CleverClamp system
Quick and flexible workholding
Clever clamping

EROWA CleverClamp is the seamless, modular tooling system. Easy to handle and versatile in use, the EROWA CleverClamp decrease your set up times while increasing machine running times.

Enjoy the many benefits of EROWA’s CleverClamp tooling system. Thanks to the standardized EROWA UPC or MTS interface, CleverClamp workpiece carriers are quickly and accurately positioned on the machine and can be used universally.

EROWA CleverClamp for clamping large workpieces with large holding power.

Multiple clamping of identical or different workpieces on the same fixture.

Clamping of workpieces with minimal clamping height.

A wide selection of clamping elements and jaws holds any workpiece.

The Facts
- Easy to use.
- Quick set-up of workpieces.
- Modular extensions.
- 5-side machining.
- Automatable.
The perfect combination

Everything fits together and can be flexibly combined. CleverClamp holds any workpiece and adapts to any machine situation.

Very high holding power and minimal clamping height (3mm) are easily achieved with CleverClamp pull-down or linear stamping elements.

By custom reworking of soft clamping and stop jaws, the clamping possibilities are almost unlimited.

Clamp many workpieces and make optimized use of the full working area of the machine: CleverClamp mounted on EROWA mineral casting tower.

Use of height increasing elements for clamping workpieces with large diameter.

For 5-axis machining: Ensure optimal accessibility of the machine spindle to the workpiece by increasing height increases and serrated clamping elements.

With the CleverClamp QuickChuck 100 P, electrodes can be adapted to and machined on EROWA electrode holders with ease.

CleverClamp rails enable automatable single or multiple clamping directly on the MTS base plates.

Optimal accessibility for machining from 5 sides. Utilize one CleverClamp rail on our MTS or UPC pallets.

Two CleverClamp rails in combination with pull-down elements allow safe clamping of oversized workpieces.

Easily clamp different workpieces on one pallet using different clamping elements and increase the cycle time of your machine.

Multiple clamping on MTS or UPC pallets with one CleverClamp rail for improved accessibility to the workpiece. Automation enables additional machine running time.

Automatable and usable throughout in the EROWA UPC and MTS tooling system.
Reliable base

The base rails are the backbone of the CleverClamp workpiece holding system. They can be used horizontally or vertically.

The suitable clamping elements can be placed quickly with the precise positioning grid. Base rails offer plenty of room in the smallest space for flexible fastening of different workpiece shapes and sizes.

Very convenient – the integrated scale with 2mm gradation help in quick and repeatable positioning of the clamping elements during set-up.

Very clever – the scale protects the mounting holes from contamination.

Very precise – the dowel holes in a 50mm grid allow you to position the base rails quickly and accurately on the machine table.

CleverClamp base rails are available in various versions.

- As a single rail for individual mounting on a machine, fixture, EROWA UPC or an MTS pallet, etc.
- With mounted couplings and automation coupling (option) for direct integration in the EROWA MTS tooling system.
- On EROWA UPC and MTS pallets.

The height of the machining position can be varied on the base using the convenient raise module.

- Heavy fixtures can be handled easily with a crane. The CleverClamp base rails have holes on both sides to attach eye bolts.

01 | Precise positioning grid 2mm.
02 | Scale for quick positioning of clamping elements.
03 | Automation Mounting hole for coupling for automated handling.
04 | Chucking spigots for quick and precise clamping of the base rail in the EROWA MTS tooling system.

THE FACTS
- Flexible clamping element carriers.
- Precise 2mm positioning grid.
- Fast mounting.
- Scale for fast positioning.
- Mounting of chucking spigots directly in the base rail.
- Minimal contamination.
- Directly automatable.
Faster setups

The convenient and elaborate selection of different stop and clamping elements hold workpieces flexibly and accurately in any desired position.

Stop elements

The stop element is used in combination with a clamping element as a fixed jaw on the base rail. Available in widths of 48mm or 94mm and with different clamping surfaces as required.

Clamping range: 0 - 4.1mm
Clamping power: up to 28kN
- High holding forces.
- Powerful clamping also of large workpieces.
- With exchangeable jaws.

Pull-down clamping elements

Clamping range: 0 - 5mm
Clamping power: up to 16kN
- Vise-like clamping.
- With exchangeable jaws.
- Process-reliable positioning of second mounting.
- Suitable for manufacture of custom form jaws.
- Secure hold with stamping technology.

Set-up and changeover in a few steps. Position and fasten stop element.

Linear clamping elements

Position and fasten the clamping element based on the size of the workpiece.

Ingenious screw spindle mechanism – only one screw accurately secures the elements. The toothed grid ensures reliable positioning.

THE FACTS

- Quickly positioned and fastened.
- Quick change of workpieces.
- Easy cleaning of the elements.
- Powerful workholding.
- Single and multiple clamping.
Everything fits

Various types of clamping surfaces, additional clamping jaws and accessories make sure that each type of workpiece and material is mounted reliably. Whether round, angled or irregular workpiece shapes – CleverClamp holds everything.

Select the appropriate properties of the clamping surface depending on the material and workpiece.

- Smooth clamping and stop sides - ideal for clamping of workpieces with finished surfaces.
- Clamping and stop sides with grip contour - ideal for clamping of raw material and workpieces with increased demands on holding power during machining.
- Clamping and stop side with stamping contour - ideal for clamping of raw parts at minimal clamping height and irregular parts.

Ingenious stamping contour - The workpieces are held at 3mm minimal clamping height with up to 1.6 tons of holding power (linear element) form and friction locked. This achieves maximum holding forces. The workpiece can be nearly finish-machined on 5 sides if necessary.

- Various clamping and stop jaws for each requirement.
- Soft jaws – for manufacturing jaws with contours as required.

THE FACTS
- Large assortment.
- Clamping surface in different finishes.
- Machining with contour of your choice.
Clever technology to increase productivity

The CleverClamp workpiece is automatable throughout. The proportion of productive machine hours is significantly increased.

By setting up and adjusting the workpieces outside the machine, time is optimally used and cost is reduced.

The workpieces to be machined are palletized with CleverClamp and stored in the magazine of the handling unit. The EWS™ identification system provides a clear overview of magazine locations and pallets.

For setups with recurring workpieces: single part recognition with identification chip and the EROWA Manufacturing Control process control system.

With the EROWA Process Control System, the operator is always in control of all data of the manufacturing cell.

Integrated quality control - intermediate and final inspections increase process reliability in production.

A highly efficient production cell for automating the manufacture of single parts and small batches. An EROWA linear robot loads two milling centers and one measuring machine in combination.

Simply ingenious: The CleverClamp base rail is directly automatable. The robot places the workpiece carrier quickly and accurately on the machine.

The FACTS

- Direct automation of CleverClamp.
- Use of peripheral and night time hours.
- Automated quality measurement.
- Chip identification for pallets and single parts.
EROWA provides you with a full range of products - everything fits together!

The components

- **M* = manual operation**
- **A* = automatic operation**

**The color icon describes the respective surface finish.**

- **smooth**
- **Grip contour**
- **Stamping contour**
To make it easier for you to find your way about the fields of application for EROWA products, we use the following symbols in all our documents:

1. Manual operation
2. Operate with compressed air jet
3. Operate with manual valve
4. Operate with manual control unit
5. Operate with electro-pneumatic control unit
6. With central flushing clearance
7. Suited for submerged operation
8. Corrosion-resistant material
9. Suited for automatic operation
10. Handling with EROWA Robot gripper S
11. Handling with EROWA Combi gripper
12. Handling with EROWA Robot gripper 72
13. Handling with EROWA Robot gripper 115
14. Handling with EROWA Robot gripper 148
15. Handling with EROWA gripper RN PC 210
16. Handling with EROWA RCS gripper

CLEVERCLAMP WORKPIECE TOOLING SYSTEM

- CleverClamp System Base
- CleverClamp System Base rails MTS
- CleverClamp System Base rails UPC
- CleverClamp System Pull down clamping elements
- CleverClamp System Linear clamping elements
- CleverClamp System Stop elements
- CleverClamp System Accessories / Parallel supports
- CleverClamp System Accessories
- CleverClamp System Operating tools
- CleverClamp System Spare parts
EROWA CleverClamp System

Rails

ER-099314 Rail 320 H60 CleverClamp

**Version**
Steel, hardened. H60 clamping element carrier with 2mm positioning grid.

**Application**
Serves as a base to clamp workpieces with various CleverClamp clamping and stop elements.

**Mounting**
To mount on R50 grid plates, pallets, tombstones and machine tables.

**Accessories**
Clamping and stop elements, etc.

**Important**
Can be used directly with a spigot on MTS, 200mm set-up distance (M) or MTS81, 120mm set-up distance (A/M).

ER-099315 Rail 398 H60 CleverClamp

**Version**
Steel, hardened. H60 clamping element carrier with 2mm positioning grid.

**Application**
Serves as a base to clamp workpieces with various CleverClamp clamping and stop elements.

**Mounting**
To fit on R50 grid plates, pallets, tombstones and machine tables.

**Accessories**
Clamping and stop elements, etc.

**Important**
Can be used directly with a spigot on MTS, 200mm set-up distance (M) or 250mm set-up distance (M).

ER-100266 Rail 398 H80 CleverClamp

**Version**
Steel, hardened. H80 clamping element carrier with 2mm positioning grid.

**Application**
Serves as a base to clamp workpieces with various CleverClamp clamping and stop elements.

**Mounting**
To fit on R50 grid plates, pallets, tombstones and machine tables.

**Accessories**
Clamping and stop elements, etc.

**Important**
Can be used directly with a spigot on MTS, 200mm set-up distance (A/M) or 250mm set-up distance (A/M).

ER-099387 Rail 320 H60 manual CleverClamp

**Version**
Steel, hardened. H60 clamping element carrier with 2mm positioning grid. With MTS spigot, manual.

**Operation**
Manual application on MTS81 base plates with 120mm set-up distance and MTS base plates with 200mm set-up distance.

**Application**
Serves as a base to clamp workpieces with various CleverClamp clamping and stop elements.

**Accessories**
Clamping and stop elements, etc.

**Important**
Manual application.

ER-099388 Rail 320 H60 automated CleverClamp

**Version**
Steel, hardened. H60 clamping element carrier with 2mm positioning grid. With MTS spigot, automatic, and Grip-PerLink.

**Operation**
Automated application on MTS81 base plates with 120mm set-up distance.

**Application**
Serves as a base to clamp workpieces with various CleverClamp clamping and stop elements.

**Accessories**
Clamping and stop elements, etc.

**Important**
Automated application.

ER-099389 Rail 398 H60 manual CleverClamp

**Version**
Steel, hardened. H60 clamping element carrier with 2mm positioning grid. With MTS spigot, Manual.

**Operation**
Manual application on MTS base plates with 200/250mm set-up distance.

**Application**
Serves as a base to clamp workpieces with various CleverClamp clamping and stop elements.

**Accessories**
Clamping and stop elements, etc.

**Important**
Manual application.

ER-099390 Rail 398 H80 automated CleverClamp

**Version**
Steel, hardened. H80 clamping element carrier with 2mm positioning grid. With MTS spigot, automatic, and Grip-PerLink.

**Operation**
Automated application of MTS base plates with 200/250mm set-up distance.

**Application**
Serves as a base to clamp workpieces with various CleverClamp clamping and stop elements.

**Accessories**
Clamping and stop elements, etc.

**Important**
Automated application.
EROWA CleverClamp System

MTS Base rails

**ER-099323** Base MTS 200 mono

*Version* Combination of MTS aluminum pallet with 398 rail (MTS spigot set ER-041461 (M) / ER-041464 (A)).

*Application* Optimal accessibility for 5-axis applications with single and multiple fixtures.

*Accessories* Order separately: ER-041461 (M) / ER-041464 (A) or MTS GripperLink Rapid ER-038622.

**ER-099321** Base MTS 200 duo

*Version* Combination of MTS aluminum pallet with two 398 rails (MTS spigot set ER-041461 (M) / ER-041464 (A)).

*Application* Optimal for multiple fixtures and for clamping big workpieces.

*Accessories* Order separately: ER-041461 (M) / ER-041464 (A) or MTS GripperLink Rapid ER-038622.

**ER-099320** Base MTS 250 mono

*Version* Combination of MTS aluminum pallet with 398 rail (MTS spigot set ER-041461 (M) / ER-041464 (A)).

*Application* Optimal accessibility for 5-axis applications with single and multiple fixtures.

*Accessories* Order separately: ER-041461 (M) / ER-041464 (A) with GripperLink Rapid ER-038622.

**ER-099319** Base MTS 250 duo

*Version* Combination of MTS aluminum pallet with two 398 rails (MTS spigot set ER-041461 (M) / ER-041464 (A)).

*Application* Optimal for multiple fixtures and for clamping big workpieces.

*Accessories* Order separately: ER-041461 (M) / ER-041464 (A) or MTS GripperLink Rapid ER-038622.

UPC Base rails

**ER-099318** Base UPC mono

*Version* Combination of UPC aluminum pallet with 320 rail; centering segments and chucking spigots fitted. Z-support hard.

*Application* Optimal accessibility for 5-axis applications with single and multiple fixtures.

*Accessories* Order separately: GripperLink RCS / EWIS RAPID ER-036347 for Automation.

**ER-099317** Base UPC duo

*Version* Combination of UPC aluminum pallet with two 320 rails; centering segments and chucking spigots fitted. Z-support hard.

*Application* Optimal for multiple fixtures and for clamping big workpieces.

*Accessories* Order separately: GripperLink RCS / EWIS RAPID ER-036347 for Automation.
EROWA CleverClamp System

Pull down clamping elements

**ER-099292** Pull Down Slide Multi Flat CleverClamp

- **Version**: Steel, hardened, width 48mm, height 34mm, clamping and stop sides smooth.
- **Application**: Pull-down element for clamping jobs with high clamping forces. Surface: smooth. Ideal for two-side machining and for clamping workpieces with machined surfaces.
- **Mounting**: On a CleverClamp rail.
- **Important**: Suitable for single or multiple fixtures.
- **Clamping force**: Up to 28kN max. at a torque of 40Nm max.
- **Clamping stroke**: Up to 4.1mm.

**ER-099298** Pull Down Slide Multi Grip CleverClamp

- **Version**: Steel, hardened, width 48mm, height 34mm, clamping and stop sides with grip contours.
- **Application**: Pull-down element for clamping jobs with high clamping forces. Surface with grip contours for additional purchase.
- **Mounting**: On CleverClamp rail.
- **Important**: Suitable for single or multiple fixtures.
- **Clamping force**: Up to 28kN max. with a torque of 40Nm max.
- **Clamping stroke**: Up to 4.1mm.

**ER-099285** Linear Slide Multi Flat CleverClamp

- **Version**: Steel, hardened, width 48mm, height 34mm, clamping and stop sides smooth.
- **Application**: For the linear clamping of workpieces with machined surfaces.
- **Mounting**: On CleverClamp rail.
- **Important**: Modularly compatible with all linear jaws. Suitable for single and multiple fixtures.
- **Clamping force**: Up to 16kN max. with a torque of 40Nm max.
- **Clamping stroke**: Up to 5mm.

**ER-099286** Linear Slide Multi Grip CleverClamp

- **Version**: Steel, hardened, width 48mm, height 34mm, clamping and stop sides with grip contours.
- **Application**: Linear clamping with grip contours for additional purchase.
- **Mounting**: On CleverClamp rail.
- **Important**: Modularly compatible with all linear jaws. Suitable for single and multiple fixtures.
- **Clamping force**: Up to 16kN max. with a torque of 40Nm max.
- **Clamping stroke**: Up to 5mm.

**ER-099282** Linear Slide Multi Stamp CleverClamp

- **Version**: Steel, hardened, width 48mm, height 34mm, clamping and stop sides with stamp contours.
- **Application**: Ideal for clamping blanks at the minimum clamping height of 3mm. Secure grip thanks to stamp technology for direct stamping. Can also be used for two-side machining.
- **Mounting**: On CleverClamp rail.
- **Important**: Modularly compatible with all linear jaws. Suitable for single and multiple fixtures.
- **Clamping force**: Up to 16kN max. with a torque of 40Nm max.
- **Clamping stroke**: Up to 5mm.

**ER-099277** Linear Slide Multi Stamp Wide CleverClamp

- **Version**: Steel, hardened, width 94mm, height 34mm, clamping and stop sides with stamp contours.
- **Application**: Ideal for clamping blanks at a minimum clamping height of 3mm. Secure grip thanks to stamp technology for direct stamping. Can also be used for two-side machining.
- **Mounting**: On CleverClamp rail.
- **Important**: Modularly compatible with all linear jaws. Suitable for single and multiple fixtures.
- **Clamping force**: Up to 16kN max. with a torque of 40Nm max.
- **Clamping stroke**: Up to 5mm.
EROWA CleverClamp System

Linear clamping elements

**ER-099276 Linear Slide Sx Stamp CleverClamp**

**Version**
Steel, hardened, width 48mm, height 49mm, clamping side with stamp contours.

**Application**
Optimised machine spindle accessibility for 5-axis applications. Ideal for clamping blanks at a minimum clamping height of 3mm. Secure grip thanks to stamp technology for direct stamping.

**Mounting**
On CleverClamp rail.

**Important**
Modularly compatible with all linear jaws. Can be used for single and multiple fixtures.

**Clamping force**
Up to 16kN max. with a torque of 40Nm max.

**Clamping stroke**
Up to 5mm.

**ER-099275 Linear Slide Sx Stamp Wide CleverClamp**

**Version**
Steel, hardened, width 94mm, height 49mm, clamping side with stamp contours.

**Application**
Optimised machine spindle accessibility for 5-axis applications. Ideal for clamping blanks at a minimum clamping height of 3mm. Secure grip thanks to stamp technology for direct stamping.

**Mounting**
On CleverClamp rail.

**Important**
Modularly compatible with all linear jaws. Can be used for single and multiple fixtures.

**Clamping force**
Up to 16kN max. with a torque of 40Nm max.

**Clamping stroke**
Up to 5mm.

EROWA CleverClamp System

Stop elements

**ER-099269 Stop Multi Stamp CleverClamp**

**Version**
Steel, hardened, width 48mm, height 34mm, with stamp contours.

**Application**
Stop element in the modular CleverClamp system. Stop element with stamp contours, ideal in combination with stamp clamping elements for clamping blanks at a minimum clamping height of 3mm.

**Mounting**
On CleverClamp rail.

**ER-099267 Stop Multi Stamp Wide CleverClamp**

**Version**
Steel, hardened, width 94mm, height 34mm, with stamp contours.

**Application**
Stop element in the modular CleverClamp system. Stop element with stamp contours, ideal in combination with stamp clamping elements for clamping blanks at a minimum clamping height of 3mm.

**Mounting**
On CleverClamp rail.

**ER-099263 Stop Sx Stamp CleverClamp**

**Version**
Steel, hardened, width 48mm, height 49 mm, with stamp countours.

**Application**
Stop element in the modular CleverClamp system. Stop element with better machine spindle accessibility for 5-axis applications. With stamp contours, ideal in combination with stamp clamping elements for clamping blanks at a minimum clamping height of 3mm.

**Mounting**
On CleverClamp rail.

**ER-099258 Stop Sx Stamp Wide CleverClamp**

**Version**
Steel, hardened, width 94mm, height 49mm, with stamp contours.

**Application**
Stop element in the modular CleverClamp system. Stop element with better machine spindle accessibility for 5-axis applications. With stamp contours, ideal in combination with stamp clamping elements for clamping blanks at a minimum clamping height of 3mm.

**Mounting**
On CleverClamp rail.
EROWA CleverClamp System

Accessories / Parallel supports

**ER-099204 Support 20 CleverClamp**

**Version**
Steel, hardened, width 47mm, height 20mm.

**Application**
Ground support for setting the workpiece clamping height between the CleverClamp clamping and stop elements.

**Important**

**ER-099206 Support 24 CleverClamp**

**Version**
Steel, hardened, width 47mm, height 24mm.

**Application**
Ground support for setting the workpiece clamping height between the CleverClamp clamping and stop elements.

**Important**

**ER-099227 Support 29 CleverClamp**

**Version**
Steel, hardened, width 47mm, height 29mm.

**Application**
Ground support for setting the workpiece clamping height between the CleverClamp clamping and stop elements.

**Important**

**ER-099228 Support 31 CleverClamp**

**Version**
Steel, hardened, width 47mm, height 31mm.

**Application**
Ground support for setting the workpiece clamping height between the CleverClamp clamping and stop elements.

**Important**

**ER-099229 Support 34 CleverClamp**

**Version**
Steel, hardened, width 47mm, height 34mm.

**Application**
Ground support for setting the workpiece clamping height between the CleverClamp clamping and stop elements.

**Important**

**ER-099230 Support 39 CleverClamp**

**Version**
Steel, hardened, width 47mm, height 39mm.

**Application**
Ground support for setting the workpiece clamping height between the CleverClamp clamping and stop elements.

**Important**

**ER-099231 Support 44 CleverClamp**

**Version**
Steel, hardened, width 47mm, height 44mm.

**Application**
Ground support for setting the workpiece clamping height between the CleverClamp clamping and stop elements.

**Important**

**ER-099232 Support 46 CleverClamp**

**Version**
Steel, hardened, width 47mm, height 46mm.

**Application**
Ground support for setting the workpiece clamping height between the CleverClamp clamping and stop elements.

**Important**

Supports of the heights 34, 39, 44 and 46 can only be used in combination with the 5-axis clamping and stop elements.
EROWA CleverClamp System

Accessories / Parallel supports wide

**ER-099233 Support 20 Wide CleverClamp**

- **Version**: Steel, hardened, width 93mm, height 20mm.
- **Application**: Ground support for setting the workpiece clamping height between the CleverClamp clamping and stop elements.

**ER-099234 Support 24 Wide CleverClamp**

- **Version**: Steel, hardened, width 93mm, height 24mm.
- **Application**: Ground support for setting the workpiece clamping height between the CleverClamp clamping and stop elements.

**ER-099235 Support 29 Wide CleverClamp**

- **Version**: Steel, hardened, width 93mm, height 29mm.
- **Application**: Ground support for setting the workpiece clamping height between the CleverClamp clamping and stop elements.

**ER-099236 Support 31 Wide CleverClamp**

- **Version**: Steel, hardened, width 93mm, height 31mm.
- **Application**: Ground support for setting the workpiece clamping height between the CleverClamp clamping and stop elements.

**ER-099237 Support 34 Wide CleverClamp**

- **Version**: Steel, hardened, width 93mm, height 34mm.
- **Application**: Ground support for setting the workpiece clamping height between the CleverClamp clamping and stop elements.
- **Important**: Supports with the heights 34, 39, 44 and 46 can only be used in combination with the 5-axis clamping and stop elements.

**ER-099238 Support 39 Wide CleverClamp**

- **Version**: Steel, hardened, width 93mm, height 39mm.
- **Application**: Ground support for setting the workpiece clamping height between the CleverClamp clamping and stop elements.
- **Important**: Supports with the heights 34, 39, 44 and 46 can only be used with the 5-axis clamping and stop elements.

**ER-099239 Support 44 Wide CleverClamp**

- **Version**: Steel, hardened, width 93mm, height 44mm.
- **Application**: Ground support for setting the workpiece clamping height between the CleverClamp clamping and stop elements.
- **Important**: Supports with the heights 34, 39, 44 and 46 can only be used in combination with the 5-axis clamping and stop elements.

**ER-099240 Support 46 Wide CleverClamp**

- **Version**: Steel, hardened, width 93mm, height 46mm.
- **Application**: Ground support for setting the workpiece clamping height between the CleverClamp clamping and stop elements.
- **Important**: Supports of the heights 34, 39, 44 and 46 can only be used in combination with the 5-axis clamping and stop elements.
EROWA CleverClamp System

Accessories

**ER-099243** Elevation for rail H60
CleverClamp

- **Version**: Steel, hardened, height 60mm, width 94mm, length 130mm.
- **Application**: CleverClamp 5-axis elevation - enables optimal machine spindle accessibility in 5-axis applications.
- **Mounting**: On CleverClamp rail.

**ER-099246** Quick Chuck 100 P
CleverClamp

- **Version**: CleverClamp carrier element with QuickChuck 100P, manual.
- **Application**: Adapter between CleverClamp and EROWA ITS pallets/holders.
- **Mounting**: On CleverClamp rail.

**ER-099241** Support Holder
CleverClamp

- **Version**: Steel, hardened, width 94mm, height 15mm.
- **Application**: Holder for ground supports used to bridge big clamping distances.
- **Important**: A mill stop can be fitted to the holder additionally.

**ER-099201** MillStop
CleverClamp

- **Version**: Adjustable stop made of steel.
- **Application**: Lateral stop on any CleverClamp clamping or stop element.
- **Mounting**: Use the bolts supplied to fit it laterally to the CleverClamp clamping or stop elements of your choice.

**ER-082273** Magnetic stop
CleverClamp

- **Version**: Stop made of anodized aluminum.
- **Application**: Magnetic stop used for positioning workpieces in vises.
- **Important**: Remove the magnetic stop before machining the part.

**ER-099166** Stop Jaw Flat / Grip Wide
CleverClamp

- **Version**: Steel, hardened, width 94mm, height 34mm, one side smooth, the other with grip contours.
- **Application**: Widening the stop surface for better grip when clamping wide workpieces.
- **Mounting**: Use the bolts supplied to fit it to the front of the CleverClamp clamping or stop elements of your choice.
- **Important**: Can be ideally combined for use with the 94mm-width linear jaws.

**ER-099195** Stop Jaw Stamp Wide
CleverClamp

- **Version**: Steel, hardened, width 94mm, height 34mm, with stamping.
- **Application**: Widening the stamping stop surface for better grip when clamping wide workpieces at minimum clamping height with stamping.
- **Mounting**: Place stop jaw behind the clamping or stop element of your choice and attach with lateral bolt.

**ER-099164** Stop Jaw Soft Wide
CleverClamp

- **Version**: Steel, soft, width 94mm, height 34mm.
- **Application**: Soft stop jaw, ideal for milling workpiece-specific clamping contours.
- **Mounting**: Use the bolts supplied to fit it to the front of the CleverClamp clamping or stop elements of your choice.

**ER-099079** Pull Down Jaw Flat
CleverClamp

- **Version**: Steel, hardened, stop side smooth or with grip contours.
- **Application**: ER-099079: stop side smooth - ideal for clamping workpieces with machined surfaces.
  ER-099092: stop side with grip contours for additional grip.
- **Mounting**: Can be used on all CleverClamp pull-down clamping elements.
EROWA CleverClamp System

Accessories

ER-099098 Linear Jaw Flat CleverClamp

Version
Steel, hardened, width 48mm, stop side smooth or with grip contours.

Application
Stop side smooth - ideal for clamping workpieces with machined surfaces.

Mounting
Can be used on all CleverClamp linear clamping elements.

ER-099099 Linear Jaw Grip CleverClamp

Version
Steel, hardened, width 48mm, stop side smooth or with grip contours.

Application
Stop side with grip contours for additional grip.

Mounting
Can be used on all CleverClamp linear clamping elements.

ER-099100 Linear Jaw Flat Wide CleverClamp

Version
Steel, hardened, width 94mm, stop side smooth or with grip contours.

Application
Stop side smooth - ideal for clamping workpieces with machined surfaces.

Mounting
Can be used on all CleverClamp linear clamping elements.

ER-099114 Linear Jaw Grip Wide CleverClamp

Version
Steel, hardened, width 94mm, stop side smooth or with grip contours.

Application
Stop side with grip contours for additional grip.

Mounting
Can be used on all CleverClamp linear clamping elements.

ER-099119 Linear Jaw Stamp CleverClamp

Version
Steel, hardened, width 48mm, with stamp contours and smooth step.

Application
Ideal for clamping blanks at the minimum clamping height of 3mm and parts with angle error.

Mounting
Can be used on all CleverClamp linear clamping elements.

ER-099121 Linear Jaw Stamp Wide CleverClamp

Version
Steel, hardened, width 94mm, with stamp contours.

Application
Ideal for clamping blanks at the minimum clamping height of 3mm and parts with angle error.

Mounting
Can be used on all CleverClamp linear clamping elements.

ER-099123 Linear Jaw Soft CleverClamp

Version
Steel, soft, width 48mm.

Application
To produce jaws with contours of your choice.

Mounting
Can be used on all CleverClamp linear clamping elements.

ER-099126 Linear Jaw Soft Wide CleverClamp

Version
Steel, soft, width 94mm.

Application
To produce jaws with contours of your choice.

Mounting
Can be used on all CleverClamp linear clamping elements.

ER-099313 EWIS™ Chip Set CleverClamp

Version
EWIS Rapid chip with 5 ø14 chip holders.

Application
For the identification of individual parts when using CleverClamp rails as a recurring machining fixture in combination with the EROWA Manufacturing Control and EROWA JMS® Pro Process Control Systems.

Mounting
Chips have to be glued on (ref. instruction manual of the relevant CleverClamp rails).
**EROWA CleverClamp System**

### Operation tools

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Version</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>ER-007769</td>
<td>Hexagon socket head wrench SW 6 with grip, PB 207</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ER-007770</td>
<td>Hexagon socket head wrench SW 8 with grip, PB 207</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ER-052602** Torque wrench Tohnichi 10 - 50 Nm to self centering vise 100/150/200

**ER-099312** Brush CleverClamp

**ER-099484** Hex bit 3/8" extra long CleverClamp

**ER-099155** Ruler 320 (Ruler length 320) CleverClamp

### Spare parts

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Version</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>ER-099157</td>
<td>Ruler 398 (Ruler length 398) CleverClamp</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ER-099132</td>
<td>Claw 50L CleverClamp</td>
<td>ER-099132: steel</td>
<td>Attachment claw for CleverClamp elements on CleverClamp rails.</td>
</tr>
<tr>
<td>ER-099134</td>
<td>Claw 50R CleverClamp</td>
<td>ER-099134: steel</td>
<td></td>
</tr>
<tr>
<td>ER-099137</td>
<td>Claw 60L CleverClamp</td>
<td>ER-099137: steel</td>
<td>Attachment claw for CleverClamp elements on CleverClamp rails.</td>
</tr>
<tr>
<td>ER-099141</td>
<td>Claw 60R CleverClamp</td>
<td>ER-099141: steel</td>
<td></td>
</tr>
<tr>
<td>ER-099309</td>
<td>Replacement kit pull-down-/stop element</td>
<td></td>
<td>Spare parts for CleverClamp pull-down and stop elements.</td>
</tr>
<tr>
<td>ER-099654</td>
<td>Replacement kit linear and stop element</td>
<td></td>
<td>Spare parts for CleverClamp linear and stop elements.</td>
</tr>
</tbody>
</table>

**EROWA CleverClamp System**

### Operation tools

- **Hexagon socket head wrench SW 6 with grip, PB 207**
- **Hexagon socket head wrench SW 8 with grip, PB 207**

### Spare parts

- **Ruler 398 (Ruler length 398) CleverClamp**
- **Claw 50L CleverClamp**
- **Claw 50R CleverClamp**
- **Claw 60L CleverClamp**
- **Claw 60R CleverClamp**
- **Replacement kit pull-down-/stop element CleverClamp**
- **Replacement kit linear and stop element CleverClamp**
The next step

Important things need to be planned. And your next step is certainly among the important things. For it is your start into a new, efficient era. We are pleased to be with you on the way. As consultants, in practice. For you to know at all times what you’re engaging in.

The next EROWA branch office is not far – take the step.