

# Proteus™

PIPELINE CRAWLER INSPECTION SYSTEM



 **Mini-Cam**  
InPipe Innovation



**CRP300** Crawler  
**CAM028** Pan, Rotate & Zoom Camera  
**ALN300** Auxiliary Light  
**ALB300** Auxiliary Light/Backeye  
**QRW140SR/300** Soft Rubber Wheels

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COVER IMAGE:

**RAP300** Motorised Reel, **CCU208** Control Unit, **CRP300** Crawler, **QRW250** Pneumatic Balloon Wheels, **CAM028L** Pan, Rotate Zoom & Laser Camera, **ALN300** Auxiliary Light, **ALB300** Auxiliary Light with Backeye.



# TRIED & TRUSTED OUR PROTEUS SYSTEM TICKS ALL THE BOXES!

With our experience of innovative solutions for the pipeline inspection industry extending back over 28 years, we have created our most advanced, most capable, most feature-rich system. Proteus™ has been designed to meet your needs in the real world: a system which is highly affordable, reliable, and fully supported by experienced engineers and our “How To” video built-in support. The Proteus system is highly expandable and - most importantly - future proof.

All Proteus crawlers feature CAN bus technology, allowing communication directly between each piece of attached equipment, and can relay control and status information such as activity, speed, pressure, inclination and temperature.

The Proteus range includes a *Lite* system (page 15), which brings together, the well proven performance and reliability of the Proteus family, in a value for money, entry level system. Proteus Lite is the ideal starter kit for a one-man operation, integration into a small inspection van, or a low-cost option for larger companies to use for off-road, remote locations.

Designed and developed in-house, Mini-Cam’s Proteus crawlers are now one of the industry’s leading systems in daily use, both in the UK and in over 38 countries worldwide. The systems can be installed as part of our Custom Van-Fit service, or be fully portable with the Proteus Portable Storage Trolley (page 47) and the Proteus Power Battery Pack (page 43), giving up to five hours inspection time in a highly compact solution.





# SYSTEM CONFIGURATION



CCU208 Control Unit



VKU500 Desktop Keyboard  
VCU500 Desktop Controller



Automatic Reel  
350/500m



Motorised Reel  
250/350m



Manual Reel  
250/350m



Lite Manual Reel  
250m



CRP90 Crawler



CRP140 Crawler



CPL150 Crawler



CRP300 Crawler



Floatation Raft



Soft Rubber Wheel



Wide Axle Wheel



Carbide Wheel



High Grip Wheel



Balloon Wheel



XL Balloon Wheel



Auxiliary Light Pods



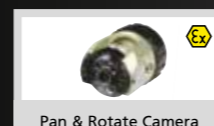
Auxiliary Light



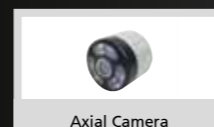
Auxiliary Light/Backeye



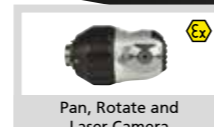
Self Levelling  
Axial Camera



Pan & Rotate Camera



Axial Camera



Pan, Rotate and  
Laser Camera



Pan, Rotate and  
Laser Camera



Inline Camera  
Adaptor



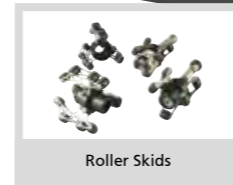
Tilting Table



CCP60R Compatible Coiler



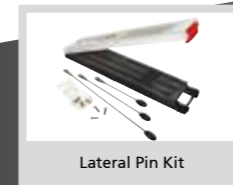
CCP60D Compatible Coiler



Roller Skids



Crawler Cradle



Lateral Pin Kit



Battery Pack



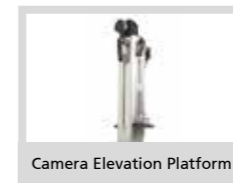
Cable Guide Pulley



Manhole Top Roller



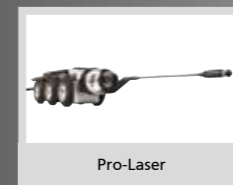
Brick Egg Stabilizer



Camera Elevation Platform



Pressure Kit



Pro-Laser



Extra Weight Plate



Crawler Camera Extender



4 Button Remote



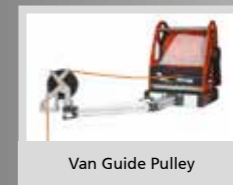
Joystick Remote



Pressure Kit



Reel Bracket



Van Guide Pulley



Cable Reel Guide



Seesnake® Interface



Extension Reel



Link Cable



Portable Storage Trolley



SOFTWARE INCLUDED AS STANDARD ON ALL PROTEUS SYSTEMS



Additional Proteus accessories can be found from page 36 onwards.

# MINIATURE TO MASSIVE PROTEUS HANDLES THEM ALL!

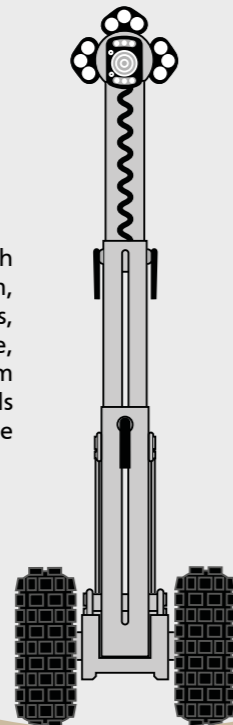
**START  
PLANNING YOUR  
PROTEUS SYSTEM**  
CHECK OUT THE  
CONFIGURATION  
CHART ON  
PAGE 06-7

With four crawlers, six cameras, two compatible coilers and over twenty accessories, the Proteus system can be configured to perfectly meet your requirements. As your business grows simply add more components from the Proteus range to your kit, enabling you to significantly increase your inspection capabilities for larger diameter pipes and tricky, challenging environments. No matter what the pipe diameter, Proteus crawlers are rugged, agile and rapidly responsive to your commands.

The example shown here demonstrates the scope of the Proteus system. The compact size of our smallest CRP90 crawler allows it to easily survey relined 100mm pipes, while the CRP300 crawler, the largest in the range, with the optional CEP300 Camera Elevation Platform, centres the camera in an impressive 2200mm pipe diameter. For mid-size inspections, there are countless configurations possible with our CRP140 and CPL150 Crawlers (page 12) - **which one will you drive?**

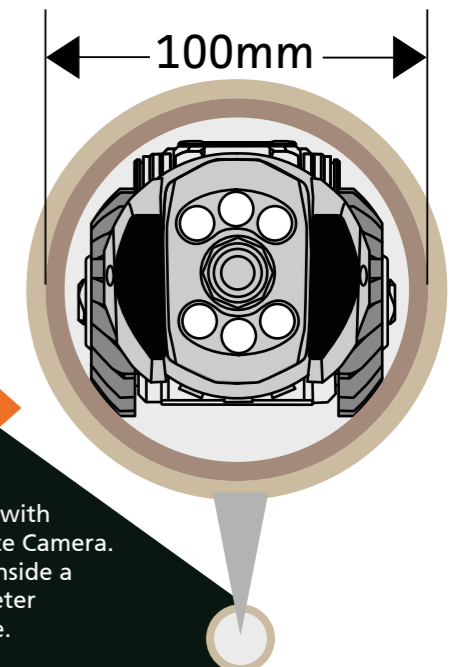
2200mm

CRP300 Crawler with  
CAM028 Pan, Rotate & Zoom,  
ALN300 Auxiliary Lights,  
ALB300 Auxiliary Light/Backeye,  
CEP300 Camera Elevation Platform  
and QRW250 Balloon Wheels  
in a 2200mm diameter pipe



**PIPE DIAMETERS  
FROM 100mm  
TO 2200mm**

100mm



CRP90 Crawler with  
CAM026 Pan & Rotate Camera.  
Elevator Down, inside a  
100mm diameter  
relined pipe.

# PROTEUS FAMILY



A **CRP140** Crawler, **CAM028L** Pan, Rotate, Zoom & Laser, **ALN300** Auxiliary Light  
 B **CRP300** Crawler, **CAM028L** Pan, Rotate, Zoom & Laser, **ALN300** Auxiliary Lights  
 C **CRP90** Crawler, **CAM027** Axial  
 D **CPL150** Crawler, **CAM027** Axial

# IN-BUILT INNOVATION

## KEY FEATURES OF PROTEUS CRAWLERS

STANDARD FEATURES, OPTIONS & MODEL COMPARISONS ON NEXT PAGE



Quick Change Wheel Lock



Soft Rubber Wheels



In-built Inclination Sensor



Articulated Knuckle Connector



Heavy Duty Rear Connector



1 bar Pressure Tight



Aux Light, Backeye and LED Pod Mounting



Heavy Duty Camera Connector



Motorised Elevator



Manual Elevator



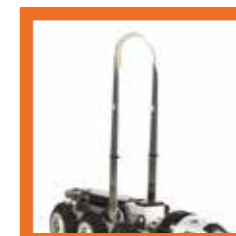
Multi-Frequency Sonde  
33kHz/512Hz/640Hz



Front Connector Protective Cap



Rear Connector Protective Cap



Lowering Arm




Lowering Arm



# STANDARD FEATURES

- Compatible with:
  - CAM026 Pan & Rotate
  - CAM026L Pan, Rotate & Laser
  - CAM027 Axial
  - CAM028L Pan, Rotate, Zoom & Laser
  - ALB300 Auxiliary Light with Backeye<sup>Δ</sup>
  - ALN300 Auxiliary Light (Non-Backeye)<sup>Δ</sup>
  - APB300 LED Pod with Backeye<sup>Δ</sup>
  - APN300 LED Pod (Non-Backeye)<sup>Δ</sup>
- Continuous monitoring of speed, internal pressure, inclination and temperature
- Dual Axis Inclination Sensor\*\*
- Single Auxiliary Light/Backeye Mounting
- Multi-Frequency Sonde\*\*
  - 33kHz / 512Hz / 640Hz
- Steerable High Torque All-Wheel Drive
- Robust Housing
- 1 bar Pressure Tight
- Quick Change Wheel Lock
- In-Built Lowering Arm
- Heavy Duty Camera Connector
- Protective Front Connector Cap
- Protective Rear Connector Cap
- Lowering Rope
- Protective Carry Case\*
- Tools

<sup>Δ</sup>Except CRP90, \*Except CRP300, \*\*Optional on CPL150

 <b>ATEX ZONE 2 APPROVED CRAWLERS</b>	<b>CRP300</b>	<b>Optional</b>
	<b>CPL150</b>	<b>Not available</b>
	<b>CRP140</b>	<b>Optional</b>
	<b>CRP90</b>	<b>Optional</b>

## CRP90

### Massive capabilities Skilfully miniaturised

CRP90's compact size allows it to easily survey relined 100mm pipes. The motorised elevator enables the camera to be centred in pipes of up to 225mm diameter.

#### ALL STANDARD FEATURES INCLUDED PLUS

- 6 x QRWX60SR 60mm Rubber Wheels
- Motorised Elevator - Range 40-77mm
- Articulated 'Knuckle' Connector

#### OPTIONAL

- Carbide Wheels (page 40)
- High Grip Wheel (page 40)



Technical Specifications	
Product Code	CRP90
Pipe Sizes	90mm - 225mm
Weight	4.50kg

## CRP140

### Sophisticated mid-size crawler modelled on the CRP150

For pipes from 140mm (even in a relined pipe) up to 600mm, with the optional PCC01 Crawler Cradle it can even be used in pipes up to 1000mm diameter.

#### ALL STANDARD FEATURES INCLUDED PLUS

- 6 x QRWX90SR 90mm Rubber Wheels
- Motorised Elevator - Range 54-205mm
- Articulated 'Knuckle' Connector

#### OPTIONAL

- Carbide Wheels (page 40)
- High Grip Wheel (page 40)



Technical Specifications	
Product Code	CRP140
Pipe Sizes	from 140mm - 600mm to 1000mm with PCC01 Crawler Cradle (page 45)
Weight	9.5kg

## CPL150

### Entry level, mid-size crawler with manual elevator

The perfect companion to the RMPL250 Reel (page 15). CPL150 has the same professional grade quality, reliability and accuracy as our mainline Proteus crawlers.

#### ALL STANDARD FEATURES INCLUDED PLUS

- 6 x QRWX90SR 90mm Rubber Wheels
- Manual Elevator - Range 60-112mm
- Heavy Duty Rear Connector

#### OPTIONAL

- Multi-Frequency Sonde
- Inclination Sensor
- Carbide Wheels (page 40)
- High Grip Wheel (page 40)



Technical Specifications	
Product Code	CPL150
Pipe Sizes	from 150mm - 400mm to 800mm with PCC01 Crawler Cradle (page 45)
Weight	9kg

## CRP300

### Engineered to perform reliably in challenging conditions

Designed for larger pipe diameters with high flow rates, this heavy duty crawler makes easy work of inspections in more difficult environments.

#### ALL STANDARD FEATURES INCLUDED PLUS

- 6 x QRWX140SR 140mm Rubber Wheels
- Motorised Elevator - Range 135-398mm
- Heavy Duty Rear Connector

#### OPTIONAL

- Wide Axle Balloon Wheels (page 40)



Technical Specifications	
Product Code	CRP300
Pipe Sizes	from 300mm - 1000mm to 2200mm with Elevation Platform CEP300 (page 51)
Weight	32.0kg

# PROVEN RELIABILITY

## MODULAR CAPABILITY

Mini-Cam's *Proteus Lite* brings together, the well proven performance and reliability of the Proteus family, in a value for money, entry level system.

Designed and developed in-house, Proteus Lite is the ideal starter kit for a one-man operation, integration into a small inspection van, or a low-cost option for larger companies to use for off-road, remote locations. Proteus Lite provides all the resources required to undertake efficient, easy to perform inspections, and with *ProPIPE+*, *WinCan Embedded* and *WinCan Web* software as standard, you can deliver accurate, detailed reports, instantly on-site.

Future proof and totally modular, when your business budget allows, simply upgrade your Proteus Lite with a larger or smaller crawler, extra cameras and auxiliary lights, or one of the many other Proteus compatible accessories available.



CPL150 Crawler



## Proteus Lite System

### RMPL250 Reel

- 250m Kevlar Reinforced Cable
- Manual Cable Layering Arm
- 2-Step Quick-Release Meterage Rollers - removable for easy cleaning
- Friction Brake
- Removable Winding Handle
- Spring Loaded Connector
- Powder Coated Frame with Rubber Feet
- Unique Cow Horn locator for easy-fit Control Unit (CCU)

### CPL150 Crawler (See page 13 )

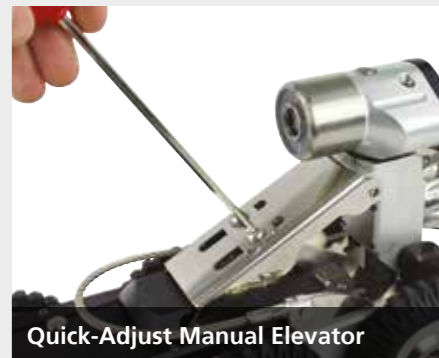
- Quick-Adjust Manual Elevator
- Lowering Handle
- Heavy Duty Rear Connector
- 6 Soft Rubber Wheels
- Quick-change Wheel Lock

### CAM026 Pan & Rotate Camera

See page 26

### CCU208 Control Unit

See page 17



Quick-Adjust Manual Elevator



Lowering Handle



Manual Cable Layering Arm



Friction Brake / Hand Brake



2-Step Quick Release Meterage Rollers

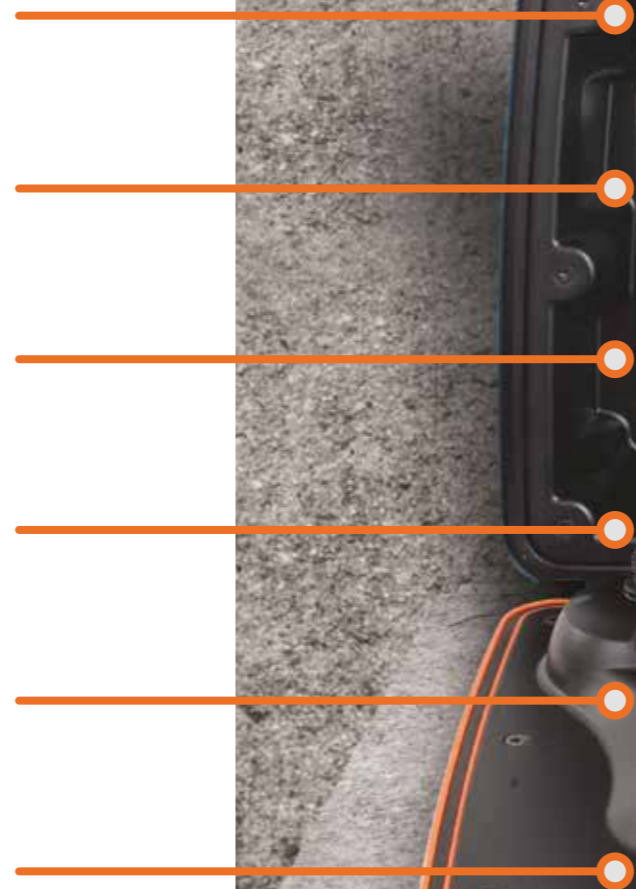


Fold-away/Removable Handle

## MUCH MORE THAN MEETS THE EYE.

Feature rich, Mini-Cam's CCU208 Control Unit has twin integral joysticks for camera control and crawler manoeuvrability, 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 the brain of the Proteus system.

**Functionality at your fingertips.**



# FUNCTIONALITY AT YOUR FINGERTIPS

Use the Proteus 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

## Sonde Settings

Set the frequency of the sonde transmitter to 33kHz, 512Hz or 640Hz.



## Hot Keys

User friendly, multi-function hot keys control an intuitive on-screen display of the numerous features.



## Survey Features

Access embedded reporting software to create detailed on-site reports



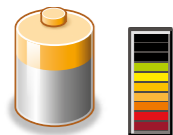
## Generate Reports

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

PDF

## Internal Batteries

The Proteus CCU includes internal batteries so that it can be used autonomously to view inspection reports and video.



## Setup & Configure Preferences

Easily and quickly configure the Proteus 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 theme, enable power saving options and update firmware.



## Capture Footage

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

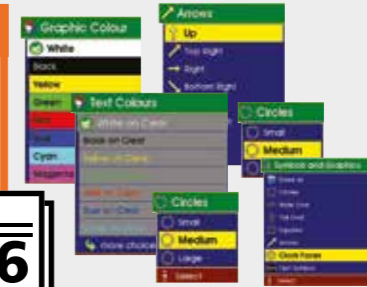


## Write Screen Text

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

T

16



## Joystick Controls

The left hand joystick controls crawler manoeuvrability. Movement of the Pan & Rotate camera is smooth and effortless using the right hand joystick control. Perform a 360° endless rotation and pan the camera +/- 135°.



## Share Files

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.



## Illumination

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

## Alternative Languages

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



## Review Footage

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



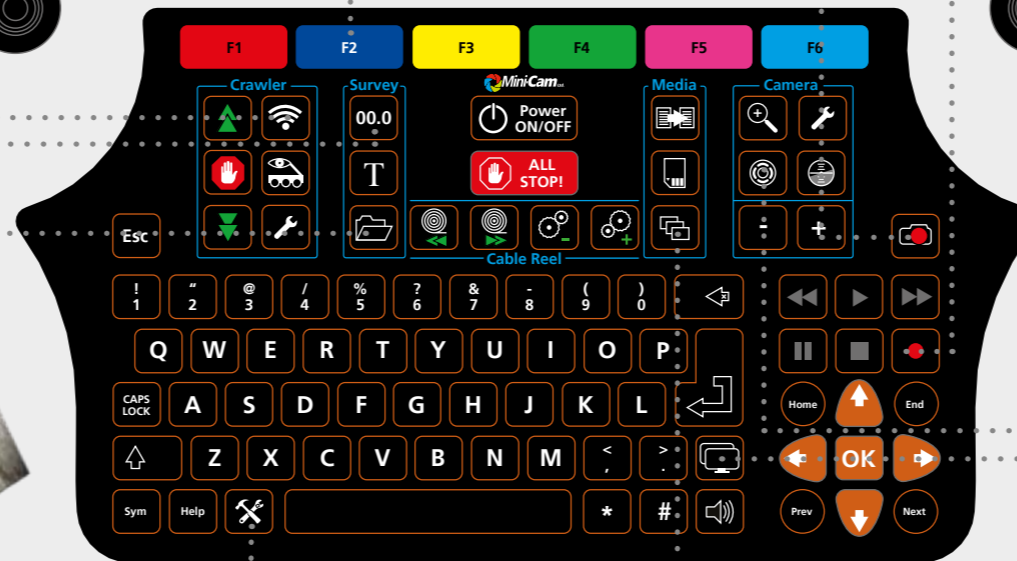
## Screens Intensity

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



## Offload Data

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



# VCU500 VAN CONTROL UNIT

The Van Control Unit and Desktop Keyboard system has been designed and developed specially for van-fits. The free-standing/built-in keyboard (opposite), and under-shelf control unit (below) replaces the traditional CCU to offer more flexibility for van-fit layouts and user specific requirements.

A development of Mini-Cam's best-selling CCU208 control unit, the Proteus VCU500 is a screenless control unit housed in a 1U high (44mm) rack mount enclosure for integration into a 19in rack enclosure, in a typical van installation. Designed to support all the existing Proteus features, VCU500 can be used with any combination of Mini-Cam Proteus and Proteus Lite cable reels, cameras and crawlers.

The front panel of the VCU500 includes two USB ports for connection of memory devices. A push-button allows a memory device to be ejected safely, and an array of four multicolour LEDs shows the status of these ports and of the system.

It is intended that the VCU500 is incorporated into a rack enclosure with an industrial PC mounted in the van studio, which is running *WinCan* or any other reporting software. An array of displays may then be mounted in the studio, with one being driven from the HDMI output of the VCU500 and other being driven by the PC. A further VGA or composite video monitor can be mounted in the vehicle workspace to display the operation of the crawler.

The VCU500 may be powered from a vehicle 24-volt DC supply or from 240-volt AC via the standard Mini-Cam PSP24 power supply unit.



# DESKTOP KEYBOARD VKU500

Developed and manufactured to Mini-Cam's rigorously high standards, the ergonomically designed VKU features our trademark user-friendly, multi-function hot keys, and twin, extra large, three-axis joysticks which control all the features and functions of the conventional CCU208 (see page 18).

The sturdy unit sports retractable rear legs, to tilt the face of the keyboard to the user, for ease of use and improved viewing. By simply changing the connection socket from rear to base, the unit can easily be integrated into the desktop, enabling safe, concealed cable management.

The VCU/VKU modules provide a flexible system and improved work-flow, for the discerning operation manager's inspection vehicle.



## Desktop Keyboard

Product Code	VKU500
--------------	--------

See page 55 technical specification

## SEAMLESS CONNECTIVITY WITH ALL PROTEUS FEATURES



The rear panel houses connectors for the HDMI and VGA monitors, the BNC Composite Video outputs, a USB port to allow connection to a PC for external control functions, and a connection for the matching Mini-Cam Desktop Keyboard.

## Van Control Unit

Product Code	VCU500
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See page 55 technical specification



Integral Height Adjustment Legs



Large Three-Axis Joystick Controls



Alternative Base Socket Connection

# 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 Proteus 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 Proteus 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



**YouTube** View ProPIPE+ footage on our YouTube Channel - MinicamTubeUK



ProPIPE+ and WinCan Embedded software comes pre-installed as standard on Proteus systems



## 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.



## PAN, ROTATE, ZOOM & LASER CAM028L

CAM028L Pan & Rotate camera with zoom has the same features as the CAM026L, but with the addition of an optical and digital zoom function to allow distant objects to be viewed in much greater detail. As with the CAM026L it has two aligned lasers for defect and object measurement and a distance sensor for pipe diameter measurement.

It also has twin clusters of three powerful, ultra-bright LEDs for optimum illumination. Horizontal and vertical movement is smooth and shutter-free, with the full 360° rotate and +/-135° pan, and our unique quick install connector makes getting ready for inspection as easy as twist-and-lock.



### Pan, Rotate & Zoom Camera with Dual Lasers

Product Code	CAM028L
Pipe Diameter Measurement Range	90 - 600mm
Aligned Laser Spacing	30mm
Camera Resolution	530 HTVL
Sensitivity	< 1.0 lux
Aperture/Field of View	F1.8 - F2.9 / 46° - 4.6°
Dimensions	143 x 80 x 80mm
Maximum Illumination Intensity	12.5k lux at 150mm
Pressure Depth Rating	1 bar (14.50psi)

# CAM026L PAN, ROTATE & LASER

Modelled on Mini-Cam's popular CAM026 the CAM026L features an integral distance sensor and two aligned visible lasers to enable accurate pipe diameter, defect and object measurement, directly from the Proteus control unit. With a continuous 360° rotation and +/-135° Pan, CAM026L

is a compact, robust camera with twin clusters of three high powered ultra-bright LED lights to provide optimum illumination for better image clarity. The hard wearing, scratch resistant sapphire glass provides protection of the camera lens.



# CAM026 PAN & ROTATE

A Mini-Cam best seller, the forerunner to CAM026L it has a continuous 360° rotation and +/-135° Pan, plus twin clusters of three high powered ultra-bright LED lights and a hard wearing, scratch resistant sapphire glass to protect the camera lens.



## Pan, Rotate & Laser Camera

Product Code	CAM026L
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See page 55 for technical specification.

## Pan & Rotate Camera (Non-Laser)

Product Code	CAM026
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See page 55 for technical specification.

# AXIAL CAMERA CAM025

Tried and trusted, 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 and a hard wearing, scratch resistant sapphire glass to protect the camera lens.



## Axial Camera

Product Code	CAM025
--------------	--------

See page 55 for technical specification.

# CAM027 AXIAL CAMERA

A robust camera head with triple clusters of 3 high powered ultra-bright LED lights for optimum illumination and a scratch resistant sapphire glass to protect the lens.



## Pan & Rotate Camera

Product Code	CAM027
Dimensions L x W x H mm	62 x 52 x 52
Weight	0.25kg

See page 55 for technical specification.

**VERTICAL INSPECTIONS**



**BAK01 Adaptor Guides**



Invaluable for vertical inspections. The robust arms keep the camera centred in the pipe and help to prevent damage to the camera and adaptor. BAK01 kit includes 2 sizes: 150mm and 225mm.

**CAMERA ADAPTOR PCA01**

**Invaluable for hand-held walk-throughs and vertical inspections in manholes, chimneys, tanks and vessels.**

A useful accessory for your inspection kit. PCA01 allows the user to connect a camera to the CCU without the need for a crawler. Precision engineered from high specification materials, this compact tool is invaluable for vertical inspections, hand-held walk-throughs, and for use in a service department.



DUAL AUX LIGHT HOUSINGS



**HAND-HELD WALK-THROUGHS**



**Technical Specifications**

Product Code	PCA01
Compatibility	Proteus System
Features	Dual Aux Light Housings
Dimensions	130 x 70 x 80mm (L x W x H)
Weight	790g

**Adjustable LED light pods for larger pipe diameters.**

Twin LED light pods are in-built to the auxiliary light. Manually adjustable, the directional light function provides a full horizontal 180° rotation and a 90° upward rotation, enabling forward, upward, rear or sideways facing positions. The light pod accessory fits all Proteus crawlers, and is quick and easy to fit. The APB300 backeye version features a colour rear view camera to aid crawler reversing.



**Pro Tip**

Users of Mini-Cam's PCC01 Crawler Cradle with CPL150/CRP140 crawlers in large diameter pipes, will find the APB300 Backeye version exceptionally beneficial in providing increased illumination.

**AUXILIARY LIGHTS**



A must-have accessory for crawler users. The durable anodised aluminium housing features three high-powered ultra-bright LED lights and a scratch resistant sapphire glass to protect the lens.



Product Name	Code
LED Pod with backeye	APB300EX
LED Pod Non-backeye	APN300EX
Aux Light with backeye	ALB300EX
Aux Light Non-backeye	ALN300EX



Mini-Cam LED pods and auxiliary lights, with and without backeye are also available in ATEX Zone 2 certified versions.

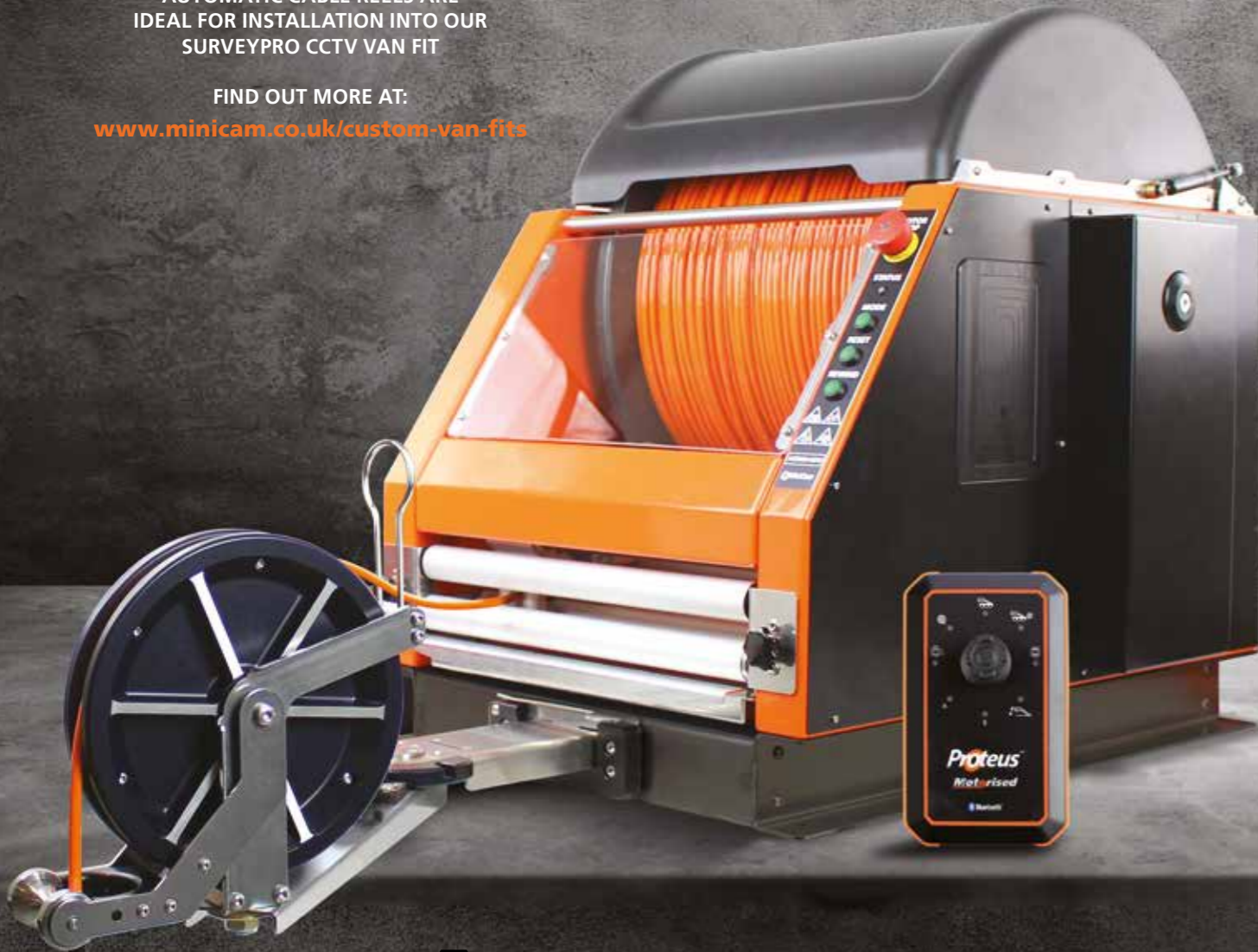



See page 56 for technical specifications

AUTOMATIC CABLE REELS ARE IDEAL FOR INSTALLATION INTO OUR SURVEYPRO CCTV VAN FIT

FIND OUT MORE AT:

[www.minicam.co.uk/custom-van-fits](http://www.minicam.co.uk/custom-van-fits)



 Cable available in ATEX ZONE 2 approved

ACR500 Automatic Cable Reel, VGP500 Van Guide Pulley, RJP Joystick Remote Control,

# AUTOMATIC REEL ACR350•500

## Experience powered winding in both directions!

Developed for the CCTV Inspection Van market, and modelled on our best-selling Proteus 300 metre motorised cable reel, the ACR500 large capacity reel gives users an impressive 200 metres of extra inspection capability. The ACR is also available in a mid-sized 350m cable length.

Fitted with high strength, *Kevlar* reinforced inspection cable, ultra-smooth operation is provided by the powerful, three phase motor and cable layering mechanism, specially designed for uninterrupted, tangle free pay-out and re-winding. A clear safety screen prevents contact with the cable whilst coiling, and for additional safety there's a rigid cover and an instant motor stop button.

Fully synchronised with the camera control unit, operation is controlled using the hand-held Bluetooth® Joystick Remote Controller (included), which is also capable of controlling camera and crawler functions. Or use the ACR control panel buttons in conjunction with the dedicated keys and intuitive on-screen display on the Proteus CCU.

The ACR500 is supplied complete with the VGP500 (Van Guide Pulley), The guide pulley can be adjusted to pre-set angles, and is fully extendable to reach the optimum working position, reducing friction and providing additional guidance for the cable when paying out and rewinding. An integral, sturdy, stainless steel mounting base secures the reel to the platform in the inspection van.



ACR350



### Technical Specifications

Product Code	ACR350	ACR500
Cable Length / Diameter	350metres / 6.5mm	500metres / 6.5mm
Dimensions L x W x D mm	660 x 390 x 652	660 x 550 x 652
Power Supply	90-264 VAC	90-264 VAC
Power Consumption	600W	600W
Environmental Protection	IP45	IP45
Weight	45kg (99lb)	55kg (121lb)
Remote Controller (included)	RJP Joystick	RJP Joystick
Van Guide Pulley	VGP350 (Optional)	VGP500 (Included)

# MOTORISED REEL RAP200•300

## BLUETOOTH® CONTROLLERS



RJP Joystick Controller



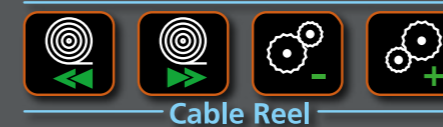
RCP4 4 Button Controller



Built to the same exacting standards as our manual cable reels, these labour saving motorised reels are sturdy, rugged and built to perform reliably efficient pipeline inspections.

Mini-Cam motorised cable reels are designed for easy one-person operation in remote locations. The reels are fitted with high tensile strength Kevlar reinforced inspection cable. The ultra-smooth operation is provided by the powerful three phase motor and cable layering mechanism for uninterrupted, tangle free pay-out and re-winding. A rigid, clear safety screen prevents contact with the cable whilst coiling.

The reel is operated using the dedicated keys and intuitive on-screen display on the Proteus CCU.



Cable Reel

In the event of an emergency, the reel also features an emergency stop button. The specialised crawler connector provides a waterproof seal and there's a removable drip tray for easy cleaning and maintenance.

Two optional hand-held Bluetooth® controllers are available to remotely control paying-out and rewinding cable, and crawler movement. Choose from the 4 button or Joystick version.

Motorised reels are available in 2 sizes – Large 350m and Small 250m. The 250m reel has secure fixing points for fitting to our PTP02 Portable Storage Trolley (see page 47). Both reels are ideal for being installed in our SurveyPro CCTV Van Fit.

For more information on Mini-Cam Custom Van-fits visit [minicam.co.uk/custom-van-fits](http://minicam.co.uk/custom-van-fits)

Cable available in ATEX ZONE 2 approved



Emergency Stop Button



Cable Self-Layering Mechanism

### Technical Specifications

Product Code	RAP200	RAP300
Cable Length	250metres	350metres
Dimensions L x W x H mm	530 x 320 x 520	530 x 440 x 520
Weight	30.5kg	40.5kg
Power Supply	24v	24v
Environmental Protection	IP54	IP54
Optional Remote Controller	RJP/RCP4	RJP/RCP4

# MANUAL REEL RMP100•200•300

Sturdy, rugged and built to withstand harsh environments. Mini-Cam manual cable reels are compact, portable and easy to use. The robust powder coated frame houses high tensile strength Kevlar reinforced inspection cable.

Smooth pay-out and re-winding is performance enhanced by the cable layering mechanism and durable heavy duty turning handle. The specialised crawler connector provides a water-proof seal and there's a removable drip tray for easy cleaning and maintenance.



The reels are available in 3 sizes: small 100m, mid-size 250m and large 350m reels. The small and mid-size reels can be fitted to our Portable PTP01 Storage Trolley (shown right) and on page 47, and the large reel is ideal for being installed as part of our SurveyPro CCTV Van. For more information on Mini-Cam Custom Van-fits visit [minicam.co.uk/custom-van-fits](http://minicam.co.uk/custom-van-fits)

**Ex** Cable available in ATEX ZONE 2 approved

Technical Specifications			
Product Code	<b>RMP100</b>	<b>RMP200</b>	<b>RMP300</b>
Cable Length	100metres	250metres	350metres
Dimensions L x W x H mm	530 x 220 x 520	530 x 280 x 520	530 x 400 x 520
Weight	16kg	25kg	35kg
Environmental Protection	Splash Proof	Splash Proof	Splash Proof



# LATERAL PIN KIT

## Smooth inspection of incoming laterals

For use with the CAM026 Pan & Rotate camera when attached to the CCP60/100 Compatible Coiler. 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, medium 225mm and large 300mm. Fixings and instruction included.

COMPATIBLE COILER ACCESSORY



Technical Specifications	
Product Code	ASS-001-968
Small Pin Length	150mm
Medium Pin Length	225mm
Large Pin Length	300mm
Fixings Supplied	6 Screws

# ROLLER SKIDS

## Optimize your view

Roller skids expand the Compatible Coiler for use in 150mm to 450mm pipelines. 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, allowing it to negotiate multiple corners and bends. Manufactured from stainless steel and ABS plastic, the device is sturdy, rugged and corrosion resistant to withstand the punishment of daily field work. No tools or manual adjustments are required



COMPATIBLE COILER ACCESSORY

Technical Specifications		
Compatibility		Product Code
<b>A</b>	180mm Skid for CAM025	ASS-002-009
<b>B</b>	180mm Skid for CAM026	ASS-001-955
<b>C</b>	130mm Skid for CAM026	ASS-002-160
<b>D</b>	130mm Skid for CAM025	ASS-002-008

# COMPATIBLE COILER

COMPATIBLE COILER

## Companion accessory to the Proteus system

Push rod coiler CCP60R with removable CAM025 Self Levelling Axial camera head, designed to plug directly into the Proteus CCU. Also available as CCP60D (Duo) allowing a CAM026 Pan & Rotate camera to be attached. Robust construction with mobility wheels and a durable powder coated finish.

Centering skids optimize your view in pipes 75mm and larger. The CCP coiler comes complete with a set of three skids and a removal tool.



AVAILABLE WITH 60 METRE OR 100 METRE ROD LENGTHS

**A** Compatible Coiler with CAM026 Pan & Rotate  
**B** Compatible Coiler with CAM025 Axial Camera

Centering Skids	
Supplied with CCP60/100	
<b>C</b>	4inch Skid
<b>D</b>	6inch Skid
<b>E</b>	Protection Skid
<b>F</b>	Skid Removal Tool



Technical Specifications	
Product Code	CCP60 / CCP100
Temperature Range	-20°C ~ +50°C
Dimensions H x W x D	890 x 360 x 690mm
Weight (without CCU)	21.3kg
Environmental Protection	IP54

## ATEX CAMERAS



**CAM026EX**  
ATEX Pan & Rotate Camera



**CAM028EX**  
ATEX Pan, Rotate & Zoom Camera



**ALB300EX**  
ATEX Auxiliary Light/Backeye



### EASY DEPLOYMENT AND RETRIEVAL

Using the in-built lowering device

### BACK-EYE CAMERA

Capture images from behind the camera

### PAN & ROTATE

360° continuous rotation and +/- 135°Pan

### DUAL AUX LIGHTS

Optimum illumination for image clarity

### KEEP ON TRACK

Heavy duty 250mm pneumatic balloon wheels

## ATEX APPROVED

### UNCOMPROMISING PERFORMANCE AND SAFETY



Proteus™ ATEX crawlers have been engineered, built and tested for safe use in some of the most dangerous situations, without compromising on any of the features and benefits of our other Proteus crawlers. All our crawlers are available in ATEX approved versions which 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 use of electronic devices.

ATEX crawlers have all the features, functionality and agility of the standard versions, and offer the same professional-grade quality, reliability and accuracy our customers expect from the Proteus brand.

The Proteus ATEX crawlers feature as standard: built-in height adjustment, multi-frequency SONDE, lowering device, and variable wheel size options using our unique quick-release locking system.

BELOW: **CRP140EX** Crawler  
**CAM026EX** Pan & Rotate Camera  
**QRW140HG/150** 140mm High Grip Wheels  
**QRW90R/150** 90mm Soft Rubber Wheels



ABOVE: **CRP300EX** Crawler, **CAM026EX** Pan, Rotate Camera, **ALN300** Auxiliary Light, **ALB300** Auxiliary Light/Backeye, **QRW250** Pneumatic Balloon Wheels.



# CRAWLER WHEELS



Our specially designed wheels offer significant performance benefits in various pipe diameters and for specific operating conditions.

## SOFT BLACK RUBBER

Black, soft rubber tyres developed to provide improved traction in regular pipes.

Available in four sizes and Wide Axle

IMPROVED TRACTION

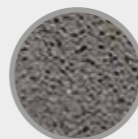


## HIGH GRIP

Hard wearing carborundum manufactured with a deep bevel profile to provide improved traction in wet and greasy pipes.

Available in three sizes and Wide Axle

FOR WET & GREASY PIPES



## CARBIDE

Fragmented copper particles fused to an heavy duty stainless steel body.

Available in four sizes and Wide Axle

FOR PLASTIC PIPES



## PNEUMATIC BALLOON

Heavy duty, 250mm wide tyres designed to improve performance on our large Proteus CRP300 crawler. Optional for Crawler Cradle PCC01.

Available in one size and Wide Axle

RUGGED HEAVY DUTY



## QUICK RELEASE LOCK

Proteus crawlers feature Mini-Cam's unique, patented wheel lock device. This makes it easy to change the crawler wheel type to suit the size and condition of the pipe. Using the supplied 4mm Hex T-Bar driver, the operation is quick and simple with no other tools required.

[YouTube](#) View the Changing Wheels "HOW-TO" video at [MinicamTubeUK](#)



## WIDE AXLE WHEELS

Extend the capability of your crawler. Quick and easy to attach, wide axle wheels provide instant extra width for inspections in wider pipe diameters.

Wide axle wheels are available in Soft Black Rubber, Carbide and High Grip

Wheel Type	To fit CRP90	To fit CRP140 & CPL150	To fit CRP300	Recommended Pipe Diameter
<b>Soft Black Rubber Wheels</b>				
60mm Wheel	QRW60SR/90	-	-	100mm
90mm Wheel	QRW90SR/90	QRW90SR/150	-	150mm
90mm Extra Large Wheel	QRW90XLSR/90	-	-	150mm
115mm Wheel	-	QRW115SR/150	-	200 to 300mm
140mm Wheel	-	QRW140SR/150	QRW140SR/300	300 to 450mm (150) 300 to 600mm (300)
140mm Extra Large Wheel	-	QRW140XLSR/150	-	450 to 600mm
<b>Carbide Wheels</b>				
60mm Carbide Wheel	QRW60CB/90	-	-	100mm
90mm Carbide Wheel	QRW90CB/90	QRW90CB/150	-	150mm to 200mm (90) 150mm (150)
90mm Extra Large Carbide Wheel	QRW90CBXL/90	-	-	200mm to 300mm (90)
115mm Carbide Wheel	-	QRW115CB/150	-	200mm to 300mm
140mm Carbide Wheel	-	QRW140CB/150	-	300mm to 450mm
<b>High Grip Wheels</b>				
90mm High Grip Wheel	QRW90HG/90	QRW90HG/150	-	150mm to 200mm
90mm Extra Large High Grip Wheel	QRW90HGXL/90	-	-	200mm to 300mm
115mm High Grip Wheel	-	QRW115HG/150	-	200mm to 300mm
140mm High Grip Wheel	-	QRW140HG/150	-	300mm to 450mm
<b>Pneumatic Balloon Wheels</b>				
250mm Wheel	-	-	QRW250	600mm to 1000mm
250mm Extra Large Wheel	-	-	QRW250XL	600mm to 1000mm

RIGHT: **CRP140EX** Crawler  
**CAM026EX** Pan & Rotate Camera  
**QRW115HG/150** 115mm High Grip Wheels  
**QRW90R/150** 90mm Soft Rubber Wheels



# CCU TILTING TABLE

Customise 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° forwards and 75° backwards, with a full unobstructed 360° horizontal rotation. No tools are required, simply attach using the adjustable clamps.



**You Tube**  
View on our YouTube Channel  
MinicamTubeUK

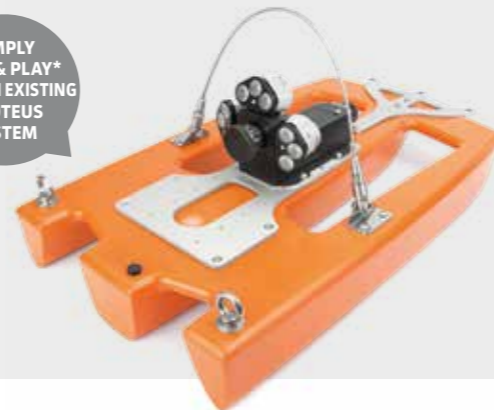
Technical Specifications	
Product Code	TTC01
Dimensions L x W x H	350 x 300 x 270mm
Weight	3kg

# FLOATATION RAFT

Pipe inspection in flowing water just got easier!

Eliminate the need for man-entry. The raft features three powerful angled auxiliary LED ultra-bright light modules, to illuminate pipes in excess of 2000mm. Small enough to be lowered down most common sizes of manhole cover, the compact design allows inspection capabilities in pipes from 600mm. An in-built lowering loop makes for quick and easy deployment and retrieval, and the floatation plate ensures the device is perfectly balanced to eliminate rolling.

SIMPLY PLUG & PLAY\* WITH AN EXISTING PROTEUS SYSTEM



Technical Specifications	
Product Code	FRP01
Dimensions L x W x H	680 x 420 x 200mm
Weight (without camera)	5.8kg
IP Rating	IP68

\*Additional software may be required

# PROTEUS POWER BATTERY PACK

Portable power... where will it take you?

No need to rely on vehicle or mains power. Mini-Cam's unique Proteus Power Battery Pack enables pipeline inspections in the most remote locations with in excess of 5 hours inspection time\*. The rugged pack is quick



Please Note: Charging unit shown above for illustration only, not included with Proteus Power Pack. Charging Unit purchased separately. \*Battery life dependant on operating conditions.

Technical Specifications	
Product Code	BPP24
Dimensions L x W x H	280 x 100 x 120mm
Weight	4kg
Optional	Carry Case

Dangerous goods shipping conformity required - please contact us for details



and easy to connect and features output short circuit protection and LED charge status indication. The battery is charged using the standard Proteus power supply unit.

**You Tube**  
View on our YouTube Channel  
MinicamTubeUK

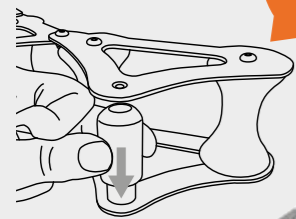


OPTIONAL EASY ACCESS CARRY CASE

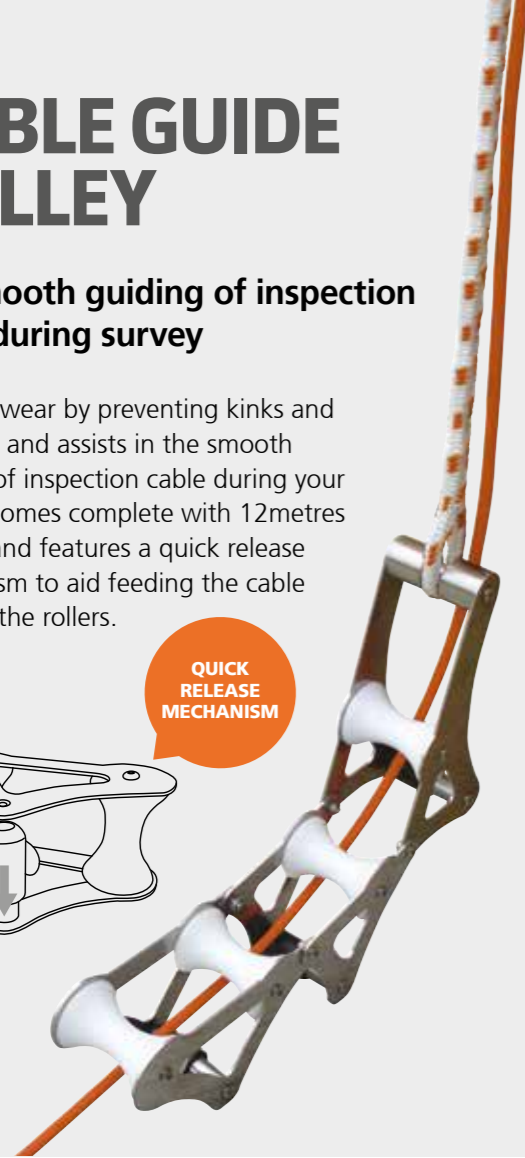
# CABLE GUIDE PULLEY

**For smooth guiding of inspection cable during survey**

Reduces wear by preventing kinks and chaffing, and assists in the smooth guiding of inspection cable during your survey. Comes complete with 12metres of rope and features a quick release mechanism to aid feeding the cable through the rollers.



QUICK RELEASE MECHANISM



# MANHOLE TOP ROLLER

**For smooth guiding of inspection cable during survey**

Reduces wear by preventing kinks and chaffing, and assists in the smooth guiding of inspection cable during your survey. Fully adjustable to fit most manhole sizes.



Technical Specifications	
Product Code	TRP01
Dimensions L x W x H	650 x 290 x 140mm
Weight	4.45kg

# CRAWLER CRADLE

**Improved inspection capabilities**

The *Crawler Cradle* adapts Mini-Cam's CPL150, and CRP140 crawlers for use in large diameter pipes. Versatile, quick and easy to attach, the cradle provides extra ground clearance enabling improved inspection capabilities in pipes and culverts up to 1000mm in diameter.

This robust, steerable, 4-wheel drive cradle is driven by the crawler, and features a unique gear selector, enabling the user to change between high speed and high torque operation. Exclusively compatible with Proteus CRP150, CPL150, and CRP140 crawlers, PCC01 comes supplied with four 220mm balloon wheels.

YouTube  
View on our  
YouTube Channel  
MinicamTubeUK



For heavily silted pipes we recommend the optional 250mm Balloon Wheel (QRW250/150), which are also required to centralise the crawler in 1000mm diameter pipes.



UNIQUE GEAR SELECTOR

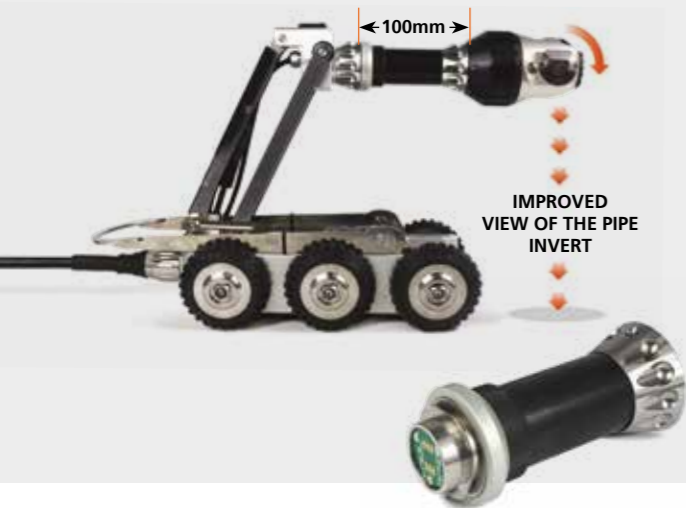


Technical Specifications	
Product Code	PCC01
Compatibility	CPL150 / CRP140
Dimensions L x W x H	410 x 265 x 220mm
Weight	7.6kg
Fixings	2 Axle Adaptors & Bolts

# CRAWLER CAMERA EXTENDER

**Extends the camera position 100mm forwards**

The *Crawler Camera Extender* moves the camera position 100mm forwards, extending the camera beyond the crawler. When the camera is positioned 90° downwards, this provides a view of the invert of pipeline, and not the crawler.



### Technical Specifications

Product Code	CCE01
Dimensions L x W x H	115 x 50 x 50mm
Weight (inc rope)	302g

# EXTRA WEIGHT PLATE

**Extra down-force and traction for the crawler**

Exclusively compatible with Proteus CPL150 and CRP140 crawlers, the 2.5kg *Extra Weight Plate* gives the crawler extra down-force to allow for more traction in tricky pipe conditions. Quick to attach, the assembly is supplied with fixing bolts and washers.



### Technical Specifications

Product Code	EWP01
Compatibility	CPL150 / CRP140
Dimensions L x W x H	264 x 80 x 14mm
Weight	2.5kg
Supplied with	Fixing Bolts & Washers

# PORTABLE STORAGE TROLLEY

**Complete mobility for your Proteus system**

Eliminate health hazardous lifting, and time consuming carrying to your remote work site. Engineered to allow for the mobile operation of your Proteus inspection system in difficult to reach areas, such as inside buildings, or other situations a distance away from your vehicle.

The trolley securely holds everything you need to efficiently undertake your pipeline inspection; control unit, reel, battery pack and accessory case. Simply wheel the unit to your location, connect a camera and crawler, and you're up and running in minutes.

The added convenience of Mini-Cam's unique Proteus Power Pack (see page 43), means there's no need to rely on generator or mains power. The power pack enables pipeline inspection in the most remote locations with up to 5 hours\* inspection time.



### Technical Specifications

Product Code	PTP01	PTP02	PTP03	PTP04
Compatibility	RMP100/RMP200	RAP200	RMP300/RAP300	Proteus Lite
Dimensions W x H x D mm	650 x 1150 x 750	650 x 1150 x 750	650 x 1150 x 870	TBC
Weight (unladen)	9.75kg	9.75kg	10.5kg	TBC

Please Note: Equipment shown on trolley NOT included with PTP01/PTP02/PTP03/PTP04 \*Battery life dependant on operating conditions.



# REMOTE CONTROLLERS

**Instant control with Bluetooth® wireless connectivity**

The *4 Button Remote Control* and *Joystick Remote Control* are used to control a Crawler and Motorised Cable Reel using Bluetooth® wireless technology. The Motorised Cable Reel can be controlled directly without the presence of the Control Unit. A handy size and lightweight, the controllers are simple to use and fully rechargeable. Supplied with full instructions.



RCP4 4 Button Controller

RJP Joystick Controller

Technical Specifications		
Product Code	RCP4	RJP
Compatibility	RAP300/RAP200	RAP300/RAP200
Dimensions W x L x D mm	88 x 146 x 27mm	88 x 146 x 27mm
Weight	175g	175g

# SEESNAKE® INTERFACE

**Exclusively compatible with Mini-Cam Control Units**

Sturdy and robust construction, the Mini-Cam SeeSnake® Interface unit quickly and easily connects the Rigid® SeeSnake® Standard and SeeSnake® Mini cameras to Mini-Cam's intuitive and advanced Proteus Control Units.



Also available to fit Mini-Cam SOLOPro+ Control Units Product Code: SSP02

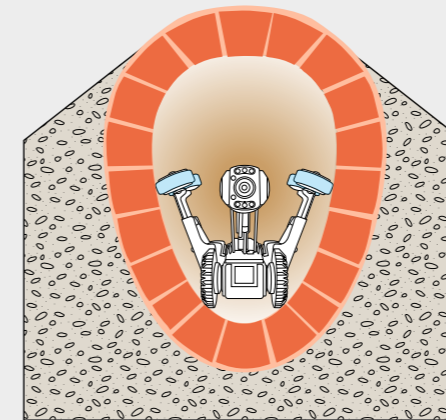
Technical Specifications	
Product Code	SSP01
Compatibility	Proteus Control Unit
Dimensions WxLxD	50 x 268 x 40mm
Weight	115g

# BRICK EGG STABILIZER

**Eliminates rolling over of the crawler**

A simple quick fit to our Proteus Crawler, the *Brick Egg Stabilizer* stops the crawler from rolling over during inspections in pipes with an egg-shaped profile. Exclusively compatible with Mini-Cam's Proteus CRP300, CPL150 and CRP140 crawlers.

**Compatibility:**  
**BEP300 fits Proteus CRP300**  
**BEP150/140 fits Proteus CRP150, CPL150 and CRP140**



Technical Specifications	
Product Code	BEP300
Compatibility	CRP300
Dimensions L x W x H	450 x 190 x 220mm
Weight	2.95kg

Technical Specifications	
Product Code	BEP150/140
Compatibility	CPL150/CRP140
Dimensions L x W x H	375 x 180 x 210mm
Weight	2.05kg

# CABLE REEL GUIDE

## Smooth friction-free cable guiding

Reduces friction and provides additional guidance for the cable when paying out and rewinding. Also brushes and cleans the cable when rewinding. Exclusively compatible with Mini-Cam Motorised and Manual 300 metre and 200 metre Cable Reels.



Technical Specifications		
Product Code	CGP300	CGP200
Compatibility	RAP300 / RMP300	RAP200 / RMP200
Dimensions L x W x H	540 x 490 x 175mm	540 x 370 x 175mm
Weight	3.5kg	2.9kg

# VAN GUIDE PULLEY

## Smooth friction-free cable guiding

Reduces friction and provides additional guidance for the cable when paying out and rewinding. Exclusively for use with Mini-Cam Motorised and Manual, 300 metre and 200 metre Cable Reels.



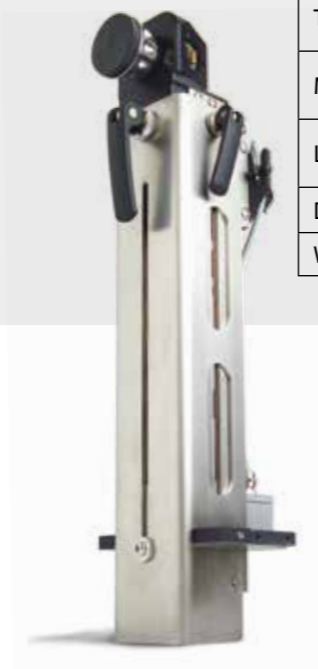
Technical Specifications	
Product Code	VGP01
Compatibility	RMP200/300 & RAP200/300

# CAMERA ELEVATION PLATFORM

## Increase your inspection capabilities

The telescopic elevator is quick to attach to the CRP300 Crawler and can be manually moved up or down to increase inspection capabilities up to 2200mm. Interface provides easy connection for various combinations of camera, auxiliary lights and pods.

Technical Specifications	
Product Code	CEP300
Connections	Camera connection (front) Lifter connection (rear) 2 x additional lamp connections ( side) 1 x additional lamp connection with Backeye Camera (top connector)
Top camera position	1090mm Top camera position (pipe centre) using pneumatic balloon wheels
Mid camera position	Approx 830mm Mid camera position (pipe centre) with extended plate
Low camera position	565mm Low camera position (pipe centre) with pneumatic wheels
Dimensions L x W x H	142 x 130 x 476 mm
Weight	5.7kg



# REEL BRACKET

Use the reel as a CCU holder, for portability in remote areas

This lightweight tubular bracket is quick and easy to attach, using the bolts and washers supplied. The bracket holds the control unit firmly in place in a comfortable working position for the user. Available in 2 sizes.



### Technical Specifications

	RBP01	RBP02
Product Code	RBP01	RBP02
Compatibility	Fits 200m Reel	Fits 300m Reel
Dimensions L x W x H mm	350 x 215 x 118	430 x 215 x 118
Weight (inc fixings)	675g	735g

# PRESSURE KIT

All you need to purge a Proteus crawler and camera head

Pressurisation is safe, quick and easy. Two kits are available: Standard CO<sub>2</sub> and a Nitrogen version for ATEX equipment. Supplied in a handy padded carry case.

Replacement cylinders can be purchased separately.



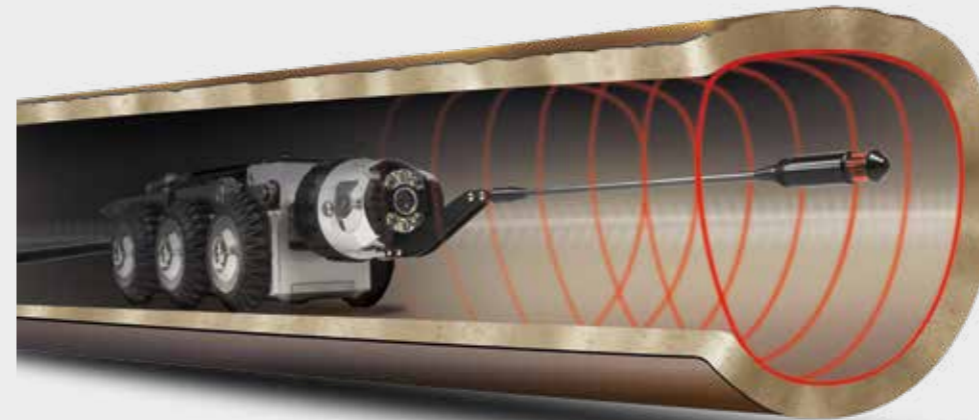
### Technical Specifications

Product Code	Description
PKP01	Standard CO <sub>2</sub> Pressure Kit
PKP02EX	ATEX Nitrogen Pressure Kit

# PRO LASER

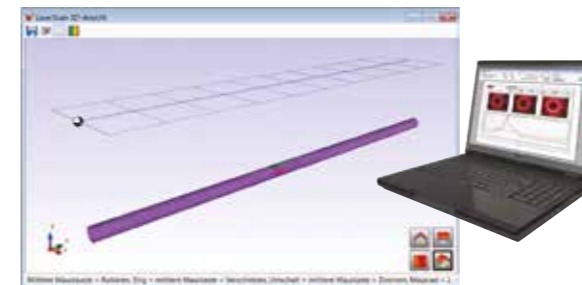
Pinpoint accurate laser profiling of pipes and sewers

Pro Laser is the perfect partner for any CCTV inspection system and provides accurate analysis of the true pipe condition prior to and after rehabilitation.



### Data Analysis and Delivery

The Mini-Cam Laser profiler has been designed to provide accurate and repeatable pipe geometry for many pipeline conditions. Simply attach the device to your CAM026 and WinCan will do the rest! All results are automatically calculated and can be delivered via WinCan. The WinCan software generates the report automatically, including diameter, ovality, capacity and also provides 3-dimensional XYZ-data.



## ACCESSORIES

**ProLaser**

### WHY DO YOU NEED A PIPE PROFILER?

If you are a municipality, consulting engineer or contractor, the Profiler is a necessary tool for the analysis of the true pipe condition prior to and after rehabilitation. When used as a video survey tool it can provide accuracy up to 1mm when measuring pipe size, deformation, erosion encrustation, debris, grease, flows, lateral protrusion, surface damage and holes.





**CONTROL UNITS/KEYBOARDS**

	<b>CCU208</b> Control Unit	<b>VCU500</b> Van Control Unit	<b>VKU500</b> Desktop Keyboard
Operating System	Linux	Linux	-
Screen	XGA (1024 x 768 pixels) Daylight Viewable	External	-
Interfaces	RS232, USB 2.0	USB 2.0	-
Internal Storage	Internal Solid State	Internal Solid State	-
External Storage	2 x USB 2.0 /SDHC	2 x USB 2.0	-
File Format	MPEG-4 / JPEG Stills	MPEG-4 / JPEG Stills	-
Dimensions W x D x H mm	430 x 150 x 280	483 x 271 x 43.6	432 x 257 x 137
Weight	5.5kg	2.5kg	4.45kg
<b>ATEX Zone 2 Certified</b>	<b>OPTIONAL</b>	<b>OPTIONAL</b>	

**CRAWLERS**

	<b>CRP90</b> Crawler	<b>CRP140</b> Crawler	<b>CPL150</b> Crawler	<b>CRP300</b> Crawler
Pipe Diameter	90 - 225mm	140 - 600mm	150 - 375mm	300 - 1000mm
Weight	4.5 kg	9.25 kg	9.25 kg	32 kg
Pressure Depth Rating	1 bar (14.50psi)	1 bar (14.50psi)	1 bar (14.50psi)	1 bar (14.50psi)
Built-in Elevator	Motorised	Motorised	Manual	Motorised
Quick Change Wheel Lock	YES	YES	YES	YES
Optional Large Wheels	2 size options	4 size options	4 size options	3 size options
Multi-Frequency Sonde Transmitter	YES	YES	OPTIONAL	YES
Inclination Sensor	YES	YES	OPTIONAL	YES
Heavy Duty Connector	YES	YES	YES	YES
Flexible Rear Connector	YES	YES	OPTIONAL	OPTIONAL
Dimensions L x W x H mm	296 x 87 x 72	386 x 133 x 108	307 x 133 x 110	470 x 233 x 195
<b>ATEX Zone 2 Certified</b>	<b>OPTIONAL</b>	<b>OPTIONAL</b>	<b>NOT AVAILABLE</b>	<b>OPTIONAL</b>

**CAMERAS**

	<b>CAM025</b> Self Levelling Axial Camera	<b>CAM026</b> Pan & Rotate Camera	<b>CAM027</b> Axial Camera
Effective Pixels	512 x 582	512 x 582	512 x 582
Resolution	470 HTVL	470 HTVL	470 HTVL
Sensitivity	< 1.0 Lux	< 1.0 Lux	< 1.0 Lux
Aperture/Field of View	F2.5 / 75°	F2.5 / 75°	F2.5 / 75°
Illumination Intensity	Adjustable to 12.5k Lux at 150mm	Adjustable to 12.5k Lux at 150mm	Adjustable to 12.5k Lux at 150mm
Pressure Depth Rating	1 bar (14.50psi)	1 bar (14.50psi)	1 bar (14.50psi)
Dimensions L x W x H mm	220 x 41 x 41	120 x 74 x 74	62 x 52 x 52mm
Weight	620g	860g	250g
<b>ATEX Zone 2 Certified</b>	<b>OPTIONAL</b>	<b>OPTIONAL</b>	<b>NOT AVAILABLE</b>

LASER CAMERAS

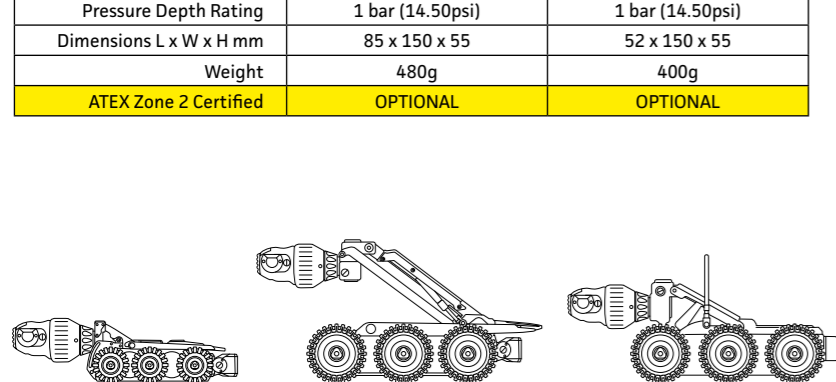
	CAM026L Pan, Rotate & Laser	CAM028L Pan, Rotate, Zoom & Laser
Pipe Diameter Measurement Range	90 - 600mm	90 - 600mm
Aligned Laser Spacing	25mm	30mm
Camera Resolution	470 HTVL	530 HTVL
Sensitivity	< 1.0 Lux	< 1.0 Lux
Aperture/Field of View	F2.5 / 75°	F1.8 - F2.9 / 46° - 4.6°
Maximum Illumination Intensity	12.5k Lux at 150mm	12.5k Lux at 150mm
Pressure Depth Rating	1 bar (14.50psi)	1 bar (14.50psi)
Dimensions L x W x H mm	120 x 74 x 74	143 x 80 x 80
Weight	860g	1148g
ATEX Zone 2 Certified	OPTIONAL	OPTIONAL

AUXILIARY LIGHTS

	ALB300 Aux Light with Backeye	ALN300 Aux Light Non-Backeye
Pressure Depth Rating	1 bar (14.50psi)	1 bar (14.50psi)
Dimensions L x W x H mm	84 x 68 x 50	51 x 68 x 50
Weight	306g	225g
ATEX Zone 2 Certified	OPTIONAL	OPTIONAL

LED PODS

	APB300 LED Pod with Backeye	APN300 LED Pod Non-Backeye
Pipe Diameter	300mm upwards	300mm upwards
Illumination System	9 High Power LEDs	9 High Power LEDs
Backeye Camera	YES	NO
Pressure Depth Rating	1 bar (14.50psi)	1 bar (14.50psi)
Dimensions L x W x H mm	85 x 150 x 55	52 x 150 x 55
Weight	480g	400g
ATEX Zone 2 Certified	OPTIONAL	OPTIONAL



MANUAL REELS

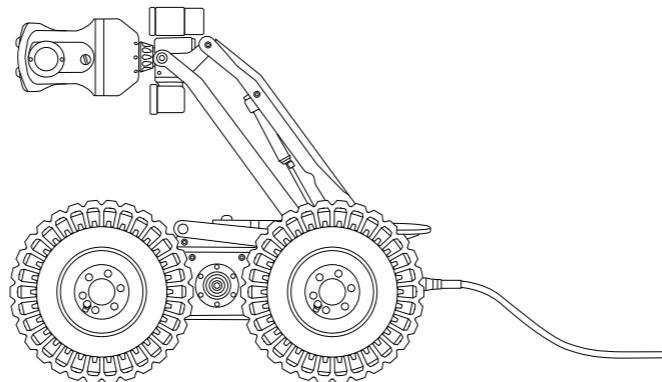
	RMP100 100m Manual Reel	RMP200 250m Manual Reel	RMP300 350m Manual Reel	RMPL250 250m Lite Reel
Cable Length / Diameter	100metres / 6.5mm	250metres / 6.5mm	350metres / 6.5mm	250metres / 6.5mm
Dimensions L x W x H mm	530 x 220 x 520	530 x 280 x 520	530 x 400 x 520	550 x 385 x 700
Weight	16kg	25kg	35kg	29.3kg
Environmental Protection	Splash Proof	Splash Proof	Splash Proof	Splash Proof
ATEX Zone 2 Certified	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL

MOTORISED REELS

	RAP200 250m Motorised Reel	RAP300 350m Motorised Reel
Cable Length / Diameter	250metres / 6.5mm	350metres / 6.5mm
Power Supply	24v	24v
Dimensions L x W x H mm	530 x 320 x 520	530 x 440 x 520
Weight	30.5kg	40.5kg
Environmental Protection	IP54	IP54
Remote Controller (Optional)	RJP/RCP4	RJP/RCP4
ATEX Zone 2 Certified	OPTIONAL	OPTIONAL

AUTOMATIC REELS

	ACR350 350m Automatic Reel	ACR500 500m Automatic Reel
Cable Length / Diameter	350metres / 6.5mm	500metres / 6.5mm
Power Supply	90-264 VAC	90-264 VAC
Power Consumption	600W	600W
Environmental Protection	IP45	IP45
Dimensions L x W x H mm	660 x 390 x 652	660 x 550 x 652
Weight	45kg (99lb)	55kg (121lb)
Remote Controller (included)	RJP Joystick	RJP Joystick
Van Guide Pulley	VGP350 (Optional)	VGP500 (Included)
ATEX Zone 2 Certified	OPTIONAL	OPTIONAL



## SERVICE SUPPORT FOR JUST WHEN YOU NEED US MOST

Mini-Cam's reputation for efficient, quality service is now mobile nationwide\*. Our dedicated, highly skilled service technicians are available to offer routine maintenance and emergency repairs, both on-site and at your depot.

Our Service Support vehicle is stocked with a range of replacement parts and fault finding equipment that will cover most eventualities. Mini-Cam customers who need an urgent repair, can take advantage of this service.

- Competitive Pricing
- Rapid Service Turn-Around
- Loan equipment provided\*\* whilst yours is repaired on-site
- Replacement parts readily available
- Minimize downtime



### SERVICE SUPPORT LINE

For further information and to request a Service Support visit please contact:  
Glenn Guest - Service Manager  
Office: 01942 270524  
8am – 5pm Monday to Friday  
Email: servicevan@minicam.co.uk

\*Service Support coverage is Mainland UK only and does not include Scottish Highlands, Scottish Islands, Isle of Wight, Isle of Man, Dublin, Eire, Channel Islands. \*\*Subject to availability.

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Appointed Mini-Cam Partners are given access to the online parts shop which has the full range of genuine Mini-Cam spares and accessories, all available to order online with same day despatch if ordered before 3pm\*. The e-shop stocks parts for all Mini-Cam systems and equipment. [www.minicam.co.uk](http://www.minicam.co.uk)



\*Terms and conditions apply - contact us for details



### HOW TO FIND US



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**International Sales**  
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#### Demonstration Showroom & Custom Van Fits

5 minute drive from our Head Office

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Telephone +44 (0) 1942 444555

**Custom Van-Fit Enquiries**  
Email [greg.guest@minicam.co.uk](mailto:greg.guest@minicam.co.uk)

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