Innovative Extra-long 30 m Scope

Extra-bright, extra-maneuverable, yet extra-long

Introducing the innovative extra-long 30 m scope, IPLEX YS.

Being equipped with a range of innovative technologies, the IPLEX YS delivers unprecedented brightness and maneuverability, and dramatically improves your inspection quality.

Outstanding Operability

Air articulation offers unparalleled flexibility at any length

The versatile IPLEX YS features innovative air articulation technology, letting you freely manipulate scope articulation with the compact palm-held controller. Since the insertion tube need not be fully extended, you can unroll only the length which is needed for the inspection and leave the rest neatly and safely coiled on the internal storage drum.

Direction and location of target are accurately revealed during inspections

During inspections, it is sometimes difficult to determine the area and direction being displayed on an inspected image. The IPLEX YS features an integrated gravity sensor that provides an on-screen orientation of the inspected image, clearly differentiating up from down. An optional length indicator can display the scope length inserted into an object on the screen. Utilising these functions, you can confidently proceed with inspections knowing they will be able to clearly identify inspected positions.

SCREEN DETAIL
Scope insertion length

+1145 [mm]

On-screen gravity orientation
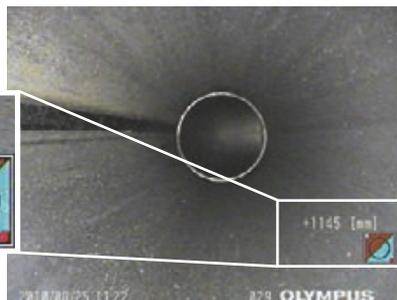
Operates efficiently even in hostile environments

During field maintenance, inspections must proceed even where rough objects and dusty, drip-laden environments can present obstacles. The IPLEX YS insertion tube is engineered for high resistance to abrasion and can be inserted into a wide range of objects, even those with rough surfaces. The lens cleaning system blows away fine dust and drip residue on the scope tip, ensuring efficient inspections that produce clear images.

Air jet helps remove dust and residue from scope tip

All-in-one package permits easy portability

Not only can the IPLEX YS handle complete inspections, its all-in-one design lets you conduct them almost anywhere. At sites lacking an AC power supply, it can be powered by a lithium-ion battery. The scope articulation is operable with a small CO_2 cartridge; no bulky air compressor is needed.

Unsurpassed Image Quality

Pioneering laser illumination technology for exceptional brightness

The IPLEX YS is the first industrial videoscope to incorporate laser illumination, 2X brighter than a conventional long-length videoscope, featuring low power consumption. It offers a comprehensive range of interchangeable optical adaptors for optimal magnification and direction. You can easily view a wide variety of inspection environments.

IPLEX YS provides laser illumination to the scope tip for exceptional brightness.

Clear, crisp images in every environment

The 6.5 in. daylight-view monitor delivers vivid images both indoor and outdoors. Our unique image processing capability, WiDER™ (Wide Dynamic Extended Range), brings out detail in shadowed and highlighted areas to produce bright, contrast-balanced images across the entire depth of field.
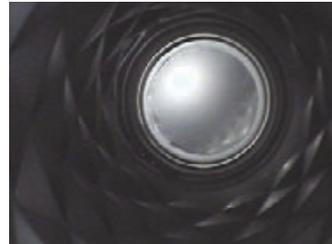
Image at standard gain setting

Image with WiDER gain applied

Precise Diagnosis

Accurate post-inspection analysis

The IPLEX YS provides a number of post-inspection functions to support your analyses.

You can record JPEG still images and AVI movies into a removable Compact Flash card or USB flash drive, and use the ImageNotepad™ to enter extended descriptions on recorded images. While you type, a list of predicted words is displayed when you enter a letter, simplifying and accelerating text input. Your descriptions are immediately accessible as part of each image when inspected data is transferred to a computer.

Convenient image data management

IPLEX Viewer Plus software features image data management and precise measurement of objects in recorded images. Available free from our website, IPLEX Viewer Plus is ideal for remote users to re-measure or validate saved-measurement results.
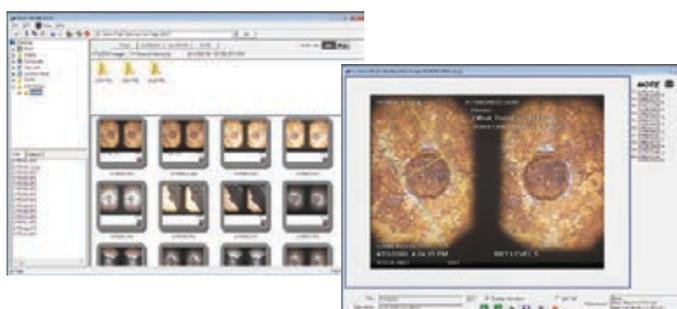
Reliable defect detection with Stereo Measurement

Stereo Measurement technology permits accurate, three-dimensional defect measurement at any target angle. You can easily measure size, depth, and area of erosion, corrosion, and waste during inspection. Quantitatively measured calculations of a defect ensure inspection reliability.

Our unique Spot-Ranging™ function, the industry's only real-time tip-to-target distance measurement feature, navigates the scope tip to the optimum distance from a target. You can then easily determine whether the tip is close enough to calculate the most accurate measurement on the first try.
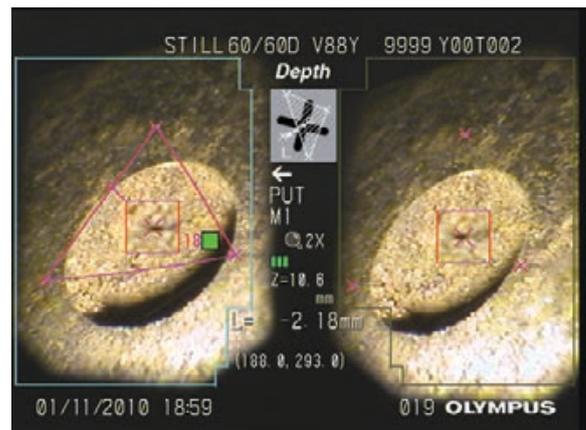
STEREO MEASUREMENT FUNCTIONS

Distance	Distance between two points
Point-to-Line	Perpendicular distance between a point and a user-defined line
Depth	Orthogonal depth/height distance between a point and a user-defined plane
Area/Lines	Multiple point circumference and area measurement
Profile	Plot of cross section between two points
Multi	Multiple measurements (distance, point-to-line, area and line) between two points
Offset	Point-to-Line measurement with a parallel line passing on a measurement point

IPLEX YS Specifications*

INSERTION TUBE

Model No.	Scope Diameter	Scope Length	Exterior	Articulation angle
IV88300Y	φ8.5 mm	30 m	High durability tungsten braid	60° (up/down/right/left)
Articulation mechanics	Scope tip articulation by pneumatic pressure			
Illumination method	Laser diode illumination			
Gravity sensor	Indicating gravity directions of the scope tip			
Temperature sensor	2-stage indicator for high temperature warning			
Lens cleaning function	Cleaning fine drip and dust on the scope tip by blowing air			

MAIN UNIT

Dimensions (W x H x D)	472 mm x 522 mm x 380 mm	
System weight	Approximately 26 kg	
LCD monitor	6.5 in. daylight-view LCD, anti-reflective type	
Power supply	Removable battery: 14.8 V nominal, 120-minute operating time	
	AC power: 100 V to 240 V, 50/60 Hz (with supplied AC adaptor)	
Air gas provision method	Compact CO_2 cartridge or air compressor	
Hardware connectors	Video output	S-Video, Composite BNC
	Audio input	External microphone, 3.5 mm mono jack
	Auxiliary connector	Two-way communication connector
	USB	One USB connector

SOFTWARE CONTROLS

Image controls	3X digital zoom, 9 step digital brightness control, 5 step contrast adjustment for frozen and retrieved images
Adjustable gain control	4 step adjustable gain control with exclusive WiDER™ brightness level balancing technology
Exposure control	Adjustable CCD exposure time. PAL: 20 ms to 500 ms, NTSC: 17 ms to 500 ms
Colour enhancement	Monochrome mode or Colour Emphasis of red, blue or all primary colours

RECORDING MANAGEMENT FUNCTIONS

Recording media	Compact Flash card (1GB standard, compatible with recommended Compact Flash cards up to 4GB). USB Flash Drive recommended.	
Internal memory	1GB standard	
Overlay	30-character title with date, time and system settings. ImageNotepad™ allows up to 10 descriptions to be added to an image, displayed by categories and contents.	
Thumbnail images	Recorded images can be displayed as thumbnails	
Still image recording	Resolution (pixel)	NTSC: 640 x 480, PAL: 768 x 576
Video recording	Recording format	JPEG – Super high quality, high quality, standard quality; TIFF – Uncompressed (for Stereo Tip Adaptors only)
	Resolution (pixel)	NTSC: 320 x 240/640 x 480, PAL: 384 x 288/640 x 480
Audio recording	Recording format	AVI format, Motion JPEG compression, Windows Media Player compatible
	Recording format	WAV format, 60 sec max.

OPERATING ENVIRONMENT

Operating temperature	Insertion tube	In air: −25 °C to 100 °C In water: 10 °C to 30 °C
	Parts other than above	−10 °C to 40 °C (with battery) 0 °C to 40 °C (with AC power adaptor)
Relative humidity	All parts	15% to 90%
Liquid resistance	All parts	Operable when exposed to machine oil, light oil or 5% saline solution.
Waterproofing	Insertion tube	Operable underwater up to a water pressure equivalent to a depth of 30 m. Not operable underwater with stereo measurement tip adaptors.
	Remote controller and LCD monitor	Operable in rain. Not operable underwater.
	Parts other than above	Neither waterproof nor rain-proof

Accessories

Optical tip adaptors
A range of the IPLEX YS tip adaptors meets the optical requirements of various applications.

CO₂ cartridge
The portable CO_2 cartridge can be fixed onto the IPLEX YS, letting you manipulate scope articulation without a bulky compressor.

Note: Please consult a sales representative for the recommended model.

Length indicator
Indicates how far the insertion tube is inserted into an object.

Pushing rod
Provides support for inserting the scope tip into a deep area.

Lithium-ion battery & Battery charger
One battery lasts approximately 2 hours under normal operating conditions. Re-charge time: 90 minutes.

LCD monitor extension cable
Lets you operate the main unit while moving freely around an extended area.

Remote controller extension cable
Extends the remote control cable, permitting free movement during operation.

Tip Adaptor Optical Specifications

OPTICAL TIP ADAPTOR VARIATION

		Viewing Tip Adaptors				Stereo Tip Adaptors	
		AT120D/NF-IV88Y	AT120D/FF-IV88Y	AT120S/NF-IV88Y	AT120S/FF-IV88Y	AT60D/60D-IV88Y	AT60S/60S-IV88Y
Optical system	Field of view	120°				60°/60°	
	Direction of view	Forward		Side		Forward/Forward	Side/Side
	Depth of field*1	4 to 190 mm	25 to ∞ mm	1 to 25 mm	5 to ∞ mm	5 to ∞ mm	4 to ∞ mm
Distal end	Outer diameter*2	ø8.5 mm					
	Distal end*3	30.7 mm		35.6 mm		36.9 mm	39.6 mm
Locking mechanism	Double threaded attachment, with O-ring seal						

*1. Indicates the optimal focal distance of the tip adaptor.
*2. The adaptor can be inserted into a ø8.5 mm hole when it is mounted on the scope.
*3. Indicates the length of the rigid portion at the scope's distal end when mounted.

LASER RADIATION
DO NOT STARE INTO BEAM
CLASS 2 LASER PRODUCT
レーザ放射
ビームを見ないこと
クラス2のレーザ製品
RAYONNEMENT LASER
NE PAS REGARDER DANS LE FAISCEAU
APPAREIL À LASER DE CLASSE 2
激光辐射
勿直视光束
2类激光产品
3mW MAX (CW)   400 - 700nm
IEC60825-1:2007   IEC60825-1:2014
EN60825-1:2007   EN60825-1:2014
GB7247.1-2012   JIS C 6802:2005
This Product complies with 21 CFR 1040.10 and 1040.11
except for deviations pursuant to Laser Notice No.50,
dated June 24, 2007.

RoHS COMPLIANT

WiDER

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