

Absolute Arm

A portable solution for easy and effective tube & wire measurement

Absolute Arm with BendingStudio is an excellent solution for superior tube/wire measurement and CNC bender correction. Ideal for shops with fewer CNC benders, a need for measurement portability or need to perform full GD&T inspection of complex tubing assemblies.

3D Scanner Solution

Measure All Shapes

Absolute Arm scanner measures all types of tube and wire including round, square, rectangular and oval profiles, freeform parts and parts with formed ends.

Assembly Inspection

Position and orientation measurement of end holders, fittings and brackets and ports through scanner point cloud analysis with CAD adapters.



Simple Free Scanning

Collect accurate tube and wire geometry data simply running laser along the entire length of the tube top surface without need for complex fixturing.

Absolute Scanner AS1

Using cutting-edge blue-laser technology and advanced programming, the flagship AS1 3D scanning sensor combines 'always-on' maximum performance with simple usability to deliver high-productivity non-contact 3D measurement.

Tube Probe Solution

Use Familiar Methods

Well-established technique using infrared non-contact tube probes and touch probes enables basic inspection for standard LRA forming of round tubes of any material.



Cost-Effective Alternative

Realize big advantages in speed and performance compared with traditional methods such as hard gauges and layouts.



Absolute Arm

Specifications

Solutions specifications



	AS1	RS5	Tube	Touch
Measurement technology	Blue laser scanner	Red laser scanner	Infrared tube probe	Touch probe
Measurable tube diameter	3-300 mm		4-130 mm	> 50 mm
Measurable diagonal for rectangular tubes	6-300 mm	10-300 mm	n/a	n/a
Measuring volume	2-4.5 m diameter		1.2-4.5 m diameter	
Max. tube length	Unlimited (with repositioning)			
Bending angle	1-340°			
Min. straight between bends	Bend-in-bend and freeform		Bend-in-bend with limitations; freeform not possible	
Measurement accuracy (tube sheath deviation)	0.05 mm (1σ)		0.1 mm (1σ)	
CAD-adaptors	yes	no	no	no
Rectangle-section tube measurement	yes		no	
Automation compatibility	no			

Hardware specifications

	AS1	RS5
Accuracy	0.016 mm ($P_{Form,Sph,1 \times 25:ODS}^1$)	0.028 mm (2σ)
Point acquisition rate	up to 1.2 million pts/s	752 000 pts/s
Points per frame	max. 4000	max. 7520
Frame rate	max. 300 Hz	max. 100 Hz
Line width (mid)	150 mm	115 mm
Standoff	165 ± 50 mm	165 ± 50 mm
Minimum point spacing	0.027 mm	0.011 mm
System scanning certification	yes	yes
Laser class	2	2M
Operating temperature	5-40°C	5-40°C
Weight	0.4 kg	0.4 kg

Absolute Arm Tube Model touch probe accuracy and size specifications

Model	E_{UNI}^2	P_{SIZE}^3	L_{DIA}^4	P_{FORM}^5	Weight ⁶	Max. reach
8325T	0.058 mm	0.025 mm	0.066 mm	0.048 mm	8.1 kg	2.73 m
8330T	0.083 mm	0.036 mm	0.089 mm	0.068 mm	8.4 kg	3.23 m

¹Accuracy Based on a part of the ISO-10360 standard
Maximum permissible longitudinal error of measurement – according to ISO 10360-12:2016
² P_{SIZE} Maximum permissible probe deviation, size – according to ISO 10360-12:2016
³ L_{DIA} Maximum permissible probe deviation, position – according to ISO 10360-12:2016
⁴ P_{FORM} Maximum permissible probe deviation, shape – according to ISO 10360-12:2016
⁵Weight Weight without probe

For more information contact:



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