



## Medium-Duty Geared Positioner Type 203056A



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
- Corrosion Resistant Hardware
- Anti-Backlash and/or On-Shaft Data Gearing
- Adjustable and/or Zero Backlash Drive Gearing
- Lightweight Aluminum
- 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

Parameter	Basic Characteristics		Optional Characteristics		
	Azimuth	Elevation	1st Option	2nd Option	3rd Option
Compliance	1x10 <sup>5</sup> rad/lb-ft	1x10 <sup>5</sup> rad/lb-ft			
Overturning Moment	2,000 lb-ft	2,000 lb-ft			
Maximum Load	200 lb.	200 lb.			
Motor Config.	Single Drive	Single drive			
Motor Sizing	1/4 HP DC Brush	1/4 HP DC Brush	DC Brush-less		
Rated Gear Strength	1,000 lb-ft	1,000 lb-ft			
Gear Ratio	396.5:1	396.5:1			
Torque (Cont.)	150 lb-ft	150 lb-ft			
Torque (Peak)	250 lb-ft	250 lb-ft			
Maximum Velocity	35°/Sec.	35°/Sec.			
Maximum Acceleration	35°/Sec. <sup>2</sup>	35°/Sec. <sup>2</sup>			
Limits (Electrical)	±220°	-5° to +95°	±440° Az	Cont. in Az with SL/RJ	-5° to +185° El
Backlash	≤0.1°	≤0.1°			
Position Feedback	1:1 Synchro	1:1 Synchro	1:1 Resolver	1:1 Absolute Encoder	
Angular Travel (Mechanical)	±230°	-10° to +100°	±450° Az	Cont. in Az with SL/RJ	-10° to +190° El
Interlocks	Servo Cutoff, Stow Pin, Door, RUN/SAFE	Servo Cutoff, Stow Pin, Door	Remote RUN/SAFE	Brake Release	Hand Crank
Manual Positioning	Motor End Shaft	Motor End Shaft	Hand Cranks	Hand-Held Maint. Control	
Weight	125 lbs.				
Az Riser Base Height	12 inches	N/A	As Required		

All specifications are Load-Dependent and may not represent actual output.

