



Customized solutions in
workholding and automation.



Contents

As unique as your workpiece!

Our department for customized products	4
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Examples of customized solutions that have already been realized:

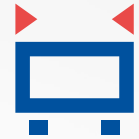
Pneumatic zero point clamping systems	6	Pendulum jaw for centering vises	18
L-angle device for rotary axes	7	Stepped top jaws	19
Extended 4-fold grid plate 96	8	Top jaws with gripping inserts	20
Clamping bridges for rotary tables	9	5-axis vise with dovetail clamping	21
Zero point table plate for machine tools	10	Prism clamping jaw	22
Spacer block for stamping unit	11	Centering vise with fixed jaw	23
Stamping unit positioning device	12	5-axis vise with Erowa adaptation	24
Stamping- and clamping jaws with custom made clamping depth	13	Magnetic workpiece stop	25
Directly mounted 5-axis vise	14	Special top jaws for Profilo / Avanti	26
3-face pyramid	15	Automation support pallets for RoboTrex	27
Low clamping jaws for 5-axis vises	16	Automation pallets with integrated zero point mechanism	28
Clamping jaws with extended width for 5-axis vises	17	Multiple automation vise for RoboTrex 96	29

Our customized solutions:

Key information at a glance	30
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As unique as your workpiece!

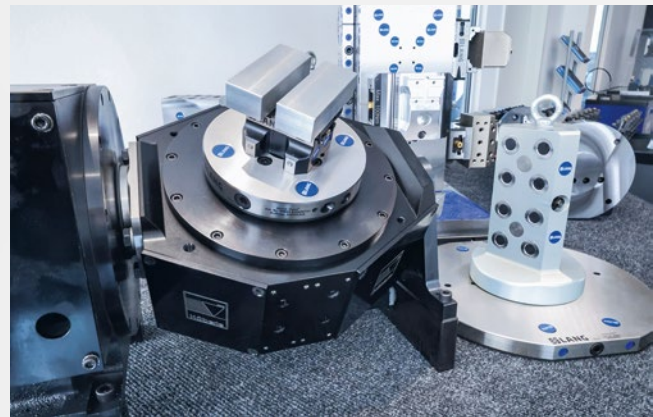
Our department for customized products



Modern production methods and concepts enable us to manufacture large quantities of our standardized products very efficiently in our facilities in Holzmaden / Germany, achieve high machine-tool utilization and thus offer you a very attractive price-performance ratio. Nevertheless, it is also one of our goals to customize our proven products even more closely to your production requirements.

For this reason, we have had our own department for customized products for several years. This department, which has its own production facilities, is based at our former main plant in Neuhausen auf den Fildern / Germany. It specializes in individual clamping solutions for the LANG product range

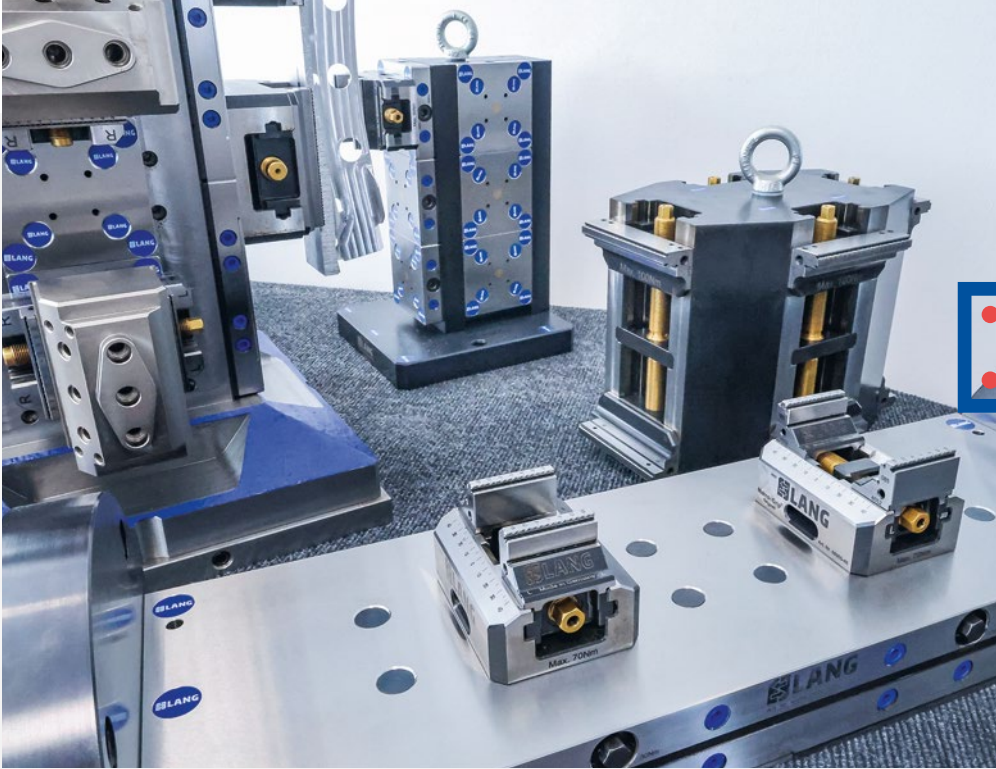
and offers customized solutions for various applications. From consultation (on site if required), through design conception, to production – we work together with you to develop a customized solution. In this brochure you will find some examples of projects realized to date in the fields of automation, zero point clamping and workholding technology, which may also be of interest to you.



ZERO POINT CLAMPING

WORKHOLDING

AUTOMATION



Pneumatic zero point clamping systems

Zero point clamping system that is pneumatically clamped or released via the rotary joint of the machine table.

ZERO POINT CLAMPING

AUTOMATION

Application:

- **Automated changing of vises and pallets in unmanned production**

Benefits:

- **Flexible control options for the zero point unit**
- **Set-up time savings when switching between manual and automated operation**
- **Ideal adaptation of the design to the machine table and the loading device**



L-angle device for rotary axes

Zero point plate mounted on a specially manufactured angle fixture.

ZERO POINT CLAMPING



Application:

- **Multi-axis machining on 3-axis machining centers with rotary tables**

Benefits:

- **5-sided machining by changing over the part only once**
- **Fast set-up process thanks to integrated clamping studs**
- **Precise clamping in the integrated zero point system**

Extended 4-fold grid plate 96

4-fold grid plate 96 with extended dimensions.

ZERO POINT CLAMPING



Application:

- **Flexible multiple zero point clamping**

Benefits:

- **Direct mounting on machine tables with 100 mm T-slot spacing**
- **Wide range of applications and basis for further flexible clamping options**
- **Less time required for set-up, high precision**

Clamping bridges for rotary tables

Clamping bridges specially developed for rotary tables, with integrated zero point mechanism.

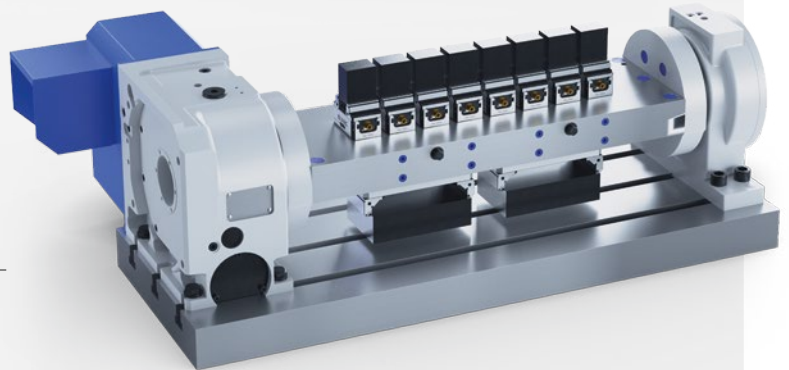
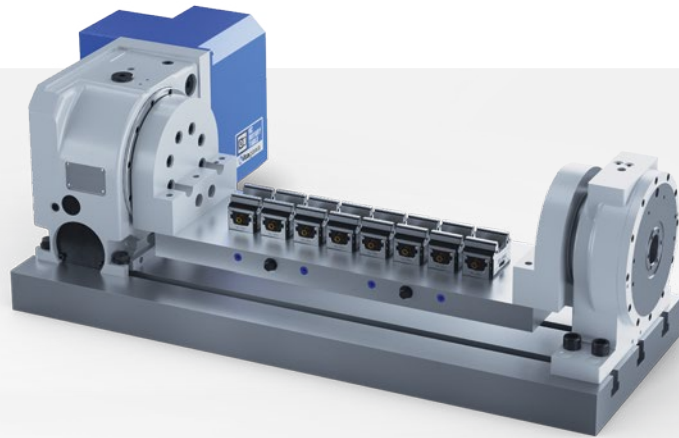
ZERO POINT CLAMPING

Application:

- **Multiple clamping on 3-axis machining centers with rotary tables**

Benefits:

- **Lower system height compared to conventional clamping bridges with zero point**
- **High flexibility thanks to the possibility of adjusting the bridge position (on/off-center)**
- **Enormous variety of applications thanks to integrated zero point grid**



Zero point table plate for machine tools

Zero point plate with direct assembly option without T-slot table.

ZERO POINT CLAMPING

Application:

- **Machine tools with machine tables without T-slot plate**

Benefits:

- **Lower investment costs as an additional T-slot table is not needed**
- **Reduced installation height, particularly advantageous for machine tools with limited space in z-direction**
- **Minimized total weight of the machine table**



Spacer block for stamping unit

Additional spacer between movable
carrier jaw and stamping jaw.

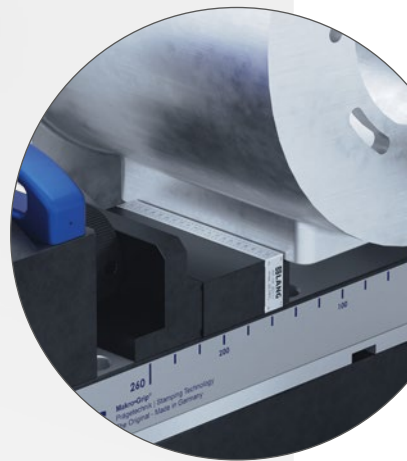
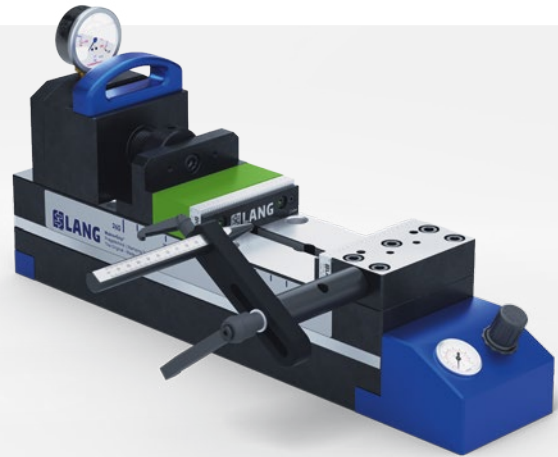
WORKHOLDING

Application:

- **Pre-stamping of offset workpieces**

Benefits:

- **Enables precise pre-stamping of workpieces with protrusions or special geometries**
- **Can be retrofitted to existing stamping units**
- **Quick and easy installation and removal**



Stamping unit positioning device

Spring-loaded fixation device for positioning parts in the Makro•Grip® stamping unit.

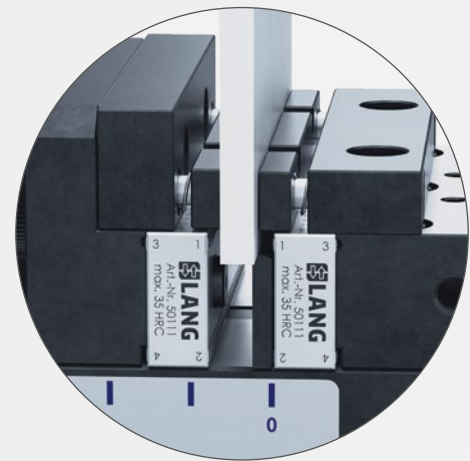
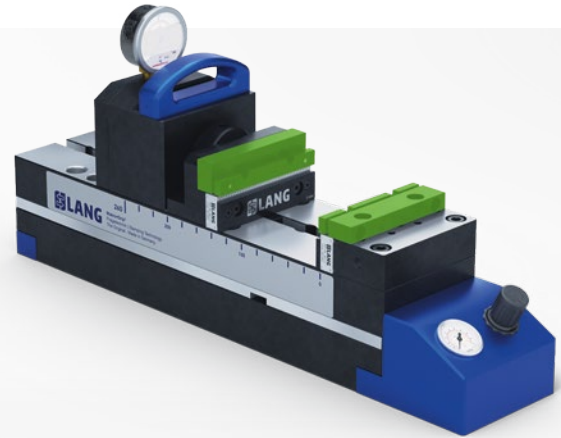
WORKHOLDING

Application:

- **Stamping of thin workpieces**

Benefits:

- **High insertion accuracy in the stamping process**
- **Maximum process reliability when clamping thin blanks**
- **Simple retrofitting on existing stamping units**



Stamping- and clamping jaws with custom made clamping depth

Stamping jaws and vise jaws with customized clamping depth (5 + 7 mm) using a parallel support.

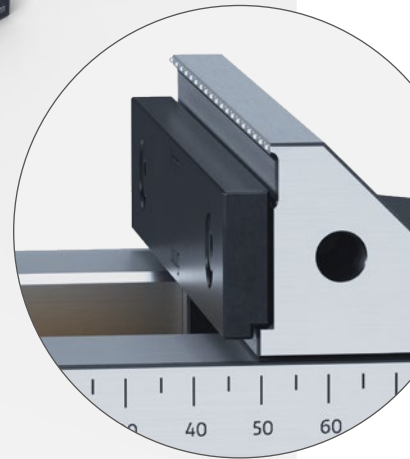
WORKHOLDING

Application:

- **Clamping of blanks with large radius or chamfer**

Benefits:

- **Direct pre-stamping, without additional preparatory work on blanks with large radius**
- **Flexible adjustment of the clamping depth by turning the parallel**
- **Can be retrofitted to existing standard 5-axis vises**



Directly mounted 5-axis vise

Direct mounting of 5-axis vises
without zero point plates.

WORKHOLDING

Application:

- **Workpiece clamping on tombstones, clamping bridges and pallets**

Benefits:

- **Reduced investment, if zero point plates are not required**
- **Lower system height**
- **High adaptability in terms of possible hole patterns**



3-face pyramid

3-face pyramid with directly mounted 5-axis vises, without integrated zero point plates.

ZERO POINT CLAMPING

WORKHOLDING



Application:

- **Multiple clamping set-up in 5-axis machining centers**

Benefits:

- **Reduced investment, if zero point plates are not required**
- **Customized angles and diameters can be selected depending on machine size**
- **Optimum utilization of machine running time due to reduced tool changes**

Low clamping jaws for 5-axis vises

An overall height of the clamping jaws on 5-axis vises that deviates from the standard.

WORKHOLDING

Application:

- **Clamping tasks in machine tools where there is little travel in z-direction**

Benefits:

- **Optimized space utilization, e. g. on rotary tables and dividing heads**
- **Good accessibility despite flat jaw height thanks to compact design**
- **Compatible with all LANG Technik centering vises**



Clamping jaws with extended width for 5-axis vises

A clamping jaw width that deviates from the standard on 5-axis vises.

WORKHOLDING

Application:

- **Workpiece clamping of wide workpieces where a larger clamping surface is recommended. Also suitable for clamping thin-walled components that require an even distribution of force to prevent deformation and vibrations.**

Benefits:

- **Improved stability when clamping workpieces by increasing the contact surfaces between the clamping jaws and the part**
- **Low-deformation clamping due to uniform clamping force transmission, particularly recommended for thin-walled components**
- **Increased holding forces thanks to the higher amount of holding teeth, even with smaller vise sizes**



Pendulum jaw for centering vises

Specially manufactured top jaws on Avanti or Profilo base with equalizing pendulum function.

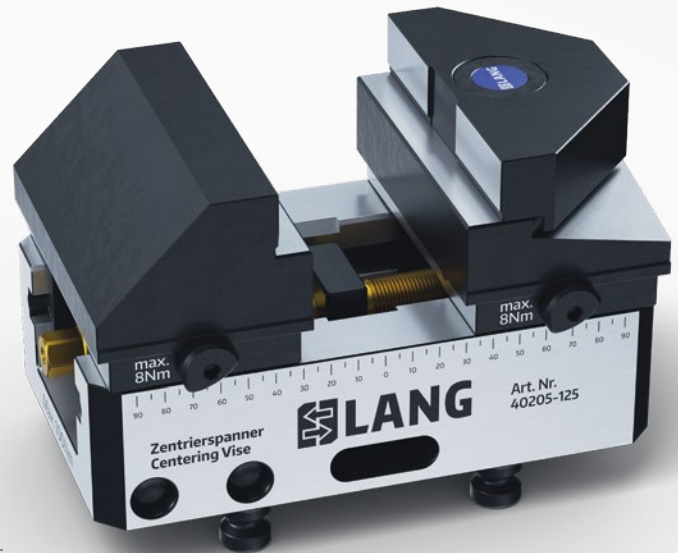
WORKHOLDING

Application:

- **Clamping of workpieces with non-parallel or irregular clamping surfaces**

Benefits:

- **Secure clamping of workpieces with varying parallelism of the clamping surfaces**
- **Quick jaw change and compatibility with Makro-Grip® 5-axis vises**



Stepped top jaws

Pre-machined and hardened top jaw with Avanti technology.

WORKHOLDING

Application:

- **Workpiece clamping of components that should / must be clamped smoothly**

Benefits:

- **No additional time required or production capacity tied up, as top jaws are already pre-machined**
- **Reduced set-up times thanks to quick jaw change with Avanti technology**
- **Large clamping surface for secure fixation of the workpiece**



Top jaws with gripping inserts

Specially modified top jaws with threaded holes and gripping inserts.

WORKHOLDING



Application:

- **Workpiece clamping of round, irregular or misshapen geometries**

Benefits:

- **Simple and cost-effective retrofitting to the Profilo and Avanti contour jaw systems**
- **Can be used flexibly for different materials and workpiece diameters**
- **Quick clamping jaw exchange for frequently changing machining tasks**

5-axis vise with dovetail clamping

Modified clamping jaws in the 5-axis vise with additional dovetail recess.

WORKHOLDING

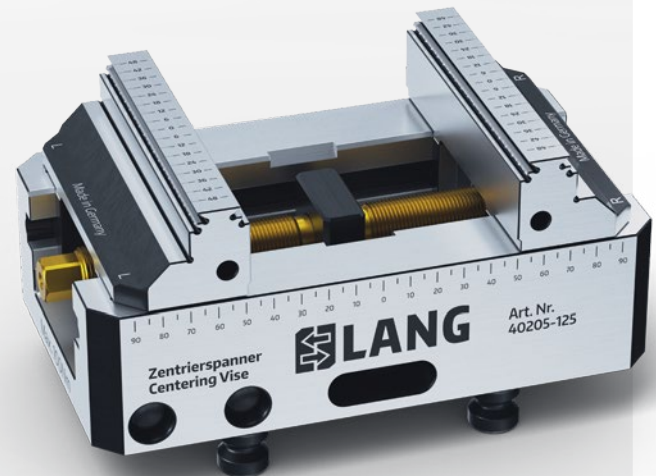
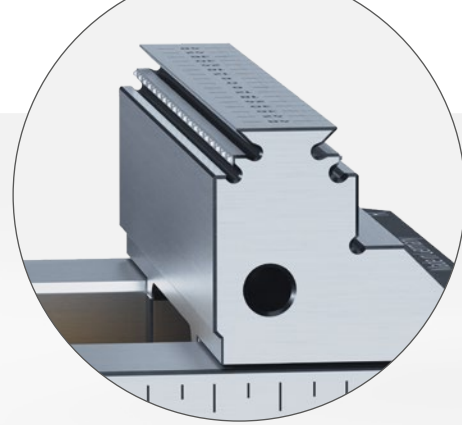
AUTOMATION

Application:

- Production processes in which milling with dovetail clamping is already in place

Benefits:

- Upgrading of the existing clamping philosophy through the advantages of stamping technology
- Gradual conversion of production processes through partial integration of stamping technology
- Flexible changeover between different production technologies without replacing the clamping system



Prism clamping jaw

Specially modified clamping jaws with integrated prism contour.

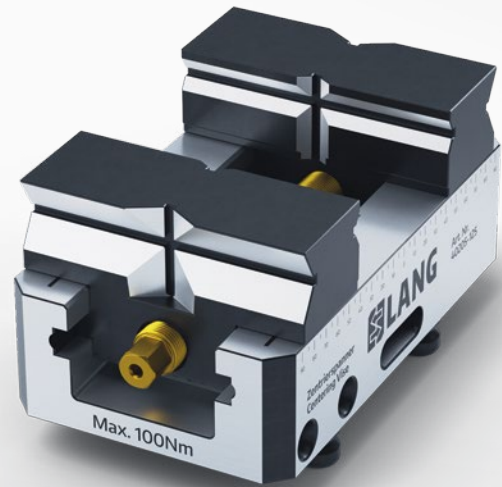
WORKHOLDING

Application:

- **Clamping of round or oval workpieces in different sizes**

Benefits:

- **Ideal for components that are difficult to clamp with conventional smooth clamping jaws**
- **Multifunctional use by inserting several prismatic contours on both sides of the reversible jaws**
- **Flexible selection of the base material (e.g. aluminium, steel, hardened steel, plastic) depending on the material to be clamped**



Centering vise with fixed jaw

Centering vise with special threaded spindle and a fixed clamping jaw (in this case based on Profilo).

WORKHOLDING

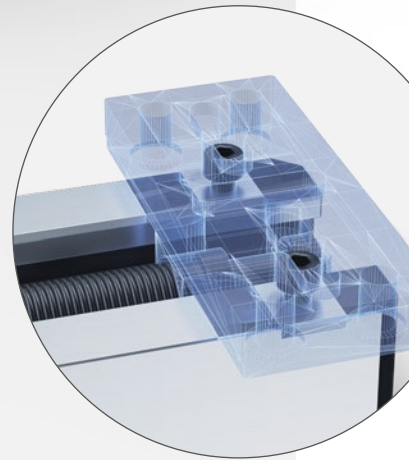


Application:

- **Clamping tasks that require a fixed jaw position**

Benefits:

- **Practical alternative for clamping tasks in which the workpiece does not necessarily have to be clamped concentrically, especially for the second OP**
- **Compact design compared to other fixed stop vises on the market**
- **Quick set-up and dismantling of the fixed stop vise thanks to the integrated zero point system**



5-axis vise with Erowa adaptation

Modified 5-axis vise with integrated Erowa interface (or similar systems).

WORKHOLDING

AUTOMATION



Application:

- **Production processes in which zero point clamping and automation systems from Erowa are already established**

Benefits:

- **Upgrading of existing workpiece clamping technology by integrating the advantages of stamping technology**
- **No complete changeover of production technology if Erowa systems are already in use**

Magnetic workpiece stop

Specially manufactured workpiece stop for 5-axis vises, magnetically mounted to the clamping jaw or base body.

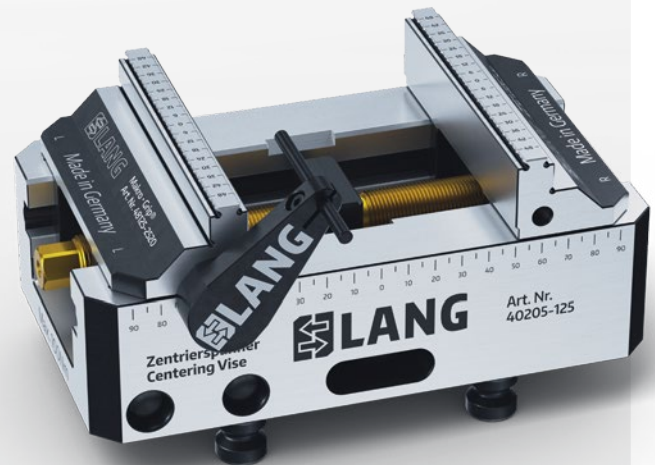
WORKHOLDING

Application:

- **Pre-positioning of workpieces in the vise**

Benefits:

- **No restrictions on accessibility during the milling process**
- **Easy attachment to and removal from the vise**
- **Can be used universally with any clamping device**



Special top jaws for Profilo / Avanti

Profilo / Avanti -based top jaws with pre-moulded contour for special component requirements.

WORKHOLDING

Application:

- **Contour clamping of special work-piece geometries**

Benefits:

- **Flexible changeover options between individual clamping fixtures**
- **Vise can still be used for standard applications**
- **Precisely customized workpiece fixing for maximum machining accuracy**



Automation support pallets for RoboTrex

Special automation pallet instead of vises in the RoboTrex system (also with integrated zero point mechanism on request).

AUTOMATION

Application:

- **Automation of workpieces and devices**

Benefits:

- **Functional expansion of the RoboTrex automation system**
- **High flexibility for specific production requirements**
- **No need to adapt the robot program when changing from vise to pallet**



Automation pallets with integrated zero point mechanism

Automation pallet with integrated zero point grid for third-party palletizing systems.

ZERO POINT CLAMPING

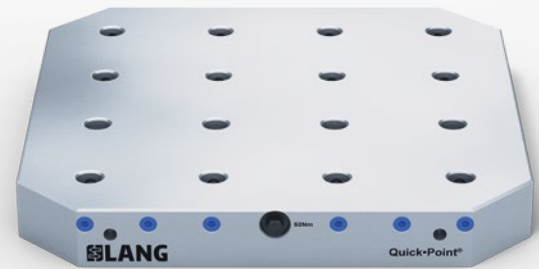
AUTOMATION

Application:

- **Production processes with pallet automation systems**

Benefits:

- **Flexible loading options with vises, workpieces and fixtures**
- **No additional height and no additional weight**
- **Pallets can be set up quickly without prior alignment of the clamping devices**



Multiple automation vise for RoboTrex 96

Modified vise base with integrated interface for automation grippers and mounting holes for storage on an automation trolley. Optionally available as a 2-fold or 4-fold vise with integrated center jaws.

WORKHOLDING

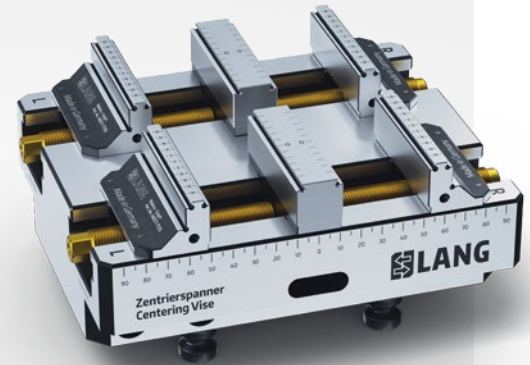
AUTOMATION

Application:

- **Automated multiple part clamping with RoboTrex 96**

Benefits:

- **Fewer change cycles and downtimes in automated operation**
- **Capacity expansion of the RoboTrex 96 automation system**
- **Use of standard automation trolleys and yet an extended range of parts**



Our customized solutions

Key information at a glance



Get in touch with us:

For special inquiries regarding customized products, please refer to your local sales agent or field staff. Of course, you can also send your inquiry directly to our special department, using following e-mail address: info@lang-technik-nh.de. We or our local sales partner will then be happy to get in touch with you to discuss the inquiry more in detail.



General procedure:

For customer-specific requirements, we draft a special concept, submit the corresponding quotation, drawings and a 3D model. Once the order has been received, the special product is designed and finally manufactured in our customized production plant. The lead time depends on the product and is approx. **6 – 10 working weeks**.

Our standard product range:

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Title:

Customized solutions in
workholding and automation.
Date of printing 02/2025

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