

LYNDEX NIKKEN



FOR UNSURPASSED ECONOMIC EFFICIENCY

EZ-BOT - AUTOMATIC WORK CHANGER

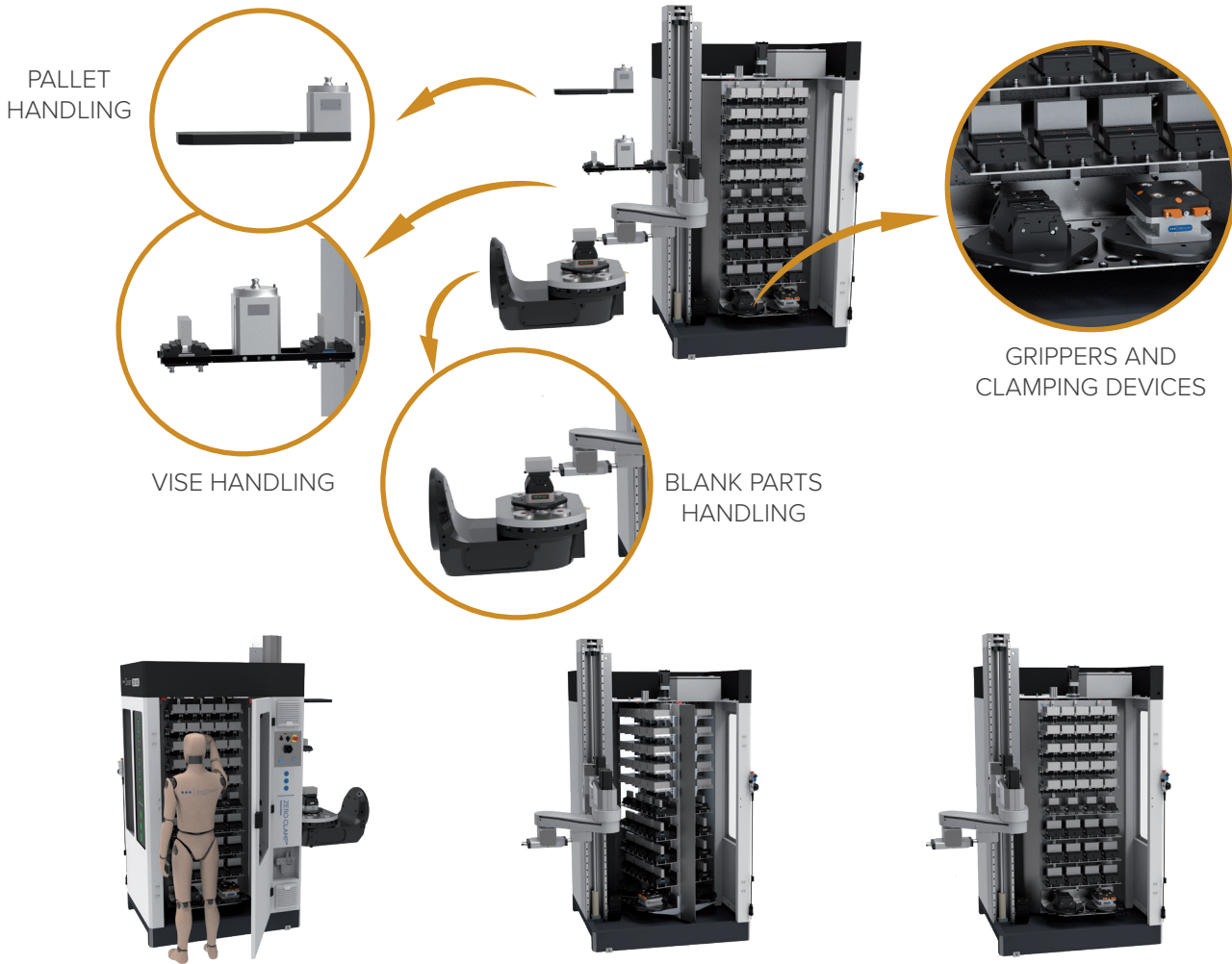


**Maximum machine
running times with
minimum workload**

Efficient **blank part handling, vise handling, pallet handling** and **automatic setup** results in maximum machine running times while minimizing the time strain on your skilled workers.

EZ-BOT 100 V AWC

Loading robot with vertical double rack enables full-time parallel loading with minimum space requirement



Cycle time parallel set-up

Rotation of the storage rack during cycle time

Production non-stop

EZ-BOT 100 V AWC - The advantages at a glance

- Compact and flexible robot with double-sided, automatically rotating rack
- Footprint only approx. 2.9m²
- Maximum storage capacity for blank parts, vises, pallets and fixtures
- 100kg handling weight, up to 640mm component length
- Cycle time parallel set-up at the rear of the rack
- Free access for the operator during set-up
- Designed for automated CNC machining with high flexibility and parts mix

EZ-BOT 100 S / 250 S

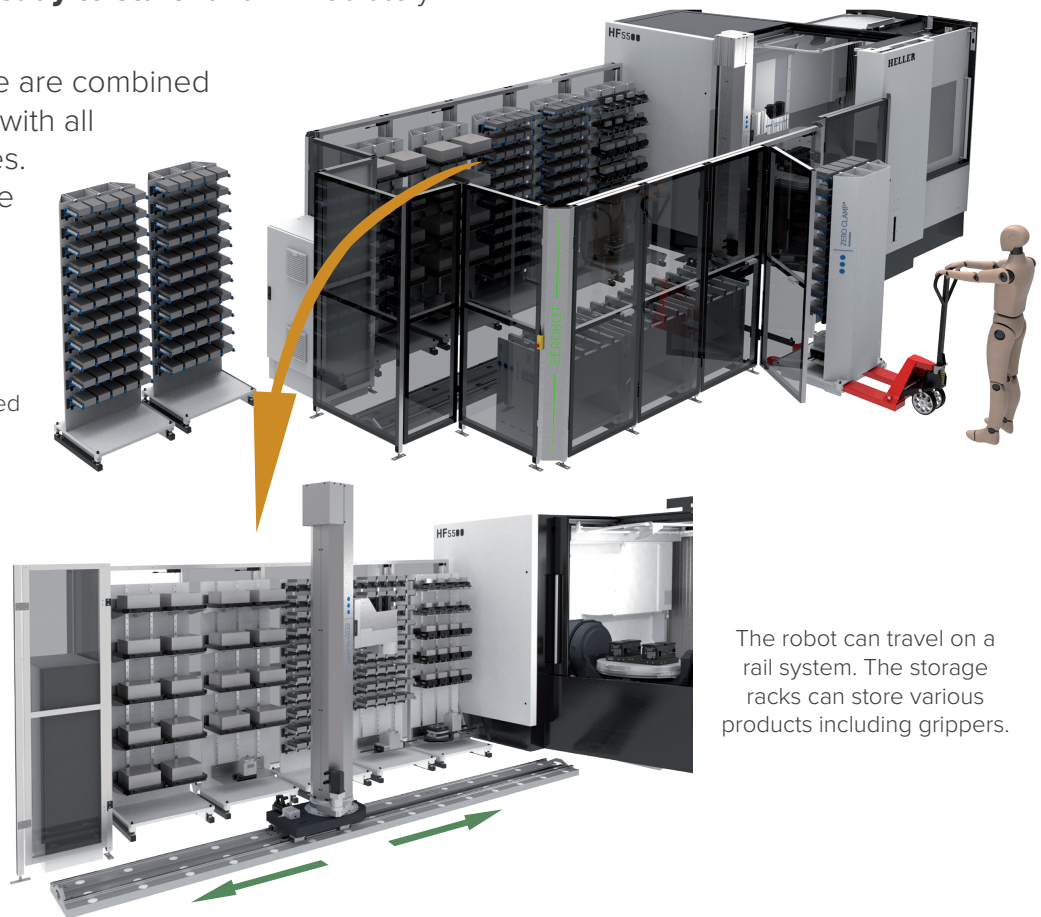
Optimized workflow: pre-set machining tasks without manual set-up times

Store your machining tasks already **pre-equipped on mobile racks**.

A large number of jobs with different clamping devices and workpieces can be kept **"ready to start"** and immediately clocked in as required.

Via job management, these are combined as desired and processed with all necessary set-up processes. So, manual set-up times are a thing of the past.

EZ-BOT 250S with interchangeable rack. The storage racks can be removed cycle time parallel.



The robot can travel on a rail system. The storage racks can store various products including grippers.

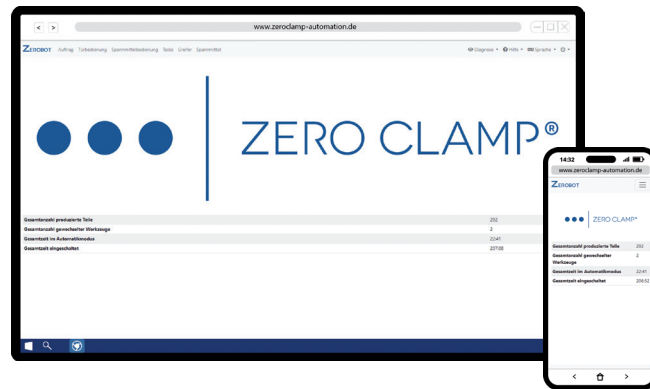
EZ-BOT 100 S / 250 S - The advantages at a glance

- SCARA robot on linear shuttle axis
- 100 kg or 250 kg handling weight
- Maximum storage capacity for blank parts, vises and fixtures with minimum space requirement
- Double gripper for shortest changeover times
- Any number of racks, equipped with workpieces, clamping devices and grippers, can be kept in stock
- Racks can be easily changed using a pallet truck
- Designed for automated CNC machining with high flexibility and parts mix

EZ-BOT - The Software

Browser-based job management

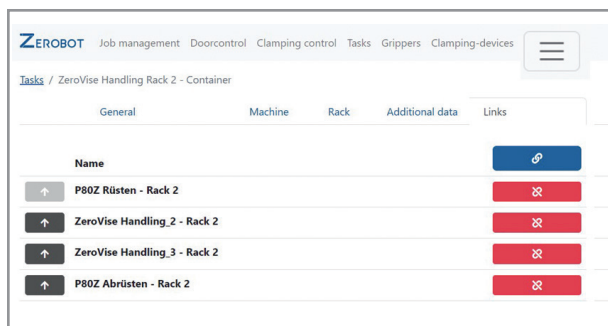
Connection simply via WLAN and TCP address of the robot.



Complex functionality made easy

Large database of predefined programs. These can be used to create individual tasks, such as a fixture change or a loading routine.

Created tasks are then linked to a sequence program in job management.

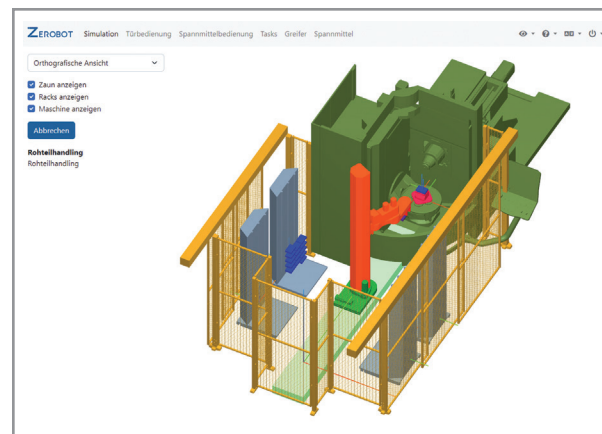


Job-Folder
Program 111: Part handling with single-sided gripper
Program 112: Part handling with double-sided gripper
Program 117: Pallet handling one-sided passive gripper for large pallets
Program 122: Part handling with asymmetrical double-sided gripper
Program 281 load: Blank handling for lathes
Program 281 unload: Additional unload routine for complete program 281
Program 301: Gripper pick-up
Program 302: Store gripper
Program 401: Bring clamping device into machine
Program 402: Remove clamping device from machine
Program 403: Bringing clamping devices into the machine including picking up the gripper in the rack
Program 404: Remove clamping device from machine including placing gripper back in the rack
Program 551: Tool change for active one-sided gripper
Program 561: Insert tools into magazine
Program 562: Exchange tools from magazine
Program loop
Measuring part ejection
Tool identification
Additional data for unloading position

For the execution of several programs in succession, these are then in turn linked in containers.

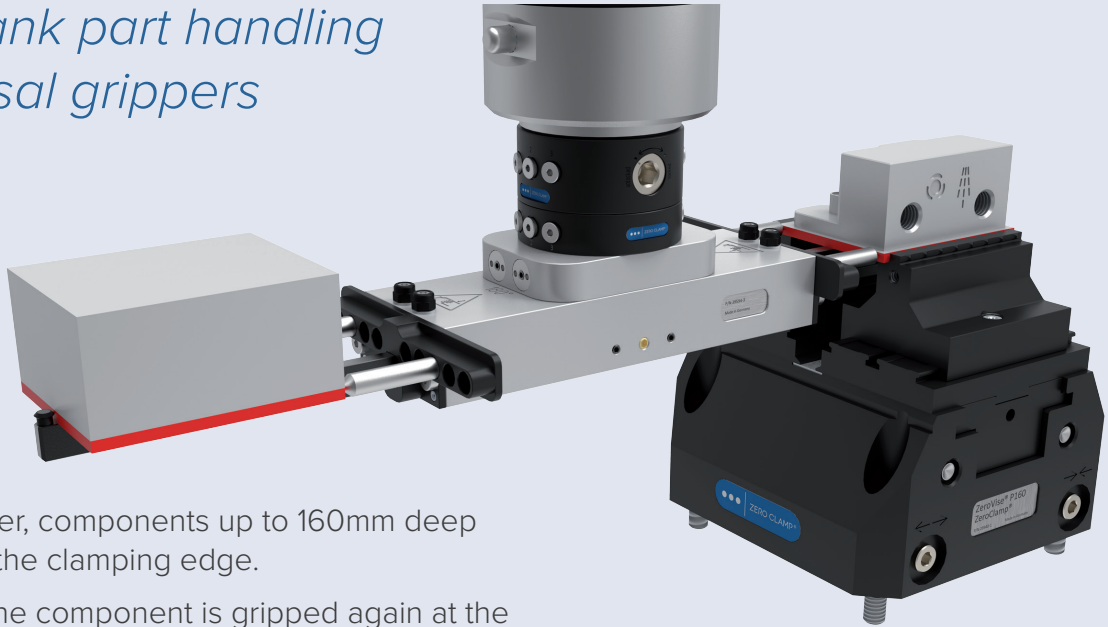
Simulation module for verification

After the jobs have been created, they can be viewed and checked in the simulation.



The EZ-BOT Components at a Glance - Blank Part Handling

*Efficient blank part handling
with universal grippers*



With a single gripper, components up to 160mm deep can be gripped at the clamping edge.

After processing, the component is gripped again at the clamping edge with the same gripper and removed from the clamping device.

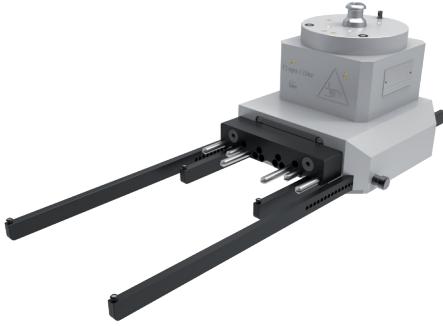
This means that no special component-specific jaws are required.

Blank part gripper

- Grips components from below at the 4mm clamping edge
- Grippers for component depths up to 160mm
- Automatic adjustment of the component depth through active gripper lance
- Adjustable support pins for different component widths
- Pneumatic actuation
- Docking port for air transfer to the machine-side clamping device (if no clamping device actuation is possible in the machine)



EZBOT-EOAT-BLNK-DSSL



EZBOT-EOAT-BLNK-SSDL

Blank part gripper, one-sided, double lance

- Grippers for large/wide components
- Grips components from below at the 4mm clamping edge
- Gripper for component depths up to 250mm and 600mm width
- Adaptation to component depth on the gripper lance in 5mm increments
- Adjustable support pins for different component widths
- Pneumatic actuation
- Docking port for air transfer to the machine-side clamping device (if no clamping device actuation is possible in the machine)



EZBOT-EOAT-UNVS-HOZL

Parallel gripper D346, horizontal, long

EZBOT-EOAT-UNVS-HOZS

Parallel gripper D176, horizontal, short

EZBOT-EOAT-UNVS-VERT

Parallel gripper D206, vertical

Parallel gripper, double-sided

- Gripping force 1.9 kN at 6 bar
- 12mm stroke
- Spring closing with 0.4 kN
- Clamping range adjustable
- Gripper fingers can be individually manufactured by the operator



EZBOT-EOAT-UNVS-FNGS-V

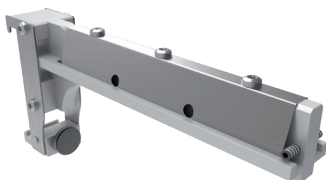
Vertical

EZBOT-EOAT-UNVS-FNGS-H

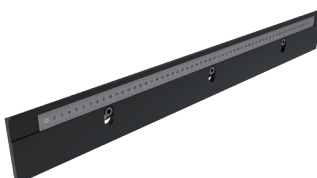
Horizontal

Groove bar and gripper fingers, set for parallel grippers

- Standard gripper fingers and serrated grooved bar
- With an adjustment possibility of 50mm in diameter, toothing 1.5mm



EZBOT-ACC-BRCK-BLNK



EZBOT-ACC-BRCK-BAR

Holding bracket and holder bar

Set (1x holder bar plus 6x holding bracket), Part No. EZBOT-ACC-BRCK-SET

- For perfect blank part storage in the rack
- Depending on the width of the component, the brackets can be positioned on the holder bars in a very short time using a quick-change system
- Serration and scale for easy and accurate positioning
- Up to 15 brackets can be used per holder bar
- Blank widths between 25 and 600mm, blank depth up to 160mm
- Holder bars are fixed in the rack in a vertical grid (50mm step)

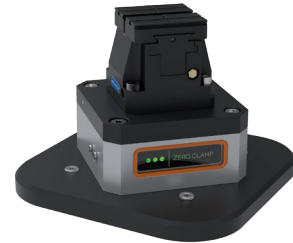
ZeroVise® P100 IoT

- High clamping force of 24 kN at 9 bar
- Clamping range 10-90mm, with jaw extension, the clamping range is extended up to 170mm
- Clamping stroke 6mm
- With AirCell accumulator, clamping is possible without permanent air pressure
- With the optional WLAN hub, wireless clamping pressure monitoring is possible
- Power supply via exchangeable LI-ION batteries, charger included
- Part No. WH-ZV-P100IOT-UBP for direct mounting on the machine table or an intermediate plate
- Part No. WH-ZV-P100IOT-ZBP with base plate for zero point clamping system (e.g. Part No. WH-ZP120-BASE4-AUTO)

**Visit lyndexnikken.com for additional base and riser.*



WH-ZV-P100IOT-UBP



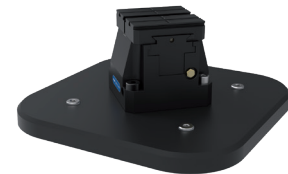
WH-ZV-P100IOT-ZBP

ZeroVise® P100

- High clamping force of 24 kN at 9 bar
- Clamping range 10-90mm, with jaw extension, the clamping range is extended up to 170mm
- Clamping stroke 6mm
- Clamping with permanent air pressure
- Part No. WH-ZV-P100 for direct mounting on the machine table or an intermediate plate
- Part No. WH-ZV-P100-ZBP with base plate for zero point clamping system (e.g. Part No. WH-ZP120-BASE4-AUTO)



WH-ZV-P100



WH-ZV-P100-ZBP

Grip jaw set 80/100

- With grip serration for direct clamp of the component without pre-stamp
- For ZeroVise® P100/P100 IoT



WH-ZV80-JAWS-R87

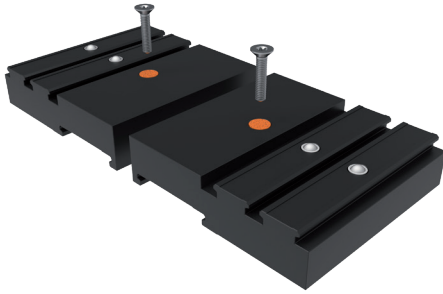
Jaw set 80/100 carbide coated

- Carbide coating, grain size approx. 400 to increase the friction value when clamping the component
- For ZeroVise® P100/P100 IoT



WH-ZV80-JAWS-F87

**Visit lyndexnikken.com for additional jaws options.*



WH-ZV80-JAWS-EXT

Jaw adapter 80/100

- To extend the clamping range to 170mm
- For ZeroVise® P100/P100 IoT

**Visit lyndexnikken.com for additional jaws option.*



WH-ZV-P160IOT-UBP

ZeroVise® P160 IoT

- High clamping force of 48 kN at 9 bar
- Clamping range 10-130mm, with jaw extension, the clamping range is extended up to 250mm
- Clamping stroke 8.5mm
- With AirCell accumulator clamping without permanent air pressure possible
- With the optional WLAN hub, wireless clamping pressure monitoring is possible
- Power supply via exchangeable LI-ION batteries, charger included
- Part No. WH-ZV-P160IOT-UBP for direct mounting on the machine table or an intermediate plate
- Part No. WH-ZV-P160IOT-ZBP with base plate for zero point clamping system (e.g. Part No. WH-ZP120-BASE4-AUTO)



WH-ZV-P160IOT-ZBP



WH-ZV-P160

ZeroVise® P160

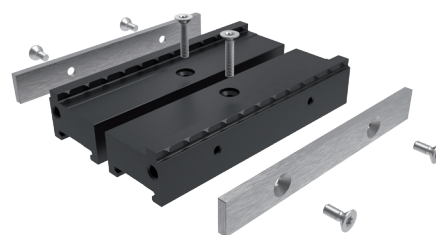
- High clamping force of 48 kN at 9 bar
- Clamping range 10-130mm, with jaw extension, the clamping range is extended up to 250mm
- Clamping stroke 8.5mm
- Clamping with permanent air pressure
- Part No. WH-ZV-P160 for direct mounting on the machine table or an intermediate plate
- Part No. WH-ZV-P160-ZBP with base plate for zero point clamping system (e.g. Part No. WH-ZP120-BASE4-AUTO)



WH-ZV-P160-ZBP

Grip jaw set 160

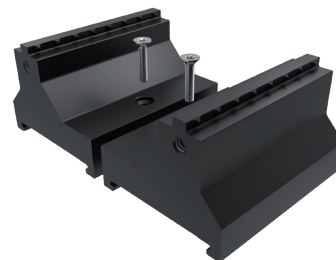
- Consisting of 3 pairs of jaws
- With grip serration for direct clamping of the component without pre-stamp
- Width 120mm, height 15mm
- For ZeroVise® P160/P160 IoT



WH-ZV160-JAWS-R130-H15-S3

Grip jaw set 160

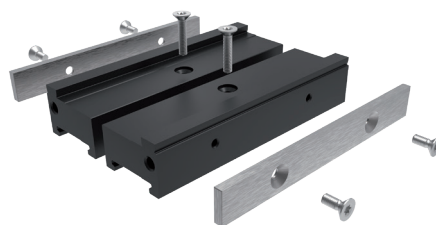
- Consisting of 6 pairs of jaws
- With grip serration for direct clamping of the component without pre-stamp
- Width 80mm, height 40mm
- For ZeroVise® P160/P160 IoT



WH-ZV160-JAWS-R130-H40-S6

Jaw set 160 carbide coated

- Consisting of 3 pairs of jaws
- Carbide coating, grain size approx. 400 to increase the friction value when clamping the component
- For ZeroVise® P160/P160 IoT



WH-ZV160-JAWS-F130-SET3

Jaw adapter 160

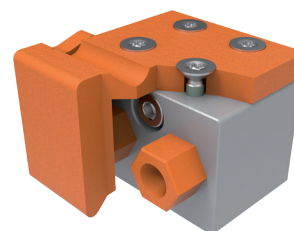
- To extend the clamping range to 250mm
- For ZeroVise® P160/P160 IoT



WH-ZV160-JAWS-EXT

Connection block horizontal

- Mounted on the side of IoT Aircell to operate the ZV pneumatic vise (P100/P160) via robot gripper air transfer lance



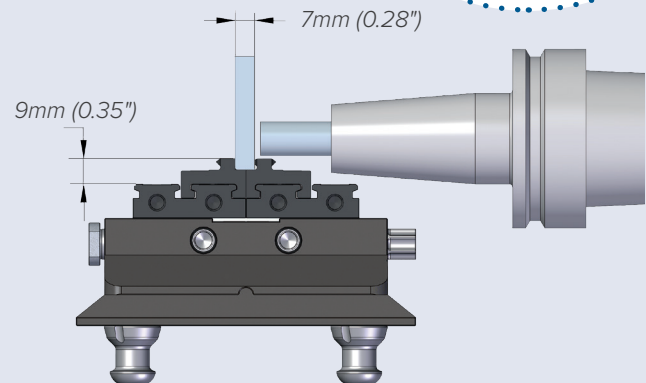
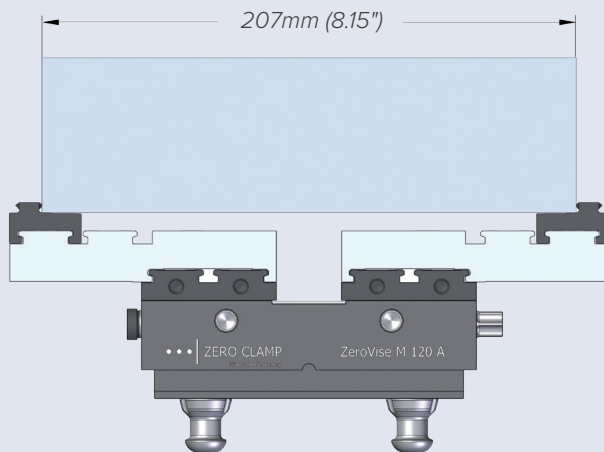
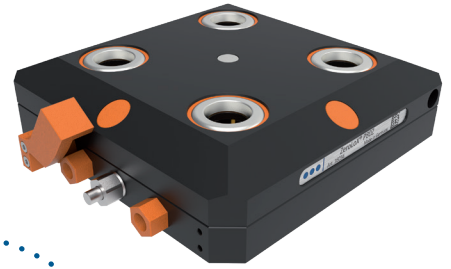
WH-ZV-ACC-AIRP-H

The EZ-BOT Components for Vise Handling

The ZeroLoX® P80Z and P96Z zero point clamping console provides a universal interface for **high-precision clamping of vises, pallets and workpieces** in seconds.

Optimal in combination with the ZeroVise® automation vises.

With adapter plates, however, vises from other manufacturers can also be used.



Best accessibility

The centric clamps are extremely compact, weighing only 3.5 or 5.2 kg.

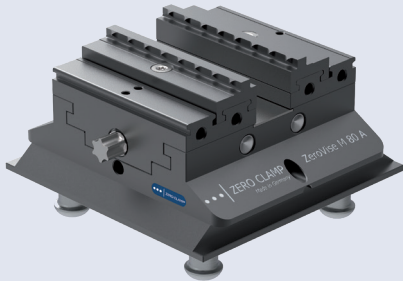
Accessibility without interfering contours

The use of reversible quick-change jaws, which are used in 2 different positions, ensures a large clamping range and good accessibility without interfering contours with minimum base body size.

Low costs, high cutting speed

This allows the use of short, stable standard tools and thus low costs, high cutting speeds and good surface quality.

Maximum economic efficiency



Chip nests are a thing of the past!

The ZeroVise® M80/M120 series is uncompromisingly designed for economy.

With reversible jaws and jaw adapters, clamping ranges up to 167mm respectively 207mm are covered. No additional vise sizes required.

Spindle, centering and inner guides are completely covered and the outer contour is designed so that there are no chip nests.

Time-consuming cleaning after use and problems with chips in the area of the spindle and guides are now a thing of the past.

Reduction of cleaning time by 15 hours per year - per vise!

EXAMPLE:

A standard open vise is used 300 times a year. With only 3 min. cleaning time, this adds up to 900 min. or 15 hours per year per vise.

You can certainly make better use of this time.

ZeroLoX® P80Z

- Clamping console for automation vises
- Patented zero point technology with highest accuracy and rigidity
- Thermal symmetry to the center
- Repeatability < 2.5 µm
- High clamping forces of 50 kN
- Compact, low-profile design with a height of only 40mm
- Pneumatic control from front or bottom possible
- Part No. WH-ZLOX-P80Z for direct mounting on the machine table or an intermediate plate
- Part No. WH-ZLOX-P80Z-125BPR with base plate for zero point clamping system (e.g. Part No. WH-ZP120-BASE4-AUTO)

*ZLOX-P96Z console available for 96mm bolt pattern vise.

*Visit lyndexnikken.com for information on ZLOX-P96Z and M120A-96 vise.



WH-ZLOX-P80Z



WH-ZLOX-P80Z-125BPR



WH-ZV-M80A

ZeroVise® M80A

- Encapsulated automation vise, jaw width 80mm
- Weight only 3.5 kg
- Centric clamping of blanks and workpieces
- Center settings adjustable, centering accuracy $\pm 0.02\text{mm}$
- Clamping force 17 kN, jaw stroke 22mm, clamping range 7-87mm
- With jaw extension, the clamping range is extended up to 167mm



WH-ZV80-JAWS-R87

Grip jaw set 80/100

- With grip serration for direct clamping of the component without pre-stamp



WH-ZV-M120A

ZeroVise® M120A

- Encapsulated automation vise, jaw width 120mm
- Weight only 5.3 kg
- Centric clamping of blanks and workpieces
- Center settings adjustable, centering accuracy $\pm 0.02\text{mm}$
- Clamping force 25 kN, jaw stroke 27mm, clamping range 7-107mm
- With jaw extension, the clamping range is extended up to 207mm

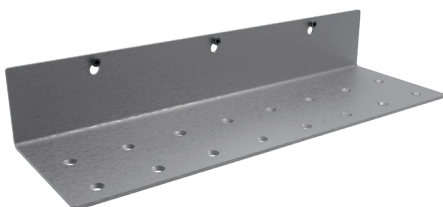
**Available in 80mm and 96mm bolt pattern.*



WH-ZV120-JAWS-R107

Grip jaw set 120

- With grip serration for direct clamping of the component without pre-stamp



EZBOT-ACC-BRCK-MVISE

Shelf for ZeroVise® M80/120A

- Tray for ZeroVise® automation vises
- Vertical mounting possible every 50mm
- Predefined positions through grid
- Max. 4 vises per shelf

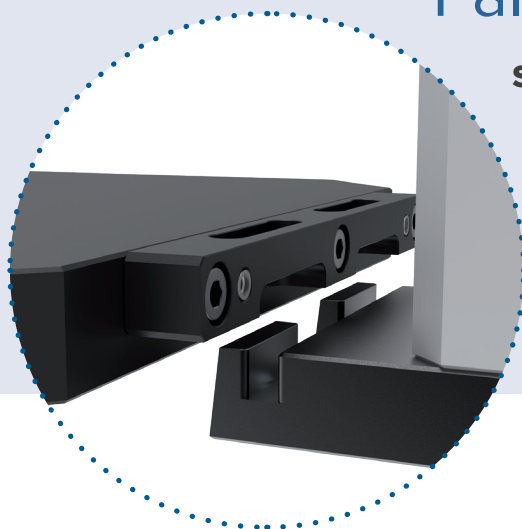
Clamping device gripper, double-sided

- Suitable for ZeroVise® automation vise sizes M80A and M120A
- Suitable for automatic set-up of the ZeroLoX® P80Z and P96Z clamping bracket
- No additional pneumatics required for operation



EZBOT-EOAT-ZLOX/WISE

Pallet Handling

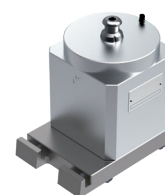


Simple and robust solution with passive gripper based on the wedge hook principle. The gripper picks up the pallet from below via the wedge hooks.

The pallet's own weight holds it positively and it can be exchanged in and out of the machine's zero point clamping system.

Pallet gripper, one-sided

- Suitable for standard anchor bar
- No additional pneumatics required for operation



EZBOT-EOAT-PLT

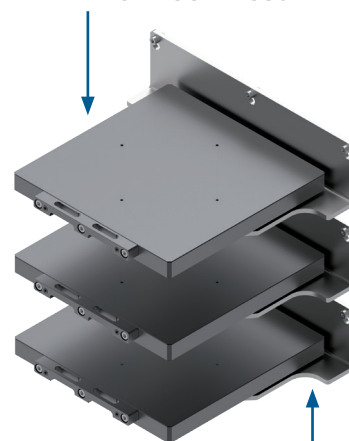
Pallet 330 x 330 x 30mm

- Incl. standard anchor bar
- Clamping bolt holes in 200mm pitch as well as in 200mm cross pitch
- Material Toolox 33, nitrided

Shelf for pallet 330 x 330mm

- To be mounted in the rack, vertical mounting in 50mm grid
- Incl. fixing material

EZBOT-ACC-PLT330



EZBOT-ACC-BRCK-PLT330

EZ-BOT - Automatic Set-up

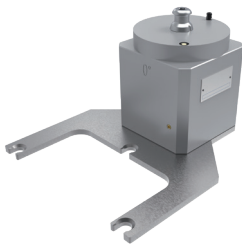
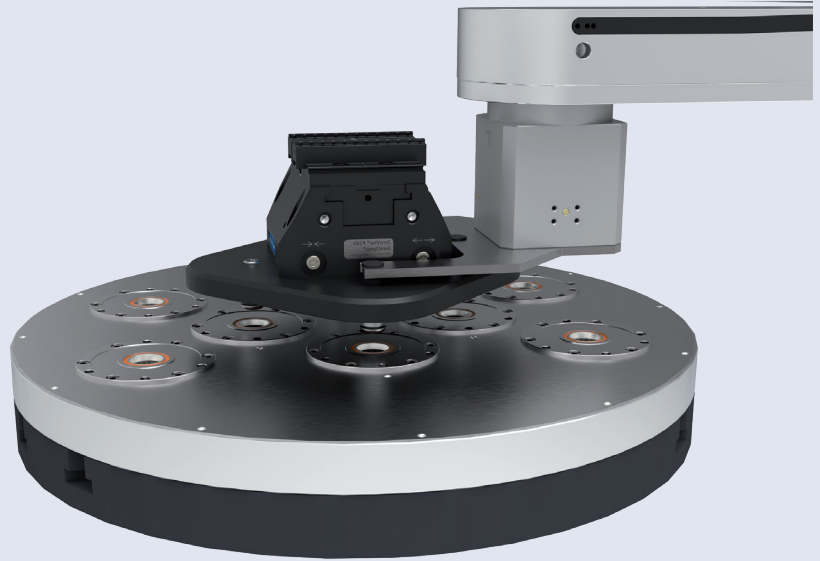
Efficient automation through flexible gripper change and zero point clamping systems

Due to the possibility of changing grippers and the use of zero point clamping systems, which are designed for automation, not only components but also clamping devices or automatic fixtures can be changed.

Two-level control for maximum flexibility

Technically, the control is divided into two levels. In the first level, a change of pallets, clamping devices or fixtures is provided.

In the second level, the clamping devices used in the first level are then used to automatically change blank parts, vises or small pallets.



EZBOT-EOAT-ZV-P160

Gripper clamping device handling, one-sided

- Suitable for ZeroVise® P160, for inserting and replacing the clamping device
- No additional pneumatics required for operation



EZBOT-EOAT-ZLOX/VICE

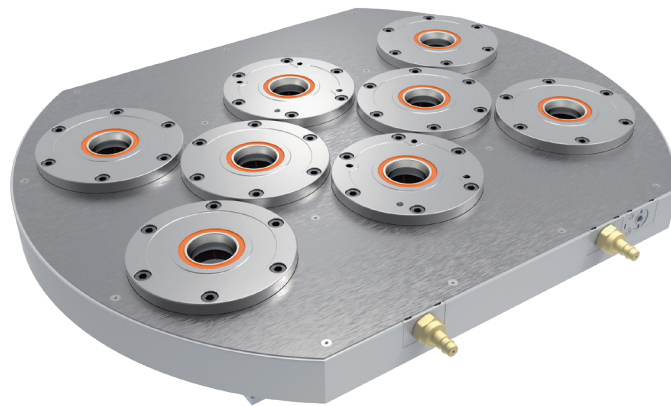
Clamping device gripper, double-sided

- Suitable for ZeroVise® automation vise sizes M80A and M120A
- Suitable for automatic set-up of the ZeroLoX® P80Z and P96Z clamping bracket
- No additional pneumatics required for operation

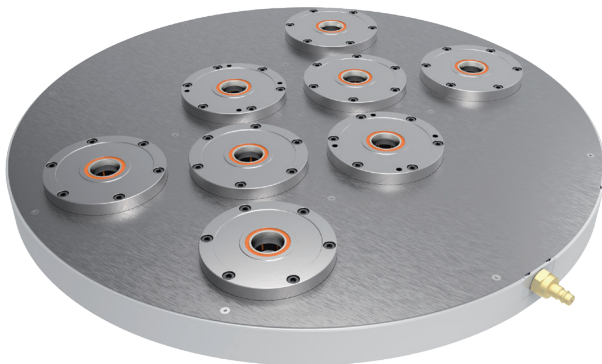
Examples for Zero Point Clamping Systems

Optimal adjustment and precise clamping

- For automatic set-up of various clamping devices without loss of time
- Perfectly adapted to the respective machine table
- 4 central clamping pots in cross stitch dimension 200mm for automation
- Clamping via permanently acting spring mechanism
- HSK principle for backlash-free clamping
- Thermal symmetry
- Release pneumatically (min. 6 bar)



Base unit - DMG-MORI DMU 50 3rd gen.



Base unit - Heller HF 3500



Base unit - Hermle C22

ABOUT US

At Lyndex-Nikken, we have made it our mission to provide the two most important points to keep you ahead of the competition: advanced technology and the innovation to keep it moving forward. In addition to manufacturing the best machine tool accessories available on the market, our team of highly experienced technicians and product specialists offers unmatched customer service and engineering support to our customers worldwide.

LYNDEX-NIKKEN

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