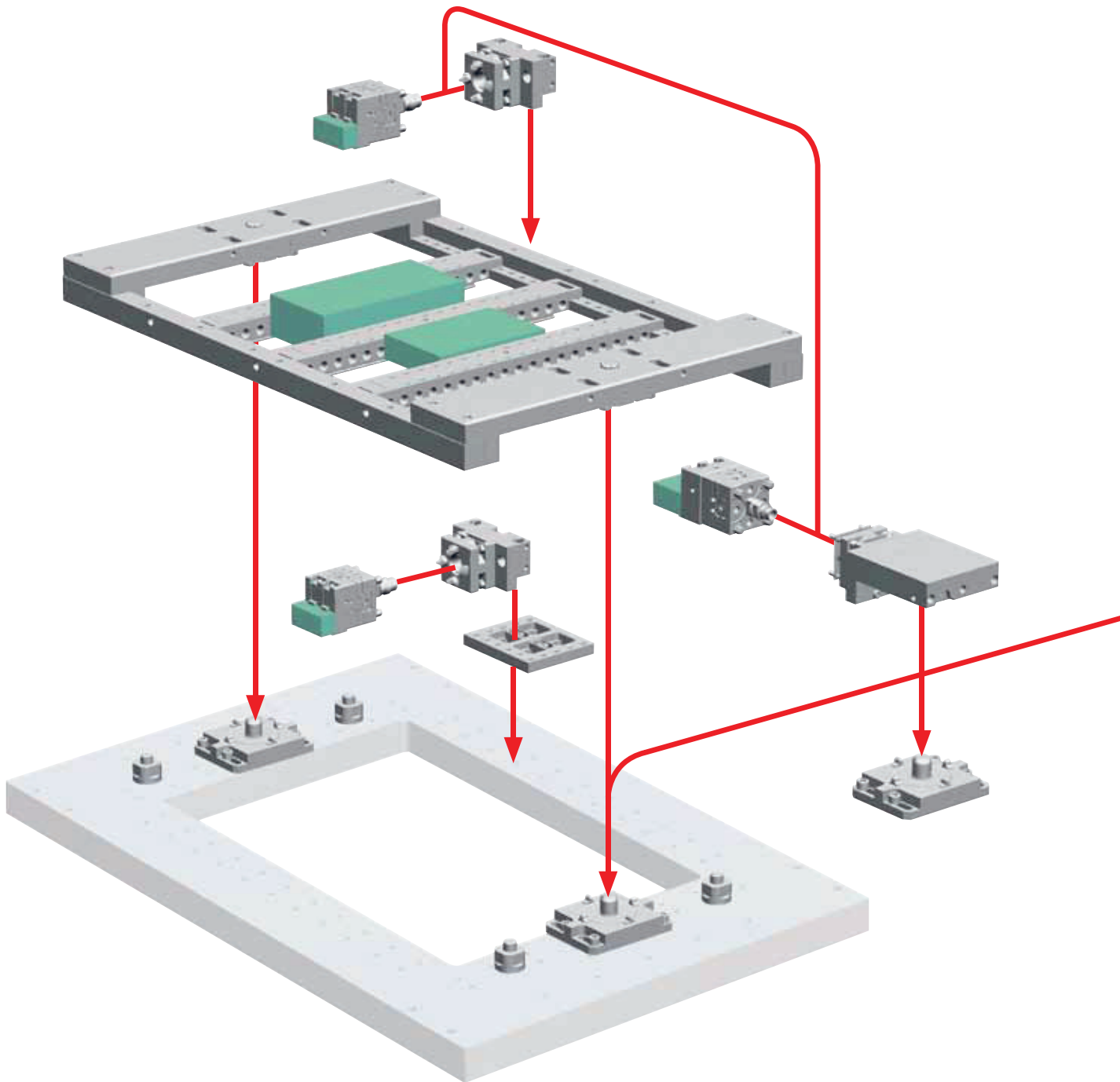


EROWA Wire EDM Tooling

The modular tooling system for WEDM purposes

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.



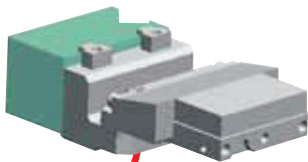
Applications



Handling

Manual / Loading facility / Robot

- 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 - Wire EDM Tooling

	Flat clamping chuck		Chuck RSA 50	QuickChuck 50 RSM
	pneumatisch	manuell		
Repeatability	0.002 mm	0.002 mm	0.002 mm	0.002 mm
Indexing			4 x 90°	4 x 90°
Clamping power	with reclamping 7'000 N	without reclamping 3'000 N	2'800 N	4'000 N
Clamping process	Spring tension	mechanically	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)		

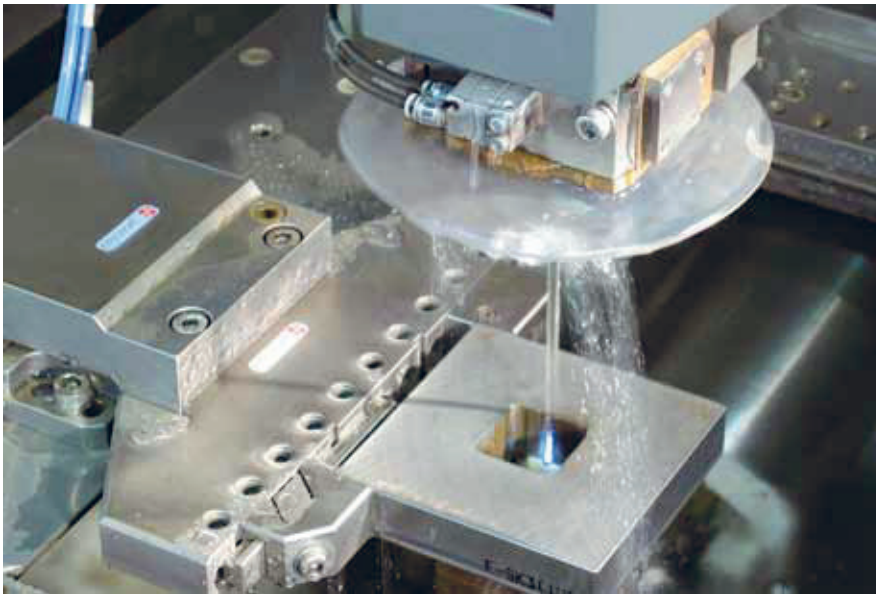
EROWA Wire EDM Tooling

Quick and precise resetting

FLEXIBLE

Suitable workpiece carriers for all workpiece sizes.

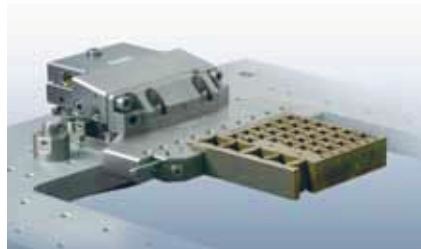
The right solution for every application. With well-thought-out combinations of vises, clamping elements and clamping beams, any conceivable workpiece can be clamped. The repeatability of EROWA's Wire EDM tooling system allows for workpieces to be preset outside the machine and for safe automatic loading.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



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



Special mounting for cylindrical parts. Mounted to the pendulum holder, the workpiece is adjustable in three axes.



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



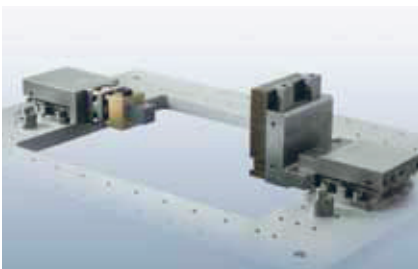
Use removable supports where they make sense. Thread in EDM wire through the special grooves.



EROWA Lift to load the WEDM center.



Special accommodation for cylindrical parts. Fitted to the pendulum holder, workpieces can be adjusted in three axes.



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.



Its low design creates more space for workpieces.



Presetting the workpieces saves time.



Presetting made easy. While the WEDM center is in operation, the next job is being preset quickly and accurately on the EROWA PreSet station.



Load Robots for more autonomy at night and at weekends. We'll be glad to advise you how to increase your productivity with an EROWA handling facility.

EROWA Wire EDM Tooling

Tooling System

The components

Clamping elements for fixtures

ER-033958



ER-031952



ER-062788



ER-008231



ER-008875



ER-008873



ER-007990

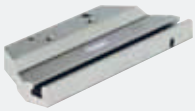


ER-008220



Fixtures for adapters

ER-031945



ER-017645



ER-019248



ER-030110



ER-018940



ER-031179



ER-018941



ER-025115



Adapters for interfaces



ER-041179



ER-035294



ER-035156

ER-033955



ER-031942



ER-039214



ER-037888



ER-055158



Interfaces to machine table

ER-040641



ER-008221



ER-029229



ER-029228



ER-025895



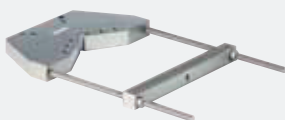
ER-054922



ER-018938



ER-038891



ER-018937



ER-055774



ER-051800



ER-038710



ER-033974



ER-008814



ER-008842



ER-052091



ER-007935



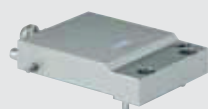
ER-008856



ER-016691



ER-030678



ER-039795



ER-014722



ER-014698



ER-055535



ER-030923



ER-033933



ER-012727



ER-007877



ER-038711



ER-028471



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



EROWA WIRE EDM TOOLING

Wire EDM Tooling	Interfaces to machine table	264
Wire EDM Tooling	Adapters for interfaces	268
Wire EDM Tooling	Fixtures for adapters	273
Wire EDM Tooling	Clamping elements for fixtures	282
Wire EDM Tooling	System accessories	285
Wire EDM Tooling	Wire EDM Tooling Kits	290
Wire EDM Tooling	Clamping equipment sets	292



For chip-removing processes



For EDM sinking



For WEDM

EROWA Wire EDM Tooling

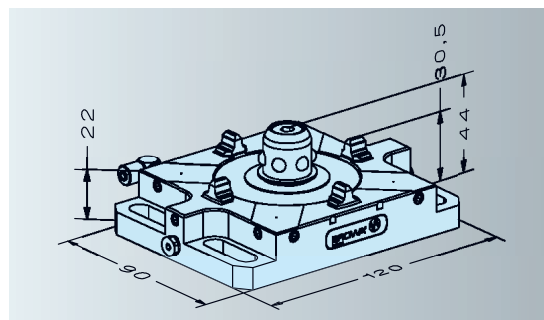
Interfaces to machine table

Technical data	Flat chuck pneumatic	Flat chuck manual	Basic WEDM chuck manual
Repeatability	0.002 mm	0.002 mm	0.002 mm
Clamping power	with reclamping 7,000 N	without reclamping 3,000 N	without reclamping 8,000 N
Generated by	spring power	mechanic	mechanic
Opening with compressed air, dry	min. 6 bar		
Operation	pneumatic	manual	manual
Max. pallet weight	30 kg (with support)	30 kg (with support)	15 kg (with support)

ER-035714 Flat chuck pneumatic PalletSet W / FrameSet



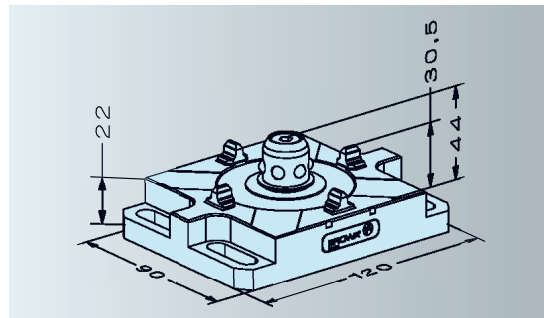
- Version Pneumatic chuck for a direct fit to the Z = 0 base of the WEDM center.
- Application On WEDM centers with manual or automatic workpiece loading.
- Connections On the side for opening, cleaning, reclamping.



ER-035715 Flat chuck manual PalletSet W / FrameSet



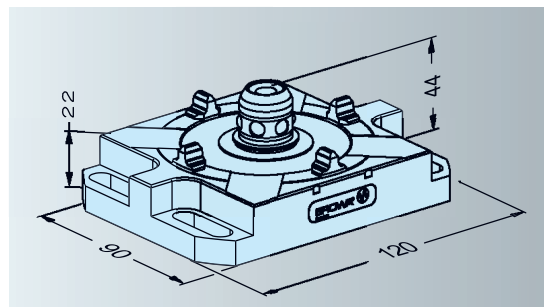
- Version Mechanical chuck for a direct fit to the Z = 0 base of the WEDM center.
- Application On WEDM centers with manual workpiece loading.
- Operation With a manually operated ball lock.



ER-040641 Basic WEDM chuck Basic Tooling



- 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.

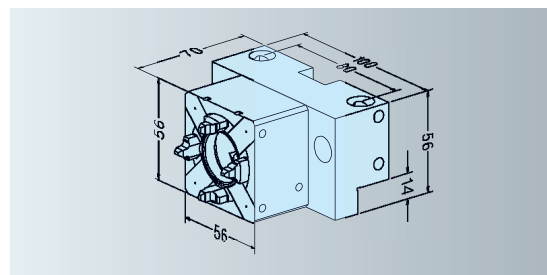


Technical data	Chuck RSA 50	QuickChuck 50 RSM
Repeatability	0.002 mm	0.002 mm
Indexing	4 x 90°	4 x 90°
Clamping power	2,800 N	4,000 N
Clamping	Spring power	mechanical
Opening with compressed air, dry	min. 6 bar	
Operation	pneumatic	mechanical

ER-007851 Chuck 50 RSA / on universal plate UnoSet



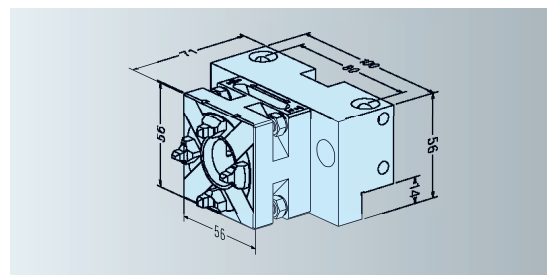
Version Automatic, with pneumatic valve.
 Application ITS base for the manual or automatic loading of ITS elements.
 Use On all machine bases and FrameSet beams. Can be used either horizontally or vertically.



ER-007852 QuickChuck 50 RSM / on universal plate UnoSet



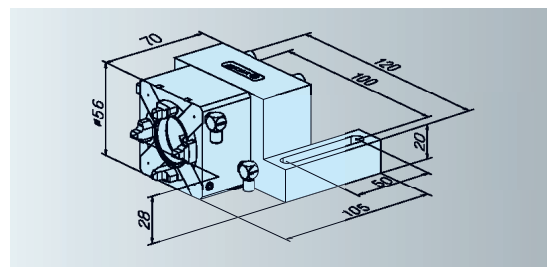
Version Manual.
 Application ITS base for the manual loading of ITS elements.
 Use On all machine bases and FrameSet beams. Can be used either horizontally or vertically.



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



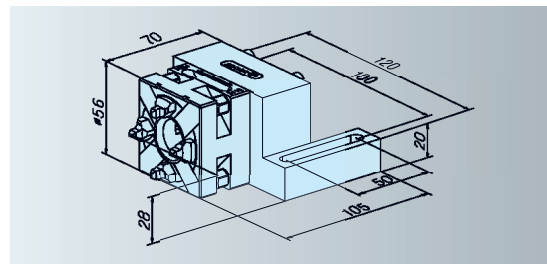
Version Chuck 50 on adapter plate, manual.
 Application To be fitted directly to any machine bases with attachment boreholes in a 100 mm grid.



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



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



EROWA Wire EDM Tooling

Interfaces to machine table

ER-012847 ManoSet rail L length 947mm XXL 1 piece

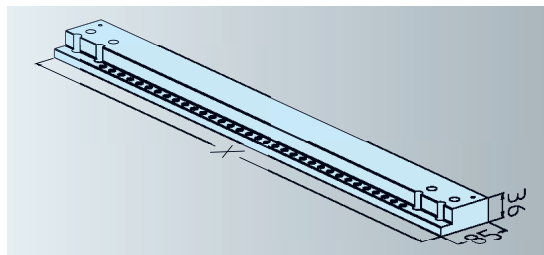


Version Supplied: 1 unit.
Rail for large WEDM centers.
X = 947 mm.

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 273).

Note ManoSet rail XXL suitable for Charmilles CTFI60++ and Sodick AQ 750 L.



ER-035690 ManoSet rail P 890mm XXL

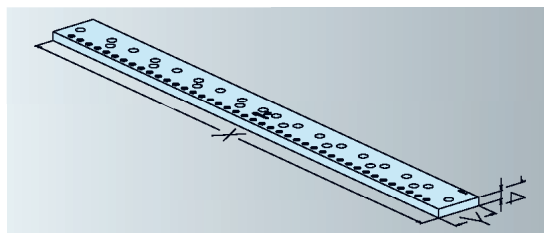


Version Supplied: 1 unit.
Rail for large WEDM centers.
X = 890 mm, Y = 75 mm.

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 273).

Note ManoSet rail XXL suitable for Sodick AQ 750 L and Makino SP 64.



ER-038985 ManoSet rail L Length 850mm XXL

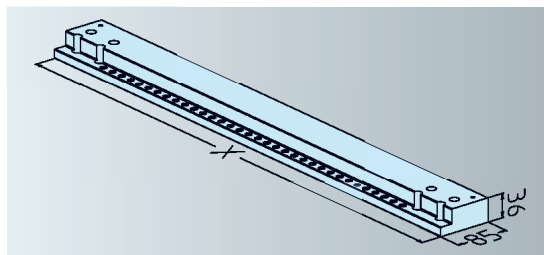


Version Supplied: 1 unit.
Rail for large WEDM centers.
X = 850 mm.

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 273).

Note ManoSet rail XXL suitable for Makino EU 64 and SP 64.



ER-041430 ManoSet rail L Length 1010mm XXL

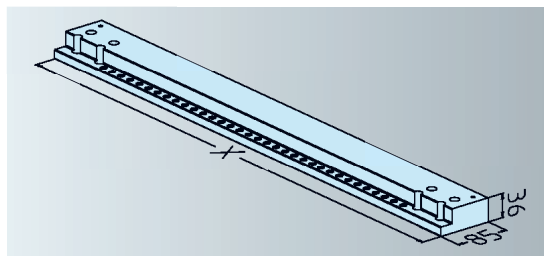


Version Supplied: 1 unit.
Rail for large WEDM centers.
X = 1010 mm.

Mounting directly on the Z=0 base.

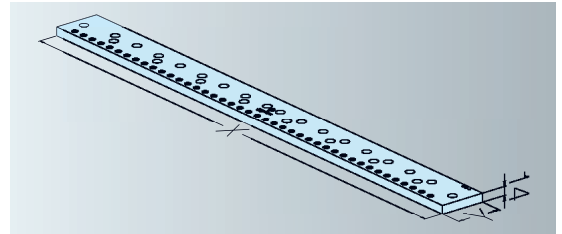
Application To clamp large workpieces with XXL clamping beams 540, ER-037307 or clamping beams 620, ER-034989 (see page 273).

Note ManoSet rail XXL suitable for Makino U86 and Seibu M 750.

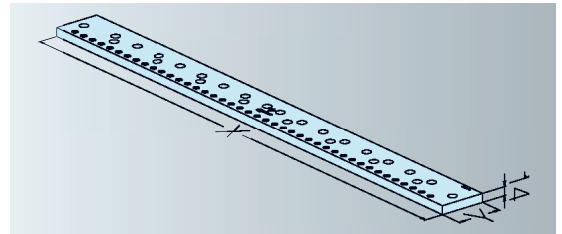


**ER-042904 ManoSet rail P length 890mm XXL
1 piece**

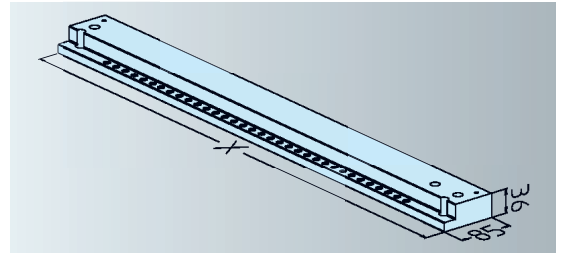
- Version Supplied: 1 unit.
Rail for large WEDM centers.
X = 890 mm, Y = 75 mm.
- Mounting directly on the Z=0 base.
- Application To clamp large workpieces with XXL clamping beams 540, ER-037307 or clamping beams 620, ER-034989 (see page 273).
- Note ManoSet rail XXL suitable for Charmilles CT FI 640cc, CT FI 690, GFMS Cut 400 / Cut 30P and ONA AE 600.

**ER-043487 ManoSet Beam P length 860mm XXL
1 piece**

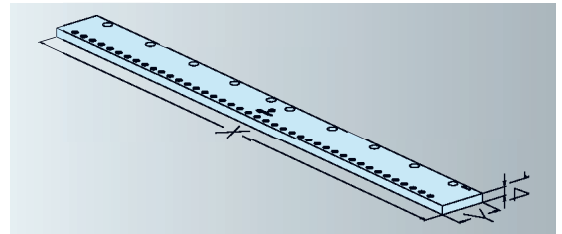
- Version Supplied: 1 unit.
Rail for large WEDM centers.
X = 860 mm, Y = 50 mm.
- Mounting directly on the Z=0 base.
- Application To clamp large workpieces with XXL clamping beams 540, ER-037307 or clamping beams 620, ER-034989 (see page 273).
- Note ManoSet rail XXL suitable for Mitsubishi FX 30 / FA30, CT FI6050, Makino SP64, Makino DUO 64/U6.

**ER-069834 ManoSet rail L length 1050mm
Sodick AQ900L**

- Version Units supplied: 1 Rail for big WEDM machines.
X = 1050mm.
- To be fitted Directly to machine base Z-Zero.
- Application Clamping of big workpieces with XXL clamping beam 540, ER-037307, or clamping beam 620, ER-034989 (see page 273).
- Information ManoSet rail XXL, suitable for Sodick AQ900L.

**ER-069835 ManoSet rail P length 950mm
Sodick AQ900L**

- Version Units supplied: 1 Rail for big WEDM machines.
X = 947mm, Y = 50mm,
- To be fitted Directly to machine base Z-Zero.
- Application Clamping of big workpieces with XXL clamping beam 40, ER-037307, or clamping beam 620, ER-034989 (see page 273).
- Information ManoSet Rail XXL, suitable for Sodick AQ900L.



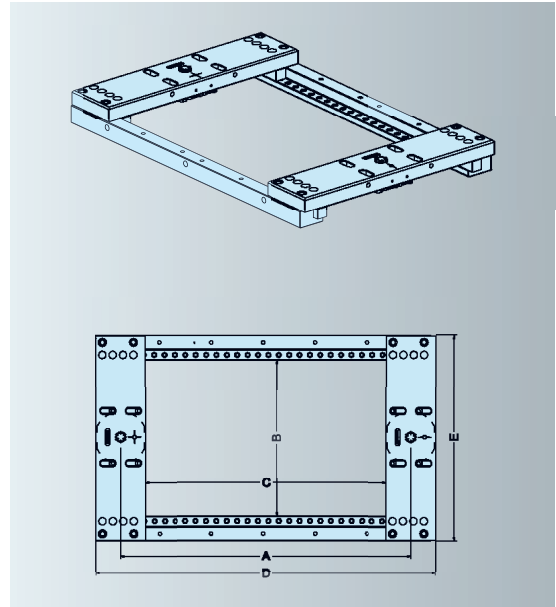
EROWA Wire EDM Tooling

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

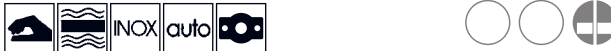


Version	Clamping frame for the multiple palletization of workpieces.
Application	To fit on EROWA flat chucks (see page 264).
Options	See Clamping beams and clamping elements for the EROWA Wire Tooling System, starting from page 273.

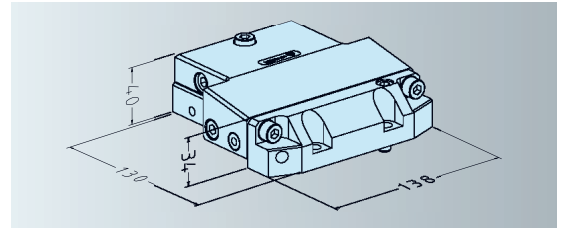


	A	B	C	D	E
ER-045555	430	220	335	525	396
ER-039212	430	300	335	525	396
ER-039211	490	220	395	585	316
ER-039213	500	300	405	595	396
ER-039214	560	300	465	655	396
ER-039215	650	300	555	745	396
ER-039216	650	380	555	745	476
ER-039217	710	380	615	805	476

**ER-030923 Pendulum holder 3D
PalletSet W**



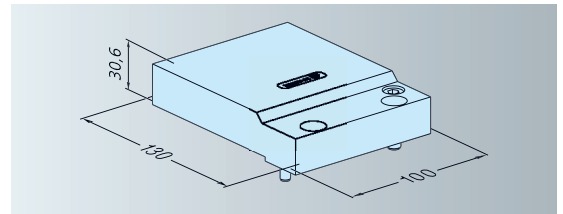
Version Pendulum head for automatic and manual loading.
G-Centering plates for increased durability.
Application Basis for all the other clamping elements such as UniVise square, frame pallet, vise and beam pallet.
Note Adjustable in the X-, Y- and Z-axes.



**ER-030678 Fix holder
PalletSet W**



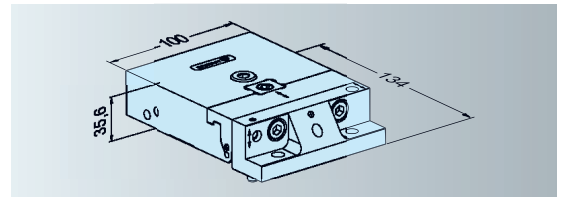
Version Standard element for automatic and manual loading.
Application Base for all other clamping elements such as UniVise square, frame plate, vise and beam pallet.
Note Adjustable in the C-axis.



**ER-031942 Basic WEDM pendulum holder
Basic Tooling**



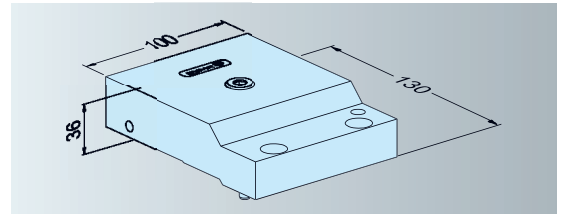
Version Pendulum head for manual loading.
Application For use on the Basic WEDM chuck. As a basis for all other clamping elements like UniVise, square, vise and beam pallet.
Note Adjustable in the X-, Y- and Z-axes.



**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-axis.



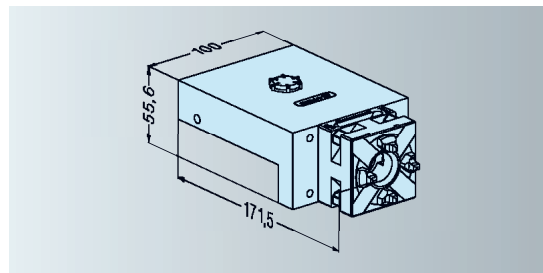
EROWA Wire EDM Tooling

Adapters for interfaces

ER-030645 UnoSet adapter PalletSet W centering plate G



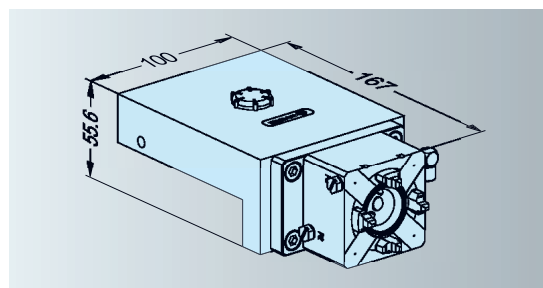
Version System adapter of PalletSet W to UnoSet.
 Application Clamps workpieces of system size ITS 50 horizontally into the workspace.
 Note Fits all UnoSet and ITS 50 clamping elements.



ER-030643 UnoSet adapter with RSA 50 PalletSet W



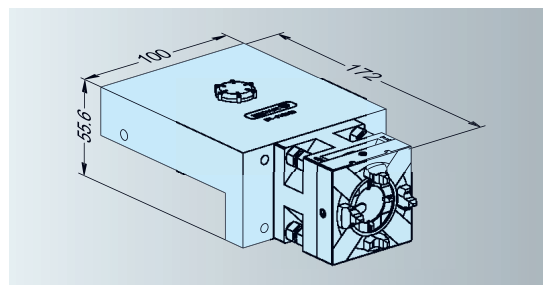
Version System adapter from Palletset W to UnoSet.
 Application Clamps workpieces of the ITS 50 system size horizontally into the workspace.
 Clamping power 2800 N.
 Note Suitable for all UnoSet and ITS 50 clamping elements.



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



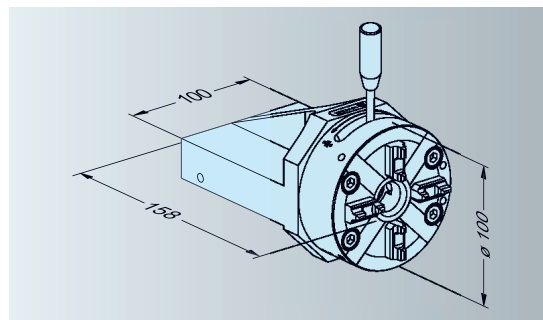
Version System adapter from Palletset W to UnoSet and/or Compact.
 Application Clamps workpieces of the ITS 50 and Compact system sizes horizontally into the workspace.
 Note Suitable for all UnoSet and ITS 50 clamping elements and Compact clamping elements.



ER-033974 PSW adapter QuickChuck 100 P



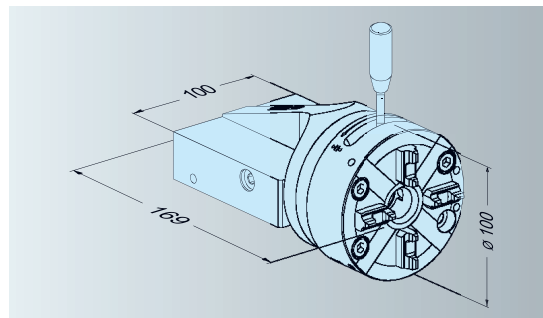
Version System adapter from Palletset W to UnoSet, ITS 50, holder $\varnothing 72$, and pallets 148, 115.
 Application Clamps workpieces of the ITS 50 and ITS 100 system sizes horizontally into the workspace.
 Note Suitable for all UnoSet clamping elements.



ER-035994 PSW adapter QuickChuck 100 P 360° turnable

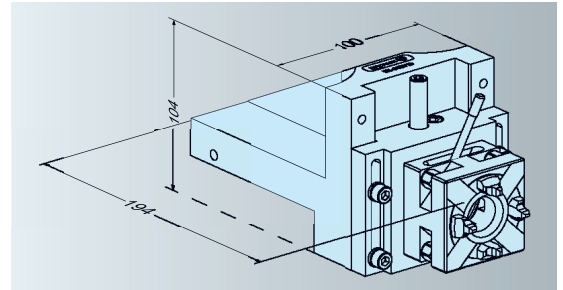


Version System adapter from Palletset W to UnoSet, ITS 50, holder $\varnothing 72$, and pallets 148, 115.
 Application Clamps workpieces of system size ITS 50 and ITS 100 horizontally into the working range. Can be rotated around 360°.
 Note Fits all UnoSet clamping elements and ITS 115/148 pallets.

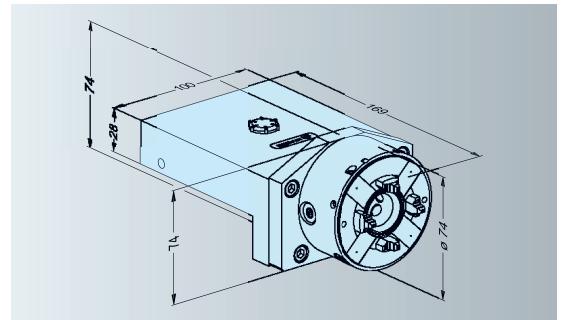


**ER-038710 Adapter Z-Vario
PalletSet W / UnoSet RSM**

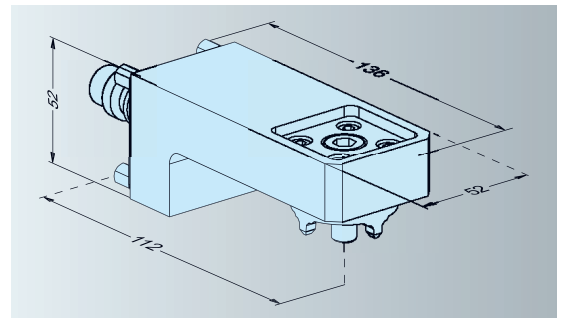
- Version System adapter from Palletset W to UnoSet.
Z-axis height adjustable.
- Application To clamp UnoSet and electrodes/workpieces in the ITS 50 system size horizontally into the workspace.
- Note Suitable for use with the whole ITS 50 system and electrode holders.

**ER-039795 Holder ø 72
PalletSet W**

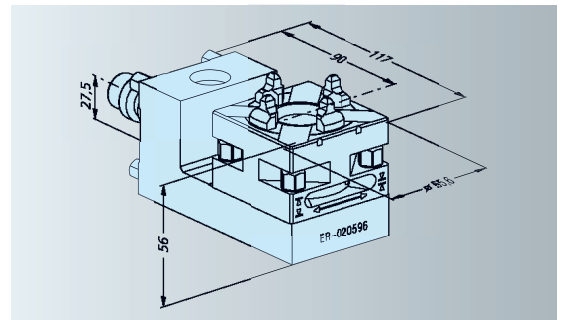
- Version System adapter from Palletset W to ITS 50 holder ø 72
- Application Clamps workpieces of holder ø 72 size horizontally into the workspace.
- Operation Pneumatically with air jet.
- Note Suitable for all holders ø 72 and ITS 50.
- Option ER-032832 Sealing ring ITS Chuck 50.

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

- 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**

- 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°.



EROWA Wire EDM Tooling

Adapters for interfaces

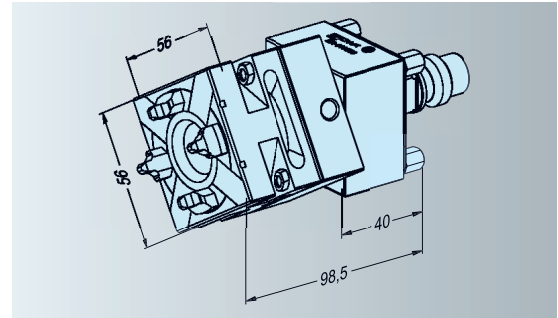
ER-007877 TurnFix 50 UnoSet



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 Angle clamping unit UnoSet for QuickChuck 50



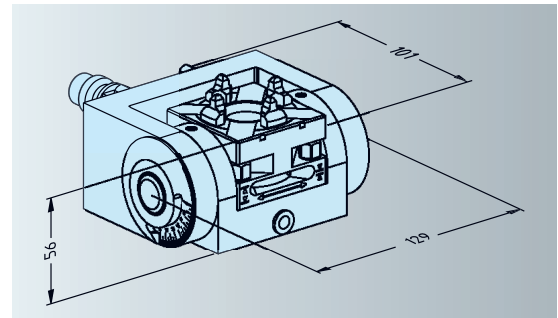
Version Chuck 50, angle to be set with the vernier.

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.



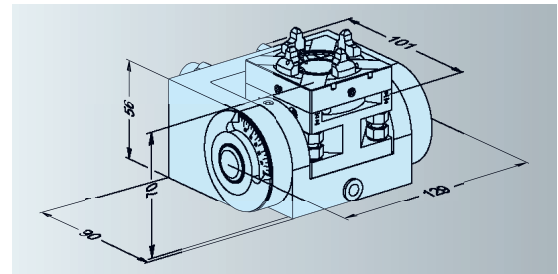
ER-027640 Square clamping unit UnoSet for CompactChuck 50 Combi



Version CompactChuck 50 Combi.
Angle to be set with the vernier.

Application WEDM or EDM.

Connections Flushing connection in place.



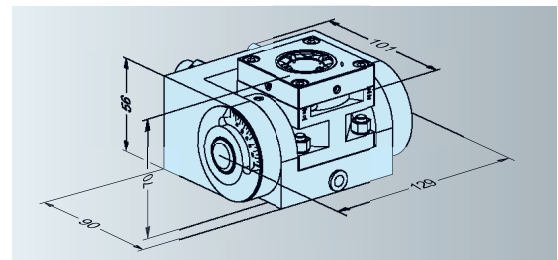
ER-027641 Square clamping unit UnoSet for CompactChuck M



Version CompactChuck manual.
Angle to be set with the vernier.

Application WEDM or EDM.

Connections Flushing connection in place.



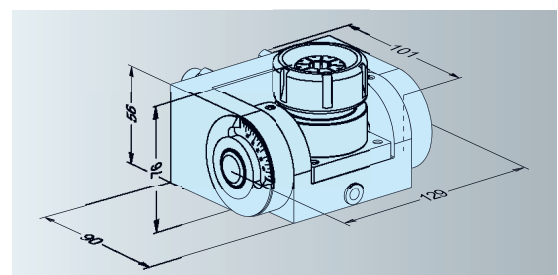
ER-028480 Angle clamping unit UnoSet for collet chuck electrode holder



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

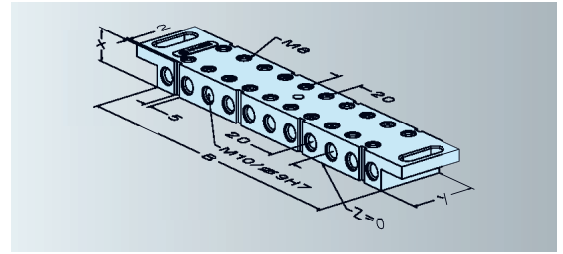
ER-017646 Clamping beam 300mm

ER-017647 Clamping beam 380mm

ER-017648 Clamping beam 460mm



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



Clamping Beam	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

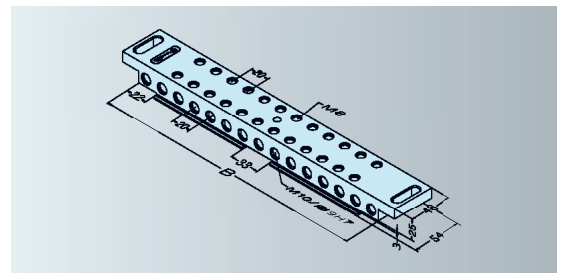
ER-021126 Double-sided clamping beam 300mm

ER-021127 Double-sided clamping beam 380mm

ER-021128 Double-sided clamping beam 460mm



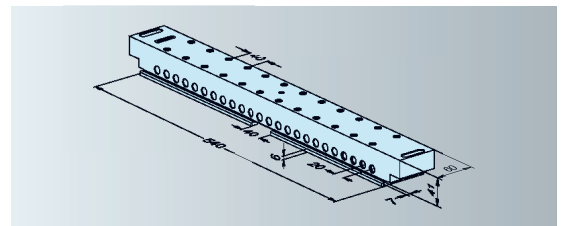
Application To clamp workpieces with clamping claws on Z-support ledges.
Version Cross boreholes, ground.



ER-037307 Double-sided clamping beam 540
ManoSet XXL



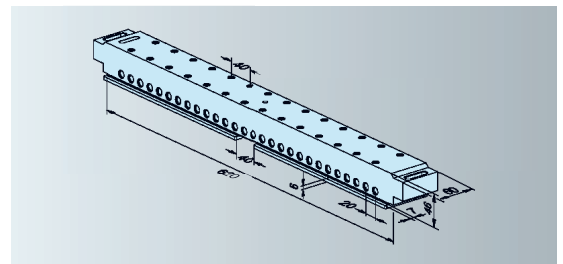
Application Clamping of workpieces with clamping claws on Z-support ledges.



ER-034989 Double-sided Clamping beam 620mm
ManoSet XXL



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



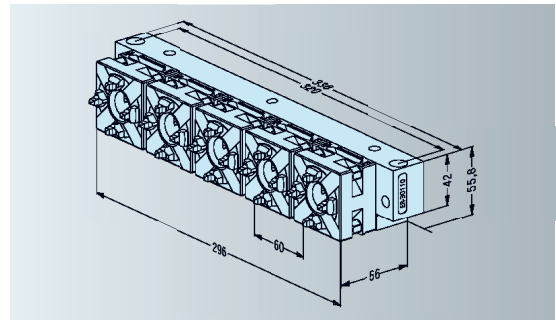
EROWA Wire EDM Tooling

Fixtures for adapters

ER-030110 Beam 5-fold 300 QuickChuck 50



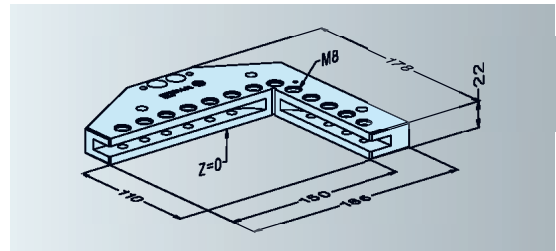
Version Five chucks 50, manual, in a row.
 Application ITS adapter for the manual loading of five ITS elements.
 Use On all FrameSet clamping frames. Width 300 mm. In combination with the basic adapter set (ER-016652) on the WEDM machine table.



ER-018938 UniVise square PalletSet W



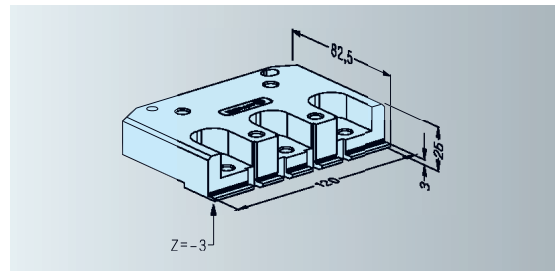
Version Square with all the clamping accessories.
 Application To be fitted to fix holders or pendulum holders.
 Note Max. load: 10 kg.



ER-018940 Vise PalletSet W



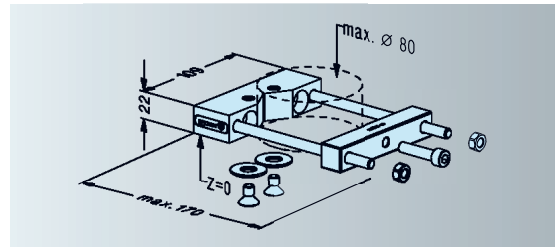
Version Clamping element with clips for one-sided attachment to workpieces.
 Application To be fitted to fix holders or pendulum holders.
 Note Max. load: 12 kg.



ER-019248 Prism holder 80 PalletSet W



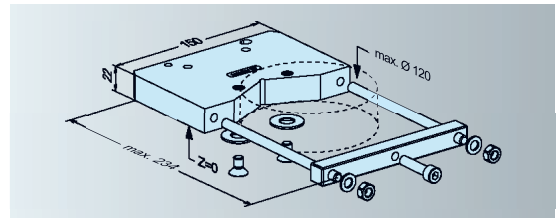
Version Prism and clamping part with detachable Z-supports.
 Application Clamping of cylindrical workpieces of up to $\varnothing 80$ mm.
 Assembly To be fitted to the front of beam pallet ER-018937 or clamping beams (cf. p 273).
 Note Max. load: 6 kg.



ER-031179 Prism holder 120 mm PalletSet W



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



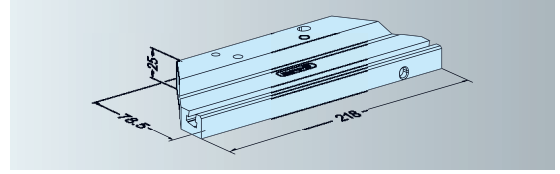
EROWA Wire EDM Tooling

Fixtures for adapters

ER-031945 Basic holder PalletSet W



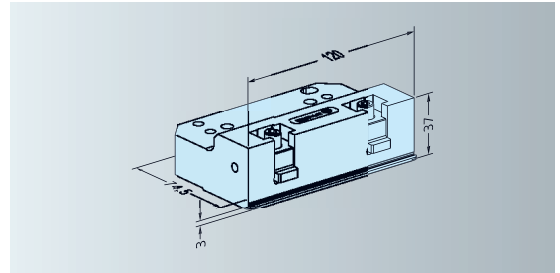
Version To accommodate various clamping elements.
 Application To fit to fixholder or pendulum holder 3D.
 Options Jaw holder ER-033958 or bracket holder ER-031952.



ER-025895 Vise PalletSet W 40 mm



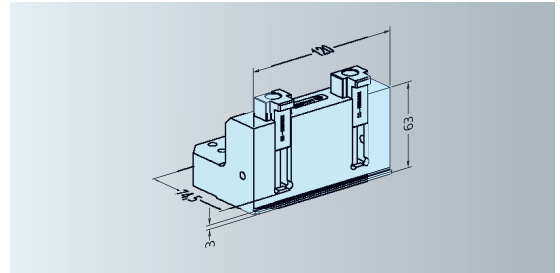
Version Vise with fixed Z-lip and jaws attached from above.
 Hardened and ground.
 Clamping range max. 150 x 150 x 40 mm.
 Max. load 12 kg.
 Application Lateral clamping of workpieces of 0 -150 mm machined from the outside. To be fitted to fix or pendulum holders.



ER-025896 Vise PalletSet W 100 mm



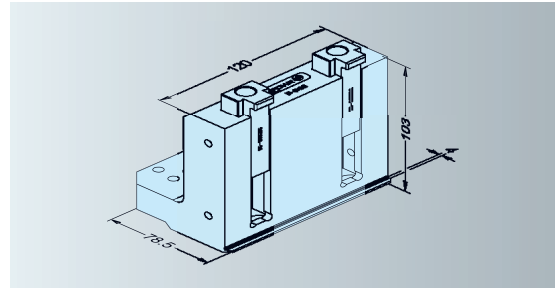
Version Vise with fixed Z-lip and jaws fitted from above.
 Application To clamp workpieces of up to 100 mm in height.
 To be fitted to fixholder or pendulum holder.
 Max. clamping range 150 x 150 x 100 mm.
 Max. load 12 kg.



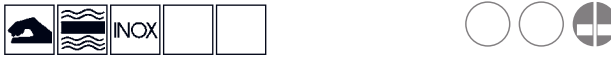
ER-034631 Vise PalletSet W 140 mm



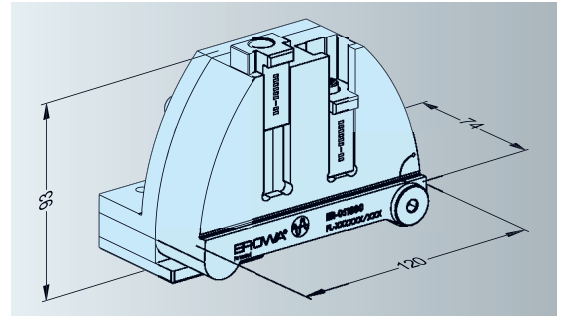
Version Vise with fixed Z-lip and jaws fitted from above. Hardened and ground.
 Application To clamp workpieces of up to 140mm in height.
 To be fitted to fixholder or pendulum holder.
 Max. load 12 kg.
 Max. clamping range 150 x 100 x 140 mm.



ER-051800 Sine vise PalletSet W



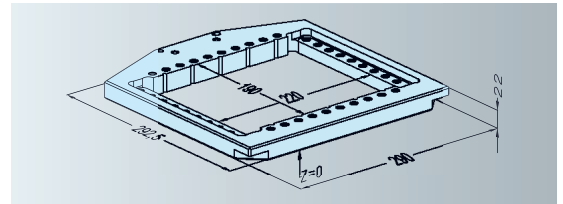
Version Vise with adjustable angle position and jaws fitted from above. Hardened and ground.
 Application To clamp workpieces at angles adjustable between 0-90°. To fit to fixholder or pendulum holder.
 Clamping range min. 10 mm / max. 75 mm
 Max. load 12 kg.



ER-018941 Frame pallet PalletSet W



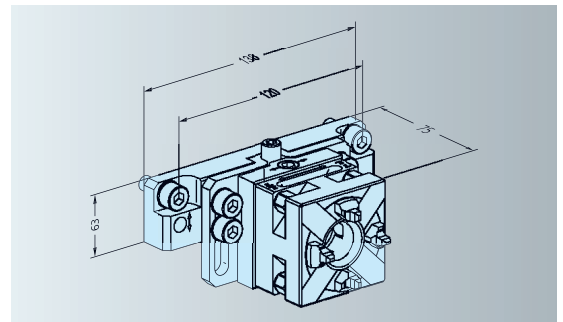
Version Clamping frame for multiple palletization of workpieces.
 Application To be fitted to fix holders or pendulum holders.
 Option Clamping beam 220 ER-017645.
 Note To support the clamping frame, use Z-supports (Page 278).



ER-029228 Z-Vario QuickChuck PalletSet W



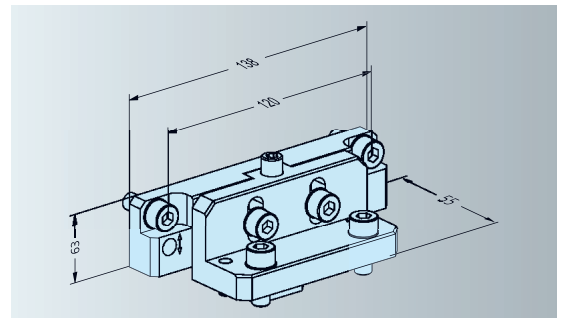
Version Fits 3D ER-030923 pendulum holder. Hardened and ground..
 Max. load 8 kg.
 Clamping range max. height adjustment 30 mm.
 Application To machine electrodes in PSW which have to be adjusted in height.



ER-029229 Z-Vario clamping elements PalletSet W

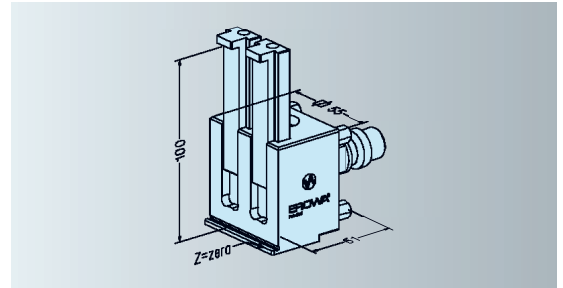


Version Fits 3D ER-030923 pendulum holder. Hardened and ground.
 Max. load 8 kg.
 Clamping range max. height adjustment 30 mm.
 Application PSW clamping elements can also be adjusted in height.

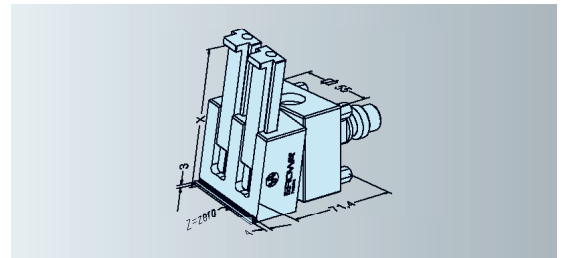


ER-008814 Precision vise 0 - 100 UnoSet

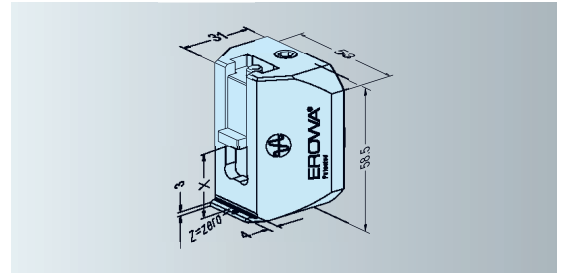
Clamping range	Ranges from 0 to 100 mm.
Max. extension	40 mm at 100 mm workpiece height.
Zuladung	max. 5 kg.
Version	Workpiece fixed. Including three sets of clamping jaws.

**ER-007935 Rotary vise 0 - 100 UnoSet**

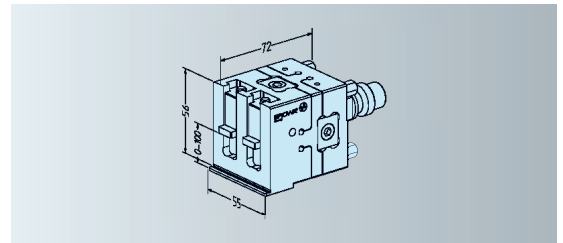
Clamping range	0-100 mm.
Max. extension	40 mm with 100 mm part height.
Zuladung	max. 5 kg.
Version	Continuously able to rotate around 360°. Set with three pairs of clamping jaws.

**ER-014698 VeeVise UnoSet**

Clamping range	0-100 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**

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.



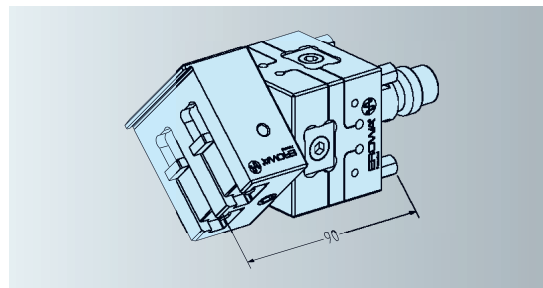
EROWA Wire EDM Tooling

Fixtures for adapters

ER-008856 Rotatable pendulum vise 0 - 100 UnoSet



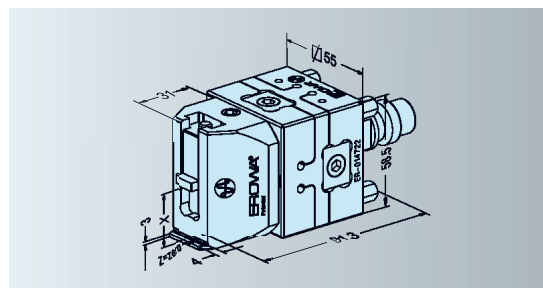
Clamping range 0-100 mm.
 Max. extension 40 mm with 100 mm part height.
 Zuladung max. 5 kg.
 Version For adjustable workpiece positioning in three axes. Continuously able to rotate around 360°. Set with three pairs of clamping jaws.



ER-014722 VeeVise TP UnoSet



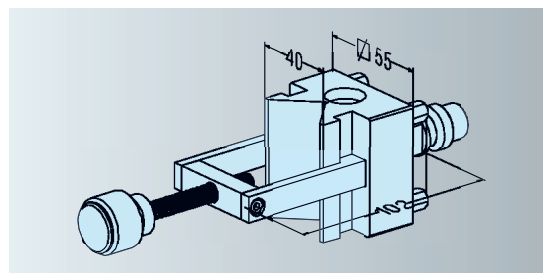
Clamping range 0-100 mm.
 Max. extension 40 mm with 100 mm part height.
 Zuladung max. 5 kg.
 Version For adjustable workpiece positioning in three axes. Continuously able to rotate around 360°. Set with three clamping jaws.



ER-016691 V-block holder UnoSet



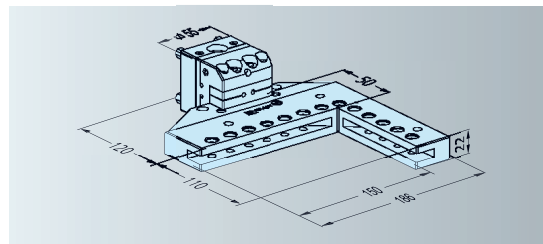
Clamping range Parts up to \varnothing 40 x H 150 mm.
 Max. load 1.5 kg.
 Application To clamp parts in prismatic slot. Parallel and angular precision 0.01 mm.



ER-015670 UniVise P UnoSet



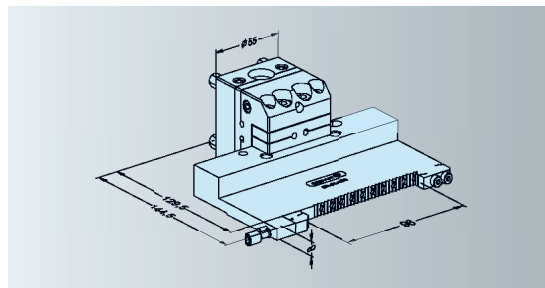
Clamping range Round parts: \varnothing 5-85 mm.
 Flat parts: 140 x 100 mm.
 Max. load 5 kg.
 Version Complete set with all clamping accessories. Workpiece adjustable in three axes.



ER-055535 Flat vise 8 mm UnoSet



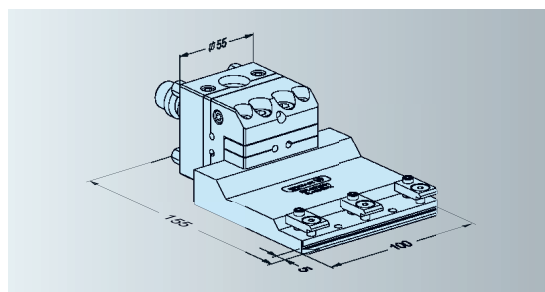
Version One movable jaw and one fixed jaw. Hardened, ground and corrosion-resistant.
Clamping range 0 - 96 mm.
Max. load 5 kg.
Application Lateral clamping of workpieces machined outside of 0 - 96 mm.



ER-052091 Support straight UnoSet with mini clamp



Version Vertical clamping of workpieces.
Clamping range 0 - 40 mm.
Max. load 5 kg.
Application Vertical clamping of workpieces.



EROWA Wire EDM Tooling

Clamping elements for fixtures

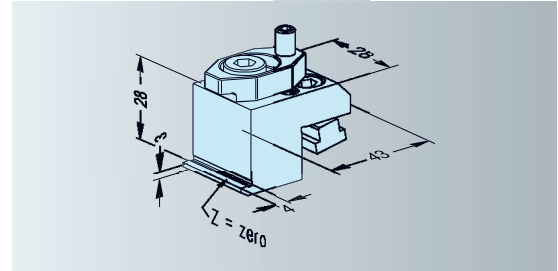
ER-031952 Bracket holder PalletSet W (1 pair)



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.



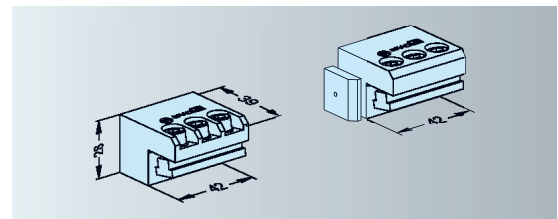
ER-033958 Jaw holder PalletSet W



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.



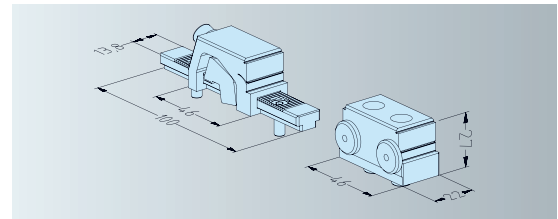
ER-062788 BeamVise Single



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.



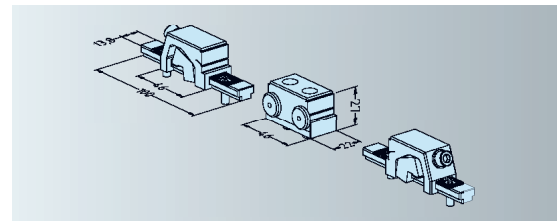
ER-062789 BeamVise Twin



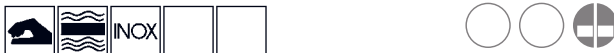
Version Two movable stop jaws and one fixed stop jaw. Hardened, ground, corrosion-resistant.

Application Variable vise laterally on EROWA clamping beams.

Assembly With the enclosed assembly elements to the desired clamping beam PalletSet W ER-018937.



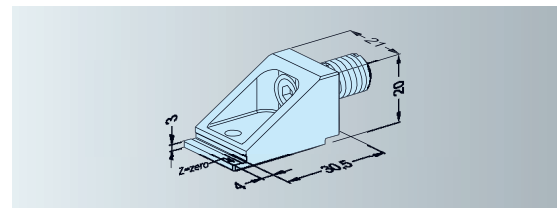
ER-008231 Mini distance support



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.

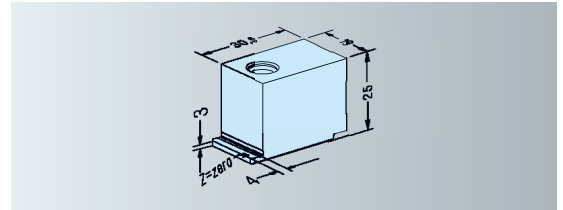
Use On all clamping and gripping beam ER-018937.



ER-008875 Fixed distance support



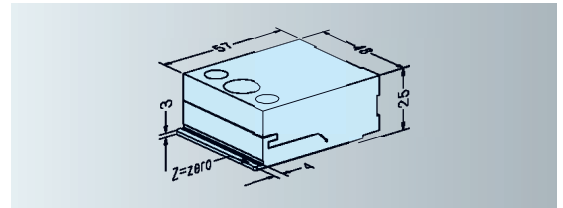
Application As side support for workpieces, or for clamping small single parts.
Presetting The support surface height corresponds to $Z = 0$ and is not adjustable.
Use On all clamping beams up to 460 mm length.



ER-008873 Adjustable distance support



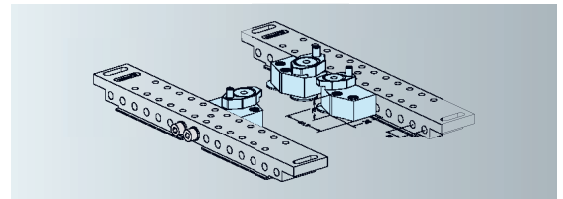
Application As side support for workpieces, or for clamping small single parts.
Presetting The support surface height corresponds to $Z = 0$ and is adjustable ± 0.15 mm.
Use On all clamping and gripping beams.



ER-007990 DiaFix 3 pieces



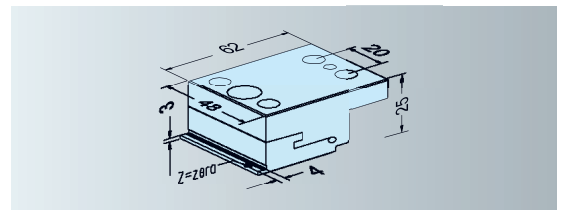
Application For supporting round parts with diameters starting at 50 mm, or as a side support for rectangular workpieces.
Presetting The support surface height corresponds to $Z = 0$ and is not adjustable.
Use On all clamping beams.



ER-008221 Z beam



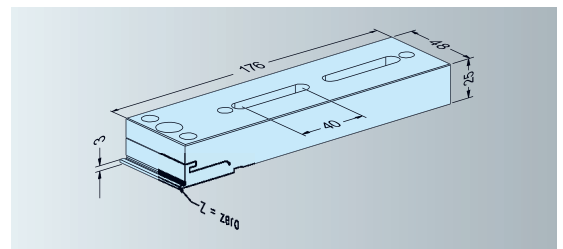
Application As side support for workpieces, or for clamping small single parts.
Presetting The support surface height corresponds to $Z = 0$ and is adjustable ± 0.15 mm.
Use On all plates and beams with $Z = + 14$ mm.



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 $Z = 0$.



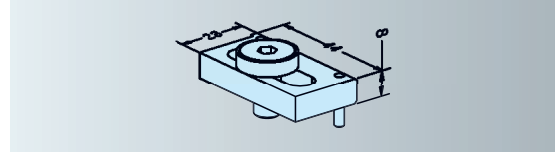
EROWA Wire EDM Tooling

Clamping elements for fixtures

ER-016657 BeamStop set



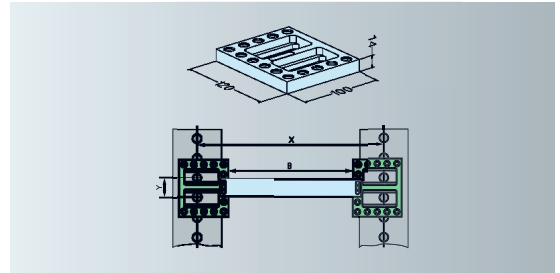
- Version Set of two stops for EROWA beams. Hardened, ground, corrosion-resistant.
- Application On ManoSet base rails, on Basic Adapter and in RoboSet Clamping frames.
- Assembly With the enclosed bolts.



ER-016652 Basic adapter set, 120x100x14 mm



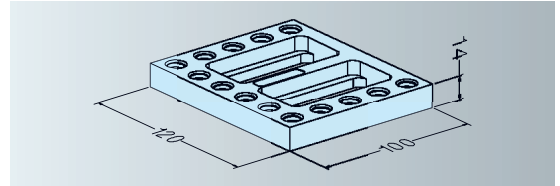
- Version A pair of ground, hardened, corrosion-resistant steel plates with variable assembly hole grids, including BeamStop.
- Application Base on WEDM machines unequipped with tooling system for the use of EROWA ManoSet clamping beams.
- Assembly With the enclosed assembly elements directly onto the existing Z-zero machine structure.



ER-017198 Basic adapter 120x100x14 mm



- 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.



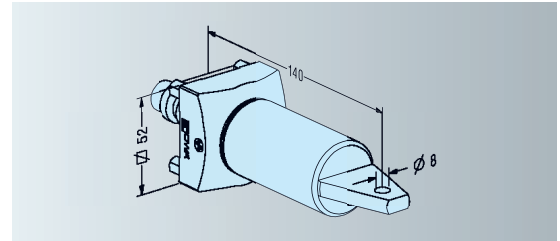
EROWA Wire EDM Tooling

Accessories

ER-012727 Reference pin UnoSet



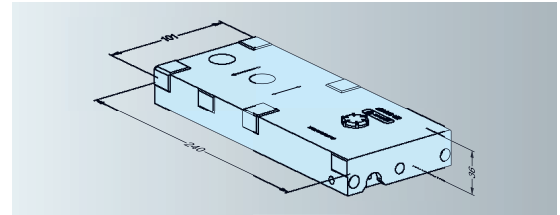
Version Hardened, ground, borehole \varnothing 8 mm.
Application To determine reference measurements on horizontal chucks.



ER-055158 Alignment pallet for PalletSet W



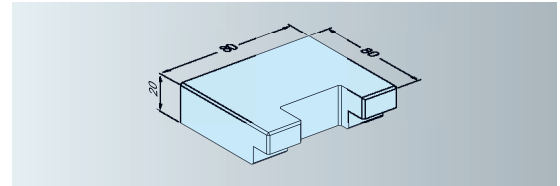
Version Hardened, ground gauge with lateral reference surfaces and two defined reference boreholes.
Application To determine the reference point and to align chucks.



ER-022669 Bracket for flat chuck FSF without fixing borehole, 2 pieces



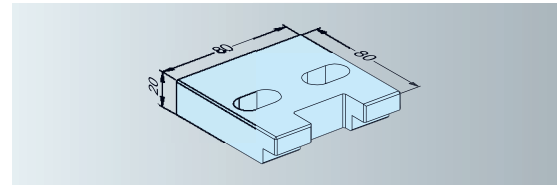
Version Steel, unhardened. Set of 2.
Application To fit flat chucks to WEDM centers.



ER-022670 Bracket for flat chuck FSF Agie, 2 pieces



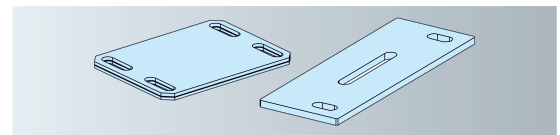
Version Steel, with attachment boreholes. Set of 2.
Application To fit flat chucks to Agie WEDM centers.



ER-028913 Insulation set PalletSet W



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

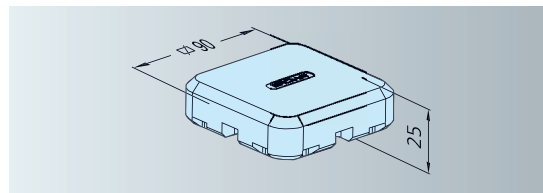


EROWA Wire EDM Tooling Accessories

ER-026768 Cover for flat chuck FSF



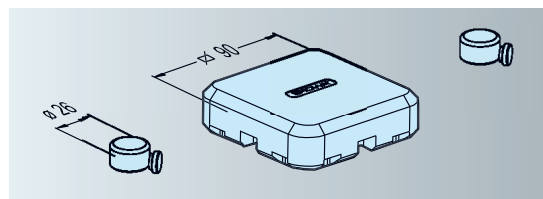
Version Cover for flat chucks
Application Protects flat chucks that are not in use against contamination and damage.



ER-027695 Cover for flat clamping chuck PalletSet W



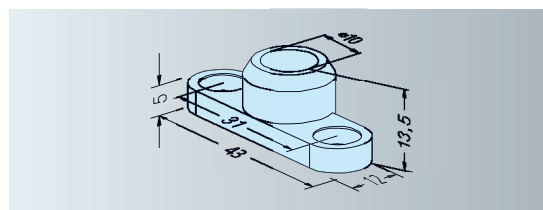
Version Set consisting of 2 covers for flat chucks and 4 covers for Z-supports.
Application Protects flat chucks and Z-supports that are not use against contamination and damage.



ER-035156 EWIS™ Rapid chip with chip holder long with chip \varnothing 12,4 x 2 mm



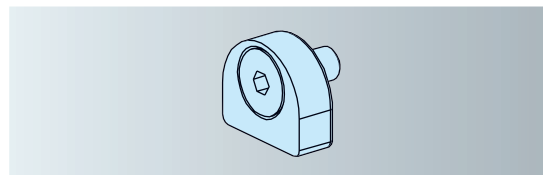
Version Holder with built-in datacarrier.
Application EWIS™ Chip: read only.
With EROWA Collet Chuck holders and Square 15/25 holders.
Mounting With supplied M4 bolts.



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



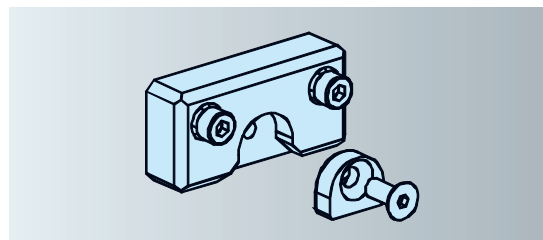
Version Holder with built-in data carrier. EWIS chip: read only.
Application To build into RCS coupling, PalletSet W holder and Basic WEDM holder.



ER-041179 Chip holder FrameSet EWIS™ Rapid mit Chip \varnothing 3,15 x 13,3 mm



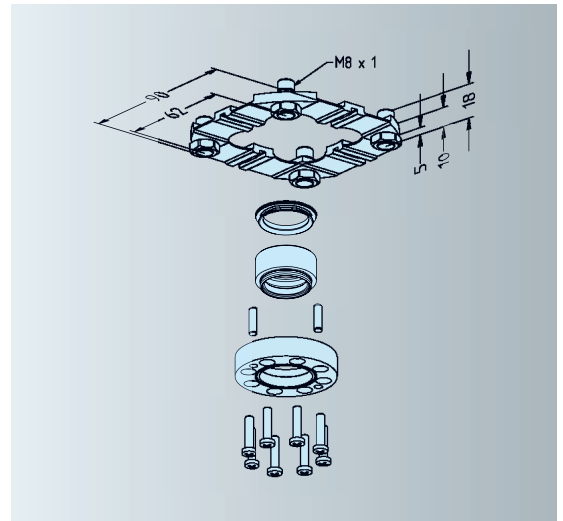
Version Holder with built-in data carrier. EWIS chip: read only.
Application To build into FrameSet clamping frames.



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



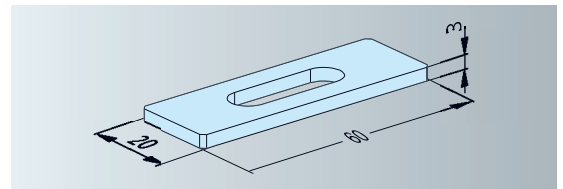
Version Set of 5, including support feet.
Application To be fitted directly to workpiece and electrodes to be used on flat chucks.



**ER-008910 Spacer plate 3 mm
8 pieces**



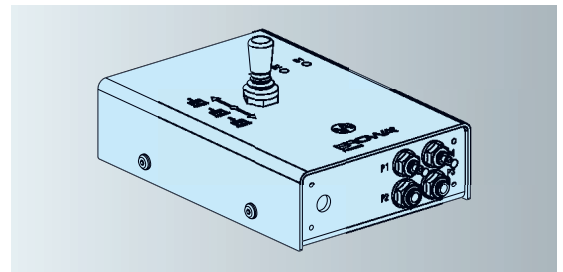
Version Set of 8 plates. Ground, hardened.
Application To fit underneath clamping beams to raise the Z-support by 3 mm. This prevents collisions in the working range of the lower flushing nozzles.



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.

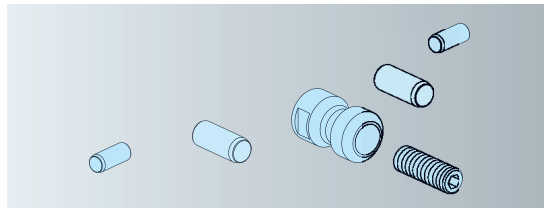


EROWA Wire EDM Tooling Accessories

ER-018936 GripperLink RCS PalletSet W

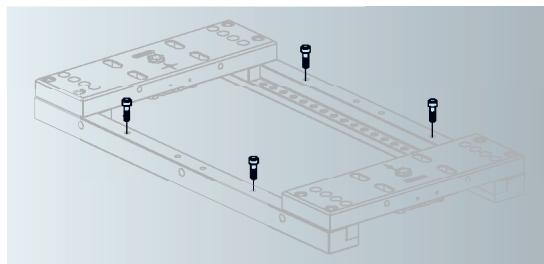


- Version** Gripper coupling for RCS gripper, consisting of 4 positioning pins and a chucking spigot.
- Application** On all EROWA handling devices equipped with the RCS coupling system.
- Assembly** Glue in pins according to instructions, fit chucking spigot with bolt.
- Note** Recess for EWIS chip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



ER-034533 FrameSet gripper bolts 4 pieces

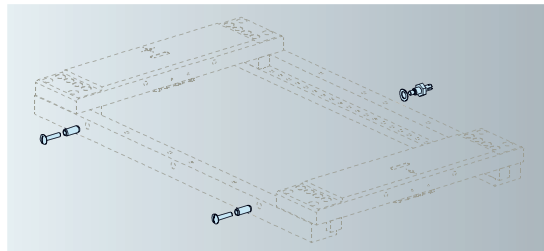
- Version** Set of 4 gripper bolts.
- Application** For FrameSet clamping frames with EROWA handling facilities.
- Note** Can only be used in connection with FrameSet gripper automation.



ER-022465 Coupling kit FrameSet manual

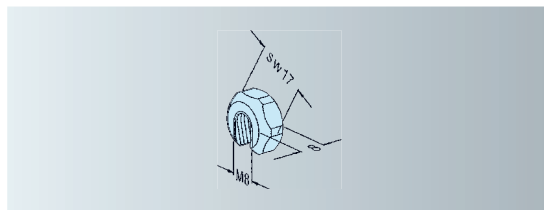


- Version** Set including 2 gripper pins, 2 M6x30 bolts, 1 cord holder, 1 spring washer.
- Application** To take up FrameSet frames with the EROWA Lift.



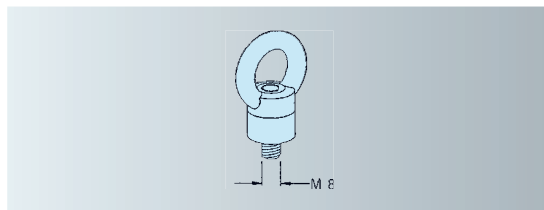
ER-008846 Slotted nut M8 10 pieces

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



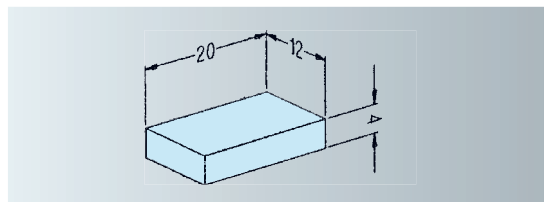
ER-008848 Eye bolt M8 1 couple

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



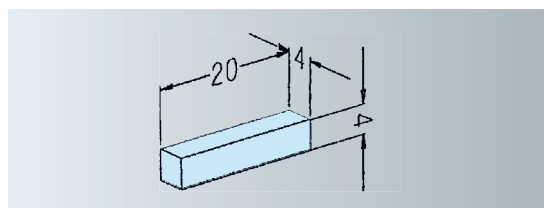
**ER-007799 Spacer plate large
50 pieces**

Quantity 50
Application As supports for chucking claws.



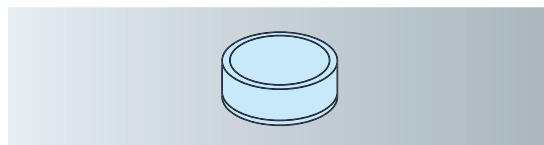
**ER-007781 Spacer plate small
50 pieces**

Quantity 50
Application As supports for chucking claws.



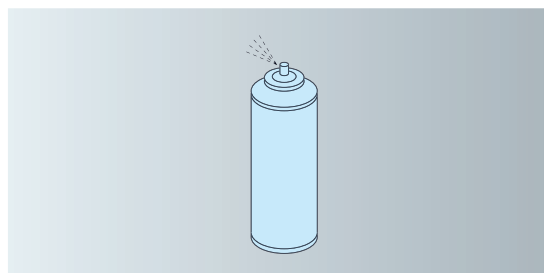
**ER-001674 Erogrease (corrosion protection)
1 kg OKS 403**

Version 1 kg 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.



EROWA Wire EDM Tooling Kit

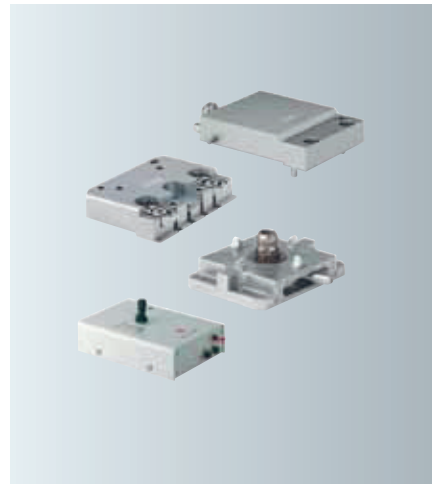
ER-009696	UnoSet Basic Kit manual
ER-007962	UnoSet Basic Kit pneumatic
Version	Basic tooling system equipment for WEDM centers.
Application	Suitable for the palletization of small and medium sized workpieces.
Mounting	Depending on the machine base, we recommend the multi-adapter plate ER-017198.
Kit 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 Wire EDM Tooling

Set of clamping elements

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.

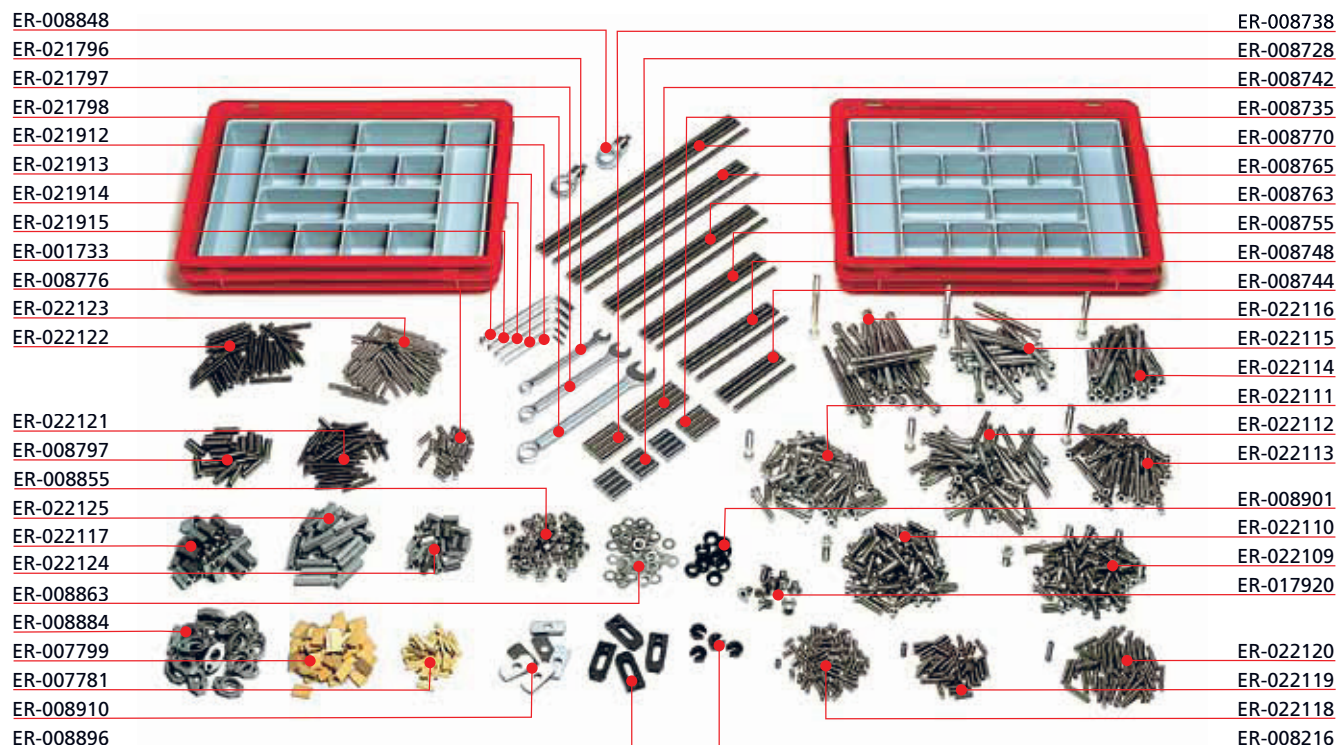
Order number	Description	Units per set	Units supplied by order number
ER-002611	Hex key SW 5	1	1
ER-007729	Z-washer 3 mm	10	1
ER-007768	Hex key SW 3	1	1
ER-007781	Spacer, small	50	50
ER-007799	Spacer, large	50	50
ER-008884	Clip, universal	10	4
ER-017920	Countersunk bolt M8 x 14	10	1
ER-022109	Socket 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 Wire EDM Tooling

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 $\varnothing 9$ L = 30	12	4
ER-008735	Straight pin $\varnothing 9$ L = 40	4	4
ER-008738	Straight pin $\varnothing 9$ L = 50	4	4
ER-008742	Straight pin $\varnothing 9$ 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-008868 Set of clamping elements, standard

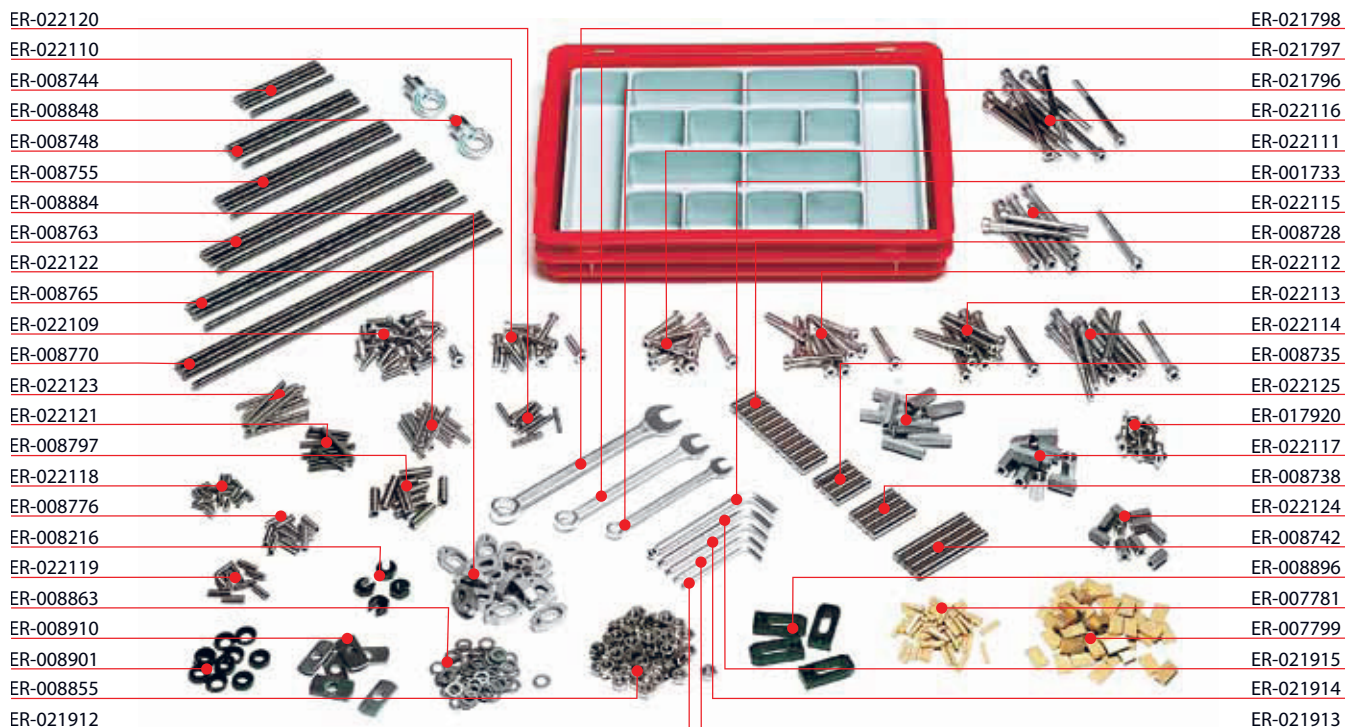
These materials have been packed in one solid plastic box.

Order number	Description	Units per set	Units supplied by order number
ER-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-008910	Spacer plate	8	8
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 Wire EDM Tooling

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, $\varnothing 9$ L = 30	12	4
ER-008735	Straight pin, $\varnothing 9$ L = 40	4	4
ER-008738	Straight pin, $\varnothing 9$ L = 50	4	4
ER-008742	Straight pin, $\varnothing 9$ 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-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-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-008910	Spacer plate	8	8
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 Wire EDM Tooling

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 \varnothing 15 x 8,4 x 1.6	20	50
ER-008896	Clamp 45 mm	8	4

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-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 Wire EDM Tooling

Set of clamping elements for Wire EDM Tooling

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



ER-019989 Set of clamping elements PalletSet W



ER-008215 Set of clamping elements Economy



ER-008301 Set of clamping elements XL



