

# HAUBEX Technology



## 1 HAUBEX tool holders

Tool holders of type HSK-A63, SK-40 and BT-40 specially adapted to HAUBEX guarantee an exactly defined positioning of the workholding hood in the machine spindle.

## 2 HAUBEX workholding hood

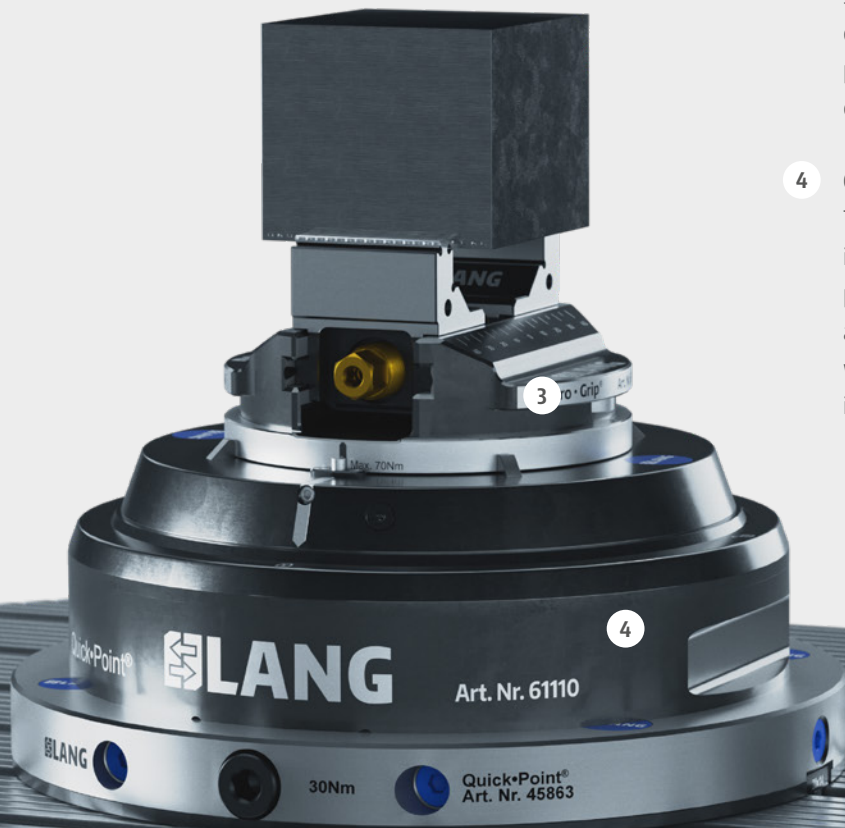
The aluminium workholding hood is the carrier system which transfers vise and workpiece blank from the tool magazine into the zero-point clamping system on the machine table. By means of a 90° closing movement, it opens and locks the zero-point system mechanically, which means that the system does not require any additional utilities on the machine side. A safety element between the workholding hood and the tool holder acts as a buffer and protects the machine spindle in the event of unexpected collisions. An integrated guide and fixation secures the vise against unintentional release from the workholding hood and ensures a secure fit.

## 3 Makro-Grip® HAUBEX 5-Axis Vise

HAUBEX uses a modified version of the Makro-Grip® as the workholding device. The slim design of the 5-Axis Vise and the narrow jaw width of 46 mm ensure ideal accessibility in 5-sided machining of blanks. The maximum workpiece size of approx. 80 × 75 × 70 mm is given by the height and diameter of the workholding hood. Examples of maximum possible workpiece dimensions and a formula for their calculation are available on the website.

## 4 Quick-Point® HAUBEX zero-point clamping system

The patented clamping mechanism of the zero-point device is actuated by the HAUBEX workholding hood in automated production or manually via a clamping lever, in each case by a 90° closing movement. The zero-point device is equipped with clamping studs which guarantees a fast set-up process in the Quick-Point® 96 system.



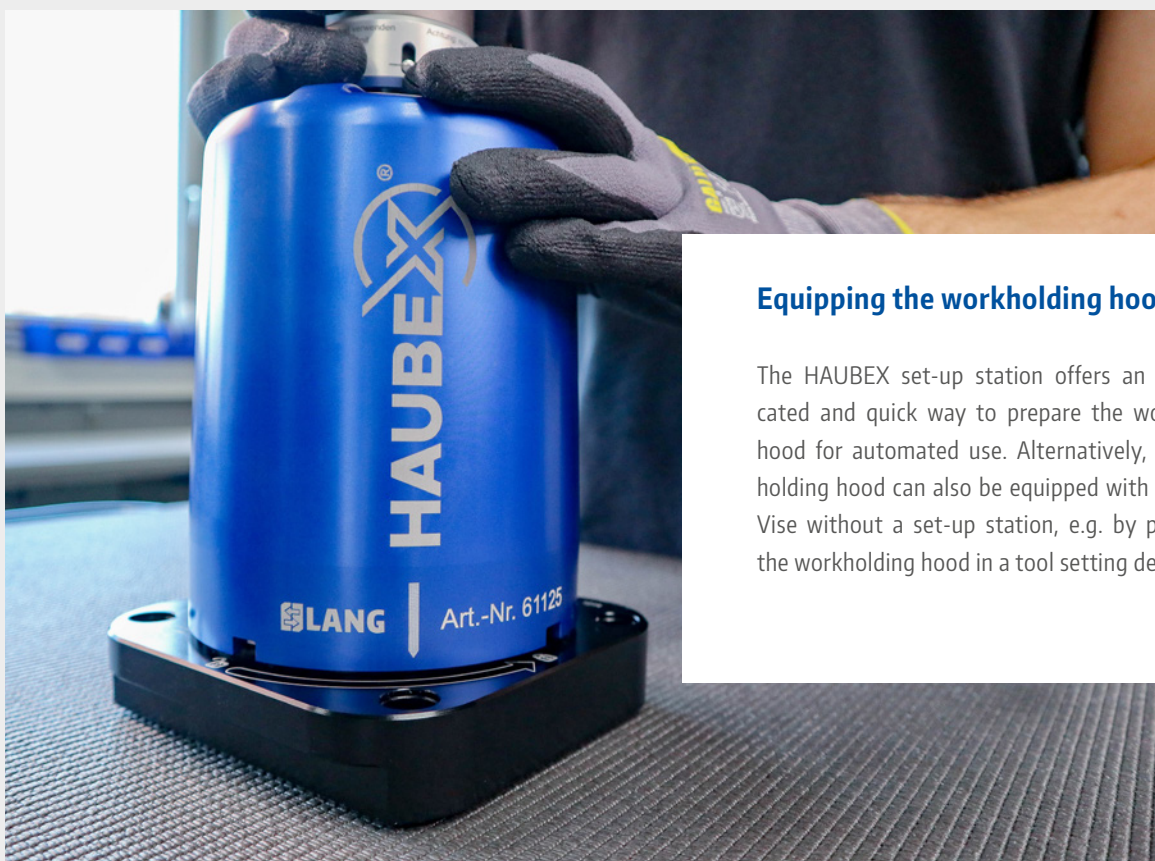
### Workpiece clamping

Workpiece blanks with dimensions of approx.  $80 \times 75 \times 70$  mm can be clamped in the Makro-Grip® HAUBEX 5-Axis Vise by form-fit. With a maximum tightening torque of 60 Nm, the 5-Axis Vise achieves holding forces of up to 14,000 N. Thanks to the defined form-fit between the pre-stamped workpiece and the jaw serration, the Makro-Grip® technology guarantees absolute process reliability and repeatability.



### Equipping the workholding hood

The HAUBEX set-up station offers an uncomplicated and quick way to prepare the workholding hood for automated use. Alternatively, the workholding hood can also be equipped with the 5-Axis Vise without a set-up station, e.g. by positioning the workholding hood in a tool setting device.

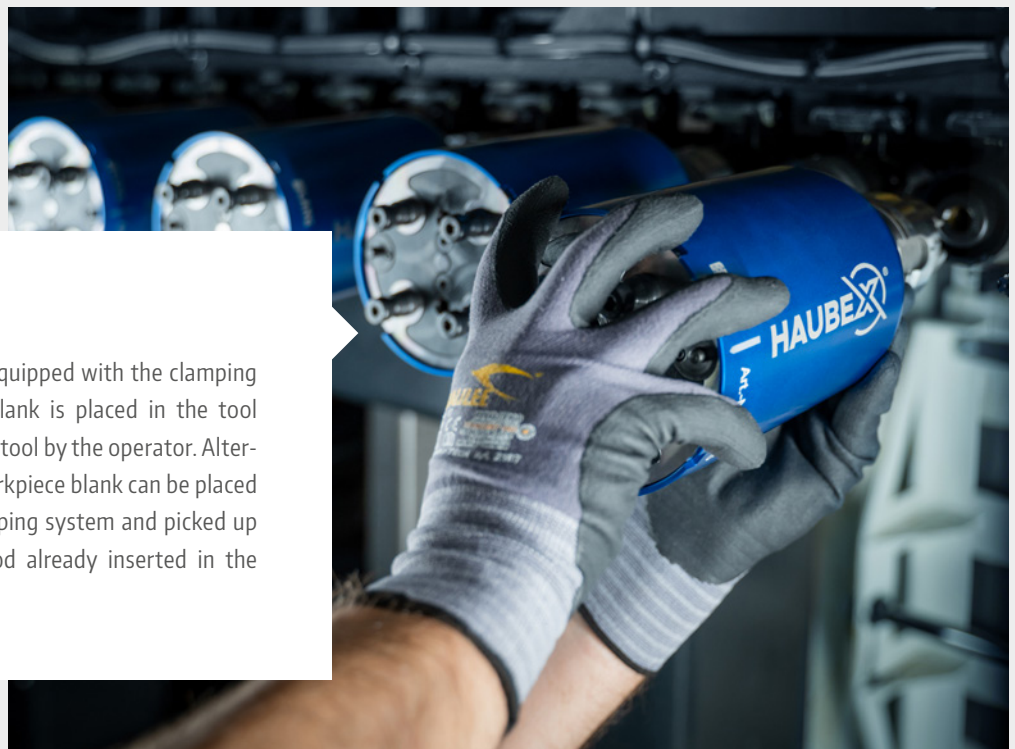






### Measuring and program sequence

Measuring the z-height on the tool setting device and entering it in the program. Sample specifications for NC programs for setting up the automatic vise change can be downloaded from our website.



### Vise storage

The workholding hood equipped with the clamping device and workpiece blank is placed in the tool magazine like a common tool by the operator. Alternatively, the vise and workpiece blank can be placed into the zero-point clamping system and picked up by the workholding hood already inserted in the tool magazine.



### Clamping mechanism

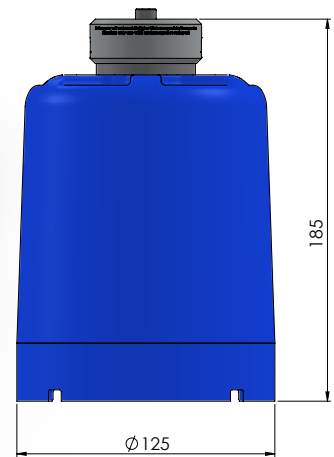
The workholding hood places the 5-Axis Vise into the zero-point clamping system and locks it by a 90° closing movement. Alternatively, the zeropoint device can be actuated via a clamping lever during manual operation without HAUBEX.

### Cleaning

After the machining process and prior to the automatic removal through the workholding hood, we recommend cleaning the machine interior and all relevant interfaces with the Clean-Tec Chip Fan.



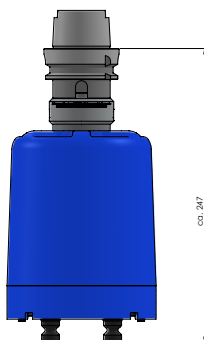
# HAUBEX Components



## HAUBEX WORKHOLDING HOOD

ITEM NO.	LOWER DIAMETER	MAX. WORKPIECE SIZE	WEIGHT	TOTAL HEIGHT
61125	Ø 125 mm	approx. 80 × 75 × 70 mm	1.0 kg	185 mm

\* including safety element



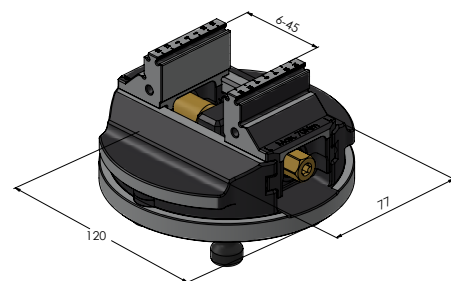
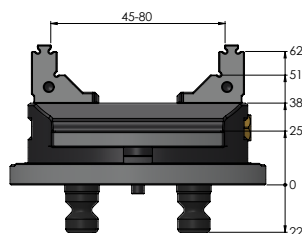
Workholding hood with HSK-A63



Workholding hood with SK 40



Workholding hood with BT 40



### MAKRO-GRIP® HAUBEX 5-AXIS VISE

ITEM NO.	DIMENSIONS	CLAMPING RANGE	WEIGHT
61085-46	Ø 120 × 65 mm	0 – 80 mm	2.6 kg



52



Ø 16 mm



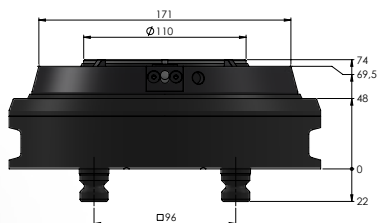
max. 14.000 N



max. 60 Nm



± 0,02 mm



### QUICK-POINT® HAUBEX ZERO-POINT CLAMPING SYSTEM

ITEM NO.	DIMENSIONS	GRID SIZE	WEIGHT
61110	Ø 211 × 74 mm	52	8.6 kg

Upper interface:



Ø 16 mm



30 Nm

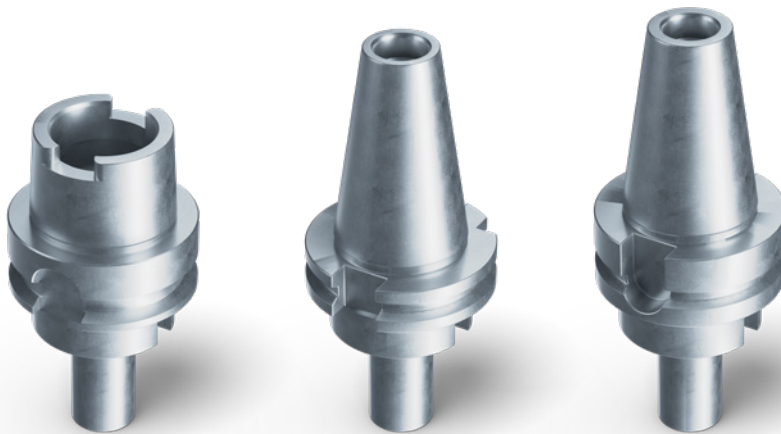
Lower interface:



96



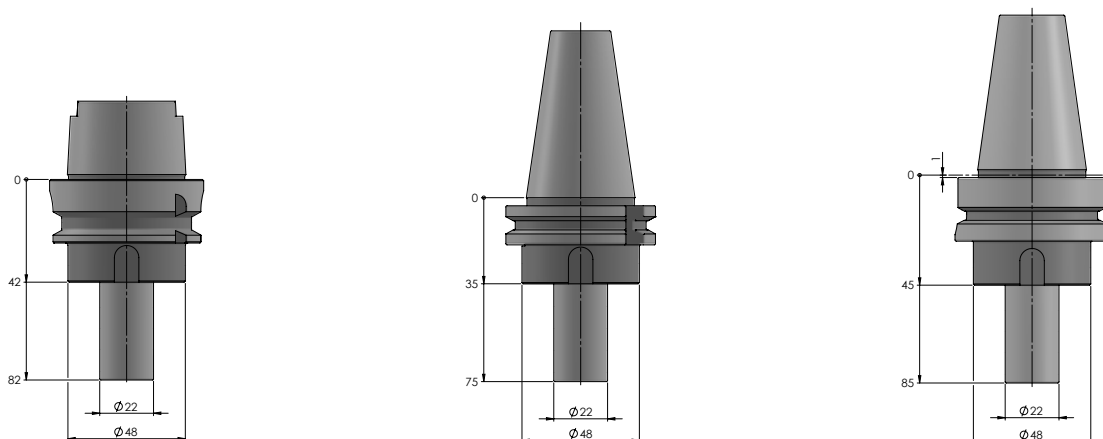
# HAUBEX Components



## HAUBEX TOOL HOLDER

ITEM NO.	TYPE	STANDARD	WEIGHT	TOOL LENGTH*
61500-HSK63	HSK-A63 (Hollow taper shank)	DIN 69893-1	1.0 kg	approx. 247 mm
61500-SK40	SK-40 (Steep taper)	DIN ISO 7388-1	1.1 kg	approx. 240 mm
61500-BT40	BT-40 (Steep taper)	JIS B6339	1.3 kg	approx. 250 mm

\* including workholding hood and Makro-Grip®. Measured to the lower edge of the clamping studs of the 5-Axis Vise.



NEW



## HAUBEX SET-UP STATION

ITEM NO.	DIMENSIONS	GRID SIZE	WEIGHT
61115	144 × 144 × 33 mm	52	1.5 kg

