



# **ROBOTREX AUTOMATION**



- 16 RoboTrex 52 **Automation System**
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- 34 Individual automation solutions
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**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**



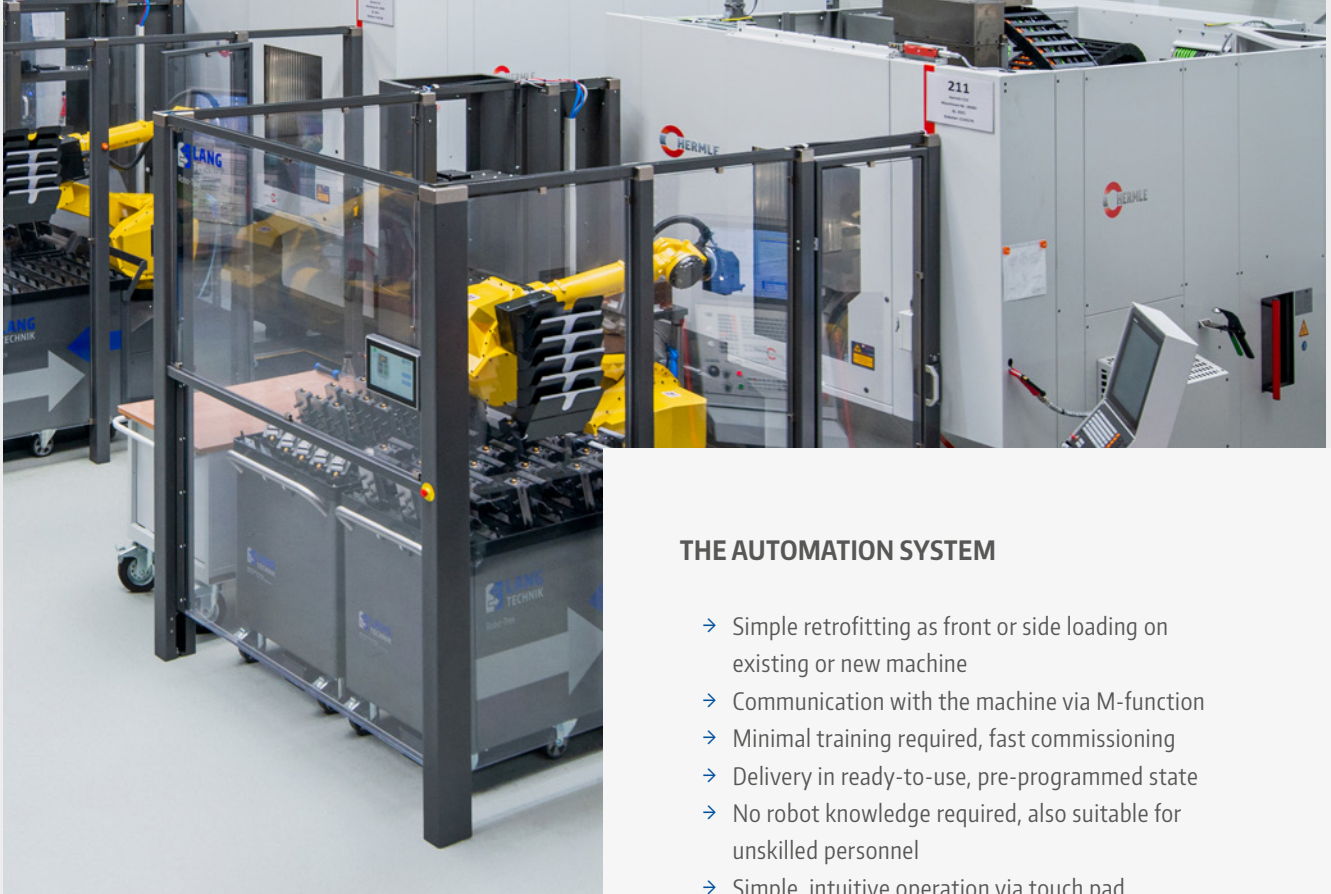
**RoboTrex 96**  
**Automation System**

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

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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

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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

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### 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



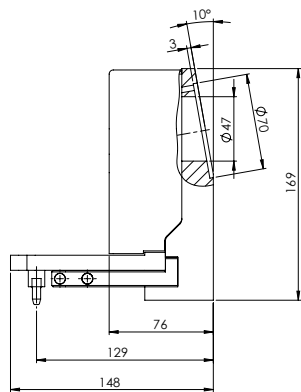
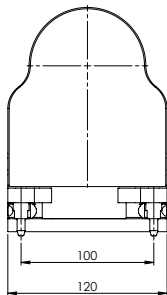
Deselection of vise positions



Individual program assignment

# RoboTrex 52 Grippers and Zero-Point Clamping Systems

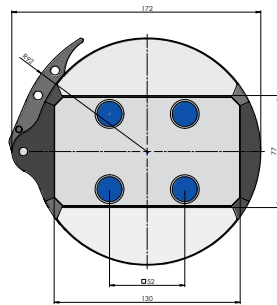
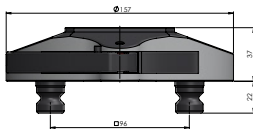
NEW VERSION



## GRIPPER 52, MECHANICAL

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

Max. workpiece weight: 12 kg.

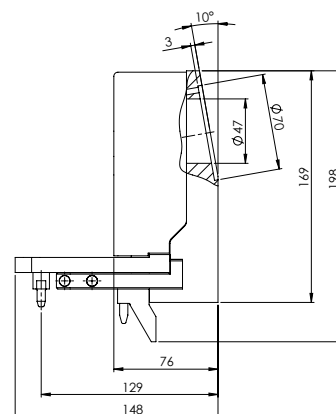
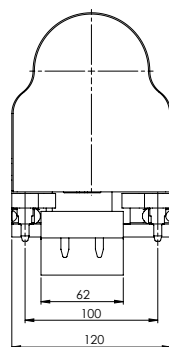


## ZERO-POINT CLAMPING SYSTEM 52, MECHANICAL

ITEM NO.	ACTUATION	SUITABLE FOR GRIPPER
66500	mechanical	66930

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



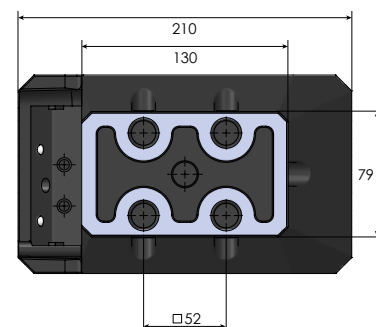
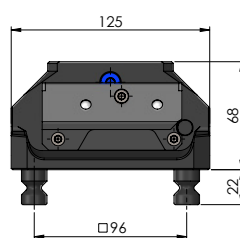


## GRIPPER 52, PNEUMATIC

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



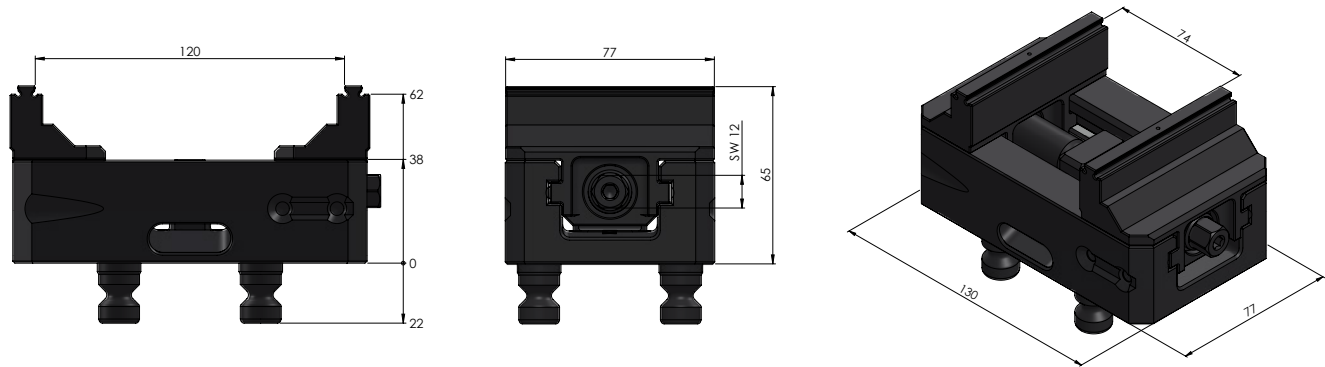
max. 14.000 N

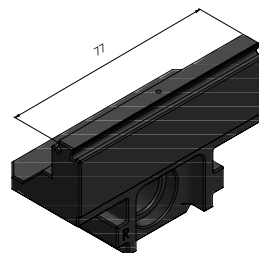
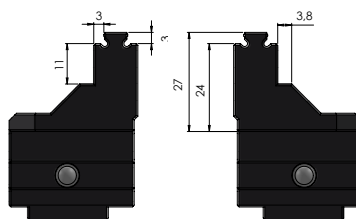


✓

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

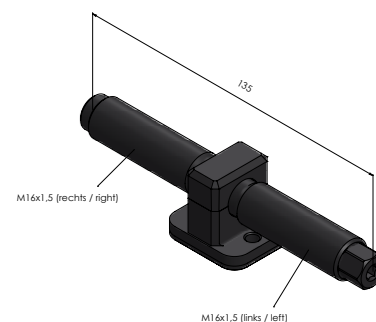
\*sold as a set of 10





### 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



52



Ø 16 mm



max. 60 Nm

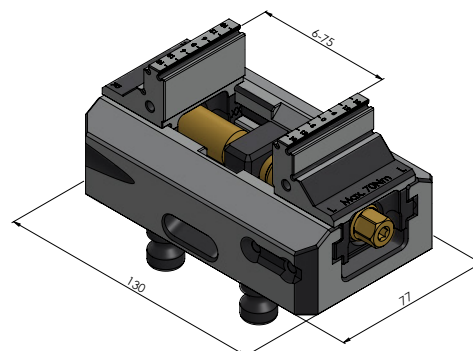
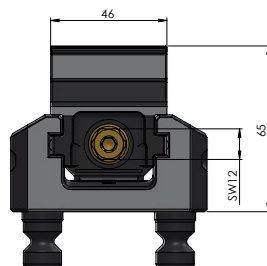
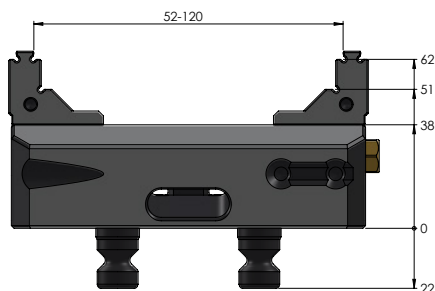


max. 14.000 N

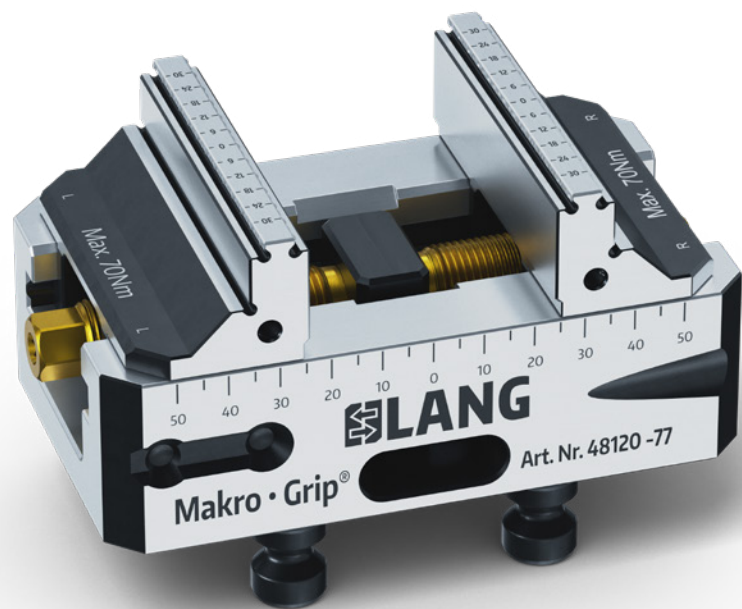


± 0,02 mm


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

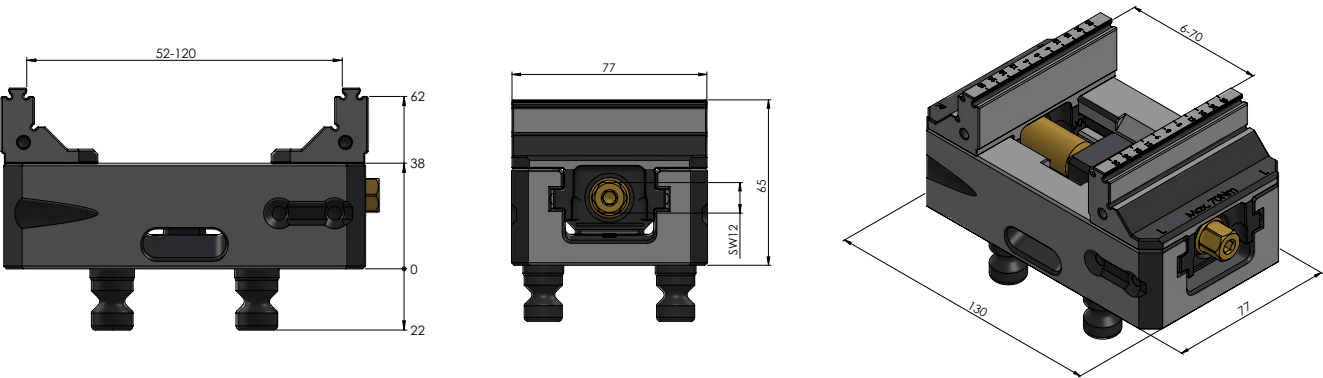


max. 14.000 N



± 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

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Image: Somic-Haag



Image: Lindauer DORNIER GmbH



Image: Waibel GmbH

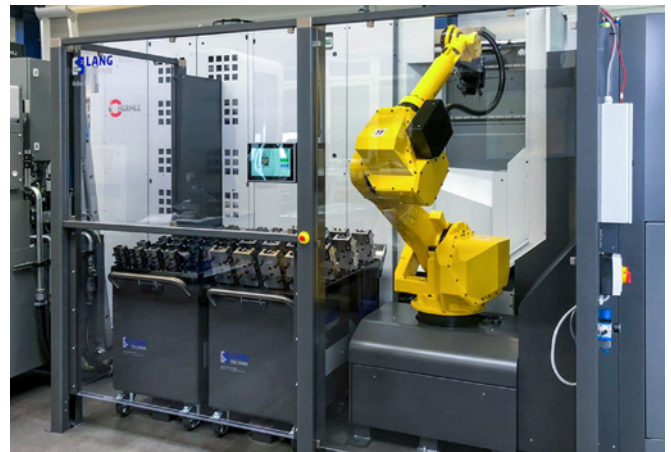


Image: Schleifner & Stocker GmbH



Image: Beer Zerspanungstechnik GmbH

# RoboTrex 96 Automation Trolley

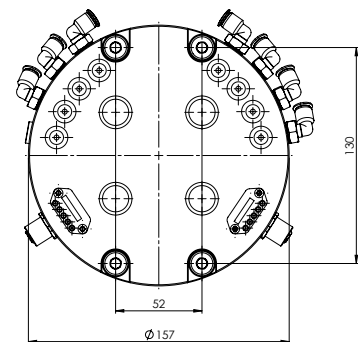
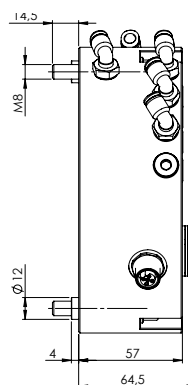
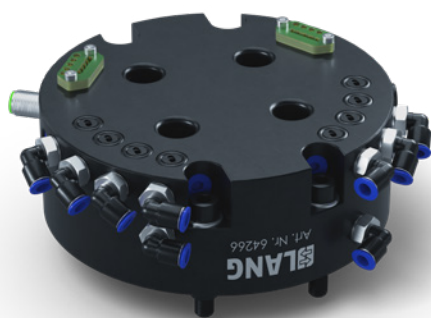


## ROBOTREX 96, AUTOMATION TROLLEY

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

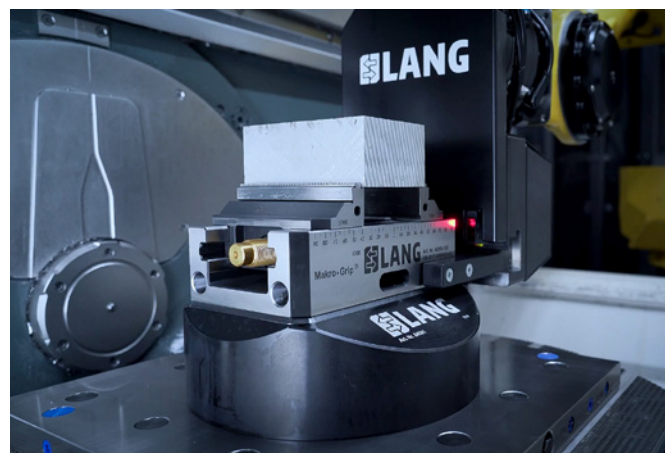
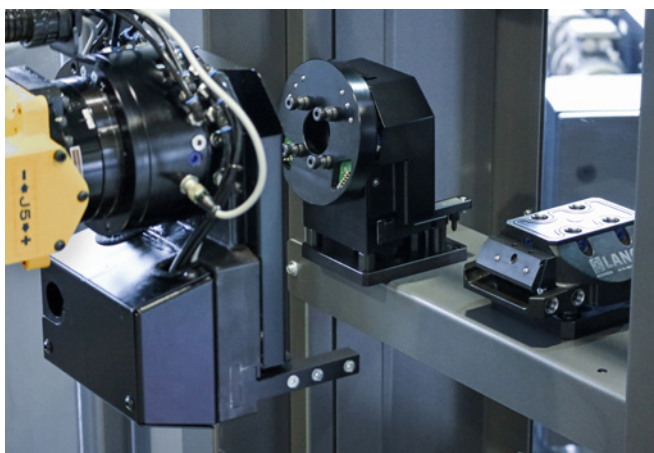
# RoboTrex 96 **Gripper Exchange Interface**



## GRIPPER EXCHANGE INTERFACE

ITEM NO.	SUITABLE FOR GRIPPERS
64266	66950 / 64850

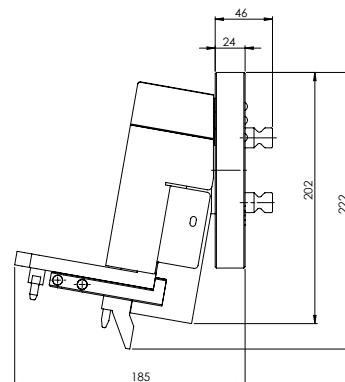
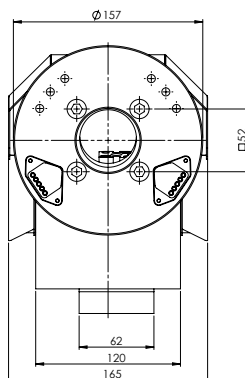
## Applications



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



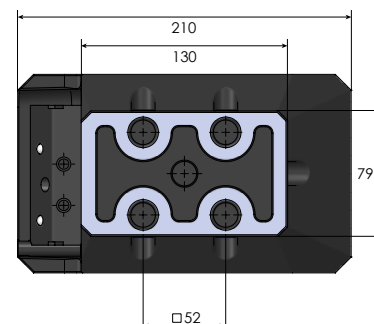
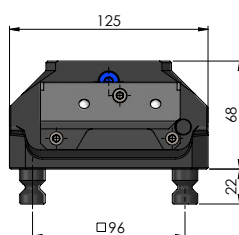
## GRIPPER 52, PNEUMATIC

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

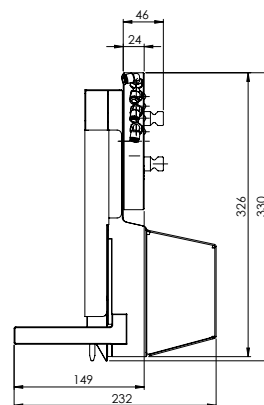
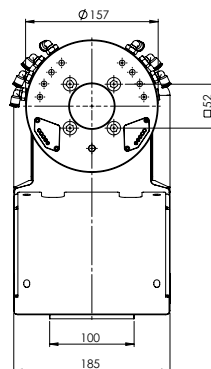


## ZERO-POINT CLAMPING SYSTEM 52, PNEUMATIC

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

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

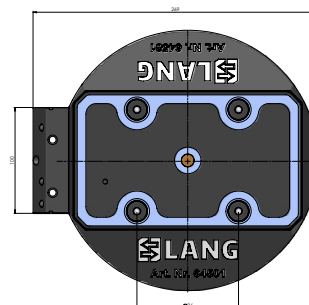
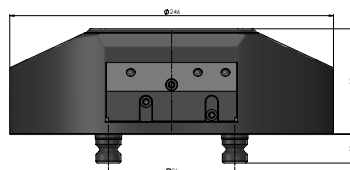
Also suitable for RoboTrex 96!



## 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

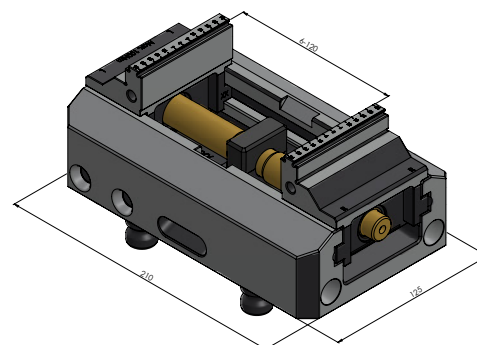
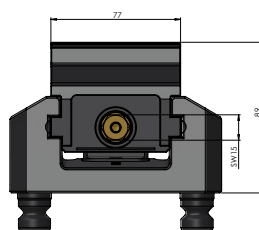
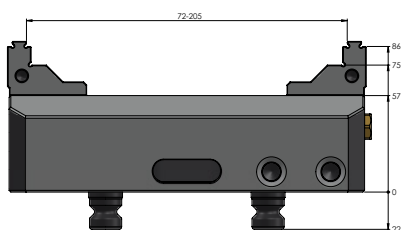


max. 20.000 N



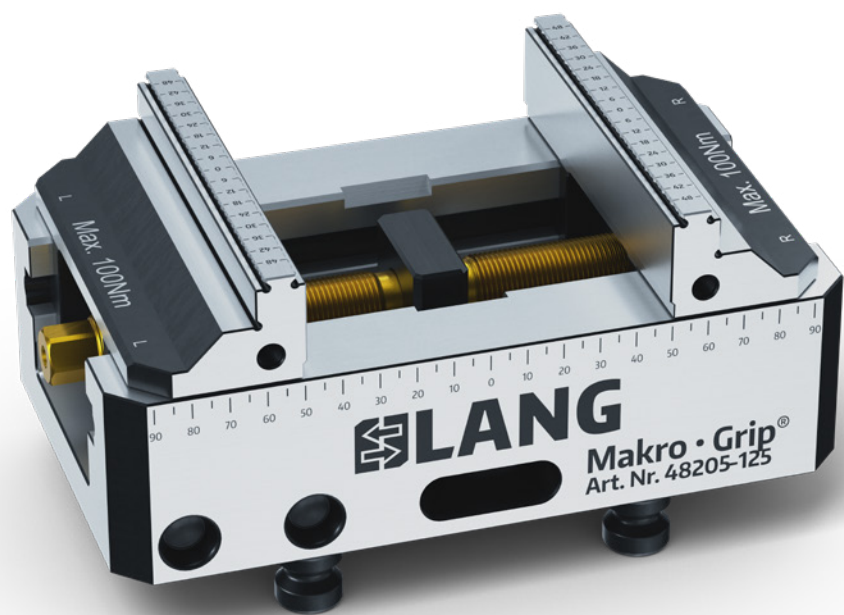
± 0,02 mm

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

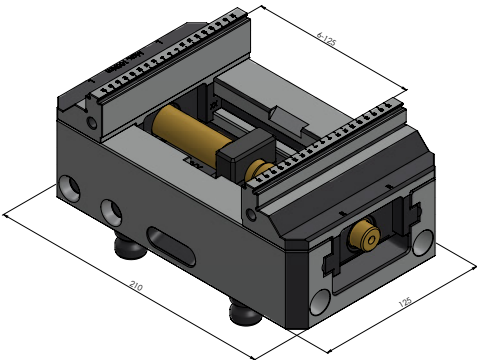
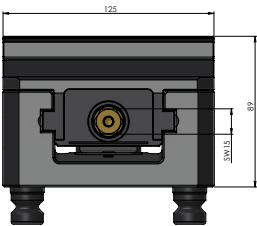
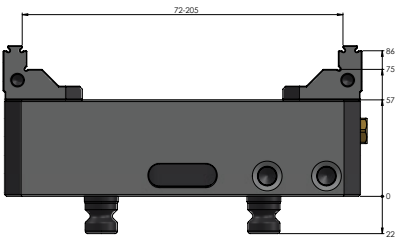
Ø 20 mm

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

