

# REES Spectrum Series

## *Robust Inspection Cameras for In-air or Underwater Applications*



### **Benefits**

- Robust and reliable with light weight construction
- High resolution, quality image
- Compact size for confined spaces and portability
- Sealed to IP68 for submerged operation to 30m/100 ft
- Sensitive controls for precise operation
- Operates in low light environments
- Available in crawler systems

### **Applications**

- Fuel Pool Inspection
- Reactor Vessel Inspection
- Pipe Inspection
- FOSAR
- Robotics and Remote Tooling
- ROV Integration

Small yet powerful, the high resolution **Spectrum** camera series provides an innovative solution for your difficult inspection challenges. Remotely operated, these systems range from the light weight Spectrum 45 to the full size Spectrum 100 with its 72:1 zoom. Camera controllers can be portable or rack mounted. Which ever size you choose, the Spectrum series is the ideal camera for your meticulous in-air or underwater nuclear viewing needs.

## Specifications and Performance

### Spectrum 45 PT



### Pelican Case



### Spectrum 45 PT

#### Size

Diameter.....	45mm (1.75")
Length.....	125mm (4.92")

#### Camera

Material.....	Aluminum
Type.....	Color 1/3" CCD
Sensitivity.....	Min 0.3 lux
Resolution.....	330 TV Lines
Focus.....	Manual
Focal Length.....	3.6mm
Ratio.....	F2.2
Iris.....	Auto
Lights.....	4x1W High Power LEDs
Camera Weight.....	0.32kg (0.71lb)

#### Controls

Active Controls.....	Pan, Tilt, Focus & Light
Pan.....	360° continuous
Pan Speed.....	26°/sec
Tilt.....	280°
Tilt Speed.....	12°/sec
Horizontal FOV.....	53° in air
Zoom.....	n/a
Clutch.....	Pan & Tilt Clutch
Lights.....	Variable intensity

### Operating Environment

Temperature.....	0-50°C in air (32-122°F)
Depth Rating.....	30m (100ft)

### Control System

Power.....	Auto-ranging 85-265 VAC
Pelican Mounted Control Size.....	235mm x 192mm x 111mm (9.25" x 7.56" x 4.37")
Pelican Weight.....	1.6kg (3.5lb)
Interface.....	Momentary 4 position joystick switch
Standard Tether Cable.....	Up to 150m (500ft)

### Spectrum 60 PT

#### Size

Diameter.....	63.5mm (2.5")
Length.....	176mm (6.93")

#### Camera

Material.....	Aluminum (Stainless Steel and Titanium Optional)
Type.....	Color 1/3" CCD Weldex
Sensitivity.....	0.3 lux
Resolution.....	570 TV Lines
Focus.....	Manual
Focal Length.....	4.3mm
Ratio.....	F1.9
Iris.....	Auto
Lights.....	12W in air (2x6W), 24W in water (4x6W) Argon Lights
Camera Weight.....	1kg (2.5lb)

#### Controls

Active Controls.....	Pan, Tilt, Focus & Light
Pan.....	340° (360° visible)
Pan Speed.....	Variable 0-18°/sec
Tilt.....	280°
Tilt Speed.....	Variable 0-7°/sec
Horizontal FOV.....	58° in air
Zoom.....	n/a
Clutch.....	Pan & Tilt Clutch
Lights.....	Variable intensity

# REES *Spectrum Series*

## Operating Environment

Temperature .....0-50°C in air (32-122°F)  
 Depth Rating .....30m (100ft)

## Control System

Power .....110 or 220 VAC  
 Chassis .....19" rack mount  
 Height.....88mm (3.5")  
 Rack Mount Weight .....10kg (22lb)  
 Pelican Size .....406mm x 330mm x174mm  
 (16" x 13" x 6.88")  
 Pelican Weight.....9.2kg (20.2lb)  
 Interface .....Proportional joystick & switch panel  
 Standard Tether Cable .....Up to 150m (500ft)

## Spectrum 90 PTZ

### Size

Diameter.....90mm (3.5")  
 Length.....248mm (9.78")

### Camera

Material.....Aluminum (Stainless Steel and Titanium Optional)  
 Type .....Color 1/4" IX-11A CCD  
 Sensitivity.....1.5 lux  
 Resolution .....NTSC 470 TV Lines, PAL 460 TV Lines  
 Focus .....Auto or Manual (Remote)  
 Focal Length.....4.2mm to 42mm  
 Ratio .....F1.8 to F2.9  
 Iris.....Auto  
 Lights.....24W in air (4x6 W flood)  
 48W in water (4x6 W flood + 4x6 W spot) Argon Lights  
 Camera Weight .....2.5kg (5.5lb)

### Controls

Active Controls.....Pan, Tilt, Zoom, Focus & Light  
 Pan.....340° (360° visible)  
 Pan Speed .....Variable 0-24°/sec  
 Tilt.....280°  
 Tilt Speed .....Variable 0-7°/sec  
 Horizontal FOV.....46° in air (wide)  
 Zoom.....40:1 (10X optical, 4X digital)  
 Clutch .....Pan & Tilt Clutch  
 Lights.....Variable intensity

## Operating Environment

Temperature .....0-50°C in air (32-122°F)  
 Depth Rating .....30m (100ft)

## Control System

Power .....110 or 220 VAC  
 Chassis .....19" rack mount  
 Height.....88mm (3.5")  
 Rack Mount Weight .....10kg (22lb)  
 Pelican Size .....406mm x 330mm x 174mm  
 (16" x 13" x 6.88")  
 Pelican Weight.....9.2kg (20.2lb)  
 Interface .....Proportional joystick & switch panel  
 Standard Tether Cable` .....Up to 150m (500ft)  
 \* Longer cables - custom order

*Spectrum 60 PT*



*Spectrum 90 PTZ*



*Pelican Case*



*19" Rack Mount*



## Spectrum 100 PTZ

### Size

Diameter.....100mm (4")  
Length.....270mm (10.7")

### Camera

Material.....Aluminum (Stainless Steel and Titanium Optional)  
Type.....Color FCB-IX47A Sony .25" CCD  
Sensitivity.....1 lux  
Resolution.....460 TV lines  
Focus.....Manual or Auto  
Iris.....Auto  
Lights.....24 W in air (4 x 6 W flood)  
48 W in water (4 x 6W flood,  
4 x 6W spot)  
Camera Weight.....3kg (7lb)

### Controls

Active Controls.....Pan, Tilt, Zoom, Focus & Light  
Pan.....360°  
Pan Speed.....Variable 0-24°/sec  
Tilt.....280°  
Tilt Speed.....Variable 0-7°/sec  
Horizontal FOV.....58° in air  
Zoom.....72:1(18x optical, 4x digital)  
Clutch.....Pan & Tilt Clutch  
Lights.....Variable intensity

### Operating Environment

Temperature.....0-50°C in air (32-122°F)  
Depth Rating.....30m (100ft)

### Control System

Power.....110 or 220 VAC  
Chassis.....19" rack mount  
Height.....88mm (3.5")  
Rack Mount Weight.....10kg (22lb)  
Interface.....Proportional joystick & switch panel  
Standard Tether Cable.....Up to 150m (500ft)

*Spectrum 100 PTZ*



*Pelican Case*



*19" Rack Mount*



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