

# AXILE<sup>®</sup> C6

## High Speed Vertical Machining Center

### Wide Application

- General work shop
- Die and mold industry
- Automobile industry
- Medical industry

Max. X travel 1050 mm  
Max. Y travel 600 mm  
Max. Z travel 600 mm  
Max. Table load 800 kg  
Table length 1200 mm  
Table width 600 mm



### Highlights

- High efficiency spindle option:
  - Belt-driven spindle of 10000 rpm
  - Direct driven spindle of 12000 rpm
- 36 m/min rapid traverse
- Fast tool-to-tool change time
- Wide stroke of all axes guideway



National Award  
of Outstanding



ISO 9001:2015  
FM 538421

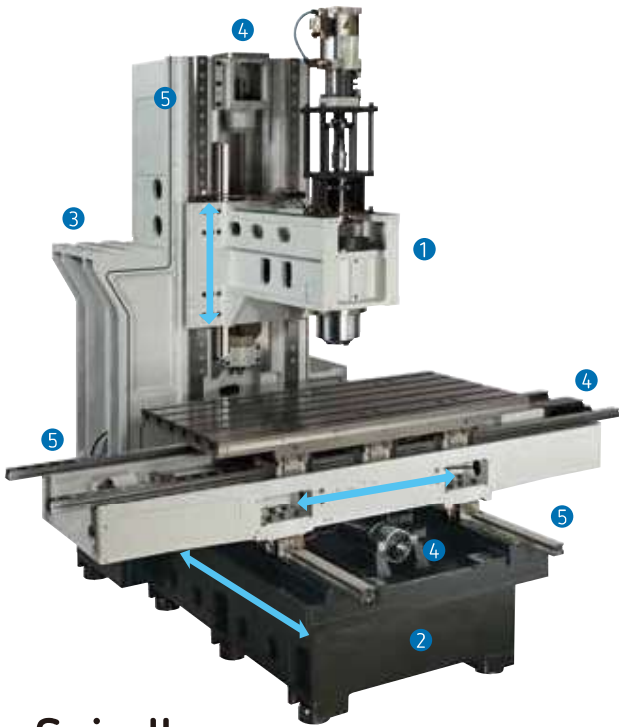


ISO 14001:2015  
EMS 546518



ISO 50001:2011  
ENMS 642457

# Rigid structure



- ① One-piece headstock
- ② Triangular wide-distance foundation provides solid support for operation.
- ③ Structural rib supported from the ground provides various size of tool magazine with stiffness and strength
- ④ C3 class ballscrew with preload for high accuracy and repeatability. All axes equipped with high rapid traverse of 36 m/min, and driven by 3.5/3.5/5 kW (X/Y/Z) direct-drive servo motor to provide high positioning accuracy
- ⑤ All axes equipped with high precision roller type linear guideway for superior accuracy

# Spindle

High speed spindle option to meet industrial demands

### Spindle Dynamic Balancing

The online dynamic balancing instrument offers calibration for spindle displacement, speed and acceleration of full speed range

### High rigidity Spindle With preloaded

angular-contact bearings throughout and with a large spacer between front bearings to improve radial thrust capacity. Cartridge spindle design makes maintenance easy

### Belt Drive spindle (Basic)

The standard 10,000 rpm belt drive spindle with ISO 40 taper

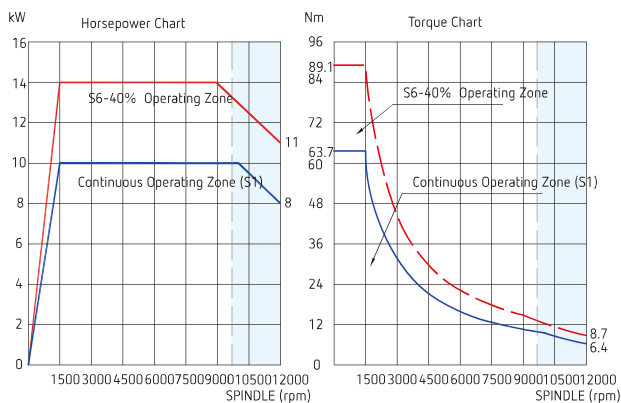


### In-line spindle (Pro)

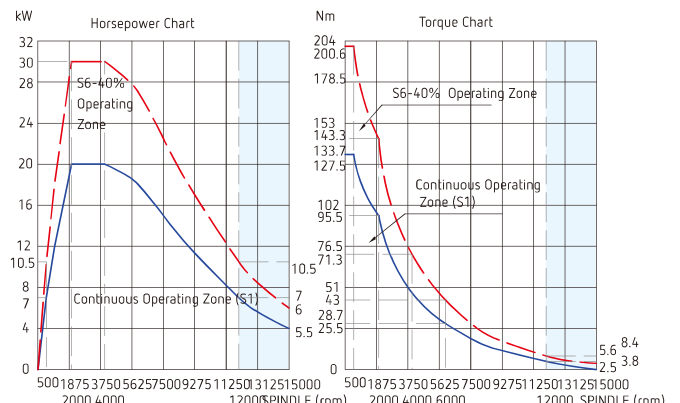
The powerful direct drive of 12,000 rpm spindles with ISO 40 taper



### Heidenhain QAN 200U 10/14 kW 10000 rpm (Basic)



### Siemens 1PH8133 20/30 kW 12000 rpm (Pro)



## Tool management



40T chain type ATC



Tool selection panel

**ARM TYPE ATC**  
**Random drum type 30 Tools (Basic)**  
**Random chain type 40 Tools (Pro)**

For 40T ATC, accessibility from back of machine for easy loading and unloading of tools while machine automatic operation

## Auxiliary system



**COOLANT FILTRATION SYSTEM**  
**CTS 20 bar separate type with paper filter (Pro)**

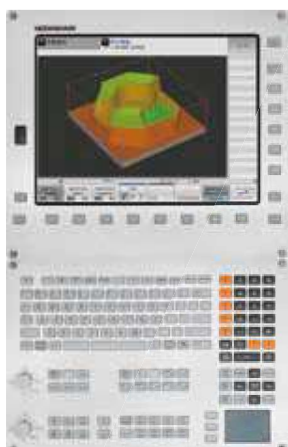
C6 is equipped with high pressure CTS and paper filter of 25-micron. The paper filter system removes contamination and particles from the coolant before being recycled through the coolant pump. The system helps to clear chips during deep-hole and tapping, highly increases tool life, allowing higher cutting speeds and clearing chips during deep-hole drilling.

**Oil cooler**

Prevent thermal expansion effects and thermal deformation, allowing high accuracy machining, perfect finish and extend lifetime of spindle.



## CNC control



**Heidenhain TNC640**

- FK free contour programming
- Programming in HEIDENHAIN conversational format with graphic support for workpiece drawings not dimensioned for NC
- Fixed cycles
- Peck drilling, reaming, boring, counter boring, centering
- Milling internal and external threads
- Clearing level and oblique surfaces
- Straight slots and circular slots
- Linear and circular point patterns
- Contour train, contour pocket --also with contour-parallel machining
- OEM cycles (special cycles developed by the machine tool builder) can be integrated
- Verification graphics, machining graphics
- Plan view
- Projection in three planes
- 3-D view

## Technical data

Category	Description	Unit	C6
Table	Table size	mm	1200 x 600
	Table height	mm	870
	Table loading	kg	800
	T-slot (w/pitch/no)	mm	18 x 100 x 6
Travel	X axis	mm	1050
	Y axis	mm	600
	Z axis	mm	600
Belt-driven Spindle (Basic)	Spindle taper		ISO 40
	Spindle speed	rpm	10000
	Motor output	kW	Heidenhain 10/14
	Motor torque	Nm	63.7/89.4
In-line Spindle (Pro)	Spindle nose to rotary table clamping surface	mm	110-710
	Spindle taper		ISO 40
	Spindle speed	rpm	12000
	Motor output	kW	Siemens 20/30
Tool Magazine	Motor torque	Nm	133.7/204
	Spindle nose to rotary table clamping surface	mm	110-710
	ATC type		Random, Arm type
	Magazine capacity		30/40
	Tool shank		BT/CAT/DIN 40
	Max tool length	mm	300
	Max tool diameter	mm	Ø75
	Max tool diameter with adjacent station empty	mm	Ø125
Feed rate	Max tool weight	kg	8
	Max loading weight	kg	240/320
	Tool changing time sec 1.94 (50Hz) / 1.63 (60Hz)	sec	1.94 (50Hz) / 1.63 (60Hz)
Accuracy (ISO 10791-4)	X/Y/Z	m/min	36/36/36
	Positioning accuracy	mm	0.008
Dimension	Repeatability	mm	±0.004
	Length (with chip conveyor)	mm	4170
	Length (without chip conveyor)	mm	2980
	Width	mm	2622
	Height	mm	3040
	Floor space	mm	2980 x 2622
	Weight	kg	7600

*Specification are subject to change without notice.*

## C6 Packages

C6	Basic Package	Pro Package
10000 rpm belt-driven spindle with 10/14 kW (S1/S6-40%)	✓	X
12000 rpm direct-driven spindle with 20/30 kW (S1/S6-40%)	X	✓
30-tool chain-type magazine	✓	X
40-tool chain-type magazine with loading /unloading station	X	✓
20-bar CTS	✓	X
20-bar CTS with separate tank and paper filter	X	✓
Linear scale for X/Y/Z axes	✓	✓
Automatic grease lubrication for guideways & ballscrews	✓	✓
Chip conveyor with air blow	✓	✓
Air through spindle	✓	✓
Water and air gun	✓	✓
Oil skimmer	✓	✓
Stainless steel finishing of working area	✓	✓
Wash down system	✓	✓

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