

# Mitcorp

## INDUSTRIAL VIDEOSCOPE

■ CLEARNESS ■ SHARPNESS ■ BRIGHTNESS



## X2000 HD VIDEOSCOPE



## Best Image Viewing Experience

The X2000 features a 7" LCD touchscreen that 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.



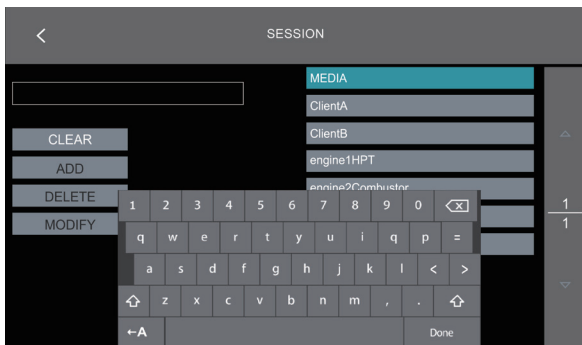
Wide view angle 7" IPS TFT-LCD



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 to 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



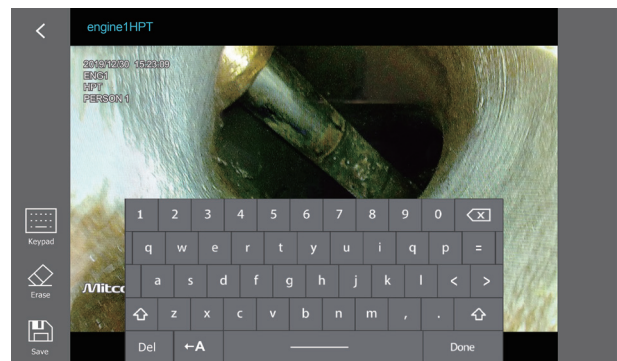
Rotate the live view clockwise to get the best visual angle



3 stage temperature warming & auto shut down function



Patented particle free effect (with mirror)



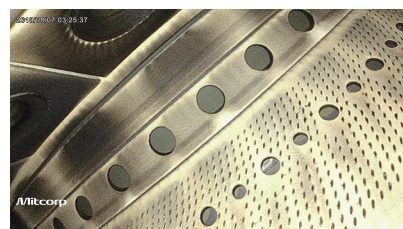
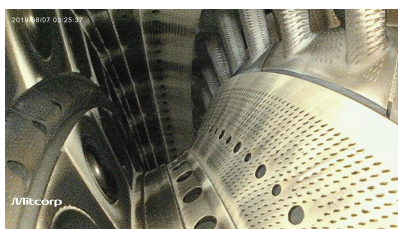
Editable image annotation



## 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.

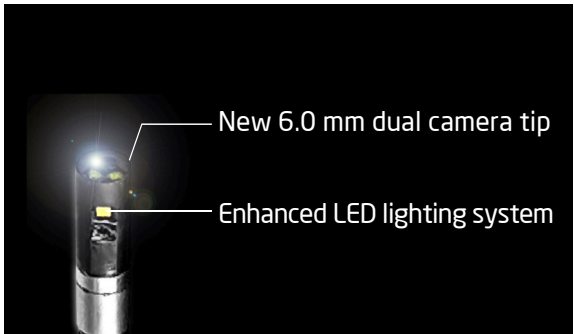
Optional small diameter of 3.9 mm and the 120° field of view as well as the 140° bending angle allow the technician to move the probe freely within the area to be inspected.



# New HD Probes



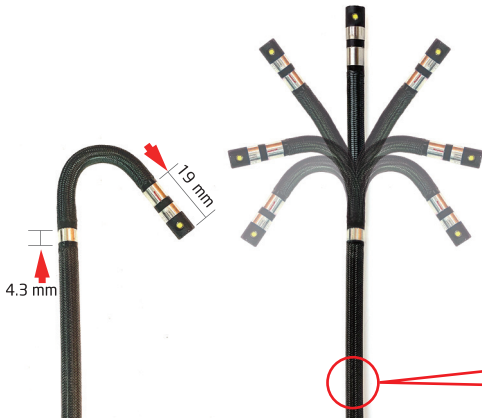
Smooth mechanic articulation control system  
Move & lock joystick



- 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

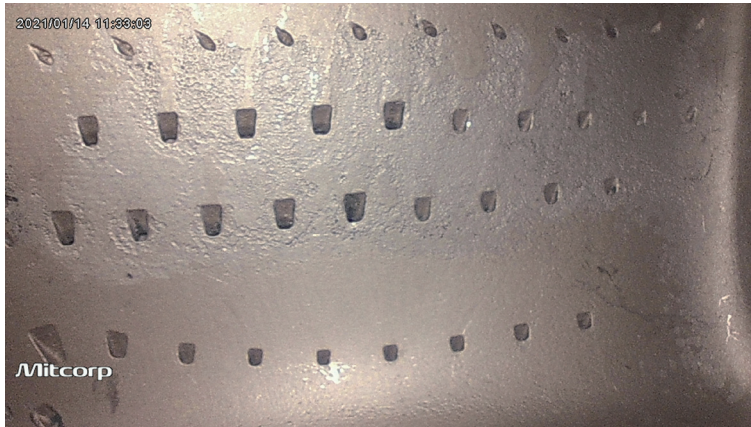
Stunning video quality and crisp images, all without compromising probe size or maneuverability. Our new 3.9 mm inspection probes are the combination of a small, flexible design and flawless image quality. The comprehensive features of our X2000 system in combination with our new series probes will definitely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





## 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)

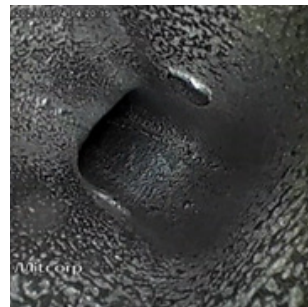
## 2.8 mm Insertion Probe



### 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 -  $\infty$  DOF range!

- Resolution: 800\*800
- FOV: 120
- DOF: 3 mm -  $\infty$



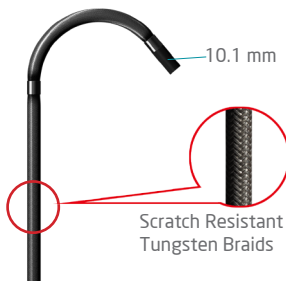
### Precise Movements:

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
- Waterproof (1m depth; 30 min)
- 80°C heat resistance
- Unyielding to scratches and corrosion

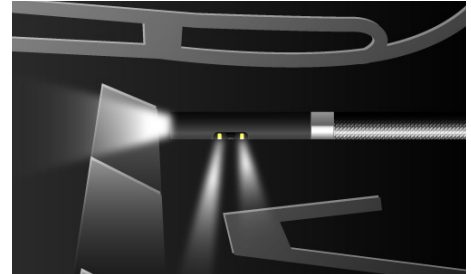


## 3.9 mm Dual View



### Dual LED Setup

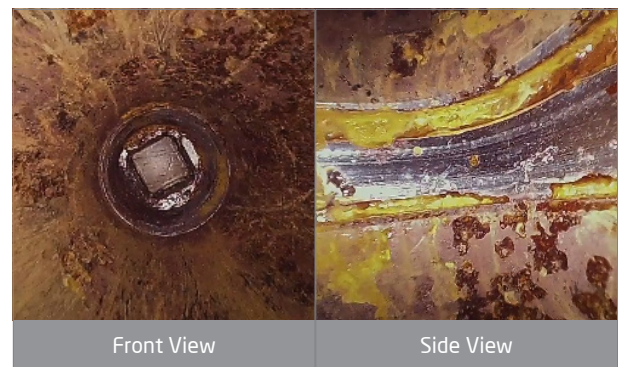
Light distribution is crucial to avoid glare spots and reflections. For that reason, the side view camera has two LED light sources, one below and one above the camera lens, allowing for evenly distributed light in any situation.



### 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.

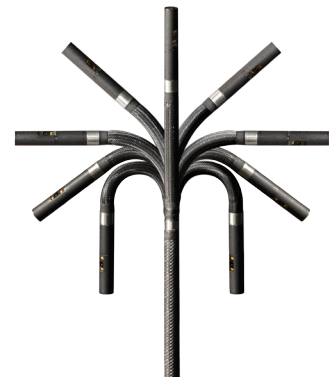
- HD resolution
- Wide FOV of 120°
- DOF of 5 mm~100 mm



### 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.

- Waterproof (1 m depth ; 30 min)
- 100°C heat resistance
- Unyielding to scratches and corrosion








# X2000 System Technical Specifications

X2000					
<div><div></div><div><p>* Size: 240*154*47 mm * High temperature during charging/operation may cause degradation of battery performance and life.</p></div></div>					
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 up to 32G
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						
Options	60D4W-F_TU-M	60D4W-F_TU-F	60D4W-FS_TU-M	39D4W-F_TU-M	39D4W-FS_TU-M	28D4W-F_TU-M
						
Probe head diameter	6.0 mm*			3.9 mm*		2.8 mm*
Probe head length	19.3 mm		21.5 mm (2 m&3 m tube) 24.4 mm (5 m&7 m tube)	13 mm	21.6 mm	10.1 mm
Mirror adaptor	Side/Dual view		n.a	n.a		
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
Field of view (FOV)	90°		95°	120°		
Depth of Field (DOF)	10 mm~100 mm	25 mm~∞	Front: 8 mm~∞ Side: 7 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) 2560*1440	1600*1600	(Dual) 1600*1600	800*800
Articulation angle*	2 m, 3 m full ways ≥120°; 5 m, 7 m full ways ≥80°			Full way >140°	Full way >120°	Full way >110°
Probe length	2 m/3 m/5 m/7 m			1.5 m/3 m	1.5 m/3 m	1.5 m
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: under water 1 m for 30 minutes					
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: 10 mm		
	Grip material: Rubber/Aluminum/Plastic; Tube material: Stainless steel					
Trolley case	HDPE EVA with storage reel					

\* The maximum articulation angle may degrade over time.

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

## Insert Tube Options

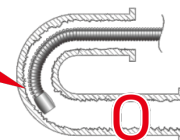
### Cast probe



- 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

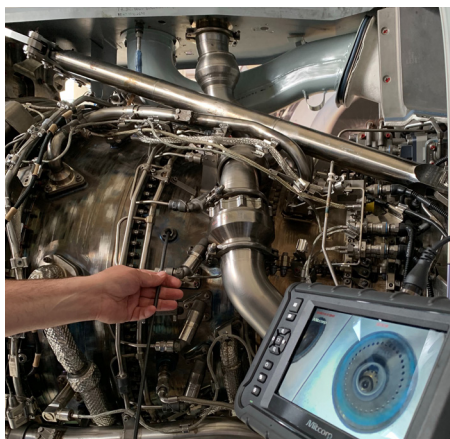
### Accessories



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







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