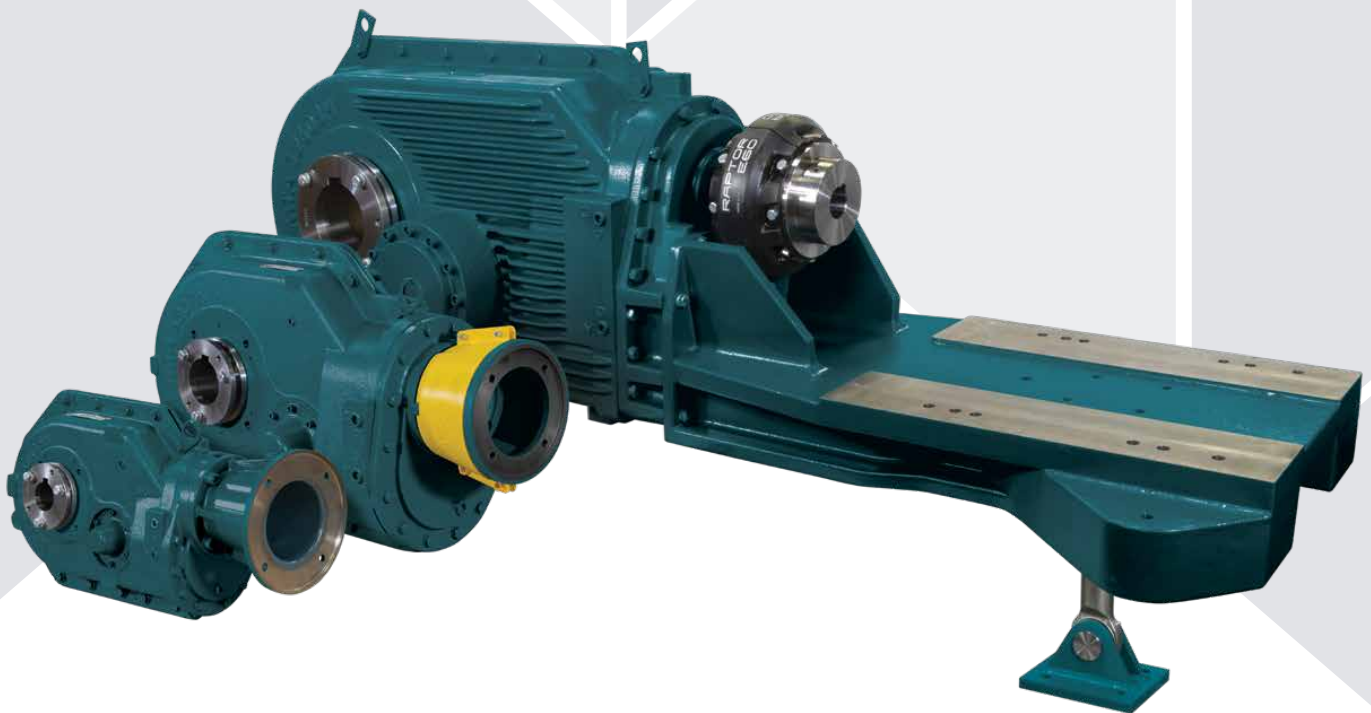


GEARING

# Motorized Torque-Arm

The ultimate shaft-mounted, direct-drive reducer



## Your trusted partner

Since 1878, the rich Dodge® legacy of innovation, safety, and quality has been unmatched in the industry. We invented the shaft-mounted gear reducer with the debut of the original Torque-Arm in 1949. The revolutionary design simplified gearbox installation by eliminating the hassle of custom-fabricating base plates to align it with driven equipment.

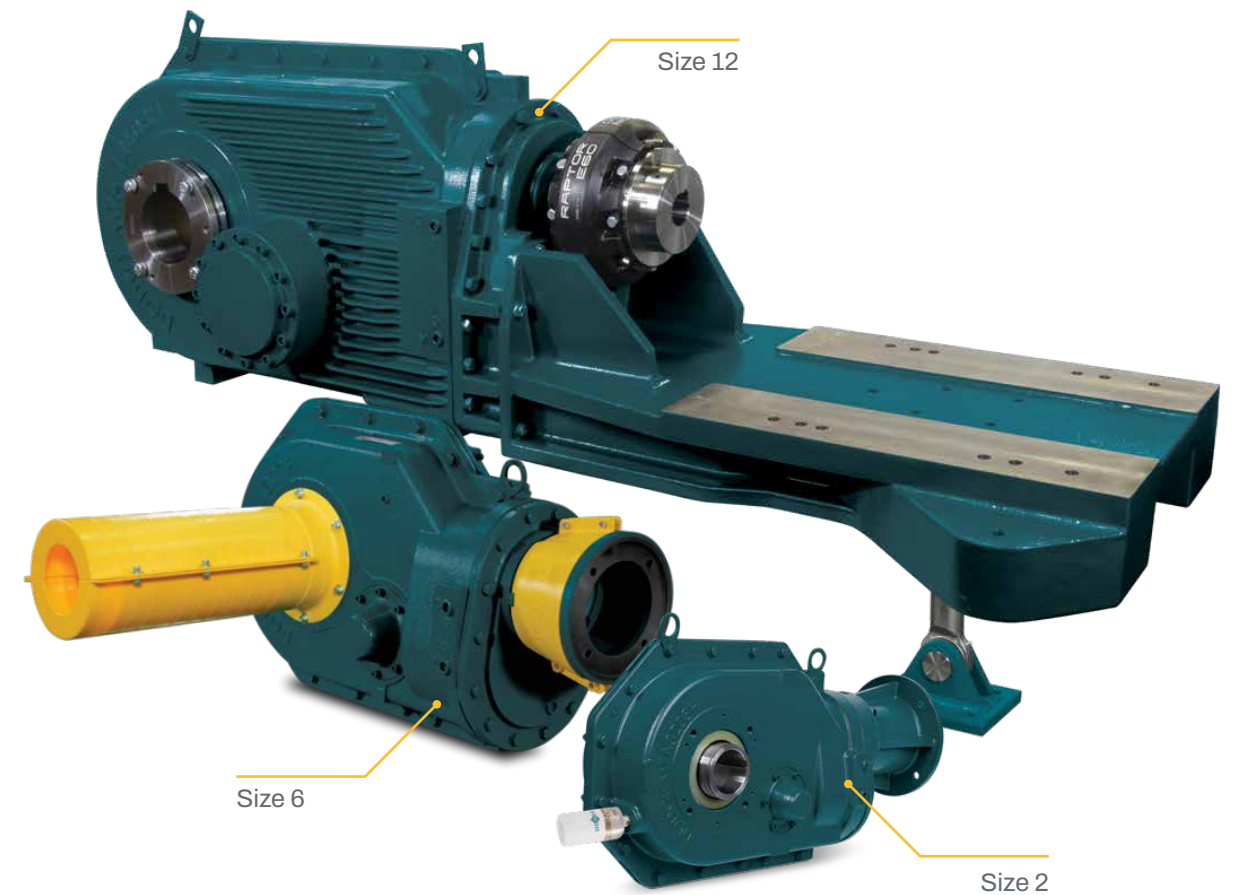
Leveraging decades of gearing design and application expertise, the entire family of Torque-Arm gear reducers is meticulously engineered to thrive in the harshest environments with proven dependability through more than 3 million units in service worldwide—setting the standard for performance and reliability.

## Direct-drive solution delivering premium performance

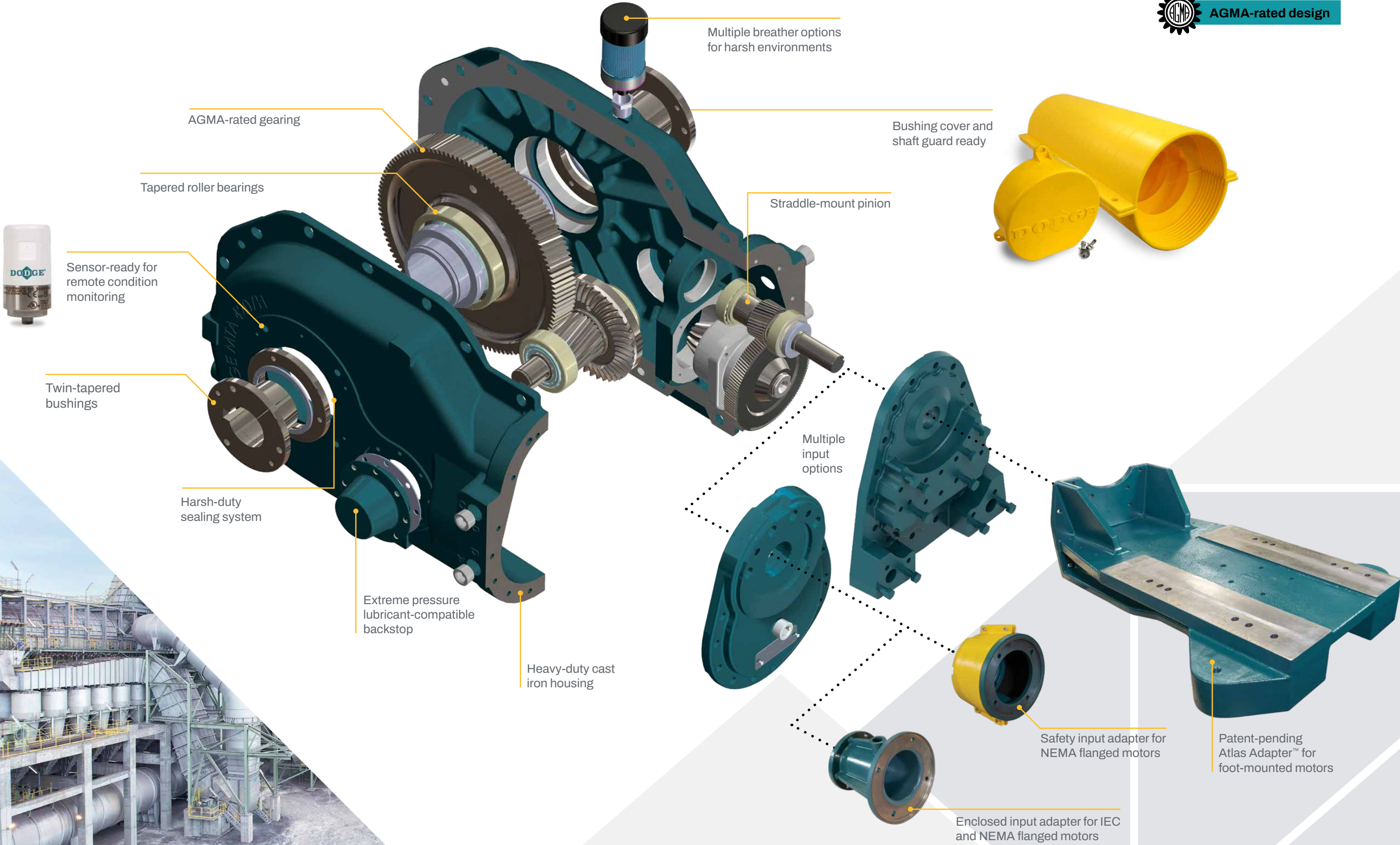
As part of the Torque-Arm family of gear reducers, Motorized Torque-Arm (MTA) is the rugged, direct-drive solution that provides best-in-class power and performance in a compact, AGMA-rated design.

MTA is a right-angle reducer available in 10 sizes with multiple input options to support drive packages up to 329,000 inch-pounds of torque, offering the highest torque ratings per case size on the market.

Packed full of industry-leading features, like its twin-tapered bushing system, MTA is easy to mount and dismount with heavy-duty construction for reliability that lasts for less required maintenance—maximizing uptime and lowering your total cost of ownership.



# Features engineered for maximum durability



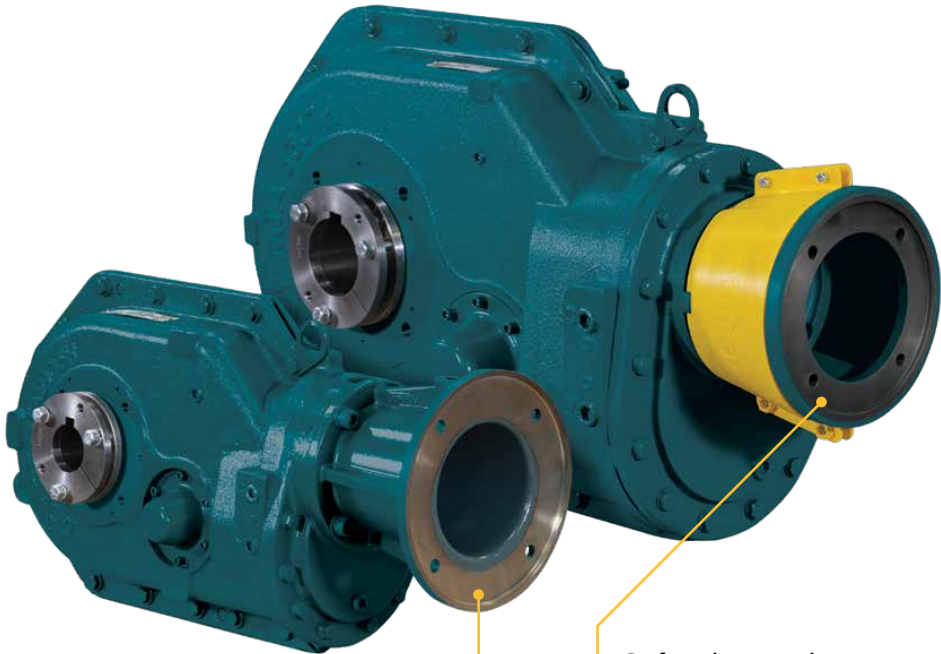
# Multiple input options for application versatility

MTA, the reliable shaft-mount reducer, is available with multiple input options that fit a variety of motor styles and sizes to be the go-to solution in applications throughout your operation.

## Options for flanged motors

MTA assemblies are offered with an enclosed input adapter or safety input adapter option that are compatible with IEC and NEMA flanged motors.

- Available for reducer sizes 2—12
- Support for drive packages up to 100 horsepower (75 kilowatts)
- Fan available for reducer sizes 7—12 with NEMA C-face motors

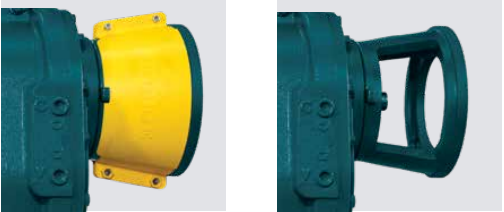


### Enclosed input adapter

- Features a three-piece jaw coupling
- Enables pairing with NEMA C-face motors in frame sizes 56 to 140T
- Enables pairing with IEC flanged motors in frame sizes IEC 90 to 250

### Safety input adapter

- Features a wrap-style coupling
- Removable cover enables coupling access for streamlined maintenance and increased safety without requiring the removal of the motor
- Enables pairing with NEMA C-face motors in frame sizes 180T to 405T

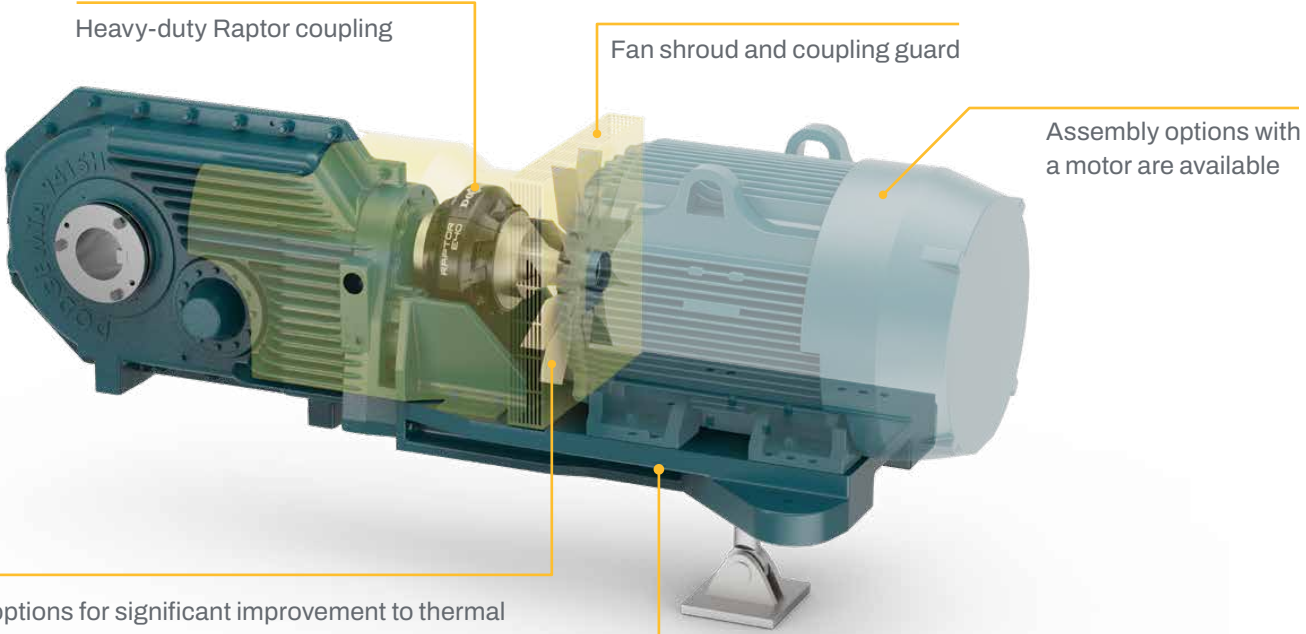


Removable cover

## Options for foot-mounted motors

Built on its proven success, the MTA reducer offering has been expanded to include assembly packages with reducers sizes 7 through 12 featuring a patent-pending Atlas Adapter that supports large-frame foot-mounted motors.

The enhanced reducer capability enables pairing large, readily available foot-mounted motors to be a cost-effective solution to easily tackle demanding operations with high horsepower requirements.



Fan options for significant improvement to thermal capacity, extending oil and product life

- Motor-shaft fan, included in all packaged assemblies with foot-mount motor adapters
- Electric fan available for reducer sizes 7—12

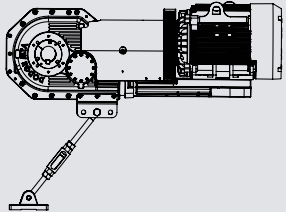
### Patent-pending Atlas Adapter

- Enables pairing with foot-mount motor in frame sizes 364T to 447T
- Support for drive packages up to 200 horsepower (150 kilowatts)

## Tie rod and torque arm assemblies

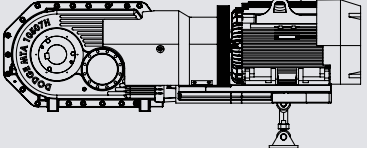
Tie rod available for assemblies with MTA sizes 7 and 8

### Tie rod

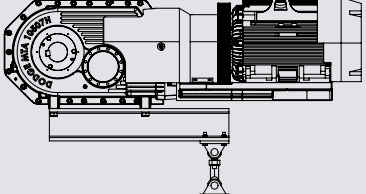


Torque arm or torque arm reaction beam included for assemblies with MTA sizes 9, 10, and 12

### Torque arm



### Torque arm reaction beam





## AGMA-rated design

As the only American Gear Manufacturers Association (AGMA) rated direct-drive reducer on the market, MTA is engineered to the highest standards and provides the longest product life possible—outlasting the competition that use lesser Deutsches Institut für Normung (DIN), a European standards platform, design specifications.

We don't cut corners with our products, and MTA is the perfect example of that philosophy. Extensively tested at our Innovation Center and proven in the field for over 20 years, MTA incorporates heavy-duty components to maximize uptime in the most demanding conditions where other reducers fail.

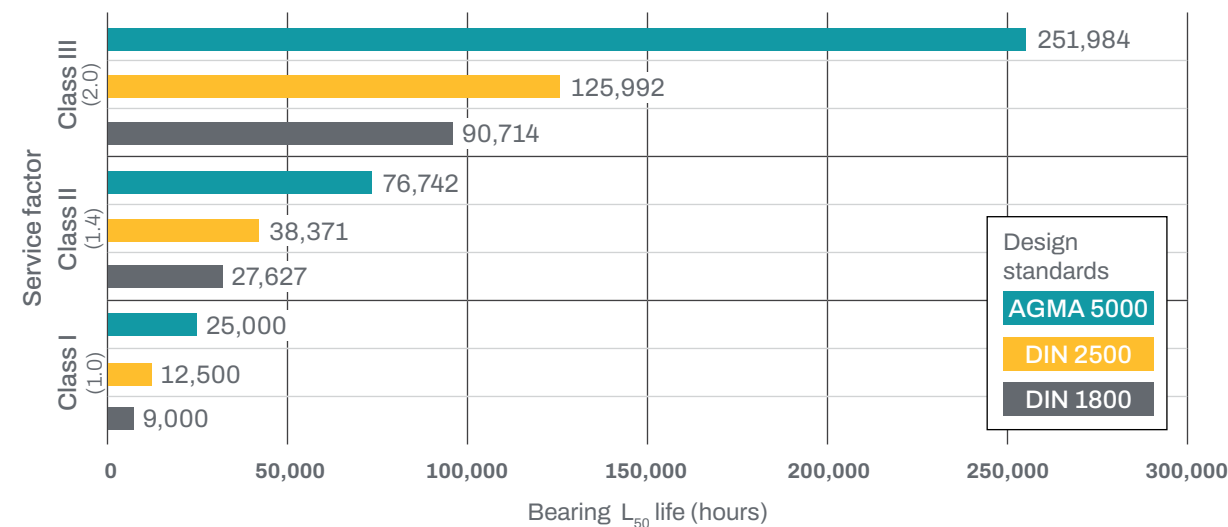
- Tapered roller bearings used throughout, unlike ball bearings used in DIN-rated competitive reducers, for best-in-class  $L_{10}$  and  $L_{50}$  life
- Built with case-carburized, helical-bevel gearing for dependable performance and long-lasting reliability

### Average reducer life

Designed to AGMA standards for 5000-hour unadjusted  $L_{10}$  bearing life, MTA provides a significantly longer average reducer life\* than DIN-rated reducers.

- 2 times longer life than reducers designed to DIN 2500-hour specifications
- 2.78 times longer life than reducers designed to DIN 1800-hour specifications

\* Calculated using bearing  $L_{50}$  life, also known as average bearing life



### Power-dense platform

When compared to competitive options, MTA is both smaller and lighter—offering equivalent torque capabilities in a more compact footprint. This minimizes the overhung load and, as a result, potentially allows for reducing the size of the supporting driven equipment for lower associated component costs.



## Premier performance and reliability

### Twin-tapered bushing system

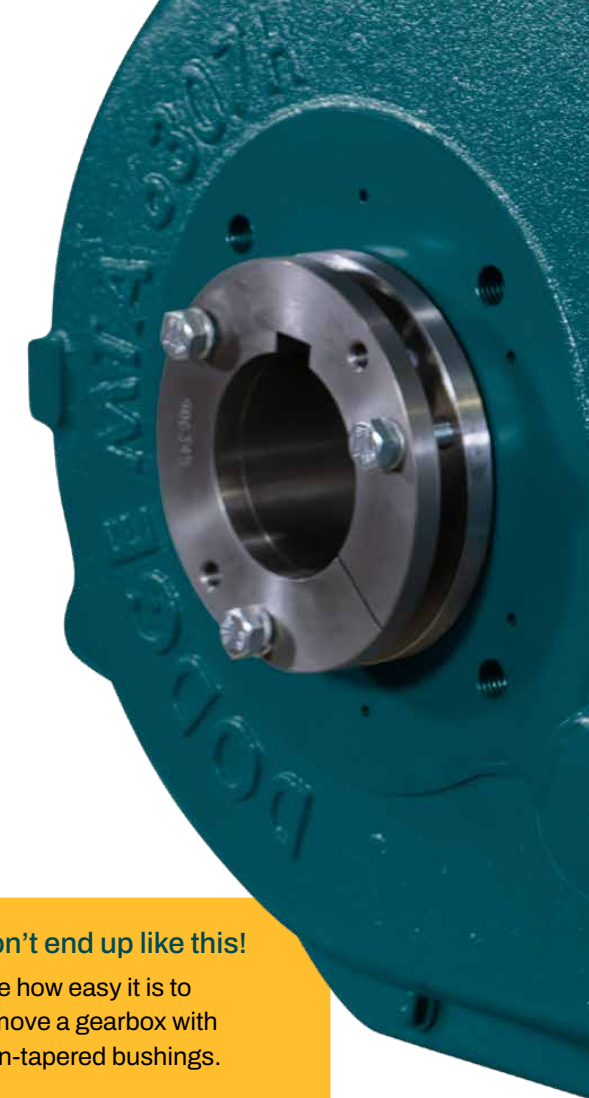
A standard feature on MTA and trusted for over 50 years in our Torque-Arm gearboxes, our patented twin-tapered bushing system is designed with two fully split, eight-degree taper bushings. It offers easy installation and guaranteed gearbox removal without requiring cutting the reducer off the shaft—saving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

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

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

### Extreme pressure lubricant-compatible backstop

The only shaft-mount reducer with a backstop designed to operate with extreme pressure (EP) lubricant for minimizing internal component wear. Engineered to prevent reverse rotation for enhanced on-site safety, its lift-off sprag design is optimized for wear-free operation to provide long-lasting reliability and performance.

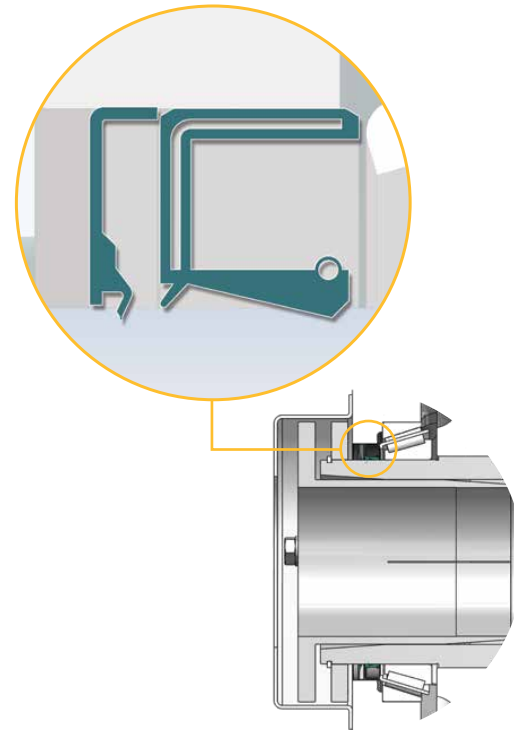


## Harsh-duty sealing system

Patented, advanced sealing system featuring a durable Hydrogenated Nitrile Butadiene Rubber (HNBR) oil seal protected by a metal excluder seal with rubbing lip for long-lasting performance in extreme environments with high contamination levels.

### HNBR material

- Extends seal service life, up to six times the life of standard Nitrile Butadiene Rubber (NBR) seals
- Withstands greater operating temperatures than NBR and Viton seals, from -40 °F to 300 °F (-40 °C to 150 °C)
- Improves chemical and ozone resistance over NBR seals
- Increases tensile strength over NBR seals for greater flexibility and durability



## Tie rod kit

Ruggedly constructed, the tie rod kit is engineered to keep a reducer stable and level, opposing reaction forces in a running gearbox to maximize application reliability. The kit includes standard brackets and offers universal mounting options for shaft-mount configurations for MTA up to size 8.



## Breather options

Multiple styles of breathers are available and can be easily installed on MTA—from standard-filter to fully-enclosed to Hydra-Lock desiccant breathers—to provide defense against moisture and particulate contamination for dependable, worry-free operation.

## Drive options

### Screw conveyor drive

MTA can be easily implemented into screw conveyor applications to provide proven dependability in a compact, direct-drive design. The CEMA bolt-on screw conveyor adapter features double-lip seals on both surfaces for optimized sealing and an open center for allowing contaminants to drop out.

Pairing seamlessly with the adapter, screw conveyor drive shafts are engineered to match CEMA dimensions and are made from high-alloy or stainless steel for durability. The three-bolt drilled design with a tapered fit ensures easy installation and patent pending lock plate provides mechanical shaft removal.



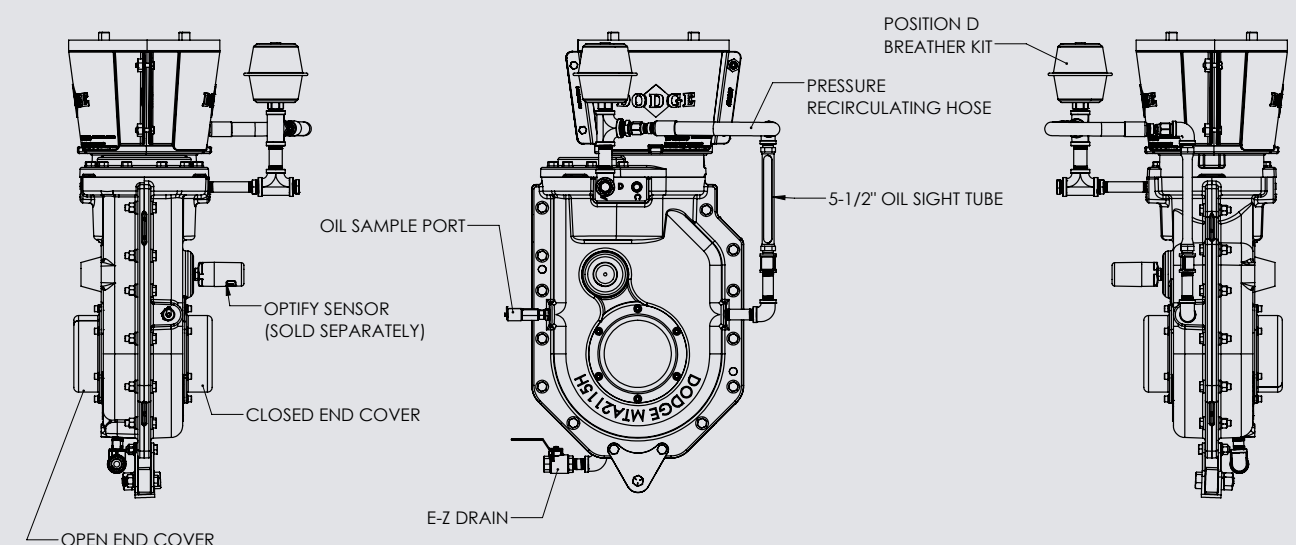
### Hydraulic drive

Available as an assembly with a preselected hydraulic motor connected to a gearbox and adapter, Hydraulic MTA comes ready to install and increases the capacity of your portable hydraulically powered conveying equipment. Its compact, right-angle design allows for the use of a wider conveyor belt to transport more material while maintaining the overall space constraints that typically limit the size of conveying equipment.



## Reliability kits

When an application is critical to operational success, a reliability kit creates a closed-loop system for MTA to eliminate the introduction of outside air or contaminants—maximizing gearbox performance and uptime.



## Safety, more than an accessory

The safest product is one designed to operate reliably with little to no human interaction.

Since the greatest risk of injury occurs when interacting with a product, our approach to safety starts with products designed to provide you with highly dependable solutions with minimal maintenance.

When extra protection is needed, easy-to-install guards are available to keep your employees safe from rotating equipment while accommodating OSHA and MSHA guidelines.

### Bushing covers

Ready-to-install covers can be attached to the pre-drilled and tapped gearcase without any modification to shield workers from rotating equipment, block contamination, and protect seals—increasing safety and extending product life.

### Shaft guards

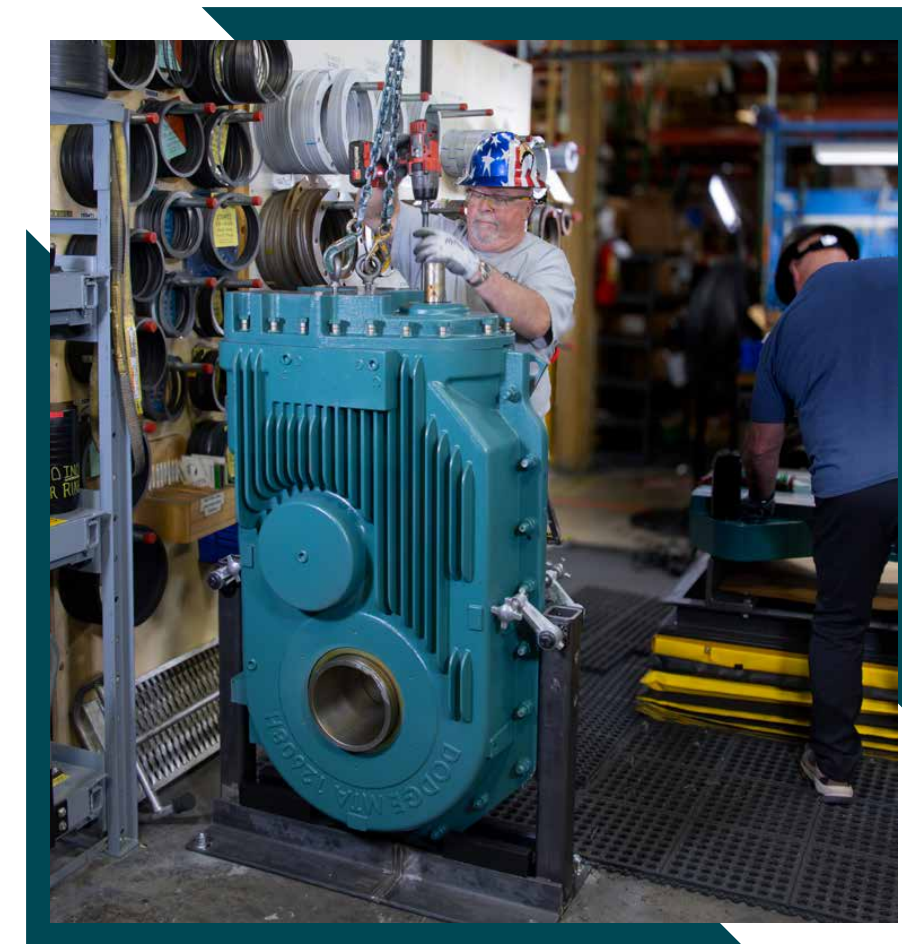
Designed for safety, shaft guards can be easily installed with basic hand tools. The length can be easily customized to fit a variety of applications, helping to eliminate injuries and reduce on-site risks.



## Unmatched availability

Whether you design new equipment or rely on gear reducers for critical applications, MTA is assembled with stock components to be available in days—offering significantly faster lead times than competitive options that take weeks or months to be assembled and shipped.

In addition to its unparalleled lead times, MTA has the largest offering on the market with every input option and the most common reducer case sizes and ratios available off the shelf to support virtually any application from stock.



### Manufactured in the USA

With world-class quality, in our ISO 9001-certified facility in Greenville, SC, and every single MTA gearbox is spin- and leak-tested before it goes out the door to ensure long-lasting performance and provide you with peace of mind.

PT Wizard

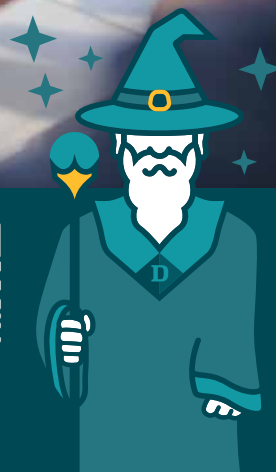
## Gearbox selection made easy, like magic

Save time and money with the power of PT Wizard, the easy-to-use Dodge product selection program. PT Wizard features individual product selection, competitive interchanges, and tools for application-based complete system design.

Leveraging our decades of gearbox engineering expertise, PT Wizard's product selection tool empowers you to choose the best MTA solution with corresponding accessories based on your application requirements.



Find your reducer solution today at [ptwizard.com](http://ptwizard.com)



## Real-time insight to help you work smarter, not harder

OPTIFY™, the Dodge portfolio of Industrial Internet of Things (IIoT) solutions, allows you to easily monitor the overall health of your power transmission equipment with sensors installed on equipment—letting you gain powerful insight to reduce unplanned downtime, improve reliability, operate safely, and make better-informed decisions in real-time.

### Platform

Take the guesswork out of work with OPTIFY, the free Dodge condition monitoring platform that empowers you with overall health indicators of your assets anytime, anywhere through the web portal or mobile app.

The platform provides you with a continuous flow of data for safe, hands-free gathering of measurements—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 accurate temperature, vibration, and speed measurements in your mounted bearings, gear reducers, and motors for complete powertrain condition monitoring.



Scan to access OPTIFY or visit [dodgeoptify.com](http://dodgeoptify.com)



The OPTIFY app is available at:







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