

Magnetic Torque Rods are the newest addition to the Andrews Space product line. Our Torque Rods are a licensed design from Sinclair Interplanetary and manufactured in the United States.

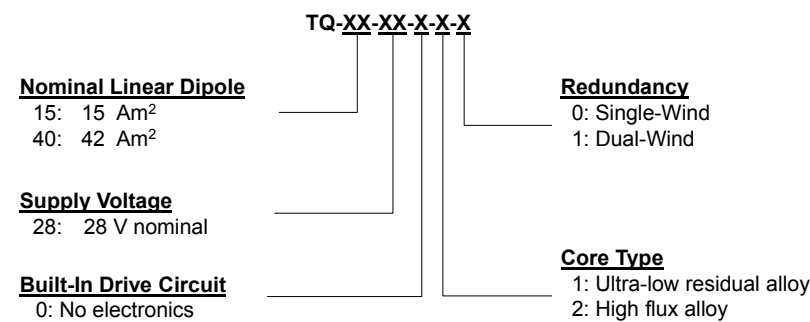
Features:

- Robust design with extensive flight heritage
- Single-wind or redundant-wind options available

Deliverables:

- Deliverable units undergo functional testing per Andrews Space test procedures
- All torque rods complete functional testing and magnetic characterization
- Flight Units undergo workmanship Acceptance Testing
  - Random Vibration
  - Thermal Cycling
- Documentation
  - Interface Control Document / Interface Description Document
  - End-Item Summary Report
  - Certificate of Conformance

Torque Rod Part Numbers



Not all combinations of numbering are available as commercial-off-the-shelf products. See part numbers in box at upper right for COTS products.

Nominal Specifications		
Primary Dipole	15 Am <sup>2</sup> @ 100 mA	42 Am <sup>2</sup> @ 100mA
Length	228 mm (single-wind) 237 mm (redundant-wind)	338 mm (single-wind)
Mass	400 g (single-wind) 727 g (redundant-wind)	825 g (single-wind)
Primary Resistance	250 Ω	
Connector	Twist-pin micro-D	
Acceptance Thermal Cycle	-55°C to 70°C 5 min. dwells, 5 cycles	
Acceptance Vibration	14.1 g <sub>RMS</sub> , 60 seconds	
Heritage	Over 87 flight units on orbit since 2002 Over 101 flight units delivered	

Nominal specifications reflect general product features and are subject to change.

**TQ-15**



**TQ-40**

**PRICING**

TQ-15-28-0-1-0, Single-Wind = \$11,000  
TQ-15-28-0-1-1, Dual-Wind = \$12,000  
TQ-40-28-0-2-0, Single-Wind = \$14,000

3D CAD models are available for download @ [andrews-space.com/torque-rods](http://andrews-space.com/torque-rods)



Andrews Space products are built to AS9100C aerospace quality standards using J-STD-001ES for electronics assemblies.

