

# Davidson AAT D-275

## Fully Automated Telescope for Alignment and/or Measurement of 5-Axis of Components in Optical Beam Paths and Subassemblies

The Davidson AAT-D-275 Automatic Autocollimating Alignment Telescope focuses from 16 inches (40cm) to infinity, to align and measure the location and angular orientation of multiple targets along its optical axis.

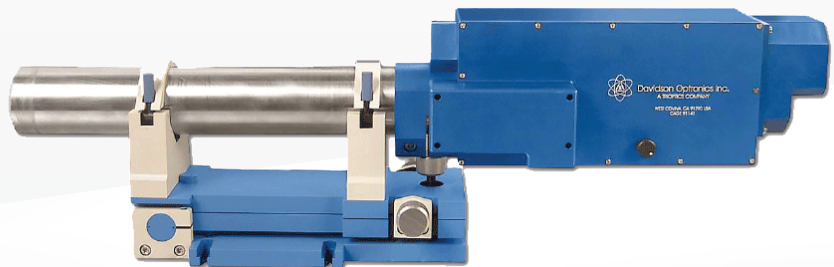
A reflective surface may be established normal to the optical axis by utilizing the autocollimating feature. The Davidson AAT-D-275 provides the flexibility to align the most complex optical assemblies and beam paths.

The instrument has the ability to measure angular deviations within an arcsecond and can boresight to provide positional data in X, Y and Z position within microns. The mechanical axis of the tube and the optical axis are concentric within 3 arc seconds.

This precision makes the Davidson AAT D-275 ideal for telescope alignment, laser cavity alignment, alignment of beam delivery systems and in systems with complex optical alignments.

### Available Accessories:

- Options for Adjustable Instrument Stands
- Multiple Target Options Available
- Mounted Cubes and Prisms
- Laboratory Tip/Tilt Stages

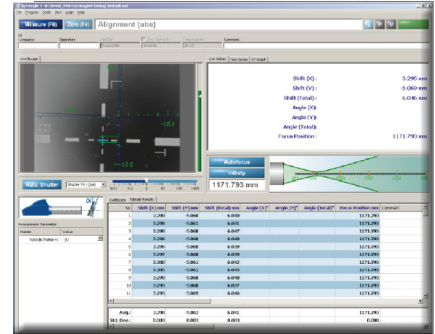


# Davidson AAT D - 275

## Davidson AAT D-275 5-Axis Measurement and Alignment

### Simple Software Control

The Davidson AAT-D-275 is remotely controllable using TCP/IP protocol and comes with easy to use software. The instrument is calibration certified and traceable to NIST standards.



### Technical Data

Measurement in metric (imperial)

Davidson AAT D-275	
Focusing Range	400 mm to infinity / 660 mm @30 m (16" to infinity / 26" @100 feet)
Clear Aperture/Tube OD	37 mm / 57.15 mm $\pm 6.35 \mu\text{m}$ ( 1.46" /2.25" $\pm 0.00025"$ )
Collimator Focal Length	185.4 mm (at 400 mm distance) to 264.3 mm (7.3" [at 15.75" distance] to 10.4") at infinity
Resolution	0.1 arc seconds (per wavelength)
Field of View	660 mm at 30 m (26" at 100 feet)
Light Source	Output peak @ 530nm
Computer Platform	Win10 laptop, running OptiAngle® 5 or 6, USB3 & Ethernet
Line Power	110 V, 60 Hz or 220 V, 50 Hz Universal Supply
Optical Axis to Tube	57.15 mm $\pm 6.35 \mu\text{m}$ (2.25" $\pm 0.00025"$ ) diameter (Designed to fit NAS-900 Spherical Mount). Tube is concentric to the optical axis with a 7.6 $\mu\text{m}$ runout at 400 mm (0.0003" runout at 16") and a 76 $\mu\text{m}$ (0.003") runout at infinity
Reticle	TBD
Camera	Basler Gig-E 1.1 Mpx
Factory Calibrations	Critical calibrations recommended every two years to maintain optimal alignment
Carrying Case	Included - Ruggedized and padded for protection and transit
Instrument Weight	7.98 kg (17.6 lbs)
Accessories Weight	8.62 kg (19 lbs)
Shipping Weight	36.3 kg (80 lbs)



A member of the JENOPTIK Group

9087 Arrow Route, Unit 180, Rancho Cucamonga California USA 91730  
Phone: +1 (626) 962-5181 Fax: +1 (626) 962-5188  
sales@trioptics-usa.com www.trioptics.com/us