

SOLOPro+

PIPELINE VIDEO INSPECTION SYSTEM

FLEXIBLE
RUGGED
INTELLIGENT

ENGINEERED
TO PERFORM

 **OPTICON**
benelux

 **Mini-Cam**
InPipe Innovation





TRIED & TESTED

THE SOLOPro+ SYSTEM

TICKS ALL THE BOXES!

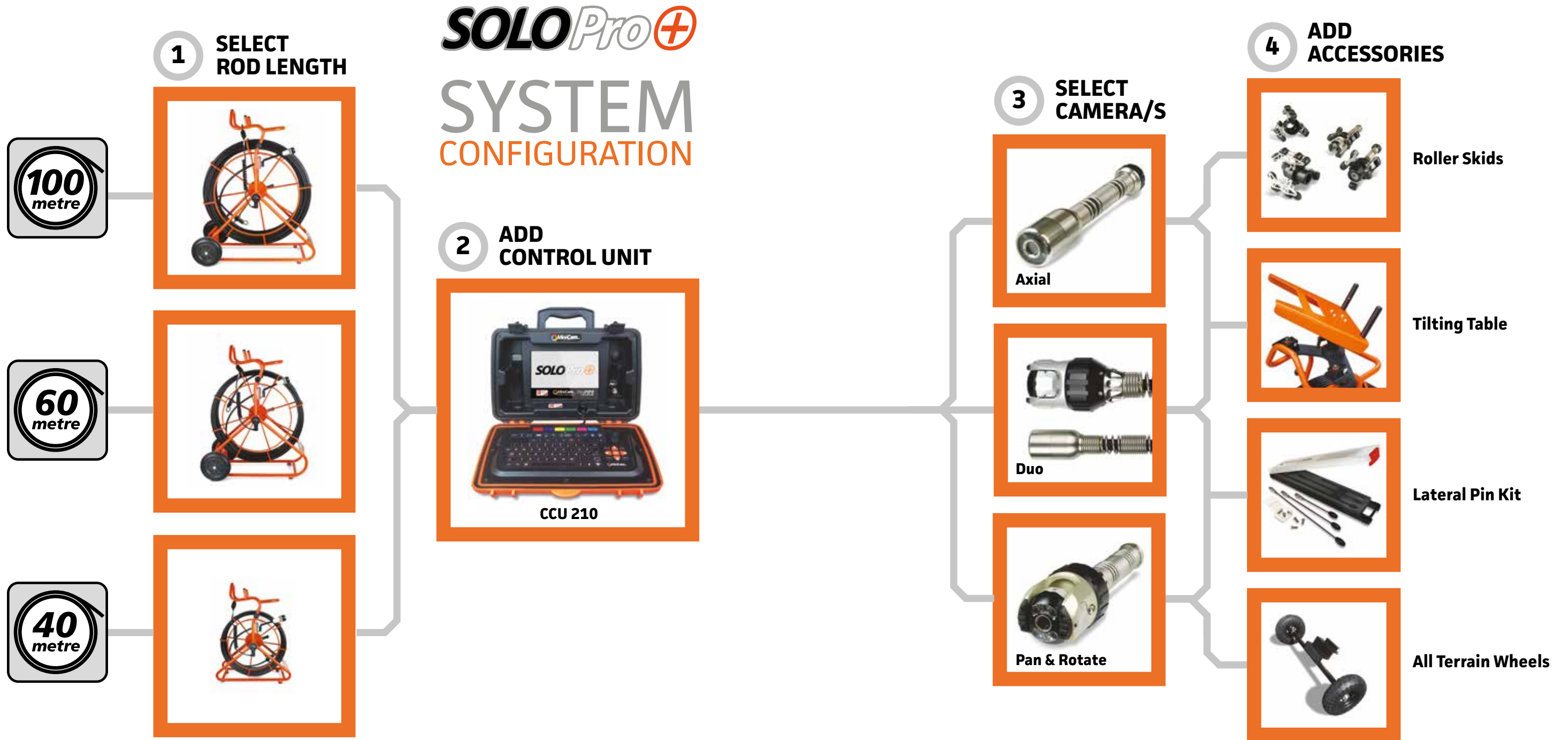
Mini-Cam's industry acknowledged reputation for innovative pipeline Inspection solutions extends back over 20 years. The SOLOPro+ Push Camera System is an amalgamation of two of our best-selling systems; SOLOPro which was the Axial camera version and SOLOPro360 which featured the Pan & Rotate camera. The two systems were merged and re-branded as SOLOPro+, now one of the industry's leading systems both in the UK, and in over 35 countries worldwide.

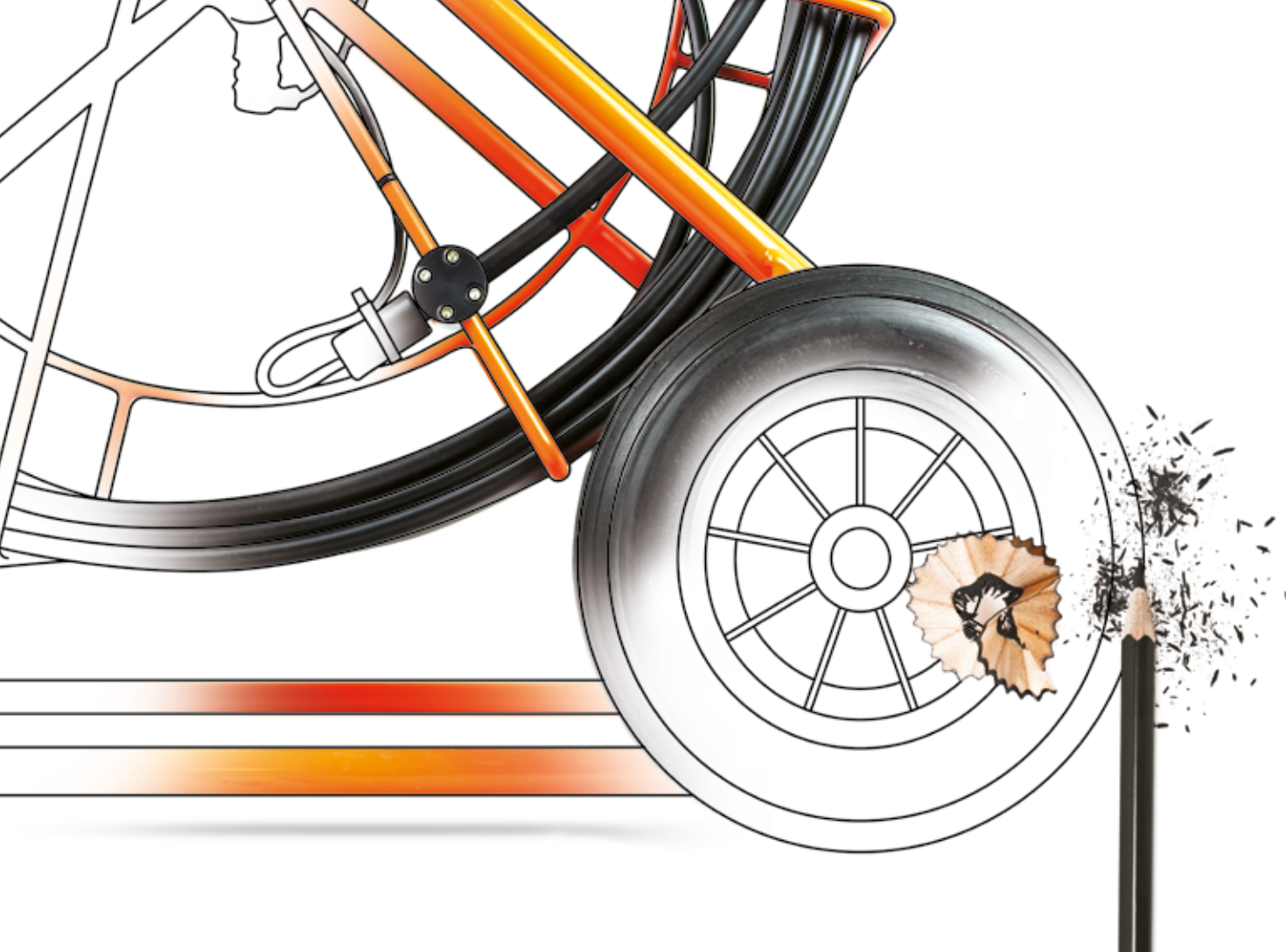
INTELLIGENT, FLEXIBLE, RUGGED.
ENGINEERED TO MAKE
EASY WORK OUT OF
CHALLENGING ENVIRONMENTS

Designed, developed, and manufactured in-house, SOLOPro+ meets the needs of your business in the real world: a system which is highly affordable, reliable, and fully supported by our experienced technicians, and enviable aftercare service. The system is available in 3 rod sizes, with a choice of cameras and features ProPIPE+, WinCan Embedded and WinCan Web Reporting Software as standard. To enhance the system a range of optional accessories is also available.



www.minicam.co.uk





ENGINEERED TO PERFORM

Highest quality components are used in all Mini-Cam products, and our skilled technicians build each system by hand to our exacting standards.

Every SOLOPro+ system is checked and rigorously tested before leaving our UK factory, and you can rest assured that we're right behind you, with our impeccable service and aftercare.



Easy-fit Control Unit



Heavy Duty Camera Connector



Rod Roller



Integrated Meterage Measurement



Friction Brake



Heavy Duty Wheels

MUCH MORE THAN MEETS THE EYE.

Feature rich, Mini-Cam's CCU210 Control Unit has an integral joystick for camera control, and an ergonomic soft-touch keypad. User friendly multi-function hot keys control an intuitive on-screen display, to enable quick and accurate navigation of the numerous features, which all come as standard on this brain of the SOLOPro+ system. **Functionality at your fingertips.**



CONTROL UNIT

CCU210



FUNCTIONALITY AT YOUR FINGERTIPS

Use the SOLOPro+ control unit to view, record and annotate inspection footage from any composite video source.

Control Meterage

Accurately set the meterage zero offset using the meterage key.

00.0

Review Footage

Organize videos and images into folders, then find them using the thumbnail gallery. Review media using standard controls.



Hot Keys

Intuitive, user-friendly, multi-function keys. The colour coding mirrors the key to the on-screen menu.



Capture Footage

Record MPEG video and capture JPEG images, and zoom up to 3X on video playback.



Write Screen Text

Type and store up to 16 pages of on-screen text. Customize text colour, background colour and position.

T



Offload Data

Copy video, images and data to USB or SDHC media for easy transfer to PC and seamless integration with WinCan reporting and querying capabilities.

16

Illumination

Increase or decrease the intensity of the ultra-bright camera LEDs



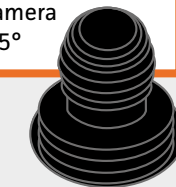
Share Files WiFi

WiFi enabled to allow remote access to stored images and data. Users can instantly share PDF reports, images and footage via email, or upload WinCan Reports via the Cloud to WinCan Web for secure, immediate team-wide access online.



Joystick Control

Controlling movement of the Pan & Rotate camera is smooth and effortless using the joystick control. Perform a 360° endless rotation and pan the camera +/- 135°



Alternative Languages

SOLOPro+ is currently available with keyboards in English, French, German and Russian



Generate Reports

Use ProPIPE+ Reporting software to create a detailed inspection report with a pipe graph to pinpoint defects.

PDF

Survey Features

Access embedded reporting software to create detailed on-site reports.



Setup & Configure Preferences

Easily and quickly configure the SOLOPro+ CCU to your specific requirements using the various menu options. Set language, date and time; establish file formats and naming conventions; adjust camera parameters; choose interface themes, enable power saving options and update firmware.



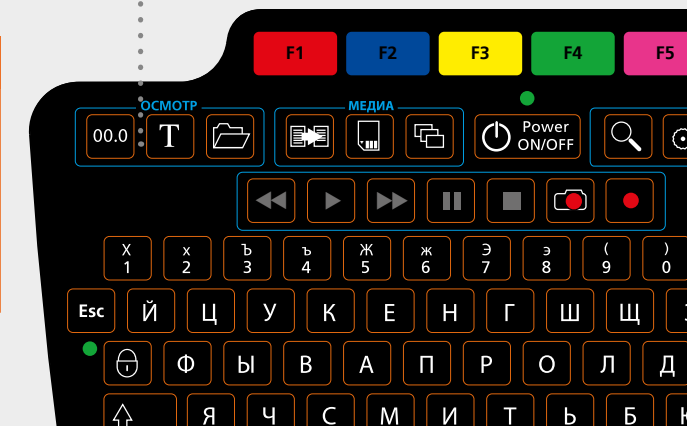
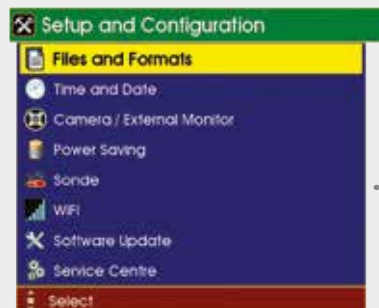
Sonde Settings

Set the frequency of the sonde transmitter. Selectable frequencies of 33kHz, 512Hz and 640Hz.



Screens Intensity

The brightness, colour and backlight intensity of the internal display can be adjusted to suit the environment in which the system is being used.



REPORTING SOFTWARE

ProPIPE+ reporting software, developed by our in-house team of software engineers, enables accurate inspection of sewers with easy post-processing of inspection data. The newly released version generates PDF files and allows users to create professionally presented, detailed reports with illustrated pipe graphs and screen shots, and also features a file sharing feature (see opposite)

Uncomplicated and efficient, ProPIPE+, WinCan Embedded and WinCan Web software is pre-installed as standard on the SOLOPro+ control unit, giving the ability to create comprehensive inspection reports on site and instantly share them with colleagues and customers. This gets the results to the client faster, making your business ultra efficient, reducing your administration costs and eliminating those long hours in the office.

Mini-Cam's SOLOPro+ control unit is WiFi enabled to allow remote access to stored images and data. Users can simply drag and drop files from control unit to PC, or upload to the Cloud directly on-site. ProPIPE+ doesn't require any additional software to view reports on a PC, simply open the file in Microsoft® Word.



- SAVE TIME AND MONEY
- CREATE A FULL REPORT INSTANTLY, ON-SITE
- ABILITY TO CREATE CUSTOMER SPECIFIC REPORT TEMPLATES
- GENERATE PDF REPORTS
- RE-DESIGNED PAGES FOR EASIER READING
- DETAILED PIPE GRAPH PINPOINTS DEFECTS
- SHARE FILES VIA EMAIL



- DATABASE CAPABILITIES
- WRc3, WRc4 & WRc5 COMPLIANCE
- GIS INTEGRATION
- ADVANCED TECHNOLOGY MODULES
- ENHANCED REPORTING
- SUPPORT FOR NETWORK INSTALLATION
- SUPPORT FOR ENTERPRISE DATABASE (Oracle, SQL)



- SHARE FILES WITH COLLEAGUES & CUSTOMERS
- SHARE PDF REPORTS, IMAGES & FOOTAGE VIA EMAIL
- UPLOAD WINCAN REPORTS VIA THE CLOUD TO WINCAN WEB



GENERATE PDF REPORTS

SHARE FILES

The latest release of ProPIPE+ Reporting Software and WinCan Embedded now includes the new File Share feature. Quick and simple to use, with just a 3-step menu selection, users can instantly share PDF reports, images and footage via email, or upload



WinCan Reports to WinCan Web for secure, immediate, team-wide access online. All that is required to start sharing with colleagues and customers is a 3G or 4G Wi-Fi connection. Users can create the hot-spot using their smart phone.

You Tube View ProPIPE+ footage on our YouTube Channel - MinicamTubeUK



COILER SPP100•60•40



100
metre

60
metre

40
metre

SOLOPro+



To provide you with the best system to suit your inspection requirements, Mini-Cam coilers are available in 3 rod lengths. The mid -size 60 metre and the large 100metre come with wheels for safe and easy mobility.

Mini-Cam use only the highest grade push rod. Manufactured to our exacting standards, the rod is semi-rigid with a tough, durable outer sheath. Manufactured to perform reliably in harsh conditions.

The coiler frame is the carrier for the coiled rod, the camera and the CCU. Mini-Cam have constantly refined the design, materials, components and construction, to make for our best ever frame. Customers the world over have come to rely on the SOLOPro+ frame for it's reliability and longevity, and of course our enviable after-care and service back-up.

The welded tubular steel construction and protective powder coating means the coiler stands up to the punishment of daily field use. The rod sheath is protected when paying-out and rewinding by an integrated rod roller, and a sturdy, water resistant camera connector houses the multi-frequency sonde, with selectable frequencies of 33kHz, 512Hz and 640Hz. A sealed slip ring in the coiler hub ensures reliable operation, while measurements from the integral distance counter appear on the CCU screen for recording into the video.



PRECISION CAMERAS FOR OPTICAL EXCELLENCE

Highest quality components are used in our camera designs, and our skilled technicians assemble and rigorously test the cameras at our UK production facility. Built for longevity, the cameras are rugged, with robust and precise connectors, and are engineered to perform with excellent optical qualities.



CAM025 AXIAL

A Mini-Cam best seller, the CAM025 Self-Levelling Axial camera performs reliably in daily use. The stainless steel housing with flexible spring and heavy duty connector features four high powered, ultra-bright LED lights.

The housing has an integral,hard wearing, scratch resistant sapphire glass to protect the camera lens. CAM025 is supplied as standard with the SOLOPro+ Axial system and the SOLOPro+ Duo system.



| Axial Camera | |
|--------------|--------|
| Product Code | CAM025 |

See page 28 for technical specification

PAN & ROTATE CAM026

Mini-Cam’s CAM026 Pan & Rotate camera features continuous 360° rotation and +/- 135° pan. Our signature dual clusters of three high powered ultra-bright LED lights provide optimum illumination

for better clarity of image. An integral, hard wearing, scratch resistant sapphire glass protects the camera lens. CAM026 is supplied as standard with the SOLOPro+ Pan & Rotate system and the SOLOPro+ Duo system.



| Pan & Rotate Camera | |
|---------------------|--------|
| Product Code | CAM026 |

See page 29 for technical specification



OPTIMIZE YOUR VIEW WITH CENTERING SKIDS

Centering skids optimize your view in pipes of 75mm and larger. For use with Axial camera CAM025, the skids are quick and simple to attach using the supplied tool.

The adaptor kit with three centering skids and skid removal tool is supplied as standard with all SOLOPro+ Axial systems and SOLOPro+ Duo systems.



| Centering Skids - Product Codes | | |
|---------------------------------|-------------------|--------------|
| A | 4inch Skid | ASS-000-001A |
| B | 6inch Skid | ASS-000-002A |
| C | Protection Skid | ASS-000-003A |
| D | Skid Removal Tool | ASS-000-667 |

SOLOPro+SPP100•60•40EX

**UNCOMPROMISING
PERFORMANCE
AND SAFETY**

**ENGINEERED FOR
EXPLOSION-RISK
ENVIRONMENTS**

ATEX CAMERAS

SOLOPro+ EX systems are engineered, built and tested for safe use in some of the most dangerous situations, without compromising on any of the features and functionality of our regular SOLOPro+ systems.

With ATEX approval these systems make working in Zone 2 and other explosion-risk environments much easier and safer than alternative methods, giving you a clear, sharp eye into the unknown, without introducing risk through the use of electronic devices in explosive atmospheres.

SOLOPro+ EX provides peace of mind safety, with the same professional grade quality, reliability and accuracy Mini-Cam customers expect from the SOLOPro+ label.



Axial Camera CAM025EX



Pan & Rotate Camera CAM026EX



Axial Camera CAM025EX



ROLLER SKIDS

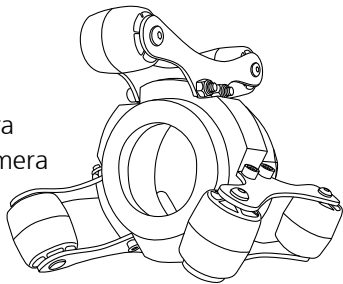
Increase the effectiveness and lifespan of your pipeline inspection system

Manufactured from high quality materials. No tools or manual adjustments are required, simply fit the skid and the three pivoting arms with specially shaped nylon wheels adjust to fit the required pipe diameter, keeping the camera head centred in the pipeline at all times.

The roller skids expand the SOLOPro+ system for use in 15cm to 45cm (6"-18") pipelines, this enables you to use your push camera inspection system in pipelines that would otherwise require a crawler system. The roller skids allow inspection cameras to negotiate multiple corners and bends and increase the inspection range significantly.

Manufactured from stainless steel and ABS plastic, the device is sturdy, rugged and corrosion resistant to withstand the punishment of daily field work.

Available in two sizes to fit the CAM025 Self Levelling Axial Camera and the CAM026 Pan & Rotate Camera



| Technical Specifications | |
|------------------------------|--------------|
| Compatibility | Product Code |
| 180mm Roller Skid for CAM025 | ASS-002-009 |
| 180mm Roller Skid for CAM026 | ASS-001-955 |
| 130mm Roller Skid for CAM026 | ASS-002-160 |
| 130mm Roller Skid for CAM025 | ASS-002-008 |



ASS-001-955 & CAM026



ASS-002-009



ASS-001-955



ASS-002-160



ASS-002-008



ASS-002-008 & CAM025


TILTING TABLE FOR CCU

Adjust the CCU position to suit the needs of the user

Quick and easy to attach, the *Tilting Table* allows adjustment of the control unit position, to give the user optimal screen viewing and keyboard positions. The table can be tilted 35° forward and 75° backwards, with a full, unobstructed 360° horizontal rotation. No tools are required, simply attach using the adjustable clamps.



| Technical Specifications | |
|--------------------------|-------------------|
| Product Code | TTC01 |
| Dimensions LxWxH | 350 x 300 x 270mm |
| Weight | 3kg |

 [View on our YouTube Channel](#)
[MinicamTubeUK](#)

ALL TERRAIN WHEELS


Improved stability for coiler rolling

The *All Terrain Wheels* attachment provides better stability for the user when manoeuvring a coiler through rocks, grass, woodland, mud and pavement. Sturdy construction, portable and easy-to-store. Quick and easy to attach and remove, no tools are required.

Please Note: The All Terrain Wheels attachment is not intended for use on stairs or kerbs.



| Technical Specifications | |
|--------------------------|---------|
| Product Code | SPP-ATA |
| Width | 860mm |
| Depth | 265mm |
| Height | 265mm |
| Weight | 1.5kg |

 [View on our YouTube Channel](#)
[MinicamTubeUK](#)

COMPOSITE VIDEO INPUT CABLE

Connectivity to external video equipment

Allows use of external video equipment to be recorded on SOLOPro+ control unit. This allows the user to take advantage of the embedded reporting software.



| Technical Specifications | |
|--------------------------|---------|
| Product Code | SPP-EVL |
| Length | 2m |
| Weight | 125g |

SEESNAKE® INTERFACE

Exclusively compatible with Mini-Cam Control Units

The Mini-Cam SeeSnake® Interface unit quickly and easily connects the Rigid SeeSnake® Standard and Rigid SeeSnake® Mini cameras to Mini-Cam's intuitive and advanced SOLOPro+ Control Units.

Also available to fit Mini-Cam Proteus™ Control Units - Product Code: SSP01



| Technical Specifications | |
|--------------------------|-----------------------|
| Product Code | SSP02 |
| Compatibility | SOLOPro+ Control Unit |
| Dimensions WxLxD | 50 x 268 x 40mm |
| Weight | 115g |

LATERAL PIN KIT

A must have accessory for the smooth inspection of incoming laterals



A useful addition to the SOLOPro+ pipeline inspection system. Used exclusively with the Pan & Rotate camera (CAM026), simply attach the pin to allow the inspection of incoming lateral pipes. The pin adjusts the direction and guides the camera smoothly along the pipe.

The kit comes with three sizes of pin small 150mm (6in), medium 225mm (9in) large 300mm (12in), fixings and full instructions.



| Technical Specifications | |
|--------------------------|--------------|
| Product Code | ASS-001-968 |
| Small Pin Length | 150mm (6in) |
| Medium Pin Length | 225mm (9in) |
| Large Pin Length | 300mm (12in) |
| Fixings Supplied | 6 Screws |



SPECIFICATIONS SOLOPro+

SPECIFICATION

| | | | SOLOPro + Axial | SOLOPro + Pan & Rotate | SOLOPro + Duo |
|-------------------|--------------------------|---|--|---|--|
| CCU210 CONTROLLER | Video Format | PAL | ■ | ■ | ■ |
| | Battery | 6-hour Lithium-Ion | ■ | ■ | ■ |
| | Charging | Mains power (100-240 Vac) or vehicle power (12 or 24 VDC) using supplied adaptors | ■ | ■ | ■ |
| | Display | 8" TFT LCD (800 x 600 pixels) Sunlight viewable | ■ | ■ | ■ |
| | Keyboard | Full QWERTY ^Δ style membrane keyboard with arrow keys for navigation and separate joystick for camera control. | ■ | ■ | ■ |
| | Video Recording | MPEG4 (WinCan compatible) | ■ | ■ | ■ |
| | Image Capture | JPEG (live or from recorded video) | ■ | ■ | ■ |
| | Text Overlay | 16 page (selectable text and colours) | ■ | ■ | ■ |
| | Internal Memory | 32 GB (expandable to 128 GB) | ■ | ■ | ■ |
| | External Media | SDHC and USB 2.0 | ■ | ■ | ■ |
| | Language Support | Multiple | ■ | ■ | ■ |
| | Connections | Power and Coiler | ■ | ■ | ■ |
| | Environmental Rating | IP54 | ■ | ■ | ■ |
| | Weight | | 3 kg (6.6lb) | 3 kg (6.6lb) | 3 kg (6.6lb) |
| | Dimensions | (W x H x D) mm (W x H x D) inches | 435 x 250 x 140 17.1 x 9.8 x 5.5 | 435 x 250 x 140 17.1 x 9.8 x 5.5 | 435 x 250 x 140 17.1 x 9.8 x 5.5 |
| COILER | Construction | Welded Steel | ■ | ■ | ■ |
| | Finish | Powder Coated | ■ | ■ | ■ |
| | Distance Counter Units | Feet, Metres | ■ | ■ | ■ |
| | Controls | Friction Brake | ■ | ■ | ■ |
| | Weight | 40m / 60m / 100m | 40m 15kg (33lb) • 60m 20kg (44lb) • 100m 30kg (66lb) | | |
| | Sonde | 33 kHz / 512 Hz / 640 Hz | - ■ | - | ■ |
| | Dimensions | 40m (130') / 60m (200') / 100m (330') (L x W x H) cm (L x W x H) inches | 40m (130') 530 x 365 x 690 20.8 x 14.3 x 27.1 | 60m (200') 690 x 370 x 890 27.1 x 14.5 x 35 | 100m (330') 790 x 370 x 960 31.1 x 14.5 x 37.7 |
| CAM025 AXIAL | Imager | 1/4" colour CCD with DSP (Digital Signal Processor) | ■ | - | ■ |
| | Effective Pixels | 512 x 582 | ■ | - | ■ |
| | Resolution | 470 HTVL | ■ | - | ■ |
| | Sensitivity | < 1.0 Lux | ■ | - | ■ |
| | Aperture / Field of View | F2.5 / 75° | ■ | - | ■ |
| | Image Orientation | Auto-levelling | ■ | - | ■ |
| | Size | 41mm (1.16") diameter | ■ | - | ■ |
| | Illumination System | 4 LED | ■ | - | ■ |
| | Illumination Intensity | Adjustable (to 12.5k Lux at 150mm) | ■ | - | ■ |
| | Construction | Stainless Steel | ■ | - | ■ |
| | Pipe Compatibility | 50mm (2") and up | ■ | - | ■ |
| | Pipe Adaptor Kit | 3" / 4" / 6" Skids | ■ | - | ■ |

| | | | SOLOPRO + Axial | SOLOPRO + Pan & Rotate | SOLOPRO + Duo |
|---------------------|-------------------------------|-------------------------------------|--------------------|---------------------------|------------------|
| CAM026 PAN & ROTATE | Imager | 1/4" colour CCD with DSP | - | ■ | ■ |
| | Effective pixels | 512 x 582 | - | ■ | ■ |
| | Resolution | 470 HTVL | - | ■ | ■ |
| | Sensitivity | < 1.0 Lux | - | ■ | ■ |
| | Aperture / field of view | F2.5 / 75° | - | ■ | ■ |
| | Image Orientation | Auto-levelling | - | ■ | ■ |
| | Size | 74mm (2.9in) dia | - | ■ | ■ |
| | Illumination System | 6 LED | - | ■ | ■ |
| | Illumination intensity | Adjustable (to 12.5K Lux at 150mm) | - | ■ | ■ |
| | Construction | Aluminium / Stainless steel | - | ■ | ■ |
| | Pipe compatibility | 150mm (6") and up | - | ■ | ■ |
| | Sonde | 33 kHz / 512 Hz / 640 Hz | - | ■ | ■ |
| SOFTWARE | Pipe adaptor kit | 6" / 8 " Skids | - | ■ | ■ |
| | ProPIPE+ Reporting | | ■ | ■ | ■ |
| | WinCan Embedded | | ■ | ■ | ■ |
| | WinCan Web | | ■ | ■ | ■ |
| | Email and File Share from CCU | | ■ | ■ | ■ |
| ACCESSORIES | Reel-to-controller cable | | ■ | ■ | ■ |
| | Vehicle power adaptor | | ■ | ■ | ■ |
| | Mains power adaptor | | ■ | ■ | ■ |
| | Memory | 8 GB USB Drive / 8 GB SDHC card | ■ | ■ | ■ |
| | Accessory Case | with Centering Skids | ■ | ■ | ■ |
| | Mini-Cam Lanyard | | ■ | ■ | ■ |
| OPTIONAL | Composite video input cable | Product Code: SPP-EVL | □ | □ | □ |
| | Memory card upgrade | 16GB / 32GB | □ | □ | □ |
| | Roller skids | 130mm / 180mm (see page 22-23) | □ | □ | □ |
| | Tilting Table | Product Code: TCC01 (see page 24) | □ | □ | □ |
| | All Terrain Wheels | Product Code: SPP-ATA (see page 25) | □ | □ | □ |

- Standard
- Optional
- Not applicable
- Δ Alternative languages available (details on request)

Discover more InPipe Innovation at



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