

TECHNICAL DATASHEET
CNC- Gear Grinding Center

Manufacturer	KAPP NILES
Type	KX 500 FLEX
Control	SINUMERIK 840 D
Built	2009

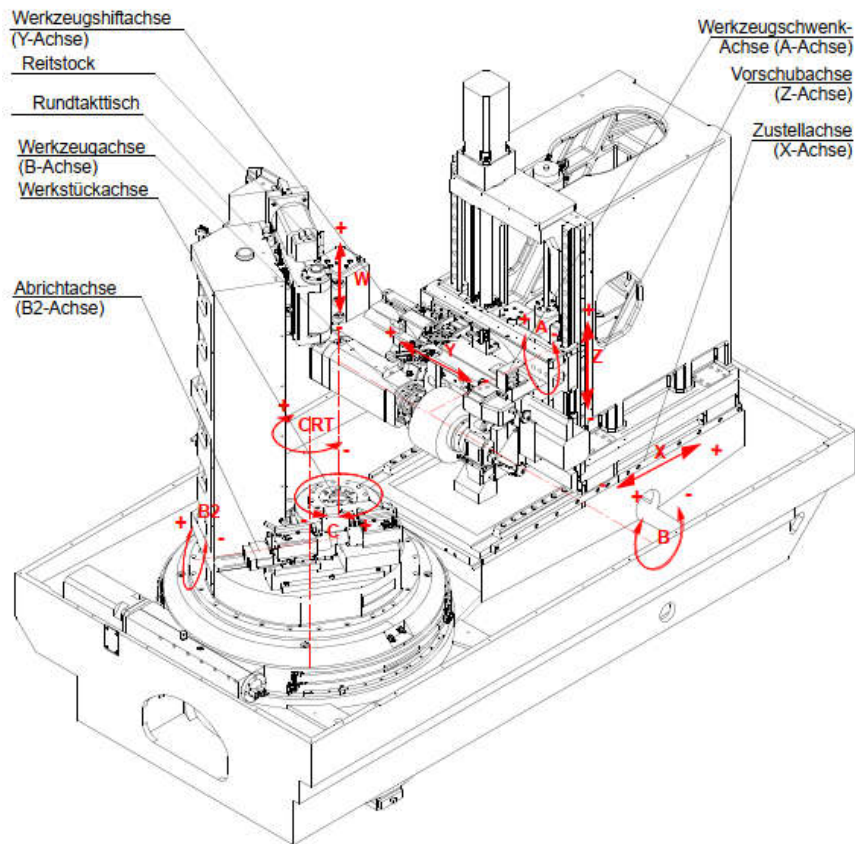


The KX 500 FLEX gear grinding center is suitable for both generating and profile grinding of gears and pinions. Workpieces up to a diameter of \varnothing 500mm and a length of max. 1,000mm can be machined on the machine.

It is especially designed for fast mass production and equipped with a robot interface.

Working area

Nominal workpiece diameter	500 mm	
Max. Workpiece length	1.000 mm	
Max. Radial travel (X axis)	525 mm	
Max. Tangential travel (Y axis)	250 mm	
Max. Tooth width (Z-Axis)	520 mm	Max. axial travel
Module range gear grinding	1,0 - 8 mm	
Module range profile grinding	0,5 - 12 mm	
Grinding spindle swivel angle (A axis)	+/- 45 Grad	



The KX 500FLEX has seven CNC axes that are controlled simultaneously during machining

Rotary indexing table CRT

Equipped with:

- Profile dresser fab. GSN for profile dressing of profile grinding wheels and grinding worms (B3 axis)
- dressing ruler for head dressing of grinding worms
- workpiece spindle (C-axis)
- Counterholder with vertical movable NC-tailstock

Driving range	270 °
Max. Swivel speed	210 °/s

Profile-Dressing unit GMN TSE 100cg (B3-Axis)

Power	1,25 kW	(S1)
Speed	6.000 min-1	
Diameter dressing wheel	100 mm	
Dresser in single roll design		

Grinding spindle (B-Axis)

Max. Speed	7.500	1/min	
Max. Dimension grinding wheel	Ø 320	mm	
Integrated autom. balancing device			Make DITTEL

Feeds and rapid traverse

X-Axis	20.000	mm/min
Y-Axis	10.000	mm/min
Z-Axis	10.000	mm/min
A-Axis	50	°/s

Dimensions & Weight

Space requirement approx. l x w x h	6,8 x 5,3 x 3,2	m
Machine weight approx.	11.200	kg

Connection data

Total connected load approx.	80	kVA
Operating voltage	400	V
Operating frequency	50	Hz
Control voltage	24	V DC

Equipment and Accessories

- Basic machine KX 500 FLEX with control Siemens Sinumerik 840D and NC tailstock
- Modem connection (analog)
- automation interface (hardware + software) for robot loading
- Cooling lubricant system (HOFFMANN type HSF 150) with oil mist suction system
- Automatically opening and closing loading door
- Automatically opening and closing work area door
- Preparation of the machine for the use of an attachment spindle
- Dressing device for profile grinding wheels and grinding worms
- Separate head dressing
- Automatic balancing unit make DITTEL
- Measuring device for external gears
- Swiveling measuring probe holder
- Gear measuring system
- Fume separator incl. exhaust system
- Full enclosure of the working area
- Electronic operating handset
- Machine light
- All axes and spindle in digital drive technology SIMODRIVE 611 D
- Machine operating hours: ca. 31.500 h

The machine can be operated with manual or automatic loading.