



MIRION
TECHNOLOGIES



FEATURES

- Rugged
- Reliable
- Radiation tolerant 1MGy (10⁸ rads) cumulative dose
- 32mm (1.25") diameter camera head
- 16mm radiation tolerant lens
- High resolution
- Remote focus
- Remote light control for viewing accessories
- Air and underwater operation

IST-REES ETV1250 Radiation Tolerant Camera System

Mirion manufactures radiation tolerant camera systems for the nuclear industry worldwide. The IST-Rees ETV-1250 series high resolution cameras from IST are designed for operation in harsh environments where personnel safety and the efficient management of plant operations are essential.

APPLICATIONS/BENEFITS

- Fuel inspection, handling and control
- Vessel maintenance
- Fuel bundle serial number verification
- Search and retrieval
- Plug in printed circuit boards and removable cartridge for easy field maintenance
- Only one camera head 'O' ring seal for leakproof operation
- Rugged design for reliability
- Increased value of inspections by use of wide range of Rees accessories



imaging systems

A Mirion Technologies Division

Featuring:



MECHANICAL: CAMERA HEAD	
Diameter	32mm (1.25")
Length (excluding cable taper)	340mm (13.4")
Weight	450g (1 lb)
Weight with 38m (125') cable	14kg (30 lb)
Housing	Polished 300 series stainless steel

MECHANICAL: CAMERA CONTROL UNIT	
Width	478mm (18.8")
Length	305mm (12")
Height	157mm (6.2")
Weight	15kg (33 lb)
Video Connectors	BNC

MECHANICAL: STANDARD CABLE	
Length	38m (125')
Diameter	14.5mm (0.57")
Minimum Bend Radius	150mm (6")

ENVIRONMENTAL: CAMERA HEAD		
Operating Temperature	-25°C TO 60°C (-13°F to 140°F)	
Storage Temperature	-30°C to 71°C (-22°F to 160°F)	
Operating Depth	Up to full cable length (38m; 125')	
Cumulative Dose	1MGy (H ₂ O) [⁶⁰ Co] (10 ⁸ rads)	
	Vidicon	Chalnicon/ Newvicon
Gamma Dose Rate	20kGy/hour 2 x 10 ⁶ rads/hour	2kGy/hour 2 x 10 ⁵ rads/hour

ENVIRONMENTAL: CAMERA CONTROL UNIT	
Operating Temperature	-18°C to 50°C (0°F to 122°F)
Storage Temperature	-30°C to 71°C (-22°F to 160°F)
Relative Humidity	0 to 95% (non condensing)

SPECIFICATIONS AND PERFORMANCE: ELECTRICAL	
Camera Tube	2/3" Vidicon
Horizontal Resolution	500 tv lines/raster height Sensitivity for signal to noise ratio of 20 db
Scene Illumination	
f/2.8 Lens (2854°K)	40 lux (4f) (f /2.8 SNR 20 db)
Grey Scale	10 shades of grey, minimum
Video Output	1V pp - 75 ohms
Synchronization	EIA (525 lines, 60 fields/sec, 2:1 interlace) crystal controlled, internal option to CCIR standard (625 lines, 50 fields/sec, 2:1 interlace)

SPECIFICATIONS AND PERFORMANCE: POWER	
Line Voltage	90-110V; 100V-120V; 200-240V
Line Frequency	60/50 Hz ± 5%
Camera	55 VA nominal
Total with Accessories	Up to 325 VA

SPECIFICATIONS AND PERFORMANCE: OPTICAL	
Lens	16mm f/2.8 radiation tolerant
Diagonal Field of View	38° in air, 28° in water
Remote focus range	
Straight Viewing (no attachments)	25mm (1") to infinity
Right Angle Attachments	From contact to infinity

OPTIONS

- Detachable camera head and cable assembly
- Rack mount CCU

ETV1250 VIEWING ACCESSORIES

Accessory Part No.	Application		Power Setting		Replacement Bulb			
	Air	Water	High	Low	Part No.	Rating		Qty.
						W	V	
NY 10322		•	•		531-00018	50	16	2
WX 33913	•			•	531-00007	25	14	1
WX 33913		•	•		531-00004	150	24	1
WX 33915		•	•		531-00011	20	6	2
WX 33916		•	•		531-00011	20	6	2

“ORIENTABLE TWIN 50” STANDARD NY 10322

Enables unobstructed forward view at a considerable distance from the camera. Two 50 Watt quartz tungsten halogen reflector lamps, protected by wire mesh screens, provide illumination. Special feature enables the rotation of the accessory for orientation. Designed for underwater use only.

Clearance Diameter	108mm (4.24")
Addition to Camera Length	29mm (1.15")



“RAVA” WX33913

A remotely controlled motorized right angle mirror provides 360° scanning capability. The accessory is equipped with a 150 Watt tungsten halogen lamp which is intended for underwater use. An optional 25 Watt lamp is available to permit operation in air.

Diameter	32mm (1.25")
Addition to Camera Length	229mm (9")



“LAVA” WX33915

Permits unobstructed forward view with two quartz 20 Watt tungsten halogen lamps. It is designed for underwater use. Conversion to LFRAM, Part No. 33916, is possible without breaking the underwater seal by use of Part No. 035-09886 fixed mirror.

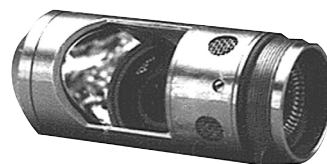
Diameter	32mm (1.25")
Addition to Camera Length	13mm (0.5")



“LFRAM” WX33916

Fixed right angle mirror with two quartz 20 Watt tungsten halogen lamps. It is designed for underwater use. The picture orientation is manually adjustable. Conversion to a LAVA, Part No. 33915, is possible without breaking the underwater seal by use of Part No. 035-09394 shield.

Diameter	32mm (1.25")
Addition to Camera Length	57mm (2.25")





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