

The world's longest articulating VideoProbe

The LongSteer VideoProbe Inspection System is the world's only fully-articulating video borescope available in lengths up to 30.5 m (100.0 ft.).



Features

- Patented pneumatic articulation allows 4-Way steering at lengths up to 30.5 m (100 ft.)
- Probe is interchangeable with XL PRO and XL PRO Plus systems
- Available in XL PRO and XL PRO Plus models
- CompactFlash® removable storage media – XL PRO Plus Model
- USB Streaming digital video output – XL PRO Plus Model
- Integrated viewing, recording, measuring, comparing
- Zoom Windows for accurate cursor placement during measurement operations
- On screen time/date and character generation

System Features

Processor/Light Source

The Processor/Light Source combines a brilliant 50 Watts of metal-halide illumination with a sophisticated computing platform for the XL PRO™ system. It is available in two models with the following features:

XL PRO Plus System

- Removable CompactFlash® data storage for Video and Still images
- Full-motion MPEG1/MPEG2 audio/video recording and playback
- USB streaming video port
- Internal 32 MB Flash memory

XL PRO System

- 3.5 in. Floppy drive for still image storage
- Internal 16 MB Flash memory
- Available 32 MB FlashPath® floppy disk



XL PRO Plus Processor/Light Source



XL PRO Processor/Light Source

Hand-Piece

Processor/Light Source

Hand-Piece

The ergonomic hand-piece provides intuitive joystick menu control, large control buttons and a high-resolution color LCD. The innovative hand-piece features:

- Joystick for menu control
- Shock-mounted LCD monitor
- Integrated microphone
- Impact-absorbing rubber bumpers

Probe Tip

4-Way Probe Tip Articulation

Probes

Using a patented compressed air system, the LongSteer® VideoProbe® system is the world's longest video borescope with articulation and measurement capability. The 6.1 or 10.0 mm diameter probe is interchangeable and built to withstand almost any environment. Ruggedly constructed, the probes are protected by:

- Stainless steel or titanium camera heads
- Quad-wall insertion tube construction
- Tungsten braid over entire insertion tube and bending neck



With Mini Magic Arm



Full system is easily transported by an inspector

Technical Specifications

System

Case Dimensions:

Base Model:

Hard Case: 55.9 x 55.9 x 26.7 cm (22.0 x 22.0 x 10.5 in.)

Soft Reel Case: 50.8 x 50.8 x 17.8 cm (20.0 x 20.0 x 7.0 in.)

Advanced & Measurement Models:

Hard Case: 55.9 x 75.0 x 26.7 cm (22.0 x 29.5 x 10.5 in.)

Soft Reel Case: 50.8 x 50.8 x 17.8 cm (20.0 x 20.0 x 7.0 in.)

Weight:

Base Model:

Hard Case: 15.9 kg (35.0 lbs.)

Soft Reel Case: 6.4 kg (14.0 lbs.)

Advanced & Measurement Models:

Hard Case: 19.1 kg (42.0 lbs.)

Soft Reel Case: 6.4 kg (14.0 lbs.)

Camera

Image Sensor: 1/6 in. Color SUPER HAD™ CCD

Pixel Count: 250,000 pixels NTSC; 290,000 pixels PAL

Exposure Control: Automatic or Manual (34 msec to 8 seconds)

White Balance: Factory default or user defined

Housing: 6.1 mm (0.24 in.): Titanium
8.4 mm (0.33 in.): Stainless Steel

Hand-Piece

Dimensions: 30.5 x 14.7 x 12.7 cm (12.0 x 5.8 x 5.0 in.)

Weight: 2.3 kg (5.1 lbs.) typical; includes insertion tube, power plug, power tube and hand-piece

Power Tube: 1.52 m (5.0 ft.)

Construction: ABS housing with integrated Santoprene® bumpers

LCD Monitor: 12.7 cm (5.0 in.) diagonal integrated TFT color LCD

Articulation: Separate joystick module

User Controls: Joystick and complete button function set

Microphone: Integrated high-sensitivity microphone

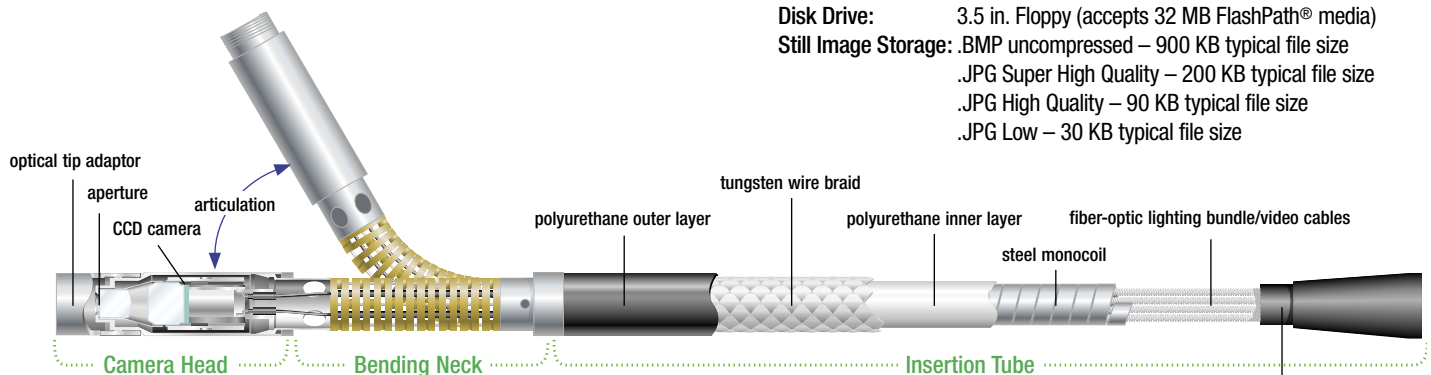
Tip Articulation

| DIAMETER | STRAIGHT TUBE |
|----------------------------|---------------------------------------|
| 6.1 mm (0.24 in.) – 2-Way | Up/Down–80° min |
| 10.0 mm (0.39 in.) – 4-Way | Up/Down–150° min, Left/Right–150° min |

Note: Typical articulation exceeds minimum specifications

Insertion Tube

Note: Illustration is not drawn to scale.



Articulation cables are in the last few feet of the distal end. Air lines run the remaining length to the Air Controller.

| DIAMETER | INSERTION TUBE WORKING LENGTH | | |
|--------------------|-------------------------------|-----------------|------------------|
| 6.1 mm (0.24 in.) | 12.2 m (40 ft.) | 18.3 m (60 ft.) | |
| 10.0 mm (0.39 in.) | 12.2 m (40 ft.) | 18.3 m (60 ft.) | 30.5 m (100 ft.) |

Operating Environment

Tip Operating Temp: -25° to 80°C (-13° to 176°F)

System Operating Temp: -20° to 46°C (-4° to 115°F)

Storage Temperature: -25° to 60°C (-13° to 140°F)

Relative Humidity: 95% max

Waterproof: Insertion tube and tip to
1 bar (14.7 psig, 10.2 m [33.5 ft.] of H₂O)

Hazardous Environments: Not rated for use in hazardous environments

Air Controller

Dimensions: 16.5 x 9.5 x 39.4 cm (6.5 x 3.7 x 15.5 in.)

Air Inlet Fitting: 6.35 mm (0.25 in.) capacity, industrial interchange, MIL-C-4109

Air Input: 5.5-8.2 bars (80-120 psi.) 0.5 cfm flow rate 14 l/m

Note: Optimal articulation achieved with 120 psi

Processor/Light Source

Common Specifications

Dimensions: 27.9 W x 29.5 D x 14.0 H cm (11.0 x 11.6 x 5.5 in.)

Weight: 5.4 kg (12.0 lbs.)

Construction: Aluminum chassis with polyurethane bumpers

Processor: 32 bit Pentium®-class embedded computer

Brightness Control: Automatic and Variable

Lamp Type: 50 W Metal-Halide Arc

Lamp Output: 2600 lumens at 5885K

Lamp Life: 1000 hrs., median

Keyboard Input: PS/2 style keyboard connector

Audio Speaker: Built-in front panel speaker with volume control knob

Audio Out Jack: RCA style connector, line-level audio out

Video Input: S-Video and Composite BNC (XL PRO only) inputs

Video Out: S-Video and Composite BNC

Remote Control: RS-232, DB-9F Connector

XL PRO Plus Specifications

Memory: 32 MB internal Flash memory

Disk Drives: CompactFlash®, Type I, accepts all memory sizes

Still Image Storage: .BMP uncompressed – 900 KB typical file size

.JPG Super High Quality – 200 KB typical file size

.JPG High Quality – 90 KB typical file size

.JPG Low – 30 KB typical file size

Video Recording: MPEG2: High and Low Quality Settings, Up to 42 minutes recording on High w/1 GB CF card

MPEG1: High, Medium and Low Quality Settings, Up to 92 minutes recording on Med w/1 GB CF card

Video Output: S-Video and USB 1.1 streaming digital video

XL PRO Specifications

Memory: 16 MB internal Flash memory

Disk Drive: 3.5 in. Floppy (accepts 32 MB FlashPath® media)

Still Image Storage: .BMP uncompressed – 900 KB typical file size

.JPG Super High Quality – 200 KB typical file size

.JPG High Quality – 90 KB typical file size

.JPG Low – 30 KB typical file size

Technical Specifications

Software

| | |
|-----------------------------|---|
| Operating System: | Real-time multitasking |
| User Interface: | Simple drop-down menu-driven operation |
| File Manager: | File and folder creation, naming, copying, deletion |
| Audio Data: | PC compatible, 15 second files (.WAV format) |
| Image Controls: | Handset brightness control – gain and exposure |
| Image Management: | Single button freeze frame, Full or Split screen |
| Exposure Control: | Automatic or Manual (34 msec to 8 seconds) |
| Digital Zoom: | 1X to 3X – Continuous and 5-Level Stepped |
| Still Image Formats: | BITMAP or JPEG (Super High, High or Low .JPG) |
| Annotation: | Text and Graphic screen overlays and custom logos |
| Lamp Control: | Manual brightness and software On/Off |
| Software Updates: | Field upgradeable via removable media |

Languages

User selectable: English, French, German, Italian, Japanese, Portuguese, Russian, Spanish, Swedish, Chinese and Czech

Measurement

Supported Measurement Features:

| Feature | ShadowProbe® | StereoProbe® | Comparison |
|--------------------------|--------------|--------------|------------|
| Length/Distance | ■ | ■ | ■ |
| Depth | ■ | ■ | |
| Point-to-Line | ■ | ■ | ■ |
| Skew | ■ | | |
| Area | ■ | ■ | ■ |
| Multi-Segment Length | ■ | ■ | ■ |
| Circle Gauge | ■ | | ■ |
| 3x Zoom Windows | ■ | ■ | ■ |
| 5 Measurements per image | ■ | ■ | ■ |

Tip/Lens Options (10 mm LongSteer uses 8 mm tip optics) *FOV is specified diagonally. **Magnification specifications at near-side of tip Depth of Field.

| TIP VIEW (DOV) | TIP COLOR | FIELD OF VIEW (FOV)* | DEPTH OF FIELD (DOF) | MAGNIFICATION** ON 13" MONITOR / 5" LCD | 6.1 mm Ø PROBE TIP PART # | 10.0 mm Ø PROBE TIP PART # |
|----------------|-----------|----------------------|----------------------|---|---------------------------|----------------------------|
|----------------|-----------|----------------------|----------------------|---|---------------------------|----------------------------|

Standard Tip Optics

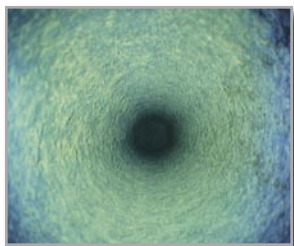
| | | | | | | |
|---------|----------|------|-------------------------------|-----------|-----------|-----------|
| FORWARD | NONE ☒ | 50° | 50 mm (1.97 in.) – infinity | 10X / 4X | XT650FF | XT850FF |
| FORWARD | WHITE □ | 50° | 12 – 200 mm (0.47 – 7.87 in.) | 30X / 11X | PXT650FG | PXT850FG |
| FORWARD | YELLOW ■ | 90° | 20 mm (0.79 in.) – infinity | 12X / 5X | PXT690FF | PXT890FF |
| FORWARD | ORANGE ■ | 80° | 3 – 20 mm (0.12 – 0.79 in.) | 70X / 27X | PXT680FN | PXT880FN |
| FORWARD | BLACK ■ | 100° | 5 – 120 mm (0.20 – 4.72 in.) | 45X / 17X | PXT6100FG | PXT8100FG |
| SIDE | BROWN ■ | 50° | 45 mm (1.77 in.) – infinity | 10X / 4X | PXT650SF | XT850SF |
| SIDE | GREEN ■ | 50° | 9 – 160 mm (0.35 – 6.30 in.) | 30X / 11X | PXT650SG | PXT850SG |
| SIDE | RED ■ | 80° | 1 – 20 mm (0.04 – 0.79 in.) | 70X / 27X | PXT680SN | PXT880SN |
| SIDE | BLUE ■ | 100° | 4 – 100 mm (0.16 – 3.94 in.) | 30X / 11X | PXT6100SG | PXT8100SG |

ShadowProbe® Measurement Tip Optics

| | | | | | | |
|---------|---------|-----|------------------------------|-----------|----------|---|
| FORWARD | WHITE □ | 50° | 12 – 30 mm (0.47 – 1.18 in.) | 30X / 11X | PXT650FG | - |
| SIDE | GREEN ■ | 50° | 12 – 35 mm (0.47 – 1.38 in.) | 30X / 11X | PXT650SG | - |
| SIDE | BLUE ■ | 50° | 7 – 24 mm (0.3 – 0.95 in.) | 50X / 19X | PXT650SN | - |

StereoProbe® Measurement Tip Optics

| | | | | | | |
|---------|---------|---------|-----------------------------|-----------|-------------|---|
| FORWARD | BLACK ■ | 60°/60° | 4 – 80 mm (0.16 – 3.15 in.) | 37X / 15X | PXTM66060FG | - |
| SIDE | BLUE ■ | 50°/50° | 2 – 50 mm (0.08 – 1.97 in.) | 37X / 15X | PXTM65050SG | - |



■ Boiler Tube – Pitting



■ Crack in Attemperator



■ Header Ligaments



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ABOUT EVEREST VIT

Everest VIT is the industry leader in the development of Remote Visual Inspection (RVI) equipment, sales, on-site service, rentals and training. RVI provides viewing capabilities from a remote location, enabling companies around the world to inspect machinery, facilities and infrastructure in the safest, quickest and most cost-effective manner possible. Everest VIT's innovative products have been used to streamline the inspection process in all industries where safety, security and accuracy are of paramount concern, such as aviation, power generation, processing, manufacturing, law enforcement and infrastructure.

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