

CMM SWAN L

PERFORMANCE

Environment conditions	Models	PH10M/T-TP20					Max. 3D Pos. Speed	Max. 3D Accel.
		Single Arm			Double Arm			
		MPE _{EQ/ISO} ⁽¹⁾	MPL _{TP20} ⁽²⁾	MPE(PFTU) ⁽³⁾	MPE _{EQ/ISO} ⁽¹⁾	MPL _{TP20} ⁽²⁾		
		[μm]	[μm]	[μm]	[μm]	[μm]		
T ₁ 18 ÷ 22 °C	xx.15.15	15 + 20 L/1000 ≤ 50	15	15	30 + 27 L/1000 ≤ 85	30	520	850
	xx.15.18	20 + 23 L/1000 ≤ 60	20	20	40 + 30 L/1000 ≤ 105	40	520	850
	xx.15.20	22 + 25 L/1000 ≤ 65	22	22	44+ 35 L/1000 ≤ 120	44	520	850
	xx.15.25	25 + 25 L/1000 ≤ 70	25	25	50 + 32 L/1000 ≤ 125	50	520	850
T ₂ 16 ÷ 26 °C	xx.15.15	18 + 27 L/1000 ≤ 80	16	18	36+ 32 L/1000 ≤ 100	32	520	850
	xx.15.18	23 + 30 L/1000 ≤ 95	21	23	46+ 35 L/1000 ≤ 120	42	520	850
	xx.15.20	25 + 32 L/1000 ≤ 100	23	25	50+ 37 L/1000 ≤ 125	46	520	850
	xx.15.25	28 + 32 L/1000 ≤ 105	26	28	56 + 37 L/1000 ≤ 135	52	520	850

⁽¹⁾ Maximum Permissible Error of Length measurement according to UNI EN ISO 10360-2:2010

⁽²⁾ Maximum Permissible Limit of Repeatability range according to UNI EN ISO 10360-2:2010

⁽³⁾ Maximum Permissible Single Stylus Form Error according to UNI EN ISO 10360-5:2010

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

L= measuring length (mm)

STRUCTURE

CNC Coordinate Measuring Machine, Horizontal Arm type with integrated slideway in the worktable

Guideways:

X Axis: linear guideways
Y-Z Axes: micromachined anodized light alloy extrusion

Drive Method:

X Axis: rack & pinion system
Y-Z Axis: zero hysteresis friction drive

Motion Control:

DC servomotor on all axes

Sliding System:

X Axis: Recirculating ball bearing
Y-Z Axes: Air bearings on all axes

Thermal Compensation:

Multi-sensors temperature compensation system
for part and scale (Optional)

Measuring System:

Linear scales, System Resolution: 0,1 µm.

OPTION

Active Antivibration System
Training c/o Coord 3 Center or Agents
Installation by Coord 3 or Agents
PC & Printer
Multi-wire cable
Safety laser scanner

POWER SUPPLY

Power supply voltage:

230 V ± 10%; 50 Hz ± 2% single phase
115 V ± 10%; 60 Hz ± 2% single phase

AIR SUPPLY

Air Consumption:

Max 100 NI/min

Minimum Air Supply:

6 Bar

Air quality:

Max. oil concentration:
5 mg/m³ (ISO 8573 - class 4)

Max. particle size of contaminants:
40 µm (ISO 8573 - class 5)

Max. contaminants concentration:
10 mg/m³ (ISO 8573 - class 5)

Max dew point:
10 °C (ISO 8573 - class 6)

ENVIRONMENT

Temperature Range for T₁ Metrological Specification:

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

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

PROBING SYSTEM

Manual Probe Head:

MIH, MH20, MH20i

Motorized Probe Head:

PH10T, PH10M, PHS-2

Point-to-point Trigger Probe:

TP20

Laser Probe:

SLK25

Stylus and Probe Changer:

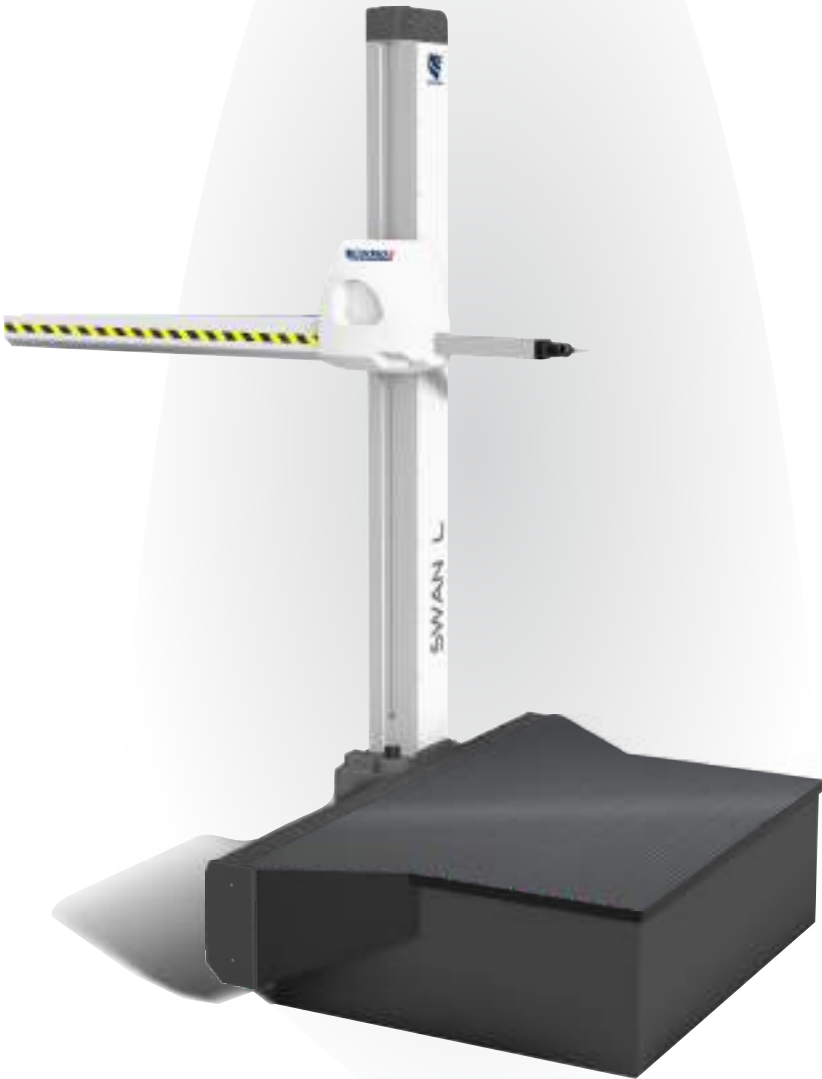
Fully automated stylus and probe changers



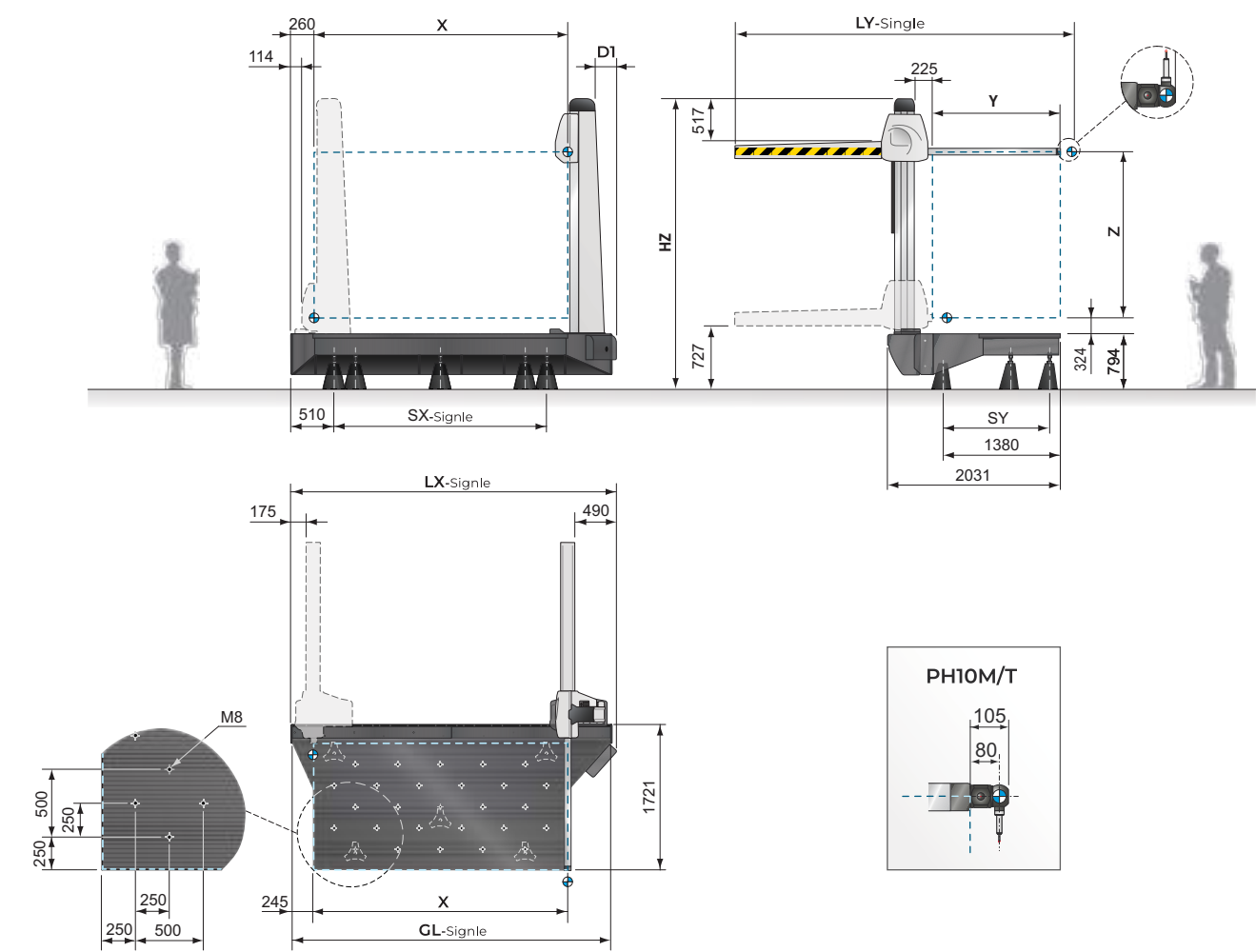
HORIZONTAL ARM

SWAN L

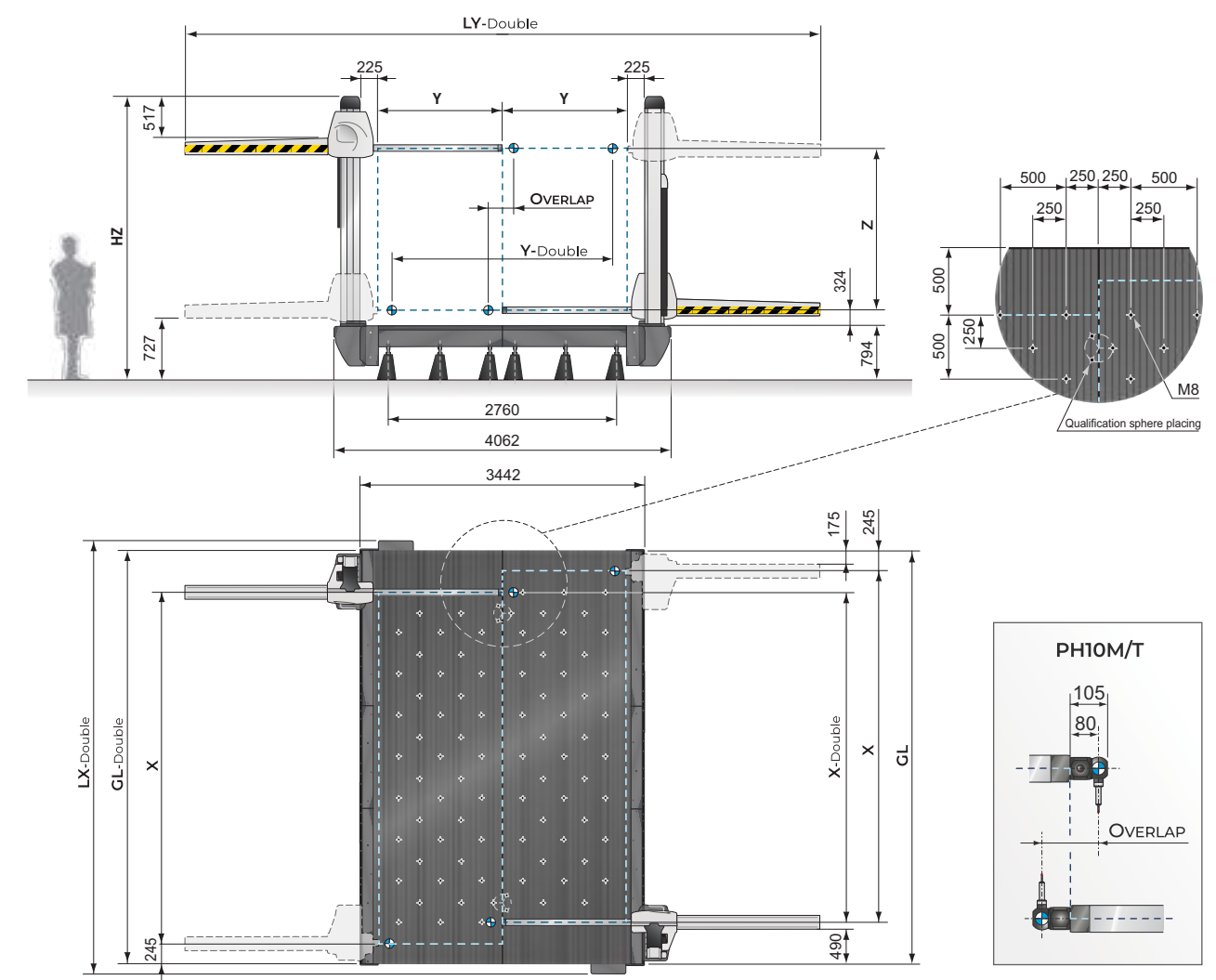
CNC COORDINATE MEASURING MACHINE



CMM HORIZONTAL ARM | SWAN L - Single Arm



CMM HORIZONTAL ARM | SWAN L - Double Arm



CMM SWAN L - Single Arm
STROKES, DIMENSIONS, WEIGHTS

Models	Measuring strokes			Overall dimensions ⁽¹⁾			Worktable				Other dim.	Weights	
	X	Y	Z	LX Single	LY Single	HZ	GL Single	SX	SY	Supports	D1	Worktable capacity ⁽²⁾	Machine weight ⁽¹⁾
	[mm]			[mm]			[mm]			Quantity	[mm]	[Kg]	
20.15.15	2000	1500	1500	2833	3879	3064	2806	1500	955	5	262	1000	3270
25.15.15	2500	1500	1500	3333	3879	3064	3306	2000	1280	5	262	1250	3860
30.15.15	3000	1500	1500	3833	3879	3064	3806	2500	955	5	262	1500	4450
40.15.15	4000	1500	1500	4833	3879	3064	4806	3500	955	9	262	2000	5630
25.15.18	2500	1500	1800	3333	3879	3364	3306	2000	1280	5	262	1250	3890
30.15.18	3000	1500	1800	3833	3879	3364	3806	2500	955	5	262	1500	4480
40.15.18	4000	1500	1800	4833	3879	3364	4806	3500	955	9	262	2000	5660
50.15.18	5000	1500	1800	5833	3879	3364	5806	4500	1280	17	262	2500	6840
30.15.20	3000	1500	2000	3833	3879	3564	3806	2500	955	5	138	1500	4530
40.15.20	4000	1500	2000	4833	3879	3564	4806	3500	955	9	138	2000	5710
50.15.20	5000	1500	2000	5833	3879	3564	5806	4500	1280	17	138	2500	6890
60.15.20	6000	1500	2000	6833	3879	3564	6806	5500	1280	20	138	3000	8120
40.15.25	4000	1500	2500	4833	3879	4064	4806	3500	955	9	138	2000	5910
50.15.25	5000	1500	2500	5833	3879	4064	5806	4500	1280	17	138	2500	7090
60.15.25	6000	1500	2500	6833	3879	4064	6806	5500	1280	20	138	3000	8320

⁽¹⁾ CMM only. Operator table, robe and Control cabinet not included.
⁽²⁾ Uniformly distributed. For lower loads, do not exceed 1000kg/m².

CMM SWAN L - Double Arm
STROKES, DIMENSIONS, WEIGHTS

Models	Measuring strokes						Overall dimensions ⁽¹⁾			Worktable ⁽²⁾	Other dim.	Weights	
	X	X Double	Y	Y Double	OVERLAP	Z	LX Double	LY Double	HZ	GL Double	D1 ⁽³⁾	Worktable Capacity ⁽⁴⁾	Machine Weight ⁽¹⁾
	[mm]			[mm]			[mm]			[mm]	[mm]	[Kg]	
20.15.15	2250	2000	1500	2840	160	1500	3200	7748	2751	3000	262	2000	9540
25.15.15	2750	2500	1500	2840	160	1500	3700	7748	2751	3500	262	2500	10720
30.15.15	3250	3000	1500	2840	160	1500	4200	7748	2751	4000	262	3000	11900
40.15.15	4250	4000	1500	2840	160	1500	5200	7748	2951	5000	262	4000	14260
25.15.18	2750	2500	1500	2840	160	1800	3700	7748	2951	3500	262	2500	10780
30.15.18	3250	3000	1500	2840	160	1800	4200	7748	2951	4000	262	3000	11960
40.15.18	4250	4000	1500	2840	160	1800	5200	7748	2951	5000	262	4000	14320
50.15.18	5250	5000	1500	2840	160	1800	6200	7748	2951	6000	262	5000	16680
30.15.20	3250	3000	1500	2840	160	2000	4200	7748	2951	4000	138	3000	12060
40.15.20	4250	4000	1500	2840	160	2000	5200	7748	2951	5000	138	4000	14420
50.15.20	5250	5000	1500	2840	160	2000	6200	7748	3451	6000	138	5000	16780
60.15.20	6250	6000	1500	2840	160	2000	7200	7748	3451	7000	138	6000	19240
40.15.25	4250	4000	1500	2840	160	2500	5200	7748	3951	5000	138	4000	14620
50.15.25	5250	5000	1500	2840	160	2500	6200	7748	3951	6000	138	5000	16980
60.15.25	6250	6000	1500	2840	160	2500	7200	7748	3951	7000	138	6000	19440

⁽¹⁾ CMM only. Operator table, probe and Control cabinet not included.
⁽²⁾ Refer to the specific layout for the quantity and SX position of the supports
⁽³⁾ Refer to the single-arm layout
⁽⁴⁾ Uniformly distributed. For lower loads, do not exceed 1000kg/m².