

REFERENCE GUIDE

Gearing Reference Guide

MOTORIZED TORQUE-ARM II

TORQUE-ARM II

TORQUE-ARM

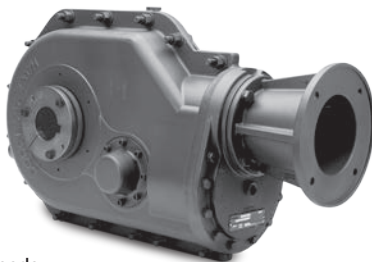
Engineering

System-1

Part Number Index

Motorized Torque-Arm II Shaft Mount Reducers Page G1-1

- 7 new reducer sizes with modular accessories
- All reducers can be shaft mounted, screw conveyor, vertical, and flange mounted
- Up through 100 HP
- Torque ratings through 130,000 lb-in
- 12 ratios and multiple motor speeds provide a wide range of output speeds
- 3 piece coupled design eliminates stresses on input shaft and assures removal of motor
- Available as a C-face reducer assembly or a C-face gear-motor assembly
- Bushing bores: 1-7/16" through 4-7/16"
- All-new, highly efficient helical/bevel gearing design
- Meets or exceeds AGMA standards, including minimum class 1 bearing L-10 life of 5,000 hours 25,000 average life
- Harsh duty, metal shielded sealing system with excluder lip
- Smooth, rugged Class 30 cast-iron housings with pry slots
- New 36-month/18-month warranty protection
- ATEX Certified Category 2 and M2 equipment



Torque-Arm II Shaft Mount Reducers Page G2-1

- 12 new reducer sizes with modular accessories
- All reducers can be shaft mounted, screw conveyor, vertical, and flange mounted
- Up through 400 HP
- Torque ratings through 500,000 lb-in
- Standard 5, 9, 15, 25, and up to 40:1 gear ratios
- Nearly 300:1 speed reduction with V-belt drives
- Bushing bores: 1" through 7"
- All-new, highly efficient helical gearing design
- Meets or exceeds AGMA standards, including minimum class 1 bearing L-10 life of 5,000 hours 25,000 average life
- Harsh duty, metal shielded sealing system with excluder lip
- Smooth, rugged Class 30 cast-iron housings with pry slots
- New 36-month/18-month warranty protection
- ATEX Certified Category 2 and M2 equipment



TXT Torque-Arm Shaft Mount Reducers Page G3-1

- Exclusive twin tapered bushings
- Rugged cast-iron efficient
- Precision, high-quality helical gearing
- Reliable anti-friction bearings and seals
- Efficient splash lubrication
- Meets/Exceeds AGMA standards
- 100% factory noise and leak tested



Capabilities & Mounting

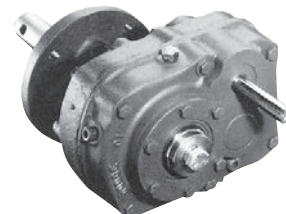
- Standard ratios: 5, 9, 15, and 25:1
- Ratios up to 210:1 with V-belts
- Fractional to 700 HP
- Output speeds through 400 RPM
- Optional flange mount and vertical shaft application
- Available with hydraulic motor input

Accessories

- Motor mounts
- Bushing assemblies
- Backstops
- Auxiliary seal kits
- Belt guards
- Cooling fans
- Harsh duty accessories

SCXT Screw Conveyor Shaft Mount Reducers Page G3-81

- Industry standard, high quality, drive mounting
- Adapter conforms to any CEMA trough ends
- Sealing system alternatives in adapter
- Seals
- Braided felt seal
- Rugged, high-thrust roller bearings
- Conforms to CEMA standards
- CEMA high-strength shafts, 2- and 3-bolt



Capabilities

- Fractional to 75 HP
- Standard ratios: 5, 9, 15, and 25:1
- 1-1/2" to 3-7/16" CEMA drive shafts
- Output speeds through 400 RPM
- Available with hydraulic motor input
- Vertical and incline mounting capability

Accessories

- Standard adapters with optional adjustable packing gland adapters
- Drive shafts - standard steel and stainless steel
- Motor mounts
- Belt guards
- Auxiliary seal kits
- Cooling fans

Dodge Motorized Torque-Arm II Speed Reducers -- General Specification:

The speed reducer shall be coupled enclosed shaft mount type unit with a triple reduction ratio. The reducer shall mount directly on the driven shaft and utilize an adjustable torque arm that attaches from the gear case to the support structure or foundation. The motor shall be attached to the reducer with a cast iron adapter and shall utilize a flexible, jaw style, 3 piece coupling to eliminate fretting corrosion and allow for any minor misalignment issues.

The reducer housing shall be constructed of two piece corrosion resistant, class 30 gray iron. All housings shall be doweled and precision machined to assure accurate alignment for all gear sets. Pry slots are provided for ease of repair.

All gearing shall be of helical or helical/bevel design, case carburized and precision finished to insure a high surface durability with a resilient tooth core for impact resistance and optimum service life. Input pinion shall be supported between bearings to maintain proper alignment of gear meshes, maximize load carrying capabilities, and to eliminate overhung loads imposed on bearings. Design meets or exceeds AGMA standards.

Reducer bearings shall be of the tapered roller type, meet or exceed AGMA standards, and provide a minimum 25,000 hour average life, AGMA Class I standard.

All seals shall be of the lip, spring loaded type, made of a premium harsh duty, heat resistant material. A metal excluder seal with rubber lip shall be external to the standard oil seal on all outboard seals.

Reducer installation shall be accomplished by using ductile iron, fully split, two bushing system. Reducer removal shall be accomplished by providing jack screw holes in the bushing flanges to mechanically remove the tapered assembly.

Backstops shall be lift-off sprag type and designed for use with standard and extreme pressure (EP) lubricants.

Dodge Motorized Torque-Arm II Screw Conveyor Drives -- General Specification:

The drive shall consist of a direct drive speed reducer; a cast iron, bolt on, four bolt mounting adapter with double lip seals on both ends, and optional bolt on adjustable packing kit.

A standard three-hole drive shaft will be machined from a high quality alloy steel.

The drive shall conform to Conveyor Equipment Manufacturers Association (CEMA) standards.

Motorized Torque-Arm II is ATEX certified.

Motorized Torque-Arm II has been found to comply with the Essential Health and Safety Requirements that relate to the design of Category 2 and M2 equipment, which is intended for use in potentially explosive atmospheres.

These Essential Health and Safety Requirements are given in Annex II to European Union Directive 94/9/EC of 23 March 1994.