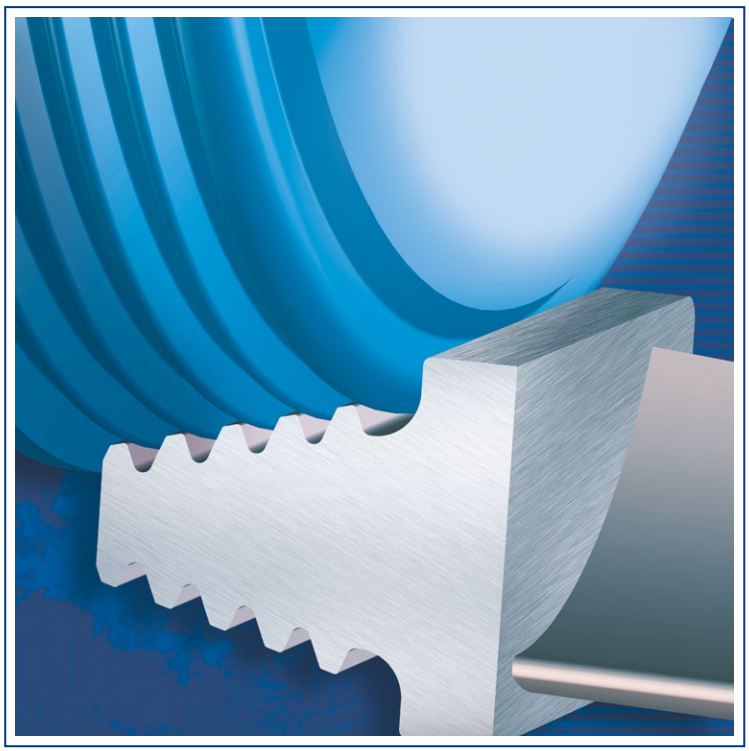
SPINDLES



HIGH TORQUE

During plunge-cut dressing the entire work piece profile is transferred from the profile roller to the grinding wheel in a single axis in-feed motion. The large contact lengths between the grinding wheel and dressing tool call for rigid and powerful spindles. Profile rollers up to a width of 50 mm can be used with frequency-controlled motor spindles. The cantilevered bearing design permits a rapid change of the dressing tool. Profile geometries wider than 50 mm can be dressed with a spindle using an outboard-supported cartridge type bearing system with a driving power of 3.5 kW.

STIFFNESS THROUGH SPINDLE BEARING

Dressing spindles need high static and dynamic rigidity. Thermal changes in the dressing roller position under load are kept as low as possible by preloaded roller bearings. The use of ceramic ball bearings in high-speed spindles permit even smoother running. High dressing forces require the use of multiple preloaded bearings. The best possible dressing results and highest surface qualities on the work-piece are achieved by the fine balancing of the spindle and the diamond dressing roller.

Maximum Rotational Speed (RPM)	Bearings	Overall Length (mm)	Stiffness Classification
60.000	2-3	100	Class I
30.000	2-3	200	Class II
16.000	4-5	300	Class III
10.000	4-5	300	Class IV
6.000	5-6	350	Class V
6.000	Counter Bearing	350	Class VI

LIST OF DRESSING SPINDLES FOR SINGLE AXIS INFEED DRESSING

Description*	Dimension	Spindle Arbor**	Max. Dresser Diameter	Rotational Speed Range	Current	Stiffness Classification
C80Fx	Ø 80 h6 x 329 mm	Ø 52 x 40 mm	250 mm	1.500 - 6.000 RPM	350 V	Stiffness Class IV
C100Fx	Ø 100 h6 x 313 mm	Ø 40 x 13 mm	200 mm	1.500 - 7.000 RPM	230 V	Stiffness Class V
CPRS	283 x 162 x 370 mm	Ø 52 x 100 mm	150 mm	500 - 6.000 RPM	230 V	Stiffness Class VI

*x different motor-elements are available (with different speed, torque and power) ** customer specific modification possible

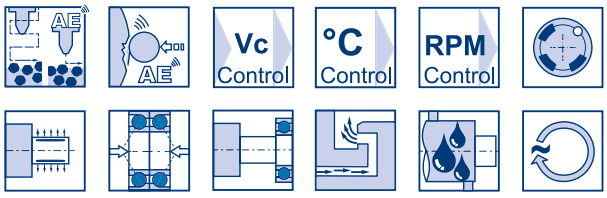
FOR SINGLE AXIS INFEED DRESSING

DRESSING SPINDLES FOR FAST DRESSING ROLLER CHANGES

These dressing spindles have been designed for the high-precision use of profile dressing rollers and dressing roller sets up to 50 mm in width. A spindle with high power and torque and the ability for fast dresser change is required here. The spindles have multiple bearings and can be supplied with thrust bearings if necessary to provide additional support for the cantilevered spindle nose.

OPTIONAL EXTRAS

Details can be found on pages 10 - 12.



PROFILE ROLLER SYSTEM FOR HIGH DRESSING FORCES

CPRS profile dressing spindle systems with high precision and stiffness are available for rotary diamond dressers wider than 50 mm. The drive consists of a frequency-controlled induction motor that transfers torque to the dressing spindle shaft either by belt or directly via a coupling. Alternatively, the spindles can be equipped with 3-phase current servomotors or hydraulic motors. This provides for good damping characteristics and a quiet-running spindle that will produce the best possible dressing results.

OPTIONAL EXTRAS

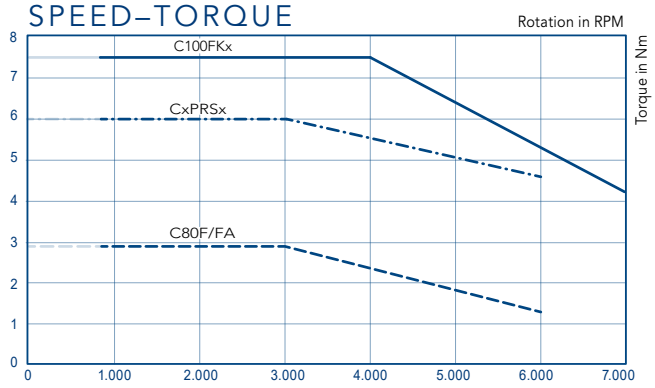
Details can be found on pages 10 - 12.

SPEED–POWER CHARACTERISTICS

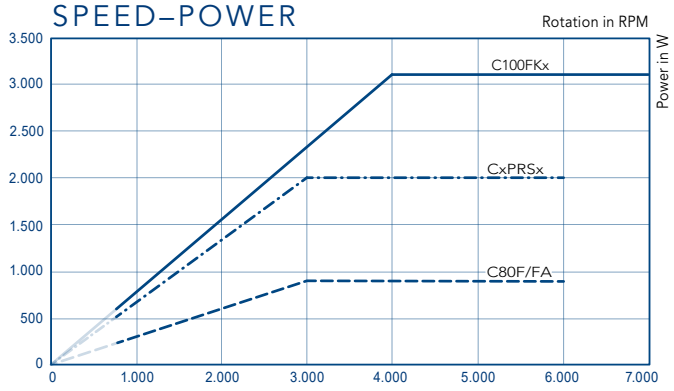
Our dressing spindles have motors and frequency converters that are specifically adapted to your process requirements. By matching a motor to a specific frequency converter we can keep the rise in temperature that can cause a loss in performance to a minimum. Dressing spindles are normally used intermittently between grinding cycles.

When operated for these short periods of time, the spindle can provide performance that is 50% higher (S6) than when used constantly and with constant load (S1).

SPEED–TORQUE



SPEED–POWER



DR. KAISER
präzision durch diamant