



FlexPoint

Flexible Multisensor Coordinate Measuring Systems

Floor Model Series

OGP FlexPoint

Coordinate Measuring Systems

FlexPoint™ is the new generation of large format multisensor coordinate measuring systems from OGP®. FlexPoint offers a unique combination of sensors, and CAD based programming, to solve a wide variety of dimensional measurement problems for large format parts.

The Multisensor Advantage

FlexPoint systems are true multisensor systems, supporting a range of tactile and non-contact sensors including SP25, SmartProbe®, a unique telecentric optical video probe, and the interferometric TeleStar® Probe, all powered by ZONE3® CAD based metrology software.

The VersaFlex™ multisensor head offers up to three simultaneously available sensors on an articulating probe head. With several sensors simultaneously available, there is no down time while individual sensors are exchanged from a change rack, and no need to requalify each time a sensor is used.



VersaFlex Articulating Sensor Array

Powerful ZONE3 Software

ZONE3 CAD based metrology software provides complete flexibility for multisensor measurements – with or without a CAD model. An entirely graphical user interface, visual validation for every step, and graphical reporting make ZONE3 the easiest and most intuitive 3D metrology software available.

High Quality Construction

FlexPoint systems feature a stable transport design with carefully selected materials, rigid body members, air bearings on all axes, and active temperature compensation, to perform in shop floor environments. Unique and patented design features enable a larger measuring volume within a compact footprint. FlexPoint is offered in three X,Z base configurations, each with a choice of Y-axis range to suit a wide variety of manufacturing needs.

	Standard	Optional
Sensor Options¹	PH10MQ PLUS with VersaFlex sensor array Tactile: SP25 Scanning Probe Non-Contact: SmartProbe Video Sensor	Non-Contact: TeleStar Probe
Tactile Sensor Options	SP25 scanning probe kit including SM25-2 module, SH25-2 stylus holder (x2), 3 mm x 21 mm stylus (A-5000-3553), and 5 mm x 21 mm stylus (A-5000-7630)	3 or 6 position change rack; additional SM25-1, SM25-3, SM25-4, SM25-5 scanning modules, stylus holders, and styli
Optics	Fixed optical magnification with 12.5 mm x 9.5 mm field of view and digital zoom	
Illumination	LED ring light with sector and intensity control	
Camera	5 megapixel monochrome digital metrology camera	
Scale Resolution	0.1 µm	
Rotary Axis		Miniature Servo Rotary (MSR™), MicroTheta Rotary (MTR™), Heavy Duty Rotary (HDR)
Software²	• ZONE3 Express metrology software • QVI® Portal	Metrology software: ZONE3 Prime or Pro Productivity software: EVOLVE® Suite (Design, Manufacturing, SmartProfile®, SPC) Offline software: ZONE3
System Controller	Windows® based with up-to-date processor and onboard networking/communication ports	
Controller Options	Ergonomic sit/stand operator workstation	24" flat panel LCD monitor or dual 24" flat panel LCD monitors, keyboard, 3-button mouse (or user supplied)
Accessories	Certified 25 mm sphere, video compensation accessory kit	Air dryer kit
Performance and Installation	Factory volumetric compensation and verification of all standard ISO 10360 specifications; on-site installation & verification of standard ISO 10360 specifications; 8 machine and 2 workpiece temperature sensors.	Premium Performance Package: Factory verification of all premium ISO 10360 specifications; on-site verification of premium ISO 10360 specifications; ZONE3 Prime metrology software; 6 additional machine temperature sensors.

¹PEM1 extension bar (A-1076-0070) included standard for mounting of VersaFlex sensor array.

²ZONE3 Prime included with optional Premium Performance Package.

System Performance and Accuracy Specifications¹

FlexPoint Model	7-Series	9-Series	12-Series
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VersaFlex Performance				
SP25 Tactile Probe (per ISO 10360-5:2020)^{2,3}				
Single stylus form error	MPE(P[Form.Sph.1x25:SS:Tact])	2.4 µm	2.5 µm	3.0 µm
Scanning mode form error	MPE(P[Form.Sph.Scan:PP:Tact])	3.6 µm	3.9 µm	4.1 µm
Time for scanning mode form error	MPL(τ[Sph.Scan:PP:Tact])	65 sec	65 sec	70 sec
TeleStar Laser Probe (per ISO 10360-8:2013)⁴				
Probing size error	MPE(P[Size.Sph.1x25:TR:ODS])	3.5 µm	3.5 µm	3.5 µm
SmartProbe Video Probe (per ISO 10360-7:2011)⁵				
Imaging probe length measurement error	MPE(EUV)	3.0 µm	3.0 µm	3.0 µm

SP25 Tactile Probe Performance (per ISO 10360-2:2009)^{2, 3, 6, 7}				
Standard:				
Length measurement errors	MPE(E0)	(3.0 + 5L/1000) µm	(3.5 + 5L/1000) µm	(4.0 + 5L/1000) µm
Repeatability of length measurement errors	MPL(R0)	2.0 µm	2.5 µm	3.0 µm
Premium (Optional):				
Length measurement errors	MPE(E0)	(2.5 + 3L/1000) µm	(2.5 + 3L/1000) µm	(3.0 + 3L/1000) µm
Repeatability of length measurement errors	MPL(R0)	2.0 µm	2.0 µm	2.5 µm

Motion Dynamics

Velocity	CNC (3D Vector)	Max. 500 mm/s
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Rated Environment

Temperature range	18 - 22 °C, stable to ±1 °C
Maximum rate of temperature change	1.0 °C/h - 2.0 °C/24h
Maximum vertical temperature gradient	1.0 °C/m
Humidity range	30 - 80%
Ambient vibration	<500µg below 15 Hz

Safe Operating Environment

Temperature range	15 - 30 °C, non-condensing
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System Utilities

Power Requirements	100-120 VAC or 200-240 VAC, 50/60 Hz, 1 phase, 900 W
Compressed Air Requirements	Air supply pressure: 0.6 MPa; Minimum flow capacity: 200 NI/min; Air quality ISO 8573-1:2010 Class 4.3.4 or better

NOTES	
1. Specifications apply to thermally stable system in the rated environment, operating in accordance with the procedures in the operating manual. Accuracy applies to an evenly distributed load up to 10% of maximum workpiece weight placed within the rated measuring range. Depending on load distribution, accuracy at maximum payload may be less than standard.	
2. Using SP25 with SM25-2 module with 3.0 mm x 21 mm A-5000-3553 stylus.	
3. Target tip deflection of 0.2 mm, filter 50 UPR.	
4. Where measurements are taken in a region of the sphere within a cone angle of 150°.	
5. Specifications apply at a PH10 position of A-axis 0° and B-axis 0°.	
6. Where L = measuring length in mm.	
7. Artifact may be low expansion with a CTE no greater than $1 \times 10^{-6} / ^\circ\text{C}$ and with a CTE expanded uncertainty ($k = 2$) no greater than $0.5 \times 10^{-6} / ^\circ\text{C}$.	



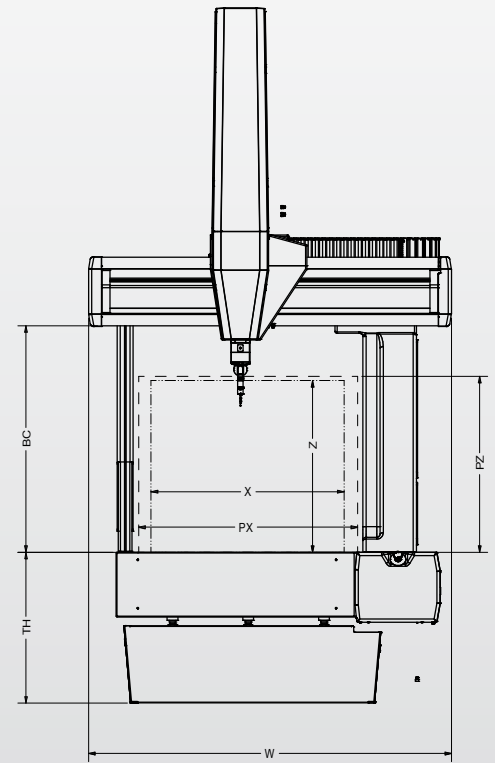
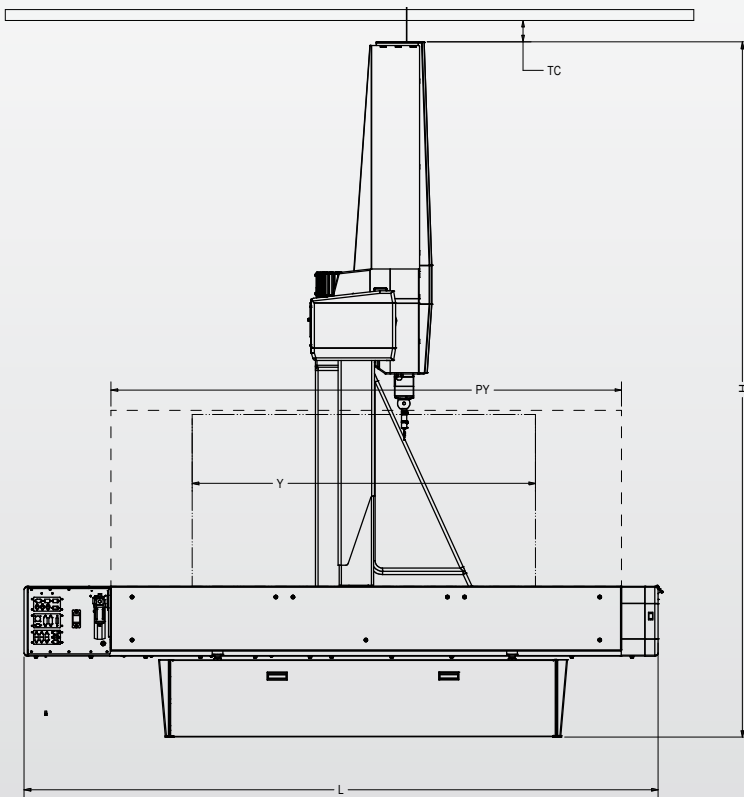
System Dimensions*

All dimensions in MM

Model	Measuring Range			Overall Dimensions			Maximum Workpiece Size			Bridge Clearance	Table Height	Min. Top Clearance	Machine Weight (kg)	Maximum Workpiece Weight** (kg)
	X	Y	Z	W	L	H	PX	PY	PZ	BC	TH	TC		
7.7.6	700	700	600	1470	1630	2790	825	1230	620	854	650	100	1200	500
7.11.6	700	1100	600	1470	2190	2790	825	1630	620	854	650	100	1500	800
7.15.6	700	1500	600	1470	2600	2790	825	2030	620	854	650	100	1800	1000
9.12.8	900	1200	800	1700	2540	3240	1020	1980	820	1054	700	100	2600	1200
9.16.8	900	1600	800	1700	2980	3240	1020	2380	820	1054	700	100	3000	1500
9.20.8	900	2000	800	1700	3380	3240	1020	2780	820	1054	700	100	3400	1800
12.15.10	1200	1500	1000	2000	2980	3740	1320	2280	1020	1254	800	100	4600	2000
12.20.10	1200	2000	1000	2000	3380	3740	1320	2780	1020	1254	800	100	5600	2500
12.30.10	1200	3000	1000	2000	4500	3740	1320	3780	1020	1254	800	100	7500	3000

* As defined in the drawing below. Actual measuring volume is dependent on selected sensor and articulation. Minimum 600 mm clearance around machine required for service access.

** Evenly distributed load



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