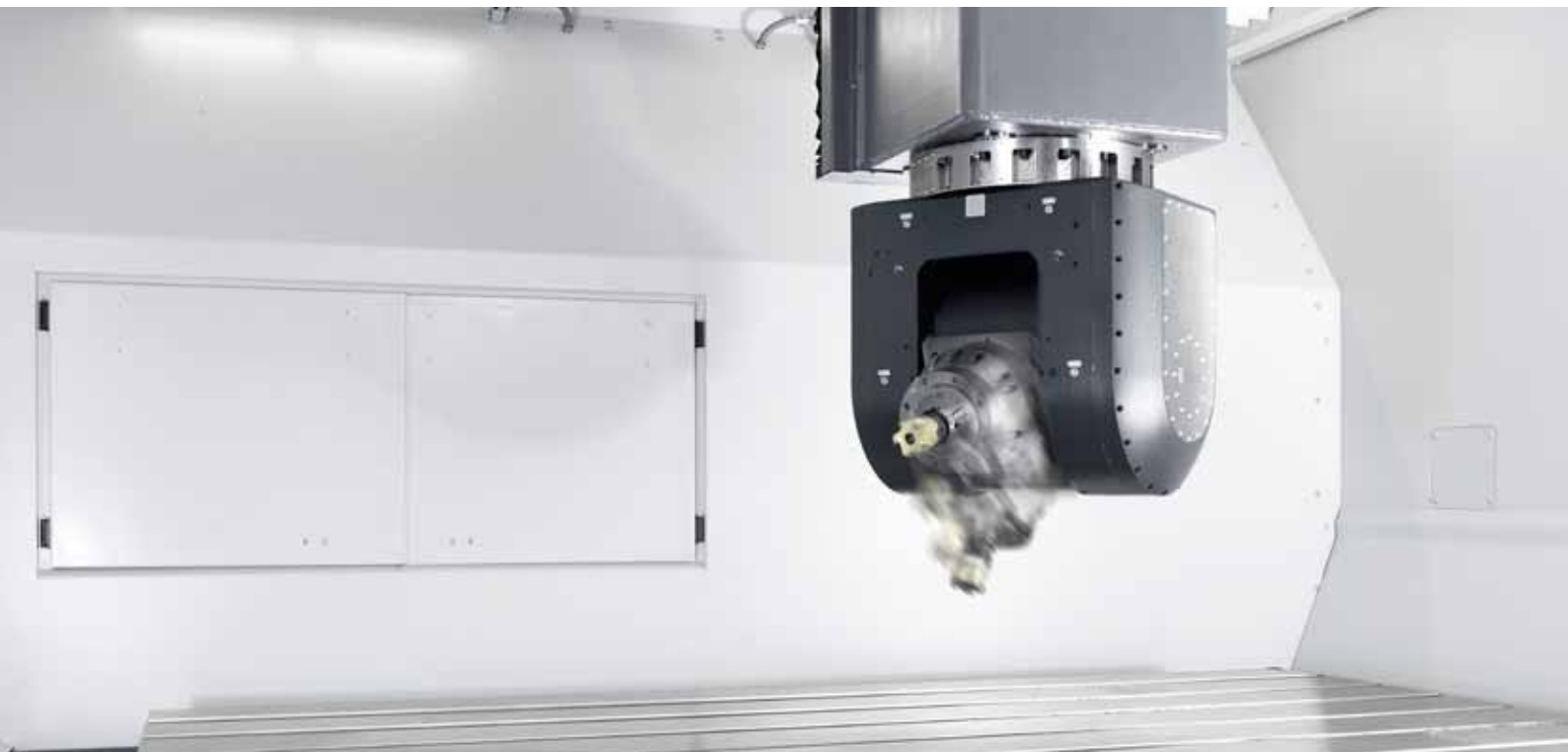




MANUFACTURER OF
CNC MILLING AND
MACHINING CENTRES

CNC MILLING AND MACHINING CENTRES



THE COMPANY

EiMa Maschinenbau GmbH develops, manufactures and sells CNC milling and machining centres.



Who we are

The EiMa Maschinenbau GmbH is located in Frickenhausen in Baden-Württemberg, Germany and customers in completely different sectors appreciate our competence in mechanical engineering acquired over a period of more than 30 years. EiMa machines are used in the automotive industry, in the aviation and aerospace technology as well as in model and mould making.

The portfolio

The portfolio comprises machines for 5-axis machining of the most different materials such as e.g. steel, aluminium, plastics and composites. These are all areas in which there is a need for particularly high precision, a high degree of process reliability and individual solutions.

Our objectives

Each material, each industry sector places the most different requirements on CNC machining. In cooperation with our customers we continuously develop individual solutions for their requirements. EiMa CNC machining centres convince thanks to our long experience, the efficiency and flexibility.



Individual solutions for individual requirements



Your
requirements

Our
solutions

GAMMA S

This starter machine is extremely well suited for machining many different workpiece shapes and materials.

Aluminium, plastics and wood are its métier, along with the finishing of CFRP parts (carbon fibre and composites). The top-moving portal ensures that the usual high precision is also achieved in the production of models and moulded parts. The standard configuration includes a tool changer for 12 tools and a modern 840D sl controller. Thanks to its geometry, the specially developed 5-axis milling head with a 12 kW or 15 kW spindle is also suitable for machining those difficult-to-reach points on workpieces.



Technical data

Series:	GAMMA S	
Controller:	Siemens 840D sl, Heidenhain iTNC 530 HSCI	
5-axis milling head:	S2	
Drive technology:	X-axis Y-axis Z-axis	Rack drive Rack drive Rack drive
Protection device:	Complete housing with folding sliding roof	
Tool changer:	12 magazine places as pick-up magazine (option 24 magazine places)	
Machine table:	Steel load-supporting members with threaded holes and a fitting groove (aluminium or cast iron table optionally)	
Travel distances:	X/Y-axis	3,000 x 2,000 mm; 3,500 x 2,500 mm
	Z-axis	1,000 or 1,250 mm
Travel speed:	X-axis	70 m/min
	Y-axis	70 m/min
	Z-axis	40 m/min
Materials:	Aluminium, plastics, CFRP, wood	

GAMMA T / Td

Model and mould making places its own particular set of demands on a machining centre; this series meets these demands in full – including for large-volume components out of aluminium and ureol or even for light HSC steel machining.

In these areas too, the proven components of the modular system can be tailored to individual jobs. The linear design in particular brings the user maximum dynamics combined with highest accuracy thanks to the mechatronically calculated machine concept. The machine is equipped with a fully developed chip management system which impresses with its excellent chip disposal system that incorporates self-cleaning chip baffle plates and insensitive, high quality chip conveyors.



Technical data

Series:	GAMMA T/linear		GAMMA Td
Controller:	Siemens 840D sl, Heidenhain iTNC 530 HSCI		
5-axis milling head:	C3		
Drive technology:	X-axis Y-axis Z-axis	Rack drive/linear motor Rack drive/linear motor Rack drive	Rack drive Rack drive Rack drive
Protection device:	Complete housing with folding sliding roof		
Tool changer:	20 or 30 tools in the plate magazine (optionally 40 or 60 places)		
Machine table:	Grey cast iron table with T-slots (opt. aluminium grid plate)		Grey cast iron table or steel load-supporting members
Travel distances:	X/Y-axis Z-axis	2,500 x 2,000 mm; 3,500 x 2,500 mm; 1,250 or 1,500 mm	3,000 x 2,000 mm; 2,500 x 4,000 mm
Travel speed:	X-axis Y-axis Z-axis	60 m/min / 100 m/min 60 m/min / 100 m/min 40 m/min / 40 m/min	60 m/min 60 m/min 40 m/min
Materials/applications:	Aluminium, plastics, model making, mould making, Wet machining optionally		light steel machining Dry machining or minimal quantity lubrication

GAMMA XT

This particularly robust series has proven itself superbly in the heavy-duty HSC machining of high-volume steel and aluminium components.

It is used in mechanical engineering and in model and mould making. This machine can also be used for steel machining operations. The modular principle means that the machining centre can be precisely tailored to meet the operator's individual needs. The mechatronically calculated machine concept guarantees maximum dynamics. You have a choice of motor spindles with HSK-A63 and HSK-A100, and torques up to 145 Nm.



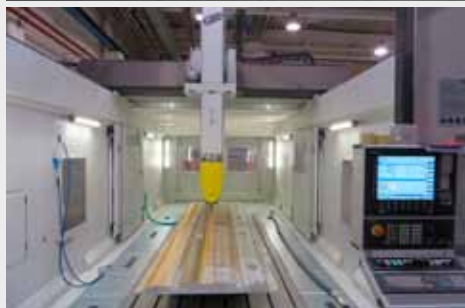
Technical data

Series:	GAMMA XT		
Controller:	Siemens 840D sl, Heidenhain iTNC 530 HSCI		
5-axis milling head:	XCD4, C3		
Drive technology:	X-axis	Rack drive Master-Slave	
	Y-axis	Rack drive Master-Slave	
	Z-axis	Rack drive	
Protection device:	Complete housing with folding sliding roof		
Tool changer:	20 or 30 tools in the plate magazine (optionally 60 to 200 places)		
Machine table:	Grey cast iron table with T-slots		
Travel distances:	X/Y-axis	2,500 x 2,000 mm;	3,000 x 2,000 mm; 3,500 x 2,500 mm
	Z-axis	1,250 to 1,750 mm	
Travel speed:	X-axis	60 m/min	
	Y-axis	60 m/min	
	Z-axis	40 m/min	
Materials/applications:	Steel machining, heavy aluminium machining, model making, mould making		

GAMMA L

Machining centre for high-volume components, mainly made of aluminium or ureol.

Sturdy construction, top-moving portal, precise material machining. The well thought-through, fully developed modular system guarantees optimum adaptation to any machining job and any workpiece size. Its range of application extends from 1:1 models used in automobile design, to aircraft parts and boat hulls to waggon construction components.



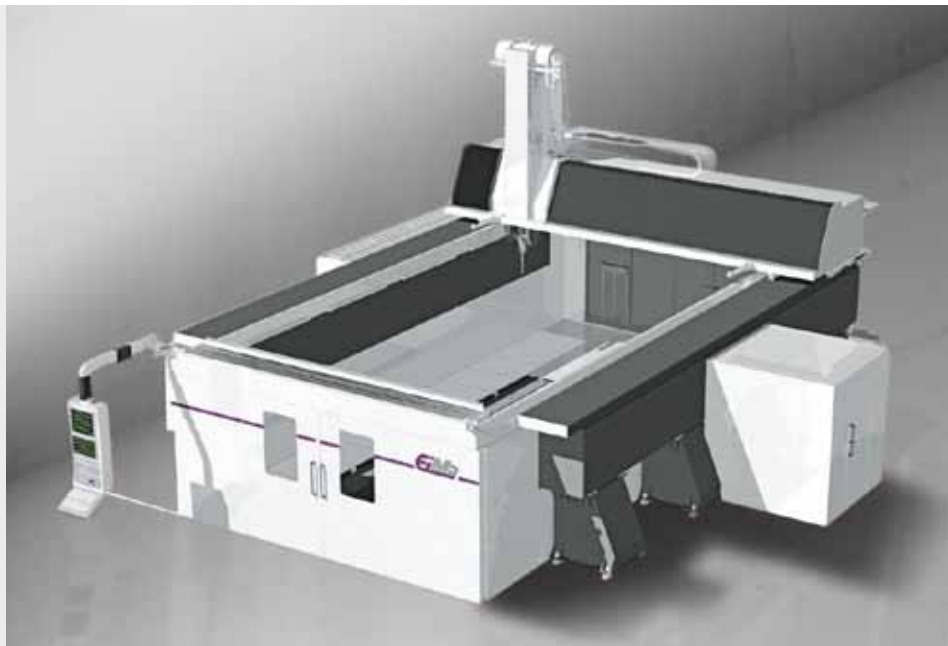
Technical data

Series:	GAMMA L		
Controller:	Siemens 840D sl, Heidenhain iTNC 530 HSCI		
5-axis milling head:	C3, C3E		
Drive technology:	X-axis	Rack drive	
	Y-axis	Rack drive	
	Z-axis	Rack drive	
Protection device:	Complete housing with folding sliding roof		
Tool changer:	20 or 30 tools in the plate magazine		
Machine table:	Grey cast iron table with T-slots (optionally aluminium grid plate)		
Travel distances:	X-axis	2,500 mm	to 3,500 mm
	Y-axis	3,000 mm	to 20,000 mm
	Z-axis	1,000 mm	to 2,000 mm
Travel speed:	X-axis	60 m/min	
	Y-axis	60 m/min	
	Z-axis	40 m/min	
Materials/applications:	Aluminium, plastics, model making, mould making		

GAMMA XL

The GAMMA XL series was developed for heavy HSC machining of high-volume components made of steel and aluminium.

Its superb properties make it particularly well suited to the exacting demands in mechanical engineering – but also in model and mould making. In this field too, the perfect modular system guarantees optimum adaptation to any machining job. Maximum dynamics combined with highest accuracy are achieved thanks to electrically pre-stressed servo gears, master-slave-function. You can choose between motor spindles with HSK-A63 and HSK-A100, and torques up to 145 Nm.



Technical data

Series:	GAMMA XL		
Controller:	Siemens 840D sl, Heidenhain iTNC 530 HSCI		
5-axis milling head:	XCD4, S4		
Drive technology:	X-axis	Rack drive Master-Slave	
	Y-axis	Rack drive Master-Slave	
	Z-axis	Rack drive	
Protection device:	Complete housing with folding sliding roof		
Tool changer:	20 or 30 tools in the plate magazine (optionally 60 to 200 places)		
Machine table:	Grey cast iron table with T-slots (optionally aluminium grid plate)		
Travel distances:	X-axis	2,500 mm	to 3,500 mm
	Y-axis	3,000 mm	to 20,000 mm
	Z-axis	1,250 mm	to 1,750 mm
Travel speed:	X-axis	60 m/min	
	Y-axis	60 m/min	
	Z-axis	40 m/min	
Materials/applications:	Steel machining, heavy aluminium machining, model making, mould making		

ALPHA

This series offers you the ideal machine concept specifically for aluminium, plastic or CFRP profile machining.

By using appropriate accessories such as rod loaders and a rod magazine, automatic clamping fixtures and workpiece grippers from the EiMa modular system kit, the machine can be converted into an unmanned production cell, if desired. The system has proved to be extremely successful in practical use, resulting in tail lifts, automotive parts, roof railings and many other workpieces being made on the ALPHA.



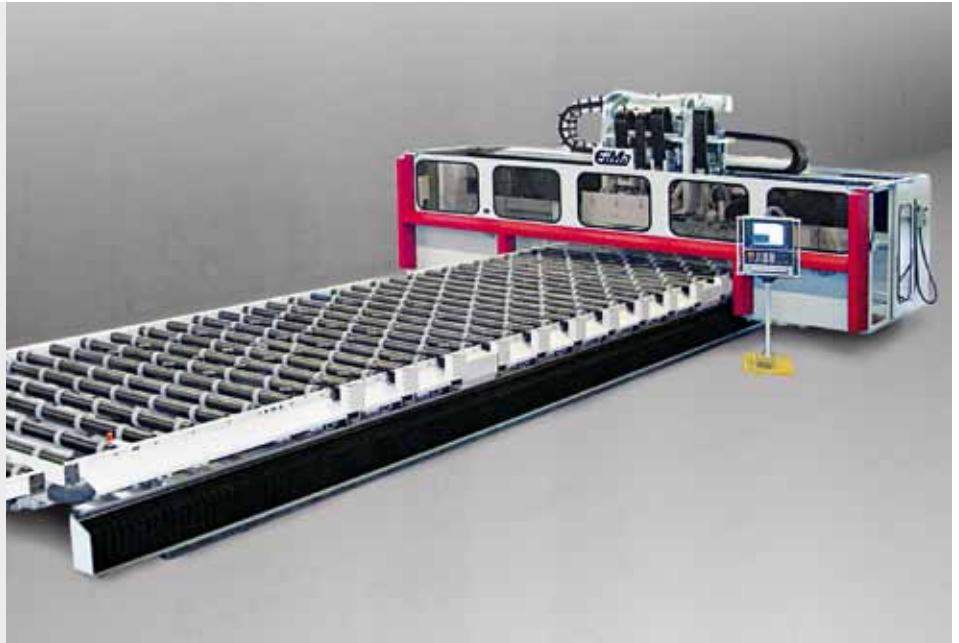
Technical data

Series:	<i>ALPHA</i>		
Controller:	Siemens 840D sl		
5-axis milling head:	S2, C3E		
Drive technology:	X-axis	Rack drive	
	Y-axis	Ball screw drive	
	Z-axis	Ball screw drive	
Protection device:	Complete housing with sliding doors		
Tool changer:	12/25/31 magazine places; pick-up magazine place for special tools; special design upon request		
Machine table:	Steel load-supporting members or clamps, manual or CNC-controlled; optionally steel frame table. Individual adaptable clamping stations.		
Travel distances:	X-axis	2,500 mm	to 20,000 mm
	Y-axis	1,000 mm	to 1,200 mm
	Z-axis	300 mm	to 700 mm
Travel speed:	X-axis	60 m/min	
	Y-axis	60 m/min	
	Z-axis	40 m/min	
Materials:	Aluminium, plastics, CFRP		

OMEGA

The OMEGA offers the optimum solution wherever there is a need for the precise machining of large-surface components.

It is used very successfully in a wide variety of industries: Vehicle, caravan and waggon construction, prefabricated house building, and also Plexiglas and sheet metal working – to mention just a few examples. Specially developed clamping fixtures, handling systems and the networking in production lines guarantee both competition advantages and an excellent price/performance ratio.



Technical data

Series:	<i>OMEGA</i>		
Controller:	Siemens 840D sl		
5-axis milling head:	C3E, S2, C2		
Drive technology:	X-axis	Rack drive	
	Y-axis	Rack drive	
	Z-axis	Ball screw drive	
Protection device:	Cabin moving with portal or complete housing		
Tool changer:	12/24 magazine places, pick-up magazine for special tools; special design upon request		
Machine table:	Steel load-supporting members or clamps, manual or CNC-controlled; optionally steel frame table. Individual adaptable clamping stations.		
Travel distances:	X-axis	2,500 mm	to 20,000 mm
	Y-axis	1,000 mm	to 4,500 mm
	Z-axis	300 mm	to 1,500 mm
Travel speed:	X-axis	60 m/min	
	Y-axis	60 m/min	
	Z-axis	40 m/min	
Materials:	Aluminium, plastics, wood, composites		

SIGMA

With its double-table design, the SIGMA is second to none in terms of unit costs.

In tandem with a double head, two-table machining also eliminates those non-productive times. This is almost like having a second machine. This advantage really makes itself felt in the machining of long profiles and automotive parts with longer workpiece machining times. Here too, specially developed additional equipment such as clamping fixtures and handling systems supplement the machine to create an individual machining cell.



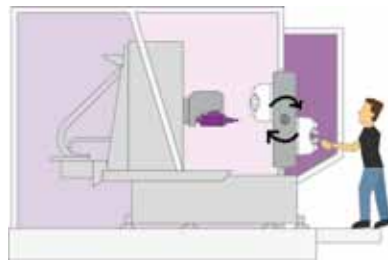
Technical data

Series:	<i>SIGMA</i>		
Controller:	Siemens 840D sl, Heidenhain iTNC 530 HSCI		
5-axis milling head:	C3, C3E, S2, C2		
Drive technology:	X-axis	Rack drive	
	Y-axis	Rack drive	
	Z-axis	Rack drive	
Protection device:	Complete housing, optionally with moving table		
Tool changer:	12/24 magazine places, pick-up magazine for special tools; special designs upon request		
Machine table:	Steel load-supporting members or clamps, manual or CNC-controlled. Individual adaptable clamping stations, optionally aluminium table		
Travel distances:	X-axis	2,500 mm	to 20,000 mm
	Y-axis	1,000 mm	to 6,000 mm
	Z-axis	300 mm	to 1,500 mm
Travel speed:	X-axis	60 m/min	
	Y-axis	60 m/min	
	Z-axis	40 m/min	
Materials:	Aluminium, plastics, CFRP		

BETA

The travelling column machine **BETA** developed for series production of CFRP parts offers the decisive advantages thanks to its turntable concept.

The setting-up during the machining operation guarantees a high production output, the separate loading and machining area allows an excellent safety and ergonomic concept. The chip management reduces cleaning times of workpiece and machine to a minimum. The optimized machining area reduces cost intensive extraction capacities. Fitting individual clamping fixtures as well as the equipment with one or two milling units round off the machine concept for machining of plastics, composites as well as aluminium.



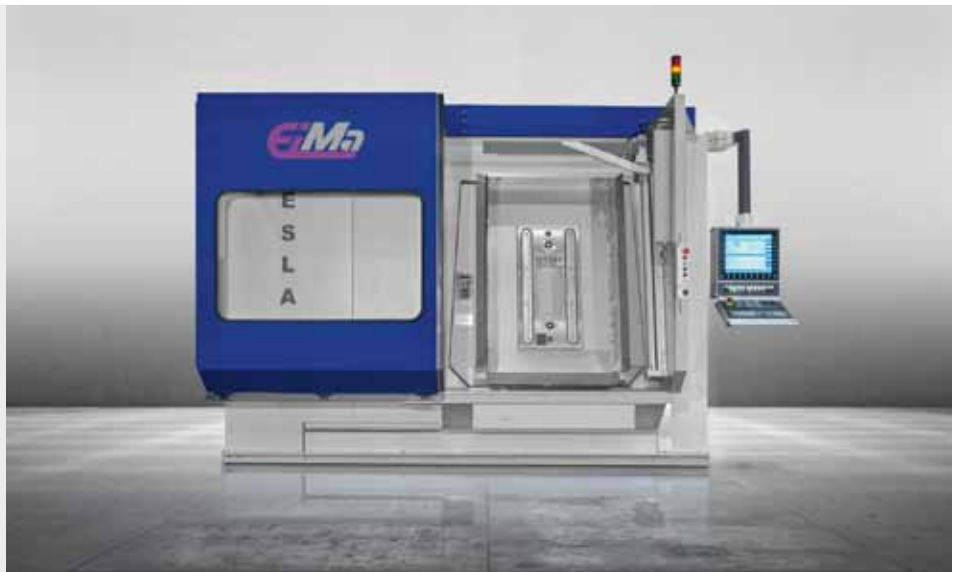
Technical data

Series:	BETA	
Controller:	Siemens 840D sl	
5-axis milling head:	S2	
Drive technology: X-axis Y-axis Z-axis	Rack drive Ball screw drive Ball screw drive	
Protection device:	Complete housing with sliding gate for feeding	
Tool changer:	8/16 magazine places, pick-up magazine for special tools; special design upon request	
Machine table:	2,500 or 3,000 mm x 400 mm swivelling table with zero point clamping system for individual clamping fixtures	
Travel distances: X-axis Y-axis Z-axis	3,400 mm 950 mm 600 mm	3,400 mm 1,250 mm 700 mm
Travel speed: X-axis Y-axis Z-axis	70 m/min 40 m/min 60 m/min	Acceleration up to 8 m/s ² Repeat accuracy +/- 0.012 mm per axis
Materials:	Aluminium profiles, plastics, CFRP components for series production	

Examples for special solutions

TESLA

Travelling column machine with integrated vertical turntable enables high production output. Space saving thanks to reduced total dimensions of the machine. Closed safety concept with high machine rigidity and precision.



TESLA D

This double-sided travelling column machine was developed for vehicle production, simultaneous machining of a space frame on both sides of the vehicle.



Turning and Milling Centre

Fitting a continuously turning rotary table to a GAMMA machine creates a highly interesting variant.



5-axis milling heads



C2

Aluminium profile machining, plastics machining and modelling

- High rigidity thanks to fork design and large dimensioned gears
- HSK-F63
- 24,000 rpm
- 15 (18) kW / 12 (14) Nm



S2

Aluminium profile machining, CFRP and plastics machining

- Minimal collision contour for optimal accessibility at the workpiece
- HSK-F63
- 24,000 rpm
- 15 (18) kW / 12 (14) Nm



C3-193

Aluminium and steel finishing operation, modelling and mould making

- High rigidity thanks to fork design and large dimensioned gears
- Direct measuring systems in B-* and C-axis*
- HSK-A63
- 22,000 rpm
- 24 (31) kW / 36 (48) Nm



C3-300

Aluminium and steel finishing operation, modelling and mould making

- High rigidity thanks to fork design and large dimensioned gears
- Direct measuring systems in B-* and C-axis*
- HSK-A63
- 15,000 rpm
- 25 (35) kW / 60 (83) Nm



C3E

Aluminium profile machining

- Eccentric head with small compensation movements. High accessibility between tensioners for aluminium profile machining
- Direct measuring systems in B- and C-axis
- HSK-A63
- 18,000 rpm or 22,000 rpm
- 24 (31) kW / 36 (48) Nm



S4

Aluminium and steel finishing operation, modelling and mould making

- Minimal collision contour for optimal accessibility at the workpiece
- Direct measuring systems in B-* and C-axis*
- HSK-A63
- 15,000 rpm
- 25 (35) kW / 60 (83) Nm



XCD4

Steel, cast iron and aluminium machining, modelling and mould making

- Very rigid, dynamic milling head with directly driven torque motors
- Direct measuring systems in B- and C-axis
- Motor spindles with HSK-A63 / HSK-A100
- Max. 24,000 rpm
- 30 kW / 143 Nm up to 60 kW / 75 Nm

- Optionally, axes can be clamped.
- Each of the central heads is suitable for simultaneous machining.
- All heads and spindles respectively can be equipped with rotary feedthrough.
- *Optionally possible

Controllers



Siemens 840D sl

- SINUMERIK control panel front OP 019
- 19" industrial display with capacitive keys
- SINUMERIK machine control panel MCP 483C PN/IE



Heidenhain iTNC 530 HSCI

- 19" colour flat screen in stainless steel design BF 760
- Keyboard with integrated machine control panel in stainless steel design TE 745 FS

Accessories

Wet machining unit



- Hinged belt conveyor
- Belt filter system
- High pressure pump
- Working area flushing

Chain changer for 60 tools



Plate changer for 20 tools and tool measurement



Pick-up tool changer for 12 tools HSK-F63



Chain changer for 200 tools with double gripper



Your contact partners



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