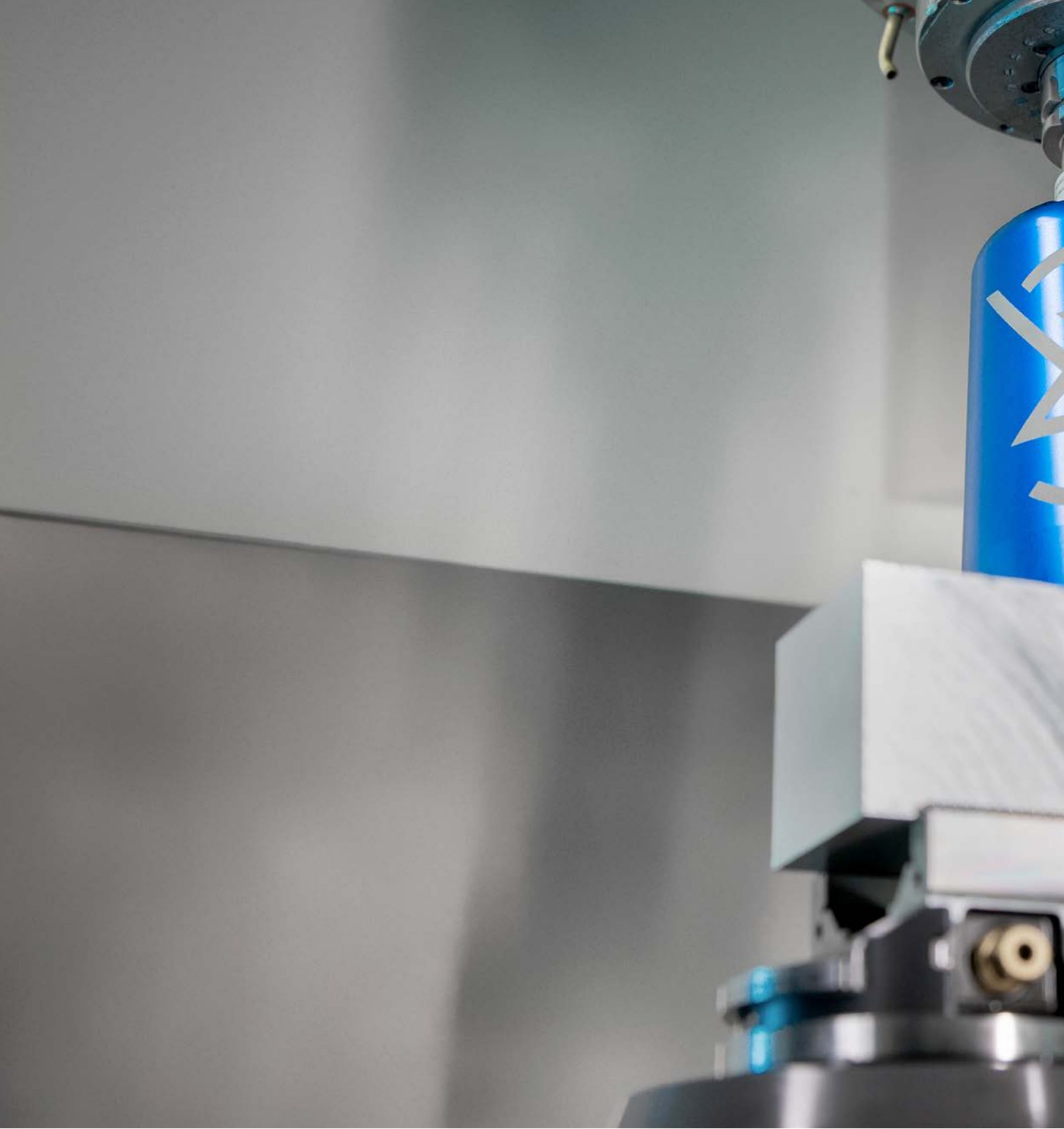




**HAUBEX
AUTOMATION**



204 HAUBEX Automation

210 HAUBEX Components



**simple.
automatic.
change.**

The automatic vice change from the tool magazine

UNIVERSAL

FLEXIBLE

COST-EFFICIENT

Automated manufacturing without any pallet changer, feeding unit or robot? In cooperation with Erst Maschinenbau, LANG Technik presents a new, patented system that transforms the tool magazine of a machine tool into an automation system. The world's probably most simple automation solution enables automated production with any machine tool.

Benefits of the HAUBEX Automation System:



Can be used in almost any machine tool



Flexible use throughout the entire production



Cost-efficient automation solution for beginners



No knowledge about automation and robotic systems required



Can be ideally integrated into existing production environment



No time-consuming installation or machine downtimes



The automatic vice change by Erst Maschinenbau and LANG Technik

In joint cooperation, Erst Maschinenbau and LANG Technik present a patented system with which every machine tool can manufacture automatically without an additional feeding unit or robot – innovative. patented. unique.

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 vice 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 vice against unintentional release from the workholding hood and ensures a secure fit.

3 Makro-Grip® HAUBEX 5-Axis Vice

HAUBEX uses a modified version of the Makro-Grip® as the workholding device. The slim design of the 5-Axis Vice 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 Vice by form-fit. With a maximum tightening torque of 70 Nm, the 5-Axis Vice 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

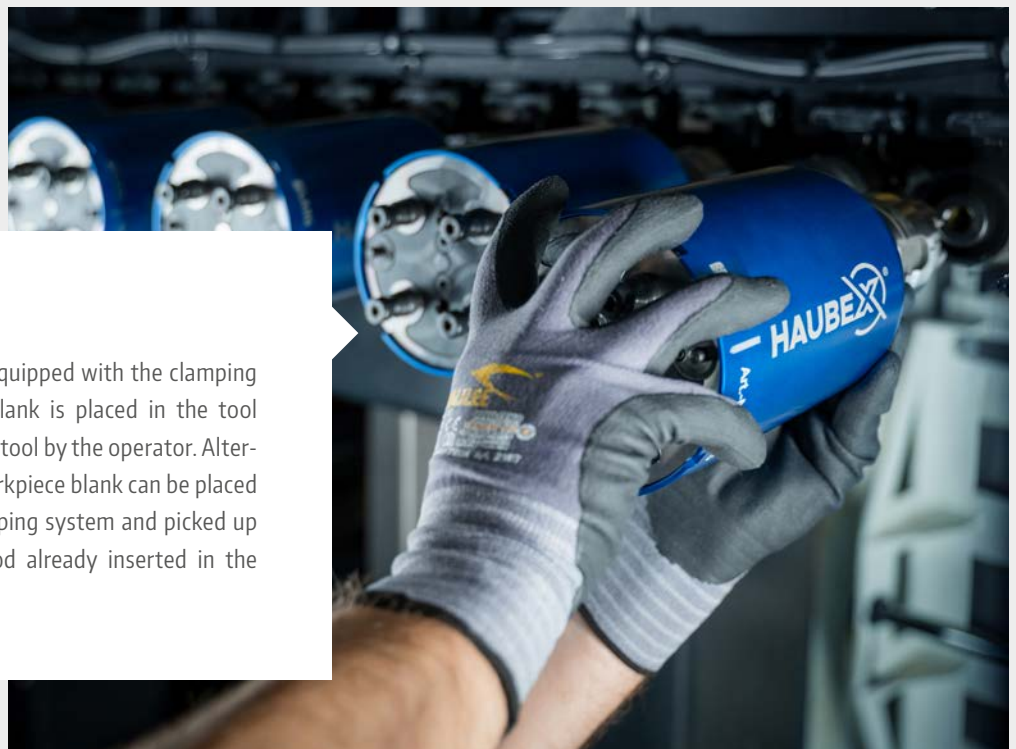
The workholding hood can be equipped in several ways. If the workholding hood is placed in a tool setting device, the 5-Axis Vice with the workpiece blank can be inserted overhead. Alternatively, the workholding hood can be slipped over the 5-Axis Vice at a set-up station, in each case by a 45° snap-in function.





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 vice change can be downloaded from our website.



Vice 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 vice 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

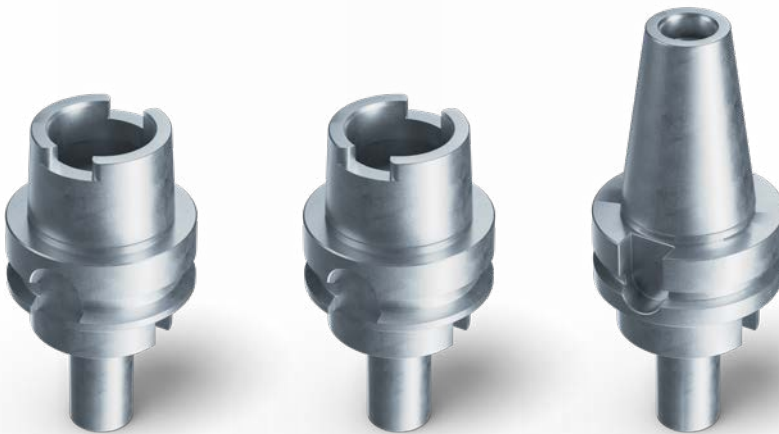
The workholding hood places the 5-Axis Vice into the zero-point clamping system and locks it by a 90° closing movement. Alternatively, the zeropoint device can be actuated via a clamping lever during manual operation without HAUBEX.

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.



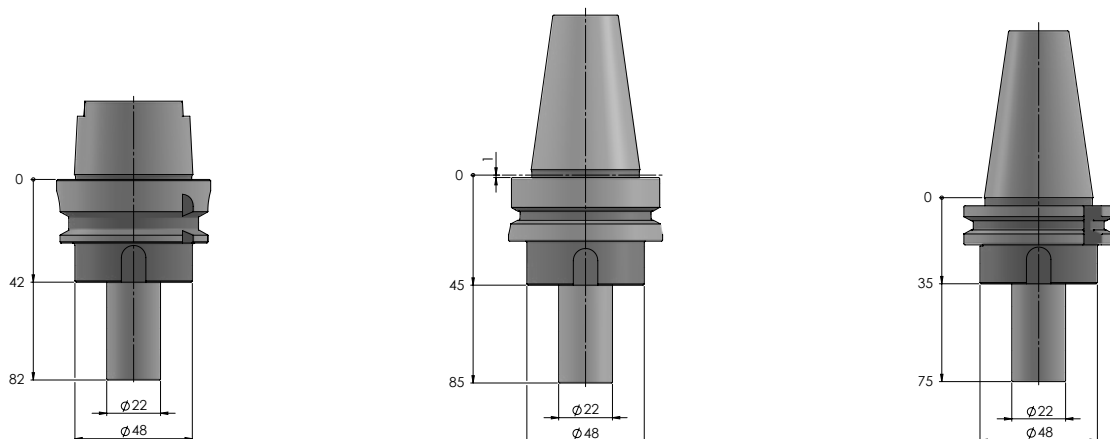
HAUBEX Components



HAUBEX 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 Vice.

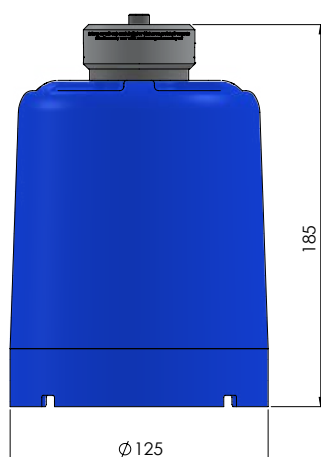




HAUBEX WORKHOLDING HOOD

ITEM NO.	LOWER DIAMETER	MAX. WORKPIECE SIZE	WEIGHT	TOTAL HEIGHT
61125	Ø 125 mm	approx. 80 × 75 × 70 mm	0.9 kg	185 mm

* including safety element



HAUBEX Workholding



MAKRO-GRIP® HAUBEX 5-AXIS VICE

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



52



Ø 16 mm



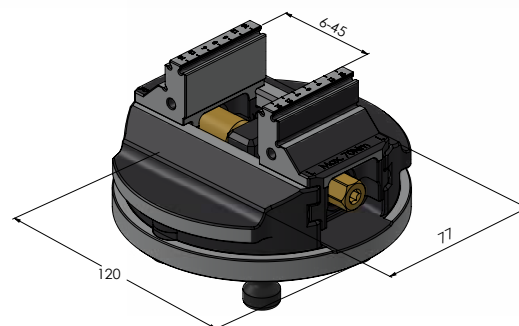
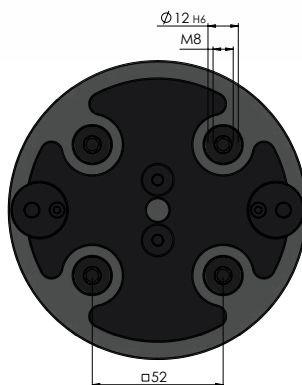
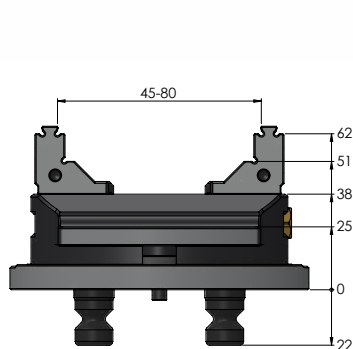
max. 14.000 N



max. 70 Nm



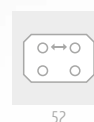
± 0,02 mm



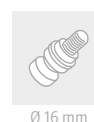


QUICK-POINT® HAUBEX ZERO-POINT CLAMPING SYSTEM

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



52



Ø 16 mm



30 Nm

