



76-RH190 Telescopic Transit Square

With Built-In Cross Telescope

The **76-RH190** has precision telescope optics mounted on a solid-cast bronze horizontal axle which combine to produce a well-balanced instrument with feather-touch controls. The 76-RH190 is the undisputed "workhorse" of optical alignment, providing tremendous flexibility with substantial time and labor savings.

The versatile Brunson 76-RH190 transit combines the traditional main telescope with a fixed-focus cross telescope mounted in the horizontal axis of the instrument. This second telescope is fixed at infinity focus to make collimation or autocollimation with another instrument or a mirror quick and easy. This capability means that the 76-RH190 can be quickly made perpendicular to an optical reference line. By simply shifting from the main eyepiece to the cross-axis eyepiece, an operator can establish or verify his/her position relative to the basic reference line in seconds. This effectively requires only one technician, where previously two were required.

Patented ball bearing mounts permit accurate sweeping of both horizontal and vertical planes. The 76-RH190 employs a 194-TM coincidence level for precision leveling. The 194-TM has a 360-degree rotating turret to view the magnified bubble image from any position.



Comes with or without a micrometer. Measurements from the optical reference line are taken by using an optical micrometer mounted on the main telescope. The 76-RH190 comes standard with a model [190](#) optical micrometer. In event that you do not want this micrometer, or would like to replace it with another one, this instrument may be ordered without a micrometer, by using model number 76-RH.

The 76-RH190 also comes with a model 500 light source, a carrying case, set of adjusting pins, instruction booklet, and plastic cover.



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Specifications

Main telescope:

Length: 14 " (with 190 micrometer)

Magnification: 20X at 2" from objective;
30X at infinity

Field of view: 1 degree

Image: Erect

Optics: Low reflective, protective coating

Effective aperture: 1.34"

Resolution: 3.9 arcseconds

Reticle: Glass, filar/bi-filar pattern (others available)

Focusing Range: 2" to infinity

Cross-axis telescope:

Length: 11"

Magnification: 45X

Field of view: 1 degree

Image: Erect

Optics: Low reflective, protective coating

Effective aperture: 1.25"

Resolution: 4.0 arcseconds

Reticle: Glass, filar/bi-filar pattern (others available)

Focusing range: Focus is fixed at infinity

Bearings: Ball type with a runout of 0.000025" or less

Approximate Weight: Instrument, 34 lbs (15.4 kg); instrument and case, 54 lbs (24.5 kg); shipping, 56 lbs (25.4 kg)

May be used with...

- 160-x Series Coordinate Optical Micrometers
 - 186 Plastic Autoreflexion Target
 - 188 Glass Autoreflexion Target
 - 190-x Series Optical Micrometers
 - 191 Combination Reticle Projection, Fixed Right Angle Eyepiece Unit
 - 192 Auto-Collimation Unit
 - 193 Right Angle Swivel Eyepiece
 - 193-L Right Angle Swivel Eyepiece, Illuminated Adapter
 - 196-1 Combination Projection, Auto-Collimation, Fixed Right Angle Eyepiece Unit
- Although the 76-RH190 comes with its own light source, the following light sources will also fit on the instrument:
- 504 In-line fiberoptic light source
 - 505-110 & 505-220 Fiberoptic light source