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 autojoint allowing auto-recognition and no need of calibration.

The EVO X measuring arm offers you:
› Excellent productivity
› Delivers quickly and reliable results
› Flexibilty for every day usement in many industry sectors

The EVO X measuring arm offers you:
› Capture very micrometric details on any complex surface
› Very high resolution
› Very large depth of field
› High speed scanning

Technical Data

› Accuracy up to 6 µm
› Maximimum frequency 300Hz
› Depth of field up to 270 mm
› Laserlinie width up to 100 mm
› High resolution up to 0,025 mm
› Laser sizes available: 25 mm, 50 mm, 100 mm

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.

Software

› Every EVO und EVO X measuring is delivered with Standard-Utility-Software named K-ARM
› The Utility-Software allows the measuring arm a complete diagnosis of:
- Accuracy
- Electronics diagnosis
- Setting the probes
- Calibration of the probes
- Full calibration of the measuring arm

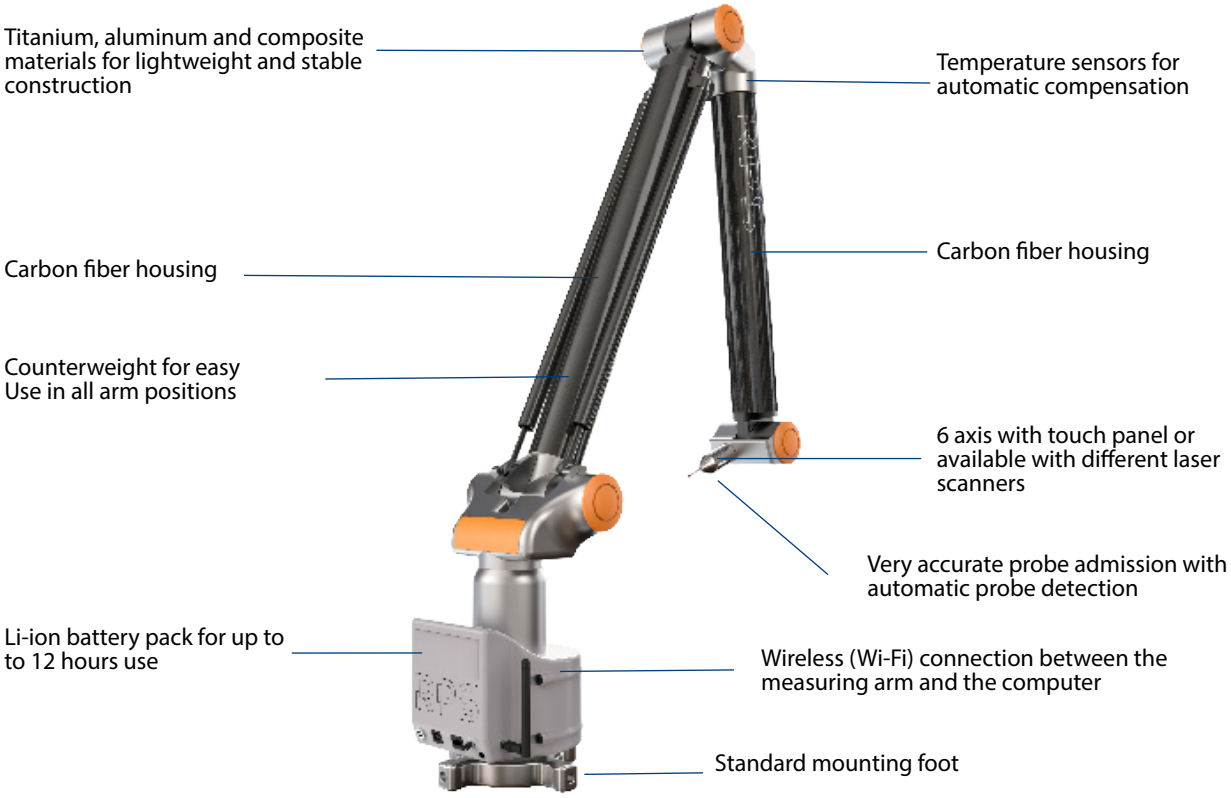
Moreover the K-Arm software enables connection and integration with third-party software such as Innovmetric Polyworks, Verisurf, 3DSystems Geomagic, and many others.

The 3D RPS measuring arm is available with 6 or 7 Axis.
Tactile measuring or Scanning:

› 6-Axis measuring arm: tactile (Art. Nr.: 3DRPSEV..6)
› 7-Axis measuring arm: tactile (Art. Nr.: 3DRPSEV..7) (Laserscanner expandable)
› 7-Axis measuring arm: scanning (adjustable) + tactile (Art. No.: 3DRPSEV..7+3DEVOLAS)
› 7-Axis measuring arm: scanning (fixed integrated) + tactile (Art. No.: 3DEVOX)

3D RPS Precision measuring arm

3D measuring in the middle of the production



6 Axis measuring arm

Features

› Fast and precise 3D-inspection
› No warm-up time
› Operating temperature: 0 - 45 °C
› Storage temperature: -20 - 70 °C
› Easy handling
› Clear software
› No zero point calibration necessary
› Carbon fiber construction: light, robust, temperature stable
› Portable CMM-joint
› Processing of point clouds
› STL Data Export

Applications

Mechanical engineering, tool making, punching tool manufacture, printing tool construction, mould manufacture, damage analysis, casingtool construction, fixture construction, gauge manufacture, plastic injection mold construction, turbine blades testing, gap and flush testing, vehicle construction, aircraft, automobile, yachts, motorcycle, ...

Equipment

› Wireless connection (Wi-Fi)
› Battery-operated device with Li-ion Battery
  12 workig hours for tactile measuring
  8 working hours for Laserscanning
› Quick fastener of Brunson for mounting
› Renishaw probe with Ruby-ball Ø 4mm
› High repeatability Renishaw Autojoint
› Temperature comensator
› Start & Scan function
› USB driver kit, power adapter, USB cable
› Tool case with mounting screws & tools
› Calibration standard in the form of a sphere Ø20,000 with magnet
› Software K-Arm for calibration & diagnostic
› transport box

3DEVOX..

Evo X Laser measurinng arm (7-Axis) with red integrated (not removeable) Laserscanner

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)
3DEVOX20007RED025	2000	0,044	0,049	0,025	25	1280	128000	150
3DEVOX20007RED050	2000	0,044	0,055	0,025	50	1280	128000	200
3DEVOX20007RED100	2000	0,044	0,066	0,025	100	1280	128000	270
3DEVOX25007RED025	2500	0,053	0,058	0,030	25	1280	128000	150
3DEVOX25007RED050	2500	0,053	0,064	0,030	50	1280	128000	200
3DEVOX25007RED100	2500	0,053	0,075	0,030	100	1280	128000	270
3DEVOX30007RED025	3000	0,065	0,070	0,037	25	1280	128000	150
3DEVOX30007RED050	3000	0,065	0,076	0,037	50	1280	128000	200
3DEVOX30007RED100	3000	0,065	0,087	0,037	100	1280	128000	270
3DEVOX40007RED025	4000	0,090	0,084	0,068	25	1280	128000	150
3DEVOX40007RED050	4000	0,090	0,090	0,068	50	1280	128000	200
3DEVOX40007RED100	4000	0,090	0,102	0,068	100	1280	128000	270
3DEVOX50007RED025	5000	0,131	0,095	0,085	25	1280	128000	150
3DEVOX50007RED050	5000	0,131	0,101	0,085	50	1280	128000	200
3DEVOX50007RED100	5000	0,131	0,113	0,085	100	1280	128000	270
3DEVOX60007RED025	6000	0,155	0,107	0,127	25	1280	128000	150
3DEVOX60007RED050	6000	0,155	0,113	0,127	50	1280	128000	200
3DEVOX60007RED100	6000	0,155	0,134	0,127	100	1280	128000	270
3DEVOX70007RED025	7000	0,191	0,120	0,134	25	1280	128000	150
3DEVOX70007RED050	7000	0,191	0,126	0,134	50	1280	128000	200
3DEVOX70007RED100	7000	0,191	0,147	0,134	100	1280	128000	270

3DEVOXR..

Evo X Laser measuring arm (7-Axis) with red removeable Laserscanner

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)
3DEVOXR20007RED025	2000	0,044	0,049	0,025	25	1280	128000	150
3DEVOXR20007RED050	2000	0,044	0,055	0,025	50	1280	128000	200
3DEVOXR20007RED100	2000	0,044	0,066	0,025	100	1280	128000	270
3DEVOXR25007RED025	2500	0,053	0,058	0,030	25	1280	128000	150
3DEVOXR25007RED050	2500	0,053	0,064	0,030	50	1280	128000	200
3DEVOXR25007RED100	2500	0,053	0,075	0,030	100	1280	128000	270
3DEVOXR30007RED025	3000	0,065	0,070	0,037	25	1280	128000	150
3DEVOXR30007RED050	3000	0,065	0,076	0,037	50	1280	128000	200
3DEVOXR30007RED100	3000	0,065	0,087	0,037	100	1280	128000	270
3DEVOXR40007RED025	4000	0,090	0,084	0,068	25	1280	128000	150
3DEVOXR40007RED050	4000	0,090	0,090	0,068	50	1280	128000	200
3DEVOXR40007RED100	4000	0,090	0,102	0,068	100	1280	128000	270
3DEVOXR50007RED025	5000	0,131	0,095	0,085	25	1280	128000	150
3DEVOXR50007RED050	5000	0,131	0,101	0,085	50	1280	128000	200
3DEVOXR50007RED100	5000	0,131	0,113	0,085	100	1280	128000	270
3DEVOXR60007RED025	6000	0,155	0,107	0,127	25	1280	128000	150
3DEVOXR60007RED050	6000	0,155	0,113	0,127	50	1280	128000	200
3DEVOXR60007RED100	6000	0,155	0,134	0,127	100	1280	128000	270
3DEVOXR70007RED025	7000	0,191	0,120	0,134	25	1280	128000	150
3DEVOXR70007RED050	7000	0,191	0,126	0,134	50	1280	128000	200
3DEVOXR70007RED100	7000	0,191	0,147	0,134	100	1280	128000	270

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Offering, errors and changes excepted
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Software / Measuring arm 3DRPS Compatibility

Software	Scanning	Tactile
Verisurf	YES	YES
PolyWorks (InnovMetric)	YES	YES
Geomagic Design-X Geomagic Control-X	YES	X (YES: from Q4 2018)
Geomagic Studio (and earlier Versions)	YES	X (YES: from Q4 2018)
Power Inspect (Autodesk)	X	YES
Touch Dmis (Next Metrology)	X	YES
AXEL	X	YES
Rapidform XOV XOS (3DSystems)	YES	X

7 Axis measuring arm with Scanner

3DRPSEVO..6

6-Axis measuring arm

Art.-no.	Measuring range (mm)	Volumetric accuracy (mm)	Repeatability (mm)	weight (kg)
3DRPSEVO15006	1500	0,018	0,014	7,0
3DRPSEVO20006	2000	0,026	0,019	7,2
3DRPSEVO25006	2500	0,036	0,022	7,5
3DRPSEVO30006	3000	0,048	0,034	7,9
3DRPSEVO40006	4000	0,069	0,055	8,3
3DRPSEVO50006	5000	0,092	0,078	9,0
3DRPSEVO60006	6000	0,125	0,105	11,3
3DRPSEVO70006	7000	0,159	0,115	12,5

6-Axis measuring arm

3DRPSEVO..7

7-Axis Messarm with Laserscanner expandable

Art.-no.	Measuring range (mm)	Volumetric accuracy (mm)	Repeatability (mm)	weight (kg)
3DRPSEVO20007	2000	0,034	0,025	7,8
3DRPSEVO25007	2500	0,043	0,030	8,1
3DRPSEVO30007	3000	0,055	0,037	8,5
3DRPSEVO40007	4000	0,080	0,068	8,9
3DRPSEVO50007	5000	0,119	0,085	9,6
3DRPSEVO60007	6000	0,143	0,127	11,9
3DRPSEVO70007	7000	0,179	0,134	13,1

7-Axis measuring arm

3DEVOLAS

Laser Scanner for 7-Axis measuring arm 3DRPSEVO..7, with Redlight Scanner

3DEVOLAS				
Art.-no.	Measuring range (mm)	Points per line	Speed (pts./sec.)	Depth of field (mm)
3DEVOLAS025	25	1280	0,016	150
3DEVOLAS050	50	1280	0,022	200
3DEVOLAS100	100	1280	0,034	270

3DEVOLAS measuring arm