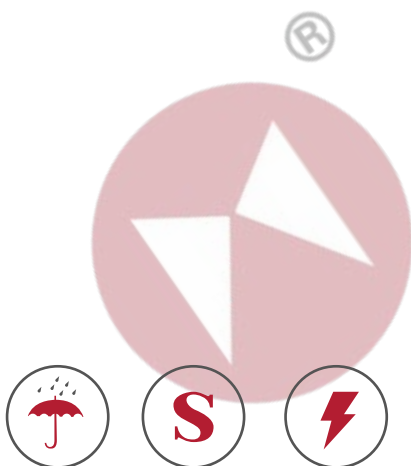


# MITECH MVH SERIES INDUSTRIAL ENDOSCOPE

- Professional manufacturer, best quality with competitive price
- Recommended by the world UT NDT inspection association for training and examination
- Core technology with independent intellectual property rights, certificate of CE, GOST and etc..



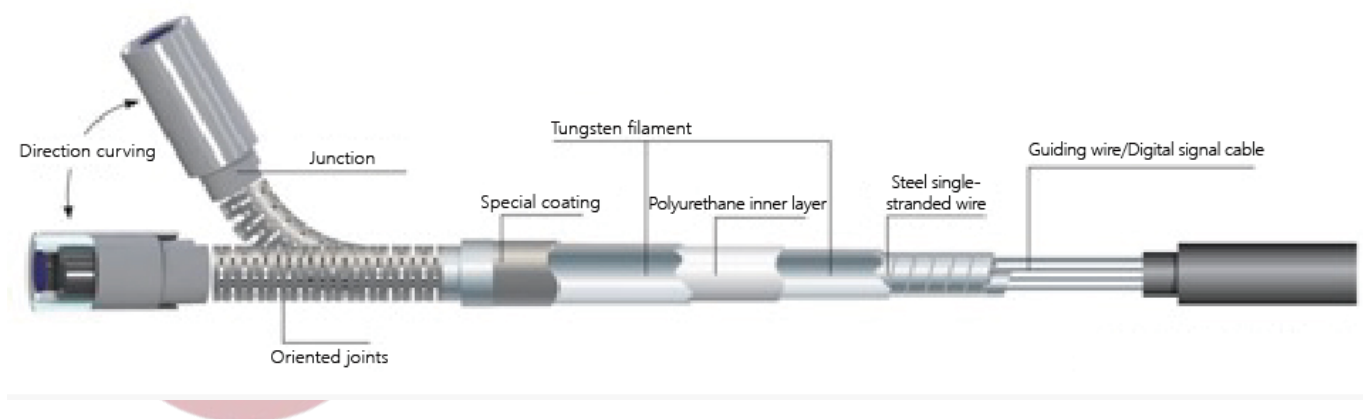
## Overview

MITECH MVH Electric 360°series of industrial endoscope, based on the CMOS image sensor principle, can realize image shooting in the pipe or narrow area which can not be directly observed. And the results can be displayed with high-definition ,so as to achieve non-destructive testing. MITECH MVH series endoscope is a high-precision video electronics industry endoscope, the use of color LCD display and highly integrated CMOS image sensor to ensure that the video endoscopic image of the clear, realistic; its low power consumption, quick signal transmission speed , and easy to carry,operate. It can detect pipe or narrow spaces without tearing apart or damaging machine while not working.Cracks, welds, foreign body, wear and internal processing of parts and other circumstances can be detected with high quality images. It is widely used in aerospace, petrochemical, mechanical casting, national defense military, power production, automobile transportation and other fields, and is the important detection and monitoring equipment of industrial equipment testing and maintenance and other aspects.

## Technical Parameters

Probe diameter:	φ4, φ6, φ8, φ10 (unit: mm)
Imaging sensor:	CMOS
Field angle:	70°/100°
Depth of focus:	20mm~∞
Brightness:	High brightness LED
Brightness control:	5 gears adjustable
Camera pixels:	450,000 1000,000
Video Output:	NTSC/PAL
Storage:	8 G (Micro SD Card, can be made to 32G)
Picture format:	JPEG
Video format:	AVI
Frame rate:	15~30 fps
Line length:	1m, 1.5m, 2m, can be customized
Line material:	Tungsten wire / stainless steel / plastic coated
Probe direction:	Electric 360° all-round
Screen size :	5 inches
Screen brightness:	250cd/m <sup>2</sup>
USB port:	Mini-USB B type
Battery:	Li-On rechargeable
Shell material:	ABS
Weight:	1kg (main unit)

## Working Principle



Based on the CMOS image sensor principle, MITECH MVH industrial endoscope can collect picture information in narrow spaces. The digital signal can be transferred to the host through video signal cable plugged in pipe, thus to achieve picture display and storage. The oriented joints connect the probe with insert tube and the guide wire inside the joints can turn 360° freely controlled by mechanical device. As a result, the CMOS sensor can shoot excellent photos as required in time.

## Features

- High-brightness color TFT-LCD liquid crystal display, which can work under direct sunlight. High reliability, good stability, and excellent real-time field detection; Micro CMOS sensor designed with high sensitivity and integration but low power consumption, available for low brightness detection;
- High resolution camera module, to provide a smooth, clear, stable dynamic (static) detection screen;
- Photo and video storage, 8GB SD Card, can save and record tons of image data;
- Cold light source adopted in probe, 5 gears adjustable;
- Electric 360° button control, arbitrary point positioning, fine adjustment of fine movement, bending angle  $\geq 120^\circ$  (working length  $\leq 1.5\text{m}$ );  $\geq 90^\circ$  (working length  $> 1.5\text{m}$ );
- Probe shell is stainless steel, multi-layer tungsten wire braided, more anti-corrosion wear, durable, detection distance up to 6m;
- Multi-function image processing system, which integrates taking photos, videos, browsing, and returning, and can be connected to a computer via USB;
- It can be customized according to the needs: upgrade to infrared endoscope, increase wireless receiving screen function. (Customized).

## Applications

- Turbine overhaul: Turbine cleaning, paddle and nozzle / nozzle block check, find off parts, corrosion inside and outside the pipe;
- Aerospace: Aircraft parts, large diesel engines, various engines and pipelines for routine maintenance and inspection;
- Petrochemical Industry: Used for detection of oil refineries in the storage tank, heat exchangers, ball tankers, chemical industry pipeline facilities, special inspection and pressure vessel production units of containers, cylinders, pipelines;
- Military: Used to check the mechanical gear parts wear, loose, oil spills, barrel internal situation;
- Motor traffic: Car engine cleaning and maintenance;
- Machine casting: Automotive parts casting, hydraulic casting, pump body casting, mechanical parts casting, pipe fittings casting; Used to check the situation of sand casting, burr and staggered hole quality control;
- Power industry: Power generation, equipment defect detection and condition monitoring.

## Working condition

- Probe working temperature:  $-10^\circ\text{C} \sim 50^\circ\text{C}$
- Host working temperature:  $-10^\circ\text{C} \sim 50^\circ\text{C}$
- Storage temperature:  $-10^\circ\text{C} \sim 50^\circ\text{C}$
- Waterproof level :IP65

## Serial products comparison

Name	Probe diameter (mm)	Lens material	Camera pixels	Depth of focus (mm)	Length of line (m)	Application	
MVH4150-a	4	Ordinary lens	450,000	20mm-∞	1	Suitable for narrow space detection, for small space, piping, engines, parts, hydraulic, pneumatic parts, castings to detect the internal.	
MVH4150-b		Glass lens			1		
MVH4150S-a		Ordinary lens	1000,000		1		
MVH4150S-b		Glass lens			1		
MVH6150-a	6	Ordinary lens	450,000		1.5-2		Suitable for 10-150mm diameter range of video detection, for hydraulic, pneumatic, steel, castings, containers inside the foreign body, plug, defects for visual inspection.
MVH6150-b		Glass lens			1.5-2		
MVH6150S-a		Ordinary lens	1000,000		1.5-2		
MVH6150S-b		Glass lens			1.5-2		
MVH8150-a	8	Ordinary lens	450,000		1.5-2		
MVH8150-b		Glass lens			1.5-2		
MVH8150S-a		Ordinary lens	1000,000		1.5-2		
MVH8150S-b		Glass lens			1.5-2		
MVH10150-a	10	Ordinary lens	450,000	1.5-2			
MVH10150-b		Glass lens		1.5-2			
MVH10150S-a		Ordinary lens	1000,000	1.5-2			
MVH10150S-b		Glass lens		1.5-2			

Note: The 1.5-2m test line has a default length of 1.5m. If it needs to be within 2m, special instructions are required; the length of the test line can be customized.

The letter "S" at the end of the instrument model indicates that this product is a megapixel upgrade product with superior performance.

## Instrument configuration

	Num	Name	QTY	Note
Standard config	1	Main unit	1	
	2	Detection line	1	Connect to host
	3	Probe	1	
	4	8G SD Card	1	Insert in the host
	5	USB cable	1	
	6	AV line	1	
	7	Cloth	1	
	8	Li battery	1	In the host
	9	AC adapter	1	8.4V
	10	Battery charger	1	
	11	ABS case	1	
	12	Attached files	1	