

VT-100 TRACKING SYSTEM

Precision high-performance optical tracking system

At Vision Engineering Solutions, “we use what we sell.” The VT-100 Tracking System, Vision Engineering Solutions’ flagship product, represents over 20 years of experience providing tracking solutions, both in the field and in the lab. Exceptional performance, intuitive controls, and mission-specific adaptability in a cost-effective package make the VT-100 the ideal tracking solution to satisfy imaging & sensing needs across a broad range of applications.

HIGHLIGHTS

- Very high power-to-payload ratio for wind stabilization and performance
- Linear amplifiers to eliminate switching noise
- 6 modular payload mounting faces
- Brushless AC direct drive motors increase reliability and performance with limited maintenance
- Angular resolution of 26 bits
- Custom electronics to increase reliability and speed
- Unlimited azimuth rotation through a slip ring with power and Gigabit Ethernet capability



VT-100 Tracking Gimbal with optional telescopes

CUSTOM GIMBAL CONTROL

- Integrates with PMCS™ gimbal control software
- Allows for external inputs for mission-adaptability: designation by radar, telemetry, or external computer
- Joystick or gamepad control optional
- Programmable knobs and foot-switch controls to maximize functionality

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PERFORMANCE

Resolution	26 bits
Tracking Error*	<20 μ rad RMS @ 10°/sec
Velocity	90°/s
Acceleration	60°/s ²
Travel	
Azimuth	Unlimited
Elevation	-20° to +95°
Torque, Peak (nominal)	319 Nm / 235 lb-ft

* Extremely low error achievable at low tracking speeds

CONSTRUCTION

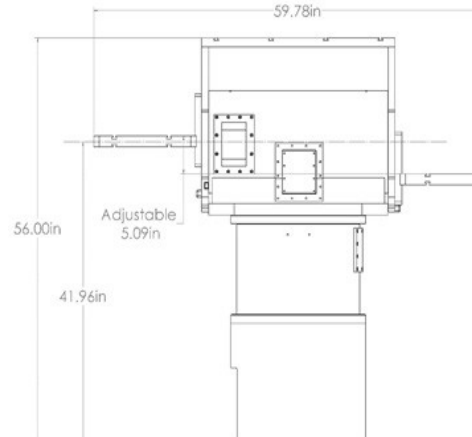
The VT-100 was designed for use in humid and harsh environments

- Aircraft-grade epoxy paint or powder-coat (customer choice)
- 6061 AL components
- Stainless steel strength-members and fasteners
- Operable in environments 0°C – 50°C (customizable)

DESIGN SPECIFICATIONS

Pedestal Type	Direct-drive, Elevation over Azimuth
Drive Motors	Brushless AC
Protection	Fail-safe brakes and over-travel bumpers
Weight	~500 lb (nominal)
Payload	Up to 400 lb, distributed
Mounting	10 x 1/2 in screw clearance holes R10.83 in
Elevation axis	41.96 in above base

SIZE (NOT TO SCALE)



POWER

VT-100 includes a transformer and amplifier lineup

- 220 VAC, single-phase, 60 Hz power input
- 10 VAC, 60 Hz available on-platform

CONTROLS

VT-100 includes a transformer and amplifier lineup

- Human-machine interface with mode-select buttons and drive knobs/pedals (joystick or gamepad optional)
- PMCS™ software allows for mount control in manual and automatic modes

AVAILABLE OPTIONS (CUSTOM ORDERS)

- Video tracker, recorder and analysis software
- Transportable pedestal platform
- Enclosed transport trailer (internal control station optional)
- Environment/performance customization available
- Absolute Inertial Referencing System Interface
- Custom sensor design
- Optics and sensor selection and testing