

# Bremer

Willi Bremer GmbH

## KPM 4 AC with 2 workstations



**Fully automatic processing machine for  
tungsten carbide drawing dies**

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For the repair and production of round tungsten carbide drawing dies in the size range of 0.70 - 6.50 mm.

**Designed for grinding / calibrating / polishing conical and cylindrical inner contours to complete the carbide turret.**

Dimensions: Ø 0,70 - 6,50 mm.

- Fully automatic machining operations via integrated intelligent program control
- The combination of expertly programmed intelligence and permanent die measurement during the operation results in rapid die processing and high precision.
- If desired, the two interactive workstations, which are used for conical and cylindrical die-cutting, can also be operated independently of each other and automatically, both via magazine!
- The KPM-4 AC is designed according to the latest EU / CE mechanical engineering standards and for automated continuous operation.

Under the control of an intelligent program control, a robotic arm robot removes the die to be processed from the corresponding magazine, brings it to the left workstation, where it is precisely positioned / centered / fixed. First, the drawing cone is ground - under permanent measuring procedures and using the "meeting point method", as well as the required length of the drawing cylinder. Subsequently, after cleaning the drawing die and adding diamond suspension in the next operation with after changing the tools (steel needle) the die can be polished. After polishing, the gripper arm can transport the die, which has been finished in the cone, to the right-hand workstation, where it is then precisely calibrated to the desired cylinder dimension.

Working material include diamond grinding pins, steel polishing pins, diamond suspension, measuring pins and precise calibration pins.

## Easy handling:

Training by our technical staff on the KPM-4 AC is generally recommended, but the use of the KPM-4 AC due to the integrated intelligent program control is easy for the die maker to understand. When **grinding** or **polishing** on station 1, for example, the full angle is used. If the die is to be given a 12 ° cone, a 12 ° diamond grinding needle or a 12 ° steel needle is used. With the program, the processing of drawing dies continuously retrieved from the magazine takes place fully automatically and without further intervention by the operating personnel; a few parameters must be entered for setting up. This is exactly the case with Station 2 **Calibration**. For the desired dimension, the appropriate calibration pin is selected and clamped in the tool holder and the die is calibrated with the addition of diamond suspension.

## High precision:

High precision and tightest tolerance are now easily achievable, since the critical processing parameters during the workflow are systematically and automatically checked. The respective results are reported back to the computer control system and necessary correction promptly initiated!

## Integrated technical know-how:

So far, a high degree of knowledge and training of the staff was indispensable for the successful drawing die processing. The KPM-4 AC, with appropriate intelligence programmed by the company Willi Bremer, but now allows the simple achievement of optimal results in the processing of carbide dies and in a fully automated form, even for moderately trained personnel, or sets the now additional available performance potential of experienced drawing staff for more tasks free!

## Reliable conception:

The KPM-4 AC was developed from the internationally proven KPM-2 and KPM-3 / CNC machine types for many years and combines maximum reliability with the latest state-of-the-art technology!

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## Technical Details:

Dimension:	1100 x 1410 x 1085 mm (L x B x H)
net weight	ca. 310 Kg
power supply:	230V, +/-10%, 50/60 Hz, 1phasig, 10A
air pressure:	min. 6 bar – max. 10 bar, oilfree
working spindle speed:	max. 30.000 U/min. adjustable
standard-working area:	0,70 – 6,50 mm bore diameter
standard magazine	for casing 43 mm Ø