

TECHNICAL DATA
FLOOR TYPE BORING AND MILLING MACHINE

manufacturer	PAMA
type	SPEEDRAM 2
built	2002
control	SIEMENS SINUMERIK 840C



Working area

X-Axis, lateral movement column	11.000	mm
Y-Axis, vertical movement spindle unit	2.800	mm
Z-Axis, longitudinal movement RAM	900	mm
W-Axis, movement quill	800	mm

Machining unit

In hydrostatic design

Cross section RAM	360 x 400	mm	
RAM movement (Z-axis)	900	mm	
spindle diameter	150	mm	
Spindle movement (W-axis)	800	mm	
Spindle taper (short taper acc. to DIN 69871)	ISO 50		
Spindle power S1 (100%)	60	kW	
Max. torque at spindle	2.900	Nm	At 195 rpm
spindle speed range	6 - 3.000	rpm	2 gearsteps
max. feed	15.000	mm/min	

Floor plates

floor plates area (2 pc.)	4.000 x 2.500	mm	Thickness 300 mm
max. workpiece load	15.000	kg/m ²	

Feed and speed range

Max. feed range for X- Axis	20.000	mm/min
Max. feed force for X- and Y-Axis	30.000	N
Max. feed range for Y- and Z-Axis	15.000	mm/min
Max. feed force for Z-Axis	25.000	N
Rapid traverse for X-Axis	20.000	mm/min
Rapid traverse for Y- and Z-Axis	15.000	mm/min

Design features

X-axis

Slide for column with hydrostatic guideways on low-friction guideway plates. Drive system with Servomotor, Duplex-Pinions and Gear Rack. The pinions are pretensioned hydraulically for zero axial play.

Spindle unit

The high-precision RAM, made of meehanite cast iron in a rectangular shape, slides on hydrostatic wedge bars machined directly into the head unit. Inside the RAM runs - axially on bronze bearings - the boring quill. It is supported by front and rear angular contact ball bearings in high precision design.

Tool magazine

Type	Chain magazine
Number of tools	90

Data for electrical installation

Operating voltage	3~ 400/230 V
Frequency	50 Hz
Power requirement	195 kVA
Total power consumption	125 kW

Space requirement and weight

Total footprint	ca. 16 x 7,7 x 5,5 m
Total weight	ca. 50 to.
Total power consumption	125 kW

Accessories

Chip conveyor between floor plates and X-bed

Operator platform moving vertically

Tool magazine with manipulator, 90 positions

Tool breakage and wear monitoring (ARTIS)

Pick-up station for speed milling head

Axial milling head MG4, SK50, 13kW, $i = 1:4$, $M_{max} = 405Nm$, $U_{max} = 8,000$ rpm