

# CARBIDE-150™



## PRODUCT OVERVIEW

### PAN TILT POSITIONER FOR MULTI-SENSOR PAYLOADS

The Carbide-150 Numeric Positioner is a high-resolution pan and tilt for driving super long-range optics. The Carbide-150's repeatability is essential to successful maritime and land based operations. In addition to the side saddle mount, RVision's unique pan through shaft allows for configurations of sensors not typically seen in the surveillance marketplace. The Carbide-150 can carry a total payload of 150 lbs. across the pan axis (includes both sides of the unit) and can carry an additional 100 lbs on top of the unit.

The Carbide-150 is used for unique configurations of sensors such as Laser Range Finders, Xenon Spotlights, Defensive Acoustic Arrays, Laser Designators, and of course long range CCD and Thermal Camera systems. A versatile internal wiring harness and multiple Mil-Spec ports located at the base of the Carbide-150 allow for unlimited configurations without exposing cables to unnecessary wear and tear.

Configurations of multiple sensors utilized in this fashion with the Carbide-150 are termed the COLE configuration. A typical COLE solution would feature a 400-1500mm thermal imager on one side of the positioner with a low light 1500mm Color CCD camera mounted in a pressurized housing on the opposite side. A ground based surveillance radar is often mounted on top of the pan tilt while a Laser Range Finder and Laser Designator are mounted on top of the pressurized color camera housing. Bore-sight adjustment mechanisms are integrated for highly accurate alignment of all sensors. The end solution allows the radar to move independently and acquire targets. That information is sent to the Carbide 150 which in turn tracks those targets autonomously. When the Carbide 150 has locked on, both color and thermal imagery is sent back to command and control along with range and the target is painted with light only visible to individuals wearing night vision goggles.

The Carbide-150 is a work horse for the surveillance industry matched by no other.

## KEY FEATURES

- 150 LB PAYLOAD
- MARINE-RATED
- PAN AND TILT AXLES MADE FROM TYPE 7075-T6 ALUMINUM ALLOY
- ALL STAINLESS STEEL FASTENERS
- HEAVY DUTY STEPPER MOTORS
- ENCODERS ARE INTEGRATED ELECTRO-OPTIC SENSORS
- LOW POWER CONSUMPTION
- NUMERIC POSITIONING CONTROLS FOR SLEW TO QUEUE OPERATIONS
- RS232 OR RS422 SERIAL COMMUNICATIONS
- OPTIONS:
  - CUSTOM AND VENDOR SPECIFIC PROTOCOLS
  - IP ADDRESSABLE
  - UNLIMITED ANCILLARY SENSOR CONFIGURATIONS

*RVision, Inc.*  
IMAGING SYSTEMS FOR SIGHT

619.233.1403 : [www.rvisionusa.com](http://www.rvisionusa.com)

# CARBIDE-150™

## TECHNICAL SPECIFICATIONS

- **PAN ANGLE RANGE** .....0° to 365°
- **PAN ANGLE MINIMUM MOVEMENT** .....0.005°
- **PAN ANGLE SPEED** .....0.2° to 30°/s
- **PAN ANGLE ENCODER FEEDBACK** .....0° to 365°
- **PAN TORQUE** .....100 newton meters
- **TILT ANGLE RANGE** .....0° to 90°
- **TILT ANGLE MINIMUM MOVEMENT**.....0.005°
- **TILT ANGLE SPEED** .....0.2°/s to 30°/s
- **TILT ANGLE ENCODER FEEDBACK** .....0° to 180°
- **TILT TORQUE** .....100 newton meters
- **TILT MEAN TIME BETWEEN FAILURE** .....5 years or  
2,500,000 movements
- **VIDEO COAX** .....4 Analog video signals, NTSC or PAL
- **OPERATIONAL TEMPERATURE RANGE** .....0°C to +70°C
- **STORAGE TEMPERATURE RANGE** .....-20°C to +85°C
- **OPERATIONAL HUMIDITY RANGE**..0 to 100% non-condensing
- **CARBIDE HOUSING** .....Tiger Drylac Powder Coat, 38/60031
- **OPERATING VOLTAGE** .....22-26vdc
- **OPERATING POWER** .....1.5 amps, 6.5 amps peak
- **WEIGHT** .....95 lbs

