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PROTEUS

The LAT150 is a mainline to lateral inspection crawler designed to offer range, reliability and functionality. Whether you're offering pre-acceptance inspection, searching for cross bores or inflows or conducting a structural survey, Minicam's self-propelled LAT150 has you covered.

Crawl 350m

Launch 45m

8 x 8 Steerable

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Innovative. Robust. Reliable.

Pan-Tilt Laser Camera

Expertly engineered in stainless steel and aluminium, this robust camera offers maximum pan and rotate flexibility for use in small diameter pipe applications, from 60mm up. The camera features an integral distance sensor and dual aligned visible lasers, to enable accurate pipe diameter, defect, and object measurement, directly from the control unit. The precision camera lens and four ultra-bright LED's guarantee clear, defined, quality inspection images.

Flexible Pivot

Horizontal pan and vertical tilt positioning of the deployment arm provides the operator with optimum flexibility.

Hinged Mid-section

The hinged mid-section allows for flexible mainline entry for access sizes as small as 300mm. No hinge locking required due to constant wheel support.

Rod Rollers

Assists smooth friction-free guiding of the push rod.

Observation Camera and LED Auxiliary Light

Forward facing precision camera capable of 740TVL resolutions with powerful ultra-bright LEDs provides a bright, clear picture to assist launching into the unknown with confidence.
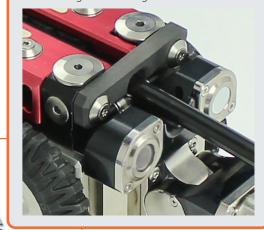
Meterage Counter

Close to deployment for an accurate lateral distance measurement.

Back-eye Camera and LED Auxiliary Light

Taken from our tried and tested Proteus Back-eye camera and positioned above flow, this colour camera and LED light enables confident cable management during reverse travel.

Lateral Pin

The optional pin adjusts the direction and guides the camera smoothly along the pipe.

Pan-tilt Deployment Arm

The standard deployment arm provides horizontal pan and vertical tilt via the flexible front pivot, which enables accurate positioning of the camera/push rod prior to launch. For larger mainlines, the unique design of the pivot provides quick and easy attachment of deployment tubes in varying sizes.

Quick Change Wheel Lock

Easy single tool wheel lock enables you to use a variety of wheel sizes and type to offer significant performance benefits in various pipe diameters and for specific operating conditions.

Lateral Drive Belt

The drive mechanism maximizes your productivity by powerfully feeding the push rod up to 45 metre. The drive belt is designed to repel debris whilst in operation, using a flexible, the tread is designed to remove dirt and prevents belt clogging, meaning long service intervals. The drive belt housing is user-serviceable enabling a quick single tool cartridge change while on-site.

Articulated 'Knuckle' Connector

Enables easy deployment of the crawler and prevents water ingression to the connections.

Crawler Nudge Mode

Use the orange coloured arrows on the keyboard to nudge incremental distance for truly accurate positioning of the crawler.

Single Click Mode Change

Changing control mode between mainline and lateral is made easy by a single click of the joystick top button.
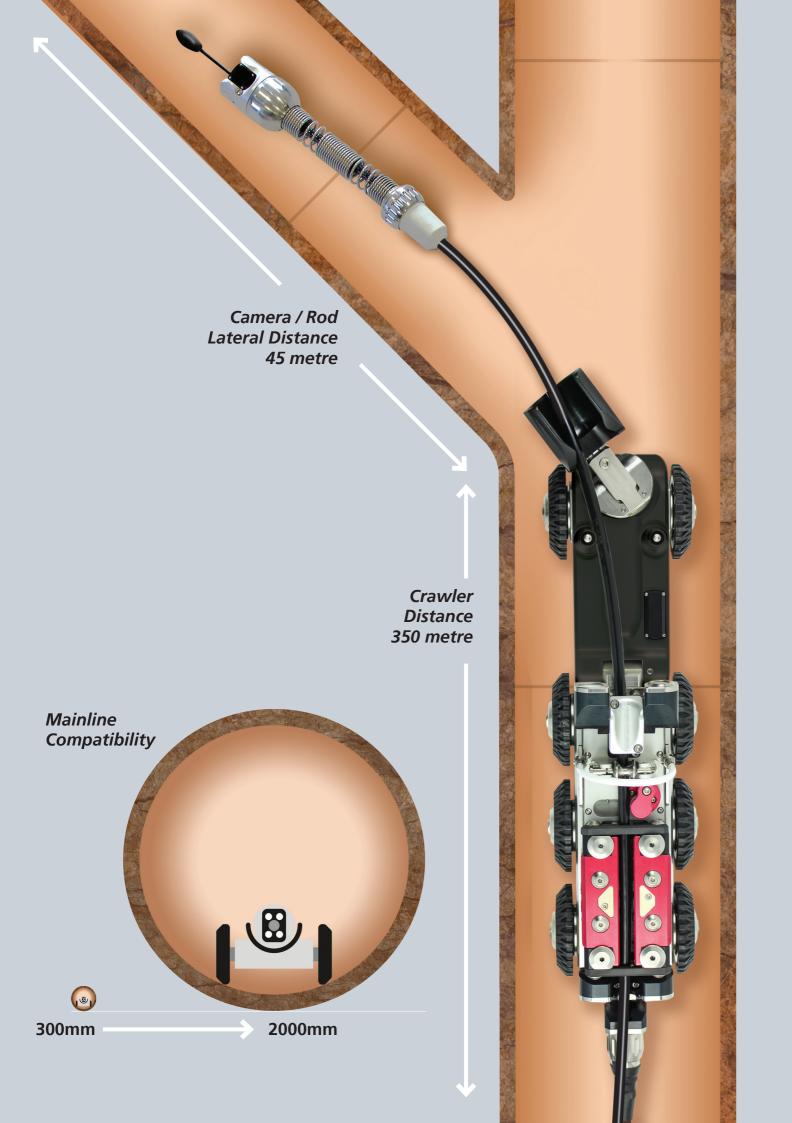
Wheel Configurations

Minicam's patented quick release wheel lock enables the user to quickly change wheel configurations of the LAT150 to launch in main lines from 150 to 2000mm diameter. Wheel sizes compatible with LAT150 are 90mm, 115mm and 140mm.

LAT150 with 140mm Soft Rubber Wheels (QRW140SR/150)

Camera / Rod
Lateral Distance
45 metre

Crawler
Distance
350 metre

Mainline
Compatibility

300mm ⟶ 2000mm

Reels

Dual reels with installation flexibility in van arrangements (example shown below) are used to drive the LT150 crawler. The Lateral Reel gives you 350m of mainline capability to then extend the main camera up to 45m into a lateral pipe, while the mainline reel provides cable to the crawler for runs of up to 350m within the mainline pipe. Ultra-smooth operation is provided by a powerful motor and cable layering mechanism, specially designed for uninterrupted, tangle free pay-out and re-winding. Clear safety screens prevent contact with the cable whilst coiling, and for additional safety there is a rigid lid and an e-stop button.

Lateral Reel
Mainline Reel
Lateral Launch

Right: Typical Lateral Launch system layout for the CCTV vehicle inspection vehicle

Lateral Reel - LCR350

Fitted with 350m of high strength, Kevlar reinforced inspection cable and 45m of flexible 11mm diameter push rod. The extendable arm of the guide roller has 4 distance locks enabling the cable/rod to be deployed from the optimum position.

LCR350

Mainline Reel - ACR350

Used in conjunction with the lateral reel this fully automatic reel provides a distance capability of 350m to power the crawler along the pipeline. It uses our tried and tested Kevlar reinforced inspection cable, and has all the functionality and safety features of the lateral reel. For additional smooth friction-free guiding, an optional van guide pulley is available.

VGP350

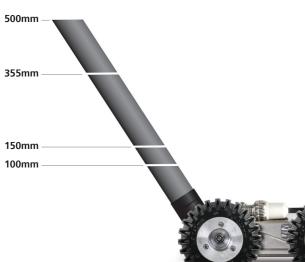Optional Van Guide Pulley for the ACR350

ACR350

Manageable Manoeuvrability

The LAT150 offers a multitude of options to help overcome challenging situations and give complete control of each launch. The system has flexible but easy to use options available such as, various configurations and sizes of wheels, deployment tubes and the lateral pin.

Deployment Tubes

For larger mainlines, to enable accurate positioning of the camera prior to launch, the LAT150 can be fitted with various sized deployed tubes. The unique design of the pivot provides quick, easy and tool-less attachment of deployment tubes in any size.

500mm
355mm
150mm
100mm

LAT150 with 140mm Soft Rubber Wheels (QRW140SR/150)

Wheel Configurations

Minicam's patented quick release wheel lock enables the user to quickly change wheel configurations of the LAT150 to launch in main lines from 150 to 2000mm diameter. Wheel sizes compatible with LAT150 are 90mm, 115mm and 140mm.

Optional performance wheels are available in high grip and carbide which offer significant performance benefits in various for specific operating conditions, such as greasy and/or plastic pipes.
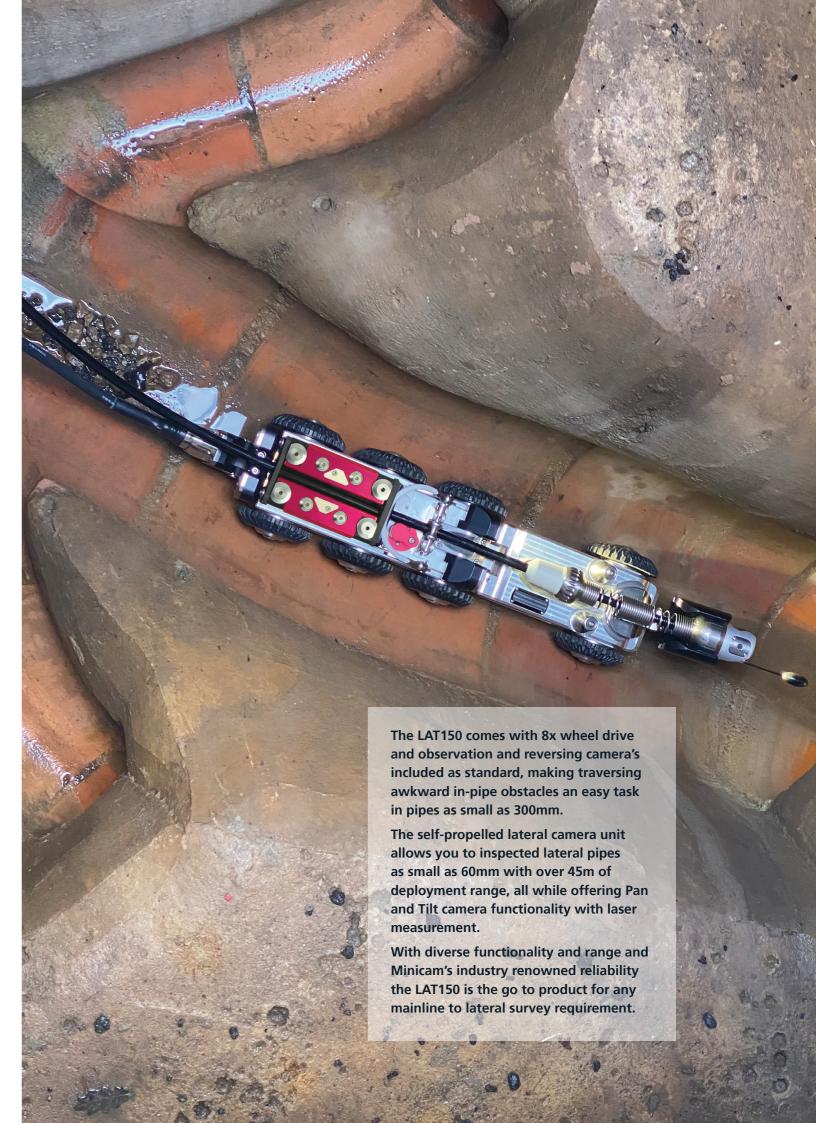
Rubber   High Grip   Carbide   Wide Axle

Lateral Pin

A useful addition to the Pan-tilt and Laser Camera CAM050. simply attach the pin to assist in directional guidance within a lateral pipe. The pin helps to overcome entry to bends & junctions and guides the camera smoothly along the pipe.

76mm

Lateral Pin
Product Code: ASS-006-322

Observation Camera Extension Support

Raises the camera for a better view in pipes 200mm and above.

The LAT150 comes with 8x wheel drive and observation and reversing camera's included as standard, making traversing awkward in-pipe obstacles an easy task in pipes as small as 300mm.

The self-propelled lateral camera unit allows you to inspected lateral pipes as small as 60mm with over 45m of deployment range, all while offering Pan and Tilt camera functionality with laser measurement.

With diverse functionality and range and Minicam's industry renowned reliability the LAT150 is the go to product for any mainline to lateral survey requirement.

SPECIFICATIONS

Crawler - LAT150

Crawl distance	350m
Launch distance	45m
Observation Camera Lens	740TVL
Drive train	8 x 8 steerable high torque all-wheel drive
Wheel Compatability	90mm, 115mm and 140mm
Pipe diameter capabilities	Min 150mm - Max 2000mm
Minimum Access Size	300mm
Rating	IP68 Pressurised
Maximum Water Depth	10 metre
Internal Pressure	1bar (10m)
Construction	Aluminium / Brass
Material (rear body)	Brass (Zinc Coated)
Material (front body)	Brass (Zinc Coated)
Material (Lateral Drive Module)	Anodised Aluminium
Multi-frequency Sonde	600Hz
Size (L x W x H)	61cm x 14cm x 16cm
Height with Observation Camera	16cm
Weight	16.5kg
Continuous monitoring of speed, internal pressure inclination and temperature	
Dual axis inclination sensor	
Rear articulated 'knuckle' connector	
Quick change wheel lock	

Pan-Rotate Laser Camera - CAM050

Imager	CMOS Colour Camera
Effective pixels	976 x 496
Resolution	740 TVL
Lasers	Dual aligned front facing / single side
Sensitivity	< 1.0 Lux
Aperture / Field of view	F2.5 / 75°
Image orientation	Auto- levelling
Lighting capabilities	4 x high powered LEDs
Illumination intensity	Adjustable to 12.5k Lux at 150mm
Pan-tilt	Continuous 360° rotation and +/-135° pan
Construction	Stainless Steel / Aluminium
Pipe compatibility	Greater than 60mm
Dimensions	49mm
Weight	570g

REELS

REELS	Lateral Reel - LCR350	Mainline Reel -ACR350
Operation	3 Phase motor	
Payout / Rewind	Cable layering mechanism	Cable layering mechanism
Emergency stop button	In-built	In-built
Push rod length	45m	-
Cable length	350m	350m
Cable type	Kevlar reinforced	Kevlar reinforced
Power Supply	100-240 VAC	100-240 VAC
Power Consumption	600W	600W
Dimensions L x W x H	895 x 480 x 725mm	660 x 440 x 640mm
Weight	120 kg	42kg
Van Guide Pulley	Integral	VGP350 (Optional)

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