

GENERAL SPECIFICATIONS for DODGE MAGNAGEAR Speed Reducers to 920,000 in-lbs

MagnaGear speed reducers are a 2 or 3 stage reduction in a parallel or right angle shaft configuration.

Gearing type is helical, bevel helical and planetary.

Output shaft is solid or hollow with a twin taper bushing.

Mounting configurations include foot or shaft mounting and standard mounting accessories include solid base, swing base and tunnel housing. Cooling systems include a shaft mounted fan, electric fan or external cooling system with a water to oil or air to oil heat exchanger.



Gearing

MagnaGear sizes G100 through G390 utilize helical or bevel helical gearing.

Sizes G525 through G920 utilize helical or bevel helical gearing with a planetary gear output.

Gear materials are a carburizing grade alloy steel which meets an AGMA Grade 2 standard. All gearing is case carburized to ensure a high surface durability and resilient tooth core for greater impact resistance and longer service life.

Bevel, helical, planet gears and sun pinion are ground after heat treating and carburizing to an AGMA Q11 minimum quality level. Gear quality is equivalent to DIN Grade 6 standard.

Castings

MagnaGear housings are constructed of Class 30 gray iron. Housings are suitable for horizontal output shaft mounting on 4 sides. The same housings are used for parallel and right angle reducers.

Housings are a mono-block construction. MagnaGear sizes G525 and larger have oversized assembly covers for ease of maintenance. All housings include bolted end covers instead of bore plugs. Housings and assembly covers are precision matched to ensure proper gear alignment.

Housings include cast cooling fins for greater thermal horsepower capabilities.

Pipe fittings and plugs are NPT.

Lubrication

Gearing is splash and dip lubricated. Bearings are lubricated by dip and by gravity feed.

Mineral based EP oils are the preferred lubricant, suitable for operating temperatures up to 200°F (93°C) as well as for low ambient temperatures down to 25°F (-4°C). For applications outside this temperature range, synthetic lubricants which are suitable for operating temperatures up to 212°F (100°C) as well as for low ambient temperatures down to -15°F (-26°C) may be used. Recommended oil viscosity ISO grade is 220EP to 320EP, depending on output RPM and ambient temperature.

MagnaGear reducers are compatible with rust and oxidation inhibiting (R&O) and polyalpha olefin (PAO) lubricants.

Oil sampling ports are standard.

Bearings

Bearings are spherical type on planetary gears, all others are tapered roller type.

Bearings ratings are based on a minimum unadjusted L-10 life of 5000 hours, providing a minimum 25,000 hours average life.

Sealing

Input and output shaft seals are a tandem radial lip arrangement. Between the tandem seals is a grease purge cavity.

Seals are constructed of hydrogenated nitrile butadiene rubber (HNBR).

Shafts

MagnaGear sizes G100 through G390 are available with a twin taper bushing hollow output shaft. The taper bushing is manufactured from ductile iron.

Shaft extensions are metric dimensions to conform to global standards.

Backstops

Backstops are a centrifugal throw out, lift off, design which eliminates sprag sliding and reduces wear. Backstops are integrally mounted on the input shaft of parallel MagnaGear reducers or on the intermediate shaft of right angle reducers.

Backstops are lubricated by the oil in the reducer and are EP and synthetic oil compatible.



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