

FR-1

The FR-1 provides superb close-focus performance from 3ft (91cm) to Infinity. It delivers the telescopic performance for which Questar is famed.

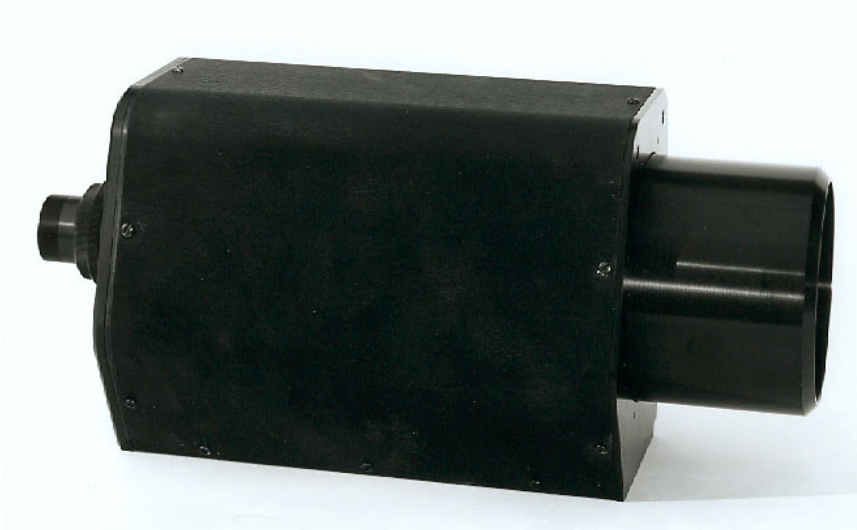
The FR-1 is designed for accuracy and performance. It utilizes the Questar MKIII precision tube assembly design. There are no spacers, extenders, or diopters required.

The FR-1 tube design allows for extended internal focus travel to accommodate this wide focus range. Focus is smooth and stable.

The MKIII barrel design allows for integration of additional options such as motorized focus and future upgrade to SZ 83000 series.

The improved boresight accuracy of this instrument provides greater accuracy in alignment applications.

Equipped with a C-mount adapter and camera coupling set, this unit is ready to attach to any CCD camera with a standard C-thread, and flexibility to be useful in virtually any situation.



FR-1

Questar Long-Distance Microscope Datasheet



Technical data

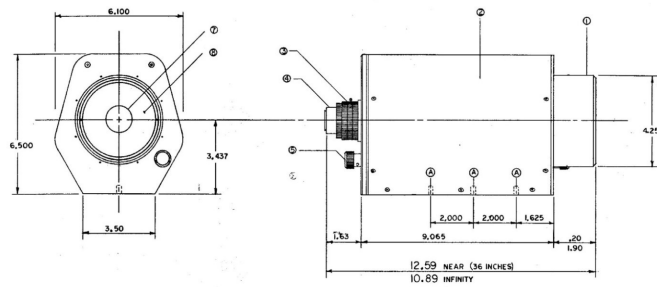
Type	Maksutov Cassegrain Catadioptric
Working range	91cm to Infinity
Resolution	6 microns at 91cm
Focal length	visual: 1400mm at 2.75 BFD at f/16 photographic: 3200mm at f/32
Magnification	Variable depending on BFD, Auxiliary Lens & Imaging Device
Format	Diffraction limited field 18mm

Optics

Corrector lens	BK7, MgF2 coated, 89mm diameter
Primary Mirror	Pyrex, Aluminum coated, SiO overcoated, 96mm diameter
Secondary Mirror	Aluminum coated, R-II surface of corrector, 29mm diameter
Baffling	Helix in central tube, black anti-reflection coated

Mechanical

Barrel	Aluminum plate, machined & black anodized, modular fabricated construction
Lens Cell	Hollow bar, machined & black anodized, precision turned mounting surface & pilot flange
Focusing Mechanism	Corrector focus 6 point bearing structure, 6 precision pressed & loaded bearing & matched stainless steel slide rods, direct drive lead screw focuser & matching anti-backlash ball nut & bronze support bearings
Mirror Mounting	Fixed position, 3» diameter stainless steel mounting plate, matched & fitted to barrel assembly, mirror thimble precision thread to match plate
Knobs	Aluminum
Hardware	Stainless steel



Sample Magnification Chart for the FR-1

Working distance	FR-1 Objective	Auxiliary Lens to 16 mm Eyepiece					With 2/3" Camera & 14" Monitor
		0.9x	Open	1.5x	2.0x	3.0x	
2 m	0.67x	9.4x	10.5x	15.8x	21.0x	31.5x	21.8x
3 m	1.33x	18.7x	20.8x	31.2x	41.6x	62.4x	43.1x

