The Absolute Arm range

The Absolute Arm

Find the arm to suit your needs

6-Axis

Probing

Designed for precision probing, the 6-Axis Absolute Arm offers unmatched accuracy for tactile measurement. It is ideal for the measurement of mechanical and prismatic parts.

7-Axis

Probing and Scanning

Combines precision with flexibility, allowing seamless switching between probing and scanning, delivering versatile, high-speed measurement in any environment.

Compact

Probing

Designed for precision probing, the Absolute Arm Compact provides ultra high-accuracy and small size. Thanks to its integrated base, the Compact does not need any mounting — it can simply be placed on any surface. Ideal for measuring in tight spaces, such as inside CNC machines.

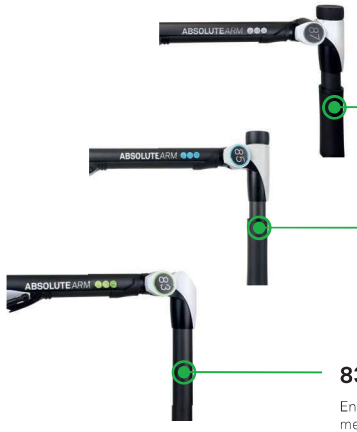
The most accurate arm available.

Series and sizes

Customise your arm's features and length

The Absolute Arm comes in three series, each offering different levels of accuracy to fit your needs.

You can choose from seven arm sizes, with measurement ranges from 1.2 to 4.5 meters. Most options are available in both 6-Axis models for probing and 7-Axis models for scanning, so you can select the best setup based on your measurement requirements.



87 series

Ultimate solution for portable high-accuracy measurement.

85 series

Perfect balance between value for money and accurate measurement.

83 series

Entry-level measurement accuracy.

	83	85	87
1.2 m	✓	✓	
2.0 m	✓	✓	
2.5 m	✓	✓	✓
3.0 m	✓	✓	✓
3.5 m	✓	✓	✓
4.0 m	✓	✓	✓
4.5 m	✓	✓	✓

Available measurement volumes for each Absolute Arm series.

Volume versus reach

With the Absolute Arm, the quoted measurement volume represents the largest area within which reliable accurate measurement is feasible, rather than just the maximum possible horizontal extension of the arm. A 2.5 meter arm, for example, can actually measure a 2.5 meter part.

Measurement arm

Maximum reach

Specifications

Accuracy, size, operating conditions

Choose your Absolute Arm

Absolute Arm 7-Axis accuracy and size specifications

	Model	E_{UNI}[1]	P_{SIZE}[2]	L_{DIA}[3]	P_{FORM}[4]	AS1 SSA[5]	AS1-XL SSA[5]	RS5 SSA[5]	Max. reach
83 series	8320-7	0.039 mm	0.015 mm	0.048 mm	0.033 mm	0.057 mm	-	0.059 mm	2.48 m
	8325-7	0.048 mm	0.019 mm	0.057 mm	0.038 mm	0.062 mm	0.114 mm	0.065 mm	2.98 m
	8330-7	0.064 mm	0.027 mm	0.086 mm	0.049 mm	0.078 mm	0.142 mm	0.088 mm	3.48 m
	8335-7	0.082 mm	0.035 mm	0.108 mm	0.060 mm	0.095 mm	0.169 mm	0.100 mm	3.98 m
	8340-7	0.104 mm	0.043 mm	0.134 mm	0.073 mm	0.113 mm	0.198 mm	0.116 mm	4.48 m
	8345-7	0.135 mm	0.053 mm	0.168 mm	0.090 mm	0.155 mm	0.236 mm	0.164 mm	4.98 m
85 series	8520-7	0.029 mm	0.010 mm	0.038 mm	0.021 mm	0.039 mm	-	0.043 mm	2.48 m
	8525-7	0.031 mm	0.012 mm	0.048 mm	0.025 mm	0.045 mm	0.097 mm	0.046 mm	2.98 m
	8530-7	0.053 mm	0.020 mm	0.080 mm	0.035 mm	0.061 mm	0.129 mm	0.063 mm	3.48 m
	8535-7	0.064 mm	0.024 mm	0.096 mm	0.043 mm	0.075 mm	0.147 mm	0.076 mm	3.98 m
	8540-7	0.081 mm	0.029 mm	0.117 mm	0.050 mm	0.085 mm	0.159 mm	0.087 mm	4.48 m
	8545-7	0.113 mm	0.040 mm	0.140 mm	0.065 mm	0.134 mm	0.189 mm	0.141 mm	4.98 m
87 series	8725-7	0.027 mm	0.011 mm	0.042 mm	0.021 mm	0.041 mm	0.087 mm	0.042 mm	2.98 m
	8730-7	0.048 mm	0.016 mm	0.072 mm	0.032 mm	0.054 mm	0.103 mm	0.056 mm	3.48 m
	8735-7	0.060 mm	0.019 mm	0.087 mm	0.038 mm	0.065 mm	0.121 mm	0.068 mm	3.98 m
	8740-7	0.075 mm	0.025 mm	0.106 mm	0.043 mm	0.076 mm	0.138 mm	0.078 mm	4.48 m
	8745-7	0.104 mm	0.035 mm	0.125 mm	0.050 mm	0.115 mm	0.155 mm	0.121 mm	4.98 m

3D scanner specifications

	AS1	AS1-XL	RS5	HP-L-8.9
Scanner type	Blue laser line scanner	Blue laser line scanner	Red laser line scanner	Red laser line scanner
Accuracy	0.013 mm ($P_{Form-Sph-1\times25.0DS}$)[9]	0.134 mm ($P_{Form-Sph-1\times25.0DS}$)[9]	0.028 mm (2σ)	0.04 mm (2σ)
Point acquisition rate	up to 1.2 million points/s	up to 1.2 million points/s	up to 752 000 points/s	45 000 points/s
Points per frame	max. 4000	max. 4000	max. 7520	max. 750
Frame rate	max. 300 Hz	max. 300 Hz	max. 100 Hz	max. 60 Hz
Line width (mid)	150 mm	600 mm	115 mm	80 mm
Standoff	165 ± 50 mm	700 ± 300 mm	165 ± 50 mm	135 ± 45 mm
Minimum point spacing	0.027 mm	0.080 mm	0.011 mm	0.080 mm
System scanning certification	yes	yes	yes	no
Laser class	2	2	2M	2
Protection rating	IP54	IP54	-	-
Operating temperature	5-45°C	5-45°C	5-40°C	5-40°C
Weight	0.4 kg	0.46 kg	0.4 kg	0.32 kg

Absolute Arm 6-Axis accuracy and size specifications

	Model	E_{UNI}[1]	P_{SIZE}[2]	L_{DIA}[3]	P_{FORM}[4]	Max. reach
83 series	8312-6	0.022 mm	0.009 mm	0.021 mm	0.014 mm	1.49 m
	8320-6	0.033 mm	0.012 mm	0.040 mm	0.024 mm	2.23 m
	8325-6	0.042 mm	0.017 mm	0.047 mm	0.034 mm	2.73 m
	8330-6	0.056 mm	0.022 mm	0.062 mm	0.048 mm	3.23 m
	8335-6	0.070 mm	0.030 mm	0.079 mm	0.059 mm	3.73 m
	8340-6	0.085 mm	0.037 mm	0.095 mm	0.069 mm	4.23 m
	8345-6	0.105 mm	0.048 mm	0.110 mm	0.086 mm	4.73 m
85 series	8512-6	0.018 mm	0.006 mm	0.016 mm	0.011 mm	1.49 m
	8520-6	0.023 mm	0.008 mm	0.030 mm	0.017 mm	2.23 m
	8525-6	0.028 mm	0.010 mm	0.035 mm	0.020 mm	2.73 m
	8530-6	0.040 mm	0.014 mm	0.049 mm	0.028 mm	3.23 m
	8535-6	0.053 mm	0.018 mm	0.066 mm	0.036 mm	3.73 m
	8540-6	0.065 mm	0.022 mm	0.082 mm	0.041 mm	4.23 m
	8545-6	0.080 mm	0.028 mm	0.102 mm	0.050 mm	4.73 m
87 series	8725-6	0.025 mm	0.009 mm	0.028 mm	0.017 mm	2.73 m
	8730-6	0.036 mm	0.012 mm	0.044 mm	0.025 mm	3.23 m
	8735-6	0.048 mm	0.015 mm	0.061 mm	0.032 mm	3.73 m
	8740-6	0.061 mm	0.019 mm	0.075 mm	0.036 mm	4.23 m
	8745-6	0.074 mm	0.026 mm	0.094 mm	0.046 mm	4.73 m

Absolute Arm Compact 10360-2 accuracy specifications

Model	MPE_p[7]	MPE_e[8]
8312	0.008 mm	5+L/40 <0.018 mm
8512	0.006 mm	5+L/65 <0.015 mm

Absolute Arm technical specifications

Operating temperature	5 to 45°C	Protection rating	IP54
Storage temperature	-30 to +70°C	Marks of conformity	CE – FCC – IC
Operational elevation	up to 2000 m	Power requirement	110-240 V
Relative humidity	10 to 90% non-condensing		

[1] E_{UNI} 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
[5] SSA Scanning System Accuracy: L_{DIA} according to ISO 10360-8 Annex D
[6] Weight Weight without scanner
[7] MPE_p Maximum permissible error, probing – according to ISO 10360-2
[8] MPE_e Maximum permissible error, length measurement – according to ISO 10360-2
[9] $P_{FORM/Sph-1\times25.0DS}$ Based on a part of the ISO-10360 standard