KEMPF

ibex SOFT
ibex FLEX
ibex XS
MEDIUM
HARD

Status: July 2026
P26IBEXANDEN

MANUAL

KEMPF

IBEX DEBURRING SYSTEM

FEATURES

IBEX DEBURRING TOOL HOLDER

- ibex SOFT/MEDIUM/HARD: Tension and pressure compensation with up to 10 mm each
- ibex FLEX: pressure compensation with up to 10 mm
- ibex XS: pressure compensation with up to 7 mm
- Uniform deburring result
- Shorter cycle times
- Low programming effort
- Very high wear resistance, sealing against pollution
- Slim design enables better access to the workpiece

IBEX CARBIDE CHAMFER MILLING CUTTER

- Low chattering due to specially developed cutter geometry
- Extremely high tool life of the milling cutters due to special geometry
- High feed rates due to Cross-Cut design

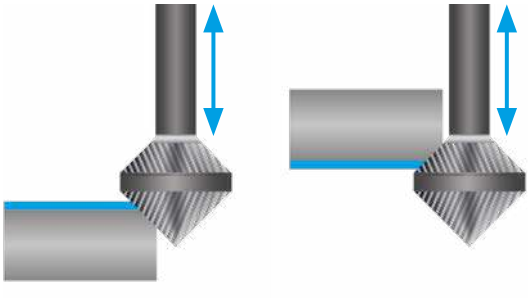
PRODUCT PRESENTATION

VIDEO
ibex product presentation
with Christian Biermann

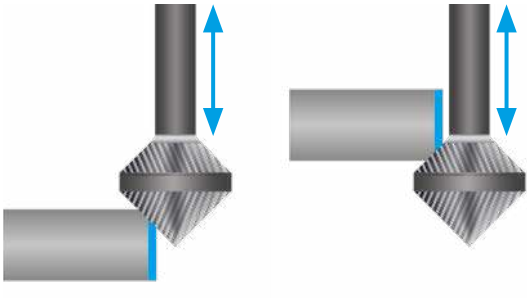
WORKING PRINCIPLE

As soon as the cutter hits the edge of the workpiece, it can perform the axial movement both forwards and backwards due to the linear mounted compensation of the ibex. In interaction with the tapered ibex deburring cutters, both radial and axial dimensional deviations of the component can be compensated. Thus, the deburring cutter always has the same cutting performance on the workpiece and produces a uniform deburring quality.
Please note: backward machining is only possible with ibex SOFT, MEDIUM and HARD.

AXIAL



RADIAL



Dimensional deviations

GENERAL INFORMATION FOR IBEX SOFT, MEDIUM, HARD, FLEX AND XS

PUTTING THE TOOL INTO OPERATION

1. Insert compensation holder into tool holder.
2. Loosen the clamping nut and push the cutting tool into the collet chuck.
3. Pay attention to minimum clamping length of 12 mm.
4. Tighten the clamping nut with a wrench and max. 18 Nm while holding the open-end wrench SW 14 mm (ibex FLEX and ibex XS – SW 11 mm) against the piston.
5. Caution: Do not use internal cooling through the spindle. Otherwise, the spring force will be significantly reduced or completely overcome.

IMPORTANT

It must be ensured that the air is not compressed inside the ibex when the cutter is deflected and that the spring effect is maintained.

- Use tightening bolts with interal cooling supply.
- If air exchange via the internal cooling supply is not possible, please remove the length adjustment screw in the ibex and do not insert the ibex milling cutter to the stop so that air exchange can take place via the collet chuck.

TIPS & TRICKS

- IMPORTANT: The first contact of the milling cutter with the workpiece must be in the area of the 45° taper so that the compensating function of the ibex holder is guaranteed during machining.

- The approach to the edge should be carried out with at least 2 axes. A gentle approach to the workpiece in a quadrant can also be carried out to avoid uneven deburring on first contact.
- Increasing the feed rate → Chamfer becomes smaller
- Reduction of the feed rate → Chamfer becomes larger
- Dry processing to avoid thermal shock.
- Synchronous milling prevents the formation of chattermarks and produces uniform deburring.
- Increase a_e with the formation of secondary burrs.
- Higher rotational speed improves the finish.
- Increase speed to improve the chamfer surface finish.
- If space is limited, the workpiece can also be approached and traced by “ramping”.

APPLICATION PARAMETERS

ibex type	Deflection Tension	Deflection Compression	P	M	K	N	S	O
SOFT	10 mm	10 mm	-	-	-	•	-	•
MEDIUM			•	-	•	-	-	-
HARD			-	•	-	-	•	-
FLEX	-	10 mm	Pressure level 2 MEDIUM	Pressure level 3 HARD	Pressure level 2 MEDIUM	Pressure level 1 SOFT	Pressure level 3 HARD	Pressure level 1 SOFT
XS	-	7 mm	Compression spring MEDIUM	Compression spring HARD	Compression spring MEDIUM	Compression spring SOFT	Compression spring HARD	Compression spring SOFT

Speed n	Feed rate v_f
6.000 - 8000 rpm	2.000 - 10.000 mm/min*
max. 10.000 rpm	

*depending on the desired deburring strength

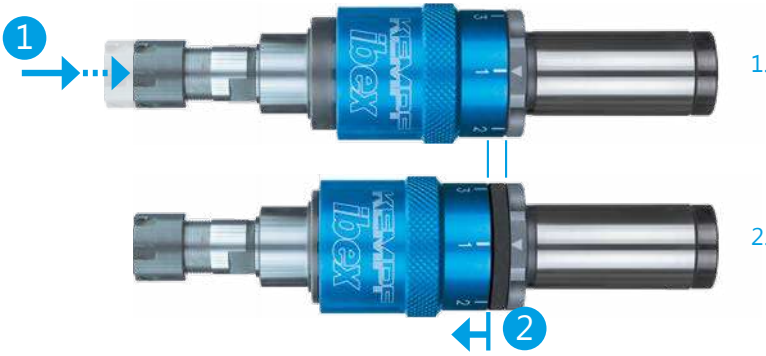
Width of cut a_e	Depth of cut a_p
approx. 25 % of the cutter diameter	approx. 30 % of the cutter diameter

ADJUSTING THE SPRING FORCE ONLY FOR IBEX FLEX

In contrast to the ibex compensation holder with fixed pressure levels (separate tools), the pressure of the ibex FLEX can be adjusted using three pressure levels.

Pressure level 1 = SOFT
Pressure level 2 = MEDIUM
Pressure level 3 = HARD

As the adjustment mechanism must not move during processing, it is secured twice. To adjust the pressure levels with the knurled wheel, please proceed as follows and carry out both steps AT THE SAME TIME:



1. PUSH piston to end position and hold down...

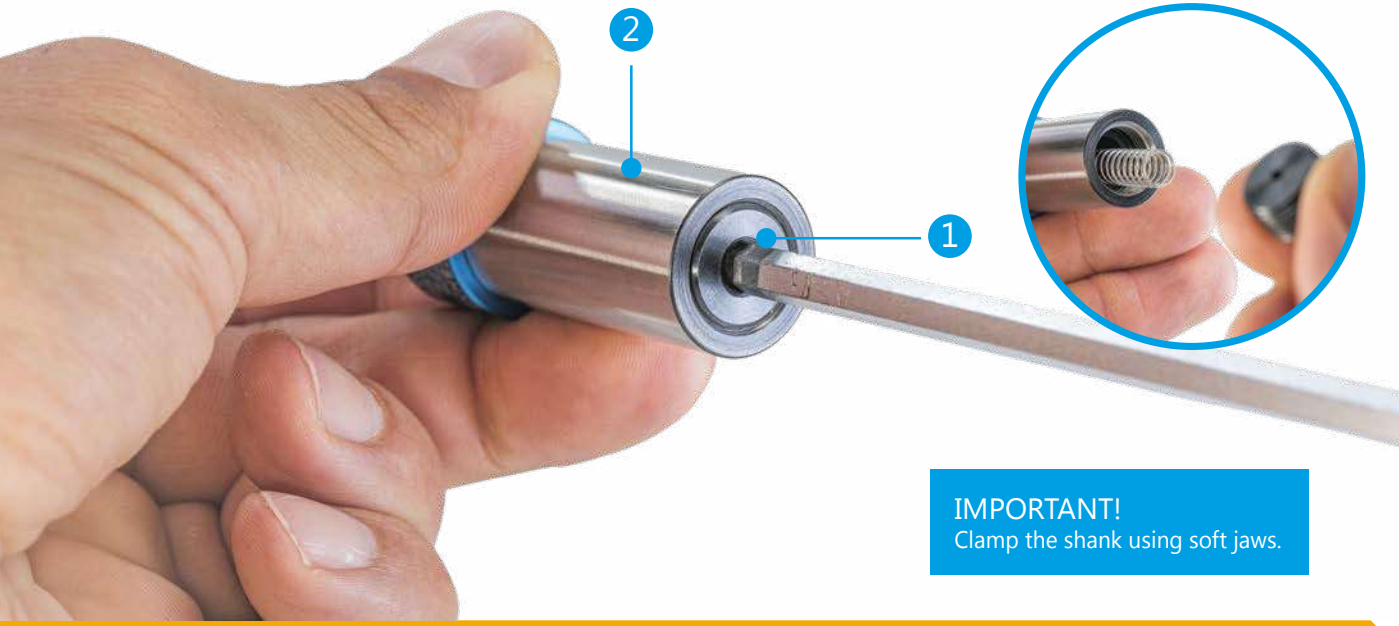
2. ... then PULL the blue sleeve in the direction of the piston.

The knurled wheel can now be TURNED to the desired position, until the blue sleeve snaps back into place.

CHANGING THE SPRING FORCE ONLY FOR IBEX XS

The spring force of the ibex XS compensating holder can be changed by replacing the spring installed in the holder. The compensating holder is supplied with a medium spring installed. The SOFT and HARD springs are also included in the scope of delivery.

1. To replace the spring, loosen the 5 mm hex socket screw at the end of the shank of the ibex XS.
2. When loosening or tightening the hex socket screw, hold the shank securely to prevent it from rotating. Use soft jaws when clamping the shank. Tightening torque for the screw: max. 2 Nm.



IMPORTANT!
Clamp the shank using soft jaws.

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