

Precision 3D measuring arm EVO X with Laser Scanner



EVO-X is the solution of RPS Metrology for fast and accurate 3D scanning: the ideal choice for any reverse-engineering job, inspection, 3D quality control and more.

EVO-X: One equipment, two devices, one touch probe and a laser scanner.

The touch probe mount is based on Renishaw auto-joint allowing auto-recognition and no need of calibration.

The EVO X measuring arm offers you:

- › Excellent productivity
- › Delivers quickly and reliable results
- › Flexibility for every day use in many industry sectors

The EVO X measuring arm offers you:

- › Capture very micrometric details on any complex surface
- › Very high resolution
- › High speed scanning
- › Very large depth of field



BLUE laser? RED light laser is better!

Where other scanners, to overcome their limits, need to adopt lasers with different colors, the laser scanner of the EVO-X, with RED light wave frequency combined with its CMOS sensor, is excellent for any kind of material.

Perfect performance in extreme conditions of use: glossy or shiny as well as deep dark colors can be scanned easily. The driver software is automatically controlling the power and exposure of the laser to adapt to the scanning material in use.

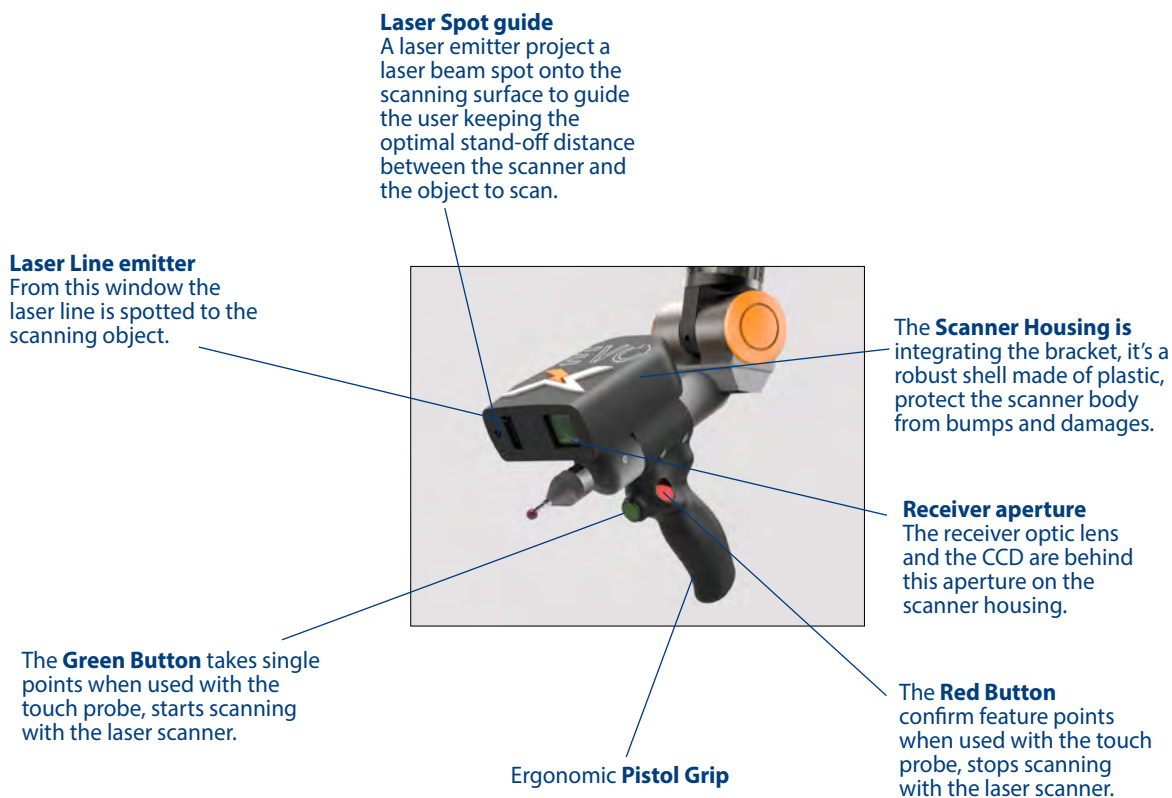
Technical Data

- › Maximum speed 384,000 pts/sec
- › Accuracy up to 6 µm
- › Maximum frequency 300Hz
- › Depth of field up to 265 mm
- › Laser line width up to 144 mm
- › High resolution up to 0,019 mm
- › Availability: Red or blue Laser Scanner
- › Available Laser sizes: 25 mm, 50 mm, 100 mm



Software

Every RPS Metrology EVO and EVO-X arm is delivered with standard utility software called K-ARM. This utility software allows to diagnose the arm completely (check the accuracy, diagnose the electronics, set the probes, calibrate the probe and calibrate the arm in full). Moreover the K-Arm software, as well as other driver, allows to connect as a driver with different 3rd party software, like Innovmetric Polyworks, Verisurf, 3DSystems Geomagic and many other.



Evo X Laser measuring arm with red Laserscanner

3DRPS Serie Evo X (7 Axis-Arm) Red-Scanner								
Art.-no.	Measuring range (mm)	Probe Volumetric accuracy (mm)*	Laser Scanner Volumetric accuracy (mm)*	Probe Repeatability (mm)*	Laser line spectrum (mm)	Points per line	Speed (pts./sec.)	Deep of field (mm)
3DEVOX18007RED025	1800	0,034	0,049	0,016	25	1280	128000	150
3DEVOX18007RED050	1800	0,034	0,055	0,016	50	1280	128000	200
3DEVOX18007RED100	1800	0,034	0,066	0,016	100	1280	128000	270
3DEVOX24007RED025	2400	0,043	0,058	0,022	25	1280	128000	150
3DEVOX24007RED050	2400	0,043	0,064	0,022	50	1280	128000	200
3DEVOX24007RED100	2400	0,043	0,075	0,022	100	1280	128000	270
3DEVOX30007RED025	3000	0,055	0,070	0,034	25	1280	128000	150
3DEVOX30007RED050	3000	0,055	0,076	0,034	50	1280	128000	200
3DEVOX30007RED100	3000	0,055	0,087	0,034	100	1280	128000	270
3DEVOX40007RED025	4000	0,069	0,084	0,040	25	1280	128000	150
3DEVOX40007RED050	4000	0,069	0,090	0,040	50	1280	128000	200
3DEVOX40007RED100	4000	0,069	0,102	0,040	100	1280	128000	270
3DEVOX50007RED025	5000	0,080	0,095	0,048	25	1280	128000	150
3DEVOX50007RED050	5000	0,080	0,101	0,048	50	1280	128000	200
3DEVOX50007RED100	5000	0,080	0,113	0,048	100	1280	128000	270
3DEVOX60007RED025	6000	0,092	0,107	0,062	25	1280	128000	150
3DEVOX60007RED050	6000	0,092	0,113	0,062	50	1280	128000	200
3DEVOX60007RED100	6000	0,092	0,134	0,062	100	1280	128000	270
3DEVOX70007RED025	7000	0,105	0,120	0,076	25	1280	128000	150
3DEVOX70007RED050	7000	0,105	0,126	0,076	50	1280	128000	200
3DEVOX70007RED100	7000	0,105	0,147	0,076	100	1280	128000	270

Evo X Plus Laser measuring arm with red Laserscanner, higher speed + higher Scan accuracy

3DRPS Serie Evo X (7 Axis-Arm) Red-Scanner								
Art.-no.	Measuring range (mm)	Probe Volumetric accuracy (mm)*	Laser Scanner Volumetric accuracy (mm)*	Probe Repeatability (mm)*	Laser line spectrum (mm)	Points per line	Speed (pts./sec.)	Deep of field (mm)
3DEVOX18007REDP025	1800	0,034	0,038	0,016	25	1280	320000	150
3DEVOX18007REDP050	1800	0,034	0,044	0,016	50	1280	320000	200
3DEVOX18007REDP100	1800	0,034	0,057	0,016	100	1280	320000	270
3DEVOX24007REDP025	2400	0,043	0,047	0,022	25	1280	320000	150
3DEVOX24007REDP050	2400	0,043	0,053	0,022	50	1280	320000	200
3DEVOX24007REDP100	2400	0,043	0,066	0,022	100	1280	320000	270
3DEVOX30007REDP025	3000	0,055	0,059	0,034	25	1280	320000	150
3DEVOX30007REDP050	3000	0,055	0,065	0,034	50	1280	320000	200
3DEVOX30007REDP100	3000	0,055	0,078	0,034	100	1280	320000	270
3DEVOX40007REDP025	4000	0,069	0,073	0,040	25	1280	320000	150
3DEVOX40007REDP050	4000	0,069	0,079	0,040	50	1280	320000	200
3DEVOX40007REDP100	4000	0,069	0,092	0,040	100	1280	320000	270
3DEVOX50007REDP025	5000	0,080	0,084	0,048	25	1280	320000	150
3DEVOX50007REDP050	5000	0,080	0,090	0,048	50	1280	320000	200
3DEVOX50007REDP100	5000	0,080	0,103	0,048	100	1280	320000	270
3DEVOX60007REDP025	6000	0,092	0,096	0,062	25	1280	320000	150
3DEVOX60007REDP050	6000	0,092	0,102	0,062	50	1280	320000	200
3DEVOX60007REDP100	6000	0,092	0,115	0,062	100	1280	320000	270
3DEVOX70007REDP025	7000	0,105	0,109	0,076	25	1280	320000	150
3DEVOX70007REDP050	7000	0,105	0,115	0,076	50	1280	320000	200
3DEVOX70007REDP100	7000	0,105	0,128	0,076	100	1280	320000	270

Difference EVO X and EVO X Plus

The difference between the normal and the Plus version is the electronic hardware of the arm and the calibration of the laser scanner, which are influencing the acquiring speed of the laser scanner and the accuracy of the laser scanner, however the laser scanner hardware is the same in both versions.

The EVO-X arm is an articulated measuring arm with integrated laser scanner.

The Laser Scanner is integrated on the EVO7 arm and it is not removable.

Evo X Plus Laser measuring arm with blue Laserscanner, higher speed + higher Scan accuracy

3DRPS Serie Evo X (7 Axis-Arm) Blue-Scanner								
Art.-no.	Measuring range (mm)	Probe Volumetric accuracy (mm)*	Laser Scanner Volumetric accuracy (mm)*	Probe Repeatability (mm)*	Laser line spectrum (mm)	Points per line	Speed (pts./sec.)	Deep of field (mm)
3DEVOX18007BLUEP025	1800	0,034	0,038	0,016	25	1280	320000	150
3DEVOX18007BLUEP050	1800	0,034	0,044	0,016	50	1280	320000	200
3DEVOX18007BLUEP100	1800	0,034	0,057	0,016	100	1280	320000	270
3DEVOX24007BLUEP025	2400	0,043	0,047	0,022	25	1280	320000	150
3DEVOX24007BLUEP050	2400	0,043	0,053	0,022	50	1280	320000	200
3DEVOX24007BLUEP100	2400	0,043	0,066	0,022	100	1280	320000	270
3DEVOX30007BLUEP025	3000	0,055	0,059	0,034	25	1280	320000	150
3DEVOX30007BLUEP050	3000	0,055	0,065	0,034	50	1280	320000	200
3DEVOX30007BLUEP100	3000	0,055	0,078	0,034	100	1280	320000	270
3DEVOX40007BLUEP025	4000	0,069	0,073	0,040	25	1280	320000	150
3DEVOX40007BLUEP050	4000	0,069	0,079	0,040	50	1280	320000	200
3DEVOX40007BLUEP100	4000	0,069	0,092	0,040	100	1280	320000	270
3DEVOX50007BLUEP025	5000	0,080	0,084	0,048	25	1280	320000	150
3DEVOX50007BLUEP050	5000	0,080	0,090	0,048	50	1280	320000	200
3DEVOX50007BLUEP100	5000	0,080	0,103	0,048	100	1280	320000	270
3DEVOX60007BLUEP025	6000	0,092	0,096	0,062	25	1280	320000	150
3DEVOX60007BLUEP050	6000	0,092	0,102	0,062	50	1280	320000	200
3DEVOX60007BLUEP100	6000	0,092	0,115	0,062	100	1280	320000	270
3DEVOX70007BLUEP025	7000	0,105	0,109	0,076	25	1280	320000	150
3DEVOX70007BLUEP050	7000	0,105	0,115	0,076	50	1280	320000	200
3DEVOX70007BLUEP100	7000	0,105	0,128	0,076	100	1280	320000	270

* global uncertainty on the volume, values shown in 2 sigma