

ASCAMILL

A SCHIESS THAT'S FOR SURE



reddot design award
winner 2012

SCHIESS

The machine tools

Set up by the Magdeburg engineer and VDW founding father Ernst Schiess in 1866, SCHIESS quickly progressed to being one of the largest manufacturers for machine tools with several plants and almost 2000 employees. Since then, the name SCHIESS has stood for excellent product quality, precision and efficiency in the field of heavy machine construction.

After merging with Werkzeugmaschinenfabrik Aschersleben GmbH in 1991, the company portfolio today includes large vertical and horizontal machining centers as well as average-sized, highly complex and compact CNC machines, a wide range of services for complete modernizations as well as a well-structured contract machining. Since 2004, SCHIESS is a wholly-owned subsidiary of the biggest machine tool manufacturing holding in China, Shenyang Machine Tool Co. Ltd. (SYMG), which continuously invests in the manufacturing and the development work carried out at Aschersleben.

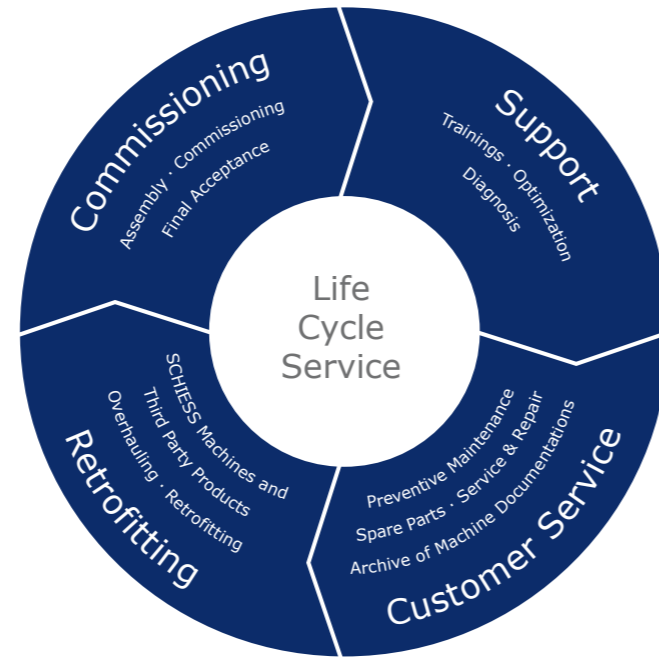
SCHIESS machines are being successfully used in Europe and all over the world for years now. Therefore, our customers are extremely satisfied with SCHIESS and remain loyal to us over decades:

- Long years of experience at the heart of manufacturing companies
- German engineering competence across generations in the field of heavy machine construction
- Renowned references worldwide
- Permanent optimization of the SCHIESS product portfolio with respect to ease of operation and versatility
- Individual maintenance and tight service network
- Fair collaboration



The Service

Life Cycle Service = Always at your Service!



Your partner right from commissioning up to retrofitting – a one-stop shop!



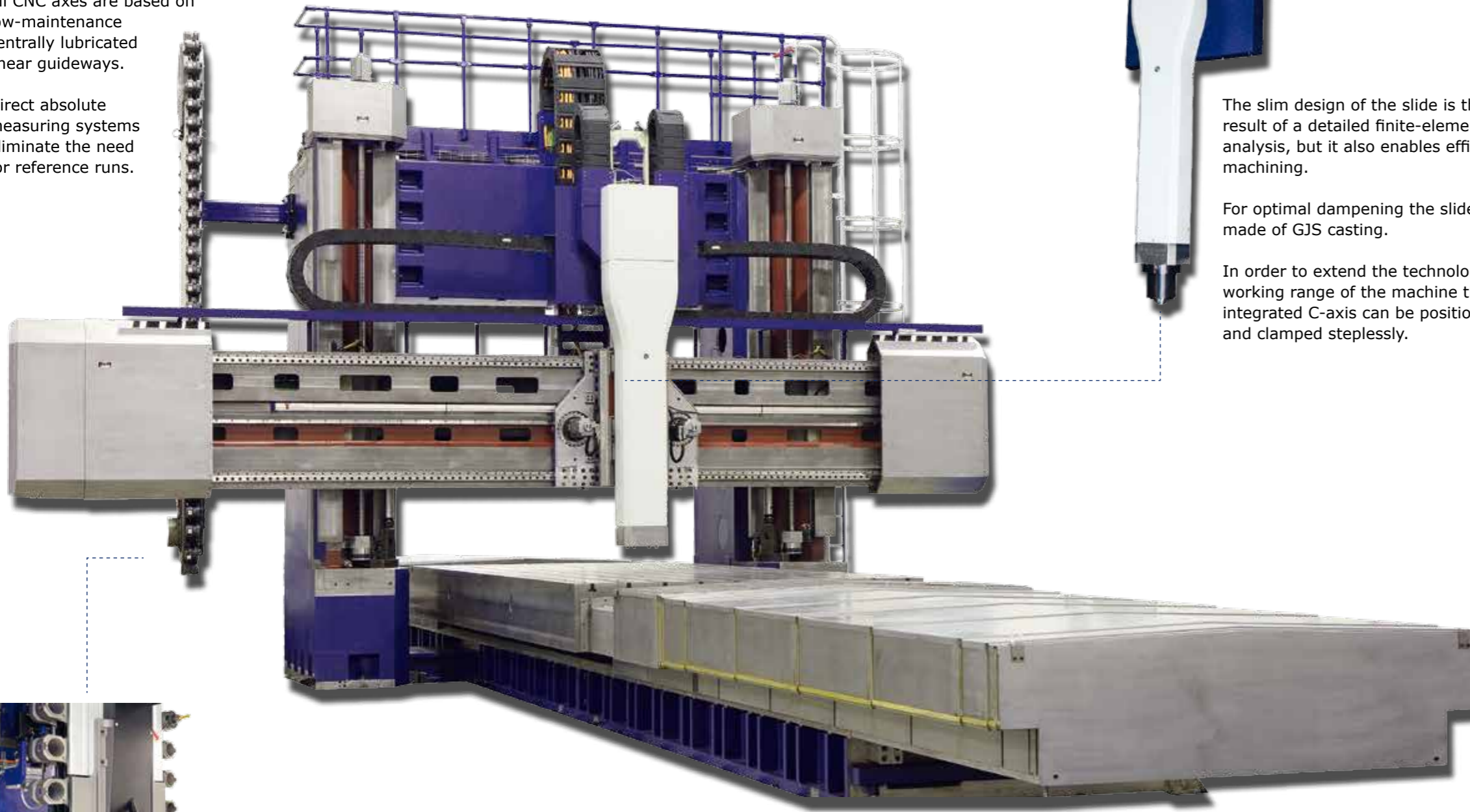
»AT SCHIESS I CAN DESIGN SOMETHING OF LASTING VALUE.«

STABLE, PRECISE & EFFICIENT

Columns, connection parts and cross rail are manufactured by high-quality GJS casting. For optimal positioning the cross rail is stepless adjustable.

All CNC axes are based on low-maintenance centrally lubricated linear guideways.

Direct absolute measuring systems eliminate the need for reference runs.



The proven Masterhead system allows a flexible and technology-specific application of various different machining heads.

The automatic tool changing system with chain magazine is vertically mounted on the left hand column of the machine and can be loaded or unloaded during the machining process.



The slim design of the slide is the result of a detailed finite-element analysis, but it also enables efficient machining.

For optimal dampening the slide is made of GJS casting.

In order to extend the technological working range of the machine the integrated C-axis can be positioned and clamped steplessly.



As standard the machine is equipped with CNC Sinumerik 840 Dsl and energy-efficient servo drives.

Optional with: Fanuc 31i-B



The brand new table design is based on bionic principles and manufactured with a special honeycomb structure. It is inherently highly stable and nevertheless weight optimized.

The table feed in the X-direction as well as the support saddle representing the Y-axis are driven by a servomotor, gears and double pinion/rack. This guarantees maximum stiffness and accuracy. The drives of the linear axes X and Y are electronically pre-loaded.

ASCAMILL T-SERIES
MODERN HOUSING CONCEPT



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Rear view: Chip conveyors and many access doors around the machine to assure excellent maintainability.



Front view: Operator platform and machine control on the right side.

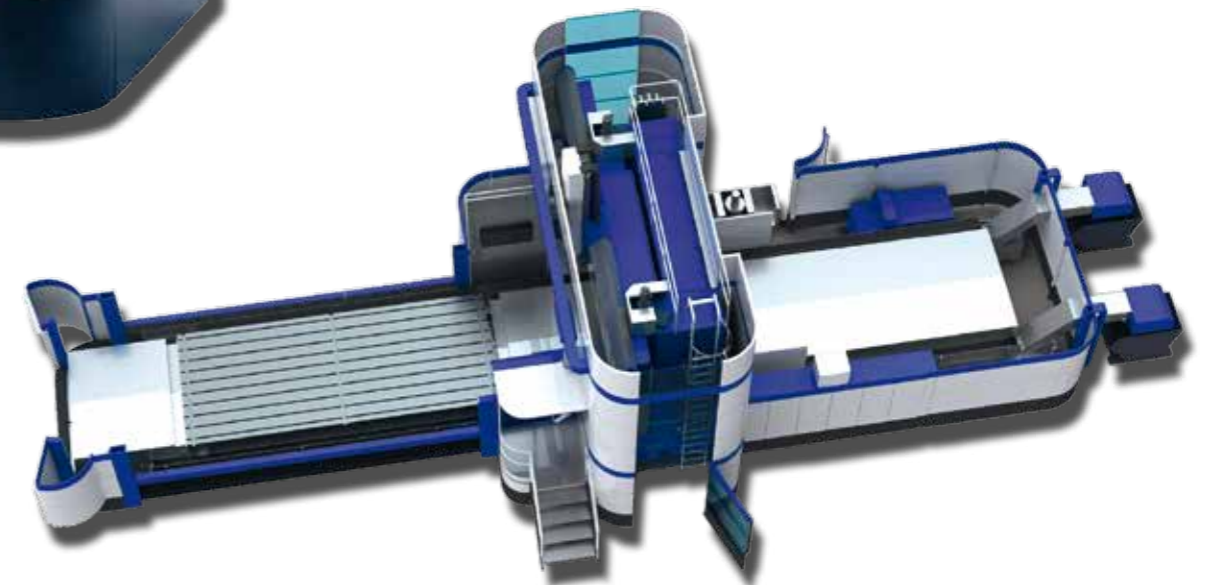
Machine housing around the columns with good access to the head and tool changing system.

Electrically lowering doors for fast and efficient loading / unloading procedures.

Electrical cabinets, coolant device and the hydraulic unit are integrated into the machine housing.



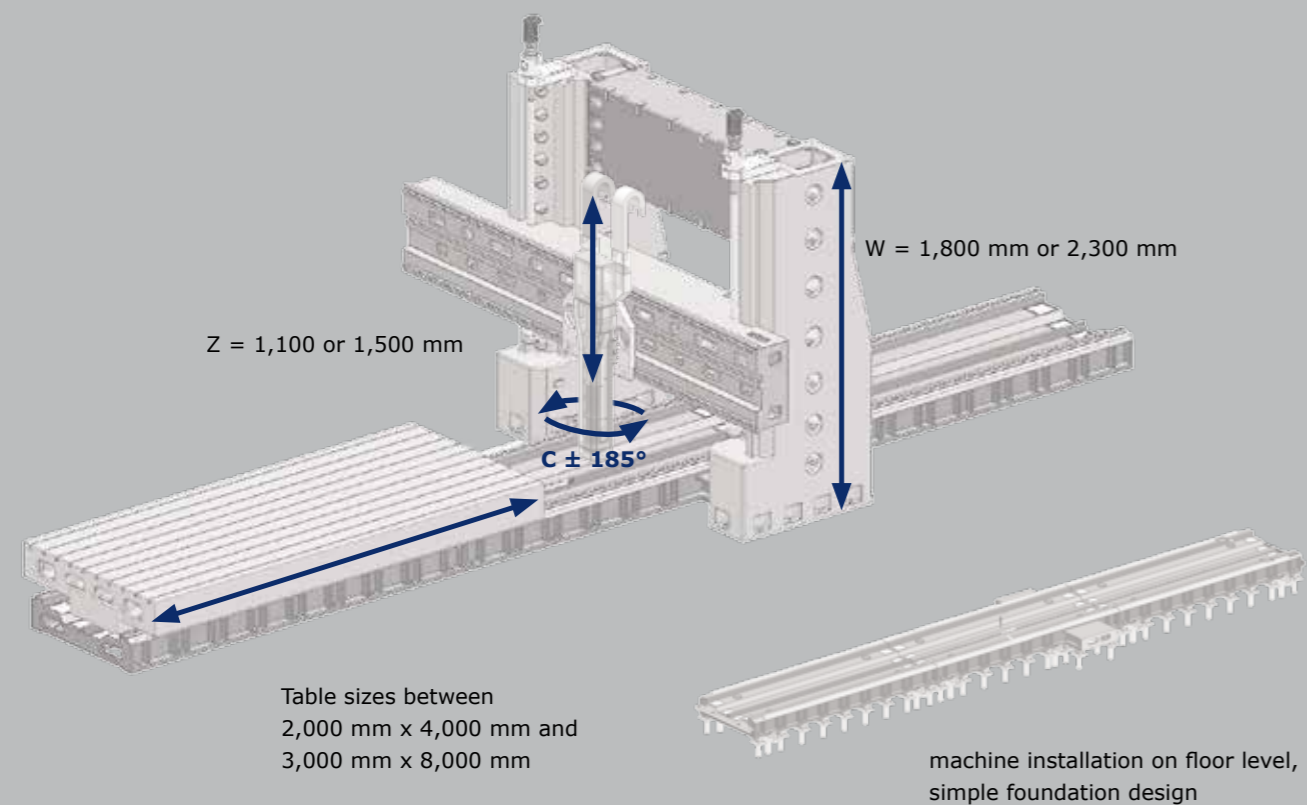
The reddot design award 2012 honoured housing concept is optionally available.



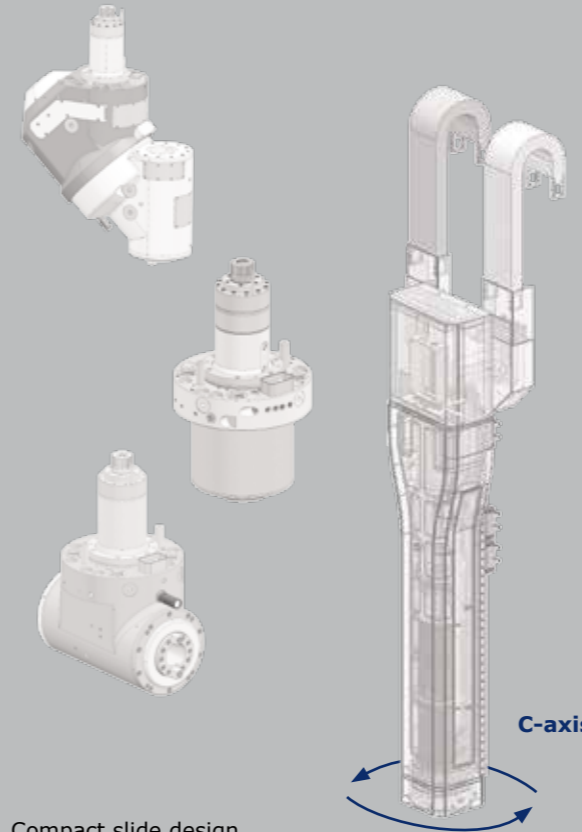
The Highlights

- Modular design kit to adjust the machine to your individual machining tasks (choice between several table sizes, different passage heights and Z-axis travels, ...)
- High-quality visual appearance
- Cross rail height is steplessly adjustable for maximum stiffness during machining
- Masterhead system for highest flexibility
- Modern, energy-efficient servo drives
- Direct absolute scales on all axes for maximum precision
- Electronic pre-loading of X- and Y-axes for backlash elimination
- Easy and fast installation via fixators
- Optimal accessibility for shorter maintenance and servicing times

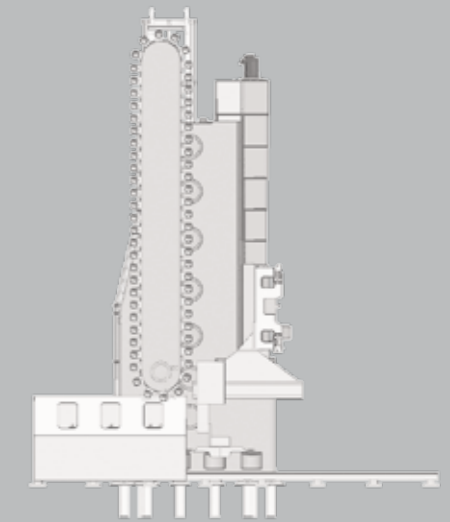
Portal, Cross Rail, Table, Support



Slide and Machining Heads



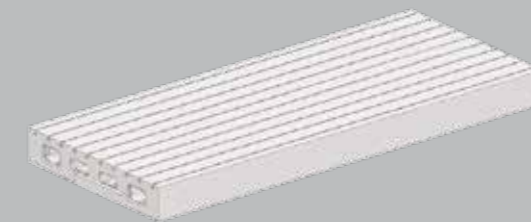
Automatic Head & Tool Changing System



Head changing system with three head stations [additional stations optionally available]

Tool magazine for 40 tools [optional 60, 80, 120 tools or more on request]

Table Sizes



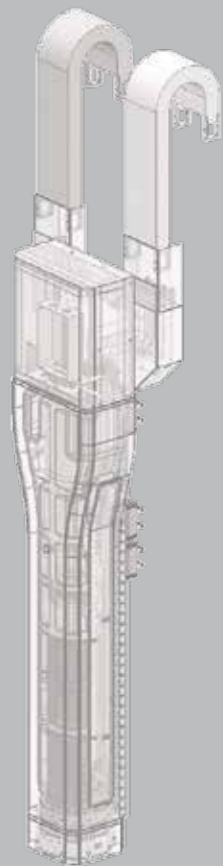
2,000 x 4,000 mm	2,500 x 5,000 mm	3,000 x 6,000 mm
2,000 x 5,000 mm	2,500 x 6,000 mm	3,000 x 8,000 mm

Additional sizes optional

Machining Heads & Support

The proven Masterhead principle allows a flexible and technology-orientated adaption of different machining heads to solve complicated and complex machining operations.

Support with C-Axis



Main spindle

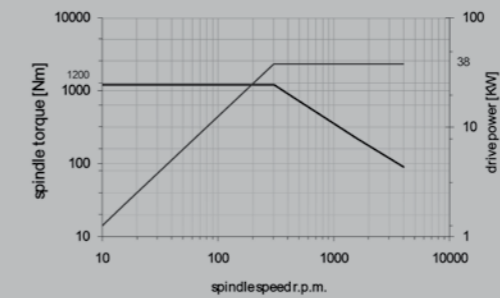
Drive power (S1)	38 kW
Spindle speed	4,000 rpm [optional 6,000 rpm]
Max. spindle torque	1,200 Nm
C-Axis, stepless positioning	± 185 Degree
C-Axis, max. clamping torque	6,000 Nm

Slide (Z-Axis)

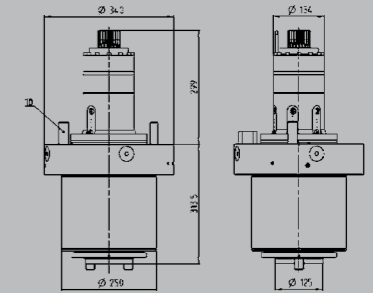
Travel	1,100 mm [optional 1,500 mm]
Cross section	380 x 360 mm
Guiding system	Linear guides [optional sliding guides]
Drive system	Ball screw
Scales	Absolute, direct

Machining Heads

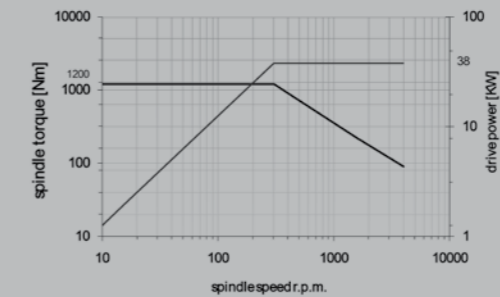
Straight Drilling and Milling Head GB 1



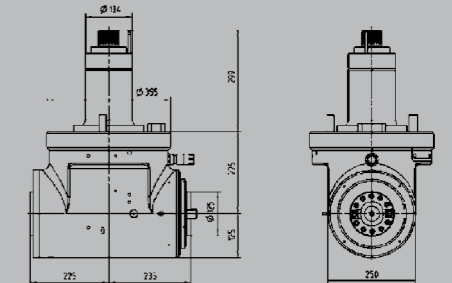
- Max. power on drive 38 kW
- Max. spindle torque 1,200 Nm
- Max. spindle speed 4,000 rpm [6,000]
- Transmission 1:1



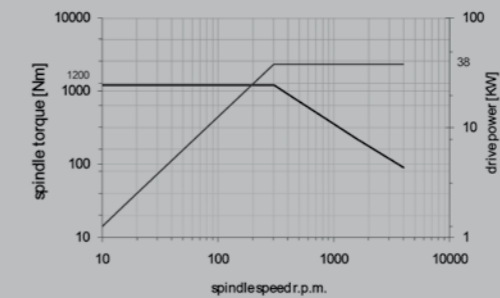
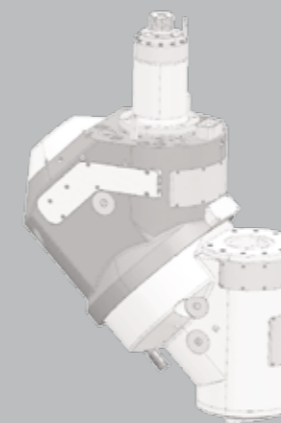
Angular Drilling and Milling Head WB 1



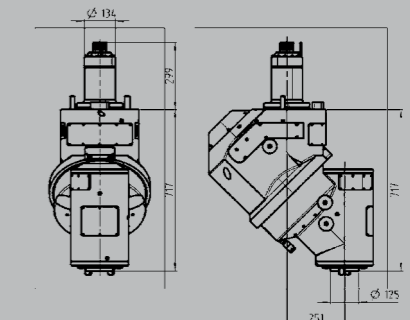
- Max. power on drive 38 kW
- Max. spindle torque 1,200 Nm
- Max. spindle speed 4,000 rpm [6,000]
- Transmission 1:1



Orthogonal Head OB 1

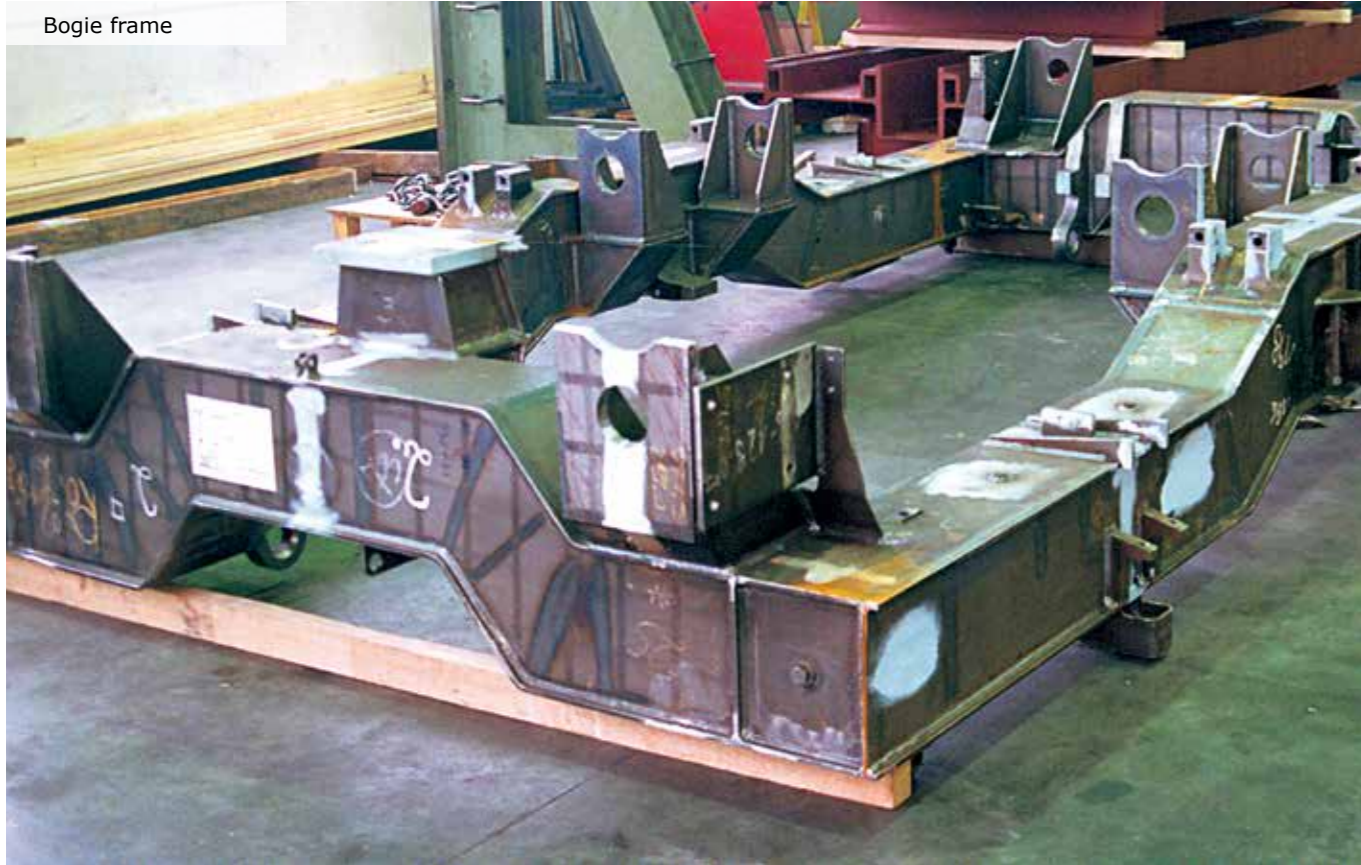


- Max. power on drive 38 kW
- Max. spindle torque 1,200 Nm
- Max. spindle speed 4,000 rpm [6,000]
- Transmission ratio 1:1
- Stepless positioning of A-Axis

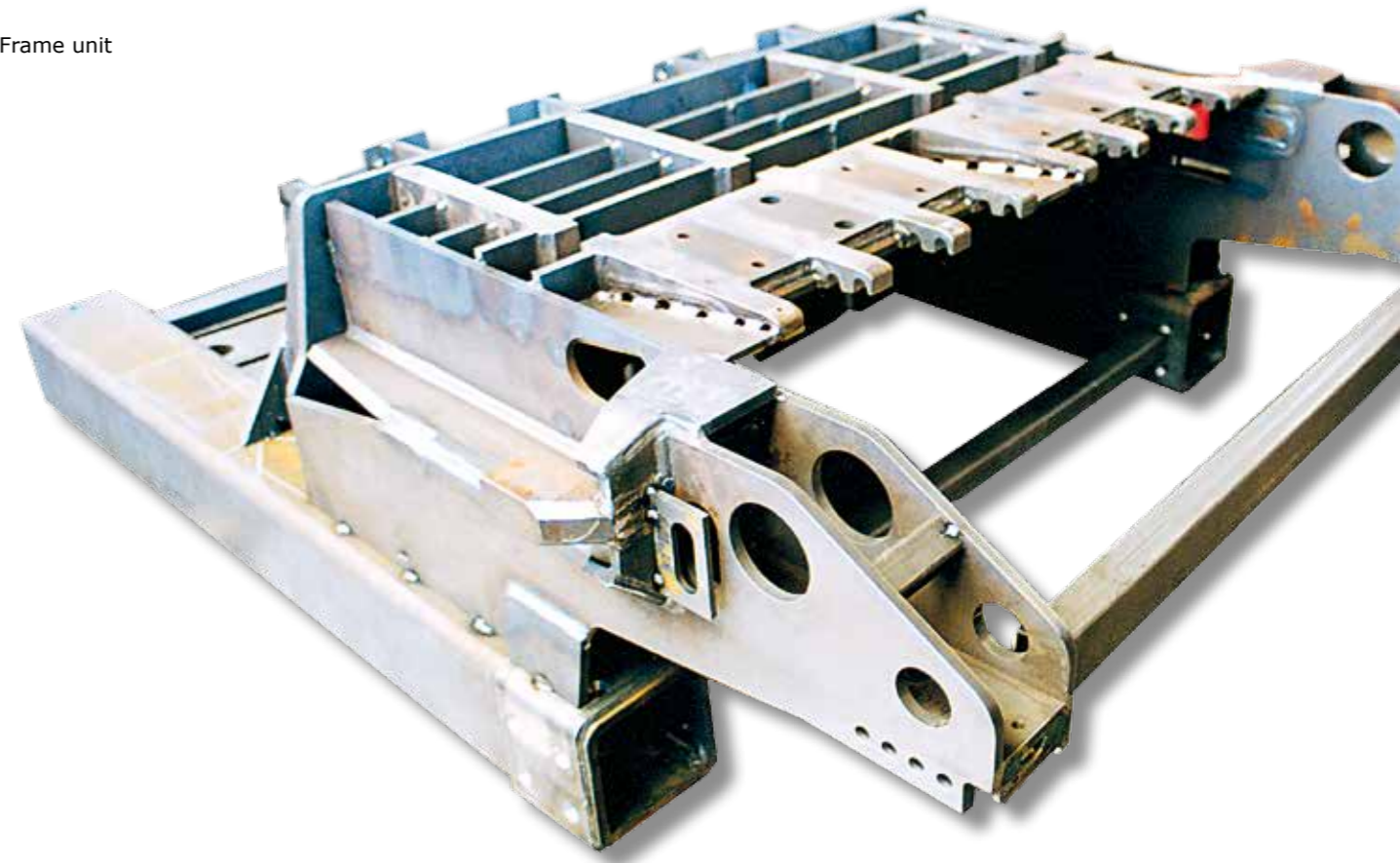


Other heads available as option

Bogie frame



Frame unit



Support frame



Basement



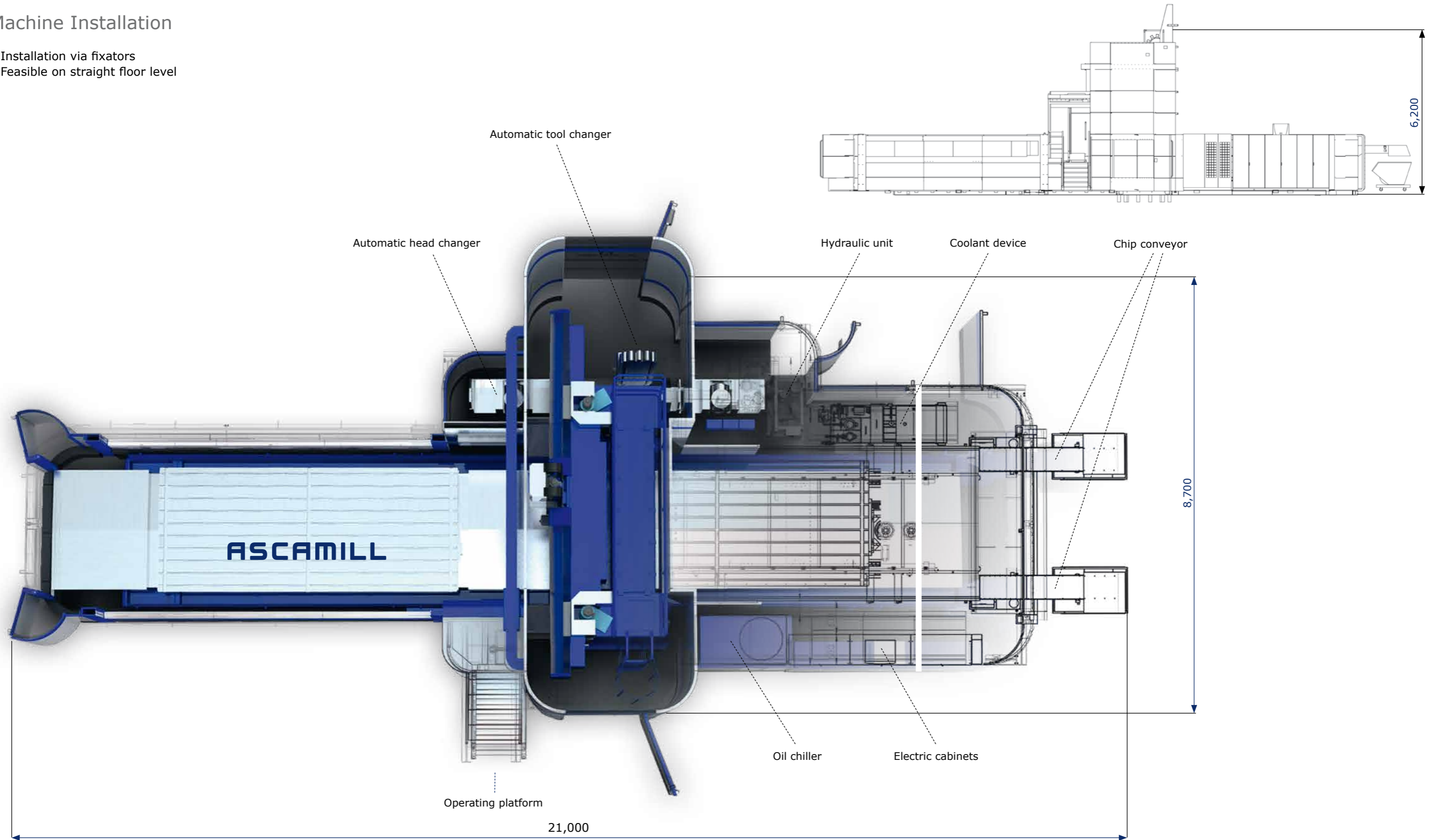
Steel chamber



ASCAMILL T-SERIES
FLOOR PLAN

Machine Installation

- Installation via fixators
- Feasible on straight floor level



ASCAMILL T-SERIES STANDARD EQUIPMENT & OPTIONS

Machine Type		T-2040	T-2050	T-2550	T-2560	T-3060	T-3080
Table Size (Width x Length)	mm	2,000 x 4,000	2,000 x 5,000	2,500 x 5,000	2,500 x 6,000	3,000 x 6,000	3,000 x 8,000
Max. Table Load	kg	20,000	20,000	25,000	30,000	30,000	40,000
Working Area							
Clearance between Machining Head GB1 and Table Surface	mm	2,100 [2,600]					
Slide (Z-Axis)							
Travel	mm	1,100 [1,500]					
Main Spindle							
Max. Spindle Speed	rpm	4,000 [6,000]					
[...] = Option							
						Standard	Option
Working Area							
Workspace Lightning in LED Design							x
Passage Height Increase to 2,600 mm							x
Camera System for Workspace Monitoring							x
Axes							
Linear Guides in X-, Y- and Z-Axis						x	
Electronic Pre-Loading of X- and Y-Axis						x	
Ball Screw in Z-Axis						x	
Continuously Adjustable Cross Rail						x	
Increase of Max. Feed Rate X-Axis to 30 m/min							x
Increase of Max. Feed Rate Y-Axis to 30 m/min							x
Slide							
C-Axis as Positioning Axis, Continuous \pm 185°						x	
Linear Guides						x	
Sliding Guides							x
Increase of Z-Axis Travel to 1,500 mm							x
Main Spindle							
Increase of Max. Spindle Speed to 6,000 rpm							x
Head and Tool Changer							
Automatic Head and Tool Changer						x	
Additional Control Station for Tool Magazine						x	
Storage for Three Heads						x	
Additional Storage for Heads							x
Tool Taper							
SK50						x	
HSK							x
BT50							x
CAPTO							x
Fully Electronic Tool Changer						x	
Tool Magazine Capacity							
40 Tools (Chain Type)						x	
60 Tools (Chain Type)							x
80 Tools (Chain Type)							x
100 Tools (Chain Type)							x
120 Tools (Rack Type)							x
Drilling Heads and Milling							
Straight Head GB1						x	
Angular Head WB1							x
Universal Head OB1							x
Extended Straight Head GB1 X							x
Extended Angular Head WB1 X							x
Straight Facing Head							x

	Standard	Option
Angular Facing Head		x
Table		
T-Slots 28H12 x 250 mm (1x Aligning Slot 28H7), DIN 650	x	
Twin Tables		x
Pallet Changer		x
Embedded Faceplate		x
Connection for Hydraulic Clamping Fixtures		x
Cooling System		
Coolant System Internal/External	x	
Paperband Filtration System	x	
Tank Capacity 1,400 Liter	x	
Increase of Tank Capacity		x
Internal Coolant Pressure 20 bar	x	
Increase of Coolant Pressure		x
Coolant Gun at Operator Station		x
Coolant Shower to the Table		x
Oil Skimmer	x	
Measuring Systems		
Absolute Scales on All Linear Axes and Rotary Axis C	x	
Workpiece Measuring Probe		x
Tool Measuring System		x
Tool Breakage Control		x
Machine Housing		
Designer Housing Blue/White		x
Electric Lowering of Left Loading Gate		x
Electric Lowering of Right Loading Gate		x
Split Manual Frontal Loading Gate		x
Functional Sheet Metal Housing	x	
Electric Lowering of Left Loading Gate		x
Electric Lowering of Right Loading Gate		x
Split Manual Frontal Loading Gate		x
Fencing and Minimal Safety Covers (at Lowered Machine Foundation)	x	
Additional Covers incl. Interface for Oil and Mist Collector		x
Customized Varnish for Machine Housing		x
Rotoclear Windows		x
Chip Disposal		
Hinge-Type Chip Conveyor, 2 Pcs.	x	
Chip Channel		x
Chip Container, Moveable		x
Additional		
Temperature Monitoring for Error Analysis (Not for Feedback Control)	x	
Signal Lamp 4-Stages		x
Electronic Hand Wheel		x
Automatic Machine Shutdown (Energy Savings)		x
Electric Cabinet		
Cooling with Cold Plate Technology	x	
Control		
Siemens 840 Dsl	x	
Fanuc 31i-B		x
Software		
Autinty (SCHIESS made)	x	
CAD/CAM NX		x

Machine Type		T-2040	T-2050	T-2550	T-2560	T-3060	T-3080
Table Size (Width x Length)	mm	2,000 x 4,000	2,000 x 5,000	2,500 x 5,000	2,500 x 6,000	3,000 x 6,000	3,000 x 8,000
Max. Table Load	kg	20,000	20,000	25,000	30,000	30,000	40,000
T-slots (1x Reference Slot), DIN 650		28 H12 x 250 mm					
Table Guiding System		Linear guides					
Table Drive		Rack and Pinion with Servo motors, Electronically Pre-loaded					
Working Area							
Passage Height Under Spindle Head (GB1)	mm			2,100 [2,600]			
Passage Width	mm	2,600		3,100		3,600	
Slide (Z-Axis)							
Travel	mm			1,100 [1,500]			
Cross-section	mm			380 x 360			
Feed Rate / Rapid Traverse Rate	mm/min			20,000			
Spindle							
Max. Speed	rpm			4,000 [6,000]			
Power (S1)	kW			38			
Max. Torque	Nm			1,200			
Spindle Speed Nominal	rpm			300			
Spindle Drive				Siemens 1FE1116-6WR11			
Tool Clamping				SK50			
				Masterhead-Principle			
C-Axis, stepless	Degree			± 185			
C-Axis, Clamping Torque	Nm			6,000			
W-Axis (Cross Rail)							
W-Drive				Ball Screw			
Guiding System				Sliding with Clamping			
Scales				Absolute Direct			
X-/Y-Axis							
Drive				Rack and Pinion with Servo motors, Electronically Pre-loaded			
Guiding System				Linear			
Scales				Absolute Direct			
Z-Axis (CNC)							
Z-Drive				Ball Screw			
Guiding System				Linear			
Scales				Absolute Direct			
Travel							
X-Axis				Table Length + 500 mm			
Y-Axis				Passage Width + 2,000 mm			
Z-Axis	mm			1,100 [1,500]			
W-Axis	mm			1,800 [2,300]			
Max. Rapid Speeds							
X-Axis	m/min			25			
Y-Axis	m/min			25			
Z-Axis	m/min			20			
W-Axis	m/min			3			

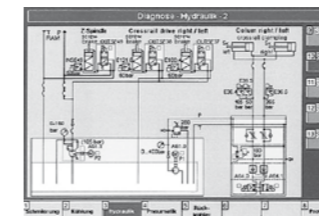
[...] = Option

Easy Operation Combined with the Latest Technology

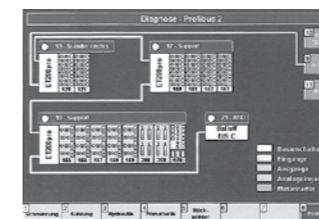
- Control Siemens 840 Dsl incl. Safety Integrated (Fanuc or as option)
- Graphical displays for monitoring and setting up the machine:



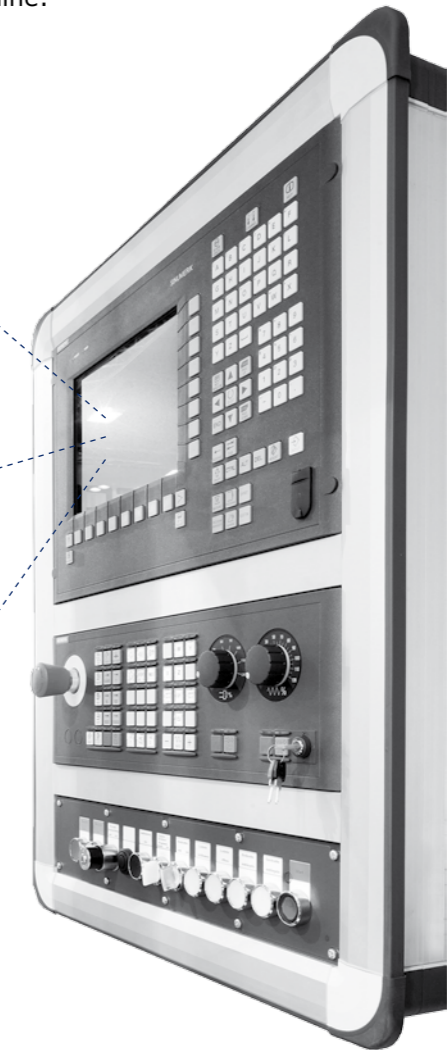
Programming of peripheral devices like chip conveyors



Monitoring of machine functions, e.g. lubrication cycles



Support in case of default analysis, e.g. hydraulic and pneumatic circuits



Telediagnosis System

Our Telediagnosis System "Autinity" collects and stores data from the production process, e.g. machine status, fault reports, etc.

These data are available for evaluations locally or via Internet by the SCHIESS Service Department. We can also program customer-specific applications.





Please visit our website for further information

WWW.SCHIESS.DE

THE ASCA-SERIES PRODUCT LINE-UP



ASCAMILL



ASCATURN



ASCARAPID

SCHIESS GmbH

Ernst-Schiess-Strasse 1
06449 Aschersleben
Germany

Contact - Sales

☎ +49 (0) 3473 968-333
☎ +49 (0) 3473 968-121
✉ vertrieb@schuess.de

Contact - Service

☎ +49 (0) 3473 968-222
☎ +49 (0) 3473 968-146
✉ service@schuess.de

SCHIESS