

Micro 3D^A

Coordinate Measuring Machines





			05.04.04 M	06.05.04 M	05.04.04	06.05.04	xx.07.05	xx.07.07
Max. Cruise Speed	Motorized (axes)	mm/s	-	-	0 - 100	0 - 100	0 - 100	0 - 100
	CNC (vector)	mm/s	-	-	500	500	500	500
Max. Acceleration	CNC (vector)	mm/s ²	-	-	1500	1500	1500	1200

SCANNING PROBE HEADS

Volumetric Length meas. Error, MPE as per ISO 10360-2:2009 ¹⁾	E0/E150	μm	T1	-	-	-	-	1,9 + L/333	2,3 + L/300
	E0/E150	μm	T2	-	-	-	-	1,9 + L/250	2,3 + L/200
Repeatability range, MPL as per ISO 10360-2:2009	R0	μm	-	-	-	-	-	1,8	2,2
Single stylus form error, MPE as per ISO 10360-5:2010	PFTU	μm	-	-	-	-	-	1,9	2,3
Single Stylus form error, scanning. MPE as per ISO 10360-4:2000 ³⁾	THP	μm	-	-	-	-	-	4,0	4,5
Required measuring time MPT	T	s	-	-	-	-	-	120	120
Single Stylus form error, scanning. MPE as per ISO 10360-4:2000 ³⁾	THN	μm	-	-	-	-	-	4,0	4,5
Required measuring time MPT	T	s	-	-	-	-	-	120	120
Form measurement error	RONt (MZCI) ²⁾	μm	-	-	-	-	-	2,0	2,4

INDEXING HEADS OR FIXED HEADS WITH STRAIN-GAUGE TRIGGER PROBE

Volumetric Length meas. Error, MPE as per ISO 10360-2:2009 ¹⁾	E0/E150	μm	T1	-	-	2,3 + L/333	2,5 + L/333	1,9 + L/333	2,3 + L/300
	E0/E150	μm	T2	-	-	-	-	1,9 + L/250	2,3 + L/200
Repeatability range, MPL as per ISO 10360-2:2009	R0	μm	-	-	2,2	2,4	-	1,8	2,2
Single stylus form error, MPE as per ISO 10360-5:2010	PFTU	μm	-	-	2,3	2,5	-	1,9	2,3

INDEXING HEADS OR FIXED HEADS WITH TRIGGER PROBE

Volumetric Length meas. Error, MPE as per ISO 10360-2:2009 ¹⁾	E0/E150	μm	T1	3,0 + L/300	3,2 + L/300	2,5 + L/333	2,7 + L/333	2,1 + L/333	2,5 + L/300
	E0/E150	μm	T2	-	-	-	-	2,1 + L/250	2,5 + L/200
Repeatability range, MPL as per ISO 10360-2:2009	R0	μm	-	3,0	3,2	2,5	2,7	2,1	2,5
Single stylus form error, MPE as per ISO 10360-5:2010	PFTU	μm	-	3,0	3,2	2,5	2,7	2,1	2,5

METROLOGICAL SPECIFICATIONS

	TEMPERATURES		TOOLS / STYLUS CONFIGURATIONS	
	Ambient T1	Ambient T2		
Measuring Reference Temperature	18 °C to 22 °C	16 °C to 26 °C	SP25	Stylus Ø5 x 50 mm
Maximum air temperature variations	0,5 °C / h - 2,0 °C / 24h	1,0 °C / h - 5,0 °C / 24h	TP200	Standard Force Module and stylus Ø4 x 10 mm
Maximum spatial gradient	0,5 °C / m	1,0 °C / m	Trigger Probe	Standard Force Module and stylus Ø4 x 10 mm

1) Measuring length L in mm.

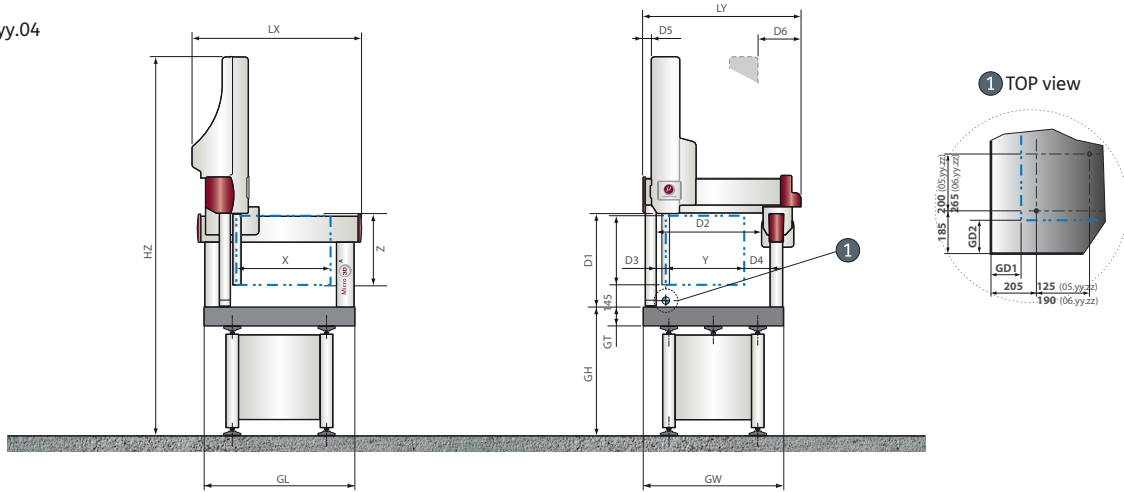
2) RONt test available on SP80 probe head, with Stylus Ø5 x 50 mm, 50 mm ring gauge, speed 5 mm/s, located in the middle of the measuring Volume.

3) For MPE(THP/THN) and MPT(T): sphere is placed in the middle of the measuring volume.

GENERAL DIMENSIONS

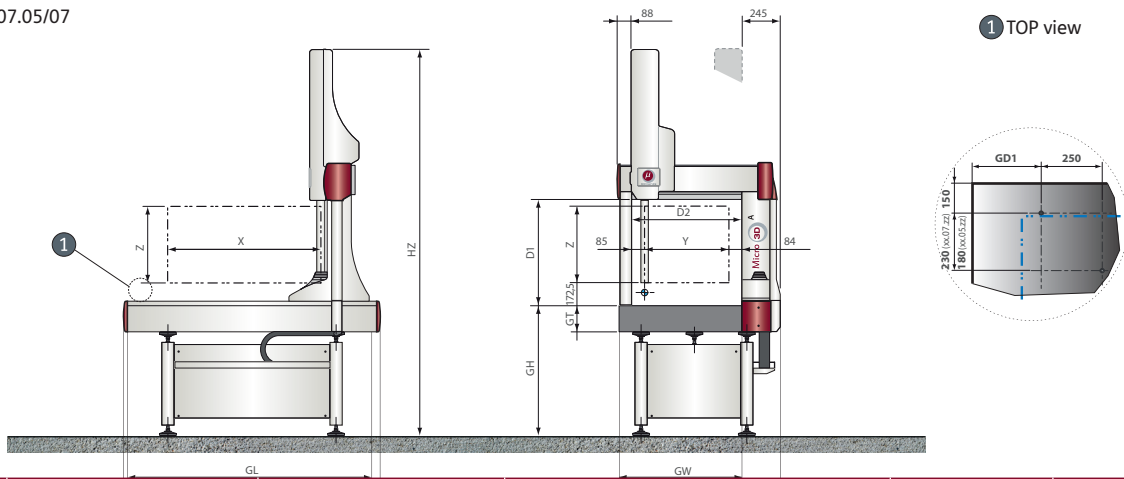


xx.yy.04



Micro 3D ^A sizes	Measuring range			Overall dimensions			Surface plate					Daylights						Weights		
	mm									daN										
	X	Y	Z ⁽¹⁾	Length	Width	Height	Height	Spess.	Length	Width	Holes	D1	D2	D3	D4	D5	D6	Max. workpiece weight	Machine weight	
MX	MY	MZ	LX	LY	HZ	GH	GT	GL	GW	GD1	GD2									
05.04.04	500	400	440	929	888	2411	830	100	830	673	135	135	598	537	49	141	53	252	300	300
06.05.04	600	500	440	1044	1018	2411	830	100	960	803	150	150	598	670	64	156	68	267	300	390

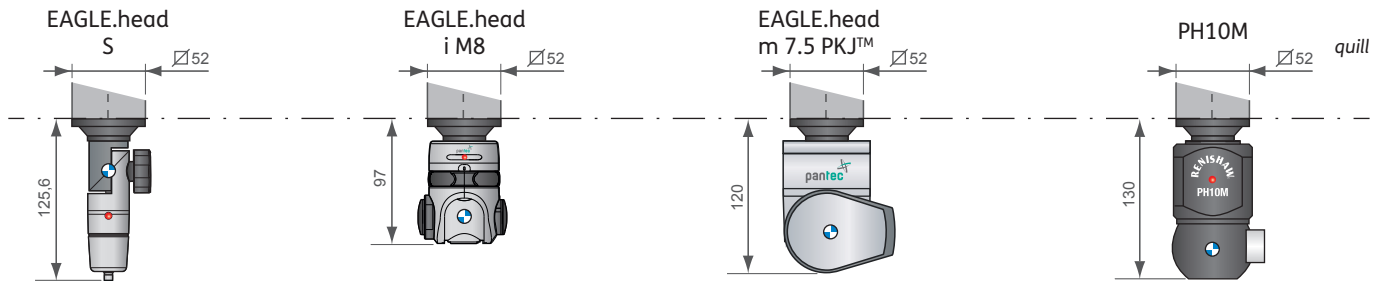
xx.07.05/07



Micro 3D ^A sizes	Measuring range			Overall dimensions			Surface plate					Daylights		Weights	
	mm									daN					
	X	Y	Z ⁽¹⁾	Length	Width	Height	Height	Spess.	Length	Width	Holes	D1	D2	Max. workpiece weight	Machine weight
MX	MY	MZ	LX	LY	HZ	GH	GT	GL	GW	GD					
07.07.05	700	650	500	1380	1160	2429	750	170	1330	899	350	688	819	650	775
07.07.07	700	650	650	1380	1160	2734	750	170	1330	899	350	838	819	650	800
10.07.05	1000	650	500	1680	1160	2429	750	170	1630	899	350	688	819	700	925
10.07.07	1000	650	650	1680	1160	2734	750	170	1630	899	350	838	819	700	950
12.07.05	1200	650	500	1880	1160	2429	750	170	1830	899	300	688	819	700	990
12.07.07	1200	650	650	1880	1160	2734	750	170	1830	899	300	838	819	700	1015



PROBE HEADS



TECHNICAL FEATURES

Mechanical frame	Coordinate Measuring Machine, MAN and CNC type, with mobile traverse (XX,YY,04) or mobile bridge structure.	
	xx.yy.04	xx.07.05/07
Sliding guideways	Asse X On anodized light alloy extrusion (right) Machined into the granite table (left)	Machined into the granite table
	Asse Y On anodized alloy extrusion	Micromachined on anodized light alloy extrusion.
	Asse Z On anodized light alloy extrusion	Micromachined on silicon carbide extrusion.
Sliding elements	Air bearings	
Drive system	Direct drive belt all axes	
Drives	DC servomotor or manual handles (xx.yy.04 M)	
Length measuring system	Free-moving linear transducers on carrier, resolution 0.1 µm	
Controller	Pantec EAGLE™ / Renishaw® UCC	
	Protection degree: IP40 (IP54 upon request)	
	Cooling system: Fan	
Surface Plate (part locking)	Granite, threaded inserts M8x1.25: flatness according to DIN 876/3	
Vibration damping system ¹⁾	Passive elastometer vibration damping	
Options	Automatic tip/tool changer, Automatic multisensor temperature compensation for sizes xx.yy.05/07 for T2 (16 °C to 26 °C), on top rotary table, manual and automated part loading system, active pneumatic vibration damping. ¹⁾ if requested, we will perform a vibration analysis.	

ELECTRIC AND COMPRESSED AIR SUPPLY

Power Supply	1/N/PE 115/230 V~ ± 10 %; 50 / 60 Hz (± 4 %)	Compressed air supply	From 0,6 to 1,0 MPa, pre-cleaned
Max. power consumption	2,5 kVA	Operating Pressure	≤ 0,5 MPa
Typ. power consumption	0,6 kVA	Consumption	≤ 250 Nl/min
		Quality	According ISO 8573 part 1: class 4

ENVIRONMENT

Humidity	40 % to 70 % UR (non condensing)
Operating Temperature	From 15 °C to 35 °C
Acceptable Vibrations	(Peak to Peak acceleration) 30 mm/s ² from 1 to 10 Hz 15 mm/s ² from 10 to 20 Hz 50 mm/s ² from 20 to 100 Hz

SAFETY

Regulations

Micro 3D ^A complies with EC machine directive 2006/42/EC and EMC directive 2004/108/EEC

Disposal

Microservice products and packaging returned to us are disposed of in accordance with applicable legal provisions.

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Specifications subject to change, due to the continuous improvement of the product.

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