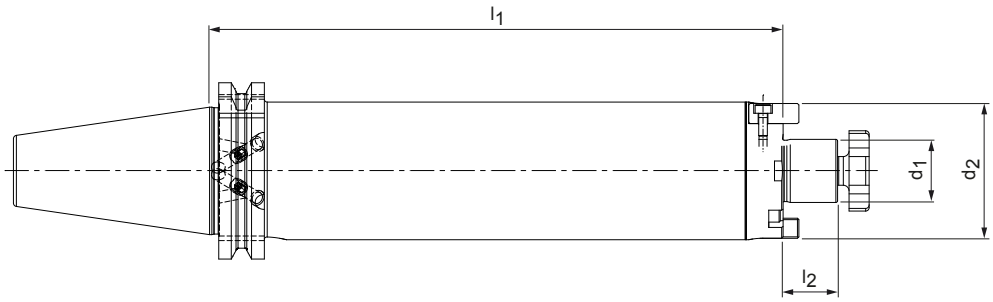
Milling cutter arbor

Mechanical tool clamping, for milling cutters with cross slot according to DIN 69882-3
SK shank according to ISO 7388-1 Form AD/AF



Vibration dampened design | Preferred series available from stock

Steep taper	Dimensions				Order designation	Order no.
	d_1	d_2	l_1	l_2		
40	16,0	38,0	200,0	17,0	15.276.40.16.Z	30905993
40	16,0	38,0	300,0	17,0	15.276.40.16.Z	30905996
40	22,0	48,0	200,0	19,0	15.276.40.22.Z	30905995
40	22,0	48,0	300,0	19,0	15.276.40.22.Z	30977074
50	16,0	38,0	200,0	17,0	15.276.50.16.Z	30905997
50	16,0	38,0	300,0	17,0	15.276.50.16.Z	30906000
50	22,0	48,0	200,0	19,0	15.276.50.22.Z	30905998
50	22,0	48,0	300,0	19,0	15.276.50.22.Z	30906003
50	27,0	58,0	200,0	21,0	15.276.50.27.Z	30905999
50	27,0	58,0	300,0	21,0	15.276.50.27.Z	30906007

Technical data of the milling cutter arbor with steep taper connection

Order no.	Max. operating speed [rpm]	Recommended weight for milling cutter [kg]	Total mass [kg]	Moment of tilt with milling cutter nominal weight [Nm]	Permissible transferable torque [Nm]	Max. cutting force [N]
31045127	8.000	0,2 (±0,1)	2,5	1,90	200	650
31045129	4.500	0,2 (±0,1)	3,4	4,32	200	450
31045128	5.500	0,6 (±0,15)	3,7	4,19	270	650
31045130	3.500	0,6 (±0,15)	5,1	8,85	270	450
31045131	8.000	0,2 (±0,1)	4,2	1,22	200	1.700
31045134	6.000	0,2 (±0,1)	5,1	3,67	200	1.200
31045132	8.000	0,6 (±0,15)	5,3	3,34	270	1.700
31045135	5.500	0,6 (±0,15)	6,9	7,87	270	1.200
31045133	8.000	0,9 (±0,2)	6,6	5,13	500	1.700
31045136	5.000	0,9 (±0,2)	8,8	11,59	500	1.200

Dimensions in mm.
For accessories and spare parts, see end of section.
Additional dimensions and special designs available upon request.

VIBRATION DAMPENING

Significantly better surfaces

Vibrations often occur during machining. They cause the system to become dynamically unstable. This can result in unacceptable surface finish, insufficient accuracy, high levels of machining noise, shortened tool life, and broken tools and cutting edges in extreme cases.

To minimise these vibrations and their consequences, WTE has developed an innovative system for vibration dampening in the tool shank. In particular, tools for boring and milling with very long projections tend to vibrate due to the insufficient dynamic rigidity of the overall system. When designing the new system, the developers took into account all the factors resulting from the interaction between the machine tool, the tool and its clamp, and the part. The result: a vibration dampening system that is calibrated to the rigidity of all common machine types. It can be used for the machining of a range of workpiece materials with various different tools.

The self-contained system made of auxiliary mass and several steel spring packages counteracts and minimises the displacement of the tool body. Compared to tools without an absorber system, the vibration amplitudes can be up to 1,000 times lower. As such, a smooth, stable run is achieved even with long projections. This allows higher cutting speeds to be used and the material removal rate to be significantly increased. In addition, considerably better surface finishes are achieved thanks to the vibration dampening.

AT A GLANCE

- System for vibration dampening in tools with long projections directly in the tool shank
- Adapted to the rigidity of all common machine types
- Available with internal coolant supply for the clamping diameters 16, 22 and 27 mm with a length of 200 and 300 mm for the SK40, SK50, HSK-A63 and HSK-A100 connections

ADVANTAGES

- Smooth, stable running despite long projections
- Higher cutting speeds, higher material removal rate
- Better surface qualities

Tool features in detail

1 Internal coolant supply channels
– Optimum coolant supply

2 Standardised connection according to DIN 69882-3
– Suitable for standard milling cutters with cross slot

3 Hard turned surface
– Improved corrosion resistance

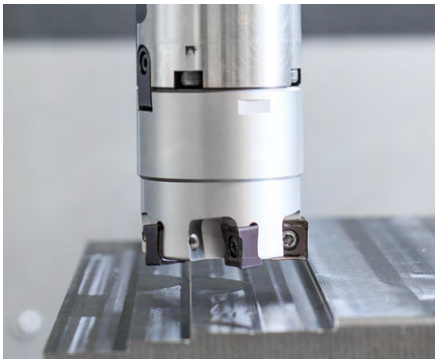
4 Cylindrical contour
– Optimum accessibility

Vibration dampening in the milling cutter arbor

- Smooth, stable running despite long projections
- Protection of spindle and machine with lower energy consumption than with an undamped system
- Noise is minimised in the machining process

Internal coolant supply

- Internal cooling enables higher cutting speeds with better material removal rates
- Less blade chipping
- Optimal cooling of the cutting edge also makes deep machining positions possible



Better surface qualities thanks to vibration dampening

- Significantly improved surface with identical cutting data compared to undamped systems
- Optimum chip breaking, surfaces are not scratched