

# WÖHLER



## UNIQUELY CLEAR VIEW

### Wohler VIS 350 Visual Inspection System

Video inspection, position indicator, home function and locator

*The Measure of Technology*



ROBUST HOUSING

1.5" dia.

PAN/TILT COLOR CAMERA HEAD



POSITION & ANGLE DISPLAY



LOCATOR TRANSMITTER



POWER UP TO 4h



PHOTO FUNCTION



VIDEO FUNCTION



DETACHABLE HEAD

# Wohler VIS 350 Visual Inspection System

## Intelligent camera head guides and tracks

**Video inspection in a case:** With the new Wohler VIS 350 camera system, you not only have everything you need to inspect waste water pipes, flue gas and ventilation lines as well as industrial systems – you can also precisely locate the damage and accurately document the results of the inspection.

Wohler's new camera system is both compact and safely housed in a plastic case for transport and mobility. The system consists of a 100 ft. push rod cable with reel, a color camera head with a diameter of 1 1/2" and a large color monitor. Then there is the typical Wohler control panel that ensures easy control of the camera head: The camera pans 360°, tilts 180° and offers the best-possible lighting to carry out an all-round inspection of the inside of the pipe. Particularly practical: After panning and tilting, the home function automatically aligns the camera angle to straight ahead with a simple push of a button. The camera can record video of what it sees as it travels along the line run. Even several tight 90° bends

along the line are no hurdle. When damage is discovered, one quick press of a button is all that is required to shoot and save a photo.

To be able to assess and specifically target repair work, we at Wohler have perfected the technique of precisely locating damage. The actual meter count and the position of the head are displayed in the monitor. That, for example, is a huge help when dealing with extensive networks of pipelines. The top and bottom of the pipe are displayed on the monitor at all times and at how many degrees the camera is being guided up or down. Even low-cost, simple wire-less location detection is available in the form of the new Wohler L 200 Locator.

## ADVANTAGES

- Video inspection system proven over many years – now with CCS picture quality
- Position of camera head indicated in the display
- Keep your sense of orientation with home function – camera aligns itself automatically
- 4 hour flexibility – 2 rechargeable batteries for lasting mobility
- Built-in location transmitter facilitates wireless location detection



The 100 ft. push rod and the pan&tilt color camera head make sure nothing in the house supply line remains hidden from your view.



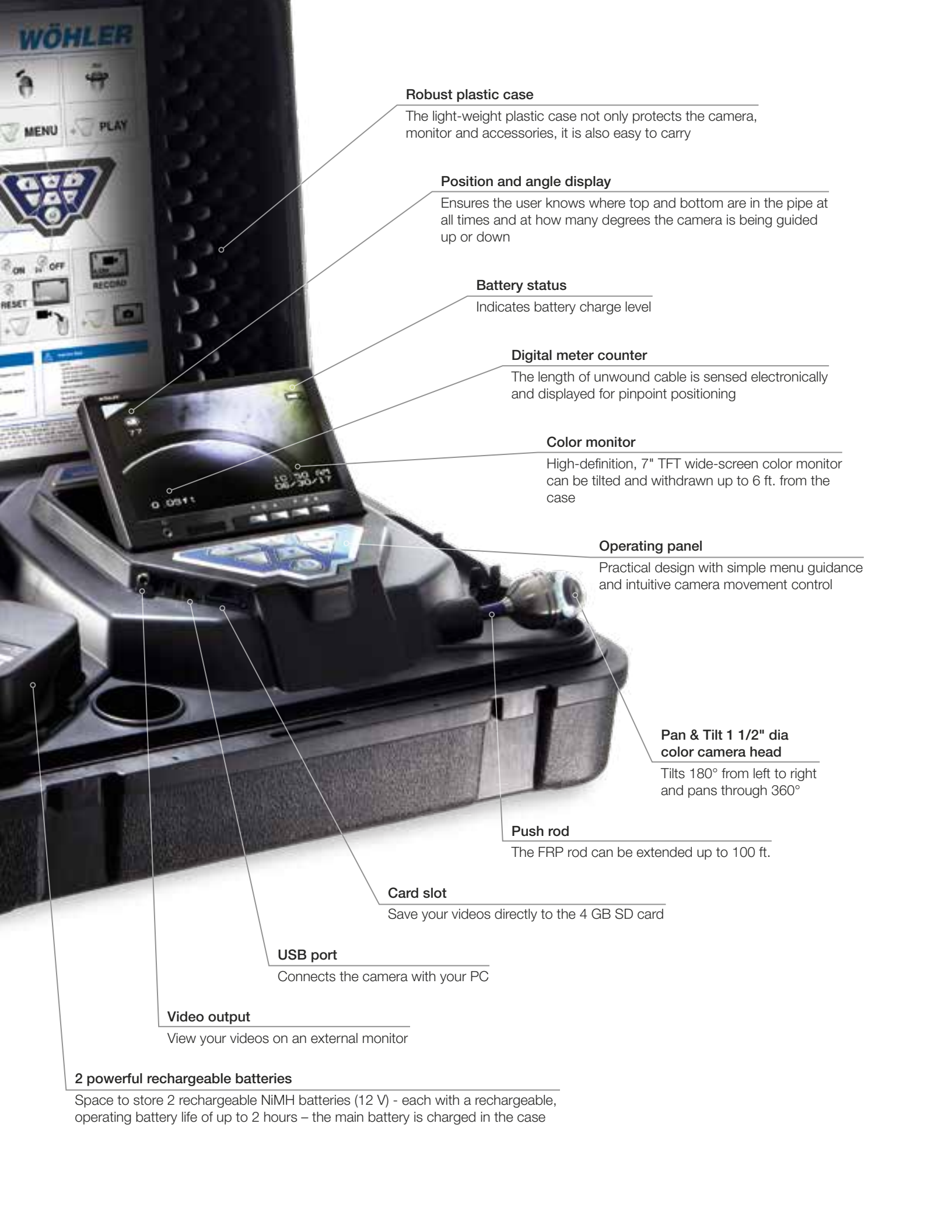
The Wohler VIS 350 precisely locates radio waves transmitted by the camera head through concrete and asphalt to save a lot of time and further building damage.



The 360° pan and 180° tiltable color camera head easily negotiates 90° bends.



The actual meter count and the position of the head are displayed in the monitor. The Wohler L 200 Locator makes it possible to locate the camera head wirelessly.



**Robust plastic case**

The light-weight plastic case not only protects the camera, monitor and accessories, it is also easy to carry

**Position and angle display**

Ensures the user knows where top and bottom are in the pipe at all times and at how many degrees the camera is being guided up or down

**Battery status**

Indicates battery charge level

**Digital meter counter**

The length of unwound cable is sensed electronically and displayed for pinpoint positioning

**Color monitor**

High-definition, 7" TFT wide-screen color monitor can be tilted and withdrawn up to 6 ft. from the case

**Operating panel**

Practical design with simple menu guidance and intuitive camera movement control

**Pan & Tilt 1 1/2" dia color camera head**

Tilts 180° from left to right and pans through 360°

**Push rod**

The FRP rod can be extended up to 100 ft.

**Card slot**

Save your videos directly to the 4 GB SD card

**USB port**

Connects the camera with your PC

**Video output**

View your videos on an external monitor

**2 powerful rechargeable batteries**

Space to store 2 rechargeable NiMH batteries (12 V) - each with a rechargeable, operating battery life of up to 2 hours – the main battery is charged in the case

## TECHNICAL DATA

### Monitor

Dimensions housing	7" x 4.5" x 1.3"
TFT-Display	7" / 16:9 format
Video-Out	FBAS signal
Weight	1 lbs
Power supply	Space for 2 rechargeable batteries, each 12 V or via power pack
Battery operating time	Max. 2 rechargeable batteries, each 120 mins. = 4 h (battery status in display)

### Pan&tilt Ø 40 mm color camera head

Type	1/3" COLOR CMOS
Pixels	656 x 492 (NTSC)
Light sensitivity	0.5 Lux
Lens	f = 0.09", F = 2.5
Viewing angle	115°
Light source	12 white LEDs
Degree of protection	Waterproof to IP 67
Dimensions	1 1/2" dia x 2"
Operating temperature	32...104 °F, RH 95 % MAX
Storage temperature	-4...122 °F, RH 95 % MAX

### Locator transmitter

Transmission frequency	Adjustable 8.9 kHz or 9.2 kHz
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### Push rod

Length	100 ft.
Diameter	0.26"

### Plastic case

Dimensions	20" x 17" x 7" (l x w x h)
Weight	18 lbs

### Distance measurement

Wohler VIS 350 / VIS 300	Electronic meter counter
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### Locator receiver

Display	Graphic visualization of transmitted position
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### Output impedance

Headphones	32 Ohm
Power supply	12 V MIMH battery (rechargeable)
Operating temperature	32...104 °F
Storage temperature	14 °F...104 °F
Weight	1.3 lbs
Dimensions	13" x 6" x 3" cm (l x w x h)

### Memory (Wohler VIS 350)

Recording	4 GB SD card (2.5 h recording capacity)
Interface	Mini USB port

## ✂ Applications

Analyze damage and inspect:

- Waste water lines of 2" dia and larger
- House connections up to 8" dia
- Flue gas systems of 2" dia and larger
- Ventilation lines of ventilation systems
- False ceilings, hollow spaces, shafts

## ⚙ Functionality

- Optics pan 360° and tilt 180° – facilitate maximum movement radius and ensure even the smallest damage does not remain hidden from your view
- Store video footage and photos on a 4 GB SD card (Wohler VIS 350)
- Camera head with integrated transmitter facilitates location detection by the Wohler L 200 Locator
- Digital position and angle of the camera head displayed on the monitor
- Home function aligns the camera head to a straight position – display parallel to the ground above
- Brightly illuminating color camera head, 2" in length and 1 1/2" in diameter, easily negotiates tight bends
- Electronic meter counter with a resolution of 0.10 ft. displayed on the monitor
- Bright TFT color monitor (tiltable and removable) supplies razor sharp images
- Battery operating time: 2 x 120 min. with 2 rechargeable batteries (optional)
- Fully equipped mobile solution in a robust plastic case

## 📍 Locator (optional)

- Transmitter integrated in camera head makes it possible to precisely locate the camera head
- Facilitates targeted repairs to damaged pipelines
- Telescopic holder makes it possible to locate damage under floors or in ceilings
- Chalk holder with lithographic chalk ensures it is possible to mark located damage immediately
- Long-lasting LI-ION rechargeable battery

## 💾 Data management

Simply record and store photos and videos on a 4 GB SD card (Wohler VIS 350) for documentation and archiving purposes for you and your customers.

## Documentation



The „Save function“ makes it possible to save and view a video or still image of what you see at the push of a button. Transfer to PC: Per USB or SD card.

## Bright illumination



Thanks to the excellent lighting system of the color camera head, the camera supplies razor sharp images of even the darkest corners of the section under inspection.

## Position and angle display



The Home button realigns the camera head to its initial position. The position and angle display indicate top and bottom of the pipe on the monitor at all times and at how many degrees the camera is being guided up or down.

## Integrated locator transmitter



The camera head of the Wohler VIS 350 is equipped with a transmitter as standard – that means the camera head can easily be located by the new Wohler L 200 Locator.

# Wohler L 200 Locator

## Penetrating views through concrete and asphalt

Inspecting pipes under the ground, in ceilings and walls is daily routine for specialist tradesmen and women. And after the inspection, the next task is to locate the position of the damage accurately to be able to offer and carry out the necessary repair or cleaning work with precision. With the Wohler L 200 Locator that is now all just child's play. It precisely detects radio signals transmitted by the flexibly positionable camera head.

Skilled tradesmen and women and their customers are able to save considerable time and cost savings by utilizing video inspections to visualize leaks and document damaged or soiled sections of pipework. The Wohler L 200 Locator also locates the radio signals transmitted by the camera head of the Wohler VIS 350 / 300 systems. Damage is displayed precisely in a clear-cut graphic on the display of the Locator to ensure it is discovered rapidly and marked.

### Insights keeping you in the picture

This is how the Wohler L 200 makes locating simple: The Locator attaches to a telescopic pole. Guided close to the ground,

along walls or below the ceiling, it locates the very long radio waves transmitted by the camera head. Particularly ideal: The user is guided by the bright color display throughout the locating process – cross-hairs are displayed on a horizontal grid system. In addition, an acoustic signal is emitted and made audible via a loudspeaker or headphones. The cross-hairs and the strength of the signal indicate the direction and distance to the located point. Once the section of pipe to be repaired or cleaned has been found, it can be marked easily. For this purpose, a holder is provided to affix a piece of chalk to the end of the Locator.



## ADVANTAGES

- Locates radio signals transmitted by the camera head – rapidly pinpoints damage
- Easy to handle – user guided via display throughout the locating process
- Bright, easy-to-read color display
- Telescopic pole – easily track down damage anywhere
- Chalk holder – for chalk to mark the position where damage is found

# Kit and Accessories

Sets Wohler VIS 350	Qty
<b>Wohler VIS 350 Service Camera</b> Video inspection for sewer and water pipes, drain and flue lines, ductwork, etc. <b>Comes with:</b> Wohler VIS 350 NTSC Service Camera with digital meter counter in heavy duty carrying case, video recording function, attached pan and tilt color camera head 1.5" dia V2 NTSC, 4 GB SD card and mini USB cable, 7" TFT color monitor, 6 ft. connection cable (removable monitor), 100 ft. push rod 0.26" dia, 5 plastic domes, 1 anti-slide mat, 2 NiMH batteries with charger <b>P/N 7354</b>	
<b>Wohler VIS 350 Service Camera</b> Video inspection for sewer and water pipes, drain and flue lines, ductwork, etc. <b>Comes with:</b> Wohler VIS 350 NTSC Service Camera with digital meter counter in heavy duty carrying case, video recording function, detachable pan and tilt color camera head 1.5" dia V2 NTSC, 4 GB SD card and mini USB cable, 7" TFT color monitor, 6 ft. connection cable (removable monitor), 100 ft. push rod 0.26" dia, 5 plastic domes, 1 anti-slide mat, 2 NiMH batteries with charger <b>P/N 6352</b>	
<b>Wohler VIS 350PLUS Service Camera</b> Video inspection for sewer and water pipes, drain and flue lines, ductwork, etc <b>Comes with:</b> Wohler VIS 350 NTSC Service Camera with digital meter counter in heavy duty carrying case, video recording function, detachable pan&tilt color camera head 1.5" dia V2 NTSC, detachable miniature color camera head 1" dia incl. guidance sleeve, guidance ball for push rod, 4 GB SD card and mini USB cable, 7" TFT color monitor, 6 ft. connection cable (removable monitor), 100 ft. push rod 0.26" dia, 5 plastic domes, 1 anti-slide mat, 2 NiMH batteries with charger <b>P/N 8927</b>	
<b>Wohler VIS 350 Service Camera with Wohler L 200 Locator</b> Video inspection for sewer and water pipes, drain and flue lines, ductwork, etc. <b>Comes with:</b> Wöhler VIS 350 NTSC Service Camera with digital meter counter in heavy duty carrying case, video recording function, detachable pan and tilt color camera head 1.5" dia V2 NTSC, detachable miniature color camera head 1" dia incl. guidance sleeve, guidance ball for push rod, 4 GB SD card and mini USB cable, 7" TFT color monitor , 6 ft connection cable (removable monitor), 100 ft push rod 6.5 mm dia, 5 plastic domes, 1 anti-slide mat, 2 NiMH batteries with charger, Wohler L 200 Locator (Receiver) <b>P/N 8931</b>	

Accessories	Qty
<b>Wohler L 200 Locator (Receiver)</b> <b>P/N 7430</b>	
<b>Wohler VIS Cleaning Set</b> with plastic case, for approx. 50 applications // 1 liter disinfection spray, 50 cleaning tissues, 100 disposable gloves size XL (powder free), 6.76 ounce lubricant, plastic case <b>P/N 4725</b>	
<b>Wohler VIS Cleaning Set Refill</b> for approx. 50 applications // 1 liter disinfection spray, 50 cleaning tissues, 100 disposable gloves size XL (powder free), 6.76 ounce lubricant, in plastic bag <b>P/N 4726</b>	
<b>Camera Roller Guide</b> suitable for camera heads and rods <b>P/N 3681</b>	
<b>Wohler VIS Guidance Set 100</b> for Wohler VIS 3xx // with protection sleeve, Roller guide and centering star <b>P/N 3884</b>	
<b>Wohler VIS Centering Brush</b> for Wohler VIS 2000 <sup>PRO</sup> /VIS 400/VIS 2xx/VIS 3xx // 8" dia with 6 brushes, with thread, centers the GRP camera rod, to guide the camerad head <b>P/N 3854</b>	
<b>Wohler VIS Centering Brush</b> for Wohler VIS 2000 <sup>PRO</sup> /VIS 400/VIS 2xx/VIS 3xx <b>P/N 3850</b>	
<b>Wohler Protection Sleeve</b> for camera head 1.5" dia <b>P/N 3682</b>	
<b>Wohler Protection Sleeve</b> for Wohler VIS 3xx with cut-out <b>P/N 2641</b>	
<b>Re-lining adapter set</b> for Wohler VIS 2xx/VIS 3xx // re-lining adapter, centering star and 3 x stabilisation sleeve <b>P/N 6889</b>	
<b>Glass Dome</b> for Wohler VIS 3xx <b>P/N 3674</b>	
<b>Replacement Plastic Domes (10 pcs.)</b> for Wohler VIS 3xx <b>P/N 3675</b>	
<b>Sunshade for Wohler VIS 2xx and VIS 3xx</b> for 7" TFT monitor <b>P/N 6814</b>	
<b>Power Supply</b> for Wohler VIS 3xx/VIS 2xx // 18V, 1,5A, 100-240V, 50 Hz, 2.1 mm female plug, center plus, charge time 3 hours for all countries <b>P/N 3789</b>	
<b>Wohler Battery 12 V NiMh 2600 mAh</b> for Wohler VIS 2xx/VIS 3xx // operation time: 120 min, warranty: 12 months <b>P/N 4715</b>	
<b>Car charger Wohler VIS 2xx / VIS 3xx</b> 18 V <b>P/N 3169</b>	

