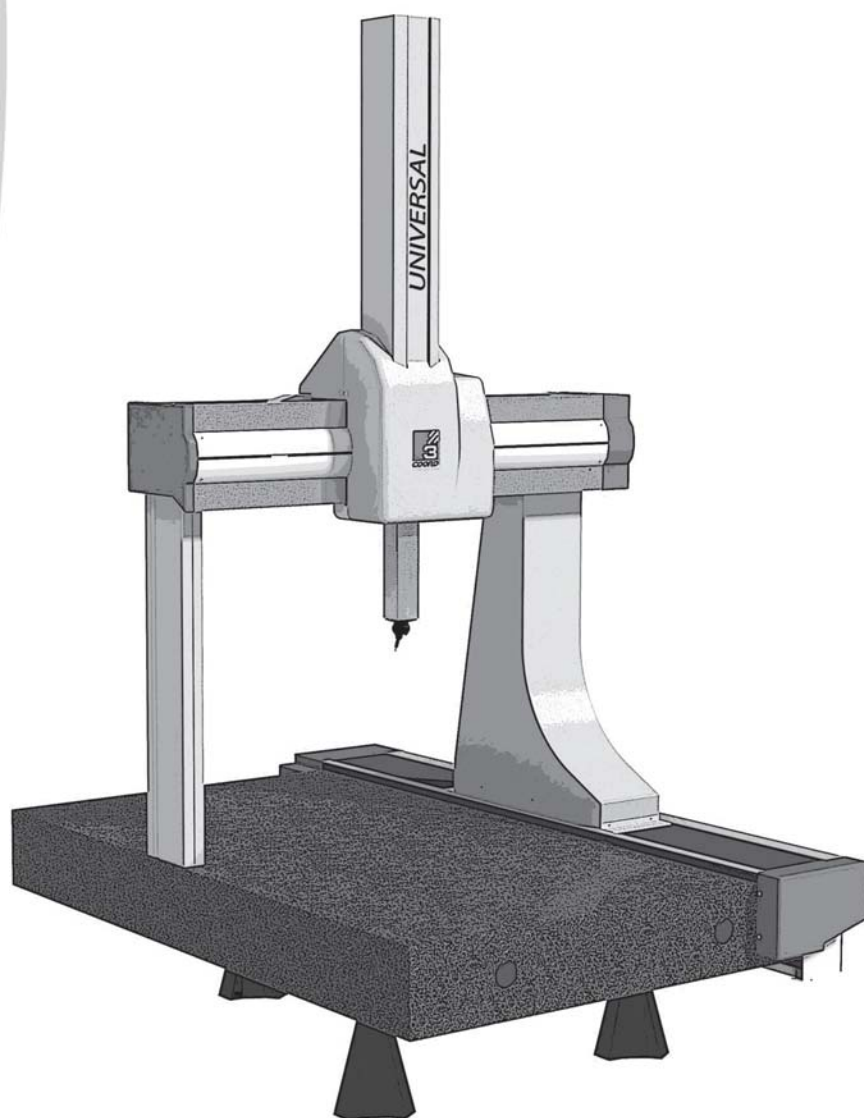


COORD3 UNIVERSAL

BRIDGE TYPE

CNC COORDINATE MEASURING MACHINE



UNIVERSAL 10.09 - 10.10 - 12.10 - 15.10



STRUCTURE: CNC Bridge Type Coordinate Measuring Machine with alloy bridge frame on granite base.

SURFACE PLATE: Monolithic granite table with integral guide-ways and isostatic support with flatness to DIN876/III and M8 threaded insert grid.

GUIDEWAYS: X axis integral dovetail machined into granite table;
Y/Z axes micro-machined and hard anodized alloy extrusions.

DRIVE SYSTEMS: CNC drive via DC motors with toothed drive belts to all axes.

BEARING SYSTEM: Isostatic system of air bearings to all axes.

MEASURING SYSTEM: High resolution (0.1µm) free floating linear scales mounted in carriers.

COUNTERBALANCE: Adjustable pneumatic on Z ram.
THERMAL COMPENSATION: Wireless multi-sensors for measuring scales and part.

PERFORMANCE

Models	Maximum Permissible Error ISO 10360-2 / ISO 10360-4 <i>MPE [μm] , L [mm], t [sec]</i>														Max. 3D Pos. Speed	Max. 3D Accel.
	T ₁ : 18÷22 °C							T ₂ : 16÷26 °C								
	PH10M/MQ/PH20-TP20		PH10MQ-TP200		PH10MQ-SP25			PH10M/MQ/PH20-TP20		PH10MQ-TP200		PH10MQ-SP25				
	⁽¹⁾ MPE _E	⁽²⁾ MPE _P	⁽¹⁾ MPE _E	⁽²⁾ MPE _P	⁽¹⁾ MPE _E	⁽²⁾ MPE _P	⁽³⁾ MPE _{THP}	⁽¹⁾ MPE _E	⁽²⁾ MPE _P	⁽¹⁾ MPE _E	⁽²⁾ MPE _P	⁽¹⁾ MPE _E	⁽²⁾ MPE _P	⁽³⁾ MPE _{THP}		
	[μm]		[μm]		[μm]			[μm]		[μm]		[μm]				
xx.10.09	2,2 + L/333	2,2	2,0 + L/333	2,0	1,9 + L/333	1,9	4,0/120	3,0 + L/200	3,0	2,8 + L/200	2,8	2,8 + L/200	2,8	5,6/120	866	1500
xx.10.10	2,5 + L/333	2,5	2,4 + L/333	2,4	2,4 + L/333	2,4	4,8/120	3,0 + L/200	3,0	2,8 + L/200	2,8	2,8 + L/200	2,8	5,6/120	866	1200
xx.12.10	2,7 + L/333	2,7	2,5 + L/333	2,5	2,4 + L/333	2,4	4,8/120	3,5 + L/200	3,5	3,3 + L/200	3,3	3,3 + L/200	3,3	6,6/120	866	1200
xx.15.10	2,8 + L/285	2,8	2,6 + L/285	2,6	2,5 + L/285	2,5	5,0/120	3,5 + L/166	3,5	3,3 + L/166	3,3	3,3 + L/166	3,3	6,6/120	866	1000

Performance data are only valid if the following specifications are met:

- PH10M/PH10MQ/PH20/TP200: tip diameter Ø 4 mm, stylus length 10 mm.

- PH10MQ/SP25: SM1, stylus Ø 5 mm, length 50 mm.

- L = measuring length in mm

- Ambient temperature:

T₁: 18 ± 22 °C; Max. Gradients: 1,0 °C/h - 2,0 °C/24h - 1,0 °C/m

T₂: 16 ± 26 °C; Max. Gradients: 1,0 °C/h - 5,0 °C/24h - 1,0 °C/m

⁽¹⁾ Maximum Permissible Error of indication for size measurement according ISO 10360-2

⁽²⁾ Maximum Permissible Probing Error according ISO 10360-2

⁽³⁾ Maximum Permissible Scanning Probing Error according ISO 10360-4, applicable to the SP25M/SP80 probes only

PERFORMANCE VERIFICATION

MPE_E : Maximum Permissible Error of indication for size measurement

Measurement of a set of 5 sizes, taken through two opposite probing points on two nominally parallel planes. The set of 5 sizes is placed in 7 different positions/directions within the measuring volume. Each size is measured 3 times for a total of 105 measurements. All 105 measurements (100%) must be within the specified MPE_E.

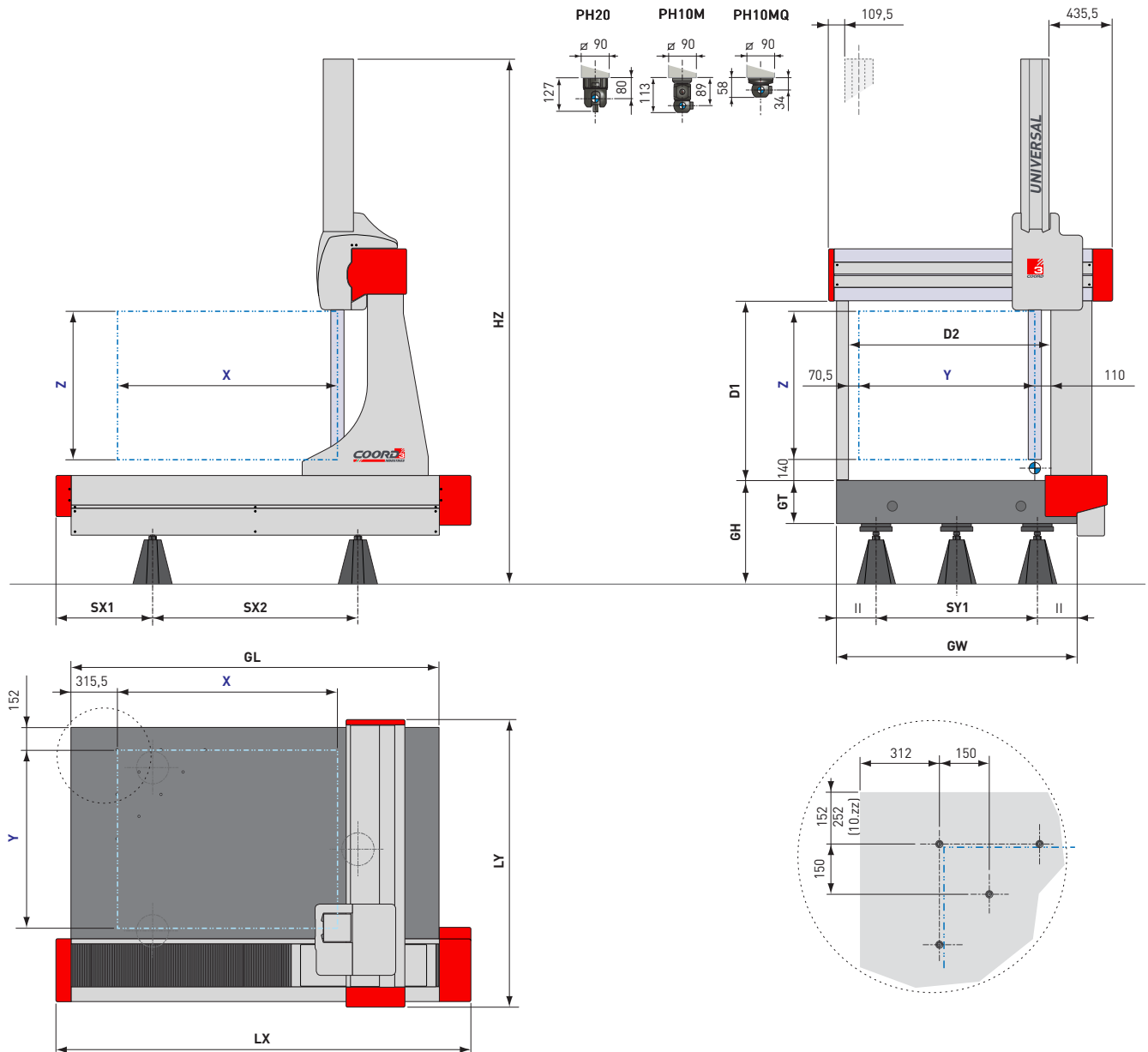
MPE_P : Maximum Permissible Probing Error

A reference sphere is measured with 25 equally distributed probeings. The probing performance shall be verified in one position, placed in the middle of the CMM measure volume. Using all 25 measurements, compute the Gaussian associated sphere. For each of the 25 measurements, calculate the Gaussian radial distance R. Calculate the probing error P, as the range of the 25 Gaussian distances, Rmax - Rmin. The probing error P must be within the specified MPE_P.

MPE_{THP/t} : Maximum Permissible Scanning Probing Error

MPE_{THP/t} is the Maximum Permissible Scanning Probing Error of the range of all measured sphere radii (sphere form error), with high point density and predefined path scanning, where t is the specified time (seconds) needed to perform the verification test. The scanning probing performance shall be verified in one single position, placed in the middle of the CMM measure volume. A reference sphere is measured by scanning 4 target scan lines to determine the range of the radial distance R. The scanning probing error THP is calculated as the range of sphere radii between the measured centre and all of the valued scan points. The measured THP and the time to perform the scanning test must be within the specified MPE_{THP/t}.

STROKES, DIMENSIONS, WEIGHTS



Models	Measuring Strokes			Overall Dimensions			Surface Plate							Daylights		Weights	
							Height	Thickness	Length	Width	Supports						
	X	Y	Z	LX	LY	HZ	GH	GT	GL	GW	SX1	SX2	SY1	D1	D2	Max. Part Weight	Machine Weight
	[mm]			[mm]			[mm]				[mm]			[mm]		[kg]	
15.10.09	1500	1000	900	2830	1737	3339	700	250	2510	1440	555	1400	900	1180,5	1111	1500	2890
20.10.09	2000	1000	900	3330	1737	3339	700	290	3010	1440	655	1700	900	1180,5	1111	1600	3890
15.10.10	1500	1000	1000	2830	1737	3539	700	250	2510	1440	555	1400	900	1180,5	1211	1500	2890
20.10.10	2000	1000	1000	3330	1737	3539	700	290	3010	1440	655	1700	900	1180,5	1211	1600	3900
15.12.10	1500	1200	1000	2830	1937	3539	700	290	2510	1640	555	1400	1100	1380,5	1211	1800	3730
20.12.10	2000	1200	1000	3330	1937	3539	700	340	3010	1640	680	1650	1100	1380,5	1211	2300	5100
25.12.10	2500	1200	1000	3830	1937	3539	700	360	3510	1640	785	1940	1100	1380,5	1211	2400	6210
20.15.10	2000	1500	1000	3330	2237	3539	700	360	3010	1940	670	1670	1300	1680,5	1211	3600	6330
25.15.10	2500	1500	1000	3830	2237	3539	700	400	3510	1940	780	1950	1300	1680,5	1211	4000	8080
30.15.10	3000	1500	1000	4330	2237	3539	700	420	4010	1940	880	2250	1300	1680,5	1211	4000	9650

TECHNICAL CHARACTERISTICS

STRUCTURE

Structure:

CNC Bridge Type Coordinate Measuring Machine with alloy bridge frame on granite base.

Surface Plate:

Monolithic granite table with integral guide-ways and isostatic support with flatness to DIN876/III and M8 threaded insert grid.

Guideways:

X axis integral dovetail machined into granite table;
Y/Z axes micro-machined and hard anodized alloy extrusions.

Drive Systems:

CNC drive via DC motors with toothed drive belts to all axes.

Bearing System:

Isostatic system of air bearings to all axes.

Measuring System:

High resolution (0.1µm) free floating linear scales mounted in carriers.

Counterbalance:

Adjustable pneumatic on Z ram.

Thermal Compensation:

COORD3-T Wireless multi-sensors for measuring scales and part.

OPTION

Active vibration insulation system (AVM)

Perimetral safety system with SAFE MODE operation (CC3-NT)

Multi-wire cable

PROBING SYSTEM

Manual Probe Head:

MIH, MH20, MH20i

Motorized Indexable Probe Head:

PH10T, PH10M, PH10MQ

Motorized Continuous Probe Head:

PH20, REVO

Point-to-point Trigger Probe:

TP2, TP20, TP200

Analog Contact Probe:

SP600, SP25M, SP80

Laser Probe:

Metris/Nikon LC/XC series

Stylus and Probe Changer:

Fully automated stylus and probe changers

ENVIRONMENT

Temperature Range for Metrological Specification:

T₁: Ambient Temperature Range: 18 ÷ 22 °C

Max. gradient per hour: 1,0 °C/h

Max. gradient per day: 2,0 °C/24h

Max. gradient in space: 1,0 °C/m

T₂: Ambient Temperature Range: 16 ÷ 26 °C

Max. gradient per hour: 1,0 °C/h

Max. gradient per day: 5,0 °C/24h

Max. gradient in space: 1,0 °C/m

Operating Temperature:

15 ÷ 35 °C

Relative Humidity:

40 ÷ 80 % (non condensing)

Acceptable Vibrations:

(vibration acceleration between peaks)

30 mm/s² from 1 to 10 Hz

15 mm/s² from 10 to 20 Hz

50 mm/s² from 20 to 100 Hz

AIR SUPPLY

Air Consumption:

250 NL/min

Minimum Air Supply:

5 Bar (71 PSI)

POWER SUPPLY

Power Supply Voltage:

230 V ± 10%; 50 Hz ± 2% (single phase)

115 V ± 10%; 60 Hz ± 2% (single phase)

(data for CC3-NT control)



Coord3 Industries S.r.l.

Headquarters/Administration and Sales:

Strada Statale 25, n. 3
10050 Bruzolo (TO) - Italia
Tel.: +39 011 9635511
Fax: +39 011 9635566
info@coord3.it
www.coord3.com
www.coord3-cmm.com

Italy offices:

Via B Diotti, 21
20153 Milano
- Italy
Tel.: +39 02 47999197
Fax: +39 02 47997754

Via degli Oleandri, 8
51100 Chianciano (PT)
- Italy
Tel.: +39 0573 935058
Fax: +39 0573 539970

Subsidiaries:

COORD3 Metrology India Pvt. Ltd.
49/39, Site - IV,
Industrial Area Sahibabad,
Ghaziabad - 201010
- India

COORD3 Beijing Co., Ltd
1st floor, Fortune Plaza
Long Sheng Industrie Zone
No. 7 North Rongchang street
- EDZ, Beijing 100176
- P.R. China

COORD3 Metrology, Inc.
48861 West Road
Wixom, MI 48393
- USA

COMPANY WITH
QUALITY SYSTEM
CERTIFIED BY DNV
= ISO 9001 =

Full list of Agents & Distributors available at www.coord3.com