

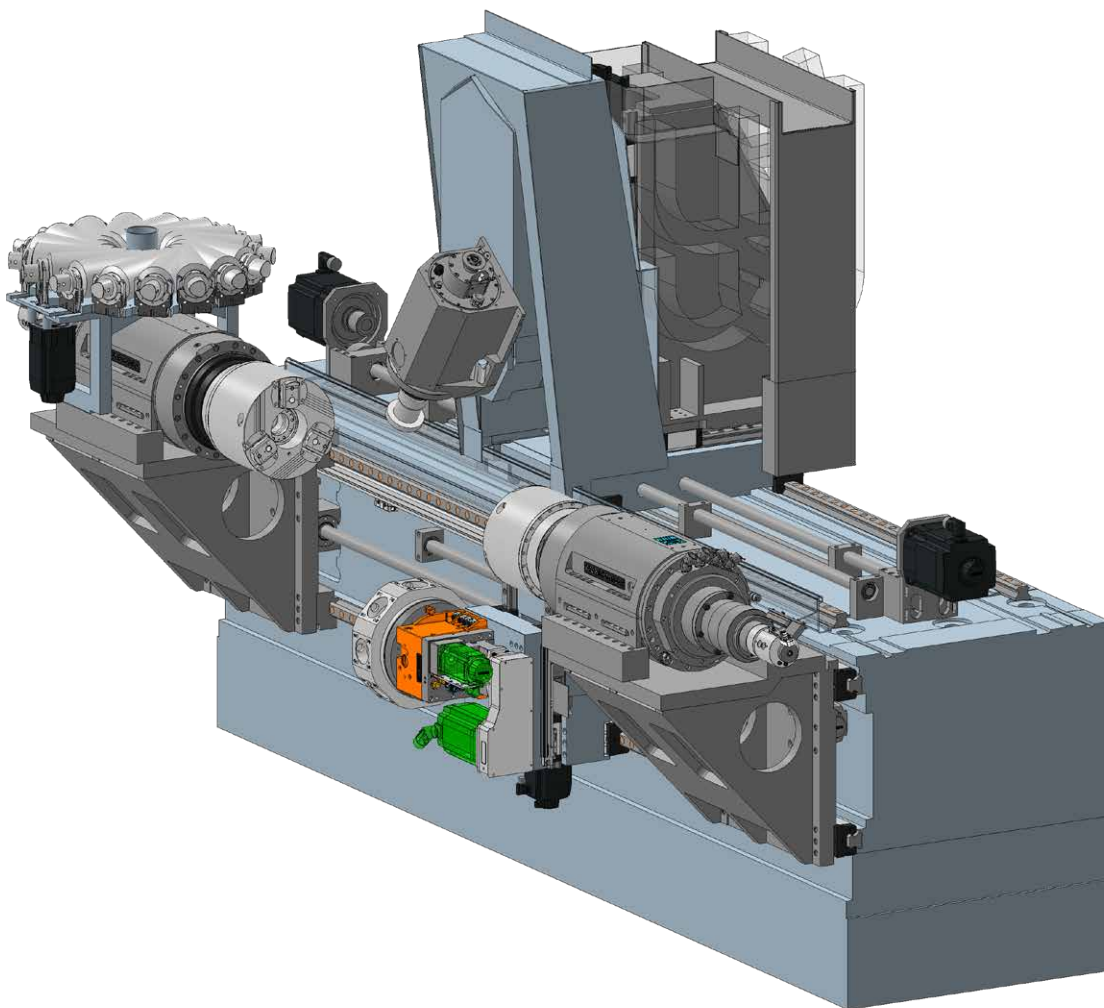


V300 MT

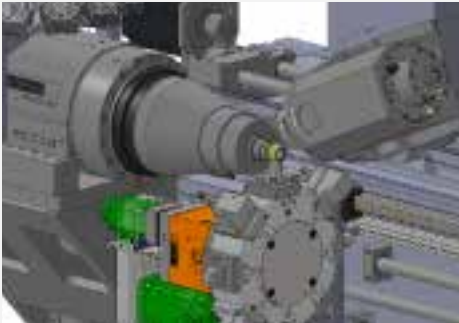
Horizontal Mill - Turn - Center

Long Shaft Machining, Turning, Milling, Hobbing, Skiving

The modular system of the V300 enables the realization of robust, rigid and precise machine variants with high availability.

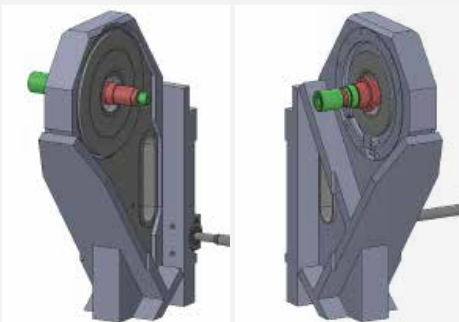


Highlights



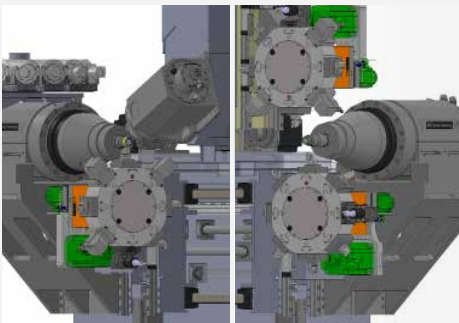
Turning, milling and gear cutting of shafts in one set-up

Skiving and hobbing up to module 6 with the robust motorized milling spindle.



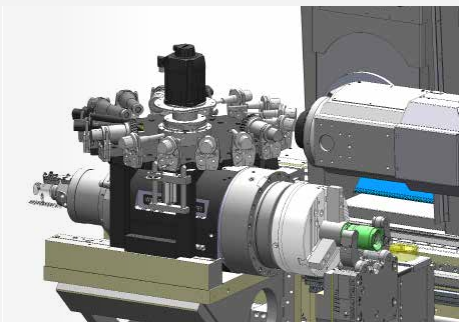
Center drive technology

highly efficient complete machining of shafts by simultaneous machining of both shaft ends by turning, milling and gear cutting



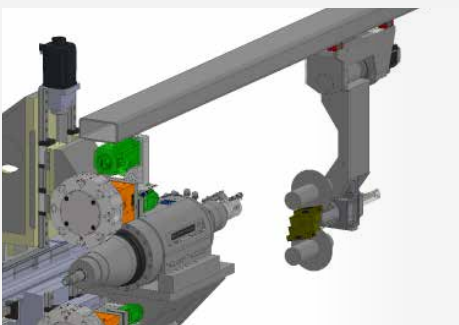
6-side machining

with robust and powerful motorized milling spindles and turrets on main and counter spindles



Automatic tool change in 7 sec.

by disc magazine at the work area - supported by background magazine if necessary



Integrated automation for fast workpiece change

Workpieces



E-rotor shaft

Material	20 MnCr5
Workpiece dimensions	ø 58 × 303 mm
Processing time	05:55 min
Highlight	6-sided complete machining incl. gear cutting



Gear shaft

Material	16MnCr5
Workpiece dimensions	ø 88 × 343 mm
Processing time	07:45 min
Highlight	6-sided complete machining incl. gear cutting



Truck transmission shaft

Material	16MnCr5
Workpiece dimensions	ø 275 × 385 mm
Processing time	05:15 min
Highlight	Complete turning fully auto- matic



Truck transmission shaft

Material	42CrMo4
Workpiece dimensions	ø 186 × 462 mm
Processing time	08:30 min
Highlight	6-sided complete machining incl. gear cutting



Truck transmission shaft

Material	16MnCr5S
Workpiece dimensions	ø 125 × 500 mm
Processing time	03:00 min
Highlight	Complete turning machining in OP10 and OP 20

Technical Specifications

6-side workpiece machining

5-axis-machining

Main and counter spindle

Powerful Milling Spindle with B-swiveling axis; ATC with 16 tools

Lower turret optional with live tools in axis with milling spindle

Machine dimensions

length without (with) chip conveyor	[mm]	4500 (6550)	
height	[mm]	2850	
depth without (with) e-cabinet chiller	[mm]	2950 (3100)	
weight	[kg]	20000	

Max. workpiece dimensions

spindle nose to tailstock tip distance	[mm]	2100	
max. workpiece length	[mm]	2 x 700	
(assumed chuck height of 200 mm; half workpiece length chucked in spindle)			
max. chuck diameter	[mm]	315	
max. Workpiece diameter	[mm]	300	

W1: Upper ZYXB slide with milling spindle

Z1 upper slide Z travel	[mm]	2250	
Y1 upper slide Y travel	[mm]	+ 100 / - 200	
X1 upper slide X travel	[mm]	460	
B1 upper slide B travel	[°]	+ 105 / -105	

W3: Lower ZX turret slide

Z3 Lower slide Z travel	[mm]	1550	
X3 Lower slide YX travel	[mm]	215	

Counter Spindle

Z4 Lower slide Z travel	[mm]	1600	
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Axis force / feed

Slides

max. acceleration	[m/s ²]	5	
max. feed speed upper ZYXB slide TC1	[m/min]	40	
max. feed speed lower slide	[m/min]	30	
continious / max. feed force	[N]	7500 / 15000	

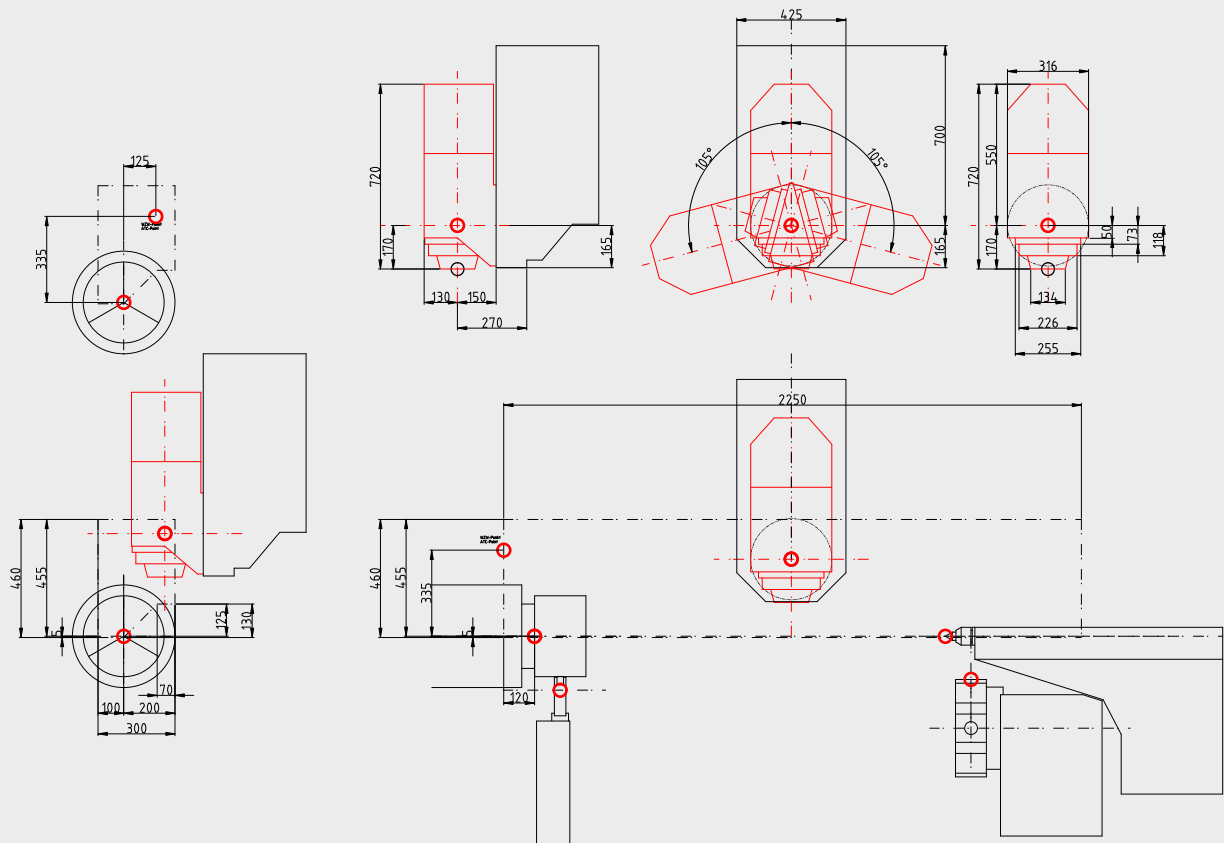
B-Axis

max. rot. Speed	[1/min]	40	
continious / max. torque	[Nm]	1200 / 2200	
clamping torque	[Nm]	2500	

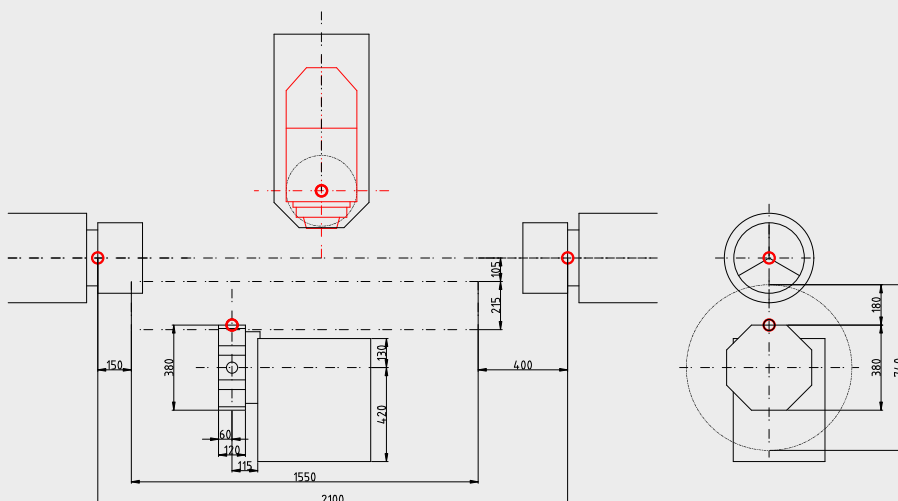
Spindles			
Turning spindle 1 (1093-6WV11), grease lubrication	[1/min]	6000	
front bearing ID	[mm]	100	
continious / max. torque	[Nm]	100 / 130	
continious / max. power	[kW]	17 / 22	
Turning spindle 2 (1147-8WS1), grease lubrication	[1/min]	3500	
front bearing ID	[mm]	150	
continious / max. torque	[Nm]	820 / 1100	
continious / max. power	[kW]	58 / 65	
Milling spindle 202B, C8 (HSK100), grease lubrication	[1/min]	4500	
front bearing ID	[mm]	120	
continious / max. torque	[Nm]	136 / 210	
continious / max. power	[kW]	24 / 32	
clamping torque for turning / MultiTool-Operation	[Nm]	900	OPTION
Milling spindle AS180, HSK63/C6, oil-air-lubrication	[1/min]	20000	
front bearing ID	[mm]	80	
continious / max. torque	[Nm]	85 / 130	
continious / max. power	[kW]	25 / 35	
clamping torque for turning / MultiTool-Operation	[Nm]	600	OPTION
Spindles for inner / outer grinding available on request			
ATC			
Tool disc magazin			
no. of tools C8 / HSK63	[-]	16	
max. tool diameter / length (depends on the size of neighbouring tools)	[mm]	120 / 300	
max. tool weight	[kg]	10	
Higher tool capacity by background ATC (on request)			
no. of tools HSK63 / C6	[-]	60 / 90 / 120	
no. of tools HSK100 / C8	[-]	24 / 48 / 72	
max. tool dimensions / weight		see above	
Turret (example)			
VDI 40 Turret			
no. of tools / interface	[-]	12 x VDI 40	
max. tool length upper / lower slide	[mm]	240 / 180	
continious / max. torque	[Nm]	25 / 45	OPTION
continious / max. power	[kW]	5 / 10	OPTION
tool drive max. rot. speed	[1/min]	4000	OPTION
CDI-, CAPTO-Interfaces on request			

Work area

AXIS DIAGRAMM / WORKING AREA UPPER ZYXB SLIDE WITH MILLING SPINDLE AND COUNTER SPINDLE



AXIS DIAGRAMM / WORKING AREA LOWER W3 XZ-TURRET-SLIDE



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