



General Catalog

Unlocking the full potential
of your machines



Welcome to the EROWA General Catalog

Competence means understanding the facts. EROWA products are based on this competence. The use of the EROWA FMC concept only has one single aim: **to increase competitiveness**. We'll be glad to be of assistance. With practical advice.

Your EROWA Team



How to find everything

STANDARDIZATION

EROWA PALLETIZING SYSTEMS



Overview

7



Tooling systems for production and precision mechanics


8




Tooling systems for EDM, tool- and mold-making

115


This is how the General Catalog works




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

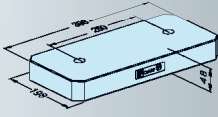


17. Handling with EROWA Robot gripper RCS

ER-041781 MTS pallet 198 x 398 / 250


















Aluminum pallet, 2-fold, excluding chucking spigot (MTS chucking spigot set ER-041460).
To clamp workpieces, vises and gauges.
ER-041460 to be ordered separately.

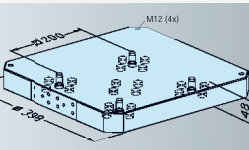




8014 MTS pallet 398 x 398 / 200


















Cast aluminum pallet, 4-fold, excluding chucking spigot (MTS chucking spigot set ER-041461 (M) / ER-041464 (A)).
To clamp workpieces, vises and gauges.
ER-041461 (M) / ER-041464 (A) to be ordered separately.

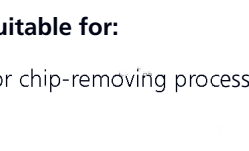




8002 MTS pallet 398 x 398 / 250


















Cast aluminum pallet, 4-fold, excluding chucking spigot (MTS chucking spigot set ER-041461 (M) / ER-041464 (A)).
To clamp workpieces, vises and gauges.
ER-041461 (M) / ER-041464 (A) to be ordered separately.

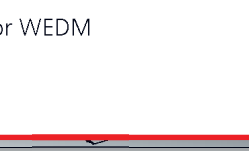





8376 MTS pallet 398 x 398 / 200
Hard Z support

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







Suitable for:



For chip-removing processes



For EDM sinking



For WEDM

STANDARDIZATION

Red marks everything that is connected with **palletizing systems**.

ORGANIZATION

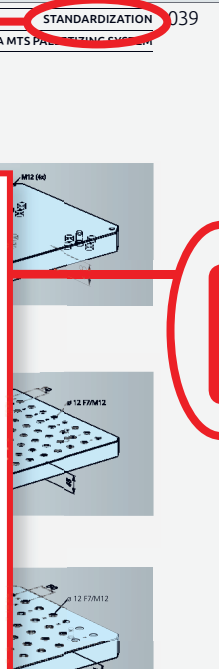
Yellow is used for **measuring and presetting stations**.

AUTOMATION

The color green directs you to **handling facilities**.

INTEGRATION

Software and process control systems are marked blue.



To make it easier for you to find your bearings among all the applications of EROWA products, we use the following icons in all our documents:

QUICK SEARCH

The quick search on the first inside page leads you to the beginning of the various product areas.

How to find ev

STANDARDIZATION	EROWA PALLETIZING SYSTEMS	
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DETAILED OVERVIEW

The detailed overview that precedes each product area leads you to the relevant product families such as the ITS or the WEDM tooling system.

Machine dependent					
500 x 500 x 500 mm					
000 x 000 x 000 mm					EROWA ClevorClamp System
400 x 400 x 400 mm					EROWA PC210 (ProductionChuck 210)
160 x 160 x 250 mm					EROWA PowerChuck P
Depends on machining power					EROWA Self-Centering Vise
200 x 200 x 200 mm					EROWA ClampSet
140 x 140 x 140 mm					EROWA ITS (Integrated Tooling System)
50 x 50 x 50 mm					EROWA ITS Compact Combi
					EROWA ITS Accessories
Depends on machining power					EROWA FTS (Fine Tooling System)
Machine dependent					EROWA Wire EDM Tooling

OVERVIEW TABLES

The overview tables that precede the chapters on presetting stations and handling facilities provide you with a quick overview of the properties of the various products.

Robot Easy									
									
PSW	PC210	UPC	MTS 400						
									
-	-	-	-	-	11	-	-	-	30
-	-	-	-	-	11	11	-	-	30
-	-	-	-	-	11	-	-	-	30
-	-	-	-	-	11	-	-	-	30
-	-	-	-	-	9	-	-	-	30
-	-	-	-	-	5	-	-	-	15
-	-	-	-	-	5	-	-	-	15
-	-	-	-	-	5	-	-	-	15
-	-	-	-	-	5	-	-	-	15
-	12	-	-	-	3	-	-	5	10
-	-	10	-	-	2	2	2	3	3/5
-	-	-	6	-	-	-	-	3	3
-	-	-	-	4	-	-	-	2	-
-	-	-	-	-	9	-	-	-	30*
15	-	-	-	-	2/3	-	-	7	15

UPDATES

The «Updates» page on the Internet shows you novelties and improvements that cannot be found in the printed copy. The PDF file is easy to download. The version number will tell you whether this page contains something new for you.

Online Catalogs

Quick Order

File Download


Exhibitions & Events

EMO 2011

NEW 5 | File Download

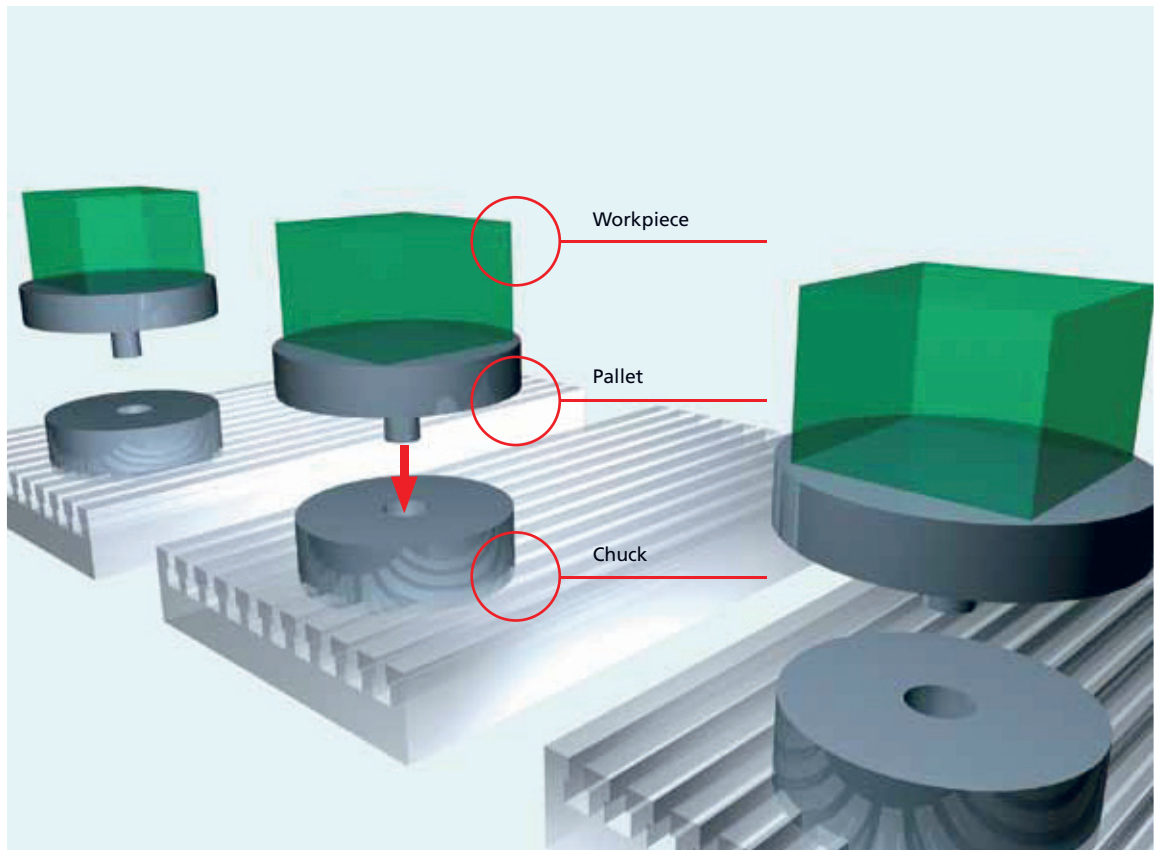
Interesting Files for

This is the page where you can find and follow the directions on the



DOWNLOAD HERE

EROWA Palletizing systems



Standardization of mechanical interfaces. The integration of a universal tooling system on all machine tools will significantly reduce any downtimes.



For chip-removing processes






For EDM sinking



For WEDM

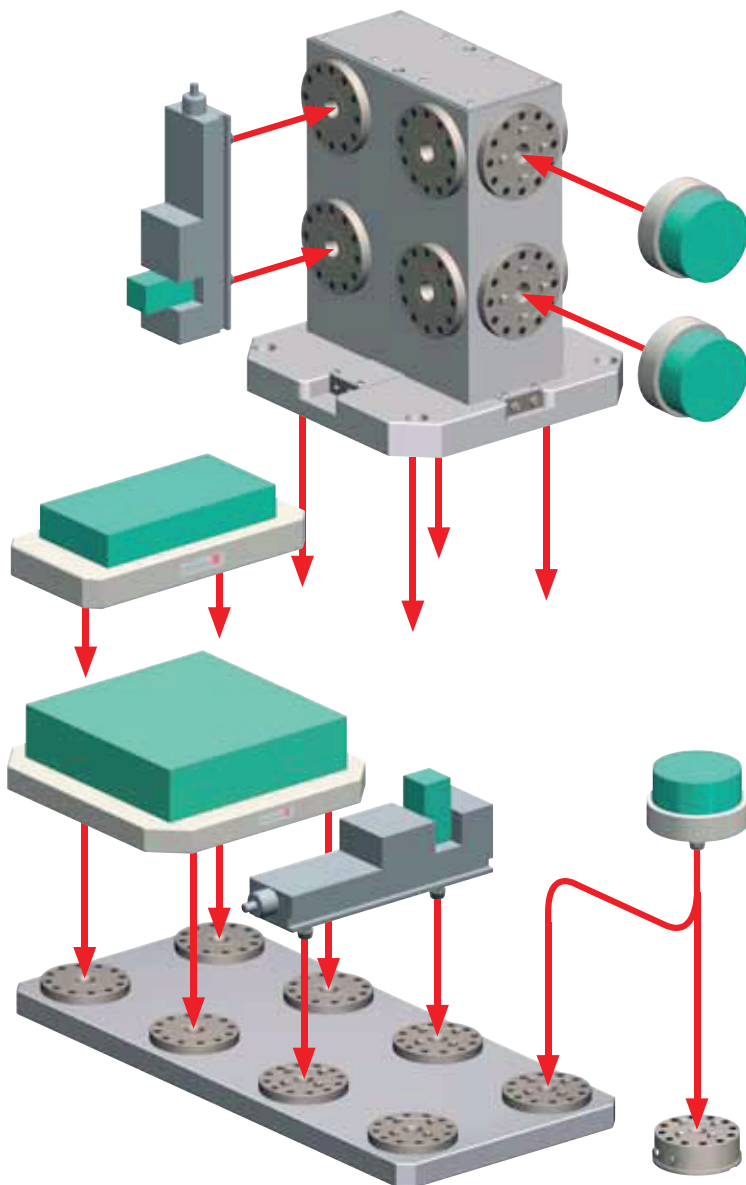
EROWA PALLETIZING SYSTEMS

			EROWA MTS (Modular Tooling System)	8
Machine dependent				
			EROWA UPC (Universal PowerChuck)	62
500 x 500 x 500 mm				
			EROWA CleverClamp System	76
Maximum clamping range 337 mm				
			EROWA PC210 (ProductionChuck 210)	96
400 x 400 x 400 mm				
			EROWA PowerChuck P	110
160 x 160 x 250 mm				

The datum point tooling system

The EROWA MTS (Modular Tooling System) is a flexible system. The maximum workpiece size exclusively depends on the possibilities offered by the machine. Whether it is a case of single palletization with one MTS chuck or multiple palletization with several MTS chucks or base plates - any combination is possible.

MTS chucks can be operated manually or automatically. New jobs are set up while the machine is in productive operation. Express jobs can be positioned on the machine within seconds. After that, the previous production process can be resumed. Therefore, machine down-times are reduced to a minimum.



The datum point is defined!

No alignment is necessary.

Minimum set-up times thanks to a standardized interface!

The interface between the machine and the workpieces/fixtures is standardized. The modular design of the clamping equipment allows for an almost unlimited number of combinations of all the components.

Make use of existing equipment!

Vises, gauges and fixtures are palletized or equipped with chucking spigots and put into production right away.

5-sided machining in one single clamping process!

Once the workpiece has been clamped on an EROWA pallet, 5 sides can be machined with that one clamping process.

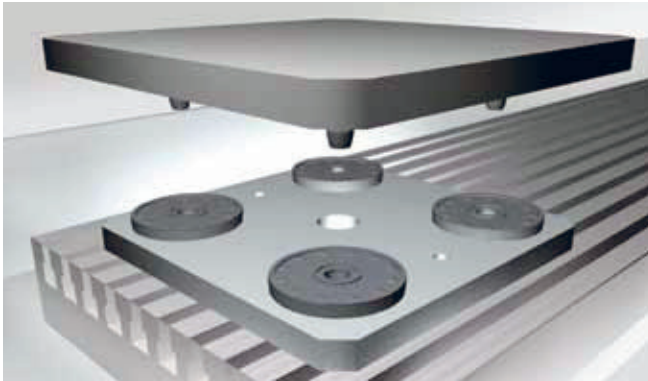
- Play-free prismatic centering in MTS single chucks.
- Indexable 4 x 90°.
- More than 500,000 clamping processes without any loss of power or reference accuracy.
- Clamping surfaces without recesses can be cleaned with compressed air.
- Low profile design.
- Suitable for automatic pallet change.
- Standardized pitch* of 200 mm or 250 mm on all EROWA base plates.

*) The pitch is the distance between the MTS chucks on a base plate.

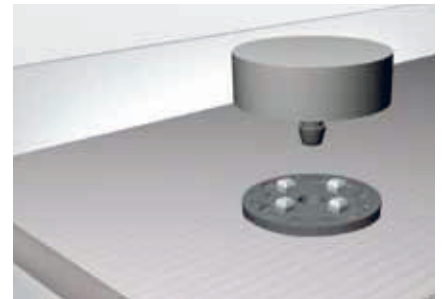
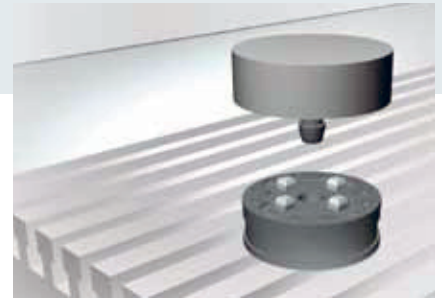
EROWA MTS

Systematic clamping

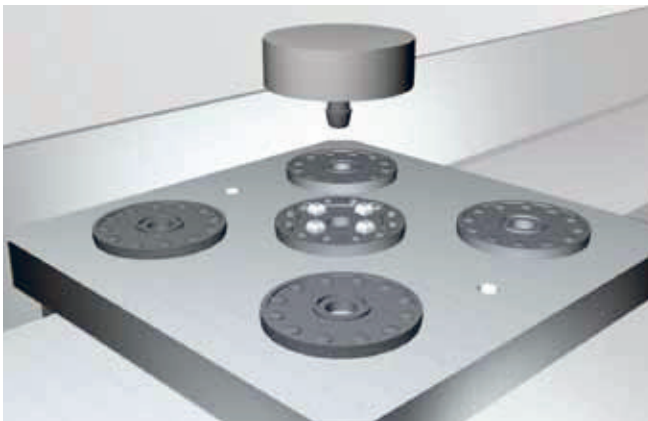
A base plate with integrated MTS chucks.



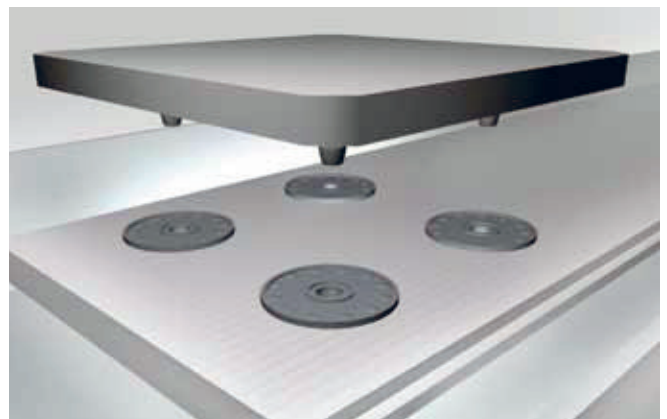
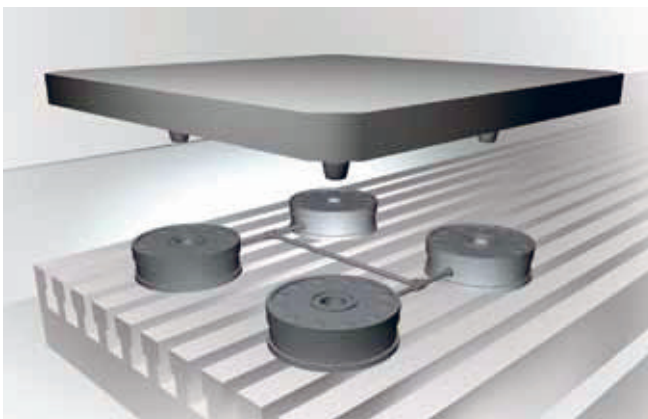
An individual MTS chuck, mounted on or directly integrated in the machine table.



Single and/or multiple MTS chucks integrated in a customized base plate.



Several MTS chucks mounted on or directly integrated in the machine table.



MTS

EROWA MTS

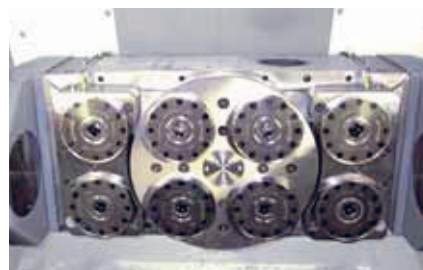
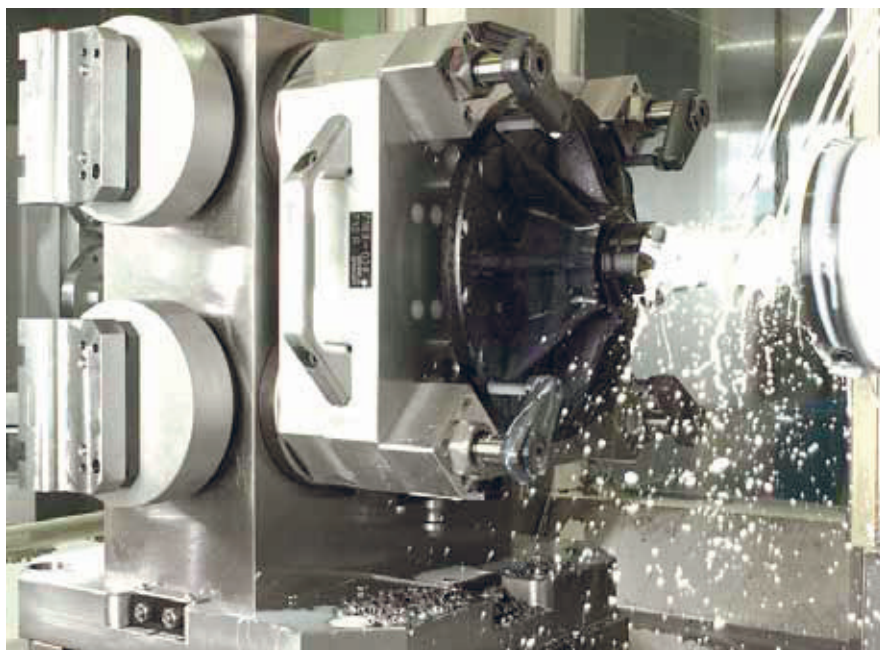
The palletizing system for your manufacturing processes

SERVICE

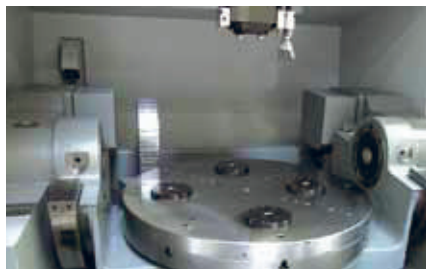
We'll be glad to advise you. No doubt we will find an optimal «clamping solution» for you, too.

Practical work demonstrates the flexibility of the EROWA MTS tooling system. Whether it is a standard solution or a customized configuration, the system will adapt to virtually any machine situation.

The system's universality allows for a wide variety of workpiece carriers to be loaded and unloaded in next to no time. The automation of the workpiece loading/unloading cycle can be retrofitted at any time.



Customized solutions are included. We will gladly advise you.



The low profile design of the EROWA MTS leaves a great deal of space for workpieces.



Various jobs can be done on one machine. Express jobs can easily be placed in between. Resetting the clamping equipment only takes a few seconds.



Thanks to the medium duct between chuck and pallet, workpieces may be clamped pneumatically, hydraulically or with a vacuum.



MTS chuck integrated in the mineral cast cube. In combination with the EROWA CleverClamp tooling system - a crucial production factor.



Flexible clamping devices. EROWA center clamps on MTS pallet.



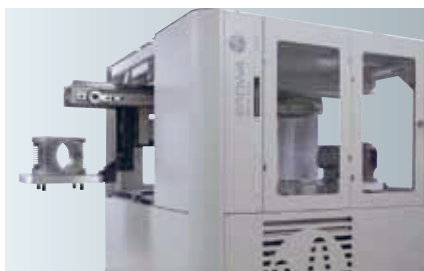
MTS single base plates are quickly installed and ready to use. Fit on machine tables with R50 and 63 mm hole grid and 100 mm T-slot spacing.



MTS chuck, able to automate. During the workpiece change, the contact surfaces are cleaned automatically.



Variable use of tombstones. The MTS system provides an interface to fixtures and vises. Refitting takes no time at all.



From the manual handling facility to the complex Robot system, EROWA supplies the handling solution you require.



Automatic pallet change in mixed operation with MTS and ITS pallets. Such combinations allow for an optimal use of the tooling system according to part sizes.

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 datum point tooling system and high clamping power.

EROWA MTS

The universal interface

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

EROWA MTS 2.0

The datum 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

EROWA MTS PALLETIZING SYSTEM

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EROWA MTS 81

Small size, high clamping power!

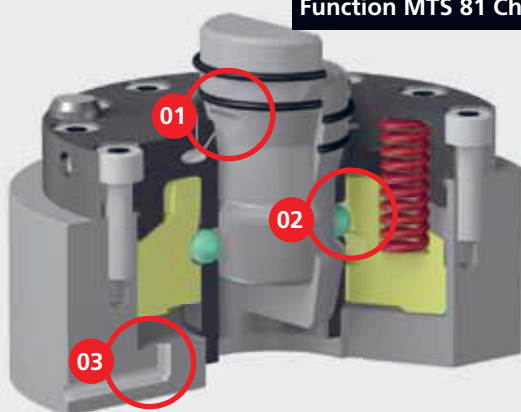
Applications



Handling

Manual / Loading facility / Robot

Function MTS 81 Chuck

**01 | Precise**

Play-free, 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

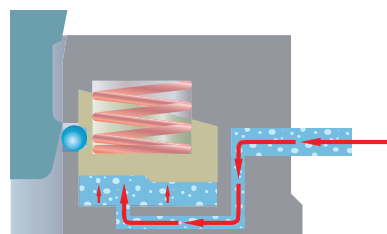
MTS 81 chucks are operated
pneumatically.

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+

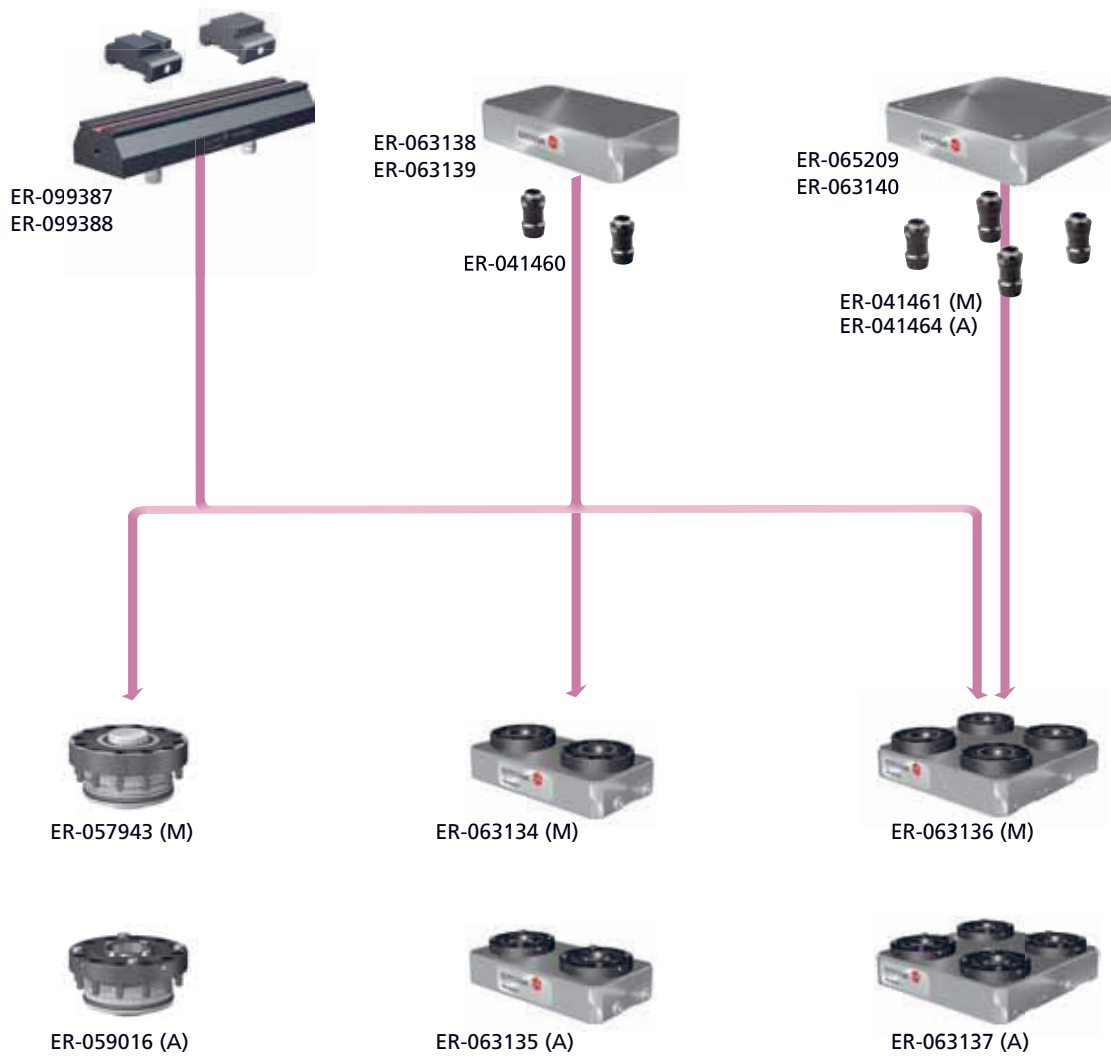


EROWA MTS 81

The components

(M) = manual
(A) = automatic

CleverClamp System:
see page 76



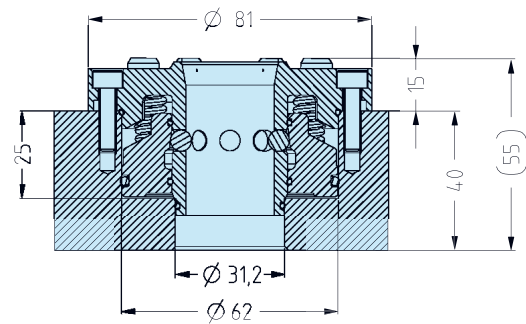
EROWA MTS 81

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

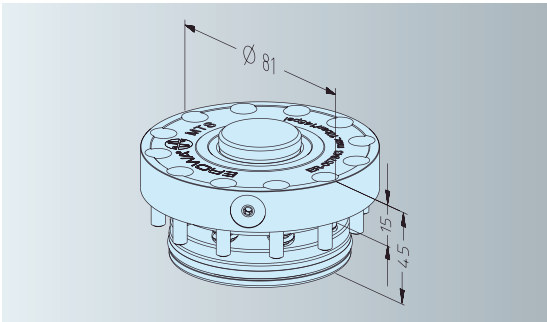
Integration variant applicable to MTS 81 IntegralChucks.
Observe tolerances according to integration instructions!



ER-057943 MTS 81 IntegralChuck M-P



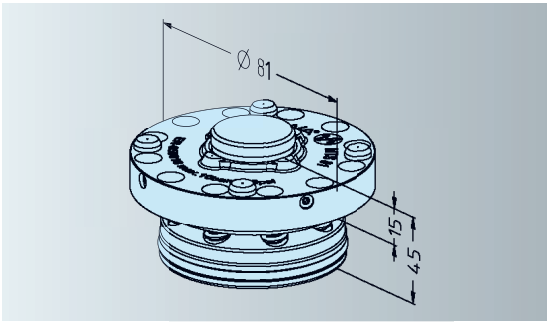
- Version: To be fitted directly to machine tables, plates, tombstones, squares or dividing heads. Suitable for manual loading.
- Connections: 2 pneumatic connections: one for opening and one for reclamping.
- Application: To accommodate multiple pallets.



ER-059016 MTS 81 IntegralChuck M-P/A



- Version: To be fitted directly to machine tables, tombstones, squares or dividing heads. Suitable for auto-matic loading.
- Connections: 3 pneumatic connections: one for opening, one for reclamping, and one for presence checks and cleaning.
- Application: To accommodate multiple pallets.



EROWA MTS 81

Base plates, 2-fold

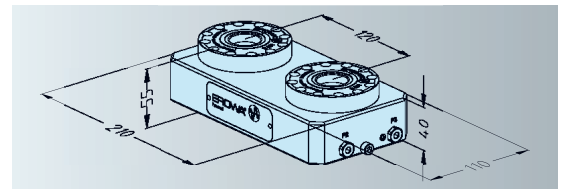
Technical data	MTS 81 Base plates, 2-fold pneumatic
Repeatability	< 0.005 mm
Indexation, pallet	1 x 180°
Clamping	Spring tension
Opening pressure	min. 8.5 bar
Process monitoring	pneumatic
Clamping power	up to 20,000 N
with reclamping	(2 x 10,000 N)

P = pneumatically operated
A = able to automate

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



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 EROWA dealer.



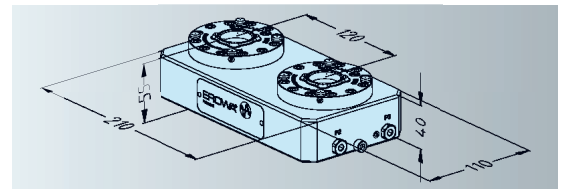
EROWA MTS 81

Base plates, 2-fold with cleaning facility, automatable

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



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 EROWA dealer.



MTS 81

EROWA MTS 81

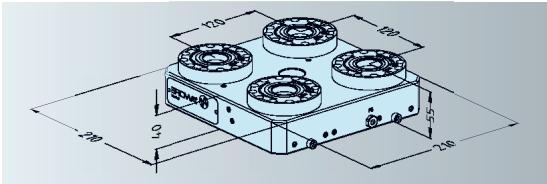
Base plates, 4-fold

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 mm

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 EROWA dealer.



EROWA MTS 81

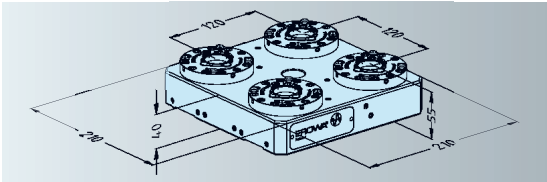
Base plates, 4-fold

with cleaning facility, automatable

ER-063137

MTS 81 base plate 210 x 210 P/A
pitch 120 mm

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 EROWA dealer.



EROWA MTS 81

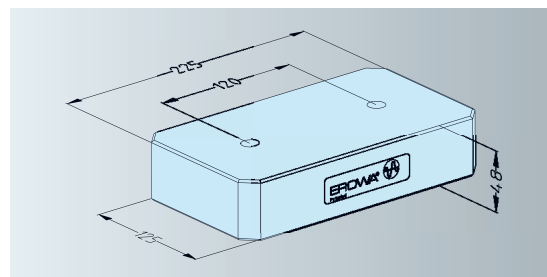
Pallets

**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.

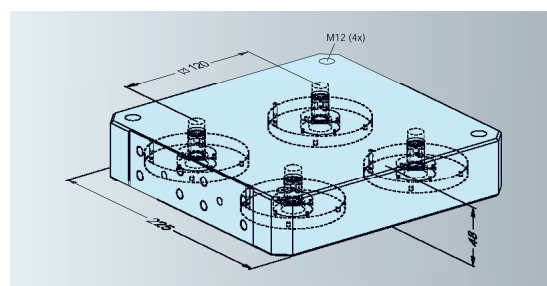
Accessories ER-041460 to be ordered separately.

**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.

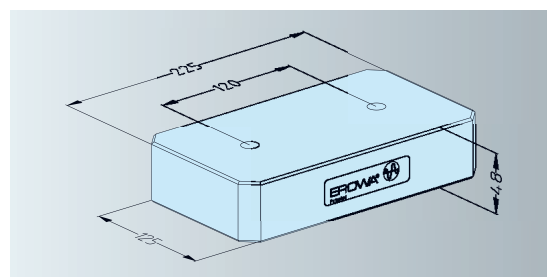
Accessories ER-041461 (M) / ER-041464 (A) to be ordered separately.

**ER-063139 MTS 81 pallet 125 x 225 / 120**

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

Application To clamp workpieces, vises and gauges.

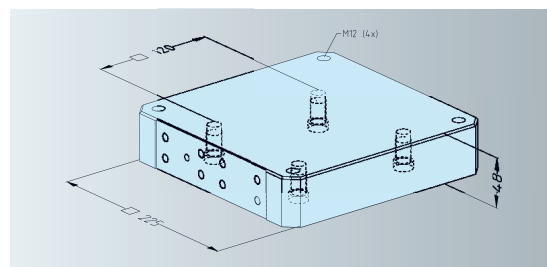
Accessories ER-041460 to be ordered separately.

**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.



MTS 81

Note: You will find the MTS chucking spigots overview starting on page: 48.

The universal interface

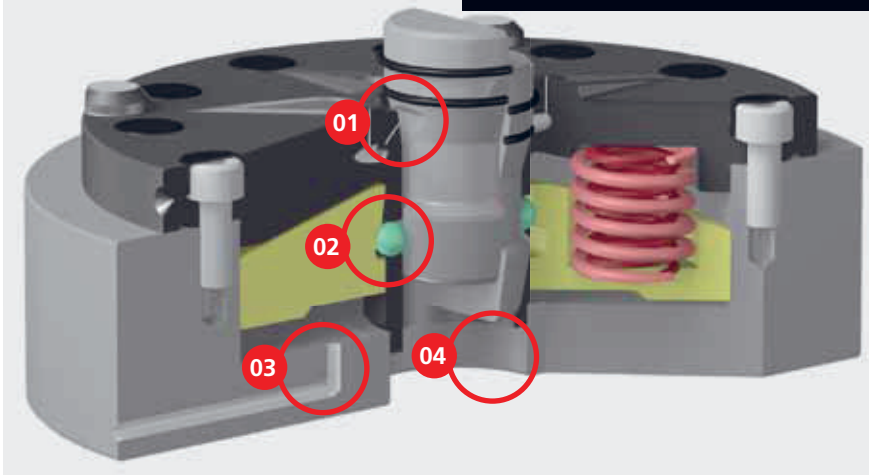
Applications



Handling

Manual / Loading facility / Robot

Function MTS Chuck



01 | Precise

Play free, 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

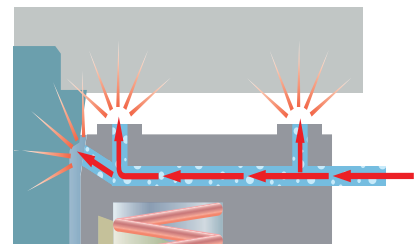
Liquids can drain off. No dirt traps.

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	12,000 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

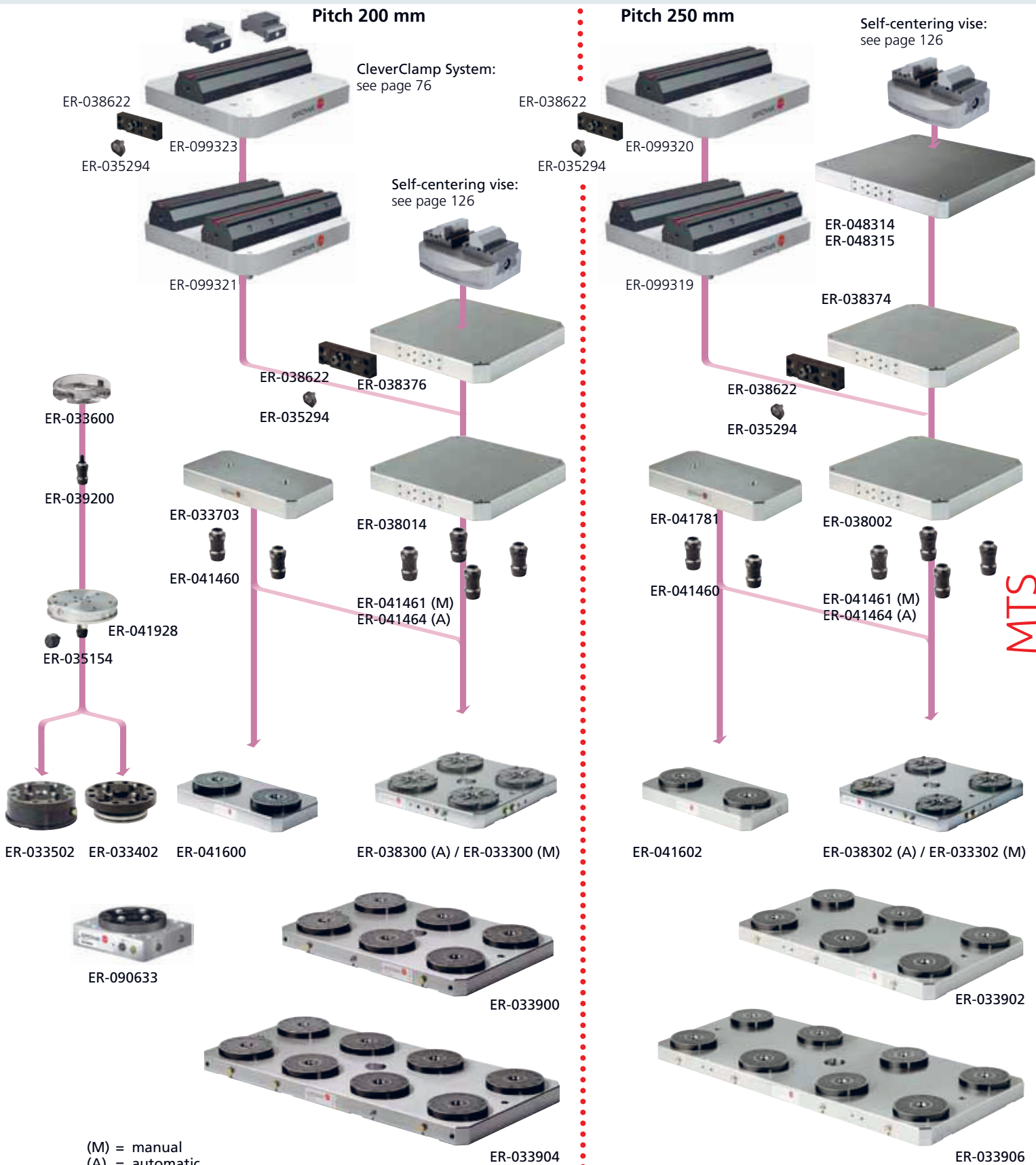
The components

Pitch 200 mm

Pitch 250 mm

Self-centering vise:
see page 126CleverClamp System:
see page 76Self-centering vise:
see page 126

MTS



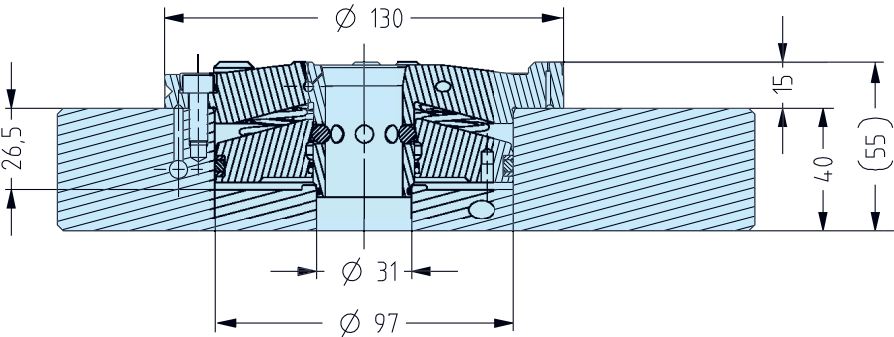
EROWA MTS

Integral chucks

Technical data	MTS integral chucks	
	pneumatic	hydraulic
Repeatability	< 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

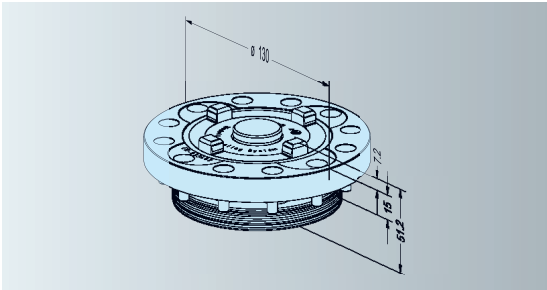
Integration variant (applicable to MTS IntegralChucks Single and Multi).
Observe tolerances according to integration instructions!



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



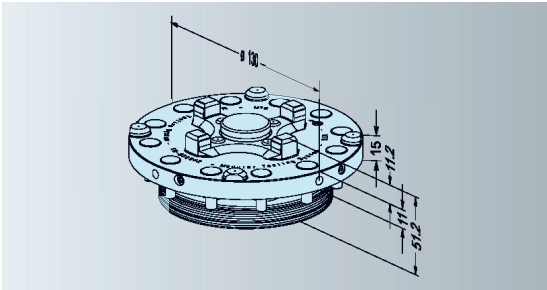
- Version: For direct integration in machine tables, plates, tombstones, squares or dividing heads.
- Connections: To open: pneumatic or hydraulic.
- Application: To accommodate single or multiple pallets.



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



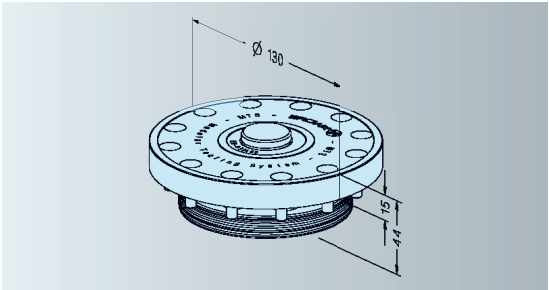
- Version: For direct integration in machine tables, plates, tombstones, squares or dividing heads.
- Connections: To open: pneumatic or hydraulic.
To clean: pneumatic.
- Application: To accommodate single or multiple pallets.



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



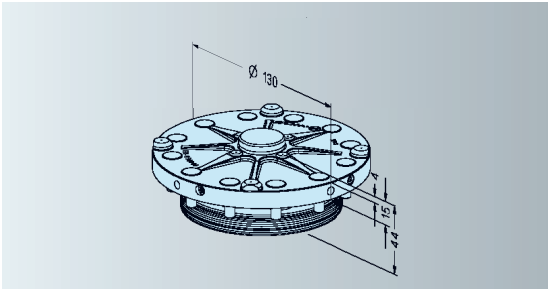
Version	For direct integration in machine tables, plates, tombstones, squares or dividing heads.
Connections	To open: pneumatic or hydraulic.
Application	To accommodate multiple pallets.



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

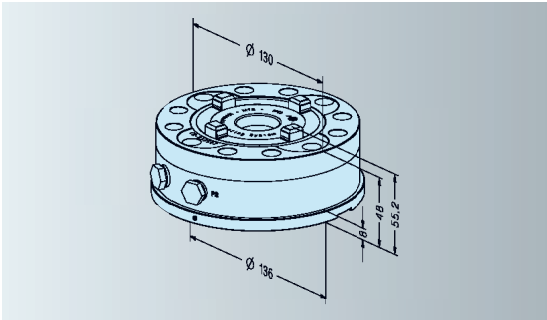


Version For direct mounting on machine tables, plates, tombstones, squares or dividing heads.

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

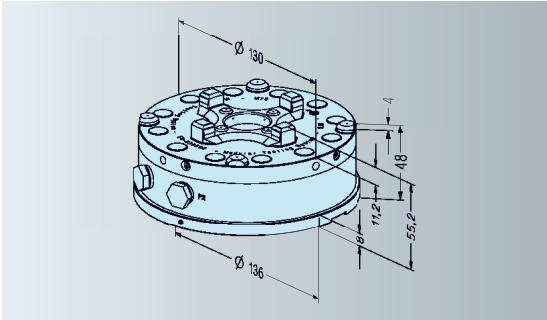


Version For direct mounting on machine tables, plates, tombstones, squares or dividing heads.

Connections Lateral, to open: pneumatic.
Lateral to clean: pneumatic

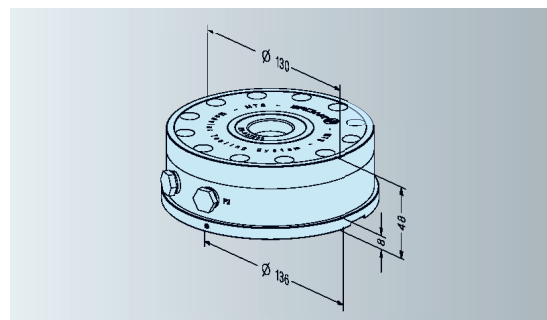
Application To accommodate single or multiple pallets.

Accessories Order separately: to fit MTS Chuck, MTS bracket ER-033804 or ER-033805.

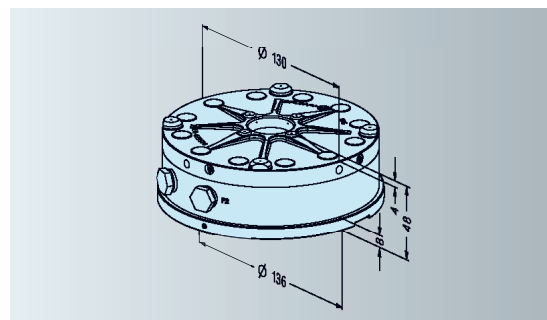


ER-033500 MTS Chuck M-P

- 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

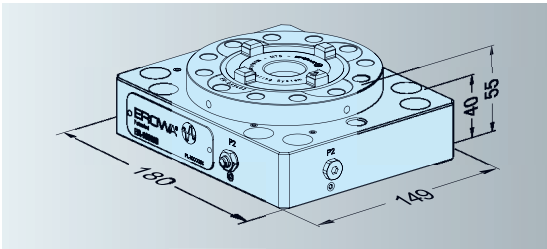
Technical data	MTS base plates, 1-fold
	pneumatic
Repeatability	< 0.005 mm
Indexation, pallet	4 x 90° (MTS Chuck S)
Clamping	Spring tension
Opening pressure	min. 7 bar
Process monitoring	pneumatic
Clamping power	12,000 N

S = Single
M = Multi
P = pneumatically operated

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



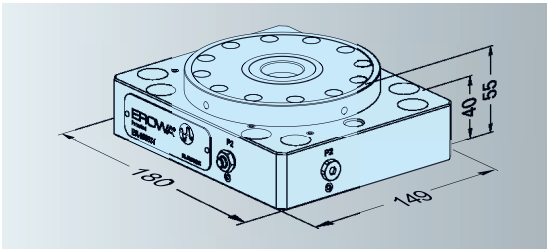
Version	Baseplate, steel not heat treated
Connections	At the side for opening the chuck. 1x air jet valve 2x threaded plug
Application	Mounting on to machine tables. For holding MTS single- and multiple pallets
Installation	Hole pattern for R50 / M12 grid plates and for machine tables with T-slot distance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

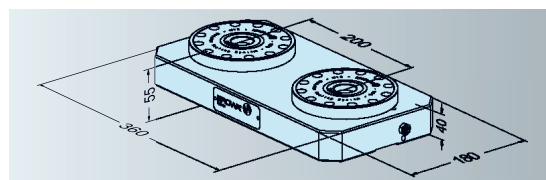
Technical data	MTS base plates, 2-fold pneumatic
Repeatability	< 0.005 mm
Indexation, pallet	1 x 180°
Clamping	Spring power
Opening pressure	min. 7 bar
Process monitoring	pneumatic
Clamping power	24,000 N (2 x 12,000 N)

P = pneumatically operated

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



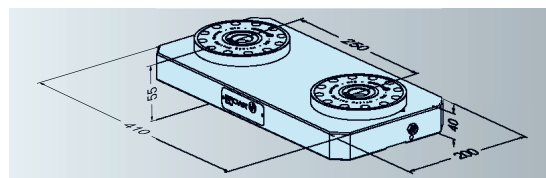
Version	Base plate, steel, unhardened; Pitch: 200 mm.
Connections	Lateral, to open: pneumatic.
Application	To accommodate double pallets. For direct assembly on machine tables.
Accessories supplied	1 x ER-036672 MTS air jet valve
Note	Attachment boreholes can be drilled by customers.
Caution	Do not drill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



MTS

EROWA MTS

Base plates, 4-fold

Technical data	MTS base plates, 4-fold
	pneumatic
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)

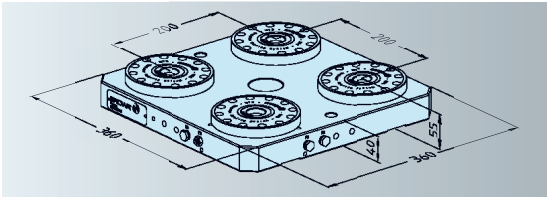
P = pneumatically operated

ER-033300

MTS base plate 360 x 360 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.

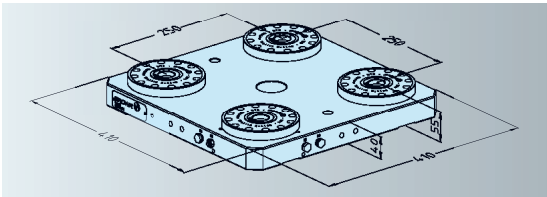


ER-033302

MTS base plate 410 x 410 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, 4-fold, with cleaning facility, automatable

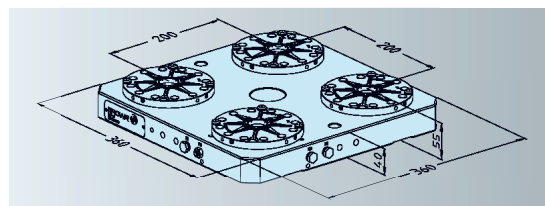
Technical data	MTS base plates, 4-fold, with cleaning facility, automatable pneumatic
Repeatability	< 0.005 mm
Clamping	Spring tension
Opening pressure	min. 7 bar
Process monitoring	pneumatic
Clamping power	48,000 N (4 x 12,000 N)

P = pneumatically operated

ER-038300 MTS base plate 360 x 360 P/A Pitch 200



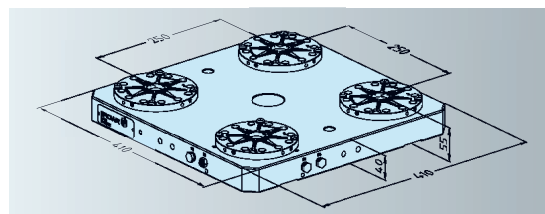
Version	Base plate, steel, unhardened; Pitch: 200 mm.
Connections	Lateral, to open: pneumatic. Lateral to clean: pneumatic.
Application	To accommodate multiple pallets. For direct assembly on machine tables.
Accessories supplied	for ER-038300: 1 x ER-036672, 2 x ER-014326.
Note	Attachment boreholes can be drilled by customers.
Caution	Do not drill through any air ducts! Please order operating instructions from your EROWA dealer.



ER-038302 MTS base plate 410 x 410 P/A Pitch 250



Version	Base plate, steel, unhardened; Pitch: 250 mm.
Connections	Lateral, to open: pneumatic. Lateral to clean: pneumatic.
Application	To accommodate multiple pallets. For direct assembly on machine tables.
Accessories supplied	for ER-038302: 1 x ER-036672, 2 x ER-014326.
Note	Attachment boreholes can be drilled by customers.
Caution	Do not drill through any air ducts! Please order operating instructions from your EROWA dealer.



MTS

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)

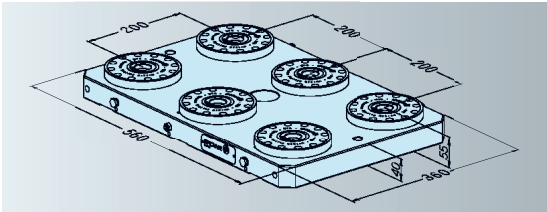
P = pneumatically operated

ER-033900

MTS base plate 360 x 560 P
Pitch 200



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

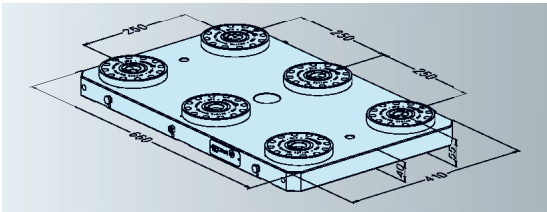


ER-033902

MTS base plate 410 x 660 P
Pitch 250



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



EROWA MTS

Base plates, 8-fold

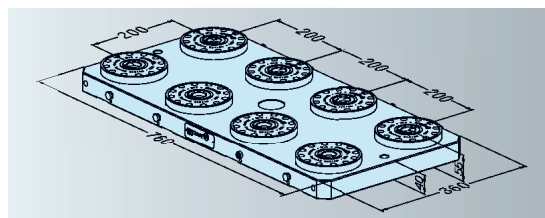
Technical data	MTS base plates, 8-fold pneumatic
Repeatability	<0.005 mm
Clamping	Spring power
Opening pressure	min. 7 bar
Process monitoring	pneumatic
Clamping power	96,000 N (8 x 12,000 N)

P = pneumatically operated

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



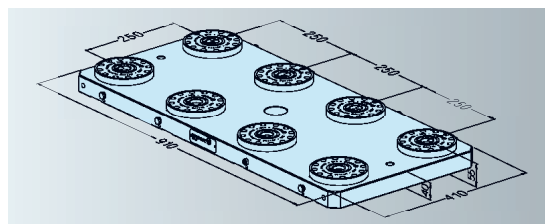
Version	Base plate, steel, unhardened; Pitch: 200 mm.
Connections	Lateral, to open: pneumatic.
Application	To accommodate multiple pallets. For direct assembly on machine tables.
Accessories supplied	1 x ER-036672.
Note	Attachment boreholes can be drilled by customers.
Caution	Do not drill through any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



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.



MTS

EROWA MTS 2.0

The datum-point system for the highest demands

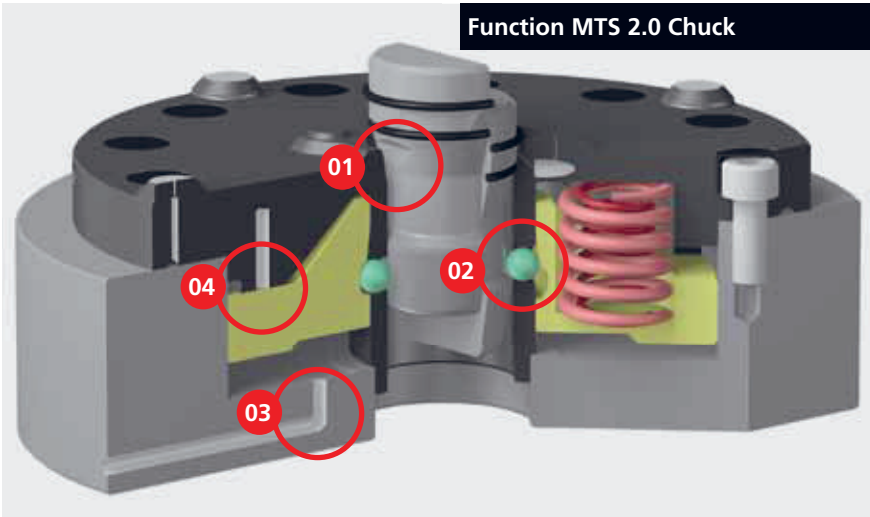
Applications



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

Play free, 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.

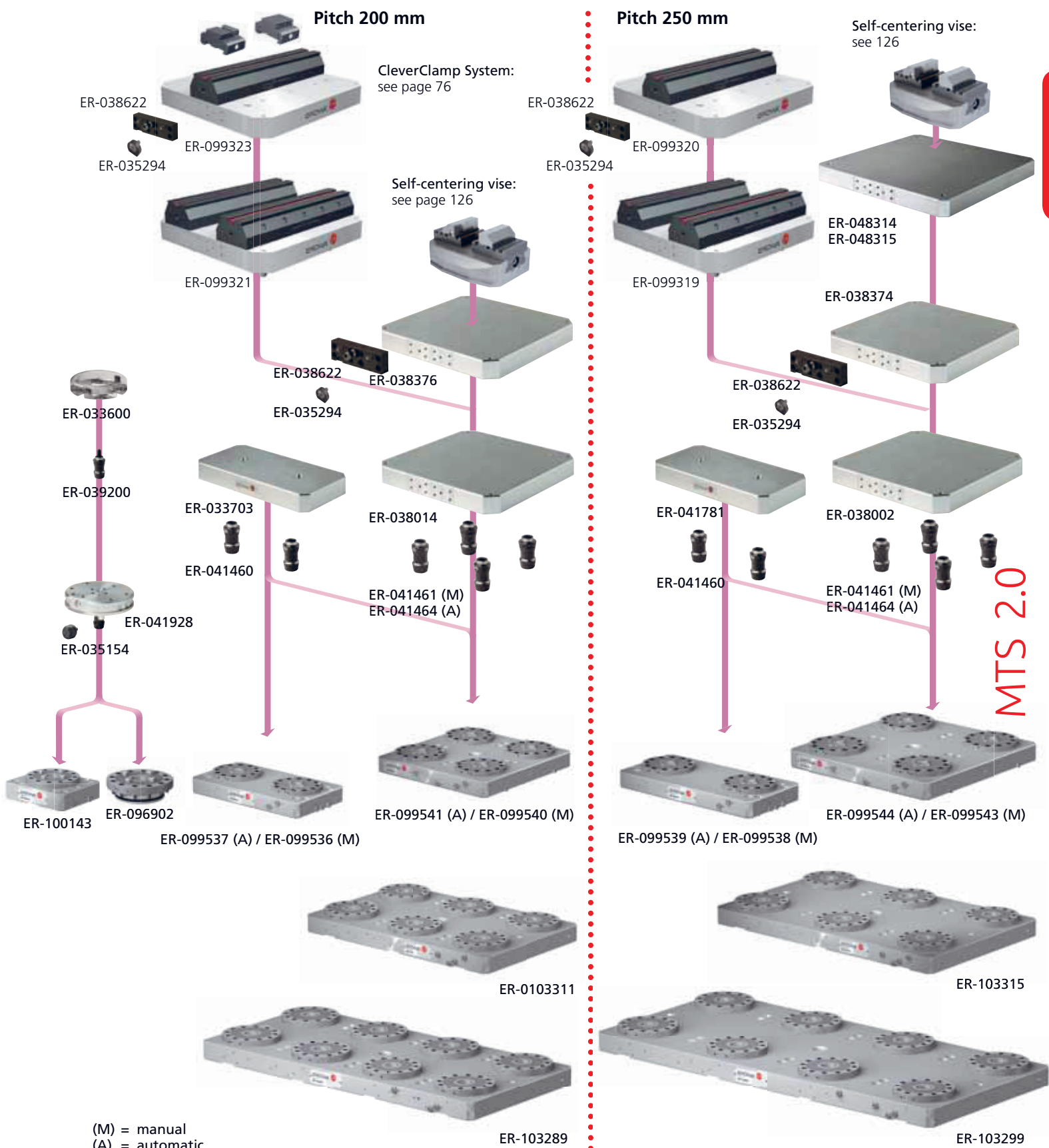
compatible

- MTS 81
- MTS
- MTS 2.0
- MTS+



EROWA MTS 2.0

The components



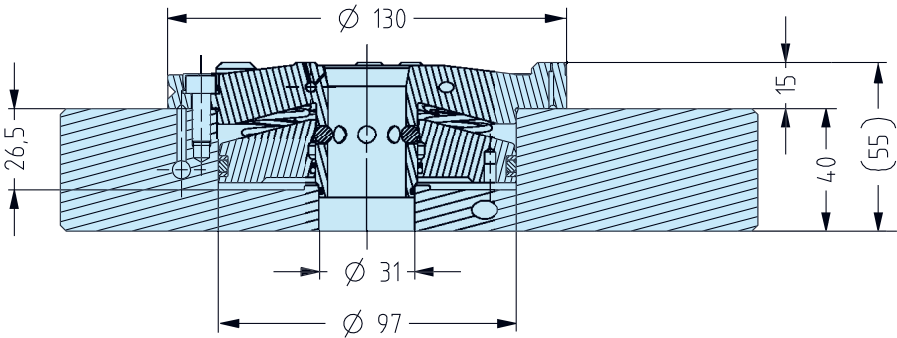
EROWA MTS 2.0

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 control 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

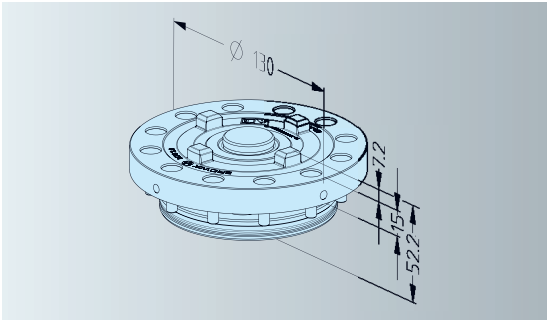
Integration variant (applicable to MTS 2.0 IntegralChucks Single and Multi).
Observe tolerances according to integration instructions!



ER-096902 MTS 2.0 IntegralChuck S-P



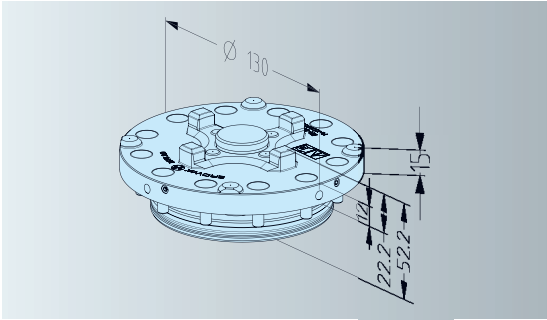
- Version For direct attachment to machine tables, plates, tombstones, angles or dividing heads.
- Connections 3 pneumatic connections: for opening, reclamping and open check.
- Application To hold individual and multiple pallets.



ER-096903 MTS 2.0 IntegralChuck S-P/A

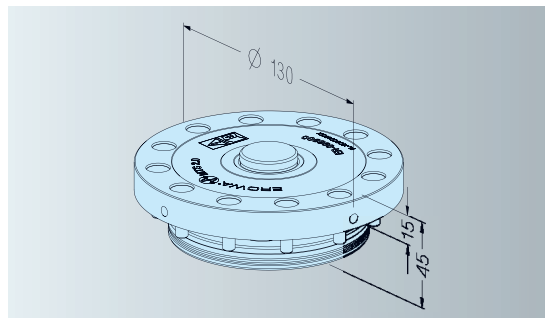


- Version For direct attachment to machine tables, plates, tombstones or dividing heads.
- Connections 4 pneumatic connections: for opening, cleaning/presence checks, reclamping and open check.
- Application To hold individual and multiple pallets.

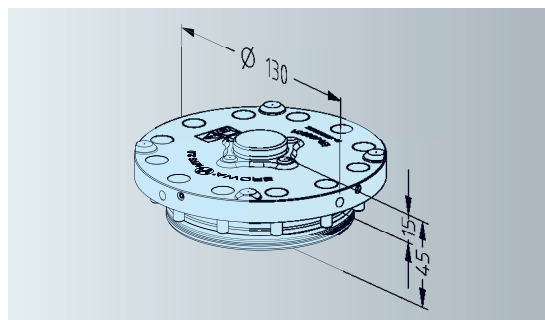


ER-096900 MTS 2.0 IntegralChuck M-P

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



EROWA MTS 2.0

Base plates, 1-fold

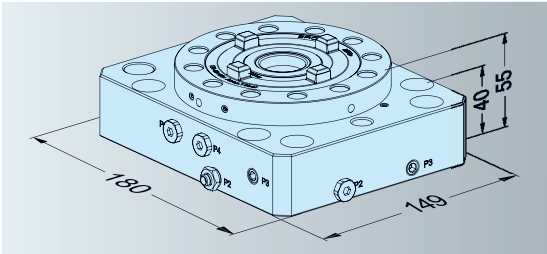
Technical data	MTS 2.0 base plate, 1-fold, pneumatic
Repeatability	< 0.003 mm
Indexation, pallet	4 x 90° (MTS 2.0 IntegralChuck S)
Clamping	Spring tension
Opening pressure	6 bar
Process monitoring	Pneumatically: opening control and monitoring
Clamping power	9,000 N (spring tension)
with reclamping	20,000 N

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

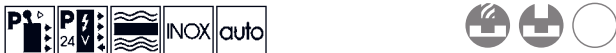
ER-100143 MTS 2.0 base plate 149 x 180 S-P single



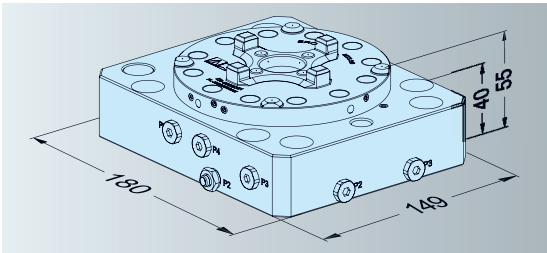
Version	Base plate, unhardened steel.
Connections:	Laterally: for opening, reclamping and open check.
Application	To hold individual and multiple pallets. To be set up on machine tables.
Mounting	Mounting hole configuration for R50/M12 grids and for tables with T-slot distances of 60/100 mm.



ER-100145 MTS 2.0 base plate 149 x 180 S-P/A single

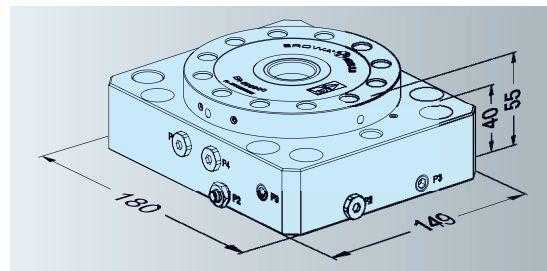


Version	Base plate, unhardened steel.
Connections:	Laterally: for opening, reclamping, open check and for cleaning/presence check.
Application	To hold individual and multiple pallets. To be set up on machine tables.
Mounting	Mounting hole configuration for R50/M12 grids and for table with T-slot distances of 63/100 mm.

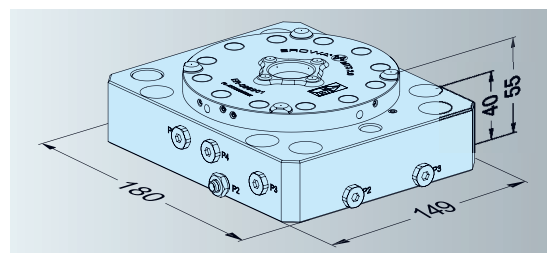


ER-100140 MTS 2.0 Base plate 149 x 180 M-P single

Version	Base plate, unhardened steel.
Connections	Laterally: for opening, reclamping and open check.
Application	To hold individual and multiple pallets. To be set up on machine tables.
Mounting	Mounting hole configuration for R50/M12 grids and for tables with T-slot distances of 63/100 mm.

**ER-100144 MTS 2.0 base plate 149 x 180 M-P/A single**

Version	Base plate, unhardened steel.
Connections	Laterally: for opening, reclamping, open check and for cleaning/presence check.
Application	To hold individual and multiple pallets. To be set up on machine tables.
Mounting	Mounting hole configuration for R50/M12 grids and for tables with T-slot distances of 63/100 mm.



EROWA MTS 2.0

Base plates, 2-fold

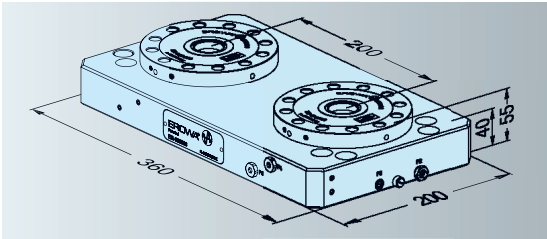
Technical data	MTS 2.0 base plate, 2-fold, pneumatic
Repeatability	< 0.003 mm
Indexation, pallet	1 x 180° (MTS 2.0 IntegralChuck S)
Clamping	Spring tension
Opening pressure	6 bar
Process monitoring	Pneumatically: opening control and monitoring
Clamping power	18,000 N (2 x 9,000 N) (spring tension)
with reclamping	40,000 N (2 x 20,000 N)

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

ER-099536 MTS 2.0 base plate 200 x 360 P Pitch 200



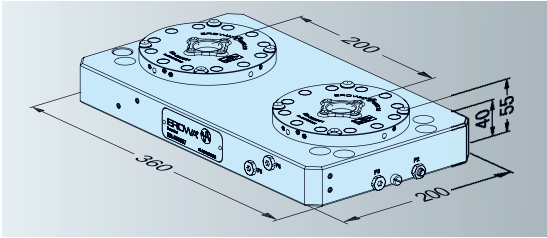
Version Base plate, unhardened steel. Pitch: 200 mm.
Connections Laterally: for opening, reclamping and open check.
Applicatin To hold double pallets. To be set up on machine tables.
Mounting Mounting hole configuration for R50/M12 grids and for tables with T-slot distances of 63/100 mm.



ER-099537 MTS 2.0 base plate 200 x 360 P/A Pitch 200

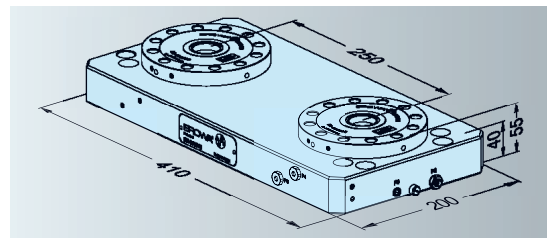


Version Base plate, unhardened steel. Pitch: 200 mm.
Connections Laterally: for opening, reclamping, open check and for cleaning/presence check.
Application To hold double pallets. To be set up on machine tables.
Mounting Mounting hold configuration for R50/M12 grids and for tables with T-slot distances of 63/100 mm.

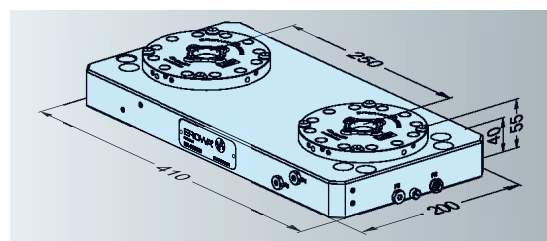


ER-099538 MTS 2.0 base plate 200 x 410 P
Pitch 250


Version	Base plate, unhardened steel. Pitch: 250 mm.
Connections	Laterally: for opening, reclamping and open check.
Application	To hold double pallets. To be set up on machine tables.
Mounting	Mounting hold configuration for R50/M12 grids and for tables with T-slot distances of 63/100 mm.


ER-099539 MTS 2.0 base plate 200 x 410 P/A
Pitch 250


Version	Base plate, unhardened steel. Pitch: 250 mm
Connections	Laterally: for opening, reclamping, open check and for cleaning/presence check.
Application	To hold double pallets. To be set up on machine tables.
Mounting	Mounting hole configuration for R50/M12 grids and for tables with T-slot distances of 63/100 mm.



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)

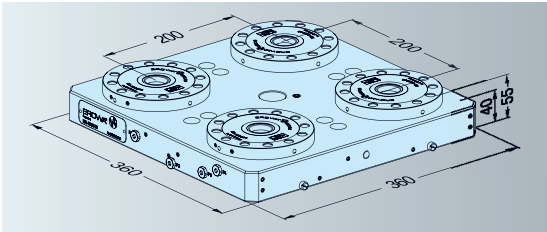
S = Single
M = Multi
P = pneumatically operated
A = able to automate

PC* = pitch circle

ER-099540 MTS 2.0 base plate 360 x 360 P Pitch 200



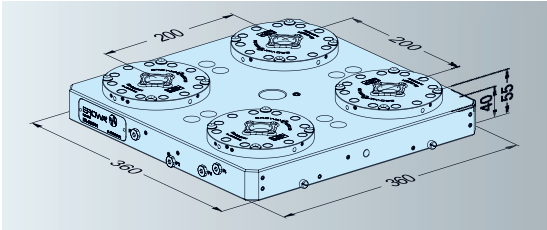
Version Base plate, unhardened steel. Pitch: 200 mm.
Connections Laterally and underneath (PC* ø57 mm): for opening, reclamping and open check.
Application To hold multiple pallets. To be set up on machine tables.
Mounting Mounting hole configuration for R50/M12 grids and for tables with T-slot distances of 63/100 mm.



ER-099541 MTS 2.0 base plate 360 x 360 P/A Pitch 200

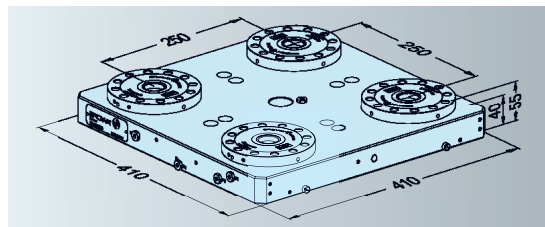


Version Base plate, unhardened steel. Pitch: 200 mm.
Connections Laterally and underneath (PC* ø57 mm): for opening, reclamping, open check and for cleaning/presence check.
Application To hold multiple pallets. To be set up on machine tables.
Mounting Mounting hole configuration for R50/M12 grids and for tables with T-slot distances of 63/100 mm.

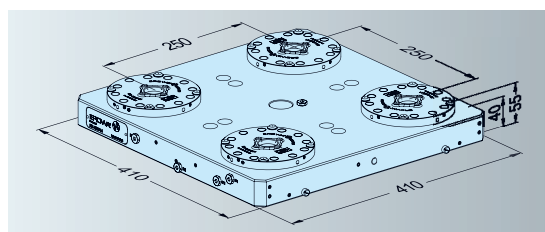


ER-099543 MTS 2.0 base plate 410 x 410 P
Pitch 250


Version	Base plate, unhardened steel. Pitch: 250 mm.
Connections	Laterally and underneath (PC* ø57 mm): for opening, reclamping and open check.
Application	To hold multiple pallets. To be set up on machine tables.
Mounting	Mounting hole configuration for R50/M12 grids and for tables with T-slot distances of 63/100 mm.


ER-099544 MTS 2.0 base plate 410 x 410 P/A
Pitch 250


Version	Base plate, unhardened steel. Pitch: 250 mm.
Connections	Laterally and underneath (PC* ø57 mm): for opening, reclamping, open check and for cleaning/presence check.
Application	To hold multiple pallets. To be set up on machine tables.
Mounting	Mounting hole configuration for R50/M12 grids and for tables with T-slot distances of 63/100 mm.



EROWA MTS 2.0

Base plates, 6-fold

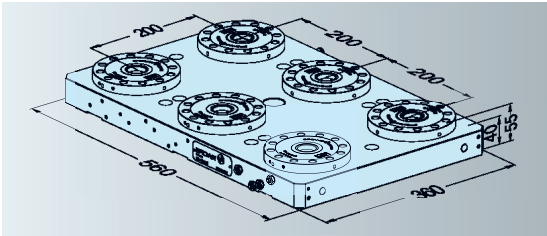
Technical data	MTS 2.0 base plate, 6-fold, pneumatic
Repeatability	< 0.003 mm
Clamping	Spring tension
Opening pressure	6 bar
Process monitoring	Pneumatically: opening control and monitoring
Clamping power	54,000 N (6 x 9,000 N) (spring tension)
with reclamping	120,000 N (6 x 20,000 N)

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

ER-103311 **MTS 2.0 base plate 360 x 560 P**
Pitch 200



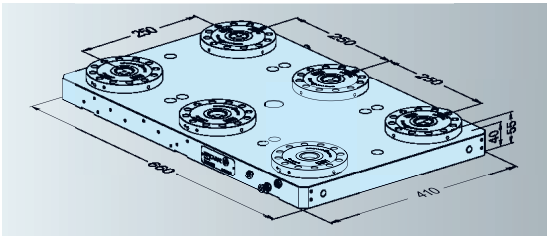
Version Base plate, unhardened steel. Pitch: 200 mm.
Connections Laterally: for opening, reclamping and open check.
Application To hold multiple pallets. To be set up on machine tables.
Mounting Mounting hole configuration for tables with T-slot
 distances of 63/100 mm.



ER-103315 **MTS 2.0 base plate 410 x 660 P**
Pitch 250



Version Base plate, unhardened steel. Pitch: 250 mm.
Connections Laterally: for opening, reclamping and open check.
Application To hold multiple pallets. To be set up on machine tables.
Mounting Mounting hole configuration for tables with T-slot
 distances of 63/100 mm.



EROWA MTS 2.0

Base plates, 8-fold

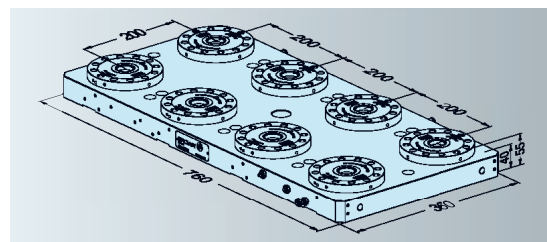
Technical data	MTS 2.0 base plate, 8-fold, pneumatic
Repeatability	< 0.003 mm
Clamping	Spring tension
Opening pressure	6 bar
Process monitoring	Pneumatically: opening controll and monitoring
Clamping power	72,000 N (8 x 9,000 N) (spring tension)
with reclamping	160,000 N (8 x 20,000 N)

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

ER-103289 MTS 2.0 base plate 360 x 760 P Pitch 200



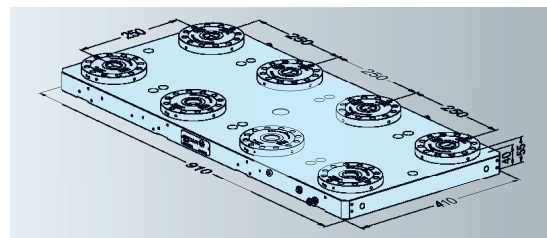
Version	Base plate, unhardened steel. Pitch: 200 mm.
Connections	Laterally: for opening, reclamping and open check.
Application	To hold multiple pallets. To be set up on machine tables.
Mounting	Mounting hole configuration for tables with T-slot distances of 63/100 mm.



ER-103299 MTS 2.0 base plate 410 x 910 P Pitch 250



Version	Base plate, unhardened steel. Pitch: 250 mm.
Connections	Laterally: for opening, reclamping and open check.
Application	To hold multiple pallets. To be set up on machines tables.
Mounting	Mounting hole configuration for tables with T-slot distances of 63/100 mm.



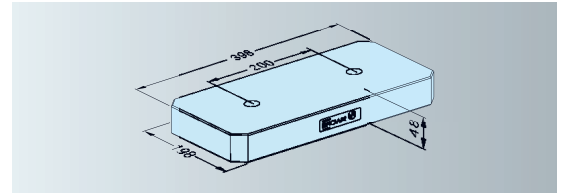
MTS 2.0

EROWA MTS Pallets

ER-033703 MTS pallet 198 x 398 / 200



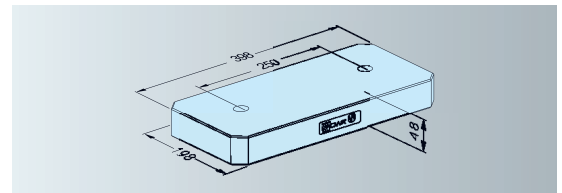
Version Aluminum pallet, 2-fold, excluding chucking spigot (MTS chucking spigot set ER-041460).
Application To clamp workpieces, vises and gauges.
Accessories ER-041460 to be ordered separately.



ER-041781 MTS pallet 198 x 398 / 250



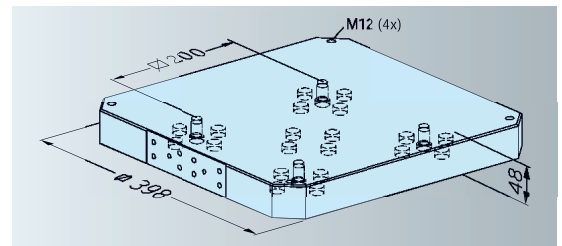
Version Aluminum pallet, 2-fold, excluding chucking spigot (MTS chucking spigot set ER-041460).
Application To clamp workpieces, vises and gauges.
Accessories ER-041460 to be ordered separately.



ER-038014 MTS pallet 398 x 398 / 200



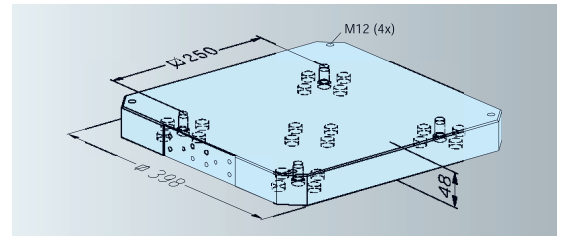
Version Aluminum pallet, 4-fold, excluding chucking spigot (MTS chucking spigot set ER-041461 (M) / ER-041464 (A)).
Application To clamp workpieces, vises and gauges.
Accessories ER-041461 (M) / ER-041464 (A) to be ordered separately.



ER-038002 MTS pallet 398 x 398 / 250



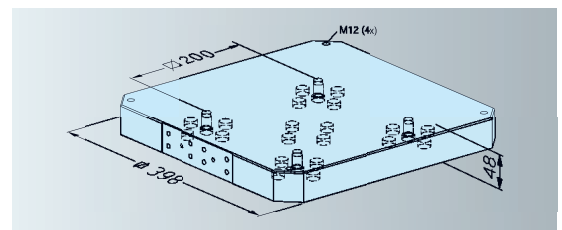
Version Aluminum pallet, 4-fold, excluding chucking spigot (MTS chucking spigot set ER-041461 (M) / ER-041464 (A)).
Application To clamp workpieces, vises and gauges.
Accessories ER-041461 (M) / ER-041464 (A) to be ordered separately.

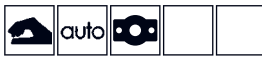


ER-038376 MTS pallet 398 x 398 / 200 Hard Z support

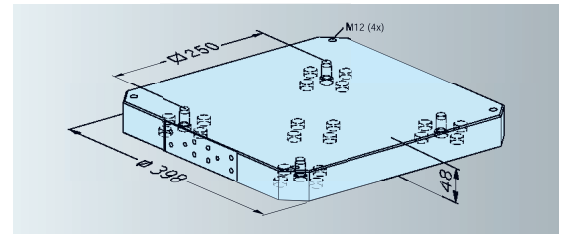
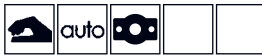


Version Aluminum pallet, 4-fold, excluding chucking spigot (MTS chucking spigot set ER-041461 (M) / ER-041464 (A)).
Application To clamp workpieces, vises and gauges.
Accessories ER-041461 (M) / ER-041464 (A) to be ordered separately.

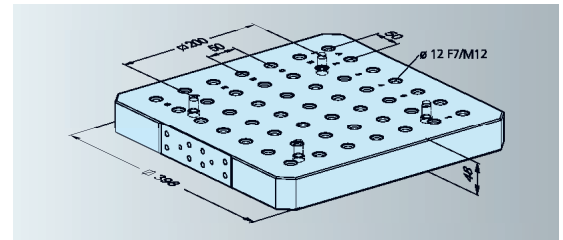


**ER-038374 MTS pallet 398 x 398 / 250
Hard Z support**

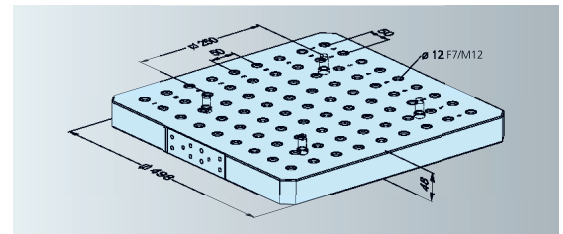
- Version Aluminum pallet, 4-fold, excluding chucking spigot (MTS chucking spigot set ER-041461 (M) / ER-041464 (A)).
- Application To clamp workpieces, vises and gauges.
- Accessories ER-041461 (M) / ER-041464 (A) to be ordered separately.

**ER-058819 MTS Pallet 398 x 398/200 R50**

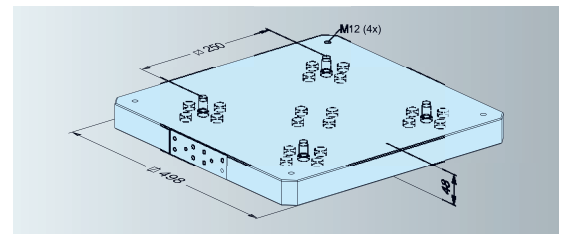
- Version Aluminum pallet (hard anodized), 4-fold, excluding chucking spigot (MTS chucking spigot set ER-041461 (M) / ER-041464 (A)).
- Application To clamp workpieces, vises and gauges.
- Accessories ER-041461 (M) / ER-041464 (A) to be ordered separately.

**ER-044906 MTS Pallet 498 x 498/250 R50**

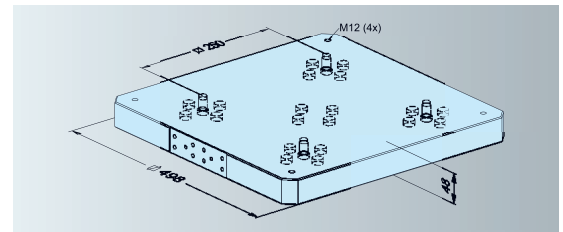
- Version Aluminum pallet (hard anodized), 4-fold, excluding chucking spigot (MTS chucking spigot set ER-041461 (M) / ER-041464 (A)).
- Application To clamp workpieces, vises and gauges.
- Accessories ER-041461 (M) / ER-041464 (A) to be ordered separately.

**ER-048314 MTS Pallet 498 x 498 / 250**

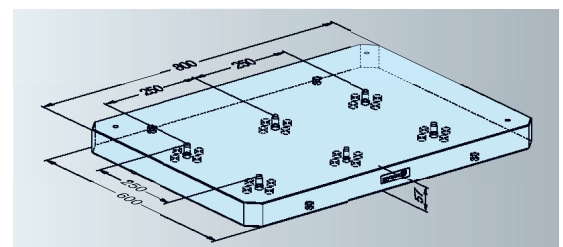
- Version Aluminum pallet, 4-fold, excluding chucking spigot (MTS chucking spigot set ER-041461 (M) / ER-041464 (A)).
- Application To clamp workpieces, vises and gauges.
- Accessories ER-041461 (M) / ER-041464 (A) to be ordered separately.

**ER-048315 MTS Pallet 498 x 498 / 250
Hard Z support**

- Version Aluminum pallet, 4-fold, excluding chucking spigot (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-054981 MTS pallet 600 x 800 x 57 / 250
hard Z support**

- Version Aluminum pallet, 6-fold, excluding chucking spigot (MTS chucking spigot set ER-054710(A), ER-041462 (M)).
- Application To clamp workpieces, vises and gauges, for chip-cutting operations
- Accessories To be ordered separately ER-054710(A), ER-041462 (M).



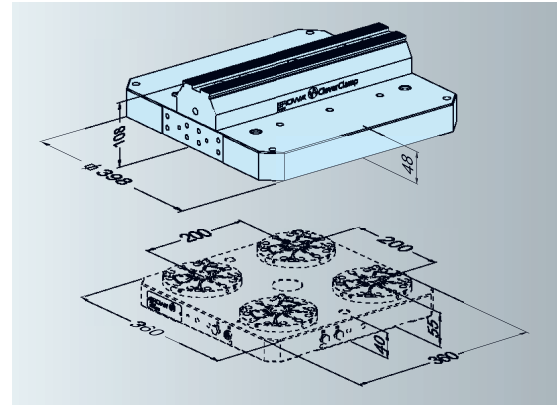
EROWA MTS

Pallets CleverClamp System

ER-099323 Base MTS 200 mono CleverClamp



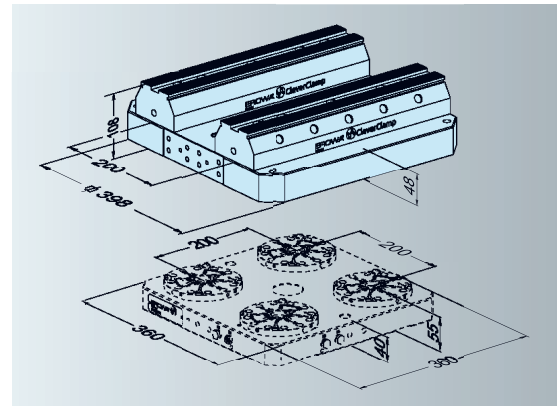
- Version Combination of MTS aluminum pallet with 398 rail (MTS spigot set ER-041461 (M) / ER-041464 (A)).
- Application Optimal accessibility for 5-axis applications with single and multiple fixtures.
- Accessories Order separately: ER-041461 (M) / ER-041464 (A) or MTS GripperLink Rapid ER-038622.



ER-099321 Base MTS 200 duo CleverClamp



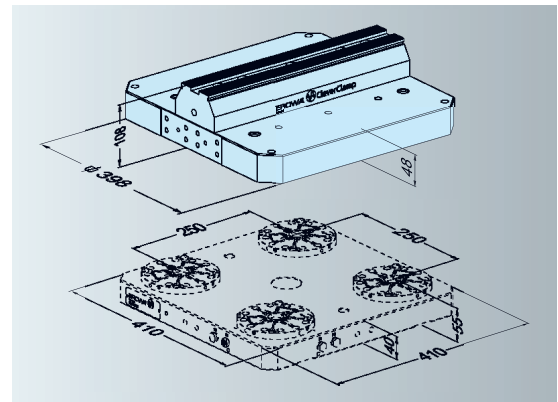
- Version Combination of MTS aluminum pallet with two 298 rails (MTS spigot set ER-041461 (M) / ER-041464 (A)).
- Application Optimal for multiple fixtures and for clamping big work-pieces.
- Accessories Order separately: ER-041461 (M) / ER-041464 (A) or MTS GripperLink Rapid ER-038622.



ER-099320 Base MTS 250 mono CleverClamp



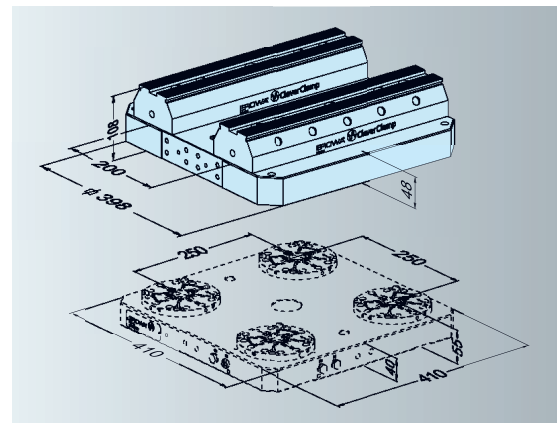
- Version Combination of MTS aluminum pallet with 298 rail (MTS spigot set ER-041461 (M) / ER-041464 (A)).
- Application Optimal accessibility for 5-axis applications with single and multiple fixtures.
- Accessories Order separately: ER-041461 (M) / ER-041464 (A) with GripperLink Rapid ER-038622.



ER-099319 Base MTS 250 duo CleverClamp



- Version Combination of MTS aluminum with two 398 rails (MTS spigot set ER-041461 (M) / ER-041464 (A)).
- Application Optimal for multiple fixtures and for clamping big work-pieces.
- Accessories Order separately: ER-041461 (M) / ER-041464 (A) or MTS GripperLink Rapid ER-038622.

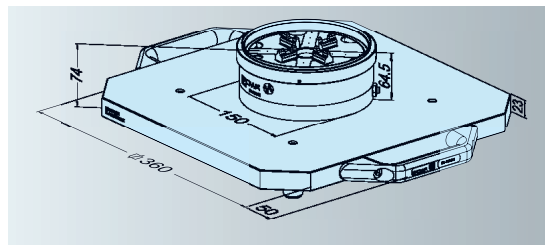


ER-054315 Adapter pallet MTS-PowerChuck 360x360, pitch 200

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

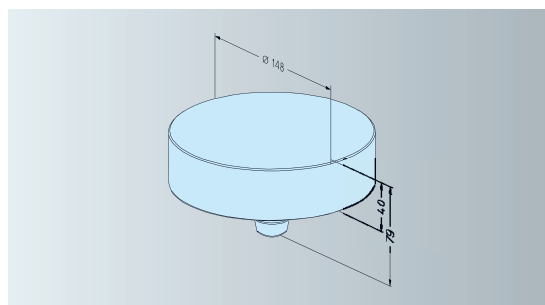
Operation PowerChuck P with lateral valve. Operate with air-jet.

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

**ER-033602 MTS pallet P ø 148 Alu**

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

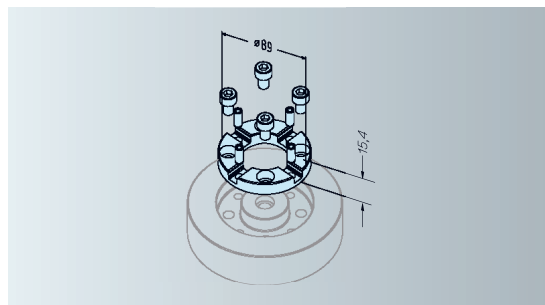
Application To clamp workpieces and gauges. For manual handling.

**ER-033600 MTS centering plate P**

Version Steel, including attachment bolts and positioning pins.

Application For the production of customized and indexable MTS pallets.

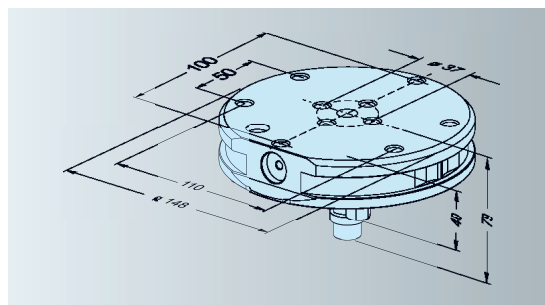
Accessories Chucking spigot ER-039200 to be ordered separately.

**ER-041928 MTS pallet P ø 148 Inox**

Version Steel pallet, not hardened, including chucking spigot ER-040999. Centering segment integrated in the pallet body.

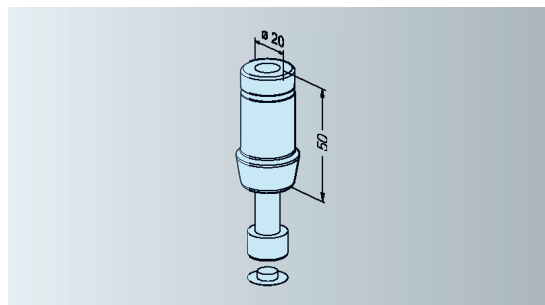
Application To clamp workpieces and gauges. For manual handling and automatic operation.

Note Compatible with EROWA PC210 CombiChuck and PowerChuck P (ITS chucking spigot ER-010742 required).

**ER-040999 MTS chucking spigot P**

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

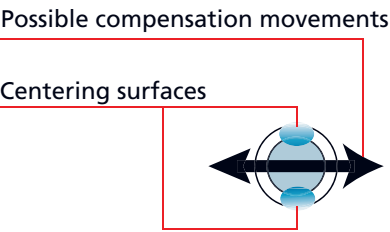
Application For the conversion of ITS pallet ø 148 ER-041912 into MTS pallet P ø 148 ER-041928.








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 (centering play 0.1 mm).
	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 set-up distance difference of 0.1 mm.

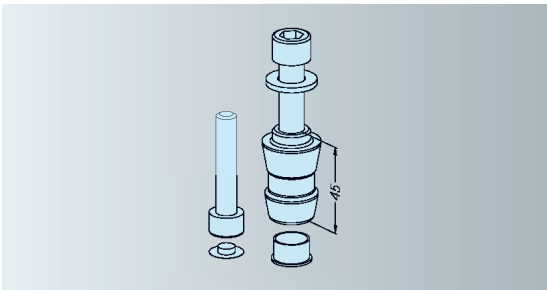


ER-033800 MTS centering spigot













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

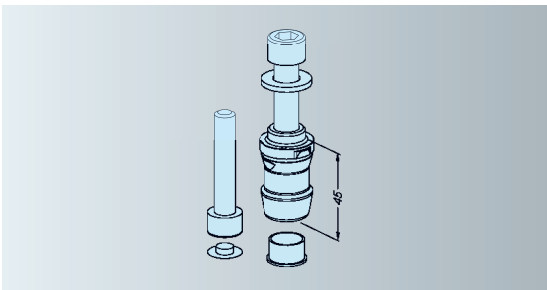


ER-039201 MTS compensation spigot / A













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

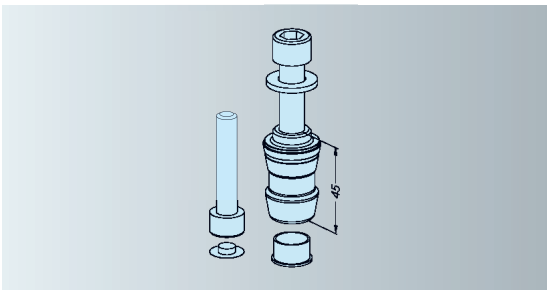


ER-039200 MTS chucking spigot / A













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



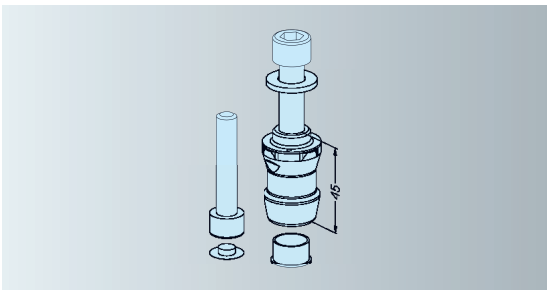
ER-038000 MTS centering spigot / A





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 without play and closes the cleaning boreholes in the MTS Chucks / A.



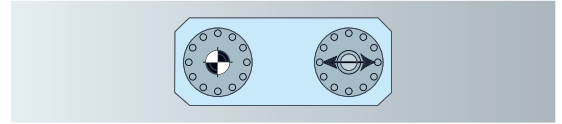
EROWA MTS

Chucking spigot set

ER-041460 MTS chucking spigot set 2



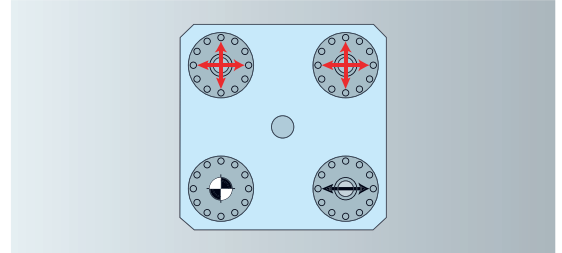
Version 1 centering spigot, 1 compensation spigot / A.
 Mounting With the bolts supplied through the pallet or through the chucking spigot.



ER-041461 MTS chucking spigot set 4



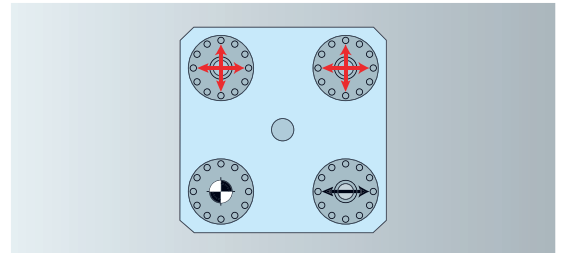
Version 1 centering spigot, 1 compensation spigot / A,
 2 chucking spigots / A.
 Mounting With the bolts supplied through the pallet or through the chucking spigot.



ER-041464 MTS chucking spigot set 4 / A



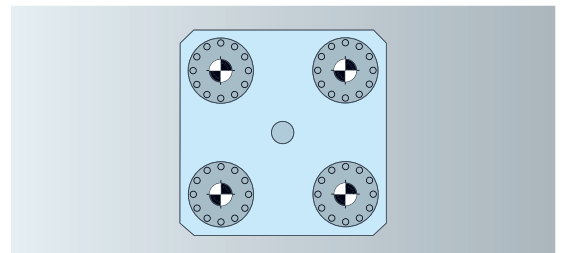
Version 1 centering spigot / A, 1 compensation spigot / A,
 2 chucking spigots / A.
 Mounting With the bolts supplied through the pallet or through the chucking spigot.



ER-062465 MTS centering spigot set 4 / A



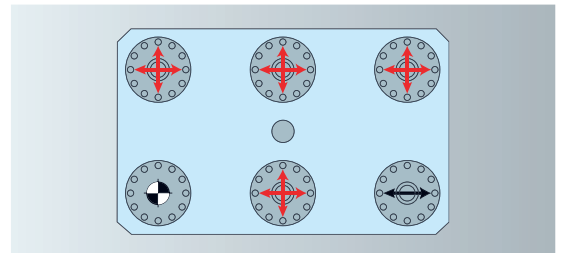
Version 4 centering spigots / A.
 Application For 5-axis machining.
 To fit With the bolts supplied, through the pallet, or through chucking spigots.



ER-041462 MTS chucking spigot set 6



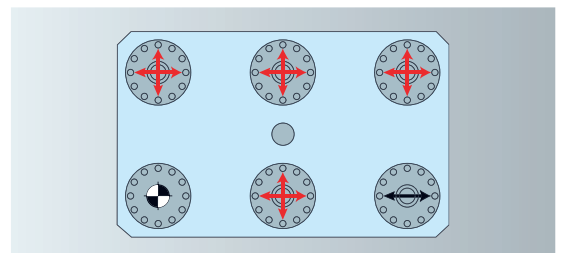
Version 1 centering spigot, 1 compensation spigot / A,
 4 chucking spigots / A.
 Mounting With the bolts supplied through the pallet or through the chucking spigot.



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.



MTS

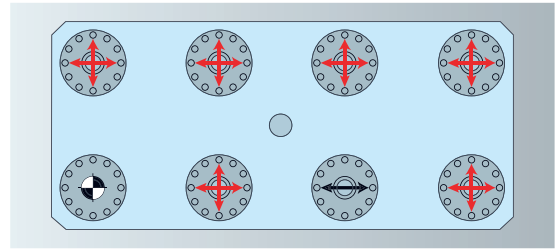
EROWA MTS

Chucking spigot set

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.



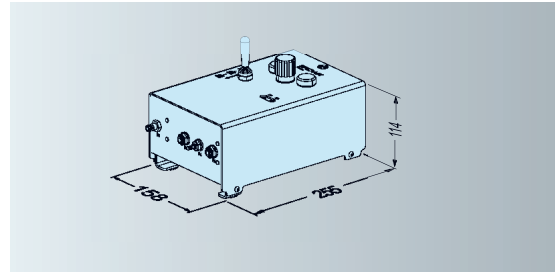
EROWA MTS

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 pres-
sure of 10 bar max.).



ER-099200 MTS 2.0 manual control unit



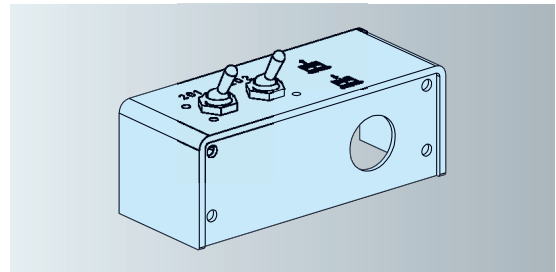
- Version Manually operated valve for the control of the MTS 2.0
chuck functions. Opening / reclamping / monitoring / open
check. Open control status: display possible through pres-
sure gage and additional electrical signal.
- Application Operation of MTS 2.0 chucks.



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.



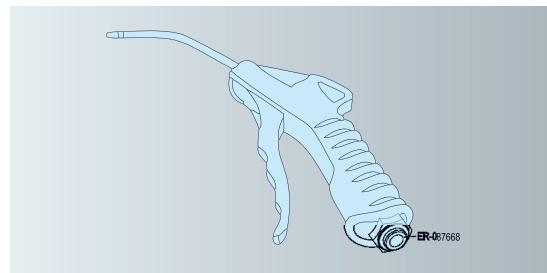
EROWA MTS

Operation

ER-001846 Air jet



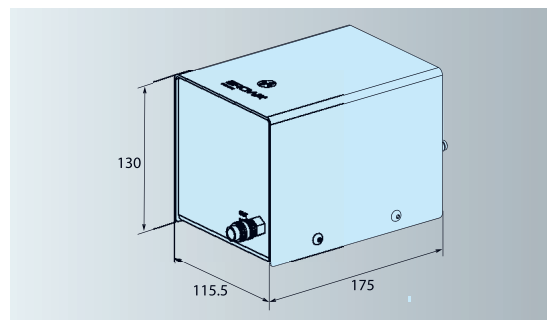
Version	Plastic, smooth regulation of air flow, connection 1/4", inside thread.
Application	Operation of manual chucks.
Option	Volume and pressure reduction to air jet (ER-087668). Pressure build up is reduced if Air Jet is not pushed against an air valve.



ER-074893 Pressure booster



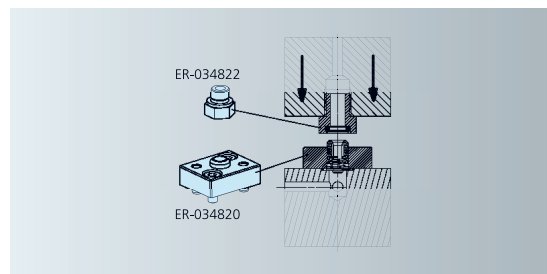
Version	Quick-connect couplings for hose $\varnothing i = 8$ mm. Compression ratio: 1:2
Application	On insufficient system pressure and on pressure fluctuations.
Installation	Integrate in air circuit near application.



ER-034820 MTS air coupling

ER-034822 MTS air coupling pallet 1 piece

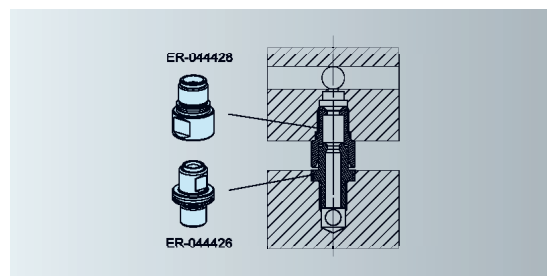
Application	The MTS air coupling ER-034820 combined with the MTS air coupling ER-034822 serves as a pneumatic interface between MTS base plates (A) and MTS pallets (B).
For use	with compressed air.
Working pressure	max. 10 bar.



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.



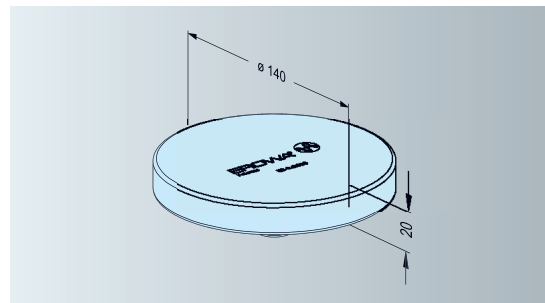
EROWA MTS

Accessories

ER-042038 MTS cover

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

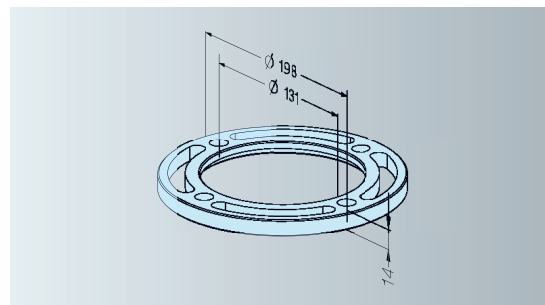
Application Protects MTS and MTS 2.0 chucks that are not in use from chips and coolant.



ER-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.

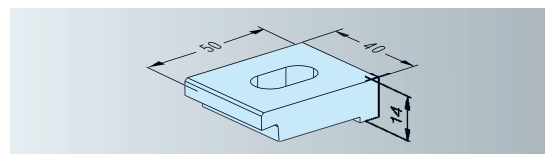


ER-033805 MTS bracket 1 piece

Version Bracket made of steel, excluding attachment bolt.

Application To attach MTS chucks onto the machine table.

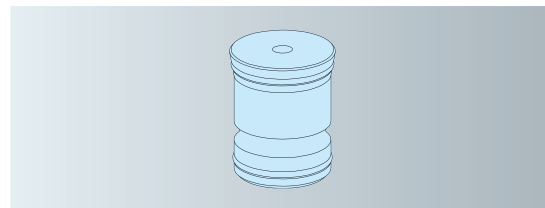
Note Four brackets are necessary per MTS chuck.



ER-037967 MTS Locking bolt with M6 with internal thread M6

Version Steel.

Application To plug the central borehole in MTS and MTS 81 chucks.



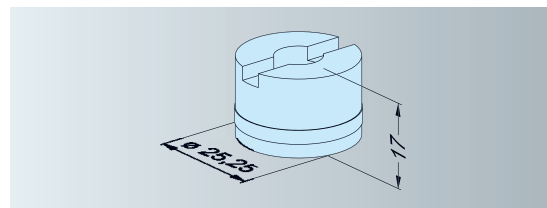
ER-067563 Rubber seal MTS $\varnothing 25.25 \times 17$ for EDM

Version

Rubber seal

Note

Assembly according to operating instructions. Prevents liquid from penetrating from below.

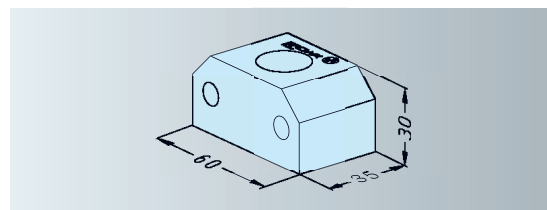
**ER-034168 MTS Connector block 1/8" double**

Version

Connector block made of steel, excluding attachment bolts.

Application

To receive pneumatic and hydraulic threaded connectors, nipples and couplings.

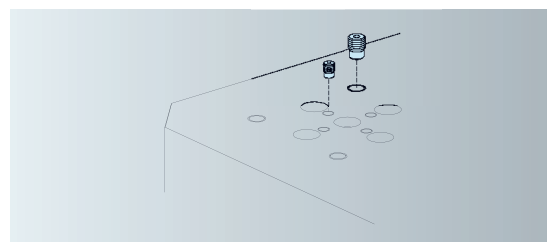
**ER-060391 MTS Set Z-support bolt set for 4-part pallet**

Version

Steel, hardened

Application

The Z-support bolts (1, 2) serve as Z-support surface for customized MTS pallets.

**ER-034382 MTS repair set pneumatic**

Version

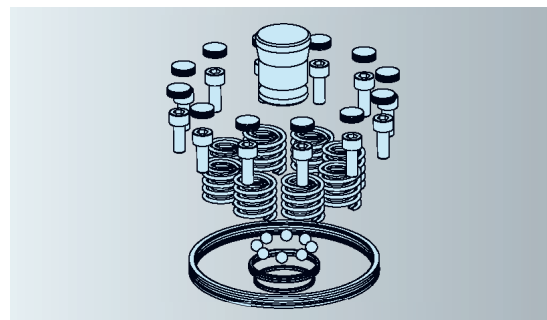
All the wearing parts for pneumatic MTS chucks.

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.

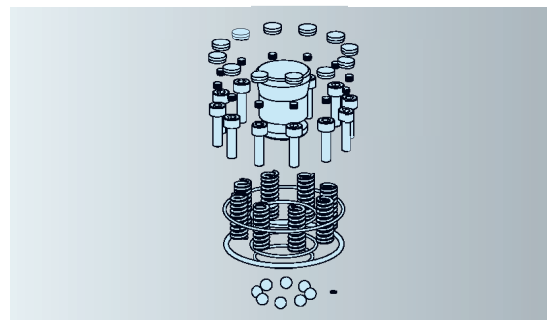
**ER-061558 MTS 81 Repair Kit**

Application

Repair Kit

Version

All the wearing parts for MTS IntegralChuck $\varnothing 81$ M-P (ER-057943) and MTS IntegralChuck $\varnothing 81$ M-P/A (ER-059016).



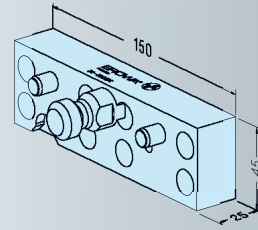
EROWA MTS

Accessories

ER-038622 MTS GripperLink Rapid



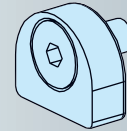
Version Coupling for MTS pallets, mounting accessories included.
Application Suited for MTS pallets to be used on EROWA handling devices with the RCS coupling system.



ER-035294 EWIS™ Rapid chip with chip holder RCS with chip $\varnothing 12.4 \times 2$ mm



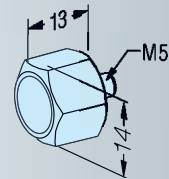
Version Holder with built-in data carrier. EWIS chip: read only.
Application To build into RCS coupling, PalletSet W holder and Basic WEDM holder.



ER-035154 EWIS™ Rapid chip with chip holder SW14 with chip $\varnothing 12.4 \times 2$ mm



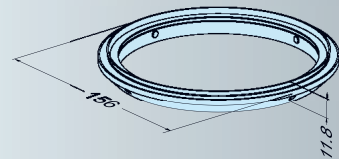
Version Sleeve fitting with built-in data carrier.
EWIS Rapid chip: read only.
Application In any EROWA electrode holder and pallet which has been prepared for it.



ER-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 $\varnothing 148$ Inox, ER-041928.

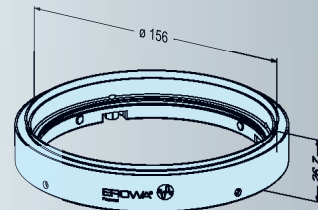


ER-056879 MTS Chip guard $\varnothing 156$ with axial deaeration



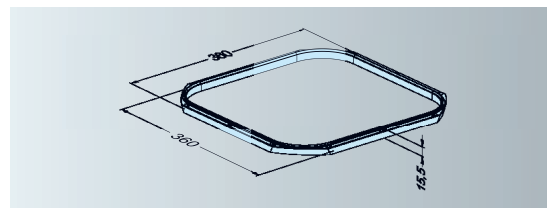
Application For use with MTS pallet P $\varnothing 148$.

Prevents dirt and chips from penetrating into the MTS SingleChuck

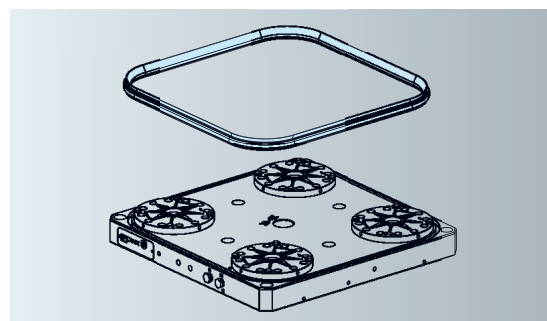


ER-049041 MTS seal frame set / 200

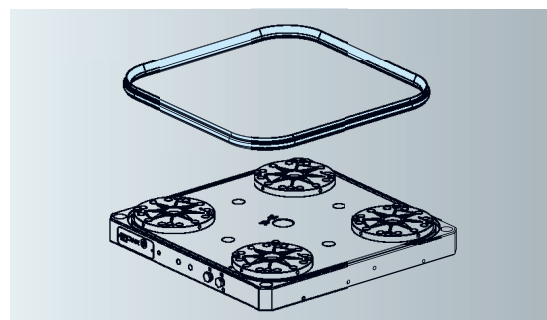
Version Aluminum anodized, with seal FPM (Viton).
 Application The MTS seal frame set serves to protect MTS chucks against dirt and liquids when in use with an EROWA MTS pallet.

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

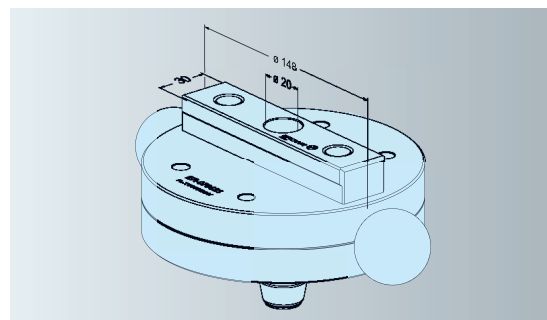
Version FPM (Viton).
 Application Prevents dirt from penetrating into MTS base plates 360 x 360 in combination with MTS pallets 398 x 398 / 200.
 Note The MTS base plate must have, or be equipped with, the groove (A) to accommodate the seal.

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

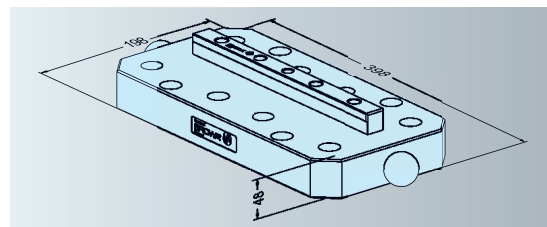
Version FPM (Viton)
 Application Prevents dirt from penetrating into MTS base plates 410 x 410 with the use of EROWA MTS pallets 398 x 398 / 250 and 498 x 498 / 250.

**ER-078823 MTS alignment pallet P ø 148 for MTS single chuck**

Version Pallet ø 148 mm, center borehole ø 20 mm.
 Application Alignment of radial, axial and angular position of MTS single chucks.

**ER-037870 MTS Alignment pallet / 200****ER-037875 MTS Alignment pallet / 250**

Version Twin aluminum pallet with precision ground alignment rail.
 Application Alignment of MTS chucks.
 Rail length ER-037870 = 200 mm.
 Rail length ER-037875 = 250 mm.



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.

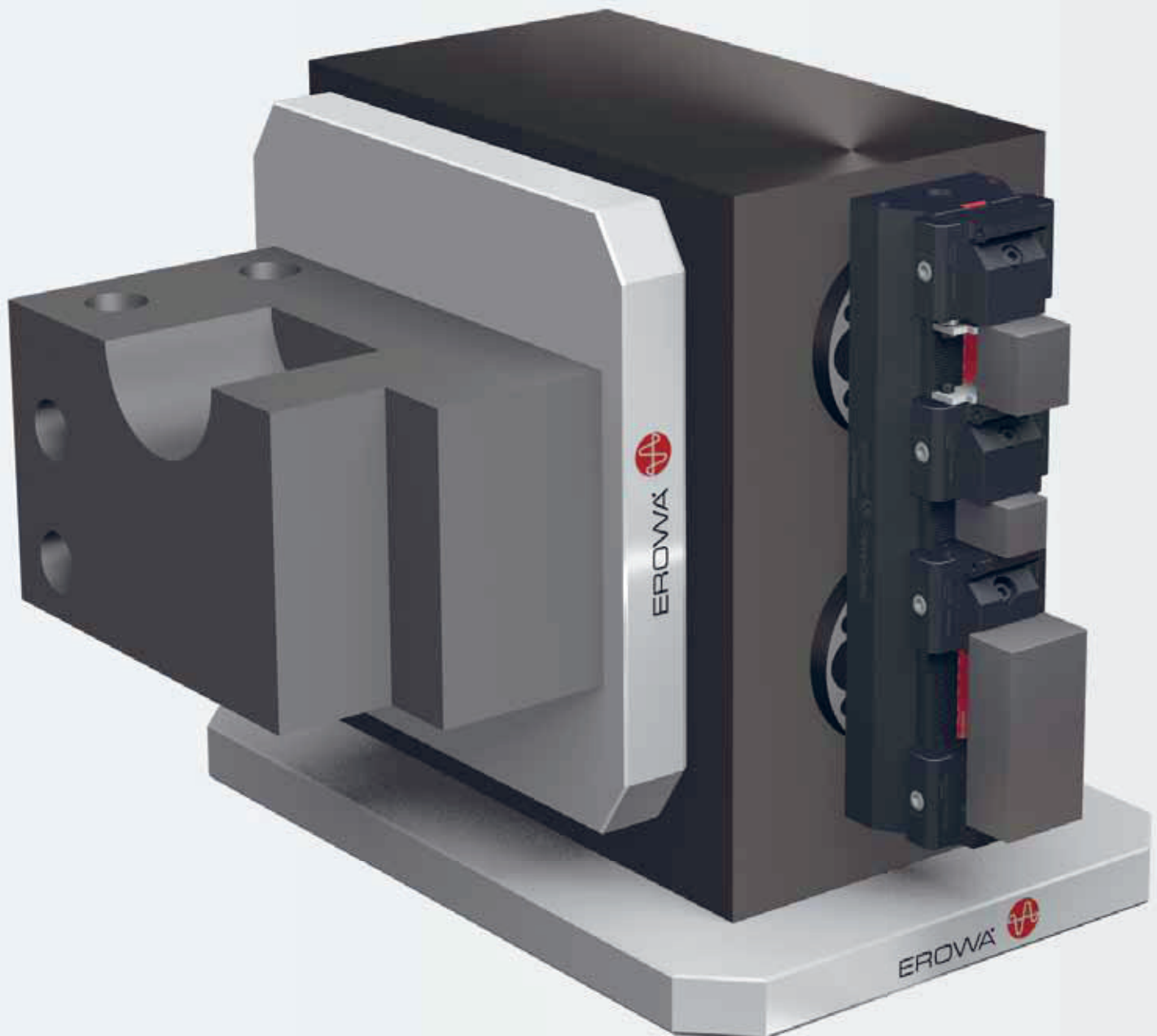


EROWA MTS

Mineral Cast Cube

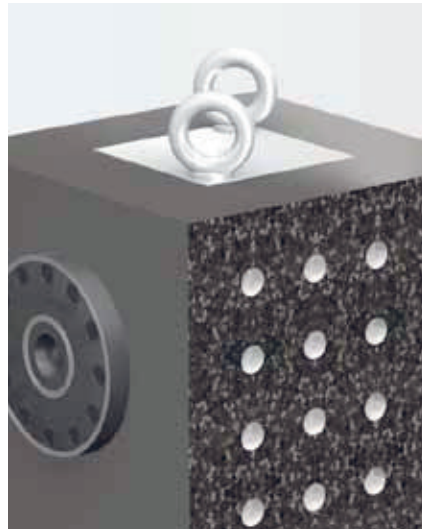
The whole working area of the machine is utilized optimally by using mineral cast cubes. Mineral cast as base material has many beneficial properties: The vibration damping is up to 10 times better than that of cast iron. Mineral cast also has a very high temperature stability.

Paired with the ingenious MTS datum point tooling system, the EROWA mineral cast cube becomes a key productivity factor.





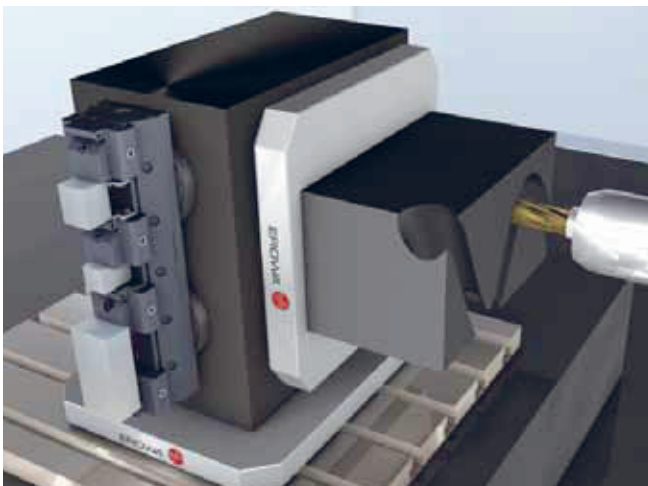
Changeover times are eliminated: Workpieces are prepared conveniently at the set-up station outside of the machine. They are then clamped in the MTS datum point tooling system for machining.



Moving the cube from the machine to the setup station? Simply lift it with the overhead crane.



Rust-resistant built-in pockets and internal pneumatic supply for safe operation in the challenging production environment.



Ultimate machine utilization by maximizing the working area.



Reduce set-up time even further with EROWA CleverClamp, the modular tooling system. Easy to handle, versatile in use.

MTS

EROWA MTS

Mineral Cast Cube

Variations

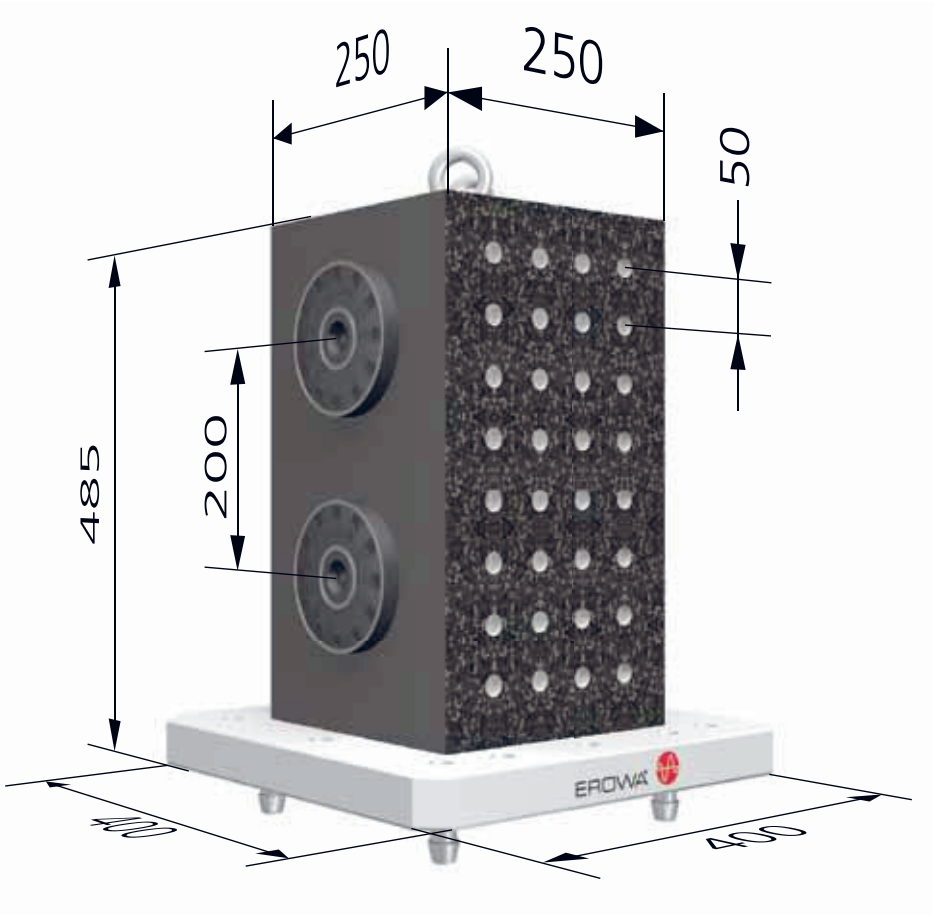
All devices, including tombstones, should be clamped on the machine table as quickly and accurately as possible. The basis is the MTS datum point tooling system. So, all job changes are done in no time with only two pallets. The fixtures are stored in racks, saving space, but can be called up at any time.

Standard version:

ER-094454 MTS mineral cast cube
250 x 250 x 485 mm



Version	Mineral cast cube 250 x 250 x 445 mm. Including 2 sides each with 2 MTS chuck M-P (pitch 200 mm) and 2 sides with hole grid R50 / M12 F7. With mounted steel base plate 400 x 400 x 40 mm.
Operation	MTS chuck with air gun.
Note	Base plate with borehole for 63 / 100 mm slot spacing as well as preparation for 4 chucking spigots (set-up distance 200 mm).
Weight	Approx. 135 kg.





MTS Mineral Cast Cube

Scan the code and choose your mineral cast cube on our homepage.

For clamping of MTS 4-way, 2-way and single pallets.

The following examples show some of the possibilities.

Various sizes, other forms, any number of chucks, with or without hole patterns – almost everything is possible.

The MTS mineral cast cubes are produced according to customer specifications. Simply order "Your Cube".



Example 01

8 chucks in the smallest space. Clamp pallets from the tooling station directly on the cube.



Example 02

4-way or 2-way MTS pallets can be used on two sides.



Example 03

Additional four positions for MTS single pallets..



Example 04

For optimal use of the available height in the machine.



Example 05

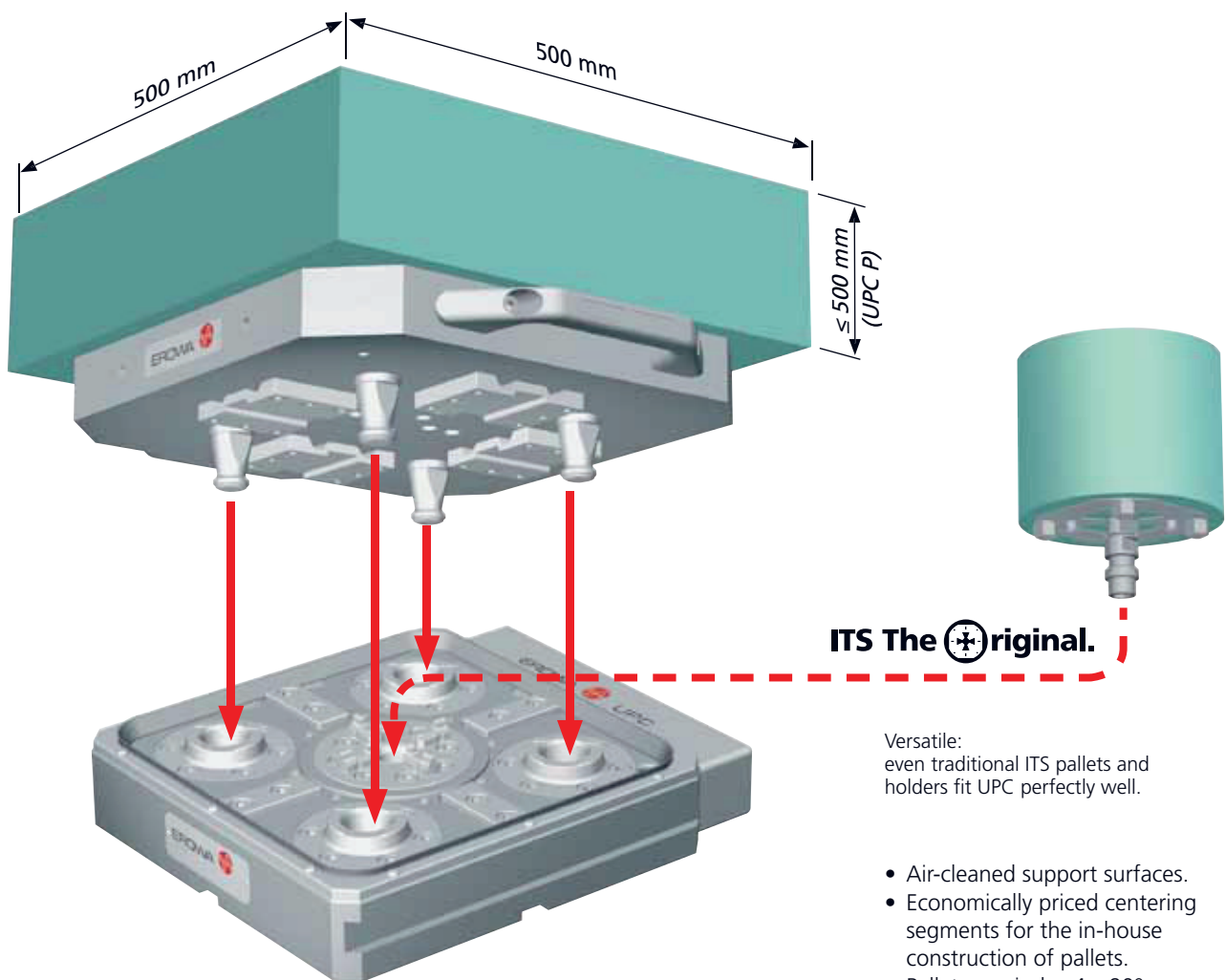
Optimal use of the machine working envelope.

EROWA UPC

You might as well try to move a mountain

EROWA's UPC (Universal Power Chuck) breaks through the conventional limits of precision, stability and workpiece size. Now, 500 x 500 x 500 mm have ceased to be a problem. And the 2- μ m precision will not be impaired at all.

A decisive factor for ITS users: the central ITS chuck guarantees seamless integration into the existing system.



ITS The Original.

Versatile:
even traditional ITS pallets and
holders fit UPC perfectly well.

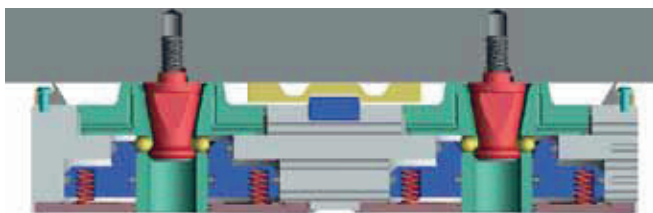
- Air-cleaned support surfaces.
- Economically priced centering segments for the in-house construction of pallets.
- Pallets can index 4 x 90°.
- Stable centering segments with patented initial tension.
- ITS chuck can be integrated in the center (option).
- Four fixed chucking spigots which also serve as supports for pallet storage.
- Economically priced aluminum pallets with hardened Z-supports as a basis for any fixture.

Applications**Handling**

Manual / Loading facility / Robot

Function

UPC open



UPC closed

The functional elements have been designed with every conceivable simplicity. This makes for a favorable price. The few movable parts guarantee high functional safety.

The lock creates a retaining power of 50,000 N. The big distance between the supports creates an extreme degree of platform stability.

Precentering is done by means of the chucking spigots. Precise positioning is then achieved by four stable centering segments in the pallet and chuck. Release and cleaning are achieved by means of compressed air.

Technical data - UPC

	UPC	UPC P «Production»
Pallet size	320 x 320 mm	320 x 320 mm
Chuck dimensions	280 x 280 mm	320 x 300 mm
System height (chuck and pallet)	105 mm	105 mm
Recommended workpiece sizes	500 x 500 x 350 mm	500 x 500 x 500 mm
Repeatability	0.002 mm	0.002 mm
Indexation, pallet	4 x 90°	4 x 90°
Activation	clamped without pressure	
Air pressure, dry	min. 6 bar	min. 6 bar
Operation	manually or with automatic control unit	
Process monitoring	pneumatically, evaluation electro-pneumatically	
Clamping power	32,000 N	50,000 N

EROWA UPC in operation

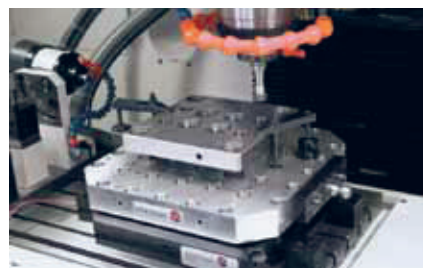
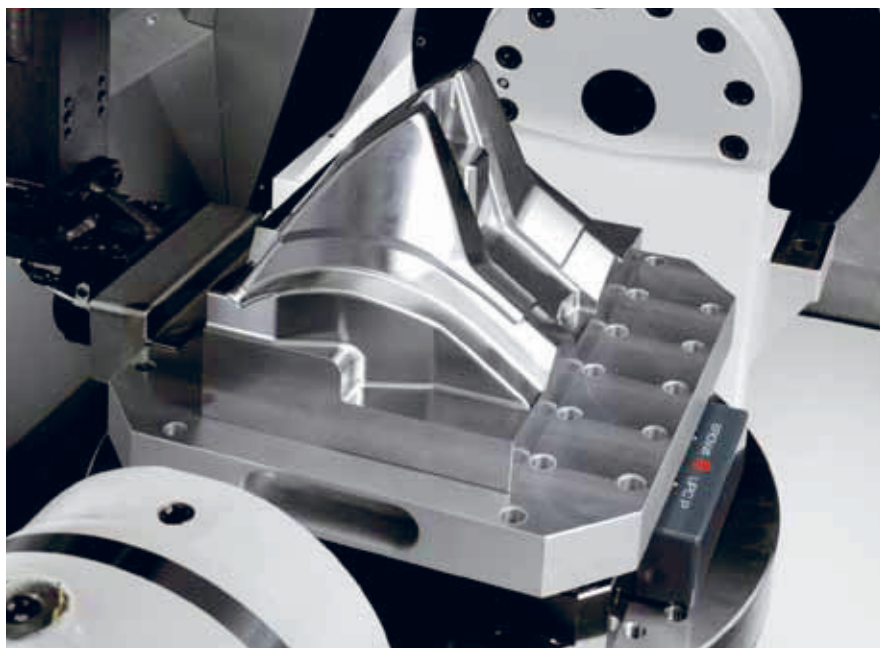
Universal, powerful, micronaccurate

The UPC tooling system is suitable for flexible use. Whether big electrodes on the quill of EDM centers or big workpieces in milling machines: the UPC has been designed to cope with them, and it does.

With a repeatability of 2 μm , the UPC does not leave any wishes unfulfilled with regard to precision, either.

RELIABLE

**Resistant to dirt.
Robust - developed for
continuous operation.**



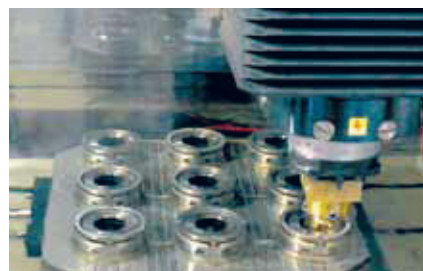
Customized solutions including. We'll be happy to advise you!



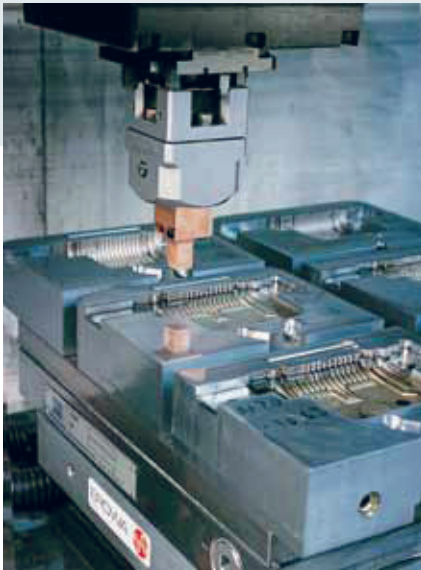
Low construction height leaves much room for workpieces.



Suitable PreSet stations are available for setting up and presetting - manual or CNC.



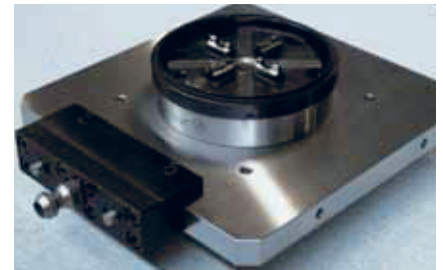
Practical! EDMing on the UPC magnet pallet.



On a clamping surface of up to 500 x 500 mm, even large workpieces or fixtures can be attached to the UPC pallet without any problems.



Powerful in heavy machining.



2 in 1: UPC adapter pallet with EROWA PowerChuck P.



The UPC pallet CleverClamp workpiece tooling system makes it simple to clamp different workpieces on a pallet with different clamping elements. The pallets can be automated.



UPC Pallet Alu DG – light and handy.



Short set-up times with flexible clamping elements: EROWA ClampSet vises on UPC grid pallet.



The UPC on the machine table constitutes the interface with the workpiece carrier. Resetting takes next to no time, and production can resume.



The UPC palletizing system is consistently automatable.

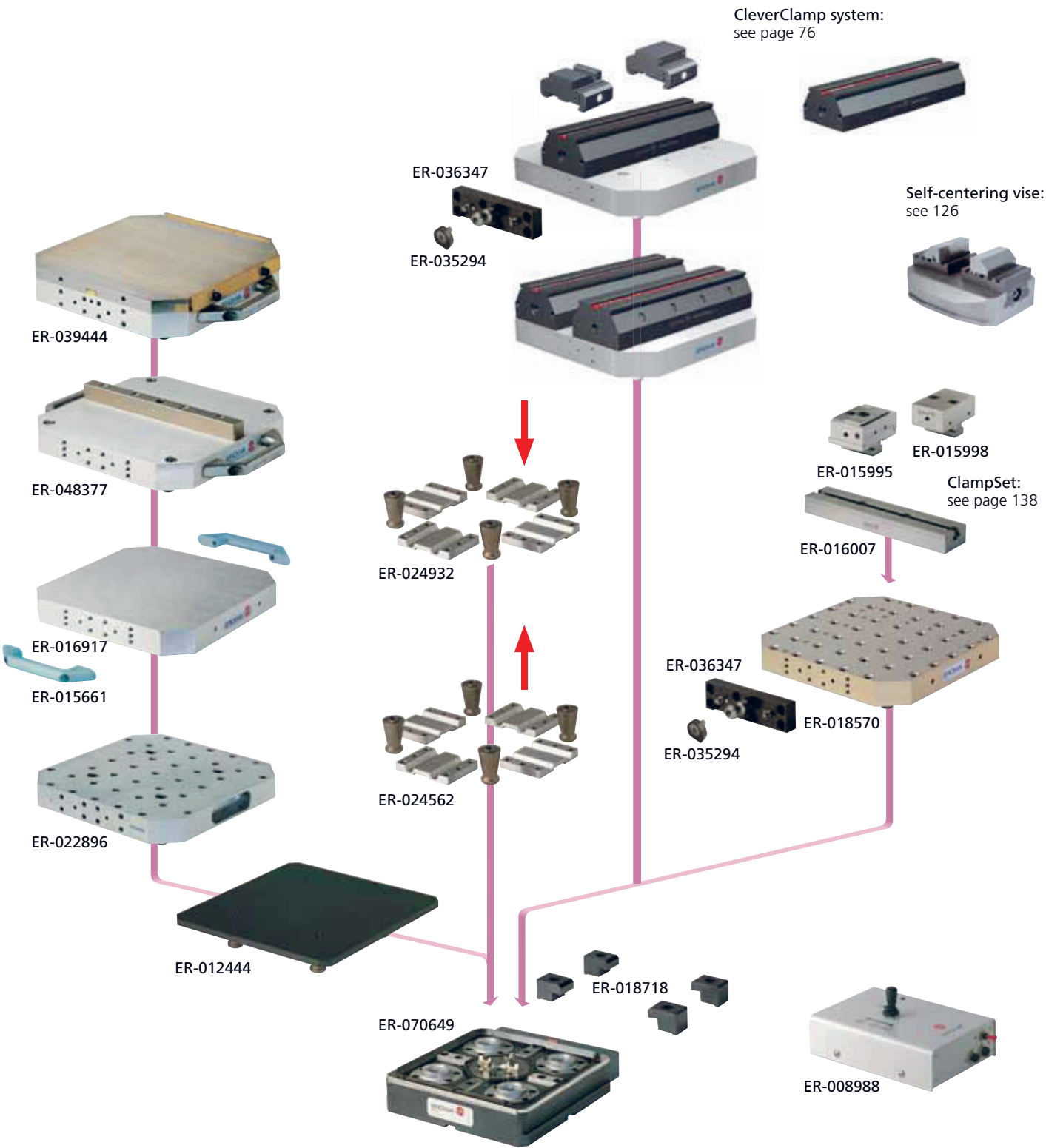


The chucks are completely sealed against ingress of coolant and chips. The contact surfaces are cleaned automatically and thoroughly with air.

EROWA UPC

Palletizing System

The components



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

EROWA UPC PALLETIZING SYSTEM

UPC	Chucks	68
UPC	Pallets	69
UPC	Auxiliary equipment	71



For chip-removing processes



For EDM sinking



For WEDM

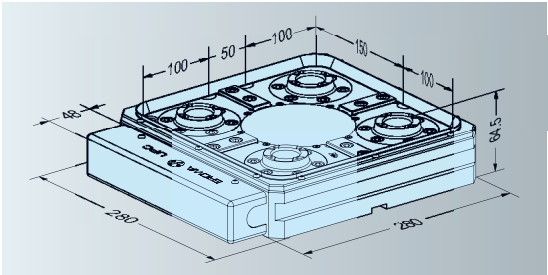
EROWA UPC Chucks

Technical data	UPC	UPC P «Production»	ITS Chuck 100P	PowerChuck
Repeatability	0.002 mm	0.002 mm	0.002 mm	0.002 mm
Indexing, pallet position-oriented	4 x 90°	4 x 90°	4 x 90°	4 x 90°
Chuck clamping power	32,000 N	50,000 N	6000 N	10 000 N
Generated by	spring power	spring power	spring power	spring power
Chuck opens, air pressure dry	min. 6 bar	min. 6 bar	min. 6 bar	min. 6 bar

ER-074524 UPC chuck



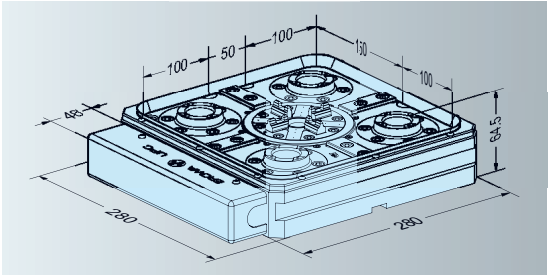
Version UPC, prepared to accommodate an ITS chuck 100P.
Connections Through the base and on the side.
Application On milling, grinding, drilling and EDM sinking centers.
 In production lines.



ER-070649 UPC chuck with ITS Chuck 100 P



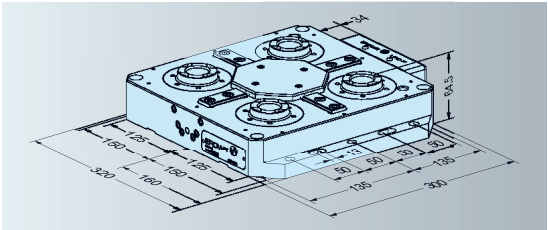
Version UPC with ITS chuck 100P fitted and aligned.
Connections Through the base and on the side.
Application On milling, grinding, drilling and EDM sinking centers.
 In production lines.



ER-016841 UPC P chuck



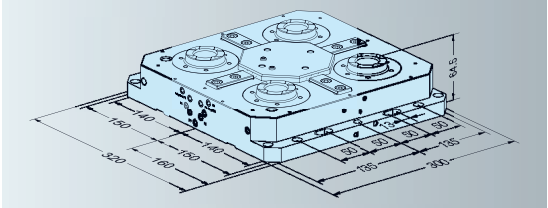
Version Chuck for high machining forces during chip removal.
Connections Through the base and on the side.
Application On milling, grinding, drilling and EDM centers and in
 production lines.
Option UPC Sealing-Set ER-016650.



**ER-078728 UPC P with connection on TK 57 mm
 with 2 air docks**



Version Chuck for high machining forces during chip removal.
Connections Through the base on pitch circle 57 mm and on the side.
Application For milling, grinding, drilling and EDM centers and in
 production lines.
Option UPC Sealing kit ER-016650 and ER-030580.
 Another system adaptations on request.



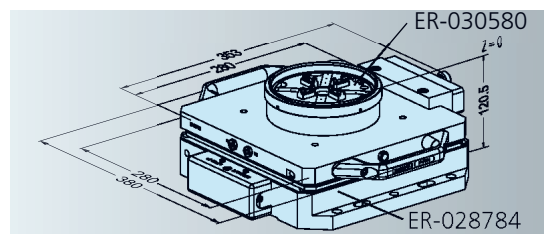
EROWA UPC

Chucks

ER-030581 UPC P / PowerChuck P kit automatic



- Version UPC P with air dock for the automatic operation of PowerChuck P.
- Content 1 x ER-028784, UPC P with air duct and UPC seal kit
1 x ER-030580, PowerChuck P on UPC pallet with air duct
1 x Pneumatic tube.
- Requirements *At least 4 air ducts available on the machine table.
*Air ducts for the PowerChuck P are only possible laterally.
If required, an adapter plate can be used.
- Please note Another system adaptations on request..



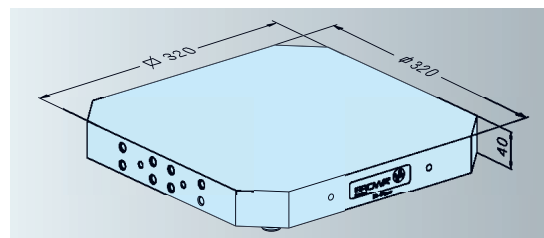
EROWA UPC

Pallets

ER-016917 UPC pallet Alu 320 x 320 x 40



- Version Aluminum, with centering segments and chucking spigots fitted. Hard Z-support.
- Application To clamp workpieces and gauges.
- Please note Holes to be drilled as required.

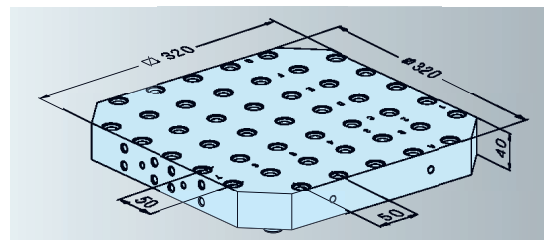


ER-018570 UPC pallet Alu R50 320 x 320 x 40 anodized

ER-016003 UPC pallet Alu R50 320 x 320 x 40



- Version Aluminum with 50 mm grid. Centering segments and chucking spigots fitted. Hard Z-support.
- Application Basis for gauges and workpieces.
- Info Pattern borehole \varnothing 12F7, M12 thread.

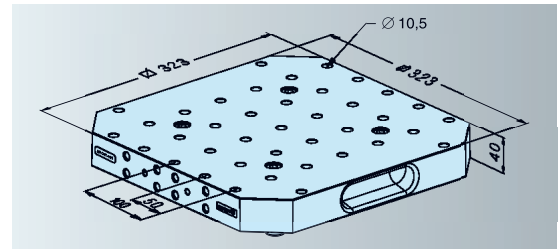


EROWA UPC Pallets

ER-022896 UPC pallet Alu diecast S with steel centering



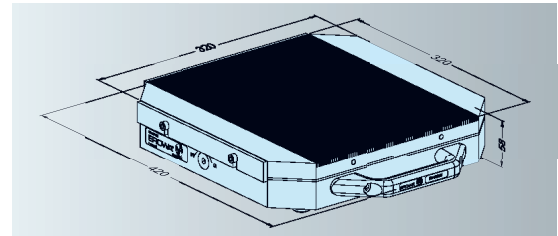
- Version Aluminum with 50mm grid. Chucking spigot fitted. Handles integrated. Steel Z-support.
- Application To clamp workpieces and gauges.
- Please note With steel centering segment fitted (repeatability: 0.002 mm).
- Accessories Order separately: ER-032503, M10 insert nut.



ER-090679 UPC magnet plate Neomicro 320x320x58



- Version Magnet plate assembled as a UPC pallet 320 x 320 x 58 mm.
- Application To clamp workpieces for surface and profile grinding, EDM sinking, and high speed milling.

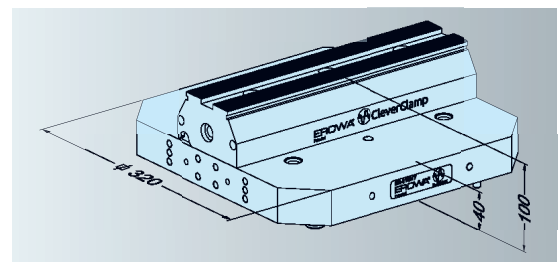


EROWA UPC Pallets CleverClamp System

ER-099318 Base UPC mono CleverClamp



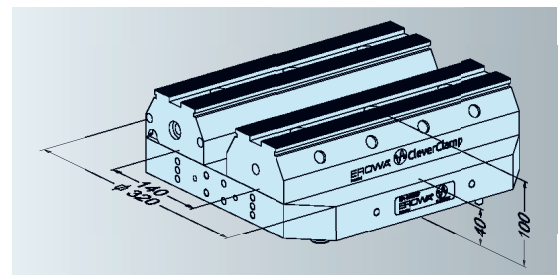
- Version Combination of UPC aluminum pallet with 320 rail; centering segments and chucking spigots fitted. Z-Support hard.
- Application Optimal accessibility for 5-axis applications with single and multiple fixtures.
- Accessories Order separately: GripperLink RCS / EWIST™ Rapid ER-036347 for Automation.



ER-099317 Base UPC duo CleverClamp



- 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 / EWIST™ Rapid ER-036347 for Automation.



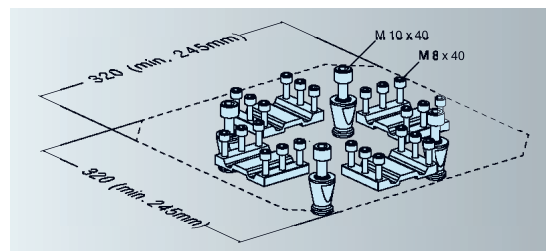
EROWA UPC

Auxiliary equipment

ER-024932 UPC centering segments and chucking spigots, for mounting from above



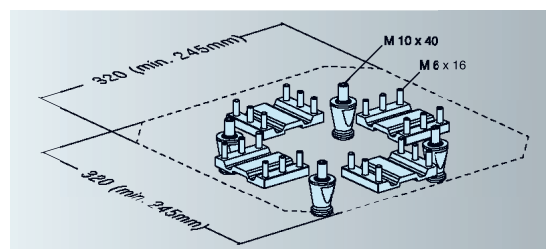
Version	Four segments and chucking spigots for UPC, including bolts.
Application	To produce special UPC pallets.
Mounting	With bolts through the pallet from above.
Note	Easy to assemble on the UPC chuck.



ER-024562 UPC centering segments and spigots to mount from lower side



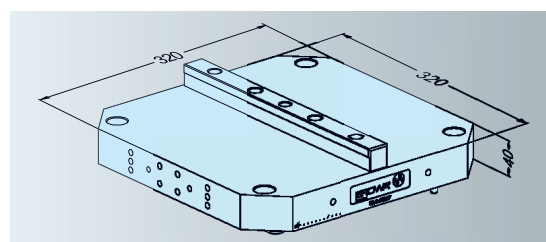
Version	Four segments and chucking spigots for UPC, including bolts.
Application	To produce special UPC pallets.
Mounting	With bolts through the pallet from below.
Note	Easy to assemble on the PreSet Basic UPC presetting station.



ER-048377 UPC alignment pallet, 320x320x40



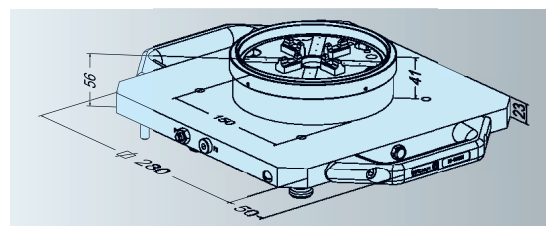
Application	To align angular position and to determine the center of UPC chucks.
Please note	System parallelism 0.005 mm. Borehole concentricity 0.005 mm.



ER-029453 PowerChuck P on UPC pallet



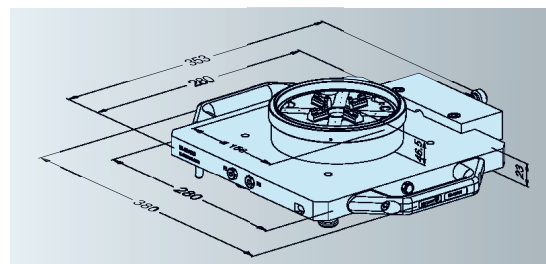
Version	Adapter pallet UPC - PowerChuck P.
Connections	Laterally on pallet.
Application	On machining centers. Operate with air-jet or fixed connection.
Note	Manual change into UPC. Possible automatic change into PowerChuck P.



ER-030580 PowerChuck P on UPC pallet with air connection



Version	Adapter pallet UPC - PowerChuck P.
Connections	From the bottom through of the pallet. Suitable for ER-028784 and ER-078728.
Application	On machining centers.



EROWA UPC

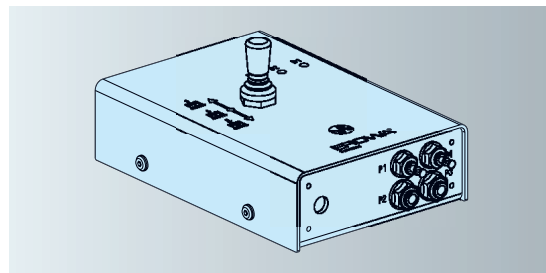
Auxiliary equipment

ER-008988 Manual control unit



Version Manual valve to control all the functions of ITS, ITS Compact CombiChuck, PowerChuck P and UPC:

Application Opening/reclamping/cleaning.
Operation of chucks on machines.

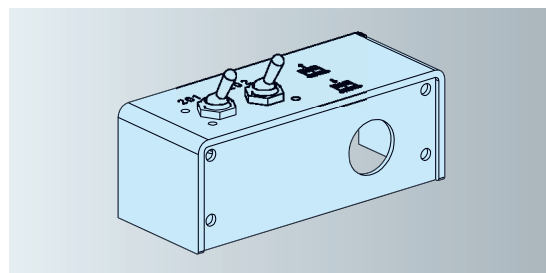


ER-039466 Additional valve double



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.

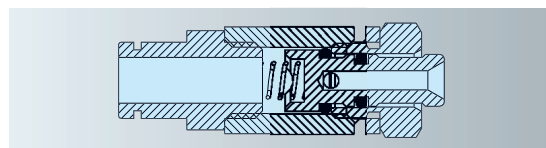


ER-016531 UPC air jet connection



Version Valve for the manual operation of UPC ER-016092, ER-016093, ER-074527 and ER-070649 with an air jet.

Application To be fitted on UPC cover.

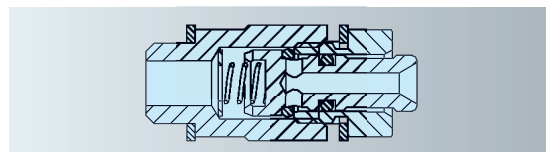


ER-018168 UPC P air jet connection



Version Valve for the manual operation of UPC P ER-016841 with an air jet.

Application To be fitted on UPC P cover.

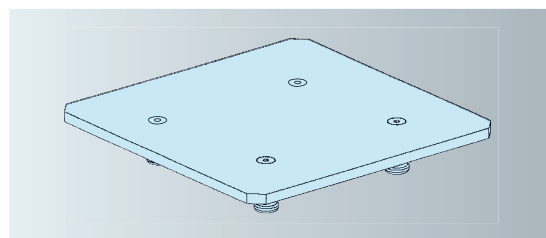


ER-012444 Cover for UPC



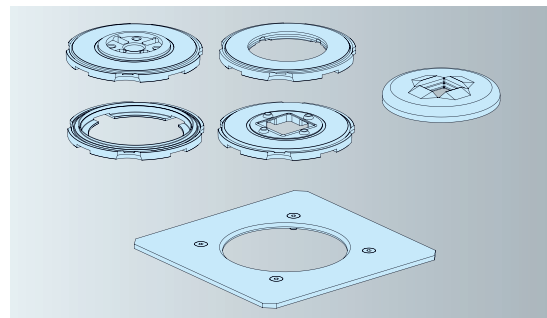
Version Aluminum.

Application Cover for UPC.

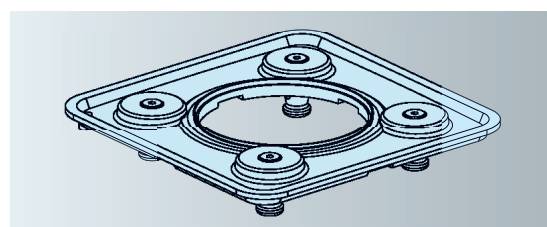


ER-094178 Cover set for UPC / ITS 50 C

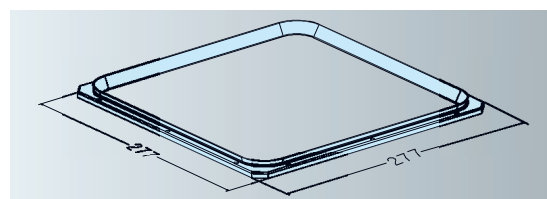
Version Aluminum with inserts, to protect UPC chuck when used with holder 72, pallet ø115, pallet ø148, electrode holders ITS 50 C.

**ER-018247 Cover UPC pallet ø 148**

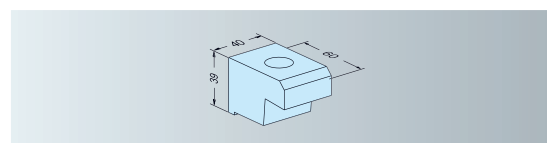
Version Aluminum. Cover for UPC ER-070649.
Application Protects UPC system when ø 148 mm pallets are used in the ITS central chuck.

**ER-016650 UPC sealing kit**

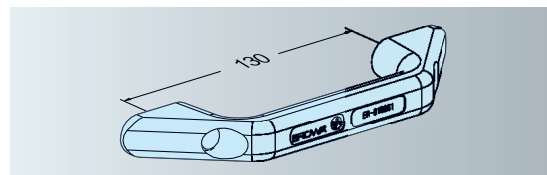
Version Rubber seal and frame.
Application To seal the UPC P against chips.
Mounting With supplied bolts.
Please note Fits UPC No. ER-016841/ER-070649/ER-074524/ER-078728.

**ER-018718 UPC clamping bracket 4 pieces**

Version High tension steel, mounting accessories not included.
Application To mount UPC chucks to machine tables.
Please note Fits UPC chuck No. ER-016841/ER-070649/ER-074524/ER-078728.

**ER-015661 Handles for UPC pallets / FrameSet 2 pieces**

Version Aluminum die-casting, set of 2 units.
Application Safe handles for UPC pallets.
Mounting With the enclosed bolts to the prepared threads.

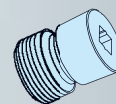


EROWA UPC

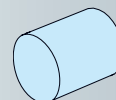
Auxiliary equipment

**ER-018817 Sealing bolt M12x16
50 pieces**

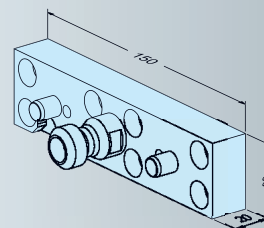

Version Set of 50, including square wrench.
Application Plastic bolts to seal grid boreholes that are not in use.
Suitable for ER-018570 and ER-016003.


**ER-022646 Plug ø 10.6x20
50 pieces**

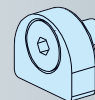

Version Set of 50.
Application Plastic plug to seal grid boreholes that are not in use.
Suitable for ER-022896.


ER-036347 GripperLink RCS / EWIS™ Rapid


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


**ER-035294 EWIS™ Rapid chip with chip holder RCS
with chip ø 12,4 x 2mm**


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



EROWA CleverClamp System

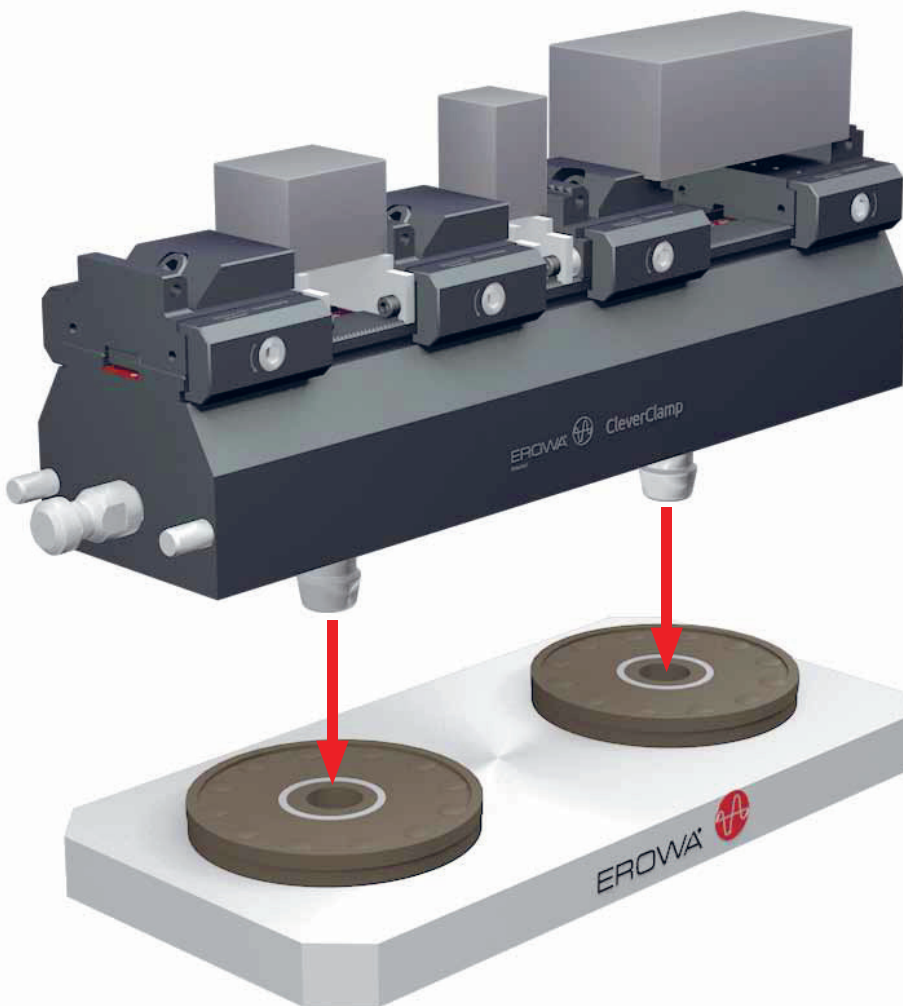
The flexible workpiece clamping system for chip-cutting processes

The EROWA CleverClamp system is a modular and universal workpiece clamping system. It is simple to operate and can be used in a wide variety of ways.

CleverClamp base rails are fitted directly to the machine table, a tombstone, a pallet, etc. Thanks to the standardized interface, they can be universally used in EROWA's UPC and MTS palletizing systems.



For more information about the entire EROWA CleverClamp system range.



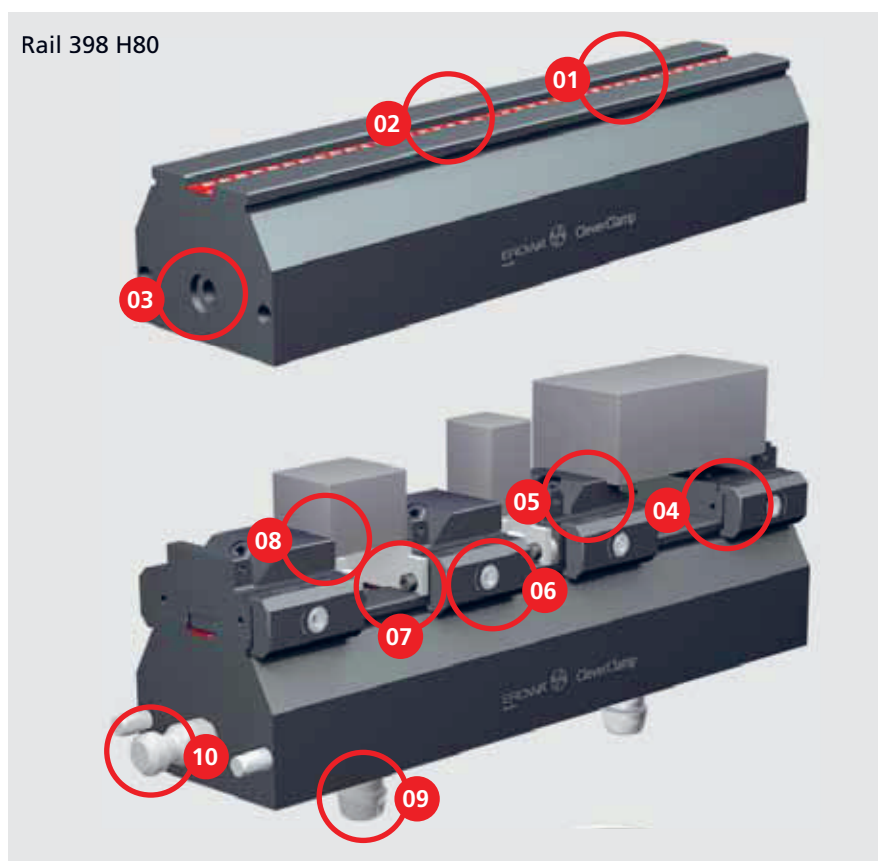
- The base rails constitute the foundation of the CleverClamp workpiece clamping system.
- The base rails are available in various versions.
- Large and well-thought-out selection of clamping and stop elements.
- Precise 2mm positioning grid to place clamping and stop elements.
- MTS clamping spigots can be directly fitted to the base rails.
- The integrated scale with a 2mm gradation helps the operator to position the clamping and stop elements quickly and repeatably during setting-up operations.
- Clamping surfaces are available in various versions.
- Base rails can be directly automated.

Applications**Handling**

Manual / Loading facility / Robot

Function

Rail 398 H80

**01 | Precise**

Steel, hardened and ground, 2mm positioning grid.

02 | Scale

for the quick positioning of the clamping elements.

03 | Automation

Attachment borehole for the coupling required for automatic handling.

04 | Stop element**05 | Clamping element**

Depending on requirements, as a pull-down or linear clamping element.

06 | Locking bolt

Threaded spindle mechanism for the quick attachment of the modules.

07 | Support

Various versions and heights.

08 | Clamping jaw

A suitable stop surface for every clamping position.

09 | Chucking spigot

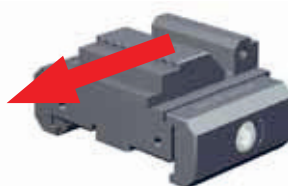
for quick positioning in the EROWA MTS tooling system.

10 | Automation coupling (option)

More productive machine hours through automatic loading.

Technical data - Clamping elements

	Pull-down clamping elements	Linear clamping elements
Clamping range	0 - 4.1 mm	0 - 5 mm
Clamping power	up to 28 kN	up to 16 kN



EROWA CleverClamp system in operation

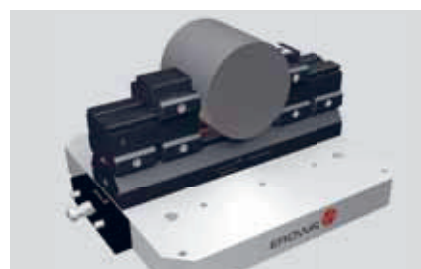
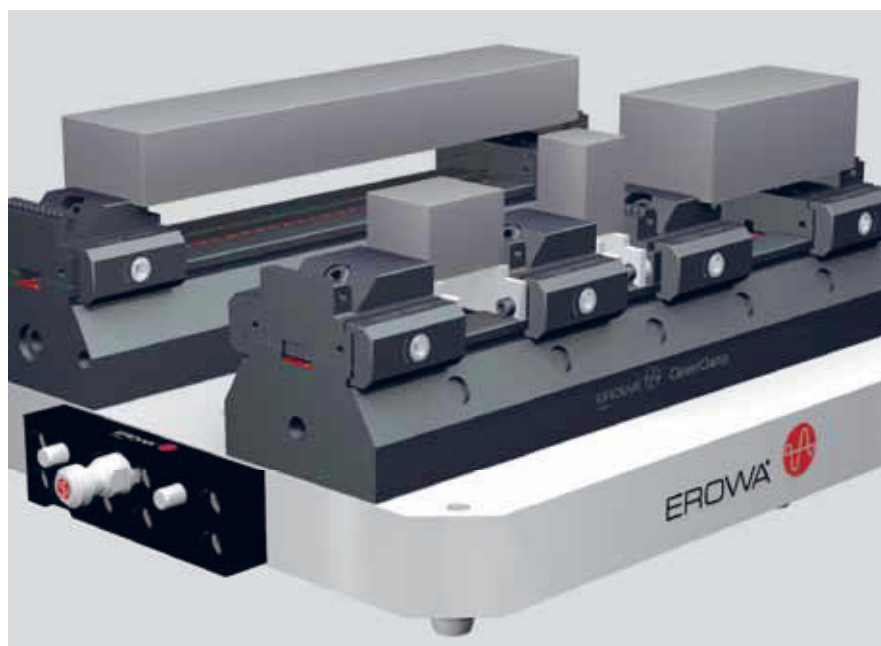
Perfect combination

EXTREMELY VERSATILE

Everything matches up
and can be combined
flexibly.

The CleverClamp system clamps any workpiece and adapts to any machine situation.

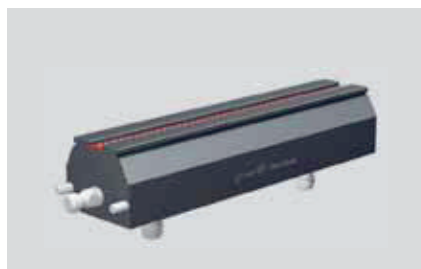
Suitable clamping and stop elements can be placed quickly with the help of the precise positioning grid. The base rails take up hardly any room but still provide a great deal of space for the flexible attachment of a wide variety of workpiece shapes and sizes.



Use of elevation elements to clamp larger workpieces.



- As a single rail to be individually fitted onto the machine table, fixture, EROWA UPC or MTS pallet, etc.



- With a fitted chucking spigot and automation coupling (option) for direct integration into the EROWA MTS tooling system.
- Can be directly automated.

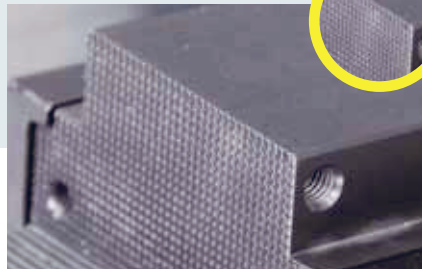


- On EROWA UPC and MTS pallets.

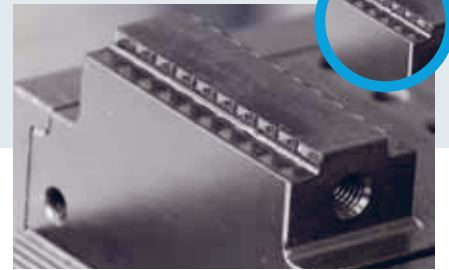
Smooth clamping surface



Clamping surface with grip contours



Clamping surface with stamping contours



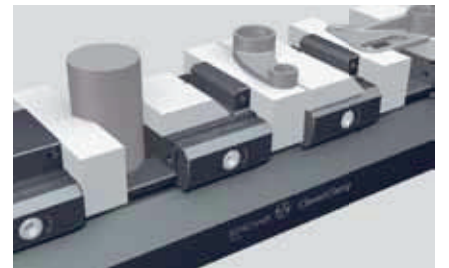
You can choose the clamping surface structure according to materials and workpieces.



The CleverClamp base rails have holes on both sides to attach eye bolts.



Clamping of workpieces with stamping technology at the minimum clamping height of 3mm.



Various clamping and stop jaws for every requirement. Soft jaws can be used for the production of clamping jaws with contours according to requirements, for example.



EROWA CleverClamp to clamp big workpieces with great holding power.



Multiple clamping of the same or different workpieces on the same base.



Simple handling, short set-up times. Setting up and resetting in just a few steps.

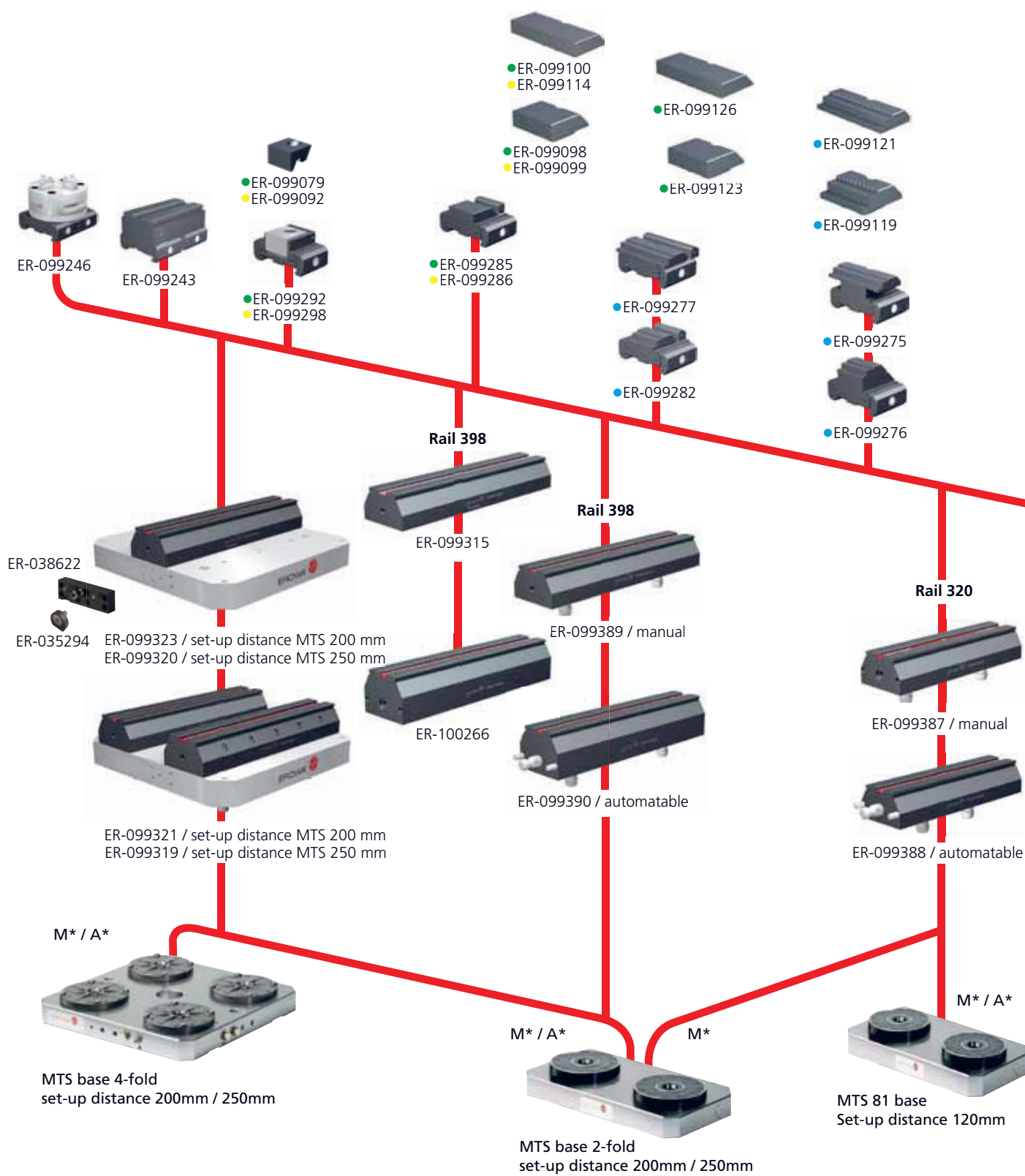


The CleverClamp can be directly automated. The Robot places the workpiece carrier on the machine with precision and speed.

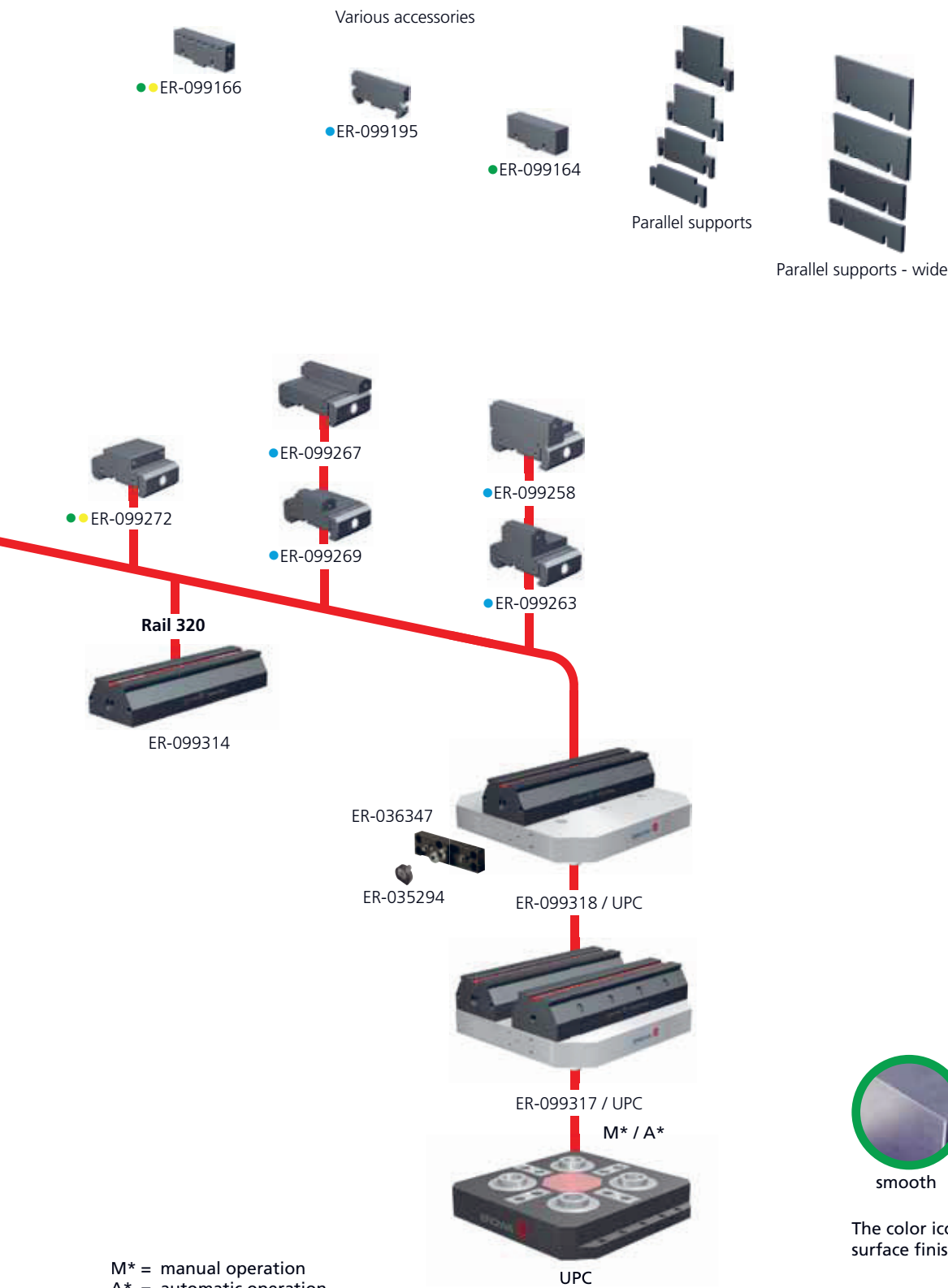
EROWA CleverClamp System

Tooling system

The components



EROWA provides you with a full range of products - everything fits together!

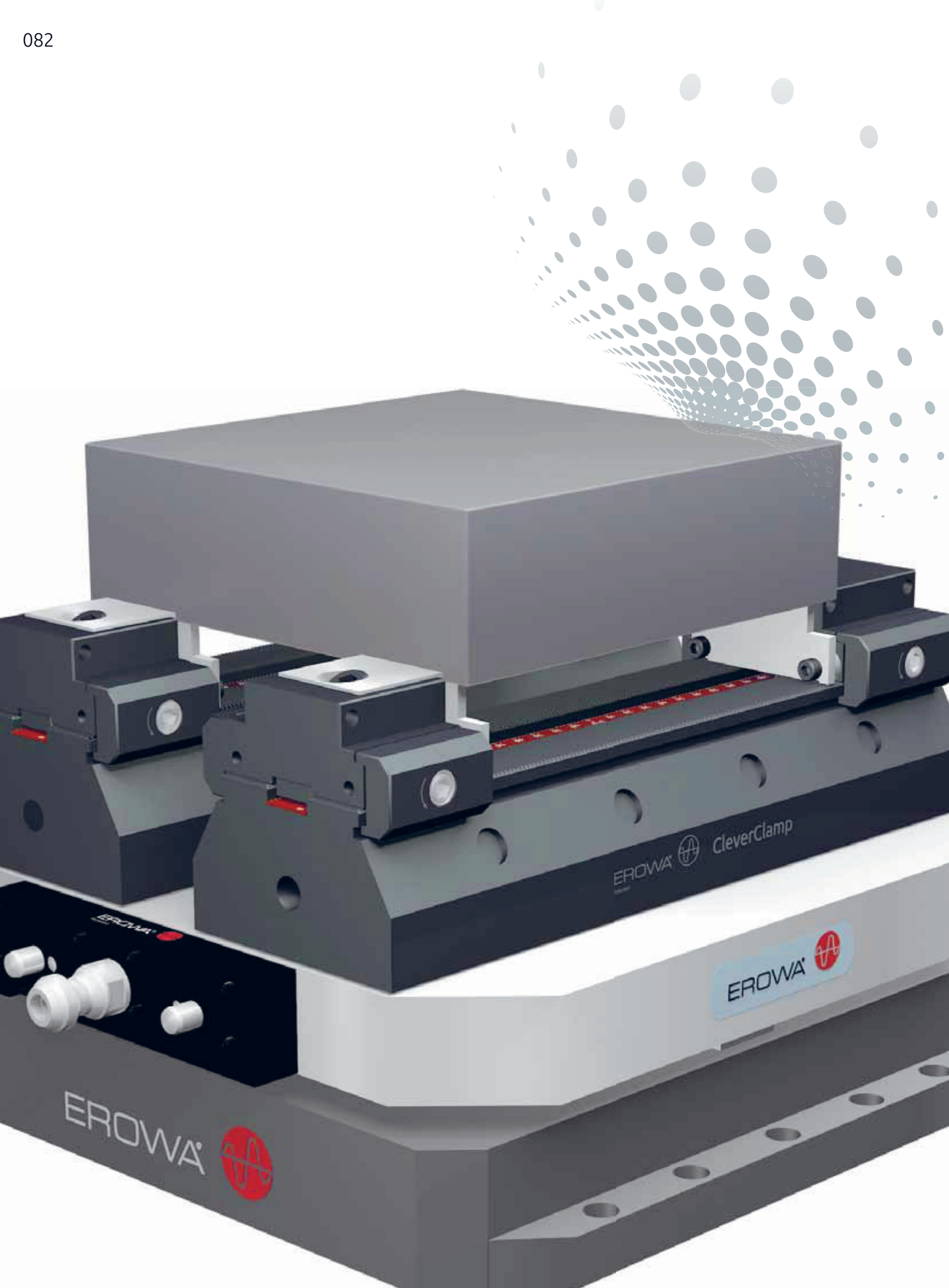


M* = manual operation
A* = automatic operation




















The color icon describes the respective surface finish.

CleverClamp System



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 |

CLEVERCLAMP WORKPIECE TOOLING SYSTEM

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For chip-removing processes



For EDM sinking



For WEDM

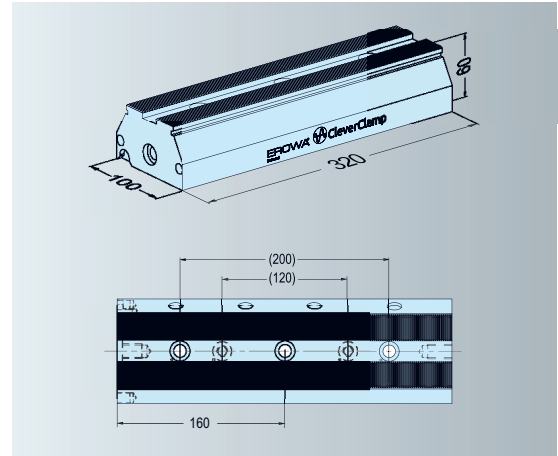
EROWA CleverClamp System

Rails

ER-099314 Rail 320 H60 CleverClamp



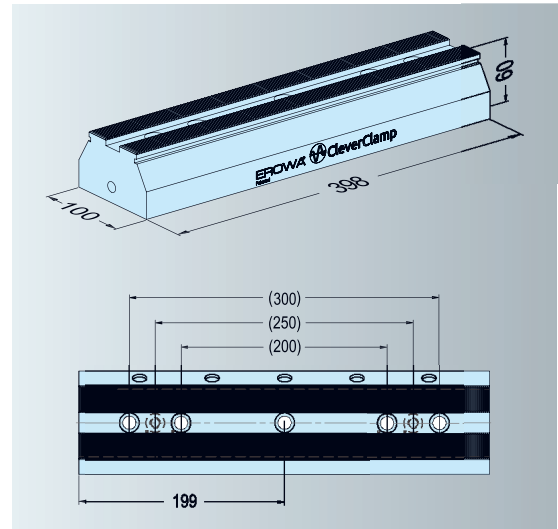
- Version** Steel, hardened. H60 clamping element carrier with 2mm positioning grid.
- Application** Serves as a base to clamp workpieces with various CleverClamp clamping and stop elements.
- Mounting** To mount on R50 grid plates, pallets, tombstones and machine tables
- Accessories** Clamping and stop elements, etc.
- Important** Can be used directly with a spigot on MTS, 200mm pitch (M) or MTS81, 120mm pitch (A/M).



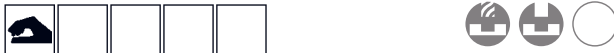
ER-099315 Rail 398 H60 CleverClamp



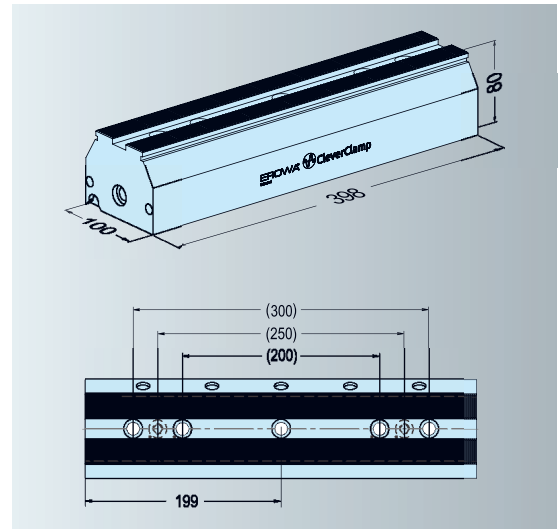
- Version** Steel, hardened. H60 clamping element carrier with 2mm positioning grid.
- Application** Serves as a base to clamp workpieces with various CleverClamp clamping and stop elements.
- Mounting** To fit on R50 grid plates, pallets, tombstones and machine tables.
- Accessories** Clamping and stop elements, etc.
- Important** Can be used directly with a spigot on MTS, 200mm pitch (M) or 250mm pitch (M).



ER-100266 Rail 398 H80 CleverClamp

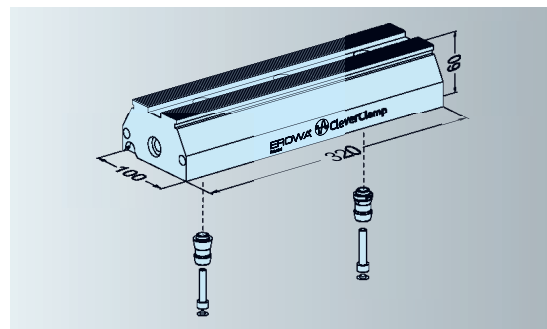


- Version** Steel, hardened. H80 clamping element carrier with 2mm positioning grid.
- Application** Serves as a base to clamp workpieces with various CleverClamp clamping and stop elements.
- Mounting** To fit on R50 grid plates, pallets, tombstones and machine tables.
- Accessories** Clamping and stop elements, etc.
- Important** Can be used directly with a spigot on MTS, 200mm pitch (A/M) or 250mm pitch (A/M).

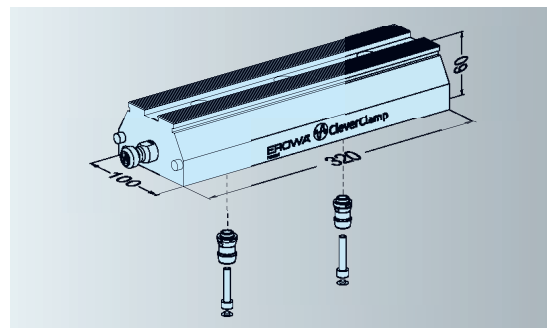


**ER-099387 Rail 320 H60 manual
CleverClamp**

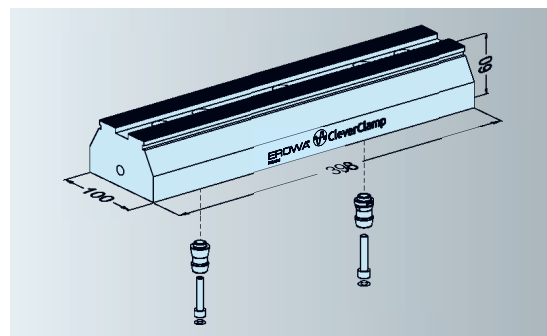
Version	Steel, hardened. H60 clamping element carrier with 2mm positioning grid. With MTS spigot, manual.
Operation	Manual application on MTS81 base plates with 120mm pitch and MTS base plates with 200m pitch.
Application	Serves as a base to clamp workpieces with various CleverClamp clamping and stop elements.
Accessories	Clamping and stop elements, etc.
Important	Manual application.

**ER-099388 Rail 320 H60 automated
CleverClamp**

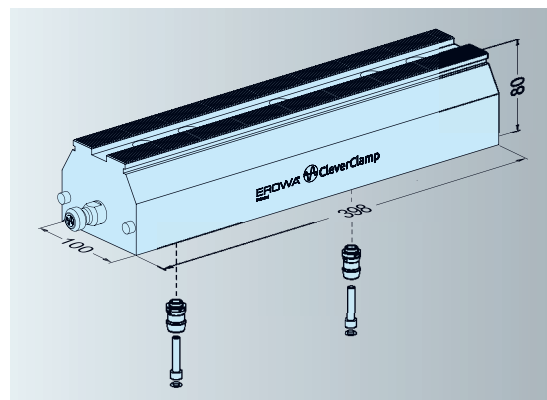
Version	Steel, hardened. H60 clamping element carrier with 2mm positioning grid. With MTS spigot, automatic, and Grip-perLink.
Operation	Automated application on MTS81 base plates with 120mm pitch.
Application	Serves as a base to clamp workpieces with various CleverClamp clamping and stop elements.
Accessories	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 pitch.
Application	Serves as a basis 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 pitch.
Application	Serves as a base to clamp workpieces with various CleverClamp clamping and stop elements.
Accessories	Clamping and stop elements, etc.
Important	Automated application.



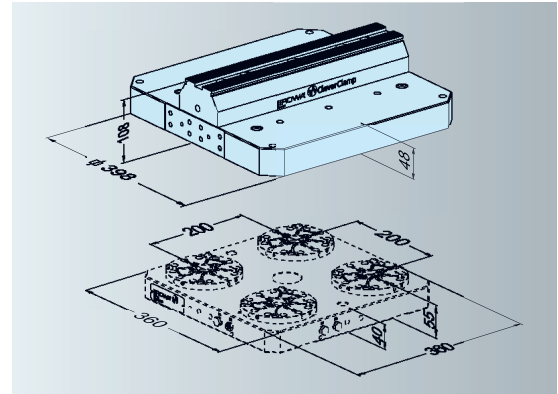
EROWA CleverClamp System

MTS Base rails

ER-099323 Base MTS 200 mono CleverClamp



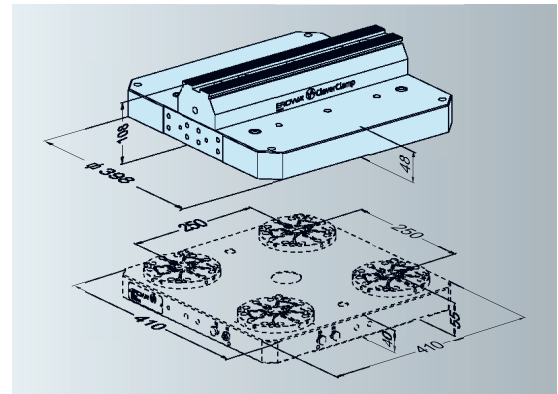
- Version Combination of MTS aluminum pallet with 398 rail (MTS spigot set ER-041461 (M) / ER-041464 (A)).
- Application Optimal accessibility for 5-axis applications with single and multiple fixtures.
- Accessories Order separately: ER-041461 (M) / ER-041464 (A) or MTS GripperLink Rapid ER-038622.



ER-099320 Base MTS 250 mono CleverClamp



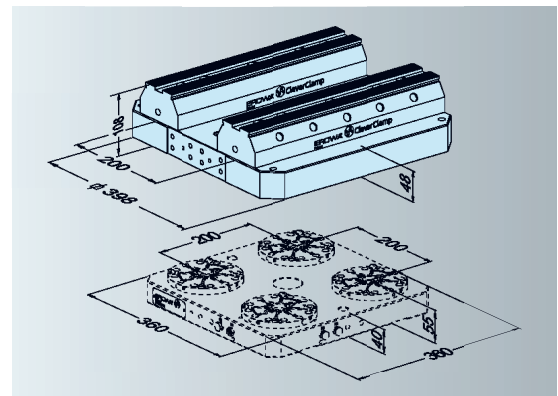
- Version Combination of MTS aluminum pallet with 298 rail (MTS spigot set ER-041461 (M) / ER-041464 (A)).
- Application Optimal accessibility for 5-axis applications with single and multiple fixtures.
- Accessories Order separately: ER-041461 (M) / ER-041464 (A) with GripperLink Rapid ER-038622.



ER-099321 Base MTS 200 duo CleverClamp



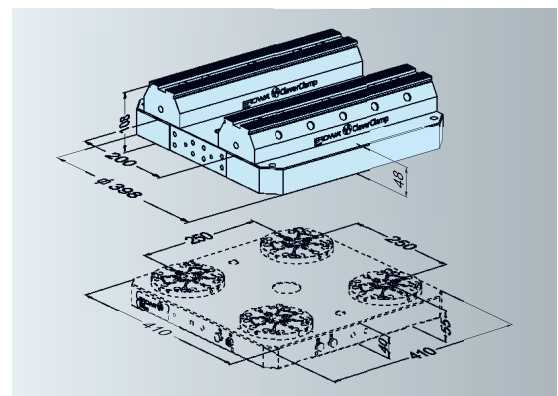
- Version Combination of MTS aluminum pallet with two 298 rails (MTS spigot set ER-041461 (M) / ER-041464 (A)).
- Application Optimal for multiple fixtures and for clamping big workpieces.
- Accessories Order separately: ER-041461 (M) / ER-041464 (A) or MTS GripperLink Rapid ER-038622.



ER-099319 Base MTS 250 duo CleverClamp



- Version Combination of MTS aluminum 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.

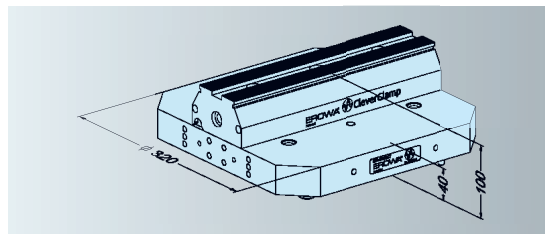


EROWA CleverClamp System

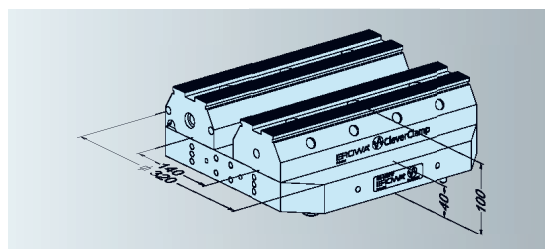
UPC Base rails

ER-099318 Base UPC mono CleverClamp

- 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 / EWISTTM Rapid ER-036347 for Automation.

**ER-099317 Base UPC duo CleverClamp**

- 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 work-pieces.
- Accessories Order separately: GripperLink RCS / EWISTTM Rapid ER-036347 for Automation.

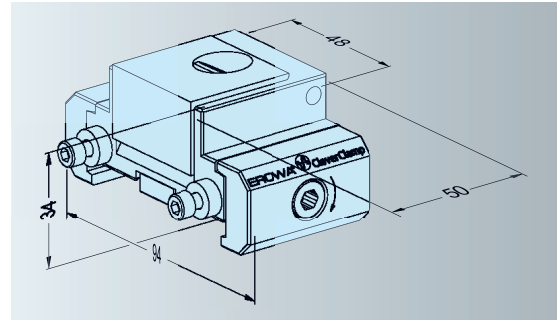


EROWA CleverClamp System

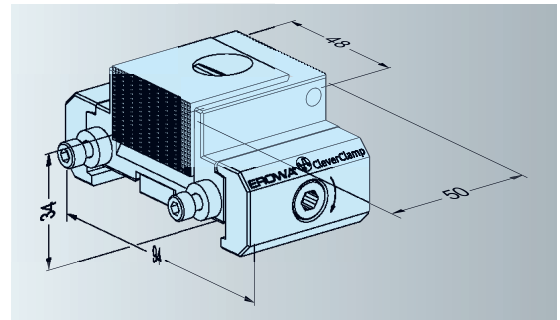
Pull down clamping elements

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.

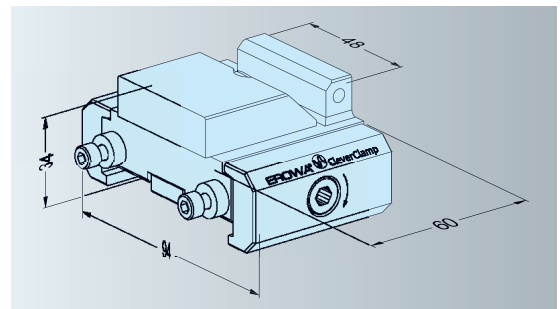


EROWA CleverClamp System

Linear clamping elements

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.

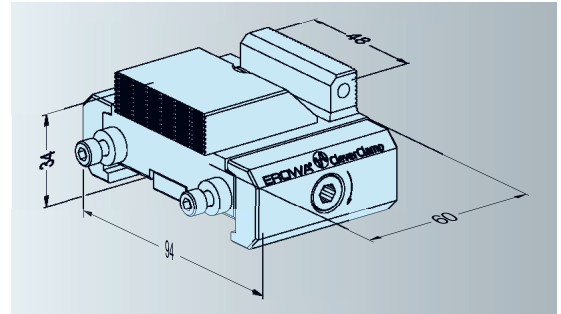


EROWA CleverClamp System

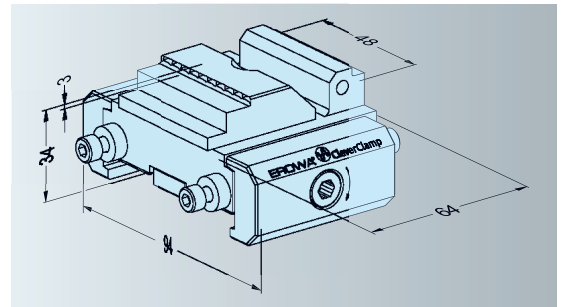
Linear clamping elements

ER-099286 Linear Slide Multi Grip CleverClamp

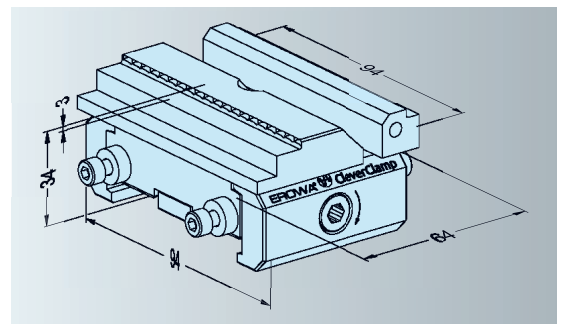
Version	Steel, hardened, width 48mm, height 34mm, clamping and stop sides with grip contours.
Application	Linear clamping with grip contours for additional purchase.
Mounting	On CleverClamp rail.
Important	Modularly compatible with all linear jaws. Suitable for single and multiple fixtures.
Clamping 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.



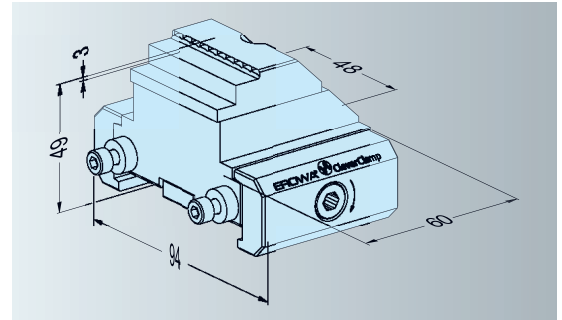
EROWA CleverClamp System

Linear clamping elements

ER-099276 Linear Slide 5X Stamp CleverClamp



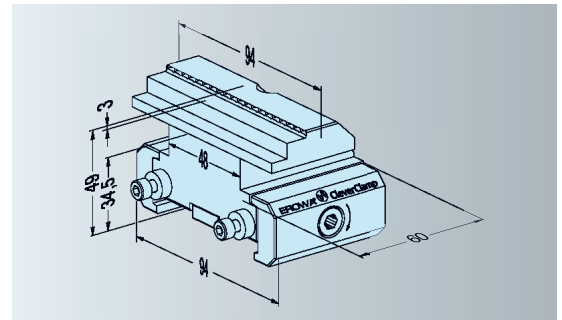
Version	Steel, hardened, width 48mm, height 49mm, clamping side with stamp contours.
Application	Optimised machine spindle accessibility for 5-axis applications. Ideal for clamping blanks at a minimum clamping height of 3mm. Secure grip thanks to stamp technology for direct stamping.
Mounting Important	On CleverClamp rail. 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 5X 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 Important	On CleverClamp rail. 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.



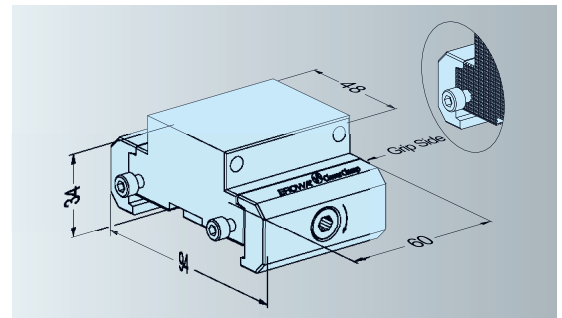
EROWA CleverClamp System

Stop elements

ER-099272 Stop Flat/Grip CleverClamp



Version	Steel, hardened, width 48mm, height 34mm; two stop sides: one smooth, one with grip contours.
Application	Stop element in the modular CleverClamp system. Smooth stop side for workpieces with a machined surface, grip side for additional purchase.
Mounting	On CleverClamp rail.



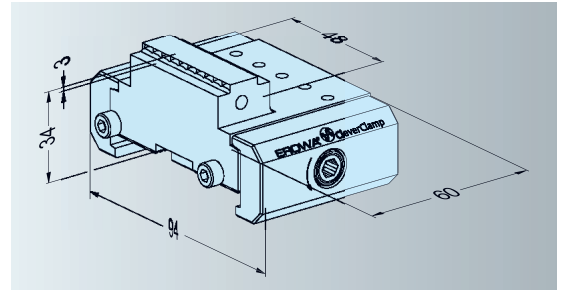
EROWA CleverClamp System

Stop elements

ER-099269 Stop Multi Stamp CleverClamp



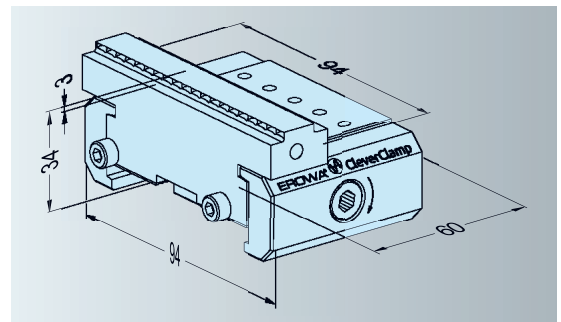
- Version** Steel, hardened, width 48mm, height 34mm, with stamp contours.
- Application** Stop element in the modular CleverClamp system. Stop element with stamp contours, ideal in combination with stamp clamping elements for clamping blanks at a minimum clamping height of 3mm.
- Mounting** On CleverClamp rail.



ER-099267 Stop Multi Stamp Wide CleverClamp



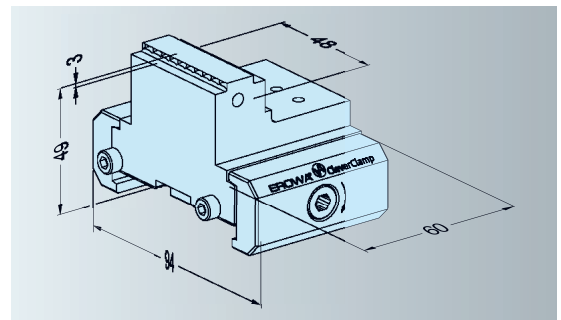
- Version** Steel, hardened, width 94mm, height 34mm, with stamp contours.
- Application** Stop element in the modular CleverClamp system. Stop element with stamp contours, ideal in combination with stamp clamping elements for clamping blanks at a minimum clamping height of 3mm.
- Mounting** On CleverClamp rails.



ER-099263 Stop 5X Stamp CleverClamp



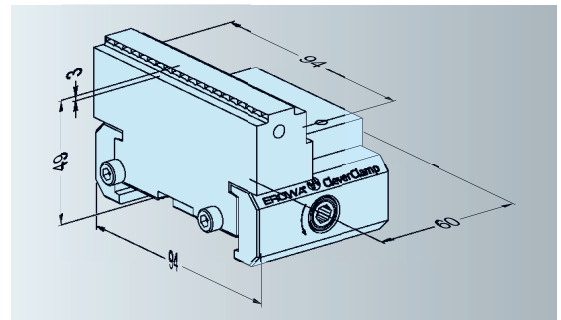
- Version** Steel, hardened, width 48mm, height 49 mm, with stamp contours.
- Application** Stop element in the modular CleverClamp system. Stop element with better machine spindle accessibility for 5-axis applications. With stamp contours, ideal in combination with stamp clamping elements for clamping blanks at a minimum clamping height of 3mm.
- Mounting** On CleverClamp rail.



ER-099258 Stop 5X Stamp Wide CleverClamp



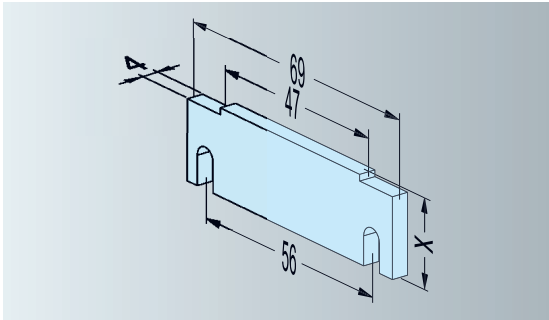
- Version** Steel, hardened, width 94mm, height 49mm, with stamp contours.
- Application** Stop element in the modular CleverClamp system. Stop element with better machine spindle accessibility for 5-axis applications. With stamp contours, ideal in combination with stamp clamping elements for clamping blanks at a minimum clamping height of 3mm.
- Mounting** On CleverClamp rail.



EROWA CleverClamp System

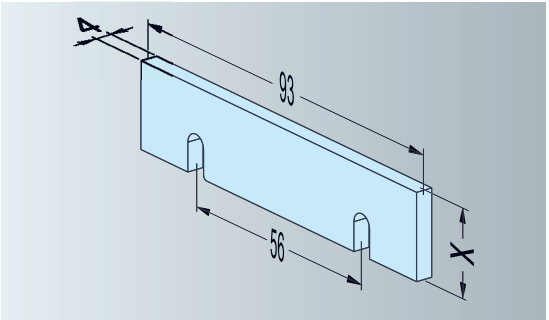
Accessories / Parallel supports

ER-099204	Support 20 CleverClamp
ER-099206	Support 24 CleverClamp
ER-099227	Support 29 CleverClamp
ER-099228	Support 31 CleverClamp
ER-099229	Support 34 CleverClamp
ER-099230	Support 39 CleverClamp
ER-099231	Support 44 CleverClamp
ER-099232	Support 46 CleverClamp



Version	Steel, hardened, width 47mm, height x mm.
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.

ER-099233	Support 20 Wide CleverClamp
ER-099234	Support 24 Wide CleverClamp
ER-099235	Support 29 Wide CleverClamp
ER-099236	Support 31 Wide CleverClamp
ER-099237	Support 34 Wide CleverClamp
ER-099238	Support 39 Wide CleverClamp
ER-099239	Support 44 Wide CleverClamp
ER-099240	Support 46 Wide CleverClamp



Version	Steel, hardened,width 93mm, height x mm.
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.

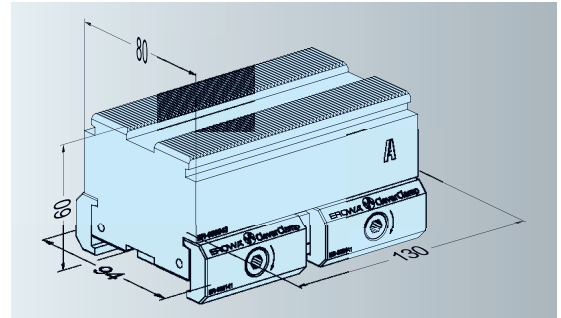
EROWA CleverClamp System

Accessories

ER-099243 Elevation for rail H60 CleverClamp



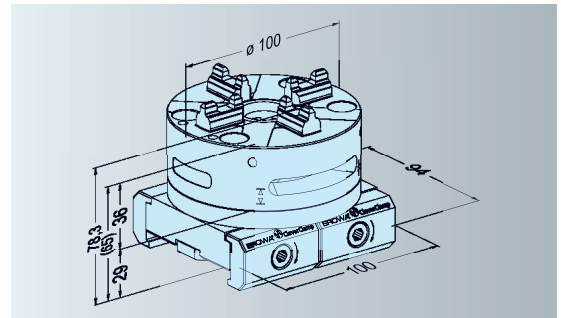
Version	Steel, hardened, height 60mm, width 94mm, length 130mm.
Application	CleverClamp 5-axis elevation - enables optimal machine spindle accessibility in 5-axis applications.
Mounting	On CleverClamp rail.



ER-099246 Quick Chuck 100 P CleverClamp



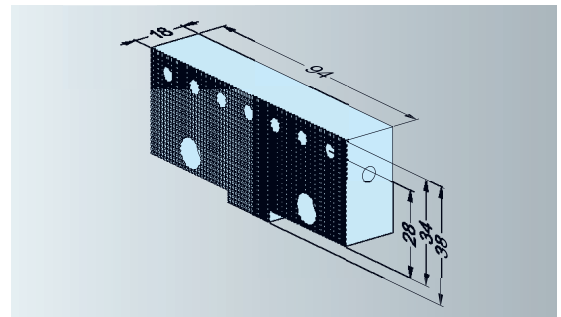
Version	CleverClamp carrier element with QuickChuck 100P, manual.
Application	Adapter between CleverClamp and EROWA ITS pallets/holders.
Mounting	On CleverClamp rail.



ER-099166 Stop Jaw Flat / Grip Wide CleverClamp



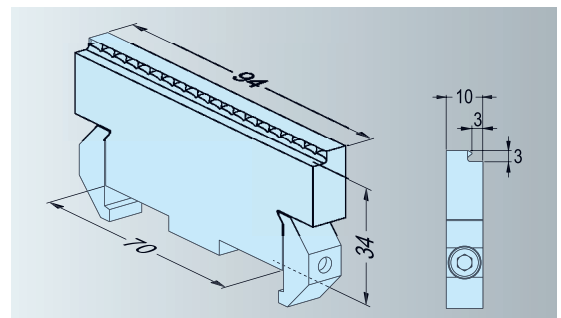
Version	Steel, hardened, width 94mm, height 34mm, one side smooth, the other with grip contours.
Application	Widening the stop surface for better grip when clamping wide workpieces.
Mounting	Use the bolts supplied to fit it to the front of the CleverClamp clamping or stop elements of your choice.
Important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



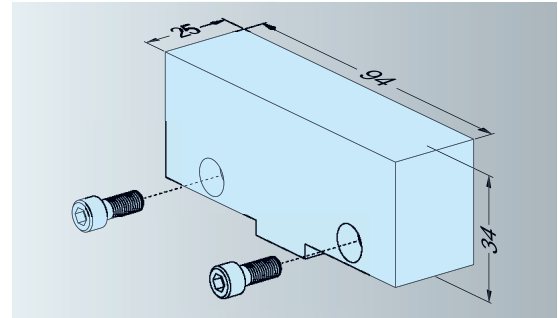
EROWA CleverClamp System

Accessories

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.

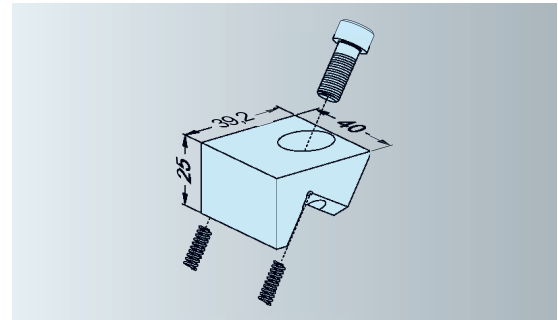


ER-099079 Pull Down Jaw Flat CleverClamp

ER-099092 Pull Down Jaw Grip 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.

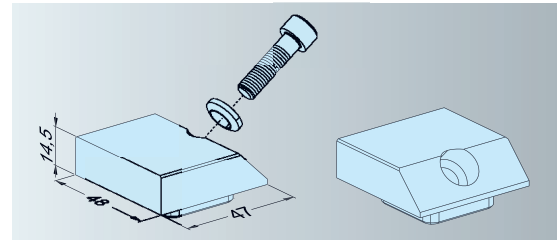


ER-099098 Linear Jaw Flat CleverClamp

ER-099099 Linear Jaw Grip CleverClamp



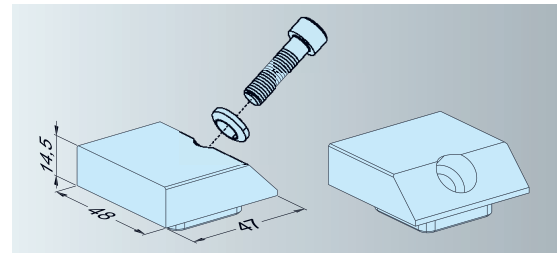
Version Steel, hardened, width 48mm, stop side smooth or with grip contours.
 Application **ER-099098:** stop side smooth - ideal for clamping workpieces with machined surfaces.
ER-099099: stop side with grip contours for additional grip.
 Mounting Can be used on all CleverClamp linear clamping elements.



ER-099123 Linear Jaw Soft CleverClamp

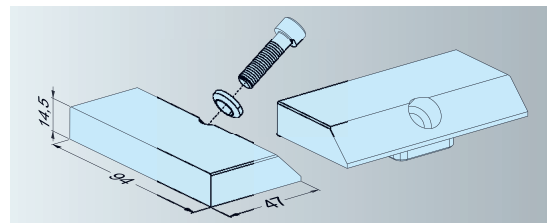


Version Steel, soft, width 48mm.
 Application To produce jaws with contours of your choice.
 Mounting Can be used on all CleverClamp linear clamping elements.

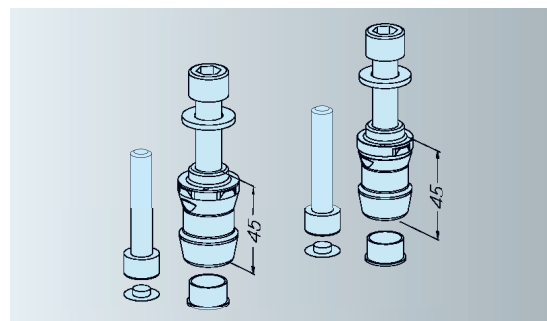


**ER-099126 Linear Jaw Soft Wide
CleverClamp**

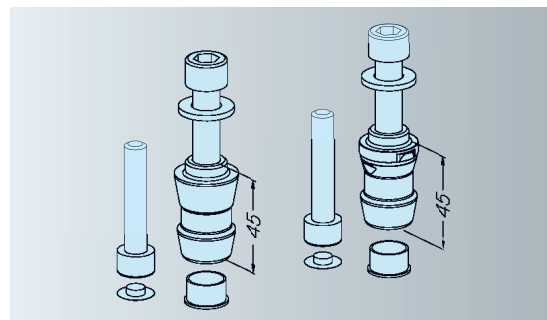
Version Steel, soft, width 94mm.
 Application To produce jaws with contours of your choice.
 Mounting Can be used on all CleverClamp linear clamping elements.

**ER-099334 MTS Spigot Set 2 automated
CleverClamp**

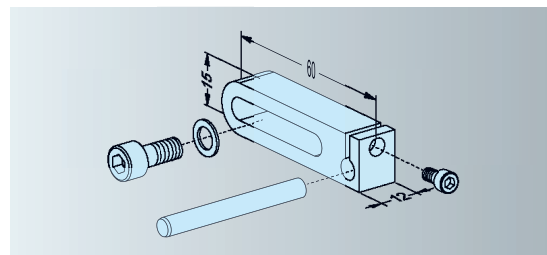
Version 1 centering spigot / A, 1 compensation spigot / A.
 Application For CleverClamp rails "320 H60 automated" and „398 automated“, which are automatically loaded / unloaded in the MTS System.
 To be fitted From below to the CleverClamp base rails.

**ER-099437 MTS Spigot Set 2 manuel
CleverClamp**

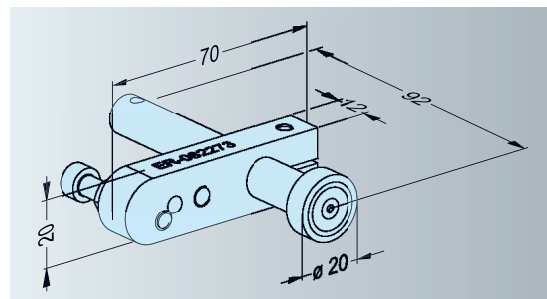
Version 1 centering spigot, 1 compensation spigot / A.
 Application For CleverClamp rails "320 H60 Manual" and „398 H60 Manual“, which are manually loaded / unloaded in the MTS system.
 To be fitted From below to the CleverClamp base rails.

**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**

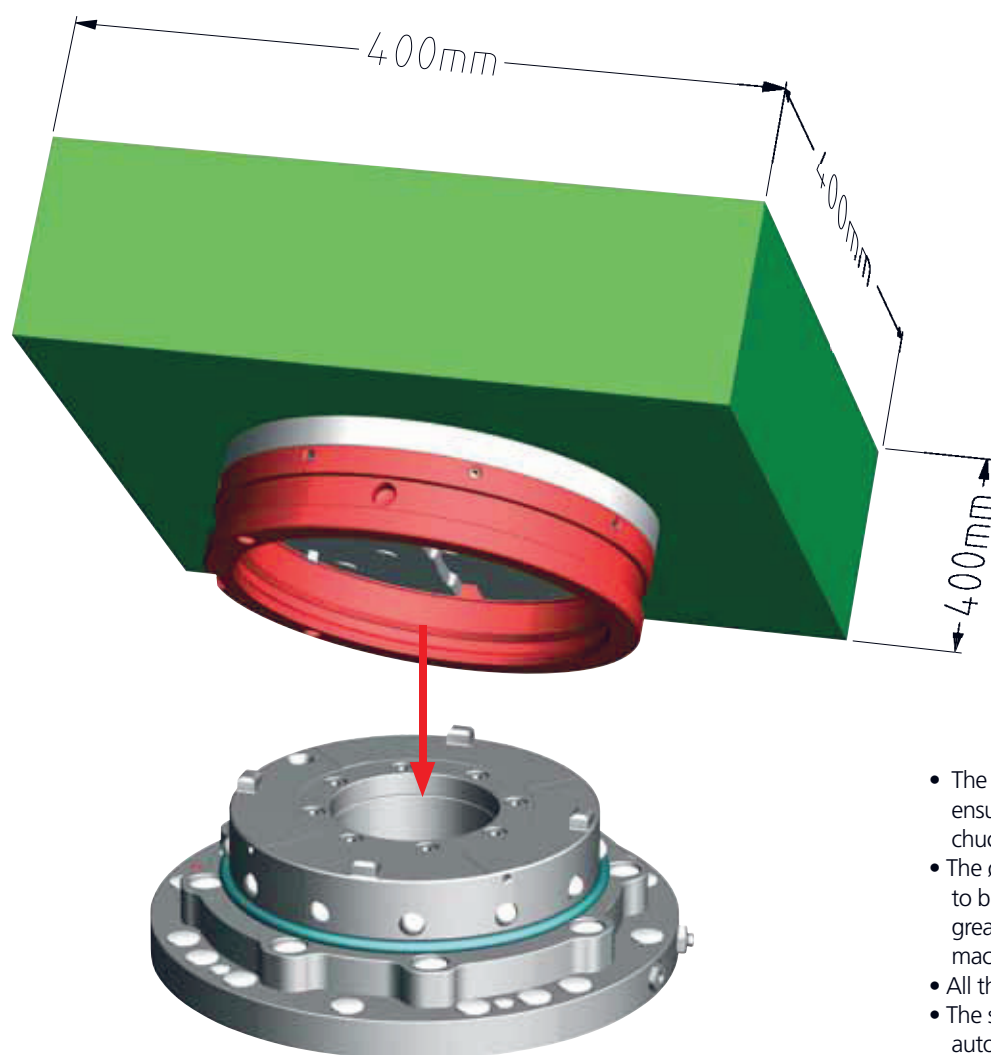
Version Stop made of anodized aluminum.
 Application Magnetic stop used for positioning workpieces in vises.
 Important Remove the magnetic stop before machining the part.



EROWA ProductionChuck 210

Palletizing system with centralized material pass-through

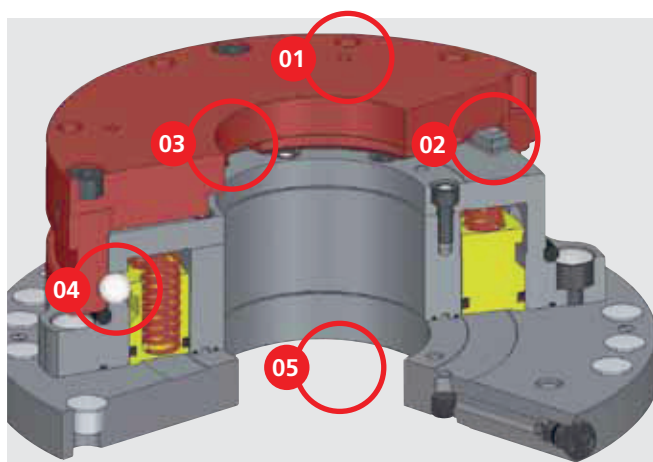
The EROWA ProductionChuck 210 ingeniously combines the endurance-tested EROWA precision with the flexible operation of a palletizing system such as required by modern parts manufacturing.



- The locking mechanism on the periphery ensures a stable connection between chuck and pallet.
- The $\varnothing 81$ mm borehole enables material to be run through the center. This is a great advantage when workpieces are machined on lathes and dividing heads.
- All the pallets are indexable $4 \times 90^\circ$.
- The system can be operated manually or automatically.
- The system is suitable for the palletizing of workpieces with volumes of up to $400 \times 400 \times 400$ mm.
- Its round design enables tools with optimal accessibility to workpieces.

Applications**Handling**

Manual / Loading facility / Robot

Function**05 | Material pass-through**

Rod material of up to $\varnothing 81$ mm can be led directly through the chuck. The $\varnothing 81$ mm boreholes also provides for air, hydraulic and vacuum lines to operate the fixtures that are clamped on pallets.

01 | Mounting

Workpieces, fixtures and plates are directly mounted on the PC 210 pallet.

02 | Centering system

The widely spaced centering system enables the transfer of maximum torque.

03 | Z-supports

The Z-supports are positioned on the far outside, thus accommodating the tilting moment in the best possible way. The Z-supports are automatically cleaned with air. Dynamic pressure is used to check whether a pallet is in place.

04 | Ball lock

The self-locking ball lock generates a clamping power of 20,000 N. Compressed air is necessary to open the chuck and to clean the Z-supports.

Technical data - ProductionChuck 210

	ProductionChuck 210
Repeatability	<0.002 mm
Pallet indexation	4 x 90°
Clamping power	20,000 N / 29,000 N
Clamping power (central PowerChuck P)	9,000 N
Generated by	spring power
Opening with compressed air	7.5 bar
Chuck fits directly to:	
– machine tables with T-slots	50, 63, 100 mm
– round tables with T-slots	4 x 90°, 45°

EROWA ProductionChuck 210 in action

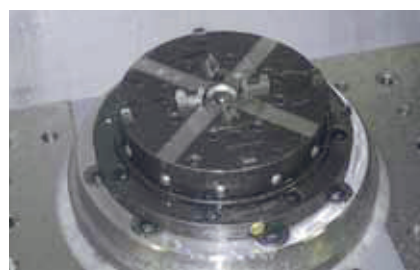
Flexible palletizing of workpieces and fixtures

The ProductionChuck 210 pallet serves as a workpiece and fixture carrier.

A borehole in the center of the pallet also enables material up to a diameter of 81 mm to be led through the ProductionChuck 210.

RELIABLE

Dirt-resistant, robust, designed for continuous use.



Working space well exploited! 5-side machining in one clamping process thanks to optimal accessibility.



The existing attachment boreholes allow for quick mounting on all well-established machines.



Another advantage: the workpiece or the fixture can be fitted directly on the PC pallet 210.



The Z-supports are placed as far on the outside that they provide a stable and precise support even for bigger workpieces.

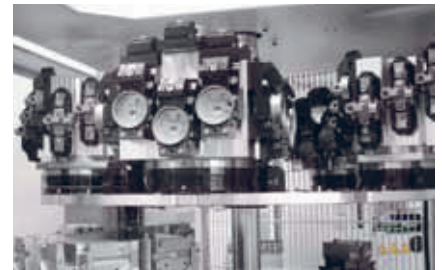


Fixture stability. Access from all sides. Best use of horizontal/vertical milling machines.



PC 210 is an tooling system that is ideal for rotary transfer machines:

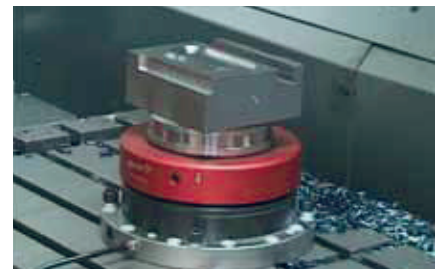
- quick fixture change,
- sufficient room to dock on the hydraulic system to operate the fixtures.



Palletized clamping devices in the robot magazine.



Particularly suitable for use on lathes. The ProductionChuck 210 is the only precision palletizing system with a borehole for central material feed.



Mixed use of ITS and ProductionChuck 210 pallets.



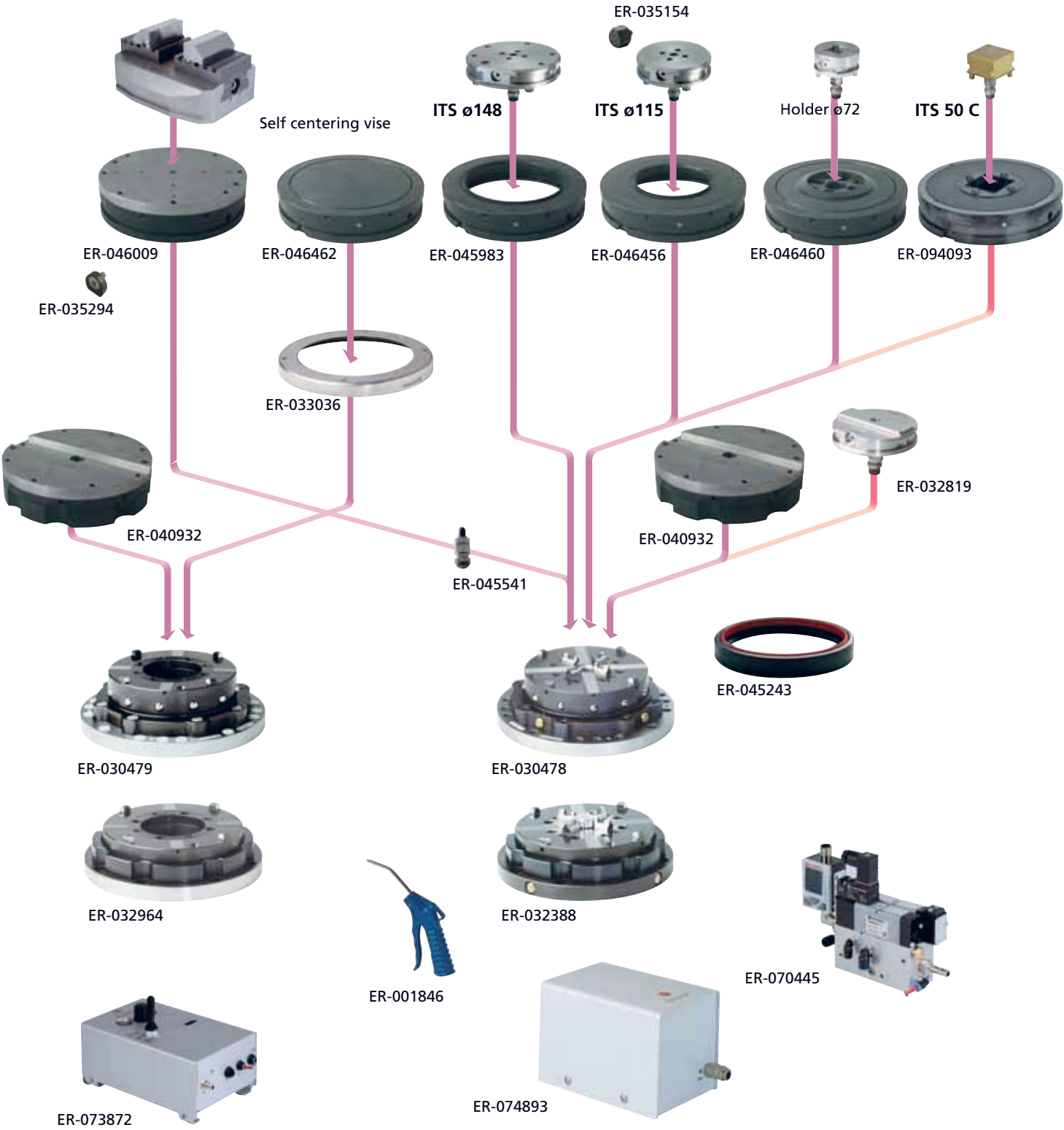
Would you like to automate? We will gladly advise you as to how an EROWA handling facility will increase your productivity up to three times.



EROWA ProductionChuck 210

palletizing system

The components



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

EROWA PRODUCTIONCHUCK 210 PALLETIZING SYSTEM

ProductionChuck 210	Chucks	102
ProductionChuck 210	Workpiece carriers	104
ProductionChuck 210	Auxiliary Equipment	106



For chip-removing processes



For EDM sinking



For WEDM

EROWA ProductionChuck 210

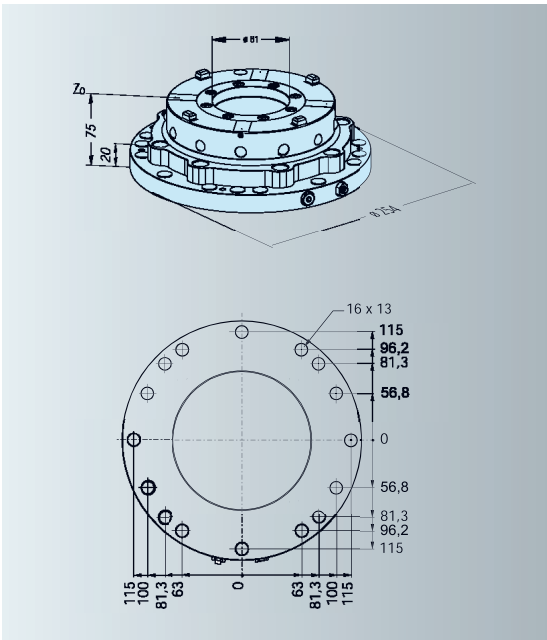
Chucks

Technical data	ProductionChuck 210
Repeatability	0.002 mm
Indexing	4 x 90°
Clamping power	20,000 N
Clamping power (central PowerChuck P)	9,000 N
Generated by	spring power
Opening with compressed air	min. 7.5 bar

ER-030479 ProductionChuck 210



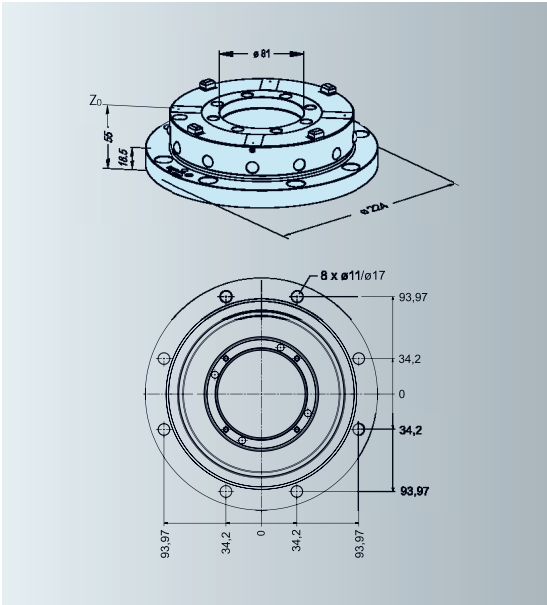
Version	Chuck for high machining forces in chip cutting. Low design. Through-borehole $\varnothing 81$ mm.
Connections	Laterally or from below with two lines.
Operation	With air gun, laterally. With control unit, through the two connections laterally or from below.
Application	On milling machines, lathes and grinding machines. To clamp pallets PC 210.



ER-032964 ProductionChuck 210 without base plate



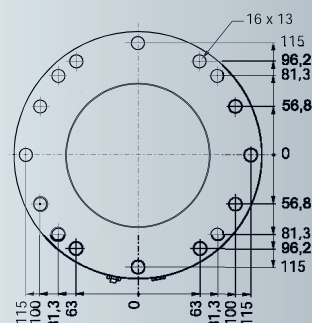
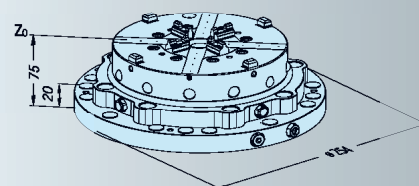
Version	Chuck for high machining forces in chip cutting. Low design. Through-borehole $\varnothing 81$ mm.
Application	On milling machines, lathes and grinding machines. To clamp pallets PC 210.
Connections	2 air connections: on the sides and from below through customized base plate.
Operation	With air gun or control unit.
Note	Base plate must be customized.



EROWA Production Chucks 210

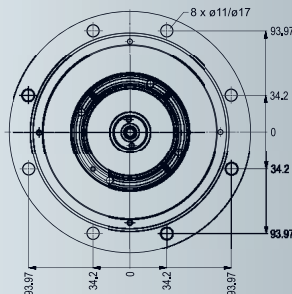
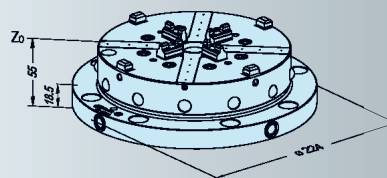


Version	Chuck for strong machining forces in chip-cutting operations. PC 210 with integrated PowerChuck P.
Connections	Laterally or from below with two lines.
Operation	With air gun, laterally. With control unit, through the two connections laterally or from below.
Application	On milling machines, lathes, grinding machines and EDM centers. To clamp pallets PC 210, ITS pallets ø 148, ø 115, ITS 50 holders and PM pallets.





Version	Chuck for high machining forces in chip cutting. System PC210 and ITS.
Application	On milling machines, lathes, grinding machines and EDM centers. To clamp pallets PC 210, ITS pallets ø 148, ø 115, ITS 50 holders and PM pallets.
Connections	2 air connections: on the sides and from below through customized base plate.
Operation	With air gun or control unit.
Note	Base plate must be customized.



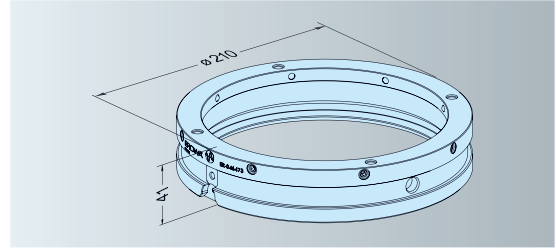
EROWA ProductionChuck 210

Workpiece carriers

ER-046473 Clamping ring RN PC 210



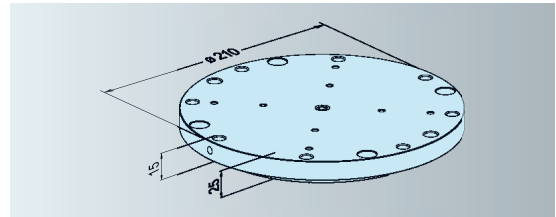
Version Steel, hardened.
Application Clamping ring for centering pallet PC 210 and centering pallet PC 210 / $\varnothing 81$. Can be automated with gripper PC 210 RN (option).



ER-042865 PC Centering pallet 210



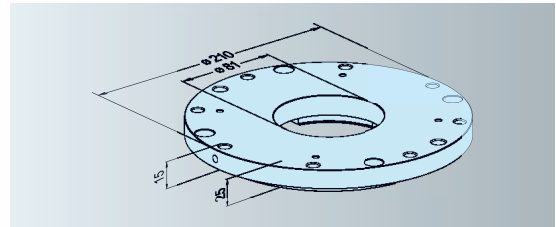
Version Steel, without clamping ring (option ER-046473).
Fitting 8 x M10 attachment threads and two $\varnothing 10$ boreholes.
Application To accommodate workpieces, clamping jigs and plates PC 210.



ER-042866 PC Centering pallet 210 $\varnothing 81$



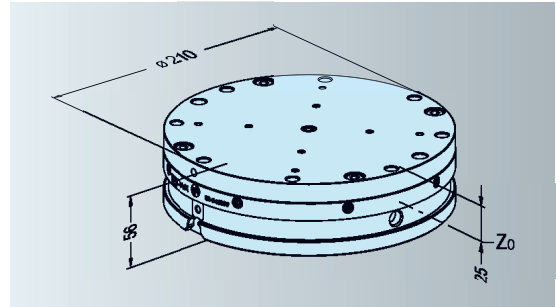
Version Steel, without clamping ring (option ER-046473).
Fitting 8 x M10 attachment threads and two $\varnothing 10$ boreholes.
Application To accommodate workpieces, clamping jigs and plates PC 210.



ER-046009 Pallet RN PC 210



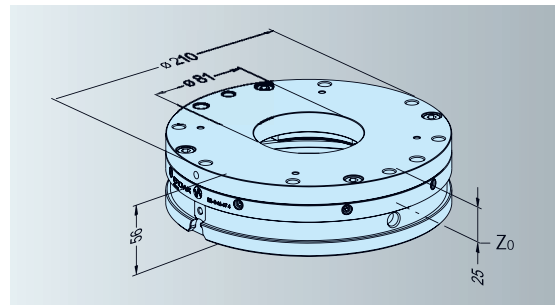
Version Steel. Centering segments integrated.
Assembly 8 x M10 attachment threads and two $\varnothing 10$ boreholes.
Application To clamp workpieces, clamping jigs and pallets PC 210. Can be automated with gripper RN PC 210 (option).



ER-046474 Pallet RN PC 210 $\varnothing 81$

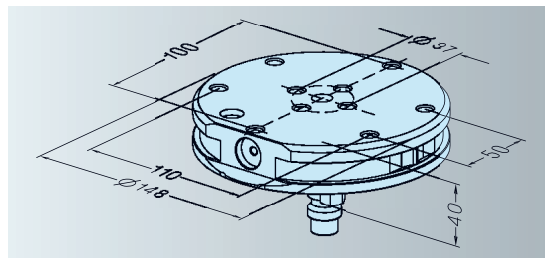


Version Steel. Centering segments integrated.
Through borehole $\varnothing 81$ mm.
Fitting 8 x M10 attachment threads and two $\varnothing 10$ boreholes.
Application To accommodate workpieces, clamping jigs and plates PC 210. Can be automated with gripper RN PC 210 (Option).

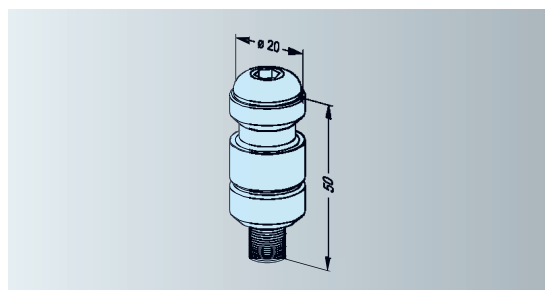


ER-041912 Pallet P ø 148 Inox**ER-041924 Pallet Kit P ø 148 Inox
4 pieces**

- Version Steel, corrosion-resistant. Centering integrated in the pallet.
- Application For use on all EROWA PowerChucks P and Production-Chuck 210 Combi. To accommodate workpieces and fixtures in chip-cutting machining processes.
- Mounting Through pallet with M8 bolts or through blank with M10 bolts.

**ER-045541 Chucking spigot for PC 210**

- Version Fixed type, manual. 1 spigot.
- Application In pallets PC 210 for chip-cutting machining processes.



Please note: Further pallets and electrode holders for the ProductionChuck 210 Combi can be found from pages 172.

EROWA ProductionChuck 210

Auxiliary Equipment

ER-045983 Sealing ring holder RN \varnothing 148 PC 210

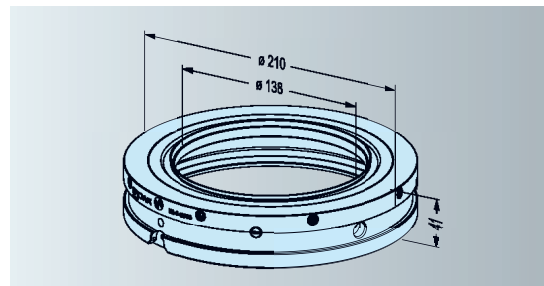


Version

Aluminium anodized.

Application

Prevents penetration of chips and dirt into the Production-Chuck 210 by application of EROWA ITS pallets \varnothing 148. For automatic handling with gripper RN PC 210 (option).



ER-046456 Sealing ring holder RN \varnothing 115 PC 210

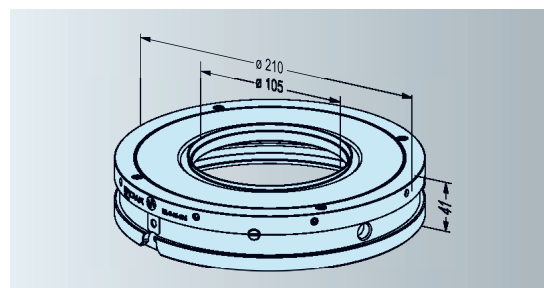


Version

Aluminium anodized.

Application

Prevents penetration of chips and dirt into the Production-Chuck 210 by application of EROWA ITS pallets \varnothing 115. For automatic handling with gripper RN PC 210 (option).



ER-046460 Sealing ring holder RN \varnothing 72 PC 210

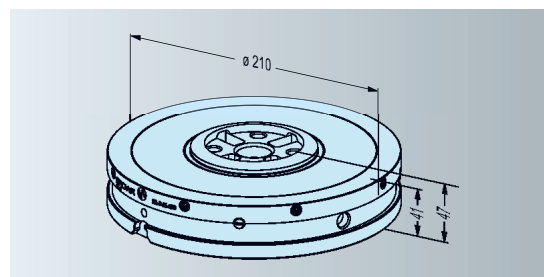


Version

Aluminium anodized.

Application

Prevents penetration of chips and dirt into the Production-Chuck 210 Combi by application of EROWA ITS pallets \varnothing 72. For automatic handling with gripper RN PC 210 (option).



ER-046458 Sealing ring holder RN \varnothing 85 PC 210

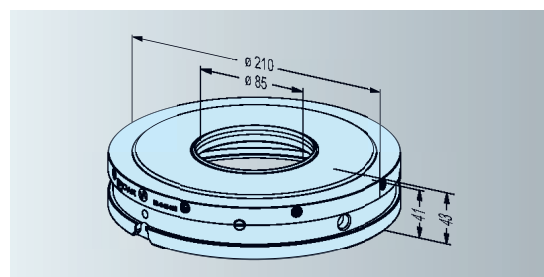


Version

Aluminium anodized.

Application

Prevents penetration of chips and dirt into the Production-Chuck 210 Combi by application of EROWA ITS pallets \varnothing 85. For automatic handling with gripper RN PC 210 (option).



ER-094093 Sealing ring ITS 50 C for PC 210

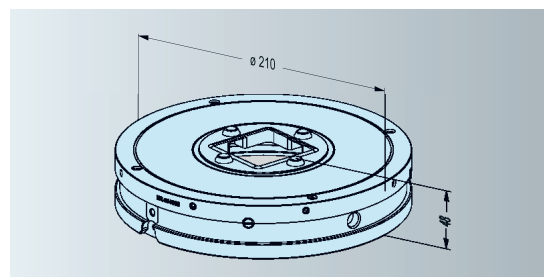


Version

Aluminium anodized.

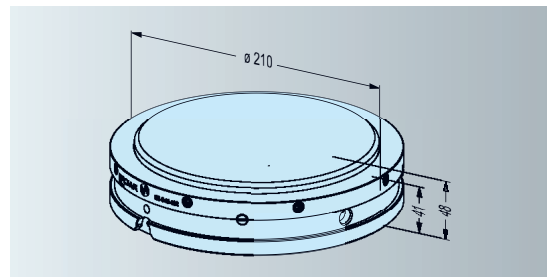
Application

Prevents penetration of chips and dirt into the ProductionChuck 210 Combi by application of EROWA electrode holders C. For automatic handling with gripper RN PC 210 (option).

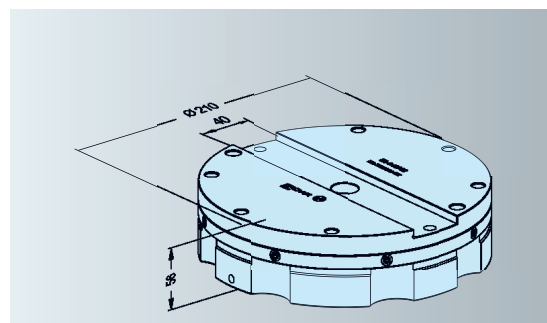


ER-046462 Cover RN PC 210

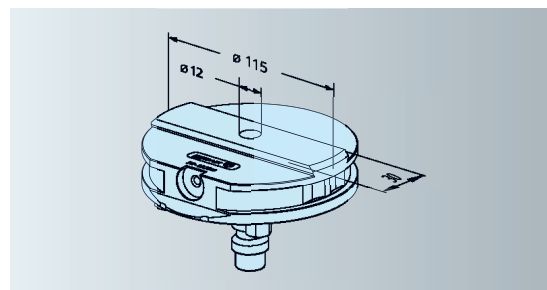
- Version Aluminium anodized.
Application Prevents penetration of chips and dirt into the Production-Chuck 210 Combi. For automatic handling with gripper RN PC 210 (option).

**ER-040932 Positioning pallet PC 210**

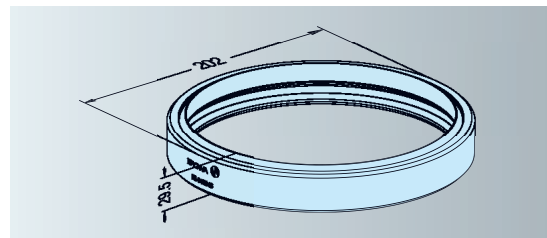
- Version Alignment pallet with ground alignment rail and central borehole.
Application Alignment of angular position, and determination of the center of PC 210 chucks.

**ER-032819 Alignment pallet ø 115**

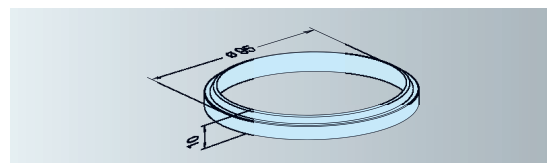
- Version Pallet ø 115 mm, alignment length 110 mm, center borehole ø 12 mm.
Application Alignment of radial, axial and angular position of ITS chucks, PowerChuck P and PC 210 Combi chucks.

**ER-045243 PC 210 Sealing ring**

- Version Holder with wiper.
Application For use on ProductionChuck 210 Combi. To seal the outer balls if ITS 50 standard electrode holders or other workpiece carriers without PC sealing ring holders PC 210 are used.

**ER-045249 Wiper for pallet PC 210 ø 81**

- Version Rubber
Application Prevents penetration of chips and dirt into the Production-Chuck 210 in use with pallets PC 210 / ø 81.

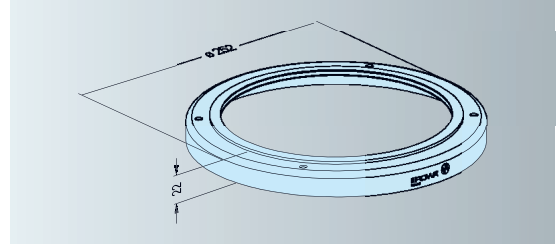


EROWA ProductionChuck 210

Auxiliary Equipment

ER-033036 Covering ring PC 210

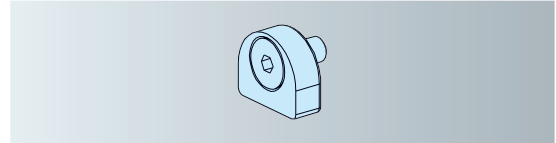
Application Covering ring for the attachment bolts of the PC 210: ER-030479, ER-030478 (Recommended for application on lathes).



ER-035294 EWIS™ Rapid chip with chip holder RCS with chip ø 12,4 x 2mm



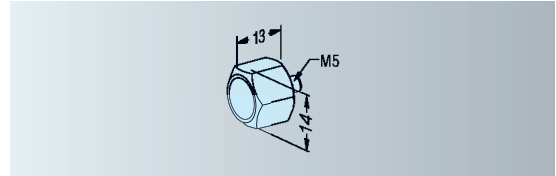
Version Holder with built-in data carrier. EWIS chip: read only.
Application To build into RCS coupling, PalletSet W holder and Basic WEDM holder.



ER-035154 EWIS™ Rapid chip with chip holder SW14 with chip ø 12,4 x 2mm



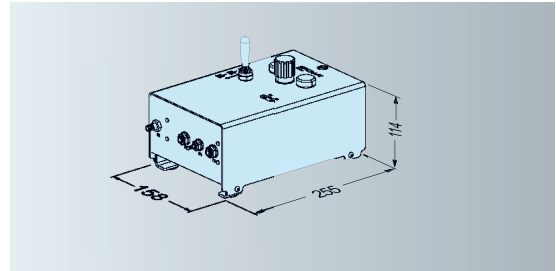
Version Sleeve fitting with built-in data carrier.
Application EWIS Rapid chip: read only.
 In any EROWA electrode holder and pallet which has been prepared for it.



ER-073872 Manual control unit with booster



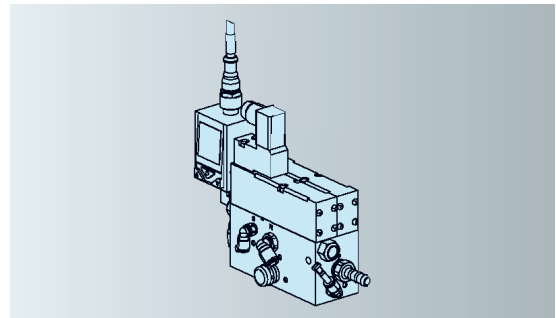
Version Manual valve to control the EROWA chucks: Opening/Reclamping/Cleaning.
Application Operation of: EROWA ITS Compact Combi Chuck, ITS, UPC, MTS, PC 210 chucks and PowerChuck P.
Note Integrated booster with load ratio 1:2 (up to output pressure of 10 bar max.).



ER-070445 Control unit with monitoring

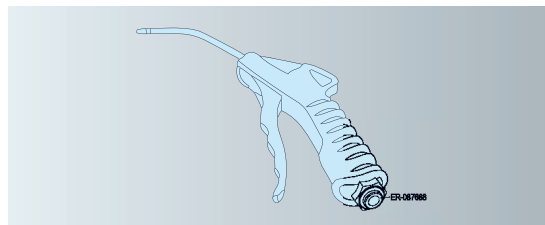


Version Electropneumatic valve. Outputs for chucks: opening/cleaning/reclamping. 24 V, incl. mounting accessories and 3 m connection hose.
Application Operation and monitoring of machine-integrated chucks, for instance through the CNC M-function.

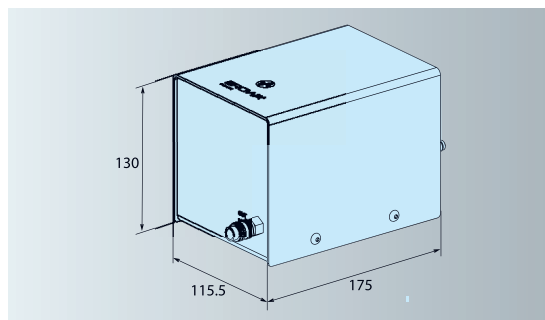


ER-001846 Air jet

- Version Plastic, smooth regulation of air flow, connection 1/4", inside thread.
- Application Operation of manual chucks.
- 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-074893 Pressure booster**

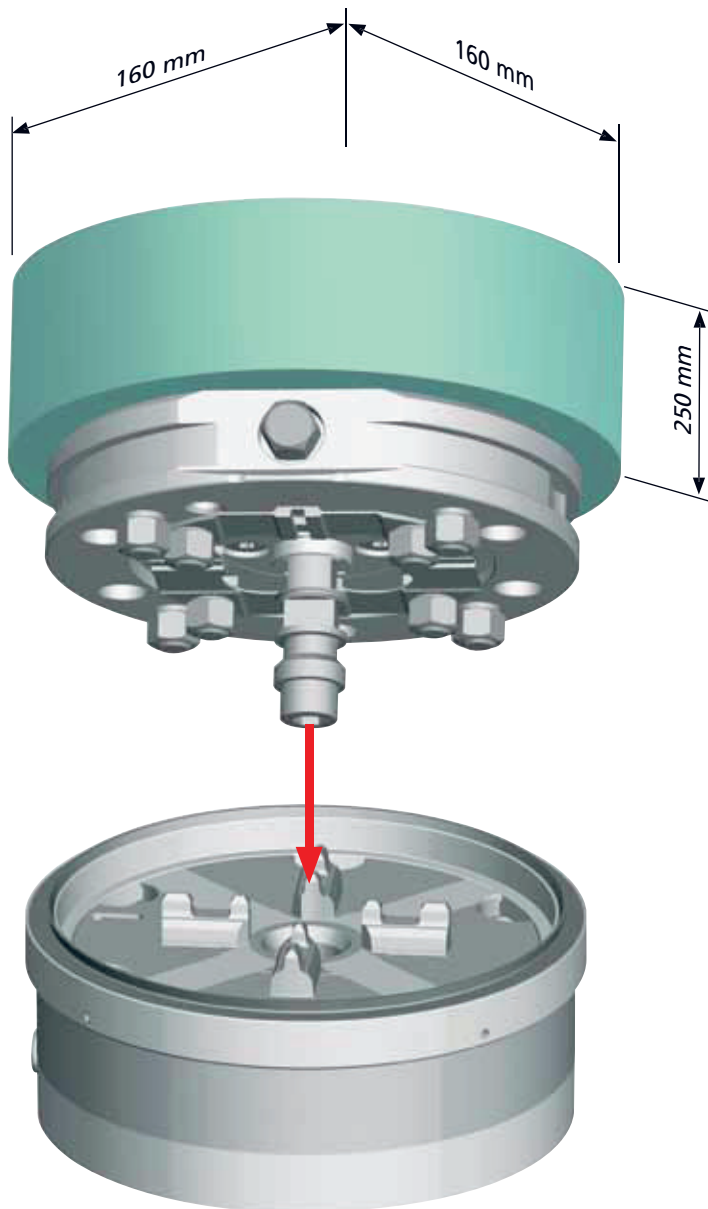
- Version Quick-connect couplings for hose $\varnothing i = 8$ mm.
Compression ratio: 1:2.
- Application On insufficient system pressure and on pressure fluctuations.
- Installation Integrate in air circuit near application.



EROWA PowerChuck P

Accessible from all sides

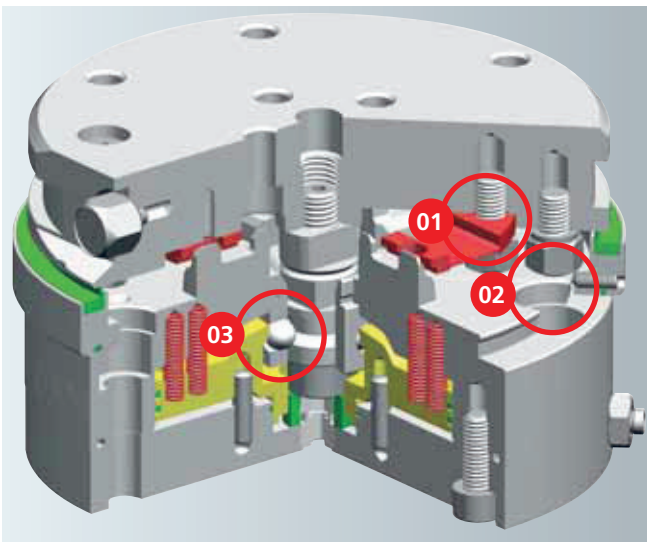
EROWA PowerChucks are quick and easy to integrate on a wide variety of machining centers.



- Whether affixed to the T-slot table or built into the integrated axis, there is always a good solution.
- Access from all five open sides is particularly important with horizontal machining. The low height of the chuck plays a significant role on smaller machines.
- Operation is manual with an air jet, or with one of the pneumatic control units through the permanently screwed-in connections.
- In automatic operation, the presence and proper position of the pallets in the chuck is monitored (EROWA standard). Support surfaces are automatically cleaned.
- The different variants enable the chuck to be optimally fitted to the existing machine base.

Applications**Handling**

Manual / Loading facility / Robot

Function**01 | Centering plates**

The G-centering plates with their ground centering slots and their 0.7-mm-thick spring plate ensure clean and powerful positioning.

02 | Cleaning

During the clamping process, the contact surfaces of the supports are cleaned with compressed air.

03 | Ball lock

The self-locking ball lock generates a clamping power of 10,000 N; full clamping power is even retained in the case of a pressure failure.

Technical data - PowerChuck P

PowerChuck P	
Pallet size	ø 115 mm, ø 148 mm and ITS 50
Chuck dimensions H x ø	H = 51 mm x ø 156 mm
System height (chuck and pallet)	H = 91 mm
Recommended workpiece size	up to 160 x 160 x 250 mm
Repeatability	0.002 mm
Indexing	4 x 90°
Clamping power	10,000 N
Generated by	springs
Release	compressed air, min. 6 bar
Operation	control unit or air jet

EROWA PowerChuck P in action

Powerful, flexible, universally applicable

Manufacturing is virtually inconceivable anymore without PowerChucks. Whether on milling or drilling machines, whether on profile-grinding or surface-grinding machines, whether on spindles of dividing heads or lathes: wherever it is, they fit like a glove.

Downtimes are completely eliminated by integrating a consistent clamping system on all machine tools.

CLEAN

By automatic cleaning of the contact surfaces.



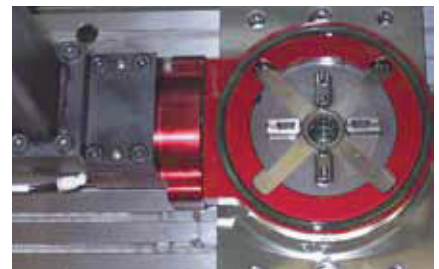
Horizontal chuck on a dividing head.



Flexible and automatic loading of a machine tool with an EROWA handling unit. The ratio of productive hours is considerably increased.



Universal combination of EROWA clamping systems with automatic handling.



Gaskets protect the chucks and ensure secure automatic loading.



Securely clamped also for heavy machining.



We would like to advise you. Please describe your clamping problem to us.



Clamped with μm -accuracy with one movement of the hand.



Practical clamping elements for universal operation.



Grinding or milling: EROWA PowerChucks are just right.



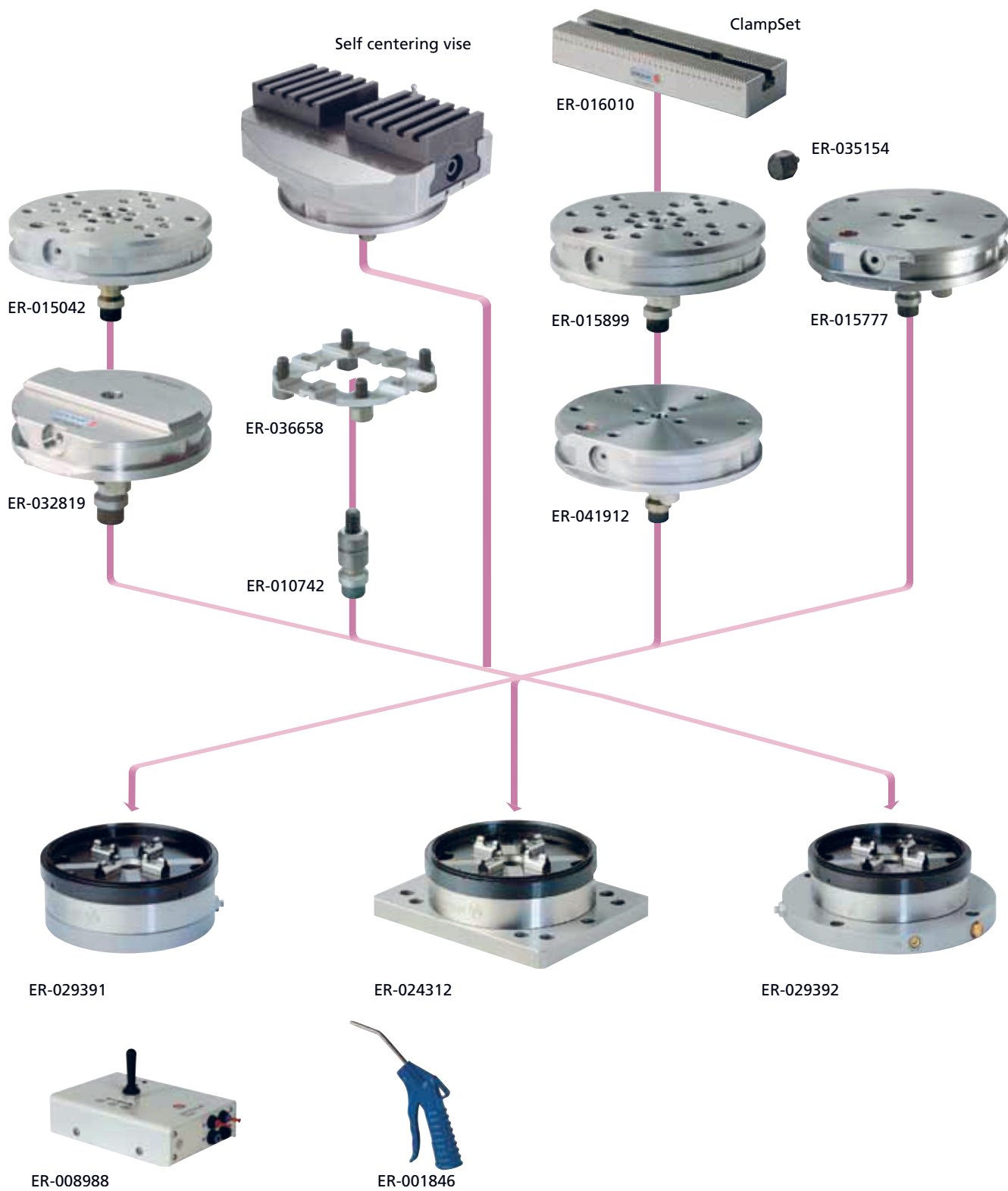
Prepare, clamp and complete the job.



EROWA PowerChuck P


















Palletizing system

The components



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 |

EROWA POWERCHUCK P PALLETIZING SYSTEM

PowerChuck P	Chucks	116
PowerChuck P	Workpiece carrier	118
PowerChuck P	Auxiliary Equipment	122



For chip-removing processes



For EDM sinking



For WEDM

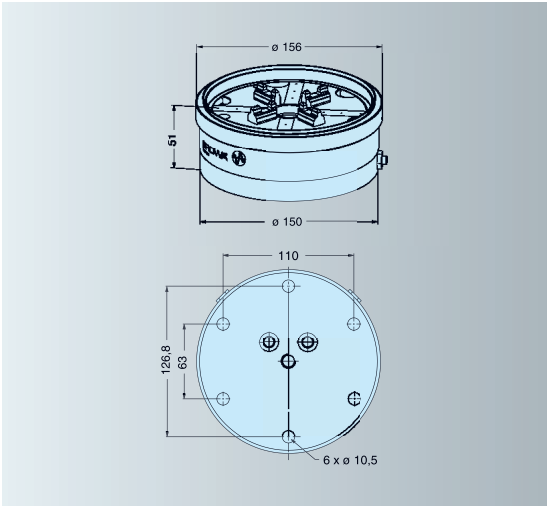
EROWA PowerChuck P Chucks

Technical data	PowerChuck P
Repeatability	0.002 mm
Pallet indexation	4 x 90°
Clamping power	10,000 N
Generated by	spring power
Opening with compressed air	min. 6 bar

ER-029391 PowerChuck P ø 150



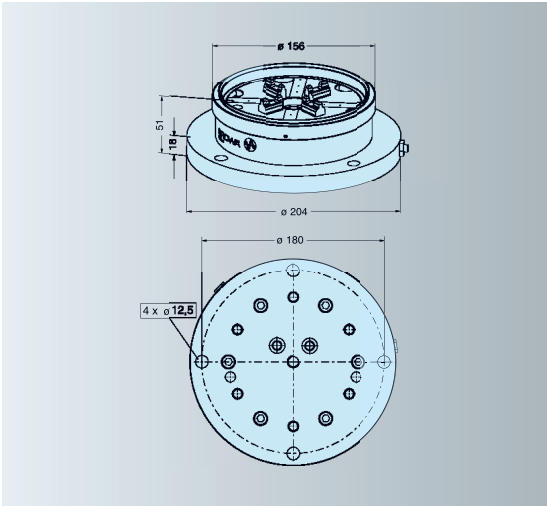
Version Extra-flat version. Height 51 mm. Base plate ø 150 mm.
Connections On the side or at the rear with two lines.
Operation With airjet, laterally. With control unit through the two
 lines on the side and at the rear.



ER-029392 PowerChuck P ø 204



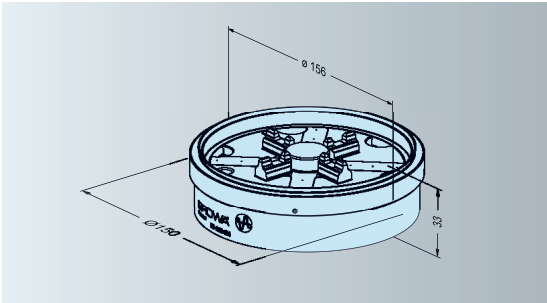
Version Extra-flat version. Height 51 mm. Base plate ø 204 mm.
Connections On the side or at the rear with two lines.
Operation With airjet, laterally. With control unit through the two
 lines on the side and at the rear.



ER-029436 PowerChuck P without base plate

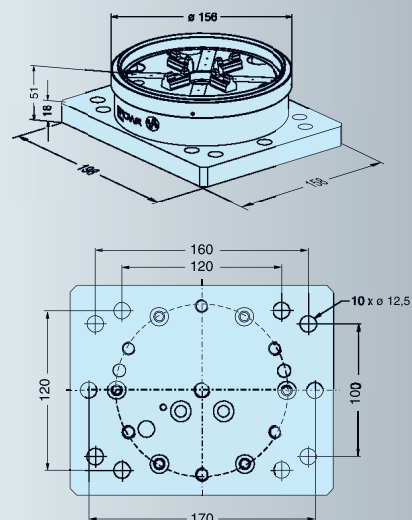


Version Extra flat version. Height 33 mm. Without base plate.
Connections At the rear according the instruction manual.
Operation Pneumatically.

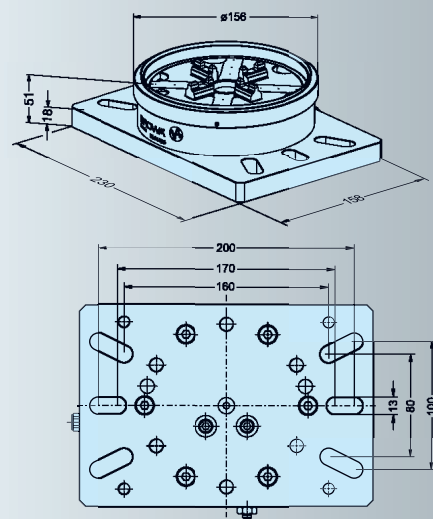


ER-024312 PowerChuck P 158 x 198

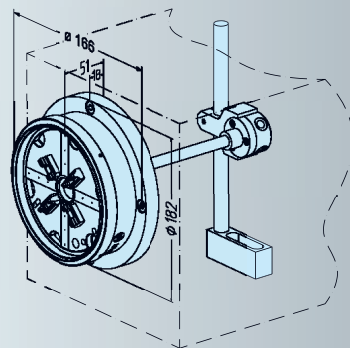
- Version Extra-flat version. Height 51 mm.
Base plate 158 mm x 198 mm.
- Connections On the side or at the rear with two lines.
- Operation With airjet, laterally. With control unit through the two lines on the side and at the rear.

**ER-044310 PowerChuck P 158 x 230**

- Version Extra-flat version. Height 51 mm.
Base plate 158 mm x 230 mm.
- Connections On the side or at the rear with two lines.
- Operation With airgun on the side. With control unit through the two lines on the side or at the rear.
- Information The borehole pattern of this plate fits 40mm and 50mm T-slot distances.

**ER-029422 PowerChuck P / R**

- Version PowerChuck P with rotatable connection, max. 50 rpm.
- Connections Two lines to the rotatable connection.
- Operation With control unit, manually and automatically.
- Application For use on dividing heads and round tables.



[illegible]

INOX	auto			
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Technical drawing of a circular component, likely a motor or actuator. The drawing shows a top view and a side view. The top view is a circle with a diameter dimensioned as $\varnothing 148$. The side view shows a cylindrical body with a flange. The flange has a thickness dimensioned as 10. The base of the component is a cylindrical foot with a diameter dimensioned as $\varnothing 40$.

INOX	auto			
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Technical drawing of the base plate of the 1000W power supply unit. The drawing shows a circular base plate with a central mounting hole of diameter 37mm and an outer diameter of 148mm. There are four mounting holes with a diameter of 8.5mm, spaced 70mm apart. The base plate has a thickness of 10mm and a total width of 82.5mm. A central screw hole is also indicated.

auto				
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The technical drawing illustrates a circular mechanical component, likely a flange or base plate, with the following specifications:

- Top View:** Shows a circular plate with a diameter of $\varnothing 148$. It features a central hole with a diameter of $\varnothing 37$ and a series of smaller holes arranged in concentric circles. The thickness of the plate is indicated as 40.
- Side View:** Shows the profile of the component, highlighting its circular shape and the central mounting feature.
- Cross-Section A-A:** Provides a detailed view of the internal structure, showing a central bore with a diameter of $\varnothing 10 F7$ and a surrounding ring with a thickness of 10. The total height of the component is 24.5.
- Dimensions:** Various radial dimensions are provided for the hole patterns, including 62.5, 50, 37.5, 25, 12.5, and 55. A specific dimension for the central hole is given as $Tk \varnothing 37$.

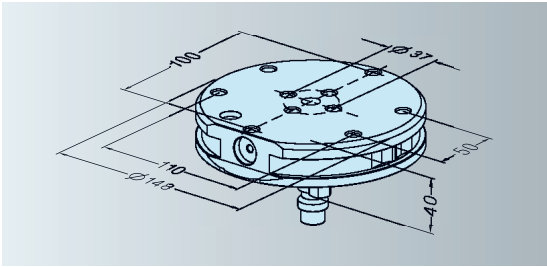
EROWA PowerChuck P

Workpiece carriers

ER-041912	Pallet P ø 148 Inox
ER-041924	Pallet Kit P ø 148 Inox 4 pieces



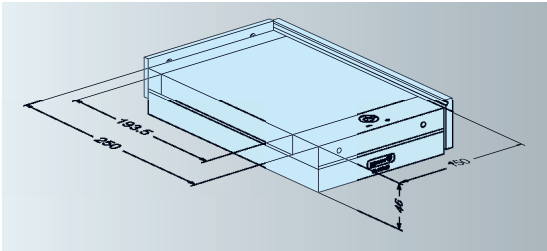
Version	Steel, corrosion-resistant. Centering integrated in the pallet.
Application	For use on all EROWA PowerChucks P and Production-Chuck 210 Combi. To accommodate workpieces and fixtures in chip-cutting machining processes.
Mounting	Through pallet with M8 bolts or through blank with M10 bolts.



ER-038189	Magnetic clamping plate Neospark 250 x 150 x 46
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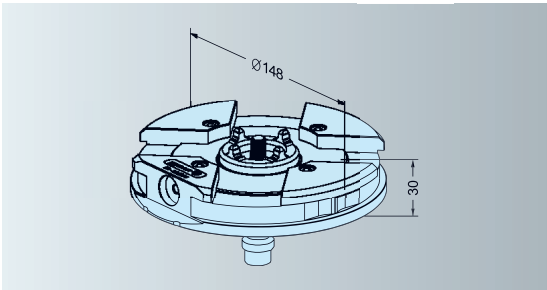
Version	Magnetic clamping plate of steel with M8 attachment boreholes for ITS Pallet ø 148.
Application	To clamp workpieces for surface and profile grinding, WEDM and high-frequency milling.



ER-022250	Adapter pallet ITS 50 / ø 148
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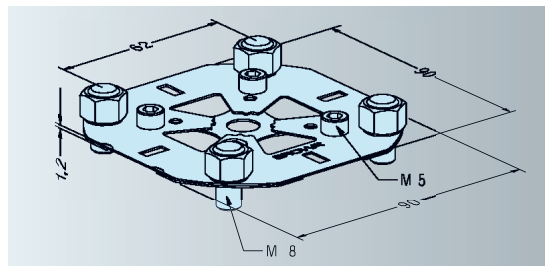
Version	ITS system size 100. Lock with central M 10 locking bolt.
Application	To accommodate ITS Electrode holders system 50. Lock with central M10 locking bolt. For automatic handling.



ER-011599 Centering plate 100 M8
10 pieces



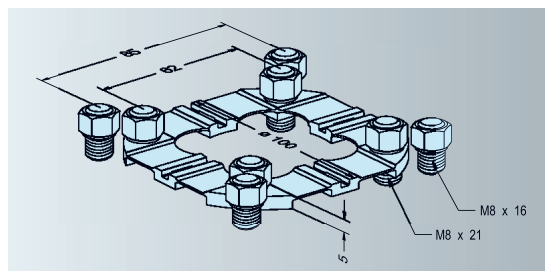
Version	Corrosion-resistant, including 4 supporting feet M8 and 4 x M5 screws per plate.
Application	Workpieces and electrodes.
Mounting	Mounted directly on of blank plane surface of blank.



ER-036658 Centering plate G Inox
5 pieces



Version	Ground including 8 supporting feet M8 per plate.
Application	For workpieces, jigs and fixtures in chip-removal machining.
Mounting	According to accompanying fitting instructions.



EROWA PowerChuck P

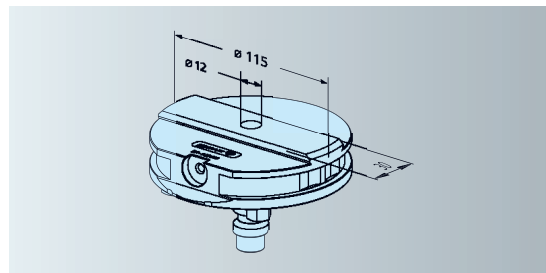
Auxiliary Equipment

ER-032819 Alignment pallet ø 115



Version Pallet ø 115 mm, alignment length 110 mm, center bore-hole ø 12 mm.

Application Alignment of radial, axial and angular position of ITS chucks, PowerChuck P and PC 210 Combi chucks.



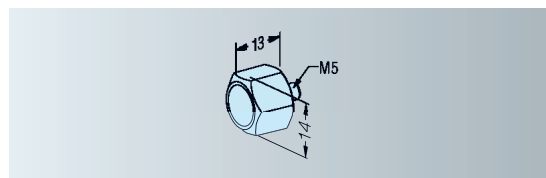
ER-035154 EWIS™ Rapid chip with chip holder SW14 with chip ø 12,4 x 2mm



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.

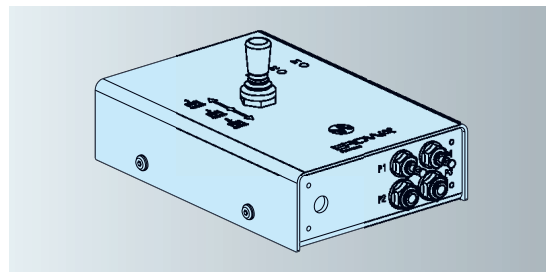


ER-008988 Manual control unit



Version Manual valve to control all the functions of ITS, ITS Compact CombiChuck, PowerChuck P and UPC: opening/reclamping/cleaning.

Application Operation of chucks on machines.



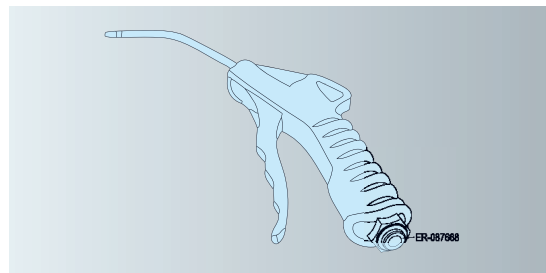
ER-001846 Air jet



Version Plastic, smooth regulation of air flow, connection 1/4", inside thread.

Application Operation of manual chucks.

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.



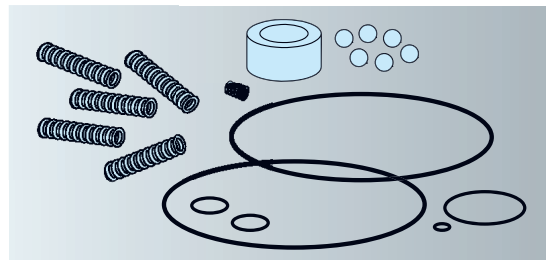
ER-015962 Repair kit PowerChuck P



Version All the wear parts of PowerChuck P.

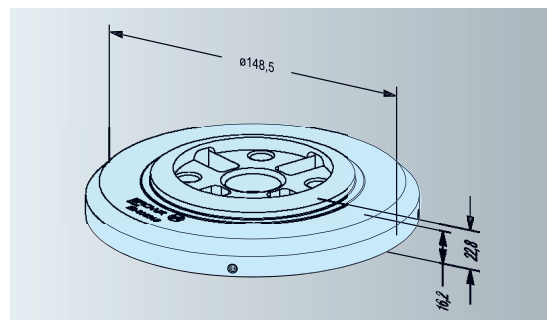
Application Dismantle chuck according to instructions supplied, replace parts.

Please note Every chuck is supplied with instructions. Please keep in a safe place.

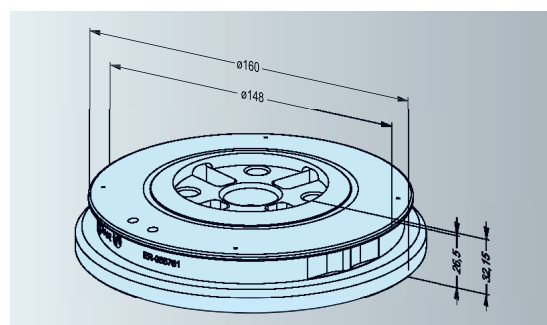


ER-035365 Sealing ring PowerChuck P ø 72

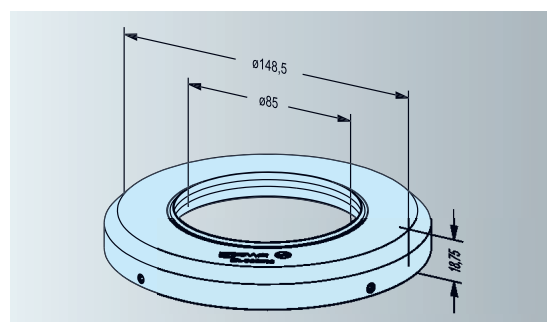
Version Aluminium anodized.
 Application Prevents penetration of chips and dirt into the PowerChuck P by application of EROWA Holders ø 72.

**ER-055761 Sealing ring for holder 72 PowerChuck P**

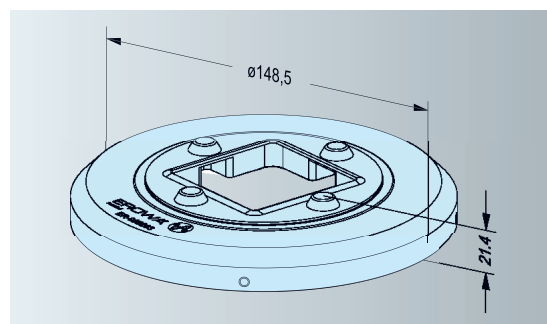
Version Rust-resistant steel
 Application Prevents penetration of chips and dirt into the PowerChuck P by application of EROWA Holders 72.

**ER-038918 Sealing ring PowerChuck P / ø 85**

Version Aluminium anodized.
 Application Prevents penetration of chips and dirt into the PowerChuck P by application of EROWA pallets PM85.

**ER-092203 Sealing ring ITS 50 C for PowerChuck P manual**

Version Aluminium anodized.
 Application Prevents penetration of chips and dirt into the PowerChuck P by application of EROWA electrode holders C.



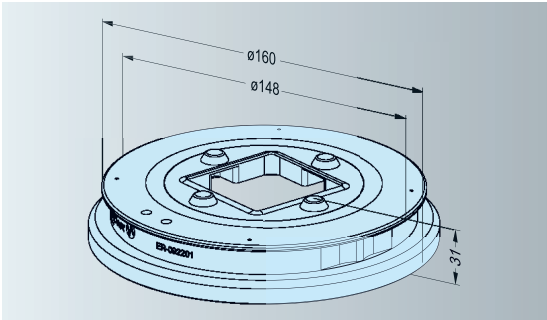
EROWA PowerChuck P

Auxiliary Equipment

ER-092201 Sealing ring ITS 50 C for PowerChuck P automatic



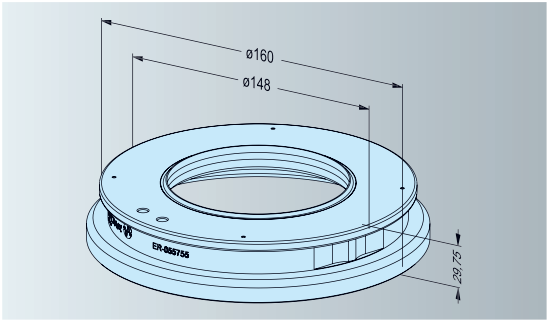
Version Rust-resistant steel
Application Prevents penetration of chips and dirt into the PowerChuck P during machining with EROWA electrode holders C.



ER-055755 Sealing ring for pallet PM85 PowerChuck P



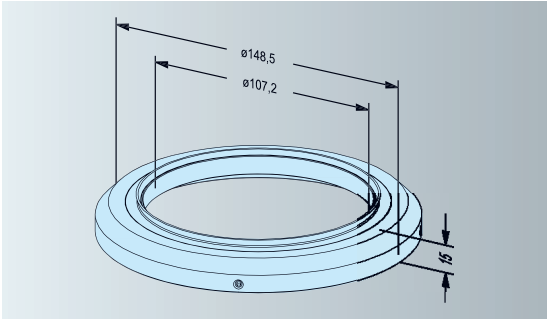
Version Rust-resistant steel.
Application Prevents penetration of chips and dirt into the PowerChuck P by application of EROWA pallets PM85.



ER-016142 Sealing ring holder ø 115



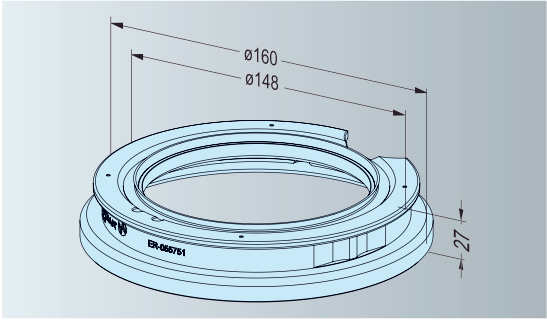
Version Aluminium anodized.
Application Prevents penetration of chips and dirt into the PowerChuck P by application of EROWA ITS pallets ø 115.



ER-055751 Sealing ring for pallet ø115 PowerChuck P

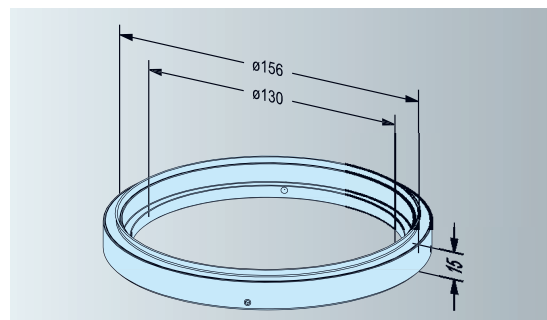


Version Rust-resistant steel.
Application Prevents penetration of chips and dirt into the PowerChuck P by application of EROWA ITS pallets ø 115.

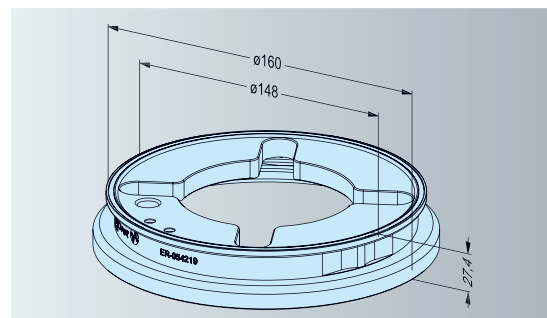


ER-016131 Sealing ring holder ø 148

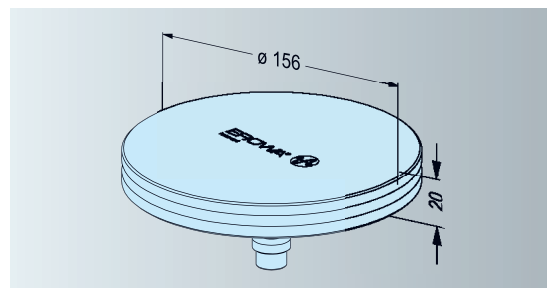
Version Steel black oxide coated.
Application Prevents penetration of chips and dirt into the PowerChuck P by application of EROWA ITS pallets ø 148.

**ER-054219 Sealing ring for pallet ø148 PowerChuck P**

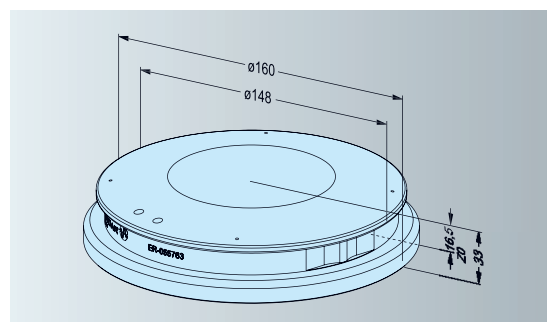
Version Rust-resistant steel.
Application Prevents penetration of chips and dirt into the PowerChuck P by application of EROWA ITS pallets ø 148.

**ER-008972 Cover for PowerChuck P**

Version Aluminum. Without centering plate and supports.
Application Protects the PowerChuck P from chips and cooling water when not in use.

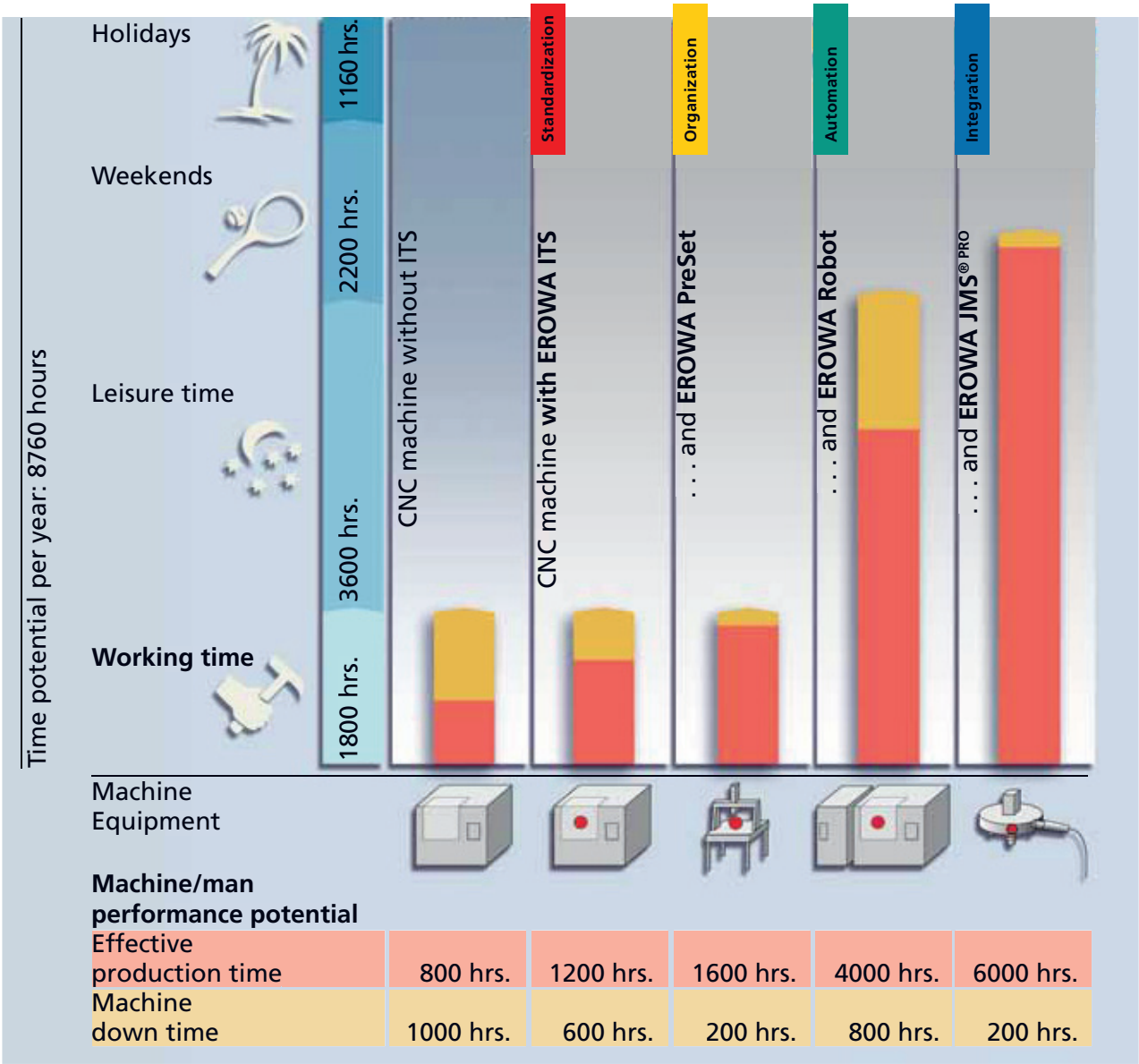
**ER-055763 Cover to PowerChuck P**

Version Rust-resistant steel.
Application Prevents penetration of chips and dirt into the PowerChuck P. For automatic handling.



Optimal use of resources

Suitable EROWA components will enable you to put your machines to optimal use. We'll gladly assist you with our many years of experience. You call - we'll come.




The next step

Important matters require planning. And your next step is certain to be such an important matter. After all, you are setting off into a new, rational age.

We will gladly accompany you on your way with advice, in daily operating procedures, so that you will know at any time what you are letting yourself in for. The nearest EROWA agency is not far away.

Take that important step.

A close-up, low-angle photograph of a calculator. The focus is on the keypad, which has a grid of dark, raised buttons. Above the keypad, a white label with black text is visible, showing the characters 'ER-0706'. The background is a plain, light color, and the lighting creates soft shadows on the calculator's surface.

ER-0706



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