |
| **55A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 55 | 125.7 | 105 | 5 | M6x16 | 28 | 40 |
| **60A2** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 60 | 75 | 100 | 6.5 | M5x14 | 28 | 40 |
| **60AH2** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 60 | 75 | 100 | 4 | 6.5 | 33 | 40 |
| **60B1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 60 | 85 | 100 | 6.5 | M5x14 | 28 | 40 |
| **70A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 70 | 85 | 100 | 6.5 | M6x14 | 28 | 40 |
| **70AH1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 70 | 85 | 100 | 4 | 6.5 | 33 | 40 |
| **70B1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 70 | 90 | 100 | 6.5 | M5x12 | 28 | 40 |
| **80A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 80 | 100 | 100 | 6.5 | M6x16 | 28 | 40 |
| **80AH1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 80 | 100 | 100 | 4 | 6.5 | 33 | 40 |
| **95A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 95 | 115 | 100 | 6.5 | M8x18 | 28 | 40 |
| **95A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 95 | 115 | 100 | 6.5 | M8x18 | 38 | 50 |
| **95B** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 95 | 130 | 115 | 6.5 | M8x18 | 28 | 40 |
| **110A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 110 | 130 | 115 | 6.5 | M8x18 | 28 | 40 |
| **110A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 110 | 130 | 115 | 6.5 | M8x20 | 38 | 50 |
| **110B** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 110 | 145 | 120 | 6.5 | M8x20 | 38 | 50 |
| **110B1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 28 | – | 110 | 145 | 120 | 6.5 | M8x20 | 48 | 60 |
| **130A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 130 | 165 | 140 | 6.5 | M10x20 | 38 | 50 |
| **130A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 130 | 165 | 140 | 6.5 | M10x25 | 48 | 60 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

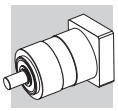
# TR MB 105

**FM**



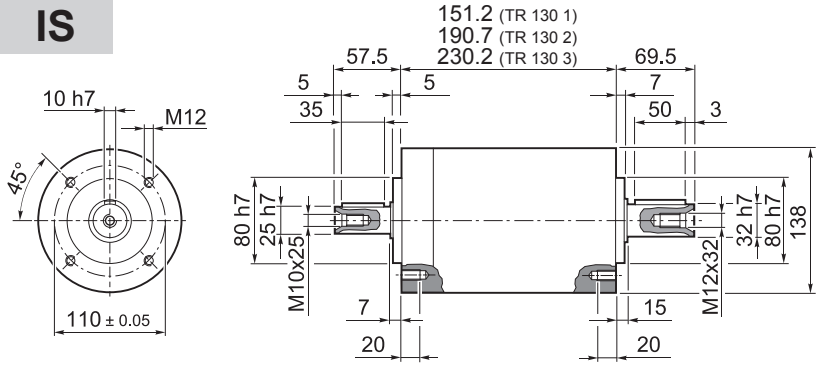

| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 12 | 12.7 | | 43 | 90 | 98 | M6x15 | M6 | 31.5 | 19.5 | 7.6 | 12 | 12.5 |
| 14 | 15 | 15.875 | 16 | 48 | 90 | 98 | M6x15 | M6 | 31.5 | 19.5 | 7.6 | 12 | 14.5 |
| 19 | | | | 51 | 90 | 98 | M6x15 | M6 | 31.5 | 19.5 | 7.6 | 12 | 16.5 |
| 22 | 24 | | | 56.5 | 90 | 98 | M6x15 | M6 | 35 | 23 | 7.6 | 12 | 19 |
| 28 | | | | 67 | 90 | 98 | M6x15 | M8 | 35 | 23 | 7.6 | 14 | 22.5 |
| 32 | | | | 71 | 90 | 98 | M6x15 | M8 | 37 | 25 | 7.6 | 16 | 24.5 |

| i | $M_{n2}$ | $M_{a2}$ | $M_{p2}$ | $n_1$ | $n_{1\,max}$ | $\varphi_S$ | $\varphi_R$ | $C_t$ | $\eta$ | $J_G$ [kgcm²] D | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | [Nm] | [Nm] | [Nm] | [min⁻¹] | [min⁻¹] | [arcmin] | | [Nm/arcmin] | % | 11 ... 12.7 | 14 ... 19 | 22 - 24 | 28 - 32 |
| TR MB 105 2_3 | 100 | 180 | 360 | 2500 | 3500 | 5' | 3' | 24.0 | 94 | 1.70 | 1.78 | 2.22 | 2.59 |
| TR MB 105 2_4 | 140 | 210 | 450 | 2800 | 4500 | 5' | 3' | 24.0 | 94 | 0.99 | 1.06 | 1.51 | 1.87 |
| TR MB 105 2_5 | 140 | 210 | 450 | 3000 | 4500 | 5' | 3' | 24.0 | 94 | 0.72 | 0.79 | 1.23 | 1.60 |
| TR MB 105 2_6 | 140 | 210 | 450 | 3000 | 4500 | 5' | 3' | 24.0 | 94 | 0.36 | 0.43 | 0.88 | 1.24 |
| TR MB 105 2_7 | 140 | 210 | 450 | 3500 | 5000 | 5' | 3' | 24.0 | 94 | 0.47 | 0.55 | 0.99 | 1.35 |
| TR MB 105 2_10 | 100 | 180 | 360 | 3500 | 5000 | 5' | 3' | 24.0 | 94 | 0.33 | 0.41 | 0.85 | 1.21 |
| TR MB 105 3_9 | 100 | 180 | 360 | 2500 | 3500 | 5' | 3' | 21.5 | 91 | 1.58 | 1.63 | 2.07 | 2.44 |
| TR MB 105 3_12 | 170 | 250 | 600 | 2500 | 3500 | 5' | 3' | 21.5 | 91 | 1.52 | 1.59 | 2.03 | 2.40 |
| TR MB 105 3_15 | 170 | 250 | 600 | 2500 | 3500 | 5' | 3' | 21.5 | 91 | 1.47 | 1.55 | 1.99 | 2.36 |
| TR MB 105 3_16 | 170 | 250 | 600 | 2800 | 4500 | 5' | 3' | 21.5 | 91 | 0.87 | 0.95 | 1.39 | 1.76 |
| TR MB 105 3_20 | 170 | 250 | 600 | 3000 | 4500 | 5' | 3' | 21.5 | 91 | 0.86 | 0.93 | 1.37 | 1.74 |
| TR MB 105 3_25 | 170 | 250 | 600 | 3000 | 4500 | 5' | 3' | 21.5 | 91 | 0.63 | 0.71 | 1.15 | 1.51 |
| TR MB 105 3_28 | 170 | 250 | 600 | 3500 | 5000 | 5' | 3' | 21.5 | 91 | 0.43 | 0.51 | 0.95 | 1.32 |
| TR MB 105 3_30 | 100 | 180 | 360 | 3500 | 5000 | 5' | 3' | 21.5 | 91 | 0.32 | 0.40 | 0.84 | 1.20 |
| TR MB 105 3_35 | 170 | 250 | 600 | 3500 | 5000 | 5' | 3' | 21.5 | 91 | 0.43 | 0.50 | 0.95 | 1.31 |
| TR MB 105 3_36 | 140 | 210 | 450 | 3000 | 4500 | 5' | 3' | 21.5 | 91 | 0.32 | 0.39 | 0.84 | 1.20 |
| TR MB 105 3_40 | 170 | 250 | 600 | 3500 | 5000 | 5' | 3' | 21.5 | 91 | 0.31 | 0.39 | 0.83 | 1.20 |
| TR MB 105 3_50 | 170 | 250 | 600 | 3500 | 5000 | 5' | 3' | 21.5 | 91 | 0.31 | 0.39 | 0.83 | 1.19 |
| TR MB 105 3_70 | 170 | 250 | 600 | 3500 | 5000 | 5' | 3' | 21.5 | 91 | 0.31 | 0.38 | 0.83 | 1.19 |
| TR MB 105 3_100 | 100 | 180 | 360 | 3500 | 5000 | 5' | 3' | 21.5 | 91 | 0.31 | 0.38 | 0.83 | 1.19 |
| TR MB 105 4_48 | 170 | 250 | 600 | 2800 | 4500 | 7' | 5' | 18.0 | 89 | 0.91 | 0.98 | 1.42 | 1.79 |
| TR MB 105 4_64 | 170 | 250 | 600 | 2800 | 4500 | 7' | 5' | 18.0 | 89 | 0.87 | 0.94 | 1.38 | 1.75 |
| TR MB 105 4_75 | 170 | 250 | 600 | 3000 | 4500 | 7' | 5' | 18.0 | 89 | 0.66 | 0.74 | 1.18 | 1.55 |
| TR MB 105 4_80 | 170 | 250 | 600 | 2800 | 4500 | 7' | 5' | 18.0 | 89 | 0.86 | 0.94 | 1.38 | 1.75 |
| TR MB 105 4_84 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 89 | 0.44 | 0.52 | 0.96 | 1.33 |
| TR MB 105 4_90 | 100 | 180 | 360 | 3500 | 5000 | 7' | 5' | 18.0 | 89 | 0.32 | 0.39 | 0.84 | 1.20 |
| TR MB 105 4_120 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 89 | 0.32 | 0.39 | 0.84 | 1.20 |
| TR MB 105 4_125 | 170 | 250 | 600 | 3000 | 4500 | 7' | 5' | 18.0 | 89 | 0.63 | 0.70 | 1.15 | 1.51 |
| TR MB 105 4_140 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 89 | 0.43 | 0.51 | 0.95 | 1.32 |
| TR MB 105 4_150 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 89 | 0.32 | 0.39 | 0.84 | 1.20 |
| TR MB 105 4_160 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 89 | 0.31 | 0.39 | 0.83 | 1.21 |
| TR MB 105 4_175 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 89 | 0.43 | 0.50 | 0.95 | 1.31 |
| TR MB 105 4_200 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 89 | 0.31 | 0.39 | 0.83 | 1.20 |
| TR MB 105 4_210 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 89 | 0.32 | 0.39 | 0.84 | 1.20 |
| TR MB 105 4_216 | 170 | 250 | 600 | 3000 | 4500 | 7' | 5' | 18.0 | 89 | 0.31 | 0.39 | 0.83 | 1.20 |
| TR MB 105 4_250 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 89 | 0.31 | 0.39 | 0.83 | 1.19 |
| TR MB 105 4_280 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 89 | 0.31 | 0.38 | 0.83 | 1.19 |
| TR MB 105 4_350 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 89 | 0.31 | 0.38 | 0.83 | 1.19 |
| TR MB 105 4_400 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 89 | 0.31 | 0.38 | 0.83 | 1.19 |
| TR MB 105 4_500 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 89 | 0.31 | 0.38 | 0.83 | 1.19 |
| TR MB 105 4_700 | 170 | 250 | 600 | 3500 | 5000 | 7' | 5' | 18.0 | 89 | 0.31 | 0.38 | 0.83 | 1.19 |
| TR MB 105 4_1000 | 100 | 180 | 360 | 3500 | 5000 | 7' | 5' | 18.0 | 89 | 0.31 | 0.38 | 0.83 | 1.19 |



# TR 130

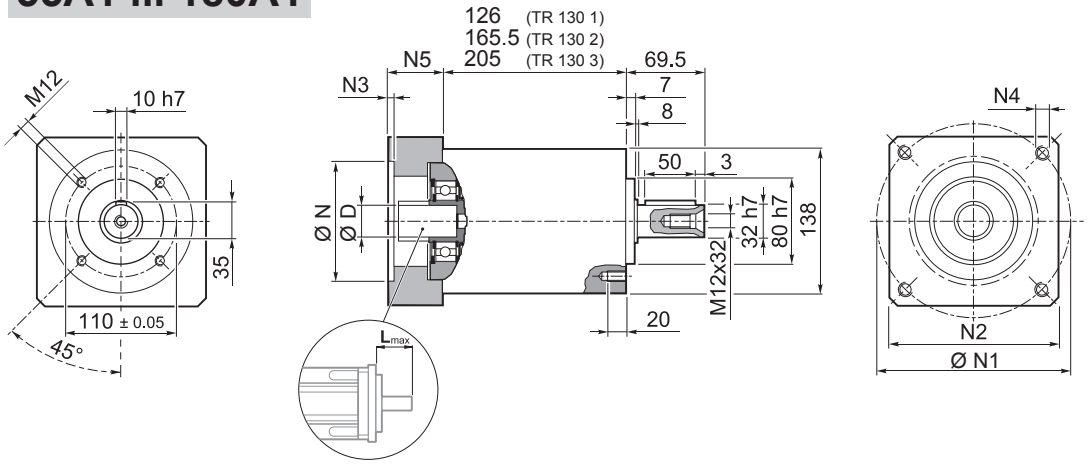
## IS




| | Kg |
|---|---|
| **TR 130 1** | 12.0 |
| **TR 130 2** | 15.5 |
| **TR 130 3** | 18.5 |

TR

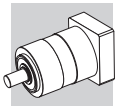
## 55A1 ... 180A1




| | Kg |
|---|---|
| **TR 130 1** | 12.0 |
| **TR 130 2** | 15.5 |
| **TR 130 3** | 18.5 |

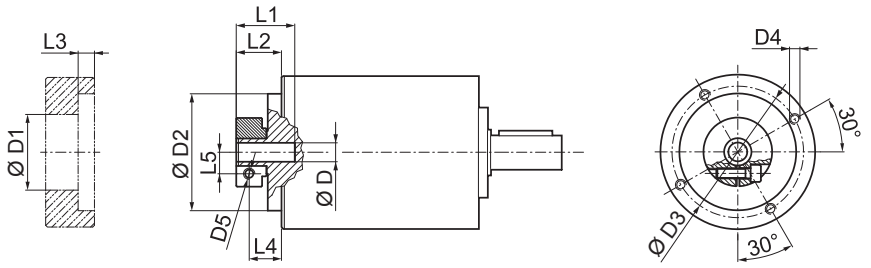
| | D | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **55A1** | 14 | 15.875 | 16 | 19 | – | – | – | – | – | – | 55.5 | 125.7 | 130 | 4 | M6x15 | 39.5 | 50 |
| **80A2** | 14 | 15.875 | 16 | 19 | – | – | – | – | – | – | 80 | 100 | 130 | 4 | M6x15 | 39.5 | 50 |
| **95A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 95 | 115 | 130 | 4 | M8x20 | 39.5 | 50 |
| **110A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 110 | 130 | 130 | 4 | M8x20 | 39.5 | 50 |
| **110B1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 110 | 145 | 130 | 6.5 | M8x20 | 49.5 | 60 |
| **114A0** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 114.3 | 200 | 170 | 5.5 | M12x25 | 39.5 | 50 |
| **114A** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 35 | 38 | 114.3 | 200 | 170 | 5.5 | M12x25 | 69.5 | 80 |
| **130A** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 130 | 165 | 140 | 4 | M10x20 | 39.5 | 50 |
| **130A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | – | – | 130 | 165 | 140 | 4 | M10x20 | 49.5 | 60 |
| **180A** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | – | – | 180 | 215 | 190 | 5.5 | M14x25 | 49.5 | 60 |
| **180A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 35 | 38 | 180 | 215 | 190 | 5.5 | M14x25 | 69.5 | 80 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.



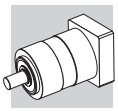
# TR 130

## FM



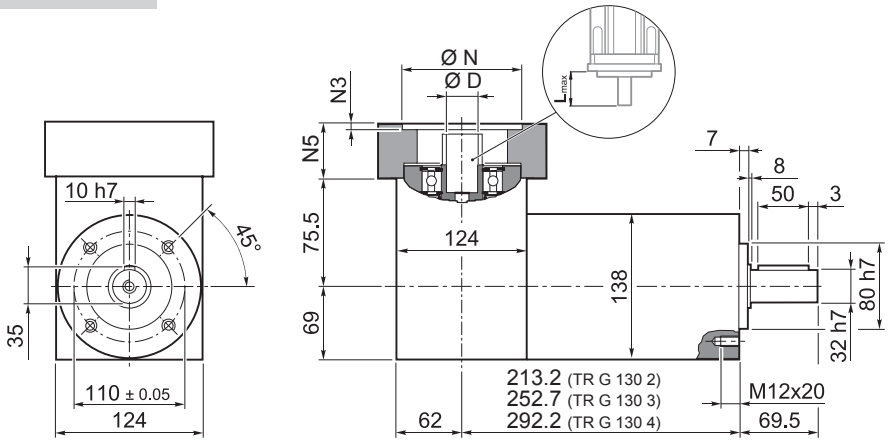

| D | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 15.875 | 16 | 48 | 113 | 125.5 | M8x15 | M6 | 40 | 27.5 | 6 | 20 | 14.5 |
| 19 | | | 51 | 113 | 125.5 | M8x15 | M6 | 40 | 27.5 | 6 | 20 | 16.5 |
| 22 | 24 | | 56.5 | 113 | 125.5 | M8x15 | M6 | 41 | 28.5 | 6 | 19.5 | 19 |
| 28 | | | 67 | 113 | 125.5 | M8x15 | M8 | 41 | 28.5 | 6 | 19.5 | 22.5 |
| 32 | | | 71 | 113 | 125.5 | M8x15 | M8 | 41 | 28.5 | 6 | 19.5 | 24.5 |
| 35 | | | 73 | 113 | 125.5 | M8x15 | M8 | 50 | 37.5 | 11.25 | 26 | 26 |
| 38 | | | 77.5 | 113 | 125.5 | M8x15 | M8 | 50 | 37.5 | 11.25 | 26 | 28 |

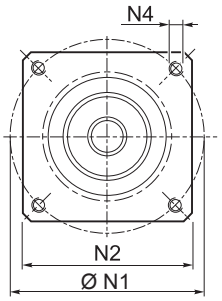
| i | $M_{n2}$ | $M_{a2}$ | $M_{p2}$ | $n_1$ | $n_{1\,max}$ | $\varphi_S$ | $\varphi_R$ | $C_t$ | $R_{1\,max}$ | $R_{2\,max}$ | $A_{2\,max}$ | $\eta$ | $J_G$ [kgcm²] D | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | [Nm] | [Nm] | [Nm] | [min⁻¹] | [min⁻¹] | [arcmin] | | [Nm/arcmin] | [N] | [N] | [N] | % | 14 ... 19 | 22 - 24 | 28 - 32 | 35 - 38 |
| TR 130 1_3 | 215 | 400 | 800 | 2100 | 3000 | 5' | 3' | 45.0 | 800 | 5500 | 6500 | 97 | 5.25 | 5.46 | 5.81 | 7.16 |
| TR 130 1_4 | 380 | 600 | 1100 | 2400 | 3500 | 5' | 3' | 45.0 | 800 | 5500 | 6500 | 97 | 3.06 | 3.26 | 3.61 | 4.97 |
| TR 130 1_5 | 380 | 600 | 1100 | 2900 | 3500 | 5' | 3' | 45.0 | 800 | 5500 | 6500 | 97 | 2.22 | 2.42 | 2.77 | 4.13 |
| TR 130 1_6 | 380 | 600 | 1100 | 2900 | 3500 | 5' | 3' | 45.0 | 800 | 5500 | 6500 | 97 | 1.19 | 1.40 | 1.75 | 3.10 |
| TR 130 1_7 | 380 | 600 | 1100 | 3200 | 4000 | 5' | 3' | 45.0 | 800 | 5500 | 6500 | 97 | 1.47 | 1.68 | 2.03 | 3.38 |
| TR 130 1_10 | 215 | 400 | 800 | 3200 | 4000 | 5' | 3' | 45.0 | 800 | 5500 | 6500 | 97 | 1.04 | 1.25 | 1.60 | 2.95 |
| TR 130 2_9 | 215 | 400 | 800 | 2100 | 3000 | 5' | 3' | 38.5 | 800 | 5500 | 6500 | 94 | 4.82 | 5.02 | 5.37 | 6.72 |
| TR 130 2_12 | 450 | 700 | 1300 | 2100 | 3000 | 5' | 3' | 38.5 | 800 | 5500 | 6500 | 94 | 4.57 | 4.78 | 5.13 | 6.48 |
| TR 130 2_15 | 450 | 700 | 1300 | 2100 | 3000 | 5' | 3' | 38.5 | 800 | 5500 | 6500 | 94 | 4.48 | 4.69 | 5.04 | 6.39 |
| TR 130 2_16 | 450 | 700 | 1300 | 2400 | 3500 | 5' | 3' | 38.5 | 800 | 5500 | 6500 | 94 | 2.67 | 2.88 | 3.23 | 4.58 |
| TR 130 2_20 | 450 | 700 | 1300 | 2900 | 3500 | 5' | 3' | 38.5 | 800 | 5500 | 6500 | 94 | 1.97 | 2.18 | 2.53 | 3.88 |
| TR 130 2_25 | 450 | 700 | 1300 | 2900 | 3500 | 5' | 3' | 38.5 | 800 | 5500 | 6500 | 94 | 1.94 | 2.15 | 2.50 | 3.85 |
| TR 130 2_28 | 450 | 700 | 1300 | 3200 | 4000 | 5' | 3' | 38.5 | 800 | 5500 | 6500 | 94 | 1.34 | 1.55 | 1.90 | 3.25 |
| TR 130 2_30 | 215 | 400 | 800 | 3200 | 4000 | 5' | 3' | 38.5 | 800 | 5500 | 6500 | 94 | 1.00 | 1.21 | 1.56 | 2.91 |
| TR 130 2_35 | 450 | 700 | 1300 | 3200 | 4000 | 5' | 3' | 38.5 | 800 | 5500 | 6500 | 94 | 1.33 | 1.53 | 1.88 | 3.24 |
| TR 130 2_36 | 380 | 600 | 1100 | 2900 | 3500 | 5' | 3' | 38.5 | 800 | 5500 | 6500 | 94 | 1.05 | 1.26 | 1.61 | 2.96 |
| TR 130 2_40 | 450 | 700 | 1300 | 3200 | 4000 | 5' | 3' | 38.5 | 800 | 5500 | 6500 | 94 | 0.98 | 1.19 | 1.54 | 2.89 |
| TR 130 2_50 | 450 | 700 | 1300 | 3200 | 4000 | 5' | 3' | 38.5 | 800 | 5500 | 6500 | 94 | 0.97 | 1.18 | 1.53 | 2.88 |
| TR 130 2_70 | 450 | 700 | 1300 | 3200 | 4000 | 5' | 3' | 38.5 | 800 | 5500 | 6500 | 94 | 0.96 | 1.17 | 1.52 | 2.87 |
| TR 130 2_100 | 215 | 400 | 800 | 3200 | 4000 | 5' | 3' | 38.5 | 800 | 5500 | 6500 | 94 | 0.96 | 1.17 | 1.52 | 2.87 |
| TR 130 3_48 | 450 | 700 | 1300 | 2400 | 3500 | 7' | 5' | 30.0 | 800 | 5500 | 6500 | 91 | 2.77 | 2.98 | 3.33 | 4.68 |
| TR 130 3_64 | 450 | 700 | 1300 | 2400 | 3500 | 7' | 5' | 30.0 | 800 | 5500 | 6500 | 91 | 2.65 | 2.86 | 3.21 | 4.56 |
| TR 130 3_75 | 450 | 700 | 1300 | 2900 | 3500 | 7' | 5' | 30.0 | 800 | 5500 | 6500 | 91 | 2.03 | 2.24 | 2.59 | 3.94 |
| TR 130 3_80 | 450 | 700 | 1300 | 2400 | 3500 | 7' | 5' | 30.0 | 800 | 5500 | 6500 | 91 | 2.65 | 2.85 | 3.20 | 4.56 |
| TR 130 3_84 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 800 | 5500 | 6500 | 91 | 1.37 | 1.58 | 1.93 | 3.28 |
| TR 130 3_90 | 215 | 400 | 800 | 3200 | 4000 | 7' | 5' | 30.0 | 800 | 5500 | 6500 | 91 | 1.00 | 1.20 | 1.55 | 2.91 |
| TR 130 3_120 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 800 | 5500 | 6500 | 91 | 0.99 | 1.20 | 1.55 | 2.90 |
| TR 130 3_125 | 450 | 700 | 1300 | 2900 | 3500 | 7' | 5' | 30.0 | 800 | 5500 | 6500 | 91 | 1.93 | 2.13 | 2.48 | 3.84 |
| TR 130 3_140 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 800 | 5500 | 6500 | 91 | 1.34 | 1.54 | 1.89 | 3.25 |
| TR 130 3_150 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 800 | 5500 | 6500 | 91 | 0.99 | 1.20 | 1.55 | 2.90 |
| TR 130 3_160 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 800 | 5500 | 6500 | 91 | 0.98 | 1.18 | 1.53 | 2.89 |
| TR 130 3_175 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 800 | 5500 | 6500 | 91 | 1.32 | 1.53 | 1.88 | 3.23 |
| TR 130 3_200 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 800 | 5500 | 6500 | 91 | 0.97 | 1.18 | 1.53 | 2.88 |
| TR 130 3_210 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 800 | 5500 | 6500 | 91 | 0.99 | 1.20 | 1.55 | 2.90 |
| TR 130 3_216 | 450 | 700 | 1300 | 2900 | 3500 | 7' | 5' | 30.0 | 800 | 5500 | 6500 | 91 | 1.05 | 1.26 | 1.61 | 2.96 |
| TR 130 3_250 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 800 | 5500 | 6500 | 91 | 0.97 | 1.18 | 1.53 | 2.88 |
| TR 130 3_280 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 800 | 5500 | 6500 | 91 | 0.96 | 1.17 | 1.52 | 2.87 |
| TR 130 3_350 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 800 | 5500 | 6500 | 91 | 0.96 | 1.17 | 1.52 | 2.87 |
| TR 130 3_400 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 800 | 5500 | 6500 | 91 | 0.96 | 1.17 | 1.52 | 2.87 |
| TR 130 3_500 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 800 | 5500 | 6500 | 91 | 0.96 | 1.17 | 1.52 | 2.87 |
| TR 130 3_700 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 800 | 5500 | 6500 | 91 | 0.96 | 1.17 | 1.52 | 2.87 |
| TR 130 3_1000 | 215 | 400 | 800 | 3200 | 4000 | 7' | 5' | 30.0 | 800 | 5500 | 6500 | 91 | 0.96 | 1.17 | 1.52 | 2.87 |



# TR G 130

## 55A1 ... 180A1

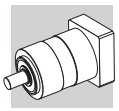



| | Kg |
|---|---|
| **TR G 130 2** | 16.0 |
| **TR G 130 3** | 19.5 |
| **TR G 130 4** | 22.5 |

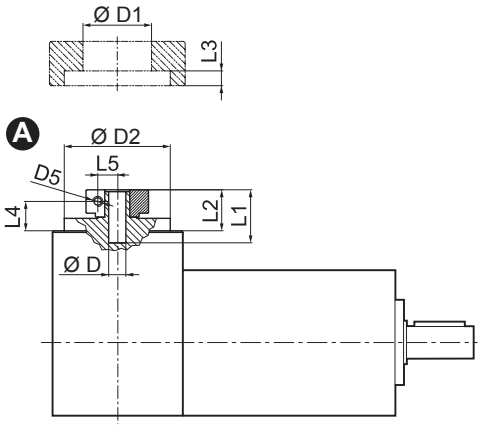
| | D | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **55A1** | 14 | 15.875 | 16 | 19 | – | – | – | – | – | – | 55.5 | 125.7 | 130 | 4 | M6x15 | 39.5 | 50 |
| **80A2** | 14 | 15.875 | 16 | 19 | – | – | – | – | – | – | 80 | 100 | 130 | 4 | M6x15 | 39.5 | 50 |
| **95A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 95 | 115 | 130 | 4 | M8x20 | 39.5 | 50 |
| **110A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 110 | 130 | 130 | 4 | M8x20 | 39.5 | 50 |
| **110B1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 110 | 145 | 130 | 6.5 | M8x20 | 49.5 | 60 |
| **114A0** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 114.3 | 200 | 170 | 5.5 | M12x25 | 39.5 | 50 |
| **114A** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 35 | 38 | 114.3 | 200 | 170 | 5.5 | M12x25 | 69.5 | 80 |
| **130A** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 130 | 165 | 140 | 4 | M10x20 | 39.5 | 50 |
| **130A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | – | – | 130 | 165 | 140 | 4 | M10x20 | 49.5 | 60 |
| **180A** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | – | – | 180 | 215 | 190 | 5.5 | M14x25 | 49.5 | 60 |
| **180A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 35 | 38 | 180 | 215 | 190 | 5.5 | M14x25 | 69.5 | 80 |

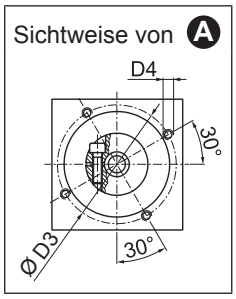
Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.



# TR G 130

**FM**

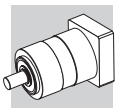



| D | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 15.875 | 16 | 48 | 113 | 125.5 | M8x15 | M6 | 40 | 27.5 | 6 | 20 | 14.5 |
| 19 | | | 51 | 113 | 125.5 | M8x15 | M6 | 40 | 27.5 | 6 | 20 | 16.5 |
| 22 | 24 | | 56.5 | 113 | 125.5 | M8x15 | M6 | 41 | 28.5 | 6 | 19.5 | 19 |
| 28 | | | 67 | 113 | 125.5 | M8x15 | M8 | 41 | 28.5 | 6 | 19.5 | 22.5 |
| 32 | | | 71 | 113 | 125.5 | M8x15 | M8 | 41 | 28.5 | 6 | 19.5 | 24.5 |
| 35 | | | 73 | 113 | 125.5 | M8x15 | M8 | 50 | 37.5 | 11.25 | 26 | 26 |
| 38 | | | 77.5 | 113 | 125.5 | M8x15 | M8 | 50 | 37.5 | 11.25 | 26 | 28 |

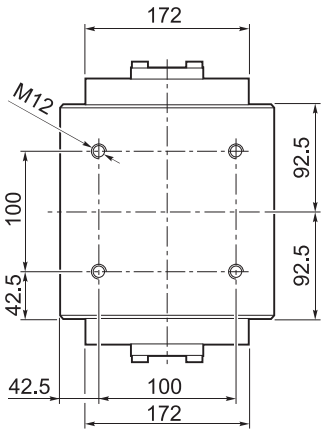


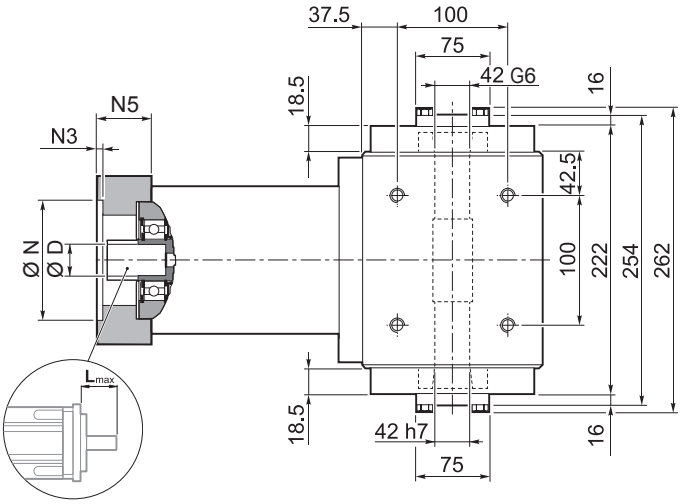
| i | $M_{n2}$ | $M_{a2}$ | $M_{p2}$ | $n_1$ | $n_{1\,max}$ | $\varphi_S$ | $\varphi_R$ | $C_t$ | $R_{2\,max}$ | $A_{2\,max}$ | $\eta$ | $J_G$ [kgcm²] D | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | [Nm] | [Nm] | [Nm] | [min⁻¹] | [min⁻¹] | [arcmin] | | [Nm/arcmin] | [N] | [N] | % | 14 ... 19 | 22 - 24 | 28 - 32 | 35 - 38 |
| TR G 130 2_3 | 215 | 400 | 800 | 2100 | 3000 | 5' | 3' | 45.0 | 5500 | 6500 | 94 | 7.09 | 7.28 | 7.66 | 10.37 |
| TR G 130 2_4 | 380 | 600 | 1100 | 2400 | 3500 | 5' | 3' | 45.0 | 5500 | 6500 | 94 | 4.90 | 5.08 | 5.46 | 8.18 |
| TR G 130 2_5 | 380 | 600 | 1100 | 2900 | 3500 | 5' | 3' | 45.0 | 5500 | 6500 | 94 | 4.81 | 4.99 | 5.38 | 8.10 |
| TR G 130 2_6 | 380 | 600 | 1100 | 2900 | 3500 | 5' | 3' | 45.0 | 5500 | 6500 | 94 | 4.45 | 4.64 | 5.03 | 7.73 |
| TR G 130 2_7 | 380 | 600 | 1100 | 3200 | 4000 | 5' | 3' | 45.0 | 5500 | 6500 | 94 | 4.73 | 4.92 | 5.31 | 8.01 |
| TR G 130 2_10 | 215 | 400 | 800 | 3200 | 4000 | 5' | 3' | 45.0 | 5500 | 6500 | 94 | 4.68 | 4.88 | 5.26 | 7.97 |
| TR G 130 3_9 | 215 | 400 | 800 | 2100 | 3000 | 5' | 3' | 38.5 | 5500 | 6500 | 91 | 6.66 | 6.84 | 7.22 | 9.93 |
| TR G 130 3_12 | 450 | 700 | 1300 | 2100 | 3000 | 5' | 3' | 38.5 | 5500 | 6500 | 91 | 6.25 | 6.45 | 6.84 | 9.54 |
| TR G 130 3_15 | 450 | 700 | 1300 | 2100 | 3000 | 5' | 3' | 38.5 | 5500 | 6500 | 91 | 6.25 | 6.44 | 6.83 | 9.53 |
| TR G 130 3_16 | 450 | 700 | 1300 | 2400 | 3500 | 5' | 3' | 38.5 | 5500 | 6500 | 91 | 4.51 | 4.70 | 5.08 | 7.79 |
| TR G 130 3_20 | 450 | 700 | 1300 | 2900 | 3500 | 5' | 3' | 38.5 | 5500 | 6500 | 91 | 4.56 | 5.36 | 5.75 | 8.45 |
| TR G 130 3_25 | 450 | 700 | 1300 | 2900 | 3500 | 5' | 3' | 38.5 | 5500 | 6500 | 91 | 5.13 | 4.72 | 5.11 | 7.82 |
| TR G 130 3_28 | 450 | 700 | 1300 | 3200 | 4000 | 5' | 3' | 38.5 | 5500 | 6500 | 91 | 4.60 | 4.79 | 5.18 | 7.88 |
| TR G 130 3_30 | 215 | 400 | 800 | 3200 | 4000 | 5' | 3' | 38.5 | 5500 | 6500 | 91 | 4.64 | 4.84 | 5.22 | 7.93 |
| TR G 130 3_35 | 450 | 700 | 1300 | 3200 | 4000 | 5' | 3' | 38.5 | 5500 | 6500 | 91 | 4.92 | 5.10 | 5.49 | 8.20 |
| TR G 130 3_36 | 380 | 600 | 1100 | 2900 | 3500 | 5' | 3' | 38.5 | 5500 | 6500 | 91 | 4.31 | 4.50 | 4.89 | 7.59 |
| TR G 130 3_40 | 450 | 700 | 1300 | 3200 | 4000 | 5' | 3' | 38.5 | 5500 | 6500 | 91 | 4.77 | 4.96 | 5.35 | 8.05 |
| TR G 130 3_50 | 450 | 700 | 1300 | 3200 | 4000 | 5' | 3' | 38.5 | 5500 | 6500 | 91 | 4.76 | 4.96 | 5.34 | 8.05 |
| TR G 130 3_70 | 450 | 700 | 1300 | 3200 | 4000 | 5' | 3' | 38.5 | 5500 | 6500 | 91 | 4.60 | 4.80 | 5.18 | 7.89 |
| TR G 130 3_100 | 215 | 400 | 800 | 3200 | 4000 | 5' | 3' | 38.5 | 5500 | 6500 | 91 | 4.60 | 4.80 | 5.18 | 7.89 |
| TR G 130 4_48 | 450 | 700 | 1300 | 2400 | 3500 | 7' | 5' | 30.0 | 5500 | 6500 | 89 | 4.61 | 4.81 | 5.18 | 7.89 |
| TR G 130 4_64 | 450 | 700 | 1300 | 2400 | 3500 | 7' | 5' | 30.0 | 5500 | 6500 | 89 | 4.49 | 4.68 | 5.06 | 7.77 |
| TR G 130 4_75 | 450 | 700 | 1300 | 2900 | 3500 | 7' | 5' | 30.0 | 5500 | 6500 | 89 | 4.62 | 4.81 | 5.20 | 7.91 |
| TR G 130 4_80 | 450 | 700 | 1300 | 2400 | 3500 | 7' | 5' | 30.0 | 5500 | 6500 | 89 | 4.49 | 4.67 | 5.05 | 7.77 |
| TR G 130 4_84 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 5500 | 6500 | 89 | 4.63 | 4.82 | 5.21 | 7.91 |
| TR G 130 4_90 | 215 | 400 | 800 | 3200 | 4000 | 7' | 5' | 30.0 | 5500 | 6500 | 89 | 4.64 | 4.83 | 5.21 | 7.93 |
| TR G 130 4_120 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 5500 | 6500 | 89 | 4.63 | 4.83 | 5.21 | 7.92 |
| TR G 130 4_125 | 450 | 700 | 1300 | 2900 | 3500 | 7' | 5' | 30.0 | 5500 | 6500 | 89 | 4.52 | 4.70 | 5.09 | 7.81 |
| TR G 130 4_140 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 5500 | 6500 | 89 | 4.60 | 4.78 | 5.17 | 7.88 |
| TR G 130 4_150 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 5500 | 6500 | 89 | 4.63 | 4.83 | 5.21 | 7.92 |
| TR G 130 4_160 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 5500 | 6500 | 89 | 4.62 | 4.81 | 5.19 | 7.91 |
| TR G 130 4_175 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 5500 | 6500 | 89 | 4.58 | 4.77 | 5.16 | 7.86 |
| TR G 130 4_200 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 5500 | 6500 | 89 | 4.61 | 4.81 | 5.19 | 7.90 |
| TR G 130 4_210 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 5500 | 6500 | 89 | 4.63 | 4.83 | 5.21 | 7.92 |
| TR G 130 4_216 | 450 | 700 | 1300 | 2900 | 3500 | 7' | 5' | 30.0 | 5500 | 6500 | 89 | 4.31 | 4.50 | 4.89 | 7.59 |
| TR G 130 4_250 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 5500 | 6500 | 89 | 4.61 | 4.81 | 5.19 | 7.90 |
| TR G 130 4_280 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 5500 | 6500 | 89 | 4.60 | 4.80 | 5.18 | 7.89 |
| TR G 130 4_350 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 5500 | 6500 | 89 | 4.60 | 4.80 | 5.18 | 7.89 |
| TR G 130 4_400 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 5500 | 6500 | 89 | 4.60 | 4.80 | 5.18 | 7.89 |
| TR G 130 4_500 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 5500 | 6500 | 89 | 4.60 | 4.80 | 5.18 | 7.89 |
| TR G 130 4_700 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 5500 | 6500 | 89 | 4.60 | 4.80 | 5.18 | 7.89 |
| TR G 130 4_1000 | 215 | 400 | 800 | 3200 | 4000 | 7' | 5' | 30.0 | 5500 | 6500 | 89 | 4.60 | 4.80 | 5.18 | 7.89 |

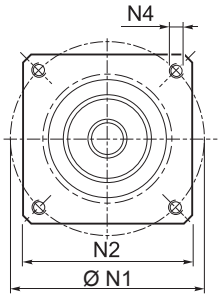


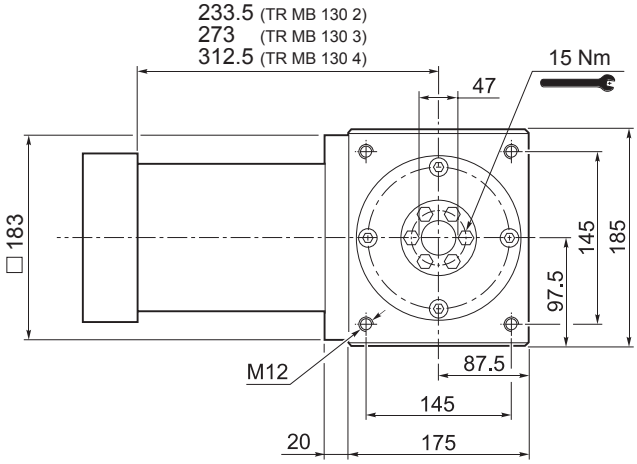
# TR MB 130

## 55A1 ... 180A1



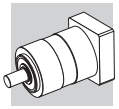




| | Kg |
|---|---|
| **TR MB 130 2** | 54 |
| **TR MB 130 3** | 58 |
| **TR MB 130 4** | 61 |

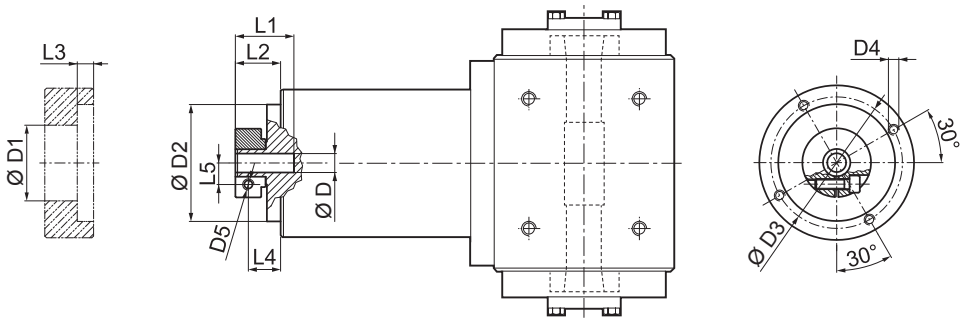
| | D | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **55A1** | 14 | 15.875 | 16 | 19 | – | – | – | – | – | – | 55.5 | 125.7 | 130 | 4 | M6x15 | 39.5 | 50 |
| **80A2** | 14 | 15.875 | 16 | 19 | – | – | – | – | – | – | 80 | 100 | 130 | 4 | M6x15 | 39.5 | 50 |
| **95A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 95 | 115 | 130 | 4 | M8x20 | 39.5 | 50 |
| **110A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 110 | 130 | 130 | 4 | M8x20 | 39.5 | 50 |
| **110B1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 110 | 145 | 130 | 6.5 | M8x20 | 49.5 | 60 |
| **114A0** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 114.3 | 200 | 170 | 5.5 | M12x25 | 39.5 | 50 |
| **114A** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 35 | 38 | 114.3 | 200 | 170 | 5.5 | M12x25 | 69.5 | 80 |
| **130A** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 130 | 165 | 140 | 4 | M10x20 | 39.5 | 50 |
| **130A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | – | – | 130 | 165 | 140 | 4 | M10x20 | 49.5 | 60 |
| **180A** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | – | – | 180 | 215 | 190 | 5.5 | M14x25 | 49.5 | 60 |
| **180A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 35 | 38 | 180 | 215 | 190 | 5.5 | M14x25 | 69.5 | 80 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.



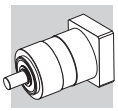
# TR MB 130

**FM**



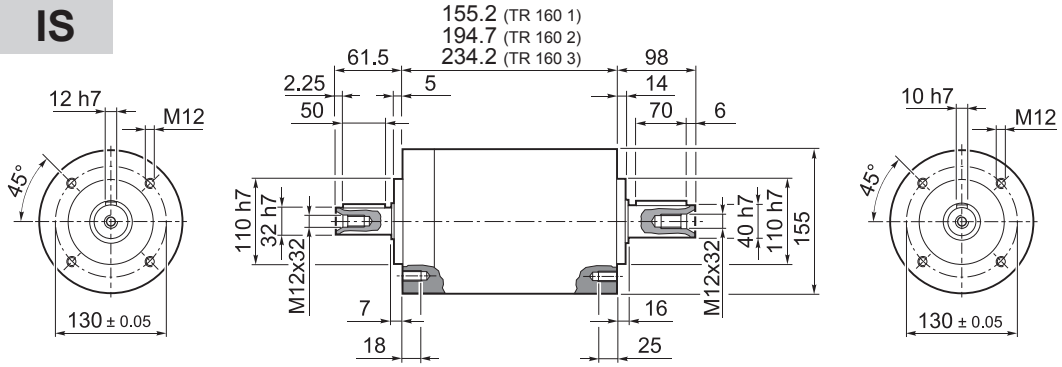

| D | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 15.875 | 16 | 48 | 113 | 125.5 | M8x15 | M6 | 40 | 27.5 | 6 | 20 | 14.5 |
| 19 | | | 51 | 113 | 125.5 | M8x15 | M6 | 40 | 27.5 | 6 | 20 | 16.5 |
| 22 | 24 | | 56.5 | 113 | 125.5 | M8x15 | M6 | 41 | 28.5 | 6 | 19.5 | 19 |
| 28 | | | 67 | 113 | 125.5 | M8x15 | M8 | 41 | 28.5 | 6 | 19.5 | 22.5 |
| 32 | | | 71 | 113 | 125.5 | M8x15 | M8 | 41 | 28.5 | 6 | 19.5 | 24.5 |
| 35 | | | 73 | 113 | 125.5 | M8x15 | M8 | 50 | 37.5 | 11.25 | 26 | 26 |
| 38 | | | 77.5 | 113 | 125.5 | M8x15 | M8 | 50 | 37.5 | 11.25 | 26 | 28 |

| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $\varphi_R$ [arcmin] | $C_t$ [Nm/arcmin] | $\eta$ % | $J_G$ [kgcm$^2$] D 14 ... 19 | 22 - 24 | 28 - 32 | 35 - 38 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TR MB 130 2_3 | 215 | 400 | 800 | 2100 | 3000 | 5' | 3' | 45.0 | 94 | 5.25 | 5.46 | 5.81 | 7.16 |
| TR MB 130 2_4 | 380 | 600 | 1100 | 2400 | 3500 | 5' | 3' | 45.0 | 94 | 3.06 | 3.26 | 3.61 | 4.97 |
| TR MB 130 2_5 | 380 | 600 | 1100 | 2900 | 3500 | 5' | 3' | 45.0 | 94 | 2.22 | 2.42 | 2.77 | 4.13 |
| TR MB 130 2_6 | 380 | 600 | 1100 | 2900 | 3500 | 5' | 3' | 45.0 | 94 | 1.19 | 1.40 | 1.75 | 3.10 |
| TR MB 130 2_7 | 380 | 600 | 1100 | 3200 | 4000 | 5' | 3' | 45.0 | 94 | 1.47 | 1.68 | 2.03 | 3.38 |
| TR MB 130 2_10 | 215 | 400 | 800 | 3200 | 4000 | 5' | 3' | 45.0 | 94 | 1.04 | 1.25 | 1.60 | 2.95 |
| TR MB 130 3_9 | 215 | 400 | 800 | 2100 | 3000 | 5' | 3' | 38.5 | 91 | 4.82 | 5.02 | 5.37 | 6.72 |
| TR MB 130 3_12 | 450 | 700 | 1300 | 2100 | 3000 | 5' | 3' | 38.5 | 91 | 4.57 | 4.78 | 5.13 | 6.48 |
| TR MB 130 3_15 | 450 | 700 | 1300 | 2100 | 3000 | 5' | 3' | 38.5 | 91 | 4.48 | 4.69 | 5.04 | 6.39 |
| TR MB 130 3_16 | 450 | 700 | 1300 | 2400 | 3500 | 5' | 3' | 38.5 | 91 | 2.67 | 2.88 | 3.23 | 4.58 |
| TR MB 130 3_20 | 450 | 700 | 1300 | 2900 | 3500 | 5' | 3' | 38.5 | 91 | 1.97 | 2.18 | 2.53 | 3.88 |
| TR MB 130 3_25 | 450 | 700 | 1300 | 2900 | 3500 | 5' | 3' | 38.5 | 91 | 1.94 | 2.15 | 2.50 | 3.85 |
| TR MB 130 3_28 | 450 | 700 | 1300 | 3200 | 4000 | 5' | 3' | 38.5 | 91 | 1.34 | 1.55 | 1.90 | 3.25 |
| TR MB 130 3_30 | 215 | 400 | 800 | 3200 | 4000 | 5' | 3' | 38.5 | 91 | 1.00 | 1.21 | 1.56 | 2.91 |
| TR MB 130 3_35 | 450 | 700 | 1300 | 3200 | 4000 | 5' | 3' | 38.5 | 91 | 1.33 | 1.53 | 1.88 | 3.24 |
| TR MB 130 3_36 | 380 | 600 | 1100 | 2900 | 3500 | 5' | 3' | 38.5 | 91 | 1.05 | 1.26 | 1.61 | 2.96 |
| TR MB 130 3_40 | 450 | 700 | 1300 | 3200 | 4000 | 5' | 3' | 38.5 | 91 | 0.98 | 1.19 | 1.54 | 2.89 |
| TR MB 130 3_50 | 450 | 700 | 1300 | 3200 | 4000 | 5' | 3' | 38.5 | 91 | 0.97 | 1.18 | 1.53 | 2.88 |
| TR MB 130 3_70 | 450 | 700 | 1300 | 3200 | 4000 | 5' | 3' | 38.5 | 91 | 0.96 | 1.17 | 1.52 | 2.87 |
| TR MB 130 3_100 | 215 | 400 | 800 | 3200 | 4000 | 5' | 3' | 38.5 | 91 | 0.96 | 1.17 | 1.52 | 2.87 |
| TR MB 130 4_48 | 450 | 700 | 1300 | 2400 | 3500 | 7' | 5' | 30.0 | 89 | 2.77 | 2.98 | 3.33 | 4.68 |
| TR MB 130 4_64 | 450 | 700 | 1300 | 2400 | 3500 | 7' | 5' | 30.0 | 89 | 2.65 | 2.86 | 3.21 | 4.56 |
| TR MB 130 4_75 | 450 | 700 | 1300 | 2900 | 3500 | 7' | 5' | 30.0 | 89 | 2.03 | 2.24 | 2.59 | 3.94 |
| TR MB 130 4_80 | 450 | 700 | 1300 | 2400 | 3500 | 7' | 5' | 30.0 | 89 | 2.65 | 2.85 | 3.20 | 4.56 |
| TR MB 130 4_84 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 89 | 1.37 | 1.58 | 1.93 | 3.28 |
| TR MB 130 4_90 | 215 | 400 | 800 | 3200 | 4000 | 7' | 5' | 30.0 | 89 | 1.00 | 1.20 | 1.55 | 2.91 |
| TR MB 130 4_120 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 89 | 0.99 | 1.20 | 1.55 | 2.90 |
| TR MB 130 4_125 | 450 | 700 | 1300 | 2900 | 3500 | 7' | 5' | 30.0 | 89 | 1.93 | 2.13 | 2.48 | 3.84 |
| TR MB 130 4_140 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 89 | 1.34 | 1.54 | 1.89 | 3.25 |
| TR MB 130 4_150 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 89 | 0.99 | 1.20 | 1.55 | 2.90 |
| TR MB 130 4_160 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 89 | 0.98 | 1.18 | 1.53 | 2.89 |
| TR MB 130 4_175 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 89 | 1.32 | 1.53 | 1.88 | 3.23 |
| TR MB 130 4_200 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 89 | 0.97 | 1.18 | 1.53 | 2.88 |
| TR MB 130 4_210 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 89 | 0.99 | 1.20 | 1.55 | 2.90 |
| TR MB 130 4_216 | 450 | 700 | 1300 | 2900 | 3500 | 7' | 5' | 30.0 | 89 | 1.05 | 1.26 | 1.61 | 2.96 |
| TR MB 130 4_250 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 89 | 0.97 | 1.18 | 1.53 | 2.88 |
| TR MB 130 4_280 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 89 | 0.96 | 1.17 | 1.52 | 2.87 |
| TR MB 130 4_350 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 89 | 0.96 | 1.17 | 1.52 | 2.87 |
| TR MB 130 4_400 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 89 | 0.96 | 1.17 | 1.52 | 2.87 |
| TR MB 130 4_500 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 89 | 0.96 | 1.17 | 1.52 | 2.87 |
| TR MB 130 4_700 | 450 | 700 | 1300 | 3200 | 4000 | 7' | 5' | 30.0 | 89 | 0.96 | 1.17 | 1.52 | 2.87 |
| TR MB 130 4_1000 | 215 | 400 | 800 | 3200 | 4000 | 7' | 5' | 30.0 | 89 | 0.96 | 1.17 | 1.52 | 2.87 |



# TR 160

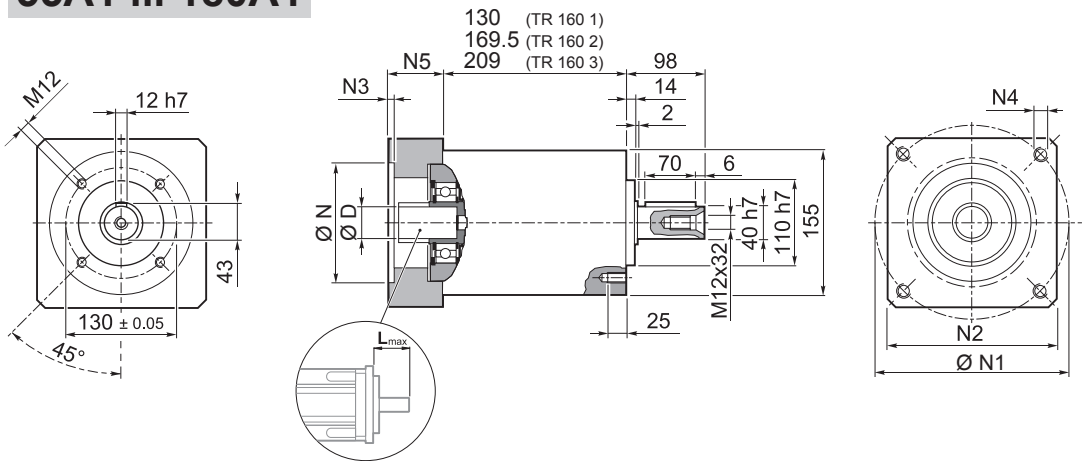
## IS




| | Kg |
|---|---|
| **TR 160 1** | 17.0 |
| **TR 160 2** | 21 |
| **TR 160 3** | 28 |



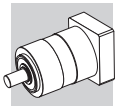
## 55A1 ... 180A1




| | Kg |
|---|---|
| **TR 160 1** | 17.0 |
| **TR 160 2** | 21 |
| **TR 160 3** | 28 |

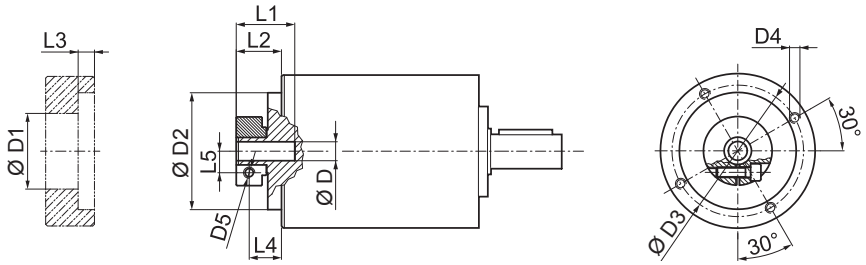
| | D | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **55A1** | 14 | 15.875 | 16 | 19 | – | – | – | – | – | – | 55.5 | 125.7 | 140 | 5 | M6x15 | 39.5 | 50 |
| **80A2** | 14 | 15.875 | 16 | 19 | – | – | – | – | – | – | 80 | 100 | 140 | 5 | M6x15 | 39.5 | 50 |
| **95A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 95 | 115 | 140 | 5 | M8x20 | 39.5 | 50 |
| **110A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 110 | 130 | 140 | 5 | M8x20 | 39.5 | 50 |
| **110B1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 110 | 145 | 140 | 6.5 | M8x20 | 49.5 | 60 |
| **114A** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 35 | 38 | 114.3 | 200 | 170 | 6.5 | M12x25 | 69.5 | 80 |
| **130A** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 130 | 165 | 140 | 5 | M10x20 | 39.5 | 50 |
| **130A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | – | – | 130 | 165 | 140 | 5 | M10x20 | 49.5 | 60 |
| **180A** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | – | – | 180 | 215 | 190 | 6.5 | M14x25 | 49.5 | 60 |
| **180A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 35 | 38 | 180 | 215 | 190 | 6.5 | M14x25 | 69.5 | 80 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.



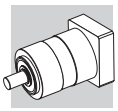
# TR 160

**FM**



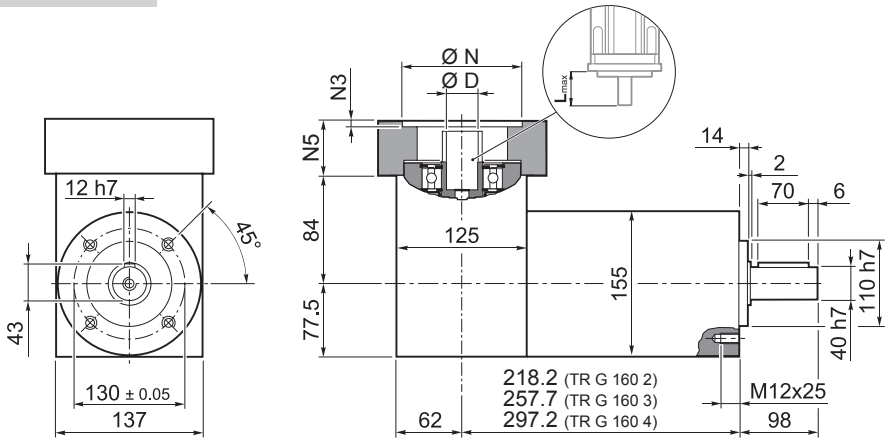

| D | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 15.875 | 16 | 48 | 130 | 142.5 | M8x16 | M6 | 40 | 27.5 | 6 | 20 | 14.5 |
| 19 | | | 51 | 130 | 142.5 | M8x16 | M6 | 40 | 27.5 | 6 | 20 | 16.5 |
| 22 | 24 | | 56.5 | 130 | 142.5 | M8x16 | M6 | 41 | 28.5 | 6 | 19.5 | 19 |
| 28 | | | 67 | 130 | 142.5 | M8x16 | M8 | 41 | 28.5 | 6 | 19.5 | 22.5 |
| 32 | | | 71 | 130 | 142.5 | M8x16 | M8 | 41 | 28.5 | 6 | 19.5 | 24.5 |
| 35 | | | 73 | 130 | 142.5 | M8x16 | M8 | 50 | 37.5 | 11.25 | 26 | 26 |
| 38 | | | 77.5 | 130 | 142.5 | M8x16 | M8 | 50 | 37.5 | 11.25 | 26 | 28 |

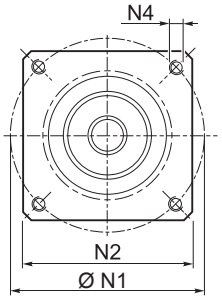
| i | $M_{n2}$ | $M_{a2}$ | $M_{p2}$ | $n_1$ | $n_{1\,max}$ | $\varphi_S$ | $\varphi_R$ | $C_t$ | $R_{1\,max}$ | $R_{2\,max}$ | $A_{2\,max}$ | $\eta$ | $J_G$ [kgcm²] D | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | [Nm] | [Nm] | [Nm] | [min⁻¹] | [min⁻¹] | [arcmin] | | [Nm/arcmin] | [N] | [N] | [N] | % | 14 ... 19 | 22 - 24 | 28 - 32 | 35 - 38 |
| TR 160 1_3 | 350 | 660 | 1200 | 1900 | 3000 | 5' | 3' | 90 | 1200 | 6500 | 7500 | 97 | 8.39 | 8.60 | 8.95 | 10.30 |
| TR 160 1_4 | 500 | 750 | 1400 | 2200 | 3500 | 5' | 3' | 90 | 1200 | 6500 | 7500 | 97 | 4.68 | 4.89 | 5.24 | 6.59 |
| TR 160 1_5 | 500 | 750 | 1400 | 2500 | 3500 | 5' | 3' | 90 | 1200 | 6500 | 7500 | 97 | 3.28 | 3.49 | 3.84 | 5.19 |
| TR 160 1_6 | 500 | 750 | 1400 | 2500 | 3500 | 5' | 3' | 90 | 1200 | 6500 | 7500 | 97 | 1.32 | 1.53 | 1.88 | 3.23 |
| TR 160 1_7 | 500 | 750 | 1400 | 3000 | 4000 | 5' | 3' | 90 | 1200 | 6500 | 7500 | 97 | 2.03 | 2.24 | 2.59 | 3.94 |
| TR 160 1_10 | 350 | 660 | 1200 | 3000 | 4000 | 5' | 3' | 90 | 1200 | 6500 | 7500 | 97 | 1.33 | 1.53 | 1.88 | 3.24 |
| TR 160 2_9 | 350 | 660 | 1200 | 1900 | 3000 | 5' | 3' | 83.5 | 1200 | 6500 | 7500 | 94 | 7.51 | 7.72 | 8.07 | 9.42 |
| TR 160 2_12 | 700 | 950 | 1800 | 1900 | 3000 | 5' | 3' | 83.5 | 1200 | 6500 | 7500 | 94 | 7.10 | 7.30 | 7.65 | 9.01 |
| TR 160 2_15 | 700 | 950 | 1800 | 1900 | 3000 | 5' | 3' | 83.5 | 1200 | 6500 | 7500 | 94 | 6.94 | 7.15 | 7.50 | 8.85 |
| TR 160 2_16 | 700 | 950 | 1800 | 2200 | 3500 | 5' | 3' | 83.5 | 1200 | 6500 | 7500 | 94 | 3.95 | 4.16 | 4.51 | 5.86 |
| TR 160 2_20 | 700 | 950 | 1800 | 2500 | 3500 | 5' | 3' | 83.5 | 1200 | 6500 | 7500 | 94 | 2.82 | 3.02 | 3.37 | 4.73 |
| TR 160 2_25 | 700 | 950 | 1800 | 2500 | 3500 | 5' | 3' | 83.5 | 1200 | 6500 | 7500 | 94 | 2.76 | 2.97 | 3.32 | 4.67 |
| TR 160 2_28 | 700 | 950 | 1800 | 3000 | 4000 | 5' | 3' | 83.5 | 1200 | 6500 | 7500 | 94 | 1.79 | 2.00 | 2.35 | 3.70 |
| TR 160 2_30 | 350 | 660 | 1200 | 3000 | 4000 | 5' | 3' | 83.5 | 1200 | 6500 | 7500 | 94 | 1.25 | 1.46 | 1.81 | 3.16 |
| TR 160 2_35 | 700 | 950 | 1800 | 3000 | 4000 | 5' | 3' | 83.5 | 1200 | 6500 | 7500 | 94 | 1.77 | 1.97 | 2.32 | 3.68 |
| TR 160 2_36 | 500 | 750 | 1400 | 2500 | 3500 | 5' | 3' | 83.5 | 1200 | 6500 | 7500 | 94 | 1.06 | 1.27 | 1.62 | 2.97 |
| TR 160 2_40 | 700 | 950 | 1800 | 3000 | 4000 | 5' | 3' | 83.5 | 1200 | 6500 | 7500 | 94 | 1.21 | 1.42 | 1.77 | 3.12 |
| TR 160 2_50 | 700 | 950 | 1800 | 3000 | 4000 | 5' | 3' | 83.5 | 1200 | 6500 | 7500 | 94 | 1.20 | 1.40 | 1.75 | 3.11 |
| TR 160 2_70 | 700 | 950 | 1800 | 3000 | 4000 | 5' | 3' | 83.5 | 1200 | 6500 | 7500 | 94 | 1.18 | 1.39 | 1.74 | 3.09 |
| TR 160 2_100 | 350 | 660 | 1200 | 3000 | 4000 | 5' | 3' | 83.5 | 1200 | 6500 | 7500 | 94 | 1.18 | 1.38 | 1.73 | 3.09 |
| TR 160 3_48 | 700 | 950 | 1800 | 2200 | 3500 | 7' | 5' | 60 | 1200 | 6500 | 7500 | 91 | 4.10 | 4.31 | 4.66 | 6.01 |
| TR 160 3_64 | 700 | 950 | 1800 | 2200 | 3500 | 7' | 5' | 60 | 1200 | 6500 | 7500 | 91 | 3.90 | 4.11 | 4.46 | 5.81 |
| TR 160 3_75 | 700 | 950 | 1800 | 2500 | 3500 | 7' | 5' | 60 | 1200 | 6500 | 7500 | 91 | 2.91 | 3.11 | 3.46 | 4.82 |
| TR 160 3_80 | 700 | 950 | 1800 | 2200 | 3500 | 7' | 5' | 60 | 1200 | 6500 | 7500 | 91 | 3.90 | 4.11 | 4.46 | 5.81 |
| TR 160 3_84 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 1200 | 6500 | 7500 | 91 | 1.84 | 2.05 | 2.40 | 3.75 |
| TR 160 3_90 | 350 | 660 | 1200 | 3000 | 4000 | 7' | 5' | 60 | 1200 | 6500 | 7500 | 91 | 1.24 | 1.45 | 1.80 | 3.15 |
| TR 160 3_120 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 1200 | 6500 | 7500 | 91 | 1.23 | 1.44 | 1.79 | 3.14 |
| TR 160 3_125 | 700 | 950 | 1800 | 2500 | 3500 | 7' | 5' | 60 | 1200 | 6500 | 7500 | 91 | 2.74 | 2.95 | 3.30 | 4.65 |
| TR 160 3_140 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 1200 | 6500 | 7500 | 91 | 1.78 | 1.98 | 2.33 | 3.69 |
| TR 160 3_150 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 1200 | 6500 | 7500 | 91 | 1.23 | 1.44 | 1.79 | 3.14 |
| TR 160 3_160 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 1200 | 6500 | 7500 | 91 | 1.20 | 1.41 | 1.76 | 3.11 |
| TR 160 3_175 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 1200 | 6500 | 7500 | 91 | 1.76 | 1.96 | 2.31 | 3.67 |
| TR 160 3_200 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 1200 | 6500 | 7500 | 91 | 1.20 | 1.41 | 1.76 | 3.11 |
| TR 160 3_210 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 1200 | 6500 | 7500 | 91 | 1.23 | 1.44 | 1.79 | 3.14 |
| TR 160 3_250 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 1200 | 6500 | 7500 | 91 | 1.19 | 1.40 | 1.75 | 3.10 |
| TR 160 3_280 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 1200 | 6500 | 7500 | 91 | 1.18 | 1.39 | 1.74 | 3.09 |
| TR 160 3_350 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 1200 | 6500 | 7500 | 91 | 1.18 | 1.39 | 1.74 | 3.09 |
| TR 160 3_400 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 1200 | 6500 | 7500 | 91 | 1.18 | 1.38 | 1.73 | 3.09 |
| TR 160 3_500 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 1200 | 6500 | 7500 | 91 | 1.18 | 1.38 | 1.73 | 3.09 |
| TR 160 3_700 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 1200 | 6500 | 7500 | 91 | 1.18 | 1.38 | 1.73 | 3.09 |
| TR 160 3_1000 | 350 | 660 | 1200 | 3000 | 4000 | 7' | 5' | 60 | 1200 | 6500 | 7500 | 91 | 1.18 | 1.38 | 1.73 | 3.09 |



# TR G 160

## 55A1 ... 180A1




| | Kg |
|---|---|
| **TR G 160 2** | 24 |
| **TR G 160 3** | 28 |
| **TR G 160 4** | 34 |

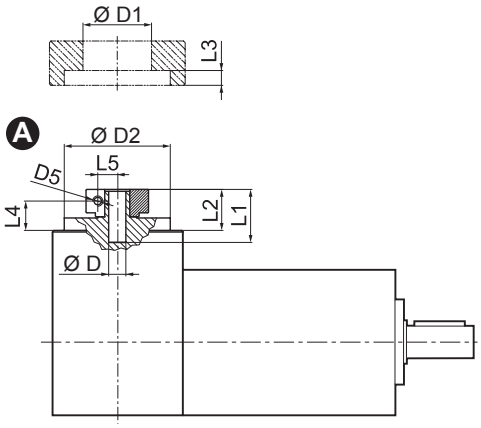
TR

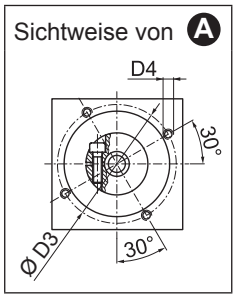
| | D | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **55A1** | 14 | 15.875 | 16 | 19 | – | – | – | – | – | – | 55.5 | 125.7 | 140 | 5 | M6x15 | 39.5 | 50 |
| **80A2** | 14 | 15.875 | 16 | 19 | – | – | – | – | – | – | 80 | 100 | 140 | 5 | M6x15 | 39.5 | 50 |
| **95A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 95 | 115 | 140 | 5 | M8x20 | 39.5 | 50 |
| **110A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 110 | 130 | 140 | 5 | M8x20 | 39.5 | 50 |
| **110B1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 110 | 145 | 140 | 6.5 | M8x20 | 49.5 | 60 |
| **114A** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 35 | 38 | 114.3 | 200 | 170 | 6.5 | M12x25 | 69.5 | 80 |
| **130A** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 130 | 165 | 140 | 5 | M10x20 | 39.5 | 50 |
| **130A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | – | – | 130 | 165 | 140 | 5 | M10x20 | 49.5 | 60 |
| **180A** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | – | – | 180 | 215 | 190 | 6.5 | M14x25 | 49.5 | 60 |
| **180A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 35 | 38 | 180 | 215 | 190 | 6.5 | M14x25 | 69.5 | 80 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

# TR G 160

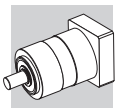
**FM**



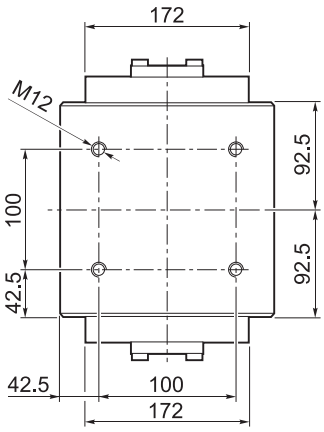

| D | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 15.875 | 16 | 48 | 113 | 125.5 | M8x15 | M6 | 40 | 27.5 | 6 | 20 | 14.5 |
| 19 | | | 51 | 113 | 125.5 | M8x15 | M6 | 40 | 27.5 | 6 | 20 | 16.5 |
| 22 | 24 | | 56.5 | 113 | 125.5 | M8x15 | M6 | 41 | 28.5 | 6 | 19.5 | 19 |
| 28 | | | 67 | 113 | 125.5 | M8x15 | M8 | 41 | 28.5 | 6 | 19.5 | 22.5 |
| 32 | | | 71 | 113 | 125.5 | M8x15 | M8 | 41 | 28.5 | 6 | 19.5 | 24.5 |
| 35 | | | 73 | 113 | 125.5 | M8x15 | M8 | 50 | 37.5 | 11.25 | 26 | 26 |
| 38 | | | 77.5 | 113 | 125.5 | M8x15 | M8 | 50 | 37.5 | 11.25 | 26 | 28 |

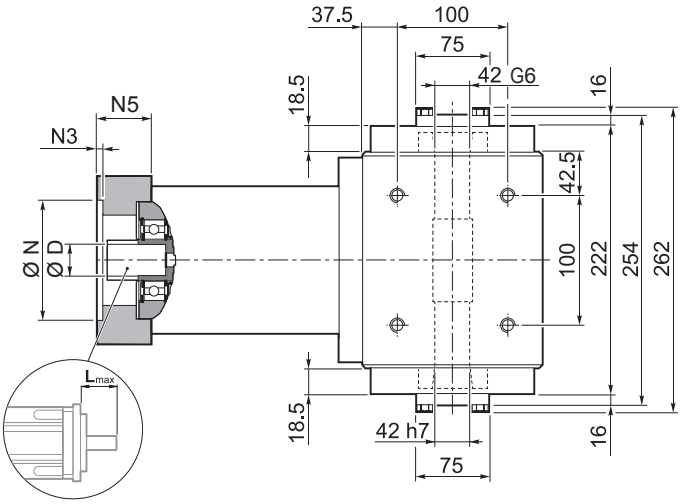
| i | $M_{n2}$ | $M_{a2}$ | $M_{p2}$ | $n_1$ | $n_{1\,max}$ | $\varphi_S$ | $\varphi_R$ | $C_t$ | $R_{2\,max}$ | $A_{2\,max}$ | $\eta$ | $J_G$ [kgcm²] D | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | [Nm] | [Nm] | [Nm] | [min⁻¹] | [min⁻¹] | [arcmin] | | [Nm/arcmin] | [N] | [N] | % | 14 ... 19 | 22 - 24 | 28 - 32 | 35 - 38 |
| TR G 160 2_3 | 350 | 660 | 1200 | 1900 | 3000 | 5' | 3' | 90 | 6500 | 7500 | 94 | 10.23 | 10.42 | 10.80 | 13.51 |
| TR G 160 2_4 | 500 | 750 | 1400 | 2200 | 3500 | 5' | 3' | 90 | 6500 | 7500 | 94 | 6.52 | 6.71 | 7.09 | 9.80 |
| TR G 160 2_5 | 500 | 750 | 1400 | 2500 | 3500 | 5' | 3' | 90 | 6500 | 7500 | 94 | 5.87 | 6.06 | 6.45 | 9.16 |
| TR G 160 2_6 | 500 | 750 | 1400 | 2500 | 3500 | 5' | 3' | 90 | 6500 | 7500 | 94 | 4.58 | 4.77 | 5.16 | 7.86 |
| TR G 160 2_7 | 500 | 750 | 1400 | 3000 | 4000 | 5' | 3' | 90 | 6500 | 7500 | 94 | 5.29 | 5.48 | 5.87 | 8.57 |
| TR G 160 2_10 | 350 | 660 | 1200 | 3000 | 4000 | 5' | 3' | 90 | 6500 | 7500 | 94 | 4.97 | 5.16 | 5.54 | 8.25 |
| TR G 160 3_9 | 350 | 660 | 1200 | 1900 | 3000 | 5' | 3' | 83.5 | 6500 | 7500 | 91 | 9.35 | 9.54 | 9.92 | 12.63 |
| TR G 160 3_12 | 700 | 950 | 1800 | 1900 | 3000 | 5' | 3' | 83.5 | 6500 | 7500 | 91 | 8.78 | 8.97 | 9.36 | 12.07 |
| TR G 160 3_15 | 700 | 950 | 1800 | 1900 | 3000 | 5' | 3' | 83.5 | 6500 | 7500 | 91 | 8.71 | 8.90 | 9.29 | 11.99 |
| TR G 160 3_16 | 700 | 950 | 1800 | 2200 | 3500 | 5' | 3' | 83.5 | 6500 | 7500 | 91 | 5.79 | 5.98 | 6.36 | 9.07 |
| TR G 160 3_20 | 700 | 950 | 1800 | 2500 | 3500 | 5' | 3' | 83.5 | 6500 | 7500 | 91 | 5.41 | 6.20 | 6.59 | 9.30 |
| TR G 160 3_25 | 700 | 950 | 1800 | 2500 | 3500 | 5' | 3' | 83.5 | 6500 | 7500 | 91 | 5.95 | 5.54 | 5.93 | 8.64 |
| TR G 160 3_28 | 700 | 950 | 1800 | 3000 | 4000 | 5' | 3' | 83.5 | 6500 | 7500 | 91 | 5.05 | 5.24 | 5.63 | 8.33 |
| TR G 160 3_30 | 350 | 660 | 1200 | 3000 | 4000 | 5' | 3' | 83.5 | 6500 | 7500 | 91 | 4.89 | 5.09 | 5.47 | 8.18 |
| TR G 160 3_35 | 700 | 950 | 1800 | 3000 | 4000 | 5' | 3' | 83.5 | 6500 | 7500 | 91 | 5.36 | 5.54 | 5.93 | 8.64 |
| TR G 160 3_36 | 500 | 750 | 1400 | 2500 | 3500 | 5' | 3' | 83.5 | 6500 | 7500 | 91 | 4.32 | 4.51 | 4.90 | 7.60 |
| TR G 160 3_40 | 700 | 950 | 1800 | 3000 | 4000 | 5' | 3' | 83.5 | 6500 | 7500 | 91 | 5.00 | 5.19 | 5.58 | 8.28 |
| TR G 160 3_50 | 700 | 950 | 1800 | 3000 | 4000 | 5' | 3' | 83.5 | 6500 | 7500 | 91 | 4.99 | 5.18 | 5.56 | 8.27 |
| TR G 160 3_70 | 700 | 950 | 1800 | 3000 | 4000 | 5' | 3' | 83.5 | 6500 | 7500 | 91 | 4.82 | 5.02 | 5.40 | 8.11 |
| TR G 160 3_100 | 350 | 660 | 1200 | 3000 | 4000 | 5' | 3' | 83.5 | 6500 | 7500 | 91 | 4.82 | 5.01 | 5.39 | 8.10 |
| TR G 160 4_48 | 700 | 950 | 1800 | 2200 | 3500 | 7' | 5' | 60 | 6500 | 7500 | 89 | 5.94 | 6.13 | 6.53 | 9.22 |
| TR G 160 4_64 | 700 | 950 | 1800 | 2200 | 3500 | 7' | 5' | 60 | 6500 | 7500 | 89 | 5.74 | 5.93 | 6.31 | 9.02 |
| TR G 160 4_75 | 700 | 950 | 1800 | 2500 | 3500 | 7' | 5' | 60 | 6500 | 7500 | 89 | 5.50 | 5.68 | 6.07 | 8.79 |
| TR G 160 4_80 | 700 | 950 | 1800 | 2200 | 3500 | 7' | 5' | 60 | 6500 | 7500 | 89 | 5.74 | 5.93 | 6.31 | 9.02 |
| TR G 160 4_84 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 6500 | 7500 | 89 | 5.10 | 5.29 | 5.68 | 8.38 |
| TR G 160 4_90 | 350 | 660 | 1200 | 3000 | 4000 | 7' | 5' | 60 | 6500 | 7500 | 89 | 4.88 | 5.08 | 5.46 | 8.17 |
| TR G 160 4_120 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 6500 | 7500 | 89 | 4.87 | 5.07 | 5.45 | 8.16 |
| TR G 160 4_125 | 700 | 950 | 1800 | 2500 | 3500 | 7' | 5' | 60 | 6500 | 7500 | 89 | 5.33 | 5.52 | 5.91 | 8.62 |
| TR G 160 4_140 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 6500 | 7500 | 89 | 5.04 | 5.22 | 5.61 | 8.32 |
| TR G 160 4_150 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 6500 | 7500 | 89 | 4.87 | 5.07 | 5.45 | 8.16 |
| TR G 160 4_160 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 6500 | 7500 | 89 | 4.84 | 5.04 | 5.42 | 8.13 |
| TR G 160 4_175 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 6500 | 7500 | 89 | 5.02 | 5.20 | 5.59 | 8.30 |
| TR G 160 4_200 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 6500 | 7500 | 89 | 4.84 | 5.04 | 5.42 | 8.13 |
| TR G 160 4_210 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 6500 | 7500 | 89 | 4.87 | 5.07 | 5.45 | 8.16 |
| TR G 160 4_250 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 6500 | 7500 | 89 | 4.83 | 5.03 | 5.41 | 8.12 |
| TR G 160 4_280 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 6500 | 7500 | 89 | 4.82 | 5.02 | 5.40 | 8.11 |
| TR G 160 4_350 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 6500 | 7500 | 89 | 4.82 | 2.05 | 5.40 | 8.11 |
| TR G 160 4_400 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 6500 | 7500 | 89 | 4.82 | 5.01 | 5.39 | 8.11 |
| TR G 160 4_500 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 6500 | 7500 | 89 | 4.82 | 5.01 | 5.39 | 8.11 |
| TR G 160 4_700 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 6500 | 7500 | 89 | 4.82 | 5.01 | 5.39 | 8.11 |
| TR G 160 4_1000 | 350 | 660 | 1200 | 3000 | 4000 | 7' | 5' | 60 | 6500 | 7500 | 89 | 4.82 | 5.01 | 5.39 | 8.11 |

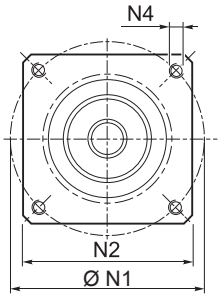


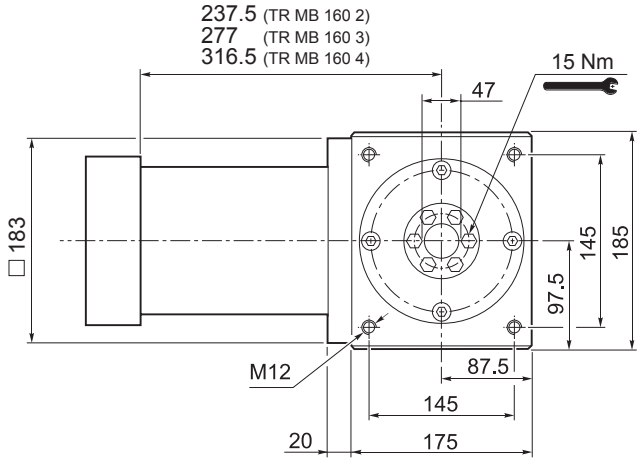
# TR MB 160

## 55A1 ... 180A1



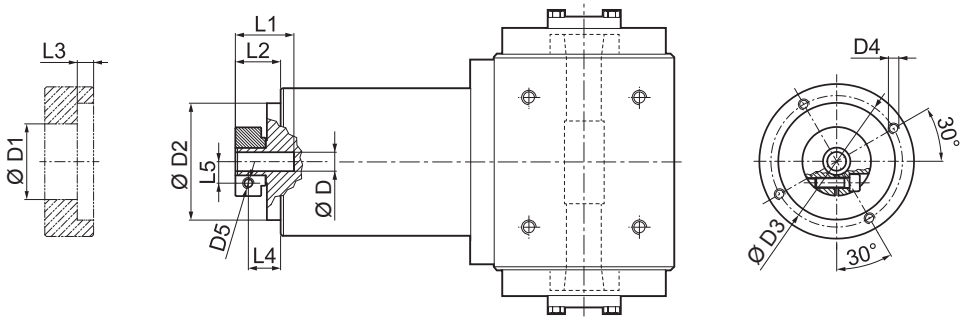

| | Kg |
|---|---|
| **TR MB 160 2** | 59 |
| **TR MB 160 3** | 63.5 |
| **TR MB 160 4** | 70.5 |

| | D | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **55A1** | 14 | 15.875 | 16 | 19 | – | – | – | – | – | – | 55.5 | 125.7 | 140 | 5 | M6x15 | 39.5 | 50 |
| **80A2** | 14 | 15.875 | 16 | 19 | – | – | – | – | – | – | 80 | 100 | 140 | 5 | M6x15 | 39.5 | 50 |
| **95A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 95 | 115 | 140 | 5 | M8x20 | 39.5 | 50 |
| **110A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 110 | 130 | 140 | 5 | M8x20 | 39.5 | 50 |
| **110B1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 110 | 145 | 140 | 6.5 | M8x20 | 49.5 | 60 |
| **114A** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 35 | 38 | 114.3 | 200 | 170 | 6.5 | M12x25 | 69.5 | 80 |
| **130A** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 130 | 165 | 140 | 5 | M10x20 | 39.5 | 50 |
| **130A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | – | – | 130 | 165 | 140 | 5 | M10x20 | 49.5 | 60 |
| **180A** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | – | – | 180 | 215 | 190 | 6.5 | M14x25 | 49.5 | 60 |
| **180A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 35 | 38 | 180 | 215 | 190 | 6.5 | M14x25 | 69.5 | 80 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

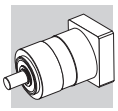
# TR MB 160

**FM**



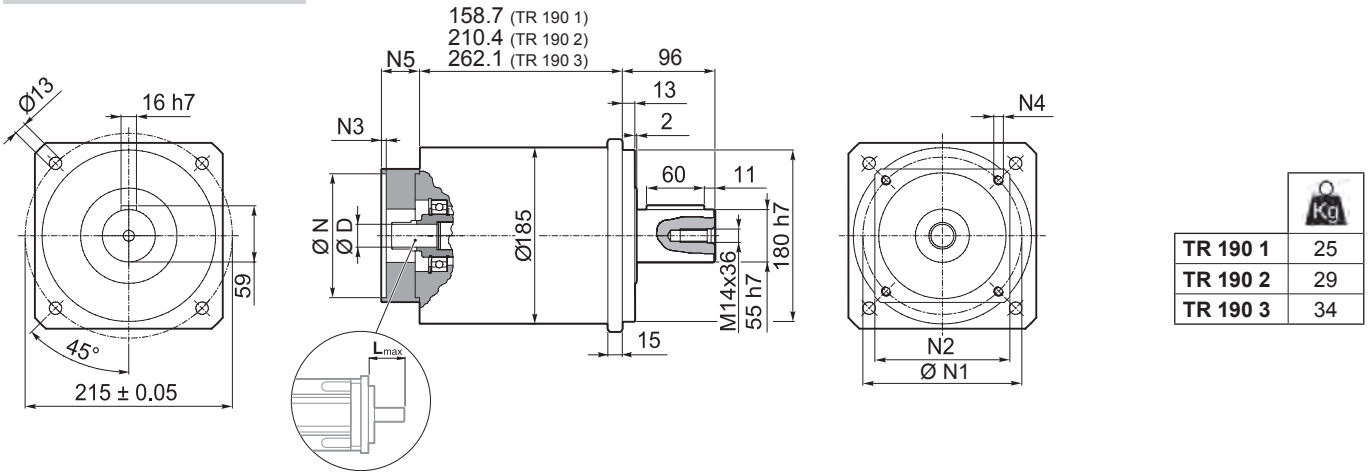

| D | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 15.875 | 16 | 48 | 130 | 142.5 | M8x16 | M6 | 40 | 27.5 | 6 | 20 | 14.5 |
| 19 | | | 51 | 130 | 142.5 | M8x16 | M6 | 40 | 27.5 | 6 | 20 | 16.5 |
| 22 | 24 | | 56.5 | 130 | 142.5 | M8x16 | M6 | 41 | 28.5 | 6 | 19.5 | 19 |
| 28 | | | 67 | 130 | 142.5 | M8x16 | M8 | 41 | 28.5 | 6 | 19.5 | 22.5 |
| 32 | | | 71 | 130 | 142.5 | M8x16 | M8 | 41 | 28.5 | 6 | 19.5 | 24.5 |
| 35 | | | 73 | 130 | 142.5 | M8x16 | M8 | 50 | 37.5 | 11.25 | 26 | 26 |
| 38 | | | 77.5 | 130 | 142.5 | M8x16 | M8 | 50 | 37.5 | 11.25 | 26 | 28 |

| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $\varphi_R$ [arcmin] | $C_t$ [Nm/arcmin] | $\eta$ % | $J_G$ [kgcm$^2$] D 14 ... 19 | 22 - 24 | 28 - 32 | 35 - 38 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TR MB 160 2_3 | 350 | 660 | 1200 | 1900 | 3000 | 5' | 3' | 90 | 94 | 8.39 | 8.60 | 8.95 | 10.30 |
| TR MB 160 2_4 | 500 | 750 | 1400 | 2200 | 3500 | 5' | 3' | 90 | 94 | 4.68 | 4.89 | 5.24 | 6.59 |
| TR MB 160 2_5 | 500 | 750 | 1400 | 2500 | 3500 | 5' | 3' | 90 | 94 | 3.28 | 3.49 | 3.84 | 5.19 |
| TR MB 160 2_6 | 500 | 750 | 1400 | 2500 | 3500 | 5' | 3' | 90 | 94 | 1.32 | 1.53 | 1.88 | 3.23 |
| TR MB 160 2_7 | 500 | 750 | 1400 | 3000 | 4000 | 5' | 3' | 90 | 94 | 2.03 | 2.24 | 2.59 | 3.94 |
| TR MB 160 2_10 | 350 | 660 | 1200 | 3000 | 4000 | 5' | 3' | 90 | 94 | 1.33 | 1.53 | 1.88 | 3.24 |
| TR MB 160 3_9 | 350 | 660 | 1200 | 1900 | 3000 | 5' | 3' | 83 | 91 | 7.51 | 7.72 | 8.07 | 9.42 |
| TR MB 160 3_12 | 700 | 950 | 1800 | 1900 | 3000 | 5' | 3' | 83 | 91 | 7.10 | 7.30 | 7.65 | 9.01 |
| TR MB 160 3_15 | 700 | 950 | 1800 | 1900 | 3000 | 5' | 3' | 83 | 91 | 6.94 | 7.15 | 7.50 | 8.85 |
| TR MB 160 3_16 | 700 | 950 | 1800 | 2200 | 3500 | 5' | 3' | 83 | 91 | 3.95 | 4.16 | 4.51 | 5.86 |
| TR MB 160 3_20 | 700 | 950 | 1800 | 2500 | 3500 | 5' | 3' | 83 | 91 | 2.82 | 3.02 | 3.37 | 4.73 |
| TR MB 160 3_25 | 700 | 950 | 1800 | 2500 | 3500 | 5' | 3' | 83 | 91 | 2.76 | 2.97 | 3.32 | 4.67 |
| TR MB 160 3_28 | 700 | 950 | 1800 | 3000 | 4000 | 5' | 3' | 83 | 91 | 1.79 | 2.00 | 2.35 | 3.70 |
| TR MB 160 3_30 | 350 | 660 | 1200 | 3000 | 4000 | 5' | 3' | 83 | 91 | 1.25 | 1.46 | 1.81 | 3.16 |
| TR MB 160 3_35 | 700 | 950 | 1800 | 3000 | 4000 | 5' | 3' | 83 | 91 | 1.77 | 1.97 | 2.32 | 3.68 |
| TR MB 160 3_36 | 500 | 750 | 1400 | 2500 | 3500 | 5' | 3' | 83 | 91 | 1.06 | 1.27 | 1.62 | 2.97 |
| TR MB 160 3_40 | 700 | 950 | 1800 | 3000 | 4000 | 5' | 3' | 83 | 91 | 1.21 | 1.42 | 1.77 | 3.12 |
| TR MB 160 3_50 | 700 | 950 | 1800 | 3000 | 4000 | 5' | 3' | 83 | 91 | 1.20 | 1.40 | 1.75 | 3.11 |
| TR MB 160 3_70 | 700 | 950 | 1800 | 3000 | 4000 | 5' | 3' | 83 | 91 | 1.18 | 1.39 | 1.74 | 3.09 |
| TR MB 160 3_100 | 350 | 660 | 1200 | 3000 | 4000 | 5' | 3' | 83 | 91 | 1.18 | 1.38 | 1.73 | 3.09 |
| TR MB 160 4_48 | 700 | 950 | 1800 | 2200 | 3500 | 7' | 5' | 60 | 89 | 4.10 | 4.31 | 4.66 | 6.01 |
| TR MB 160 4_64 | 700 | 950 | 1800 | 2200 | 3500 | 7' | 5' | 60 | 89 | 3.90 | 4.11 | 4.46 | 5.81 |
| TR MB 160 4_75 | 700 | 950 | 1800 | 2500 | 3500 | 7' | 5' | 60 | 89 | 2.91 | 3.11 | 3.46 | 4.82 |
| TR MB 160 4_80 | 700 | 950 | 1800 | 2200 | 3500 | 7' | 5' | 60 | 89 | 3.90 | 4.11 | 4.46 | 5.81 |
| TR MB 160 4_84 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 89 | 1.84 | 2.05 | 2.40 | 3.75 |
| TR MB 160 4_90 | 350 | 660 | 1200 | 3000 | 4000 | 7' | 5' | 60 | 89 | 1.24 | 1.45 | 1.80 | 3.15 |
| TR MB 160 4_120 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 89 | 1.23 | 1.44 | 1.79 | 3.14 |
| TR MB 160 4_125 | 700 | 950 | 1800 | 2500 | 3500 | 7' | 5' | 60 | 89 | 2.74 | 2.95 | 3.30 | 4.65 |
| TR MB 160 4_140 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 89 | 1.78 | 1.98 | 2.33 | 3.69 |
| TR MB 160 4_150 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 89 | 1.23 | 1.44 | 1.79 | 3.14 |
| TR MB 160 4_160 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 89 | 1.20 | 1.41 | 1.76 | 3.11 |
| TR MB 160 4_175 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 89 | 1.76 | 1.96 | 2.31 | 3.67 |
| TR MB 160 4_200 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 89 | 1.20 | 1.41 | 1.76 | 3.11 |
| TR MB 160 4_210 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 89 | 1.23 | 1.44 | 1.79 | 3.14 |
| TR MB 160 4_250 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 89 | 1.19 | 1.40 | 1.75 | 3.10 |
| TR MB 160 4_280 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 89 | 1.18 | 1.39 | 1.74 | 3.09 |
| TR MB 160 4_350 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 89 | 1.18 | 1.39 | 1.74 | 3.09 |
| TR MB 160 4_400 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 89 | 1.18 | 1.38 | 1.73 | 3.09 |
| TR MB 160 4_500 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 89 | 1.18 | 1.38 | 1.73 | 3.09 |
| TR MB 160 4_700 | 700 | 950 | 1800 | 3000 | 4000 | 7' | 5' | 60 | 89 | 1.18 | 1.38 | 1.73 | 3.09 |
| TR MB 160 4_1000 | 350 | 660 | 1200 | 3000 | 4000 | 7' | 5' | 60 | 89 | 1.18 | 1.38 | 1.73 | 3.09 |



# TR 190

## 55A1 ... 180A1

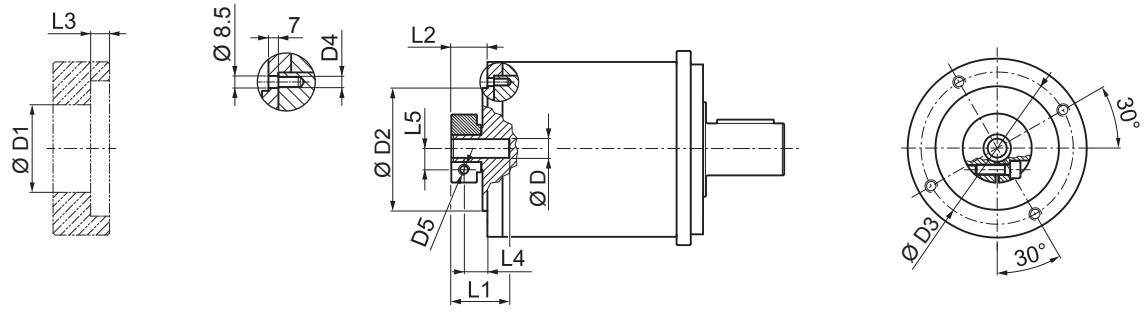



| | Kg |
|---|---|
| **TR 190 1** | 25 |
| **TR 190 2** | 29 |
| **TR 190 3** | 34 |

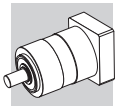
| | D | | | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **55A1** | 14 | 16 | 19 | – | – | – | – | – | – | – | – | – | 55.5 | 125.7 | 140 | 5 | M6x15 | 39.5 | 50 |
| **80A2** | 14 | 16 | 19 | – | – | – | | | | – | – | – | 80 | 100 | 140 | 5 | M6x15 | 39.5 | 50 |
| **95A1** | 14 | 16 | 19 | 22 | 24 | – | – | – | – | – | – | – | 95 | 115 | 140 | 5 | M8x20 | 39.5 | 50 |
| **110A1** | 14 | 16 | 19 | 22 | 24 | – | – | – | – | – | – | – | 110 | 130 | 140 | 5 | M8x20 | 39.5 | 50 |
| **110B1** | 14 | 16 | 19 | 22 | 24 | – | – | – | – | – | – | – | 110 | 145 | 140 | 6.5 | M8x20 | 49.5 | 60 |
| **114A** | 14 | 16 | 19 | 22 | 24 | 28 | 32 | 35 | 38 | 42 | 45 | 48 | 114.3 | 200 | 170 | 6.5 | M12x25 | 69.5 | 80 |
| **130A** | 14 | 16 | 19 | 22 | 24 | – | – | – | – | – | – | – | 130 | 165 | 140 | 5 | M10x20 | 39.5 | 50 |
| **130A1** | 14 | 16 | 19 | 22 | 24 | 28 | 32 | – | – | – | – | – | 130 | 165 | 140 | 5 | M10x20 | 49.5 | 60 |
| **180A** | 14 | 16 | 19 | 22 | 24 | 28 | 32 | – | – | – | – | – | 180 | 215 | 190 | 6.5 | M14x25 | 49.5 | 60 |
| **180A1** | 14 | 16 | 19 | 22 | 24 | 28 | 32 | 35 | 38 | 42 | 45 | 48 | 180 | 215 | 190 | 6.5 | M14x25 | 69.5 | 80 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

## FM

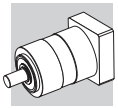



| D | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 16 | 48 | 130 | 142.5 | M8x14 | M6 | 45.5 | 27.5 | 6 | 20 | 14.5 |
| 19 | | 51 | 130 | 142.5 | M8x14 | M6 | 45.5 | 27.5 | 6 | 20 | 16.5 |
| 22 | 24 | 56.5 | 130 | 142.5 | M8x14 | M6 | 47 | 29 | 6 | 20 | 19 |
| 28 | | 67 | 130 | 142.5 | M8x14 | M8 | 47 | 29 | 6 | 20 | 22.5 |
| 32 | | 71 | 130 | 142.5 | M8x14 | M8 | 47 | 29 | 6 | 20 | 24.5 |
| 35 | | 73 | 130 | 142.5 | M8x14 | M8 | 54.5 | 36.5 | 6 | 25 | 26 |
| 38 | | 77.5 | 130 | 142.5 | M8x14 | M8 | 54.5 | 36.5 | 6 | 25 | 28 |
| 42 | | 92 | 130 | 142.5 | M8x14 | M10 | 60.5 | 40 | 6 | 25 | 33 |
| 45 | | 95 | 130 | 142.5 | M8x14 | M10 | 60.5 | 40 | 6 | 25 | 33 |
| 48 | | 97 | 130 | 142.5 | M8x14 | M10 | 60.5 | 40 | 6 | 25 | 33 |



# TR 190

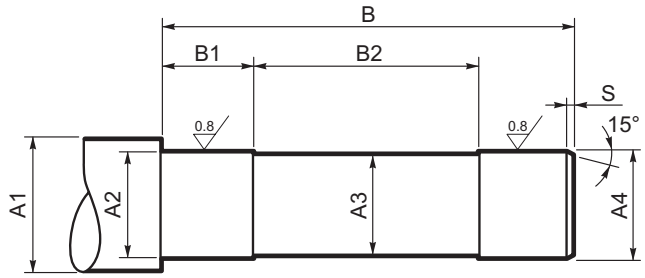
| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $\varphi_R$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 14 ... 24 | 28 - 32 | 35 - 38 | 42 | 45 - 48 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TR 190 1_3 | 500 | 800 | 1400 | 1500 | 2500 | 5' | 3' | 130 | 14000 | 15000 | 97 | 24.20 | 24.88 | 25.65 | 29.30 | 29.90 |
| TR 190 1_4 | 700 | 950 | 1800 | 2100 | 3000 | 5' | 3' | 130 | 14000 | 15000 | 97 | 13.41 | 14.09 | 14.85 | 18.51 | 19.11 |
| TR 190 1_5 | 700 | 950 | 1800 | 2300 | 3000 | 5' | 3' | 130 | 14000 | 15000 | 97 | 9.32 | 10.00 | 10.77 | 14.42 | 15.02 |
| TR 190 1_6 | 700 | 950 | 1800 | 2300 | 3000 | 5' | 3' | 130 | 14000 | 15000 | 97 | 2.88 | 3.56 | 4.33 | 7.98 | 8.58 |
| TR 190 1_7 | 700 | 950 | 1800 | 2900 | 3500 | 5' | 3' | 130 | 14000 | 15000 | 97 | 5.68 | 6.36 | 7.13 | 10.78 | 11.38 |
| TR 190 1_10 | 500 | 800 | 1400 | 2900 | 3500 | 5' | 3' | 130 | 14000 | 15000 | 97 | 3.57 | 4.25 | 5.02 | 8.67 | 9.27 |
| TR 190 2_9 | 500 | 800 | 1400 | 1500 | 2500 | 5' | 3' | 100 | 14000 | 15000 | 94 | 23.23 | 23.91 | 24.67 | 28.33 | 28.93 |
| TR 190 2_12 | 1000 | 1200 | 2200 | 1500 | 2500 | 5' | 3' | 100 | 14000 | 15000 | 94 | 22.03 | 22.71 | 23.48 | 27.13 | 27.73 |
| TR 190 2_15 | 1000 | 1200 | 2200 | 1500 | 2500 | 5' | 3' | 100 | 14000 | 15000 | 94 | 21.58 | 22.25 | 23.02 | 26.68 | 27.27 |
| TR 190 2_16 | 1000 | 1200 | 2200 | 2100 | 3000 | 5' | 3' | 100 | 14000 | 15000 | 94 | 12.19 | 12.86 | 13.63 | 17.29 | 17.89 |
| TR 190 2_20 | 1000 | 1200 | 2200 | 2300 | 3000 | 5' | 3' | 100 | 14000 | 15000 | 94 | 8.54 | 9.22 | 9.98 | 13.64 | 14.24 |
| TR 190 2_25 | 1000 | 1200 | 2200 | 2300 | 3000 | 5' | 3' | 100 | 14000 | 15000 | 94 | 8.37 | 9.05 | 9.82 | 13.48 | 14.07 |
| TR 190 2_28 | 1000 | 1200 | 2200 | 2900 | 3500 | 5' | 3' | 100 | 14000 | 15000 | 94 | 5.28 | 5.96 | 6.73 | 10.38 | 10.98 |
| TR 190 2_30 | 500 | 800 | 1400 | 2900 | 3500 | 5' | 3' | 100 | 14000 | 15000 | 94 | 3.48 | 4.16 | 4.93 | 8.58 | 9.18 |
| TR 190 2_35 | 1000 | 1200 | 2200 | 2900 | 3500 | 5' | 3' | 100 | 14000 | 15000 | 94 | 5.20 | 5.87 | 6.64 | 10.30 | 10.90 |
| TR 190 2_36 | 700 | 950 | 1800 | 2300 | 3000 | 5' | 3' | 100 | 14000 | 15000 | 94 | 2.18 | 2.86 | 3.63 | 7.28 | 7.88 |
| TR 190 2_40 | 1000 | 1200 | 2200 | 2900 | 3500 | 5' | 3' | 100 | 14000 | 15000 | 94 | 3.37 | 4.05 | 4.82 | 8.48 | 9.07 |
| TR 190 2_50 | 1000 | 1200 | 2200 | 2900 | 3500 | 5' | 3' | 100 | 14000 | 15000 | 94 | 3.33 | 4.01 | 4.78 | 8.44 | 9.03 |
| TR 190 2_70 | 1000 | 1200 | 2200 | 2900 | 3500 | 5' | 3' | 100 | 14000 | 15000 | 94 | 3.30 | 3.97 | 4.74 | 8.40 | 9.00 |
| TR 190 2_100 | 500 | 800 | 1400 | 2900 | 3500 | 5' | 3' | 100 | 14000 | 15000 | 94 | 3.28 | 3.95 | 4.72 | 8.38 | 8.98 |
| TR 190 3_48 | 1000 | 1200 | 2200 | 2100 | 3000 | 7' | 5' | 90 | 14000 | 15000 | 91 | 12.73 | 13.40 | 14.17 | 17.83 | 18.43 |
| TR 190 3_64 | 1000 | 1200 | 2200 | 2100 | 3000 | 7' | 5' | 90 | 14000 | 15000 | 91 | 12.10 | 12.78 | 13.55 | 17.21 | 17.80 |
| TR 190 3_75 | 1000 | 1200 | 2200 | 2300 | 3000 | 7' | 5' | 90 | 14000 | 15000 | 91 | 8.86 | 9.54 | 10.31 | 13.97 | 14.56 |
| TR 190 3_80 | 1000 | 1200 | 2200 | 2100 | 3000 | 7' | 5' | 90 | 14000 | 15000 | 91 | 12.09 | 12.76 | 13.53 | 17.19 | 17.79 |
| TR 190 3_84 | 1000 | 1200 | 2200 | 2900 | 3500 | 7' | 5' | 90 | 14000 | 15000 | 91 | 5.46 | 6.13 | 6.90 | 10.56 | 11.16 |
| TR 190 3_90 | 500 | 800 | 1400 | 2900 | 3500 | 7' | 5' | 90 | 14000 | 15000 | 91 | 3.47 | 4.15 | 4.92 | 8.57 | 9.17 |
| TR 190 3_120 | 1000 | 1200 | 2200 | 2900 | 3500 | 7' | 5' | 90 | 14000 | 15000 | 91 | 3.46 | 4.14 | 4.91 | 8.56 | 9.16 |
| TR 190 3_125 | 1000 | 1200 | 2200 | 2300 | 3000 | 7' | 5' | 90 | 14000 | 15000 | 91 | 8.34 | 9.01 | 9.78 | 13.44 | 14.04 |
| TR 190 3_140 | 1000 | 1200 | 2200 | 2900 | 3500 | 7' | 5' | 90 | 14000 | 15000 | 91 | 5.25 | 5.92 | 6.69 | 10.35 | 10.95 |
| TR 190 3_150 | 1000 | 1200 | 2200 | 2900 | 3500 | 7' | 5' | 90 | 14000 | 15000 | 91 | 3.46 | 4.13 | 4.90 | 8.56 | 9.15 |
| TR 190 3_160 | 1000 | 1200 | 2200 | 2900 | 3500 | 7' | 5' | 90 | 14000 | 15000 | 91 | 3.36 | 4.04 | 4.81 | 8.46 | 9.06 |
| TR 190 3_175 | 1000 | 1200 | 2200 | 2900 | 3500 | 7' | 5' | 90 | 14000 | 15000 | 91 | 5.18 | 5.85 | 6.62 | 10.28 | 10.88 |
| TR 190 3_200 | 1000 | 1200 | 2200 | 2900 | 3500 | 7' | 5' | 90 | 14000 | 15000 | 91 | 3.36 | 4.03 | 4.80 | 8.46 | 9.06 |
| TR 190 3_210 | 1000 | 1200 | 2200 | 2900 | 3500 | 7' | 5' | 90 | 14000 | 15000 | 91 | 3.45 | 4.13 | 4.90 | 8.55 | 9.15 |
| TR 190 3_250 | 1000 | 1200 | 2200 | 2900 | 3500 | 7' | 5' | 90 | 14000 | 15000 | 91 | 3.32 | 4.00 | 4.77 | 8.42 | 9.02 |
| TR 190 3_280 | 1000 | 1200 | 2200 | 2900 | 3500 | 7' | 5' | 90 | 14000 | 15000 | 91 | 3.29 | 3.97 | 4.74 | 8.39 | 8.99 |
| TR 190 3_350 | 1000 | 1200 | 2200 | 2900 | 3500 | 7' | 5' | 90 | 14000 | 15000 | 91 | 3.29 | 3.97 | 4.74 | 8.39 | 8.99 |
| TR 190 3_400 | 1000 | 1200 | 2200 | 2900 | 3500 | 7' | 5' | 90 | 14000 | 15000 | 91 | 3.27 | 3.95 | 4.72 | 8.38 | 8.97 |
| TR 190 3_500 | 1000 | 1200 | 2200 | 2900 | 3500 | 7' | 5' | 90 | 14000 | 15000 | 91 | 3.27 | 3.95 | 4.72 | 8.38 | 8.97 |
| TR 190 3_700 | 1000 | 1200 | 2200 | 2900 | 3500 | 7' | 5' | 90 | 14000 | 15000 | 91 | 3.27 | 3.95 | 4.72 | 8.38 | 8.97 |
| TR 190 3_1000 | 500 | 800 | 1400 | 2900 | 3500 | 7' | 5' | 90 | 14000 | 15000 | 91 | 3.27 | 3.95 | 4.72 | 8.38 | 8.97 |



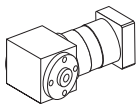
### *5.3.1 MASCHINENWELLE*

Für die Welle der angetriebenen Maschine ist eine hochwertige Stahllegierung zu bevorzugen. Die Tabelle unten zeigt die empfohlenen Abmessungen, die vom Kunden bei der Konstruktion der Gegenwelle zu berücksichtigen sind. Weiterhin wird eine axiale Aufnahmevorrichtung für die Welle empfohlen (nicht gezeigt).
Anzahl und Größe der entsprechenden Gewindebohrungen am Wellenende sind von den Anwendungsanforderungen abhängig.

## MB



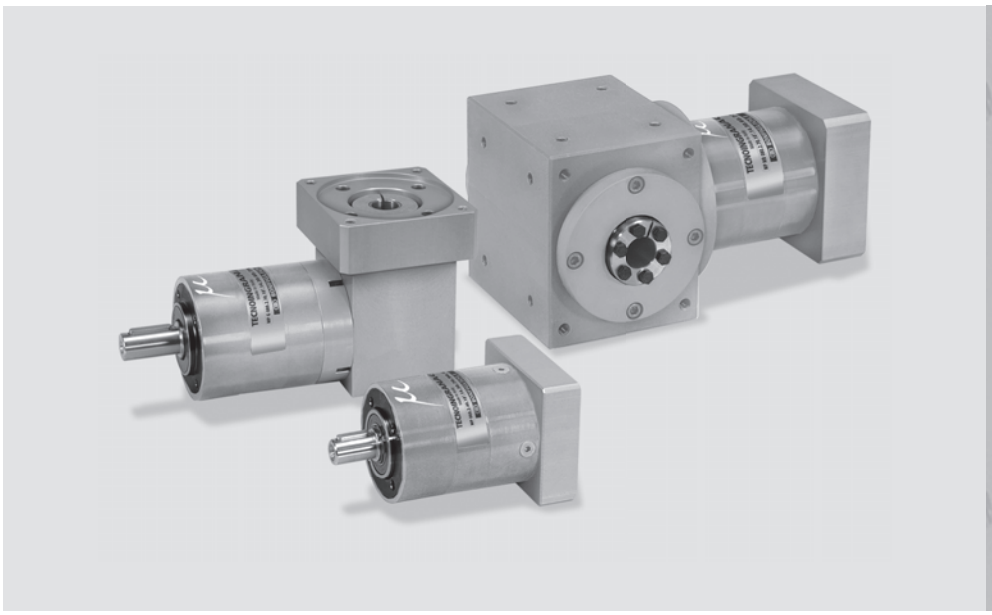

TR

|  | A1 | A2 | A3 | A4 | B | B1 | B2 | S |
|---|---|---|---|---|---|---|---|---|
| **TR MB 080** | ≥ 25 | 20 h7 | 18 | 20 h7 | 178 | 50 | 90 | 1 |
| **TR MB 105** | ≥ 40 | 32 h7 | 30 | 32 h7 | 205 | 60 | 115 | |
| **TR MB 130/160** | ≥ 50 | 42 h7 | 40 | 42 h7 | 259 | 70 | 140 | |

# MP
# PRÄZISIONSPLANETENGETRIEBE

MP-Präzisionsplanetengetriebe bestechen durch optimale Leistungsfähigkeit und herausragende Zuverlässigkeit.

Sie sind in verschiedenen Konfigurationen (Antrieb rechtwinklig, Abtrieb rechtwinklig, Hohlwelle, Eingangsvollwelle) und Motoradaptern erhältlich und so mit den mechanischen Schnittstellen der marktgängigsten Servomotoren kompatibel.

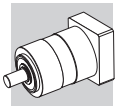




MP

**Produktmerkmale:**

- Hohe Drehmomentdichte
- Hohes Beschleunigungs- und Nenndrehmoment
- Hohe radiale und axiale Belastbarkeit
- Entwickelt für Zyklus- und Dauerbetrieb
- Hohe Verdrehsteifigkeit
- Verdrehflankenspiels unter 10 arcmin
- Maximale Flexibilität (standard/reduziertes Flankenspiel; standard/verstärkte Lager)
- Verschiedene Varianten für Ihre Anforderungen.

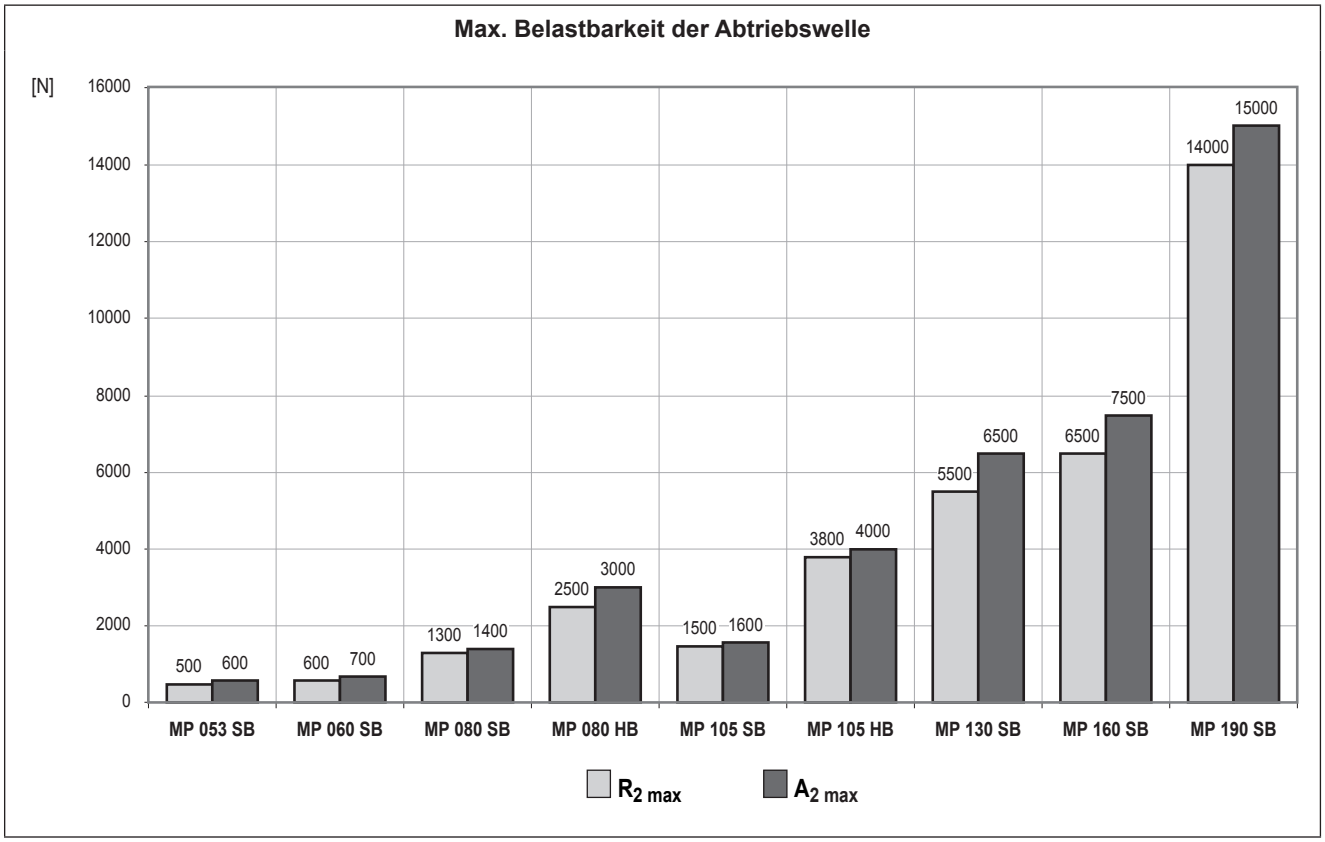


## 6 MERKMALE DER MP-REIHE

Die Planetengetriebe der MP-Reihe zeichnen sich durch geringes Verdrehspiel, hohes übertragbares Drehmoment und hohe Getriebeübersetzungen aus.
Alle Getriebe sind laufruhig und gewährleisten eine lange und wartungsarme Nutzungsdauer. Die Motormontage ist einfach und erfordert keinerlei Spezialwerkzeug.

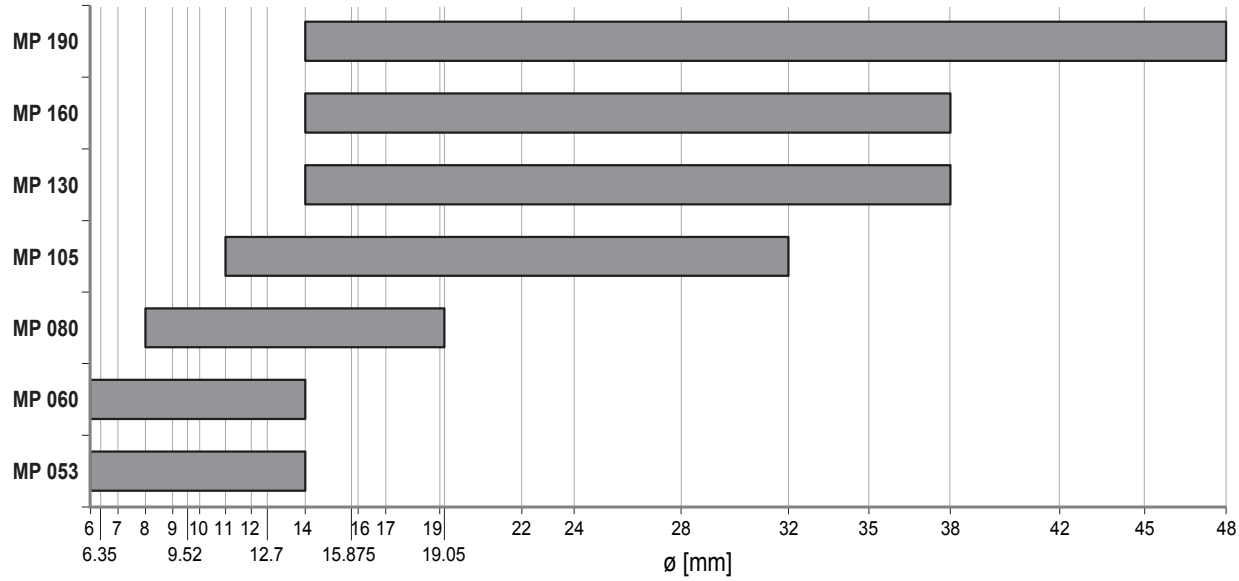
- Erhältlich entweder mit standard (STD) oder reduziertem (LOW) Flankenspiel:
  1-stufige Getriebe: standard $\varphi_S \leq 15'$; reduziert $\varphi_R \leq 10'$
  2-stufige Getriebe: standard $\varphi_S \leq 15'$; reduziert $\varphi_R \leq 10'$
  3-stufige Getriebe: (nur G und MB): standard $\varphi_R \leq 15'$; reduziert $\varphi_R \leq 10'$
  3-stufige Getriebe: standard $\varphi_S \leq 17'$; reduziert $\varphi_R \leq 12'$
  4-stufige Getriebe (nur G und MB): standard $\varphi_S \leq 17'$; reduziert $\varphi_R \leq 12'$
- Eine hohe IP-Schutzklasse (IP65) sorgt dafür, dass innenliegende Teile vor Staub- und Flüssigkeitseintritt geschützt sind.
- Serienmäßige Fluorelastomer-Wellendichtungen an der Eingangswelle.
- Schalldruckpegel $L_P \leq 70$ dB(A). Gemessen in 1 m Abstand ohne Last und bei einer Eingangsdrehzahl von $n_1 = 3000$ min$^{-1}$; i=10.
- Lager für eine durchschnittliche Lebensdauer von von 20.000 Stunden unter normalen Betriebsbedingungen geeignet. Die folgende Tabelle zeigt die Lagertypen für die Abtriebswelle.

| | MP 053 | MP 060 | MP 080 | MP 105 | MP 130 | MP 160 | MP 190 |
|---|---|---|---|---|---|---|---|
| SB |  |  |  |  |  |  |  |
| HB | | |  |  | | | |



- Große Auswahl an Motoradaptern sorgt für den Anschluss an die marktgängigsten Servomotoren.

**Verfügbare Motorwellendurchmesser**




- Schmierung optimiert für die gewünschte Betriebsart.
  Ohne Verunreinigung muss das Schmiermittel nicht regelmäßig gewechselt werden.

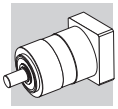
| Betrieb | MP 053 - MP 060 | MP 080 ... MP 190 | andere Dichtungen |
|---|---|---|---|
| **S1** (kontinuierlich) | NLGI Fettkonsistenz 00 | Synthetiköl Viskositätsklasse ISO VG 220 | Fluoroelastomer |
| **S5** (unterbrochen) | | NLGI Fettkonsistenz 00 | NBR |

- Umgebungstemperatur min. -20°C, max. +30°C; bei Temperaturen höher als 30°C ist der Temperaturfaktor $f_T$ zu berücksichtigen.
- Die Gehäusetemperatur darf $T_{max}$ = 90°C nicht übersteigen.

**Übersicht der Nenndrehmomente $M_{n2}$ [Nm]**

| [i] | 3 | 4 | 5 | 6 | 7 | 9 | 10 | 12 | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 36 | 40 | 45 | 48 | 50 | 60 | 64 | 70 | 75 | 80 | 81 | 84 | 90 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MP 053** | 12 | 15 | 15 | 15 | 15 | 12 | – | 20 | 20 | 20 | 20 | 20 | 20 | – | 20 | 15 | – | 20 | 20 | – | 20 | 20 | – | 20 | 20 | 12 | 20 | – |
| **MP 060** | 18 | 25 | 25 | 25 | 25 | 18 | 18 | 30 | 30 | 30 | 30 | 30 | 30 | 18 | 30 | 25 | 30 | – | 30 | 30 | – | 30 | 30 | 30 | 30 | – | 30 | 18 |
| **MP 080** | 40 | 50 | 50 | 50 | 50 | 40 | 40 | 70 | 70 | 70 | 70 | 70 | 70 | 40 | 70 | 50 | 70 | – | 70 | 70 | – | 70 | 70 | 70 | 70 | – | 70 | 40 |
| **MP 105** | 100 | 140 | 140 | 140 | 140 | 100 | 100 | 170 | 170 | 170 | 170 | 170 | 170 | 100 | 170 | 140 | 170 | – | 170 | 170 | – | 170 | 170 | 170 | 170 | – | 170 | 100 |
| **MP 130** | 215 | 380 | 380 | 380 | 380 | 215 | 215 | 450 | 450 | 450 | 450 | 450 | 450 | 215 | 450 | 380 | 450 | – | 450 | 450 | – | 450 | 450 | 450 | 450 | – | 450 | 215 |
| **MP 160** | 350 | 500 | 500 | 500 | 500 | 350 | 350 | 700 | 700 | 700 | 700 | 700 | 700 | 350 | 700 | 500 | 700 | – | 700 | 700 | – | 700 | 700 | 700 | 700 | – | 700 | 350 |
| **MP 190** | 500 | 700 | 700 | 700 | 700 | 500 | 500 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 500 | 1000 | 700 | 1000 | – | 1000 | 1000 | – | 1000 | 1000 | 1000 | 1000 | – | 1000 | 500 |

| [i] | 100 | 112 | 120 | 125 | 140 | 144 | 150 | 160 | 175 | 180 | 200 | 210 | 216 | 225 | 245 | 250 | 252 | 280 | 324 | 350 | 400 | 405 | 500 | 567 | 700 | 729 | 1000 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MP 053** | 20 | 20 | – | 20 | 20 | 20 | – | – | 20 | 20 | – | – | 20 | 20 | 20 | – | 20 | – | 20 | – | – | 20 | – | 20 | – | 12 | – |
| **MP 060** | 18 | – | 30 | 30 | 30 | – | 30 | 30 | 30 | – | 30 | 30 | 30 | – | – | 30 | – | 30 | – | 30 | 30 | – | 30 | – | 30 | – | 18 |
| **MP 080** | 40 | – | 70 | 70 | 70 | – | 70 | 70 | 70 | – | 70 | 70 | 70 | – | – | 70 | – | 70 | – | 70 | 70 | – | 70 | – | 70 | – | 40 |
| **MP 105** | 100 | – | 170 | 170 | 170 | – | 170 | 170 | 170 | – | 170 | 170 | 170 | – | – | 170 | – | 170 | – | 170 | 170 | – | 170 | – | 170 | – | 100 |
| **MP 130** | 215 | – | 450 | 450 | 450 | – | 450 | 450 | 450 | – | 450 | 450 | 450 | – | – | 450 | – | 450 | – | 450 | 450 | – | 450 | – | 450 | – | 215 |
| **MP 160** | 700 | – | 350 | 700 | 700 | – | 700 | 700 | 700 | – | 700 | 700 | – | – | – | 700 | – | 700 | – | 700 | 700 | – | 700 | – | 700 | – | 350 |
| **MP 190** | 1000 | – | 500 | 1000 | 1000 | – | 1000 | 1000 | 1000 | – | 1000 | 1000 | – | – | – | 1000 | – | 1000 | – | 1000 | 1000 | – | 1000 | – | 1000 | – | 500 |



## 6.1 BESTELLBEZEICHNUNG

**MP G 080 3 20 STD 95A CD 19 S1 OR SB KL UH1**

SCHMIERSTOFF
- **–** Standard
- **UH1** Lebensmitteltaugliches Schmiermittel

ABTRIEBSWELLENKONFIGURATION
- **KL** Glatte Welle ohne Passfeder
- **KE** Welle mit Passfeder (⛔ MB)

LAGER DER ABTRIEBSWELLE
- **SB** Standard
- **HB** Verstärkt (MP 080 - MP 105) (⛔ MB)

MONTAGEPOSITION
- **OR** Horizontal
- **VA** Vertikal mit Motor oben
- **VB** Vertikal mit Motor unten

BETRIEBSART
- **S1** Dauerbetrieb
- **S5** Kurzzeitbetrieb

BOHRUNGSDURCHMESSER EINGANGSWELLE
- **6 ... 48** (⛔ IS)

MOTORKOPPLUNG
- **CD** Klemmnabe (⛔ IS)

ANTRIEBSFLANSCH
- **25AH ... 180A1** Motorflansch
- **IS** Eingangsvollwelle (MP 053 ... MP 160) (⛔ K, G, MB)
- **FM** Ohne Motorflansch

VERDREHSPIEL

| | 1 Getriebestufe | 2 Getriebestufen | 3 Getriebestufen (K, G, MB only) | 3 Getriebestufen | 4 Getriebestufen (K, G, MB only) |
|---|---|---|---|---|---|
| **STD** | $\varphi_S \leq 15'$ | $\varphi_S \leq 15'$ | $\varphi_S \leq 15'$ | $\varphi_S \leq 17'$ | $\varphi_S \leq 17'$ |
| **LOW** | $\varphi_R \leq 10'$ | $\varphi_R \leq 10'$ | $\varphi_R \leq 10'$ | $\varphi_R \leq 12'$ | $\varphi_R \leq 12'$ |

GETRIEBEÜBERSETZUNG

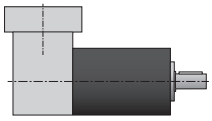
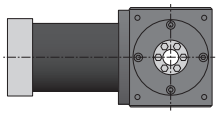
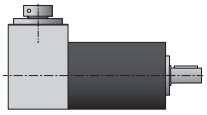
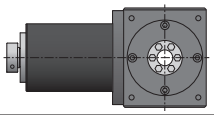
GETRIEBESTUFEN
- **1** **2** **3** **4**

BAUGRÖSSE
- **053** **060** **080** **105** **130** **160** **190**

VERSION
- **–** Koaxial
- **K** Rechtwinkliger Eingang (MP 053 ... MP 060)
- **G** Rechtwinkliger Eingang (MP 080 ... MP 160)
- **MB** Rechtwinkliger Ausgang (MP 080 ... MP 160)

REIHE
- **MP**

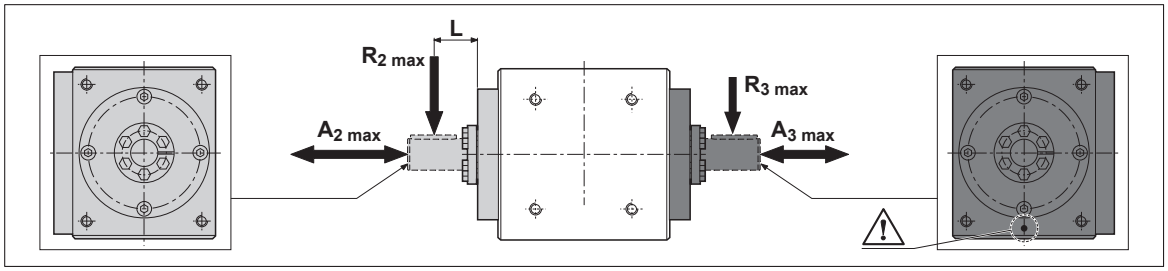
### 6.1.1 VERSIONEN UND ANTRIEBSSEITE

| ANTRIEBSFLANSCH | VERSION<br>Koaxial **(—)** | Rechtwinkliger Eingang **(K - G)** | Rechtwinkliger Ausgang **(MB)** |
|---|---|---|---|
| **25AH ... 180A1** |  |  |  |
| **IS** |  | ⛔ | ⛔ |
| **FM** |  |  |  |

### 6.1.2 MONTAGEPOSITIONEN

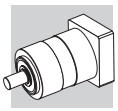
| | OR | VA | VB |
|---|---|---|---|
| **—** |  |  |  |
| **K - G** |  |  |  |
| **MB** |  |  |  |

### 6.2 ZULÄSSIGE RADIAL- UND AXIALKRÄFTE BEI DER MB-VERSION




| | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | L [mm] | $R_{3\,max}$ [N] | $A_{3\,max}$ [N] |
|---|---|---|---|---|---|
| **MP MB 080** | 6000 | 5000 | 60 | 5500 | 5000 |
| **MP MB 105** | 9000 | 7500 | 80 | 7500 | 7500 |
| **MP MB 130** | 13500 | 11500 | 100 | 11000 | 11500 |
| **MP MB 160*** | 15000 | 11500 | 100 | 12500 | 11500 |

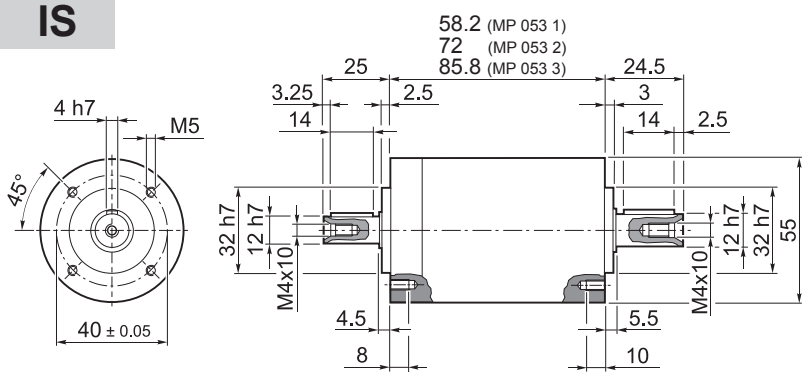
* Lager ausgelegt für eine durchschnittliche Lebensdauer von 10.000 Stunden unter normalen Betriebsbedingungen.





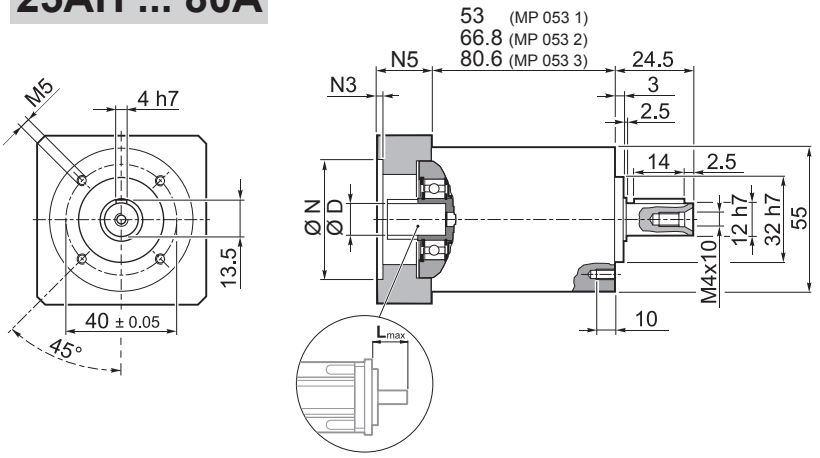
# MP 053

## IS




| | Kg |
|---|---|
| **MP 053 1** | 0.8 |
| **MP 053 2** | 1.0 |
| **MP 053 3** | 1.3 |

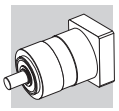
## 25AH ... 80A




| | Kg |
|---|---|
| **MP 053 1** | 0.8 |
| **MP 053 2** | 1.0 |
| **MP 053 3** | 1.3 |

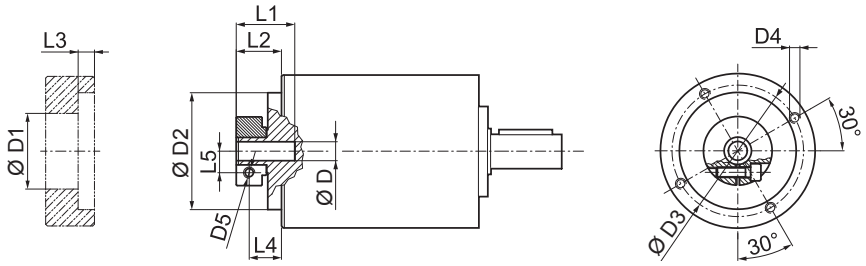
| | D | | | | | | | | | | | N | N1 | | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | min | max | | | | | |
| **25AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 25 | 36 | 48 | | | | | |
| **26AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 26 | 36 | 48 | | | | | |
| **28AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 28 | 36 | 48 | | | | | |
| **30AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 30 | 36 | 48 | | | | | |
| **32AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 32 | 38 | 48 | 55 | 3.5 | 4.5 | 25 | 25 |
| **34AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 34 | 40 | 48 | | | | | |
| **36AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 36 | 42 | 48 | | | | | |
| **38AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 38 | 44 | 48 | | | | | |
| **40AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 40 | 46 | 48 | | | | | |
| **38B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 38.1 | 66.6 | | 60 | 3 | M4x10 | 18 | 25 |
| **40B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 40 | 63 | | 60 | 3 | M4x10 | 18 | 25 |
| **50A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 50 | 60 | | 60 | 3 | M4x10 | 18 | 25 |
| **50B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 60 | 3 | M5x12 | 23 | 30 |
| **50BH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 60 | 4 | 5.5 | 23 | 30 |
| **50C** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 70 | | 60 | 3 | M4x10 | 23 | 30 |
| **50MH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 50 | 65 | | 55 | 2 | 5.5 | 16 | 23 |
| **60A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 60 | 75 | | 65 | 3 | M5x12 | 18 | 25 |
| **60AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 60 | 75 | | 65 | 3 | 5.5 | 18 | 25 |
| **60A1** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 75 | | 65 | 3 | M5x12 | 23 | 30 |
| **60AH1** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 75 | | 65 | 3 | 5.5 | 23 | 30 |
| **60B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 85 | | 75 | 3 | M5x12 | 23 | 30 |
| **60C** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **70A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 85 | | 75 | 3 | M6x15 | 23 | 30 |
| **70B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **73A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 73 | 98.4 | | 85 | 3 | M5x12 | 25 | 32 |
| **80A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 80 | 100 | | 85 | 3 | M6x15 | 23 | 30 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.



# MP 053

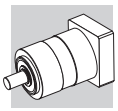
**FM**




| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 6.35 | 7 | | 32.5 | 50 | 42.5 | M4x8 | M4 | 20.2 | 13.2 | 3 | 8.7 | 8 |
| 8 | 9 | 9.52 | 10 | 32.5 | 50 | 42.5 | M4x8 | M4 | 20.2 | 13.2 | 3 | 7.8 | 9 |
| 11 | 12 | 12.7 | | 35.5 | 50 | 42.5 | M4x8 | M4 | 20.5 | 13.5 | 3 | 8.5 | 11 |
| 14 | | | | 35.5 | 50 | 42.5 | M4x8 | M4 | 24 | 17 | 3 | 10.2 | 11.5 |

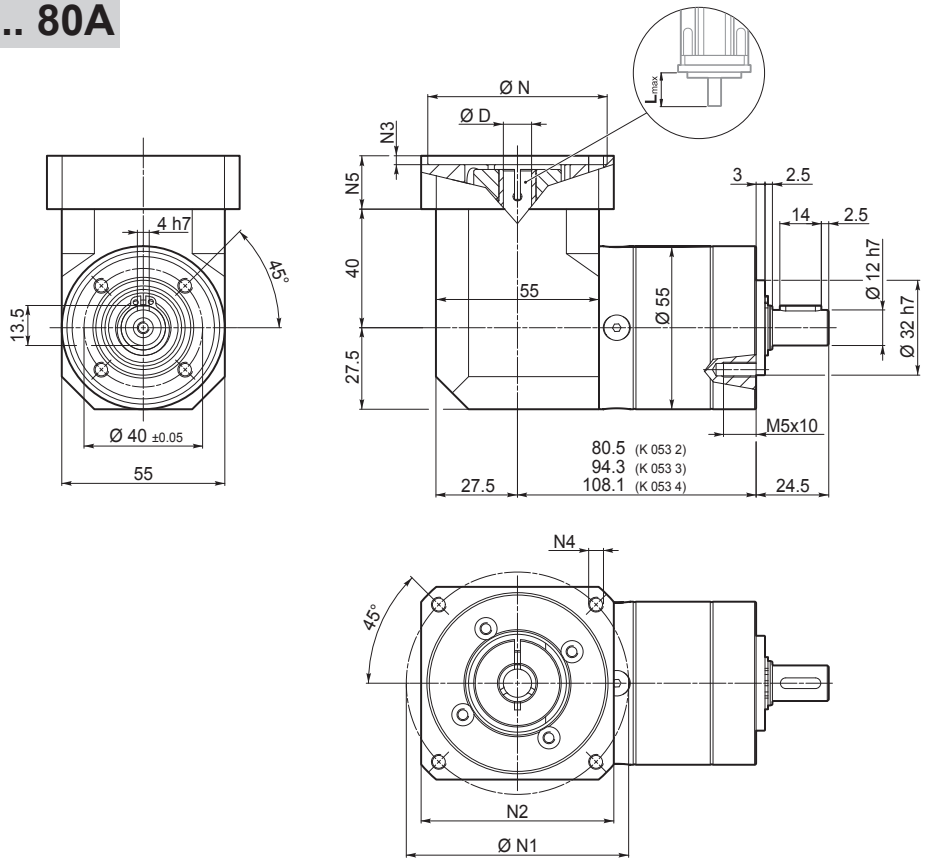
| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $\varphi_R$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{1\,max}$ [N] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 6 ... 9.52 | $J_G$ [kgcm$^2$] D 10 ... 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MP 053 1_3 | 12 | 22 | 40 | 3300 | 4000 | 15’ | 10’ | 1.0 | 200 | 500 | 600 | 97 | 0.06 | 0.08 |
| MP 053 1_4 | 15 | 28 | 45 | 3500 | 5000 | 15’ | 10’ | 1.0 | 200 | 500 | 600 | 97 | 0.05 | 0.06 |
| MP 053 1_5 | 15 | 28 | 45 | 3500 | 5000 | 15’ | 10’ | 1.0 | 200 | 500 | 600 | 97 | 0.04 | 0.06 |
| MP 053 1_6 | 15 | 28 | 45 | 3500 | 5000 | 15’ | 10’ | 1.0 | 200 | 500 | 600 | 97 | 0.03 | 0.05 |
| MP 053 1_7 | 15 | 28 | 45 | 4000 | 6000 | 15’ | 10’ | 1.0 | 200 | 500 | 600 | 97 | 0.03 | 0.05 |
| MP 053 1_9 | 12 | 22 | 40 | 4000 | 6000 | 15’ | 10’ | 1.0 | 200 | 500 | 600 | 97 | 0.03 | 0.05 |
| MP 053 2_12 | 20 | 30 | 60 | 3300 | 4000 | 15’ | 10’ | 0.9 | 200 | 500 | 600 | 94 | 0.06 | 0.08 |
| MP 053 2_15 | 20 | 30 | 60 | 3300 | 4000 | 15’ | 10’ | 0.9 | 200 | 500 | 600 | 94 | 0.06 | 0.08 |
| MP 053 2_16 | 20 | 30 | 60 | 3500 | 5000 | 15’ | 10’ | 0.9 | 200 | 500 | 600 | 94 | 0.05 | 0.06 |
| MP 053 2_20 | 20 | 30 | 60 | 3500 | 5000 | 15’ | 10’ | 0.9 | 200 | 500 | 600 | 94 | 0.04 | 0.06 |
| MP 053 2_25 | 20 | 30 | 60 | 3500 | 5000 | 15’ | 10’ | 0.9 | 200 | 500 | 600 | 94 | 0.04 | 0.06 |
| MP 053 2_28 | 20 | 30 | 60 | 4000 | 6000 | 15’ | 10’ | 0.9 | 200 | 500 | 600 | 94 | 0.03 | 0.05 |
| MP 053 2_35 | 20 | 30 | 60 | 4000 | 6000 | 15’ | 10’ | 0.9 | 200 | 500 | 600 | 94 | 0.03 | 0.05 |
| MP 053 2_36 | 15 | 28 | 45 | 4000 | 6000 | 15’ | 10’ | 0.9 | 200 | 500 | 600 | 94 | 0.03 | 0.05 |
| MP 053 2_45 | 20 | 30 | 60 | 4000 | 6000 | 15’ | 10’ | 0.9 | 200 | 500 | 600 | 94 | 0.03 | 0.05 |
| MP 053 2_81 | 12 | 22 | 40 | 4000 | 6000 | 15’ | 10’ | 0.9 | 200 | 500 | 600 | 94 | 0.03 | 0.05 |
| MP 053 3_48 | 20 | 30 | 60 | 4000 | 5000 | 17’ | 12’ | 0.7 | 200 | 500 | 600 | 91 | 0.05 | 0.07 |
| MP 053 3_60 | 20 | 30 | 60 | 3500 | 5000 | 17’ | 12’ | 0.7 | 200 | 500 | 600 | 91 | 0.05 | 0.07 |
| MP 053 3_64 | 20 | 30 | 60 | 3500 | 5000 | 17’ | 12’ | 0.7 | 200 | 500 | 600 | 91 | 0.05 | 0.06 |
| MP 053 3_75 | 20 | 30 | 60 | 3500 | 5000 | 17’ | 12’ | 0.7 | 200 | 500 | 600 | 91 | 0.04 | 0.06 |
| MP 053 3_80 | 20 | 30 | 60 | 3500 | 5000 | 17’ | 12’ | 0.7 | 200 | 500 | 600 | 91 | 0.05 | 0.06 |
| MP 053 3_84 | 20 | 30 | 60 | 4000 | 6000 | 17’ | 12’ | 0.7 | 200 | 500 | 600 | 91 | 0.03 | 0.05 |
| MP 053 3_100 | 20 | 30 | 60 | 3500 | 5000 | 17’ | 12’ | 0.7 | 200 | 500 | 600 | 91 | 0.04 | 0.06 |
| MP 053 3_112 | 20 | 30 | 60 | 4000 | 6000 | 17’ | 12’ | 0.7 | 200 | 500 | 600 | 91 | 0.03 | 0.05 |
| MP 053 3_125 | 20 | 30 | 60 | 3500 | 5000 | 17’ | 12’ | 0.7 | 200 | 500 | 600 | 91 | 0.04 | 0.06 |
| MP 053 3_140 | 20 | 30 | 60 | 4000 | 6000 | 17’ | 12’ | 0.7 | 200 | 500 | 600 | 91 | 0.03 | 0.05 |
| MP 053 3_144 | 20 | 30 | 60 | 4000 | 6000 | 17’ | 12’ | 0.7 | 200 | 500 | 600 | 91 | 0.03 | 0.05 |
| MP 053 3_175 | 20 | 30 | 60 | 4000 | 6000 | 17’ | 12’ | 0.7 | 200 | 500 | 600 | 91 | 0.03 | 0.05 |
| MP 053 3_180 | 20 | 30 | 60 | 4000 | 6000 | 17’ | 12’ | 0.7 | 200 | 500 | 600 | 91 | 0.03 | 0.05 |
| MP 053 3_216 | 20 | 30 | 60 | 3500 | 5000 | 17’ | 12’ | 0.7 | 200 | 500 | 600 | 91 | 0.03 | 0.05 |
| MP 053 3_225 | 20 | 30 | 60 | 4000 | 6000 | 17’ | 12’ | 0.7 | 200 | 500 | 600 | 91 | 0.03 | 0.05 |
| MP 053 3_245 | 20 | 30 | 60 | 4000 | 6000 | 17’ | 12’ | 0.7 | 200 | 500 | 600 | 91 | 0.03 | 0.05 |
| MP 053 3_252 | 20 | 30 | 60 | 4000 | 6000 | 17’ | 12’ | 0.7 | 200 | 500 | 600 | 91 | 0.05 | 0.06 |
| MP 053 3_324 | 20 | 30 | 60 | 4000 | 6000 | 17’ | 12’ | 0.7 | 200 | 500 | 600 | 91 | 0.03 | 0.05 |
| MP 053 3_405 | 20 | 30 | 60 | 4000 | 6000 | 17’ | 12’ | 0.7 | 200 | 500 | 600 | 91 | 0.03 | 0.05 |
| MP 053 3_567 | 20 | 30 | 60 | 4000 | 6000 | 17’ | 12’ | 0.7 | 200 | 500 | 600 | 91 | 0.03 | 0.05 |
| MP 053 3_729 | 12 | 22 | 40 | 4000 | 6000 | 17’ | 12’ | 0.7 | 200 | 500 | 600 | 91 | 0.03 | 0.05 |

MP



# MP K 053

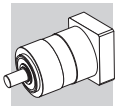
## 25AH ... 80A




| | Kg |
|---|---|
| **MP K 053 2** | 1.3 |
| **MP K 053 3** | 1.5 |
| **MP K 053 4** | 1.8 |

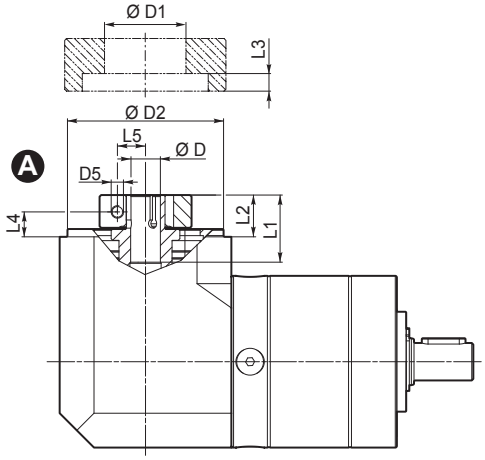
| | D | | | | | | | | | | | N | N1 | | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | min | max | | | | | |
| **25AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 25 | 36 | 48 | | | | | |
| **26AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 26 | 36 | 48 | | | | | |
| **28AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 28 | 36 | 48 | | | | | |
| **30AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 30 | 36 | 48 | | | | | |
| **32AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 32 | 38 | 48 | 55 | 3.5 | 4.5 | 25 | 25 |
| **34AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 34 | 40 | 48 | | | | | |
| **36AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 36 | 42 | 48 | | | | | |
| **38AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 38 | 44 | 48 | | | | | |
| **40AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 40 | 46 | 48 | | | | | |
| **38B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 38.1 | 66.6 | | 60 | 3 | M4x10 | 18 | 25 |
| **40B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 40 | 63 | | 60 | 3 | M4x10 | 18 | 25 |
| **50A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 50 | 60 | | 60 | 3 | M4x10 | 18 | 25 |
| **50B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 60 | 3 | M5x12 | 23 | 30 |
| **50BH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 60 | 4 | 5.5 | 23 | 30 |
| **50C** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 70 | | 60 | 3 | M4x10 | 23 | 30 |
| **50MH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 50 | 65 | | 55 | 2 | 5.5 | 16 | 23 |
| **60A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 60 | 75 | | 65 | 3 | M5x12 | 18 | 25 |
| **60A1** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 75 | | 65 | 3 | M5x12 | 23 | 30 |
| **60B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 85 | | 75 | 3 | M5x12 | 23 | 30 |
| **60C** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **70A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 85 | | 75 | 3 | M6x15 | 23 | 30 |
| **70B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **73A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 73 | 98.4 | | 85 | 3 | M5x12 | 25 | 32 |
| **80A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 80 | 100 | | 85 | 3 | M6x15 | 23 | 30 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

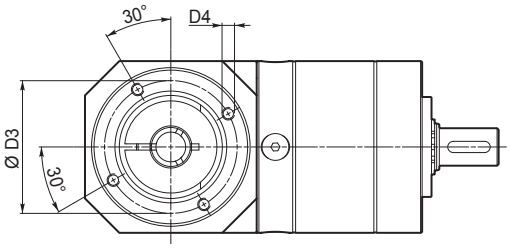


# MP K 053

**FM**

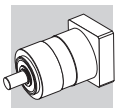



Sichtweise von A



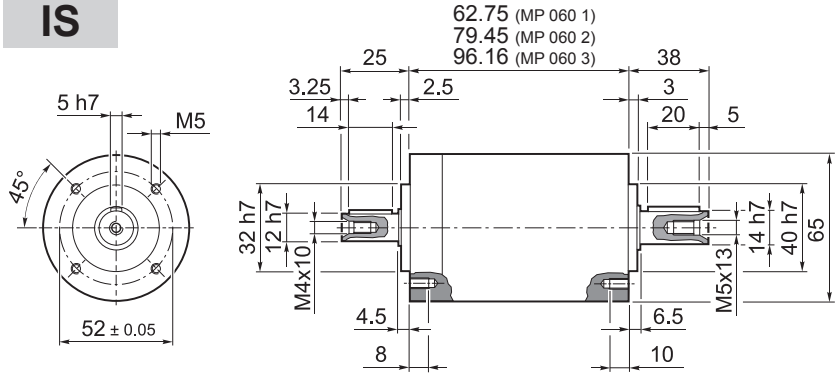

| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 6.35 | 7 | | 32.5 | 50 | 42.5 | M4x8 | M4 | 20.2 | 13.2 | 3 | 8.7 | 8 |
| 8 | 9 | 9.52 | 10 | 32.5 | 50 | 42.5 | M4x8 | M4 | 20.2 | 13.2 | 3 | 7.8 | 9 |
| 11 | 12 | 12.7 | | 35.5 | 50 | 42.5 | M4x8 | M4 | 20.5 | 13.5 | 3 | 8.5 | 11 |
| 14 | | | | 35.5 | 50 | 42.5 | M4x8 | M4 | 24 | 17 | 3 | 10.2 | 11.5 |

| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $\varphi_R$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 6 ... 9.52 | $J_G$ [kgcm$^2$] D 10 ... 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MP K 053 2_3 | 12 | 22 | 40 | 3300 | 4000 | 15' | 10' | 1.0 | 500 | 600 | 94 | 0.18 | 0.20 |
| MP K 053 2_4 | 15 | 28 | 45 | 3500 | 5000 | 15' | 10' | 1.0 | 500 | 600 | 94 | 0.18 | 0.19 |
| MP K 053 2_5 | 15 | 28 | 45 | 3500 | 5000 | 15' | 10' | 1.0 | 500 | 600 | 94 | 0.17 | 0.19 |
| MP K 053 2_6 | 15 | 28 | 45 | 3500 | 5000 | 15' | 10' | 1.0 | 500 | 600 | 94 | 0.17 | 0.18 |
| MP K 053 2_7 | 15 | 28 | 45 | 4000 | 6000 | 15' | 10' | 1.0 | 500 | 600 | 94 | 0.17 | 0.19 |
| MP K 053 2_9 | 12 | 22 | 40 | 4000 | 6000 | 15' | 10' | 1.0 | 500 | 600 | 94 | 0.17 | 0.18 |
| MP K 053 3_12 | 20 | 30 | 60 | 3300 | 4000 | 15' | 10' | 0.9 | 500 | 600 | 91 | 0.18 | 0.20 |
| MP K 053 3_15 | 20 | 30 | 60 | 3300 | 4000 | 15' | 10' | 0.9 | 500 | 600 | 91 | 0.18 | 0.20 |
| MP K 053 3_16 | 20 | 30 | 60 | 3500 | 5000 | 15' | 10' | 0.9 | 500 | 600 | 91 | 0.17 | 0.19 |
| MP K 053 3_20 | 20 | 30 | 60 | 3500 | 5000 | 15' | 10' | 0.9 | 500 | 600 | 91 | 0.17 | 0.19 |
| MP K 053 3_25 | 20 | 30 | 60 | 3500 | 5000 | 15' | 10' | 0.9 | 500 | 600 | 91 | 0.17 | 0.19 |
| MP K 053 3_28 | 20 | 30 | 60 | 4000 | 6000 | 15' | 10' | 0.9 | 500 | 600 | 91 | 0.17 | 0.19 |
| MP K 053 3_35 | 20 | 30 | 60 | 4000 | 6000 | 15' | 10' | 0.9 | 500 | 600 | 91 | 0.17 | 0.19 |
| MP K 053 3_36 | 15 | 28 | 45 | 4000 | 6000 | 15' | 10' | 0.9 | 500 | 600 | 91 | 0.17 | 0.18 |
| MP K 053 3_45 | 20 | 30 | 60 | 4000 | 6000 | 15' | 10' | 0.9 | 500 | 600 | 91 | 0.17 | 0.19 |
| MP K 053 3_81 | 12 | 22 | 40 | 4000 | 6000 | 15' | 10' | 0.9 | 500 | 600 | 91 | 0.17 | 0.18 |
| MP K 053 4_48 | 20 | 30 | 60 | 4000 | 5000 | 17' | 12' | 0.7 | 500 | 600 | 89 | 0.18 | 0.19 |
| MP K 053 4_60 | 20 | 30 | 60 | 3500 | 5000 | 17' | 12' | 0.7 | 500 | 600 | 89 | 0.18 | 0.19 |
| MP K 053 4_64 | 20 | 30 | 60 | 3500 | 5000 | 17' | 12' | 0.7 | 500 | 600 | 89 | 0.17 | 0.19 |
| MP K 053 4_75 | 20 | 30 | 60 | 3500 | 5000 | 17' | 12' | 0.7 | 500 | 600 | 89 | 0.17 | 0.19 |
| MP K 053 4_80 | 20 | 30 | 60 | 3500 | 5000 | 17' | 12' | 0.7 | 500 | 600 | 89 | 0.17 | 0.19 |
| MP K 053 4_84 | 20 | 30 | 60 | 4000 | 6000 | 17' | 12' | 0.7 | 500 | 600 | 89 | 0.17 | 0.19 |
| MP K 053 4_100 | 20 | 30 | 60 | 3500 | 5000 | 17' | 12' | 0.7 | 500 | 600 | 89 | 0.17 | 0.19 |
| MP K 053 4_112 | 20 | 30 | 60 | 4000 | 6000 | 17' | 12' | 0.7 | 500 | 600 | 89 | 0.17 | 0.19 |
| MP K 053 4_125 | 20 | 30 | 60 | 3500 | 5000 | 17' | 12' | 0.7 | 500 | 600 | 89 | 0.17 | 0.19 |
| MP K 053 4_140 | 20 | 30 | 60 | 4000 | 6000 | 17' | 12' | 0.7 | 500 | 600 | 89 | 0.17 | 0.19 |
| MP K 053 4_144 | 20 | 30 | 60 | 4000 | 6000 | 17' | 12' | 0.7 | 500 | 600 | 89 | 0.17 | 0.18 |
| MP K 053 4_175 | 20 | 30 | 60 | 4000 | 6000 | 17' | 12' | 0.7 | 500 | 600 | 89 | 0.17 | 0.19 |
| MP K 053 4_180 | 20 | 30 | 60 | 4000 | 6000 | 17' | 12' | 0.7 | 500 | 600 | 89 | 0.17 | 0.18 |
| MP K 053 4_216 | 20 | 30 | 60 | 3500 | 5000 | 17' | 12' | 0.7 | 500 | 600 | 89 | 0.17 | 0.18 |
| MP K 053 4_225 | 20 | 30 | 60 | 4000 | 6000 | 17' | 12' | 0.7 | 500 | 600 | 89 | 0.17 | 0.18 |
| MP K 053 4_245 | 20 | 30 | 60 | 4000 | 6000 | 17' | 12' | 0.7 | 500 | 600 | 89 | 0.17 | 0.19 |
| MP K 053 4_252 | 20 | 30 | 60 | 4000 | 6000 | 17' | 12' | 0.7 | 500 | 600 | 89 | 0.18 | 0.20 |
| MP K 053 4_324 | 20 | 30 | 60 | 4000 | 6000 | 17' | 12' | 0.7 | 500 | 600 | 89 | 0.17 | 0.18 |
| MP K 053 4_405 | 20 | 30 | 60 | 4000 | 6000 | 17' | 12' | 0.7 | 500 | 600 | 89 | 0.17 | 0.18 |
| MP K 053 4_567 | 20 | 30 | 60 | 4000 | 6000 | 17' | 12' | 0.7 | 500 | 600 | 89 | 0.17 | 0.18 |
| MP K 053 4_729 | 12 | 22 | 40 | 4000 | 6000 | 17' | 12' | 0.7 | 500 | 600 | 89 | 0.17 | 0.18 |



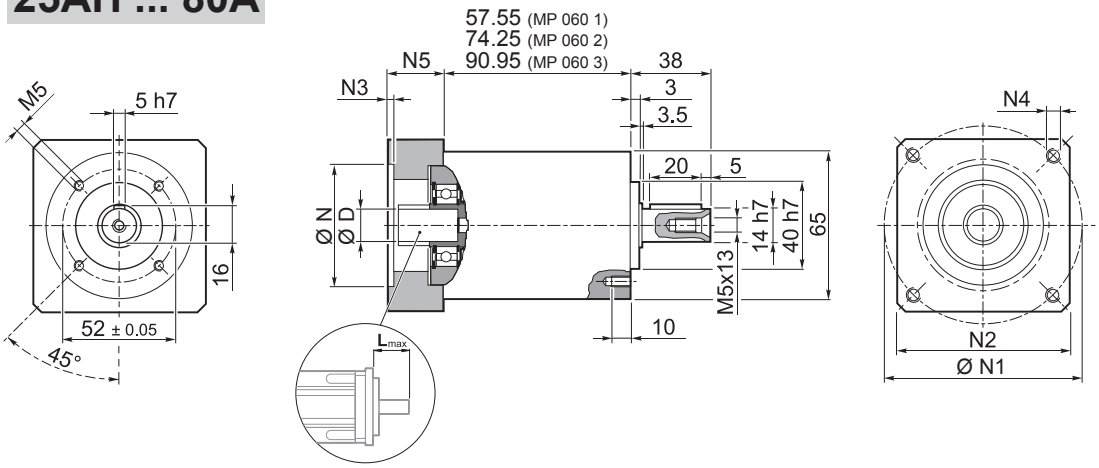
# MP 060

## IS




| | Kg |
|---|---|
| **MP 060 1** | 1.2 |
| **MP 060 2** | 1.7 |
| **MP 060 3** | 2.0 |

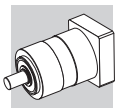
## 25AH ... 80A




| | Kg |
|---|---|
| **MP 060 1** | 1.2 |
| **MP 060 2** | 1.7 |
| **MP 060 3** | 2.0 |

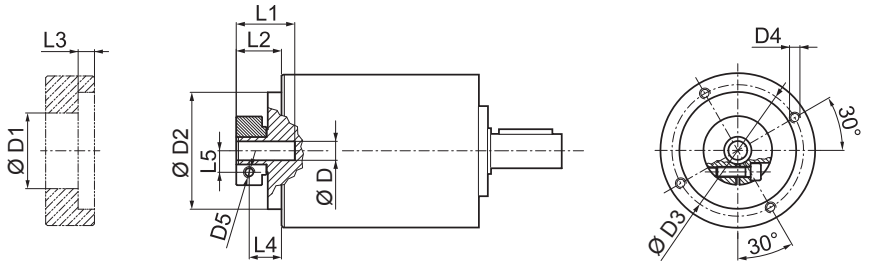
| | D | | | | | | | | | | | N | N1 | | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | min | max | | | | | |
| **25AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 25 | 39 | 56 | | | | | |
| **26AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 26 | 39 | 56 | | | | | |
| **28AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 28 | 39 | 56 | | | | | |
| **30AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 30 | 39 | 56 | | | | | |
| **32AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 32 | 39 | 56 | 65 | 3.5 | 4.5 | 25 | 25 |
| **34AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 34 | 40 | 56 | | | | | |
| **36AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 36 | 42 | 56 | | | | | |
| **39AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 39 | 45 | 56 | | | | | |
| **40AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 40 | 46 | 56 | | | | | |
| **38B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 38.1 | 66.6 | | 60 | 3 | M4x10 | 18 | 25 |
| **40B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 40 | 63 | | 60 | 3 | M4x10 | 18 | 25 |
| **50A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 50 | 60 | | 60 | 3 | M4x10 | 18 | 25 |
| **50B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 60 | 3 | M5x12 | 23 | 30 |
| **50BH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 65 | 3 | 5.5 | 25 | 32 |
| **50C** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 70 | | 60 | 3 | M4x10 | 23 | 30 |
| **55MH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 55 | 80 | | 65 | 2 | 5.5 | 16 | 23 |
| **60A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 60 | 75 | | 65 | 3 | M5x12 | 18 | 25 |
| **60AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 60 | 75 | | 65 | 3 | 5.5 | 18 | 25 |
| **60A1** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 75 | | 65 | 3 | M5x12 | 23 | 30 |
| **60AH1** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 75 | | 65 | 3 | 5.5 | 23 | 30 |
| **60B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 85 | | 75 | 3 | M5x12 | 23 | 30 |
| **60C** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **70A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 85 | | 75 | 3 | M6x15 | 23 | 30 |
| **70B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **73A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 73 | 98.4 | | 85 | 3 | M5x12 | 25 | 32 |
| **80A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 80 | 100 | | 85 | 3 | M6x15 | 23 | 30 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.



# MP 060

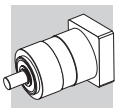
**FM**




| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 6.35 | 7 | | 32.5 | 50 | 42.5 | M4x8 | M4 | 20.2 | 13.2 | 3 | 8.7 | 8 |
| 8 | 9 | 9.52 | 10 | 32.5 | 50 | 42.5 | M4x8 | M4 | 20.2 | 13.2 | 3 | 7.8 | 9 |
| 11 | 12 | 12.7 | | 35.5 | 50 | 42.5 | M4x8 | M4 | 20.5 | 13.5 | 3 | 8.5 | 11 |
| 14 | | | | 35.5 | 50 | 42.5 | M4x8 | M4 | 24 | 17 | 3 | 10.2 | 11.5 |

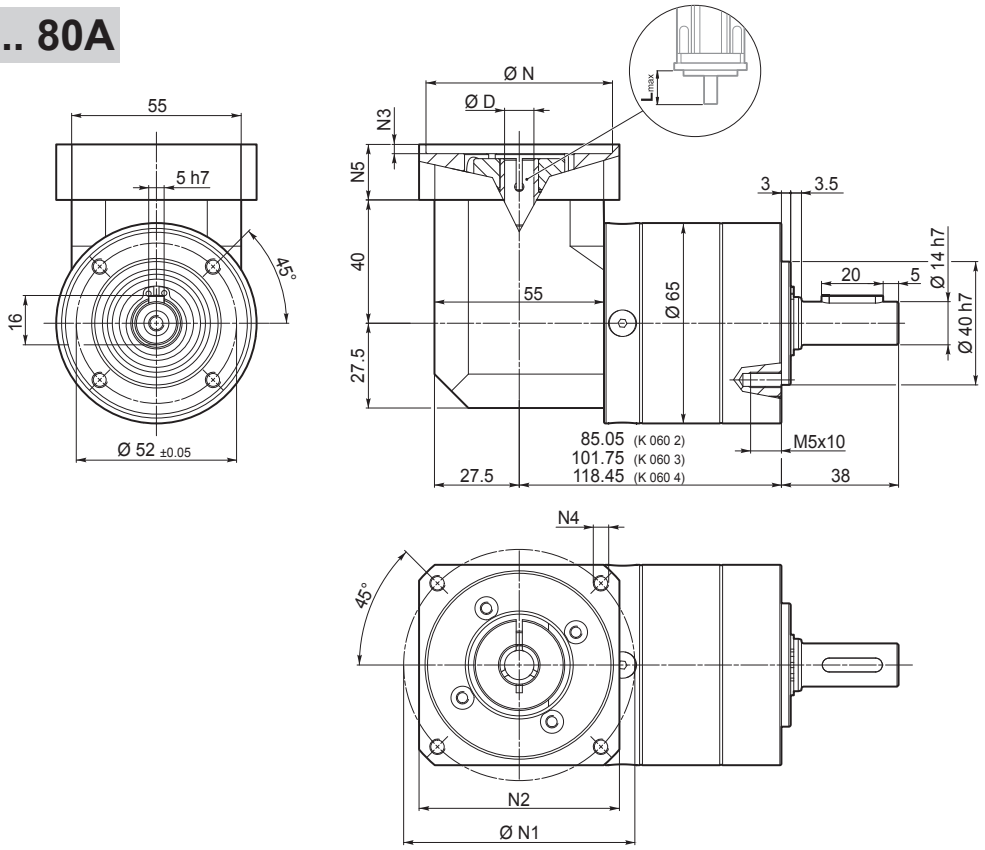
| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $\varphi_R$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{1\,max}$ [N] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 6 ... 9.52 | $J_G$ [kgcm$^2$] D 10 ... 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MP 060 1_3 | 18 | 35 | 70 | 3300 | 4000 | 15' | 10' | 3.0 | 200 | 600 | 700 | 97 | 0.10 | 0.11 |
| MP 060 1_4 | 25 | 40 | 90 | 3500 | 5000 | 15' | 10' | 3.0 | 200 | 600 | 700 | 97 | 0.06 | 0.08 |
| MP 060 1_5 | 25 | 40 | 90 | 3500 | 5000 | 15' | 10' | 3.0 | 200 | 600 | 700 | 97 | 0.05 | 0.07 |
| MP 060 1_6 | 25 | 40 | 90 | 3500 | 5000 | 15' | 10' | 3.0 | 200 | 600 | 700 | 97 | 0.04 | 0.06 |
| MP 060 1_7 | 25 | 40 | 90 | 4000 | 6000 | 15' | 10' | 3.0 | 200 | 600 | 700 | 97 | 0.04 | 0.06 |
| MP 060 1_10 | 18 | 35 | 70 | 4000 | 6000 | 15' | 10' | 3.0 | 200 | 600 | 700 | 97 | 0.03 | 0.05 |
| MP 060 2_9 | 18 | 35 | 70 | 3300 | 4000 | 15' | 10' | 2.5 | 200 | 600 | 700 | 94 | 0.10 | 0.12 |
| MP 060 2_12 | 30 | 45 | 100 | 3300 | 4000 | 15' | 10' | 2.5 | 200 | 600 | 700 | 94 | 0.10 | 0.11 |
| MP 060 2_15 | 30 | 45 | 100 | 3300 | 4000 | 15' | 10' | 2.5 | 200 | 600 | 700 | 94 | 0.09 | 0.11 |
| MP 060 2_16 | 30 | 45 | 100 | 3500 | 5000 | 15' | 10' | 2.5 | 200 | 600 | 700 | 94 | 0.06 | 0.08 |
| MP 060 2_20 | 30 | 45 | 100 | 3500 | 5000 | 15' | 10' | 2.5 | 200 | 600 | 700 | 94 | 0.05 | 0.07 |
| MP 060 2_25 | 30 | 45 | 100 | 3500 | 5000 | 15' | 10' | 2.5 | 200 | 600 | 700 | 94 | 0.05 | 0.06 |
| MP 060 2_28 | 30 | 45 | 100 | 4000 | 6000 | 15' | 10' | 2.5 | 200 | 600 | 700 | 94 | 0.04 | 0.06 |
| MP 060 2_30 | 18 | 35 | 70 | 4000 | 6000 | 15' | 10' | 2.5 | 200 | 600 | 700 | 94 | 0.03 | 0.05 |
| MP 060 2_35 | 30 | 45 | 100 | 4000 | 6000 | 15' | 10' | 2.5 | 200 | 600 | 700 | 94 | 0.04 | 0.06 |
| MP 060 2_36 | 25 | 40 | 90 | 3500 | 5000 | 15' | 10' | 2.5 | 200 | 600 | 700 | 94 | 0.04 | 0.06 |
| MP 060 2_40 | 30 | 45 | 100 | 4000 | 6000 | 15' | 10' | 2.5 | 200 | 600 | 700 | 94 | 0.03 | 0.05 |
| MP 060 2_50 | 30 | 45 | 100 | 4000 | 6000 | 15' | 10' | 2.5 | 200 | 600 | 700 | 94 | 0.03 | 0.05 |
| MP 060 2_70 | 30 | 45 | 100 | 4000 | 6000 | 15' | 10' | 2.5 | 200 | 600 | 700 | 94 | 0.03 | 0.05 |
| MP 060 2_100 | 18 | 35 | 70 | 4000 | 6000 | 15' | 10' | 2.5 | 200 | 600 | 700 | 94 | 0.03 | 0.05 |
| MP 060 3_48 | 30 | 45 | 100 | 3500 | 5000 | 17' | 12' | 1.8 | 200 | 600 | 700 | 91 | 0.06 | 0.08 |
| MP 060 3_64 | 30 | 45 | 100 | 3500 | 5000 | 17' | 12' | 1.8 | 200 | 600 | 700 | 91 | 0.06 | 0.08 |
| MP 060 3_75 | 30 | 45 | 100 | 3500 | 5000 | 17' | 12' | 1.8 | 200 | 600 | 700 | 91 | 0.05 | 0.07 |
| MP 060 3_80 | 30 | 45 | 100 | 3500 | 5000 | 17' | 12' | 1.8 | 200 | 600 | 700 | 91 | 0.06 | 0.08 |
| MP 060 3_84 | 30 | 45 | 100 | 4000 | 6000 | 17' | 12' | 1.8 | 200 | 600 | 700 | 91 | 0.04 | 0.06 |
| MP 060 3_90 | 18 | 35 | 70 | 4000 | 6000 | 17' | 12' | 1.8 | 200 | 600 | 700 | 91 | 0.03 | 0.05 |
| MP 060 3_120 | 30 | 45 | 100 | 4000 | 6000 | 17' | 12' | 1.8 | 200 | 600 | 700 | 91 | 0.03 | 0.05 |
| MP 060 3_125 | 30 | 45 | 100 | 3500 | 5000 | 17' | 12' | 1.8 | 200 | 600 | 700 | 91 | 0.05 | 0.07 |
| MP 060 3_140 | 30 | 45 | 100 | 4000 | 6000 | 17' | 12' | 1.8 | 200 | 600 | 700 | 91 | 0.04 | 0.06 |
| MP 060 3_150 | 30 | 45 | 100 | 4000 | 6000 | 17' | 12' | 1.8 | 200 | 600 | 700 | 91 | 0.03 | 0.05 |
| MP 060 3_160 | 30 | 45 | 100 | 4000 | 6000 | 17' | 12' | 1.8 | 200 | 600 | 700 | 91 | 0.03 | 0.05 |
| MP 060 3_175 | 30 | 45 | 100 | 4000 | 6000 | 17' | 12' | 1.8 | 200 | 600 | 700 | 91 | 0.04 | 0.06 |
| MP 060 3_200 | 30 | 45 | 100 | 4000 | 6000 | 17' | 12' | 1.8 | 200 | 600 | 700 | 91 | 0.03 | 0.05 |
| MP 060 3_210 | 30 | 45 | 100 | 4000 | 6000 | 17' | 12' | 1.8 | 200 | 600 | 700 | 91 | 0.03 | 0.05 |
| MP 060 3_216 | 30 | 45 | 100 | 3500 | 5000 | 17' | 12' | 1.8 | 200 | 600 | 700 | 91 | 0.04 | 0.06 |
| MP 060 3_250 | 30 | 45 | 100 | 4000 | 6000 | 17' | 12' | 1.8 | 200 | 600 | 700 | 91 | 0.03 | 0.05 |
| MP 060 3_280 | 30 | 45 | 100 | 4000 | 6000 | 17' | 12' | 1.8 | 200 | 600 | 700 | 91 | 0.03 | 0.05 |
| MP 060 3_350 | 30 | 45 | 100 | 4000 | 6000 | 17' | 12' | 1.8 | 200 | 600 | 700 | 91 | 0.03 | 0.05 |
| MP 060 3_400 | 30 | 45 | 100 | 4000 | 6000 | 17' | 12' | 1.8 | 200 | 600 | 700 | 91 | 0.03 | 0.05 |
| MP 060 3_500 | 30 | 45 | 100 | 4000 | 6000 | 17' | 12' | 1.8 | 200 | 600 | 700 | 91 | 0.03 | 0.05 |
| MP 060 3_700 | 30 | 45 | 100 | 4000 | 6000 | 17' | 12' | 1.8 | 200 | 600 | 700 | 91 | 0.03 | 0.05 |
| MP 060 3_1000 | 18 | 35 | 70 | 4000 | 6000 | 17' | 12' | 1.8 | 200 | 600 | 700 | 91 | 0.03 | 0.05 |

MP



# MP K 060

## 25AH ... 80A



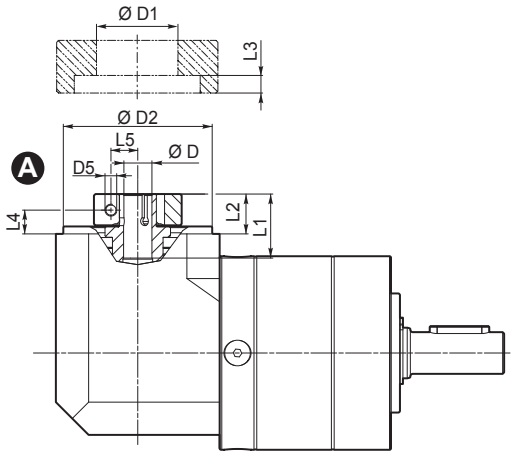

| | Kg |
|---|---|
| **MP K 060 2** | 1.7 |
| **MP K 060 3** | 2.2 |
| **MP K 060 4** | 2.5 |

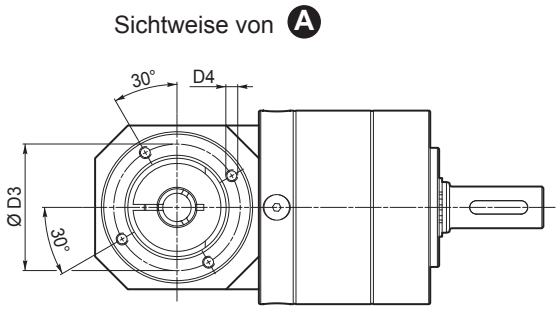
| | D | | | | | | | | | | | N | N1 | | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | min | max | | | | | |
| **25AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 25 | 39 | 56 | | | | | |
| **26AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 26 | 39 | 56 | | | | | |
| **28AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 28 | 39 | 56 | | | | | |
| **30AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 30 | 39 | 56 | | | | | |
| **32AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 32 | 39 | 56 | 65 | 3.5 | 4.5 | 25 | 25 |
| **34AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 34 | 40 | 56 | | | | | |
| **36AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 36 | 42 | 56 | | | | | |
| **39AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 39 | 45 | 56 | | | | | |
| **40AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 40 | 46 | 56 | | | | | |
| **38B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 38.1 | 66.6 | | 60 | 3 | M4x10 | 18 | 25 |
| **40B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 40 | 63 | | 60 | 3 | M4x10 | 18 | 25 |
| **50A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 50 | 60 | | 60 | 3 | M4x10 | 18 | 25 |
| **50B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 60 | 3 | M5x12 | 23 | 30 |
| **50BH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 65 | 3 | 5.5 | 25 | 32 |
| **50C** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 70 | | 60 | 3 | M4x10 | 23 | 30 |
| **55MH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 55 | 80 | | 65 | 2 | 5.5 | 16 | 23 |
| **60A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 60 | 75 | | 65 | 3 | M5x12 | 18 | 25 |
| **60A1** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 75 | | 65 | 3 | M5x12 | 23 | 30 |
| **60B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 85 | | 75 | 3 | M5x12 | 23 | 30 |
| **60C** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **70A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 85 | | 75 | 3 | M6x15 | 23 | 30 |
| **70B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **73A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 73 | 98.4 | | 85 | 3 | M5x12 | 25 | 32 |
| **80A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 80 | 100 | | 85 | 3 | M6x15 | 23 | 30 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

# MP K 060

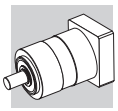
**FM**



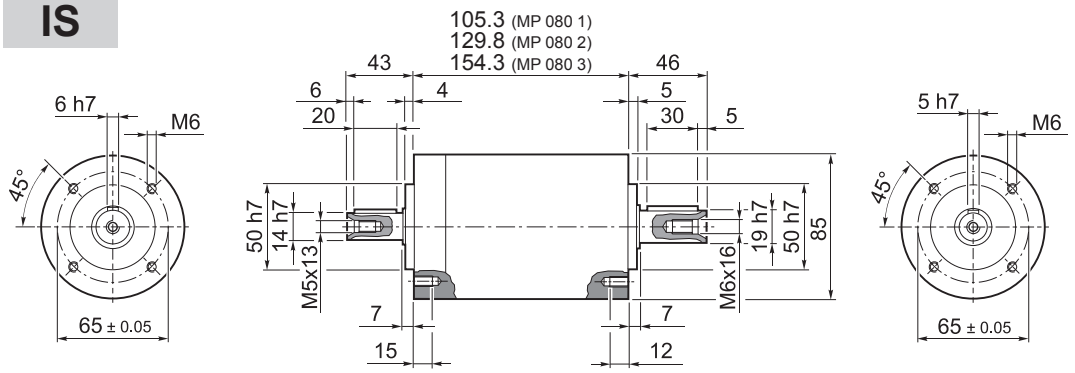

| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 6.35 | 7 | | 32.5 | 50 | 42.5 | M4x8 | M4 | 20.2 | 13.2 | 3 | 8.7 | 8 |
| 8 | 9 | 9.52 | 10 | 32.5 | 50 | 42.5 | M4x8 | M4 | 20.2 | 13.2 | 3 | 7.8 | 9 |
| 11 | 12 | 12.7 | | 35.5 | 50 | 42.5 | M4x8 | M4 | 20.5 | 13.5 | 3 | 8.5 | 11 |
| 14 | | | | 35.5 | 50 | 42.5 | M4x8 | M4 | 24 | 17 | 3 | 10.2 | 11.5 |

| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $\varphi_R$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 6 ... 9.52 | $J_G$ [kgcm$^2$] D 10 ... 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MP K 060 2_3 | 18 | 35 | 70 | 3300 | 4000 | 15' | 10' | 3.0 | 600 | 700 | 94 | 0.20 | 0.20 |
| MP K 060 2_4 | 25 | 40 | 90 | 3500 | 5000 | 15' | 10' | 3.0 | 600 | 700 | 94 | 0.18 | 0.20 |
| MP K 060 2_5 | 25 | 40 | 90 | 3500 | 5000 | 15' | 10' | 3.0 | 600 | 700 | 94 | 0.17 | 0.19 |
| MP K 060 2_6 | 25 | 40 | 90 | 3500 | 5000 | 15' | 10' | 3.0 | 600 | 700 | 94 | 0.17 | 0.19 |
| MP K 060 2_7 | 25 | 40 | 90 | 4000 | 6000 | 15' | 10' | 3.0 | 600 | 700 | 94 | 0.17 | 0.19 |
| MP K 060 2_10 | 18 | 35 | 70 | 4000 | 6000 | 15' | 10' | 3.0 | 600 | 700 | 94 | 0.17 | 0.18 |
| MP K 060 3_9 | 18 | 35 | 70 | 3300 | 4000 | 15' | 10' | 2.5 | 600 | 700 | 91 | 0.20 | 0.21 |
| MP K 060 3_12 | 30 | 45 | 100 | 3300 | 4000 | 15' | 10' | 2.5 | 600 | 700 | 91 | 0.20 | 0.21 |
| MP K 060 3_15 | 30 | 45 | 100 | 3300 | 4000 | 15' | 10' | 2.5 | 600 | 700 | 91 | 0.19 | 0.21 |
| MP K 060 3_16 | 30 | 45 | 100 | 3500 | 5000 | 15' | 10' | 2.5 | 600 | 700 | 91 | 0.18 | 0.20 |
| MP K 060 3_20 | 30 | 45 | 100 | 3500 | 5000 | 15' | 10' | 2.5 | 600 | 700 | 91 | 0.17 | 0.19 |
| MP K 060 3_25 | 30 | 45 | 100 | 3500 | 5000 | 15' | 10' | 2.5 | 600 | 700 | 91 | 0.17 | 0.18 |
| MP K 060 3_28 | 30 | 45 | 100 | 4000 | 6000 | 15' | 10' | 2.5 | 600 | 700 | 91 | 0.17 | 0.19 |
| MP K 060 3_30 | 18 | 35 | 70 | 4000 | 6000 | 15' | 10' | 2.5 | 600 | 700 | 91 | 0.17 | 0.18 |
| MP K 060 3_35 | 30 | 45 | 100 | 4000 | 6000 | 15' | 10' | 2.5 | 600 | 700 | 91 | 0.18 | 0.19 |
| MP K 060 3_36 | 25 | 40 | 90 | 3500 | 5000 | 15' | 10' | 2.5 | 600 | 700 | 91 | 0.18 | 0.19 |
| MP K 060 3_40 | 30 | 45 | 100 | 4000 | 6000 | 15' | 10' | 2.5 | 600 | 700 | 91 | 0.17 | 0.18 |
| MP K 060 3_50 | 30 | 45 | 100 | 4000 | 6000 | 15' | 10' | 2.5 | 600 | 700 | 91 | 0.17 | 0.18 |
| MP K 060 3_70 | 30 | 45 | 100 | 4000 | 6000 | 15' | 10' | 2.5 | 600 | 700 | 91 | 0.17 | 0.18 |
| MP K 060 3_100 | 18 | 35 | 70 | 4000 | 6000 | 15' | 10' | 2.5 | 600 | 700 | 91 | 0.17 | 0.18 |
| MP K 060 4_48 | 30 | 45 | 100 | 3500 | 5000 | 17' | 12' | 1.8 | 600 | 700 | 89 | 0.18 | 0.20 |
| MP K 060 4_64 | 30 | 45 | 100 | 3500 | 5000 | 17' | 12' | 1.8 | 600 | 700 | 89 | 0.18 | 0.20 |
| MP K 060 4_75 | 30 | 45 | 100 | 3500 | 5000 | 17' | 12' | 1.8 | 600 | 700 | 89 | 0.17 | 0.19 |
| MP K 060 4_80 | 30 | 45 | 100 | 3500 | 5000 | 17' | 12' | 1.8 | 600 | 700 | 89 | 0.18 | 0.20 |
| MP K 060 4_84 | 30 | 45 | 100 | 4000 | 6000 | 17' | 12' | 1.8 | 600 | 700 | 89 | 0.17 | 0.19 |
| MP K 060 4_90 | 18 | 35 | 70 | 4000 | 6000 | 17' | 12' | 1.8 | 600 | 700 | 89 | 0.17 | 0.18 |
| MP K 060 4_120 | 30 | 45 | 100 | 4000 | 6000 | 17' | 12' | 1.8 | 600 | 700 | 89 | 0.15 | 0.17 |
| MP K 060 4_125 | 30 | 45 | 100 | 3500 | 5000 | 17' | 12' | 1.8 | 600 | 700 | 89 | 0.17 | 0.19 |
| MP K 060 4_140 | 30 | 45 | 100 | 4000 | 6000 | 17' | 12' | 1.8 | 600 | 700 | 89 | 0.17 | 0.19 |
| MP K 060 4_150 | 30 | 45 | 100 | 4000 | 6000 | 17' | 12' | 1.8 | 600 | 700 | 89 | 0.17 | 0.18 |
| MP K 060 4_160 | 30 | 45 | 100 | 4000 | 6000 | 17' | 12' | 1.8 | 600 | 700 | 89 | 0.17 | 0.18 |
| MP K 060 4_175 | 30 | 45 | 100 | 4000 | 6000 | 17' | 12' | 1.8 | 600 | 700 | 89 | 0.17 | 0.19 |
| MP K 060 4_200 | 30 | 45 | 100 | 4000 | 6000 | 17' | 12' | 1.8 | 600 | 700 | 89 | 0.17 | 0.18 |
| MP K 060 4_210 | 30 | 45 | 100 | 4000 | 6000 | 17' | 12' | 1.8 | 600 | 700 | 89 | 0.17 | 0.18 |
| MP K 060 4_216 | 30 | 45 | 100 | 3500 | 5000 | 17' | 12' | 1.8 | 600 | 700 | 89 | 0.17 | 0.19 |
| MP K 060 4_250 | 30 | 45 | 100 | 4000 | 6000 | 17' | 12' | 1.8 | 600 | 700 | 89 | 0.17 | 0.18 |
| MP K 060 4_280 | 30 | 45 | 100 | 4000 | 6000 | 17' | 12' | 1.8 | 600 | 700 | 89 | 0.17 | 0.18 |
| MP K 060 4_350 | 30 | 45 | 100 | 4000 | 6000 | 17' | 12' | 1.8 | 600 | 700 | 89 | 0.17 | 0.18 |
| MP K 060 4_400 | 30 | 45 | 100 | 4000 | 6000 | 17' | 12' | 1.8 | 600 | 700 | 89 | 0.17 | 0.18 |
| MP K 060 4_500 | 30 | 45 | 100 | 4000 | 6000 | 17' | 12' | 1.8 | 600 | 700 | 89 | 0.17 | 0.18 |
| MP K 060 4_700 | 30 | 45 | 100 | 4000 | 6000 | 17' | 12' | 1.8 | 600 | 700 | 89 | 0.17 | 0.18 |
| MP K 060 4_1000 | 18 | 35 | 70 | 4000 | 6000 | 17' | 12' | 1.8 | 600 | 700 | 89 | 0.17 | 0.18 |



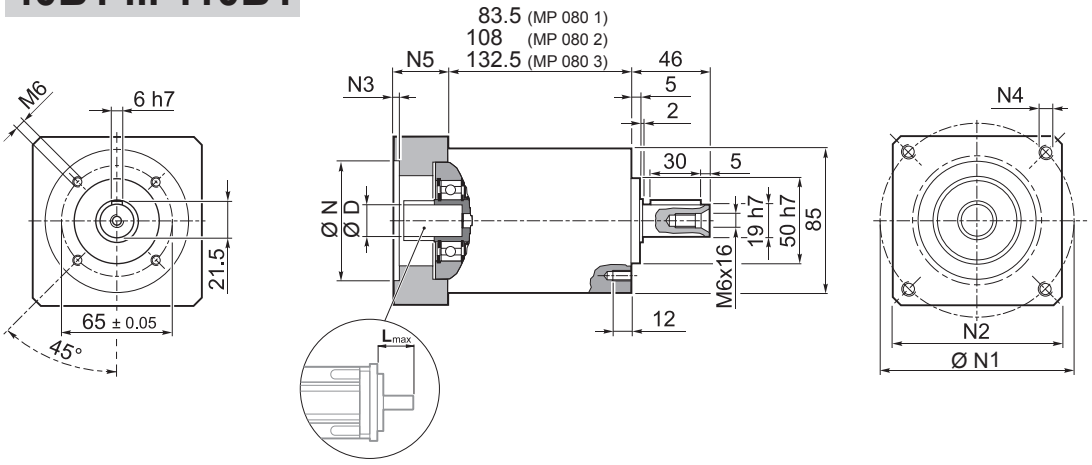
# MP 080

## IS




| | Kg |
|---|---|
| **MP 080 1** | 4.0 |
| **MP 080 2** | 4.6 |
| **MP 080 3** | 5.2 |

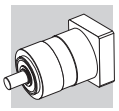
## 40B1 ... 110B1




| | Kg |
|---|---|
| **MP 080 1** | 4.0 |
| **MP 080 2** | 4.6 |
| **MP 080 3** | 5.2 |

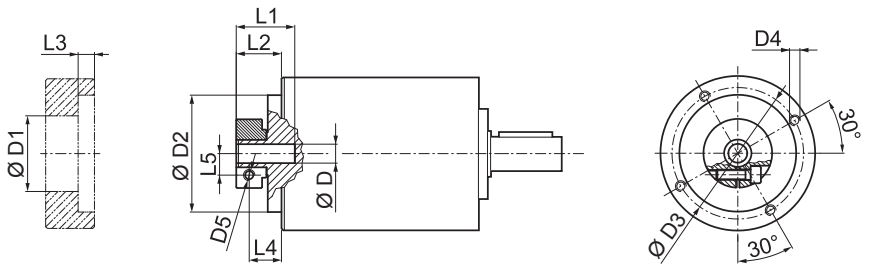
| | D | | | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **40B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 40 | 63 | 80 | 4 | M4x12 | 34 | 40 |
| **45A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | – | – | – | – | – | – | 45 | 63 | 80 | 4 | M4x12 | 34 | 40 |
| **50B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 65 | 80 | 4 | M5x16 | 34 | 40 |
| **50BH1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 65 | 80 | 4 | 5.5 | 34 | 40 |
| **50C1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 70 | 80 | 4 | M4x10 | 34 | 40 |
| **50D** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 95 | 80 | 4 | M6x20 | 34 | 40 |
| **55A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 55.5 | 125.7 | 105 | 4 | M6x20 | 34 | 40 |
| **60A2** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 60 | 75 | 80 | 4 | M5x16 | 34 | 40 |
| **60AH2** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 60 | 75 | 90 | 4 | 6.5 | 34 | 40 |
| **60B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | – | – | – | 60 | 85 | 80 | 4 | M5x16 | 34 | 40 |
| **60C1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | – | – | – | 60 | 90 | 80 | 4 | M5x16 | 34 | 40 |
| **70A1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 85 | 80 | 4 | M6x20 | 34 | 40 |
| **70AH1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 85 | 90 | 4 | 6.5 | 34 | 40 |
| **70B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 90 | 80 | 4 | M5x16 | 34 | 40 |
| **73A1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 73 | 98.4 | 85 | 4 | M5x16 | 34 | 40 |
| **80A1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 80 | 100 | 90 | 4 | M6x16 | 34 | 40 |
| **95A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 95 | 115 | 100 | 4 | M8x20 | 34 | 40 |
| **95B** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 95 | 130 | 115 | 4 | M8x20 | 34 | 40 |
| **110A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 130 | 115 | 4 | M8x20 | 34 | 40 |
| **110B** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 145 | 120 | 6.5 | M8x20 | 44 | 50 |
| **110B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 145 | 120 | 6.5 | M8x20 | 54 | 60 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.



# MP 080

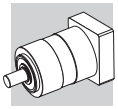
**FM**




| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 9 | 9.52 | | 38 | 68 | 76.5 | M6x12 | M6 | 32.2 | 26.3 | 9.5 | 19.3 | 10.5 |
| 11 | 12 | 12.7 | | 43 | 68 | 76.5 | M6x12 | M6 | 32.2 | 26.3 | 9.5 | 19.3 | 12.5 |
| 14 | 15.875 | 16 | 17 | 48 | 68 | 76.5 | M6x12 | M6 | 32.2 | 26.3 | 9.5 | 19.3 | 14.5 |
| 19 | 19.05 | | | 51 | 68 | 76.5 | M6x12 | M6 | 32.2 | 26.3 | 9.5 | 19.3 | 16.5 |

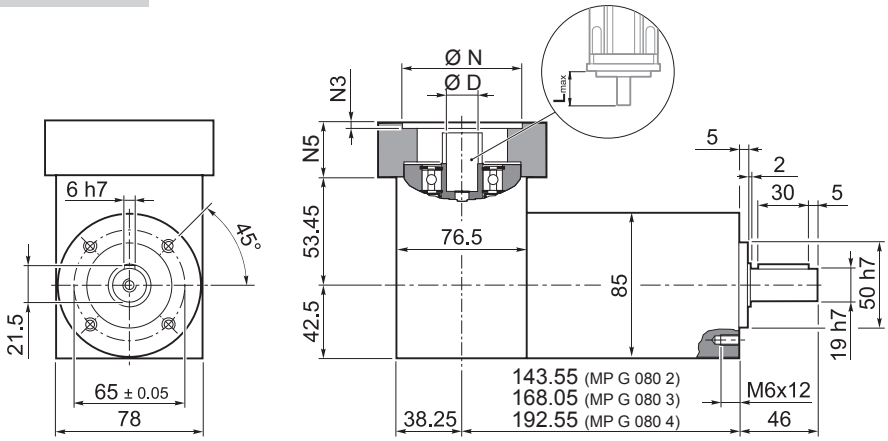
| i | $M_{n\,2}$ | $M_{a\,2}$ | $M_{p\,2}$ | $n_1$ | $n_{1\,max}$ | $\varphi_S$ | $\varphi_R$ | $C_t$ | $R_{1\,max}$ | SB $R_{2\,max}$ | SB $A_{2\,max}$ | HB $R_{2\,max}$ | HB $A_{2\,max}$ | $\eta$ | $J_G$ [kgcm²] D 8 ... 12.7 | $J_G$ [kgcm²] D 14 ... 19.05 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | [Nm] | [Nm] | [Nm] | [min⁻¹] | [min⁻¹] | [arcmin] | | [Nm/arcmin] | [N] | [N] | [N] | [N] | [N] | % | | |
| MP 080 1_3 | 40 | 80 | 180 | 2900 | 3500 | 15' | 10' | 7.0 | 400 | 1300 | 1400 | 2500 | 3000 | 97 | 0.50 | 0.59 |
| MP 080 1_4 | 50 | 80 | 200 | 3100 | 4500 | 15' | 10' | 7.0 | 400 | 1300 | 1400 | 2500 | 3000 | 97 | 0.34 | 0.43 |
| MP 080 1_5 | 50 | 80 | 200 | 3200 | 4500 | 15' | 10' | 7.0 | 400 | 1300 | 1400 | 2500 | 3000 | 97 | 0.28 | 0.37 |
| MP 080 1_6 | 50 | 80 | 200 | 3200 | 4500 | 15' | 10' | 7.0 | 400 | 1300 | 1400 | 2500 | 3000 | 97 | 0.21 | 0.30 |
| MP 080 1_7 | 50 | 80 | 200 | 4000 | 6000 | 15' | 10' | 7.0 | 400 | 1300 | 1400 | 2500 | 3000 | 97 | 0.23 | 0.32 |
| MP 080 1_10 | 40 | 80 | 180 | 4000 | 6000 | 15' | 10' | 7.0 | 400 | 1300 | 1400 | 2500 | 3000 | 97 | 0.20 | 0.29 |
| MP 080 2_9 | 40 | 80 | 180 | 2900 | 3500 | 15' | 10' | 5.9 | 400 | 1300 | 1400 | 2500 | 3000 | 94 | 0.49 | 0.58 |
| MP 080 2_12 | 70 | 100 | 250 | 2900 | 3500 | 15' | 10' | 5.9 | 400 | 1300 | 1400 | 2500 | 3000 | 94 | 0.47 | 0.56 |
| MP 080 2_15 | 70 | 100 | 250 | 2900 | 3500 | 15' | 10' | 5.9 | 400 | 1300 | 1400 | 2500 | 3000 | 94 | 0.46 | 0.55 |
| MP 080 2_16 | 70 | 100 | 250 | 3100 | 4500 | 15' | 10' | 5.9 | 400 | 1300 | 1400 | 2500 | 3000 | 94 | 0.32 | 0.41 |
| MP 080 2_20 | 70 | 100 | 250 | 3200 | 4500 | 15' | 10' | 5.9 | 400 | 1300 | 1400 | 2500 | 3000 | 94 | 0.27 | 0.36 |
| MP 080 2_25 | 70 | 100 | 250 | 3200 | 4500 | 15' | 10' | 5.9 | 400 | 1300 | 1400 | 2500 | 3000 | 94 | 0.27 | 0.36 |
| MP 080 2_28 | 70 | 100 | 250 | 4000 | 6000 | 15' | 10' | 5.9 | 400 | 1300 | 1400 | 2500 | 3000 | 94 | 0.22 | 0.31 |
| MP 080 2_30 | 40 | 80 | 180 | 4000 | 6000 | 15' | 10' | 5.9 | 400 | 1300 | 1400 | 2500 | 3000 | 94 | 0.20 | 0.29 |
| MP 080 2_35 | 70 | 100 | 250 | 4000 | 6000 | 15' | 10' | 5.9 | 400 | 1300 | 1400 | 2500 | 3000 | 94 | 0.22 | 0.31 |
| MP 080 2_36 | 50 | 80 | 200 | 3200 | 4500 | 15' | 10' | 5.9 | 400 | 1300 | 1400 | 2500 | 3000 | 94 | 0.20 | 0.29 |
| MP 080 2_40 | 70 | 100 | 250 | 4000 | 6000 | 15' | 10' | 5.9 | 400 | 1300 | 1400 | 2500 | 3000 | 94 | 0.20 | 0.29 |
| MP 080 2_50 | 70 | 100 | 250 | 4000 | 6000 | 15' | 10' | 5.9 | 400 | 1300 | 1400 | 2500 | 3000 | 94 | 0.19 | 0.28 |
| MP 080 2_70 | 70 | 100 | 250 | 4000 | 6000 | 15' | 10' | 5.9 | 400 | 1300 | 1400 | 2500 | 3000 | 94 | 0.19 | 0.28 |
| MP 080 2_100 | 40 | 80 | 180 | 4000 | 6000 | 15' | 10' | 5.9 | 400 | 1300 | 1400 | 2500 | 3000 | 94 | 0.19 | 0.28 |
| MP 080 3_48 | 70 | 100 | 250 | 3100 | 4500 | 17' | 12' | 5.4 | 400 | 1300 | 1400 | 2500 | 3000 | 91 | 0.33 | 0.42 |
| MP 080 3_64 | 70 | 100 | 250 | 3100 | 4500 | 17' | 12' | 5.4 | 400 | 1300 | 1400 | 2500 | 3000 | 91 | 0.32 | 0.41 |
| MP 080 3_75 | 70 | 100 | 250 | 3200 | 4500 | 17' | 12' | 5.4 | 400 | 1300 | 1400 | 2500 | 3000 | 91 | 0.27 | 0.36 |
| MP 080 3_80 | 70 | 100 | 250 | 3100 | 4500 | 17' | 12' | 5.4 | 400 | 1300 | 1400 | 2500 | 3000 | 91 | 0.32 | 0.41 |
| MP 080 3_84 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 400 | 1300 | 1400 | 2500 | 3000 | 91 | 0.23 | 0.32 |
| MP 080 3_90 | 40 | 80 | 180 | 4000 | 6000 | 17' | 12' | 5.4 | 400 | 1300 | 1400 | 2500 | 3000 | 91 | 0.20 | 0.29 |
| MP 080 3_120 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 400 | 1300 | 1400 | 2500 | 3000 | 91 | 0.20 | 0.29 |
| MP 080 3_125 | 70 | 100 | 250 | 3200 | 4500 | 17' | 12' | 5.4 | 400 | 1300 | 1400 | 2500 | 3000 | 91 | 0.27 | 0.36 |
| MP 080 3_140 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 400 | 1300 | 1400 | 2500 | 3000 | 91 | 0.22 | 0.31 |
| MP 080 3_150 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 400 | 1300 | 1400 | 2500 | 3000 | 91 | 0.20 | 0.29 |
| MP 080 3_160 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 400 | 1300 | 1400 | 2500 | 3000 | 91 | 0.20 | 0.29 |
| MP 080 3_175 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 400 | 1300 | 1400 | 2500 | 3000 | 91 | 0.22 | 0.31 |
| MP 080 3_200 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 400 | 1300 | 1400 | 2500 | 3000 | 91 | 0.20 | 0.29 |
| MP 080 3_210 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 400 | 1300 | 1400 | 2500 | 3000 | 91 | 0.20 | 0.29 |
| MP 080 3_216 | 70 | 100 | 250 | 3200 | 4500 | 17' | 12' | 5.4 | 400 | 1300 | 1400 | 2500 | 3000 | 91 | 0.20 | 0.29 |
| MP 080 3_250 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 400 | 1300 | 1400 | 2500 | 3000 | 91 | 0.19 | 0.28 |
| MP 080 3_280 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 400 | 1300 | 1400 | 2500 | 3000 | 91 | 0.19 | 0.28 |
| MP 080 3_350 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 400 | 1300 | 1400 | 2500 | 3000 | 91 | 0.19 | 0.28 |
| MP 080 3_400 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 400 | 1300 | 1400 | 2500 | 3000 | 91 | 0.19 | 0.28 |
| MP 080 3_500 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 400 | 1300 | 1400 | 2500 | 3000 | 91 | 0.19 | 0.28 |
| MP 080 3_700 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 400 | 1300 | 1400 | 2500 | 3000 | 91 | 0.19 | 0.28 |
| MP 080 3_1000 | 40 | 80 | 180 | 4000 | 6000 | 17' | 12' | 5.4 | 400 | 1300 | 1400 | 2500 | 3000 | 91 | 0.19 | 0.28 |

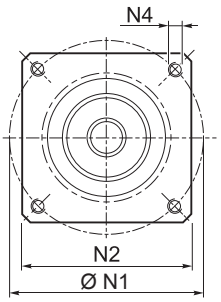
MP



# MP G 080

## 40B1 ... 110B1



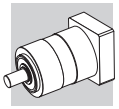




| | Kg |
|---|---|
| **MP G 080 2** | 5.2 |
| **MP G 080 3** | 5.8 |
| **MP G 080 4** | 6.4 |

MP

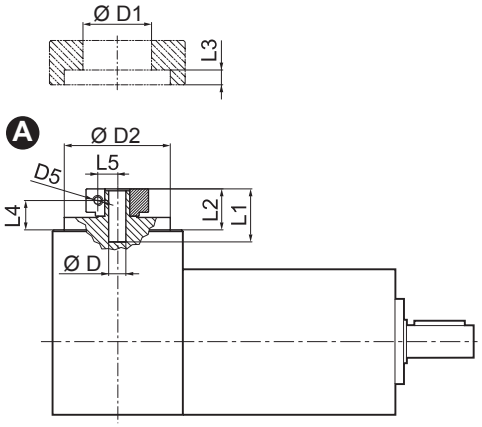
| | D | | | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **40B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 40 | 63 | 80 | 4 | M4x12 | 34 | 40 |
| **45A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | – | – | – | – | – | – | 45 | 63 | 80 | 4 | M4x12 | 34 | 40 |
| **50B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 65 | 80 | 4 | M5x16 | 34 | 40 |
| **50BH1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 65 | 80 | 4 | 5.5 | 34 | 40 |
| **50C1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 70 | 80 | 4 | M4x10 | 34 | 40 |
| **50D** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 95 | 80 | 4 | M6x20 | 34 | 40 |
| **55A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 55.5 | 125.7 | 105 | 4 | M6x20 | 34 | 40 |
| **60A2** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 60 | 75 | 80 | 4 | M5x16 | 34 | 40 |
| **60AH2** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 60 | 75 | 90 | 4 | 6.5 | 34 | 40 |
| **60B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | – | – | – | 60 | 85 | 80 | 4 | M5x16 | 34 | 40 |
| **60C1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | – | – | – | 60 | 90 | 80 | 4 | M5x16 | 34 | 40 |
| **70A1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 85 | 80 | 4 | M6x20 | 34 | 40 |
| **70AH1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 85 | 90 | 4 | 6.5 | 34 | 40 |
| **70B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 90 | 80 | 4 | M5x16 | 34 | 40 |
| **73A1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 73 | 98.4 | 85 | 4 | M5x16 | 34 | 40 |
| **80A1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 80 | 100 | 90 | 4 | M6x16 | 34 | 40 |
| **95A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 95 | 115 | 100 | 4 | M8x20 | 34 | 40 |
| **95B** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 95 | 130 | 115 | 4 | M8x20 | 34 | 40 |
| **110A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 130 | 115 | 4 | M8x20 | 34 | 40 |
| **110B** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 145 | 120 | 6.5 | M8x20 | 44 | 50 |
| **110B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 145 | 120 | 6.5 | M8x20 | 54 | 60 |

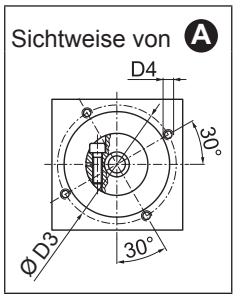
Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.



# MP G 080

**FM**

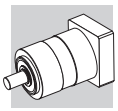



| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 9 | 9.52 | | 38 | 68 | 76.5 | M6x12 | M6 | 32.2 | 26.3 | 9.5 | 19.3 | 10.5 |
| 11 | 12 | 12.7 | | 43 | 68 | 76.5 | M6x12 | M6 | 32.2 | 26.3 | 9.5 | 19.3 | 12.5 |
| 14 | 15.875 | 16 | 17 | 48 | 68 | 76.5 | M6x12 | M6 | 32.2 | 26.3 | 9.5 | 19.3 | 14.5 |
| 19 | 19.05 | | | 51 | 68 | 76.5 | M6x12 | M6 | 32.2 | 26.3 | 9.5 | 19.3 | 16.5 |

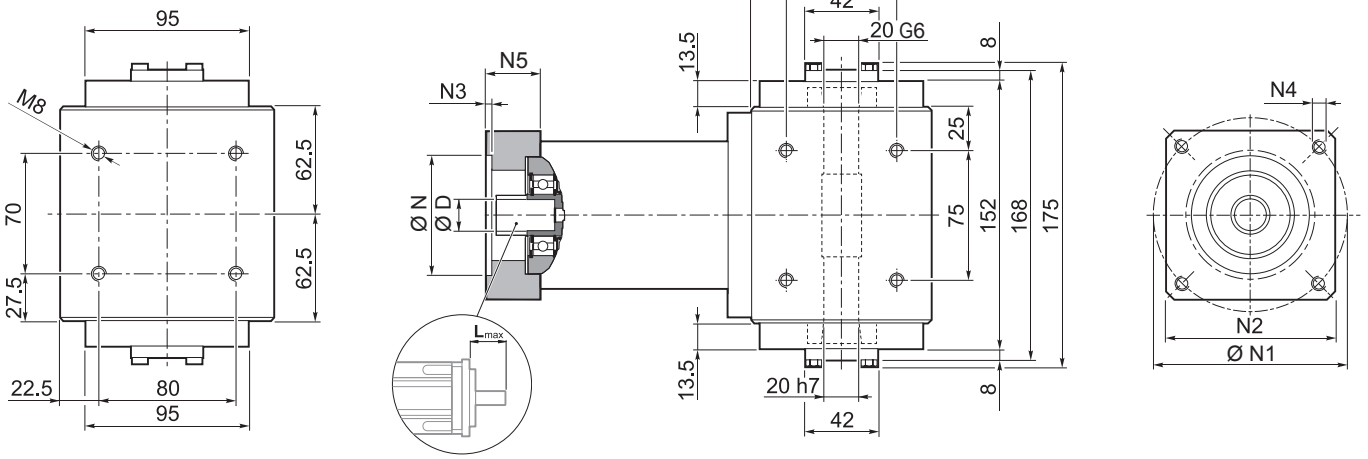
| i | $M_{n2}$ | $M_{a2}$ | $M_{p2}$ | $n_1$ | $n_{1\,max}$ | $\varphi_S$ | $\varphi_R$ | $C_t$ | SB $R_{2\,max}$ | SB $A_{2\,max}$ | HB $R_{2\,max}$ | HB $A_{2\,max}$ | $\eta$ | $J_G$ [kgcm²] D 8 ... 12.7 | $J_G$ [kgcm²] D 14 ... 19.05 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | [Nm] | [Nm] | [Nm] | [min⁻¹] | [min⁻¹] | [arcmin] | | [Nm/arcmin] | [N] | [N] | [N] | [N] | % | | |
| MP G 080 2_3 | 40 | 80 | 180 | 2900 | 3500 | 15' | 10' | 7.0 | 1300 | 1400 | 2500 | 3000 | 94 | 0.67 | 0.79 |
| MP G 080 2_4 | 50 | 80 | 200 | 3100 | 4500 | 15' | 10' | 7.0 | 1300 | 1400 | 2500 | 3000 | 94 | 0.62 | 0.75 |
| MP G 080 2_5 | 50 | 80 | 200 | 3200 | 4500 | 15' | 10' | 7.0 | 1300 | 1400 | 2500 | 3000 | 94 | 0.61 | 0.74 |
| MP G 080 2_6 | 50 | 80 | 200 | 3200 | 4500 | 15' | 10' | 7.0 | 1300 | 1400 | 2500 | 3000 | 94 | 0.58 | 0.71 |
| MP G 080 2_7 | 50 | 80 | 200 | 4000 | 6000 | 15' | 10' | 7.0 | 1300 | 1400 | 2500 | 3000 | 94 | 0.60 | 0.73 |
| MP G 080 2_10 | 40 | 80 | 180 | 4000 | 6000 | 15' | 10' | 7.0 | 1300 | 1400 | 2500 | 3000 | 94 | 0.60 | 0.72 |
| MP G 080 3_9 | 40 | 80 | 180 | 2900 | 3500 | 15' | 10' | 5.9 | 1300 | 1400 | 2500 | 3000 | 91 | 0.66 | 0.78 |
| MP G 080 3_12 | 70 | 100 | 250 | 2900 | 3500 | 15' | 10' | 5.9 | 1300 | 1400 | 2500 | 3000 | 91 | 0.75 | 0.87 |
| MP G 080 3_15 | 70 | 100 | 250 | 2900 | 3500 | 15' | 10' | 5.9 | 1300 | 1400 | 2500 | 3000 | 91 | 0.74 | 0.87 |
| MP G 080 3_16 | 70 | 100 | 250 | 3100 | 4500 | 15' | 10' | 5.9 | 1300 | 1400 | 2500 | 3000 | 91 | 0.60 | 0.73 |
| MP G 080 3_20 | 70 | 100 | 250 | 3200 | 4500 | 15' | 10' | 5.9 | 1300 | 1400 | 2500 | 3000 | 91 | 0.60 | 0.73 |
| MP G 080 3_25 | 70 | 100 | 250 | 3200 | 4500 | 15' | 10' | 5.9 | 1300 | 1400 | 2500 | 3000 | 91 | 0.64 | 0.76 |
| MP G 080 3_28 | 70 | 100 | 250 | 4000 | 6000 | 15' | 10' | 5.9 | 1300 | 1400 | 2500 | 3000 | 91 | 0.59 | 0.72 |
| MP G 080 3_30 | 40 | 80 | 180 | 4000 | 6000 | 15' | 10' | 5.9 | 1300 | 1400 | 2500 | 3000 | 91 | 0.60 | 0.72 |
| MP G 080 3_35 | 70 | 100 | 250 | 4000 | 6000 | 15' | 10' | 5.9 | 1300 | 1400 | 2500 | 3000 | 91 | 0.61 | 0.74 |
| MP G 080 3_36 | 50 | 80 | 200 | 3200 | 4500 | 15' | 10' | 5.9 | 1300 | 1400 | 2500 | 3000 | 91 | 0.57 | 0.70 |
| MP G 080 3_40 | 70 | 100 | 250 | 4000 | 6000 | 15' | 10' | 5.9 | 1300 | 1400 | 2500 | 3000 | 91 | 0.60 | 0.72 |
| MP G 080 3_50 | 70 | 100 | 250 | 4000 | 6000 | 15' | 10' | 5.9 | 1300 | 1400 | 2500 | 3000 | 91 | 0.59 | 0.71 |
| MP G 080 3_70 | 70 | 100 | 250 | 4000 | 6000 | 15' | 10' | 5.9 | 1300 | 1400 | 2500 | 3000 | 91 | 0.59 | 0.71 |
| MP G 080 3_100 | 40 | 80 | 180 | 4000 | 6000 | 15' | 10' | 5.9 | 1300 | 1400 | 2500 | 3000 | 91 | 0.59 | 0.71 |
| MP G 080 4_48 | 70 | 100 | 250 | 3100 | 4500 | 17' | 12' | 5.4 | 1300 | 1400 | 2500 | 3000 | 89 | 0.61 | 0.75 |
| MP G 080 4_64 | 70 | 100 | 250 | 3100 | 4500 | 17' | 12' | 5.4 | 1300 | 1400 | 2500 | 3000 | 89 | 0.60 | 0.73 |
| MP G 080 4_75 | 70 | 100 | 250 | 3200 | 4500 | 17' | 12' | 5.4 | 1300 | 1400 | 2500 | 3000 | 89 | 0.60 | 0.73 |
| MP G 080 4_80 | 70 | 100 | 250 | 3100 | 4500 | 17' | 12' | 5.4 | 1300 | 1400 | 2500 | 3000 | 89 | 0.60 | 0.73 |
| MP G 080 4_84 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 1300 | 1400 | 2500 | 3000 | 89 | 0.60 | 0.73 |
| MP G 080 4_90 | 40 | 80 | 180 | 4000 | 6000 | 17' | 12' | 5.4 | 1300 | 1400 | 2500 | 3000 | 89 | 0.60 | 0.72 |
| MP G 080 4_120 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 1300 | 1400 | 2500 | 3000 | 89 | 0.60 | 0.72 |
| MP G 080 4_125 | 70 | 100 | 250 | 3200 | 4500 | 17' | 12' | 5.4 | 1300 | 1400 | 2500 | 3000 | 89 | 0.60 | 0.73 |
| MP G 080 4_140 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 1300 | 1400 | 2500 | 3000 | 89 | 0.59 | 0.72 |
| MP G 080 4_150 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 1300 | 1400 | 2500 | 3000 | 89 | 0.60 | 0.72 |
| MP G 080 4_160 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 1300 | 1400 | 2500 | 3000 | 89 | 0.60 | 0.72 |
| MP G 080 4_175 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 1300 | 1400 | 2500 | 3000 | 89 | 0.59 | 0.72 |
| MP G 080 4_200 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 1300 | 1400 | 2500 | 3000 | 89 | 0.60 | 0.72 |
| MP G 080 4_210 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 1300 | 1400 | 2500 | 3000 | 89 | 0.60 | 0.72 |
| MP G 080 4_216 | 70 | 100 | 250 | 3200 | 4500 | 17' | 12' | 5.4 | 1300 | 1400 | 2500 | 3000 | 89 | 0.57 | 0.70 |
| MP G 080 4_250 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 1300 | 1400 | 2500 | 3000 | 89 | 0.59 | 0.71 |
| MP G 080 4_280 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 1300 | 1400 | 2500 | 3000 | 89 | 0.59 | 0.71 |
| MP G 080 4_350 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 1300 | 1400 | 2500 | 3000 | 89 | 0.59 | 0.71 |
| MP G 080 4_400 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 1300 | 1400 | 2500 | 3000 | 89 | 0.59 | 0.71 |
| MP G 080 4_500 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 1300 | 1400 | 2500 | 3000 | 89 | 0.59 | 0.71 |
| MP G 080 4_700 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 1300 | 1400 | 2500 | 3000 | 89 | 0.59 | 0.71 |
| MP G 080 4_1000 | 40 | 80 | 180 | 4000 | 6000 | 17' | 12' | 5.4 | 1300 | 1400 | 2500 | 3000 | 89 | 0.59 | 0.71 |

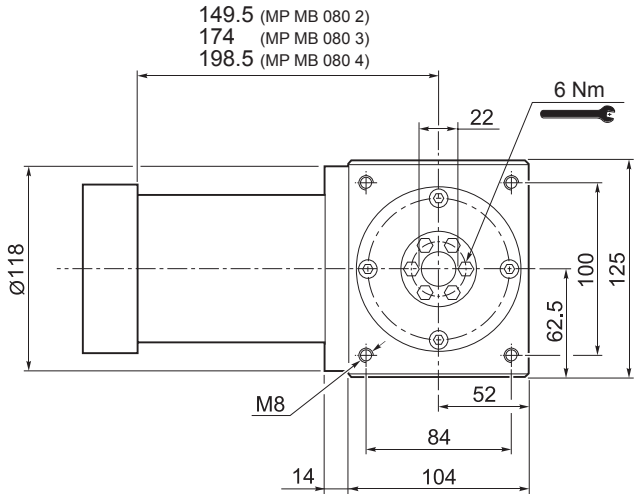
MP



# MP MB 080

## 40B1 ... 110B1



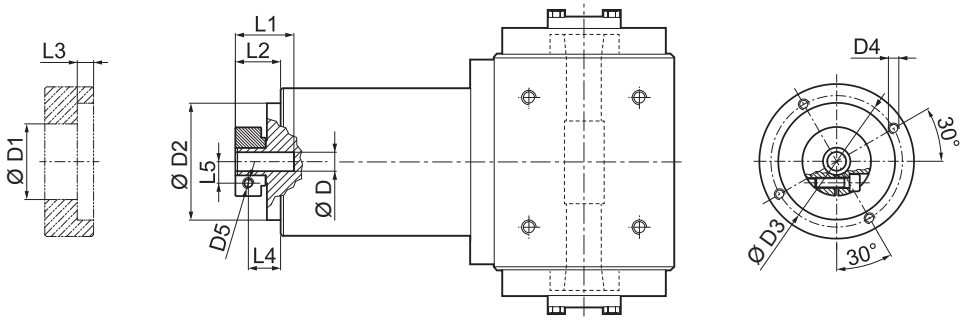

| | Kg |
|---|---|
| **MP MB 080 2** | 14.0 |
| **MP MB 080 3** | 15.0 |
| **MP MB 080 4** | 16.0 |

| | D | | | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **40B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 40 | 63 | 80 | 4 | M4x12 | 34 | 40 |
| **45A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | – | – | – | – | – | – | 45 | 63 | 80 | 4 | M4x12 | 34 | 40 |
| **50B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 65 | 80 | 4 | M5x16 | 34 | 40 |
| **50BH1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 65 | 80 | 4 | 5.5 | 34 | 40 |
| **50C1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 70 | 80 | 4 | M4x10 | 34 | 40 |
| **50D** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 95 | 80 | 4 | M6x20 | 34 | 40 |
| **55A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 55.5 | 125.7 | 105 | 4 | M6x20 | 34 | 40 |
| **60A2** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 60 | 75 | 80 | 4 | M5x16 | 34 | 40 |
| **60AH2** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 60 | 75 | 90 | 4 | 6.5 | 34 | 40 |
| **60B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | – | – | – | 60 | 85 | 80 | 4 | M5x16 | 34 | 40 |
| **60C1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | – | – | – | 60 | 90 | 80 | 4 | M5x16 | 34 | 40 |
| **70A1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 85 | 80 | 4 | M6x20 | 34 | 40 |
| **70AH1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 85 | 90 | 4 | 6.5 | 34 | 40 |
| **70B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 90 | 80 | 4 | M5x16 | 34 | 40 |
| **73A1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 73 | 98.4 | 85 | 4 | M5x16 | 34 | 40 |
| **80A1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 80 | 100 | 90 | 4 | M6x16 | 34 | 40 |
| **95A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 95 | 115 | 100 | 4 | M8x20 | 34 | 40 |
| **95B** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 95 | 130 | 115 | 4 | M8x20 | 34 | 40 |
| **110A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 130 | 115 | 4 | M8x20 | 34 | 40 |
| **110B** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 145 | 120 | 6.5 | M8x20 | 44 | 50 |
| **110B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 145 | 120 | 6.5 | M8x20 | 54 | 60 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

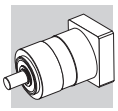
# MP MB 080

**FM**



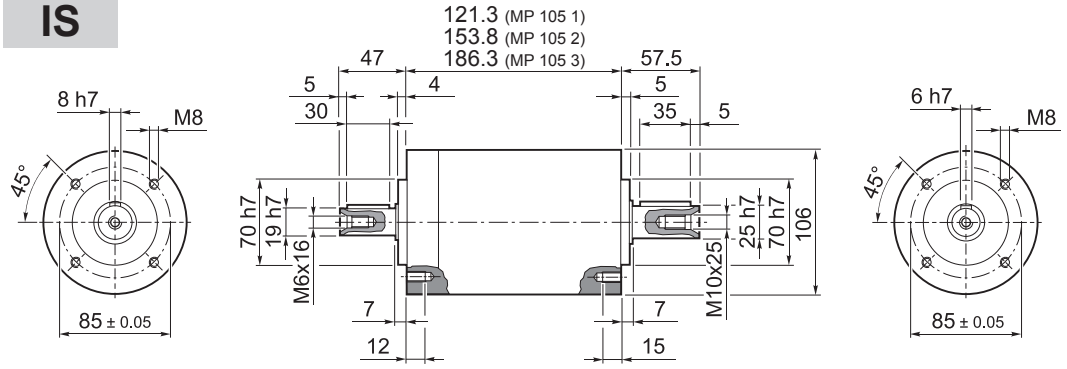

| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 9 | 9.52 | | 38 | 68 | 76.5 | M6x12 | M6 | 32.2 | 26.3 | 9.5 | 19.3 | 10.5 |
| 11 | 12 | 12.7 | | 43 | 68 | 76.5 | M6x12 | M6 | 32.2 | 26.3 | 9.5 | 19.3 | 12.5 |
| 14 | 15.875 | 16 | 17 | 48 | 68 | 76.5 | M6x12 | M6 | 32.2 | 26.3 | 9.5 | 19.3 | 14.5 |
| 19 | 19.05 | | | 51 | 68 | 76.5 | M6x12 | M6 | 32.2 | 26.3 | 9.5 | 19.3 | 16.5 |

| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $\varphi_R$ [arcmin] | $C_t$ [Nm/arcmin] | $\eta$ % | $J_G$ [kgcm$^2$] D 8 ... 12.7 | $J_G$ [kgcm$^2$] D 14 ... 19.05 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MP MB 080 2_3 | 40 | 80 | 180 | 2900 | 3500 | 15' | 10' | 7.0 | 94 | 0.50 | 0.59 |
| MP MB 080 2_4 | 50 | 80 | 200 | 3100 | 4500 | 15' | 10' | 7.0 | 94 | 0.34 | 0.43 |
| MP MB 080 2_5 | 50 | 80 | 200 | 3200 | 4500 | 15' | 10' | 7.0 | 94 | 0.28 | 0.37 |
| MP MB 080 2_6 | 50 | 80 | 200 | 3200 | 4500 | 15' | 10' | 7.0 | 94 | 0.21 | 0.30 |
| MP MB 080 2_7 | 50 | 80 | 200 | 4000 | 6000 | 15' | 10' | 7.0 | 94 | 0.23 | 0.32 |
| MP MB 080 2_10 | 40 | 80 | 180 | 4000 | 6000 | 15' | 10' | 7.0 | 94 | 0.20 | 0.29 |
| MP MB 080 3_9 | 40 | 80 | 180 | 2900 | 3500 | 15' | 10' | 5.9 | 91 | 0.49 | 0.58 |
| MP MB 080 3_12 | 70 | 100 | 250 | 2900 | 3500 | 15' | 10' | 5.9 | 91 | 0.47 | 0.56 |
| MP MB 080 3_15 | 70 | 100 | 250 | 2900 | 3500 | 15' | 10' | 5.9 | 91 | 0.46 | 0.55 |
| MP MB 080 3_16 | 70 | 100 | 250 | 3100 | 4500 | 15' | 10' | 5.9 | 91 | 0.32 | 0.41 |
| MP MB 080 3_20 | 70 | 100 | 250 | 3200 | 4500 | 15' | 10' | 5.9 | 91 | 0.27 | 0.36 |
| MP MB 080 3_25 | 70 | 100 | 250 | 3200 | 4500 | 15' | 10' | 5.9 | 91 | 0.27 | 0.36 |
| MP MB 080 3_28 | 70 | 100 | 250 | 4000 | 6000 | 15' | 10' | 5.9 | 91 | 0.22 | 0.31 |
| MP MB 080 3_30 | 40 | 80 | 180 | 4000 | 6000 | 15' | 10' | 5.9 | 91 | 0.20 | 0.29 |
| MP MB 080 3_35 | 70 | 100 | 250 | 4000 | 6000 | 15' | 10' | 5.9 | 91 | 0.22 | 0.31 |
| MP MB 080 3_36 | 50 | 80 | 200 | 3200 | 4500 | 15' | 10' | 5.9 | 91 | 0.20 | 0.29 |
| MP MB 080 3_40 | 70 | 100 | 250 | 4000 | 6000 | 15' | 10' | 5.9 | 91 | 0.20 | 0.29 |
| MP MB 080 3_50 | 70 | 100 | 250 | 4000 | 6000 | 15' | 10' | 5.9 | 91 | 0.19 | 0.28 |
| MP MB 080 3_70 | 70 | 100 | 250 | 4000 | 6000 | 15' | 10' | 5.9 | 91 | 0.19 | 0.28 |
| MP MB 080 3_100 | 40 | 80 | 180 | 4000 | 6000 | 15' | 10' | 5.9 | 91 | 0.19 | 0.28 |
| MP MB 080 4_48 | 70 | 100 | 250 | 3100 | 4500 | 17' | 12' | 5.4 | 89 | 0.33 | 0.42 |
| MP MB 080 4_64 | 70 | 100 | 250 | 3100 | 4500 | 17' | 12' | 5.4 | 89 | 0.32 | 0.41 |
| MP MB 080 4_75 | 70 | 100 | 250 | 3200 | 4500 | 17' | 12' | 5.4 | 89 | 0.27 | 0.36 |
| MP MB 080 4_80 | 70 | 100 | 250 | 3100 | 4500 | 17' | 12' | 5.4 | 89 | 0.32 | 0.41 |
| MP MB 080 4_84 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 89 | 0.23 | 0.32 |
| MP MB 080 4_90 | 40 | 80 | 180 | 4000 | 6000 | 17' | 12' | 5.4 | 89 | 0.20 | 0.29 |
| MP MB 080 4_120 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 89 | 0.20 | 0.29 |
| MP MB 080 4_125 | 70 | 100 | 250 | 3200 | 4500 | 17' | 12' | 5.4 | 89 | 0.27 | 0.36 |
| MP MB 080 4_140 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 89 | 0.22 | 0.31 |
| MP MB 080 4_150 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 89 | 0.20 | 0.29 |
| MP MB 080 4_160 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 89 | 0.20 | 0.29 |
| MP MB 080 4_175 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 89 | 0.22 | 0.31 |
| MP MB 080 4_200 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 89 | 0.20 | 0.29 |
| MP MB 080 4_210 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 89 | 0.20 | 0.29 |
| MP MB 080 4_216 | 70 | 100 | 250 | 3200 | 4500 | 17' | 12' | 5.4 | 89 | 0.20 | 0.29 |
| MP MB 080 4_250 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 89 | 0.19 | 0.28 |
| MP MB 080 4_280 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 89 | 0.19 | 0.28 |
| MP MB 080 4_350 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 89 | 0.19 | 0.28 |
| MP MB 080 4_400 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 89 | 0.19 | 0.28 |
| MP MB 080 4_500 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 89 | 0.19 | 0.28 |
| MP MB 080 4_700 | 70 | 100 | 250 | 4000 | 6000 | 17' | 12' | 5.4 | 89 | 0.19 | 0.28 |
| MP MB 080 4_1000 | 40 | 80 | 180 | 4000 | 6000 | 17' | 12' | 5.4 | 89 | 0.19 | 0.28 |



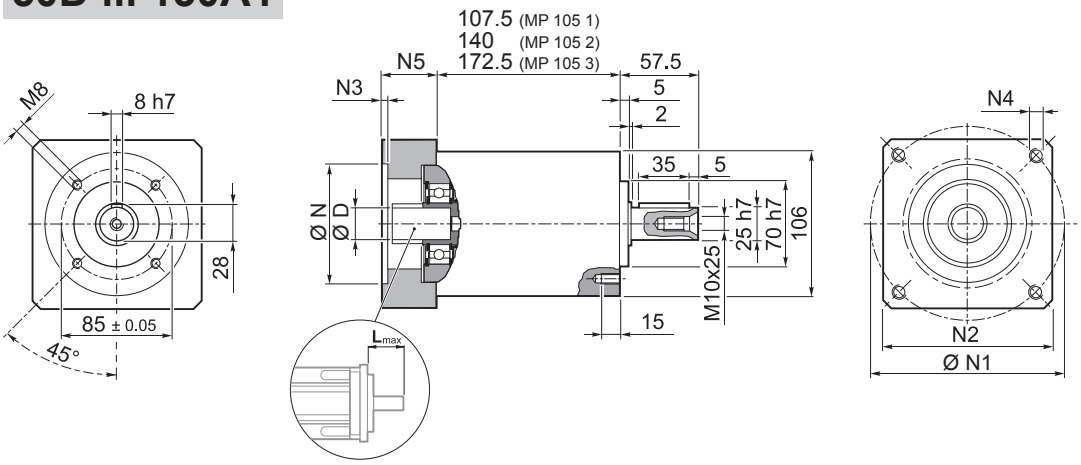
# MP 105

## IS




| | Kg |
|---|---|
| **MP 105 1** | 6.5 |
| **MP 105 2** | 8.5 |
| **MP 105 3** | 10.5 |

## 50D ... 130A1



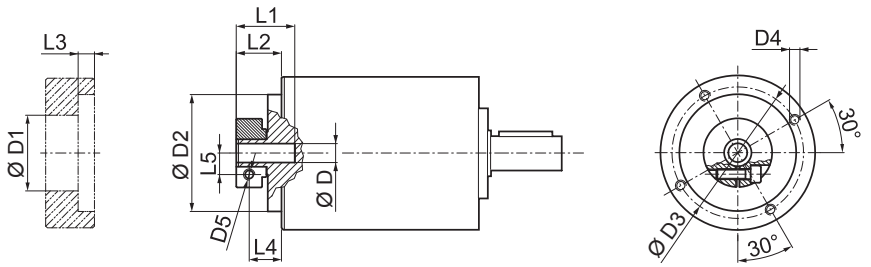

| | Kg |
|---|---|
| **MP 105 1** | 6.5 |
| **MP 105 2** | 8.5 |
| **MP 105 3** | 10.5 |

| | D | | | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **50D** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 50 | 95 | 100 | 5 | M6x14 | 28 | 40 |
| **55A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 55 | 125.7 | 105 | 5 | M6x16 | 28 | 40 |
| **60A2** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 60 | 75 | 100 | 6.5 | M5x14 | 28 | 40 |
| **60AH2** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 60 | 75 | 100 | 4 | 6.5 | 33 | 40 |
| **60B1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 60 | 85 | 100 | 6.5 | M5x14 | 28 | 40 |
| **70A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 70 | 85 | 100 | 6.5 | M6x14 | 28 | 40 |
| **70AH1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 70 | 85 | 100 | 4 | 6.5 | 33 | 40 |
| **70B1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 70 | 90 | 100 | 6.5 | M5x12 | 28 | 40 |
| **80A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 80 | 100 | 100 | 6.5 | M6x16 | 28 | 40 |
| **80AH1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 80 | 100 | 100 | 4 | 6.5 | 33 | 40 |
| **95A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 95 | 115 | 100 | 6.5 | M8x18 | 28 | 40 |
| **95A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 95 | 115 | 100 | 6.5 | M8x18 | 38 | 50 |
| **95B** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 95 | 130 | 115 | 6.5 | M8x18 | 28 | 40 |
| **110A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 110 | 130 | 115 | 6.5 | M8x18 | 28 | 40 |
| **110A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 110 | 130 | 115 | 6.5 | M8x20 | 38 | 50 |
| **110B** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 110 | 145 | 120 | 6.5 | M8x20 | 38 | 50 |
| **110B1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 28 | – | 110 | 145 | 120 | 6.5 | M8x20 | 48 | 60 |
| **130A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 130 | 165 | 140 | 6.5 | M10x20 | 38 | 50 |
| **130A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 130 | 165 | 140 | 6.5 | M10x25 | 48 | 60 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

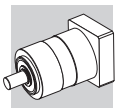
# MP 105

## FM



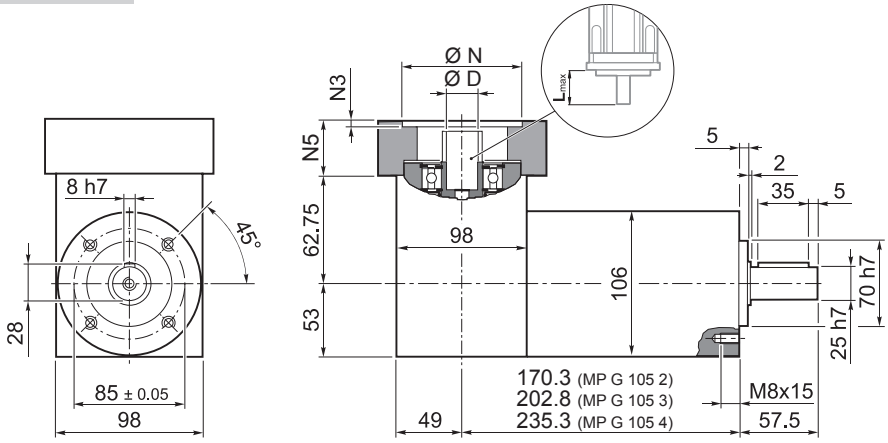

| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 12 | 12.7 | | 43 | 90 | 98 | M6x15 | M6 | 31.5 | 19.5 | 7.6 | 12 | 12.5 |
| 14 | 15 | 15.875 | 16 | 48 | 90 | 98 | M6x15 | M6 | 31.5 | 19.5 | 7.6 | 12 | 14.5 |
| 19 | | | | 51 | 90 | 98 | M6x15 | M6 | 31.5 | 19.5 | 7.6 | 12 | 16.5 |
| 22 | 24 | | | 56.5 | 90 | 98 | M6x15 | M6 | 35 | 23 | 7.6 | 12 | 19 |
| 28 | | | | 67 | 90 | 98 | M6x15 | M8 | 35 | 23 | 7.6 | 14 | 22.5 |
| 32 | | | | 71 | 90 | 98 | M6x15 | M8 | 37 | 25 | 7.6 | 16 | 24.5 |

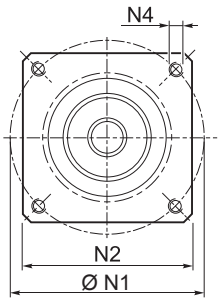
| i | $M_{n2}$ | $M_{a2}$ | $M_{p2}$ | $n_1$ | $n_{1\,max}$ | $\varphi_S$ | $\varphi_R$ | $C_t$ | $R_{1\,max}$ | SB $R_{2\,max}$ | SB $A_{2\,max}$ | HB $R_{2\,max}$ | HB $A_{2\,max}$ | $\eta$ | $J_G$ [kgcm²] D 11 ... 12.7 | D 14 ... 19 | D 22 - 24 | D 28 - 32 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | [Nm] | [Nm] | [Nm] | [min⁻¹] | [min⁻¹] | [arcmin] | | $\frac{Nm}{arcmin}$ | [N] | [N] | [N] | [N] | [N] | % | | | | |
| MP 105 1_3 | 100 | 180 | 360 | 2500 | 3500 | 15' | 10' | 22.0 | 600 | 1500 | 1600 | 3800 | 4000 | 97 | 1.70 | 1.78 | 2.22 | 2.59 |
| MP 105 1_4 | 140 | 210 | 450 | 2800 | 4500 | 15' | 10' | 22.0 | 600 | 1500 | 1600 | 3800 | 4000 | 97 | 0.99 | 1.06 | 1.51 | 1.87 |
| MP 105 1_5 | 140 | 210 | 450 | 3000 | 4500 | 15' | 10' | 22.0 | 600 | 1500 | 1600 | 3800 | 4000 | 97 | 0.72 | 0.79 | 1.23 | 1.60 |
| MP 105 1_6 | 140 | 210 | 450 | 3000 | 4500 | 15' | 10' | 22.0 | 600 | 1500 | 1600 | 3800 | 4000 | 97 | 0.36 | 0.43 | 0.88 | 1.24 |
| MP 105 1_7 | 140 | 210 | 450 | 3500 | 5000 | 15' | 10' | 22.0 | 600 | 1500 | 1600 | 3800 | 4000 | 97 | 0.47 | 0.55 | 0.99 | 1.35 |
| MP 105 1_10 | 100 | 180 | 360 | 3500 | 5000 | 15' | 10' | 22.0 | 600 | 1500 | 1600 | 3800 | 4000 | 97 | 0.33 | 0.41 | 0.85 | 1.21 |
| MP 105 2_9 | 100 | 180 | 360 | 2500 | 3500 | 15' | 10' | 20.5 | 600 | 1500 | 1600 | 3800 | 4000 | 94 | 1.58 | 1.63 | 2.07 | 2.44 |
| MP 105 2_12 | 170 | 250 | 600 | 2500 | 3500 | 15' | 10' | 20.5 | 600 | 1500 | 1600 | 3800 | 4000 | 94 | 1.52 | 1.59 | 2.03 | 2.40 |
| MP 105 2_15 | 170 | 250 | 600 | 2500 | 3500 | 15' | 10' | 20.5 | 600 | 1500 | 1600 | 3800 | 4000 | 94 | 1.47 | 1.55 | 1.99 | 2.36 |
| MP 105 2_16 | 170 | 250 | 600 | 2800 | 4500 | 15' | 10' | 20.5 | 600 | 1500 | 1600 | 3800 | 4000 | 94 | 0.87 | 0.95 | 1.39 | 1.76 |
| MP 105 2_20 | 170 | 250 | 600 | 3000 | 4500 | 15' | 10' | 20.5 | 600 | 1500 | 1600 | 3800 | 4000 | 94 | 0.86 | 0.93 | 1.37 | 1.74 |
| MP 105 2_25 | 170 | 250 | 600 | 3000 | 4500 | 15' | 10' | 20.5 | 600 | 1500 | 1600 | 3800 | 4000 | 94 | 0.63 | 0.71 | 1.15 | 1.51 |
| MP 105 2_28 | 170 | 250 | 600 | 3500 | 5000 | 15' | 10' | 20.5 | 600 | 1500 | 1600 | 3800 | 4000 | 94 | 0.43 | 0.51 | 0.95 | 1.32 |
| MP 105 2_30 | 100 | 180 | 360 | 3500 | 5000 | 15' | 10' | 20.5 | 600 | 1500 | 1600 | 3800 | 4000 | 94 | 0.32 | 0.40 | 0.84 | 1.20 |
| MP 105 2_35 | 170 | 250 | 600 | 3500 | 5000 | 15' | 10' | 20.5 | 600 | 1500 | 1600 | 3800 | 4000 | 94 | 0.43 | 0.50 | 0.95 | 1.31 |
| MP 105 2_36 | 140 | 210 | 450 | 3000 | 4500 | 15' | 10' | 20.5 | 600 | 1500 | 1600 | 3800 | 4000 | 94 | 0.32 | 0.39 | 0.84 | 1.20 |
| MP 105 2_40 | 170 | 250 | 600 | 3500 | 5000 | 15' | 10' | 20.5 | 600 | 1500 | 1600 | 3800 | 4000 | 94 | 0.31 | 0.39 | 0.83 | 1.20 |
| MP 105 2_50 | 170 | 250 | 600 | 3500 | 5000 | 15' | 10' | 20.5 | 600 | 1500 | 1600 | 3800 | 4000 | 94 | 0.31 | 0.39 | 0.83 | 1.19 |
| MP 105 2_70 | 170 | 250 | 600 | 3500 | 5000 | 15' | 10' | 20.5 | 600 | 1500 | 1600 | 3800 | 4000 | 94 | 0.31 | 0.38 | 0.83 | 1.19 |
| MP 105 2_100 | 100 | 180 | 360 | 3500 | 5000 | 15' | 10' | 20.5 | 600 | 1500 | 1600 | 3800 | 4000 | 94 | 0.31 | 0.38 | 0.83 | 1.19 |
| MP 105 3_48 | 170 | 250 | 600 | 2800 | 4500 | 17' | 12' | 17.5 | 600 | 1500 | 1600 | 3800 | 4000 | 91 | 0.91 | 0.98 | 1.42 | 1.79 |
| MP 105 3_64 | 170 | 250 | 600 | 2800 | 4500 | 17' | 12' | 17.5 | 600 | 1500 | 1600 | 3800 | 4000 | 91 | 0.87 | 0.94 | 1.38 | 1.75 |
| MP 105 3_75 | 170 | 250 | 600 | 3000 | 4500 | 17' | 12' | 17.5 | 600 | 1500 | 1600 | 3800 | 4000 | 91 | 0.66 | 0.74 | 1.18 | 1.55 |
| MP 105 3_80 | 170 | 250 | 600 | 2800 | 4500 | 17' | 12' | 17.5 | 600 | 1500 | 1600 | 3800 | 4000 | 91 | 0.86 | 0.94 | 1.38 | 1.75 |
| MP 105 3_84 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 600 | 1500 | 1600 | 3800 | 4000 | 91 | 0.44 | 0.52 | 0.96 | 1.33 |
| MP 105 3_90 | 100 | 180 | 360 | 3500 | 5000 | 17' | 12' | 17.5 | 600 | 1500 | 1600 | 3800 | 4000 | 91 | 0.32 | 0.39 | 0.84 | 1.20 |
| MP 105 3_120 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 600 | 1500 | 1600 | 3800 | 4000 | 91 | 0.32 | 0.39 | 0.84 | 1.20 |
| MP 105 3_125 | 170 | 250 | 600 | 3000 | 4500 | 17' | 12' | 17.5 | 600 | 1500 | 1600 | 3800 | 4000 | 91 | 0.63 | 0.70 | 1.15 | 1.51 |
| MP 105 3_140 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 600 | 1500 | 1600 | 3800 | 4000 | 91 | 0.43 | 0.51 | 0.95 | 1.32 |
| MP 105 3_150 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 600 | 1500 | 1600 | 3800 | 4000 | 91 | 0.32 | 0.39 | 0.84 | 1.20 |
| MP 105 3_160 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 600 | 1500 | 1600 | 3800 | 4000 | 91 | 0.31 | 0.39 | 0.83 | 1.21 |
| MP 105 3_175 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 600 | 1500 | 1600 | 3800 | 4000 | 91 | 0.43 | 0.50 | 0.95 | 1.31 |
| MP 105 3_200 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 600 | 1500 | 1600 | 3800 | 4000 | 91 | 0.31 | 0.39 | 0.83 | 1.20 |
| MP 105 3_210 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 600 | 1500 | 1600 | 3800 | 4000 | 91 | 0.32 | 0.39 | 0.84 | 1.20 |
| MP 105 3_216 | 170 | 250 | 600 | 3000 | 4500 | 17' | 12' | 17.5 | 600 | 1500 | 1600 | 3800 | 4000 | 91 | 0.31 | 0.39 | 0.83 | 1.20 |
| MP 105 3_250 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 600 | 1500 | 1600 | 3800 | 4000 | 91 | 0.31 | 0.39 | 0.83 | 1.19 |
| MP 105 3_280 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 600 | 1500 | 1600 | 3800 | 4000 | 91 | 0.31 | 0.38 | 0.83 | 1.19 |
| MP 105 3_350 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 600 | 1500 | 1600 | 3800 | 4000 | 91 | 0.31 | 0.38 | 0.83 | 1.19 |
| MP 105 3_400 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 600 | 1500 | 1600 | 3800 | 4000 | 91 | 0.31 | 0.38 | 0.83 | 1.19 |
| MP 105 3_500 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 600 | 1500 | 1600 | 3800 | 4000 | 91 | 0.31 | 0.38 | 0.83 | 1.19 |
| MP 105 3_700 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 600 | 1500 | 1600 | 3800 | 4000 | 91 | 0.31 | 0.38 | 0.83 | 1.19 |
| MP 105 3_1000 | 100 | 180 | 360 | 3500 | 5000 | 17' | 12' | 17.5 | 600 | 1500 | 1600 | 3800 | 4000 | 91 | 0.31 | 0.38 | 0.83 | 1.19 |



# MP G 105

## 50D ... 130A1




| | Kg |
|---|---|
| **MP G 105 2** | 8.5 |
| **MP G 105 3** | 10.5 |
| **MP G 105 4** | 12.5 |

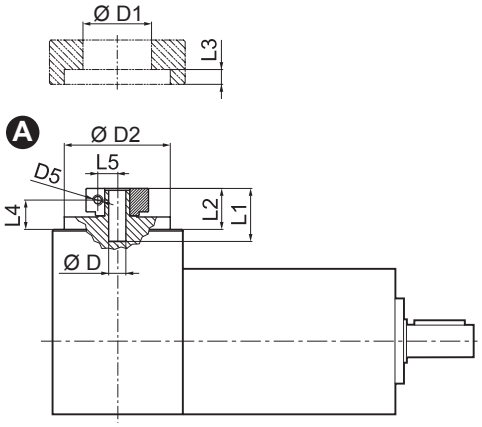
MP

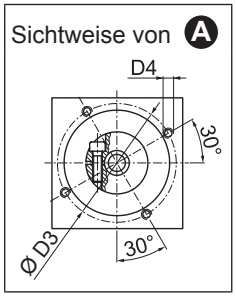
|  | D | | | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **50D** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 50 | 95 | 100 | 5 | M6x14 | 28 | 40 |
| **55A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 55 | 125.7 | 105 | 5 | M6x16 | 28 | 40 |
| **60A2** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 60 | 75 | 100 | 6.5 | M5x14 | 28 | 40 |
| **60AH2** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 60 | 75 | 100 | 4 | 6.5 | 33 | 40 |
| **60B1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 60 | 85 | 100 | 6.5 | M5x14 | 28 | 40 |
| **70A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 70 | 85 | 100 | 6.5 | M6x14 | 28 | 40 |
| **70AH1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 70 | 85 | 100 | 4 | 6.5 | 33 | 40 |
| **70B1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 70 | 90 | 100 | 6.5 | M5x12 | 28 | 40 |
| **80A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 80 | 100 | 100 | 6.5 | M6x16 | 28 | 40 |
| **80AH1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 80 | 100 | 100 | 4 | 6.5 | 33 | 40 |
| **95A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 95 | 115 | 100 | 6.5 | M8x18 | 28 | 40 |
| **95A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 95 | 115 | 100 | 6.5 | M8x18 | 38 | 50 |
| **95B** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 95 | 130 | 115 | 6.5 | M8x18 | 28 | 40 |
| **110A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 110 | 130 | 115 | 6.5 | M8x18 | 28 | 40 |
| **110A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 110 | 130 | 115 | 6.5 | M8x20 | 38 | 50 |
| **110B** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 110 | 145 | 120 | 6.5 | M8x20 | 38 | 50 |
| **110B1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 28 | – | 110 | 145 | 120 | 6.5 | M8x20 | 48 | 60 |
| **130A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 130 | 165 | 140 | 6.5 | M10x20 | 38 | 50 |
| **130A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 130 | 165 | 140 | 6.5 | M10x25 | 48 | 60 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

# MP G 105

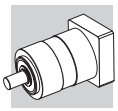
**FM**



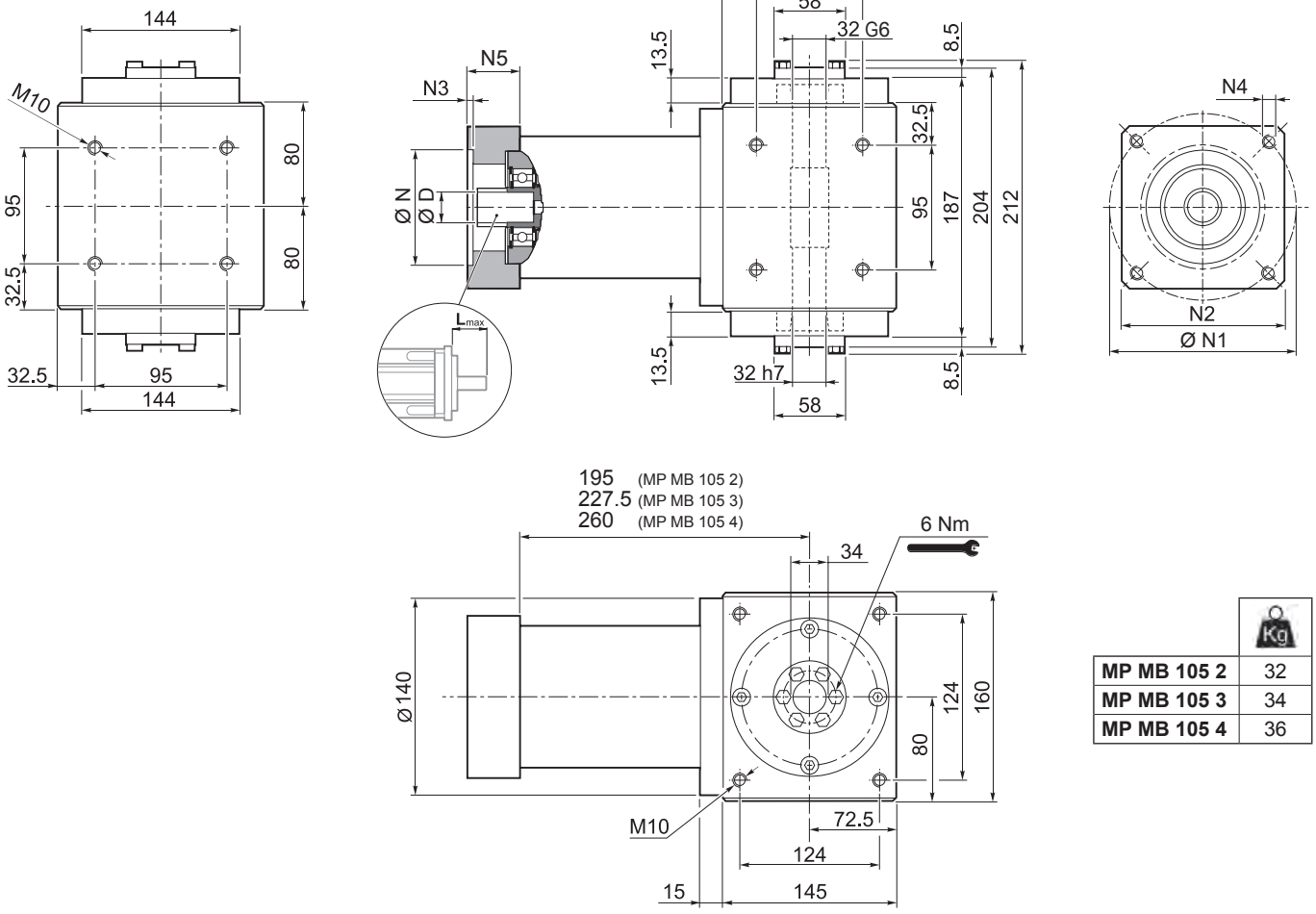

| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 12 | 12.7 | | 43 | 90 | 98 | M6x15 | M6 | 31.5 | 19.5 | 7.6 | 12 | 12.5 |
| 14 | 15 | 15.875 | 16 | 48 | 90 | 98 | M6x15 | M6 | 31.5 | 19.5 | 7.6 | 12 | 14.5 |
| 19 | | | | 51 | 90 | 98 | M6x15 | M6 | 31.5 | 19.5 | 7.6 | 12 | 16.5 |
| 22 | 24 | | | 56.5 | 90 | 98 | M6x15 | M6 | 35 | 23 | 7.6 | 12 | 19 |
| 28 | | | | 67 | 90 | 98 | M6x15 | M8 | 35 | 23 | 7.6 | 14 | 22.5 |
| 32 | | | | 71 | 90 | 98 | M6x15 | M8 | 37 | 25 | 7.6 | 16 | 24.5 |

| i | $M_{n2}$ | $M_{a2}$ | $M_{p2}$ | $n_1$ | $n_{1\,max}$ | $\varphi_S$ | $\varphi_R$ | $C_t$ | SB $R_{2\,max}$ | SB $A_{2\,max}$ | HB $R_{2\,max}$ | HB $A_{2\,max}$ | $\eta$ | $J_G$ [kgcm²] D 11 ... 12.7 | $J_G$ [kgcm²] D 14 ... 19 | $J_G$ [kgcm²] D 22 - 24 | $J_G$ [kgcm²] D 28 - 32 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | [Nm] | [Nm] | [Nm] | [min⁻¹] | [min⁻¹] | [arcmin] | | [Nm/arcmin] | [N] | [N] | [N] | [N] | % | | | | |
| MP G 105 2_3 | 100 | 180 | 360 | 2500 | 3500 | 15' | 10' | 22.0 | 1500 | 1600 | 3800 | 4000 | 94 | 1.85 | 2.01 | 2.33 | 3.07 |
| MP G 105 2_4 | 140 | 210 | 450 | 2800 | 4500 | 15' | 10' | 22.0 | 1500 | 1600 | 3800 | 4000 | 94 | 1.14 | 1.29 | 1.62 | 2.35 |
| MP G 105 2_5 | 140 | 210 | 450 | 3000 | 4500 | 15' | 10' | 22.0 | 1500 | 1600 | 3800 | 4000 | 94 | 1.07 | 1.21 | 1.34 | 2.08 |
| MP G 105 2_6 | 140 | 210 | 450 | 3000 | 4500 | 15' | 10' | 22.0 | 1500 | 1600 | 3800 | 4000 | 94 | 0.87 | 1.02 | 1.16 | 1.89 |
| MP G 105 2_7 | 140 | 210 | 450 | 3500 | 5000 | 15' | 10' | 22.0 | 1500 | 1600 | 3800 | 4000 | 94 | 0.98 | 1.14 | 1.27 | 2.00 |
| MP G 105 2_10 | 100 | 180 | 360 | 3500 | 5000 | 15' | 10' | 22.0 | 1500 | 1600 | 3800 | 4000 | 94 | 0.94 | 1.09 | 1.23 | 1.95 |
| MP G 105 3_9 | 100 | 180 | 360 | 2500 | 3500 | 15' | 10' | 20.5 | 1500 | 1600 | 3800 | 4000 | 91 | 1.76 | 1.86 | 2.18 | 2.92 |
| MP G 105 3_12 | 170 | 250 | 600 | 2500 | 3500 | 15' | 10' | 20.5 | 1500 | 1600 | 3800 | 4000 | 91 | 1.60 | 1.75 | 2.14 | 2.88 |
| MP G 105 3_15 | 170 | 250 | 600 | 2500 | 3500 | 15' | 10' | 20.5 | 1500 | 1600 | 3800 | 4000 | 91 | 1.57 | 1.73 | 2.10 | 2.84 |
| MP G 105 3_16 | 170 | 250 | 600 | 2800 | 4500 | 15' | 10' | 20.5 | 1500 | 1600 | 3800 | 4000 | 91 | 1.02 | 1.18 | 1.50 | 2.24 |
| MP G 105 3_20 | 170 | 250 | 600 | 3000 | 4500 | 15' | 10' | 20.5 | 1500 | 1600 | 3800 | 4000 | 91 | 1.20 | 1.35 | 1.48 | 2.22 |
| MP G 105 3_25 | 170 | 250 | 600 | 3000 | 4500 | 15' | 10' | 20.5 | 1500 | 1600 | 3800 | 4000 | 91 | 1.13 | 1.29 | 1.42 | 2.15 |
| MP G 105 3_28 | 170 | 250 | 600 | 3500 | 5000 | 15' | 10' | 20.5 | 1500 | 1600 | 3800 | 4000 | 91 | 0.94 | 1.10 | 1.23 | 1.97 |
| MP G 105 3_30 | 100 | 180 | 360 | 3500 | 5000 | 15' | 10' | 20.5 | 1500 | 1600 | 3800 | 4000 | 91 | 0.93 | 1.08 | 1.22 | 1.94 |
| MP G 105 3_35 | 170 | 250 | 600 | 3500 | 5000 | 15' | 10' | 20.5 | 1500 | 1600 | 3800 | 4000 | 91 | 1.02 | 1.17 | 1.31 | 2.04 |
| MP G 105 3_36 | 140 | 210 | 450 | 3000 | 4500 | 15' | 10' | 20.5 | 1500 | 1600 | 3800 | 4000 | 91 | 0.83 | 0.98 | 1.12 | 1.85 |
| MP G 105 3_40 | 170 | 250 | 600 | 3500 | 5000 | 15' | 10' | 20.5 | 1500 | 1600 | 3800 | 4000 | 91 | 0.96 | 1.11 | 1.25 | 1.98 |
| MP G 105 3_50 | 170 | 250 | 600 | 3500 | 5000 | 15' | 10' | 20.5 | 1500 | 1600 | 3800 | 4000 | 91 | 0.96 | 1.11 | 1.25 | 1.98 |
| MP G 105 3_70 | 170 | 250 | 600 | 3500 | 5000 | 15' | 10' | 20.5 | 1500 | 1600 | 3800 | 4000 | 91 | 0.92 | 1.06 | 1.21 | 1.93 |
| MP G 105 3_100 | 100 | 180 | 360 | 3500 | 5000 | 15' | 10' | 20.5 | 1500 | 1600 | 3800 | 4000 | 91 | 0.92 | 1.06 | 1.21 | 1.93 |
| MP G 105 4_48 | 170 | 250 | 600 | 2800 | 4500 | 17' | 12' | 17.5 | 1500 | 1600 | 3800 | 4000 | 89 | 1.06 | 1.21 | 1.53 | 2.27 |
| MP G 105 4_64 | 170 | 250 | 600 | 2800 | 4500 | 17' | 12' | 17.5 | 1500 | 1600 | 3800 | 4000 | 89 | 1.02 | 1.17 | 1.49 | 2.23 |
| MP G 105 4_75 | 170 | 250 | 600 | 3000 | 4500 | 17' | 12' | 17.5 | 1500 | 1600 | 3800 | 4000 | 89 | 1.00 | 1.16 | 1.29 | 2.03 |
| MP G 105 4_80 | 170 | 250 | 600 | 2800 | 4500 | 17' | 12' | 17.5 | 1500 | 1600 | 3800 | 4000 | 89 | 1.01 | 1.17 | 1.49 | 2.23 |
| MP G 105 4_84 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 1500 | 1600 | 3800 | 4000 | 89 | 0.95 | 1.11 | 1.24 | 1.98 |
| MP G 105 4_90 | 100 | 180 | 360 | 3500 | 5000 | 17' | 12' | 17.5 | 1500 | 1600 | 3800 | 4000 | 89 | 0.93 | 1.07 | 1.22 | 1.94 |
| MP G 105 4_120 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 1500 | 1600 | 3800 | 4000 | 89 | 0.93 | 1.07 | 1.22 | 1.94 |
| MP G 105 4_125 | 170 | 250 | 600 | 3000 | 4500 | 17' | 12' | 17.5 | 1500 | 1600 | 3800 | 4000 | 89 | 0.97 | 1.12 | 1.26 | 1.99 |
| MP G 105 4_140 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 1500 | 1600 | 3800 | 4000 | 89 | 0.94 | 1.10 | 1.23 | 1.97 |
| MP G 105 4_150 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 1500 | 1600 | 3800 | 4000 | 89 | 0.93 | 1.07 | 1.22 | 1.94 |
| MP G 105 4_160 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 1500 | 1600 | 3800 | 4000 | 89 | 0.92 | 1.07 | 1.21 | 1.96 |
| MP G 105 4_175 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 1500 | 1600 | 3800 | 4000 | 89 | 0.94 | 1.09 | 1.23 | 1.96 |
| MP G 105 4_200 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 1500 | 1600 | 3800 | 4000 | 89 | 0.92 | 1.07 | 1.21 | 1.94 |
| MP G 105 4_210 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 1500 | 1600 | 3800 | 4000 | 89 | 0.93 | 1.07 | 1.22 | 1.94 |
| MP G 105 4_216 | 170 | 250 | 600 | 3000 | 4500 | 17' | 12' | 17.5 | 1500 | 1600 | 3800 | 4000 | 89 | 0.83 | 0.98 | 1.11 | 1.85 |
| MP G 105 4_250 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 1500 | 1600 | 3800 | 4000 | 89 | 0.92 | 1.07 | 1.21 | 1.93 |
| MP G 105 4_280 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 1500 | 1600 | 3800 | 4000 | 89 | 0.92 | 1.06 | 1.21 | 1.93 |
| MP G 105 4_350 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 1500 | 1600 | 3800 | 4000 | 89 | 0.92 | 1.06 | 1.21 | 1.93 |
| MP G 105 4_400 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 1500 | 1600 | 3800 | 4000 | 89 | 0.92 | 1.06 | 1.21 | 1.93 |
| MP G 105 4_500 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 1500 | 1600 | 3800 | 4000 | 89 | 0.92 | 1.06 | 1.21 | 1.93 |
| MP G 105 4_700 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 1500 | 1600 | 3800 | 4000 | 89 | 0.92 | 1.06 | 1.21 | 1.93 |
| MP G 105 4_1000 | 100 | 180 | 360 | 3500 | 5000 | 17' | 12' | 17.5 | 1500 | 1600 | 3800 | 4000 | 89 | 0.92 | 1.06 | 1.21 | 1.93 |



# MP MB 105

## 50D ... 130A1



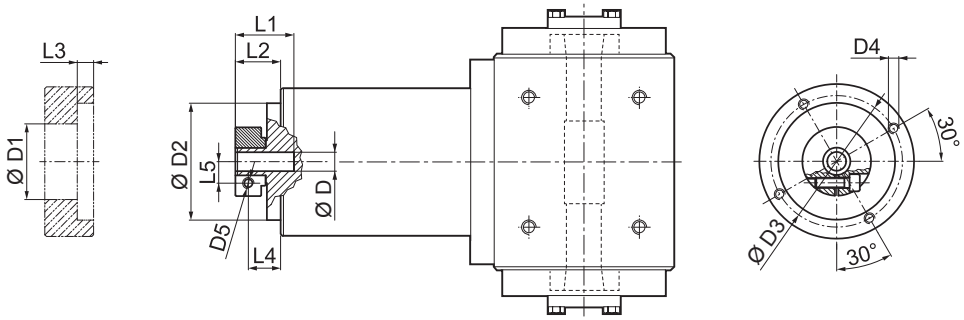

| | Kg |
|---|---|
| **MP MB 105 2** | 32 |
| **MP MB 105 3** | 34 |
| **MP MB 105 4** | 36 |

| | D | | | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **50D** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 50 | 95 | 100 | 5 | M6x14 | 28 | 40 |
| **55A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 55 | 125.7 | 105 | 5 | M6x16 | 28 | 40 |
| **60A2** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 60 | 75 | 100 | 6.5 | M5x14 | 28 | 40 |
| **60AH2** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 60 | 75 | 100 | 4 | 6.5 | 33 | 40 |
| **60B1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 60 | 85 | 100 | 6.5 | M5x14 | 28 | 40 |
| **70A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 70 | 85 | 100 | 6.5 | M6x14 | 28 | 40 |
| **70AH1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 70 | 85 | 100 | 4 | 6.5 | 33 | 40 |
| **70B1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 70 | 90 | 100 | 6.5 | M5x12 | 28 | 40 |
| **80A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 80 | 100 | 100 | 6.5 | M6x16 | 28 | 40 |
| **80AH1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 80 | 100 | 100 | 4 | 6.5 | 33 | 40 |
| **95A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 95 | 115 | 100 | 6.5 | M8x18 | 28 | 40 |
| **95A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 95 | 115 | 100 | 6.5 | M8x18 | 38 | 50 |
| **95B** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 95 | 130 | 115 | 6.5 | M8x18 | 28 | 40 |
| **110A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 110 | 130 | 115 | 6.5 | M8x18 | 28 | 40 |
| **110A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 110 | 130 | 115 | 6.5 | M8x20 | 38 | 50 |
| **110B** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 110 | 145 | 120 | 6.5 | M8x20 | 38 | 50 |
| **110B1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 28 | – | 110 | 145 | 120 | 6.5 | M8x20 | 48 | 60 |
| **130A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 130 | 165 | 140 | 6.5 | M10x20 | 38 | 50 |
| **130A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 130 | 165 | 140 | 6.5 | M10x25 | 48 | 60 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

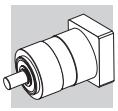
# MP MB 105

**FM**



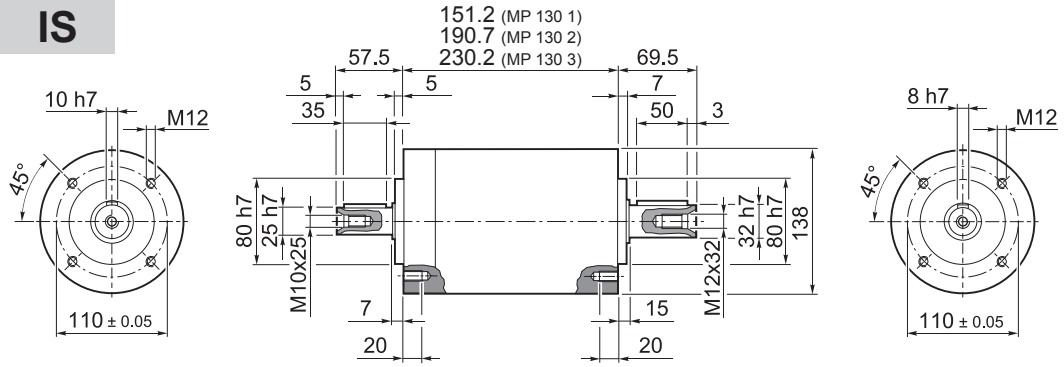

| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 12 | 12.7 | | 43 | 90 | 98 | M6x15 | M6 | 31.5 | 19.5 | 7.6 | 12 | 12.5 |
| 14 | 15 | 15.875 | 16 | 48 | 90 | 98 | M6x15 | M6 | 31.5 | 19.5 | 7.6 | 12 | 14.5 |
| 19 | | | | 51 | 90 | 98 | M6x15 | M6 | 31.5 | 19.5 | 7.6 | 12 | 16.5 |
| 22 | 24 | | | 56.5 | 90 | 98 | M6x15 | M6 | 35 | 23 | 7.6 | 12 | 19 |
| 28 | | | | 67 | 90 | 98 | M6x15 | M8 | 35 | 23 | 7.6 | 14 | 22.5 |
| 32 | | | | 71 | 90 | 98 | M6x15 | M8 | 37 | 25 | 7.6 | 16 | 24.5 |

| i | $M_{n2}$ | $M_{a2}$ | $M_{p2}$ | $n_1$ | $n_{1\,max}$ | $\varphi_S$ | $\varphi_R$ | $C_t$ | $\eta$ | $J_G$ [kgcm²] D | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | [Nm] | [Nm] | [Nm] | [min⁻¹] | [min⁻¹] | [arcmin] | | [Nm/arcmin] | % | 11 ... 12.7 | 14 ... 19 | 22 - 24 | 28 - 32 |
| MP MB 105 2_3 | 100 | 180 | 360 | 2500 | 3500 | 15' | 10' | 22.0 | 94 | 1.70 | 1.78 | 2.22 | 2.59 |
| MP MB 105 2_4 | 140 | 210 | 450 | 2800 | 4500 | 15' | 10' | 22.0 | 94 | 0.99 | 1.06 | 1.51 | 1.87 |
| MP MB 105 2_5 | 140 | 210 | 450 | 3000 | 4500 | 15' | 10' | 22.0 | 94 | 0.72 | 0.79 | 1.23 | 1.60 |
| MP MB 105 2_6 | 140 | 210 | 450 | 3000 | 4500 | 15' | 10' | 22.0 | 94 | 0.36 | 0.43 | 0.88 | 1.24 |
| MP MB 105 2_7 | 140 | 210 | 450 | 3500 | 5000 | 15' | 10' | 22.0 | 94 | 0.47 | 0.55 | 0.99 | 1.35 |
| MP MB 105 2_10 | 100 | 180 | 360 | 3500 | 5000 | 15' | 10' | 22.0 | 94 | 0.33 | 0.41 | 0.85 | 1.21 |
| MP MB 105 3_9 | 100 | 180 | 360 | 2500 | 3500 | 15' | 10' | 20.5 | 91 | 1.58 | 1.63 | 2.07 | 2.44 |
| MP MB 105 3_12 | 170 | 250 | 600 | 2500 | 3500 | 15' | 10' | 20.5 | 91 | 1.52 | 1.59 | 2.03 | 2.40 |
| MP MB 105 3_15 | 170 | 250 | 600 | 2500 | 3500 | 15' | 10' | 20.5 | 91 | 1.47 | 1.55 | 1.99 | 2.36 |
| MP MB 105 3_16 | 170 | 250 | 600 | 2800 | 4500 | 15' | 10' | 20.5 | 91 | 0.87 | 0.95 | 1.39 | 1.76 |
| MP MB 105 3_20 | 170 | 250 | 600 | 3000 | 4500 | 15' | 10' | 20.5 | 91 | 0.86 | 0.93 | 1.37 | 1.74 |
| MP MB 105 3_25 | 170 | 250 | 600 | 3000 | 4500 | 15' | 10' | 20.5 | 91 | 0.63 | 0.71 | 1.15 | 1.51 |
| MP MB 105 3_28 | 170 | 250 | 600 | 3500 | 5000 | 15' | 10' | 20.5 | 91 | 0.43 | 0.51 | 0.95 | 1.32 |
| MP MB 105 3_30 | 100 | 180 | 360 | 3500 | 5000 | 15' | 10' | 20.5 | 91 | 0.32 | 0.40 | 0.84 | 1.20 |
| MP MB 105 3_35 | 170 | 250 | 600 | 3500 | 5000 | 15' | 10' | 20.5 | 91 | 0.43 | 0.50 | 0.95 | 1.31 |
| MP MB 105 3_36 | 140 | 210 | 450 | 3000 | 4500 | 15' | 10' | 20.5 | 91 | 0.32 | 0.39 | 0.84 | 1.20 |
| MP MB 105 3_40 | 170 | 250 | 600 | 3500 | 5000 | 15' | 10' | 20.5 | 91 | 0.31 | 0.39 | 0.83 | 1.20 |
| MP MB 105 3_50 | 170 | 250 | 600 | 3500 | 5000 | 15' | 10' | 20.5 | 91 | 0.31 | 0.39 | 0.83 | 1.19 |
| MP MB 105 3_70 | 170 | 250 | 600 | 3500 | 5000 | 15' | 10' | 20.5 | 91 | 0.31 | 0.38 | 0.83 | 1.19 |
| MP MB 105 3_100 | 100 | 180 | 360 | 3500 | 5000 | 15' | 10' | 20.5 | 91 | 0.31 | 0.38 | 0.83 | 1.19 |
| MP MB 105 4_48 | 170 | 250 | 600 | 2800 | 4500 | 17' | 12' | 17.5 | 89 | 0.91 | 0.98 | 1.42 | 1.79 |
| MP MB 105 4_64 | 170 | 250 | 600 | 2800 | 4500 | 17' | 12' | 17.5 | 89 | 0.87 | 0.94 | 1.38 | 1.75 |
| MP MB 105 4_75 | 170 | 250 | 600 | 3000 | 4500 | 17' | 12' | 17.5 | 89 | 0.66 | 0.74 | 1.18 | 1.55 |
| MP MB 105 4_80 | 170 | 250 | 600 | 2800 | 4500 | 17' | 12' | 17.5 | 89 | 0.86 | 0.94 | 1.38 | 1.75 |
| MP MB 105 4_84 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 89 | 0.44 | 0.52 | 0.96 | 1.33 |
| MP MB 105 4_90 | 100 | 180 | 360 | 3500 | 5000 | 17' | 12' | 17.5 | 89 | 0.32 | 0.39 | 0.84 | 1.20 |
| MP MB 105 4_120 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 89 | 0.32 | 0.39 | 0.84 | 1.20 |
| MP MB 105 4_125 | 170 | 250 | 600 | 3000 | 4500 | 17' | 12' | 17.5 | 89 | 0.63 | 0.70 | 1.15 | 1.51 |
| MP MB 105 4_140 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 89 | 0.43 | 0.51 | 0.95 | 1.32 |
| MP MB 105 4_150 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 89 | 0.32 | 0.39 | 0.84 | 1.20 |
| MP MB 105 4_160 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 89 | 0.31 | 0.39 | 0.83 | 1.21 |
| MP MB 105 4_175 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 89 | 0.43 | 0.50 | 0.95 | 1.31 |
| MP MB 105 4_200 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 89 | 0.31 | 0.39 | 0.83 | 1.20 |
| MP MB 105 4_210 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 89 | 0.32 | 0.39 | 0.84 | 1.20 |
| MP MB 105 4_216 | 170 | 250 | 600 | 3000 | 4500 | 17' | 12' | 17.5 | 89 | 0.31 | 0.39 | 0.83 | 1.20 |
| MP MB 105 4_250 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 89 | 0.31 | 0.39 | 0.83 | 1.19 |
| MP MB 105 4_280 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 89 | 0.31 | 0.38 | 0.83 | 1.19 |
| MP MB 105 4_350 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 89 | 0.31 | 0.38 | 0.83 | 1.19 |
| MP MB 105 4_400 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 89 | 0.31 | 0.38 | 0.83 | 1.19 |
| MP MB 105 4_500 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 89 | 0.31 | 0.38 | 0.83 | 1.19 |
| MP MB 105 4_700 | 170 | 250 | 600 | 3500 | 5000 | 17' | 12' | 17.5 | 89 | 0.31 | 0.38 | 0.83 | 1.19 |
| MP MB 105 4_1000 | 100 | 180 | 360 | 3500 | 5000 | 17' | 12' | 17.5 | 89 | 0.31 | 0.38 | 0.83 | 1.19 |



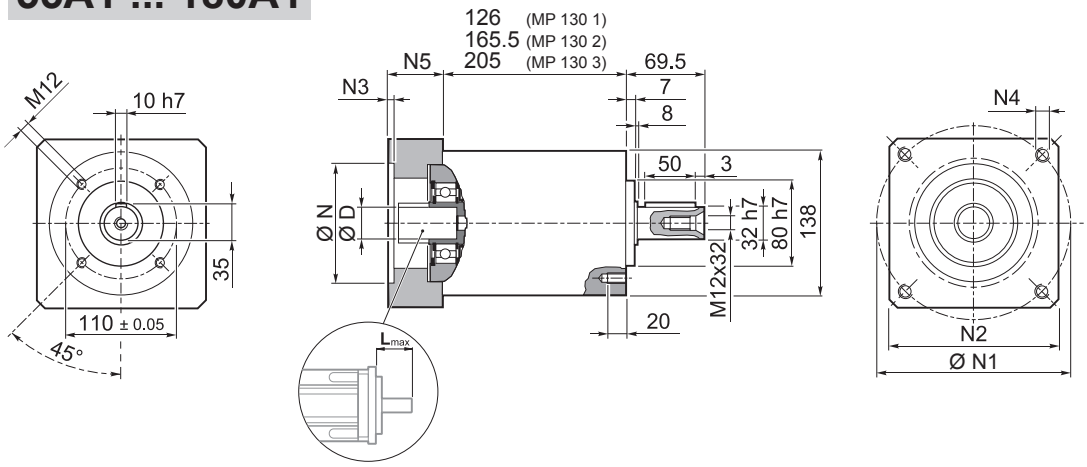
# MP 130

## IS




| | Kg |
|---|---|
| **MP 130 1** | 12.0 |
| **MP 130 2** | 15.5 |
| **MP 130 3** | 18.5 |

## 55A1 ... 180A1



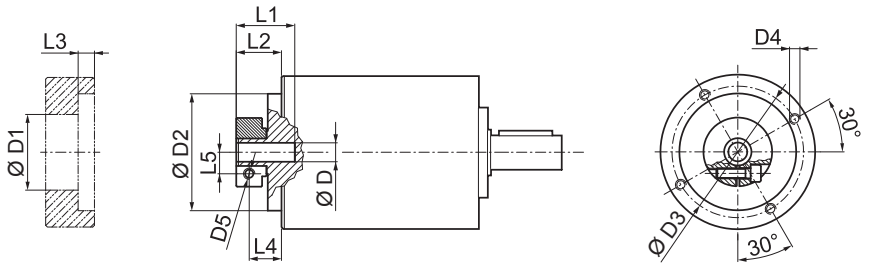

| | Kg |
|---|---|
| **MP 130 1** | 12.0 |
| **MP 130 2** | 15.5 |
| **MP 130 3** | 18.5 |

| | D | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **55A1** | 14 | 15.875 | 16 | 19 | – | – | – | – | – | – | 55.5 | 125.7 | 130 | 4 | M6x15 | 39.5 | 50 |
| **80A2** | 14 | 15.875 | 16 | 19 | – | – | – | – | – | – | 80 | 100 | 130 | 4 | M6x15 | 39.5 | 50 |
| **95A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 95 | 115 | 130 | 4 | M8x20 | 39.5 | 50 |
| **110A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 110 | 130 | 130 | 4 | M8x20 | 39.5 | 50 |
| **110B1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 110 | 145 | 130 | 6.5 | M8x20 | 49.5 | 60 |
| **114A0** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 114.3 | 200 | 170 | 5.5 | M12x25 | 39.5 | 50 |
| **114A** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 35 | 38 | 114.3 | 200 | 170 | 5.5 | M12x25 | 69.5 | 80 |
| **130A** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 130 | 165 | 140 | 4 | M10x20 | 39.5 | 50 |
| **130A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | – | – | 130 | 165 | 140 | 4 | M10x20 | 49.5 | 60 |
| **180A** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | – | – | 180 | 215 | 190 | 5.5 | M14x25 | 49.5 | 60 |
| **180A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 35 | 38 | 180 | 215 | 190 | 5.5 | M14x25 | 69.5 | 80 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

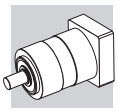
# MP 130

## FM



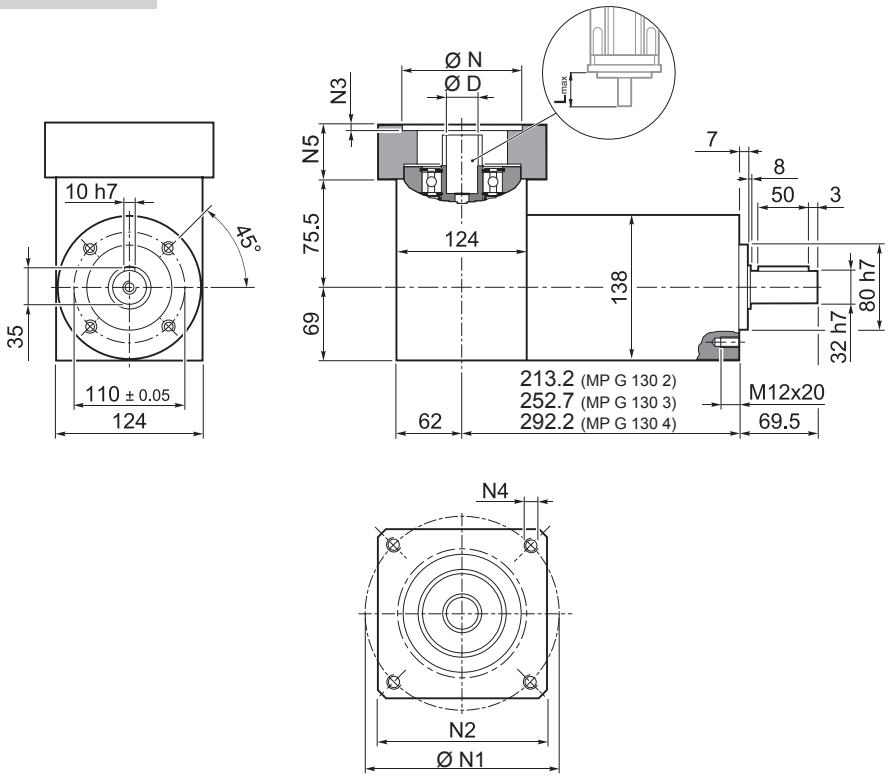

| D | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 15.875 | 16 | 48 | 113 | 125.5 | M8x15 | M6 | 40 | 27.5 | 6 | 20 | 14.5 |
| 19 | | | 51 | 113 | 125.5 | M8x15 | M6 | 40 | 27.5 | 6 | 20 | 16.5 |
| 22 | 24 | | 56.5 | 113 | 125.5 | M8x15 | M6 | 41 | 28.5 | 6 | 19.5 | 19 |
| 28 | | | 67 | 113 | 125.5 | M8x15 | M8 | 41 | 28.5 | 6 | 19.5 | 22.5 |
| 32 | | | 71 | 113 | 125.5 | M8x15 | M8 | 41 | 28.5 | 6 | 19.5 | 24.5 |
| 35 | | | 73 | 113 | 125.5 | M8x15 | M8 | 50 | 37.5 | 11.25 | 26 | 26 |
| 38 | | | 77.5 | 113 | 125.5 | M8x15 | M8 | 50 | 37.5 | 11.25 | 26 | 28 |

| i | $M_{n2}$ [Nm] | $M_{a2}$ [Nm] | $M_{p2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $\varphi_R$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{1\,max}$ [N] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 14 ... 19 | 22 - 24 | 28 - 32 | 35 - 38 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MP 130 1_3 | 215 | 400 | 800 | 2100 | 3000 | 15' | 10' | 43.0 | 800 | 5500 | 6500 | 97 | 5.25 | 5.46 | 5.81 | 7.16 |
| MP 130 1_4 | 380 | 600 | 1100 | 2400 | 3500 | 15' | 10' | 43.0 | 800 | 5500 | 6500 | 97 | 3.06 | 3.26 | 3.61 | 4.97 |
| MP 130 1_5 | 380 | 600 | 1100 | 2900 | 3500 | 15' | 10' | 43.0 | 800 | 5500 | 6500 | 97 | 2.22 | 2.42 | 2.77 | 4.13 |
| MP 130 1_6 | 380 | 600 | 1100 | 2900 | 3500 | 15' | 10' | 43.0 | 800 | 5500 | 6500 | 97 | 1.19 | 1.40 | 1.75 | 3.10 |
| MP 130 1_7 | 380 | 600 | 1100 | 3200 | 4000 | 15' | 10' | 43.0 | 800 | 5500 | 6500 | 97 | 1.47 | 1.68 | 2.03 | 3.38 |
| MP 130 1_10 | 215 | 400 | 800 | 3200 | 4000 | 15' | 10' | 43.0 | 800 | 5500 | 6500 | 97 | 1.04 | 1.25 | 1.60 | 2.95 |
| MP 130 2_9 | 215 | 400 | 800 | 2100 | 3000 | 15' | 10' | 37.5 | 800 | 5500 | 6500 | 94 | 4.82 | 5.02 | 5.37 | 6.72 |
| MP 130 2_12 | 450 | 700 | 1300 | 2100 | 3000 | 15' | 10' | 37.5 | 800 | 5500 | 6500 | 94 | 4.57 | 4.78 | 5.13 | 6.48 |
| MP 130 2_15 | 450 | 700 | 1300 | 2100 | 3000 | 15' | 10' | 37.5 | 800 | 5500 | 6500 | 94 | 4.48 | 4.69 | 5.04 | 6.39 |
| MP 130 2_16 | 450 | 700 | 1300 | 2400 | 3500 | 15' | 10' | 37.5 | 800 | 5500 | 6500 | 94 | 2.67 | 2.88 | 3.23 | 4.58 |
| MP 130 2_20 | 450 | 700 | 1300 | 2900 | 3500 | 15' | 10' | 37.5 | 800 | 5500 | 6500 | 94 | 1.97 | 2.18 | 2.53 | 3.88 |
| MP 130 2_25 | 450 | 700 | 1300 | 2900 | 3500 | 15' | 10' | 37.5 | 800 | 5500 | 6500 | 94 | 1.94 | 2.15 | 2.50 | 3.85 |
| MP 130 2_28 | 450 | 700 | 1300 | 3200 | 4000 | 15' | 10' | 37.5 | 800 | 5500 | 6500 | 94 | 1.34 | 1.55 | 1.90 | 3.25 |
| MP 130 2_30 | 215 | 400 | 800 | 3200 | 4000 | 15' | 10' | 37.5 | 800 | 5500 | 6500 | 94 | 1.00 | 1.21 | 1.56 | 2.91 |
| MP 130 2_35 | 450 | 700 | 1300 | 3200 | 4000 | 15' | 10' | 37.5 | 800 | 5500 | 6500 | 94 | 1.33 | 1.53 | 1.88 | 3.24 |
| MP 130 2_36 | 380 | 600 | 1100 | 2900 | 3500 | 15' | 10' | 37.5 | 800 | 5500 | 6500 | 94 | 1.05 | 1.26 | 1.61 | 2.96 |
| MP 130 2_40 | 450 | 700 | 1300 | 3200 | 4000 | 15' | 10' | 37.5 | 800 | 5500 | 6500 | 94 | 0.98 | 1.19 | 1.54 | 2.89 |
| MP 130 2_50 | 450 | 700 | 1300 | 3200 | 4000 | 15' | 10' | 37.5 | 800 | 5500 | 6500 | 94 | 0.97 | 1.18 | 1.53 | 2.88 |
| MP 130 2_70 | 450 | 700 | 1300 | 3200 | 4000 | 15' | 10' | 37.5 | 800 | 5500 | 6500 | 94 | 0.96 | 1.17 | 1.52 | 2.87 |
| MP 130 2_100 | 215 | 400 | 800 | 3200 | 4000 | 15' | 10' | 37.5 | 800 | 5500 | 6500 | 94 | 0.96 | 1.17 | 1.52 | 2.87 |
| MP 130 3_48 | 450 | 700 | 1300 | 2400 | 3500 | 17' | 12' | 29.5 | 800 | 5500 | 6500 | 91 | 2.77 | 2.98 | 3.33 | 4.68 |
| MP 130 3_64 | 450 | 700 | 1300 | 2400 | 3500 | 17' | 12' | 29.5 | 800 | 5500 | 6500 | 91 | 2.65 | 2.86 | 3.21 | 4.56 |
| MP 130 3_75 | 450 | 700 | 1300 | 2900 | 3500 | 17' | 12' | 29.5 | 800 | 5500 | 6500 | 91 | 2.03 | 2.24 | 2.59 | 3.94 |
| MP 130 3_80 | 450 | 700 | 1300 | 2400 | 3500 | 17' | 12' | 29.5 | 800 | 5500 | 6500 | 91 | 2.65 | 2.85 | 3.20 | 4.56 |
| MP 130 3_84 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 800 | 5500 | 6500 | 91 | 1.37 | 1.58 | 1.93 | 3.28 |
| MP 130 3_90 | 215 | 400 | 800 | 3200 | 4000 | 17' | 12' | 29.5 | 800 | 5500 | 6500 | 91 | 1.00 | 1.20 | 1.55 | 2.91 |
| MP 130 3_120 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 800 | 5500 | 6500 | 91 | 0.99 | 1.20 | 1.55 | 2.90 |
| MP 130 3_125 | 450 | 700 | 1300 | 2900 | 3500 | 17' | 12' | 29.5 | 800 | 5500 | 6500 | 91 | 1.93 | 2.13 | 2.48 | 3.84 |
| MP 130 3_140 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 800 | 5500 | 6500 | 91 | 1.34 | 1.54 | 1.89 | 3.25 |
| MP 130 3_150 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 800 | 5500 | 6500 | 91 | 0.99 | 1.20 | 1.55 | 2.90 |
| MP 130 3_160 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 800 | 5500 | 6500 | 91 | 0.98 | 1.18 | 1.53 | 2.89 |
| MP 130 3_175 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 800 | 5500 | 6500 | 91 | 1.32 | 1.53 | 1.88 | 3.23 |
| MP 130 3_200 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 800 | 5500 | 6500 | 91 | 0.97 | 1.18 | 1.53 | 2.88 |
| MP 130 3_210 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 800 | 5500 | 6500 | 91 | 0.99 | 1.20 | 1.55 | 2.90 |
| MP 130 3_216 | 450 | 700 | 1300 | 2900 | 3500 | 17' | 12' | 29.5 | 800 | 5500 | 6500 | 91 | 1.05 | 1.26 | 1.61 | 2.96 |
| MP 130 3_250 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 800 | 5500 | 6500 | 91 | 0.97 | 1.18 | 1.53 | 2.88 |
| MP 130 3_280 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 800 | 5500 | 6500 | 91 | 0.96 | 1.17 | 1.52 | 2.87 |
| MP 130 3_350 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 800 | 5500 | 6500 | 91 | 0.96 | 1.17 | 1.52 | 2.87 |
| MP 130 3_400 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 800 | 5500 | 6500 | 91 | 0.96 | 1.17 | 1.52 | 2.87 |
| MP 130 3_500 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 800 | 5500 | 6500 | 91 | 0.96 | 1.17 | 1.52 | 2.87 |
| MP 130 3_700 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 800 | 5500 | 6500 | 91 | 0.96 | 1.17 | 1.52 | 2.87 |
| MP 130 3_1000 | 215 | 400 | 800 | 3200 | 4000 | 17' | 12' | 29.5 | 800 | 5500 | 6500 | 91 | 0.96 | 1.17 | 1.52 | 2.87 |



# MP G 130

## 55A1 ... 180A1



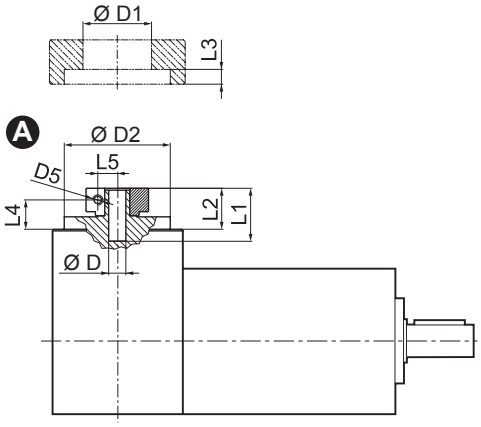

| | Kg |
|---|---|
| **MP G 130 2** | 16.0 |
| **MP G 130 3** | 19.5 |
| **MP G 130 4** | 22.5 |

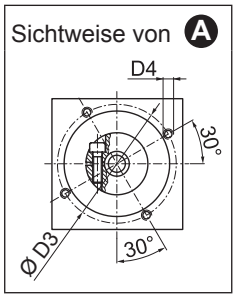
| | D | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **55A1** | 14 | 15.875 | 16 | 19 | – | – | – | – | – | – | 55.5 | 125.7 | 130 | 4 | M6x15 | 39.5 | 50 |
| **80A2** | 14 | 15.875 | 16 | 19 | – | – | – | – | – | – | 80 | 100 | 130 | 4 | M6x15 | 39.5 | 50 |
| **95A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 95 | 115 | 130 | 4 | M8x20 | 39.5 | 50 |
| **110A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 110 | 130 | 130 | 4 | M8x20 | 39.5 | 50 |
| **110B1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 110 | 145 | 130 | 6.5 | M8x20 | 49.5 | 60 |
| **114A0** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 114.3 | 200 | 170 | 5.5 | M12x25 | 39.5 | 50 |
| **114A** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 35 | 38 | 114.3 | 200 | 170 | 5.5 | M12x25 | 69.5 | 80 |
| **130A** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 130 | 165 | 140 | 4 | M10x20 | 39.5 | 50 |
| **130A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | – | – | 130 | 165 | 140 | 4 | M10x20 | 49.5 | 60 |
| **180A** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | – | – | 180 | 215 | 190 | 5.5 | M14x25 | 49.5 | 60 |
| **180A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 35 | 38 | 180 | 215 | 190 | 5.5 | M14x25 | 69.5 | 80 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

# MP G 130

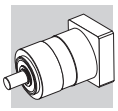
**FM**



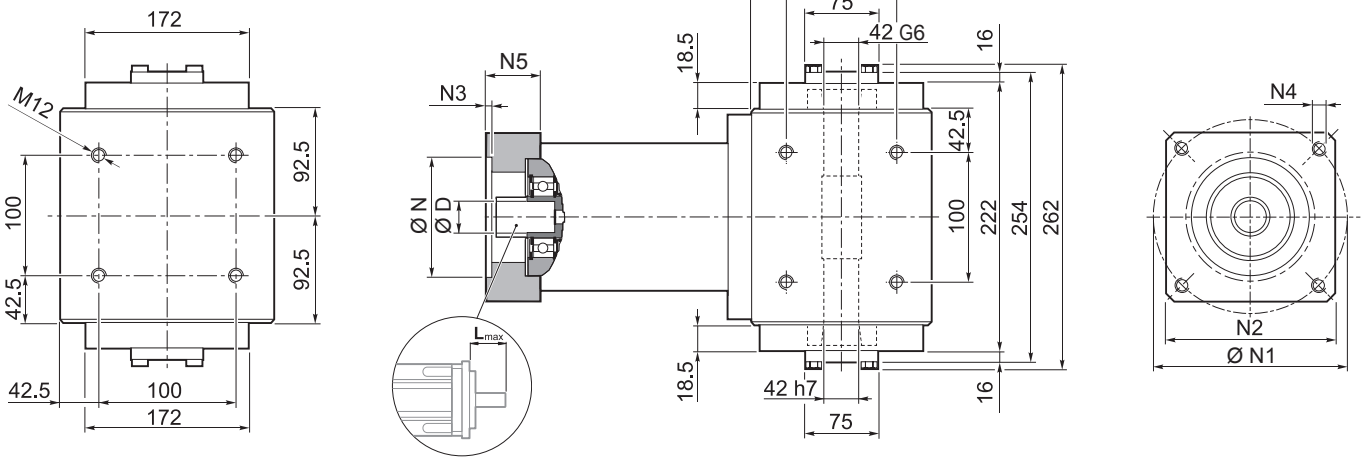

| D | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 15.875 | 16 | 48 | 113 | 125.5 | M8x15 | M6 | 40 | 27.5 | 6 | 20 | 14.5 |
| 19 | | | 51 | 113 | 125.5 | M8x15 | M6 | 40 | 27.5 | 6 | 20 | 16.5 |
| 22 | 24 | | 56.5 | 113 | 125.5 | M8x15 | M6 | 41 | 28.5 | 6 | 19.5 | 19 |
| 28 | | | 67 | 113 | 125.5 | M8x15 | M8 | 41 | 28.5 | 6 | 19.5 | 22.5 |
| 32 | | | 71 | 113 | 125.5 | M8x15 | M8 | 41 | 28.5 | 6 | 19.5 | 24.5 |
| 35 | | | 73 | 113 | 125.5 | M8x15 | M8 | 50 | 37.5 | 11.25 | 26 | 26 |
| 38 | | | 77.5 | 113 | 125.5 | M8x15 | M8 | 50 | 37.5 | 11.25 | 26 | 28 |

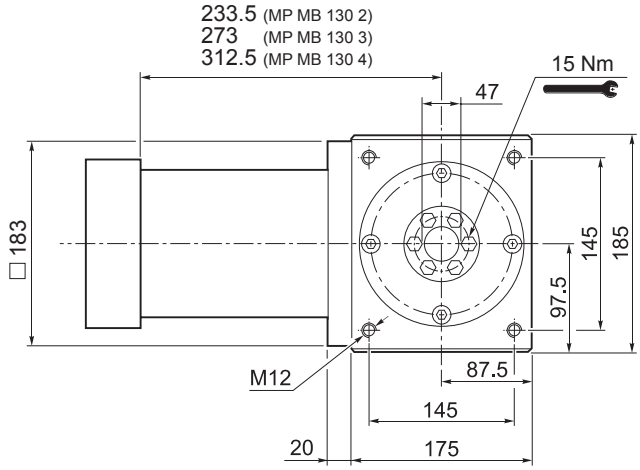
| i | $M_{n\,2}$ | $M_{a\,2}$ | $M_{p\,2}$ | $n_1$ | $n_{1\,max}$ | $\varphi_S$ | $\varphi_R$ | $C_t$ | $R_{2\,max}$ | $A_{2\,max}$ | $\eta$ | $J_G$ [kgcm²] D | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | [Nm] | [Nm] | [Nm] | [min⁻¹] | [min⁻¹] | [arcmin] | | [Nm/arcmin] | [N] | [N] | % | 14 ... 19 | 22 - 24 | 28 - 32 | 35 - 38 |
| MP G 130 2_3 | 215 | 400 | 800 | 2100 | 3000 | 15' | 10' | 43.0 | 5500 | 6500 | 94 | 7.09 | 7.28 | 7.66 | 10.37 |
| MP G 130 2_4 | 380 | 600 | 1100 | 2400 | 3500 | 15' | 10' | 43.0 | 5500 | 6500 | 94 | 4.90 | 5.08 | 5.46 | 8.18 |
| MP G 130 2_5 | 380 | 600 | 1100 | 2900 | 3500 | 15' | 10' | 43.0 | 5500 | 6500 | 94 | 4.81 | 4.99 | 5.38 | 8.10 |
| MP G 130 2_6 | 380 | 600 | 1100 | 2900 | 3500 | 15' | 10' | 43.0 | 5500 | 6500 | 94 | 4.45 | 4.64 | 5.03 | 7.73 |
| MP G 130 2_7 | 380 | 600 | 1100 | 3200 | 4000 | 15' | 10' | 43.0 | 5500 | 6500 | 94 | 4.73 | 4.92 | 5.31 | 8.01 |
| MP G 130 2_10 | 215 | 400 | 800 | 3200 | 4000 | 15' | 10' | 43.0 | 5500 | 6500 | 94 | 4.68 | 4.88 | 5.26 | 7.97 |
| MP G 130 3_9 | 215 | 400 | 800 | 2100 | 3000 | 15' | 10' | 37.5 | 5500 | 6500 | 91 | 6.66 | 6.84 | 7.22 | 9.93 |
| MP G 130 3_12 | 450 | 700 | 1300 | 2100 | 3000 | 15' | 10' | 37.5 | 5500 | 6500 | 91 | 6.25 | 6.45 | 6.84 | 9.54 |
| MP G 130 3_15 | 450 | 700 | 1300 | 2100 | 3000 | 15' | 10' | 37.5 | 5500 | 6500 | 91 | 6.25 | 6.44 | 6.83 | 9.53 |
| MP G 130 3_16 | 450 | 700 | 1300 | 2400 | 3500 | 15' | 10' | 37.5 | 5500 | 6500 | 91 | 4.51 | 4.70 | 5.08 | 7.79 |
| MP G 130 3_20 | 450 | 700 | 1300 | 2900 | 3500 | 15' | 10' | 37.5 | 5500 | 6500 | 91 | 4.56 | 5.36 | 5.75 | 8.45 |
| MP G 130 3_25 | 450 | 700 | 1300 | 2900 | 3500 | 15' | 10' | 37.5 | 5500 | 6500 | 91 | 5.13 | 4.72 | 5.11 | 7.82 |
| MP G 130 3_28 | 450 | 700 | 1300 | 3200 | 4000 | 15' | 10' | 37.5 | 5500 | 6500 | 91 | 4.60 | 4.79 | 5.18 | 7.88 |
| MP G 130 3_30 | 215 | 400 | 800 | 3200 | 4000 | 15' | 10' | 37.5 | 5500 | 6500 | 91 | 4.64 | 4.84 | 5.22 | 7.93 |
| MP G 130 3_35 | 450 | 700 | 1300 | 3200 | 4000 | 15' | 10' | 37.5 | 5500 | 6500 | 91 | 4.92 | 5.10 | 5.49 | 8.20 |
| MP G 130 3_36 | 380 | 600 | 1100 | 2900 | 3500 | 15' | 10' | 37.5 | 5500 | 6500 | 91 | 4.31 | 4.50 | 4.89 | 7.59 |
| MP G 130 3_40 | 450 | 700 | 1300 | 3200 | 4000 | 15' | 10' | 37.5 | 5500 | 6500 | 91 | 4.77 | 4.96 | 5.35 | 8.05 |
| MP G 130 3_50 | 450 | 700 | 1300 | 3200 | 4000 | 15' | 10' | 37.5 | 5500 | 6500 | 91 | 4.76 | 4.96 | 5.34 | 8.05 |
| MP G 130 3_70 | 450 | 700 | 1300 | 3200 | 4000 | 15' | 10' | 37.5 | 5500 | 6500 | 91 | 4.60 | 4.80 | 5.18 | 7.89 |
| MP G 130 3_100 | 215 | 400 | 800 | 3200 | 4000 | 15' | 10' | 37.5 | 5500 | 6500 | 91 | 4.60 | 4.80 | 5.18 | 7.89 |
| MP G 130 4_48 | 450 | 700 | 1300 | 2400 | 3500 | 17' | 12' | 29.5 | 5500 | 6500 | 89 | 4.61 | 4.81 | 5.18 | 7.89 |
| MP G 130 4_64 | 450 | 700 | 1300 | 2400 | 3500 | 17' | 12' | 29.5 | 5500 | 6500 | 89 | 4.49 | 4.68 | 5.06 | 7.77 |
| MP G 130 4_75 | 450 | 700 | 1300 | 2900 | 3500 | 17' | 12' | 29.5 | 5500 | 6500 | 89 | 4.62 | 4.81 | 5.20 | 7.91 |
| MP G 130 4_80 | 450 | 700 | 1300 | 2400 | 3500 | 17' | 12' | 29.5 | 5500 | 6500 | 89 | 4.49 | 4.67 | 5.05 | 7.77 |
| MP G 130 4_84 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 5500 | 6500 | 89 | 4.63 | 4.82 | 5.21 | 7.91 |
| MP G 130 4_90 | 215 | 400 | 800 | 3200 | 4000 | 17' | 12' | 29.5 | 5500 | 6500 | 89 | 4.64 | 4.83 | 5.21 | 7.93 |
| MP G 130 4_120 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 5500 | 6500 | 89 | 4.63 | 4.83 | 5.21 | 7.92 |
| MP G 130 4_125 | 450 | 700 | 1300 | 2900 | 3500 | 17' | 12' | 29.5 | 5500 | 6500 | 89 | 4.52 | 4.70 | 5.09 | 7.81 |
| MP G 130 4_140 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 5500 | 6500 | 89 | 4.60 | 4.78 | 5.17 | 7.88 |
| MP G 130 4_150 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 5500 | 6500 | 89 | 4.63 | 4.83 | 5.21 | 7.92 |
| MP G 130 4_160 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 5500 | 6500 | 89 | 4.62 | 4.81 | 5.19 | 7.91 |
| MP G 130 4_175 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 5500 | 6500 | 89 | 4.58 | 4.77 | 5.16 | 7.86 |
| MP G 130 4_200 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 5500 | 6500 | 89 | 4.61 | 4.81 | 5.19 | 7.90 |
| MP G 130 4_210 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 5500 | 6500 | 89 | 4.63 | 4.83 | 5.21 | 7.92 |
| MP G 130 4_216 | 450 | 700 | 1300 | 2900 | 3500 | 17' | 12' | 29.5 | 5500 | 6500 | 89 | 4.31 | 4.50 | 4.89 | 7.59 |
| MP G 130 4_250 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 5500 | 6500 | 89 | 4.61 | 4.81 | 5.19 | 7.90 |
| MP G 130 4_280 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 5500 | 6500 | 89 | 4.60 | 4.80 | 5.18 | 7.89 |
| MP G 130 4_350 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 5500 | 6500 | 89 | 4.60 | 4.80 | 5.18 | 7.89 |
| MP G 130 4_400 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 5500 | 6500 | 89 | 4.60 | 4.80 | 5.18 | 7.89 |
| MP G 130 4_500 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 5500 | 6500 | 89 | 4.60 | 4.80 | 5.18 | 7.89 |
| MP G 130 4_700 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 5500 | 6500 | 89 | 4.60 | 4.80 | 5.18 | 7.89 |
| MP G 130 4_1000 | 215 | 400 | 800 | 3200 | 4000 | 17' | 12' | 29.5 | 5500 | 6500 | 89 | 4.60 | 4.80 | 5.18 | 7.89 |



# MP MB 130

## 55A1 ... 180A1

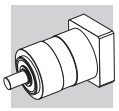



| | Kg |
|---|---|
| **MP MB 130 2** | 54 |
| **MP MB 130 3** | 58 |
| **MP MB 130 4** | 61 |

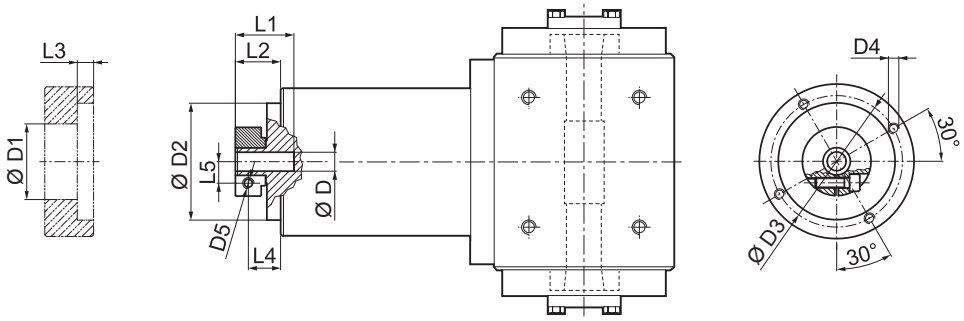
| | D | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **55A1** | 14 | 15.875 | 16 | 19 | – | – | – | – | – | – | 55.5 | 125.7 | 130 | 4 | M6x15 | 39.5 | 50 |
| **80A2** | 14 | 15.875 | 16 | 19 | – | – | – | – | – | – | 80 | 100 | 130 | 4 | M6x15 | 39.5 | 50 |
| **95A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 95 | 115 | 130 | 4 | M8x20 | 39.5 | 50 |
| **110A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 110 | 130 | 130 | 4 | M8x20 | 39.5 | 50 |
| **110B1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 110 | 145 | 130 | 6.5 | M8x20 | 49.5 | 60 |
| **114A0** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 114.3 | 200 | 170 | 5.5 | M12x25 | 39.5 | 50 |
| **114A** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 35 | 38 | 114.3 | 200 | 170 | 5.5 | M12x25 | 69.5 | 80 |
| **130A** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 130 | 165 | 140 | 4 | M10x20 | 39.5 | 50 |
| **130A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | – | – | 130 | 165 | 140 | 4 | M10x20 | 49.5 | 60 |
| **180A** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | – | – | 180 | 215 | 190 | 5.5 | M14x25 | 49.5 | 60 |
| **180A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 35 | 38 | 180 | 215 | 190 | 5.5 | M14x25 | 69.5 | 80 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.



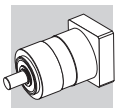
# MP MB 130

**FM**



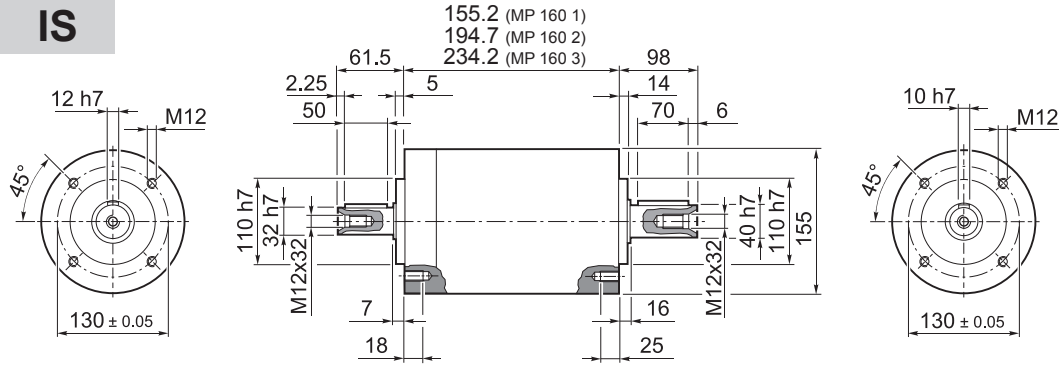

| D | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 15.875 | 16 | 48 | 113 | 125.5 | M8x15 | M6 | 40 | 27.5 | 6 | 20 | 14.5 |
| 19 | | | 51 | 113 | 125.5 | M8x15 | M6 | 40 | 27.5 | 6 | 20 | 16.5 |
| 22 | 24 | | 56.5 | 113 | 125.5 | M8x15 | M6 | 41 | 28.5 | 6 | 19.5 | 19 |
| 28 | | | 67 | 113 | 125.5 | M8x15 | M8 | 41 | 28.5 | 6 | 19.5 | 22.5 |
| 32 | | | 71 | 113 | 125.5 | M8x15 | M8 | 41 | 28.5 | 6 | 19.5 | 24.5 |
| 35 | | | 73 | 113 | 125.5 | M8x15 | M8 | 50 | 37.5 | 11.25 | 26 | 26 |
| 38 | | | 77.5 | 113 | 125.5 | M8x15 | M8 | 50 | 37.5 | 11.25 | 26 | 28 |

| i | $M_{n2}$ [Nm] | $M_{a2}$ [Nm] | $M_{p2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $\varphi_R$ [arcmin] | $C_t$ [Nm/arcmin] | $\eta$ % | $J_G$ [kgcm$^2$] D 14 ... 19 | 22 - 24 | 28 - 32 | 35 - 38 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MP MB 130 2_3 | 215 | 400 | 800 | 2100 | 3000 | 15' | 10' | 43.0 | 94 | 5.25 | 5.46 | 5.81 | 7.16 |
| MP MB 130 2_4 | 380 | 600 | 1100 | 2400 | 3500 | 15' | 10' | 43.0 | 94 | 3.06 | 3.26 | 3.61 | 4.97 |
| MP MB 130 2_5 | 380 | 600 | 1100 | 2900 | 3500 | 15' | 10' | 43.0 | 94 | 2.22 | 2.42 | 2.77 | 4.13 |
| MP MB 130 2_6 | 380 | 600 | 1100 | 2900 | 3500 | 15' | 10' | 43.0 | 94 | 1.19 | 1.40 | 1.75 | 3.10 |
| MP MB 130 2_7 | 380 | 600 | 1100 | 3200 | 4000 | 15' | 10' | 43.0 | 94 | 1.47 | 1.68 | 2.03 | 3.38 |
| MP MB 130 2_10 | 215 | 400 | 800 | 3200 | 4000 | 15' | 10' | 43.0 | 94 | 1.04 | 1.25 | 1.60 | 2.95 |
| MP MB 130 3_9 | 215 | 400 | 800 | 2100 | 3000 | 15' | 10' | 37.5 | 91 | 4.82 | 5.02 | 5.37 | 6.72 |
| MP MB 130 3_12 | 450 | 700 | 1300 | 2100 | 3000 | 15' | 10' | 37.5 | 91 | 4.57 | 4.78 | 5.13 | 6.48 |
| MP MB 130 3_15 | 450 | 700 | 1300 | 2100 | 3000 | 15' | 10' | 37.5 | 91 | 4.48 | 4.69 | 5.04 | 6.39 |
| MP MB 130 3_16 | 450 | 700 | 1300 | 2400 | 3500 | 15' | 10' | 37.5 | 91 | 2.67 | 2.88 | 3.23 | 4.58 |
| MP MB 130 3_20 | 450 | 700 | 1300 | 2900 | 3500 | 15' | 10' | 37.5 | 91 | 1.97 | 2.18 | 2.53 | 3.88 |
| MP MB 130 3_25 | 450 | 700 | 1300 | 2900 | 3500 | 15' | 10' | 37.5 | 91 | 1.94 | 2.15 | 2.50 | 3.85 |
| MP MB 130 3_28 | 450 | 700 | 1300 | 3200 | 4000 | 15' | 10' | 37.5 | 91 | 1.34 | 1.55 | 1.90 | 3.25 |
| MP MB 130 3_30 | 215 | 400 | 800 | 3200 | 4000 | 15' | 10' | 37.5 | 91 | 1.00 | 1.21 | 1.56 | 2.91 |
| MP MB 130 3_35 | 450 | 700 | 1300 | 3200 | 4000 | 15' | 10' | 37.5 | 91 | 1.33 | 1.53 | 1.88 | 3.24 |
| MP MB 130 3_36 | 380 | 600 | 1100 | 2900 | 3500 | 15' | 10' | 37.5 | 91 | 1.05 | 1.26 | 1.61 | 2.96 |
| MP MB 130 3_40 | 450 | 700 | 1300 | 3200 | 4000 | 15' | 10' | 37.5 | 91 | 0.98 | 1.19 | 1.54 | 2.89 |
| MP MB 130 3_50 | 450 | 700 | 1300 | 3200 | 4000 | 15' | 10' | 37.5 | 91 | 0.97 | 1.18 | 1.53 | 2.88 |
| MP MB 130 3_70 | 450 | 700 | 1300 | 3200 | 4000 | 15' | 10' | 37.5 | 91 | 0.96 | 1.17 | 1.52 | 2.87 |
| MP MB 130 3_100 | 215 | 400 | 800 | 3200 | 4000 | 15' | 10' | 37.5 | 91 | 0.96 | 1.17 | 1.52 | 2.87 |
| MP MB 130 4_48 | 450 | 700 | 1300 | 2400 | 3500 | 17' | 12' | 29.5 | 89 | 2.77 | 2.98 | 3.33 | 4.68 |
| MP MB 130 4_64 | 450 | 700 | 1300 | 2400 | 3500 | 17' | 12' | 29.5 | 89 | 2.65 | 2.86 | 3.21 | 4.56 |
| MP MB 130 4_75 | 450 | 700 | 1300 | 2900 | 3500 | 17' | 12' | 29.5 | 89 | 2.03 | 2.24 | 2.59 | 3.94 |
| MP MB 130 4_80 | 450 | 700 | 1300 | 2400 | 3500 | 17' | 12' | 29.5 | 89 | 2.65 | 2.85 | 3.20 | 4.56 |
| MP MB 130 4_84 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 89 | 1.37 | 1.58 | 1.93 | 3.28 |
| MP MB 130 4_90 | 215 | 400 | 800 | 3200 | 4000 | 17' | 12' | 29.5 | 89 | 1.00 | 1.20 | 1.55 | 2.91 |
| MP MB 130 4_120 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 89 | 0.99 | 1.20 | 1.55 | 2.90 |
| MP MB 130 4_125 | 450 | 700 | 1300 | 2900 | 3500 | 17' | 12' | 29.5 | 89 | 1.93 | 2.13 | 2.48 | 3.84 |
| MP MB 130 4_140 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 89 | 1.34 | 1.54 | 1.89 | 3.25 |
| MP MB 130 4_150 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 89 | 0.99 | 1.20 | 1.55 | 2.90 |
| MP MB 130 4_160 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 89 | 0.98 | 1.18 | 1.53 | 2.89 |
| MP MB 130 4_175 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 89 | 1.32 | 1.53 | 1.88 | 3.23 |
| MP MB 130 4_200 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 89 | 0.97 | 1.18 | 1.53 | 2.88 |
| MP MB 130 4_210 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 89 | 0.99 | 1.20 | 1.55 | 2.90 |
| MP MB 130 4_216 | 450 | 700 | 1300 | 2900 | 3500 | 17' | 12' | 29.5 | 89 | 1.05 | 1.26 | 1.61 | 2.96 |
| MP MB 130 4_250 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 89 | 0.97 | 1.18 | 1.53 | 2.88 |
| MP MB 130 4_280 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 89 | 0.96 | 1.17 | 1.52 | 2.87 |
| MP MB 130 4_350 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 89 | 0.96 | 1.17 | 1.52 | 2.87 |
| MP MB 130 4_400 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 89 | 0.96 | 1.17 | 1.52 | 2.87 |
| MP MB 130 4_500 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 89 | 0.96 | 1.17 | 1.52 | 2.87 |
| MP MB 130 4_700 | 450 | 700 | 1300 | 3200 | 4000 | 17' | 12' | 29.5 | 89 | 0.96 | 1.17 | 1.52 | 2.87 |
| MP MB 130 4_1000 | 215 | 400 | 800 | 3200 | 4000 | 17' | 12' | 29.5 | 89 | 0.96 | 1.17 | 1.52 | 2.87 |



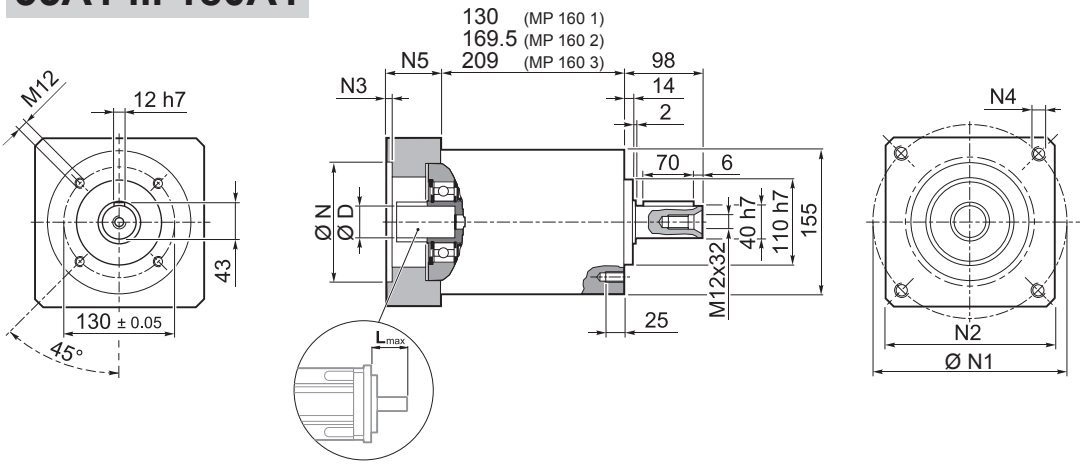
# MP 160

## IS




| | Kg |
|---|---|
| **MP 160 1** | 17.0 |
| **MP 160 2** | 21 |
| **MP 160 3** | 28 |

## 55A1 ... 180A1



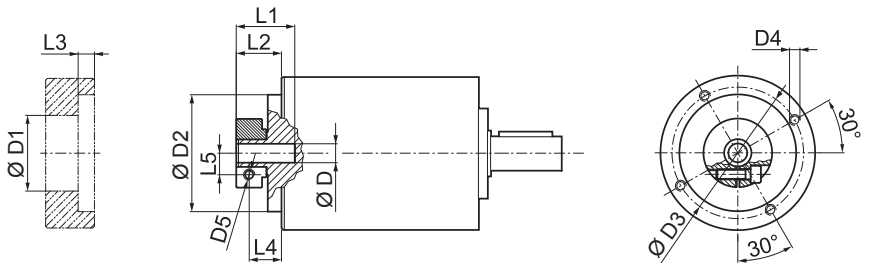

| | Kg |
|---|---|
| **MP 160 1** | 17.0 |
| **MP 160 2** | 21 |
| **MP 160 3** | 28 |

| | D | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **55A1** | 14 | 15.875 | 16 | 19 | – | – | – | – | – | – | 55.5 | 125.7 | 140 | 5 | M6x15 | 39.5 | 50 |
| **80A2** | 14 | 15.875 | 16 | 19 | – | – | – | – | – | – | 80 | 100 | 140 | 5 | M6x15 | 39.5 | 50 |
| **95A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 95 | 115 | 140 | 5 | M8x20 | 39.5 | 50 |
| **110A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 110 | 130 | 140 | 5 | M8x20 | 39.5 | 50 |
| **110B1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 110 | 145 | 140 | 6.5 | M8x20 | 49.5 | 60 |
| **114A** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 35 | 38 | 114.3 | 200 | 170 | 6.5 | M12x25 | 69.5 | 80 |
| **130A** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 130 | 165 | 140 | 5 | M10x20 | 39.5 | 50 |
| **130A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | – | – | 130 | 165 | 140 | 5 | M10x20 | 49.5 | 60 |
| **180A** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | – | – | 180 | 215 | 190 | 6.5 | M14x25 | 49.5 | 60 |
| **180A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 35 | 38 | 180 | 215 | 190 | 6.5 | M14x25 | 69.5 | 80 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

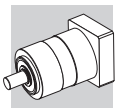
# MP 160

**FM**



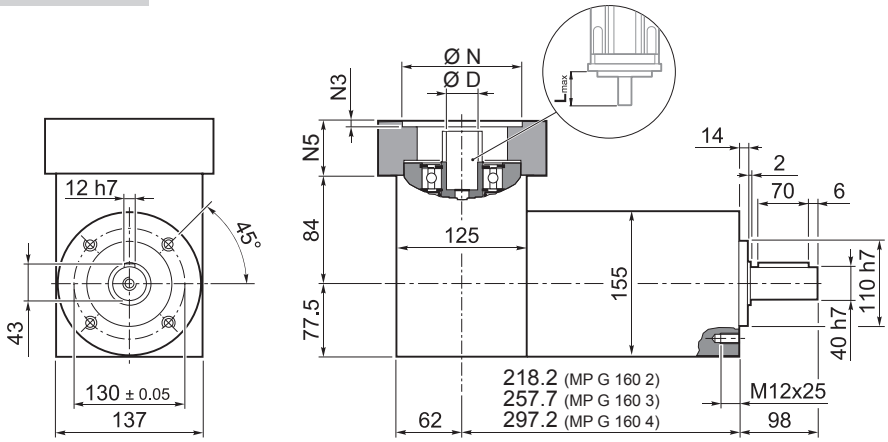

| D | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 15.875 | 16 | 48 | 130 | 142.5 | M8x16 | M6 | 40 | 27.5 | 6 | 20 | 14.5 |
| 19 | | | 51 | 130 | 142.5 | M8x16 | M6 | 40 | 27.5 | 6 | 20 | 16.5 |
| 22 | 24 | | 56.5 | 130 | 142.5 | M8x16 | M6 | 41 | 28.5 | 6 | 19.5 | 19 |
| 28 | | | 67 | 130 | 142.5 | M8x16 | M8 | 41 | 28.5 | 6 | 19.5 | 22.5 |
| 32 | | | 71 | 130 | 142.5 | M8x16 | M8 | 41 | 28.5 | 6 | 19.5 | 24.5 |
| 35 | | | 73 | 130 | 142.5 | M8x16 | M8 | 50 | 37.5 | 11.25 | 26 | 26 |
| 38 | | | 77.5 | 130 | 142.5 | M8x16 | M8 | 50 | 37.5 | 11.25 | 26 | 28 |

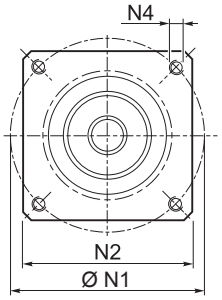
| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $\varphi_R$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{1\,max}$ [N] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 14 ... 19 | 22 - 24 | 28 - 32 | 35 - 38 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MP 160 1_3 | 350 | 660 | 1200 | 1900 | 3000 | 15' | 10' | 90 | 1200 | 6500 | 7500 | 97 | 8.39 | 8.60 | 8.95 | 10.30 |
| MP 160 1_4 | 500 | 750 | 1400 | 2200 | 3500 | 15' | 10' | 90 | 1200 | 6500 | 7500 | 97 | 4.68 | 4.89 | 5.24 | 6.59 |
| MP 160 1_5 | 500 | 750 | 1400 | 2500 | 3500 | 15' | 10' | 90 | 1200 | 6500 | 7500 | 97 | 3.28 | 3.49 | 3.84 | 5.19 |
| MP 160 1_6 | 500 | 750 | 1400 | 2500 | 3500 | 15' | 10' | 90 | 1200 | 6500 | 7500 | 97 | 1.32 | 1.53 | 1.88 | 3.23 |
| MP 160 1_7 | 500 | 750 | 1400 | 3000 | 4000 | 15' | 10' | 90 | 1200 | 6500 | 7500 | 97 | 2.03 | 2.24 | 2.59 | 3.94 |
| MP 160 1_10 | 350 | 660 | 1200 | 3000 | 4000 | 15' | 10' | 90 | 1200 | 6500 | 7500 | 97 | 1.33 | 1.53 | 1.88 | 3.24 |
| MP 160 2_9 | 350 | 660 | 1200 | 1900 | 3000 | 15' | 10' | 83 | 1200 | 6500 | 7500 | 94 | 7.51 | 7.72 | 8.07 | 9.42 |
| MP 160 2_12 | 700 | 950 | 1800 | 1900 | 3000 | 15' | 10' | 83 | 1200 | 6500 | 7500 | 94 | 7.10 | 7.30 | 7.65 | 9.01 |
| MP 160 2_15 | 700 | 950 | 1800 | 1900 | 3000 | 15' | 10' | 83 | 1200 | 6500 | 7500 | 94 | 6.94 | 7.15 | 7.50 | 8.85 |
| MP 160 2_16 | 700 | 950 | 1800 | 2200 | 3500 | 15' | 10' | 83 | 1200 | 6500 | 7500 | 94 | 3.95 | 4.16 | 4.51 | 5.86 |
| MP 160 2_20 | 700 | 950 | 1800 | 2500 | 3500 | 15' | 10' | 83 | 1200 | 6500 | 7500 | 94 | 2.82 | 3.02 | 3.37 | 4.73 |
| MP 160 2_25 | 700 | 950 | 1800 | 2500 | 3500 | 15' | 10' | 83 | 1200 | 6500 | 7500 | 94 | 2.76 | 2.97 | 3.32 | 4.67 |
| MP 160 2_28 | 700 | 950 | 1800 | 3000 | 4000 | 15' | 10' | 83 | 1200 | 6500 | 7500 | 94 | 1.79 | 2.00 | 2.35 | 3.70 |
| MP 160 2_30 | 350 | 660 | 1200 | 3000 | 4000 | 15' | 10' | 83 | 1200 | 6500 | 7500 | 94 | 1.25 | 1.46 | 1.81 | 3.16 |
| MP 160 2_35 | 700 | 950 | 1800 | 3000 | 4000 | 15' | 10' | 83 | 1200 | 6500 | 7500 | 94 | 1.77 | 1.97 | 2.32 | 3.68 |
| MP 160 2_36 | 500 | 750 | 1400 | 2500 | 3500 | 15' | 10' | 83 | 1200 | 6500 | 7500 | 94 | 1.06 | 1.27 | 1.62 | 2.97 |
| MP 160 2_40 | 700 | 950 | 1800 | 3000 | 4000 | 15' | 10' | 83 | 1200 | 6500 | 7500 | 94 | 1.21 | 1.42 | 1.77 | 3.12 |
| MP 160 2_50 | 700 | 950 | 1800 | 3000 | 4000 | 15' | 10' | 83 | 1200 | 6500 | 7500 | 94 | 1.20 | 1.40 | 1.75 | 3.11 |
| MP 160 2_70 | 700 | 950 | 1800 | 3000 | 4000 | 15' | 10' | 83 | 1200 | 6500 | 7500 | 94 | 1.18 | 1.39 | 1.74 | 3.09 |
| MP 160 2_100 | 350 | 660 | 1200 | 3000 | 4000 | 15' | 10' | 83 | 1200 | 6500 | 7500 | 94 | 1.18 | 1.38 | 1.73 | 3.09 |
| MP 160 3_48 | 700 | 950 | 1800 | 2200 | 3500 | 17' | 12' | 60 | 1200 | 6500 | 7500 | 91 | 4.10 | 4.31 | 4.66 | 6.01 |
| MP 160 3_64 | 700 | 950 | 1800 | 2200 | 3500 | 17' | 12' | 60 | 1200 | 6500 | 7500 | 91 | 3.90 | 4.11 | 4.46 | 5.81 |
| MP 160 3_75 | 700 | 950 | 1800 | 2500 | 3500 | 17' | 12' | 60 | 1200 | 6500 | 7500 | 91 | 2.91 | 3.11 | 3.46 | 4.82 |
| MP 160 3_80 | 700 | 950 | 1800 | 2200 | 3500 | 17' | 12' | 60 | 1200 | 6500 | 7500 | 91 | 3.90 | 4.11 | 4.46 | 5.81 |
| MP 160 3_84 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 1200 | 6500 | 7500 | 91 | 1.84 | 2.05 | 2.40 | 3.75 |
| MP 160 3_90 | 350 | 660 | 1200 | 3000 | 4000 | 17' | 12' | 60 | 1200 | 6500 | 7500 | 91 | 1.24 | 1.45 | 1.80 | 3.15 |
| MP 160 3_120 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 1200 | 6500 | 7500 | 91 | 1.23 | 1.44 | 1.79 | 3.14 |
| MP 160 3_125 | 700 | 950 | 1800 | 2500 | 3500 | 17' | 12' | 60 | 1200 | 6500 | 7500 | 91 | 2.74 | 2.95 | 3.30 | 4.65 |
| MP 160 3_140 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 1200 | 6500 | 7500 | 91 | 1.78 | 1.98 | 2.33 | 3.69 |
| MP 160 3_150 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 1200 | 6500 | 7500 | 91 | 1.23 | 1.44 | 1.79 | 3.14 |
| MP 160 3_160 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 1200 | 6500 | 7500 | 91 | 1.20 | 1.41 | 1.76 | 3.11 |
| MP 160 3_175 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 1200 | 6500 | 7500 | 91 | 1.76 | 1.96 | 2.31 | 3.67 |
| MP 160 3_200 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 1200 | 6500 | 7500 | 91 | 1.20 | 1.41 | 1.76 | 3.11 |
| MP 160 3_210 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 1200 | 6500 | 7500 | 91 | 1.23 | 1.44 | 1.79 | 3.14 |
| MP 160 3_250 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 1200 | 6500 | 7500 | 91 | 1.19 | 1.40 | 1.75 | 3.10 |
| MP 160 3_280 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 1200 | 6500 | 7500 | 91 | 1.18 | 1.39 | 1.74 | 3.09 |
| MP 160 3_350 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 1200 | 6500 | 7500 | 91 | 1.18 | 1.39 | 1.74 | 3.09 |
| MP 160 3_400 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 1200 | 6500 | 7500 | 91 | 1.18 | 1.38 | 1.73 | 3.09 |
| MP 160 3_500 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 1200 | 6500 | 7500 | 91 | 1.18 | 1.38 | 1.73 | 3.09 |
| MP 160 3_700 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 1200 | 6500 | 7500 | 91 | 1.18 | 1.38 | 1.73 | 3.09 |
| MP 160 3_1000 | 350 | 660 | 1200 | 3000 | 4000 | 17' | 12' | 60 | 1200 | 6500 | 7500 | 91 | 1.18 | 1.38 | 1.73 | 3.09 |



# MP G 160

## 55A1 ... 180A1




| | Kg |
|---|---|
| **MP G 160 2** | 24 |
| **MP G 160 3** | 28 |
| **MP G 160 4** | 34 |

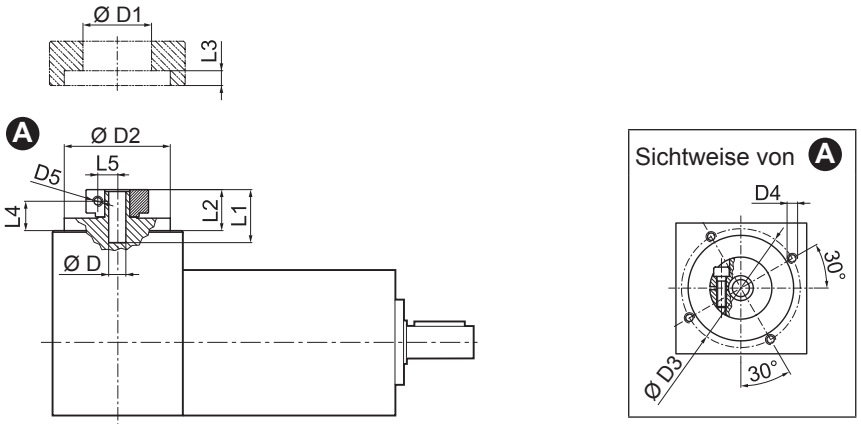
MP

| | D | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **55A1** | 14 | 15.875 | 16 | 19 | – | – | – | – | – | – | 55.5 | 125.7 | 140 | 5 | M6x15 | 39.5 | 50 |
| **80A2** | 14 | 15.875 | 16 | 19 | – | – | – | – | – | – | 80 | 100 | 140 | 5 | M6x15 | 39.5 | 50 |
| **95A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 95 | 115 | 140 | 5 | M8x20 | 39.5 | 50 |
| **110A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 110 | 130 | 140 | 5 | M8x20 | 39.5 | 50 |
| **110B1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 110 | 145 | 140 | 6.5 | M8x20 | 49.5 | 60 |
| **114A** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 35 | 38 | 114.3 | 200 | 170 | 6.5 | M12x25 | 69.5 | 80 |
| **130A** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 130 | 165 | 140 | 5 | M10x20 | 39.5 | 50 |
| **130A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | – | – | 130 | 165 | 140 | 5 | M10x20 | 49.5 | 60 |
| **180A** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | – | – | 180 | 215 | 190 | 6.5 | M14x25 | 49.5 | 60 |
| **180A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 35 | 38 | 180 | 215 | 190 | 6.5 | M14x25 | 69.5 | 80 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

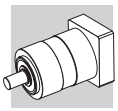
# MP G 160

**FM**



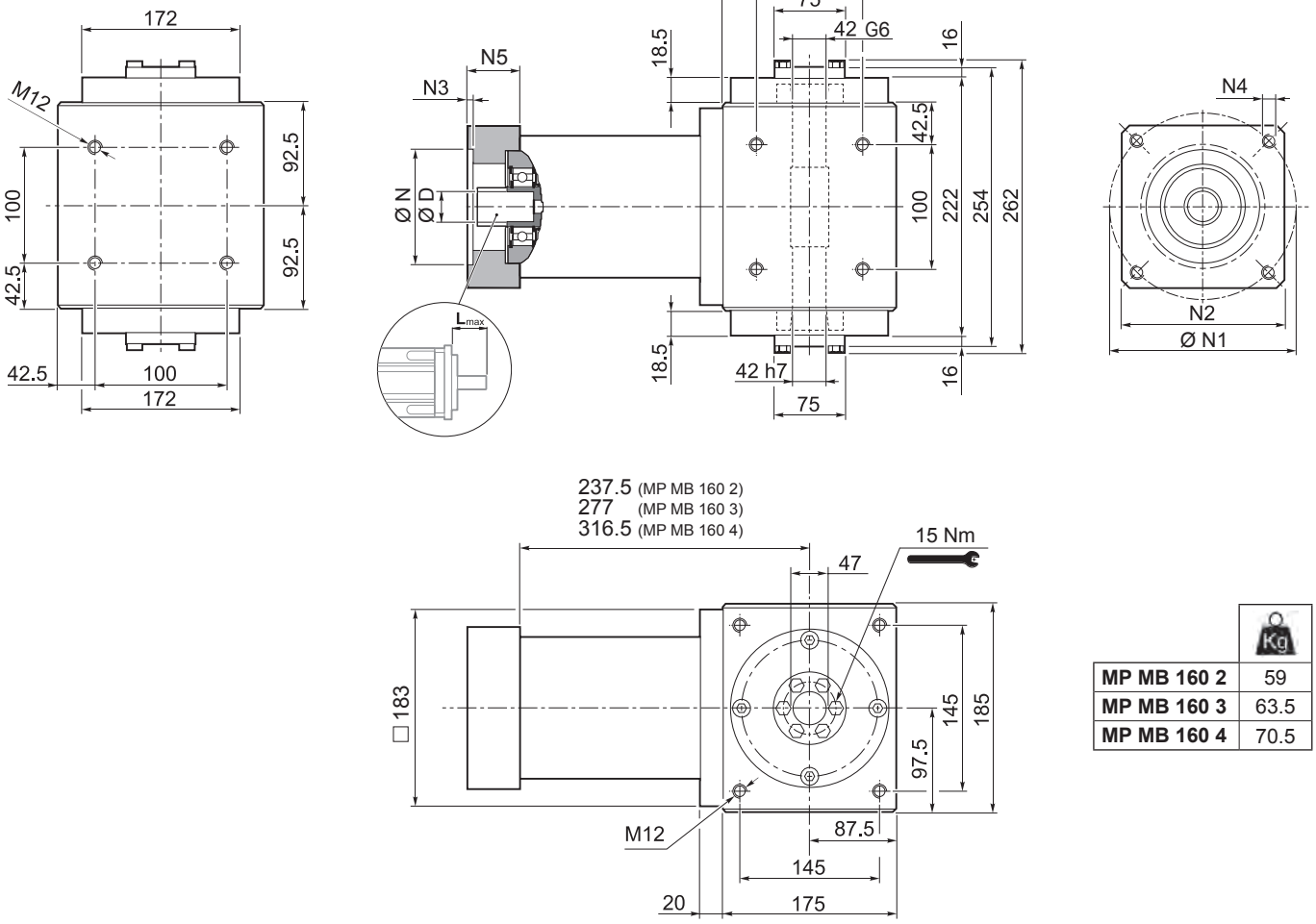

| D | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 15.875 | 16 | 48 | 113 | 125.5 | M8x15 | M6 | 40 | 27.5 | 6 | 20 | 14.5 |
| 19 | | | 51 | 113 | 125.5 | M8x15 | M6 | 40 | 27.5 | 6 | 20 | 16.5 |
| 22 | 24 | | 56.5 | 113 | 125.5 | M8x15 | M6 | 41 | 28.5 | 6 | 19.5 | 19 |
| 28 | | | 67 | 113 | 125.5 | M8x15 | M8 | 41 | 28.5 | 6 | 19.5 | 22.5 |
| 32 | | | 71 | 113 | 125.5 | M8x15 | M8 | 41 | 28.5 | 6 | 19.5 | 24.5 |
| 35 | | | 73 | 113 | 125.5 | M8x15 | M8 | 50 | 37.5 | 11.25 | 26 | 26 |
| 38 | | | 77.5 | 113 | 125.5 | M8x15 | M8 | 50 | 37.5 | 11.25 | 26 | 28 |

| i | $M_{n2}$ | $M_{a2}$ | $M_{p2}$ | $n_1$ | $n_{1\,max}$ | $\varphi_S$ | $\varphi_R$ | $C_t$ | $R_{2\,max}$ | $A_{2\,max}$ | $\eta$ | $J_G$ [kgcm²] D | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | [Nm] | [Nm] | [Nm] | [min⁻¹] | [min⁻¹] | [arcmin] | | [Nm/arcmin] | [N] | [N] | % | 14 ... 19 | 22 - 24 | 28 - 32 | 35 - 38 |
| MP G 160 2_3 | 350 | 660 | 1200 | 1900 | 3000 | 15' | 10' | 90 | 6500 | 7500 | 94 | 10.23 | 10.42 | 10.80 | 13.51 |
| MP G 160 2_4 | 500 | 750 | 1400 | 2200 | 3500 | 15' | 10' | 90 | 6500 | 7500 | 94 | 6.52 | 6.71 | 7.09 | 9.80 |
| MP G 160 2_5 | 500 | 750 | 1400 | 2500 | 3500 | 15' | 10' | 90 | 6500 | 7500 | 94 | 5.87 | 6.06 | 6.45 | 9.16 |
| MP G 160 2_6 | 500 | 750 | 1400 | 2500 | 3500 | 15' | 10' | 90 | 6500 | 7500 | 94 | 4.58 | 4.77 | 5.16 | 7.86 |
| MP G 160 2_7 | 500 | 750 | 1400 | 3000 | 4000 | 15' | 10' | 90 | 6500 | 7500 | 94 | 5.29 | 5.48 | 5.87 | 8.57 |
| MP G 160 2_10 | 350 | 660 | 1200 | 3000 | 4000 | 15' | 10' | 90 | 6500 | 7500 | 94 | 4.97 | 5.16 | 5.54 | 8.25 |
| MP G 160 3_9 | 350 | 660 | 1200 | 1900 | 3000 | 15' | 10' | 83 | 6500 | 7500 | 91 | 9.35 | 9.54 | 9.92 | 12.63 |
| MP G 160 3_12 | 700 | 950 | 1800 | 1900 | 3000 | 15' | 10' | 83 | 6500 | 7500 | 91 | 8.78 | 8.97 | 9.36 | 12.07 |
| MP G 160 3_15 | 700 | 950 | 1800 | 1900 | 3000 | 15' | 10' | 83 | 6500 | 7500 | 91 | 8.71 | 8.90 | 9.29 | 11.99 |
| MP G 160 3_16 | 700 | 950 | 1800 | 2200 | 3500 | 15' | 10' | 83 | 6500 | 7500 | 91 | 5.79 | 5.98 | 6.36 | 9.07 |
| MP G 160 3_20 | 700 | 950 | 1800 | 2500 | 3500 | 15' | 10' | 83 | 6500 | 7500 | 91 | 5.41 | 6.20 | 6.59 | 9.30 |
| MP G 160 3_25 | 700 | 950 | 1800 | 2500 | 3500 | 15' | 10' | 83 | 6500 | 7500 | 91 | 5.95 | 5.54 | 5.93 | 8.64 |
| MP G 160 3_28 | 700 | 950 | 1800 | 3000 | 4000 | 15' | 10' | 83 | 6500 | 7500 | 91 | 5.05 | 5.24 | 5.63 | 8.33 |
| MP G 160 3_30 | 350 | 660 | 1200 | 3000 | 4000 | 15' | 10' | 83 | 6500 | 7500 | 91 | 4.89 | 5.09 | 5.47 | 8.18 |
| MP G 160 3_35 | 700 | 950 | 1800 | 3000 | 4000 | 15' | 10' | 83 | 6500 | 7500 | 91 | 5.36 | 5.54 | 5.93 | 8.64 |
| MP G 160 3_36 | 500 | 750 | 1400 | 2500 | 3500 | 15' | 10' | 83 | 6500 | 7500 | 91 | 4.32 | 4.51 | 4.90 | 7.60 |
| MP G 160 3_40 | 700 | 950 | 1800 | 3000 | 4000 | 15' | 10' | 83 | 6500 | 7500 | 91 | 5.00 | 5.19 | 5.58 | 8.28 |
| MP G 160 3_50 | 700 | 950 | 1800 | 3000 | 4000 | 15' | 10' | 83 | 6500 | 7500 | 91 | 4.99 | 5.18 | 5.56 | 8.27 |
| MP G 160 3_70 | 700 | 950 | 1800 | 3000 | 4000 | 15' | 10' | 83 | 6500 | 7500 | 91 | 4.82 | 5.02 | 5.40 | 8.11 |
| MP G 160 3_100 | 350 | 660 | 1200 | 3000 | 4000 | 15' | 10' | 83 | 6500 | 7500 | 91 | 4.82 | 5.01 | 5.39 | 8.10 |
| MP G 160 4_48 | 700 | 950 | 1800 | 2200 | 3500 | 17' | 12' | 60 | 6500 | 7500 | 89 | 5.94 | 6.13 | 6.53 | 9.22 |
| MP G 160 4_64 | 700 | 950 | 1800 | 2200 | 3500 | 17' | 12' | 60 | 6500 | 7500 | 89 | 5.74 | 5.93 | 6.31 | 9.02 |
| MP G 160 4_75 | 700 | 950 | 1800 | 2500 | 3500 | 17' | 12' | 60 | 6500 | 7500 | 89 | 5.50 | 5.68 | 6.07 | 8.79 |
| MP G 160 4_80 | 700 | 950 | 1800 | 2200 | 3500 | 17' | 12' | 60 | 6500 | 7500 | 89 | 5.74 | 5.93 | 6.31 | 9.02 |
| MP G 160 4_84 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 6500 | 7500 | 89 | 5.10 | 5.29 | 5.68 | 8.38 |
| MP G 160 4_90 | 350 | 660 | 1200 | 3000 | 4000 | 17' | 12' | 60 | 6500 | 7500 | 89 | 4.88 | 5.08 | 5.46 | 8.17 |
| MP G 160 4_120 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 6500 | 7500 | 89 | 4.87 | 5.07 | 5.45 | 8.16 |
| MP G 160 4_125 | 700 | 950 | 1800 | 2500 | 3500 | 17' | 12' | 60 | 6500 | 7500 | 89 | 5.33 | 5.52 | 5.91 | 8.62 |
| MP G 160 4_140 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 6500 | 7500 | 89 | 5.04 | 5.22 | 5.61 | 8.32 |
| MP G 160 4_150 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 6500 | 7500 | 89 | 4.87 | 5.07 | 5.45 | 8.16 |
| MP G 160 4_160 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 6500 | 7500 | 89 | 4.84 | 5.04 | 5.42 | 8.13 |
| MP G 160 4_175 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 6500 | 7500 | 89 | 5.02 | 5.20 | 5.59 | 8.30 |
| MP G 160 4_200 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 6500 | 7500 | 89 | 4.84 | 5.04 | 5.42 | 8.13 |
| MP G 160 4_210 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 6500 | 7500 | 89 | 4.87 | 5.07 | 5.45 | 8.16 |
| MP G 160 4_250 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 6500 | 7500 | 89 | 4.83 | 5.03 | 5.41 | 8.12 |
| MP G 160 4_280 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 6500 | 7500 | 89 | 4.82 | 5.02 | 5.40 | 8.11 |
| MP G 160 4_350 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 6500 | 7500 | 89 | 4.82 | 2.05 | 5.40 | 8.11 |
| MP G 160 4_400 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 6500 | 7500 | 89 | 4.82 | 5.01 | 5.39 | 8.11 |
| MP G 160 4_500 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 6500 | 7500 | 89 | 4.82 | 5.01 | 5.39 | 8.11 |
| MP G 160 4_700 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 6500 | 7500 | 89 | 4.82 | 5.01 | 5.39 | 8.11 |
| MP G 160 4_1000 | 350 | 660 | 1200 | 3000 | 4000 | 17' | 12' | 60 | 6500 | 7500 | 89 | 4.82 | 5.01 | 5.39 | 8.11 |



# MP MB 160

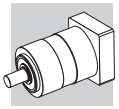
## 55A1 ... 180A1




| | Kg |
|---|---|
| **MP MB 160 2** | 59 |
| **MP MB 160 3** | 63.5 |
| **MP MB 160 4** | 70.5 |

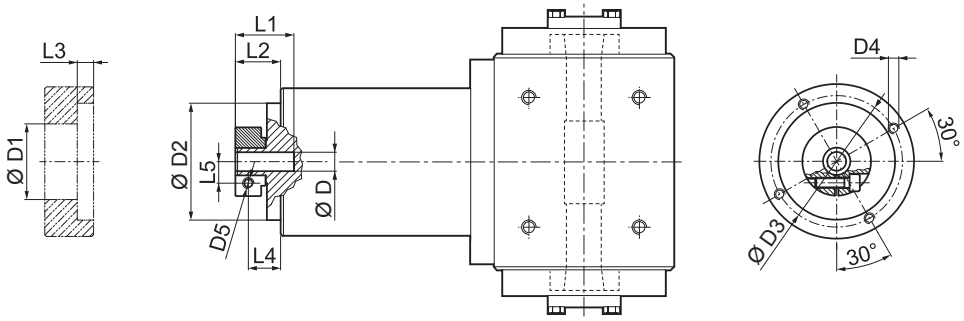
| | D | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **55A1** | 14 | 15.875 | 16 | 19 | – | – | – | – | – | – | 55.5 | 125.7 | 140 | 5 | M6x15 | 39.5 | 50 |
| **80A2** | 14 | 15.875 | 16 | 19 | – | – | – | – | – | – | 80 | 100 | 140 | 5 | M6x15 | 39.5 | 50 |
| **95A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 95 | 115 | 140 | 5 | M8x20 | 39.5 | 50 |
| **110A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 110 | 130 | 140 | 5 | M8x20 | 39.5 | 50 |
| **110B1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 110 | 145 | 140 | 6.5 | M8x20 | 49.5 | 60 |
| **114A** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 35 | 38 | 114.3 | 200 | 170 | 6.5 | M12x25 | 69.5 | 80 |
| **130A** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | – | – | – | 130 | 165 | 140 | 5 | M10x20 | 39.5 | 50 |
| **130A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | – | – | 130 | 165 | 140 | 5 | M10x20 | 49.5 | 60 |
| **180A** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | – | – | 180 | 215 | 190 | 6.5 | M14x25 | 49.5 | 60 |
| **180A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 35 | 38 | 180 | 215 | 190 | 6.5 | M14x25 | 69.5 | 80 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.



# MP MB 160

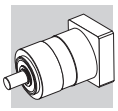
**FM**




| D | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 15.875 | 16 | 48 | 130 | 142.5 | M8x16 | M6 | 40 | 27.5 | 6 | 20 | 14.5 |
| 19 | | | 51 | 130 | 142.5 | M8x16 | M6 | 40 | 27.5 | 6 | 20 | 16.5 |
| 22 | 24 | | 56.5 | 130 | 142.5 | M8x16 | M6 | 41 | 28.5 | 6 | 19.5 | 19 |
| 28 | | | 67 | 130 | 142.5 | M8x16 | M8 | 41 | 28.5 | 6 | 19.5 | 22.5 |
| 32 | | | 71 | 130 | 142.5 | M8x16 | M8 | 41 | 28.5 | 6 | 19.5 | 24.5 |
| 35 | | | 73 | 130 | 142.5 | M8x16 | M8 | 50 | 37.5 | 11.25 | 26 | 26 |
| 38 | | | 77.5 | 130 | 142.5 | M8x16 | M8 | 50 | 37.5 | 11.25 | 26 | 28 |

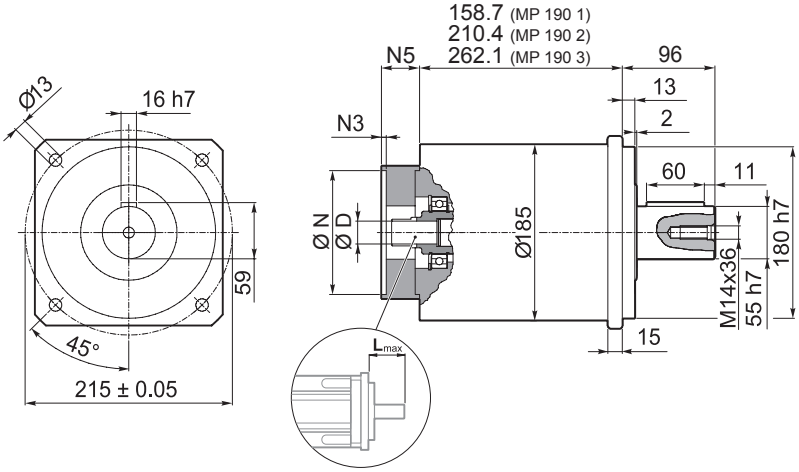
| i | $M_{n2}$ | $M_{a2}$ | $M_{p2}$ | $n_1$ | $n_{1\,max}$ | $\varphi_S$ | $\varphi_R$ | $C_t$ | $\eta$ | $J_G$ [kgcm²] D | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | [Nm] | [Nm] | [Nm] | [min⁻¹] | [min⁻¹] | [arcmin] | | [Nm/arcmin] | % | 14 ... 19 | 22 - 24 | 28 - 32 | 35 - 38 |
| MP MB 160 2_3 | 350 | 660 | 1200 | 1900 | 3000 | 15' | 10' | 90 | 94 | 8.39 | 8.60 | 8.95 | 10.30 |
| MP MB 160 2_4 | 500 | 750 | 1400 | 2200 | 3500 | 15' | 10' | 90 | 94 | 4.68 | 4.89 | 5.24 | 6.59 |
| MP MB 160 2_5 | 500 | 750 | 1400 | 2500 | 3500 | 15' | 10' | 90 | 94 | 3.28 | 3.49 | 3.84 | 5.19 |
| MP MB 160 2_6 | 500 | 750 | 1400 | 2500 | 3500 | 15' | 10' | 90 | 94 | 1.32 | 1.53 | 1.88 | 3.23 |
| MP MB 160 2_7 | 500 | 750 | 1400 | 3000 | 4000 | 15' | 10' | 90 | 94 | 2.03 | 2.24 | 2.59 | 3.94 |
| MP MB 160 2_10 | 350 | 660 | 1200 | 3000 | 4000 | 15' | 10' | 90 | 94 | 1.33 | 1.53 | 1.88 | 3.24 |
| MP MB 160 3_9 | 350 | 660 | 1200 | 1900 | 3000 | 15' | 10' | 83 | 91 | 7.51 | 7.72 | 8.07 | 9.42 |
| MP MB 160 3_12 | 700 | 950 | 1800 | 1900 | 3000 | 15' | 10' | 83 | 91 | 7.10 | 7.30 | 7.65 | 9.01 |
| MP MB 160 3_15 | 700 | 950 | 1800 | 1900 | 3000 | 15' | 10' | 83 | 91 | 6.94 | 7.15 | 7.50 | 8.85 |
| MP MB 160 3_16 | 700 | 950 | 1800 | 2200 | 3500 | 15' | 10' | 83 | 91 | 3.95 | 4.16 | 4.51 | 5.86 |
| MP MB 160 3_20 | 700 | 950 | 1800 | 2500 | 3500 | 15' | 10' | 83 | 91 | 2.82 | 3.02 | 3.37 | 4.73 |
| MP MB 160 3_25 | 700 | 950 | 1800 | 2500 | 3500 | 15' | 10' | 83 | 91 | 2.76 | 2.97 | 3.32 | 4.67 |
| MP MB 160 3_28 | 700 | 950 | 1800 | 3000 | 4000 | 15' | 10' | 83 | 91 | 1.79 | 2.00 | 2.35 | 3.70 |
| MP MB 160 3_30 | 350 | 660 | 1200 | 3000 | 4000 | 15' | 10' | 83 | 91 | 1.25 | 1.46 | 1.81 | 3.16 |
| MP MB 160 3_35 | 700 | 950 | 1800 | 3000 | 4000 | 15' | 10' | 83 | 91 | 1.77 | 1.97 | 2.32 | 3.68 |
| MP MB 160 3_36 | 500 | 750 | 1400 | 2500 | 3500 | 15' | 10' | 83 | 91 | 1.06 | 1.27 | 1.62 | 2.97 |
| MP MB 160 3_40 | 700 | 950 | 1800 | 3000 | 4000 | 15' | 10' | 83 | 91 | 1.21 | 1.42 | 1.77 | 3.12 |
| MP MB 160 3_50 | 700 | 950 | 1800 | 3000 | 4000 | 15' | 10' | 83 | 91 | 1.20 | 1.40 | 1.75 | 3.11 |
| MP MB 160 3_70 | 700 | 950 | 1800 | 3000 | 4000 | 15' | 10' | 83 | 91 | 1.18 | 1.39 | 1.74 | 3.09 |
| MP MB 160 3_100 | 350 | 660 | 1200 | 3000 | 4000 | 15' | 10' | 83 | 91 | 1.18 | 1.38 | 1.73 | 3.09 |
| MP MB 160 4_48 | 700 | 950 | 1800 | 2200 | 3500 | 17' | 12' | 60 | 89 | 4.10 | 4.31 | 4.66 | 6.01 |
| MP MB 160 4_64 | 700 | 950 | 1800 | 2200 | 3500 | 17' | 12' | 60 | 89 | 3.90 | 4.11 | 4.46 | 5.81 |
| MP MB 160 4_75 | 700 | 950 | 1800 | 2500 | 3500 | 17' | 12' | 60 | 89 | 2.91 | 3.11 | 3.46 | 4.82 |
| MP MB 160 4_80 | 700 | 950 | 1800 | 2200 | 3500 | 17' | 12' | 60 | 89 | 3.90 | 4.11 | 4.46 | 5.81 |
| MP MB 160 4_84 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 89 | 1.84 | 2.05 | 2.40 | 3.75 |
| MP MB 160 4_90 | 350 | 660 | 1200 | 3000 | 4000 | 17' | 12' | 60 | 89 | 1.24 | 1.45 | 1.80 | 3.15 |
| MP MB 160 4_120 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 89 | 1.23 | 1.44 | 1.79 | 3.14 |
| MP MB 160 4_125 | 700 | 950 | 1800 | 2500 | 3500 | 17' | 12' | 60 | 89 | 2.74 | 2.95 | 3.30 | 4.65 |
| MP MB 160 4_140 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 89 | 1.78 | 1.98 | 2.33 | 3.69 |
| MP MB 160 4_150 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 89 | 1.23 | 1.44 | 1.79 | 3.14 |
| MP MB 160 4_160 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 89 | 1.20 | 1.41 | 1.76 | 3.11 |
| MP MB 160 4_175 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 89 | 1.76 | 1.96 | 2.31 | 3.67 |
| MP MB 160 4_200 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 89 | 1.20 | 1.41 | 1.76 | 3.11 |
| MP MB 160 4_210 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 89 | 1.23 | 1.44 | 1.79 | 3.14 |
| MP MB 160 4_250 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 89 | 1.19 | 1.40 | 1.75 | 3.10 |
| MP MB 160 4_280 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 89 | 1.18 | 1.39 | 1.74 | 3.09 |
| MP MB 160 4_350 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 89 | 1.18 | 1.39 | 1.74 | 3.09 |
| MP MB 160 4_400 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 89 | 1.18 | 1.38 | 1.73 | 3.09 |
| MP MB 160 4_500 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 89 | 1.18 | 1.38 | 1.73 | 3.09 |
| MP MB 160 4_700 | 700 | 950 | 1800 | 3000 | 4000 | 17' | 12' | 60 | 89 | 1.18 | 1.38 | 1.73 | 3.09 |
| MP MB 160 4_1000 | 350 | 660 | 1200 | 3000 | 4000 | 17' | 12' | 60 | 89 | 1.18 | 1.38 | 1.73 | 3.09 |

MP



# MP 190

## 55A1 ... 180A1

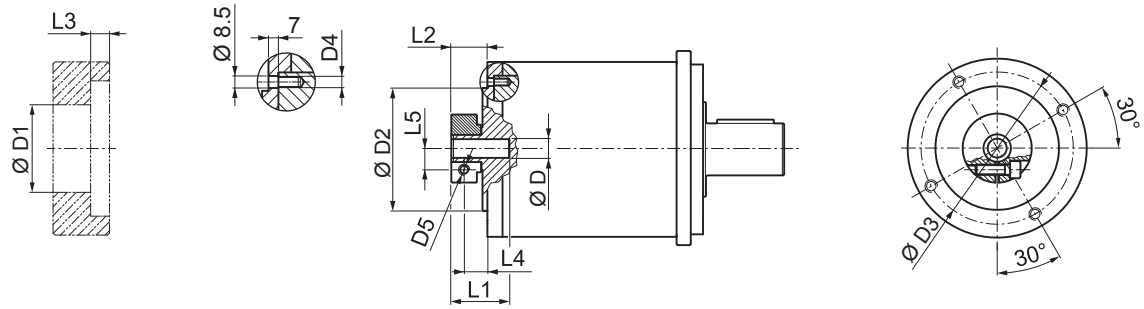



| | Kg |
|---|---|
| **MP 190 1** | 25 |
| **MP 190 2** | 29 |
| **MP 190 3** | 34 |

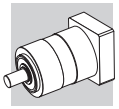
| | D | | | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **55A1** | 14 | 16 | 19 | – | – | – | – | – | – | – | – | – | 55.5 | 125.7 | 140 | 5 | M6x15 | 39.5 | 50 |
| **80A2** | 14 | 16 | 19 | – | – | – | | | | – | – | – | 80 | 100 | 140 | 5 | M6x15 | 39.5 | 50 |
| **95A1** | 14 | 16 | 19 | 22 | 24 | – | – | – | – | – | – | – | 95 | 115 | 140 | 5 | M8x20 | 39.5 | 50 |
| **110A1** | 14 | 16 | 19 | 22 | 24 | – | – | – | – | – | – | – | 110 | 130 | 140 | 5 | M8x20 | 39.5 | 50 |
| **110B1** | 14 | 16 | 19 | 22 | 24 | – | – | – | – | – | – | – | 110 | 145 | 140 | 6.5 | M8x20 | 49.5 | 60 |
| **114A** | 14 | 16 | 19 | 22 | 24 | 28 | 32 | 35 | 38 | 42 | 45 | 48 | 114.3 | 200 | 170 | 6.5 | M12x25 | 69.5 | 80 |
| **130A** | 14 | 16 | 19 | 22 | 24 | – | – | – | – | – | – | – | 130 | 165 | 140 | 5 | M10x20 | 39.5 | 50 |
| **130A1** | 14 | 16 | 19 | 22 | 24 | 28 | 32 | – | – | – | – | – | 130 | 165 | 140 | 5 | M10x20 | 49.5 | 60 |
| **180A** | 14 | 16 | 19 | 22 | 24 | 28 | 32 | – | – | – | – | – | 180 | 215 | 190 | 6.5 | M14x25 | 49.5 | 60 |
| **180A1** | 14 | 16 | 19 | 22 | 24 | 28 | 32 | 35 | 38 | 42 | 45 | 48 | 180 | 215 | 190 | 6.5 | M14x25 | 69.5 | 80 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

## FM

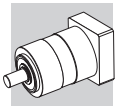



| D | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 16 | 48 | 130 | 142.5 | M8x14 | M6 | 45.5 | 27.5 | 6 | 20 | 14.5 |
| 19 | | 51 | 130 | 142.5 | M8x14 | M6 | 45.5 | 27.5 | 6 | 20 | 16.5 |
| 22 | 24 | 56.5 | 130 | 142.5 | M8x14 | M6 | 47 | 29 | 6 | 20 | 19 |
| 28 | | 67 | 130 | 142.5 | M8x14 | M8 | 47 | 29 | 6 | 20 | 22.5 |
| 32 | | 71 | 130 | 142.5 | M8x14 | M8 | 47 | 29 | 6 | 20 | 24.5 |
| 35 | | 73 | 130 | 142.5 | M8x14 | M8 | 54.5 | 36.5 | 6 | 25 | 26 |
| 38 | | 77.5 | 130 | 142.5 | M8x14 | M8 | 54.5 | 36.5 | 6 | 25 | 28 |
| 42 | | 92 | 130 | 142.5 | M8x14 | M10 | 60.5 | 40 | 6 | 25 | 33 |
| 45 | | 95 | 130 | 142.5 | M8x14 | M10 | 60.5 | 40 | 6 | 25 | 33 |
| 48 | | 97 | 130 | 142.5 | M8x14 | M10 | 60.5 | 40 | 6 | 25 | 33 |



# MP 190

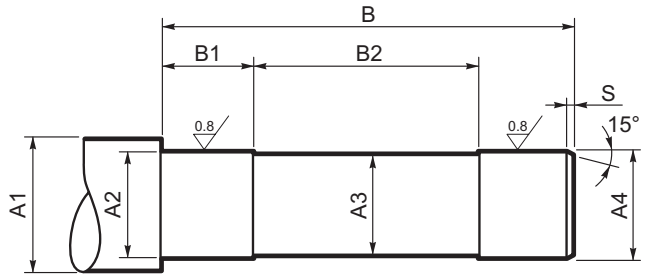
| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $\varphi_R$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 14 ... 24 | 28 - 32 | 35 - 35 | 42 | 45 - 48 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MP 190 1_3 | 500 | 800 | 1400 | 1500 | 2500 | 15' | 10' | 130 | 14000 | 15000 | 97 | 24.20 | 24.88 | 25.65 | 29.30 | 29.90 |
| MP 190 1_4 | 700 | 950 | 1800 | 2100 | 3000 | 15' | 10' | 130 | 14000 | 15000 | 97 | 13.41 | 14.09 | 14.85 | 18.51 | 19.11 |
| MP 190 1_5 | 700 | 950 | 1800 | 2300 | 3000 | 15' | 10' | 130 | 14000 | 15000 | 97 | 9.32 | 10.00 | 10.77 | 14.42 | 15.02 |
| MP 190 1_6 | 700 | 950 | 1800 | 2300 | 3000 | 15' | 10' | 130 | 14000 | 15000 | 97 | 2.88 | 3.56 | 4.33 | 7.98 | 8.58 |
| MP 190 1_7 | 700 | 950 | 1800 | 2900 | 3500 | 15' | 10' | 130 | 14000 | 15000 | 97 | 5.68 | 6.36 | 7.13 | 10.78 | 11.38 |
| MP 190 1_10 | 500 | 800 | 1400 | 2900 | 3500 | 15' | 10' | 130 | 14000 | 15000 | 97 | 3.57 | 4.25 | 5.02 | 8.67 | 9.27 |
| MP 190 2_9 | 500 | 800 | 1400 | 1500 | 2500 | 15' | 10' | 100 | 14000 | 15000 | 94 | 23.23 | 23.91 | 24.67 | 28.33 | 28.93 |
| MP 190 2_12 | 1000 | 1200 | 2200 | 1500 | 2500 | 15' | 10' | 100 | 14000 | 15000 | 94 | 22.03 | 22.71 | 23.48 | 27.13 | 27.73 |
| MP 190 2_15 | 1000 | 1200 | 2200 | 1500 | 2500 | 15' | 10' | 100 | 14000 | 15000 | 94 | 21.58 | 22.25 | 23.02 | 26.68 | 27.27 |
| MP 190 2_16 | 1000 | 1200 | 2200 | 2100 | 3000 | 15' | 10' | 100 | 14000 | 15000 | 94 | 12.19 | 12.86 | 13.63 | 17.29 | 17.89 |
| MP 190 2_20 | 1000 | 1200 | 2200 | 2300 | 3000 | 15' | 10' | 100 | 14000 | 15000 | 94 | 8.54 | 9.22 | 9.98 | 13.64 | 14.24 |
| MP 190 2_25 | 1000 | 1200 | 2200 | 2300 | 3000 | 15' | 10' | 100 | 14000 | 15000 | 94 | 8.37 | 9.05 | 9.82 | 13.48 | 14.07 |
| MP 190 2_28 | 1000 | 1200 | 2200 | 2900 | 3500 | 15' | 10' | 100 | 14000 | 15000 | 94 | 5.28 | 5.96 | 6.73 | 10.38 | 10.98 |
| MP 190 2_30 | 500 | 800 | 1400 | 2900 | 3500 | 15' | 10' | 100 | 14000 | 15000 | 94 | 3.48 | 4.16 | 4.93 | 8.58 | 9.18 |
| MP 190 2_35 | 1000 | 1200 | 2200 | 2900 | 3500 | 15' | 10' | 100 | 14000 | 15000 | 94 | 5.20 | 5.87 | 6.64 | 10.30 | 10.90 |
| MP 190 2_36 | 700 | 950 | 1800 | 2300 | 3000 | 15' | 10' | 100 | 14000 | 15000 | 94 | 2.18 | 2.86 | 3.63 | 7.28 | 7.88 |
| MP 190 2_40 | 1000 | 1200 | 2200 | 2900 | 3500 | 15' | 10' | 100 | 14000 | 15000 | 94 | 3.37 | 4.05 | 4.82 | 8.48 | 9.07 |
| MP 190 2_50 | 1000 | 1200 | 2200 | 2900 | 3500 | 15' | 10' | 100 | 14000 | 15000 | 94 | 3.33 | 4.01 | 4.78 | 8.44 | 9.03 |
| MP 190 2_70 | 1000 | 1200 | 2200 | 2900 | 3500 | 15' | 10' | 100 | 14000 | 15000 | 94 | 3.30 | 3.97 | 4.74 | 8.40 | 9.00 |
| MP 190 2_100 | 500 | 800 | 1400 | 2900 | 3500 | 15' | 10' | 100 | 14000 | 15000 | 94 | 3.28 | 3.95 | 4.72 | 8.38 | 8.98 |
| MP 190 3_48 | 1000 | 1200 | 2200 | 2100 | 3000 | 17' | 12' | 90 | 14000 | 15000 | 91 | 12.73 | 13.40 | 14.17 | 17.83 | 18.43 |
| MP 190 3_64 | 1000 | 1200 | 2200 | 2100 | 3000 | 17' | 12' | 90 | 14000 | 15000 | 91 | 12.10 | 12.78 | 13.55 | 17.21 | 17.80 |
| MP 190 3_75 | 1000 | 1200 | 2200 | 2300 | 3000 | 17' | 12' | 90 | 14000 | 15000 | 91 | 8.86 | 9.54 | 10.31 | 13.97 | 14.56 |
| MP 190 3_80 | 1000 | 1200 | 2200 | 2100 | 3000 | 17' | 12' | 90 | 14000 | 15000 | 91 | 12.09 | 12.76 | 13.53 | 17.19 | 17.79 |
| MP 190 3_84 | 1000 | 1200 | 2200 | 2900 | 3500 | 17' | 12' | 90 | 14000 | 15000 | 91 | 5.46 | 6.13 | 6.90 | 10.56 | 11.16 |
| MP 190 3_90 | 500 | 800 | 1400 | 2900 | 3500 | 17' | 12' | 90 | 14000 | 15000 | 91 | 3.47 | 4.15 | 4.92 | 8.57 | 9.17 |
| MP 190 3_120 | 1000 | 1200 | 2200 | 2900 | 3500 | 17' | 12' | 90 | 14000 | 15000 | 91 | 3.46 | 4.14 | 4.91 | 8.56 | 9.16 |
| MP 190 3_125 | 1000 | 1200 | 2200 | 2300 | 3000 | 17' | 12' | 90 | 14000 | 15000 | 91 | 8.34 | 9.01 | 9.78 | 13.44 | 14.04 |
| MP 190 3_140 | 1000 | 1200 | 2200 | 2900 | 3500 | 17' | 12' | 90 | 14000 | 15000 | 91 | 5.25 | 5.92 | 6.69 | 10.35 | 10.95 |
| MP 190 3_150 | 1000 | 1200 | 2200 | 2900 | 3500 | 17' | 12' | 90 | 14000 | 15000 | 91 | 3.46 | 4.13 | 4.90 | 8.56 | 9.15 |
| MP 190 3_160 | 1000 | 1200 | 2200 | 2900 | 3500 | 17' | 12' | 90 | 14000 | 15000 | 91 | 3.36 | 4.04 | 4.81 | 8.46 | 9.06 |
| MP 190 3_175 | 1000 | 1200 | 2200 | 2900 | 3500 | 17' | 12' | 90 | 14000 | 15000 | 91 | 5.18 | 5.85 | 6.62 | 10.28 | 10.88 |
| MP 190 3_200 | 1000 | 1200 | 2200 | 2900 | 3500 | 17' | 12' | 90 | 14000 | 15000 | 91 | 3.36 | 4.03 | 4.80 | 8.46 | 9.06 |
| MP 190 3_210 | 1000 | 1200 | 2200 | 2900 | 3500 | 17' | 12' | 90 | 14000 | 15000 | 91 | 3.45 | 4.13 | 4.90 | 8.55 | 9.15 |
| MP 190 3_250 | 1000 | 1200 | 2200 | 2900 | 3500 | 17' | 12' | 90 | 14000 | 15000 | 91 | 3.32 | 4.00 | 4.77 | 8.42 | 9.02 |
| MP 190 3_280 | 1000 | 1200 | 2200 | 2900 | 3500 | 17' | 12' | 90 | 14000 | 15000 | 91 | 3.29 | 3.97 | 4.74 | 8.39 | 8.99 |
| MP 190 3_350 | 1000 | 1200 | 2200 | 2900 | 3500 | 17' | 12' | 90 | 14000 | 15000 | 91 | 3.29 | 3.97 | 4.74 | 8.39 | 8.99 |
| MP 190 3_400 | 1000 | 1200 | 2200 | 2900 | 3500 | 17' | 12' | 90 | 14000 | 15000 | 91 | 3.27 | 3.95 | 4.72 | 8.38 | 8.97 |
| MP 190 3_500 | 1000 | 1200 | 2200 | 2900 | 3500 | 17' | 12' | 90 | 14000 | 15000 | 91 | 3.27 | 3.95 | 4.72 | 8.38 | 8.97 |
| MP 190 3_700 | 1000 | 1200 | 2200 | 2900 | 3500 | 17' | 12' | 90 | 14000 | 15000 | 91 | 3.27 | 3.95 | 4.72 | 8.38 | 8.97 |
| MP 190 3_1000 | 500 | 800 | 1400 | 2900 | 3500 | 17' | 12' | 90 | 14000 | 15000 | 91 | 3.27 | 3.95 | 4.72 | 8.38 | 8.97 |

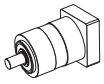


### *6.3.1 MASCHINENWELLE*

Für die Welle der angetriebenen Maschine ist eine hochwertige Stahllegierung zu bevorzugen. Die Tabelle unten zeigt die empfohlenen Abmessungen, die vom Kunden bei der Konstruktion der Gegenwelle zu berücksichtigen sind. Weiterhin wird eine axiale Aufnahmevorrichtung für die Welle empfohlen (nicht gezeigt).
Anzahl und Größe der entsprechenden Gewindebohrungen am Wellenende sind von den Anwendungsanforderungen abhängig.

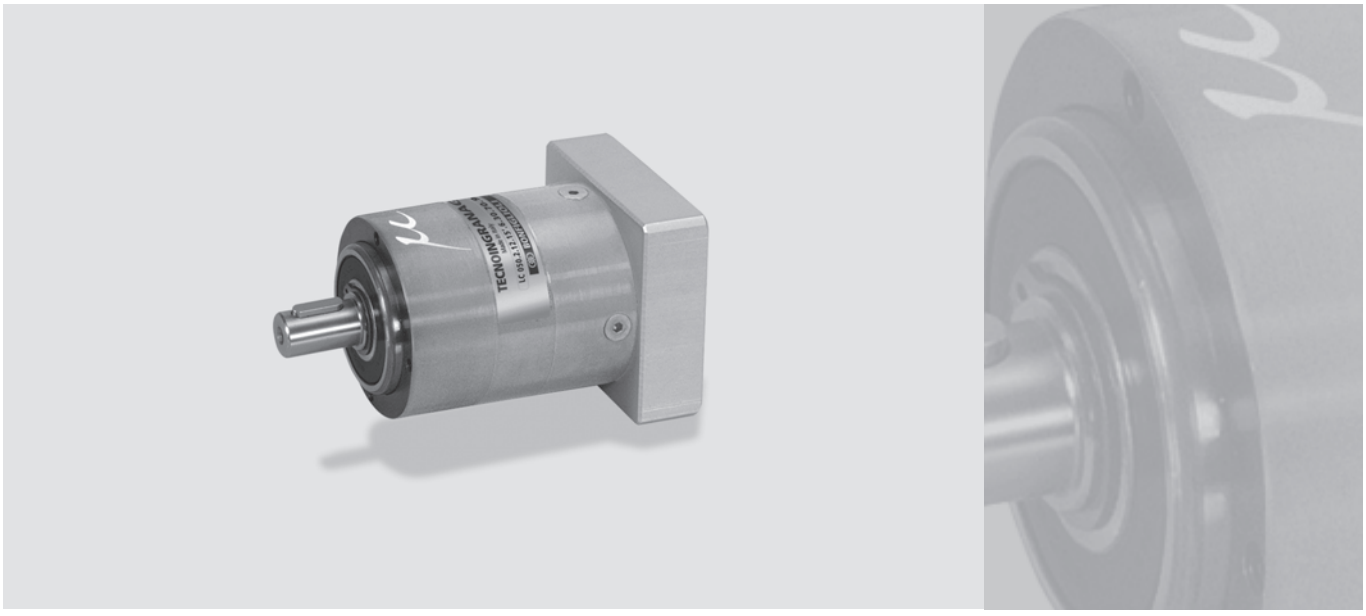
## MB



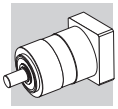

|  | A1 | A2 | A3 | A4 | B | B1 | B2 | S |
|---|---|---|---|---|---|---|---|---|
| **MP MB 080** | ≥ 25 | 20 h7 | 18 | 20 h7 | 178 | 50 | 90 | 1 |
| **MP MB 105** | ≥ 40 | 32 h7 | 30 | 32 h7 | 205 | 60 | 115 | |
| **MP MB 130/160** | ≥ 50 | 42 h7 | 40 | 42 h7 | 259 | 70 | 140 | |

# LC
# KOAXIALE PRÄZISIONSPLANETENGETRIEBE

LC-Präzisionsplanetengetriebe sind dank optimaler Leistungsfähigkeit und Zuverlässigkeit eine flexible Lösung und wirtschaftliche Alternative.
**Verbesserte Leistungsfähigkeit als Schlüssel zum Downsizing.**
Die verbesserte Leistungsfähigkeit unseres LC-Präzisionsgetriebes (neue Option "P") kann wichtige Downsizing-Optionen für zahlreiche Anwendungen eröffnen, bei denen es zuvor nicht möglich war, ein höheres übertragbares Abtriebsdrehmoment bereitrzustellen.
Ein weiterer Vorteil des Downsizing ist eine verbesserte Energieeffizienz, indem man ein kompakteres Getriebe mit höherer Drehmomentdichte wählen und dadurch die Beschleunigungsmasse deutlich reduzieren kann.
Das übertragbare Drehmoment wurde um bis zu 40% verbessert.



**Produktmerkmale:**
- Option "P" mit hoher Drehmomentdichte für eine größere Produktleistungsfähigkeit verfügbar
- Optimales Beschleunigungs- und Nenndrehmoment
- Optimale radiale und axiale Belastbarkeit
- Entwickelt für Zyklus- und Dauerbetrieb
- Optimale Verdrehsteifigkeit
- Verdrehflankenspiel – unter 6 arcmin
- Einsetzbar in beliebiger Montageaposition



## 7 MERKMALE DER LC-REIHE

Die Planetengetriebe der LC-Reihe zeichnen sich durch geringes Verdrehspiel, hohes übertragbares Drehmoment und hohe Getriebeübersetzungen aus.
Alle Getriebe sind laufruhig und gewährleisten eine lange und wartungsarme Nutzungsdauer. Die Motormontage ist einfach und erfordert keinerlei Spezialwerkzeug.

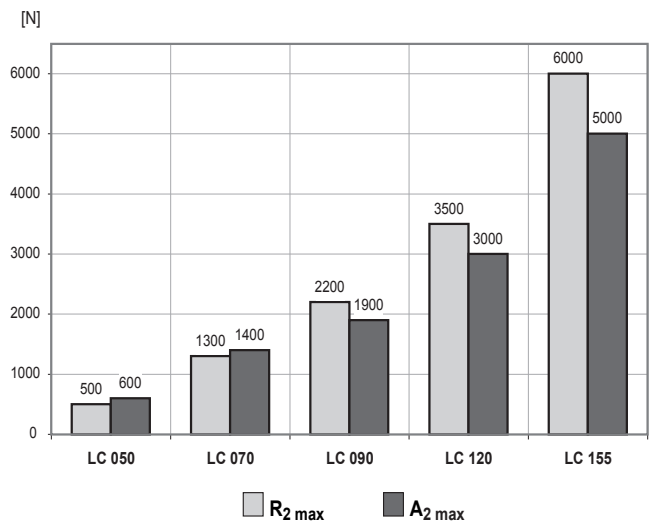
- Erhältlich entweder mit standard (STD) oder reduziertem (LOW) Flankenspiel:
  1-stufige Getriebe: standard $\varphi_S \leq 12'$; reduziert $\varphi_R \leq 6'$
  2-stufige Getriebe: standard $\varphi_S \leq 15'$; reduziert $\varphi_R \leq 8'$
- Eine hohe IP-Schutzklasse (IP64) sorgt dafür, dass innenliegende Teile vor Staub- und Flüssigkeitseintritt geschützt sind.
- Serienmäßige Fluorelastomer-Wellendichtungen an der Eingangswelle
- Schalldruckpegel $L_P \leq 70$ dB(A). Gemessen in 1 m Abstand ohne Last und bei einer Eingangsdrehzahl von $n_1 = 3000$ min$^{-1}$; i=10.
- Große Auswahl an Motoradaptern sorgt für den Anschluss an die marktgängigsten Servomotoren.
- Die Getriebe sind werksseitig mit synthetischem Schmierfett gemäß NLGI-Konsistenzklasse 00 gefüllt; ohne Verunreinigung muss das Schmiermittel nicht regelmäßig gewechselt werden.
- Umgebungstemperatur min. -20°C, max. +30°C; bei Temperaturen höher als 30°C ist der Temperaturfaktor $f_T$ zu berücksichtigen.
- Die Gehäusetemperatur darf Tmax = 90°C nicht übersteigen.
- Erhältlich als Version P mit höherem Abtriebsdrehmoment.

**Übersicht der Nenndrehmomente $M_{n2}$ [Nm]**

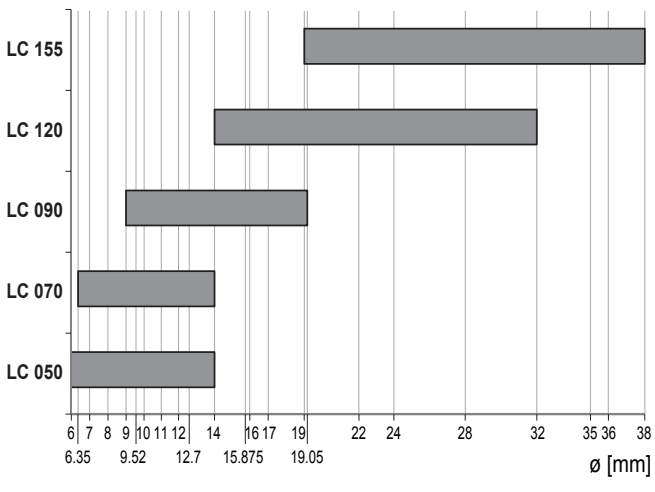
| [i] | 3 | 4 | 5 | 7 | 9 | 10 | 12 | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 36 | 40 | 45 | 50 | 70 | 81 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **LC 050** | 10 | 12 | 12 | 12 | 10 | – | 12 | 12 | 12 | 12 | 12 | 12 | – | 12 | 12 | – | 12 | – | – | 10 | – |
| **LC 070** | 18 | 25 | 25 | 25 | 18 | 18 | 25 | 25 | 25 | 25 | 25 | 25 | 18 | 25 | – | 25 | – | 25 | 25 | – | 18 |
| **LC 070P** | 29 | 30 | 25 | 25 | 29 | 18 | 29 | 29 | 30 | 30 | 30 | 30 | 29 | 30 | - | 30 | - | 30 | 30 | - | 18 |
| **LC 090** | 37 | 43 | 43 | 43 | 37 | 37 | 43 | 43 | 43 | 43 | 43 | 43 | 37 | 43 | – | 43 | – | 43 | 43 | – | 37 |
| **LC 090P** | 65 | 60 | 50 | 50 | 65 | 40 | 65 | 65 | 60 | 60 | 50 | 50 | 65 | 50 | - | 60 | - | 50 | 50 | - | 40 |
| **LC 120** | 95 | 110 | 110 | 110 | 95 | 95 | 110 | 110 | 110 | 110 | 110 | 110 | 95 | 110 | – | 110 | – | 110 | 110 | – | 95 |
| **LC 120P** | 155 | 155 | 125 | 125 | 155 | 100 | 155 | 155 | 155 | 155 | 125 | 125 | 155 | 125 | - | 155 | - | 125 | 125 | - | 100 |
| **LC 155** | 250 | 300 | 300 | 300 | 250 | 230 | 300 | 300 | 300 | 300 | 300 | 300 | 250 | 300 | – | 300 | – | 300 | 300 | – | 230 |
| **LC 155P** | 250 | 350 | 350 | 350 | 250 | 230 | 450 | 450 | 450 | 450 | 450 | 450 | 250 | 450 | - | 450 | - | 450 | 450 | - | 230 |

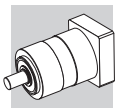


**Max. Belastbarkeit der Abtriebswelle**




**Verfügbare Motorwellendurchmesser**





## *7.1 BESTELLBEZEICHNUNG*

**LC** | **120** | **1** | **3** | **STD** | **70D** | **CD** | **19** | **KE** | **UH1**

SCHMIERSTOFF
- **–** Standard
- **UH1** Lebensmitteltaugliches Schmiermittel

ABTRIEBSWELLENKONFIGURATION
- **KL** Glatte Welle ohne Passfeder
- **KE** Welle mit Passfeder

BOHRUNGSDURCHMESSER EINGANGSWELLE
- **6 ... 38**

MOTORKOPPLUNG
- **CD** Klemmnabe

ANTRIEBSFLANSCH
- **25AH ... 180A1** Motorflansch
- **FM** Ohne Motorflansch

VERDREHSPIEL

| | 1 Getriebestufe | 2 Getriebestufen |
|---|---|---|
| **STD** | $\varphi_S \leq 12'$ | $\varphi_S \leq 15'$ |
| **LOW** | $\varphi_R \leq 6'$ | $\varphi_R \leq 8'$ |

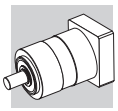
GETRIEBEÜBERSETZUNG

GETRIEBESTUFEN
- **1** **2**

BAUGRÖSSE
- **050** **070** **090** **120** **155**
- **070P** **090P** **120P** **155P**

REIHE
- **LC**

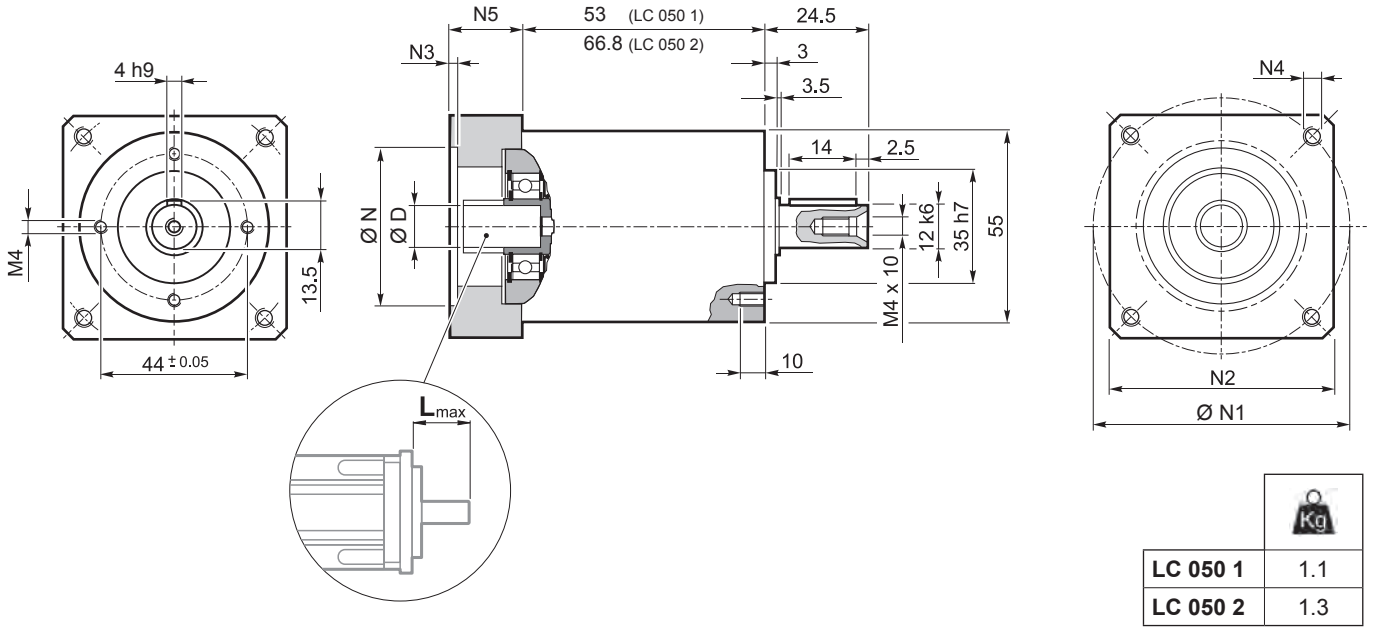
LC





# LC 050

## 25AH ... 80A



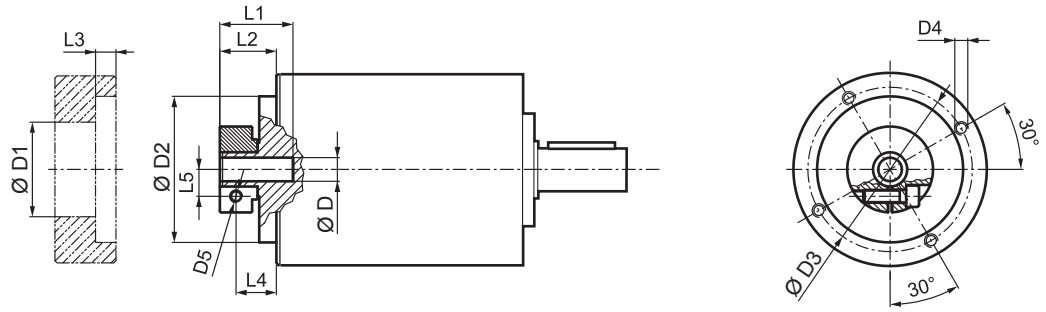

| | Kg |
|---|---|
| **LC 050 1** | 1.1 |
| **LC 050 2** | 1.3 |

| | D | | | | | | | | | | | N | N1 | | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | min | max | | | | | |
| **25AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 25 | 36 | 48 | | | | | |
| **26AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 26 | 36 | 48 | | | | | |
| **28AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 28 | 36 | 48 | | | | | |
| **30AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 30 | 36 | 48 | | | | | |
| **32AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 32 | 38 | 48 | 55 | 3.5 | 4.5 | 25 | 25 |
| **34AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 34 | 40 | 48 | | | | | |
| **36AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 36 | 42 | 48 | | | | | |
| **38AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 38 | 44 | 48 | | | | | |
| **40AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 40 | 46 | 48 | | | | | |
| **38B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 38.1 | 66.6 | | 60 | 3 | M4x10 | 18 | 25 |
| **40B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 40 | 63 | | 60 | 3 | M4x10 | 18 | 25 |
| **50A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 50 | 60 | | 60 | 3 | M4x10 | 18 | 25 |
| **50B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 60 | 3 | M5x12 | 23 | 30 |
| **50BH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 60 | 4 | 5.5 | 23 | 30 |
| **50C** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 70 | | 60 | 3 | M4x10 | 23 | 30 |
| **50MH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 50 | 65 | | 55 | 4 | 5.5 | 16 | 23 |
| **60A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 60 | 75 | | 65 | 3 | M5x12 | 18 | 25 |
| **60AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 60 | 75 | | 65 | 3 | 5.5 | 18 | 25 |
| **60A1** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 75 | | 65 | 3 | M5x12 | 23 | 30 |
| **60AH1** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 75 | | 65 | 3 | 5.5 | 23 | 30 |
| **60B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 85 | | 75 | 3 | M5x12 | 23 | 30 |
| **60C** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **70A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 85 | | 75 | 3 | M6x15 | 23 | 30 |
| **70B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **73A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 73 | 98.4 | | 85 | 3 | M5x12 | 25 | 32 |
| **80A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 80 | 100 | | 85 | 3 | M6x15 | 23 | 30 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

# LC 050

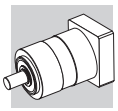
**FM**




| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 6.35 | 7 | | 32.5 | 50 | 42.5 | M4x8 | M4 | 21.7 | 13.2 | 3 | 8.2 | 8 |
| 8 | 9 | 9.52 | 10 | 32.5 | 50 | 42.5 | M4x8 | M4 | 21.7 | 13.2 | 3 | 8.2 | 9 |
| 11 | 12 | 12.7 | | 35.5 | 50 | 42.5 | M4x8 | M4 | 22 | 13.5 | 3 | 8.5 | 11 |
| 14 | | | | 35.5 | 50 | 42.5 | M4x8 | M4 | 25 | 17 | 3 | 10.2 | 11.5 |

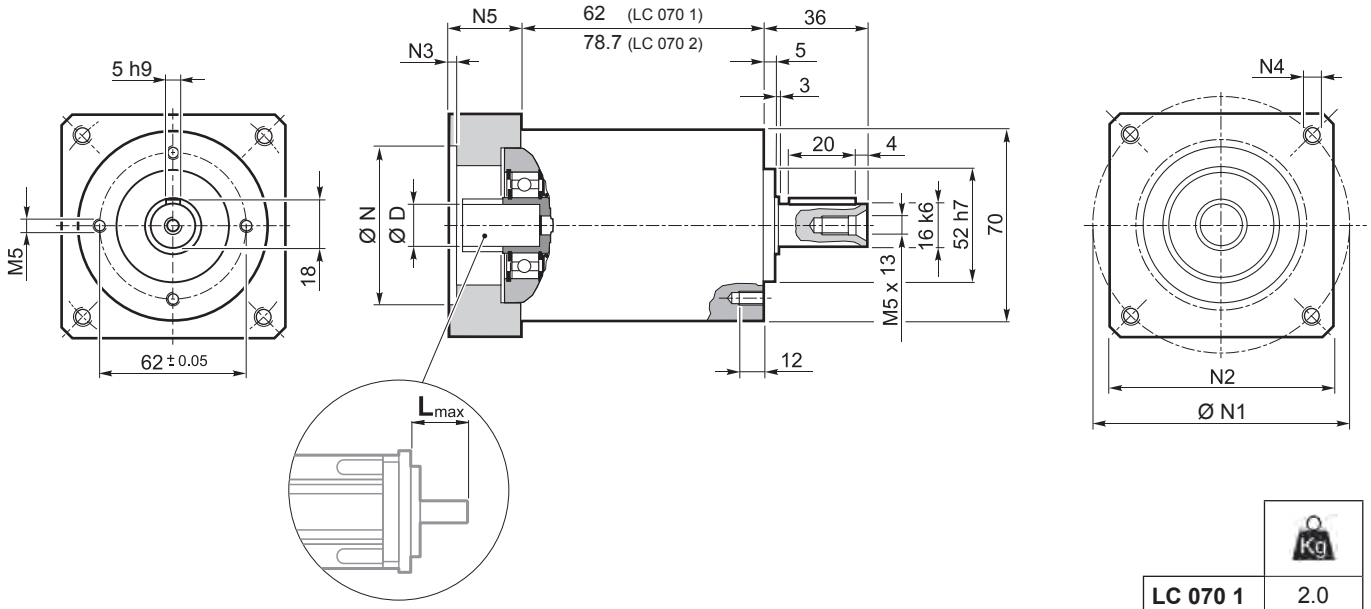
| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $\varphi_R$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 6 ... 9.52 | $J_G$ [kgcm$^2$] D 10 ... 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LC 050 1_ 3 | 10 | 16 | 28 | 3300 | 4000 | 12’ | 6’ | 0.9 | 500 | 600 | 97 | 0.07 | 0.10 |
| LC 050 1_ 4 | 12 | 20 | 30 | 3500 | 5000 | 12’ | 6’ | 0.9 | 500 | 600 | 97 | 0.06 | 0.08 |
| LC 050 1_ 5 | 12 | 20 | 30 | 3500 | 5000 | 12’ | 6’ | 0.9 | 500 | 600 | 97 | 0.05 | 0.07 |
| LC 050 1_ 7 | 12 | 20 | 30 | 4000 | 5000 | 12’ | 6’ | 0.9 | 500 | 600 | 97 | 0.04 | 0.06 |
| LC 050 1_ 9 | 10 | 16 | 28 | 4000 | 6000 | 12’ | 6’ | 0.9 | 500 | 600 | 97 | 0.04 | 0.06 |
| LC 050 2_ 12 | 12 | 20 | 30 | 3300 | 4000 | 15’ | 8’ | 0.75 | 500 | 600 | 94 | 0.07 | 0.09 |
| LC 050 2_ 15 | 12 | 20 | 30 | 3300 | 4000 | 15’ | 8’ | 0.75 | 500 | 600 | 94 | 0.07 | 0.09 |
| LC 050 2_ 16 | 12 | 20 | 30 | 3500 | 5000 | 15’ | 8’ | 0.75 | 500 | 600 | 94 | 0.05 | 0.07 |
| LC 050 2_ 20 | 12 | 20 | 30 | 3500 | 5000 | 15’ | 8’ | 0.75 | 500 | 600 | 94 | 0.05 | 0.07 |
| LC 050 2_ 25 | 12 | 20 | 30 | 3500 | 5000 | 15’ | 8’ | 0.75 | 500 | 600 | 94 | 0.05 | 0.07 |
| LC 050 2_ 28 | 12 | 20 | 30 | 4000 | 5000 | 15’ | 8’ | 0.75 | 500 | 600 | 94 | 0.04 | 0.06 |
| LC 050 2_ 35 | 12 | 20 | 30 | 4000 | 5000 | 15’ | 8’ | 0.75 | 500 | 600 | 94 | 0.04 | 0.06 |
| LC 050 2_ 36 | 12 | 20 | 30 | 4000 | 6000 | 15’ | 8’ | 0.75 | 500 | 600 | 94 | 0.04 | 0.06 |
| LC 050 2_ 45 | 12 | 20 | 30 | 4000 | 6000 | 15’ | 8’ | 0.75 | 500 | 600 | 94 | 0.04 | 0.06 |
| LC 050 2_ 81 | 10 | 16 | 28 | 4000 | 6000 | 15’ | 8’ | 0.75 | 500 | 600 | 94 | 0.04 | 0.06 |

LC



# LC 070

## 25AH ... 80A



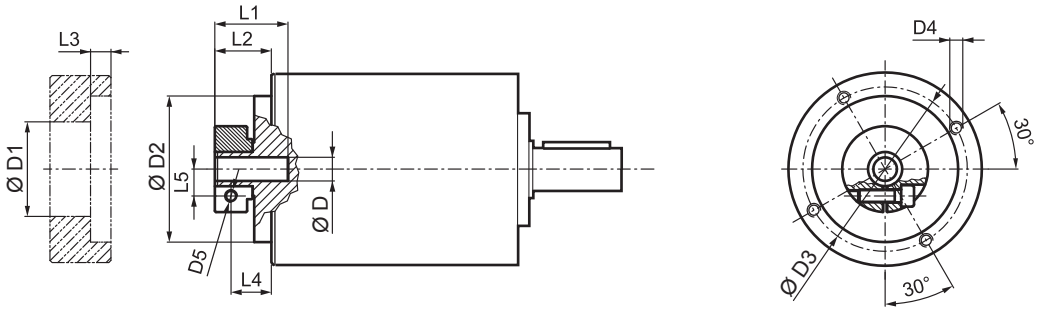

| | Kg |
|---|---|
| **LC 070 1** | 2.0 |
| **LC 070 2** | 2.3 |

| | D | | | | | | | | | | N | N1 | | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | min | max | | | | | |
| **25AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 25 | 39 | 56 | | | | | |
| **26AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 26 | 39 | 56 | | | | | |
| **28AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 28 | 39 | 56 | | | | | |
| **30AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 30 | 39 | 56 | | | | | |
| **32AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 32 | 39 | 56 | 65 | 3.5 | 4.5 | 25 | 25 |
| **34AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 34 | 40 | 56 | | | | | |
| **36AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 36 | 42 | 56 | | | | | |
| **39AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 39 | 45 | 56 | | | | | |
| **40AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 40 | 46 | 56 | | | | | |
| **38B** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 38.1 | 66.6 | | 60 | 3 | M4x10 | 18 | 25 |
| **40B** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 40 | 63 | | 60 | 3 | M4x10 | 18 | 25 |
| **50A** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 50 | 60 | | 60 | 3 | M4x10 | 18 | 25 |
| **50B** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 60 | 3 | M5x12 | 23 | 30 |
| **50BH** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 65 | 3 | 5.5 | 25 | 32 |
| **50C** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 70 | | 60 | 3 | M4x10 | 23 | 30 |
| **55MH** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 55 | 80 | | 65 | 2 | 5.5 | 16 | 23 |
| **60A** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 60 | 75 | | 65 | 3 | M5x12 | 18 | 25 |
| **60A1** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 75 | | 65 | 3 | M5x12 | 23 | 30 |
| **60B** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 85 | | 75 | 3 | M5x12 | 23 | 30 |
| **60C** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **70A** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 85 | | 75 | 3 | M6x15 | 23 | 30 |
| **70B** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **73A** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 73 | 98.4 | | 85 | 3 | M5x12 | 25 | 32 |
| **80A** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 80 | 100 | | 85 | 3 | M6x15 | 23 | 30 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

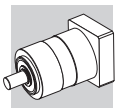
# LC 070

## FM



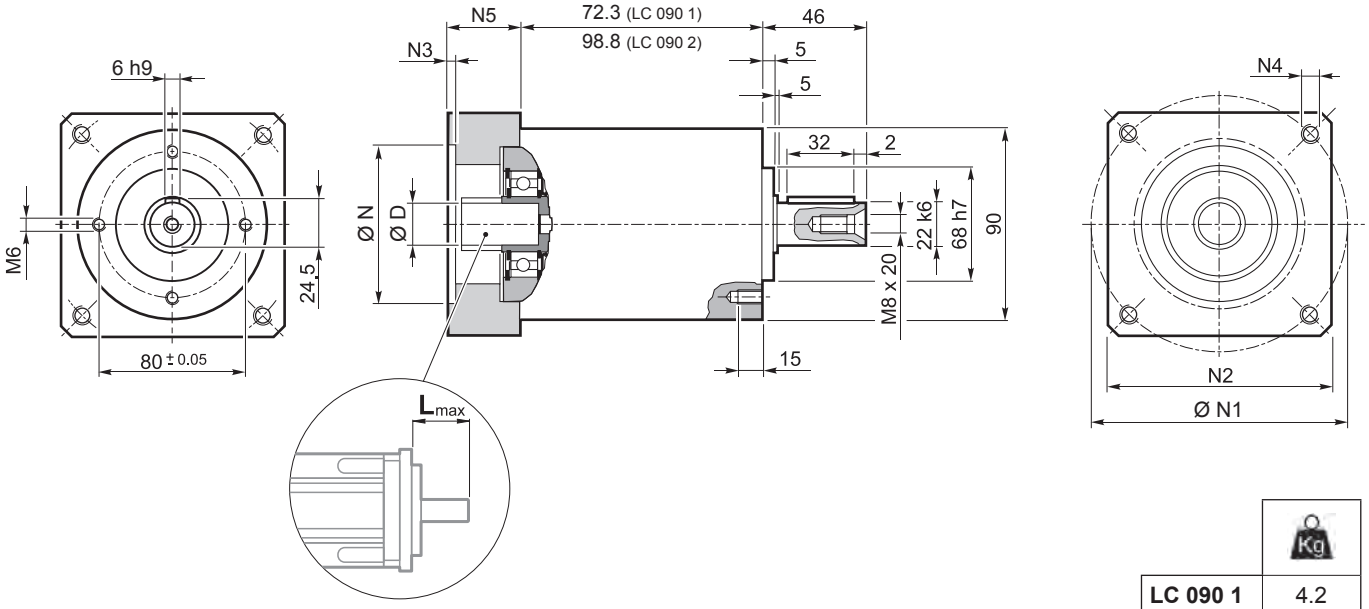

| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.35 | 7 | | | 32.5 | 50 | 42.5 | M4x8 | M4 | 21.7 | 13.2 | 3 | 8.2 | 8 |
| 8 | 9 | 9.52 | 10 | 32.5 | 50 | 42.5 | M4x8 | M4 | 21.7 | 13.2 | 3 | 8.2 | 9 |
| 11 | 12 | 12.7 | | 35.5 | 50 | 42.5 | M4x8 | M4 | 22 | 13.5 | 3 | 8.5 | 11 |
| 14 | | | | 35.5 | 50 | 42.5 | M4x8 | M4 | 25 | 17 | 3 | 10.2 | 11.5 |

| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $\varphi_R$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 6.35 ... 9.52 | $J_G$ [kgcm$^2$] D 10 ... 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LC 070 1_ 3 | 18 | 30 | 60 | 3300 | 4000 | 12’ | 6’ | 3 | 1300 | 1400 | 97 | 0.12 | 0.14 |
| LC 070 1_ 4 | 25 | 35 | 70 | 3500 | 5000 | 12’ | 6’ | 3 | 1300 | 1400 | 97 | 0.08 | 0.10 |
| LC 070 1_ 5 | 25 | 35 | 70 | 3500 | 5000 | 12’ | 6’ | 3 | 1300 | 1400 | 97 | 0.06 | 0.09 |
| LC 070 1_ 7 | 25 | 35 | 70 | 4000 | 5000 | 12’ | 6’ | 3 | 1300 | 1400 | 97 | 0.05 | 0.07 |
| LC 070 1_ 10 | 18 | 30 | 60 | 4000 | 6000 | 12’ | 6’ | 3 | 1300 | 1400 | 97 | 0.04 | 0.06 |
| LC 070 2_ 9 | 18 | 30 | 60 | 3300 | 4000 | 15’ | 8’ | 2.5 | 1300 | 1400 | 94 | 0.11 | 0.13 |
| LC 070 2_ 12 | 25 | 35 | 70 | 3300 | 4000 | 15’ | 8’ | 2.5 | 1300 | 1400 | 94 | 0.10 | 0.13 |
| LC 070 2_ 15 | 25 | 35 | 70 | 3300 | 4000 | 15’ | 8’ | 2.5 | 1300 | 1400 | 94 | 0.10 | 0.12 |
| LC 070 2_ 16 | 25 | 35 | 70 | 3500 | 5000 | 15’ | 8’ | 2.5 | 1300 | 1400 | 94 | 0.07 | 0.09 |
| LC 070 2_ 20 | 25 | 35 | 70 | 3500 | 5000 | 15’ | 8’ | 2.5 | 1300 | 1400 | 94 | 0.06 | 0.08 |
| LC 070 2_ 25 | 25 | 35 | 70 | 3500 | 5000 | 15’ | 8’ | 2.5 | 1300 | 1400 | 94 | 0.06 | 0.08 |
| LC 070 2_ 28 | 25 | 35 | 70 | 4000 | 5000 | 15’ | 8’ | 2.5 | 1300 | 1400 | 94 | 0.05 | 0.07 |
| LC 070 2_ 30 | 18 | 30 | 60 | 4000 | 6000 | 15’ | 8’ | 2.5 | 1300 | 1400 | 94 | 0.04 | 0.06 |
| LC 070 2_ 35 | 25 | 35 | 70 | 4000 | 5000 | 15’ | 8’ | 2.5 | 1300 | 1400 | 94 | 0.05 | 0.07 |
| LC 070 2_ 40 | 25 | 35 | 70 | 4000 | 6000 | 15’ | 8’ | 2.5 | 1300 | 1400 | 94 | 0.04 | 0.06 |
| LC 070 2_ 50 | 25 | 35 | 70 | 4000 | 6000 | 15’ | 8’ | 2.5 | 1300 | 1400 | 94 | 0.04 | 0.06 |
| LC 070 2_ 70 | 25 | 35 | 70 | 4000 | 6000 | 15’ | 8’ | 2.5 | 1300 | 1400 | 94 | 0.04 | 0.06 |
| LC 070 2_ 100 | 18 | 30 | 60 | 4000 | 6000 | 15’ | 8’ | 2.5 | 1300 | 1400 | 94 | 0.04 | 0.06 |



# LC 090

## 40B1 ... 110B1



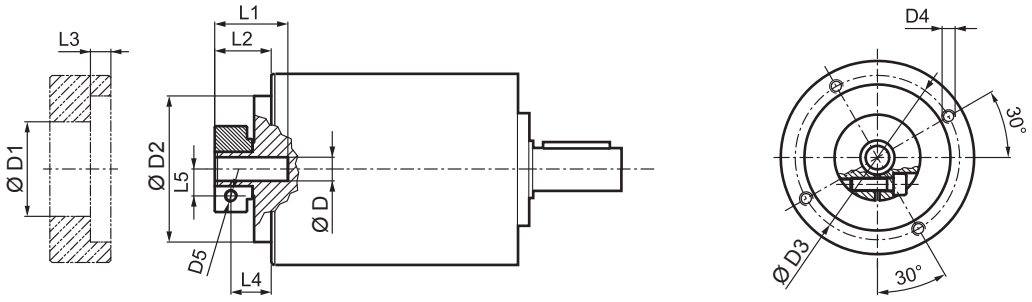

| | Kg |
|---|---|
| **LC 090 1** | 4.2 |
| **LC 090 2** | 5.3 |

| | D | | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **40B1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 40 | 63 | 80 | 4 | M4x10 | 34 | 40 |
| **45A** | 9 | 9.52 | 11 | 12 | 12.7 | – | – | – | – | – | – | 45 | 63 | 80 | 4 | M4x10 | 34 | 40 |
| **50B1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 65 | 80 | 4 | M5x16 | 34 | 40 |
| **50BH1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 65 | 80 | 4 | 5.5 | 34 | 40 |
| **50C1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 70 | 80 | 4 | M4x10 | 34 | 40 |
| **50D** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 95 | 80 | 4 | M6x10 | 34 | 40 |
| **55A** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 55.5 | 125.7 | 105 | 4 | M6x16 | 34 | 40 |
| **60A2** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 60 | 75 | 80 | 4 | M5x16 | 34 | 40 |
| **60AH2** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 60 | 75 | 90 | 4 | 5.5 | 34 | 40 |
| **60B1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | – | – | – | 60 | 85 | 80 | 4 | M5x16 | 34 | 40 |
| **60C1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | – | – | – | 60 | 90 | 80 | 4 | M5x16 | 34 | 40 |
| **70A1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 85 | 80 | 4 | M6x20 | 34 | 40 |
| **70AH1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 85 | 90 | 4 | 6.5 | 34 | 40 |
| **70B1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 90 | 80 | 4 | M5x16 | 34 | 40 |
| **73A1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 73 | 98.4 | 85 | 4 | M5x16 | 34 | 40 |
| **80A1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 80 | 100 | 90 | 4 | M6x16 | 34 | 40 |
| **95A** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 95 | 115 | 100 | 4 | M8x20 | 34 | 40 |
| **95B** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 95 | 130 | 115 | 4 | M8x20 | 34 | 40 |
| **110A** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 130 | 115 | 4 | M8x20 | 34 | 40 |
| **110B** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 145 | 120 | 6.5 | M8x20 | 44 | 50 |
| **110B1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 145 | 120 | 6.5 | M8x20 | 54 | 60 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

# LC 090

## FM

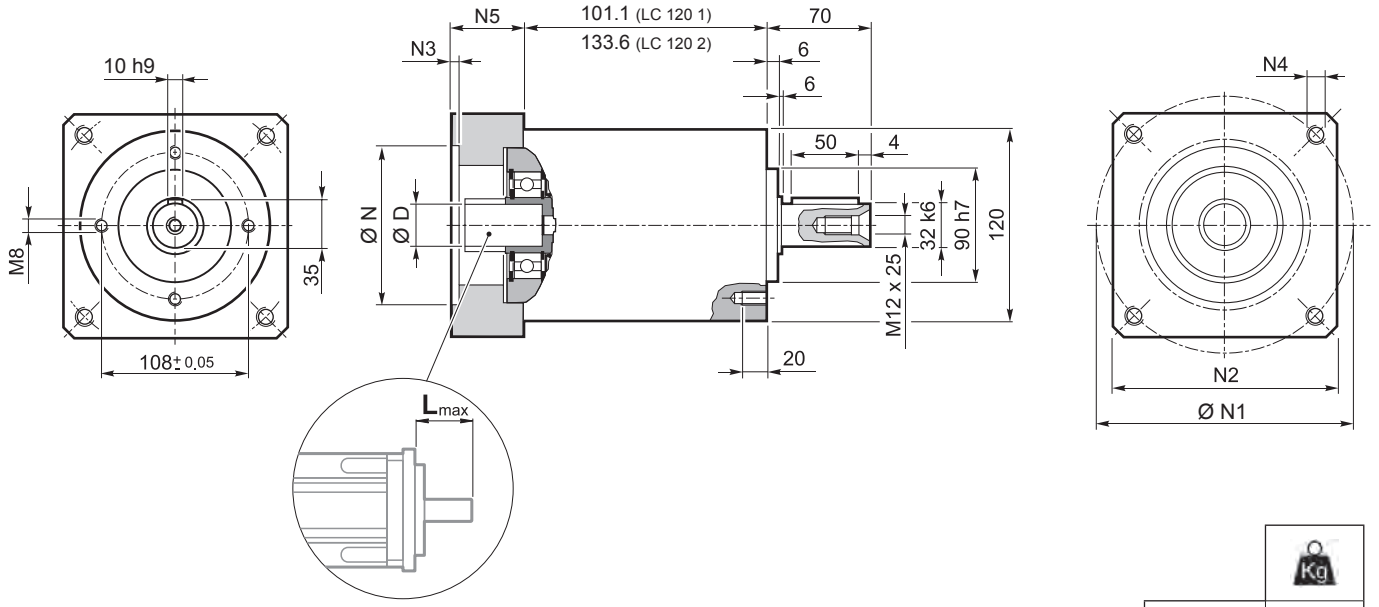



| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 9.52 | | | 38 | 68 | 76.5 | M6x10 | M6 | 34 | 26.8 | 9.5 | 18.8 | 10.5 |
| 11 | 12 | 12.7 | | 43 | 68 | 76.5 | M6x10 | M6 | 34 | 26.8 | 9.5 | 18.8 | 12.5 |
| 14 | 15.875 | 16 | 17 | 48 | 68 | 76.5 | M6x10 | M6 | 34 | 26.8 | 9.5 | 18.8 | 14.5 |
| 19 | 19.05 | | | 51 | 68 | 76.5 | M6x10 | M6 | 34 | 26.8 | 9.5 | 18.8 | 16.5 |

| i | $M_{n\,2}$ | $M_{a\,2}$ | $M_{p\,2}$ | $n_1$ | $n_{1\,max}$ | $\varphi_S$ | $\varphi_R$ | $C_t$ | $R_{2\,max}$ | $A_{2\,max}$ | $\eta$ | $J_G$ [kgcm²] D | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | [Nm] | [Nm] | [Nm] | [min⁻¹] | [min⁻¹] | [arcmin] | | [Nm/arcmin] | [N] | [N] | % | 9 ... 12.7 | 14 ... 19.05 |
| LC 090 1_ 3 | 37 | 70 | 150 | 2900 | 3500 | 12’ | 6’ | 9 | 2200 | 1900 | 97 | 0.62 | 0.77 |
| LC 090 1_ 4 | 43 | 80 | 160 | 3100 | 4500 | 12’ | 6’ | 9 | 2200 | 1900 | 97 | 0.41 | 0.55 |
| LC 090 1_ 5 | 43 | 80 | 160 | 3200 | 4500 | 12’ | 6’ | 9 | 2200 | 1900 | 97 | 0.33 | 0.47 |
| LC 090 1_ 7 | 43 | 80 | 160 | 4000 | 4500 | 12’ | 6’ | 9 | 2200 | 1900 | 97 | 0.26 | 0.40 |
| LC 090 1_ 10 | 37 | 70 | 150 | 4000 | 6000 | 12’ | 6’ | 9 | 2200 | 1900 | 97 | 0.21 | 0.35 |
| LC 090 2_ 9 | 37 | 70 | 150 | 2900 | 3500 | 15’ | 8’ | 8.5 | 2200 | 1900 | 94 | 0.47 | 0.61 |
| LC 090 2_ 12 | 43 | 80 | 160 | 2900 | 3500 | 15’ | 8’ | 8.5 | 2200 | 1900 | 94 | 0.44 | 0.58 |
| LC 090 2_ 15 | 43 | 80 | 160 | 2900 | 3500 | 15’ | 8’ | 8.5 | 2200 | 1900 | 94 | 0.43 | 0.57 |
| LC 090 2_ 16 | 43 | 80 | 160 | 3100 | 4500 | 15’ | 8’ | 8.5 | 2200 | 1900 | 94 | 0.31 | 0.45 |
| LC 090 2_ 20 | 43 | 80 | 160 | 3200 | 4500 | 15’ | 8’ | 8.5 | 2200 | 1900 | 94 | 0.26 | 0.40 |
| LC 090 2_ 25 | 43 | 80 | 160 | 3200 | 4500 | 15’ | 8’ | 8.5 | 2200 | 1900 | 94 | 0.26 | 0.40 |
| LC 090 2_ 28 | 43 | 80 | 160 | 4000 | 4500 | 15’ | 8’ | 8.5 | 2200 | 1900 | 94 | 0.22 | 0.36 |
| LC 090 2_ 30 | 37 | 70 | 150 | 4000 | 6000 | 15’ | 8’ | 8.5 | 2200 | 1900 | 94 | 0.20 | 0.34 |
| LC 090 2_ 35 | 43 | 80 | 160 | 4000 | 4500 | 15’ | 8’ | 8.5 | 2200 | 1900 | 94 | 0.22 | 0.36 |
| LC 090 2_ 40 | 43 | 80 | 160 | 4000 | 6000 | 15’ | 8’ | 8.5 | 2200 | 1900 | 94 | 0.20 | 0.34 |
| LC 090 2_ 50 | 43 | 80 | 160 | 4000 | 6000 | 15’ | 8’ | 8.5 | 2200 | 1900 | 94 | 0.20 | 0.34 |
| LC 090 2_ 70 | 43 | 80 | 160 | 4000 | 6000 | 15’ | 8’ | 8.5 | 2200 | 1900 | 94 | 0.20 | 0.34 |
| LC 090 2_ 100 | 37 | 70 | 150 | 4000 | 6000 | 15’ | 8’ | 8.5 | 2200 | 1900 | 94 | 0.19 | 0.34 |

# LC 120

## 50D ... 130A1



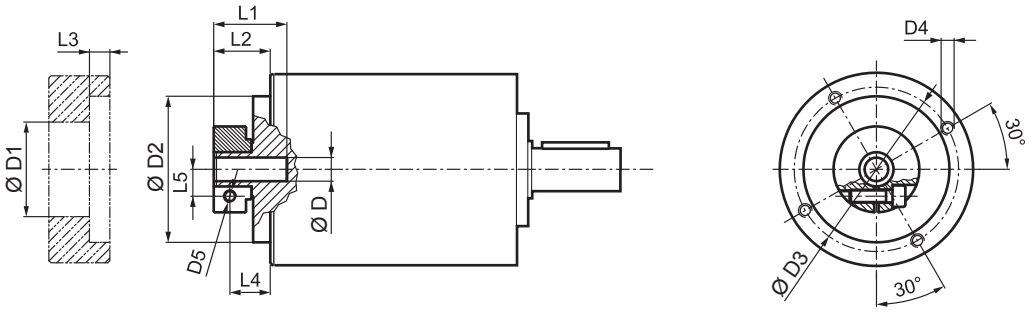

| | Kg |
|---|---|
| **LC 120 1** | 9.6 |
| **LC 120 2** | 12.1 |

| | D | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **50D** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 50 | 95 | 100 | 5 | M6x14 | 28 | 40 |
| **55A** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 55.5 | 125.7 | 105 | 5 | M6x16 | 28 | 40 |
| **60A2** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 60 | 75 | 100 | 5 | M5x14 | 28 | 40 |
| **60AH2** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 60 | 75 | 100 | 5 | 6.5 | 33 | 40 |
| **60B1** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 60 | 85 | 100 | 6.5 | M5x14 | 28 | 40 |
| **70A1** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 70 | 85 | 100 | 5 | M6x14 | 28 | 40 |
| **70AH1** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 70 | 85 | 100 | 5 | 6 | 33 | 40 |
| **70B1** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 70 | 90 | 100 | 5 | M5x12 | 28 | 40 |
| **80A1** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 80 | 100 | 100 | 5 | M6x16 | 28 | 40 |
| **80AH1** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 80 | 100 | 100 | 5 | 6.5 | 28 | 40 |
| **95A** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 95 | 115 | 100 | 5 | M8x18 | 28 | 40 |
| **95A1** | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 95 | 115 | 100 | 5 | M8x18 | 38 | 50 |
| **95B** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 95 | 130 | 115 | 5 | M8x18 | 28 | 40 |
| **110A** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 110 | 130 | 115 | 5 | M8x18 | 28 | 40 |
| **110A1** | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 110 | 130 | 115 | 6.5 | M8x20 | 38 | 50 |
| **110B** | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 110 | 145 | 120 | 6.5 | M8x20 | 38 | 50 |
| **110B1** | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 28 | – | 110 | 145 | 120 | 6.5 | M8x20 | 48 | 60 |
| **130A** | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 130 | 165 | 140 | 6.5 | M10x20 | 38 | 50 |
| **130A1** | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 130 | 165 | 140 | 6.5 | M10x25 | 48 | 60 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

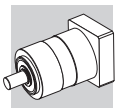
# LC 120

**FM**



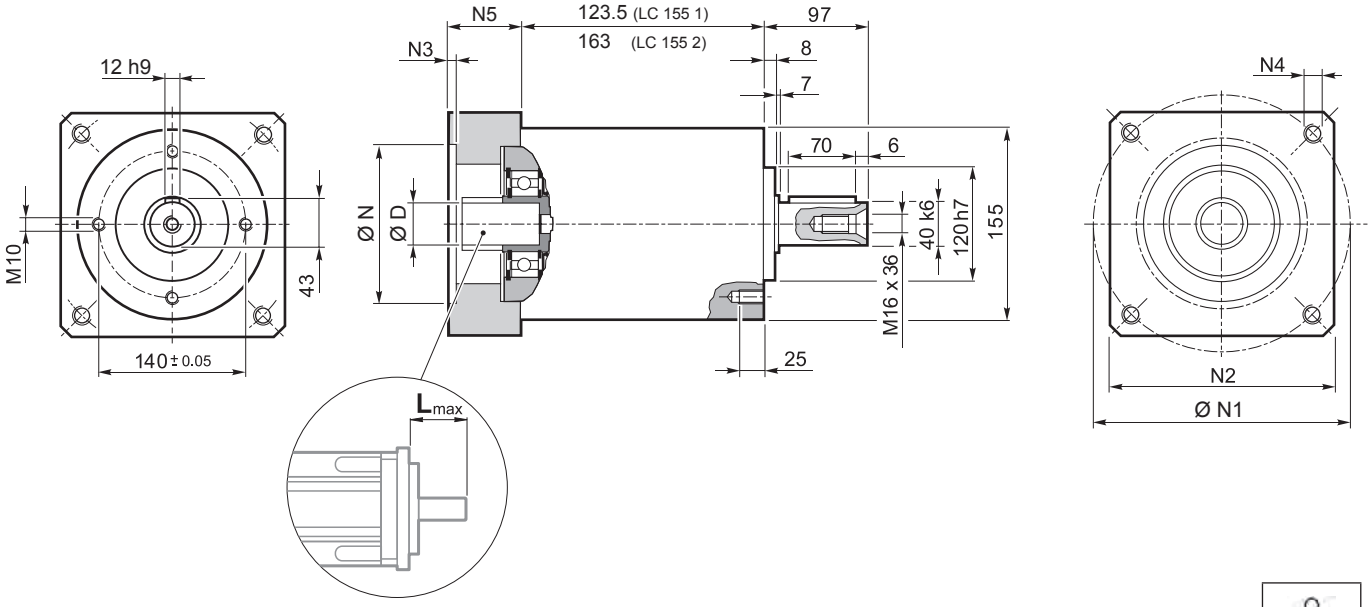

| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 15 | 15.875 | 16 | 48 | 90 | 98 | M6x15 | M6 | 33.5 | 20 | 7.6 | 12.5 | 14.5 |
| 19 | | | | 51 | 90 | 98 | M6x15 | M6 | 33.5 | 20 | 7.6 | 12.5 | 16.5 |
| 22 | 24 | | | 56.5 | 90 | 98 | M6x15 | M6 | 36.5 | 23 | 7.6 | 14 | 19 |
| 28 | | | | 67 | 90 | 98 | M6x15 | M8 | 36.5 | 23 | 7.6 | 14 | 22.5 |
| 32 | | | | 71 | 90 | 98 | M6x15 | M8 | 38 | 24.5 | 7.6 | 15.5 | 24.5 |

| i | $M_{n2}$ | $M_{a2}$ | $M_{p2}$ | $n_1$ | $n_{1\,max}$ | $\varphi_S$ | $\varphi_R$ | $C_t$ | $R_{2\,max}$ | $A_{2\,max}$ | $\eta$ | $J_G$ [kgcm²] D | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | [Nm] | [Nm] | [Nm] | [min⁻¹] | [min⁻¹] | [arcmin] | | [Nm/arcmin] | [N] | [N] | % | 14 ... 19 | 22 ; 24 | 28 ; 32 |
| LC 120 1_ 3 | 95 | 160 | 300 | 2500 | 3500 | 12’ | 6’ | 25 | 3500 | 3000 | 97 | 2.17 | 2.77 | 3.13 |
| LC 120 1_ 4 | 110 | 190 | 360 | 2800 | 4500 | 12’ | 6’ | 25 | 3500 | 3000 | 97 | 1.30 | 1.89 | 2.26 |
| LC 120 1_ 5 | 110 | 190 | 360 | 3000 | 4500 | 12’ | 6’ | 25 | 3500 | 3000 | 97 | 0.96 | 1.56 | 1.92 |
| LC 120 1_ 7 | 110 | 190 | 360 | 3500 | 4500 | 12’ | 6’ | 25 | 3500 | 3000 | 97 | 0.66 | 1.26 | 1.62 |
| LC 120 1_ 10 | 95 | 160 | 300 | 3500 | 5000 | 12’ | 6’ | 25 | 3500 | 3000 | 97 | 0.49 | 1.09 | 1.45 |
| LC 120 2_ 9 | 95 | 160 | 300 | 2500 | 3500 | 15’ | 8’ | 22.5 | 3500 | 3000 | 94 | 1.61 | 2.20 | 2.57 |
| LC 120 2_ 12 | 110 | 190 | 360 | 2500 | 3500 | 15’ | 8’ | 22.5 | 3500 | 3000 | 94 | 1.51 | 2.10 | 2.47 |
| LC 120 2_ 15 | 110 | 190 | 360 | 2500 | 3500 | 15’ | 8’ | 22.5 | 3500 | 3000 | 94 | 1.47 | 2.06 | 2.43 |
| LC 120 2_ 16 | 110 | 190 | 360 | 2800 | 4500 | 15’ | 8’ | 22.5 | 3500 | 3000 | 94 | 0.92 | 1.52 | 1.88 |
| LC 120 2_ 20 | 110 | 190 | 360 | 3000 | 4500 | 15’ | 8’ | 22.5 | 3500 | 3000 | 94 | 0.90 | 1.50 | 1.86 |
| LC 120 2_ 25 | 110 | 190 | 360 | 3000 | 4500 | 15’ | 8’ | 22.5 | 3500 | 3000 | 94 | 0.71 | 1.30 | 1.67 |
| LC 120 2_ 28 | 110 | 190 | 360 | 3500 | 4500 | 15’ | 8’ | 22.5 | 3500 | 3000 | 94 | 0.54 | 1.13 | 1.50 |
| LC 120 2_ 30 | 95 | 160 | 300 | 3500 | 5000 | 15’ | 8’ | 22.5 | 3500 | 3000 | 94 | 0.44 | 1.04 | 1.40 |
| LC 120 2_ 35 | 110 | 190 | 360 | 3500 | 4500 | 15’ | 8’ | 22.5 | 3500 | 3000 | 94 | 0.53 | 1.13 | 1.49 |
| LC 120 2_ 40 | 110 | 190 | 360 | 3500 | 5000 | 15’ | 8’ | 22.5 | 3500 | 3000 | 94 | 0.43 | 1.03 | 1.39 |
| LC 120 2_ 50 | 110 | 190 | 360 | 3500 | 5000 | 15’ | 8’ | 22.5 | 3500 | 3000 | 94 | 0.43 | 1.02 | 1.39 |
| LC 120 2_ 70 | 110 | 190 | 360 | 3500 | 5000 | 15’ | 8’ | 22.5 | 3500 | 3000 | 94 | 0.42 | 1.02 | 1.38 |
| LC 120 2_ 100 | 95 | 160 | 300 | 3500 | 5000 | 15’ | 8’ | 22.5 | 3500 | 3000 | 94 | 0.42 | 1.02 | 1.38 |



# LC 155

## 55A1 ... 180A1



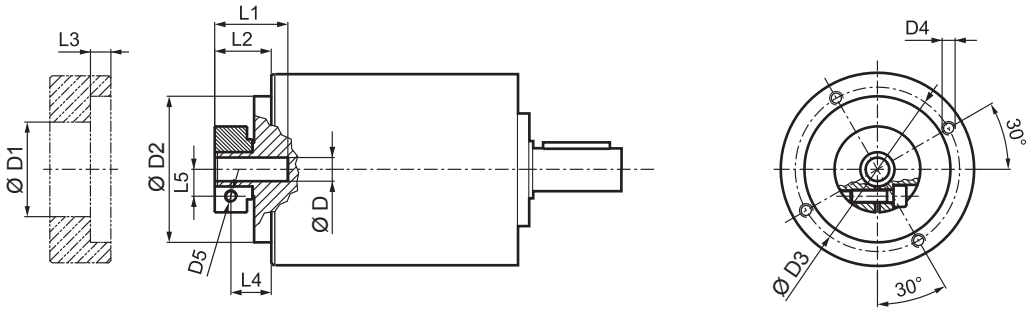

| | Kg |
|---|---|
| **LC 155 1** | 19.3 |
| **LC 155 2** | 24.3 |

| | D | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **55A1** | 19 | – | – | – | – | – | – | 55.5 | 125.7 | 130 | 4 | M6x15 | 39.5 | 50 |
| **80A2** | 19 | – | – | – | – | – | – | 80 | 100 | 130 | 4 | M6x15 | 39.5 | 50 |
| **95A1** | 19 | 22 | 24 | – | – | – | – | 95 | 115 | 130 | 4 | M8x20 | 39.5 | 50 |
| **110A1** | 19 | 22 | 24 | – | – | – | – | 110 | 130 | 130 | 4 | M8x20 | 39.5 | 50 |
| **110B1** | 19 | 22 | 24 | – | – | – | – | 110 | 145 | 130 | 6.5 | M8x20 | 49.5 | 60 |
| **114A** | 19 | 22 | 24 | 28 | 32 | 35 | 38 | 114.3 | 200 | 170 | 5.5 | M12x25 | 69.5 | 80 |
| **130A** | 19 | 22 | 24 | – | – | – | – | 130 | 165 | 140 | 4 | M10x20 | 39.5 | 50 |
| **130A1** | 19 | 22 | 24 | 28 | 32 | – | – | 130 | 165 | 140 | 4 | M10x20 | 49.5 | 60 |
| **180A** | 19 | 22 | 24 | 28 | 32 | – | – | 180 | 215 | 190 | 5.5 | M14x25 | 49.5 | 60 |
| **180A1** | 19 | 22 | 24 | 28 | 32 | 35 | 38 | 180 | 215 | 190 | 5.5 | M14x25 | 69.5 | 80 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

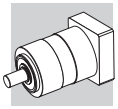
# LC 155

**FM**



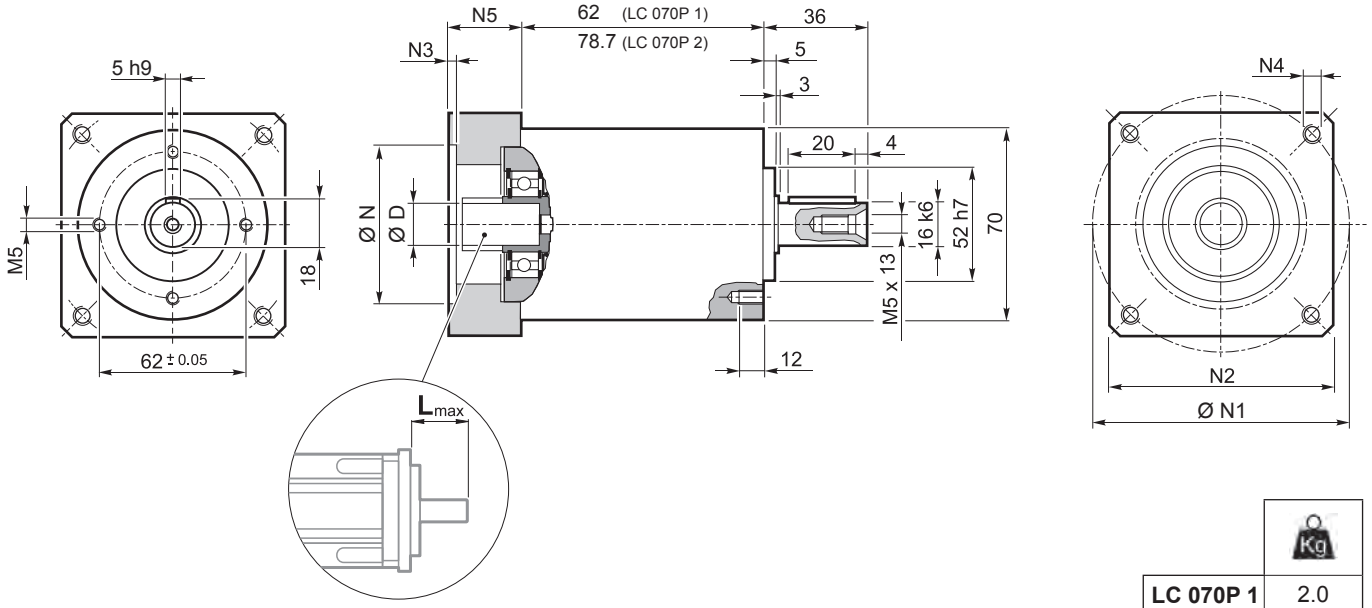

| D | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|
| 19 | 51 | 113 | 125.5 | M8x15 | M6 | 40 | 27.5 | 6 | 20 | 16.5 |
| 22 24 | 56.5 | 113 | 125.5 | M8x15 | M6 | 41 | 28.5 | 6 | 19.5 | 19 |
| 28 | 67 | 113 | 125.5 | M8x15 | M8 | 41 | 28.5 | 6 | 19.5 | 22.5 |
| 32 | 71 | 113 | 125.5 | M8x15 | M8 | 41 | 28.5 | 6 | 18.5 | 24.5 |
| 35 | 73 | 113 | 125.5 | M8x15 | M8 | 50 | 37.5 | 11.25 | 26 | 26 |
| 38 | 77.5 | 113 | 125.5 | M8x15 | M8 | 50 | 37.5 | 11.25 | 26 | 28 |

| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $\varphi_R$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 19 | 22 ; 24 | 28 ; 32 | 35 ; 38 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LC 155 1 _ 3 | 250 | 380 | 600 | 2100 | 3600 | 12’ | 6’ | 43 | 6000 | 5000 | 97 | 7.99 | 8.19 | 8.54 | 9.90 |
| LC 155 1 _ 4 | 300 | 450 | 700 | 2400 | 3600 | 12’ | 6’ | 43 | 6000 | 5000 | 97 | 4.66 | 4.87 | 5.23 | 6.57 |
| LC 155 1 _ 5 | 300 | 450 | 900 | 2900 | 3600 | 12’ | 6’ | 43 | 6000 | 5000 | 97 | 3.32 | 3.53 | 3.88 | 5.23 |
| LC 155 1 _ 7 | 300 | 450 | 900 | 3200 | 3600 | 12’ | 6’ | 43 | 6000 | 5000 | 97 | 2.14 | 2.35 | 2.70 | 4.05 |
| LC 155 1 _ 10 | 230 | 350 | 750 | 3200 | 3600 | 12’ | 6’ | 43 | 6000 | 5000 | 97 | 1.45 | 1.66 | 2.01 | 3.36 |
| LC 155 2 _ 9 | 250 | 380 | 600 | 2100 | 3600 | 15’ | 8’ | 37.5 | 6000 | 5000 | 94 | 5.30 | 5.51 | 5.86 | 7.21 |
| LC 155 2 _ 12 | 300 | 450 | 700 | 2100 | 3600 | 15’ | 8’ | 37.5 | 6000 | 5000 | 94 | 4.93 | 5.14 | 5.49 | 6.84 |
| LC 155 2 _ 15 | 300 | 450 | 900 | 2100 | 3600 | 15’ | 8’ | 37.5 | 6000 | 5000 | 94 | 4.79 | 4.99 | 5.34 | 6.70 |
| LC 155 2 _ 16 | 300 | 450 | 700 | 2400 | 3600 | 15’ | 8’ | 37.5 | 6000 | 5000 | 94 | 2.97 | 3.18 | 3.53 | 4.88 |
| LC 155 2 _ 20 | 300 | 450 | 900 | 2900 | 3600 | 15’ | 8’ | 37.5 | 6000 | 5000 | 94 | 2.23 | 2.44 | 2.79 | 4.14 |
| LC 155 2 _ 25 | 300 | 450 | 900 | 2900 | 3600 | 15’ | 8’ | 37.5 | 6000 | 5000 | 94 | 2.18 | 2.39 | 2.74 | 4.09 |
| LC 155 2 _ 28 | 300 | 450 | 900 | 3200 | 3600 | 15’ | 8’ | 37.5 | 6000 | 5000 | 94 | 1.58 | 1.79 | 2.14 | 3.49 |
| LC 155 2 _ 30 | 250 | 380 | 600 | 3200 | 3600 | 15’ | 8’ | 37.5 | 6000 | 5000 | 94 | 1.23 | 1.44 | 1.79 | 3.14 |
| LC 155 2 _ 35 | 300 | 450 | 900 | 3200 | 3600 | 15’ | 8’ | 37.5 | 6000 | 5000 | 94 | 1.55 | 1.76 | 2.11 | 3.46 |
| LC 155 2 _ 40 | 300 | 450 | 700 | 3200 | 3600 | 15’ | 8’ | 37.5 | 6000 | 5000 | 94 | 1.20 | 1.41 | 1.76 | 3.11 |
| LC 155 2 _ 50 | 300 | 450 | 900 | 3200 | 3600 | 15’ | 8’ | 37.5 | 6000 | 5000 | 94 | 1.19 | 1.39 | 1.74 | 3.10 |
| LC 155 2 _ 70 | 300 | 450 | 900 | 3200 | 3600 | 15’ | 8’ | 37.5 | 6000 | 5000 | 94 | 1.17 | 1.38 | 1.73 | 3.08 |
| LC 155 2 _ 100 | 230 | 350 | 750 | 3200 | 3600 | 15’ | 8’ | 37.5 | 6000 | 5000 | 94 | 1.17 | 1.38 | 1.73 | 3.08 |



# LC 070P

## 25AH ... 80A



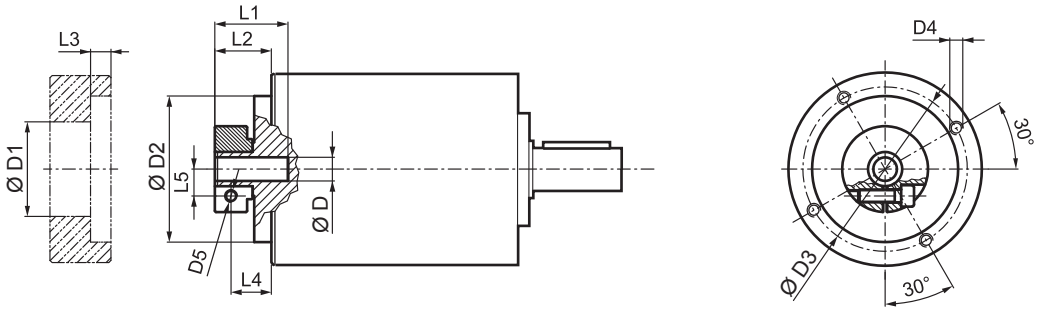

| | Kg |
|---|---|
| **LC 070P 1** | 2.0 |
| **LC 070P 2** | 2.3 |

| | D | | | | | | | | | | N | N1 | | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | min | max | | | | | |
| **25AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 25 | 39 | 56 | | | | | |
| **26AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 26 | 39 | 56 | | | | | |
| **28AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 28 | 39 | 56 | | | | | |
| **30AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 30 | 39 | 56 | | | | | |
| **32AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 32 | 39 | 56 | 65 | 3.5 | 4.5 | 25 | 25 |
| **34AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 34 | 40 | 56 | | | | | |
| **36AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 36 | 42 | 56 | | | | | |
| **39AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 39 | 45 | 56 | | | | | |
| **40AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 40 | 46 | 56 | | | | | |
| **38B** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 38.1 | 66.6 | | 60 | 3 | M4x10 | 18 | 25 |
| **40B** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 40 | 63 | | 60 | 3 | M4x10 | 18 | 25 |
| **50A** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 50 | 60 | | 60 | 3 | M4x10 | 18 | 25 |
| **50B** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 60 | 3 | M5x12 | 23 | 30 |
| **50BH** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 65 | 3 | 5.5 | 25 | 32 |
| **50C** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 70 | | 60 | 3 | M4x10 | 23 | 30 |
| **55MH** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 55 | 80 | | 65 | 2 | 5.5 | 16 | 23 |
| **60A** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 60 | 75 | | 65 | 3 | M5x12 | 18 | 25 |
| **60A1** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 75 | | 65 | 3 | M5x12 | 23 | 30 |
| **60B** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 85 | | 75 | 3 | M5x12 | 23 | 30 |
| **60C** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **70A** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 85 | | 75 | 3 | M6x15 | 23 | 30 |
| **70B** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **73A** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 73 | 98.4 | | 85 | 3 | M5x12 | 25 | 32 |
| **80A** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 80 | 100 | | 85 | 3 | M6x15 | 23 | 30 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

# LC 070P

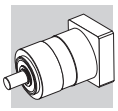
**FM**




| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.35 | 7 | | | 32.5 | 50 | 42.5 | M4x8 | M4 | 21.7 | 13.2 | 3 | 8.2 | 8 |
| 8 | 9 | 9.52 | 10 | 32.5 | 50 | 42.5 | M4x8 | M4 | 21.7 | 13.2 | 3 | 8.2 | 9 |
| 11 | 12 | 12.7 | | 35.5 | 50 | 42.5 | M4x8 | M4 | 22 | 13.5 | 3 | 8.5 | 11 |
| 14 | | | | 35.5 | 50 | 42.5 | M4x8 | M4 | 25 | 17 | 3 | 10.2 | 11.5 |

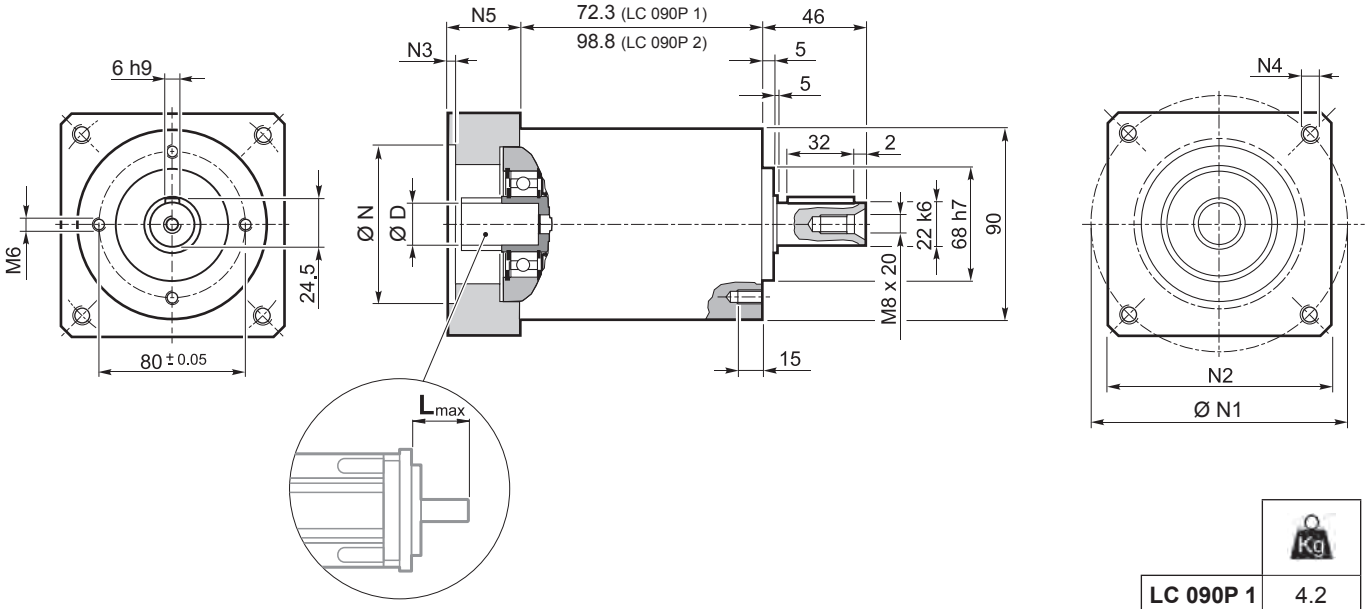
| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $\varphi_R$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 6 ... 9.52 | $J_G$ [kgcm$^2$] D 11 ... 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LC 070P 1_ 3 | 29 | 55 | 60 | 3300 | 4000 | 12' | 6' | 3 | 1300 | 1400 | 97 | 0.12 | 0.14 |
| LC 070P 1_ 4 | 30 | 45 | 70 | 3500 | 5000 | 12' | 6' | 3 | 1300 | 1400 | 97 | 0.08 | 0.10 |
| LC 070P 1_ 5 | 25 | 40 | 70 | 3500 | 5000 | 12' | 6' | 3 | 1300 | 1400 | 97 | 0.06 | 0.09 |
| LC 070P 1_ 7 | 25 | 40 | 70 | 4000 | 5000 | 12' | 6' | 3 | 1300 | 1400 | 97 | 0.05 | 0.07 |
| LC 070P 1_ 10 | 18 | 30 | 60 | 4000 | 6000 | 12' | 6' | 3 | 3500 | 1400 | 97 | 0.04 | 0.06 |
| LC 070P 2_ 9 | 29 | 55 | 60 | 3300 | 4000 | 15' | 8' | 2.5 | 1300 | 1400 | 94 | 0.11 | 0.13 |
| LC 070P 2_ 12 | 29 | 55 | 70 | 3300 | 4000 | 15' | 8' | 2.5 | 1300 | 1400 | 94 | 0.10 | 0.13 |
| LC 070P 2_ 15 | 29 | 55 | 70 | 3300 | 4000 | 15' | 8' | 2.5 | 1300 | 1400 | 94 | 0.10 | 0.12 |
| LC 070P 2_ 16 | 30 | 45 | 70 | 3500 | 5000 | 15' | 8' | 2.5 | 1300 | 1400 | 94 | 0.07 | 0.09 |
| LC 070P 2_ 20 | 30 | 45 | 70 | 3500 | 5000 | 15' | 8' | 2.5 | 1300 | 1400 | 94 | 0.06 | 0.08 |
| LC 070P 2_ 25 | 30 | 45 | 70 | 3500 | 5000 | 15' | 8' | 2.5 | 1300 | 1400 | 94 | 0.06 | 0.08 |
| LC 070P 2_ 28 | 30 | 45 | 70 | 4000 | 6000 | 15' | 8' | 2.5 | 1300 | 1400 | 94 | 0.05 | 0.07 |
| LC 070P 2_ 30 | 29 | 55 | 60 | 4000 | 6000 | 15' | 8' | 2.5 | 1300 | 1400 | 94 | 0.04 | 0.06 |
| LC 070P 2_ 35 | 30 | 45 | 70 | 4000 | 6000 | 15' | 8' | 2.5 | 1300 | 1400 | 94 | 0.05 | 0.07 |
| LC 070P 2_ 40 | 30 | 45 | 70 | 4000 | 6000 | 15' | 8' | 2.5 | 1300 | 1400 | 94 | 0.04 | 0.06 |
| LC 070P 2_ 50 | 30 | 45 | 70 | 4000 | 6000 | 15' | 8' | 2.5 | 1300 | 1400 | 94 | 0.04 | 0.06 |
| LC 070P 2_ 70 | 30 | 45 | 70 | 4000 | 6000 | 15' | 8' | 2.5 | 1300 | 1400 | 94 | 0.04 | 0.06 |
| LC 070P 2_ 100 | 18 | 30 | 60 | 4000 | 6000 | 15' | 8' | 2.5 | 1300 | 1400 | 94 | 0.04 | 0.06 |

LC



# LC 090P

## 40B1 ... 110B1



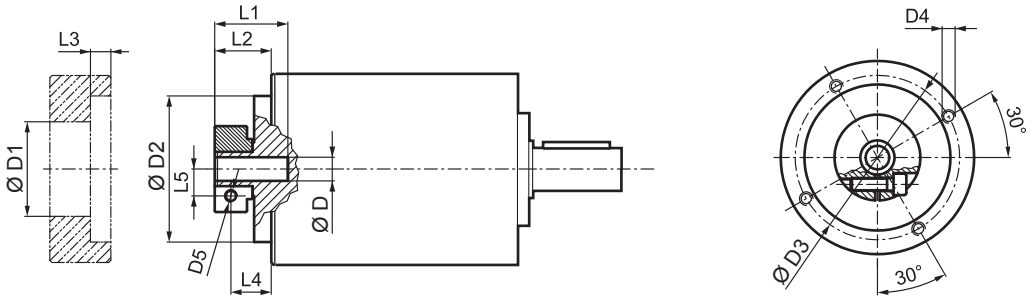

| | Kg |
|---|---|
| **LC 090P 1** | 4.2 |
| **LC 090P 2** | 5.3 |

| | D | | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **40B1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 40 | 63 | 80 | 4 | M4x10 | 34 | 40 |
| **45A** | 9 | 9.52 | 11 | 12 | 12.7 | – | – | – | – | – | – | 45 | 63 | 80 | 4 | M4x10 | 34 | 40 |
| **50B1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 65 | 80 | 4 | M5x16 | 34 | 40 |
| **50BH1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 65 | 80 | 4 | 5.5 | 34 | 40 |
| **50C1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 70 | 80 | 4 | M4x10 | 34 | 40 |
| **50D** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 95 | 80 | 4 | M6x10 | 34 | 40 |
| **55A** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 55.5 | 125.7 | 105 | 4 | M6x16 | 34 | 40 |
| **60A2** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 60 | 75 | 80 | 4 | M5x16 | 34 | 40 |
| **60AH2** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 60 | 75 | 90 | 4 | 5.5 | 34 | 40 |
| **60B1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | – | – | – | 60 | 85 | 80 | 4 | M5x16 | 34 | 40 |
| **60C1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | – | – | – | 60 | 90 | 80 | 4 | M5x16 | 34 | 40 |
| **70A1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 85 | 80 | 4 | M6x20 | 34 | 40 |
| **70AH1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 85 | 90 | 4 | 6.5 | 34 | 40 |
| **70B1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 90 | 80 | 4 | M5x16 | 34 | 40 |
| **73A1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 73 | 98.4 | 85 | 4 | M5x16 | 34 | 40 |
| **80A1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 80 | 100 | 90 | 4 | M6x16 | 34 | 40 |
| **95A** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 95 | 115 | 100 | 4 | M8x20 | 34 | 40 |
| **95B** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 95 | 130 | 115 | 4 | M8x20 | 34 | 40 |
| **110A** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 130 | 115 | 4 | M8x20 | 34 | 40 |
| **110B** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 145 | 120 | 6.5 | M8x20 | 44 | 50 |
| **110B1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 145 | 120 | 6.5 | M8x20 | 54 | 60 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

# LC 090P

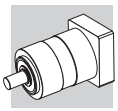
**FM**




| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 9.52 | | | 38 | 68 | 76.5 | M6x10 | M6 | 34 | 26.8 | 9.5 | 18.8 | 10.5 |
| 11 | 12 | 12.7 | | 43 | 68 | 76.5 | M6x10 | M6 | 34 | 26.8 | 9.5 | 18.8 | 12.5 |
| 14 | 15.875 | 16 | 17 | 48 | 68 | 76.5 | M6x10 | M6 | 34 | 26.8 | 9.5 | 18.8 | 14.5 |
| 19 | 19.05 | | | 51 | 68 | 76.5 | M6x10 | M6 | 34 | 26.8 | 9.5 | 18.8 | 16.5 |

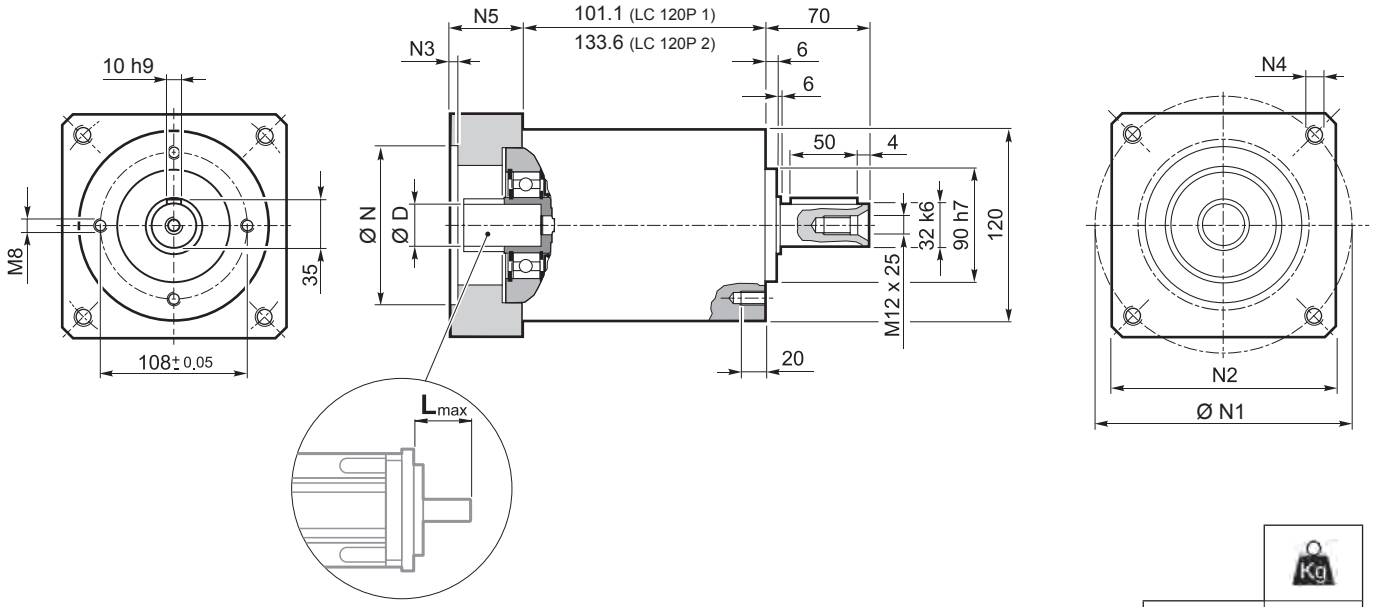
| i | $M_{n2}$ [Nm] | $M_{a2}$ [Nm] | $M_{p2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $\varphi_R$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 8 ... 12.7 | $J_G$ [kgcm$^2$] D 14 ... 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LC 090P 1_ 3 | 65 | 120 | 150 | 3500 | 4000 | 12' | 6' | 12 | 2200 | 1900 | 97 | 0.62 | 0.77 |
| LC 090P 1_ 4 | 60 | 110 | 160 | 3500 | 4000 | 12' | 6' | 12 | 2200 | 1900 | 97 | 0.41 | 0.55 |
| LC 090P 1_ 5 | 50 | 100 | 160 | 3200 | 4500 | 12' | 6' | 9 | 2200 | 1900 | 97 | 0.33 | 0.47 |
| LC 090P 1_ 7 | 50 | 100 | 160 | 4000 | 6000 | 12' | 6' | 9 | 2200 | 1900 | 97 | 0.26 | 0.40 |
| LC 090P 1_ 10 | 40 | 70 | 150 | 4000 | 6000 | 12' | 6' | 9 | 2200 | 1900 | 97 | 0.21 | 0.35 |
| LC 090P 2_ 9 | 65 | 120 | 150 | 3500 | 4000 | 15' | 8' | 12 | 2200 | 1900 | 94 | 0.47 | 0.61 |
| LC 090P 2_ 12 | 65 | 120 | 160 | 3500 | 4000 | 15' | 8' | 12 | 2200 | 1900 | 94 | 0.44 | 0.58 |
| LC 090P 2_ 15 | 65 | 120 | 160 | 3500 | 4000 | 15' | 8' | 12 | 2200 | 1900 | 94 | 0.43 | 0.57 |
| LC 090P 2_ 16 | 60 | 110 | 160 | 3500 | 4500 | 15' | 8' | 12 | 2200 | 1900 | 94 | 0.31 | 0.45 |
| LC 090P 2_ 20 | 60 | 110 | 160 | 3500 | 4500 | 15' | 8' | 12 | 2200 | 1900 | 94 | 0.26 | 0.40 |
| LC 090P 2_ 25 | 50 | 100 | 160 | 3200 | 4500 | 15' | 8' | 9 | 2200 | 1900 | 94 | 0.26 | 0.40 |
| LC 090P 2_ 28 | 50 | 100 | 160 | 4000 | 6000 | 15' | 8' | 9 | 2200 | 1900 | 94 | 0.22 | 0.36 |
| LC 090P 2_ 30 | 65 | 120 | 150 | 4000 | 6000 | 15' | 8' | 12 | 2200 | 1900 | 94 | 0.20 | 0.34 |
| LC 090P 2_ 35 | 50 | 100 | 160 | 4000 | 6000 | 15' | 8' | 9 | 2200 | 1900 | 94 | 0.22 | 0.36 |
| LC 090P 2_ 40 | 60 | 110 | 160 | 4000 | 6000 | 15' | 8' | 12 | 2200 | 1900 | 94 | 0.20 | 0.34 |
| LC 090P 2_ 50 | 50 | 100 | 160 | 4000 | 6000 | 15' | 8' | 9 | 2200 | 1900 | 94 | 0.20 | 0.34 |
| LC 090P 2_ 70 | 50 | 100 | 160 | 4000 | 6000 | 15' | 8' | 9 | 2200 | 1900 | 94 | 0.20 | 0.34 |
| LC 090P 2_ 100 | 40 | 70 | 150 | 4000 | 6000 | 15' | 8' | 9 | 2200 | 1900 | 94 | 0.19 | 0.34 |

LC



# LC 120P

## 50D ... 130A1



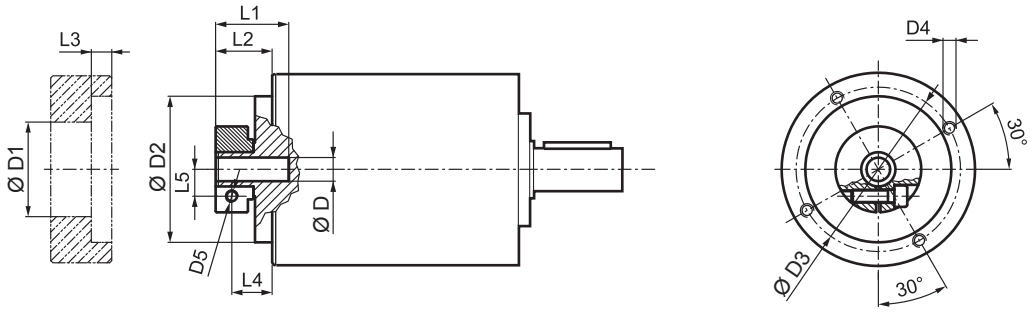

| | Kg |
|---|---|
| **LC 120P 1** | 9.6 |
| **LC 120P 2** | 12.1 |

| | D | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **50D** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 50 | 95 | 100 | 5 | M6x14 | 28 | 40 |
| **55A** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 55.5 | 125.7 | 105 | 5 | M6x16 | 28 | 40 |
| **60A2** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 60 | 75 | 100 | 5 | M5x14 | 28 | 40 |
| **60AH2** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 60 | 75 | 100 | 5 | 6.5 | 33 | 40 |
| **60B1** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 60 | 85 | 100 | 6.5 | M5x14 | 28 | 40 |
| **70A1** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 70 | 85 | 100 | 5 | M6x14 | 28 | 40 |
| **70AH1** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 70 | 85 | 100 | 5 | 6 | 33 | 40 |
| **70B1** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 70 | 90 | 100 | 5 | M5x12 | 28 | 40 |
| **80A1** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 80 | 100 | 100 | 5 | M6x16 | 28 | 40 |
| **80AH1** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 80 | 100 | 100 | 5 | 6.5 | 28 | 40 |
| **95A** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 95 | 115 | 100 | 5 | M8x18 | 28 | 40 |
| **95A1** | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 95 | 115 | 100 | 5 | M8x18 | 38 | 50 |
| **95B** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 95 | 130 | 115 | 5 | M8x18 | 28 | 40 |
| **110A** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 110 | 130 | 115 | 5 | M8x18 | 28 | 40 |
| **110A1** | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 110 | 130 | 115 | 6.5 | M8x20 | 38 | 50 |
| **110B** | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 110 | 145 | 120 | 6.5 | M8x20 | 38 | 50 |
| **110B1** | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 28 | – | 110 | 145 | 120 | 6.5 | M8x20 | 48 | 60 |
| **130A** | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 130 | 165 | 140 | 6.5 | M10x20 | 38 | 50 |
| **130A1** | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 130 | 165 | 140 | 6.5 | M10x25 | 48 | 60 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

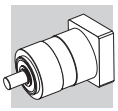
# LC 120P

**FM**



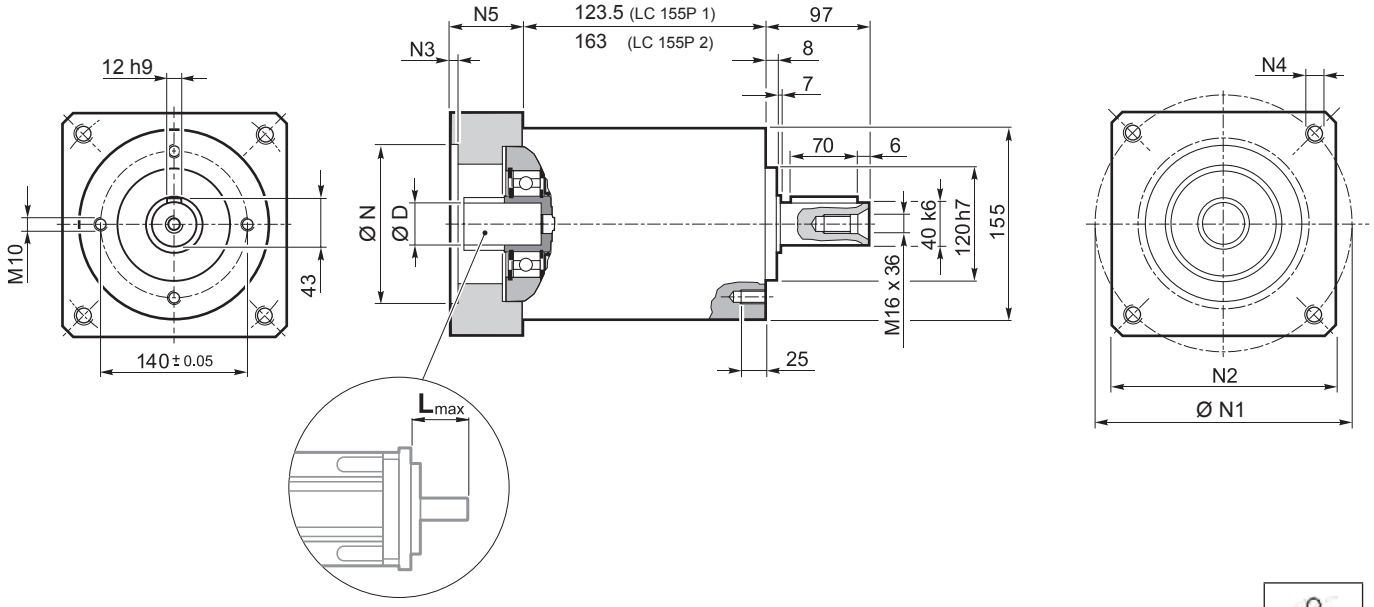

| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 15 | 15.875 | 16 | 48 | 90 | 98 | M6x15 | M6 | 33.5 | 20 | 7.6 | 12.5 | 14.5 |
| 19 | | | | 51 | 90 | 98 | M6x15 | M6 | 33.5 | 20 | 7.6 | 12.5 | 16.5 |
| 22 | 24 | | | 56.5 | 90 | 98 | M6x15 | M6 | 36.5 | 23 | 7.6 | 14 | 19 |
| 28 | | | | 67 | 90 | 98 | M6x15 | M8 | 36.5 | 23 | 7.6 | 14 | 22.5 |
| 32 | | | | 71 | 90 | 98 | M6x15 | M8 | 38 | 24.5 | 7.6 | 15.5 | 24.5 |

| i | $M_{n2}$ | $M_{a2}$ | $M_{p2}$ | $n_1$ | $n_{1\,max}$ | $\varphi_S$ | $\varphi_R$ | $C_t$ | $R_{2\,max}$ | $A_{2\,max}$ | $\eta$ | $J_G$ [kgcm²] D | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | [Nm] | [Nm] | [Nm] | [min⁻¹] | [min⁻¹] | [arcmin] | | [Nm/arcmin] | [N] | [N] | % | 14 ... 19 | 22 ; 24 | 28 ; 32 |
| LC 120P 1_ 3 | 155 | 280 | 300 | 3000 | 4000 | 12' | 6' | 30 | 3500 | 3000 | 97 | 2.17 | 2.77 | 3.13 |
| LC 120P 1_ 4 | 155 | 300 | 360 | 3000 | 4500 | 12' | 6' | 30 | 3500 | 3000 | 97 | 1.30 | 1.89 | 2.26 |
| LC 120P 1_ 5 | 125 | 240 | 360 | 3000 | 4500 | 12' | 6' | 25 | 3500 | 3000 | 97 | 0.96 | 1.56 | 1.92 |
| LC 120P 1_ 7 | 125 | 240 | 360 | 3500 | 4500 | 12' | 6' | 25 | 3500 | 3000 | 97 | 0.66 | 1.26 | 1.62 |
| LC 120P 1_ 10 | 100 | 160 | 300 | 3500 | 5000 | 12' | 6' | 25 | 3500 | 3000 | 97 | 0.49 | 1.09 | 1.45 |
| LC 120P 2_ 9 | 155 | 280 | 300 | 3000 | 4000 | 15' | 8' | 30 | 3500 | 3000 | 94 | 1.61 | 2.20 | 2.57 |
| LC 120P 2_ 12 | 155 | 300 | 360 | 3000 | 4000 | 15' | 8' | 30 | 3500 | 3000 | 94 | 1.51 | 2.10 | 2.47 |
| LC 120P 2_ 15 | 155 | 300 | 360 | 3000 | 4000 | 15' | 8' | 30 | 3500 | 3000 | 94 | 1.47 | 2.06 | 2.43 |
| LC 120P 2_ 16 | 155 | 300 | 360 | 3000 | 4500 | 15' | 8' | 30 | 3500 | 3000 | 94 | 0.92 | 1.52 | 1.88 |
| LC 120P 2_ 20 | 155 | 300 | 360 | 3000 | 4500 | 15' | 8' | 30 | 3500 | 3000 | 94 | 0.90 | 1.50 | 1.86 |
| LC 120P 2_ 25 | 125 | 240 | 360 | 3000 | 4500 | 15' | 8' | 22.5 | 3500 | 3000 | 94 | 0.71 | 1.30 | 1.67 |
| LC 120P 2_ 28 | 125 | 240 | 360 | 3500 | 5000 | 15' | 8' | 22.5 | 3500 | 3000 | 94 | 0.54 | 1.13 | 1.50 |
| LC 120P 2_ 30 | 155 | 300 | 300 | 3500 | 5000 | 15' | 8' | 30 | 3500 | 3000 | 94 | 0.44 | 1.04 | 1.40 |
| LC 120P 2_ 35 | 125 | 240 | 360 | 3500 | 5000 | 15' | 8' | 22.5 | 3500 | 3000 | 94 | 0.53 | 1.13 | 1.49 |
| LC 120P 2_ 40 | 155 | 300 | 360 | 3500 | 5000 | 15' | 8' | 30 | 3500 | 3000 | 94 | 0.43 | 1.03 | 1.39 |
| LC 120P 2_ 50 | 125 | 240 | 360 | 3500 | 5000 | 15' | 8' | 22.5 | 3500 | 3000 | 94 | 0.43 | 1.02 | 1.39 |
| LC 120P 2_ 70 | 125 | 240 | 360 | 3500 | 5000 | 15' | 8' | 22.5 | 3500 | 3000 | 94 | 0.42 | 1.02 | 1.38 |
| LC 120P 2_ 100 | 100 | 160 | 300 | 3500 | 5000 | 15' | 8' | 22.5 | 3500 | 3000 | 94 | 0.42 | 1.02 | 1.38 |



# LC 155P

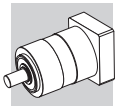
## 55A1 ... 180A1




| | Kg |
|---|---|
| **LC 155P 1** | 19.3 |
| **LC 155P 2** | 24.3 |

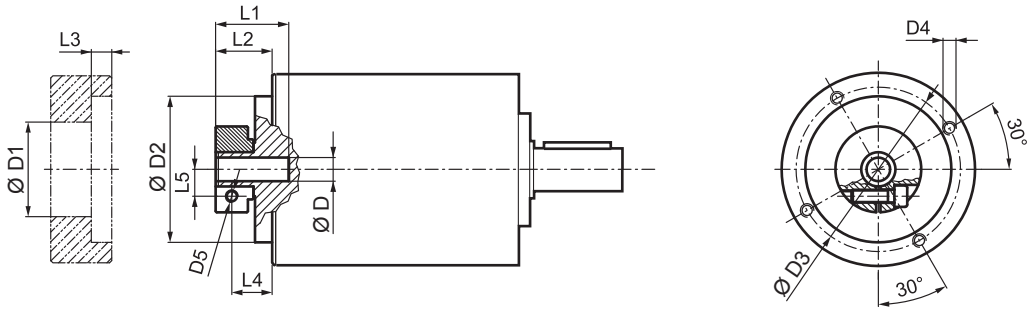
| | D | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **55A1** | 19 | – | – | – | – | – | – | 55.5 | 125.7 | 130 | 4 | M6x15 | 39.5 | 50 |
| **80A2** | 19 | – | – | – | – | – | – | 80 | 100 | 130 | 4 | M6x15 | 39.5 | 50 |
| **95A1** | 19 | 22 | 24 | – | – | – | – | 95 | 115 | 130 | 4 | M8x20 | 39.5 | 50 |
| **110A1** | 19 | 22 | 24 | – | – | – | – | 110 | 130 | 130 | 4 | M8x20 | 39.5 | 50 |
| **110B1** | 19 | 22 | 24 | – | – | – | – | 110 | 145 | 130 | 6.5 | M8x20 | 49.5 | 60 |
| **114A** | 19 | 22 | 24 | 28 | 32 | 35 | 38 | 114.3 | 200 | 170 | 5.5 | M12x25 | 69.5 | 80 |
| **130A** | 19 | 22 | 24 | – | – | – | – | 130 | 165 | 140 | 4 | M10x20 | 39.5 | 50 |
| **130A1** | 19 | 22 | 24 | 28 | 32 | – | – | 130 | 165 | 140 | 4 | M10x20 | 49.5 | 60 |
| **180A** | 19 | 22 | 24 | 28 | 32 | – | – | 180 | 215 | 190 | 5.5 | M14x25 | 49.5 | 60 |
| **180A1** | 19 | 22 | 24 | 28 | 32 | 35 | 38 | 180 | 215 | 190 | 5.5 | M14x25 | 69.5 | 80 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.



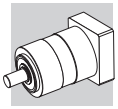
# LC 155P

## FM




| D | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | | 51 | 113 | 125.5 | M8x15 | M6 | 40 | 27.5 | 6 | 20 | 16.5 |
| 22 | 24 | 56.5 | 113 | 125.5 | M8x15 | M6 | 41 | 28.5 | 6 | 19.5 | 19 |
| 28 | | 67 | 113 | 125.5 | M8x15 | M8 | 41 | 28.5 | 6 | 19.5 | 22.5 |
| 32 | | 71 | 113 | 125.5 | M8x15 | M8 | 41 | 28.5 | 6 | 18.5 | 24.5 |
| 35 | | 73 | 113 | 125.5 | M8x15 | M8 | 50 | 37.5 | 11.25 | 26 | 26 |
| 38 | | 77.5 | 113 | 125.5 | M8x15 | M8 | 50 | 37.5 | 11.25 | 26 | 28 |

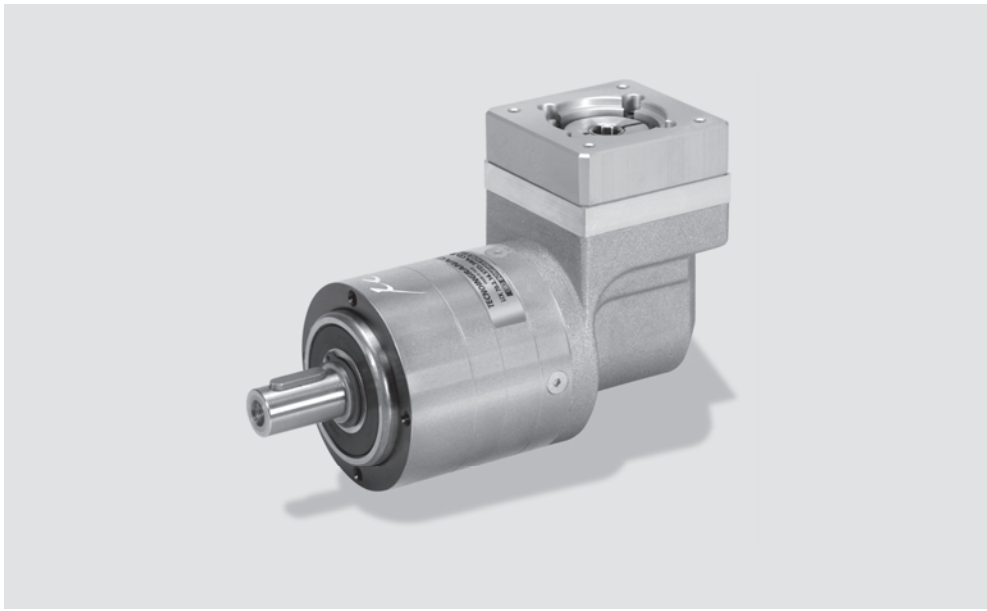
| i | $M_{n\,2}$ | $M_{a\,2}$ | $M_{p\,2}$ | $n_1$ | $n_{1\,max}$ | $\varphi_S$ | $\varphi_R$ | $C_t$ | $R_{2\,max}$ | $A_{2\,max}$ | $\eta$ | $J_G$ [kgcm²] D | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | [Nm] | [Nm] | [Nm] | [min⁻¹] | [min⁻¹] | [arcmin] | | [Nm/arcmin] | [N] | [N] | % | 19 | 22 ; 24 | 28 ; 32 | 35 ; 38 |
| LC 155P 1 _ 3 | 250 | 380 | 600 | 2100 | 3600 | 12' | 6' | 50 | 6000 | 5000 | 97 | 7.99 | 8.19 | 8.54 | 9.90 |
| LC 155P 1 _ 4 | 350 | 500 | 1000 | 2400 | 3600 | 12' | 6' | 50 | 6000 | 5000 | 97 | 4.66 | 4.87 | 5.23 | 6.57 |
| LC 155P 1 _ 5 | 350 | 500 | 1000 | 2900 | 3600 | 12' | 6' | 50 | 6000 | 5000 | 97 | 3.32 | 2.53 | 3.53 | 5.23 |
| LC 155P 1 _ 7 | 350 | 500 | 1000 | 3200 | 3600 | 12' | 6' | 50 | 6000 | 5000 | 97 | 2.14 | 2.35 | 2.70 | 4.05 |
| LC 155P 1 _ 10 | 230 | 350 | 750 | 3200 | 3600 | 12' | 6' | 50 | 6000 | 5000 | 97 | 1.14 | 1.66 | 2.01 | 3.36 |
| LC 155P 2 _ 9 | 250 | 380 | 600 | 2100 | 3600 | 15' | 8' | 48 | 6000 | 5000 | 94 | 5.30 | 5.51 | 5.86 | 7.21 |
| LC 155P 2 _ 12 | 450 | 700 | 1000 | 2100 | 3600 | 15' | 8' | 48 | 6000 | 5000 | 94 | 4.93 | 5.14 | 5.49 | 6.84 |
| LC 155P 2 _ 15 | 450 | 700 | 1000 | 2100 | 3600 | 15' | 8' | 48 | 6000 | 5000 | 94 | 4.79 | 4.99 | 5.34 | 6.70 |
| LC 155P 2 _ 16 | 450 | 700 | 1000 | 2400 | 3600 | 15' | 8' | 48 | 6000 | 5000 | 94 | 2.97 | 3.18 | 3.53 | 4.88 |
| LC 155P 2 _ 20 | 450 | 700 | 1000 | 2900 | 3600 | 15' | 8' | 48 | 6000 | 5000 | 94 | 2.23 | 2.44 | 2.79 | 4.14 |
| LC 155P 2 _ 25 | 450 | 700 | 1000 | 2900 | 3600 | 15' | 8' | 48 | 6000 | 5000 | 94 | 2.18 | 2.39 | 2.74 | 4.09 |
| LC 155P 2 _ 28 | 450 | 700 | 1000 | 3200 | 3600 | 15' | 8' | 48 | 6000 | 5000 | 94 | 1.58 | 1.79 | 2.14 | 3.49 |
| LC 155P 2 _ 30 | 250 | 380 | 750 | 3200 | 3600 | 15' | 8' | 48 | 6000 | 5000 | 94 | 1.23 | 1.44 | 1.79 | 3.14 |
| LC 155P 2 _ 35 | 450 | 700 | 1000 | 3200 | 3600 | 15' | 8' | 48 | 6000 | 5000 | 94 | 1.55 | 1.76 | 2.11 | 3.46 |
| LC 155P 2 _ 40 | 450 | 700 | 1000 | 3200 | 3600 | 15' | 8' | 48 | 6000 | 5000 | 94 | 1.20 | 1.41 | 1.76 | 3.11 |
| LC 155P 2 _ 50 | 450 | 700 | 1000 | 3200 | 3600 | 15' | 8' | 48 | 6000 | 5000 | 94 | 1.19 | 1.39 | 1.74 | 3.10 |
| LC 155P 2 _ 70 | 450 | 700 | 1000 | 3200 | 3600 | 15' | 8' | 48 | 6000 | 5000 | 94 | 1.17 | 1.38 | 1.73 | 3.08 |
| LC 155P 2 _ 100 | 230 | 350 | 750 | 3200 | 3600 | 15' | 8' | 48 | 6000 | 5000 | 94 | 1.17 | 1.38 | 1.73 | 3.08 |



LC

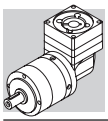
# LCK
# ABGEWINKELTES PRÄZISIONSPLANETENGETRIEBE

Die LCK-Reihe bietet in Winkelbauform die gleichen Merkmale der LC-Reihe. Die Winkelbauweise erleichtert dabei die Installation an Stellen, an denen der Platz beschränkt ist.
Diese Getriebe sind dank optimaler Leistungsfähigkeit und Zuverlässigkeit eine flexible Lösung und wirtschaftliche Alternative.
**Verbesserte Leistungsfähigkeit als Schlüssel zum Downsizing.**
Die verbesserte Leistungsfähigkeit unseres LC-Präzisionsgetriebes (neue Option "P") kann wichtige Downsizing-Optionen für zahlreiche Anwendungen eröffnen, bei denen es zuvor nicht möglich war, ein höheres übertragbares Abtriebsdrehmoment bereitrzustellen.
Ein weiterer Vorteil des Downsizing ist eine verbesserte Energieeffizienz, indem man ein kompakteres Getriebe mit höherer Drehmomentdichte wählen und dadurch die Beschleunigungsmasse deutlich reduzieren kann.
Das übertragbare Drehmoment wurde um bis zu 40% verbessert.





**Produktmerkmale:**
- Option "P" mit hoher Drehmomentdichte für eine größere Produktleistungsfähigkeit verfügbar
- Optimales Beschleunigungs- und Nenndrehmoment
- Optimale radiale und axiale Belastbarkeit
- Entwickelt für Zyklus- und Dauerbetrieb
- Optimale Verdrehsteifigkeit
- Verdrehflankenspiel – unter 6 arcmin
- Einsetzbar in beliebiger Montageaposition



## 8 MERKMALE DER LCK-REIHE

Die LCK-Reihe bietet in Winkelbauform die gleichen Merkmale der LC-Reihe, sowie den zusätzlichen Vorteil einer einfacheren Installation bei eingeschränkten Platzverhältnissen.

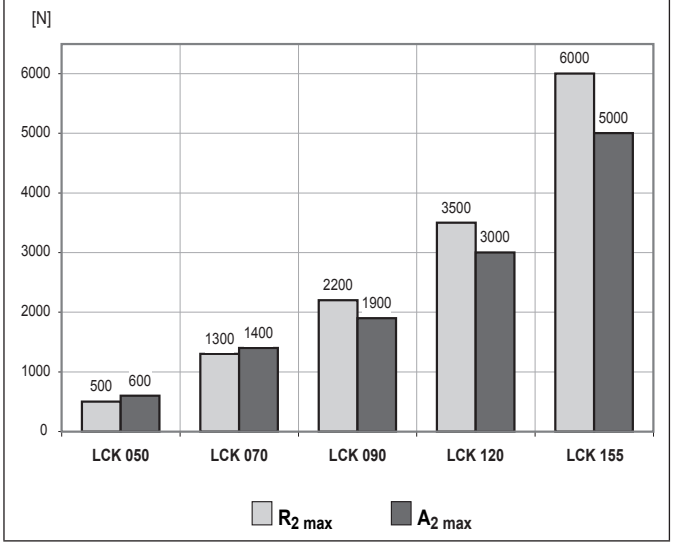
- Erhältlich mit standard Flankenspiel:
  2-stufige Getriebe: standard $\varphi_s \leq 6'$;
  3-stufige Getriebe: standard $\varphi_s \leq 8'$;
- Eine hohe IP-Schutzklasse (IP64) sorgt dafür, dass innenliegende Teile vor Staub- und Flüssigkeitseintritt geschützt sind.
- Serienmäßige Fluorelastomer-Wellendichtungen an der Eingangswelle
- Schalldruckpegel $L_P \leq 70$ dB(A). Gemessen in 1 m Abstand ohne Last und bei einer Eingangsdrehzahl von $n_1 = 3000$ min$^{-1}$; i=10.
- Große Auswahl an Motoradaptern sorgt für den Anschluss an die marktgängigsten Servomotoren.
- Die Getriebe sind werksseitig mit synthetischem Schmierfett gemäß NLGI-Konsistenzklasse 00 gefüllt; ohne Verunreinigung muss das Schmiermittel nicht regelmäßig gewechselt werden.
- Umgebungstemperatur min. -20°C, max. +30°C; bei Temperaturen höher als 30°C ist der Temperaturfaktor $f_T$ zu berücksichtigen.
- Die Gehäusetemperatur darf $T_{max} = 90$°C nicht übersteigen.
- Erhältlich als Version P mit höherem Abtriebsdrehmoment.

**Übersicht der Nenndrehmomente $M_{n2}$ [Nm]**

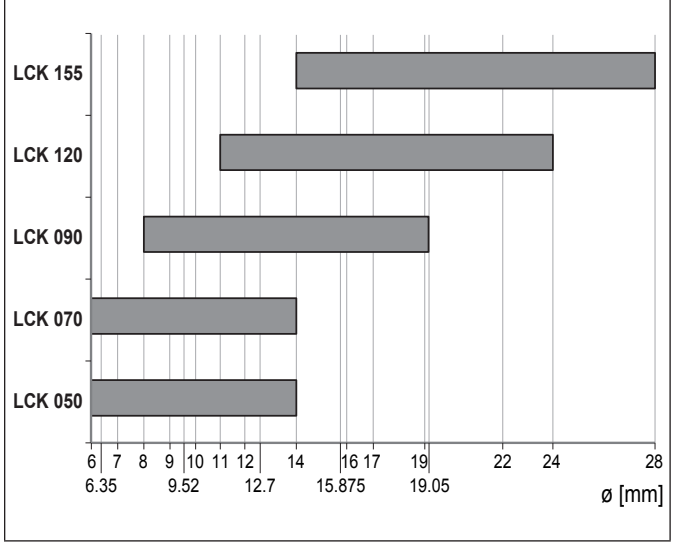
| [i] | 6 | 8 | 10 | 14 | 20 | 24 | 30 | 50 | 70 | 80 | 90 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **LCK 050** | 10 | 12 | 12 | 12 | – | 12 | 12 | 12 | 12 | – | 12 | – |
| **LCK 070** | 18 | 25 | 25 | 25 | 18 | 25 | 25 | 25 | 25 | 25 | – | 25 |
| **LCK 070P** | 25 | 30 | 25 | 25 | 18 | 29 | 29 | 30 | 30 | 30 | – | 30 |
| **LCK 090** | 37 | 43 | 43 | 43 | 37 | 43 | 43 | 43 | 43 | 43 | – | 43 |
| **LCK 090P** | 45 | 60 | 50 | 50 | 40 | 60 | 60 | 50 | 50 | 60 | – | 50 |
| **LCK 120** | 95 | 110 | 110 | 110 | 95 | 110 | 110 | 110 | 110 | 110 | – | 110 |
| **LCK 120P** | 110 | 140 | 125 | 125 | 100 | 155 | 155 | 125 | 125 | 155 | – | 125 |
| **LCK 155** | 250 | 300 | 300 | 300 | 230 | 300 | 300 | 300 | 300 | 300 | – | 300 |
| **LCK 155P** | 250 | 350 | 350 | 350 | 230 | 450 | 450 | 450 | 450 | 450 | – | 450 |

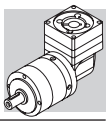


**Max. Belastbarkeit der Abtriebswelle**




**Verfügbare Motorwellendurchmesser**





## *8.1 BESTELLBEZEICHNUNG*

**LCK** | **120** | **2** | **20** | **STD** | **100A** | **CD** | **14** | **KE** | **UH1**

SCHMIERSTOFF
- **–** Standard
- **UH1** Lebensmitteltaugliches Schmiermittel

ABTRIEBSWELLENKONFIGURATION
- **KL** Glatte Welle ohne Passfeder
- **KE** Welle mit Passfedert

BOHRUNGSDURCHMESSER EINGANGSWELLE
- **6 ... 28**

MOTORKOPPLUNG
- **CD** Klemmnabe

ANTRIEBSFLANSCH
- **25AH ... 180A1** Motorflansch
- **FM** Ohne Motorflansch

VERDREHSPIEL

| | 2 Getriebestufen | 3 Getriebestufen |
|---|---|---|
| **STD** | $\varphi s \leq 6'$ | $\varphi s \leq 8'$ |

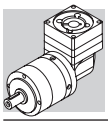
GETRIEBEÜBERSETZUNG

GETRIEBESTUFEN
- **2** **3**

BAUGRÖSSE
- **050** **070** **090** **120** **155**
- **070P** **090P** **120P** **155P**

REIHE
- **LCK**

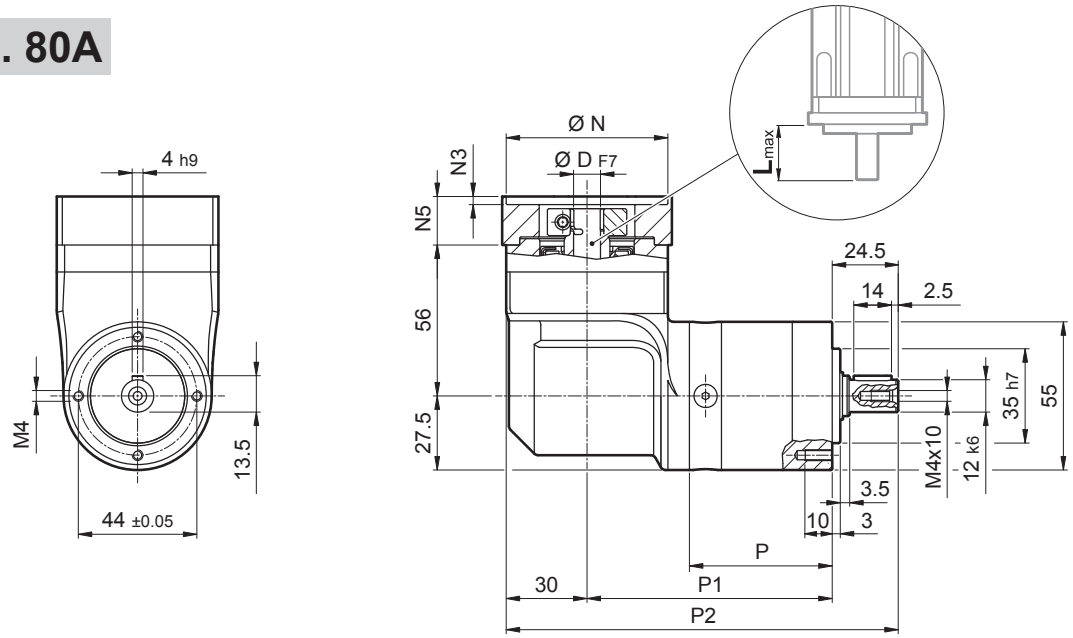
LCK

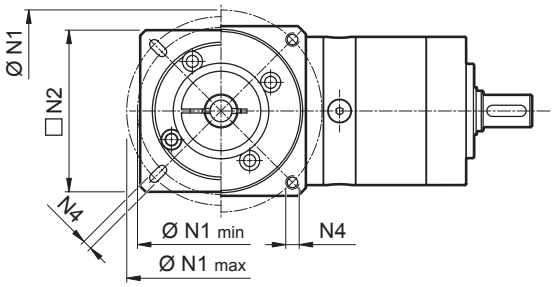




# LCK 050

## 25AH ... 80A

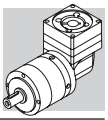



| | P | P1 | P2 | Kg |
|---|---|---|---|---|
| **LCK 050 2** | 53 | 91 | 145.5 | 1.6 |
| **LCK 050 3** | 66.8 | 104.8 | 159.3 | 1.8 |

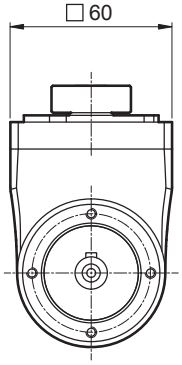
| | D | | | | | | | | | | | N | N1 | | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | min | max | | | | | |
| **25AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 25 | 39 | 56 | | | | | |
| **26AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 26 | 39 | 56 | | | | | |
| **28AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 28 | 39 | 56 | | | | | |
| **30AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 30 | 39 | 56 | | | | | |
| **32AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 32 | 39 | 56 | 65 | 3.5 | 4.5 | 25 | 25 |
| **34AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 34 | 40 | 56 | | | | | |
| **36AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 36 | 42 | 56 | | | | | |
| **38AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 39 | 45 | 56 | | | | | |
| **40AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 40 | 46 | 56 | | | | | |
| **38B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 38.1 | 66.6 | | 60 | 3 | M4x10 | 18 | 25 |
| **40B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 40 | 63 | | 60 | 3 | M4x10 | 18 | 25 |
| **50A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 50 | 60 | | 60 | 3 | M4x10 | 18 | 25 |
| **50B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 60 | 3 | M5x12 | 23 | 30 |
| **50BH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 65 | 3 | 5.5 | 25 | 32 |
| **50C** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 70 | | 60 | 3 | M4x10 | 23 | 30 |
| **50MH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 55 | 80 | | 65 | 2 | 5.5 | 16 | 23 |
| **60A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 60 | 75 | | 65 | 3 | M5x12 | 18 | 25 |
| **60A1** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 75 | | 65 | 3 | M5x12 | 23 | 30 |
| **60B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 85 | | 75 | 3 | M5x12 | 23 | 30 |
| **60C** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **70A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 85 | | 75 | 3 | M6x15 | 23 | 30 |
| **70B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **73A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 73 | 98.4 | | 85 | 3 | M5x12 | 25 | 32 |
| **80A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 80 | 100 | | 85 | 3 | M6x15 | 23 | 30 |

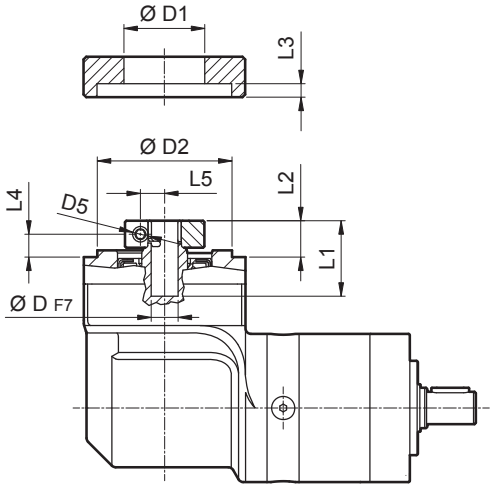
Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

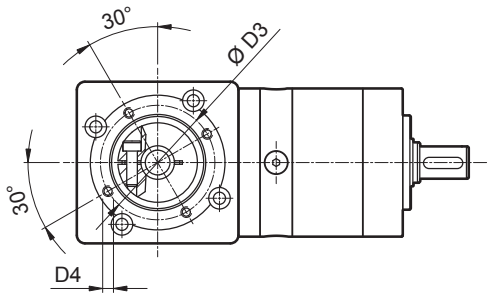


# LCK 050

## FM

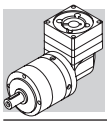


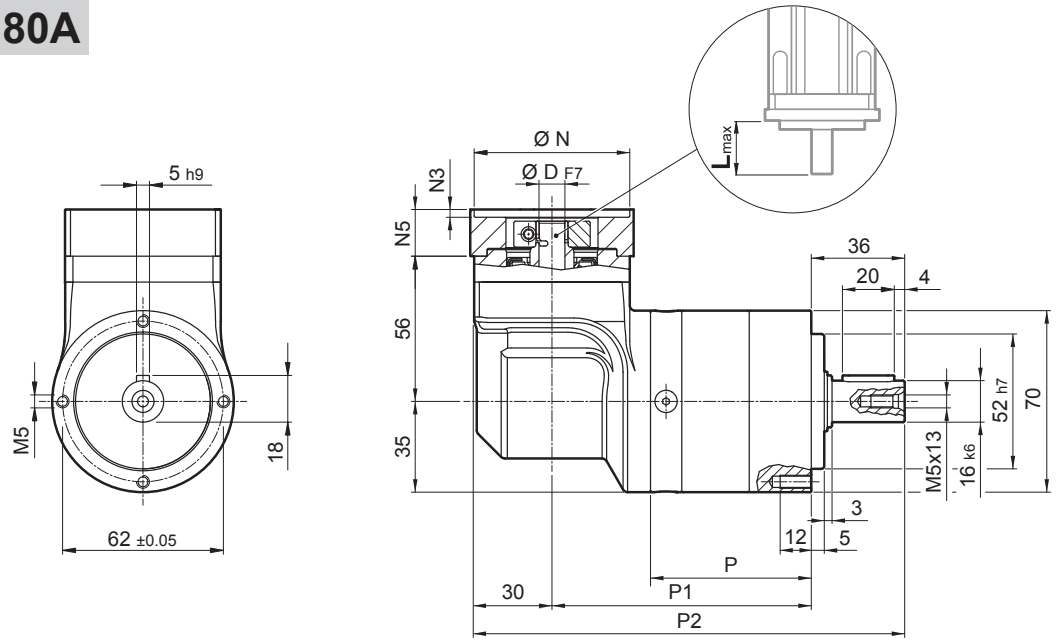

| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 6.35 | 7 | | 32.5 | 50 | 42.5 | M4x8 | M4 | 28 | 13.5 | 3 | 8.5 | 8 |
| 8 | 9 | 9.52 | 10 | 32.5 | 50 | 42.5 | M4x8 | M4 | 28 | 13.5 | 3 | 8.5 | 9 |
| 11 | 12 | 12.7 | | 35.5 | 50 | 42.5 | M4x8 | M4 | 23 | 13.5 | 3 | 8.5 | 11 |
| 14 | | | | 35.5 | 50 | 42.5 | M4x8 | M4 | 25 | 15.5 | 3 | 8.9 | 11.5 |

| i | $M_{n2}$ [Nm] | $M_{a2}$ [Nm] | $M_{p2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 6 ... 9.52 | $J_G$ [kgcm$^2$] D 10 ... 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LCK 050 2_6 | 10 | 16 | 28 | 2500 | 5000 | 6' | 0.9 | 500 | 600 | 94 | 0.23 | 0.25 |
| LCK 050 2_8 | 12 | 20 | 30 | 2500 | 5000 | 6' | 0.9 | 500 | 600 | 94 | 0.23 | 0.24 |
| LCK 050 2_10 | 12 | 20 | 30 | 2500 | 5000 | 6' | 0.9 | 500 | 600 | 94 | 0.23 | 0.24 |
| LCK 050 2_14 | 12 | 20 | 30 | 2500 | 5000 | 6' | 0.9 | 500 | 600 | 94 | 0.23 | 0.24 |
| LCK 050 3_24 | 12 | 20 | 30 | 2500 | 5000 | 8' | 0.7 | 500 | 600 | 91 | 0.23 | 0.25 |
| LCK 050 3_30 | 12 | 20 | 30 | 2500 | 5000 | 8' | 0.7 | 500 | 600 | 91 | 0.23 | 0.25 |
| LCK 050 3_50 | 12 | 20 | 30 | 2500 | 5000 | 8' | 0.7 | 500 | 600 | 91 | 0.23 | 0.24 |
| LCK 050 3_70 | 12 | 20 | 30 | 2500 | 5000 | 8' | 0.7 | 500 | 600 | 91 | 0.23 | 0.24 |
| LCK 050 3_90 | 12 | 20 | 30 | 2500 | 5000 | 8' | 0.7 | 500 | 600 | 91 | 0.22 | 0.24 |

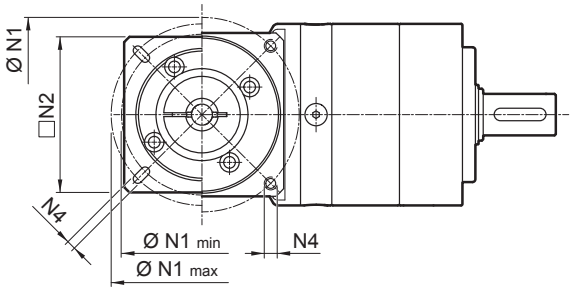


# LCK 070

## 25AH ... 80A

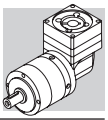



| | P | P1 | P2 | kg |
|---|---|---|---|---|
| **LCK 070 2** | 62 | 100 | 166 | 2.7 |
| **LCK 070 3** | 78.7 | 116.7 | 182.7 | 3.0 |



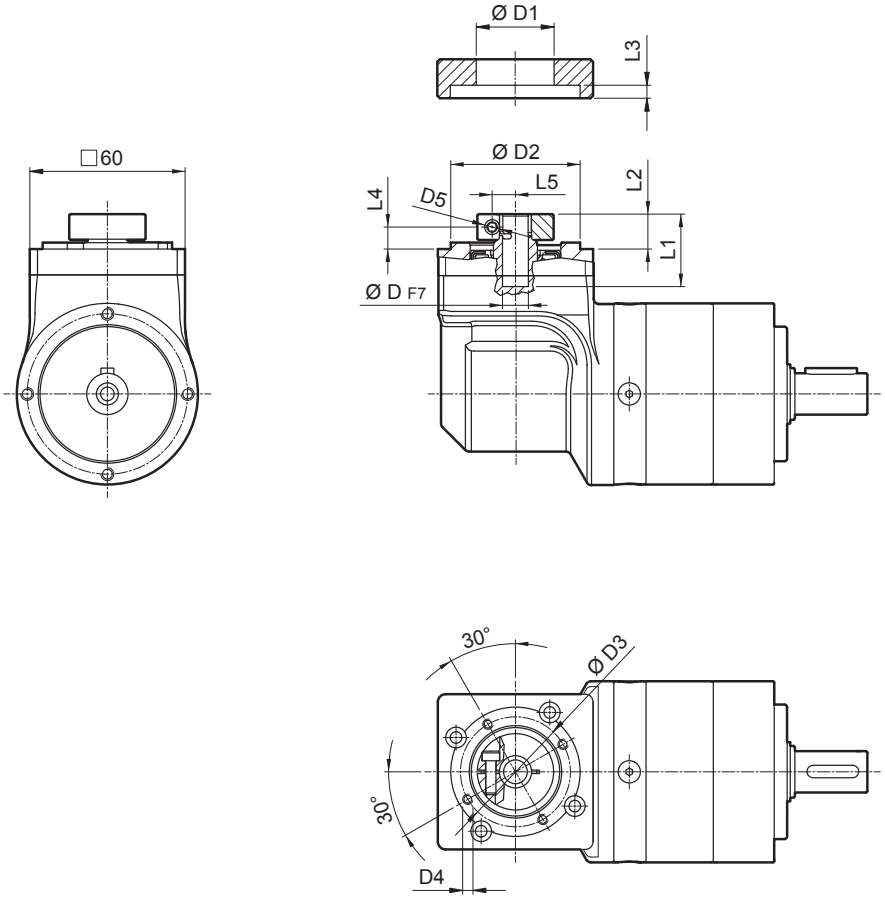

| | D | | | | | | | | | | | N | N1 | | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | min | max | | | | | |
| **25AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 25 | 39 | 56 | | | | | |
| **26AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 26 | 39 | 56 | | | | | |
| **28AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 28 | 39 | 56 | | | | | |
| **30AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 30 | 39 | 56 | | | | | |
| **32AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 32 | 39 | 56 | 65 | 3.5 | 4.5 | 25 | 25 |
| **34AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 34 | 40 | 56 | | | | | |
| **36AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 36 | 42 | 56 | | | | | |
| **39AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 39 | 45 | 56 | | | | | |
| **40AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 40 | 46 | 56 | | | | | |
| **38B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 38.1 | 66.6 | | 60 | 3 | M4x10 | 18 | 25 |
| **40B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 40 | 63 | | 60 | 3 | M4x10 | 18 | 25 |
| **50A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 50 | 60 | | 60 | 3 | M4x10 | 18 | 25 |
| **50B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 60 | 3 | M5x12 | 23 | 30 |
| **50BH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 65 | 3 | 5.5 | 25 | 32 |
| **50C** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 70 | | 60 | 3 | M4x10 | 23 | 30 |
| **55MH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 55 | 80 | | 65 | 2 | 5.5 | 16 | 23 |
| **60A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 60 | 75 | | 65 | 3 | M5x12 | 18 | 25 |
| **60A1** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 75 | | 65 | 3 | M5x12 | 23 | 30 |
| **60B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 85 | | 75 | 3 | M5x12 | 23 | 30 |
| **60C** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **70A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 85 | | 75 | 3 | M6x15 | 23 | 30 |
| **70B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **73A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 73 | 98.4 | | 85 | 3 | M5x12 | 25 | 32 |
| **80A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 80 | 100 | | 85 | 3 | M6x15 | 23 | 30 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.



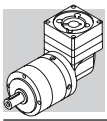
# LCK 070

**FM**



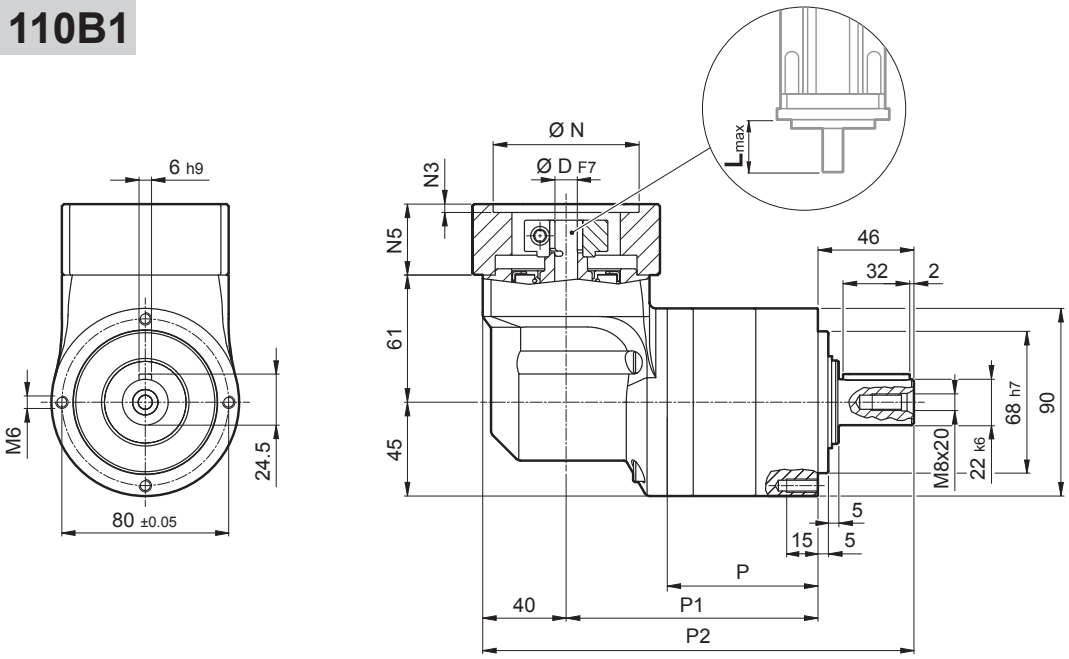

| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 6.35 | 7 | | 32.5 | 50 | 42.5 | M4x8 | M4 | 28 | 13.5 | 3 | 8.5 | 8 |
| 8 | 9 | 9.52 | 10 | 32.5 | 50 | 42.5 | M4x8 | M4 | 28 | 13.5 | 3 | 8.5 | 9 |
| 11 | 12 | 12.7 | | 35.5 | 50 | 42.5 | M4x8 | M4 | 23 | 13.5 | 3 | 8.5 | 11 |
| 14 | | | | 35.5 | 50 | 42.5 | M4x8 | M4 | 25 | 15.5 | 3 | 8.9 | 11.5 |

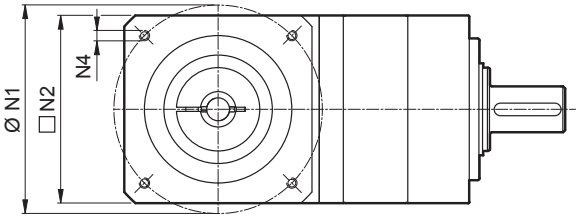
| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 6 ... 9.52 | $J_G$ [kgcm$^2$] D 10 ... 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LCK 070 2_6 | 18 | 30 | 45 | 2500 | 5000 | 6' | 2.8 | 1300 | 1400 | 94 | 0.25 | 0.26 |
| LCK 070 2_8 | 25 | 35 | 60 | 2500 | 5000 | 6' | 2.8 | 1300 | 1400 | 94 | 0.24 | 0.25 |
| LCK 070 2_10 | 25 | 35 | 70 | 2500 | 5000 | 6' | 2.8 | 1300 | 1400 | 94 | 0.23 | 0.25 |
| LCK 070 2_14 | 25 | 35 | 70 | 2500 | 5000 | 6' | 2.8 | 1300 | 1400 | 94 | 0.23 | 0.24 |
| LCK 070 2_20 | 18 | 30 | 60 | 2500 | 5000 | 6' | 2.8 | 1300 | 1400 | 94 | 0.23 | 0.24 |
| LCK 070 3_24 | 25 | 35 | 70 | 2500 | 5000 | 8' | 2.5 | 1300 | 1400 | 91 | 0.24 | 0.26 |
| LCK 070 3_30 | 25 | 35 | 70 | 2500 | 5000 | 8' | 2.5 | 1300 | 1400 | 91 | 0.24 | 0.26 |
| LCK 070 3_50 | 25 | 35 | 70 | 2500 | 5000 | 8' | 2.5 | 1300 | 1400 | 91 | 0.23 | 0.24 |
| LCK 070 3_70 | 25 | 35 | 70 | 2500 | 5000 | 8' | 2.5 | 1300 | 1400 | 91 | 0.23 | 0.24 |
| LCK 070 3_80 | 25 | 35 | 70 | 2500 | 5000 | 8' | 2.5 | 1300 | 1400 | 91 | 0.23 | 0.24 |
| LCK 070 3_100 | 25 | 35 | 70 | 2500 | 5000 | 8' | 2.5 | 1300 | 1400 | 91 | 0.23 | 0.24 |



# LCK 090

## 40B1 ... 110B1

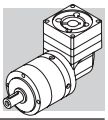



| | P | P1 | P2 | Kg |
|---|---|---|---|---|
| **LCK 090 2** | 72.3 | 120.8 | 206.8 | 5.2 |
| **LCK 090 3** | 98.8 | 147.3 | 233.3 | 6.3 |

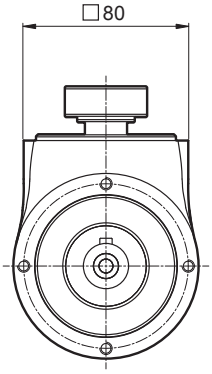
| | D | | | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **40B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 40 | 63 | 80 | 4 | M4x10 | 34 | 40 |
| **45A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | – | – | – | – | – | – | 45 | 63 | 80 | 4 | M4x10 | 34 | 40 |
| **50B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 65 | 80 | 4 | M5x16 | 34 | 40 |
| **50BH1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 65 | 80 | 4 | 5.5 | 34 | 40 |
| **50C1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 70 | 80 | 4 | M4x10 | 34 | 40 |
| **50D** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 95 | 80 | 4 | M6x10 | 34 | 40 |
| **55A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 55.5 | 125.7 | 105 | 4 | M6x16 | 34 | 40 |
| **60A2** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 60 | 75 | 80 | 4 | M5x16 | 34 | 40 |
| **60AH2** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 60 | 75 | 90 | 4 | 5.5 | 34 | 40 |
| **60B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | – | – | – | 60 | 85 | 80 | 4 | M5x16 | 34 | 40 |
| **60C1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | – | – | – | 60 | 90 | 80 | 4 | M5x16 | 34 | 40 |
| **70A1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 85 | 80 | 4 | M6x20 | 34 | 40 |
| **70AH1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 85 | 90 | 4 | 6.5 | 34 | 40 |
| **70B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 90 | 80 | 4 | M5x16 | 34 | 40 |
| **73A1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 73 | 98.4 | 85 | 4 | M5x16 | 34 | 40 |
| **80A1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 80 | 100 | 90 | 4 | M6x16 | 34 | 40 |
| **95A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 95 | 115 | 100 | 4 | M8x20 | 34 | 40 |
| **95B** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 95 | 130 | 115 | 4 | M8x20 | 34 | 40 |
| **110A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 130 | 115 | 4 | M8x20 | 34 | 40 |
| **110B** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 145 | 120 | 6.5 | M8x20 | 44 | 50 |
| **110B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 145 | 120 | 6.5 | M8x20 | 54 | 60 |

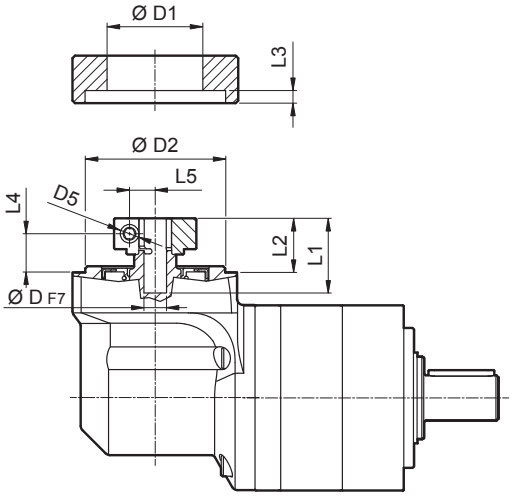
Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

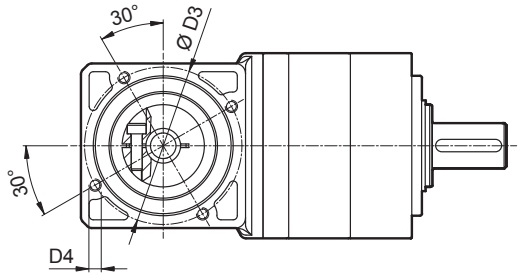


# LCK 090

**FM**

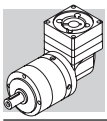


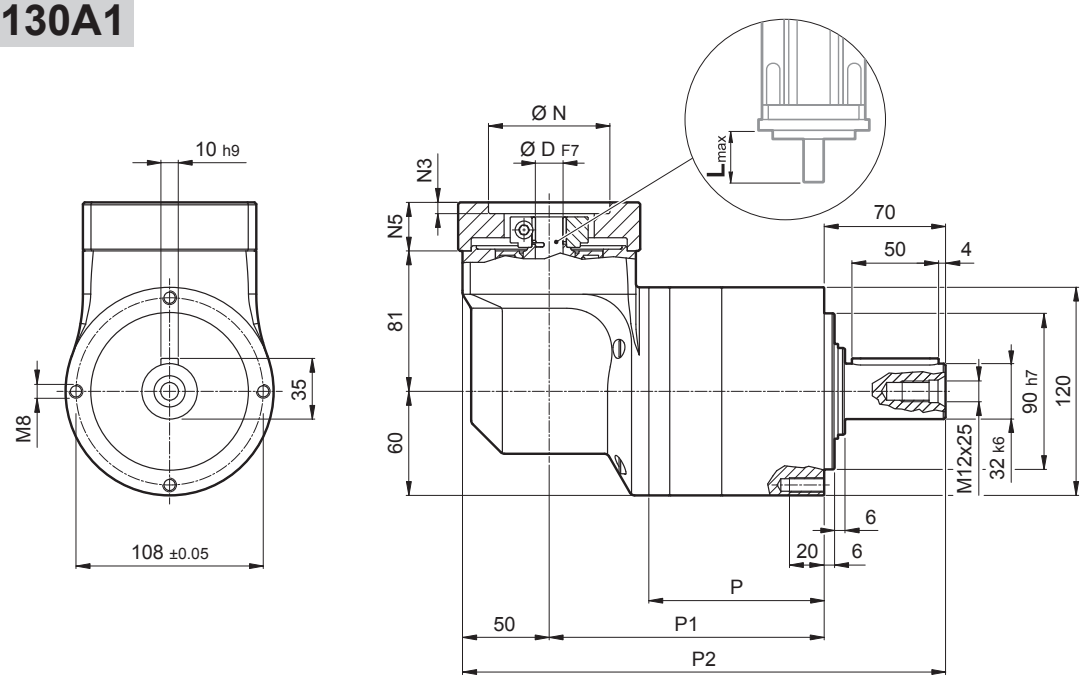

| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 9 | 9.52 | | 38 | 68 | 76.5 | M6x10 | M6 | 36.3 | 26.3 | 9.5 | 18.8 | 10.5 |
| 11 | 12 | 12.7 | | 43 | 68 | 76.5 | M6x10 | M6 | 36.3 | 26.3 | 9.5 | 18.8 | 12.5 |
| 14 | 15.875 | 16 | 17 | 48 | 68 | 76.5 | M6x10 | M6 | 36.3 | 26.3 | 9.5 | 18.8 | 14.5 |
| 19 | 19.05 | | | 51 | 68 | 76.5 | M6x10 | M6 | 36.3 | 26.3 | 9.5 | 18.8 | 16.5 |

| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 8 ... 12.7 | $J_G$ [kgcm$^2$] D 14 ... 19.05 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LCK 090 2_6 | 37 | 63 | 90 | 2500 | 5000 | 6' | 8 | 2200 | 1900 | 94 | 0.85 | 1.03 |
| LCK 090 2_8 | 43 | 80 | 120 | 2500 | 5000 | 6' | 8 | 2200 | 1900 | 94 | 0.79 | 0.98 |
| LCK 090 2_10 | 43 | 80 | 150 | 2500 | 5000 | 6' | 8 | 2200 | 1900 | 94 | 0.77 | 0.96 |
| LCK 090 2_14 | 43 | 80 | 160 | 2500 | 5000 | 6' | 8 | 2200 | 1900 | 94 | 0.75 | 0.94 |
| LCK 090 2_20 | 37 | 70 | 150 | 2500 | 5000 | 6' | 8 | 2200 | 1900 | 94 | 0.74 | 0.93 |
| LCK 090 3_24 | 43 | 80 | 160 | 2500 | 5000 | 8' | 7.8 | 2200 | 1900 | 91 | 0.81 | 1.00 |
| LCK 090 3_30 | 43 | 80 | 160 | 2500 | 5000 | 8' | 7.8 | 2200 | 1900 | 91 | 0.81 | 1.00 |
| LCK 090 3_50 | 43 | 80 | 160 | 2500 | 5000 | 8' | 7.8 | 2200 | 1900 | 91 | 0.76 | 0.94 |
| LCK 090 3_70 | 43 | 80 | 160 | 2500 | 5000 | 8' | 7.8 | 2200 | 1900 | 91 | 0.74 | 0.93 |
| LCK 090 3_80 | 43 | 80 | 160 | 2500 | 5000 | 8' | 7.8 | 2200 | 1900 | 91 | 0.74 | 0.93 |
| LCK 090 3_100 | 43 | 80 | 160 | 2500 | 5000 | 8' | 7.8 | 2200 | 1900 | 91 | 0.74 | 0.93 |

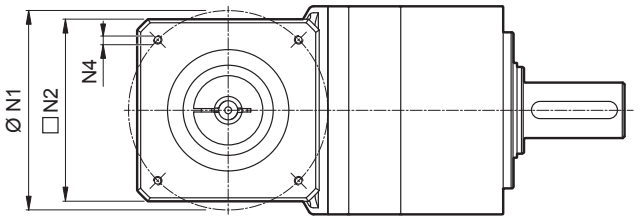


# LCK 120

## 50D ... 130A1

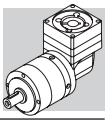



| | P | P1 | P2 | Kg |
|---|---|---|---|---|
| **LCK 120 2** | 101.1 | 158.6 | 278.6 | 11.3 |
| **LCK 120 3** | 133.6 | 191.1 | 311.1 | 13.8 |



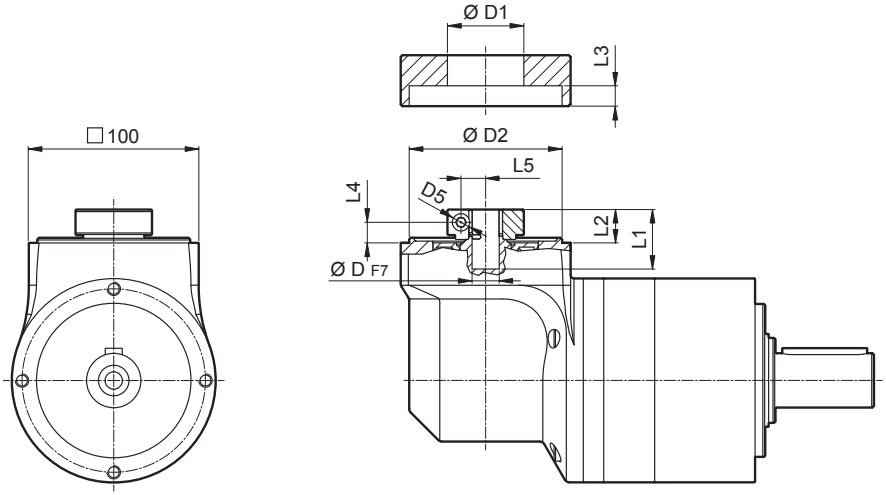

| | D | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **50D** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 50 | 95 | 100 | 5 | M6x14 | 28 | 40 |
| **55A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 55.5 | 125.7 | 105 | 5 | M6x16 | 28 | 40 |
| **60A2** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 60 | 75 | 100 | 5 | M5x14 | 28 | 40 |
| **60AH2** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 60 | 75 | 100 | 5 | 6.5 | 33 | 40 |
| **60B1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 60 | 85 | 100 | 6.5 | M5x14 | 28 | 40 |
| **70A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 70 | 85 | 100 | 5 | M6x14 | 28 | 40 |
| **70AH1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 70 | 85 | 100 | 5 | 6 | 33 | 40 |
| **70B1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 70 | 90 | 100 | 5 | M5x12 | 28 | 40 |
| **80A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 80 | 100 | 100 | 5 | M6x16 | 28 | 40 |
| **80AH1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 80 | 100 | 100 | 5 | 6.5 | 28 | 40 |
| **95A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 95 | 115 | 100 | 5 | M8x18 | 28 | 40 |
| **95A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 95 | 115 | 100 | 5 | M8x18 | 38 | 50 |
| **95B** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 95 | 130 | 115 | 5 | M8x18 | 28 | 40 |
| **110A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 110 | 130 | 115 | 5 | M8x18 | 28 | 40 |
| **110A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 110 | 130 | 115 | 6.5 | M8x20 | 38 | 50 |
| **110B** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 110 | 145 | 120 | 6.5 | M8x20 | 38 | 50 |
| **110B1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 110 | 145 | 120 | 6.5 | M8x20 | 48 | 60 |
| **130A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 130 | 165 | 140 | 6.5 | M10x20 | 38 | 50 |
| **130A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 130 | 165 | 140 | 6.5 | M10x25 | 48 | 60 |

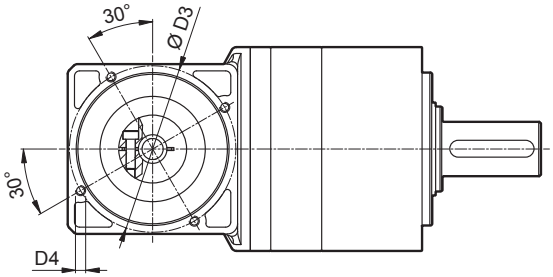
Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.



# LCK 120

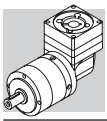
**FM**



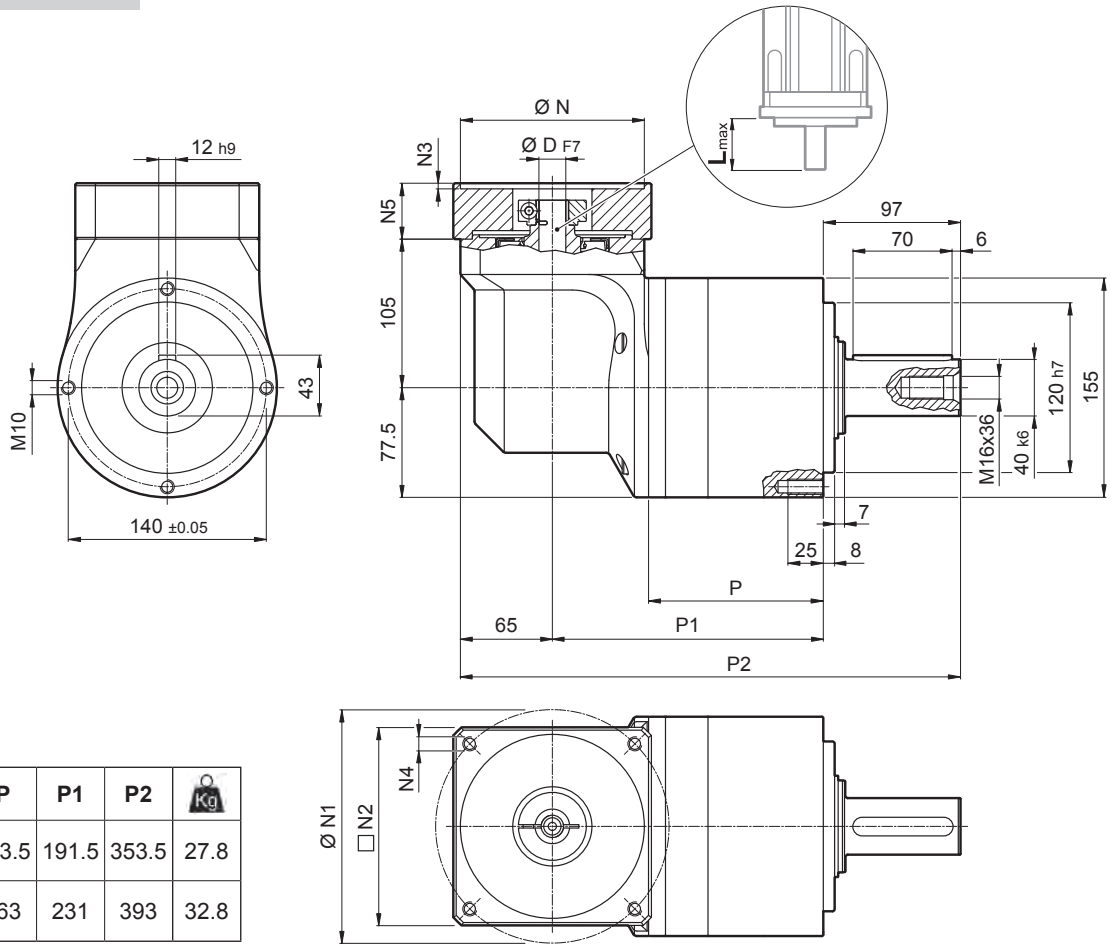

| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 12 | 12.7 | | 43 | 90 | 98 | M6x15 | M6 | 35 | 19.5 | 7.6 | 12.1 | 12.5 |
| 14 | 15 | 15.875 | 16 | 48 | 90 | 98 | M6x15 | M6 | 35 | 19.5 | 7.6 | 12.1 | 14.5 |
| 19 | | | | 51 | 90 | 98 | M6x15 | M6 | 35 | 19.5 | 7.6 | 12.1 | 16.5 |
| 22 | 24 | | | 56.5 | 90 | 98 | M6x15 | M6 | 37 | 21.5 | 7.6 | 12.1 | 19 |

| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 11 ... 12.7 | D 14 ... 19 | D 22 ; 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **LCK 120 2_6** | 95 | 160 | 225 | 2000 | 4500 | 6' | 23.4 | 3500 | 3000 | 94 | 1.74 | 1.82 | 2.01 |
| **LCK 120 2_8** | 110 | 190 | 300 | 2000 | 4500 | 6' | 23.4 | 3500 | 3000 | 94 | 1.52 | 1.60 | 1.79 |
| **LCK 120 2_10** | 110 | 190 | 360 | 2000 | 4500 | 6' | 23.4 | 3500 | 3000 | 94 | 1.44 | 1.52 | 1.71 |
| **LCK 120 2_14** | 110 | 190 | 360 | 2000 | 4500 | 6' | 23.4 | 3500 | 3000 | 94 | 1.37 | 1.45 | 1.63 |
| **LCK 120 2_20** | 95 | 160 | 300 | 2000 | 4500 | 6' | 23.4 | 3500 | 3000 | 94 | 1.32 | 1.40 | 1.59 |
| **LCK 120 3_24** | 110 | 190 | 360 | 2000 | 4500 | 8' | 22.9 | 3500 | 3000 | 91 | 1.64 | 1.72 | 1.90 |
| **LCK 120 3_30** | 110 | 190 | 360 | 2000 | 4500 | 8' | 22.9 | 3500 | 3000 | 91 | 1.63 | 1.71 | 1.89 |
| **LCK 120 3_50** | 110 | 190 | 360 | 2000 | 4500 | 8' | 22.9 | 3500 | 3000 | 91 | 1.40 | 1.48 | 1.67 |
| **LCK 120 3_70** | 110 | 190 | 360 | 2000 | 4500 | 8' | 22.9 | 3500 | 3000 | 91 | 1.34 | 1.42 | 1.61 |
| **LCK 120 3_80** | 110 | 190 | 360 | 2000 | 4500 | 8' | 22.9 | 3500 | 3000 | 91 | 1.31 | 1.39 | 1.58 |
| **LCK 120 3_100** | 110 | 190 | 360 | 2000 | 4500 | 8' | 22.9 | 3500 | 3000 | 91 | 1.31 | 1.39 | 1.58 |



# LCK 155

## 55A1 ... 180A1



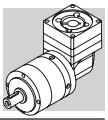




| | P | P1 | P2 | Kg |
|---|---|---|---|---|
| **LCK 155 2** | 123.5 | 191.5 | 353.5 | 27.8 |
| **LCK 155 3** | 163 | 231 | 393 | 32.8 |

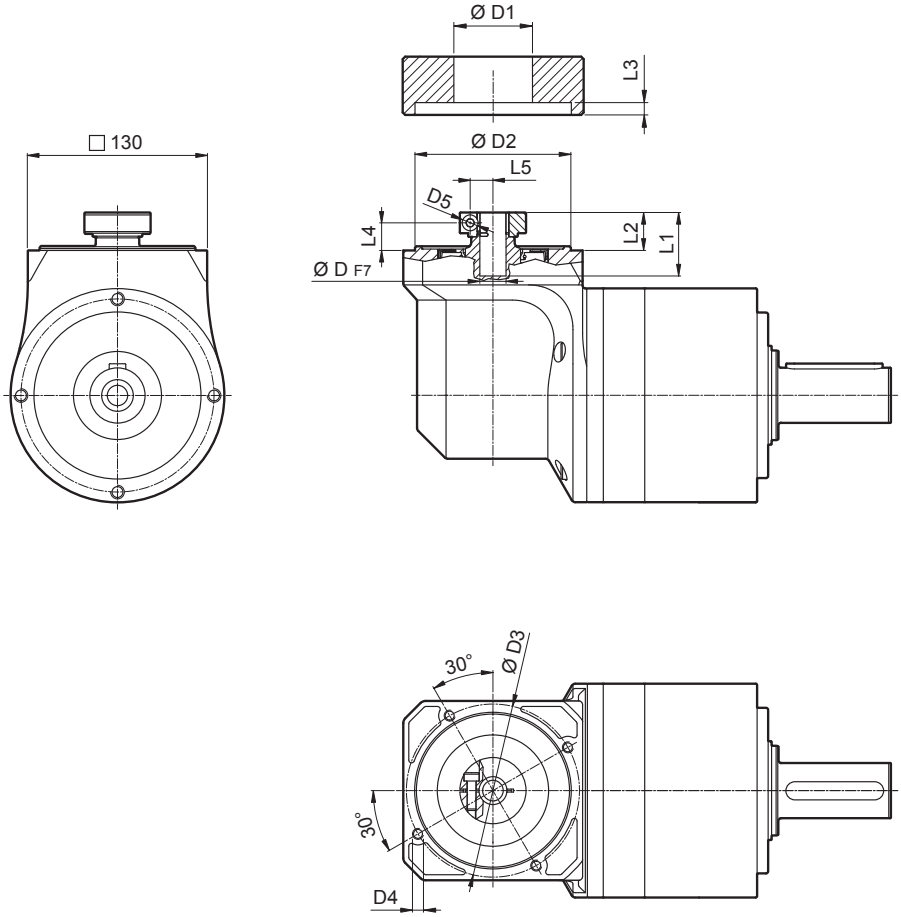
| | D | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **55A1** | 14 | 15.875 | 16 | 19 | – | – | – | 55.5 | 125.7 | 130 | 4 | M6x15 | 39.5 | 50 |
| **80A2** | 14 | 15.875 | 16 | 19 | – | – | – | 80 | 100 | 130 | 4 | M6x15 | 39.5 | 50 |
| **95A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | 95 | 115 | 130 | 4 | M8x20 | 39.5 | 50 |
| **110A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | 110 | 130 | 130 | 4 | M8x20 | 39.5 | 50 |
| **110B1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | 110 | 145 | 130 | 6.5 | M8x20 | 49.5 | 60 |
| **114A** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 114.3 | 200 | 170 | 5.5 | M12x25 | 69.5 | 80 |
| **130A** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | 130 | 165 | 140 | 4 | M10x20 | 39.5 | 50 |
| **130A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 130 | 165 | 140 | 4 | M10x20 | 49.5 | 60 |
| **180A** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 180 | 215 | 190 | 5.5 | M14x25 | 49.5 | 60 |
| **180A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 180 | 215 | 190 | 5.5 | M14x25 | 69.5 | 80 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.



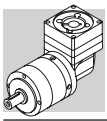
# LCK 155

**FM**



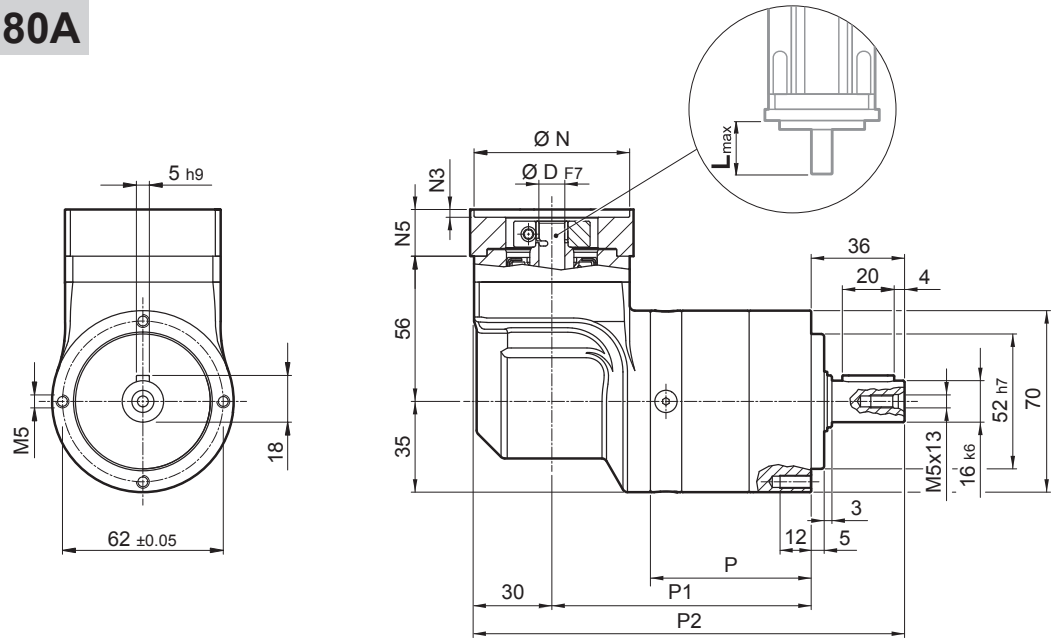

| D | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 15.875 | 16 | 48 | 113 | 125.5 | M8x15 | M6 | 46 | 27.5 | 6 | 20 | 14.5 |
| 19 | | | 51 | 113 | 125.5 | M8x15 | M6 | 46 | 27.5 | 6 | 20 | 16.5 |
| 22 | 24 | | 56.5 | 113 | 125.5 | M8x15 | M6 | 47.5 | 29 | 6 | 20 | 19 |
| 28 | | | 67 | 113 | 125.5 | M8x15 | M8 | 47.5 | 29 | 6 | 20 | 22.5 |

| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 14 ... 19 | 22 ; 24 | 28 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **LCK 155 2_6** | 250 | 360 | 510 | 2000 | 4500 | 6' | 40.7 | 6000 | 5000 | 94 | 7.94 | 8.13 | 8.53 |
| **LCK 155 2_8** | 300 | 450 | 680 | 2000 | 4500 | 6' | 40.7 | 6000 | 5000 | 94 | 7.11 | 7.30 | 7.70 |
| **LCK 155 2_10** | 300 | 450 | 850 | 2000 | 4500 | 6' | 40.7 | 6000 | 5000 | 94 | 6.78 | 6.96 | 7.36 |
| **LCK 155 2_14** | 300 | 450 | 900 | 2000 | 4500 | 6' | 40.7 | 6000 | 5000 | 94 | 6.48 | 6.67 | 7.07 |
| **LCK 155 2_20** | 230 | 350 | 750 | 2000 | 4500 | 6' | 40.7 | 6000 | 5000 | 94 | 6.31 | 6.49 | 6.90 |
| **LCK 155 3_24** | 300 | 450 | 900 | 2000 | 4500 | 8' | 37.4 | 6000 | 5000 | 91 | 7.18 | 7.37 | 7.77 |
| **LCK 155 3_30** | 300 | 450 | 900 | 2000 | 4500 | 8' | 37.4 | 6000 | 5000 | 91 | 7.14 | 7.33 | 7.73 |
| **LCK 155 3_50** | 300 | 450 | 900 | 2000 | 4500 | 8' | 37.4 | 6000 | 5000 | 91 | 6.49 | 6.68 | 7.08 |
| **LCK 155 3_70** | 300 | 450 | 900 | 2000 | 4500 | 8' | 37.4 | 6000 | 5000 | 91 | 6.33 | 6.52 | 6.92 |
| **LCK 155 3_80** | 300 | 450 | 700 | 2000 | 4500 | 8' | 37.4 | 6000 | 5000 | 91 | 6.25 | 6.43 | 6.83 |
| **LCK 155 3_100** | 300 | 450 | 900 | 2000 | 4500 | 8' | 37.4 | 6000 | 5000 | 91 | 6.24 | 6.43 | 6.83 |

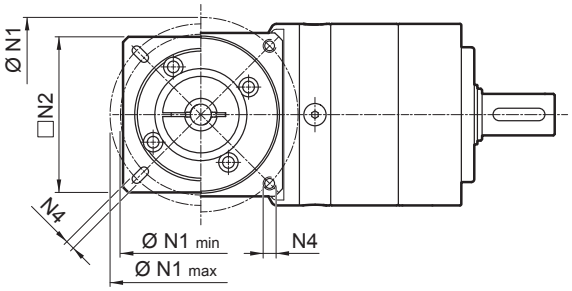


# LCK 070P

## 25AH ... 80A




| | P | P1 | P2 | kg |
|---|---|---|---|---|
| **LCK 070P 2** | 62 | 100 | 166 | 2.7 |
| **LCK 070P 3** | 78.7 | 116.7 | 182.7 | 3.0 |

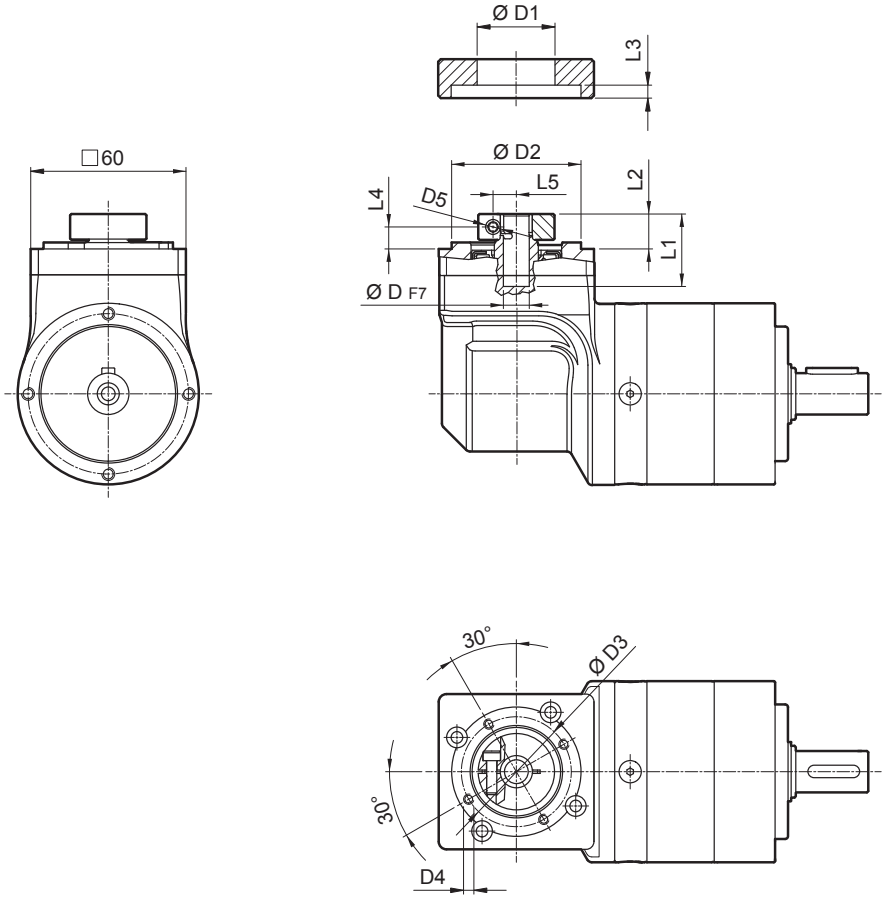



| | D | | | | | | | | | | | N | N1 | | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | min | max | | | | | |
| **25AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 25 | 39 | 56 | | | | | |
| **26AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 26 | 39 | 56 | | | | | |
| **28AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 28 | 39 | 56 | | | | | |
| **30AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 30 | 39 | 56 | | | | | |
| **32AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 32 | 39 | 56 | 65 | 3.5 | 4.5 | 25 | 25 |
| **34AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 34 | 40 | 56 | | | | | |
| **36AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 36 | 42 | 56 | | | | | |
| **39AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 39 | 45 | 56 | | | | | |
| **40AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 40 | 46 | 56 | | | | | |
| **38B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 38.1 | 66.6 | | 60 | 3 | M4x10 | 18 | 25 |
| **40B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 40 | 63 | | 60 | 3 | M4x10 | 18 | 25 |
| **50A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 50 | 60 | | 60 | 3 | M4x10 | 18 | 25 |
| **50B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 60 | 3 | M5x12 | 23 | 30 |
| **50BH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 65 | 3 | 5.5 | 25 | 32 |
| **50C** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 70 | | 60 | 3 | M4x10 | 23 | 30 |
| **55MH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 55 | 80 | | 65 | 2 | 5.5 | 16 | 23 |
| **60A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 60 | 75 | | 65 | 3 | M5x12 | 18 | 25 |
| **60A1** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 75 | | 65 | 3 | M5x12 | 23 | 30 |
| **60B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 85 | | 75 | 3 | M5x12 | 23 | 30 |
| **60C** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **70A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 85 | | 75 | 3 | M6x15 | 23 | 30 |
| **70B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **73A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 73 | 98.4 | | 85 | 3 | M5x12 | 25 | 32 |
| **80A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 80 | 100 | | 85 | 3 | M6x15 | 23 | 30 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

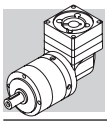
# LCK 070P

**FM**



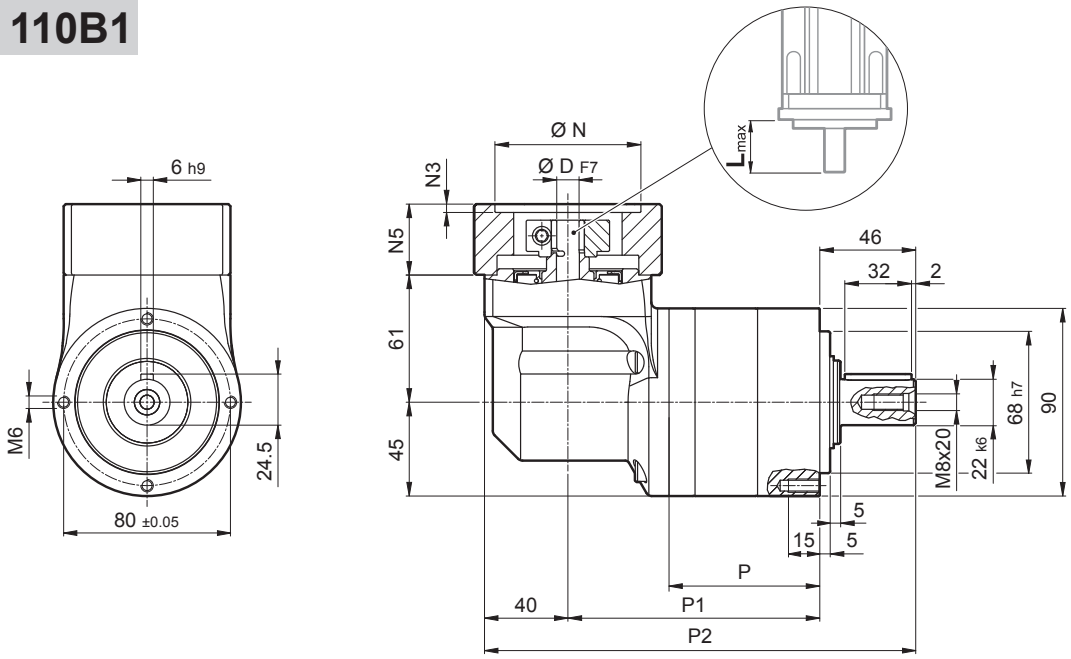

| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 6.35 | 7 | | 32.5 | 50 | 42.5 | M4x8 | M4 | 28 | 13.5 | 3 | 8.5 | 8 |
| 8 | 9 | 9.52 | 10 | 32.5 | 50 | 42.5 | M4x8 | M4 | 28 | 13.5 | 3 | 8.5 | 9 |
| 11 | 12 | 12.7 | | 35.5 | 50 | 42.5 | M4x8 | M4 | 23 | 13.5 | 3 | 8.5 | 11 |
| 14 | | | | 35.5 | 50 | 42.5 | M4x8 | M4 | 25 | 15.5 | 3 | 8.9 | 11.5 |

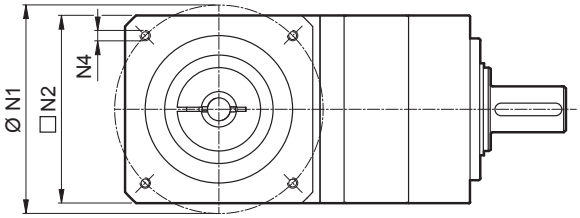
| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 6 ... 9.52 | $J_G$ [kgcm$^2$] D 11 ... 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LCK 070P 2_6 | 25 | 38 | 45 | 2500 | 5000 | 6' | 2.8 | 1300 | 1400 | 94 | 0.25 | 0.26 |
| LCK 070P 2_8 | 30 | 40 | 60 | 2500 | 5000 | 6' | 2.8 | 1300 | 1400 | 94 | 0.24 | 0.25 |
| LCK 070P 2_10 | 25 | 40 | 70 | 2500 | 5000 | 6' | 2.8 | 1300 | 1400 | 94 | 0.23 | 0.25 |
| LCK 070P 2_14 | 25 | 40 | 70 | 2500 | 5000 | 6' | 2.8 | 1300 | 1400 | 94 | 0.23 | 0.24 |
| LCK 070P 2_20 | 18 | 30 | 60 | 2500 | 5000 | 6' | 2.8 | 1300 | 1400 | 94 | 0.23 | 0.24 |
| LCK 070P 3_24 | 29 | 45 | 70 | 2500 | 5000 | 8' | 2.5 | 1300 | 1400 | 91 | 0.24 | 0.26 |
| LCK 070P 3_30 | 29 | 45 | 70 | 2500 | 5000 | 8' | 2.5 | 1300 | 1400 | 91 | 0.24 | 0.26 |
| LCK 070P 3_50 | 30 | 45 | 70 | 2500 | 5000 | 8' | 2.5 | 1300 | 1400 | 91 | 0.23 | 0.24 |
| LCK 070P 3_70 | 30 | 45 | 70 | 2500 | 5000 | 8' | 2.5 | 1300 | 1400 | 91 | 0.23 | 0.24 |
| LCK 070P 3_80 | 30 | 45 | 70 | 2500 | 5000 | 8' | 2.5 | 1300 | 1400 | 91 | 0.23 | 0.24 |
| LCK 070P 3_100 | 30 | 45 | 70 | 2500 | 5000 | 8' | 2.5 | 1300 | 1400 | 91 | 0.23 | 0.24 |



# LCK 090P

## 40B1 ... 110B1

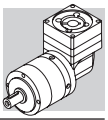



| | P | P1 | P2 | Kg |
|---|---|---|---|---|
| **LCK 090P 2** | 72.3 | 120.8 | 206.8 | 5.2 |
| **LCK 090P 3** | 98.8 | 147.3 | 233.3 | 6.3 |

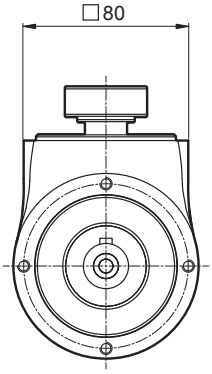
| | D | | | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **40B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 40 | 63 | 80 | 4 | M4x10 | 34 | 40 |
| **45A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | – | – | – | – | – | – | 45 | 63 | 80 | 4 | M4x10 | 34 | 40 |
| **50B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 65 | 80 | 4 | M5x16 | 34 | 40 |
| **50BH1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 65 | 80 | 4 | 5.5 | 34 | 40 |
| **50C1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 70 | 80 | 4 | M4x10 | 34 | 40 |
| **50D** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 95 | 80 | 4 | M6x10 | 34 | 40 |
| **55A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 55.5 | 125.7 | 105 | 4 | M6x16 | 34 | 40 |
| **60A2** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 60 | 75 | 80 | 4 | M5x16 | 34 | 40 |
| **60AH2** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 60 | 75 | 90 | 4 | 5.5 | 34 | 40 |
| **60B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | – | – | – | 60 | 85 | 80 | 4 | M5x16 | 34 | 40 |
| **60C1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | – | – | – | 60 | 90 | 80 | 4 | M5x16 | 34 | 40 |
| **70A1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 85 | 80 | 4 | M6x20 | 34 | 40 |
| **70AH1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 85 | 90 | 4 | 6.5 | 34 | 40 |
| **70B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 90 | 80 | 4 | M5x16 | 34 | 40 |
| **73A1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 73 | 98.4 | 85 | 4 | M5x16 | 34 | 40 |
| **80A1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 80 | 100 | 90 | 4 | M6x16 | 34 | 40 |
| **95A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 95 | 115 | 100 | 4 | M8x20 | 34 | 40 |
| **95B** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 95 | 130 | 115 | 4 | M8x20 | 34 | 40 |
| **110A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 130 | 115 | 4 | M8x20 | 34 | 40 |
| **110B** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 145 | 120 | 6.5 | M8x20 | 44 | 50 |
| **110B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 145 | 120 | 6.5 | M8x20 | 54 | 60 |

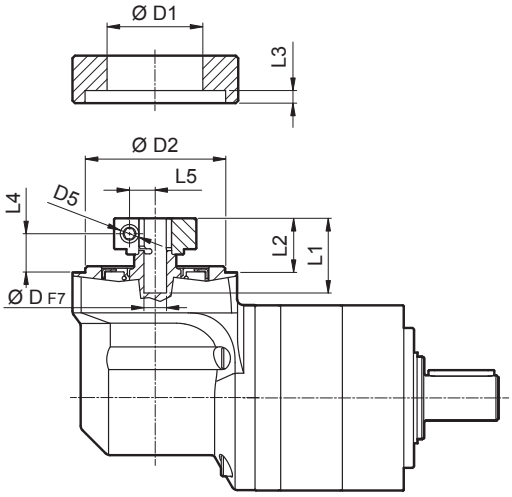
Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

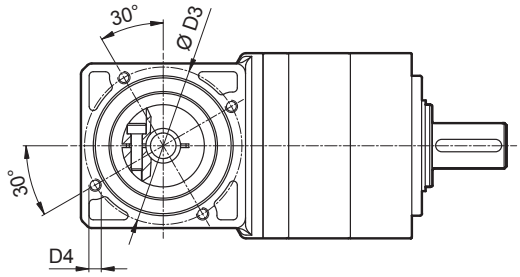


# LCK 090P

**FM**

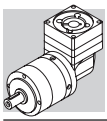


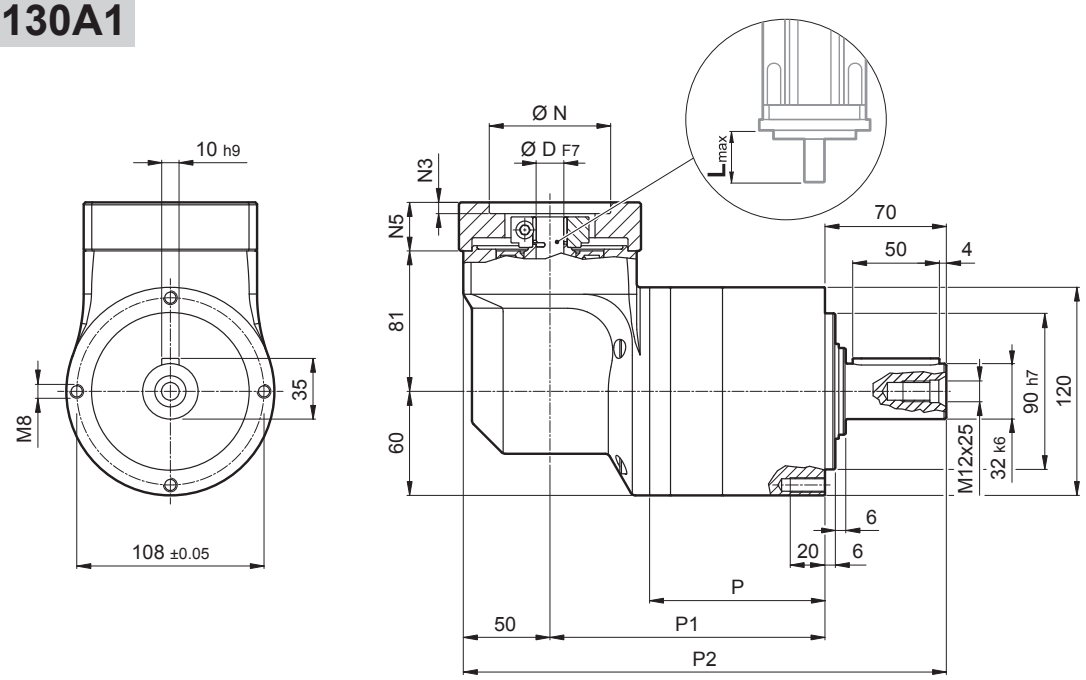

| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 9 | 9.52 | | 38 | 68 | 76.5 | M6x10 | M6 | 36.3 | 26.3 | 9.5 | 18.8 | 10.5 |
| 11 | 12 | 12.7 | | 43 | 68 | 76.5 | M6x10 | M6 | 36.3 | 26.3 | 9.5 | 18.8 | 12.5 |
| 14 | 15.875 | 16 | 17 | 48 | 68 | 76.5 | M6x10 | M6 | 36.3 | 26.3 | 9.5 | 18.8 | 14.5 |
| 19 | 19.05 | | | 51 | 68 | 76.5 | M6x10 | M6 | 36.3 | 26.3 | 9.5 | 18.8 | 16.5 |

| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 8 ... 12.7 | $J_G$ [kgcm$^2$] D 14 ... 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LCK 090P 2_6 | 45 | 70 | 90 | 2500 | 5000 | 6' | 11 | 2200 | 1900 | 94 | 0.85 | 1.03 |
| LCK 090P 2_8 | 60 | 90 | 120 | 2500 | 5000 | 6' | 11 | 2200 | 1900 | 94 | 0.79 | 0.98 |
| LCK 090P 2_10 | 50 | 90 | 150 | 2500 | 5000 | 6' | 8 | 2200 | 1900 | 94 | 0.77 | 0.96 |
| LCK 090P 2_14 | 50 | 90 | 160 | 2500 | 5000 | 6' | 8 | 2200 | 1900 | 94 | 0.75 | 0.94 |
| LCK 090P 2_20 | 40 | 70 | 150 | 2500 | 5000 | 6' | 8 | 2200 | 1900 | 94 | 0.74 | 0.93 |
| LCK 090P 3_24 | 60 | 90 | 160 | 2500 | 5000 | 8' | 10.8 | 2200 | 1900 | 91 | 0.81 | 1.00 |
| LCK 090P 3_30 | 60 | 90 | 160 | 2500 | 5000 | 8' | 10.8 | 2200 | 1900 | 91 | 0.81 | 1.00 |
| LCK 090P 3_50 | 50 | 90 | 160 | 2500 | 5000 | 8' | 7.8 | 2200 | 1900 | 91 | 0.76 | 0.94 |
| LCK 090P 3_70 | 50 | 90 | 160 | 2500 | 5000 | 8' | 7.8 | 2200 | 1900 | 91 | 0.74 | 0.93 |
| LCK 090P 3_80 | 60 | 90 | 160 | 2500 | 5000 | 8' | 10.8 | 2200 | 1900 | 91 | 0.74 | 0.93 |
| LCK 090P 3_100 | 50 | 90 | 160 | 2500 | 5000 | 8' | 7.8 | 2200 | 1900 | 91 | 0.74 | 0.93 |

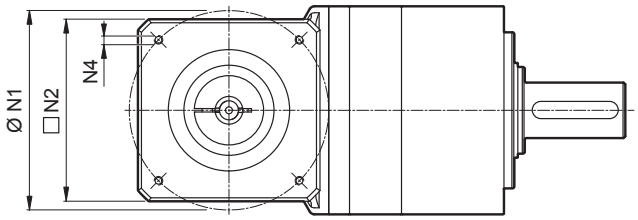


# LCK 120P

## 50D ... 130A1

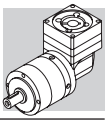



| | P | P1 | P2 | Kg |
|---|---|---|---|---|
| **LCK 120P 2** | 101.1 | 158.6 | 278.6 | 11.3 |
| **LCK 120P 3** | 133.6 | 191.1 | 311.1 | 13.8 |



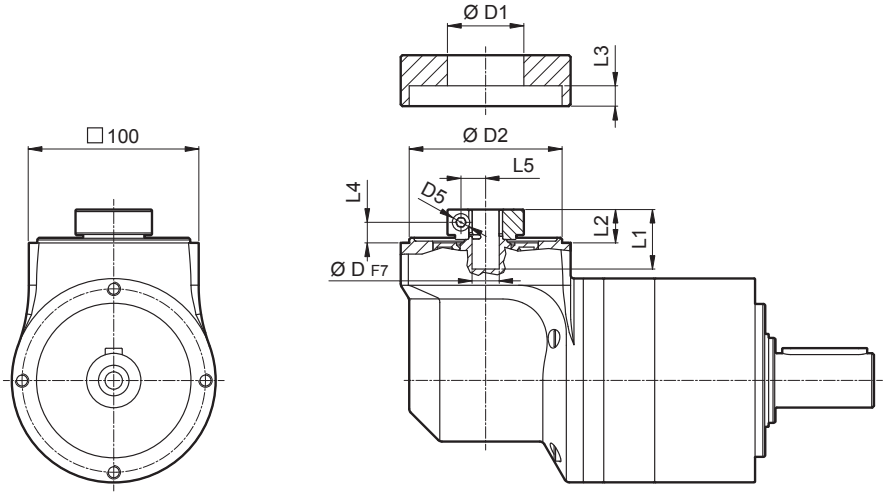

| | D | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **50D** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 50 | 95 | 100 | 5 | M6x14 | 28 | 40 |
| **55A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 55.5 | 125.7 | 105 | 5 | M6x16 | 28 | 40 |
| **60A2** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 60 | 75 | 100 | 5 | M5x14 | 28 | 40 |
| **60AH2** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 60 | 75 | 100 | 5 | 6.5 | 33 | 40 |
| **60B1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 60 | 85 | 100 | 6.5 | M5x14 | 28 | 40 |
| **70A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 70 | 85 | 100 | 5 | M6x14 | 28 | 40 |
| **70AH1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 70 | 85 | 100 | 5 | 6 | 33 | 40 |
| **70B1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 70 | 90 | 100 | 5 | M5x12 | 28 | 40 |
| **80A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 80 | 100 | 100 | 5 | M6x16 | 28 | 40 |
| **80AH1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 80 | 100 | 100 | 5 | 6.5 | 28 | 40 |
| **95A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 95 | 115 | 100 | 5 | M8x18 | 28 | 40 |
| **95A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 95 | 115 | 100 | 5 | M8x18 | 38 | 50 |
| **95B** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 95 | 130 | 115 | 5 | M8x18 | 28 | 40 |
| **110A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 110 | 130 | 115 | 5 | M8x18 | 28 | 40 |
| **110A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 110 | 130 | 115 | 6.5 | M8x20 | 38 | 50 |
| **110B** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 110 | 145 | 120 | 6.5 | M8x20 | 38 | 50 |
| **110B1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 110 | 145 | 120 | 6.5 | M8x20 | 48 | 60 |
| **130A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 130 | 165 | 140 | 6.5 | M10x20 | 38 | 50 |
| **130A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 130 | 165 | 140 | 6.5 | M10x25 | 48 | 60 |

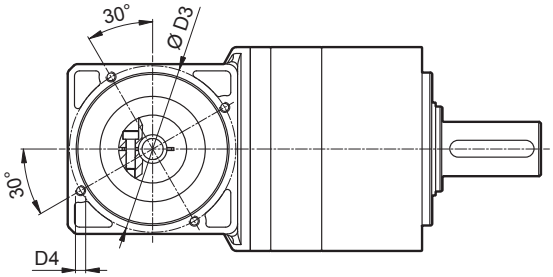
Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.



# LCK 120P

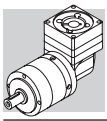
**FM**



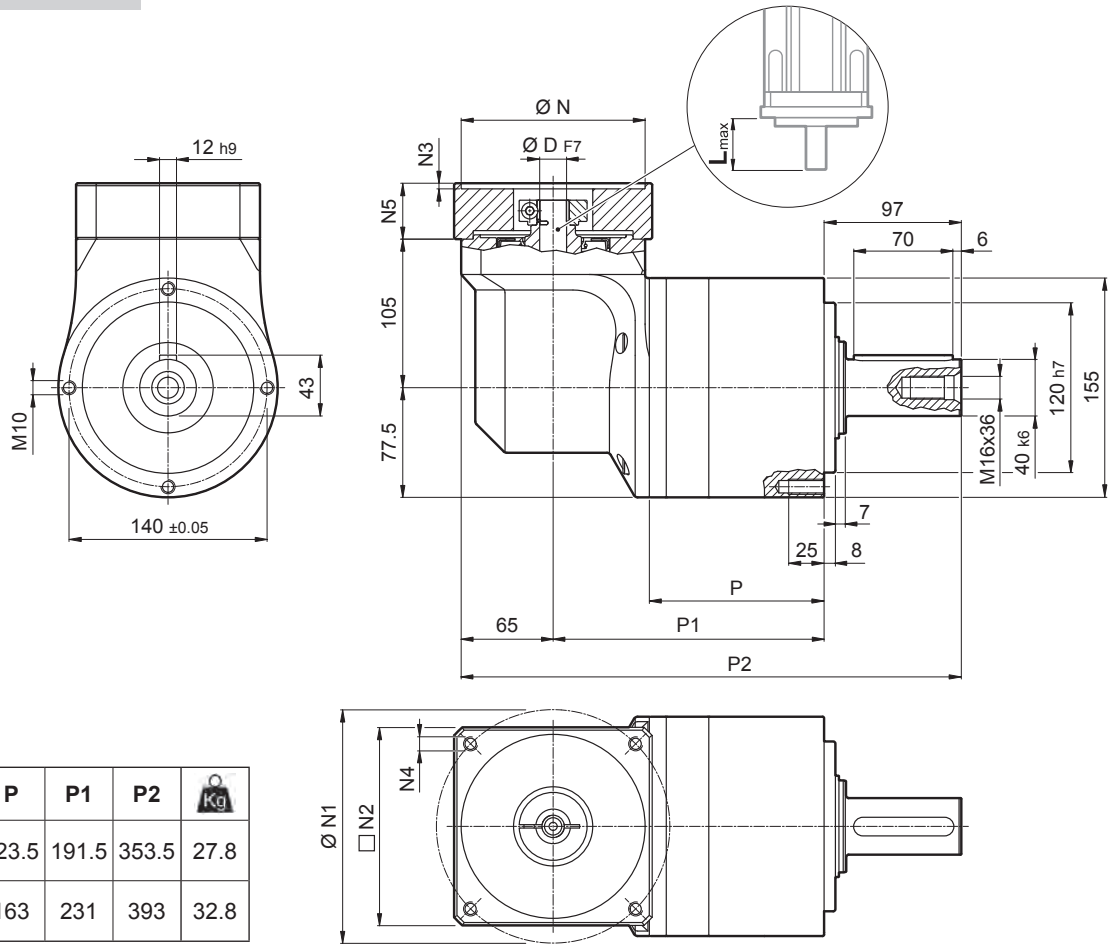

| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 12 | 12.7 | | 43 | 90 | 98 | M6x15 | M6 | 35 | 19.5 | 7.6 | 12.1 | 12.5 |
| 14 | 15 | 15.875 | 16 | 48 | 90 | 98 | M6x15 | M6 | 35 | 19.5 | 7.6 | 12.1 | 14.5 |
| 19 | | | | 51 | 90 | 98 | M6x15 | M6 | 35 | 19.5 | 7.6 | 12.1 | 16.5 |
| 22 | 24 | | | 56.5 | 90 | 98 | M6x15 | M6 | 37 | 21.5 | 7.6 | 12.1 | 19 |

| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 14 ... 19 | D 22 ; 24 | D 28 ; 32 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **LCK 120P 2_6** | 110 | 160 | 225 | 2000 | 4500 | 6' | 28.4 | 3500 | 3000 | 94 | 1.74 | 1.82 | 2.01 |
| **LCK 120P 2_8** | 140 | 220 | 300 | 2000 | 4500 | 6' | 28.4 | 3500 | 3000 | 94 | 1.52 | 1.60 | 1.79 |
| **LCK 120P 2_10** | 125 | 220 | 360 | 2000 | 4500 | 6' | 28.4 | 3500 | 3000 | 94 | 1.44 | 1.52 | 1.71 |
| **LCK 120P 2_14** | 125 | 220 | 360 | 2000 | 4500 | 6' | 28.4 | 3500 | 3000 | 94 | 1.37 | 1.45 | 1.63 |
| **LCK 120P 2_20** | 100 | 160 | 300 | 2000 | 4500 | 6' | 28.4 | 3500 | 3000 | 94 | 1.32 | 1.40 | 1.59 |
| **LCK 120P 3_24** | 155 | 220 | 360 | 2000 | 4500 | 8' | 28.4 | 3500 | 3000 | 91 | 1.64 | 1.72 | 1.90 |
| **LCK 120P 3_30** | 155 | 220 | 360 | 2000 | 4500 | 8' | 28.4 | 3500 | 3000 | 91 | 1.63 | 1.71 | 1.89 |
| **LCK 120P 3_50** | 125 | 220 | 360 | 2000 | 4500 | 8' | 22.9 | 3500 | 3000 | 91 | 1.40 | 1.48 | 1.67 |
| **LCK 120P 3_70** | 125 | 220 | 360 | 2000 | 4500 | 8' | 22.9 | 3500 | 3000 | 91 | 1.34 | 1.42 | 1.61 |
| **LCK 120P 3_80** | 155 | 220 | 360 | 2000 | 4500 | 8' | 28.4 | 3500 | 3000 | 91 | 1.31 | 1.39 | 1.58 |
| **LCK 120P 3_100** | 125 | 220 | 360 | 2000 | 4500 | 8' | 22.9 | 3500 | 3000 | 91 | 1.31 | 1.39 | 1.58 |



# LCK 155P

## 55A1 ... 180A1



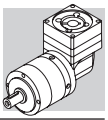




| | P | P1 | P2 | Kg |
|---|---|---|---|---|
| **LCK 155P 2** | 123.5 | 191.5 | 353.5 | 27.8 |
| **LCK 155P 3** | 163 | 231 | 393 | 32.8 |

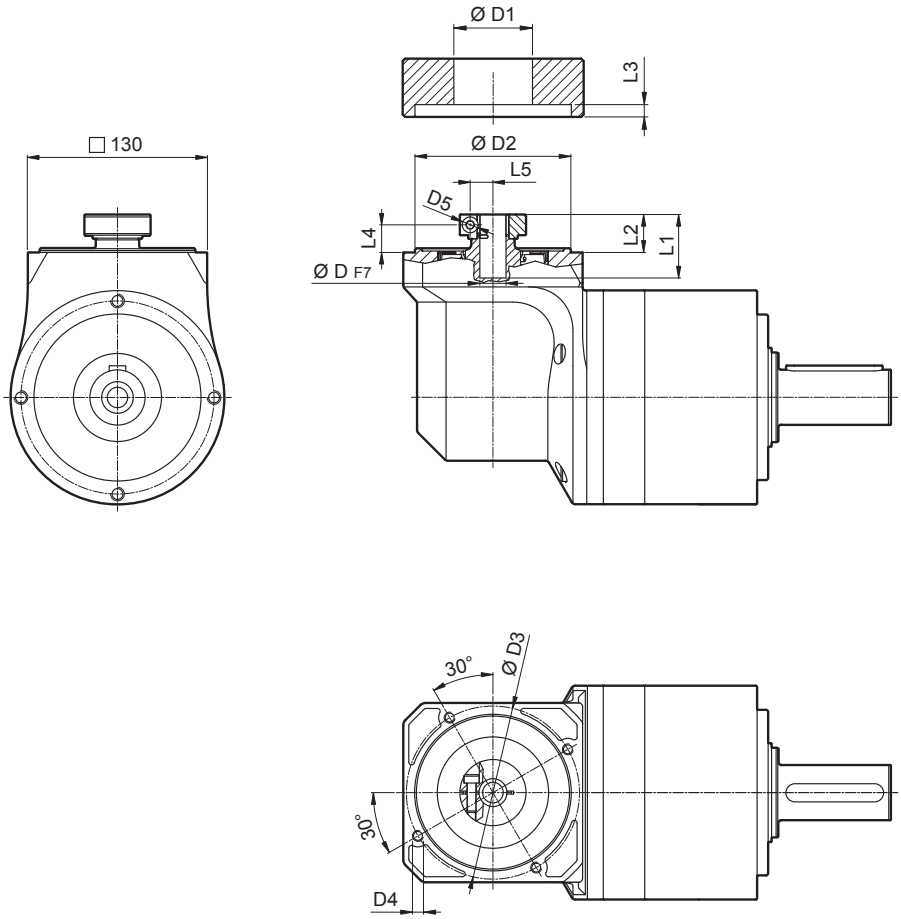
| | D | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **55A1** | 14 | 15.875 | 16 | 19 | – | – | – | 55.5 | 125.7 | 130 | 4 | M6x15 | 39.5 | 50 |
| **80A2** | 14 | 15.875 | 16 | 19 | – | – | – | 80 | 100 | 130 | 4 | M6x15 | 39.5 | 50 |
| **95A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | 95 | 115 | 130 | 4 | M8x20 | 39.5 | 50 |
| **110A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | 110 | 130 | 130 | 4 | M8x20 | 39.5 | 50 |
| **110B1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | 110 | 145 | 130 | 6.5 | M8x20 | 49.5 | 60 |
| **114A** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 114.3 | 200 | 170 | 5.5 | M12x25 | 69.5 | 80 |
| **130A** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | 130 | 165 | 140 | 4 | M10x20 | 39.5 | 50 |
| **130A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 130 | 165 | 140 | 4 | M10x20 | 49.5 | 60 |
| **180A** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 180 | 215 | 190 | 5.5 | M14x25 | 49.5 | 60 |
| **180A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 180 | 215 | 190 | 5.5 | M14x25 | 69.5 | 80 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.



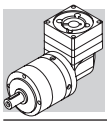
# LCK 155P

**FM**



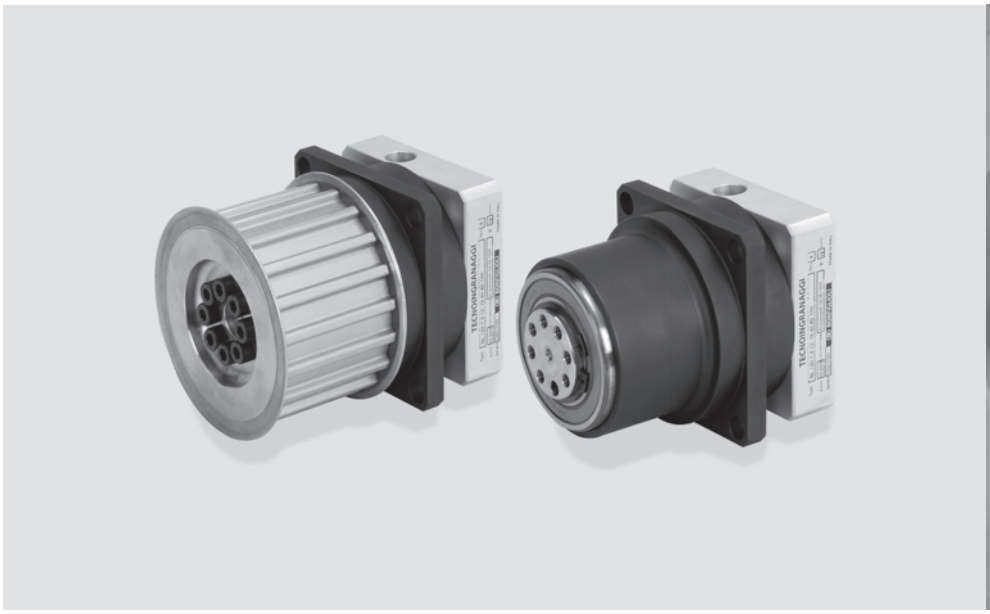

| D | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 15.875 | 16 | 48 | 113 | 125.5 | M8x15 | M6 | 46 | 27.5 | 6 | 20 | 14.5 |
| 19 | | | 51 | 113 | 125.5 | M8x15 | M6 | 46 | 27.5 | 6 | 20 | 16.5 |
| 22 | 24 | | 56.5 | 113 | 125.5 | M8x15 | M6 | 47.5 | 29 | 6 | 20 | 19 |
| 28 | | | 67 | 113 | 125.5 | M8x15 | M8 | 47.5 | 29 | 6 | 20 | 22.5 |

| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 14 ... 19 | D 22 ; 24 | D 28 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LCK 155P 2_6 | 250 | 380 | 600 | 2000 | 4500 | 6' | 47.9 | 6000 | 5000 | 94 | 7.94 | 8.13 | 8.53 |
| LCK 155P 2_8 | 350 | 500 | 1000 | 2000 | 4500 | 6' | 47.9 | 6000 | 5000 | 94 | 7.11 | 7.30 | 7.70 |
| LCK 155P 2_10 | 350 | 500 | 1000 | 2000 | 4500 | 6' | 47.9 | 6000 | 5000 | 94 | 6.78 | 6.96 | 7.36 |
| LCK 155P 2_14 | 350 | 500 | 1000 | 2000 | 4500 | 6' | 47.9 | 6000 | 5000 | 94 | 6.48 | 6.67 | 7.07 |
| LCK 155P 2_20 | 230 | 350 | 750 | 2000 | 4500 | 6' | 47.9 | 6000 | 5000 | 94 | 6.31 | 6.49 | 6.90 |
| LCK 155P 3_24 | 450 | 700 | 1000 | 2000 | 4500 | 8' | 44.6 | 6000 | 5000 | 91 | 7.18 | 7.37 | 7.77 |
| LCK 155P 3_30 | 450 | 700 | 1000 | 2000 | 4500 | 8' | 44.6 | 6000 | 5000 | 91 | 7.14 | 7.33 | 7.73 |
| LCK 155P 3_50 | 450 | 700 | 1000 | 2000 | 4500 | 8' | 44.6 | 6000 | 5000 | 91 | 6.49 | 6.68 | 7.08 |
| LCK 155P 3_70 | 450 | 700 | 1000 | 2000 | 4500 | 8' | 44.6 | 6000 | 5000 | 91 | 6.33 | 6.52 | 6.92 |
| LCK 155P 3_80 | 450 | 700 | 1000 | 2000 | 4500 | 8' | 44.6 | 6000 | 5000 | 91 | 6.25 | 6.43 | 6.83 |
| LCK 155P 3_100 | 450 | 700 | 1000 | 2000 | 4500 | 8' | 44.6 | 6000 | 5000 | 91 | 6.24 | 6.43 | 6.83 |



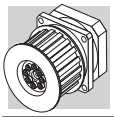
# SL
# PRÄZISIONSPLANETENGETRIEBE FÜR RIEMENANTRIEBE

Das SL-Präzisionsplanetengetriebe für Riemenantriebe ist konkurrenzlos, wenn es um Kompaktheit, Effizienz und optimale Eignung für den Einsatz mit Zahnriemenantrieben geht.
Diese Getriebe sind die ideale Ergänzung für Servoantriebssysteme in Anwendungen, die eine Kombination aus Präzision und hohen Querkräften mit extrem kompakten Abmessungen erfordern.
**Verbesserte Leistungsfähigkeit als Schlüssel zum Downsizing.**
Die verbesserte Leistungsfähigkeit unseres LC-Präzisionsgetriebes (neue Option "P") kann wichtige Downsizing-Optionen für zahlreiche Anwendungen eröffnen, bei denen es zuvor nicht möglich war, ein höheres übertragbares Abtriebsdrehmoment bereitrzustellen.
Ein weiterer Vorteil des Downsizing ist eine verbesserte Energieeffizienz, indem man ein kompakteres Getriebe mit höherer Drehmomentdichte wählen und dadurch die Beschleunigungsmasse deutlich reduzieren kann. Das übertragbare Drehmoment wurde um bis zu 40% verbessert.





**Produktmerkmale:**
- Option "P" mit hoher Drehmomentdichte für eine größere Produktleistungsfähigkeit verfügbar
- Hohes Beschleunigungs- und Nenndrehmoment
- Hohe radiale und axiale Belastbarkeit
- Entwickelt für Zyklus- und Dauerbetrieb
- Hohe Verdrehsteifigkeit
- Niedriges Verdrehflankenspiel – unter 6 arcmin
- Optional mit Zahnriemenscheibe erhältlich
- Laufruhig
- Einsetzbar in beliebiger Montageaposition



## 9 MERKMALE DER SL-REIHE

Die SL-Reihe ist konkurrenzlos, wenn es um Kompaktheit, Effizienz und optimale Eignung für den Einsatz mit Zahnriemenantrieben geht. Die spielarmen Getriebe der SL-Reihe sind die ideale Ergänzung für Servoantriebssysteme in Anwendungen, die eine Kombination aus Präzision und hohen Querkräften mit extrem kompakten Abmessungen erfordern.

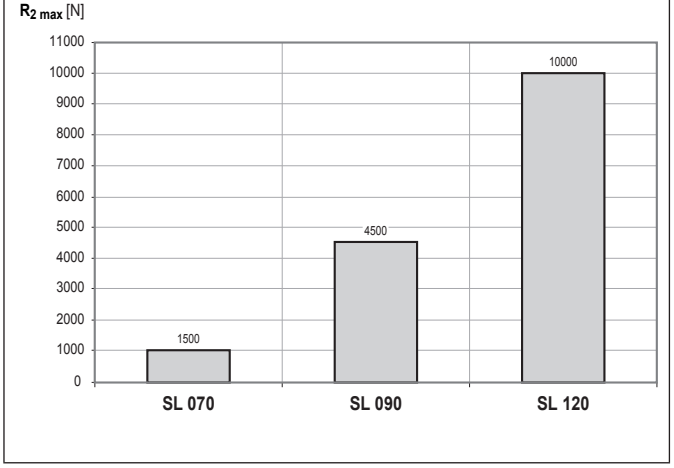
- Erhältlich entweder mit standard (STD) oder reduziertem (LOW) Flankenspiel:
  1-stufige Getriebe: standard $\varphi_S \leq 12'$; reduziert $\varphi_R \leq 6'$
  2-stufige Getriebe: standard $\varphi_S \leq 15'$; reduziert $\varphi_R \leq 8'$
- Eine hohe IP-Schutzklasse (IP64) sorgt dafür, dass innenliegende Teile vor Staub- und Flüssigkeitseintritt geschützt sind.
- Serienmäßige Fluorelastomer-Wellendichtungen an der Eingangswelle.
- Schalldruckpegel $L_P \leq 70$ dB(A). Gemessen in 1 m Abstand ohne Last und bei einer Eingangsdrehzahl von $n_1 = 3000$ min$^{-1}$; i=10.
- Die Getriebe sind werksseitig mit synthetischem Schmierfett gemäß NLGI-Konsistenzklasse 00 gefüllt; ohne Verunreinigung muss das Schmiermittel nicht regelmäßig gewechselt werden.
- AUmgebungstemperatur min. -20°C, max. +30°C; bei Temperaturen höher als 30°C ist der Temperaturfaktor $f_T$ zu berücksichtigen.
- Die Gehäusetemperatur darf $T_{max} = 90$°C nicht übersteigen
- Erhältlich als Version P mit höherem Abtriebsdrehmoment.

**Übersicht der Nenndrehmomente $M_{n2}$ [Nm]**

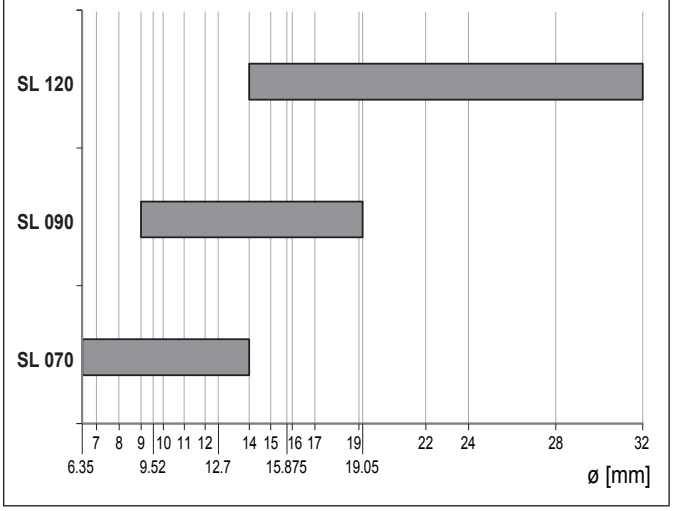
| [i] | 3 | 4 | 5 | 7 | 9 | 10 | 12 | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 | 50 | 70 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SL 070** | 18 | 25 | 25 | 25 | 18 | 18 | 25 | 25 | 25 | 25 | 25 | 25 | 18 | 25 | 25 | 25 | 25 | 18 |
| **SL 070P** | 29 | 30 | 25 | 25 | 29 | 18 | 29 | 29 | 30 | 30 | 30 | 30 | 29 | 30 | 30 | 30 | 30 | 18 |
| **SL 090** | 37 | 43 | 43 | 43 | 37 | 37 | 43 | 43 | 43 | 43 | 43 | 43 | 37 | 43 | 43 | 43 | 43 | 37 |
| **SL 090P** | 65 | 60 | 50 | 50 | 65 | 40 | 65 | 65 | 60 | 60 | 50 | 50 | 65 | 50 | 60 | 50 | 50 | 40 |
| **SL 120** | 95 | 110 | 110 | 110 | 95 | 95 | 110 | 110 | 110 | 110 | 110 | 110 | 95 | 110 | 110 | 110 | 110 | 95 |
| **SL 120P** | 155 | 155 | 125 | 125 | 155 | 100 | 155 | 155 | 155 | 155 | 125 | 125 | 155 | 125 | 155 | 125 | 125 | 100 |

**Max. Belastbarkeit der Abtriebswelle**

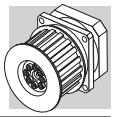





**Verfügbare Motorwellendurchmesser**




SL



## *9.1 BESTELLBEZEICHNUNG*

| SL | 120 | 1 | 5 | STD | 80A | CD | 19 | YP | UH1 |
|---|---|---|---|---|---|---|---|---|---|

**SCHMIERSTOFF**

| | |
|---|---|
| **–** | Standard |
| **UH1** | Lebensmitteltaugliches Schmiermittel |

**ZAHNRIEMENSCHEIBE**

| | |
|---|---|
| **YP** | Mit Zahnriemenscheibe |
| **NP** | Ohne Zahnriemenscheibe |

**BOHRUNGSDURCHMESSER EINGANGSWELLE**

**6.35 ... 32**

**MOTORKOPPLUNG**

**CD** Klemmnabe

**ANTRIEBSFLANSCH**

| | |
|---|---|
| **25AH ... 130A1** | Motorflansch |
| **FM** | Ohne Motorflansch |

**VERDREHSPIEL**

| | 1 Getriebestufe | 2 Getriebestufen |
|---|---|---|
| **STD** | $\varphi_S \leq 12'$ | $\varphi_S \leq 15'$ |
| **LOW** | $\varphi_R \leq 6'$ | $\varphi_R \leq 8'$ |

**GETRIEBEÜBERSETZUNG**

**GETRIEBESTUFEN**

**1** **2**

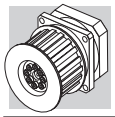
**BAUGRÖSSE**

**070** **090** **120**
**070P** **090P** **120P**

**REIHE**

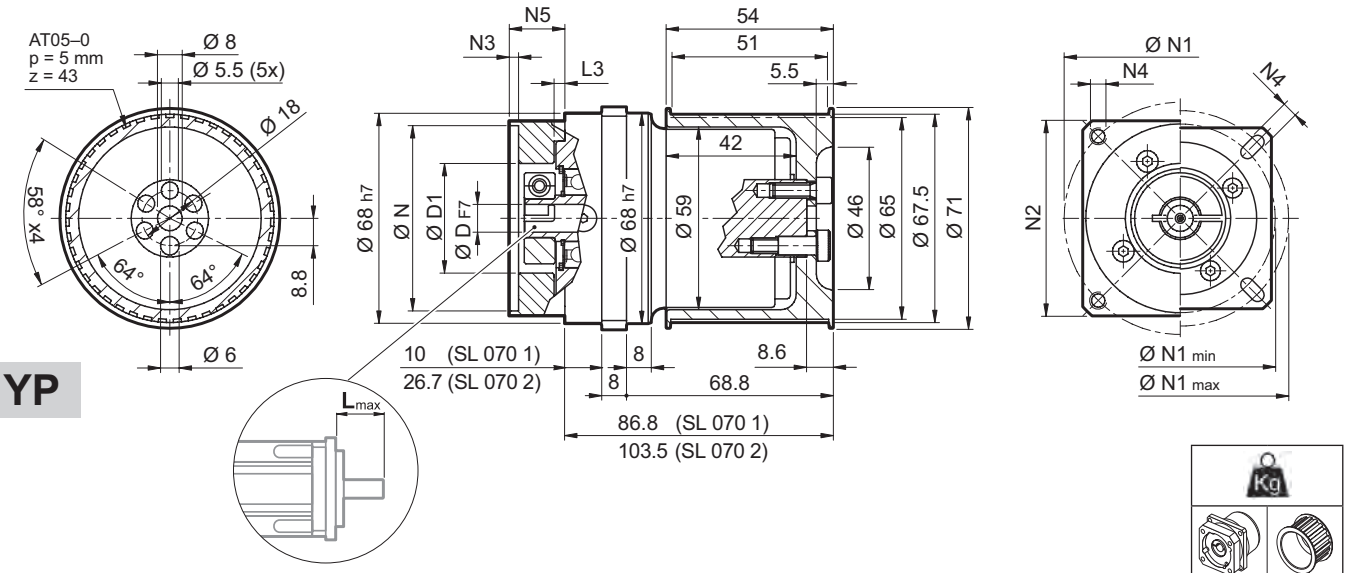
**SL**

SL



## 9.2 ABMESSUNGEN UND TECHNISCHE DATEN

# SL 070




**YP**

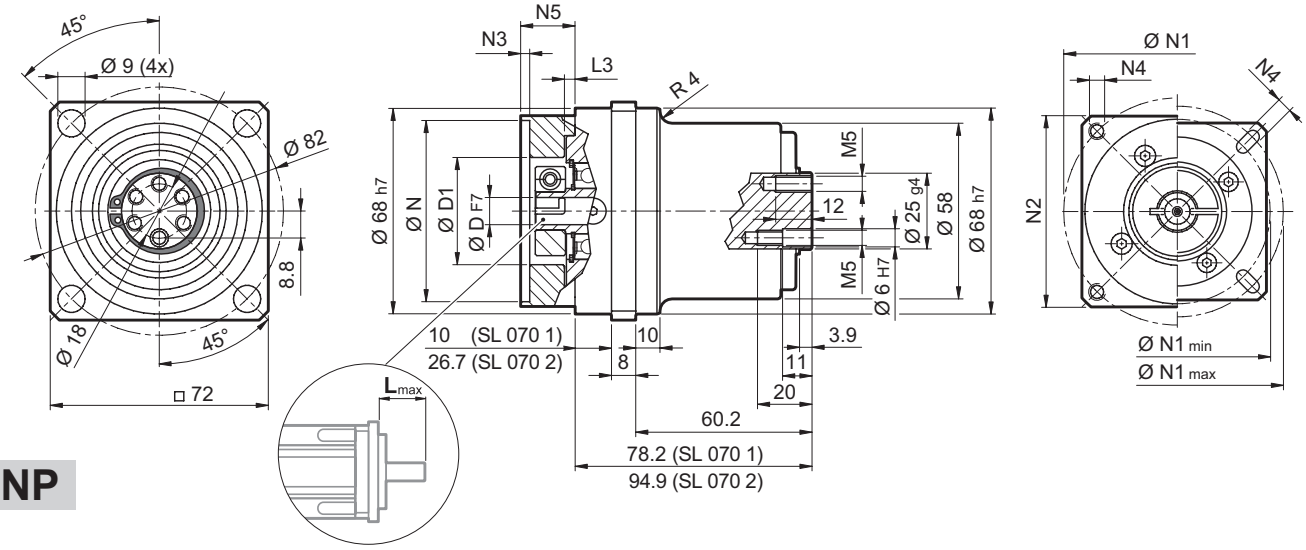
| | Kg | |
|---|---|---|
| **SL 070 1** | 2.0 | 0.5 |
| **SL 070 2** | 2.3 | 0.5 |

| | D | | | | | | | | | | N | N1 | | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | min | max | | | | | |
| **25AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 25 | 39 | 56 | | | | | |
| **26AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 26 | 39 | 56 | | | | | |
| **28AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 28 | 39 | 56 | | | | | |
| **30AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 30 | 39 | 56 | | | | | |
| **32AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 32 | 39 | 56 | 65 | 3.5 | 4.5 | 25 | 25 |
| **34AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 34 | 40 | 56 | | | | | |
| **36AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 36 | 42 | 56 | | | | | |
| **39AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 39 | 45 | 56 | | | | | |
| **40AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 40 | 46 | 56 | | | | | |
| **38B** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 38.1 | 66.6 | | 60 | 3 | M4x10 | 18 | 25 |
| **40B** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 40 | 63 | | 60 | 3 | M4x10 | 18 | 25 |
| **50A** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 50 | 60 | | 60 | 3 | M4x10 | 18 | 25 |
| **50B** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 60 | 3 | M5x12 | 23 | 30 |
| **50BH** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 65 | 3 | 5.5 | 25 | 32 |
| **50C** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 70 | | 60 | 3 | M4x10 | 23 | 30 |
| **55MH** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 55 | 80 | | 65 | 2 | 5.5 | 16 | 23 |
| **60A** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 60 | 75 | | 65 | 3 | M5x12 | 18 | 25 |
| **60A1** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 75 | | 65 | 3 | M5x12 | 23 | 30 |
| **60B** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 85 | | 75 | 3 | M5x12 | 23 | 30 |
| **60C** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **70A** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 85 | | 75 | 3 | M6x15 | 23 | 30 |
| **70B** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **73A** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 73 | 98.4 | | 85 | 3 | M5x12 | 25 | 32 |
| **80A** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 80 | 100 | | 85 | 3 | M6x15 | 23 | 30 |

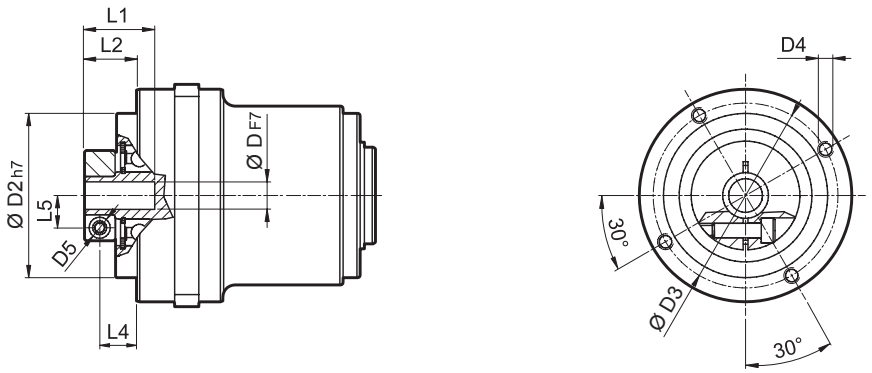
Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

SL

# SL 070




## NP

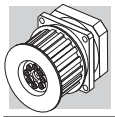



## FM

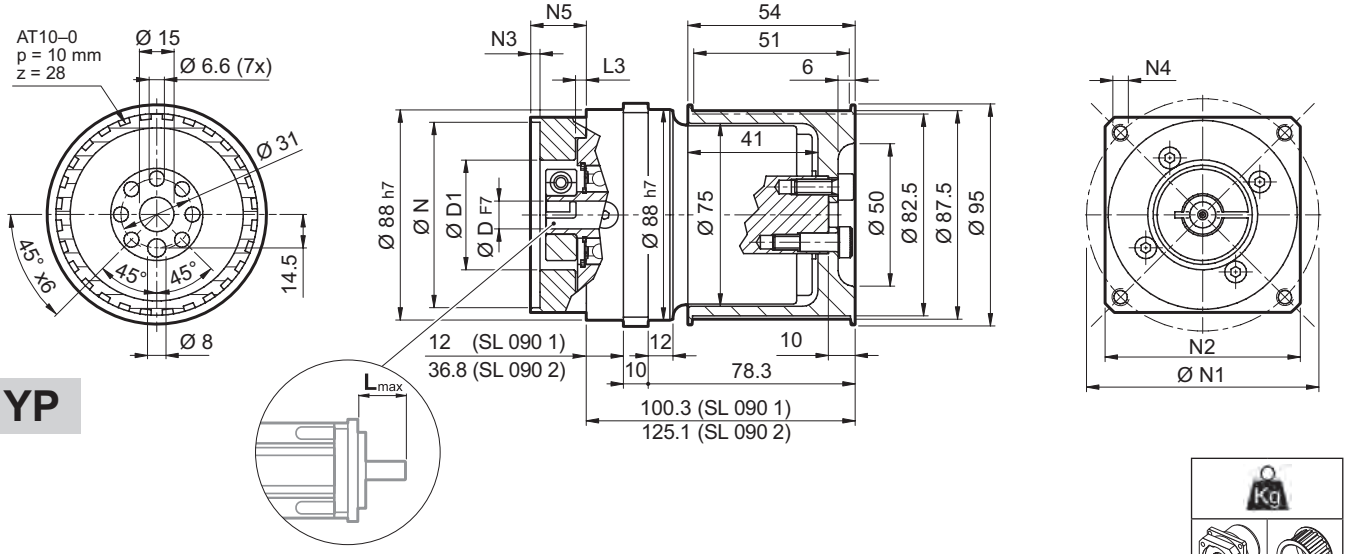
| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.35 | 7 | | | 32.5 | 50 | 42.5 | M4x8 | M4 | 21.7 | 13.2 | 3 | 8.2 | 8 |
| 8 | 9 | 9.52 | 10 | 32.5 | 50 | 42.5 | M4x8 | M4 | 21.7 | 13.2 | 3 | 8.2 | 9 |
| 11 | 12 | 12.7 | | 35.5 | 50 | 42.5 | M4x8 | M4 | 22 | 13.5 | 3 | 8.5 | 11 |
| 14 | | | | 35.5 | 50 | 42.5 | M4x8 | M4 | 25 | 17 | 3 | 10.2 | 11.5 |

| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $\varphi_R$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ * [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 6 ... 9.52 | $J_G$ [kgcm$^2$] D 11 ... 14 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL 070 1_3 | 18 | 30 | 60 | 3300 | 4000 | 12' | 6' | 6.5 | 3500 | 1600 | 97 | 0.14 | 0.16 | 3.86 |
| SL 070 1_4 | 25 | 35 | 70 | 3500 | 5000 | 12' | 6' | 6.5 | 3500 | 1600 | 97 | 0.09 | 0.11 | |
| SL 070 1_5 | 25 | 35 | 70 | 3500 | 5000 | 12' | 6' | 6.5 | 3500 | 1600 | 97 | 0.07 | 0.09 | |
| SL 070 1_7 | 25 | 35 | 70 | 3500 | 5000 | 12' | 6' | 6.5 | 3500 | 1600 | 97 | 0.05 | 0.07 | |
| SL 070 1_10 | 18 | 30 | 60 | 4000 | 6000 | 12' | 6' | 6.5 | 3500 | 1600 | 97 | 0.04 | 0.06 | |
| SL 070 2_9 | 18 | 30 | 60 | 3300 | 4000 | 15' | 8' | 6 | 3500 | 1600 | 94 | 0.11 | 0.13 | |
| SL 070 2_12 | 25 | 35 | 70 | 3300 | 4000 | 15' | 8' | 6 | 3500 | 1600 | 94 | 0.10 | 0.13 | |
| SL 070 2_15 | 25 | 35 | 70 | 3300 | 4000 | 15' | 8' | 6 | 3500 | 1600 | 94 | 0.10 | 0.12 | |
| SL 070 2_16 | 25 | 35 | 70 | 3500 | 5000 | 15' | 8' | 6 | 3500 | 1600 | 94 | 0.07 | 0.09 | |
| SL 070 2_20 | 25 | 35 | 70 | 3500 | 5000 | 15' | 8' | 6 | 3500 | 1600 | 94 | 0.06 | 0.08 | |
| SL 070 2_25 | 25 | 35 | 70 | 3500 | 5000 | 15' | 8' | 6 | 3500 | 1600 | 94 | 0.06 | 0.08 | |
| SL 070 2_28 | 25 | 35 | 70 | 4000 | 6000 | 15' | 8' | 6 | 3500 | 1600 | 94 | 0.05 | 0.07 | |
| SL 070 2_30 | 18 | 30 | 60 | 4000 | 6000 | 15' | 8' | 6 | 3500 | 1600 | 94 | 0.04 | 0.06 | |
| SL 070 2_35 | 25 | 35 | 70 | 4000 | 6000 | 15' | 8' | 6 | 3500 | 1600 | 94 | 0.05 | 0.07 | |
| SL 070 2_40 | 25 | 35 | 70 | 4000 | 6000 | 15' | 8' | 6 | 3500 | 1600 | 94 | 0.04 | 0.06 | |
| SL 070 2_50 | 25 | 35 | 70 | 4000 | 6000 | 15' | 8' | 6 | 3500 | 1600 | 94 | 0.04 | 0.06 | |
| SL 070 2_70 | 25 | 35 | 70 | 4000 | 6000 | 15' | 8' | 6 | 3500 | 1600 | 94 | 0.04 | 0.06 | |
| SL 070 2_100 | 18 | 30 | 60 | 4000 | 6000 | 15' | 8' | 6 | 3500 | 1600 | 94 | 0.04 | 0.06 | |

* Gilt für Zahnriemenanwendungen



# SL 090




**YP**

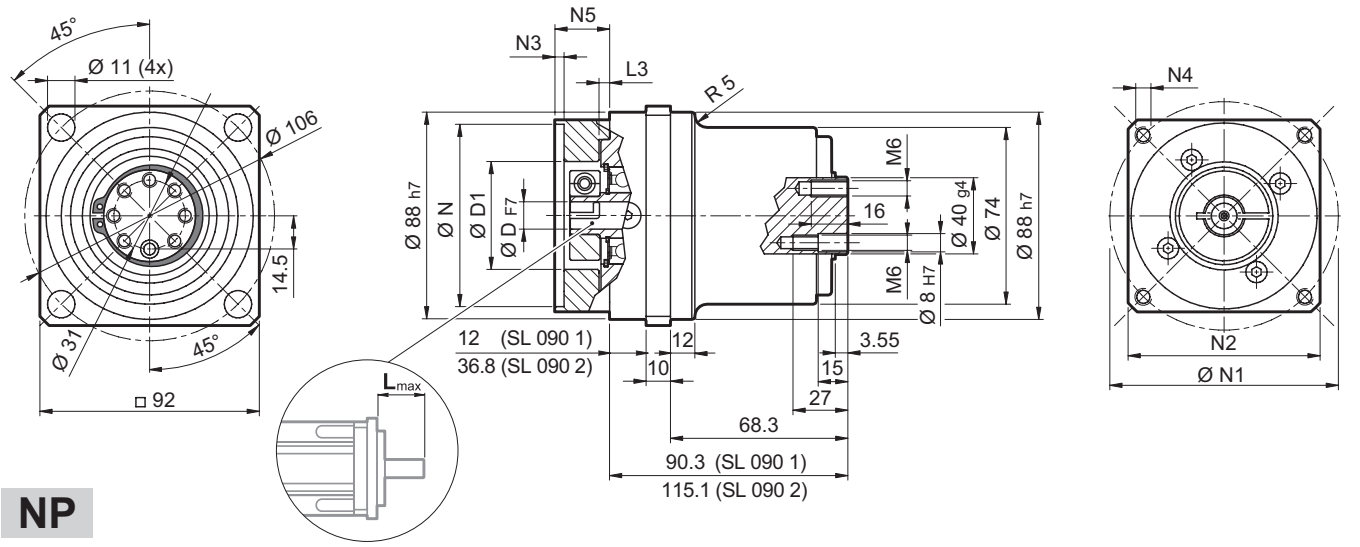
| | Kg | |
|---|---|---|
| **SL 090 1** | 3.6 | 0.8 |
| **SL 090 2** | 4.7 | 0.8 |

| | D | | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **40B1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 40 | 63 | 80 | 4 | M4x10 | 34 | 40 |
| **45A** | 9 | 9.52 | 11 | 12 | 12.7 | – | – | – | – | – | – | 45 | 63 | 80 | 4 | M4x10 | 34 | 40 |
| **50B1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 65 | 80 | 4 | M5x16 | 34 | 40 |
| **50BH1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 65 | 80 | 4 | 5.5 | 34 | 40 |
| **50C1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 70 | 80 | 4 | M4x10 | 34 | 40 |
| **50D** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 95 | 80 | 4 | M6x10 | 34 | 40 |
| **55A** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 55.5 | 125.7 | 105 | 4 | M6x16 | 34 | 40 |
| **60A2** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 60 | 75 | 80 | 4 | M5x16 | 34 | 40 |
| **60AH2** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 60 | 75 | 90 | 4 | 5.5 | 34 | 40 |
| **60B1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | – | – | – | 60 | 85 | 80 | 4 | M5x16 | 34 | 40 |
| **60C1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | – | – | – | 60 | 90 | 80 | 4 | M5x16 | 34 | 40 |
| **70A1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 85 | 80 | 4 | M6x20 | 34 | 40 |
| **70AH1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 85 | 90 | 4 | 6.5 | 34 | 40 |
| **70B1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 90 | 80 | 4 | M5x16 | 34 | 40 |
| **73A1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 73 | 98.4 | 85 | 4 | M5x16 | 34 | 40 |
| **80A1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 80 | 100 | 90 | 4 | M6x16 | 34 | 40 |
| **95A** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 95 | 115 | 100 | 4 | M8x20 | 34 | 40 |
| **95B** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 95 | 130 | 115 | 4 | M8x20 | 34 | 40 |
| **110A** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 130 | 115 | 4 | M8x20 | 34 | 40 |
| **110B** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 145 | 120 | 6.5 | M8x20 | 44 | 50 |
| **110B1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 145 | 120 | 6.5 | M8x20 | 54 | 60 |

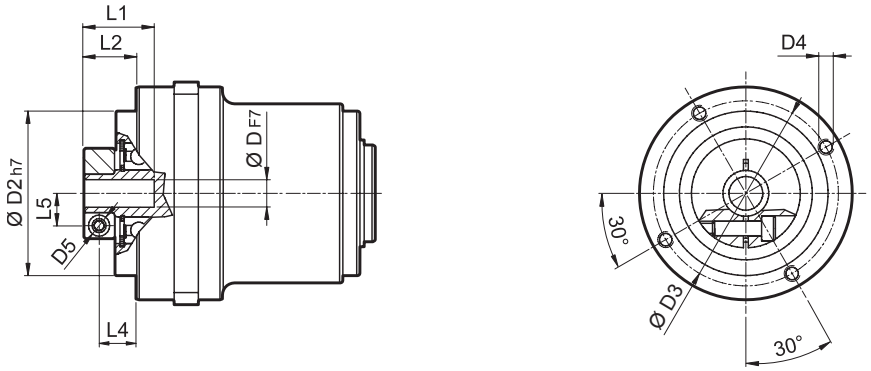
Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

SL

# SL 090




**NP**

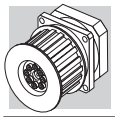



**FM**

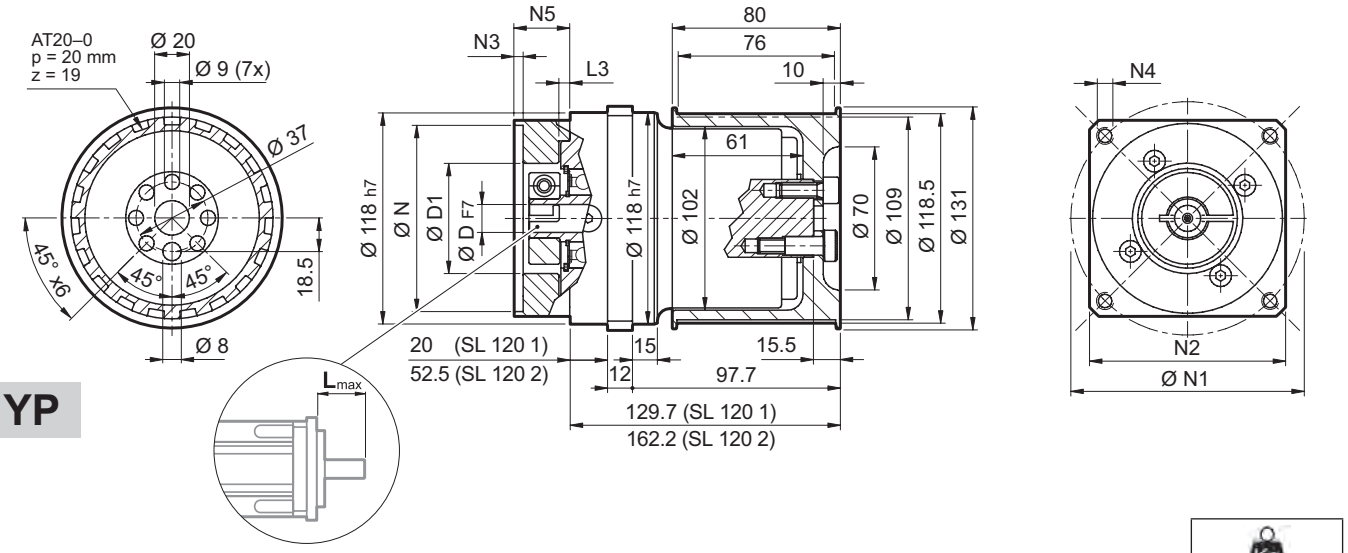
| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 9.52 | | | 38 | 68 | 76.5 | M6x10 | M6 | 34 | 26.8 | 9.5 | 18.8 | 10.5 |
| 11 | 12 | 12.7 | | 52 | 68 | 76.5 | M6x10 | M6 | 34 | 26.8 | 9.5 | 18.8 | 12.5 |
| 14 | 15.875 | 16 | 17 | 48 | 68 | 76.5 | M6x10 | M6 | 34 | 26.8 | 9.5 | 18.8 | 14.5 |
| 19 | 19.05 | | | 51 | 68 | 76.5 | M6x10 | M6 | 34 | 26.8 | 9.5 | 18.8 | 16.5 |

| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $\varphi_R$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ * [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 9 ... 12.7 | $J_G$ [kgcm$^2$] D 14 ... 19 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL 090 1_3 | 37 | 70 | 150 | 2900 | 3500 | 12' | 6' | 12 | 4500 | 2000 | 97 | 0.72 | 0.81 | 10.95 |
| SL 090 1_4 | 43 | 80 | 160 | 3100 | 4500 | 12' | 6' | 12 | 4500 | 2000 | 97 | 0.49 | 0.58 | |
| SL 090 1_5 | 43 | 80 | 160 | 3200 | 4500 | 12' | 6' | 12 | 4500 | 2000 | 97 | 0.39 | 0.48 | |
| SL 090 1_7 | 43 | 80 | 160 | 4000 | 6000 | 12' | 6' | 12 | 4500 | 2000 | 97 | 0.31 | 0.40 | |
| SL 090 1_10 | 37 | 70 | 150 | 4000 | 6000 | 12' | 6' | 12 | 4500 | 2000 | 97 | 0.27 | 0.35 | |
| SL 090 2_9 | 37 | 70 | 150 | 2900 | 3500 | 15' | 8' | 11.5 | 4500 | 2000 | 94 | 0.47 | 0.61 | |
| SL 090 2_12 | 43 | 80 | 160 | 2900 | 3500 | 15' | 8' | 11.5 | 4500 | 2000 | 94 | 0.44 | 0.58 | |
| SL 090 2_15 | 43 | 80 | 160 | 2900 | 3500 | 15' | 8' | 11.5 | 4500 | 2000 | 94 | 0.43 | 0.57 | |
| SL 090 2_16 | 43 | 80 | 160 | 3100 | 4500 | 15' | 8' | 11.5 | 4500 | 2000 | 94 | 0.31 | 0.45 | |
| SL 090 2_20 | 43 | 80 | 160 | 3200 | 4500 | 15' | 8' | 11.5 | 4500 | 2000 | 94 | 0.26 | 0.40 | |
| SL 090 2_25 | 43 | 80 | 160 | 3200 | 4500 | 15' | 8' | 11.5 | 4500 | 2000 | 94 | 0.26 | 0.40 | |
| SL 090 2_28 | 43 | 80 | 160 | 4000 | 6000 | 15' | 8' | 11.5 | 4500 | 2000 | 94 | 0.22 | 0.36 | |
| SL 090 2_30 | 37 | 70 | 150 | 4000 | 6000 | 15' | 8' | 11.5 | 4500 | 2000 | 94 | 0.20 | 0.34 | |
| SL 090 2_35 | 43 | 80 | 160 | 4000 | 6000 | 15' | 8' | 11.5 | 4500 | 2000 | 94 | 0.22 | 0.36 | |
| SL 090 2_40 | 43 | 80 | 160 | 4000 | 6000 | 15' | 8' | 11.5 | 4500 | 2000 | 94 | 0.20 | 0.34 | |
| SL 090 2_50 | 43 | 80 | 160 | 4000 | 6000 | 15' | 8' | 11.5 | 4500 | 2000 | 94 | 0.20 | 0.34 | |
| SL 090 2_70 | 43 | 80 | 160 | 4000 | 6000 | 15' | 8' | 11.5 | 4500 | 2000 | 94 | 0.20 | 0.34 | |
| SL 090 2_100 | 37 | 70 | 150 | 4000 | 6000 | 15' | 8' | 11.5 | 4500 | 2000 | 94 | 0.19 | 0.34 | |

* Gilt für Zahnriemenanwendungen



# SL 120

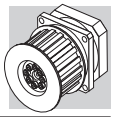



**YP**

| | Kg | |
|---|---|---|
| **SL 120 1** | 8.4 | 2.6 |
| **SL 120 2** | 10.9 | 2.6 |

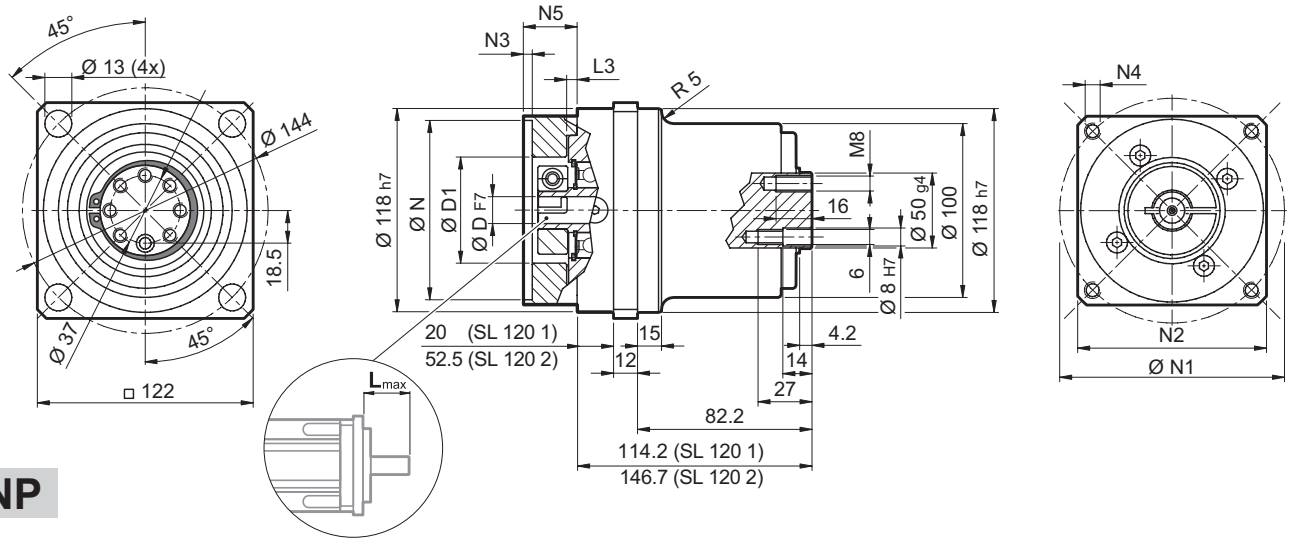
| | D | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **50D** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 50 | 95 | 100 | 5 | M6x14 | 28 | 40 |
| **55A** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 55.5 | 125.7 | 105 | 5 | M6x16 | 28 | 40 |
| **60A2** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 60 | 75 | 100 | 5 | M5x14 | 28 | 40 |
| **60AH2** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 60 | 75 | 100 | 5 | 6.5 | 33 | 40 |
| **60B1** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 60 | 85 | 100 | 6.5 | M5x14 | 28 | 40 |
| **70A1** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 70 | 85 | 100 | 5 | M6x14 | 28 | 40 |
| **70AH1** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 70 | 85 | 100 | 5 | 6 | 33 | 40 |
| **70B1** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 70 | 90 | 100 | 5 | M5x12 | 28 | 40 |
| **80A1** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 80 | 100 | 100 | 5 | M6x16 | 28 | 40 |
| **80AH1** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 80 | 100 | 100 | 5 | 6.5 | 28 | 40 |
| **95A** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 95 | 115 | 100 | 5 | M8x18 | 28 | 40 |
| **95A1** | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 95 | 115 | 100 | 5 | M8x18 | 38 | 50 |
| **95B** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 95 | 130 | 115 | 5 | M8x18 | 28 | 40 |
| **110A** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 110 | 130 | 115 | 5 | M8x18 | 28 | 40 |
| **110A1** | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 110 | 130 | 115 | 6.5 | M8x20 | 38 | 50 |
| **110B** | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 110 | 145 | 120 | 6.5 | M8x20 | 38 | 50 |
| **110B1** | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 28 | – | 110 | 145 | 120 | 6.5 | M8x20 | 48 | 60 |
| **130A** | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 130 | 165 | 140 | 6.5 | M10x20 | 38 | 50 |
| **130A1** | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 130 | 165 | 140 | 6.5 | M10x25 | 48 | 60 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

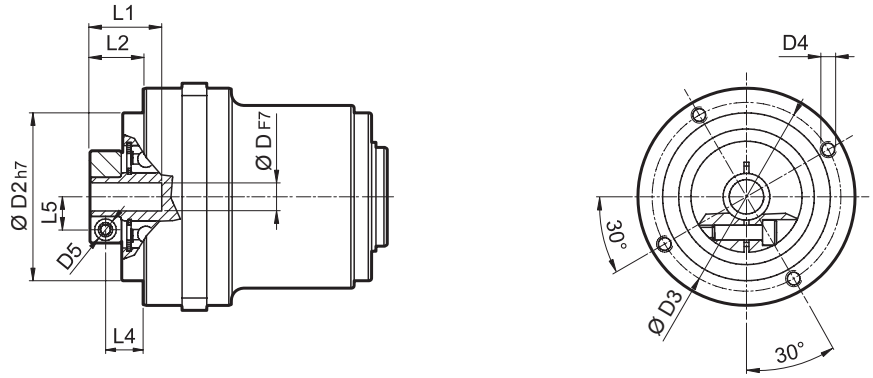


# SL 120

## NP



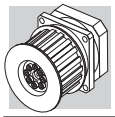

## FM



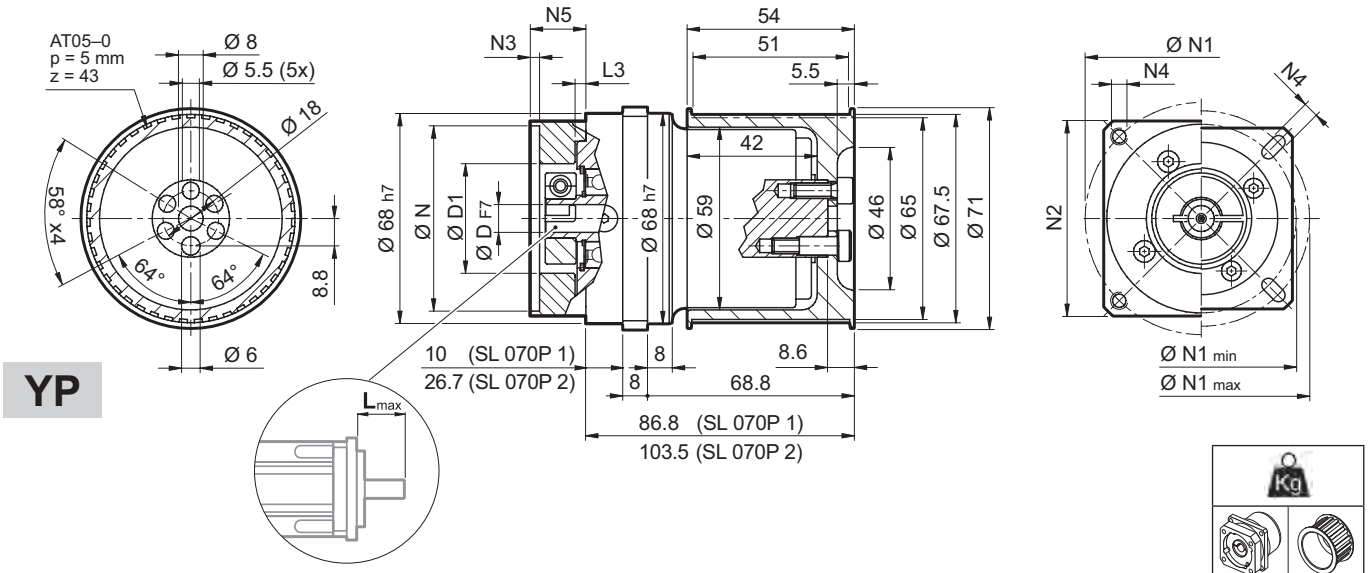

| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 15 | 15.875 | 16 | 48 | 90 | 98 | M6x15 | M6 | 33.5 | 20 | 7.6 | 12.5 | 14.5 |
| 19 | | | | 51 | 90 | 98 | M6x15 | M6 | 33.5 | 20 | 7.6 | 12.5 | 16.5 |
| 22 | 24 | | | 56.5 | 90 | 98 | M6x15 | M6 | 36.5 | 23 | 7.6 | 14 | 19 |
| 28 | | | | 70 | 90 | 98 | M6x15 | M8 | 36.5 | 23 | 7.6 | 14 | 22.5 |
| 32 | | | | 71 | 90 | 98 | M6x15 | M8 | 38 | 24.5 | 7.6 | 15.5 | 24.5 |

| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $\varphi_R$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$* [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 14 ... 19 | D 22 ; 24 | D 28 ; 32 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL 120 1_3 | 95 | 160 | 300 | 2500 | 3500 | 12' | 6' | 45 | 10000 | 4500 | 97 | 2.18 | 2.81 | 3.25 | 50.62 |
| SL 120 1_4 | 110 | 190 | 360 | 2800 | 4500 | 12' | 6' | 45 | 10000 | 4500 | 97 | 1.30 | 1.93 | 2.37 | |
| SL 120 1_5 | 110 | 190 | 360 | 3000 | 4500 | 12' | 6' | 45 | 10000 | 4500 | 97 | 0.96 | 1.59 | 2.03 | |
| SL 120 1_7 | 110 | 190 | 360 | 3500 | 4500 | 12' | 6' | 45 | 10000 | 4500 | 97 | 0.66 | 1.28 | 1.72 | |
| SL 120 1_10 | 95 | 160 | 300 | 3500 | 5000 | 12' | 6' | 45 | 10000 | 4500 | 97 | 0.49 | 1.11 | 1.55 | |
| SL 120 2_9 | 95 | 160 | 300 | 2500 | 3500 | 15' | 8' | 40 | 10000 | 4500 | 94 | 1.61 | 2.20 | 2.57 | |
| SL 120 2_12 | 110 | 190 | 360 | 2500 | 3500 | 15' | 8' | 40 | 10000 | 4500 | 94 | 1.51 | 2.10 | 2.47 | |
| SL 120 2_15 | 110 | 190 | 360 | 2500 | 3500 | 15' | 8' | 40 | 10000 | 4500 | 94 | 1.47 | 2.06 | 2.43 | |
| SL 120 2_16 | 110 | 190 | 360 | 2800 | 4500 | 15' | 8' | 40 | 10000 | 4500 | 94 | 0.92 | 1.52 | 1.88 | |
| SL 120 2_20 | 110 | 190 | 360 | 3000 | 4500 | 15' | 8' | 40 | 10000 | 4500 | 94 | 0.90 | 1.50 | 1.86 | |
| SL 120 2_25 | 110 | 190 | 360 | 3000 | 4500 | 15' | 8' | 40 | 10000 | 4500 | 94 | 0.71 | 1.30 | 1.67 | |
| SL 120 2_28 | 110 | 190 | 360 | 3500 | 5000 | 15' | 8' | 40 | 10000 | 4500 | 94 | 0.54 | 1.13 | 1.50 | |
| SL 120 2_30 | 95 | 160 | 300 | 3500 | 5000 | 15' | 8' | 40 | 10000 | 4500 | 94 | 0.44 | 1.04 | 1.40 | |
| SL 120 2_35 | 110 | 190 | 360 | 3500 | 5000 | 15' | 8' | 40 | 10000 | 4500 | 94 | 0.53 | 1.13 | 1.49 | |
| SL 120 2_40 | 110 | 190 | 360 | 3500 | 5000 | 15' | 8' | 40 | 10000 | 4500 | 94 | 0.43 | 1.03 | 1.39 | |
| SL 120 2_50 | 110 | 190 | 360 | 3500 | 5000 | 15' | 8' | 40 | 10000 | 4500 | 94 | 0.43 | 1.02 | 1.39 | |
| SL 120 2_70 | 110 | 190 | 360 | 3500 | 5000 | 15' | 8' | 40 | 10000 | 4500 | 94 | 0.42 | 1.02 | 1.38 | |
| SL 120 2_100 | 95 | 160 | 300 | 3500 | 5000 | 15' | 8' | 40 | 10000 | 4500 | 94 | 0.42 | 1.02 | 1.38 | |

* Gilt für Zahnriemenanwendungen



# SL 070P

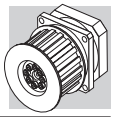



**YP**

| | Kg | |
|---|---|---|
| **SL 070P 1** | 2.0 | 0.5 |
| **SL 070P 2** | 2.3 | 0.5 |

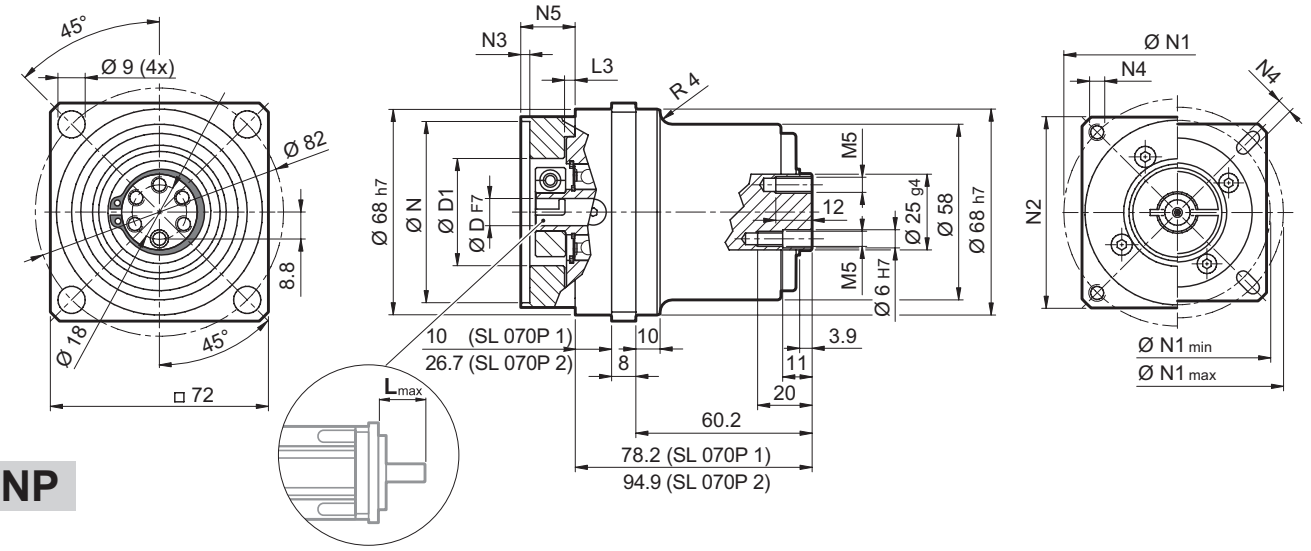
| | D | | | | | | | | | | N | N1 | | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | min | max | | | | | |
| **25AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 25 | 39 | 56 | | | | | |
| **26AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 26 | 39 | 56 | | | | | |
| **28AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 28 | 39 | 56 | | | | | |
| **30AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 30 | 39 | 56 | | | | | |
| **32AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 32 | 39 | 56 | 65 | 3.5 | 4.5 | 25 | 25 |
| **34AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 34 | 40 | 56 | | | | | |
| **36AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 36 | 42 | 56 | | | | | |
| **39AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 39 | 45 | 56 | | | | | |
| **40AH** | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 40 | 46 | 56 | | | | | |
| **38B** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 38.1 | 66.6 | | 60 | 3 | M4x10 | 18 | 25 |
| **40B** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 40 | 63 | | 60 | 3 | M4x10 | 18 | 25 |
| **50A** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 50 | 60 | | 60 | 3 | M4x10 | 18 | 25 |
| **50B** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 60 | 3 | M5x12 | 23 | 30 |
| **50BH** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 65 | 3 | 5.5 | 25 | 32 |
| **50C** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 70 | | 60 | 3 | M4x10 | 23 | 30 |
| **55MH** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 55 | 80 | | 65 | 2 | 5.5 | 16 | 23 |
| **60A** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 60 | 75 | | 65 | 3 | M5x12 | 18 | 25 |
| **60A1** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 75 | | 65 | 3 | M5x12 | 23 | 30 |
| **60B** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 85 | | 75 | 3 | M5x12 | 23 | 30 |
| **60C** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **70A** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 85 | | 75 | 3 | M6x15 | 23 | 30 |
| **70B** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **73A** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 73 | 98.4 | | 85 | 3 | M5x12 | 25 | 32 |
| **80A** | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 80 | 100 | | 85 | 3 | M6x15 | 23 | 30 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

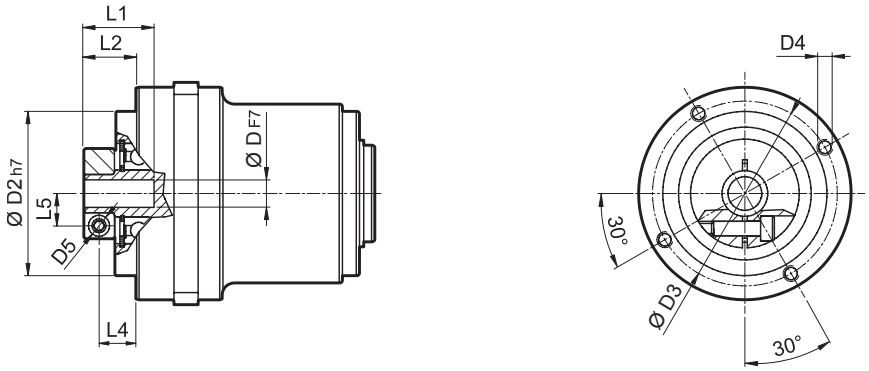


# SL 070P

## NP




## FM

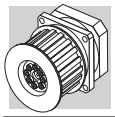



| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.35 | 7 | | | 32.5 | 50 | 42.5 | M4x8 | M4 | 21.7 | 13.2 | 3 | 8.2 | 8 |
| 8 | 9 | 9.52 | 10 | 32.5 | 50 | 42.5 | M4x8 | M4 | 21.7 | 13.2 | 3 | 8.2 | 9 |
| 11 | 12 | 12.7 | | 35.5 | 50 | 42.5 | M4x8 | M4 | 22 | 13.5 | 3 | 8.5 | 11 |
| 14 | | | | 35.5 | 50 | 42.5 | M4x8 | M4 | 25 | 17 | 3 | 10.2 | 11.5 |

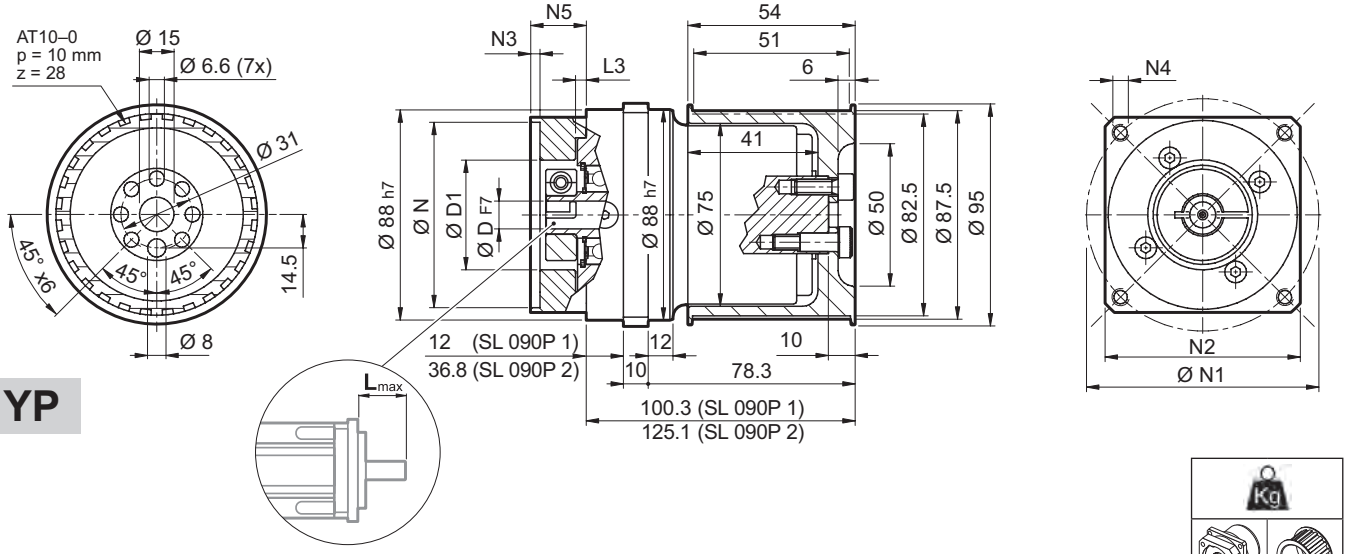
| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $\varphi_R$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ * [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 6 ... 9.52 | $J_G$ [kgcm$^2$] D 11 ... 14 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL 070P 1_3 | 29 | 55 | 60 | 3300 | 4000 | 12' | 6' | 6.5 | 3500 | 1600 | 97 | 0.14 | 0.16 | 3.86 |
| SL 070P 1_4 | 30 | 45 | 70 | 3500 | 5000 | 12' | 6' | 6.5 | 3500 | 1600 | 97 | 0.09 | 0.11 | |
| SL 070P 1_5 | 25 | 40 | 70 | 3500 | 5000 | 12' | 6' | 6.5 | 3500 | 1600 | 97 | 0.07 | 0.09 | |
| SL 070P 1_7 | 25 | 40 | 70 | 4000 | 5000 | 12' | 6' | 6.5 | 3500 | 1600 | 97 | 0.05 | 0.07 | |
| SL 070P 1_10 | 18 | 30 | 60 | 4000 | 6000 | 12' | 6' | 6.5 | 3500 | 1600 | 97 | 0.04 | 0.06 | |
| SL 070P 2_9 | 29 | 55 | 60 | 3300 | 4000 | 15' | 8' | 6 | 3500 | 1600 | 94 | 0.11 | 0.13 | |
| SL 070P 2_12 | 29 | 55 | 70 | 3300 | 4000 | 15' | 8' | 6 | 3500 | 1600 | 94 | 0.10 | 0.13 | |
| SL 070P 2_15 | 29 | 55 | 70 | 3300 | 4000 | 15' | 8' | 6 | 3500 | 1600 | 94 | 0.10 | 0.12 | |
| SL 070P 2_16 | 30 | 45 | 70 | 3500 | 5000 | 15' | 8' | 6 | 3500 | 1600 | 94 | 0.07 | 0.09 | |
| SL 070P 2_20 | 30 | 45 | 70 | 3500 | 5000 | 15' | 8' | 6 | 3500 | 1600 | 94 | 0.06 | 0.08 | |
| SL 070P 2_25 | 30 | 45 | 70 | 3500 | 5000 | 15' | 8' | 6 | 3500 | 1600 | 94 | 0.06 | 0.08 | |
| SL 070P 2_28 | 30 | 45 | 70 | 4000 | 6000 | 15' | 8' | 6 | 3500 | 1600 | 94 | 0.05 | 0.07 | |
| SL 070P 2_30 | 29 | 55 | 60 | 4000 | 6000 | 15' | 8' | 6 | 3500 | 1600 | 94 | 0.04 | 0.06 | |
| SL 070P 2_35 | 30 | 45 | 70 | 4000 | 6000 | 15' | 8' | 6 | 3500 | 1600 | 94 | 0.05 | 0.07 | |
| SL 070P 2_40 | 30 | 45 | 70 | 4000 | 6000 | 15' | 8' | 6 | 3500 | 1600 | 94 | 0.04 | 0.06 | |
| SL 070P 2_50 | 30 | 45 | 70 | 4000 | 6000 | 15' | 8' | 6 | 3500 | 1600 | 94 | 0.04 | 0.06 | |
| SL 070P 2_70 | 30 | 45 | 70 | 4000 | 6000 | 15' | 8' | 6 | 3500 | 1600 | 94 | 0.04 | 0.06 | |
| SL 070P 2_100 | 18 | 30 | 60 | 4000 | 6000 | 15' | 8' | 6 | 3500 | 1600 | 94 | 0.04 | 0.06 | |

* Gilt für Zahnriemenanwendungen

SL



# SL 090P



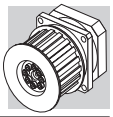

**YP**

| | Kg | |
|---|---|---|
| **SL 090P 1** | 3.6 | 0.8 |
| **SL 090P 2** | 4.7 | 0.8 |

| | D | | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **40B1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 40 | 63 | 80 | 4 | M4x10 | 34 | 40 |
| **45A** | 9 | 9.52 | 11 | 12 | 12.7 | – | – | – | – | – | – | 45 | 63 | 80 | 4 | M4x10 | 34 | 40 |
| **50B1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 65 | 80 | 4 | M5x16 | 34 | 40 |
| **50BH1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 65 | 80 | 4 | 5.5 | 34 | 40 |
| **50C1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 70 | 80 | 4 | M4x10 | 34 | 40 |
| **50D** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 95 | 80 | 4 | M6x10 | 34 | 40 |
| **55A** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 55.5 | 125.7 | 105 | 4 | M6x16 | 34 | 40 |
| **60A2** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 60 | 75 | 80 | 4 | M5x16 | 34 | 40 |
| **60AH2** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 60 | 75 | 90 | 4 | 5.5 | 34 | 40 |
| **60B1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | – | – | – | 60 | 85 | 80 | 4 | M5x16 | 34 | 40 |
| **60C1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | – | – | – | 60 | 90 | 80 | 4 | M5x16 | 34 | 40 |
| **70A1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 85 | 80 | 4 | M6x20 | 34 | 40 |
| **70AH1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 85 | 90 | 4 | 6.5 | 34 | 40 |
| **70B1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 90 | 80 | 4 | M5x16 | 34 | 40 |
| **73A1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 73 | 98.4 | 85 | 4 | M5x16 | 34 | 40 |
| **80A1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 80 | 100 | 90 | 4 | M6x16 | 34 | 40 |
| **95A** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 95 | 115 | 100 | 4 | M8x20 | 34 | 40 |
| **95B** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 95 | 130 | 115 | 4 | M8x20 | 34 | 40 |
| **110A** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 130 | 115 | 4 | M8x20 | 34 | 40 |
| **110B** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 145 | 120 | 6.5 | M8x20 | 44 | 50 |
| **110B1** | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 145 | 120 | 6.5 | M8x20 | 54 | 60 |

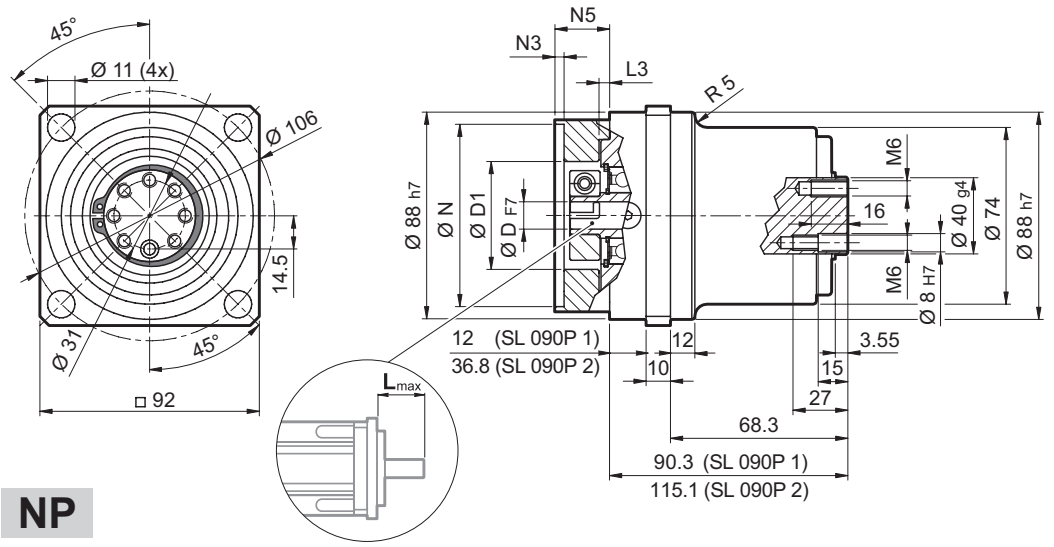
Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

SL

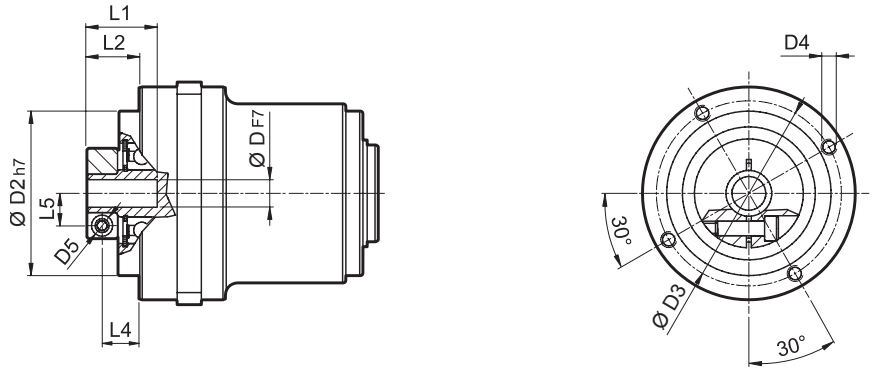


# SL 090P

## NP




## FM

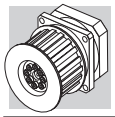



| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 9.52 | | | 38 | 68 | 76.5 | M6x10 | M6 | 34 | 26.8 | 9.5 | 18.8 | 10.5 |
| 11 | 12 | 12.7 | | 52 | 68 | 76.5 | M6x10 | M6 | 34 | 26.8 | 9.5 | 18.8 | 12.5 |
| 14 | 15.875 | 16 | 17 | 48 | 68 | 76.5 | M6x10 | M6 | 34 | 26.8 | 9.5 | 18.8 | 14.5 |
| 19 | 19.05 | | | 51 | 68 | 76.5 | M6x10 | M6 | 34 | 26.8 | 9.5 | 18.8 | 16.5 |

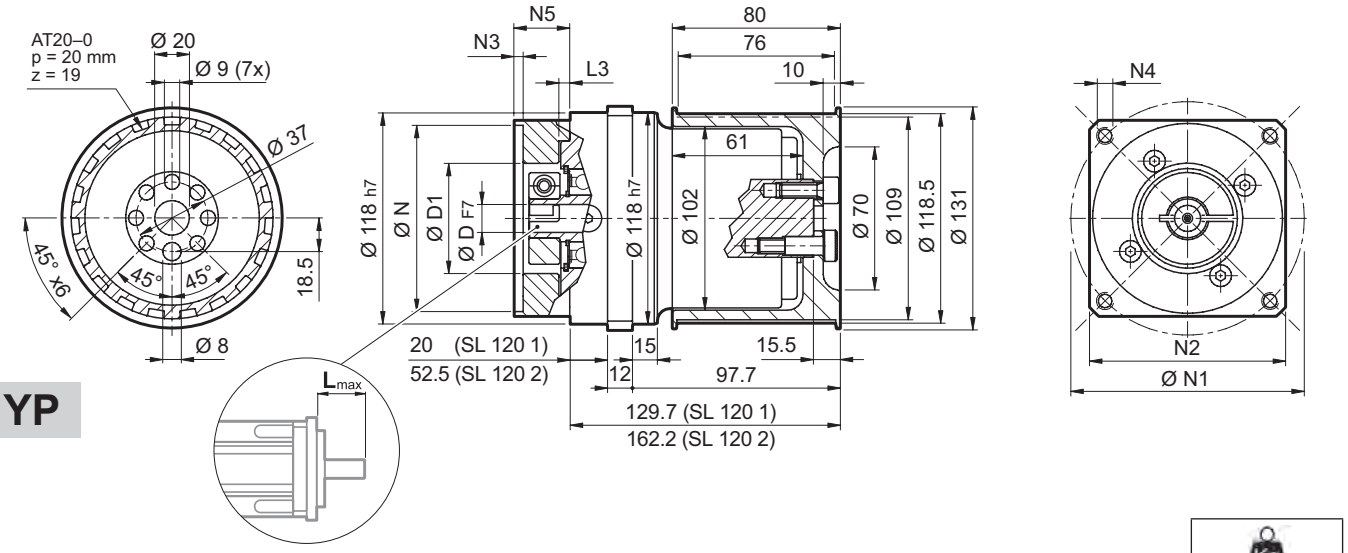
| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $\varphi_R$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$ * [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 9 ... 12.7 | $J_G$ [kgcm$^2$] D 14 ... 19 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL 090P 1_3 | 65 | 120 | 150 | 3500 | 4000 | 12' | 6' | 12 | 4500 | 2000 | 97 | 0.72 | 0.81 | 10.95 |
| SL 090P 1_4 | 60 | 110 | 160 | 3500 | 4000 | 12' | 6' | 12 | 4500 | 2000 | 97 | 0.49 | 0.58 | |
| SL 090P 1_5 | 50 | 100 | 160 | 3200 | 4500 | 12' | 6' | 12 | 4500 | 2000 | 97 | 0.39 | 0.48 | |
| SL 090P 1_7 | 50 | 100 | 160 | 4000 | 6000 | 12' | 6' | 12 | 4500 | 2000 | 97 | 0.31 | 0.40 | |
| SL 090P 1_10 | 40 | 70 | 150 | 4000 | 6000 | 12' | 6' | 12 | 4500 | 2000 | 97 | 0.27 | 0.35 | |
| SL 090P 2_9 | 65 | 120 | 150 | 3500 | 4000 | 15' | 8' | 11.5 | 4500 | 2000 | 94 | 0.47 | 0.61 | |
| SL 090P 2_12 | 65 | 120 | 160 | 3500 | 4000 | 15' | 8' | 11.5 | 4500 | 2000 | 94 | 0.44 | 0.58 | |
| SL 090P 2_15 | 65 | 120 | 160 | 3500 | 4000 | 15' | 8' | 11.5 | 4500 | 2000 | 94 | 0.43 | 0.57 | |
| SL 090P 2_16 | 60 | 110 | 160 | 3500 | 4500 | 15' | 8' | 11.5 | 4500 | 2000 | 94 | 0.31 | 0.45 | |
| SL 090P 2_20 | 60 | 110 | 160 | 3500 | 4500 | 15' | 8' | 11.5 | 4500 | 2000 | 94 | 0.26 | 0.40 | |
| SL 090P 2_25 | 50 | 100 | 160 | 3200 | 4500 | 15' | 8' | 11.5 | 4500 | 2000 | 94 | 0.26 | 0.40 | |
| SL 090P 2_28 | 50 | 100 | 160 | 4000 | 6000 | 15' | 8' | 11.5 | 4500 | 2000 | 94 | 0.22 | 0.36 | |
| SL 090P 2_30 | 65 | 120 | 150 | 4000 | 6000 | 15' | 8' | 11.5 | 4500 | 2000 | 94 | 0.20 | 0.34 | |
| SL 090P 2_35 | 50 | 100 | 160 | 4000 | 6000 | 15' | 8' | 11.5 | 4500 | 2000 | 94 | 0.22 | 0.36 | |
| SL 090P 2_40 | 60 | 110 | 160 | 4000 | 6000 | 15' | 8' | 11.5 | 4500 | 2000 | 94 | 0.20 | 0.34 | |
| SL 090P 2_50 | 50 | 100 | 160 | 4000 | 6000 | 15' | 8' | 11.5 | 4500 | 2000 | 94 | 0.20 | 0.34 | |
| SL 090P 2_70 | 50 | 100 | 160 | 4000 | 6000 | 15' | 8' | 11.5 | 4500 | 2000 | 94 | 0.20 | 0.34 | |
| SL 090P 2_100 | 40 | 70 | 150 | 4000 | 6000 | 15' | 8' | 11.5 | 4500 | 2000 | 94 | 0.19 | 0.34 | |

* Gilt für Zahnriemenanwendungen

SL



# SL 120P

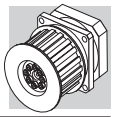



**YP**

| | Kg | |
|---|---|---|
| **SL 120P 1** | 8.4 | 2.6 |
| **SL 120P 2** | 10.9 | 2.6 |

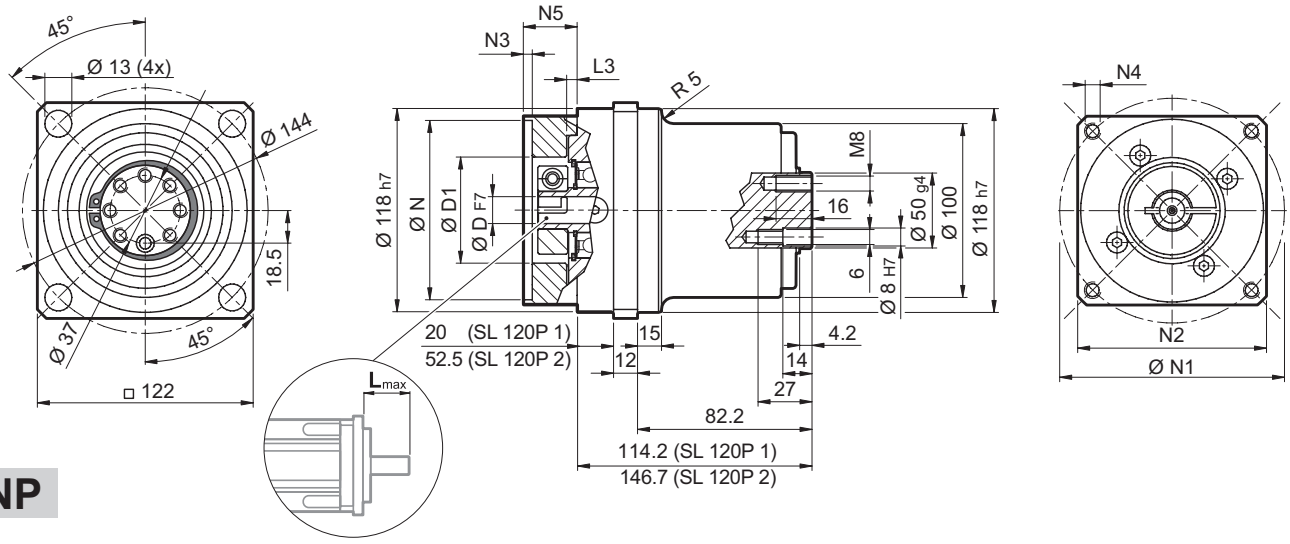
| | D | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **50D** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 50 | 95 | 100 | 5 | M6x14 | 28 | 40 |
| **55A** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 55.5 | 125.7 | 105 | 5 | M6x16 | 28 | 40 |
| **60A2** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 60 | 75 | 100 | 5 | M5x14 | 28 | 40 |
| **60AH2** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 60 | 75 | 100 | 5 | 6.5 | 33 | 40 |
| **60B1** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 60 | 85 | 100 | 6.5 | M5x14 | 28 | 40 |
| **70A1** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 70 | 85 | 100 | 5 | M6x14 | 28 | 40 |
| **70AH1** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 70 | 85 | 100 | 5 | 6 | 33 | 40 |
| **70B1** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 70 | 90 | 100 | 5 | M5x12 | 28 | 40 |
| **80A1** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 80 | 100 | 100 | 5 | M6x16 | 28 | 40 |
| **80AH1** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 80 | 100 | 100 | 5 | 6.5 | 28 | 40 |
| **95A** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 95 | 115 | 100 | 5 | M8x18 | 28 | 40 |
| **95A1** | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 95 | 115 | 100 | 5 | M8x18 | 38 | 50 |
| **95B** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 95 | 130 | 115 | 5 | M8x18 | 28 | 40 |
| **110A** | 14 | 15 | 15.875 | 16 | 19 | – | – | – | – | 110 | 130 | 115 | 5 | M8x18 | 28 | 40 |
| **110A1** | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 110 | 130 | 115 | 6.5 | M8x20 | 38 | 50 |
| **110B** | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 110 | 145 | 120 | 6.5 | M8x20 | 38 | 50 |
| **110B1** | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 28 | – | 110 | 145 | 120 | 6.5 | M8x20 | 48 | 60 |
| **130A** | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | – | – | 130 | 165 | 140 | 6.5 | M10x20 | 38 | 50 |
| **130A1** | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 28 | 32 | 130 | 165 | 140 | 6.5 | M10x25 | 48 | 60 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

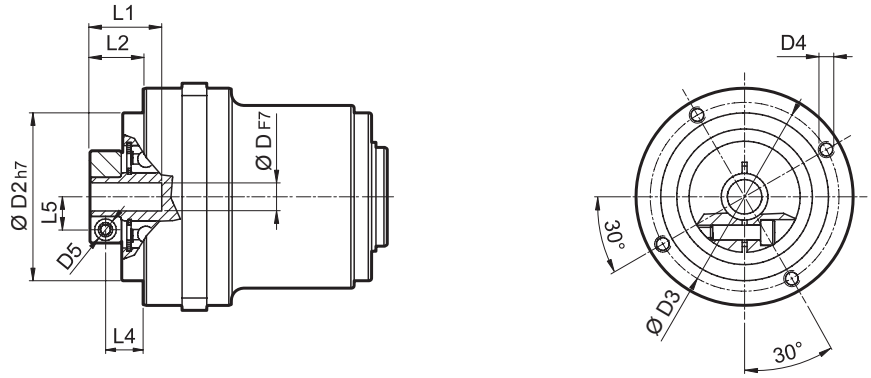


# SL 120P

## NP




## FM

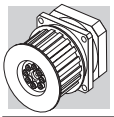



| D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 15 | 15.875 | 16 | 48 | 90 | 98 | M6x15 | M6 | 33.5 | 20 | 7.6 | 12.5 | 14.5 |
| 19 | | | | 51 | 90 | 98 | M6x15 | M6 | 33.5 | 20 | 7.6 | 12.5 | 16.5 |
| 22 | 24 | | | 56.5 | 90 | 98 | M6x15 | M6 | 36.5 | 23 | 7.6 | 14 | 19 |
| 28 | | | | 70 | 90 | 98 | M6x15 | M8 | 36.5 | 23 | 7.6 | 14 | 22.5 |
| 32 | | | | 71 | 90 | 98 | M6x15 | M8 | 38 | 24.5 | 7.6 | 15.5 | 24.5 |

| i | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_S$ [arcmin] | $\varphi_R$ [arcmin] | $C_t$ [Nm/arcmin] | $R_{2\,max}$* [N] | $A_{2\,max}$ [N] | $\eta$ % | $J_G$ [kgcm$^2$] D 14 ... 19 | D 22 ; 24 | D 28 ; 32 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL 120P 1_3 | 155 | 280 | 300 | 3000 | 4000 | 12' | 6' | 45 | 10000 | 4500 | 97 | 2.18 | 2.81 | 3.25 | 50.62 |
| SL 120P 1_4 | 155 | 300 | 360 | 3000 | 4500 | 12' | 6' | 45 | 10000 | 4500 | 97 | 1.30 | 1.93 | 2.37 | |
| SL 120P 1_5 | 125 | 240 | 360 | 3000 | 4500 | 12' | 6' | 45 | 10000 | 4500 | 97 | 0.96 | 1.59 | 2.03 | |
| SL 120P 1_7 | 125 | 240 | 360 | 3500 | 4500 | 12' | 6' | 45 | 10000 | 4500 | 97 | 0.66 | 1.28 | 1.72 | |
| SL 120P 1_10 | 100 | 160 | 300 | 3500 | 5000 | 12' | 6' | 45 | 10000 | 4500 | 97 | 0.49 | 1.11 | 1.55 | |
| SL 120P 2_9 | 155 | 280 | 300 | 3000 | 4000 | 15' | 8' | 40 | 10000 | 4500 | 94 | 1.61 | 2.20 | 2.57 | |
| SL 120P 2_12 | 155 | 300 | 360 | 3000 | 4000 | 15' | 8' | 40 | 10000 | 4500 | 94 | 1.51 | 2.10 | 2.47 | |
| SL 120P 2_15 | 155 | 300 | 360 | 3000 | 4000 | 15' | 8' | 40 | 10000 | 4500 | 94 | 1.47 | 2.06 | 2.43 | |
| SL 120P 2_16 | 155 | 300 | 360 | 3000 | 4500 | 15' | 8' | 40 | 10000 | 4500 | 94 | 0.92 | 1.52 | 1.88 | |
| SL 120P 2_20 | 155 | 300 | 360 | 3000 | 4500 | 15' | 8' | 40 | 10000 | 4500 | 94 | 0.90 | 1.50 | 1.86 | |
| SL 120P 2_25 | 125 | 240 | 360 | 3000 | 4500 | 15' | 8' | 40 | 10000 | 4500 | 94 | 0.71 | 1.30 | 1.67 | |
| SL 120P 2_28 | 125 | 240 | 360 | 3500 | 5000 | 15' | 8' | 40 | 10000 | 4500 | 94 | 0.54 | 1.13 | 1.50 | |
| SL 120P 2_30 | 155 | 300 | 300 | 3500 | 5000 | 15' | 8' | 40 | 10000 | 4500 | 94 | 0.44 | 1.04 | 1.40 | |
| SL 120P 2_35 | 125 | 240 | 360 | 3500 | 5000 | 15' | 8' | 40 | 10000 | 4500 | 94 | 0.53 | 1.13 | 1.49 | |
| SL 120P 2_40 | 155 | 300 | 360 | 3500 | 5000 | 15' | 8' | 40 | 10000 | 4500 | 94 | 0.43 | 1.03 | 1.39 | |
| SL 120P 2_50 | 125 | 240 | 360 | 3500 | 5000 | 15' | 8' | 40 | 10000 | 4500 | 94 | 0.43 | 1.02 | 1.39 | |
| SL 120P 2_70 | 125 | 240 | 360 | 3500 | 5000 | 15' | 8' | 40 | 10000 | 4500 | 94 | 0.42 | 1.02 | 1.38 | |
| SL 120P 2_100 | 100 | 160 | 300 | 3500 | 5000 | 15' | 8' | 40 | 10000 | 4500 | 94 | 0.42 | 1.02 | 1.38 | |

* Gilt für Zahnriemenanwendungen

SL

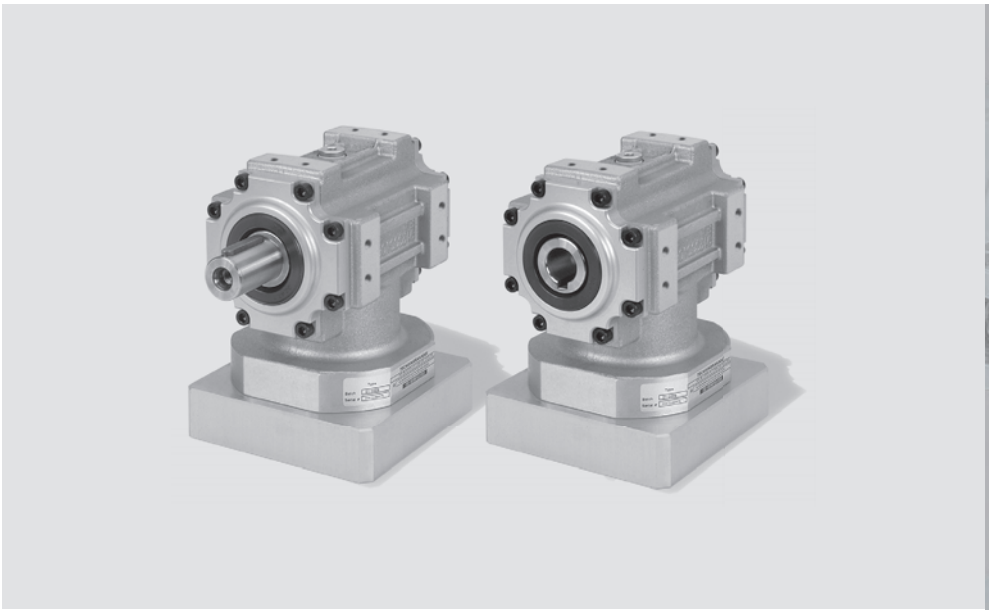


SL

# KR
# PRÄZISIONSKEGELRADGETRIEBE

Die flexible, effiziente und wirtschaftliche Lösung für Anwendungen, die platzsparende Winkelgetriebe mit minimalem Spiel erfordern.

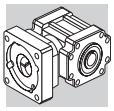
Erhältlich in verschiedenen Ausführungen mit zahlreichen An- und Abtriebskonfigurationen.





**Produktmerkmale:**

- Optimale Kombination von Dynamik, Kompaktheit und Präzision
- Entwickelt für Zyklus- und Dauerbetrieb
- Gute Verdrehsteifigkeit
- Niedriges Verdrehflankenspiel – unter 8 arcmin



## *10 MERKMALE DER KR-REIHE*

Die Präzisionskegelradgetriebe der KR-Reihe werden nach den strengsten Qualitätskriterien gefertigt und sind für Anwendungen konzipiert, deren Dynamik- und Präzisionsanforderungen geringes Gewicht und kompakte Abmaße verlangen.
Der Reihe enthält zahlreiche Optionen, Motoradapter und Abtriebswellenkonfigurationen, um die Installation in der angetriebenen Vorrichtung zu ermöglichen.

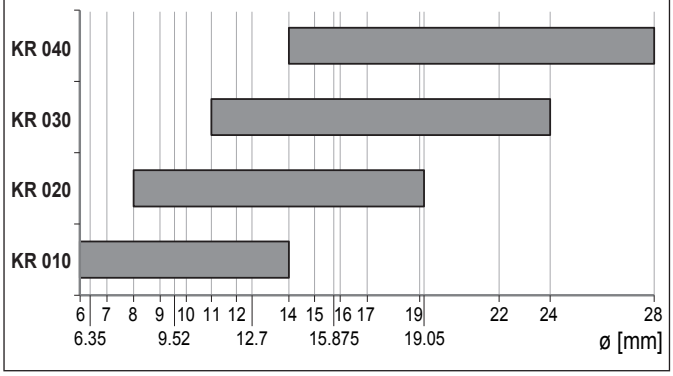
- Erhältlich mit Flankenspiel ($\Phi_S \leq 8'$)
- Übersetzung i = 1, 2, 5
- Radialkugellager (SB) als Standard; optional können Kegelrollenlager (HB) für besonders anspruchsvolle Belastungsbedingungen ausgewählt werden
- Schutzart IP65
- Serienmäßige Fluorelastomer-Wellendichtungen
- Schalldruckpegel $L_P \leq 70$ dB(A). Gemessen in 1 m Abstand ohne Last und bei einer Eingangsdrehzahl von $n_1 = 3000$ min$^{-1}$
- Schmierung optimiert für die gewünschte Betriebsart.
  Ohne Verunreinigung muss das Schmiermittel nicht regelmäßig gewechselt werden.

| Betrieb | KR 010 ... KR 040 |
|---|---|
| **S1** (kontinuierlich) | Synthetiköl Viskositätsklasse ISO VG 220 |
| **S5** (unterbrochen) | NLGI Fettkonsistenz 00 |

- Umgebungstemperatur min. -20°C, max. +30°C; bei Temperaturen höher als 30°C ist der Temperaturfaktor $f_T$ zu berücksichtigen.
- Die Gehäusetemperatur darf Tmax = 90°C nicht übersteigen.

| **Übersicht der Nenndrehmomente** | **$M_{n2}$** [Nm] | | |
|---|---|---|---|
| [i] | **1** | **2** | **5** |
| **KR 010** | 10 | 7 | 3 |
| **KR 020** | 24 | 15 | 10 |
| **KR 030** | 55 | 37 | 22 |
| **KR 040** | 120 | 85 | 45 |

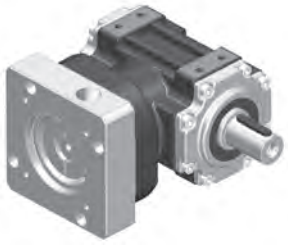
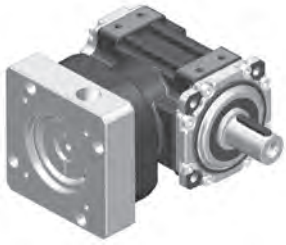
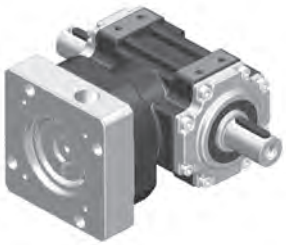
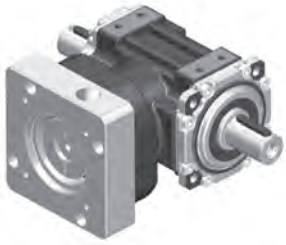
**Verfügbare Motorwellendurchmesser**



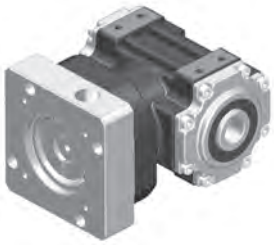
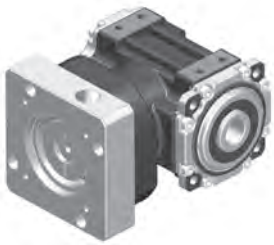
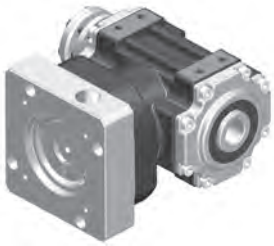

KR

## *10.1 VERSIONEN*

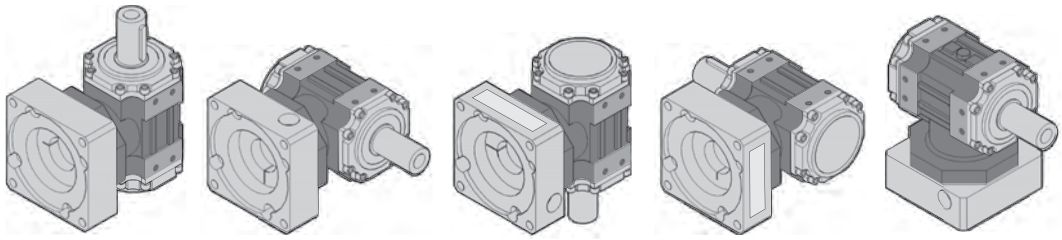
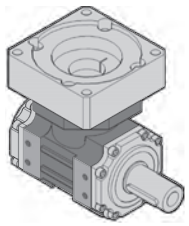
**Vollwelle**

| LP | LPF | LD | LDF |
|---|---|---|---|
|  |  |  |  |
| Einfache Abtriebswelle | Einfache Abtriebswelle + Flansch | Doppelte Abtriebswelle | Doppelte Abtriebswelle + Flansch |

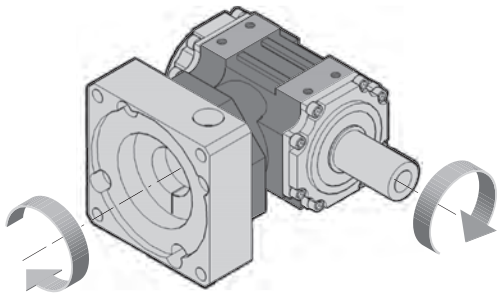
**Hohlwelle**

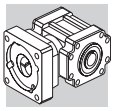
| H | HF | S | SF |
|---|---|---|---|
|  |  |  |  |
| Passfedernut (KR 030...KR 040) | Passfedernut + Flansch (KR 030...KR 040) | Schrumpfscheibe | Schrumpfscheibe + Flansch |

## *10.2 MONTAGEPOSITIONEN*

| U | VA |
|---|---|
|  |  |

## *10.3 WELLENDREHRICHTUNG*





## *10.4 BESTELLBEZEICHNUNG*

**KR** | **030** | **1** | **STD** | **LP** | **60A** | **CD** | **14** | **S1** | **U** | **SB** | **UH1**

SCHMIERSTOFF
- **–** Standard
- **UH1** Lebensmitteltaugliches Schmiermittel

LAGER DER ABTRIEBSWELLE
- **SB** Standard
- **HB** Verstärkt (KR 020 ... KR 040)

MONTAGEPOSITION
**U** **VA**

BETRIEBSART
- **S1** Dauerbetrieb
- **S5** Kurzzeitbetrieb

BOHRUNGSDURCHMESSER EINGANGSWELLE
**6 ... 28**

MOTORKOPPLUNG
**CD** Klemmnabe

ANTRIEBSFLANSCH
- **25AH ... 180A1** Motorflansch
- **FM** Ohne Motorflansch

VERSION
- Vollwelle: **LP** **LPF** **LD** **LDF**
- Hohlwelle: **H** (KR 030 ... KR 040) **HF** (KR 030 ... KR 040) **S** **SF**

VERDREHSPIEL
**STD** $\varphi_s \leq 8'$

GETRIEBEÜBERSETZUNG
**1** **2** **5**

BAUGRÖSSE
**010** **020** **030** **040**

REIHE
**KR**

## *10.5 TECHNISCHE DATEN*

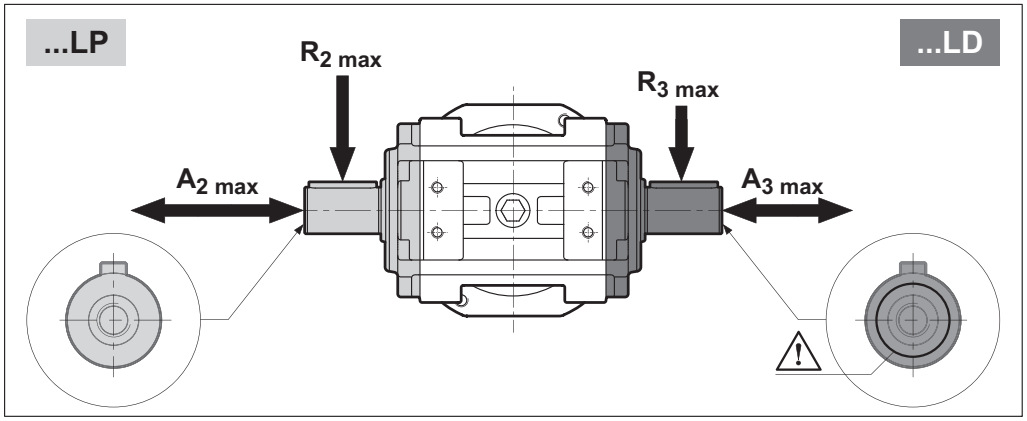
| KR 010 | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $C_t$ [Nm/arcmin] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_s$ [arcmin] | $\eta$ % |
|---|---|---|---|---|---|---|---|---|
| **i = 1** | 10 | 14 | 20 | 0.5 | 2000 | 4000 | 8’ | 97 |
| **i = 2** | 7 | 10 | 15 | 0.4 | 2500 | 5000 | | |
| **i = 5** | 3 | 4 | 6 | 0.2 | 3000 | 5000 | | |

| KR 020 | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $C_t$ [Nm/arcmin] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_s$ [arcmin] | $\eta$ % |
|---|---|---|---|---|---|---|---|---|
| **i = 1** | 24 | 35 | 50 | 1.4 | 2000 | 4000 | 8’ | 97 |
| **i = 2** | 15 | 21 | 30 | 1.1 | 2500 | 5000 | | |
| **i = 5** | 10 | 13 | 20 | 0.7 | 3000 | 5000 | | |

| KR 030 | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $C_t$ [Nm/arcmin] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_s$ [arcmin] | $\eta$ % |
|---|---|---|---|---|---|---|---|---|
| **i = 1** | 55 | 75 | 110 | 4 | 1500 | 3500 | 8’ | 97 |
| **i = 2** | 37 | 52 | 75 | 3 | 2000 | 4500 | | |
| **i = 5** | 22 | 29 | 45 | 2 | 2800 | 4500 | | |

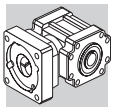
| KR 040 | $M_{n\,2}$ [Nm] | $M_{a\,2}$ [Nm] | $M_{p\,2}$ [Nm] | $C_t$ [Nm/arcmin] | $n_1$ [min$^{-1}$] | $n_{1\,max}$ [min$^{-1}$] | $\varphi_s$ [arcmin] | $\eta$ % |
|---|---|---|---|---|---|---|---|---|
| **i = 1** | 120 | 170 | 240 | 11 | 1500 | 3500 | 8’ | 97 |
| **i = 2** | 85 | 120 | 170 | 9 | 2000 | 4500 | | |
| **i = 5** | 45 | 60 | 90 | 5 | 2500 | 4500 | | |

Der angegebene Steifigkeit bezieht sich auf die LP-Version




| | | $R_{2\,max}$ [N] | $A_{2\,max}$ [N] | $A_2'_{max}$ [N] | $R_{3\,max}$ [N] | $A_{3\,max}$ [N] | $A_3'_{max}$ [N] |
|---|---|---|---|---|---|---|---|
| **KR 010** | **SB** | 1000 | — | 200 | 500 | — | 100 |
| **KR 020** | **SB** | 1500 | — | 300 | 750 | — | 150 |
| | **HB** | 3000 | 1500 | 600 | 3000 | 1500 | 600 |
| **KR 030** | **SB** | 2000 | — | 400 | 1000 | — | 200 |
| | **HB** | 4000 | 2000 | 800 | 4000 | 2000 | 800 |
| **KR 040** | **SB** | 3000 | — | 600 | 1500 | — | 300 |
| | **HB** | 5500 | 2750 | 1100 | 5500 | 2750 | 1100 |

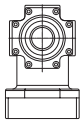
KR



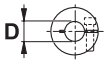
## *10.6 MASSENTRÄGHEITSMOMENT*

### *10.6.1 KR 010...KR 040 mit standard Kugellagern - SB*

**KR 010**

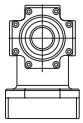


$J_G$ [kgcm$^2$]

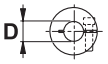


| | SB | 6 ≤ D ≤ 9.52 | 10 ≤ D ≤ 14 |
|---|---|---|---|
| i = 1 | S, SF | 0.52 | 0.52 |
| | LP, LPF | 0.38 | 0.38 |
| | LD, LDF | 0.39 | 0.39 |
| i = 2 | S, SF | 0.27 | 0.29 |
| | LP, LPF | 0.24 | 0.25 |
| | LD, LDF | 0.24 | 0.25 |
| i = 5 | S, SF | 0.20 | 0.21 |
| | LP, LPF | 0.19 | 0.21 |
| | LD, LDF | 0.19 | 0.21 |

**KR 020**

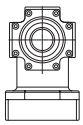


$J_G$ [kgcm$^2$]

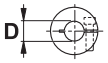


| | SB | 8 ≤ D ≤ 12.7 | 14 ≤ D ≤ 19.05 |
|---|---|---|---|
| i = 1 | S, SF | 1.61 | 1.80 |
| | LP, LPF | 1.34 | 1.52 |
| | LD, LDF | 1.37 | 1.55 |
| i = 2 | S, SF | 0.86 | 1.05 |
| | LP, LPF | 0.80 | 0.98 |
| | LD, LDF | 0.80 | 0.99 |
| i = 5 | S, SF | 0.66 | 0.84 |
| | LP, LPF | 0.64 | 0.83 |
| | LD, LDF | 0.65 | 0.83 |

**KR 030**

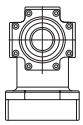


$J_G$ [kgcm$^2$]

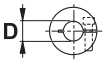


| | SB | 11 ≤ D ≤ 12.7 | 14 ≤ D ≤ 19 | 22 ≤ D ≤ 24 |
|---|---|---|---|---|
| i = 1 | H, HF | 4.37 | 4.45 | 4.64 |
| | S, SF | 5.00 | 5.08 | 5.27 |
| | LP, LPF | 4.70 | 4.78 | 4.97 |
| | LD, LDF | 4.63 | 4.71 | 4.90 |
| i = 2 | H, HF | 2.04 | 2.12 | 2.31 |
| | S, SF | 2.20 | 2.28 | 2.47 |
| | LP, LPF | 2.12 | 2.20 | 2.39 |
| | LD, LDF | 2.11 | 2.19 | 2.37 |
| i = 5 | H, HF | 1.47 | 1.55 | 1.74 |
| | S, SF | 1.50 | 1.57 | 1.76 |
| | LP, LPF | 1.48 | 1.56 | 1.75 |
| | LD, LDF | 1.48 | 1.56 | 1.75 |

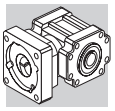
**KR 040**



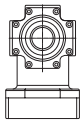
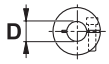
$J_G$ [kgcm$^2$]

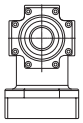
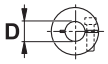


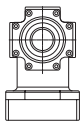
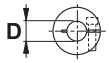
| | SB | 14 ≤ D ≤ 19 | 22 ≤ D ≤ 24 | D = 28 |
|---|---|---|---|---|
| i = 1 | H, HF | 17.19 | 17.37 | 17.77 |
| | S, SF | 20.46 | 20.65 | 21.05 |
| | LP, LPF | 18.21 | 18.40 | 18.80 |
| | LD, LDF | 18.90 | 19.08 | 19.48 |
| i = 2 | H, HF | 4.47 | 4.65 | 5.06 |
| | S, SF | 5.29 | 5.47 | 5.87 |
| | LP, LPF | 4.73 | 4.91 | 5.31 |
| | LD, LDF | 4.90 | 5.08 | 5.48 |
| i = 5 | H, HF | 5.23 | 5.42 | 5.82 |
| | S, SF | 5.36 | 5.55 | 5.95 |
| | LP, LPF | 5.27 | 5.46 | 5.86 |
| | LD, LDF | 5.30 | 5.49 | 5.89 |



### *10.6.2 KR 020...KR 040 mit Kegelrollenlagern - HB*

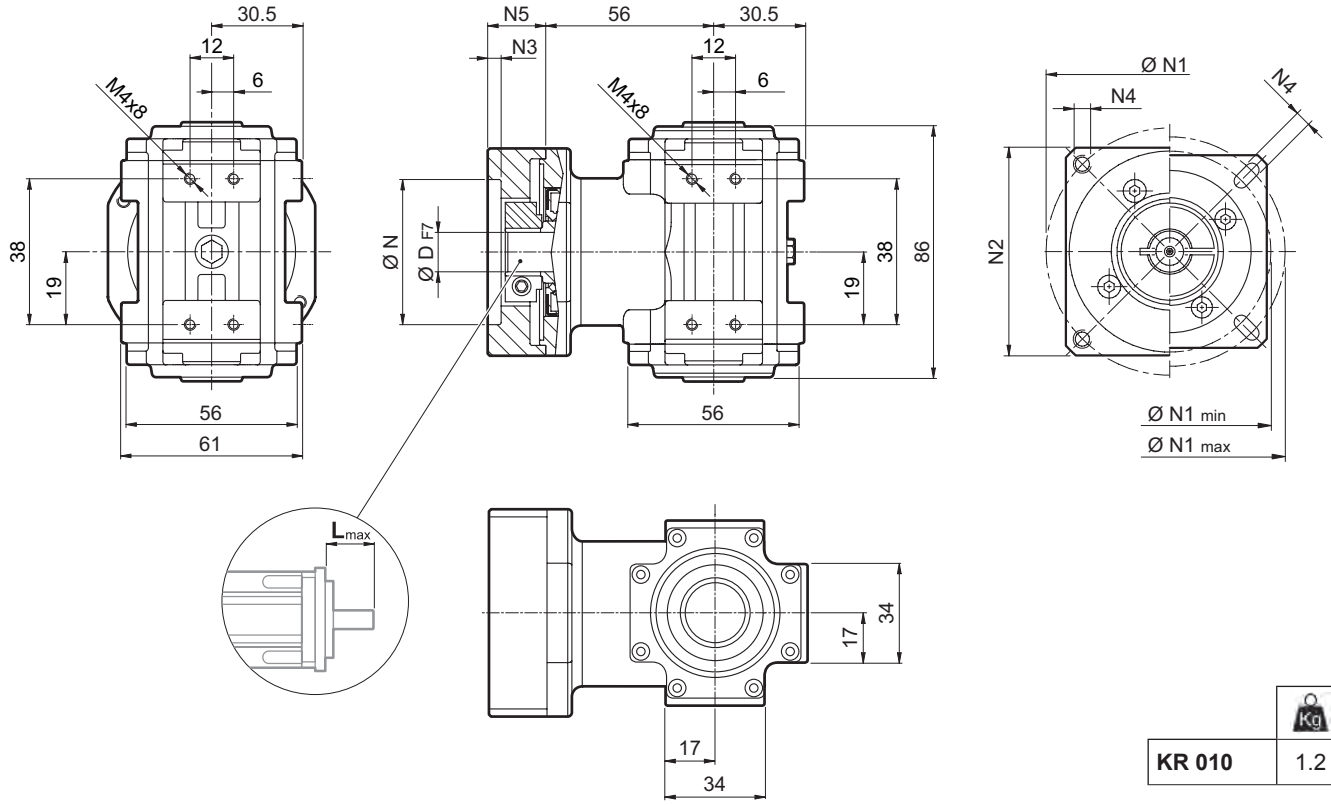
| KR 020 | | | |
|---|---|---|---|
| | | $J_G$ [kgcm$^2$] | |
| |  |  | |
| | HB  | 8 ≤ D ≤ 12.7 | 14 ≤ D ≤ 19.05 |
| i = 1 | S, SF | 1.87 | 2.06 |
| | LP, LPF | 1.60 | 1.78 |
| | LD, LDF | 1.62 | 1.81 |
| i = 2 | S, SF | 0.93 | 1.12 |
| | LP, LPF | 0.86 | 1.05 |
| | LD, LDF | 0.87 | 1.05 |
| i = 5 | S, SF | 0.67 | 0.85 |
| | LP, LPF | 0.66 | 0.84 |
| | LD, LDF | 0.66 | 0.84 |

| KR 030 | | | | |
|---|---|---|---|---|
| | | $J_G$ [kgcm$^2$] | | |
| |  |  | | |
| | HB  | 11 ≤ D ≤ 12.7 | 14 ≤ D ≤ 19 | 22 ≤ D ≤ 24 |
| i = 1 | H, HF | 5.48 | 5.56 | 5.75 |
| | S, SF | 6.11 | 6.19 | 6.38 |
| | LP, LPF | 5.81 | 5.89 | 6.08 |
| | LD, LDF | 5.74 | 5.82 | 6.01 |
| i = 2 | H, HF | 2.92 | 3.00 | 3.19 |
| | S, SF | 3.08 | 3.16 | 3.35 |
| | LP, LPF | 3.01 | 3.09 | 3.27 |
| | LD, LDF | 2.99 | 3.07 | 3.26 |
| i = 5 | H, HF | 1.51 | 1.59 | 1.78 |
| | S, SF | 1.54 | 1.62 | 1.81 |
| | LP, LPF | 1.53 | 1.61 | 1.80 |
| | LD, LDF | 1.53 | 1.60 | 1.79 |

| KR 040 | | | | |
|---|---|---|---|---|
| | | $J_G$ [kgcm$^2$] | | |
| |  |  | | |
| | HB  | 14 ≤ D ≤ 19 | 22 ≤ D ≤ 24 | D = 28 |
| i = 1 | H, HF | 18.82 | 19.01 | 19.41 |
| | S, SF | 22.10 | 22.28 | 22.69 |
| | LP, LPF | 19.85 | 20.04 | 20.44 |
| | LD, LDF | 20.53 | 20.72 | 21.12 |
| i = 2 | H, HF | 4.88 | 5.06 | 5.47 |
| | S, SF | 5.70 | 6.28 | 6.28 |
| | LP, LPF | 5.13 | 5.72 | 5.72 |
| | LD, LDF | 5.31 | 5.89 | 5.89 |
| i = 5 | H, HF | 5.30 | 5.48 | 5.89 |
| | S, SF | 5.43 | 6.02 | 6.02 |
| | LP, LPF | 5.34 | 5.93 | 5.93 |
| | LD, LDF | 5.37 | 5.95 | 5.95 |

# KR 010

## 25AH ... 80A

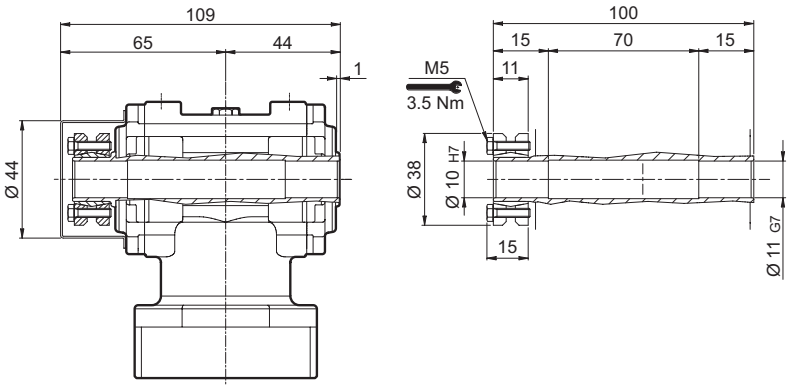



| | Kg |
|---|---|
| **KR 010** | 1.2 |

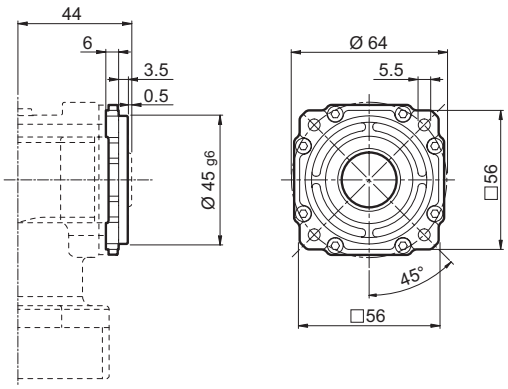
| | D | | | | | | | | | | | N | N1 | | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | min | max | | | | | |
| **25AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 25 | 39 | 56 | | | | | |
| **26AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 26 | 39 | 56 | | | | | |
| **28AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 28 | 39 | 56 | | | | | |
| **30AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 30 | 39 | 56 | | | | | |
| **32AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 32 | 39 | 56 | 65 | 3.5 | 4.5 | 25 | 25 |
| **34AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 34 | 40 | 56 | | | | | |
| **36AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 36 | 42 | 56 | | | | | |
| **39AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 39 | 45 | 56 | | | | | |
| **40AH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | – | – | – | – | – | 40 | 46 | 56 | | | | | |
| **38B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 38.1 | 66.6 | | 60 | 3 | M4x10 | 18 | 25 |
| **40B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 40 | 63 | | 60 | 3 | M4x10 | 18 | 25 |
| **50A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 50 | 60 | | 60 | 3 | M4x10 | 18 | 25 |
| **50B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 60 | 3 | M5x12 | 23 | 30 |
| **50BH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 65 | | 65 | 3 | 5.5 | 25 | 32 |
| **50C** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 50 | 70 | | 60 | 3 | M4x10 | 23 | 30 |
| **55MH** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 55 | 80 | | 65 | 2 | 5.5 | 16 | 23 |
| **60A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | – | 60 | 75 | | 65 | 3 | M5x12 | 18 | 25 |
| **60A1** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 75 | | 65 | 3 | M5x12 | 23 | 30 |
| **60B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 85 | | 75 | 3 | M5x12 | 23 | 30 |
| **60C** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 60 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **70A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 85 | | 75 | 3 | M6x15 | 23 | 30 |
| **70B** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 70 | 90 | | 75 | 3 | M5x12 | 23 | 30 |
| **73A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 73 | 98.4 | | 85 | 3 | M5x12 | 25 | 32 |
| **80A** | 6 | 6.35 | 7 | 8 | 9 | 9.52 | 10 | 11 | 12 | 12.7 | 14 | 80 | 100 | | 85 | 3 | M6x15 | 23 | 30 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

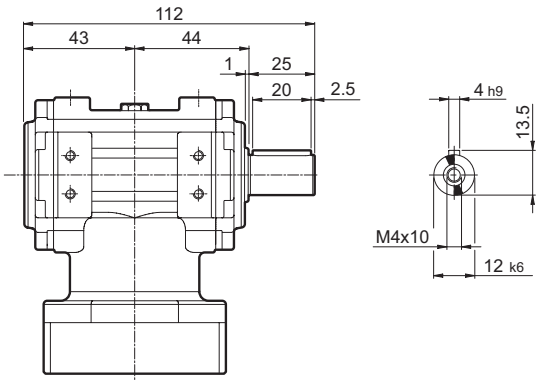
## KR 010... S



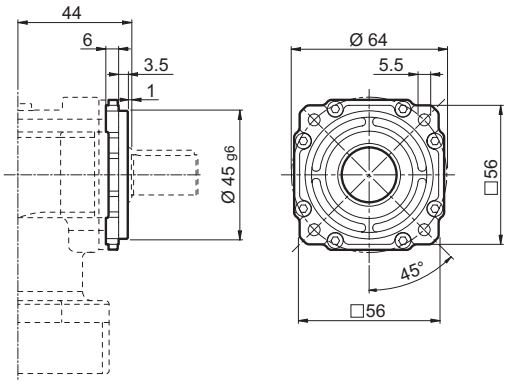

## KR 010... SF



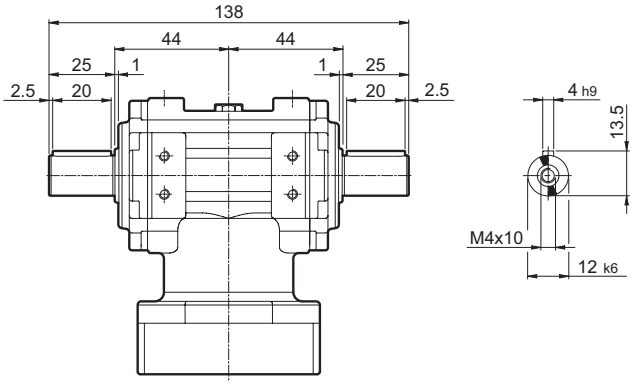

## KR 010... LP



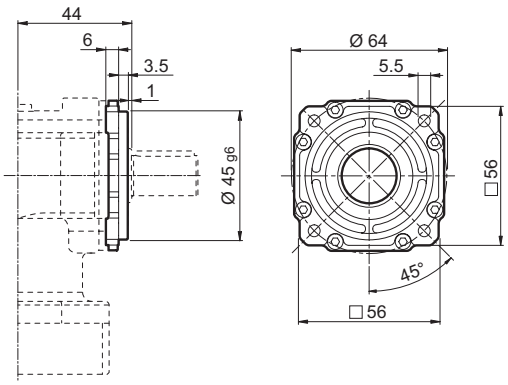

## KR 010... LPF




## KR 010... LD



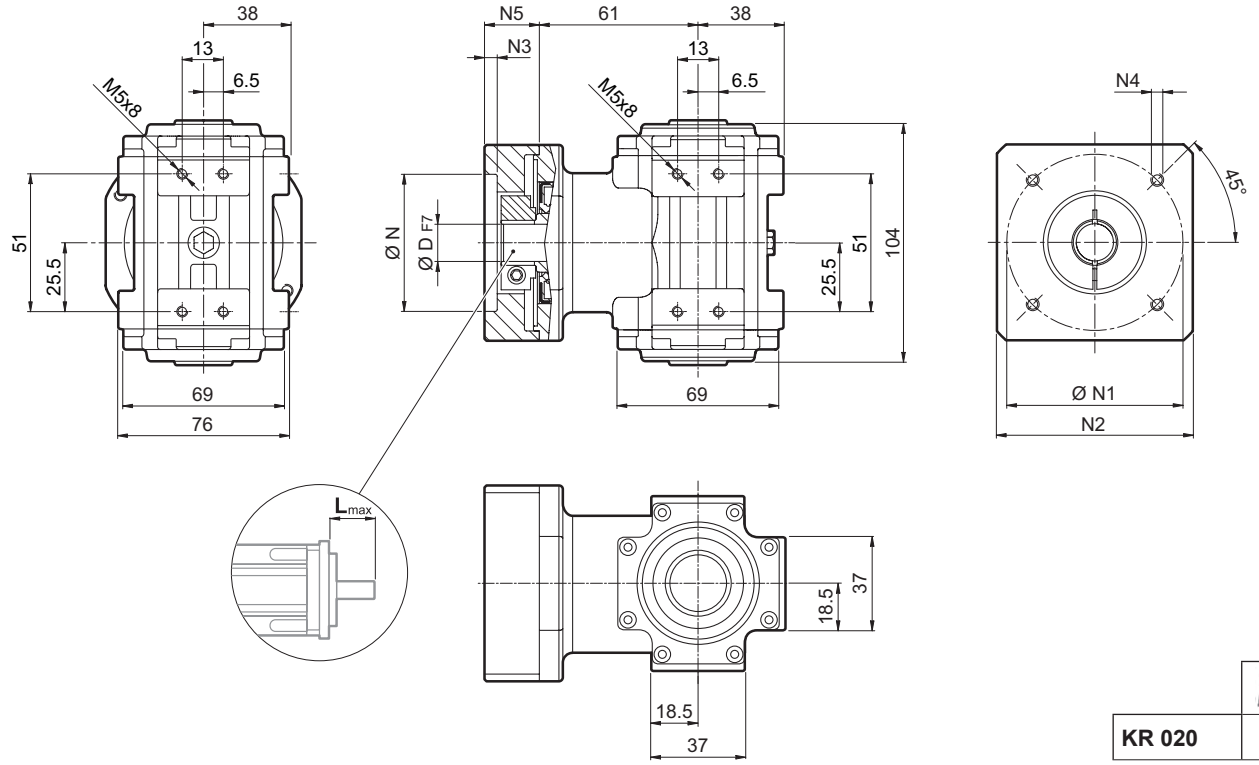

## KR 010... LDF




KR

# KR 020

## 40B1 ... 110B1



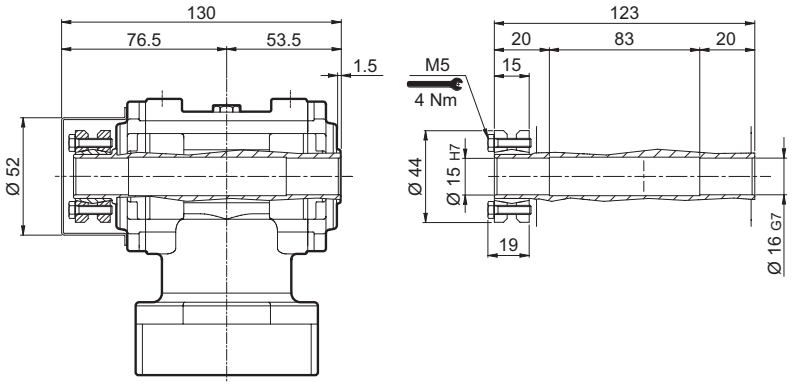

| | Kg |
|---|---|
| **KR 020** | 2.6 |

| | D | | | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **40B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 40 | 63 | 80 | 4 | M4x10 | 34 | 40 |
| **45A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | – | – | – | – | – | – | 45 | 63 | 80 | 4 | M4x10 | 34 | 40 |
| **50B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 65 | 80 | 4 | M5x16 | 34 | 40 |
| **50BH1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 65 | 80 | 4 | 5.5 | 34 | 40 |
| **50C1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 70 | 80 | 4 | M4x10 | 34 | 40 |
| **50D** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 50 | 95 | 80 | 4 | M6x10 | 34 | 40 |
| **55A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 55.5 | 125.7 | 105 | 4 | M6x16 | 34 | 40 |
| **60A2** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 60 | 75 | 80 | 4 | M5x16 | 34 | 40 |
| **60AH2** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 60 | 75 | 90 | 4 | 5.5 | 34 | 40 |
| **60B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | – | – | – | 60 | 85 | 80 | 4 | M5x16 | 34 | 40 |
| **60C1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | – | – | – | 60 | 90 | 80 | 4 | M5x16 | 34 | 40 |
| **70A1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 85 | 80 | 4 | M6x20 | 34 | 40 |
| **70AH1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 85 | 90 | 4 | 6.5 | 34 | 40 |
| **70B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 70 | 90 | 80 | 4 | M5x16 | 34 | 40 |
| **73A1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | – | – | – | – | – | 73 | 98.4 | 85 | 4 | M5x16 | 34 | 40 |
| **80A1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 80 | 100 | 90 | 4 | M6x16 | 34 | 40 |
| **95A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 95 | 115 | 100 | 4 | M8x20 | 34 | 40 |
| **95B** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 95 | 130 | 115 | 4 | M8x20 | 34 | 40 |
| **110A** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 130 | 115 | 4 | M8x20 | 34 | 40 |
| **110B** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 145 | 120 | 6.5 | M8x20 | 44 | 50 |
| **110B1** | 8 | 9 | 9.52 | 11 | 12 | 12.7 | 14 | 15.875 | 16 | 17 | 19 | 19.05 | 110 | 145 | 120 | 6.5 | M8x20 | 54 | 60 |

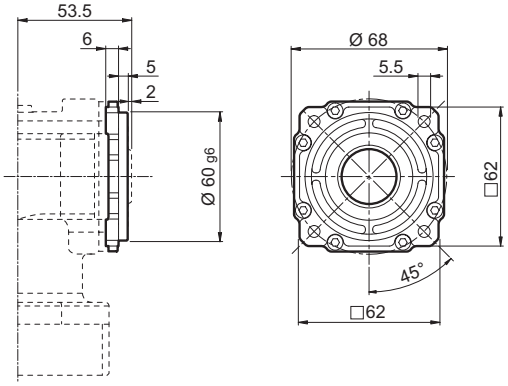
Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

# KR 020

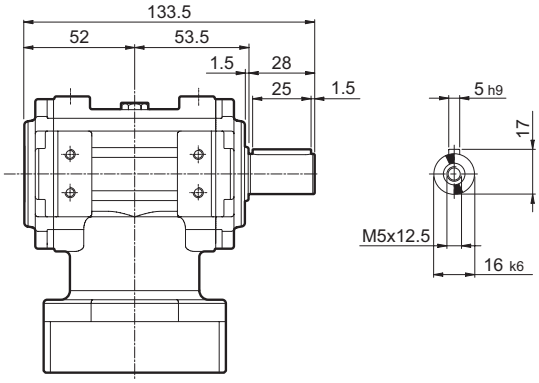
## KR 020... S



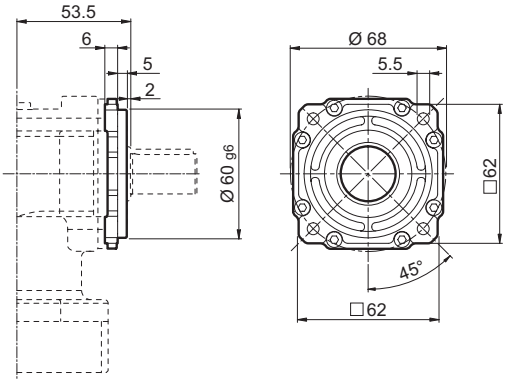

## KR 020... SF



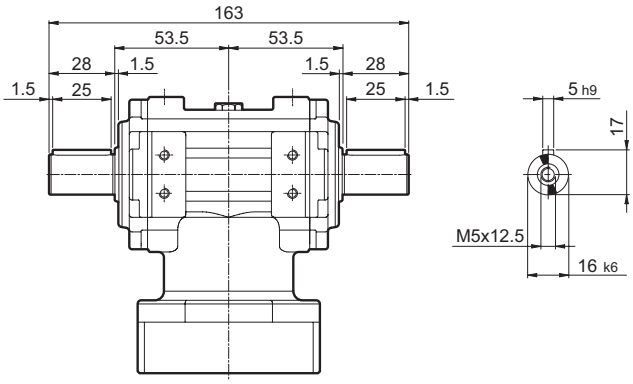

## KR 020... LP



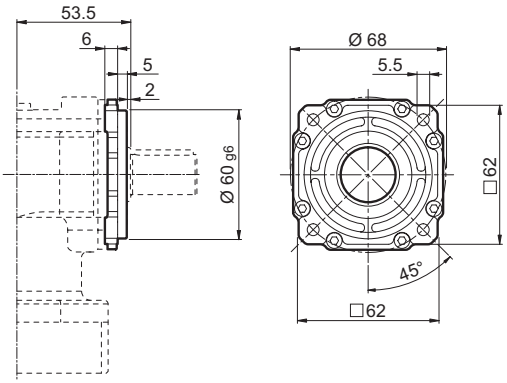

## KR 020... LPF




## KR 020... LD



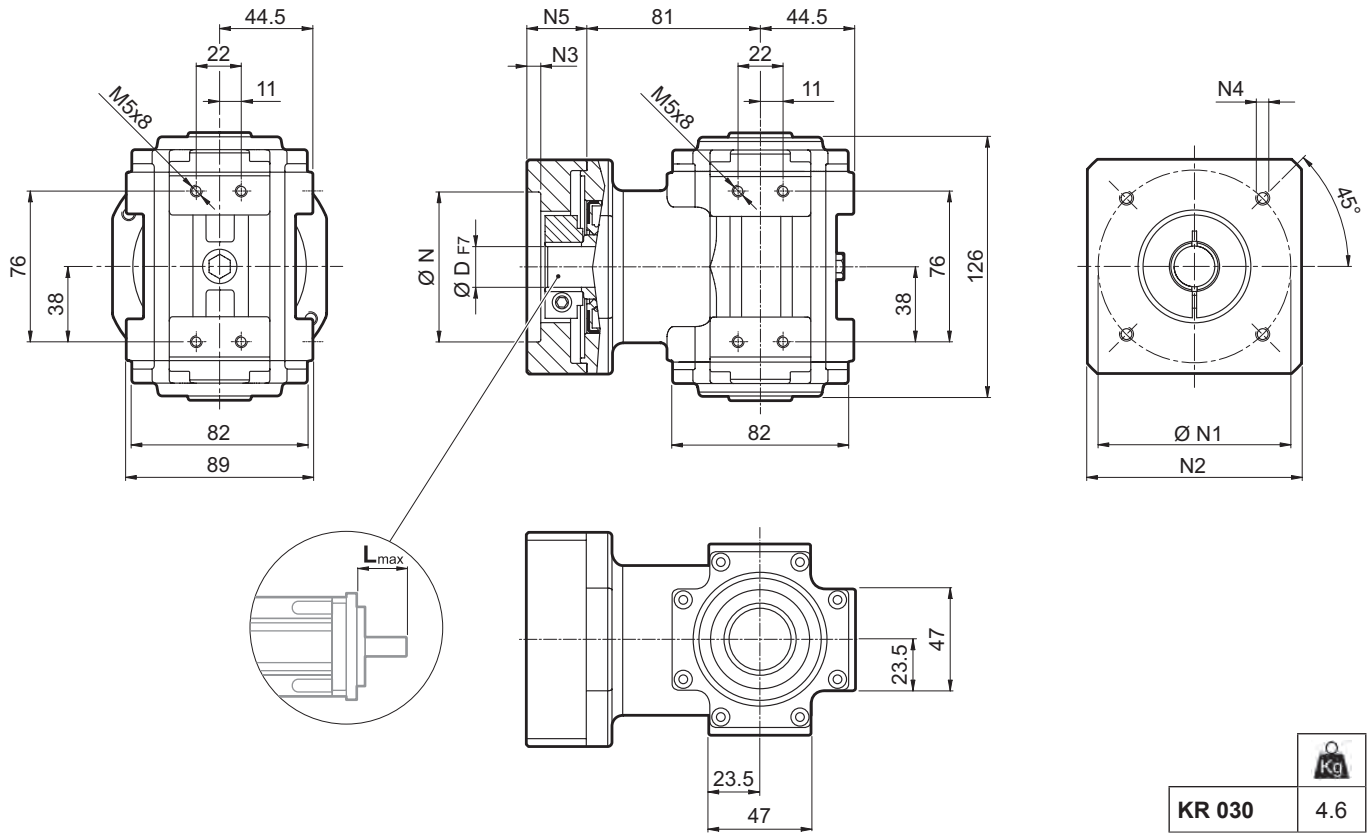

## KR 020... LDF




KR

# KR 030

## 50D ... 130A1



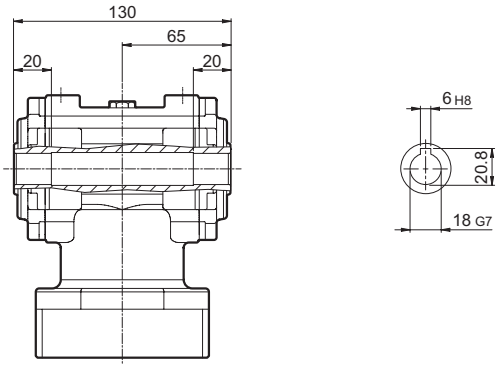

| | Kg |
|---|---|
| **KR 030** | 4.6 |

| | D | | | | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **50D** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 50 | 95 | 100 | 5 | M6x14 | 28 | 40 |
| **55A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 55.5 | 125.7 | 105 | 5 | M6x16 | 28 | 40 |
| **60A2** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 60 | 75 | 100 | 5 | M5x14 | 28 | 40 |
| **60AH2** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 60 | 75 | 100 | 5 | 6.5 | 33 | 40 |
| **60B1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 60 | 85 | 100 | 6.5 | M5x14 | 28 | 40 |
| **70A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 70 | 85 | 100 | 5 | M6x14 | 28 | 40 |
| **70AH1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 70 | 85 | 100 | 5 | 6 | 33 | 40 |
| **70B1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 70 | 90 | 100 | 5 | M5x12 | 28 | 40 |
| **80A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 80 | 100 | 100 | 5 | M6x16 | 28 | 40 |
| **80AH1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 80 | 100 | 100 | 5 | 6.5 | 28 | 40 |
| **95A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 95 | 115 | 100 | 5 | M8x18 | 28 | 40 |
| **95A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 95 | 115 | 100 | 5 | M8x18 | 38 | 50 |
| **95B** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 95 | 130 | 115 | 5 | M8x18 | 28 | 40 |
| **110A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | – | – | 110 | 130 | 115 | 5 | M8x18 | 28 | 40 |
| **110A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 110 | 130 | 115 | 6.5 | M8x20 | 38 | 50 |
| **110B** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 110 | 145 | 120 | 6.5 | M8x20 | 38 | 50 |
| **110B1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 110 | 145 | 120 | 6.5 | M8x20 | 48 | 60 |
| **130A** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 130 | 165 | 140 | 6.5 | M10x20 | 38 | 50 |
| **130A1** | 11 | 12 | 12.7 | 14 | 15 | 15.875 | 16 | 19 | 22 | 24 | 130 | 165 | 140 | 6.5 | M10x25 | 48 | 60 |

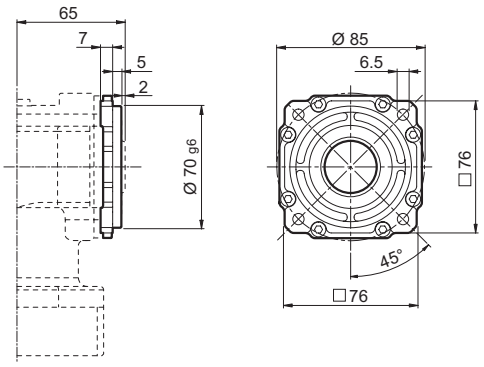
Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

# KR 030

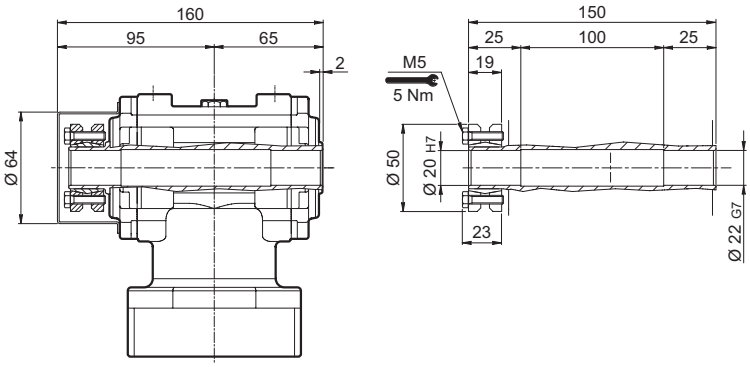
## KR 030... H



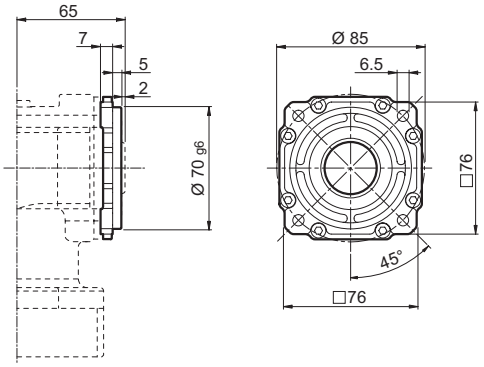

## KR 030... HF



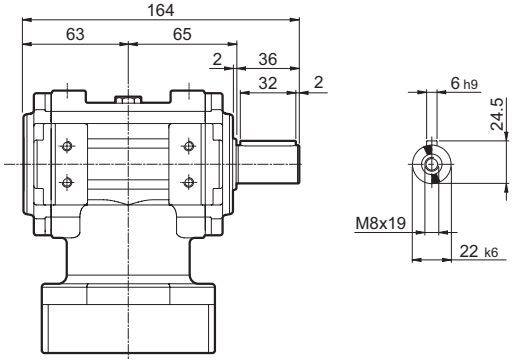

## KR 030... S



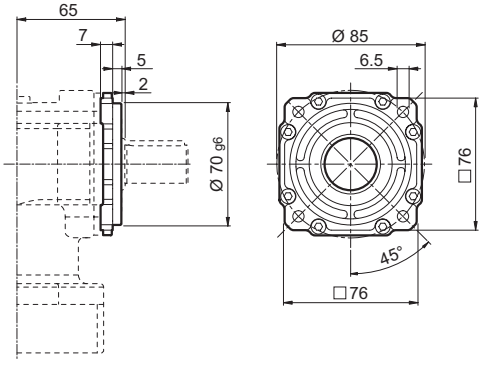

## KR 030... SF



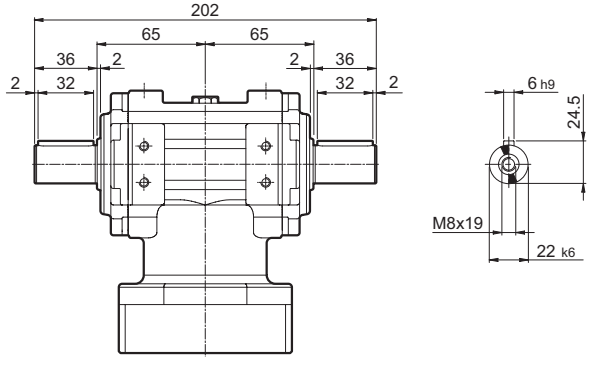

## KR 030... LP



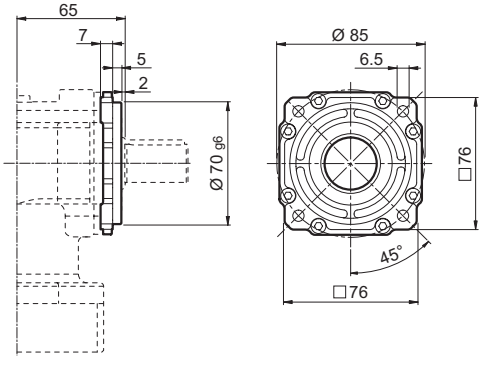

## KR 030... LPF




## KR 030... LD



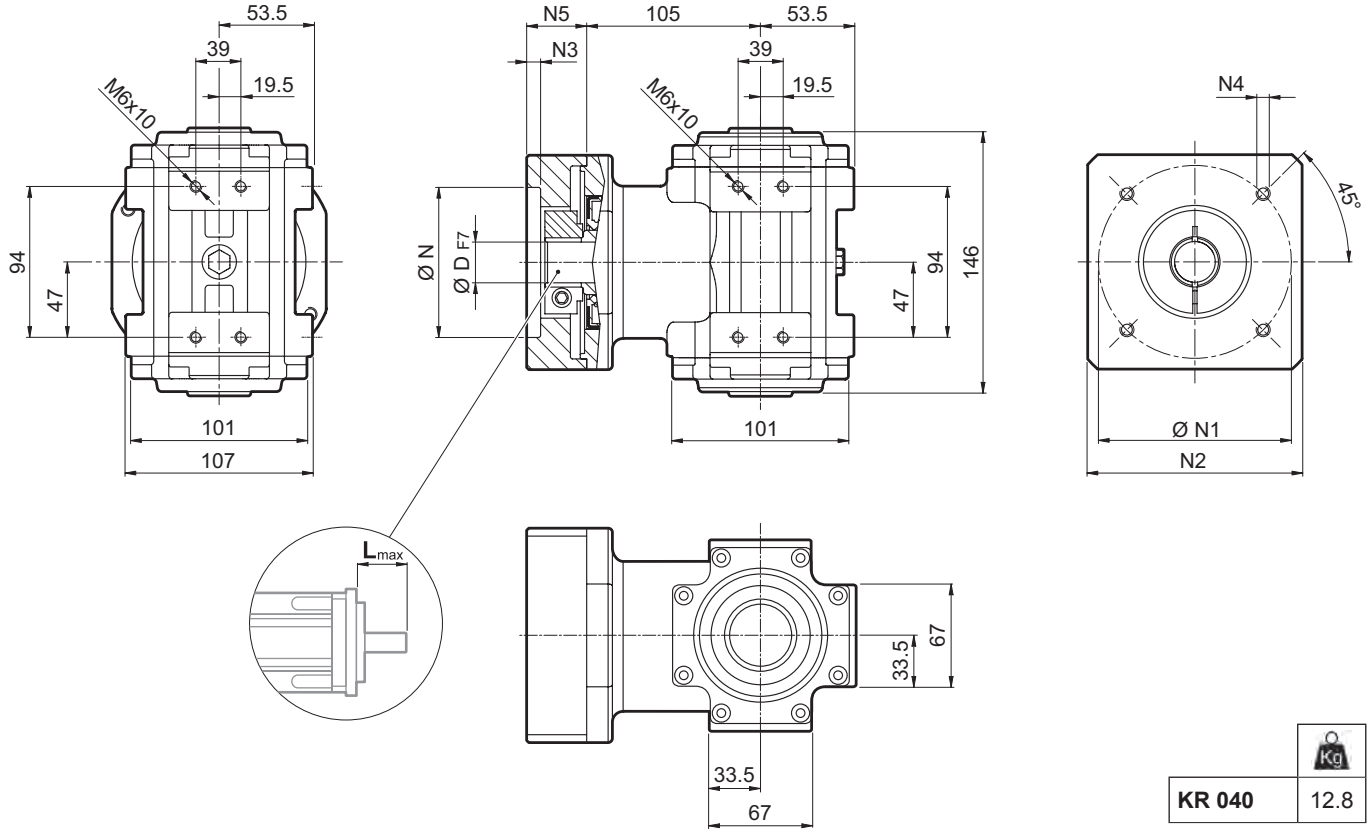

## KR 030... LDF




KR

# KR 040

## 55A1 ... 180A1

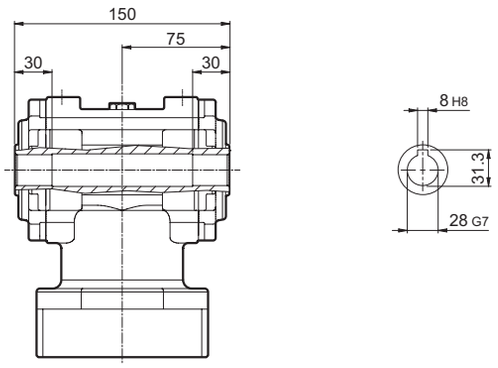



| | Kg |
|---|---|
| **KR 040** | 12.8 |

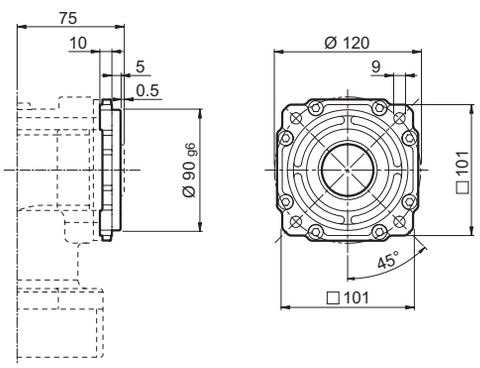
| | D | | | | | | | N | N1 | N2 | N3 | N4 | N5 | $L_{max}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **55A1** | 14 | 15.875 | 16 | 19 | – | – | – | 55.5 | 125.7 | 130 | 4 | M6x15 | 39.5 | 50 |
| **80A2** | 14 | 15.875 | 16 | 19 | – | – | – | 80 | 100 | 130 | 4 | M6x15 | 39.5 | 50 |
| **95A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | 95 | 115 | 130 | 4 | M8x20 | 39.5 | 50 |
| **110A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | 110 | 130 | 130 | 4 | M8x20 | 39.5 | 50 |
| **110B1** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | 110 | 145 | 130 | 6.5 | M8x20 | 49.5 | 60 |
| **114A** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 114.3 | 200 | 170 | 5.5 | M12x25 | 69.5 | 80 |
| **130A** | 14 | 15.875 | 16 | 19 | 22 | 24 | – | 130 | 165 | 140 | 4 | M10x20 | 39.5 | 50 |
| **130A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 130 | 165 | 140 | 4 | M10x20 | 49.5 | 60 |
| **180A** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 180 | 215 | 190 | 5.5 | M14x25 | 49.5 | 60 |
| **180A1** | 14 | 15.875 | 16 | 19 | 22 | 24 | 28 | 180 | 215 | 190 | 5.5 | M14x25 | 69.5 | 80 |

Für weitere Motoradapter und Antriebswellenbohrungen bitte nachfragen.

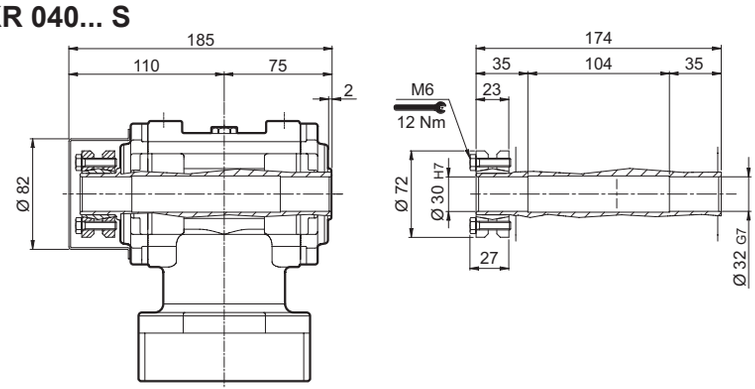
## KR 040... H



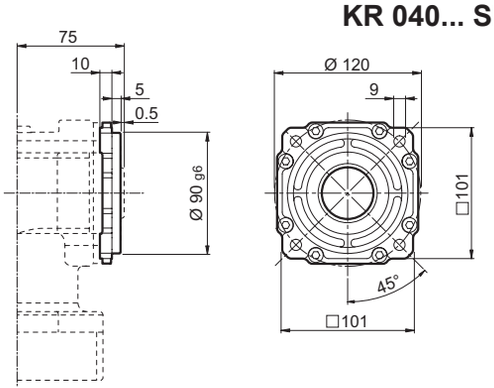

## KR 040... HF



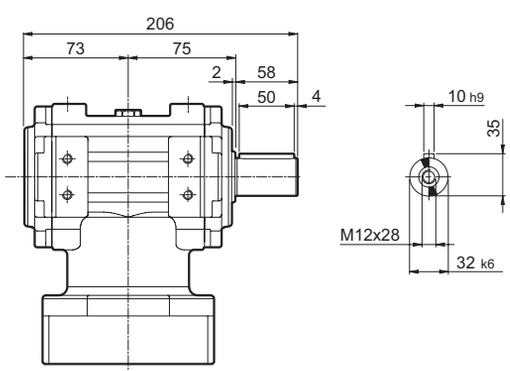

## KR 040... S



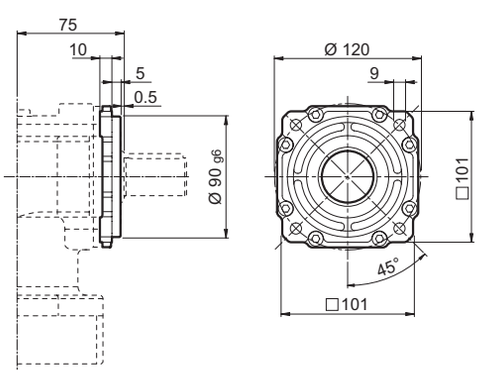

## KR 040... SF



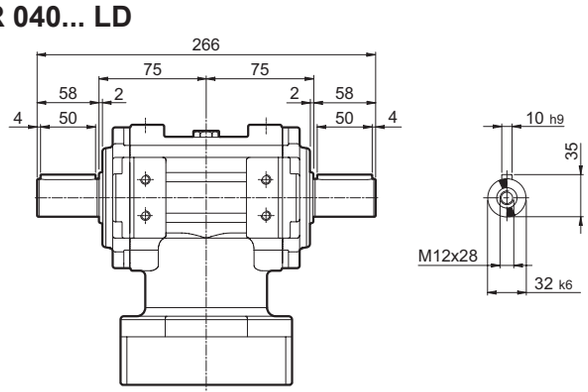

## KR 040... LP



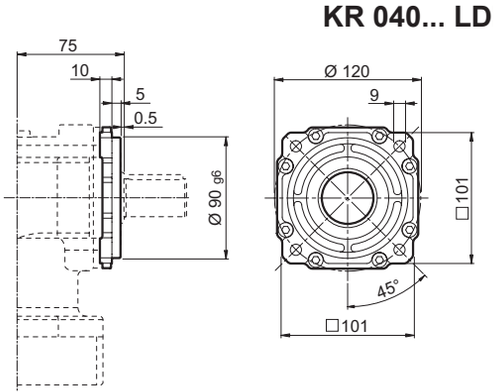

## KR 040... LPF



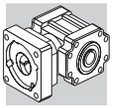

## KR 040... LD




## KR 040... LDF

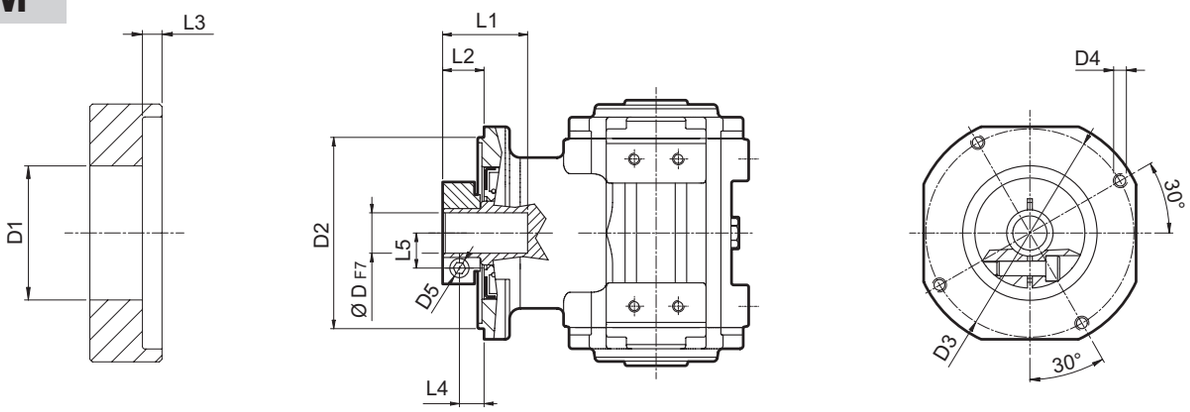



KR



### *10.7.1 GETRIEBE OHNE MOTORADAPTER*

## FM

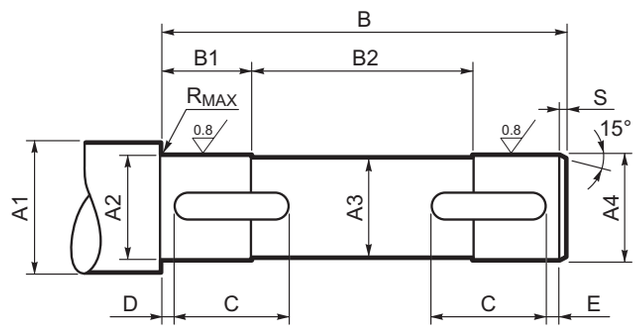


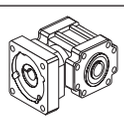

| | D | | | | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | L4 | L5 | Kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **KR 010** | 6 | 6.35 | 7 | | 32.5 | 50 | 42.5 | M4x8 | M4 | 28 | 13.5 | 3 | 8.5 | 8 | 1.0 |
| | 8 | 9 | 9.52 | 10 | 32.5 | 50 | 42.5 | M4x8 | M4 | 28 | 13.5 | 3 | 8.5 | 9 | |
| | 11 | 12 | 12.7 | | 35.5 | 50 | 42.5 | M4x8 | M4 | 23 | 13.5 | 3 | 8.5 | 11 | |
| | 14 | | | | 35.5 | 50 | 42.5 | M4x8 | M4 | 25 | 15.5 | 3 | 8.9 | 11.5 | |
| **KR 020** | 8 | 9 | 9.52 | | 38 | 68 | 76.5 | M6x10 | M6 | 36.3 | 26.3 | 9.5 | 18.8 | 10.5 | 2.0 |
| | 11 | 12 | 12.7 | | 43 | 68 | 76.5 | M6x10 | M6 | 36.3 | 26.3 | 9.5 | 18.8 | 12.5 | |
| | 14 | 15.875 | 16 | 17 | 48 | 68 | 76.5 | M6x10 | M6 | 36.3 | 26.3 | 9.5 | 18.8 | 14.5 | |
| | 19 | 19.05 | | | 51 | 68 | 76.5 | M6x10 | M6 | 36.3 | 26.3 | 9.5 | 18.8 | 16.5 | |
| **KR 030** | 11 | 12 | 12.7 | | 43 | 90 | 98 | M6x15 | M6 | 35 | 19.5 | 7.6 | 12.1 | 12.5 | 3.5 |
| | 14 | 15 | 15.875 | 16 | 48 | 90 | 98 | M6x15 | M6 | 35 | 19.5 | 7.6 | 12.1 | 14.5 | |
| | 19 | | | | 51 | 90 | 98 | M6x15 | M6 | 35 | 19.5 | 7.6 | 12.1 | 16.5 | |
| | 22 | 24 | | | 56.5 | 90 | 98 | M6x15 | M6 | 37 | 21.5 | 7.6 | 12.1 | 19 | |
| **KR 040** | 14 | 15.875 | 16 | | 48 | 113 | 125.5 | M8x15 | M6 | 46 | 27.5 | 6 | 20 | 14.5 | 10.0 |
| | 19 | | | | 51 | 113 | 125.5 | M8x15 | M6 | 46 | 27.5 | 6 | 20 | 16.5 | |
| | 22 | 24 | | | 56.5 | 113 | 125.5 | M8x15 | M6 | 47.5 | 29 | 6 | 20 | 19 | |
| | 28 | | | | 67 | 113 | 125.5 | M8x15 | M8 | 47.5 | 29 | 6 | 20 | 22.5 | |

### *10.7.2 MASCHINENWELLE*

Für die Welle der angetriebenen Maschine ist eine hochwertige Stahllegierung zu bevorzugen. Die Tabelle unten zeigt die empfohlenen Abmessungen, die vom Kunden bei der Konstruktion der Gegenwelle zu berücksichtigen sind. Weiterhin wird eine axiale Aufnahmevorrichtung für die Welle empfohlen (nicht gezeigt).
Anzahl und Größe der entsprechenden Gewindebohrungen am Wellenende sind von den Anwendungsanforderungen abhängig.

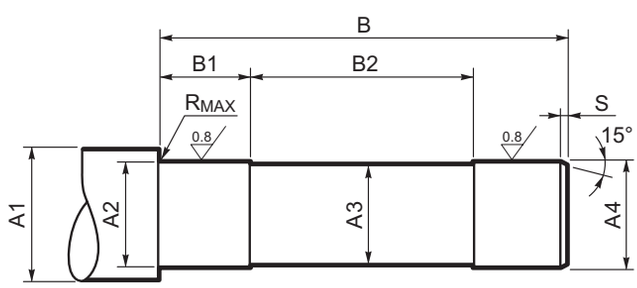
**H**

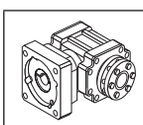



|  | A1 | A2 | A3 | A4 | B | B1 | B2 | C | D | E | $R_{MAX}$ |  UNI 6604 | S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **KR 030** | ≥ 26 | 18 h7 | 17 | 18 h7 | 129 | 18 | 90 | 32 | 2 | 2 | 0.5 | 6x6x25 A | 1 |
| **KR 040** | ≥ 36 | 28 h7 | 27 | 28 h7 | 149 | 28 | 90 | 50 | 2 | 2 | 0.5 | 8x7x35 A | |

Hinweis: Bei Verbindung der Welle mit Passfeder wie oben beschrieben erhöht sich das Flankenspiel in der Anwendung.($\varphi_S \leq 8'$).

**S**




|  | A1 | A2 | A3 | A4 | B | B1 | B2 | $R_{MAX}$ | S |
|---|---|---|---|---|---|---|---|---|---|
| **KR 010** | ≥ 15 | 11 h7 | 9.5 | 10 h6 | 99 | 13 | 70 | 0.5 | 1 |
| **KR 020** | ≥ 20 | 16 h7 | 14.5 | 15 h6 | 122 | 18 | 83 | 0.2 | |
| **KR 030** | ≥ 30 | 22 h7 | 19.5 | 20 h6 | 149 | 23 | 100 | 0.5 | |
| **KR 040** | ≥ 40 | 32 h7 | 29.5 | 30 h6 | 173 | 33 | 104 | 0.5 | |

## REVISIONSSINDEX

| | TI_CAT_TIR_STD_DEU_R04_0 |
|---|---|
| | **Beschreibung** |
| 70...79 | Version K für Getriebe TR 053 - 060 hinzugefügt. |
| 110...119 | Version K für Getriebe MP 053 - 060 hinzugefügt. |

2019 09 30

Diese Publikation ersetzt alle vorhergehenden Ausgaben und Überarbeitungen. Wir behalten uns das Recht vor, Veränderungen ohne Ankündigung umzusetzen.
Dieser Katalog darf ohne vorherige Genehmigung weder vollständig noch auszugsweise reproduziert werden.

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