

INDUSTRY

Grain Handling

Proven solutions to maximize productivity and safety



Your trusted partner

The rich Dodge® legacy of innovation, safety, and quality has been unmatched in the industry since 1878. From inventing the concept of shaft mounting a gear reducer to over a century of mounted bearing leadership, our mechanical power transmission products have been meticulously engineered to thrive in the harshest, most demanding grain applications.

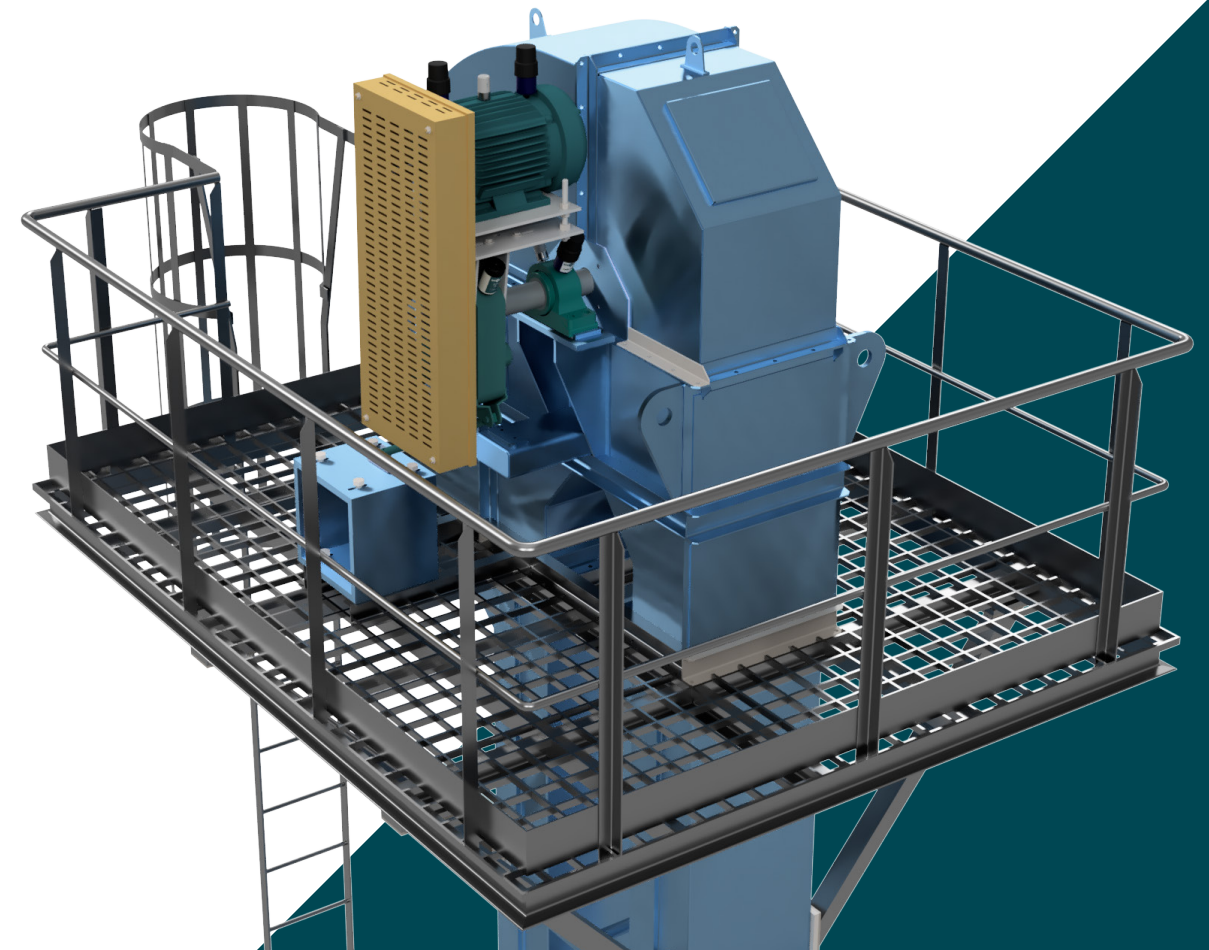
Whether you transport, store, mill, or mix it, you rely on equipment to move material throughout your operations with systems that perform in rigorous conditions while keeping everyone safe. With decades of experience in the grain industry and bulk material handling applications, we understand the challenges you face and are committed to providing you with reliable, tailored solutions with built-in features to prevent contamination, reduce maintenance, enhance on-site safety, and maximize production.

Superior solutions and expertise to feed productivity

From bucket elevators lifting material vertically for storage to screw and drag conveyors transporting material horizontally from one process to another, our field-proven solutions keep grain moving throughout all phases of production.

Grain facilities are dusty, extremely demanding environments with high shock loads that put the performance and reliability of driven equipment to the test. We don't cut corners with our products, engineering each for the longest product life possible.

Leveraging over 145 years of Dodge engineering expertise with our ability to build pre-assembled packages and unmatched product availability, we can provide you with the best solution for your exact application requirements.



Gearing solutions for maximum performance

No matter the specific grain material you need to transport, mill, or process, a reliable and efficient drive system is critical to the success of your operations.

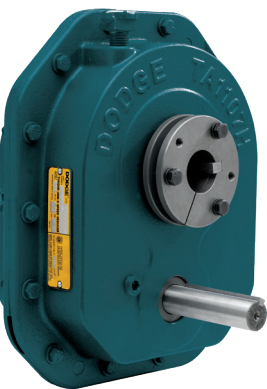
Our expansive offering of rugged gear reducers is unmatched and provides you with proven solutions that have outperformed the competition for decades—feeding productivity and maximizing uptime.



TXT®

Introduced in 1949 as the first shaft-mount reducer, it's engineered to be a rugged, belt-driven solution to tackle the most demanding applications. It continues to set the industry benchmark for performance and safety that other shaft-mounted reducers strive to be.

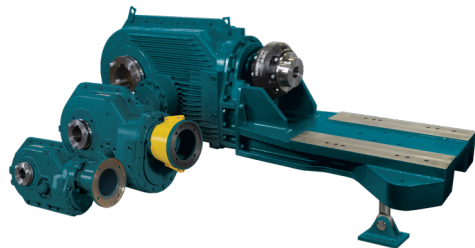
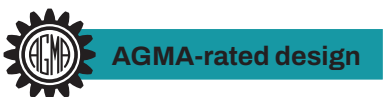
- Sizes support drive packages up to 700 hp (525 kW)
- Flexible mounting options maximize versatility and optimize inventory: shaft mount, flange mount, vertical mount, hydraulic, and screw conveyor drive
- Severe-duty backstop designed to operate with extreme pressure (EP) lubricant to minimize internal component wear
- Premier sealing system with patented, durable oil seals with filter breather to protect against contamination ingress
- Patented twin-tapered bushings allow for easy mounting and dismounting



Torque-Arm II (TA II)

The dependable shaft-mount reducer is designed for best-in-class efficiency and unparalleled torque ratings—increasing your productivity and uptime. It includes patented, heavy-duty features to be an adaptable gearbox capable of withstanding heavy shock loads and harsh operating conditions.

- Sizes support drive packages up to 400 hp (300 kW)
- Flexible mounting options maximize versatility and minimize inventory: shaft mount, flange mount, vertical mount, and screw conveyor drive
- Severe-duty backstop designed to operate with EP lubricant to minimize internal component wear
- Patented Hydrogenated Nitrile Butadiene Rubber (HNBR) sealing system with metal shield and excluder lip for extended wear in extreme environments with high contamination levels
- Patented twin-tapered bushings allow for easy mounting and dismounting



Motorized Torque-Arm (MTA)

Built for industry-leading performance in a compact design, it's a right-angle, direct-drive reducer offering the highest torque ratings per case size for reduced power consumption to optimize system efficiency. The shaft-mounted reducer is easy to install, and its heavy-duty construction provides you with reliability for less required maintenance—maximizing uptime and lowering your total cost of ownership.

- Sizes support drive packages up to 200 hp (150 kW)
- Multiple input adapter options to fit both flanged and foot-mounted motors
- Severe-duty backstop designed to operate with EP lubricant to minimize internal component wear
- Patented HNBR sealing system with metal shield and excluder lip for extended wear in extreme environments with high contamination levels
- Patented twin-tapered bushings allow for easy mounting and dismounting



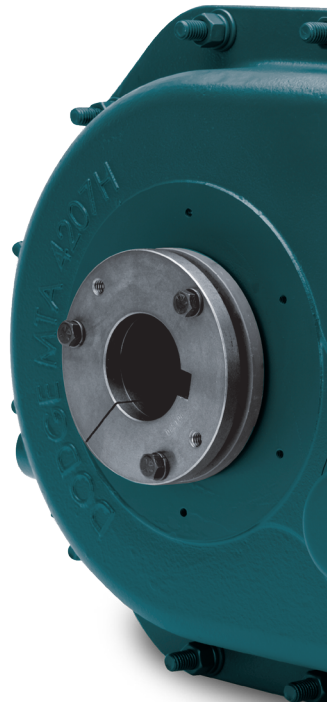
Twin-tapered bushing system

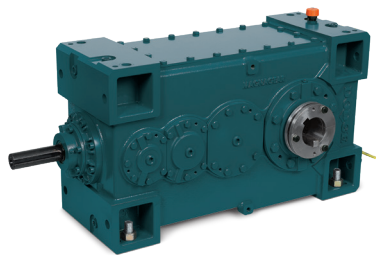
Available and trusted for over 50 years in our gearboxes, our patented twin-tapered bushing system is designed with two fully split, eight-degree taper bushings. It offers easy installation and guaranteed gearbox removal without requiring cutting the reducer off the shaft—saving the reducer and shaft, improving reliability, and maximizing uptime.

- | | |
|--|---|
| • Simplifies installation and removal | • Available in inch and metric bores |
| • Mitigates shaft-to-reducer fretting | • Increased bore capability in many sizes |
| • Eliminates eccentricity and wobble | • Shaft-ready out of the box |
| • Available in standard and short-shaft versions | • Lowers total cost of ownership |



Don't end up like this!
See how easy it is to
remove a gearbox with
twin-tapered bushings.





AGMA-rated design

MagnaGear XTR®

Ideally suited for the most demanding bulk material handling applications, it's a power-dense reducer offering superior torque ratings with best-in-class reliability for long-term value. Its planetary and helical gearing designs provide you with a compact solution that thrives in challenging environments—outlasting the competition to maximize your productivity.

- Sizes support drive packages up to 2,500 hp (2 MW)
- Offered in offset-parallel and right-angle configurations to maximize application versatility and optimize inventory
- Tunnel-housing design is self-aligning between the motor, coupling, and reducer to optimize performance, extending product life
- Patented HNBR sealing system with metal shield and excluder lip for extended wear in extreme environments with high contamination levels
- Patented twin-tapered bushings are available, allowing for easy mounting and dismounting



AGMA-rated design

Maxum® XTR

A power-dense concentric reducer that delivers high torque ratings and best-in-class reliability. Its harsh-duty features provide you with a solution that excels in the most demanding conditions and outlasts the competition for maximum operation uptime.

- Sizes support drive packages up to 1,165 hp (870 kW)
- Multiple mounting configurations maximize application versatility: top motor mount, scoop mount, slide base, and custom base plate
- Heavy-duty backstop provides reliable holding power and is easy to maintain—maximizing on-site safety and minimizing downtime
- High-precision, carburized and ground gearing design optimizes contact to reduce stress and maximize efficiency
- Tandem sealing system with HNBR oil seal and auxiliary seal with purgeable grease cavity provide premier protection and minimize shaft wear in high-heat and high-contaminate environments

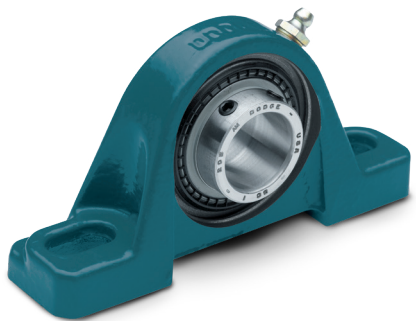


Mounted bearings

Our full portfolio of mounted bearings is the largest and most innovative in the industry with patented designs for enhanced performance, improved safety, and maximum reliability—offering you solutions that combat common application challenges, like shaft misalignment and contamination, with the lowest total cost of ownership.

With our world-class manufacturing in the USA, our mounted bearings are unequalled in quality, availability, and features—making Dodge the trusted choice for operations for more than a century.

Ball



Extreme Duty

Extreme Duty mounted ball bearings are the proven solution to tackle the toughest industrial applications. Designed with a QuadGuard seal and patented Maxlife cage, the bearings maintain adequate amounts of clean grease—outperforming the competition’s products that unsuccessfully attempt to handle harsh, high-contamination environments.

Attachment method
Set screw, eccentric collar, concentric collar

Standard seal
QuadGuard

Spherical roller



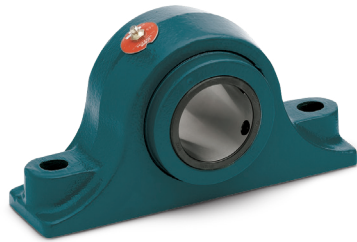
Safety Mount®

Safety Mount features a patented push-pull adapter mounting system for easy installation and removal without the use of feeler gauges or risk of damaging the shaft. The solution is available in a variety of housing styles and is dimensionally interchangeable with competitive mounted bearings—providing consistent, high-quality performance to be suitable for a wide range of challenging bulk material handling applications.

Attachment method
Tapered adapter

Standard seal
Trident™

Tapered roller

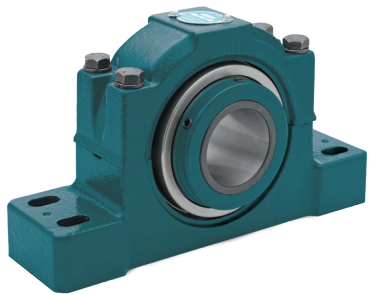


Type E

The high-capacity upgrade to mounted ball bearings, capable of handling heavy loads and providing long-lasting, reliable performance in demanding applications.

Attachment method
Set screw

Standard seal
XTS



TAF

Engineered to be a drop-in replacement for SAF-style pillow block mounted bearings with the extra strength needed for demanding applications, it can be quickly installed while requiring up to 75 percent less grease to be a powerful, efficient option for applications moving bulk material.

Attachment method
Set screw

Standard seal
XTS



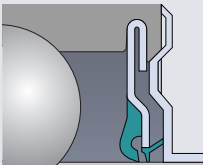
Harsh Duty™

The Harsh Duty series takes reliability to the next level by offering Type E and TAF with upgraded features, like the premier ArmorTect sealing system, for maximum protection in the harshest environments. Ideal for applications with heavy particulates, such as grain, the Harsh Duty series is the premier solution to keep your equipment moving no matter what your operations throw at it.

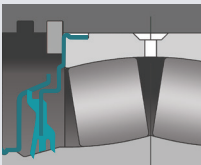
Attachment method
Set screw

Standard seal
ArmorTect

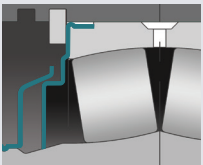
Innovative sealing solutions



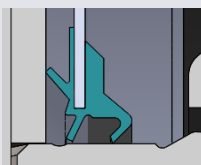
QuadGuard seal
Triple-lip seal with a rubberized flinger for added protection against contaminants in extremely harsh environments.



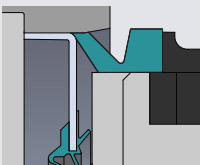
Trident seal
Triple-lip rubbing seal with seal land that maintains full contact even when misaligned, being extremely effective in dirty, low- to medium-speed applications.



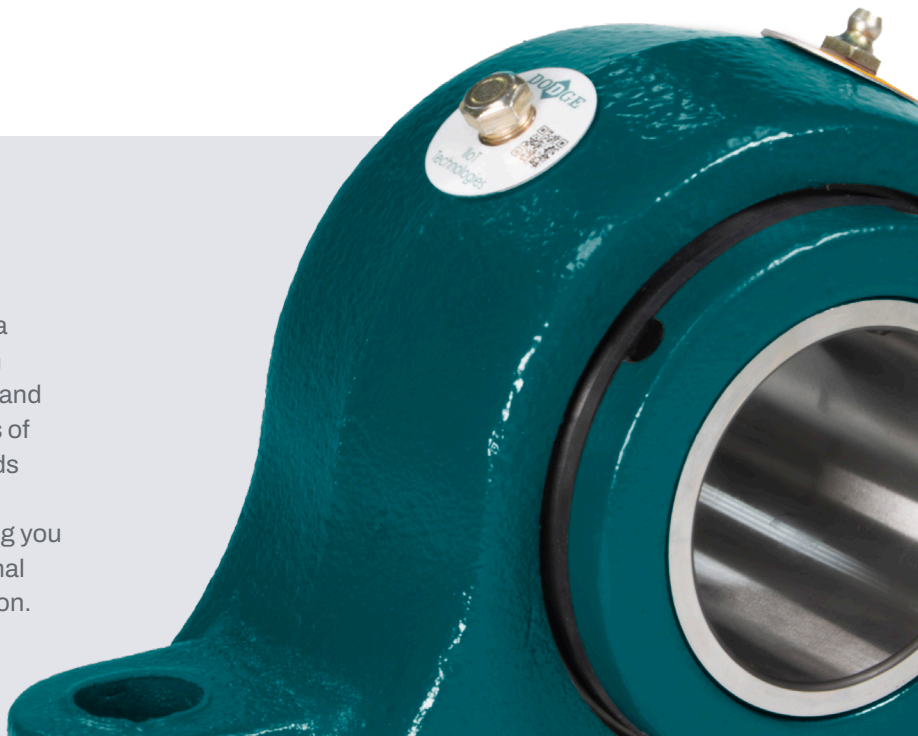
Labyrinth seal
With corrosion-resistant flingers and steel clearance seals, the seal is ideal for high-speed and high-operating temperature applications.



XTS seal
Mechanically retained, triple-lip seal maximizes protection from contamination and grease retention in demanding environments.



ArmorTect seal
The ArmorTect sealing system, a premium option only available in the Harsh Duty series of Type E and TAF, is designed with four points of seal contact and two trash guards to prevent contamination in the harshest applications—providing you with a superior solution for optimal performance and grease retention.



Power transmission components

Couplings, mechanical drives, and pulleys are vital to keeping grain material moving to its next destination in your operations.

Engineered for premier performance, the expansive line of components offers the strength and endurance needed to keep production smoothly flowing.



Raptor elastomeric coupling

- Split-tire design for easy maintenance and interchangeability with competitive couplings
- Patented WingLock design maximizes fatigue resistance for up to six times longer life than the polyurethane tire couplings
- Industry-leading combined angular and parallel misalignment capabilities
- Natural-rubber element dampens vibration for enhanced driven equipment reliability
- 5-year limited warranty, even when used with other manufacturers’ components



Grid-Lign® metallic couplings

- Torque-dense design supports up to 8,250,000 lb-in (930,000 Nm) of torque
- Multiple shaft attachment methods to maximize versatility: clearance fit, interference fit, and Taper-Lock® bushed
- Engineered for maximum combined angular and parallel misalignment and vibration damping capabilities
- Utilizes a 65-degree set screw angle to maximize holding power for both radial and axial loads
- Interchangeable with Falk tapered grid couplings



Mechanical drive components

- Both classical (A, B, and C) and DV wedge (3V, 5V, and 8V) belts available
- Various offerings of synchronous drive packages led by HT500, a modified curvilinear-tooth profile
- Full line of Taper-Lock and QD sheaves and bushings available



Pulleys

- Full line of robust drum and wing pulleys available off the shelf to support a variety of applications from stock
- Single- or double-disc elevator pulleys
- High-compression XT tapered hubs or keyless locking devices available
- Multiple lagging options available: D-Lag, styrene-butadiene rubber (SBR), replaceable side lagging, vulcanized, and cold-bonded ceramic



D-Lag

Our proprietary D-Lag features maximum resistance to abrasions, cuts, and gouges with an improved coefficient of friction and low-temperature flexibility—delivering up to two times greater life than standard SBR lagging.

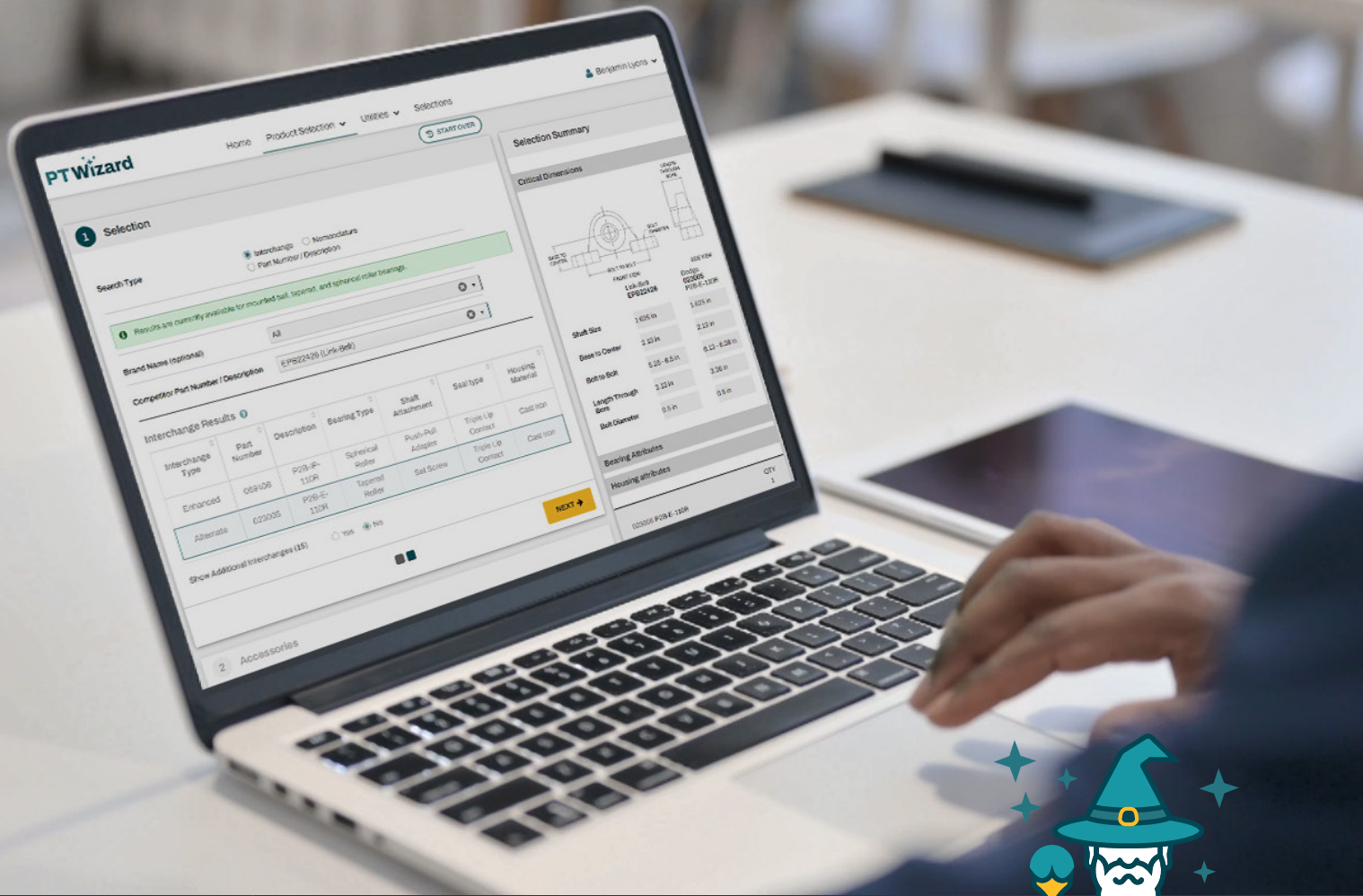
Application versatility

Product		Application			
		Bucket elevator	Screw conveyor	Drag conveyor	Other applications
Gearing	Tigear®-2	—	—	—	✓
	Quantis®	✓	✓	✓	✓
	Maxum XTR	—	✓	✓	✓
	TXT	✓	✓	✓	✓
	TA II	✓	✓	✓	✓
	MTA	✓	✓	✓	✓
	MagnaGear XTR	✓	—	—	✓
Mounted bearings	Ball bearings	✓	✓	✓	✓
	Safety Mount	✓	✓	✓	✓
	Type E	✓	✓	✓	✓
	TAF	✓	✓	✓	✓
Power transmission components	Pulleys	✓	—	—	✓
	Couplings	✓	—	✓	✓
	Sheaves, bushings, belts	✓	✓	✓	✓
	Synchronous drives	✓	✓	✓	✓

Save time and money, like magic

Backed by over 145 years of engineering excellence, PT Wizard is the easy-to-use program that provides a guided experience with built-in tools at your fingertips to ensure you can quickly find the exact solution you need.

- Product selection
- Competitive interchange
- Belt conveyor design tool
- Bearing grease calculator



Start designing your belt conveyor system at ptwizard.com



Your one-stop-shop for packaged solutions

System1™ offers you an integrated, single source solution for all your mechanical power transmission needs in bulk material handling applications.

At Dodge, we have the expertise and tools to assist with system design and optimized product selection to provide you with a customized, packaged solution for your exact requirements—making your grain project a success.



One system, one source, one solution

System1 empowers you to save time and money by offering complete, factory-assembled packages ready to install on your equipment with a single invoice, warranty, and point of contact.

To streamline your on-site installation requirements, a package can include motors, couplings, gear reducers, bases, guarding, drive components, shafting, bushings, conveyor pulleys, and mounted bearings.



Backed by a 3-year warranty

Complete packages designed in PT Wizard or by a System1 engineer include a 3-year warranty for ultimate peace of mind.



Connected technologies to work smarter, not harder

OPTIFY™, our portfolio of Industrial Internet of Things (IIoT) solutions, allows you to easily monitor the overall health of your power transmission equipment and gain powerful insights—letting you know when maintenance is needed before it's too late.

Performance Sensor

Built on the proven success of Dodge sensors, the specialized wireless sensor remotely captures temperature, vibration, and speed measurements in your mounted bearings, gear reducers, and motors for complete powertrain condition monitoring.



Intelli-Lube®

The premier automatic, connected lubricator that effortlessly extends the life of your bearings by replacing your manual lubrication process—streamlining maintenance, lowering costs, and improving safety with the right grease, volume, and interval every single time.



Breather

The connect breather solution is engineered to eliminate gearbox contamination and allows you to tap into the power of the OPTIFY platform for remotely monitoring breather health—enhancing gearbox reliability and simplifying on-site maintenance.



Platform

Take the guesswork out of work with the free OPTIFY condition monitoring platform that empowers you with overall health indicators of your assets anytime, anywhere through its web portal or mobile app—providing you with a continuous flow of data for safe, hands-free gathering of measurements.



Scan to access the OPTIFY platform or visit dodgeoptify.com

The mobile app is available at:





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