EROWA

General Catalog

Unlocking the full potential of your machines

EROWA®

System solutions
from one single source

V6.00

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

1

EROWA palletizing systems

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EROWA presetting systems

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EROWA loading systems

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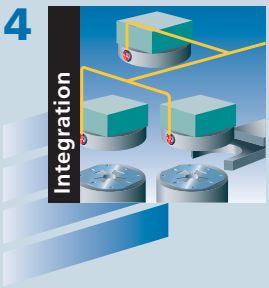
4 

EROWA data transfer systems

EMC cell control 296

EROWA JMS® Pro process control system 298

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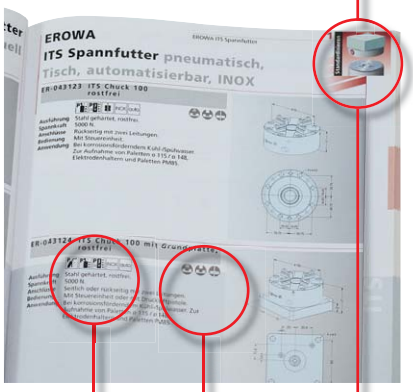
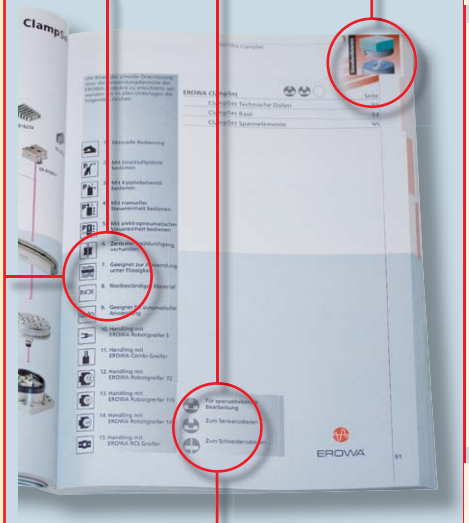
Directory of search terms 306

This is how
the General Catalog works

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:

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





Suitable for:

For chip-removing processes

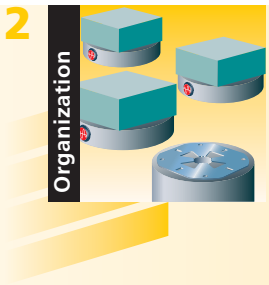
For EDM sinking

For WEDM

1

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

2

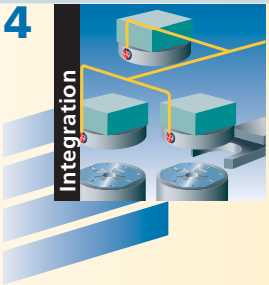


Yellow is used for **measuring and presetting stations**.

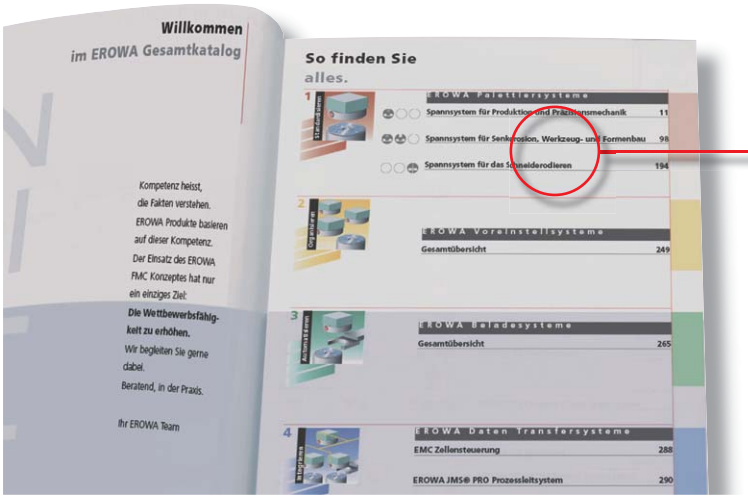
3

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

4



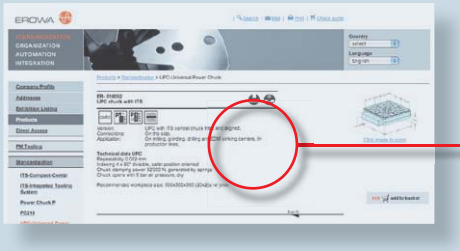
Software and **process control systems** are marked blue.



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

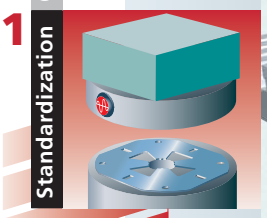
The detailed overview that precedes each product area leads you to the relevant product families such as the ITS tooling system or the WEDM tooling system.

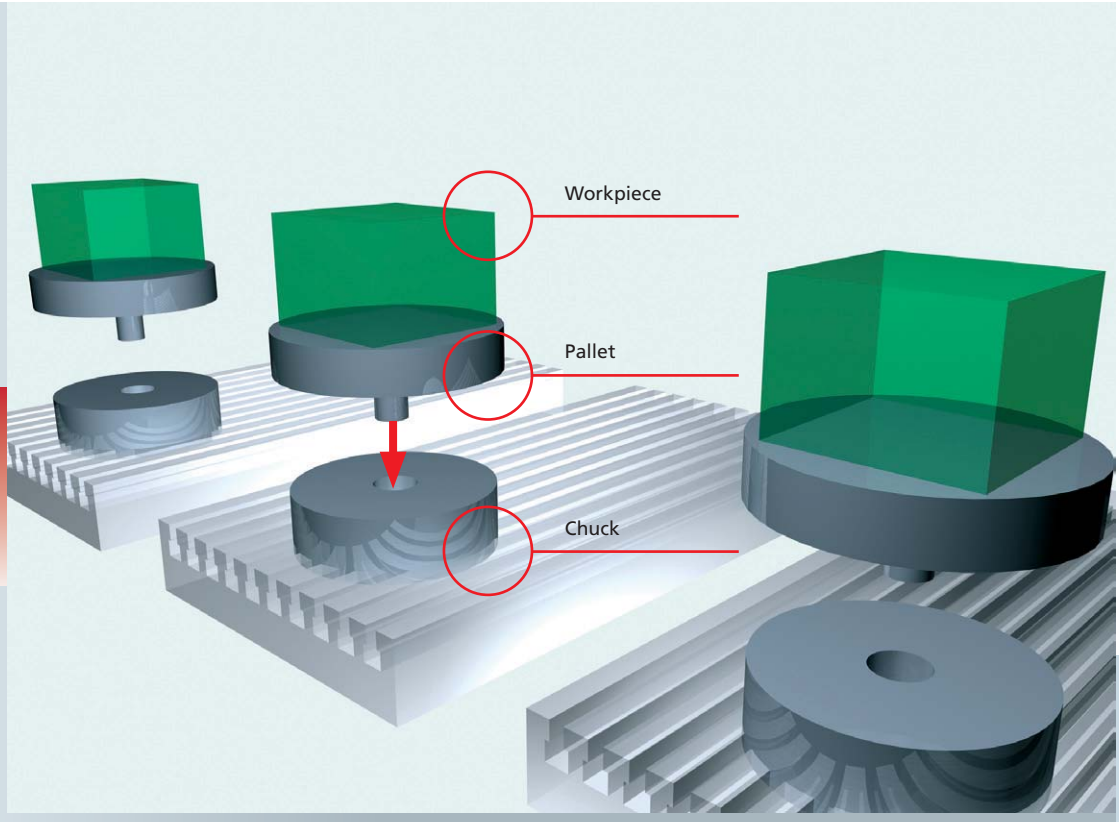
The overview tables that precede the chapters on presetting stations and handling facilities provide you with a quick overview of the properties of the various products.



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.

EROWA Palletizing systems



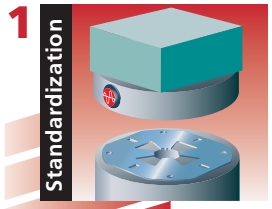


Standardization of mechanical interfaces. The integration of a universal tooling system on all machine tools will significantly reduce any downtimes.

For chip-removing processes

For EDM sinking

For WEDM



Machine dependent

EROWA MTS palletizing system

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500 x 500 x 500 mm

EROWA UPC palletizing system

Page 40 – 51

400 x 400 x 400 mm

EROWA ProductionChuck 210 tooling system

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160 x 160 x 160 mm

EROWA PowerChuck P tooling system

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200 x 200 x 200 mm

EROWA ClampSet palletizing system

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140 x 140 x 140 mm

EROWA ITS tooling system

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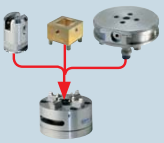
50 x 50 x 50 mm



EROWA ITS Compact Combi tooling system

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Depends on machinig power

EROWA FTS Tooling System

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EROWA ITS Accessories

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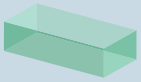
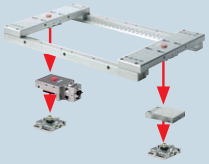


Machine dependent



EROWA Wire EDM Tooling System

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EROWA Peripheral equipment

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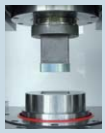
Machine dependent



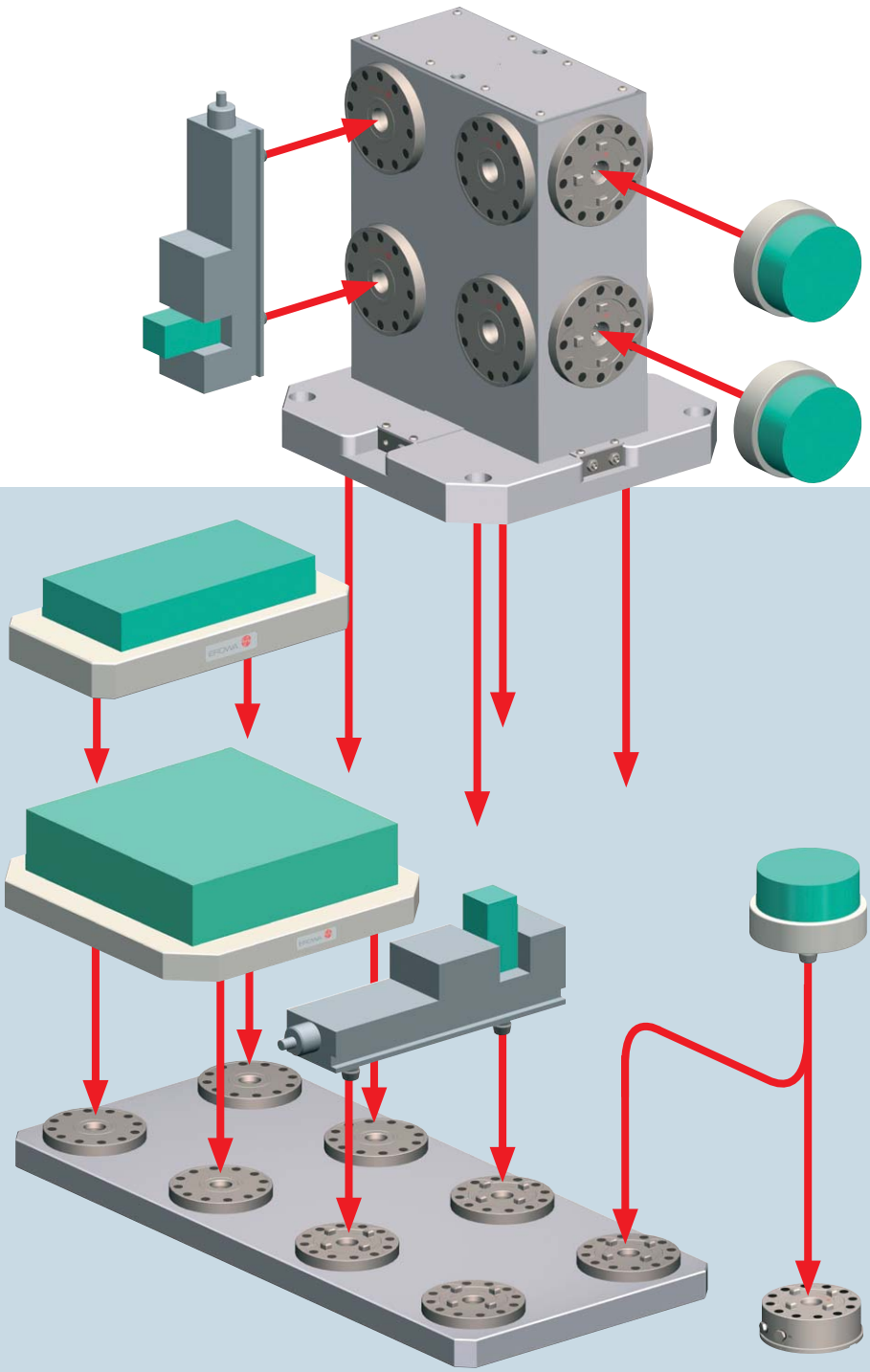
EROWA PM Tooling

Page 246 – 253

EROWA MTS

The datum point tooling system

The EROWA MTS (Modular Tooling System) is an open 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.

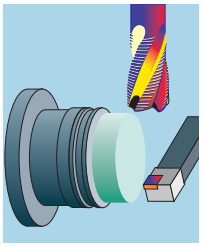
Make use of existing equipment!
Vises, gauges and fixtures are palletized or equipped with chucking spigots and put into production right away.

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.

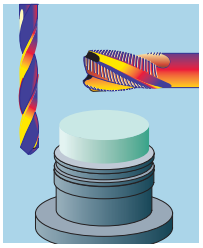
- Play-free prismatic centering in MTS single chucks.
- Indexable 4 x 90°.
- More than 500,000 clamping processes without any loss of power or reference accuracy.
- Clamping surfaces without recesses can be cleaned with compressed air.
- Low profile design.
- Suitable for automatic pallet change.
- Standardized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

*) The set-up distance is the distance between the MTS chucks on a base plate.

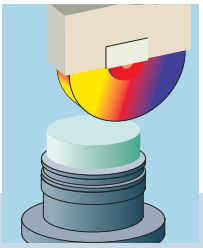
Applications



Milling/Turning

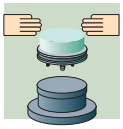


Drilling/Milling



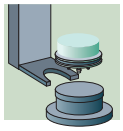
Grinding

Handling



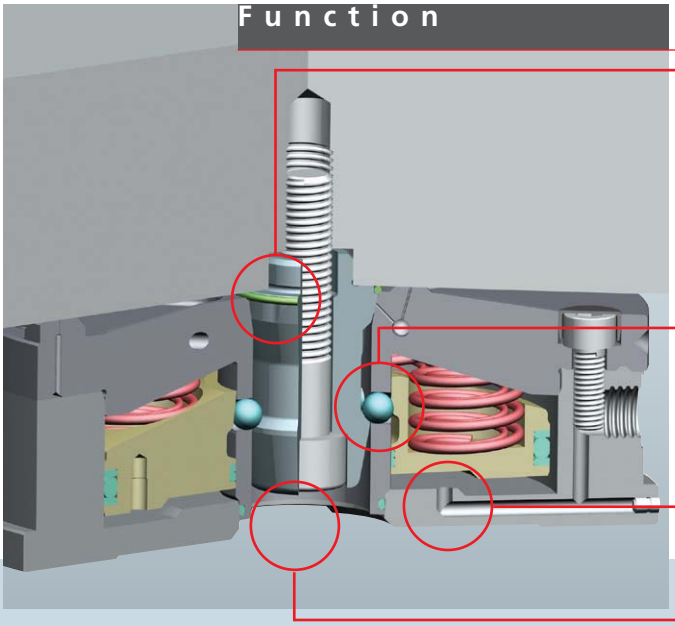
Manual

Loading facility



Robot

Function



Play-free round-cone centering.

Repeatability: <0.005 mm.

Easy insertion of the pallets without any jamming.

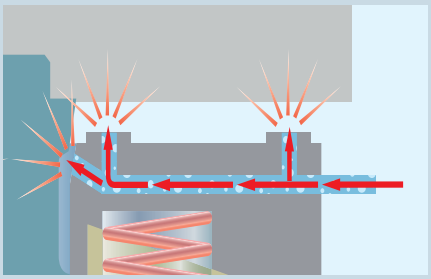
Reliable clamping mechanism through self-locking ball lock. Stable, low level of vibration.

Opened: Pneumatically or hydraulically.

Liquids can drain off. No dirt traps.

Opening, hydraulic
The hydraulic MTS chuck with 20,000 N clamping power only requires 25 bar opening pressure.

Opening, pneumatic
A mere 7 bar of opening pressure results in 12,000 N clamping power thanks to internal power boosting.



MTS chuck, able to automate. Automatic cleaning of contact surfaces and of the centering spigots cone while the workpiece is changed.

Technical data

	MTS pneumatic	MTS hydraulic
Repeatability	<0.005 mm	<0.005 mm
Activation	clamped without pressure	
Opening pressure	min. 7 bar	min. 25 /max. 35 bar
Process monitoring	pneumatically	pneumatically
Clamping power	12,000 N/Chuck	20,000 N/Chuck

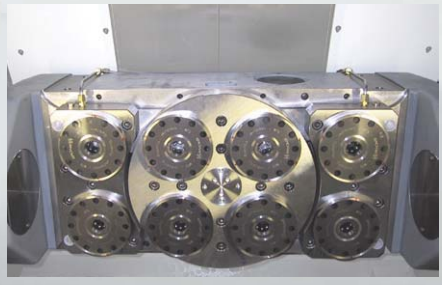
EROWA®

EROWA MTS

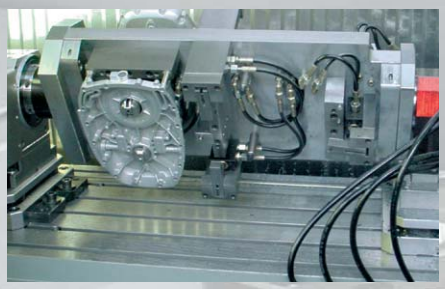
The tooling system for your manufacturing processes

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.



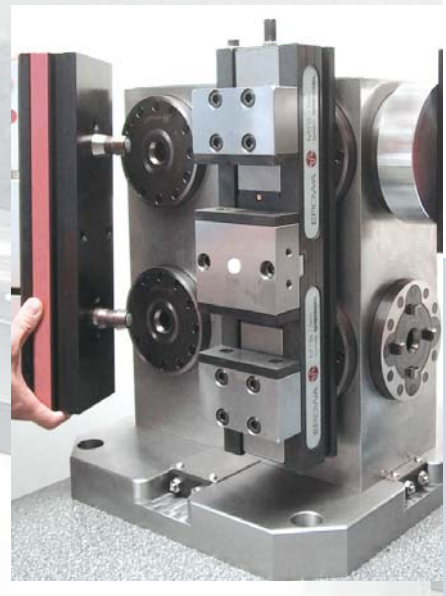
Various jobs can be done on one machine. Express jobs can easily be placed in between. Resetting the clamping equipment only takes a few seconds.

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.

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

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

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



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

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

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

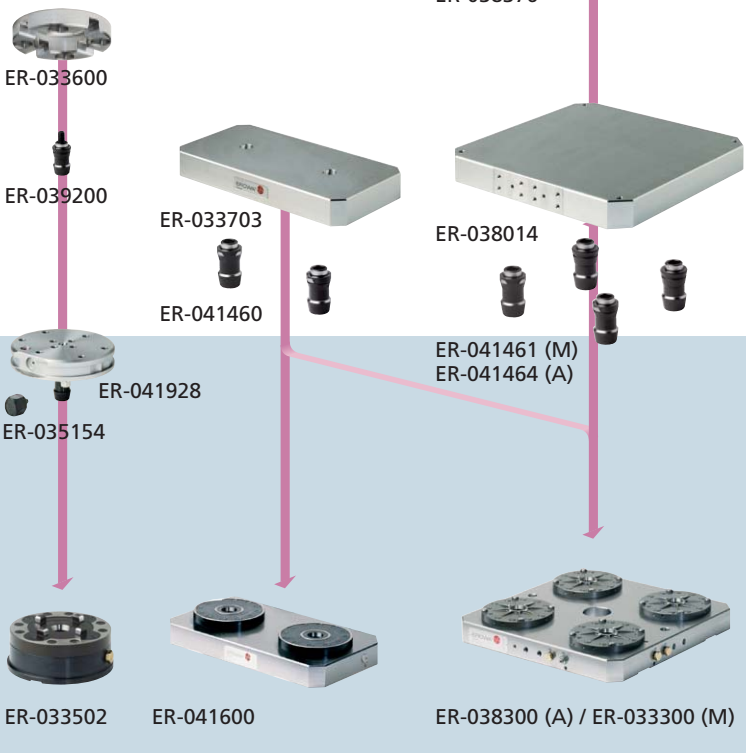
Reputable clamping equipment manufacturers offer vises with integrated EROWA MTS chucking spigots.

EROWA®

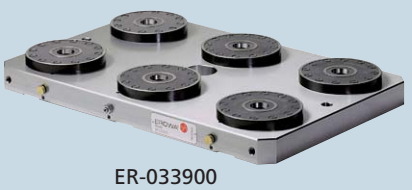
MTS

The components

set–up distance 200 mm



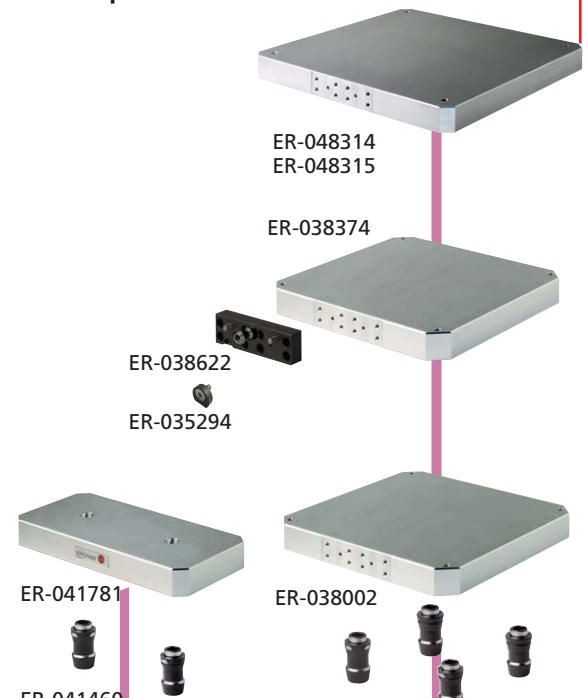
ER-033502 ER-041600 ER-038300 (A) / ER-033300 (M)



ER-033900

ER-033904

set–up distance 250 mm



ER-041602 ER-038302 (A) / ER-033302 (M)

ER-033902

ER-033906

(M) = manual
(A) = automatic

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

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

EROWA MTS palletizing system

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MTS pallets	23
MTS single pallets	25
MTS chucking spigots	26
MTS operation	28
MTS tube set	30
MTS accessories	32

For chip-removing processes

For EDM sinking

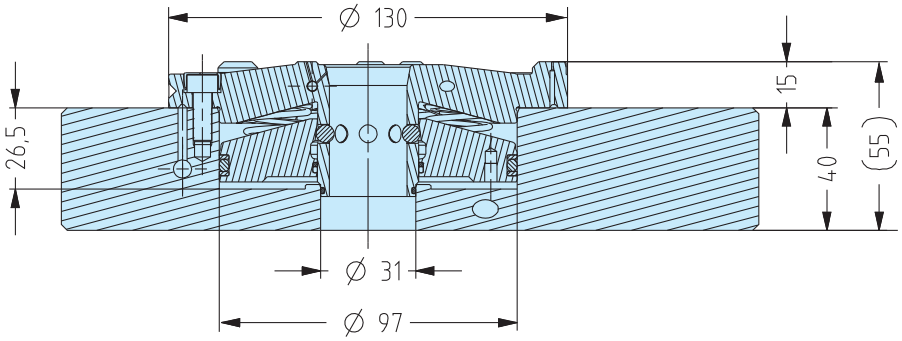
For WEDM

EROWA

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

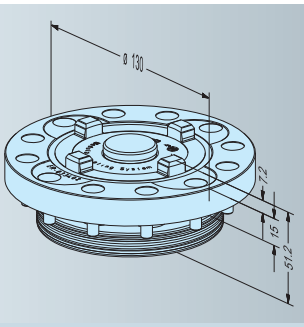
S = Single
M = Multi
A = able to automate
P = pneumatically operated
H = hydraulically operated

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

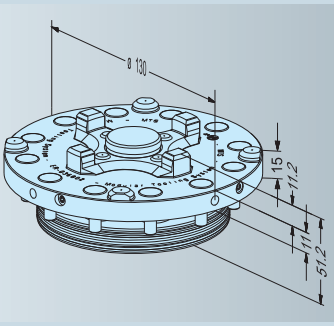
Version For direct integration in machine tables, plates, tombstones, squares or dividing heads.
Connections To open: pneumatic or hydraulic.
Application To accommodate single or multiple pallets.



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

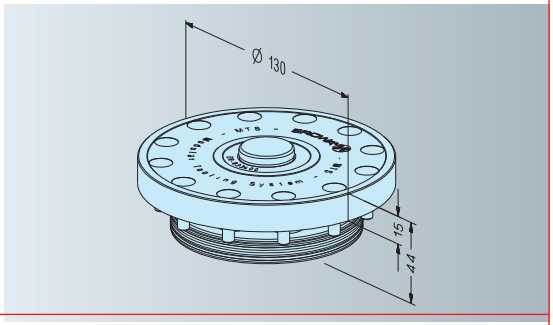
auto

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.



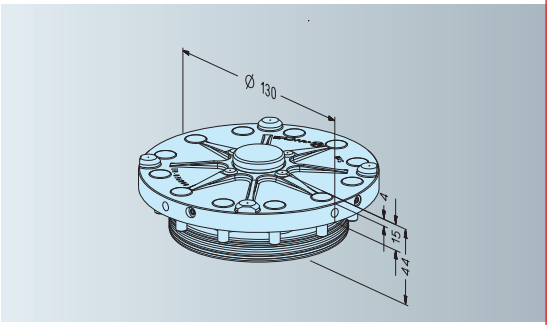
ER-033400 MTS IntegralChuck M-P
ER-033401 MTS IntegralChuck M-H

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 single pallets.



MTS

EROWA®

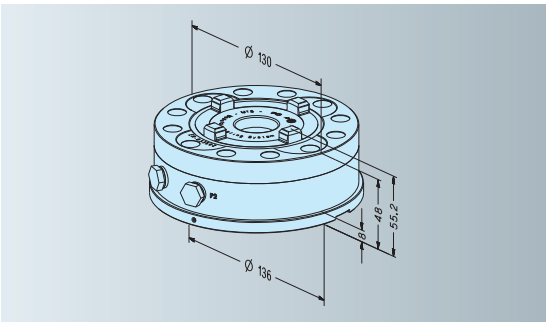
Mounted chucks

Technical data	MTS mounted chucks	
	pneumatic	hydraulic
Repeatability	<0.005 mm	<0.005 mm
Indexation, pallet	4 x 90° (MTS Chuck S)	
Clamping	Spring power	Spring power
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
A = able to automate
P = pneumatically operated
H = hydraulically operated

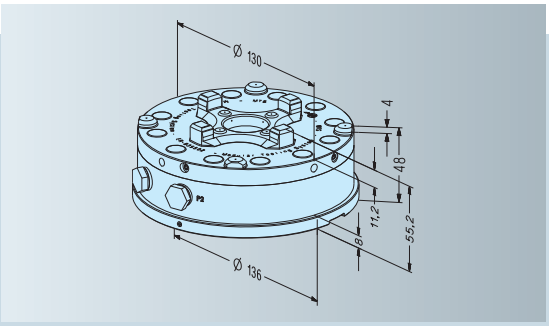
ER-033502 MTS Chuck S-P
ER-033503 MTS Chuck S-H

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



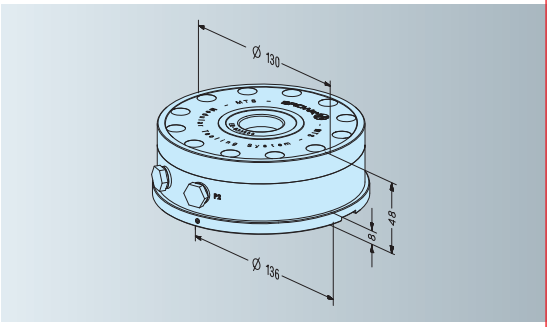
ER-035502 MTS Chuck S-P/A
ER-035503 MTS Chuck S-H/A

Version For direct mounting on machine tables, plates tombstones, squares or dividing heads.
Connections Lateral, to open: pneumatic or hydraulic.
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.



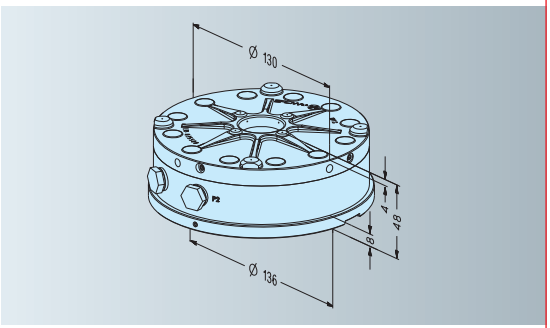
ER-033500 MTS Chuck M-P
ER-033501 MTS Chuck M-H

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



ER-035500 MTS Chuck M-P/A
ER-035501 MTS Chuck M-H/A

Version For direct mounting on machine tables, plates, tombstones, squares or dividing heads.
Connections Lateral, to open: pneumatic or hydraulic.
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.



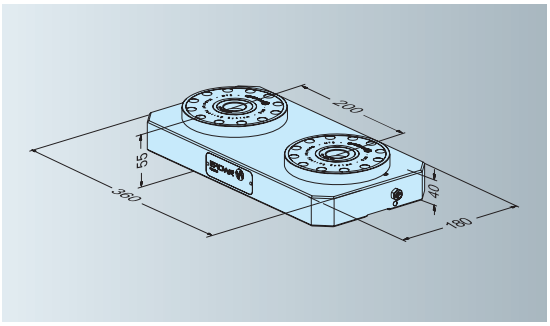
EROWA®

EROWA MTS
Base plates, 2-fold

Technical data	MTS base plates, 2-fold	
	pneumatic	hydraulic
Repeatability	<0.005 mm	<0.005 mm
Indexation, pallet	1 x 180°	1 x 180°
Clamping	Spring power	Spring power
Opening pressure	min. 7 bar	min. 25 /max. 35 bar
Process monitoring	pneumatic	pneumatic
Clamping power	24,000 N (2 x 12,000 N)	40,000 N (2 x 20,000 N)

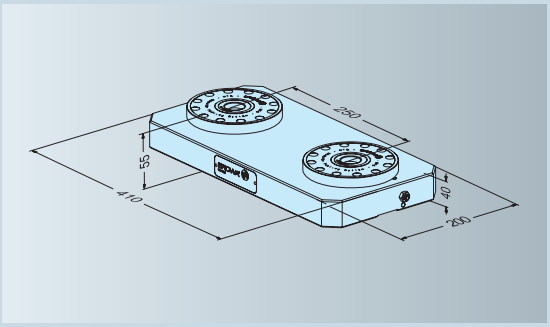
P = pneumatically operated
H = hydraulically operated

ER-041600 MTS base plate 180 x 360 P
ER-041601 MTS base plate 180 x 360 H



Version Base plate, steel, unhardened; set-up distance 200 mm.
Connections Lateral, to open: pneumatic or hydraulic.
Application To accommodate double pallets. For direct assembly on machine tables.
Accessories supplied for ER-041600: 1 x ER-036672,
for ER-041601: 1 x ER-033504.
Note Attachment boreholes can be drilled by customers.
Caution Do not drill through any air or oil ducts! Please order operating instructions from your EROWA dealer.

ER-041602 MTS base plate 200 x 410 P
ER-041603 MTS base plate 200 x 410 H



Version Base plate, steel, unhardened; set-up distance 250 mm.
Connections Lateral, to open: pneumatic or hydraulic.
Application To accommodate double pallets. For direct assembly on machine tables.
Accessories supplied for ER-041602: 1 x ER-036672,
for ER-041603: 1 x ER-033504.
Note Attachment boreholes can be drilled by customers.
Caution Do not drill through any air or oil ducts! Please order operating instructions from your EROWA dealer.

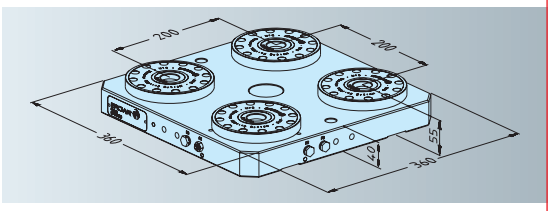
EROWA MTS

Base plates, 4-fold

Technical data	MTS base plates, 4-fold	
	pneumatic	hydraulic
Repeatability	<0.005 mm	<0.005 mm
Indexation, pallet	4 x 90°	4 x 90°
Clamping	Spring power	Spring power
Opening pressure	min. 7 bar	min. 25 /max. 35 bar
Process monitoring	pneumatic	pneumatic
Clamping power	48,000 N (4 x 12,000 N)	80,000 N (4 x 20,000 N)

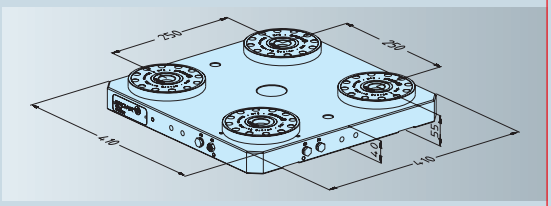
P = pneumatically operated
H = hydraulically operated

ER-033300 MTS base plate 360 x 360 P
ER-033301 MTS base plate 360 x 360 H



Version Base plate, steel, unhardened; set-up distance 200 mm.
Connections Lateral, to open: pneumatic or hydraulic.
Application To accommodate multiple pallets. For direct assembly on machine tables.
Accessories supplied for ER-033300: 1 x ER-036672,
for ER-033301: 1 x ER-033504.
Note Attachment boreholes can be drilled by customers.
Caution Do not drill through any air or oil ducts! Please order operating instructions from your EROWA dealer.

ER-033302 MTS base plate 410 x 410 P
ER-033303 MTS base plate 410 x 410 H



Version Base plate, steel, unhardened; set-up distance 250 mm.
Connections Lateral, to open: pneumatic or hydraulic.
Application To accommodate multiple pallets. For direct assembly on machine tables.
Accessories supplied for ER-033302: 1 x ER-036672,
for ER-033303: 1 x ER-033504.
Note Attachment boreholes can be drilled by customers.
Caution Do not drill through any air or oil ducts! Please order operating instructions from your EROWA dealer.

EROWA®

EROWA MTS

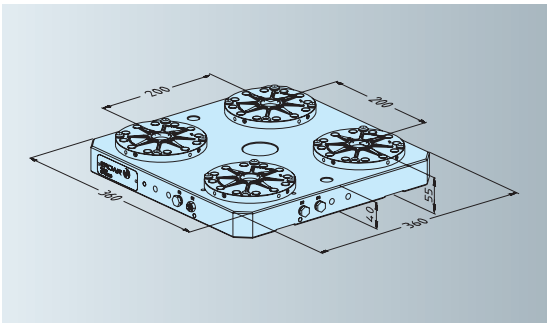
Base plates, 4-fold, with cleaning, able to automate

Technical data	MTS base plates, 4-fold with cleaning, able to automate	
	pneumatic	hydraulic
Repeatability	<0.005 mm	<0.005 mm
Clamping	Spring power	Spring power
Opening pressure	min. 7 bar	min. 25 /max. 35 bar
Process monitoring	pneumatic	pneumatic
Clamping power	48,000 N (4 x 12,000 N)	80,000 N (4 x 20,000 N)

P = pneumatically operated
H = hydraulically operated
A = able to automate

ER-038300 MTS base plate 360 x 360 P/A
ER-038301 MTS base plate 360 x 360 H/A

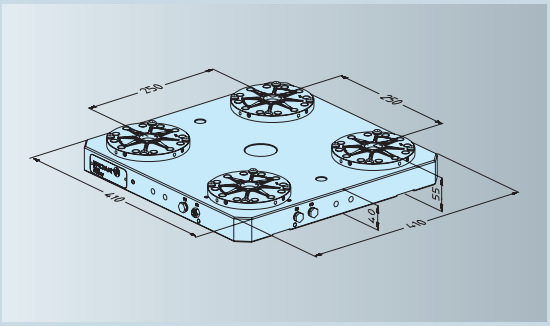
auto



Version Base plate, steel, unhardened; set-up distance 200 mm.
Connections Lateral, to open: pneumatic or hydraulic. 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, for ER-038301: 1 x ER-033504, 1 x ER-014326.
Note Attachment boreholes can be drilled by customers.
Caution Do not drill through any air or oil ducts! Please order operating instructions from your EROWA dealer.

ER-038302 MTS base plate 410 x 410 P/A
ER-038303 MTS base plate 410 x 410 H/A

auto



Version Base plate, steel, unhardened; set-up distance 250 mm.
Connections Lateral, to open: pneumatic or hydraulic. 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, for ER-038303: 1 x ER-033504, 1 x ER-014326.
Note Attachment boreholes can be drilled by customers.
Caution Do not drill through any air or oil ducts! Please order operating instructions from your EROWA dealer.

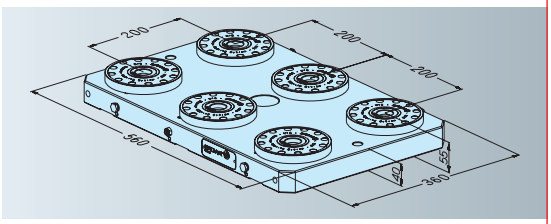
EROWA MTS

Base plates, 6-fold

Technical data	MTS base plates, 6-fold	
	pneumatic	hydraulic
Repeatability	<0.005 mm	<0.005 mm
Clamping	Spring power	Spring power
Opening pressure	min. 7 bar	min. 25 /max. 35 bar
Process monitoring	pneumatic	pneumatic
Clamping power	72,000 N (6 x 12,000 N)	120,000 N (6 x 20,000 N)

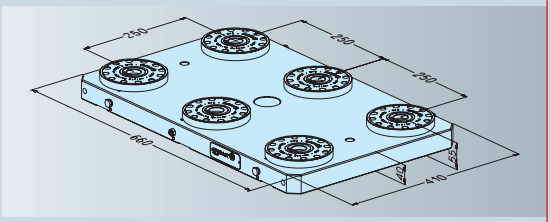
P = pneumatically operated
H = hydraulically operated

ER-033900 MTS base plate 360 x 560 P
ER-033901 MTS base plate 360 x 560 H



Version Base plate, steel, unhardened; set-up distance 200 mm.
Connections Lateral, to open: pneumatic or hydraulic.
Application To accommodate multiple pallets. For direct assembly on machine tables.
Accessories supplied for ER-033900: 1 x ER-036672,
for ER-033901: 1 x ER-033504.
Note Attachment boreholes can be drilled by customers.
Caution Do not drill through any air or oil ducts! Please order operating instructions from your EROWA dealer.

ER-033902 MTS base plate 410 x 660 P
ER-033903 MTS base plate 410 x 660 H



Version Base plate, steel, unhardened; set-up distance 250 mm.
Connections Lateral, to open: pneumatic or hydraulic.
Application To accommodate multiple pallets. For direct assembly on machine tables.
Accessories supplied for ER-033902: 1 x ER-036672,
for ER-033903: 1 x ER-033504.
Note Attachment boreholes can be drilled by customers.
Caution Do not drill through any air or oil ducts! Please order operating instructions from your EROWA dealer.

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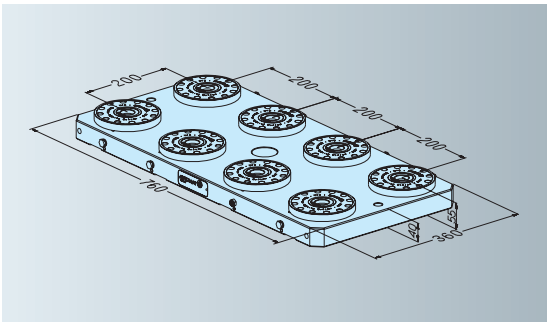
EROWA MTS

Base plates, 8-fold

Technical data	MTS base plates, 8-fold	
	pneumatic	hydraulic
Repeatability	<0.005 mm	<0.005 mm
Clamping	Spring power	Spring power
Opening pressure	min. 7 bar	min. 25 /max. 35 bar
Process monitoring	pneumatic	pneumatic
Clamping power	96,000 N (8 x 12,000 N)	160,000 N (8 x 20,000 N)

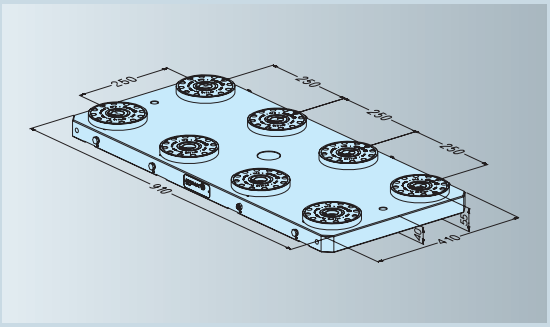
P = pneumatically operated
H = hydraulically operated

ER-033904 MTS base plate 360 x 760 P
ER-033905 MTS base plate 360 x 760 H



Version Base plate, steel, unhardened; set-up distance 200 mm.
Connections Lateral, to open: pneumatic or hydraulic.
Application To accommodate multiple pallets. For direct assembly on machine tables.
Accessories supplied for ER-033904: 1 x ER-036672,
for ER-033905: 1 x ER-033504.
Note Attachment boreholes can be drilled by customers.
Caution Do not drill through any air or oil ducts! Please order operating instructions from your EROWA dealer.

ER-033906 MTS base plate 410 x 910 P
ER-033907 MTS base plate 410 x 910 H

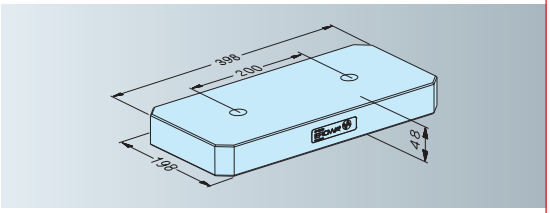


Version Base plate, steel, unhardened; set-up distance 250 mm.
Connections Lateral, to open: pneumatic or hydraulic.
Application To accommodate multiple pallets. For direct assembly on machine tables.
Accessories supplied for ER-033906: 1 x ER-036672,
for ER-033907: 1 x ER-033504.
Note Attachment boreholes can be drilled by customers.
Caution Do not drill through any air or oil ducts! Please order operating instructions from your EROWA dealer.

EROWA MTS
Pallets

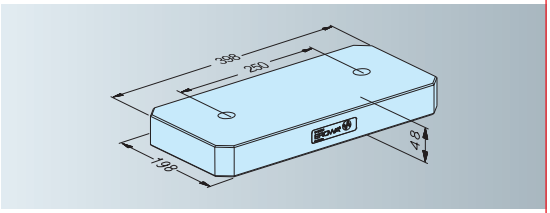
ER-033703 MTS pallet 198 x 398 / 200

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.



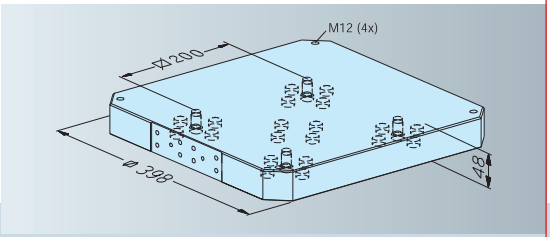
ER-041781 MTS pallet 198 x 398 / 250

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.



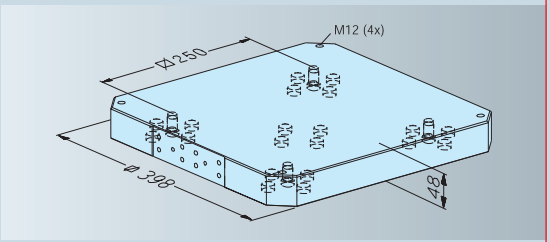
ER-038014 MTS pallet 398 x 398 / 200

Version Cast 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.



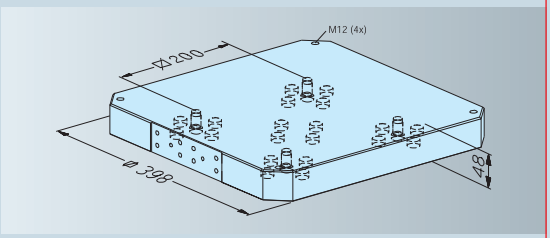
ER-038002 MTS pallet 398 x 398 / 250

Version Cast 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.



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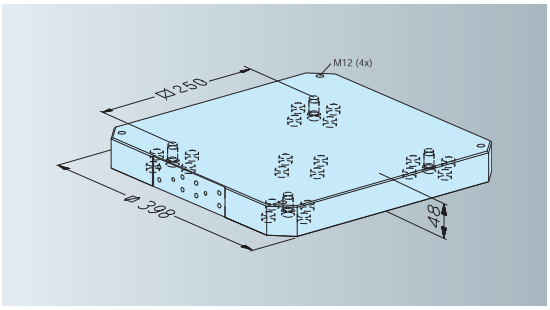
ER-038374 MTS pallet 398 x 398 / 250 Hard Z support

auto

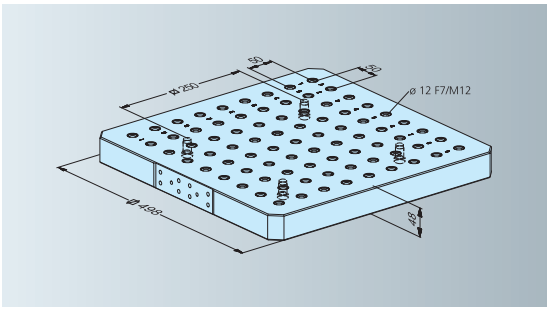
Version Aluminum pallet, 4–fold, excluding chucking spigot (MTS chucking spigot set ER–041461 (M) / ER-041464 (A).
Application To clamp workpieces, vises and gauges.
Accessories ER–041461 (M) / ER-041464 (A) to be ordered separately.



ER-044906 MTS Pallet 498 x 498/250 R50

auto

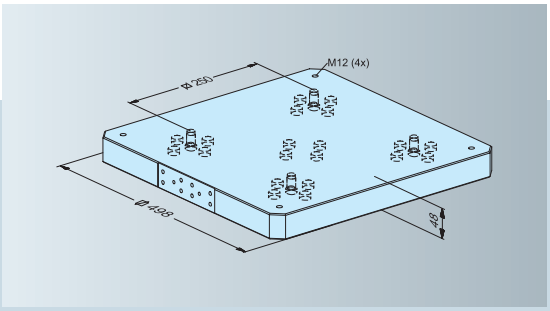
Version Cast aluminum pallet (hard anodized), 4–fold, excluding chucking spigot (MTS chucking spigot set ER–041461 (M) / ER-041464 (A).
Application To clamp workpieces, vises and gauges.
Accessories ER–041461 (M) / ER-041464 (A) to be ordered separately.



ER-048314 MTS Pallet 498 x 498 / 250

auto

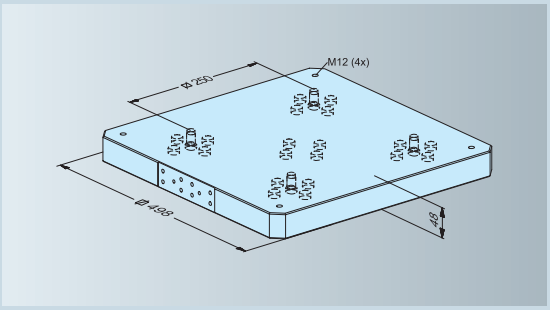
Version Cast aluminum pallet, 4–fold, excluding chucking spigot (MTS chucking spigot set ER–041461 (M) / ER-041464 (A).
Application To clamp workpieces, vises and gauges.
Accessories ER–041461 (M) / ER-041464 (A) to be ordered separately.



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

auto

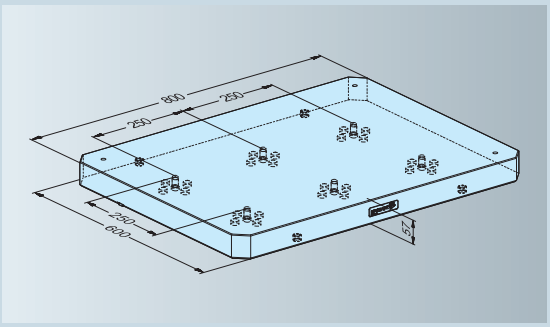
Version Cast aluminum pallet, 4–fold, excluding chucking spigot (MTS chucking spigot set ER–041461 (M) / ER-041464 (A).
Application To clamp workpieces, vises and gauges.
Accessories ER–041461 (M) / ER-041464 (A) to be ordered separately.



ER-054981 MTS pallet 600 x 800 x 57 / 250 Hard Z support

auto

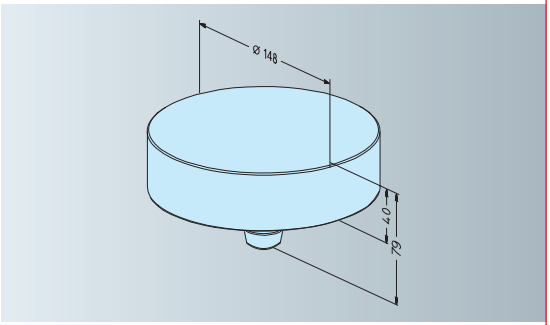
Version Cast aluminum pallet, 6–fold, excluding chucking spigot (MTS chucking spigot set ER–054710(A), ER-041432 (M).
Application To clamp workpieces, vises and gauges, for chip-cutting operations
Accessories To be ordered separately ER–054710(A), ER-041432 (M).



EROWA MTS
Single pallets

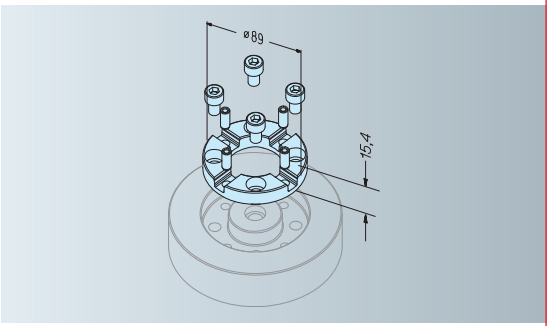
ER-033602 MTS pallet P ø 148 Alu

Version Aluminum pallet, fitted with centering plate ER-033600, including chucking spigot ER-039200.
Application To clamp workpieces and gauges. For manual handling.



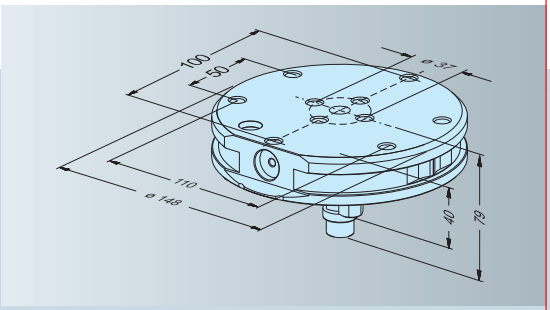
ER-033600 MTS centering plate P

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.



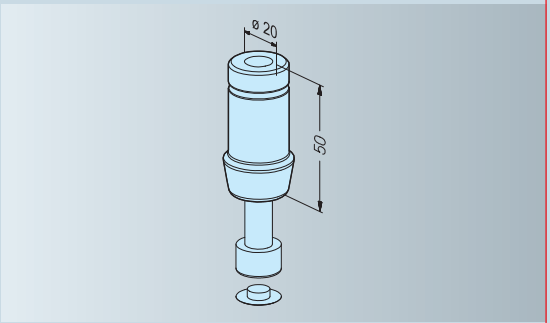
ER-041928 MTS pallet P ø 148 Inox

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.

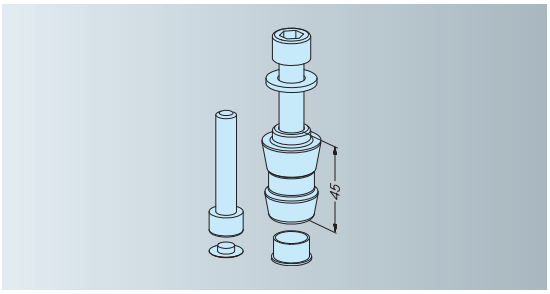


EROWA®

Chucking spigots

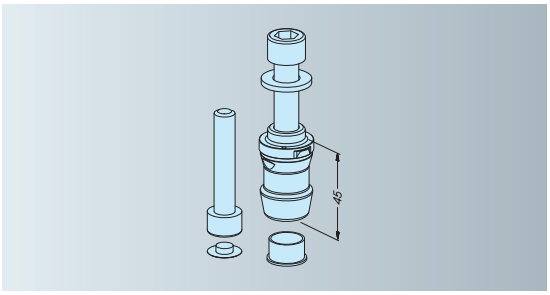
ER-033800 MTS centering spigot

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



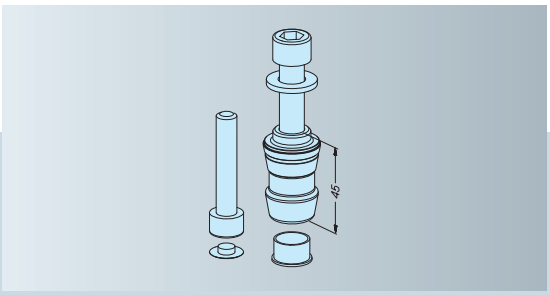
ER-039201 MTS compensation spigot / A

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



ER-039200 MTS chucking spigot / A

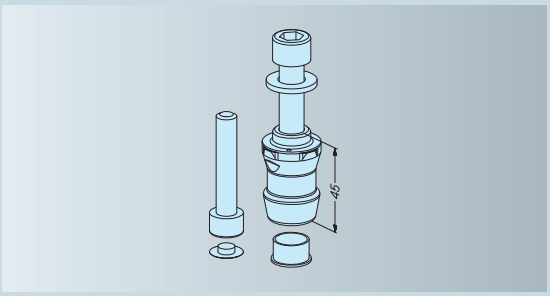
Version One chucking spigot without centering (centering play 0.1mm), including attachment bolts (M10x50, M12x55), U–disc and protective caps.



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.

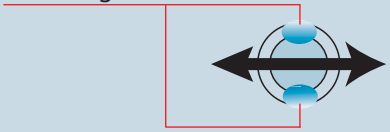


ER–033800 MTS centering spigot
ER–038000 MTS centering spigot / A
The **centering spigot** defines the datum point (free of play).

ER–039200 MTS chucking spigot / A
(centering play 0.1 mm).

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.

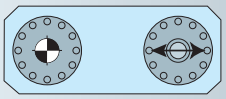
Centering surfaces



EROWA MTS
Chucking spigot set

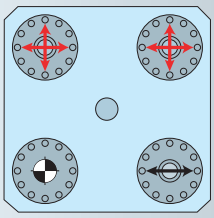
ER-041460 MTS chucking spigot set 2

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



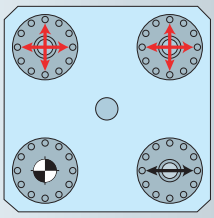
ER-041461 MTS chucking spigot set 4

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.



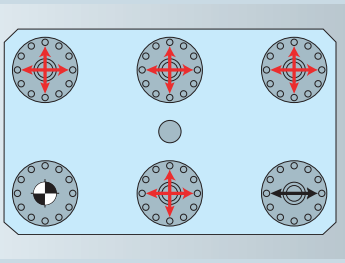
ER-041464 MTS chucking spigot set 4 / A

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.



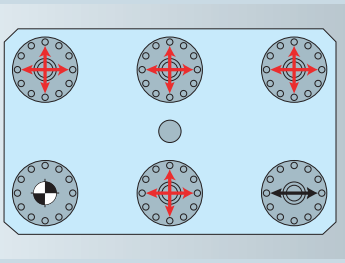
ER-041462 MTS chucking spigot set 6

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



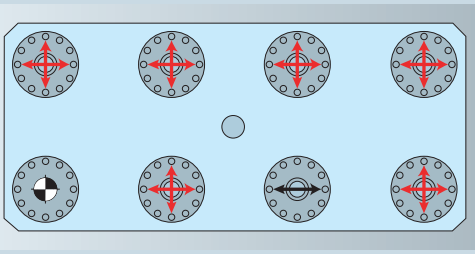
ER-054710 MTS Chucking spigot set 6/A

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

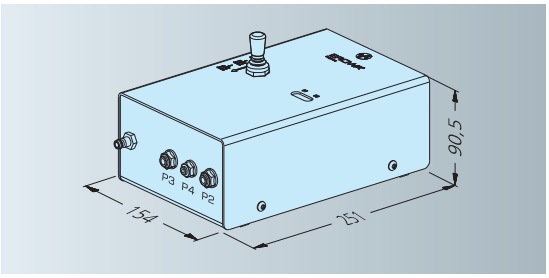


ER-041463 MTS chucking spigot set 8

Version 1 centering spigot, 1 compensation spigot / A, 6 chucking spigots / A.
Mounting With the bolts supplied through the pallet or through the chucking spigot.

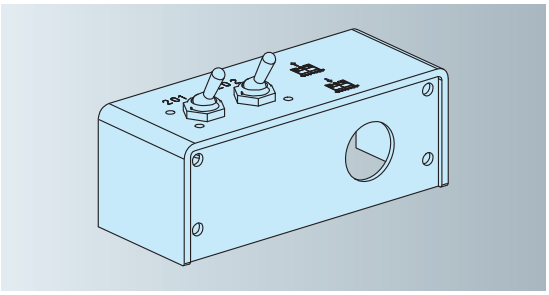


ER-025893 Manual control unit with booster



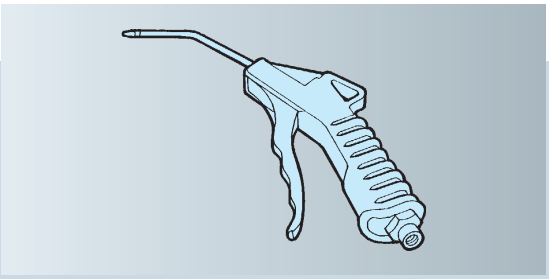
Version	Manual valve to control the EROWA chucks: Opening/Reclamping/Cleaning.
Application	Operation of: EROWA ITS Compact Combi Chuck, ITS, UPC, MTS, PC 210 chucks and PowerChuck P.
Note	Integrated booster with load ratio 1:2 (up to output pressure of 10 bar max.).

ER-039466 Additional valve double



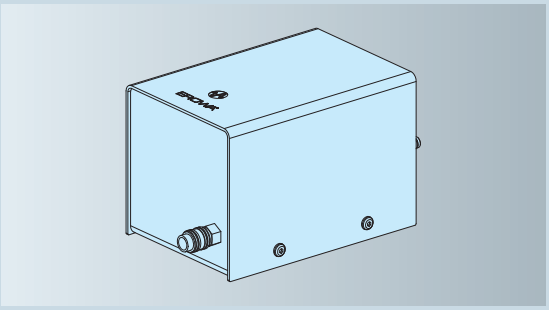
Version	For mounting to the manual control units ER-008988 and ER-025893, incl. set of hoses.
Application	Operating of two separate chucks with one single control unit.

ER-001846 Air jet



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

ER-010520 Pressure booster



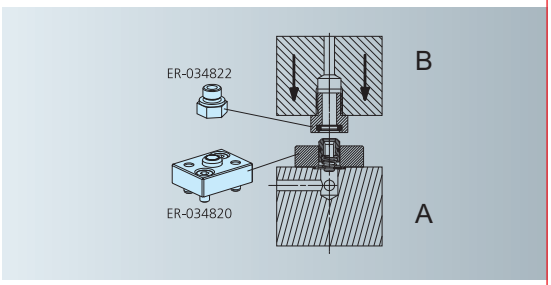
Version	Quick-connect couplings for hose ø i = 8 mm. Output pressure: 8 bar. Compression ratio: 1:2
Application	On insufficient system pressure and on pressure fluctuations.
Installation	Integrate in air circuit near application.

ER-033497 Pneumatic/hydraulic pump

Version Manual pump to control the EROWA MTS chucks (hydraulic versions).

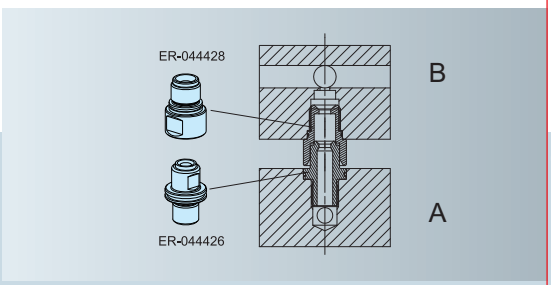
Note Integrated pressure reducing valve, set to the necessary operating pressure (25 bar). Complete with hydraulic tube (2 m) and plug coupling (ER-033499).

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



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).

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

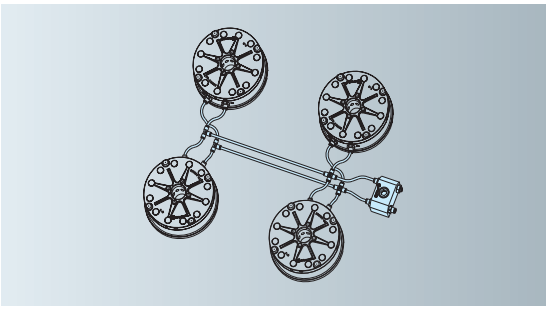


Application The coupling for MTS pallets ER-044428, in combination with the nipple for MTS base plates ER-044426, serves as an interface for the medium connection between MTS base plates (A) and MTS pallets (B).

For use
with oil up to 250 bar
with compressed air
with vacuum

EROWA®

ER-034361 Tube set for MTS chuck 2/4-P

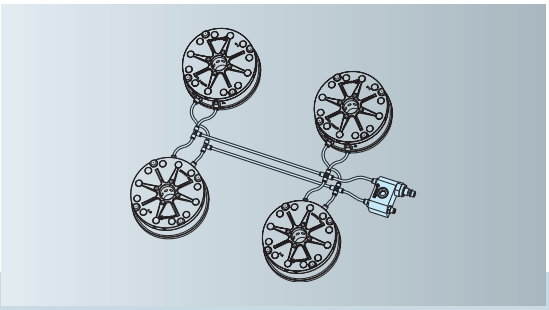


Application All the necessary fittings for the pneumatic control of 2 or 4 MTS chucks. Max. operating pressure: 9 bar.

Version
2 T-Plugs
2 Cross plug connectors
3 Straight threaded connectors
1 Connector block
8 m Tube ø 6/4 black
8 m PMAFLEX corrugated pipe 1 Valve, complete (for air jet ER-001846).

Mounting According to instruction manual supplied.

ER-034359 Tube set for MTS chuck 2/4-H

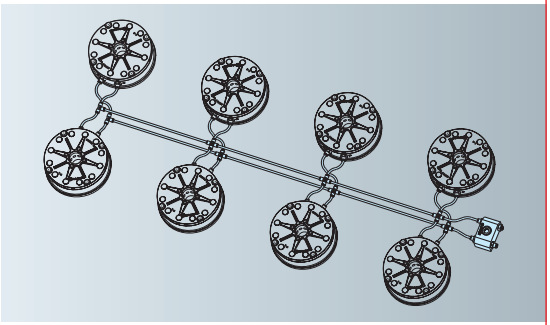


Application All the necessary fittings for the hydraulic control of 2 or 4 MTS chucks. Max. operating pressure: 40 bar.

Version
2 Threaded T-connectors
2 Threaded cross connectors
3 Straight threaded connectors
24 Support sleeves
1 Connector block
8 m Tube ø 4/2 yellow PA
8 m PMAFLEX corrugated pipe 1 Nipple 1/8“ (for pneumatic/hydraulic booster ER–033497)

Mounting According to instruction manual supplied.

ER-034362 Tube set for MTS chuck 6/8-P

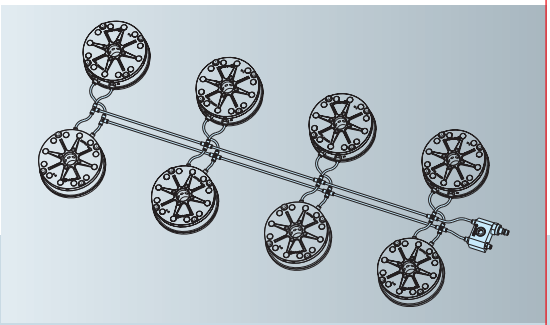


Application All the necessary fittings for the pneumatic control of 6 or 8 MTS chucks. Max. operating pressure: 9 bar.

Version
2 T-plugs
6 Cross plug connectors
3 Straight threaded connectors
1 Connector block
12 m Tube ø 6/4 black
12 m Corrugated pipe
1 Valve, complete (for air jet ER-001846).

Mounting According to instruction manual supplied.

ER-034360 Tube set for MTS chuck 6/8-H

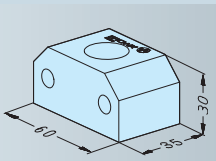


Application All the necessary fittings for the hydraulic control of 6 or 8 MTS chucks. Max. operating pressure: 40 bar.

Version
2 Threaded T-connectors
2 Threaded cross connectors
3 Straight threaded connectors
48 Support sleeves
1 Connector block
12 m Tube ø 4/2 yellow PA
12 m PMAFLEX corrugated pipe
1 Nipple 1/8" (for pneumatic/hydraulic booster ER–033497)

Mounting According to instructon manual supplied.

ER-034168 MTS Connector block 1/8" double

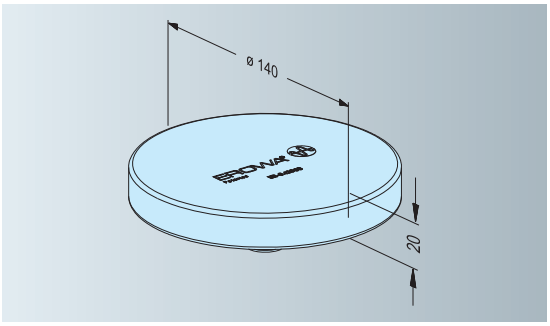


Version Connector block made of steel, excluding attachment bolts.

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

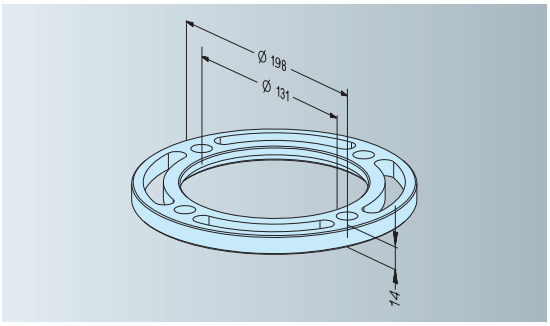
ER-042038 MTS cover

Version Aluminum cover, anodized, for all MTS chucks.
Application Protects MTS chucks that are not in use from chips and coolant.



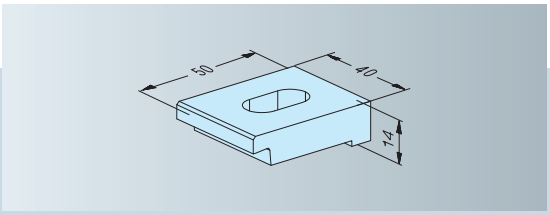
ER-033804 MTS ring bracket

Version Bracket made of steel, excluding attachment bolts.
Application To attach MTS chucks onto the machine table.



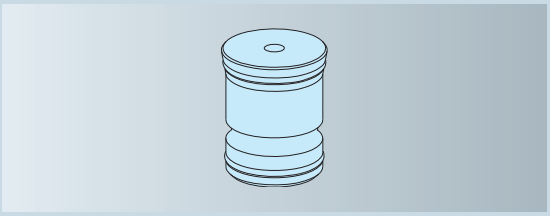
ER-033805 MTS bracket 1 piece

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.



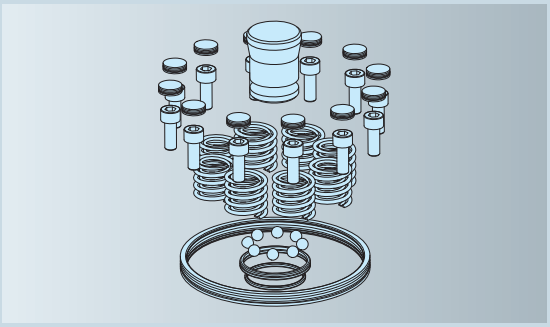
ER-037967 MTS stopper

Version Steel.
Application To plug the central borehole of all the MTS chucks.

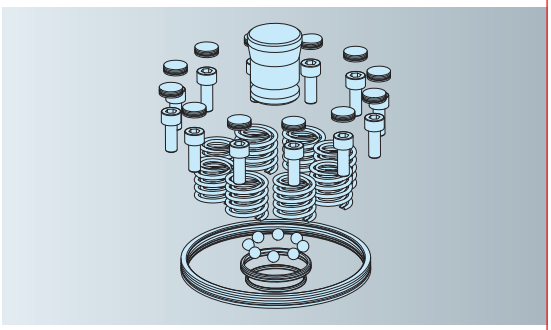


ER-034382 MTS repair set pneumatic

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.

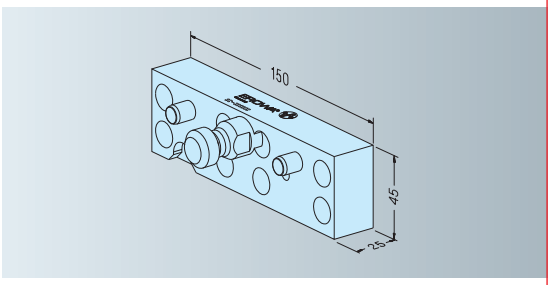


ER-034383 MTS repair set hydraulic



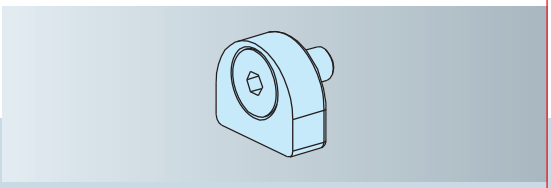
Version All the wearing parts for hydraulic MTS chucks.
Application As a repair set or for the conversion of pneumatic MTS chucks into hydraulic ones.
Note Repair or conversion according to instruction manual supplied.

ER-038622 MTS Gripper Link Rapid



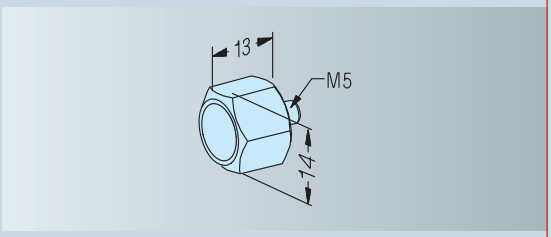
Version Coupling for MTS pallets, mounting accessories included.
Application Suited for MTS pallets to be used on EROWA handling devices with the RCS coupling system.

ER-035294 EWIS™ chip with holder / RCS



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

ER-035154 EWIS™ chip with holder SW14

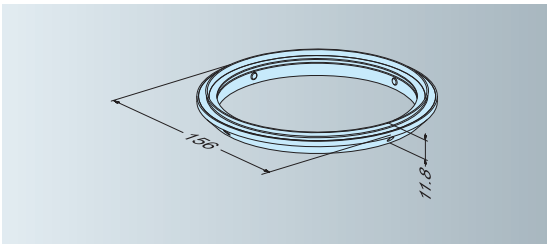


Version Sleeve fitting with built-in datacarrier.
EWIS chip: read only.
Application In any EROWA electrode holder and pallet which have been prepared for it.

EROWA®

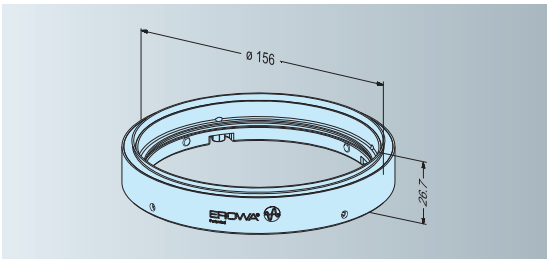
ER-048478 MTS Chip guard low

Version Aluminum, anodized
Application The MTS chip guard serves to seal the automatic MTS chucks and base plates when MTS pallets are used.
Note The MTS chip guard low cannot be combined with the MTS pallet P ø 148 Inox, ER-041928.



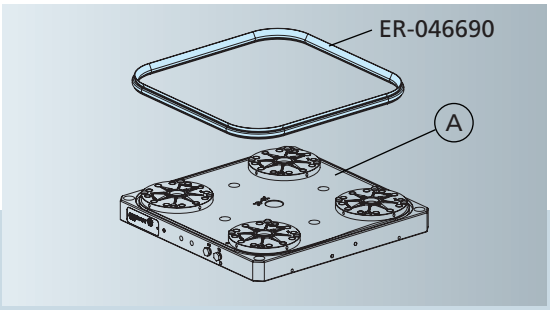
ER-056879 MTS Chip guard ø 156 with axial deaeration

Application For use with MTS pallet P ø 148.
Prevents dirt and chips from penetrating into the MTS SingleChuck



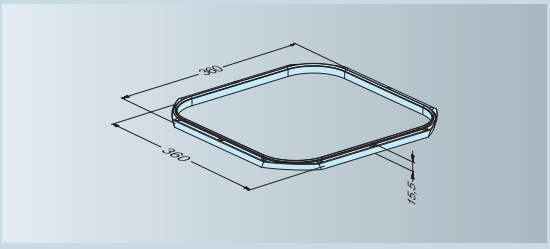
ER-046690 MTS Flushing seal / 250

Version Synthetic.
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.



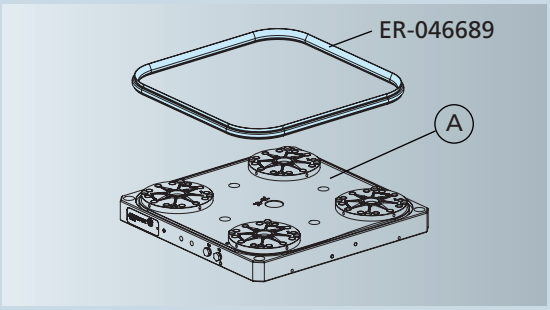
ER-049041 MTS seal frame set / 200

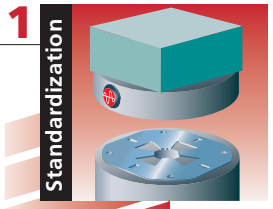
Version Aluminum anodized, with seal.
Application The MTS seal frame set serves to protect MTS chucks against dirt and liquids when in use with an EROWA MTS pallet.



ER-046689 MTS Flushing seal / 200

Version Rubber
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-014326 Straight threaded connector

Application Pneumatic.

ER-002814 Angled connector

Application Pneumatic.

ER-014366 Threaded T-connector

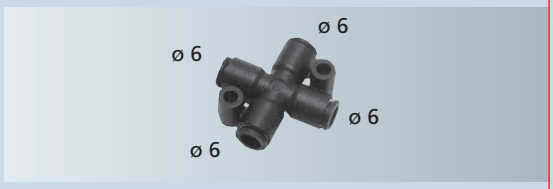
Application Pneumatic.

ER-014333 T-connector

Application Pneumatic.

ER-034095 Cross-connector

Application Pneumatic.

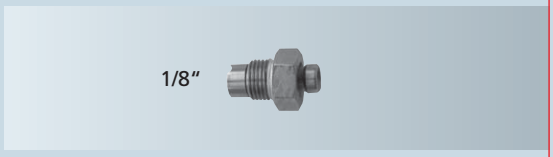


ER-002023 Tube ø 6/4 black

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

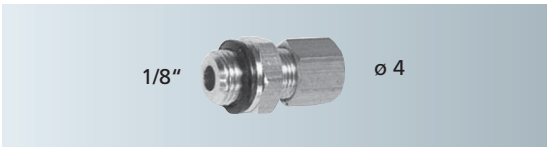
ER-036672 MTS air jet valve

Application Pneumatic. For air jet ER-001846.



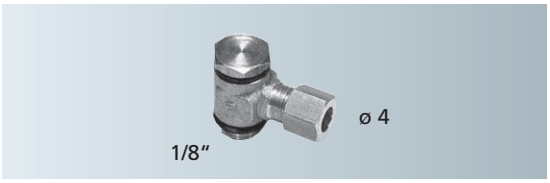
EROWA®

ER-033492 Straight threaded joint



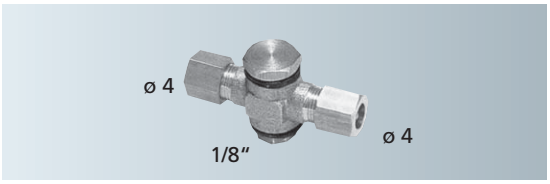
Application Hydraulic and pneumatic.
Note Hydraulic operation requires support sleeve ER-033496.

ER-033565 Angular connector



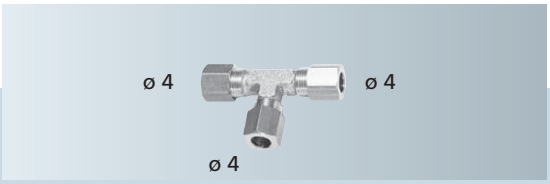
Application Hydraulic and pneumatic.
Note Hydraulic operation requires support sleeve ER-033496.

ER-033566 Angled T-connector



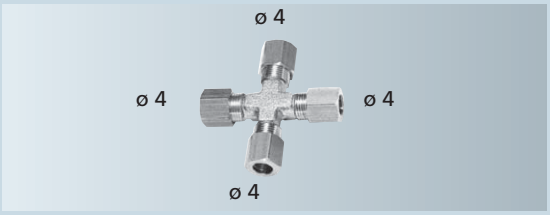
Application Hydraulic and pneumatic.
Note Hydraulic operation requires support sleeve ER-033496.

ER-033960 Threaded joint T



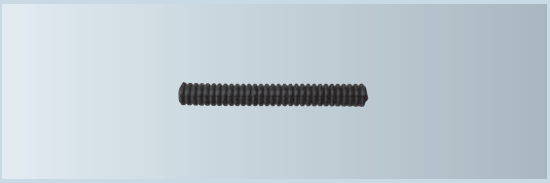
Application Hydraulic and pneumatic.
Note Hydraulic operation requires support sleeve ER-033496.

ER-033494 Cross union



Application Hydraulic and pneumatic.
Note Hydraulic operation requires support sleeve ER-033496.

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-001539 Double nipple MS 1/8" - 1/8"

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"

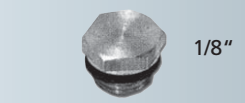
Application Hydraulic and pneumatic.

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

Application Hydraulic and pneumatic.

ER-001617 Threaded plug 1/8"

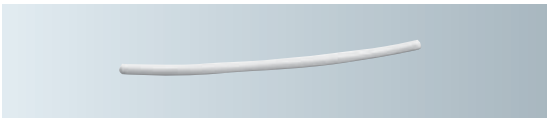
Application Hydraulic and pneumatic.



MTS

EROWA®

ER-033495 Tube ø 4 / 2

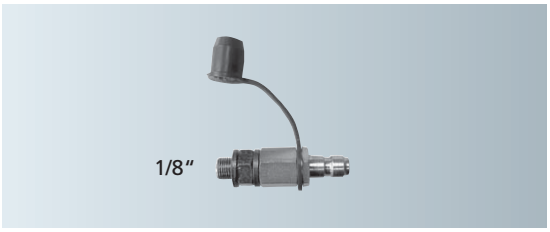


Application Hydraulic.
Version Max. operating pressure: 40 bar.
Order unit Meters.
Note If the operating pressure is 8 bar or higher, you need the support sleeve ER-033496.

ER-033496 Support sleeve

Application Hydraulic, if the operating pressure is 8 bar or higher.

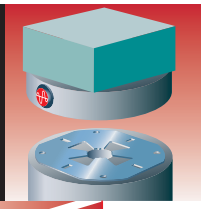
ER-033504 Nipple 1/8”



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

ER-033499 Rapid-action coupling 1/8” IG

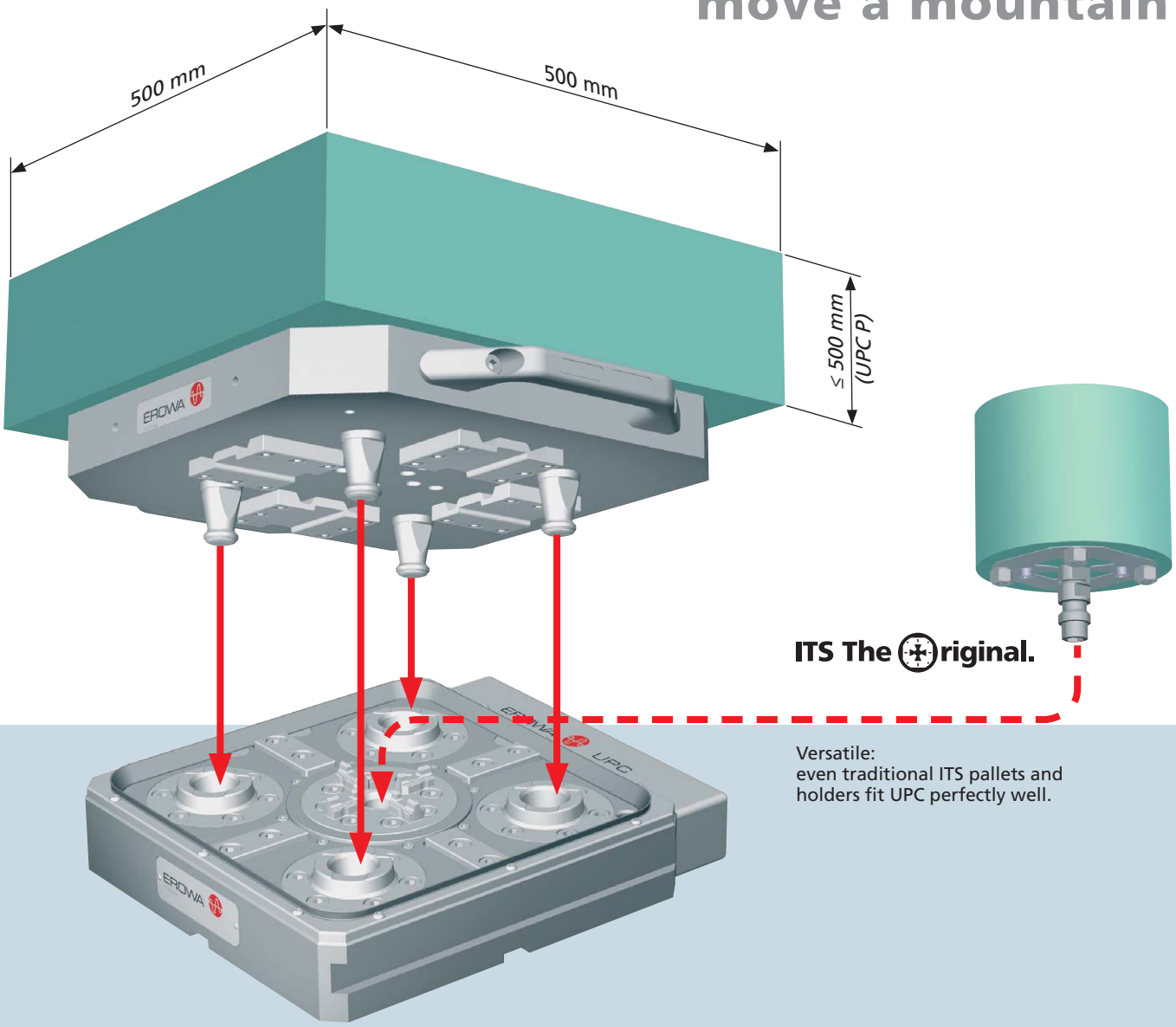
Application Hydraulic. With blocking device. Fits fast nipple ER-033504.



EROWA®

EROWA UPC

you might as well try to move a mountain



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

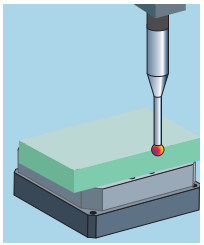
A few highlights:

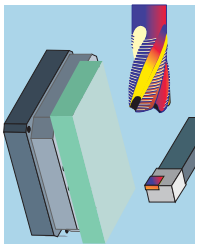
- Air-cleaned support surfaces.
- Economically priced centering segments for the in-house construction of pallets.
- Pallets can index 4 x 90°.
- Stable centering segments with patented initial tension.
- ITS chuck can be integrated in the center (option).
- Four fixed chucking spigots which also serve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

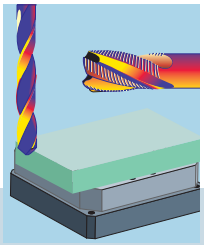
EROWA's UPC (Universal Power Chuck) breaks through the conventional limits of precision, stability and workpiece size. Now, 500 x 500 x 500 mm have ceased to be a problem. And the 2-µm precision will not be impaired at all.

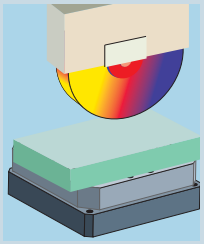
A decisive factor for ITS users: the central ITS chuck guarantees seamless integration into the existing system.

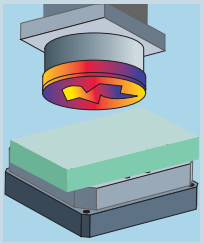
Applications


Presetting

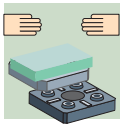

Milling / turning

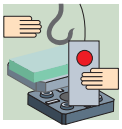

Drilling / milling

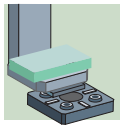

Grinding


EDM sinking

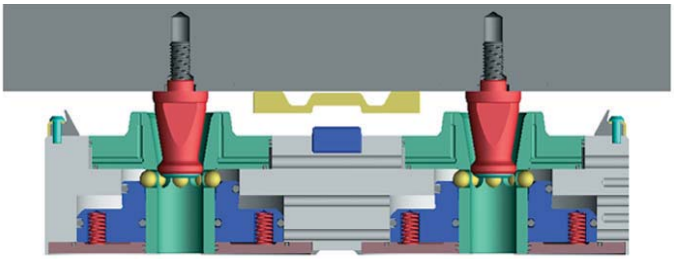
Handling

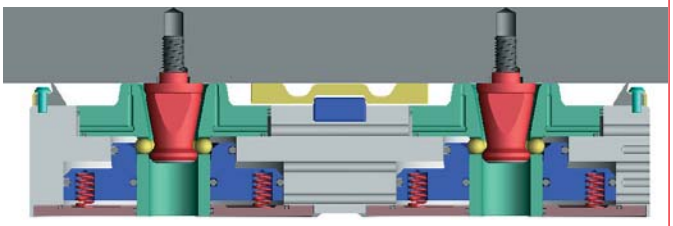

Manual


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 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

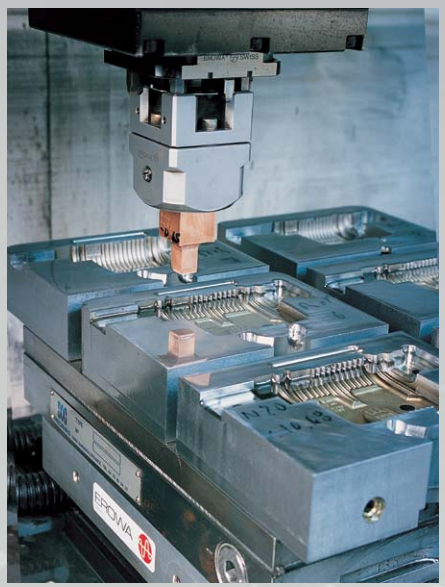
EROWA®

EROWA UPC in operation

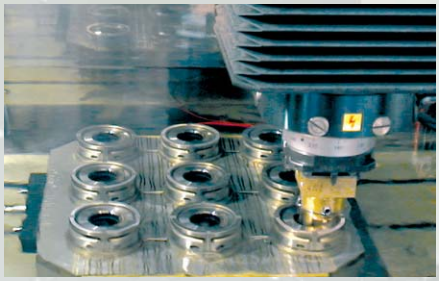
universal, powerful, micron-accurate

**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.



On a clamping surface of up to 500x500mm, even large workpieces or fixtures can be attached to the UPC pallet without any problems.

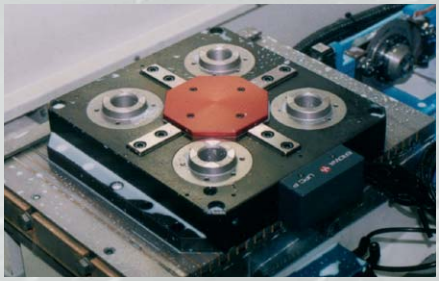


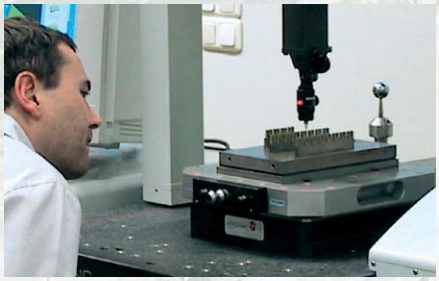
Practical! EDMing on the UPC magnet pallet.

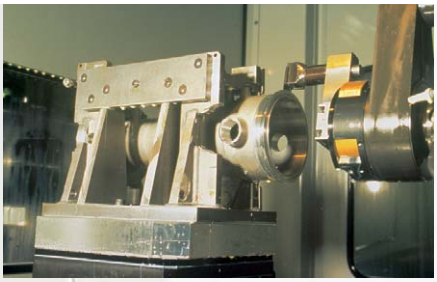
The UPC on the machine table constitutes the interface with the workpiece carrier. Resetting takes next to no time, and production can resume.

Multiple fixture on a UPC pallet.

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





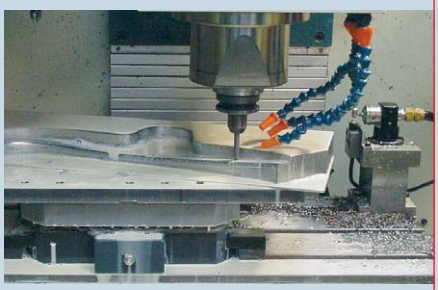


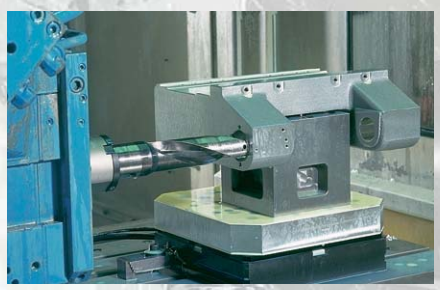
The advantage on the horizontal machining center: five sides are accessible, the pallet indexes 4 x 90°.

UPC was designed for automatic loading without any compromise.

**Reliable - resistant to dirt.
Robust - developed for continuous operation.**

UPC Pallet Alu DG – light and handy.





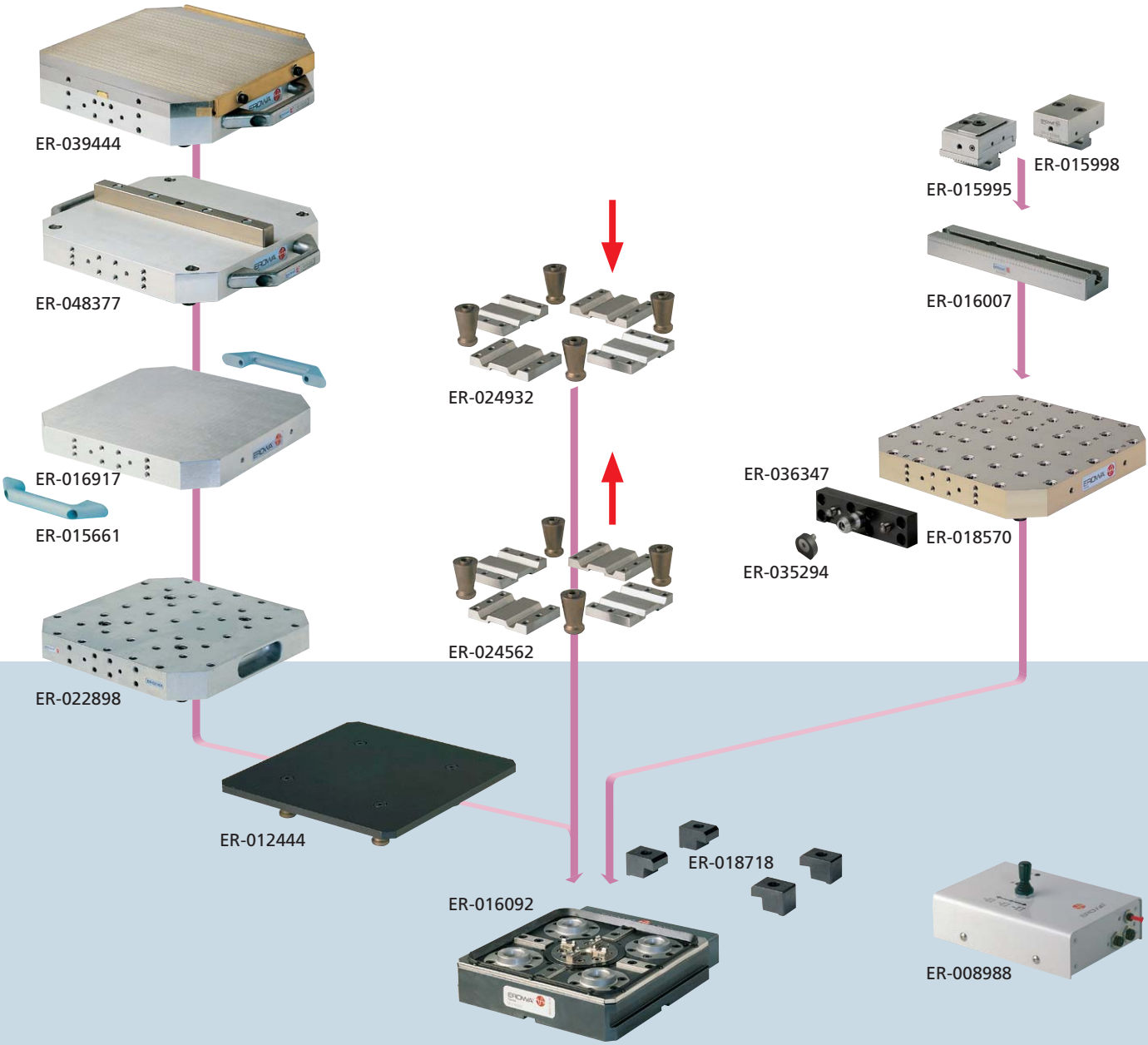
Short set-up times with flexible clamping elements: EROWA ClampSet vises on UPC grid pallet.

UPC - also for big workpieces: profiling on UPC pallet.

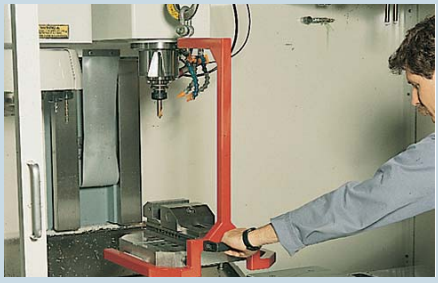
EROWA®

EROWA UPC
Palletizing System

The components

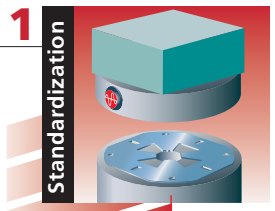


EROWA Lift, the manual handling device permanently installed next to the machining center.
For information, please refer to page 292.



LiftGear UPC, for easy loading of the UPC chuck by means of an overhead crane.
For information, please refer to page 290.

PreSet Basic UPC, to mount and preset pallets, gauges and workpieces.
For information, please refer to page 264.



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

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

For chip-removing processes

For EDM sinking

For WEDM

EROWA UPC palletizing system

	Page
UPC chucks	46
UPC pallets	47
UPC auxiliary equipment	48

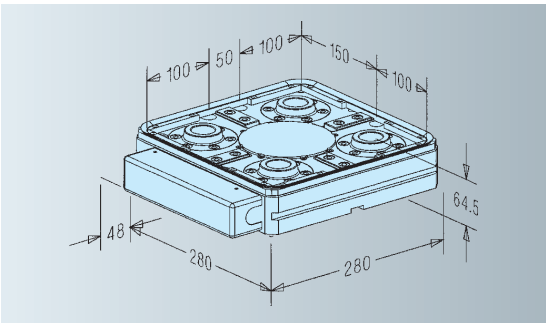
UPC

EROWA

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

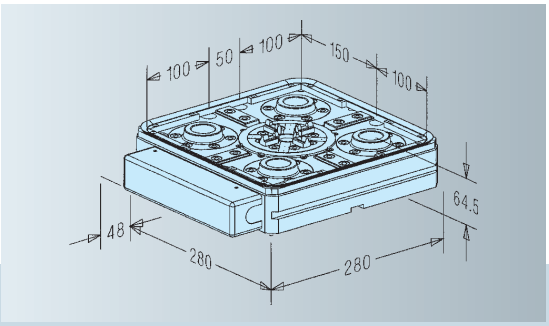
ER-016093 UPC Universal Power Chuck

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

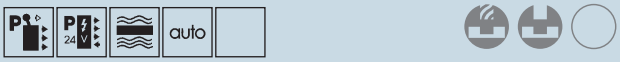


ER-016092 UPC chuck with ITS

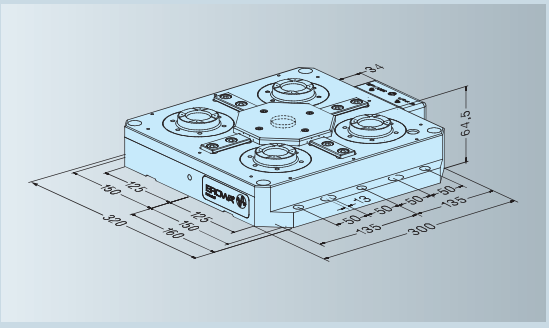
Version UPC with ITS central chuck fitted and aligned.
Connections On the side.
Application On milling, grinding, drilling and EDM sinking centers. In production lines.



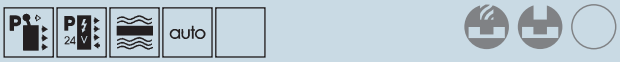
ER-016841 UPC P chuck



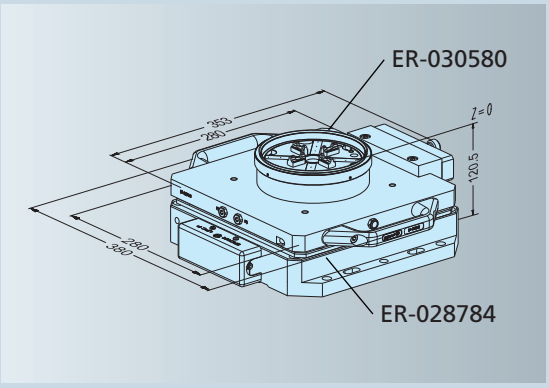
Version Chuck for high machining forces during chip removal.
Connections Through the base and on the side.
Application On milling, grinding, drilling and EDM centers and in production lines.
Option UPC Sealing-Set ER-016650.



ER-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.
Require-ments At least 4 air ducts available on the machine table.

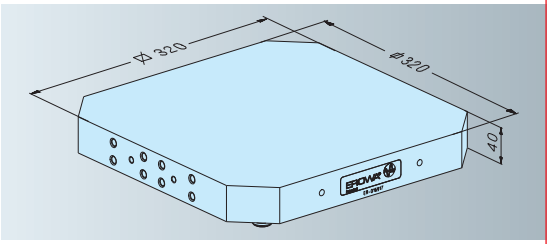


EROWA UPC
Pallets

ER-016917 UPC pallet Alu 320 x 320 x 40

auto

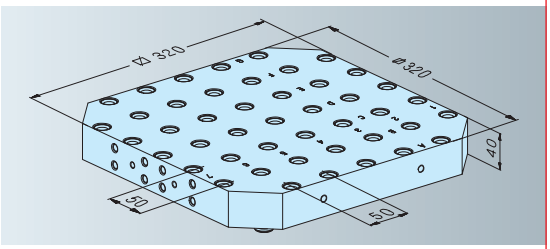
Version Aluminum, with centering segments and chucking spigots fitted. Hard Z-support.
Application To clamp workpieces and gauges.
Please note Holes to be drilled as required.



ER-018570 UPC pallet Alu R50 320 x 320 40 eloxed
ER-016003 UPC pallet Alu R50 320 x 320 x 40

auto

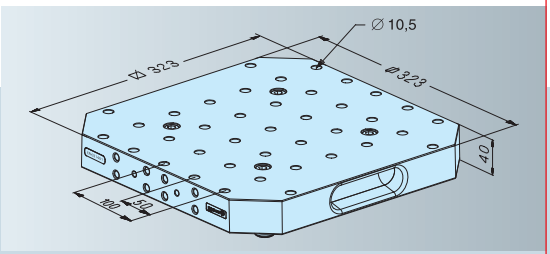
Version Aluminum with 50mm grid. Centering segments and chucking spigots fitted. Hard Z-support.
Application Basis for gauges and workpieces.
Info Pattern borehole ø 12F7, M12 thread .
Please note The elox version is not suited for use in EDM machines.



ER-022898 UPC pallet ALU diecast
ER-022896 UPC pallet ALU diecast S

auto

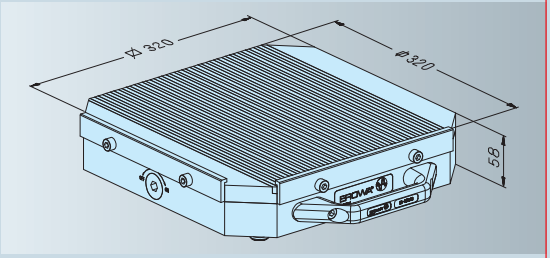
Version Aluminum with 50mm grid. Chucking spigot fitted. Handles integrated. Steel Z-support.
Application To clamp workpieces and gauges.
Please note ER-022898: centering segment integrated in aluminum
(repeatability: 0.005 mm)
ER-022896: with steel centering segment fitted
(repeatability:0.002 mm)



ER-039444 UPC magnet plate Neomicro

auto

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.

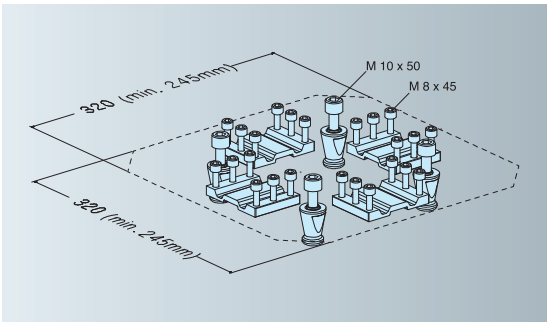


UPC

EROWA®

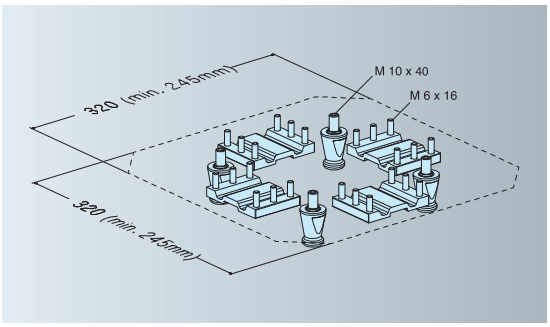
ER-024932 UPC centering segments and chucking spigots

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.



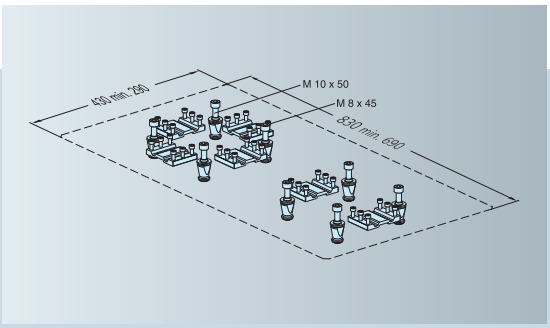
ER-024562 UPC centering segments and spigots to mount from lower side

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.



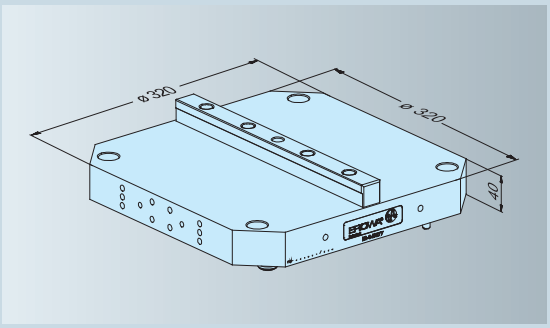
ER-025820 UPC DUO centering segments

Version	Six segments and eight chucking spigots for UPC, including bolts.
Application	To build special UPC pallets.
Mounting	With bolts from the top through the pallet.
Note	Assembling on two aligned UPC chucks.

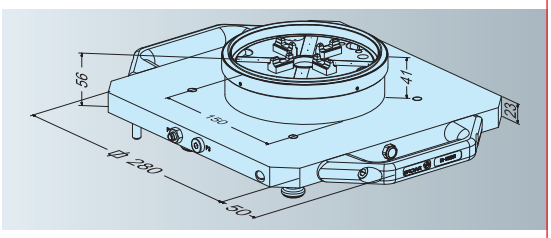


ER-048377 UPC alignment pallet

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.

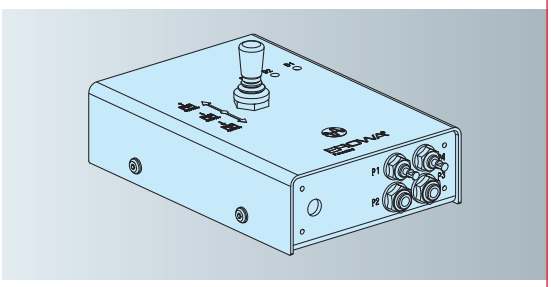


ER-029453 PowerChuck P on UPC pallet



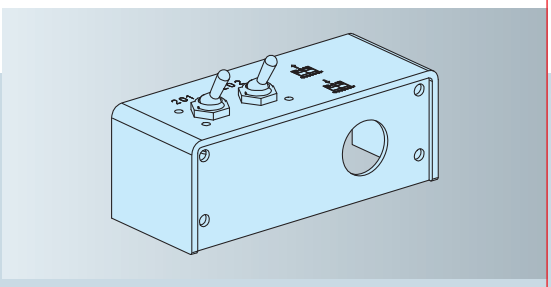
Version Adapter pallet UPC - PowerChuck P.
Connections Laterally on pallet.
Application On machining centers. Operate with air-jet or fixed connection.
Note Manual change into UPC. Possible automatic change into PowerChuck P.

ER-008988 Manual control unit



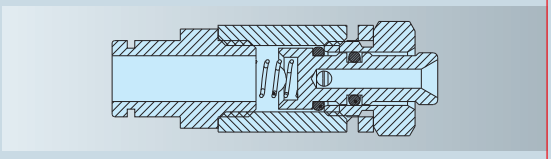
Version Manual valve to control all the functions of ITS, ITS Compact CombiChuck, PowerChuck P and UPC: opening/reclamping/cleaning.
Application Operation of chucks on machines.

ER-039466 Additional valve double



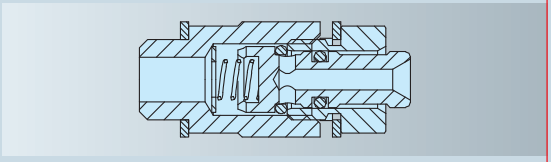
Version For mounting to the manual control units ER-008988 and ER-025893, incl. set of hoses.
Application Operating of two separate chucks with one single control unit.

ER-016531 UPC air jet connection



Version Valve for the manual operation of UPC ER-016092 and ER-016093 with an air jet.
Application To be fitted on UPC cover.

ER-018168 UPC P air jet connection

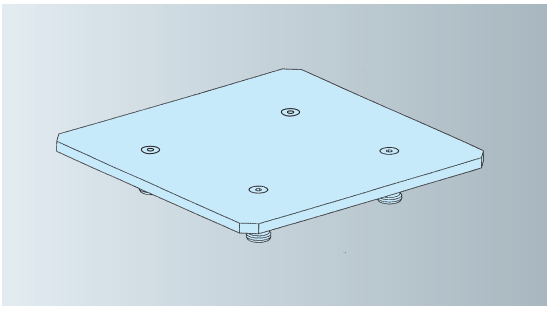


Version Valve for the manual operation of UPC P ER-016841 with an air jet.
Application To be fitted on UPC P cover.

EROWA®

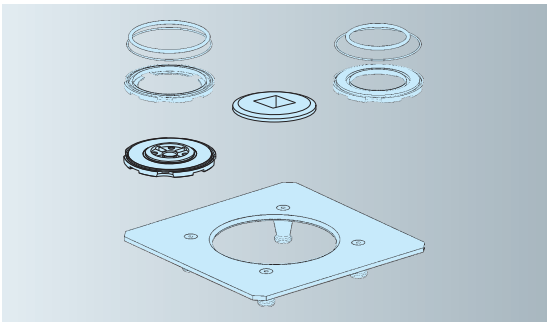
ER-012444 Cover for UPC

Version Aluminum.
Application Cover for UPC.



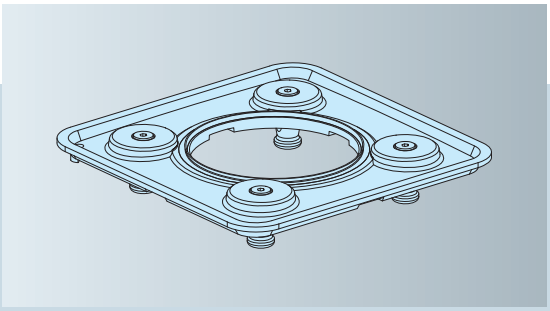
ER-012441 Cover set for UPC / ITS

Version Aluminum with inserts for ⧄51, ø 72, ø 115, ø 148 pallets and for electrode holders for UPC ER-016092.



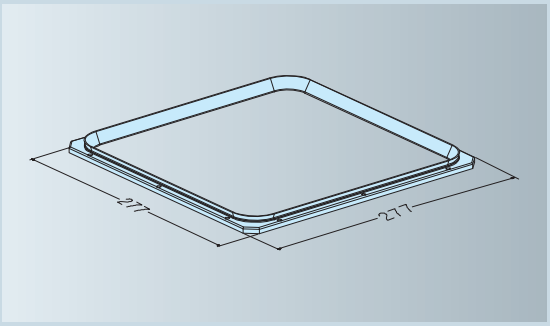
ER-018247 Cover for UPC pallet ø 148

Version Aluminum. Cover for UPC ER-016092.
Application Protects UPC system when ø 148 mm pallets are used in the ITS central chuck.



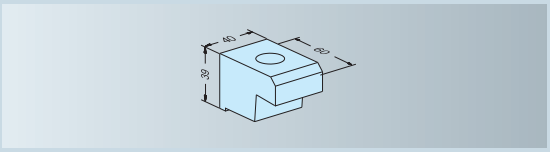
ER-016650 UPC sealing kit

Version Rubber seal and frame.
Application To seal the UPC P against chips.
Mounting With supplied bolts.
Please note Fits UPC No. ER-016092/ER-016093/ER-016841.

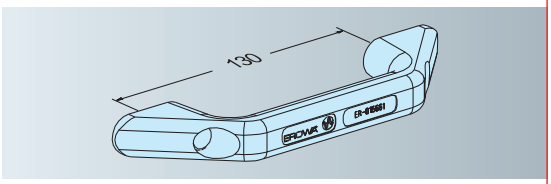


ER-018718 Clamps for UPC 4 pieces

Version High tension steel, mounting accessories not included.
Application To mount UPC chucks to machine tables.
Please note Fits UPC chuck No. ER-016092/ER-016093/ ER-016841.

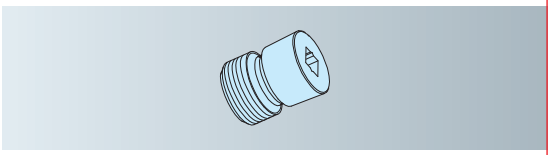


ER-015661 Handles for UPC pallets / FrameSet
2 pieces



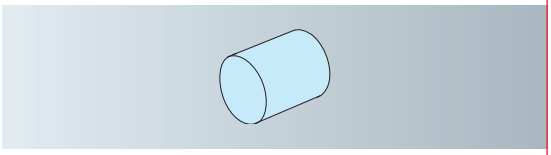
Version Aluminum die-casting, set of 2 units.
Application Safe handles for UPC pallets.
Mounting With the enclosed bolts to the prepared threads.

ER-018817 M12 sealing bolt
50 pieces



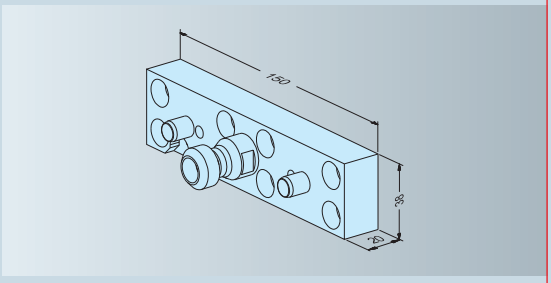
Version Set of 50, including square wrench.
Application Plastic bolts to seal grid boreholes that are not in use.
Suitable for ER-018570 and ER-016003.

ER-022646 Plug
50 pieces



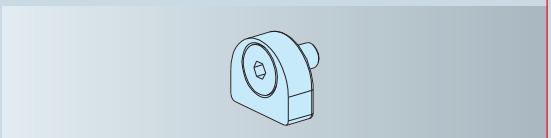
Version Set of 50.
Application Plastic plug to seal grid boreholes that are not in use.
Suitable for ER-022898 and ER-022896.

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™ chip with holder / RCS

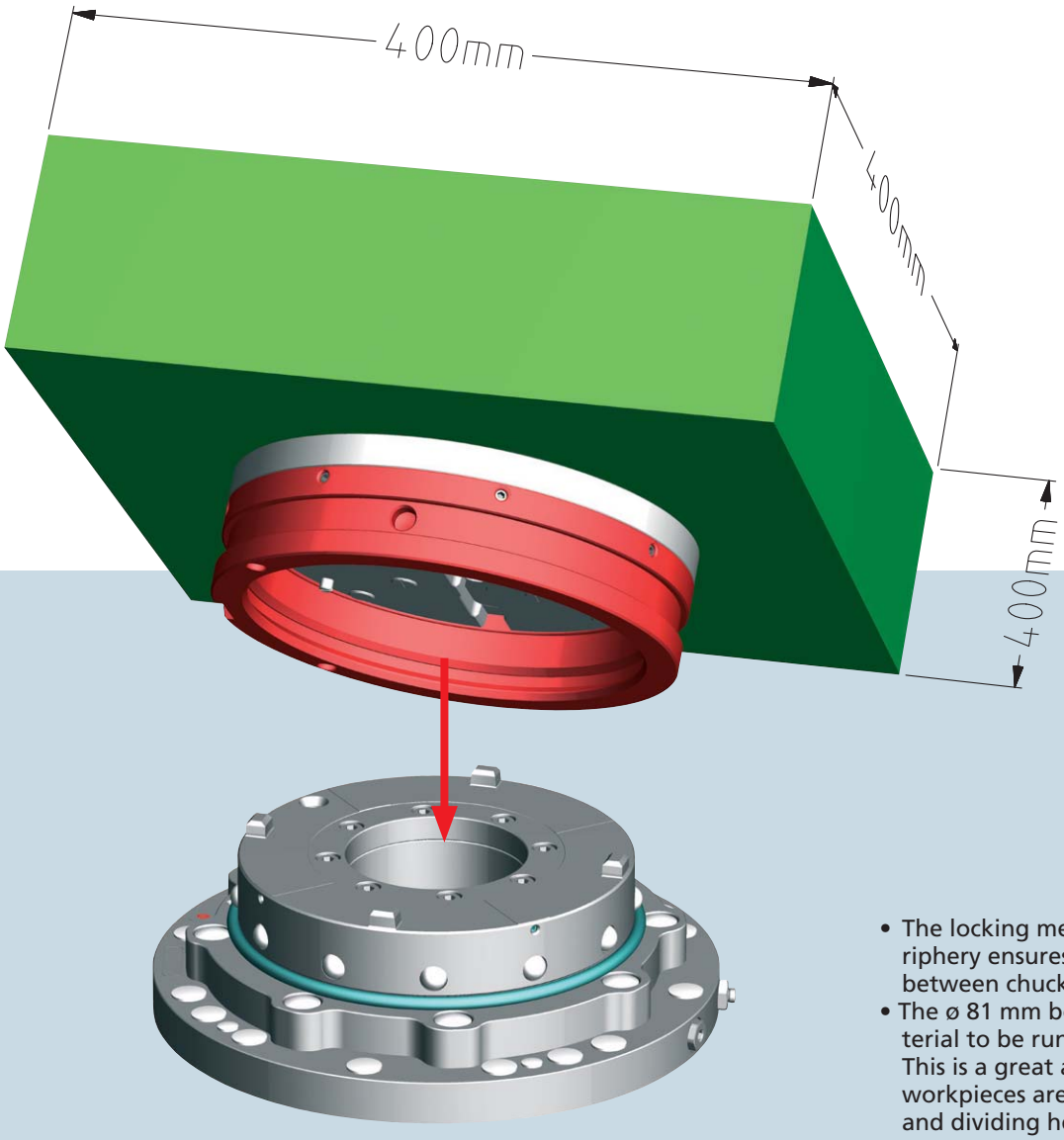


Version Holder with built-in datacarrier.
EWIS chip: read only.
Application To build into RCS coupling, PalletSet W holder and Basic WEDM holder.

EROWA

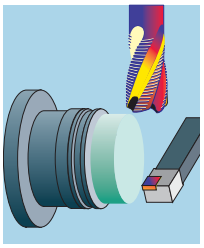
EROWA ProductionChuck 210

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.

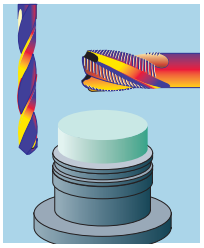


- The locking mechanism on the periphery ensures a stable connection between chuck and pallet.
- The ø 81 mm borehole enables material to be run through the center This is a great advantage when workpieces are machined on lathes and dividing heads.
- All the pallets are indexable 4 x 90°.
- The system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

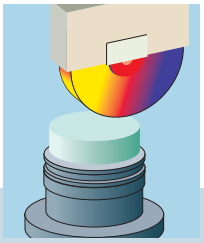
Applications



Milling/Turning



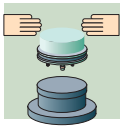
Drilling/Milling

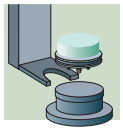


Grinding

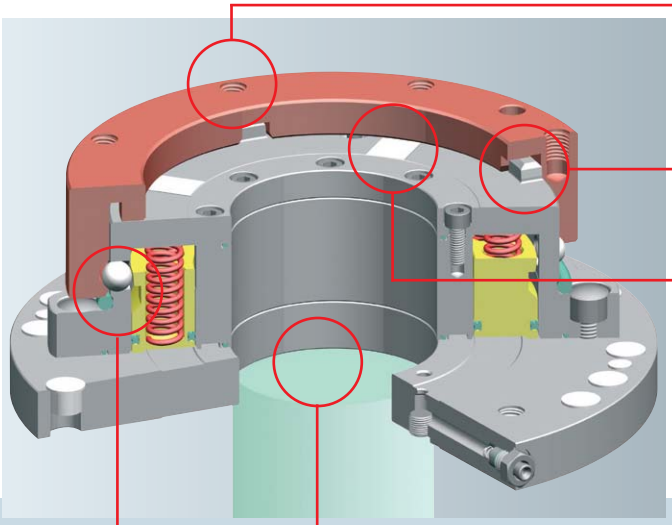
The self-locking ball lock generates a clamping power of 20,000 N. Compressed air is necessary to open the chuck and to clean the Z-supports.

Handling





Function



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

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

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.

Rod material of up to ø 81mm can be led directly through the chuck.

The ø 81mm boreholes also provides for air, hydraulic and vacuum lines to operate the fixtures that are clamped on pallets.

Technical data

	ProductionChuck 210
Repeatability	<0.002 mm
Pallet indexation	4 x 90°
Clamping power	20,000 N / 30,000 N
Clamping power (central PowerChuck P)	10,000 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®

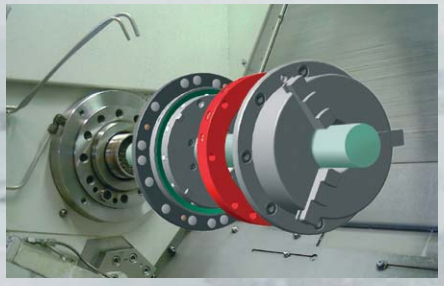
EROWA ProductionChuck 210

Palletizing system with central material feed.

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.

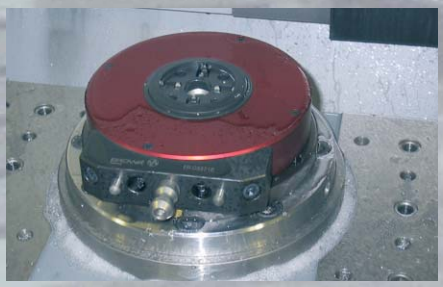
The Z-supports are placed as far on the outside that they provide a stable and precise support even for bigger workpieces.

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



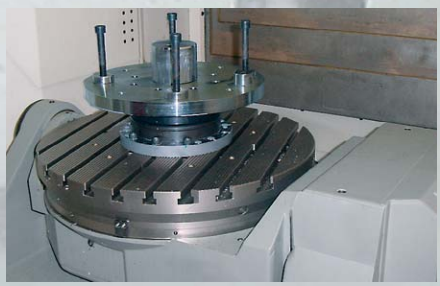
Particularly suitable for use on lathes. The ProductionChuck 210 is the only precision palletizing system with a borehole for central material feed.

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.



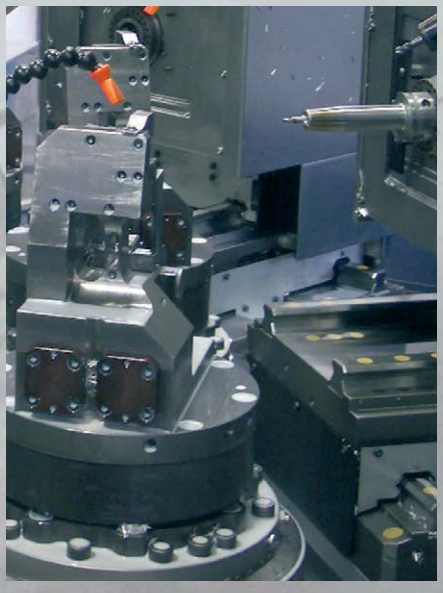
The RN PC 210 gripper takes workpieces to your machine with safety and precision.

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



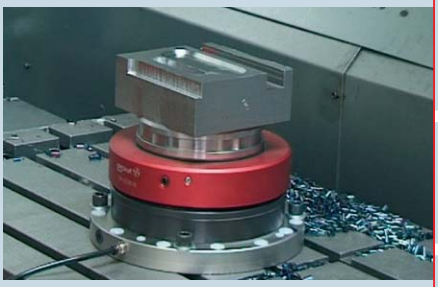
Another advantage: the workpiece or the fixture can be fitted directly on the PC pallet 210.

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

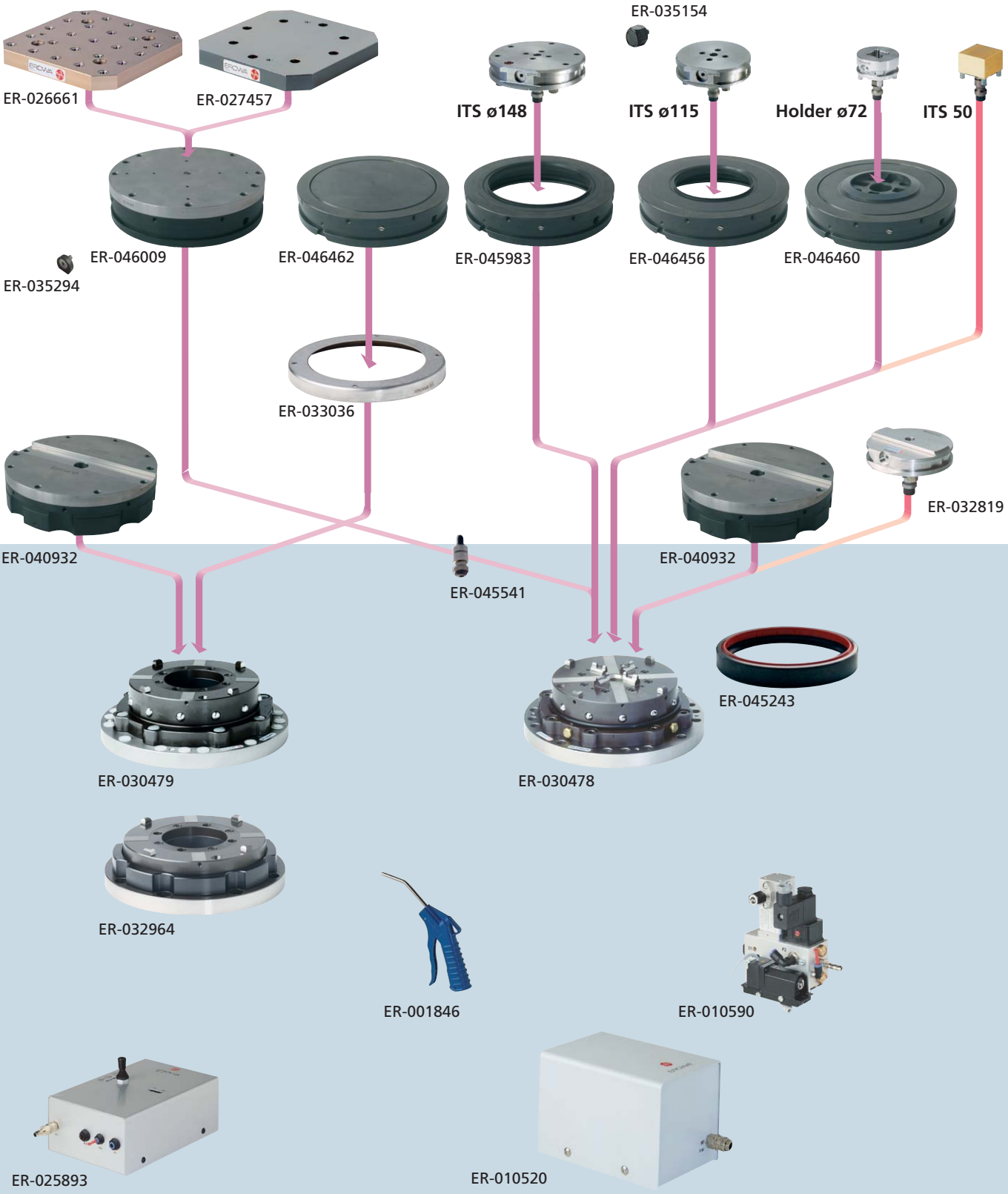
Mixed use of ITS and ProductionChuck 210 pallets.

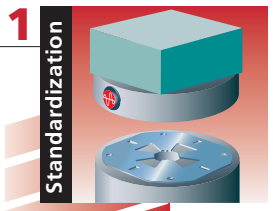


EROWA®

ProductionChuck 210

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 Combi gripper
12. Handling with EROWA Robot gripper 72
13. Handling with EROWA Robot gripper 115
14. Handling with EROWA Robot gripper 148
15. Handling with EROWA gripper RN PC 210
16. Handling with EROWA RCS gripper

For chip-removing processes

For EDM sinking

For WEDM

EROWA ProductionChuck 210 palletizing system

	Page
ProductionChuck 210 Chucks	58
ProductionChuck 210 Workpiece carriers	60
ProductionChuck 210 Auxiliary Equipment	62

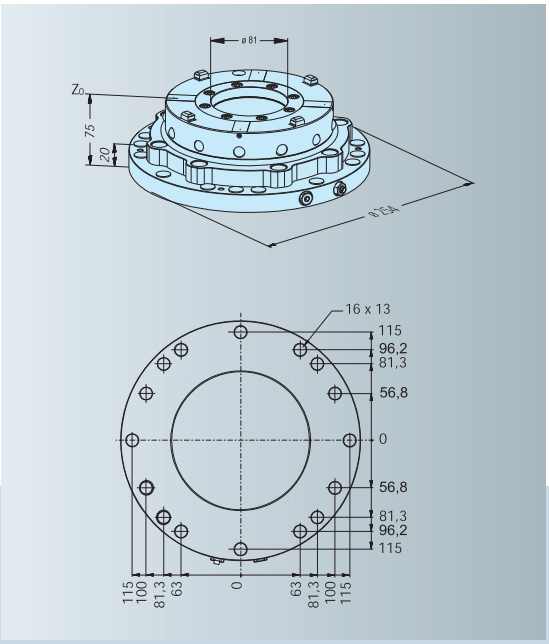
EROWA

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)	10,000 N
Generated by	spring power
Opening with compressed air	min. 8 bar

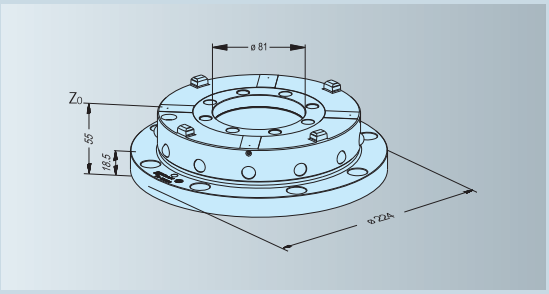
ER-030479 ProductionChuck 210

Version Chuck for high machining forces in chip cutting. Low design. Through-borehole ø 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

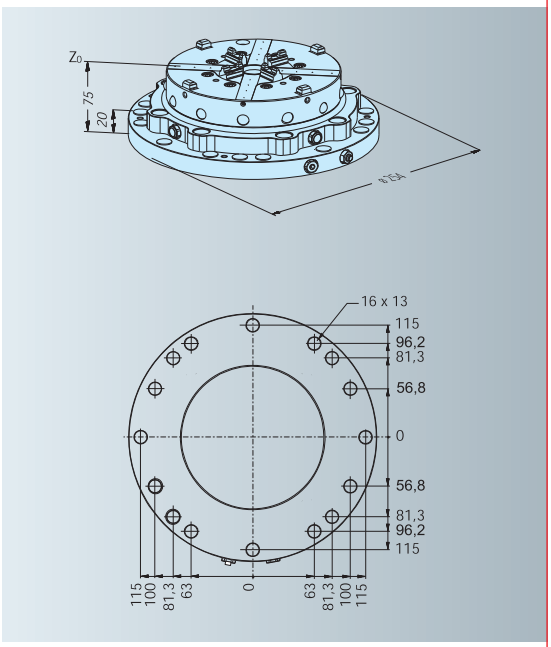
Version Chuck for high machining forces in chip cutting. Low design. Through-borehole ø 81 mm.
Connections On milling machines, lathes and grinding machines. To clamp pallets PC 210.
Operation 2 air connections: on the sides and from below through customized base plate.
Application With air gun or control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



ER-030478 ProductionChuck 210 Combi

auto

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 and ITS 50 holders.



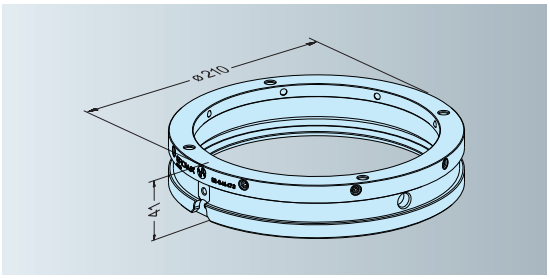
Note ProductionChuck 210 Combi without base plate on request.

EROWA®

ER-046473 Clamping ring RN PC 210

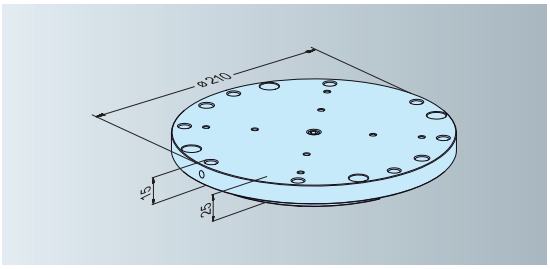
auto

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



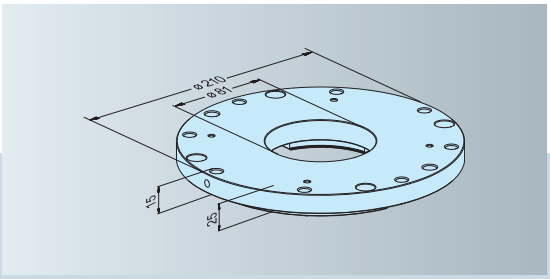
ER-042865 PC Centering pallet 210

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



ER-042866 PC Centering pallet 210 ø 81

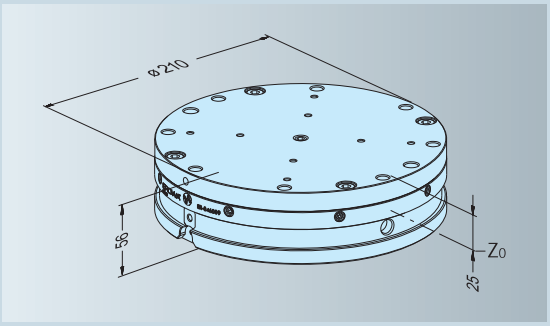
Version Steel, without clamping ring (option ER-046473).
Fitting 8 x M10 attachment threads and two ø 10 boreholes.
Application To accommodate workpieces, clamping jigs and plates PC 210.



ER-046009 Pallet RN PC 210

auto

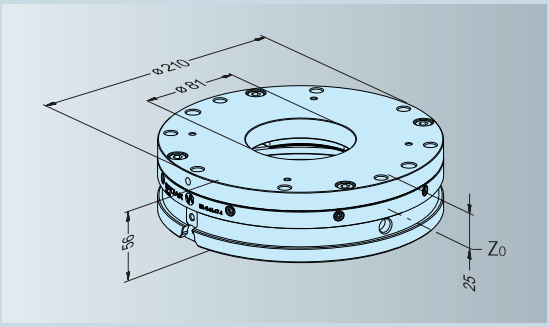
Version Steel. Centering segments integrated.
Assembly 8 x M10 attachment threads and two ø 10 boreholes.
Application To clamp workpieces, clamping jigs and pallets PC 210.
Can be automated with gripper RN PC 210 (option).



ER-046474 Pallet RN PC 210 ø 81

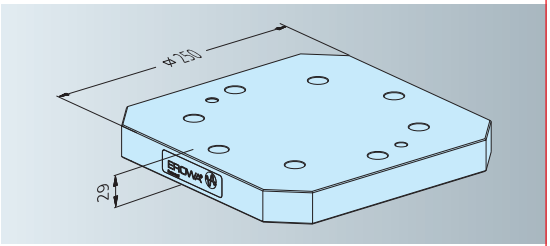
auto

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



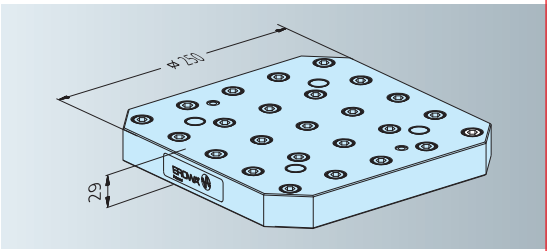
ER-027457 PC 210 plate 250 x 250

Version Steel (not hardened).
Application To clamp workpieces and clamping jigs. Attachment borehole pattern to be drilled according to requirements.
Assembly On pallet PC 210 (8 x M10).



ER-026661 PC 210 plate 250 x 250 / R50

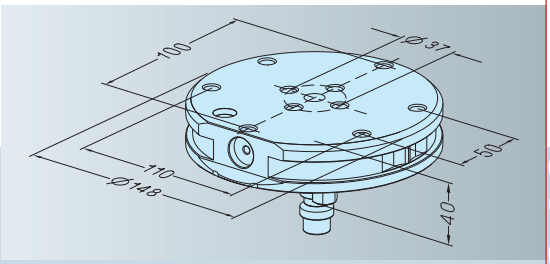
Version Aluminum, anodized with 50 mm grid boreholes of ø 12 F7 and M12 thread.
Application To clamp workpieces and clamping jigs.
Assembly On pallet PC 210 (4 x M10).
Note Not suitable for application on EDM centres.



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

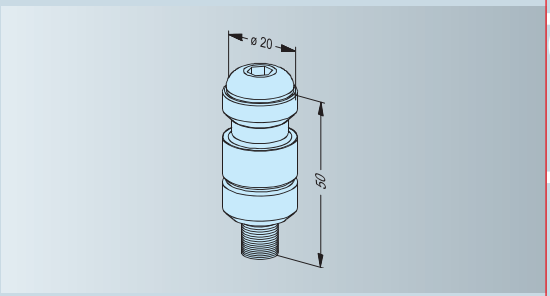
INOX | auto | 148

Version Steel, corrosion-resistant. Centering integrated in the pallet.
Application For use on all EROWA PowerChucks P and ProductionChuck 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.

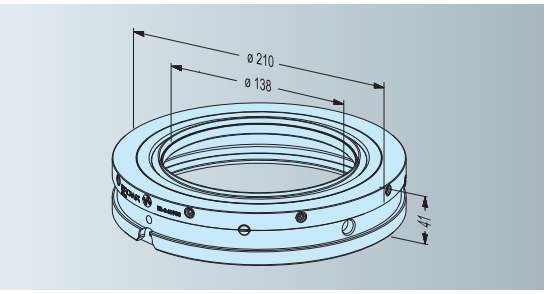


EROWA®

ER-045983 Seal ring holder RN ø 148 PC 210

auto

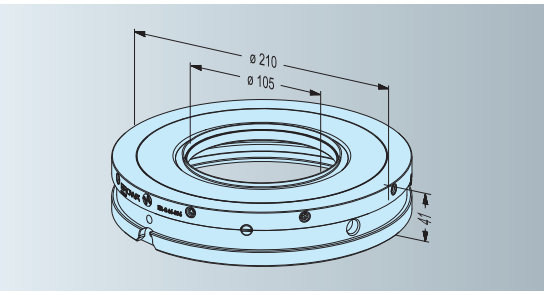
Version Aluminium anodized.
Application Prevents penetration of chips and dirt into the ProductionChuck 210 by application of EROWA ITS pallets ø 148. For automatic handling with gripper RN PC 210 (option).



ER-046456 Seal ring holder RN ø 115 PC 210

auto

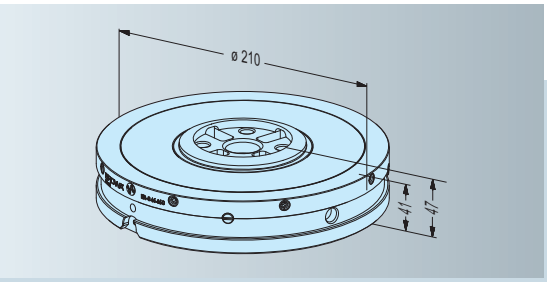
Version Aluminium anodized.
Application Prevents penetration of chips and dirt into the ProductionChuck 210 by application of EROWA ITS pallets ø 115. For automatic handling with gripper RN PC 210 (option).



ER-046460 Seal ring holder RN ø 72 PC 210

auto

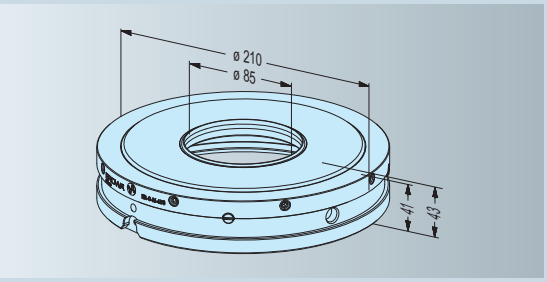
Version Aluminium anodized.
Application Prevents penetration of chips and dirt into the ProductionChuck 210 Combi by application of EROWA ITS pallets ø 72. For automatic handling with gripper RN PC 210 (option).



ER-046458 Seal ring holder RN ø 85 PC 210

auto

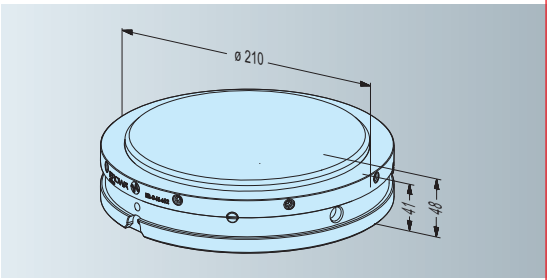
Version Aluminium anodized.
Application Prevents penetration of chips and dirt into the ProductionChuck 210 Combi by application of EROWA ITS pallets ø 85. For automatic handling with gripper RN PC 210 (option).



ER-046462 Cover RN PC 210

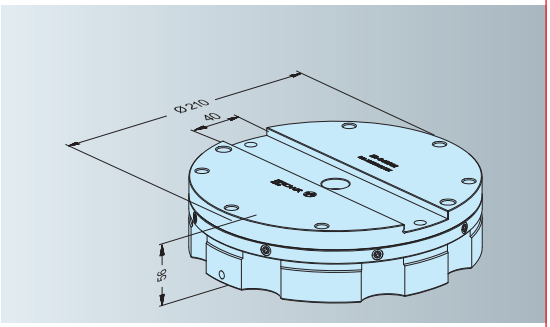
auto

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



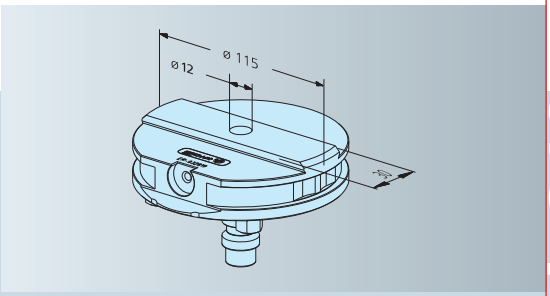
ER-040932 Positioning pallet PC 210

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



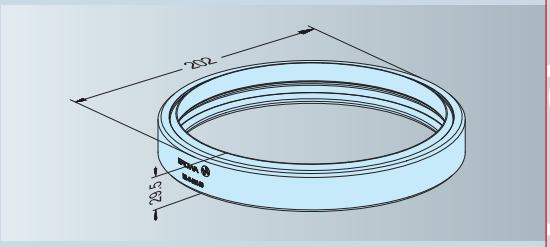
ER-032819 Alignment pallet ø 115

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



ER-045243 PC 210 Sealing ring

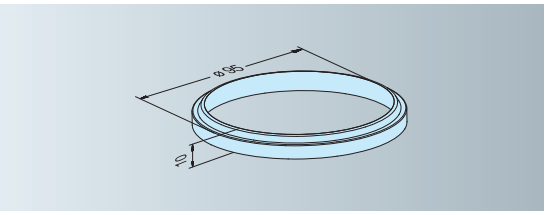
Version Holder with wiper.
Application For use on ProductonChuck 210 Combi.
To seal the outer balls if ITS 50 standard electrode holders or other workpiece carriers without PC sealing ring holders PC 210 are used.



EROWA®

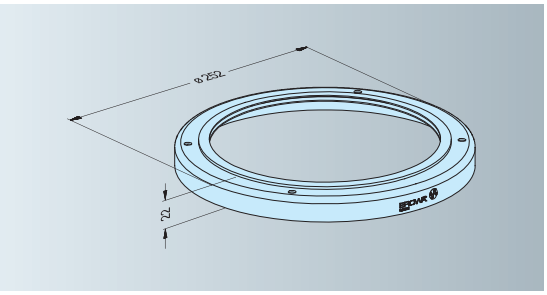
ER-045249 Wiper for pallet PC 210 ø 81

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



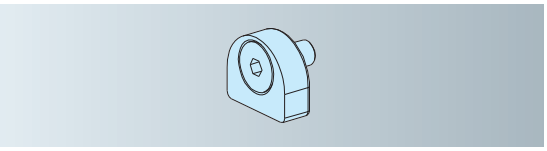
ER-033036 Covering ring PC 210

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



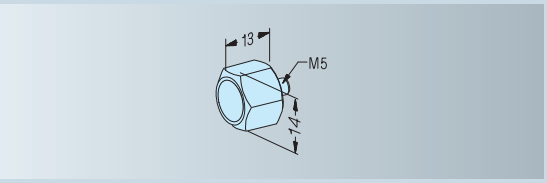
ER-035294 EWIS™ chip with holder / RCS

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



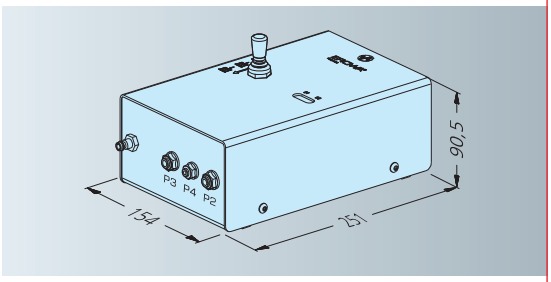
ER-035154 EWIS™ chip with holder SW14

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



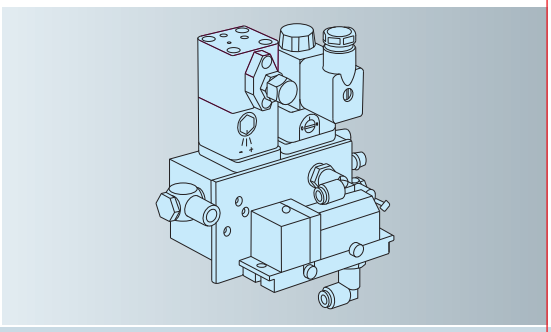
ER-025893 Manual control unit with booster

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.).



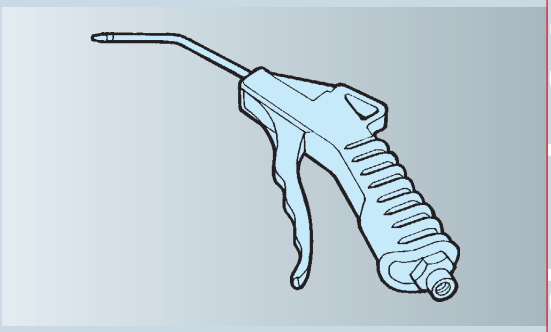
ER-010590 Control unit with monitoring

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.



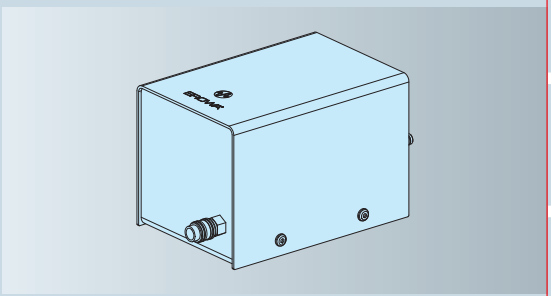
ER-001846 Air jet

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



ER-010520 Pressure booster

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

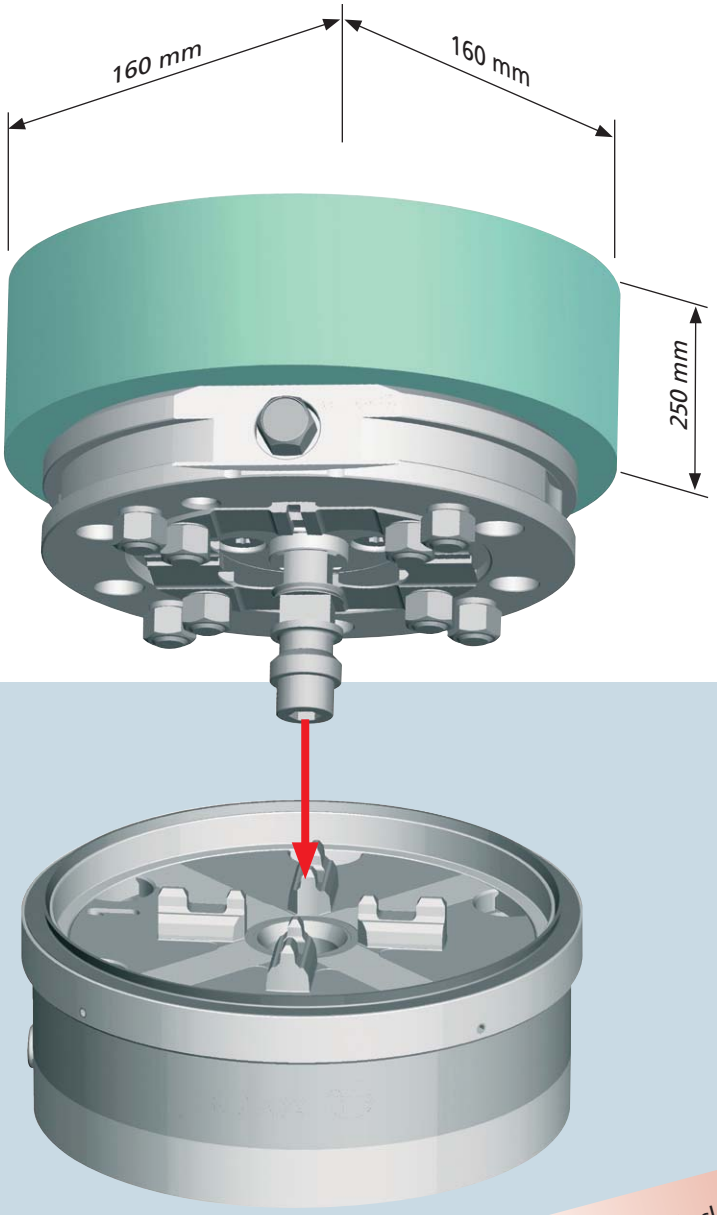


EROWA

EROWA PowerChuck P

accessible from all sides

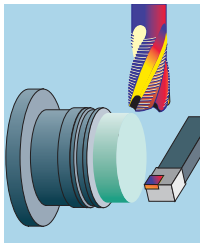
EROWA PowerChucks are quick and easy to integrate on a wide variety of machining centers.



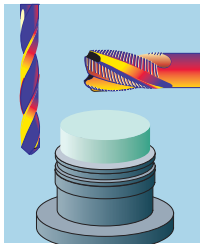
- Whether affixed to the T-slot table or built into the integrated axis, there is always a good solution.
- Access from all five open sides is particularly important with horizontal machining. The low height of the chuck plays a significant role on smaller machines.
- Operation is manual with an air 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.

Clean
Through automatic cleaning of contact surfaces.

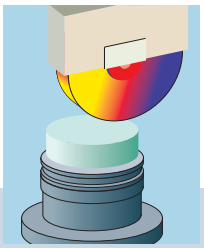
Applications



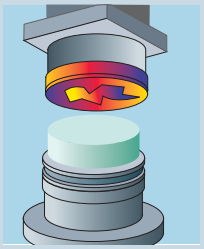
Milling / Turning



Drilling / Milling

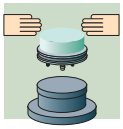


Grinding



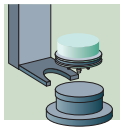
EDM sinking

Handling



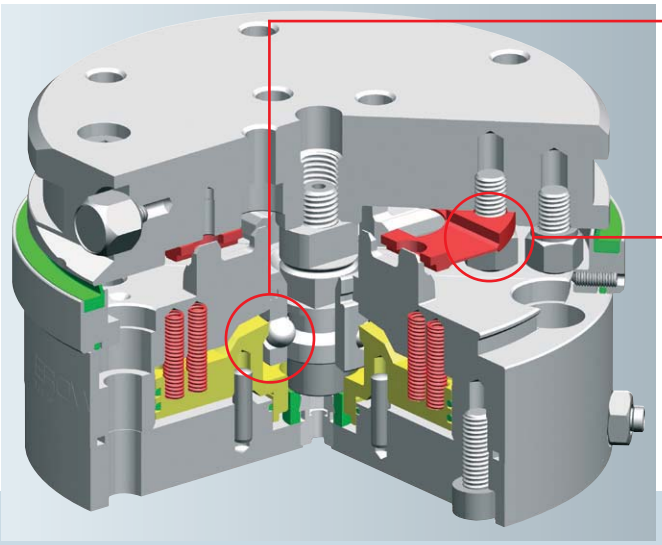
Manual

Loading facility



Robot

Function



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.

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

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

Technical data

	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®

EROWA ITS PowerChuck P

powerful, flexible, universally applicable

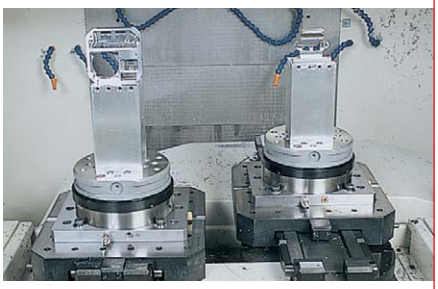
Manufacturing is virtually inconceivable anymore without PowerChucks. Whether on milling or drilling machines, whether on profile-grinding or surface-grinding machines, whether on spindles of dividing heads or lathes: wherever it is, they fit like a glove.

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

Universal combination of EROWA clamping systems with automatic handling.

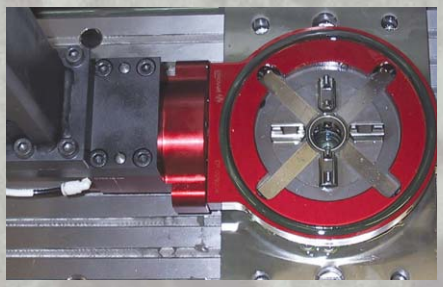
Prepare, clamp and complete the job.

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

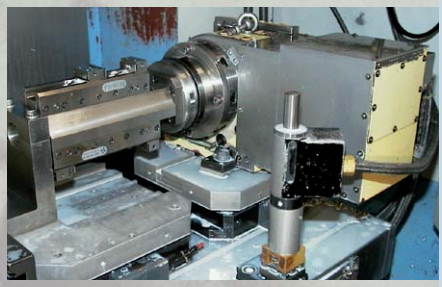


We would like to advise you. Please describe your clamping problem to us.

Practical clamping elements for universal operation.



Automatic loading of the chuck with sealing rings for every EROWA workpiece holder



Horizontal chuck on a dividing head.

Grinding or milling: EROWA PowerChucks are just right.

EROWA®

The components

ER-016010

ER-035154

ER-015042

ER-015899

ER-015777

ER-032819

ER-036658

ER-041912

ER-010742

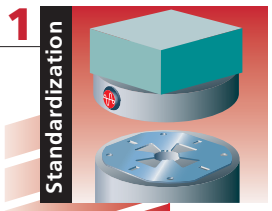
ER-029391

ER-024312

ER-029392

ER-008988

ER-001846



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

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

EROWA PowerChuck P palletizing system

	Page
PowerChuck P Chucks	72
PowerChuck P Workpiece carrier	74
PowerChuck P Auxiliary Equipment	76

For chip-removing processes

For EDM sinking

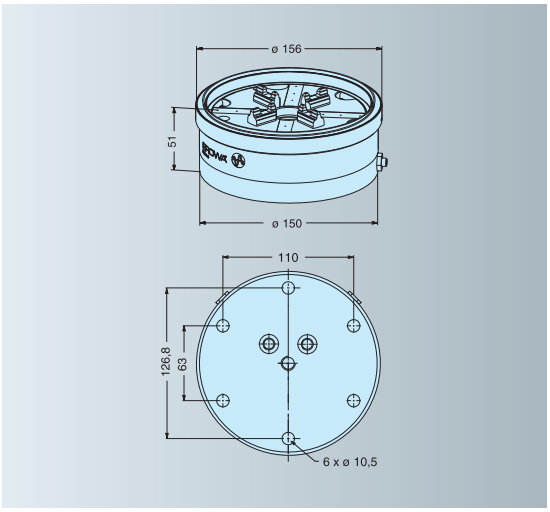
For WEDM

EROWA

Technical data	PowerChuck
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

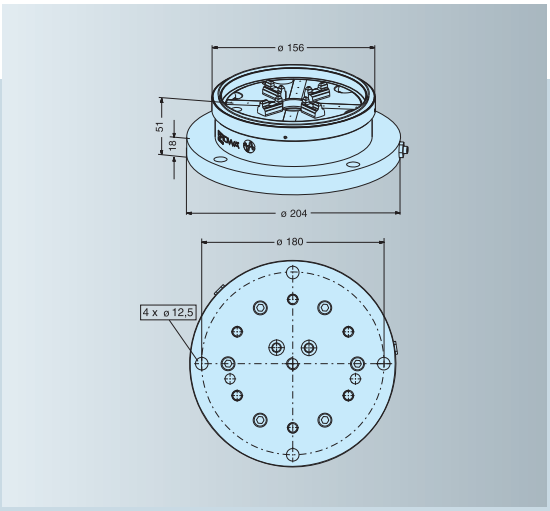
ER-029391 PowerChuck P ø 150

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.



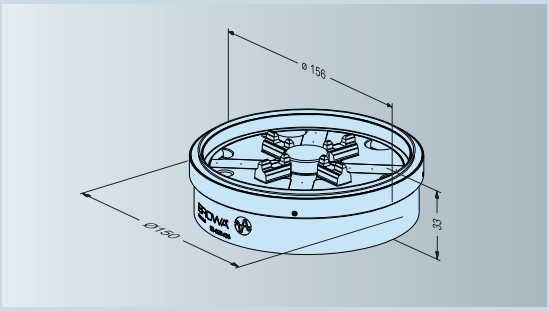
ER-029392 PowerChuck P ø 204

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.



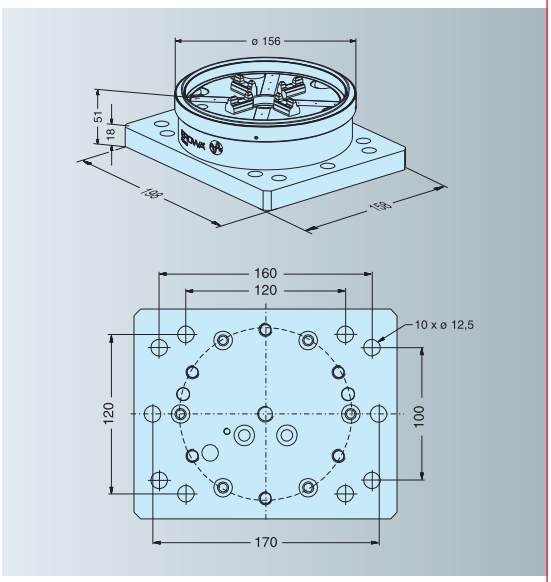
ER-029436 PowerChuck P without base plate

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



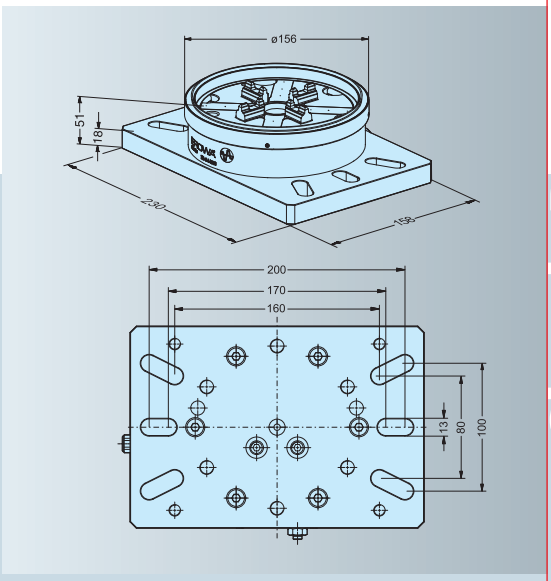
ER-024312 PowerChuck P 158 x 198

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.

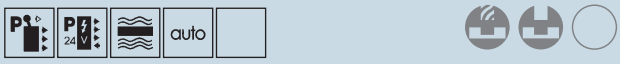


ER-044310 PowerChuck P 158 x 230

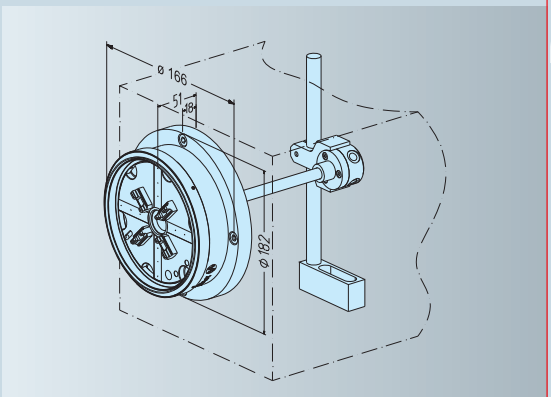
Version Extra-flat version. Height 51 mm.
Base plate 158 mm x 230 mm.
Connections On the side or at the rear with two lines.
Operation With airgun on the side. With control unit through the two lines on the side or at the rear.
Information The borehole pattern of this plate fits 40mm and 50mm T-slot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

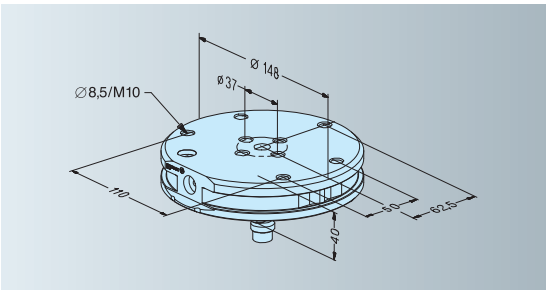


ER-015777 Pallet ø 148 G

ER-032732 Pallet Kit G ø 148 4 pieces

INOX | auto | 148

Version Standard type, ground centering plates.
Application To accommodate workpieces and fixtures in chip-cutting machining processes.
Mounting Through pallet with M8 bolts or through blank with M10 bolts.

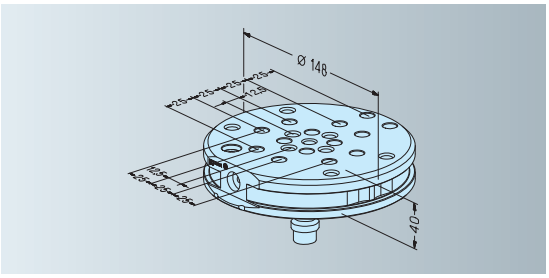


ER-015899 Pallet ø 148 G R25

ER-033053 Pallet Kit ø 148 G R25 4 pieces

auto | 148

Version Steel, nitride coated, with borehole pattern 25, ø 10 F7, thread M10.
Application To accommodate EROWA ClampSet Base 220 or specially constructed fixtures and gauges.

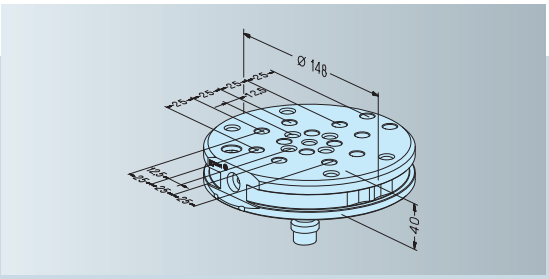


ER-015042 Pallet ø 148 MS ALU R25

ER-033051 Pallet Kit ø 148 MS ALU R25 4 pieces

auto | 148

Version Body of casted aluminum with borehole pattern 25, ø 10 F7, thread M10.
Application Palletizing of workpieces and electrodes, mounting of fixtures and ClampSet Base 220.
Mounting Through pallet with M8 bolts or through blank with M10 bolts.

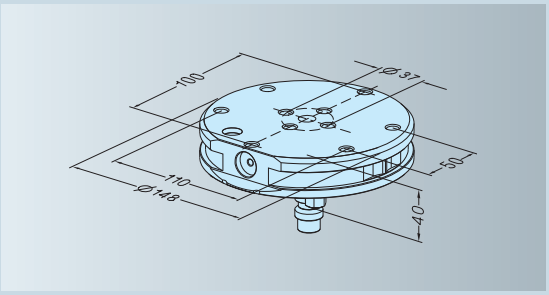


ER-041912 Pallet P ø 148 Inox

ER-041924 Pallet Kit P ø 148 Inox 4 pieces

INOX | auto | 148

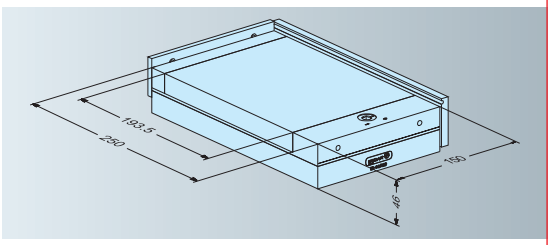
Version Steel, corrosion-resistant. Centering integrated in the pallet.
Application For use on all EROWA PowerChucks P and Production-Chuck 210 Combi. To accommodate workpieces and fixtures in chip-cutting machining processes.
Mounting Through pallet with M8 bolts or through blank with M10 bolts.



ER-038189 ITS magnetic clamping plate permanent 250 x 150 x 46

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.



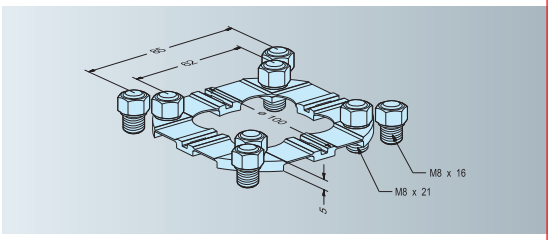
ER-036658 Centering plate G Inox 5 pieces

INOX

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.

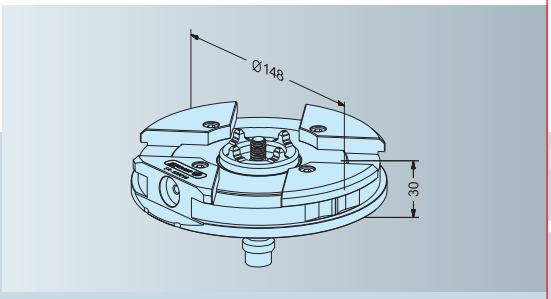


ER-022250 Adapter pallet ITS 50 / ø 148

INOX auto 148

Version ITS system size 100.
Lock with central M 10 locking bolt.

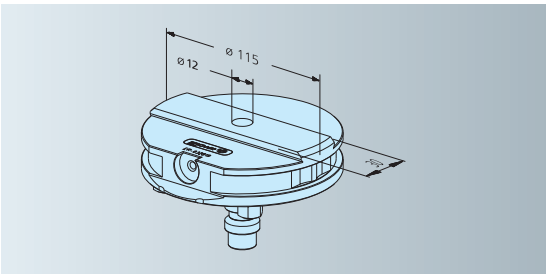
Application To accommodate ITS Electrode holders system 50.
Lock with central M10 locking bolt.
For automatic handling.



More workpiece carriers for the EROWA PowerChuck P palletizing system you will find on page: 112.

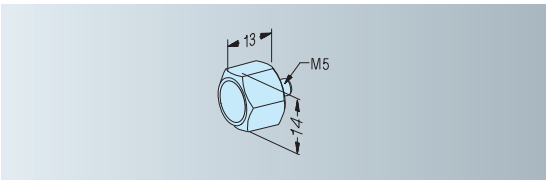
Auxiliary Equipment

ER-032819 Alignment pallet ø 115



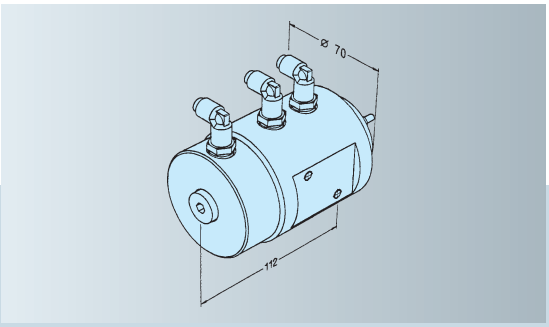
Version Pallet ø 115 mm, alignment length 110 mm, center borehole ø 12 mm.
Application Alignement of radial, axial and angular position of ITS chucks, PowerChuck P and PC 210 Combi chucks.

ER-035154 EWIS™ chip with holder SW14



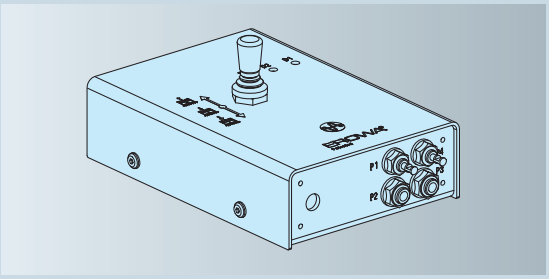
Version Sleeve fitting with built-in datacarrier.
EWIS chip: read only.
Application In any EROWA electrode holder and pallet which have been prepared for it.

ER-011362 Twin rotatable pneumatic connector
ER-011412 Triple rotatable pneumatic connector



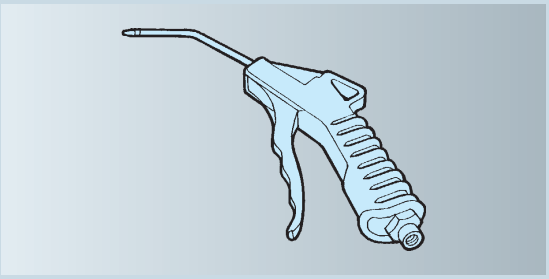
Version Non machine specific connection flange. Two (three) air lines.
Max. speed: 6000 rpm.
Max. operating pressure: 10 bar.
Application Air supply to EROWA chucks on rotatable spindles.
Operation Only operate when spindle is at stand still!

ER-008988 Manual control unit



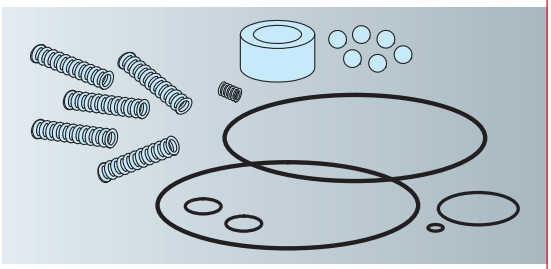
Version Manual valve to control all the functions of ITS, ITS Compact CombiChuck, PowerChuck P and UPC: opening/reclamping/cleaning.
Application Operation of chucks on machines.

ER-001846 Air jet



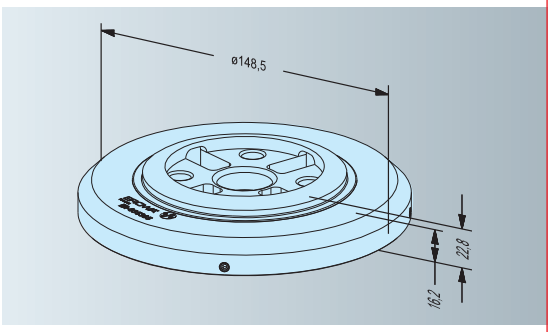
Version Plastic, smooth regulation of air flow, connection 1/4", inside thread.
Application Operation of manual chucks.

ER-015962 Repair kit PowerChuck P



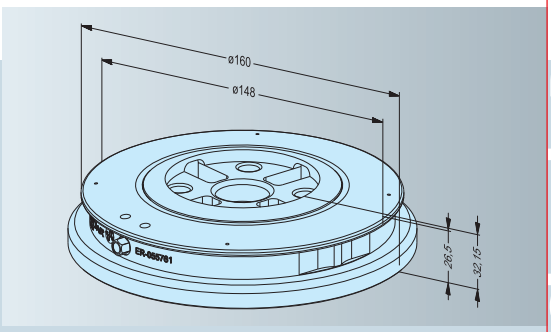
Version All the wear parts of PowerChuck P.
Application Dismantle chuck according to instructions supplied, replace parts.
Please note Every chuck is supplied with instructions. Please keep in a safe place.

ER-035365 Seal 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



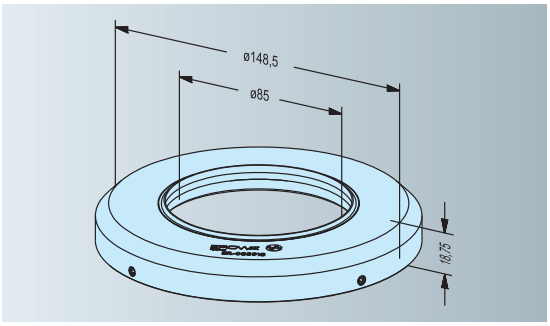
INOX | auto | 148

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

EROWA®

ER-038918 Seal ring PowerChuck P / ø 85

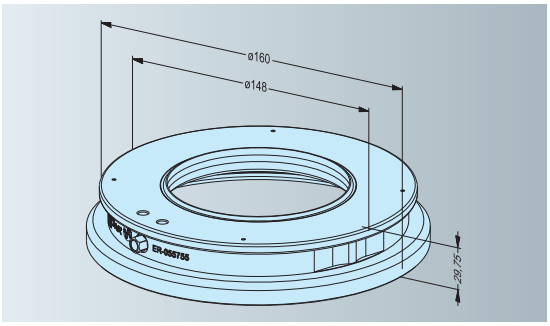
Version Aluminium anodized.
Application Prevents penetration of chips and dirt into the PowerChuck P by application of EROWA pallets PM85.



ER-055755 Sealing ring for pallet PM85 PowerChuck P

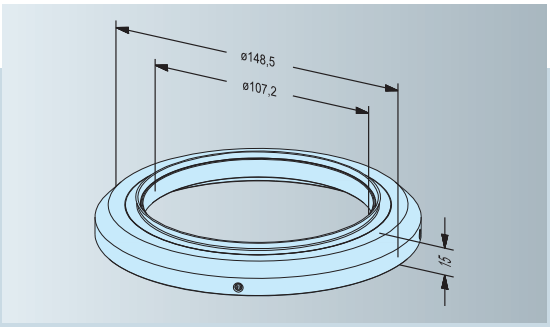
INOX | auto | 148

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



ER-016142 Seal ring holder ø 115

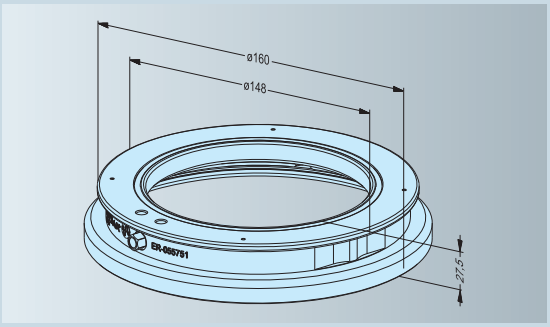
Version Aluminium anodized.
Application Prevents penetration of chips and dirt into the Power-Chuck P by application of EROWA ITS pallets ø 115.



ER-055751 Sealing ring for pallet ø115 PowerChuck P

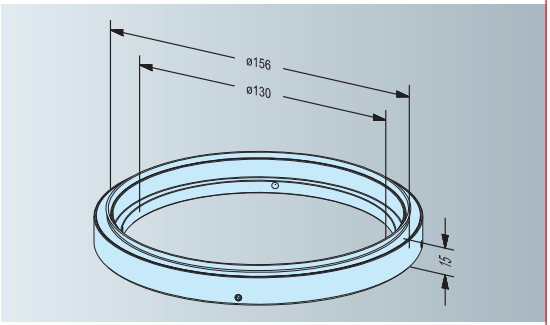
INOX | auto | 148

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 Seal nipple holder ø 148 for sealingring with sealing lip

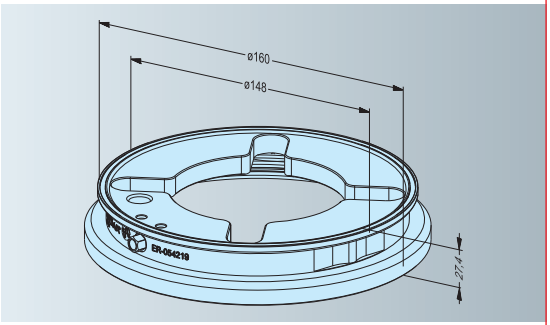
Version Steel black oxide coated.
Application Prevents penetration of chips and dirt into the PowerChuck P by application of EROWA ITS pallets ø 148.



ER-054219 Sealing ring for pallet ø148 PowerChuck P

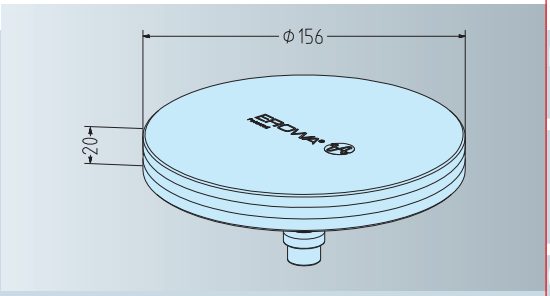
INOX auto 148

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



ER-008972 Cover for PowerChuck P

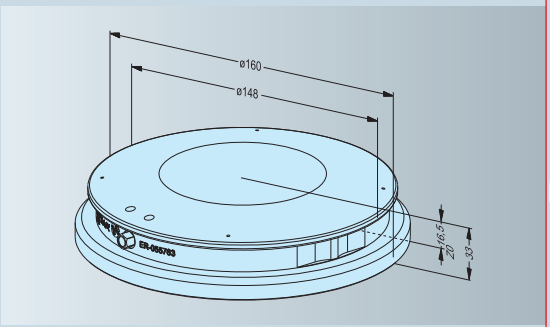
Version Aluminum. Without centering plate and supports.
Application Protects the PowerChuck P from chips and cooling water when not in use.



ER-055763 Cover to PowerChuck P

INOX auto 148

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

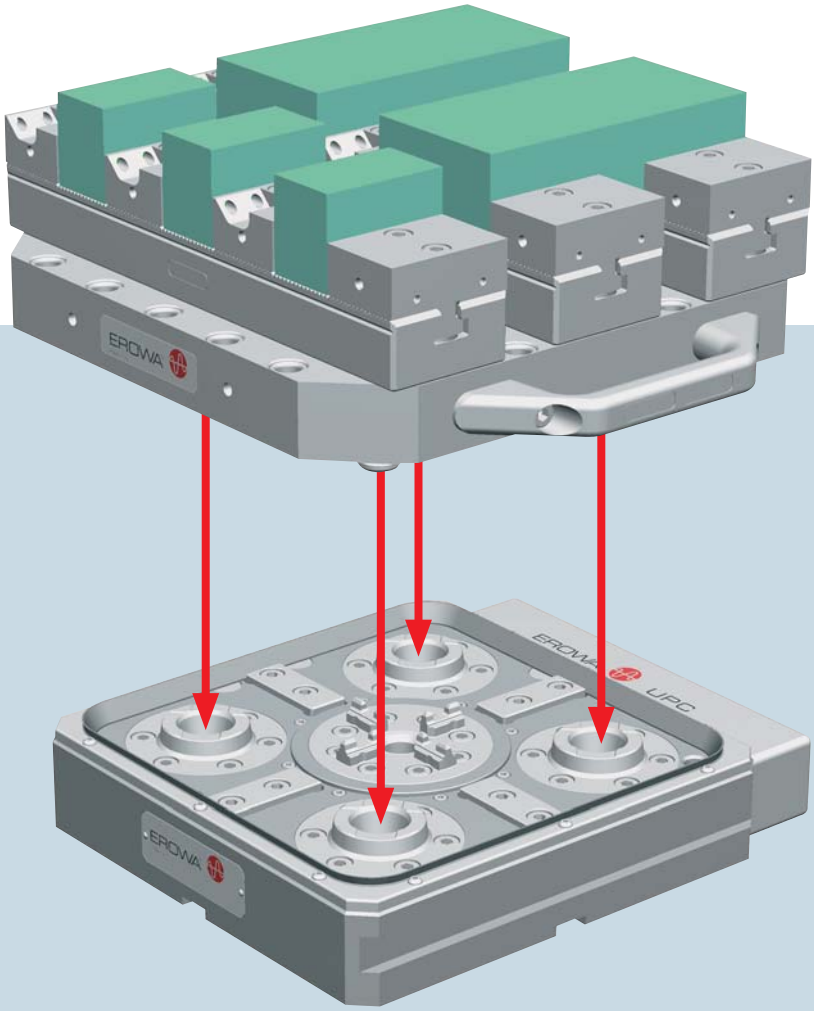


EROWA®

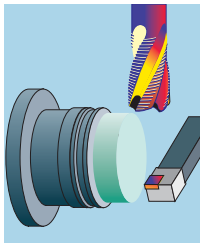
EROWA ClampSet

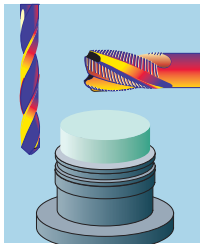
EROWA ClampSet is the modular system for clamping workpieces. It is universally applicable throughout the EROWA Manufacturing Concept.

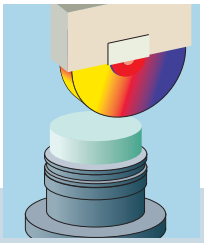
- The ClampSet offers enormous flexibility. A great number of various precise clamping elements are available.
- It serves to clamp both machined workpieces and blanks.
- A variety of jaws enable many different workpiece forms to be clamped.
- A maximum clamping range of 225 mm also provides room for large workpieces.
- Workpieces are set up and preset outside the machine; this makes for an optimal use of time and cuts costs.
- Once the ClampSet has been palletized, it is immediately suitable for the automatic loading of machines.

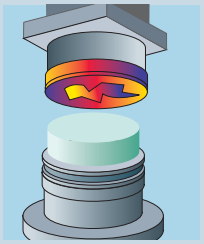


Applications

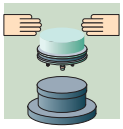

Milling/Turning


Drilling/Milling

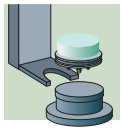

Grinding


EDM sinking

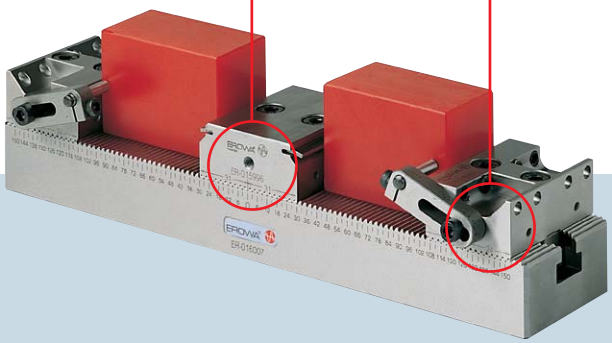
Handling


Manual

Loading facility


Robot

Function



ClampSet Block N:
the pull-down jaw in combination with the ClampSet Standard Block offers the ideal pull-down effect.

ClampSet Stop:
the lateral stop can be attached to any ClampSet jaw.

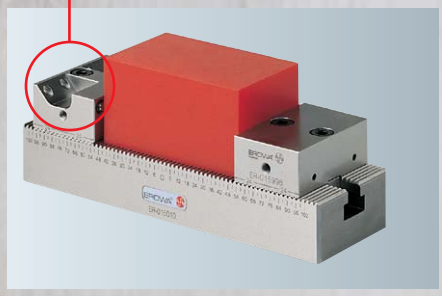
Technical data

	ClampSet Base 220	ClampSet Base 320
Clamping range	max. 126 mm	max. 225 mm
Material	steel, hardened, ground	

EROWA®

EROWA ClampSet – modular, flexible, precise

Whether it´s drilling, milling, grinding or EDM, ClampSet will reduce set-up times.

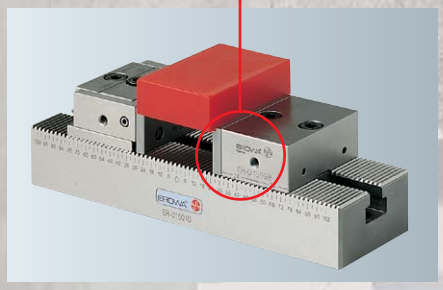


The Standard Block with 4 ball pressure bolts at an angle of 3° to the base surface for an optimal pull-down function.

Base 220, ClampSet Standard Block and ClampSet Block F (hard jaw) to clamp blanks. For ClampSet Block S (soft jaw), see page 90.

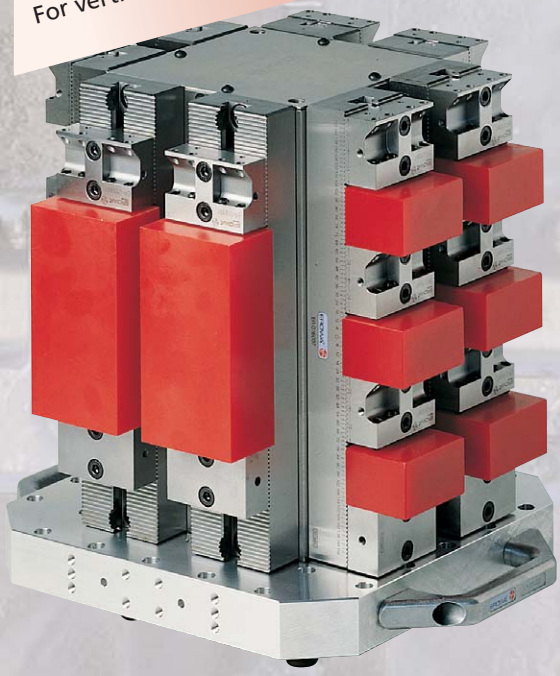
Flexible
For vertical and horizontal use.

Support N; to clamp flat, low workpieces.

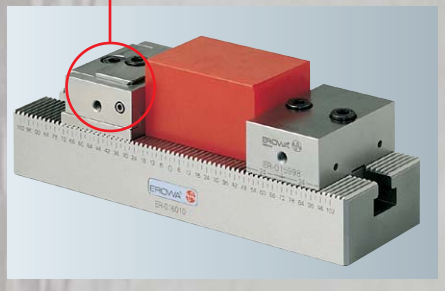


Base 220, ClampSet Slide, Block F and Support N (in two parts). For additional workpiece supports, see pages 90/91.

Universal
Adapted elements for use throughout the EROWA Manufacturing Concept.



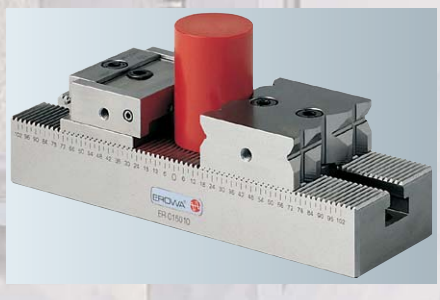
The multiple fixture on Cube and the UPC pallet for horizontal machining.

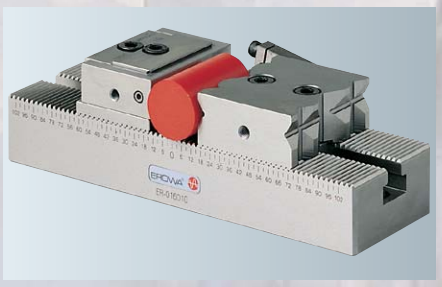


ClampSet Slide; the precision clamping jaw for multiple clamping.

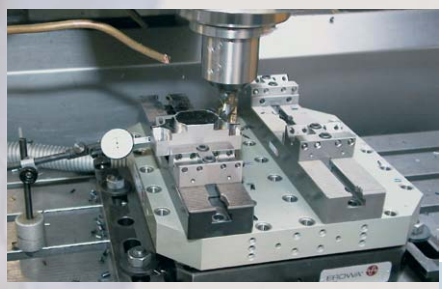
Base 220, ClampSet Slide and Block F to clamp machined parts (grinding vise).

Automatic
To load machine tools automatically.

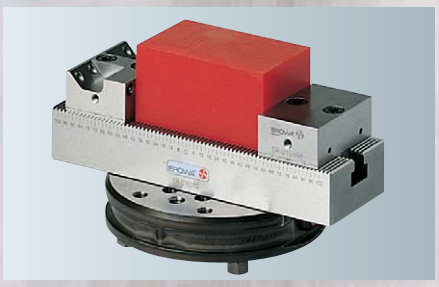




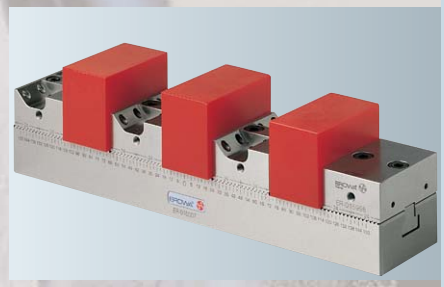
Base 220, ClampSet Slide and prismatic jaw to clamp various cylindrical parts, both horizontally and vertically.



ClampSet vise on ITS pallet. Positioning to µ-accuracy and ready for use within seconds.



A fixture with Base 220 on an ITS pallet ø 148 mm.



Base 320 with 3 ClampSet Standard Blocks and Block F for multiple fixtures.

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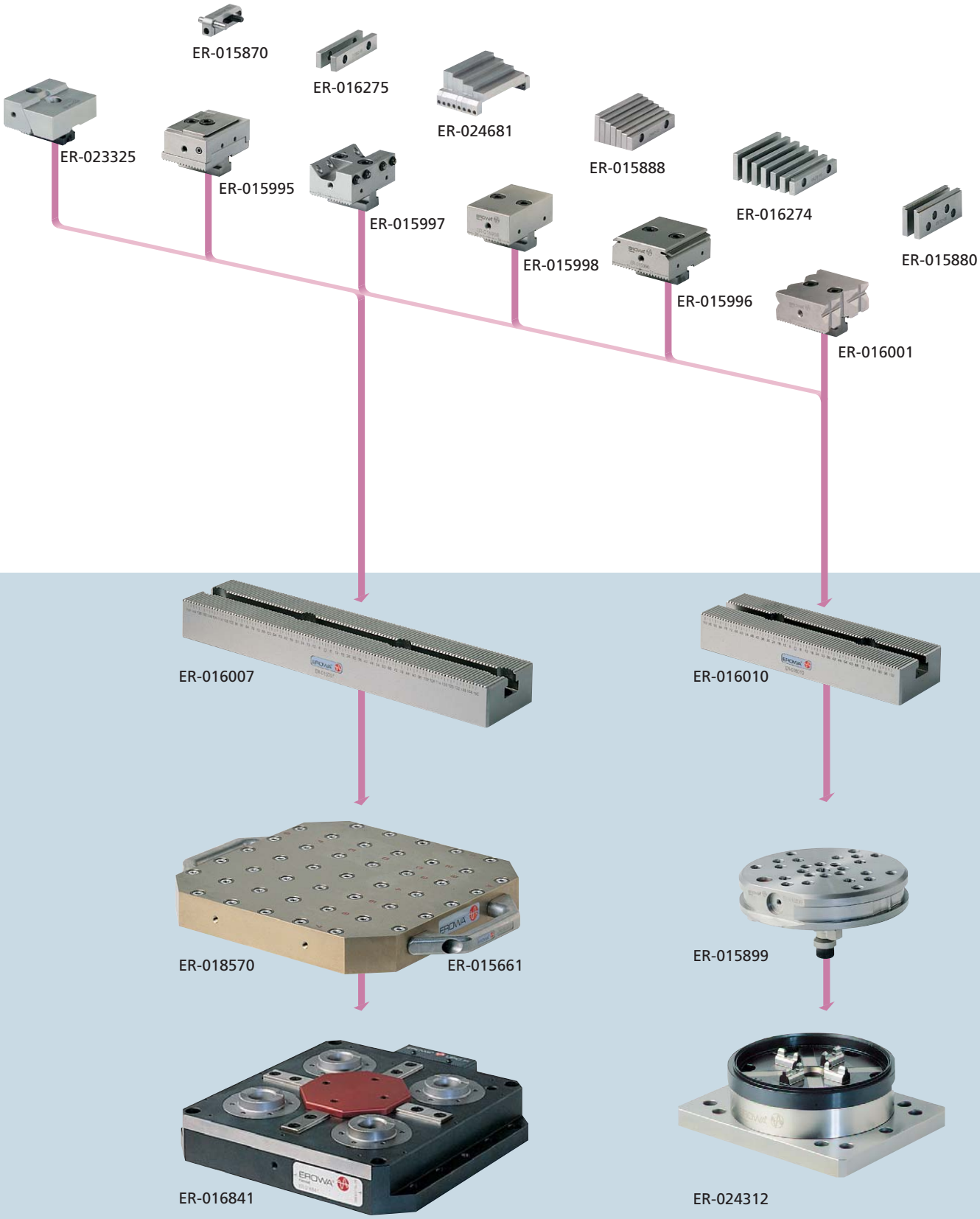
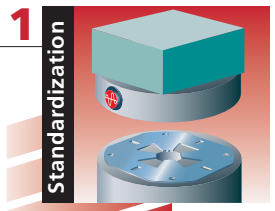
The components





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 Combi gripper
12. Handling with EROWA Robot gripper 72
13. Handling with EROWA Robot gripper 115
14. Handling with EROWA Robot gripper 148
15. Handling with EROWA gripper RN PC 210
16. Handling with EROWA RCS gripper

For chip-removing processes

For EDM sinking

For WEDM

EROWA ClampSet

	Page
ClampSet technical data	86
ClampSet Base	88
ClampSet clamping elements	89

EROWA

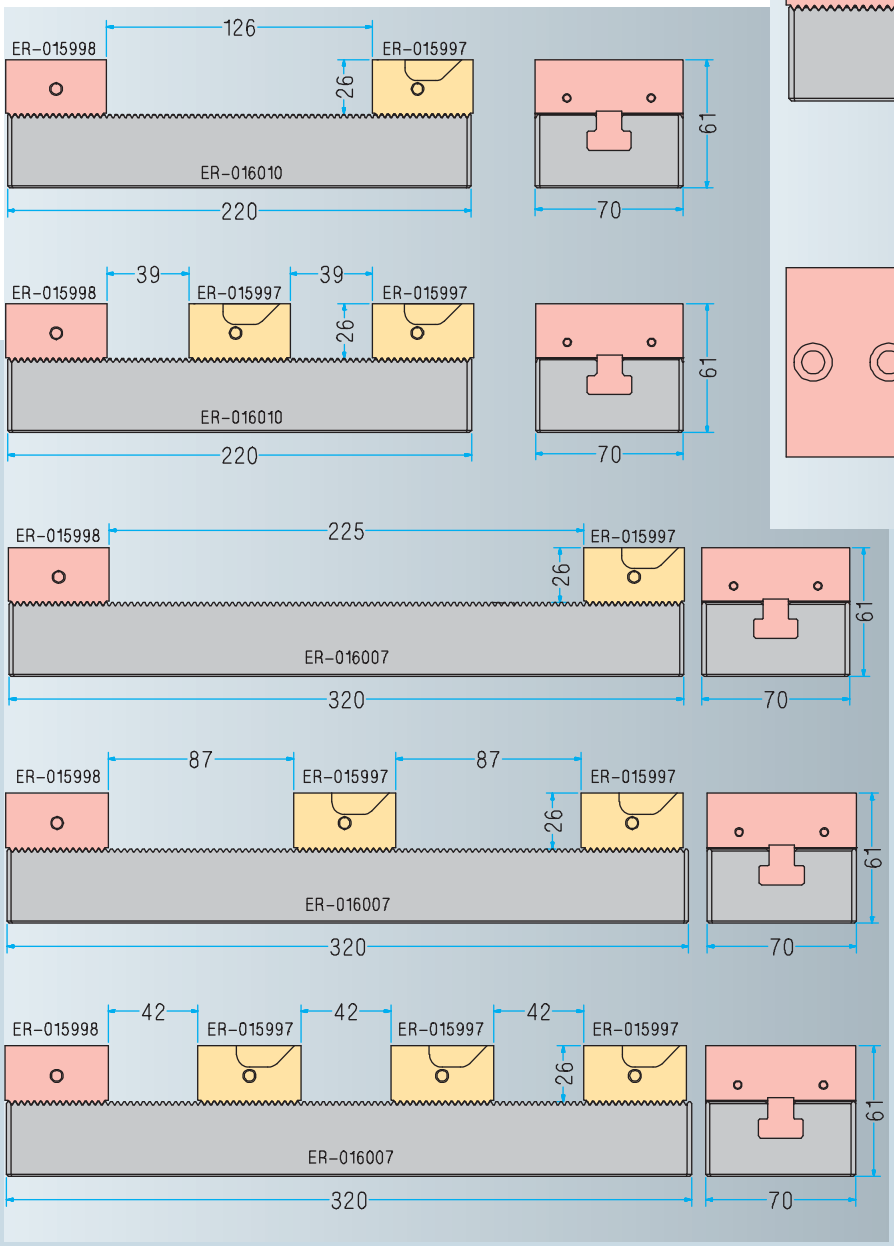
Application ClampSet Standardblock

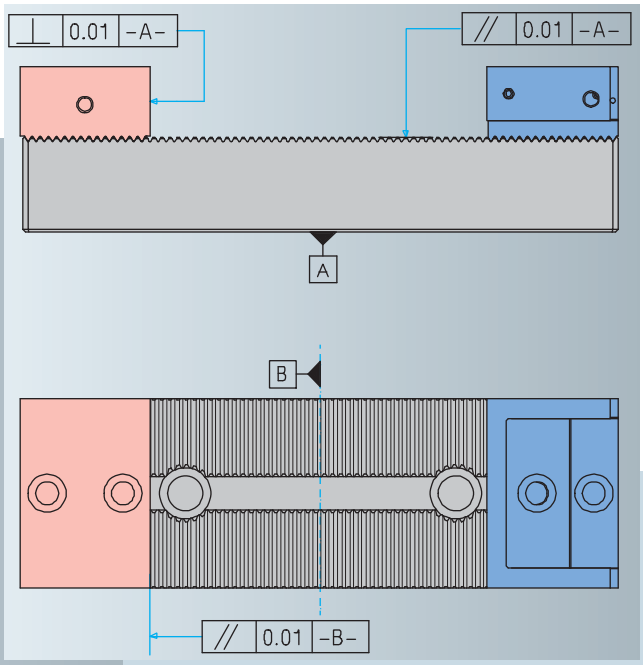
ER-015997	**ClampSet Standardblock**
ER-015998	**ClampSet Block F**
ER-016010	**ClampSet Base 220**
ER-016007	**ClampSet Base 320**

ClampSet Standard Block	**Clamping power in kg ±10%**		
Number of ball-pressure bolts	at a torque of 5 Nm	10 Nm	15 Nm
2	900	1750	2500
4	1450	2750	3900

For the sake of clamping precision and safety, it is very important to tighten the bolts with a torque wrench.

Data given are guiding values, which may be impaired by dirt and other environmental influences.



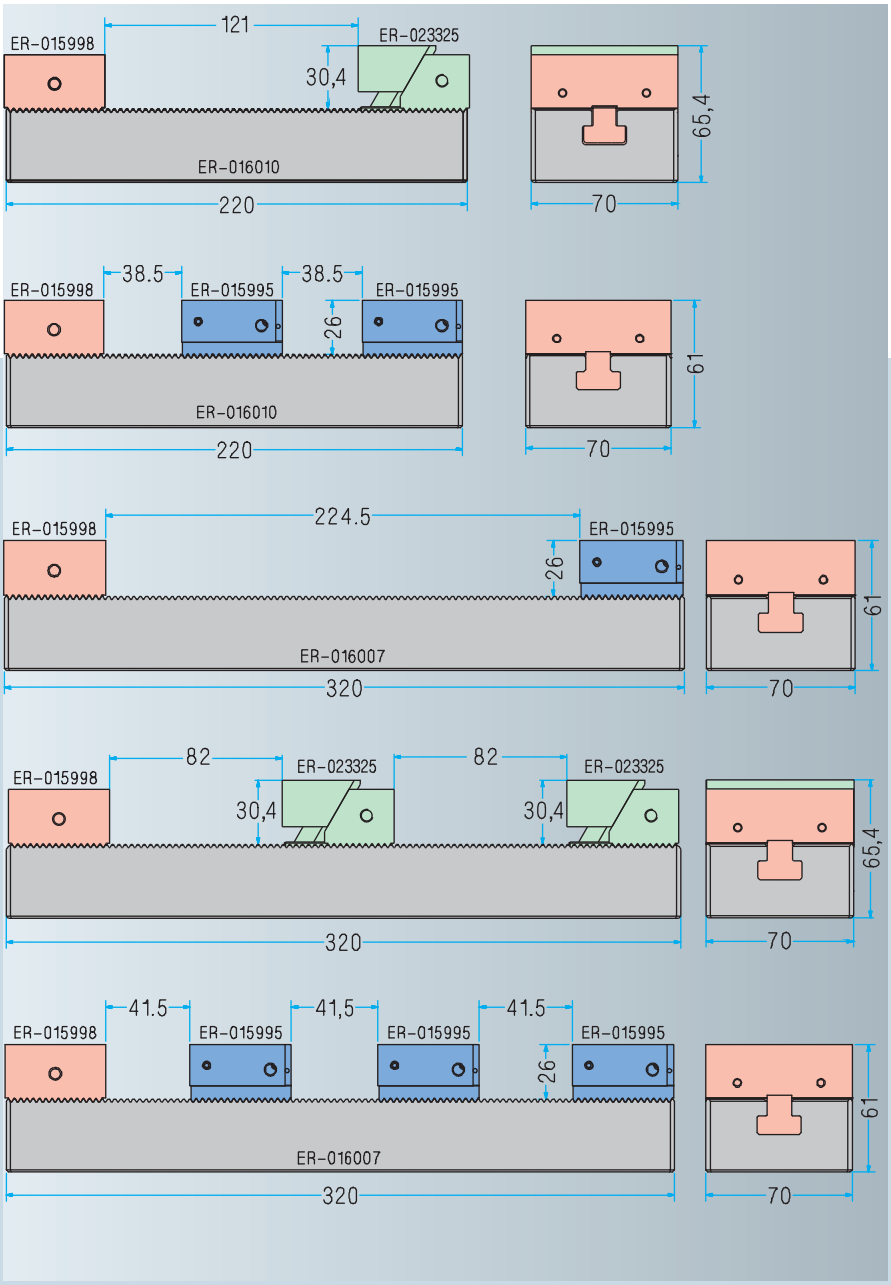


Position tolerances

Application ClampSet Slide/Jaw

ER-015995	**ClampSet Slide**
ER-023325	**ClampSet Jaw**
ER-015998	**ClampSet Block F**
ER-016010	**ClampSet Base 220**
ER-016007	**ClampSet Base 320**

	Clamping power in kg ±10% at a torque of			
	5 Nm	10 Nm	15 Nm	20 Nm
ClampSet Slide	250	500	750	1000
ClampSet Jaw	300	600	900	1200



Modular
Different clamping jaws for many workpiece shapes.

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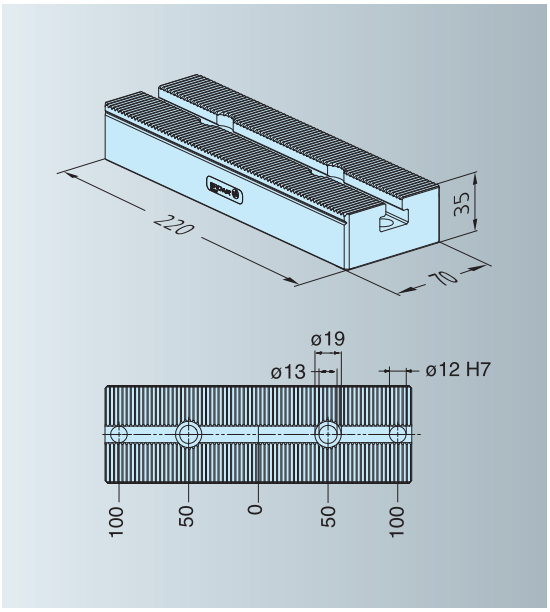
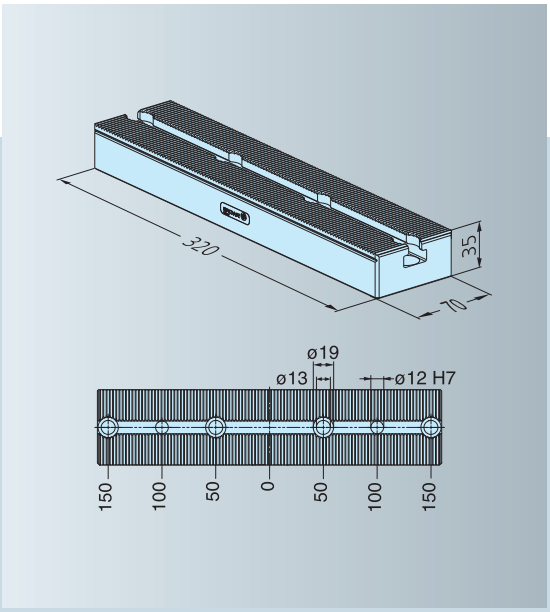
ER-016010 ClampSet Base 220

Version	Steel, hardened, ground. Clamping element carrier with 3 mm positioning grid.
Application	On ITS pallets 148 with 25 mm grid and on UPC pallets with 50 mm grid, as a base for the various ClampSet clamping jaws.
Mounting	On all EROWA grid pallets.
Note	R40 subject to consultation.



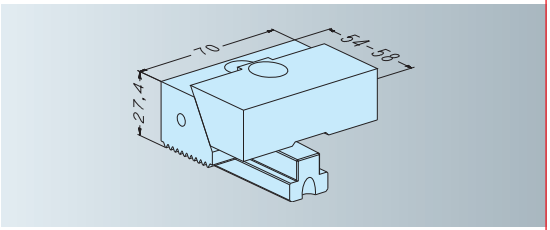
ER-016007 ClampSet Base 320

Version	Steel, hardened, ground. Clamping element carrier with 3 mm positioning grid.
Application	On UPC grid pallets R50 or Cube R50, as a base for the various ClampSet clamping jaws.
Mounting	On EROWA UPC and MTS grid pallets R50 or Cube R50.
Note	R40 subject to consultation.



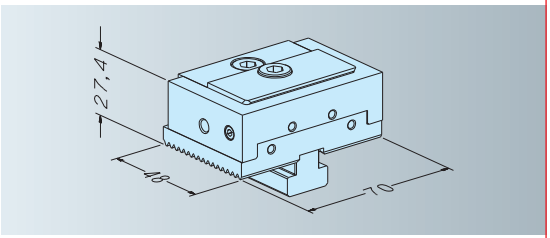
ER-023325 ClampSet Jaw

Version	Steel, hardened, including tenon block for attachment.
Application	To clamp workpieces with machined surfaces.
Mounting	On ClampSet Base 320 or 220 with tenon block supplied.
Note	Favorably priced alternative to the Clamp Set Slide. The fixed stop side enables multiple fixtures.



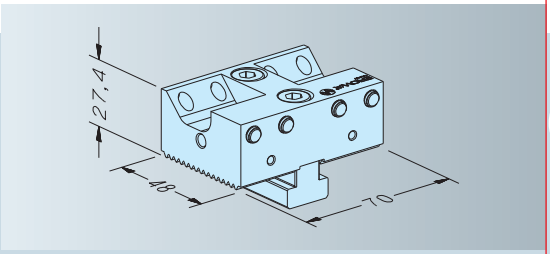
ER-015995 ClampSet Slide

Version	Steel, hardened, incl. T-nut for fixation.
Application	To clamp workpieces with machined sides.
Mounting	On ClampSet Base 320 or 220 with the T-nut supplied.
Note	Fixed stop side for the multiple fixture of machined workpieces. The precision clamping jaw in the ClampSet system.



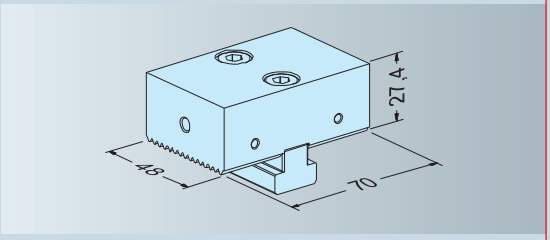
ER-015997 ClampSet standard block M8

Version	Steel, hardened, incl. T-nut for attachment.
Application	The blanks are clamped with the M8 stud bolts. A clamping jaw in EROWA´s modular vise system.
Mounting	On ClampSet Base 320 or 220 with the T-nut supplied.
Note	The fixed stop side allows for multiple fixtures.



ER-015998 ClampSet Block F

Version	Steel, hardened, incl. T-nut for attachment.
Application	Hard jaw in EROWA´s modular vise system.
Mounting	On ClampSet 320 or 220 with the T-nut supplied.



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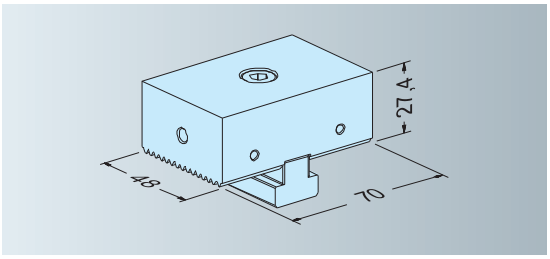
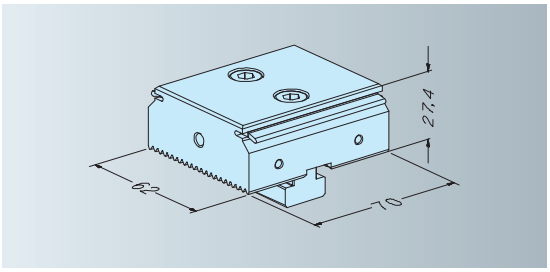
ER-015999 ClampSet Block S steel soft

Version	Steel, soft, incl. T-nut for attachment.
Application	The soft block serves to produce a workpiece-specific hard jaw.
Mounting	On ClampSet 320 or 220 with the T-nut supplied.



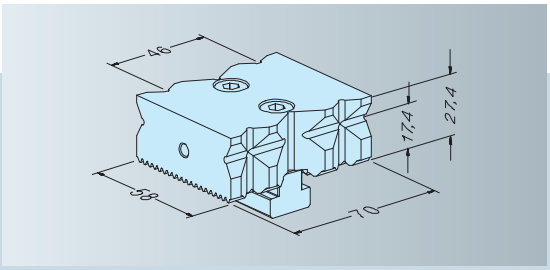
ER-015996 ClampSet block N Pull-down jaw

Version	Steel, hardened, incl. T-nut for attachment.
Application	To clamp blanks. Hard jaw in EROWA´s modular vise system.
Mounting	On ClampSet 320 or 220 with the T-nut supplied.
Note	Pull-down function when clamping.



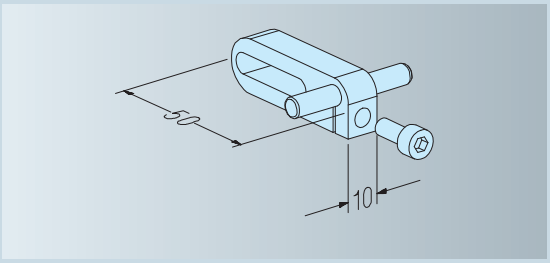
ER-016001 ClampSet Block Prisma

Version	Steel, hardened, incl. T-nut for attachment.
Application	To clamp round parts. Hard jaw in EROWA´s modular vise system.
Mounting	On ClampSet 320 or 220 with the T-nut supplied.



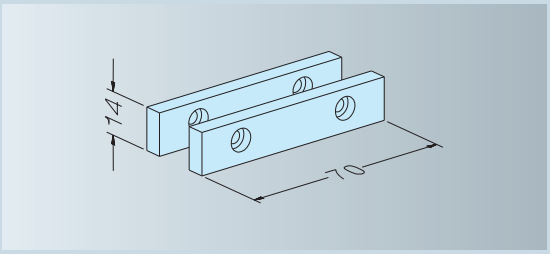
ER-015870 ClampSet Stop adjustable stop

Version	Adjustable stop, steel.
Application	Lateral stop for every ClampSet element.
Mounting	Laterally to the relevant ClampSet block with the bolts supplied.

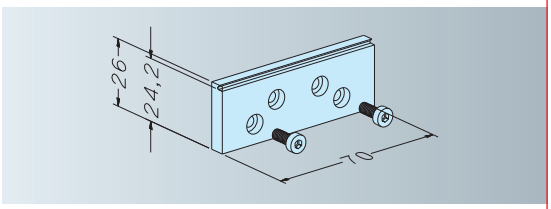


ER-016275 ClampSet Support Kit 14mm

Version	Ground support (1 pair), 14 mm high, with four bolts.
Application	Support for the height positioning of workpieces.
Mounting	To the ClampSet Standard Block with the bolts supplied.

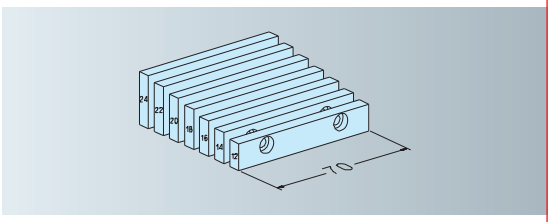


ER-015880 ClampSet Support N 1 pair



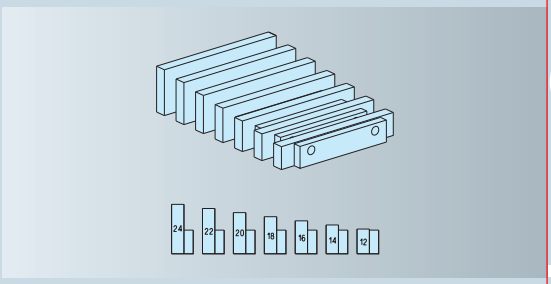
Version	Steel, hardened, ground, with bolts.
Application	Pull-down element for ClampSet Slide and ClampSet Block. To clamp workpieces of aluminum and non-ferrous heavy metal.
Mounting	To ClampSet Slide and ClampSet Block with the bolts supplied.
Note	Also suitable for clamping workpieces of low height.

ER-015888 ClampSet Support Kit, 7 parts



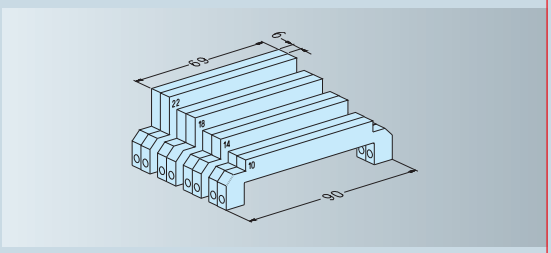
Version	Set of 7 ground supports; 12, 14, 16, 18, 20, 22 and 24 mm high; with bolts.
Application	Supports for the height positioning of workpieces.
Mounting	To the various ClampSet Blocks with the bolts supplied.

ER-016274 ClampSet Support Kit offset, 7 parts



Version	Set of 7 ground, offset supports, with bolts.
Application	Supports for the height positioning of workpieces.
Mounting	To ClampSet Slide with the bolts supplied.

ER-024681 ClampSet Support Set



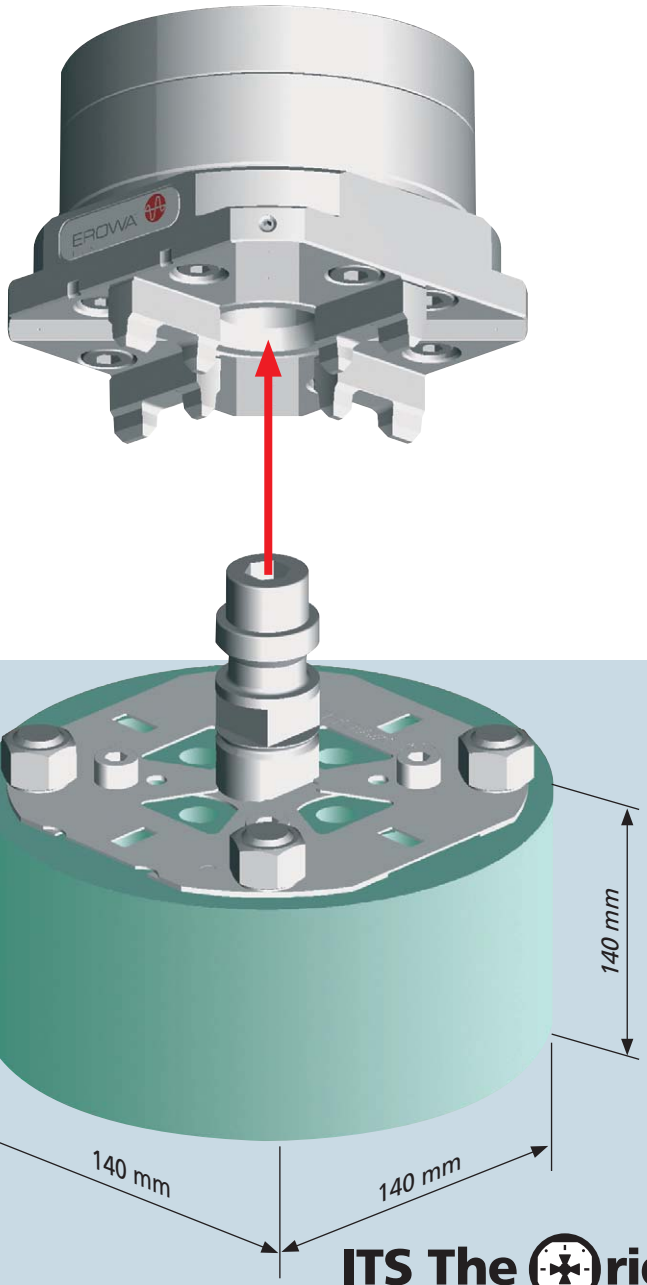
Version	Set of 8 ground supports, heights 10, 14, 18 and 22 mm.
Application	Support for the height positioning of workpieces.
Mounting	The supports are clamped on the base from above.

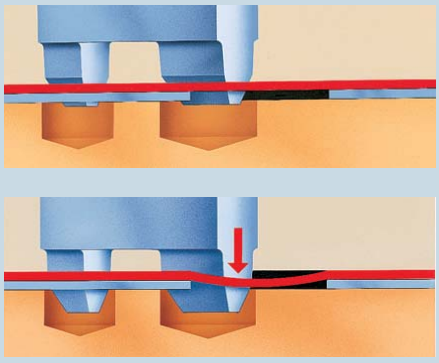
EROWA®

EROWA ITS chuck – simple, practical, good

EROWA's ITS chuck operates on a principle that is as simple as it is ingenious. It holds both tools and workpieces with equal precision and with a high degree of repeatability. Its applications are so numerous that it forms the basis for a well thought-out modular tooling system.

- Tens of thousands of ITS chucks are in daily operation worldwide - with their guaranteed 2-µm accuracy and with a reliability they have earned for themselves in practical working application.
- Integrated on milling, grinding and drilling machines, on EDM sinking and WEDM centers or on measuring and presetting stations, ITS helps us week after week to achieve a profitable use of production time.



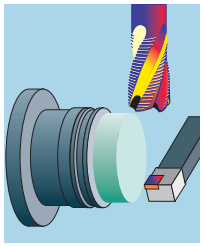


The two pictures illustrate the ITS patent. After a rough precentering process, the reference position is only reached when the centering plate is flexed. Together with the contact points, this flexing action creates the stability of the frictional connection. This is how positioning accuracy is created between the flexible centering plate and the rigid centering prisms.

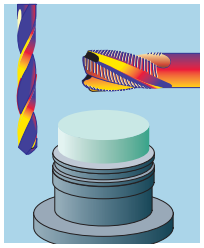
ITS The Original.

Nothing is copied as fast as a pioneering invention. But then a copy always lags behind the times. It won't be different with the next innovative idea. We will ensure that you continue to do well if you invest your money in originals. In originals by EROWA.

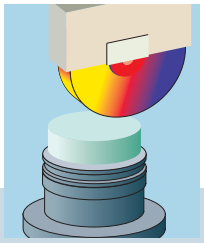
Applications



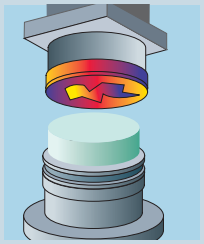
Milling / turning



Drilling / milling



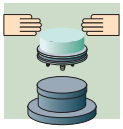
Grinding



EDM sinking

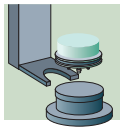
The second important effect: the flexing plate wipes off any dirt. Centering plate and prism only touch on one line. A small contact area also reduces the possibility of interference by chips and dirt particles.

Handling



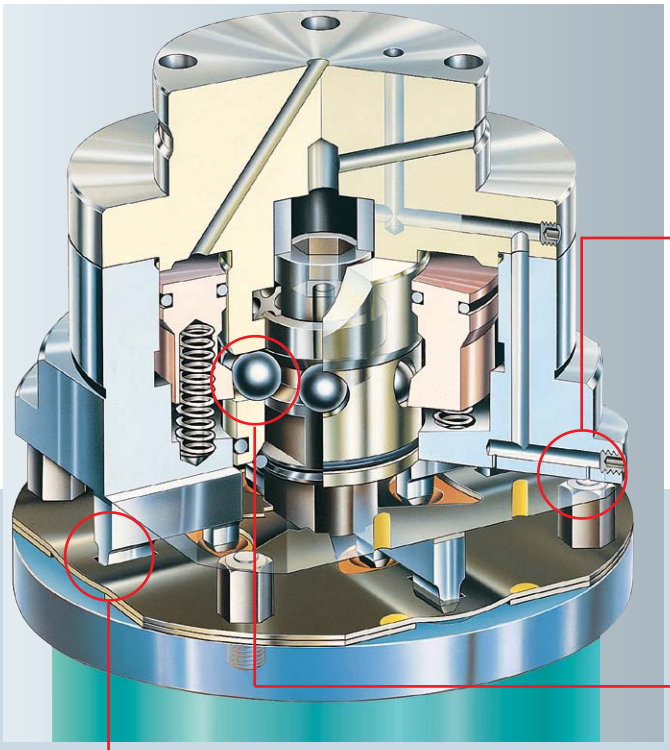
Manual

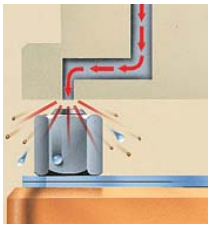
Loading facility



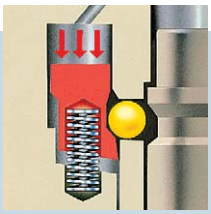
Robot

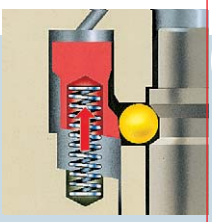
Function





Experience shows that precision and dirt are do not go hand in hand. This is why the contact points of the support feet are cleaned with compressed air at the very moment of clamping. This also functions when the chuck is submerged in liquid.





The reliable clamping mechanism with the self-locking ball lock generates a clamping power of up to 7,000 N (NSF) and does not unlock even if the pressure fails.

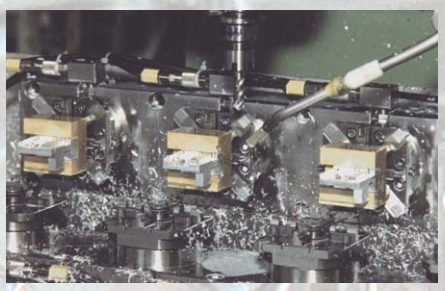
Technical data

	ITS chuck, pneumatic
System sizes	50 and 100
Repeatability	0.002 mm
Indexing	4 x 90°
Clamping power	2,500 N (NSF chuck: 7,000 N)
Recommended workpiece sizes	up to 140 x 140 x 140 mm
Generated by	springs (+ 6 bar NSF chucks)
Opening	compressed air min. 6 bar
Operation	air jet, valve, manual control unit

EROWA®

EROWA ITS chucks – a suitable version for each job

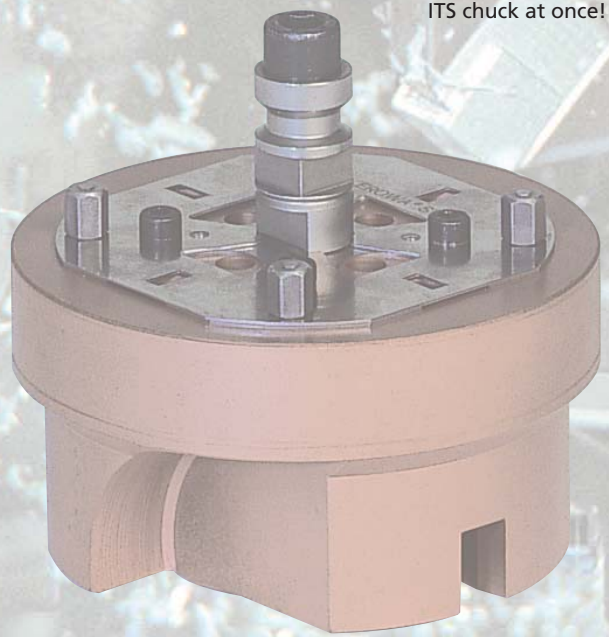
The applications of ITS chucks are as numerous as the jobs to be done in precision mechanics and in tool and mold manufacturing. This is why we offer such a diverse variety of chucks.



Save time
Machine changes and in-process-control without loss of time thanks to fixed reference position.

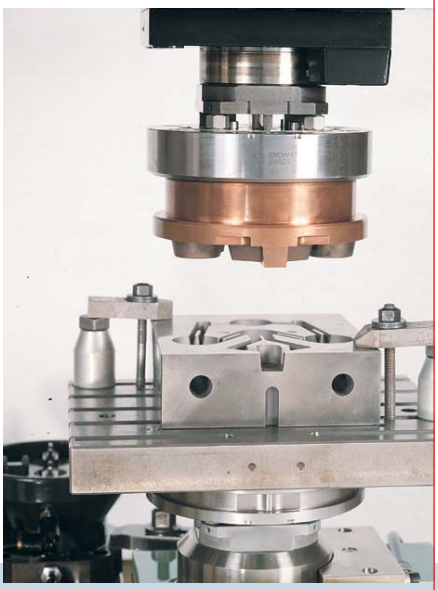
Ideally suitable for milling, drilling, grinding, turning . . .

The centering plate is fitted directly on to the electrode or the workpiece…
…which is then transferred to the ITS chuck at once!



Exploit marginal and night hours by loading EDM machines automatically: ITS provides you with the necessary prerequisites.

Checking outside the machine: quick, simple, precise.



ITS chucks: Perfectly suited for integration in special fixtures.

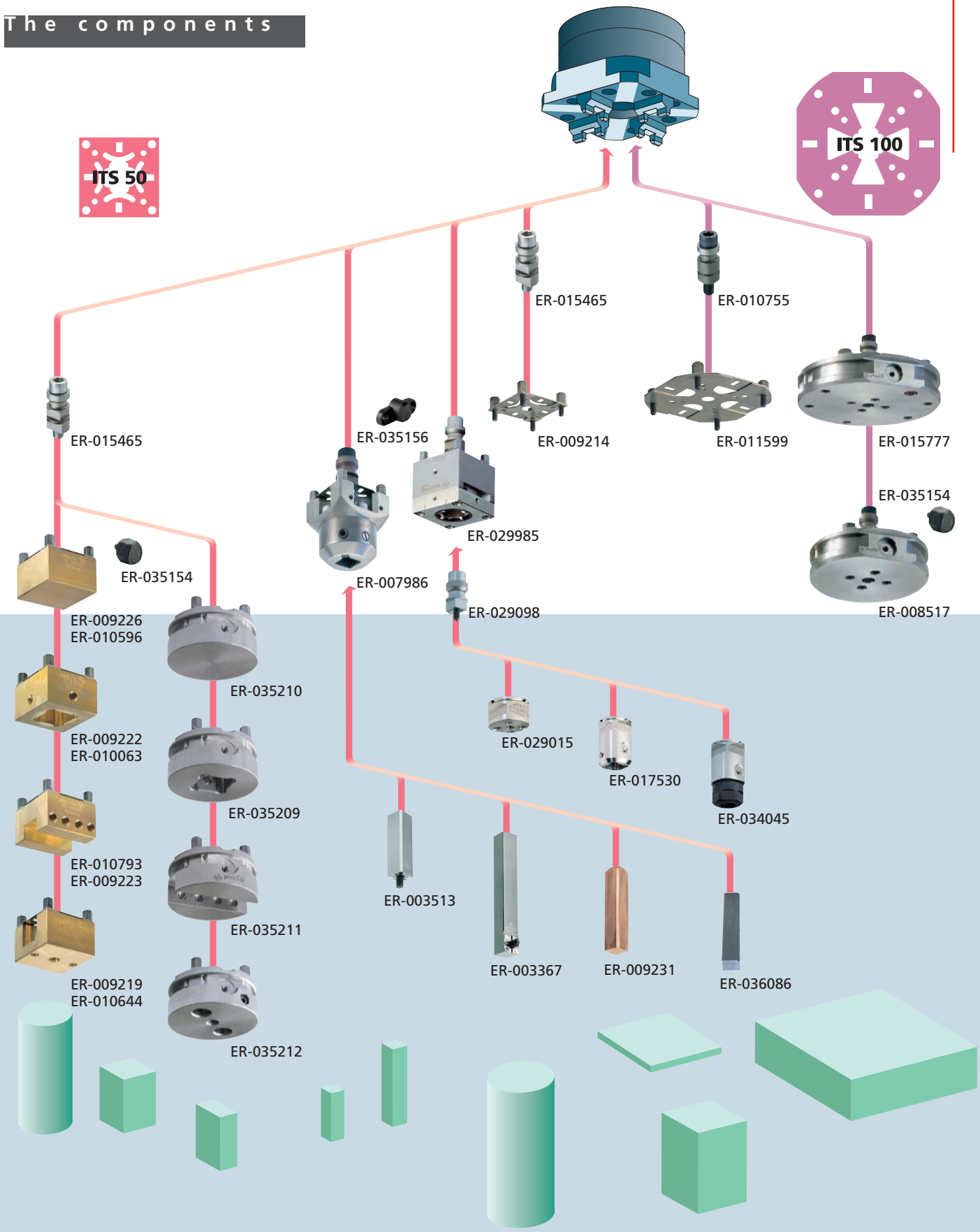
Precision and reliability in the tank and on the quill of the EDM machine.

Loading machines with preset parts will increase your capacity.

EROWA®

ITS

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 Combi gripper
12. Handling with EROWA Robot gripper 72
13. Handling with EROWA Robot gripper 115
14. Handling with EROWA Robot gripper 148
15. Handling with EROWA gripper RN PC 210
16. Handling with EROWA RCS gripper

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For chip-removing processes

For EDM sinking

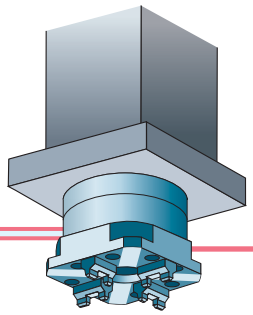
For WEDM

EROWA

The chucks

Pneumatically activated

ER-001846 ER-010590 ER-010538 ER-008988



Quill chucks

ER-007523 ER-007521 ER-007580

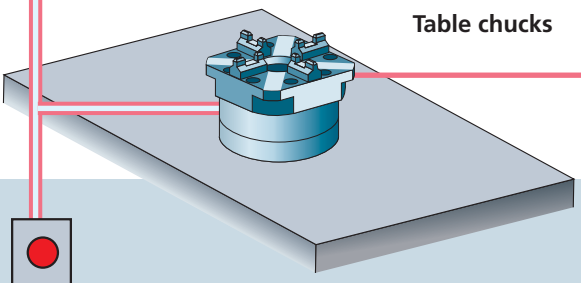
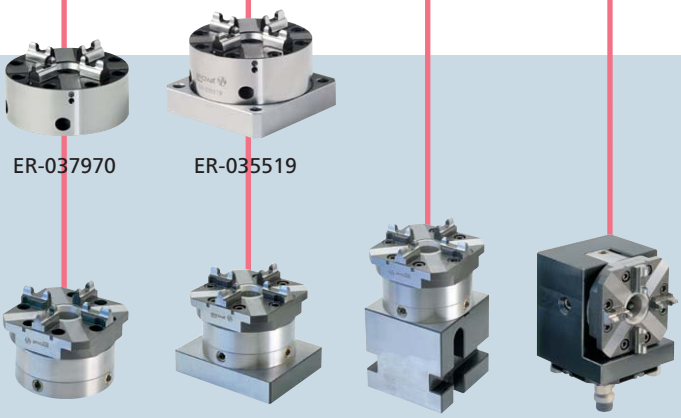
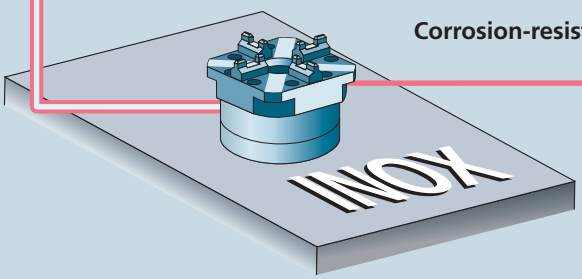


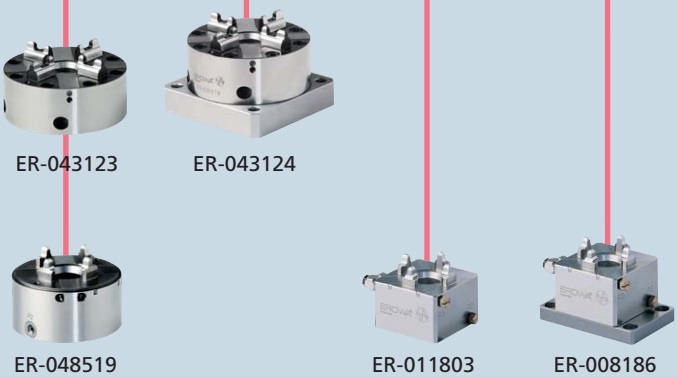
Table chucks



ER-037970 ER-035519 ER-007604 ER-012299 ER-012297 ER-007612



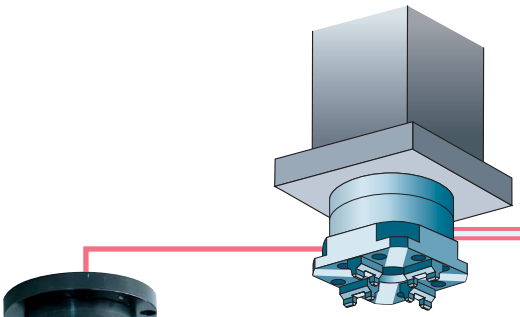
Corrosion-resistant table chucks



ER-043123 ER-043124 ER-048519 ER-011803 ER-008186

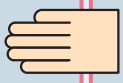
Mechanically activated

Quill chucks

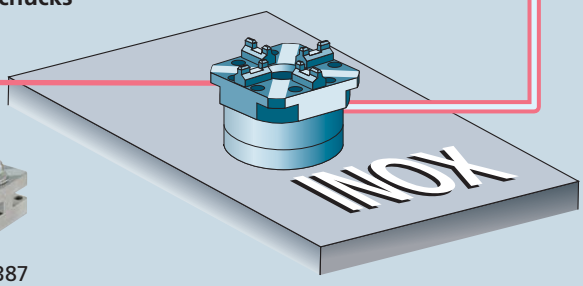


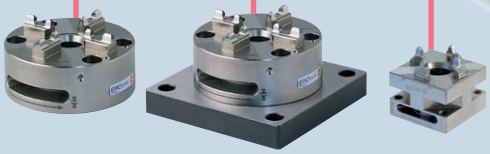
ER-038826

ITS - the original
Tens of thousands in successful operation and patented worldwide since 1984.



Corrosion-resistant table chucks





ER-036345 ER-038824 ER-034387

ITS

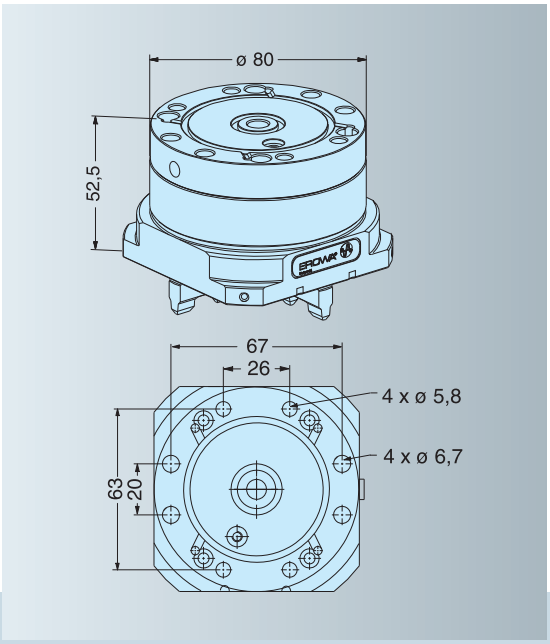
EROWA®

EROWA ITS chucks
pneumatic, quill

Technical data	Chuck	Chuck «NSF» (with reclamping)
Repeatability	0.002 mm	0.002 mm
Indexing	4 x 90°	4 x 90°
Generated by	springs	springs
Opening	min. 6 bar	min. 6 bar
Reclamp		min. 6 bar

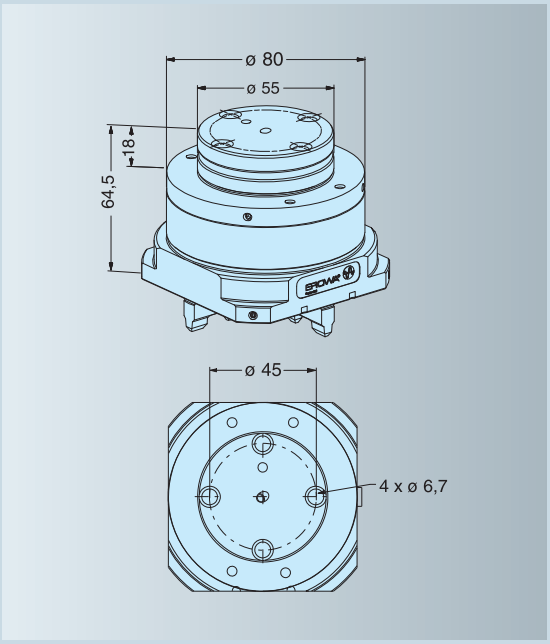
ER-007521 Rapid-action chuck automatic

Version Standard type. Clamping power up to 2500 N.
Connections On back.
Application EDM sinking machines with automatic electrode change, machine tools with automatic loading, production lines.



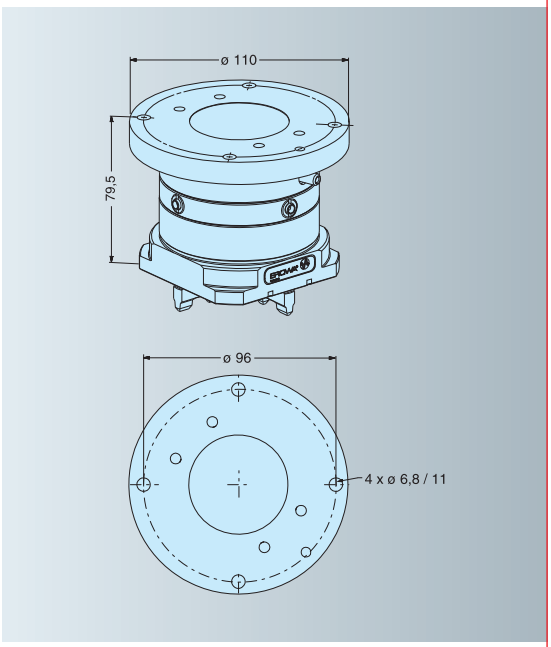
ER-007523 Rapid-action chuck automatic

Version Shoulder for flushing connection. Clamping power up to 2500 N.
Connections On back.
Application EDM sinking machines with automatic electrode change.



ER-007580 Manual rapid-action chuck

Version With flange ø 110 mm. Clamping power up to 2500 N.
Connections Hose coupling fitting on side.
Application Retrofitting on EDM sinking machines.

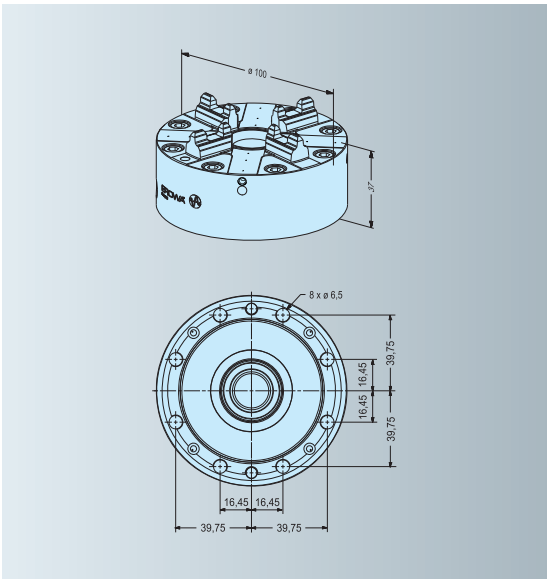


EROWA ITS chucks

pneumatic, table, able to automate

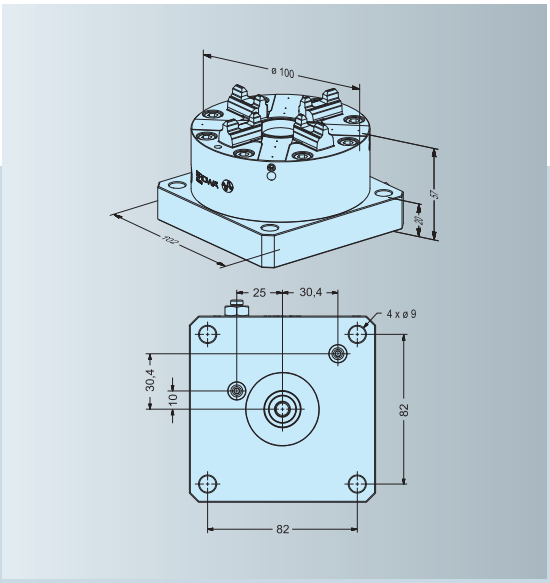
ER-037970 ITS chuck 100 P without base plate

Version	Steel, hardened.
Clamping power	6000 N.
Connections	At the rear, with two lines.
Operation	With control unit.
Application	For receiving pallets ø 115 / ø 148, electrode holders, pallets PM56, PM60 and PM85 Precise.



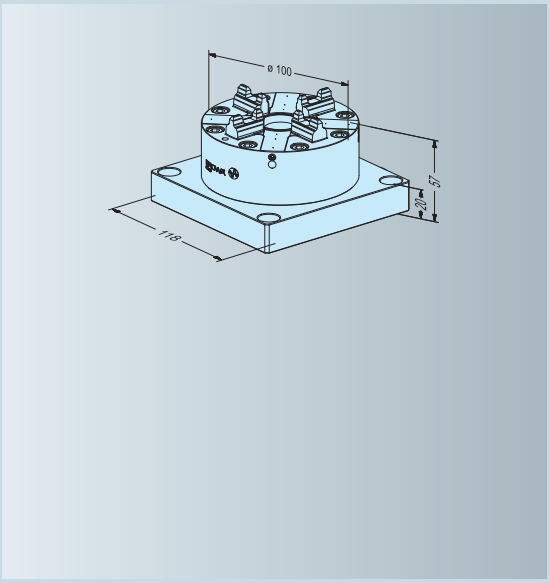
ER-035519 ITS chuck 100 P 102 x 102

Version	Steel, hardened.
Clamping power	6000 N.
Connections	On the side or at the rear, with two lines.
Operation	With control unit or with air gun.
Application	For receiving pallets ø 115 / ø 148, electrode holders, pallets PM56, PM60 and PM85 Precise.



ER-045076 ITS chuck 100 P 118 x 118

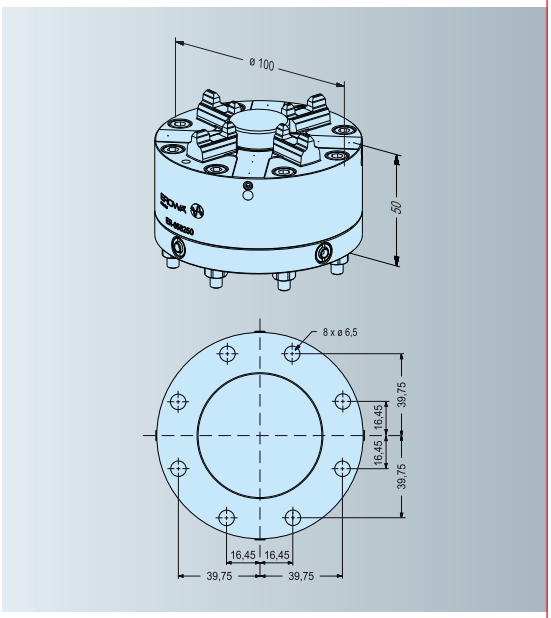
Version	Steel, hardened.
Clamping power	6000 N.
Connections	Laterally or at the rear, with two lines.
Operation	With control unit or compressed-air gun.
Application	For receiving pallets ø 115 / ø 148, electrode holders, pallets PM56, PM60 and PM85 Precise.



EROWA
ITS chucks
pneumatic, table, manual

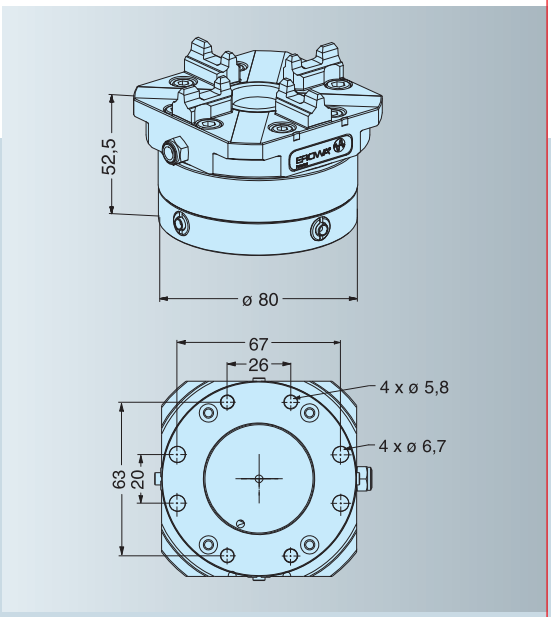
ER-058250 ITS Chuck 100 P with base plate ø100

Version	Steel, hardened, with P-profile.
Clamping power	6000 N.
Connections	Air valves, lateral.
Operation	With air gun.
Application	To hold pallet ø 115 / ø 148 and pallets PM56, PM60, PM85 Precise.



ER-007604 Manual rapid-action chuck NSF

Version	NSF = increased clamping power up to 7000 N.
Connections	Pneumatic valves on side, flushing on back.
Application	Electrode fabrication general.
Note	To clamp pallets of ø 115 / ø 148, ø 72 and electrode holder 50. Pallets with P centering system are excluded.

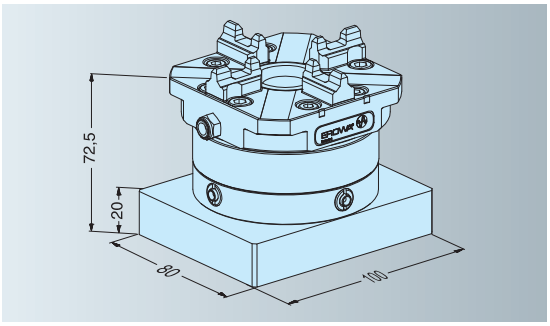


ITS

EROWA

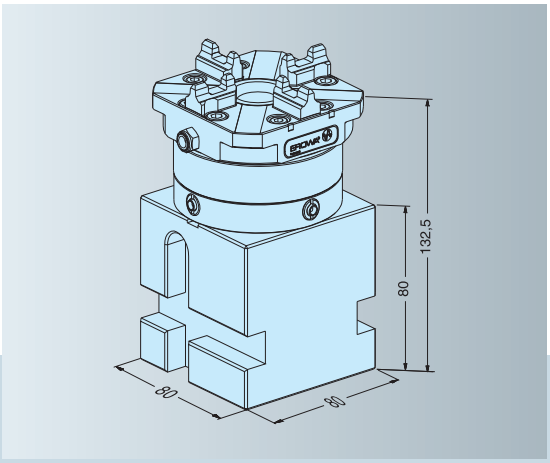
EROWA ITS chucks
pneumatic, table, manual

ER-012299 Rapid-action chuck NSF on plate



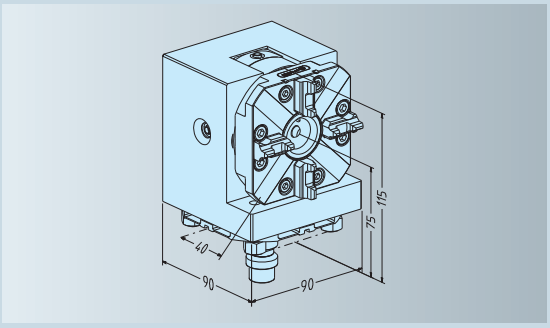
Version NSF = increased clamping power up to 7000 N.
Connections Pneumatic valves on side.
Application Electrode fabrication, e.g. on magnetic plate.
Note To hold pallets ø 115 / ø 148, electrode holders, with the exception of pallets with a P-profile.

ER-012297 Rapid-action chuck NSF on block



Version NSF = increased clamping power up to 7000 N.
Connections Pneumatic valves on side.
Application Electrode fabrication. For use in horizontal and vertical positions.
Note To hold pallets ø 115 / ø 148, electrode holders, with the exception of pallets with a P-profile.

ER-007612 Rapid-action chuck NSF on angle plate

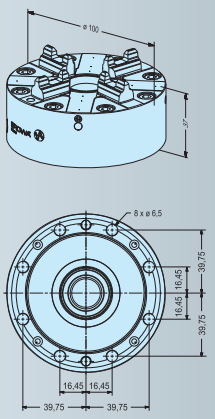


Version Standard type on type G angle plate.
NFS = increased clamping power up to 7000 N.
Connections Pneumatic valves on the side, flushing through chucking spigot.
Application To produce electrodes, and on EDM quill.
Note To hold pallets ø 115 / ø 148, electrode holders, with the exception of pallets with a P-profile.

EROWA
ITS chucks pneumatic, table, able to automate, INOX

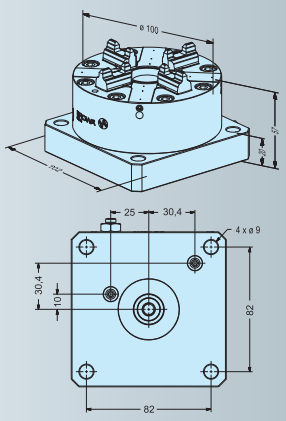
ER-043123 ITS chuck 100 P Inox without base plate

Version	Steel, hardened, INOX.
Clamping power	5000 N.
Connections	At the rear, with two lines.
Operation	With control unit
Note	To hold pallets ø 115 / ø 148, electrode holders and pallets PM56, PM60 and PM85 Precise.



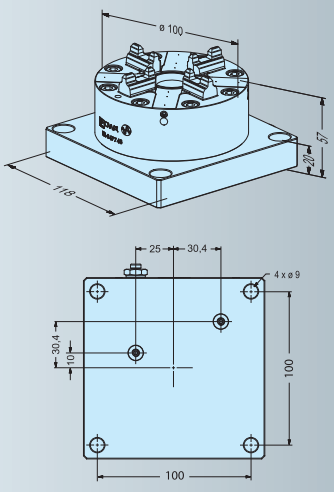
ER-043124 ITS chuck 100 P Inox 102 x 102

Version	Steel, hardened, INOX.
Clamping power	5000 N.
Connections	On the side or at the rear, with two lines.
Operation	With control unit or with air gun.
Application	To hold pallets ø 115 / ø 148, electrode holders and pallets PM56, PM60 and PM85 Precise.



ER-047743 ITS chuck 100 P Inox 118 x 118

Version	Steel, hardened, stainless
Clamping power	5,000 N
Connections	Laterally or at the rear, with two lines.
Operation	With control unit or with compressed-air gun.
Application	To hold pallets ø 115 / ø 148, electrode holders and pallets PM56, PM60 and PM85 Precise.

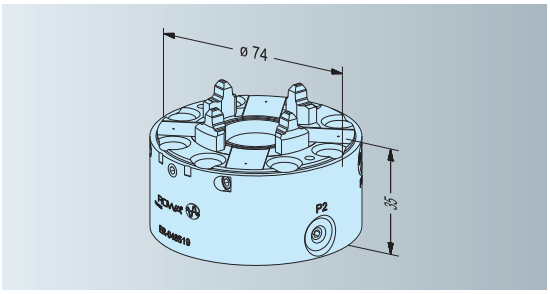


EROWA ITS chucks

pneumatic, table, able to automate, INOX

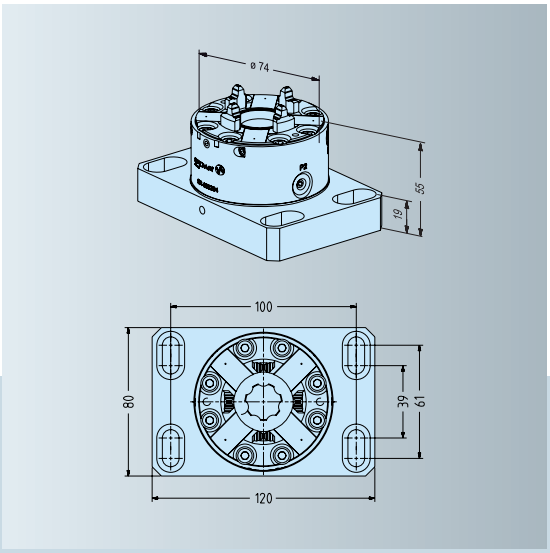
ER-048519 ITS chuck 50 Inox

Version	System size 50, corrosion-resistant.
Clamping power	2800 N.
To be fitted	With 8 M5 bolts from the front.
Application	For fixtures produced by users themselves.
Note	Chuck can be operated manually or automatically. Air connections laterally or at the rear.



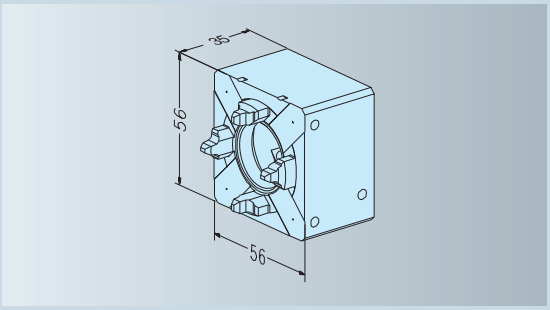
ER-055294 ITS Chuck 50 INOX with base platet 80 x 120

Version	System size 50, corrosion-resistant.
Clamping power	2800 N.
Attachment	With 4xM8 bolts from the front.
Application	On milling and grinding machines and on EDM/ WEDM centers.
Note	Chuck can be operated manually or automatically. Pneumatic connections on the side of the chuck.



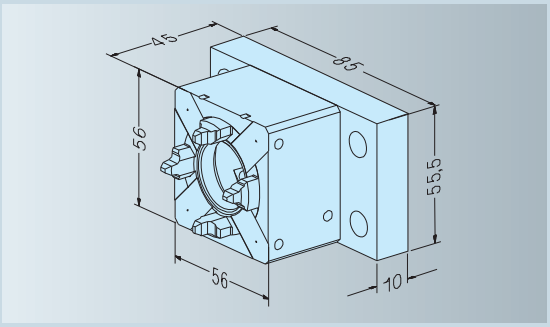
ER-011803 Chuck 50 RSA without base plate

Version	Chuck 50 RSA, automatic with pneumatic valve.
Clamping power	2800 N.
Attachment	With 4 M6 bolts from the rear.
Application	ITS basis for the manual loading of ITS elements or for automatic operation.



ER-008186 Chuck 50 RSA with base plate 10 x 55.5 x 85

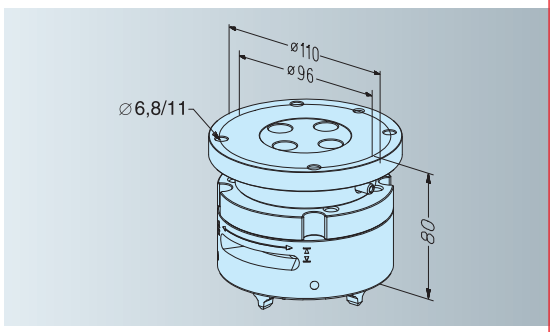
Version	Chuck 50 RSA, automatic, with pneumatic connection.
Clamping power	2800 N.
Application	ITS basis for the manual loading of ITS elements or for automatic operation.



EROWA
ITS chucks manual, quill

Technical data	ITS chuck, manual
Repeatability	0.002 mm
Indexing	4 x 90°
Operation/clamping	manually with clamping lever

ER-038826 QuickChuck 100 P / R



Version On a ø 110 mm base plate with a rotatable flushing connection.
Attachment With 4 x M6 bolts.
Application On EDM centers with quill rotation.
Note Clamping power: 10000 N.

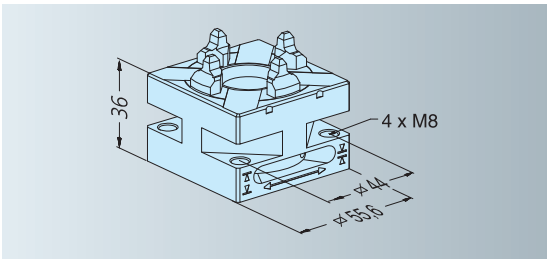
EROWA

EROWA ITS chucks
manual, table, INOX

ER-034387 QuickChuck 50

INOX

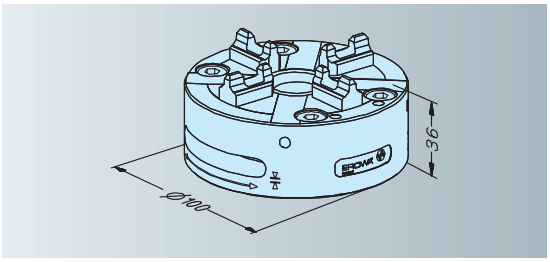
Version	System size 50, manual, corrosion resistant.
Attachment	4 x M8 from the rear or 4 x M6 stud bolts with nuts.
Application	On EDM/WEDM centers for light milling and grinding work. Max. revolutions on rotating axes 200 rpm.
Note	Clamping power 4000 N.



ER-036345 QuickChuck 100P

INOX

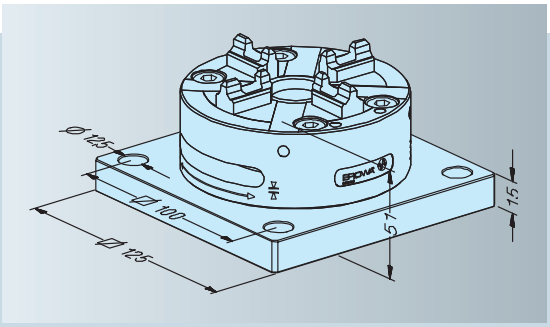
Version	System size 100, manual, corrosion-resistant.
Mounting	With four M8 bolts supplied.
Application	Turning, milling, grinding or EDM/WEDM machines, in dividers and fixtures.
Note	Clamping power 10000 Nm. max. 3000 rpm.



ER-038824 QuickChuck 100 P with base plate

INOX

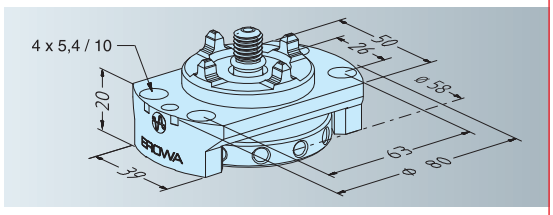
Version	System size 100, manual, corrosion-resistant, with baseplate.
Mounting	With bolts or clamps.
Application	Milling, grinding or EDM machines.
Please note	Clamping power: 10000 N.



EROWA
ITS screw chucks manual

Technical data	ITS screw chuck, manual
Repeatability	0.002 mm
Indexing	4 x 90°
Operation/clamping	manually with locking bolt

ER-007697 Screw chuck 50 D

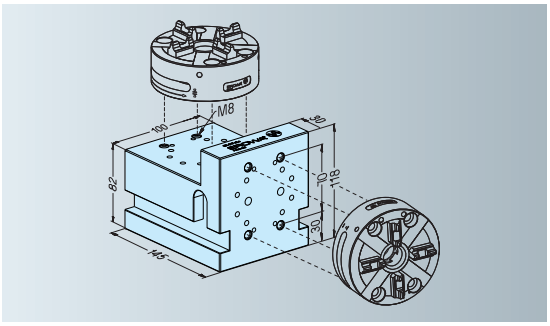


Version Only 20 mm overall height. For holders of system size 50.
Connections Central flushing possible.
Application Small lathes, on cones, flanges and jigs and fixtures.

EROWA

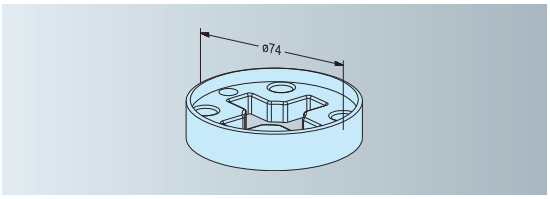
ER-019424 Square block for QuickChuck 100 P

Version Steel, hardened, corrosion-resistant.
Application For attaching 1 or 2 chucks in horizontal and/or vertcal position. Fits ITS chucks, QuickChuck 50, QuickChuck 100.
Note Delivery without chucks.



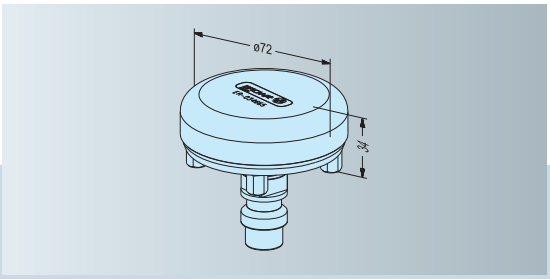
ER-032832 Seal ring ITS chuck 50

Version Plastic.
Application Prevents penetration of chips and dirt into the ITS Chuck 50 by application of EROWA Holders ø 72.



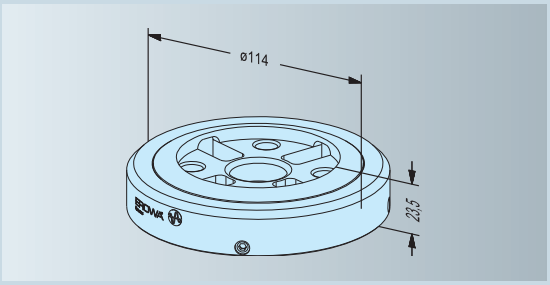
ER-034665 Cover ITS chuck 50

Version Aluminium anodized. Without centering plate.
Application Prevents penetration of chips and dirt into the ITS Chuck 50 in combination with the seal ring ER-032832.



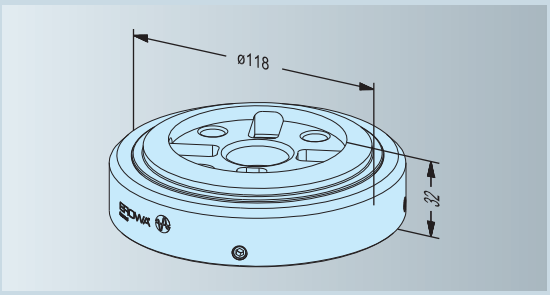
ER-034735 Seal Rapid Action Chuck / ø 72

Version Aluminium anodized.
Application Prevents penetration of chips and dirt into the rapid action chuck by application of EROWA Holders ø 72.



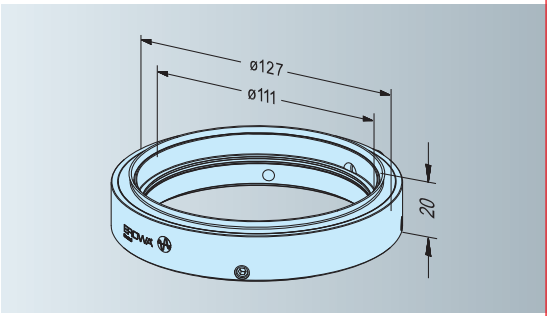
ER-035356 Seal ring QuickChuck 100 P ø 72

Version Aluminium anodized.
Application Prevents penetration of chips and dirt into the QuickChuck of RSA 100 by application of EROWA Holders ø 72.



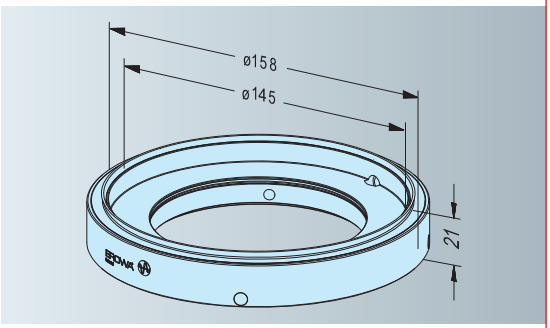
ER-046046 Chip guard ø 115 to QuickChuck 100 P / ITS Chuck 100 P

Version Aluminum, for pallets ø 115 mm.
Application Seals QuickChuck 100 P / ITS Chuck 100 P in use with pallets ø 115 mm against liquid and chips. Can be combined with ER-029313.



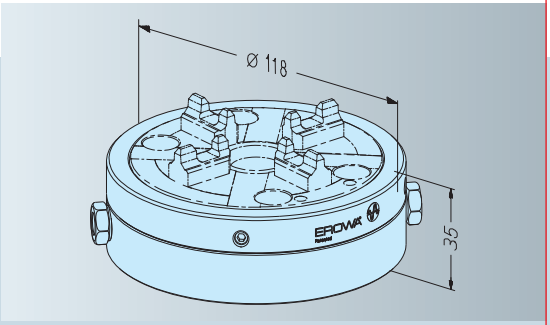
ER-046044 Chip guard ø 148 for QuickChuck 100 P / ITS Chuck 100 P

Version Aluminum, for pallets ø 148 mm.
Application Seals QuickChuck 100 P / ITS Chuck 100 P in use with pallets ø 148 mm against liquid and chips. Can be combined with ER-029313.



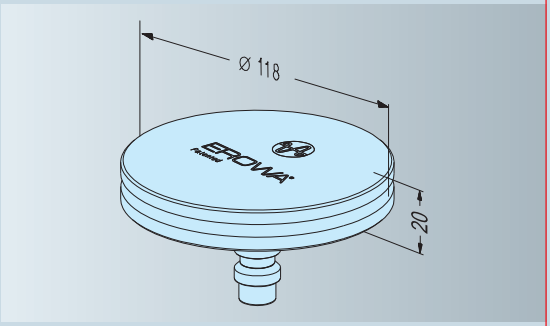
ER-029313 Chip Guard for QuickChuck 100 P

Version Aluminum.
Application Seals the locking mechanism of the QuickChuck 100 P against the penetration of liquids and chips.



ER-007618 Cover for rapid-action chuck

Version Aluminum, without supports and centering plate.
Application To protect rapid-action chucks from dirt.

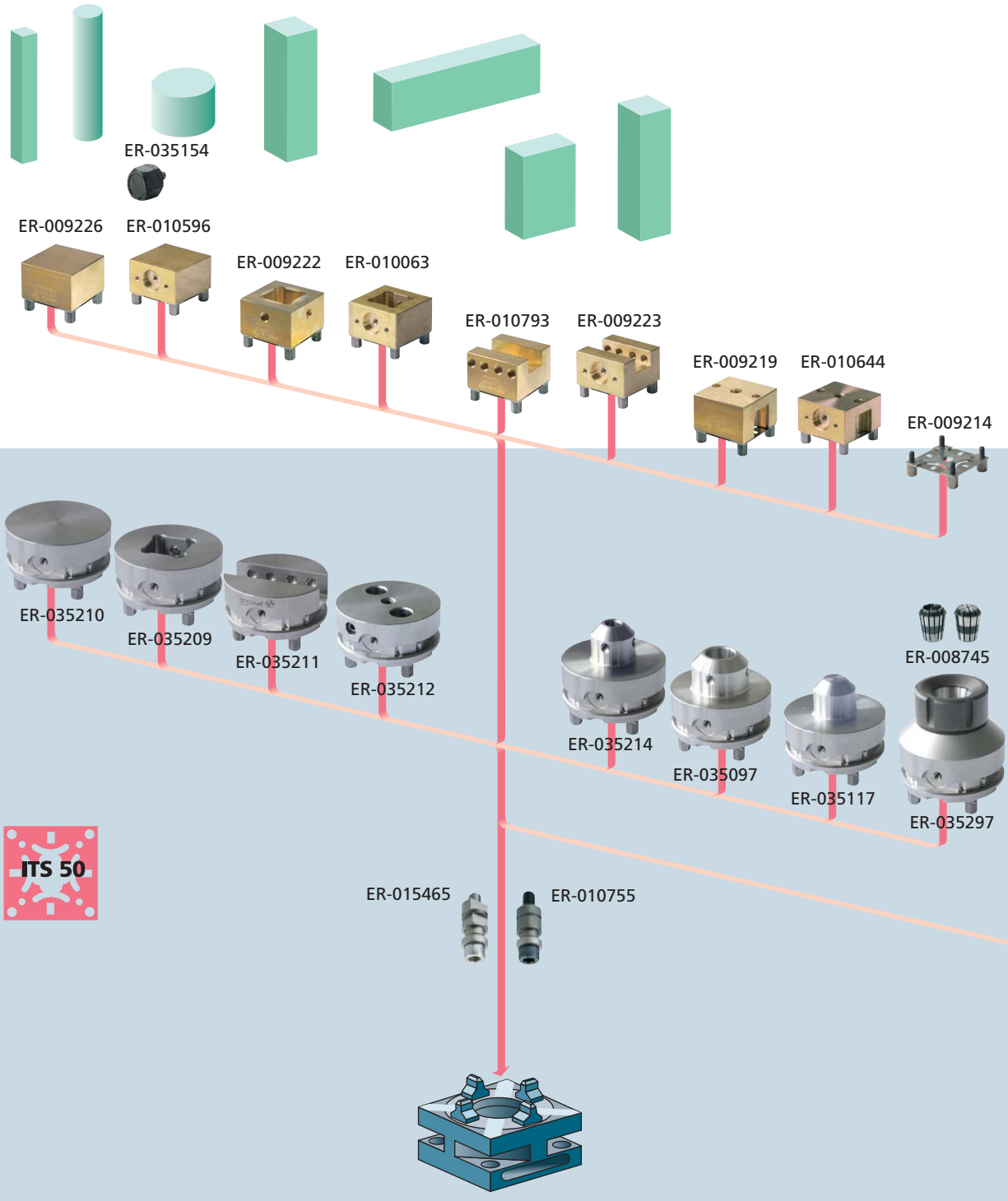


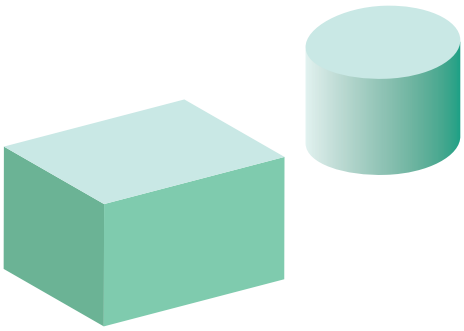
EROWA ITS System carriers

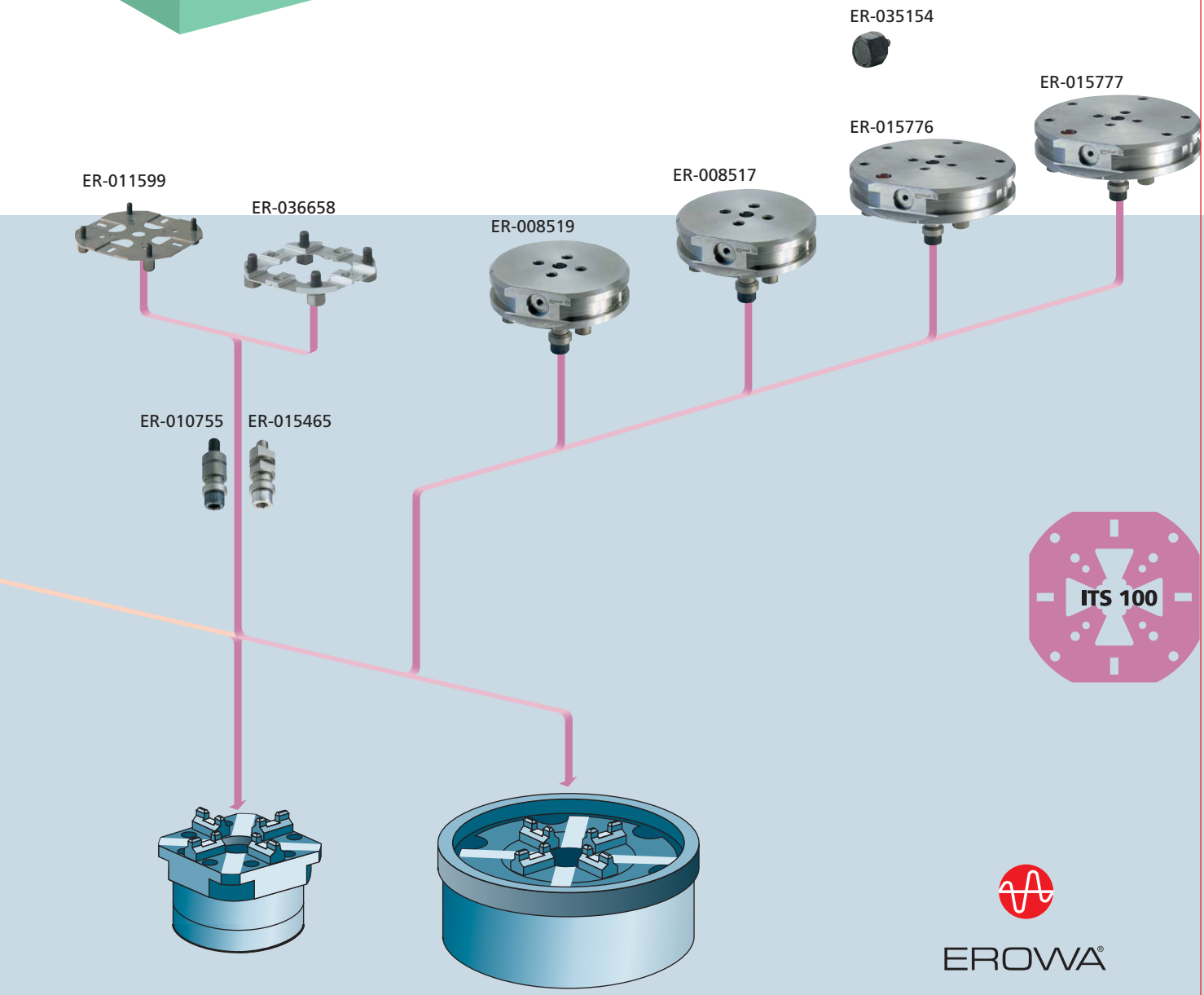
Standard electrode holders, centering plates and pallets

The components

Universality starts with the system carrier. Whether you use completely prepared electrode holders, pallets or the very economically priced centering plates, they all depend on the application. However, the workpiece will be ready for universal and flexible use in any case.






ER-035154
ER-015777
ER-015776
ER-011599
ER-036658
ER-008519
ER-008517
ER-010755
ER-015465
ITS 100

EROWA®

EROWA

ITS centering plates

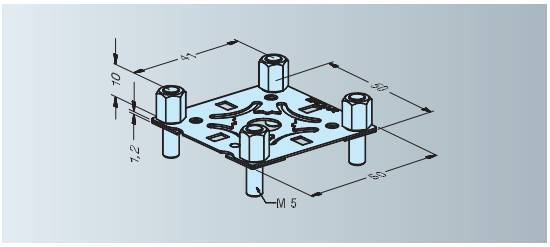
The centering plates are the most cost-effective base for clamping electrodes. They are mounted directly onto the blanks. This way, jigs and fixtures are also ITS compatible. The hole pattern for mounting is simply drilled into the blank with a drilling template, or by means of an NC program.

Technical data	ITS centering plates
Material	corrosion-resistant
System accuracy in chuck	0.002 mm
Versions:	
Centering plate 50	small electrode weights
Centering plate 100 M8	workpieces and electrodes
Centering plate G	workpieces, jigs and fixtures for chip-removal machining
Handling	with EROWA Handlingsystems or electrode changer.

ER-009214 **Centering plate 50**
50 pieces

ER-036751 **Centering plate 50**
Set of 5 units

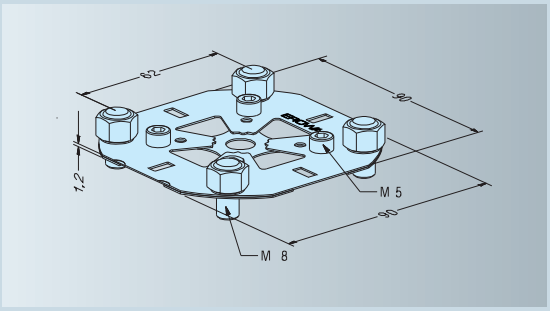
Version Corrosion-resistant, including 4 supporting feet each.
Application Small electrode weights.
Mounting Mounted directly on plane surface of blank.



ER-011599 **Centering plate 100 M8**
10 pieces

ER-050195 **Centering plate 100 M8**
1 unit

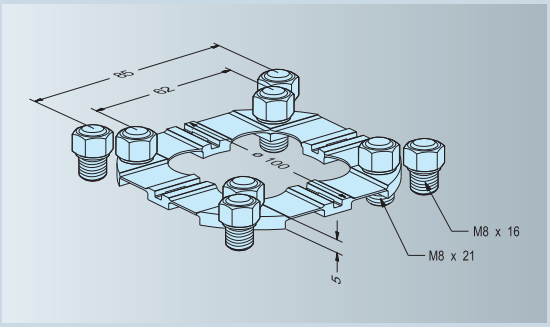
Version Corrosion-resistant, including 4 supporting feet M8 and 4 x M5 screws per plate.
Application Workpieces and electrodes.
Mounting Mounted directly on of blank plane surface of blank.



ER-036658 **Centering plate G Inox**
5 pieces

ER-036657 **Centering plate G Inox**
1 unit

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



EROWA

ITS standard electrode holders

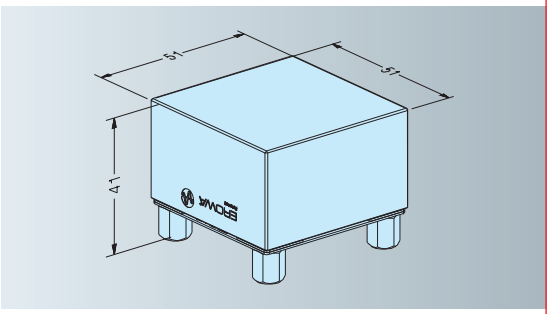
Standard electrode holders are used to contain electrodes for the entire machining cycle and for storage. Their economical unit price enables users to stock such holders in large quantities. The standard holders are supplied without chucking spigots.

Technical data	ITS standard electrode holders
Material	body: brass centering plate: corrosion-resistant
System accuracy in chuck	0.002 mm
Recommended max. weight with electrode	20 kg / 44 lbs
Handling	with EROWA Handlingsystems or electrode changer.

ER-009226 Uniblank 12 pieces

INOX | auto

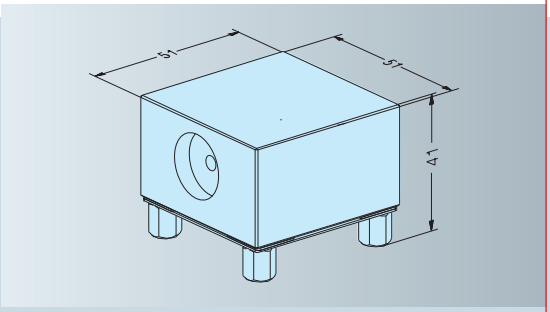
Version Set of 12 units, fitted without machining of body.
Application To mount electrodes and workpieces of various shapes.
Mounting As required.



ER-010596 Uniblank EWIS™ 12 pieces

INOX | auto

Version Set of 12 units, prepared for the installation of the code carrier. Order EWIS™ chip, ER-035154 separately!



ITS

ITS standard electrode holders

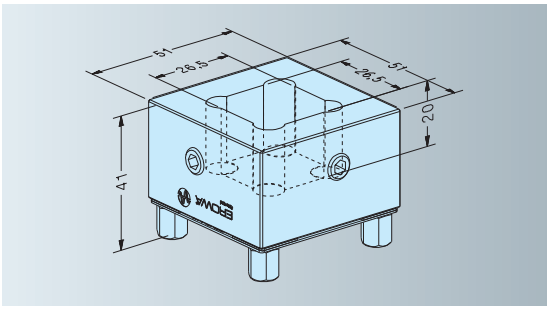
ER-009222 Prisround 12 pieces

INOX auto

Version Set of 12 units, square 26.5 mm milled, including 2 setscrews for each unit.

Application To mount electrodes and workpieces with a base surface of more than 25 mm.

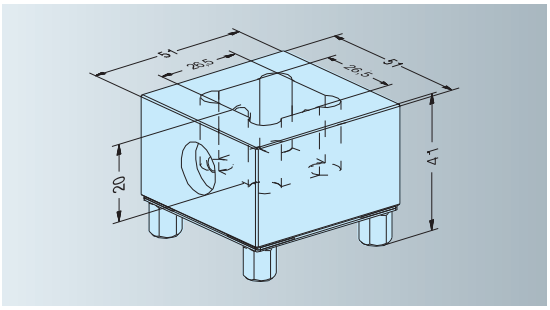
Mounting Insert and tighten setscrews. If necessary, center with spacer plate ER-010532.



ER-010063 Prisround EWIS™ 12 pieces

INOX auto

Version Set of 12 units, prepared for the installation of the code carrier. Order EWIS™ chip, ER-035154 separately!



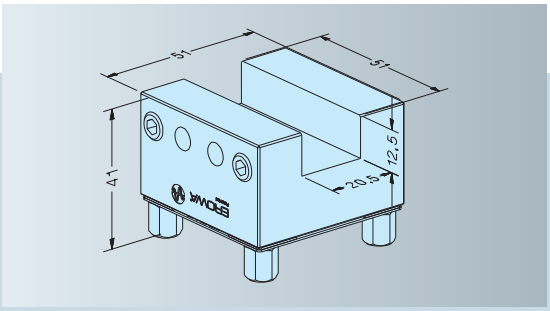
ER-010793 Uniholder 12 pieces

INOX auto

Version Set of 12 units, groove 20 mm faced, including 2 setscrews for each unit.

Application To mount electrodes and workpieces with shaft sizes of up to 20 mm.

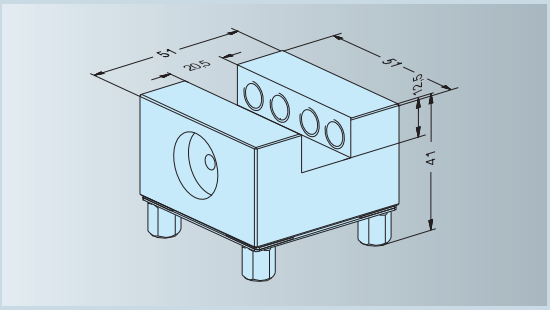
Mounting Insert and tighten setscrews. If necessary, center with spacer plate ER-010532.



ER-009223 Uniholder EWIS™ 12 pieces

INOX auto

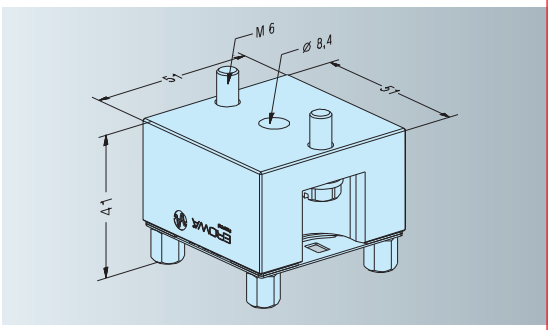
Version Set of 12 units, prepared for the installation of the code carrier. Order EWIS™ chip, ER-035154 separately!



ER-009219 Uniplate 12 pieces

INOX auto

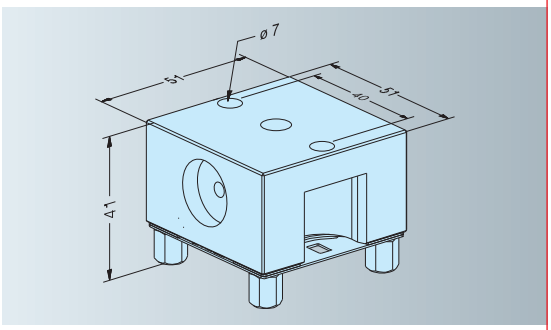
Version Set of 12 units, surface 51 x 51 mm faced, including 2 x M6 bolts for each unit.
Application To mount electrodes and workpieces with a base surface of more than 50 mm.
To fit blank With 2 x M6 bolts into the base surface.



ER-010644 Uniplate EWIS™ 12 pieces

INOX auto

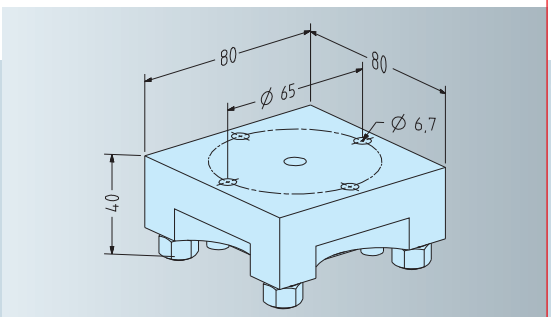
Version Set of 12 units, prepared for the installation of the code carrier. Order EWIS™ chip, ER-035154 separately!



ER-010627 Uniplate Alu 80 x 80 4 pieces

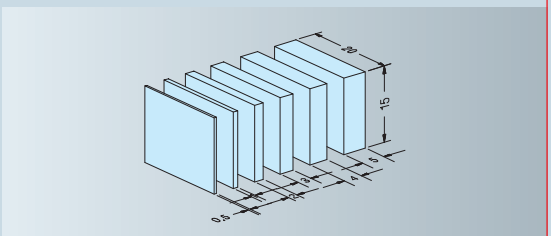
INOX auto

Version Set of 4 units, aluminum, system size 100, with M8 supports.
Application To mount electrodes and workpieces with a base surface of more than 70 mm.
Mounting With 4 x M6 bolts into the base surface.



ER-010532 Spacer plate 300 pieces

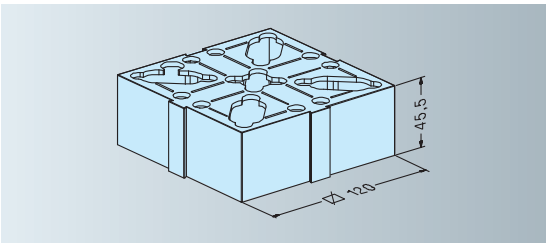
Version 6 x 50 plates. Corrosion-resistant. Thicknesses from 0.5 mm to 5 mm.
Application Centering of blanks in electrode holders.



EROWA

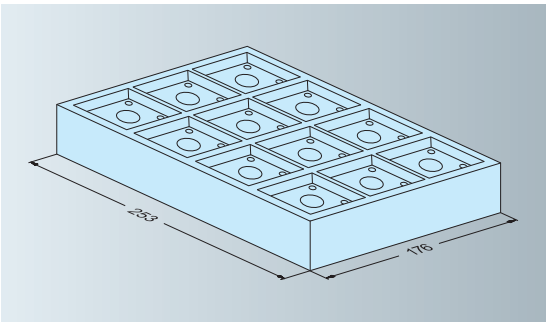
ITS standard electrode holders

ER-013913 System stand 10 pieces



Version	Plastic, set of 10.
Application	As a rack for four electrode holders 50 or a pallet ø 115/148 mm.
Please note	System racks can be stuck together without any gaps, e. g. to be stored in drawers.

ER-011591 System stand 50 12-fold 10 pieces



Version	Set of 10 styrene stands.
Application	Storage and transport of electrode holders system size 50.

EROWA

Holder ø 72

The EROWA holders ø 72 in combination with covers provides maximum protection against the contamination of table chucks. The holders are the optimal solution for automatic production.

Technical data	EROWA Holder ø 72
Material	steel, corrosion-resistant
System accuracy, chuck	0.002 mm
Recommended max. weight with electrode	20 kg / 44 lbs
Handling	with EROWA handling systems or electrode changers.

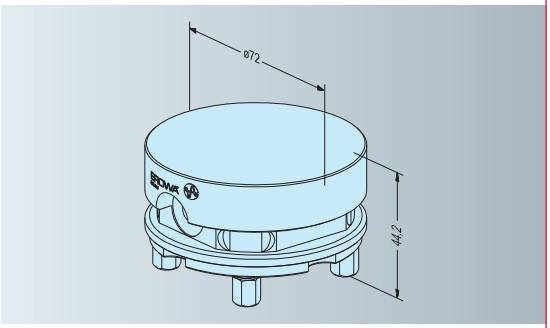
ER-035210 Uniblank ø 72 6 pieces

INOX auto

Version Set of 6 units, system size ITS 50. Without chucking spigots.

Application To mount electrodes and workpieces of various shapes.

Mounting Attachment boreholes to be drilled according to requirements.

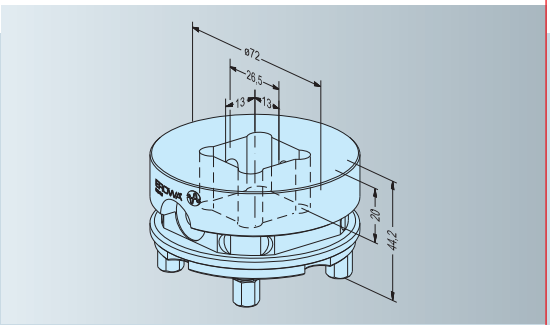


ER-035209 Prisround ø 72 6 pieces

INOX auto

Version Set of 6 units, system size ITS 50. Without chucking spigots.

Application To mount electrodes and workpieces with shafts of up to square 25 mm.



ITS

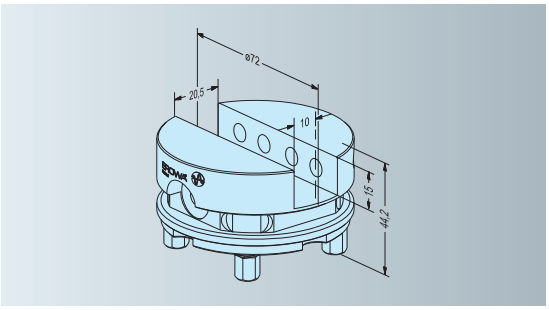
EROWA

ER-035211 Uniholder ø 72
6 pieces

INOX auto 72

Version Set of 6 units, system size ITS 50.
Without chucking spigots.

Application To mount electrodes and workpieces with shaft of up to 20 mm.



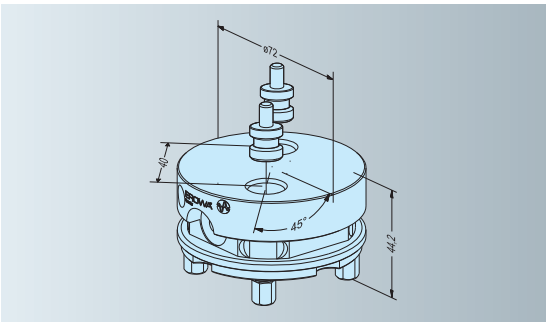
ER-035212 Uniplate ø 72
6 pieces

INOX auto 72

Version Set of 6 units, includes 12 PinLock locking pins.
System size ITS 50, without chucking spigots.

Application To mount electrodes and workpieces with surface more than square 40 x 40 mm or ø 50 mm.

Mounting With two PinLock locking pins.

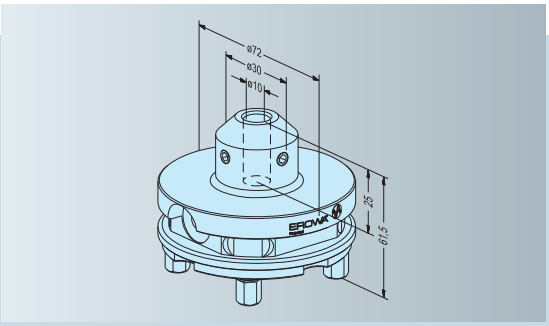


ER-035114 Blank holder ø 10 / ø 72
6 pieces

INOX auto 72

Version Set of 6 units, system size ITS 50.
Without chucking spigots.

Application To clamp cylindrical parts with ø 10 mm.

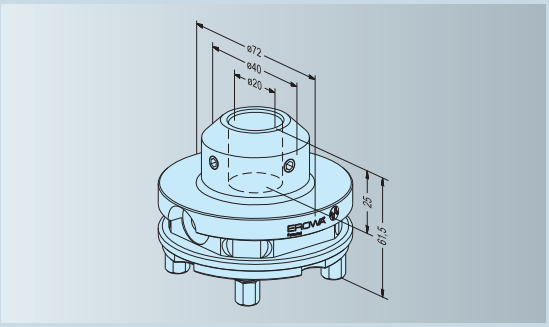


ER-035097 Blank holder ø 20 / ø 72
6 pieces

INOX auto 72

Version Set of 6 units, system size ITS 50.
Without chucking spigots.

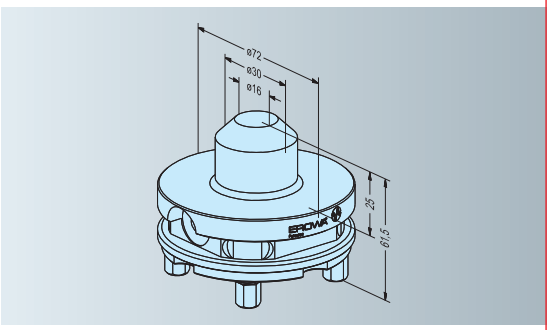
Application To clamp cylindrical parts with ø 20 mm.



ER-035117 Blank holder ø 72 without borehole 6 pieces

INOX | auto | 72

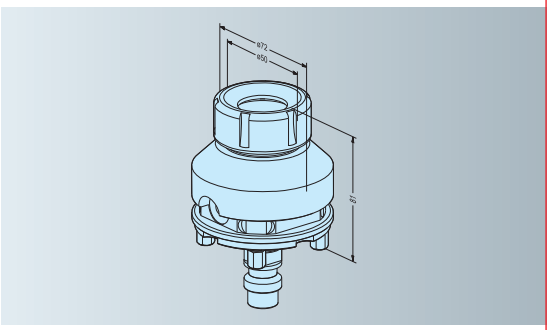
Version Set of 6 units, system size ITS 50.
Without chucking spigots.
Application To clamp cylindrical parts.
Mounting Attachment borehole up to max. ø 12 mm to be drilled according to requirements.



ER-035297 Collet chuck holder ø 72 1 piece

auto | 72

Version One collet chuck holder with chucking spigot.
System size ITS 50.
Application To clamp cylindrical parts.
Clamping range ø 2 mm - ø 20 mm.
Please note Order collet chucks separately.



ITS

EROWA®

EROWA

ITS precision pallets

ITS precision pallets are workpiece and electrode carriers.
The pallets are prepared for automatic handling and to accommodate EWIS chips. Marginal and night hours are thus put to productive use.

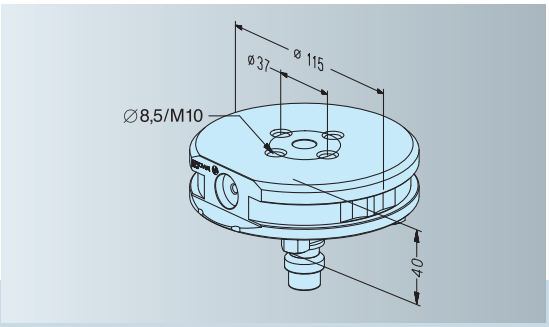
Technical data	ITS precision pallets
Material	corrosion-resistant
System accuracy in chuck	0.002 mm
Run-out	< 0.01 mm
Variants	
Pallets MS	die cut centering plates
Pallets G	ground centering plates
Pallets P	Centering integrated in the pallet
Borehole pattern	standard, can be supplemented
Handling	with EROWA Handlingsystems
Unit supplied	pallet including chucking spigot

ER-008519 Pallet ø 115 MS

ER-032730 Pallet Kit ø 115 MS 4 pieces

INOX | auto | 115

Version Standard type, punched centering plates.
Application For electrodes and workpieces in EDM
Mounting Through pallet with 4xM8 bolts or through blank with 4xM10 bolts.

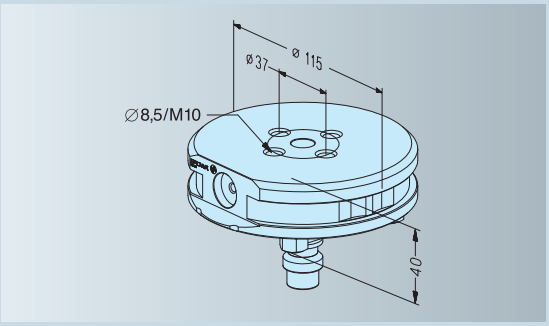


ER-008517 Pallet G ø 115

ER-032729 Pallet Kit G ø 115 4 pieces

INOX | auto | 115

Version Standard type, ground centering plates.
Application For electrodes and workpieces in EDM.
Mounting Through pallet with 4xM8 bolts or through blank with 4xM10 bolts.

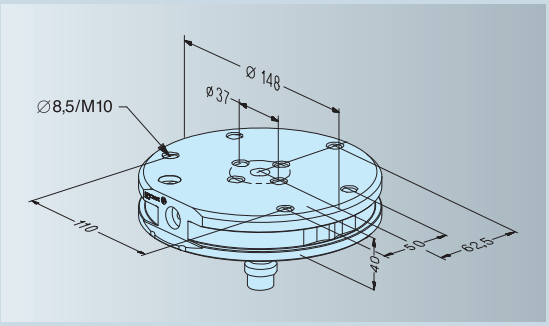


ER-015776 Pallet ø 148 MS

ER-032731 Pallet Kit ø 148 MS 4 pieces

INOX | auto | 148

Version Standard type, punched centering plates.
Application For electrodes and workpieces, and for the construction of fixtures.
Mounting Through pallet with M8 bolts or through blank with M10 bolts.

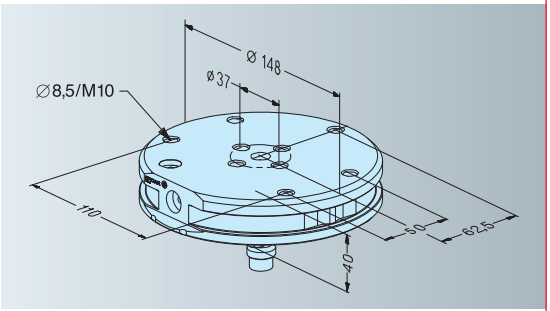


ER-015777 Pallet ø 148 G

ER-032732 Pallet Kit G ø 148 4 pieces

INOX | auto | 148

Version	Standard type, ground centering plates.
Application	To accommodate workpieces and fixtures in chip-cutting machining processes.
Mounting	Through pallet with M8 bolts or through blank with M10 bolts.

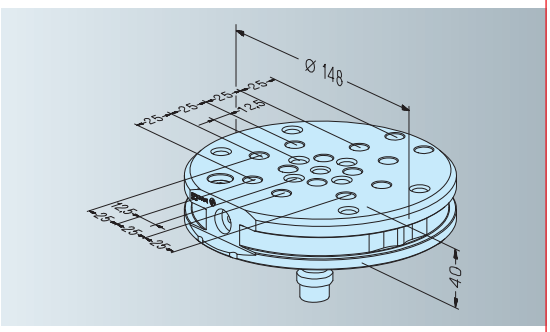


ER-015042 Pallet ø 148 MS ALU R25

ER-033051 Pallet Kit ø 148 MS ALU R25 4 pieces

auto | 148

Version	Body of casted aluminum with borehole pattern 25, ø 10 F7, thread M10.
Application	Palletizing of workpieces and electrodes, mounting of fixtures and ClampSet Base 220.
Mounting	Through pallet with M8 bolts or through blank with M10 bolts.

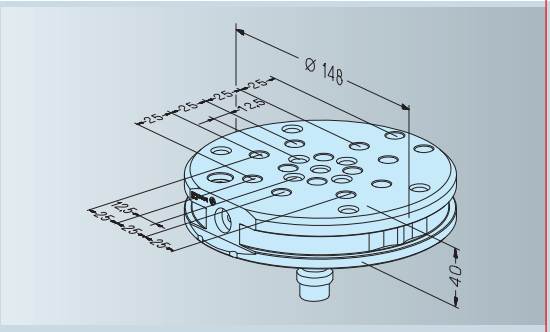


ER-015899 Pallet ø 148 G R25

ER-033053 Pallet Kit ø 148 G R25 4 pieces

auto | 148

Version	Steel, nitride coated, with borehole pattern 25, ø 10 F7, thread M10.
Application	To accommodate EROWA ClampSet Base 220 or specially constructed fixtures and gauges.

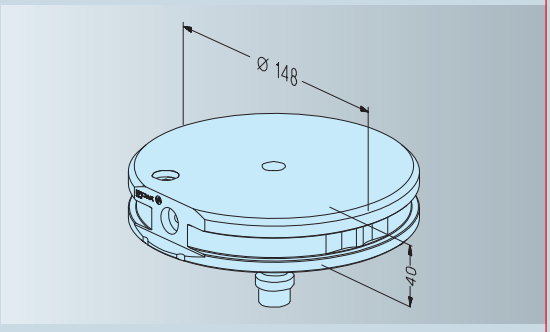


ER-032699 Pallet ø 148 G

ER-033048 Pallet Kit ø 148 G 4 pieces

INOX | auto | 148

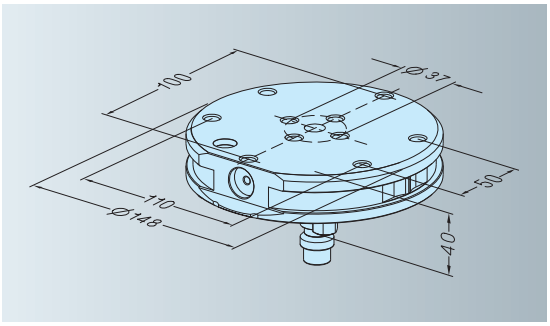
Version	Without boreholders apart from center borehole and borehole for reference bolt.
Application	For workpieces machined in chip-cutting machining.
Mounting	According to your preference.



EROWA®

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

INOX | auto | 148



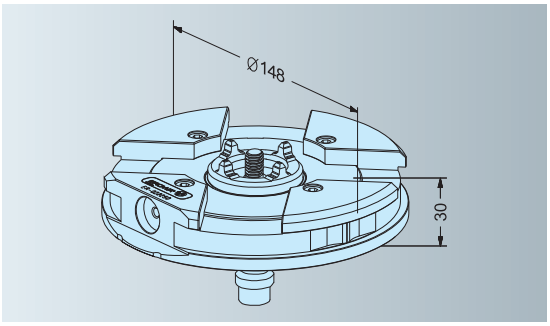
Version Steel, corrosion-resistant. Centering integrated in the pallet.

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-022250 Adapter pallet ITS 50 / ø 148

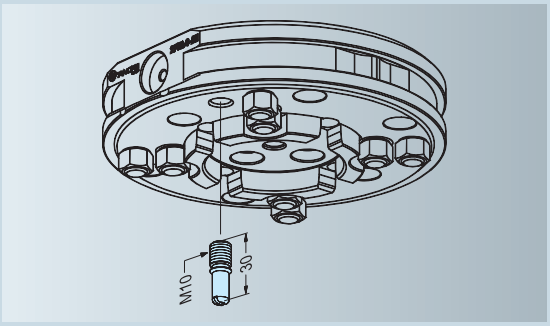
INOX | auto | 148



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.

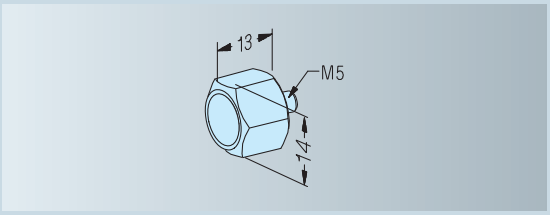
ER-046221 Reference bolt 10 pieces



Version Set of 10 bolts. Bolts have been reworked.

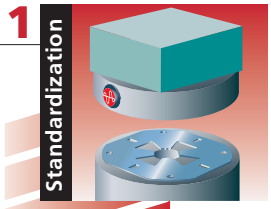
Application On pallets ø 148 mm: for positional orientation in power chucks and Robot magazines.

ER-035154 EWIS™ chip with holder SW14



Version Sleeve fitting with built-in datacarrier.
EWIS chip: read only.

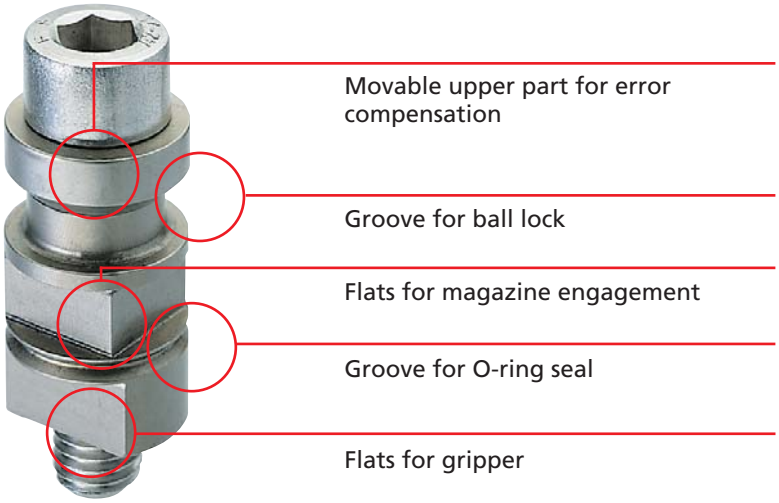
Application In any EROWA electrode holder and pallet which have been prepared for it.



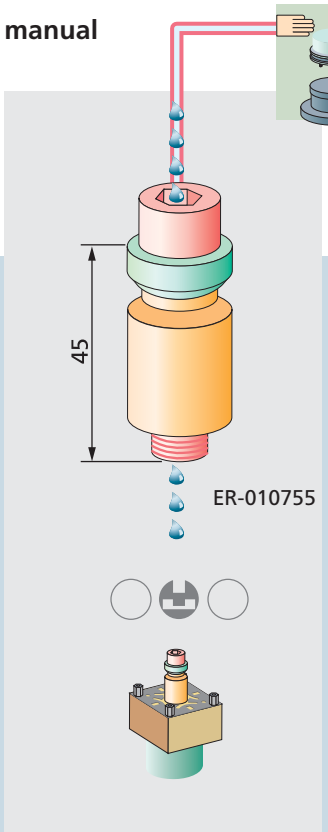
EROWA®

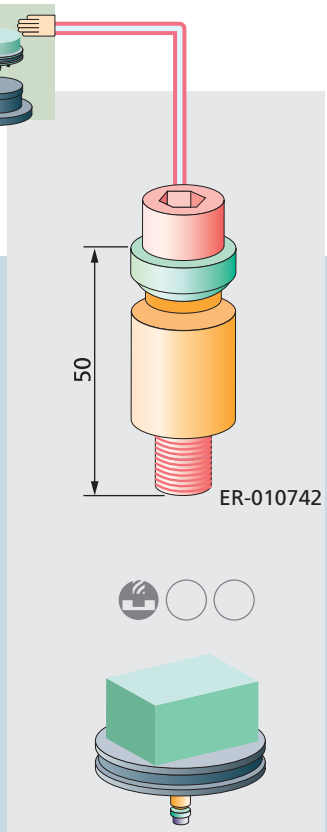
Chucking spigots

The various versions are exactly tailored to individual applications.

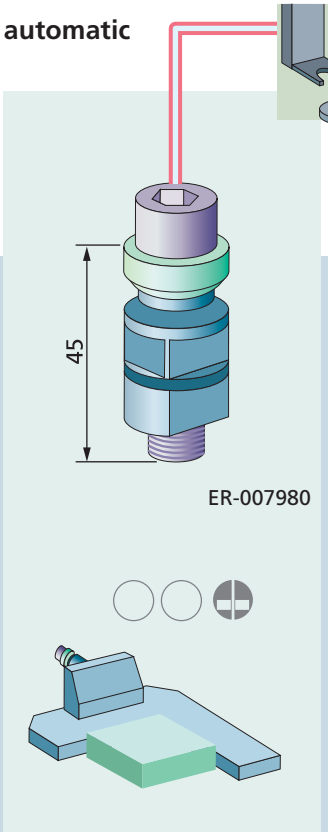


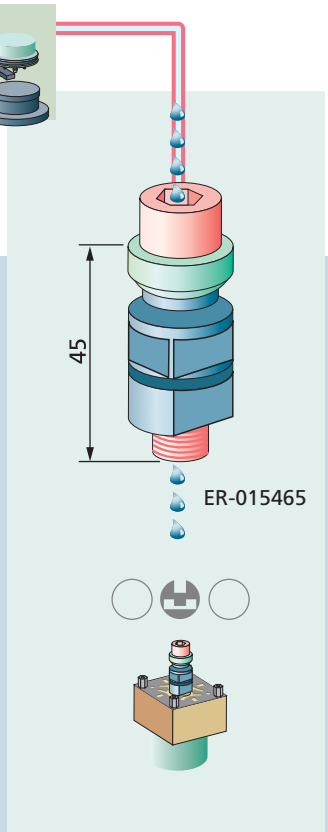
manual

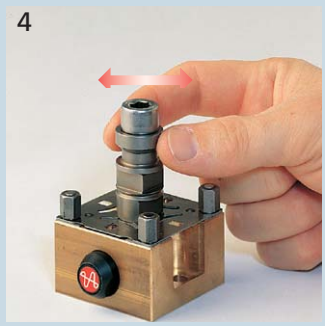




automatic





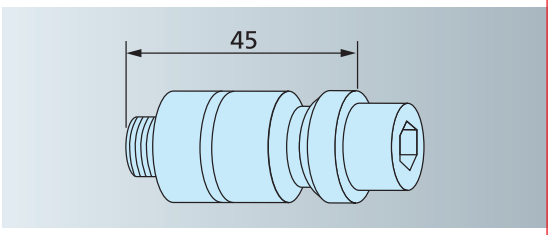


Chucking spigots are screwed into the holder or into the pallet for the **machining cycle** only. Since it has no influence on the reference position, it is removed for the purpose of **space-saving storage** and only screwed in again when the holder or pallet is used next time.

Technical data	ITS Chucking spigot
Material	Steel, hardened
Bolt	M10

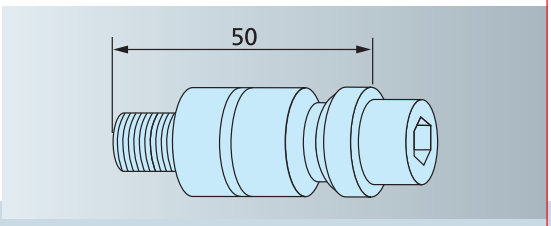
ER-010755 Chucking spigot F/M EDM for flushing 20 pieces

Version Fixed type, manual. Bolt with flushing hole. Set of 20 spigots.
Application In Electrode Holders. For EDMing and easy machining.



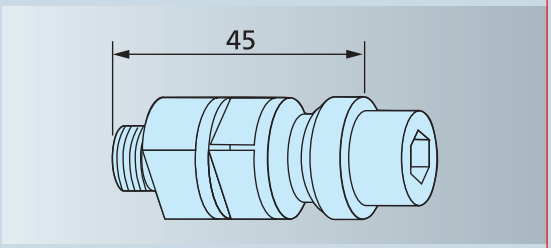
ER-010742 Chucking spigot F/M production 1 unit
ER-051381 Chucking spigot F/M Production 20 pieces

Version Fixed type, manual. Bolt 12.9, without flushing hole.
Application In pallets for chip-cutting machining processes.



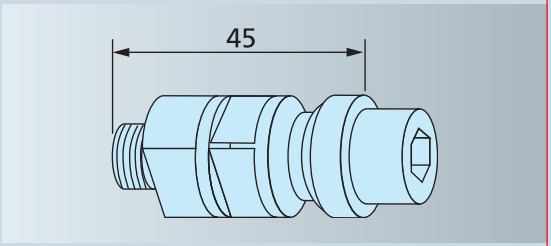
ER-007980 Chucking spigot F/A Inox 20 pieces

Version Fixed type, automatic. Bolt stainless, without flushing hole. Set of 20 spigots.
Application On all holders used on UnoSet.



ER-015465 Chucking spigot F/A EDM M10 x 45 for flushing / 20 pieces

Version Fixed type, automatic. Bolt with flushing hole. Set of 20 spigots.
Application For electrode holder to be changed automatically. For EDM-ing and and machining with light cutting force.



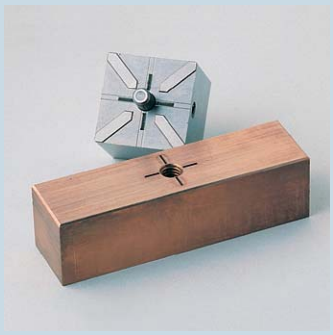
EROWA ITS

Square Electrode System and System Plus

EROWA square holders are higly suitable for the manufacture of small electrodes. Their applications consists of milling, turning, grinding, as well as EDM sinking and WEDM. Used in addition to the System Plus, they represent a well-rounded, well thought-out range of products for everyone who works with many small electrodes.

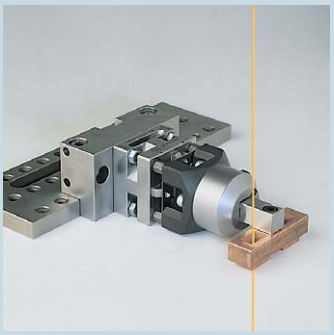
Save space
Store up to 1600 square electrodes safe and handy on 1 m².

System Plus
The stamped centering profile directly on the blank forms the system reference.



1. Preparation
Stamp in the centering profile.

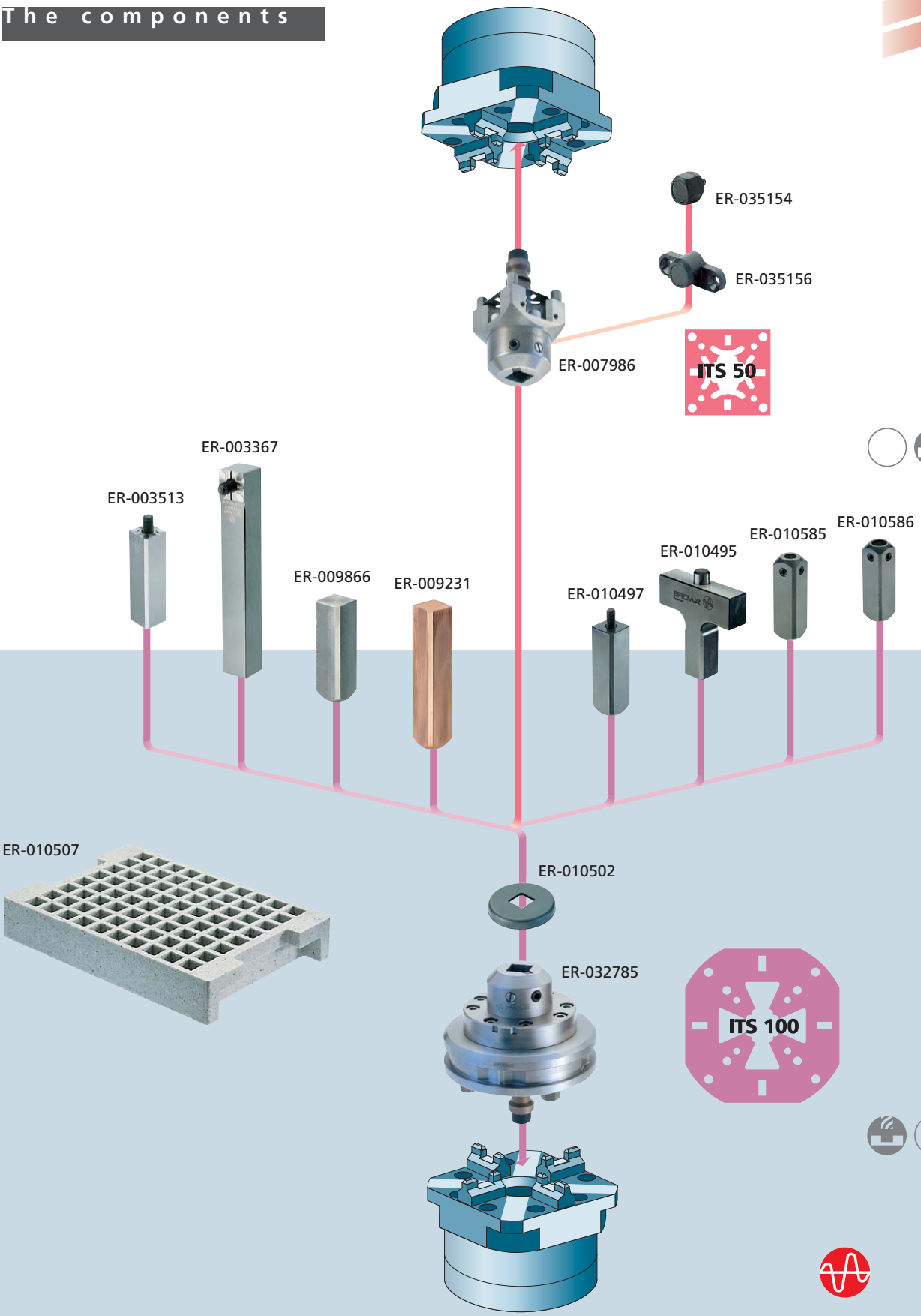
2. Milling
On a straight System Plus holder.



3. WEDM
On an angle holder.

4. EDM
On a straight holder.

The components



EROWA®

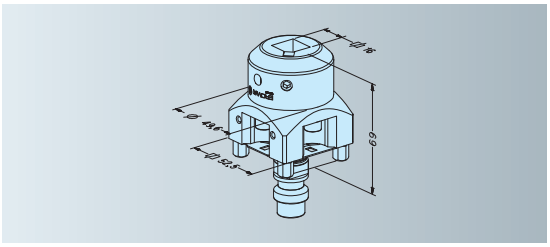
Square Electrode Clamping System 15

ER-007986 Square 15 electrode holder, ITS 50
1 unit

ER-010907 Square 15 holder, ITS 50
12 pieces

INOX auto

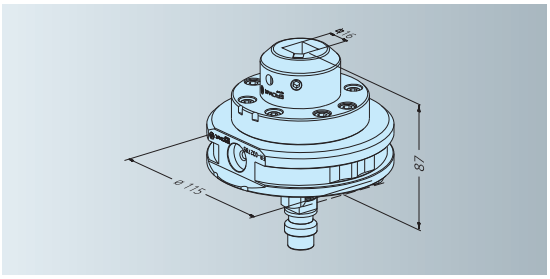
Version ITS system size 50.
Application EDM/WEDM.



ER-032785 Square 15 holder EWIS™, ITS 100

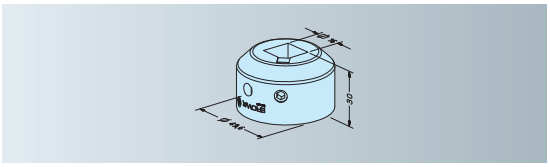
INOX auto

Version ITS system size 100
Application EDM and chip-cutting processes.



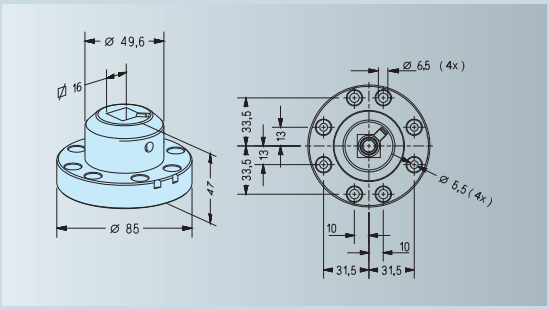
ER-007870 Square 15 holder, front part

Version Only clamping part of the holder.
Application For the construction on multiple fixtures.



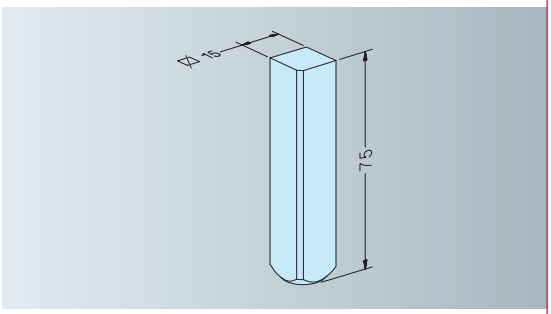
ER-015627 Square 15 holder on adapter ø 85

Version Clamping part fitted to flange, positioned with rods.
Application For the construction on multiple fixtures.
Mounting From above through the flange into the base.



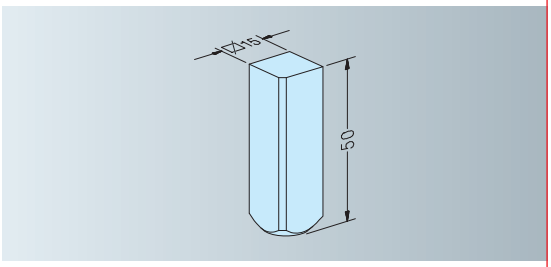
ER-009231 Square 15 electrode blank 40 pieces

Version Set of 40 blanks. EDM copper, drawn profile.
Application Blank for electrodes of up to 15 mm square.



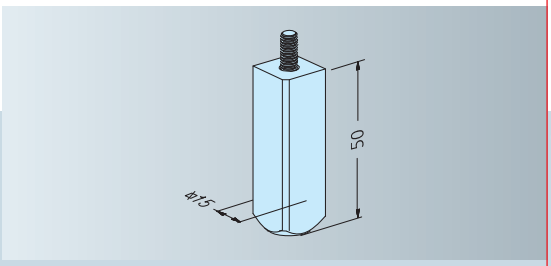
ER-009866 Square 15 electrode shaft 40 pieces

Version Set of 40 shafts, drawn steel.
Application To solder or bond to copper or graphite electrode blanks.



ER-010497 Square 15 electrode shaft M5 10 pieces

Version Set of 10 blanks, hardened, ground, including M5 bolts.
Application To screw on to electrode blanks.



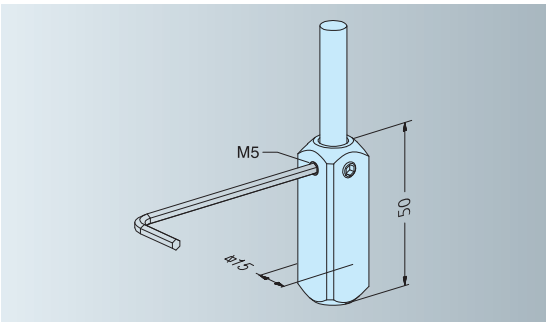
ITS

EROWA®

Square Electrode Clamping System 15 and System Plus

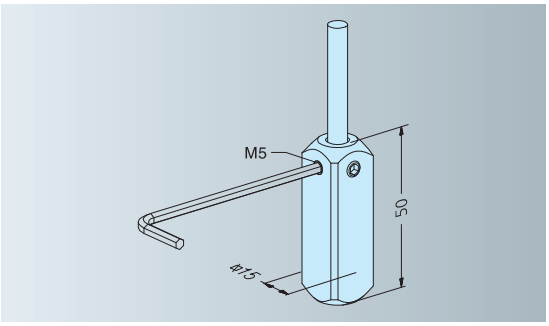
ER-010585 Square 15 blank holder ø 8mm

Version Steel, hardened, ground.
Application To clamp round parts of ø 8 mm.



ER-010586 Square 15 blank holder ø 6mm

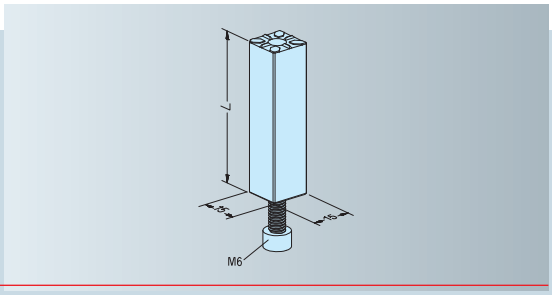
Version Steel, hardened, ground.
Application To clamp round parts of ø 6 mm.



ER-003467 Holder straight 15 x 15 x 37mm
ER-003513 Holder straight 15 x 15 x 57mm

INOX

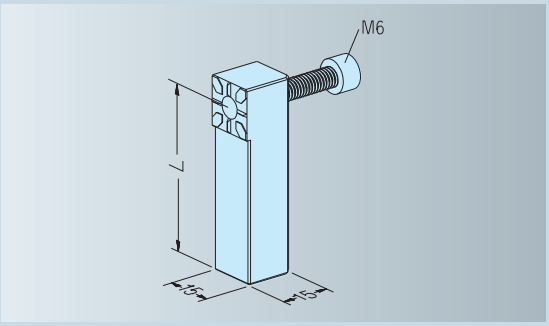
Version Steel, hardened, ground. Centering profile 15 mm.
Holder incl. bolt.
Application For electrodes of copper or graphite.
Fitting according to supplied instructions.



ER-003470 Angle holder 15 x 15 x 50mm
ER-003367 Angle holder 15 x 15 x 100mm

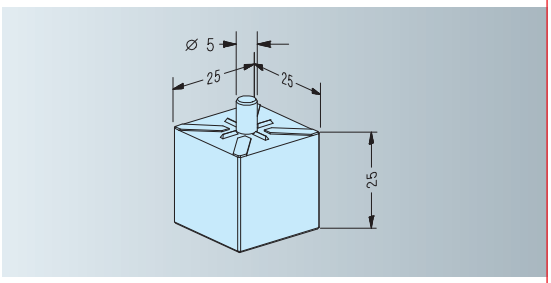
INOX

Version Steel, hardened, ground. Centering profile 15 mm.
Holder incl. bolt.
Application For electrodes of copper or graphite.
Fitting according to supplied instructions.



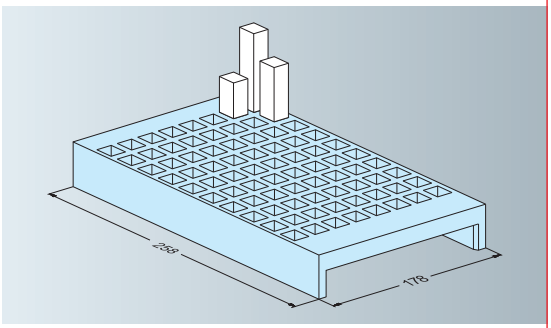
ER-003422 Prism die size 15

Version Steel, hardened, ground. Embossed profile 15 mm.
Application Embossing of centering prisms in blanks.



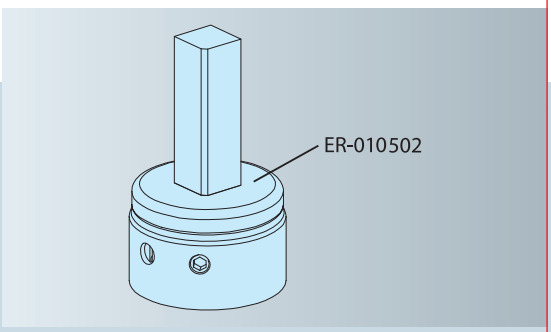
ER-010507 Square 15 electrode stand 10 pieces

Version Set of 10 stands, styrene.
Application Storage and transport of blanks and electrodes.



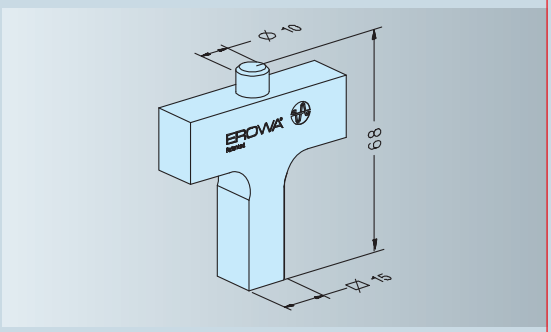
ER-010502 Square 15 chip guard 10 pieces

Version Set of 10 guards, oil-resistant rubber.
Application Protection against chips during electrode manufacturing.



ER-010495 Square 15 alignment rail

Version Steel, hardened, ground.
Application Testing of concentricity and angular accuracy of holder to ITS system.



ITS

EROWA®

EROWA ITS Square 15
Element Set

This will provide you with the complete basic equipment to work with EROWA´s square 15 system. Additional material, consumables in particular, can be ordered according to requirements.

ER-010515 Square 15 Electrode Set

This material is packed into one solid plastic box.

Order number	Description	Units per set	Units supplied by order number
ER-006641	Socket wrench SW4 for square holder	2	1
ER-007986	Square 15 electrode holder 50, for use on EDM centers	2	1
ER-009231	Square 15 electrode blank, copper	20	40
ER-009866	Square 15 electrode shaft, steel	20	40
ER-032785	Square 15 holder EWIS, for chip-cutting processes	1	1
ER-010495	Square 15 checking pin	1	1
ER-010497	Square 15 electrode shaft, M5	8	10
ER-010502	Square 15 chip guard	10	10
ER-010507	Square 15 electrode stand, styrene	2	10

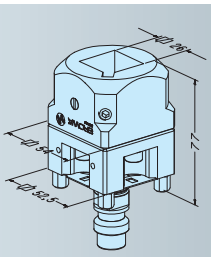
EROWA ITS

Square Electrode Clamping System 25

ER-010607 Square 25 electrode holder, ITS 50
1 unit

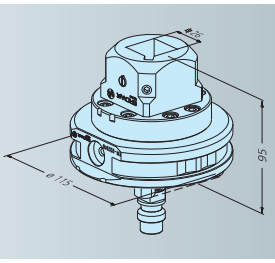
ER-010611 Square 25 electrode holder, ITS 50
12 pieces

Version ITS system size 50.
Application EDM/WEDM.



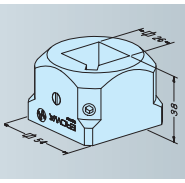
ER-032810 Square 25 holder EWIS™, ITS 100

Version ITS system size 100.
Application EDM and chip-cutting processes.



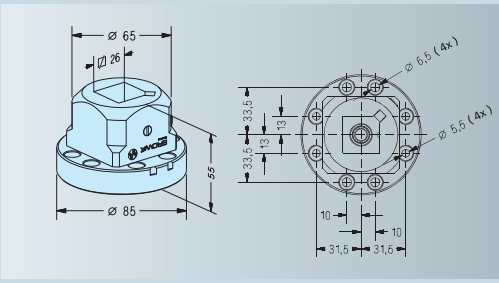
ER-010622 Square 25 holder, front part

Version Only clamping part of the holder.
Application For the construction on multiple fixtures.



ER-015629 Square 25 holder on adapter ø 85

Version Clamping part fitted to flange, fixed with rods.
Application For the construction on multiple fixtures.
Mounting From above through the flange into the base.



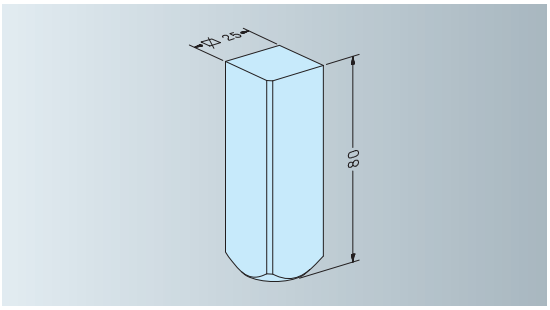
ITS

EROWA®

Square Electrode Clamping System 25 and System Plus

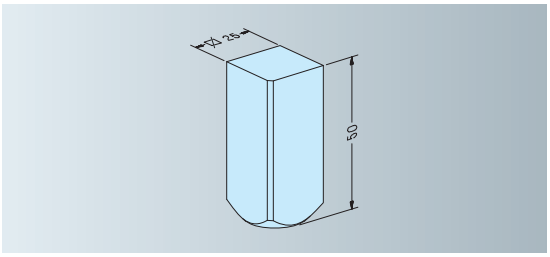
ER-009209 Square 25 electrode blank 24 pieces

Version Set of 24 blanks. EDM copper, drawn profile.
Application Blank for electrodes of up to 25 mm edge square.



ER-010491 Square 25 electrode shaft 24 pieces

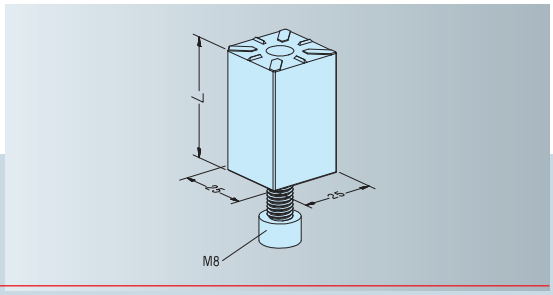
Version Set of 24 shafts, soft steel, drawn profile.
Application To solder or bond to blanks of up to 40 mm square.



ER-003405 Holder straight 25 x 25 x 40mm
ER-003439 Holder straight 25 x 25 x 65mm

INOX

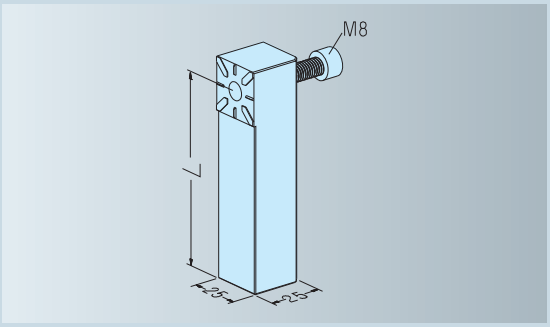
Version Steel, hardened, ground. Centering profile 25 mm. Holder incl. bolt.
Application For electrodes of copper or graphite. Fitting according to supplied instructions.



ER-003393 Angle holder 25 x 25 x 90mm

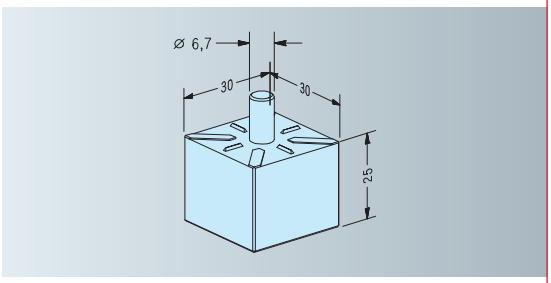
INOX

Version Steel, hardened, ground. Centering profile 25 mm. Holder incl. bolt.
Application For electrodes of copper or graphite. Fit according to supplied instructions.



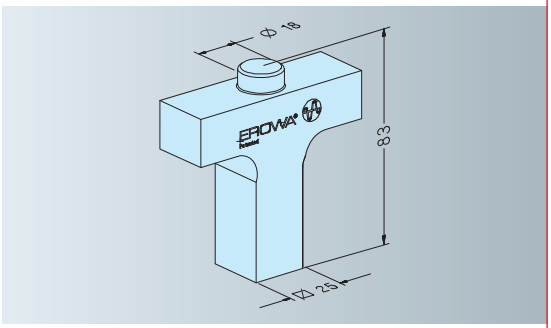
ER-003489 Prism die size 25

Version Steel, hardened, ground. Embossed profile 25 mm.
Application Embossing of centering prisms in blanks.



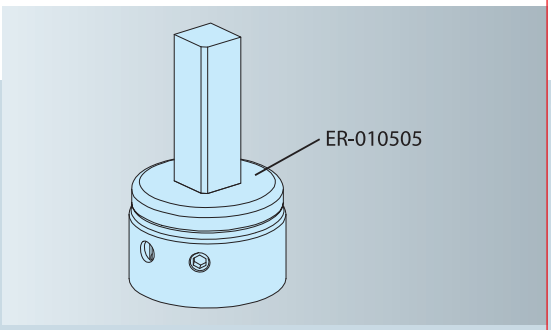
ER-010592 Square 25 alignment rail

Version Steel, hardened, ground.
Application Testing of concentricity and angular accuracy of the holder to the ITS system.



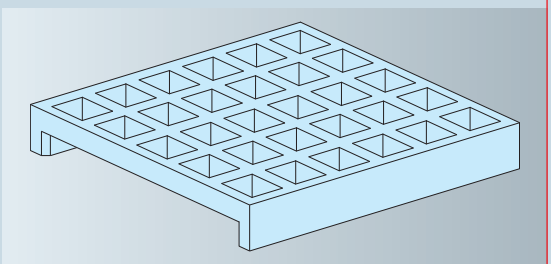
ER-010505 Square 25 chip guard 10 pieces

Version Set of 10 guards, oil-resistant rubber.
Application Protection against chips during electrode manufacturing.



ER-010511 Square 25 electrode stand 10 pieces

Version Set of 10 styrene stands.
Application Storage and transporting of blanks and electrodes.



EROWA®

EROWA ITS Square 25

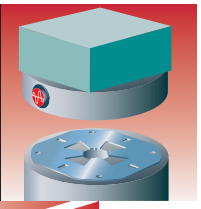
Element Set

This will provide you with the complete basic equipment to work with EROWA´s square 25 system. Additional material, consumables in particular, can be ordered according to requirements.

ER-010541 Square 25 Electrode Set

This material is packed into one solid plastic box.

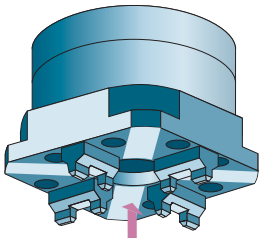
Order number	Description	Units per set	Units supplied by order number
ER-032810	Square 25 holder EWIS, for chip-cutting processes	1	1
ER-006641	Socket wrench SW4 for square holder	3	1
ER-009209	Square 25 electrode blank, holder	24	24
ER-010491	Square 25 electrode shaft, steel	24	24
ER-010505	Square 25 electrode chip guard	10	10
ER-010511	Square 25 electrode stand, styrene	2	10
ER-010592	Square 25 checking pin	1	1
ER-010607	Square 25 electrode holder 50, for use on EDM centers	2	1



EROWA®

ITS Special Electrode Holders

These holders support the manufacturing of special electrodes. Thanks to their adjustable angular and axial positions, existing electrodes can be integrated into the system. One of each of these holders should be kept ready for use in every workshop.



Save time
Machine changes and in-process-control without loss of time thanks to fixed reference position.

ITS 50

ER-008551

ER-008458

ER-008595

ER-015465

ER-009219
ER-010644

ER-035154

ER-010583

ER-009235

ER-033654

ER-039204

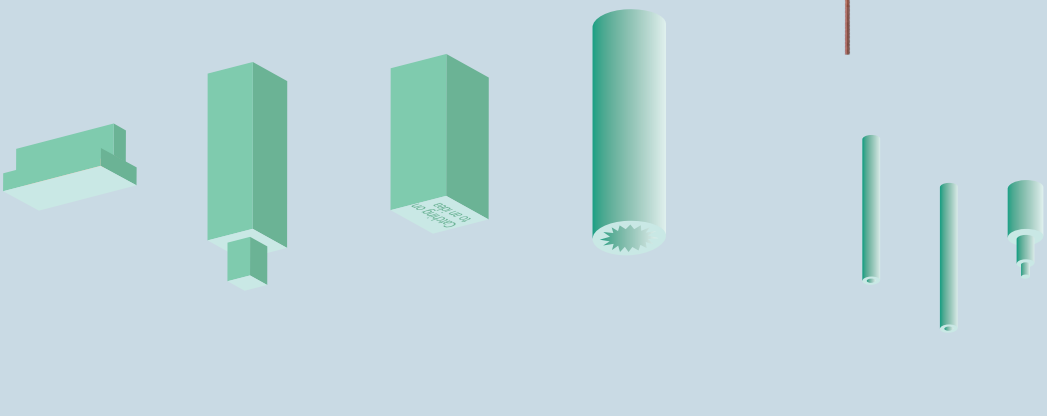
ER-035156

ER-008566

ER-008745

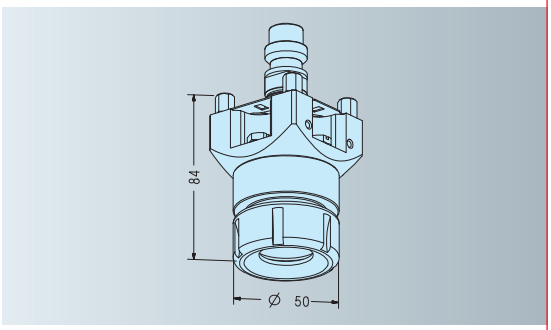
ER-010671

ER-010689



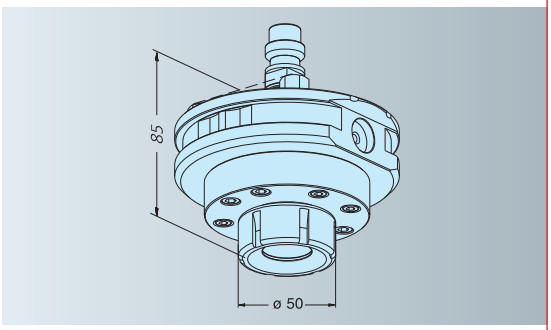
ER-008566 Collet chuck holder 50

Version System size 50, incl. wrench.
Application For round material up to ø 20 mm.



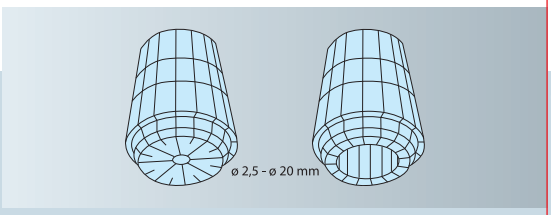
ER-032815 Collect Chuck holder 100

Version System size 100
Application For round material up to ø 20 mm.



ER-008745 Set of collet chucks ø 2.5 - 20mm

Version 19 collet chucks from ø 2.5 mm to ø 20 mm.
Application For round material up to ø 20 mm.

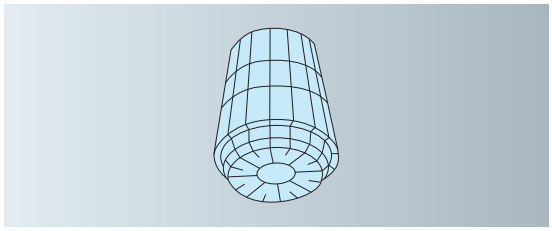


ITS

EROWA®

ITS Special Electrode Holders

ER-006700	Collet chuck ø 2.5mm
ER-006701	Collet chuck ø 3mm
ER-006702	Collet chuck ø 4mm
ER-006703	Collet chuck ø 5mm
ER-006704	Collet chuck ø 6mm
ER-006705	Collet chuck ø 7mm
ER-006706	Collet chuck ø 8mm
ER-006707	Collet chuck ø 9mm
ER-006708	Collet chuck ø 10mm
ER-006709	Collet chuck ø 11mm
ER-006710	Collet chuck ø 12mm
ER-006711	Collet chuck ø 13mm
ER-006712	Collet chuck ø 14mm
ER-006713	Collet chuck ø 15mm
ER-006714	Collet chuck ø 16mm
ER-006715	Collet chuck ø 17mm
ER-006716	Collet chuck ø 18mm
ER-006717	Collet chuck ø 19mm
ER-006718	Collet chuck ø 20mm



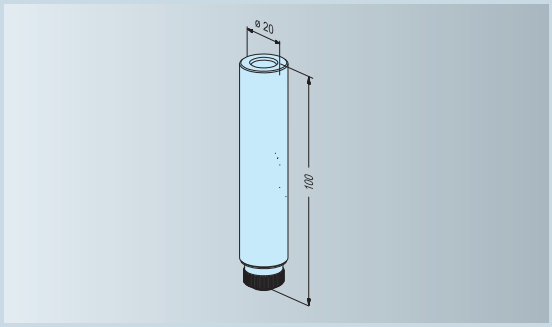
Version Delivered separately, clamping range per collet chuck:
ø 2.5 mm = 0.5 mm
ø 3-20 mm = 1 mm

Application Round material from ø 2 mm to ø 20 mm.

ER-010671 Mini collet chucks holder

Version Steel ground ø 20 mm.

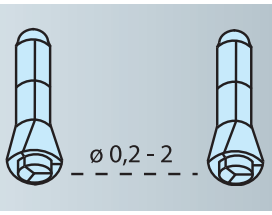
Application In ø 20 mm adapter or in ø 20 mm collet chuck for mini collet chucks of ø 0.2 mm to ø 2 mm.



ER-010689 Set of mini collet chucks

Version Set of 19 collet chucks ø 0.2 mm to ø 2.0 mm, steel ground, with brass seal for appropriate diameter.

Application Clamping of small electrode tubes ø 0.2 mm to ø 20 mm.



ER-002403	Mini collet chuck ø 0.2mm
ER-002404	Mini collet chuck ø 0.3mm
ER-002405	Mini collet chuck ø 0.4mm
ER-002406	Mini collet chuck ø 0.5mm
ER-002407	Mini collet chuck ø 0.6mm
ER-002408	Mini collet chuck ø 0.7mm
ER-002409	Mini collet chuck ø 0.8mm
ER-002410	Mini collet chuck ø 0.9mm
ER-002411	Mini collet chuck ø 1.0mm
ER-002412	Mini collet chuck ø 1.1mm
ER-002413	Mini collet chuck ø 1.2mm
ER-002414	Mini collet chuck ø 1.3mm
ER-002415	Mini collet chuck ø 1.4mm
ER-002416	Mini collet chuck ø 1.5mm
ER-002417	Mini collet chuck ø 1.6mm
ER-002418	Mini collet chuck ø 1.7mm
ER-002419	Mini collet chuck ø 1.8mm
ER-002420	Mini collet chuck ø 1.9mm
ER-002421	Mini collet chuck ø 2.0mm

Version Steel, ground, with brass seal for appropriate diameter.

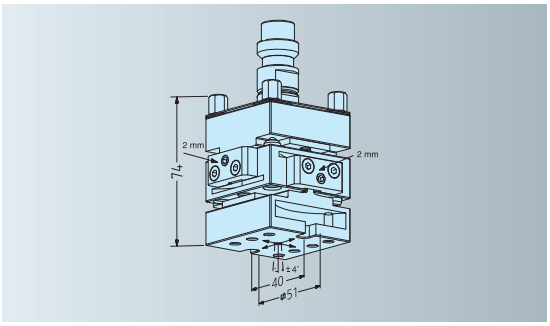
Application Clamping of small electrode tubes.

ITS Special Electrode Holders

ER-008595 Zekant

Version Electrode holder with cross slide (2 mm travel) and pendulum movement (+/– 4°).

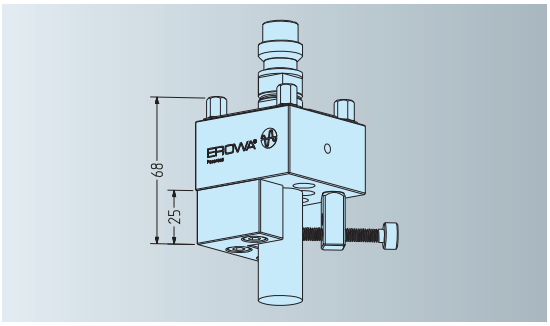
Application Clamping and alignment of electrodes. Not suitable for chip-machining.



ER-008458 V-block holder stainless

Version Prism ground bearing surfaces 10 mm +/– 0.005 mm from the center.

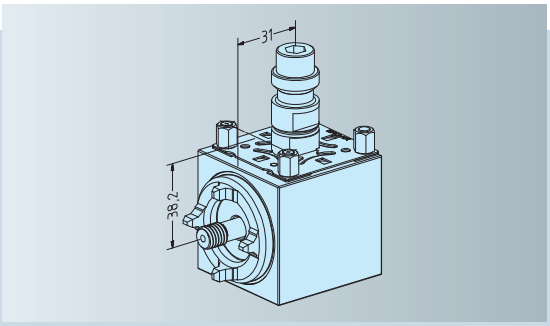
Application Clamping from outside, precision machined electrodes or small workpieces.



ER-008551 Horizontal holder

Version Hardened and ground 90° angle and centering accuracy 0.005 mm.

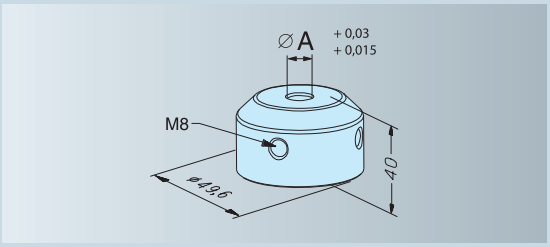
Application Clamping of electrode holders in horizontal position, may not be used for chip-machining.



ER-010583 Blank holder ø 10mm
ER-010581 Blank holder ø 12mm
ER-010577 Blank holder ø 20mm

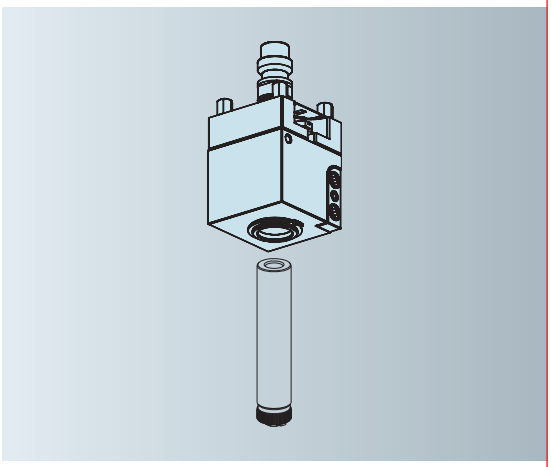
Version Steel, hardened, ground bore.

Application Fit to Uniplate ER-009219 for clamping of precision copper tubes or bars.

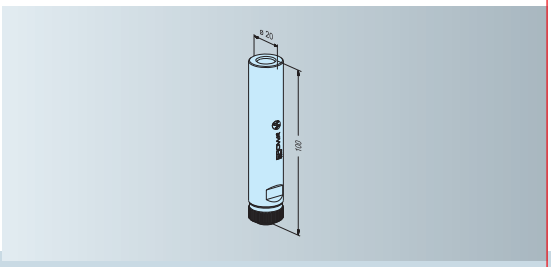


ER-009235 Adapter ø 20mm

Version Hydraulic holding of ø 20 mm shafts.

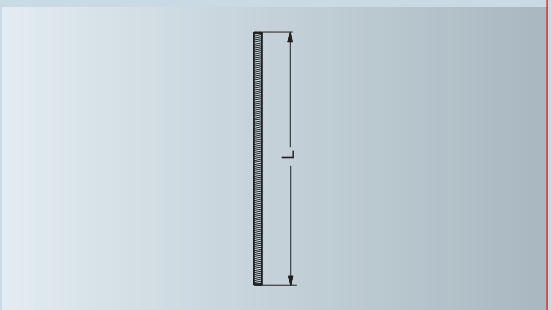


ER-033654 Thread holder M3 P=0.5mm / ø 2.3mm
ER-033655 Thread holder M4 P=0.7mm / ø 2.9mm
ER-033656 Thread holder M5 P=0.8mm / ø 3.8mm
ER-033657 Thread holder M6 P=1mm / ø 4.5mm



Version Ground 20 mm shaft.
Application Defined positioning of threaded EROWA electrodes.
Note Systems for M3, M4, M5 and M6.

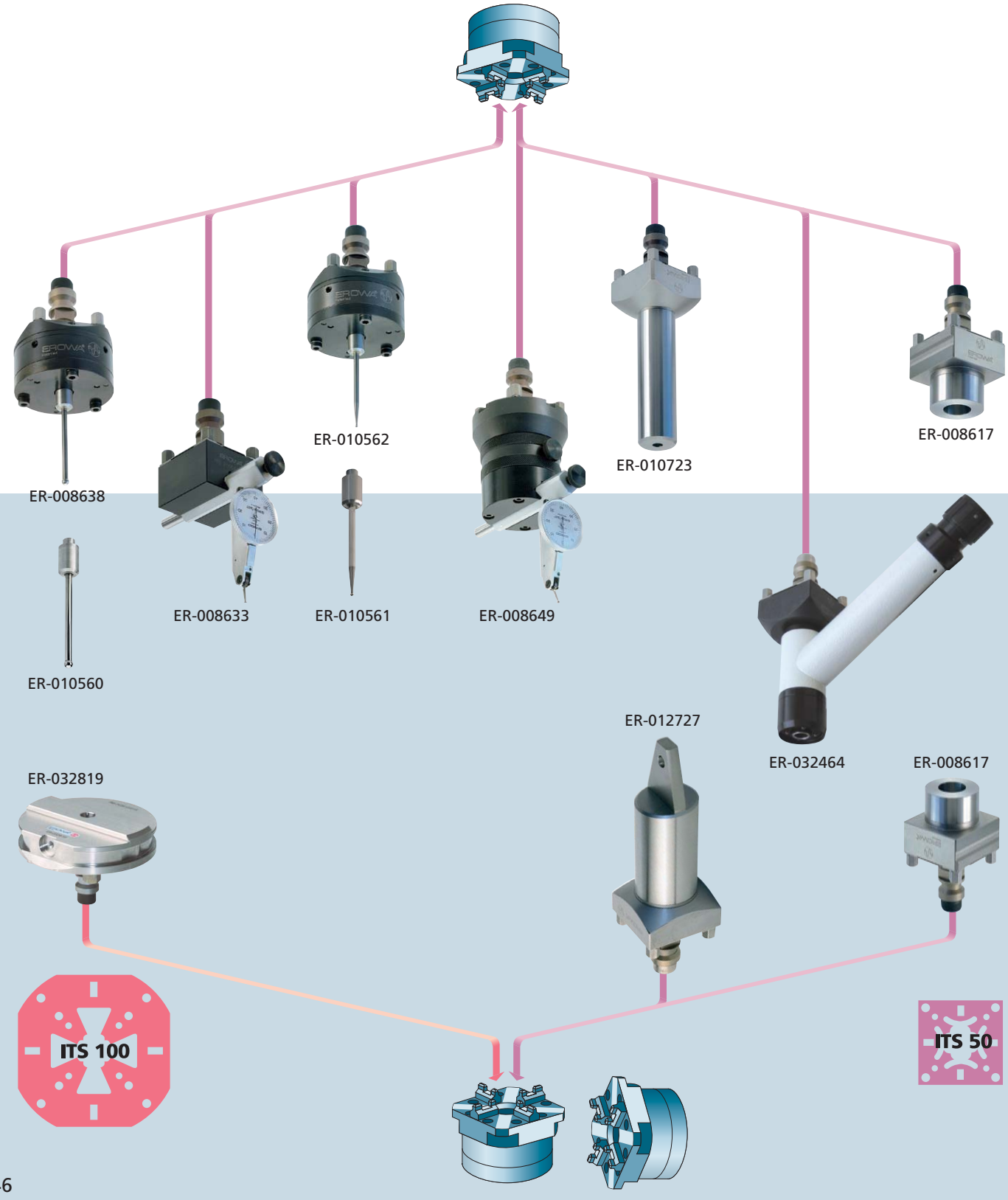
ER-033204 Threaded electrode M3
ER-033205 Threaded electrode M4
ER-033206 Threaded electrode M5
ER-033207 Threaded electrode M6



Version EDM copper with precision thread.
Application For EDM-ing threads with EROWA Thread holder System.
Note Sizes available for: M3, M4, M5 and M6.

Measuring and Checking Elements

Trusting is good - checking is better. These specially designed elements will make it easier for you to check your production equipment. These elements are for use both in chip-cutting applications and in EDM sinking and WEDM.

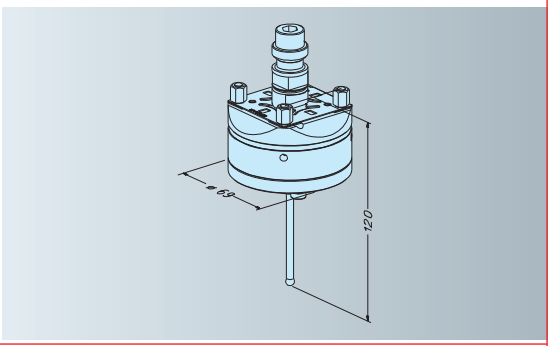


ER-008638 Sensor with ball ø 5mm
ER-010562 Sensor with ball ø 2mm

auto

Version Holder with spring-loaded sensing pin and tungsten carbide ball. Overrun protection: X, Y, Z 1 mm. Repetition accuracy: X, Z, Y 0.002 mm.

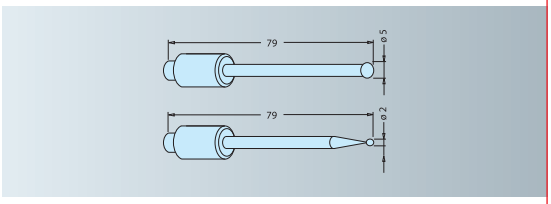
Application Automatic measurement of workpieces in CNC EDM sinking centers.



ER-010560 Replacement sensor pin ø 5mm
ER-010561 Replacement sensor pin ø 2mm

Version Tungsten carbide, incl. adapter part, without spacer washer

Application Replacement of pins in sensors ER-008638 and ER-010562 Attention: spacer washer is matched to the respective sensor.

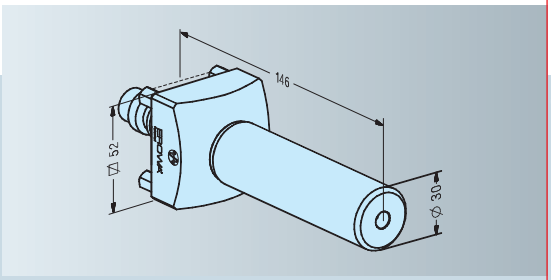


ER-010723 Checking pin 50

INOX

Version Hardened, ground.

Application Alignment of radial, axial and angular position of ITS chucks.

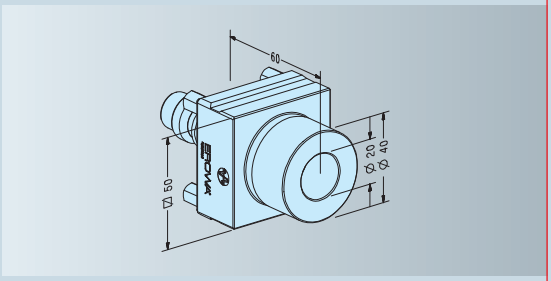


ER-008617 Gauging pin

INOX

Version Hardened, ground.

Application Alignment of ITS chucks in radial, axial and angular position.



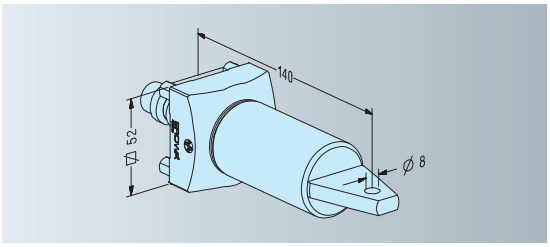
ITS

EROWA®

ER-012727 Reference pin UnoSet

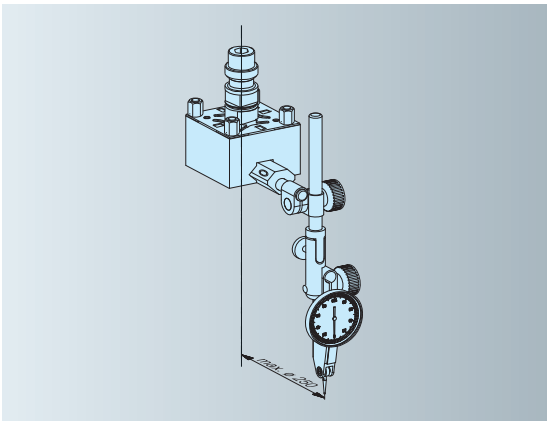
INOX

Version Hardened, ground, borehole ø 8 mm.
Application To determine reference measurements on horizontal chucks.



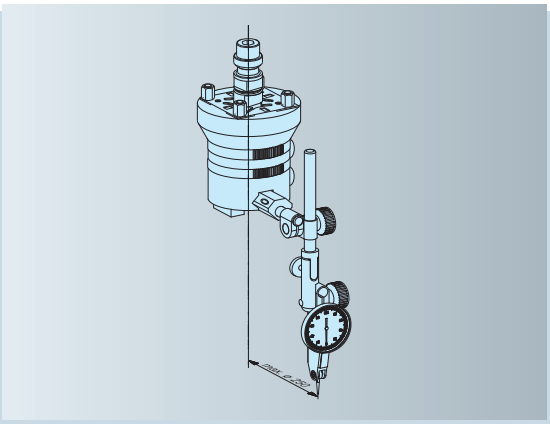
ER-008633 Fixed centering device

Version Holder with sliding part and metric dial gauge mm. Scale graduation: 0.01 mm.
Application Concentricity measurement of workpieces on machines with C-axis or rotating spindle.



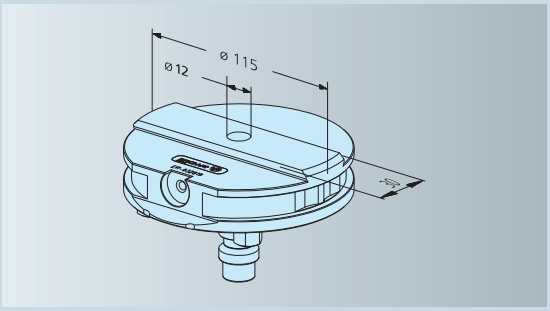
ER-008649 Rotatable centering device complete

Version Holder with rotating and sliding part, including metric dial gauge mm. Scale graduation: 0.01 mm.
Application Concentricity measurement of workpieces on machines without rotating axis.



ER-032819 Alignment pallet ø 115

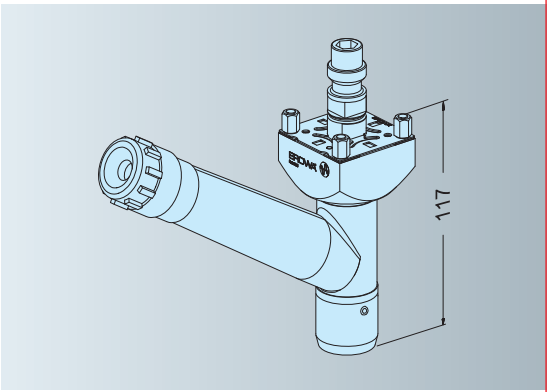
Version Pallet ø 115 mm, alignment length 110 mm, center borehole ø 12 mm.
Application Alignement of radial, axial and angular position of ITS chucks, PowerChuck P and PC 210 Combi chucks.



ER-032464 Microscope with pointed checking pin

Version Amplification factor: 40x
Illumination: 5 V, Tansformer: 100-240 V.

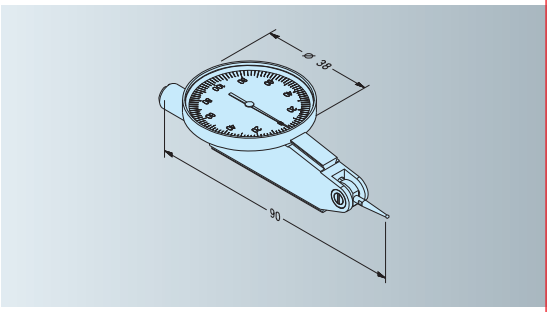
Application Determination of dimensions for complicated contours. The checking pin with tip serves for adjustment of the optical system.



ER-001565 Dial gauge ø 38 0.002mm

Version Measuring range +/- 0.2 mm Graduation 0.002 mm.

Application On PreSet setup and pre-setting cells, and on ITS centering devices.



EROWA®

ITS Element Set
My first EROWA

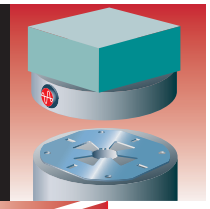
We have compiled practical sets for newcomers to the modern ITS Integrated Tooling System. Additional material, consumables in particular, can be ordered according to requirements.

Starter set for newcomers, with existing ITS chuck on the EDM quill.

ER-023239 My first EROWA

This material is packed into one solid plastic box.

Order number	Description	Units per set	Units supplied by order number
ER-009219	Uniplate	3	12
ER-009222	Prisround	3	12
ER-009226	Uniblank	3	12
ER-010438	Setscrew M8 x 16 for Prisround	6	25
ER-010441	Setscrew M8 x 16 for Uniholder	6	25
ER-010577	Blank holder ø 20 mm	1	1
ER-010581	Blank holder ø 12 mm	1	1
ER-010583	Blank holder ø 10 mm	1	1
ER-010634	Hex bolt with slot M6 x 20 for Uniplate	6	12
ER-010723	Checking pin	1	1
ER-010793	Uniholder	3	12
ER-010906	Toolkit ITS	1	1
ER-038824	QuickChuck 100 P with base plate	1	1
ER-015465	Chucking spigot F/A EDM	5	20



EROWA®

ITS Element Set

EDM Set

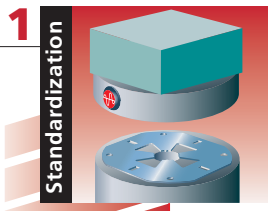
We have compiled practical sets for newcomers to the modern ITS Integrated Tooling System. Additional material, in particular consumables, can be ordered according to requirements.

User set for manual or CNC EDM centers with ITS quill chuck. The supplied chuck has been designed for manual electrode manufacturing.

ER-021098 QuickChuck 100 EDM Set

This material is packed into two solid plastic boxes.

Order number	Description	Units per set	Units supplied by order number
ER-000974	M10 x 20 hex socket head bolt	1	1
ER-001483	Key for collet holder 50	1	1
ER-006702	Collet ø 4 mm	1	1
ER-006704	Collet ø 6 mm	1	1
ER-006706	Collet ø 8 mm	1	1
ER-006708	Collet ø 10 mm	1	1
ER-006710	Collet ø 12 mm	1	1
ER-006718	Collet ø 20 mm	1	1
ER-008458	Prism holder, stainless	1	1
ER-008566	Collet holder 50	1	1
ER-009214	Centering plate 50 with washer	20	50
ER-011599	Centering plate 100 M5 with washer	5	10
ER-009219	Uniplate	6	12
ER-009222	Prisround	6	12
ER-010438	Setscrew M8 x 16 for Prisround	12	25
ER-010441	Setscrew M8 x 16 for Uniholder	12	25



ER-021098 QuickChuck 100 EDM Set

This material is packed into two solid plastic boxes.

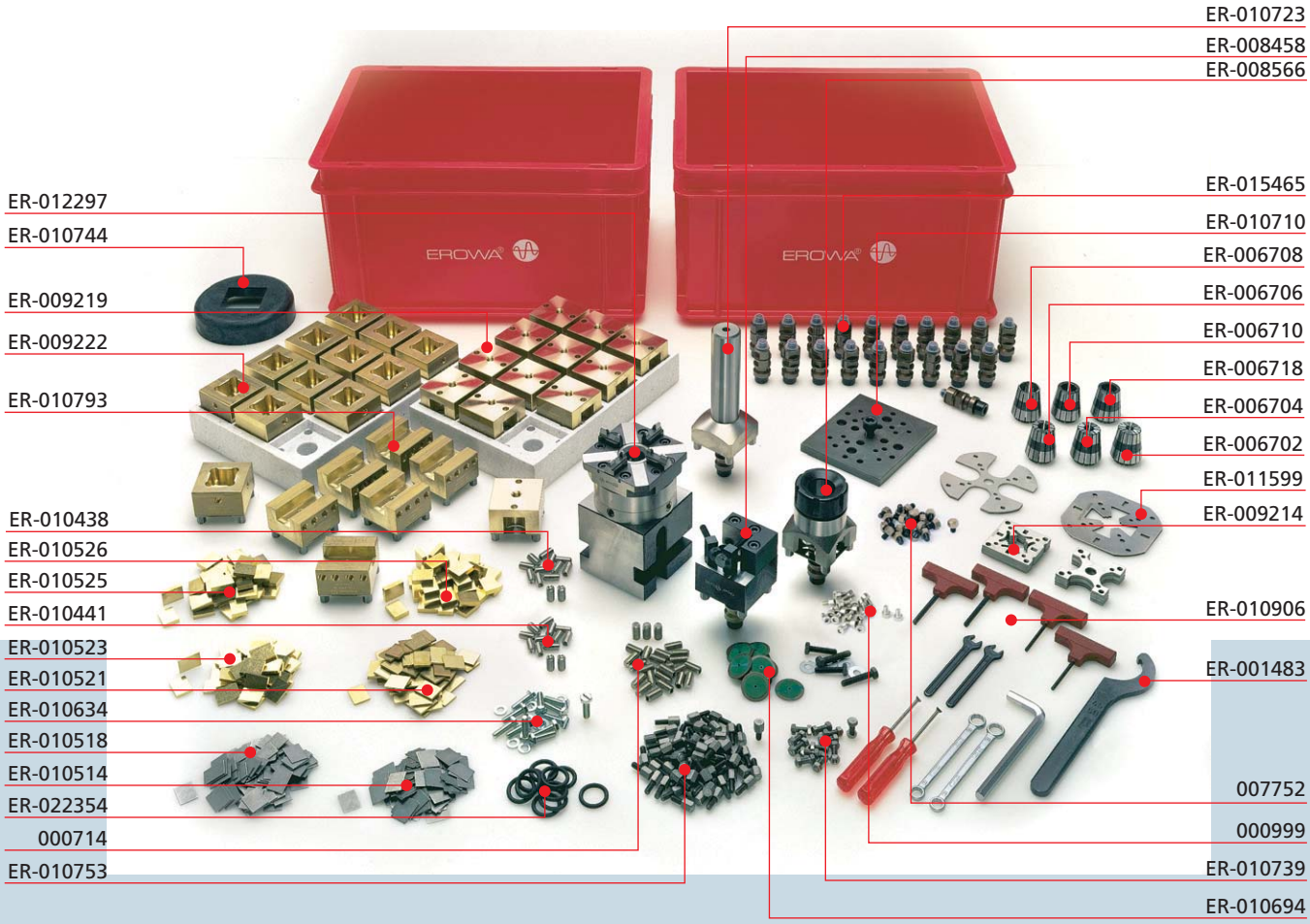
Order number	Description	Units per set	Units Artikel-Nummer
ER-010514	Spacer plate 0,5 mm	50	50
ER-010518	Spacer plate 1 mm	50	50
ER-010521	Spacer plate 2 mm	50	50
ER-010523	Spacer plate 3 mm	50	50
ER-010525	Spacer plate 4 mm	50	50
ER-010526	Spacer plate 5 mm	50	50
ER-010634	Hex bolt with slot for Uniplate	12	25
ER-010694	Sealing washers	12	24
ER-010710	Drilling template for borehole patterns, centering plates 50 and 100	1	1
ER-010723	Checking pin	1	1
ER-010753	Support feet M5	100	100
ER-010793	Uniholder	6	12
ER-010906	Toolkit ITS	1	1
ER-038824	QuickChuck 100 P with base plate	1	1
ER-015465	Chucking spigot F/A EDM	10	20
007752	M8 support foot	20	–
000999	M5 x 8 socket head bolt	20	–

ITS Element Set

EDM Standard Set

We have compiled practical sets for newcomers to the modern ITS Integrated Tooling System. Additional material, in particular consumables, can be ordered according to requirements.

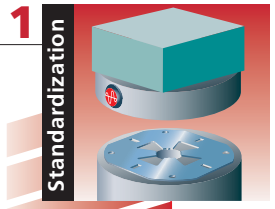
User set for manual or CNC centers. Containing, among other things, 50 electrode holders and a chuck.



ER-010874 EDM Standard Set

This material is packed into two solid plastic boxes.

Order number	Description	Units per set	Units supplied by order number
000714	Setscrew M8 x 16	25	1
ER-001483	Key for collet holder 50	1	1
ER-006702	Collet ø 4 mm	1	1
ER-006704	Collet ø 6 mm	1	1
ER-006706	Collet ø 8 mm	1	1
ER-006708	Collet ø 10 mm	1	1
ER-006710	Collet ø 12 mm	1	1
ER-006718	Collet ø 20 mm	1	1
ER-012297	Rapid-action chuck, manual, on block	1	1
ER-008458	Prism holder	1	1
ER-008566	Collet holder 50	1	1
ER-009214	Centering plate 50 with washer	20	50
ER-011599	Centering plate 100 M8 with washer	5	10
ER-009219	Uniplate	12	12



ER-010874 EDM Standard Set

This material is packed into two solid plastic boxes.

Order number	Description	Units per set	Units supplied by order number
ER-009222	Prisround	12	12
ER-010438	Setscrew M8 x 16 für Prisround	25	25
ER-010441	Setscrew M8 x 16 for Uniholder	12	25
ER-010514	Spacer plate 0,5 mm	100	50
ER-010518	Spacer plate 1 mm	100	50
ER-010521	Spacer plate 2 mm	100	50
ER-010523	Spacer plate 3 mm	100	50
ER-010525	Spacer plate 4 mm	100	50
ER-010526	Spacer plate 5 mm	100	50
ER-010634	Hex bolt with slot for Uniplate	25	25
ER-010694	Sealing washers	12	24
ER-010710	Drilling template for borehole patterns, centering plates 50 and 100	1	1
ER-010723	Checking pin	1	1
ER-010739	Supports M5, adjustable	12	24
ER-010744	Chip guard for rapid-action chuck	1	1
ER-010753	Supports M5	100	100
ER-010793	Uniholder	6	12
ER-010906	Toolkit ITS	1	1
ER-015465	Chucking spigot F/A EDM	20	20
ER-022354	Seal ring for chucking spigot	10	10
007752	M8 support foot	20	–
000999	M5 x 8 socket head bolt	20	–

EROWA®

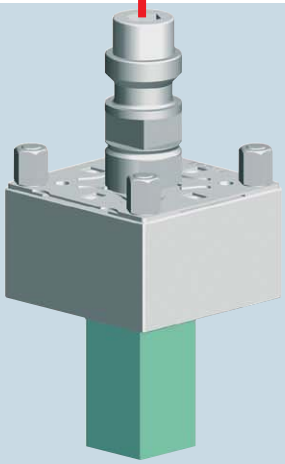
EROWA ITS Compact Combi

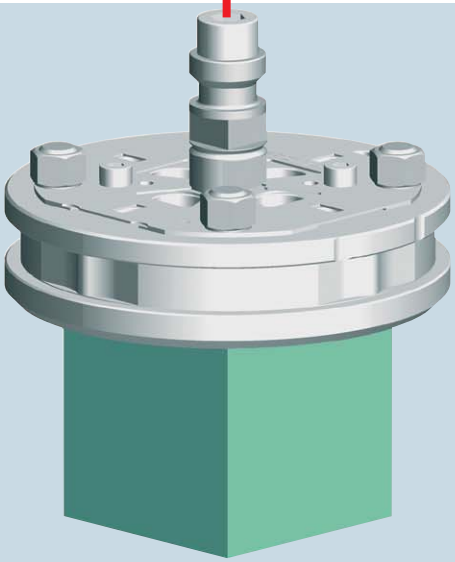
Three in one

Seamless integration into the existing ITS system.
The ITS Compact CombiChucks have the same mounting borehole grid as the conventional EROWA ITS chucks.
Universal clamping of three systems in one single chuck.
High precision and great performance due to the patented EROWA tooling technology.
Whether on the machine table or in the tool quill: EROWA´s ITS Compact CombiChucks can be used everywhere.

CompactChuck

ITS Compact CombiChuck



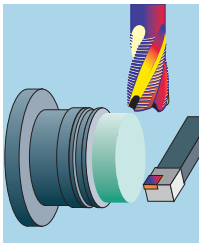


Compact Electrode holder

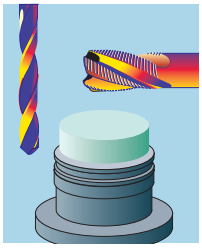
ITS 50 Electrode holder

ITS 100 Electrode holder

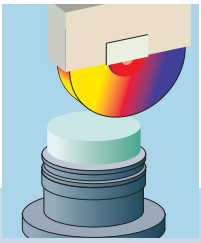
Applications



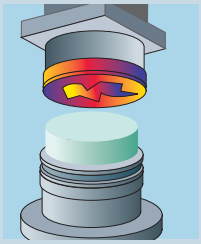
Milling / turning



Drilling / milling

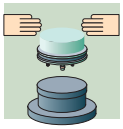


Grinding



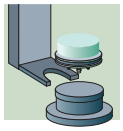
EDM sinking

Handling



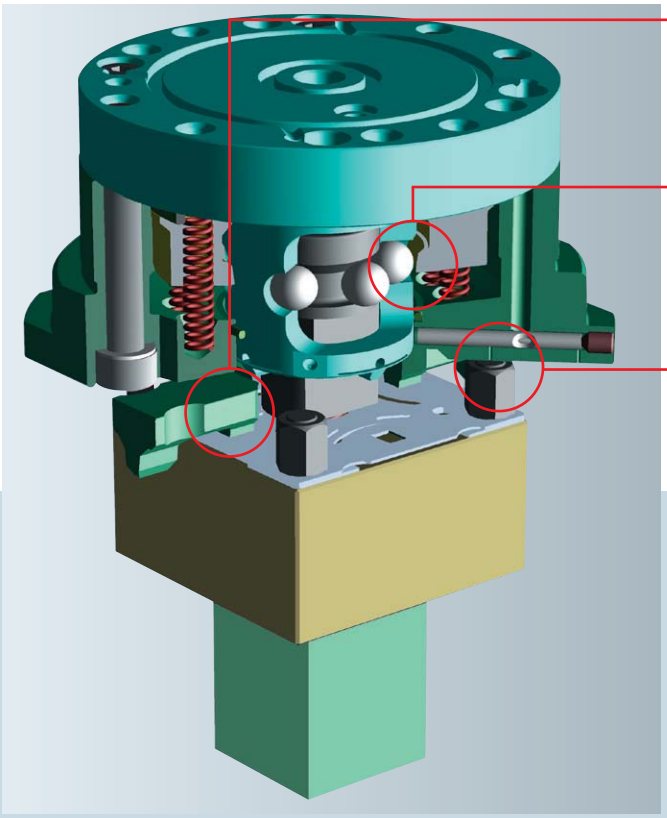
Manual

Loading facility



Robot

Function

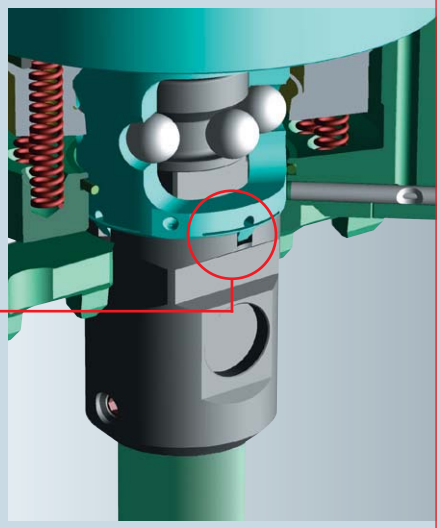


ITS Compact CombiChuck with **ITS** holder.

After latching into the centering plate, the prismatic spigots ensure powerful and high-precision positioning.

The self-locking ball-lock generates a clamping power of 5,000 N (with reclamping) and does not open even if the pressure fails.

The support feet are cleaned during the clamping process.



ITS Compact CombiChuck with **Compact** holder.

After latching to the centering plate, the prismatic spigots in combination with the spring slots ensure powerful and high-precision positioning.

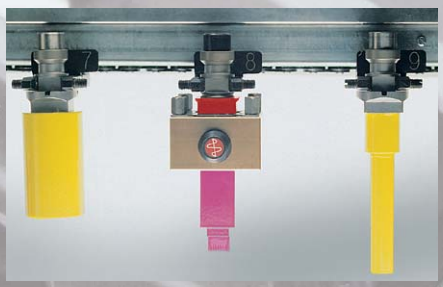
Technical data

	ITS Compact CombiChuck
System sizes	Compact 30, ITS 50 and ITS 100
Indexing	4 x 90°
Clamping power	3,000 N, 5,000 N with reclamping
Clamping	Spring power
Opening	Compressed air min. 6 bar
Operation	With manual or electropneumatic control unit

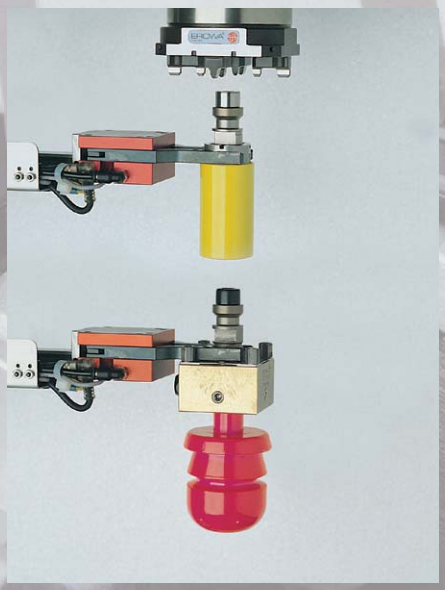
EROWA®

EROWA ITS Compact Combi

Compact – the best investment value tooling system for electrodes up to ø 50 mm. Compactness, precision, great performance. EROWA´s Compact System consists of a complete range of chucks, electrode holders, electrode changers and accessories.



Mixed up in the electrode magazine.



Economical automation by a combined loading of the EDM center.

Three pallet sizes - one chuck.
EROWA ITS Compact CombiChuck.

Storage capacity of up to 900 parts per square meter.

Compact chucking spigot Combi: for the integration of all Compact electrodes and electrode holders into the EROWA ITS Compact Combi system.

Quick and precise clamping of electrode holders with a fitted chip guard.

Ready - steady - GO! Insert chucking spigot and start machining. Use the ready made copper blank, you won´t find a quicker way.

Setting-up and measuring outside the machine: quickl, simple and accurate.

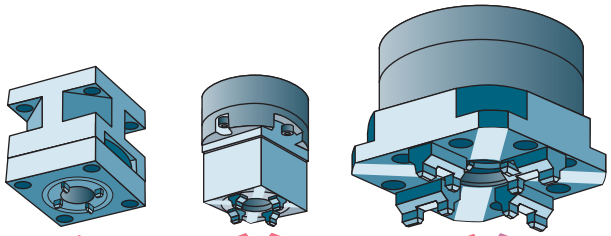
Robust and precise. The Compact standard holder is the base for most clamping applications.

EROWA®

ITS Compact Combi

The components

ER-008988



COMPACT

ITS 50

ITS 100

ER-029098

ER-015465

ER-010793

ER-035154

ER-035210

ER-017541

ER-015777

ER-019512

ER-017530

ER-017984

ER-034045

ER-035154

ER-032819

ER-017532

ER-017536

ER-010700

ER-019474

ER-029015

ER-010723

ER-010689

ER-032466

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

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

For chip-removing processes

For EDM sinking

For WEDM

EROWA ITS Compact Combi

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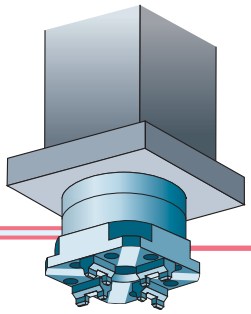
ITS Compact CombiChuck	164
Compact chuck	168
ITS Compact Combi Compact ITS Adapter	169
ITS Compact Combi Electrode Holder	170
ITS Compact Combi Electrode	172
ITS Compact Combi Accessories	173
ITS Compact Combi Measuring equipment	176
Compact Electrode Holder Set	178

The chucks pneumatically operated



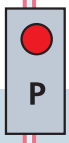
Quill chuck

ER-020025

ER-020026

ER-035261

ER-035262



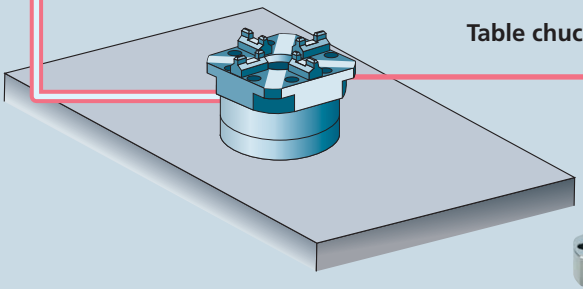
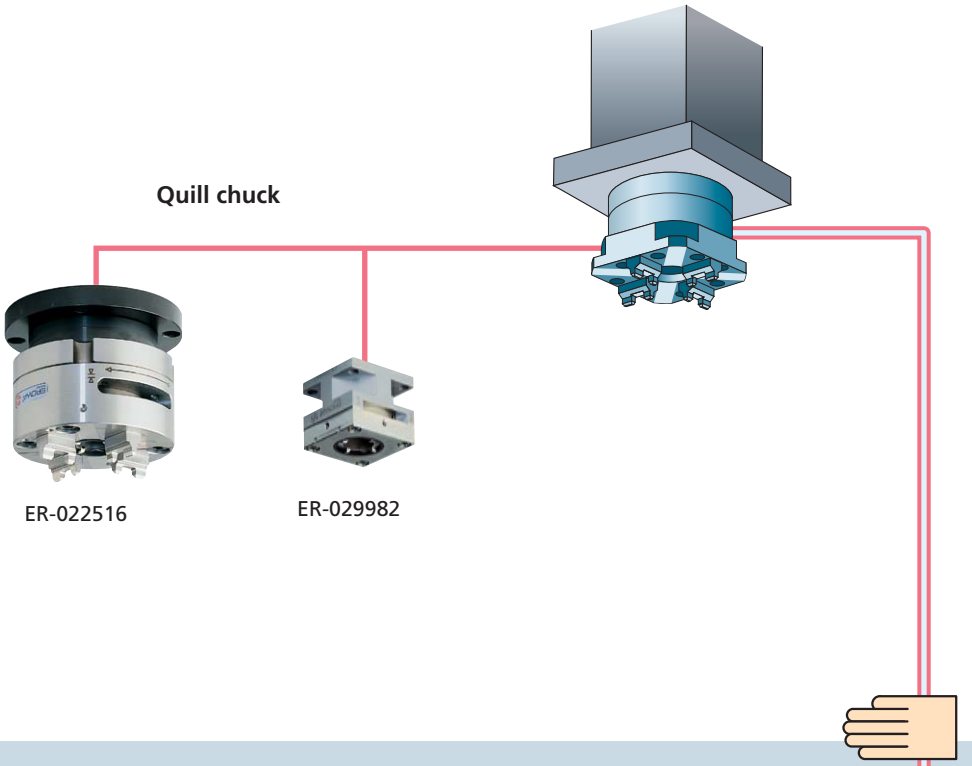


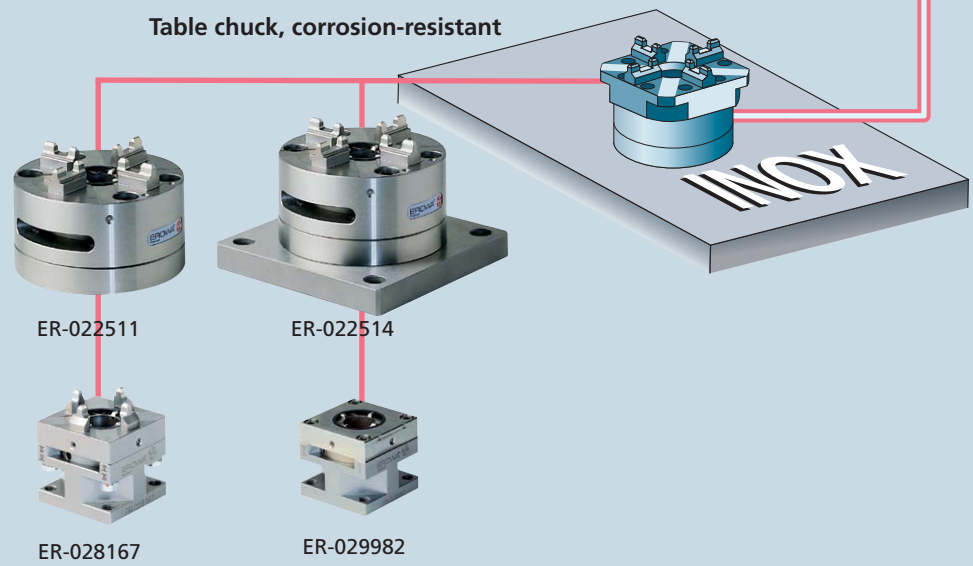
Table chuck

ER-020027

ER-020963

mechanically operated





EROWA®

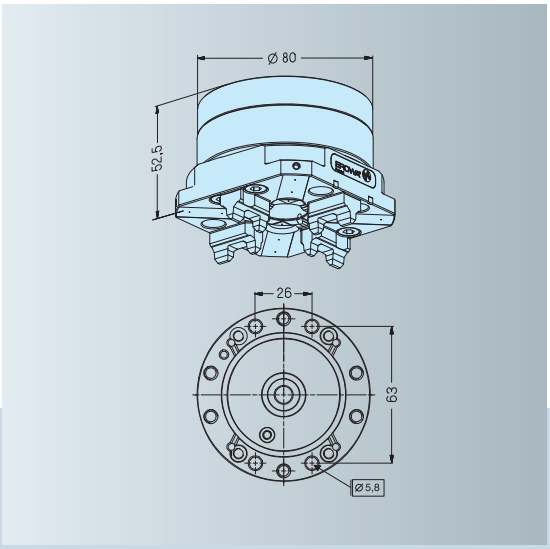
EROWA
ITS Compact Combi
chucks

Technical data	ITS Compact CombiChuck	ITS 50 Compact CombiChuck
Repeatability	0.002 mm	0.002 mm
Indexing	4 x 90°	4 x 90°
Clamping power with reclamping 6 bar (without)	5000 N (3000 N)	(4,000 N)
Generated by	springs	springs
Opening with compressed air, dry	min. 6 bar	min. 6 bar
Operation	with manual or electro-pneumatic control unit	with manual or electro-pneumatic control unit

ER-020025 ITS Compact CombiChuck

auto

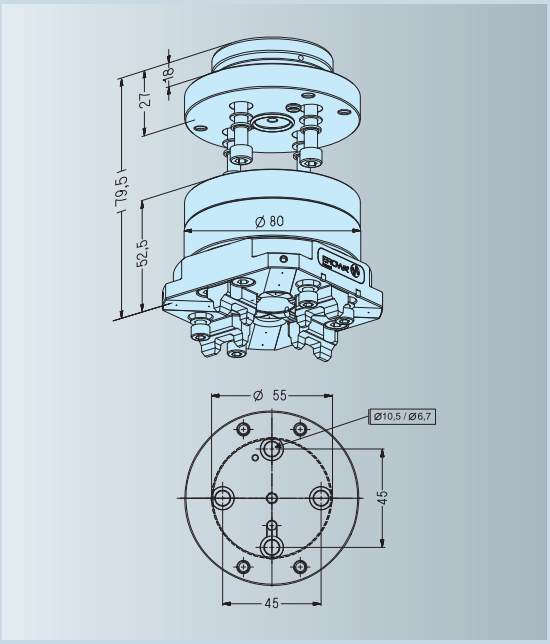
Version ITS rapid-action chuck with built-in CompactChuck.
Connections At the rear.
Application EDM centers with automatic electrode change, machine tools with automatic loading of ITS and Compact electrode holders.



ER-020026 ITS Compact CombiChuck with collar

auto

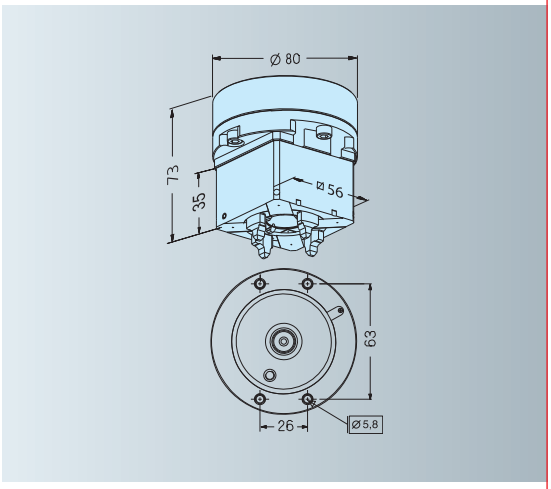
Version With flange ø 80/55 mm for flushing connection.
Connections At the rear.
Application EDM centers with automatic electrode change of ITS and Compact electrode holders.



ER-035261 ITS 50 Compact CombiChuck

auto

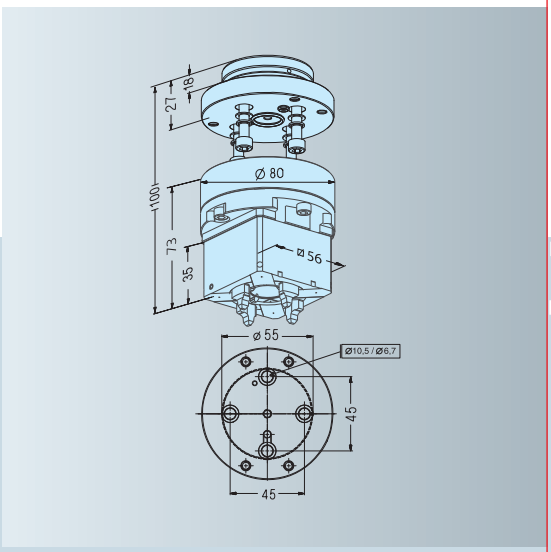
Version ITS QuickChuck 50 with built-in CompactChuck.
Connections At the rear.
Application EDM centers with automatic electrode change, machine tools with automatic loading of ITS and Compact electrode holders.



ER-035262 ITS 50 Compact CombiChuck with collar

auto

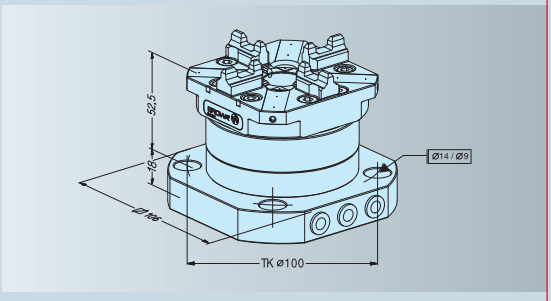
Version With flange ø 80/55 mm for flushing connection.
Connections At the rear.
Application EDM centers with automatic electrode change of ITS and Compact electrode holders.



ER-020027 ITS Compact CombiChuck with clamping pallet

auto

Version With clamping pallet 106 x 106 mm.
Connections With lateral clamping plate for manual and pneumatic control unit.
Application On milling, grinding and EDM centers with manual and automatic loading facilities.



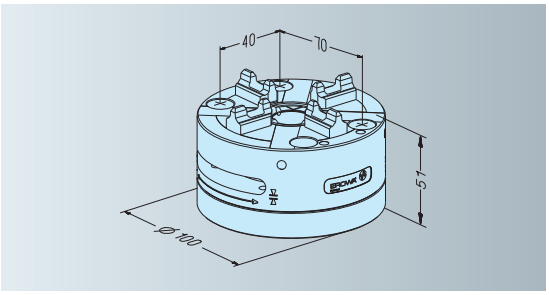
EROWA®

EROWA
ITS Compact Combi
chucks

Technical data	QuickChuck 100 Combi	QuickChuck 50 Combi
Repeatability	0.002 mm	0.002 mm
Indexing	4 x 90°	4 x 90°
Max. clamping power	10,000 N	4,000 N
Operation	manual	manual

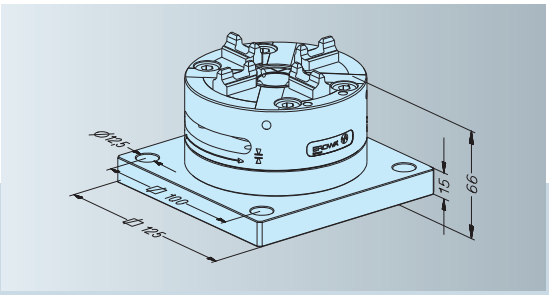
ER-022511 QuickChuck 100 Combi

Version Combi system for EROWA ITS and Compact.
To fit With 4 x M8 bolts.
Operation Manual.
Application To clamp EROWA electrode holders and pallets of the system sizes Compact, ITS 50 und ITS 100.



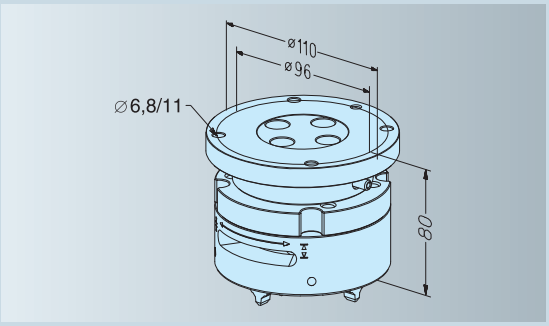
ER-022514 QuickChuck 100 Combi P

Version Combi system for EROWA ITS and Compact with base plate.
Mounting With bolts or brackets.
Operation Manual.
Application To clamp EROWA electrode holders and pallets of the system sizes Compact, ITS 50 and ITS 100.



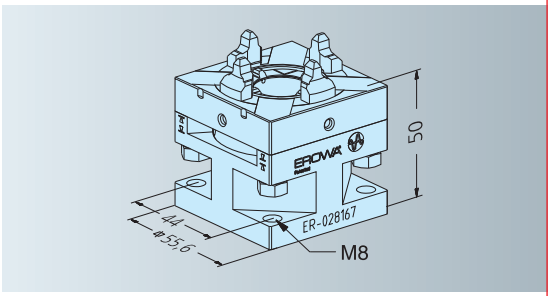
ER-022516 QuickChuck 100 Combi R

Version Combi system for EROWA ITS and Compact with rotatable flushing connection.
Mounting With 4 x M6 bolts.
Operation Manual.
Application To fit to rotating axes of EDM centers with lateral flushing connection.



ER-028167 QuickChuck 50 Combi

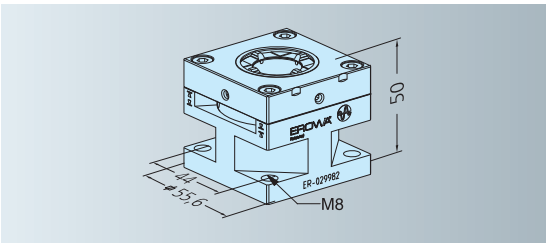
Version	Combi System for EROWA ITS and Compact.
Mounting	With four M8 bolts or four M6 bolts and nuts.
Operation	Manual.
Application	Clamping of EROWA electrode holders of the system size Compact and ITS 50.



Technical data	CompactChuck
Repeatability	0.002 mm
Indexing	4 x 90°
Clamping power with reclamping 6 bar (without)	5,000 N (2,200 N)
Opening with compressed air	min. 6 bar
Operation mode	PA = Pneumatic, automatic PM = Pneumatic, manual M = Manual

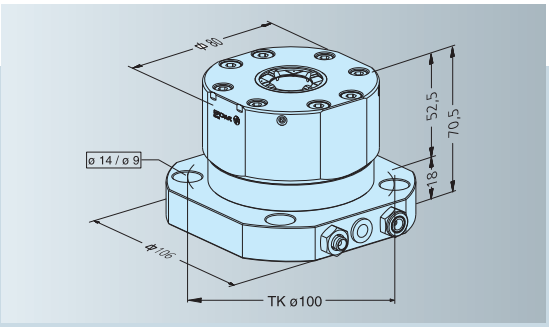
ER-029982 CompactChuck M

Mounting With four M8 bolts or with four M6 bolts and nuts
Operation Rapid-action lock with lever.
Application Clamping of EROWA Compact electrode holders.
Note The CompactChuck M can also be used as a quill chuck.



ER-020963 CompactChuck PM/PA

Version On 106 x 106 mm clamping plate.
Connections On the side on clamping plate.
Application On milling, grinding and EDM centers with manual operation.

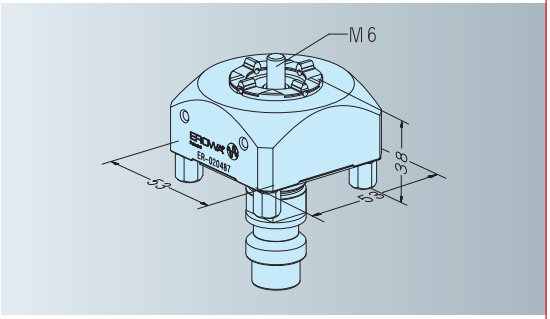


EROWA
ITS Compact Combi
Compact ITS Adapter

ER-020487 Compact ITS adapter

INOX

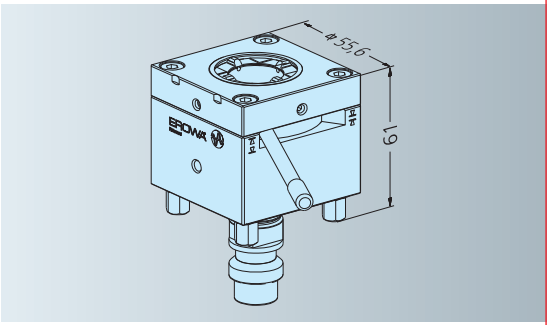
Version ITS system size 50, lock with central locking bolt. Prepared to accommodate chip holder for EWIS chip.
Operation Tighten central locking bolt.
Application System adapter Compact - ITS.



ER-029985 Compact ITS Adapter Chuck

INOX auto

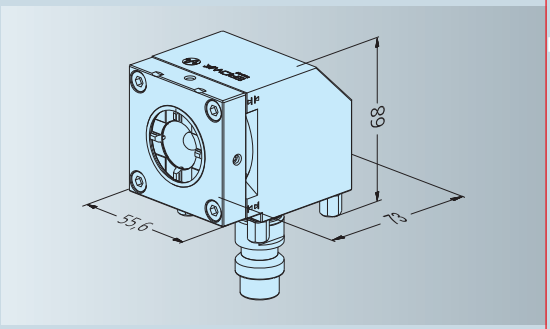
Version ITS system size 50, QuickChuck action for Compact holders.
Operation Quick locking mechanism with lever.
Application Individual Compact chuck for machines which are equipped with standard ITS. System adapter Compact - ITS.



ER-029988 Compact ITS angle adapter

INOX auto

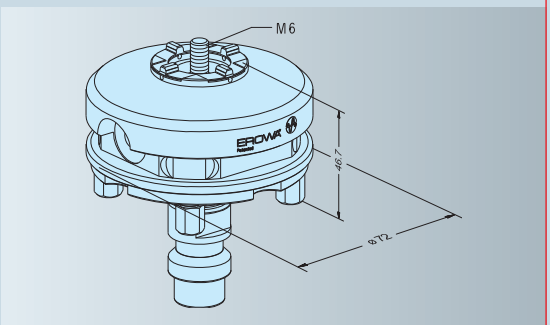
Version ITS System size 50, QuickChuck locking mechanism of 90° angle chuck.
Operation Quick locking mechanism with lever.
Application Systeme adapter Compact - ITS.



ER-036272 Compact ITS Adapter ø 72

INOX 72

Version ITS system size 50 ø 72. Lock with central locking bolt. Prepared for chip holder identification system.
Operation Tighten central locking bolt.
Application System adapter Compact - ITS 50 ø 72 mm.

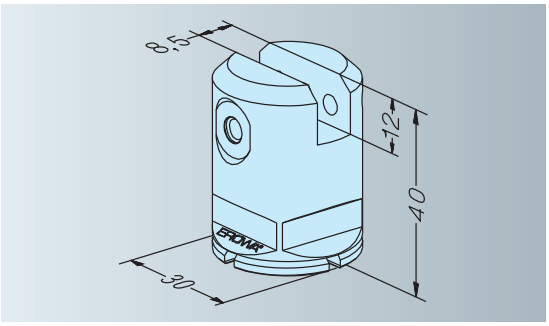


EROWA®

ER-017532 Compact Uniholder 18 pieces

INOX | auto

Version	Set of 18 units. Without chucking spigot.
Application	To hold blanks up to 8 mm width.
To fit blank	Insert and tighten M5 bolts.

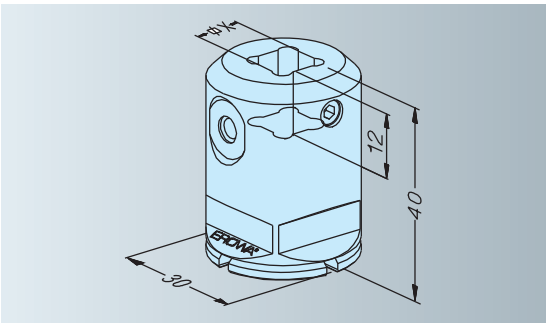


ER-017529 Compact Prisround 10mm 18 pieces

ER-017530 Compact Prisround 15mm 18 pieces

INOX | auto

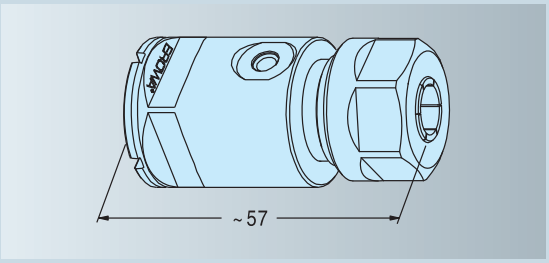
Version	Set of 18 units. Without chucking spigot.
Application	To hold blanks with shaft of up to X = 10 mm square (ER-017529), up to X = 15 mm square (ER-017530).
Mounting	Insert and tighten M5 bolts.



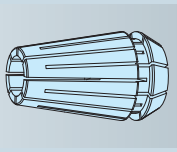
ER-034045 Compact Collect Chuck Holder 1 unit

INOX | auto

Version	One unit.
Application	To hold cylindrical parts with respective diameter.
Please note	Order collect chucks ER 16 (no INOX) separately.

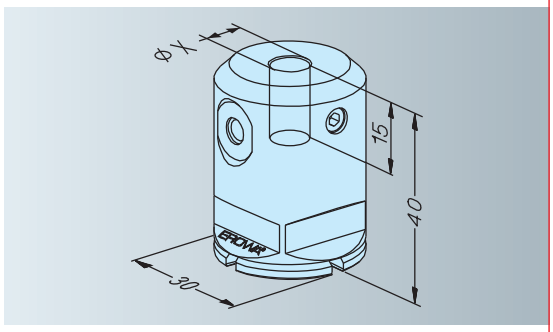


ER-002394 Collet chuck ER16 ø 2mm
ER-002395 Collet chuck ER16 ø 3mm
ER-002396 Collet chuck ER16 ø 4mm
ER-002397 Collet chuck ER16 ø 5mm
ER-002398 Collet chuck ER16 ø 6mm
ER-002399 Collet chuck ER16 ø 7mm
ER-002400 Collet chuck ER16 ø 8mm
ER-002401 Collet chuck ER16 ø 9mm
ER-002402 Collet chuck ER16 ø 10mm



Version	Clamping range 1 mm per collet chuck. Fits Collet Chuck Holder ER-017531.

ER-017533	**Compact Electrode Holder 8mm 18 pieces**
ER-017534	**Compact Electrode Holder 10mm 18 pieces**
ER-017535	**Compact Electrode Holder 12mm 18 pieces**
ER-017536	**Compact Electrode holder 16mm 18 pieces**



Version Set of 18 units.
Without chucking spigot.

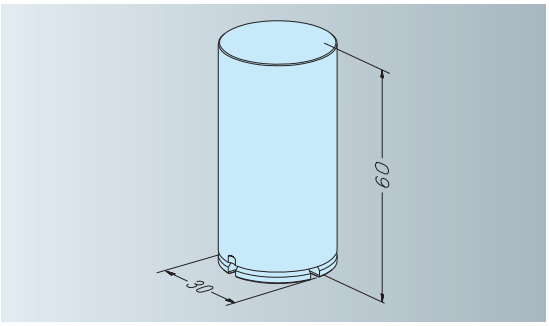
Application To hold cylindrical parts with respective diameter.

Mounting Insert and tighten M5 bolts.

EROWA®

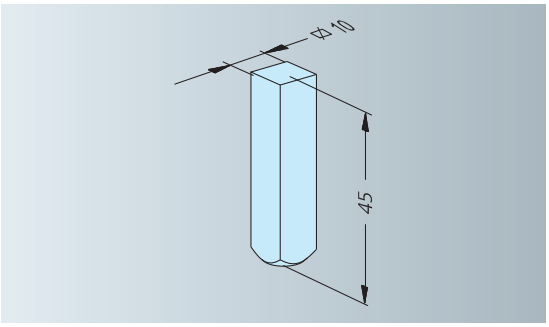
ER-019512 Compact Electrode ø 30 x 60
12 pieces, without gripper groove

Version Electrode copper.
Set of 18 units. Without chucking spigot.
Application To produce electrodes up to ø 30 mm.



ER-030161 Compact electrode 10 x 10 x 45 copper
36 pieces

Version Electrode copper. Set of 36.
Application Production of electrodes of up to 10 x 10 mm.

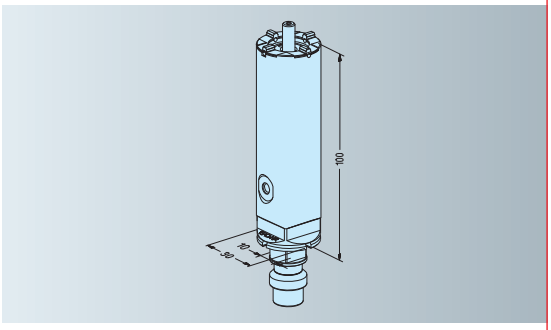


EROWA
ITS Compact Combi
Accessories

ER-017982 Compact extension 100mm

INOX

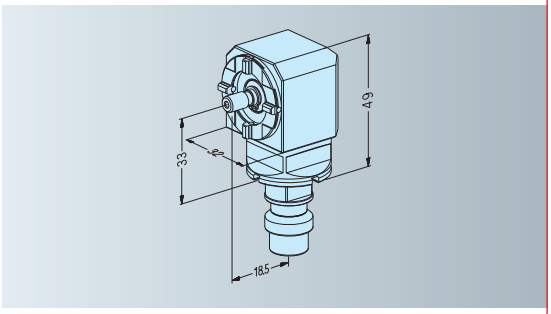
Version Shaft ø 30 x 100 mm.
Application Extends the electrode by 100 mm.
Operation Lock via central bolt through shaft.



ER-017984 Compact angle Chuck

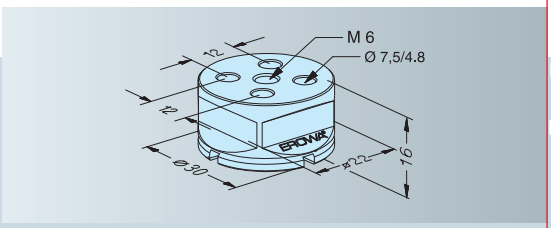
INOX

Version Compact Chuck at 90° angle.
Operation Central locking bolt.
Application Change from vertical to horizontal machining position.



ER-029015 Compact standard holder H=16 20 pieces

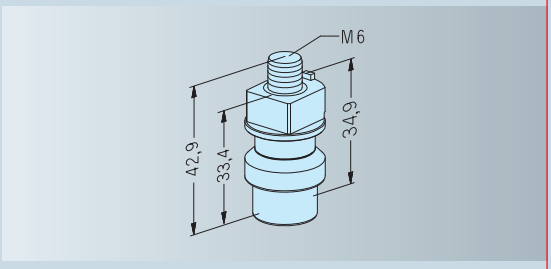
Version Set of 20 per package, without chucking spigot.
Application To fit electrodes and workpieces.
Note Attach blank through the center with the chucking spigot bolt or through the holder with four M4 bolts (option ER-023125, 100 M4 x 14 socket head bolts).



ER-029098 Chucking spigot Compact Combi 20 pieces

INOX auto

Version Set of 20.
Application To accommodate all the compact electrodes and electrode holders in CompactChucks, ITS-Compact-Combi-Chucks and electrode changers. For handling with the EROWA Combi gripper.

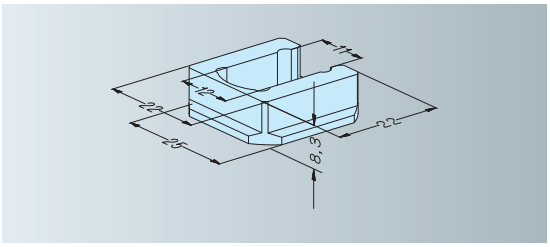


EROWA®

ER-051968 Chucking spigot clip 2 open electroconductive / 20 pieces

INOX | auto

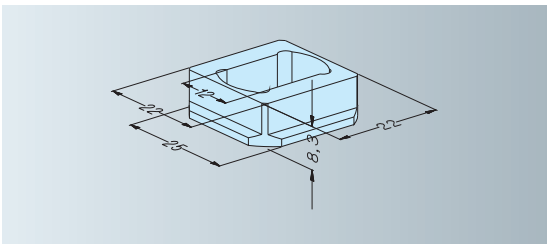
Version Synthetic, set of 20. Electroconductive.
To be fitted to ITS chucking spigot F/A.
Application To fit on ITS chucking spigot F/A. To load/unload ITS electrodes and electrode holders with EROWA Combi gripper.



ER-051969 Chucking spigot clip 2 closed electroconductive / 20 pieces

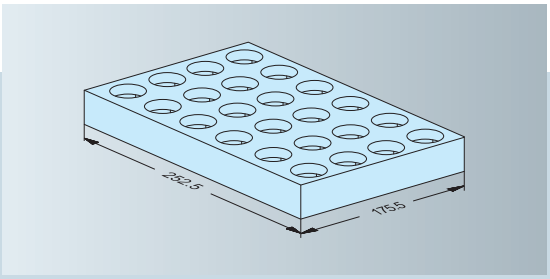
INOX | auto

Version Synthetic, set of 20. Electroconductive.
To be fitted to ITS chucking spigot F/A.
Application To fit to ITS chucking spigot F/A. To load/unload ITS electrodes and electrode holders with EROWA Combi gripper.



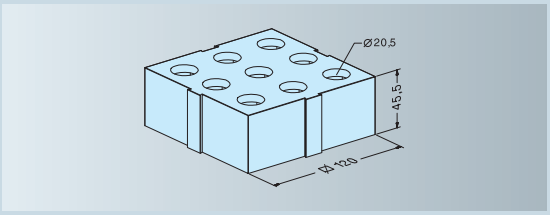
ER-020958 Compact System stand 24-fold 10 pieces

Version Styrene, set of 10.
Application Storage and transport of 24 parts each. Compact electrodes ø 30 mm, with fitted Compact chucking spigot.



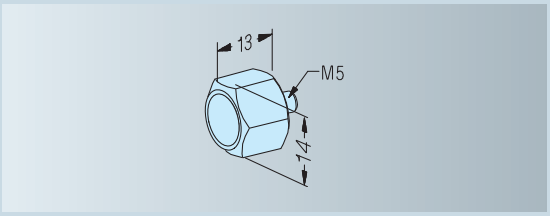
ER-022045 System stand Compact Combi 10 pieces

Version Plastic, set of 10.
Application Storage of 9 parts each. Compact electrodes with fitted Compact chucking spigot Combi.
Note The system stands can be fitted together to fill an entire surface, i.e. that of a drawer.

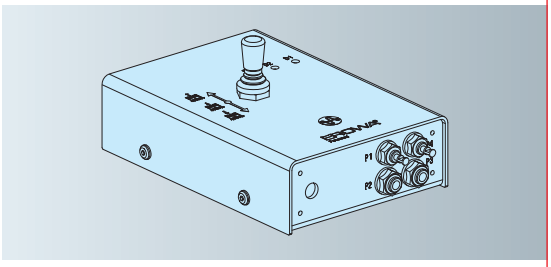


ER-035154 EWIS™ chip with holder SW14

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

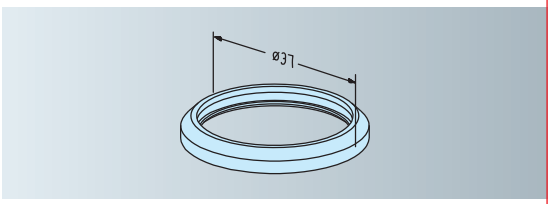


ER-008988 Manual control unit



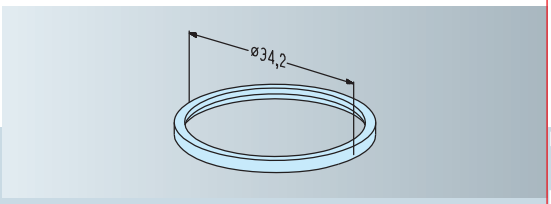
Version Manual valve to control all the functions of ITS, ITS Compact CombiChuck, PowerChuck P and UPC: opening/reclamping/cleaning.
Application Operation of chucks on machines.

ER-022921 Chip guard for CompactChuck 10 pieces



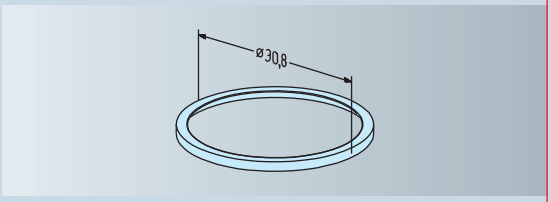
Version Rubber seal to attach to Compact ITS adapters. Set of 10.
Application Protects Compact ITS adapter and prevents the intrusion of liquids and chips. To be used in combination with sealing ring ER-022922.

ER-022923 Chip guard for CombiChuck 10 pieces



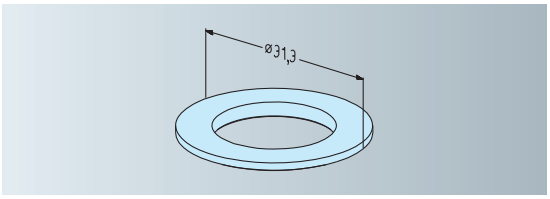
Version Plastic seal, set of 10.
Application Protects Compact chucks and prevents the intrusion of liquids and chips. To be used in combination with sealing ring ER-022922 or Combi sealing ring ER-022924.

ER-022922 Sealing ring for Compact holder 50 pieces



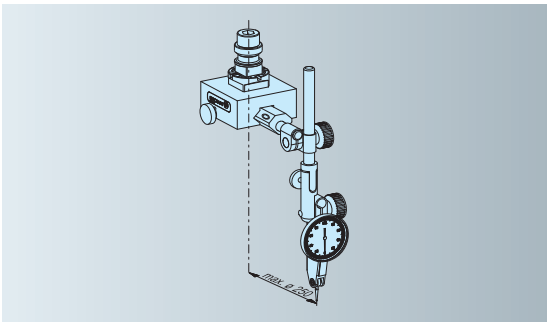
Version Rubber seal, set of 50.
Application To be fitted to Compact holder. In combination with chip guards ER-022921 or ER-022923, this prevents the intrusion of liquids and chips into the CompactChuck and the CombiChuck.

ER-022924 Combi sealing ring / ITS chucking spigot 20 pieces



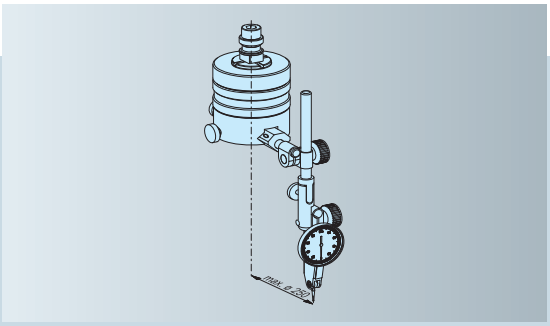
Version Plastic seal, set of 20.
Application To be fitted to ITS chucking spigots. In combination with the chip guard ER-022923, this prevents the intrusion of liquids and chips into the CombiChuck.

ER-019979 Compact centering equipment fixed



Version Holder with slide and metric dial gauge. Gradation: 0.01 mm.
Application Centric alignment of workpieces on machines with C-axes or rotation spindles.

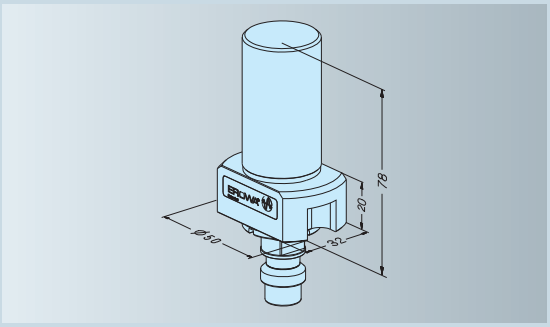
ER-019951 Compact centering equipment rotate



Version Holder with slide and metric dial gauge. Gradation: 0.01 mm.
Application Centric alignment of workpieces on machines without rotation axis.

ER-017541 Compact Checking pin

INOX



Version Hardened, ground, corrosion-resistant.
Application To align radial, axial and angular position of Compact chucks.

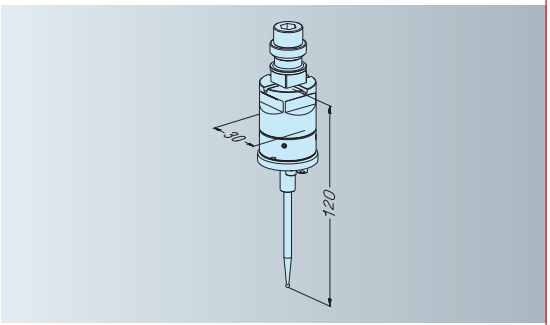
EROWA
ITS Compact Combi
Measuring equipment

ER-019473 Compact probe with ball ø 2 mm
ER-019474 Compact probe with ball ø 5mm

auto

Version Version with spring-mounted probe and carbide bolt.
Overrun protection: X-, Y-, Z-axes, 0.3 mm.
Repeatability: X-, Y-, Z-axes, 0.002 mm.

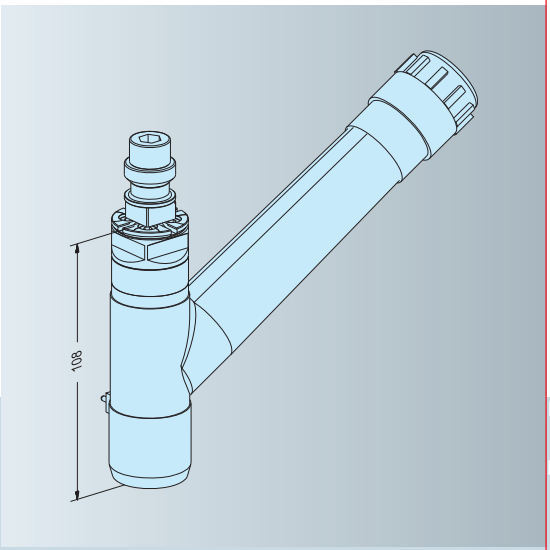
Application Automatic measuring of workpieces in CNC EDM centers.



ER-032466 Compact Microscope

Version Magnification: 40x
Supply voltage: 12 Volt
Lighting: 6 Volt
Adapter: 110/220 Volt.

Application Determination of measurements on complicated contours. The pointed checking pin serves to adjust the optic position.



EROWA

EROWA

Compact Electrode holder Set

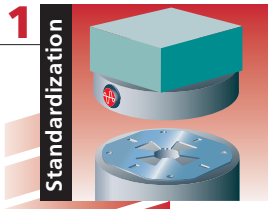
We have compiled a helpful set for the introduction of the EROWA Compact System. Additional material, in particular consumable parts, can be ordered according to your requirements.

ER-018858 Compact Electrode holder Set

The material is packed in a practical plastic box.

Article number	Description	Number of units in the set	Number supplied according to article number
000682	Stud bolt M5 x 8	4	1
018293	Stud bolt M5 x 10	12	1
018294	Stud bolt M5 x 6	16	1
ER-017529	Compact Prisround 10 mm	4	18
ER-017530	Compact Prisround 15 mm	4	18
ER-017532	Compact Uniholder	2	18
ER-017533	Compact Electrode holder ø 8 mm	2	18
ER-017535	Compact Electrode holder ø 12 mm	2	18
ER-017536	Compact Electrode holder ø 16 mm	2	18
ER-029015	Compact Standard holder	6	20

Order chucking spigots according to requirements.

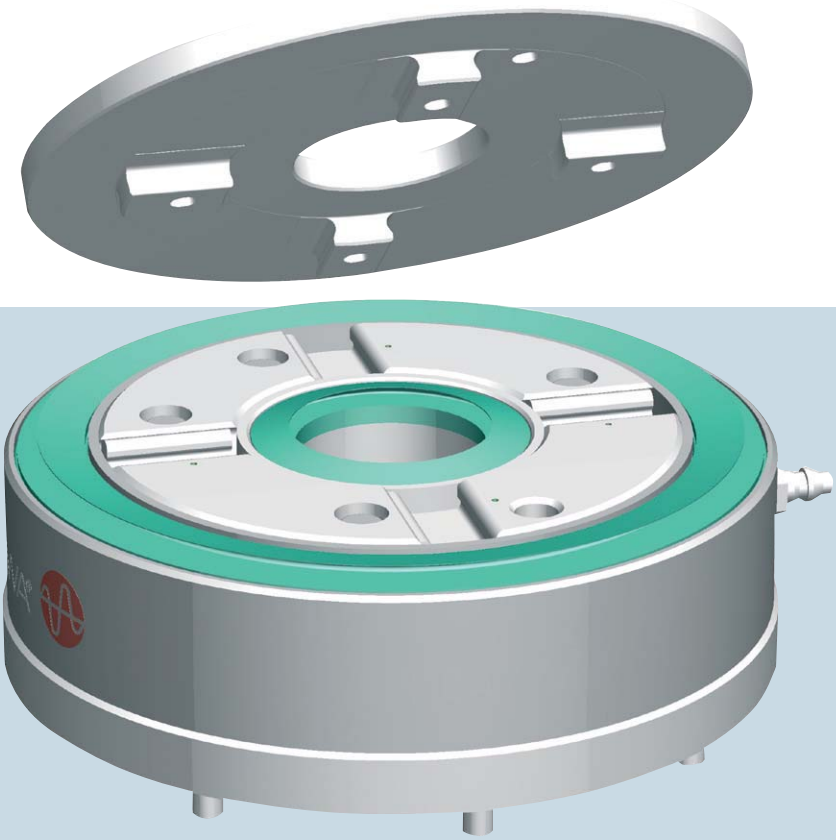


EROWA®

EROWA FTS Fine Tooling System

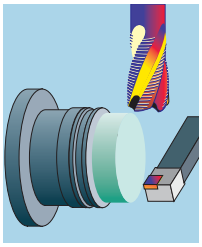
The significance of setting up while the machine is at work is not a function of workpiece size. Rather, it is the time spent on changing from one production batch to another that has a crucial impact on machine productivity. Even with very small parts on machines designed for fine and finest processes, setting up outside the machine can be a critical success factor for production.

The FTS Fine Tooling System has been adapted to exactly these circumstances. With a positioning accuracy of less than 0.002mm and its extremely flat design, it contributes toward an optimal exploitation of the working range of small machines.

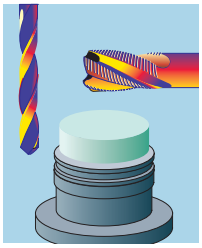


- The pallet is positioned and clamped with special profiles.
- The pallet has to be raised only 4mm before it can be removed from the chuck.
- The precision pallet is made of one piece.
- The chuck centers and clamps the pallet by means of spring tension. Thus functional safety is also guaranteed in the case of air-pressure failure.
- The compressed air required to open and clean the chuck is supplied through the lateral connections or directly through the base plate.
- Central through borehole of ø 18 mm.
- The seals ensure that the pallet is neatly and precisely clamped and positioned.

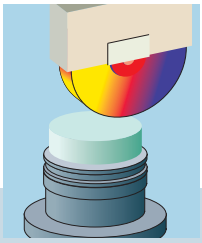
Application



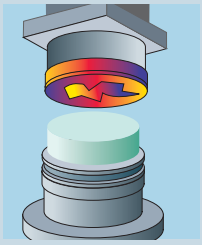
Milling / turning



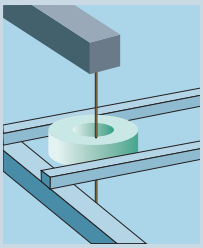
Drilling / milling



Grinding

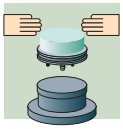


Wire EDM



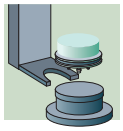
WEDM

Handling



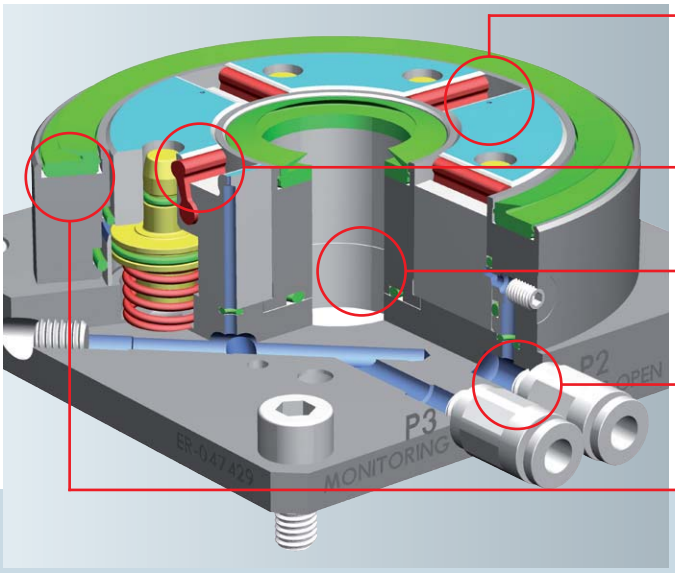
Manual

Loading facility



Robot

Function



Contact surfaces are automatically cleaned with compressed air.

Reliable clamping mechanism thanks to spring tension.

Central through borehole of ø 18 mm.

Pneumatic system can be connected up laterally or through the base plate.

The seals ensure reliable protection from contamination.

Technical data

FTS Fine Tooling System	
Repeatability	< 0.002 mm
Indexation	4 x 90°
Clamping power	400 N
Recommended workpiece size	depends on machining power
Clamping	by spring tension
Opening	by compressed air, min. 6 bar
Operation	control unit or air gun

FTS

EROWA®

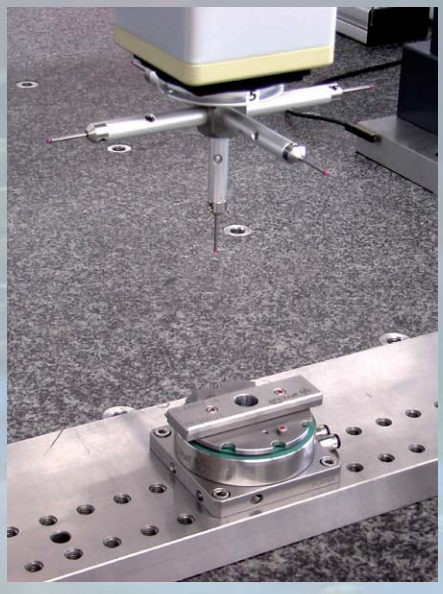
EROWA FTS Fine Tooling System

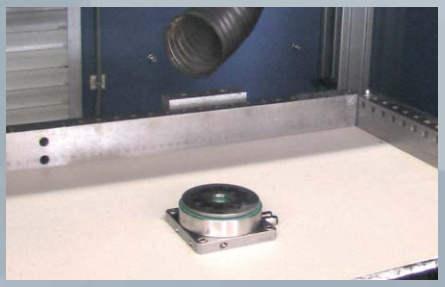
High precision - low design

Have a closer look at EROWA's FTS Fine Tooling System. All its components are made of stainless steel. The chucks can be fitted to a wide variety of machine tables, either directly or with adapter plates. A standard pallet covers the main range of applications

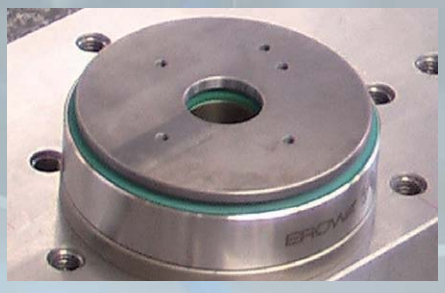
FTS in operation on a laser marking machine. The system's high positioning accuracy ensures the quality of signage even on the smallest of workpieces.

Chuck height:
only 23 mm!





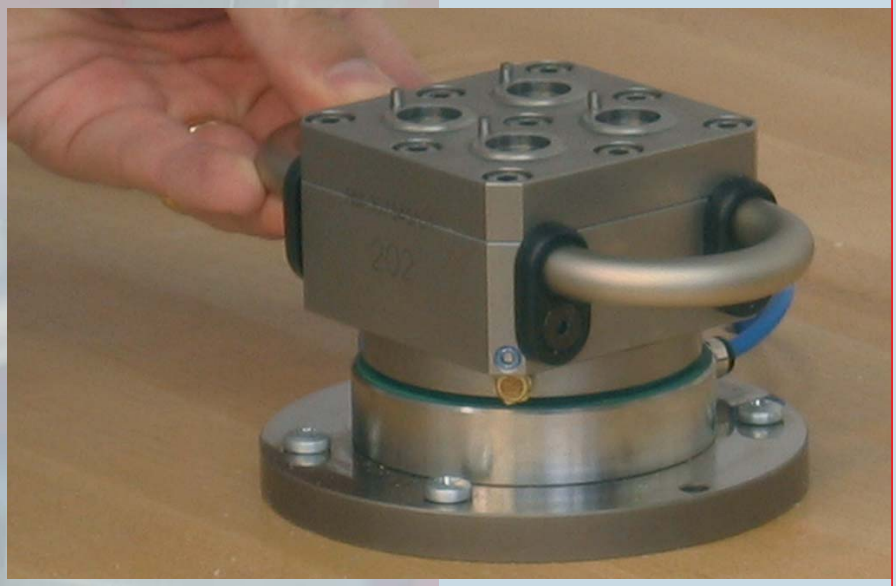
Positioning accuracy is below 0.002 mm on all machines.
Precision is retained after every machining process change.

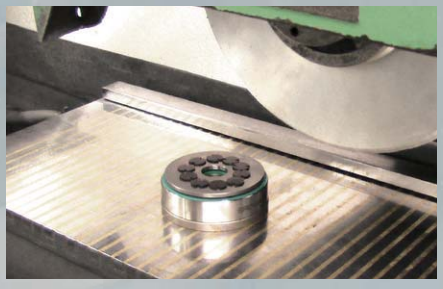


The cover prevents penetration of chips and dirt into the FTS chuck.

4 mm vertical movement to remove the pallet. This, too, saves space.

The flat precision pallet is the basis for all clamping processes.

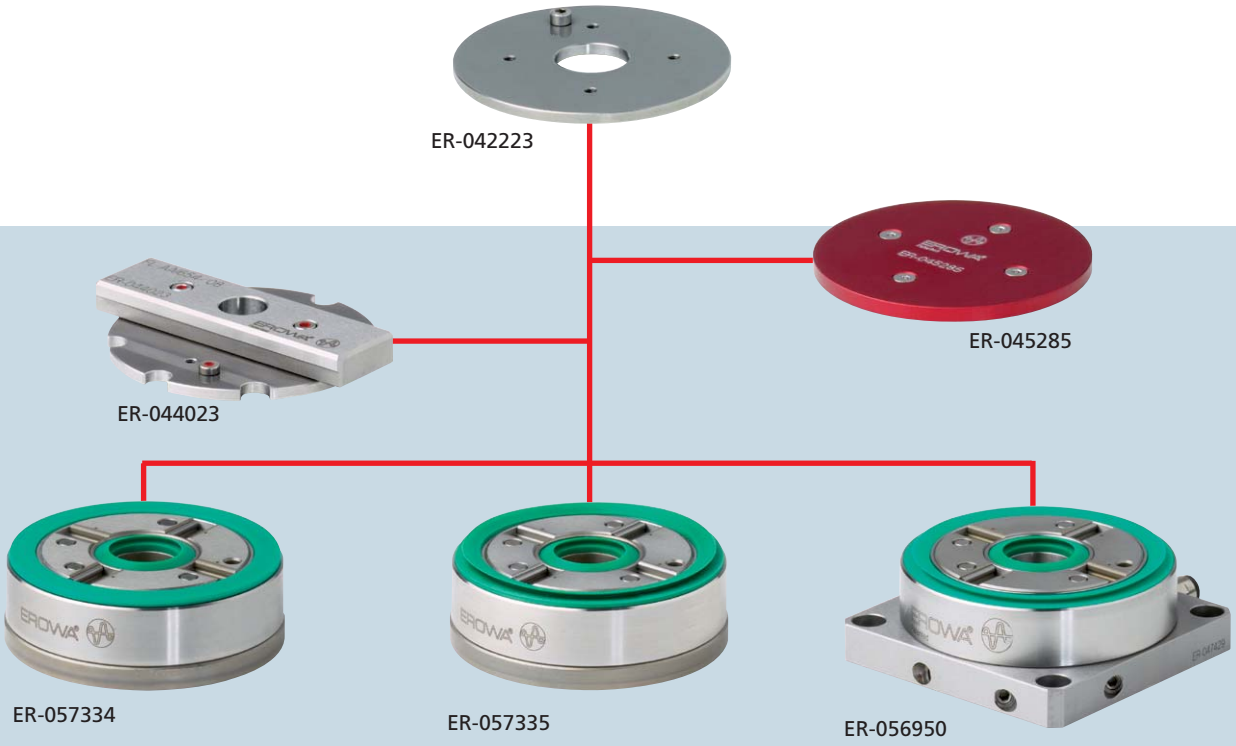


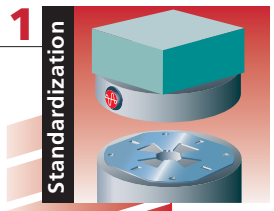


FTS is ideally suitable for the high-precision machining of small and smallest workpieces.

EROWA®

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 Combi gripper
12. Handling with EROWA Robot gripper 72
13. Handling with EROWA Robot gripper 115
14. Handling with EROWA Robot gripper 148
15. Handling with EROWA gripper RN PC 210
16. Handling with EROWA RCS gripper

EROWA FTS Fine Tooling System

	Page
FTS chucks	186
FTS auxiliary equipment	187

For chip-removing processes

For EDM sinking

For WEDM

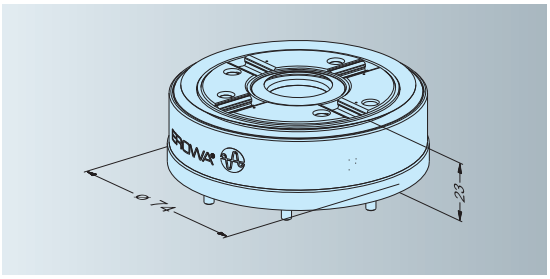
EROWA®

FTS

FTS Fine Tooling System	
Repeatability	< 0.002 mm
Indexation	4 x 90°
Clamping power	400 N
Recommended workpiece size	depends on machining power
Clamping	by spring tension
Opening	by compressed air, min. 6 bar
Operation	control unit or air gun

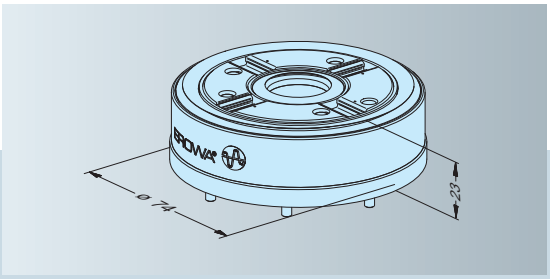
ER-057334 FTS chuck manual Inox

Version Pneumatic FTS chuck.
To fit With M3x7 bolts through the chuck.
Connections Lateral for opening.
Operation With manual valve ER-010538.



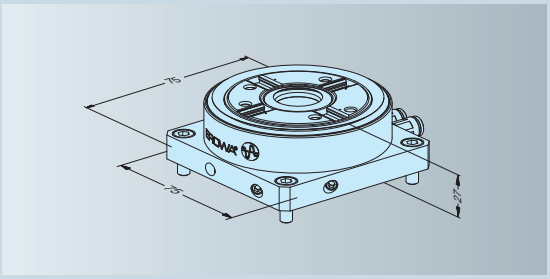
ER-057335 FTS chuck pneumatic Inox

Version Pneumatic FTS chuck.
To fit With M3x7 bolts through the chuck.
Connections At the rear for opening and cleaning/monitoring.
Operation With manual control unit ER-008988.



ER-056950 FTS chuck with base plate Inox

Version Pneumatic FTS chuck with base plate.
To fit With M3x4 bolts on grid dimension 63mm through the base plate.
Connections Lateral for opening and cleaning/monitoring.
Operation With manual control unit ER-008988.

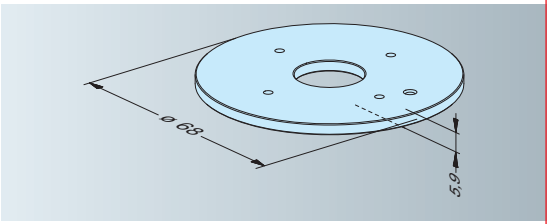


EROWA
FTS Fine Tooling System
Auxiliary equipment

ER-042223 Pallet FTS

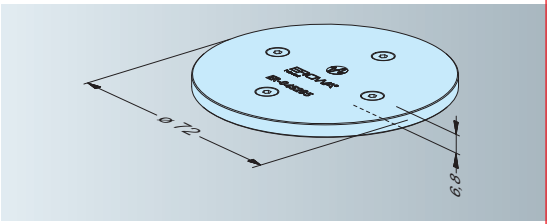
INOX

Version Steel pallet, hardened, including positioning pin for safe positioning. With central borehole ø18 mm.
Application To accommodate workpieces or fixtures.
To fit blanks Through the pallet with M3x4 bolts.



ER-045285 Cover FTS

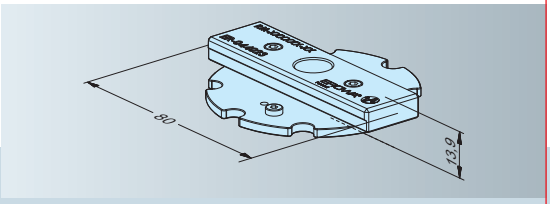
Version Aluminum, with elox finish.
Application To protect chucks that are not in operation on the machine.
Note CANNOT be used as a pallet.



ER-044023 Alignment pallet FTS

INOX

Version Steel, corrosion-resistant, hardened and ground.
Application To align and check the chuck position on the machine.
Note All the axes – X, Y and Z – as well as the center are checked with the same alignment pallet.



FTS

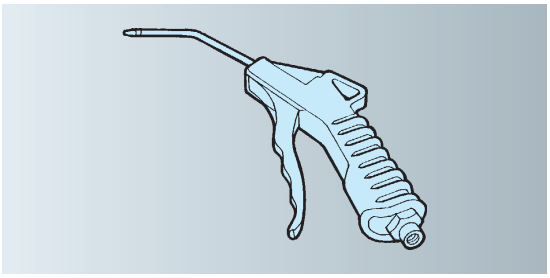
EROWA®

EROWA ITS Auxiliary Equipment

Chuck operation

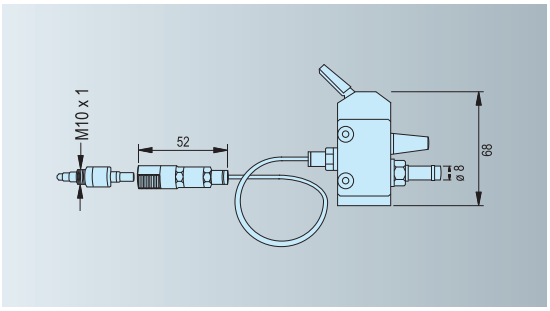
ER-001846 Air jet

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



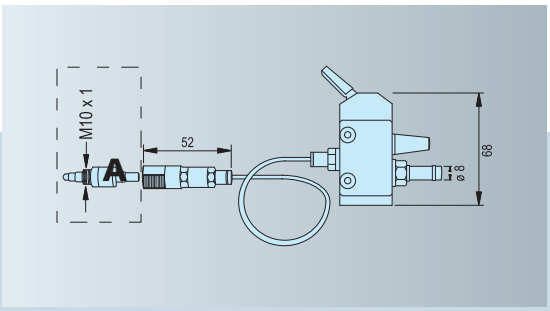
ER-010538 Manual valve

Version Lever valve, incl. 2 m hose and coupling fittings A and B.
Application Operation of chucks with an air connection for opening.
Note Connecting thread M10x1



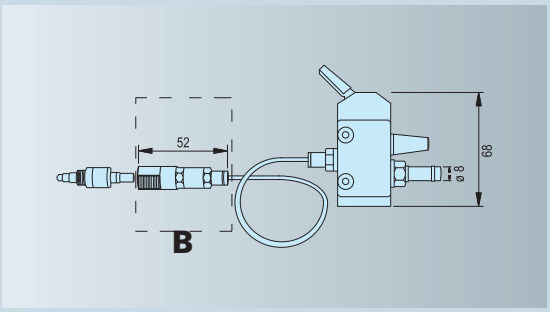
ER-011598 Rapid-action coupling chuck side (A)

Version Fast coupling for compressed air.
Application Screw into a suitable EROWA chuck. Cf. manual.
Note For connecting thread M10x1



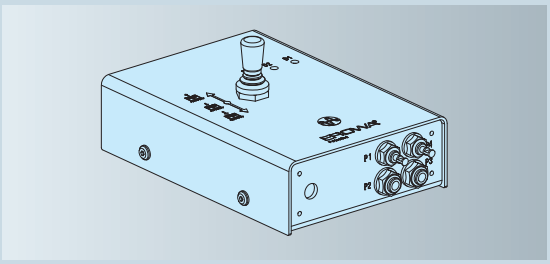
ER-011597 Rapid-action coupling hose side (B)

Version Fast coupling for compressed air
Application For use on the air supply



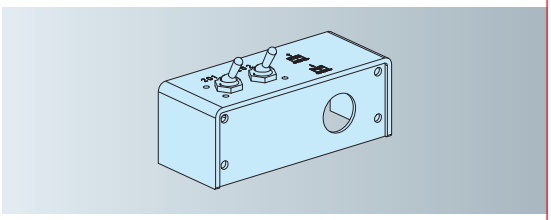
ER-008988 Manual control unit

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.



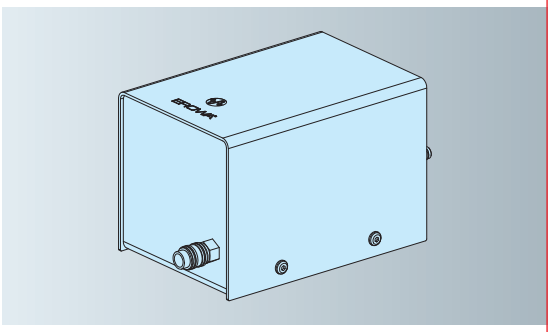
ER-039466 Additional valve double

Version For mounting to the manual control units ER-008988 and ER-025893, incl. set of hoses.
Application Operating of two separate chucks with one single control unit.



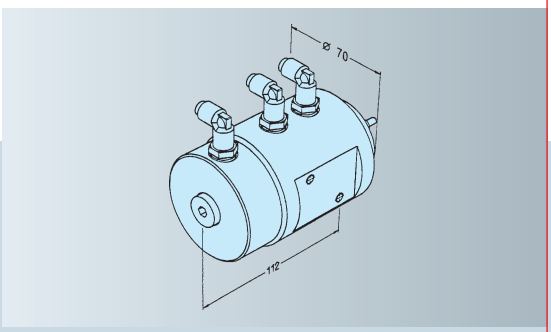
ER-010520 Pressure booster

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



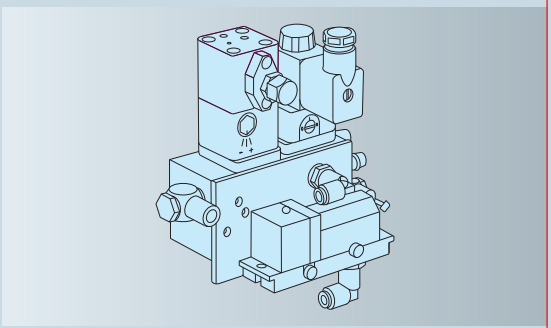
ER-011362 Twin rotatable pneumatic connector
ER-011412 Triple rotatable pneumatic connector

Version Non machine specific connection flange. Two (three) air lines.
Max. speed: 6000 rpm.
Max. operating pressure: 10 bar.
Application Air supply to EROWA chucks on rotatable spindles.
Operation Only operate when spindle is at stand still!



ER-010590 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.

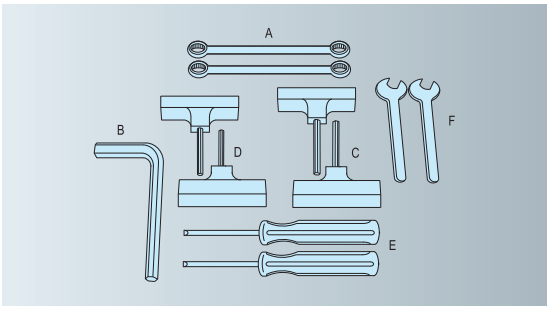


EROWA ITS Auxiliary Equipment

Toolroom accessories

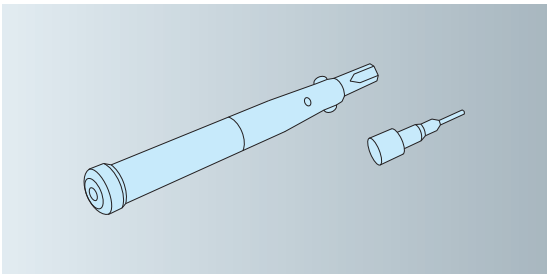
ER-010906 Set of tools

Application
A = Box wrench 8/10 mm for supporting feet M5
B = Key 8 mm for chucking spigot
C = Key with handle 4 mm
D = Key with handle 3 mm
E = Screwdriver for slotted screws in Uniplate
F = Open-end wrench 8 mm



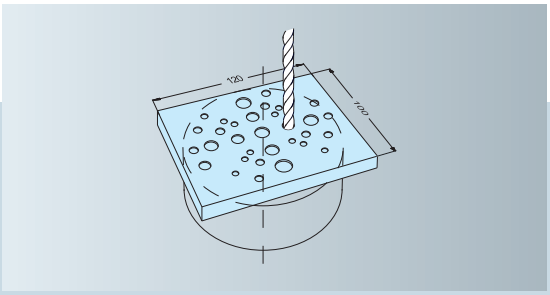
ER-011600 Torque wrench

Version Torque range up to 20 Nm, inc. 3, 4, 5 mm key and one WS 8 mm bit.
Application Service and fitting work on ITS system parts.



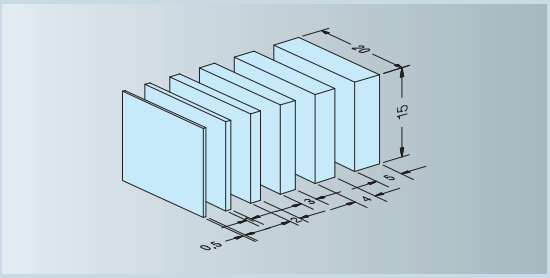
ER-010710 Drilling template

Version Steel, hardened, precision guide bores.
Application Fast drilling of hole pattern for ITS centering plates 50 and 100.

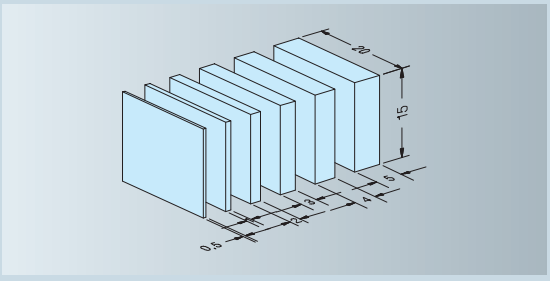


ER-010532 Spacer plate 300 pieces

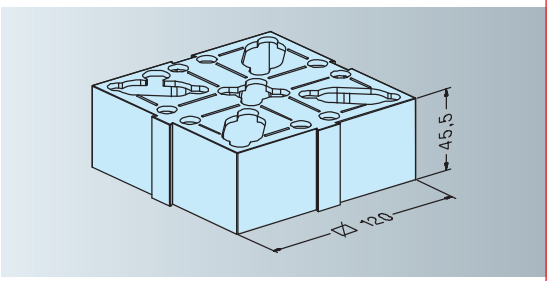
Version 6 x 50 plates. Corrosion-resistant.
Thicknesses from 0.5 mm to 5 mm.
Application Centering of blanks in electrode holders.



ER-010514 Insert plates 0.5mm 50 pieces
ER-010518 Insert plates 1mm 50 pieces
ER-010521 Insert plates 2mm 50 pieces
ER-010523 Insert plates 3mm 50 pieces
ER-010525 Insert plates 4mm 50 pieces
ER-010526 Insert plates 5mm 50 pieces

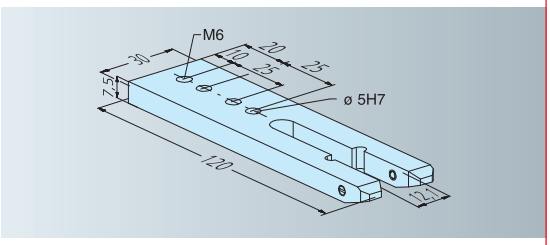


ER-013913 System stand 10 pieces



Version Plastic, set of 10.
Application As a rack for four electrode holders 50 or a pallet ø 115/148 mm.
Please note System racks can be stuck together without any gaps, e. g. to be stored in drawers.

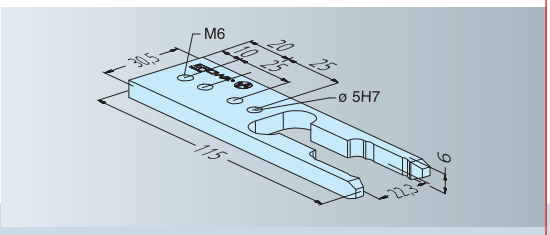
ER-010661 Carrier fork for electrode changer



Version Steel, hardened, ground.
Application To build simple electrode changers, suitable for ER-007521 and ER-007523

ER-024808 Pick-up fork Combi

INOX



Version Corrosion-resistant steel.
Application To make simple electrode changers suitable for chucks ER-020025 and ER-020026.

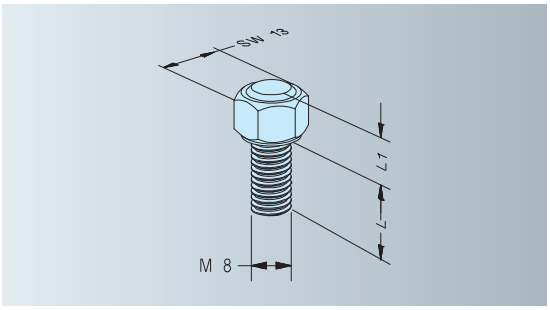
EROWA ITS Auxiliary Equipment

Toolroom accessories

ER-022457 Supporting foot SW13H/L=16/L1=11.4
20 pieces

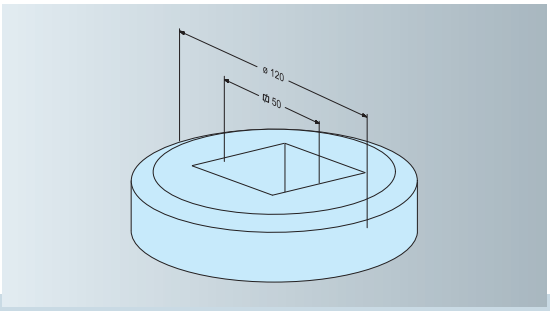
ER-008547 Support foot SW13/L=16/L1=10.2
20 pieces

ER-008553 Support. foot SW13/L=21/L1=10.2
20 pieces



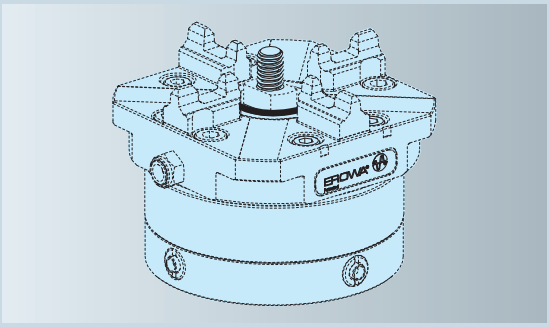
Version Set of 20 supportfeet.
ER-022457 L = 16 in combination with.
G-centering plates,
Position outside the centering plate.
ER-008547 L = 16 for punched centering plates,
ER-008553 L = 21 for G-centering plates.

ER-010744 Chip guard 50 x 50mm
for rapid-action chuck



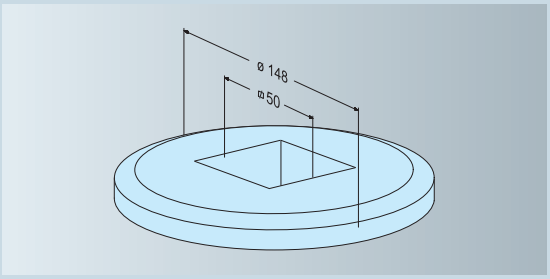
Application On Uniplate, Prisround and all other standardholders.

ER-022355 Sealing ring for ITS chucking spigot
50 pieces



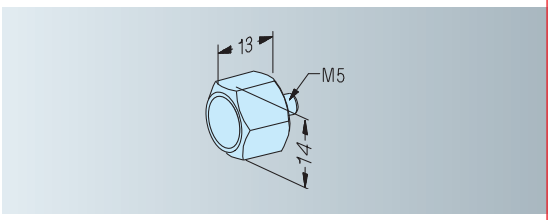
Application Set of 50 sealing rings. Sealing between chucking spigot and Rapid-action chuck.

ER-008475 Chip guard 50 x 50 for power chucks



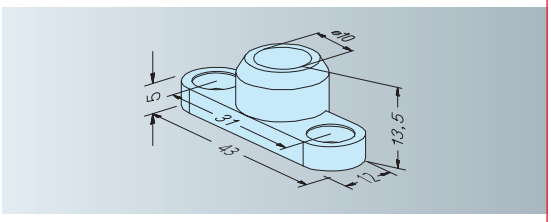
Application On Uniplate, Prisround and all other standard holders.

ER-035154 EWIS™ chip with holder SW14



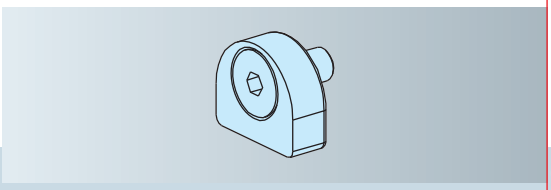
Version Sleeve fitting with built-in datacarrier.
EWIS chip: read only.
Application In any EROWA electrode holder and pallet which have been prepared for it.

ER-035156 EWIS™ Chip with holder long



Version Holder with built-in datacarrier.
EWIS™ Chip: read only.
Application With EROWA Collet Chuck holders and Square 15/25 holders.
Mounting With supplied M4 bolts.

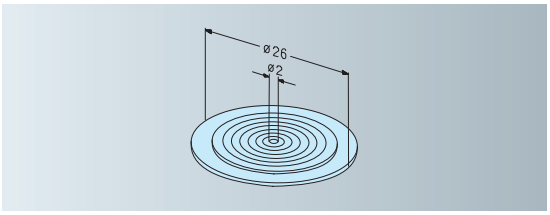
ER-035294 EWIS™ chip with holder / RCS



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

EROWA

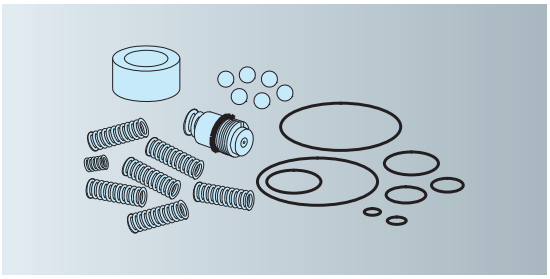
ER-010694 Sealing washer 24 pieces



Application Set of 24 washers. Insertion in Prisround for sealing on central flushing.

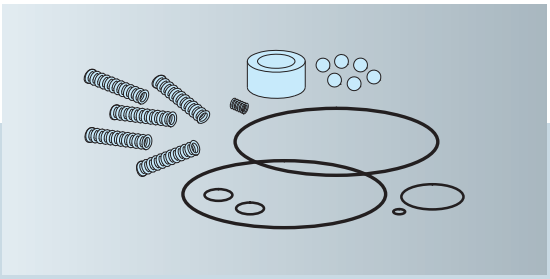
ER-013062 Repair kit, ITS chucks

ER-015985 Repair kit, ITS chucks, INOX



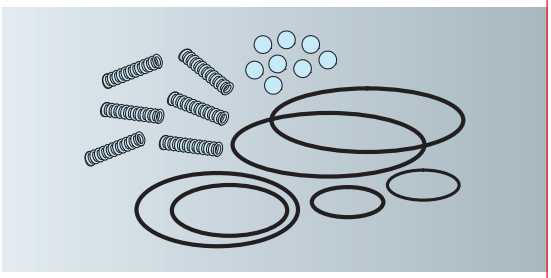
Version All the wear parts of ITS rapid-action chucks.
Application Dismantle chuck according to instructions supplied, replace parts.
Please note Every chuck is supplied with instructions. Please keep in a safe place.

ER-015962 Repair kit PowerChuck P



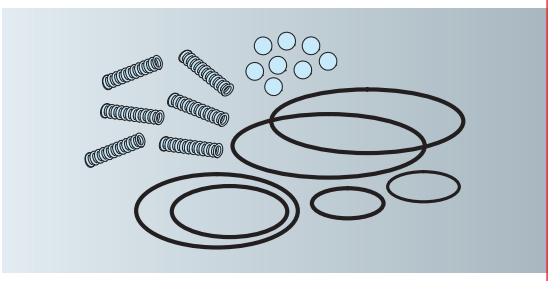
Version All the wear parts of PowerChuck P.
Application Dismantle chuck according to instructions supplied, replace parts.
Please note Every chuck is supplied with instructions. Please keep in a safe place.

ER-023121 UPC repair kit O-rings, springs, balls



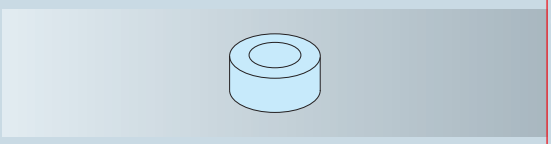
Version All the wearing parts of UPC ER-016092 and ER-016093.
Application Dismantle UPC according to instructions supplied, replace parts.
Note Each UPC is supplied with an operating manual, which you will please keep.

ER-023120 UPC P repair kit O-ring, springs, balls



Version All the wear parts of UPC P ER-016841.
Application Dismantle UPC P according to instructions supplied, replace parts.
Note Each UPC P is supplied with an operating manual, which you will please keep.

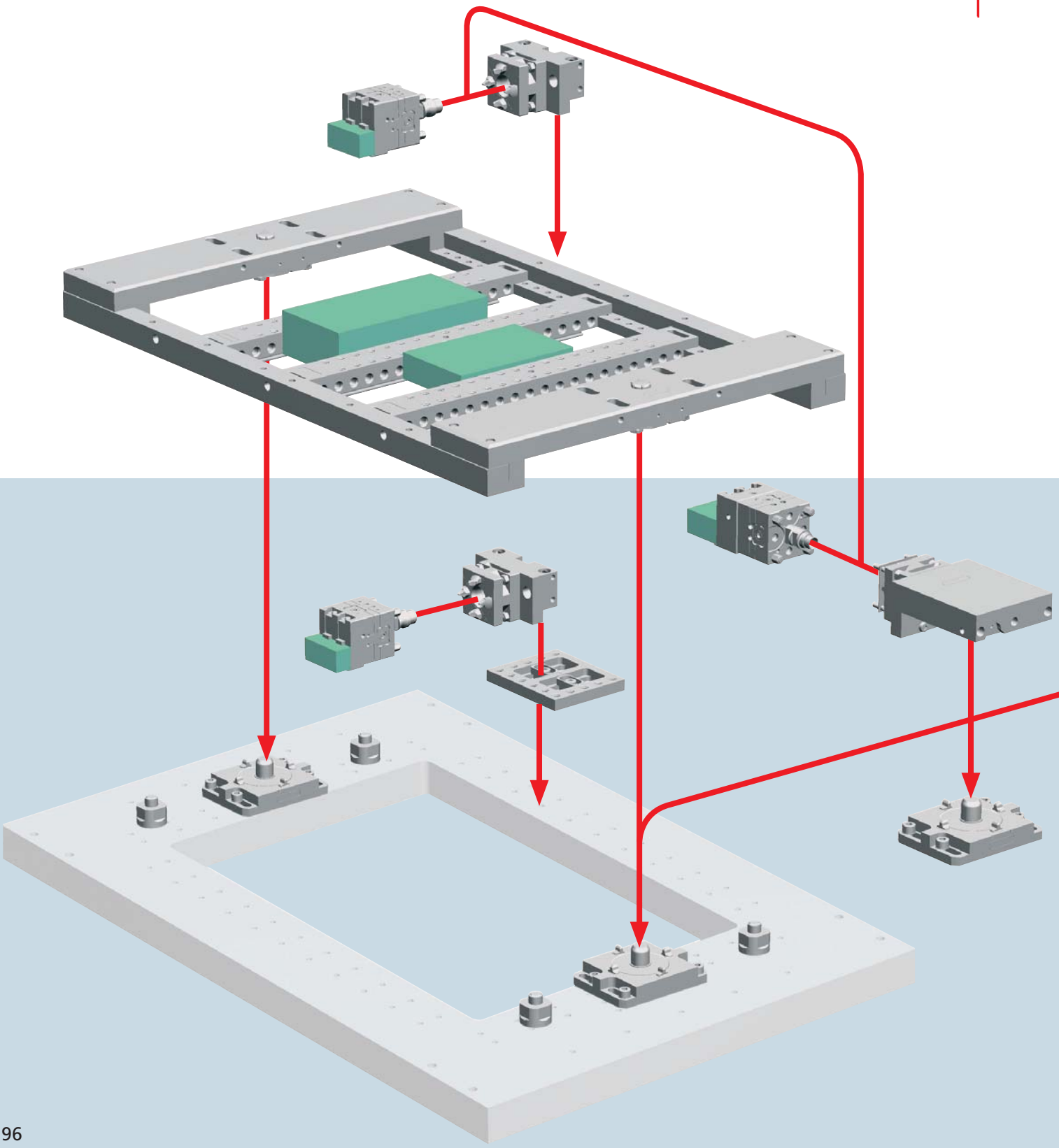
ER-009007 Viton seal 10 pieces



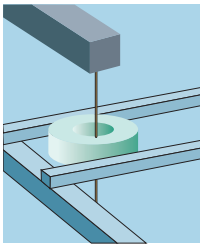
Version Set of 10 seals.
Application To fit ITS rapid-action and power.

EROWA Wire EDM Tooling

EROWA tooling systems make WEDM centers considerably more flexible and productive. Down-times can be virtually eliminated. Expensive machines can work round the clock.
Our program contains system components for newcomers, for those who would like to extend the use of ITS, and for top-end users.
You define the framework and you are bound to win.

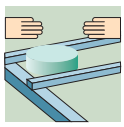


Applications

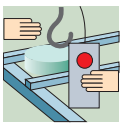


Wire EDM

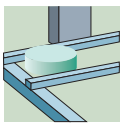
Handling



Manual



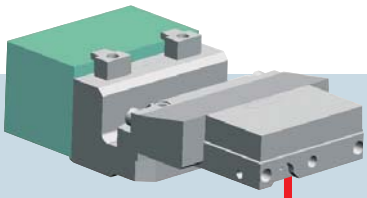
Loading station



Robot

Advantages

- Modular tooling system.
- Single and multiple palletization.
- Repeatability of clamping elements 0.002 mm.
- WEDM basic kits for all popular WEDM centers.
- Can be automated with EROWA handling facilities.



Technical data

	Flat clamping chuck		Chuck RSA 50	QuickChuck 50 RSM
	pneumatic	manual		
Repeatability	0.002 mm	0.002 mm	0.002 mm	0.002 mm
Indexing			4 x 90°	4 x 90°
Clamping power	with reclamping	without reclamping		
	7,000 N	3,000 N	2,800 N	4,000 N
Clamping process	Spring tension	Spring tension	Spring tension	Spring tension
Opening, compressed air, dry	min. 6 bar			min. 6 bar
Operation	pneumatically	mechanically	pneumatically	mechanically
Max. weight of pallet	30 kg (with support)	30 kg (with support)		

EROWA®

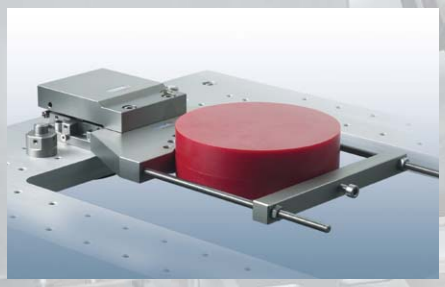
Find a workpiece you can´t clamp!

The right solution for every application.
With well-thought-out combinations of vises, clamping elements and clamping beams, any conceivable workpiece can be clamped. The repeatability of EROWA´s Wire EDM tooling system allows for workpieces to be preset outside the machine and for safe automatic loading. Ongoing jobs can be interrupted for express jobs and then continued later.

Free access to wire guides even if the workpieces is only a few milimeters thin.

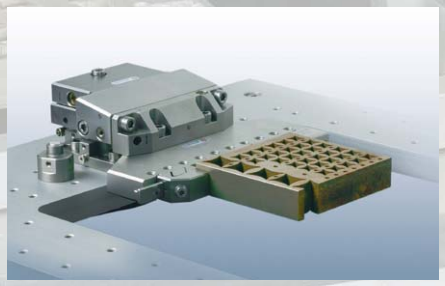
The flat vise for free wire-guide access.

Use removable supports where they make sense. Thread in EDM wire through the special grooves.



Special fixture for **cylindrical parts**. Fitted to a pendulum holder, the workpiece can be adjusted in three axes.

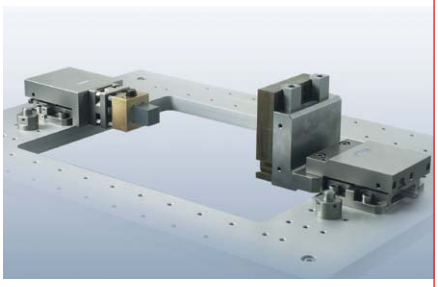
Combination of frame and UnoSet for electrode machining.



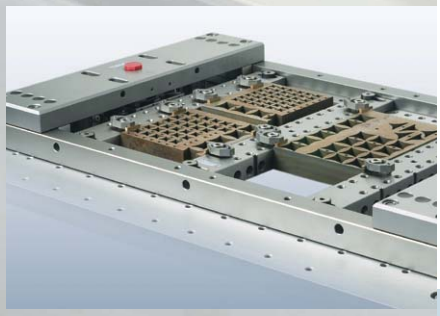
Adjustable in all axes: the pendulum holder with fitted flat vise.

Presetting the workpieces saves time.

PreSet 3D CNC – presetting made easy. While the WEDM center is in operation, the next job is being preset quickly and accurately on the EROWA PreSet station.



Single palletization in a manned shift: this is where the tricky jobs are done.



EDM electrode holders are positioned on the WEDM center for machining both quickly and with high precision.

EROWA Lift – to take care of your back and easy on the machine.

Loading Robot – for more machine autonomy at night and on weekends.

EROWA®

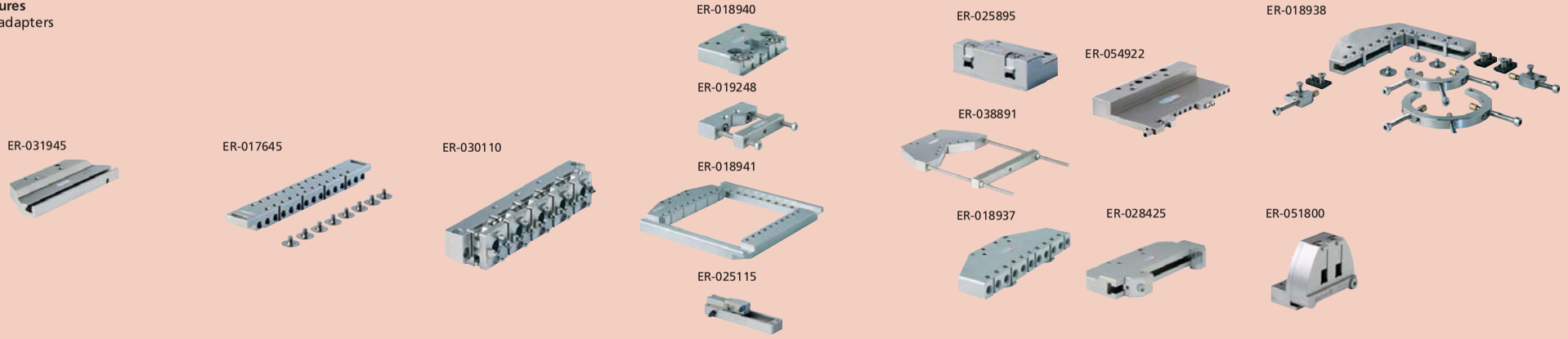
EROWA Wire EDM Tooling:
clamping elements for all workpieces

Clamping elements
for fixtures

ER-033958 ER-031952 ER-016914 ER-008231 ER-008875 ER-008873 ER-007990 ER-008220 ER-008221 ER-029229 ER-029228

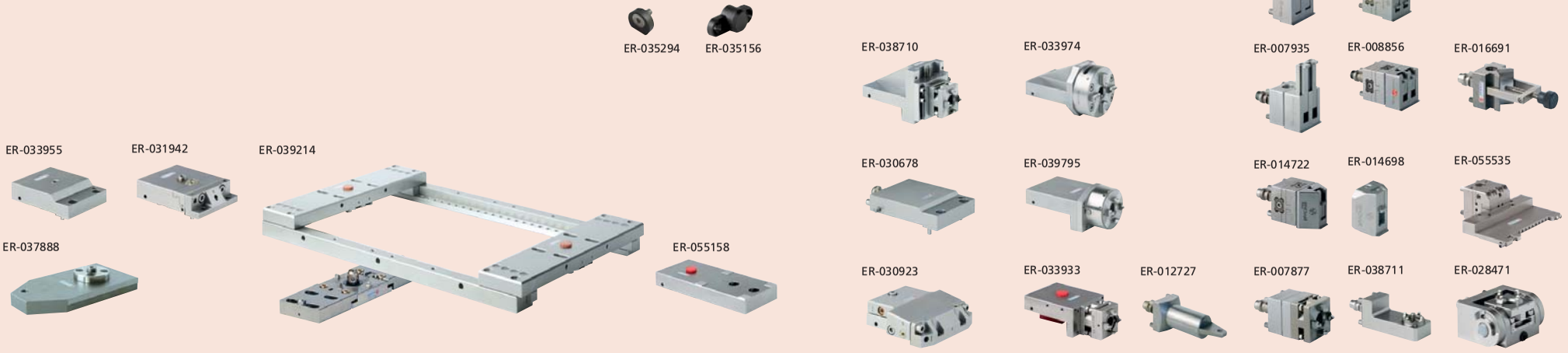
Fixtures
for adapters

ER-031945 ER-017645 ER-030110 ER-018940 ER-019248 ER-018941 ER-025115 ER-025895 ER-038891 ER-018937 ER-054922 ER-028425 ER-018938 ER-051800



Adapters
for interfaces

ER-035294 ER-035156 ER-008814 ER-008842 ER-038710 ER-033974 ER-007935 ER-008856 ER-016691 ER-033955 ER-031942 ER-039214 ER-030678 ER-039795 ER-014722 ER-014698 ER-055535 ER-037888 ER-055158 ER-030923 ER-033933 ER-012727 ER-007877 ER-038711 ER-028471



Interfaces
to machine table

ER-040641 ER-035714 ER-035715 ER-017198 ER-007852 ER-022583

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

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

For chip-removing processes

For EDM sinking

For WEDM

EROWA Wire EDM Tooling Page

Interfaces to machine table	204
Adapters for interfaces	209
Fixtures for adapters	215
Clamping elements for fixtures	224
Wire EDM Tooling system accessories	227
Wire EDM Tooling Kits	232
Clamping equipment sets	234

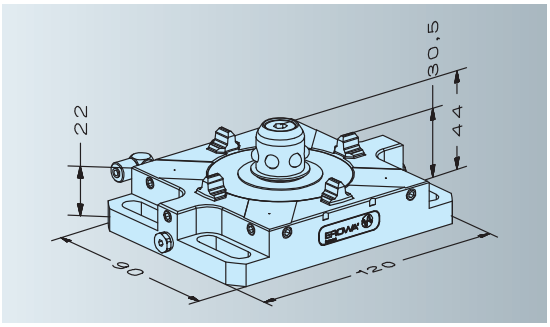
EROWA

Interfaces to machine table

Technical data	Flat chuck pneumatic	manual
Repeatability	0.002 mm	0.002 mm
Clamping power	with reclamping 7,000 N	without reclamping 3,000 N
Generated by	spring power	mechanic
Opening with compressed air, dry	min. 6 bar	
Operation	pneumatic	manual
Max. pallet weight	30 kg (with support)	30 kg (with support)

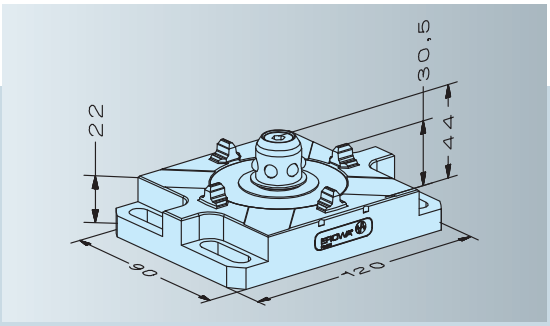
ER-035714 Flat chuck pneumatic PalletSet W / FrameSet

Version Pneumatic chuck for a direct fit to the Z = 0 base of the WEDM center.
Application On WEDM centers with manual or automatic workpiece loading.
Connections On the side for opening, cleaning, reclamping.



ER-035715 Flat chuck manual PalletSet W / FrameSet

Version Mechanical chuck for a direct fit to the Z = 0 base of the WEDM center.
Application On WEDM centers with manual workpiece loading.
Operation With a manually operated ball lock.

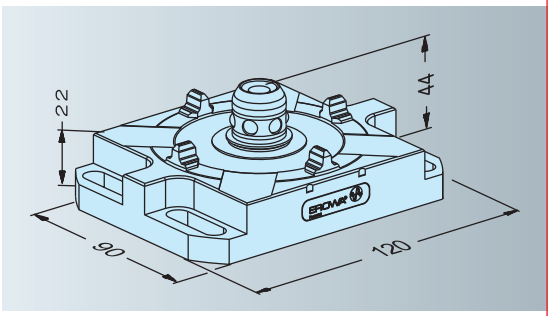


Technical data	Basic WEDM chuck manual
Repeatability	0.002 mm
Clamping power	without reclamping 8´000 N
Generated by	mechanic
Operation	manual
Max. pallet weight	15 kg (without support)

ER-040641 Basic WEDM chuck Basic Tooling

INOX

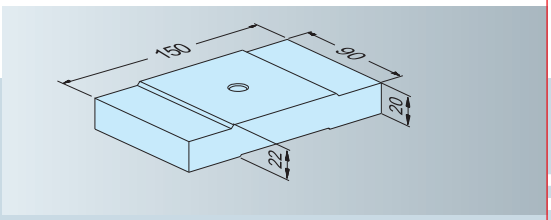
Version Mechanical chuck for a direct fit to the Z = 0 base of the WEDM center.
Application On WEDM centers with manual workpiece loading.
Operation With a manually operated ball lock.



ER-042842 Fix plate for FrameSet Fix 150 mm FrameSet Fix

INOX

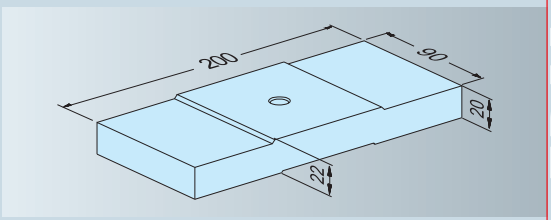
Version Plate to attach the FrameSet clamping frame.
Application On WEDM centers with FrameSet clamping frames, to be mounted directly on the Z=0 base.
Mounting to the base according to operating instructions.



ER-040497 Fix plate for FrameSet Fix 200 mm FrameSet Fix

INOX

Version Plate to attach the FrameSet clamping frame.
Application On WEDM centers with FrameSet clamping frames, to be mounted directly on the Z=0 base.
Mounting to the base according to operating instructions.



EROWA®

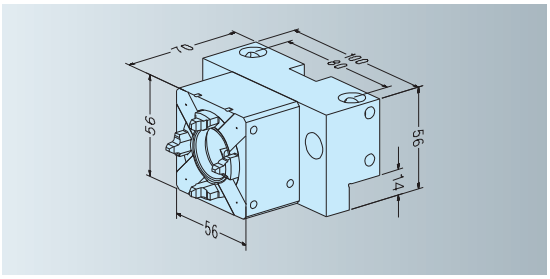
Interfaces to machine table

Technical data	Chuck RSA 50	QuickChuck 50 RSM
Repeatability	0.002 mm	0.002 mm
Indexing	4 x 90°	4 x 90°
Clamping power	2,800 N	4,000 N
Clamping	Spring power	mechanical
Opening with compressed air, dry	min. 6 bar	
Operation	pneumatic	mechanical

ER-007851 Chuck 50 RSA / on universal plate UnoSet

INOX auto

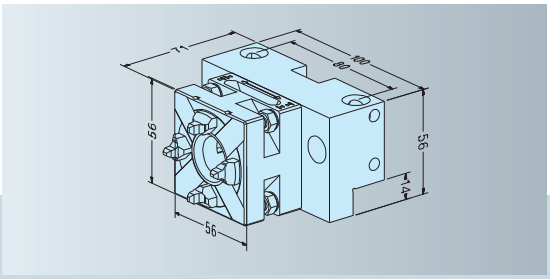
Version Automatic, with pneumatic valve.
Application ITS base for the manual or automatic loading of ITS elements.
Use On all machine bases and FrameSet beams.
Can be used either horizontally or vertically.



ER-007852 QuickChuck 50 RSM / on univeral plate UnoSet

INOX

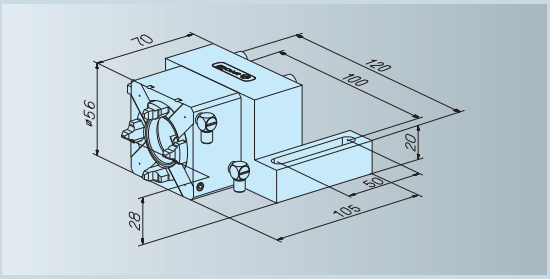
Version Manual.
Application ITS base for the manual loading of ITS elements.
Use On all machine bases and FrameSet beams.
Can be used either horizontally or vertically.



ER-022583 Clamping chuck 50 RSA / UnoSet on adapter plate R=100mm

INOX auto

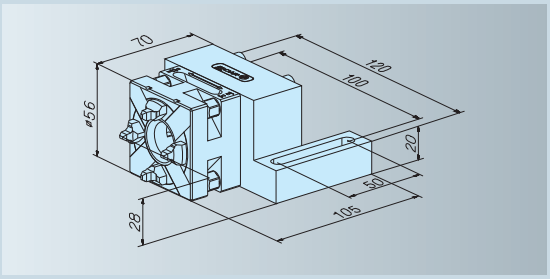
Version Chuck 50 on adapter plate, manual.
Application To be fitted directly to any machine bases with attachment boreholes in a 100 mm grid.



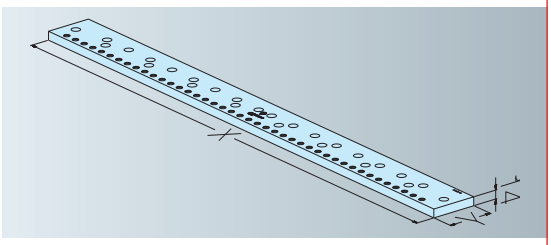
ER-022584 QuickChuck 50 RSM UnoSet on adapter plate R=100mm

INOX

Version Chuck 50 on adapter plate, manual.
Application To be fitted directly to any machine bases with attachment boreholes in a 100 mm grid.

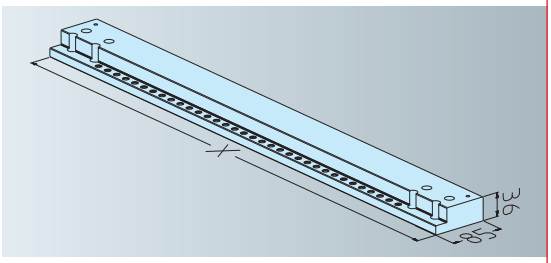


ER-035690 ManoSet rail P 890mm XXL



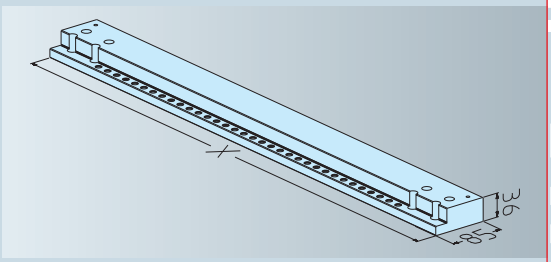
Version Supplied: 1 unit.
Rail for large WEDM centers.
X = 890 mm, Y = 75 mm.
Mounting directly on the Z=0 base.
Application To clamp large workpieces with XXL clamping beams 540, ER-037307 or clamping beams 620, ER-034989 (see page 215).
Note ManoSet rail XXL suitable for Sodick AQ 750 L and Makino SP 64 (see page 232/233).

ER-038985 ManoSet rail L Length 850mm XXL



Version Supplied: 1 unit.
Rail for large WEDM centers.
X = 850 mm.
Mounting directly on the Z=0 base.
Application To clamp large workpieces with XXL clamping beams 540, ER-037307 or clamping beams 620, ER-034989 (see page 215).
Note ManoSet rail XXL suitable for Makino EU 64 and SP 64 (see page 232/233).

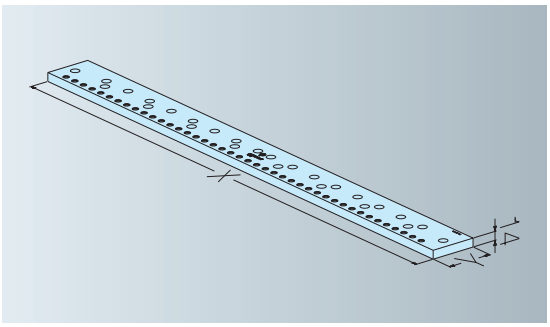
ER-012847 ManoSet rail P length 947mm XXL



Version Supplied: 1 unit.
Rail for large WEDM centers.
X = 947 mm.
Mounting Directly on the Z=0 base.
Application To clamp large workpieces with XXL clamping beams 540, ER-037307 or clamping beams 620, ER-034989 (see page 215).
Note ManoSet rail XXL suitable for Charmilles CTFI60++ and Sodick AQ 750 L (see page 232/233).

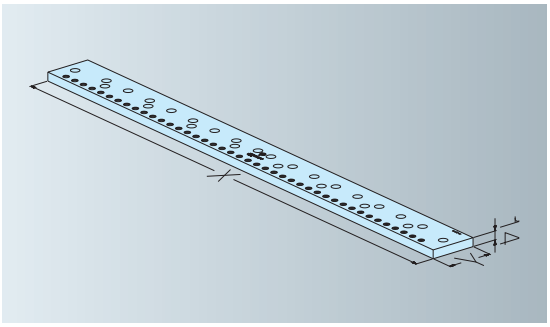
EROWA®

ER-042904 ManoSet rail P length 890mm XXL



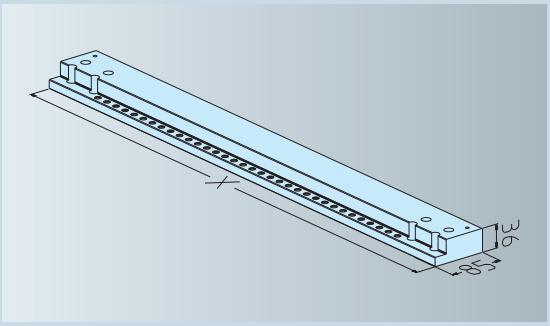
Version	Supplied: 1 unit. Rail for large WEDM centers. X = 890 mm, Y = 75 mm.
Mounting	directly on the Z=0 base.
Application	To clamp large workpieces with XXL clamping beams 540, ER-037307 or clamping beams 620, ER-034989 (see page 215).
Note	ManoSet rail XXL suitable for Charmilles CT FI 640cc, CT FI 690 and ONA AE 600 (see page 232/233).

ER-043487 ManoSet Beam P length 860mm XXL



Version	Supplied: 1 unit. Rail for large WEDM centers. X = 860 mm, Y = 50 mm.
Mounting	directly on the Z = 0 base.
Application	To clamp large workpieces with XXL clamping beams 540, ER-037307 or clamping beams 620, ER-034989 (see page 215).
Note	ManoSet rail XXL suitable for Mitsubishi FX 30 / FA30, CT FI6050, Makino SP64 (see page 232/233).

ER-041430 ManoSet rail L Length 1010mm XXL



Version	Supplied: 1 unit. Rail for large WEDM centers. X = 1010 mm.
Mounting	directly on the Z = 0 base.
Application	To clamp large workpieces with XXL clamping beams 540, ER-037307 or clamping beams 620, ER-034989 (see page 215).
Note	ManoSet rail XXL suitable for Makino U86 (see page 232/233).

EROWA
Wire EDM Tooling
Adapters for interfaces

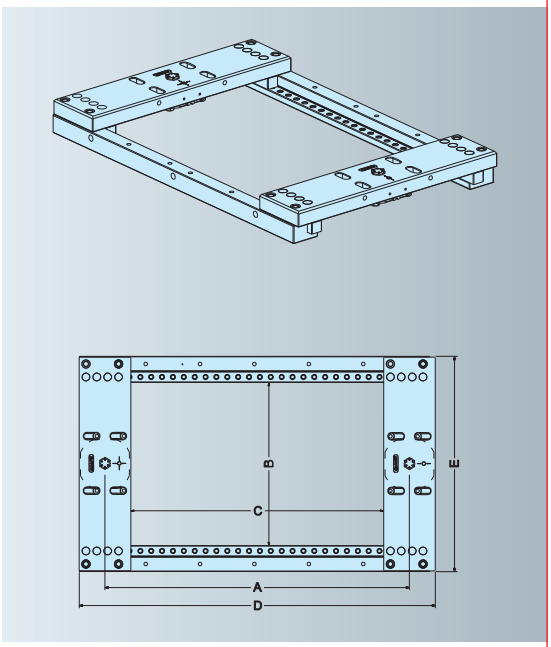
ER-045555	Clamping frame FrameSet 430/220-335
ER-039212	Clamping frame FrameSet 430/300-335
ER-039211	Clamping frame FrameSet 490/220-395
ER-039213	Clamping frame FrameSet 500/300-405
ER-039214	Clamping frame FrameSet 560/300-465
ER-039215	Clamping frame FrameSet 650/300-555
ER-039216	Clamping frame FrameSet 650/380-555
ER-039217	Clamping frame FrameSet 710/380-615

INOX auto

Version Clamping frame for the multiple palletization of workpieces.

Application To fit on EROWA flat chucks and FrameSet Fix plates (see page 205).

Options See Clamping beams and clamping elements for the EROWA Wire Tooling System, starting from page 215.



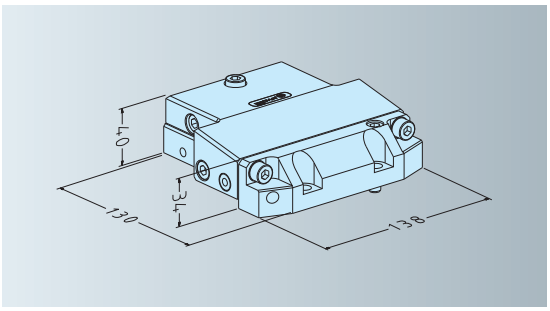
	A	B	C	D	E
ER-045555	430	220	335	525	396
ER-039212	430	300	335	525	396
ER-039211	490	220	395	585	316
ER-039213	500	300	405	595	396
ER-039214	560	300	465	655	396
ER-039215	650	300	555	745	396
ER-039216	650	380	555	745	476
ER-039217	710	380	615	805	476

EROWA

Adapters for interfaces

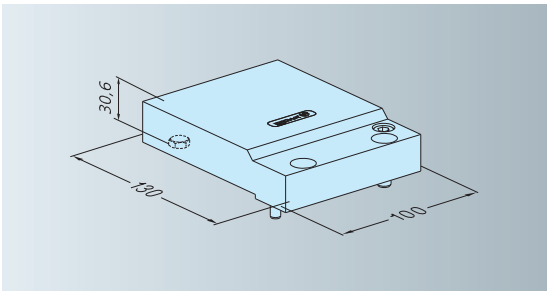
ER-030923 Pendulum holder 3D PalletSet W

Version	Pendulum head for automatic and manual loading. G-Centerning plates for increased durability.
Application	Basis for all the other clamping elements such as UniVise square, frame pallet, vise and beam pallet.
Note	Adjustable in the X-, Y- and Z-axes. Slim Line Version 15 mm reduced in height for best access of lower wire guide

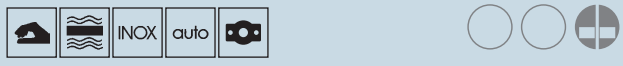


ER-030678 Fix holder PalletSet W

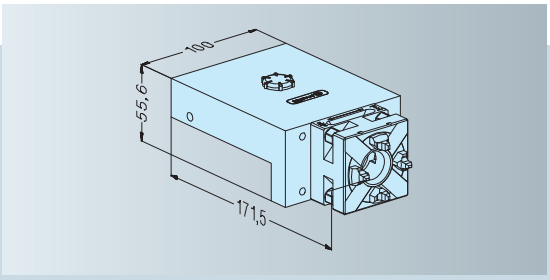
Version	Standard element for automatic and manual loading.
Application	Base for all other clamping elements such as UniVise square, frame plate, vise and beam pallet.
Note	Adjustable in the C-axis.



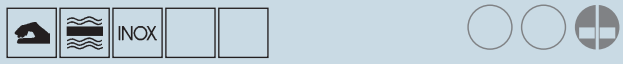
ER-030645 UnoSet Adapter PalletSet W centering plate G



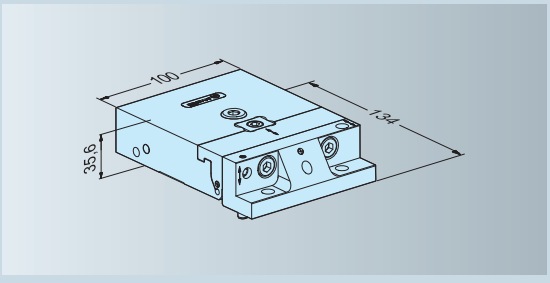
Version	System adapter of PalletSet W to UnoSet.
Application	Clamps workpieces of system size ITS 50 horizontally into the workspace.
Note	Fits all UnoSet and ITS 50 clamping elements.



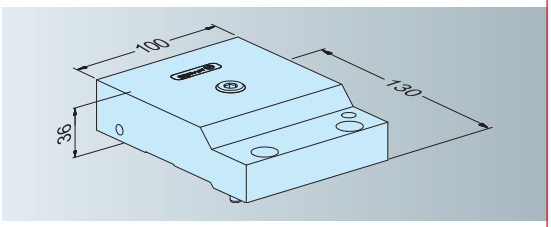
ER-031942 Basic WEDM pendulum holder Basic Tooling



Version	Pendulum head for manual loading.
Application	For use on the Basic WEDM chuck. As a basis for all other clamping elements like UniVise, square, vise and beam pallet.
Note	Adjustable in the X-, Y- and Z-axes.

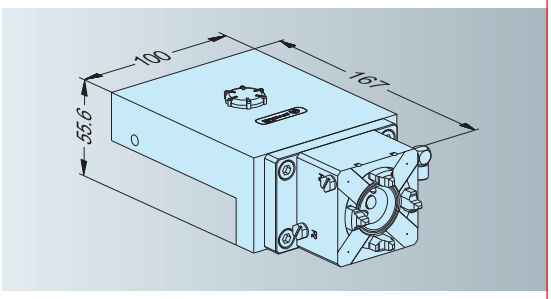


ER-033955 Basic WEDM fix holder Basic Tooling



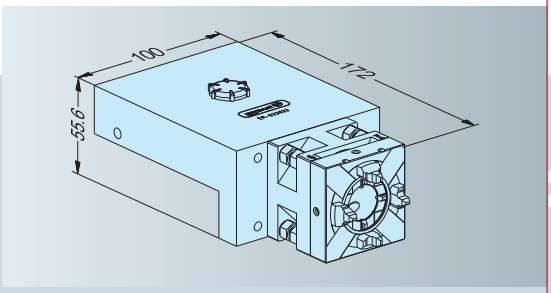
Version	Standard element for manual loading.
Application	For use on the Basic WEDM chuck. As a basis for all other clamping elements like UniVise, square, vise and beam pallet.
Note	Adjustable in the C-axe.

ER-030643 Adapter UnoSet with RSA 50 PalletSet W



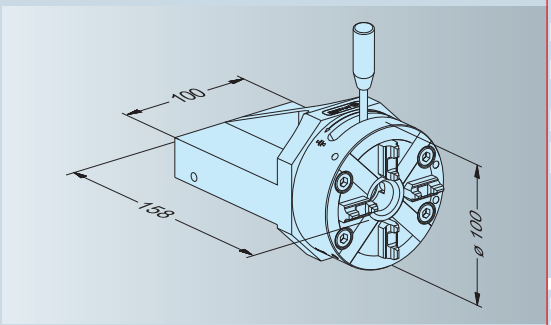
Version	System adapter from Palletset W to UnoSet.
Application	Clamps workpieces of the ITS 50 system size horizontally into the workspace.
Clamping power	2800 N
Note	Suitable for all UnoSet and ITS 50 clamping elements.

ER-033933 PSW adapter QuickChuck 50 Combi PalletSet W / centering plate G



Version	System adapter from Palletset W to UnoSet and/or Compact.
Application	Clamps workpieces of the ITS 50 and Compact system sizes horizontally into the workspace.
Note	Suitable for all UnoSet and ITS 50 clamping elements and Compact clamping elements.

ER-033974 PSW adapter QuickChuck 100 PalletSet W



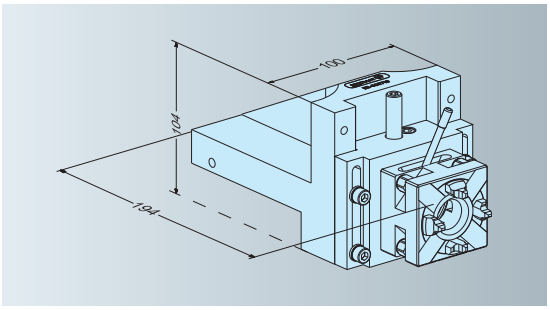
Version	System adapter from Palletset W to UnoSet, ITS 50, holder ø 72, and pallets 148, 115.
Application	Clamps workpieces of the ITS 50 and ITS 100 system sizes horizontally into the workspace.
Note	Suitable for all UnoSet clamping elements.

EROWA®

ER-038710 Adapter Z-Vario PalletSet W / UnoSet RSM

INOX auto

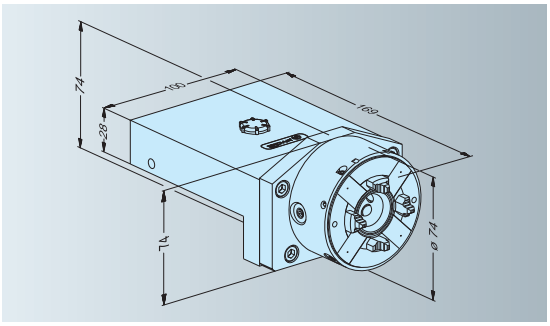
Version	System adapter from Palletset W to UnoSet. Z-axis height adjustable.
Application	To clamp UnoSet and electrodes/workpieces in the ITS 50 system size horizontally into the workspace.
Note	Suitable for use with the whole ITS 50 system and electrode holders.



ER-039795 Holder ø 72 PalletSet W

INOX auto

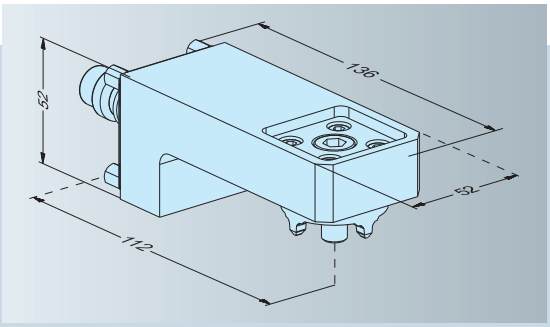
Version	System adapter from Palletset W to ITS 50 holder ø 72
Application	Clamps workpieces of holder ø 72 size horizontally into the workspace.
Operation	Pneumatically with air jet.
Note	Suitable for all holders ø 72 and ITS 50.



ER-038711 Extension arm Z-Vario PalletSet W / UnoSet

INOX

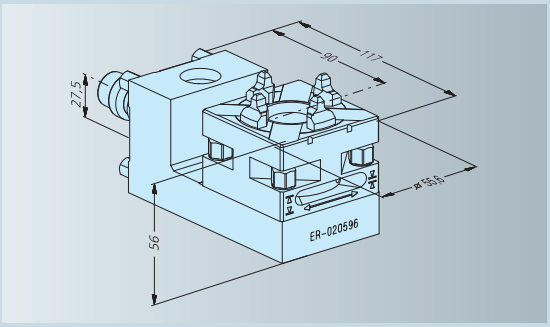
Version	Extension arm with centering system connection to ITS 50. Accommodates workpieces and electrodes.
Application	Accommodation of workpieces and electrodes for machining in a horizontal or vertical position.
Load	Max. 6 kg
Note	Can be used in combination with adapter Z-Vario PSW/UnoSet. Indexation around 4x90°.



ER-020596 Extension arm UnoSet

INOX

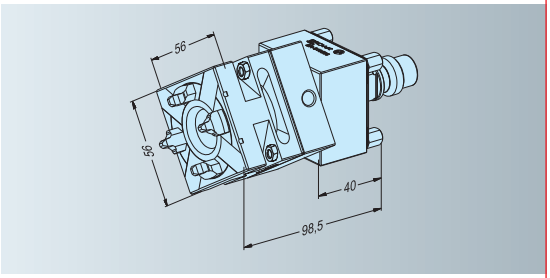
Clamping range	80 mm
Max. load	6 kg
Version	The extension arm UnoSet with QuickChuck 50 is suitable for the accommodation of workpieces and electrodes that have to be machined in a vertical and in a horizontal position.
Note	Indexable around 4x90°.



ER-007877 TurnFix 50 UnoSet

INOX

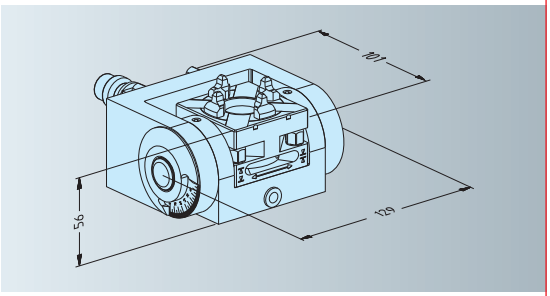
Version	Chuck 50, manual, with ITS base plate, continuously able to rotate round 360°.
Application	ITS base for the manual loading of ITS elements carrying workpieces that require angular positions.
Use	On any ITS chuck of system size 50.



ER-028471 Angled clamping unit UnoSet for QuickChuck 50

INOX

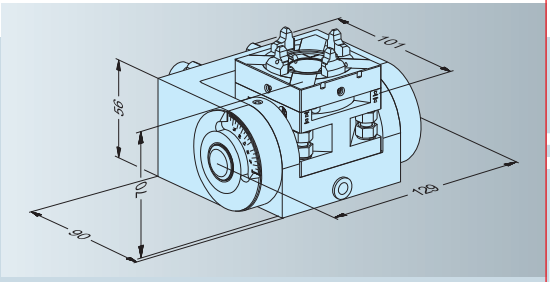
Version	Chuck 50, angle to be set with the vernier.
Application	WEDM or EDM. To fit lateral sprues to casting tools.
Max. load	6 kg.
Max. work-piece size	100 x 100 x 100 mm.
Connections	Flushing connection in place.



ER-027640 Square clamping unit CompactChuck 50 Combi UnoSet QuickChuck

INOX

Version	CompactChuck 50 Combi. Angle to be set with the vernier. Angled clamping unit made of corrosion-resistant steel.
Application	WEDM or EDM.
Connections	Flushing connection in place.

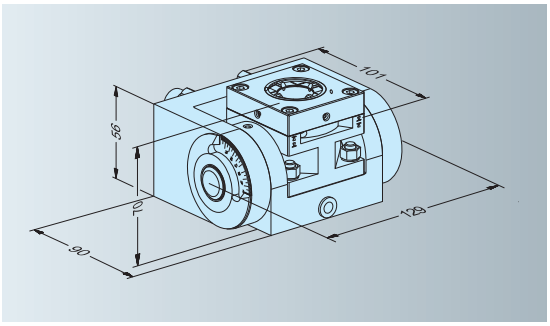


EROWA®

Adapters for interfaces

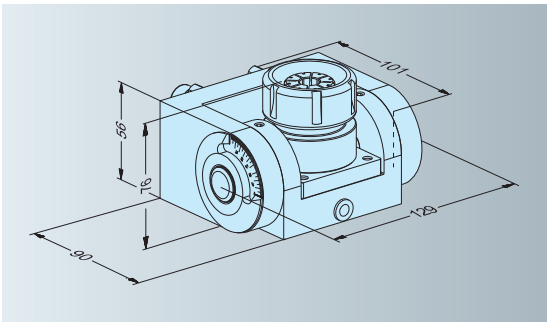
ER-027641 Square clamping unit for CompactChuck M UnoSet

Version CompactChuck manual.
Angle to be set with the vernier.
Angled clamping unit made of corrosion-resistant steel.
Application WEDM or EDM.
Connections Flushing connection in place.



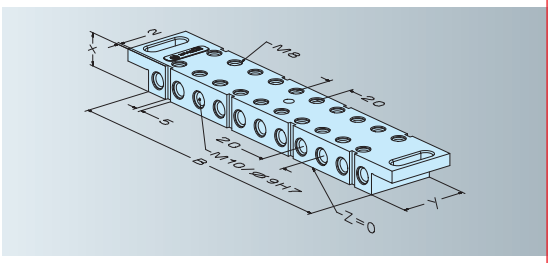
ER-028480 Angled clamping unit UnoSet for collet chuck electrode holder

Version Angled clamping unit made of corrosion-resistant steel, except collet chuck unit.
Angle to be set with the vernier.
Application WEDM or EDM.
Connections Flushing connection in place.



EROWA
Wire EDM Tooling
Fixtures for adapters

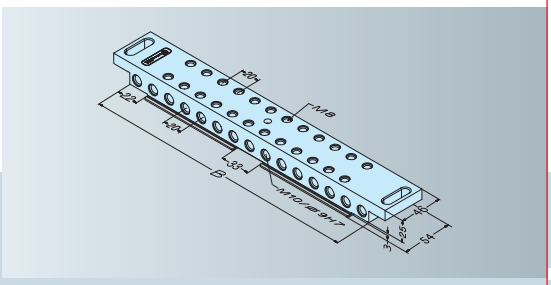
ER-017645 Clamping beam 220mm
ER-017646 Clamping beam 300mm
ER-017647 Clamping beam 380mm
ER-017648 Clamping beam 460m



Application To clamp workpieces with clamping claws on Z-discs.
Version Cross boreholes, ground.

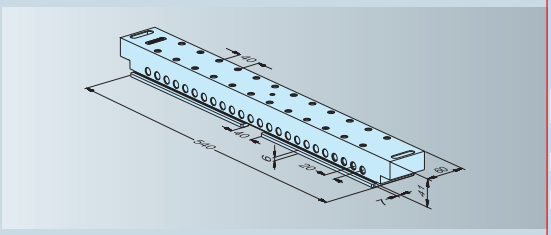
Spannbalken	X	Y
ER-017645	22 mm	46 mm
ER-017646	25 mm	46 mm
ER-017647	25 mm	46 mm
ER-017648	36 mm	56 mm

ER-021126 Double-sided clamping beam 300mm
ER-021127 Double-sided Clamping beam 380mm
ER-021128 Double-sided Clamping beam 460mm



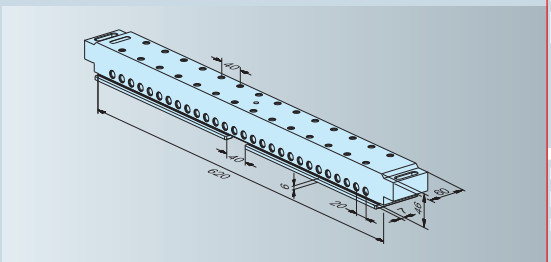
Application To clamp workpieces with clamping claws on Z-support ledges.
Version Cross boreholes, ground.

ER-037307 Double-sided clamping beam 540 ManoSet XXL



Application Clamping of workpieces with clamping claws on Z-support ledges.

ER-034989 Double-sided Clamping beam 620 ManoSet XXL



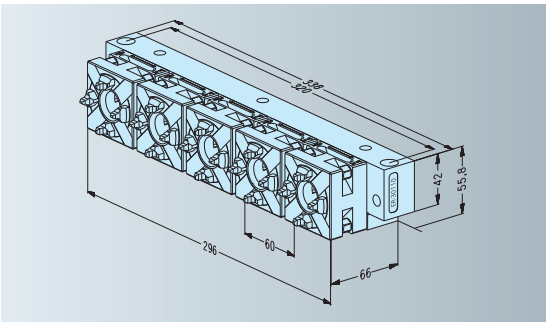
Application Clamping of workpieces with clamping claws on Z-support ledges.

EROWA®

ER-030110 5-fold beam 300 QuickChuck

INOX

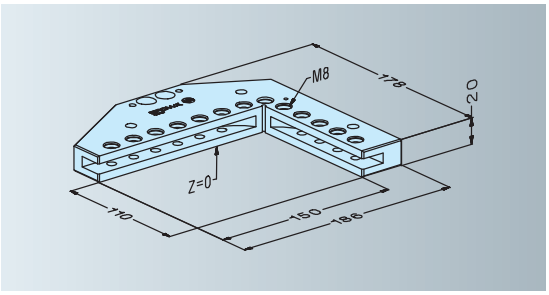
Version Five chucks 50, manual, in a row.
Application ITS adapter for the manual loading of five ITS elements.
Use On all FrameSet clamping frames, carrier plates and ManoSet bases. Width 300 mm.



ER-018938 UniVise square PalletSet W

INOX

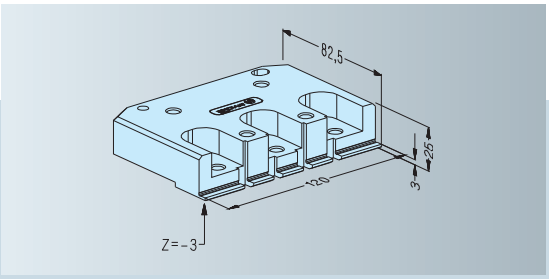
Version Square with all the clamping accessories.
Application To be fitted to fix holders or pendulum holders.
Note Max. load: 10 kg.



ER-018940 Vise PalletSet W

INOX

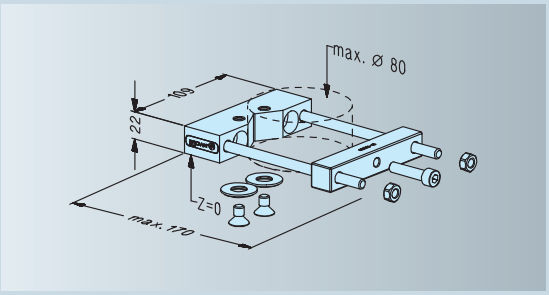
Version Clamping element with clips for one-sided attachment to workpieces.
Application To be fitted to fix holders or pendulum holders.
Note Max. load: 12 kg.



ER-019248 Prism holder 80 PalletSet W

INOX

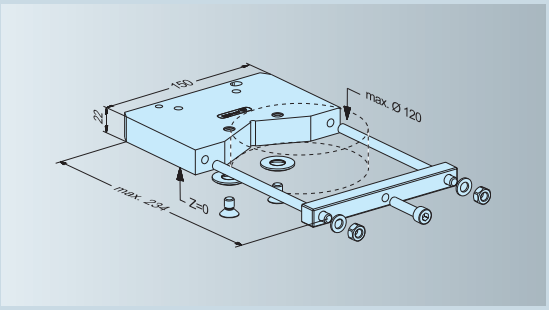
Version Prism and clamping part with detachable Z-supports.
Application Clamping of cylindrical workpieces of up to Ø 80 mm.
Assembly To be fitted to the front of beam pallet ER-018937 or clamping beams (cf. p 215).
Note Max. load: 6 kg.



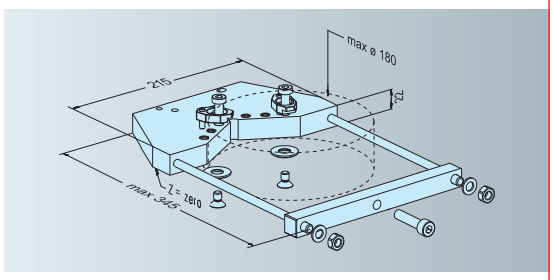
ER-031179 Prism holder 120mm PalletSet W

INOX

Version Prism and clamping bars with detachable Z-supports.
Application To clamp cylindrical workpieces of up to ø 120 mm.
Mounting directly to fixholder or pendulum holder.
Note Max. load: 10 kg.

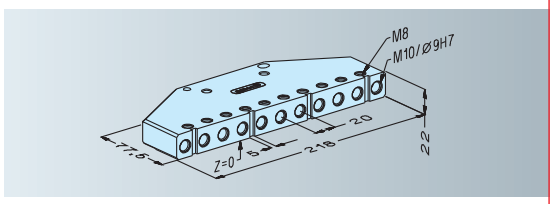


ER-038891 Prism holder ø 10 - 180 PalletSet W



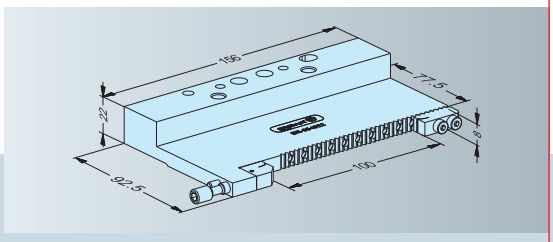
Version	Prism and clamping bars with detachable Z-supports.
Application	To clamp cylindrical workpieces of up to ø 180 mm.
Mounting	directly to fixholder or pendulum holder.
Note	Max. load: 12 kg.

ER-018937 Beam pallet PalletSet W



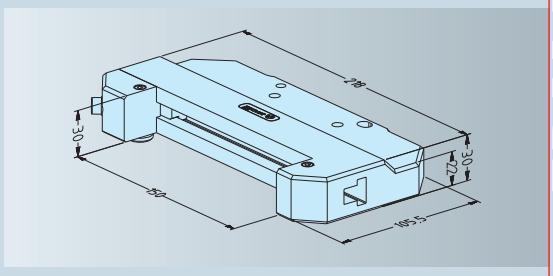
Version	Pallet to accommodate various clamping elements. Includes Z-supports and clips.
Application	To be fitted to fix holders or pendulum holders 3D.
Options	Prism holders and BeamVise clamping elements.

ER-054922 Flat vise 8mm PalletSet W



Version	One movable jaw and one fixed jaw. Hardened, ground and corrosion-resistant.
Clamping range	0 - 100 mm.
Max. load	5 kg.
Application	Lateral clamping of workpieces machined outside of up to 100mm. To be fitted to fixholder or pendulum holder.

ER-028425 Flat vise 150mm PalletSet W

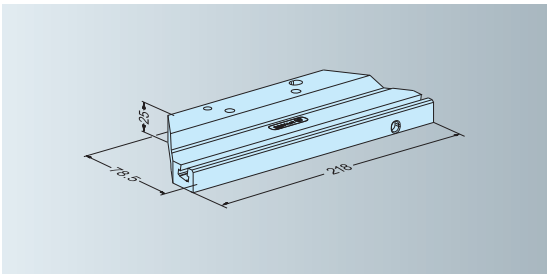


Version	One movable and one fixed jaw. Hardened, ground and corrosion-resistant.
Clamping range	max. 150 x 150 x 100 mm.
Max. load	12 kg.
Application	Lateral clamping of workpieces of 0-150mm machined from the outside. To be fitted to fix or pendulum holders.

EROWA®

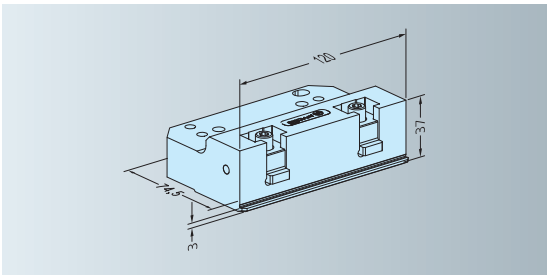
ER-031945 Basic holder PalletSet W

Version	To accommodate various clamping elements.
Application	To fit to fixholder or pendulum holder 3D.
Options	Jaw holder ER-033958 or bracket holder ER-031952.



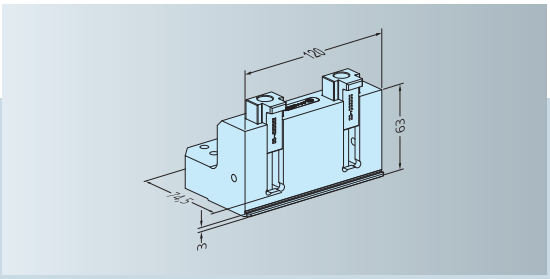
ER-025895 Vise 40mm PalletSet W

Version	Vise with fixed Z-lip and jaws attached from above. Hardened and ground.
Clamping range	max. 150 x 150 x 40 mm.
Max. load	12 kg
Application	Lateral clamping of workpieces of 0 -150 mm machined from the outside. To be fitted to fix or pendulum holders.



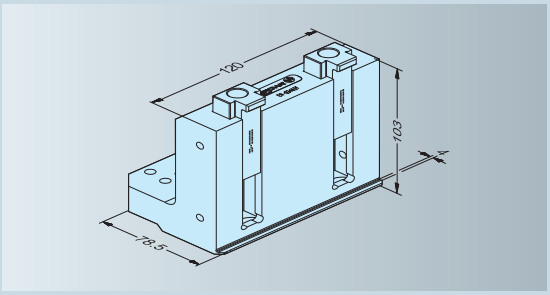
ER-025896 Vise PalletSet W 100mm

Version	Vise with fixed Z-lip and jaws fitted from above.
Application	To clamp workpieces of up to 100 mm in height. To be fitted to fixholder or pendulum holder.
Max. clamping range	150 x 150 x 100 mm.
Max. load	12 kg



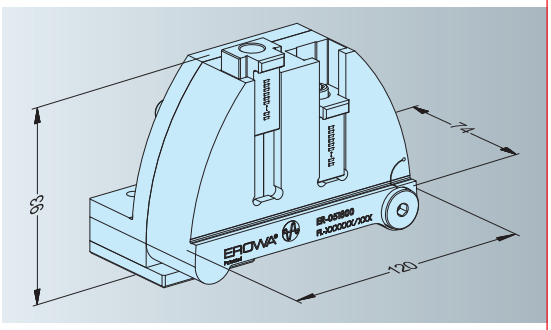
ER-034631 Vise PalletSet W 140mm

Version	Vise with fixed Z-lip and jaws fitted from above. Hardened and ground.
Application	To clamp workpieces of up to 140mm in height. To be fitted to fixholder or pendulum holder.
Max. load	12 kg
Max. clamping range	150 x 100 x 140 mm



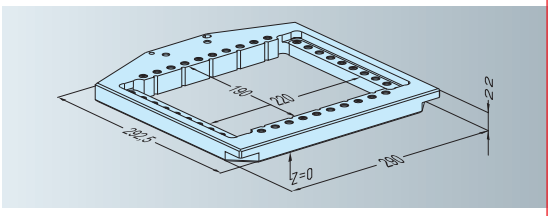
ER-051800 Sine vise PalletSet W

Version	Vise with adjustable angle position and jaws fitted from above. Hardened and ground.
Application	To clamp workpieces at angles adjustable between 0-90°. To fit to fixholder or pendulum holder.
Clamping range	min. 10 mm / max. 75 mm
Max. load	12 kg



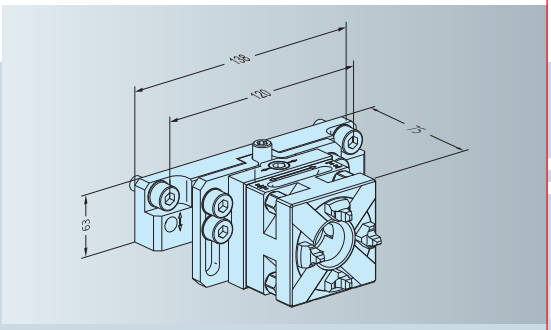
ER-018941 Frame pallet PalletSet W

Version	Clamping frame for multiple palletization of work-pieces
Application	To be fitted to fix holders or pendulum holders.
Option	Clamping beam 220 ER-017645.
Note	To support the clamping frame, use Z-supports. (Page 220/221).



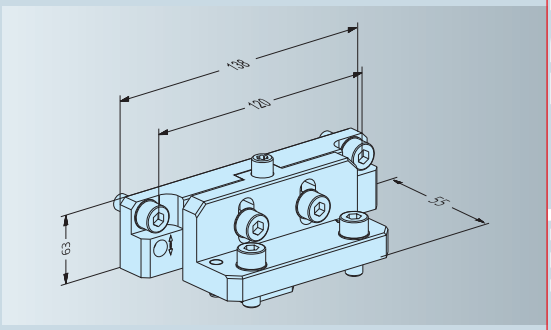
ER-029228 Z-Vario QuickChuck PalletSet W

Version	Fits 3D ER-030923 pendulum holder. Hardened and ground.
Max. load	8 kg
Clamping range	max. height adjustement 30 mm.
Application	To machine electrodes in PSW which have to be adjusted in height.



ER-029229 Z-Vario clamping elements PalletSet W

Version	Fits 3D ER-030923 pendulum holder. Hardened and ground.
Max. load	8 kg
Clamping range	max. height adjustment 30 mm.
Application	PSW clamping elements can also be adjusted in height.

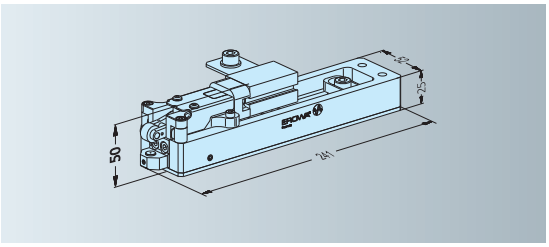


EROWA

ER-025115 Z-support universal PalletSet W pneumatic, 1 pair

INOX auto

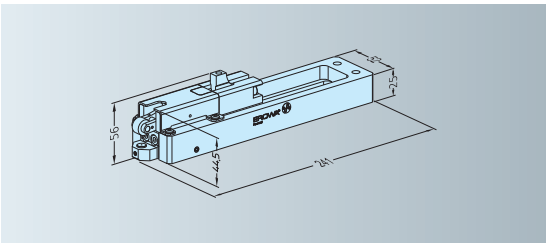
Version	1 pair of supports. Hardened and ground.
Mounting	Directly on the Z=0 base of the WEDM center.
Operation	With manual control unit.
Application	Support and clamping of the frame plate with weights of up to 30kg. Stabilizes the frame plate in case of high flushing pressure.



ER-025116 Z-support universal PalletSet W manual 1 pair

INOX

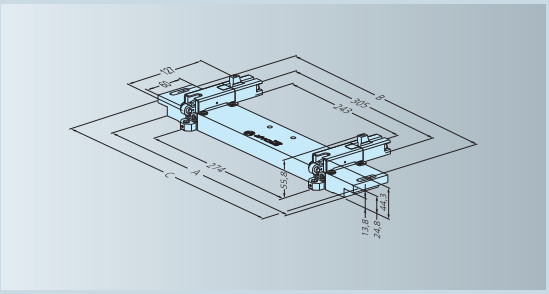
Version	1 pair of supports. Hardened and ground.
Mounting	Directly on the Z=0 base of the WEDM center.
Operation	Manually
Application	Support and clamping of the frame plate with weights of up to 30 kg. Stabilizes the frame plate in case of high flushing pressure.



ER-025100 Z-support beam 300 PalletSet W manual
ER-025101 Z-support beam 380 PalletSet W manual
ER-027205 Z-support beam 460 PalletSet W manual

INOX

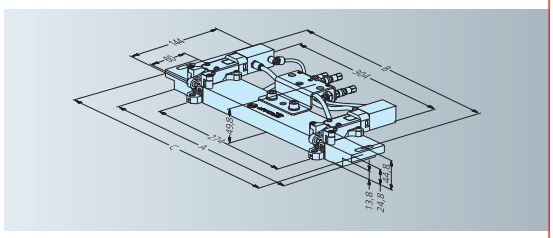
Version	Support beam for use in EROWA ManoSet.
Operation	Manually
Applicaton	Support and clamping of the frame plate with weights of up to 30 kg in combination with EROWA ManoSet. Stabilizes the frame plate in case of high flushing pressure.



ER-025027 Z-support beam 300 PalletSet W pneumatic

ER-025030 Z-support beam 380 PalletSet W pneumatic

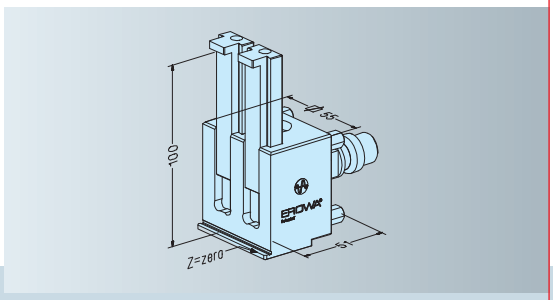
ER-028306 Z-support beam 460 PalletSet W pneumatic



INOX | auto

Version	Support beam for use in EROWA ManoSet.
Operation	Pneumatically.
Application	Support and clamping of the frame plate with weights of up to 30kg in combination with EROWA ManoSet. Stabilizes the frame plate in case of high flushing pressure.

ER-008814 Precision vise 0 - 100 UnoSet



INOX

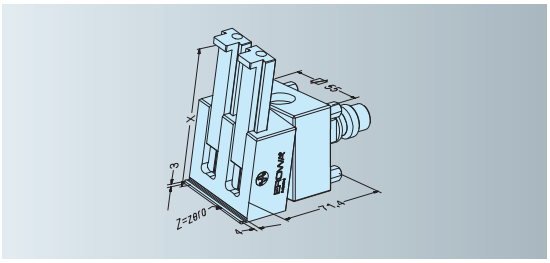
Clamping range	Ranges from 0 to 100 mm.
Max. extension	40 mm at 100 mm workpiece height.
Zuladung	max. 5 kg.
Version	Workpiece fixed. Including three sets of clamping jaws.

EROWA

ER-007935 Rotary vise 0 - 100 UnoSet

INOX

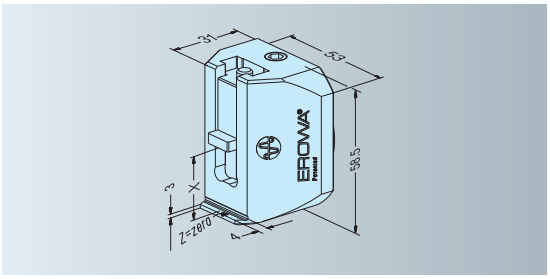
Clamping range	0–100 mm
Max. extension	40 mm with 100 mm part height.
Zuladung	max. 5 kg.
Version	Continuously able to rotate around 360°. Set with three pairs of clamping jaws.



ER-014698 VeeVise UnoSet

INOX

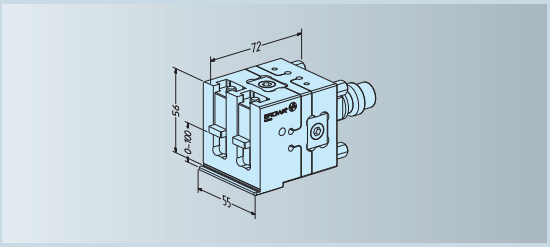
Clamping range	0–50 mm
Max. extension	40 mm with 100 mm part height.
Zuladung	max. 5 kg.
Version	Clamping component without ITS connection. To fit to an existing pendulum rotating adapter.



ER-008842 Pendulum vise 0 - 100 UnoSet

INOX

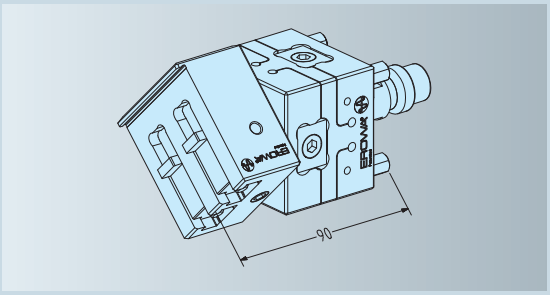
Clamping range	Ranges from 0 to 100 mm.
Max. extension	40 mm at 100 mm workpiece height.
Zuladung	max. 5 kg.
Version	Workpiece adjustable in two axes. Including three sets of clamping jaws.



ER-008856 Rotatable pendulum vise 0 - 100 UnoSet

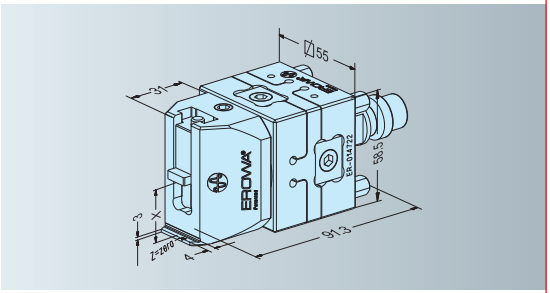
INOX

Clamping range	0–100 mm
Max. extension	40 mm with 100 mm part height.
Zuladung	max. 5 kg
Version	For adjustable workpiece positioning in three axes. Continuously able to rotate around 360°. Set with three pairs of clamping jaws.



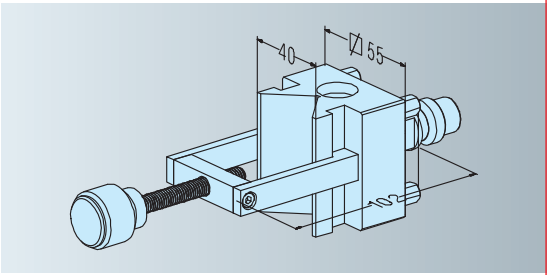
ER-014722 VeeVise TP UnoSet

Clamping range	0–100 mm
Max. extension	40 mm with 100 mm part height.
Zuladung	max. 5 kg.
Version	For adjustable workpiece positioning in three axes. Continuously able to rotate around 360°. Set with three clamping jaws.



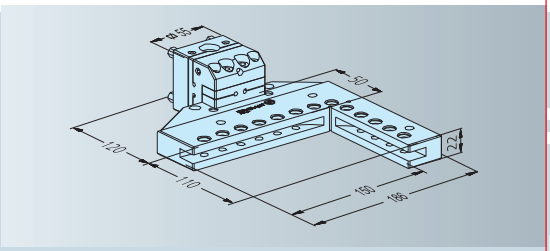
ER-016691 V-Block holder UnoSet

Clamping range	Parts up to ø 40 x height 150 mm
Max. load	1.5 kg
Application	To clamp parts in prismatic slot. Parallel and angular precision 0.01 mm.



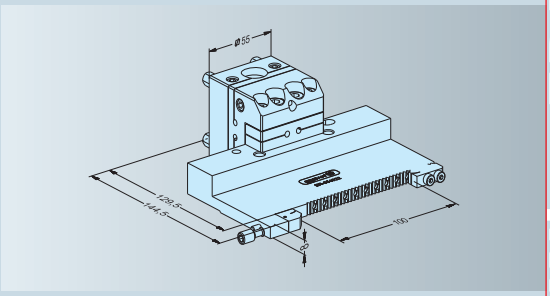
ER-015670 UniVise P UnoSet

Clamping range	Round parts: ø 5–85 mm Flat parts: 140 x 100 mm
Max. load	5 kg
Version	Complete set with all clamping accessories. Workpiece adjustable in three axes.



ER-055535 Flat vise 8mm UnoSet

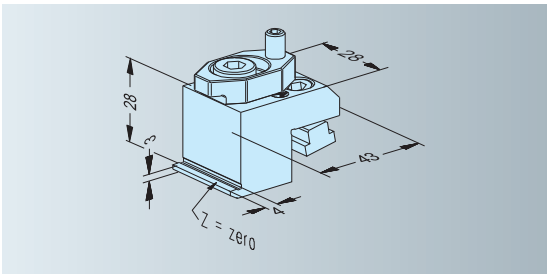
Version	One movable jaw and one fixed jaw. Hardened, ground and corrosion-resistant.
Clamping range	0 - 100 mm.
Max. load	5 kg
Application	Lateral clamping of workpieces machined outside of 0 - 100 mm.



EROWA®

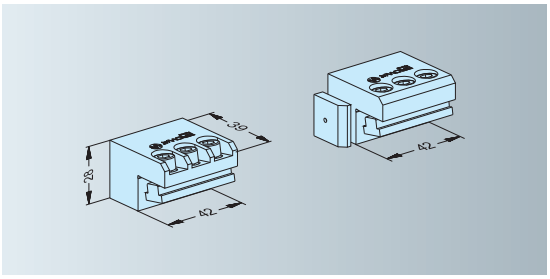
Clamping elements for fixtures

ER-031952 Bracket holder PalletSet W (1 pair)



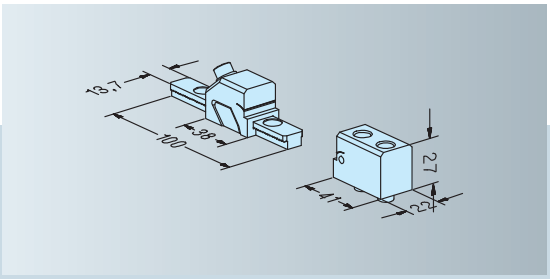
Version Two movable vertical jaws. Hardened, ground and corrosion-resistant.
Application Variable vise to be fitted to basic holder PSW.
Mounting Directly to basic holder ER-031945, using the fittings supplied.

ER-033958 Jaw holder PalletSet W



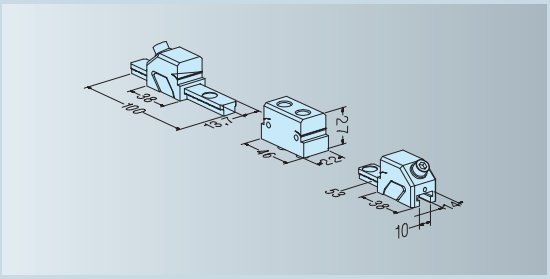
Version One movable jaw and one fixed jaw. Hardened, ground and corrosion-resistant.
Application Variable vise to be fitted to basic holder PSW.
Mounting Directly to basic holder ER-031945, using the fittings supplied.

ER-016914 BeamVise single



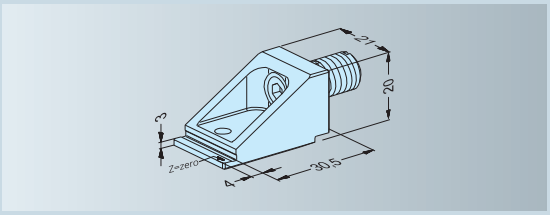
Version One movable and one fixed stop jaw. Hardened, ground, corrosion-resistant.
Application Variable vise laterally on EROWA clamping beams.
Assembly With the enclosed assembly elements to the desired clamping beam Pallet Set W ER-018937.

ER-016658 BeamVise Twin



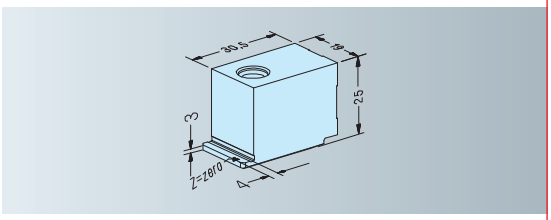
Version Two movable stop jaws and one fixed stop jaw. Hardened, ground, corrosion-resistant.
Application Variable vise laterally on EROWA clamping beams.
Assembly With the enclosed assembly elements to the desired clamping beam PalletSet W ER-018937.

ER-008231 Mini distance support



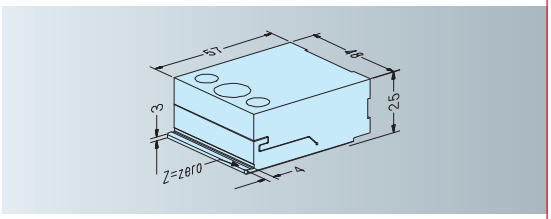
Application As side support for workpieces, or for clamping small, flat single parts.
Presetting The support surface height corresponds to Z = 0 and is not adjustable.
Use On all clamping and gripping beam ER-018937.

ER-008875 Fixed distance support



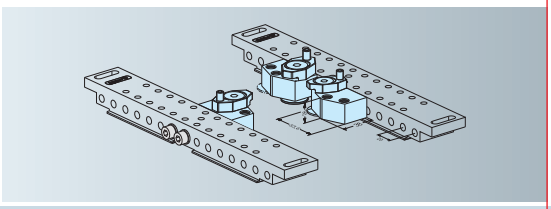
Application As side support for workpieces, or for clamping small single parts.
Presetting The support surface height corresponds to Z = 0 and is not adjustable.
Use On all clamping and gripping beams.

ER-008873 Adjustable distance support



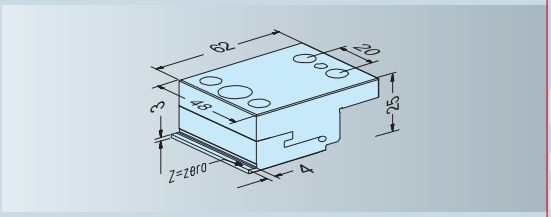
Application As side support for workpieces, or for clamping small single parts.
Presetting The support surface height corresponds to Z = 0 and is adjustable +/- 0.15 mm.
Use On all clamping and gripping beams.

ER-007990 DiaFix 3 pieces



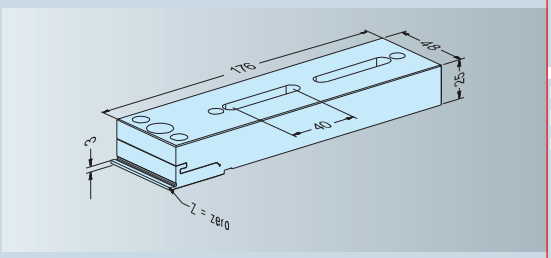
Application For supporting round parts with diameters starting at 50 mm, or as a side support for rectangular work-pieces.
Presetting The support surface height corresponds to Z = 0 and is not adjustable.
Use On all clamping beams.

ER-008221 Z beam



Application As side support for workpieces, or for clamping small single parts.
Presetting The support surface height corresponds to Z = 0 and is adjustable +/- 0.15 mm.
Use On all plates and beams with Z = + 14 mm.

ER-008220 Z universal support

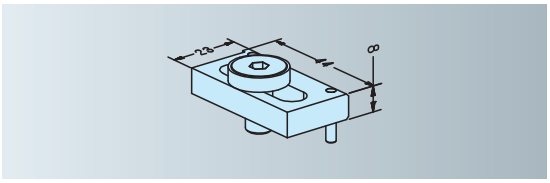


Application As side support for workpieces, or for clamping small single parts.
Presetting The support surface height corresponds to Z = 0 and is adjustable +/- 0.15 mm.
Use On all carrier plates and bases with Z = 0.

EROWA®

Clamping elements for fixtures

ER-016657 BeamStop Set

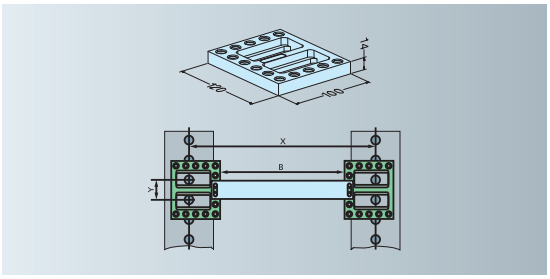


Version Set of two stops for EROWA beams. Hardened, ground, corrosion-resistant.

Application On ManoSet base rails, on Basic Adapter and in RoboSet Clamping frames.

Assembly With the enclosed bolts.

ER-016652 Basic adapter set

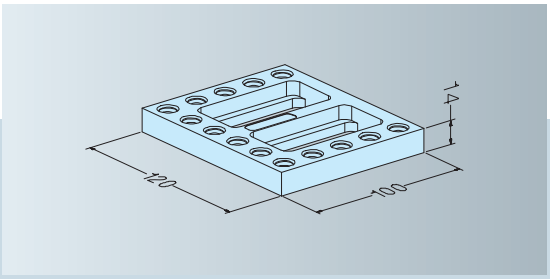


Version A pair of ground, hardened, corrosion-resistant steel plates with variable assembly hole grids, including BeamStop.

Application Base on WEDM machines unequipped with tooling system for the use of EROWA ManoSet clamping beams.

Assembly With the enclosed assembly elements directly onto the existing Z-zero machine structure.

ER-017198 Basic adapter



Version A ground, hardened, corrosion-resistant plate with variable assembly hole grids.

Application Base on WEDM machines with no tooling system. With chucks ER-007851/ER-007852.

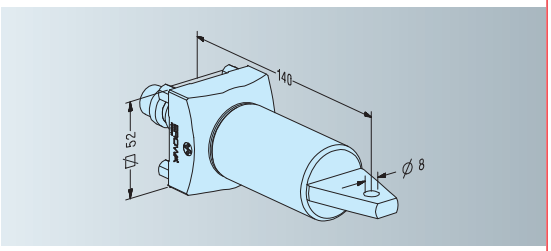
Assembly With the enclosed bolts directly onto the existing Z-zero base.

EROWA
Wire EDM Tooling
Accessories

ER-012727 Reference pin UnoSet

INOX

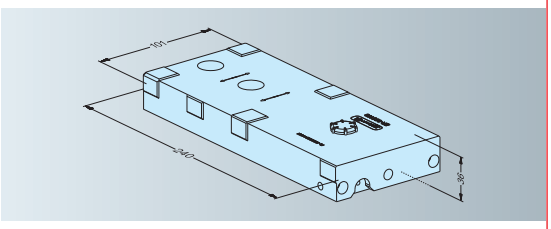
Version Hardened, ground, borehole ø 8 mm.
Application To determine reference measurements on horizontal chucks.



ER-055158 Alignment pallet PalletSet W

INOX

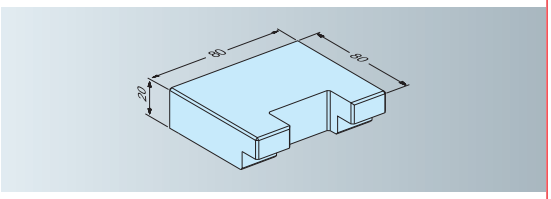
Version Hardened, ground gauge with lateral reference surfaces and two defined reference boreholes.
Application To determine the reference point and to align chucks.



ER-022669 Bracket for flat chuck

INOX

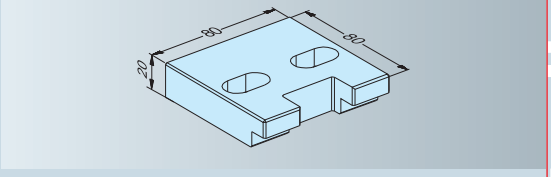
Version Steel, unhardened. Set of 2.
Application To fit flat chucks to WEDM centers.



ER-022670 Bracket for Agie flat chuck

INOX

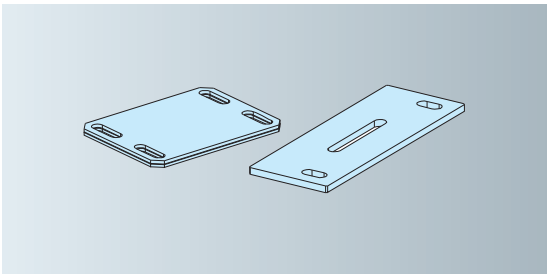
Version Steel, with attachment boreholes. Set of 2.
Application To fit flat chucks to Agie WEDM centers.



EROWA®

ER-028913 Insulation set PalletSet W

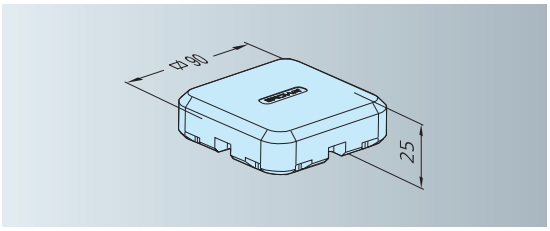
Application To fit underneath the flat chucks and Z-supports to insulate the tooling system.



ER-026768 Cover for flat chucks

INOX

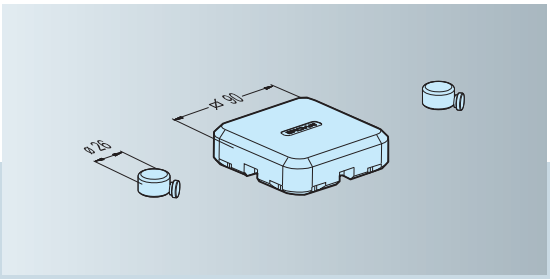
Version Cover for flat chucks
Application Protects flat chucks that are not in use against contamination and damage.



ER-027695 Cover for flat clamping chuck PalletSet W

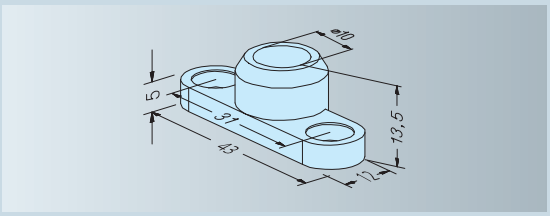
INOX

Version Set consisting of 2 covers for flat chucks and 4 covers for Z-supports.
Application Protects flat chucks and Z-supports that are not use against contamination and damage.



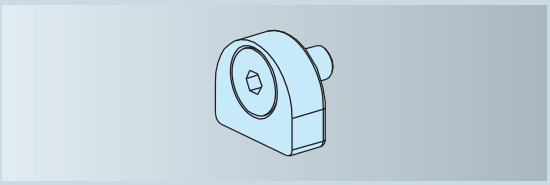
ER-035156 EWIS™ Chip with holder long

Version Holder with built-in datacarrier.
EWIS™ Chip: read only.
Application With EROWA Collet Chuck holders and Square 15/25 holders.
Mounting With supplied M4 bolts.



ER-035294 EWIS™ chip with holder / RCS

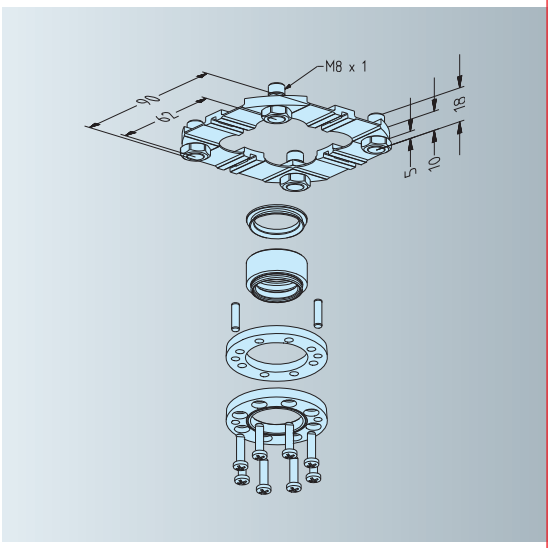
Version Holder with built-in datacarrier.
EWIS chip: read only.
Application To build into RCS coupling, PalletSet W holder and Basic WEDM holder.



ER-030671 Centering plate, G100 M8 x 1 PalletSet W 5 pieces

INOX

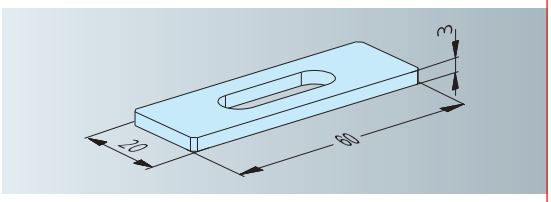
Version Set of 5, including support feet.
Application To be fitted directly to workpiece and electrodes to be used on flat chucks.



ER-008910 Spacer plate 3 mm 8 pieces

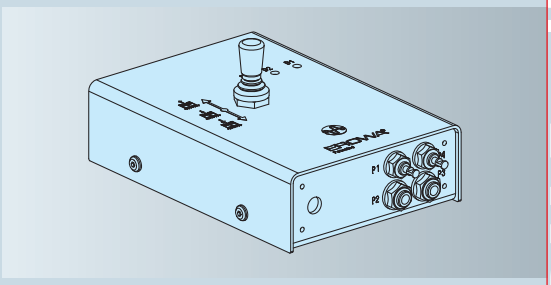
INOX

Version Set of 8 plates. Ground, hardened.
Application To fit underneath clamping beams to raise the Z-support by 3 mm. This prevents collisions in the working range of the lower flushing nozzles.



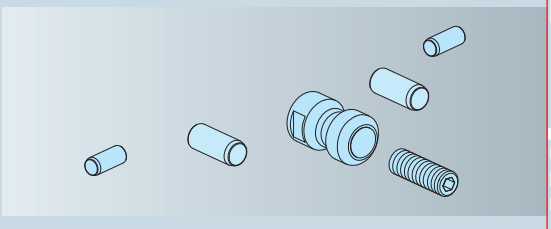
ER-008988 Manual control unit

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-018936 Gripper Link RCS PalletSet W

Version Gripper coupling for RCS gripper, consisting of 4 positioning pins and a chucking spigot.
Application On all EROWA handling devices equipped with the RCS coupling system.
Assembly Glue in pins according to instructions, fit chucking spigot with bolt.
Note Recess for EWIS chip (not included) in the chucking spigot.



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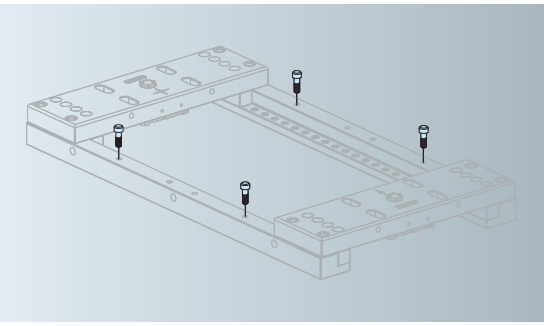
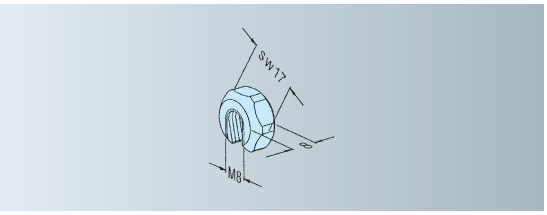
ER-034533 FrameSet gripper bolts 4 pieces



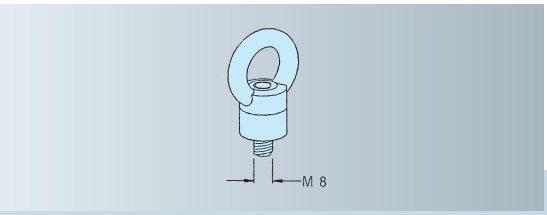
Version Set of 4 gripper bolts.
Application For FrameSet clamping frames with EROWA handling facilities.
Note Can only be used in connection with FrameSet gripper automation.

ER-008846 Slotted nut M8 10 pieces



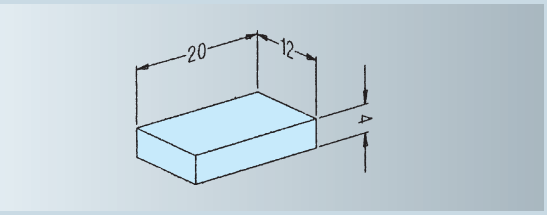
Quantity 10
Application On long setscrews, to avoid time-consuming nut tightening.

ER-008848 Eye bolt M8 1 couple



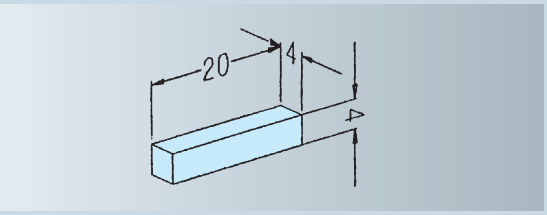
Quantity 2
Application To raise loaded clamping frames with a crane or lifting device.

ER-007799 Spacer plate large 50 pieces



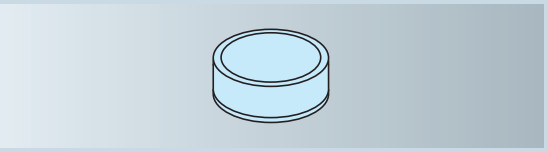
Quantity 50
Application As supports for chucking claws.

ER-007781 Spacer plate small 50 pieces

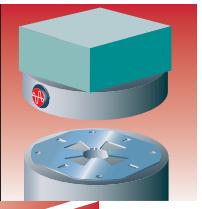


Quantity 50
Application As supports for chucking claws.

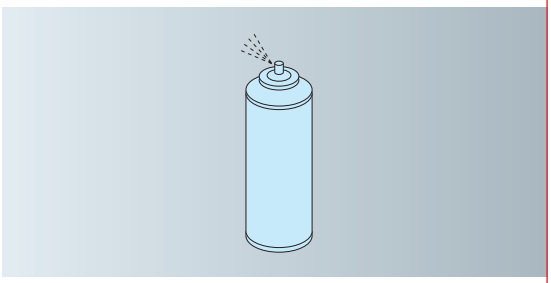
ER-001674 Erogrease 1kg



Version 1kg tin.
Application For the durable lubrication of guides, joints and threads submerged in water.



ER-010734 Branotect maintenance spray 0.4 liter



Version 0.4 litre aerosol.
Application For the maintenance and conservation of all the clamping elements used for WEDM purposes.

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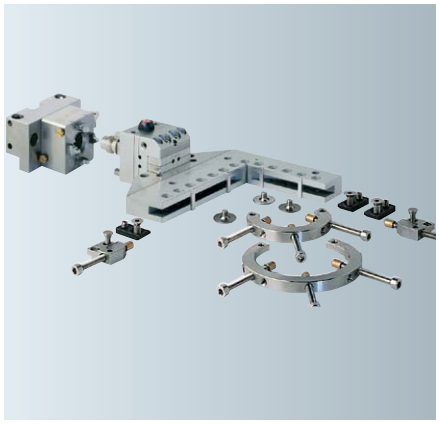
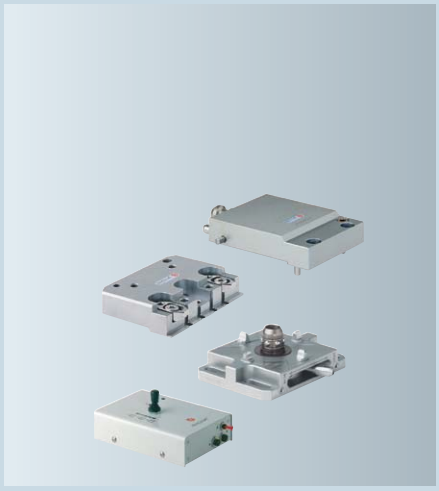


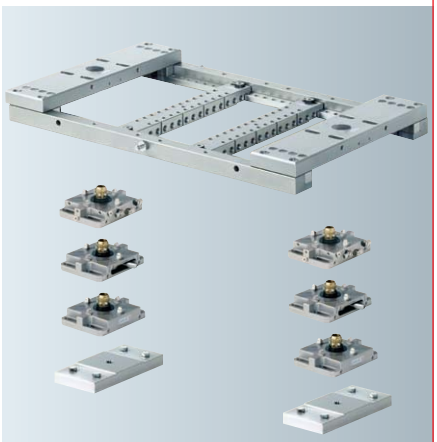
ER-009696	**UnoSet Basic Kit** manual
ER-007962	**UnoSet Basic Kit** pneumatic
Version	Basic tooling system equipment for WEDM centers.
Application	Suitable for the palletization of small and medium-sized workpieces.
Mounting	Depending on the machine base, we recommend the multi-adapter plate ER-017198.
Kit contains	1 chuck 1 UniVise universal vise
Note	Machine-specific information can be found at www.erowa.com/unoset or at your EROWA dealer.

ER-017198	**Multi-adapter plate**
Application	To fit the UnoSet chuck to the machine base
Mounting	Through the adjustable borehole grids with the bolts supplied.

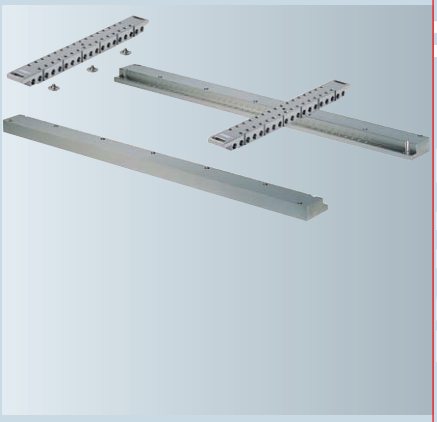


ER-021502	**Starter Kit PalletSet W,** manual
ER-021503	**Starter Kit PalletSet W** pneumatic
Version	Basic tooling system equipment for WEDM centers.
Application	Suitable for the palletization of medium-sized workpieces.
Mounting	Directly to the machine base with the fittings supplied.
Kit contains	1 chuck 1 fixholder 1 vise 1 manual control unit (pneumatic)
Note	Machine-specific information can be found at www.erowa.com/palletset or at your EROWA dealer.

	Starter Kit FrameSet, fix
	Starter Kit FrameSet, basic
	Starter Kit Frameset, manual
	Starter Kit Frameset, pneumatic
Version	Basic frame tooling system equipment for WEDM centers. Manually or pneumatically controlled chucks according to your choice. With the FrameSet fix version, the clamping frames are firmly bolted to the machine base.
Application	Suitable for the palletization of small and medium-sized workpieces.
Mounting	directly to the machine base with the fittings supplied.
Kit contains	2 FrameSet fix plates or corresponding chucks 1 clamping frame of the machine-specific size 2 fitting clamping beams 1 set clamping equipment 1 set frame supports Fittings and pneumatic materials where necessary
Note	Machine-specific information can be found at www.erowa.com/frameset or at your EROWA dealer.



	ManoSet Kit XXL
Version	Basic frame tooling system equipment for WEDM centers. Fixed rails serve as the basis for the clamping beams.
Application	On large WEDM centers.
Mounting	Directly to the machine base with the fittings supplied.
Kit contains	1 set machine-specific base rails 2 fitting clamping beams 1 set clamping equipment
Note	Machine-specific information can be found at www.erowa.com/manoset or at your EROWA dealer.



EROWA®

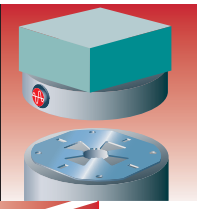
EROWA set of clamping elements
for PalletSet W

EROWA's extensive accessory sets contain a number of practical and economically priced auxiliaries which turn clamping jobs into fun.

ER-019989 Set of clamping elements, PalletSet W

These materials have been packed in one solid plastic box.

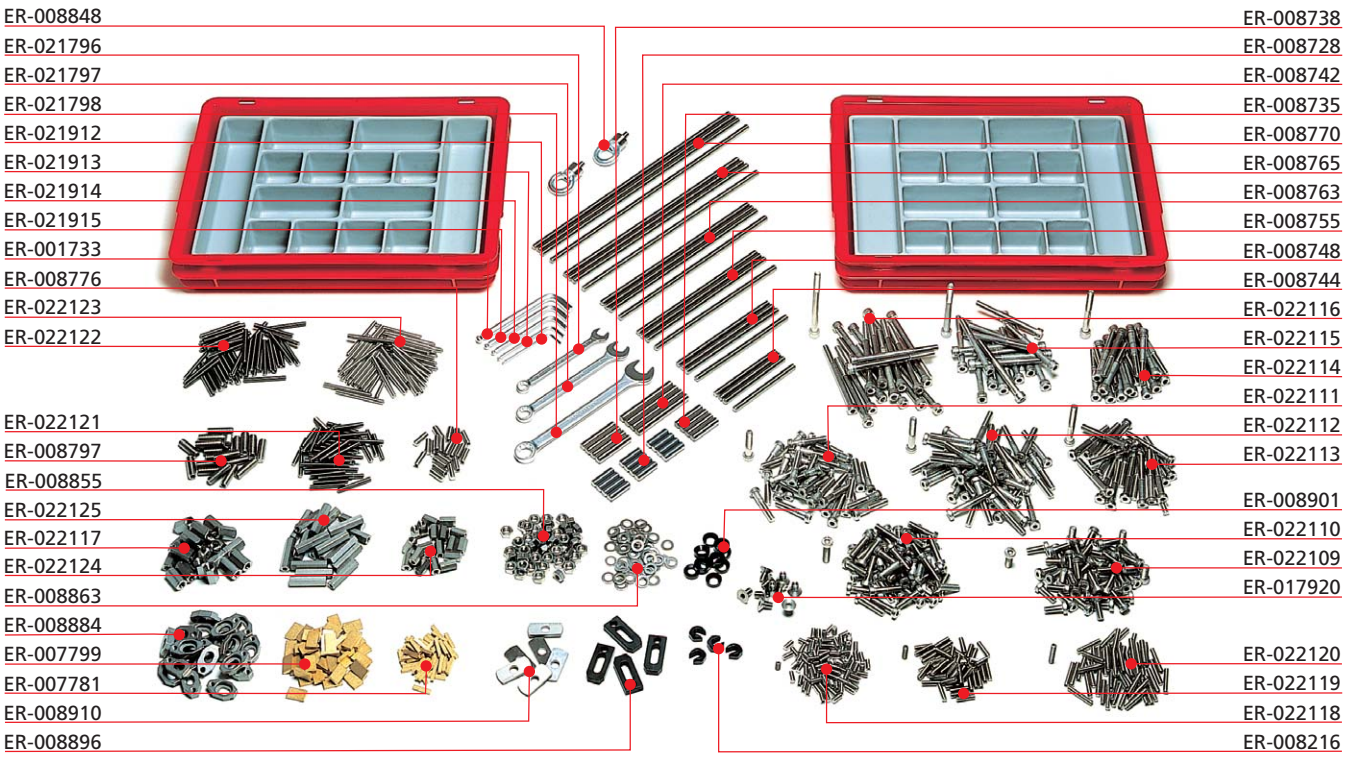
Order number	Description	Units per set	Units supplied by order number
ER-002611	Hex key SW 5	1	1
ER-007729	Z-washer 3 mm	10	1
ER-007768	Hex key SW 3	1	1
ER-007781	Spacer, small	50	50
ER-007799	Spacer, large	50	50
ER-008884	Clip, universal	10	4
ER-017920	Countersunk bolt M8 x 14	10	1
ER-022109	Socket head bolt M8 x 20	10	50
ER-022110	Socket head bolt M8 x 30	10	50
ER-022111	Socket head bolt M8 x 40	10	50
ER-022113	Socket head bolt M8 x 60	10	50
ER-022118	Threaded pin M6 x 12	10	50
ER-022119	Threaded pin M6 x 20	10	50
ER-022120	Threaded pin M6 x 30	10	50
ER-022121	Threaded pin M6 x 40	10	50
ER-022122	Threaded pin M6 x 50	10	50



EROWA®

EROWA set of clamping elements
for Wire EDM Tooling
Standard

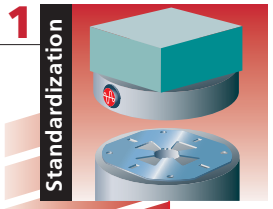
EROWA's extensive accessory sets contain a number of practical and economically priced auxiliaries which turn clamping jobs into fun.



ER-008868 Set of clamping elements, standard

These materials have been packed in one solid plastic box.

Order number	Description	Units per set	Units supplied by order number
ER-001733	Hex key SW 8	1	1
ER-007781	Spacer plate, small	50	50
ER-007799	Spacer plate, large	50	50
ER-008216	Slotted nut M8	4	4
ER-008728	Straight pin ø9 L = 30	12	4
ER-008735	Straight pin ø9 L = 40	4	4
ER-008738	Straight pin ø9 L = 50	4	4
ER-008742	Straight pin ø9 L = 80	4	4
ER-008744	Threaded rod M8 x 100	4	4
ER-008748	Threaded rod M8 x 150	4	4
ER-008755	Threaded rod M8 x 200	4	4
ER-008763	Threaded rod M8 x 250	4	4
ER-008765	Threaded rod M8 x 300	4	4
ER-008770	Threaded rod M8 x 350	4	4
ER-008776	Threaded pin, hex, M8 x 20	20	50
ER-008797	Threaded pin, hex, M10 x 30	20	50
ER-008848	Eye bolt	2	2
ER-008855	Hex nut, M8 x 0.8	50	50
ER-008863	Washer	50	50
ER-008884	Bracket, universal	20	4
ER-008896	Bracket	4	4
ER-008901	Sliding disk	10	20



ER-008868 Set of clamping elements, standard

These materials have been packed in one solid plastic box.

Order number	Description	Units per set	Units supplied by order number
ER-008910	Spacer plate	8	6
ER-017920	Countersunk head bolt M8 x 14	10	1
ER-021796	Ring spanner, SW 10	1	1
ER-021797	Ring spanner, SW 13	1	1
ER-021798	Ring spanner, SW 17	1	1
ER-021912	Hex key SW 3	1	1
ER-021913	Hex key SW 4	1	1
ER-021914	Hex key SW 5	1	1
ER-021915	Hex key SW 6	1	1
ER-022109	Socket head bolt, hex, M8 x 20	50	50
ER-022110	Socket head bolt, hex, M8 x 30	50	50
ER-022111	Socket head bolt, hex, M8 x 40	40	50
ER-022112	Socket head bolt, hex, M8 x 50	40	50
ER-022113	Socket head bolt, hex, M8 x 60	20	50
ER-022114	Socket head bolt, hex, M8 x 70	20	20
ER-022115	Socket head bolt, hex, M8 x 80	20	20
ER-022116	Socket head bolt, hex, M8 x 100	20	20
ER-022117	Hex extension nut M8	20	20
ER-022118	Threaded pin, hex, M6 x 12	100	50
ER-022119	Threaded pin, hex, M6 x 20	50	50
ER-022120	Threaded pin, hex, M6 x 30	50	50
ER-022121	Threaded pin, hex, M6 x 40	50	50
ER-022122	Threaded pin, hex, M6 x 50	50	50
ER-022123	Threaded pin, hex, M6 x 60	50	50
ER-022124	Extension nut, hex / M6	20	20
ER-022125	Spacer, hex / M6 / L = 40	20	20

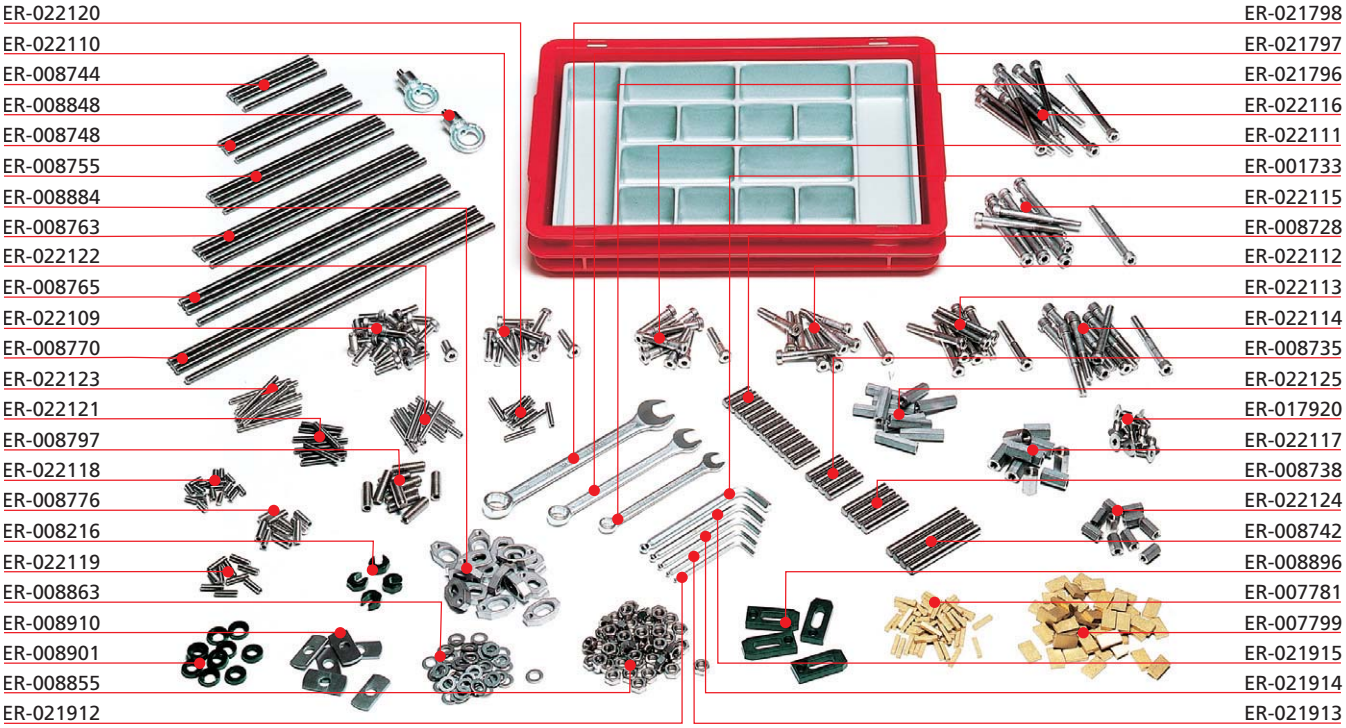
EROWA®

EROWA set of clamping elements

for Wire EDM Tooling

Economy

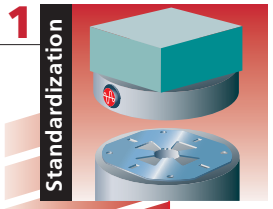
EROWA's extensive accessory sets contain a number of practical and economically priced auxiliaries which turn clamping jobs into fun.



ER-008215 Set of clamping elements Economy

These materials have been packed in one solid plastic box.

Order number	Description	Units per set	Units supplied by order number
ER-001733	Hex key SW 8	1	1
ER-007781	Spacer plate, small	50	50
ER-007799	Spacer plate, large	50	50
ER-008216	Slotted nut M8	4	4
ER-008728	Straight pin, ø9 L = 30	12	4
ER-008735	Straight pin, ø9 L = 40	4	4
ER-008738	Straight pin, ø9 L = 50	4	4
ER-008742	Straight pin, ø9 L = 80	4	4
ER-008744	Threaded rod M8 x 100	4	4
ER-008748	Threaded rod M8 x 150	4	4
ER-008755	Threaded rod M8 x 200	4	4
ER-008763	Threaded rod M8 x 250	4	4
ER-008765	Threaded rod M8 x 300	4	4
ER-008770	Threaded rod M8 x 350	4	4
ER-008776	Threaded pin, hex, M8 x 20	10	50
ER-008797	Threaded pin, hex, M10 x 30	10	50
ER-008848	Eye bolt	2	2
ER-008855	Hex nut, M8 x 0.8	50	50
ER-008863	Washer	50	50
ER-008884	Bracket universal	15	4
ER-008896	Bracket	4	4
ER-008901	Sliding disk	10	20



ER-008215 Set of clamping elements Economy

These materials have been packed in one solid plastic box.

Order number	Description	Units per set	Units supplied by order number
ER-008910	Spacer plate	8	6
ER-017920	Countersunk head bolt M8 x 14	10	1
ER-021796	Ring spanner, SW 10	1	1
ER-021797	Ring spanner, SW 13	1	1
ER-021798	Ring spanner, SW 17	1	1
ER-021912	Hex key SW 3	1	1
ER-021913	Hex key SW 4	1	1
ER-021914	Hex key SW 5	1	1
ER-021915	Hex key SW 6	1	1
ER-022109	Socket head bolt, hex, M8 x 20	20	50
ER-022110	Socket head bolt, hex, M8 x 30	10	50
ER-022111	Socket head bolt, hex, M8 x 40	10	50
ER-022112	Socket head bolt, hex, M8 x 50	10	50
ER-022113	Socket head bolt, hex, M8 x 60	10	50
ER-022114	Socket head bolt, hex, M8 x 70	10	20
ER-022115	Socket head bolt, hex, M8 x 80	10	20
ER-022116	Socket head bolt, hex, M8 x 100	10	20
ER-022117	Hex extension nut, M8	10	20
ER-022118	Threaded pin, hex, M6 x 12	20	50
ER-022119	Threaded pin, hex, M6 x 20	10	50
ER-022120	Threaded pin, hex, M6 x 30	10	50
ER-022121	Threaded pin, hex, M6 x 40	10	50
ER-022122	Threaded pin, hex, M6 x 50	10	50
ER-022123	Threaded pin, hex, M6 x 60	10	50
ER-022124	Extension nut, hex / M6	10	20
ER-022125	Spacer, hex/M6/L = 40	10	20

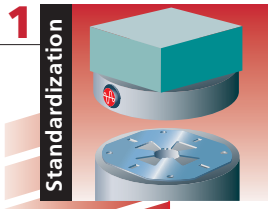
EROWA set of clamping elements
for Wire EDM Tooling
XL

EROWA's extensive accessory sets contain a number of practical and economically priced auxiliaries which turn clamping jobs into fun.

ER-008301 Set of clamping elements, XL

These materials have been packed in one solid plastic box.

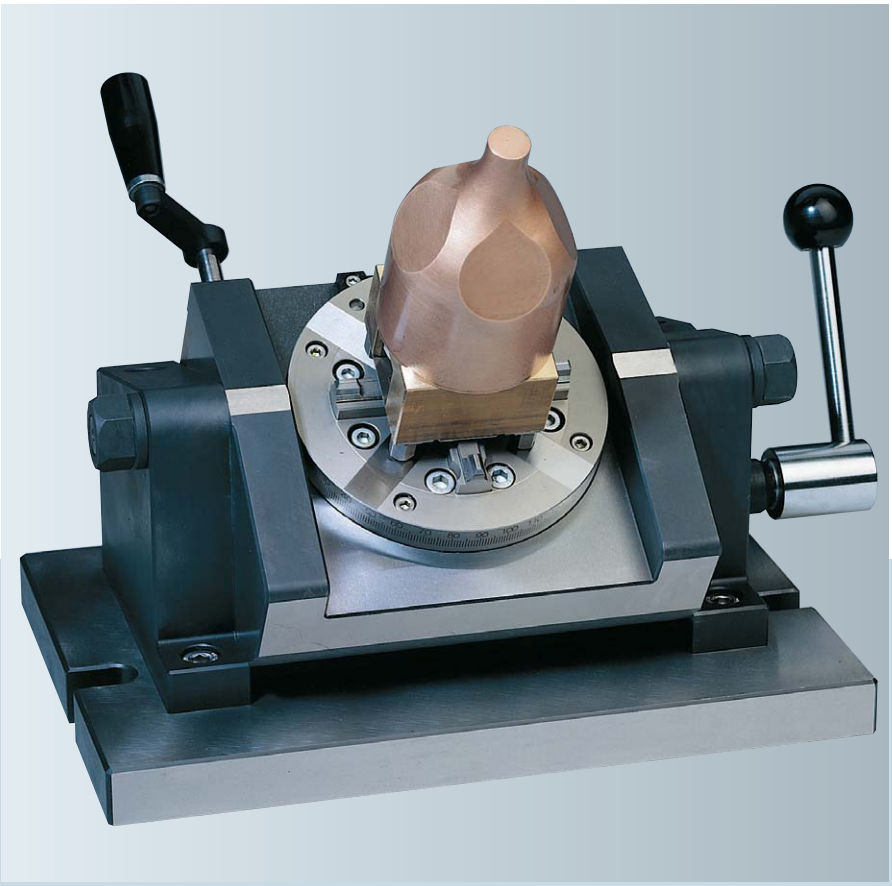
Order number	Description	Units per set	Units supplied by order number
ER-001417	Wrench SW13	1	1
ER-002613	Hex key SW 5	1	1
ER-007781	Spacer plate, small, 4 x 4 x 20 mm	50	50
ER-007799	Spacer plate, large, 4 x 12 x 20 mm	50	50
ER-008744	Threaded rod M8 x 100	4	4
ER-008748	Threaded rod M8 x 150	4	4
ER-008755	Threaded rod M8 x 200	4	4
ER-008763	Threaded rod M8 x 250	4	4
ER-008765	Threaded rod M8 x 300	4	4
ER-008770	Threaded rod M8 x 350	4	4
ER-008776	Threaded rod M8 x 20	10	50
ER-008786	Threaded rod M8 x 30	10	50
ER-008790	Threaded rod M8 x 40	10	50
ER-008794	Threaded rod M8 x 50	10	50
ER-008812	Countersunk head bolt M8 x 40	20	40
ER-008855	Hex nut M8 x 0.8D	20	50
ER-008861	Hex nut M8 x 3D	4	10
ER-008863	Washer ø 15 x 8,4 x 1.6	20	50
ER-008896	Clamp 45 mm	8	4
ER-008901	Sliding disk	20	20
ER-010115	Clamps, aluminum, bronzed	4	1
ER-010120	Column, 100 mm	4	1
ER-010123	Column, 60 mm	4	1
ER-010126	Adjustment supports	4	1



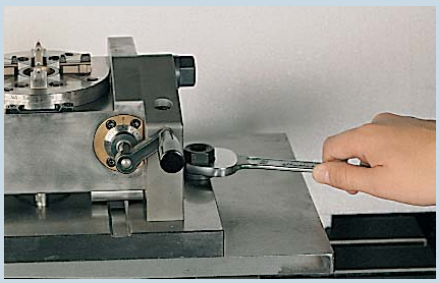
EROWA®

EROWA Sine Dividing Head ITS

The highest precision-the simplest handling



Your advantages
- Workpieces and electrodes are clamped and machined simply, quickly, and with precision.
- Thanks to the precision of the integrated ITS rapid-action chuck, workpieces need not be realigned when they are changed.
- Full ITS universality is guaranteed.
- Simple to fit on any milling, grinding or EDM center.

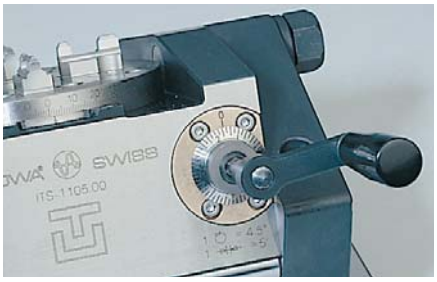


The EROWA Sine Dividing Head ITS is easy and quick to fit on the machine table, with only two bolts.

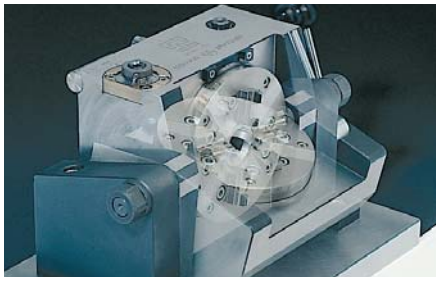
The workpiece is clamped with the precision of the ITS tooling system, with a repeatability of 0.002 mm.

Function

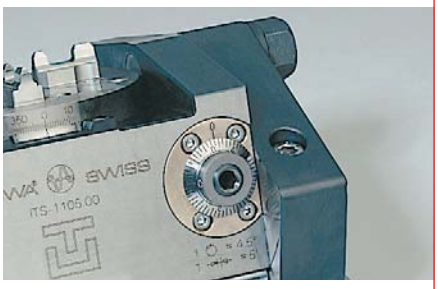
The Sine Dividing Head offers you the followingpossibilities:



ITS S rapid-action chuck, able to rotate round 360°, indexing vernier 5 minutes (0.08°).



. . . swivelable round 90° with . . .

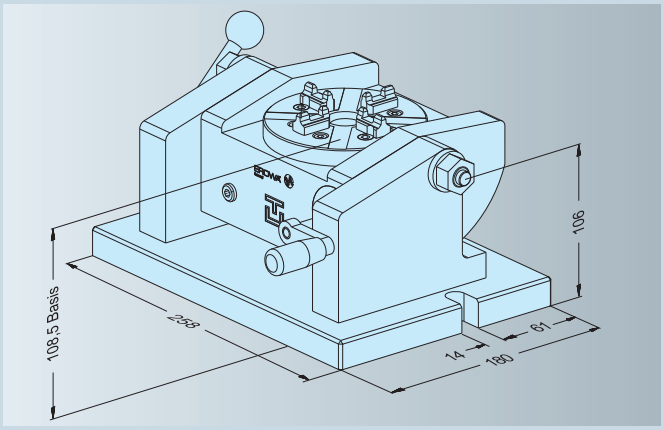


. . . sine function.

Technical data

ER-010427	**EROWA Sine Dividing Head**
Titling range	0°–90°
Rotating axis, rapid-action chuck	360°
Chuck indexing	4 x 90°
1 turn on crank	4.5°
Air connection	M5
Air pressure	7 bar
Weight	22 kg
Concentricity rapid-action chuck/rotating axis	± 0.015 mm
Axial load	500 N
Clamping, indexing and rotating axes	mechanical
Materials	Corrosion resistant

Option	
ER-010567	**Manual valve**



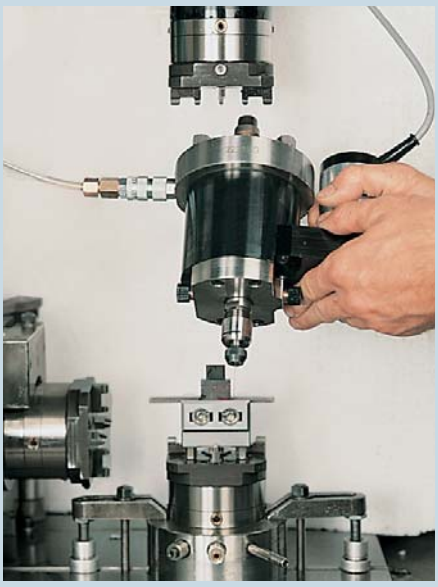
EROWA

EROWA Rotating Spindle

The smallest boreholes with the greatest precision.

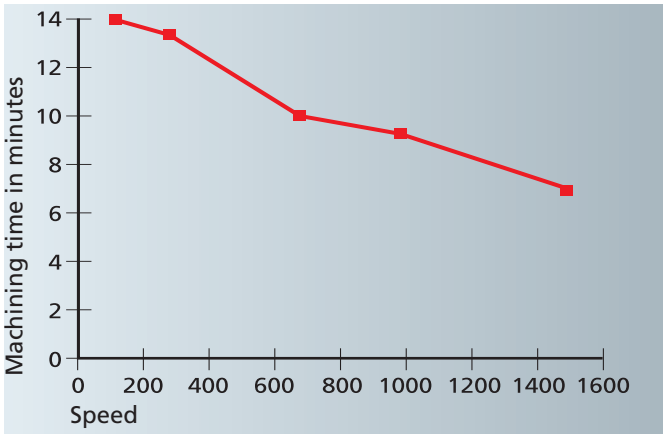
The ITS tooling system allows for a simple and precise integration of the rotatring spindle into the machine. Electrodes of 0.2-10 mm in diameter are clamped and aligned with precision.

Your advantages
- Quick and easy mounting of the rotating spindle.
- Manufacturing of the smallest boreholes with the greatest precision.
- Short machining time thanks to an optimal synchronization of rotation speed and flushing pressure.
- Can be used on any EDM center, thanks to the ITS tooling system.



The wide range of speed helps achieve very good results, even with the finest tubes (see chart).

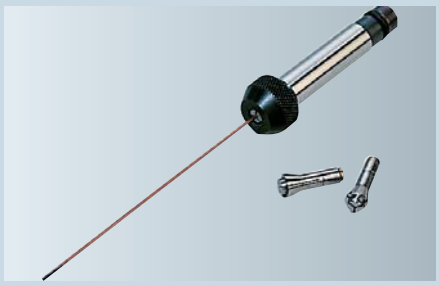
Material	hardened steel (x 210 CRW 12)
Thickness	8 mm
Flushing pressure	5 bar
Electrode	Cu ø 0.4 mm
Generator setting	constant



The right ratio between speed, electrode diameter, flushing pressure and generator setting ensures an optimal machining rate.

Technical data

ER-036000	EROWA **Rotating Spindle**
Speed:	100 to 2000 n-1
Clamping range:	ø 1–10 mm (without mini collet chucks)
Weight:	5.2 kg (without control box)
Mains:	220 V/110 V, switchable
Central flushing:	
up to 3 bar	through ITS chuck
up to 18 bar	through high-pressure connection (1/8" thread)
Main cable	2.5 m
Connection cable	5 m



Mini-collet chuck holder

Mini-collet chuck set

Options	
ER-010700	**mini collet chuck holder** shaft ø 10 mm
ER-010689	**mini collet chuck set** ø 0.2–2 mm
	mini collet chucks, individual
ER-002403	ø 0.2 mm bis
ER-002421	ø 2 mm

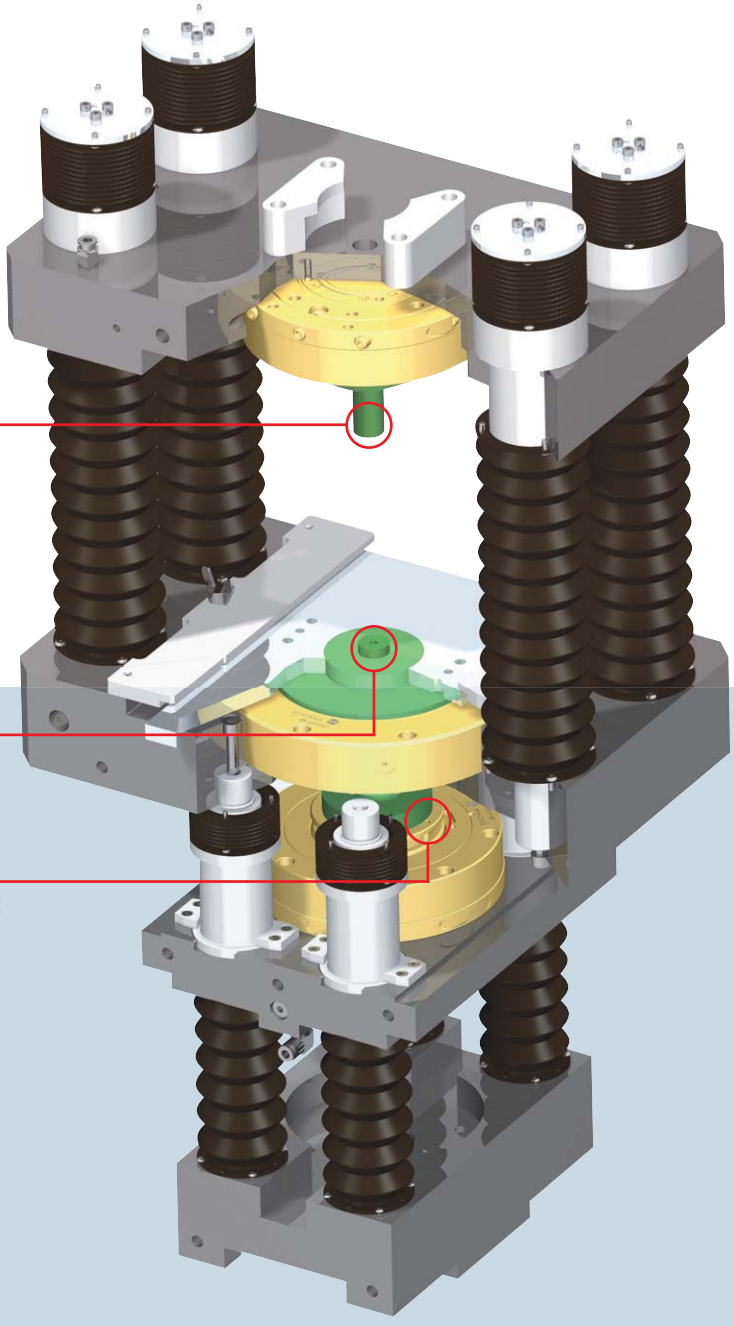
EROWA®

EROWA PM Tooling

Pressing powder with system

Pressed-powder parts are become more and more refined.
The special shapes are manufactured in small batch sizes.
Powder presses have to be reset frequently.
EROWA's PM Tooling cuts resetting time to less than 2 minutes!

It's plain to see: if resetting times must be reduced, a tooling system will have to be used. The EROWA PM Tooling was specifically designed for use under high pressure.



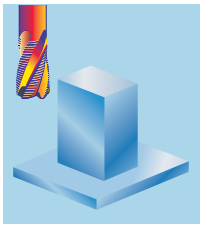
Upper punch on EROWA PM Tooling pallet
Positioning accuracy < 0.002 mm.

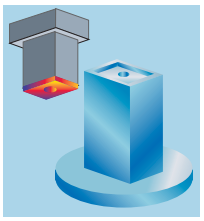
Die-plate on EROWA PM Tooling pallet
Positioning accuracy < 0.002 mm.

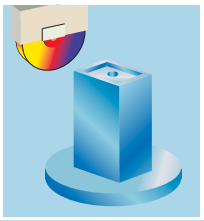
Lower punch on the EROWA PM Tooling pallet
Positioning accuracy < 0.002 mm.

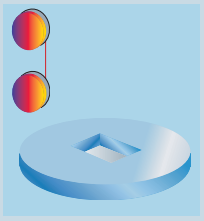
The upper and lower punches as well as the die-plates are machined on the PM Tooling, right from the start until they are used in the press. Thanks to the system's positioning accuracy and stability, all the punches and die-plates produced on the system can be changed in the twinkling of an eye.

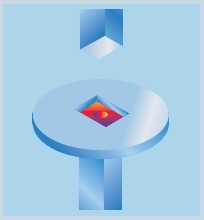
Applications


Milling

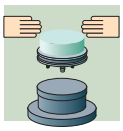

EDM


Grinding

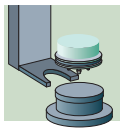

Wire EDM


Powder pressing

Handling

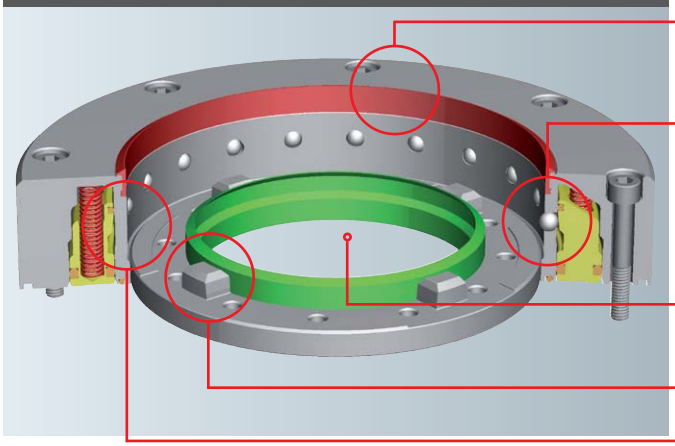

Manual

Loading facility


Robot

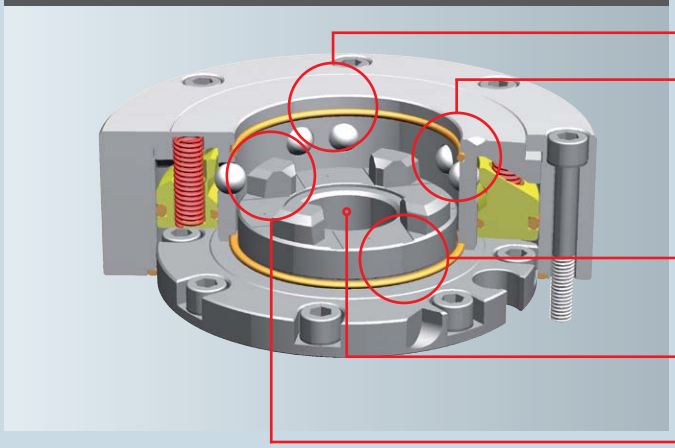
Function

Die-plate chuck



- Fully sealed system, resistant to dust and liquids
- Patented outside clamping
- Wide clearance for manymold contours
- Compatible with P centering
- Large contact surfaces for a high degree of pressure absorption

Punch chuck



- Fully sealed system
- Patented outside clamping
- Large contact surfaces for a high degree of pressure absorption
- 25 mm clearance for center pin or second punch
- Compatible with P centering

Technical data PM Precise

	PM56/PM60	PM85
Pressure absorption, max.	50 t	100 t
Repeatability	< 0.002 mm	< 0.002 mm
Automatable	yes	yes
Electronic identification	yes	yes

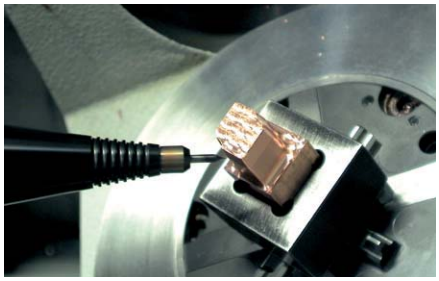
EROWA®

EROWA PM Tooling

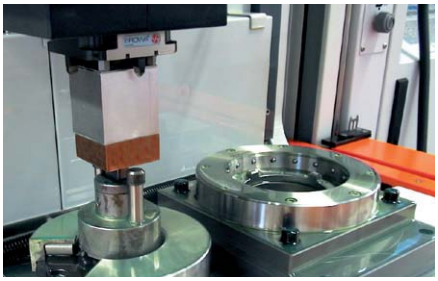
Universal from milling to pressing

Punches and die-plates are produced on pallets, with exact centricity. PM Tooling pallets are compatible with all EROWA P chucks. The EROWA PM Tooling allows for the complete automation of your machine.

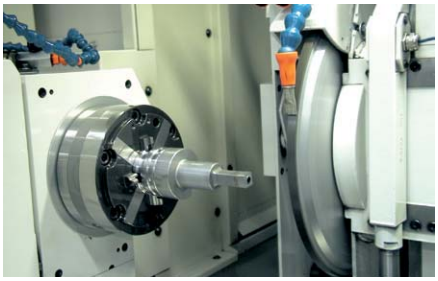
Milling
Electrodes used to EMD the molds are machined on ITS system holders. The reference position is provided by the chuck.



EDM
Shapes in the surface of the punches are EDMed. The reference position is provided by the chuck.

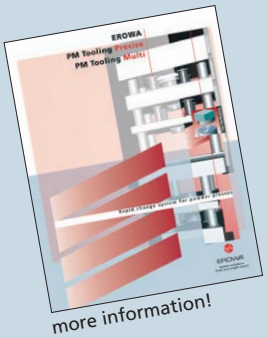


Grinding
Punches may also be machined on cylindrical grinding machines. The reference position is provided by the chuck.



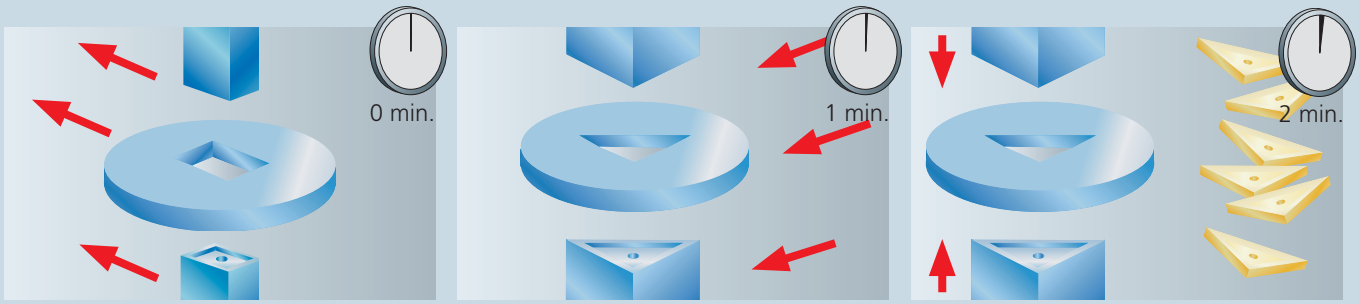
Wire-EDM
The contours are produced on a WEDM center. The reference position is provided by the chuck.

Powder pressing
Top and bottom punches and the die-plate are inserted into the press. The reference positions are provided by the precisely aligned chucks.



more information!

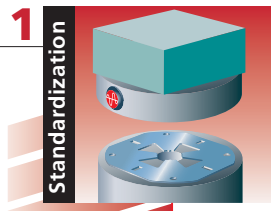
Changing variants in 2 minutes



Pneumatically loosen die-plate and both punches.

Insert and clamp new die-plate and punches.

Produce new molds.



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

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

For chip-removing processes

For EDM sinking

For WEDM

EROWA PM Tooling

	Page
PM Tooling chucks	250
PM Tooling Workpiece carrier	252
PM Tooling Accessories	253

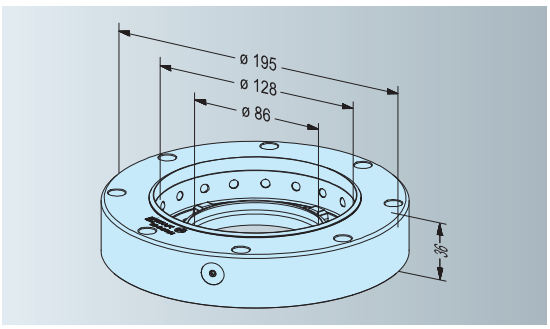
PM Tooling

EROWA

Technical data	PM chucks
Repeatability	0.002 mm
Indexation	4 x 90°
Opening with dry compressed air	6 bar min.
Clamping	Spring pressure

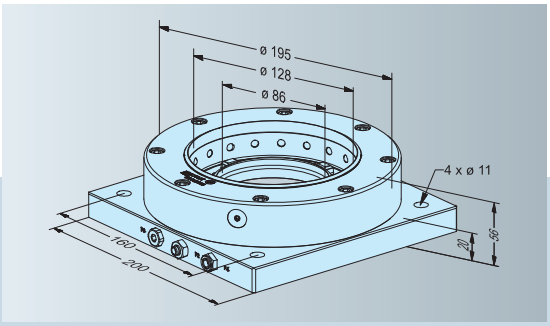
ER-047544 Die-plate chuck PM128 II Precise

Version Steel, hardened. Through borehole ø 86. External seal.
Clamping power Reclamped at 6 bar: 23000 N.
Connections At the rear, with two lines.
Operation With control unit.
Application On milling machines and powder presses.
To accommodate PM 128 die-plate pallets Precise.



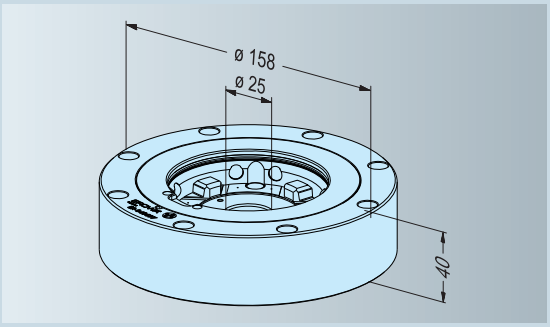
ER-047566 Die-plate chuck PM128 II Precise with base plate

Version Steel, hardened, corrosion-resistant.
Through borehole ø 86. External seal.
Clamping power 20000 N.
Operation Laterally with compressed-air gun or with control unit.
Application On milling machines, lathes, grinding machines and EDM/WEDM centers.
To accommodate die-plate pallets PM128 Precise and Multi.

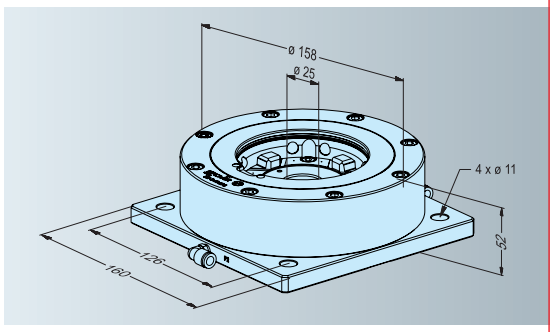


ER-040697 Chuck PM85 Precise

Version Steel, hardened, corrosion-resistant.
Through borehole ø 25.
Clamping power 9000 N.
Connections At the rear, with two lines.
Operation With control unit.
Application On milling machines, lathes, EDM/WEDM centers and powder presses.
To accommodate pallets PM85 Precise.

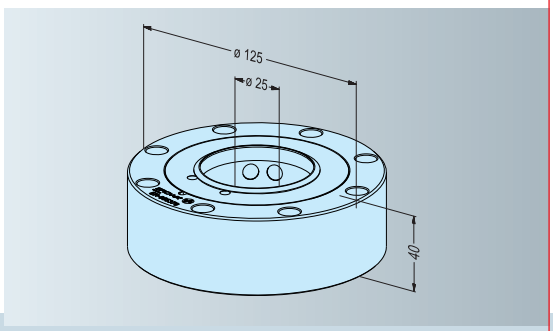


ER-040696 Chuck PM85 Precise with base plate



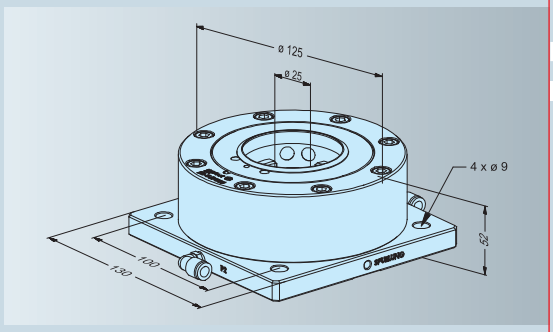
Version	Steel, hardened, corrosion-resistant. Through borehole ø 25.
Clamping power	9000 N.
Connections	Laterally, with two lines.
Operation	With control unit.
Application	On milling and grinding machines and on EDM/WEDM centers. To accommodate pallets PM85 Precise and Multi.

ER-055370 Chuck PM60 Precise



Version	Steel, hardened, corrosion-resistant. Through borehole ø 25.
Clamping power	6500 N.
Connections	At the rear, with two lines.
Operation	With control unit.
Application	On milling machines, lathes, EDM/WEDM centers and powder presses. To accommodate pallets PM60 Precise.

ER-047500 Chuck PM60 Precise with base plate



Version	Steel, hardened, corrosion-resistant. Through borehole ø 25.
Clamping power	6500 N.
Connections	Laterally, with two lines.
Operation	With control unit.
Application	On milling and grinding machines and on EDM/WEDM centers. To accommodate pallets PM60 Precise.

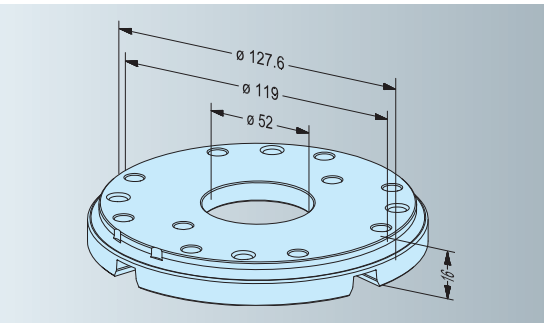
ER-034680 Die-plate pallet PM128 ø 52 Precise 1 unit

INOX

Version Steel, hardened, corrosion-resistant.
Centering integrated in pallet. Inside ø 52. 1 unit.

Application For use on die-plate chuck PM128 Precise. To accommodate die plates, workpieces and fixtures for chip-cutting machines, EDM/WEDM centers and powder presses.

Fitting blanks Through the pallet with M6 bolts or through the workpiece with M8 bolts.



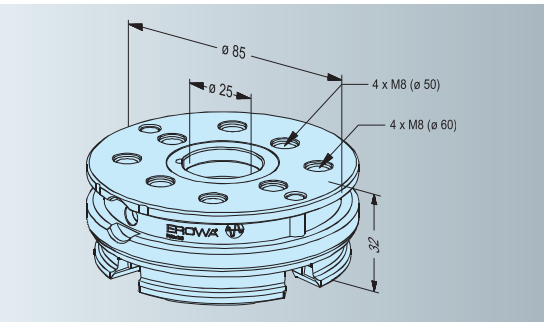
ER-040701 Pallet PM85 Precise 1 unit

INOX auto

Version Steel, hardened, corrosion-resistant.
Centering integrated in pallet. Inside ø 25. 1 unit.

Application For use on EROWA Chuck PM85 Precise.
With chucking spigot ER-039839 on Production-Chuck 210 Combi, PowerChuck P, ITS Chuck 100 P and QuickChuck 100 P. To accommodate workpieces and fixtures for chip-cutting machines, EDM/WEDM centers and powder presses.

Fitting blanks Through the pallet with M6 bolts or through the workpiece with M8 bolts.



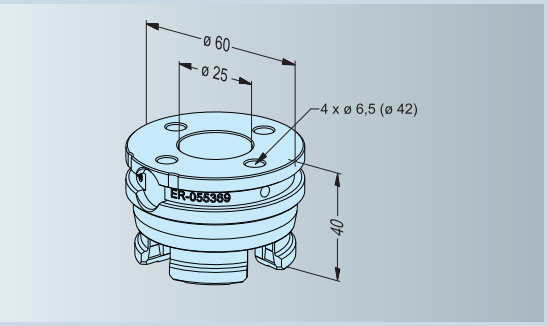
ER-055369 Pallet PM60 Precise 8 units

INOX auto

Version Steel, hardened, corrosion-resistant.
Centering integrated in pallet. Inside ø 25.

Application For use on EROWA Chuck PM60 Precise.
With chucking spigot ER-041429 on Production-Chuck 210 Combi, PowerChuck P, ITS Chuck 100 P and QuickChuck 100 P. To accommodate workpieces and fixtures for chip-cutting machines, EDM/WEDM centers and powder presses.

Fitting blanks Through the pallet with M6 bolts.

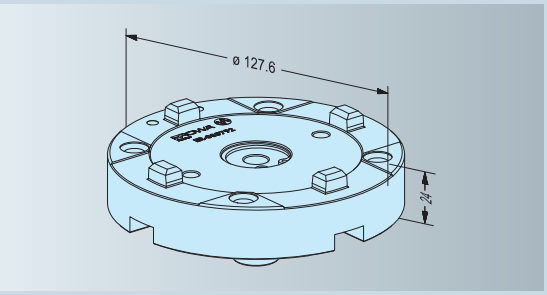


ER-035792 Adapter pallet P PM Precise for die-plate pallet PM128

INOX

Version Hardened steel, corrosion-resistant.

Application Serves as an adapter between the die-plate pallets PM128 Precise and Multi and an ITS Chuck 100 P or a PowerChuck P.

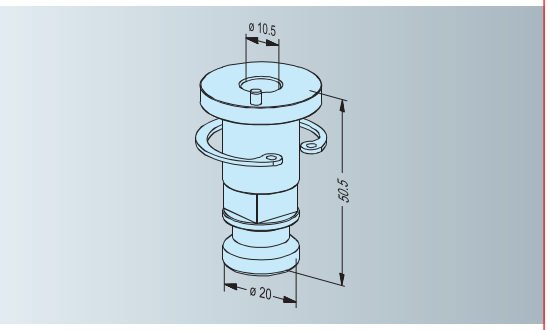


EROWA
PM Tooling
Accessories

ER-039839 Chucking spigot PM85 automatic 8 units

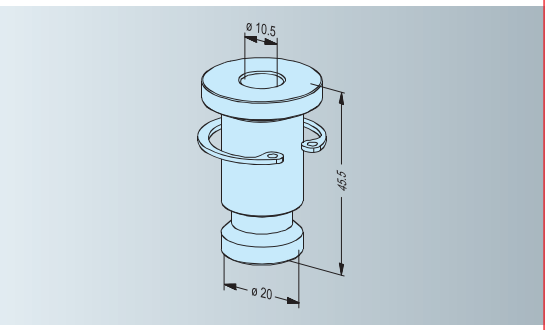
auto

Version Steel, hardened. Automatic, with borehole ø 10.5.
Application In pallets PM85 Precise. To be fitted with securing ring.



ER-041429 Chucking spigot PM56 / PM60 manual 8 units

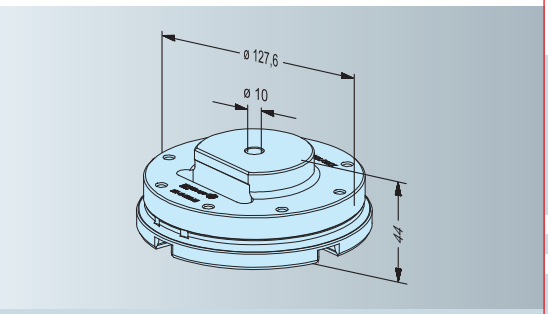
Version Steel, hardened. Manual, with borehole ø 10.5.
Application In pallets PM56 and PM60 Precise. To be fitted with securing ring.



ER-049248 Alignment pallet PM128 Precise to die-plate chuck PM128 Precise

INOX

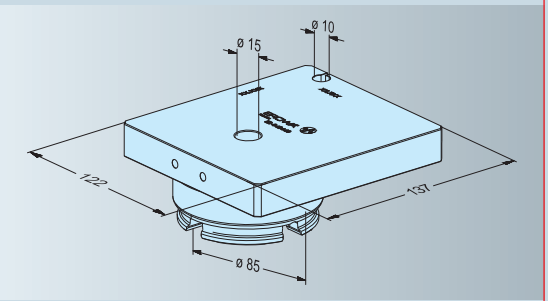
Version Die-plate chuck PM128 Precise, alignment surface, centering borehole ø 10.
Application In tool- and mold-making. Alignment of the angle position and determination of the center of the die-plate chuck PM128 Precise.



ER-042440 Alignment pallet PM85 Precise to PM85 Chuck Precise

INOX

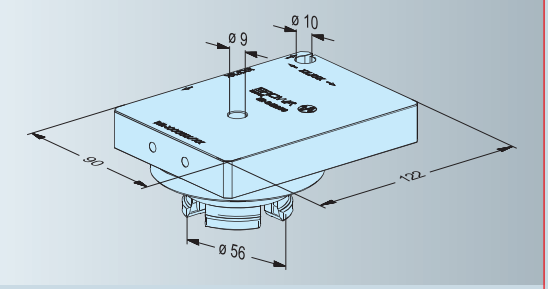
Version Pallet PM85 Precise, alignment surface, center borehole ø 15, position borehole ø 10.
Application In tool- and mold-making. Alignment of the angle position and determination of the center of PM85 Precise chucks.

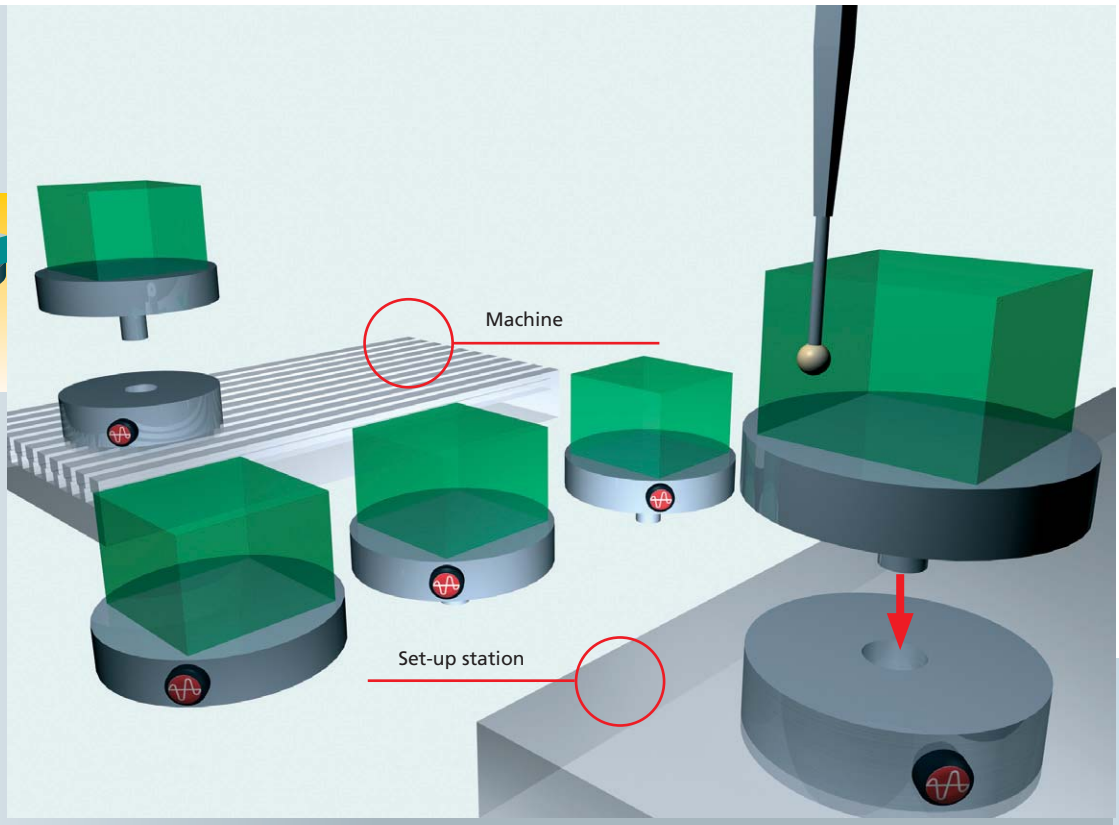


ER-042350 Alignment pallet PM56 / PM60 Precise to PM56 / PM60 Chuck Precise

INOX

Version Pallet PM56 Precise, alignment surface, center borehole ø 9, position borehole ø 10.
Application In tool- and mold-making.
To align the angular position and to determine the center of PM 56 and PM60 Precise chucks.





Organization of electrodes and workpieces. All the workpieces and electrodes are set up outside the machine. If necessary, their offset values are determined outside the machine. Thus programs can be generated in advance, and automation becomes possible.

For chip-removing processes

For EDM sinking

For WEDM

up to 200 kg

EROWA PreSet 3D CNC

Page 256 - 257

up to 200 kg

EROWA PreSet 3D MAN

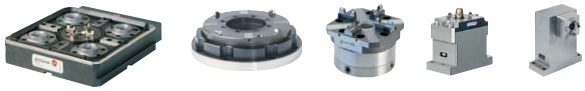
Page 258 - 259

Basic equipment PreSet 3D

Page 260 - 261

up to 50 kg

EROWA PreSet 2D



EROWA PreSet 2D +C

Page 262 -263

up to 60 kg

EROWA PreSet Basic PalletSet W

Page 264

up to 20 kg

EROWA PreSet Basic UnoSet

Page 264

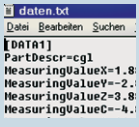
up to 200 kg

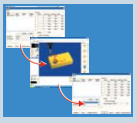
EROWA PreSet Basic UPC

Page 264

Measuring tools and options

Page 266 - 267





EROWA QuickLink^{XT}

Page 268 - 269

EROWA JMS® ^{Pro} Organization

Page 270 - 271

EROWA PreSoft XP

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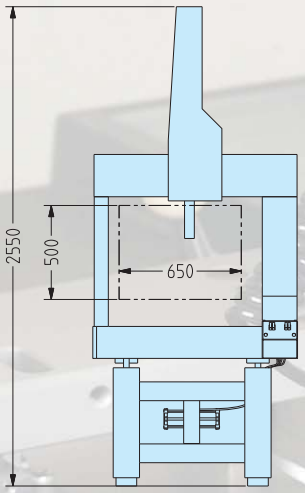
EROWA®

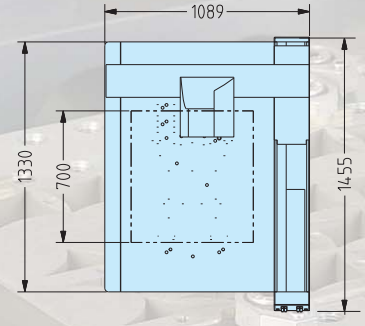
EROWA PreSet 3D

CNC

Machining centers must be relieved of any unproductive work as much as possible. Presetting and measuring workpieces and electrodes are jobs that can be more efficiently done on a measuring station.
The motto is presetting while the machine is working. With the PreSet 3D CNC, you provide your operators with a facility that has been optimally designed for such a purpose.

Automatic
Serial measurements with the integrated CNC control system are carried out automatically.





EROWA PreSet 3D CNC

- Measuring machine (working plate with borehole grid for all EROWA tooling systems)
- Pneumatic control system
- PC and color printer
- Presetting software
- Renishaw measuring probe TPC 3
- Calibration ball

Technical data

	PreSet 3D CNC
Range, X-axis	650 mm
Range, Y-axis	700 mm
Range, Z-axis	500 mm
Maximum distance between table and probe holder (without probe)	643.5 mm
Maximum distance between the columns at table height	820 mm
Usable surface of the granite plate (with EROWA borehole pattern)	820 x 1300 mm
Resolution, scales	0.0005 mm
Measuring accuracy according to volume (according to M = 0.003 + ISO 10360/2)	M = 0.003 + 0.0035 x L
Axis movement speed	18 m/min
Machine dimensions	
Height	2550 mm
Surface	1089 x 1455 mm
Maximum workpiece load	650 kg
Maximum probe weight	1.2 kg
Machine weight (without load)	775 kg

For additional details, please contact your EROWA dealer.

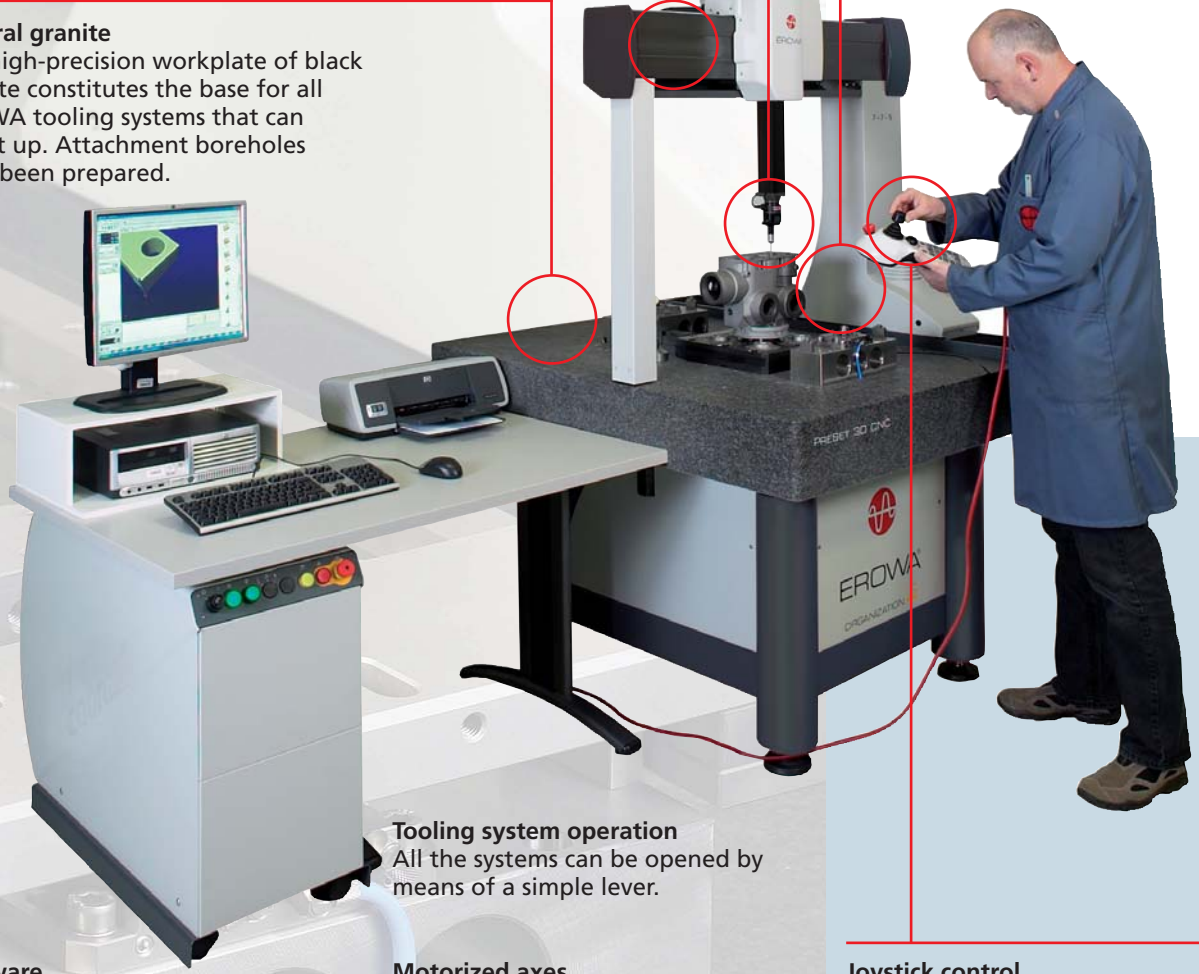
Renishaw probe unit RTP20
One of the best probing systems for three-dimensional measurement.

Rails
High-precision Renishaw rails with optical probe heads guarantee the best results.

Machine design
Specially cast aluminum for optimal dimensional and thermal stability.

Natural granite
The high-precision workplate of black granite constitutes the base for all EROWA tooling systems that can be set up. Attachment boreholes have been prepared.

Air bearing
All the axes are moved on high-precision air bearings. The Z-axis is equipped with an automatic brake in case of pressure loss.



Tooling system operation
All the systems can be opened by means of a simple lever.

Software
PreSoft XP – this graphically designed aid will turn everyone into a measuring specialist.

Motorized axes
All the axes are driven by DC servo motors.

Joystick control
Optimal operation for safe measurement. One joystick for all the axes.

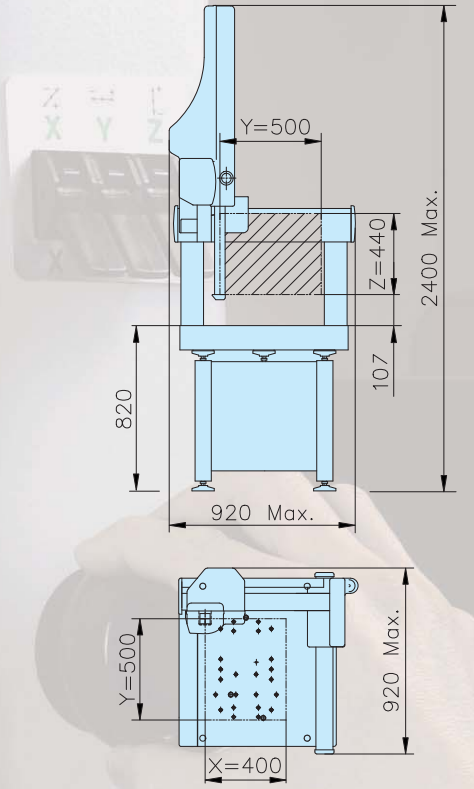
EROWA PreSet 3D CNC –
a measuring and presetting cell with many advantages
- More than 100 animated PreSet programs
- Efficient database for all the measured values
- Safe workpiece identification possible with EWIS™
- Many postprocessors additionally available for the conversion of measured data into the machine language

EROWA®

EROWA PreSet 3D
MAN

When it comes to thousandths of a millimeter, you can't do things by halves. PreSet 3D MAN satisfies the most exacting requirements. Due to its modular principle, the system can be flexibly adapted and extended. We assume the system responsibility for the project from installation and training right through to maintenance. Comfortably and competently.

Precision
Base plate, traverse and quill have been crafted from natural hard stone. Portal structure of specially cast aluminum for optimal form stability and temperature stability.



EROWA PreSet 3D MAN

- Measuring machine (working plate with borehole grid for all EROWA tooling systems)
- Pneumatic control system
- PC and color printer
- Presetting software
- Renishaw measuring probe TPC 3
- Calibration ball

Technical data

Range X-axis	400 mm
Range Y-axis	500 mm
Range Z-axis	440 mm
Maximum distance between table and probe holder (without probe)	547 mm
Maximum distance between the columns at table height	590 mm
Usable surface of the granite plate (with EROWA borehole pattern)	590 x 840 mm
Resolution, scales	0.0005 mm
Measuring uncertainty (according to ISO 10360/2)	M = 0.0025 + 0.003 x L
Machine dimensions	
Height	2400 mm
Surface	920 x 920 mm
Maximum workpiece load	130 kg
Maximum probe weight	1.2 kg
Machine weight (without load)	210 kg

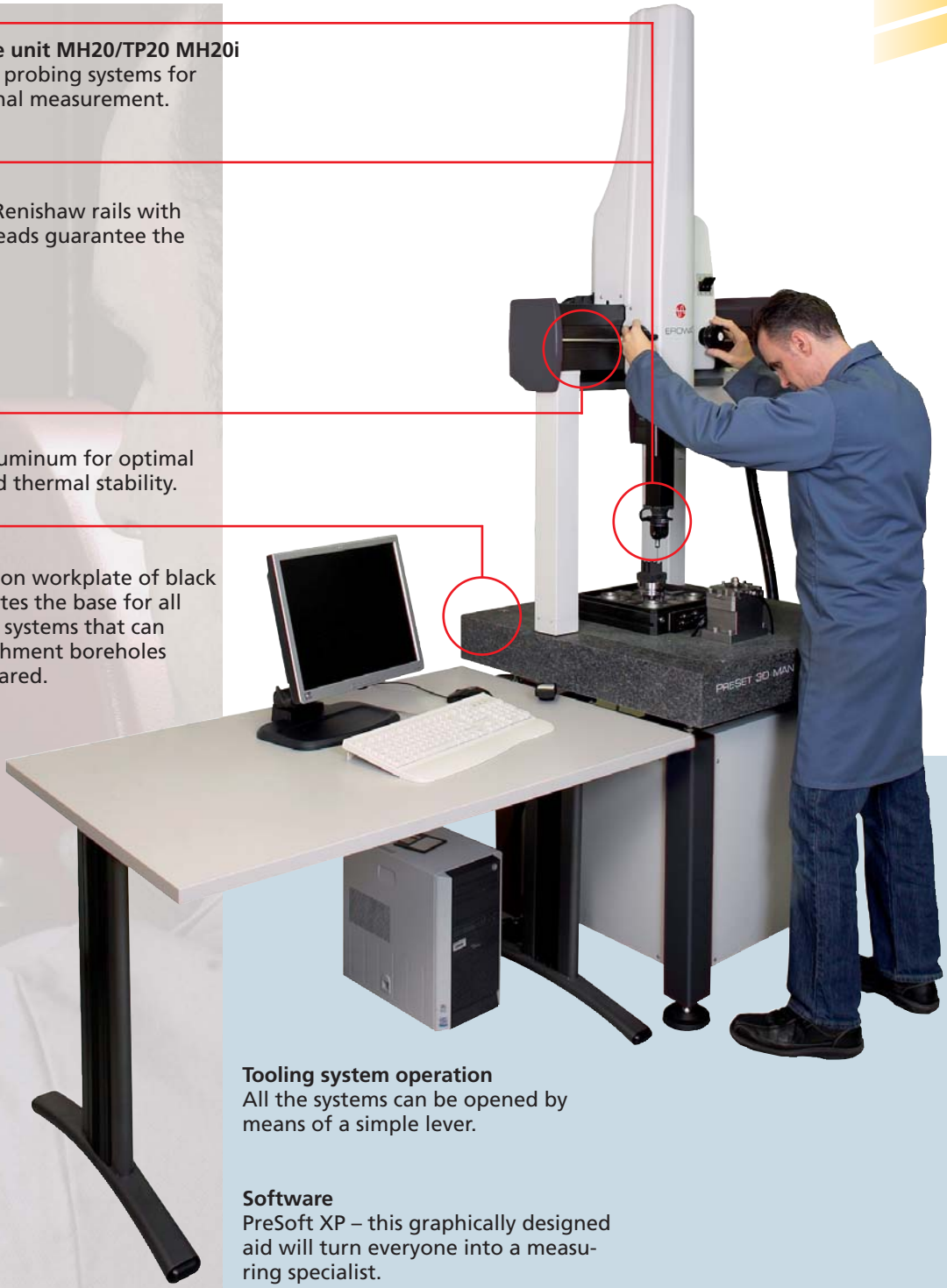
For additional details, please contact your EROWA dealer.

Renishaw probe unit MH20/TP20 MH20i
One of the best probing systems for three-dimensional measurement.

Rails
High-precision Renishaw rails with optical probe heads guarantee the best results.

Machine design
Specially cast aluminum for optimal dimensional and thermal stability.

Natural granite
The high-precision workplate of black granite constitutes the base for all EROWA tooling systems that can be set up. Attachment boreholes have been prepared.



Tooling system operation
All the systems can be opened by means of a simple lever.

Software
PreSoft XP – this graphically designed aid will turn everyone into a measuring specialist.

EROWA PreSet 3D MAN –
a measuring and presetting cell with many advantages
- More than 100 animated PreSet programs
- Efficient database for all the measured values
- Safe workpiece identification possible with EWIS™
- Many postprocessors additionally available for the conversion of measured data into the machine language

EROWA®

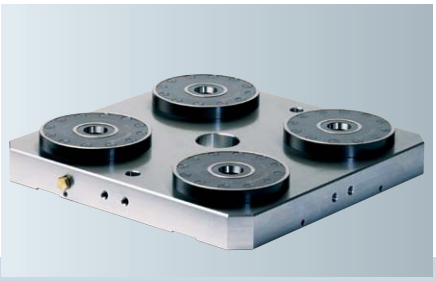
Basic equipment

EROWA PreSet 3D CNC and 3D MAN

Measuring stations are equipped with EROWA tooling systems according to requirements. Some of these tooling systems can be mounted on one and the same table in combination.

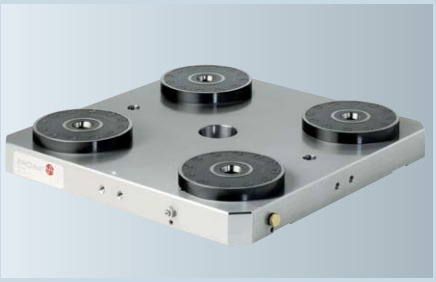
ER-035526 MTS Chuck 3D

Version Pneumatic MTS Single Chuck for PreSet 3D.
Mounting With clamping ring directly to prepared borehole pattern.
Application To accommodate MTS Single ITS 148 P pallets.
Combination The MTS Chuck 3D can be fitted in combination with one of the following systems: FrameSet (on 3D CNC only), PalletSet W, UnoSet, ITS Compact CombiChuck, Power Chuck P.



ER-035527 MTS 360 3D

Version MTS Base plate with four clamping units.
Plate dimension 360 x 360 mm.
Mounting With fitting accessories directly to prepared borehole pattern.
Application To accommodate MTS twofold and fourfold pallets with set-up distance of 200 mm.



ER-035528 MTS 410 3D

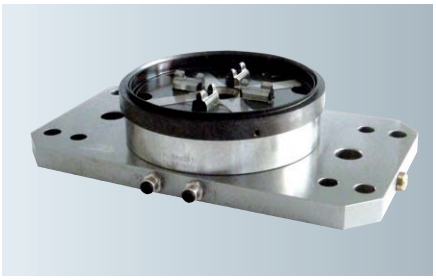
Version MTS Base plate with four clamping units.
Plate dimension 410 x 410 mm.
Mounting With fitting accessories directly to prepared borehole pattern.
Application To accommodate MTS twofold and fourfold pallets with set-up distance of 250mm.

ER-020571 UPC Kit with RSA 100

Version UPC with integrated ITS chuck.
Mounting Directly to prepared borehole pattern.
Application To accommodate all UPC, ITS 148 and ITS 115 pallets, as well as holders 72 and 50.
Combination The UPC can be fitted in combination with one of the following systems: FrameSet (3D CNC only), PalletSet W, UnoSet.

ER-035529 PC 210 3D
ER-035530 PC 210 Combi 3D

Version Pneumatic chucks. PC 210 Combi 3D with integrated PowerChuck.
Mounting With fitting accessories directly to prepared borehole pattern.
Application To accommodate PC 210 pallets. In the combined version, pallets 148 and 115 and holder 72 and 50 can also be clamped.
Combination The PC 210 can be fitted in combination with one of the following systems: PalletSet W, UnoSet.



ER-029434 PowerChuck P 3D

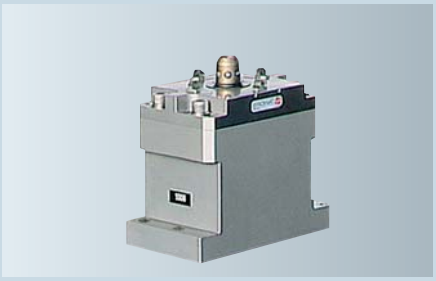
Version Pneumatic chuck on base plate.
Mounting Directly to prepared borehole pattern.
Application To accommodate ITS 148 P, 148 and 115 pallets, as well as holders 72 and 50.
Combination The PowerChuck can be fitted in combination with one of the following systems: FrameSet (on 3D CNC only), PalletSet W, UnoSet, MTS chuck.

ER-025060 ITS Compact CombiChuck 3D

Version Chuck with integrated Compact Chuck.
Mounting Directly to prepared borehole pattern.
Application To accommodate ITS 148 and ITS 115 pallets, holders 72 and 50, and all the Compact 30 holders.
Combination The ITS Compact CombiChuck can be fitted in combination with one of the following systems: FrameSet (on 3D CNC only), PalletSet W, UnoSet, MTS chuck.

ER-046080 FrameSet Base 3D

Version Pneumatic chuck (only for PreSet 3D CNC).
Mounting With fitting accessories directly to prepared borehole pattern.
Application To accommodate FrameSet clamping frame.
Combination The FrameSet can be fitted in combination with one of the following systems: UPC, PowerChuck P, ITS Compact CombiChuck, MTS Single Chuck.



ER-022683 PalletSet W Base 3D

Version Pneumatic flat chuck mounted on column.
Mounting Directly to prepared borehole pattern.
Application To accommodate all PalletSet W holders.
Combination The PalletSet W can be fitted in combination with one of the following systems: UPC, PowerChuck P, ITS Compact CombiChuck, MTS Single Chuck, PC 210.

ER-012580 UnoSet Kit Support 3D

Version Pneumatic chuck mounted on column.
Mounting Directly to prepared borehole pattern.
Application To accommodate all UnoSet holders, as well as holders 72 and 50, in a horizontal position.
Combination The UnoSet can be fitted in combination with one of the following systems: UPC, PowerChuck P, ITS Compact CombiChuck, MTS Single Chuck, PC 210.

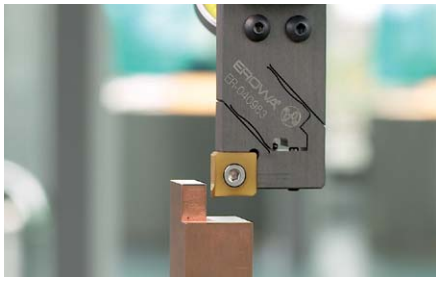
EROWA®

EROWA PreSet 2D

Electrode preset made easy

The electrode presetting station for every contingency. The matured design does justice to everyday life in the workshop. Measurements in the X-, Y-, Z- and C-axes can be carried out quickly and safely. The data output of the measured values are integrated. The presetting station can be equipped with various tooling systems.

2D probe



Simply ingenious: the 2D edge probe (EROWA patent) enables you to make the necessary measurements on radii, edges, corners and oblique surfaces.

Display

The practical user guidance in the EROWA mode shows step by step how offset values are determined.

Order numbers

without C-axis	
ER-057208	PreSet 2D UnoSet
ER-057209	PreSet 2D PalletSet W
ER-057210	PreSet 2D UPC
ER-057211	PreSet 2D ITS Compact Combi
ER-057212	PreSet 2D ProductionChuck 210
with C-axis	
ER-057213	PreSet 2D+C ITS Chuck 100
ER-057214	PreSet 2D+C ITS Compact Combi

Complete equipment

The measuring station is supplied with the following elements:

- Measuring slab with trolley
- Integrated chuck
- PT880 digital display with presetting mac
- Two-axis measuring facility
- EROWA 2D edge probe
- Instruction manual
- Detergent for hard-stone slab

EROWA PreSet 2D

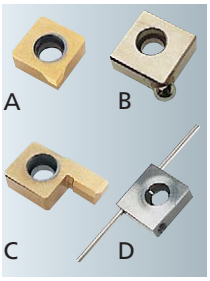
Options and accessories

EROWA 2D edge probe **ER-040983**

Precise probing of sharp edges, angles, diameters and lengths.

Measuring pin **ER-008617**

Alignment of radial and axial and angular positions of ITS chucks.

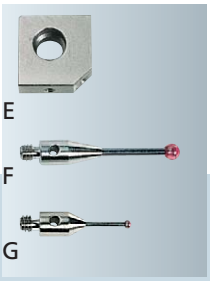


Probe inserts		
	A	**ER-008623**
	B	**ER-008562**
	C	**ER-008831**
	D	**ER-008628**

for 2D edge probe.

Microscope **ER-008756**

To view profiles, indentations and boreholes, with a magnifying factor of 30.

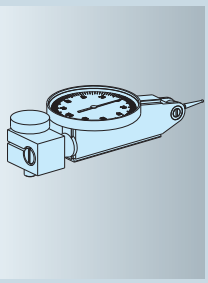


3xM2 probe insert		
	E	**ER-009899**
ø 2 mm	F	**ER-003350**
ø 1 mm	G	**ER-003358**

for 2D edge probe.

Cold light	
220 V	**ER-032916**
110 V	**ER-032917**

For the microscope: for optimal light on the area to be magnified.



Lever gauge **ER-059439**

Analogue gauge with a diameter of 38mm and a resolution of 0.002 mm.

QuickLink

To record data and convert them into machine-specific formats.

QuickLink is a simple program for the data transfer from the EROWA PreSet 2D presetting station to machine control units. Presetting data are converted into a machine-specific format at the push of a button.

Technical data

	EROWA PreSet 2D
Movement X	240 mm
Movement Y	320 mm
Movement Z	335 mm
Evaluation unit	Heidenhain Positip 880 with EROWA presetting macros
Interface	Serial RS232 for data transfer to QuickLink / parallel output for printer
Probe system	EROWA 2D edge probe
Space requirements	500 x 800 x 1000 mm
Compressed-air supply	min. 6bar, dry

EROWA

EROWA PreSet Basic

PreSet Basic is the ideal setting and presetting station for a quick check of the Z-plane or to align workpieces in the Y-axis. Its stable trolley enables you to place it wherever it makes most sense in terms of work.

ER-057206	**PreSet Basic UPC**
Version:	Presetting station with trolley, measuring top, UPC chuck and probe
Load:	100 kg
Application:	Setting and aligning of workpieces on UPC pallets

ER-057205	**PreSet Basic PalletSet W**
Version:	Presetting station with trolley, measuring top, PSW chuck and probe
Load:	25 kg
Application:	Setting and aligning of workpieces on PalletSet W holders

ER-057204	**PreSet Basic UnoSet**
Version:	Presetting station with trolley, measuring top, UnoSet chuck and probe
Load:	10 kg
Application:	Setting and aligning of workpieces on UnoSet holders

Technical data

PreSet Basic	**UPC**	**PalletSet W**	**UnoSet**
Operational weight (kg)	**230**	**220**	**230**
Max. load (kg)	**100**	**25**	**10**
Gauge gradation (mm)	**0.002**	**0.002**	**0.002**
Probe system	**analog dial gauge on flexible stand**		
Space requirements (mm)	**800 x 500 x 1000**		

PreSet Basic

EROWA®

Measuring tools and options
for EROWA set-up and presetting stations

A variety of sensible components make it easy for you to have everything under control in a practical manner. These products are invariably supplied with a quality certification.

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

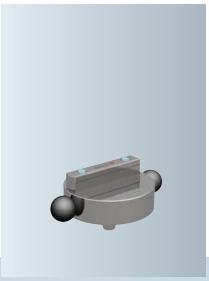
To align the angular position and to establish the center of MTS chucks.

Pallet	396 x 198 mm
Alignment length	200 / 250 mm

Alignment gauge PalletSet W ER-032035

To align the angular position and to establish the center of flat chucks.

Pallet	PalletSet W



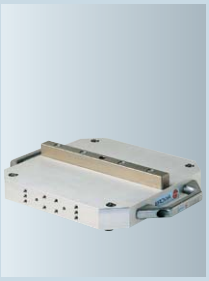
Alignment pallet MTS ø 148 ER-037877

To align the angular position and to establish the center of MTS single chucks.

Pallet	ø 148 mm
Alignment length	130 mm

Measuring pin ER-008617

Alignment of radial and axial and angular positions of ITS chucks.



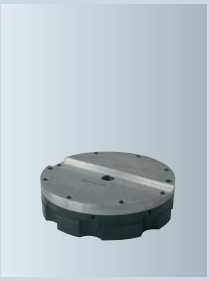
Alignment pallet UPC ER-017777

To align the angular position and to establish the center of UPC chucks.

Pallet	320 x 320 mm
Alignment length	320 mm

Checking pin 50 ER-010723

Alignment of radial and axial positions of ITS chucks.



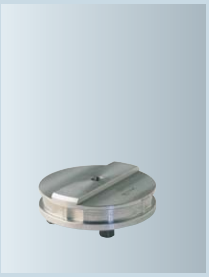
Alignment pallet PC 210 ER-032907

To align the angular position and to establish the center of PC-210 chucks.

Pallet	Clamping ring PC 210
Alignment length	210 mm

Checking pin for Compact ER-017541

To align the tooling system on the PreSet station.



Alignment pallet ITS ER-032819

To align the angular position and to establish the center of ITS chucks.

Pallet	ø 115 mm
Alignment length	110 mm

Reference pin UnoSet ER-012727

Determination of reference measurements on horizontal chucks.

Borehole	ø 8 mm

Zero master **ER-007796**
To check the «Z = 0 height».

EWIS™ identification system **ER-035990**
Hardware module.
Read/write head and evaluation unit.

Cleaning agent
DIACLEAN **ER-001516**
For granite tables.
Content: 0.1 l.

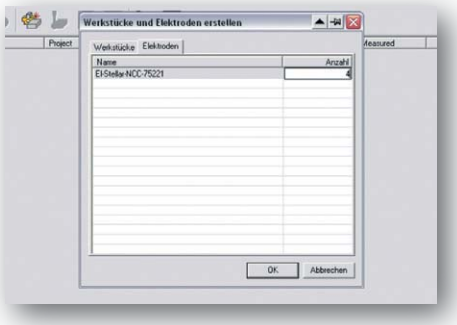
EWIS chip with holder SW14 **ER-035154**
For pallets and electrode holders.
EWIS™ Chip: read only.
Compatible with the EWIS™ Rapid system.

EROWA®

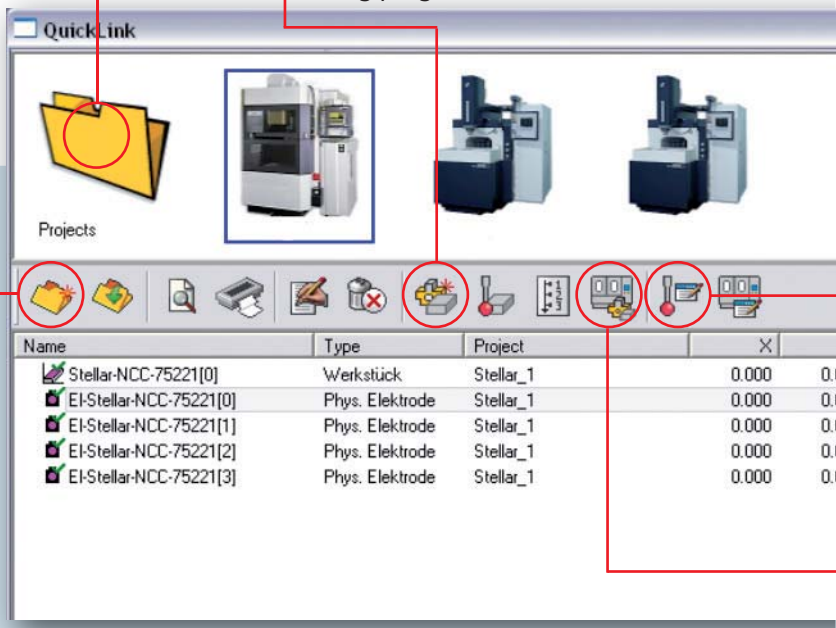
EROWA
QuickLink^{XT}

QuickLink^{XT} is a simple program for the data transfer from the EROWA PreSet 2D presetting station to a machine control unit. Set up a PC, inset the CD, install the program, plug in the connecting cable between PC and display, and the comfortable data transfer to the machine or the programming station is ready.

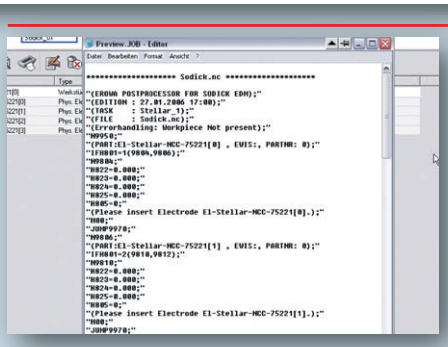
Stored projects
The projects are stored to document the working steps. This information can be called up and printed out at any time.



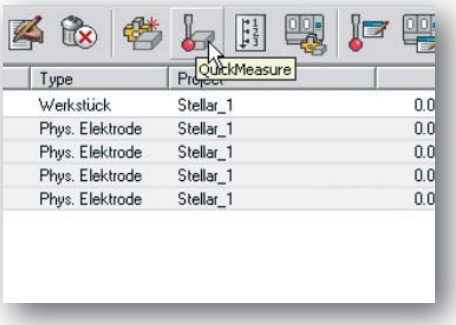
Number of electrodes
At the beginning, the number of electrodes to be measured is defined. This will guarantee an overview of the working progress.



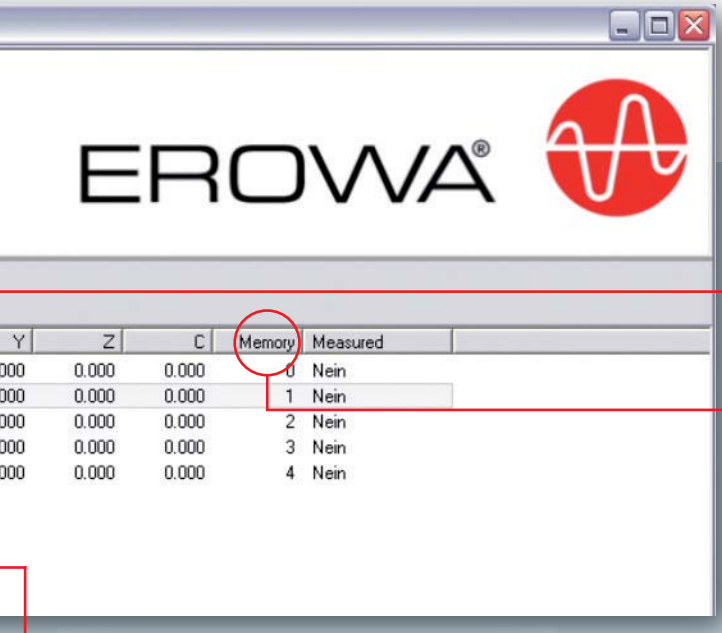
New project
Every new job is given a designation. In this way, it can easily be found again. Even at this early stage, the job has been allocated to a machine.

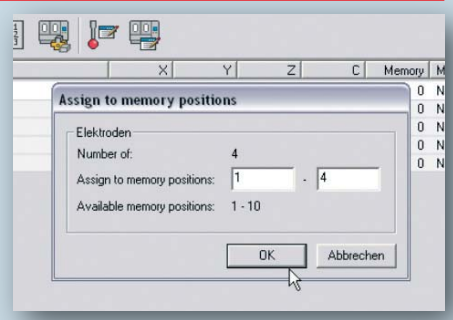


Control is good
Before the export, you can check whether the result comes up to expectations.

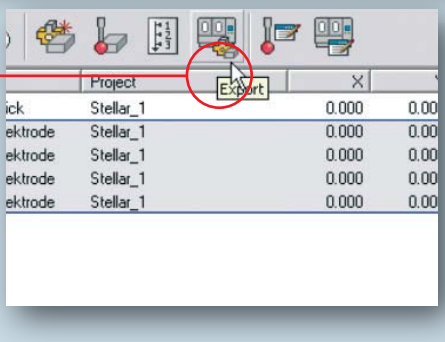


Receive measured data
QuickLink[XT] is ready to take over the data from the presetting station. The transmission command is triggered in the control unit of the presetting station.





Allocate memory space
The memory positions are defined at once in order to avoid any confusion during the transfer to the machine control unit.



Data export
All the selected measured data are converted into the specific machine format at the push of a button. They can be stored on a diskette or in a network directory.

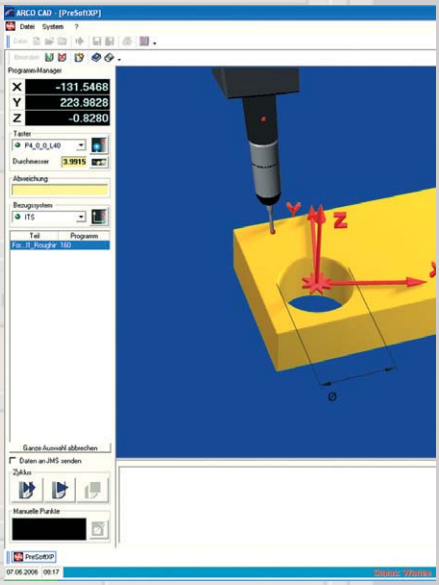
Presetting data of electrodes are transferred to the machine with ease and speed. The X-, Y-, Z- and C-values are determined on the PreSet 2D presetting station and transmitted to QuickLink[XT] at the push of a button. All the data of one job are converted into the specific machine format.

EROWA

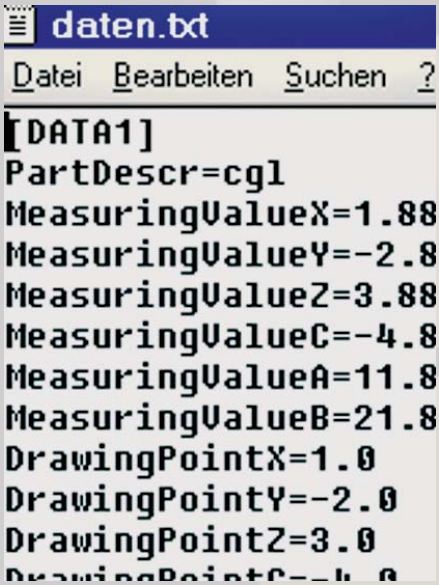
EROWA JMS® Pro Organization

Presetting and measuring made simple.

JMS® Pro Organization consists of program modules that are connected with data import, setting up and presetting.
Presetting data are the most important feature of job preparation. They must be accessible from everywhere at all times. For this reason, the EROWA JMS® Pro software stores all the data in a machine-neutral format. Only the relevant JMS® Pro Cell Integration products will convert the data into the desired machine format. The decision as to the center on which the job will be processed need not be made at the point in time when the part is preset. Any available machine can be chosen just before the job is done.



JMS® Pro PreSet 3D
the presetting software with user guidance and automatic data recording in JMS® Pro.



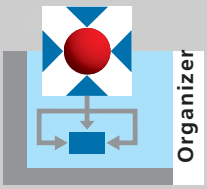
JMS® Pro PreSet Import
links up the most popular measuring stations with JMS® Pro. Data import is largely automatic.

The **EWIS™ Rapid identification system** provides an overview of holders and pallets. With the modern transponder chips, every pallet can be identified at any time. The handling facilities examine the magazine loads automatically. Handheld reading heads are used on the set-up and measuring stations. (The EWIS™ Rapid equipment is available as an option).

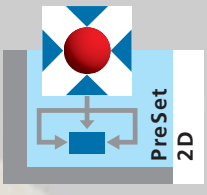
Your advantages

- Entry into the EROWA **J**ob **M**anagement **S**ystem.
- A fully developed measuring software is included.
- More than 60 presetting programs are available.
- Quick change from presetting to measuring software with the help of a button.

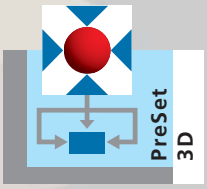
The EROWA JMS® Pro PreSet software package offers you all the necessary tools for productive, routine-informed presetting.



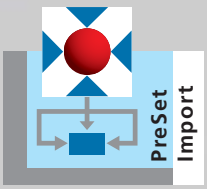
JMS® Pro Organizer
Data organization module for data management and to set up and identify workpieces.



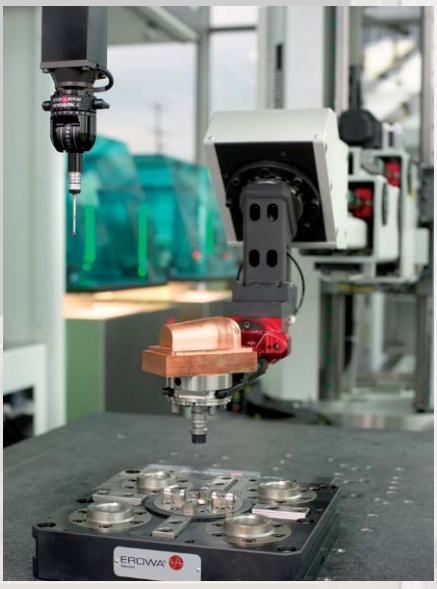
JMS® Pro PreSet 2D
Data organization module for the integration of the time-tested electrode presetting station.



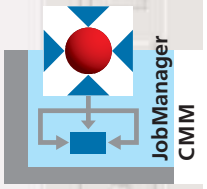
JMS® Pro PreSet 3D
Data organization module for the integration of the EROWA 3D measuring station.



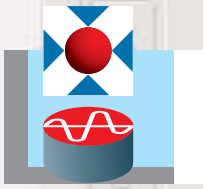
JMS® Pro PreSet Import
Data organization module for the import of data from other measuring stations.



Automatic quality control:
The measuring station is equipped with a Robot.
The JMS® Pro JobManager will link up the right parts with the suitable measuring programs.



JMS® Pro JobManager CMM
Control module for automatic quality measurements on PreSet 3D CNC.



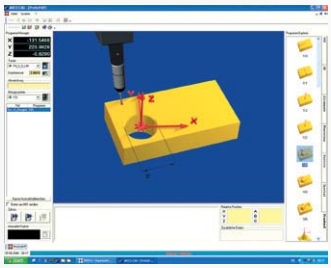
EWIS™ Rapid Identification System
The assignment of data to workpieces provides a good overiew. With the modern transponder chips, every pallet can be identified at any time. On set-up and measuring stations, identification is carried out with manual scanners, while EROWA handling facilities identify their magazine content automatically.

EROWA®

EROWA PreSoft XP

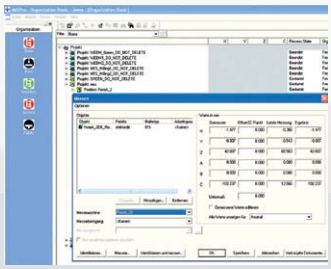
Presetting made easy

Presetting provides more productive time on machine tools. However, presetting must be as efficient as possible in itself. PreSoft XP takes this demand into account.

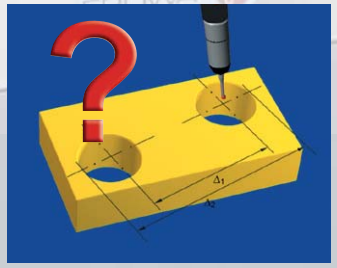


1. Graphic user guidance enables every operator to preset parts correctly within a short period of time. The processes can be learned intuitively. Knowledge of 3D measurements are not required.

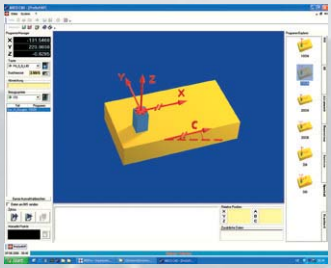
2. The reference positions are controlled, which guarantees that the offset values always receive the correct reference point.



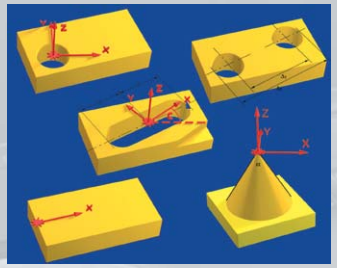
3. The automatic assignment of offset values to the ID numbers of electrodes and workpieces creates a high degree of process safety.



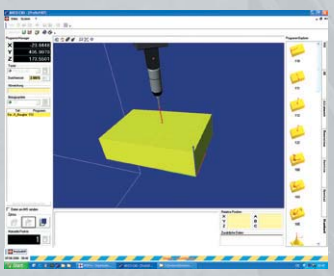
4. Quick as-should-be/as-is comparisons of diameters or distances can be conducted thanks to simple measuring macros.



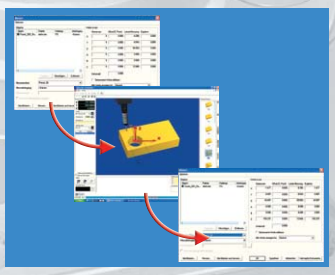
5. Generate your own macros for quick and safe measurements. Process safety will increase since the optimized macros cover exactly your requirements.



6. Already integrated: more than 100 frequently used measuring processes as macros. Select, move, done!



7. The animated arrow symbol shows the right measurement sequence: everyone can determine presetting data correctly without any prior training.

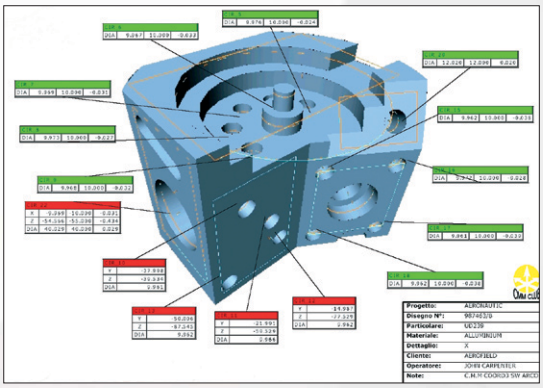


8. PreSoft XP is seamlessly integrated in JMS® Pro. The presetting function is activated by a mouse-click. The offset data that have been recorded are automatically transmitted from the measuring station into the JMS® Pro system.

EROWA PreSoft XP

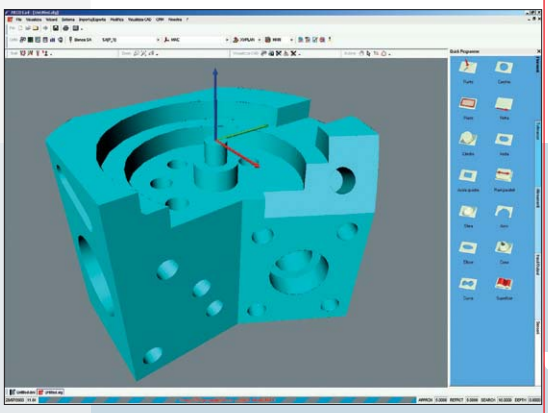
Convincing advantages

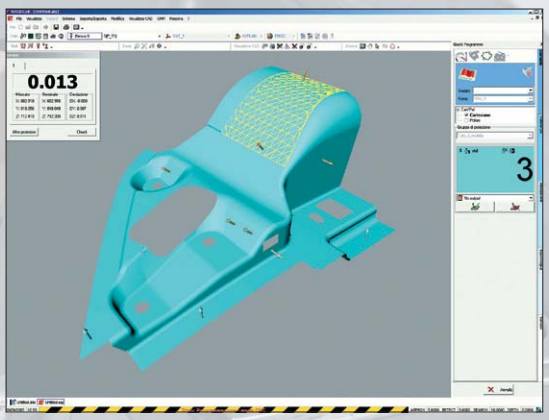
PreSoft XP is more than a mere presetting software. Genuine quality measurements with proper protocols can be carried out after a certain amount of training.



The integrated Arco CAD module enables you to generate proper measurement protocols in accordance with the ISO standard. Arco is a product of Coord3. It is recommended that operators undergo specific training for the use of the measuring software.

On the basis of Arco, user guidance is generated with animated symbols. Every operator can move through this program intuitively and safely thanks to its graphic representation.



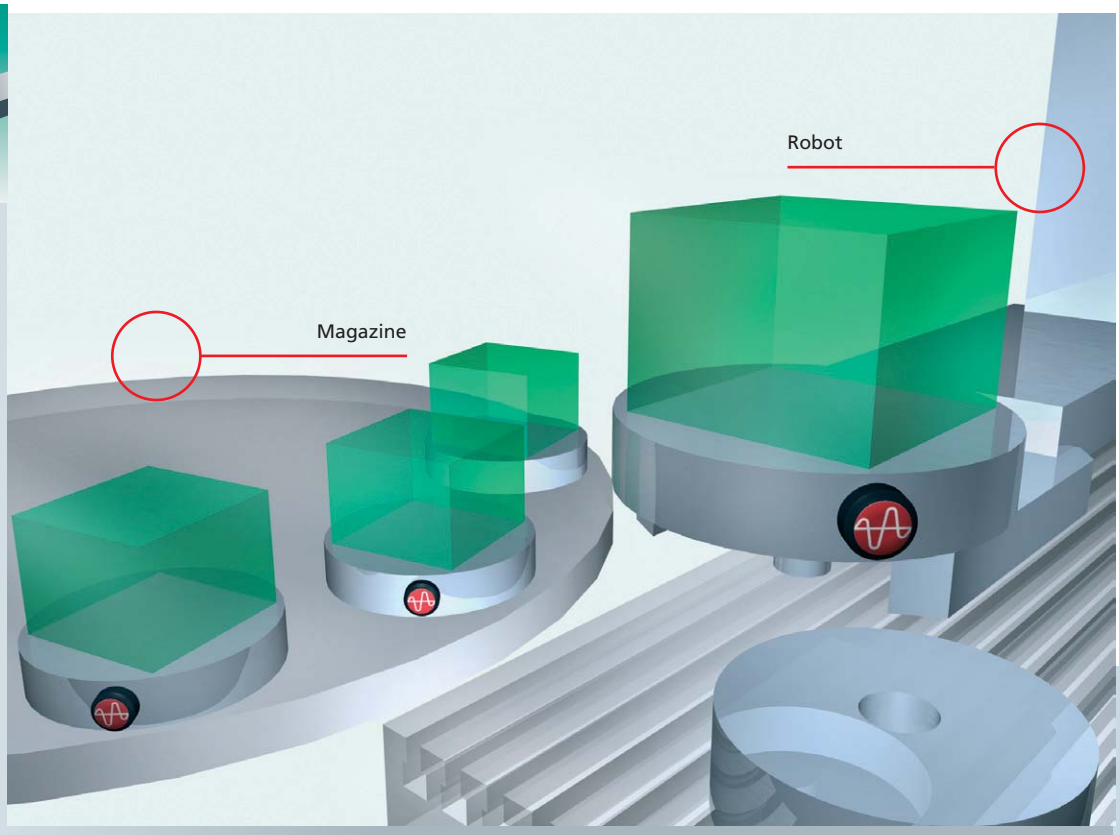


Arco CAD allows for CAD data to be integrated. The areas to be measured are selected and calculated on the basis of the imported data. This function is particularly suitable for the measurement of complex 3D shapes.

EROWA®

EROWA loading systems

Integration
3 Automation
Organization
Standardization



Automation of machine tools. This relieves personnel of monotonous work, while at the same time creating a multiple capacity for the output of part and for preparation. It also provides more space for your personnel's creativity.

For chip-removing processes

For EDM sinking

For WEDM

up to 250 kg

EROWA Robot Easy

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up to 30 kg

EROWA Robot Compact

Page 280 - 281

up to 80 kg

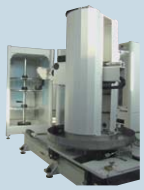
EROWA Robot Multi

Page 282 - 283

up to 200 kg

EROWA Robot System ERS / ERS Heavy

Page 284 - 285



up to 200 kg

EROWA Robot System ERS Linear

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up to 500 kg

EROWA Robot Heavy

Page 288 - 289

up to 250 kg

EROWA LiftGear

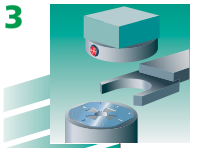
Page 290 - 291

up to 250 kg

EROWA Lift

Page 292 - 293

EROWA®



The automatic EROWA Handling Devices

Type	Robot Easy							Robot Compact			Robot Multi		EROWA Robot System				EROWA Robot System Linerar				Robot Heavy			Type
	ITS 50 / 72	ITS115 / 148	PSW	PC210	UPC	MTS 400	MTS 500	ITS 50 / 72 PM56	ITS 115 / 148 PM85	PSW	Rack	Rotary	Transfer unit	Rotary	Rack	Rack Heavy	Transfer unit	Rotary	Rack	Rack Heavy	Transfer unit	Rack 2	Rack 3	
Tooling system/magaz. pos. per level																								Tooling system/magaz. pos. per level
Compact	-	-	-	-	-	-	-	1-1	-	-	-	30	-	30	-	-	-	30	-	-	-	-	-	Compact
ITS 50	60	-	-	-	-	-	-	11	-	-	-	30	-	30	-	-	-	30	-	-	-	-	-	ITS 50
Holder 72	60	-	-	-	-	-	-	11	-	-	-	30	-	30	-	-	-	30	-	-	-	-	-	Holder 72
PM 56	-	-	-	-	-	-	-	11	-	-	-	30	-	30	-	-	-	30	-	-	-	-	-	PM 56
PM 85	-	-	-	-	-	-	-	-	11	-	-	30	-	30	-	-	-	30	-	-	-	-	-	PM 85
PM 130	-	-	-	-	-	-	-	-	5	-	-	15	-	15	-	-	-	15	-	-	-	-	-	PM 130
ITS 115	-	24	-	-	-	-	-	-	5	-	-	15	-	15	-	-	-	15	-	-	-	-	-	ITS 115
ITS 148	-	24	-	-	-	-	-	-	5	-	-	15	-	15	-	-	-	15	-	-	-	-	-	ITS 148
MTS 148	-	-	-	-	-	-	-	-	5	-	-	15	-	15	-	-	-	15	-	-	-	-	-	MTS 148
PC 210	-	-	-	12	-	-	-	-	-	-	5	10	-	10	2	-	-	10	2	-	-	-	-	PC 210
UPC 320	-	-	-	-	10	-	-	-	-	-	3	3/5	-	3/5	1/2	2/3	-	3/5	1/2	2/3	-	-	-	UPC 320
MTS 400	-	-	-	-	-	6	-	-	-	-	3	3	-	3	1	2	-	3	1	2	-	1	1	MTS 400
MTS 500	-	-	-	-	-	-	4	-	-	-	2	-	-	-	1	2	-	-	1	2	-	1	1	MTS 500
UnoSet	-	-	-	-	-	-	-	-	-	9	-	30*	-	30*	-	-	-	30*	-	-	-	-	-	UnoSet
PalletSet W	-	-	15	-	-	-	-	-	-	3	7	15	-	15	3/4	-	-	15	3/4	-	-	-	-	PalletSet W
PalletSet W Frame	-	-	7	-	-	-	-	-	-	2	4	3	-	3	2	-	-	3	2	-	-	-	-	PalletSet W Frame
FrameSet	-	-	-	-	-	-	-	-	-	-	2	-	-	-	1	-	-	-	1	-	-	-	-	FrameSet
MTS 600 x 800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	MTS 600 x 800
Transfer weight kg (incl. pallet)	20	40	30/15	130	130	250	250	30	30	30	80**	80**	130/200**	-	-	-	130/200**	-	-	-	500	-	-	Transfer weight kg (incl. pallet)
Number of possible machine levels	1	1	1	1	1	1	1	2 x 10	2 x 10	2 x 10	9	9	-	8	8	8	-	8	8	8	-	2	3	Number of possible machine levels
Gripper arm swiveling	-	-	-	-	-	-	-	-	-	-	option	option	option	-	-	-	option	-	-	-	-	-	-	Gripper arm swiveling
Automatic gripper change	-	-	-	-	-	-	-	option	option	option	option	option	option	-	-	-	option	-	-	-	-	-	-	Automatic gripper change
Double gripper	-	-	-	-	-	-	-	-	-	-	option	option	option	-	-	-	option	-	-	-	-	-	-	Double gripper
Loading station	-	-	-	-	-	-	-	-	-	-	option	option	option	-	-	-	option	-	-	-	option	-	-	Loading station
EWIS™ Rapid	option	option	option	option	option	option	option	EWIS Scan option			option	option	option	-	-	-	option	-	-	-	option	-	-	EWIS™ Rapid
Remote diagnosis	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	Remote diagnosis
Flyer with additional information	040746	040746	040746	040746	040746	040746	040746	057105	057105	057105	039634 054193	039634 054193	036569	036569	036569	039576	056559	056559	056559	056559	053370	053370	053370	Flyer with additional information

Technical modifications reserved.

* Suspended in the magazine
** Depending on gripper and tooling system

EROWA Robot Easy

handling facility for large and heavy workpieces

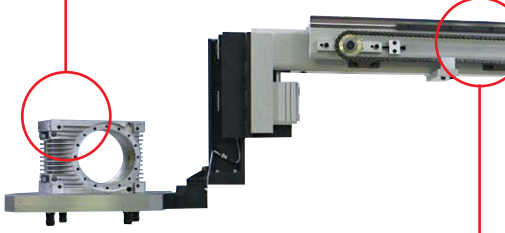
For heavy parts and long loading/unloading movements

Modern user guidance with logical structure

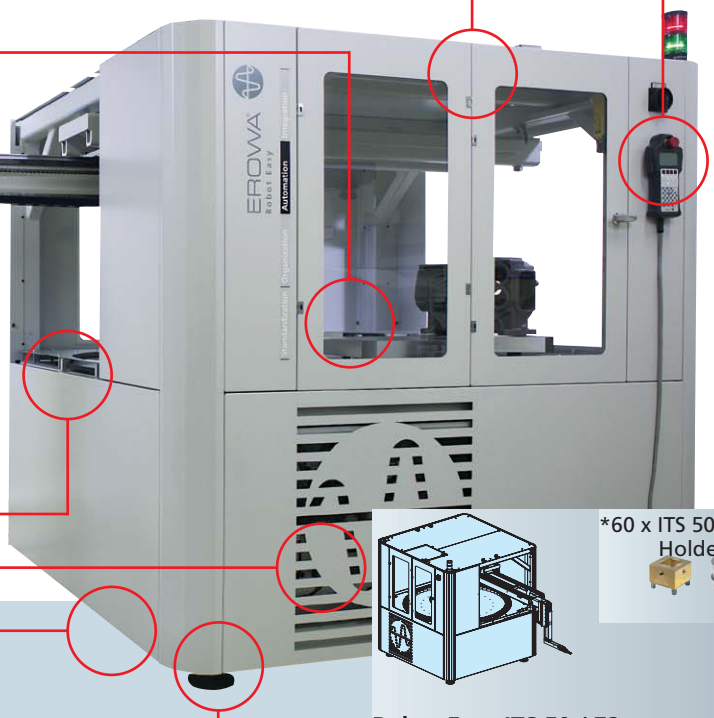
Simple magazine loading, accessible to loading crane

Up to 60 magazine positions per level

Max. 250 kg transfer weight



X-stroke: ~1600 mm



For big/overloaded pallets also with raining basin and controlled drainage

Integrated control system

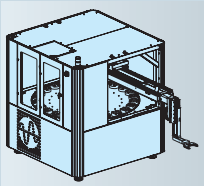
Servicing-friendly casing

Integrated level adjustment

EWIS™ AutoLink Rapid as an option

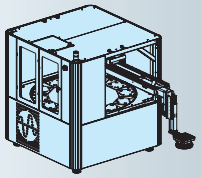
*60 x ITS 50
Holder 72

Robot Easy ITS 50 / 72 (Light axis)

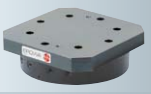


*24 x ITS 115/148

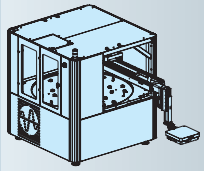
Robot Easy ITS 115 / 148 (Light axis)



*12 x PC 210



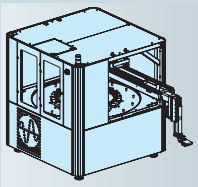
Robot Easy PC 210



*6 x MTS 400

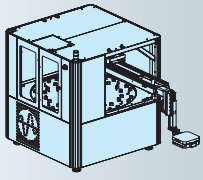
Robot Easy ITS MTS 400

* Number of possible magazine positions per Robot version

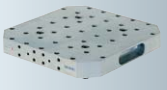


PalletSet W
*7 x Frame
*15 x Holder

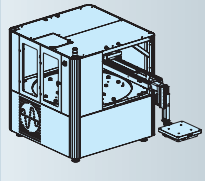
Robot Easy PalletSet W (Light axis)



*10 x UPC



Robot Easy UPC

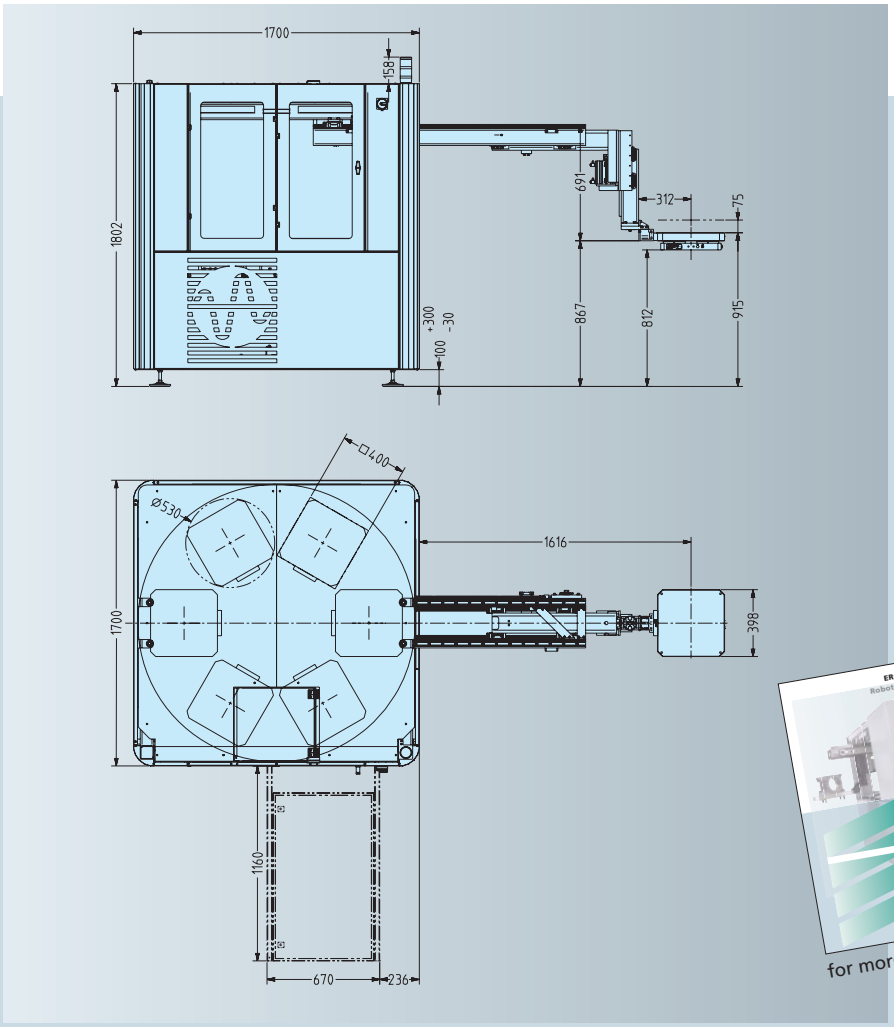


*4 x MTS 500

Robot Easy ITS MTS 500

Technical data

	EROWA Robot Easy MTS
Transfer weight	40 kg/ 250 kg
Axes	
M- and X-axes controlled	X: stroke ~1600 mm
Z-axis pneumatic	Z: stroke 75 mm
Pneumatic system	
Min. pressure / max. consumption	5 bar / 200 l/min.
Electrical system	
Voltage (V+PE)	3x400
Frequency (Hz)	50/60
Power (VA)	710
Nominal current (A)	1.8
Control system	
Interface	Serial RS232 M-function Parallel I/O Bit
Protocol	EROWA Standard EROWA EWIS
Remote diagnosis	Yes
Workpiece identification	EWIS™ Rapid
JobManagement	JMS® Pro / EMC



Logical user guidance

The navigation through the menu structure is as simple as with a mobile phone.

Workpiece identification within seconds

EWIS™ Rapid identifies all the cell positions and transmits them to the cell computer.

for more information!

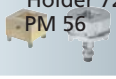
EROWA®

EROWA Robot Compact

Productivity on 2m²

Would you like to increase a machine's autonomy? Are the workpieces numerous but not very big? Do you only have a little room left around the machine? Do you want to serve two machines with the same handling facility? If you can answer one of these question with YES, then we are just what you're looking for. The EROWA Robot Compact is the answer to your requirements.

*160 x ITS 50
Holder 72
PM 56



*60 x ITS 115/148
MTS 148
PM85/130

PalletSet W
*24 x Holder

* Examples of the number of possible magazine positions.

Symmetrical design for positioning to the left or right of the machine

Max. 30kg transfer weight

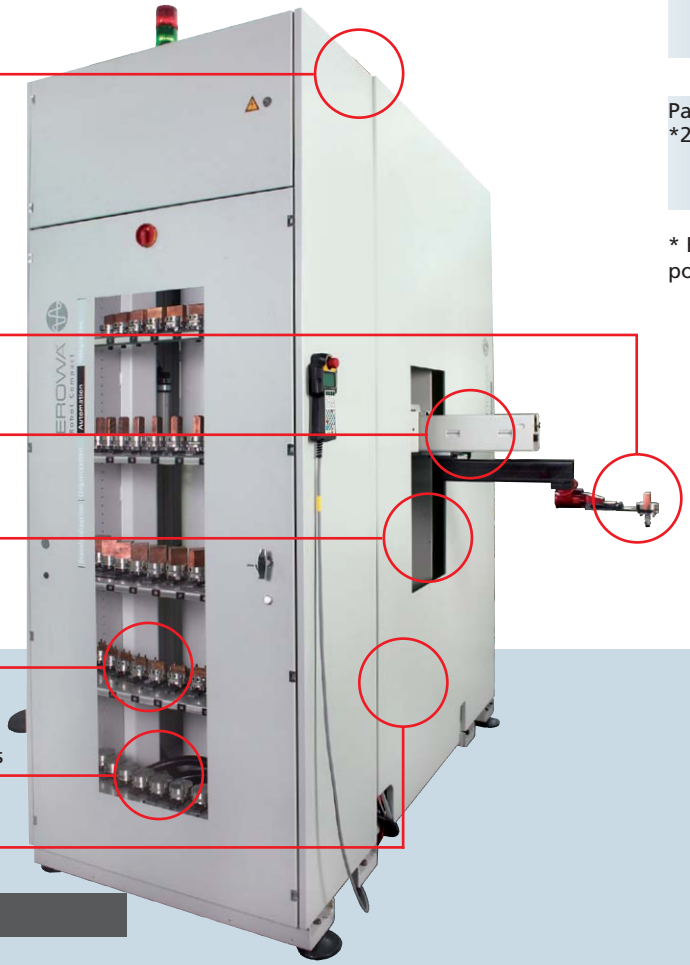
X-stroke 1200mm

350° swivel axis to serve the two rack magazines and up to two machines

2 rack magazines with up to 160 magazine positions

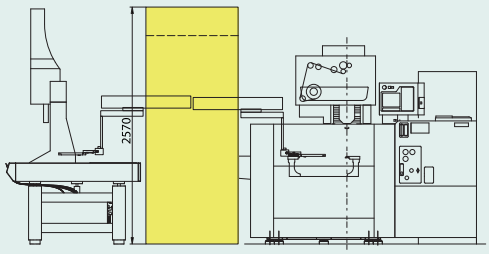
Freely adjustable height of the magazine levels

Compact monobloc design on only 2m²

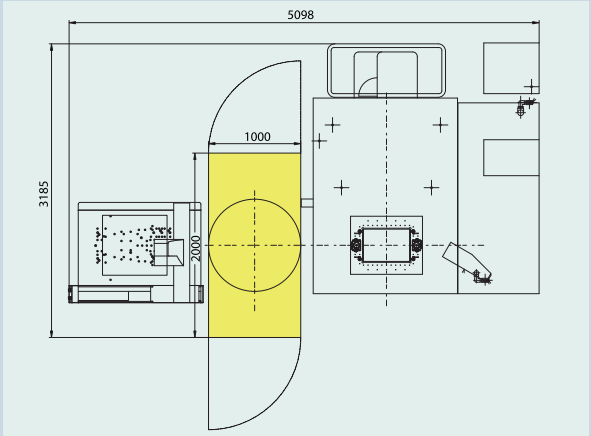


Layout (examples)

With longer machining times, it is worth using one Robot to serve two machines. The Robot's capacity is put to better use, and precious shop-floor space is optimally utilized.

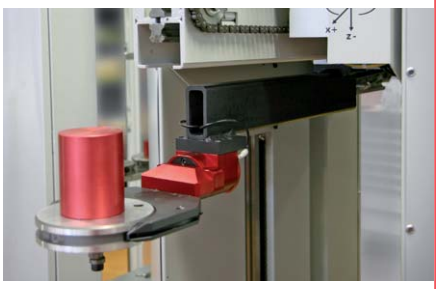


There is sufficient work reserve for a whole weekend of WEDM in the magazine. If necessary, a setting-up and presetting station for the workpieces is placed on the other side.



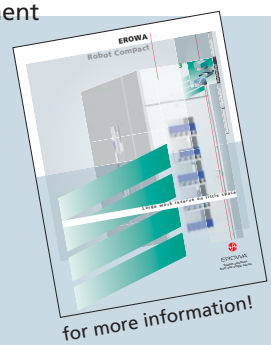
Technical Data

	EROWA Robot Compact
Transfer weight	30 kg
Magazine positions, max.	160
Magazine levels, max.	10 per side = 20 levels
Magazine load, max.	1000 kg
Electrically powered and controlled axes	X-stroke 1200 mm Z-stroke 1680 mm min.
Swivel range, C-axis	350°
Axis control	Electrically controlled axes
Connections	
Pneumatic system	
Min. pressure/max. consumption	5 bar / 150 l/min.
Electric system	
Voltage (V+PE)	3x400
Frequency (Hz)	50/60
Power (kVA)	1.4
Nominal current (A)	3.5
Control system	
Interface	Serial RS232/422 M-function Parallel I/O bits
Protocol	EROWA Standard EROWA EWIS various
Remote diagnosis	yes
Workpiece identification	EWIS™ Scan
JobManagement	JMS® Pro / EMC

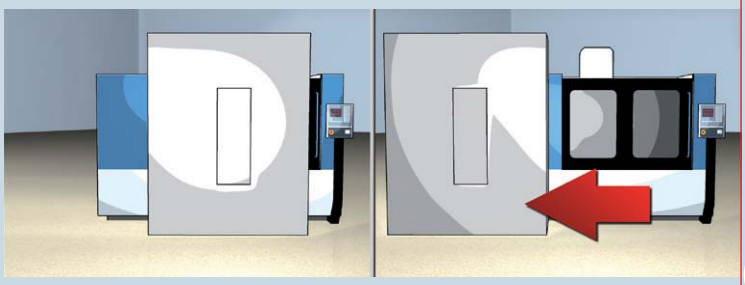


Transfer axis

The ingeniously designed axis can swivel round 350° in a very small space. Correspondingly, it can serve both rack magazines and one or two machines. If required, the gripper change function for mixed operations with different pallets can be integrated.

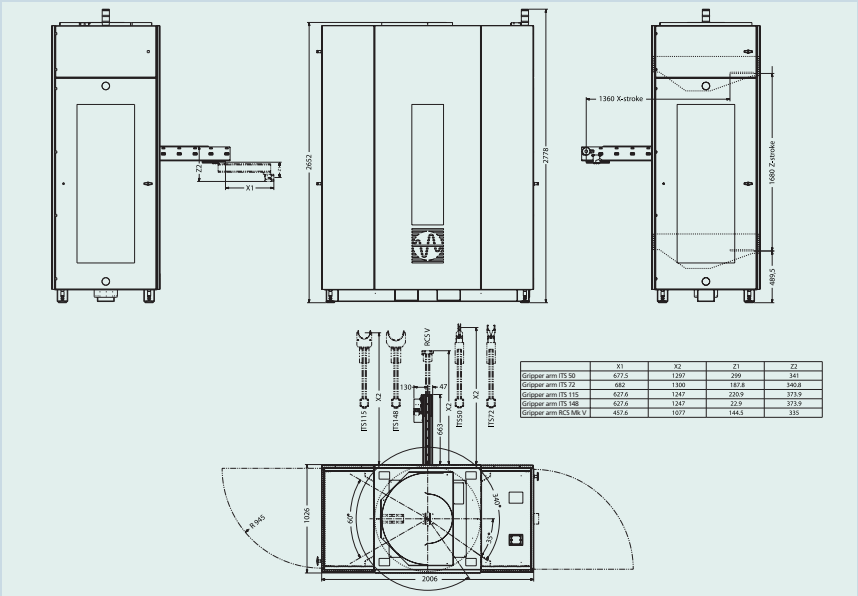


for more information!



DockOn

The Robot can often only be placed on the operator's side of the machine. This blocks access for manual work. With the optional „DockOn" equipment, the facility can simply be moved to the side if the operator wants to do some manual work.



	X1	X2	Z1	Z2
Gripper arm ITS 50	677.5	1297	299	341
Gripper arm ITS 72	682	1300	187.8	340.8
Gripper arm ITS 115	627.6	1247	220.9	373.9
Gripper arm ITS 148	627.6	1247	22.9	373.9
Gripper arm RCS Mk V	457.6	1077	144.3	335

EROWA®

EROWA Robot Multi

for 270 workpieces and electrodes

To load one or two machines.

X-stroke 1200 mm

Magazine can be loaded from 3 sides and is accessible for loading crane

Gripper arm with swivel axis

Fast change times with double gripper

80 kg transfer weight

Integrated control system

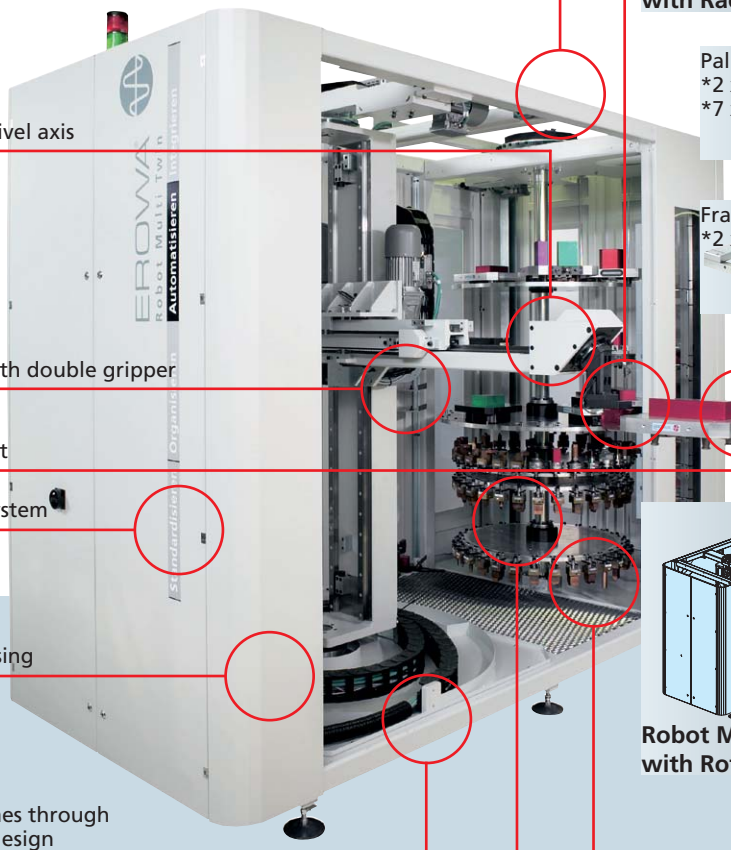
Servicing-friendly casing

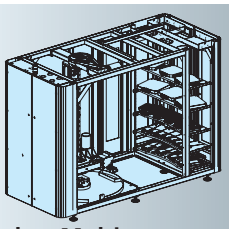
Short starting-up times through compact monobloc design

Up to 270 magazine positions

Reading time < 30 seconds for the whole magazine with workpiece identification EWIS™ Rapid

To load one or two machines with 6 chucks max.





Robot Multi with Rack Magazine

*5 x PC 210

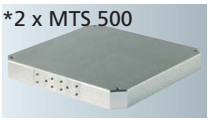
*3 x UPC

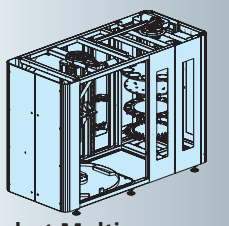
PalletSet W
*2 x Frame
*7 x Holder

*3 x MTS 400

FrameSet
*2 x Frame

*2 x MTS 500

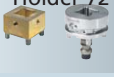




Robot Multi with Rotary Magazine

*30 x Compact

*30 x ITS 50
Holder 72



*30 x PM 85
*30 x PM 56
*15 x PM 130

*15 x ITS 115/148
*15 x MTS 148

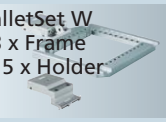
*10 x PC 210

* Number of possible magazine positions per level.

*30 x UnoSet

*5 x UPC

PalletSet W
*3 x Frame
*15 x Holder



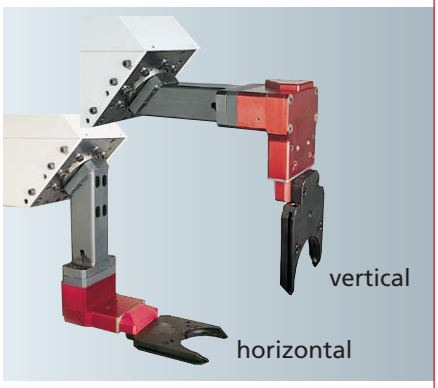
*3 x MTS 400

Loading station for user-friendly loading/ unloading cycles

Technical data

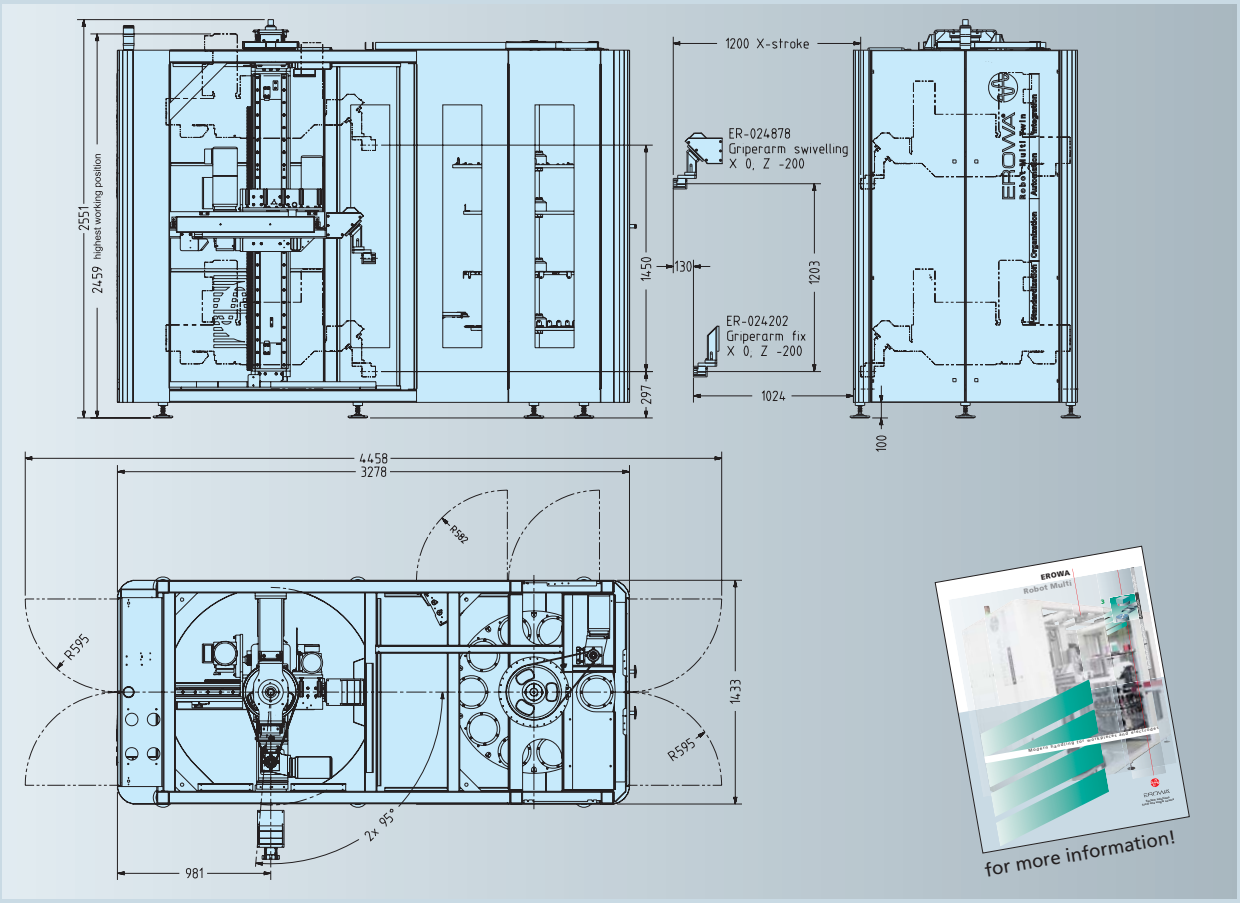
	EROWA Robot Multi	
Transfer weight	80 kg ①	
Magazine levels, max.	Rotary 9	Rack 9
Magazine level load, max.	Rotary 600 kg ①	Rack 400 kg ①
Magazine load max.	Rotary 1500 kg	Rack 1900 kg
electrically driven and controlled axes	X-stroke 1200 mm	Z-stroke 1450 mm
Pneumatic system		
Min. pressure/max. consumption	5 bar / 200 l/min.	
Electrical system		
Voltage (V+PE)	3x400	
Frequency (Hz)	50/60	
Power (kVA)	3.6	
Nominal current (A)	3.5	
Control system		
Interface	Serial RS232 / 422 M-function Parallel I/O Bit	
Protocol	EROWA Standard EROWA EWIS various	
Remote diagnosis	Yes	
Workpiece identification	EWIS™ Rapid	
JobManagement	JMS® Pro	

① Depending on the tooling system



Swiveling Gripper arm

The Robot Multi also serves CNC machines with vertically aligned chucks. The swiveling gripper arm turns the palletized workpiece into the right position.



EROWA Robot System ERS
– one for all

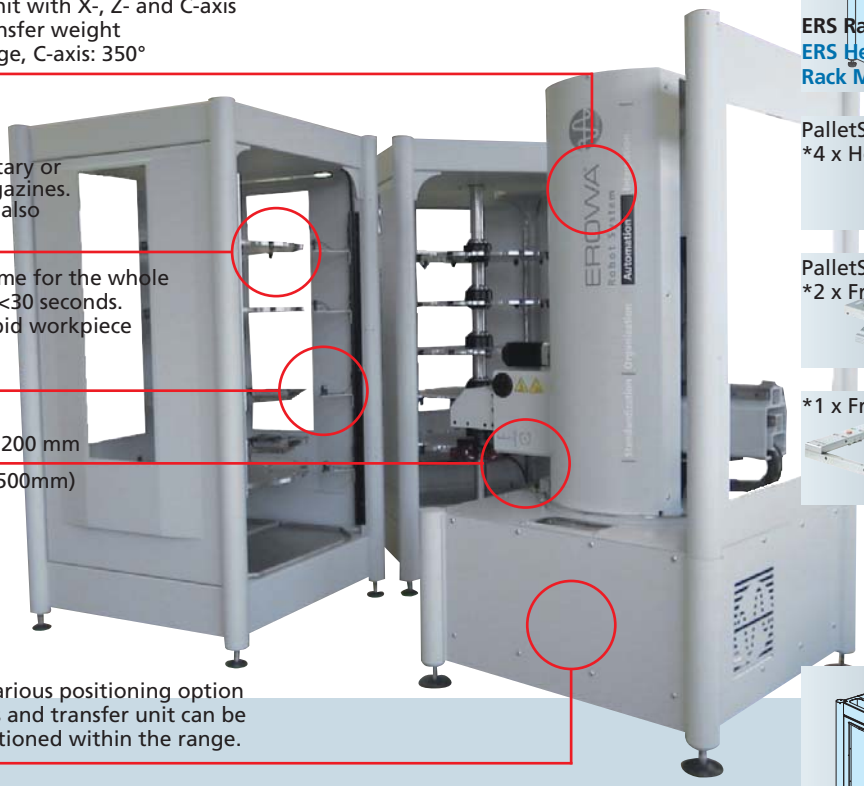
The handling facility for all the tooling systems. With a transfer weight of 130kg and a range of 1200mm, the ERS is suitable for the handling of many workpieces. It can be configured to serve one or more machines.

Transfer unit with X-, Z- and C-axis
130 kg transfer weight
Swivel range, C-axis: 350°

Up to 3 rotary or
5 rack magazines.
Mixed use also
possible

Reading time for the whole
magazine <30 seconds.
EWIS™ Rapid workpiece

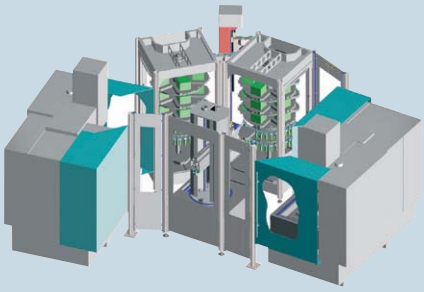
X-stroke: 1200 mm
(Option: 1500mm)



Open to various positioning option
Magazines and transfer unit can be
freely positioned within the range.

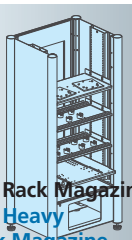
EROWA ERS Heavy to load/unload heavy workpieces up to 200kg.

Ergonomic loading station for pallet loading/unloading cycles.



Example of a **"two-machine"** unit, consisting of:
- Transfer unit
- Gripper dock
- Two rotary magazines UPC / ITS 50
- One EROWA Lift
- Safety barriers
- EROWA JMS® Pro Job Management System

This configuration is particularly suitable for the flexible operation of two independent machining centers.



ERS Rack Magazine
ERS Heavy Rack Magazine

*2 x PC 210

*2 x UPC
*3 x UPC (Rack-Heavy)

PalletSet W
*4 x Holder

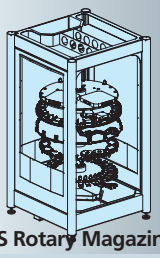
*1 x MTS 400
*2 x MTS 400 (Rack Heavy)

PalletSet W
*2 x Frame

*1 x MTS 500
*2 x MTS 500 (Rack Heavy)

*1 x FrameSet

* Number of possible magazine positions per level



ERS Rotary Magazine

*30 x Compact

*30 x ITS 50
Holder 72

*30 x PM 85

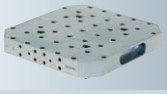
*15 x ITS 115/148
*15 x MTS 148

PalletSet W
*3 x Frame

*10 x PC 210

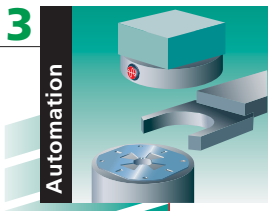
PalletSet W
*15 x Holder

*5 x UPC



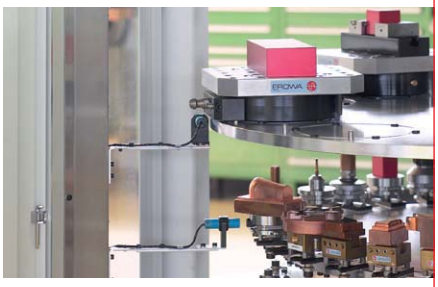
*30 x UnoSet

*3 x MTS 400



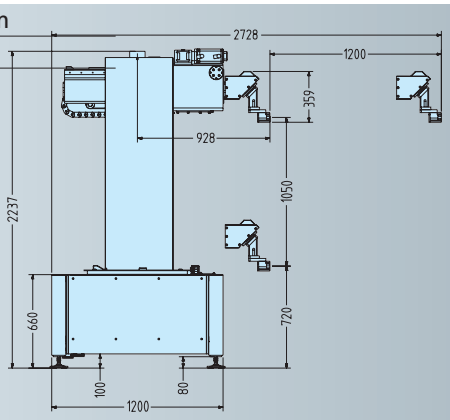
Technical data

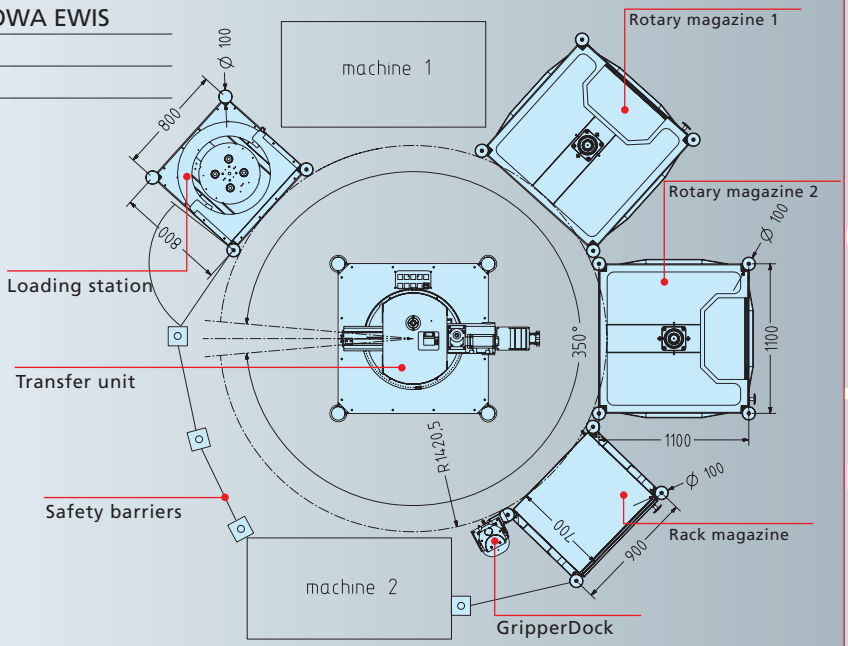
	ERS	ERS Heavy
Transfer weight	130 kg	200 kg
Magazine positions	variable <1000	variable
Magazine levels	up to 8	up to 8
Magazine level load, max.	Rotary 650 kg Rack 260 kg	Rotary 650 kg Rack Heavy 400 kg
Magazine load, max.	Rotary 1200 kg Rack 1500 kg	Rotary 1200 kg Rack Heavy 2000 kg
Double gripper	Yes	–
Gripper change	Yes	Yes
Swifel range		
A-axis	±180°	–
C-axis	350°	350°
Movement X-axis	1200 mm option 1500 mm	1200 mm
Movement Z-axis	1050 mm	1050 mm
Axis control	simultaneous	
Pneumatic system		
Min. pressure/max. consumption	5 bar / 300 l/min	
Electrical system		
Voltage (V+PE)	3 x 400	
Frequency (Hz)	50/60	
Power (kVA)	3	
Nominal current (A)	4.3	
Control system		
EROWA interface	M-function Serial (RS 232/422) I/O-Bit	
Protocol	EROWA Standard/ EROWA EWIS	
EWIS identification	Yes	
EROWA JMS® Pro Integration	Yes	



Workpiece identification within seconds

EWIS™ Rapid identifies all the cell positions and transmits them to the cell computer.





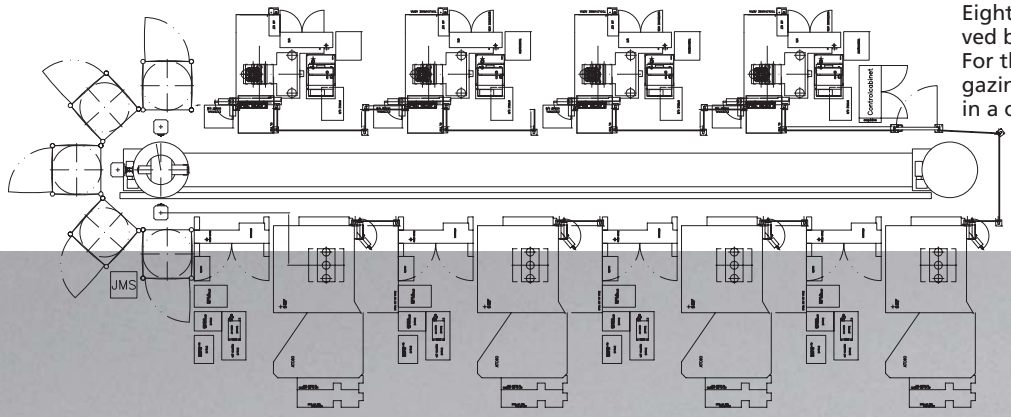
for more information!

EROWA®

EROWA Robot System Linear

Well-thought-out and modular

The ERS Linear can provide up to 8 machines with workpieces. Identical work processes can be conducted in parallel. It is also possible, however, to run one whole process through various machining types. The positioning accuracy on the linear axis guarantees smooth pallet changes. Nevertheless, the transfer unit travels from one machine to another at the remarkable speed of 2 m/sec.



Eight milling centers are served by one Robot.
For this purpose, 5 rotary magazines have been positioned in a compact way.

Even after fast movement, the transfer unit positions itself in front of the machine with an accuracy of half a millimeter. Only in this way are reliable pallet changes possible.

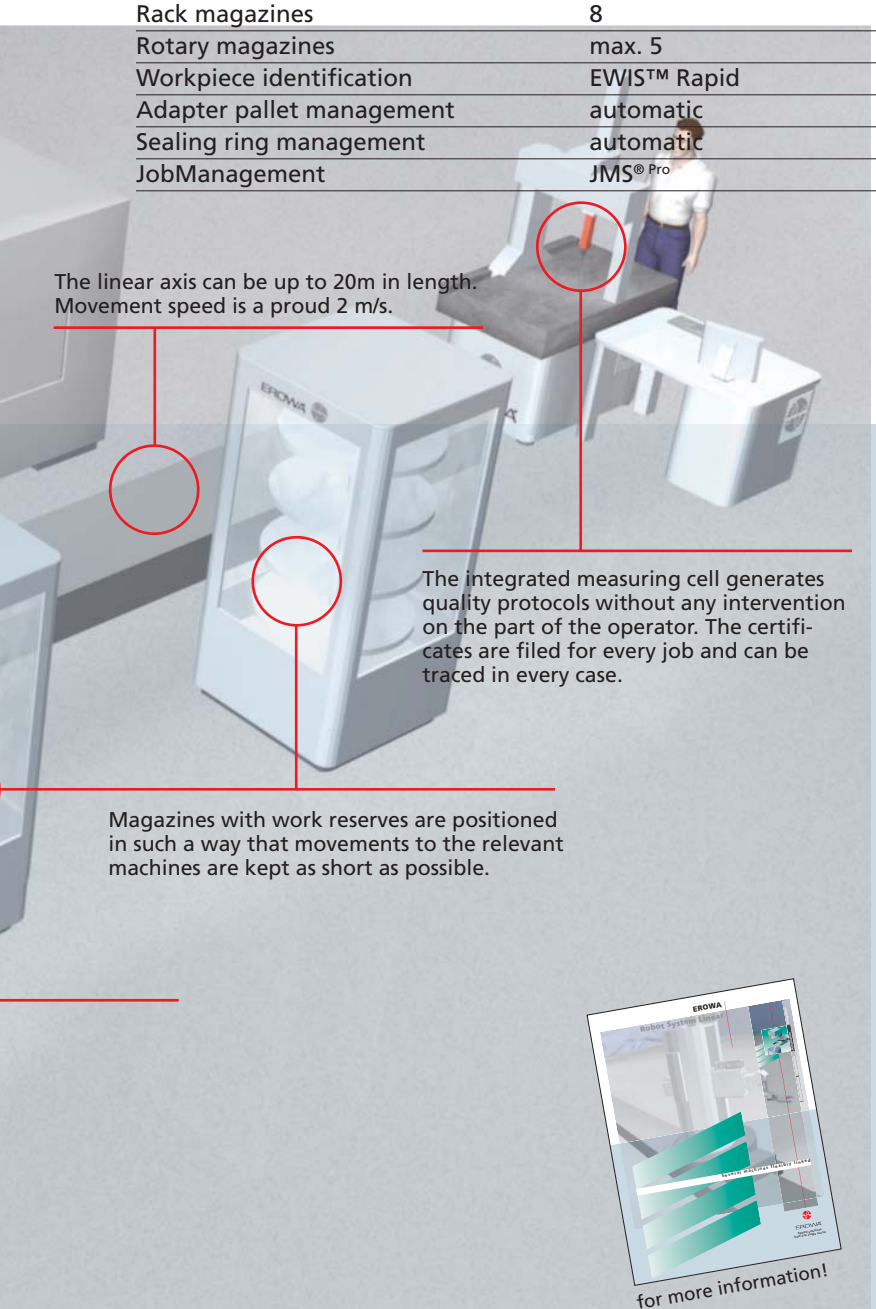
New workpieces are introduced into the linear cell with a loading station. This is also where completed workpieces are removed from the cell.

Pallet weights of up to 200kg are transported from magazine to machine both reliably and accurately.

The whole process is controlled by the JMS® Pro process control software. LineManager.

Technical data

	EROWA Robot System Linear
Transfer weight	130/200 kg
Magazine positions	1200
Linear axis length	20 meters
Movement speed	2 m/s
Number of machines served	8
Number of chuck positions	18
Double gripper	Yes
Gripper change	Yes
Automatic pallet identification	Yes
EROWA standard user guidance	Yes
Rack magazines	8
Rotary magazines	max. 5
Workpiece identification	EWIS™ Rapid
Adapter pallet management	automatic
Sealing ring management	automatic
JobManagement	JMS® Pro



The linear axis can be up to 20m in length. Movement speed is a proud 2 m/s.

The integrated measuring cell generates quality protocols without any intervention on the part of the operator. The certificates are filed for every job and can be traced in every case.

Magazines with work reserves are positioned in such a way that movements to the relevant machines are kept as short as possible.

for more information!

Quick and precise at 2 m/sec.

The axis drives are state of the art. Acceleration and final velocity of the linear axis are adapted to working conditions. At 2 m/sec, the Robot moves to the loading/unloading positions quickly and precisely.

A great deal of work reserve

The control unit manages up to 5 rotary magazines with more than 1000 positions or 8 rack magazines.

Linear axis of up to 20 meters

Everything is possible between 3 and 20 meters. The linear axis is of a modular design. It can also be extended to the full 20 meters at a later date.

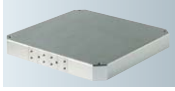
EROWA®

EROWA Robot Heavy

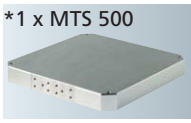
Automatically loading 500kg onto the machine

Getting large parts to the machine is not always all that easy. Setting-up times on the center are carried out at the expense of productivity. Setting-up while the machine is running and automatic loading/unloading cycles are the order of the day. The EROWA Robot Heavy solves this problem, even for one-off parts.

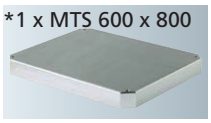
*1 x MTS 400



*1 x MTS 500

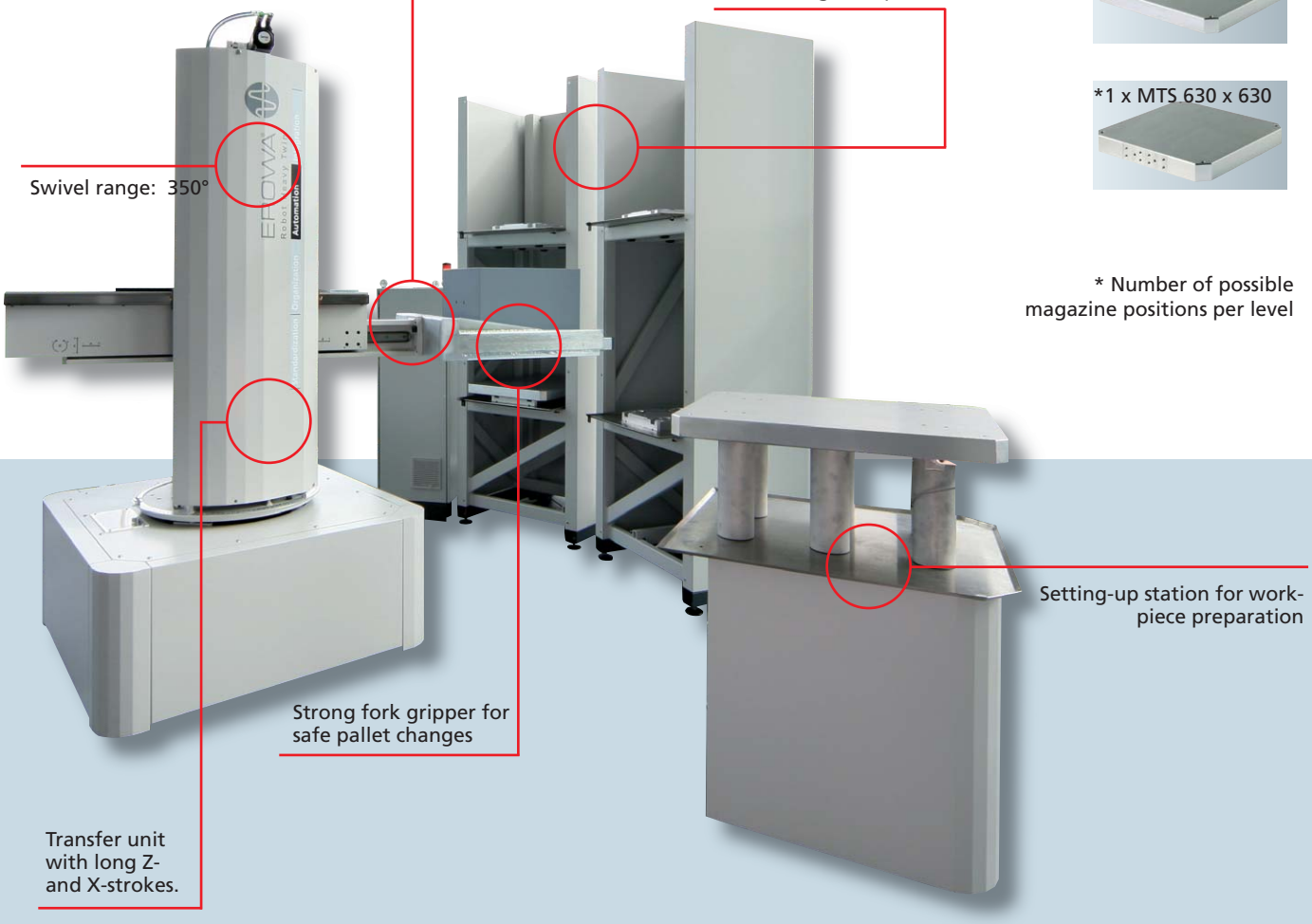


*1 x MTS 600 x 800



*1 x MTS 630 x 630

* Number of possible magazine positions per level



Rotating loading station

This ergonomic loading station for the setting-up and introduction of heavy pallets is integrated in the safety circuit.

Transferachse

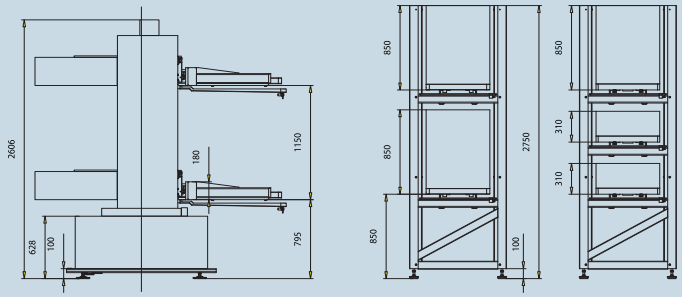
The maximum range of 1500mm also allows for big machines to be served. The transfer weight of 500kg (pallet and workpiece) will satisfy all requirements.

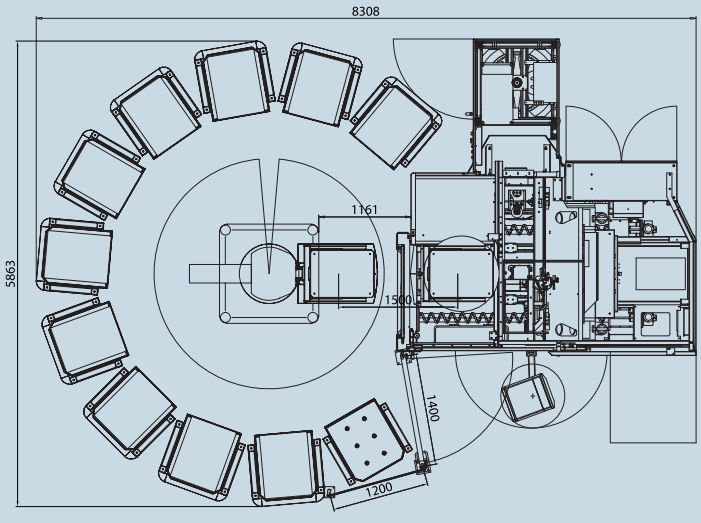
Technical data

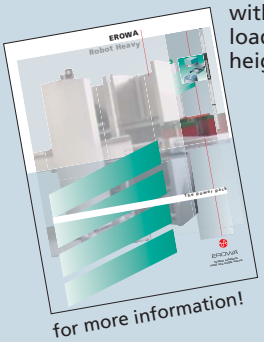
Transfer weight	500 kg
Magazine levels	2 or 3
Magazine load	1000kg with 2 levels 1500kg with 3 levels
Connections	
Pneumatic system	
Min. pressure/max. consumption	5 bar / 450 l/min.
Electric system	
Voltage (V+PE)	3 x 400
Frequency (Hz)	50/60
Power (kVA)	4
Nominal current (A)	5,8
Control system	
EROWA interfaces	M-function Serial: RS 232/422 Parallel: I/O bits
Protocol	EROWA Standard/EWIS™
Pallet identification	EWIS™ Rapid
	VisuLink/AutoLink
Job Management	EROWA EMC Cell Manager EROWA JMS© Pro JobManager

Gripper

The gripper has been designed for pallets of up to 600x800mm in size and takes weights of up to 500kg safely to the machine. The integrated draining basin ensures cleanness, as it collects chips and dripping-off coolants.







for more information!

Magazine

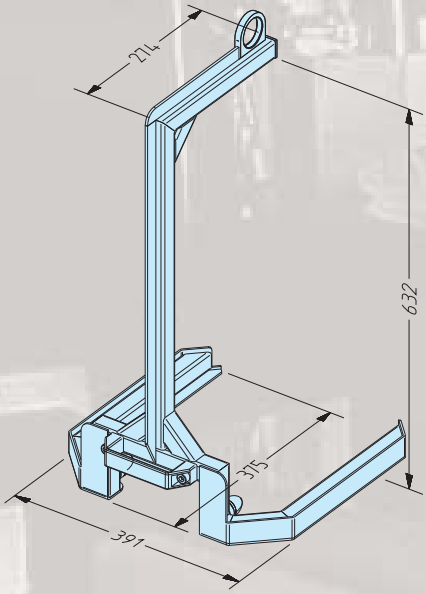
Basically, the magazine can be equipped with two or three racks. With two levels, loaded pallets can have a maximum height of 850mm.

EROWA®

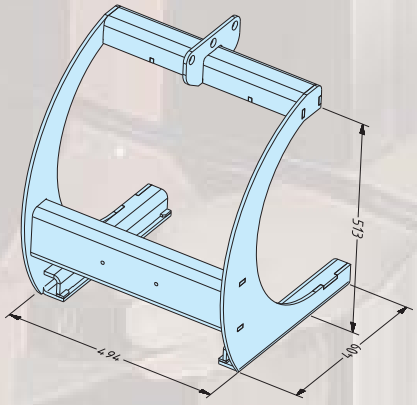
Pallets weighing more than 20 kg must be inserted into the UPCs or MTS chucks on the machine in a gentle and accurate manner. With the LiftGear and an overhead crane, this is child's play.

Your advantages
- Gentle machine loading.
- Increase in quality through careful and safe handling.
- Safety-conforming work

Applications:
Loading of machine tools, pallet magazines, Robot magazines, presetting and measuring stations.

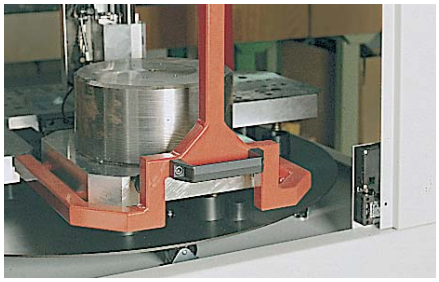


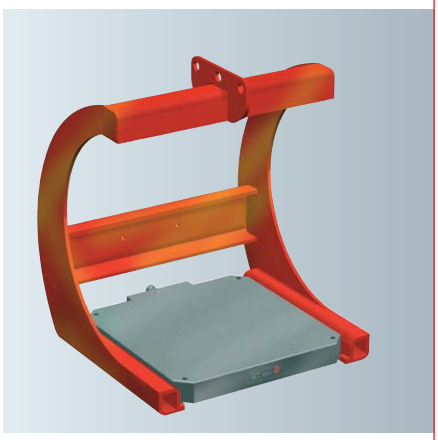
LiftGear UPC



LiftGear MTS

LiftGear UPC helps to change workpieces quickly, accurately and simply.





LiftGear MTS.

LiftGear with a PreSet Basic UPC.

Insertion of a UPC pallet on a universal milling machine.

Technical data

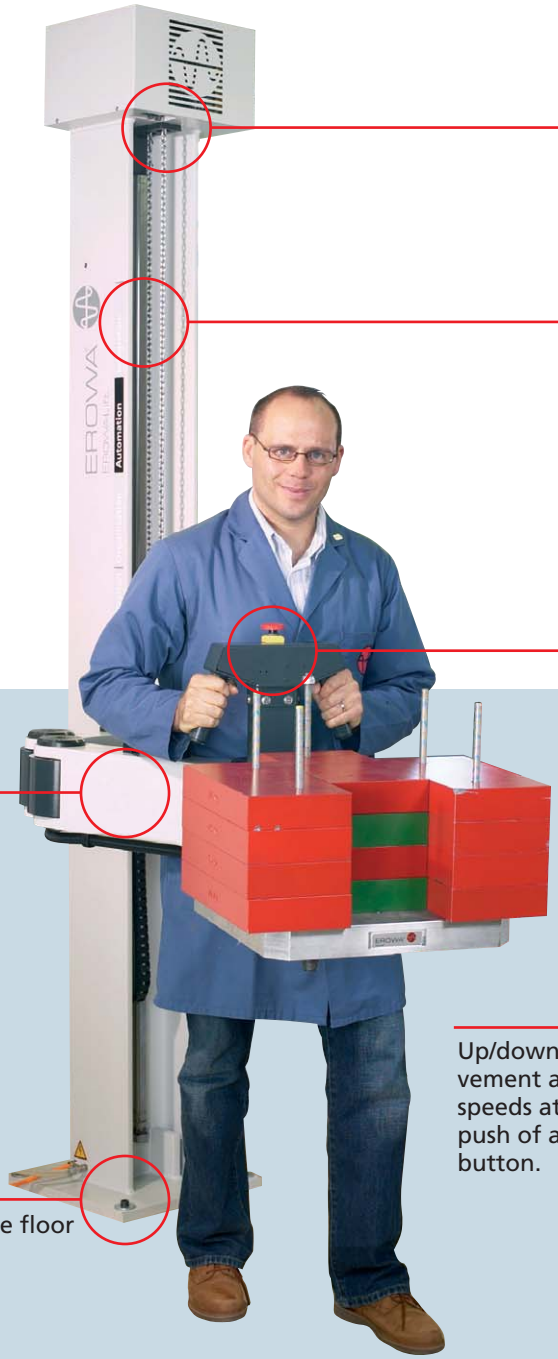
	ER-037477	ER-042800	on request
	LiftGear UPC	**LiftGear MTS 400**	**LiftGear MTS 500**
Transfer weight	200 kg, incl. pallet	250 kg, incl. pallet	250 kg, incl. pallet
Pallet type	UPC 320 x 320 mm	MTS 400	MTS 500
Maximum workpiece dimensions L x W x H	400 x 500 x 500 mm	400 x 450 x 400 mm	500 x 500 x 450 mm

EROWA®

EROWA Lift

Loading machines made easy.

The EROWA Lift has been designed for frequent pallet changes directly onto the machine or into the handling facility. Fitted in a fixed position next to the machine, it is always where it is needed and moves palletized workpieces from transport pallets even up to the topmost magazine rack.



Strong drive with two speeds.

Stable guidance of the Z-axis.

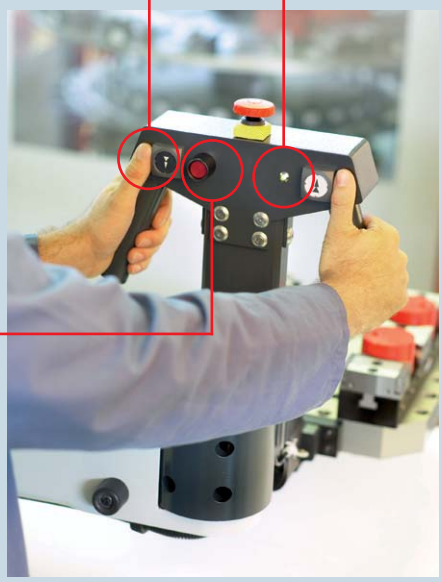
Two-handed control system with integrated operation.

Segmented arm for optimal accessibility.

Solid anchorage to the floor with leveling facility.

RCS 5 control light "Gripper clamped".

Up/down movement at two speeds at the push of a button.

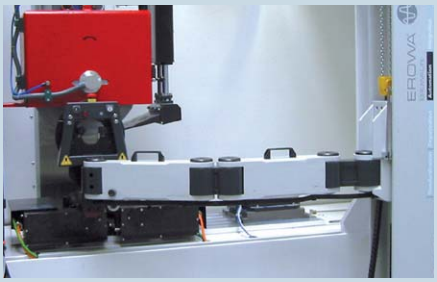


"Open gripper" button.

Lift pallets without straining your back. Directly from the shop-floor trolley into the magazine, even right to the top rack.

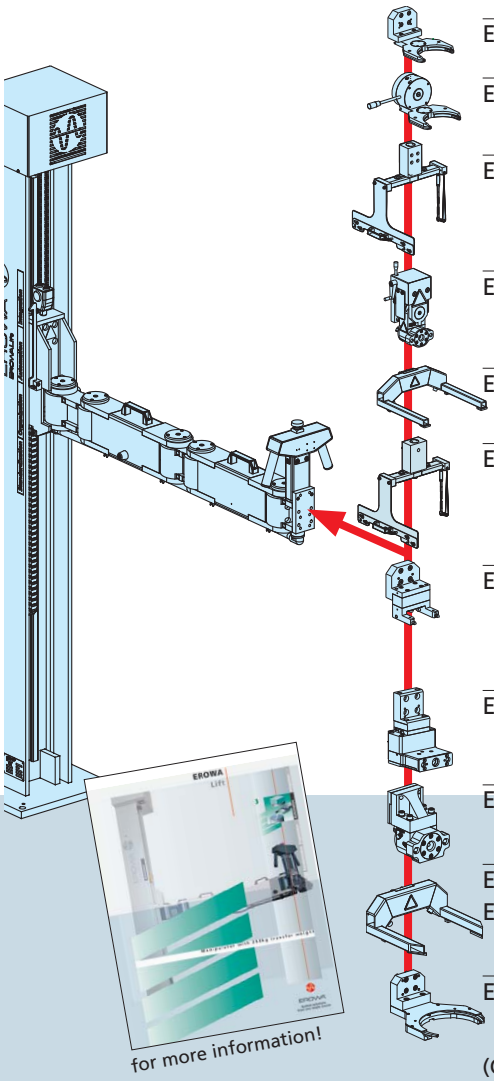
We also supply special grippers, for instance for the handling of large grinding wheels.

Simple and safe handling even of heavy workpieces up to 250kg.



Flexible pallet positioning with the swivel arm.

Lifting the pallet from the transport system.



for more information!

ER-030192	**Gripper ITS 148**
ER-030194	**Gripper ITS 148** 90° swivelable
ER-030218	**Gripper FrameSet**
ER-033290	**Gripper RCS 5** 90° swivelable
ER-042568	**Gripper MTS 400**
ER-044612	**Gripper FrameSet/RCS**
ER-046144	**Gripper RoboSet**
ER-046161	**Gripper RCS 2**
ER-046162	**Gripper RCS 5**
ER-046163	**Gripper fork UPC**
ER-046164	**Gripper fork UPC/RCS**
ER-047400	**Gripper PC210 RN**

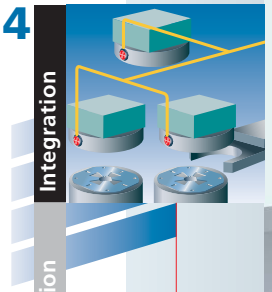
(Order grippers separately.
Special grippers on request.)

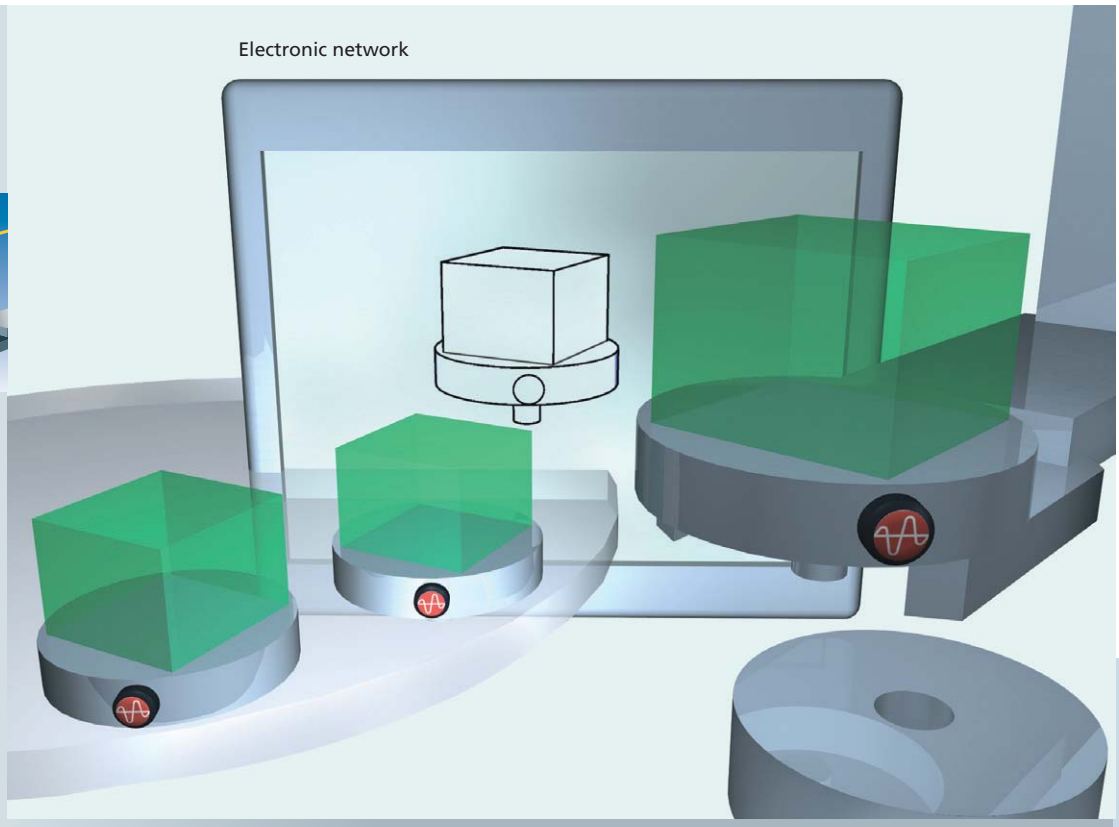
Technical data

ER-046250	**EROWA Lift**
Transfer weight	max. 250 kg
Movements	Z = 1660 mm X = 1300 mm Swivel range 360°
Installation	4 M12 heavy-duty anchors, concrete strength min. C20/25
Pneumatic system	min. 5 bar
Voltage	3x380/400 V
Frequency	50Hz
Drive	High speed 4m/min Low speed 1m/min

EROWA®

EROWA data transfer systems



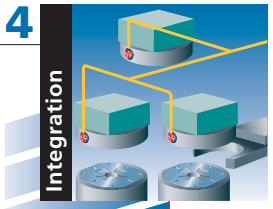


Integration of systems and communication channels. This precludes sources of error as much as possible, and will guarantee a faster flow of communication.

For chip-removing processes

For EDM sinking

For WEDM



EROWA EMC
Cell control for production machines

Page 296 - 297

EROWA JMS® Pro
From the production cell to networked production

Page 298 - 301

EROWA®

EROWA EMC

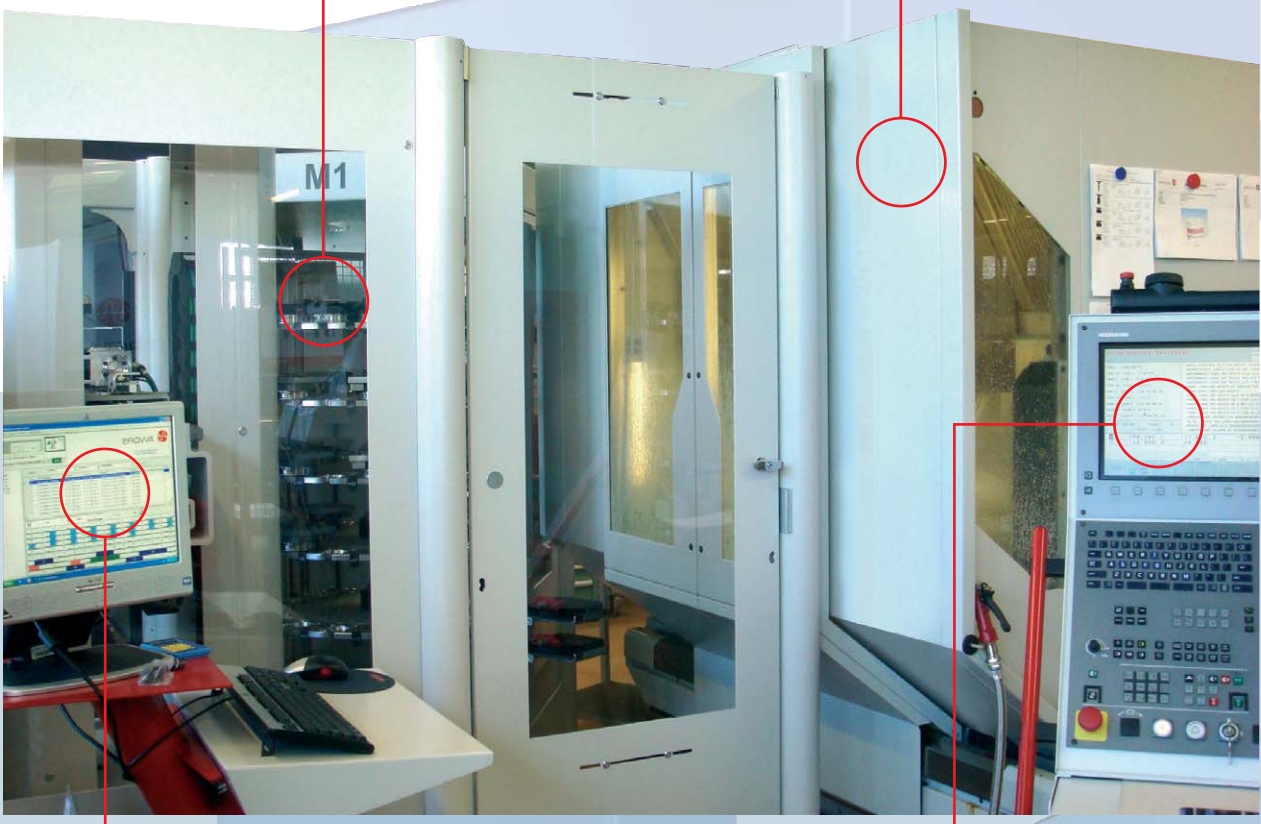
Simple & Ingenious

Cell control for production machines simplifies working activities. From the setting-up of jobs to the checking of available tool in the changer, everything is displayed in a simple and easy-to-view manner.

Made for milling! With EMC, it's easy to keep an overview. More productive hours are seen at a glance.

The Robot with magazine: the entire work reserve is on call and has been unequivocally identified by the chip ID system.

The machine tool with the EROWA table equipment, the automatic door and the tool magazine.



Cell control unit: the EROWA Manufacturing Control (EMC) software is the overriding tool through which the operator controls and monitors the cell.

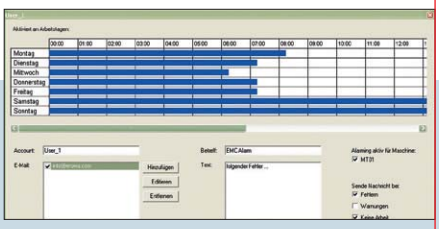
The machine control unit transmits data from the tool changer to the EMC.

You can find more technical information in the special EMC flyer.

Everything at a glance: the machine operator always sees what's going on. The user surface is the same for all the cells, which makes deputizing easier.

Check the down times of the tools in use at a glance, and replace tools if necessary.

This is the work reserve that is available at this moment. Find out how the milling cell will remain productive at the touch of a button.



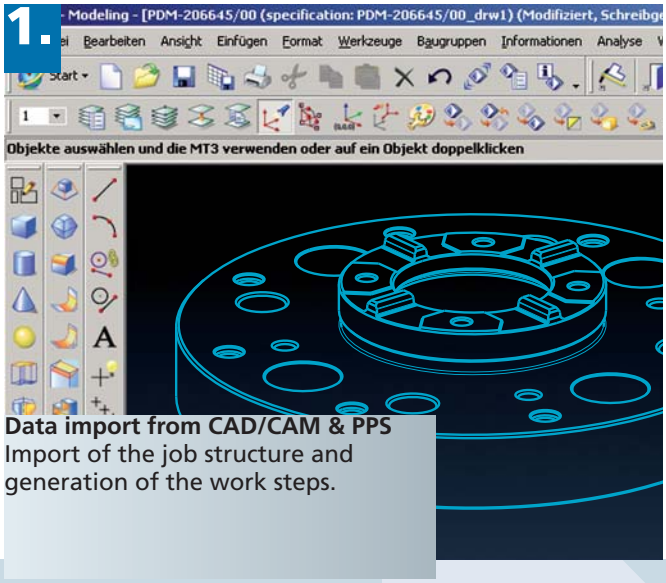
Should anything go wrong, the operator will be alerted. Information about the type of trouble is transmitted by e-mail or text message

	Heidenhain from iTNC 530	Heidenhain Millplus	Siemens	Fanuc	BTR
Cell Manager 1 machine	ER-051010	ER-051020	ER-051030	ER-051040	ER-053310
Cell Manager 2 machines	ER-051011	ER-051021	ER-051031	ER-051041	ER-053311
ToolManagement			ER-051060		no
Reporting			ER-054040		
Alarming			ER-054050		
PreSet Import			ER-058010		

EROWA

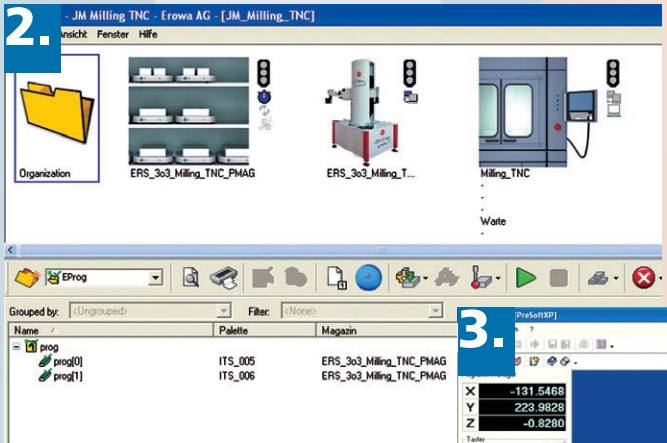
Automatically documented production process

JMS® Pro Workflow Management is not a slogan but a program. By making the data completely universal, it allows for comprehensive control throughout the workshop. From the CAD/CAM data import to the reporting of the completed jobs, everything can be viewed online.



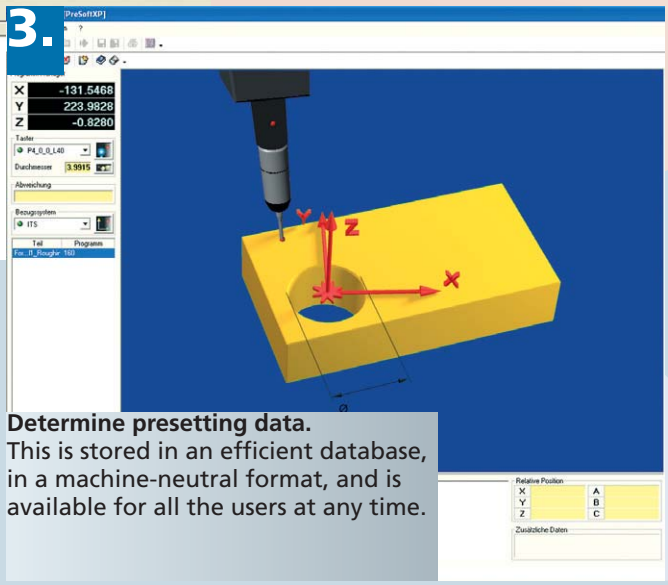
Data import from CAD/CAM & PPS
Import of the job structure and generation of the work steps.

Workflow-Management



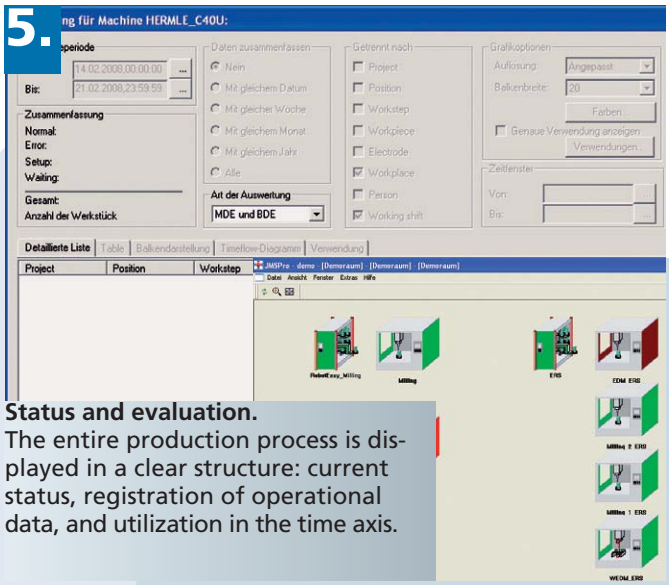
Managing and setting up.
Management of production data. Preparation of jobs while machine is at work. Identification of pallets through the electronic identification system EWIS™ Rapid. The pallets are automatically identified on the basis of the built-in chip. The data is then transmitted to JMS® Pro.

Planning, control and monitoring of individual work processes . . .



Determine presetting data.
This is stored in an efficient database, in a machine-neutral format, and is available for all the users at any time.

Monitoring.
Collects and transmits special events from the production cells. The relevant users are always informed.



Status and evaluation.
The entire production process is displayed in a clear structure: current status, registration of operational data, and utilization in the time axis.

Machining.
The production cell is controlled online. The user is able to influence all the priorities. This will guarantee a quick response.

- The production data is stored in a clear structure.
  You can access them at any time.
- The entire production process is displayed in JMS® Pro. You have an overview.
- Changes to the production process are effective online. You always know what is happening.
- JMS® Pro documents all the processes automatically. Traceability is guaranteed. You are in control of all the changes.
- The complete electronic dataflow from CAD to evaluation replaces the paper avalanche.
- JMS® Pro interlinks machines of a wide variety of technologies and generations.
  You choose yourself what should be part of the network.
- You determine the degree of integration yourself. Whether simple postprocessor or integrated workshop solution - we give you comprehensive advice.
- Workplaces become more interesting. With JMS® Pro users become machine managers.
- Whether EDM or WEDM, milling, drilling, turning, grinding or measuring: JMS® Pro integrates the facilities.

EROWA®

EROWA JMS® Pro

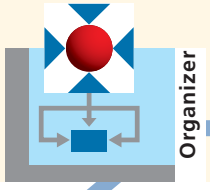
From production cell to integrated manufacturing

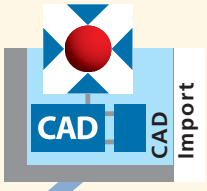
JMS® Pro is characterized by its consistent modular structure. Starting with a simple postprocessor which outputs the offset values as defined for a given machine format to the fully interlinked workshop, everything can be extended in small, manageable steps.

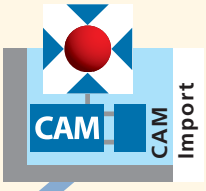
Work preparation

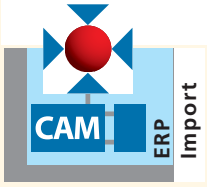
Workshop

CAD/CAM Import

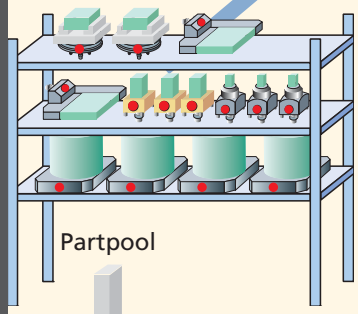




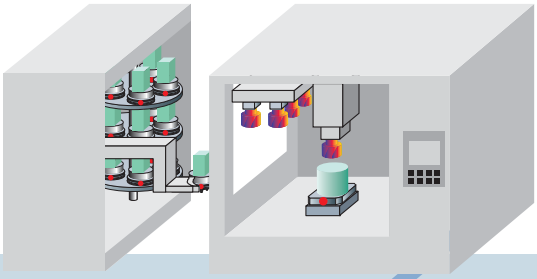




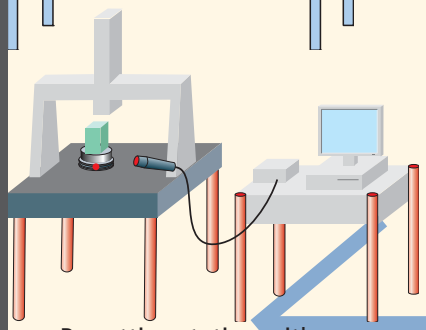
Setup, Presetting



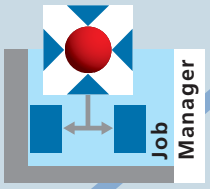
Partpool

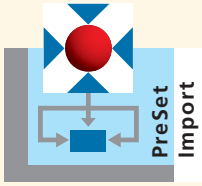


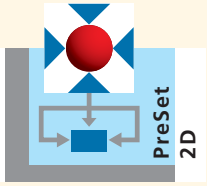
Machine with automatic pallet and workpiece changer

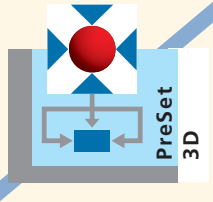


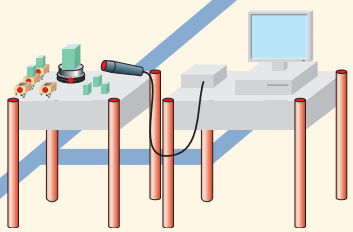
Presetting station with an EWIS™ Rapid identification system



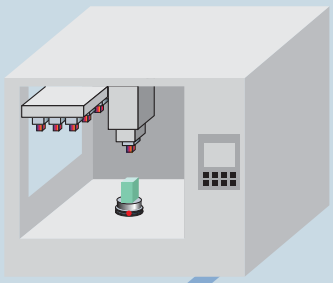




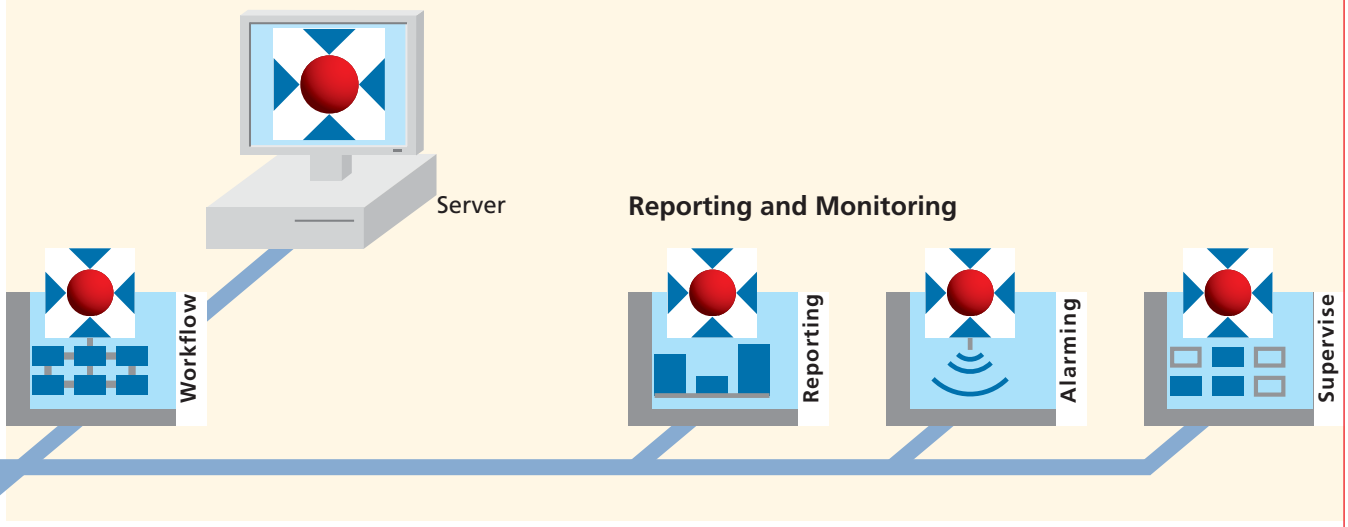


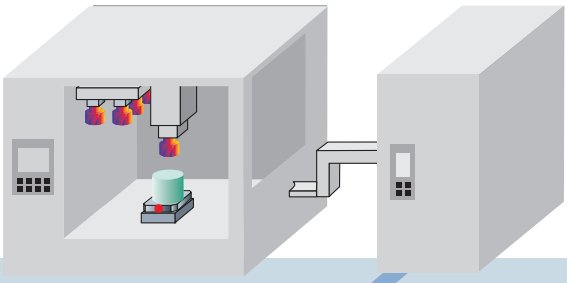


Setting-up station with an EWIS™ Rapid identification system

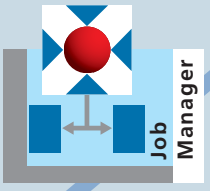


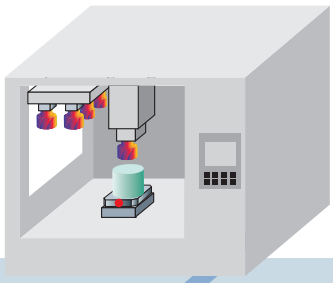
Machine for manual workpiece change



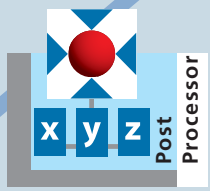


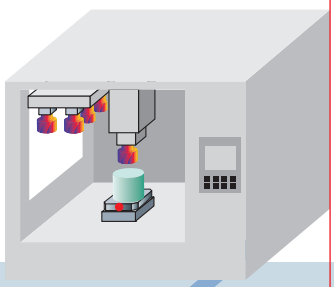
Machine with automatic workpiece and electrode change



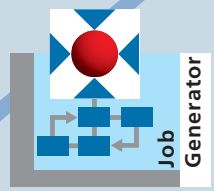


Machine with manual workpiece change

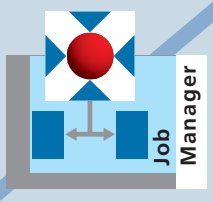


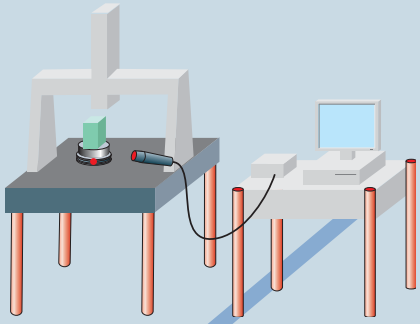


Machine with manual workpiece change



Production cell with two machines and one handling system





Quality control with the EWIS™ Rapid identification system

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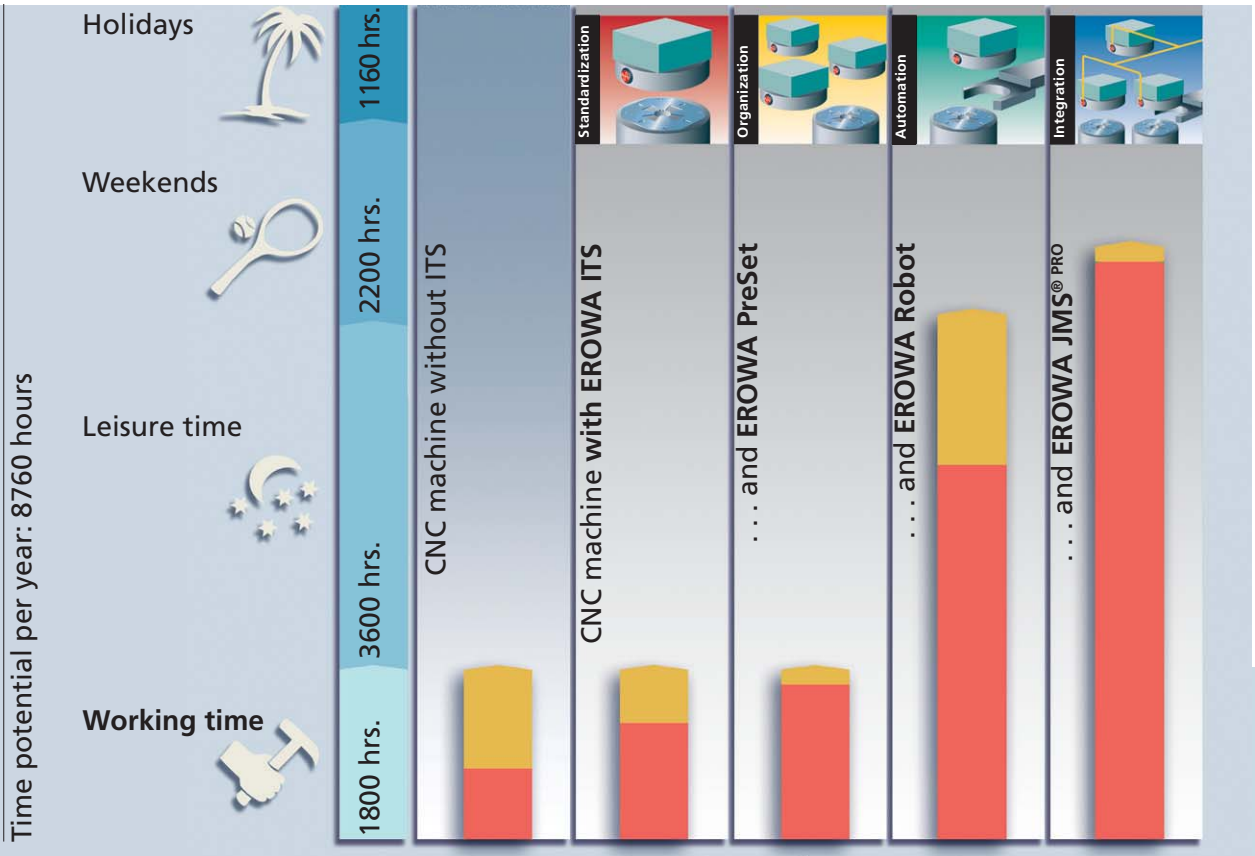

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