Overview of the three marco Gantry Systems

This overview compares marco's three gantry systems, highlighting their different dimensions, capabilities and optional technical accessories. By examining these systems side by side, we aim to provide a clear understanding of their unique strengths. This comparison will help you make informed decisions for your specific application.

System	marc0 - 3 axis	marc1 - 3 axis	marc2 - 3 axis
Maximum working area X/Y/Z	445/250/145 mm	480/480/120 mm	619/940/126 mm
Maximum tool payload	6,5 kg	13 kg	13 kg
Repeatability	± 5 µm	± 3 µm	± 3 µm
Maximum working velocity X/Y/Z	the dispensing process defines the max speed up to 0,6 m/s	the dispensing process defines the max speed up to 1 m/s	the dispensing process defines the max speed up to 1 m/s
Maximum acceleration X/Y/Z	2g	3g	3g
Weight (basic version)	65 kg	650 kg	1150 kg
Dimensions W/D/H	660x790x750 mm	800x950x1800 mm	1200x1450x2000 mm
Drive system	Linear encoders 0.1 µm resolution. Closed loop 5-phase stepper drive. Z-Axis: pneumatic static load compensation	Linear encoders 0.1 µm resolution. Closed loop linear motor drive. Z-Axis: pneumatic static load compensation	
Storage capacity for application use	>32GB	>32GB	>32GB
Input AC (to power supply)	100 – 240 VAC, ±10% 50/60 Hz 165 W full load 520 W peak load	200 - 240 VAC 50/60 Hz 700 W full load 2700 W peak load	200 - 240 VAC 50/60 Hz 700 W full load 2700 W peak load

ACCESSORIES

Legend: ✓ Included   ✓⊗ Optional compatibility   ⊗ Not available

Dispensing Heads

Dispensing Heads	marc0 - 3 axis	marc1 - 3 axis	marc2 - 3 axis
2C Mixing head	✓⊗	✓⊗	✓⊗
StepDot dispensing head	⊗	✓⊗	✓⊗
MultiHead dispensing head	Up to 2 valves	Up to 12 valves	Up to 12 valves
ax4 PivotJet head – 360° rotatable head with one axis	✓⊗	✓⊗	✓⊗
ax5 PivotJet head - 45° pivotable head with two extra axies	✓⊗	✓⊗	✓⊗
Hot melt dispensing head (max 210°C)	✓⊗	✓⊗	✓⊗

Process Control Units

Process Control Units	marc0 - 3 axis	marc1 - 3 axis	marc2 - 3 axis
Vacuum cleaning station	✓⊗	✓⊗	✓⊗
Ribbon cleaning station	✓⊗	✓⊗	✓⊗
Touch sensor - for needle calibration on Z-Axis	✓⊗	✓⊗	✓⊗
Look-up camera - for evaluating nozzle cleanliness and position	✓⊗	✓⊗	✓⊗
Dummy dot target	✓⊗	✓⊗	✓⊗
Laser height sensor	✓⊗	✓⊗	✓⊗
Precision scale	✓⊗	✓⊗	✓⊗
Barcode / QR Code Reader	✓⊗	✓⊗	✓⊗
DXF import function	✓	✓	✓
Look-down camara - for AOI and FAI	✓⊗	✓⊗	✓⊗
AI module – for assistance with challenging optical inspection tasks (on the fly and post-dispense)	✓⊗	✓⊗	✓⊗
Universal table with fixture holes	✓	✓	✓
Vacuum table - for fixing parts	✓⊗	✓⊗	✓⊗
Air cushion system - for isolation the gantry from vibrations	⊗	✓⊗	✓⊗
Water cooling system - for linear motors	⊗	✓⊗	✓⊗
Ventilation system	✓⊗	✓⊗	✓⊗
Cleanroom compatibility (class 10000, class 1000, class 100)	✓⊗	✓⊗	✓⊗
Safety Guard according to EU Machinery Directive 2006/42/EC	✓⊗ W/D/H 791x866x1035 mm	✓	✓
Storing cabinet - for air tanks, fluid reservoirs, or other components of dispensing systems	✓⊗	✓	✓
SMEMA compatibility	✓⊗	✓⊗ Openings for cluster or inline set-up 640 x 520 mm (W x H) front door opening 460 x 190 mm (W x H) side opening 445 x 185 mm (W x H) rear opening	✓⊗ Openings for cluster or inline set-up 788 x 520 mm (W x H) front door opening 747 x 193 mm (W x H) side opening 788 x 223 mm (W x H) rear opening
I/O ports	1x Ethernet 1x real-time Ethernet 6x Digital I/O 1x DAC/ADC marco NVar	1x Ethernet 6x Digital I/O marco NVar	1x Ethernet 6x Digital I/O marco NVar

✓ Included   ✓⊗ Optional compatibility   ⊗ Not available   Please note: Technical data is subject to change due to ongoing development.