

EROWA®
system solutions



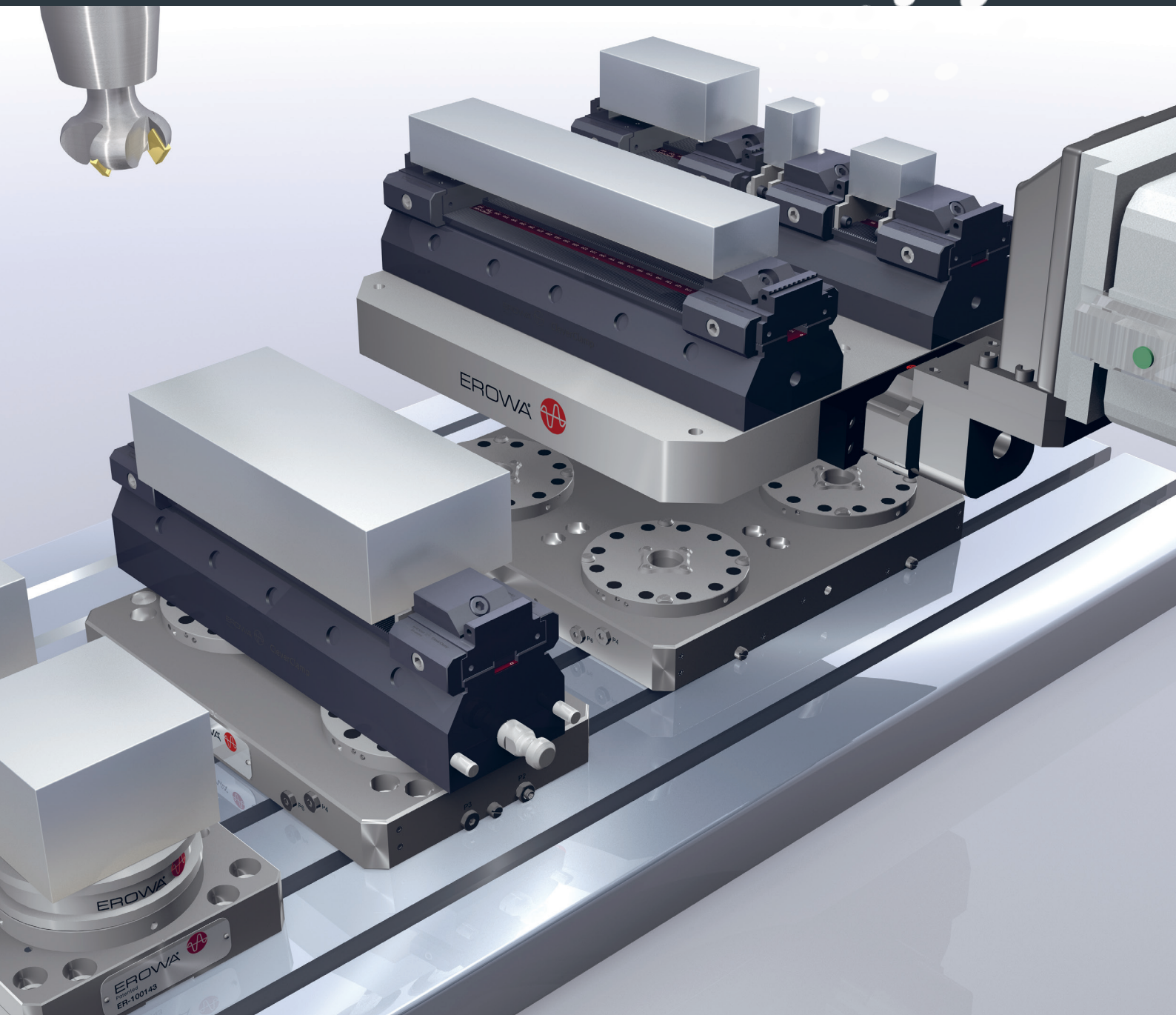
MTS Zero Point Workholding System

The universal interface

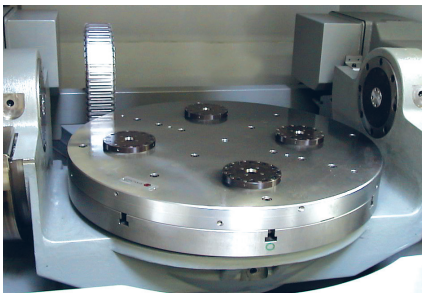
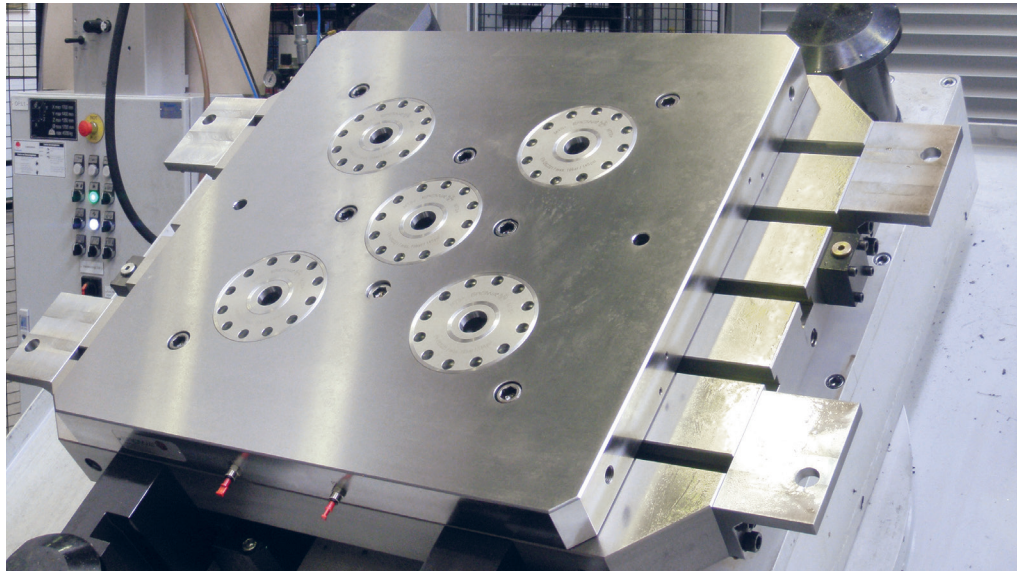


The consistent workholding system

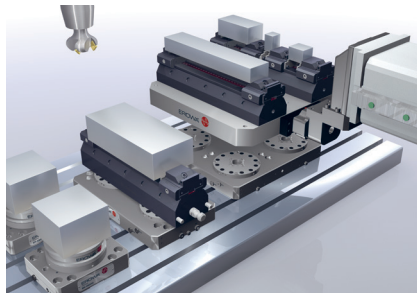
Single palletizing, multiple palletizing, consistent palletizing.



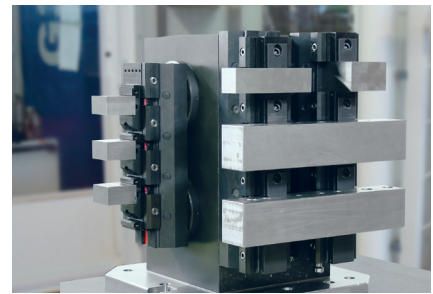
EROWA MTS (Modular Tooling System) is a flexible workholding system. It offers various usage possibilities: Single palletizing with one MTS chuck or multiple palletizing with several MTS chucks. The MTS chucks are mounted directly on the machine table or integrated into base plates.



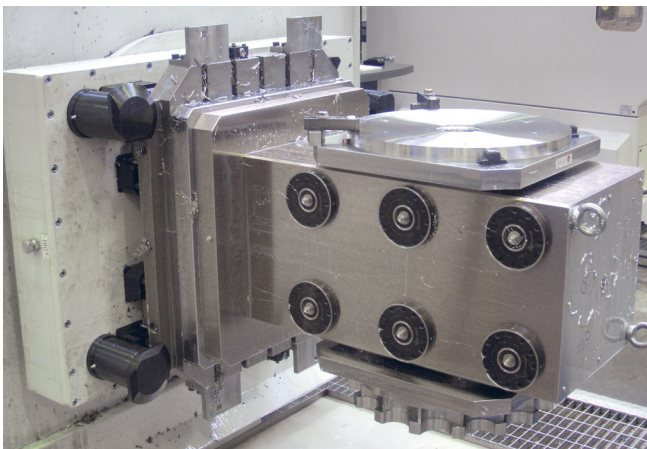
The low profile height of the EROWA MTS workholding system allows plenty of space for workpieces. MTS chucks are mounted on the machine table or integrated directly into it.



MTS base plates are the flexible and precise interface for single or multiple palletizing. MTS base plates are available in various version. With 1, 2, 4, 6 or 8 chucks, depending on the model. We'll be happy to advise you on customized versions as well.



The MTS mineral cast cube provides a flexible interface to the EROWA CleverClamp workholding system and fixtures.



ALWAYS FITS

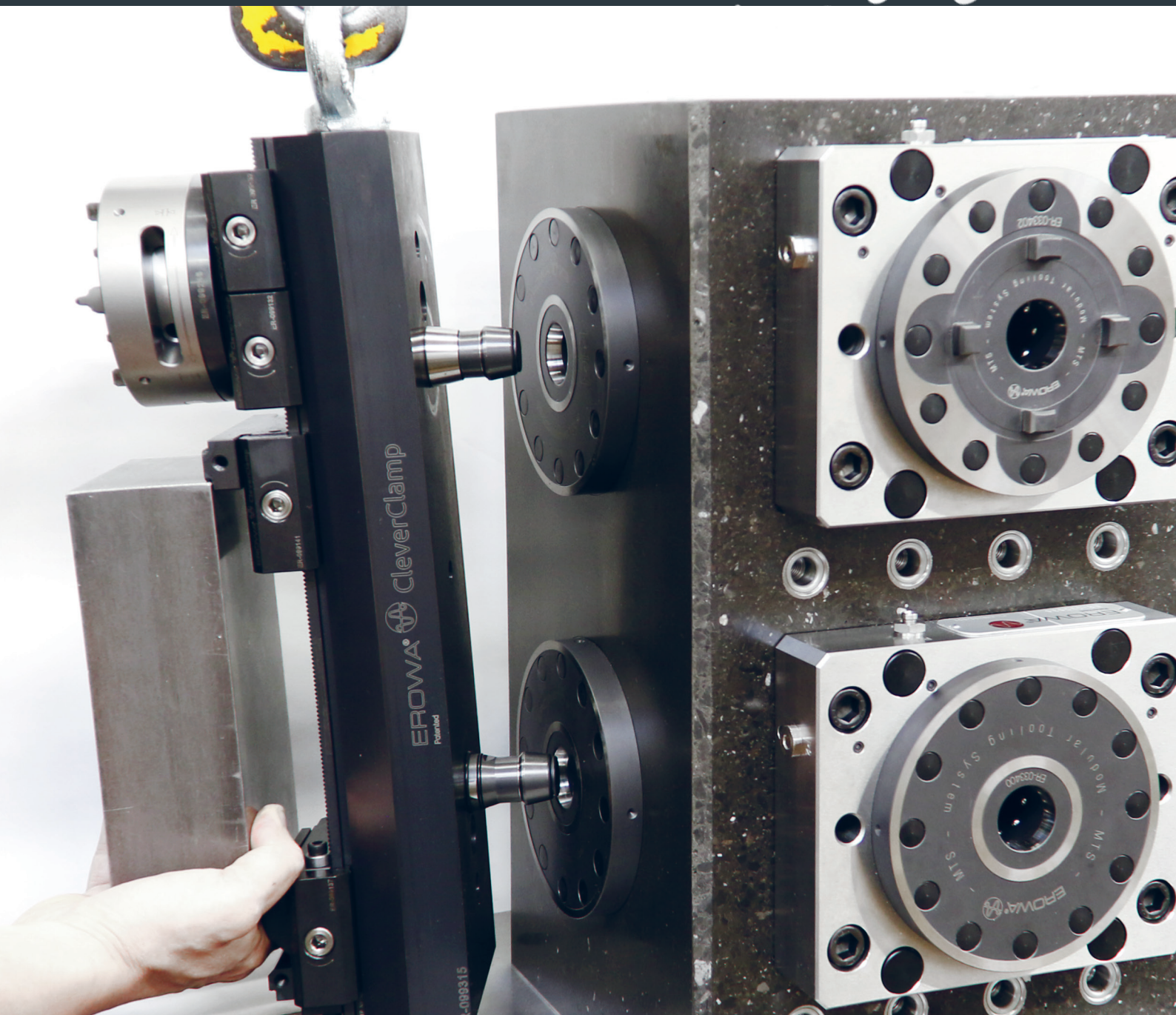
Standardized and consistent interface.

Low profile.

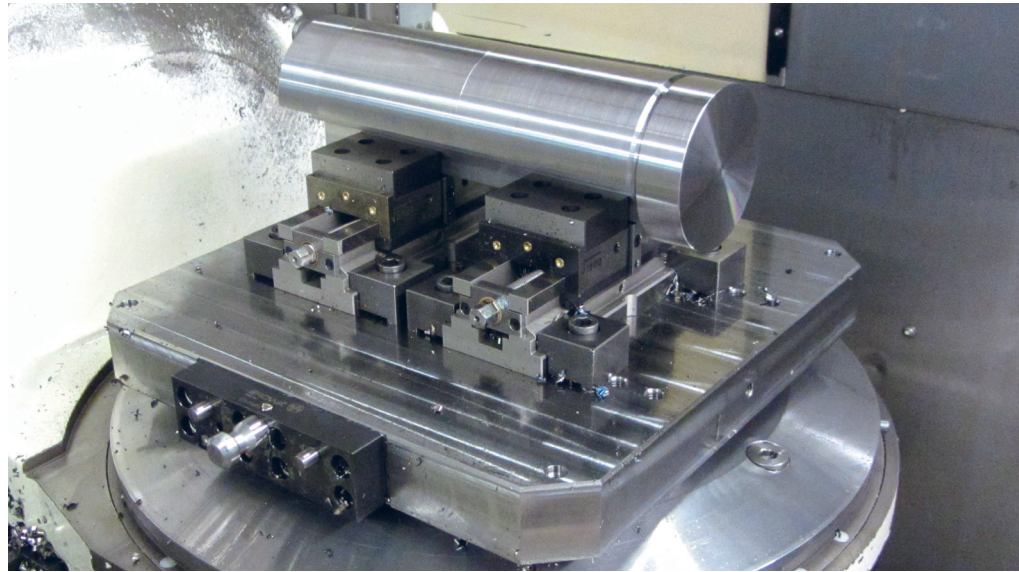
5-sided machining in one set-up.

Minimal set-up times

The standardized interface between the machine and workpiece allows for quick and precise changeover.



Downtime of the machine is reduced to a minimum by MTS. New orders are set up during primary machining. Prepared jobs are replaced in an instant against finished ones. MTS chucks are operated manually or automatically.



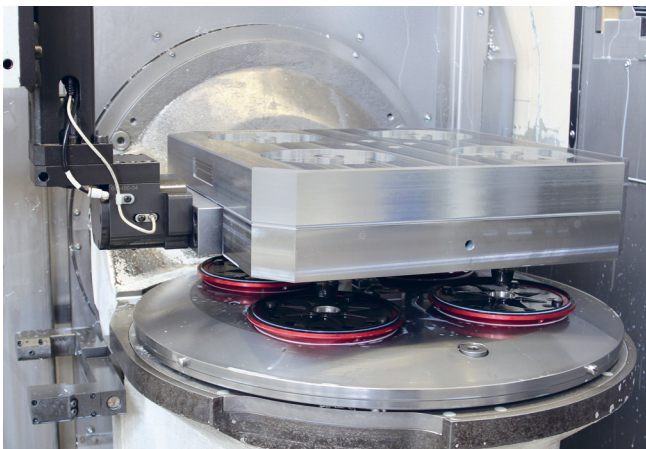
Existing vises, gauges and fixtures are equipped with chucking spigots or palletized and used immediately.



More workpieces are prepared while the machine is in production.



Different jobs on one machine. The conversion of clamping devices takes a few seconds.

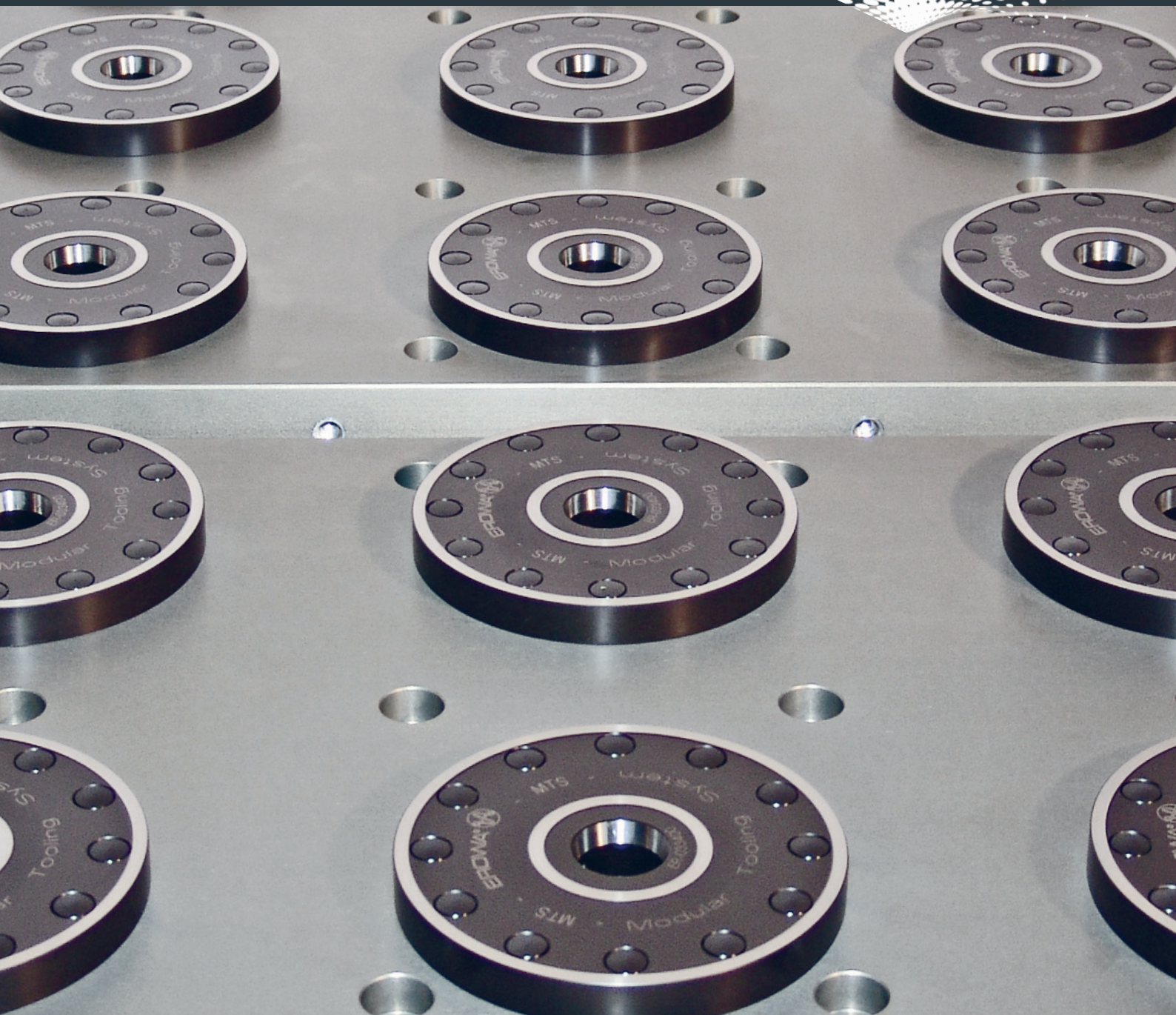


TIME SAVING

Chucking spigots mounted directly on the workpiece. The zero point is defined. Alignment is not necessary. Ideally suited for automatic pallet change.

MTS according to your wishes

Whether standard or a custom configuration, the MTS system adapts to any machine situation.
We'll be happy to advise you!

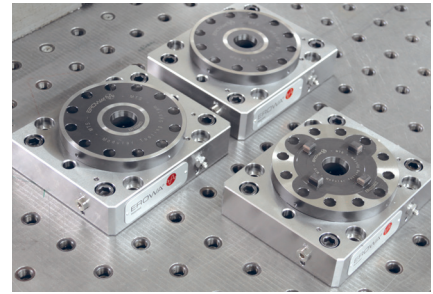




Machine table with flexible MTS clamping options.



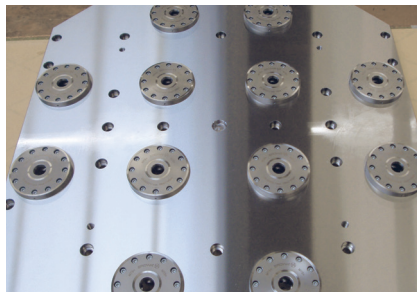
Customized table equipment with large MTS pallet.



MTS single base plates are quickly installed and ready to use.



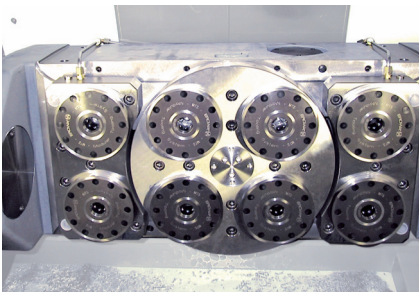
Vacuum clamping on an MTS pallet.



Special MTS base plate, 950 x 950 mm, with 12 MTS chucks.



MTS 81 base plates offer flexible clamping options requiring minimal space.



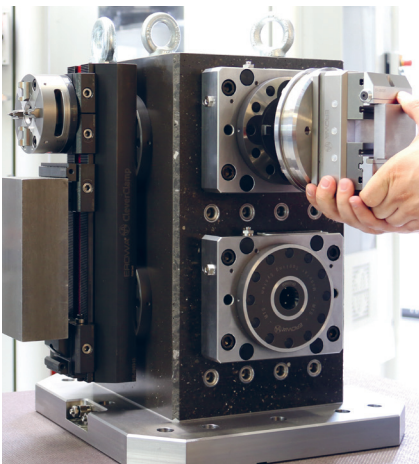
Swivel table with 8 MTS chucks.



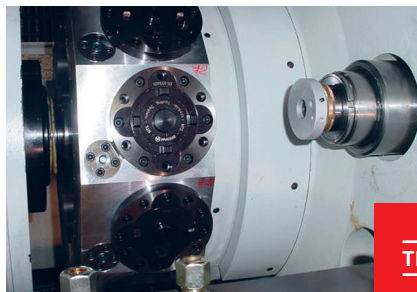
Preparing for automation: fixture with MTS interface.



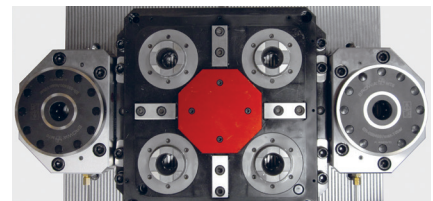
MTS pallet ø 400 mm with 3-jaw chuck.



MTS mineral cast cube with individual clamping options.



Practical applications in the field showing the flexible use of the MTS zero-point workholding system.



THE WHOLE FLEXIBILITY

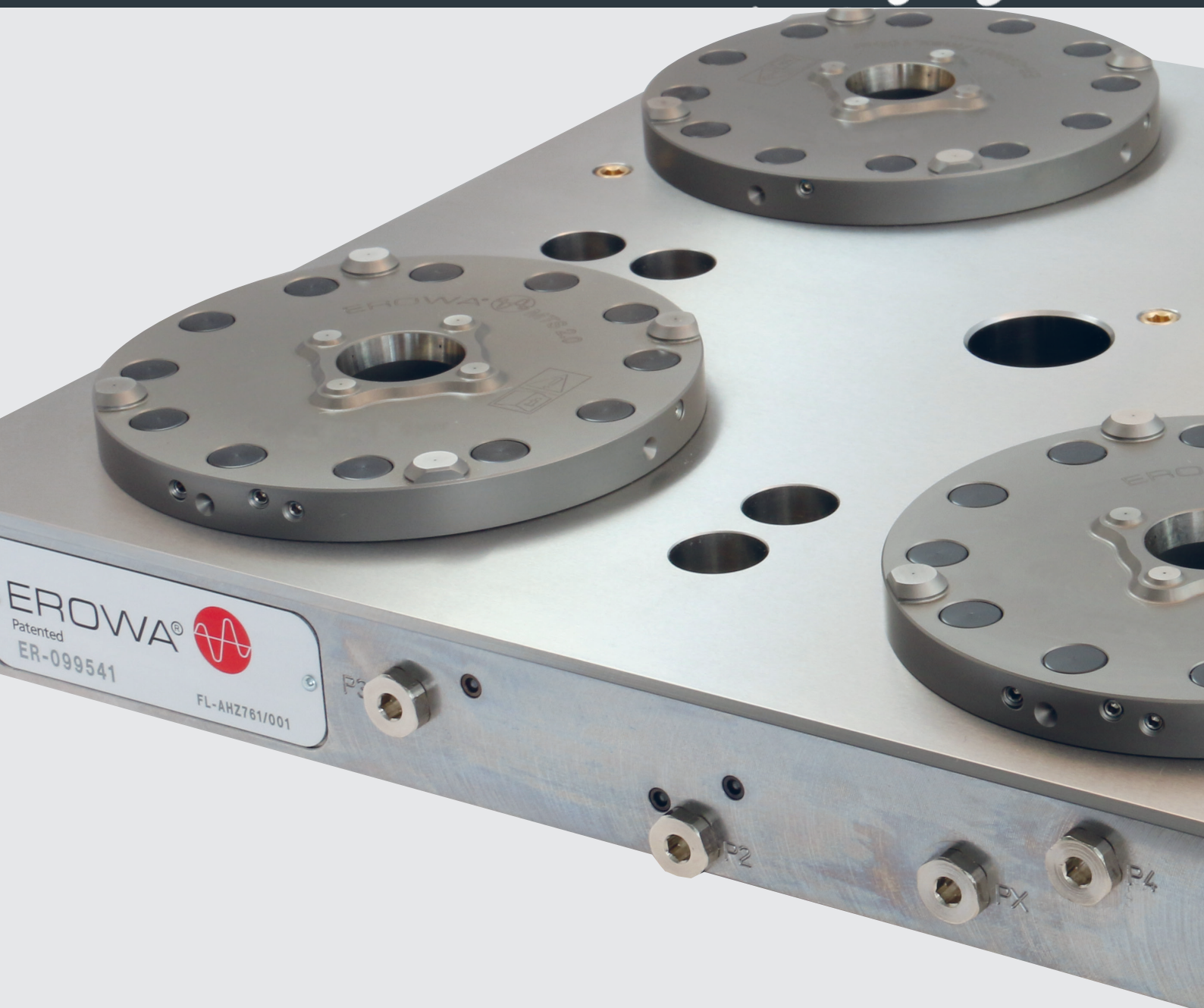
For machine-specific solutions.

Modular extensions possible.

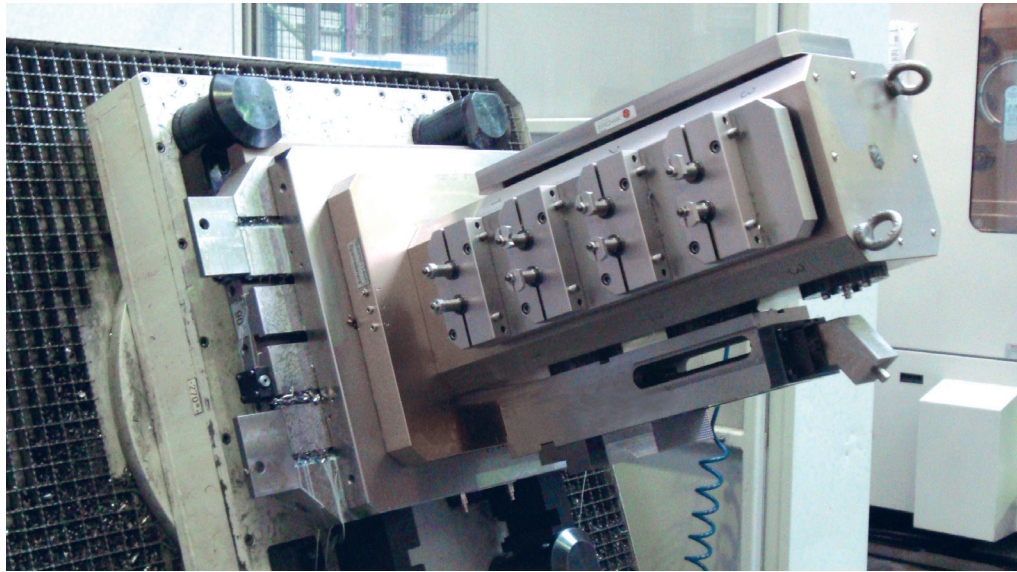
Tailored to your needs.

High process reliability with MTS 2.0

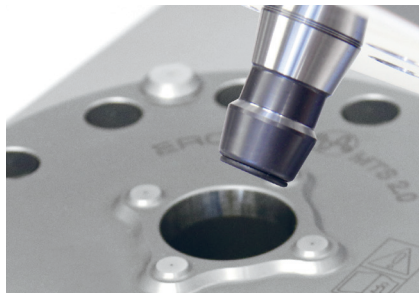
In practice, it's reliability what counts above all. Both the open check and the cleaning of all surfaces are important functions, which yield the necessary safety in automatic operation.



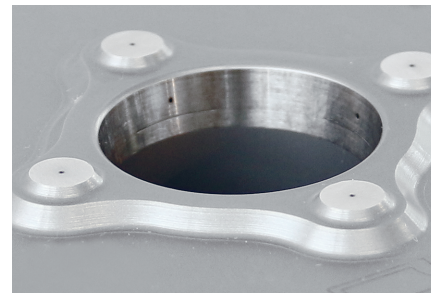
The integrated open check feature ensures that the MTS 2.0 chucks are positively open before a pallet change. This is especially important for large workpieces and fixtures.



MTS 2.0 control unit for controlling the functions of the MTS 2.0 chuck, such as: opening / cleaning / reclamping and open check.

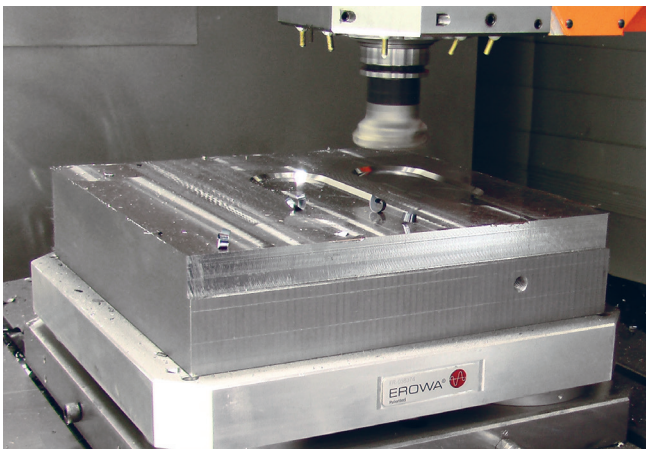


Utmost repeating accuracy of < 0.003 mm. The centering and compensation spigots position and center the workpiece carrier accurately in the MTS 2.0 chucks.



When changing the workpiece, the contact surfaces of the MTS 2.0 chucks and the chucking spigots are cleaned automatically. The MTS pallets are positioned neatly and accurately.

MTS 2.0 chucks require only 6 bar opening pressure despite their high clamping power of 20,000 N.



MTS 2.0: RELIABLE AND ACCURATE

Integrated open check and cleaning.

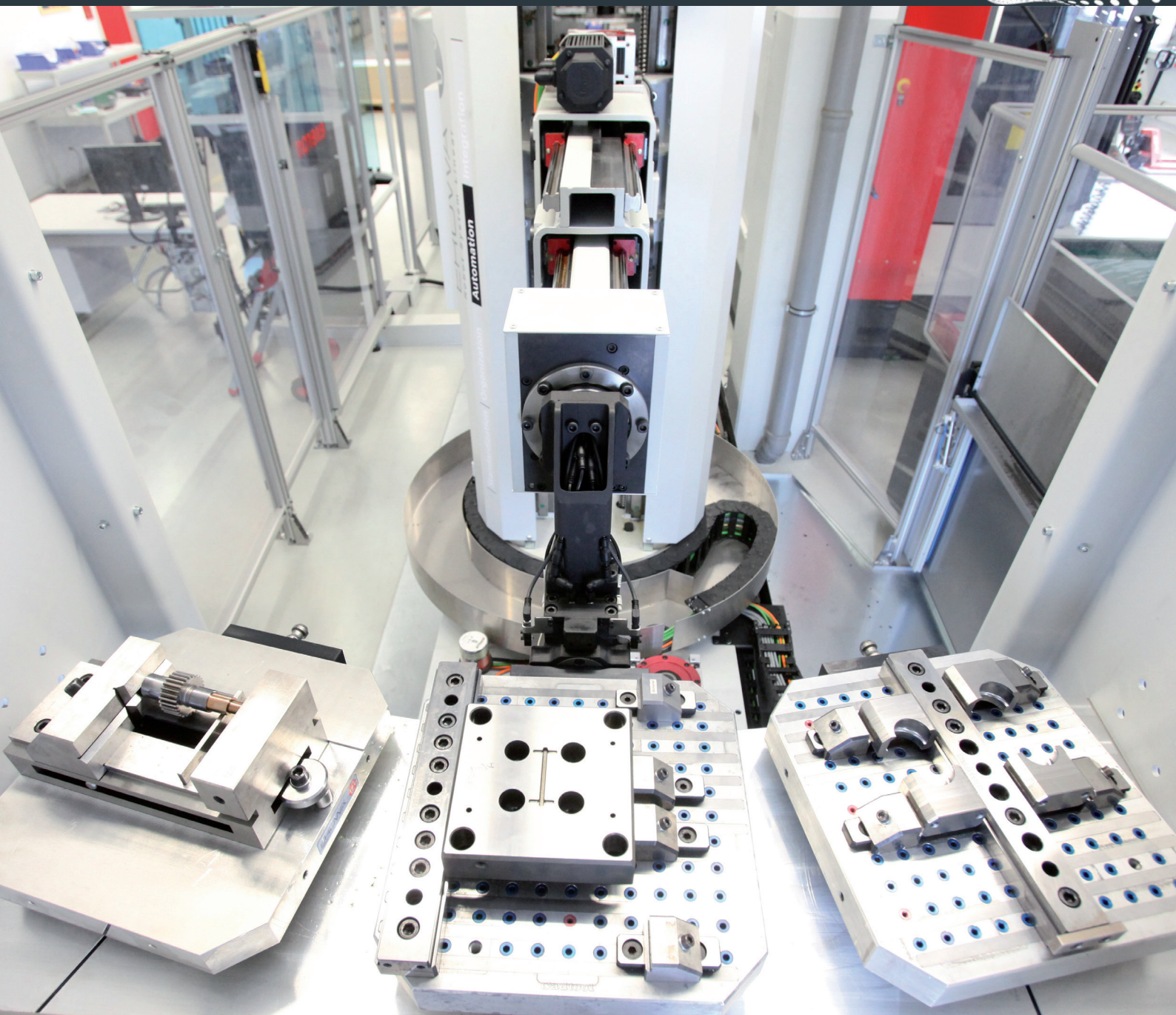
Repeating accuracy < 0.003 mm.

Clamping power 20,000 N.

Only 6 bar opening pressure.

Increase production through automation

More efficient manufacturing thanks to perfectly matched automation solutions.

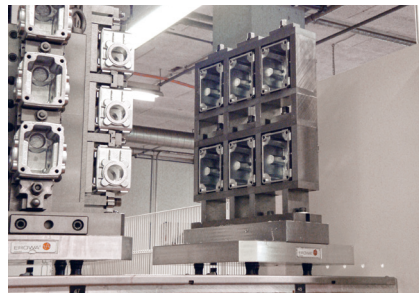


By setting up new workpieces during primary machining, the availability of productive hours is considerably increased. In addition, marginal and night hours as well as the weekend can be used productively.

EROWA offers customized handling system solutions from manual lifting devices to sophisticated robotic systems.



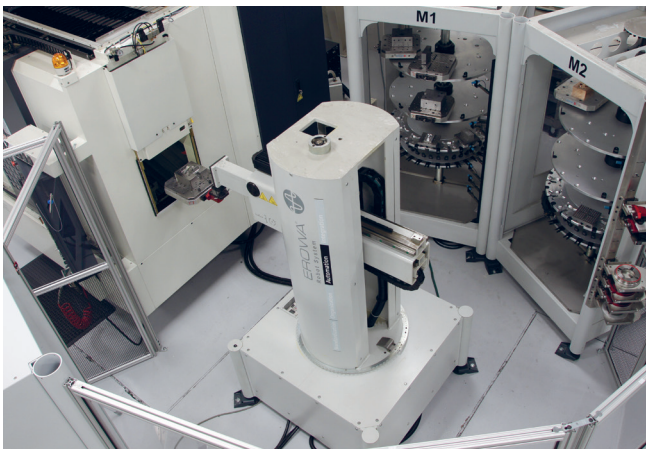
The operator provides the pallets on a loading station arranged at an ergonomically correct working height. By pressing a button, he then commands the robot to pick up and insert the prepared job into an empty pocket in the magazine.



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



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



AUTOMATICALLY GOOD

Individually tailored to your needs.

Transfer weight of up to 500 kg.
EROWA Process Control System.

Combined manufacturing

By adapting EROWA chucks on MTS pallets, more EROWA system sizes can be seamlessly integrated in the MTS system. The chucks are operated by an air jet or by direct control from the machine.



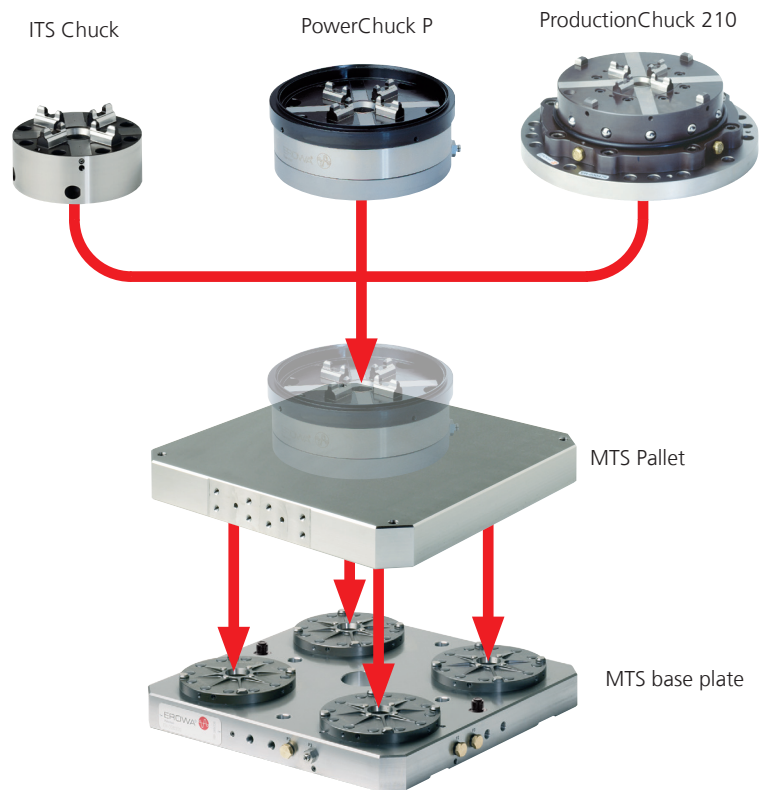
MTS adaptations

Various EROWA chucks (see diagram) can be mounted on MTS pallets. No more than two additional air lines are necessary for control. One for opening and one for cleaning air.

Medium transfer with automatic operation

To operate the chuck mounted on the MTS pallet, the MTS pallet must be equipped with a coupling system. The coupling system serves as the interface between the MTS base plate and the MTS pallet.

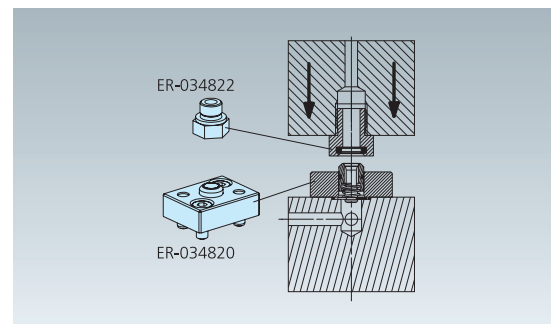
EROWA MTS chucks are operated by compressed air. Other devices and adaptations can be operated hydraulically. For both options, we offer medium coupling systems.



Operation with air - you will need:

ER-034820	MTS air coupling
ER-034822	MTS air coupling pallet 1 piece

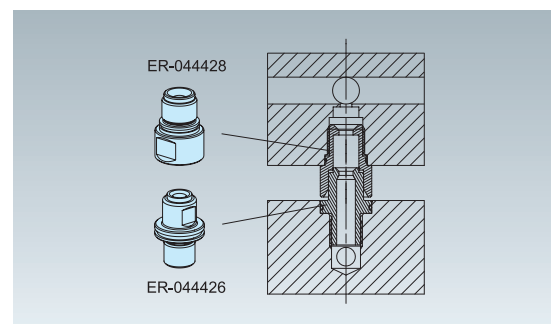
Application	The MTS air coupling ER-034820 combined with the MTS air coupling ER-034822 serves as a pneumatic interface between MTS base plates (A) and MTS pallets (B).
For use	with compressed air.
Working pressure	max. 10 bar.



Operation with oil or air - you will need:

ER-044426	Nipple for MTS base plates
ER-044428	Coupling for MTS pallets

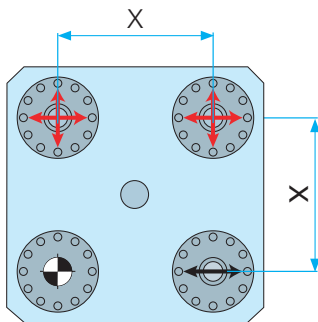
Application	The coupling for MTS pallets ER-044428, in combination with the nipple for MTS base plates ER-044426, serves as an interface for the medium connection between MTS base plates (A) and MTS pallets (B).
For use	with compressed air, with vacuum, with oil.
Working pressure	max. 200 bar.
Important	Docking- and undocking only depressurized.



Tips & tricks

On these two pages we have collected frequently asked questions and their answers.

Pitch



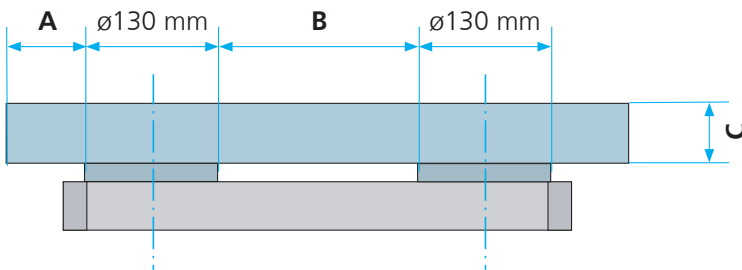
The pitch (X) is the distance between the centers of two MTS chucks.

MTS base plates are delivered with a standard pitch of 200 mm or 250 mm.

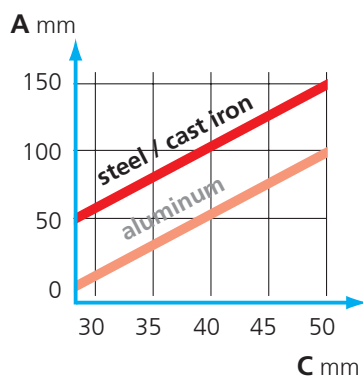
The minimum pitch for integral chucks is 140 mm.

The minimum pitch for mounting chucks is 200 mm.

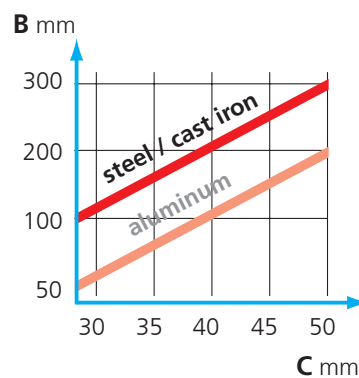
Pallet overhang



The pallet overhang (A) (B) affects stability and precision of the whole set-up. The shorter the distances, the better the results.

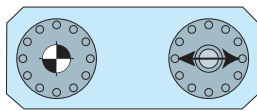


Maximum overhang **A**

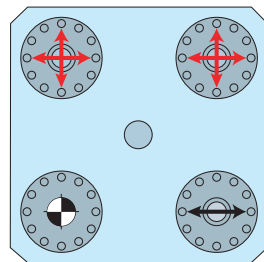


Maximum distance **B**

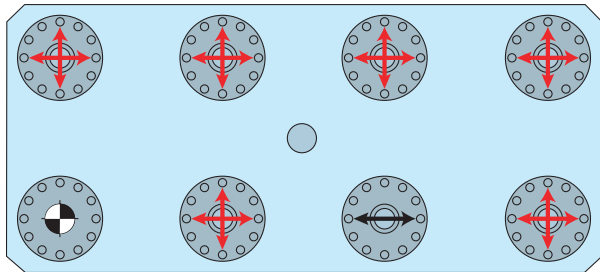
Arrangement of MTS chucking spigots – Examples



MTS pallet 2-fold



MTS pallet 4-fold



MTS pallet 8-fold

MTS centering spigot

The **centering spigot** defines the zero point (free of play).



MTS chucking spigot

Chucking spigot without centering function.



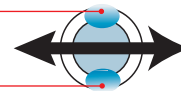
MTS compensation spigot

The **compensation spigot** positions the pallet in only one axis (X or Y) and compensates dimensional differences due to thermal growth.



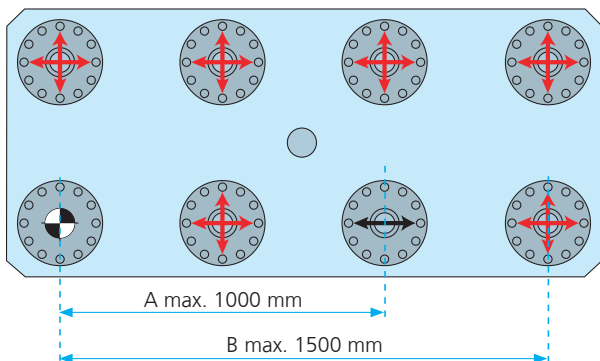
possible compensation movements

centering surfaces



All order numbers of the MTS chucking spigots can be found on page 54.

Chucking spigot distance



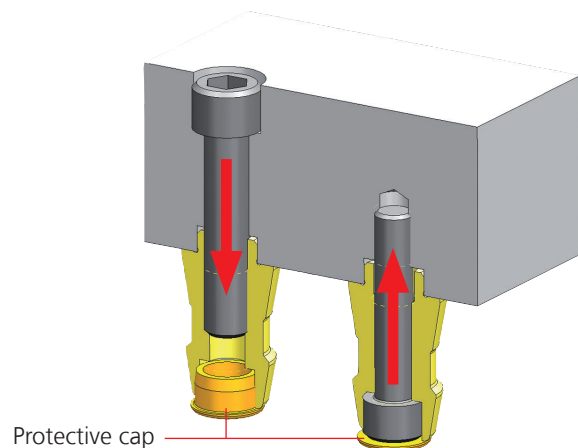
A | Maximum distance between the MTS centering spigot and the MTS compensation spigot.

B | Maximum distance between the MTS centering spigot and the MTS compensation spigot.

Installation of MTS chucking spigots

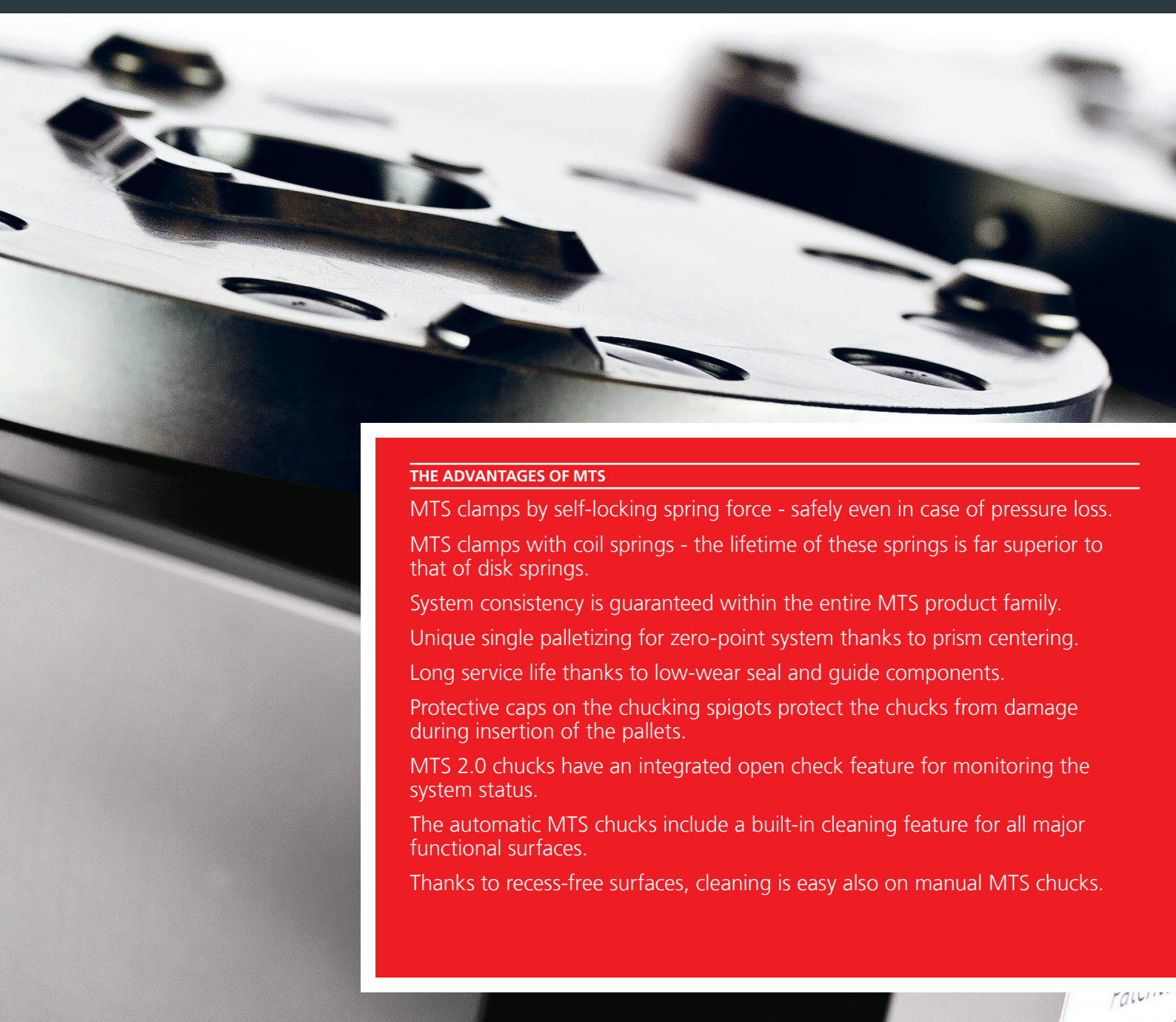
The MTS clamping spigots can be attached to the pallet from below or from above.

- Low profile installation.
- Easy production of specialty pallets.
- Chucking spigots mounted directly on the workpiece.



Outstanding properties

The MTS zero-point workholding system has many outstanding features. All of these features fit together to create the optimized overall picture of the MTS system.



THE ADVANTAGES OF MTS

MTS clamps by self-locking spring force - safely even in case of pressure loss.

MTS clamps with coil springs - the lifetime of these springs is far superior to that of disk springs.

System consistency is guaranteed within the entire MTS product family.

Unique single palletizing for zero-point system thanks to prism centering.

Long service life thanks to low-wear seal and guide components.

Protective caps on the chucking spigots protect the chucks from damage during insertion of the pallets.

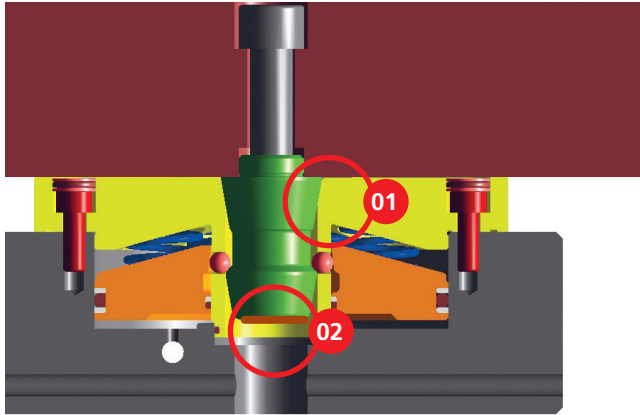
MTS 2.0 chucks have an integrated open check feature for monitoring the system status.

The automatic MTS chucks include a built-in cleaning feature for all major functional surfaces.

Thanks to recess-free surfaces, cleaning is easy also on manual MTS chucks.

The advantages of short-taper centering

The chucking spigot is deformed by high pulling powers within the elastic limit. This pulls the pallet up to the Z support. The result is an accurate location, robust and vibration-resistant centering.



01 | Accurate

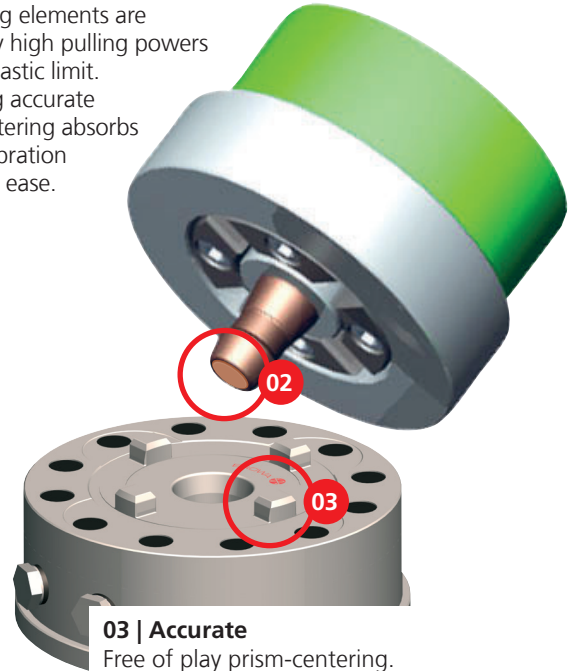
Free of play round-cone centering.
Easy insertion of pallets.

02 | Protected

The protective cap protects the Z-support during insertion of the pallet.

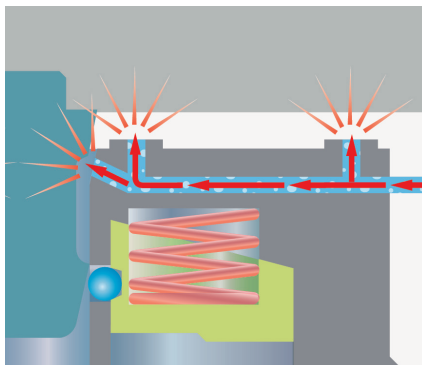
Single palletizing with prism-centering

The centering elements are deformed by high pulling powers within the elastic limit. The resulting accurate location centering absorbs even high vibration powers with ease.

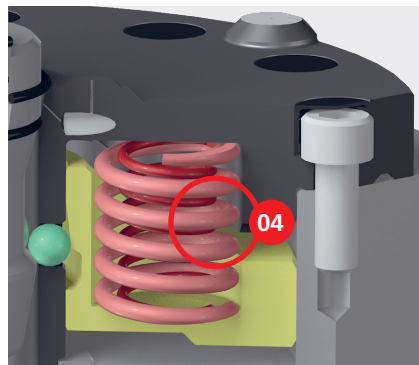


03 | Accurate

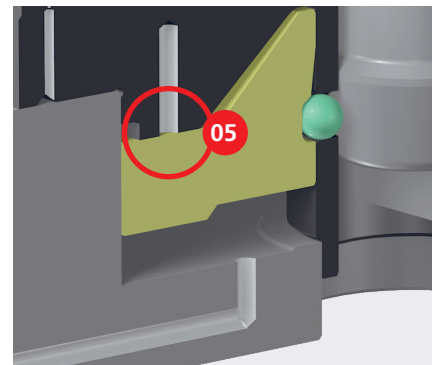
Free of play prism-centering.



Automatic cleaning of the contact surfaces and the centering spigot while changing the workpiece.



The clamping mechanism with coil springs (4) ensures powerful and safe clamping of the workpiece carriers, even in case of a pressure loss.



With the integrated open check feature (5), you know with certainty if the MTS 2.0 chuck is open.

EROWA MTS

The various EROWA MTS palletizing systems at a glance

EROWA MTS 81

Small size, high clamping power

MTS 81 is used wherever available space is limited.

There is no need to give up the benefits of a zero-point tooling system and high clamping power.

EROWA MTS

The universal interface

Used and proven in tens of thousands of practical applications, the MTS zero-point tooling system is indispensable in machining production and the EROWA product portfolio.

EROWA MTS 2.0

The zero-point tooling system for highest demands

With integrated open monitoring, a maximum clamping power of 20,000 N and enhanced precision, the new MTS 2.0 generation fulfills even the most exacting demands. A top product with an attractive price-performance ratio!

On the following pages, you will find detailed product information including a portfolio overview of the individual EROWA MTS palletizing systems.

EROWA MTS+

Contact your EROWA dealer for information about MTS+.

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 Robot gripper Combi
12. Handling with EROWA Robot gripper C
13. Handling with EROWA Robot gripper 72
14. Handling with EROWA Robot gripper 115
15. Handling with EROWA Robot gripper 148
16. Handling with EROWA Robot gripper RN PC 210
17. Handling with EROWA Robot gripper RCS
18. Handling with EROWA Robot gripper WGS-500

EROWA MTS PALLETIZING SYSTEM

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For chip-removing processes



For EDM sinking



For WEDM

EROWA MTS 81

Small size, high clamping power!

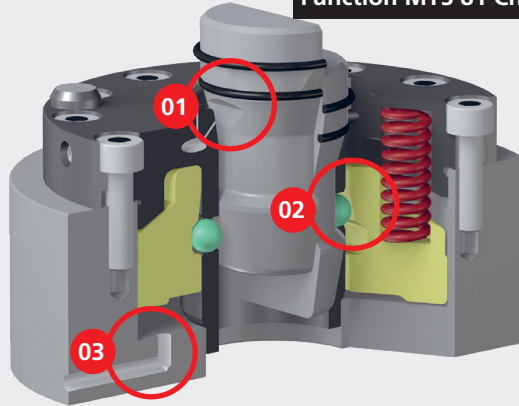
Applications



Handling

Manual / Loading facility / Robot

Function MTS 81 Chuck

**01 | Precise**

Free of play, conical centering.
Repeatability: < 0.005 mm.
Easy insertion of the pallets
without any jamming.

02 | Clamping mechanism

Reliable clamping mechanism through
self-locking ball lock. Stable, low level
of vibration.

03 | Open

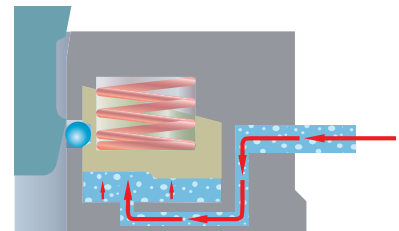
MTS 81 chucks are operated
pneumatically.

Technical data - MTS 81

	MTS 81
Repeatability	< 0.005 mm
Activation	clamped without pressure
Opening pressure	min. 8.5 bar
Process monitoring	pneumatically
Clamping power	
with reclamping	10,000 N/chuck
Holding power	> 60,000 N/chuck
Reclamp	yes
Clamping cycles	> 500,000

Power package

A reclamping feature provides up to
10,000 N of clamping power.
The chucks are opened pneumatically.



compatible

- MTS 81
- MTS
- MTS 2.0
- MTS+

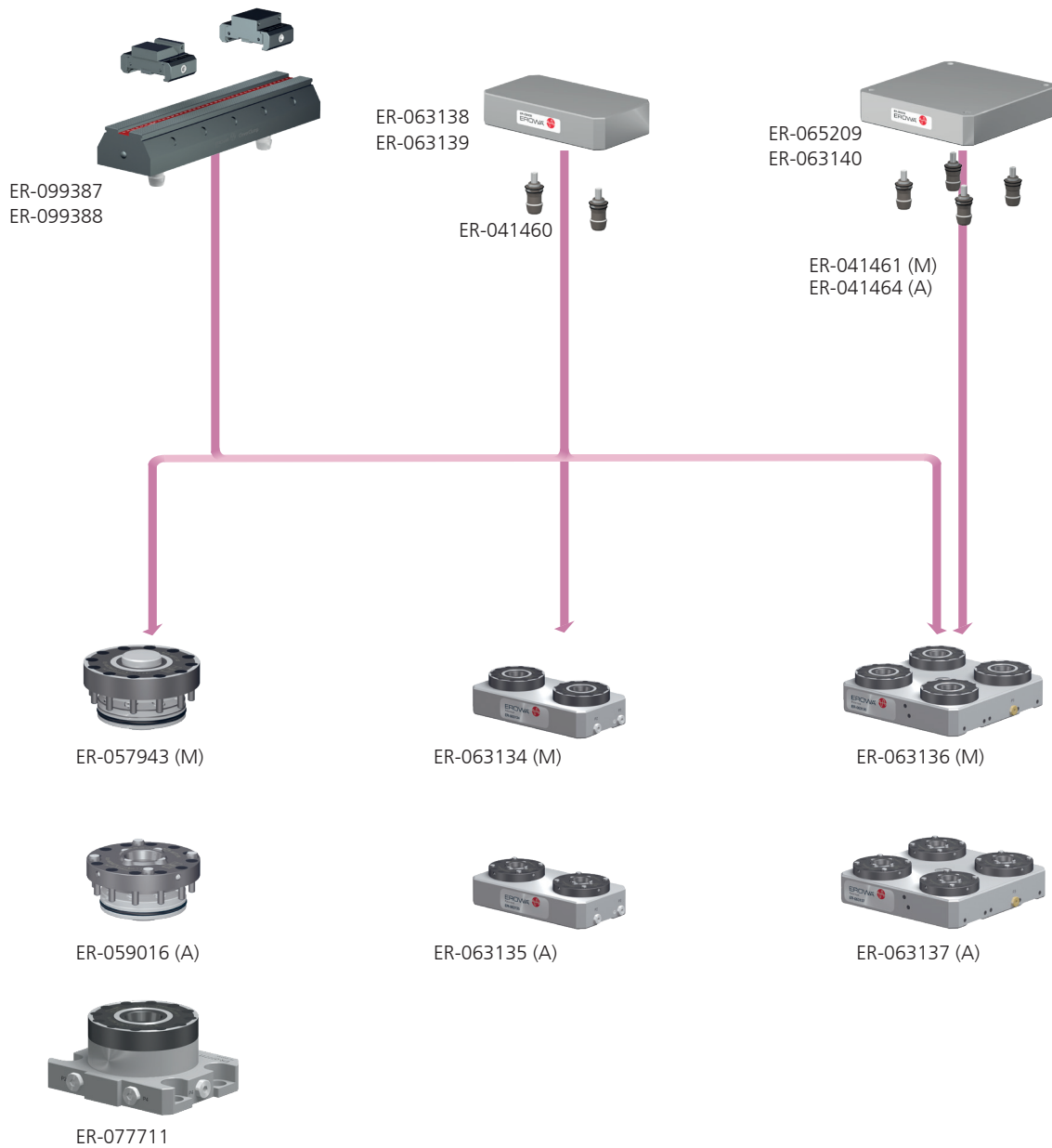


EROWA MTS 81

The components

(M) = manual
(A) = automatic

CleverClamp System:

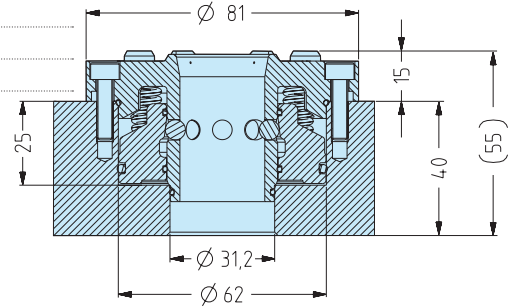


EROWA MTS 81

Integral chucks

Technical data	MTS 81 integral chucks
	pneumatic
Repeatability	< 0.005 mm
Clamping	Spring tension
Opening pressure	min. 8.5 bar
Process monitoring	pneumatic
Clamping power with reclamping	up to 10,000 N/chuck

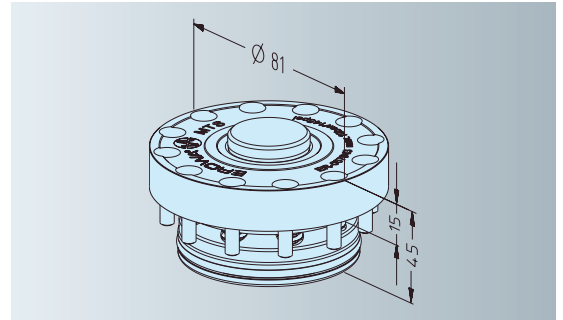
M = Multi
P = pneumatically operated
A = able to automate



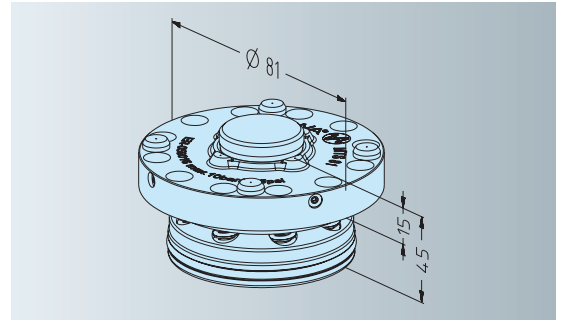
Integration variant applicable to MTS 81 IntegralChucks.
Observe tolerances according to integration instructions!

ER-057943 MTS 81 IntegralChuck M-P

Version	To be fitted directly into machine tables, plates, tombstones, squares or dividing heads. Suitable for manual loading.
Connections	2 pneumatic connections: one for opening and one for reclamping.
Application	To accommodate multiple pallets.

**ER-059016 MTS 81 IntegralChuck M-P/A**

Version	To be fitted directly into machine tables, plates, tombstones, squares or dividing heads. Suitable for automatic loading.
Connections	3 pneumatic connections: one for opening, one for reclamping, and one for presence check and cleaning.
Application	To accommodate multiple pallets.

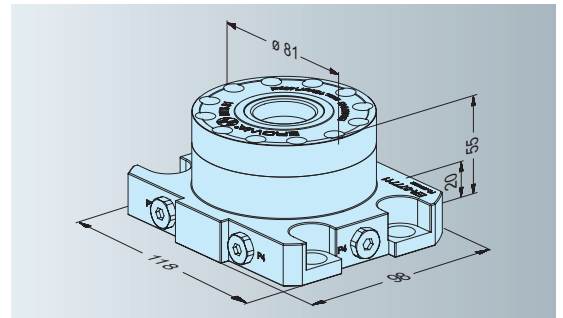


EROWA MTS 81

Base plate, 1-fold

ER-077711 MTS 81 Base plate 98 x 118 M-P

Version	Baseplate, steel not heat treated
Connections	At the side for opening the chuck. 1x air jet valve 2x threaded plug
Application	Mounting on to machine tables. For holding MTS single- and multiple pallets
Installation	Hole pattern for R50 / M12 grid plates.



EROWA MTS 81

Base plates, 2-fold

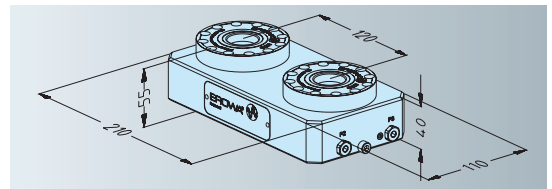
Technical data	MTS 81 Base plates, 2-fold
	pneumatic
Repeatability	< 0.005 mm
Indexation, pallet	1 x 180°
Clamping	Spring tension
Opening pressure	min. 8.5 bar
Process monitoring	pneumatic
Clamping power	up to 20,000 N
with reclamping	(2 x 10,000 N)

P = pneumatically operated
A = able to automate

ER-063134 MTS 81 base plate 110 x 210 P Pitch 120



Version	Base plate, steel, unhardened; Pitch: 120 mm.
Connections	2 lateral pneumatic connections: one for opening and one for reclamping.
Application	To accommodate double pallets. For direct assembly on machine tables.
Accessories supplied	2 x ER-014326 threaded connector, straight, Ø 6 2 x ER-002675 plugs, Ø 6 1 x ER-014324 threaded connector, straight, Ø 4 1 x ER-002673 plug, Ø 4
Note	Attachment boreholes can be drilled by customers.
Caution	Do not drill through any air ducts! Please order operating instructions from your specialist EROWA dealer.



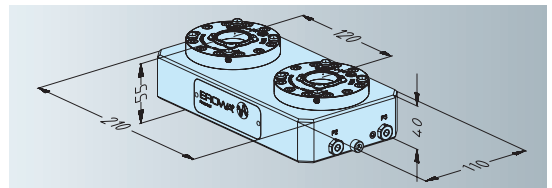
EROWA MTS 81

Base plates, 2-fold with cleaning facility, automatable

ER-063135 MTS 81 base plate 110 x 210 P/A Pitch 120



Version	Base plate, steel, unhardened; Pitch: 120 mm.
Connections	3 lateral pneumatic connections: one for opening, one for cleaning and one for reclamping.
Application	To accommodate multiple pallets. For direct assembly on machine tables.
Accessories supplied	2 x ER-014326 threaded connector, straight, Ø 6 2 x ER-002675 plugs, Ø 6 1 x ER-014324 threaded connector, straight, Ø 4 1 x ER-002673 plug, Ø 4
Note	Attachment boreholes can be drilled by customers.
Caution	Do not drill through any air ducts! Please order operating instructions from your specialist EROWA dealer.



EROWA MTS 81

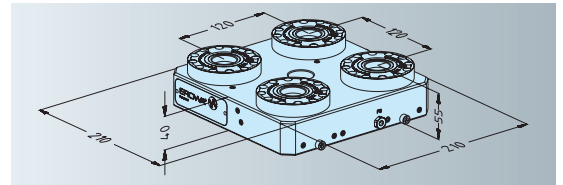
Base plates, 4-fold

Technical data	MTS 81 Base plates, 4-fold
	pneumatic
Repeatability	< 0.005 mm
Indexation, pallet	4 x 90°
Clamping	Spring tension
Opening pressure	min. 8.5 bar
Process monitoring	pneumatic
Clamping power	up to 40,000 N
with reclamping	(4 x 10,000 N)

ER-063136 MTS 81 base plate 210 x 210 P Pitch 120



Version	Base plate, steel, unhardened; Pitch: 120 mm.
Connections	2 lateral pneumatic connections: one for opening and one for reclamping.
Application	To accommodate multiple pallets. For direct assembly on machine tables.
Accessories supplied	2 x ER-014326 threaded connector, straight, Ø 6 2 x ER-002675 plugs, Ø 6 1 x ER-014324 threaded connector, straight, Ø 4 1 x ER-002673 plug, Ø 4
Note	Attachment boreholes can be drilled by customers.
Caution	Do not drill through any air ducts! Please order operating instructions from your specialist EROWA dealer.



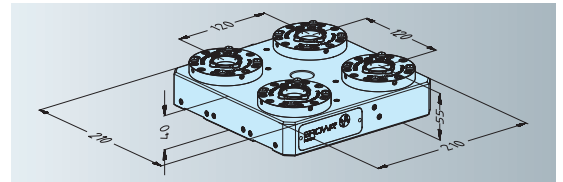
EROWA MTS 81

Base plates, 4-fold with cleaning facility, automatable

ER-063137 MTS 81 base plate 210 x 210 P/A Pitch 120



Version	Base plate, steel, unhardened; Pitch: 120 mm.
Connections	3 lateral pneumatic connections: one for opening, one for cleaning and one for reclamping.
Application	To accommodate multiple pallets. For direct assembly on machine tables.
Accessories supplied	2 x ER-014326 threaded connector, straight, Ø 6 2 x ER-002675 plugs, Ø 6 1 x ER-014324 threaded connector, straight, Ø 4 1 x ER-002673 plug, Ø 4
Note	Attachment boreholes can be drilled by customers.
Caution	Do not drill through any air ducts! Please order operating instructions from your specialist EROWA dealer.



EROWA MTS 81

Pallets

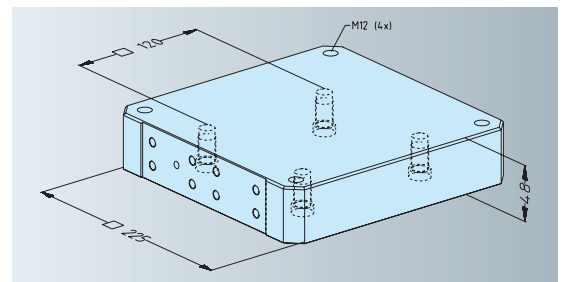
ER-063140 MTS 81 pallet 225 x 225 / 120



Version Aluminum pallet, 4-fold, excluding chucking spigots (MTS chucking spigot set ER-041461 (M) / ER-041464 (A)).

Application To clamp workpieces, vises and gauges.

Accessories ER-041461 (M) / ER-041464 (A) to be ordered separately.



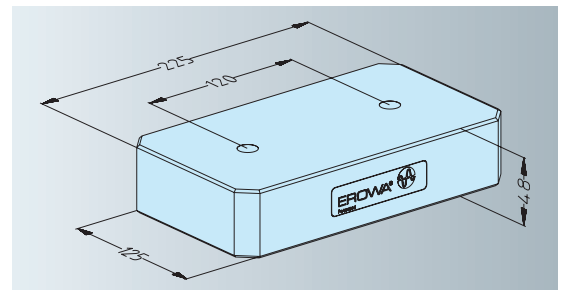
ER-063138 MTS 81 pallet 125 x 225 / 120 Hard Z support



Version Aluminum pallet, double, excluding chucking spigots (MTS chucking spigot set ER-041460). Hard Z-supports.

Application To clamp workpieces, vises and gauges.

Accessories ER-041460 to be ordered separately.



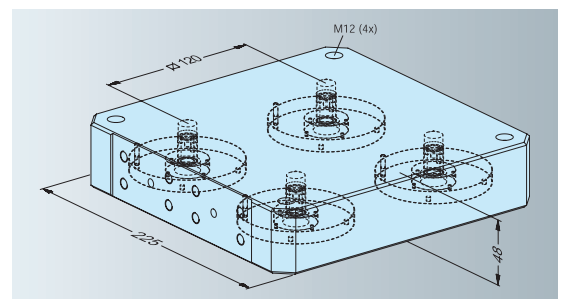
ER-065209 MTS 81 pallet 225 x 225 / 120 hard Z support



Version Aluminum pallet, excluding chucking spigots (MTS chucking spigot set ER-041461 (M) / ER-041464 (A). Hard Z-supports.

Application To clamp workpieces, vises and gauges.

Accessories ER-041461 (M) / ER-041464 (A) to be ordered separately.



Note: You will find the MTS chucking spigots overview starting on page: 49.

EROWA MTS

The universal interface

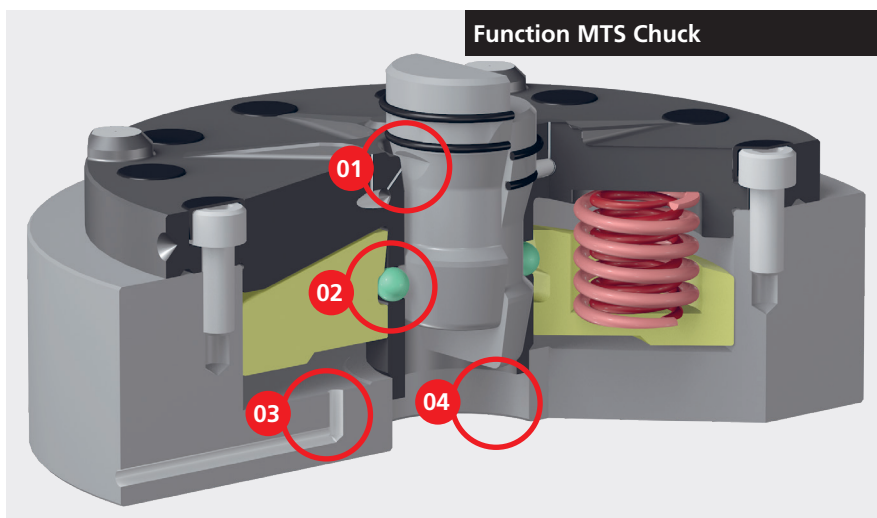
Applications



Handling

Manual / Loading facility / Robot

Function MTS Chuck



01 | Precise

Free of play, conical centering.
Repeatability: <0.005 mm.
Easy insertion of the pallets
without any jamming.

02 | Clamping mechanism

Reliable clamping mechanism through
self-locking ball lock. Stable, low level
of vibration.

03 | Open

MTS chucks are available as pneumatic
and hydraulic versions.

04 | Cleanliness

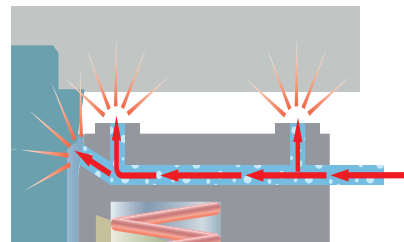
Liquids can drain off. No dirt traps.

Technical data - MTS

	MTS
Repeatability	< 0.005 mm
Activation	clamped without pressure
Opening pressure pneumatically	min. 7 bar
Opening pressure hydraulically	min. 25 bar / max. 35 bar
Clamping power pneumatically	12,000 N/chuck
Clamping power hydraulically	20,000 N/chuck
Holding power	> 60,000 N/chuck
Reclamp	no
Clamping cycles	> 500,000

MTS chuck, automatable

Automatic cleaning of contact surfaces
and of the centering spigot cone
while the workpiece is changed.



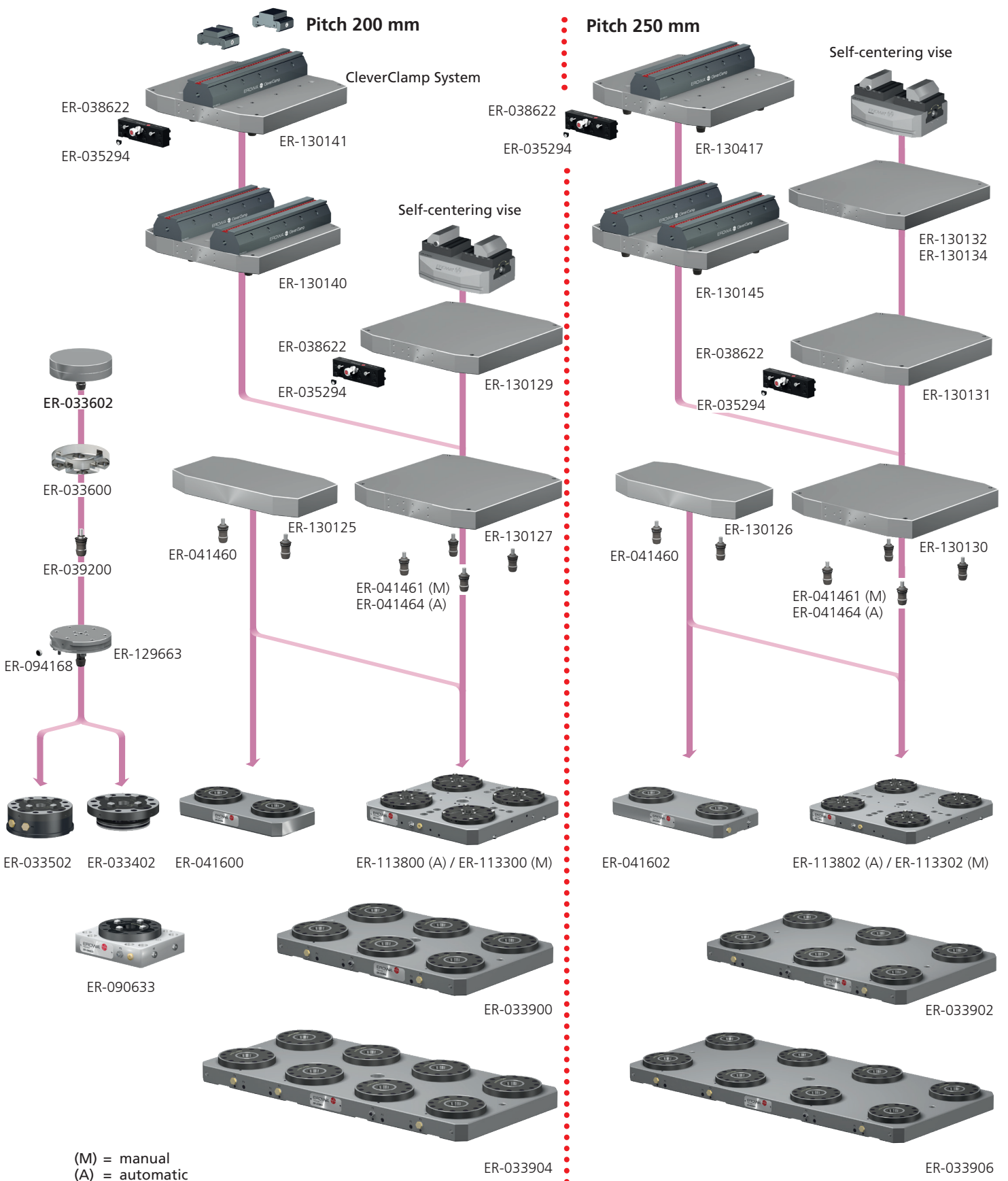
compatible

- MTS 81
- MTS
- MTS 2.0
- MTS+



EROWA MTS

The components



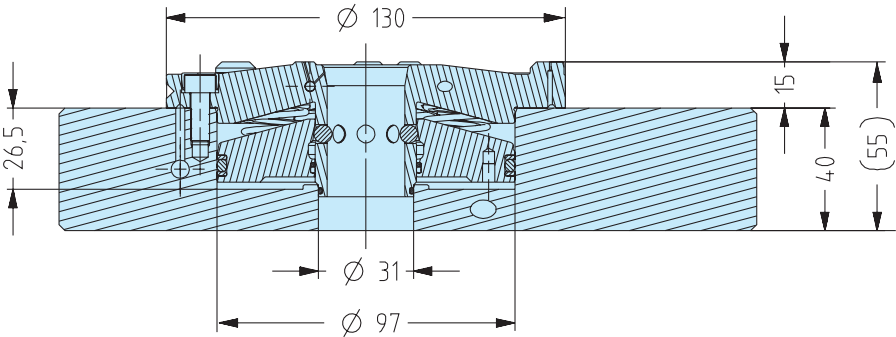
EROWA MTS

Integral chucks

Technical data	MTS integral chucks	
	pneumatic	hydraulic
Repeatability	< 0.005 mm	< 0.005 mm
Indexation, pallet	4 x 90° (MTS IntegralChuck S)	
Clamping	Spring tension	Spring tension
Opening pressure	min. 7 bar	min. 25 /max. 35 bar
Process monitoring	pneumatic	pneumatic
Clamping power	12,000 N/chuck	20,000 N/chuck

- S = Single
- M = Multi
- P = pneumatically operated
- H = hydraulically operated
- A = able to automate

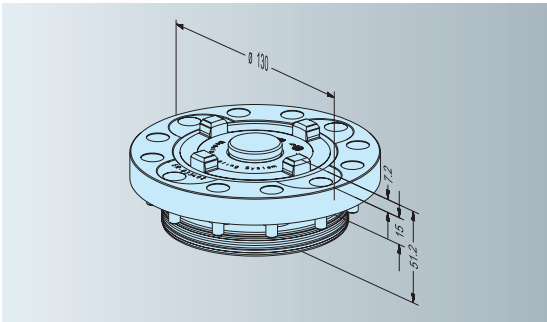
Integration variant (applicable to MTS IntegralChucks Single and Multi).
Observe tolerances according to integration instructions!



ER-033402	MTS IntegralChuck S-P
ER-033403	MTS IntegralChuck S-H



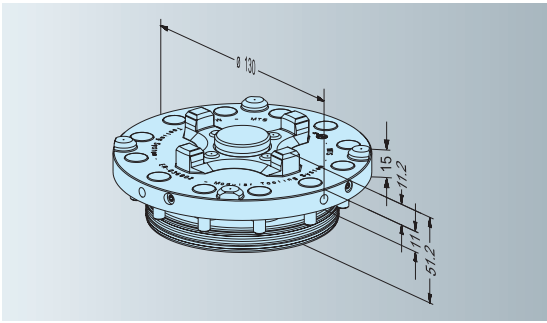
- Version For direct integration in machine tables, plates, tombstones, squares or dividing heads.
- Connections To open: pneumatic or hydraulic.
- Application To accommodate single or multiple pallets.



ER-036802	MTS IntegralChuck S-P/A
ER-036803	MTS IntegralChuck S-H/A



- Version For direct integration in machine tables, plates, tombstones, squares or dividing heads.
- Connections To open: pneumatic or hydraulic.
To clean: pneumatic.
- Application To accommodate single or multiple pallets.

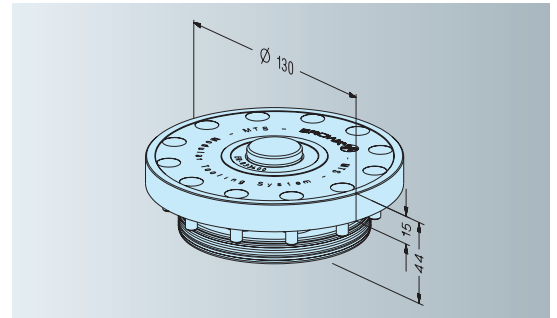


ER-033400 MTS IntegralChuck M-P
ER-033401 MTS IntegralChuck M-H


Version For direct integration in machine tables, plates, tombstones, squares or dividing heads.

Connections To open: pneumatic or hydraulic.

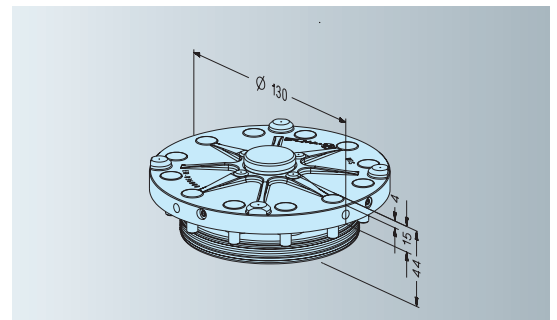
Application To accommodate multiple pallets.


ER-036800 MTS IntegralChuck M-P/A
ER-036801 MTS IntegralChuck M-H/A


Version For direct integration in machine tables, plates, tombstones, squares or dividing heads.

Connections To open: pneumatic or hydraulic.
To clean: pneumatic.

Application To accommodate multiple pallets.



EROWA MTS

Mounted chucks

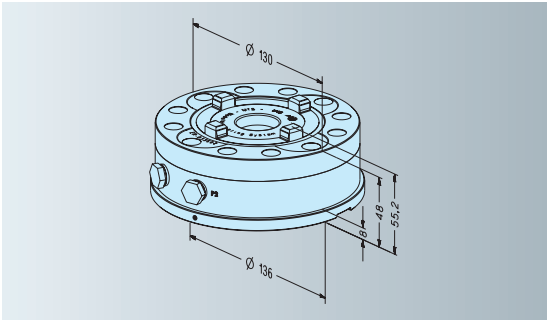
Technical data	MTS mounted chucks
	pneumatic
Repeatability	< 0.005 mm
Indexation, pallet	4 x 90° (MTS Chuck S)
Clamping	Spring power
Opening pressure	min. 7 bar
Process monitoring	pneumatic
Clamping power	12,000 N/Chuck

- S = Single
- M = Multi
- P = pneumatically operated
- A = able to automate

ER-033502 MTS Chuck S-P



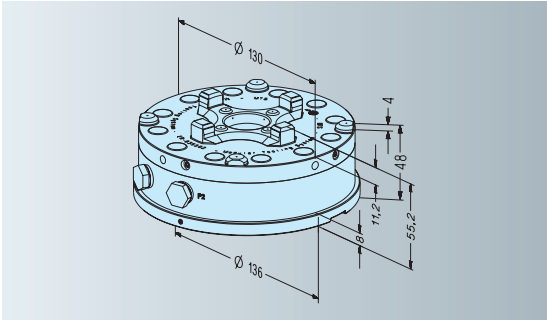
Version	For direct mounting on machine tables, plates, tombstones, squares or dividing heads.
Connections	Lateral, to open: pneumatic.
Application	To accommodate single or multiple pallets.
Accessories	Order separately: to fit MTS Chuck, MTS bracket ER-033804 or ER-033805.



ER-035502 MTS Chuck S-P/A

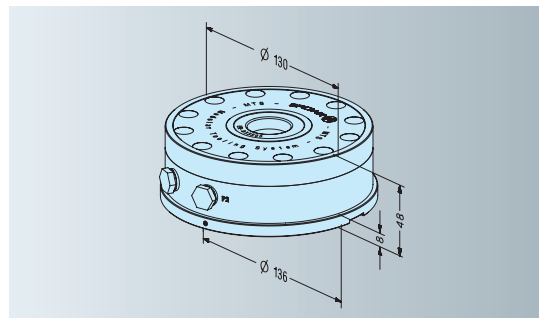


Version	For direct mounting on machine tables, plates, tombstones, squares or dividing heads.
Connections	Lateral, to open: pneumatic. Lateral to clean: pneumatic
Application	To accommodate single or multiple pallets.
Accessories	Order separately: to fit MTS Chuck, MTS bracket ER-033804 or ER-033805.

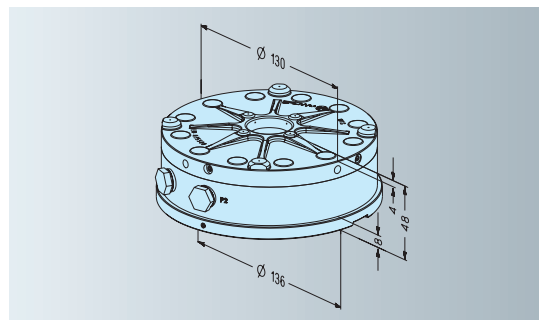


ER-033500 MTS Chuck M-P


- Version For direct mounting on machine tables, plates, tombstones, squares or dividing heads.
- Connections Lateral, to open: pneumatic.
- Application To accommodate multiple pallets.
- Accessories Order separately: to fit MTS Chuck, MTS bracket ER-033804 or ER-033805.


ER-035500 MTS Chuck M-P/A


- Version For direct mounting on machine tables, plates, tombstones, squares or dividing heads.
- Connections Lateral, to open: pneumatic.
Lateral to clean: pneumatic.
- Application To accommodate multiple pallets.
- Accessories Order separately: to fit MTS Chuck, MTS bracket ER-033804 or ER-033805.



EROWA MTS

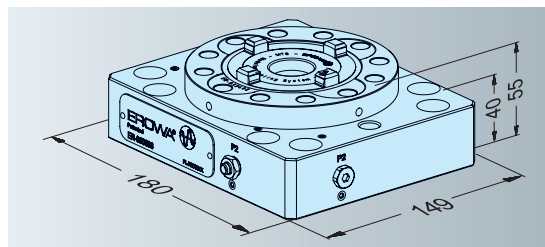
Base plates, 1-fold

Technical data	MTS base plates, 1-fold
	pneumatic
Repeatability	< 0.005 mm
Indexation, pallet	4 x 90° (MTS Chuck S)
Clamping	Spring tension
Opening pressure	min. 7 bar
Process monitoring	pneumatic
Clamping power	12,000 N

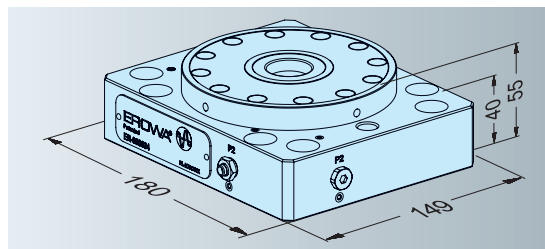
S = Single
M = Multi
P = pneumatically operated

ER-090633 MTS base plate 149 x 180 S-P

Version	Baseplate, steel not heat treated
Connections	At the side for opening the chuck. 1x air jet valve 2x threaded plug
Application	Mounting on to machine tables. For holding MTS single- and multiple pallets
Installation	Hole pattern for R50 / M12 grid plates and for machine tables with T-slot distance 63 / 100 mm

**ER-090634 MTS base plate 149 x 180 M-P**

Version	Baseplate, steel not heat treated
Connections	At the side for opening the chuck. 1x air jet valve 2x threaded plug
Application	Mounting on to machine tables. For holding MTS single- and multiple pallets
Installation	Hole pattern for R50 / M12 grid plates and for machine tables with T-slot distance 63 / 100 mm



EROWA MTS

Base plates, 2-fold

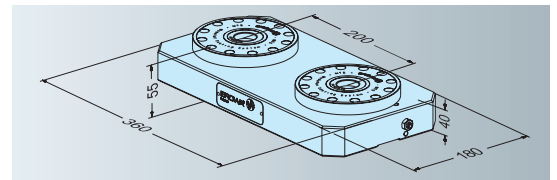
Technical data	MTS base plates, 2-fold pneumatic
Repeatability	< 0.005 mm
Indexation, pallet	1 x 180°
Clamping	Spring power
Opening pressure	min. 7 bar
Process monitoring	pneumatic
Clamping power	24,000 N (2 x 12,000 N)

P = pneumatically operated

ER-041600 MTS base plate 180 x 360 / 200 P Pitch 200



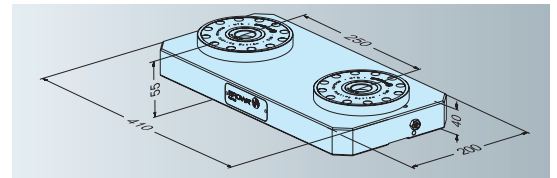
Version	Base plate, steel, unhardened; Pitch: 200 mm.
Connections	Lateral, to open: pneumatic.
Application	To accommodate double pallets. For direct assembly on machine tables.
Accessories supplied	1 x ER-036672 MTS air jet valve
Note	Attachment boreholes can be drilled by customers.
Caution	Do not drill through any air ducts! Please order operating instructions from your EROWA dealer.



ER-041602 MTS base plate 200 x 410 P Pitch 250



Version	Base plate, steel, unhardened; Pitch: 250 mm.
Connections	Lateral, to open: pneumatic.
Application	To accommodate double pallets. For direct assembly on machine tables.
Accessories supplied	1 x ER-036672.
Note	Attachment boreholes can be drilled by customers.
Caution	Do not drill through any air ducts! Please order operating instructions from your EROWA dealer.



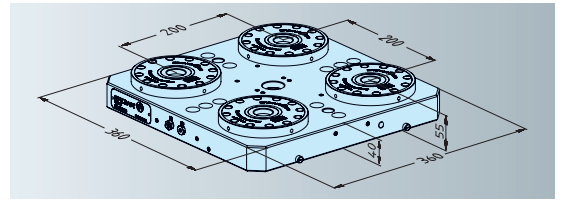
Base plates universal, 4-fold

Technical data	MTS base plates universal, 4-fold pneumatic	P = pneumatically operated
Repeatability	< 0.005 mm	
Clamping	Spring power	
Opening pressure	min. 7 bar	
Process monitoring	pneumatic	
Clamping power	48,000 N (4 x 12,000 N)	

ER-113300 MTS base plate universal 360 x 360 P Pitch 200



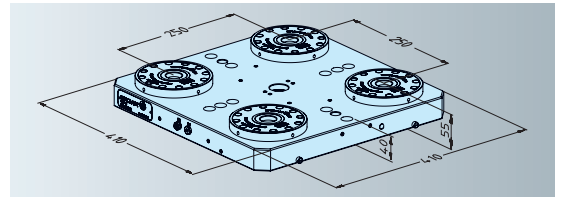
Version	Base plate, universal steel, unhardened, set-up distance 200mm, including adapter flange without air boreholes.
Connections	Laterally for opening: pneumatic.
Option	Control from the rear possible with the relevant adapter flange.
Application	To accommodate multiple pallets. For direct assembly on machine tables.
To fit	Mounting hole pattern for R50 / M12 grid and for tables with T-slot distances of 63/100mm.



ER-113302 MTS base plate universal 410 x 410 P Pitch 250



Version	Base plate, universal steel, unhardened, set-up distance 250mm, including adapter flange without air boreholes.
Connections	Laterally for opening: pneumatic.
Option	Control from the rear possible with the relevant adapter flange.
Application	To accommodate multiple pallets. For direct assembly on machine tables.
To fit	Mounting hole pattern for R50 / M12 grid for tables with T-slot distances of 63/100mm.



EROWA MTS

Base plates universal, 4-fold, with cleaning facility, automatable

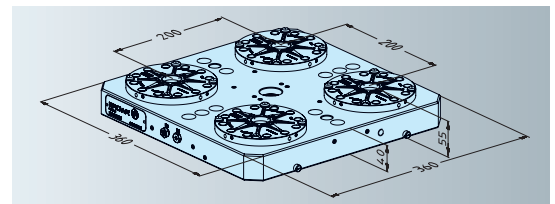
Technical data	MTS base plates universal, 4-fold, with cleaning facility, automatable pneumatic
Repeatability	< 0.005 mm
Clamping	Spring tension
Opening pressure	min. 7 bar
Process monitoring	pneumatic
Clamping power	48,000 N (4 x 12,000 N)

P = pneumatically operated
A = able to automate

ER-113800 MTS base plate universal 360 x 360 P/A Pitch 200



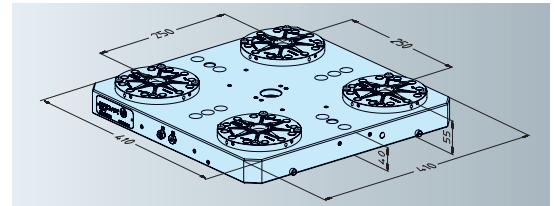
Version	Base plate, universal steel, unhardened, set-up distance 200mm, including dummy cover.
Connections	Laterally for opening and cleaning: pneumatic.
Option	Control from the rear possible with the relevant adapter flange. Customized adapter flange available on request.
Application	To accommodate multiple pallets. For direct assembly on machine tables.
To fit	Mounting hole pattern for R50 / M12 grid and for tables with T-slot distances of 63/100mm.



ER-113802 MTS base plate universal 410 x 410 P/A Pitch 250



Version	Base plate, universal steel, unhardened, set-up distance 250mm, including adapter flange without air boreholes.
Connections	Laterally for opening and cleaning: pneumatic.
Option	Control from the rear possible with the relevant adapter flange.
Application	To accommodate multiple pallets. For direct assembly on machine tables.
To fit	Mounting hole pattern for R50 / M12 grid and for tables with T-slot distances of 63/100mm.



EROWA MTS

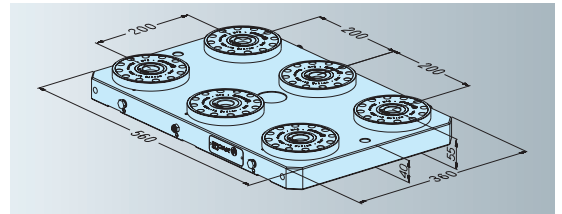
Base plates, 6-fold

Technical data	MTS base plates, 6-fold pneumatic
Repeatability	< 0.005 mm
Clamping	Spring tension
Opening pressure	min. 7 bar
Process monitoring	pneumatic
Clamping power	72,000 N (6 x 12,000 N)

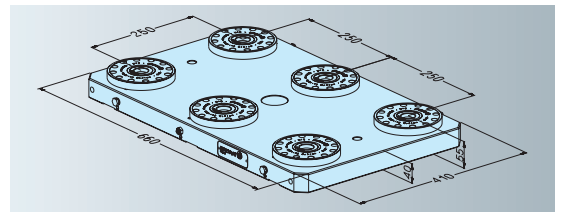
P = pneumatically operated

**ER-033900 MTS base plate 360 x 560 P
Pitch 200**


Version	Base plate, steel, unhardened; Pitch: 200 mm.
Connections	Lateral, to open: pneumatic.
Application	To accommodate multiple pallets. For direct assembly on machine tables.
Accessories supplied	1 x ER-036672.
Note	Attachment boreholes can be drilled by customers.
Caution	Do not drill through any air ducts! Please order operating instructions from your EROWA dealer.


**ER-033902 MTS base plate 410 x 660 P
Pitch 250**


Version	Base plate, steel, unhardened; Pitch: 250 mm.
Connections	Lateral, to open: pneumatic.
Application	To accommodate multiple pallets. For direct assembly on machine tables.
Accessories supplied	1 x ER-036672.
Note	Attachment boreholes can be drilled by customers.
Caution	Do not drill through any air ducts! Please order operating instructions from your EROWA dealer.



EROWA MTS

Base plates, 8-fold

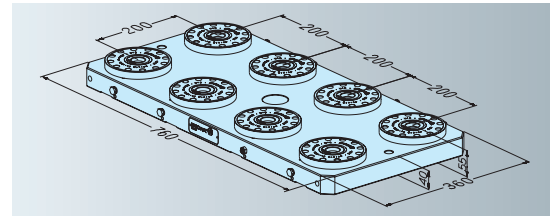
Technical data	MTS base plates, 8-fold pneumatic
Repeatability	<0.005 mm
Clamping	Spring power
Opening pressure	min. 7 bar
Process monitoring	pneumatic
Clamping power	96,000 N (8 x 12,000 N)

P = pneumatically operated

ER-033904 MTS base plate 360 x 760 P Pitch 200



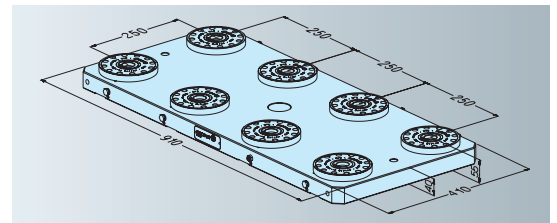
Version	Base plate, steel, unhardened; Pitch: 200 mm.
Connections	Lateral, to open: pneumatic.
Application	To accommodate multiple pallets. For direct assembly on machine tables.
Accessories supplied	1 x ER-036672.
Note	Attachment boreholes can be drilled by customers.
Caution	Do not drill through any air ducts!



ER-033906 MTS base plate 410 x 910 P Pitch 250



Version	Base plate, steel, unhardened; Pitch: 250 mm.
Connections	Lateral, to open: pneumatic.
Application	To accommodate multiple pallets. For direct assembly on machine tables.
Accessories supplied	1 x ER-036672.
Note	Attachment boreholes can be drilled by customers.
Caution	Do not drill through any air ducts! Please order operating instructions from your EROWA dealer.



EROWA MTS 2.0

The zero-point system for the highest demands

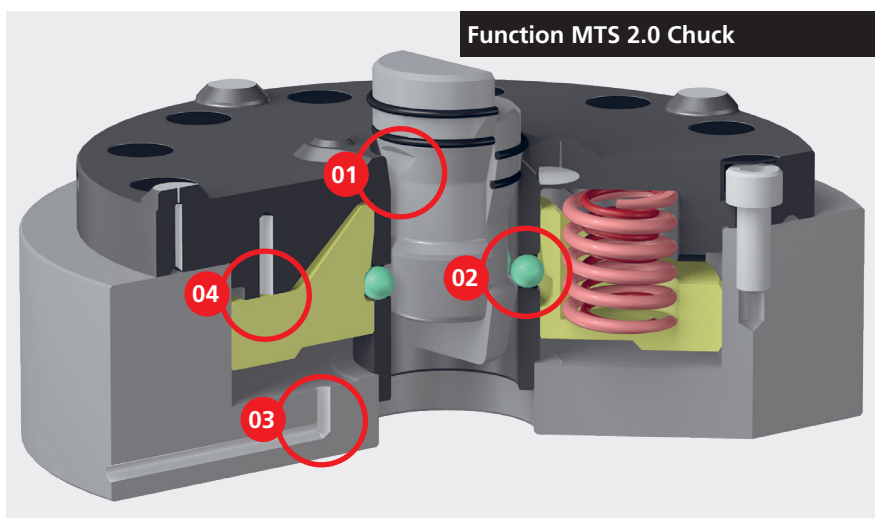
Applications



Handling

Manual / Loading facility / Robot

Function MTS 2.0 Chuck



Technical data - MTS 2.0

	MTS 2.0
Repeatability	< 0.003 mm
Activation	clamped without pressure
Opening pressure	6 bar
Reclamp pressure	max. 6 bar
Process monitoring	pneumatically: opening controll and monitoring
Clamping power	9,000 N/Chuck (spring tension)
with reclamping	20,000 N/Chuck
Holding power	> 60,000 N/Chuck
Reclamp	yes
Clamping cycles	> 500,000
Material	INOX

CRUCIAL ADVANTAGES

- **Open check**
- **Extreme process safety**
- **Clamping power: 20,000 N**
- **Opening pressure: 6 bar**
- **Clamping mechanism with ceramic balls**
- **Rust-resistant**

01 | High precision

Free of play, conical centering.
Repeatability: < 0.003 mm.
Easy insertion of the pallets
without any jamming.

02 | Clamping mechanism

Reliable clamping mechanism
through self-locking ball lock.
Stable, low level of vibration.

03 | Open

MTS 2.0 chucks are operated pneumatically. The chucks require only 6 bar opening pressure despite their high clamping power of 20,000 N.

04 | Open monitoring

Know for sure when the MTS 2.0 chuck is open thanks to integrated open monitoring.

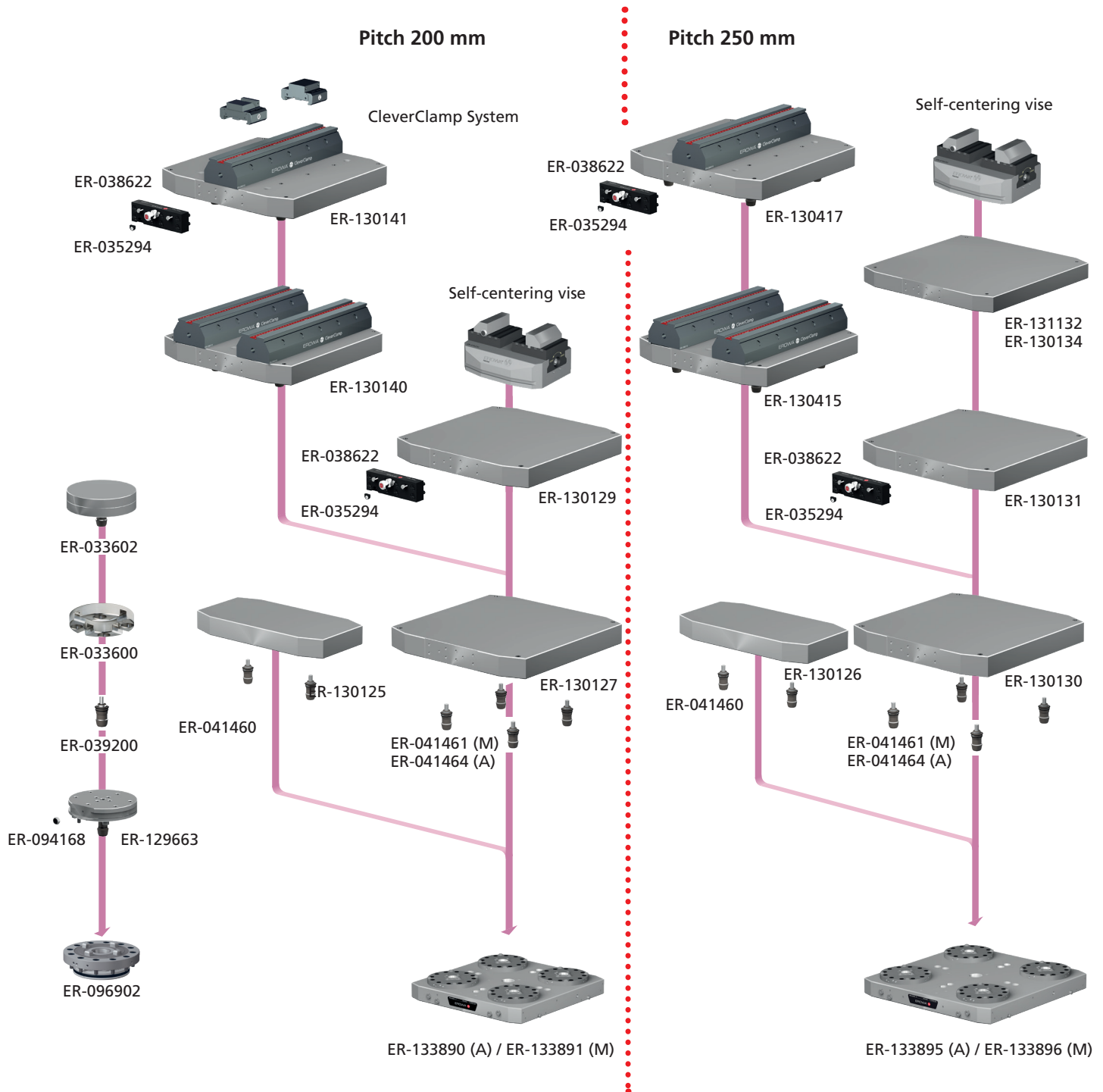
compatible

- MTS 81
- MTS
- MTS 2.0
- MTS+



EROWA MTS 2.0

The components



(M) = manual
(A) = automatic

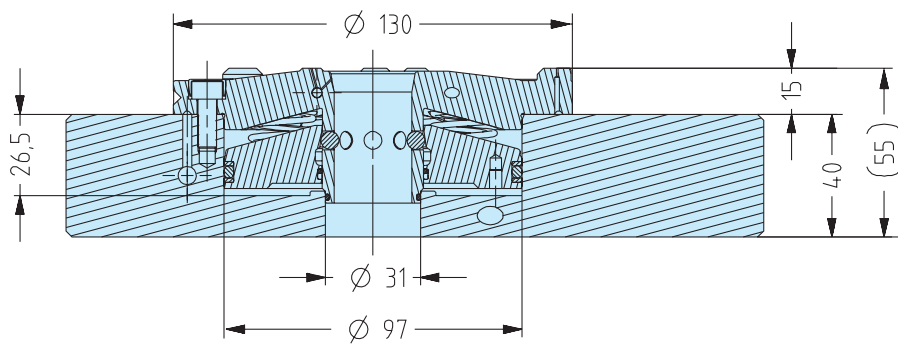
EROWA MTS 2.0

Integral chucks

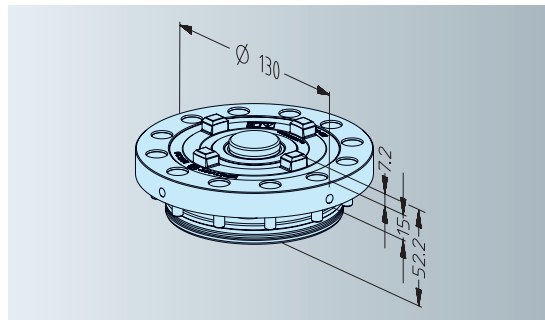
Technical data	MTS 2.0 integral chuck, pneumatic
Repeatability	< 0.003 mm
Indexation, pallet	4 x 90° (MTS 2.0 IntegralChuck S)
Clamping	Spring tension
Opening pressure	6 bar
Process monitoring	Pneumatically: opening controll and monitoring
Clamping power	9,000 N (spring tension)
with reclamping	20,000 N

S = Single
M = Multi
P = pneumatically operated
A = able to automate

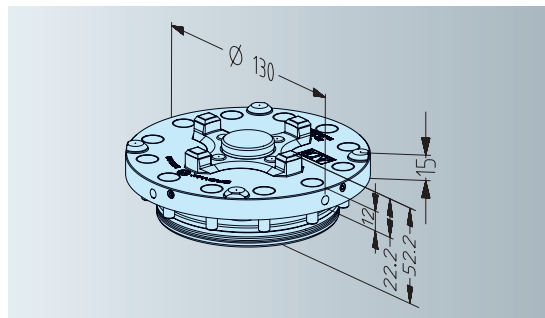
Integration variant (applicable to MTS 2.0 IntegralChucks Single and Multi).
Observe tolerances according to integration instructions!


ER-096902 MTS 2.0 IntegralChuck S-P


Version For attachment to machine tables, plates, tombstones, angles or dividing heads.
Connections 3 pneumatic connections: for opening, reclamping and the open check.
Application To hold individual and multiple pallets.

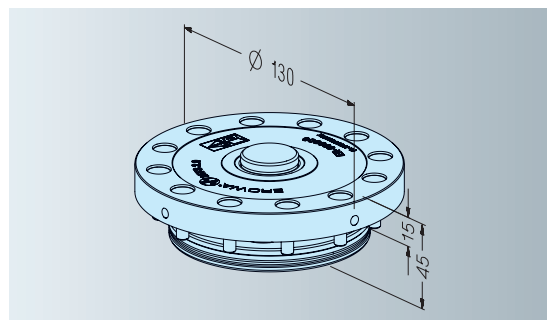

ER-096903 MTS 2.0 IntegralChuck S-P/A


Version For direct attachment to machine tables, plates, tombstones or dividing heads.
Connections 4 pneumatic connections: for opening, cleaning/presence checks, reclamping and the open check.
Application To hold individual and multiple pallets.

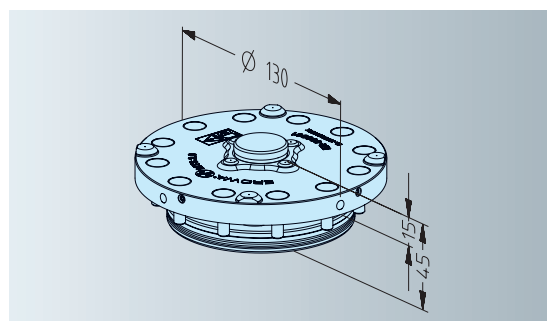


ER-096900 MTS 2.0 IntegralChuck M-P

- Version For direct attachment to machine tables, plates, tombstones or dividing heads.
- Connections 3 pneumatic connections: for opening, reclamping and the open check.
- Application To hold multiple pallets.

**ER-096901 MTS 2.0 IntegralChuck M-P/A**

- Version For direct attachment to machine tables, plates, tombstones, angles or dividing heads.
- Connections 4 pneumatic connections: for opening, cleaning/presence check, reclamping and the open check.
- Application To hold multiple pallets.



EROWA MTS 2.0

Base plates, 4-fold

Technical data	MTS base plate 2.0, 4-fold, pneumatic
Repeatability	< 0.003 mm
Clamping	Spring tension
Opening pressure	6 bar
Process monitoring	Pneumatically: opening control and monitoring
Clamping power	36,000 N (4 x 9,000 N) (spring tension)
with reclamping	80,000 N (4 x 20,000 N)

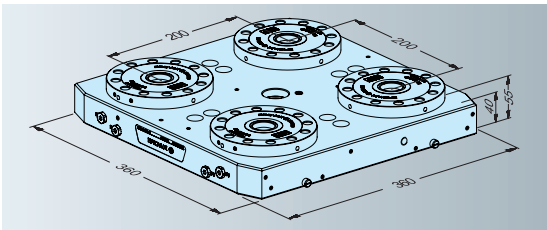
P = pneumatically operated

PC* = pitch circle

ER-133891 MTS 2.0 base plate 360 x 360 P
Universal, pitch 200



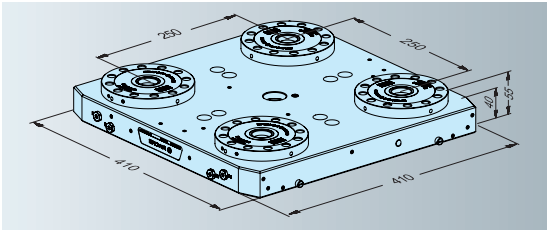
Version	Base plate universal, steel unhardened, pitch 200mm. Including adapter flange with air boreholes.
Connections	Laterally and from underneath on PC* ø57mm: for opening, reclamping and open check.
Option	Customized adapter flange available on request.
Application	To accommodate multiple pallets. For direct assembly on machine tables.
To fit	Mounting hole pattern for grid 50mm/M12 and for machine tables with T-slot distances of 63 and 100mm.



ER-133896 MTS 2.0 base plate 410 x 410 P
Universal, pitch 250



Version	Base plate universal, steel unhardened, pitch 250mm. Including adapter flange with air boreholes.
Connections	Laterally and from underneath on PC* ø57mm: for opening, reclamping and open check.
Option	Customized adapter flange available on request.
Application	To accommodate multiple pallets. For direct assembly on machine tables.
To fit	Mounting hole pattern for grid 50mm/M12 and for machine tables with T-slot distances of 63 and 100mm.



EROWA MTS 2.0

Base plates, 4-fold, with cleaning facility, automatable

Technical data	MTS 2.0 base plate universal, 4-fold, with cleaning facility, automatable, pneumatic
Repeatability	< 0,003 mm
Clamping	Spring tension
Opening pressure	6 bar
Process monitoring	Pneumatically: opening control and monitoring
Clamping power	36'000 N (4 x 9'000 N) (spring tension)
with reclamping	80'000 N (4 x 20'000 N)

P = pneumatically operated

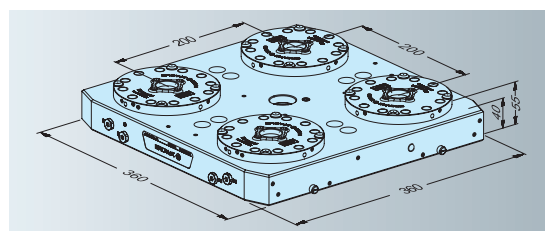
A = able to automate

PC* = pitch circle

ER-133890 MTS 2.0 base plate 360 x 360 P/A Universal, pitch 200



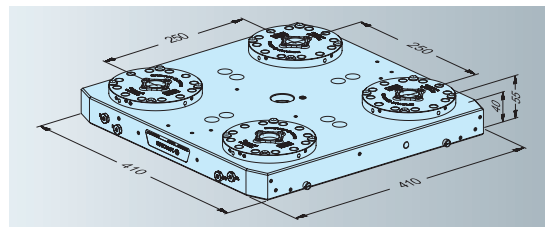
Version	Base plate universal, steel unhardened, pitch 200mm. Including adapter flange with air boreholes.
Connections	Laterally and from underneath on PC* ø57mm: for opening, reclamping, open check and for cleaning/ presence check.
Option	Customized adapter flange available on request.
Application	To accommodate multiple pallets. For direct assembly on machine tables.
To fit	Mounting hole pattern for grid 50mm/M12 and for machine tables with T-slot distances of 63 and 100mm.



ER-133895 MTS 2.0 base plate 410 x 410 P/A Universal, pitch 250



Version	Base plate universal, steel unhardened, pitch 250mm. Including adapter flange with air boreholes.
Connections	Laterally and from underneath on PC* ø57mm: for opening, reclamping, open check and for cleaning/ presence check.
Option	Customized adapter flange available on request.
Application	To accommodate multiple pallets. For direct assembly on machine tables.
To fit	Mounting hole pattern for grid 50mm/M12 and for machine tables with T-slot distances of 63 and 100mm.



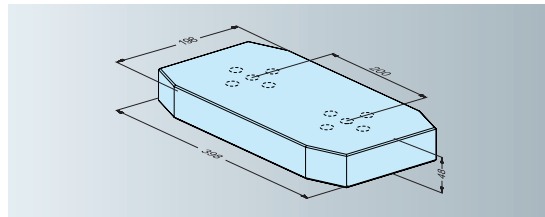
EROWA MTS

Pallets

ER-130125 MTS pallet 198 x 398 / 200



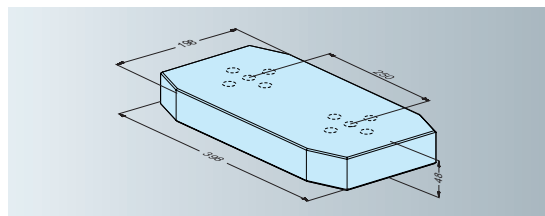
Version Aluminum pallet, 2-fold, pitch 200mm. Excluding chucking spigots.
 Application To clamp workpieces, vises and gauges. Holes to be drilled as required.
 Accessories MTS chucking spigot set ER-041460



ER-130126 MTS pallet 198 x 398 / 250



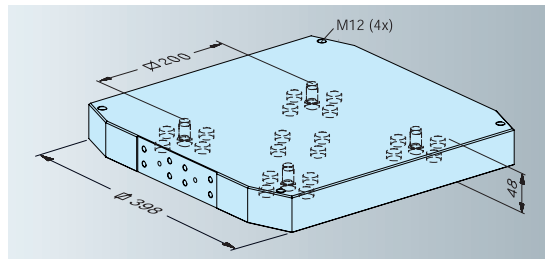
Version Aluminum pallet, 2-fold, pitch 250mm. Excluding chucking spigots.
 Application To clamp workpieces, vises and gauges. Holes to be drilled as required.
 Accessories MTS chucking spigot set ER-041460



ER-130127 MTS pallet 398 x 398 / 200



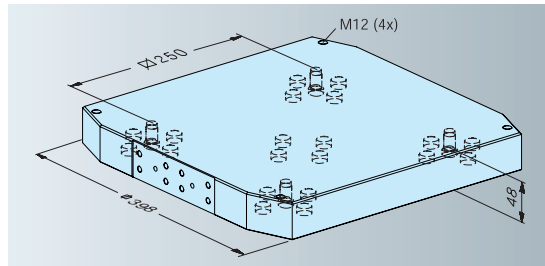
Version Aluminum pallet, 4-fold, pitch 200mm. Excluding chucking spigots.
 Application To clamp workpieces, vises and gauges. Holes to be drilled as required.
 Accessories MTS chucking spigot set ER-041461 (M) or ER-041464 (A) and MTS GripperLink ER-038622.



ER-130130 MTS pallet 398 x 398 / 250



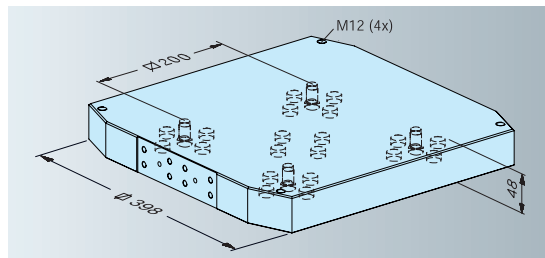
Version Aluminum pallet, 4-fold, pitch 250mm. Excluding chucking spigots.
 Application To clamp workpieces, vises and gauges. Holes to be drilled as required.
 Accessories MTS chucking spigot set ER-041461 (M) or ER-041464 (A) and MTS GripperLink ER-038622.

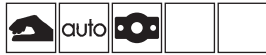


ER-130129 MTS pallet 398 x 398 / 200 Hard Z support

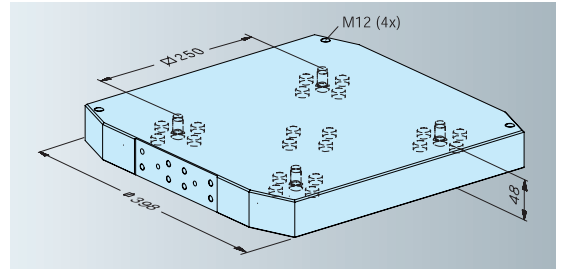
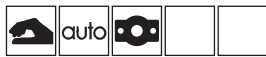


Version Aluminum pallet, 4-fold, pitch 200mm. With hard Z supports. Excluding chucking spigots.
 Application To clamp workpieces, vises and gauges. Holes to be drilled as required.
 Accessories MTS chucking spigot set ER-041461 (M) or ER-041464 (A) and MTS GripperLink ER-038622.

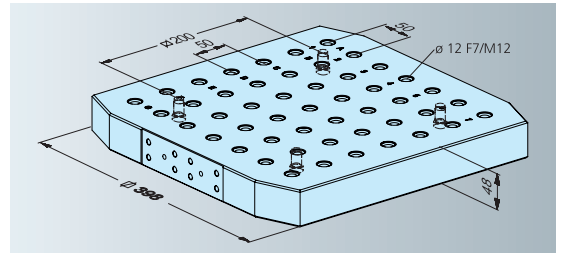


**ER-130131 MTS pallet 398 x 398 / 250
Hard Z support**


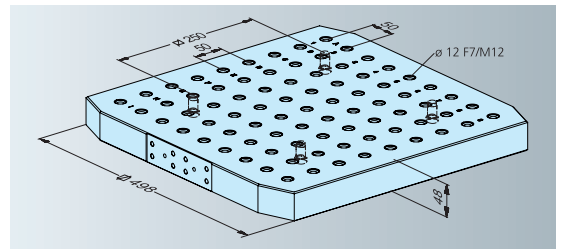
- Version Aluminum pallet, 4-fold, pitch 250mm. With hard Z supports. Excluding chucking spigots.
- Application To clamp workpieces, vises and gauges. Holes to be drilled as required.
- Accessories MTS chucking spigot set ER-041461 (M) or ER-041464 (A) and MTS GripperLink ER-038622.


ER-130128 MTS pallet 398 x 398 / 200 R50


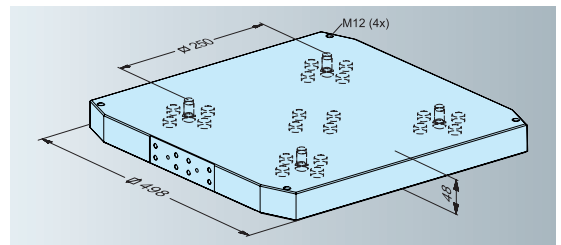
- Version Aluminum pallet (hard-anodized), 4-fold, pitch 200mm. With grid 50mm/M12. Excluding chucking spigots.
- Application To clamp workpieces, vises and gauges.
- Accessories MTS chucking spigot set ER-041461 (M) or ER-041464 (A) and MTS GripperLink ER-038622.


ER-130133 MTS pallet 498 x 498 / 250 R50


- Version Aluminum pallet (hard-anodized), 4-fold, pitch 250mm. With grid 50mm/M12. Excluding chucking spigots.
- Application To clamp workpieces, vises and gauges.
- Accessories MTS chucking spigot set ER-041461 (M) or ER-041464 (A) and MTS GripperLink ER-038622.


ER-130132 MTS pallet 498 x 498 / 250


- Version Aluminum pallet, 4-fold, pitch 250mm. Excluding chucking spigots.
- Application To clamp workpieces, vises and gauges. Holes to be drilled as required.
- Accessories MTS chucking spigot set ER-041461 (M) or ER-041464 (A) and MTS GripperLink ER-038622.)



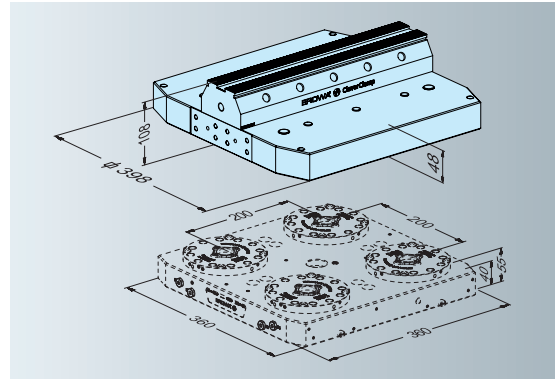
EROWA MTS

Pallets CleverClamp System

ER-130141 MTS pallet 398 x 398 / 200 CleverClamp mono



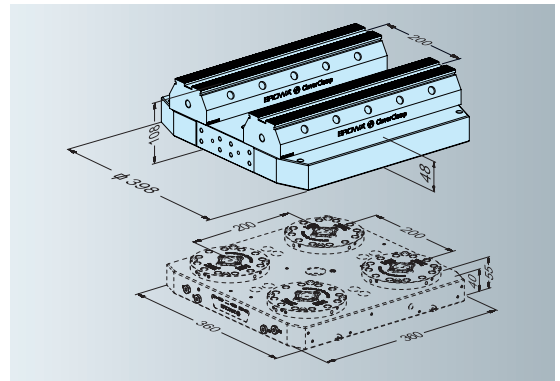
- Version** Aluminum pallet, 4-fold, pitch 200mm. With hard Z supports and 1 x CleverClamp rail 398. Excluding chucking spigots.
- Application** Optimal accessibility for 5-axis machining with single and multiple part clamping.
- Accessories** MTS chucking spigot set ER-041461 (M) or ER-041464 (A) and MTS GripperLink ER-038622.



ER-130140 MTS pallet 398 x 398 / 200 CleverClamp duo



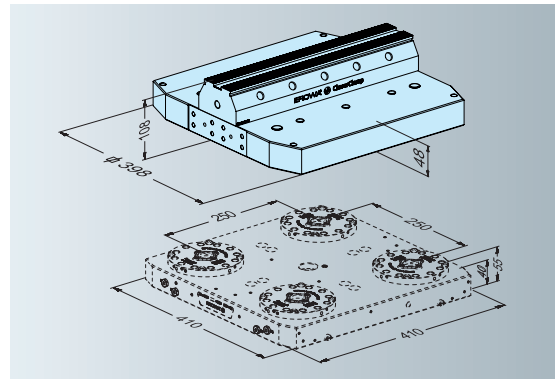
- Version** Aluminum pallet, 4-fold, pitch 200mm. With hard Z supports and 2 x CleverClamp rail 398. Excluding chucking spigots.
- Application** Optimal accessibility for 5-axis machining with single and multiple part clamping.
- Accessories** MTS chucking spigot set ER-041461 (M) or ER-041464 (A) and MTS GripperLink ER-038622.



ER-130417 MTS pallet 398 x 398 / 250 CleverClamp mono



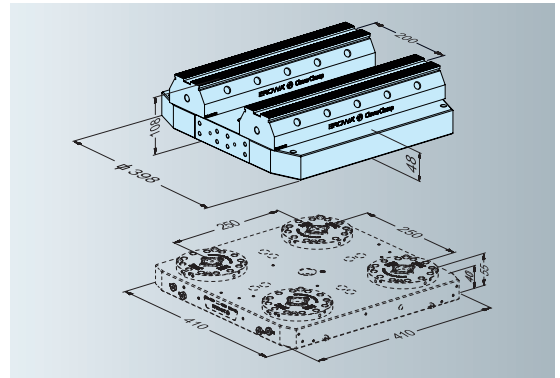
- Version** Aluminum pallet, 4-fold, pitch 250mm. With hard Z supports and 1 x CleverClamp rail 398. Excluding chucking spigots.
- Application** Optimal accessibility for 5-axis machining with single and multiple part clamping.
- Accessories** MTS chucking spigot set ER-041461 (M) or ER-041464 (A) and MTS GripperLink ER-038622.



ER-130415 MTS pallet 398 x 398 / 250 CleverClamp duo



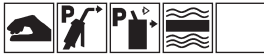
- Version** Aluminum pallet, 4-fold, pitch 250mm. With hard Z supports and 2 x CleverClamp rail 398. Excluding chucking spigots.
- Application** Optimal accessibility for 5-axis machining with single and multiple part clamping.
- Accessories** MTS chucking spigot set ER-041461 (M) or ER-041464 (A) and MTS GripperLink ER-038622.



EROWA MTS

Single pallets

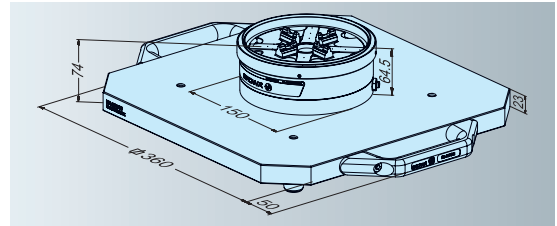
ER-054315 Adapter pallet MTS-PowerChuck P 360 x 360, pitch STM 200



Version Adapterpallet MTS to PowerChuck P. Chuck ER-029391 installed and aligned.

Operation PowerChuck P with lateral valve. Operate with air-jet.

Application On machines with MTS base to receive ITS pallets and standard holders.

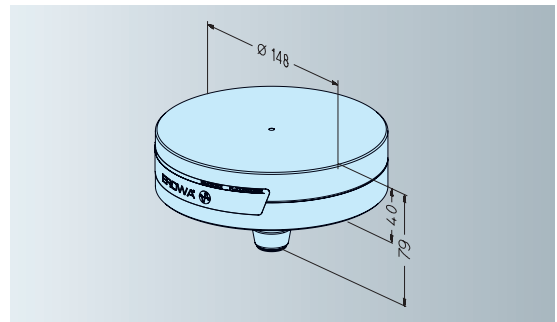


ER-033602 MTS pallet ø 148 blank ALU



Version Aluminum pallet, fitted with centering plate ER-033600, including MTS chucking spigot ER-039200.

Application To clamp workpieces and gauges. For manual handling on MTS IntegralChuck Single.



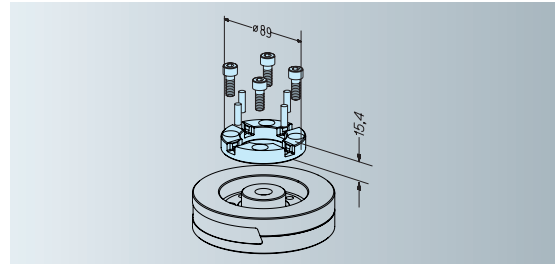
ER-033600 MTS centering plate P



Version Steel, including attachment bolts and positioning pins.

Application For the production of customized and indexable MTS pallets. For manual handling on MTS IntegralChuck Single.

Accessories Chucking spigot ER-039200 to be ordered separately.



ER-129663 MTS pallet ø 148 P

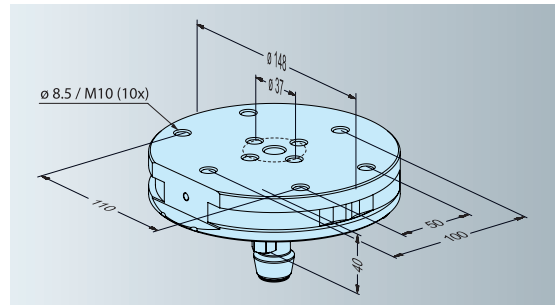


Version Steel pallet, unhardened, including MTS chucking spigot P ER-040999. Centering integrated in the pallet. With optimized Center of mass.

Application To accommodate workpieces and fixtures for chip-cutting production.

Fitting a blank Through the pallet with M8 bolts or through the blank with M10 bolts.

Note In automatic operation additionally use MTS sealing ring ER-045969.



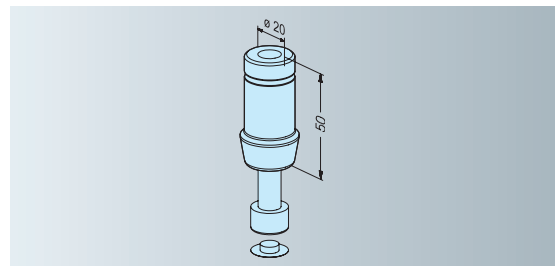
ER-040999 MTS chucking spigot P 1 piece



Version MTS chucking spigot, including attachment bolt and protective cap.

Application To be mounted on pallets ø 148 P.

Note In automatic operation additionally use MTS sealing ring ER-045969.

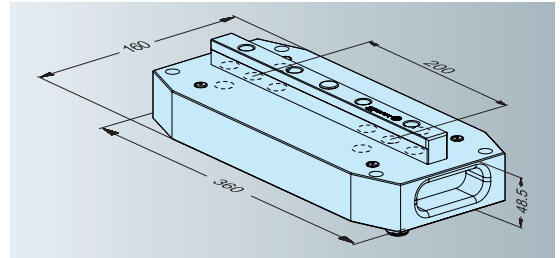


EROWA MTS

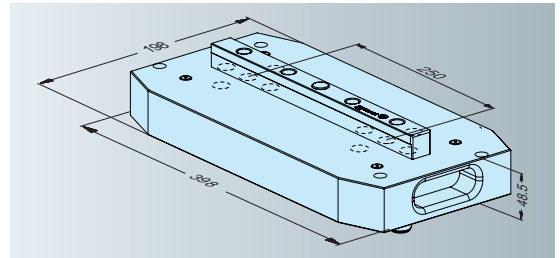
Alignment pallets

ER-130135 MTS Alignment pallet 160 x 360 / 200

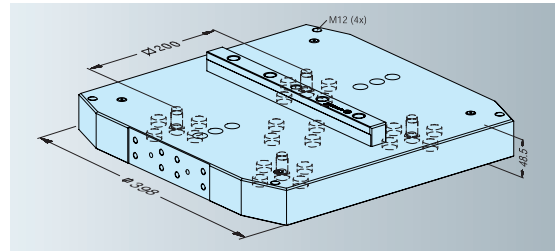
- Version Aluminum pallet, 2-fold, with hard Z supports. With ground alignment rail and four Z-measuring surfaces. Including 2 x MTS centering spigot / A.
- Application Alignment of the angle position and determination of the Z-values of 2-fold MTS base plates with pitch 200mm.

**ER-130136 MTS Alignment pallet 198 x 398 / 250**

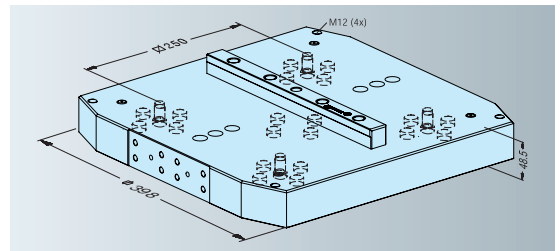
- Version Aluminum pallet, 2-fold, with hard Z supports. With ground alignment rail and four Z-measuring surfaces. Including 2 x MTS centering spigot / A.
- Application Alignment of the angle position and determination of the Z-values of 2-fold MTS base plates with pitch 250mm.

**ER-130137 MTS Alignment pallet 398 x 398 / 200**

- Version Aluminum pallet, 4-fold, with hard Z supports. With ground alignment rail and four Z-measuring surfaces. Including MTS chucking spigot set 4 / A-Z.
- Application Alignment of the angle position and determination of the center and Z-values of 4-fold MTS base plates with pitch 200mm.

**ER-130138 MTS Alignment pallet 398 x 398 / 250**

- Version Aluminum pallet, 4-fold, with hard Z supports. With ground alignment rail and four Z-measuring surfaces. Including MTS chucking spigot set 4 / A-Z.
- Application Alignment of the angle position and determination of the center and Z-values of 4-fold MTS base plates with pitch 250mm.



EROWA MTS

Chucking spigots



MTS centering spigot:

ER-033800 MTS centering spigot
ER-038000 MTS centering spigot / A

The centering spigot defines the datum point (free of play).



MTS chucking spigot:

ER-039200 MTS chucking spigot / A
Chucking spigot without centering function.

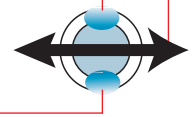

MTS compensation spigot:

ER-039201 MTS compensation spigot / A

The **compensation spigot** positions the pallet in one axis only (X or Y) and is capable of compensating for a maximum pitch difference of 0.1 mm.

Possible compensation movements

Centering surfaces

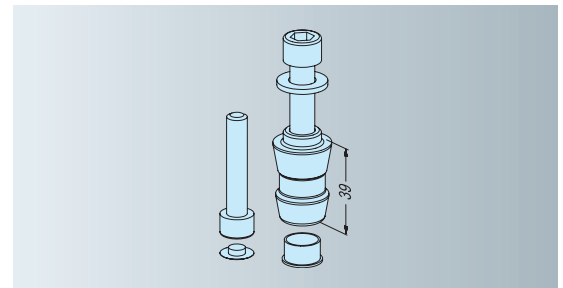


ER-033800 MTS centering spigot



Version

One chucking spigot with centering function (free of play), including attachment bolts (M10x50, M12x55), U-disc and protective caps.

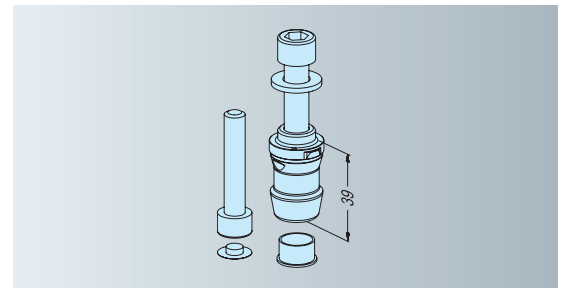


ER-039201 MTS compensation spigot / A



Version

One chucking spigot with compensation function, including attachment bolts (M10x50, M12x55), U-disc and protective caps.

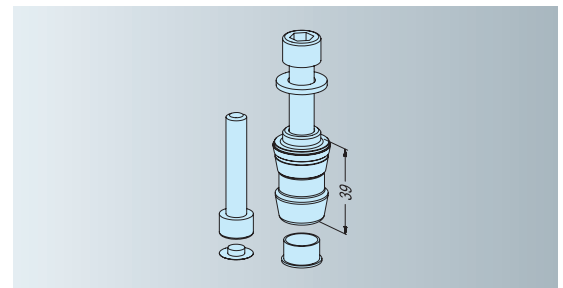


ER-039200 MTS chucking spigot / A

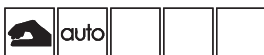


Version

One chucking spigot without centering (centering play 0.1mm), including attachment bolts (M10x50, M12x55), U-disc and protective caps.



ER-038000 MTS centering spigot / A

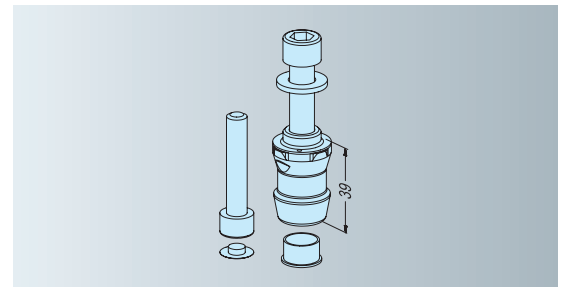


Version

One chucking spigot with centering function, including attachment bolts (M10x50, M12x55), U-disc, O-ring and protective caps.

Application

For MTS pallets which are loaded/unloaded automatically. The centering spigot defines the datum point and closes the cleaning boreholes in the MTS Chucks / A.

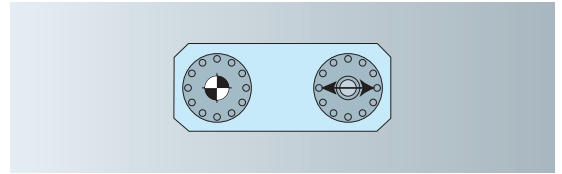


EROWA MTS

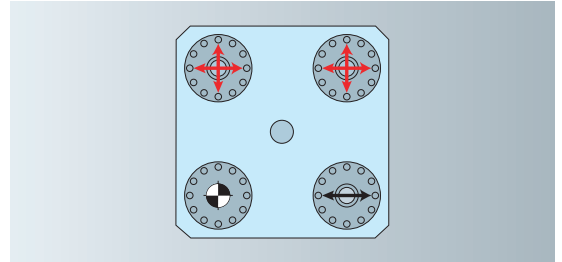
Chuckling spigot set

ER-041460 MTS chuckling spigot set 2

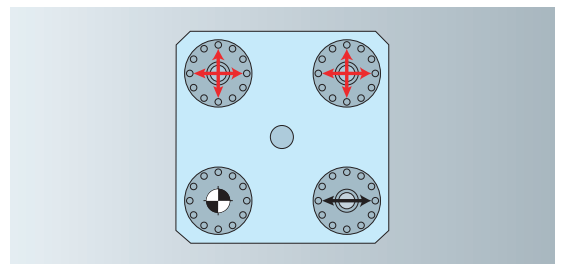
Version 1 centering spigot, 1 compensation spigot / A.
 Mounting With the bolts supplied through the pallet or through the chucking spigot.

**ER-041461 MTS chuckling spigot set 4**

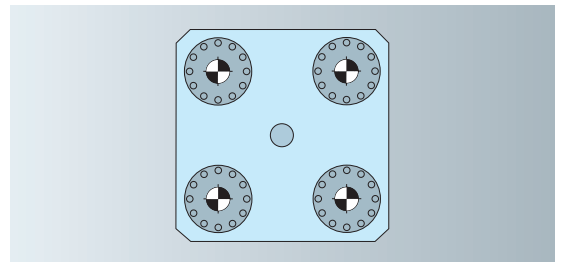
Version 1 centering spigot, 1 compensation spigot / A,
 2 chucking spigots / A.
 Mounting With the bolts supplied through the pallet or through the chucking spigot.

**ER-041464 MTS chuckling spigot set 4 / A**

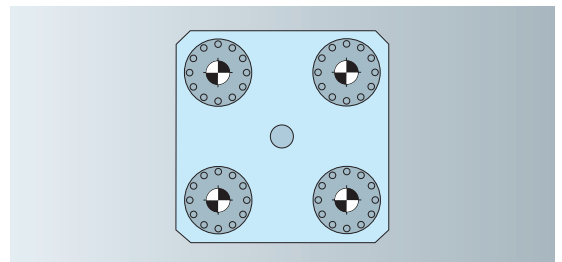
Version 1 centering spigot / A, 1 compensation spigot / A,
 2 chucking spigots / A.
 Mounting With the bolts supplied through the pallet or through the chucking spigot.

**ER-062465 MTS chuckling spigot set 4 / A-Z**

Version 4 centering spigots / A.
 Application Basically for 5-axis machining.
 To fit With the bolts supplied, through the pallet, or through chucking spigots.

**ER-100693 MTS chuckling spigot set 4 / A-Z-FD reinforced spigot**

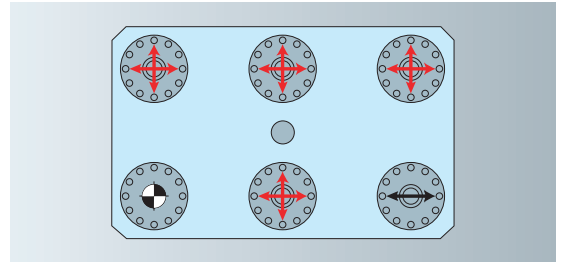
Version 4 centering spigots FD / A, including washers, straight pins and O-rings. Without M12 attachment bolts.
 Application Predominantly for 5-axis machining, rotative machining, for example milling/turning.
 To fit Through the pallet (from above) - attachment from below impossible.
 Note The centering spigots FD can only be used in conjunction with FD pallets. If you have any questions, please contact EROWA.



ER-041462 MTS chucking spigot set 6

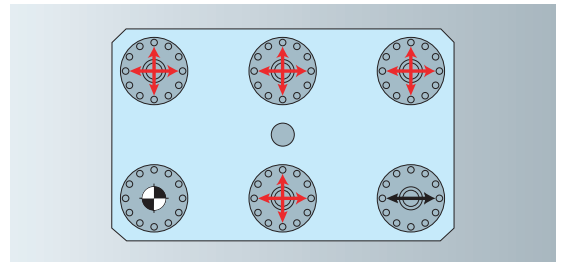

Version 1 centering spigot, 1 compensation spigot / A,
4 chucking spigots / A.

Mounting With the bolts supplied through the pallet or
through the chucking spigot.


ER-054710 MTS Chucking spigot set 6 / A

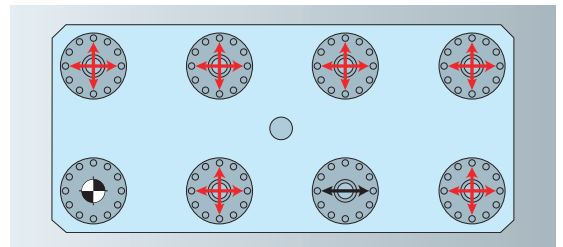

Version 1 centering spigot / A, 1 compensation spigot / A,
4 chucking spigots / A.

Mounting With the bolts supplied through the pallet or
through the chucking spigot.


ER-041463 MTS chucking spigot set 8


Version 1 centering spigot, 1 compensation spigot / A,
6 chucking spigots / A.

Mounting With the bolts supplied through the pallet or
through the chucking spigot.



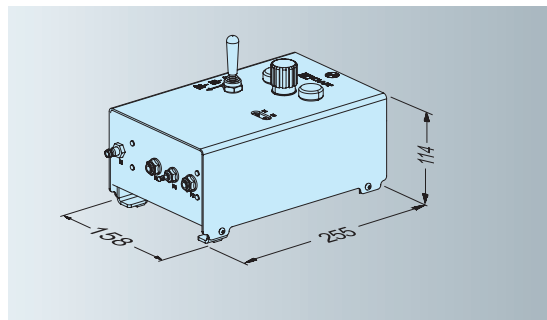
EROWA MTS

Operation

ER-073872 Manual control unit with booster



- Version** Manual valve to control the EROWA chucks:
Opening/Reclamping/Cleaning.
- Application** Operation of: EROWA ITS Compact Combi Chuck, ITS, UPC, MTS, PC 210 chucks and PowerChuck P.
- Note** Integrated booster with load ratio 1:2 (up to output pressure of 10 bar max.).



ER-099200 MTS 2.0 manual control unit



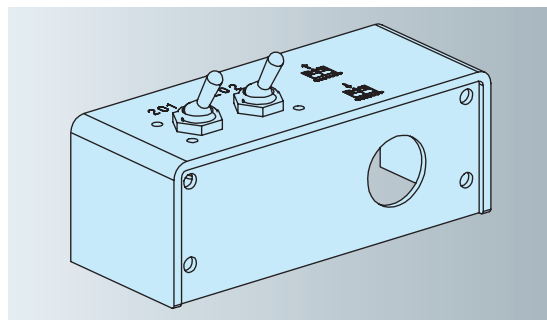
- Version** Manually operated valve for the control of the MTS 2.0 chuck functions. Opening / reclamping / monitoring / open check. Open control status: display possible through pressure gage and additional electrical signal.
- Application** Operation of MTS 2.0 chucks.



ER-039466 Additional valve double



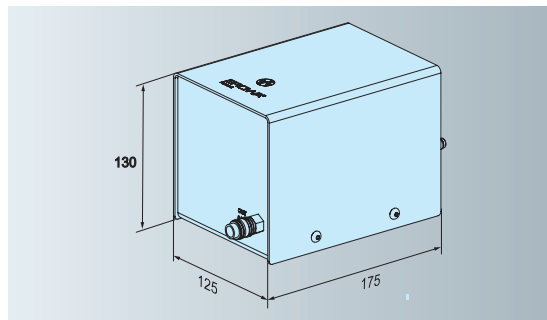
- Version** For mounting to the manual control units ER-008988 and ER-073872, incl. set of hoses.
- Application** Operating of two separate chucks with one single control unit.



ER-074893 Pressure booster

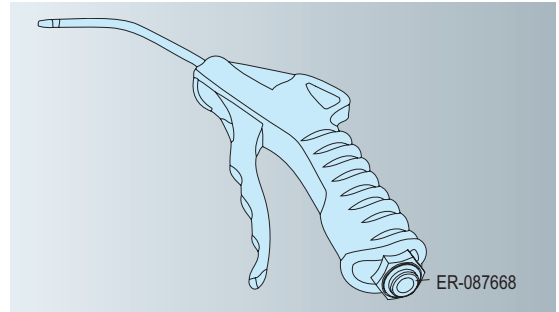


- Version** Quick-connect couplings for hose $\varnothing i = 8$ mm. Compression ratio: 1:2
- Application** On insufficient system pressure and on pressure fluctuations.
- Installation** Integrate in air circuit near application.

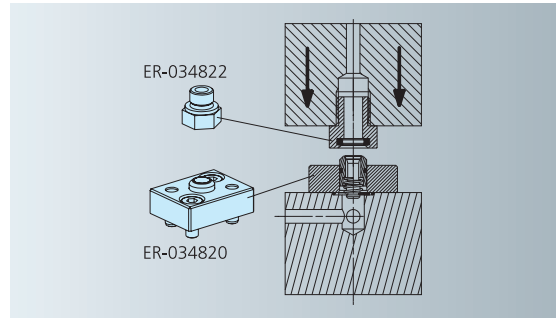


ER-001846 Air jet

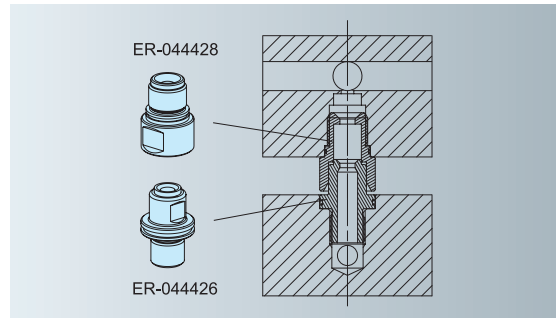
Version	Plastic, smooth regulation of air flow, connection 1/4", inside thread.
Application	Operation of manual chucks.
Note	Not suitable for operating MTS+ and MTS81.
Option	Volume and pressure reduction to air jet (ER-087668). Pressure build up is reduced if Air Jet is not pushed against an air valve.


ER-034820 MTS air coupling
ER-034822 MTS air coupling pallet 1 piece

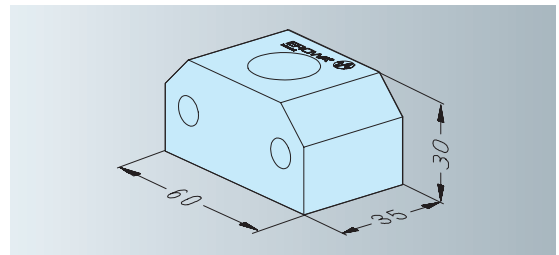
Application	The MTS air coupling ER-034820 combined with the MTS air coupling ER-034822 serves as a pneumatic interface between MTS base plates (A) and MTS pallets (B).
For use	with compressed air.
Working pressure	max. 10 bar.


ER-044426 Nipple for MTS base plates
ER-044428 Coupling for MTS pallets

Application	The coupling for MTS pallets ER-044428, in combination with the nipple for MTS base plates ER-044426, serves as an interface for the medium connection between MTS base plates (A) and MTS pallets (B).
For use	with compressed air, with vacuum, with oil / hydraulic.
Working pressure	max. 200 bar.
Important	Docking- and undocking only depressurized.


ER-034168 MTS Connector block 1/8" double

Version	Connector block made of steel, excluding attachment bolts.
Application	To receive pneumatic and hydraulic threaded connectors, nipples and couplings.



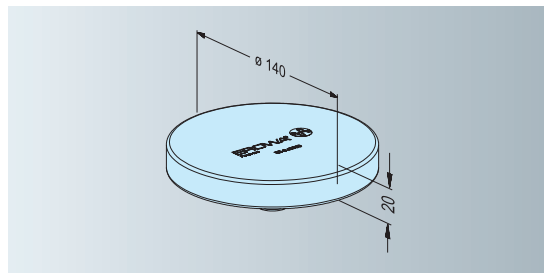
EROWA MTS

Accessories

ER-042038 MTS cover

Version Aluminum cover, anodized. Suitable for MTS and MTS 2.0 chucks.

Application Protects MTS and MTS 2.0 chucks that are not in use from chips and coolant.

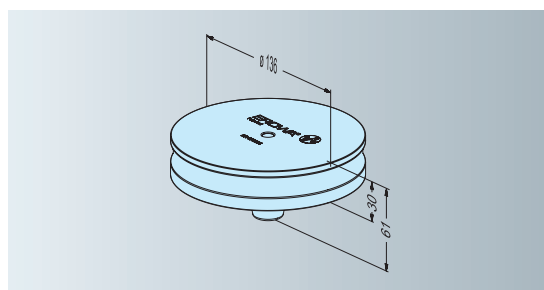


ER-070064 MTS Sealing pallet ø 136/A



Version Rust-resistant cover for the hermetical sealing of MTS chucks that are not in use.

Note Support surface must be clean and must be protected against damage.



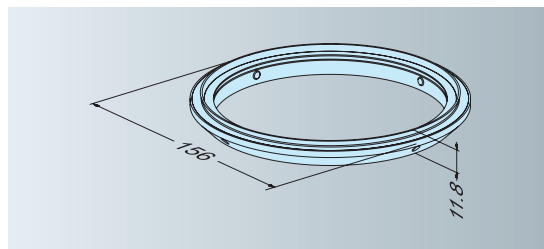
ER-048478 MTS Chip guard low



Version Aluminum, anodized

Application The MTS chip guard serves to seal the automatic MTS chucks and base plates when MTS pallets are used.

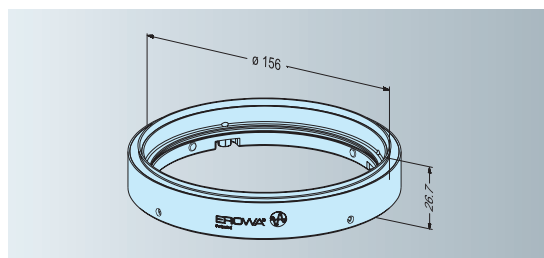
Note The MTS chip guard low cannot be combined with the MTS pallet P ø 148 Inox (ER-041928).



ER-056879 MTS Chip guard ø 156 with axial deaeration



Application For use with MTS pallet P ø 148 (ER-041928). Prevents dirt and chips from penetrating into the MTS SingleChuck

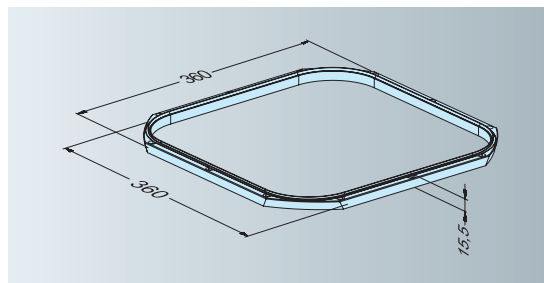


ER-049041 MTS seal frame set / 200



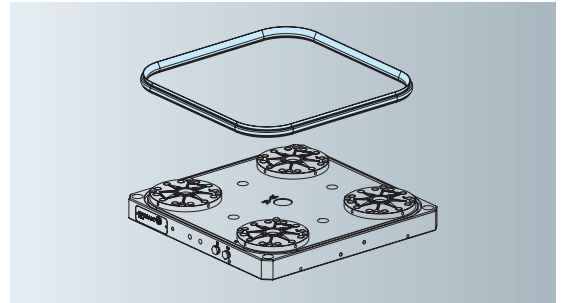
Version Aluminum anodized, with seal FPM (Viton).

Application The MTS seal frame set serves to protect MTS chucks against dirt and liquids when in use with an EROWA MTS pallet.

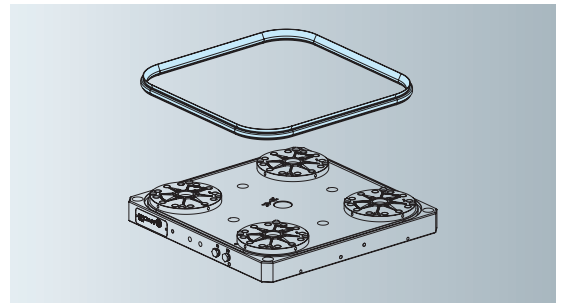


**ER-075393 MTS seal / 200
for MTS base plate 360 x 360 mm**

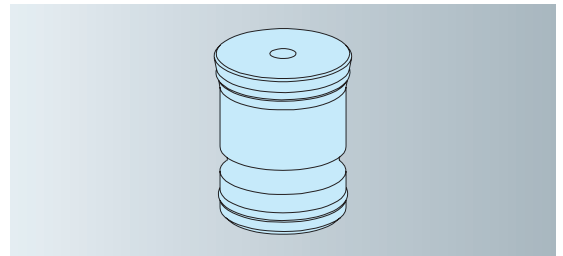

Version FPM (Viton).
Application Prevents dirt from penetrating into MTS base plates 360 x 360 in combination with MTS pallets 398 x 398 / 200.
Note The MTS base plate must have, or be equipped with, the groove to accommodate the seal.


**ER-071604 MTS seal / 250
for MTS base plate 410 x 410 mm**

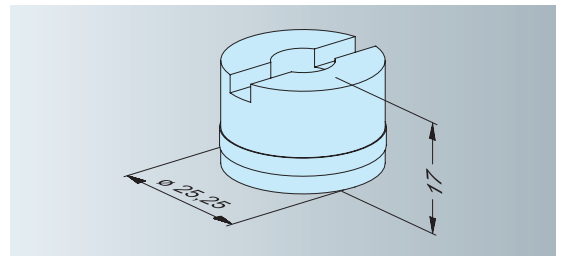

Version FPM (Viton)
Application Prevents dirt from penetrating into MTS base plates 410 x 410 with the use of EROWA MTS pallets 398 x 398 / 250 and 498 x 498 / 250.


ER-037967 MTS Locking bolt with M6

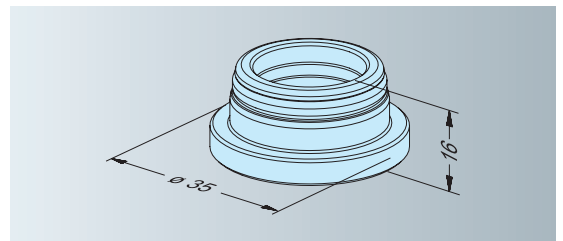
Version Steel.
Application To plug the central borehole in MTS, MTS 2.0 and MTS 81 chucks.


**ER-067563 Rubber seal MTS ø25 x 17 mm
for EDM**


Version Rubber seal
Note Assembly according to operating instructions. Prevents liquid from penetrating from below into the MTS chuck.


**ER-045969 MTS sealing ring
for chucking spigot P**


Version Plastic
Application Used in combination with the MTS chucking spigot P ER-040999 for sealing MTS chucks.

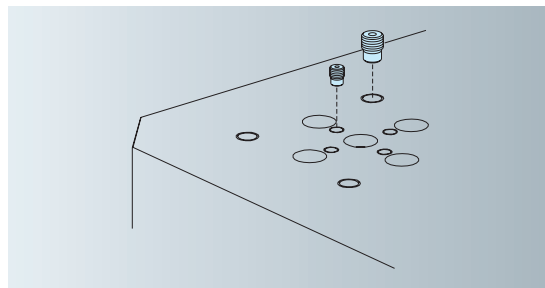


Accessories

ER-060391 MTS Set Z-support bolt set for 4-part pallet



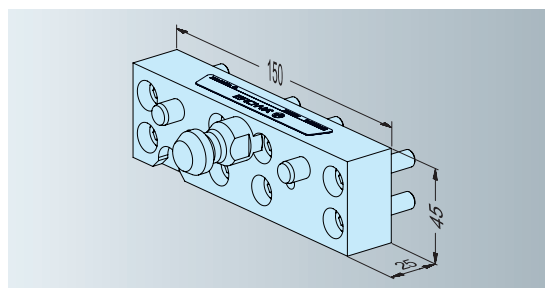
Version Steel, hardened
Application The Z-support bolts (1, 2) serve as Z-support surface for custo-mized MTS pallets.



ER-038622 GripperLink RCS 45 mm



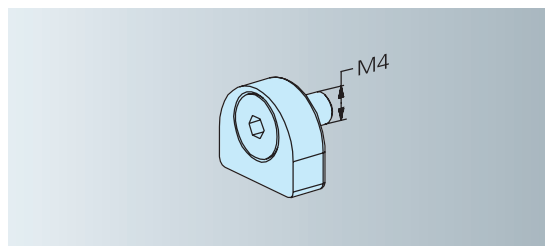
Version Coupling for MTS pallets, mounting accessories included.
Application Suited for MTS pallets to be used on EROWA handling devices with the «RCS» coupling system.



ER-035294 EWIS™ Rapid chip with chip holder RCS with chip $\varnothing 3 \times 13.5\text{mm}$



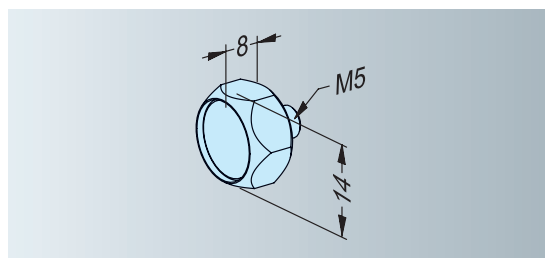
Version Holder with built-in data carrier. EWIS chip: read only.
Application To build into RCS coupling, PalletSet W holder and Basic WEDM holder.



ER-094168 EWIS™ rapid chip with holder SW14 Length 8mm (grey)

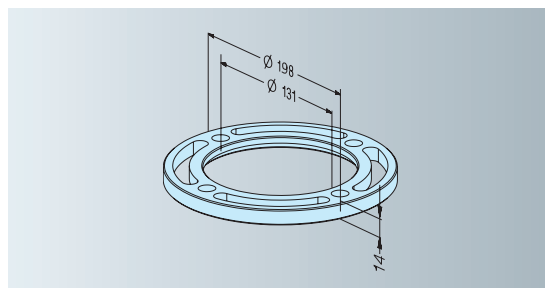


Version Sleeve fitting with built-in data carrier.
EWIS Rapid chip: read only.
Application In any EROWA electrode holder and pallet which has been prepared for it.



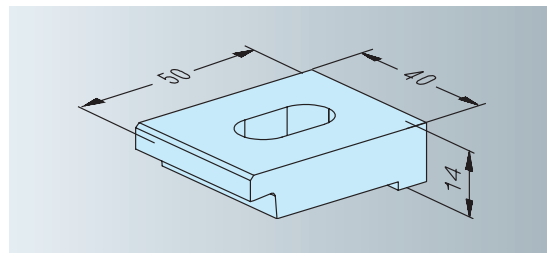
ER-033804 MTS ring bracket

Version Bracket made of steel, excluding attachment bolts.
Application Suitable for MTS chucks only. To attach mounted MTS chucks to the machine table.

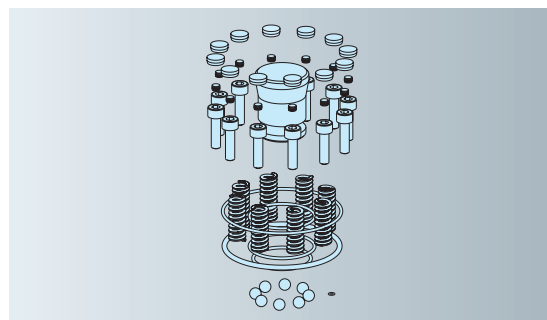


ER-033805 MTS bracket
1 piece

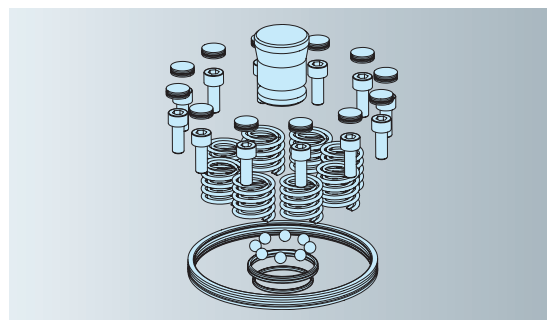
Version Bracket made of steel, excluding attachment bolt.
 Application To attach MTS chucks onto the machine table.
 Note Four brackets are necessary per MTS chuck.


ER-061558 MTS 81 Repair Kit

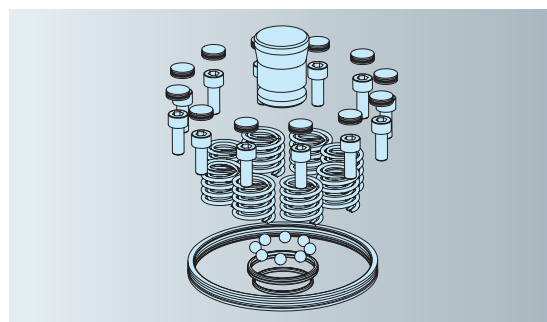

Version All the wearing parts for MTS 81 IntegralChuck.
 Application Repair Kit.


ER-034382 MTS repair set pneumatic


Version All the wearing parts for pneumatic MTS chucks.
 Application As a repair set or for the conversion of hydraulic MTS chucks into pneumatic ones.
 Note Repair or conversion according to instruction manual supplied.


ER-108204 MTS 2.0 repair set pneumatic


Version All the wearing parts for MTS 2.0 chuck.
 Application Repair Kit.



EROWA MTS

Accessories

ER-014326 Straight threaded connector 3101 06 10
ø6 / G1/8

Application Pneumatic.



ER-002814 Angled connector 3199 06 10

Application Pneumatic.



ER-014366 Threaded T-connector 3198 06 10

Application Pneumatic.



ER-014333 T-connector

Application Pneumatic.



ER-034095 Cross-connector

Application Pneumatic.



ER-002023 Tube ø 6/4 black
Legris 1100 U06 01

Application Pneumatic. Max. operating pressure: 9 bar.
Order unit Meters.



ER-036672 MTS air jet valve

Application Pneumatic. For air jet ER-001846.



ER-002147 Reinforced pipe PMAFlex
Co-Flex divisible

Application Hydraulic and pneumatic. Protects tubes ER-033495 and ER-002023 from damage.
Order units Meter.



ER-034098 Reduction nipple G1/4" - G1/8"

Application Hydraulic and pneumatic.

**ER-034372 Reduction bushing IG1/8" - IG1/4"**

Application Hydraulic and pneumatic.

**ER-034373 Reduction bushing IG 1/8" - IG 1/8" AD FA 40-1/8-1/8**

Application Hydraulic and pneumatic.

**ER-034375 Reduction nipple AG 1/4" - IG 1/8"**

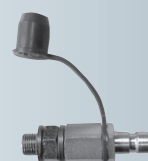
Application Hydraulic and pneumatic.

**ER-001617 Threaded plug 1/8"**

Application Hydraulic and pneumatic.

**ER-033504 Nipple 1/8"**

Application Hydraulic. With blocking device. Fits fast coupling ER-033499.

**ER-033499 Rapid-action coupling 1/8" IG**

Application Hydraulic. With blocking device. Fits fast nipple ER-033504.



The next step

Important things need to be planned. And your next step is certainly among the important things. 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.**



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