GE Oil & Gas

XL Vu VideoProbe*  
Inspection Technologies

GE’s Versatile Video Borescope

The XL Vu VideoProbe from GE’s Measurement & Control business is equipped to handle a wide variety of remote visual inspection needs.
Versatility Packed with Features

- StereoProbe* and Comparison indication measurement
- Servomotor All-Way* Probe articulation
- Sealed housings for Dust and Water ingress protection to IP55
- Transflective sunlight readable LCD
- Image and video capture in Full VGA resolution
- Integrated Temperature Warning system
- Probe operates up to 100°C to gain access faster in high temperature applications where cooling time is needed
- Automated inspection reporting and data tagging software (Menu Directed Inspection)
- Live on screen Tip Map aids inspectors in guiding the tip during inspection. A grid shows the tip direction and helps inspectors maintain orientation or better navigation.
- 4 GB Internal Flash memory
- 2 USB® 2.0 ports, VGA video out, headset/microphone port
- Two or four-hour Li-Ion battery
- Full tip optic interchangeability with secure double threads
- Shipping and storage case with integral probe reel included with system

Portability
Our XL Vu VideoProbe system provides inspectors with unparalleled access—without a bulky base unit. Weighing as little as 1.77 kg (3.90 lb), the XL Vu VideoProbe system can easily “view anywhere.”

Image Quality
GE’s XL Vu borescope utilizes LED illumination to display excellent image quality. You can save clear, accurate still images and motion video to the internal flash memory or removable USB ThumbDrive™.
**Technical Specifications**

### Operating Environment

**Tip Operating Temp:**
-25°C to 100°C (-13°F to 212°F)
Reduced articulation below 0°C (32°F)

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

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

**Relative Humidity:**
95% max, non-condensing

**Waterproof:**
Insertion tube and tip to 14.7 psi (1 bar, 10.2 m of H₂O, 33.5 ft of H₂O)

**Environmental:**
IP55 Ingress Protection

### System

**Case Dimensions:**
48.8 x 38.6 x 18.5 cm (19.2 x 15.2 x 7.3 in)

**System Weight:**
- In Case: 6.50 kg (14.30 lb)
- Without Case: 1.73 kg (3.80 lb)

**Power:**
- AC: 90-264 Vac, 47-63 Hz, <1.2 Arms @90 Vac
- DC: 10.2 V +5/-3% 4.9 A

**Construction:**
Polycarbonate housings with integrated Versalon™(JP) bumpers

**Dimensions:**
9.53 x 13.34 x 34.29 cm (3.75 x 5.25 x 13.50 in)

**LCD Monitor:**
Integrated transflective 9.40 cm (3.70 in) active matrix VGA color LCD with XpertBright, 640 x 480 resolution

**Joystick Control:**
360° All-Way tip articulation with XpertSteer, bump gesture, menu access and navigation

**Button Set:**
Access user functions, measurement and digital functions

**Audio:**
Integrated 2.5 mm headset/microphone jack

**Internal Memory:**
4 GB Flash memory

**Data I/O Ports:**
Two USB® 2.0 ports

**Video Port:**
VGA Video Out

**Brightness Control:**
Auto and Variable

**Illumination Type:**
White LED

**Long Exposure:**
Via auto and manual mode

**White Balance:**
Factory default or user defined

**XpertVision (optional external monitor):**

**Weight:**
1.12 kg (2.46 lb) with battery

**LCD:**
16.25 cm (6.4 in) diagonal active matrix VGA color LCD with XpertBright

**Resolution:**
640 x 480 pixels

**Sunlight Readable:**
1100 Cd/M² squared

**Mounting:**
75 x 75 mm (1/4-20) and vesa mount

**Battery Run Time:**
2 hour/4 hour

### Standards Compliance and Classifications

**MIL-STD-810G**
Tested to United States Department of Defense Environment Tests Sections 506.5, 507.5, 509.5, 510.5, 511.5, 514.6, 516.6, 521.3

**MIL-STD-461F**
Tested to United States Department of Defense Electromagnetic Interference RS103 - ABOVE DECK

**Standards Compliance:**
Group 1, Class A: EN61326-1
UL, IEC, EN CSA-C22.2 61010-1
UN/DOT T1-T8

**IP Rating:**
Tested to IP55

### Camera

**3.9 mm (0.154 in) Diameter Probes**

**Image Sensor:**
1/10 inch Color SUPER HAD CCD camera

**Pixel Count:**
290,000 pixels

**Housing:**
Titanium

**6.1 mm (0.242 in) and 8.4 mm (0.331 in) Diameter Probes**

**Image Sensor:**
1/6 inch Color SUPER HAD™ CCD camera

**Pixel Count:**
440,000 pixels

**Housing:**
Titanium

### Software

**Operating System:**
Real-time multi-tasking operating system

**User Interface:**
Simple drop-down menu-driven operation

**File Manager:**
Embedded file manager software supporting: File & Folder creation, naming, deleting Store to internal Flash (C:\) or USB ThumbDrive Copy between USB and C:\

**Measurements:**
StereoProbe and Comparison

**MDI Software (optional):**
Provides user defined guided inspection Creates DICONDE compatible inspection files Creates MS Word® compatible inspection reports

**Audio Data:**
PC compatible (.AAC) file format

**Image Control:**
Invert, Zoom (5X digital), Continuous (5.0X)

**Image Formats:**
Bitmap (.BMP), JPEG (.JPG)

**Video Format:**
MPEG 4

**Text Annotation:**
Built-in full screen text overlay generator Supports international language character sets 100 text line capacity

**Graphic Annotation:**
User placement of arrows

**Articulation Control:**
“Steer & Stay” articulation lock/fine articulation Tip “Home” return to neutral forward-tip orientation User-selectable fine or coarse control XpertSteer probe articulation offers quick steering responsiveness for tight probe control – bump steering enables slight adjustments to probe position

**Software Updates:**
Field updateable via USB ThumbDrive

**Languages:**
English, Spanish, French, German, Italian, Russian, Japanese, Korean, Portuguese, Chinese, Polish

### Insertion Tube Length and Diameter Options

<table>
<thead>
<tr>
<th>CAMERA DIAMETER</th>
<th>INSERTION TUBE WORKING LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.9 mm (0.154 in)</td>
<td>2.0 m (6.6 ft)</td>
</tr>
<tr>
<td>6.1 mm (0.242 in)</td>
<td>2.0 m (6.6 ft)</td>
</tr>
<tr>
<td>8.4 mm (0.331 in)</td>
<td>2.0 m (6.6 ft)</td>
</tr>
</tbody>
</table>
### Tip Articulation

<table>
<thead>
<tr>
<th>Insertion Tube Length</th>
<th>Straight Tube</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0, 3.0 or 4.5 m</td>
<td>Up/Down - 160° min, Left/Right - 160° min</td>
</tr>
<tr>
<td>6.0 m</td>
<td>Up/Down - 140° min, Left/Right - 140° min</td>
</tr>
<tr>
<td>8.0 m, 10.0 m</td>
<td>Up/Down - 120° min, Left/Right - 120° min</td>
</tr>
</tbody>
</table>

*Note: Typical articulation exceeds minimum specifications*

### Tip Optics

<table>
<thead>
<tr>
<th>Tip View (DOV)</th>
<th>Tip Color</th>
<th>Field of View (FOV)</th>
<th>Depth of Field (DOF)</th>
<th>3.9 mm Optical Tip Part #</th>
<th>6.1 mm Optical Tip Part #</th>
<th>8.4 mm Optical Tip Part #</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOR ward</td>
<td>NONE</td>
<td>80˚</td>
<td>6–80 mm</td>
<td>(0.24–3.15 in)</td>
<td>PXT480FG (1)</td>
<td></td>
</tr>
<tr>
<td>FOR ward</td>
<td>ORANGE</td>
<td>90˚</td>
<td>3–40 mm</td>
<td>(0.12–1.57 in)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FOR ward</td>
<td>NONE</td>
<td>50˚</td>
<td>50 mm–infinity</td>
<td>(1.97 in–infinity)</td>
<td>XLG3T6150FF (2)</td>
<td></td>
</tr>
<tr>
<td>FOR ward</td>
<td>WHITE</td>
<td>50˚</td>
<td>12–200 mm</td>
<td>(0.47–7.87 in)</td>
<td>XLG3T6150FG</td>
<td></td>
</tr>
<tr>
<td>FOR ward</td>
<td>ORANGE</td>
<td>80˚</td>
<td>3–20 mm</td>
<td>(0.12–0.79 in)</td>
<td>XLG3T6180FN</td>
<td></td>
</tr>
<tr>
<td>FOR ward</td>
<td>YELLOW</td>
<td>90˚</td>
<td>20 mm–infinity</td>
<td>(0.79 in–infinity)</td>
<td>XLG3T6190FF</td>
<td></td>
</tr>
<tr>
<td>FOR ward</td>
<td>BLACK</td>
<td>120˚</td>
<td>5–120 mm</td>
<td>(0.20–4.72 in)</td>
<td>XLG3T61120FG</td>
<td></td>
</tr>
<tr>
<td>FOR ward</td>
<td>BLACK</td>
<td>100˚</td>
<td>5–120 mm</td>
<td>(0.20–4.72 in)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FOR ward</td>
<td>ORANGE</td>
<td>50˚</td>
<td>12–80 mm</td>
<td>(0.47–3.15 in)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FOR ward</td>
<td>BLACK</td>
<td>120˚</td>
<td>5–200 mm</td>
<td>(0.20–7.87 in)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FOR ward</td>
<td>NONE</td>
<td>40˚</td>
<td>250 mm–infinity</td>
<td>(9.84 in–infinity)</td>
<td>XLG3T8440FF (2)</td>
<td></td>
</tr>
<tr>
<td>FOR ward</td>
<td>WHITE</td>
<td>40˚</td>
<td>80–500 mm</td>
<td>(3.15–19.68 in)</td>
<td>XLG3T8440FG</td>
<td></td>
</tr>
<tr>
<td>FOR ward</td>
<td>ORANGE</td>
<td>80˚</td>
<td>12–50 mm</td>
<td>(0.98–19.68 in)</td>
<td>XLG3T8480FG</td>
<td></td>
</tr>
<tr>
<td>SIDE</td>
<td>BROWN</td>
<td>80˚</td>
<td>4–80 mm</td>
<td>(0.16–3.15 in)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SIDE</td>
<td>RED</td>
<td>90˚</td>
<td>2–16 mm</td>
<td>(0.08–0.63 in)</td>
<td>XPT490SG</td>
<td></td>
</tr>
<tr>
<td>SIDE</td>
<td>BROWN</td>
<td>50˚</td>
<td>45 mm–infinity</td>
<td>(1.77 in–infinity)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SIDE</td>
<td>GREEN</td>
<td>50˚</td>
<td>9–160 mm</td>
<td>(0.35–6.30 in)</td>
<td>XLG3T6150SF</td>
<td></td>
</tr>
<tr>
<td>SIDE</td>
<td>BLUE</td>
<td>120˚</td>
<td>4–100 mm</td>
<td>(0.16–3.94 in)</td>
<td>XLG3T61120SG</td>
<td></td>
</tr>
<tr>
<td>SIDE</td>
<td>BLUE</td>
<td>100˚</td>
<td>4–100 mm</td>
<td>(0.16–3.94 in)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SIDE</td>
<td>RED</td>
<td>80˚</td>
<td>1–20 mm</td>
<td>(0.04–0.79 in)</td>
<td>XLG3T6180SN</td>
<td></td>
</tr>
<tr>
<td>SIDE</td>
<td>GREEN</td>
<td>80˚</td>
<td>18 mm</td>
<td>(0.71 in–infinity)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SIDE</td>
<td>BLUE</td>
<td>80˚</td>
<td>5 mm</td>
<td>(0.20 in–infinity)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SIDE</td>
<td>BROWN</td>
<td>40˚</td>
<td>250 mm–infinity</td>
<td>(9.84 in–infinity)</td>
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<td></td>
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<tr>
<td>SIDE</td>
<td>GREEN</td>
<td>80˚</td>
<td>25–500 mm</td>
<td>(0.98–19.68 in)</td>
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<td>BLUE</td>
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<td>4–200 mm</td>
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<td>BROWN</td>
<td>80˚</td>
<td>4–80 mm</td>
<td>(0.16–3.15 in)</td>
<td></td>
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</tr>
<tr>
<td>SIDE</td>
<td>BLUE</td>
<td>45˚/65˚</td>
<td>2–50 mm</td>
<td>(0.08–1.97 in)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SIDE</td>
<td>BLUE</td>
<td>50˚/50˚</td>
<td>4–45 mm</td>
<td>(0.20–1.77 in)</td>
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<td></td>
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<tr>
<td>SIDE</td>
<td>WHITE</td>
<td>60˚/60˚</td>
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<td></td>
</tr>
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</table>

(1) FOV is specified diagonally.
(2) Indicates tips with maximum brightness.