



KOVOSVIT MAS
machine your future



KOVOSVIT MAS

MACHINE TOOLS

Your partner in the field of machine
tools, automation and foundry industry

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		Multitasking						
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Customer support



TECHNOLOGY

- Application center
- Showing of technological possibilities of MAS machines
- Technology Studies
- Tooling and accessories
- Production Technology testing in application center
- Days of application technology, workshops
- Customer days and Open House



SERVICE

- Warranty and post warranty service
- Spare parts
- HOT-LINE – nonstop solving of eventual problems
- Remote diagnostics:
- Fastest technical and technological service for the customer
- Immediate „on-line“ contact with the customer's machine
- Inexpensive and reliable technical solution
- Experienced team of diagnosticians and application engineers – technologists



TRAINING

- Operating and maintenance of CNC machines
- CNC machines programming
- Technological practise
- CAM systems

In view of continuous machine development and innovation, specifications in this advertising material are subject to change without notice.
For more information about offered services, contact please your dealer.

Five-axis vertical machining centers

Advantages of the MCU product line

- Machines (MCU 700, MCU 1100) with upper gantry - the workpiece moves in two axes
- Machine (MCU 450) with solid crossbeam - the workpiece moves in three axes
- Continuous machining in 5 axes with the possibility of turning
- Wide range of spindle units and clamping cones
- Modular tool magazine
- Cast iron machine base
- High rigidity and extreme accuracy of the machines
- Linear rolling guide with direct measuring in all axes
- Machines are equipped with torque motors (axes A, C) with high dynamics and direct rotary measuring
- Machines are highly productive in terms of material removal during roughing and at the same time achieve a high quality of the final surface
- Machines are adapted for robotization and palletizing
- HEIDENHAIN TNC 640 or SIEMENS SIN 840D SL control systems are available for machines in this model line



MCU 700V[T]-5X

- X / Y / Z – 700 / 820 / 550 mm
- Table clamping surface: Ø 800 (Ø 630) mm
- C axis max. speed: 100 [500] min⁻¹
- Max. speed: 10 000 / 12 000 / 18 000 / 24 000 min⁻¹



MCU 1100V[T]-5X

- X / Y / Z – 1 100 / 1 550 / 1 000 mm
- Table clamping surface: Ø 1 150 × 900 [Ø1 000, 1 150] mm
- C axis max. speed: 80 [600] min⁻¹
- Max. speed: 10 000 / 12 000 / 18 000 / 24 000 min⁻¹



MCV 1000 5AX

- X / Y / Z – 880 / 590 / 520 mm
- Table clamping surface: 520 mm
- Max. Workpiece weight: 400 Kg
- Max. speed: 8 000 / 12 000 / 18 000 / 24 000 min⁻¹

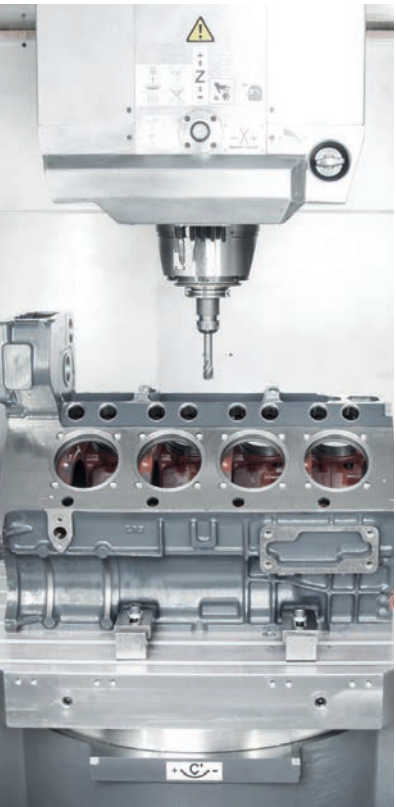
MCU 450V[T]-5X

- X / Y / Z – 500 / 800 / 520 mm
- Table clamping surface: 500 mm
- C axis max. speed: 200 [1500] min⁻¹
- Max. speed: 12 000 / 18 000 / 24 000 min⁻¹



MCU Line

MCU 450V[T]-5X
MCU 700V[T]-5X
MCU 1100V[T]-5X
MCV 1000 5AX

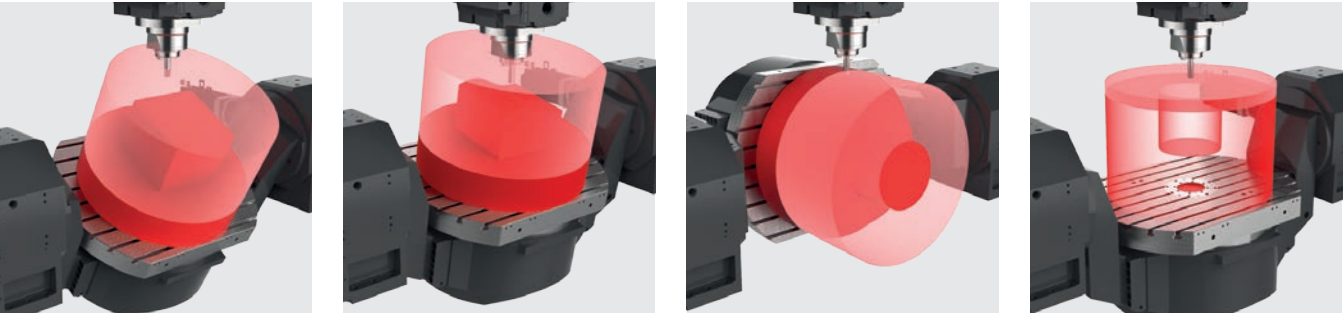


Application demonstration

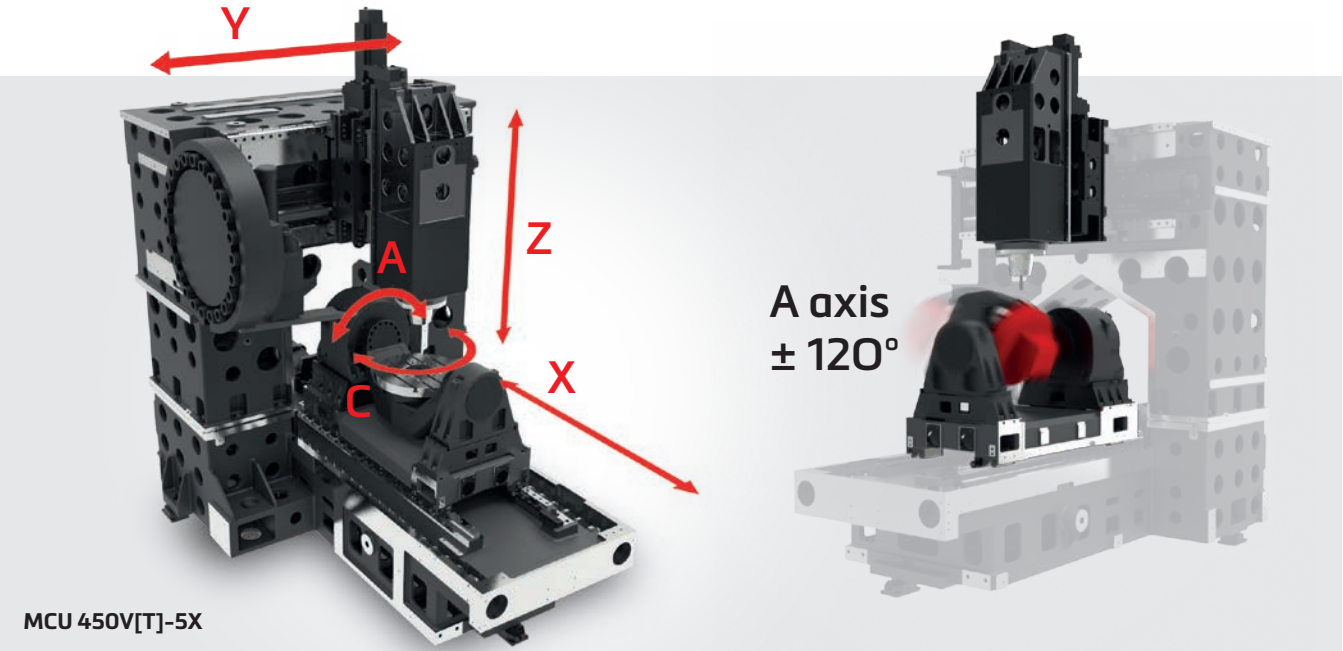
MCU Line — TECHNOLOGICAL CAPABILITIES

milling [V]

milling + turning [VT]



Milling from five sides Shape milling External turning Face and internal turning



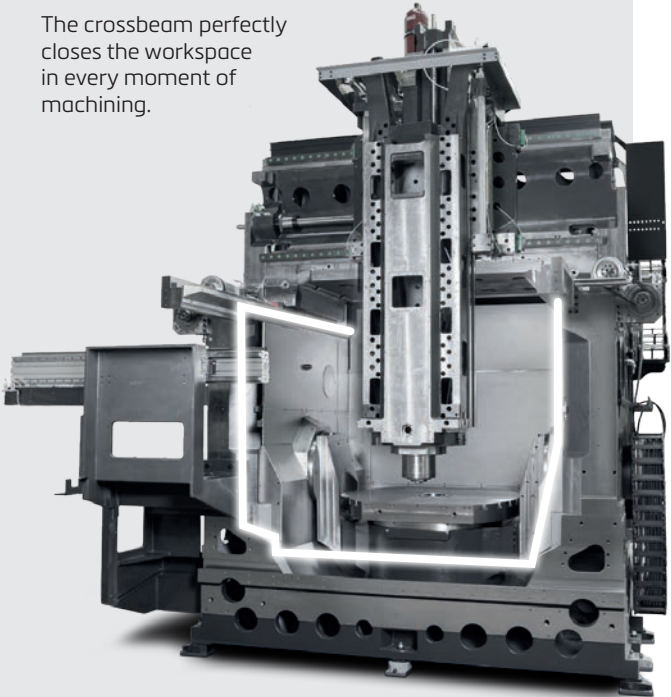
MCU 450V[T]-5X

MCU Line

Extreme

- RIGIDITY
- POWER
- SPEED

The crossbeam perfectly closes the workspace in every moment of machining.



MCU 1100V[T]-5X

MCU Line — TECHNICAL DATA

		MCV 1000 5AX	MCU 450VT-5X Turning	MCU 450VT-5X Milling	MCU 700VT-5X Turning	MCU 700V-5X Milling	MCU 1100VT-5X Turning	MCU 1100V-5X Milling
Operating range	Maximum workpiece diameter	mm	Ø 520	600	Ø 1 000		Ø 1 250	
	Maximum workpiece height	mm	500	350	500		1 000	
Linear axes	X axis travel	mm	880	500	700		1 100	
	Y axis travel	mm	590	800	820		1 550	
	Z axis travel	mm	520 (480*)	520	550		1 000	
	Rapid traverse in axes X, Y, Z	mm.min ⁻¹	40 000	60 000	60 000		50 000	
	A axis tilt range	°	±110	±120	+30 / -120	±120	175 (+45 / -130)	
Rotation axes	C axis rotation range	°	unlimited	unlimited	unlimited		unlimited	
	A axis maximum speed	min ⁻¹	12	100	100	80	80	23
	C axis maximum speed	min ⁻¹	20	1500	200	500	100	600
								80
Machine dimensions	length × width × height	mm	4 440 × 3 600 × 3 300	3 800 × 3 860 × 3 140		4 200 × 2 470 × 3 530		7 050 × 6 500 × 5 000
	Machine weight	kg	13 000	14 500		18 000		35 000
Control system			HEIDENHAIN iTNC 530 HSCI SIEMENS SIN 840D SL	HEIDENHAIN TNC 640 SIEMENS SIN 840D SL		HEIDENHAIN TNC 640 SIEMENS SIN 840D SL	HEIDENHAIN iTNC 530 HSCI SIEMENS SIN 840D SL	HEIDENHAIN TNC 640 SIEMENS SIN 840D SL

* Version only for POWER spindle

SPINDLE TECHNICAL DATA

	Type		MS 1200	POWER PLUS	POWER	SPEED	SPRINT	RAPID
MCU 1100V[T]	Taper – Universal		-	ISO 50 [HSK-A100]	ISO 50 [HSK-A100]	ISO 40	HSK-A63	HSK-A63
	Max. speed	min ⁻¹	-	10 000	10 000	12 000	18 000	24 000
	Power	40% ED continuous	kW	50 / 39	36 / 20	45 / 33	25 / 20	25 / 19
	Torque	40% ED continuous	Nm	579 / 451	340 / 262	215 / 160	135 / 87	100 / 60
MCU 700V[T]	Taper – Universal		-	-	ISO 50	HSK-A63 [ISO 40]	HSK-A63	HSK-A63
	Max. speed	min ⁻¹	-	-	10 000	12 000	18 000	24 000
	Power	40% ED continuous	kW	-	20 / 26	48 / 32	25 / 35	19 / 27
	Torque	40% ED continuous	Nm	-	262 / 340	200 / 130	87 / 130	60 / 86
MCU 450V[T]	Taper – Universal		ISO 40	-	-	ISO 40 / HSK-A63	HSK-A63	HSK-A63
	Max. speed	min ⁻¹	12 000	-	-	12 000	18 000	24 000
	Power	40% ED continuous	kW	30 / 36	-	32 / 48	25 / 35	19 / 27
	Torque	40% ED continuous	Nm	130 / 157	-	130 / 200	87 / 130	60 / 86
MCV 1000 5AX	Taper – Universal		-	-	ISO 50	HSK-A63 [ISO 40]	HSK-A63	HSK-A63
	Max. speed	min ⁻¹	-	-	8 000	12 000	18 000	24 000
	Power	40% ED continuous	kW	-	43 / 28	48 / 32	35 / 25	27 / 19
	Torque	40% ED continuous	Nm	-	623 / 406	200 / 130	120 / 86	86 / 60

Multitasking turning-milling centers

Advantages of the MULTICUT product line

- Multifunctional turning-milling centers
- Possible off-axis drilling under angle and 5 axes milling
- Wide range spindle units and clamping cones
- Modular tool magazine
- Cast iron base
- High rigidity and extreme accuracy of the machines
- Wide configurability – technological variants with tailstock, counter spindle, lower turret, up to 3 steady rests in lengths 1 500 - 6 000 mm
- Linear rolling guide with direct measuring in all axes
- Milling heads equipped with direct measuring and torque motors
- Indexing of milling heads is continuous or guided by Hirth coupling
- We offer SIEMENS SIN 840D SL control system for machines in this model line



MULTICUT 630

- Max. turning dia: 1 150 mm
- Max. turning length: 1 600 / 2 100 / 3 100 / 4 600 / 6 100 mm
- Max. Workpiece weight: 4 000 Kg
- Max.output S1 / S6 - 40%: 41 / 62 kW

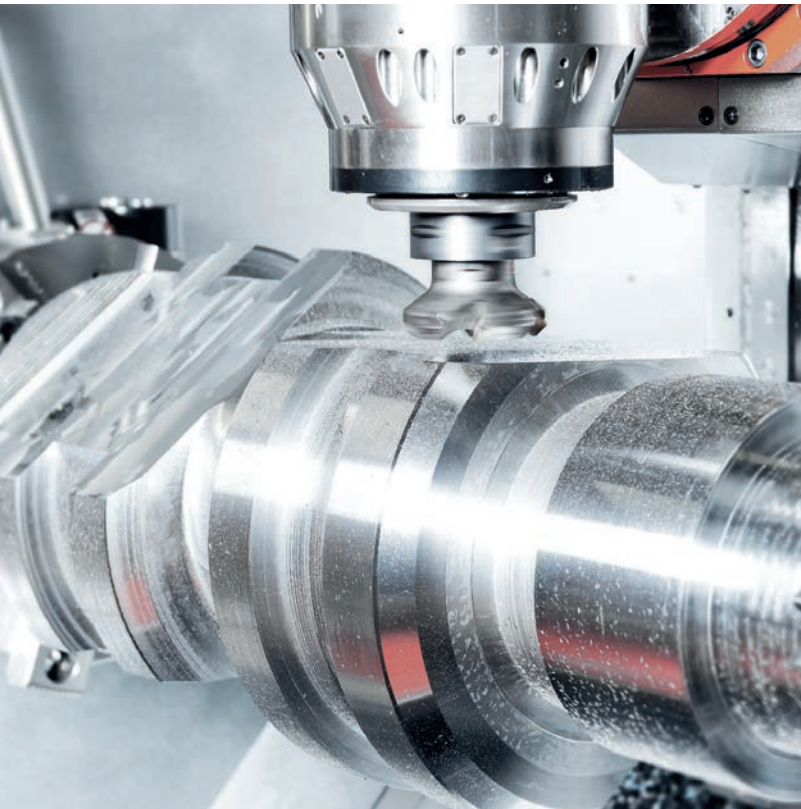
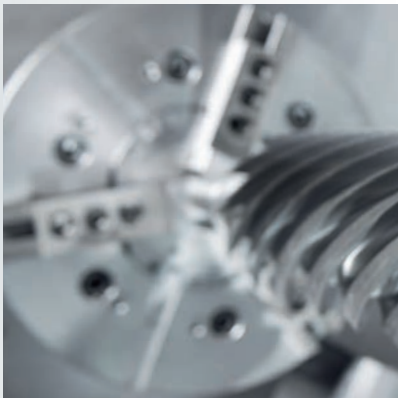
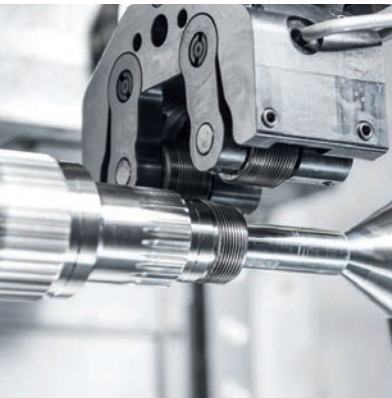
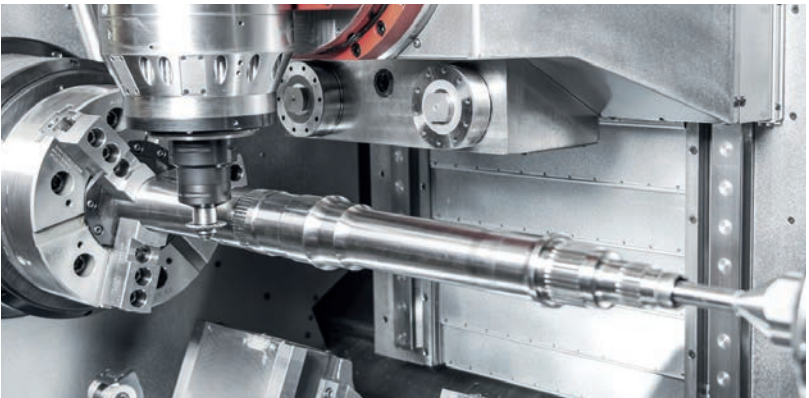


MULTICUT 500i

- Max. turning dia: 1 030 mm
- Max. turning length: 1 734 mm
- Max. Workpiece weight: 3 000 Kg
- Max.output S1 / S6 - 40%: 59 / 72 kW

MULTICUT Line

MULTICUT 500i MULTICUT 630



Application demonstration

MULTICUT Line — TECHNICAL DATA

MULTICUT Line

			MULTICUT 500i [POWER]		MULTICUT 630 / 1500		MULTICUT 630 / 2000		MULTICUT 630 / 3000		MULTICUT 630 / 4500		MULTICUT 630 / 6000	
			T	S	T	S	T	S	T	S	T	S	T	S
Operating range	Max. swing over bed / lower support	mm	1 030		1 150 / 1 020		1 150 / 1 020		1 150 / 1 020		1 150 / 1 020		1 150 / 1 020	
	Max. turning diameter B= 90° / 60° / 45° / 0°	mm	549 / 690 / 880 / 1 030		790 / 930 / 1 060 / 1 150		790 / 930 / 1 060 / 1 150		790 / 930 / 1 060 / 1 150		790 / 930 / 1 060 / 1 150		790 / 930 / 1 060 / 1 150	
	Max. distance of faces spindle to tailstock spindle spindle to spindle	mm	1 972	1 799	1 900	1 900	2 400	2 400	3 400	3 400	4 900	4 900	6 400	6 400
	Max. turning length <Z-axis travel>	mm	1 734 *	1 527 *	1 600		2 100		3 100		4 600		6 100	
	Bar capacity	mm	94 [122]		122		122		122		122		127	
Main spindle	Max. spindle speed Low speed	min ⁻¹	3 500 [866]		720		720		720		720		720	
	High speed	min ⁻¹	3 500 [2 800]		2 800		2 800		2 800		2 800		2 800	
	Nominal spindle speed	min ⁻¹	750 [133 / 666]		194 / 972		194 / 972		194 / 972		194 / 972		194 / 972	
	Gear steps number		1 [2]		2		2		2		2		2	
	Spindle nose type (DIN 55026)		A8 [A11]		A11		A11		A11		A11		A11	
	Spindle boring	mm	106 [135]		135		135		135		135		135	
	I.D. of the front bearings	mm	160 [200]		200		200		200		200		200	
	Torque Low speed 25% / 40% / 60% ED / continuous	Nm	1 145 / 1 025 / - / 760 [- / 3 000 / 2 400 / 2 000]		- / - / 3 283 / 2 736		- / - / 3 283 / 2 736		- / - / 3 283 / 2 736		- / - / 3 283 / 2 736		- / - / 3 283 / 2 736	
	High speed 25% / 40% / 60% ED / continuous	Nm	1 145 / 1 025 / - / 760 [760 / 600 / 480 / 400]		1 040 / 821 / 657 / 547		1 040 / 821 / 657 / 547		1 040 / 821 / 657 / 547		1 040 / 821 / 657 / 547		1 040 / 821 / 657 / 547	
	Motor output 25% / 40% / 60% ED continuous	kW	74 / 72 / - / 59 [53 / 42 / 33,5 / 28]		78 / 61,5 / 49 / 41		78 / 61,5 / 49 / 41		78 / 61,5 / 49 / 41		78 / 61,5 / 49 / 41		78 / 61,5 / 49 / 41	
Spindle axis height	mm	1 290		1 325		1 325		1 325		1 325		1 325		
Subspindle	Max. spindle speed Low speed	min ⁻¹	-	3 500 [866]	-	720	-	720	-	720	-	720	-	720
	High speed	min ⁻¹	-	3 500 [2 800]	-	2 800	-	2 800	-	2 800	-	2 800	-	2 800
	Nominal spindle speed	min ⁻¹	-	750 [133 / 666]	-	194 / 972	-	194 / 972	-	194 / 972	-	194 / 972	-	194 / 972
	Gear steps number		-	1 [2]	-	2	-	2	-	2	-	2	-	2
	Spindle nose type (DIN 55026)		-	A8 [A11]	-	A11	-	A 11	-	A11	-	A11	-	A11
	Spindle boring	mm	-	106 [135]	-	135	-	135	-	135	-	135	-	135
	I.D. of front bearings	mm	-	160 [200]	-	200	-	200	-	200	-	200	-	200
	Torque Low speed 25% / 40% / 60% ED / continuous	Nm	-	1 145 / 1 025 / - / 760 [- / 3 000 / 2 400 / 2 000]	-	- / - / 3 110 / 2 592	-	- / - / 3 110 / 2 592	-	- / - / 3 110 / 2 592	-	- / - / 3 110 / 2 592	-	- / - / 3 110 / 2 592
	High speed 25% / 40% / 60% ED / continuous	Nm	-	1 145 / 1 025 / - / 760 [760 / 600 / 480 / 400]	-	881 / 762 / 622 / 518	-	881 / 762 / 622 / 518	-	881 / 762 / 622 / 518	-	881 / 762 / 622 / 518	-	881 / 762 / 622 / 518
Motor output 25% / 40% / 60% ED / continuous	kW	-	74 / 72 / - / 59 [53 / 42 / 33,5 / 28]	-	73 / 63 / 51,5 / 43	-	73 / 63 / 51,5 / 43	-	73 / 63 / 51,5 / 43	-	73 / 63 / 51,5 / 43	-	73 / 63 / 51,5 / 43	
C-axis of workpiece spindles	Min. programming step		0,0001°		0,0001°		0,0001°		0,0001°		0,0001°		0,0001°	
	Max. speed	min ⁻¹	43		30		30		30		30		30	
	Torque 25% ED / continuous	Nm	2 100 / 1 400		2 176 / 1 408		2 176 / 1 408		2 176 / 1 408		2 176 / 1 408		2 176 / 1 408	
	Brake	Nm	-		3 000 / 1 000		3 000 / 1 000		3 000 / 1 000		3 000 / 1 000		3 000	
Tool spindle	Max. speed	min ⁻¹	12 000		12 000 [12 000; 6 500; 3 500]		12 000 [12 000; 6 500; 3 500]		12 000 [12 000; 6 500]		12 000 [12 000; 6 500]		12 000 [12 000; 6 500]	
	Nominal speed	min ⁻¹	2 100		2 000 [2 500; 1 400; 1 500]		2 000 [2 500; 1 400; 1 500]		2 000 [2 500; 1 400]		2 000 [2 500; 1 400]		2 000 [2 500; 1 400]	
	Taper		HSK 63 / Capto 6 / [HSK 63]		HSK 63 [Capto C6; HSK 100; Capto C8]		HSK 63 [Capto C6; HSK 100; Capto C8]		HSK 63 [Capto C6; HSK 100; Capto C8]		HSK 63 [Capto C6; HSK 100; Capto C8]		HSK 63 [Capto C6; HSK 100; Capto C8]	
	Torque 25% / 40% ED / continuous	Nm	123 / 100 / 60		162/143/119 [216/180/140; 300/255/200]		162/143/119 [216/180/140; 300/255/200; 345/300/242]		162/143/119 [216/180/140; 300/255/200]		162/143/119 [216/180/140; 300/255/200]		162/143/119 [216/180/140; 300/255/200]	
	Power 25% / 40% ED / continuous	kW	27 / 22 / 13		34/30/25 [56/47/37; 44/38/29]		34/30/25 [56/47/37; 44/38/29; 54/47/38]		34/30/25 [56/47/37; 44/38/29]		34/30/25 [56/47/37; 44/38/29]		34/30/25 [56/47/37; 44/38/29]	
	Number of tool indexing positions		360 × 1°		continuous [24 × 15°; 24 × 15°]		continuous [24 × 15°; 24 × 15°; 24 × 15°]		continuous [24 × 15°; 24 × 15°]		continuous [24 × 15°; 24 × 15°]		continuous [24 × 15°; 24 × 15°]	
	Spindle length	mm	563		695 [580; 580; 580]		695 [580; 580; 580]		695 [580; 580; 580]		695 [580; 580; 580]		695 [580; 580; 580]	
B axis of tool spindle	Range		-30° / +195°		-30° / +210°		-30° / +210°		-30° / +210°		-30° / +210°		-30° / +210°	
	Min. programming step		0,0001°		0,0001°		0,0001°		0,0001°		0,0001°		0,0001°	
	Max. speed	min ⁻¹	50		50		50		50		50		50	
	Time of indexing by 90°	s	0,8		0,8		0,8		0,8		0,8		0,8	
	Torque 40% ED / continuous	Nm	950 / 550		1 300 / 750		1 300 / 750		1 300 / 750		1 300 / 750		1 300 / 750	
	Hydraulic brake / locking	Nm	4 000		8 000 [1 700 / 8 200]		8 000 [1 700 / 8 200]		8 000 [1 700 / 8 200]		8 000 [1 700 / 8 200]		8 000 [1 700 / 8 200]	
	Machine length without / with chip conveyor / for transport	mm	4 800 / 6 500 / 5 372 [6 385 / 7 425 / 6 692]		6 630 / 8 050 / 6 630		7 130 / 8 550 / 7 130		8 130 / 9 550 / 8 130		9 850 / 11 050 / 9 850		11 600 / 12 550 / 11 600	
Machine dimensions	Machine width / for transport	mm	3 950 / 3 670		5 150 / 3 100		5 150 / 3 100		5 150 / 3 100		5 150 / 3 100		5 150 / 3 100	
	Machine height / for transport	mm	3 760 / 3 660		3 100 / 3 000		3 100 / 3 000		3 100 / 3 000		3 100 / 3 000		3 100 / 3 000	
	Machine weight	kg	22 800 [23 750]	23 050 [24 000]	24 000 - 29 500		25 000 - 30 500		26 500 - 32 500		28 500 - 35 000		30 000 - 36 500	
	Machine connection	Electrical power supply continuous	kVA	110 [90]	110 [90]	100	120	100	120	100	120	100	120	100
Compressed air supply pressure / flow		MPa/L.min ⁻¹	0,6 / 600		0,6 / 500		0,6 / 500		0,6 / 500		0,6 / 500		0,6 / 500	
Control system	Type		SIEMENS SINUMERIK 840D SL		SIEMENS SINUMERIK 840D SL		SIEMENS SINUMERIK 840D SL		SIEMENS SINUMERIK 840D SL		SIEMENS SINUMERIK 840D SL		SIEMENS SINUMERIK 840D SL	
	Number of continuously controlled axes for machining		5		5		5		5		5		5	

Vertical machining centers

Advantages of the MCV product line

- Linear rolling guide with direct measuring in three axes
- Fast and accurate positioning
- Configurable tool magazine with mechanical hand
- Large workspace with minimal machine installation space
- Efficient chip evacuation
- Wide selection of special accessories
- Possibility of 4- and 5-axis machining with the use of additional rotary and tilting tables
- Traditional concept of C stand and cross table
- Quality proven mechanical spindles with speed up to 15.000 rpm, on request - electric spindle up to 20.000 rpm
- Low operating cost, easy maintenance
- We offer HEIDENHAIN, SIEMENS or FANUC control system for this product line



MCV 2220

- X / Y / Z – 2 220 / 860 / 860 mm
- Table surface: 2 400 × 850 mm
- Max. table load: 3 500 Kg
- Max. speed: 8 000 / 12 000 / 18 000 min⁻¹



MCV 1400 QUICK

- X / Y / Z – 1 400 / 650 / 750 mm
- Table surface: 1 600 × 650 mm
- Max. table load: 1 250 Kg
- Max. speed: 12 000 min⁻¹



MCV 800 QUICK

- X / Y / Z – 800 / 500 / 550 mm
- Table clamping surface: 1 000 × 500 mm
- Max. weight on table: 500 Kg
- Max. speed: 9 000 / 12 000 min⁻¹



MCV 1016 QUICK

- X / Y / Z – 1 016 / 610 / 710 mm
- Table clamping surface: 1 300 × 600 mm
- Max. weight on table: 700 Kg
- Max. speed: 9 000 / 10 000 min⁻¹



MCV 750

- X / Y / Z – 750 / 500 / 500 mm
- Table clamping surface: 1 000 × 640 mm
- Max. weight on table: 650 Kg
- Max. speed: 12 000 / 18 000 / 24 000 min⁻¹



MCV 1000

- X / Y / Z – 1 016 / 610 / 720 mm
- Table clamping surface: 1 300 × 670 mm
- Max. weight on table: 1 200 Kg
- Max. speed: 8 000 / 12 000 / 18 000 / 24 000 min⁻¹

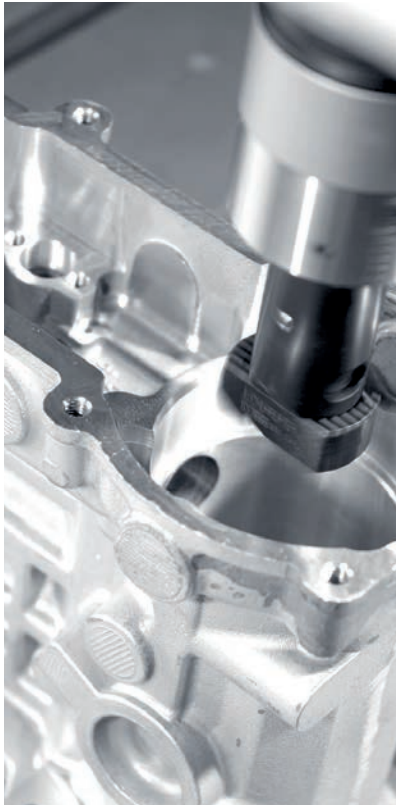


MCV

- X / Y / Z – 1 270 / 610 / 720 mm
- Table clamping surface: 1 500 × 670 mm
- Max. weight on table: 1 200 Kg
- Max. speed: 8 000 / 12 000 / 18 000 / 24 000 min⁻¹

MCV Line

- MCV 800 QUICK
- MCV 1016 QUICK
- MCV 750
- MCV 1000
- MCV 1270
- MCV 1400 QUICK
- MCV 2200



MCV Line

MCV Line — TECHNICAL DATA

		MCV 800 QUICK	MCV 800 CLEVER	MCV 1016 QUICK	MCV 1400 QUICK	MCV 2220 SPRINT	MCV 2220 SPEED	MCV 2220 POWER
Working travel in axes X / Y / Z	mm	800 / 500 / 550		1 016 / 610 / 710	1 400 / 650 / 750	2 220 / 860 / 860		
Table clamping surface	mm	1 000 × 500		1 300 × 600	1 600 × 650	2 400 × 850		
Max. table load	kg	500		700	1 250	3 500		
Max. speed	min ⁻¹	12 000	9 000	10 000	12 000	18 000	12 000	8 000
Spindle motor output (S1/S6 - 40%)	kW	10 / 14	7,5 / 10,5	17 / 25	21,5 / 32,3	25 / 35	32 / 48	28 / 43
Max. torque (S1/S6 - 40%)	Nm	63 / 88	48 / 74	162 / 239	157 / 236	86 / 120	130 / 200	406 / 623
Spindle taper	-	ISO 40		ISO 40	ISO 40	ISO 50	ISO 40; HKS 63	ISO 50
Rapid traverse X / Y / Z	m . min ⁻¹	30 / 30 / 30		30 / 30 / 30	30		30 / 30 / 30	
Tool magazine capacity	pcs	24 – s mech. rukou		24 [50] – s mech. rukou	24 [40]	40	40	40
Control system	-	HEIDENHAIN SIEMENS		HEIDENHAIN SIEMENS	HEIDENHAIN SIEMENS	HEIDENHAIN / SIEMENS		
Machine dimensions (l × w × h)	mm	2 086 × 2 745 × 2 420		3 080 × 2 270 × 2 940	2 460 × 3 470 × 2 800	7 000 × 4 420 × 3 860		
Machine weight	kg	4 000		5 500	6 200	21 000		

		MCV 750 RAPID	MCV 750 SPRINT	MCV 750 SPEED	MCV 1000 RAPID	MCV 1000 SPRINT	MCV 1000 SPEED	MCV 1000 POWER	MCV 1270 RAPID	MCV 1270 SPRINT	MCV 1270 SPEED	MCV 1270 POWER
Working travel in axes X / Y / Z	mm	750 / 500 / 500			1 016 / 610 / 720				1 270 / 610 / 720			
Table clamping surface	mm	1 000 × 640			1 300 × 670				1 500 × 670			
Max. table load	kg	650			1 200				1 200			
Max. speed	min ⁻¹	24 000	18 000	12 000	24 000	18 000	12 000	8 000	24 000	18 000	12 000	8 000
Spindle motor output (S1/S6 - 40%)	kW	19 / 26,7	25 / 35	32 / 48	19 / 26,7	25 / 35	32 / 48	28 / 43	19 / 26,7	25 / 35	32 / 48	28 / 43
Max. torque (S1/S6 - 40%)	Nm	60 / 86	86 / 120	130 / 200	60 / 86	86 / 120	130 / 200	406 / 623	60 / 86	86 / 120	130 / 200	406 / 623
Spindle taper	-	HSK – A63	HSK – A63	ISO 40; HSK – A63	HSK – A63	HSK – A63	ISO 40; HSK – A63	ISO 50	HSK – A63	HSK – A63	ISO 40; HSK – A63	ISO 50
Rapid traverse X / Y / Z	m . min ⁻¹	40 / 40 / 40			40 / 40 / 40				40 / 40 / 40			
Tool magazine capacity	pcs	24			30 [60]	30 [60]	30 [60]	24 [40]	30 [60]	30 [60]	30 [60]	24[40]
Control system	-	HEIDENHAIN / SIEMENS			HEIDENHAIN / SIEMENS				HEIDENHAIN / SIEMENS			
Machine dimensions (l×w×h)	mm	3 440 × 2 220 × 2 735			4 430 × 3 600 × 3 330				4 660 × 3 600× 3 330			
Machine weight	kg	5 250			11 500				11 800			

Application demonstration

CNC lathes

Advantages of the KL product line

- Wide configurability of machines
- Technological variants with tailstock, counter spindle, driven tools, "Y" axis
- High spindle torque
- Powerful turning at maximum diameter
- Dynamics and high speeds of movement in individual axes
- Short side times and more efficient use of the machine
- Rolling guide in all axes
- Long-term machining with high accuracy
- High operator comfort - most of function controlled and adjustable directly on the machine control panel
- Wide range of accessories, optional cooling pressures, tool heads with driven tools up to 12.000 rpm, up to 18 tools on the KL285 superprecision variant
- The machines are adapted for automatization, robotization and offer the possibility of machining from a bar
- We offer SIEMENS or FANUC control system for this product line



KL 285

- Max. turning dia.: 340 mm
- Max. turning length: 550 mm
- Max. workpiece weight: 350 Kg
- Max. output S1 / S6 - 40%: 21 / 27 kW



KL 435

- Max. turning dia.: 550 mm
- Max. turning length: 1 100 mm
- Max. workpiece weight: 500 Kg
- Max. output S1 / S6 - 40%: 17 / 25 kW

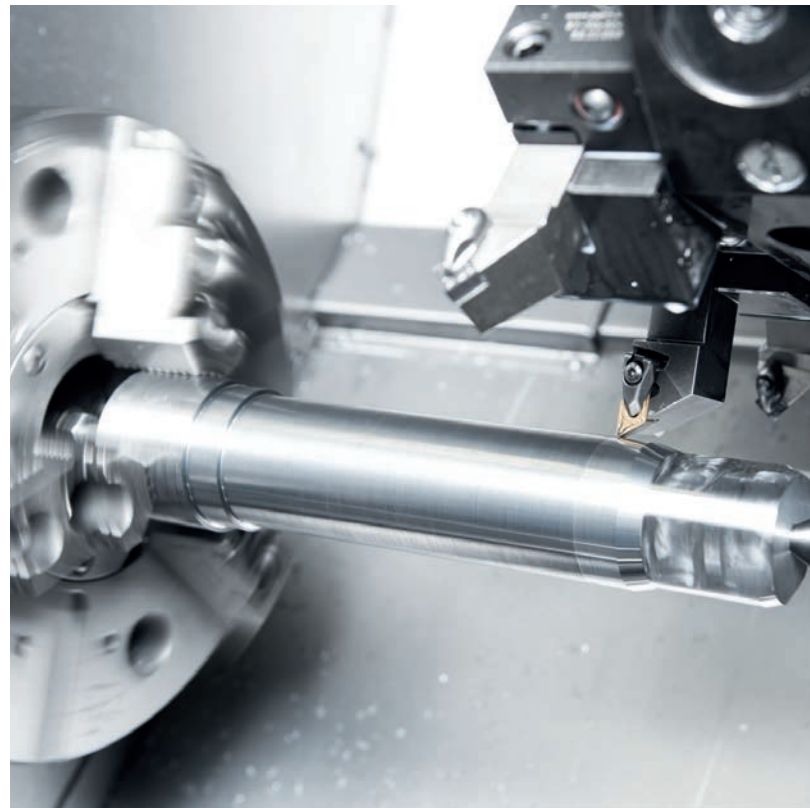
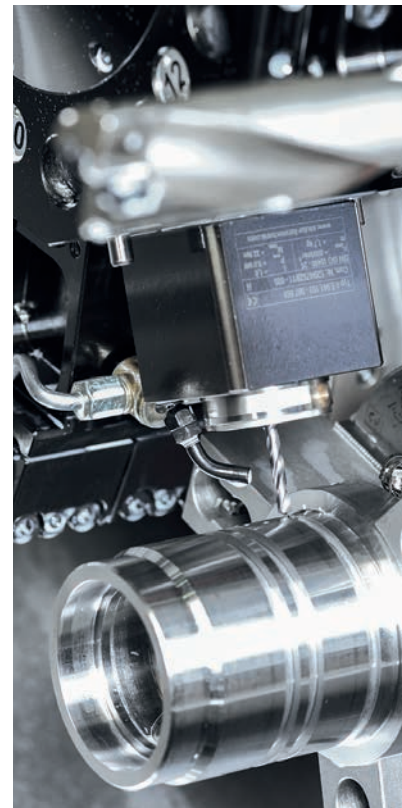
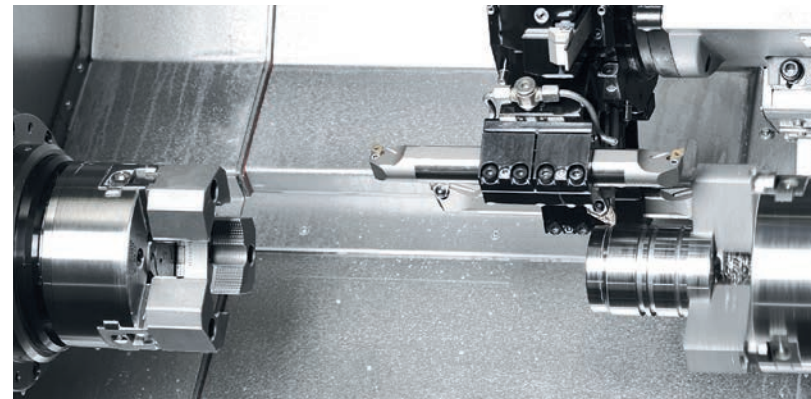


SP 430

- Max. turning dia.: 550 mm
- Max. turning length: 2 500 mm
- Max. workpiece weight: 1 100 Kg
- Max. output S1 / S6 - 40%: 28 / 42 kW

KL Line

KL 285
KL 435
SP 430



Application demonstration

KL Line — TECHNICAL DATA

		KL435 A8	KL435MC A8	KL435Y A8	KL435 A11	KL435MC A11	KL435Y A11	
Linear axis	X axis travel	mm	345		345		325	
	Y axis travel	mm	-	-	+100/-80	-	+100/-80	
	Z axis travel	mm	1225					
	Rapid traverse in axis X/Y/Z/ZS	m/min	30/30		30/25/30	30/30		30/25/30
Main spindle axis C1	Front end of the spindle		DIN 55026 A8			DIN 55026 A11		
	Power S1/S6 - 40%	kW	17/25,5			22/33		
	Speed	min ⁻¹	3800			3150		
	Torque	Nm	1755			2194		
	C axis speed	min ⁻¹	-	42	-	42		
	Torque	Nm	-	490	-	490		
Rotary tools	Speed	min ⁻¹	-	4000	-	4000		
	Power S1/S6 - 40%	kW	-	8,2/15,4	-	8,2/15,4		
	Torque	Nm	-	67	-	67		
Tailstock	Cavity cone	Morse	5					
	Tailstock sleeve stroke	mm	160					
	Compressive force	kN	4-24					
Workspace	Circular diameter above the bed	mm	700					
	Circular diameter above the cross slide	mm	470	480	470		480	
	Maximum turning length	mm	1 100					
	Maximum turning diameter	mm	550					
	Standard turning diameter	mm	430					
	Max. main spindle rod passage	mm	86		95			
Accuracy ČSN ISO 230 - 2	Measuring X		Direct					
	Measuring Y, Z		Indirect					
	Repeatability of X / Y / Z position adjustment	mm	0,006/0,006/0,01					
Energy connection and consumption	AC voltage		3x400V, 50Hz					
	Maximum power consumption of the machine	kVA	36	40	42	36	40	42
	Recommended type of electrical wires	mm2	5x25 CU					
	Working air pressure	Mpa	0,55 - 0,6					
Machine dimensions	Machine dimensions (l x w x h)	mm	4 035 x 2 591 x 2 251					
	Machine weight	kg	8 300	8 500	8 700	8 300	8 500	8 700
Tool magazine	Method of tool change		Rotary magazine					
	Number of places in the magazine	pcs	12 (6 powered)					
	VDI hole diameter	mm	50					
	Tool change time	s	0,3					
Control systems			SIEMENS SINUMERIK 840D SL					
			FANUC Oi TF					

KL Line

			KL 285	KL 285 MC	KL 285 Y	KL 285 SMC	KL 285 SY
Linear axis	X-axis travel	mm	240			168	
	Y-axis travel	mm	-	-	+50	-	+50
	Z-axis travel	mm	610				
	Distance between spindles	mm	-	-	-	757	
	Rapid traverse I axis X / Y / Z / ZS	m/min	30/-/30/-	30/-/30/-	30/25/30/-	30/-/30/15	30/25/30/15
Main spindle axis C1	Front end of the spindle		DIN 55026 A6				
	Power S1 / S6- 40%	kW	18,6/24				
	Speed	min-1	5000				
	Torque	Nm	257				
	C1 axis speed	min-1	100				
	Torque	Nm	257				
Rotary tools	Speed	min-1	-	4500		4000	
	Power S1 / S6- 40%	kW	-	3,04/3,3			
	Torque	Nm	-	21			
Counter spindle axis C2	Front end of the spindle		-	-	-	DIN 55026 A5	
	Power S1 / S6 - 40%	kW	-	-	-	14,1/20	
	Speed	min-1	-	-	-	6000	
	Torque	Nm	-	-	-	120	
	C2 axis speed	min-1	-	-	-	100	
	Torque	Nm	-	-	-	120	
Tailstock	Cavity cone Stroke	Morse	5			-	-
	Cavity cone Stroke	mm	565			-	-
	Compressive force	kN	1,5- 10			-	-
Workspace	Circular diameter above the bed	mm	670				
	Circular diameter above the cross slide	mm	410				
	Maximum turning length	mm	550				
	Maximum turning diameter	mm	340			304	
	Standard turning diameter	mm	285				
	Max. main spindle rod passage	mm	65				
Accuracy ČSN ISO 230 - 2	Measuring X, Y, Z		Indirect				
	Repeatability of X / Y / Z position adjustment	mm	0,006/0,006/0,008				
Energy connection and consumption	AC voltage		3x400V, 50Hz				
	Maximum power consumption of the machine	kVA	38	40	43	51	54
	Recommended type of electrical wires	mm2	5x25 CU			5x35 CU	
	Working air pressure	Mpa	0,55 - 0,6				
Machine dimensions	Machine dimensions (l x w x h)	mm	2 755 x 1 752 x 1 900			2 875 x 1 752 x 1 900	
	Machine weight	kg	5 700	5 700	5 900	6 200	6 400
Tool magazine	Method of tool change		Otočný zásobník				
	VDI hole diameter	mm	40				
	Number of places in the magazine	pcs	12+6 (12 powered)			12 (12 powered)	
	Tool change time	s	0,15			0,16	
Control systems			SIEMENS SINUMERIK 840D SL				
			FANUC Oi TF				

SP 430 — TECHNICAL DATA

				1100							2500					
				A11	A11	A11	A11	A11	A11	A11	A11	A11	A11	A11		
				SP 430 /2	SP 430 /2	SP 430 Y /2	SP 430 SMC / 2	SP 430 / 2	SP 430 /L2	SP 430 MC /L2	SP 430 Y /L2	SP 430 L2	SP 430 MC /L2	SP 430 Y /L2		
Working space	Swing dia. over bed			mm	680							640				
	Swing dia. over cross carriage			mm	470		480	470	480	470		480	470		480	
	Max. turning length			mm	1 100			990		1 100			2 500			
	Max. turning dia. - Upper turret			mm	550			466		550			550			
	Max. turning dia. - Lower turret			mm	430			380		-			-			
	Max. bar capacity - spindle with belt drive			mm	90							90				
Axis travels	X1 / Z1 Axis			mm	345 / 1 225		325 / 1 225	345 / 1 225	325 / 1 225	345 / 1225		325 / 1 225		345 / 2 625		325 / 2 625
	X2 / Z2 Axis			mm	217 / 1 215			194 / 1 215		-		-				
	Y Axis			mm	-		+100 / -80		-	+		100 / -80	-		+100 / -80	
	W2 Axis			mm	-					975		2 375				
Rapid traverse	Maximum distance between spindles			mm	-			1 500		-		-				
	X1 / Z1 / X2 / Z2 Axes			m.min ⁻¹	30							30				
	Y Axis			m.min ⁻¹	-		25	-	25	-		25	-		25	
	Z Axis			m.min ⁻¹	-			20		-		-				
	W2 Axis				-					30		30				
Main spindle	Max. speed			min ⁻¹	3 150							3 150				
	C Axis	Max. speed		min ⁻¹	-	30				-	30		-	30		
		Max. torque		Nm	-	327				-	327		-	327		
Counter spindle	Max. speed			min ⁻¹	-			3 800		-		-				
	Indexing				-			3		-		-				
	Spindle nose (DIN 55026)			-	-			A8		-		-				
Upper tool turret	Number of positions			pcs	12							12				
	Hole dia. VDI			mm	50							50				
	Max. speed of tool spindle			min ⁻¹	-	4 000		4 000		-	4 000		-	4 000		
Lower tool turret	Number of positions			-	8			12		-		-				
	Hole dia. VDI			mm	50							-				
	Max. speed of tool spindle			min ⁻¹	-			3 000		-		-				
Tailstock	Sleeve taper - MORSE			-	5			-		5		5				
	Sleeve stroke			mm	160			-		160		160				
	Sleeve dia			mm	150			-		150		150				
Spindle motor	Main spindle	Output S1 / S6 - 40%			kW	28 / 42							28 / 42			
		Max. torque S1 / S6 - 40%			Nm	1 403 / 2 106							1 403 / 2 106			
	Counter spindle	Output S1 / S6 - 40%			kW	-			17 / 25		-		-			
		Max. torque S1 / S6 - 40%			Nm	-			325 / 477		-		-			
	Upper turret tool spindle	Output S1 / S3 - 40%			kW	-	8,2 / 15,4				-	8,2 / 15,4		-	8,2 / 15,4	
		Max. torque S1 / S3 - 40%			Nm	-	48 / 67				-	48 / 67		-	48 / 67	
	Lower turret Tool spindle	Output S1 / S3 - 40%			kW	-			8,2 / 15,4		-		-			
Max. torque S1 / S3 - 40%			Nm	-			48 / 67		-		-					
Machine dimensions and weight				Machine dimensions (l x w x h)	mm	5 591 × 2 594 × 2 402							7 540 × 2 670 × 2 536			
				Weight	kg	12 000	12 200	12 500	13 000	13 500	12 000	12 200	12 500	16 000	16 200	16 500

Universal center lathes with CNC system

Advantages of the MASTURN product line

- Long-term proven machines with sliding guide, suitable for piece and small series production of parts
- The machines are characterized by high accuracy, stable performance, and easy operation
- Machining can be performed by manual control as on conventional lathe, or in automatic cycle with the support of CNC system working based on fixed cycles
- The machines are equipped with powerful spindles with long service life
- The program can be created by contour programming or DIN programming
- The machines have two-stage main drive gearboxes with fully automatic shifting from the system
- For this product line, we offer the HEIDENHAIN control system, which displays a graphical machining simulation on the panel



MASTURN 550i

- Max. turning dia.: 500 mm
- Max. turning length: 900 / 1 600 mm
- Max. workpiece weight: 1 000 kg
- Max. output: S1: 17 kW

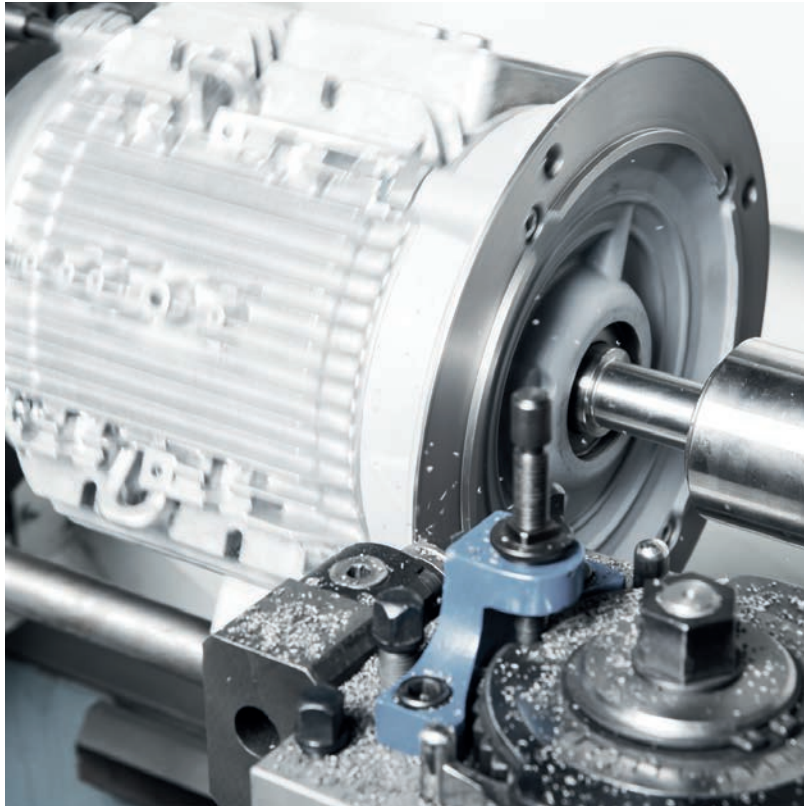
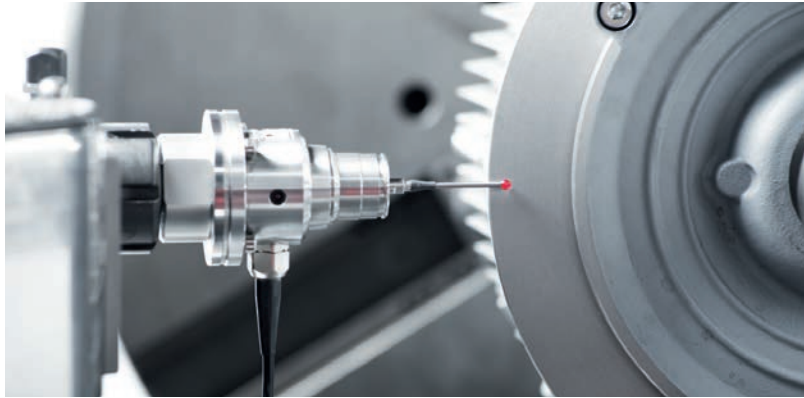
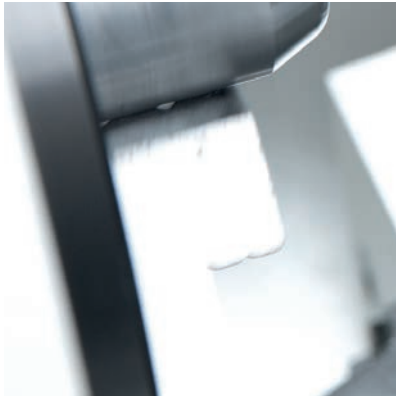


MASTURN 820i

- Max. turning dia.: 720 mm
- Max. turning length: 2 000 / 3 000 / 4 500 mm
- Max. workpiece weight: 3 000 kg
- Max. output: S1: 22 kW

MASTURN
Line

MASTURN 550i
MASTURN 820i



MASTURN Line — TECHNICAL DATA

		MASTURN 550i 800 / 1500	MASTURN 550i 800/1500 Live Tool	MASTURN 820i 2000 / 3000 / 4500	MASTURN 820i 2000 / 3000 Live Tool
Working range	Geometric and working accuracy	-	ISO 13041-1	ISO 13041-1	ISO 13041-1
	Swing over bed	mm	550	550	820
	Swing over cross slide	mm	350	350	530
	Distance between centers	mm	900 (1 600)	1 500	2 000 / 3 000 / 4 500
	Max. turning diameter	mm	500	332	720
	Workpiece weight - overhung	kg	300	300	600
	Workpiece weight - tailstock + 1 steady rest	kg	800	800	2 500
Working spindle	Spindle nose (ISO 702-3)	-	8	8	11
	Spindle bore	mm	82	82	128
	Spindle taper	-	90	90	132
Main drive	Motor output S1 / S6 40%	kW	17 / 25	17 / 25	22 / 33
	Automatic two-speed gearbox		2 stages	2 stages	2 stages
	Spindle speed range:	min ⁻¹	0 - 3 000	0 - 3 000	0 - 1 800
	1st gear	min ⁻¹	0 - 600	0 - 600	0 - 400
	2nd gear	min ⁻¹	20 - 3 000	20 - 3 000	20 - 1 800
	Max. spindle torque:				
	1st gear S1 / S6 40%	Nm	1 300 / 1 900	1 300 / 1 900	1 850 / 2 785
	2nd gear S1 / S6 40%	Nm	295 / 430	295 / 430	370 / 555
X Axis	Ball screw - dia. / pitch	mm	25 / 5	25 / 5	32 / 5
	Travel	mm	285	267	370
	Rapid traverse	m.min ⁻¹	10	10	10
Z Axis	Ball screw - dia. / pitch	mm	40 / 5	40 / 5	50 / 10
	Travel	mm	890 / 1 590	1 517	2 000 / 3 000 / 4 500
	Rapid traverse	m.min ⁻¹	10	10	10
Tool head			* MULTIFIX C / 8-position turret	*8-position turret- Live Tool	* MULTIFIX D / 8-position turret
	Max. tool section	mm	25 × 25 / 32 × 32	25 × 25	50 × 50 / 32 × 32
Tailstock	Sleeve dia.	mm	90	90	115
	Sleeve stroke	mm	160	160	225
	Sleeve taper - MORSE	-	5	5	6
Max. total machine input		kVA	30	30	38
Machine dimensions	Machine dimensions (l x w x h)	mm	2 538 / 3 238 × 1 920 × 1 755	2 538 / 3 538 × 1 920 × 1 755	4 000 / 5 000 / 6 000 × 2 055 × 1 863
	Machine weight	kg	3 200 / 3 400	3 500	4 900 / 5 300 / 6 500
Control system			HEIDENHAIN MANUAL plus 620 SIEMENS SINUMERIK 828D	HEIDENHAIN MANUAL plus 620 SIEMENS SINUMERIK 828D	HEIDENHAIN MANUAL plus 620 SIEMENS SINUMERIK 828D

*according to tool equipment of the turret, the working space alteration can occur

Application demonstration

Special technologies

Advantages of the Special technologies product line

- Special machines for machining axles
- Two upper tool heads are mirror-oriented with tool plates facing each other
- The tool heads are on separate carriages and controlled separately
- The machines use a sliding guide for maximum rigidity and damping during machining



ROLLER 2800

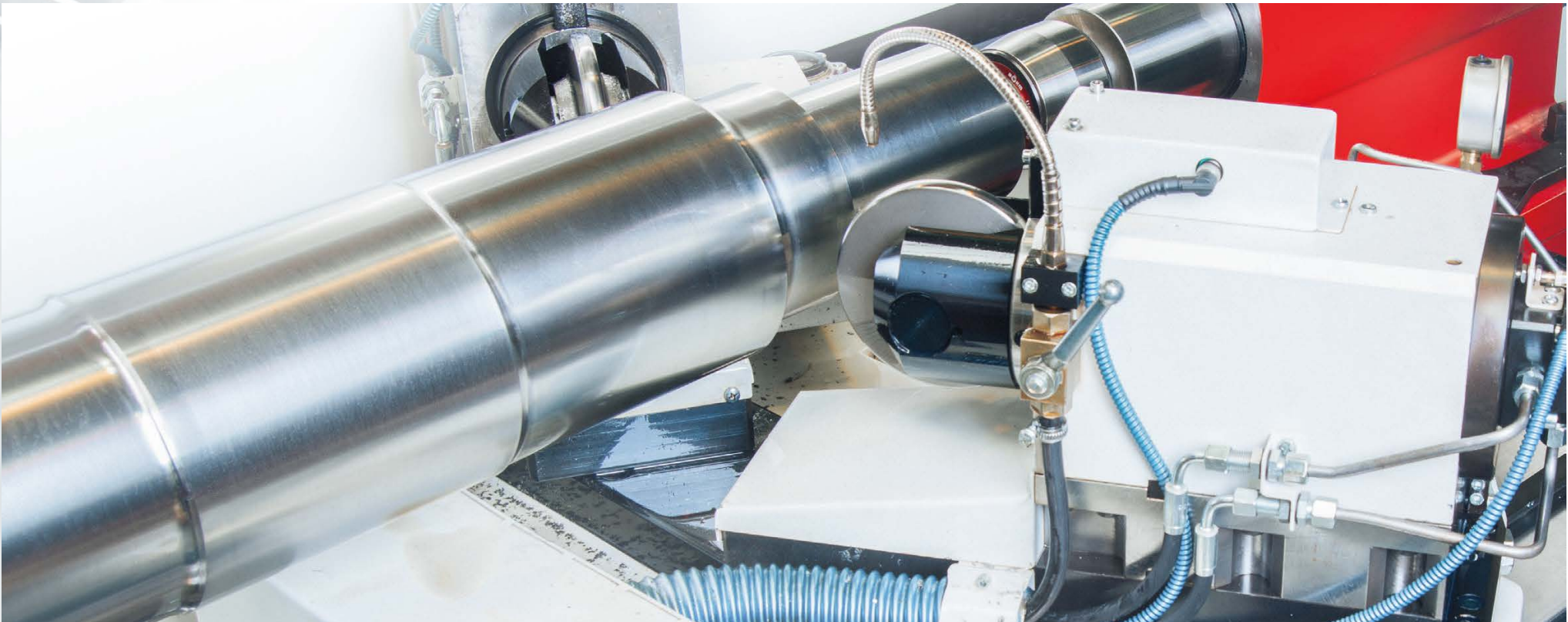
- Swing dia. without using of tilting B-axes: 300 mm
- Max. power of multi-roller without using of tilting B-axes: 50 kN
- Max. workpiece weight: 1 000 kg
- Output S1: 11 kW



SPH 50

- Max. turning dia.: 550 mm
- Max. turning length: 3 000 mm
- Max. workpiece weight: 2 500 Kg
- Max. output S1: 100 kW

**ROLLER 2800
SPH 50**



Application demonstration

ROLLER

TECHNICAL DATA

		ROLLER 2800
Working range	Geometric and operating accuracy	ISO 13041-1
	Swing dia. without using of tilting B-Axis	300
	Swing dia. with using of tilting B-Axis to ± 30°	280
	Swing dia. with using of tilting B-Axis to ± 35°	250
	Tailstock sleeve travel of multi-roller headstock	112
	Range of multi-roller power	2,5 – 50
	Max. power of multi-roller with using of tilting B-Axis (B = ± 35°)	20
	Max. power of multi-roller without using of tilting B-Axis (B = 0°)	50
	Distance between centers	2 876
	Max. workpiece weight	1 000
Operating spindle	Nose of spindle (ISO 702-3, ISO 702-2)	B11
	Spindle bore	128
	Spindle taper – metric	132
	Control system	SIEMENS SIN 840D SL
Main drive	Drive motor output (S1)	11
	Max. spindle torque (S1)	297,5
	Spindle speed range	0 – 400
B Axis	Ratio of worm-gear unit	1 : 40
	Ratio of spur gearing of tilting mechanism	1 : 12
	Tilting range	± 35
	Rapid traverse	10
Z Axis	Ball screw – dia. / increase	50/10
	Travel	2 876
	Rapid traverse	10
	Max. feed force	20
	Repeatability of positioning	0,015
Tailstock	Tailstock sleeve dia.	115
	Tailstock sleeve travel	160
	Sleeve taper	6
Hydraulic aggregate	Hydraulic oil volume	10
	Operating pressure of pump	110
	Nominal capacity of pump	11
	Nominal motor output	3
Machine dimensions	Machine dimensions (l x w x h)	5 000 × 1 815 × 1 863
	Machine weight	6 200
	Max. total machine input	30

ROLLER

SPH 50 Line

TECHNICAL DATA

		SPH 50	SPH 50 D	SPH 50 DS
Working range	Control system	SIEMENS 840 D	SIEMENS 840 D	SIEMENS 840 D
	Swing dia. over bed	760	760	760
	Max. dia. right/left saddle turning	530 / 530	530 / 400	530 / 400
	Max. turning length	3 000 *	3 000 *	2 700 *
	Max. workpiece weight	1 200 / 2 500	1 200 / 2 500	1 200 / 2 500
Operating spindle	Spindle nose (ISO 702-1)	A15	A11	A11
	Spindle bore	ø 125	ø 135	ø 135
Main drive	Drive motor output S1	110	60	28
	Spindle speed range	20 - 2 100	20 - 2 800	20 - 2 800
	Nr. of speed range	2	2	2
Auxiliary counter spindle (electrospindle)	Spindle nose (ISO 702-1)	-	-	A8
	Spindle bore	-	-	ø 65
	Output of the spindle (S1 / S6-40%)	-	-	22 / 28
	Torque (S1 / S6-40%)	-	-	300 / 384
	Spindle speed range	-	-	20 - 4000
	Max. torque C-Axis	-	-	300
NC I – upper saddle right	X-Axis – max. travel	224 (ø84 - 530)	280 (ø0 - 530)	280 (ø0 - 530)
	Z-Axis – max. travel	2 385	2 620	2 600
	Rapid traverse X / Z Axis	12 000 / 15 000	12 000 / 15 000	12 000 / 15 000
NC II – upper saddle left	U-Axis – max. travel	222 (ø88 - 530)	200 (ø30 - 400)	200 (ø30 - 400)
	W-Axis – max. travel	1 810	2 030	2 030
	Rapid traverse U / W axis	12 000 / 15 000	12 000 / 15 000	12 000 / 15 000
Accuracy of repeated driving ČSN ISO 230-2	Axis X, U	0,006 / 0,005	0,006 / 0,005	0,006 / 0,005
	Axis Z, W	0,013 / 0,013	0,013 / 0,013	0,013 / 0,013
Lower slide with steady	Axis Q – max. travel	1 715	1 860	300
	Cross lateral traverse of the rest	280	280	-
Tailstock	Tailstock sleeve dia.	190	190	-
	Tailstock sleeve travel	180	180	-
	Sleeve tapper MORSE	6	6	-
	Travel of tailstock body	1 713	1 860	-
Machine dimensions	Machine dimensions (l x w x h) (incl. chip conveyor)	8 100 × 3 435 × 2 286	8 124 × 3 435 × 2 230	8 124 × 3 435 × 2 230
	Machine weight	26 000	26 000	26 000

SPH 50

MAS Automation

Economic effects of automation:

- Production efficiency increase
- Production productivity increase
- Reduces input investment
- Reduces personal costs

On average, we increase machine efficiency by 30%



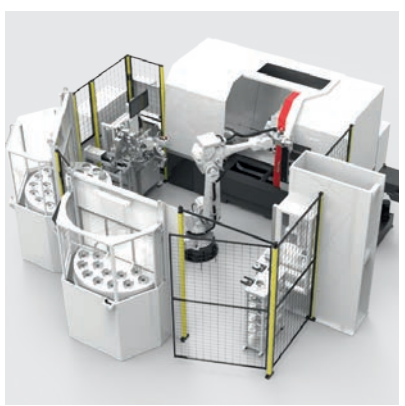
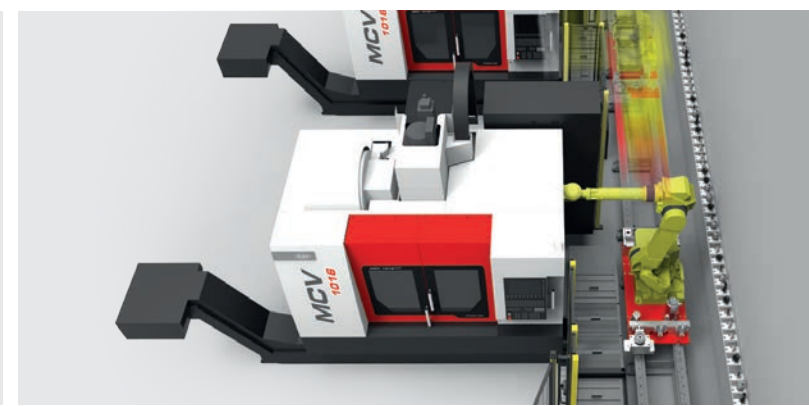
STANDARDISED AUTOMATION

We provide standardized loading stations for our machine tools of the series MCV and KL.



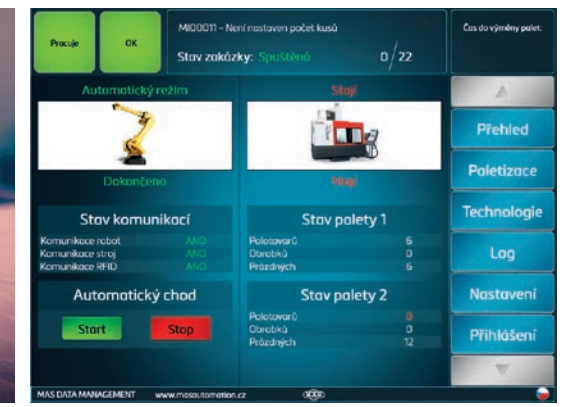
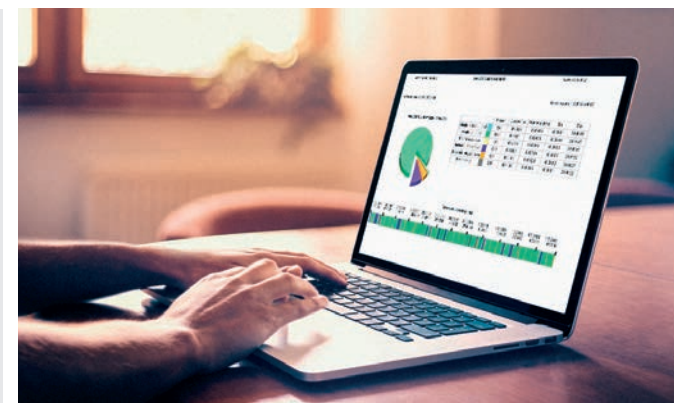
TURNKEY PROJECTS

We will build a key solution as per your needs and special requirements.



MADAM MAS DATA MANAGEMENT

Intuitive and clear system developed by KOVOSVIT MAS.



Application demonstration

Own foundry, pattern shop, machining shop

CASTINGS ARE MADE OF THE FOLLOWING MATERIALS:

- Grey cast iron (EN-GJL-150,EN-GJL-200,EN-GJL-250,EN-GJL-300,EN-GJL-350)
- Ductile cast iron (EN-GJS-400-15,EN-GJS-400-18LT,EN-GJS-500-7,EN-GJS-600-3,EN-GJS-700-3,EN-GJS-800-2)
- The total annual capacity of the Foundry is 14 000 tons of grey and ductile cast iron

CASTINGS ARE PRODUCED FOR THE FOLLOWING INDUSTRIES

- gearbox producers
- machine tools and forming machines
(our customers are leading producers of machine tools in Germany, Switzerland, Austria, Czech Republic and the Slovak Republic, England, Japan, USA, Italy and other countries)
- automotive industry *(our customers in the automotive industry are in Germany, Italy, the Czech Republic and other countries)*
- agricultural machines
- producers of pumps, piping and armatures
- textile machines
- other industries

QUALITY SYSTEM

Due to ensuring the quality, the quality control system was implemented in the foundry which includes the inspection of the input of raw materials, the whole flow of the production and the final inspection of the output castings. The whole process corresponds to the standards of quality inspection control; the foundry is a holder of the ISO 9001:2008. The foundry includes a material laboratory and sand laboratory, there are records regarding the chemical and physical properties of individual materials and moulding mixtures evaluated and archived.

OTHER OFFERED SERVICES

- technological solution of castings for clients
- complete production of new patterns in own pattern shop using CNC technology.
- option to use patterns delivered by the customer and modified for current used foundry technology
- heat processing, stress relieving annealing
- coating of castings according to client requirements
- guarantee of material composition, chemical and physical properties of cast iron
- complete machining of castings

PRODUCTION OF PATTERNS

- production of complete patterns from wood, metal and a combination of wood, plastics or resin
- repair and modification of delivered patterns according to client requirements
- production of patterns on CNC machines

PRODUCTION OF CASTINGS

Castings are produced according to individual weight categories, dimensions and batch sizes in three moulding shops:

MACHINE MOULDING SHOP – automatic moulding line

Production on Künkel-Wagner automatic moulding line with technology of natural sand moulding mixture and AIRPRESS plus system. Production of cores on core shooting machines.

Appropriate for the production of major series: 50 – 10 000 pcs

Weight range: 2 kg – 80 kg

Maximum dimensions of castings: 800 × 650 × 380 mm

Minimum wall thickness of: 6 mm

Batch size of: 200 – 500,000 pcs/year

MEDIUM MOULDING SHOP – semi-automatic moulding line

Production with the use of technology for furan mixtures prepared with GUT and FAT equipment.

Appropriate for the production of midrange series: 2 – 100 pcs

Weight range: 100 kg – 1 300 kg

Maximum dimensions of castings: 2 400 × 1 200 × 550 mm

Minimum wall thickness of: 10 mm

Batch size of: 20 – 1 000 pcs/year

HEAVY MOULDING SHOP – manual moulding line

Production with the use of technology for furan mixtures prepared with GUT and FAT equipment.

Recommended for the production of small series: 1 – 20 pcs

Weight range: 1 000 kg – 13 000 kg

Maximum dimensions of castings: 5 500 × 2 300 × 1 500 mm

Minimum wall thickness of: 12 mm

Batch size of: 10 – 200 pcs/year

MELTING SHOP

- 2 cupola furnaces, melting output 6 t/hour
- 2 low-frequency Siemens electric furnaces, volume 2 × 4 tons
- medium frequency furnace with melting capacity 6 tons

STOCKING SHOP AND PAINTING SHOP

- 2 roughing machines – portal rough machine, horizontal rough machine

FETTLING SHOP – shot blasting of castings, grinding and final fettling

- capacity – max. 48 t/day
- shot-blasting machine – Škoda, Schlick, Spencer, PTB
- straight and angle cutters, vertical cutters—
- robotic working station for grinding/cleaning of the casting parts

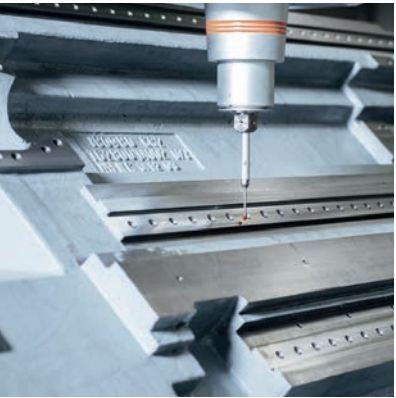
DISPATCHING DEPARTMENT

- packing and storage of castings according to client requirements

CASTINGS ARE MADE OF THE FOLLOWING MATERIALS:

- Grey cast iron (EN-GJL-150,EN-GJL-200,EN-GJL-250,EN-GJL-300,EN-GJL-350)
- Ductile cast iron (EN-GJS-400-15,EN-GJS-400-18LT,EN-GJS-500-7,EN-GJS-600-3,EN-GJS-700-3,EN-GJS-800-2)

The total annual capacity of the Foundry is 14 000 tonnes of grey and ductile cast iron with a weight range per one casting from 2 kg to 14 000 kg.



Application demonstration

MAS Industrial Services

MACHINING

Machining of steels of various quality grades, precious metals, plastics, forgings, calcined products, steel welded structures and castings.

technological capabilities

- Machining of rotating parts – from bar, flange, shaft
- Machining of non-rotating parts, incl. 5-axis milling
- Roughing and annealing of castings
- Machining of middle and large parts, castings from gray and ductile cast
- Precise boring and milling of flat surfaces
- Precise external cylindrical and plain grinding
- Hardening of guide surfaces on the gray castings

TOOL SHOP

We are fitted for production of small rotation and non-rotation parts in small series, trade cooperation of special operations and assembly of smaller units.

technological capabilities

PRODUCTION OF PARTS

- Precise rotation and non-rotation parts, incl. heat treatment
- Trade cooperation (lathing, milling, precise boring, external cylindrical grinding, plain grinding, grinding of holes, threads, worms) in single-piece and small series production
- Welding with wires and by the MIG, MAG, TIG (AC, DC) methods with possible subsequent machining of welded units on mentioned trades

MANUFACTURING OF FIXTURES

- Manufacturing and assembly of special workshop and assembly fixtures
- Manufacturing and assembly of special mechanical clamping devices

MANUFACTURING AND REPAIRS OF GAUGES

- Cylindrical, plain, snap, cone and thread gauges
- Control bars, master references and bridges for measurement of machines
- Special gauges
- Repairs, adjustment and inspection of analogue gauges
- Precise scraping and repairs of inspection plates and rules

SPECIAL PRODUCTION

- Gear wheels (flat and oblique gears up to module 8, milling and grinding up to module 5)
- Shaped cone wheels
- Worms and worm gears
- Manufacturing of inner grooves by broaching, extrusion and shaping
- Rolling of external threads
- Grinding of wedge profiles

HEAT TREATMEN

We provide hardening, annealing (softening, stress relief, normalizing), cementing, sanding, flattening, oxidation blacking, middle-frequency and high-frequency hardening.

technological capabilities

CEMENTING

- in gaseous atmosphere up to $\varnothing$ 500 mm and length of ca 1,500 mm, small parts upon request

ANNEALING

- up to $\varnothing$ 900 mm and length of ca 2 400 mm, small parts upon request

HARDENING

- up to $\varnothing$ 550 mm and length of ca 2000 mm, small parts upon request

SANDING

- upon request and dimensions of part, blasting area 2 000 mm $\times$ 2 000 mm $\times$ 1 500 mm – part hinging possible

BLACKING

- of part up to 250 kg and dimensions 250 mm $\times$ 250 mm $\times$ 1,450 mm, small parts upon request

MIDDLE- AND HIGH-FREQUENCY

- hardening from $\varnothing$ 10 mm to $\varnothing$ 200 mm, length of ca 2000 mm and weight ca 250 kg. We are able to harden the holes, gear wheels, travel wheels of ca $\varnothing$ 500 mm and length 120 mm, various shaped parts as required acc. to our capabilities

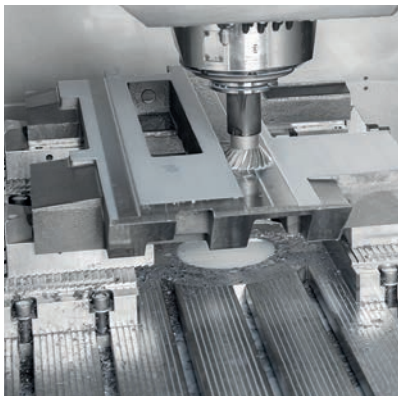
We are not fitted with protecting atmosphere.

We are fitted also for hardening at increased temperature without a protecting atmosphere to ca 1100 °C.

MACHINING AND ASSEMBLY UNITS

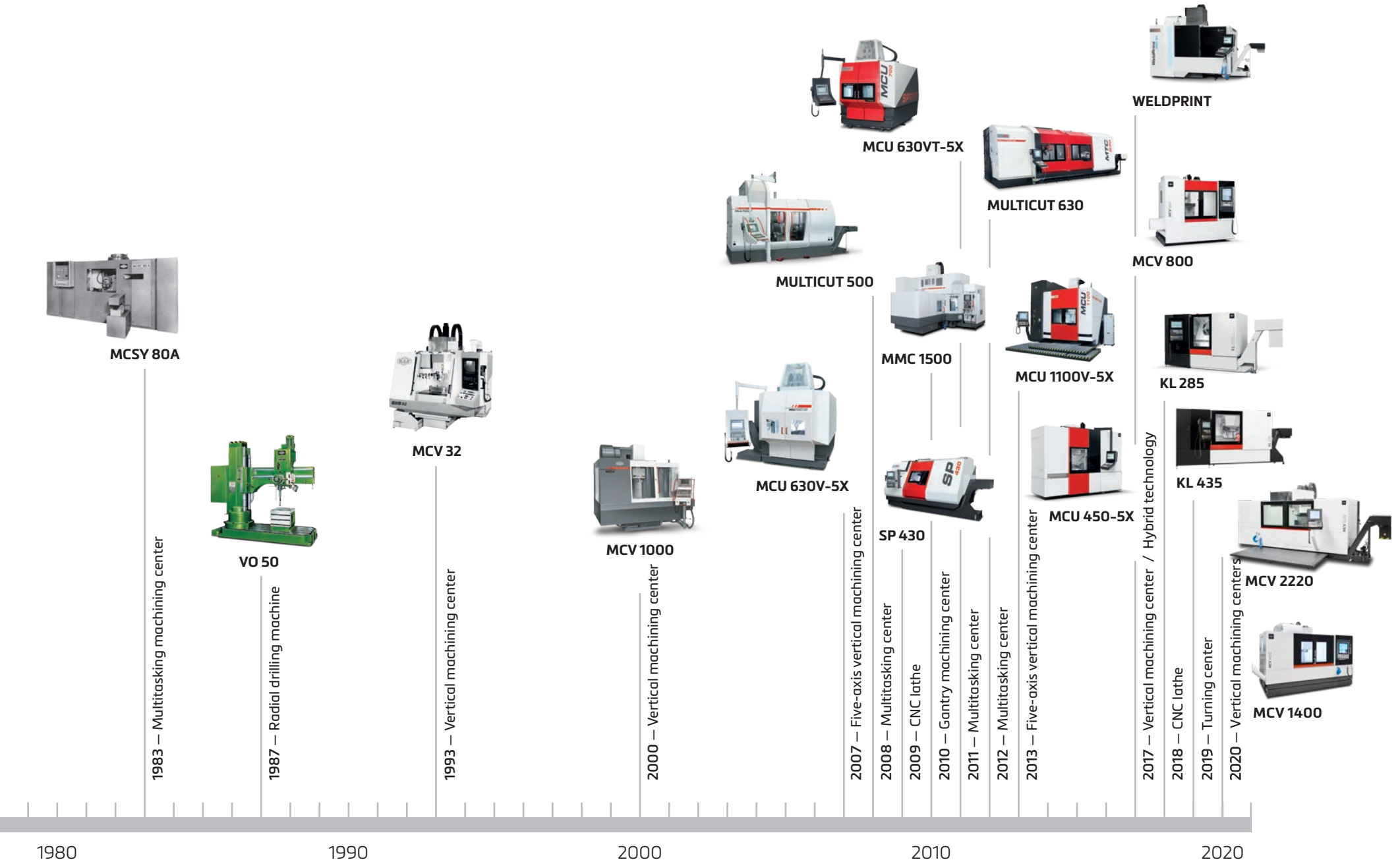
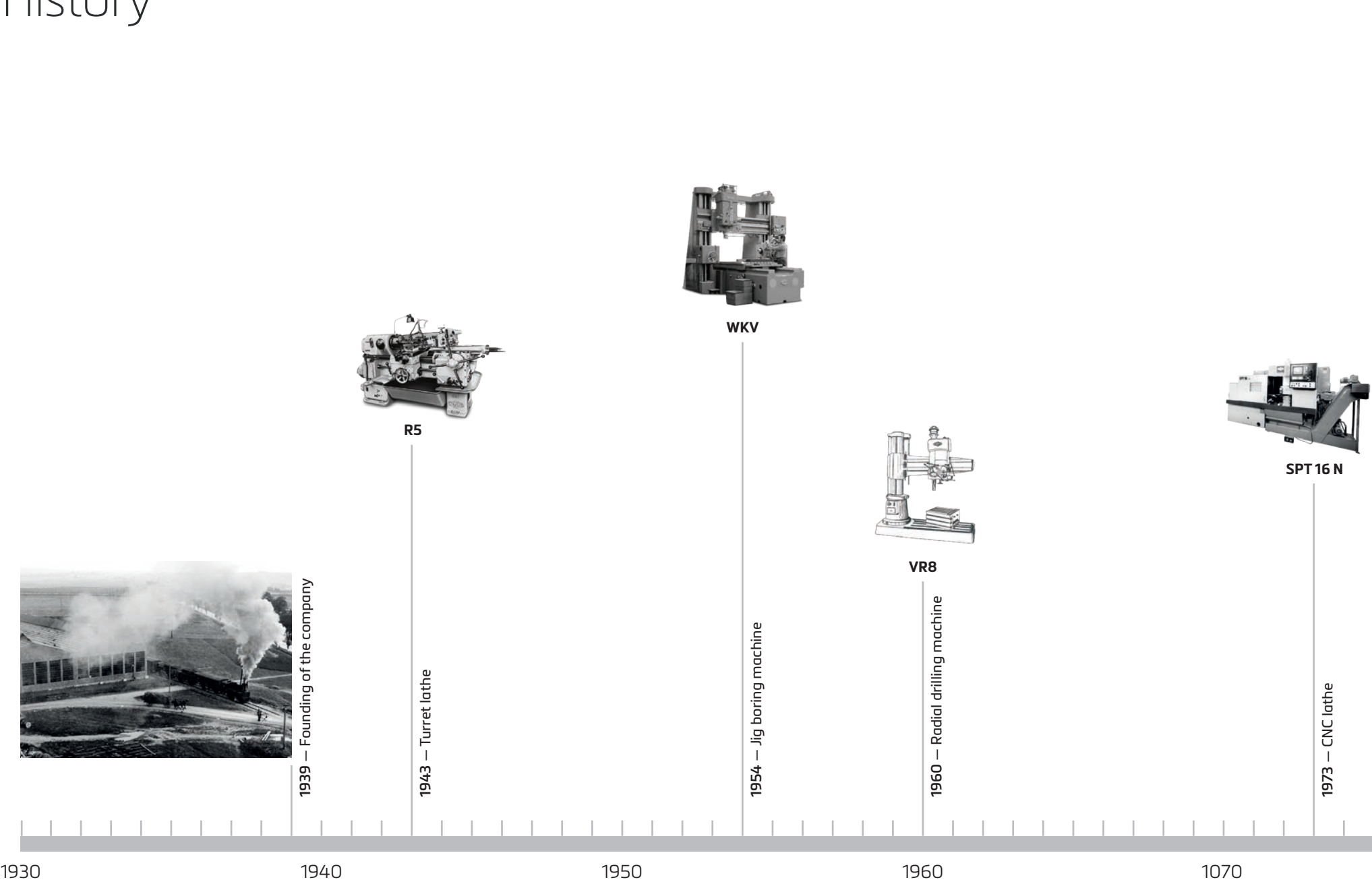
We offer CNC machining and assembly works for our external customers. Based on customers drawings we create price offer including used technology.

We are certified in compliance with EN ISO 9001.



Application demonstration

History





KOVOSVIT MAS
machine your future

KOVOSVIT MAS MACHINE TOOLS, a.s.

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