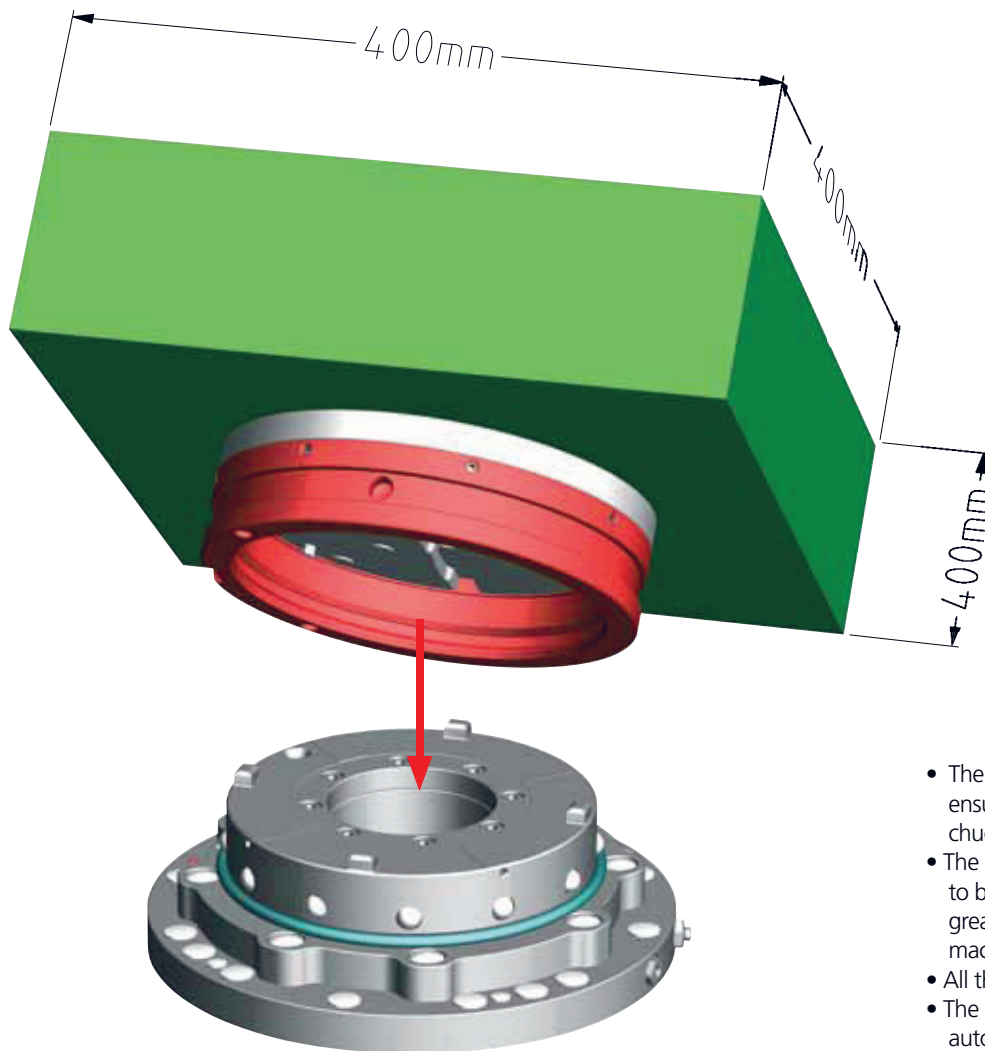


EROWA ProductionChuck 210

# Palletizing system with centralized material pass-through

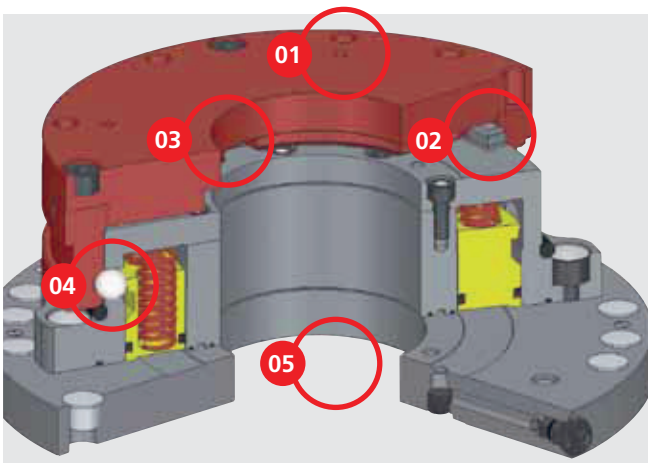
The EROWA ProductionChuck 210 ingeniously combines the endurance-tested EROWA precision with the flexible operation of a palletizing system such as required by modern parts manufacturing.



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

**Applications****Handling**

Manual / Loading facility / Robot

**Function****05 | Material pass-through**

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

**01 | Mounting**

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

**02 | Centering system**

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

**03 | Z-supports**

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

**04 | Ball lock**

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

**Technical data - ProductionChuck 210**

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

EROWA ProductionChuck 210 in action

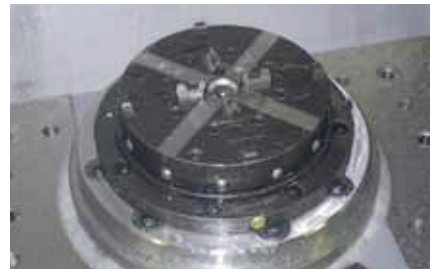
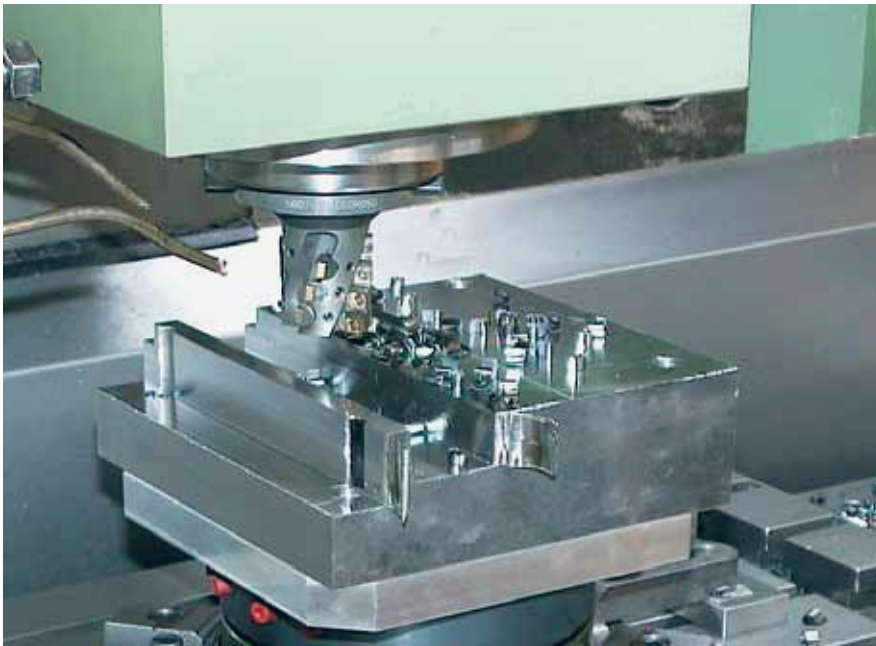
# Flexible palletizing of workpieces and fixtures

## RELIABLE

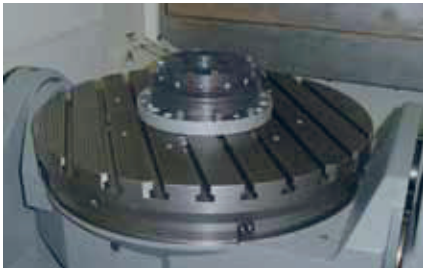
**Dirt-resistant, robust, designed for continuous use.**

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

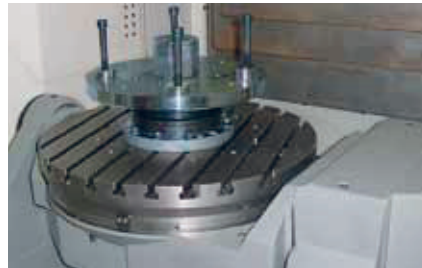
A borehole in the center of the pallet also enables material up to a diameter of 81 mm to be led through the ProductionChuck 210.



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



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



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



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



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



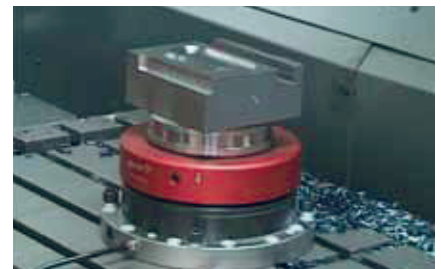
PC 210 is a tooling system that is ideal for rotary transfer machines:  
- quick fixture change,  
- sufficient room to dock on the hydraulic system to operate the fixtures.



Palletized clamping devices in the robot magazine.



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



Mixed use of ITS and ProductionChuck 210 pallets.

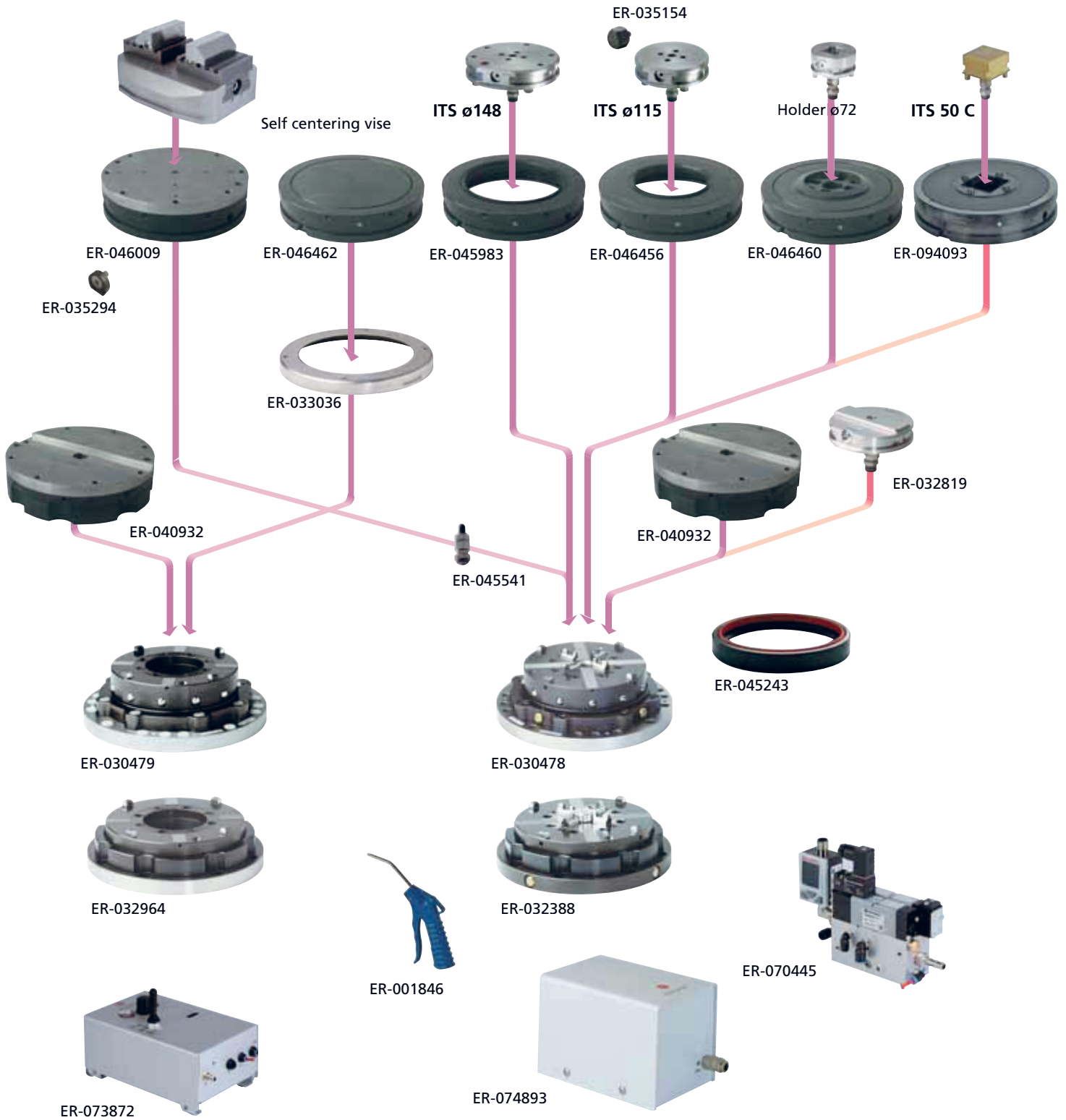


Would you like to automate? We will gladly advise you as to how an EROWA handling facility will increase your productivity up to three times.




















# EROWA ProductionChuck 210 palletizing system

## The components




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

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

## EROWA PRODUCTIONCHUCK 210 PALLETIZING SYSTEM

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



-  For chip-removing processes
-  For EDM sinking
-  For WEDM

# EROWA ProductionChuck 210

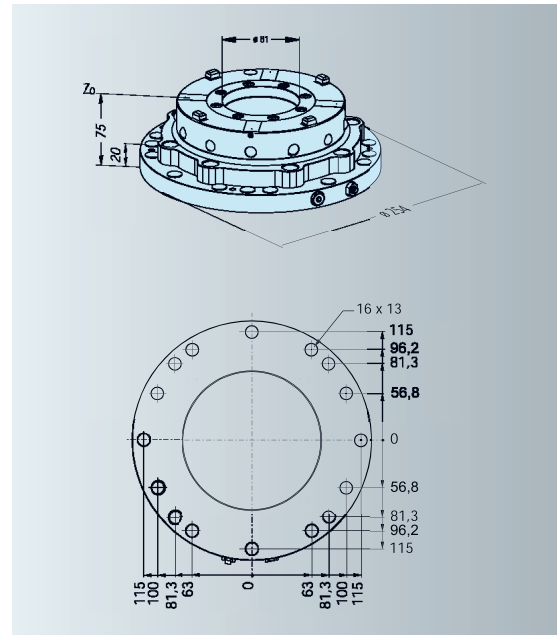
## Chucks

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

### ER-030479 ProductionChuck 210



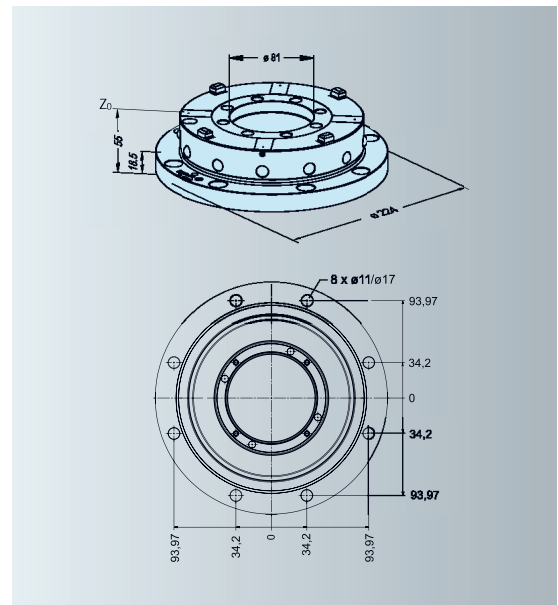
- Version** Chuck for high machining forces in chip cutting. Low design. Through-borehole  $\varnothing$  81 mm.
- Connections** Laterally or from below with two lines.
- Operation** With air gun, laterally. With control unit, through the two connections laterally or from below.
- Application** On milling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



### ER-032964 ProductionChuck 210 without base plate



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

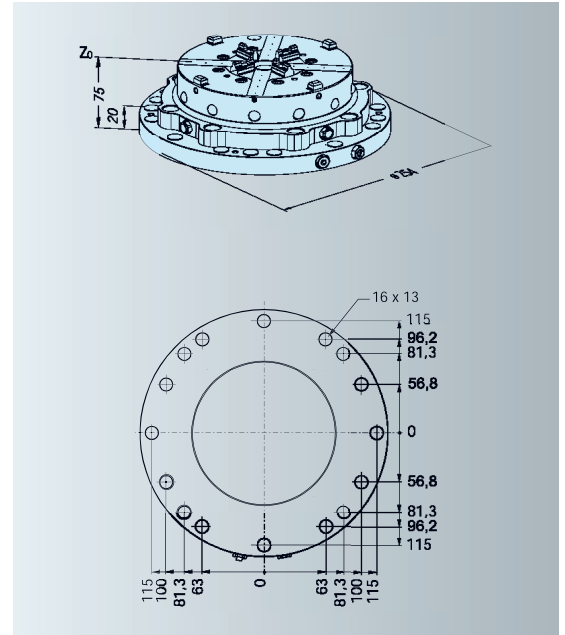


# EROWA ProductionChuck 210 Chucks

## ER-030478 ProductionChuck 210 Combi



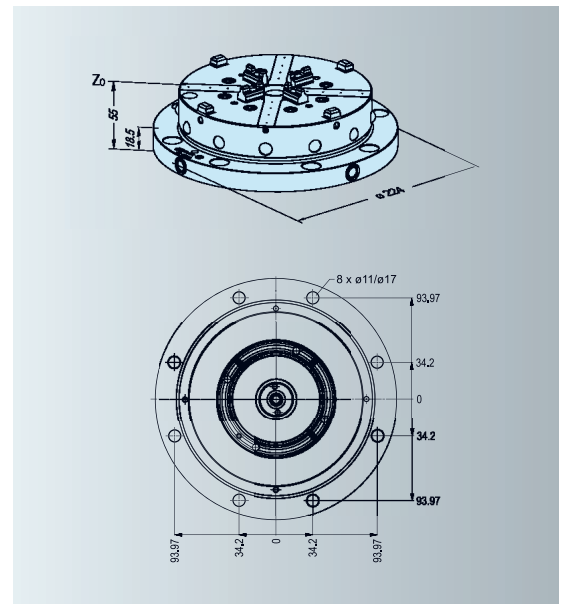
- Version** Chuck for strong machining forces in chip-cutting operations. PC 210 with integrated PowerChuck P.
- Connections** Laterally or from below with two lines.
- Operation** With air gun, laterally. With control unit, through the two connections laterally or from below.
- Application** On milling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



## ER-032388 ProductionChuck 210 Combi without base plate



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



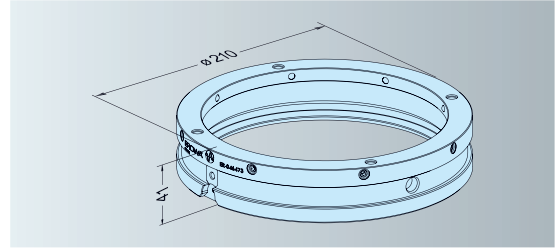
# EROWA ProductionChuck 210

## Workpiece carriers

### ER-046473 Clamping ring RN PC 210



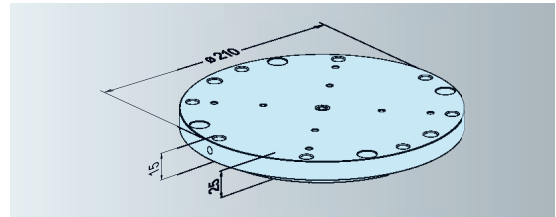
Version Steel, hardened.  
Application Clamping ring for centering pallet PC 210 and centering pallet PC 210 /  $\varnothing 81$ . Can be automated with gripper PC 210 RN (option).



### ER-042865 PC Centering pallet 210



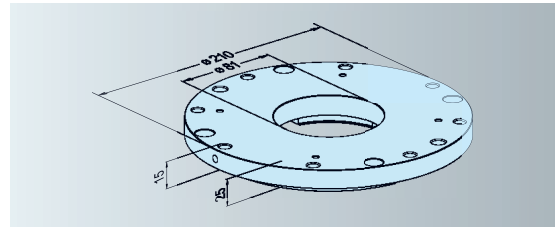
Version Steel, without clamping ring (option ER-046473).  
Fitting 8 x M10 attachment threads and two  $\varnothing 10$  boreholes.  
Application To accommodate workpieces, clamping jigs and plates PC 210.



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



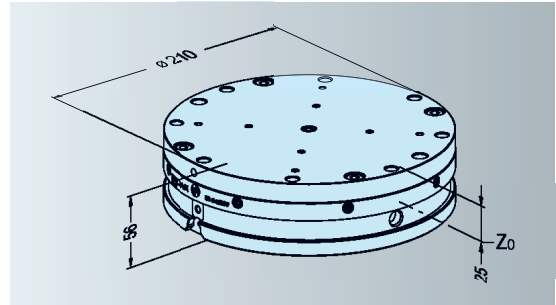
Version Steel, without clamping ring (option ER-046473).  
Fitting 8 x M10 attachment threads and two  $\varnothing 10$  boreholes.  
Application To accommodate workpieces, clamping jigs and plates PC 210.



### ER-046009 Pallet RN PC 210



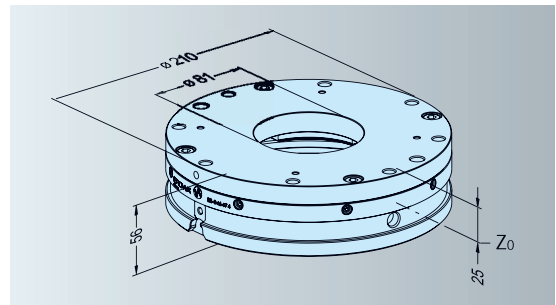
Version Steel. Centering segments integrated.  
Assembly 8 x M10 attachment threads and two  $\varnothing 10$  boreholes.  
Application To clamp workpieces, clamping jigs and pallets PC 210. Can be automated with gripper RN PC 210 (option).



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

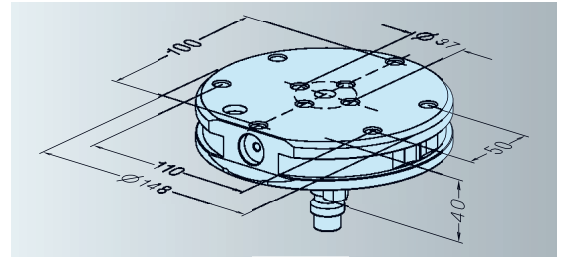


Version Steel. Centering segments integrated.  
Fitting Through borehole  $\varnothing 81$  mm.  
Application To accommodate workpieces, clamping jigs and plates PC 210. Can be automated with gripper RN PC 210 (Option).

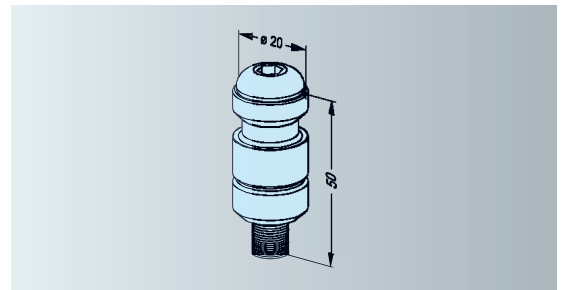


**ER-041912 Pallet P ø 148 Inox****ER-041924 Pallet Kit P ø 148 Inox  
4 pieces**

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

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

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



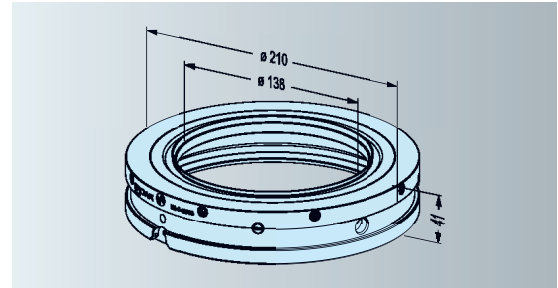
Please note: Further pallets and electrode holders for the ProductionChuck 210 Combi can be found from pages 172.

# EROWA ProductionChuck 210 Auxiliary Equipment

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



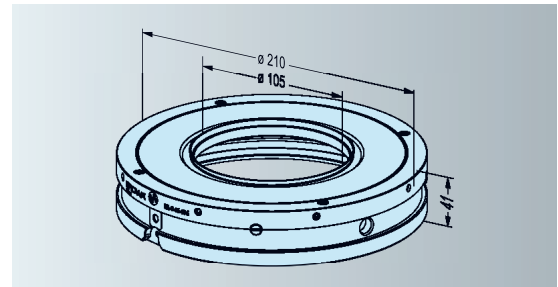
Version Aluminium anodized.  
Application Prevents penetration of chips and dirt into the Production-Chuck 210 by application of EROWA ITS pallets  $\varnothing$  148. For automatic handling with gripper RN PC 210 (option).



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



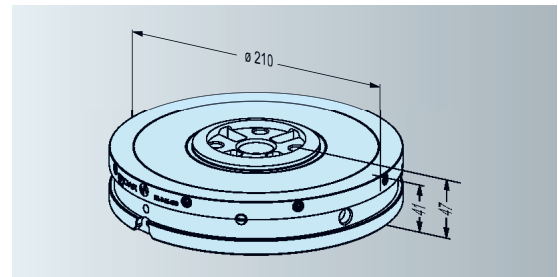
Version Aluminium anodized.  
Application Prevents penetration of chips and dirt into the Production-Chuck 210 by application of EROWA ITS pallets  $\varnothing$  115. For automatic handling with gripper RN PC 210 (option).



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



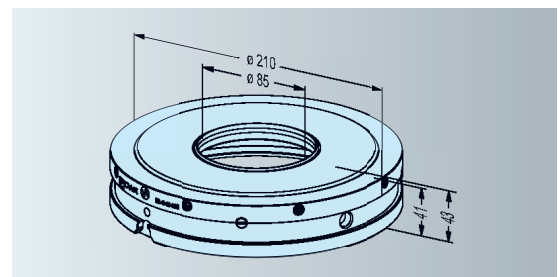
Version Aluminium anodized.  
Application Prevents penetration of chips and dirt into the Production-Chuck 210 Combi by application of EROWA ITS pallets  $\varnothing$  72. For automatic handling with gripper RN PC 210 (option).



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



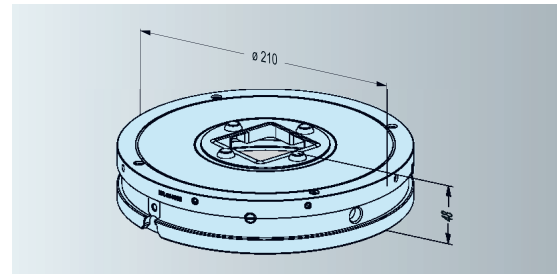
Version Aluminium anodized.  
Application Prevents penetration of chips and dirt into the Production-Chuck 210 Combi by application of EROWA ITS pallets  $\varnothing$  85. For automatic handling with gripper RN PC 210 (option).



## ER-094093 Sealing ring ITS 50 C for PC 210

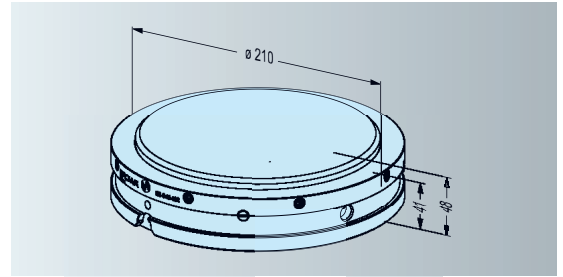


Version Aluminium anodized.  
Application Prevents penetration of chips and dirt into the ProductionChuck 210 Combi by application of EROWA electrode holders C. For automatic handling with gripper RN PC 210 (option).

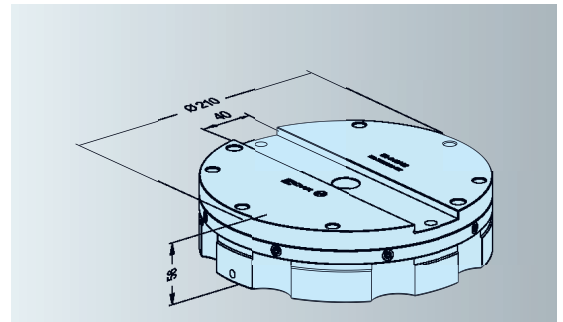


**ER-046462 Cover RN PC 210**

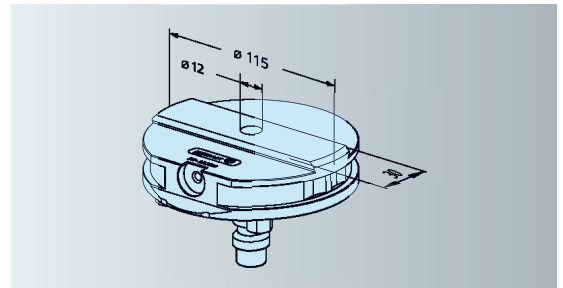
Version Aluminium anodized.  
Application Prevents penetration of chips and dirt into the Production-Chuck 210 Combi. For automatic handling with gripper RN PC 210 (option).

**ER-040932 Positioning pallet PC 210**

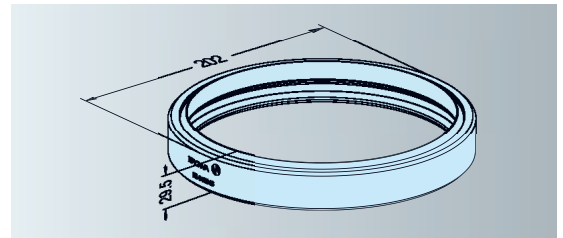
Version Alignment pallet with ground alignment rail and central borehole.  
Application Alignment of angular position, and determination of the center of PC 210 chucks.

**ER-032819 Alignment pallet ø 115**

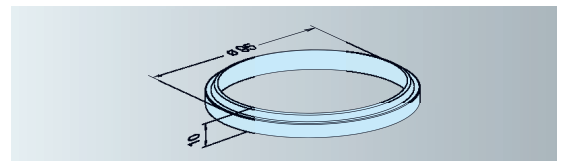
Version Pallet ø 115 mm, alignment length 110 mm, center borehole ø 12 mm.  
Application Alignment of radial, axial and angular position of ITS chucks, PowerChuck P and PC 210 Combi chucks.

**ER-045243 PC 210 Sealing ring**

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

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

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

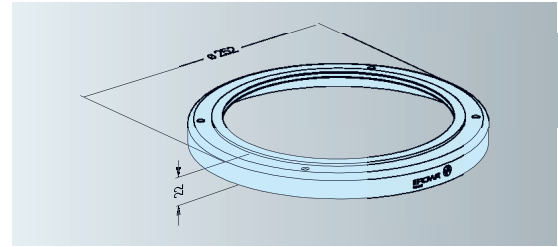


# EROWA ProductionChuck 210

## Auxiliary Equipment

### ER-033036 Covering ring PC 210

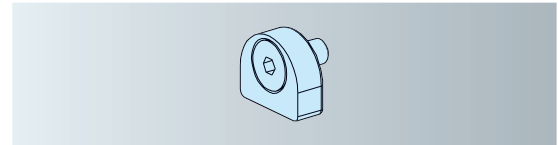
**Application** Covering ring for the attachment bolts of the PC 210: ER-030479, ER-030478 (Recommended for application on lathes).



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



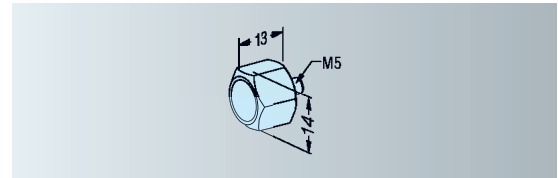
**Version** Holder with built-in data carrier. EWIS chip: read only.  
**Application** To build into RCS coupling, PalletSet W holder and Basic WEDM holder.



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



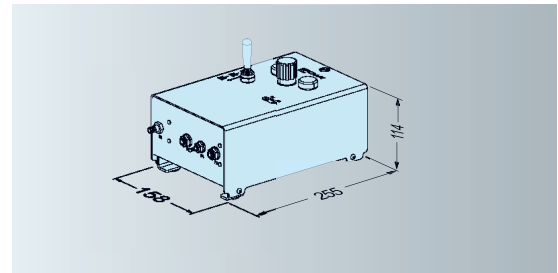
**Version** Sleeve fitting with built-in data carrier.  
**Application** In any EROWA electrode holder and pallet which has been prepared for it.



### ER-073872 Manual control unit with booster



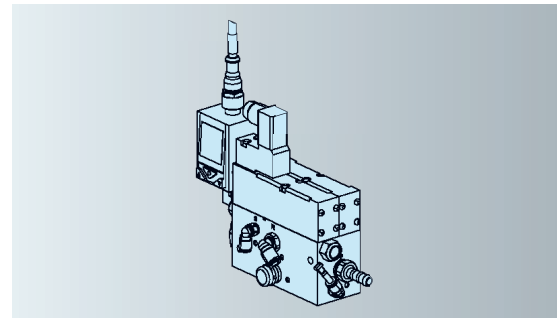
**Version** Manual valve to control the EROWA chucks: Opening/Reclamping/Cleaning.  
**Application** Operation of: EROWA ITS Compact Combi Chuck, ITS, UPC, MTS, PC 210 chucks and PowerChuck P.  
**Note** Integrated booster with load ratio 1:2 (up to output pressure of 10 bar max.).



### ER-070445 Control unit with monitoring

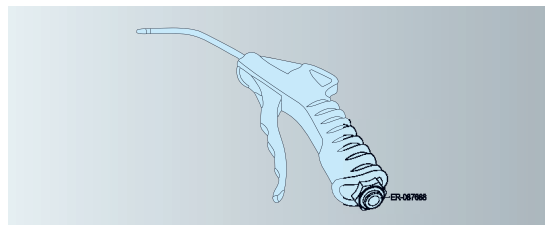


**Version** Electropneumatic valve. Outputs for chucks: opening/cleaning/reclamping. 24 V, incl. mounting accessories and 3 m connection hose.  
**Application** Operation and monitoring of machine-integrated chucks, for instance through the CNC M-function.



**ER-001846 Air jet**

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

**ER-074893 Pressure booster**

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

