Dodge Motorized Torque-Arm® II Gear Reducer

With 60 years of proven dependability and more than 1.8 million units in service throughout the world, Baldor/Dodge Torque-Arm belt driven speed reducers are the standard of the industry and the benchmark to which others are compared. Responding to overwhelming customer demand, we have now introduced a line of heavy duty right angle beltless Torque-Arm reducers for customers who need the power and performance of a truly rugged gearbox for more demanding applications.

Heavy Duty Solution
- American Gear Manufacturers Association rated design offers approximately twice the bearing design life vs. the competition's design practices
- Patented sealing system
- Straddle mount input pinion gives maximum torque throughput, no press-fit pinion
- Available in 3hp-100hp based on output speeds
- ALL tapered roller bearing design, no light duty ball bearings

Installed Cost Savings
- Reduced assembly time & guarding costs
- Reduced maintenance requirements

Compact, Flexible Drive Design
- Reducer mounts in multiple positions
- Two motor speeds and multiple gear ratios provide a wide range of output speeds

Uses Standard Stocked Torque-Arm II Accessories
- Standard and short shaft twin tapered bushings
- Industry leading backstop design
- Standard screw conveyor accessories
- Three-piece coupled design
- Optional metal or ABS polymer bushing covers

Patented Twin Taper Bushing systems
- Twin Tapered Bushing system eliminates fretting corrosion and reducer wobble and can be installed with regular hand tools
- Standard Twin Taper Bushing system for full length shafts
- Short shaft bushing system to replace straight bore or single bushing reducers

Easy Selection
- Part numbered product concept
- Easy Class I & II selection tables

Proven Performance
- Rugged, high efficiency, case carburized helical/bevel gearing
- Used in Aggregates, Grain, Mining, Mixing, Milling, Ethanol
### Shaft Design Features

#### Straddle Mounted Input Pinion
- The MTA pinion is straddle mounted between two bearings.
- This allows maximum torque transmission and eliminates the weak “press fit” pinion connection that is prevalent in the other manufacturer’s designs.

#### Adjustable Bevel Cartridge
- Intermediate bevel cartridge is adjustable and this allows contact pattern to be set perfectly every time.
- Maximum gear contact = maximum torque throughput and maximum gear life.

#### Tapered Roller Bearings
- Unlike some of the competing reducers, the MTA uses no ball bearings in the reducer.
- It is designed with heavy duty roller bearings for heavy duty Applications.

### Dodge Motorized Torque-Arm II Product Line

<table>
<thead>
<tr>
<th>MTA2115H Speeds and Motor Hp’s</th>
<th>MTA3203H Speeds and Motor Hp’s</th>
<th>MTA4207H Speeds and Motor Hp’s</th>
<th>MTA5215H Speeds and Motor Hp’s</th>
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<tr>
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<td>Ratio</td>
<td>Class 1 Mtr HP</td>
<td>Mtr speed</td>
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<tr>
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* Consult factory for thermal considerations

### Dodge Twin Tapered Bushing System

#### Dodge Short Shaft Bushing System
- Allows replacement of straight bore or single bushed reducers with the industry preferred Twin Tapered Bushing System.
- Full length key guarantees maximum torque transmission
- Extended outboard bushing reaches in and grabs the shorter shaft.
- Allows replacement of reducers with straight bore or single bushing designs

#### Dodge Motorized Torque-Arm II Product Line

<table>
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<tr>
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<th>MTA7315H Speeds and Motor Hp’s</th>
<th>MTA4407H Speeds and Motor Hp’s</th>
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Dodge Motorized Torque-Arm II Shaft Mount Features

Advanced Sealing Features
• New advanced heavy duty sealing system improves sealing performance
• -40°F to +300°F temperature range
• Excellent low temperature seal operation
• Extends seal service life up to 6 times over standard rubber seals

More information on flyer FL1617

TA II Superior Backstop Design
• Reduced Wear and Friction, Lift-Off style, No Rubbing Parts in Free Direction.
• Operates with Standard and Extreme Pressure (EP) Lubricant (Only one on the market)
• Direction of rotation Is field reversible
• No external lubrication required

Dodge Motorized Torque-Arm II Screw Conveyor Drive Features
All MTA II reducers can become screw conveyor drives with the following accessories

CEMA Bolt-On Adapter
• Double lip seals on both the reducer end and trough end
• Open center for contamination disposal
• Optional Adjustable Waste Packing Kit, proven sealing option for harsh environments

Screw Conveyor Drive Shafts
• Made from high alloy steel to CEMA dimensions
• Standard three-bolt drilled
• Tapered fit ensures simple installation
• Patent pending locking plate provides mechanical shaft removal

Dodge Motorized Torque-Arm II Safety Features

Harsh Duty Bushing Covers
• Covers rotating bushing bolts
• Protects seals from contaminants
• Corrosion resistant
• Available in metal and heavy duty ABS polymer
• Available in totally closed and split /shaft through designs
• MTA drilled and tapped for ABS cover installation, metal covers require end user to drill screw holes

ATEX Certified – TA II is the only USA shaft mount that is ATEX certified
• ATEX is a European Union Atmosphere Explosive Directive
• Insures Products Are Safe to Operate in a Hazardous Environment
• I M2: Group 1 Category 2, Safe in Mining Applications Where Dust is Likely to Occur
• II 2 GD c T4: Group II Category 2, Safe for Gas or Dust Environment Surface Temperature of Reducer Not To Exceed T4=135°C (275°F)
• Tamb: Ambient Temperature Between -30°C to +50°C

MOTORIZED TORQUE-ARM II SHAFT MOUNT

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>RATIO</th>
<th>HP AT MAX INPUT RPM</th>
<th>OIL QTY</th>
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WARNING: an explosive atmosphere may be present. Do not open when

MFG. BY BALDOR ELECTRIC CO/FT SMITH, AR 72901 USA
Dodge Motorized Torque-Arm II Harsh Duty Accessories
Optional premium harsh duty accessories can significantly help extend the service life of the reducer

Harsh Duty V-Ring Seal Kit
- Rides on driven shaft and acts as a flinger
- Keeps contaminants from coming in contact with excluder seal
- Easy installation – no tools required
- More resistant to water spray, and mild wash-down applications
More information on flyer FL1624

Hydra-Lock Dessicant Breathers
- Internal check valve system creates a nearly sealed system
- Integrated nylon standpipe and clear Polycarbonate casing allow for greater chemical compatibility and vibration resistance
- Filter element captures particles at 3 micron absolute

Ideal For…
- Wash-down applications and other high humidity environments
- A higher level of contaminant protection
- Gearboxes in storage
More information on flyer FL1627

TDNC Twin Taper Bushing System
- Thin Dense Nickel Composite coated for maximum corrosion resistance with minimum cost
- TDNC bushings, backing plates, & snap rings
- Corrosion resistant bolts and lock washers
More information on flyer FL1624

Zinc Plated Tie Rods
- ROHS compliant, environmentally friendly chromating process
- Zinc plated turnbuckle, Zinc plated fulcrum
- Two Zinc plated threaded rod extensions
- Zinc plated hardware kit
- Powder coated reducer adapter brackets
More information on flyer FL1630

Motorized Torque-Arm II Engineering Catalog

http://www.baldor.com/support/literature_load.asp?LitNumber=FL1629