

EROWA UPC

The μm -precise power package

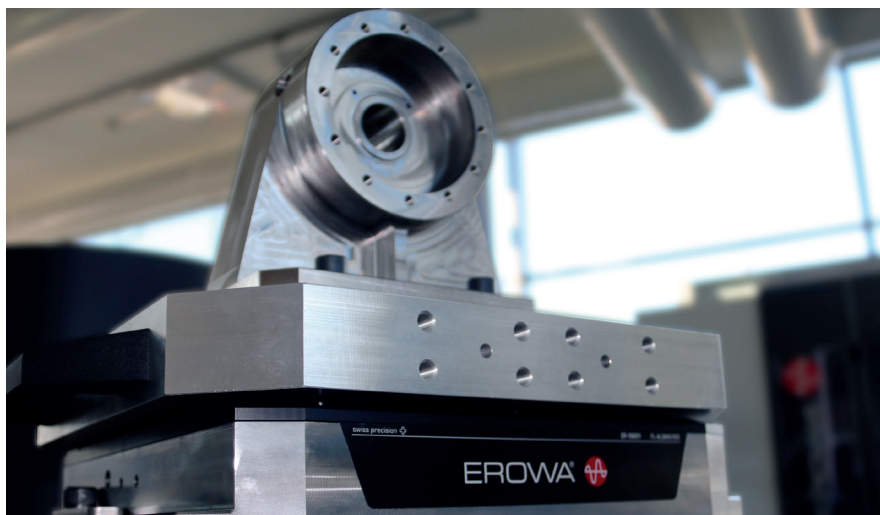
Highest
precision,
simple
automation



Highly precise and extremely stable

The UPC (Universal PowerChuck) clamping system is characterized by highest precision, stability and reliability, even with workpieces measuring up to 500 x 500 mm. With its enormous clamping force of up to 80 kN and many other advantages, EROWA UPC is made for daily use.





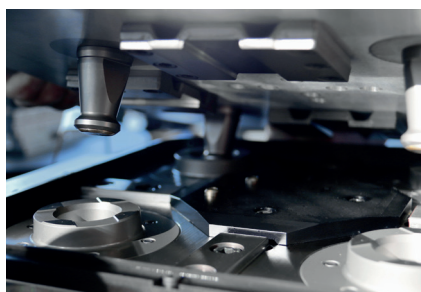
Highest performance:

With 50 kN clamping force and optional reclamping function (80 kN) for all chuck types, the UPC holds everything that needs to be held.



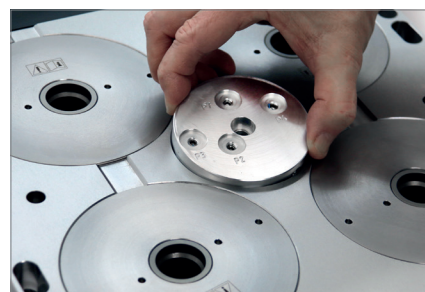
Highest compatibility:

The UPC 2.0 chucks have a mounting hole pattern for mounting options on almost any machine table without additional adjustment.



Highest precision:

Unmatched repeatability of < 0.002 mm for workpiece sizes up to 500 x 500 mm.



More production space:

Due to the adapter flange on the rear for individual air control, the UPC 2.0 chuck 320 x 300 can be mounted directly on the machine table (no intermediate plate required).



Highest process reliability:

The clamping system is completely sealed and therefore reliably protected against the penetration of coolant and chips. The contact surfaces are automatically and accurately cleaned with air.

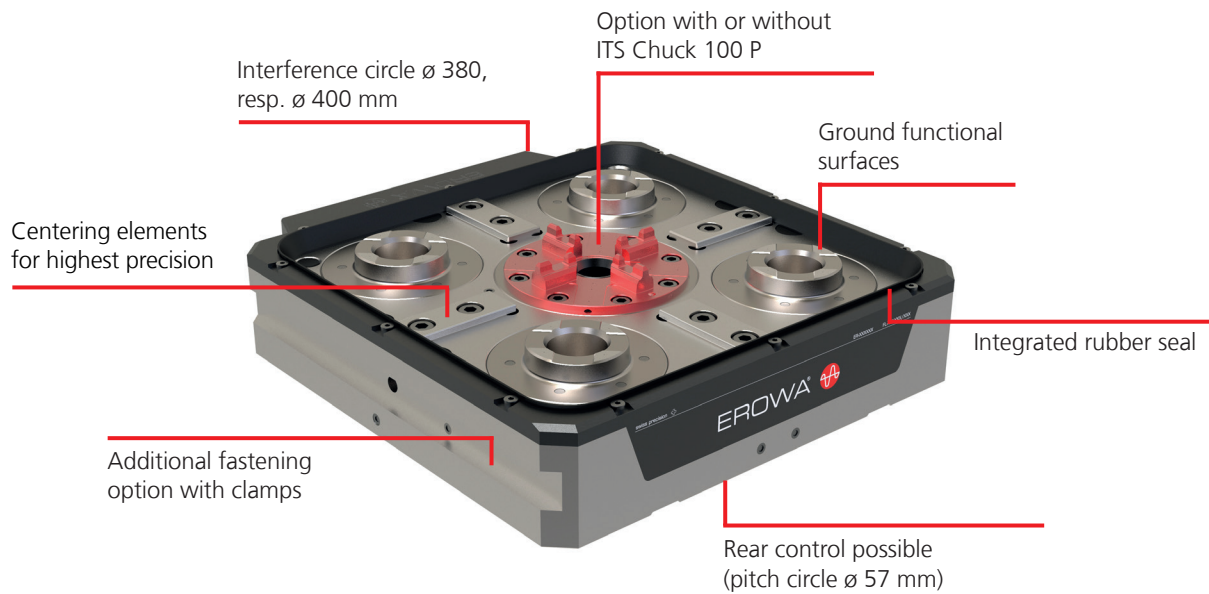
THE FACTS

- Ideal for EDM, milling, drilling, grinding and measuring
- Compact design
- Repeating accuracy < 0.002 mm
- Flexible and quick changeover of workpieces
- Rear or side control
- 5-axis machining in one clamping
- Maximizing manufacturing flexibility with adapter pallets
- Automate with process reliability

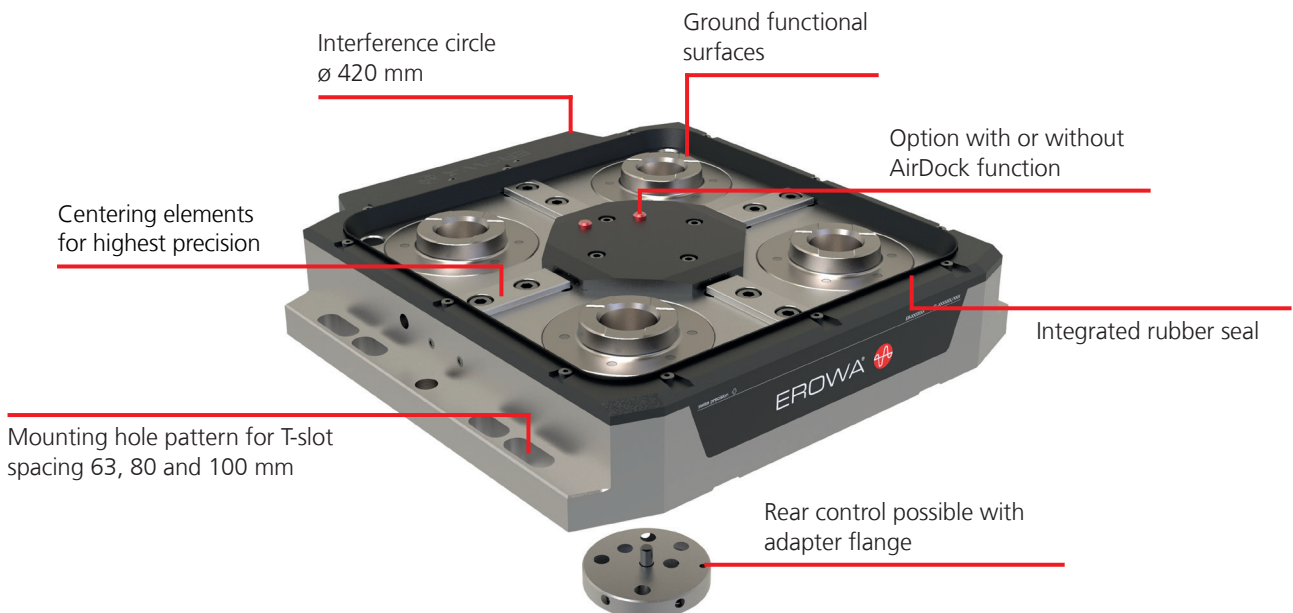
Universal, powerful, μm -accurate

EROWA UPC offers you complete flexibility: Whether for machining small to large work-pieces on milling, grinding or EDM machines, the various options, manual or automated pallet handling: the different UPC 2.0 chuck types cover every possible application.

UPC 2.0 Chuck 280 x 280



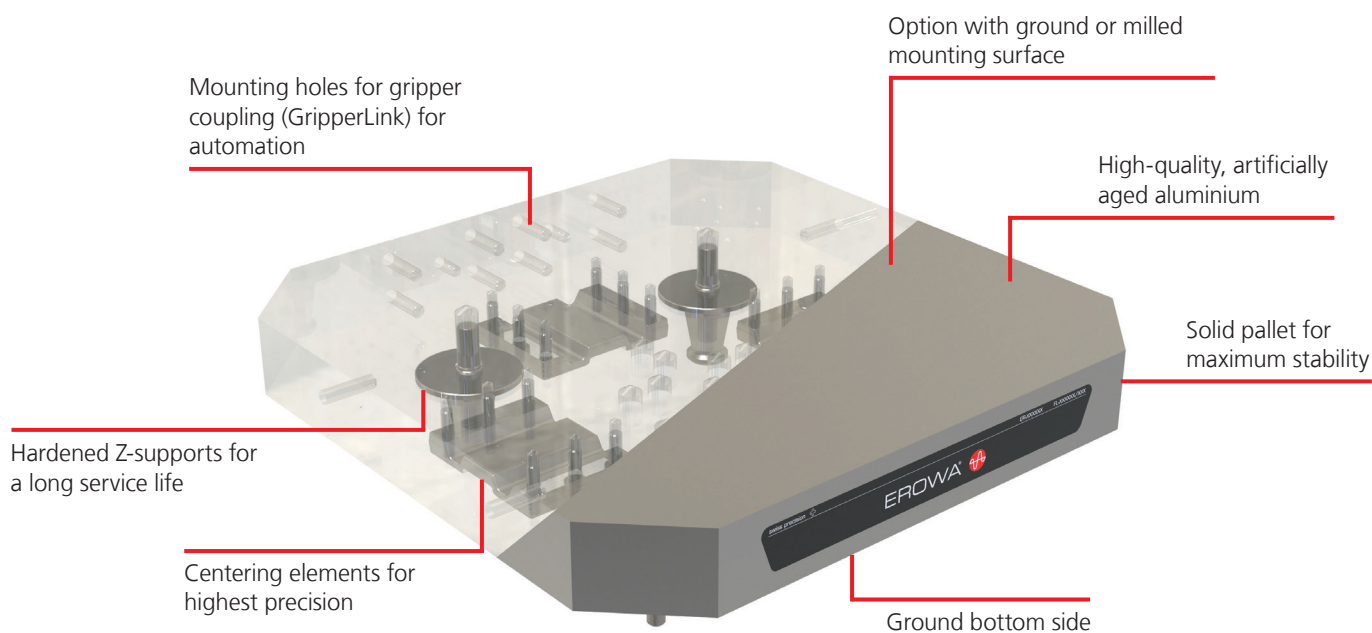
UPC 2.0 Chuck 320 x 300



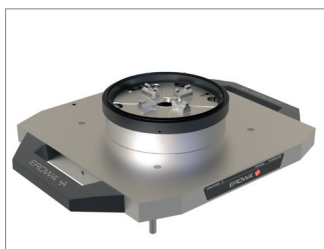
UPC Pallets

Benefit from an extensive UPC standard pallet range. In addition to the conventional workpiece carriers, this also includes grid, magnetic and adapter pallets. EROWA also offers customer-specific solutions. We will be happy to design a customized solution that fully meets your needs.

The UPC pallets are characterized by:



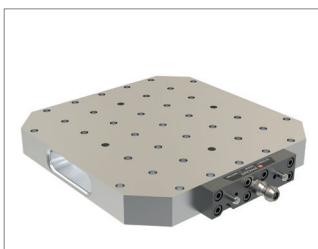
A selection of UPC pallets:



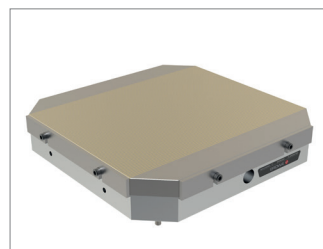
UPC Adapter pallet with PowerChuck P



Base UPC duo CleverClamp



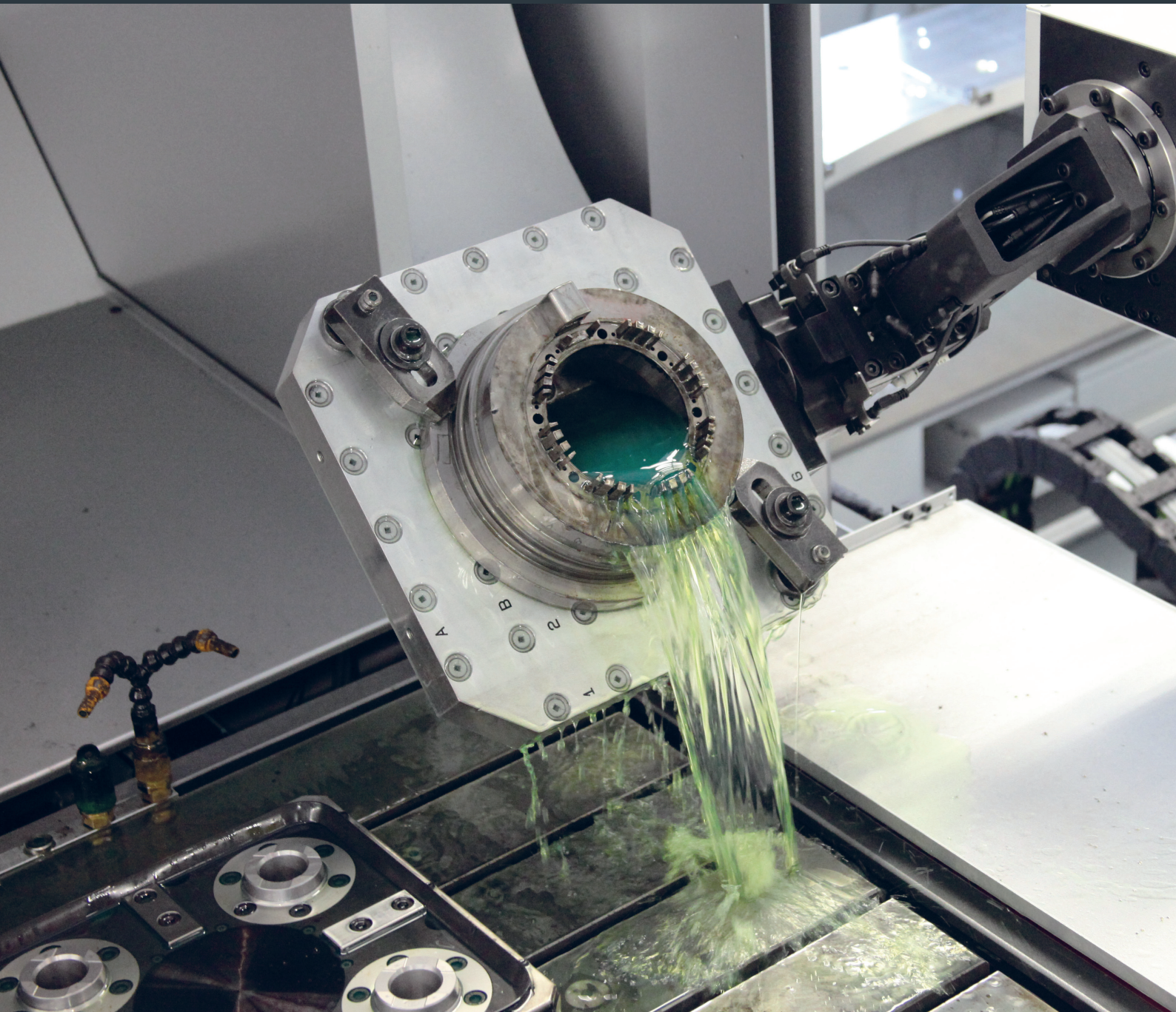
UPC Grid pallet



UPC Magnet pallet

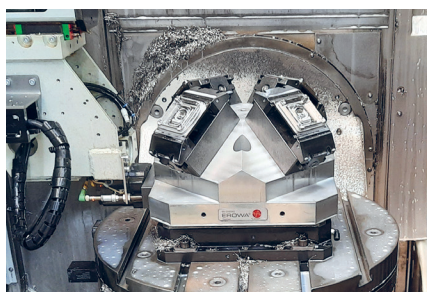
Increase productivity

The UPC clamping system forms the interface to your workpieces. With little to no downtime, you can change over and continue production. This is how you massively increase your productivity. In addition, the UPC palletizing system can be fully automated and fits seamlessly into your production environment.





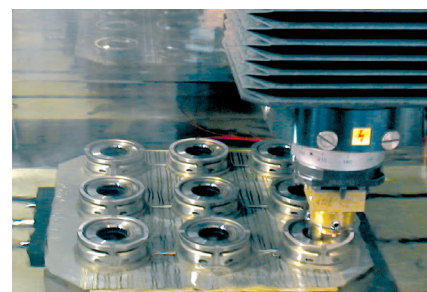
The UPC 2.0 chuck with the integrated ITS chuck ensures the seamless integration of the EROWA ITS 50 or ITS 100 workpiece carriers into the UPC system. This combination allows flexible use depending on the part size.



UPC chucks form the universal basis for all types of workpiece carriers: vises, fixtures and clamping devices are mounted on the UPC pallet. In this way, they are integrated throughout the EROWA UPC clamping system.



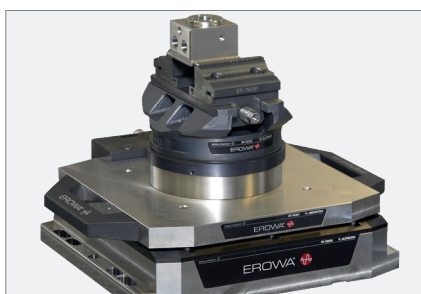
Ingenious and robust clamping technology: Due to the enormous clamping force, stable centring and the compact design, the UPC clamping system guarantees the highest performance for all your milling operations.



From milling to die-sinking EDM. The integrated rubber seal protects the UPC 2.0 chuck against the ingress of liquids and chips.



Practical and individually applicable: Grinding on the UPC magnetic pallet.



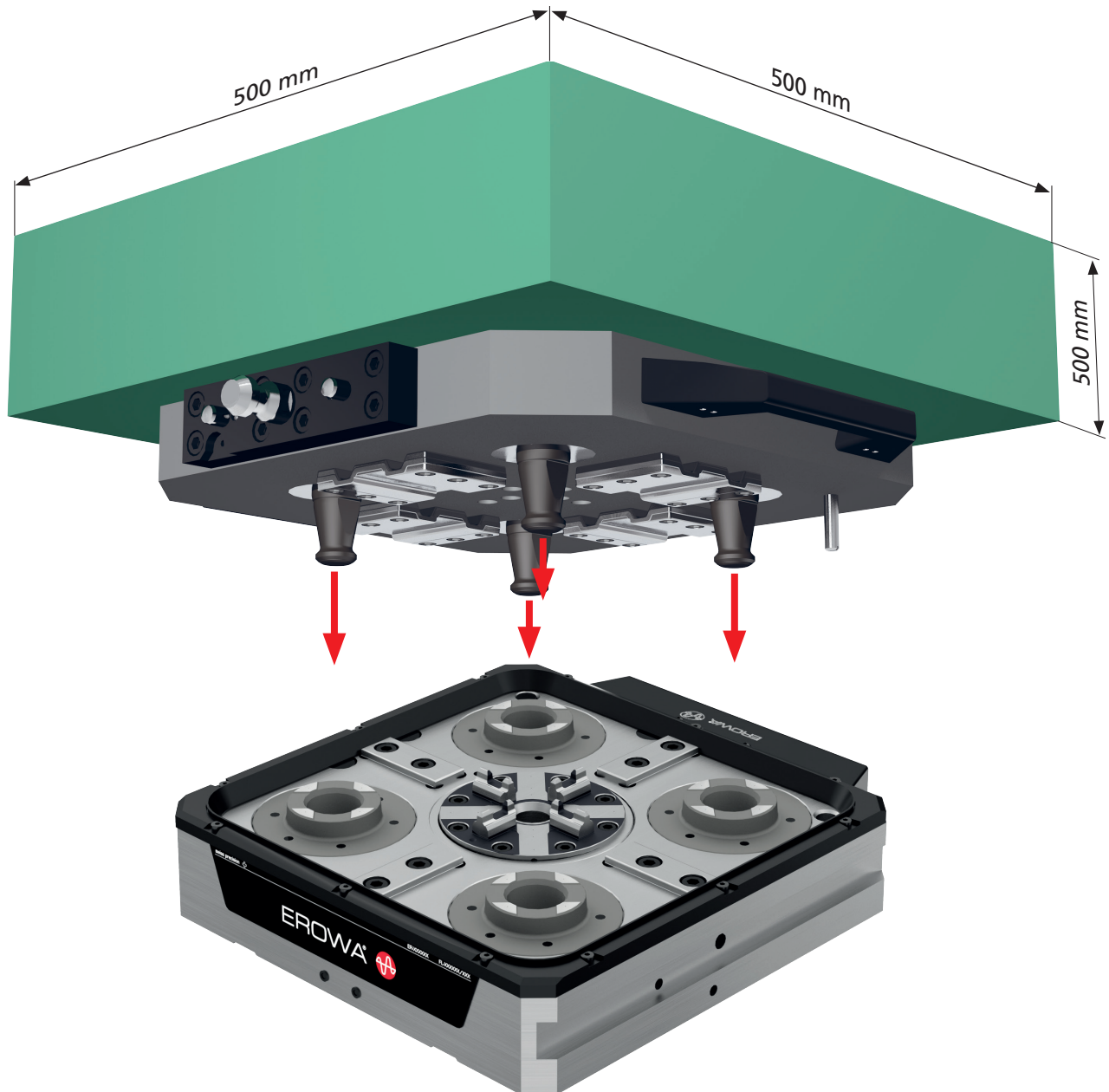
Full flexibility: UPC 2.0 chuck with PowerChuck P adapter pallet. This means that other EROWA clamping systems can be used in combination without issue.



The UPC clamping system can be automated throughout. We will be happy to advise you on a customized EROWA automation solution.

EROWA UPC

Multi-Purpose-Hero with highest precision.



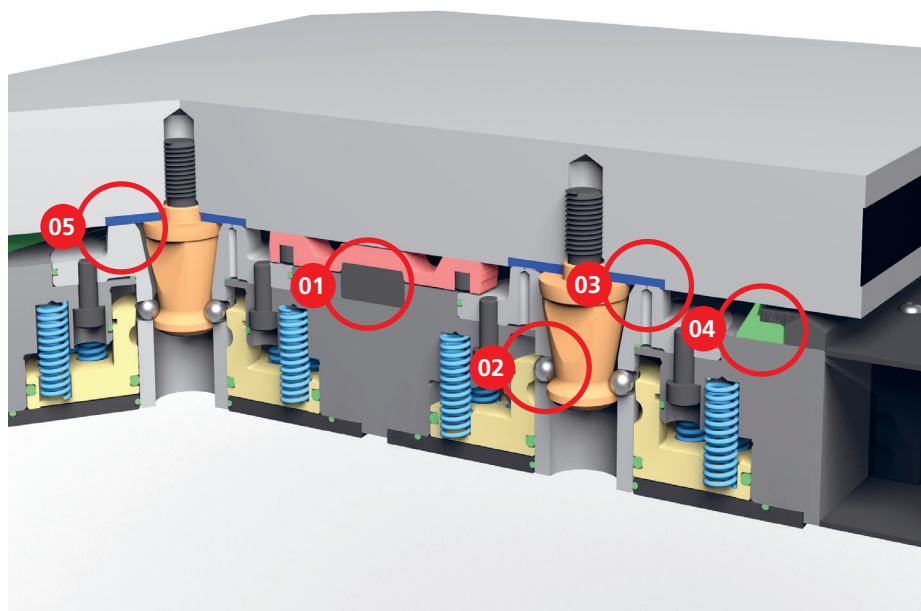
Applications



Handling

Manual / loader / robot

Function

**01 | Centering**

The four centering segments in the pallet and in the chuck guarantee a precise position orientation. The clamping spigots are used for pre-centering.

02 | Power package

The self-locking ball lock generates a clamping force of up to 80,000 N. The full clamping force is maintained even in the event of a pressure drop.

03 | Cleaning

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

04 | 100% tight

The sealing prevents the penetration of chips and coolant.

05 | Tilting stable

Thanks to the widely spaced contact surfaces, the UPC clamping system is extremely stable against tilting.

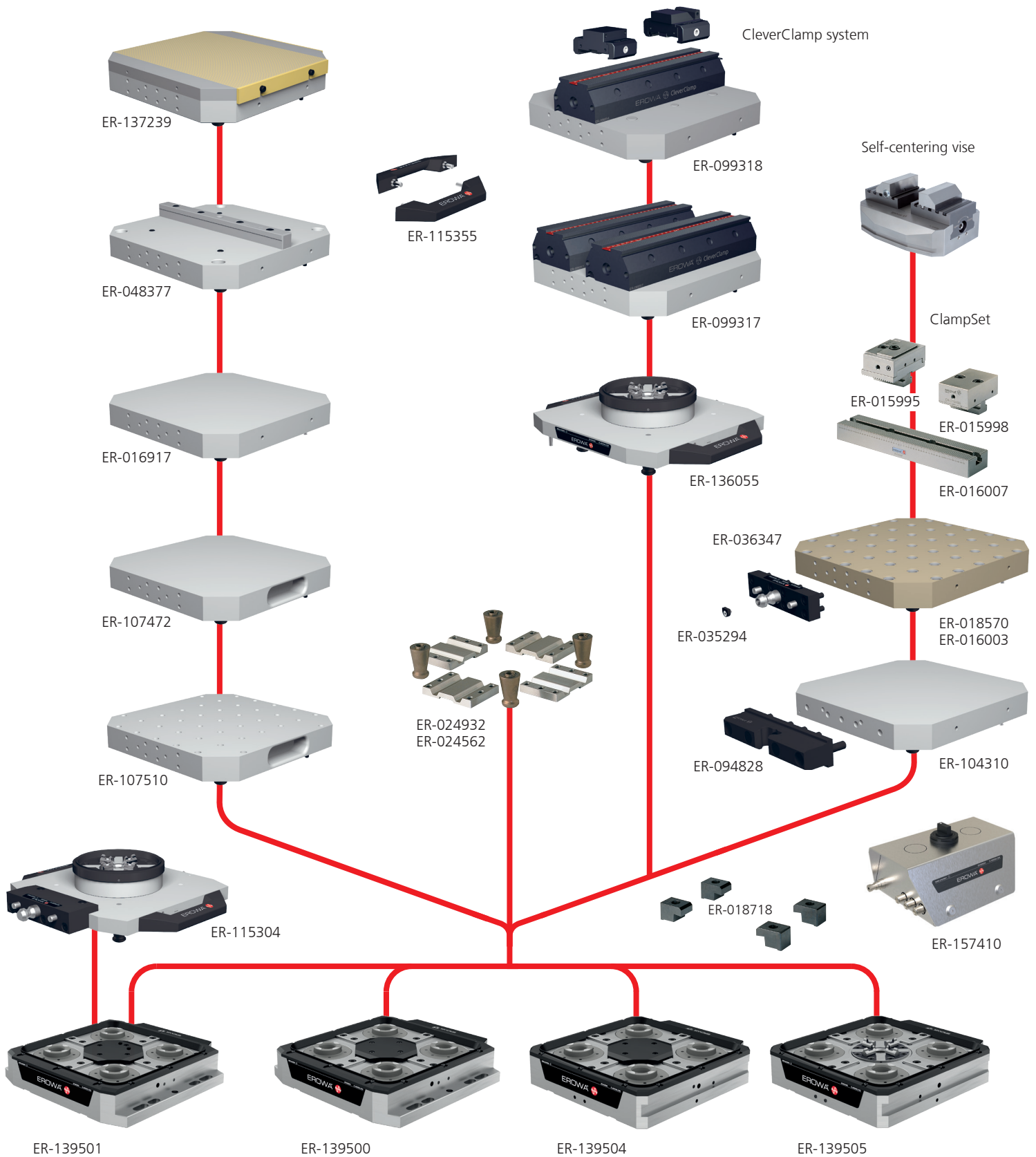
Technical data - UPC 2.0

Pallet size	320 x 320 mm
Chuck dimensions	280 x 280 mm and 320 x 300 mm
System height (chuck and pallet)	105 mm
Recommended workpiece sizes	up to 500 x 500 x 500 mm
Repeatability	< 0.002 mm
Indexing of pallet	4 x 90°
Clamping force	50,000 N spring power (clamped without pressure)
Clamping force with reclamping	80,000 N
Opening pressure	min. 6 bar (pneumatic)
Reclamping pressure	3 bar (pneumatic)
Operation	manual or automatic control unit
Monitoring	pneumatic, electropneumatic evaluation



EROWA UPC

The components



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

-  1. Manual operation
-  2. Operate with compressed air jet
-  3. Operate with manual valve
-  4. Operate with manual control unit
-  5. Operate with electro-pneumatic control unit
-  6. With central flushing clearance
-  7. Suited for submerged operation
-  8. Corrosion-resistant material
-  9. Suited for automatic operation
-  10. Handling with EROWA Robot gripper S
-  11. Handling with EROWA Robot gripper Combi
-  12. Handling with EROWA Robot gripper C
-  13. Handling with EROWA Robot gripper 72
-  14. Handling with EROWA Robot gripper 115
-  15. Handling with EROWA Robot gripper 148
-  16. Handling with EROWA Robot gripper RN PC 210
-  17. Handling with EROWA Robot gripper RCS
-  18. Handling with EROWA Robot gripper WGS-500



EROWA UPC PALLETIZING SYSTEM

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For cutting operations



For EDM



For wire-EDM

EROWA UPC

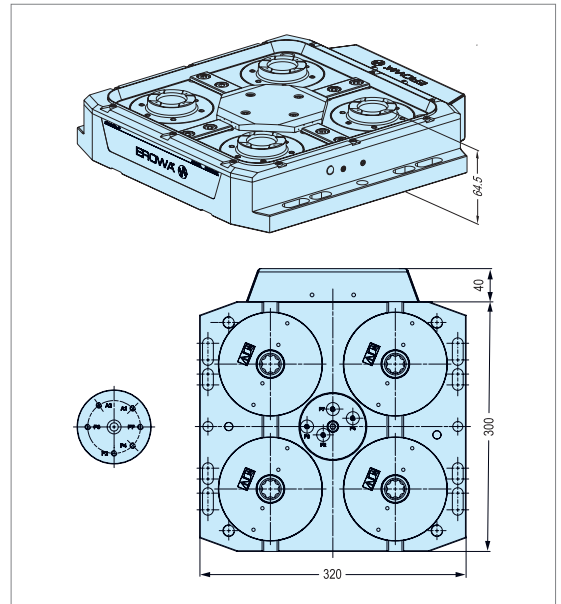
Chuck

Technical specifications	UPC 2.0	ITS Chuck 100 P	PowerChuck P
Repeatability	< 0.002 mm	< 0.002 mm	< 0.002 mm
Indexing of pallet	4 x 90°	4 x 90°	4 x 90°
Clamping force	50,000 N spring power	6,000 N spring power	10,000 N spring power
Clamping force with reclamping	80,000 N		
Opening pressure	min. 6 bar (pneumatic)	min. 6 bar (pneumatic)	min. 6 bar (pneumatic)
Reclamping pressure	3 bar (pneumatic)		

ER-139500 UPC 2.0 chuck 320 x 300



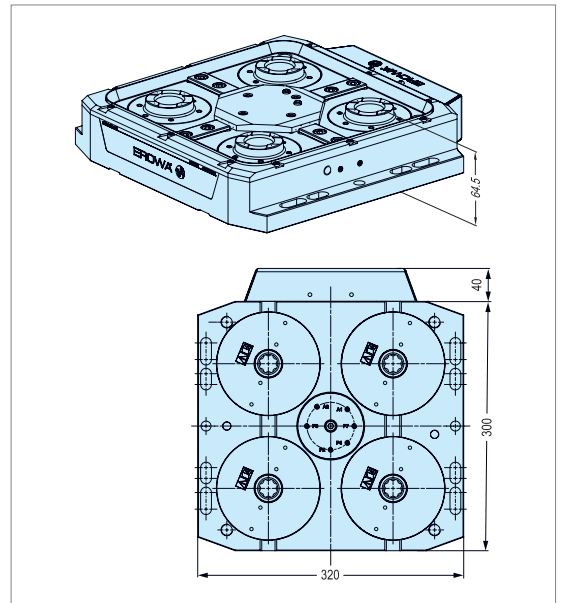
- Version** UPC 2.0 chuck, size 320 x 300 mm. Including borehole pattern adapter (fitted) and pitch $\varnothing 57$ mm adapter (not fitted).
- Connections** 4 connections (pneumatic), laterally and on the underside through adapter: for opening, cleaning / presence check, reclamping, cleaning the UPC centerings.
- Option** Customer-specific adapter on request.
- Application** On milling, grinding, drilling, EDM and measuring machines. To accommodate UPC pallets.
- To fit** Fitting bore pattern 50mm/M12, star table and machine table with T-slot distances of 63, 80 and 100 mm.



ER-139501 UPC 2.0 chuck 320 x 300 with air dock



- Version** UPC 2.0 chuck with two AirDock connections, size 320 x 300 mm. Including pitch $\varnothing 57$ mm adapter (fitted).
- Connections** 6 connections (pneumatic), laterally and on the underside through adapter: for opening, cleaning / presence check, reclamping, cleaning the UPC centerings, as well as opening, cleaning / presence check of the adaption chuck (air duct).
- Option** Customer-specific adapter on request.
- Application** On milling, grinding, drilling, EDM and measuring machines. To accommodate UPC and adapter pallets.
- To fit** Fitting bore pattern for 50mm/M12 grid, for star tables and machine tables with T-slot distances of 63, 80 and 100 mm.



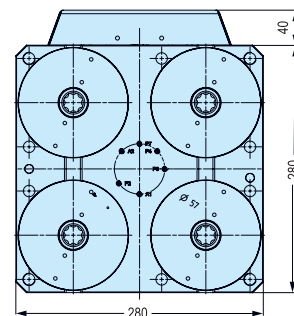
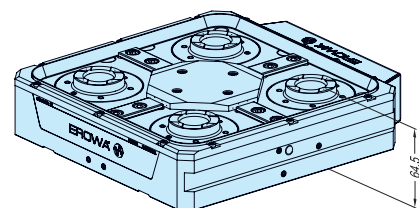
EROWA UPC

Chuck

ER-139504 UPC 2.0 chuck 280 x 280



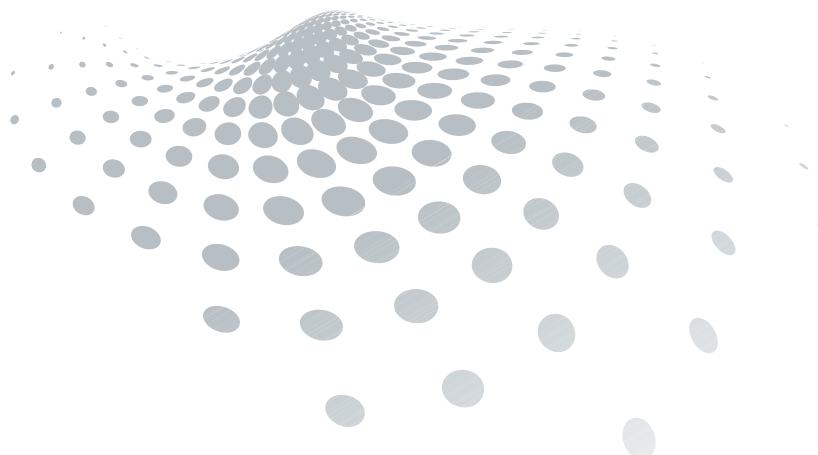
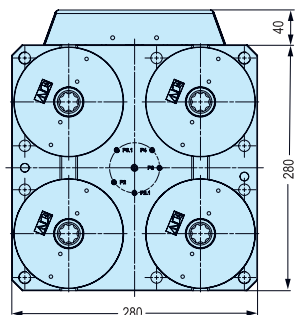
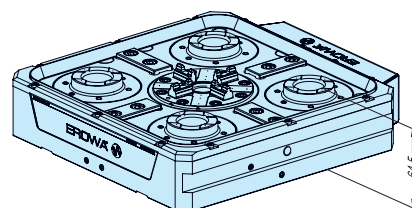
- Version** UPC 2.0 chuck. size 280 x 280 mm. With fixed connection on the underside.
- Connections** 4 connections (pneumatic), laterally and on the underside on pitch $\varnothing 5$ mm: for opening, cleaning / presence check, reclamping, cleaning of UPC centerings.
- Application** On milling, grinding, drilling, EDM and measuring machines. To accommodate UPC pallets.
- To fit** Fitting borehole pattern for 25mm/M12 grid, for star tables and machine tables with a T-slot distance of 50 mm.



ER-139505 UPC 2.0 chuck 280 x 280 with ITS chuck 100 P



- Version** UPC 2.0 chuck with integrated ITS chuck 100 P, size 280 x 280 mm. With fixed fitting pattern on the underside.
- Connections** 6 connections (pneumatic), laterally and on the underside on pitch $\varnothing 57$ mm: for opening, cleaning / presence check, reclamping, cleaning the UPC centerings, as well as opening, cleaning / presence check of the ITS chuck 100 P.
- Application** On milling, grinding, drilling, EDM and measuring machines. To accommodate UPC pallets, pallets $\varnothing 115$, $\varnothing 148$, electrode holders, etc.
- To fit** Fitting borehole pattern for 25mm/M12 grid, for star tables and machine tables with a T-slot distance of 50 mm.



EROWA UPC

Pallets

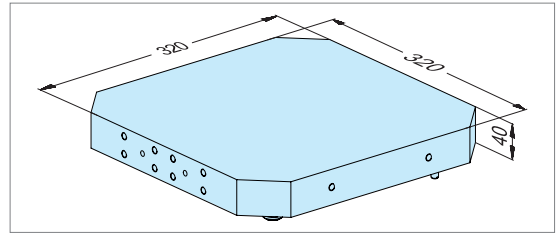
ER-016917 UPC pallet Alu 320 x 320 x 40 mounting surface ground



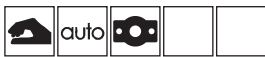
Version Aluminum, centering segments and chucking spigots fitted, hard Z-support.

Application To mount workpieces and gauges.

Please note Drill holes according to need.



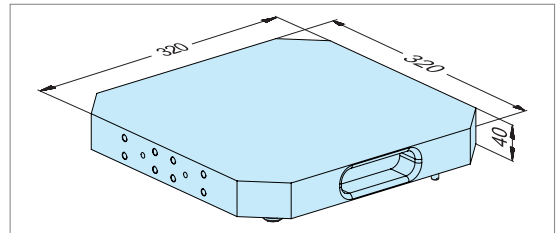
ER-107472 UPC pallet Alu 320 x 320 x 40 mounting surface milled



Version Aluminum, centering segments and chucking spigots fitted, hard Z-support, integrated handles. Mounting surface milled.

Application To mount workpieces and gauges.

Mounting workpiece Drill holes according to need.



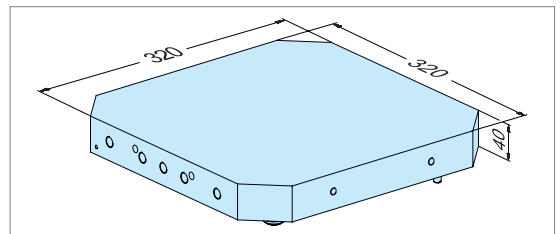
ER-104310 UPC pallet Alu 320 x 320 x 40 WGS-500 40 mm



Version Aluminum, centering segments and chucking spigots fitted, hard Z-support. Prepared with bore pattern for WGS-500 40mm GripperLink.

Application To clamp workpieces and gauges.

Please note Drill holes according to need.



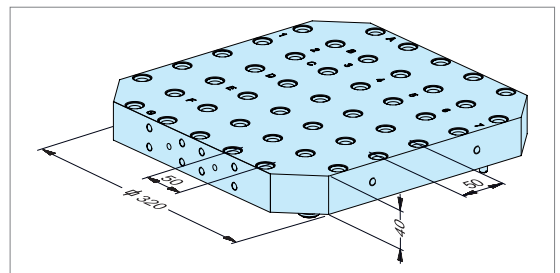
ER-018570 UPC pallet Alu R50 320 x 320 x 40 mounting surface ground / anodized

ER-016003 UPC pallet Alu R50 320 x 320 x 40 mounting surface ground



Version Aluminum with 50 mm grid, pattern borehole $\varnothing$ 12F7, M12 thread. Centering segments and chucking spigots fitted. Hard Z-support.

Application Basis for gauges and workpieces.



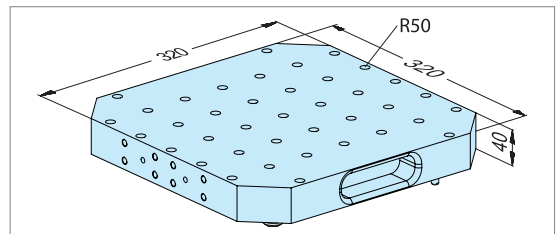
ER-107510 UPC pallet Alu R50 320 x 320 x 40 mounting surface milled



Version Aluminum, centering segments and chucking spigots fitted, hard Z-support, integrated handles. Hole grid R50 for M10 nut inserts (option). Mounting surface milled.

Application To mount workpieces and gauges.

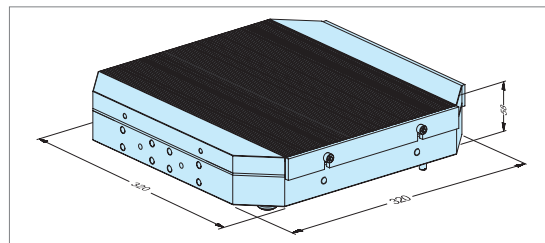
Option ER-032503 Insert nuts M10 (set of 12).



**ER-137239 UPC magnet pallet Neomicro
320 x 320 x 58 mm**

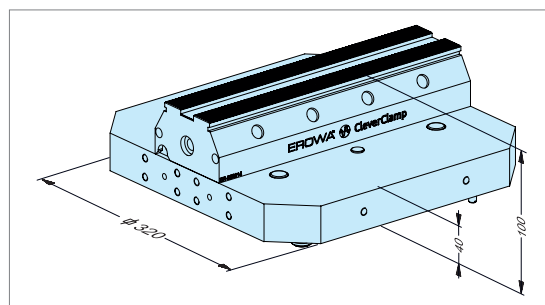

Version UPC pallet with fitted magnetic plate, 320x320x58.
Manual clamping and unclamping with a spanner supplied.

Application Clamping workpieces for surface and profile grinding,
EDM and high-frequency milling.


**ER-099318 Base UPC mono
CleverClamp**

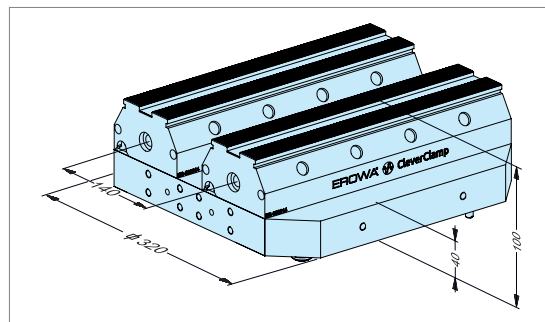

Version Combination of UPC aluminum pallet with 320 Clever-
Clamp rail; centering segments and chucking spigots
fitted. Z-Support hard.

Application Optimal accessibility for 5-axis applications with single
and multiple fixtures.


**ER-099317 Base UPC duo
CleverClamp**

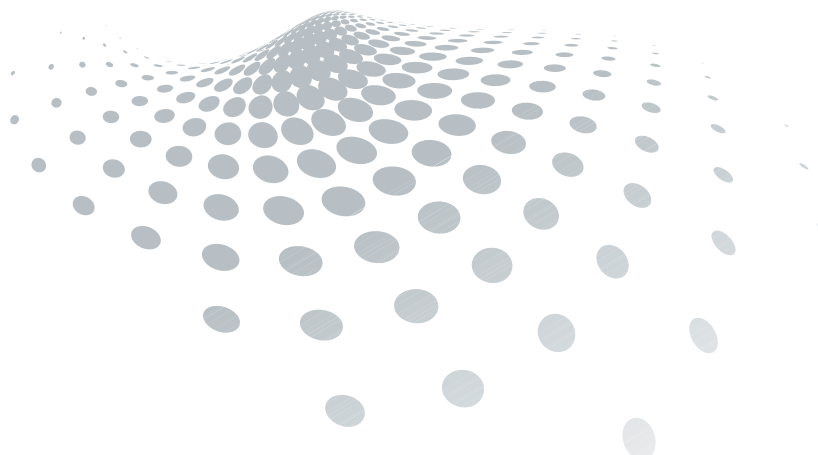
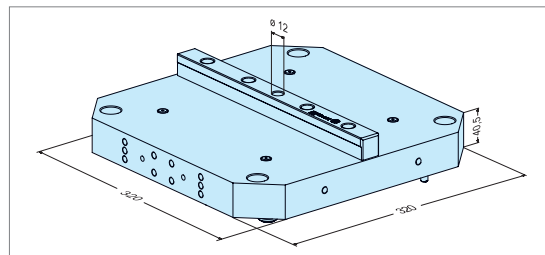

Version Combination of UPC aluminum pallet with two Clever-
Clamp 320 rails; centering segments and chucking spigots
fitted. Z-support hard.

Application Optimal for multiple fixtures and for clamping big
workpieces.


**ER-048377 UPC Alignment pallet
320 x 320 x 40 mm**


Version UPC pallet with ground alignment rail and four Z-measu-
ring surfaces.

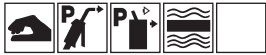
Application Alignment of the angle position and determination of the
center and the Z-values of UPC chucks.



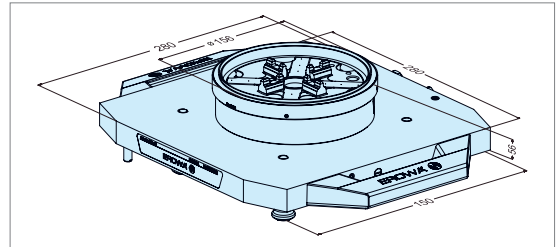
EROWA UPC

Adapter pallets PowerChuck P

ER-136055 Adapter pallet UPC PowerChuck P manual



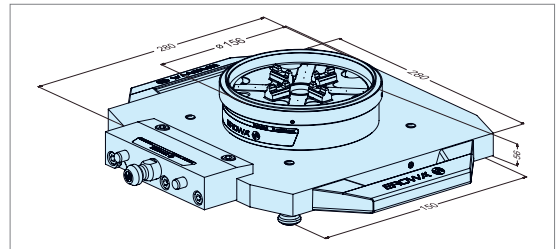
Version UPC adapter pallet with PowerChuck P fitted.
 Connections On the side of the pallet.
 Application For the manual change of the adapter plate on the UPC chuck.



ER-115304 Adapter pallet UPC PowerChuck P automatic



Version UPC adapter pallet with PowerChuck P fitted.
 Connections On the underside of the pallet, suitable for all UPC chucks with air couplings.
 Application For the automatic change of the adapter plate to the UPC chuck with a handling facility.



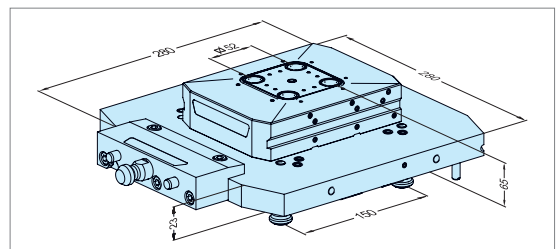
EROWA UPC

Adapter pallets VPC

ER-166736 UPC adapter pallet VPC 52 automatic with reversing valve



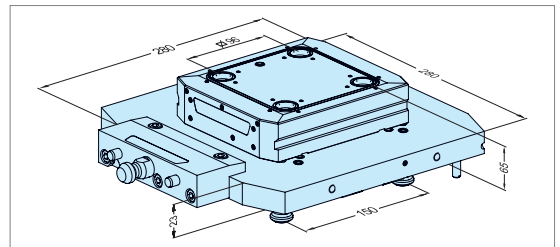
Version UPC adapter pallet with VPC 52 fitted. With reversing valve.
 Connections On the underside of the pallet, suitable for all UPC chucks with air couplings.
 Application For the automatic change of the adapter plate to the UPC chuck with a handling facility.



ER-173410 UPC adapter pallet VPC 96 automatic with reversing valve



Version UPC adapter pallet with VPC 96 fitted. With reversing valve.
 Connections On the underside of the pallet, suitable for all UPC chucks with air couplings.
 Application For the automatic change of the adapter plate to the UPC chuck with a handling facility.



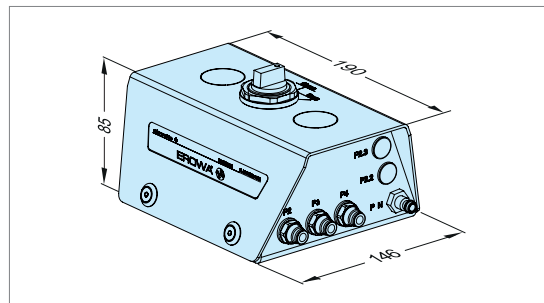
EROWA UPC

Operation

ER-157410 Control box 1-fold



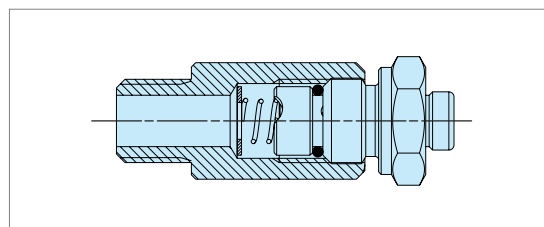
- Version** Manual control box for 1 chuck. To control the opening / reclamping / cleaning functions. Pressure adjustable. Includes a set of tubes.
- Connections** 1 input (P IN) and 3 outputs (P2 Open / P3 Clean / P4 Reclamp).
- Application** To operate chuck types ITS, ITS Compact, CombiChuck, PowerChuck P, VPC, UPC or PM Tooling.



ER-158218 UPC 2.0 air jet connection



- Version** Air gun valve for the manual operation of UPC 2.0 chucks with an air jet.
- Application** To be fitted to UPC 2.0 chuck.



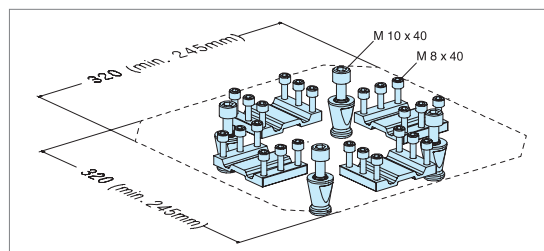
EROWA UPC

Accessories

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



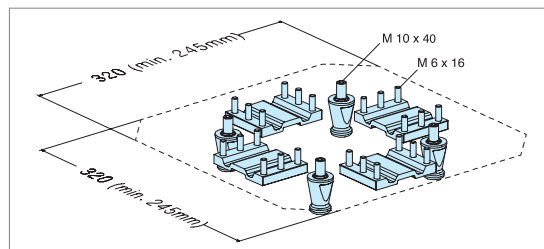
- Version** Four segments and chucking spigots for UPC, including bolts.
- Application** To produce special UPC pallets.
- Mounting** With bolts through the pallet from above.
- Note** Easy to assemble on the UPC chuck.



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



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

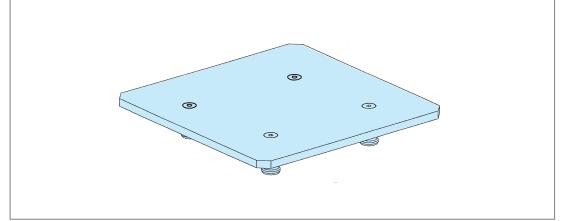


EROWA UPC

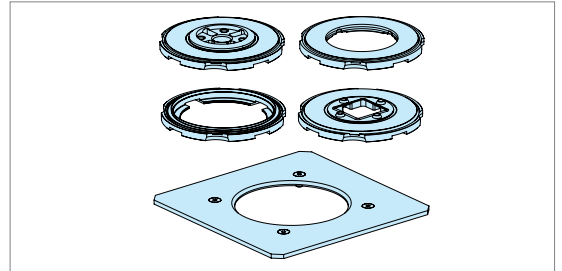
Accessories

ER-012444 Cover for UPC

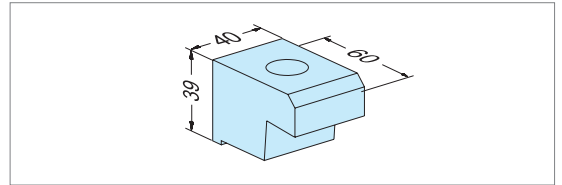
Version Aluminum.
Application Cover for UPC.

**ER-094178 Cover set for UPC / ITS**

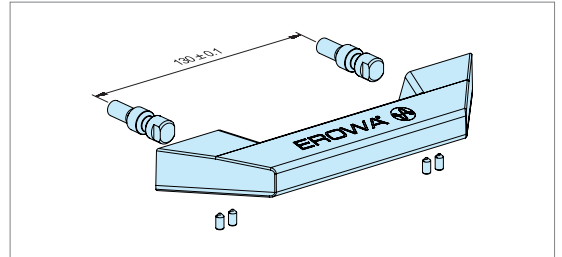
Version Aluminum with inserts, to protect UPC chucks when used with holder ø72, pallet ø115, pallet ø148, electrode holders ITS 50 C.

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

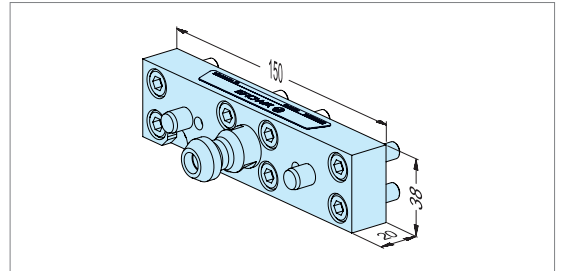
Version High tension steel, mounting accessories not included.
Application To mount UPC chucks to machine tables.
Please note Fits UPC chuck No. ER-139504/ER-139505

**ER-115355 Handle 2 pieces**

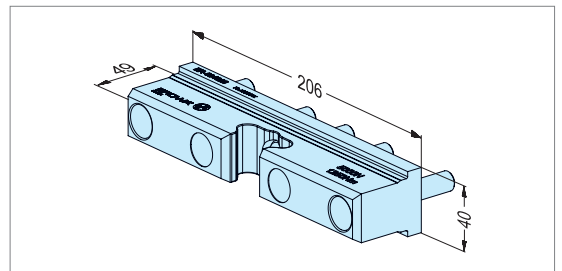
Version Aluminum handle.
Application Handle for UPC pallets.
To fit Fit into the prepared threads with enclosed attachment bolts according to instructions.

**ER-036347 GripperLink RCS 38 mm**

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

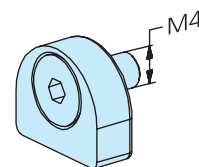
**ER-094828 GripperLink WGS-500 40 mm without air connection**

Version Coupling kit incl. screw set, for mounting on MTS or UPC pallets.
Application For pallets on EROWA handling units that are equipped with the WGS-500 exchange gripper system.

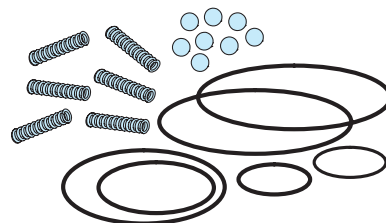


ER-035294 EWIS™ Rapid chip with chip holder RCS with chip $\varnothing 3 \times 13.5$ mm

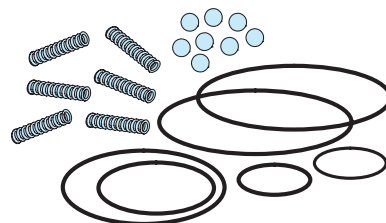

Version Holder with built-in data carrier. EWIS chip: read only.
 Application To build into RCS coupling, PalletSet W holder and Basic WEDM holder.


ER-023121 Repair kit for UPC O-rings, springs, balls for ITS 070649

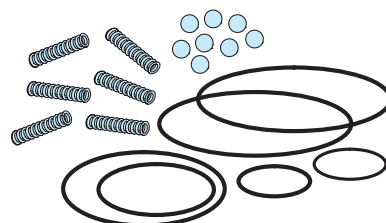

Version All the wearing parts of UPC ER-016092, ER-016093, ER-070649 and ER-074524.
 Application Dismantle UPC according to instructions supplied, replace parts.
 Note Each UPC is supplied with an operating manual, which you will please keep.


ER-023120 Repair kit for UPC P O-rings, springs, balls

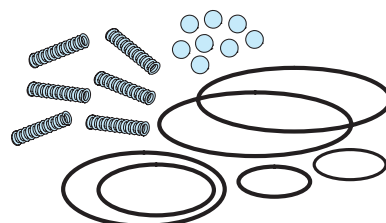

Version All the wear parts of UPC P ER-016841, ER-078728 and ER-028784.
 Application Dismantle UPC P according to instructions supplied, replace parts.
 Note Each UPC P is supplied with an operating manual, which you will please keep.


ER-139039 Repair kit for UPC 2.0


Version All the wearing parts (O-rings, springs, balls) for UPC 2.0 chucks ER-139500, ER-139501 and ER-139504.
 Application Dismantle UPC 2.0 chuck according to instructions, replace wearing parts and reassemble.


ER-139049 Repair kit for UPC 2.0 + ITS Chuck


Version All the wearing parts (O-rings, springs, balls) for UPC 2.0 chuck 280 x 280 with ITS Chuck 100 P, ER-139505.
 Application Dismantle UPC 2.0 and ITS chucks according to operating instructions, replace wearing parts and reassemble.



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EROWA AG, founded in Switzerland in 1971, is now a globally operating organization specializing in the development, production, consulting, and distribution of state-of-the-art manufacturing technology for tool and mold making, as well as for production and precision engineering. With their headquarters located in central Switzerland, EROWA ranks among the world's leading companies in clamping technology and automation. Having 13 subsidiaries and 22 representatives, EROWA offers international points of contact and worldwide customer service.



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