



Automation

Contents

New Products – Spring 2022	3
All from one source	4
RoboTrex Automation System	6
HAUBEX Automation System	36
Clean•Tec Chip Fan	48
BILD hilft e.V. "Ein Herz für Kinder" campaign	55
Terms & Conditions, Imprint	56

New Products Spring 2022

Compared to the last version of our catalog, the following products have been added to our automation range:



HAUBEX Set-Up Station

The HAUBEX set-up station offers the user a simple and convenient way to equip the workholding hood with the 5-axis vise. After the 5-axis vise and the workpiece blank have been inserted into the set-up station, the workholding hood is slipped over. The clamping mechanism is triggered by a 90° rotation and simultaneous pressing of a lateral actuating pin, allowing the workholding hood and 5-axis vise to be removed as a unit.

Learn more on page 41 and 47

What else is new?

In the RoboTrex 52 Automation range, there is a new gripper (item no. 66930) to match the Fanuc robot variant M-20iD25, in order to actuate the zero-point clamping system in a mechanical way.

Learn more on page 20

The pneumatic zero-point clamping device (item no. 66600) for the RoboTrex 52 automation system has been technically revised and impresses with even greater process reliability.

Learn more on page 21 and 30

Workholding and Automation – from one source

A proven and perfectly combined package of workholding, zero-point clamping and automation, along with our unrivaled stamping technology, provides our customers with the necessary requirements to stay efficient and competitive.





Zero-Point Clamping

Quick-Point® fits anywhere

- Fits any machine table
- Versatile application possibilities for 3-/5-axis machines and rotary tables
- Modular design
- Enormous set-up time savings
- Wide range of customization options
- Highly precise positioning
- Direct clamping of workpieces
- Simple operation, easy maintenance and cleaning



Workholding

A suitable clamping solution for any machining task

- For raw, round, pre-machined, (semi-) finished and large parts
- Highest holding forces and process reliability
- Ideal accessibility for 5-sided machining
- Wear and distortion-free clamping
- Fully compatible centering vises and clamping jaws
- Compact design, low weights, ergonomic handling
- Integrated zero-point adaptation
- For automated or manual production, can be used with competing systems



Automation

Flexible single part or large scale production

- Retrofittable to any machining center
- (Re-)equipping of automation system within a few seconds
- Highly flexible single-part or batch production
- Simple operation, no knowledge about robots required
- Quick installation, minimum training expenses
- No skilled labor required
- Automation trolleys as a flexible storage
- High storage capacity on small footprint



ROBOTREX AUTOMATION



- 16 RoboTrex 52 **Automation System**
- 26 RoboTrex 96 **Automation System**
- 34 Individual automation solutions
- 35 Makro-Grip® **Mobile Storage Unit**



**simple. flexible.
automation.**

More efficiency, automatically!

Automation systems by LANG Technik are characterized by:

SIMPLE OPERATION

SET-UP TIME SAVINGS

FLEXIBILITY

Efficiency, speed and flexibility – RoboTrex combines all these attributes and prepares your manufacturing for the future! Automation systems by LANG cover every need from single part to large-scale production. They are flexible, easy to use and offer best value for money. This makes them appealing for SME's and for those just starting out.

Benefits of the RoboTrex Automation System:



(Re-) equipping of
automation within
just a few seconds



Simple operation,
no knowledge about
robots required



Minimum
training expenses



No skilled
labor required



Works with almost
every machine tool



Single part or
large-scale production

RoboTrex Automation System



Machine tools we have already equipped with an automation:

- | | | | |
|--------------|-----------------|----------------|-----------|
| → Alzmetall | → Fehlmann | → Kern | → Müga |
| → Awea | → Grob | → Leadwell | → OKK |
| → Bridgeport | → GMC | → Litz | → Okuma |
| → Brother | → Haas | → Makino | → Quaser |
| → Chiron | → Hedelius | → Matec | → Spinner |
| → DMG Mori | → Hermle | → Matsuura | → Stama |
| → Doosan | → Hitachi Seiki | → Mazak | → Victor |
| → Emco | → Hurco | → Mikron | → YCM |
| → Fanuc | → Huron | → Mitsui Seiki | |
| → Feeler | → Hyundai | → MT Cut | |

Faster set-up, more flexible automation

The innovative and patented automation trolley as the storage of the automation system ensures highest flexibility and machine tool utilization even in a mostly unmanned shift. By preparing the trolleys offline, the RoboTrex automation system can be re-equipped within a few moments without any machine downtime. Thanks to the special, angled mounting of the vises, the trolley has a high storage capacity on a relatively small footprint, which is why RoboTrex can be integrated in nearly any machine shop. RoboTrex is not only suitable for batch production of homogeneous parts but can also

process single parts flexibly, by assigning a NC program to every vise position. It is also possible to deselect certain vise positions or entire rows to handle parts with excess width or height. Whether a completely new machine tool or as a retrofit to an existing one, due to the simple communication, RoboTrex fits almost every machine tool. The simple and uncomplicated operation provides an easy start in automated manufacturing. In economic terms, it offers a great value-for-money ratio and guarantees a quick return on investment.

RoboTrex 52 and 96 – head-to-head comparison



RoboTrex 52
Automation System



RoboTrex 96
Automation System

30 / 42 Vises	STORAGE CAPACITY OF TROLLEY	15 / 16 Vises
max. 4 pcs.	QTY OF TROLLEYS	max. 4 pcs.
120 / 168 Vises	TOTAL STORAGE CAPACITY	60 / 64 Vises
max. 120 × 120 × 100 / max. 120 × 100 × 70 mm	WORKPIECE DIMENSIONS WITH FULLY EQUIPPED TROLLEY	max. 205 × 205 × 90 / max. 205 × 150 × 150 mm
max. 12 kg	WORKPIECE WEIGHT	max. 25 kg, optional: max. 45 kg
no	GRIPPER EXCHANGE INTERFACE	yes
mechanical or pneumatical	ACTUATION OF ZERO-POINT SYSTEM	pneumatical
from 1.70 × 2.20 m	FOOTPRINT	from 2.00 × 2.70 m
through machine door or side window	LOADING	through machine door or side window

Well thought-out and excellently proven in practice

RoboTrex offers elementary advantages with each of its components, which have an immediate and extremely profitable effect on machining processes and production sequences.



THE AUTOMATION SYSTEM

- ➔ Simple retrofitting as front or side loading on existing or new machine
- ➔ Communication with the machine via M-function
- ➔ Minimal training required, fast commissioning
- ➔ Delivery in ready-to-use, pre-programmed state
- ➔ No robot knowledge required, also suitable for unskilled personnel
- ➔ Simple, intuitive operation via touch pad

THE ROBOT / GRIPPER

- ➔ Proven Fanuc robot quality
- ➔ One gripper for all types of workpieces
- ➔ No adjustments necessary for different types of workpieces
- ➔ Automatic loading/unloading takes place independently of the milled contour
- ➔ No additional programming effort for different components
- ➔ With gripper exchange interface for RoboTrex 96



THE AUTOMATION TROLLEY

- Flexible, offline preparation of the storage medium
- Direct set-up, retooling on the automation trolley
- No machine downtimes during trolley exchange
- Flexible order management, from single-part to large-scale production
- High storage capacity on a small footprint
- Immediate access to entire storage medium
- Interchangeable and therefore usable in other RoboTrex systems at any time



The 5-Axis Vise

- Vise and pallet in one
- No additional interfaces for highest stability and manufacturing accuracy
- High space saving in the automation system and machine tool due to compact design
- Highest process reliability thanks to stamping technology
- Vises can be used in other machines at any time
- High repeat accuracy and reproducibility of the clamping situation thanks to defined clamping

THE ZERO-POINT CLAMPING SYSTEM

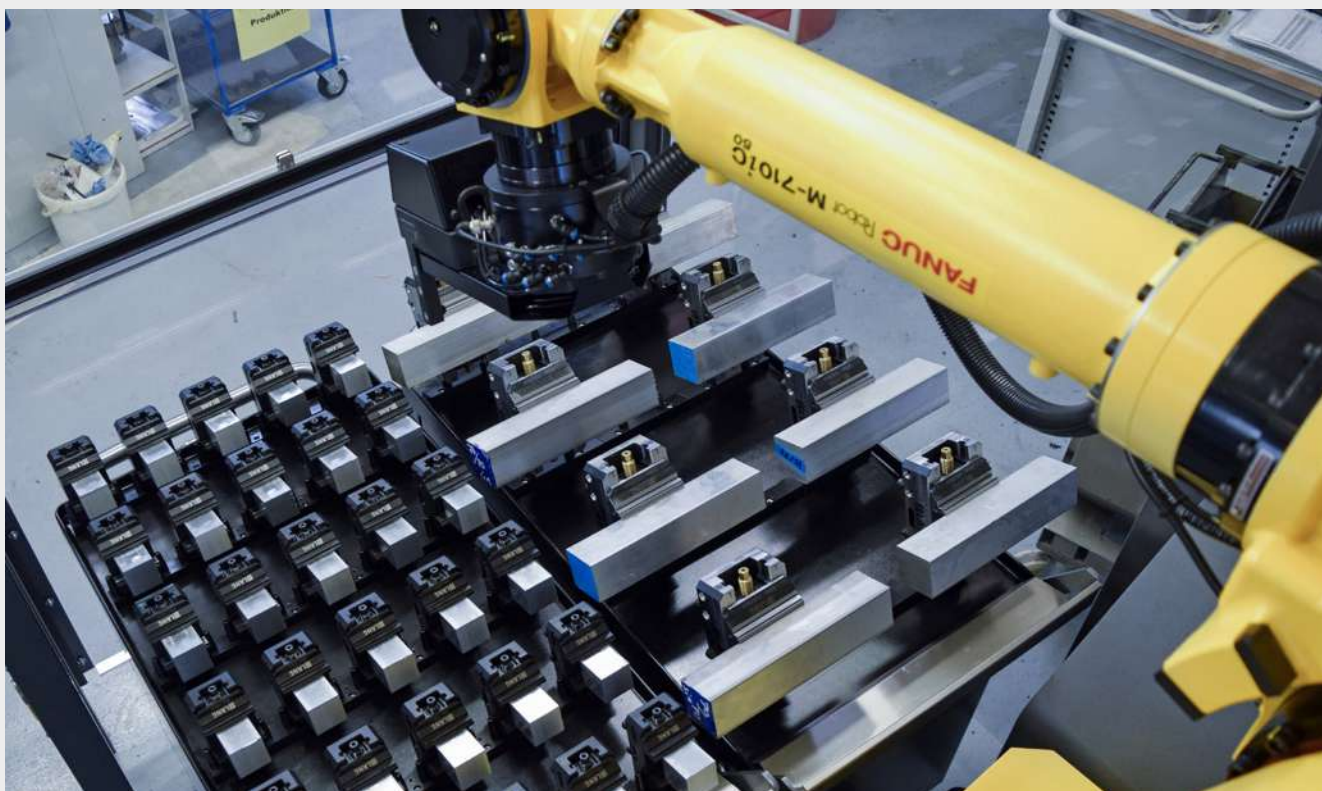
- Mechanical or pneumatic operation
- No additional utilities required within the machine
- Low-maintenance, wear-free components
- Repeat accuracy < 0.005 mm
- Can also be used without automation system for manual production



Categorization of grippers and zero-point clamping systems



RoboTrex 96 – the flexible 2-in-1 solution



The gripper exchange interface, a standard feature of RoboTrex 96, is a zero-point adaptation on the robot arm which ensures even more options and flexibility when it comes to the variety of processable part sizes. The interface allows switching between different gripper sizes and thus using both, RoboTrex 96 and 52 trolleys

(and all associated components) in the same system. This makes RoboTrex 96 a flexible 2-in-1 solution that can not only handle bigger and heavier parts up to 25 kg (or 45 kg), but also smaller parts in larger lot sizes efficiently.

RoboTrex 52 Automation System



ROBOTREX 52 AUTOMATION SYSTEM

ITEM NO.	BASIC EQUIPMENT
66000	Complete robotic automation system incl. enclosure and trolley entry system

Applications



Image: JH Maschinenbau



Image: PJK Feinmechanik GmbH



Image: Vedos Verspanende Techniek B.V.



Image: Qualiturn Products Ltd.



Image: HEL Performance Products Ltd.



Image: ASEDO GmbH & Co.KG

RoboTrex 52 Automation Trolley



ROBOTREX 52, AUTOMATION TROLLEY

ITEM NO.	STORAGE CAPACITY	MAX. PART SIZE (WHEN FULLY LOADED)	WEIGHT
66030	30 vises	120 × 120 × 100 mm	167 kg
66042	42 vises	120 × 100 × 70 mm	170 kg

Maximum load capacity of trolley: 500 kg

Batch production or individual program assignment for single parts

Flexible job management

Besides the rather conventional processing of identical parts per trolley, the RoboTrex automation system offers further possibilities, which enable a flexible job management for a diverse range of parts. From the deselection of certain vise positions or rows – in order to process parts with excess width or height – to a very individual single part production by assigning a NC program to each vise position – everything is imaginable.



Start and stop mark



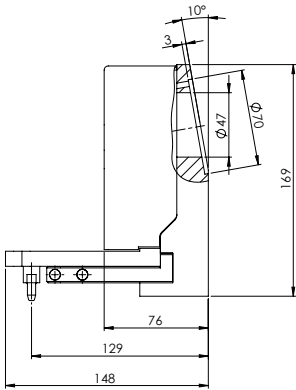
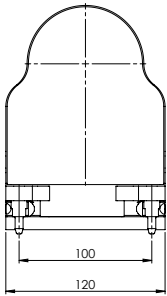
Deselection of vise positions



Individual program assignment

RoboTrex 52 Grippers and Zero-Point Clamping Systems

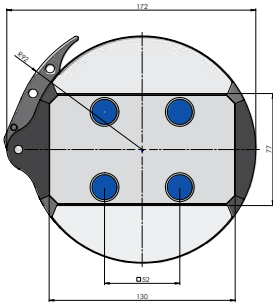
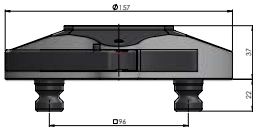
NEW VERSION



GRIPPER 52, MECHANICAL

ITEM NO.	ACTUATION	SUITABLE FOR ZERO-POINT SYSTEM
66930	mechanical	66500

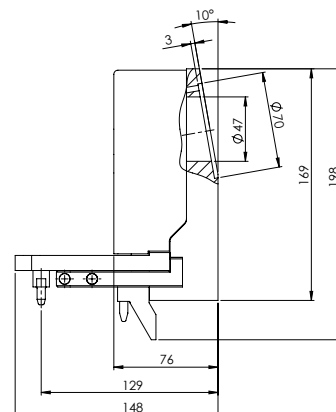
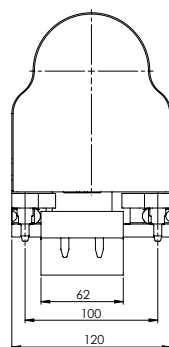
Max. workpiece weight: 12 kg.



ZERO-POINT CLAMPING SYSTEM 52, MECHANICAL

ITEM NO.	ACTUATION	SUITABLE FOR GRIPPER
66500	mechanical	66930

Included in delivery: Zero-point device, clamping lever for manual operation, aluminium handle

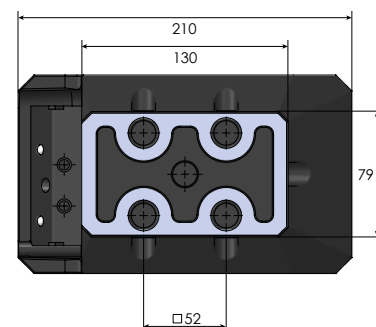
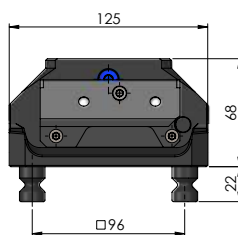


GRIPPER 52, PNEUMATIC

ITEM NO.	ACTUATION	SUITABLE FOR ZERO-POINT SYSTEM
66900	pneumatic	66600

Max. workpiece weight: 12 kg.

NEW VERSION



ZERO-POINT CLAMPING SYSTEM 52, PNEUMATIC

ITEM NO.	ACTUATION	SUITABLE FOR GRIPPERS
66600	pneumatic	66900 / 66950

Included in delivery: Zero-point device, adapter for manual operation + bracket, aluminium handle

Makro·Grip® Night King



MAKRO·GRIP® NIGHT KING, JAW WIDTH 77 MM



52



Ø 16 mm



max. 60 Nm



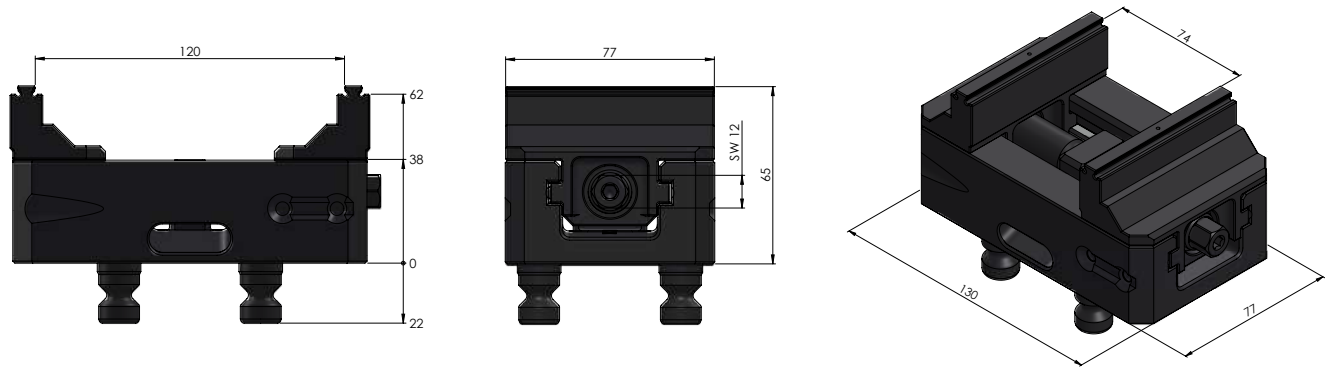
max. 14.000 N

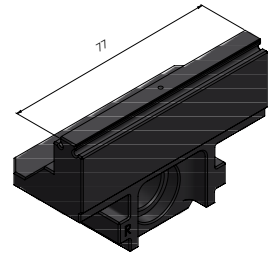
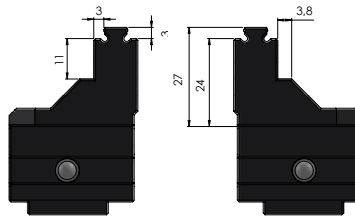


✓

ITEM NO.	BASE LENGTH	JAW WIDTH	CLAMPING RANGE	WEIGHT
68120-77	130 mm	77 mm	0 – 120 mm	2.9 kg

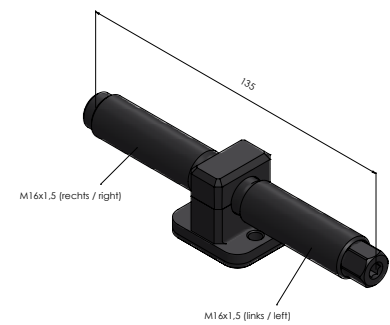
*sold as a set of 10





SPARE JAWS FOR MAKRO-GRIP® NIGHT KING

ITEM NO.	FOR	WEIGHT	QTY
68077-7720	68120-77	0.8 kg	1 pair



SPINDLE + CENTER PIECE FOR MAKRO-GRIP® NIGHT KING

ITEM NO.	FOR	SPINDLE LENGTH (+Ø)	WEIGHT
6877135	68120-77	135 mm / Ø 16 mm	0.3 kg

Applications



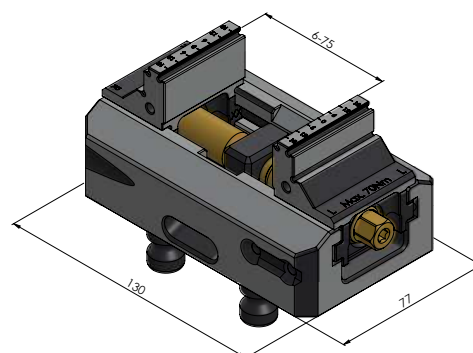
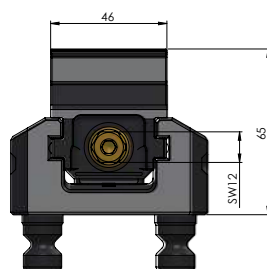
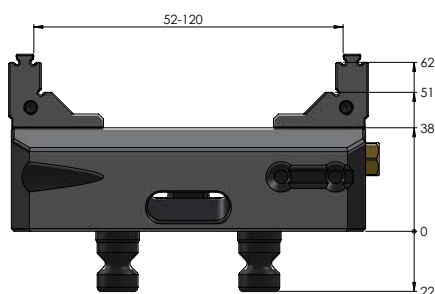
Makro·Grip® 5-Axis Vise 77



MAKRO·GRIP® 5-AXIS VISE 77, JAW WIDTH 46 MM



ITEM NO.	BASE LENGTH	CLAMPING RANGE	WEIGHT
48120-46	130 mm	0 – 120 mm	2.5 kg



Makro·Grip® 5-Axis Vise 77



MAKRO·GRIP® 5-AXIS VISE 77,
JAW WIDTH 77 MM



52



Ø 16 mm



max. 60 Nm

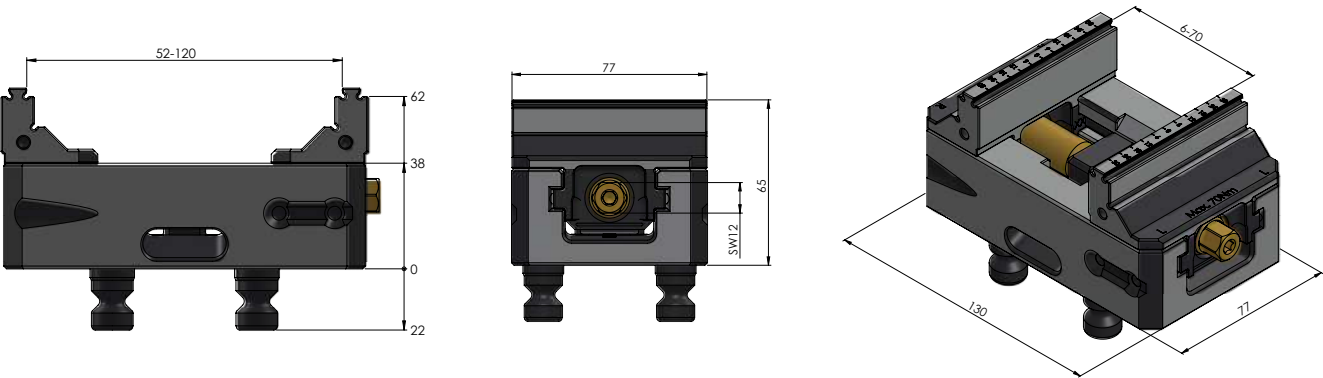


max. 14.000 N



± 0,02 mm

ITEM NO.	BASE LENGTH	CLAMPING RANGE	WEIGHT
48120-77	130 mm	0 – 120 mm	2.9 kg



RoboTrex 96 Automation System



ROBOTREX 96 AUTOMATION SYSTEM

ITEM NO.	BASIC EQUIPMENT
64000	Complete robotic automation system incl. enclosure and trolley entry system

Applications



Image: Somic-Haag



Image: Lindauer DORNIER GmbH



Image: Waibel GmbH



Image: Schleipfner & Stocker GmbH



Image: Beer Zerspanungstechnik GmbH

RoboTrex 96 Automation Trolley

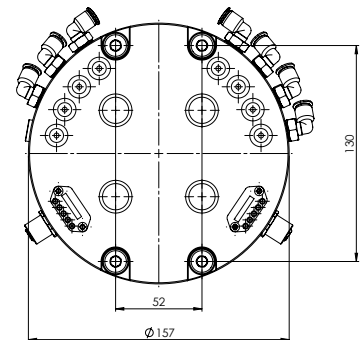
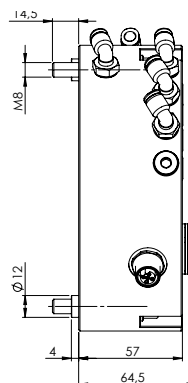


ROBOTREX 96, AUTOMATION TROLLEY

ITEM NO.	STORAGE CAPACITY	MAX. PART SIZE (WHEN FULLY LOADED)	WEIGHT
64015	15 vises	205 × 205 × 90 mm	178 kg
64016	16 vises	205 × 150 × 150 mm	174 kg

Maximum load capacity of trolley: 500 kg

RoboTrex 96 **Gripper Exchange Interface**



GRIPPER EXCHANGE INTERFACE

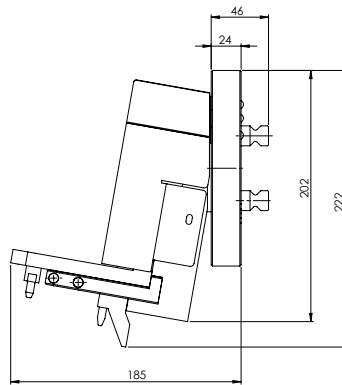
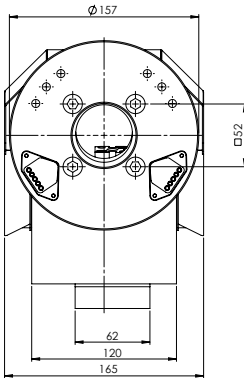
ITEM NO.	SUITABLE FOR GRIPPERS
64266	66950 / 64850

Applications



The gripper exchange interface, which is a standard feature on RoboTrex 96, allows you to change between different gripper sizes and thus use different vise sizes in the same automation system. As a single component, the gripper exchange interface can also be used in third-party automation systems to take advantage of the benefits of LANG workholding technology and to switch flexibly between different system sizes.

RoboTrex 96 Grippers and Zero-Point Clamping Systems

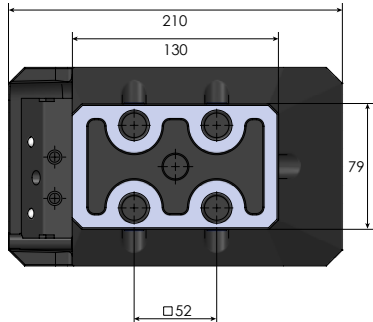
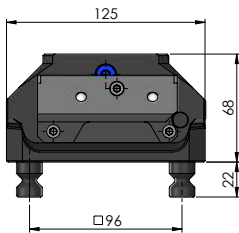


GRIPPER 52, PNEUMATIC

ITEM NO.	ACTUATION	SUITABLE FOR ZERO-POINT SYSTEM
66950	pneumatic	66600

Max. workpiece weight: 15 kg.
This gripper type allows using RoboTrex 52 components in the RoboTrex 96 automation system.

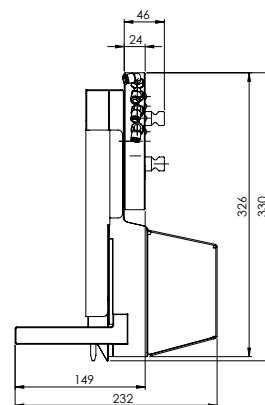
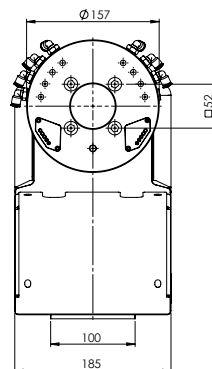
NEW VERSION



ZERO-POINT CLAMPING SYSTEM 52, PNEUMATIC

ITEM NO.	ACTUATION	SUITABLE FOR GRIPPERS
66600	pneumatic	66900 / 66950

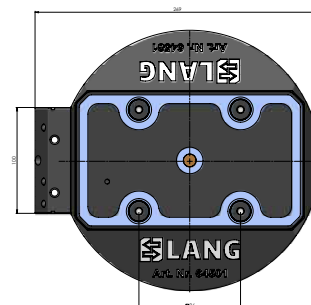
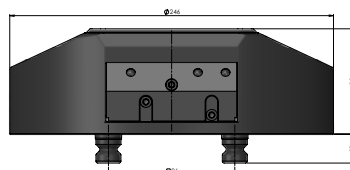
Included in delivery: zero-point device, adapter for manual operation + bracket, aluminium handle.
Also suitable for RoboTrex 96!



GRIPPER 96, PNEUMATIC

ITEM NO.	ACTUATION	SUITABLE FOR ZERO-POINT SYSTEM
64850	pneumatic	64500

Max. workpiece weight: 25 kg / 45 kg. Depending on robot version.



ZERO-POINT CLAMPING SYSTEM 96, PNEUMATIC

ITEM NO.	ACTUATION	SUITABLE FOR GRIPPER
64500	pneumatic	64850

Included in delivery: zero-point device, adapter for manual operation + bracket, aluminium handle.

Makro·Grip® 5-Axis Vise 125



MAKRO·GRIP® 5-AXIS VISE 125,
JAW WIDTH 77 MM



96



Ø 20 mm



max. 100 Nm

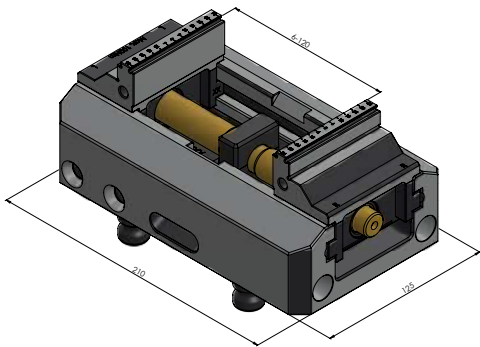
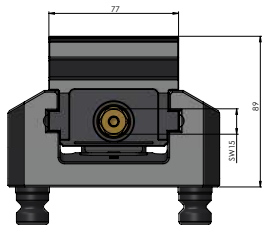
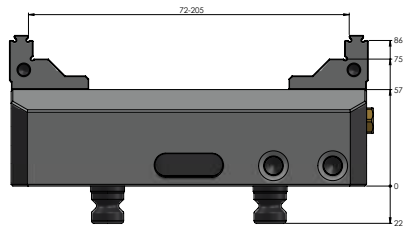


max. 20.000 N

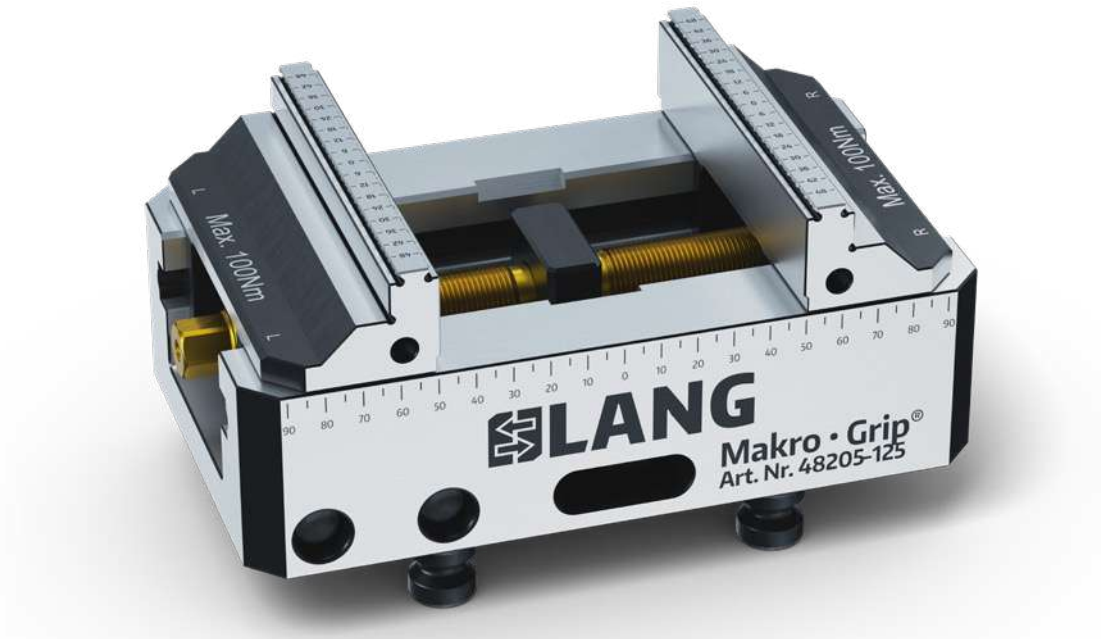


± 0,02 mm

ITEM NO.	BASE LENGTH	CLAMPING RANGE	WEIGHT
48205-77	210 mm	0 – 205 mm	9.1 kg



Makro·Grip® 5-Axis Vise 125



MAKRO·GRIP® 5-AXIS VISE 125,
JAW WIDTH 125 MM

96

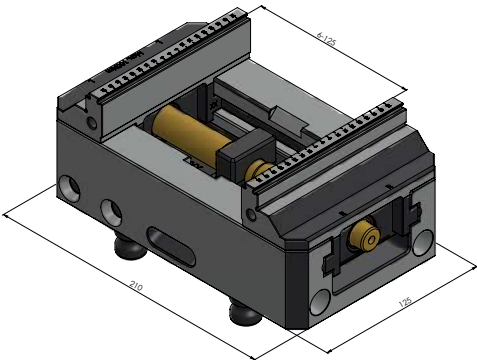
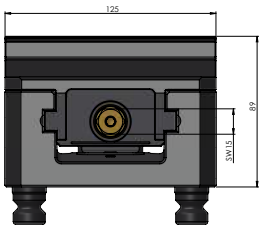
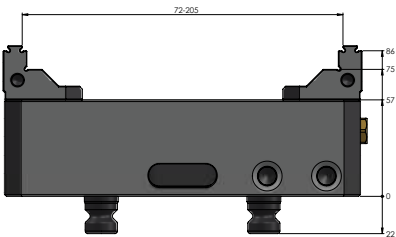
Ø 20 mm

max. 100 Nm

max. 20.000 N

± 0,02 mm

ITEM NO.	BASE LENGTH	CLAMPING RANGE	WEIGHT
48205-125	210 mm	0 – 205 mm	10.1 kg



Other components for individual automation solutions



All essential RoboTrex components are also available as individual components in order to be used with conventional automation systems. Whether it's a connection to an existing robotic system, an integration in robot cells or shelf systems or a flexible in-house solution, LANG clamping systems make every automated manufacturing process more efficient.

From the various vise versions and automation trolleys to the automation window, all of these components are listed in the table below. Grippers and zero-point devices can be found on the previous pages and are not listed hereafter.

CENTERING VISES	ITEM NO.
Makro-Grip® 5-Axis Vise 77, jaw width 46 mm	48120-46
Makro-Grip® 5-Axis Vise 77, jaw width 77 mm	48120-77
Makro-Grip® 77 Night King, jaw width 77 mm	68120-77
Makro-Grip® 5-Axis Vise 125, jaw width 77 mm	48205-77
Makro-Grip® 5-Axis Vise 125, jaw width 125 mm	48205-125
AUTOMATION TROLLEYS AND POSITIONING BOLTS:	ITEM NO.
RoboTrex 52 Automation Trolley, 30 vises	66030
RoboTrex 52 Automation Trolley, 42 vises	66042
Positioning Bolt for RoboTrex 52 Automation Trolley	66087
RoboTrex 96 Automation Trolley, 15 vises	64015
RoboTrex 96 Automation Trolley, 16 vises	64016
Positioning Bolt for RoboTrex 96 Automation Trolley	64086
Automation Trolley with special alignment	99996
MISCELLANEOUS:	ITEM NO.
RoboTrex 52 Gripper, old version, for mechanical actuation	66801
RoboTrex 96 Gripper, no gripper exchange option	64801
Trolley Entry System for RoboTrex 52 and 96	66120
Automation Window for RoboTrex 52 and 96	66750

Makro·Grip® Mobile Storage Unit

Space saving stocking solution for vises and fixtures

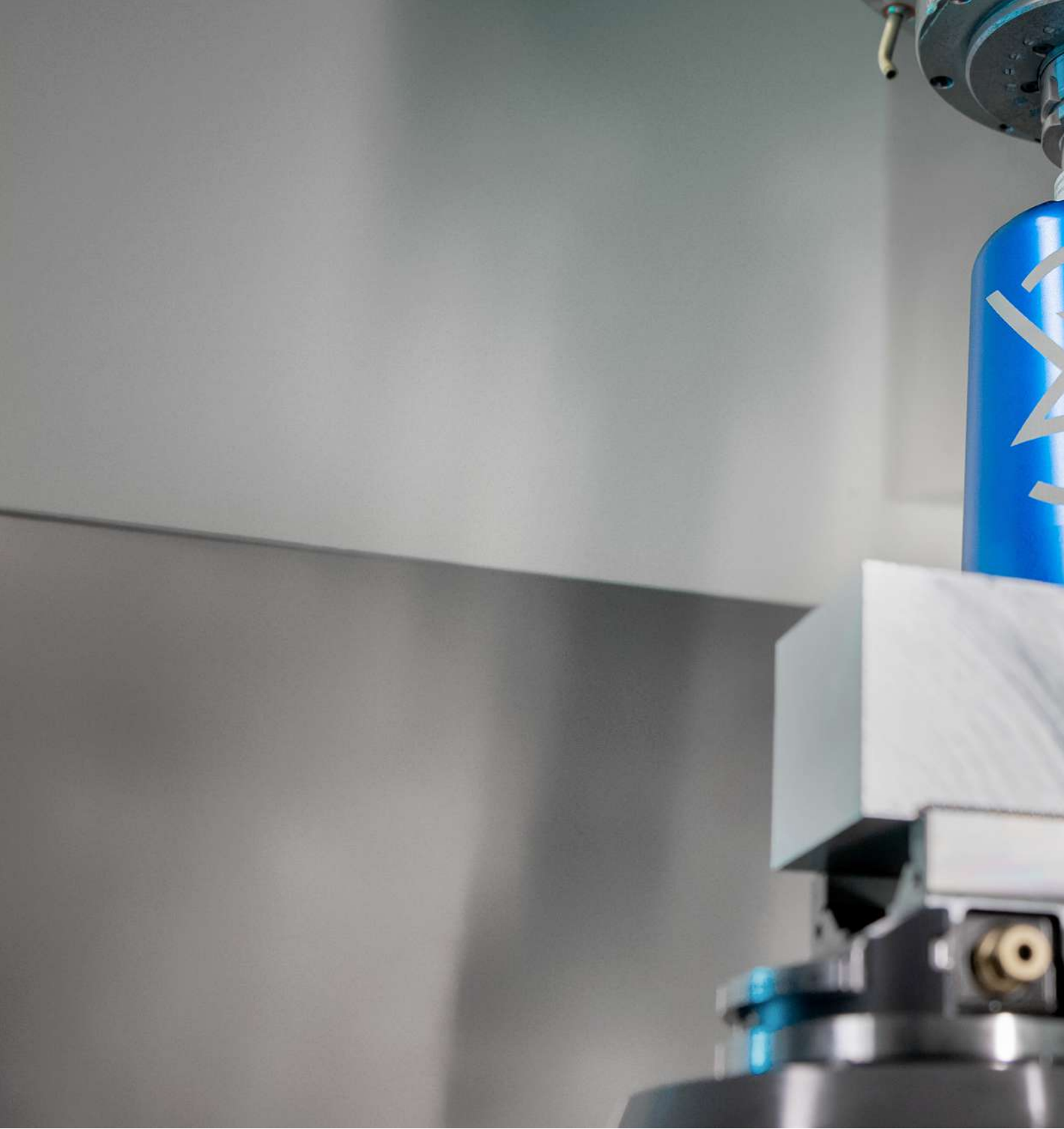


- 1 Space to hold up to 60 devices (30 devices on each side)
- 2 Convenient handle for pushing and pulling the unit
- 3 Non-corrosive galvanized sheet steel
- 4 Powder coated coolant collecting tray with integrated drain screw
- 5 Both Quick·Point® spacings 52 and 96 mm integrated

MAKRO·GRIP® MOBILE STORAGE UNIT

ITEM NO.	STORAGE CAPACITY	DIMENSIONS	WEIGHT
61060	max. 60 clamping devices	1,400 × 800 × 1,500 mm	160 kg





**HAUBEX
AUTOMATION**



38	HAUBEX Automation
44	HAUBEX Components



**simple.
automatic.
change.**

The automatic vise change from the tool magazine

The HAUBEX Automation System is characterized by:

SIMPLICITY

FLEXIBILITY

COST-EFFICIENCY

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 vise 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 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.



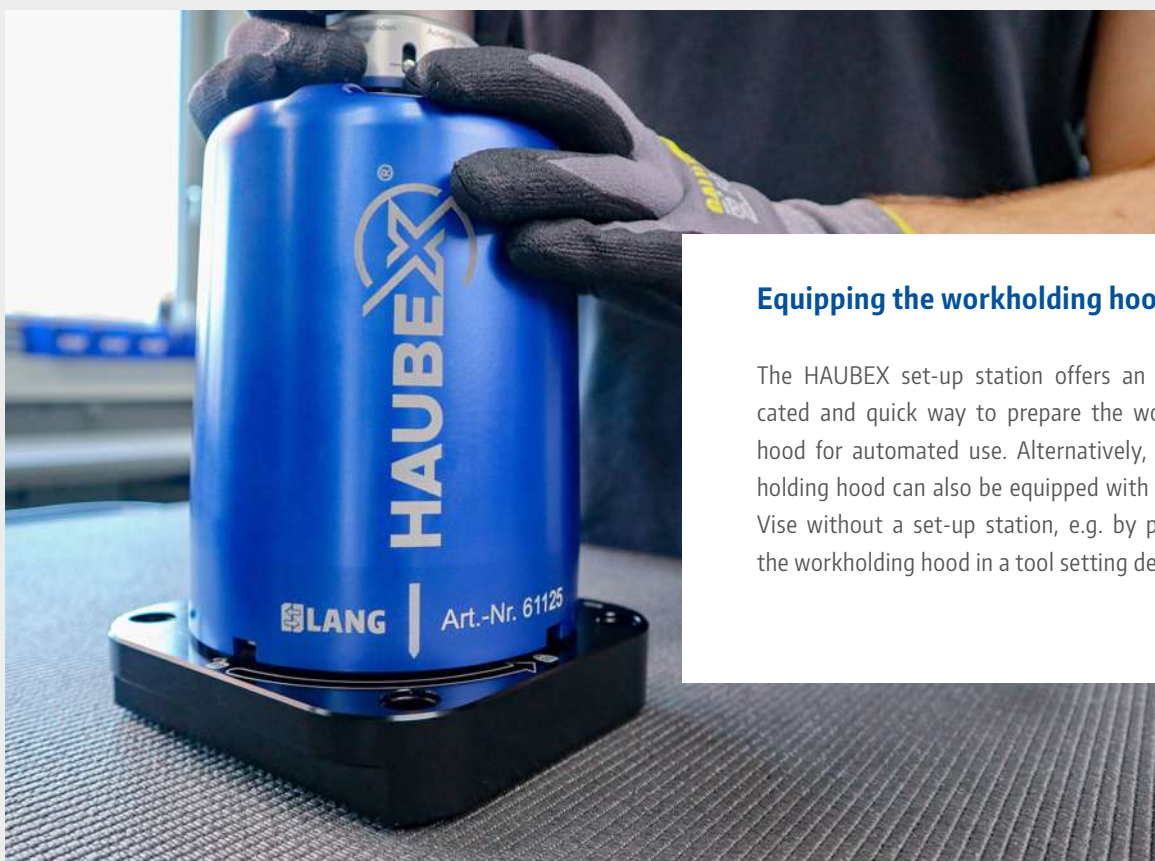
Workpiece clamping

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

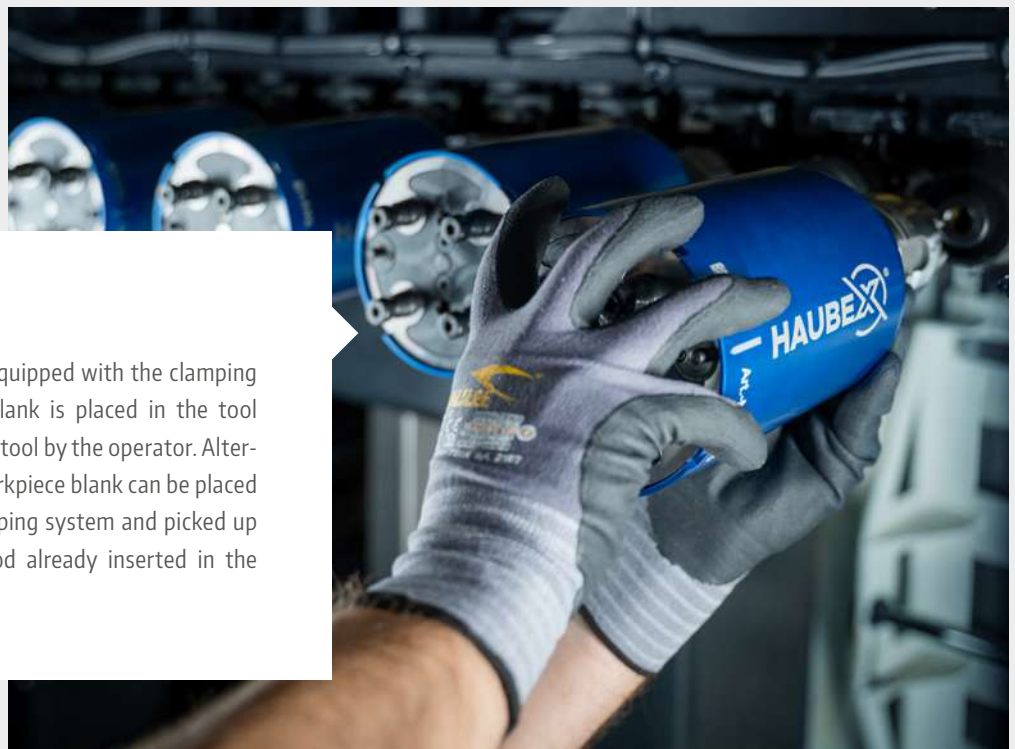
The HAUBEX set-up station offers an uncomplicated and quick way to prepare the workholding hood for automated use. Alternatively, the workholding hood can also be equipped with the 5-Axis Vise without a set-up station, e.g. by positioning the workholding hood in a tool setting device.





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.

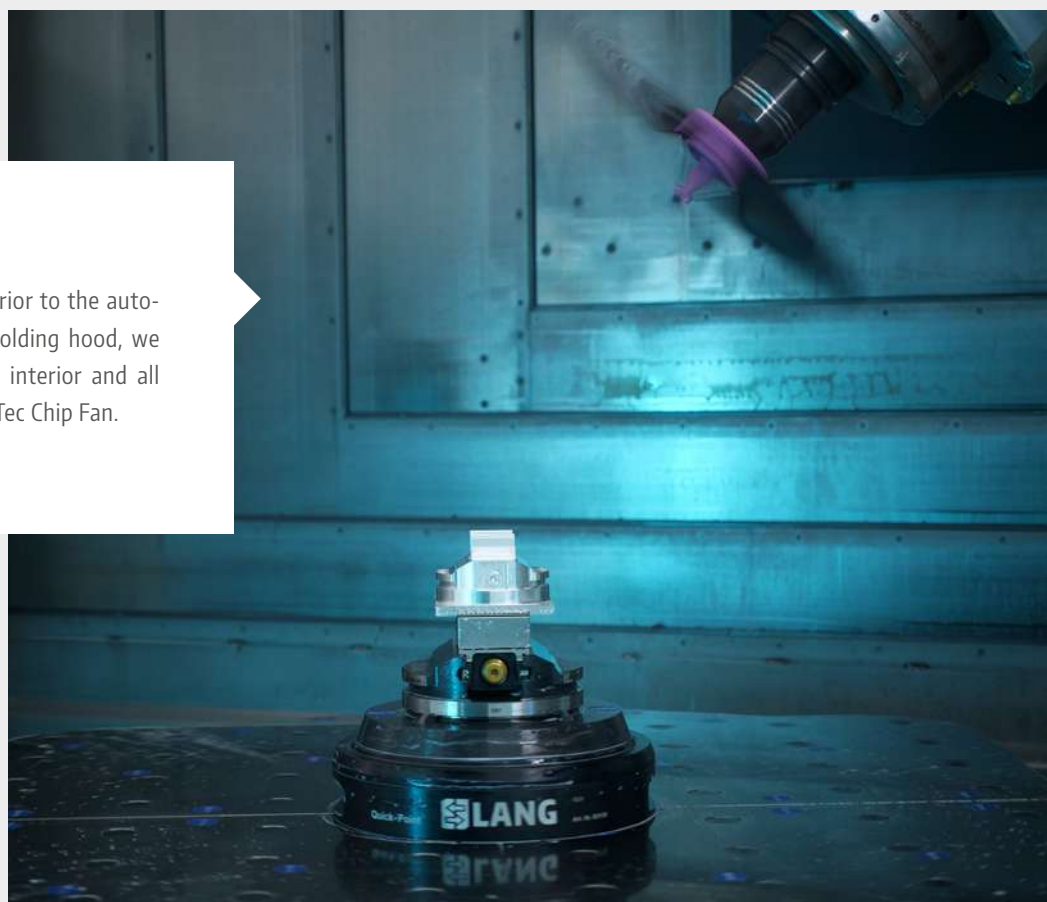


Clamping mechanism

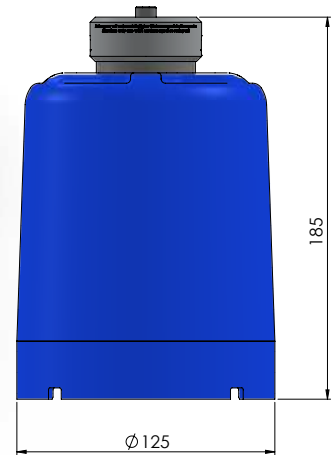
The workholding hood places the 5-Axis Vise into the zero-point clamping system and locks it by a 90° closing movement. Alternatively, the zeropoint device can be actuated via a clamping lever during manual operation without HAUBEX.

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.



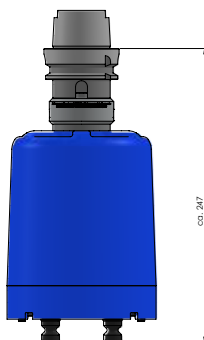
HAUBEX Components



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



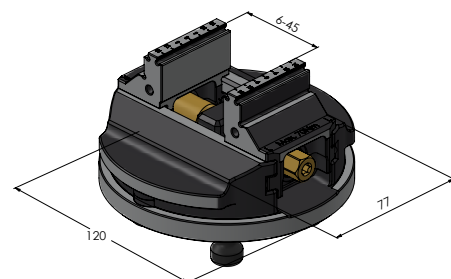
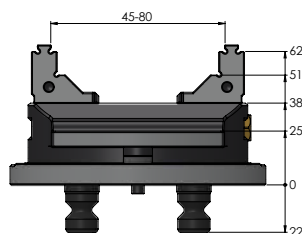
Workholding hood with HSK-A63



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



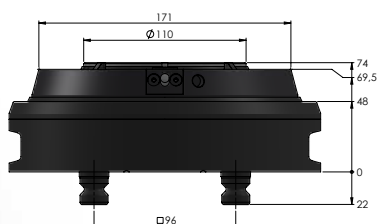
max. 14.000 N



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

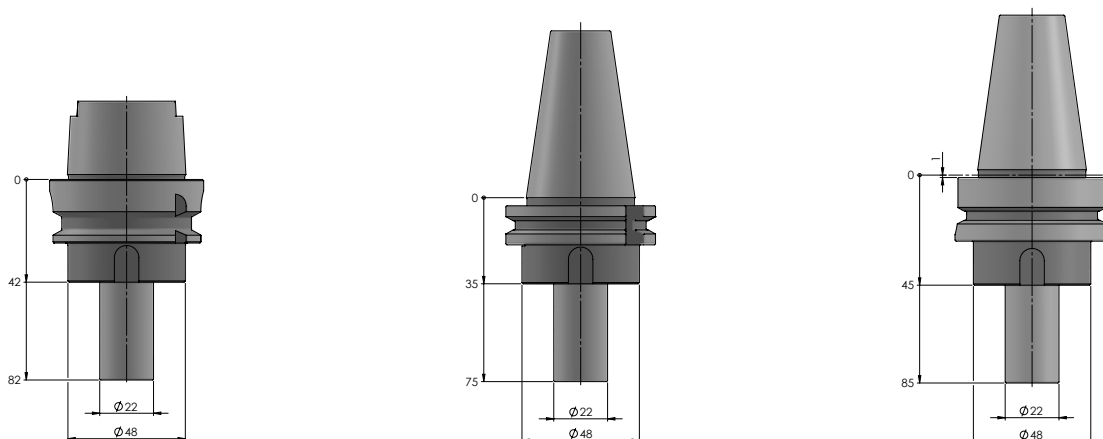
HAUBEX Components



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.

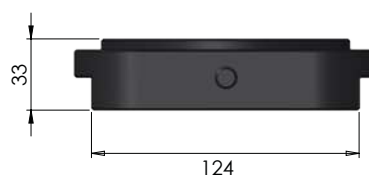
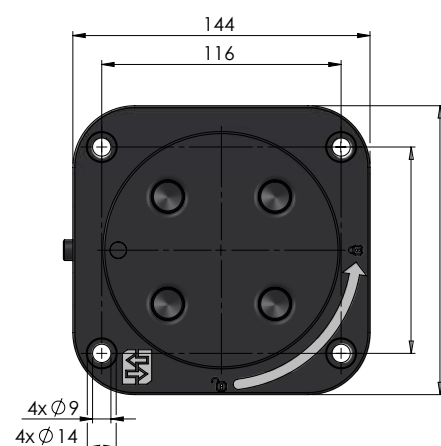


NEW



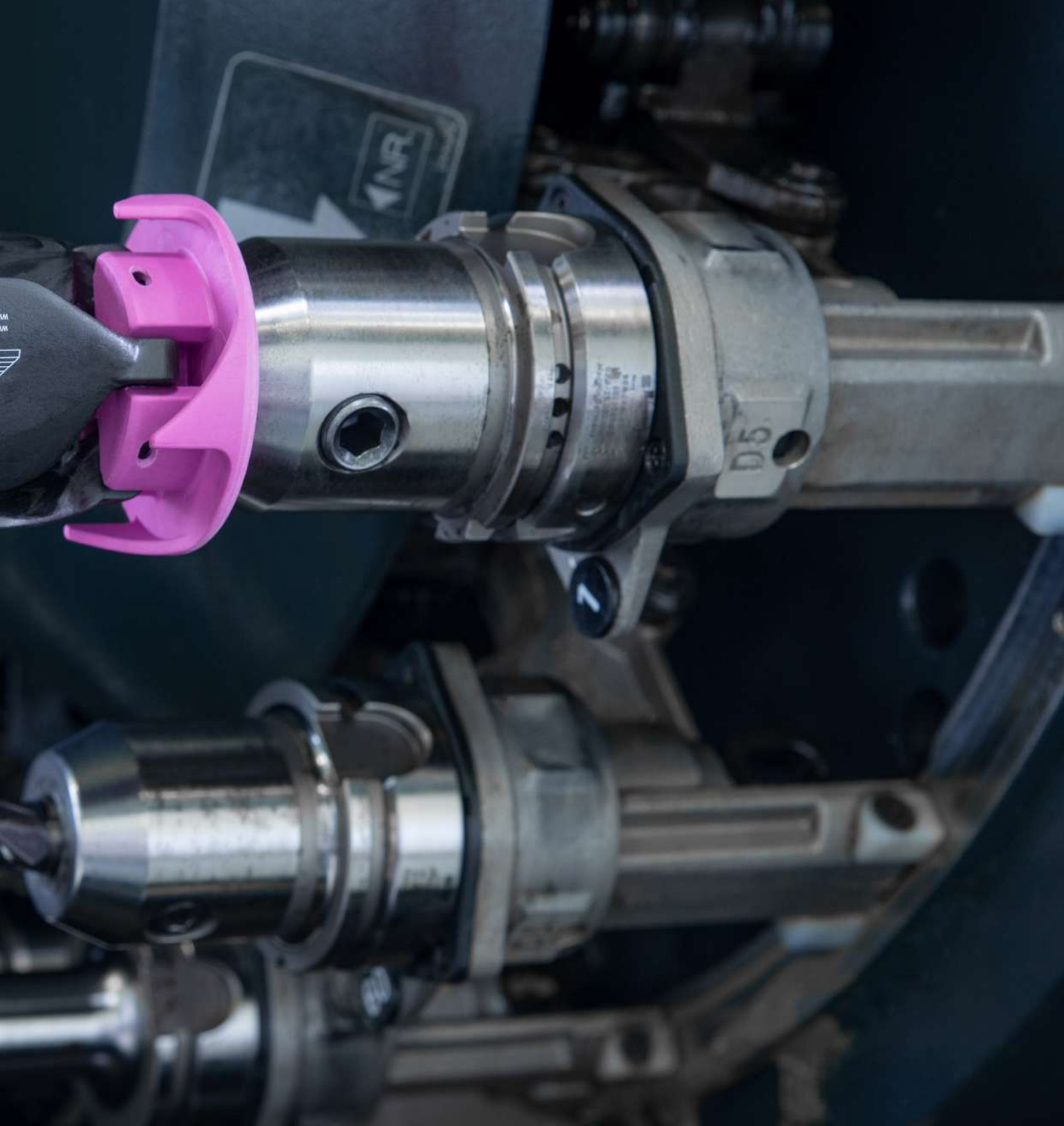
HAUBEX SET-UP STATION

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





CHIP FAN





simple.
automatic.
cleaning.

Automatic cleaning of workpieces and fixtures after the machining process

The Clean-Tec chip fan ensures and enables:

CLEANLINESS

ENERGY SAVINGS

UNMANNED CLEANING

The Clean-Tec, "The Original" Chip Fan cleans the machine interior after machining processes, removing chips and coolant without the operator having to open the machine tool door. As a final step in the machining process, the Chip Fan is called up via the machine program and selected from the tool magazine. Its blades are opened and closed by controlling the speed of the machine tool spindle. Especially in automated manufacturing the Clean-Tec is a must-have. Prior to the automatic unloading, the Chip Fan cleans all relevant interfaces between workholding fixtures and thus ensures a clean and reliable process.

Benefits of the Clean-Tec chip fan:



Clean machining environment thanks to in-process cleaning



Energy savings and no need for expensive compressed air



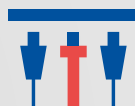
Ideal for unmanned, automated manufacturing



Flexible application possibilities due to different sizes



Suitable for every standard tool holder



Space savings in the tool magazine thanks to the slim design

Clean•Tec Technology



Save expensive compressed air – use Clean•Tec



- 1 Fibreglass compound body with steel center core. Can be clamped in every common shank Ø 20 mm
- 2 Rigid retaining spring for the secure folding of blades after the cleaning process
- 3 Strong and wear-resistant carbon fibre blades for best durability – even with tough chipping
- 4 Slim design for space-saving storage in the tool magazine



**WITH EVERY CLEAN•TEC
FAN SOLD, 2 EUROS
WILL BE DONATED TO
THE BILD HILFT E.V.
“EIN HERZ FÜR KINDER”
FOUNDATION.**

Learn more on page 55



The Clean•Tec blades open and close automatically by switching the machine tool spindle on and off.

Use recommendations

Acceleration

Turn clockwise to clean the parts. By rotating the spindle the blades will open. We recommend to accelerate in 2 stages:

1. Accelerate to 2.000 RPM

2. Accelerate to the operating RPM

(Clean·Tec works efficiently at 4.000 RPM already!)



Motion

Move the rotating fan with a distance of **100 – 150 mm** above the workpiece and apply a feed rate of **3 – 10 m/min**. Then return to the tool change position.



The design of Clean·Tec allows you to wash workpieces and fixtures using coolant – **with the machine spindle turned off and the Clean·Tec blades folded!** – This enhances the cleaning effect and makes perfect sense if pockets and bores are commonly packed with swarf and chips.

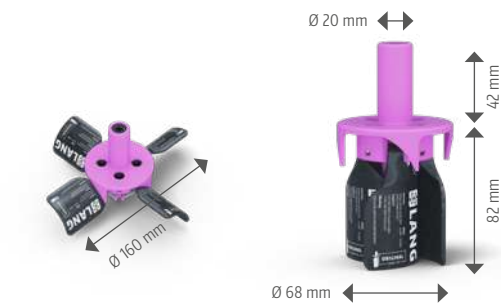


For smooth processes in automated, unmanned production Clean·Tec is a must-have! It is ideal for cleaning workpieces, fixtures and the machine table prior to an automatic unloading.



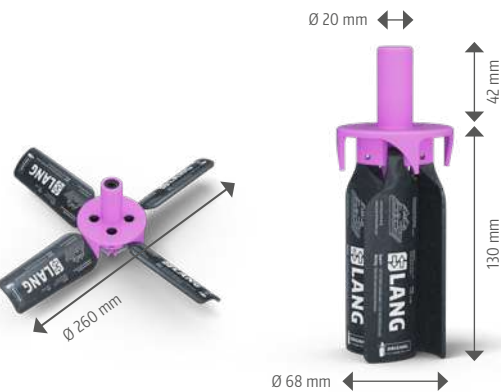
The Clean·Tec Chip Fan is stored just like a common tool in the tool magazine and selected automatically via a CNC program. Thanks to its compact design (only Ø 68 mm) tool pockets neighboring the Clean·Tec's storage place can be equipped with other tools and don't have to be left empty.

Clean·Tec Chip Fan



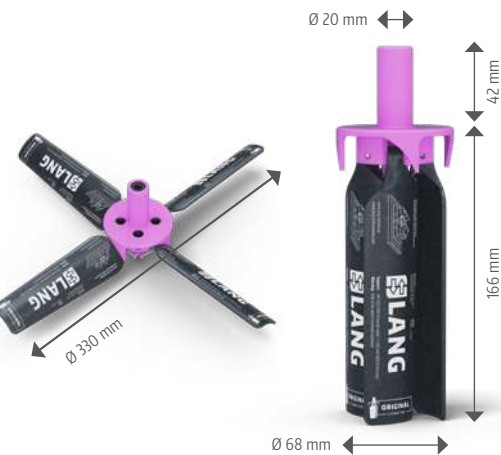
CLEAN·TEC 160

ITEM NO.	Ø WITH OPEN BLADES	RPM RANGE
30160	160 mm	6,000 – 12,000 RPM



CLEAN·TEC 260

ITEM NO.	Ø WITH OPEN BLADES	RPM RANGE
30260	260 mm	5,000 – 8,000 RPM



CLEAN·TEC 330

ITEM NO.	Ø WITH OPEN BLADES	RPM RANGE
30330	330 mm	3,000 – 8,000 RPM



CLEAN·TEC SPARE PART KIT

ITEM NO.	FOR
30164	30160
30264	30260
30334	30330

Included in delivery: 4 blades, 4 springs, 4 pins

LANG Technik supports **Bild hilft e.V. “Ein Herz für Kinder”**



As a family owned company, we think in generations. For this reason, we have for years supported different projects that sponsor and strengthen our next generations. One of those is the Bild hilft e.V. “Ein Herz für Kinder” campaign founded by the Axel Springer Verlag in 1978. For the last eight years we've donated 2 € with every Clean-Tec fan sold. Up to this date, we've collected more than 90.000 € for children in need.

Bild hilft e.V. “Ein Herz für Kinder” is an internationally active aid organization. Since its foundation it has raised more than 410 million Euro. Funding priority is Germany, but projects all over the world are supported. For example, “Ein Herz für Kinder” supports children's hospitals, kindergartens, soup kitchens, schools and families. The aid organization also ensures life-saving surgeries and therapies for children who are seriously ill and cannot be treated sufficiently in their home country. Additionally, Bild hilft e.V. “Ein Herz für Kinder” provides immediate help in war and disaster zones.

- Find out more about the aid organization and its current projects:
www.ehfk.de.



With every Clean-Tec fan sold,
2 Euros will be donated to the
BILD hilft e.V. “Ein Herz für
Kinder” foundation.

Further organizations and associations which are regularly supported by LANG Technik are for example:

- Madeleine-Schickedanz-Kinderkrebs-Stiftung
- Zukunft für Kinder – Förderverein Kinder- u. Jugendheim Neuhausen e.V.
- Helfer vor Ort – First Responder – DRK Weilheim

Terms & Conditions

Offer validity

Our offers are valid for 45 days and may be revoked by us at any time thereafter.

Prices

Prices are ex works, excluding packaging, transport, customs and plus the statutory value added tax. This shall also apply in the case of agreed partial deliveries and express deliveries.

Minimum order value

The minimum order value is € 30.00 net. In the case of a lower order value, the minimum amount of € 30.00 plus statutory value added tax will be charged.

Reservation of ownership

The delivered goods remain our property until full payment of the purchase price and can be reclaimed at any time, in which case the costs for this will be invoiced.

Incorrect order / return

Returns are possible up to a maximum of four weeks after receipt of the goods. The returned goods must not show any signs of use. If goods are returned with visual damage, restocking costs amounting to 20% of the value of the goods will be charged.

You can find the complete Terms & Conditions on our website www.lang-technik.de.

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Symbols

To simplify specifications we use these symbols to highlight technical information and the compatibility of the products:

**Grid system:**

Zero-point pitch

**Clamping stud size:**

Diameter of the clamping studs

**Quick-Lock:**

The fastener can be attached

**Vise size:**

Width of vise

**Torque:**

Maximum allowed torque

**Clamping force:**

Clamping force at maximum torque

**Centering accuracy:**

Centering tolerance of vises

**Mounting bores:**

Individual mounting bores and keyways are possible

**Automatable:**

Automation interface included



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