



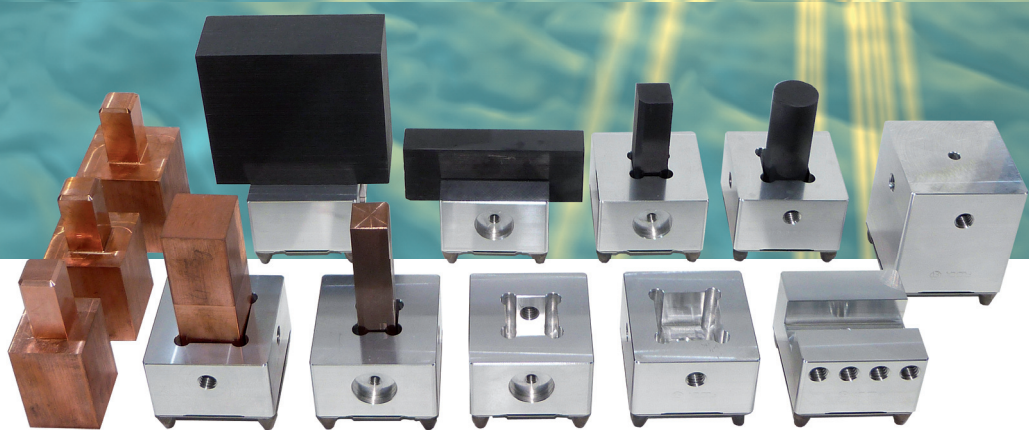
**AGS-TECH Inc.**

**Phone: +1-505-550-6501 and +1-505-565-5102; Fax: +1-505-814-5778**

**Email: sales@agstech.net**

**Web: <http://www.agstech.net>**

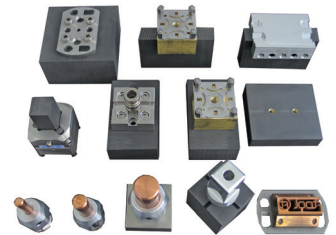
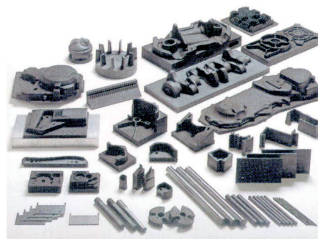
**EDM tooling**



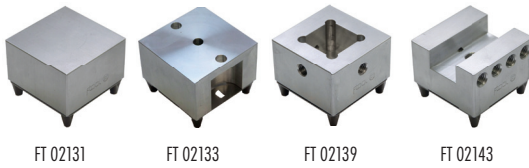
**Innovative Tooling Solutions**

# EDM tooling system

We deliver you from now on prefabricated blank electrodes and budget line EDM tooling systems of high quality.



## EROWA EDM licence products p. 5-6



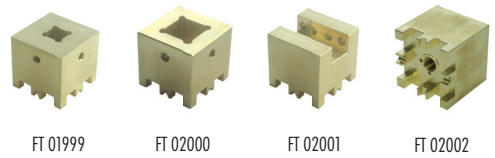
FT 02131

FT 02133

FT 02139

FT 02143

## H-link\*



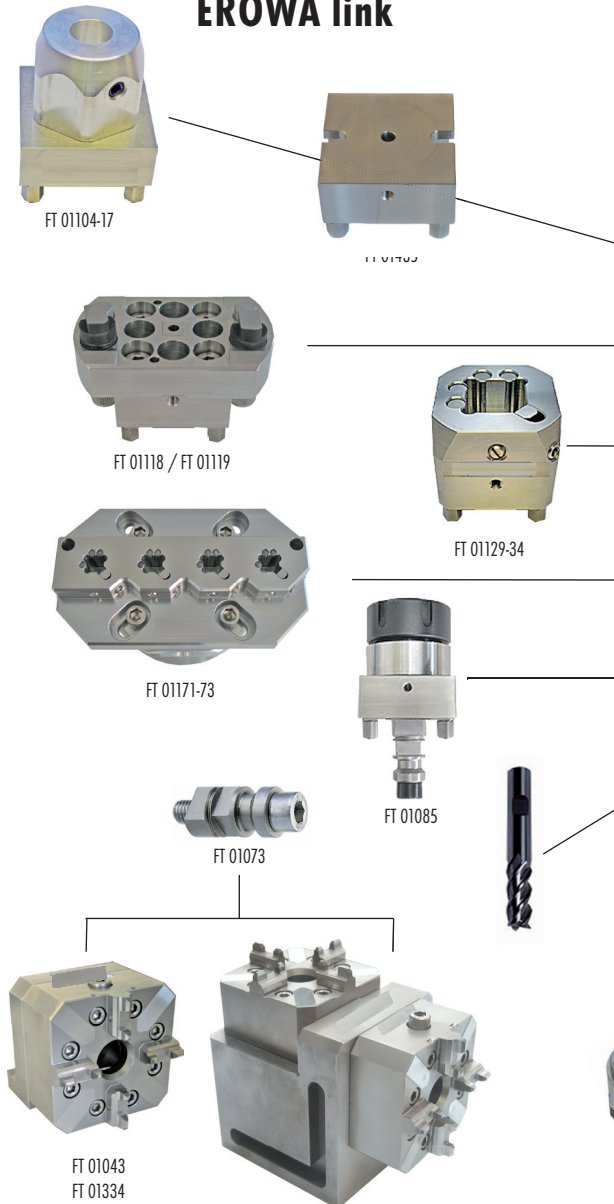
FT 01999

FT 02000

FT 02001

FT 02002

## EROWA link



FT 01104-17

FT 01105

FT 01118 / FT 01119

FT 01129-34

FT 01171-73

FT 01085

FT 01073

FT 01043  
FT 01334



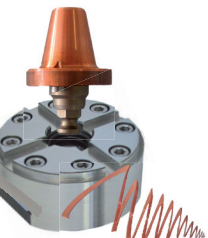
FT 01222



FT 01086

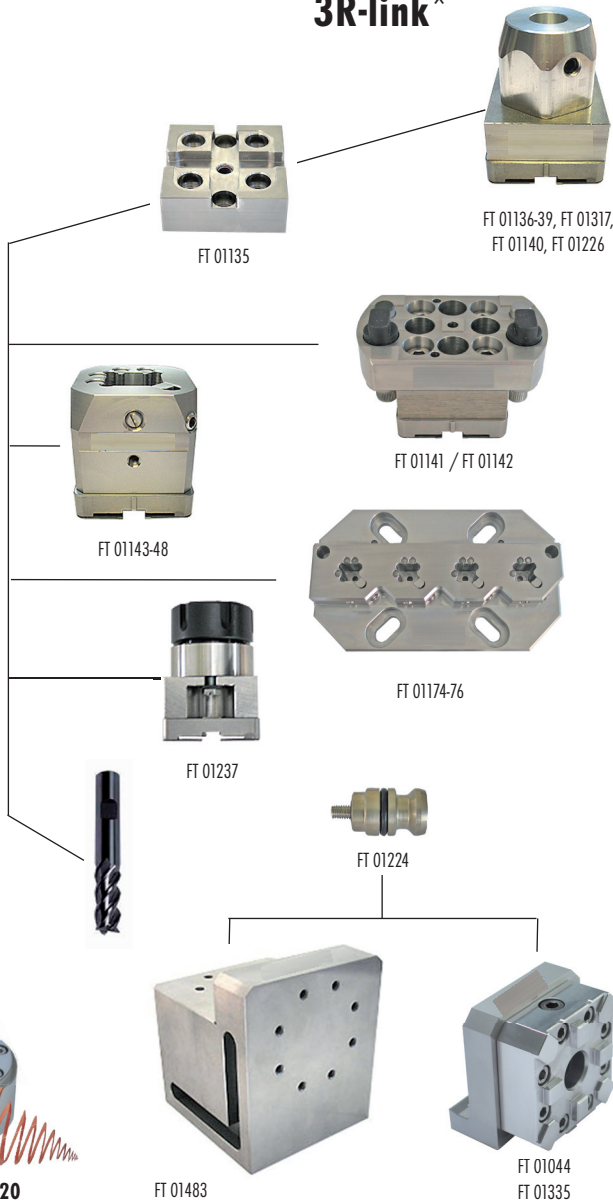


FT 01001-20



**PIN holder p. 20**

## 3R-link\*



FT 01135

FT 01136-39, FT 01317,  
FT 01140, FT 01226

FT 01141 / FT 01142

FT 01143-48

FT 01174-76

FT 01237

FT 01224

FT 01483

FT 01044  
FT 01335

\*H-link = compatible with Hirschmann

\*3R-link = compatible with 3R

## Sets

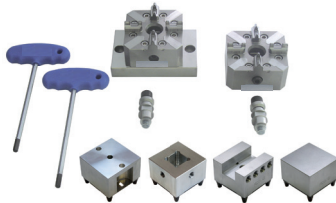


### EDM BeautyCase ERC-50

The EDM BeautyCase ERC-50 is an ideal, economic starter set for the EDM machining. The chuck ERC-50 can be used as a quill chuck or for the production of electrodes.

The set contains: 2x FT 02110 ER-Chuck 50 / FT 02107 universal adapter plate with flush connection / 2 x FT 01073 chucking spigot / 2x FT 02139 prisround / 2x FT 02143 uniholder / misc. screws and keys

Article no.	Article	Quantity	Weight	Code
FT 02120	EDM BeautyCase ERC-50	1 set	4.68 kg	B



### EDM ER-StarterSet ER80

The set contains: 2 x FT 01043 ER chuck 80P / FT 01336 Adapter plate 120 x 82 mm chuck 80/PIN chuck / 2 x FT 01073 Chucking spigot F/A EDM automatic with flushing / FT 02131 Uniblank ALU / FT 02133 Uniplate ALU / FT 02139 Prisround 25 ALU / FT 02143 Uniholder 20 ALU/ misc. screws and keys.

The ER-chuck-80P is compatible with the ITS50 / ITS100 / G-centring plates and the FT 01835 power plate.

Article no.	Article	Quantity	Weight	Code
FT 02050	EDM ER-StarterSet ER80	1 set	8.00 kg	B



### 5S-PowerSet

The 5S-PowerSet is a wide clamping element set, suited for the 5-side machining of work pieces on 3-axis milling machines. The set contains:

1 x FT 01483 Square block chuck 80/PIN chuck with 2 x FT 01043 ER chuck 80P

1 x FT 01811 PIN MultiClamp 181 x 72 mm B40, corrosion-resistant

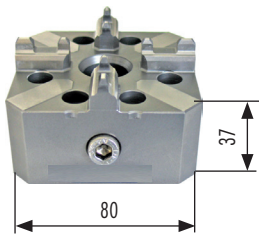
2 x FT 01949 Pallet PP148 alu (Power Plate)

2 x FT 01835 ER-PowerPlate (individual centering plate for pallets and fixtures)

4 x FT 01074 Chucking spigot F/M long without flushing

Article no.	Article	Quantity	Weight	Code
FT 02003	5S-PowerSet	1 Set	18.60 kg	P

## EDM basis equipment - EROWA link



### ER chuck 80P

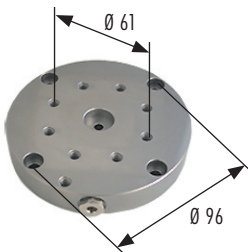
Manual ER chuck. Hardened, stainless steel.

For the system sizes ER 50 and 100. Hole pattern ER chuck: 8 x M6 TK Ø 61 x 45°

Grinded taper for the power centering. Strong floating clamping mechanism.

Tension force by hand with Allen key: 8'000 N

Article no.	Article	Quantity	Weight	Code
FT 01043	ER chuck 80P	1 piece	1.60 kg	A



### EDM adapter plate

Parallel grinded, stainless adapter plate for EDM quills. With flushing connection and M6 thread for power cable.

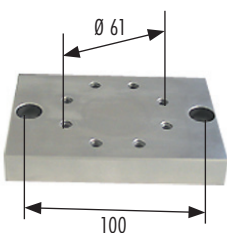
Dimension: Ø 110 x 18 mm

Hole pattern for chuck: 8 x M6 TK Ø 61 x 45°

Hole pattern for quill: 4 x 6.5 TK Ø 96 x 90°

Article no.	Article	Quantity	Weight	Code
FT 01236	EDM adapter plate Ø 110 mm chuck 80/PIN chuck	1 piece	1.32 kg	A
FT 01829	EDM adapter plate Ø 110 mm without hole pattern Ø 96 mm	1 piece	1.32 kg	A

**Delivered with screws and flushing seal.**



### Adapter plate

Parallel grinded, stainless adapter plate, suited for machine tool tables.

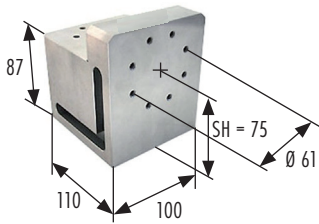
Dimension: 120 x 82 x 18 mm

Hole pattern collet chuck: 8 x M6 TK Ø 61 x 45°

Collet machine tool table: with brackets or 2 x M8 distance 100 mm

Article no.	Article	Quantity	Weight	Code
FT 01336	Adapter plate 120 x 82 mm chuck 80/PIN chuck	1 piece	1.40 kg	A





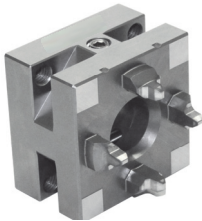
**Square block**

Accurate grinded square block, rustless, for the assembling of one or two ER chuck 80P (FT 01043), chuck 80 IF3R (FT 01044) or PIN center chuck (FT 01716) in vertical or horizontal position.

For the application with brackets on divers tooling machines.

Spindle height at horizontal installation of the chuck: 75 mm

Article no.	Article	Quantity	Weight	Code
FT 01483	Square block chuck 80/PIN chuck	1 piece	8.20 kg	A

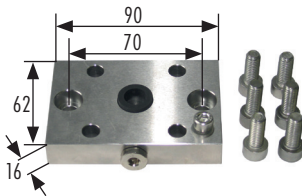


**ER-Chuck 50**

ITS chuck system size 50, manual, corrosion-resistant. Fixing with 4 x M8, hole pattern 44 mm, from back side or with 4 x M6 with stud bolts and screw nut. Use on EDM / WEDM machines and for milling, rotation and grinding jobs.

Clamping force 4000 N.

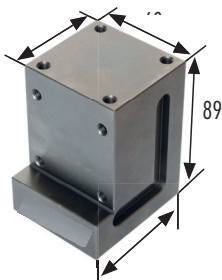
Article no.	Article	Quantity	Weight	Code
FT 02110	ER-chuck 50	1 piece	0.72 kg	B



**Universal adapter plate FTC 50**

The universal adapter plate ERC 50 with flush connection and electric cable fixation can be used as quill adapter on EDM machines or assembling plate on the machine tool.

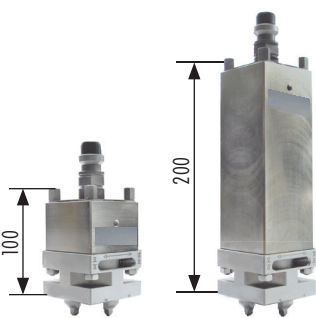
Article no.	Article	Quantity	Weight	Code
FT 02107	Universal adapter plate FTC 50 (with flushing hole)	1 piece	0.59 kg	A



**Square block ERC-50**

The square block ERC-50 is hardened, rust-resistant and ground very precise. The block is qualified optimally for the use on electrode milling, as angle adapter or as extension.

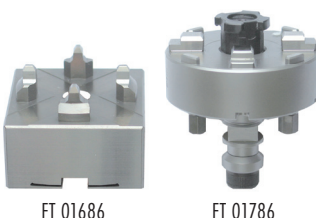
Article no.	Article	Quantity	Weight	Code
FT 02106	Square block ERC-50	1 piece	2.35 kg	A



**Extension ER-Chuck 50**

Extension ER-Chuck 50 of stainless steel.

Article no.	Article	Quantity	Weight	Code
FT 01768	Extension ER-Chuck 50 / L = 100 mm	1 piece	1.55 kg	B
FT 01769	Extension ER-Chuck 50 / L = 200 mm	1 piece	3.74 kg	B



**Adapters EROWA-IF3R/IF3R-EROWA**

The adapters are aligned in the area of 0.01 mm to the original system.

System of stainless, hardened steel.

Article no.	Article	Quantity	Weight	Code
FT 01686	System adapter IF3R Macro / ITS 50	1 piece	0.61 kg	B
FT 01786	System adapter ITS 50 / IF3R	1 piece	0.93 kg	B



## We get the point

The new ALU holders are an economic alternative for clamping electrode blanks. To clamp the electrode blanks centric even more comfortable, we offer as standard electrode holders for three different shaft sizes and two different slot widths. .

The special advantages for the ALU holders are:

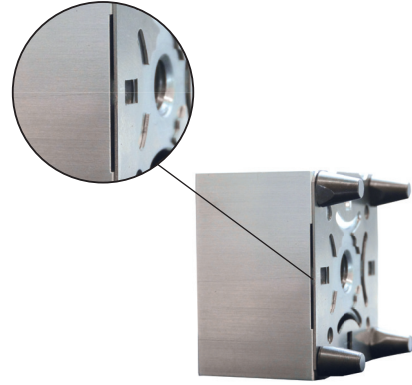
- Very economic
- Low weight, very easy in handling and transport
- For the manual or automatic application with our without EWIS chip
- Soil-resisting and trouble-free, conical formed supporting feet



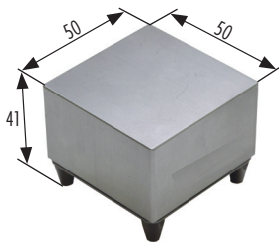
With or without EWIS preparation



Conical formed supporting feet



Solid centring plate, mounted directly



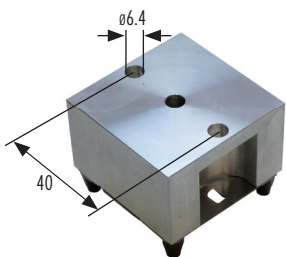
### Uniblank ALU

Version: Fitted without machining of body.  
 Application: To mount electrodes and workpieces of various shapes.  
 To fit blank: As required.

Article no.	Article	Quantity	Weight	Code
FT 02131	Uniblank ALU <b>without</b> EWIS preparation	Set of 10 pieces	2.20 kg	B
FT 02132	Uniblank ALU <b>with</b> EWIS preparation	Set of 10 pieces	2.20 kg	B
FT 01077*	Uniblank brass <b>without</b> EWIS preparation	Set of 10 pieces	6.90 kg	B

Delivered without chucking spigots.

\*Dimension, supporting feet and centring plate in original form



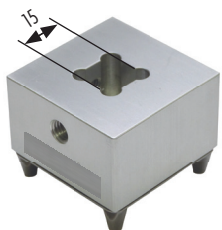
### Uniplate ALU

Version: Surface 50 x 50 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.

Article no.	Article	Quantity	Weight	Code
FT 02133	Uniplate ALU <b>without</b> EWIS preparation	Set of 10 pieces	2.20 kg	B
FT 02134	Uniplate ALU <b>with</b> EWIS preparation	Set of 10 pieces	2.20 kg	B
FT 01079*	Uniplate brass <b>without</b> EWIS preparation	Set of 10 pieces	5.80 kg	B

Delivered without chucking spigots.

\*Dimension, supporting feet and centring plate in original form



### Prisround ALU 15mm

Version: Square 16.0 mm milled. Including 2 stud bolts. Fixed stop X, Y from the centre 7.5 +/- 0,05 mm.  
 Clamping depth 19 mm, Fixed stop hZ = 22 +/- 0.05 mm.  
 Application: To mount electrodes and work pieces with a shank size of less than 15 mm.  
 To fit blank: Insert and tighten setscrews. If necessary, center with spacer plate FT 01092.

Article no.	Article	Quantity	Weight	Code
FT 02135	Prisround ALU 15mm <b>without</b> EWIS preparation	Set of 10 pieces	2.00 kg	B
FT 02136	Prisround ALU 15mm <b>with</b> EWIS preparation	Set of 10 pieces	2.00 kg	B

Delivered without chucking spigots.



**Prisround ALU 20mm**

Version: Square 21.0 mm milled. Including 2 stud bolts. Fixed stop X, Y from the centre 7.5 +/- 0,05 mm.  
Clamping depth 19 mm, Fixed stop hZ = 22 +/- 0.05 mm.

Application: To mount electrodes and work pieces with a shank size of less than 20 mm.

To fit blank: Insert and tighten setscrews. If necessary, center with spacer plate FT 01092.

Article no.	Article	Quantity	Weight	Code
FT 02137	Prisround ALU 20mm <b>without</b> EWIS preparation	Set of 10 pieces	2.00 kg	B
FT 02138	Prisround ALU 20mm <b>with</b> EWIS preparation	Set of 10 pieces	2.00 kg	B

**Delivered without chucking spigots.**



**Prisround ALU 25mm**

Version: Square 26.0 mm milled. Including 2 stud bolts. Fixed stop X, Y from the centre 7.5 +/- 0,05 mm.  
Clamping depth 25 mm, Fixed stop hZ = 22 +/- 0.05 mm.

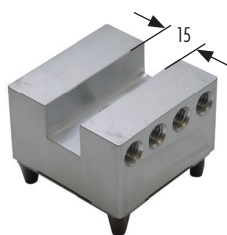
Application: To mount electrodes and work pieces with a shank size of less than 25 mm.

To fit blank: Insert and tighten setscrews. If necessary, center with spacer plate FT 01092.

Article no.	Article	Quantity	Weight	Code
FT 02139	Prisround ALU 25mm <b>without</b> EWIS preparation	Set of 10 pieces	1.80 kg	B
FT 02140	Prisround ALU 25mm <b>with</b> EWIS preparation	Set of 10 pieces	1.80 kg	B
FT 01081*	Prisround brass <b>without</b> EWIS preparation (51 x 51 mm)	Set of 10 pieces	5.60 kg	B

**Delivered without chucking spigots.**

\*Dimension, supporting feet and centring plate in original form



**Uniholder ALU 15mm**

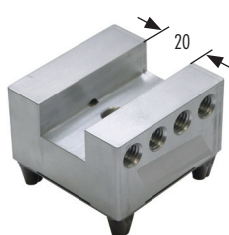
Version: Slot 15.5 mm routed including 2 stud bolts. Clamping depth 13 mm. Fixed top hZ = 28 +/- 0.05 mm.

Application: To mount electrodes and work pieces with a clamping width up to 15 mm.

To fit blank: Insert and tighten setscrews. If necessary, center with spacer plate FT 01092.

Article no.	Article	Quantity	Weight	Code
FT 02141	Uniholder ALU 15mm <b>without</b> EWIS preparation	Set of 10 pieces	1.80 kg	B
FT 02142	Uniholder ALU 15mm <b>with</b> EWIS preparation	Set of 10 pieces	1.80 kg	B

**Delivered without chucking spigots.**



**Uniholder 20mm**

Version: Slot 20.5 mm routed including 2 stud bolts. Clamping depth 13 mm. Fixed top hZ = 28 +/- 0.05 mm.

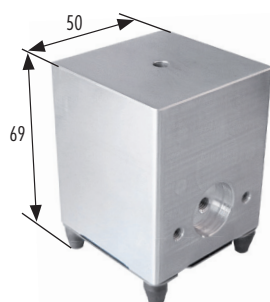
Application: To mount electrodes and work pieces with a clamping width up to 20 mm.

To fit blank: Insert and tighten setscrews. If necessary, center with spacer plate FT 01092.

Article no.	Article	Quantity	Weight	Code
FT 02143	Uniholder ALU 20mm <b>without</b> EWIS preparation	Set of 10 pieces	1.80 kg	B
FT 02144	Uniholder ALU 20mm <b>with</b> EWIS preparation	Set of 10 pieces	1.80 kg	B
FT 01084*	Uniholder brass <b>without</b> EWIS preparation (51 x 51 mm)	Set of 10 pieces	5.60 kg	B

**Delivered without chucking spigots.**

\*Dimension, supporting feet and centring plate in original form



**Electrode holders ALU XL**

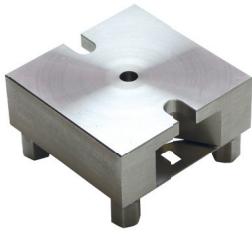
Version: The electrode holder XL is prepared with central flushing hole Ø 5 mm. Delivered with stud bolts M8.

Application: To mount electrodes and work pieces.

To fit blank: The electrode holder can be finished at will. Two pinholes M8 for the lateral clamping are prepared.

Article no.	Article	Quantity	Weight	Code
FT 02194	Electrode holder ALU XL EWIS	Set of 10 pieces	4.30 kg	A

**Delivered without chucking spigots.**



**ER-plate EWIS made of stainless steel**

This adapter plate is overwinded parallel in the system and provides an insertion of electrodes, work pieces and appliances. Made of stainless steel.

Hole distance with 2 x M6 screws: 40 mm

Article no.	Article	Quantity	Weight	Code
FT 01435	ER-plate EWIS	Set of 10 pieces	4.50 kg	A



**Collet chuck holder with EROWA interface**

Specification: Parameter EROWA ITS 50 or on 3R basis element.

Application: For collet chucks ETS32. Collet chuck Look at p. 21.

Article no.	Article	Quantity	Weight	Code
FT 01085	Collet chuck holder ETS32 / EWIS	1 piece	1.16 kg	A

**Delivered with chucking spigot F/A EDM FT 01073 without EWIS chip FT 01170.**

Article no.	Article	Quantity	Weight	Code
FT 02098	Collet chuck holder ETS32 / ECOpack	Set of 10 pieces	9.13 kg	A

**Delivered without chucking spigots.**



**Shaftholder with EROWA Interface**

Version: Shaftholder Ø 20h7 nitrided with cross slot 5 mm mounted and aligned on ER-pallet.

Application: For the receiving of 3R shafts Ø 20 mm.

Article no.	Article	Quantity	Weight	Code
FT 02109	Shaftholder Ø 20h7 IF-ER nitrided with cross slot 5 mm (for 3R shafts)	1 piece	1.06 kg	A
FT 02272	Shaftholder dm20h7-IF-Macro, nitrided, with cross slot 5 mm	1 piece	1.06 kg	A

**Delivered without chucking spigot.**

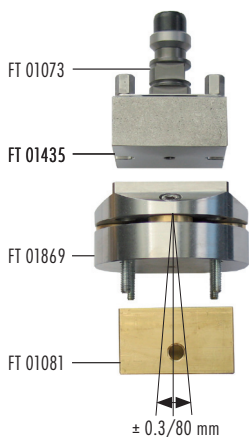


**UniV holder**

For the flexible clamping of round and square electrodes.

Article no.	Article	Quantity	Weight	Code
FT 01127	UniV holder 58 x 80 mm ER	1 piece	1.60 kg	A
FT 01128	UniV holder 58 x 80 mm IF3R	1 piece	1.94 kg	A

**Delivered without chucking spigot.**



**EDM swivel head Ø 72 mm**

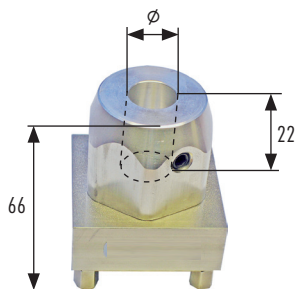
The swivel head can be adjusted independently in levels. Made of corrosion-resistant, hardened stainless steel. The swivel head can be utilized as a pendulum holder on the EDM machines and the wire EDM machines.

Article no.	Article	Quantity	Weight	Code
FT 01869	EDM swivel head Ø 72 mm	1 piece	0.96 kg	A

**All EROWA standard holder can be assembled on the EDM swivel head Ø 72, after removal of the centering plate 50.**

**Installation examples, see p. 29.**





### Holder with EROWA interface

Electrode holder, equipped with the repeat accurate ITS centering plate 50, assembled on the premium, stainless high-grade steel-basis plate. Incl. aluminium application for the shaft collet of divers diameters.

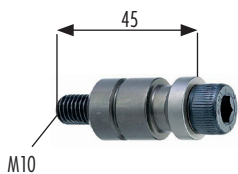
Adapted for clamping of copper- and graphite blanks and for high-precision handling of electrodes in the ITS clamping system and for the following application on the EDM plant.

The length of H = 66 mm has the advantage of an optimal sight when setting up and that shorter electrodes can be inserted, so the barrel chuck doesn't dip into the dielectric fluid.

Article no.	Article	Quantity	Weight	Code
FT 01104	Holder Ø 10 mm ER	Set of 10 pieces	5.60 kg	A
FT 01105	Holder Ø 10 mm EWIS	Set of 10 pieces	5.60 kg	A
FT 01106	Holder Ø 12 mm ER	Set of 10 pieces	5.60 kg	A
FT 01107	Holder Ø 12 mm EWIS	Set of 10 pieces	5.60 kg	A
FT 01108	Holder Ø 16 mm ER	Set of 10 pieces	5.50 kg	A
FT 01109	Holder Ø 16 mm EWIS	Set of 10 pieces	5.50 kg	A
FT 01110	Holder Ø 20 mm ER	Set of 10 pieces	5.40 kg	A
FT 01111	Holder Ø 20 mm EWIS	Set of 10 pieces	5.40 kg	A
FT 01112	Holder Ø 26 mm ER	Set of 10 pieces	5.30 kg	A
FT 01113	Holder Ø 26 mm EWIS	Set of 10 pieces	5.30 kg	A
FT 01114	Holder Ø 30 mm ER	Set of 10 pieces	5.30 kg	A
FT 01115	Holder Ø 30 mm EWIS	Set of 10 pieces	5.30 kg	A
FT 01116	Holder mixed set ER, of 2 x Ø 10 / 12 / 16 / 20 / 26 mm	Set of 10 pieces	5.50 kg	A
FT 01117	Holder mixed set EWIS, of 2 x Ø 10 / 12 / 16 / 20 / 26 mm	Set of 10 pieces	5.50 kg	A

ER = EROWA basis **without** EWIS preparation. EWIS = EROWA basis **with** EWIS preparation.

**Delivered without chucking spigot.**

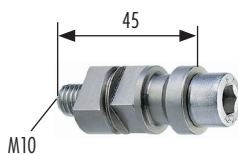


### Chucking spigot F/M EDM

Version: Fixed type, manual. Bolt, length 45 mm, with flushing hole.

Application: In ITS electrode holders.

Article no.	Article	Quantity	Weight	Code
FT 01072	Chucking spigot F/M EDM manual with flushing	Set of 10 pieces	0.83 kg	A

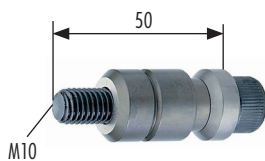


### Chucking spigot F/A EDM F/A WEDM

Version: Fixed type, automatic. Bolt, length 45 mm, with flushing hole.

Application: On all electrode holders that are changed automatically.

Article no.	Article	Quantity	Weight	Code
FT 01073	Chucking spigot F/A EDM automatic with flushing	Set of 10 pieces	0.72 kg	A
FT 01060	ER chucking spigot F/A WEDM	Set of 10 pieces	0.80 kg	B



### Chucking spigot F/M long without flushing

Version: Fixed type, manual. Bolt 12.9, length 50 mm, without flushing hole.

Application: In pallets for chip-cutting machining processes.

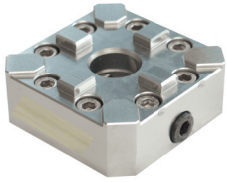
Article no.	Article	Quantity	Weight	Code
FT 01074	Chucking spigot F/M long without flushing	Set of 10 pieces	0.91 kg	A



### Compact chucking spigot combi

Application: To accommodate all the compact electrodes and electrode holders in ITS compact-combi chucks and electrode changers. For handling with the EROWA combi gripper.

Article no.	Article	Quantity	Weight	Code
FT 01089	Compact chucking spigot combi	Set of 10 pieces	0.53 kg	A



**Chuck 80 IF3R**

Manual chuck made by for 3R collet. Stainless. Strong, floating gripping mechanism.  
Clamping force by hand with Allen key: 5'000 - 8'000 N

Article no.	Article	Quantity	Weight	Code
FT 01044	Chuck 80 IF3R	1 piece	0.93 kg	A

→ Delivered with miscellaneous screw material and Allen key



**EDM adapter plate** (details on page 3)

Article no.	Article	Quantity	Weight	Code
FT 01236	EDM adapter plate Ø 110 mm chuck 80/PIN chuck	1 piece	1.32 kg	A
FT 01829	EDM adapter plate Ø 110 mm without hole pattern Ø 96 mm	1 piece	1.32 kg	A



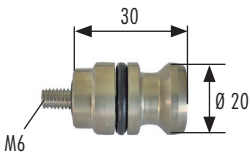
**Adapter plate** (details on page 3)

Article no.	Article	Quantity	Weight	Code
FT 01336	Adapter plate 120 x 82 mm chuck 80/PIN chuck	1 piece	1.40 kg	A



**Square block** (details on page 4)

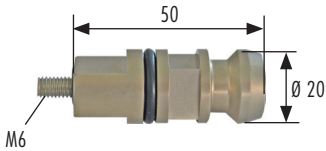
Article no.	Article	Quantity	Weight	Code
FT 01483	Square block chuck 80/PIN chuck	1 piece	8.20 kg	A



**Spigot 20 MS short M6 IF3R**

Version: Type Ø 20 short, M6 for helicoil in basic plate IF3R, rustless, the screw is provided with a central flushing hole.  
Application: For the manual application of basic plates IF3R (FT 01135) in the chuck 80 IF3R (FT 01044).

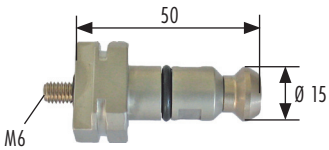
Article no.	Article	Quantity	Weight	Code
FT 01224	Spigot 20 MS short M6 IF3R	Set of 10 pieces	0.76 kg	A



**Spigot 20 ATC long M6 IF3R**

Version: Type Ø 20 long, M6 for helicoil in basic plate IF3R, rustless, the screw is provided with a central flushing hole.  
Application: For the manual or automatic application of basic plates IF3R (FT 01135) in the MACRO chuck.

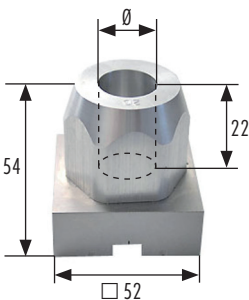
Article no.	Article	Quantity	Weight	Code
FT 01223	Spigot 20 ATC long M6 IF3R	Set of 10 pieces	0.91 kg	A



**Spigot 15 MC/ATC M6 IF3R**

Version: Type Ø 15, M6 for helicoil in basic plate IF3R, rustless, the screw is provided with a central flushing hole.  
Application: For the manual or automatic application of basic plates IF3R (FT 01135) in the MACRO/Combi chuck.

Article no.	Article	Quantity	Weight	Code
FT 01225	Spigot 15 MC/ATC M6 IF3R (Macro/Combi)	Set of 10 pieces	1.00 kg	A



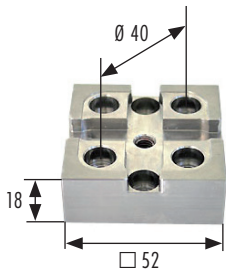
**Holder with basic plate IF3R**

Electrode holders, equipped with the rustless IF3R high-grade steel interface plate Including aluminium insert for the shaft collet of miscellaneous diameters. Appropriate for clamping of copper and graphite blanks and for the high-precision machining of electrodes in the chuck 80 IF3R (FT 01044) or MACRO chuck and for the following application on EDM machines.

Article no.	Article	Quantity	Weight	Code
FT 01136	Holder Ø 10 mm IF3R (compatible with 3R)	Set of 10 pieces	4.70 kg	A
FT 01137	Holder Ø 12 mm IF3R (compatible with 3R)	Set of 10 pieces	4.70 kg	A
FT 01138	Holder Ø 16 mm IF3R (compatible with 3R)	Set of 10 pieces	4.60 kg	A
FT 01139	Holder Ø 20 mm IF3R (compatible with 3R)	Set of 10 pieces	4.50 kg	A
FT 01317	Holder Ø 26 mm IF3R (compatible with 3R)	Set of 10 pieces	4.40 kg	A
FT 01140	Holder Ø 30 mm IF3R (compatible with 3R)	Set of 10 pieces	4.30 kg	A
FT 01226	Holder mixed set IF3R, of 2 x 10 / 12 / 16 / 20 / 26 mm	Set of 10 pieces	4.60 kg	A

Delivered without spigots.

Recommended spigots, according to chuck: FT 01223 / FT 01224 / FT 01225



**Basic plate IF3R**

The basic plates IF3R are standard adapters for miscellaneous collets or for the direct clamping of electrode blanks. The reference slot for the IF3R chucks is produced in high-precision.

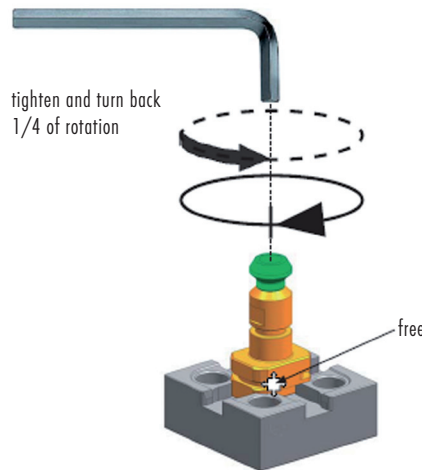
Material: rustless steel

Hole pattern: 6 x Ø 6.5 mm on reference circle diameter 40 mm

Article no.	Article	Quantity	Weight	Code
FT 01135	Basic plate IF3R	Set of 10 pieces	3.30 kg	A

**Delivered without spigots.**

**Recommended spigots, according to chuck: FT 01223 / FT 01224 / FT 01225**

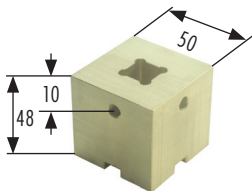


**Collet chuck holder with IF3R**

Collet chuck holder ETS32, rust resistant, assembled with sealing washer on a basic plate IF3R. Compatible with 3R-MACRO.

Article no.	Article	Quantity	Weight	Code
FT 01237	Collet chuck holder ETS32 / IF3R	1 piece	1.52 kg	A
FT 02017	Acorn nut M40 x 1.5 mm ETS32	1 piece	0.13 kg	B

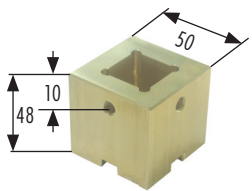
**Delivered without chucking spigot. Collets, see p. 21.**



**Brass holder IF3R**

Brass holder for the collet of square blanks 15. Compatible with chucks of the system 3R. The square collet was manufactured in reference position.

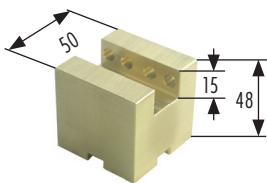
Article no.	Article	Quantity	Weight	Code
FT 01995	Square 15 Brass holder IF3R	Set of 10 pieces	8.50 kg	A



**Brass holder IF3R**

Brass holder for the collet of square blanks 25. Compatible with chucks of the system 3R. The square collet was manufactured in reference position.

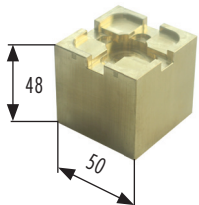
Article no.	Article	Quantity	Weight	Code
FT 01996	Square 25 Brass holder IF3R	Set of 10 pieces	7.40 kg	A



**Brass holder IF3R**

Brass holder for the collet of electrode blanks. Compatible with chucks of the system 3R. Clamping width up to 20 mm.

Article no.	Article	Quantity	Weight	Code
FT 01997	UNI Brass holder 20 IF3R	Set of 10 pieces	7.90 kg	A

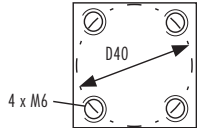


**Brass holder IF3R**

Brass holder for the collet of electrode blanks. Compatible with chucks of the system 3R. The clamping form and size can be attached individually on the holder.

Article no.	Article	Quantity	Weight	Code
FT 01998	UNI-Blank Brass holder IF3R	Set of 10 pieces	9.32 kg	A

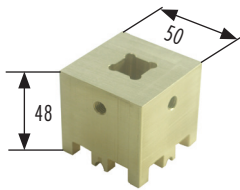
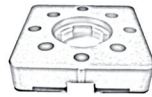




**Electrode holder**

Brazen electrode holder with hole pattern 4 x M6 on pitch circle 40 mm. For the assembling of IF3R reference elements.

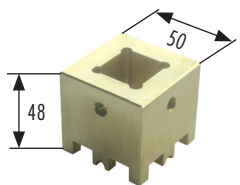
Article no.	Article	Quantity	Weight	Code
FT 01912	Uniholder 20 D40 M6 with slot width 20 mm	1 piece	0.48 kg	B
FT 01913	Prisround 25 D40 M6 with opening 25 x 25 mm	1 piece	0.48 kg	B



**Brass holder IF-H**

Brass holder for the collet of square blanks 15. Compatible with chucks of the system Hirschmann.

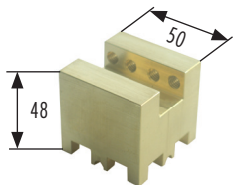
Article no.	Article	Quantity	Weight	Code
FT 01999	Square 15 Brass holder IF-H	Set of 10 pieces	7.77 kg	A



**Brass holder IF-H**

Brass holder for the collet of square blanks 25. Compatible with chucks of the system Hirschmann.

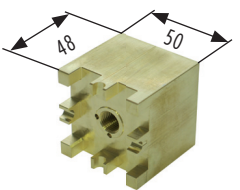
Article no.	Article	Quantity	Weight	Code
FT 02000	Square 25 Brass holder IF-H	Set of 10 pieces	6.90 kg	A



**Brass holder IF-H**

Brass holder for the collet of electrode blanks. Compatible with chucks of the system Hirschmann. Clamping width up to 20 mm.

Article no.	Article	Quantity	Weight	Code
FT 02001	UNI Brass holder 20 IF-H	Set of 10 pieces	7.08 kg	A



**Brass holder IF-H**

Brass holder for the collet of electrode blanks. Compatible with chucks of the system Hirschmann. The clamping form and size can be attached individually on the holder.

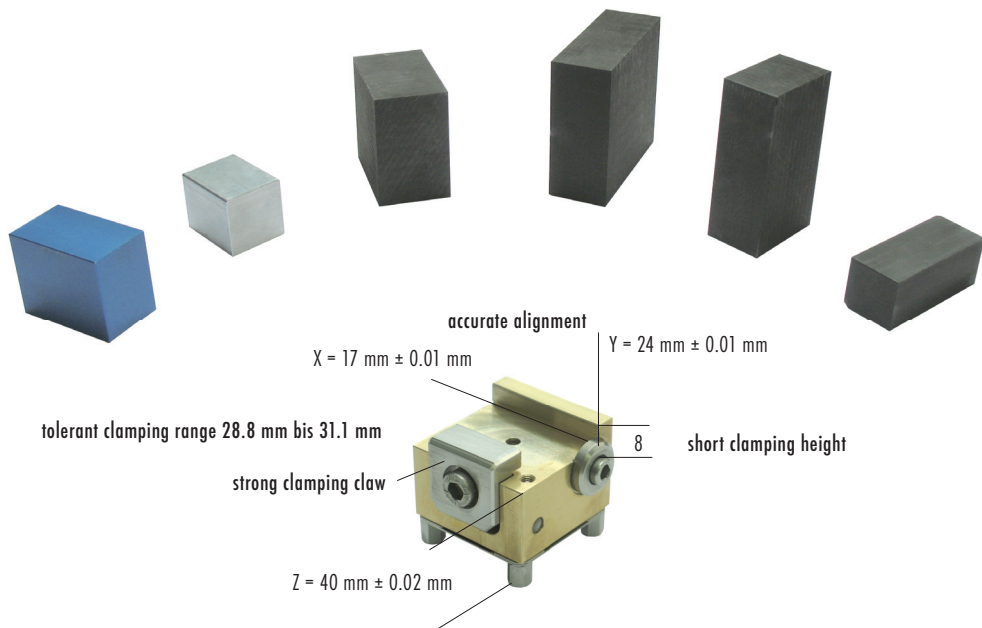
Article no.	Article	Quantity	Weight	Code
FT 02002	UNI-Blank Brass holder IF-H	Set of 10 pieces	8.80 kg	A

## The UniClamp reduces the consumption of electrode material

Simply saw the graphite, clamp it into the UniClamp, machine and erode.

All UniClamp are from A like alignment to Z like Z-support identical. Electrodes can be removed from the UniClamp and re-clamped in reference position. The short clamping height reduces the consumption of electrode material.

Less set-up time, less consumption of electrode material, less costs



### UniClamp

The UniClamp are new, basically developed as electrode holders. The strong clamping claw pushes the electrode to the reference surface and holds it firmly in position. Electrode blanks can simply be sawed off and clamped quickly. Also completed electrodes can be clamped permanently on different UniClamp in reference position. The UniClamp is suited as well for clamping and machining of precision parts.

Article no.	Article	Quantity	Weight	Code
FT 01953	UniClamp ER-30	1 piece	0.72 kg	A
FT 01957	UniClamp ER-30	Set of 10 pieces	6.84 kg	A



### UniClamp TR30 (compatible with 3R)

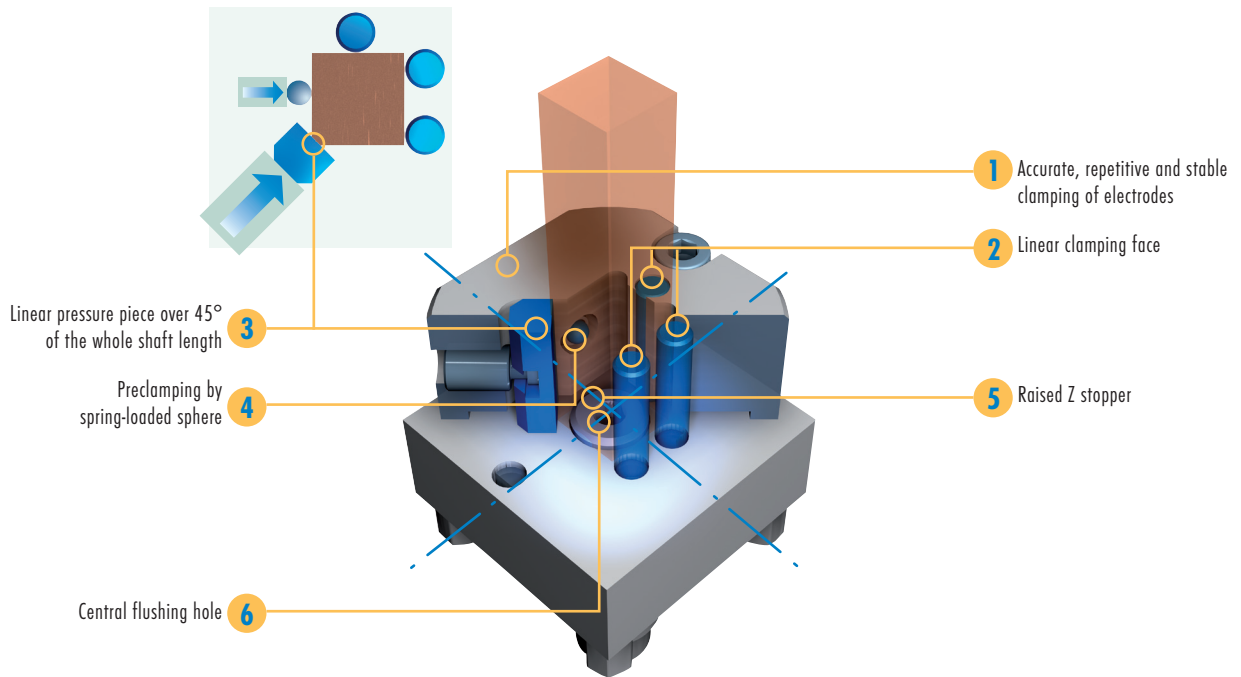
The UniClamp are new, basically developed as electrode holders. The strong clamping claw pushes the electrode to the reference surface and holds it firmly in position. Electrode blanks can simply be sawed off and clamped quickly. Also completed electrodes can be clamped permanently on different UniClamp in reference position. The UniClamp is suited as well for clamping and machining of precision parts.

Article no.	Article	Quantity	Weight	Code
FT 01954	UniClamp TR-30	1 piece	0.82 kg	A
FT 01958	UniClamp TR-30	Set of 10 pieces	7.88 kg	A

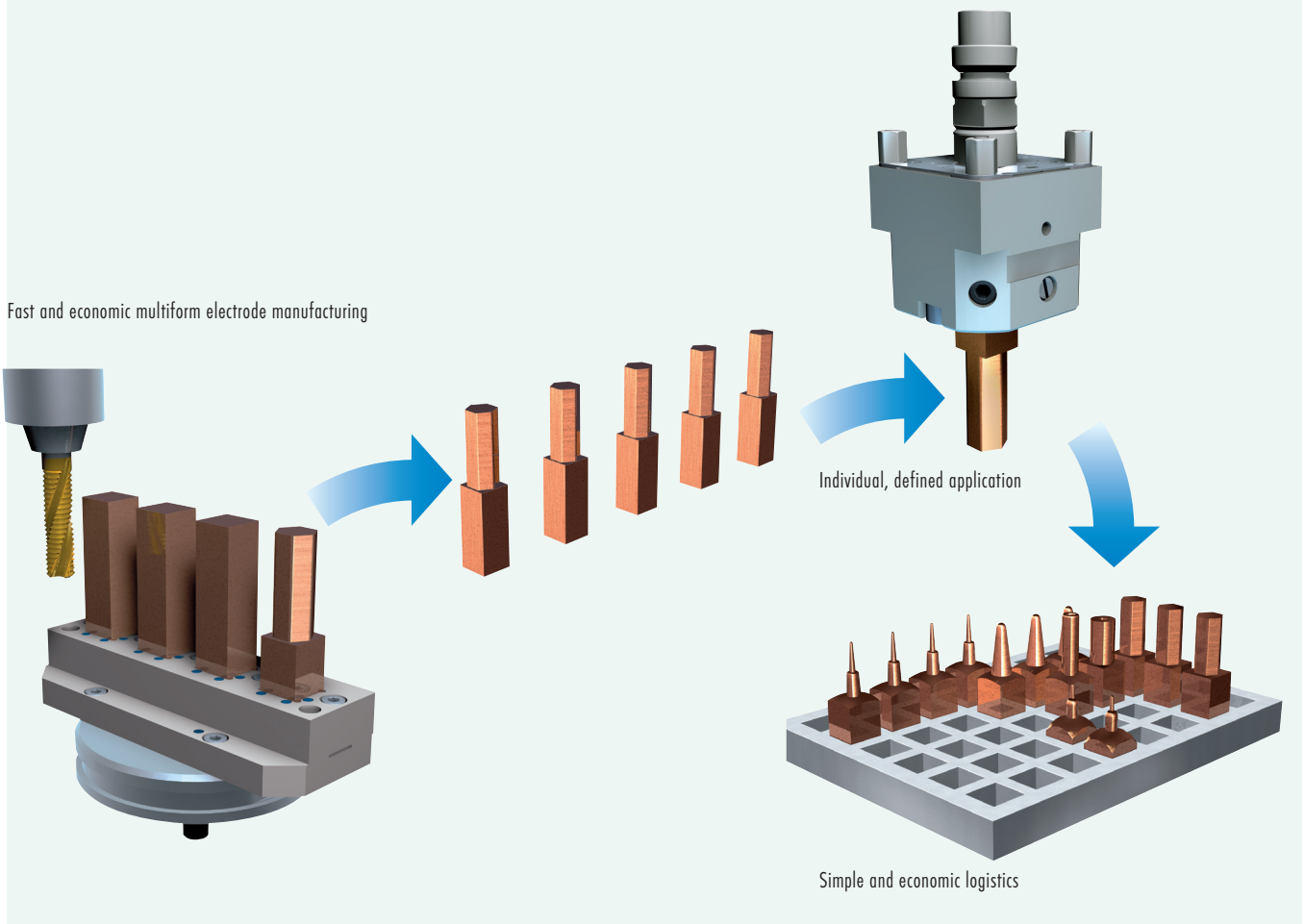
## Square clamp

The new dimension for EDMing.  
Simple, accurate and extremely economic.

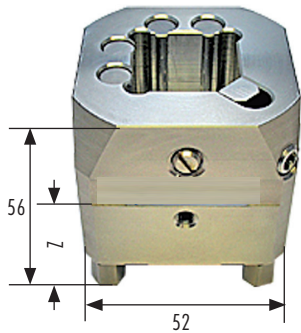
### 1. The function



### 2. The application







Z = 32/0-0.04 mm

Patent pending

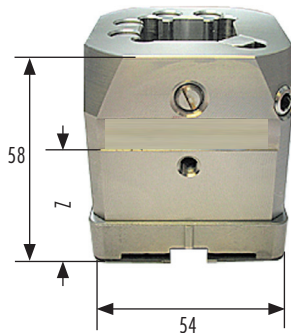
**Square clamp with EROWA interface**

The new design of the square clamp has many advantages.

- Well in price
- Uttermost repeat accuracy
- Non-sensitive to soil and corrosion resistant
- Solid
- Positioning / repeat accuracy of the electrode blanks < 0.01 mm
- New are the dimensions of 30 x 30 mm

Article no.	Article	Quantity	Weight	Code
FT 01129	15 square clamp EWIS	1 piece	0.93 kg	A
FT 01130	15 square clamp EWIS	Set of 10 pieces	8.80 kg	A
FT 01131	25 square clamp EWIS	1 piece	0.84 kg	A
FT 01132	25 square clamp EWIS	Set of 10 pieces	8.05 kg	A
FT 01133	30 square clamp EWIS	1 piece	0.86 kg	A
FT 01134	30 square clamp EWIS	Set of 10 pieces	8.14 kg	A

**Delivered without chucking spigot.**



Z = 32/0-0.04 mm

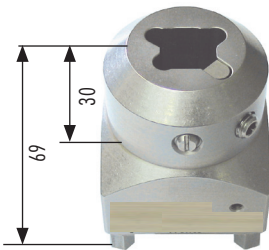
**Square clamp with IF3R**

→ Provided with reference element IF3R.

→ Appropriate for 3R standard spigots

Article no.	Article	Quantity	Weight	Code
FT 01143	15 square clamp IF3R	1 piece	1.02 kg	A
FT 01144	15 square clamp IF3R	Set of 10 pieces	9.83 kg	A
FT 01145	25 square clamp IF3R	1 piece	0.94 kg	A
FT 01146	25 square clamp IF3R	Set of 10 pieces	9.10 kg	A
FT 01147	30 square clamp IF3R	1 piece	0.94 kg	A
FT 01148	30 square clamp IF3R	Set of 10 pieces	9.10 kg	A

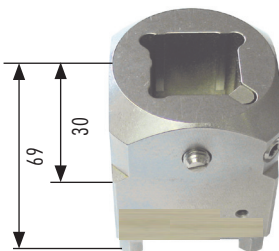
**Delivered without spigot.**



**Square 15 monoblock**

- Square 15 of stainless, hardened INOX steel with collet EROWA
- 3 linear stop surfaces, hardened and jig grinded
- Repeat accuracy +/- 0.005 mm, as well at changing electrodes in several holders
- Lateral flushing connection
- Prepared for EWIS
- Delivered without chucking spigot

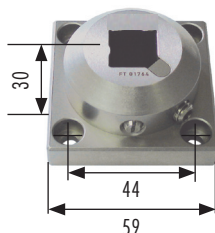
Article no.	Article	Quantity	Weight	Code
FT 01762	Square 15 monobloc	1 piece	0.92 kg	B



**Square 25 monoblock**

- Square 25 of stainless, hardened INOX steel with collet EROWA
- 3 linear stop surfaces, hardened and jig grinded
- Repeat accuracy +/- 0.005 mm, as well at changing electrodes in several holders
- Lateral flushing connection
- Prepared for EWIS
- Delivered without chucking spigot

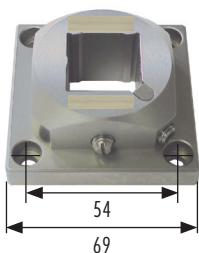
Article no.	Article	Quantity	Weight	Code
FT 01763	Square 25 monobloc	1 piece	0.99 kg	B



**Square 15 front part**

- Square front part of stainless, hardened INOX steel
- 3 linear stop surfaces, hardened and jig grinded
- Repeat accuracy +/- 0.005 mm
- For the assembling on pallets and plates for multiple clamping
- Hole pattern for 4 x M6 Ø 6.5 mm

Article no.	Article	Quantity	Weight	Code
FT 01764	Square 15 front part	1 piece	0.48 kg	B



**Square 25 front part**

- Square front part of stainless, hardened INOX steel
- 3 linear stop surfaces, hardened and jig grinded
- Repeat accuracy +/- 0.005 mm
- For the assembling on pallets and plates for multiple clamping
- Hole pattern for 4 x M6  $\varnothing$  6.5 mm

Article no.	Article	Quantity	Weight	Code
FT 01765	Square 25 front part	1 piece	0.62 kg	B



**Square 15 shaft holder**

With the square shaft holder, the copper consumption can be reduced to a minimum. The square shaft holder is prepared for the collet of two different diameters. The borehole is prepared with a H7 manufacturing tolerance. Other diameters can be clamped and bored by oneself in the square holder.

Article no.	Article	Quantity	Weight	Code
FT 01918	Square 15 shaft holder $\varnothing$ 4H7/ $\varnothing$ 6H7	1 piece	0.11 kg	A
FT 01919	Square 15 shaft holder $\varnothing$ 8H7/ $\varnothing$ 10H7	1 piece	0.09 kg	A

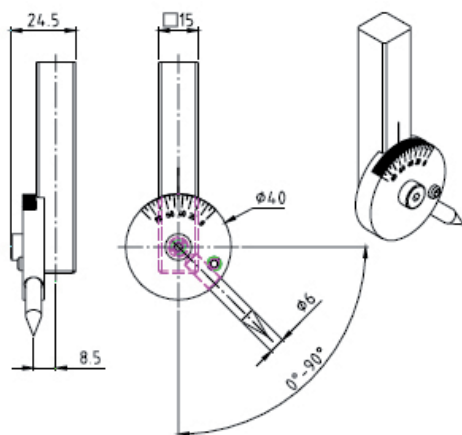


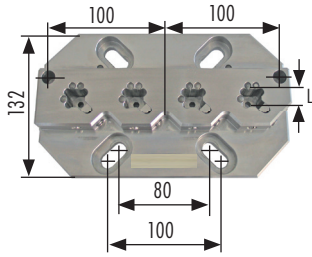
**Injection nozzle El. Holder**

Made of stainless, hardened INOX steel. For the collet in the square 15 monoblock, square clamp 15 etc.

- Infinitely adjustable from 0-90°
- Able to erode lateral drillings and nozzles.

Article no.	Article	Quantity	Weight	Code
FT 01766	Square 15 injection nozzle El. Holder $\varnothing$ 6 mm 0-90°	1 piece	0.23 kg	B



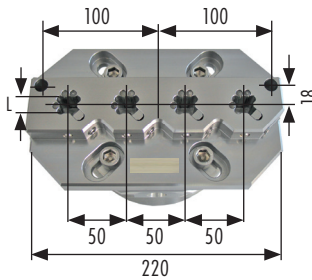


**Square clamp multiplate**

The square clamp multiplate is suited excellent for the rational fabrication of square electrodes. One or several multiple plates can be assembled on standard system beams.

- Rational, accurate electrode manufacturing, in grid 50 mm
- Alignment of the pallet and searching the coordinates by 2 reference holes, distance to the middle  $\emptyset$  axe 18 mm
- The square clamp multiplate can be fixed to all pallets with 40/50 mm pattern bore holes

Article no.	Article	Quantity	Weight	Code
FT 01174	Square clamp 4 x L = 15 mm multiplate	1 piece	5.20 kg	A
FT 01175	Square clamp 4 x L = 25 mm multiplate	1 piece	5.01 kg	A
FT 01176	Square clamp 4 x L = 30 mm multiplate	1 piece	4.80 kg	A

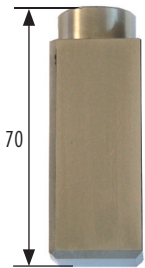


**Pallet 148 square clamp multiplate**

The pallet 148 square clamp multiplate can, manual or automatic, inserted into the EROWA ITS clamping system. Otherwise, specification as above.

Article no.	Article	Quantity	Weight	Code
FT 01171	Pallet 148 square clamp 4 x L = 15 mm	1 piece	7.30 kg	A
FT 01172	Pallet 148 square clamp 4 x L = 25 mm	1 piece	7.02 kg	A
FT 01173	Pallet 148 square clamp 4 x L = 30 mm	1 piece	6.90 kg	A

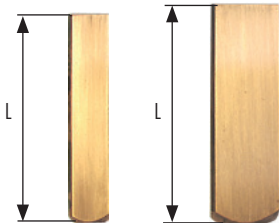
**Delivered incl. pallet 148 with centering plate 100 M8. Delivered without chucking spigot.**



**Square clamp checking rod**

A periodical inspection of the square clamp holder or the check after a crash is suitable.

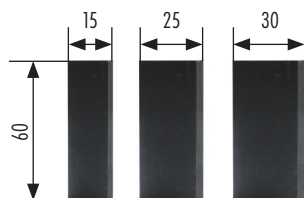
Article no.	Article	Quantity	Weight	Code
FT 01177	Square clamp checking rod 10	1 piece	0.17 kg	A
FT 01178	Square clamp checking rod 15	1 piece	0.22 kg	A
FT 01179	Square clamp checking rod 25	1 piece	0.43 kg	A
FT 01180	Square clamp checking rod 30	1 piece	0.58 kg	A



**Electrode copper for square clamp**

Drawn profile of EDM Copper, incl. phase 45° for the safe, direction-oriented, and with lapped stop-surface for the accurate application.

Article no.	Article	Quantity	Weight	Code
FT 02158	Square blank 15 L = 75 mm, shaft milled	Set of 32 pieces	4.74 kg	E
FT 02159	Square blank 25 L = 80 mm, shaft milled	Set of 20 pieces	8.80 kg	E
FT 01165	El.-copper 30 x 30 L = 60 mm, blank	Set of 10 pieces	4.89 kg	E
FT 01166	El.-copper 30 x 30 L = 60 mm, blank	Set of 24 pieces	11.61 kg	E



**Graphite square blank**

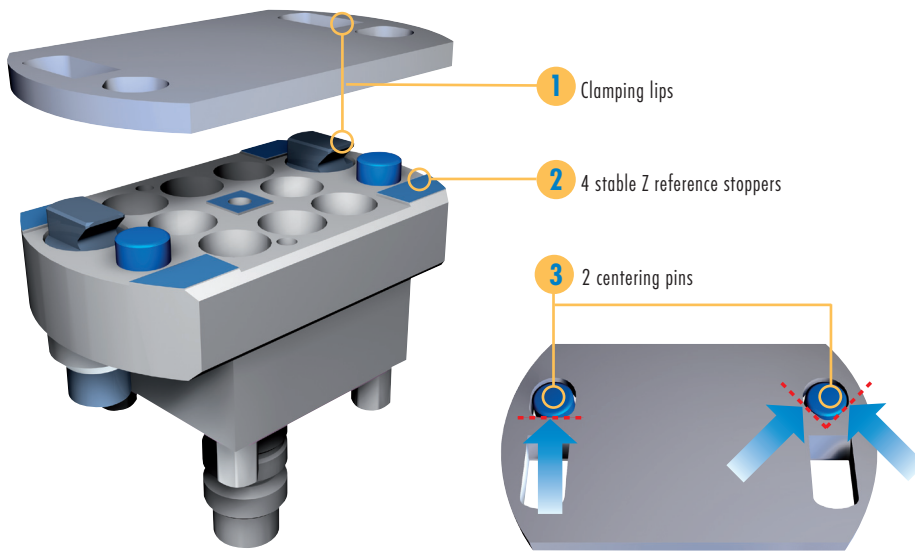
Graphite square with phase, prepared for the square clamps 15, 25 and 30 mm. EX60 for roughing up to surface quality VDI 24. EX70 for finishing up to surface quality VDI 18.

Artikel-Nr.	Artikel	Menge	Gewicht	Code
FT 01241	Graphite square blank 15 x 15 x 60 mm EX60	Set of 36 pieces	0.87 kg	G
FT 01242	Graphite square blank 15 x 15 x 250 mm EX60	Set of 2 pieces	0.20 kg	G
FT 01243	Graphite square blank 25 x 25 x 60 mm EX60	Set of 36 pieces	2.43 kg	G
FT 01244	Graphite square blank 25 x 25 x 250 mm EX60	Set of 2 pieces	0.56 kg	G
FT 01245	Graphite square blank 30 x 30 x 60 mm EX60	Set of 36 pieces	3.50 kg	G
FT 01246	Graphite square blank 30 x 30 x 250 mm EX60	Set of 2 pieces	0.81 kg	G
FT 01277	Graphite square blank 15 x 15 x 60 mm EX70	Set of 36 pieces	0.90 kg	G
FT 01278	Graphite square blank 15 x 15 x 250 mm EX70	Set of 2 pieces	0.21 kg	G
FT 01279	Graphite square blank 25 x 25 x 60 mm EX70	Set of 36 pieces	2.50 kg	G
FT 01280	Graphite square blank 25 x 25 x 250 mm EX70	Set of 2 pieces	0.58 kg	G
FT 01281	Graphite square blank 30 x 30 x 60 mm EX70	Set of 36 pieces	3.60 kg	G
FT 01282	Graphite square blank 30 x 30 x 250 mm EX70	Set of 2 pieces	0.83 kg	G

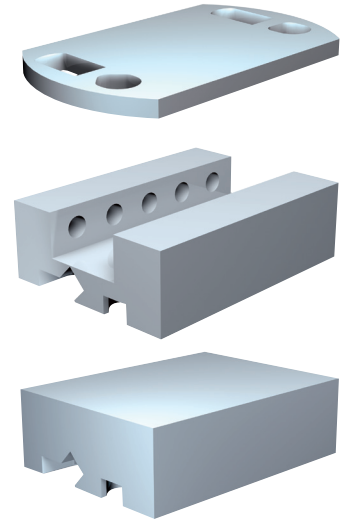
## RefTool holder

The RefTool holder brings completely new possibilities to clamp electrodes fast and economic.

### 1. The function



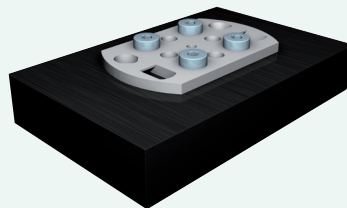
### 2. Economic electrode holders



### 3. The application

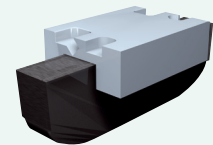
#### 3.1. RefTool graphite adapter

- Screw the RefTool graphite adapter on the graphite blank
- Cut and use the electrode in the system
- Store the electrodes together with the economic graphite adapter



#### 3.2. RefTool graphite clamp

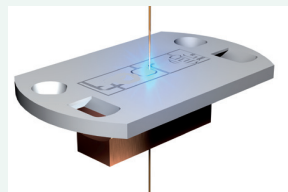
- Clamp the graphite blank into the clamp
- Cut and use the electrode in the system
- Store the electrodes with the economic graphite clamp



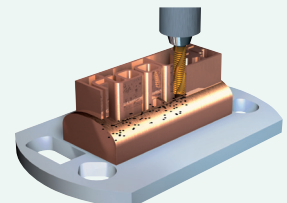
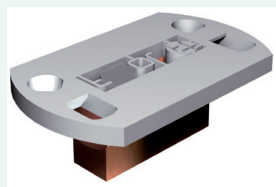
#### 3.3. RefTool WEDM adapter RefTool free clamp

- The electrode can be cut in reference position by wire EDM through the RefTool WEDM adapter or the free clamp

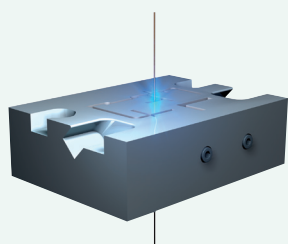
- Complex form electrode-cut by WEDM



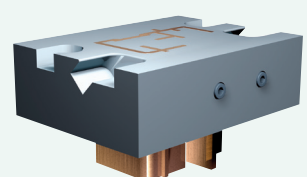
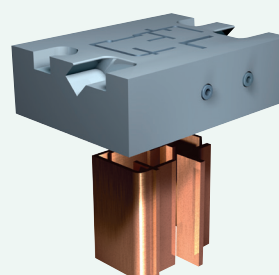
RefTool WEDM adapter

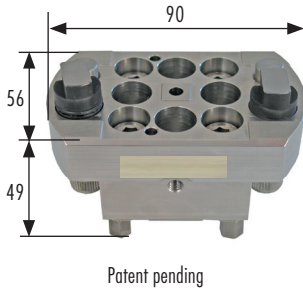


- Complex profiles for serial jobs cut by WEDM



RefTool free clamp





**RefTool holder with EROWA interface**

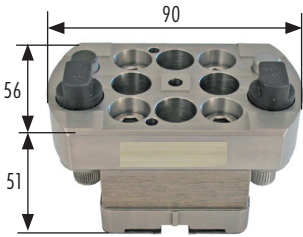
The RefTool holder is a new developed reference holder. The RefTool holder is suited mainly for the retaining of divers electrodes, particularly of inexpensive graphite collets.

The RefTool holder is assembled on the repeat accurate, premium, stainless high-grade steel-basis plate.

- Fast electrode clamping by adapted, standardised grandeur specifications (hole pattern or clamping nut)
- Uttermost inexpensive reference holders
- System accuracy of ITS (transfer from clamp to clamp) < 2 µm
- System accuracy of the reference holders < 0.01 mm (clamping / unclamping of the electrodes)

Article no.	Article	Quantity	Weight	Code
FT 01118	RefTool holder EWIS	1 piece	1.00 kg	A
FT 01119	RefTool holder EWIS	Set of 5 pieces	5.00 kg	A

**Delivered without chucking spigot.**

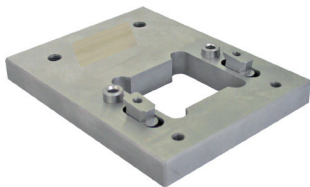


**RefTool holder with IF3R interface**

Equipped with reference element 3R. Compatible with 3R-MACRO.

Article no.	Article	Quantity	Weight	Code
FT 01141	RefTool holder IF3R (compatible with 3R)	1 piece	0.97 kg	A
FT 01142	RefTool holder IF3R (compatible with 3R)	Set of 5 pieces	5.20 kg	A

**Delivered without spigot.**

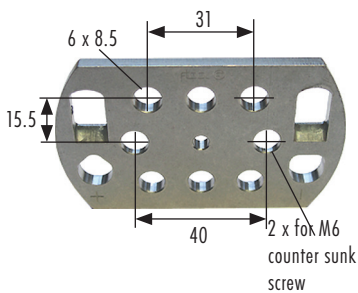
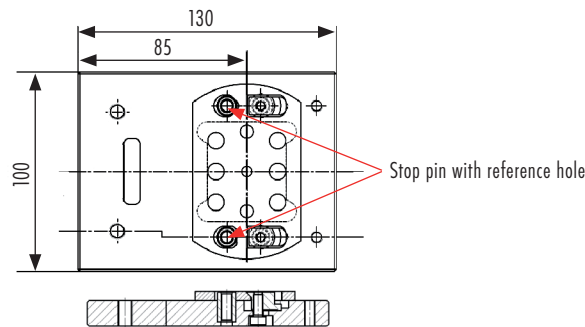


**RefTool IF pallet**

With the RefTool IF pallet, electrodes can be handled on the RefTool holders in reference position with the wire EDM machine. The RefTool IF pallet is delivered completely with screws and keys.

Pallet dimension: 130 x 100 x 14 mm

Article no.	Article	Quantity	Weight	Code
FT 01363	RefTool IF pallet 14 mm	1 piece	1.34 kg	W



**RefTool graphite adapter**

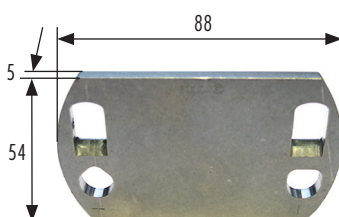
The RefTool graphite adapter can be screwed, according to the hole pattern, with two or several M8 screws on a prepared graphite blank and can afterwards be handled reference based and system accurate.

The RefTool adapters are very inexpensive and functional.

- Positioning / repeat accuracy < 0.01 mm

Article no.	Article	Quantity	Weight	Code
FT 01120	RefTool adapter with hole pattern	Set of 20 pieces	3.20 kg	A

**Delivered with 2 x M8 screws and 2 x M6 countersunk screws.**



**RefTool WEDM adapter**

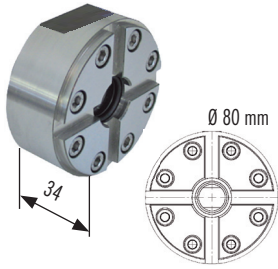
With the RefTool WEDM adapter copper plates, for example, can be tightened and with the cutting erosion machine through the plate be handled in reference position. In the next following step, the rough-worked electrodes can be removed from the cutting machine, followed up in the RefTool holder and without loss of time, inserted on the EDM machine in reference position.

- Positioning / repeat accuracy < 0.01 mm

Article no.	Article	Quantity	Weight	Code
FT 01121	RefTool adapter without hole pattern	Set of 20 pieces	3.10 kg	A



## PIN holder system



8 x hole pattern M6 Ø 61 mm

### PIN center chuck

The PIN center chuck is a compact reference system and is able for the collet of electrodes and work pieces. It's also the base of the PIN ZeroPoint centering system. The centering, respective the positioning happens in two steps. The first step is the pre-centering with the PIN centering bolt. The precise centering is done, if the cone of the spigot is intervening on the flexible centering plate, and the piece is drawn to the clamping area. With the intervention of the PIN index 8 mm into the cross slot, the angle coat is defined.

Article no.	Article	Quantity	Weight	Code
FT 01716	PIN center chuck	1 piece	1.48 kg	P
FT 01717	PIN center chuck with graduation	1 piece	1.54 kg	P



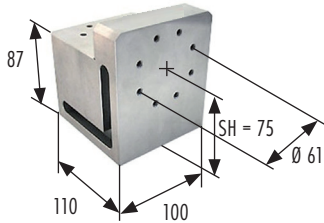
### EDM adapter plate (details on page 3)

Article no.	Article	Quantity	Weight	Code
FT 01236	EDM adapter plate Ø 110 mm chuck 80/PIN chuck	1 piece	1.32 kg	A
FT 01829	EDM adapter plate Ø 110 mm without hole pattern Ø 96 mm	1 piece	1.32 kg	A



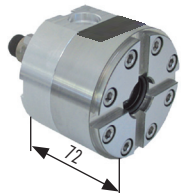
### Adapter plate (details on page 3)

Article no.	Article	Quantity	Weight	Code
FT 01336	Adapter plate 120 x 82 mm chuck 80/PIN chuck	1 piece	1.40 kg	A



### Square block (details on page 4)

Article no.	Article	Quantity	Weight	Code
FT 01483	Square block chuck 80/PIN chuck	1 piece	8.20 kg	A

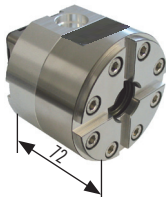


### PIN center chuck IF EROWA

With the PIN center chuck IF EROWA the electrodes and work pieces can be inserted into the EROWA ITS system.

Article no.	Article	Quantity	Weight	Code
FT 01728	PIN center chuck IF EROWA	1 piece	1.96 kg	P

Delivered with chucking spigot F/A EDM automatic with flushing.

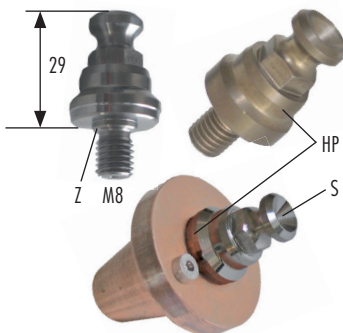


### PIN center chuck IF3R

With the PIN center chuck IF3R the electrodes and work pieces can be inserted into the 3R system.

Article no.	Article	Quantity	Weight	Code
FT 01729	PIN center chuck IF3R	1 piece	1.60 kg	P

Delivered without chucking spigot.



### PIN centering bolt

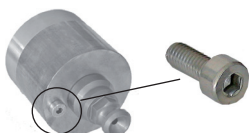
According to the application, the suitable centering bolts may be inserted.

HP = PIN centering bolt high precision / grinded

Z = with centering bundle

S = flushing hole

Article no.	Article	Quantity	Weight	Code
FT 01719	RefPIN HP-Z with flushing S (grinded)	1 piece	0.07 kg	P
FT 01720	RefPIN-Z with flushing S	Set of 10 pieces	0.65 kg	P
FT 01721	RefPIN-Z without flushing S	Set of 10 pieces	0.65 kg	P
FT 01722	RefPIN without bundle Z	Set of 10 pieces	0.65 kg	P
FT 01723	ClampPIN (without bundle Z and without centering)	Set of 10 pieces	0.65 kg	P

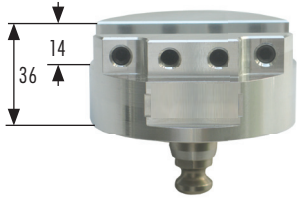


### PIN index 8 mm M5

The orientation coat can be defined with the PIN index.

Article no.	Article	Quantity	Weight	Code
FT 01724	PIN index Ø 8/3.5 mm M5 A2	Set of 10 pieces	0.01 kg	P

## PIN holder system



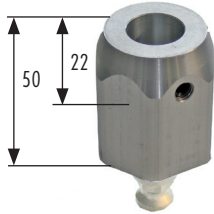
### PIN clamping holder

The PIN clamping holder is a basic holder made of aluminium for the collet of electrodes and work pieces.

Article no.	Article	Quantity	Weight	Code
FT 01725	PIN clamping holder 26 mm	1 piece	0.62 kg	P

Other sizes on request.

Delivered incl. assembled PIN index, but without centering bolt.



### PIN electrode spanner

The PIN electrode spanner made of aluminium is very good qualified for an economic collet of electrode blanks and the conditioning in the PIN system.

Article no.	Article	Quantity	Weight	Code
FT 01726	PIN electrode spanner Ø 16 mm	Set of 10 pieces	1.80 kg	P

Other diameters on request.

Delivered incl. assembled PIN index, but without centering bolt.



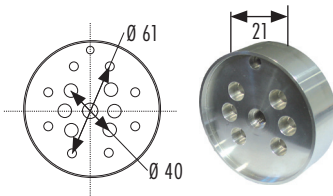
### Copper blank

The copper blank is assembled with a PIN index and prepared for the centering bolt.

Article no.	Article	Quantity	Weight	Code
FT 01234	Copper blank Ø 50 x L = 45 mm prepared for PIN adapter	Set of 10 pieces	7.66 kg	E

Other sizes on request.

Delivered incl. assembled PIN index, but without centering bolt.

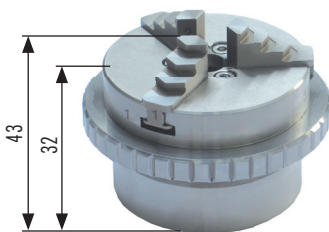


### PIN pallet aluminium

The PIN pallet aluminium is an economic, universal pallet, applicable for the collet of electrodes and work pieces.

Article no.	Article	Quantity	Weight	Code
FT 01727	PIN pallet alu Ø 80 mm	1 piece	0.34 kg	P

Delivered incl. assembled PIN index, but without centering bolt.



### Rustless, precision three-jawed chuck

Suitable for the application on EDM wire cutting machines under water. Hardened clamping jaws for the clamping of outside diameter Ø 1 - Ø 60 mm and inside diameter of Ø 12 - Ø 66 mm. Hole pattern 4 x M6, reference circle 40 mm.

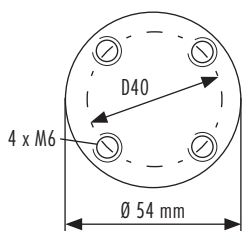
Clamping accuracy ± 0.01 mm, maximum work piece weight: 2 kg

Article no.	Article	Quantity	Weight	Code
FT 02008	3 Jaw scroll chuck DBF63 rustless 0-56 mm Ø 70 mm L = 32 mm	1 piece	0.76 kg	P
FT 02053	3 Jaw scroll chuck DBF63 rustless 0-56 mm, with exchangeable soft jaws	1 piece	0.72 kg	P

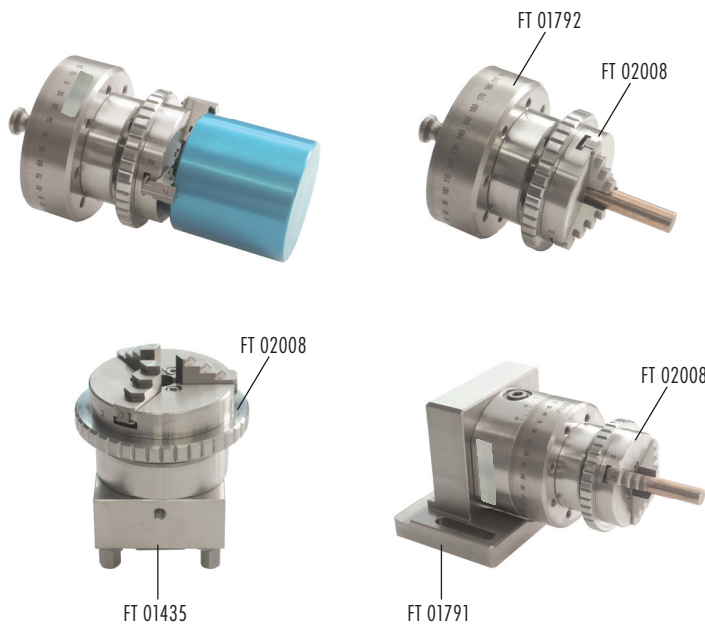
FT 02008



FT 02053



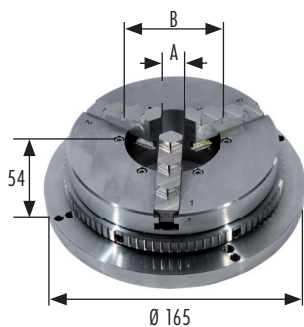
### Examples of use:



**Rustless precision 3 jaw scroll chuck DBF 140/58**

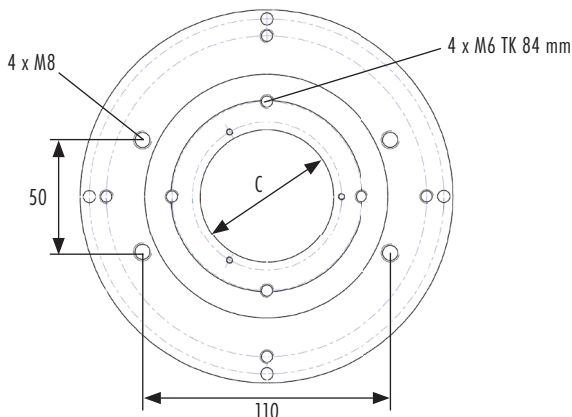
Suitable on measuring stations and fine precision works in sinking-EDM and wire-EDM machines. Hardened clamping jaws to clamp external diameters of  $\varnothing 1 - \varnothing 175$  mm and inner diameters of  $\varnothing 24 - \varnothing 180$  mm.

- A = Clamping of shafts / diameters  $\varnothing 1 - 175$  mm
- B = Clamping of inner diameters  $\varnothing 24 - \varnothing 180$  mm.
- C = Passage-diameter  $\varnothing 58$  mm



Article no.	Article	Quantity	Weight	Code
FT 02054	3 Jaw scroll chuck DBF140/58 stainless	1 piece	5.00 kg	P

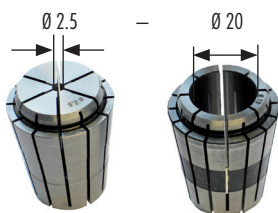
Delivered incl. assembled PIN index, but without centering bolt.



**Collets ETS32**

Specification: Accurate rotation from  $\varnothing 2.5$  to 20 mm.  
 Clamping scope per collet:  $\varnothing 2.5$  mm = 0.5 mm  
 $\varnothing 3 - 20$  mm = 1 mm

Application: For round material from  $\varnothing 2$  to 20 mm.



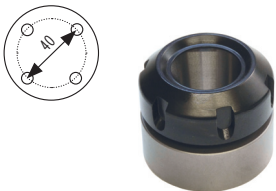
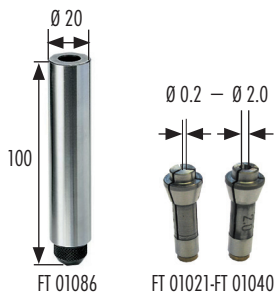
Article no.	Article	Quantity	Weight	Code
FT 01001	Collet set $\varnothing 2.5 - 20$ mm ETS32	Set of 19 pieces	2.60 kg	A
FT 01002	Collet $\varnothing 2.5$ mm ETS32	1 piece	0.14 kg	A
FT 01003	Collet $\varnothing 3$ mm ETS32	1 piece	0.14 kg	A
FT 01004	Collet $\varnothing 4$ mm ETS32	1 piece	0.14 kg	A
FT 01005	Collet $\varnothing 5$ mm ETS32	1 piece	0.14 kg	A
FT 01006	Collet $\varnothing 6$ mm ETS32	1 piece	0.14 kg	A
FT 01007	Collet $\varnothing 7$ mm ETS32	1 piece	0.14 kg	A
FT 01008	Collet $\varnothing 8$ mm ETS32	1 piece	0.14 kg	A
FT 01009	Collet $\varnothing 9$ mm ETS32	1 piece	0.13 kg	A
FT 01010	Collet $\varnothing 10$ mm ETS32	1 piece	0.13 kg	A
FT 01011	Collet $\varnothing 11$ mm ETS32	1 piece	0.13 kg	A
FT 01012	Collet $\varnothing 12$ mm ETS32	1 piece	0.13 kg	A
FT 01013	Collet $\varnothing 13$ mm ETS32	1 piece	0.12 kg	A
FT 01014	Collet $\varnothing 14$ mm ETS32	1 piece	0.12 kg	A
FT 01015	Collet $\varnothing 15$ mm ETS32	1 piece	0.11 kg	A
FT 01016	Collet $\varnothing 16$ mm ETS32	1 piece	0.11 kg	A
FT 01017	Collet $\varnothing 17$ mm ETS32	1 piece	0.10 kg	A
FT 01018	Collet $\varnothing 18$ mm ETS32	1 piece	0.10 kg	A
FT 01019	Collet $\varnothing 19$ mm ETS32	1 piece	0.09 kg	A
FT 01020	Collet $\varnothing 20$ mm ETS32	1 piece	0.08 kg	A

**Collet chuck holder FTS 16**

Application: Collet chuck holder on hardened and grinded steel  $\varnothing 20$  mm, incl. collets  $\varnothing 2$  to 10 mm.



Article no.	Article	Quantity	Weight	Code
FT 01233	Collet chuck holder FTS 16, shaft $\varnothing 20$ mm, incl. 11 collet chucks $\varnothing 2 - 10$ mm and seal kit	1 set	0.56 kg	A



**Mini collet chuck holder**

Specification: Mini collet chuck holder on hardened and grinded steel  $\varnothing$  20 mm.  
Mini collets from  $\varnothing$  0.2 to 2 mm, grinded steel with brass seal for the appropriate diameters.

Application: Clamp of small electrode pipes  $\varnothing$  0.2 to 2 mm.

Article no.	Article	Quantity	Weight	Code
FT 01086	Mini collet chuck holder for $\varnothing$ 0.2-2.0 mm (deliv. without collet chucks)	1 piece	0.25 kg	A
FT 01021	Mini collet set $\varnothing$ 0.2 - 2 mm F4.5	Set of 19 pieces	0.17 kg	A
FT 01022	Mini collet $\varnothing$ 0.2 mm F4.5	1 piece	0.01 kg	A
FT 01023	Mini collet $\varnothing$ 0.3 mm F4.5	1 piece	0.01 kg	A
FT 01024	Mini collet $\varnothing$ 0.4 mm F4.5	1 piece	0.01 kg	A
FT 01025	Mini collet $\varnothing$ 0.5 mm F4.5	1 piece	0.01 kg	A
FT 01026	Mini collet $\varnothing$ 0.6 mm F4.5	1 piece	0.01 kg	A
FT 01027	Mini collet $\varnothing$ 0.7 mm F4.5	1 piece	0.01 kg	A
FT 01028	Mini collet $\varnothing$ 0.8 mm F4.5	1 piece	0.01 kg	A
FT 01029	Mini collet $\varnothing$ 0.9 mm F4.5	1 piece	0.01 kg	A
FT 01030	Mini collet $\varnothing$ 1.0 mm F4.5	1 piece	0.01 kg	A
FT 01031	Mini collet $\varnothing$ 1.1 mm F4.5	1 piece	0.01 kg	A
FT 01032	Mini collet $\varnothing$ 1.2 mm F4.5	1 piece	0.01 kg	A
FT 01033	Mini collet $\varnothing$ 1.3 mm F4.5	1 piece	0.01 kg	A
FT 01034	Mini collet $\varnothing$ 1.4 mm F4.5	1 piece	0.01 kg	A
FT 01035	Mini collet $\varnothing$ 1.5 mm F4.5	1 piece	0.01 kg	A
FT 01036	Mini collet $\varnothing$ 1.6 mm F4.5	1 piece	0.01 kg	A
FT 01037	Mini collet $\varnothing$ 1.7 mm F4.5	1 piece	0.01 kg	A
FT 01038	Mini collet $\varnothing$ 1.8 mm F4.5	1 piece	0.01 kg	A
FT 01039	Mini collet $\varnothing$ 1.9 mm F4.5	1 piece	0.01 kg	A
FT 01040	Mini collet $\varnothing$ 2.0 mm F4.5	1 piece	0.01 kg	A

**Collet chuck holder ETS32**

The collet chuck holder ETS32 is rust-resistant and able for the water bath.

Article no.	Article	Quantity	Weight	Code
FT 01581	Collet chuck holder ETS32 without adapter plate (corrosion-resist.)	1 piece	0.45 kg	A



**Hydraulic Spanner 32**

The Hydraulic Spanner is suitable for the concentric collet of electrodes or work pieces with a shank diameter of 32 mm. Other diameters can be clamped with suitable reduction plugs. It can be assembled on the ER adapter (FT 01435) or on every other cutting site with 4 or 2 x M6 on circle diameter 40 mm. The rustless execution is able for the water bath.

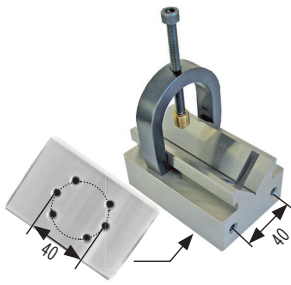
Article no.	Article	Quantity	Weight	Code
FT 01732	Hydraulic Spanner 32	1 piece	1.70 kg	B

**Clamping sleeves**

The reduction plugs of rustless steel can be inserted into the Hydraulic Spanner.



Article no.	Article	Quantity	Weight	Code
FT 01733	Reduction plug 10 mm for Hydraulic Spanner 32	1 piece	0.35 kg	B
FT 01734	Reduction plug 12 mm for Hydraulic Spanner 32	1 piece	0.35 kg	B
FT 01735	Reduction plug 16 mm for Hydraulic Spanner 32	1 piece	0.35 kg	B
FT 01736	Reduction plug 20 mm for Hydraulic Spanner 32	1 piece	0.35 kg	B
	other diameters on request			



Hole pattern from the bottom

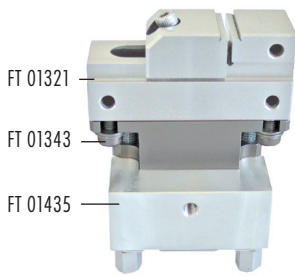
### V-block stainless steel

The V-Block is qualified for the fast clamping of arbors, punches and pushers up to  $\varnothing$  32 mm. It can be assembled frontally or from the back on diverse holders. The best compatibility is with the uniplate EWIS (FT 01080), the ER-plate EWIS (FT 01435), the basic plate IF3R (FT 01135) and the universal index adapter plate 80 with nonius-display (FT 01579). For the application on EDM, WEDM and grinding machines.

Article no.	Article	Quantity	Weight	Code
FT 01679	V-block rust-resistant	1 piece	1.64 kg	W

### Clamping elements and interface plates

Adapter for vise 20VL24.



Article no.	Article	Quantity	Weight	Code
FT 01321	Vise 20VL24	1 piece	0.26 kg	W
FT 01343	Interface uniplate for vise 20VL24	1 piece	0.22 kg	W
FT 01435	ER-plate EWIS	Set of 10 pieces	4.50 kg	A

### T-nut ER-P-Pallet with handles

The PP-pallet with handles can be used perfectly on EROWA chucks with P-profile. The T-nut pallet is suited for the collet of work pieces and fixtures. The pallets are equipped with the PowerPlate FT 01835.



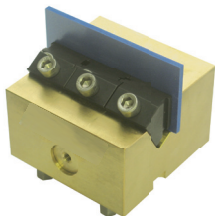
Article no.	Article	Quantity	Weight	Code
FT 02004	T-slot PP-Palette 150 x 150 mm	1 piece	2.40 kg	P
FT 02005	T-slot PP-Palette 280 x 180 mm	1 piece	4.30 kg	P
FT 02006	Universal-PP-Palette 280 x 180 mm	1 piece	4.90 kg	P



### PIN BrassClamp

The PIN BrassClamp is a brass retainer with hardened, corrosion-resistant pull-down jaws. If necessary, the stop surface on the holder can be milled to approx. 28 mm. The BrassClamp is supplied as standard with 3 clamping jaws with a clamping range of 0-3 mm. The BrassClamp is suited for use as an electrode (in particular graphite) retainer. However, it can also be used as a precision parts clamp, because the brass jaw can be enlarged precisely.

B40 = prepared for PIN system, 3R adapter plate, T-nuts and grid plate 40 mm/M8. Delivered with screws.  
ITS 50 = equipped with ITS centering plate 50 / EWIS preparation. Delivered with ITS chucking spigot F/A.



Article no.	Article	Quantity	Weight	Code
FT 01807	PIN BrassClamp 72 x 72 mm B40	1 piece	1.85 kg	P
FT 01808	PIN BrassClamp 72 x 72 mm ITS50	1 piece	2.00 kg	P

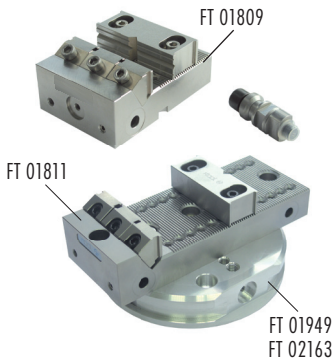




**ER-PowerPlate**

Centering plate with P-profile, compatible with FT 01043 FTool ER chuck 80P plus all EROWA chucks with P-profile, EROWA PowerChuck and EROWA ProductionChuck 210 Combi. Highly friction centering. For the direct assembling on pallets and fixtures.

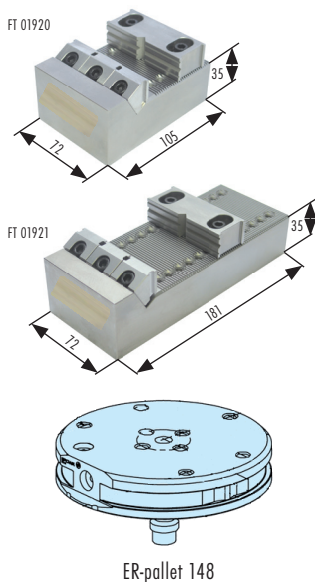
Article no.	Article	Quantity	Weight	Code
FT 01835	ER-PowerPlate	1 piece	0.27 kg	P



**Pallet ER-PP148 alu (PowerPlate)**

The pallet is equipped with the PowerPlate and can be used on all EROWA chucks with P centering. For the collet of fixtures and work pieces, the pallet with hole pattern 4 x Ø 9/110 x 50//4 x Ø 9/TK37A) and 4 x M8/D80 is prepared for the assembling of the MultiClamp FT 01809 and FT 01811.

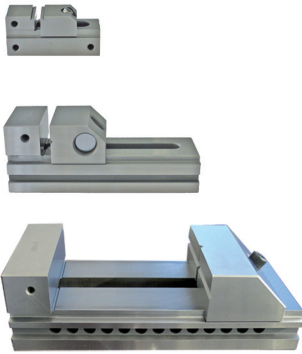
Article no.	Article	Quantity	Weight	Code
FT 01809	PIN MultiClamp 105 x 72 mm B40, corrosion-resistant	1 piece	1.90 kg	P
FT 01810	PIN MultiClamp 105 x 72 mm ITS50, corrosion-resistant	1 piece	1.95 kg	P
FT 01811	PIN MultiClamp 181 x 72 mm B40, corrosion-resistant	1 piece	2.94 kg	P
FT 01949	Pallet ER-PP148 alu (Power Plate)	1 piece	1.41 kg	P



**MultiClamp ERP148**

The MultiClamps 105/35 and 181/35 are predestinated to assemble together with the EROWA Standard pallets with hole pattern 4 x M8 Ø 37 mm respective 4 x M8 110 x 50 mm. The table height is 35 mm +/- 0.01 mm. The clamping range is identical to the FT 01809 respective FT 01811.

Article no.	Article	Quantity	Weight	Code
FT 01920	MultiClamp 105/35 for ERP148	1 piece	2.51 kg	P
FT 01921	MultiClamp 181/35 for ERP148	1 piece	4.04 kg	P



**Vises**

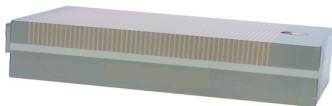
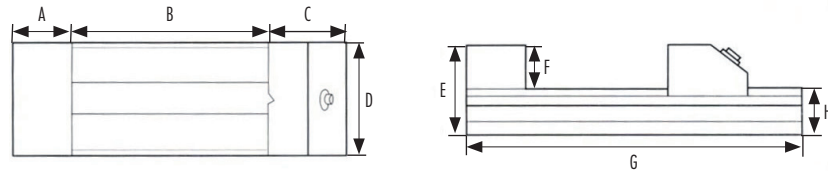
Accurate vises made of rustless, hardened, grinded high-grade steel for grinding machines, EDM-, wire EDM- and EDM drilling- machines.

Dimensions FT 01321 (mm): A=20 B=20 C=25 D=24 E=30 F=10 G=64.5 H=19.5

Dimensions FT 01320 (mm): A=25 B=75 C=40 D=50 E=52.5 F=25 G=140 H=28

Dimensions FT 01591 (mm): A=50 B=200 C=90 D=150 E=100 F=50 G=330 H=50

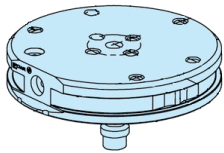
Article no.	Article	Quantity	Weight	Code
FT 01321	Vise 20VL24	1 piece	0.26 kg	W
FT 01320	Vise 80VL50	1 piece	1.40 kg	W
FT 01591	Precision vise 200VL150	1 piece	22.00 kg	B



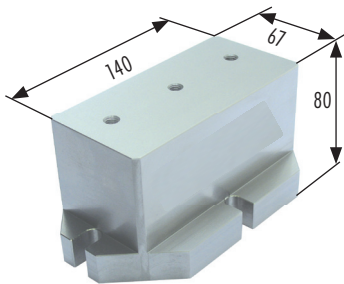
**Magnetic table 250 x 150mm (prepared PIN and ITS 148)**

This magnetic table is compatible with the EROWA standard pallets  $\varnothing$  148 mm.

Article no.	Article	Quantity	Weight	Code
FT 01824	Magnetic table 250 x 150 mm (prepared PIN and ITS 148 mm)	1 piece	15.70 kg	B



ER-pallet 148

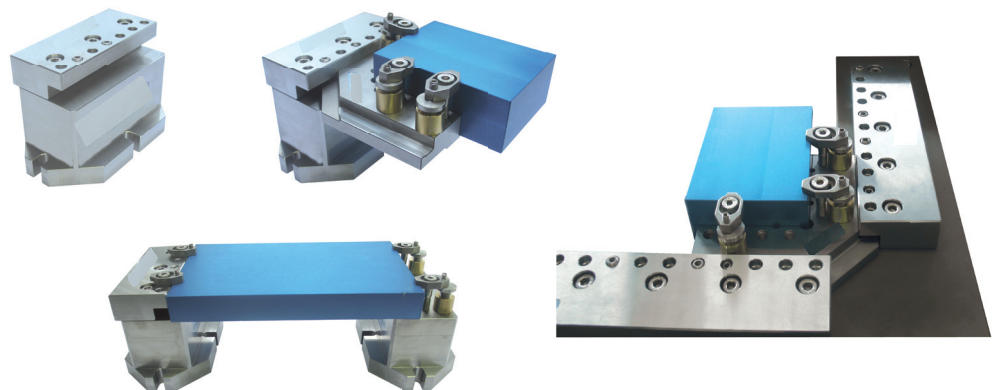


**Clamping block**

The Clamping block can be used as a basement on the EDM, EDM-drilling and Presetting machines. On the top surface the FT 01347 Basic Ruler 140 mm can be fitted. The clamping block is a high accurate clamping surface for workpieces and fixtures for RulerSet equipments.

Article no.	Article	Quantity	Weight	Code
FT 01945	Clamping block h80	1 piece	6.78 kg	B
FT 01347	Basic ruler 140 mm	1 piece	1.75 kg	W

**Combination examples:**



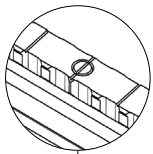
Strong design

Convincing technology

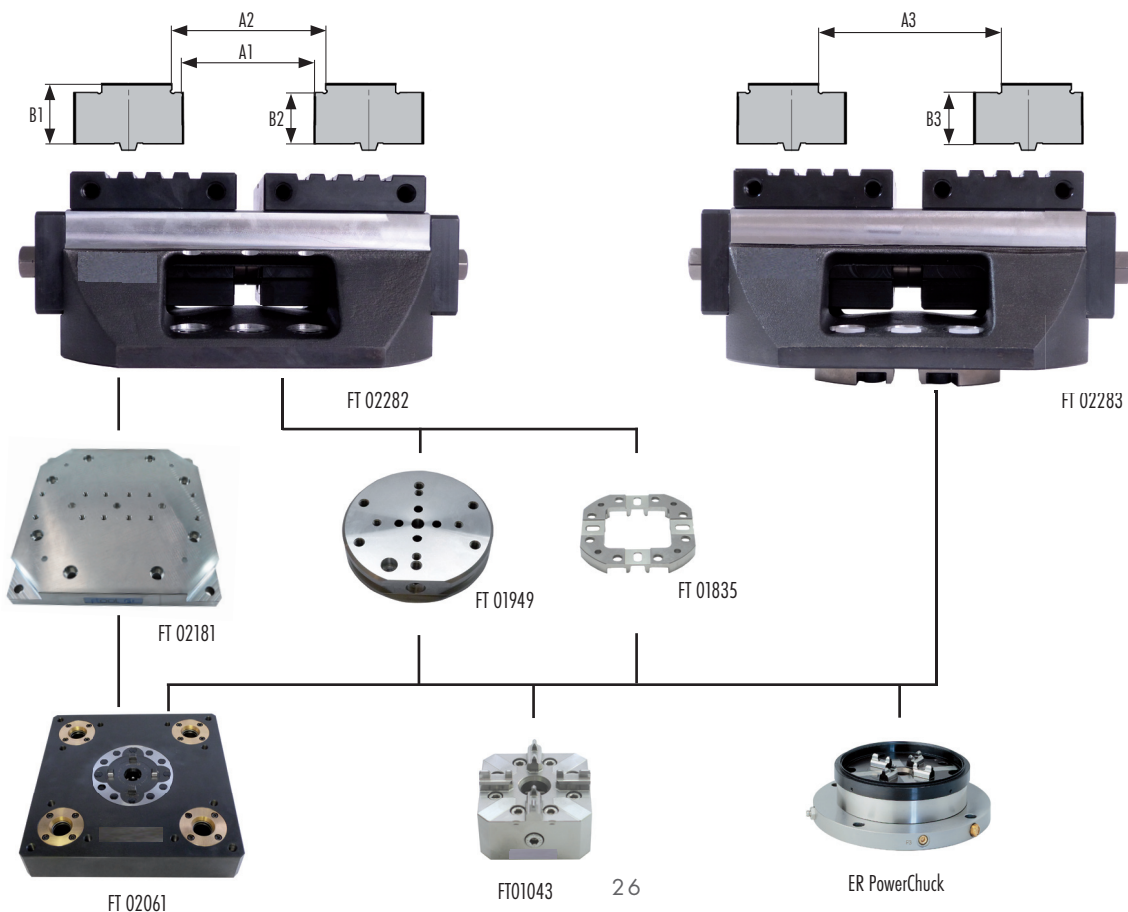
Excellent value



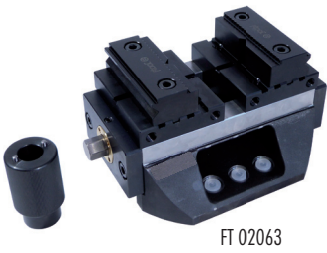
- Cast frame incl. integral guides
- Reduced height
- Prepared for PowerPlate and direct assembling on pallets and T-slot tables
- FT 02281 plus more grip clamping jaw with special tooth grip. The clamping jaw is suitable for roughing and finishing.



	FT 02281	FT 02069	FT 02070	FT 02071	FT 02152	FT 02105
<b>A1</b>	0 - 112	0 - 115	0 - 115	0 - 115	-	0 - 115
<b>A2</b>	6 - 118*	8 - 122	16 - 130*	∅12 - 40	14 - 88	to be machined
<b>A3</b>	52 - 166 / 58 - 172*	16 - 130*	17 - 128	55 - 166 / ∅48 - 140	70 - 184	to be machined
<b>B1</b>	21.5	23.5	23.5	25.5	26	25
<b>B2</b>	16	20	20	-	15	to be machined
<b>B3</b>	12 / 16	20	10	10 / 20	15	to be machined



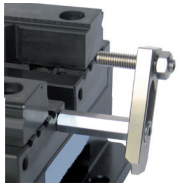
## CentroClamp 180UP



FT 02063



FT 02282  
FT 02283



FT 02104



FT 02284

### CentroClamp 180UP

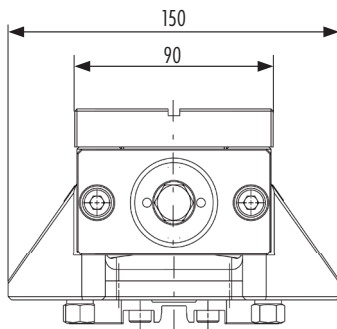
- Maximum clamping power 18kN
- Maximum Clamping force 80 Nm
- Hardened, ground guide rails
- exchangeable, hardened Clamping jaw with grip
- Strong spindle with acme thread 26 x 3 mm
- Repeatability: +/- 0.01 mm
- Clamping range 0 -125 mm (180 mm)
- Adjustable zero point
- Reference hole with centering pin dm12h7 mm
- Compact and robust construction

### CentroClamp 180 UP

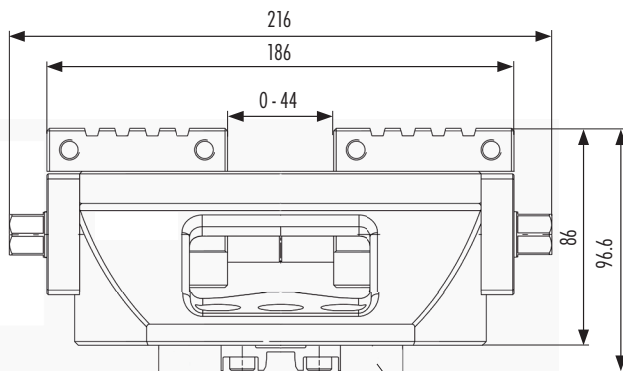
Article no.	Article	Quantity	Weight	Code
FT 02063	CentroClamp 180-UP-80 with universal grip jaws	1 piece	11.40 kg	P
FT 02282	CentroClamp 180 casting without jaws	1 piece	9.40 kg	P
FT 02283	CentroClamp 180 casting incl. PP without jaws	1 piece	9.80 kg	P

### jaws and accessories

Article no.	Article	Quantity	Weight	Code
FT 02069	Standard grip jaws UP-80	Set of 2 pieces	2.00 kg	P
FT 02070	HiP jaws HP-80	Set of 2 pieces	0.97 kg	P
FT 02071	Universal jaws UP-80	Set of 2 pieces	2.00 kg	P
FT 02104	Stopper 180-UP-80	1 piece	0.13 kg	P
FT 02105	Steel soft jaws UP-80	Set of 2 pieces	1.34 kg	P
FT 02152	KonGrip jaws CC-180, clamping range 10-180 mm	Set of 2 pieces	1.60 kg	P
FT 02153	KonGrip claws with 2 grip rows	Set of 4 pieces	0.03 kg	B
FT 02281	Plus more grip clamping jaws	Set of 2 pieces	0.80 kg	P
FT 02284	F-TFB-511R-4 FTool grip insert jaws h11mm M12	Set of 4 pieces	0.10 Kg	B
FT 02117	Torque wrench 3/8" incl. nut 16 mm	1 piece	1.21 Kg	B

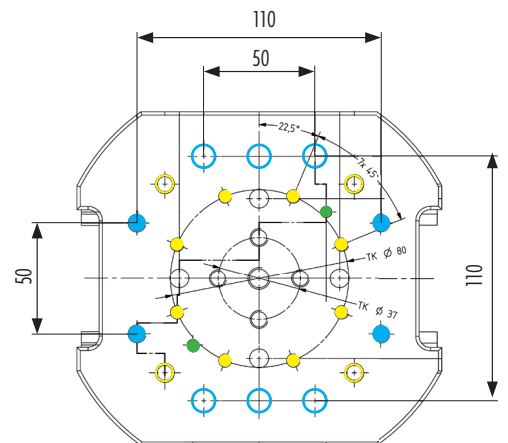
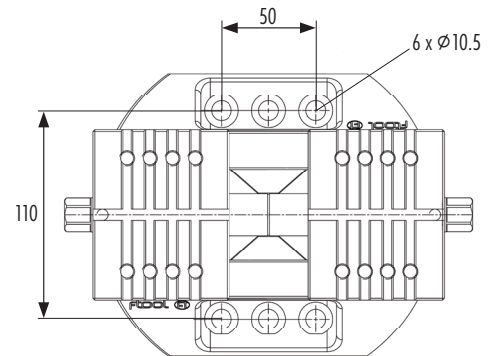


FT 02283



FT 02283

FT 01835



FT 02282

- 4 x M8 for mounting from bellow
- Mounting FT 01835 PowerPlate
- 6 x Ø10.5 for mounting from upside
- 4 x M8 for additional supporting feet
- 2 x positioning bolt PP Ø6 mm



**Clamping unit**

Spare part for PIN center chuck FT 01716 and FT 01717.

Article no.	Article	Quantity	Weight	Code
FT 02010	Clamping unit (for FT 01716)	1 piece	0.12 kg	C



**Clamping unit ER/3R chuck 80**

Spare part for the ER chuck 80P and the chuck 80 IF3R.

Article no.	Article	Quantity	Weight	Code
FT 01582	Clamping unit ER/IF3R chuck 80	1 piece	0.45 kg	A



**Chucking spigot clip open**

For the insertion on the ITS electrode holder in the electrode changer with EROWA gripper.

Article no.	Article	Quantity	Weight	Code
FT 01090	Chucking spigot clip open	Set of 20 pieces	0.10 kg	B



**Sealing washer**

Application: Insertion in prisround for sealing on central flushing.

Article no.	Article	Quantity	Weight	Code
FT 01093	Sealing washer	Set of 24 pieces	0.16 kg	C



**O-Ring for rapid-action chuck**

Application: Sealing between chucking spigot and rapid-action chuck.

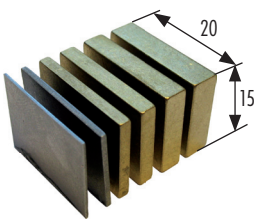
Article no.	Article	Quantity	Weight	Code
FT 01099	O-ring for rapid-action chuck	Set of 50 pieces	0.05 kg	C



**Ring piece**

Spare part for EROWA chucking spigots.

Article no.	Article	Quantity	Weight	Code
FT 01100	Ring piece	1 piece	0.01 kg	C



**Insert plates 0.5 / 1 / 2 / 3 / 4 / 5 mm**

Version: Corrosion-resistant, thicknesses from 0.5 to 5 mm.

Application: Centering of blanks in electrode holders.

Article no.	Article	Quantity	Weight	Code
FT 01092	Insert plates 0.5 / 1 / 2 / 3 / 4 / 5 mm	Set of 300 pieces	2.10 kg	C



Construct your individual equipment on the basis of your interfaces.

**Ruler Set Wire Tooling**

**EROWA link**

**IF3R link**

**PIN System**

**FT 01337**

M5 ITS 50

FT 01072 M10

45

FT 01073 M10

45

FT 01074 M10

50

FT 01225 M6

50

Ø 15

FT 01223 M6

50

Ø 20

FT 01224 M6

30

Ø 20

FT 01720

FT 01721

FT 01727

FT 01343

FT 01321

FT 01339

FT 01320

FT 01869

Ø 5.5 6 x M6

Ø 40

Ø 5.5 41

IF EROWA

M5 6 x M6

M5 ITS 50

FT 01784

Ø 5.5 6 x M6

FT 01785

M6

Ø 40

Ø 32 r10/32

FT 01733-36

40

FT 01679

M6

Ø 40

FT 01581

FT 01131

FT 01085

J1104-1/

FT 01127

FT 01087

FT 01118

FT 01084

FT 01081

FT 01079

FT 01077

## Article index

FT-Number	Page	FT-Number	Page	FT-Number	Page	FT-Number	Page	FT-Number	Page
FT 01001	21	FT 01106	8	FT 01241	16	FT 01824	25	FT 02141	6
FT 01002	21	FT 01107	8	FT 01242	16	FT 01829	3	FT 02142	6
FT 01003	21	FT 01108	8	FT 01243	16	FT 01829	9	FT 02143	6
FT 01004	21	FT 01109	8	FT 01244	16	FT 01829	19	FT 02144	6
FT 01005	21	FT 01110	8	FT 01245	16	FT 01835	24	FT 02152	27
FT 01006	21	FT 01111	8	FT 01246	16	FT 01869	7	FT 02153	27
FT 01007	21	FT 01112	8	FT 01277	16	FT 01912	11	FT 02158	16
FT 01008	21	FT 01113	8	FT 01278	16	FT 01913	11	FT 02159	16
FT 01009	21	FT 01114	8	FT 01279	16	FT 01918	15	FT 02194	6
FT 01010	21	FT 01115	8	FT 01280	16	FT 01919	15	FT 02272	7
FT 01011	21	FT 01116	8	FT 01281	16	FT 01920	24	FT 02281	27
FT 01012	21	FT 01117	8	FT 01282	16	FT 01921	24	FT 02282	27
FT 01013	21	FT 01118	18	FT 01317	9	FT 01945	25	FT 02283	27
FT 01014	21	FT 01119	18	FT 01320	25	FT 01949	24	FT 02284	27
FT 01015	21	FT 01120	18	FT 01321	25, 23	FT 01953	12		
FT 01016	21	FT 01121	18	FT 01336	3, 9, 19	FT 01954	12		
FT 01017	21	FT 01127	7	FT 01343	23	FT 01957	12		
FT 01018	21	FT 01128	7	FT 01347	25	FT 01958	12		
FT 01019	21	FT 01129	14	FT 01363	18	FT 01995	10		
FT 01020	21	FT 01130	14	FT 01435	7, 23	FT 01996	10		
FT 01021	22	FT 01131	14	FT 01483	4	FT 01997	10		
FT 01022	22	FT 01132	14	FT 01483	9	FT 01998	10		
FT 01023	22	FT 01133	14	FT 01483	19	FT 01999	11		
FT 01024	22	FT 01134	14	FT 01581	22	FT 02000	11		
FT 01025	22	FT 01135	10	FT 01582	28	FT 02001	11		
FT 01026	22	FT 01136	9	FT 01591	25	FT 02002	11		
FT 01027	22	FT 01137	9	FT 01679	23	FT 02003	3		
FT 01028	22	FT 01138	9	FT 01686	4	FT 02004	23		
FT 01029	22	FT 01139	9	FT 01716	19	FT 02005	23		
FT 01030	22	FT 01140	9	FT 01717	19	FT 02006	23		
FT 01031	22	FT 01141	18	FT 01719	19	FT 02008	20		
FT 01032	22	FT 01142	18	FT 01720	19	FT 02010	28		
FT 01033	22	FT 01143	14	FT 01721	19	FT 02017	10		
FT 01034	22	FT 01144	14	FT 01722	19	FT 02050	3		
FT 01035	22	FT 01145	14	FT 01723	19	FT 02053	20		
FT 01036	22	FT 01146	14	FT 01724	19	FT 02054	21		
FT 01037	22	FT 01147	14	FT 01725	20	FT 02063	27		
FT 01038	22	FT 01148	14	FT 01726	20	FT 02069	27		
FT 01039	22	FT 01165	16	FT 01727	20	FT 02070	27		
FT 01040	22	FT 01166	16	FT 01728	19	FT 02071	27		
FT 01043	3	FT 01171	16	FT 01729	19	FT 02098	7		
FT 01044	9	FT 01172	16	FT 01732	22	FT 02104	27		
FT 01060	8	FT 01173	16	FT 01733	22	FT 02105	27		
FT 01072	8	FT 01174	16	FT 01734	22	FT 02106	4		
FT 01073	8	FT 01175	16	FT 01735	22	FT 02107	4		
FT 01074	8	FT 01176	16	FT 01736	22	FT 02109	7		
FT 01077	5	FT 01177	16	FT 01762	14	FT 02110	4		
FT 01081	6	FT 01178	16	FT 01763	14	FT 02117	27		
FT 01084	6	FT 01179	16	FT 01764	14	FT 02120	3		
FT 01085	7	FT 01180	16	FT 01765	15	FT 02131	5		
FT 01086	22	FT 01223	9	FT 01766	15	FT 02132	5		
FT 01089	8	FT 01224	9	FT 01768	4	FT 02133	5		
FT 01090	28	FT 01225	9	FT 01769	4	FT 02134	5		
FT 01092	28	FT 01226	9	FT 01786	4	FT 02135	5		
FT 01093	28	FT 01233	21	FT 01807	23	FT 02136	5		
FT 01099	28	FT 01234	20	FT 01808	23	FT 02137	6		
FT 01100	28	FT 01236	3, 9	FT 01809	24	FT 02138	6		
FT 01104	8	FT 01236	19	FT 01810	24	FT 02139	6		
FT 01105	8	FT 01237	10	FT 01811	24	FT 02140	6		



**AGS-TECH Inc.**

**Phone: +1-505-550-6501 and +1-505-565-5102; Fax: +1-505-814-5778**

**Email: [sales@agstech.net](mailto:sales@agstech.net)      Web: <http://www.agstech.net>**