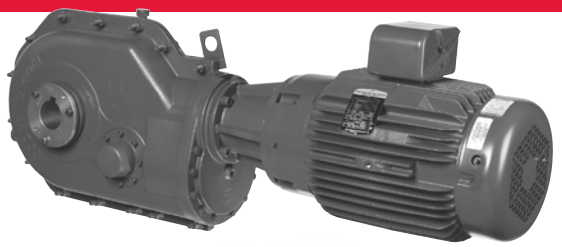
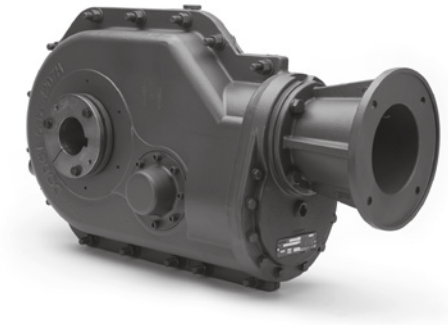
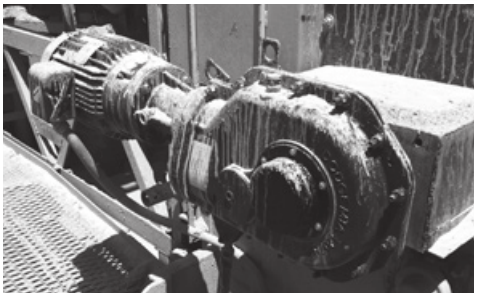
GEARING

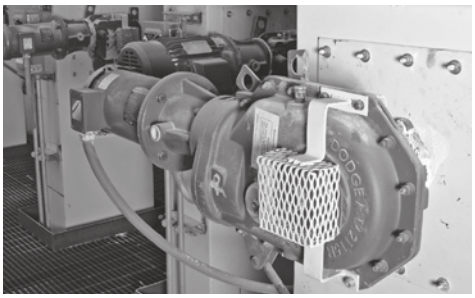
Dodge Motorized Torque-Arm® II Gear Reducer

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

BALDOR®
A MEMBER OF THE ABB GROUP

Shaft Design Features

Straddle Mounted Input Pinion

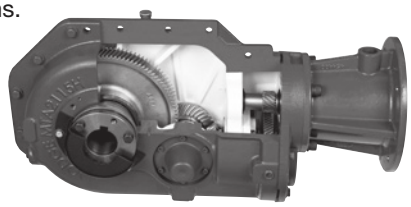
- The MTA pinion is straddle mounted between two bearings.
- This allows maximum torque transmission and eliminates the weak “press fit” pinion connection that is prevalent in the other manufacturer’s designs.

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.



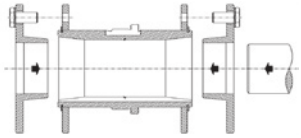
Shaft Mount Features

Dodge Twin Tapered Bushing System

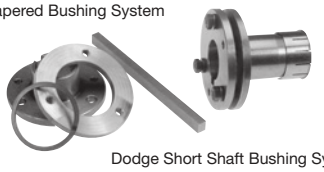
- Provide sturdy, concentric grip of the driven shaft on both sides of the reducer.
- Eliminates the wobble and fretting corrosion associated with straight bore and single bushed reducers
- Full length key guarantees maximum torque transmission
- Installation and removal methods require no special tools

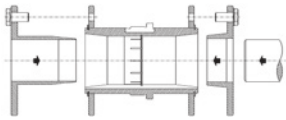
Dodge Short Shaft Bushing System

- 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 Twin Tapered Bushing System





Dodge Short Shaft Bushing System

Dodge Motorized Torque-Arm II Product Line

MTA2115H Speeds and Motor Hp's						MTA3203H Speeds and Motor Hp's						MTA4207H Speeds and Motor Hp's						MTA5215H Speeds and Motor Hp's					
Output rpm	Ratio	Class 1 Mtr HP	Mtr speed	Class 2 Mtr HP	Mtr speed	Output rpm	Ratio	Class 1 Mtr HP	Mtr speed	Class 2 Mtr HP	Mtr speed	Output rpm	Ratio	Class 1 Mtr HP	Mtr speed	Class 2 Mtr HP	Mtr speed	Output rpm	Ratio	Class 1 Motor HP	Motor speed	Class 2 Motor HP	Motor speed
23	76.96	3	1750	3	1750	23	76.02	5	1750	5	1750	24	73.57	10	1750	7.5	1750	24	71.98	15	1750	10	1750
25	71.18	3	1750	3	1750	25	70.30	5	1750	5	1750	26	66.17	10	1750	7.5	1750	27	64.74	20	1750	10	1750
26	66.07	5	1750	3	1750	27	65.26	7.5	1750	5	1750	29	61.04	10	1750	7.5	1750	29	59.73	20	1750	15	1750
30	58.29	5	1750	3	1750	30	57.58	7.5	1750	5	1750	34	51.72	15	1750	10	1750	35	50.61	25	1750	15	1750
33	53.82	5	1750	3	1750	35	50.68	10	1750	5	1750	36	49.04	15	1750	10	1750	36	47.99	25	1750	15	1750
37	47.45	5	1750	3	1750	37	46.87	10	1750	7.5	1750	40	44.11	15	1750	10	1750	41	43.16	30	1750	20	1750
40	44.05	7.5	1750	5	1750	40	43.51	10	1750	7.5	1750	43	40.70	15	1750	10	1750	44	39.82	30	1750	20	1750
45	38.86	7.5	1750	5	1750	46	38.39	10	1750	7.5	1750	47	73.57	20	3450	10	3450	48	71.98	30	3450	25	3450
49	35.88	7.5	1750	5	1750	49	35.44	10	1750	10	1750	51	34.48	20	1750	15	1750	52	33.74	30	1750	25	1750
52	66.07	7.5	3450	5	3450	53	65.26	10	3450	10	3450	52	66.17	20	3450	15	3450	53	64.74	30	3450	25	3450
54	32.15	7.5	1750	5	1750	55	31.75	15	1750	10	1750	57	61.04	20	3450	15	3450	58	59.73	40	3450	30	3450
59	29.64	10	1750	5	1750	60	29.28	15	1750	10	1750	58	30.05	20	1750	15	1750	60	29.41	40	1750	30	1750
64	53.82	10	3450	7.5	3450	68	50.68	15	3450	10	3450	67	51.72	25	3450	15	3450	68	50.61	40	3450	30	3450
70	24.87	10	1750	7.5	1750	71	24.57	15	1750	10	1750	68	25.57	25	1750	20	1750	70	25.05	50	1750	30	1750
73	47.45	10	3450	7.5	3450	74	46.87	15	3450	10	3450	70	49.04	25	3450	20	3450	72	47.99	50*	3450	30	3450
78	44.05	10	3450	7.5	3450	79	43.51	20	3450	15	3450	78	44.11	30	3450	20	3450	80	43.16	50*	3450	30	3450
82	21.22	10	1750	7.5	1750	83	20.96	20	1750	15	1750	80	21.82	30	1750	20	1750	82	21.35	50	1750	40	1750
89	38.86	10	3450	10	3450	90	38.39	20	3450	15	3450	85	40.70	30	3450	20	3450	87	39.82	50*	3450	40	3450
96	35.88	15	3450	10	3450	97	35.44	20	3450	15	3450	98	17.89	30	1750	25	1750	100	17.50	60	1750	40	1750
99	17.68	15	1750	10	1750	100	17.46	20	1750	15	1750	100	34.48	40	3450	30	3450	102	33.74	60*	3450	40	3450
107	32.15	15	3450	10	3450	109	31.75	20	3450	15	3450	115	30.05	40	3450	30	3450	117	29.41	60*	3450	40	3450
116	29.64	15	3450	10	3450	118	29.28	25	3450	20	3450	135	25.57	40	3450	30	3450	138	25.05	75*	3450	50	3450
139	24.87	15	3450	10	3450	140	24.57	30	3450	20	3450	158	21.82	50*	3450	30	3450	162	21.35	75*	3450	50	3450
163	21.22	20	3450	15	3450	165	20.96	30	3450	25	3450	193	17.89	50*	3450	40	3450	197	17.50	75*	3450	50	3450
195	17.68	25	3450	15	3450	198	17.46	30	3450	25	3450												

* Consult factory for thermal considerations

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Dodge Motorized Torque-Arm II Product Line

MTA6307H Speeds and Motor Hp's						MTA7315H Speeds and Motor Hp's						MTA8407H Speeds and Motor Hp's					
Output rpm	Ratio	Class 1 Mtr HP	Mtr speed	Class 2 Mtr HP	Mtr speed	Output rpm	Ratio	Class 1 Mtr HP	Mtr speed	Class 2 Mtr HP	Mtr speed	Output rpm	Ratio	Class 1 Mtr HP	Mtr speed	Class 2 Mtr HP	Mtr speed
22	78.53	20	1750	15	1750	23	76.46	30	1750	25	1750	22	78.80	50	1750	30	1750
26	66.92	25	1750	20	1750	26	66.57	40	1750	25	1750	26	68.53	50	1750	40	1750
30	59.05	30	1750	20	1750	30	57.58	40	1750	30	1750	29	60.13	60	1750	40	1750
33	52.35	30	1750	25	1750	34	50.97	50	1750	30	1750	33	52.53	60	1750	50	1750
35	50.26	30	1750	25	1750	39	44.38	60	1750	40	1750	34	50.85	75	1750	50	1750
39	44.61	30	1750	25	1750	45	76.46	60	3450	40	3450	38	45.69	75	1750	60	1750
44	78.53	40	3450	30	3450	46	38.39	60	1750	40	1750	44	40.09	75	1750	60	1750
44	39.37	40	1750	30	1750	52	66.57	75	3450	50	3450	44	78.80	75	3450	60	3450
52	66.92	50	3450	30	3450	52	33.48	75	1750	50	1750	50	68.53	100*	3450	75	3450
52	33.51	50	1750	30	1750	60	57.58	75	3450	60	3450	52	33.90	100	1750	75	1750
58	59.05	50	3450	40	3450	61	28.65	75	1750	60	1750	57	30.76	100	1750	75	1750
60	29.03	50	1750	40	1750	68	50.97	75	3450	60	3450	57	60.13	100*	3450	75	3450
66	52.35	60	3450	40	3450	68	25.66	75	1750	60	1750	65	26.82	100	1750	75	1750
69	50.26	60	3450	40	3450	78	44.38	100*	3450	75	3450	66	52.53	100*	3450	75	3450
72	24.43	60	1750	50	1750	80	21.74	100	1750	75	1750	68	50.85	100*	3450	100*	3450
77	44.61	60	3450	50	3450	90	38.39	100*	3450	75	3450	76	45.69	100*	3450	100*	3450
79	22.04	75*	1750	50	1750	93	18.77	100	1750	75	1750	77	22.77	100	1750	100	1750
88	39.37	75*	3450	50	3450	103	33.48	100*	3450	100*	3450	86	40.09	100*	3450	100*	3450
92	18.95	75*	1750	60	1750	120	28.65	100*	3450	100*	3450	100	17.43	100	1750	100	1750
103	33.51	75*	3450	60	3450	134	25.66	100*	3450	100*	3450	102	33.90	100*	3450	100*	3450
119	29.03	75*	3450	75*	3450							112	30.76	100*	3450	100*	3450
141	24.43	75*	3450	75*	3450												
157	22.04	75*	3450	75*	3450												

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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

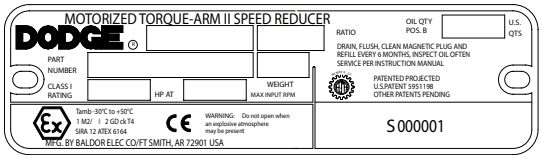
Dodge Motorized Torque-Arm II Safety Features

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 **AT**mosphere **EX**plosive 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



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

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FL1629

6/14 Litho 5000