





AGILIOSTM PAN & TILT PUSH CAMERA SYSTEM

The AGILIOS[™] pan & tilt push camera system consists of a coiler with a reinforced, yet flexible push rod of up to 90 m length, two control panels, various axial cameras and two pan & tilt head cameras. Depending on the application area and purpose there are two multi-functional and mobile VISIONCONTROL control panels – version VC200 or version VC50 – that can be used. The extremely robust VC50 is the control unit suitable for inspections under harsh environmental conditions and the VC200 allows to carry out inspections according to predefined standards.

AGILIOS COILER AR90II - TOUGH, HIGH-END AND MOBILE

With regard to ergonomics, design, quality and functionality the new AR90II coiler reflects the well-known high iPEK standards; additionally it offers some new features, which raise the bar in terms of mobility and user-friendliness while simultaneously making your work easier and more efficient.

The coiler is equipped with a reinforced, yet flexible push rod of up to 90 m length and is destined for inspecting property drainage systems and their connecting pipes to the main line, as well as for inspecting main lines.

The coiler offers user-friendly and self-explanatory handling, stableness and stability and with its aesthetically pleasing and ergonomic design all components melt together to a perfect unit. With its extremely tough and splash-proof design the coiler is perfectly suited for the use under harsh conditions and at any kind of weather. Transport is easy and comfortable due to the large off-road wheels and you can easily reach even the most remote inspection sites. The special coiler design allows a user-friendly handling during inspection — also if the coiler needs to be placed horizontally. Laterally mounted reflectors improve the visibility and, at the same time, your safety during work when carrying out inspections during night time traffic. The control panel mount can be rotated and swiveled, providing flexibility for the control panel, so that it can be positioned in any direction just as required. Additionally the mounted control panel can be folded and placed flat on the frame — this way it is very well protected and the AGILIOSTM inspection system can be transported as a compact unit. With its reduced size and the removable wheels the system permits a spacesaving storage in the inspection vehicle. To round off the coiler's features it is equipped with an analog video out interface, a meter counter and a drum brake.



The control panel can be folded down and is very well protected this way. This enables a comfortable transport and space-saving storage.

THE COILER AR90II NEEDS NO EXTERNAL POWER SUPPLY.

For maximum independence and mobility a battery pack supplies the power for the coiler. The coiler is equipped with two powerful exchangeable batteries, accommodated in integrated racks, which ensure several hours of uninterrupted operation and provide the necessary mobility to perform the inspection with utmost efficiency and maximum flexibility. The battery packs are recharged by an external battery charger. Alternatively mains operation is possible, as well.

Rotatable swivel mount
for control panel

Ergonomic handle for easy handling and comfortable transport

Reflectors for better visibility _____

Drum brake _____

Removable off-road wheels _____



Removable wheels enable a space-saving storage and comfortable operation with a horizontally placed coiler.



Exchangeable powerful battery packs ensure maximum mobility during inspection.

VISIONCONTROL VC50 THE TOUGH ENTRY-LEVEL CONTROL PANEL FOR THE IPEK PRODUCT LINE

The mobile control panel VISIONCONTROL version VC50 serves as a control unit for the AGILIOS[™] pan & tilt push camera inspection system. The VC50 is compatible to the AR90II coiler and is characterized by its low weight and its ergonomic design for optimal operator convenience.



LIGHT-WEIGHT, MOBILE AND EXTREMELY TOUGH

With its extremely tough and splash-proof design and the high-quality TFT screen, the multi-functional control panel is perfectly suited for the use under harsh conditions and at any kind of weather. The keypad is designed in a way that makes it easy to operate even when wearing gloves.



SELF-EXPLANATORY SOFTWARE AND USER-FRIENDLY OPERATING INTERFACE

There is an integrated keyboard (QWERTZ & QWERTY) for entering texts and the buttons arranged ergonomically on the control panel guarantee a quick and direct access to the most important operational functions during inspection.

The VC50 control panel enables the operator to record videos and to take pictures during inspection. The data can be stored on an internal storage device or via USB 2.0 interface to a USB stick for further processing.

A text generator that can be configured as desired and freely programmable buttons enable an individual and customized adjustment of the operating functions ensuring maximum ease of use — tailored to suit your specific inspection requirements.

The VISIONSCONTROL control panel version VC50 is the ideal device to enter the world of the modular product portfolio of the iPEK AGILIOS™ pan & tilt push camera system.

VISIONCONTROL VC200 THE CONTROL CENTER FOR YOUR INSPECTION ACCORDING TO PREDEFINED STANDARDS

The mobile VISIONCONTROL control panel version VC200 serves as a control unit for the AGILIOS[™] pan & tilt push camera inspection system. The multi-functional, portable VC200 control panel is compatible to the AR90I and AR90II coiler and characterized by its low weight and its ergonomic design for optimal operator convenience. From an interactive, high-contrast 800 x 600 touch-screen display including a virtual keyboard and intuitively operable control elements up to a user-friendly operating interface the VC200 control panel offers everything a pipeline inspector's heart desires for his work.



ALL ON BOARD — WITH THE INSPECTION SOFTWARE VISIONCONTROL

iPEK has developed the VISIONREPORT software for the VISIONCONTROL version VC200. This software is specifically tailored for the VC200 control panel and enables an easy operation and the execution of pipeline inspections according to predefined standards due to the general norms and standards integrated in the software.

The control panel offers many features that are indispensable for every inspection these days. Among them are video recording in MPEG-4 format and a color text generator that can be customized as desired. Pre-programmed macros (e.g. the panning of pipe connections and different camera positions) are available at the push of a button thus considerably facilitating the inspection. All commands and inputs needed for the inspection are entered via the VC200. For every project all data, photos and videos are stored directly on the VC200 and you can transfer these project data via USB or network interface to your PC. For the generation of protocols the free VISIONREPORT viewer is available. Furthermore an import of your projects to the WINCAN V8 software — widely used internationally — is possible.

VERSATILE FIELDS OF APPLICATION

Besides being used together with the AGILIOS[™] pan & tilt push camera inspection system the VC200 control panel may also be used as mobile control center for ROVION[®] crawler inspection systems — thus laying the foundation for a successful growth with iPEK's modular and individually extendable product portfolio.

embedded

OPE

For crawler operation key features such as crawler control and the display of sensors' monitoring results are integrated in the VISIONCONTROL software. The most important system functions are permanently displayed on the monitor, so that you can always have an eye on them.



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AGILIOS™ PUSH CAMERAS

The AGILIOS[™] push cameras systems convince with state-of-the-art camera technology, their extremely tough design and the use of highest quality materials. Axial cameras in two different versions and two pan & tilt head cameras are available for the AGILIOS[™] inspection system. All cameras are equipped with very good optics and ultra-bright LED lights to provide optimal illumination to the last corner. What all cameras have in common is their reliability in terms of best inspection results, longevity and a high degree of compatibility.

PTP70II pan & tilt head camera Ø 79 mm – 300 mm

Due to the CMOS color camera the PTP70II pan & tilt head camera delivers excellent picture quality and convinces with a constantly upright picture, endless rotation and a broad panning range of -20° up to $+110^{\circ}$. The integrated rotation and pan unit enables the panning of pipe connections without any interruption and thus a very systematic and efficient inspection. The exact inspection position can always be determined with the built-in location transmitter with choice of

transmission frequencies. Powerful LEDs with adjustable light intensity provide optimal illumination for the inspection area. The impact-resistant lighting ring with integrated bumper protects the camera from damage and wear. Integrated lasers enable the measurement of cracks. The application area starts at DN 85. The



PTP70II camera offers a bend flexibility of up to 90° for all pipes starting at DN 110. The PTP70II pan & tilt head camera is optionally available as EX version.

AC52 Axial camera Ø 56 mm – 200 mm

The axial camera AC52 is characterized by its extremely robust and high-grade design featuring a stainless steel housing, excellent optical qualities, brilliant picture quality and a constantly upright picture. The exact inspection position can always be determined with the built-in location transmitter with choice of transmission frequencies. Powerful LEDs with adjustable light intensity provide optimal illumination for the inspection area. The impact-resistant lighting ring

with integrated bumper protects the camera from damage and wear. Its application area starts at DN 60. The AC52 camera offers a bend flexibility up to 90° for all pipes starting at DN 60. The axial camera AC52 is optionally available as EX version.



PTP50 pan & tilt head camera Ø 56mm – 300 mm

The PTP50 pan & tilt head camera is suited for the operation with the AGILIOS[™] push camera system. The camera with integrated rotation and pan unit disposes of endless rotation and a large panning range of -30° up to +120° which makes the backwards view into connecting pipelines when inspecting in water flow direction together with the camera angle of view possible. The camera is also characterized by an upright picture in an axial view, by its excellent optical qualities with a high resolution and its high-grade and robust design. The exact inspection position can be determined with the in-built multi-frequency location transmitter that can be switched on and off and also between frequencies. Powerful LEDs with adjustable light intensity provide optimal illumination of the inspection area. The impact-resistant lighting ring with integrated bumper made of stainless steel and the scratchproof camera front glass protect the camera from damage and wear. Integrated lasers enable an integrated measurement of the diameter

and crack width. The PTP50 pan & tilt head camera offers a bend flexibility of up to 90° for all pipes starting at DN 90 and is optionally available as EX version.



AC40 axial camera Ø 44 mm – 200 mm

The AC40 axial camera is fastened to the push rod of the AR90II coiler or is optionally available with a camera connector. It is characterized by its high-grade and extremely robust design, excellent optical qualities, brilliant picture quality and a constantly upright picture. The exact inspection position can always be determined with the built-in location transmitter that can be switched on and off and also between frequencies. Powerful LEDs with adjustable light intensity provide optimal illumination of the inspection area. The impact-resistant lighting ring with integrated bumper and the scratchproof camera front glass protects the camera from damage and wear. The application area starts at DN 50. The AC40

axial camera offers a bend flexibility of up to 90° for all pipes starting at DN 90. The AC40 axial camera is optionally available as EX version and with a connector interface. The AC40 axial camera is optionally available as EX version.



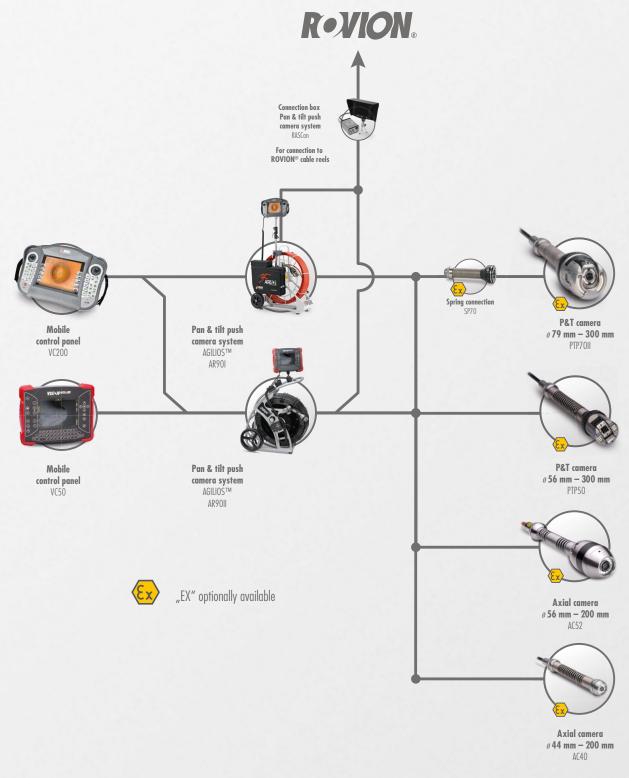
AGILIOS™ PRODUCTCONFIGURATION



CONTROL PANELS

COILER

CAMERAS



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