

Crawler for Small Pipe Welds

LPS-01 LPS-02



SIUI

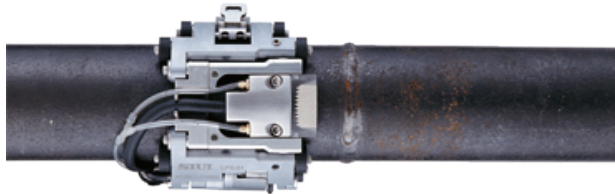


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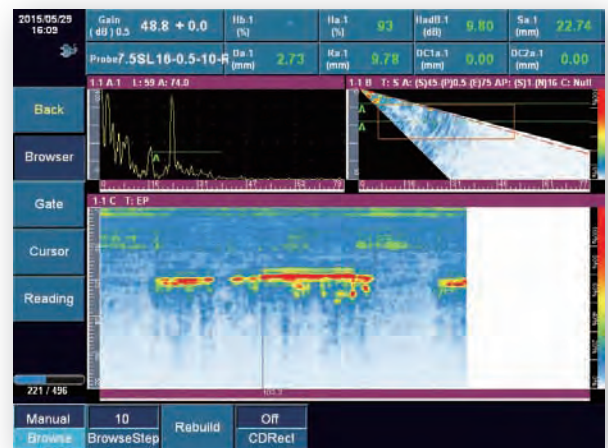
LPS-01 / LPS-02

The Phased Array low profile crawler LPS-01 and LPS-02 are compatible with Phased Array ultrasonic flaw detector, which is used to perform circumferential weld inspection on small diameter pipes.

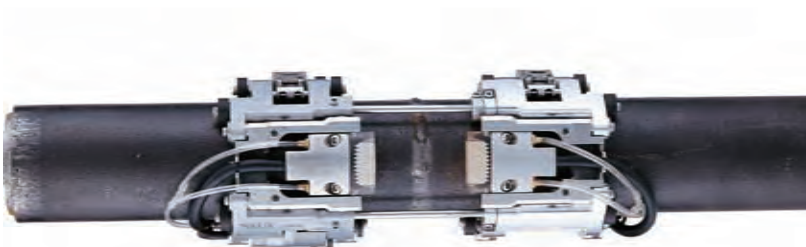
- Compact, lightweight, portable, waterproof and rust-free.
- Probes and wedges can be quickly and easily changed.
- Support up to two phased array probes to cover the whole welds at one time.
- Covers standard pipes with outside diameters ranging from 20.32-114.3mm (0.84-4.5 inch).
- Can be operated within 15mm clearance, perfect for hard-to-reach area inspection.
- Encoder precision: 32.6step/mm
- The probe spacing can be adjusted in the range of 0-55 mm.
- Crawler can provide stable and constant pressure around the pipe full circumference.
- Urethane wheels help the crawler have smooth radial movement along the pipe and reduce axial drift.
- Positive inspection and reverse inspection with high reproducibility and good coupling.
- With its simple buckle design, just easily buckle up and unbuckle the links for different pipe diameters (No need to disassemble the whole scanner).
- Two inspection methods: one-side inspection and dual-side inspection.



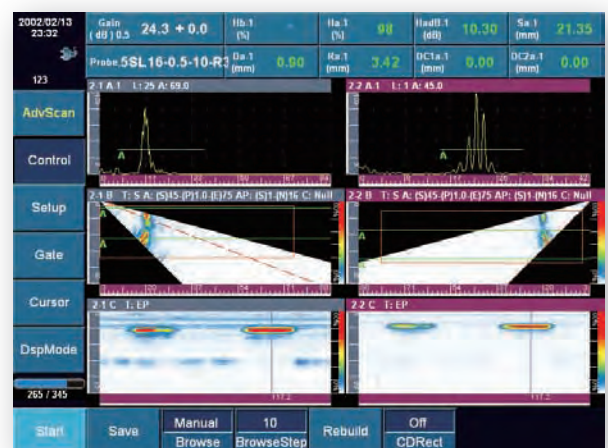
LPS-01



- One-side inspection is suitable for elbow, pipe tee and pipe cap of pipe-to-component inspection



LPS-02



- Dual-side inspection is suitable for covering the whole welds at one time of pipe-to-pipe inspection.

Crawler for Small Pipe Welds

Configuration

Typical configuration for dual-side inspection: LPS-02 crawler, two R35E phased array probes with 60°refraction angle AOD wedges, Y splitter, SIUI phased array flaw detector and manual irrigation device.

Standard Accessories		
	LPS-01	LPS-02
System	Phased Array Flaw Detector SynScan or SUPOR	
Scanning Link	Scanning link LPS-01-EN (1 pc) a) Suitable for pipe with OD from 20.32-114.3mm (0.84-4.5 inch) b) Weight (with all links):0.34kg	
	×	Scanning link LPS-01-SP (1 pc) a) With LPS-01-EN to achieve dual-side inspection b) Suitable for pipe with OD from 20.32-114.3mm(0.84-4.5 inch) c) Weight (with all links):0.34kg
Encoder Wheel	Encoder Wheel (1 pc) a) Precision: 32.6 step/mm b) IP: IP68 c) Integrated with connecting wire, with 14-core connector d) Weight: 0.08kg	
Pipe Divider	Pipe Divider (1 pc) a) Specification: Main water pipe: 4×2.5mm (OD×ID) Distributed water pipe: 2×1.2mm (OD×ID) b) Support up to 2 probes coupling	
Encoder Cable	Fixed with encoder	
Optional Accessories		
	LPS-01	LPS-02
Probes	Low-profile PA probe (1 pc)	Low-profile PA probe (2 pcs)
Wedges	Phased Array wedges (10 pcs)	Phased Array wedges (20 pcs)
Y Splitter	×	Y Splitter for two phased array probes to work simultaneously.
Manual Irrigation Device	Manual Irrigation Device (1 pc) a) Manually pressurized, with adjustable flow valve b) Capacity: 1 L c) With tube: 4×2.5mm (OD×ID), 3m length d) Weight: 0.35kg	



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Low-profile Phased Array Probe

Probe Model	Frequency	Elements No.	Pitch	Elevation	Elevation Curvature Radius	Corresponding Wedge
	MHz		mm	mm	mm	
5.0SL16-0.5-10-R35E	5	16	0.5	10	35	8R(35)60S4-I-AOD-XX
7.5SL16-0.5-10-R35E	7.5	16	0.5	10	35	8R(35)60S4-I-AOD-XX
10 SL16-0.5-10-R35E	10	16	0.5	10	35	8R(35)60S4-I-AOD-XX

Phased Array Wedge

Wedge Model	Description	L	W	H	Fixed Aperture Diameter
		mm	mm	mm	mm
8R(35)60S4-I-AOD-21	35° -70° shear wave angle block	18	22	15.5	Φ3
8R(35)60S4-I-AOD-26				15.2	
8R(35)60S4-I-AOD-33				15	
8R(35)60S4-I-AOD-42				14.2	
8R(35)60S4-I-AOD-48				13.9	
8R(35)60S4-I-AOD-60				13.4	
8R(35)60S4-I-AOD-73				13	
8R(35)60S4-I-AOD-88				12.9	
8R(35)60S4-I-AOD-101				12.6	
8R(35)60S4-I-AOD-114				12.7	
8R(35)60S4-I				11.7	

● Note: SIUI low-profile probes and wedges are compatible with Cobra from Olympus and Circ-it from Jireh.

Technical Specification

Basic Parameters		
	LPS-01	LPS-02
Dimension	Height: 15mm Width: 68mm Max. Length (Suitable for 115mm pipe): 375mm	Height: 15mm Min. Width(Wedge Front Distance:0mm): 136mm Max. Width (Wedge Front Distance:55mm): 191mm Max. Length (Suitable for 115mm pipe): 375mm Dual probe wedges front distance: 0-55mm
Weight	0.42kg	0.8kg
Packing Dimension(W×H×D)	440×340×190(mm)	
Scan Method	Manual, single axis scanning	
Encoder Precision	32.6 step/mm	
Encoder IP Code	IP68	
Suitable Tested Work Piece (Pipe)	OD: 20.32-114.3mm(0.84-4.5inch), pipe min. clearance: 15mm	
Working Temperature	0°C -+40°C	
Working Relative Humidity	30%-85%	
Working Atmospheric Pressure	700hPa-1060hPa	

SIUI

Shantou Institute of Ultrasonic Instruments Co., Ltd.

Add: #77, Jinsha Road, Shantou 515041, Guangdong, China

Tel: +86-754-88250150 Fax: +86-754-88251499

E-mail: siui@siui.com Website: <http://www.siui.com>