

Project Info 22

- Type of machine: Travelling column machining centre VHC
- Task: Development of a variable working area that enables the usage of different clamping bridges; ensures very flexible adaptation to machining requirements
- Solution:
 - Travelling column machining centre VHC without machine table
 - Instead, two vertical rotary tables to accommodate different clamping bridges
 - While one rotary table is in a fixed position, the second can be moved in the work area. The clamping bridges are centred between the rotary tables via a centring groove and two support bolts per faceplate before they are clamped via the zero-point clamps.

Small clamping bridge: 2000 mm length
equipped with 20 zero-point clamps, controlled via M function
An additional manual control unit on the bridge divides the zero point clamps into four individual, separately selectable areas (one clamping area per side)

Large clamping bridge: 2400 mm length
equipped with 12 zero-point clamps, controlled via M function

Special characteristics:
 - No machine table
 - Two additional pneumatic couplings on the face plate of a rotary table supply the clamping bridges with compressed air. Thanks to an additional connection on the clamping bridges for external air supply, they can also be equipped with clamping devices outside the machine, which reduces the overall set-up times.

Technical data:

X-traverse range:	2600 mm
Y-traverse range:	1000 mm
Z-traverse range:	1200 mm
Main drive (with 40 % DC):	56 kW
Spindle torque (with 40 % DC):	540 Nm
Speed range	7500 rpm
Tool changing system:	XTS tool magazine with 144 tool places, SK 50
4. axis	Swivelling head continuously interpolating, +/- 100°
5. axis	vertical NC-rotary table RTA 5, movable in X-direction Ø 800 mm, with 7 zero point clamps pneumatically controlled
Counterbearing	vertical NC-rotary table RTA 5 Ø 800 mm, with 7 zero point clamps pneumatically controlled
Clamping bridges	small clamping bridge: 2000 mm length with 20 zero point clamps large clamping bridge: 2400 mm length with 12 zero point clamps

Small clamping bridge



Held by two rotary tables
right: RTA 5 movable
left: RTA 5 as counterbearing

Large clamping bridge



Rotary table RTA 5 as counterbearing with 7 zero point clamps in reinforced version