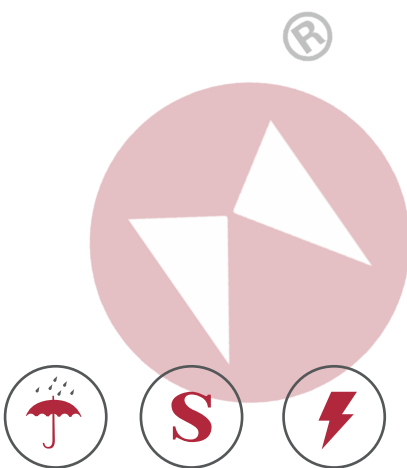


# MITECH MVG SERIES INDUSTRIAL ENDOSCOPE

- 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..



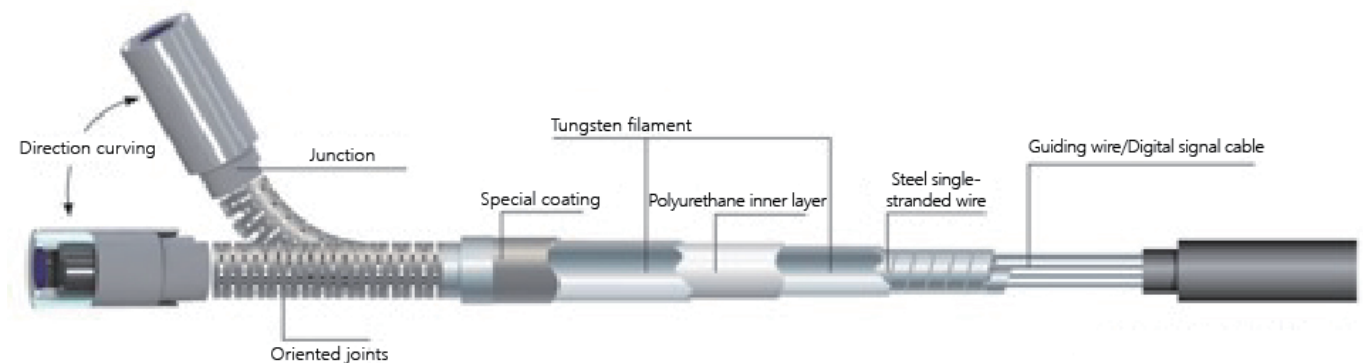
## Overview

MITECH MVG 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 in high-definition ,so as to achieve non-destructive testing. MITECH MVG 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 ,easy to carry and operate,different diameter testing lines can be replaced to achieve multi-purpose use and cost saving. 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:	φ2.8 φ4.5, φ6.4, φ8.4 (unit: mm)
Probe material:	Stainless steel/Titanium alloy
Imaging sensor:	CMOS
Field angle:	> 90°
FNO:	3.9, 4.9
Depth of focus:	5-30mm, 10mm~80mm, 15mm~∞
Brightness:	Front LED6000lux, 18000lux, 40,000 lux; Rear LED HIGH Lux
Brightness control:	5 gears adjustable
Probe length:	11mm (φ2.8mm) 15mm (φ4.5mm, φ6.4mm)
Camera pixels:	160,000; 400,000; 440,000
Video Output:	NTSC/PAL
Storage:	8 G Scalable to 32G(Micro SD Card)
Picture format:	JPEG 640*480
Video format:	AVI 4:3 800*480 16:9 640*480
Frame rate:	30 fps
Line length:	1.5m, 3m, 6m
Line material:	Tungsten
Probe direction:	360°
Screen size :	5 inches
Screen resolution:	800×480
Image control:	3 times magnification of real-time image, 3 times magnification of stored image
Digital zoom:	1-3 times
USB port:	Mini-USB B type
Battery:	Li-On rechargeable, 3.7V/6000mAh
Working time :	>4h
Charging time:	5h
AC Adapter :	AC 100-240V~50/60HZ 0.35A
Weight:	1.073kg (main unit)
Protection level:	IP65, IP67 (Optional)

## Working Principle



Based on the CMOS image sensor principle, MITECH MVG 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 around freely in all directions controlled by mechanical device. As a result, the CMOS sensor can shoot excellent photos as required in time.

## Features

- It can quickly change and replace the test lines of different diameters such as 2.8mm/4.5mm/6.4mm/8.4mm, and it can be used in one machine to save costs.
- High brightness LCD,the enlarged video signal is clearly showed on a 5-inch screen.High reliability, good stability, with excellent real-time field detection;
- High brightness, clear picture quality, digital zoom zoom function;
- Micro CMOS sensor designed with high sensitivity and integration but low power consumption, available for low brightness detection;
- Photo and video storage, 8GB SD Card, can save and record tons of image data;
- AGC, gain, exposure, screen brightness, screen contrast, screen ratio adjustable;
- High-brightness patch LED cold light source with detection range up to 3m, four-way bending detection;
- 360-degree all-round adjustment, flexible control, improve work efficiency;
- Rotary fine-tuning step damping make the probe stay at the best viewing angle easily and accurately;
- Independent battery design makes it more convenient to use;
- Inspection line outside the stainless steel wire material, anti-corrosion wear, durable;
- The front part of the probe has 6 ultra-high brightness white LED lights, and the illumination is adjustable in 5 steps. The rear-end high-brightness LED auxiliary illumination;
- Equipped with 18650 lithium battery,continuous working time >2h.

## 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( IP67 custom)
- Oil proof level : IP 67

## Serial products comparison

Name	Probe diameter (mm)	Depth of focus (mm)	Pixel	Length of line (m)	Bending direction	Application
MVG2800	2.8	5-30	160,000	1.5	180° Jostick controlled, two directions	Suitable for narrow space detection, for small space, piping, engines, parts, hydraulic, pneumatic parts, castings to detect the internal.
MVG4150	4.5	10-80	400,000	1.5		
MVG4300				3		
MVG6150	6.4	15-∞	440,000	1.5	360° Jostick controlled	Applicable to large space inspection, large castings, automotive market, short-distance pipeline inspection, transformers, power supply bureaus, special boiler inspection, food and pharmaceutical, wind power maintenance, aerospace, machinery manufacturing, etc
MVG6300				3		
MVG6150CP	6.4	8-80 (5-25 Alternative)	440,000	1.5		
MVG6300CP				3		
MVG6600	6.4	15-∞	440,000	6		
MVG8600	8.4	15-∞	440,000	6		

Note: The model with CP is a side-view lens, and the ordinary lens is a direct-view lens.

## Instrument configuration

	Num	Name	Quantity	Note
Standard config	1	Main unit	1	
	2	Detection line	1	Replaceable diameter test lines
	3	Probe	1	Connected to the test line
	4	8G SD Card	1	Insert in the main unit
	5	Camera case	1	
	6	AV line	1	
	7	Li battery	1	In the main unit
	8	AC adapter	1	
	9	Seat charger	1	
	10	ABS case	1	
	11	Attached files	1	
	12	Host controller base	1	
	13	Host strap	1	