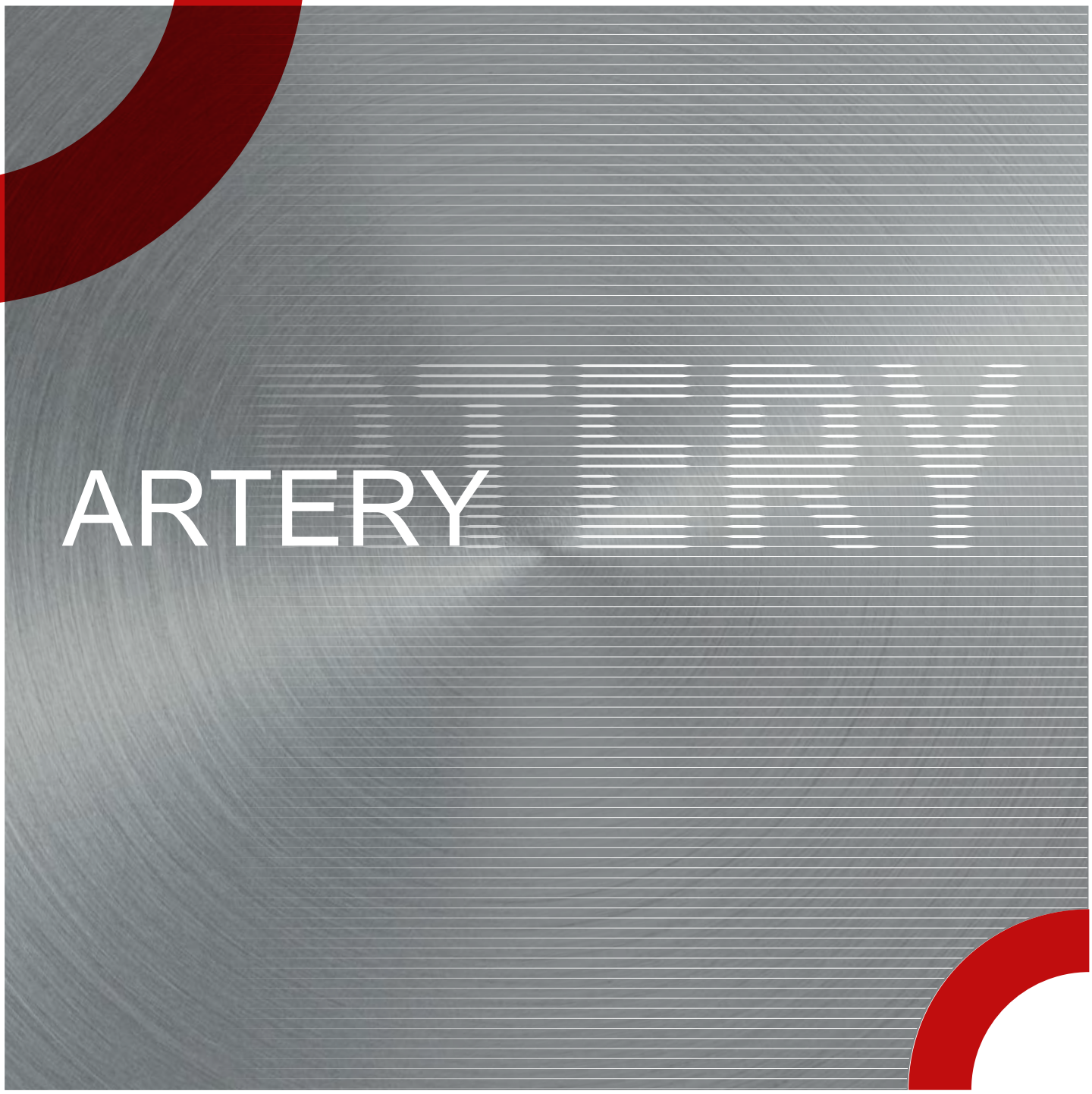


Multifunctional horizontal machining center

WEISSER

ARTERY

A multi-talent through high-end technology for highest performance and availability

Multifunctional high-performance machining center for turning operations or turn-mill complete machining in one or two setups.

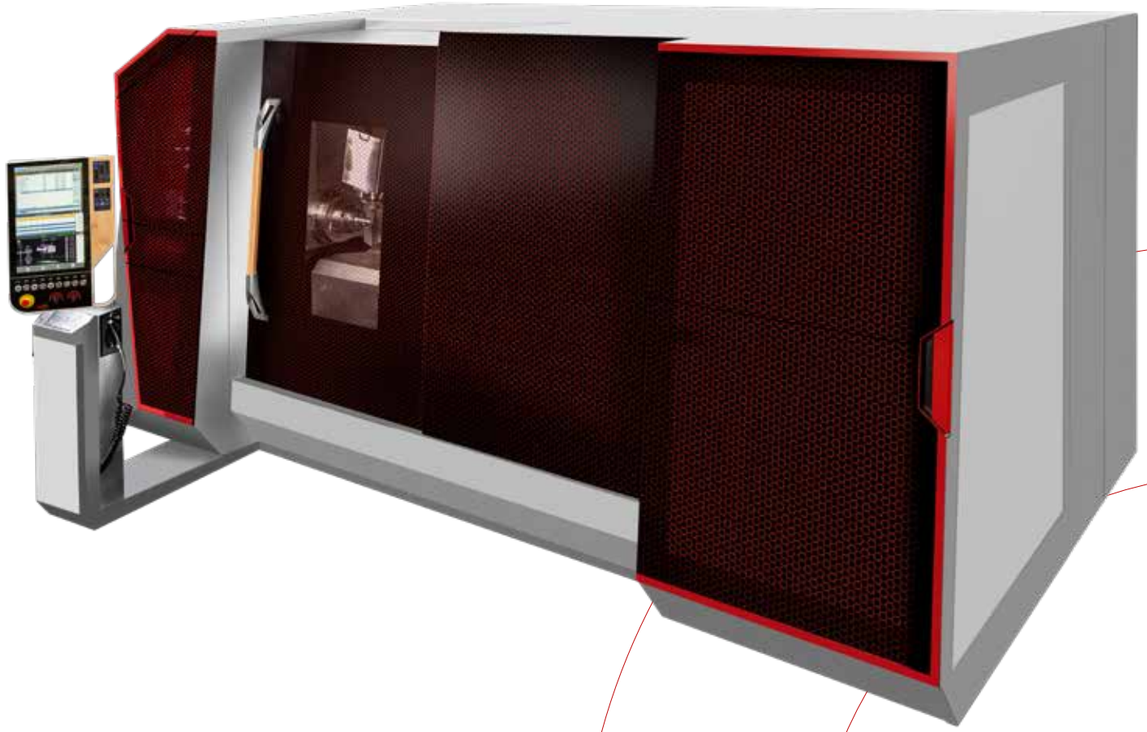
Available as a highly efficient 5-axes precision turning machine and as turn-mill center for autonomous, highly precise and cost efficient 6-sided complete machining.

The high flexibility of the ARTERY could be used in many industries such as precision engineering, aerospace, mechanical engineering, medical technology, and much more. The ARTERY manufactures first class surfaces and enables maximum space saving through the DIRECT-WALL-CONCEPT.

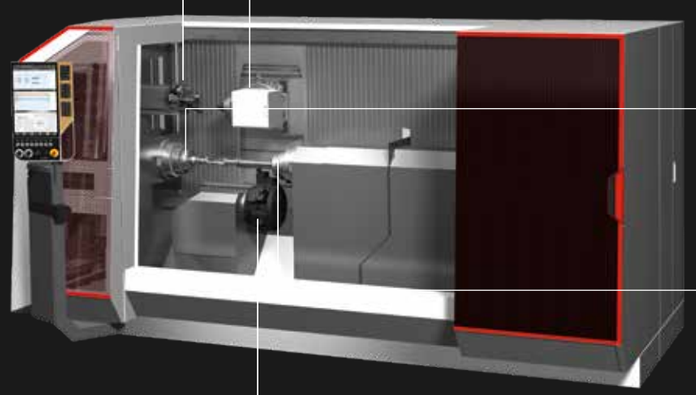
Conceptional advantages

- Simultaneous turning and/or turning and milling
- User-friendly, functional design
- Large working area with compact footprint
- Vibration optimized construction
- Service-friendly access to all relevant components

This extraordinary machining center fascinates with impressive product quality and user benefits.
Experience the performance and precision of this multitalent!



Conceptual design



TOOL CHANGER
- Chain magazine up to 102 positions

SWIVELING MILLING SPINDLE
- 12.000 / 20.000 rpm
- B-axis ± 120° (HSKT-T63)
- Y-axis +130/-80 mm

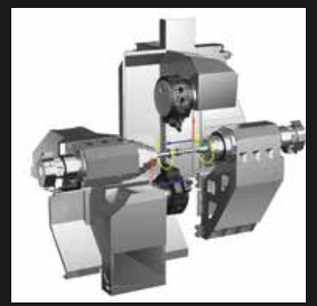
MAIN SPINDLE
- 5.700 rpm / 24 kW / 191 Nm

COUNTERSPINDLE
- 5.700 rpm / 24 kW / 191 Nm

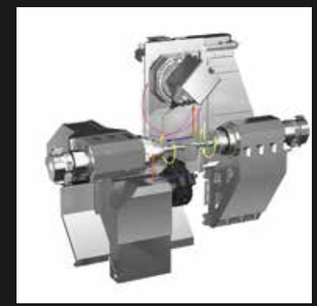
TOOL CARRIER
- Turret 12 stations
- Tools BMT 65/VDI 40
- Tool drive 6.000/12.000 rpm^{-1}

More flexibility through customized workspace configuration for complete machining of workpieces

ARTERY M-1 4X
Multifunctional turning and 4-axes machining through tool carrier with Y-axis.



ARTERY M-2 5X
Multifunctional turning and 4-axes machining through tool carrier with Y-axis.



ARTERY M-2 TM
Turning and milling by Y/B-axis with dynamic milling spindle, disk turret and counter spindle or tailstock. (high-speed tool changer and 38/102x chain magazine).

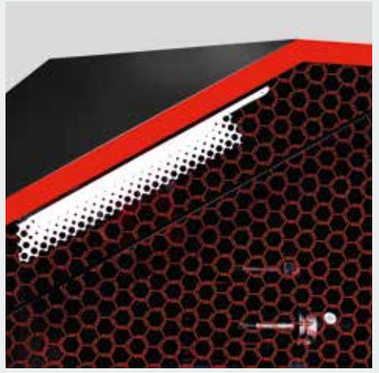
Features

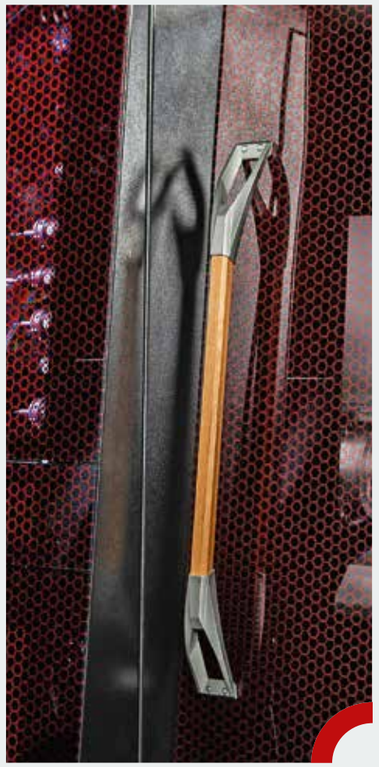
WEISSER ARTERY

The design of the ARTERY represents a visionary, innovative form. The specific use of facetted surfaces, dynamic edges and the colour concept emphasise the high precision, stability and dynamics of the turning/milling center.

Additional features:

- Long Z-axis
- Control panel with WEISSER 360 diagnostic center (i4.0 ready)
- Transparent graphics for status control
- Generously equipped, swivelling control panel





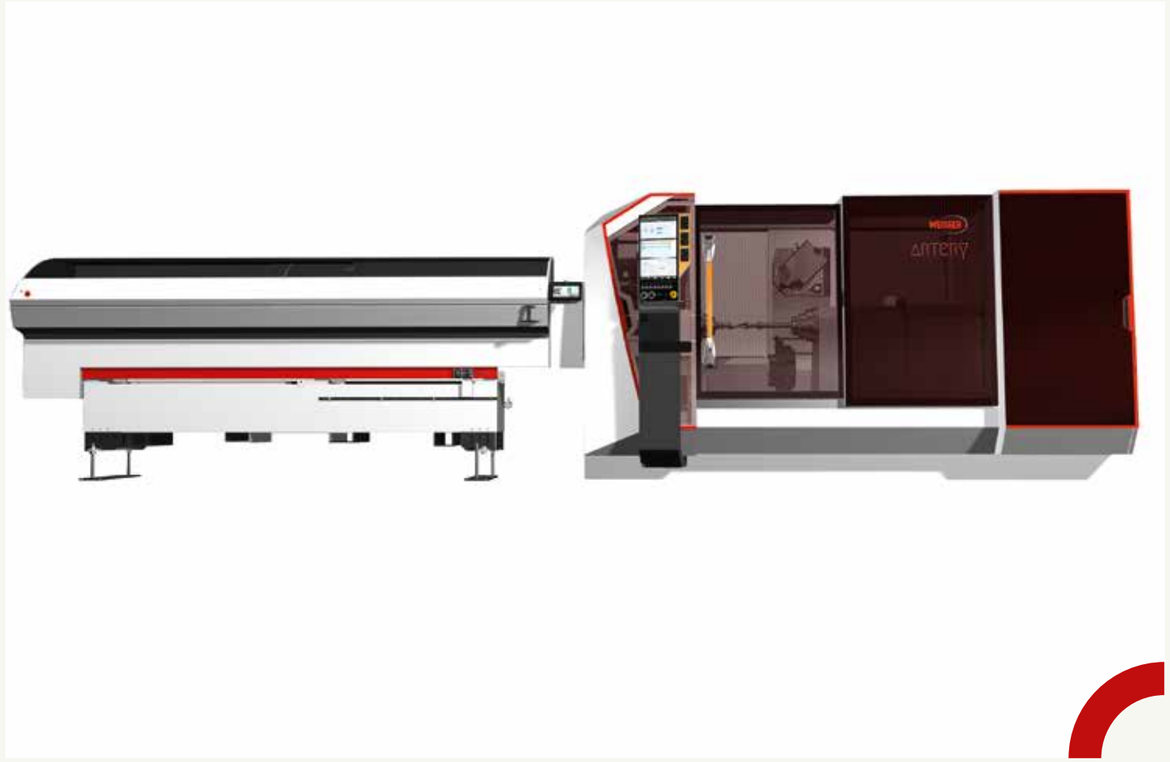
Technologies

6-sided complete machining without compromise

The combination of Y/B-axis, milling spindle with 100 Nm and a disk turret equipped with tool carrier and counter spindle enables efficient turning and milling in one process.

Multifunctional by the meter

Automated 6-sided complete machining by simultaneous turning and/or milling of bar material workpiece of up to 100mm diameter and 1.200 mm turning length.



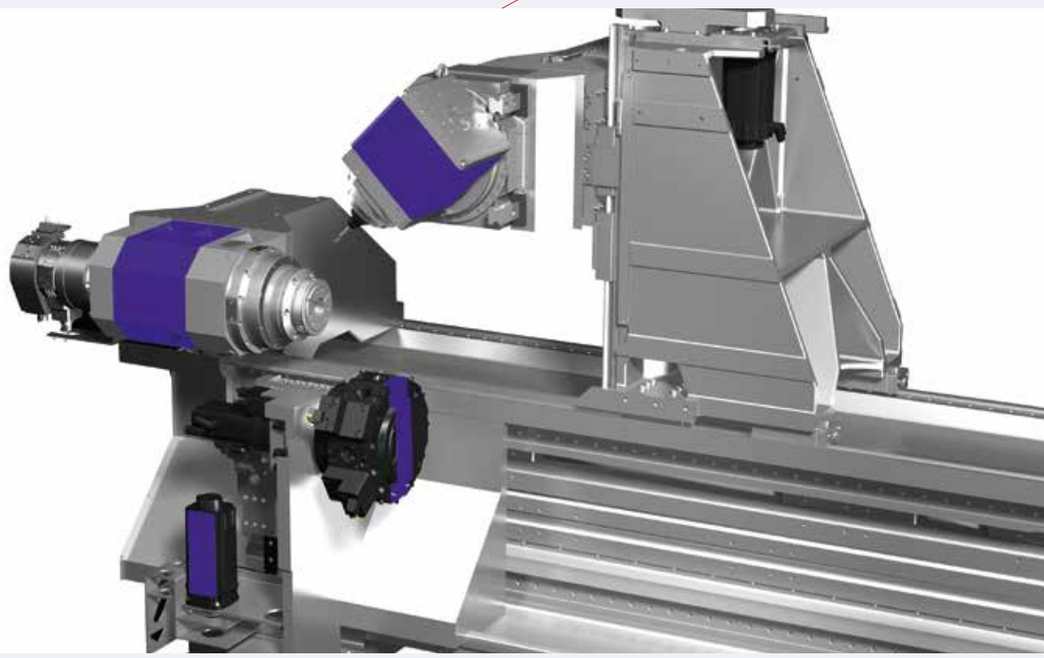
Technical Highlights

Highly stable guiding systems and ball screws

The large dimensions as well as the highest quality materials used for guides and ball screws ensures minimal wear, which leads to a lower maintenance and repair costs.

Maximum stability and long-term accuracy

The WEISSER ARTERY is characterized by a vibration-optimized thermosymmetrical construction. The FEM- and topology-optimized monoblock machine base and the slide units ensure high stability. This is further supported by a strongly ribbed, low-vibration horizontally aligned cast construction.

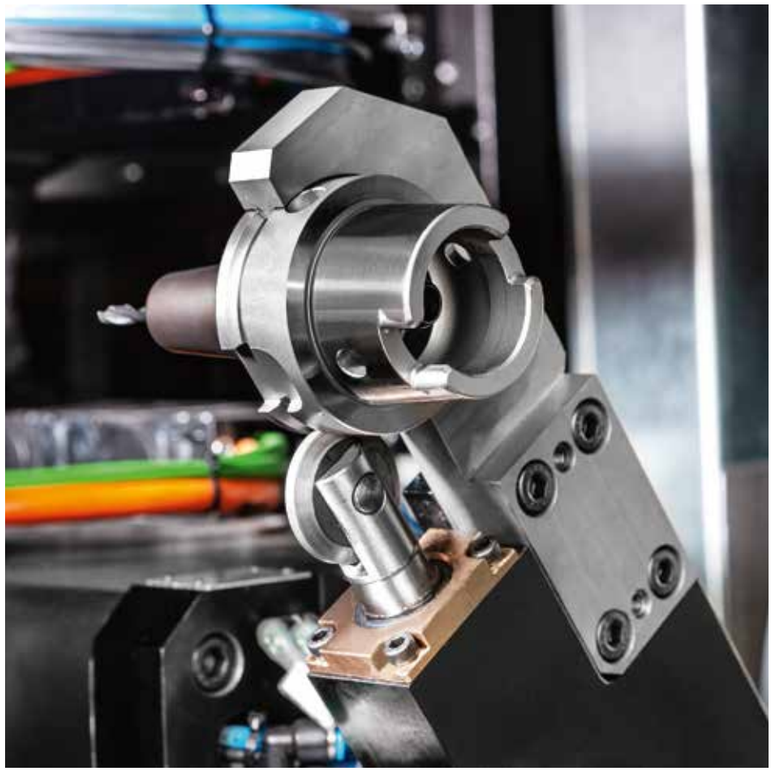


The ARTERY is assembled in an efficient and quality-oriented production process with a high level of expert knowledge. This leads to highest quality and permanent accuracy with maximum availability.

Technical Highlights

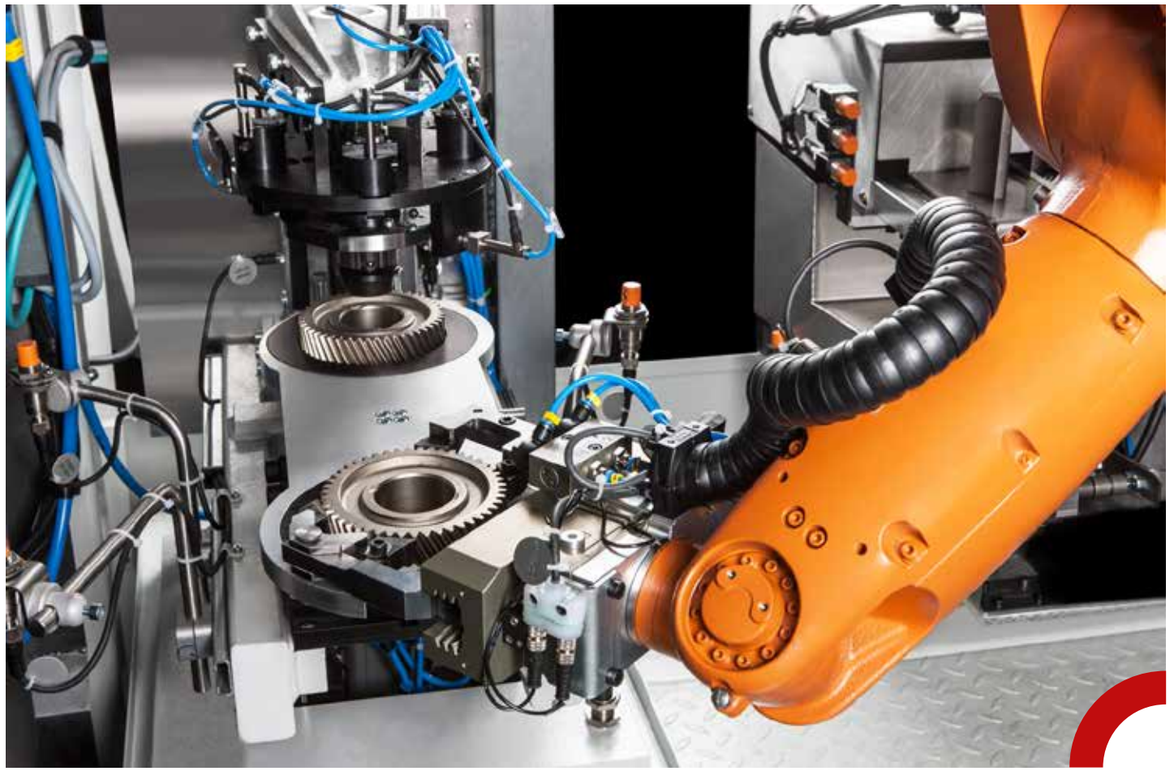
NC-controlled chain magazine

Minimization of setup time through flexible tool handling. The highly dynamic, robust NC-controlled chain magazine supports the productivity of the ARTERY. There are up to 102 magazine positions in the chain, and a total of 104 tool places are available for workpiece machining, tool input station with good accessibility from front makes it more efficient.



Robot Automation

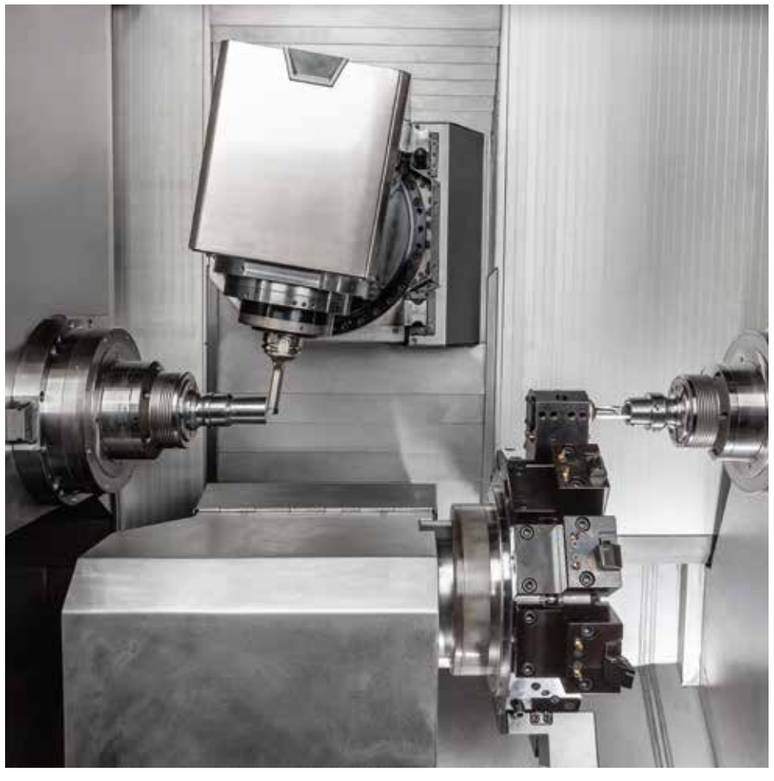
Robot automation offers a highly flexible loading and unloading method for your machining center. Machining solutions with robot automation are customized to individual requirements. Related processes (such as measuring, marking, washing) can also be handled in a space-saving manner and offer maximum availability.



Technical Highlights

Fascination through technology

- Vibration damping cast iron construction
- Long Z-axis for 1,200 mm machining length
- Y-axis (+130/-80 mm) with B axis and milling spindle (HSK-T 63)
- Compact cartridge milling spindle (B-axis)
- Milling spindle with max. 20.000 min-1, power up to 20 kW, 100Nm
- 38/102 x chain magazine
- High-speed tool changer, chip-to-chip time <8.5 s (VDI 2852)
- Complete bar machining
- High stability and precision during workpiece processing
- Identical main and counter spindle



Pay-per-Use

WEISSER Financial Agility

„Pay-per-Use WEISSER FINANCIAL AGILITY“ offers long-term planning security, permanent cost control and payment only for the output of the machining center. Pay-per-Use relates the use, turnover and profit directly to the costs. The connection of WEISSER machines allows a detailed insight into their operating sequences and thus the calculation of the rent per minute. The advantages are the elimination of capital tie-up and transparent costs per minute, which are directly included in the cost per piece calculation.

Your advantages

- Full cost transparency through minute-based billing, exclusively during production
- No charging in case of malfunctions [1)]
- Simplified credit assessment [2)]
- The most modern rental tool in use at all times - the ARTERY

Pay per use - YOU PAY ONLY THE USE

Balancing	ARTERY Pay-per-Use	Leasing	Financing
Duration	• Short terms • From 48 months • Always a modern machining center	• Short/medium terms • From 48 months • Always a modern machining center	• Usually long terms • From 50 months • Risk of non-competitive machining centers
Accounting	• Fully variable • Price/minute • Accounting of the actual machine usage • One invoice	• Monthly fixed • Rigid rates • No orientation to workload or availability	• Monthly fixed • Rigid rates • No orientation to workload or availability
Financial partners	• No financing • No bank necessary • Simplified, short credit check	• Bank partner required (house bank) • Credit assessment at the expense of credit limits • Rigid/term-related conditions	• Bank partner required (house bank) • Credit assessment at the expense of credit limits • Rigid/term-related conditions
Maintenance/ Service	• Machine failures at the expense of the lessor • Service mobile with all spare parts • Maintenance is included	• Failures at the expense of the company • Maintenance and service at the expense of the end user	• Failures at the expense of the company • Maintenance and service at the expense of the end user
Costs	• Converting the return on investment into contribution margin per unit • No financing costs for the rental tool	• Cost transparency requires own controlling • Different cost types and cost centers	• Cost transparency requires own controlling • Different cost types and cost centers

[1)] Unless caused by leaser

[2)] Carried out by bank partner

Technical data

Workspace

		M-1 4X	M-2 5X	M-2 TM
Turning length	mm	1.200	1.200	1.200
Chuck diameter	mm	bis 350	bis 350	bis 350
Feed force W/X/Y/Z max. (25 % CDF)	kN	7,5 / 7,5 / 7,5 / 7,5	7,5 / 7,5 / 7,5 / 7,5	7,5 / 7,5 / 7,5 / 7,5
Working stroke X (top / bottom)	mm	200 / 200	200 / 200	500 / 200
Working stroke Y-axis	mm	210 (+130/-80)	210 (+130/-80)	210 (+130/-80)
Working stroke Z-axis	mm	1.200	1.200	1.200
Max. travel speed W/X/Y/Z	m/min	45 / 40 / 40 / 45	45 / 40 / 40 / 45	45 / 40 / 40 / 45
Ball screw diameter W/X/Y/Z	mm	40 / 40 / 40 / 40	40 / 40 / 40 / 40	40 / 40 / 40 / 40
Profile rail guide W/X/Y/Z	mm	45 / 45 / 45 / 55	45 / 45 / 45 / 55	45 / 45 / 45 / 55
Tool flying circle	mm	700	700	700
Max. peak distance	mm	1.200	1.200	1.200

Main spindle / Counter spindle

Spindle bearing diameter	mm	120 (160)	120 (160)	120 (160)
Spindle diameter	mm	65 (105)	65 (105)	65 (105)
Spindle bore diameter	mm	80 (120)	80 (120)	80 (120)
Spindle flange / spindle head	DIN55026	A6 (A8)	A6 (A8)	A6 (A8)
Drive power 100 % CDF	kW	22 (67,4)	22 (67,4)	22 (67,4)
Drive power 40 % CDF	kW	24 (80)	24 (80)	24 (80)
Nominal speed	rpm	1.400 (1.100)	1.400 (1.100)	1.400 (1.100)
Speed max.	rpm	5.700 (4.000)	5.700 (4.000)	5.700 (4.000)
Torque 100 % CDF	Nm	150 (585)	150 (585)	150 (585)
Torque 40 % CDF	Nm	191 (795)	191 (795)	191 (795)
C-axis resolution	Degree	0,001	0,001	0,001

Tailstock (optional instead of counter spindle)

Shaft fixture	DIN228	MK5	MK5	MK5
Pressing force	kN	7,5	7,5	7,5
Speed max.	rpm	4.500	4.500	4.500

Tool carrier top

Tool system		disc turret 12x	disc turret 12xh	milling spindle
Tool holder		BMT 65s / VDI 40	BMT 65s / VDI 40	HSK T63
Speed max.	rpm	6.000 torque drive 12.000 speed drive	6.000 torque drive 12.000 speed drive	12.000 / 20.000
Drive power max. (25% CDF)	kW	28,5 torque drive 23,5 speed drive	28,5 torque drive 23,5 speed drive	20
Torque max. (25% CDF)	Nm	85 torque drive 56 speed drive	85 torque drive 56 speed drive	115
Swivel range B-axis	Degree	-	-	± 120

Tool carrier bottom

Tool system		-	disc turret 12x	disc turret 12x
Tool holder		-	BMT 65s / VDI 40	BMT 65s / VDI 40
Speed max.	rpm	-	6.000 torque drive 12.000 speed drive	6.000 torque drive 12.000 speed drive
Drive power max. (25% CDF)	kW/Nm		28,5 torque drive 23,5 speed drive	28,5 torque drive 23,5 speed drive
Torque max. (25% CDF)	Nm	-	85 torque drive 56 speed drive	85 torque drive 56 speed drive

Tool magazine

Tool system	DIN69893	-	-	HSK T63
Places in tool magazine		-	-	38 / 102
Tool weight max.	kg	-	-	8
Chip-to-chip time	s	-	-	~ 8,5

Dimensions

Dimensions basic machine (LxWxH)	mm	4.500 x 2.500 x 2.500	4.500 x 2.500 x 2.500	4.500 x 2.500 x 2.500
Weight	kg	~ 14.000	~ 15.000	~ 15.000
Connected load	kW	36	36	36
Control system		Siemens 840 D sl		

WEISSER GROUP

J. G. WEISSER SÖHNE GmbH & Co. KG
Johann-Georg-Weisser-Strasse 1
78112 St. Georgen
Germany
T +49 7724 881-0
www.weisser-web.com

WEISSER Präzisionstechnik GmbH & Co. KG
Bundesstrasse 1
78112 St. Georgen
Germany
T +49 7724 881-590
www.weisser-pt.com

WEISSER Maschinenzentrum Schwenningen
Albertistrasse 16
78056 Villingen-Schwenningen
Germany
T +49 7720 60900-41
www.weisser-web.com/service

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