

Video inspection system HD SMV-1.

SWISSMETROLOGIE



| MSA | Stand and screen | |
|--------|------------------|--|
| 14.160 | (1) | Stand with geared column MSA14.471 Screen 10" |
| 14.161 | (2) | Stand with detached arm MSA14.472 Screen 10" |
| 14.162 | | Stand with extension arm MSA14.399 Screen 10" |

The SMV-1 HD video inspection system combines the latest high-definition video technology with the best macro lens providing an exceptionally fluid image quality.

- The integrated 10" flat screen improves image quality and operator comfort
- The dome lighting technique by reverberation enables an optimised surface inspection even on polished and glazed parts
- The macro zoom 10x (13-130 mm) ensures intuitive and fast ease of use.

Key features :

- HD Camera 720P with an integrated 10" flat screen
- Image is captured directly onto the SD memory card
- Remote screen control with a pointing sight
- Indirect LED lighting dimmer by reverberation
- Optical zoom Computar 10x (13-130 mm) providing excellent quality and a working distance from 152 mm to 450 mm
- Zoom magnification from 3x up to 55x, with a wide field of view.

Technical characteristics :

- Digital sensor CMOS 1/2.5"
- Resolution 1280 x 800 @ 60 fps (24 bits), 16.10 aspect ratio
- 2 megapixels
- Individual adjustment of the screen colours : Red, Green and Blue
- Automatic or manual white balance
- Automatic or manual image contrast.

Items included in the delivery, in addition to the following compositions :

- MSA14.150-E : Dome lighting with LED + lighting intensity dimmer
- MSA14.151-P : Protection cover in semi-transparent PVC-Foil
- MSA14.150-SD : - SD memory card 8 GB.

| SMV-1 | Stand | Camera (with screen) | Optical zoom |
|-----------------|-------------|----------------------|--------------------------|
| MSA14.160 (1) = | MSA14.471 + | MSA14.150-C (10") + | MSA14.151-Z : 3x ... 55x |
| MSA14.161 (2) = | MSA14.472 + | MSA14.150-C (10") + | MSA14.151-Z : 3x ... 55x |
| MSA14.162 = | MSA14.399 + | MSA14.150-C (10") + | MSA14.151-Z : 3x ... 55x |

Video inspection system FULL HD SMV-2.

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| MSA | Stand and screen |
|--------|--|
| 14.163 | (1) Stand with geared column MSA14.471 Screen 13.3" |
| 14.164 | (2) Stand with detached arm MSA14.472 Screen 13.3" |
| 14.165 | Stand with extension arm MSA14.399 Screen 13.3" |
| 14.168 | Stand with geared column MSA14.471 Free-standing screen 23.8" |

The SMV-2 FULL HD video inspection system is an intuitive inspection device, capable of filming with an exceptional image quality and fluidity on any HDMI-linked screen.

- New Full HD 13.3" flat screen for unrivalled image quality and operator comfort
- Recording of films and pictures to SD card or USB stick.

Key features :

- Full HD camera 1080P-HDMI controlled by a wireless mouse
- LED incident lighting with an intensity dimmer
- Optical zoom Computar 10x (13-130 mm) provides excellent quality and a working distance from 152 mm to 450 mm
- Zoom magnification from 3x up to 55x, with a wide field of view.

Technical characteristics :

- Digital sensor CMOS 1/3" colour
- Full HD resolution 1920 x 1080 @ 30 fps (12 bit), 16.10 aspect ratio
- 2 megapixels
- Individual adjustment of the screen colours : Red, Green and Blue
- Automatic or manual white balance
- Automatic or manual image contrast
- HDMI connection.

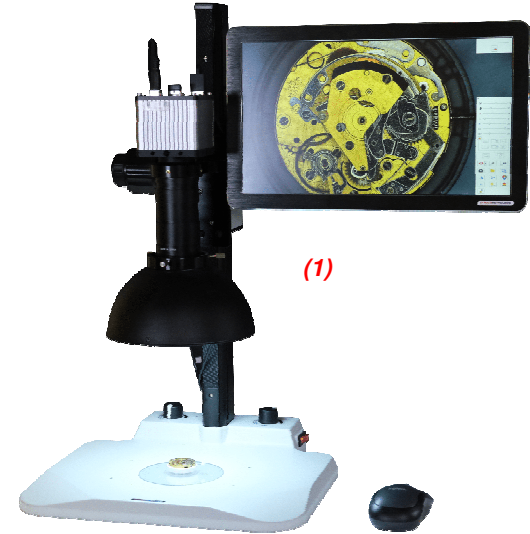
Items included in the delivery, in addition to the following compositions :

- MSA14.150-E : Dome lighting with LED + lighting intensity dimmer
- MSA14.151-P : Protection cover in semi-transparent PVC-Foil
- DOCPUB.USBKEY : USB key 4 Gb with lanyard 80 cm
- MSA14.150-S : Wireless mouse.

| SMV-2 | Stand | Screen | Camera | Optical zoom |
|-----------------|-----------|-----------------------|---------------|----------------------------|
| MSA14.163 (1) = | MSA14.471 | + MSA14.151-M (13.3") | + MSA14.151-C | + MSA14.151-Z : 3x ... 55x |
| MSA14.164 (2) = | MSA14.472 | + MSA14.151-M (13.3") | + MSA14.151-C | + MSA14.151-Z : 3x ... 55x |
| MSA14.165 = | MSA14.399 | + MSA14.151-M (13.3") | + MSA14.151-C | + MSA14.151-Z : 3x ... 55x |
| MSA14.168 = | MSA14.471 | + MSA14.153-M (23.8") | + MSA14.151-C | + MSA14.151-Z : 3x ... 55x |

Video inspection system HD SMV-3 "Focus Stacking".

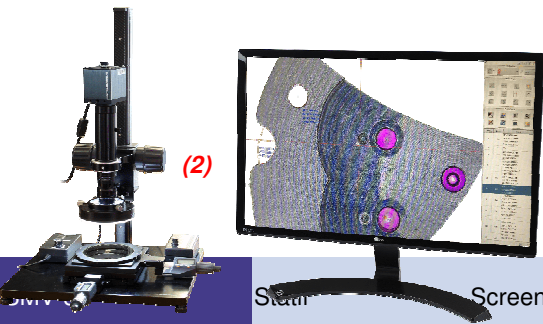
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With "Focus Stacking" function



Without "Focus Stacking" function



| | Stand | Screen | Camera | Optical zoom |
|-----------------|--|-----------------------|-----------------|----------------------------------|
| MSA14.170 (1) = | MSA14.473 | + MSA14.151-M (13.3") | + MSA14.153-CSM | + MSA14.151-Z : 3x ... 55x |
| MSA14.171 = | MSA14.473 | + MSA14.153-M (23.8") | + MSA14.153-C | + MSA14.151-Z : 3x ... 55x |
| MSA14.180 (2) = | MSA14.471 | + MSA14.153-M (23.8") | + MSA14.153-C | + MSA14.153-Z : 30x ... 200x (*) |
| Optical zoom : | (*) 6-position indexable 6000 optical zoom with zoom position memory in software | | | |

| MSA | Stand and screen |
|-----------|---|
| 14.170 | (1) Stand with geared column MSA14.473 Screen 13.3" |
| 14.171 | Stand with geared column MSA14.473 Screen 23.8" |
| 14.180 ** | (2) Stand with geared column MSA14.400 (black base) Screen 23.8" |

The SMV-3 video inspection system "Focus Stacking" is the latest intuitive solution from HOROTEC SA.

The "Focus Stacking" is a process in which several photos with different focus are merged to obtain an image with a large depth of field.

Main features :

- "Focus Stacking" function operational without a PC
- Full HD-5 MP camera, 60 fps
- Full HD 13.5" flat screen
- Image storage on Ethernet network or USB stick
- New ergonomic stand with integrated wiring
- Transmitted and incident lighting as standard equipment
- Connection type : HDMI
- Zoom magnification from 3x up to 55x, with a wide field of view (from 30x up to 200x for MSA14.180).

** Graphic measurement software, PC-free, with automatic edge detection function

MSA14.170 : Without measuring functions / Without measuring table

MSA14.171 : With measuring functions / Without measuring table

MSA14.180 : With measuring functions / With measuring table

Main measurement functions of the camera MSA14.153-C :

- Calibration according to the type of measurement : linear or diameter.
- Measurement types :
 - Distance between 2 points, 1 line/1 point and 2 lines
 - Angular between 2 lines - Circle, arc of circle
 - Distance between 1 point/1 circle, 1 line/1 circle and 2 circle centers
 - Concentricity - Rectangle, polygon.
- Capture point :
 - Automatic or manual edge detection function.

Items included in the delivery, in addition to the following compositions :

** - MSA15.614 : Measuring table "X-Y" with rotating circular plate in glass (delivered without stops)

- MSA14.150-E : Dome lighting with LED + lighting intensity dimmer
- MSA14.151-P : Protection cover in semi-transparent PVC-Foil
- DOCPUB.USBKEY : USB key 4 Gb with lanyard 80 cm
- MSA14.150-S : Wireless mouse.

Video inspection system FULL HD SMV-B.

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MSA

14.154

The video inspection system SMV-B FULL HD is an intuitive and compact inspection device, capable of filming a meticulous operation live, thanks to a large field depth and an exceptional image fluidity on any screen with an HDMI connection.

- Live viewing in FULL HD quality on any screen with an HDMI connection ; video projector, TV, PC monitor, etc.
- Possibility of streaming via an optional PC converter
- Recording of films and photos on SD card or USB key
- Viewing captured photos directly on the screen.

Key features :

- Full HD 1080P-HDMI camera controlled by wireless mouse
- Optical Zoom Macro 10x (13-130mm) providing an excellent quality and a working distance from 160 mm to 500 mm.

Technical characteristics :

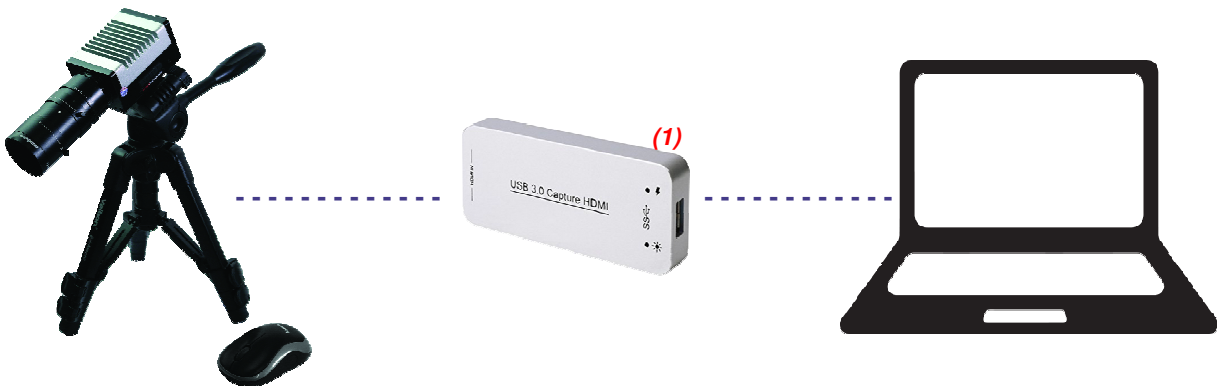
- Digital sensor CMOS 1/3" colour
- Full HD resolution 1920 x 1080 @ 30 fps (12bits), 16.10 aspect ratio
- 2 Megapixels
- Adjustment of the screen colours : Blue - Red - Green
- Automatic or manual white balance
- Automatic or manual image contrast
- Backup : 8 GB SD card or USB stick (not included)
- Connection type : HDMI.

Items included in the delivery :

- 1 FULL HD camera
- 1 HDMI cable 70 cm
- 1 wireless mouse
- 1 Optical zoom Macro 10x (13-130 mm)
- 1 SD memory card
- 1 Z-tripod 200 mm.

Optional :

| MSA | Item |
|----------|---|
| 14.151-U | (1) HDMI-USB signal converter for PC connection |



Connect your HOROTEC inspection system (SMV-B / SMV-2 / SMV-3) with the HDMI/USB 3.0 signal converter (MSA14.151-U) and share your video inspection system camera live using the following video conferencing applications :

