

R-EVO R

R-EVO MODEL R

6 and 7 Axes
Articulated
Measuring Arm



Are you ready for the R-EVO-LUTION?



In RPS Metrology the R-EVO arm is now setting the new revolutionary state-of-the-art level for: **ACCURACY, PORTABILITY, FLEXIBILITY**, for 3D inspection or reverse-engineering.

R-EVO R Model, available in 6 or 7 axes configuration, is a portable measurement arm designed for different applications of the modern industry. It is the PREMIUM accuracy system offering HI-END performance in any environment.



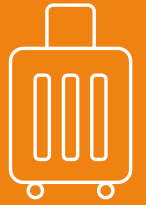
FEATURES & BENEFITS



Accuracy and repeatability

R-EVO can be used stand-alone metrology equipment with touch probe for **3D touch probe inspection**, digitizing or reverse-engineering. It meets the standard of the most **rigorous standard** ISO 10360-12:2016.

The **high precision encoders** together with an innovative assembly system on every joint, including different material like titanium, composite materials, give to the system **accuracy, repeatability and reliability**.



Design, portability and usability

Laser Scanning



R-EVO R Model arm, thanks to its extremely **reliable mechanical** and **electronic design**, the automatic temperature compensation and the **lightweight structure**, can be applied on all touch probe application, especially on applications requiring mechanical parts 3D inspection.

SFC (Symmetrical Force Counter-balance) patented system represents **the first total ergonomic counter-balance system**, giving an effortless experience when using the arm either in a short or prolonged time.

R-EVO arms are a **real portable** measurement device: equipped with wireless (Bluetooth or Wi-Fi) and **Li-ion battery** pack for 22 hours working time (tactile) and 12 hours with Laser Scanners.



High performance in any environment

With the **standard quick mount** (3 ½ inches) they can be used on **portable tripods, magnetic base**, or any customized mobile support, offers good repeatability even in the worse conditions of dust, humidity and temperature. It features automatic temperature compensation of the arm and of the part, automatically compensating the temperature changes during measurements.

Any type of probe can be easily removed and remounted at will with no need for time-consuming recalibration processes thanks to a bracket based on **Renishaw® Autojoint® mounting system**. One mount 6 types of probe: Hard probe, touch-trigger probe Renishaw LP2, Optic probe, Laser fork for pipe inspection, laser scanners and structured light scanner.





The **R-SCAN BLUE Laser Line Probe**, is an optically-superior blue laser technology, based on **R-EVO 7 axes arm**. It delivers very good scanning results with higher resolution and low noise, enabling it to capture smaller details in an object. The blue laser provides a fast and accurate solution for 3D Inspection or Reverse-Engineering.

The **R-SCAN** with its **400Hz sample count frequency**, gives a new level experience for a lightning fast acquiring speed.

R-EVO R

Technical specifications

R-EVO 6 R	Measuring range (dia.)	SPAT (mm)	E UNI (mm)	P SIZE (mm)	L DIA (mm)	P FORM (mm)	Weight (Kg)
2.0 - 6 axes	2.0 m	0.014	0.022	0.008	0.028	0.016	7.2
2.5 - 6 axes	2.5 m	0.016	0.026	0.009	0.032	0.018	7.5
3.0 - 6 axes	3.0 m	0.024	0.038	0.014	0.047	0.027	7.9
3.5 - 6 axes	3.5 m	0.029	0.046	0.017	0.058	0.034	8.1
4.0 - 6 axes	4.0 m	0.037	0.059	0.022	0.074	0.039	8.3
4.5 - 6 axes	4.5 m	0.046	0.073	0.025	0.092	0.045	9.3

6 Axes TOUCH PROBE Accuracy Table This data table is according to ISO10360-12 norm.

R-EVO 7 R	Measuring range (dia.)	SPAT (mm)	E UNI (mm)	P SIZE (mm)	L DIA (mm)	P FORM (mm)	Weight (Kg)
2.0 - 7 axes	2.0 m	0.019	0.025	0.010	0.039	0.020	7.8
2.5 - 7 axes	2.5 m	0.021	0.027	0.010	0.042	0.021	8.1
3.0 - 7 axes	3.0 m	0.037	0.050	0.016	0.074	0.032	8.5
3.5 - 7 axes	3.5 m	0.046	0.061	0.020	0.089	0.039	8.7
4.0 - 7 axes	4.0 m	0.052	0.075	0.026	0.103	0.044	8.9
4.5 - 7 axes	4.5 m	0.061	0.098	0.042	0.121	0.058	9.9

7 Axes TOUCH PROBE Accuracy Table This data table is according to ISO10360-12 norm.

R-EVO R-SCAN	Measuring range (dia.)	Laser line (mm) mid range	Sample rate (Hz)	Depth of field (mm)	L DIA Non-contact accuracy 50 (mm)	L DIA Non-contact accuracy 100 (mm)	L DIA Non-contact accuracy 200 (mm)	Weight (Kg)
2.0 - 7 axes	2.0 m	50 100 200	up to 400	From 65 to 460	0.035	0.038	0.040	8.3
2.5 - 7 axes	2.5 m				0.039	0.041	0.043	8.6
3.0 - 7 axes	3.0 m				0.050	0.053	0.055	9.0
3.5 - 7 axes	3.5 m				0.060	0.063	0.065	9.2
4.0 - 7 axes	4.0 m				0.072	0.075	0.078	9.4
4.5 - 7 axes	4.5 m				0.082	0.084	0.090	9.6

Laser Scanner Accuracy Table This data table is according to ISO 10360-8 norm.

R-SCAN LASER SCANNER technical specifications

Operating temperature range: +5°C to +50°C. Storage temperature range (when placed in the RPS standard transport box) -30°C to +70°C
Humidity: from 5% to 95% non-condensing. IP Protection grade: IP51 arm only (IP65 for the scanner R-SCAN S-SCAN) with respect of dust and water.
Power supply: 100 - 240 VAC 50/60 Hz (auto-ranging)
Articulated measurement arm
Model: R-EVO 6 and 7 are in conformity with the essential requirements of the following EU directives: 73/23/EC, 89/336/EC and in according to the following international norms: EN 292-1, EN 292-2, EN 60204/1993 and successive releases. Scanning arm R-SCAN S-SCAN and relative sensor are in conformity with the essential requirements of the following EU directives: 2004/108/EC - 2011/65/EC, "RoHS" category 9., EN 60825-1 (IEC 60825, Part 1 of 05/2008) Laser Class: 2M

Models	50	100	200
Stand-off Distance			
Near	65mm	125mm	160mm
Mid	95mm	240mm	310mm
Far	125mm	390mm	460mm
Depth of Field	60mm	265mm	300mm
Laser Line Length			
Near	40mm	59mm	100mm
Mid	50mm	100mm	200mm
Far	60mm	144mm	290mm
Accuracy	12micron	24micron	36micron
Repeatability	12micron	24micron	36micron
Resolution (point spacing, min.)	16micron	23micron	40micron
Sample count (points per line)	2500 points		
Sample rate R-SCAN	400Hz (1 million pts/sec)		
Weight (scanner only)	500gr		
Laser Power Output	Max 8mW (class 2M)		



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