

# iTool *DVR*

100% Industrial Videoscope System



Made  
in  
Germany

**New!**

# iTool *DVR*

## 100% Industrial Videoscope System

### Optimale Visualisierung

The iTool DVR video recording and documentation unit is the basic unit of the iTool DVR system. It combines software, display and light source.

### DVR Digital Video Recording

Record fully digital every single movement of a component in a brilliant video quality and Zoom-Function. In addition users are now able to document the movement from a dripping leak, or a rotating fan...

### HQ Image Capturing

By the push of the capture button, inspection images are stored on SD memory card (up to 32GB)

### VGA Display

Remote Visual Inspection just made easy. High resolution, High contrast, and brightness. The 6.8" (17,5cm) display provides razor-sharp images, so that defects can be judged even more safe and easy.

### On-Screen-Menu

Clear, intuitive and easy. Keep a constant overview of the current functions, settings and options. The clear structured user interface guides intuitively and accurately.

### Functionality

By means of direct action keys and intuitive on-screen menu, even first time users are able to navigate quick and easy through the various settings and options.



**Comparative  
Measurement**

### Camera Control

The iTool DVR has dynamic and manual camera profiles. The result is optimal balanced high-resolution images, perfectly adapted to the inspection environment.

### 2,25kg

Compact size, lightweight and nearly limitless modularity, are further outstanding features of the absolute versatile „100%-Multi-Purpose -Videoscope“.

### Integrated Lightsource

Bright, Intense, homogeneous. The integrated 24W Metal Halide gas-discharge light source is one of the most powerful compact light sources. Compared to standard light sources this light source is many times brighter and illuminates the cavity particularly strong in the deep. By means of the variable aperture the user is able to regulate the light intensity for optimized illumination.

### Secondary Power Supply

For inspection environments without mains supply to the battery belt „powerBelt“ supplies the system up to 2 hours with power.

### Video & Audio Interfaces

By connecting to an external screen, the „participant view“ enables colleagues for the joint assessment of the visual inspection. Spoken comments can be recorded and reproduced.



2,25kg

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### CCD Videoprobe

The high-resolution CCD image sensor provides the basis for detailed, life like images with realistic colour reproduction. Focussable interchangeable objective lenses with different fields of view (FOV), depth of focus (DOF) and aperture value allow individual adjustment to any inspection environment. Thus the iRis DVR 360° provides unsurpassed image quality and contrast.

### SmartChange

The modularity of the iTool DVR Imaging Hub makes it a valuable inspection tool for the whole field of Remote Visual Inspection. Thanks to the interchangeable iSeries Video Probes, the system can be adapted within seconds to the particular inspection requirements. More than 20 combinations of different probe diameters and lengths allows to always use the best matching Endoscope for each application.

### 4-Way Articulation Control

Thanks to the tactile control probe, the probe tip can easily, quickly and accurately in any position to navigate. The extremely flexible Articulation-Section is particularly advantageous in applications in which the endoscope has to be guided thru tight radius. Shear strength, flexibility and protection against damage from sharp edges or crushing is ensured by the robust tungsten braid on PU coating.

### Intelligent Illumination

Compared to other Videoscopes, the lightsource is not integrated in the distal end of the probe. It is absolutely non-destructively integrated in the housing of the iTool DVR. This intelligent design allows it to use a more powerful lightsource and achieves a much more intense and homogeneous illumination of the cavity by means of fiber optic light guides. In addition this technology concept saves repair costs in case of damage, eg crushing of the probe tip.

### Economy

The SmartChange Technology does not only save time, but also increases productivity and economic efficiency. Compared to other videoscope systems on the market, the videoscope is not firmly attached to the image display unit. Due to the interchangeable videoscopes, there is no need to buy another complete system, even if you need different diameters or lengths for the inspections to be done.

### Serviceability

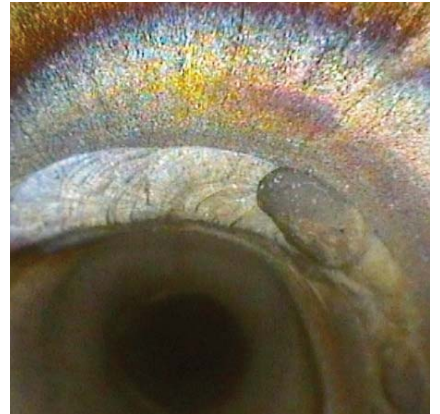
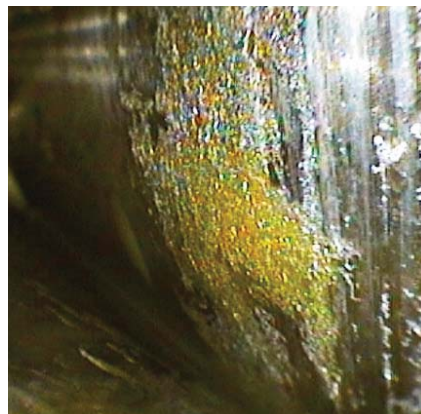
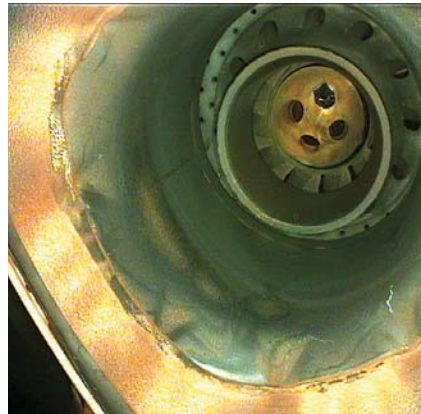
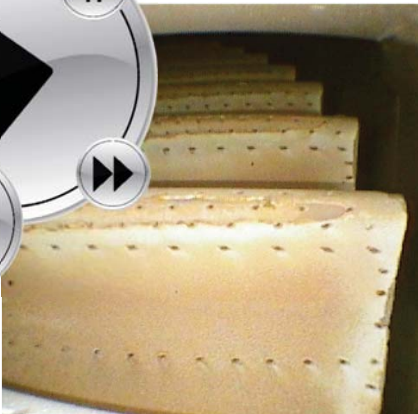
Especially in case of service and repair, the SmartChange-Technology offers key advantages in comparison to fix videoscope systems. If you have sent your scope in for service, you may use the iTool DVR Video Imaging Hub for further inspections with an alternative iSeries Videoscope or Endoscope Camera with no downtime. Furthermore the robust mechanical control of the probe effectively reduces the need of repairs, repair costs and repair time compared to other articulation mechanisms.





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## Delivery Set and Accessories

As varied as the applications of endoscopy, so extensive is the range of interchangeable objective lenses. Depending on the inspection environment different field of view values (FOV), directions of view (DOV), depths of field (DOF) and f-stops are required. The iTool DVR always has the right lens for sharp, clear images and videos.

Simplify inspections in your field of application and increase work efficiency. Optimize or expand the capabilities of the iTool DVR Industrial Videoscope with useful accessories.

					
4GB Memory Card <sup>1</sup>	Memory Card Reader <sup>1</sup> with USB Interface	System-Case <sup>1</sup> (Carry-on-luggage)	ObjectiveLens-Box <sup>2</sup>	Lockable Holding Device <sup>4</sup>	powerBelt 2h Operating time <sup>4</sup>
					
FOV 28°	FOV 60°	FOV 60°	FOV 90°	FOV 90°	90° Side View Tip Adapter <sup>4</sup>
Focussable int. Objective Lens <sup>3</sup>	Focussable int. Objective Lens <sup>3</sup>	Focussable int. Objective Lens <sup>3</sup>	Focussable int. Objective Lens <sup>3</sup>	Focussable int. Objective Lens <sup>3</sup>	
					
Rigid Shaft Extension <sup>4</sup>	Rigid Scope Grip <sup>4</sup>	Flexible Guide Tube <sup>4</sup>	Centering Device for Pipe Inspection <sup>4</sup>		
					
Head-Set <sup>4</sup> for Audio Comments	Harness <sup>4</sup>				

<sup>1</sup> Standard-Delivery Set (SDS)  
<sup>2</sup> 1m iTool DVR (SDS) 6,0mm + 8,0mm  
<sup>3</sup> Free Choice of Objective Lens  
<sup>4</sup> Optional Accessories



Objective Lens turned out = Close Focus  
 Objective Lens turned in = Far Focus

# iTool DVR

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### Operating Unit

Display Size:	17cm (6,8") TFT VGA Farbdisplay
Display Resolution:	VGA (640x480 Pixel)
Operating System:	Realtime operating System, with On-Screen-Menu
User Interface:	Direct Action Keys, Function-Keys, Arrow-Keys
Languages:	Englisch, French, Spanish, Italian, German
Video interface:	Composite Video-out, Composite Video-in, S-Video-in
Audioanschluss:	3,5mm jack Audio-in / 3,5mm jack Audio-out
Power Supply, primary:	12V via AC-Adapter
Power Supply, secondary:	12V via Battery Belt

### Mesurement

Method	Comparative Mesurement
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### Documentation

Video Format:	AVI (.avi)
Image Format:	BMP (.bmp)
Storage:	SD-HC-Memory Card up to 32GB (FAT32)

### Camera Control

Image Sensor:	High-Resolution Color SUPER HADTM CCD
Camera Control / Exposure:	Integration modes: Automatic, Short, Long, Manuell
White Balance:	yes, factory default or user defined
AGC-Level:	yes, adjustable
Gamma:	yes, adjustable

### Image Control

Zoom:	x3.5 (Digital)
Invert:	horizontal and vertical Image Inversion
Brightness, Contrast, Colour:	yes, adjustable
Text Annotation:	Built-in full screen text overlay generator

### Illumination

Type:	24Watt Metal Halide gas discharge lamp
Illumination Control:	ja, stepless manual aperture
Colour Temperature:	ca. 6000k
Average Lamp Lifetime:	ca. 500h

### Interchangeable Videoprobes

	4,0mm	6,0mm	8,0mm
Diameter:	4,0mm	6,0mm	8,0mm
Working Length:	1,5m - 3,0m	1,5m - 7,5m	1,5m - 15m
Articulation:	4-way	4-way	0-way, 2-way, 4-way
Articulation Angle* L/R   U/D:	100°/100°   100°/100°	100°/100°   160°/130°	100°/100°   160°/130°
Integrated Objective Lens:	x	-	-
Interchangeable Objective Lens:	-	x	x
Side View Tip Adapter:	o (**only with 60° FOV)	x	x
Braid:	Tungsten Braid on PU-Jacket		

### Construction

System Weight:	2,25kg (4,96lb) Operating Unit iTool / 9,2kg (20lb) inkl. Sonde & Koffer
Dimensions:	290mm x 190mm x 70mm
Housing:	rugged PU
Frame:	Alloy
Protection Class:	IP53

### Operating Environment

Tip Operating Temperature:	+14°F to 176°F (-10°C to +80°C)
System Operating Temperature:	-13°F to 115°F (-25°C to +45°C)
Storage Temperature:	-13°F to 115°F (-25°C to +45°C)
Relative Humidity:	95% max. - non condensing
Waterproof:	Probe and distal end up to 14,7 psi (1 bar- 10,2 m H <sub>2</sub> O)
Hazardous Environments:	Not rated for use in hazardous environments

### Interchangeable Objective Lenses & SVTA

PROBE	DOV	FOV	DOF	CODE	ART. NR.
4,0mm	0°	60°	7-50mm	-	-
4,0mm	0°	60°	4-10mm	CF	-
4,0mm	0°	90°	15mm-∞	-	-
4,0mm	0°	90°	10-30mm	CF	-
4,0mm**	90°	60°	5-45mm	SVTA	930-00100-0005
6,0mm	0°	60°	5mm-∞	BLACK	930-00100-0002
6,0mm	0°	60°	5mm-∞	GOLD-B	930-00200-0014
6,0mm	0°	90°	5mm-∞	RED	930-00200-0006
6,0mm**	90°	60°	5-15mm	SVTA-CF	930-00100-0002
6,0mm**	90°	60°	15-50mm	SVTA-FF	930-00100-0003
8,0mm	0°	28°	25mm-∞	BLUE	930-00200-0004
8,0mm	0°	60°	8mm-∞	GOLD-B	930-00200-0009
8,0mm	0°	60°	10mm-∞	BLACK	930-00200-0003
8,0mm	0°	90°	5mm-∞	SILVER-B	930-00200-0002
8,0mm	0°	90°	5mm-∞	RED	930-00200-0001
8,0mm**	90°	60°	5mm-∞	SVTA	930-00100-0001

DOV = Direction of View  
FOV = Field of View  
DOF = Depth of Focus  
SVTA = 90° Side View Tip Adapter

CF = Close Focus  
FF = Far Focus  
B = Bright objective lens  
\*\* Compatible to FOV60 °

\* Note: The articulation angle of the video probe is due to different length  
Diameter combinations vary. Custom build versions and special endoscopes on request.



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