



Product Brochure

# MagnaGear XTR<sup>®</sup> reducers



We provide motors, generators and mechanical power transmission products, services and expertise to save energy and improve customers' processes over the total lifecycle of our products, and beyond.



# Reliable. Easy to maintain. Maximum value.

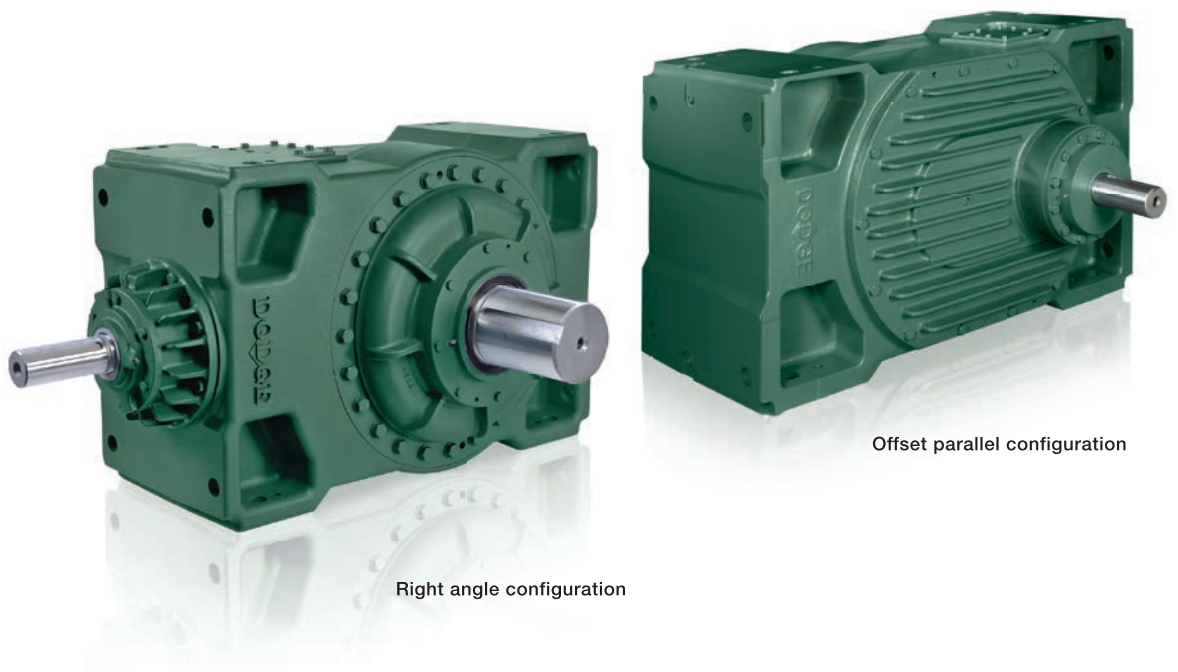
The Dodge® MagnaGear XTR® engineered with Dodge proven planetary and helical gear technology is the ultimate advancement in speed reducers

MagnaGear XTR reducers simple power-dense design offers torque ratings from 11,300 Nm to 237,000 Nm (100,000 to 2,100,000 lb-in) assuring increased reliability in a more compact, economical, heavy-duty package. With this torque range, MagnaGear XTR reducers will accommodate ratings of over 3,300 kW (4,400 hp), helping make this reducer line well-suited for a variety of high torque applications.

MagnaGear XTR reducers are designed to meet or exceed

AGMA minimum bearing life. This results in a projected bearing life which more than doubles that of many competitor's reducers. Plus, with the MagnaGear XTR reducers' standard, premium quality, tandem sealing system and improved cooling system, you can always depend on low-maintenance operation and maximum value for your money.

MagnaGear XTR reducers are ideal for rugged environments and, with their universal housing, they can be configured and mounted to suit your application.



Right angle configuration

Offset parallel configuration

# Design elements and proven Dodge® features provide rugged performance at a lower cost

## Longer-life bearings

Bearing designs meet or exceed AGMA standards, resulting in projected L-10 life over twice that of other competitors.

## Tandem lip seals

Working together, MagnaGear XTR® reducer's standard, premium quality lip seals provide high temperature protection and twice the sealing power to contain lubricant and protect against contaminants.

## Power-dense design

Heavy-duty, power-dense design gives you more power in less space and proven Dodge Planetary Gearing.

## Universal housing

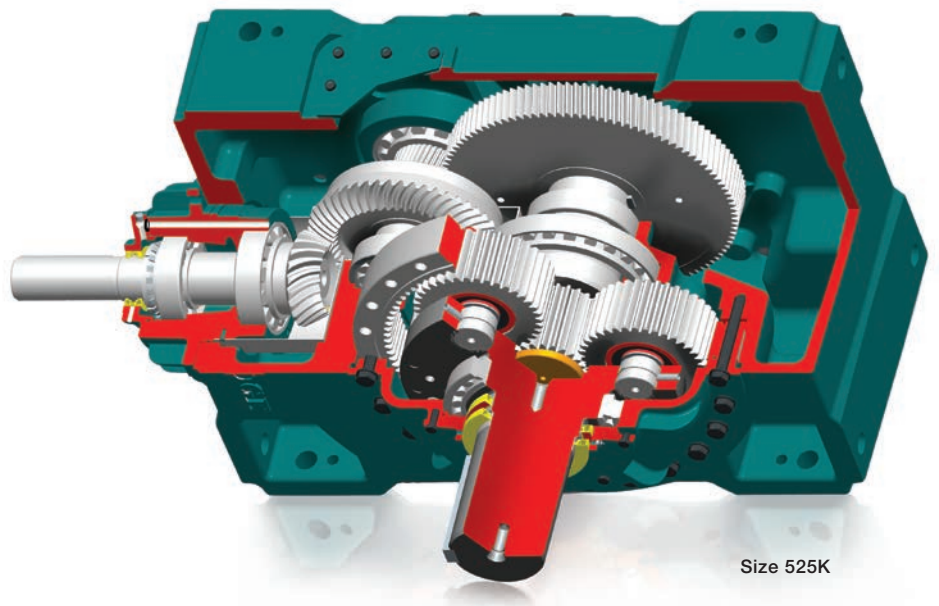
Mono-block housing with multiple mounting pads allows a variety of mounting configurations and is flippable to minimize spares.

## Finned bevel input

Housing has a finned bevel input for maximum heat dissipation.

## Oversized inspection covers

Oversized inspection covers on the MagnaGear XTR reducer housing allows easy accessibility.



## MagnaGear XTR advantages

- Maximum reliability
- Proven Dodge reducer technology
- Longer bearing life
- Premium seal arrangement
- Premium gearing designed with FEA (Finite Element Analysis) computer modeling
- Improved heat dissipation
- Capabilities exceeding 3,300 kW (4,400 hp)
- Lower total cost of ownership
- Easy maintenance
- Backstops are synthetic and EP oil compatible

**18.5 - 3,300 kW (25 – 4,400 hp),  
Ten sizes**

With their rugged cast-iron housings and mono-block design, the Dodge® MagnaGear XTR® reducers offer a variety of horsepowers and convenient sizes to fit most applications.

**Higher torque capacities**

Unmatched in their features and capabilities, Dodge MagnaGear XTR reducers provide torque capacities from 11,300 Nm to 237,000 Nm (100,000 to 2,100,000 lb-in). Sizes represent Torque Rating x 112.96 Nm (1000 lb-in).

Example: 59,304 Nm (525,000 lb-in)

**Multiple configurations for the perfect fit**

Dodge MagnaGear XTR reducers are available in parallel shaft or right-angle configurations with solid or hollow output shafts. Sizes 390K and below hollow shaft option features the Dodge patented twin-tapered bushing system, which minimizes wobble for longer life and is also easy to install and remove. They also come in several mounting configurations including swing-base and tunnel housings to suit your applications. The universal housing reversible mounting gives you the option of right hand or left hand mounting for flexibility and minimizing spares.

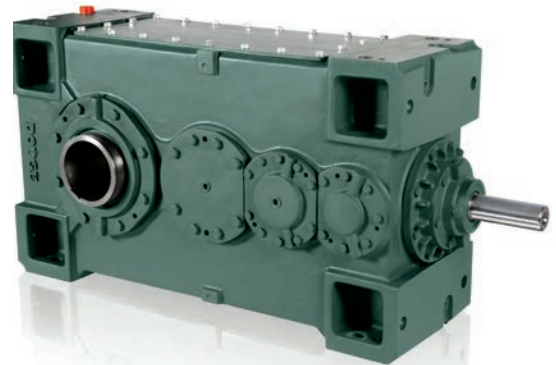
**Engineered to handle the toughest environments**

MagnaGear XTR reducers complement the Dodge gear family of products and are ideal for bulk material handling in dirty, dusty, harsh environments. They can be found in the mining, aggregate, grain, power plant, and wood products industries in a wide range of applications.

- Conveyors
- Bucket elevators
- Crushers/Breakers
- Feeders
- Mills/Kilns



**525 Right angle solid shaft**



**285 Right angle hollow shaft**

MagnaGear XTR model	Nominal output torque lb-in @ 1,0 SF	Nominal output torque N-m @ 1,0 SF
100K	100,000	11,300
150K	150,000	16,950
210K	210,000	23,750
285K	285,000	32,200
390K	390,000	44,000
525K	525,000	59,300
700K	700,000	79,100
920K	920,000	104,000
1400K	1,400,000	158,000
2100K	2,100,000	237,000

Various ratios are available ranging from 8:1 to 63:1 depending on model & configuration.

Size 525 and up:  
Planetary output 59,300-237,000 Nm (525,000-2,100,000 lb-in)

Size 390 and lower:  
Helical output 11,300-44,065 Nm (100,000-390,000 lb-in)

# Features and accessories

## Bushings

First introduced on the Dodge® Torque-Arm® speed reducer, the patented twin-tapered bushing system provides easy-on/easy-off mounting for hollow shaft reducers. A tapered bore in both sides of the reducer's output hub fits snugly against a matching taper on the outer surface of the bushing. This helps deliver maximum torque and shock load capability, while reducing wobble and helping to eliminate driven shaft damage.

This unique concept has revolutionized the industry by helping keep reducers from seizing to the driven shaft.

## Tandem seals

On most competitive units, two seals are offered only as an option. However, two seals are standard equipment on the Dodge MagnaGear XTR® reducer. Working together, these seals provide high temperature protection and twice the sealing power. They feature an inner seal and an excluder seal to prevent contamination. Plus, they incorporate premium seal material for longer life while minimizing shaft wear. The standard purgeable grease cavity provides the additional protection needed for long life.

## Housing/Covers

Unlike typical competitors, the housing on these reducers features large access covers. In addition, the end plates are bolted – not plugged. This allows quick access into the unit for easier maintenance.

## Condition monitoring

Provisions for three-axis heat/vibration monitoring assure reliable performance.

## Unique cooling system

System's design keeps unit cooler so it runs longer and smoother, helps lower energy usage for greater savings.

## Power-matched components

Components are power matched for optimum performance at a lower installed cost.



In addition to their proven technology and high-performance design features, Dodge® MagnaGear XTR® reducers offer a complete line of engineered accessories for greater versatility.

- Internal lift-off style backstops
- Shaft fans
- Electric fans
- Alternative cooling packages
- Swing-base mounts
- Tunnel drive configurations
- Torque arms
- Base plates
- Variety of input and output couplings



# Contact:

[www.abb.com/mechanicalpowertransmission](http://www.abb.com/mechanicalpowertransmission)

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