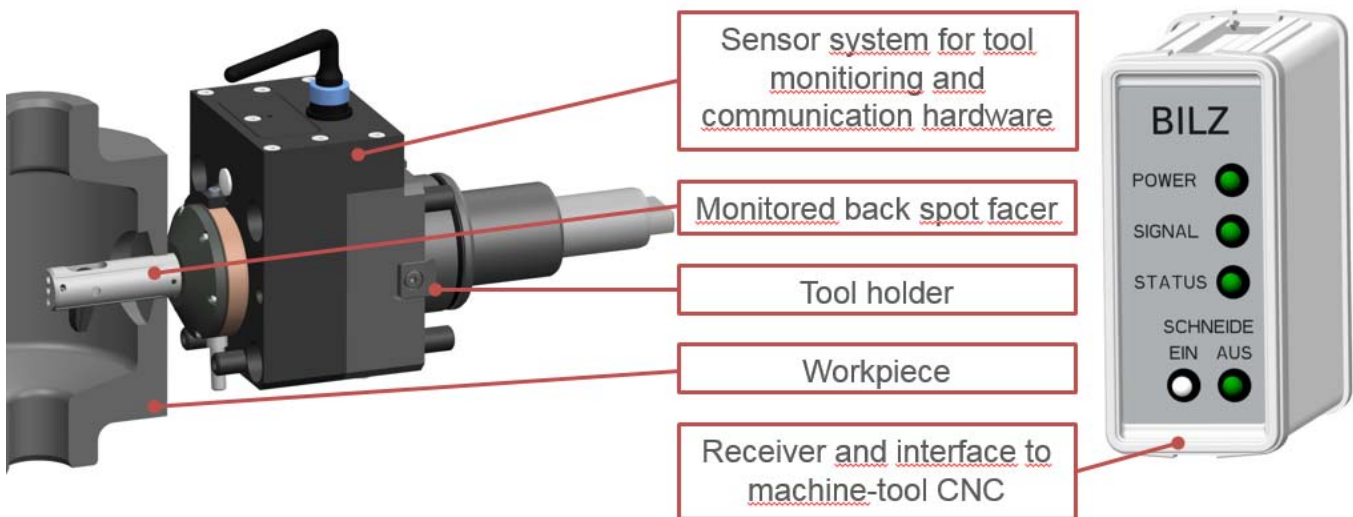


- *Intelligent Autofacer with monitoring of cutter blade position*
- *Autofacer, actuated by centrifugal force*
- *Valve seat manufacturing with Autofacer*
- *Fineboring tools for fittings IT4-6*
- *Catalog „Countersinking“ with new holders and countersinks to work in Hardox material*
- *Powerbore: effectively double-edged and sintered indexable inserts type XBMX*
- *Reverse deburring and chamferring tools*

Price decrease for Powerbore KSB01/03

## Autofacer with sensory monitoring of cutter blade position

*Wireless data transfer between tool and machine guarantees a safe production process and shuts down the machine in case of disorder*



AUTOFACER reverse countersinks are used whenever the surface to be machined is only accessible through a bore, e.g. within a housing. The cutter blade will be opened by changing the sense of rotation when the tool is in working position.

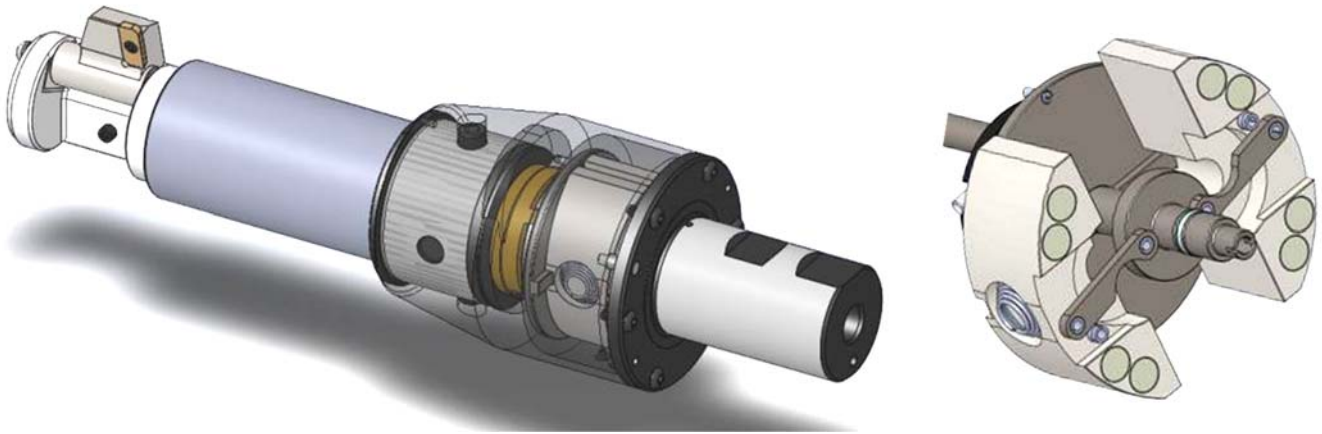
In case of disturbance, the cutter blade may not close before the tool is withdrawn from the bore: a shear pin will brake in this case and avoid that the tool will be damaged. However, following tools may collide with the front end of the Autofacer, which remains stuck in the bore. In order to avoid this, we developed a tool with sensory monitoring of the cutter position together with the companies O.BILZ and

EWS. The battery driven sensor, which is included in the tool, will detect if the cutter blade is in ideal position to enter or leave the bore hole. This signal is being transmitted wireless to the receiver. The data are transferred by a newly developed communication protocol.

The transmission of the cutter blade position is done via parallel bus, which can easily be mounted onto existing equipment. The implementation effort is minimal and enables various applications. The base station will additionally visualize the cutter blade position for the machine operator.

### Autofacer with centrifugal force actuation

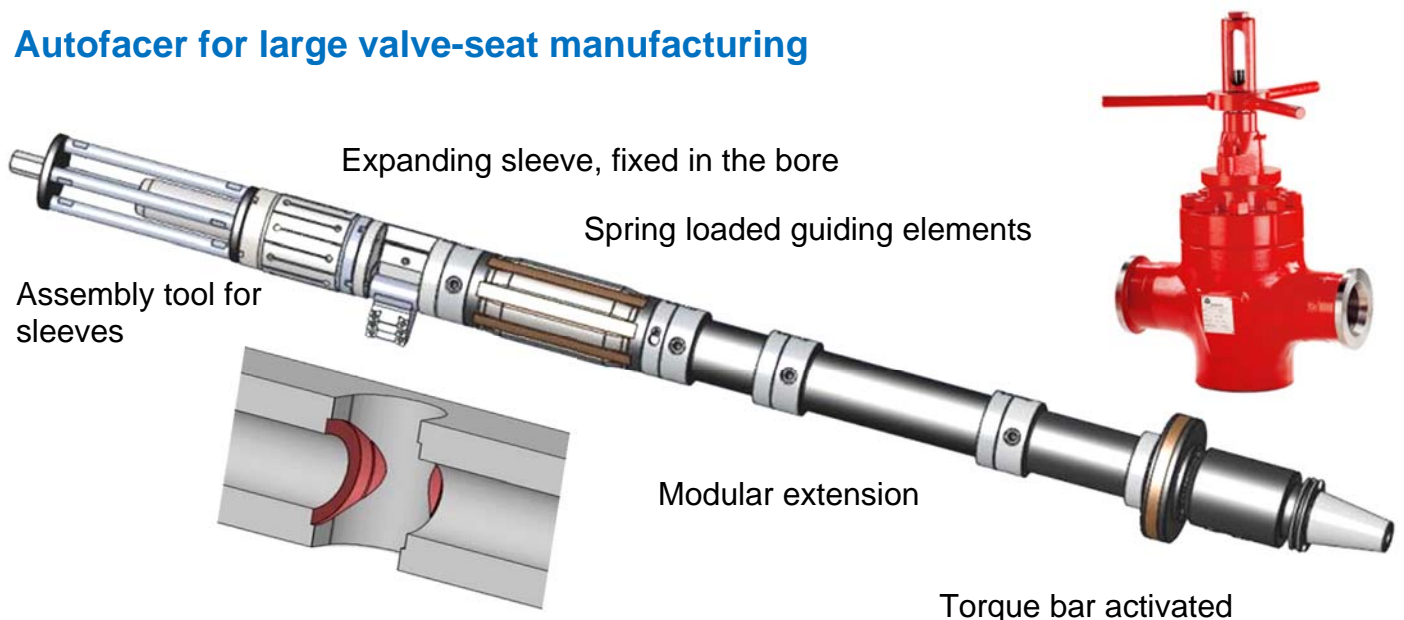
*Fly wheel masses will actuate the cutter blades without changing the sense of rotation*



The new **centrifugal force actuated** Autofacers can be used for automatic backspot facing wherever flywheel or bump style actuation is not possible. The cutter blade will automatically open at a pre-determined rpm. The Autofacer consisting of actuation modul and

countersink tool can be used on all machine types. The actuation module can be combined with multiple countersink tools for different diameters. The rapid centrifugal force actuation minimizes down times and increases productivity.

### Autofacer for large valve-seat manufacturing



Assembly tool for sleeves

Expanding sleeve, fixed in the bore

Spring loaded guiding elements

Modular extension

Torque bar activated

**Slide valves made from INCONEL 718** can be machined fast and safely on a machining centre without U-axis. The tool length can be easily adjusted with extensions due to the modular design. Expanding sleeves will com-

pensate bore diameters variations and will thus safely guide the tool. Dampened guide bushings will avoid vibrations on long tools. Offset ISO-insert will minimize cutting costs when roughing both sides.

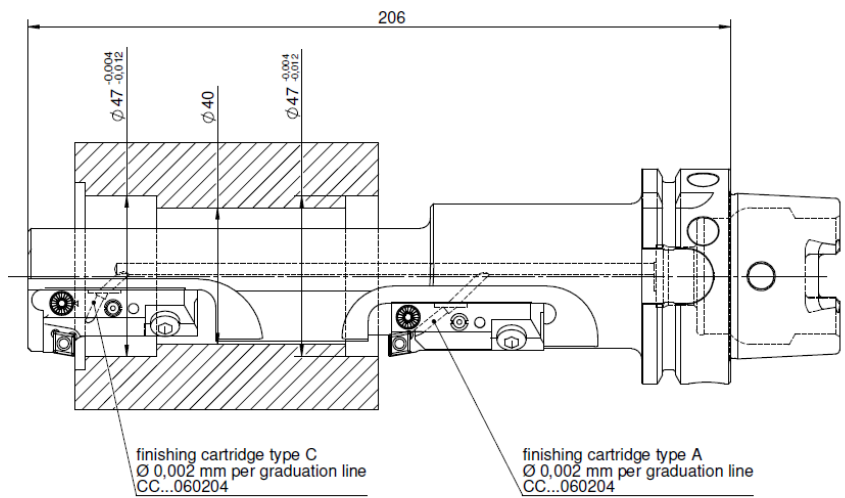
## Precision boring tools for fits IT4-6

### Cartridges with backlash free micro-adjusting mechanism

The new precision boring cartridges with an **adjustment of 2µm per scale-line** are particularly suitable for the machining of high-precision bores. The simple and accurate adjusting mechanism allows a specified faultless setting directly on the machine. They are ideal for use in single- or multi-bladed special tools

starting from diameter 28mm. Smaller tools with an integrated adjusting mechanism are available starting from D=14mm.

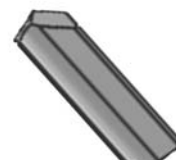
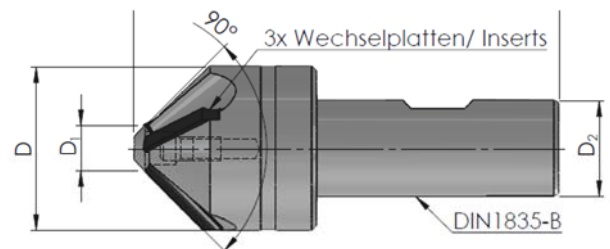
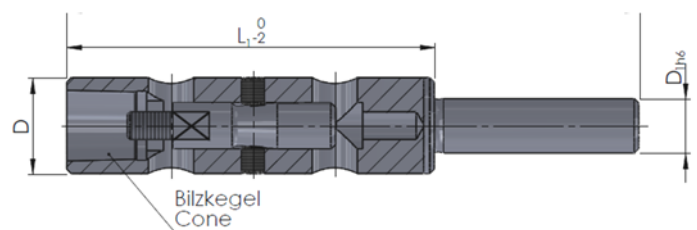
The drawing shows a special tool with two adjustable blades for forward and backward precision machining of two aligned J6 bores.



## New catalog „Countersinking“ with HBS holders and HARDOX countersinks

Besides well-known counterbores, countersinks and pilots (with or without tool securing) there are also new products:

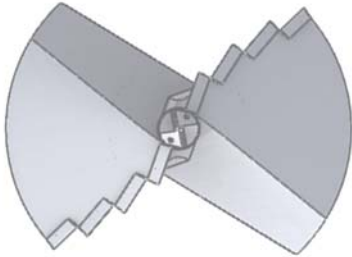
- **HBS holders** for counterbores with BILZ-cone with h6-cylindrical shank, to be used in shrink chucks
- **EWZ countersinks** with Weldon shank
- **EW..WP9 changeable inserts** for EW-countersinks to machine HARDOX material



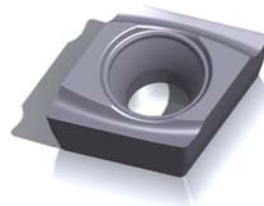
size	HF-K20	HC-P30-TiN	HSSE-TiN	HC-H15-TiAlN (for Hardox)
EW4	EW4K1	EW4P5	EW4S6	EW4WP9
EW5	EW5K1	EW5P5	EW5S6	EW5WP9
EW6	EW6K1	EW6P5	EW6S6	EW6WP9

### Powerbore: new drill heads KSB05/06 and sintered inserts type XBMX

Effectively **double-edged** cutting heads can be used at increased feed rates on powerful machines. The types KSB05 (without) and KSB06 (with guide pads) are now available for  $D = 38-160$  mm on request.



The **new low-cost sintered inserts type XBMX for drill heads KSB01 and KSB03** can be used for high cutting speeds in steel. The sintered inserts are available for drills starting from  $D = 58$  mm in 4 sizes; all inserts are ex stock.

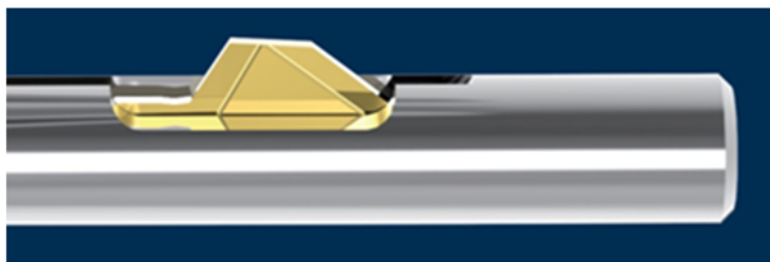


XBMX090404FR7P9
XBMX100404FR7P9
XBMX120404FR7P9
XBMX150404FR7P9

### Reverse deburring and chamferring tools

**BURRAWAY** - Universal deburring tool:

- Easy handling on all machines
- Deburring width is adjustable via spring-load
- Low cost tools and replacement cutters



**HSD** - High Speed Deburring:

- Cutter blades are flexibly in selected form
- Can be used with oil, air or coolant
- Allows high feeds and rpm

