



E MX1 series - technical information

Machine concept, drive technology and axes speed

Machine basis	Natural granite base with low coefficient of thermal expansion for high accuracy and less vibrations.
MX1 concept	One station machine with one drilling or routing spindle.
MX1 TWIN concept	Two identical spindles at one station. Both spindles working simultaneously on the same panel.
MX1 Double Head concept	Two different spindles at one station, e.g. one drilling and one routing spindle.
XYZ-axes drive	High-dynamic linear motor (wear- and maintenance-free)
XY-axes speed	75 m/min (2,953 ipm)
Z-axis speed	25 m/min infeed and retraction (984 ipm infeed and retraction)
Tooling system	Prism slot + 1 contact mushroom (mushroom required for CBD)

Spindles

Asynchronous motor

Synchronous motor

Drilling spindles	D1686-10 / D1686-180 (160 k / 180 k), PS 300 (300 k)	SM 170S (170 k), SM 220S (200 k)
Routing Spindles	D1331-26 (125 k)	SM 60S (60 k)

Automatic tool change systems

Euro tool cassette	1 x 110 tools or 2 x 110 tools
Euro tool chain	Tool chain with 2,600 tools (Loading and unloading during production)
Japanese tool cassette	not available

Features / options

Process stability and process control	Contact Bid Detection, Real-time Broken Bit Detection, Quick Drill Function, Online Accuracy Check, PFIS, S50 Software in English, Chinese, Korean, Japanese (graphical user interface), Laser station, Insert Wearout Control
Applications	Depth drilling/routing by CBD, 2nd measurement system for depth drilling/routing, Smooth Drilling, CCD
Specials	Tooling system with 6 mushroom clamps, individual loading system, pneumatic cover

Format sizes

MX1

MX1 TWIN

MX1 DH

Max formats (XY) w/o loader (one contact mushroom)	737 x 714 mm 29 x 28.1 inch	737 x 714 mm 29 x 28.1 inch	737 x 714 mm 29 x 28.1 inch
Max formats (XY) with loader (one contact mushroom)	720 x 702 mm 28.3 x 27.6 inch	720 x 702 mm 28.3 x 27.6 inch	720 x 702 mm 28.3 x 27.6 inch
Min / max formats (XY) w/o loader with 6 strd. mushrooms	245 x 714 / 615 x 714 mm 9.6 x 28.1 / 24.2 x 28.1 inch	245 x 714 / 615 x 714 mm 9.6 x 28.1 / 24.2 x 28.1 inch	245 x 714 / 615 x 714 mm 9.6 x 28.1 / 24.2 x 28.1 mm
Min / max formats (XY) with loader with 6 strd. mushrooms	270 x 702 / 615 x 702 mm 10.6 x 27.6 / 24.2 x 27.6 inch	270 x 702 / 615 x 702 mm 10.6 x 27.6 / 24.2 x 27.6 inch	270 x 702 / 615 x 702 mm 10.6 x 27.6 / 24.2 x 27.6 inch

Machine accuracy

Positioning accuracy	Cpk value must be > 1.67; Cpk tolerance ± 18 µm (Schmolz method of measuring machine accuracy)
Depth drilling accuracy	With CBD: ± 12 µm / With 2nd measurement system: ± 20 µm

Installation data

Machine weight (net / gross)	4,800 kg (10,582 lb) / 5,500 kg (12,125 lb)
Floor loading	2,000 kg/sqm. No special floor foundation is required! Machine is put on 3 machine feet.
Machine dimensions w/o loader L x W x H	1,570 x 1,920 x 1,722 mm (height incl. signal light 2,072 mm) 61.8 x 75.6 x 67.8 inch (height incl. signal light 81.6 inch)
Footprint w/o loader + periphery L x W	3,500 x 3,900 mm (with Loader 3,500 x 4,900 mm) 137.8 x 153.5 inch (with Loader 137.8 x 192.9 inch)