

Serrated Flanges. Kesel CSF.

CSF

Cross serrated flange milling machine



- > Bandsaw blade production
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CSF

The Kesel CSF machine is especially engineered and built for tooth profile milling of cross serrated flanges and covers a wide range of customary parts. Short cycle times and highest accuracy in combination with absolute competitive production and tool cost make the CSF an outstanding machine for this specific task. It is equipped with a Siemens SINUMERIK 804D sl control as well as Siemens servo drive units. Optional features make it possible to combine this machine with different automation possibilities and to consider various product specific needs.



Milling head and clamping system

The robust and low-maintenance milling head F 55.4 features a durable transmission with ideal reduction. The CSF machine therefore operates at a very high torque and within a perfectly balanced rpm-range. Together with the enormous machine rigidity this enables remarkable high feed rates and short cycle times. The special clamping system can be ordered with particular clamping sets according to the customer product range. The clamping system clamps at 70° with a high precision Hirth serration. A central lubrication system and an air-sealing function are integrated in the clamping. The complete system is compatible with hand or automatic loading and can cover Yoke flanges, Companion flanges and Shaft Flanges in various proportions.



Serrated Flanges

Yoke flanges, Companion flanges and Shaft Flanges in various proportions can be machined at the Kesel CSF.



Control

The Siemens SINUMERIK control 840D sl allows for a complete and flexible NC programming and enables an automatic work process. Optional features enable the adaption of automation systems.



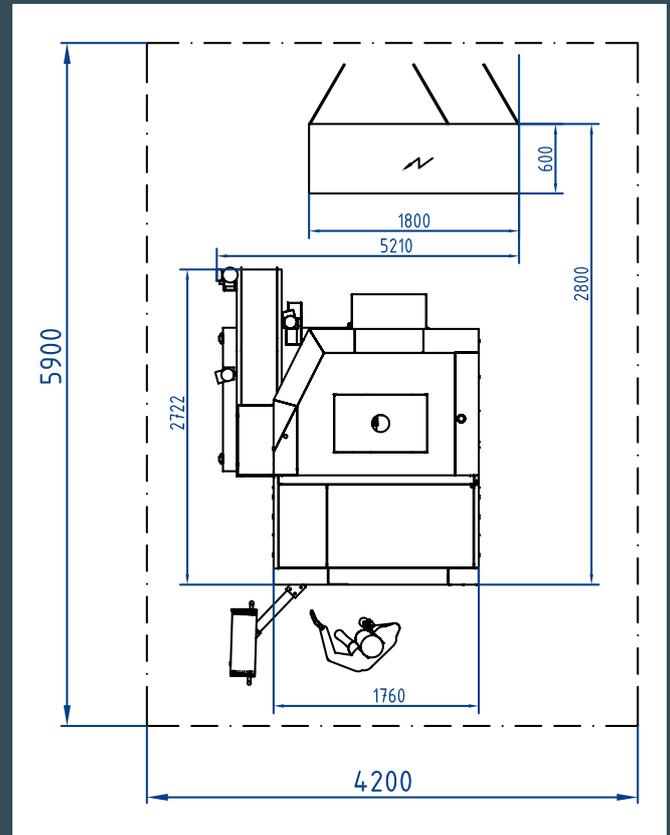
Chip management

Both emulsion as well as oil can be used as cooling lubricants. The chips are removed through the coolant and the clamping system has an integrated self-flushing system. Fine chips are cleaned with a magnetic roller and a belt conveyor transports all chips into a chip container.

Specification CSF

Travel range	
X-axis (horizontal, table-axis)	± 15 mm (manual)
Y-axis (vertical, cutting depth)	230 mm
Z-axis (horizontal, milling stroke)	370 mm
B-axis (positioning of the flange)	0 - 70°
Milling head	
Type	F 55.4, transmission with high power drive
Power	43 kW S6 40%
RMP	max. 315 rpm, contionously variable
Milling arbor	SK 50
Min. diameter of milling cutter	128 mm + 2 x cutting depth + 5 mm safety + resharpening (acc. to manufacturer)
Max. diameter of milling cutter	250 mm
Max. tool width	200 mm For cutter design concepts contact Kesel
Control	
Siemens SINUMERIK 840D sl	
Clamping system	
Hydraulic workpiece clamping system, swivel angle 70°	
Coolant and swarf removal	
Cooling lubricant	Emulsion
Filling capacity	380 litres
Magnetic filter roller for fine filtration and oil skimmer	
Electrical connection	
Voltage	3 x 400 V
Amperage	80 A
Dimensions and weight	
Installation dimensions:	length 5.200 x depth 2.900 x height 2.700 mm
Machine weight:	approx. 6.700 kg
Options	
<ul style="list-style-type: none"> - Milling accessories for different types of flange - Preparation for automation 	

Additional accessories upon request/Subject to modification due to technical advance



approx. dimensions