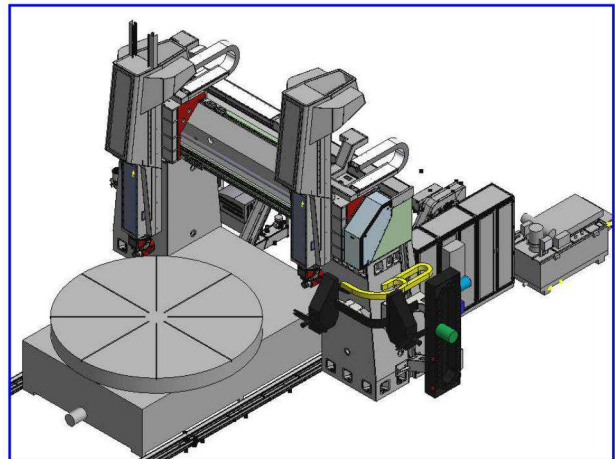
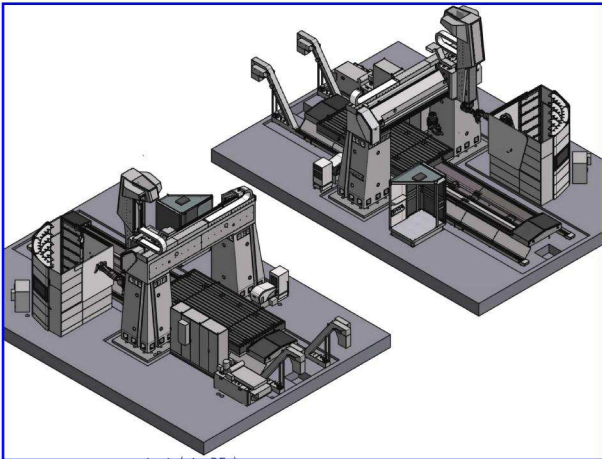


TECHNICAL DESCRIPTION

August 2018

New CNC portal milling machine "Redsteel" with 2-axis controlled head, long table or turning and moving table, SIEMENS 840 Dsl or HEIDENHAIN iTNC 530 Total production in Czech Republic



EXECUTION OF THE MACHINE

Portal with support

Portal with two columns and fixed solid crossbeam.

Very stable design in cast construction.

Horizontal slide on the crossbeam adjustable in total width (X).

Linear guides with 2 tracks TSX 55-F and 4 rolling elements RWU 55-E-L (each 210.7 mm) per track.

Feed drives in X and Z with SIEMENS servo motors.

Backlash-free ballscrews with diameters in X 80 mm and Z 63 mm.

Absolute optical HEIDENHAIN linear measuring systems in the axes in X and Z.

Telescopic covers on the crossbeam.

Vertical movable ram (Z) with head drive SIEMENS 1 PH 8 165-1.

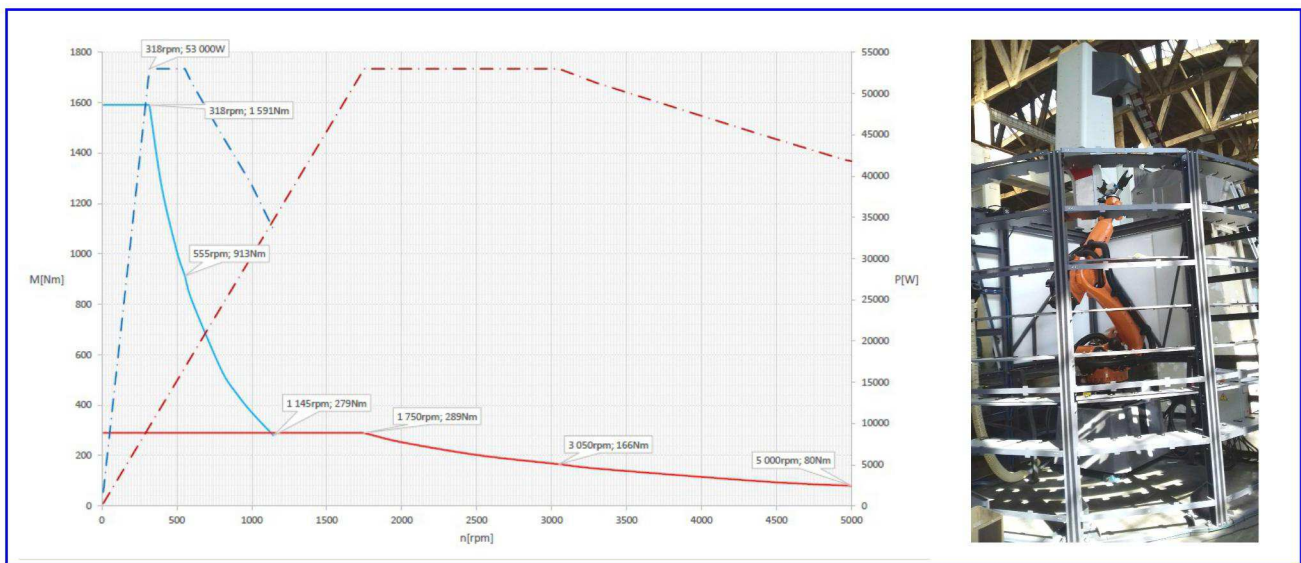
Drive with two-stage gearbox.

Thermal stabilization of the spindle by means of oil cooling.



Automatic head

Head with two controlled and clamped axes (A, C) FERMAT UHAmi 30. Rotary encoder in each axis.
 Swivel range +/- 180 ° in both axes. Positioning 0.001 ° and clamping in each axis.
 Drive and media supply of the head on the vertical ram. Power output of the head 1 : 1 like the drive in the ram.
 Hydraulic tool clamping.
 Pneumatic cleaning of the tool holder.
 Internal cooling through the center of the tool.
 Connection for external cooling.
 Tool taper SK 50 or HSK 100.



Automatic tool change

Changing carriage with gripper and chain magazine with 40 places arranged on the column. Change of tools in horizontal position.
 Alternative: Robot system.ROBOTICS (KUKA) with 50 magazine locations .

Tool cooling and chip discharge

Inside through the center of the tool up to 25 bar, outside 4 bar.
 Coolant container with magnetic and paper tape filter.
 Chip conveyors to the right and left of the table with height reduction and cooling water return to the tank.



Table module

Bed with adjustable table slide. In the basic version as a long table for different ways and table loads.
 Alternative:
 Turning and moving table for angular positioning with clamping and round milling with continuous feed.
 Special version:
 DEMMELER rotating and sliding table with additional carousel turning function including hydrostatic and master-slave drive.

Safety equipment

Protected working cabin with control panel and protective fence against unauthorized access with safety interlocks.
 Alternatively: cladding 2.5 m high with sliding doors. Execution according to customer requirement.

TECHNICAL SPECIFICATIONS

Portal

Distance between columns (option)	3370 (4200) mm
Distance crossbeam - foundation	3178 mm
Y travel of slide across (option)	3900 (4610) mm
Z travel of vertical ram	1550 mm
Size of vertical ram	460 x 420 mm
Speed of spindle drive in the vertical ram	
range I	10 – 1145 U/min
range II	1145 - 3000 U/min
Rarted speed of spindle drive	
range I	318 U/min
range II	1750 U/min
Power of spindle drive (S1 / S 6 40%)	53 / 77,9 kW
Torque on the spindle	
range I (S1 / S 6 40%)	1591 / 2338 Nm
range II (S1 / S 6 40%)	289 / 424 Nm
Feed rates in Y und Z	12 m/min
Diameter of the ball screws in Y / Z	80 / 63 mm
Axial force in Y / Z	20 kN

Automatic head UHAmi 30

2 controlled axes A and C	+ / - 180 °
Positioning in A and C	0,001 °
Clamping of the axis A and C	3800 / 6500 Nm
Hydraulic tool clamping	20 kN
Tool taper	SK 50 or HSK 100
Power S !	53 kW
Torque max.	1600 Nm
Speed max.	3000 U/min

Table module

Long table:

X travel of table slide along	upto 5200 mm
table width (option)	2500 (3000) mm
table length	upto 5000 mm
table load (option)	10 (40) t

Turning and moving table

X travel of table slide along	2000 bis 5000 mm
table width (option)	2000 (3000) mm
table length (option)	2200 (3000) mm
table load (option)	15 (25) t

DELIVERY TERMS

Demonstration and preliminary acceptance at the manufacturer.

Assembly and commissioning in the customer's work

Laser measurement with axis error compensation during commissioning.

Acceptance by the buyer.

Involvement of the buyer: foundation construction, anchoring of anchors, covering of pits and channels, all supply connections and oil fillings as well as crane services.

The description includes variants and options. The pictures are examples of which the delivered version may differ. Binding agreements in the contract.