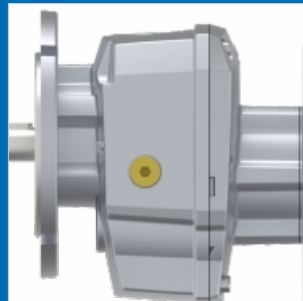
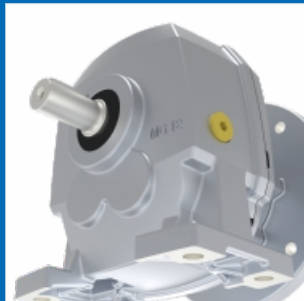




rotomotive
looks good. performs better.

MAGNUS IN-LINE HELICAL GEARBOX





Gearbox Manufacturing Facility, India

Rotomotive Powerdrives India Ltd is an Italian joint venture company operating in India since 2006. It has access to European technology and know-how from Motive srl, one of the joint venture partners and sources parts and components from Indian suppliers. We have a modern manufacturing facility in Gujarat, India. Rotomotive has the capacity to design, prototype and manufacture custom motors for various applications.

Our modern gear manufacturing facility is equipped with advanced CNC gear production and inspection systems, designed to deliver high precision, repeatability, and consistent quality with optimized production lead times. The plant features state-of-the-art gear hobbing machines for precise gear cutting, supported by cylindrical grinding and profile grinding machines that ensure superior surface finish, accurate tooth geometry, and tight dimensional tolerances.

Gear housings are machined on high-precision HMCs and VMCs, delivering excellent dimensional accuracy and robust assembly quality. Comprehensive quality assurance is ensured through coordinate measuring machines (CMMs) and lead-profile testing machines, enabling precise inspection of gear profiles, lead characteristics, and critical dimensional parameters.



Gearbox Hobbing



Gearbox Assembly



Testing Line



Gear Inspection



CMM for Mechanical Inspection



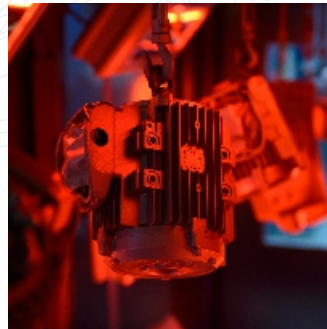
Shop Floor



Our Manufacturing Facility in Italy

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TECHNICAL CHARACTERISTICS



MG008 with detachable foot and flange are in aluminium construction. In MG012 to MG021, the main body comprises of a single piece Aluminium casting with optimum balance between weight, rigidity

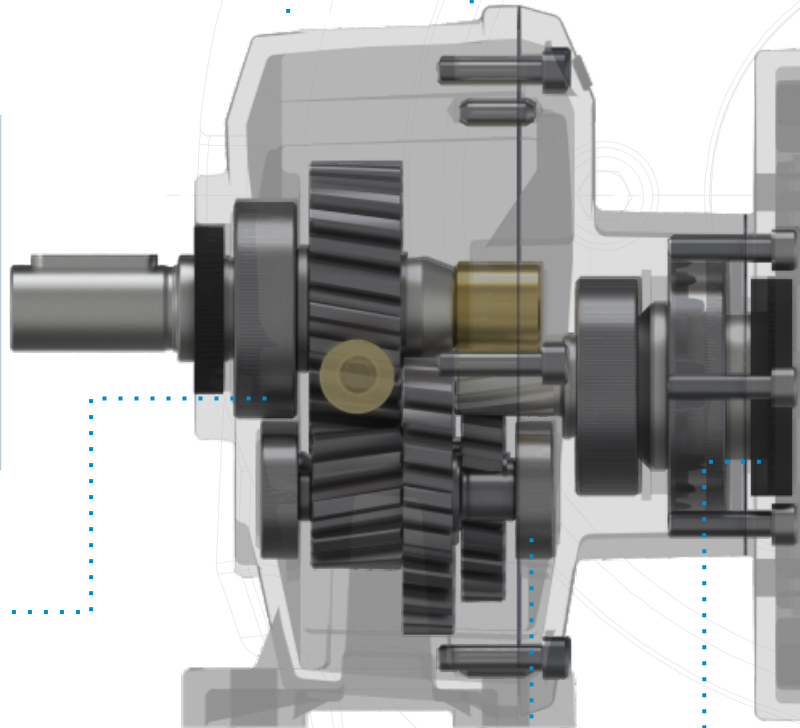
Compactly designed which is ideal for low-space mounting application



Other than foot mounting Modular design with detachable output flange and easy and quick conversion between universal and flange mounting



MG085 to MG300 taper roller bearing on output shaft provide better load carrying capacity and most suitable for mixture and agitator application



No overhang shafts or gears which results higher service factor and better load carrying capacity



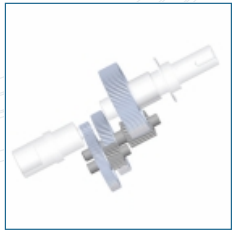
Choice of hollow input flanges permits direct mounting of any standard IEC motors

The input and output stages are equipped with double-lip oil seals to provide better sealing efficiency and reliable dust protection

HIGHER SERVICE FACTOR IN COMPACT SIZE

Which features determine the service factor offered by a helical gearbox ?

The service factor of a gearbox is its capacity to withstand operating load and overloads, a certain number of starts, the duration of operating time, mechanical shocks and vibrations. Thus, higher the service factor, greater is the possibility of trouble free operation and increased life. Without aiming to be completely exhaustive, we list here the main features that influence the service factor.



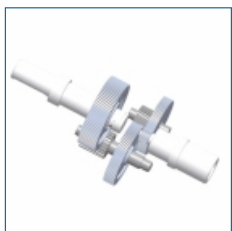
Use of high strength steels like 20MnCr5 and case hardening to 58 +2 HRC reduce the wear rate in wheels. All wheels are profile ground to Din 3962 class 6 accuracy for low noise and high efficiency.



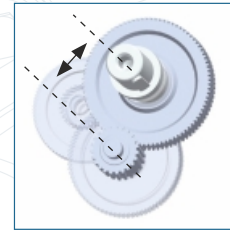
Tapered roller bearing on the output stage to withstand higher axial loads. The absence of overhang gears in the magnus gearbox further enhances its torque transmission capability



Shafts are made from 42CrMo4 steel and tempered to reach hardness of 23-35 HRC, thus increasing their capacity to withstand shearing stresses and torsion effect.



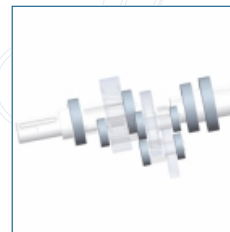
Optimal ratios (between 2 and 6) in the several stages, together with appropriate centre distances, result in higher number of teeth and size (module) of each wheel and better torque transmission fractioning through various stages. This improves the overall durability.



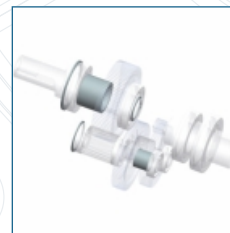
Amongst all parts, the last stage gears are subjected to highest mechanical stresses. Higher centre distance which in turn results in higher module considerably increases the service factor. MAGNUS excels in the area (see measures at last page)



Dual bearing support on the input shaft ensures precise alignment of the first stage gears and reduces vibrations and consequent gear wear



Oversized bearings (see MAGNUS bearing list), allow the gearbox to withstand higher operating loads



Mechanical parts locked in their position by snap rings and spacers. This ensures better absorption of axial thrust and prolongs the life of bearings

CALCULATION OF PERFORMANCE PARAMETERS

Rated output torque M_{n2} (Nm)

Torque output transmissible under uniform loading and referred to the input speed n_1 and the corresponding output speed n_2 . The output torque can be calculated with the following formula:

$$M_{n2} = \frac{P_{n1} \text{ [kW]} \cdot 9550 \eta}{n_2}$$

Torque demand M_{r2} (Nm)

Torque calculated based on application requirements. It must be $< M_{n2}$ of the chosen MAGNUS unit.

Input power P_{n1} (kW)

This is the power value of the motor applied to the input shaft and corresponding to a certain input speed n_1 , a service factor $f_s = 1$ and a duty service S_1 . It is even possible to calculate the motor size necessary by using the formula:

$$P_{n1} \text{ [kW]} = \frac{M_{r2} \cdot n_2}{9550 \cdot \eta}$$

Since the value calculated in this way could not really correspond to an input power actually available in the IEC standardised motors, it will be necessary to choose, among the input powers available, the one which is immediately higher, checking this in the Rotomotive catalogue of the motors.

Efficiency η (%)

An inherent factor in the selection helical gear boxes is the efficiency η , defined as the ratio between the mechanical power coming out from the output shaft, and the power in the input shaft:

$$\eta = \frac{P_{n2}}{P_{n1}}$$

The efficiency in helical gearboxes is mainly determined by the gearing and

bearing friction.

The efficiency of MAGNUS varies with the nr of stages: it's 94% when the reduction stages are 3, 96% when the stages are 2. The starting efficiency is always less than the efficiency at rated speed.

Gear ratio i

It is the relationship of the input speed n_1 and the output speed n_2

$$i = \frac{n_1}{n_2}$$

In the combined, the total ratio is the result of the product of the ratio of the two single gearboxes.

Input speed n_1 (rpm)

It is the speed the MAGNUS unit is driven at.

Output speed n_2 (rpm)

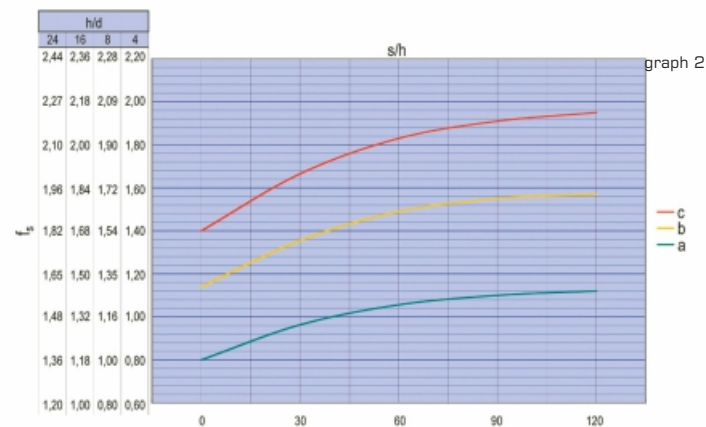
It is the rotation speed of the output shaft.

Service factor f_s

It is a numeric value describing the MAGNUS unit service duty. With unavoidable approximation, it takes into consideration:

- The daily working hours **h/d**
- The load classification (see table 2), and then the moment of inertia of the driven masses.
- The number of starts per hour **s/h**
- The presence of brake motors, for which it is necessary to multiply for 1.12 the service factor value deducted by the graph 2.
- The significance of the application in terms of safety, for example lifting of parts.

In the graph 2, the service factor f_{sr} required by a certain application can be attained, after having selected the proper "daily working hours" (h/d) column, by intersecting the number of starts per hour (s/h) and one of the a, b or c curves. The curves a, b and c are linked with the load classification described in the table 2.



tab. 2

| load Classification | Application |
|---------------------|--|
| c | uneven operation, heavy loads, larger masses to be accelerated conveyors with violent jerks; compressors ad alternate pumps with 1 or more cylinders; machinery for bricks, tiles and clay; kneaders; milling machines; lifting winches with buckets; rotting furnaces; heavy fans or mining purposes; mixers for heavy materials; machine-tools; planing kinds; alternating saws; shears; tumbling barrels; vibrators; shredders; turntables |
| b | starting with moderate loads, uneven operating conditions, medium size masses to be accelerated belt conveyors with varied load with transfer of bridge trucks for light duty; levelling machines; shakers and mixed for liquid with variable density and viscosity; machines for the food industry (kneading troughs, mincing machines, slicing machines, etc); sifting machines for sand gravel; textile industry machines; cranes, hoists, goodstifts; fertilizer scrapers; concrete mixers; folding machines; winches; crane mechanisms |
| a | easy starting, smooth operation, small masses be accelerated belt conveyors for light material; centrifugal pumps; rotary gear pumps; screw feeders for light materials; lifts; bottling machines; auxiliary controls of tool machines; fans; power generators; fillers; small mixers |

If, after the selection of the right M_{r2} and n_2 in the following performance tables, you don't find a MAGNUS unit whose service factor f_s is $>$ of the requested one f_{sr} , you can choose a MAGNUS unit in which $M_{n2} > M_{r2}$.

In fact, in order to satisfy f_{sr} , you can choose another MAGNUS unit whose output torque is $> M_{c2}$ output torque, where:

$$M_{c2} = M_{r2} \cdot f_{sr}$$

Note: This rule is valid only if the new MAGNUS unit that has been selected in this way has a service factor $f_s > 1$ in the performance tables.

From another point of view, the value of f_s in the performance tables refers to a case

in which the effective torque requested by the application M_{r2} matches perfectly with the one appearing on the catalogue M_{n2} . Whenever the torque indicated in the performance table is higher than the requested one, the offered service factor of the performance table can be increased according to the formula:

$$f_{s \text{ real}} = \frac{f_s \text{ on the table} \cdot M_{n2} \text{ on the table}}{M_{r2}}$$

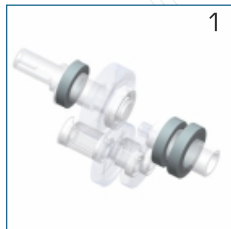
The value of f_s calculated in this way must be $\geq f_{sr}$.

OIL DETAILS TABLE

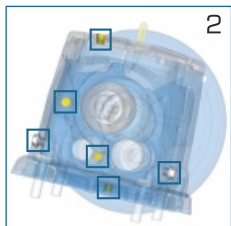
| SIZE | Oil Qty (Liter) | | | | | | ISO | Temp. | Oil Type |
|-------|-----------------|-----|-----|-----|-----|-----|--------|-------|---|
| | B3 | B6 | B7 | B8 | V5 | V6 | | | |
| MG008 | 0.5 | | | | | | VG 220 | +80°C | Mobil SHC 630 Shell Tivela S220 Klubersynth GH6-220 |
| MG012 | 0.6 | | | | | | | | |
| MG021 | 0.8 | | | | | | | | |
| MG030 | 1.5 | | | | | | | | |
| MG060 | 1.5 | | | | | | | | |
| MG085 | 2.4 | 2.2 | 2.2 | 1.8 | 2.7 | 3.6 | | | |
| MG120 | 1.8 | 1.8 | 1.8 | 2.8 | 5.0 | 4.5 | | | |
| MG150 | 2.9 | 2.8 | 2.8 | 3.8 | 6.0 | 5.5 | | | |
| MG300 | 5.5 | 6.0 | 6.0 | 6.5 | 9.0 | 8.0 | | | |

MG008 to MG060 supplied with long life synthetic lubrication and they do not require any maintenance.

MG085 to MG300 supplied without oil and with interchangeable oil plug. After adapting the oil quantity, each magnus can be mounted in any position, thus giving big advantage in the inventory reduction and interchangeability due to following characteristics.

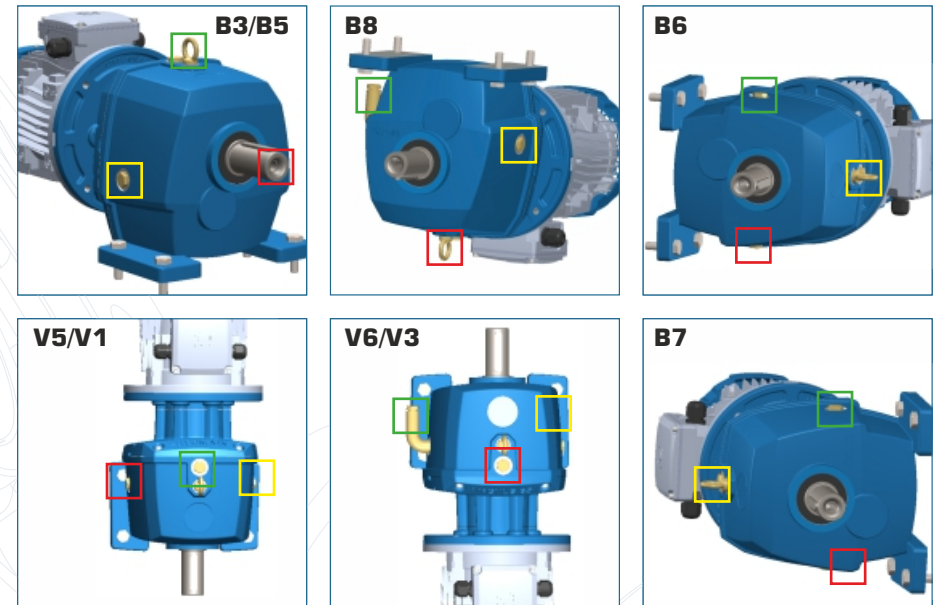


1
ZZ shielded pre-lubricated bearings on input and output shaft



2
Interchangeable plugs are provided for models MG085 to MG300. breather plug and level plug must be positioned according to the mounting position, and the oil quantity must be adjusted as per the given oil details table before commissioning gearbox.

MOUNTING POSITIONS



B5, V1 & V3 positions are for flange mounted



breather plug level plug filler plug

MG008 to MG060 is supplied ONLY with a solid plug and with long life synthetic lubrication can be used for evacuating or topping up the grease.

CODING SCHEME FOR MAGNUS GEARBOX

| Compulsory parameters | | | | | | | Optional | |
|-----------------------|--------|-------|--|---|---|--|----------|-------|
| Magnus Size | Stages | Ratio | Foot or flange | IFL size | O-P shaft size | Mounting position | OPT-1 | OPT-2 |
| MG021 | 2 | 010 | FT | 715 | A | B3 | W | V |
| MG008 | 2 | | FT = Foot mounting UV = Universal mounting 14 = OFL size Ø140 16 = OFL size Ø160 20 = OFL size Ø200 25 = OFL size Ø250 30 = OFL size Ø300 35 = OFL size Ø350 45 = OFL size Ø450 | 565 - IEC input flange - 63-B5 635 - IEC input flange - 63-B5 715 = IEC input flange - 71-B5 805 = IEC input flange - 80-B5 905 = IEC input flange - 90-B5 125 = IEC input flange - 100/112 B5 135 = IEC input flange - 132 B5 165 = IEC input flange - 160-B5 185 = IEC input flange - 180-B5 | A = First shaft diameter B = Second shaft diameter (eg .MG021 has 25 and 30 so A=25 & B= 30) | OS - With oil (MG008 to MG060) ON - Without oil B3 } B8 } B6 } (MG085 to V5 } MG300) V6 } B7 } | | |
| MG012 | 3 | | | | | | | |
| MG021 | | | | | | | | |
| MG030 | | | | | | | | |
| MG060 | | | | | | | | |
| MG085 | | | | | | | | |
| MG120 | | | | | | | | |
| MG150 | | | | | | | | |
| MG300 | | | | | | | | |

QUICK SELECTION GUIDE

Service factor $F_s = 1.5$ @ input speed $n_1 = 1440$ rpm

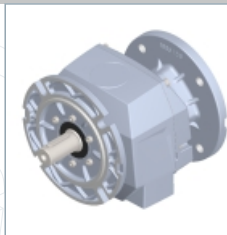
| Input | 63 | 63 | 71 | 71 | 80 | 80 | 90 | 90 | 100 | 112 | 132 | 132 | 160 | 160 | 180 | 180 | | | |
|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|--|
| Input shaft | Ø11mm | | Ø14mm | | Ø19mm | | Ø24mm | | Ø28mm | | Ø38mm | | Ø42mm | | Ø48mm | | | | |
| kW | 0.12 | 0.18 | 0.25 | 0.37 | 0.55 | 0.75 | 1.10 | 1.50 | 2.20 | 3.70 | 5.50 | 7.50 | 11.00 | 15.00 | 18.50 | 22.00 | | | |
| Hp | 0.18 | 0.25 | 0.35 | 0.50 | 0.75 | 1.00 | 1.50 | 2.00 | 3.00 | 5.00 | 7.50 | 10.00 | 15.00 | 20.00 | 25.00 | 30.00 | | | |
| Ratio (i) | 200 | MG021 | | MG030 | | MG060 | | MG150 | | MG300 | | | | | | | | | |
| | 190 | | | | | | | | | | | | | | | | | | |
| | 180 | | | | | | | | | | | | | | | | | | |
| | 170 | | | | | | | | | | | | | | | | | | |
| | 160 | MG021 | | MG030 | | MG060 | | MG150 | | MG300 | | | | | | | | | |
| | 150 | | | | | | | | | | | | | | | | | | |
| | 140 | MG021 | | MG060 | | MG150 | | MG150 | | | | | | | | | | | |
| | 130 | | | | | | | | | | | | | | | | | | |
| | 120 | MG012 | | MG060 | | MG150 | | MG120 | | MG300 | | | | | | | | | |
| | 110 | | | | | | | | | | | | | | | | | | |
| | 100 | MG012 | | MG030 | | MG060 | | MG085 | | MG120 | | MG150 | | MG300 | | | | | |
| | 90 | | | | | | | | | | | | | | | | | | |
| | 80 | MG012 | | MG021 | | MG060 | | MG085 | | MG120 | | MG300 | | | | | | | |
| | 70 | | | | | | | | | | | | | | | | | | |
| | 60 | MG008 | | MG021 | | MG030 | | MG060 | | MG085 | | MG150 | | MG300 | | | | | |
| | 50 | | | | | | | | | | | | | | | | | | |
| 40 | MG008 | | MG012 | | MG021 | | MG060 | | MG120 | | MG150 | | MG300 | | | | | | |
| 30 | | | | | | | | | | | | | | | | | | | |
| 20 | MG008 | | MG012 | | MG021 | | MG030 | | MG060 | | MG120 | | MG150 | | MG300 | | MG300 | | |
| 10 | | | | | | | | | | | | | | | | | | | |

PERFORMANCE TABLE MG008

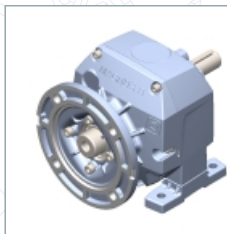
| MG008 | | | | | | | | | | | | | | Peak Torque = 50 Nm | | | |
|-------------------|-------|------------|--------------|-------------|------|------|--------|--------------|-------------|------|--------|--------|--------------|---------------------|--------|--|--|
| Polarity | | | 2-pole | | | | 4-pole | | | | 6-pole | | | | | | |
| Frame Size | | | - | 63 | 63 | 71 | 71 | - | 63 | 63 | 71 | 71 | - | 71 | 71 | | |
| Power (kW) | | | - | 0.18 | 0.25 | 0.37 | 0.55 | - | 0.12 | 0.18 | 0.25 | 0.37 | - | 0.18 | 0.25 | | |
| Input Speed (rpm) | | | 2880 | | | | 1440 | | | | 960 | | | | | | |
| Stage | Ratio | Real Ratio | Output Speed | Torque (Nm) | | | | Output Speed | Torque (Nm) | | | | Output Speed | Torque (Nm) | | | |
| 2 | 5 | 5.1 | 565 | 3 | 4 | 6 | 9 | 282 | 4 | 6 | 8 | 12 | 188 | 9 | 12 | | |
| | 6 | 6.0 | 479 | 3 | 5 | 7 | 11 | 240 | 5 | 7 | 10 | 14 | 160 | 10 | 14 | | |
| | 11 | 11.8 | 244 | 7 | 9 | 14 | 21 | 122 | 9 | 14 | 19 | 28 | 81 | 20 | 28 | | |
| | 12 | 12.4 | 232 | 7 | 10 | 15 | 22 | 116 | 9 | 14 | 20 | 29 | 77 | 21 | 30 | | |
| | 15 | 14.9 | 194 | 9 | 12 | 18 | 26 | 97 | 11 | 17 | 24 | 35 | 65 | 26 | 36 | | |
| | 20 | 19.7 | 146 | 11 | 16 | 23 | 35 | 73 | 15 | 23 | 31 | 47 | 49 | 34 | 47 | | |
| 3 | 25 | 26.6 | 108 | 16 | 22 | 32 | 48 | 54 | 21 | 31 | 43 | 64 | 36 | 47 | 65 | | |
| | 30 | 29.5 | 98 | 17 | 24 | 35 | 53 | 49 | 23 | 34 | 48 | 71 | 33 | 52 | 72 | | |
| | 35 | 34.4 | 84 | 20 | 28 | 41 | 61 | 42 | 27 | 40 | 56 | MG 012 | 28 | 60 | MG 012 | | |
| | 40 | 40.2 | 72 | 24 | 33 | 48 | 72 | 36 | 31 | 47 | 65 | MG 012 | 24 | 71 | MG 012 | | |
| | 45 | 45.7 | 63 | 27 | 37 | 55 | MG 012 | 32 | 36 | 53 | 74 | MG 012 | 21 | MG 012 | MG 012 | | |
| | 50 | 50.4 | 57 | 30 | 41 | 61 | MG 012 | 29 | 39 | 59 | MG 012 | MG 021 | 19 | MG 012 | MG 021 | | |
| | 55 | 56.1 | 51 | 33 | 46 | 68 | MG 012 | 26 | 44 | 66 | MG 012 | MG 021 | 17 | MG 012 | MG 021 | | |
| | 60 | 60.1 | 48 | 35 | 49 | 72 | MG 012 | 24 | 47 | 70 | MG 012 | MG 021 | 16 | MG 012 | MG 021 | | |

Output Shaft :- Ø16 & Ø20

Output Flange :- Ø140 (63B5)



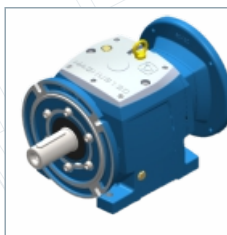
MG008



MG008



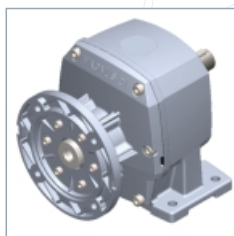
MG120



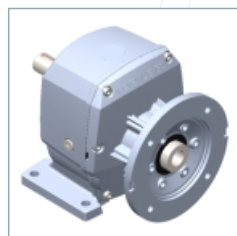
MG120



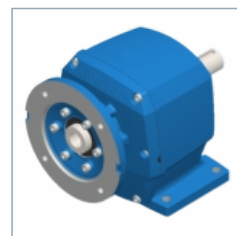
MG012



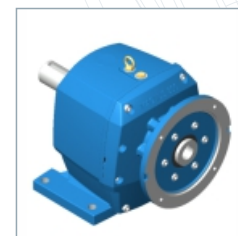
MG021



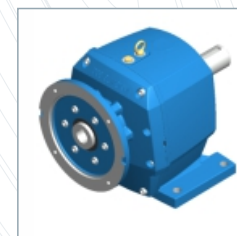
MG030



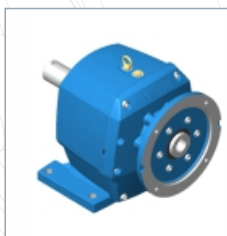
MG060



MG085



MG150



MG300

PERFORMANCE TABLE MG012

| MG012 | | | | | | | | | | | | | | | | | Peak Torque = 120 Nm | | | | | | | | | | |
|-------------------|-------|------------|--------------|-------------|--------|--------|--------|--------|--------|--------|--------------|-------------|--------|--------|--------|--------|----------------------|--------|--------------|-------------|------|--------|--------|--------|--------|--------|--------|
| Polarity | | | 2-pole | | | | | | | 4-pole | | | | | | | 6-pole | | | | | | | | | | |
| Frame Size | | | 63 | 63 | 71 | 71 | 80 | 80 | 90 | 90 | 63 | 63 | 71 | 71 | 80 | 80 | 90 | 90 | 71 | 71 | 80 | 80 | 90 | 90 | | | |
| Power (kW) | | | 0.18 | 0.25 | 0.37 | 0.55 | 0.75 | 1.1 | 1.5 | 2.2 | 0.12 | 0.18 | 0.25 | 0.37 | 0.55 | 0.75 | 1.1 | 1.5 | 0.18 | 0.25 | 0.37 | 0.55 | 0.75 | 1.1 | | | |
| Input Speed (rpm) | | | 2880 | | | | | | | 1440 | | | | | | | 960 | | | | | | | | | | |
| Stage | Ratio | Real Ratio | Output Speed | Torque (Nm) | | | | | | | Output Speed | Torque (Nm) | | | | | | | Output Speed | Torque (Nm) | | | | | | | |
| 2 | 3 | 3.2 | 911 | MG 008 | MG 008 | MG 008 | MG 008 | 8 | 11 | 15 | 23 | 456 | MG 008 | MG 008 | MG 008 | MG 008 | 11 | 15 | 23 | 31 | 304 | MG 008 | MG 008 | 11 | 17 | 23 | 34 |
| | 3.6 | 3.9 | 744 | | | | | 9 | 14 | 19 | 28 | 372 | | | | | 14 | 19 | 28 | 38 | 248 | | | 14 | 21 | 28 | 42 |
| | 5 | 4.9 | 591 | | | | | 12 | 17 | 24 | 35 | 295 | | | | | 17 | 24 | 35 | 48 | 197 | | | 18 | 26 | 36 | 52 |
| | 6 | 6.1 | 469 | | | | | 15 | 22 | 30 | 44 | 235 | | | | | 22 | 30 | 44 | 60 | 156 | | | 22 | 33 | 45 | 66 |
| | 7.5 | 7.5 | 383 | | | | | 18 | 27 | 37 | 54 | 192 | | | | | 27 | 37 | 54 | 73 | 128 | | | 27 | 40 | 55 | 81 |
| | 10 | 10.0 | 288 | | | | | 24 | 36 | 49 | 71 | 144 | | | | | 36 | 49 | 71 | 97 | 96 | | | 36 | 54 | 73 | 107 |
| | 12 | 12.6 | 229 | | | | | 31 | 45 | 61 | 90 | 114 | | | | | 45 | 61 | 90 | MG 021 | 76 | | | 45 | 68 | 92 | MG 021 |
| | 15 | 15.0 | 193 | | | | | 36 | 53 | 73 | 107 | 96 | | | | | 53 | 73 | 107 | MG 021 | 64 | | | 54 | 80 | 109 | MG 021 |
| | 18 | 18.0 | 160 | | | | | 44 | 64 | 88 | MG 021 | 80 | | | | | 64 | 88 | MG 021 | 53 | 65 | | | 97 | MG 021 | MG 030 | |
| | 20 | 19.9 | 145 | | | | | 49 | 71 | 97 | MG 021 | 72 | | | | | 71 | 97 | MG 021 | 48 | 72 | | | 107 | MG 021 | MG 030 | |
| | 25 | 24.8 | 116 | | | | | 60 | 89 | MG 021 | MG 030 | 58 | | | | | 89 | MG 021 | MG 030 | 39 | 89 | | | MG 021 | MG 030 | MG 060 | |
| | 30 | 30.3 | 95 | | | | | 74 | 108 | MG 021 | MG 030 | 47 | | | | | 108 | MG 021 | MG 030 | 32 | 108 | | | MG 021 | MG 030 | MG 060 | |
| | 35 | 33.8 | 85 | | | | | 82 | MG 021 | MG 030 | MG 060 | 43 | | | | | 82 | MG 021 | MG 030 | 28 | 82 | | | MG 021 | MG 030 | MG 060 | |
| 3 | 40 | 41.5 | 69 | 101 | MG 021 | MG 060 | 35 | 101 | MG 021 | MG 060 | 23 | 101 | MG 021 | MG 030 | MG 060 | MG 060 | | | | | | | | | | | |
| | 45 | 44.5 | 65 | 80 | 108 | MG 021 | MG 030 | 32 | 108 | MG 021 | MG 030 | 22 | 78 | 108 | MG 021 | MG 030 | MG 060 | | | | | | | | | | |
| | 50 | 49.1 | 59 | 88 | MG 021 | MG 030 | MG 060 | 29 | 88 | MG 021 | MG 030 | 20 | 86 | MG 021 | MG 030 | MG 060 | | | | | | | | | | | |
| | 60 | 59.2 | 49 | 106 | MG 021 | MG 030 | MG 060 | 24 | 106 | MG 021 | MG 030 | 16 | 104 | MG 021 | MG 030 | MG 060 | | | | | | | | | | | |
| | 75 | 72.8 | 40 | 88 | MG 021 | MG 030 | MG 060 | 20 | 88 | MG 021 | MG 030 | 13 | 104 | MG 021 | MG 030 | MG 060 | | | | | | | | | | | |
| | 80 | 80.2 | 36 | 96 | MG 021 | MG 030 | MG 060 | 18 | 96 | MG 021 | MG 030 | 12 | 104 | MG 021 | MG 030 | MG 060 | | | | | | | | | | | |
| | 90 | 88.7 | 32 | 107 | MG 021 | MG 030 | MG 060 | 16 | 107 | MG 021 | MG 030 | 11 | 104 | MG 021 | MG 030 | MG 060 | | | | | | | | | | | |
| | 100 | 98.7 | 29 | 80 | MG 021 | MG 030 | MG 060 | 15 | 80 | MG 021 | MG 030 | 10 | 115 | MG 021 | MG 030 | MG 060 | | | | | | | | | | | |
| | 110 | 110.9 | 26 | 90 | MG 021 | MG 030 | MG 060 | 13 | 90 | MG 021 | MG 030 | 9 | 87 | MG 021 | MG 030 | MG 060 | | | | | | | | | | | |
| | 120 | 122.2 | 24 | 99 | MG 021 | MG 030 | MG 060 | 12 | 99 | MG 021 | MG 030 | 8 | 95 | MG 021 | MG 030 | MG 060 | | | | | | | | | | | |
| | 135 | 135.1 | 21 | 79 | 110 | MG 021 | MG 030 | MG 060 | 11 | 79 | 110 | MG 021 | MG 030 | 7 | 105 | MG 021 | MG 030 | MG 060 | | | | | | | | | |
| | 150 | 150.4 | 19 | 88 | MG 021 | MG 030 | MG 060 | 10 | 88 | MG 021 | MG 030 | 6 | 105 | MG 021 | MG 030 | MG 060 | | | | | | | | | | | |
| | 160 | 157.7 | 18 | 92 | MG 021 | MG 030 | MG 060 | 9 | 92 | MG 021 | MG 030 | 6 | 105 | MG 021 | MG 030 | MG 060 | | | | | | | | | | | |
| 180 | 175.6 | 16 | 103 | MG 021 | MG 030 | MG 060 | 8 | 103 | MG 021 | MG 030 | 5 | 105 | MG 021 | MG 030 | MG 060 | | | | | | | | | | | | |
| 200 | 197.0 | 15 | 115 | MG 021 | MG 030 | MG 060 | 7 | 115 | MG 021 | MG 030 | 5 | 105 | MG 021 | MG 030 | MG 060 | | | | | | | | | | | | |

Output Shaft :- Ø20 & Ø25

Output Flange :- Ø160(71B5)

PERFORMANCE TABLE MG21

| MG021 | | | | | | | | | | | | | | | | | | | | Peak Torque = 210 Nm | | | | | | | | |
|-------------------|-------|------------|--------------|-------------|--------|--------|--------|--------|--------|--------|--------------|-------------|--------|--------|--------|--------|--------|--------|--------------|----------------------|--------|--------|--------|--------|--------|--------|-----|-----|
| Polarity | | | 2-pole | | | | | | | 4-pole | | | | | | | 6-pole | | | | | | | | | | | |
| Frame Size | | | 63 | 63 | 71 | 71 | 80 | 80 | 90 | 90 | 63 | 63 | 71 | 71 | 80 | 80 | 90 | 90 | 71 | 71 | 80 | 80 | 90 | 90 | | | | |
| Power (kW) | | | - | 0.18 | 0.25 | 0.37 | 0.55 | 0.75 | 1.1 | 1.5 | 2.2 | - | 0.12 | 0.18 | 0.25 | 0.37 | 0.55 | 0.75 | 1.1 | 1.5 | - | 0.18 | 0.25 | 0.37 | 0.55 | 0.75 | 1.1 | |
| Input Speed (rpm) | | | 2880 | | | | | | | 1440 | | | | | | | 960 | | | | | | | | | | | |
| Stage | Ratio | Real Ratio | Output Speed | Torque (Nm) | | | | | | | Output Speed | Torque (Nm) | | | | | | | Output Speed | Torque (Nm) | | | | | | | | |
| 2 | 3 | 3.1 | 929 | MG 008 | MG 008 | MG 008 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | | |
| | 3.6 | 3.9 | 744 | | | | | | | | | | | | | | | | | | | | | | | | 465 | 310 |
| | 5 | 4.8 | 600 | | | | | | | | | | | | | | | | | | | | | | | | 372 | 248 |
| | 7.5 | 7.4 | 388 | | | | | | | | | | | | | | | | | | | | | | | | 300 | 200 |
| | 10 | 10.1 | 284 | | | | | | | | | | | | | | | | | | | | | | | | 194 | 129 |
| | 12 | 12.3 | 234 | | | | | | | | | | | | | | | | | | | | | | | | 142 | 95 |
| | 15 | 14.7 | 195 | | | | | | | | | | | | | | | | | | | | | | | | 117 | 78 |
| | 18 | 18.0 | 160 | | | | | | | | | | | | | | | | | | | | | | | | 98 | 65 |
| | 20 | 20.0 | 144 | | | | | | | | | | | | | | | | | | | | | | | | 80 | 53 |
| 3 | 25 | 25.0 | 115 | MG 008 | MG 008 | MG 008 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | | |
| | 30 | 30.4 | 95 | | | | | | | | | | | | | | | | | | | | | | | | 58 | 38 |
| | 36 | 36.4 | 79 | | | | | | | | | | | | | | | | | | | | | | | | 47 | 32 |
| | 40 | 40.1 | 72 | | | | | | | | | | | | | | | | | | | | | | | | 40 | 26 |
| | 45 | 44.5 | 65 | | | | | | | | | | | | | | | | | | | | | | | | 36 | 24 |
| | 50 | 49.6 | 58 | | | | | | | | | | | | | | | | | | | | | | | | 32 | 22 |
| | 60 | 59.0 | 49 | | | | | | | | | | | | | | | | | | | | | | | | 29 | 19 |
| | 70 | 72.0 | 40 | | | | | | | | | | | | | | | | | | | | | | | | 24 | 16 |
| | 80 | 80.3 | 36 | | | | | | | | | | | | | | | | | | | | | | | | 20 | 13 |
| | 90 | 89.5 | 32 | | | | | | | | | | | | | | | | | | | | | | | | 18 | 12 |
| | 100 | 98.6 | 29 | | | | | | | | | | | | | | | | | | | | | | | | 16 | 11 |
| | 110 | 109.3 | 26 | | | | | | | | | | | | | | | | | | | | | | | | 15 | 10 |
| | 120 | 121.9 | 24 | | | | | | | | | | | | | | | | | | | | | | | | 13 | 9 |
| 140 | 141.2 | 20 | 12 | 8 | | | | | | | | | | | | | | | | | | | | | | | | |
| 160 | 156.5 | 18 | 10 | 7 | | | | | | | | | | | | | | | | | | | | | | | | |
| 180 | 174.5 | 17 | 9 | 6 | | | | | | | | | | | | | | | | | | | | | | | | |
| 200 | 196.1 | 15 | 8 | 6 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 7 | 5 | | | | | | | | | | | | | | | | | | | | | | | | |

Output Shaft :- Ø25 & Ø30

Output Flange :- Ø160(71B5) & Ø200(80/90B5)

PERFORMANCE TABLE MG030

| MG030 | | | | | | | | | | | | | | | | | | | | | | | | | | | | Peak Torque = 300 Nm | | | | | | | |
|-------------------|-------|------------|--------------|-------------|--------|--------|--------|--------|--------|-----|--------|--------------|-------------|--------|--------|--------|--------|--------|--------|--------|--------------|-------------|--------|--------|--------|--------|--------|----------------------|--------|--------|--------|--------|--|--|--|
| Polarity | | | 2-pole | | | | | | | | 4-pole | | | | | | | | 6-pole | | | | | | | | | | | | | | | | |
| Frame Size | | | - | 71 | 71 | 80 | 80 | 90 | 90 | 100 | - | 71 | 71 | 80 | 80 | 90 | 90 | 100 | 112 | - | 71 | 71 | 80 | 80 | 90 | 90 | 100 | 112 | | | | | | | |
| Power (kW) | | | - | 0.37 | 0.55 | 0.75 | 1.1 | 1.5 | 2.2 | 3.7 | - | 0.25 | 0.37 | 0.55 | 0.75 | 1.1 | 1.5 | 2.2 | 3.7 | - | 0.18 | 0.25 | 0.37 | 0.55 | 0.75 | 1.1 | 1.5 | 2.2 | | | | | | | |
| Input Speed (rpm) | | | 2880 | | | | | | | | 1440 | | | | | | | | 960 | | | | | | | | | | | | | | | | |
| Stage | Ratio | Real Ratio | Output Speed | Torque (Nm) | | | | | | | | Output Speed | Torque (Nm) | | | | | | | | Output Speed | Torque (Nm) | | | | | | | | | | | | | |
| 2 | 3 | 3.0 | 952 | MG 008 | MG 008 | MG 012 | MG 012 | MG 012 | MG 012 | 36 | 476 | MG 008 | MG 008 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | 42 | 71 | 317 | MG 008 | MG 008 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | 43 | 64 | | | | | |
| | 3.6 | 3.5 | 818 | | | | | | | 42 | 409 | | | | | | | | 50 | 85 | 273 | | | | | | | | 51 | 75 | | | | | |
| | 4 | 4.1 | 705 | | | | | | | 49 | 352 | | | | | | | | 58 | 98 | 235 | | | | | | | | 60 | 88 | | | | | |
| | 5 | 5.1 | 565 | | | | | | | 61 | 282 | | | | | | | | 73 | 123 | 188 | | | | | | | | 75 | 109 | | | | | |
| | 7.5 | 7.5 | 385 | | | | | | | 90 | 193 | | | | | | | | 107 | 180 | 128 | | | | | | | | 109 | 160 | | | | | |
| | 10 | 10.8 | 268 | | | | | | | 129 | 134 | | | | | | | | 154 | 259 | 89 | | | | | | | | 157 | 231 | | | | | |
| | 12 | 12.3 | 235 | | | | | | | 147 | 118 | | | | | | | | 175 | MG 021 | 78 | | | | | | | | 179 | 263 | | | | | |
| | 15 | 15.4 | 187 | | | | | | | 185 | 94 | | | | | | | | 220 | MG 060 | 62 | | | | | | | | 225 | MG 060 | | | | | |
| | 20 | 19.4 | 149 | | | | | | | 233 | 74 | | | | | | | | 277 | 50 | 208 | | | | | | | | 283 | MG 060 | | | | | |
| | 25 | 25.2 | 114 | | | | | | | 212 | 57 | | | | | | | | 245 | 38 | 270 | | | | | | | | 283 | MG 060 | | | | | |
| 3 | 30 | 29.7 | 97 | MG 012 | MG 021 | MG 021 | MG 021 | MG 021 | MG 021 | 212 | 48 | MG 012 | MG 021 | MG 021 | MG 021 | MG 021 | MG 021 | MG 021 | 212 | 290 | 32 | MG 012 | MG 021 | MG 021 | MG 021 | MG 021 | MG 021 | MG 021 | MG 021 | MG 021 | | | | | |
| | 35 | 35.8 | 81 | | | | | | | 256 | 40 | | | | | | | | 256 | 27 | 261 | | | | | | | | | | MG 060 | MG 085 | | | |
| | 40 | 39.5 | 73 | | | | | | | 282 | 36 | | | | | | | | 282 | 24 | 289 | | | | | | | | | | MG 060 | MG 120 | | | |
| | 45 | 44.9 | 64 | | | | | | | 219 | 32 | | | | | | | | 219 | 21 | 241 | | | | | | | | | | MG 060 | MG 120 | | | |
| | 50 | 50.2 | 57 | | | | | | | 245 | 29 | | | | | | | | 245 | 19 | 269 | | | | | | | | | | MG 060 | MG 120 | | | |
| | 55 | 56.5 | 51 | | | | | | | 275 | 26 | | | | | | | | 275 | 17 | 217 | | | | | | | | | | MG 060 | MG 120 | | | |
| | 60 | 60.3 | 48 | | | | | | | 215 | 24 | | | | | | | | 215 | 16 | 217 | | | | | | | | | | MG 060 | MG 120 | | | |
| | 70 | 69.5 | 41 | | | | | | | 248 | 21 | | | | | | | | 248 | 14 | 251 | | | | | | | | | | MG 060 | MG 120 | | | |
| | 75 | 76.6 | 38 | | | | | | | 274 | 19 | | | | | | | | 274 | 13 | 276 | | | | | | | | | | MG 060 | MG 120 | | | |
| | 80 | 79.0 | 36 | | | | | | | 282 | 18 | | | | | | | | 282 | 12 | 285 | | | | | | | | | | MG 060 | MG 120 | | | |
| | 90 | 88.3 | 33 | | | | | | | 215 | 16 | | | | | | | | 215 | 11 | 215 | | | | | | | | | | MG 060 | MG 120 | | | |
| | 100 | 99.4 | 29 | | | | | | | 242 | 14 | | | | | | | | 239 | 10 | 242 | | | | | | | | | | MG 060 | MG 120 | | | |
| | 120 | 121.1 | 24 | | | | | | | 216 | 12 | | | | | | | | 216 | 8 | 212 | | | | | | | | | | MG 060 | MG 120 | | | |
| | 135 | 135.2 | 21 | | | | | | | 242 | 11 | | | | | | | | 220 | 7 | 237 | | | | | | | | | | MG 060 | MG 120 | | | |
| | 140 | 139.8 | 21 | | | | | | | 250 | 10 | | | | | | | | 227 | 7 | 245 | | | | | | | | | | MG 060 | MG 120 | | | |
| | 150 | 152.2 | 19 | | | | | | | 272 | 9 | | | | | | | | 247 | 6 | 267 | | | | | | | | | | MG 060 | MG 120 | | | |
| 160 | 159.0 | 18 | 284 | 9 | 258 | 6 | 279 | MG 060 | MG 120 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 180 | 177.6 | 16 | 214 | 8 | 289 | 5 | 289 | MG 060 | MG 120 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 200 | 199.9 | 14 | 240 | 7 | MG 060 | 5 | MG 060 | MG 060 | MG 120 | | | | | | | | | | | | | | | | | | | | | | | | | | |

Output Shaft :- Ø30 & Ø35 Output Flange :- Ø200(80/90B5) & Ø250(100/112B5)

PERFORMANCE TABLE MG060

| MG060 | | | | | | | | | | Peak Torque = 600 Nm | | | | | | | | | | | | | | | | |
|-------------------|-------|------------|---------------|-------------|--------|--------|--------|--------|--------|----------------------|---------------|-------------|--------|--------|--------|--------|--------|--------|---------------|-------------|--------|--------|--------|--------|-----|-----|
| Polarity | | 2-pole | | | | | | | 4-pole | | | | | | | 6-pole | | | | | | | | | | |
| Frame Size | | 71 | 71 | 80 | 80 | 90 | 90 | 100 | 71 | 71 | 80 | 80 | 90 | 90 | 100 | 112 | 71 | 71 | 80 | 80 | 90 | 90 | 100 | 112 | | |
| Power (kW) | | 0.37 | 0.55 | 0.75 | 1.1 | 1.5 | 2.2 | 3.7 | 0.25 | 0.37 | 0.55 | 0.75 | 1.1 | 1.5 | 2.2 | 3.7 | 0.18 | 0.25 | 0.37 | 0.55 | 0.75 | 1.1 | 1.5 | 2.2 | | |
| Input Speed (rpm) | | 2880 | | | | | | | 1440 | | | | | | | 960 | | | | | | | | | | |
| Stage | Ratio | Real Ratio | Oupptut speed | Torque (Nm) | | | | | | | Oupptut speed | Torque (Nm) | | | | | | | Oupptut speed | Torque (Nm) | | | | | | |
| 2 | 5 | 5.1 | 564 | MG 008 | MG 008 | MG 012 | MG 012 | MG 012 | MG 012 | MG 030 | MG 008 | MG 008 | MG 012 | MG 012 | MG 012 | MG 030 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | MG 030 | MG 030 | MG 030 | | |
| | 6 | 6.3 | 458 | | | | | | | | | | | | | | | | | | | | | | 282 | 188 |
| | 7 | 7.0 | 410 | | | | | | | | | | | | | | | | | | | | | | 229 | 153 |
| | 7.5 | 7.5 | 386 | | | | | | | | | | | | | | | | | | | | | | 205 | 137 |
| | 8 | 7.9 | 364 | | | | | | | | | | | | | | | | | | | | | | 193 | 129 |
| | 8 | 7.9 | 364 | | | | | | | | | | | | | | | | | | | | | | 182 | 121 |
| | 9 | 9.1 | 318 | | | | | | | | | | | | | | | | | | | | | | 159 | 106 |
| | 10 | 10.1 | 284 | | | | | | | | | | | | | | | | | | | | | | 142 | 95 |
| | 11 | 11.4 | 252 | | | | | | | | | | | | | | | | | | | | | | 126 | 84 |
| | 13 | 12.8 | 225 | | | | | | | | | | | | | | | | | | | | | | 113 | 75 |
| | 15 | 15.1 | 190 | | | | | | | | | | | | | | | | | | | | | | 95 | 63 |
| | 17 | 17.0 | 169 | | | | | | | | | | | | | | | | | | | | | | 85 | 56 |
| | 19 | 19.1 | 151 | | | | | | | | | | | | | | | | | | | | | | 75 | 50 |
| | 24 | 24.2 | 119 | | | | | | | | | | | | | | | | | | | | | | 60 | 40 |
| | 3 | 29 | 29.4 | | | | | | | | | | | | | | | | | | | | | | 98 | 49 |
| 33 | | 32.7 | 88 | 44 | 29 | | | | | | | | | | | | | | | | | | | | | |
| 36 | | 36.3 | 79 | 40 | 26 | | | | | | | | | | | | | | | | | | | | | |
| 41 | | 41.1 | 70 | 35 | 23 | | | | | | | | | | | | | | | | | | | | | |
| 46 | | 46.1 | 62 | 31 | 21 | | | | | | | | | | | | | | | | | | | | | |
| 54 | | 54.0 | 53 | 27 | 18 | | | | | | | | | | | | | | | | | | | | | |
| 66 | | 65.9 | 44 | 22 | 15 | | | | | | | | | | | | | | | | | | | | | |
| 74 | | 73.6 | 39 | 20 | 13 | | | | | | | | | | | | | | | | | | | | | |
| 83 | | 82.5 | 35 | 17 | 12 | | | | | | | | | | | | | | | | | | | | | |
| 99 | | 99.4 | 29 | 14 | 10 | | | | | | | | | | | | | | | | | | | | | |
| 120 | | 120.4 | 24 | 12 | 8 | | | | | | | | | | | | | | | | | | | | | |
| 135 | | 134.8 | 21 | 11 | 7 | | | | | | | | | | | | | | | | | | | | | |
| 151 | | 150.9 | 19 | 10 | 6 | | | | | | | | | | | | | | | | | | | | | |

Output Shaft :- Ø35 & Ø40

Output Flange :- Ø200(80/90B5) & Ø250(100/112B5)

PERFORMANCE TABLE MG085

| MG085 | | | | | | | | | | | | | | | | | | | | | | | | | | | | Peak Torque = 850 Nm | | | | | | | |
|-------------|-------|------------|--------------|-------------|--------|--------|--------|--------|--------|--------|--------|--------------|-------------|--------|--------|--------|--------|--------|--------|--------|--------------|-------------|--------|--------|--------|--------|--------|----------------------|------|-----|------|------|-----|------|------|
| Polarity | | | | 2-pole | | | | | | | | 4-pole | | | | | | | | 6-pole | | | | | | | | | | | | | | | |
| Frame Size | | | | 80 | 80 | 90 | 90 | 100 | 132 | 132 | 80 | 80 | 90 | 90 | 100 | 112 | 132 | 132 | 80 | 80 | 90 | 90 | 100 | 112 | 132 | 132 | | | | | | | | | |
| Power (kW) | | | | 0.75 | 1.1 | 1.5 | 2.2 | 3.7 | 5.5 | 7.5 | 0.55 | 0.75 | 1.1 | 1.5 | 2.2 | 3.7 | 5.5 | 7.5 | 0.37 | 0.55 | 0.75 | 1.1 | 1.5 | 2.2 | 3.7 | 5.5 | | | | | | | | | |
| Speed (rpm) | | | | 2880 | | | | | | | | 1440 | | | | | | | | 960 | | | | | | | | | | | | | | | |
| Stage | Ratio | Real Ratio | Output Speed | Torque (Nm) | | | | | | | | Output Speed | Torque (Nm) | | | | | | | | Output Speed | Torque (Nm) | | | | | | | | | | | | | |
| 2 | 4 | 4.4 | 652 | MG 012 | MG 012 | MG 012 | MG 012 | MG 030 | MG 012 | MG 012 | MG 012 | MG 012 | MG 012 | MG 030 | MG 030 | MG 060 | MG 060 | MG 060 | MG 060 | MG 060 | MG 060 | MG 060 | MG 060 | MG 060 | MG 060 | MG 060 | MG 060 | | | | | | | | |
| | 5 | 4.9 | 589 | | | | | | | | | | | | | | | | | | | | | | | | | 77 | 106 | 326 | 155 | 211 | 217 | 156 | 232 |
| | 5.5 | 5.4 | 530 | | | | | | | | | | | | | | | | | | | | | | | | | 86 | 117 | 294 | 171 | 233 | 196 | 173 | 257 |
| | 6 | 6.1 | 474 | | | | | | | | | | | | | | | | | | | | | | | | | 95 | 130 | 265 | 190 | 259 | 177 | 192 | 285 |
| | 8 | 8.1 | 354 | | | | | | | | | | | | | | | | | | | | | | | | | 106 | 145 | 237 | 213 | 290 | 158 | 214 | 319 |
| | 9 | 9.0 | 320 | | | | | | | | | | | | | | | | | | | | | | | | | 143 | 194 | 177 | 285 | 389 | 118 | 288 | 428 |
| | 10 | 10.0 | 288 | | | | | | | | | | | | | | | | | | | | | | | | | 158 | 215 | 160 | 315 | 430 | 107 | 318 | 473 |
| | 11 | 11.2 | 258 | | | | | | | | | | | | | | | | | | | | | | | | | 175 | 239 | 144 | 350 | 478 | 96 | 353 | 525 |
| | 13 | 12.9 | 223 | | | | | | | | | | | | | | | | | | | | | | | | | 196 | 267 | 129 | 391 | 534 | 86 | 395 | 587 |
| | 14 | 14.3 | 202 | | | | | | | | | | | | | | | | | | | | | | | | | 226 | 308 | 112 | 451 | 615 | 74 | 455 | 677 |
| | 16 | 15.8 | 182 | | | | | | | | | | | | | | | | | | | | | | | | | 249 | 340 | 101 | 499 | 680 | 67 | 504 | 748 |
| | 18 | 17.7 | 163 | | | | | | | | | | | | | | | | | | | | | | | | | 277 | 378 | 91 | 554 | 756 | 61 | 559 | 819 |
| | 20 | 20.0 | 144 | | | | | | | | | | | | | | | | | | | | | | | | | 310 | 423 | 81 | 620 | 820 | 54 | 625 | 900 |
| | 22 | 22.1 | 130 | | | | | | | | | | | | | | | | | | | | | | | | | 350 | 477 | 72 | 700 | 880 | 48 | 706 | 981 |
| 25 | 24.6 | 117 | 387 | 527 | 65 | 774 | 940 | 43 | 781 | 1062 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 27 | 27.5 | 105 | 430 | 586 | 59 | 840 | 1000 | 39 | 846 | 1143 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 31 | 31.1 | 93 | MG 021 | MG 021 | MG 030 | MG 060 | MG 060 | MG 060 | MG 060 | MG 060 | MG 060 | MG 060 | MG 060 | MG 060 | MG 060 | MG 060 | MG 060 | MG 060 | MG 060 | MG 060 | MG 060 | MG 060 | MG 060 | MG 060 | MG 060 | MG 060 | | | | | | | | |
| | 34 | 34.4 | 84 | | | | | | | | | | | | | | | | | | | | | | | | | 481 | 655 | 52 | 647 | 880 | 35 | 667 | 1224 |
| | 38 | 38.2 | 75 | | | | | | | | | | | | | | | | | | | | | | | | | 556 | 758 | 46 | 748 | 940 | 31 | 778 | 1305 |
| | 43 | 42.7 | 67 | | | | | | | | | | | | | | | | | | | | | | | | | 615 | 840 | 42 | 840 | 1000 | 28 | 870 | 1386 |
| | 46 | 45.7 | 63 | | | | | | | | | | | | | | | | | | | | | | | | | 683 | 920 | 38 | 940 | 1060 | 25 | 970 | 1467 |
| | 51 | 50.5 | 57 | | | | | | | | | | | | | | | | | | | | | | | | | 763 | 1000 | 34 | 1040 | 1120 | 22 | 1070 | 1548 |
| | 56 | 56.1 | 51 | | | | | | | | | | | | | | | | | | | | | | | | | 817 | 1080 | 32 | 1140 | 1180 | 21 | 1170 | 1629 |
| | 63 | 62.7 | 46 | | | | | | | | | | | | | | | | | | | | | | | | | 870 | 1160 | 29 | 1240 | 1240 | 19 | 1270 | 1710 |
| | 77 | 76.8 | 38 | | | | | | | | | | | | | | | | | | | | | | | | | 920 | 1240 | 26 | 1340 | 1300 | 17 | 1370 | 1791 |
| | 85 | 84.9 | 34 | | | | | | | | | | | | | | | | | | | | | | | | | 970 | 1320 | 23 | 1440 | 1360 | 15 | 1470 | 1872 |
| | 94 | 94.3 | 31 | | | | | | | | | | | | | | | | | | | | | | | | | 1020 | 1400 | 21 | 1540 | 1420 | 13 | 1570 | 1953 |
| | 106 | 105.5 | 27 | | | | | | | | | | | | | | | | | | | | | | | | | 1070 | 1480 | 19 | 1640 | 1480 | 11 | 1670 | 2034 |

Output Shaft :- Ø40 & Ø45

Output Flange :- Ø250(100/112B5) & Ø300(132B5)

PERFORMANCE TABLE MG120

MG120

Peak Torque = 1200 Nm

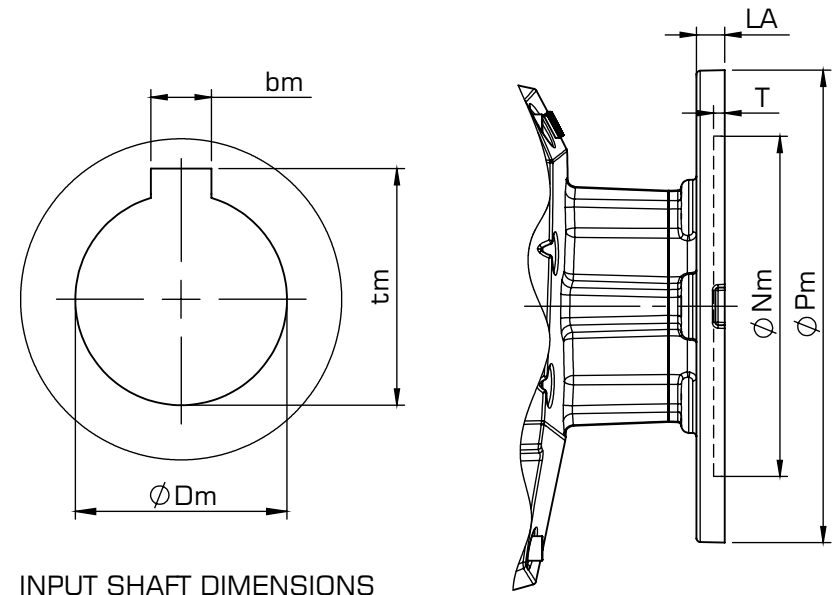
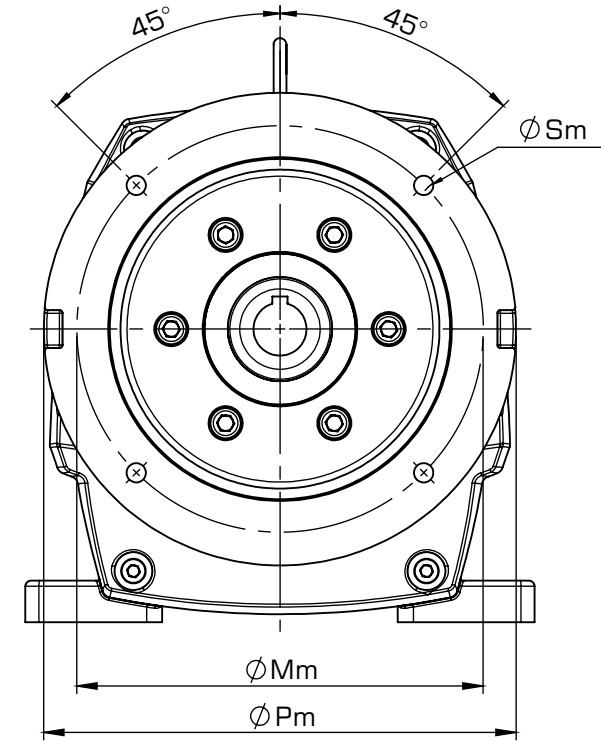
| Polarity | | 2-pole | | | | | | | | | 4-pole | | | | | | | | | 6-pole | | | | | | | | | | | | |
|-------------------|-------|------------|--------------|-------------|--------|--------|-----|-----|------|--------|--------|--------|--------------|-------------|--------|--------|--------|--------|--------|--------|--------|-----|--------------|-------------|--------|--------|--------|--------|--------|--------|--|--|
| Frame Size | | 90 | 90 | 100 | 132 | 132 | 160 | 160 | 160 | - | 90 | 90 | 100 | 112 | 132 | 132 | 160 | 160 | - | 90 | 90 | 100 | 112 | 132 | 132 | 160 | 160 | | | | | |
| Power (kW) | | 1.5 | 2.2 | 3.7 | 5.5 | 7.5 | 11 | 15 | 18.5 | - | 1.1 | 1.5 | 2.2 | 3.7 | 5.5 | 7.5 | 11 | 15 | - | 0.75 | 1.1 | 1.5 | 2.2 | 3.7 | 5.5 | 7.5 | 11 | | | | | |
| Input Speed (rpm) | | 2880 | | | | | | | | | 1440 | | | | | | | | | 960 | | | | | | | | | | | | |
| Stage | Ratio | Real Ratio | Output Speed | Torque (Nm) | | | | | | | | | Output Speed | Torque (Nm) | | | | | | | | | Output Speed | Torque (Nm) | | | | | | | | |
| 2 | 4 | 4.1 | 708 | | | | | | | 143 | 194 | 240 | 354 | | | | | | | 285 | 389 | 236 | | | | | | | 292 | 428 | | |
| | 5 | 5.0 | 573 | | | | | | | 176 | 240 | 296 | 286 | | | | | | | 352 | 480 | 191 | | | | | | | 360 | 528 | | |
| | 8 | 8.1 | 358 | | MG 012 | | | | | 282 | 384 | 474 | 179 | MG 012 | MG 012 | | MG 030 | | MG 085 | 564 | 769 | 119 | MG 012 | MG 012 | | MG 030 | | MG 085 | 577 | 846 | | |
| | 10 | 10.4 | 276 | | | | | | | 365 | 498 | 614 | 138 | | | MG 030 | | | | 730 | 996 | 92 | | | MG 030 | | | | 747 | 1096 | | |
| | 15 | 15.2 | 190 | MG 012 | | MG 030 | | | | 531 | 723 | 892 | 95 | | | | | MG 085 | | 1061 | MG 150 | 63 | | | | MG 030 | | MG 085 | 1085 | | | |
| | 18 | 18.2 | 158 | | | | | | | 637 | 869 | 1071 | 79 | | MG 021 | | | MG 060 | | 869 | MG 150 | 53 | | | MG 021 | | | MG 060 | 955 | MG 300 | | |
| | 20 | 19.7 | 146 | | | | | | | 690 | 941 | 1161 | 73 | | | | | | | 941 | MG 150 | 49 | | | MG 021 | MG 030 | | MG 060 | 1035 | MG 150 | | |
| | 23 | 22.2 | 130 | | | | | | | 777 | 1060 | | 65 | | MG 021 | | | | | 1060 | | 43 | | | MG 021 | MG 030 | | | MG 150 | | | |
| | 20 | 21.0 | 137 | | | | | | | 749 | 1021 | MG 150 | 69 | | MG 021 | | | | | 1021 | | 46 | | | | | | | 1123 | | | |
| | 3 | 25 | 28.0 | 103 | | | | | | 1000 | MG 150 | | 51 | | | MG 030 | | | | 1000 | MG 150 | 34 | | | | | | | 1009 | | | |
| 30 | | 28.2 | 102 | | | | | | 1007 | MG 150 | | 51 | | | | MG 060 | | MG 085 | 1007 | MG 150 | 34 | | | MG 030 | | MG 060 | MG 085 | 1016 | | | | |
| 35 | | 33.5 | 86 | | | | | | | | | 43 | | | | | | | | | 29 | | | | MG 060 | | | MG 300 | | | | |
| 40 | | 36.7 | 79 | | MG 030 | | | | | | MG 150 | | 39 | | MG 030 | | | | 881 | MG 150 | | 26 | | | MG 030 | | MG 060 | MG 085 | MG 300 | | | |
| 45 | | 44.4 | 65 | | | | | | | 893 | | | 32 | | | | | | 1067 | | | 22 | | | | | MG 085 | 952 | | | | |
| 50 | | 51.1 | 56 | | | | | | | 1082 | | | 28 | | | | | | | | | 19 | | | | | MG 085 | 1095 | | | | |
| 55 | | 56.5 | 51 | | | | | | | | | | 25 | | | | | | | | | 17 | | | | | | | | | | |
| 60 | | 58.7 | 49 | | | | | | | | | | 25 | | | | | | | | | 16 | | | | | MG 085 | 858 | MG 300 | | | |
| 70 | | 66.1 | 44 | | | | | | | | | | 22 | | | | | | | | | 15 | | | | | MG 085 | 966 | | | | |
| 80 | | 80.0 | 36 | | | | | | | | | | 18 | | | | | | | | | 12 | | | | | | | | | | |
| 90 | | 85.6 | 34 | | | | | | | | | | 17 | | | | | | | | | 11 | | | | | | | | | | |
| 100 | | 92.7 | 31 | | | | | | | | | | 16 | | | | | | | | | 10 | | | | | | | | | | |
| 110 | 103.2 | 28 | | | | | | | | | | 14 | | | | | | | | | 9 | | | | | | | | | | | |
| 120 | 112.3 | 26 | | | | | | | | | | 13 | | | | | | | | | 9 | | | | | | | | | | | |

Output Shaft :- Ø45 & Ø55

Output Flange :- Ø300(132B5) & Ø350(160/180B5)

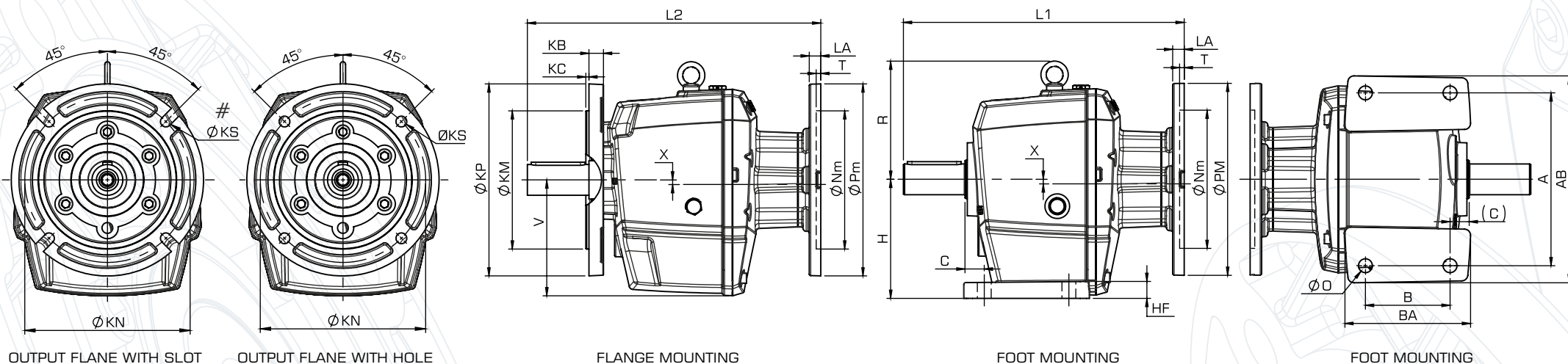
MAGNUS INPUT FLANGE DIMENSIONS

| Magnus | Motor Size | Pm | Nm | Mm | Sm | LA | T | Dm (F7) | tm | bm (E9) | L1 (Foot Mount) | | L2/L3 (Flange/Universal Mount) | |
|--------|-------------|-----|-----|-----|-------|----|-----|---------|------|---------|-----------------|-----|--------------------------------|-----|
| | | | | | | | | | | | D1 | D2 | D1 | D2 |
| MG 008 | 63B5 | 140 | 95 | 115 | Ø10 | 10 | 3.5 | 11 | 12.8 | 4 | 190 | 190 | 190 | 190 |
| | 71B5 | 160 | 110 | 130 | Ø9 | 9 | 4.5 | 14 | 16.3 | 5 | 197 | 197 | 197 | 197 |
| MG 012 | 63B5 | 140 | 95 | 115 | Ø9 | 13 | 4 | 11 | 12.8 | 4 | 202 | 212 | 222 | 232 |
| | 71B5 | 160 | 110 | 130 | Ø9 | 13 | 4 | 14 | 16.3 | 5 | 202 | 212 | 222 | 232 |
| | 80B5 | 200 | 130 | 165 | Ø11 | 13 | 4 | 19 | 21.8 | 6 | 220 | 230 | 240 | 250 |
| | 90B5 | | | | | | | 24 | 27.3 | 8 | | | | |
| MG 021 | 63B5 | 140 | 95 | 115 | Ø9 | 13 | 4 | 11 | 12.8 | 4 | 233 | 243 | 246 | 256 |
| | 71B5 | 160 | 110 | 130 | Ø9 | 13 | 4 | 14 | 16.3 | 5 | 233 | 243 | 246 | 256 |
| | 80B5 | 200 | 130 | 165 | Ø11 | 13 | 4 | 19 | 21.8 | 6 | 251 | 261 | 264 | 274 |
| | 90B5 | | | | | | | 24 | 27.3 | 8 | | | | |
| MG 030 | 71B5 | 160 | 110 | 130 | Ø9 | 12 | 4 | 14 | 16.3 | 5 | 275 | 285 | 285 | 295 |
| | 80B5 | 200 | 130 | 165 | Ø11 | 14 | 5 | 19 | 21.8 | 6 | 286 | 296 | 296 | 306 |
| | 90B5 | | | | | | | 24 | 27.3 | 8 | | | | |
| | 100B5/112B5 | 250 | 180 | 215 | Ø13.5 | 14 | 5 | 28 | 31.3 | 8 | 296 | 306 | 306 | 316 |
| MG 060 | 71B5 | 160 | 110 | 130 | Ø9 | 12 | 4 | 14 | 16.3 | 5 | 292 | 302 | 304 | 314 |
| | 80B5 | 200 | 130 | 165 | Ø11 | 13 | 5 | 19 | 21.8 | 6 | 303 | 313 | 315 | 325 |
| | 90B5 | | | | | | | 24 | 27.3 | 8 | | | | |
| | 100B5/112B5 | 250 | 180 | 215 | Ø13.5 | 13 | 5 | 28 | 31.3 | 8 | 313 | 323 | 325 | 335 |
| MG 085 | 80B5 | 200 | 130 | 165 | M10 | 12 | 5 | 19 | 21.8 | 6 | 356 | 366 | 372 | 382 |
| | 90B5 | | | | | | | 24 | 27.3 | 8 | | | | |
| | 100B5/112B5 | 250 | 180 | 215 | M12 | 15 | 6 | 28 | 31.3 | 8 | 365 | 375 | 382 | 392 |
| | 132B5 | 300 | 230 | 265 | M12 | 16 | 6 | 38 | 41.3 | 10 | 365 | 375 | 382 | 392 |
| MG 120 | 90B5 | 200 | 130 | 165 | M10 | 15 | 5 | 24 | 27.3 | 8 | 463 | 483 | 463 | 483 |
| | 100B5/112B5 | 250 | 180 | 215 | M12 | 15 | 5 | 28 | 31.3 | 8 | 463 | 483 | 463 | 483 |
| | 132B5 | 300 | 230 | 265 | M12 | 20 | 6 | 38 | 41.3 | 10 | 482 | 502 | 482 | 502 |
| | 160B5 | 350 | 250 | 300 | M16 | 20 | 6 | 42 | 45.3 | 12 | 482 | 502 | 482 | 502 |
| 180B5 | 48 | | | | | | | 51.8 | 14 | | | | | |
| MG 150 | 80B5 | 200 | 130 | 165 | M10 | 15 | 5 | 19 | 21.8 | 6 | 431 | 441 | 431 | 441 |
| | 90B5 | | | | | | | 24 | 27.3 | 8 | | | | |
| | 100B5/112B5 | 250 | 180 | 215 | M12 | 20 | 6 | 28 | 31.3 | 8 | 439 | 449 | 439 | 449 |
| | 132B5 | 300 | 230 | 265 | M12 | 20 | 6 | 38 | 41.3 | 10 | 439 | 449 | 439 | 449 |
| MG 300 | 160B5 | 350 | 250 | 300 | M16 | 20 | 6 | 42 | 45.3 | 12 | 510 | 520 | 510 | 520 |
| | 180B5 | | | | | | | 48 | 51.8 | 14 | | | | |
| | 100B5/112B5 | 250 | 180 | 215 | M12 | 20 | 6 | 28 | 31.3 | 8 | 495 | 505 | 495 | 505 |
| | 132B5 | 300 | 230 | 265 | M12 | 20 | 6 | 38 | 41.3 | 10 | 495 | 505 | 495 | 505 |



INPUT SHAFT DIMENSIONS

DIMENSIONS



OUTPUT FLANGE WITH SLOT

OUTPUT FLANGE WITH HOLE

FLANGE MOUNTING

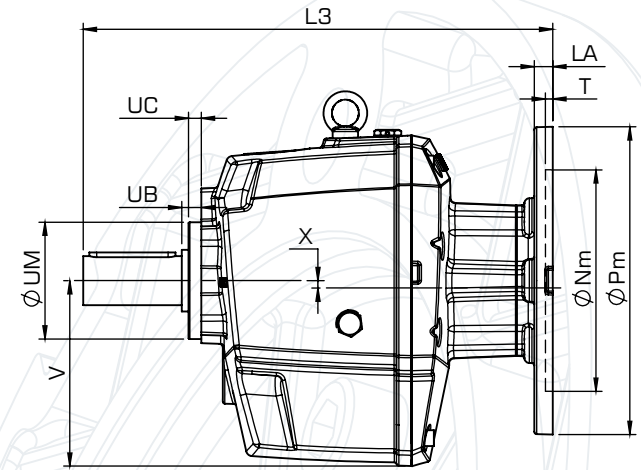
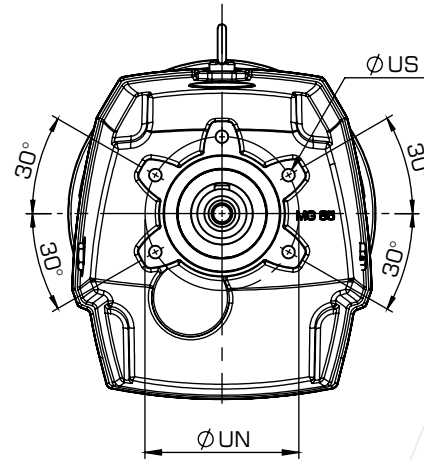
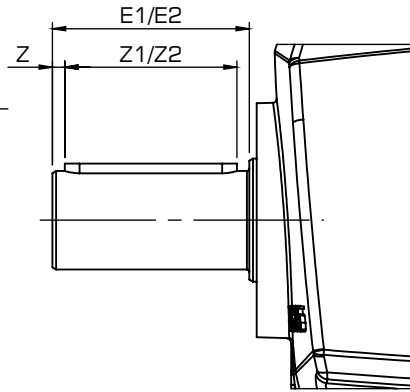
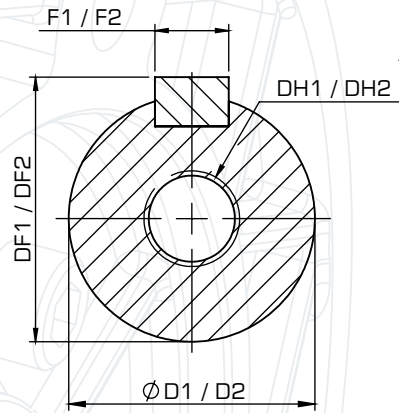
FOOT MOUNTING

FOOT MOUNTING

| Magnus Size | Flange Mounting | | | | | | | | Foot Mounting | | | | | | | | | |
|-------------|-----------------|-----|-----|-----|-----|-----|----|-----|---------------|-----|----|-----|-----|-----|-----|----|----|------|
| | OFL Size | KP | KM | KN | KS | KC | KB | V | H | R | C | AB | A | BA | B | O | HF | X |
| MG008 | 63B5 # | 140 | 95 | 115 | 10 | 3 | 9 | 79 | 90 | 57 | 18 | 137 | 110 | 102 | 75 | 9 | 11 | 17.5 |
| MG012 | 71B5 # | 160 | 110 | 130 | 9 | 3.5 | 10 | 98 | 100 | 72 | 18 | 156 | 130 | 94 | 60 | 11 | 14 | 18.5 |
| MG021 | 71B5 # | 160 | 110 | 130 | 9 | 3.5 | 10 | 109 | 110 | 81 | 18 | 189 | 160 | 109 | 70 | 11 | 16 | 23 |
| | 80/90B5 | 200 | 130 | 165 | Ø11 | 3.5 | 12 | | | | | | | | | | | |
| MG030 | 80/90B5 # | 200 | 130 | 165 | 11 | 3.5 | 12 | 125 | 130 | 95 | 20 | 215 | 180 | 142 | 105 | 14 | 18 | 30.4 |
| | 100/112B5 | 250 | 180 | 215 | Ø14 | 4 | 16 | | | | | | | | | | | |
| MG060 | 80/90B5 # | 200 | 130 | 165 | 11 | 3.5 | 12 | 128 | 130 | 95 | 20 | 215 | 180 | 142 | 105 | 14 | 18 | 0 |
| | 100/112B5 | 250 | 180 | 215 | Ø14 | 4 | 16 | | | | | | | | | | | |
| MG085 | 100/112B5# | 250 | 180 | 215 | 14 | 4 | 19 | 151 | 155 | 154 | 25 | 269 | 225 | 163 | 110 | 18 | 22 | 0 |
| | 132B5 | 300 | 230 | 265 | Ø14 | 4 | 21 | | | | | | | | | | | |
| MG120 | 132B5 # | 300 | 230 | 265 | 14 | 4 | 21 | 160 | 160 | 160 | 40 | 270 | 190 | 285 | 235 | 18 | 33 | 16 |
| | 160/180B5 | 350 | 250 | 300 | Ø18 | 5 | 21 | | | | | | | | | | | |
| MG150 | 132B5 # | 300 | 230 | 265 | 14 | 4 | 21 | 172 | 175 | 168 | 25 | 300 | 250 | 200 | 145 | 18 | 25 | 0 |
| | 160/180B5 | 350 | 250 | 300 | Ø18 | 5 | 21 | | | | | | | | | | | |
| MG300 | 160/180B5 | 350 | 250 | 300 | Ø18 | 5 | 21 | 204 | 210 | 198 | 25 | 350 | 300 | 227 | 165 | 22 | 30 | 0 |
| | 225B5 | 450 | 350 | 400 | Ø18 | 5 | 25 | | | | | | | | | | | |

MG120 is supplied as foot version or foot cum flange version; a flange-only mounting version is not available

DIMENSIONS



OUTPUT SHAFT DETAILS (FOR ALL MOUNTINGS)

UNIVERSAL MOUNTING




UNIVERSAL MOUNTING

| Magnus Size | Output Shaft Dimensions | | | | | | |
|-------------|-------------------------|-----------|-----------|--------|-----------|------------|-----------------|
| | D1/D2 (h6) | E1/E2 | Z1/Z2 | Z | DF1/DF2 | F1/F2 (h9) | DH1/DH2 |
| MG008 | 16 / 20 | 40 / 40 | 30/30 | 5 | 18 / 22.5 | 5 / 6 | M5x12 / M5x12 |
| MG012 | 20 / 25 | 40 / 50 | 30/40 | 5 | 22.5 / 28 | 6 / 8 | M5x12 / M10x20 |
| MG021 | 25 / 30 | 50 / 60 | 40 / 50 | 5 | 28 / 33 | 8 / 8 | M10x20 |
| MG030 | 30 / 35 | 60 / 70 | 50 / 60 | 5 | 33 / 38 | 8 / 10 | M10x20 / M12x24 |
| MG060 | 35 / 40 | 70 / 80 | 60 / 70 | 5 | 38 / 43 | 10 / 12 | M12x24 / M16x32 |
| MG085 | 40 / 45 | 80 / 100 | 70 / 90 | 5 | 43 / 48.5 | 12 / 14 | M16x32 |
| MG120 | 45 / 55 | 90 / 110 | 80 / 90 | 5 / 10 | 48.5 / 59 | 14 / 16 | M16x32 / M20x40 |
| MG150 | 50 / 55 | 100 / 110 | 80 / 90 | 10 | 53.5 / 59 | 14 / 16 | M16x32 / M20x40 |
| MG300 | 60 / 65 | 120 / 130 | 100 / 110 | 10 | 64 / 69 | 18 / 18 | M20x40 |

| Magnus Size | Universal Mounting | | | | | | |
|-------------|--------------------|------|---------|-----|--------|-----|-----|
| | UB | UC | UM (f8) | UN | US | V | R |
| MG008 | 6.5 | 3.5 | 46 | 55 | M4x9 | 79 | 57 |
| MG012 | 9.5 | 5.5 | 68 | 80 | M6x10 | 98 | 72 |
| MG021 | 9.5 | 6 | 68 | 80 | M6x12 | 109 | 81 |
| MG030 | 13 | 7.5 | 90 | 110 | M10x16 | 125 | 95 |
| MG060 | 13 | 8 | 90 | 110 | M10x15 | 128 | 95 |
| MG085 | 16 | 10.5 | 95 | 125 | M12x20 | 151 | 154 |
| MG120* | 16 | 11.5 | 132 | 155 | M12x2 | 160 | 160 |
| MG150 | 16 | 11 | 132 | 155 | M12x20 | 172 | 168 |
| MG300 | 18 | 10.5 | 154 | 180 | M12x25 | 204 | 198 |

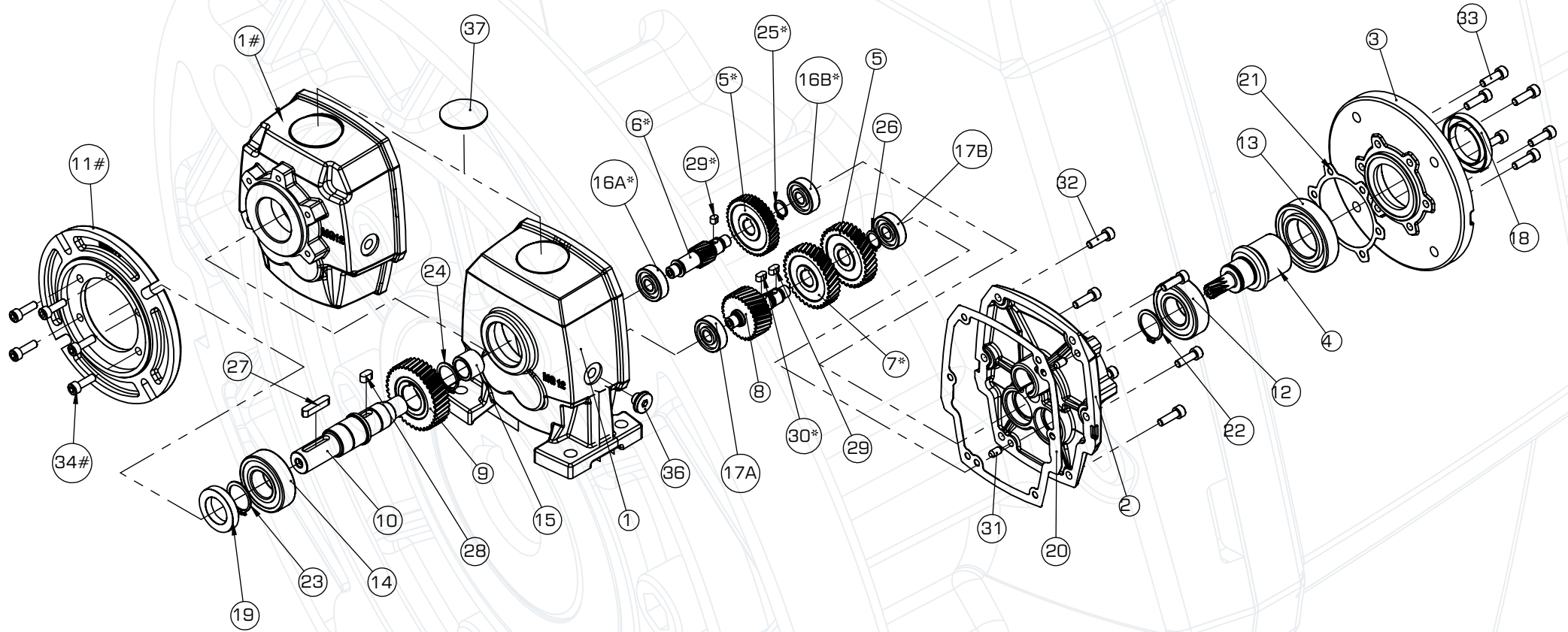
* Available with foot

MAGNUS WEIGHT

| Weights In Kg | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---------|-----|---------|-----|---------|-----|---------|------|---------|------|---------|------|---------|------|---------|------|----------|------|
| Input | MAGNUS | MG008 | | MG012 | | MG021 | | MG030 | | MG060 | | MG085 | | MG120 | | MG150 | | MG300 | |
| | Stage | 2 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 2 | 3 |
| 63B5 | UNV  | 3.2 | 3.4 | 4.8 | 5.1 | 6.8 | 7.4 | - | - | - | - | - | - | - | - | - | - | - | - |
| 71B5 | | 4.1 | 4.3 | 4.9 | 5.2 | 6.9 | 7.5 | 15.5 | 16.4 | 20.8 | 21.3 | 37.5 | 39.2 | - | - | - | - | - | - |
| 80B5 90B5 | | - | - | 5.3 | 5.6 | 7.2 | 7.8 | 15.9 | 16.8 | 21.2 | 21.7 | 39.0 | 40.7 | - | - | 57.5 | 60.4 | - | - |
| 100B5 112B5 | | - | - | - | - | - | - | 16.1 | 17.0 | 21.5 | 22.0 | 40.0 | 41.7 | - | - | 59.8 | 62.7 | 88.3 | 85.3 |
| 132B5 | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 61.0 | 63.9 | 89.5 | 86.5 |
| 160B5 180B5 | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 64.2 | 67.1 | 92.9 | 89.9 |
| 63B5 | FSW  | 3.5 | 3.7 | 4.7 | 5.0 | 6.9 | 7.5 | - | - | - | - | - | - | - | - | - | - | - | - |
| 71B5 | | 4.4 | 4.6 | 4.8 | 5.1 | 7.0 | 7.6 | 16.6 | 17.5 | 22.3 | 22.8 | - | - | - | - | - | - | - | - |
| 80B5 90B5 | | - | - | 5.1 | 5.4 | 7.3 | 7.9 | 17.0 | 17.9 | 22.7 | 23.2 | 40.5 | 42.2 | - | - | 61.4 | 64.3 | - | - |
| 100B5 112B5 | | - | - | - | - | - | - | 17.2 | 18.1 | 23.0 | 23.5 | 42.0 | 43.7 | 62.7 | 65.0 | 63.7 | 66.6 | 93.8 | 90.8 |
| 132B5 | | - | - | - | - | - | - | - | - | - | - | 43.0 | 44.7 | 66.2 | 68.5 | 64.9 | 67.8 | 95.0 | 92.0 |
| 160B5 180B5 | | - | - | - | - | - | - | - | - | - | - | - | - | 69.2 | 71.5 | 68.1 | 71.0 | 98.4 | 95.4 |
| Ø140 | OFL  | UNV+0.3 | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ø160 | | - | - | UNV+0.9 | | UNV+0.9 | | - | - | - | - | - | - | - | - | - | - | - | - |
| Ø200 | | - | - | - | - | UNV+1.7 | | UNV+1.8 | | UNV+1.8 | | - | - | - | - | - | - | - | - |
| Ø250 | | - | - | - | - | - | - | UNV+3.8 | | UNV+3.8 | | UNV+4.1 | | - | - | - | - | - | - |
| Ø300 | | - | - | - | - | - | - | - | - | - | - | UNV+7.2 | | FSW+5.8 | | UNV+5.8 | | - | - |
| Ø350 | | - | - | - | - | - | - | - | - | - | - | - | - | FSW+9.8 | | UNV+9.8 | | UNV+8.9 | |
| Ø450 | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | UNV+19.9 | |

*MG085 to MG300 weight without oil & MG008 to MG060 weight with oil

MG008 to MG030 - EXPLODED VIEW

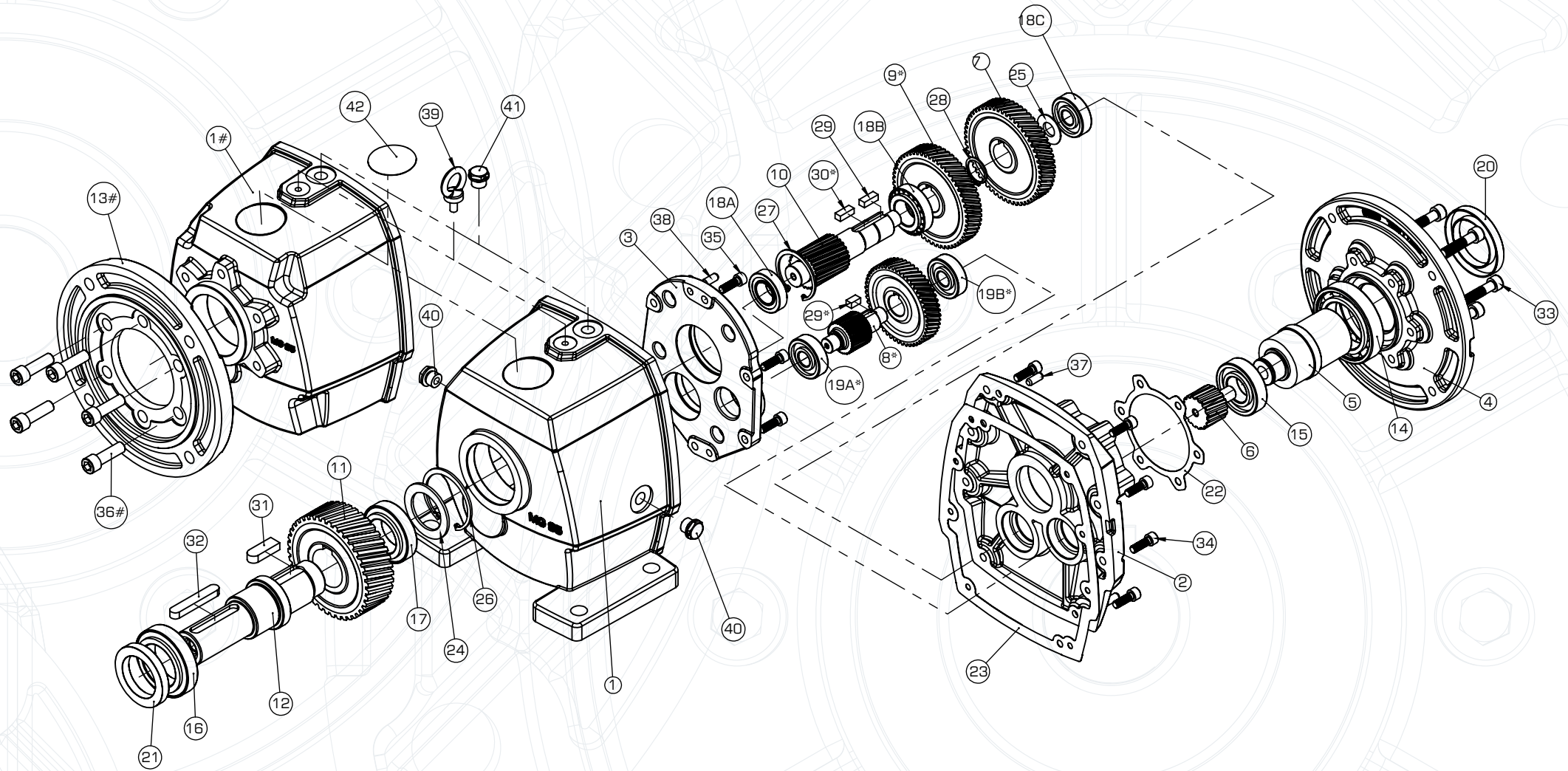


LIST OF COMPONENTS MG008 to MG030

| Item No. | Short Code | MG008 | | MG012 | | MG021 | | MG030 | |
|----------|------------|------------------------------------|-----|------------------------------------|-----|------------------------------------|-----|------------------------------------|-----|
| | | Description | QTY | Description | QTY | Description | QTY | Description | QTY |
| 1 | HO | Housing | 1 | Housing | 1 | Housing | 1 | Housing | 1 |
| 2 | IC | Input cover | 1 | Input cover | 1 | Input cover | 1 | Input cover | 1 |
| 3 | FL | Input flange | 1 | Input flange | 1 | Input flange | 1 | Input flange | 1 |
| 4 | P1 | Input shaft (with integral pinion) | 1 | Input shaft (with integral pinion) | 1 | Input shaft (with integral pinion) | 1 | Input shaft (with integral pinion) | 1 |
| 5 | G1 | Gear-1 | 1 | Gear-1 | 1 | Gear-1 | 1 | Gear-1 | 1 |
| 6* | P2 | Pinion – 2 | 1 | Pinion – 2 | 1 | Pinion - 2 | 1 | Pinion - 2 | 1 |
| 7* | G2 | Gear – 2 | 1 | Gear – 2 | 1 | Gear – 2 | 1 | Gear – 2 | 1 |
| 8 | P3 | Pinion – 3 | 1 | Pinion – 3 | 1 | Pinion – 3 | 1 | Pinion – 3 | 1 |
| 9 | G3 | Gear – 3 | 1 | Gear – 3 | 1 | Gear – 3 | 1 | Gear – 3 | 1 |
| 10 | SH | Output shaft | 1 | Output shaft | 1 | Output shaft | 1 | Output shaft | 1 |
| 11# | FL | Output flange | 1 | Output flange | 1 | Output flange | 1 | Output flange | 1 |
| 12 | BG | Bearing, 6203ZZ | 1 | Bearing, 6205ZZ | 1 | Bearing, 6205ZZ | 1 | Bearing, 6206ZZ | 1 |
| 13 | BG | Bearing, 6005ZZ | 1 | Bearing, 6007ZZ | 1 | Bearing, 6007ZZ | 1 | Bearing, 6009ZZ | 1 |
| 14 | BG | Bearing, 6005ZZ | 1 | Bearing, 6205ZZ | 1 | Bearing, 6206ZZ | 1 | Bearing, 6207ZZ | 1 |
| 15 | BG | Bearing, NA4900 | 1 | Brass bush (ID14xOD22) | 1 | Brass bush (ID18xOD26) | 1 | Bearing, 6203ZZ | 1 |
| 16A* | BG | Bearing, 6200 | 1 | Bearing, 6200 | 1 | Bearing, 6202 | 1 | Bearing, 6203 | 1 |
| 16B* | BG | Bearing, 6200 | 1 | Bearing, 6200 | 1 | Bearing, 6202 | 1 | Bearing, 6203 | 1 |
| 17A | BG | Bearing, 6200 | 1 | Bearing, 6200 | 1 | Bearing, 6202 | 1 | Bearing, 6203 | 1 |
| 17B | BG | Bearing, 6200 | 1 | Bearing, 6200 | 1 | Bearing, 6202 | 1 | Bearing, 6203 | 1 |
| 18 | SL | Oil seal 17x25x4 | 1 | Oil seal - 35x52x10 | 1 | Oil seal - 35x52x10 | 1 | Oil seal - 45x65x10 | 1 |
| 19 | SL | Oil seal - 25x40x7 | 1 | Oil seal -25x40x8 | 1 | Oil seal - 30x45x8 | 1 | Oil seal - 35x55x10 | 1 |
| 20 | GK | Gasket HOU+ICV | 1 | Gasket HOU+ICV | 1 | Gasket HOU+ICV | 1 | Gasket HOU+ICV | 1 |
| 21 | GK | - | 1 | Gasket ICV+IFL | 1 | Gasket ICV+IFL | 1 | Gasket ICV+IFL | 1 |
| 22 | CL | External Circlip A25 | 1 | External Circlip A25 | 1 | External Circlip A25 | 1 | External Circlip A30 | 1 |
| 23 | CL | - | 1 | External Circlip A25 | 1 | External Circlip A30 | 1 | External Circlip A35 | 1 |
| 24 | CL | Internal Circlip B52 | 1 | External Circlip A25 | 1 | External Circlip A30 | 1 | External Circlip A30 | 1 |
| 25* | CL | External Circlip A13 | 1 | External Circlip A12 | 1 | External Circlip A17 | 1 | External Circlip A19 | 1 |
| 26 | CL | External Circlip A13 & A14 | 1 | External Circlip A17 | 1 | External Circlip A17 | 1 | External Circlip A19 | 1 |
| 27 | KE | Key,output shaft | 1 | Key,output shaft | 1 | Key, output shaft | 1 | Key, output shaft | 1 |
| 28 | KE | Key for G3 | 1 | Key for G3 | 1 | Key for G3 | 1 | Key for G3 | 1 |
| 29 | KE | Key for G1 | 1 | Key for G1 | 1 | Key for G1 | 1 | Key for G1 | 1 |
| 30* | KE | Key for G2 | 1 | Key for G2 | 1 | Key for G2 | 1 | Key for G2 | 1 |
| 31 | SD | Dowel Pin D5x10L | 2 | Dowel Pin D6x18L | 2 | Dowel Pin D6x18L | 2 | Dowel Pin D8x20L | 2 |
| 32 | HB | Allen bolt - M5x16 | 6 | Allen bolt – M6x20 | 6 | Allen bolt – M8x20 | 6 | Allen bolt – M8x25 | 6 |
| 33 | HB | Allen bolt - M6x25 | 4 | Allen bolt – M6x20 | 6 | Allen bolt – M6x35 | 6 | Allen bolt – M8x40 | 6 |
| 34# | HB | Allen bolt - M4x12 | 5 | Allen bolt – M6x15 | 5 | Allen bolt – M6x30 | 5 | Allen bolt – M10x25 | 5 |
| 35 | OP | Oil Plug (Filler plug – 1/4") | - | Oil Plug (M10) | 1 | Oil Plug (M10) | 1 | Oil Plug (M10) | 1 |
| 36 | NP | Name Plate | 1 | Breathe Plug (M10) | 1 | Breathe Plug (M10) | 1 | Breathe Plug (M10) | 1 |

* In 3-stage only, # In flange mounting only

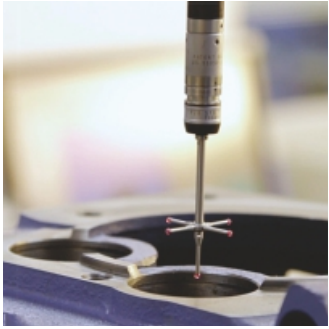
MG060 to MG300 - EXPLODED VIEW



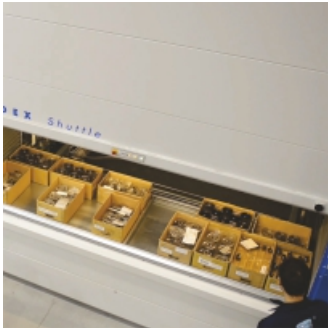
LIST OF COMPONENTS MG060 to MG300

| Item No. | Short Code | MG060 | | MG085 | | MG120 | | MG150 | | MG300 | |
|----------|------------|----------------------|-------|----------------------|-----|-----------------------------|-----|----------------------|-------|----------------------|-----|
| | | Description | QTY | Description | QTY | Description | QTY | Description | QTY | Description | QTY |
| 1 | HO | Housing | 1 | Housing | 1 | Housing | 1 | Housing | 1 | Housing | 1 |
| 2 | IC | Input cover | 1 | Input cover | 1 | Input cover | 1 | Input cover | 1 | Input cover | 1 |
| 3 | FL | Center Support | 1 | Center Support | 1 | (Monoblock housing) | 0 | Center Support | 1 | Center Support | 1 |
| 4 | FL | Input flange | 1 | Input flange | 1 | Input flange | 1 | Input flange | 1 | Input flange | 1 |
| 5 | SH | Input shaft | 1 | Input shaft | 1 | Input shaft | 1 | Input shaft | 1 | Input shaft | 1 |
| 6 | P1 | Pinion - 1 | 1 | Pinion - 1 | 1 | Pinion - 1 + Circlip | 1 | Pinion - 1 | 1 | Pinion - 1 | 1 |
| 7 | G1 | Gear-1 | 1 | Gear-1 | 1 | Gear-1 | 1 | Gear-1 | 1 | Gear-1 | 1 |
| 8* | P2 | Pinion - 2 | 1 | Pinion - 2 | 1 | Pinion - 2 | 1 | Pinion - 2 | 1 | Pinion - 2 | 1 |
| 9* | G2 | Gear - 2 | 1 | Gear - 2 | 1 | Gear - 2 | 1 | Gear - 2 | 1 | Gear - 2 | 1 |
| 10 | P3 | Pinion - 3 | 1 | Pinion - 3 | 1 | Pinion - 3 | 1 | Pinion - 3 | 1 | Pinion - 3 | 1 |
| 11 | G3 | Gear - 3 | 1 | Gear - 3 | 1 | Gear - 3 | 1 | Gear - 3 | 1 | Gear - 3 | 1 |
| 12 | SH | Output shaft | 1 | Output shaft | 1 | Output shaft | 1 | Output shaft | 1 | Output shaft | 1 |
| 13# | FL | Output flange | 1 | Output flange | 1 | Output flange | 1 | Output flange | 1 | Output flange | 1 |
| 14 | BG | Bearing, 6009ZZ | 1 | Bearing, 6011ZZ | 1 | Bearing, 6212ZZ | 1 | Bearing, 6013ZZ | 1 | Bearing, 6014ZZ | 1 |
| 15 | BG | Bearing, 6206ZZ | 1 | Bearing, 6206ZZ | 1 | Bearing, 6211ZZ | 1 | Bearing, 6207ZZ | 1 | Bearing, 6207ZZ | 1 |
| 16 | BG | Bearing, 32008 | 1 | Bearing, 32010 | 1 | Bearing, 6310ZZ | 1 | Bearing, 32012 | 1 | Bearing, 33013 | 1 |
| 17 | BG | Bearing, 32006 | 1 | Bearing, 32008 | 1 | Bearing, 6209ZZ | 1 | Bearing, 32010 | 1 | Bearing, 33109 | 1 |
| 18A | BG | Bearing, 30204 | 1 | Bearing, 32005 | 1 | 7305(2-stg) / 6305ZZ(3-stg) | 1 | Bearing, 32006 | 1 | Bearing, 32207 | 1 |
| 18B | BG | Bearing, 30205 | 1 | Bearing, 32006 | 1 | 7305(2-stg) / 6305(3-stg) | 1 | Bearing, 32007 | 1 | Bearing, 30209 | 1 |
| 18C | BG | Bearing, 6202 | 1 | Bearing, 6303 | 1 | - | - | Bearing, 6304 | 1 | Bearing, 6305 | 1 |
| 19A* | BG | Bearing, 6202 | 1 | Bearing, 6303 | 1 | Bearing, 6205 | 1 | Bearing, 6304 | 1 | Bearing, 3205 | 1 |
| 19B* | BG | Bearing, 6202 | 1 | Bearing, 6303 | 1 | Bearing, 6205ZZ | 1 | Bearing, 6304 | 1 | Bearing, 6305 | 1 |
| 20 | SL | Oil seal - 45x65x9 | 1 | Oil seal - 55x80x10 | 1 | Oil seal - 60x90x10 | 1 | Oil seal - 65x90x12 | 1 | Oil seal - 70x90x10 | 1 |
| 21 | SL | Oil seal - 40x55x8 | 1 | Oil seal - 50x72x8 | 1 | Oil seal - 60x110x13 | 1 | Oil seal - 60x85x10 | 1 | Oil seal - 65x90x12 | 1 |
| 22 | GK | Gasket ICV+IFL | 1 | Gasket ICV+IFL | 1 | Gasket ICV+IFL | 1 | Gasket ICV+IFL | 1 | Gasket ICV+IFL | 1 |
| 23 | GK | Gasket HOU+ICV | 1 | Gasket HOU+ICV | 1 | Gasket HOU+ICV | 1 | Gasket HOU+ICV | 1 | Gasket HOU+ICV | 1 |
| 24 | SP | External Circlip A40 | 1 | Spacer | 1 | Spacer | 2 | Spacer | 1 | Spacer | 1 |
| 25 | SP | Spacer | 1 | Spacer | 1 | Spacer | 1 | Spacer | 1 | Spacer | 1 |
| 26 | CL | Internal Circlip B55 | 1 | Internal Circlip B68 | 1 | External Circlip A45 | 1 | Internal Circlip B80 | 1 | Internal Circlip B80 | 1 |
| 27 | CL | Internal Circlip B52 | 1 | Internal Circlip B55 | 1 | Internal Circlip B52 | 1 | Internal Circlip B62 | 1 | Internal Circlip B85 | 1 |
| 28 | CL | External Circlip A24 | 2 / 1 | External Circlip A28 | 1 | Internal Circlip B52 | 1 | External Circlip A34 | 2 / 1 | External Circlip A42 | 1 |
| 29 | KE | Key for G1 | 1 | Key for G1 | 1 | Key for G1 | 1 | Key for G1 | 1 | Key for G1 | 1 |
| 30* | KE | Key for G2 | 1 | Key for G2 | 1 | Key for G2 | 1 | Key for G2 | 1 | Key for G2 | 1 |
| 31 | KE | Key for G3 | 1 | Key for G3 | 1 | Key for G3 | 1 | Key for G3 | 1 | Key for G3 | 1 |
| 32 | KE | Key, Ouput shaft | 1 | Key, Ouput shaft | 1 | Key, Ouput shaft | 1 | Key, Ouput shaft | 1 | Key, Ouput shaft | 1 |
| 33 | HB | Allen bolt - M8 | 6 | Allen bolt - M10 | 6 | Allen bolt - M10 / M14 | 4 | Allen bolt - M10 | 6 | Allen bolt - M12 | 6 |
| 34 | HB | Allen bolt - M8x35 | 6 | Allen bolt - M8x25 | 8 | Allen bolt - M10x25 | 6 | Allen bolt - M10x35 | 8 | Allen bolt - M12x35 | 8 |
| 35 | HB | Allen bolt - M8x35 | 6 | Allen bolt - M8x30 | 6 | Allen bolt - M10x20 | 1 | Allen bolt - M8x35 | 6 | Allen bolt - M10x40 | 6 |
| 36# | HB | Allen bolt - M10x25 | 5 | Allen bolt - M12x30 | 5 | Allen bolt - M14x35 | 6 | Allen bolt - M12x30 | 5 | Allen bolt - M12x35 | 5 |
| 37 | SD | Dowel Pin D8x20L | 2 | Dowel Pin D8x20L | 2 | Allen bolt - M6x14(TCV) | 7 | Dowel Pin D10x20L | 2 | Dowel Pin D10x25L | 2 |
| 38 | SD | Dowel Pin D8x20L | 2 | Dowel Pin D8x20L | 2 | - | - | Dowel Pin D8x20L | 2 | Dowel Pin D10x25L | 2 |
| 39 | EB | - | - | Eye Bolt - M8 | 1 | Eye Bolt - M10 | 1 | Eye Bolt - M8 | 1 | Eye Bolt - M10 | 1 |
| 40 | OP | Oil Plug | - | Oil Plug | - | Oil Plug | - | Oil Plug | - | Oil Plug | - |
| 41 | OP | Oil Plug | - | Oil Plug | - | Oil Plug | - | Oil Plug | - | Oil Plug | - |
| 42 | NP | Name Plate | 1 | Name Plate | 1 | Name Plate | 1 | Name Plate | 1 | Name Plate | 1 |

* In 3-stage only, # In flange mounting only



Co-ordinate Measuring Machine



KARDEX for Gear Storage



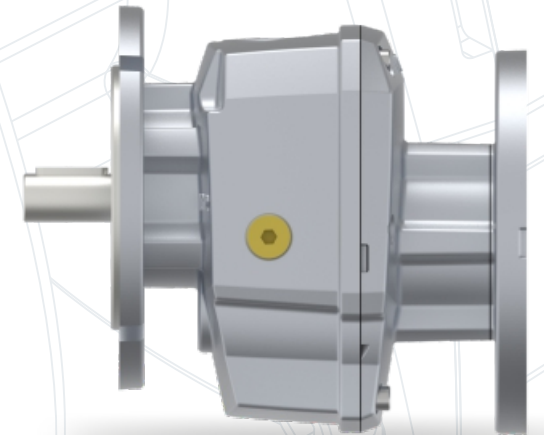
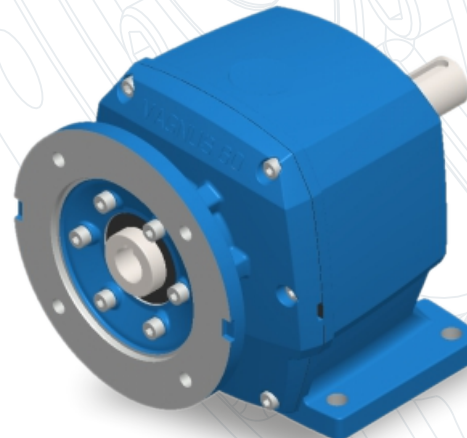
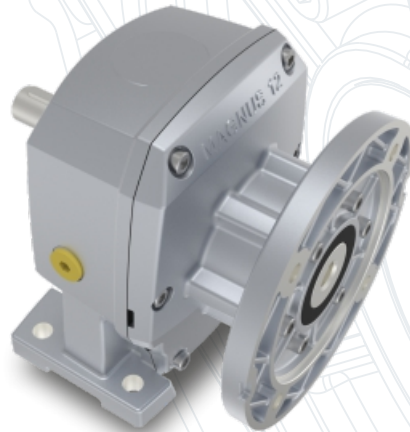
Magnifying Glass To Check Gear

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We also have an advanced testing facility for type testing motors and gearboxes which enables us to plot accurate speed torque curves and carry out temperature rise tests and other type tests as per IEC 60034/IS: 325 & IS: 12615



Motor manufacturing facility, India



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