

Mitcorp INDUSTRIAL VIDEOSCOPE

■ CLEARNESS ■ SHARPNESS ■ BRIGHTNESS



X2000 HD VIDEOSCOPE

Product Outlook



Actual Size : 240x154 mm





n (1:1)



Actual Size : 80x190mm (1:1)

Best Image Viewing Experience

The X2000 features a 7" LCD touchscreen the delivers not only crisp and clear images but also features a manual exposure which works very similar to that of a smartphone. This makes it not only very helpful but also very convenient to use.



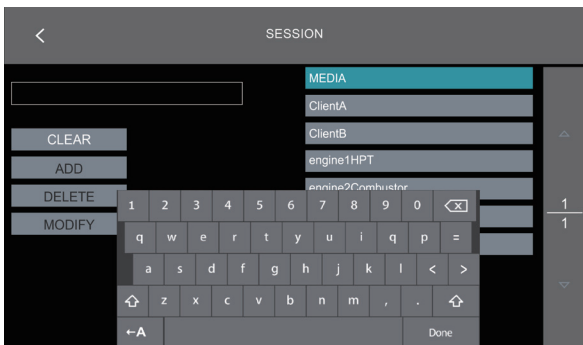
Wide view angle 7" IPS TFT-LCD



Manual exposure by fingertip

Advanced File Management

Never get lost again in the countless numbers of images and videos you take. The X2000 HD offers a file management system which allows you sort your footage into folders, to tag them and to add notes or annotations. This makes keeping track of all your inspections easy and convenient.



Custom build file folder by 'SESSION'




Custom photo overlay text by 'TAG'

Versatile Output Connectivity

HDMI port to TV/monitor for HD quality image viewing

USB type C port to PC as Web-Cam or SD card reader

Wi-Fi connect to mobile devices to view and share pictures. Dedicated APP download (VideoscopeNOW )

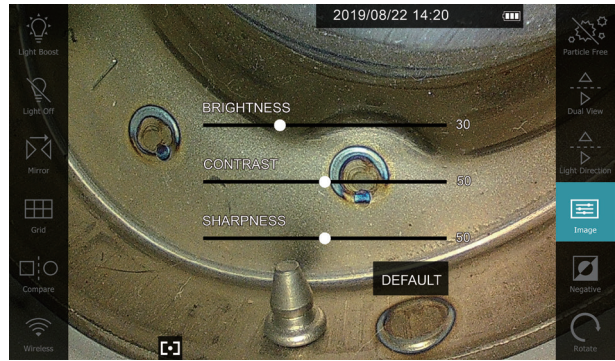


Excellent User Interface

A vast range of different functions ensure the best user experience, catering all your individual needs for your next inspection.



Front /side Dual view at once (with mirror)



Supports image sharpness fine tuning



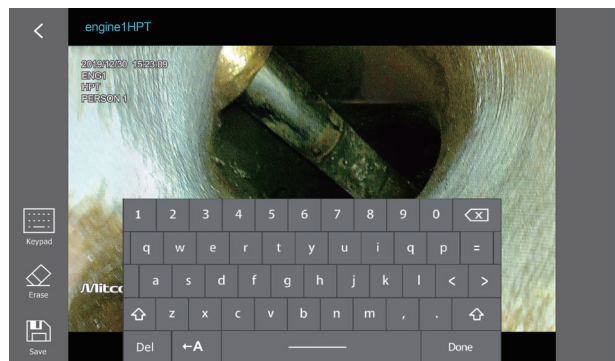
Rotate the live view clockwise to get the best visual angle



3 stage temperature warming & auto shut down function



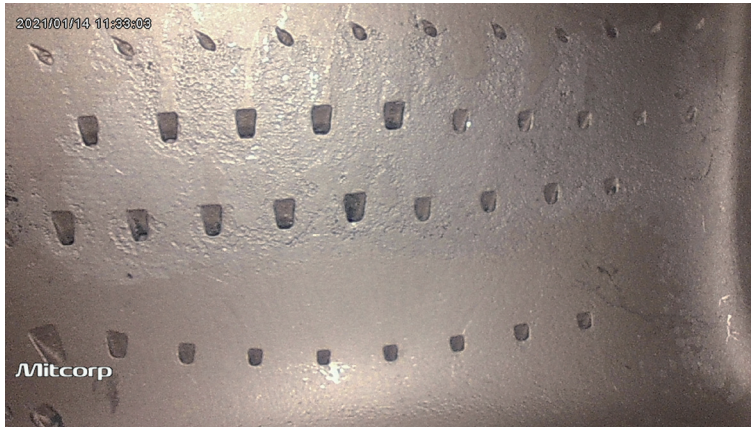
Patented particle free effect (with mirror)



Editable image annotation

FOV: Wider Than Ever Before

The enhanced field of view (FOV) of our new 3.9 mm HD lenses allows you to see in a wider angle than ever before. Especially in combination with the shorter probe tip and the large articulation angle of our probes, it allows for a comprehensive inspection during which no flaw will remain undetected.



2560*1440 output by 6.0 mm HD probe
(30 mm distance)



1600*1600 output by 3.9 mm HD probe
(30 mm distance)

DOF (Depth of Field)

The depth of field (DOF) needed for an inspection, can vary depending on the application field for your videoscope. Airplane turbines for example need a different focal length than the engine block of an automotive. Mitcorp offers a variety of different focal lengths to fit your needs.



2560*1440 output by 6.0 mm HD probe
(10 mm distance)



1600*1600 output by 3.9 mm HD probe
(5 mm distance)

Use Case: Combustion Chamber & Turbine inspection in the aviation industry

The X2000 HD videoscope is a perfect companion for this challenging task. In this case the X2000 system was used in combination with one of our 6 mm articulation probes. Not only does this combination provide high quality videos but also outstanding image quality of 2560*1440 pixels.

Optional small diameter of 3.9 mm and the 120° field of view as well as the 140° bending angle allow the technician to move the probe freely within the area to be inspected.



HD Probes



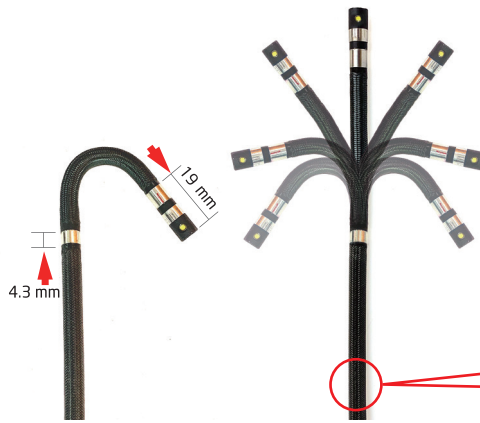
Smooth mechanic articulation control system
Move & lock joystick



- 100°C resistance camera tip (6.0 mm tube)
- Ultra-luminance front LED
- IP67 level waterproof and oil proof.



High rigidity tube (35 cm)



Shorter distal end & bending radius



Scratch resistance tungsten braids

Versatile diameter probe & optical tip

Stunning video quality and crisp images, all without compromising probe size or maneuverability. Our new 3.9 mm inspection probes are the combination of a small, flexible design and flawless image quality. The comprehensive features of our X2000 system in combination with our new series probes will definitely elevate your inspections.



2.8 mm



3.9 mm



3.9 mm dual view



6.0 mm



6.0 mm dual view

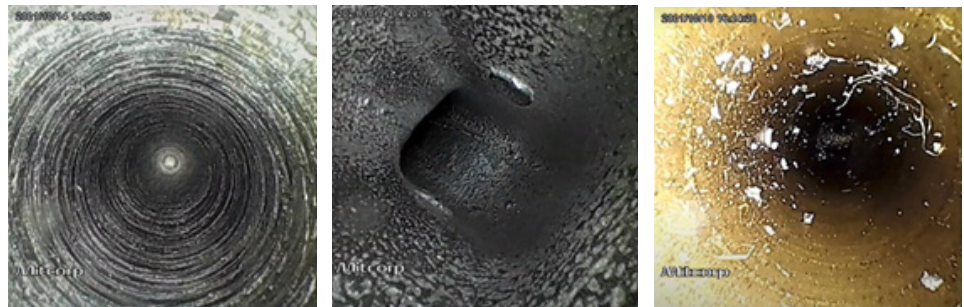
2.8 mm Insertion Probe



Bright & Clear Images

The 2.8 mm scope does not compromise between high image quality for a small diameter. Expect sharp & clear images. The bright LEDs let you see clearly in dark spaces, and the wide FOV offers a great overview. And no more blurry images, thanks to the 3 mm - ∞ DOF range!

- Resolution: 800*800
- FOV: 120
- DOF: 3 mm - ∞



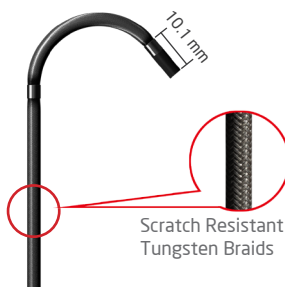
Precise Movements:

A short distal-end and four-way articulation ensure precise movements! Thanks to the small diameter, the bending radius is also small and allows you to reach your inspection target even in confined spaces.

- 4 Way articulation
- 110° bending angle
- 10.1 mm probe head length

Tungsten Durability

The 2.8 mm dual view probe has a protective tungsten braided outer layer. The strength and density of tungsten extend the probe lifespan significantly and make it waterproof, heat and scratch-resistant.



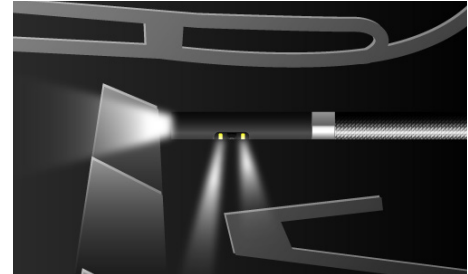
- Tungsten-braided outer layer
- IP67 level waterproof and oil proof
- 80°C heat resistance
- Unyielding to scratches and corrosion

3.9 mm Dual View



Dual LED Setup

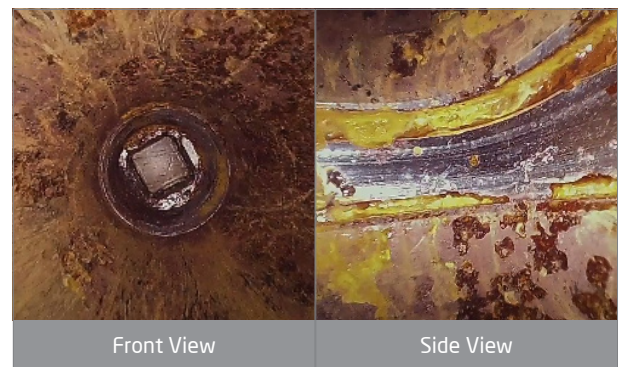
Light distribution is crucial to avoid glare spots and reflections. For that reason, the side view camera has two LED light sources, one below and one above the camera lens, allowing for evenly distributed light in any situation.



Clear Vision & Sharp Photos

Nothing is more important than to have a clear view and sharp images during an inspection. That is why the 3.9 mm dual view boasts two powerful cameras that will give you a perfect overview and leave no flaw undetected.

- HD resolution
- Wide FOV of 120°
- DOF of 5 mm~100 mm



Maneuverability & Precision

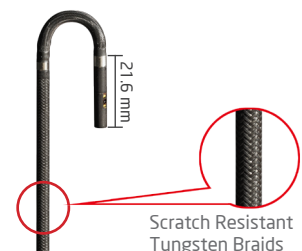
Our insertion probes are made to get to even the hardest-to-reach places, and the 3.9 mm dual view is no exception. It is highly flexible and small enough to reach your next inspection target with maximum efficiency and minimal effort.

- 3.9 mm probe head diameter
- 4 Way articulation
- Mechanical wiring (instant feedback & precise movements)
- Articulation up to 120°

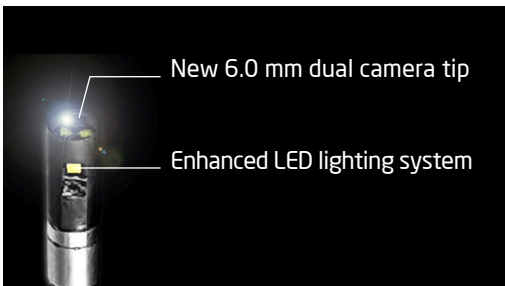
Tungsten Reliability

The 3.9 mm dual view probe has a protective tungsten braided outer layer. The strength and density of tungsten extend the probe lifespan significantly and make it waterproof as well as heat and scratch-resistant.

- IP67 level waterproof and oil proof
- 100°C heat resistance
- Unyielding to scratches and corrosion



6.0 mm Dual View



Outstanding performance for dual view inspection

6 mm is the most popular size probe of video scopes for the reasons of best developed optical technology.

The new 6 mm dual camera tip equipped with enhanced LEDs that provide 30% up illumination than conventional probe. 1 second switch between front / side views along with so sacrificed image quality is now presented !

Crisp high resolution image quality output

2560*1440 high resolution images recorded on both dual cameras. The side view camera is fine tuned to 7 mm near focal length that especially practical to tube wall side defects inspection.

- FOV: front & side camera 95°
- DOF: front camera 8 mm~∞ / side camera 7 mm~∞



High-resolution images and videos

Great mobility. Outstanding flexibility. Stunning results.



Rugged & Durability

- IP67 waterproof
- 100°C resist & High temperature warning
- Unyielding to scratches and corrosion



Sensitive mechanical control articulation

Full way articulation with lock design, mechanic wiring joystick brings you instant feedback and precise angle control.

21.5 mm short tip length and bending radius make your surrounding inspection job extremely comfortable and efficiently.

Insert Tube Options

Cast probe

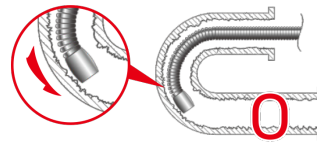


- Side view



- Snapshot
- brightness+
- brightness -

| Features | 39DF-1M-ST front view probe | 39DS-1M-ST side view probe |
|---------------------|------------------------------------|------------------------------------|
| Probe head diameter | 3.9 mm | 3.9 mm |
| Probe head length | 5.6 mm | 7.6 mm |
| Probe head material | Stainless steel | Stainless steel |
| Probe diameter | 3.9 mm | 3.9 mm |
| Probe length | 1 m | 1 m |
| Pobe material | Spring, stainless steel | Spring, stainless steel |
| LED | Front | Side |
| DOF | 5 mm~60 mm | 2 mm~30 mm |
| FOV | 90° | 90° |
| Working temperature | -10°C to 60°C | -10°C to 60°C |
| Storage temperature | -10°C to 60°C | -10°C to 60°C |
| Resolution | 400*400 | 400*400 |
| Button | Snapshot, Brightness+, Brightness- | Snapshot, Brightness+, Brightness- |



| Features | 39DF-1M-SR |
|---------------------|------------------------------------|
| Probe head diameter | 3.9 mm |
| Probe head length | 12 mm |
| Probe head material | Stainless steel |
| Probe length | 1 m |
| Probe material | Steel, semirigid |
| LED | Front / Side |
| DOF | 10 mm~60 mm |
| FOV | 90° |
| Working temperature | -10°C to 60°C |
| Storage temperature | -10°C to 60°C |
| Resolution Pixels | 400*400 |
| Button | Snapshot, Brightness+, Brightness- |

Trolley Case & Accessories

Ruggedized Storage



Built-in storage reel for tube




IP67 trolley case with extendable handle

Accessories








* also includes: cleaning set, SD card, user manual

X2000 System Technical Specifications

| X2000 | | | | | |
|--|---|--|-------------------------|------------------------------------|---------------------------------|
|  | | | | | |
| * Size: 240*154*47 mm * High temperature during charging/operation may cause degradation of battery performance and life. | | | | | |
| Display | 7"LCD, Resolution 1024*600 | | | Weight | 1480g |
| Power supply | AC adapter | 100V~240V, 120V 2.5. 50-60Hz | | | |
| Video output | BATTERY | Rechargeable Li Battery 3.6V 9800mAh, approximately operation time; 5hrs, charging time:4hrs | | | |
| | HDMI | TYPE D; HDMI 1.4 transmitter with 3D format and CEC support | | | |
| | USB | USB TYPE C, supporting USB full-speed and high-speed data transmission | | | |
| | Wi-Fi | IEEE 802.11B/G | | | |
| Operating temperature | In air 0~45°C, with AC pwer adaper: 0~40°C, charging temp:0~35°C | | | | |
| Storage temperature | -10°C~70°C | | | | |
| Drop resistance | 1m | | | | |
| Relative humidity | Max 95% non-condensing | | | | |
| Dust and waterproof | IP57 | | | | |
| Insert tubes interchangeability | 6.0 mm HD series; 3.9 mm HD series; 2.8 mm | | | | |
| Software features | | | Recording management | | |
| Image features | Digital zoom 3X, 10 steps brightness control | | Storage media | SDHC micro card | |
| Image effect | Clarity-on / off | | Overlay | YY / MM / DD h:m, battery capacity | |
| Annotation | 10 text annotation (24 characters) | | Thumbnail image display | 9 grids album mode | |
| Timestamp / watermark | For snapshot / video recording (on / off) | | Still image | Resolution | 2560*1440 (S-HD); 1280*720 (HD) |
| Image management | User define pic / video folder available | | | Recording format | jpg |
| Image display functions | Light boost, light off, mirror, grid, compare, wireless, particle free, dual view, light direction, auto whie balance | | Video | Resolution | 1920*1080 |
| | | | | Recording format | .mov / H.264 |
| | | | | Audio input | Built-in microphone (on / off) |
| White balance | Manual adjustable (default, calibration, custom) | | Frame rate | 30FPS | |
| Accessories | | | | | |
| HDMI cable (AV-out) | 1.8 m, HDMI 1.4a, D TYPE | | | | |
| USB cable (data transfer) | 1m, type C to standard type A | | | | |
| USB charging cable | 1m, USB-DC jack (for power bank). It is recommended to use a 5V~12V, 2A mobile power bank. An output under 2A will not charge the battery and only provide operation power supply | | | | |
| SD card | 32G | | | | |
| DC power adapter | 100V~240V, 12V 2.5A 50~60 Hz | | | | |
| Shoulder strap | Polyester | | | | |
| Hand strap | Polyester | | | | |
| Sun visor | Steel / Plastic | | | | |
| Insulatio cap | Ø20 mm, Ø90 mm rubber | | | | |
| Trolley case | HDPE EVA | | | | |

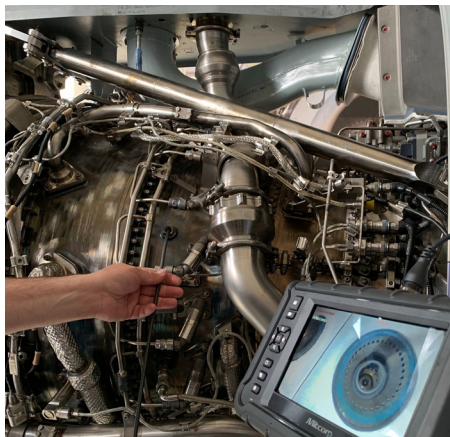
MIL-STD compliance

| Item | Standard (Method) |
|------------------------------|---------------------------------|
| Vibration Test (Packaged) | MIL-STD-810G-CHG-1 Method 514.7 |
| Transit Drop Test (Packaged) | MIL-STD-810G-CHG-1 Method 516.7 |
| Salt Fog Test | MIL-STD-810G-CHG-1 Method 509.6 |
| Humidity Test | MIL-STD-810G-CHG-1 Method 507.6 |
| Explosive Atmosphere | MIL-STD-810G-CHG-1 Method 511.6 |

| 360° Articulation Probes | | | | | | |
|-------------------------------|--|--------------|--|--|---|---|
| | 60D4W-F_TU-M | 60D4W-F_TU-F | 60D4W-FS_TU-M | 39D4W-F_TU-M | 39D4W-FS_TU-M | 28D4W-F_TU-M |
| Options |  | |  |  |  |  |
| Probe head diameter* | 6.0 mm* | | | 3.9 mm* | 3.9 mm* | 2.8 mm* |
| Probe length options | 2 m/3 m/5 m/7 m | | 2 m/3 m/5 m/7 m/10 m | 1.5 m/3 m | 1.5 m/3 m | 1.5 m |
| Probe head length | 19.3 mm | | 2 m/3 m: 21.5 mm 5 m/7 m/10 m: 24.4 mm | 13 mm | 21.6 mm | 10.1 mm |
| Direction of view | Front view | | Front + Side 90° | Front | Front+Side 90° | Front |
| Illumination | Front/Side LEDs | | Front/side LED | Front LED | Front/Side LED | Front LED |
| Mirror adaptor | Side/Dual view | | n.a | n.a | | |
| Field of view (FOV) | 90° | | 95° | 120° | | |
| Depth of Field (DOF) | 10 mm~100 mm | 25 mm~∞ | 2 m/3 m: Front: 8 mm~∞ Side: 7 mm~∞ 5 m/7 m/10 m: Front: 8 mm~∞ Side: 5 mm~200 mm | 5 mm~100 mm | 5 mm~100 mm | 3 mm~∞ |
| Still image resolution (.jpg) | 2560*1440 (S-HD) | | (Dual) 2560*1440 | 1600*1600 | (Dual) 1600*1600 | 800*800 |
| Video resolution (.mov) | 1920*1080 | | (Dual) 1920*1080 | 1600*1600 | (Dual) 1600*1600 | 800*800 |
| Articulation angle** | 2 m/3 m: full ways ≥ 120° 5 m/7 m/10 m: full ways ≥ 80° | | | Full way >140° | Full way >120° | Full way >110° |
| Operating temperature | In air: -10~100°C ; In water: 10~30°C | | | | | In air : -10~80°C In water: 10~30°C |
| Probe head material | Stainless Steel | | | | | |
| Probe material | Tungsten braid | | | | | |
| Joystick console dimensions | (WxDxH) 139.4x193x84.2 mm (w/o SR and insert tubes) | | | | | |
| Joystick console buttons | Brightness+, Brightness-, snapshot/record | | | | | |
| Lock and move | Joystick/Unlock switch on console | | | | | |
| Dust and water proof | Joystick console: IP54 ; Insert Tube: IP67 | | | | | |
| Relative humidity | Max 95% non-condensing | | | | | |
| Liquid resistance | Operable when exposed to machine oil, light oil or 5% saline solution | | | | | |
| Storage temperature | -10°C~70°C | | | | | |
| Rigid sleeve | for 6.0 mm probe | | | for 3.9mm / 2.8 mm probe | | |
| | OD: 8 mm/ID: 7 mm Protection: OD: 10 mm Extension joint ring: OD: 11.2 mm | | | OD: 6 mm/ID: 5 mm Protection: OD: 8 mm Extension joint ring: OD: 8.6 mm | | |
| | Grip material: Rubber/Aluminum/Plastic; Tube material: Stainless steel Stainless tube length: 450 mm per section. (Grip not included) | | | | | |
| Trolley case | HDPE EVA with storage reel | | | | | |

* O.D. Tolerance: 6.0 mm: ±0.09 mm / 3.9 mm: ±0.15 mm / 2.8 mm: ±0.1 mm.

** The maximum articulation angle may degrade over time.



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