

Vertical 3-Axes Machining Center

# VMX 24i



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# Keydata



	VMX 24i
Travels (X/Y/Z) [mm]	610 / 510 / 610
Spindle Speed [1/min]	12,000
Spindle Power [kW]	9
Torque [Nm]	95
ATC stations	30

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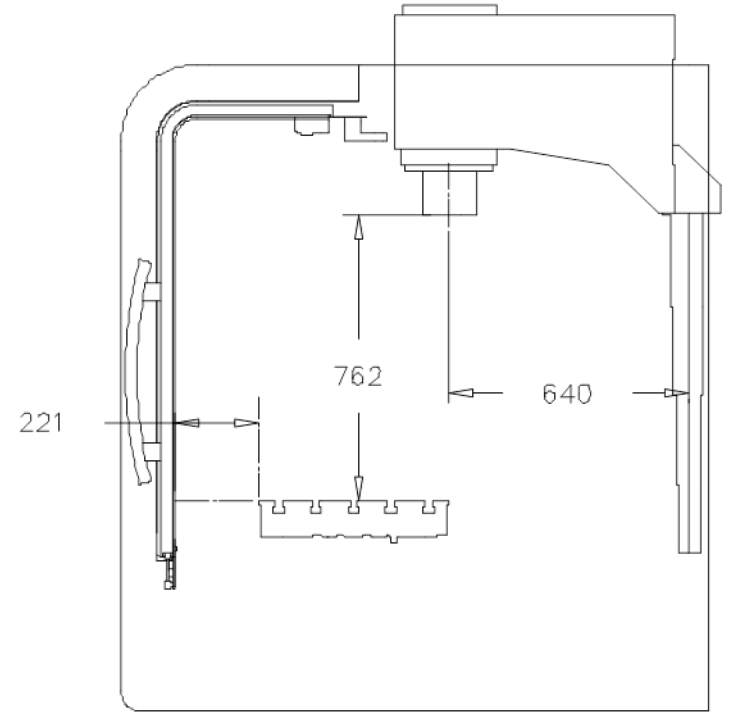
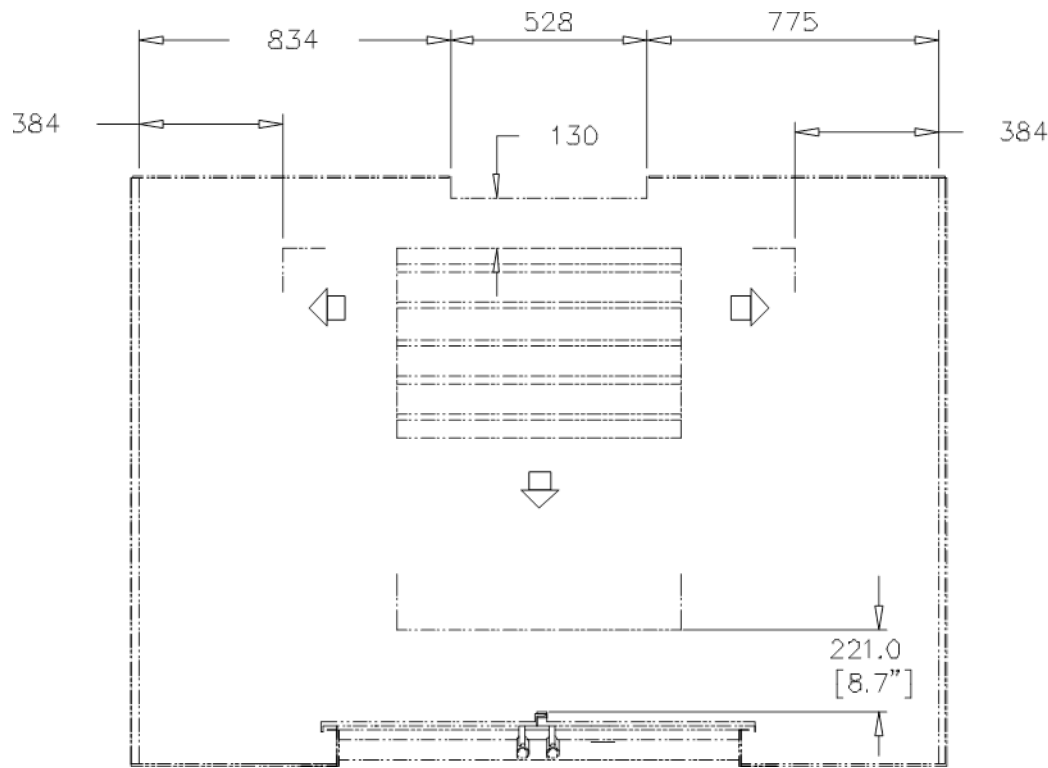
# Technical Specification

<b>Machine Capacity</b>		Rapids X / Y / Z [m/min]	35 / 35 / 30
Travels X/Y/Z [mm]	610 / 510 / 610	Axis Thrust X/Y/Z [N]	6,400 / 6,400 / 15,200
Spindle Nose To Table [mm]	150 - 760	<b>Automatic Tool Changer</b>	
Table Working Surface W x D [mm]	760 x 510	Number of stations	30
T – Slots (DIN 650)	5 x 18 <sup>H8</sup> x 100	Max. Tool Diameter [mm]	80
Max. load (uniform distribution) [kg]	1350	Adjacent Sides Empty [mm]	130
<b>Spindle</b>		Max. Tool length [mm]	300
Spindle Taper (DIN 69871 A)	Sk 40	Max. Tool weight [kg]	7
Max. Speed [min <sup>-1</sup> ]	12,000	ATC Time (Tool to tool) [sek.]	2
Max. Power [kW]	9	ATC Time (Chip to chip) [sek]	6
Max. Torque [Nm]	95	<b>Service Requirements</b>	
Retention knobs	ISO 7388/II B	Electrical	23 kVA / 33 A / 400V
<b>Accuracy (VDI / DGQ 3441)</b>		Air (Dry, clean air acc. DIN/ISO 8573-1, class 4)	7bar / 150
Positioning P <sub>max</sub> [mm]	0.01 (Full travel)	<b>Weights</b>	
Repetability P <sub>5</sub> [mm]	0.005	Machine Weight [kg]	5,000*
<b>Feedrates</b>		Shipping Weight [kg]	5,500*
Cutting feedrate X / Y / Z [mm/min]	30,000 / 30,000 / 22,900	Chip Conveyor [kg]	500

\*due to the position of the mass center of the machine, for unloading by forklift it is recommended to plan with a higher carrying capacity of 30%

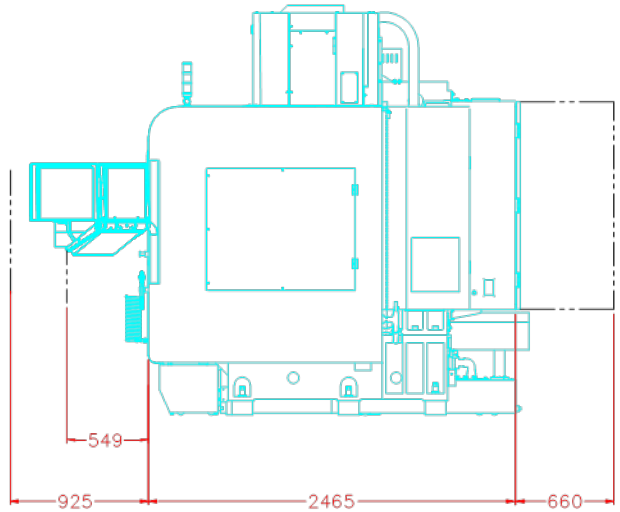
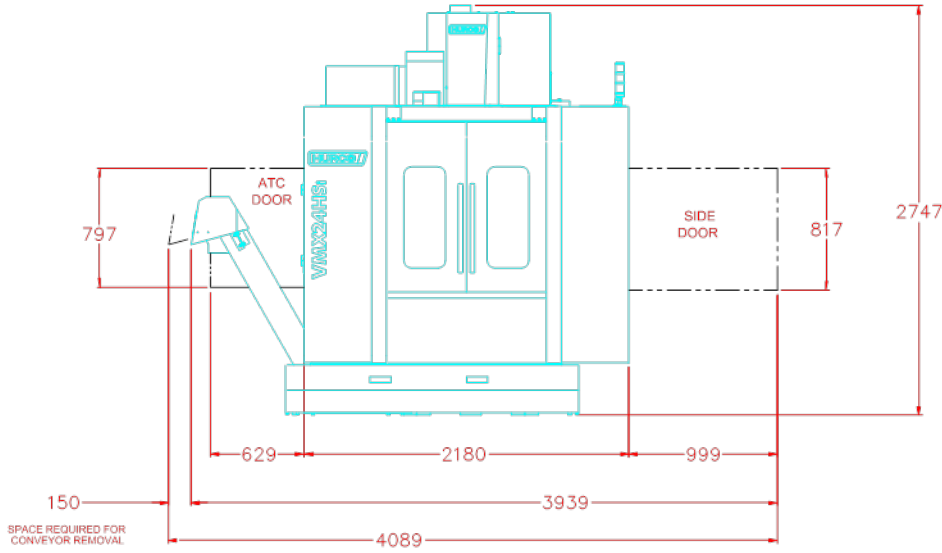
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# Interior Clearances

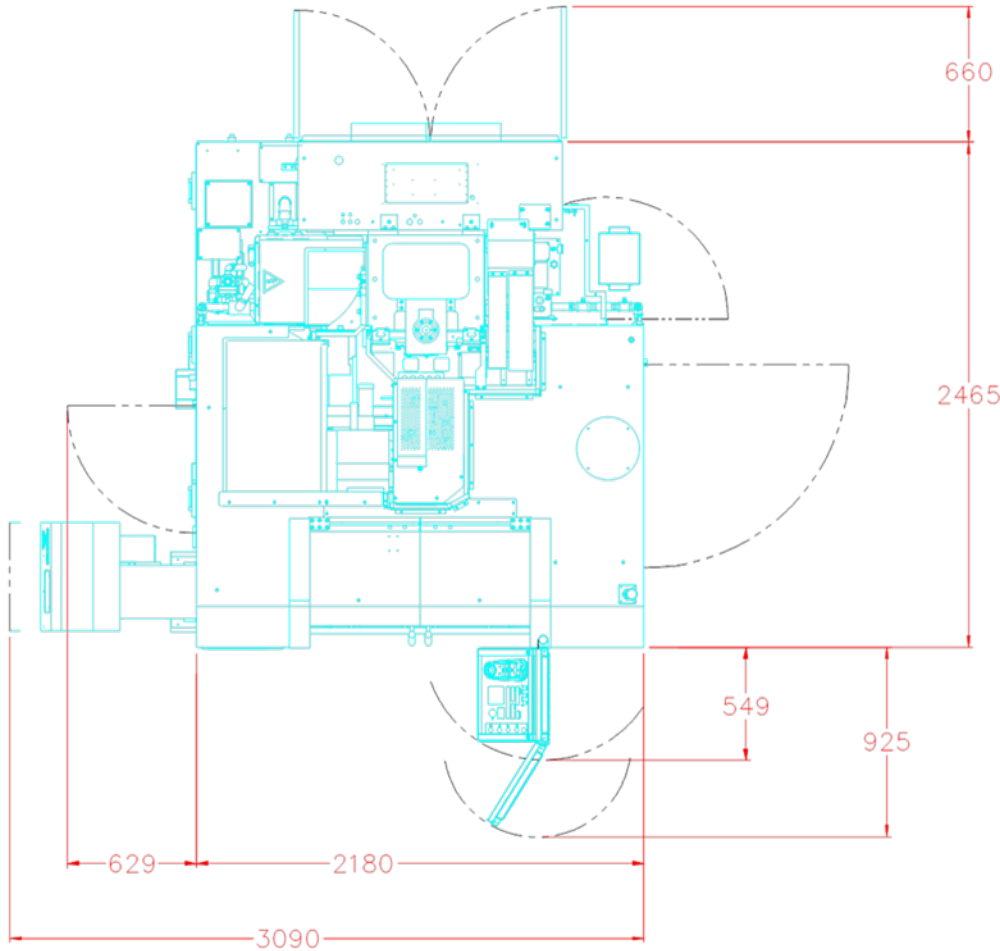


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# Operating Dimensions

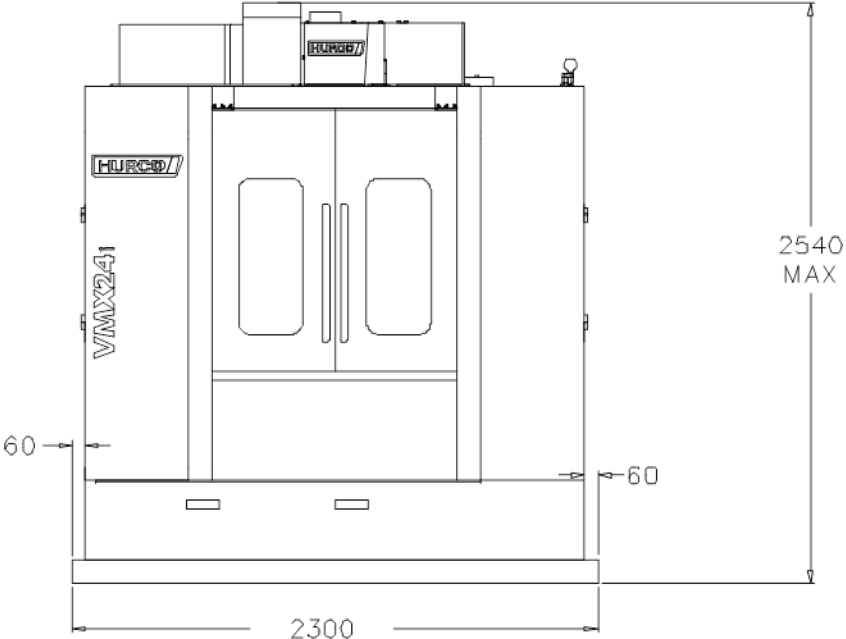
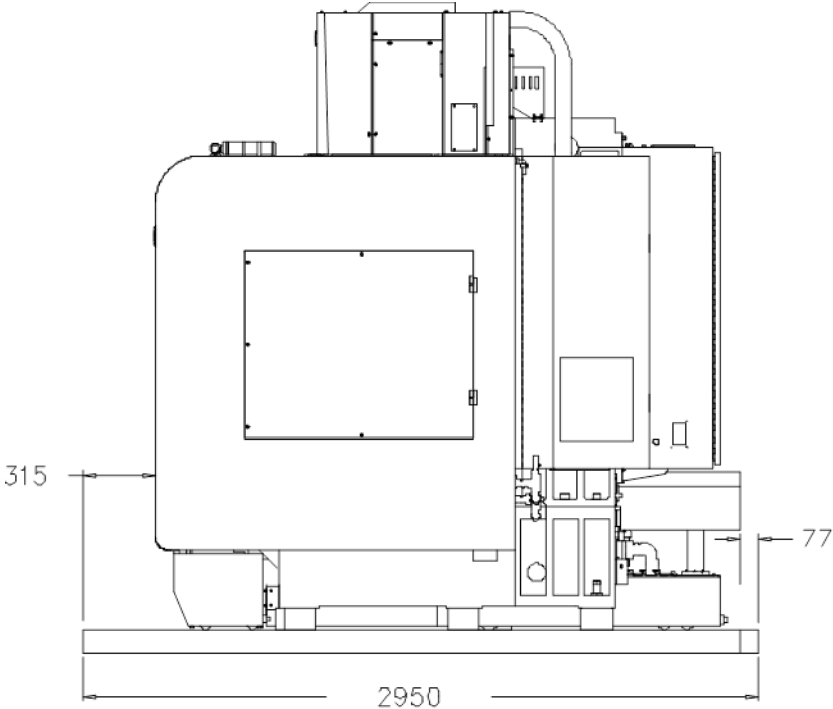


# Operating Dimensions



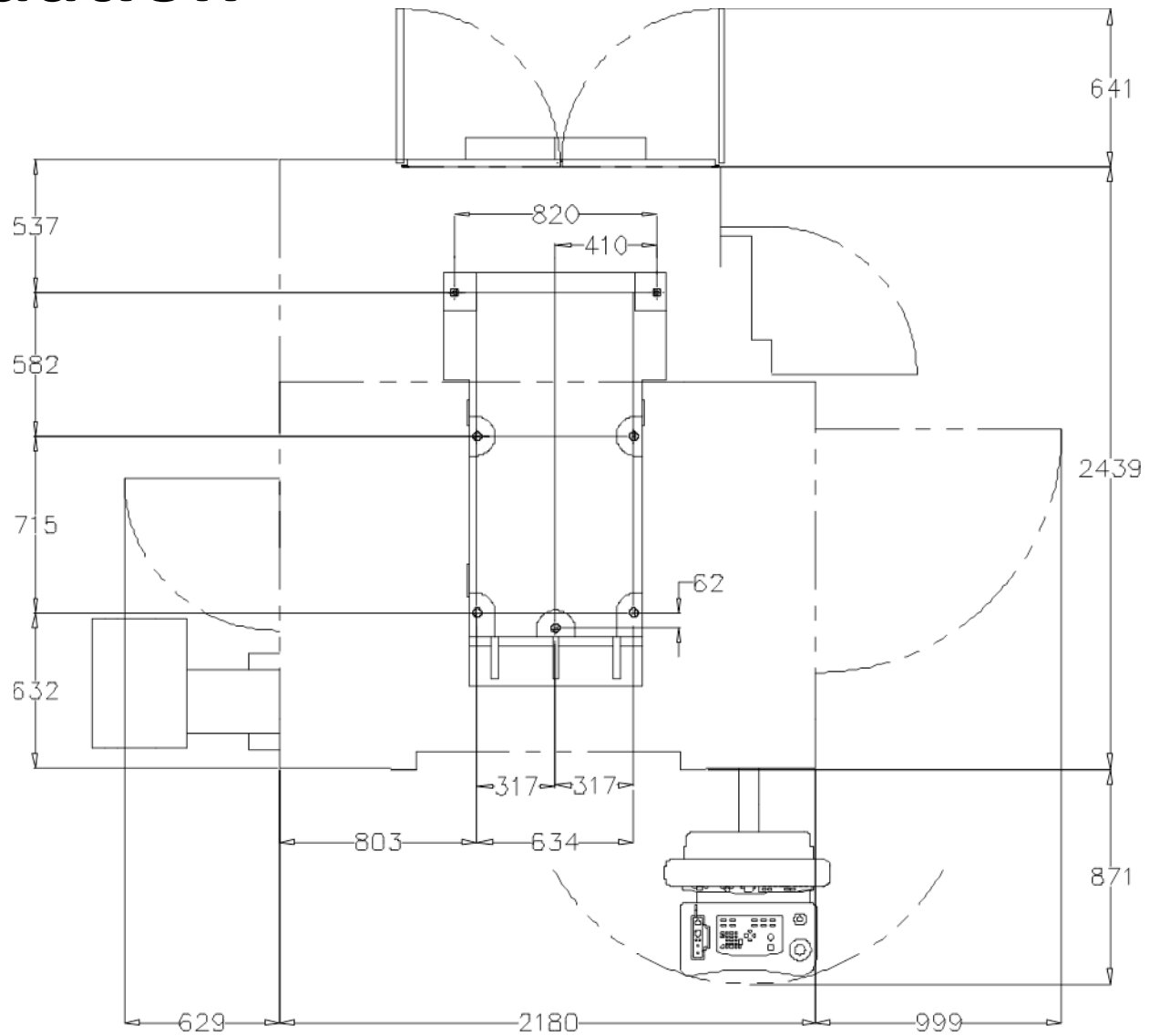
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# Shipping Dimensions



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# Foundation



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# Machine Options

- **Coolant air through coolant nozzles**
  - selectively coolant water or coolant air through coolant nozzles. Programmable as „Coolant 2“ or by M-function
- **Coolant air through Spindle**
  - as before, however supplying is through the spindle. Option „Coolant through Spindle“ (CTS) is required
- **BT-Arm**
  - for usage of BT-tool holders instead of SK holders
- **Part- and Tool Probing** [more](#)
- **Coolant through Spindle (CTS)** [more](#)
- **Production Package** [more](#)
- **Bypass Filter** [more](#)
- **Rotoclear**
  - The rotating pane throws off cooling emulsion, leaving the view free for the machine operator
- **Linear Scales**
  - Evaluation of axis position with a linear scale instead of rotary encoders (requires dry, clean air acc. DIN/ISO 8573-1, class 1, dew point 3°)

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# Part- and Tool Probing

## Partprobing

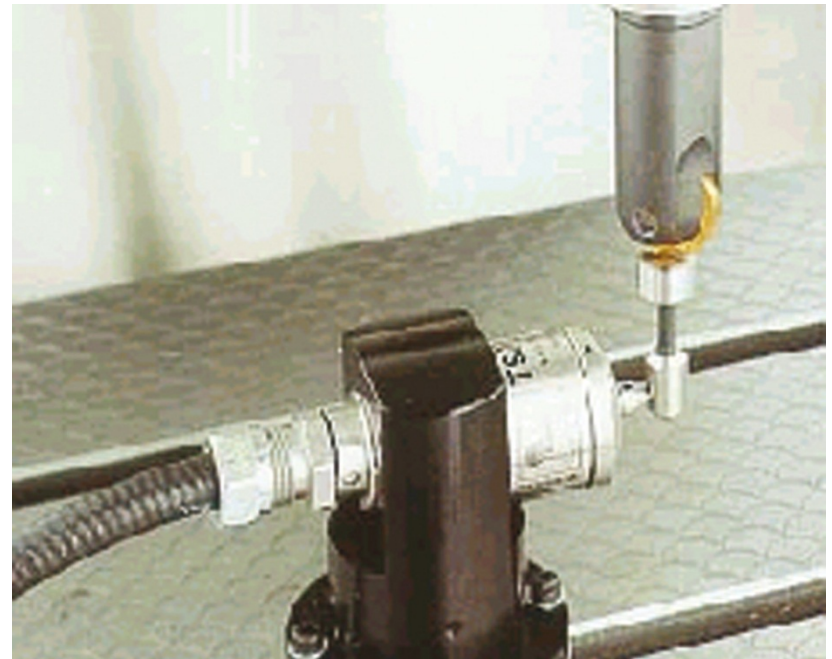
- Probing Part Zero:
  - Edge
  - Corner
  - Hole or Circle
  - Cylinder
  - Rectangular Pocket
  - Rectangular Solid
- Probing Skew Angle
- Measuring of Workpiece



# Part- and Tool Probing

## Tool Probing with Touch Probe

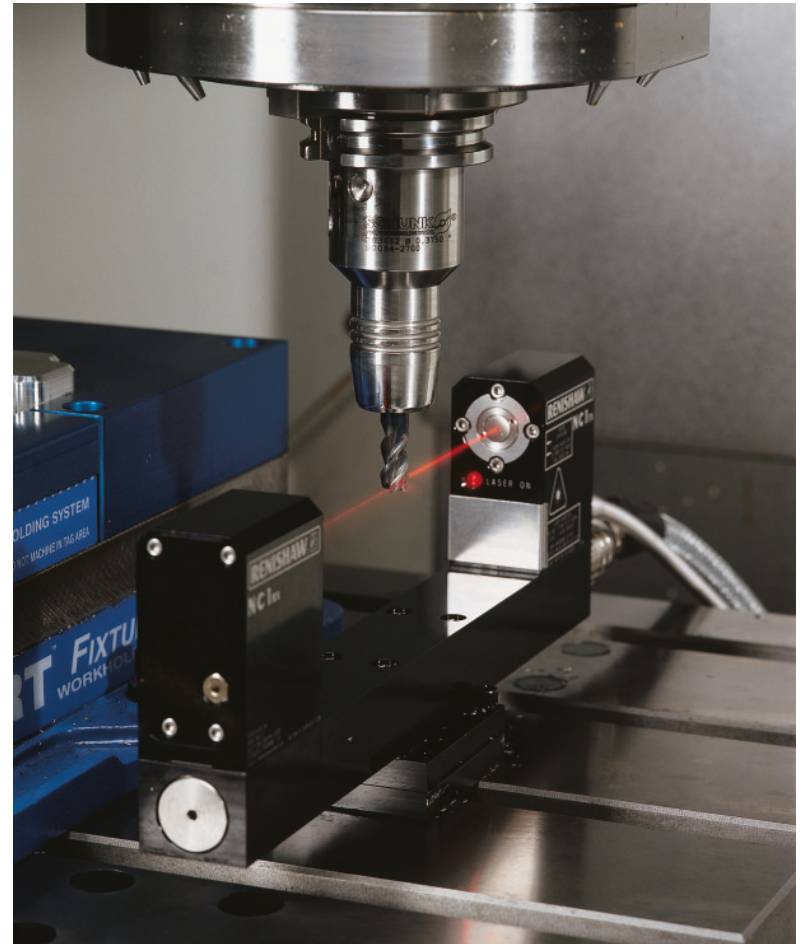
- Probing of Tool Length
- Tool Breakage Control of Tool Length and – if Tool is broken – Usage of a Spare Tool
- NO Probing of Tool Diameter



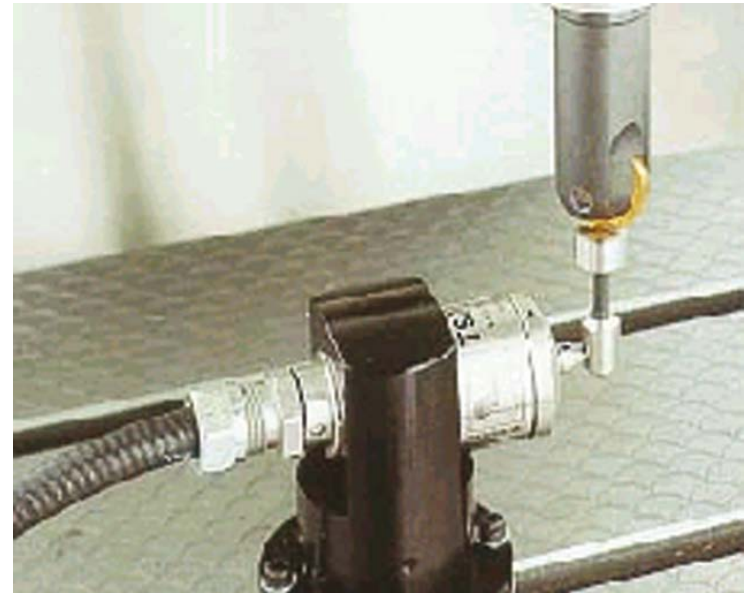
# Part- and Tool Probing

## Tool Probing with Laser

- Probing of Tool Length
- Probing of Tool Diameter
- Tool Breakage Detection and – if the Tool is broken – Usage of a Spare Tool
- Tool Wear Detection and Compensation



# Part Probing and Tool Probing with Touch Probe

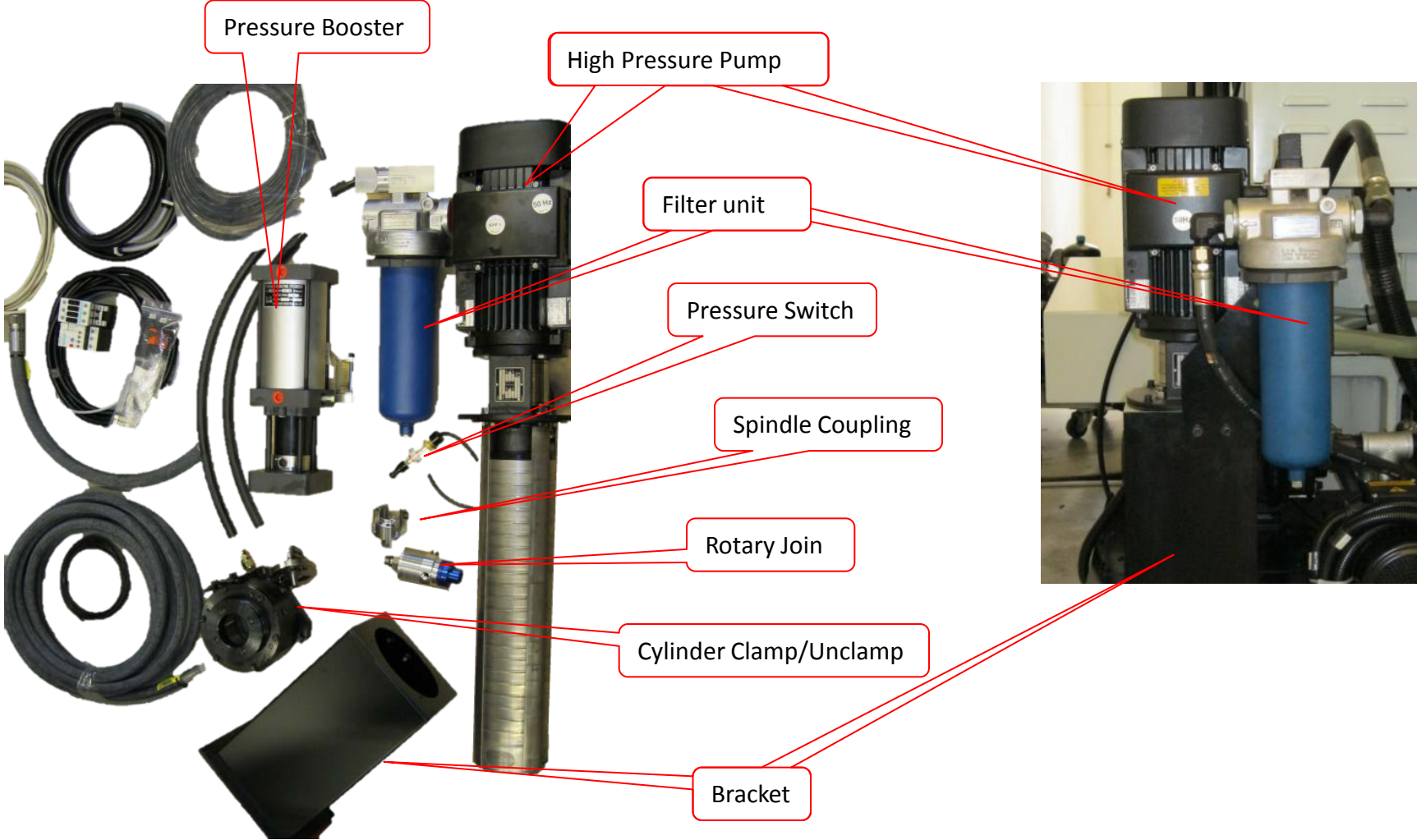


# Part Probing and Tool Probing with Laser Probe



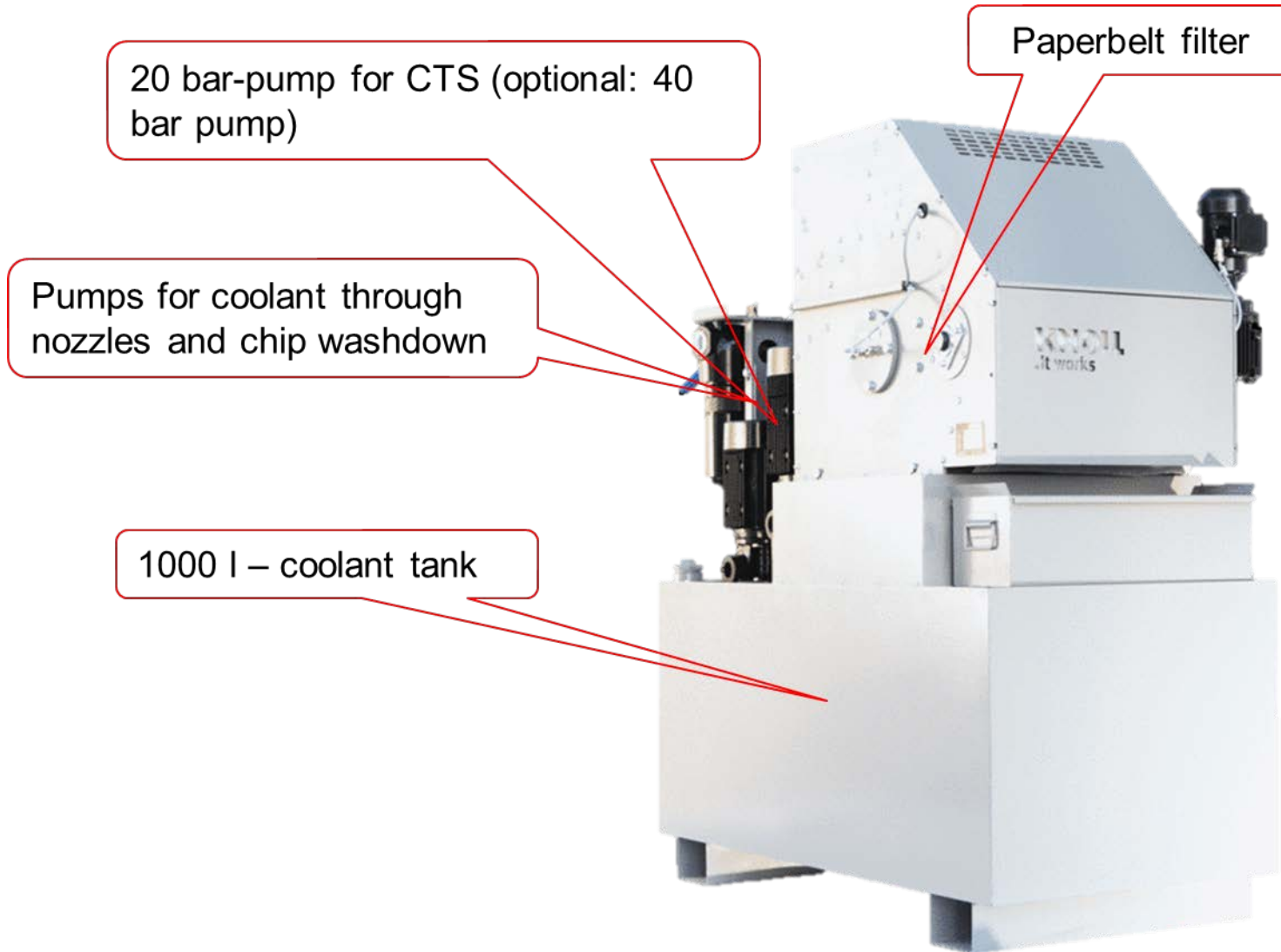
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# Coolant through Spindle 20 bar



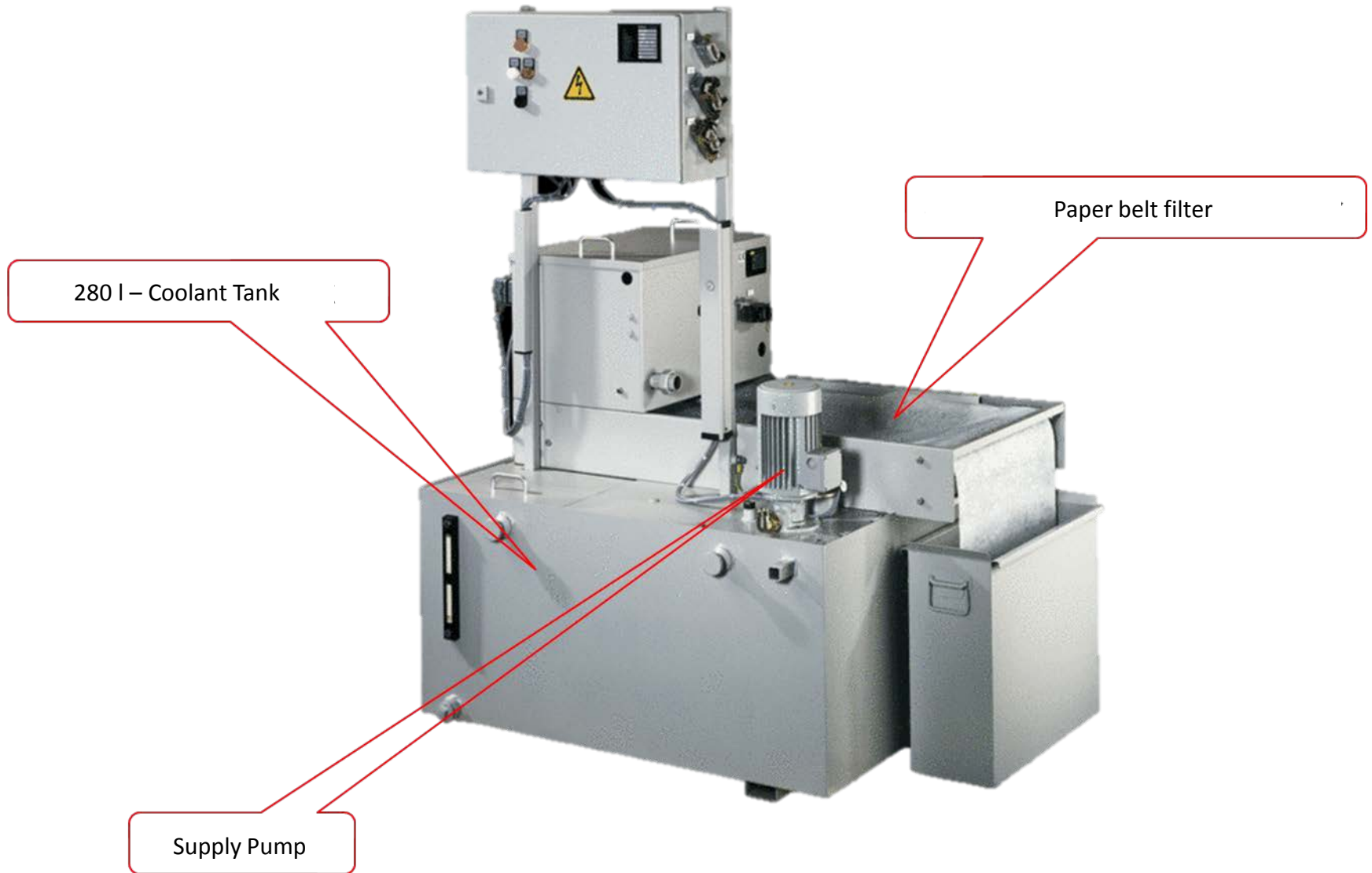
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# Production Package KF400



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# Bypass Filter



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# Rotaries

	Rotary	Eligibility	Faceplate Diameter (mm)	Center Height (mm)	Spindle Bore (mm)	Clamping Torque (Nm @ 0,5MPa)
 <p>x well suited o after consulting - not suited</p>	MR 120	x	128	120	32	150
	MR 160	x	165	140	40	310
	GT 200	x	200	140	45	820
	GT 250	x	250	180	70	1600
	GT 320	x	320	225	105	2800
	TT 101	x	110	140	32	180 (4.) 300 (5.)
	TT 182	x	180	180	40	450 (4.) 800 (5.)
	TT 251	o	250	250	70	900 (4.) 1200 (5.)
	TT 321	-	320	255	110	2600 (4.) 2600 (5.)

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