



## Heavy-Duty Geared Rotator Type 203196A(DD)\*



TECOM's goal is to provide the best solution in meeting positioning systems and components by supplying Mil-Qualified Positioners, Controllers and Antennas for requirements in the field of ELINT, EW/ECM, Satellite, Telemetry, RADAR, Electro-Optics, and related areas. This is accomplished by:

1. Engineering Systems designing and modifications to our broad array of existing COTS products.
2. Teaming with our customers as a technical and manufacturing partner with over 250 man-years of experience as an OEM in Positioner and DC Servo motor control design.
3. Lloyd's Registry ISO-9001:2000 certification.

### GENERAL

TECOM's Standard line of Positioners (Rotators, Pedestals, Yokes, and Actuators), Controllers, RF Antenna products and Systems are built to a high degree of specific integrity. Performance ratings are conservative, resulting in trouble free long life. Built in quality resulting from "productized" design, fabrication from hard tooling and critical inspection of each part assures precision operation and optimum

performance. Each Product is thoroughly operated, inspected and subjected to a rigorous final acceptance/performance test.

### STANDARD FEATURES

All of TECOM's Standard Products are constructed from COTS (Commercial Off-The-Shelf) components wherever possible. Each standard model is designed to be readily modified at minimum cost and integrated into the most demanding specification requirements.

### POSITIONERS

- True modular construction
- Totally Enclosed, Environmentally Sealed
- Lightweight Aluminum construction and Corrosion Resistant Hardware
- Anti-Backlash and/or On-Shaft Drive Gearing
- Adjustable and/or Zero Backlash Drive Gearing
- Minimal Service Requirements
- Low and High Speed Performance
- Separable El/Az/Riser Base Subassemblies

### OPTIONAL ACCESSORIES AND CONFIGURATIONS

Not every option listed is available for every Product. Please consult the factory with your unique requirement. Custom configurations are also available.

- Duplex Angular Contact Bearings
- Adjustable Orthogonality
- Fail Safe Brakes
- Stow Locks/Pins/Interlocks/Manual Hand Cranks
- Rotary Joints & Slip Rings for Cont. Az Rotation
- Analog or Digital Position Encoders (Incremental, Absolute)
- Mobilizers/Trailers

- Dual-Opposed or Dual-Aided Two-Motor Drives, Per Axis
- Multi-Axis Configurations to suppress "Keyhole" Effect
- Separable or built-in servo motor drive amplifiers and controllers
- Direct Drive, Straight Spur, Helical, Planetary, Cycloidal, or Hybrid Gear Trains.

## CHARACTERISTICS

Basic Characteristics		Optional Characteristics		
Parameter	Azimuth	1st Option	2nd Option	3rd Option
Compliance	8x10 <sup>7</sup> rcd/lb-ft			
Overturning Moment	24,000 lb-ft			
Maximum Load	6,000 lb.			
Motor Config.	Single Drive	Dual-Opposed	Dual-Aided	
Motor Sizing	3/4 HP DC Brush	DC Brush-less		
Rated Gear Strength	15,000 lb-ft			
Gear Ratio	396.5:1	396.5:1	793:1	
Torque (Cont.)	3,500 lb-ft	7,000 lb-ft *	7,000 lb-ft	
Torque (Peak)	6,000 lb-ft	12,000 lb-ft *	12,000 lb-ft	
Maximum Velocity	40°/Sec	40°/Sec.	20°/Sec.	
Maximum Acceleration	40°/Sec. <sup>2</sup>	40°/Sec. <sup>2</sup>	20°/Sec. <sup>2</sup>	
Limits (Electrical)	±220°	±440° Az	Cont. in Az with SL/RJ	
Backlash	≤0.03°	0.00° (Dual-Opposed)		
Position Feedback	1:1 Synthro	1:1 Resolver	1:1 Absolute Encoder	1:1 Potentiometer
Angular Travel (Mechanical)	±230°	±450° Az	Cont. in Az with SL/RJ	
Interlocks	Servo Cutoff, Stow Pin Door, RUN/SAFE	Remote RUN/SAFE		
Manual Positioning	Motor Erd Shaft			
Weight	800 lbs.	1,000 lbs. *		
Az Riser Base Height	60 inches	As Required		

All specifications are Load-Dependent and may not represent actual output.  
 \* = Dual-Opposed or Dual-Aided Drives

### DRAWING

