

TECHNICAL DATASHEET

CNC – TRAVELLING COLUMN MILLING MACHINE

Make	SORALUCE
Type	FL-10.000
Control	HEIDENHAIN TNC 640
Built	2016



Machine Travels

Longitudinal movement (X-axis)	10.000 mm
Vertical movement (Y-axis)	2.200 mm
Transverse movement (Z-axis)	1.300 mm

Feeds

X, Y, and Z axes, infinitely variable	2 - 10.000 mm/min.
Max. feed forces X-Y-Z	16.000 N

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Clamping table

Clamping surface	11.000 x 2.000	mm
Max. workpiece weight	10.000	kg/m ²
Number of T-slots	8	pcs.
Size of T-slots	22	mm
Spacing between T-slots	250	mm

Universal-NC-Milling Head H205

Front/rear plane swiveling	Automatically	
Indexing	2,5 x 2,5	° Hirth coupling
Power of Inline Spindle Motor	43	kW S1 (100% duty)
Speed range, infinitely variable	15 - 5.000	min-1
Max. torque	900	Nm
Tool holder	SK50 BIG Plus	DIN 69871-AD
Tightening bolts	DIN 69872	Form A
Head cooling	Oil / Air mixture	
Internal coolant supply		Through the spindle center
Tool clamping force	20.000	N

Automatic Toolchanger

Tool positions	60	
Max. tool diameter	125/250	mm Side seat free / occupied
Max. tool length	400	mm
Max. tool weight	20	kg
Permissible total weight in magazine	480	kg
Change positions at head	vertical / horizontal	

Guides, drive and measuring systems

- All axis drives with digital controllers manufactured by HEIDENHAIN
- Direct measuring systems for X, Y, and Z axes manufactured by HEIDENHAIN
- X, Y, and Z axes guided by high-precision linear guides and roller shoes for maximum precision and dynamics
- Drive of the traveling column in the X-axis by means of a rack: Two servo motors with reduction gear and helical pinion engage directly with the rack attached to the base
- Precision ball screws with preloaded nuts for the Y and Z axes

Coolant Tank with paper belt filter

- Two cooling circuits for internal and external cooling
- Frequency-controlled high-pressure pump for internal coolant supply, max. 40 bar
- Tank volume approx. 1,000 l
- Paper belt filter system with automatic feed

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Dimensions and weight

Machine footprint	approx. 18.0 x 6.0	m	Without housing
Total height	approx. 4.9	m	
Machine weight	approx. 40,000	kg	

CNC-Control HEIDENHAIN TNC 640 HSCI

Digital numerical sequence control, including digital drive control, SSD hard disk storage, 19" color flat screen, 2 USB ports for data transfer, and Ethernet interface.

Machining cycles:

Drilling, thread tapping with and without compensation chuck
Deep drilling, reaming, boring, countersinking, centering
Longitudinal and flat trimming cycles, parallel to axis and contour (optional)
Radial/axial grooving cycles (optional)
Radial/axial grooving cycles (combined grooving and roughing movement) (optional)
Milling of internal and external threads
Turning of internal and external threads (optional)
Cycles for gear hobbing and skiving (optional)
Simultaneous roughing and finishing (optional)
Interpolation turning (optional)
Linear and oblique surface turning
Complete machining of straight and circular grooves
Complete machining of rectangular and circular pockets
Point patterns on circles, lines, and DataMatrix codes
Contour drawing, contour pocket
Contour groove using whirl milling
Manufacturer cycles (special cycles created by the machine manufacturer) can be integrated
Engraving cycle: Engrave text or numbers on straight lines and circular arcs

Linear interpolation on 3 axes, circular interpolation on 2 axes and on 3 axes with rotated working plane, swiveling the machining plane

Connection Data

Operating voltage	3 x 400	V
Operating frequency	50	Hz
Maximum current	104	A
Connected load	58	kW
Connection cross-section	50	mm ²

Equipment and Accessories

- Universal milling head, 2.5° indexable, positioning via Hirth coupling
- SK50 BIG Plus spindle, 37 kW, spindle speed max. 5,000 rpm
- HEIDENHAIN TNC 640 HSCI CNC control with HEROS 5 and HEIDENHAIN digital drives
- Manufacturer software "SSV - Spindle Speed Variation": Automatic regulation of spindle speed during the machining process for extended tool life
- Manufacturer software "Adaptive Control": Automatic feed control during the machining process for extended tool life and fewer tool breakages
- Manufacturer software "Accura Heads"
- Manufacturer software „DAS“ – „Dynamics Active Stabilizer“: A sensor-actuator combination eliminates disruptive vibration frequencies in real time during the milling process
- HEIDENHAIN HR520 electronic handwheel with display
- Integrated Brankamp CMS XL Pro collision monitoring with 2 measurement channels
- Automatic tool changer with 60 magazine slots
- Sturdy and spacious clamping area of 11,000 x 2,000 mm in front of the machine, consisting of two separate plate sections with 8 nuts on the table surface
- Coolant system with belt filter, 1,000 l tank volume and two coolant circuits, internal coolant supply with 40 bar
- 1 chip conveyor, between traveling column and the panel section, loading length approx. 11 m, discharge on the right, approx. 1,000 mm above the floor
- Hexagon 3D touch probe (m&h20.41)
- Light barrier monitoring
- High enclosure on the front with optimal accessibility thanks to wide-opening, motor driven operator doors
- Operator platform traveling along the X-axis
- Work area cladding closed on the sides
- Lighting of the operator area
- Lighting of the work area
- Preparation for the fourth axis (rotary table)
- 2 clamping angles with mounting holes + threads, each 3,000 x 1,500 mm (height x width), hole pattern 100 x 100 mm
- Operating hours: Machine ON approx. 18,100 h | Program run approx. 5,800 h



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Subject to errors and prior sale

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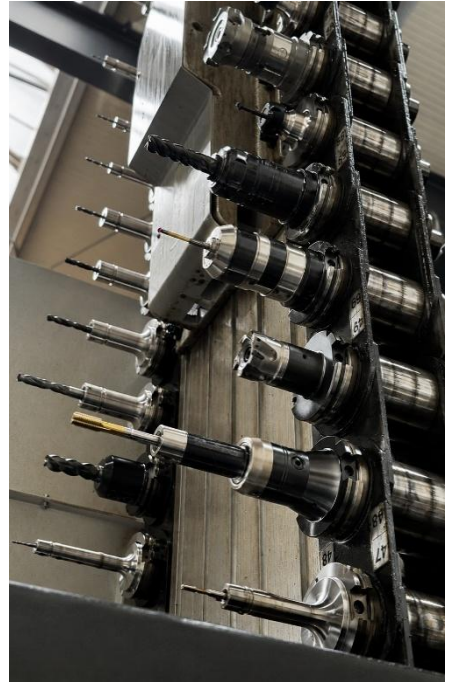
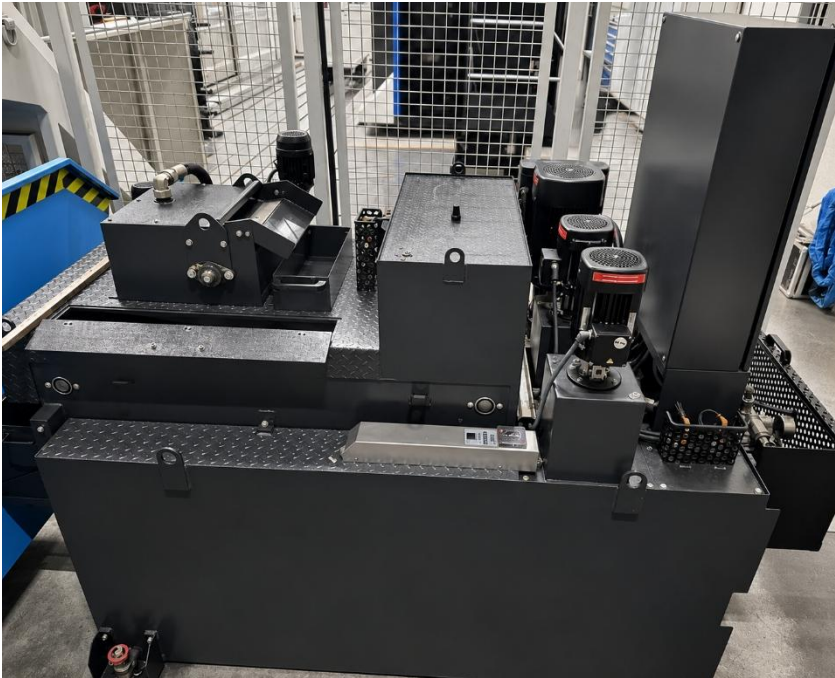
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