

MacroStd & MacroHP

To compete in the global manufacturing industry, every aspect of efficiency has to be studied. You have to extract the highest possible number of spindle hours from each machine, every day of the week. Here, the importance of a high-class reference system can never be over-estimated. A reference system that reduces set-up times to a few minutes.

Macro is such a reference system. A system that minimises throughput time, and which, thanks to its accuracy, practically eliminates rejects. A system that increases flexibility and profitability. A system that increases competitiveness and ensures the success of its users.

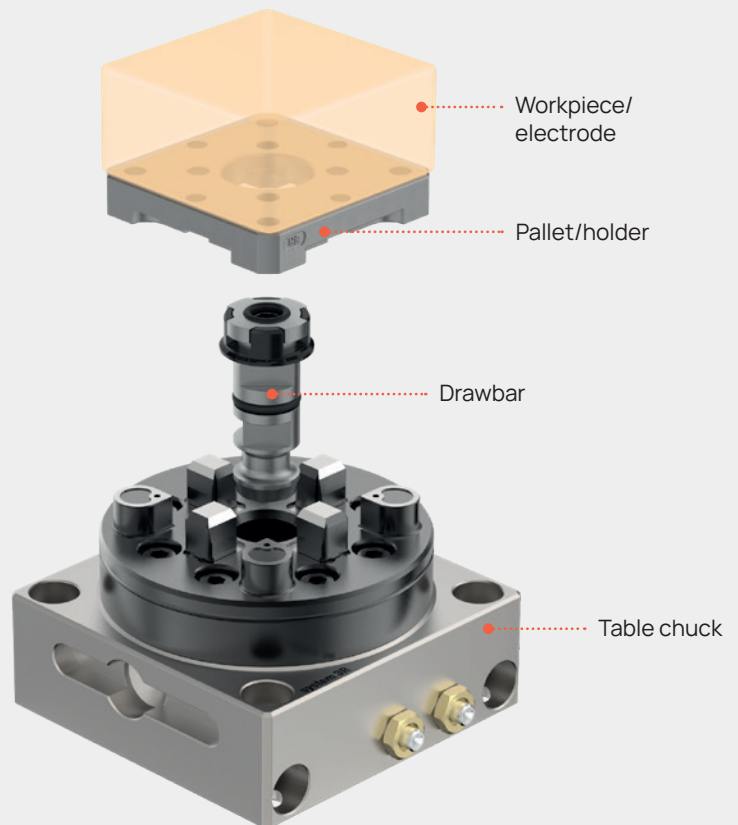
Among users worldwide, the Macro system is a byword for precision. Rightly so, every single Macro product is thoroughly checked before it is dispatched.

But precision can be graded too. Consequently, while maintaining full compatibility, Macro products are “classified” and given names reflecting their accuracy, material and service life (i.e. Standard, High Performance and Nano). Nonetheless, it is worth remembering that the accuracy of any system is determined by the element that has the lowest classification.

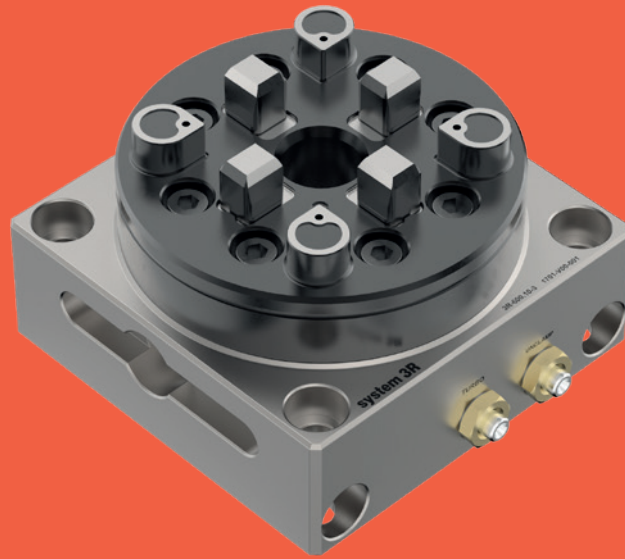
- Repetition accuracy:
 - MacroNano within 0.001 mm
 - Macro (Std and HP) within 0.002 mm
- Clamping force 6,000 N
- Fixed index positions 4x90°
- Required air pressure, pneumatic chuck 6 bars (± 1)
- Recommended tightening torque, manual chuck 6 Nm
- Recommended max workpiece weight 50 kg.

ADVANTAGES

- Reduces set-up times.
- Ensures precision and quality.
- Has automatic air-blast cleaning of the references in the pneumatic chucks.
- Has higher locking force in the pneumatic chucks – turbo locking.
- Has references of cemented carbide or hardened ground steel.
- Is suitable for automatic changing with System 3R's automation program.

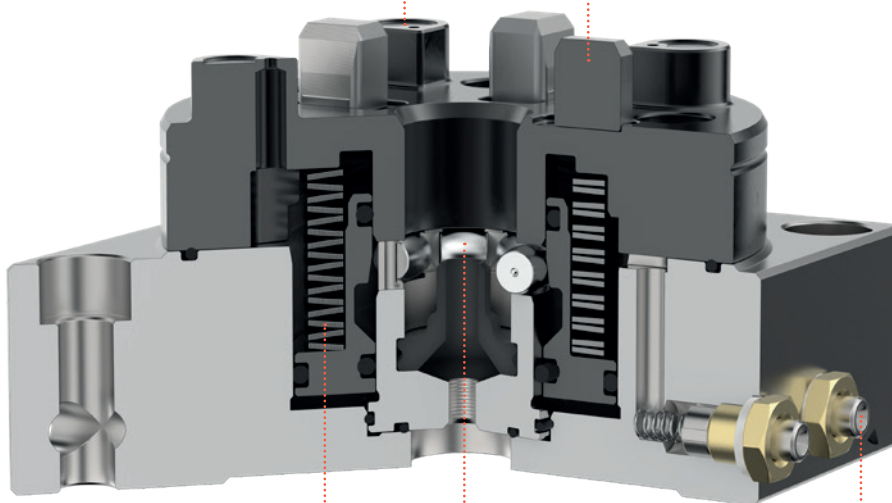


Macro in detail



Z-references are cleaned by air blasted through the chuck's Z-reference nozzles.

X and Y-references.

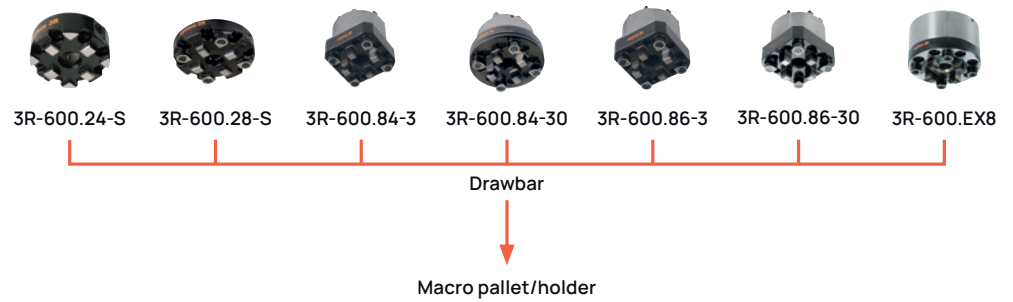


Spherical rolls.

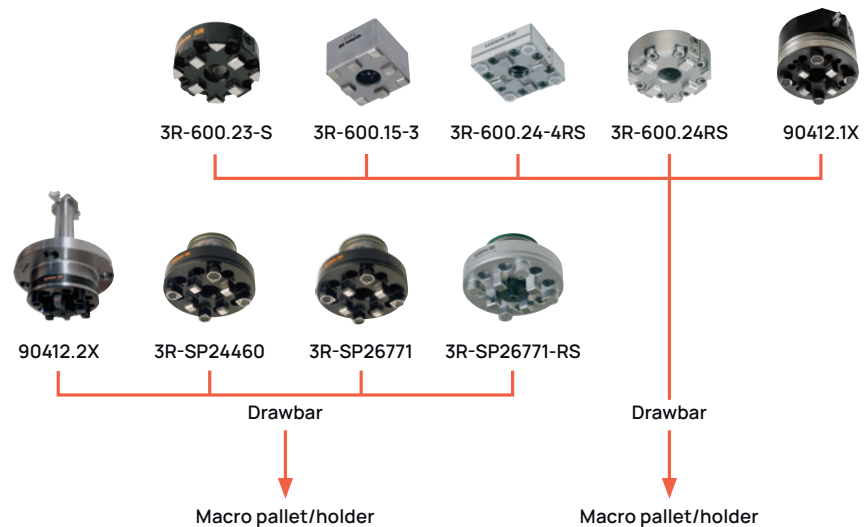
Spring-loaded when idling; special Turbo function via added air pressure.

Side air inlets are ready for air gun use on delivery.

Macro – Chucks



Chucks	Article number	Drawbar	Feature
Manual Std	3R-600.24-S	3R-605.2	ground back face, 6 Nm, Ø75 mm
Manual Std	3R-600.28-S	3R-605.2	ground back face
Pneumatic HP	3R-600.84-3	3R-605.1	machine-adapted
Pneumatic Std	3R-600.84-30	3R-605.1	machine-adapted
Pneumatic HP	3R-600.86-3	3R-605.1	machine-adapted
Pneumatic Std	3R-600.86-30	3R-605.1	machine-adapted
Pneumatic Std	3R-600.EX8	3R-605.1	machine-adapted



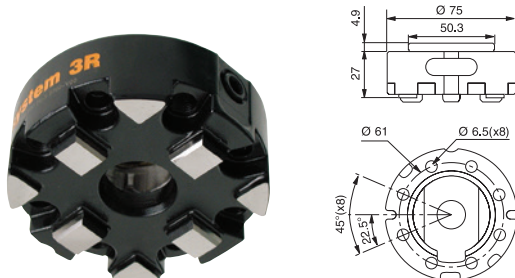
Chucks	Article number	Drawbar	Feature
Manual Std	3R-600.23-S	3R-605.2	mounting flange, 6 Nm, Ø 75 mm
Pneumatic HP	3R-600.15-3	3R-605.2	rust resistant, Ø 56 mm
Manual HP	3R-600.24-4RS	3R-605.2RS	rust resistant, Ø 70 mm
Manual HP	3R-600.24-RS	3R-605.2RS	rust resistant, Ø 75 mm
Pneumatic Std	90412.1X	3R-605.1 / 3R 604.4	with swivel, low speed
Pneumatic HP	90412.2X	3R-605.1 / 3R 604.4	with swivel, low speed
Pneumatic Std	3R-SP24460	3R-605.1 / 3R 604.4	
Pneumatic HP	3R-SP26771	3R-605.1	
Pneumatic HP	3R-SP26771-RS	3R-605.1RS	rust resistant

Macro – Chucks

Manual chuck, MacroStd, 3R-600.23-S

Cast chuck with flange for mounting on machine spindle or in fixture.

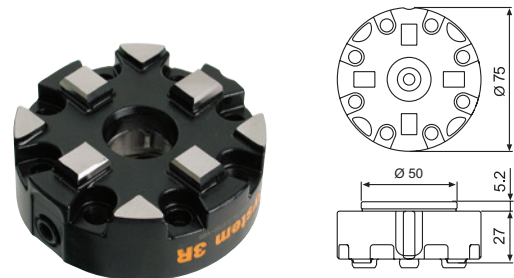
- Required drawbar 3R-605.2
- Tightening torque 6 Nm
- Fixed index positions 4x90°
- Flushing connection
- Weight 0.7 kg.



Manual chuck, MacroStd, 3R-SP15055

Cast chuck with ground flange for installation in fixture/plate.

- Required drawbar 3R-605.2
- Tightening torque 6 Nm
- Fixed index positions 4x90°
- Flushing connection
- Weight 0.7 kg.



Manual chuck, MacroStd, 3R-600.24-S

Cast chuck with grinded back face for mounting on machine spindle (with 3R-A11489) or in fixture on machine table.

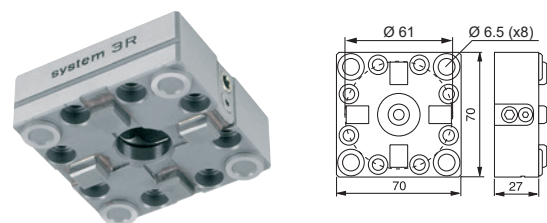
- Required drawbar 3R-605.2
- Tightening torque 6 Nm
- Fixed index positions 4x90°
- Flushing connection
- Weight 0.7 kg.



Manual chuck, MacroHP, 3R-600.24-4RS

Rust-resistant chuck for Macro holder. Mounts on a suitable fixture.

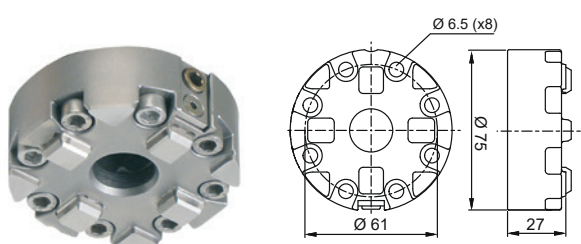
- Required drawbar 3R-605.2RS
- Tightening torque 6 Nm
- Fixed index positions 4x90°
- Grinded front edge
- Rust resistant
- Weight 1 kg.



Manual chuck, MacroHP, 3R-600.24RS

Rust-resistant manual chuck designed for permanent mounting.

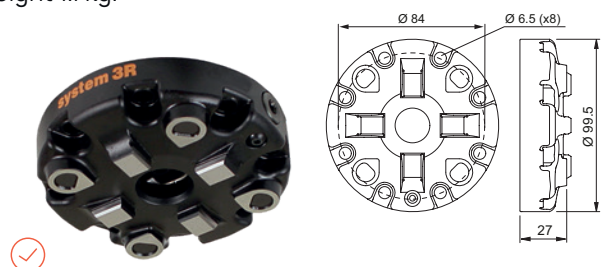
- Required drawbar 3R-605.2RS
- Tightening torque 6 Nm
- Fixed index positions 4x90°
- Clamping force 6,000 N
- Rust resistant
- Weight 0.7 kg.



Manual chuck (low profile), MacroStd, 3R-600.28-S

Cast chuck with ground back face for mounting on machine spindle. Also suitable in a fixture on machine table or with adapter plate 3R-A26488.

- Required drawbar 3R-605.2
- Tightening torque 6 Nm
- Fixed index positions 4x90°
- Flushing connection
- Weight 1.1 kg.

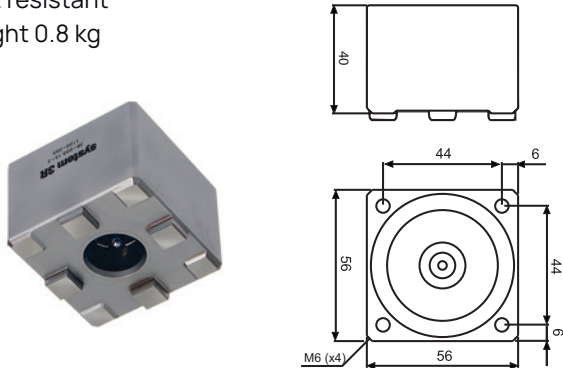


Macro – Chucks

Pneumatic chuck, MacroHP, 3R-600.15-3

Rust-resistant pneumatic chuck for permanent mounting on machine table.

- Drawbar 3R-605.2RS included
- Fixed index positions 4x90°
- Required air pressure 6 bars (± 1)
- Rust resistant
- Weight 0.8 kg



Pneumatic chuck, MacroStd, 90412.1X

Pneumatic add-on chuck with swivel surrounding unit.

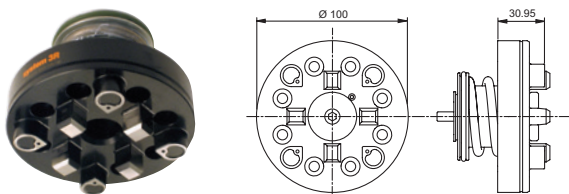
- For low RPM
- Machine adapted.



Pneumatic chuck, MacroStd, 3R-SP24460

Pneumatic chuck for building-in (e.g. in a fixture, dividing head or B-axis).

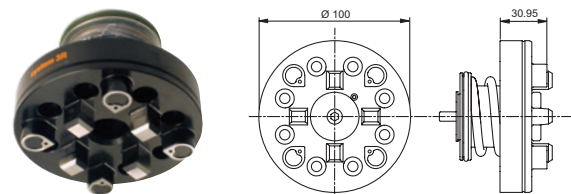
- Required drawbar 3R-605.1 or 3R-605.4
- Fixed index positions 4x90°
- Required air pressure 6 bars (± 1)
- Air-blast cleaning of Z-references
- Turbo locking
- Weight 1.8 kg.



Pneumatic chuck, MacroHP, 3R-SP26771

Pneumatic chuck for building-in (e.g. on machine spindle or in fixture).

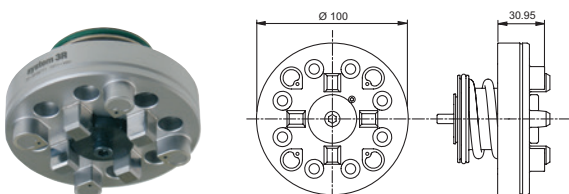
- Required drawbar 3R-605.1 or similar
- Fixed index positions 4x90°
- Carbide X and Y-references
- Required air pressure 6 bars (± 1)
- Air-blast cleaning of Z-references
- Turbo locking
- Weight 1.8 kg.



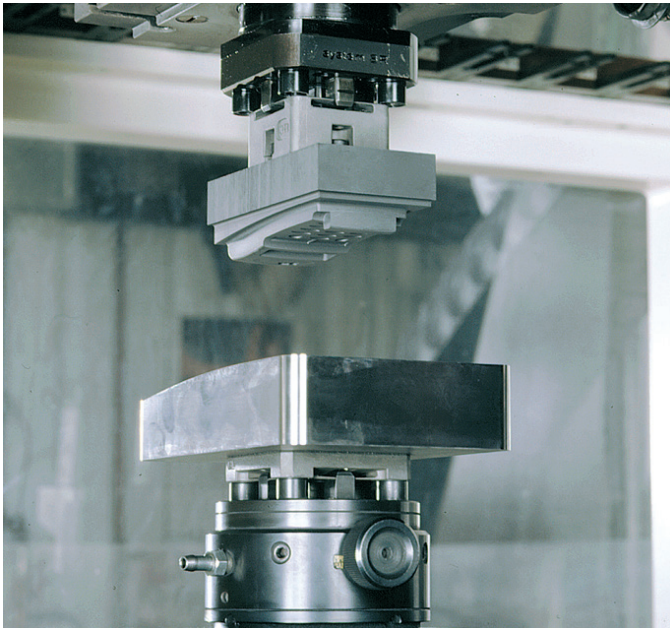
Pneumatic chuck, MacroHP, 3R-SP26771-RS

Rust-resistant pneumatic chuck for building-in (e.g. in a fixture, dividing head or B-axis).

- Required drawbar 3R-605.1RS
- Fixed index positions 4x90°
- Required air pressure 6 bars (± 1)
- Carbide X and Y-references
- Air-blast cleaning of Z-references
- Turbo locking
- Rust resistant
- Weight 1.8 kg.



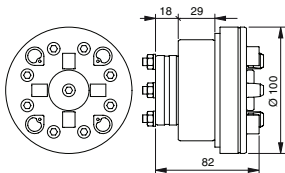
Macro – Chucks



Pneumatic chuck, MacroHP, 3R-600.84-3

Pneumatic chuck for permanent mounting in machine spindle.

- Required drawbar 3R-605.1
- Fixed index positions 4x90°
- Required air pressure 6 bars (± 1)
- Four M6 clearance holes, $\varnothing 45$ mm
- Air-blast cleaning of Z-references
- Flushing connection
- Turbo locking.
- Carbide X and Y-References
- Weight 2.4 kg.

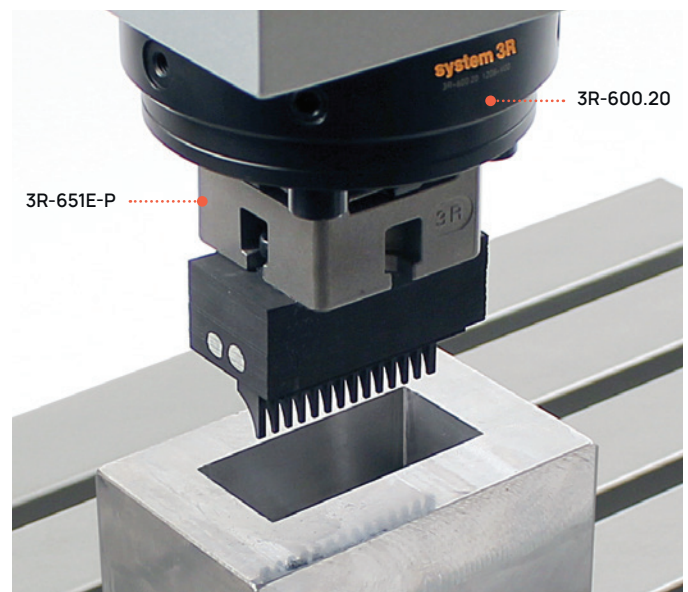
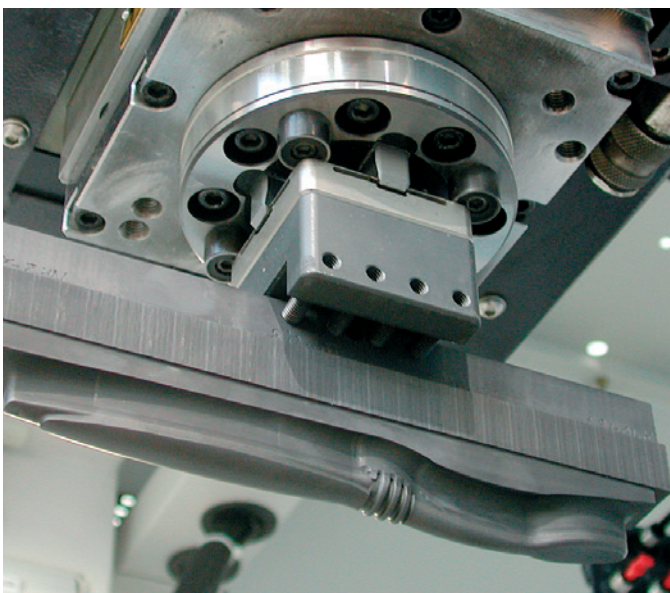
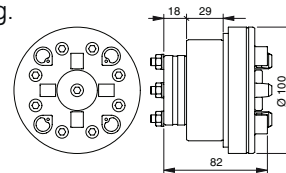


Pneumatic chuck, MacroStd, 3R-600.84-30

Pneumatic chuck for permanent mounting in machine spindle.

NOTE: X, Y and Z-references in hardened and ground steel; larger Z-references. Note: When ordering, state machine make and type.

- Required drawbar 3R-605.1
- Required air pressure 6 bars (± 1)
- Fixed index positions 4x90°
- Four M6 clearance holes $\varnothing 45$ mm
- Air-blast cleaning of the Z-references
- Flushing connection
- Turbo locking
- Weight 2.4 kg.

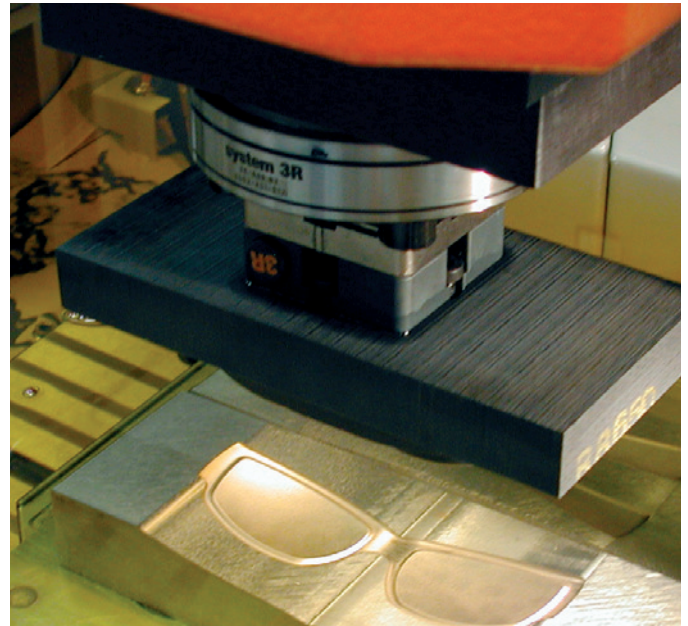


Macro – Chucks

Pneumatic chuck, MacroHP, 90412.2X

Pneumatic in-built chuck with swivel in the back.

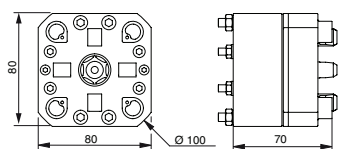
- For high RPM
- Machine adapted.



Pneumatic chuck, MacroHP, 3R-600.86-3

Pneumatic chuck for permanent mounting in machine spindle.

- Required drawbar 3R-605.1
- Required air pressure 6 bars (± 1)
- Fixed index positions 4x90°
- Air-blast cleaning of Z-references
- Turbo locking
- Carbide X and Y-References
- Weight 1.8 kg.

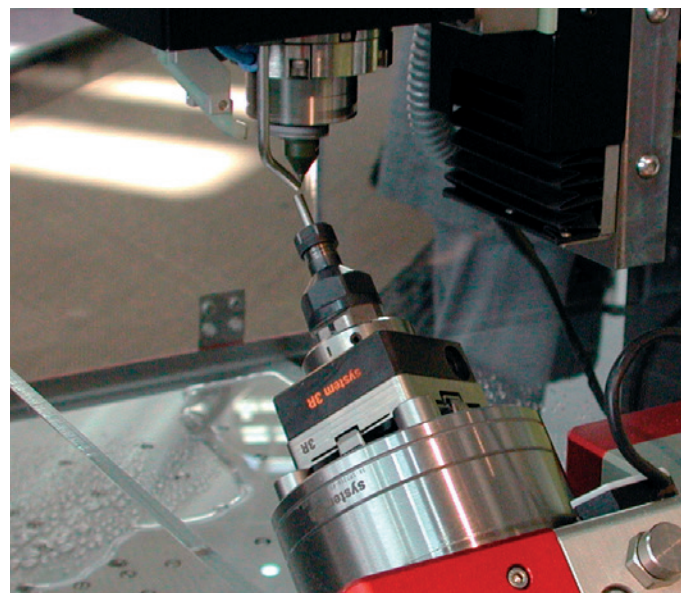
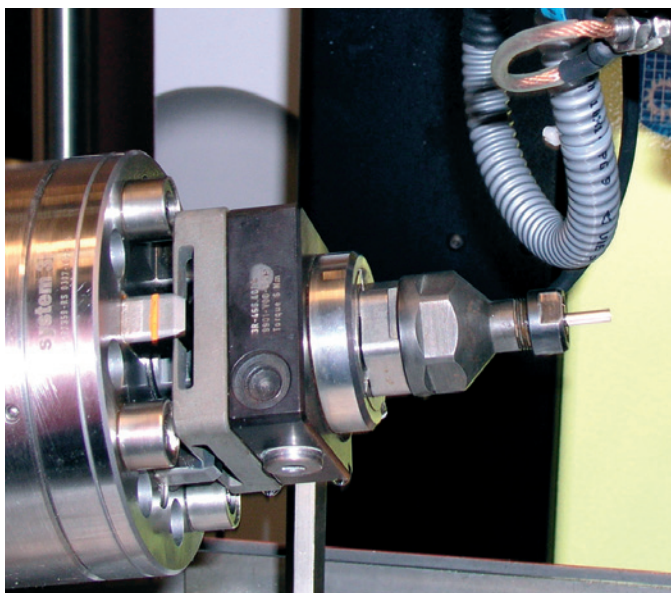
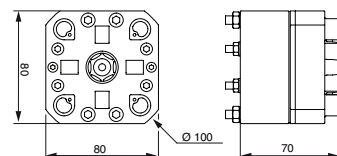


Pneumatic chuck, MacroStd, 3R-600.86-30

Pneumatic chuck for permanent mounting in machine spindle.

NOTE: When ordering state machine make and type. Note: X, Y and Z-references in hardened and ground steel; larger Z-references.

- Required drawbar 3R-605.1
- Required air pressure 6 bars (± 1)
- Fixed index positions 4x90°
- Four M6 clearance holes 67x20 mm and four M5 clearance holes 63x26 mm
- Air-blast cleaning of the Z-references
- Flushing connection
- Turbo locking
- Weight 1.8 kg.



Macro – Chucks

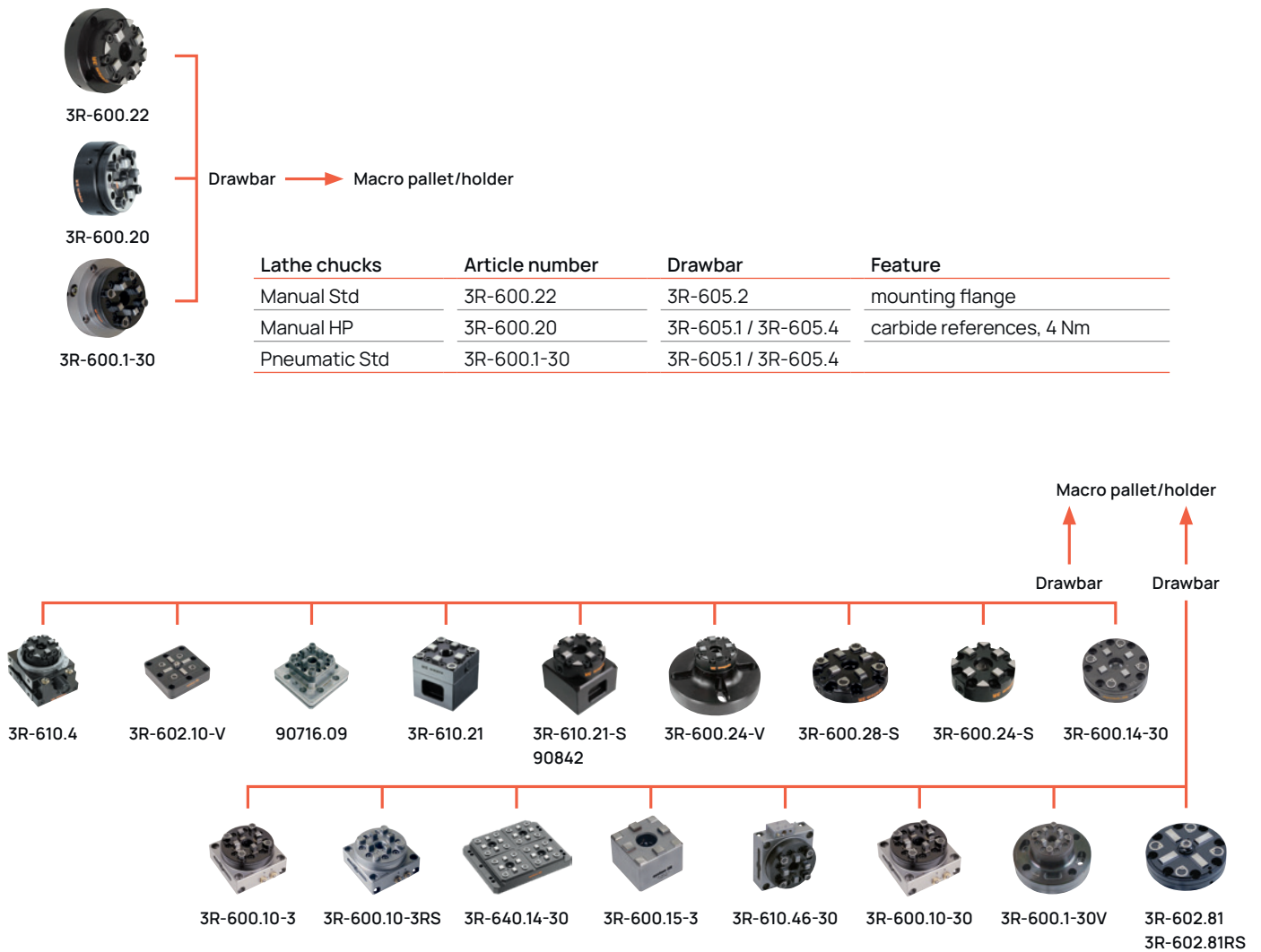


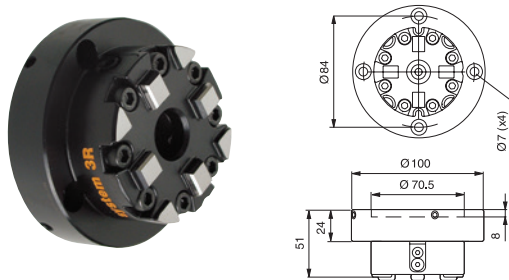
Table chucks	Article number	Drawbar	Feature
Manual Std	3R-610.21	3R-605.2	horizontal and vertical, 6 Nm
Manual Std	3R-610.21-S	3R-605.2	horizontal and vertical, 6 Nm
Manual Std	90842	3R-605.1	horizontal and vertical, 6 Nm
Manual VDP	3R-600.24-V	3R-605.2	vibration damped, 6 Nm, Ø 75 mm
Manual Std	3R-600.28-S	3R-605.2	low profile, 6 Nm, Ø 100 mm
Manual Std	3R-600.24-S	3R-605.2	6 Nm, Ø 75 mm
Pneumatic Std	3R-610.46-30	3R-605.1 / 3R-605.4	horizontal and vertical
Pneumatic HP	3R-600.15-3	3R-605.2RS	rust resistant
Pneumatic Std	3R-600.10-30	3R-605.1 / 3R-605.4	
Pneumatic HP	3R-600.10-3	3R-605.1 / 3R-605.4	
Pneumatic HP	3R-600.10-3RS	3R-605.1RS	rust resistant
Pneumatic Std	3R-600.14-30	3R-605.2	low profile
Pneumatic HP	3R-610.19	3R-605.1 / 3R-605.4	horizontal and vertical, 3Refix Ø 20
Pneumatic VDP	3R-600.1-30V	3R-605.1 / 3R-605.4	vibration damped
Pneumatic Std	3R-602.81	3R-605.10	low profile
Pneumatic HP	3R-602.81RS	3R-605.10	low profile, rust resistant
Pneumatic Std	3R-610.4	3R-605.2	horizontal and vertical, vernier scale
Pneumatic VDP	3R-602.10-V	3R-605.10	vibration damped
Pneumatic VDP	90716.09	3R-605.1 / 3R-605.4	vibration damped
Pneumatic Std	3R-640.14-30	3R-605.2	4 Macro chucks

Macro – Chucks

Manual lathe chuck, MacroStd, 3R-600.22

With setting screws for centring.

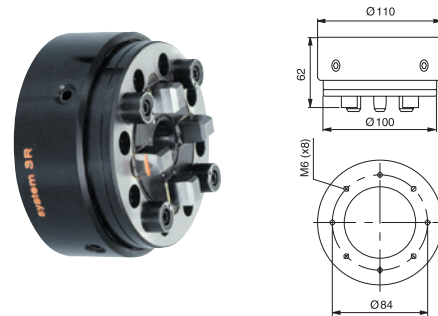
- Required drawbar 3R-605.2
- Tightening torque 6 Nm
- Fixed index positions 4x90°
- Weight 2.1 kg.



Manual chuck, MacroHP, 3R-600.20

For mounting on machine spindle with 3R-A3620 or on lathe taper with centring ring 3R-612.6.

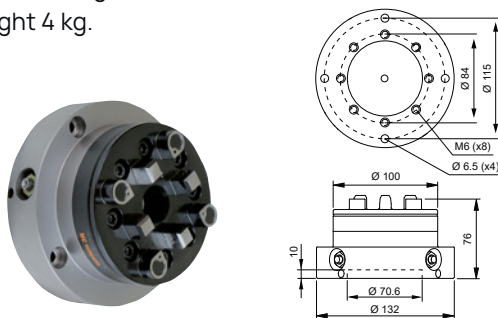
- Required drawbar 3R-605.1 or 3R-605.4
- Tightening torque 4 Nm
- Fixed index positions 4x90°
- Carbide X and Y-references
- Weight 3.6 kg.



Pneumatic chuck, MacroStd, 3R-600.1-30

Pneumatic chuck for permanent mounting on machine spindle or machine table.

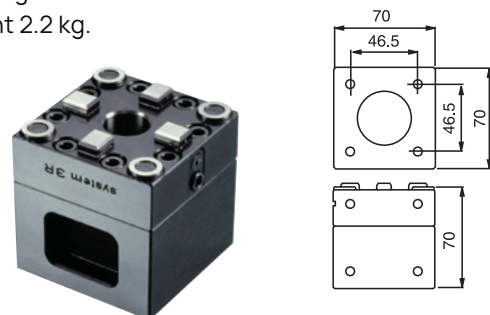
- Required drawbar 3R-605.1
- Fixed index positions 4x90°
- Turbo locking
- Weight 4 kg.



Manual chuck, MacroStd, 3R-610.21

Three ground surfaces for vertical or horizontal mounting on machine table.

- Required drawbar 3R-605.2
- Tightening torque 6 Nm
- Fixed index positions 4x90°
- Flushing duct
- Weight 2.2 kg.



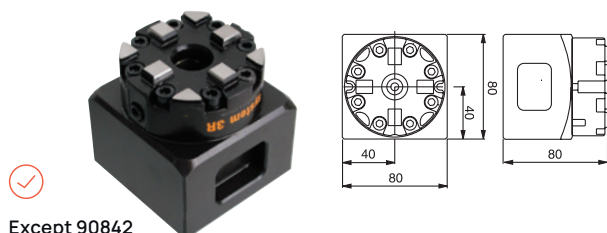
Manual chuck, MacroStd, 3R-610.21-S

Two ground surfaces for vertical or horizontal mounting on machine table.

- Required drawbar 3R-605.2
- Tightening torque 6 Nm
- Fixed index positions 4x90°
- Flushing duct
- Weight 3.5 kg.

90842

- Required drawbar 3R-605.1, otherwise as 3R-610.21-S

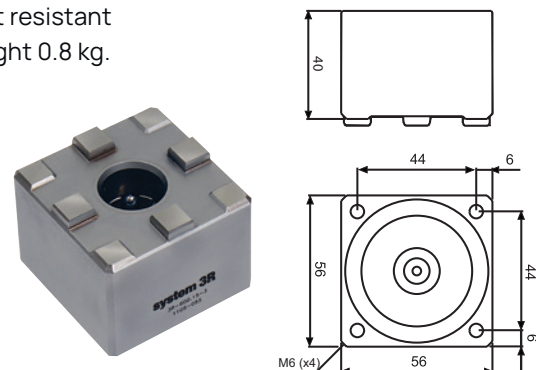


Except 90842

Pneumatic chuck, MacroHP, 3R-600.15-3

Pneumatic chuck for permanent mounting on machine table.

- Drawbar 3R-605.2RS included
- Fixed index positions 4x90°
- Required air pressure 6 bars (± 1)
- Rust resistant
- Weight 0.8 kg.

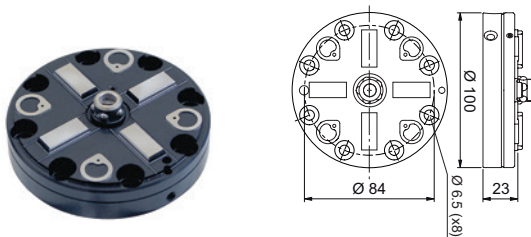


Macro – Chucks

Pneumatic chuck (low profile), MacroStd, 3R-602.81

Pneumatic chuck for permanent mounting on machine table.

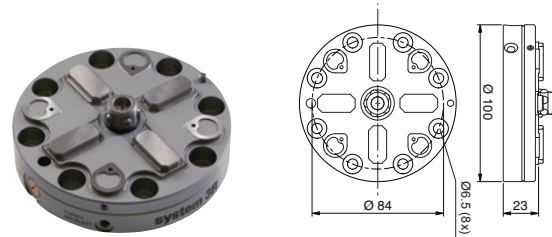
- Required drawbar 3R-605.10
- Clamping force 6700 N
- Required air pressure 6 bars (± 1)
- Fixed index positions 4x90°
- Weight 1 kg.



Pneumatic chuck (low profile), MacroHP, 3R-602.81RS

Pneumatic chuck for permanent mounting on machine table.

- Required drawbar 3R-605.10
- Clamping force 6700 N
- Fixed index positions 4x90°
- Air-blast cleaning of Z-references
- Rust resistant
- Weight 1 kg.



Pneumatic chuck (low profile), MacroStd, 3R-600.14-30

Pneumatic chuck for permanent mounting on machine table.

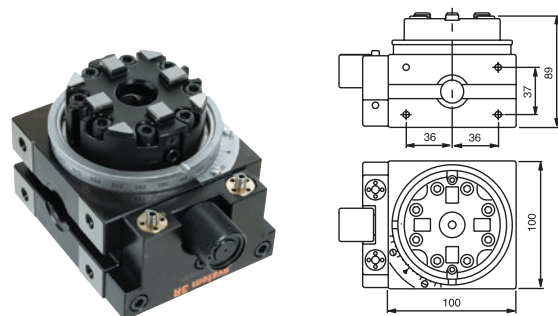
- Required drawbar 3R-605.2
- Clamping force 6500 N
- Required air pressure 6 bars (± 1)
- Fixed index positions 4x90°
- Weight 2 kg.



Manual 3R block, MacroStd, 3R-610.4

For vertical or horizontal mounting on machine table.

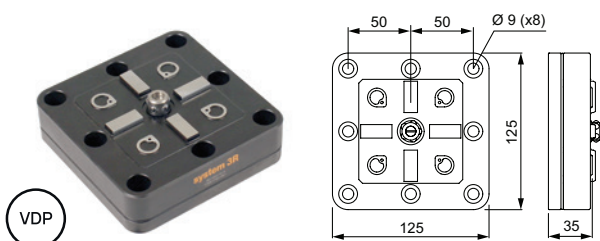
- Required drawbar 3R-605.2
- Fixed index positions 24x15°
- Vernier scale
- Weight 5.5 kg.



Pneumatic chuck, VDP, 3R-602.10-V

Pneumatic vibration-damped chuck, low-profile version for permanent mounting on machine table.

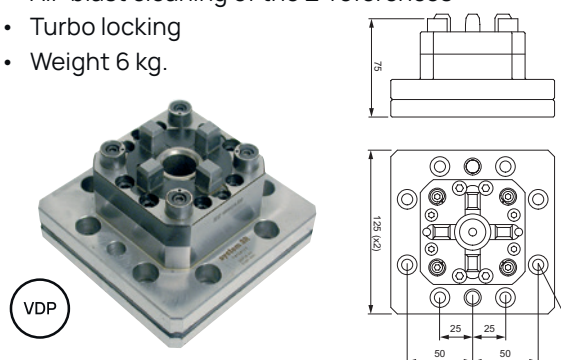
- Required drawbar 3R-605.10
- Required air pressure 6 bars (± 1)
- Fixed index positions 4x90°
- Air-blast cleaning of the Z-references
- Turbo locking.
- Weight 5 kg.



Pneumatic chuck, VDP, 90716.09

Pneumatic vibration-damped chuck for permanent mounting on machine table.

- Required drawbar 3R-605.1 or 3R-605.4
- Required air pressure 6 bars (± 1)
- Fixed index positions 4x90°
- Air-blast cleaning of the Z-references
- Turbo locking
- Weight 6 kg.

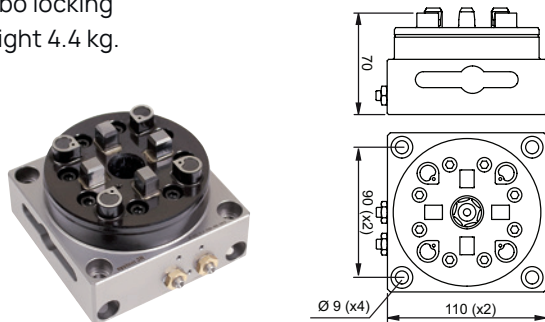


Macro – Chucks

Pneumatic chuck, MacroHP, 3R-600.10-3

Pneumatic chuck locked/opened with air gun.

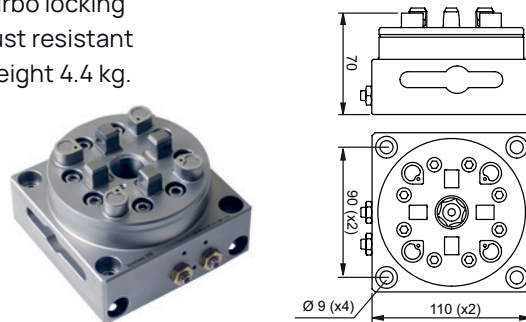
- Required drawbar 3R-605.1 or 3R-605.4
- Required air pressure 6 bars (± 1)
- Fixed index positions 4x90°
- Air-blast cleaning of the Z-references
- Carbide X and Y-References
- Turbo locking
- Weight 4.4 kg.



Pneumatic chuck, MacroHP, 3R-600.10-3RS

Pneumatic chuck locked/opened with air gun.

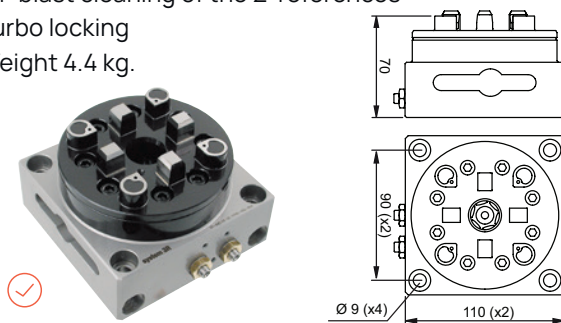
- Required drawbar 3R-605.1RS
- Required air pressure 6 bars (± 1)
- Fixed index positions 4x90°
- Air-blast cleaning of the Z-references
- Carbide X and Y-References
- Turbo locking
- Rust resistant
- Weight 4.4 kg.



Pneumatic chuck, MacroStd, 3R-600.10-30

Pneumatic chuck locked/opened with air gun.

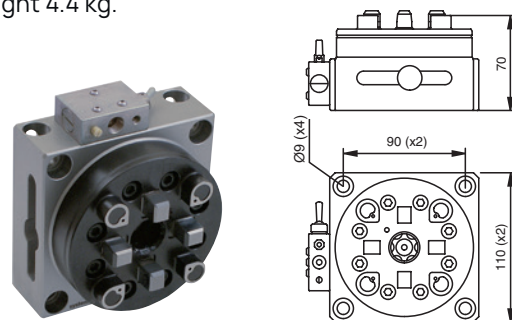
- Required drawbar 3R-605.1 or 3R-605.4
- All references of hardened and ground steel
- Required air pressure 6 bars (± 1)
- Fixed index positions 4x90°
- Air-blast cleaning of the Z-references
- Turbo locking
- Weight 4.4 kg.



Pneumatic chuck, MacroStd, 3R-610.46-30

Pneumatic chuck for horizontal or vertical use.

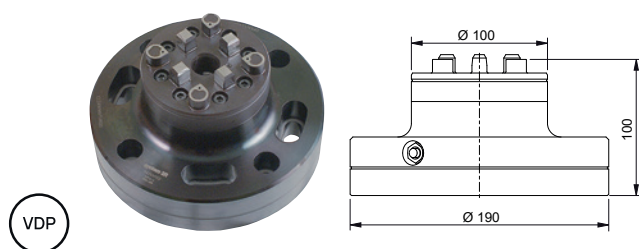
- Required drawbar 3R-605.1 or 3R-605.4
- Required air pressure 6 bars (± 1)
- Fixed index positions 4x90°
- Air unit included
- Weight 4.4 kg.



Pneumatic chuck, VDP, 3R-600.1-30V

Pneumatic vibration-damped chuck.

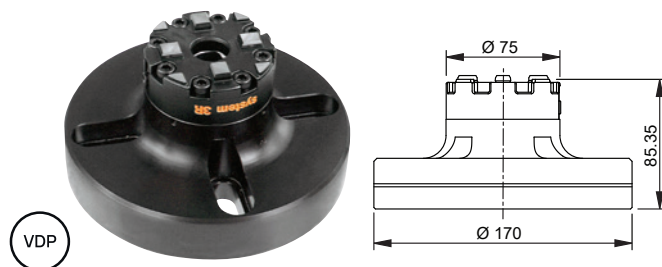
- Required drawbar 3R-605.1 or 3R-605.4
- Required air pressure 6 bars (± 1)
- Fixed index positions 4x90°
- Air-blast cleaning of the Z-references
- Turbo locking
- Weight 6 kg.



Manual chuck, VDP, 3R-600.24-V

Manual vibration-damped chuck, Ø 170 mm.

- Required drawbar 3R-605.2
- Fixed index positions 4x90°
- Tightening torque 6 Nm
- Build-in height 85 mm
- Centre spacing 63 to 100 mm
- Weight 6 kg.

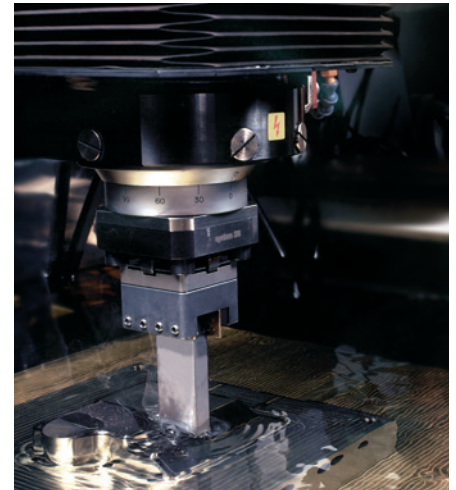


Macro – Chucks

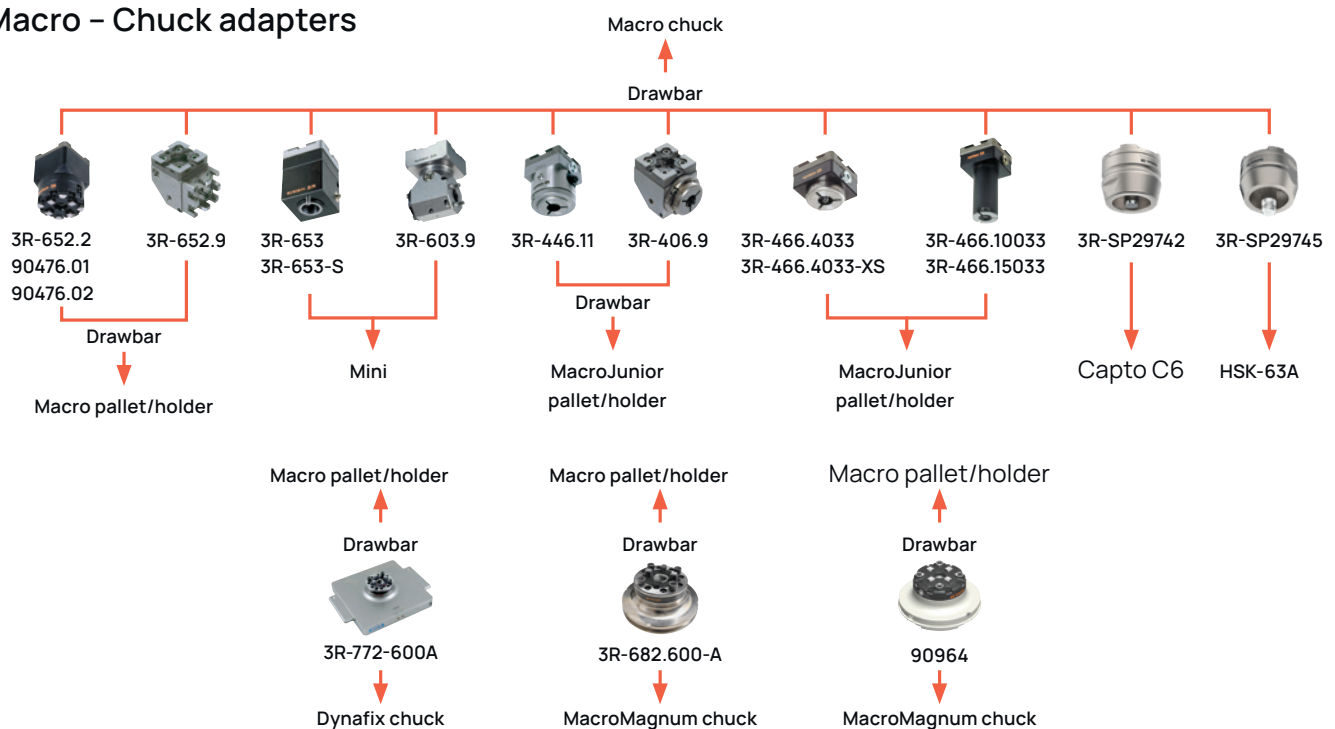
Pneumatic chuck, Macro Quad, 3R-640.14-30

For permanent mounting on machine table. All connections from the side or back of the chuck.

- Required drawbar 3R-605.2 or similar
- Required air pressure 6 bars (± 1)
- Fixed index positions 4x90°
- Permissible torque 135 mm
- Air-blast cleaning of the Z-references
- Solid X and Y-references
- Turbo locking
- Weight 10 kg.



Macro – Chuck adapters



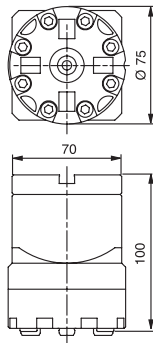
Chuck adapters	Article number	Drawbar	Feature
Manual	3R-652.2	3R-605.2	100 mm
Manual	3R-652.9		90°, locking screw with M6 drawpin
Manual	3R-653		Macro → Mini, rust resistant
Manual	3R-653-S		Macro → Mini
Manual	3R-603.9		Macro → Mini 90°, rust resistant
Manual	3R-446.11	3R-405.11	Macro → MacroJunior
Manual	3R-466.4033		Macro → MacroJunior, locking screw
Manual	3R-466.4033-S		Macro → MacroJunior, locking screw
Manual	3R-406.9		Macro → MacroJunior 90°, locking screw
Manual	3R-466.10033		Macro → MacroJunior 100 mm, locking screw
Manual	3R-466.15033		Macro → MacroJunior 150 mm, locking screw
Manual	3R-SP29742		Macro → Capto C6, rust resistant
Manual	3R-SP29745		Macro → HSK-63A, rust resistant
Pneumatic	3R-772-600A	3R-605.1 / 3R-605.4	Dynafix → Macro
Pneumatic	3R-682.600-A	3R-605.1 / 3R-605.4	MacroMagnum → Macro
Manual	90964	3R-605.2	MacroMagnum → Macro

Macro – Chuck adapters

Manual chuck adapter, Macro-Macro, 3R-652.2

Distance adapter to extend the machine spindle.
Mechanical clamping from the side.

- Required drawbar 3R-605.2
- Solid X and Y-references
- Height 100 mm
- Adapted for automatic changing
- Flushing duct
- Recommended clamping torque 6 Nm
- Permissible torque 135 Nm
- Weight 4.5 kg.



Manual chuck adapter, Macro-Macro, 90476.01

Distance adapter to extend the machine spindle.
Mechanical clamping from the side.

- Required drawbar 3R-605.2
- Solid X and Y-references
- Height 200 mm
- Adapted for automatic changing
- Flushing duct
- Recommended clamping torque 6 Nm
- Permissible torque 135 Nm
- Weight 8 kg.



Manual chuck adapter, Macro-Macro, 90476.02

Distance adapter to extend the machine spindle.
Mechanical clamping from the side.

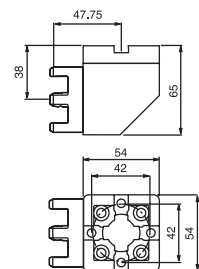
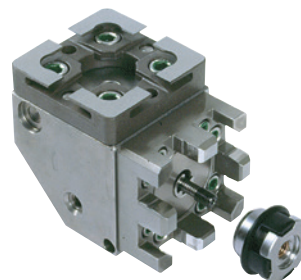
- Required drawbar 3R-605.2
- Solid X and Y-references
- Height 250 mm
- Adapted for automatic changing
- Flushing duct
- Recommended clamping torque 6 Nm
- Permissible torque 135 Nm
- Weight 9 kg.



Manual chuck adapter 90°, Macro-Macro, 3R-652.9

For horizontal mounting of Macro holders.
Supplied with drawbar for screw locking.

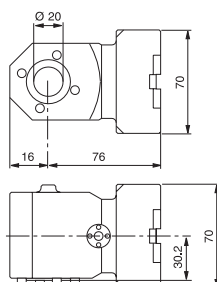
- Rust resistant
- Weight 2.4 kg.



Manual chuck adapter 90°, Macro-Mini, 3R-603.9

For horizontal mounting of Mini holders in the Macro system.

- Rust resistant
- Flushing connection
- Weight 1.9 kg.

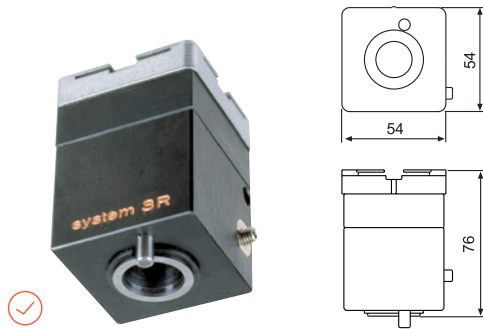


Macro – Chuck adapters

Manual chuck adapter, Macro-Mini, 3R-653-S

For mounting Mini holders in the Macro system.

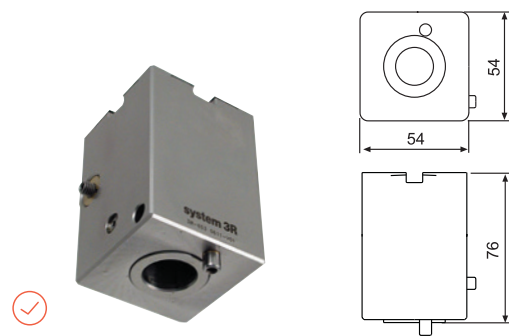
- MacroStandard coupling
- Can be changed automatically
- Weight 1.3 kg.



Manual chuck adapter, Macro-Mini, 3R-653

For mounting Mini holders in the Macro system.

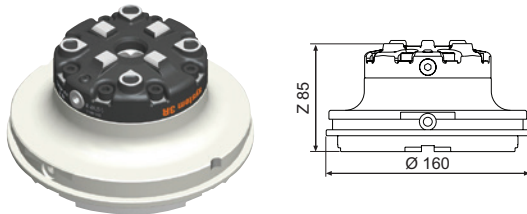
- MacroHP coupling
- Can be changed automatically
- Rust resistant
- Weight 1.3 kg.



Manual chuck adapter, MacroMagnum-Macro, 90964

From MacroMagnum into Macro system. Chuck adapter with in-built Macro chuck.

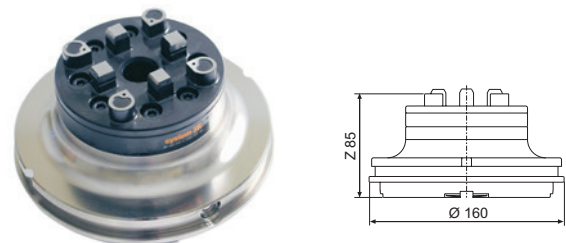
- Requires drawbar 3R-605.2 or similar
- Solid X & Y-references
- Recommended clamping torque 6 Nm
- Permissible torque 135 Nm
- Clamping force 6,000 N
- Max. load for 0.002 mm accuracy, 50 kg
- Weight 4.3 kg.



Pneumatic chuck adapter, MacroMagnum-Macro, 3R-682.600-A

Chuck adapter with in-built pneumatic Macro chuck for mounting in 3R-680.10-2A.

- Weight 4.5 kg.

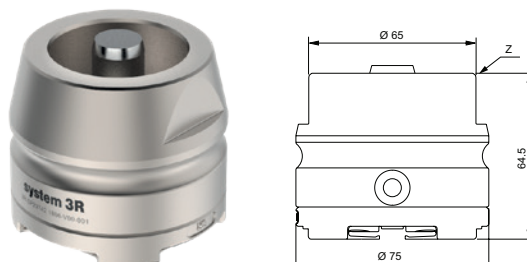


Manual adapter, Macro-Capto C6, 3R-SP29742

Access to clamping from underneath.

Torque wrench for optimal performance.

- Suitable for automatic changer.
- Recommended clamping torque 30 Nm
- Rust resistant
- Weight 1.5 kg.

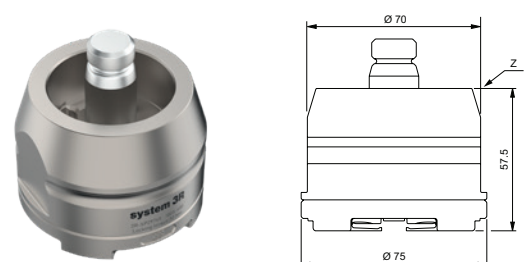


Manual adapter, Macro-HSK-63A, 3R-SP29745

Access to clamping from underneath.

Torque wrench for optimal performance.

- Suitable for automatic changer.
- Recommended clamping torque 30 Nm
- Rust resistant
- Weight 1.5 kg.

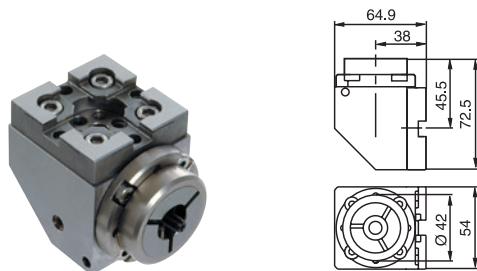


Macro – Chuck adapters

Manual chuck adapter 90°, Macro-MacroJunior, 3R-406.9

For horizontal mounting of MacroJunior holders in the Macro system. Screw locking.

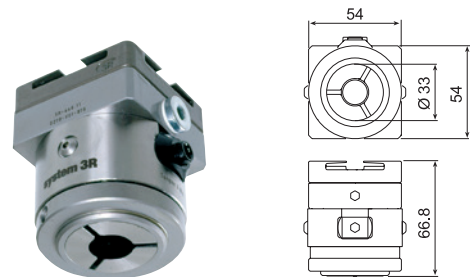
- Adapted for automatic changing
- Rust resistant
- Fixed index positions 3x120°
- Weight 2.4 kg.



Manual chuck adapter, Macro-MacroJunior, 3R-446.11

For mounting in the Macro system. Side locking of the MacroJunior holder. Duct for flushing through the electrode.

- Required drawbar 3R-405.11
- Precision-cast Macro reference element
- Adapted for automatic changing
- Fixed index positions 3x120°
- Weight 1.3 kg.

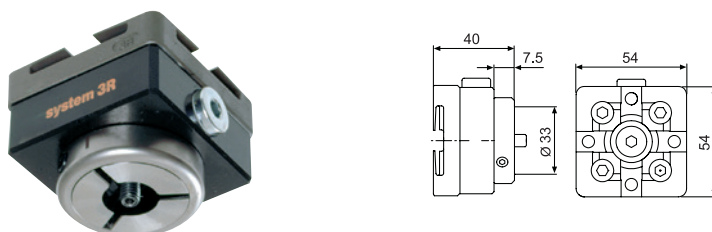


Manual chuck adapters, Macro-MacroJunior

For mounting in the Macro system. Axial locking screw with channel for flushing through the electrode.

3R-466.4033

- Precision-cast Macro reference element
- Adapted for automatic changing
- Fixed index positions 3x120°
- Weight 1.1 kg.



3R-466.4033-S

NOTE: For EDM machining only.

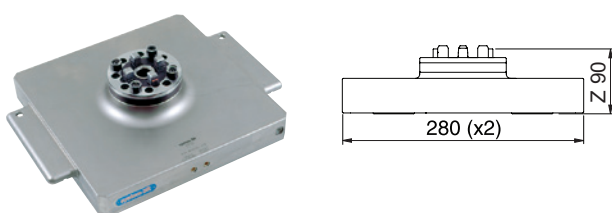
- Adapted for automatic changing
- Fixed index positions 3x120°
- Weight 1 kg.



Pneumatic chuck adapter, Dynafix-Macro, 3R-772-600A

Chuck adapter with in-built pneumatic Macro chuck for mounting in 3R-770-1A or 3R-700-5A.

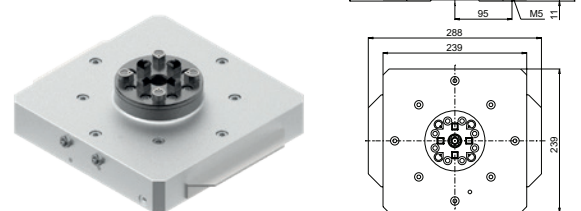
- Weight 11 kg.




Pneumatic chuck adapter, GPS 240-Macro, C522520

Chuck adapter with in-built pneumatic Macro chuck for mounting in C219800.

- Built-up height 79 mm
- X and Y-centring with springy cams, hardened, stainless
- Macro chuck 3R-SP24460
- Drawbar 3R-605.1 or 3R-605.4
- Adapted for automatic changing
- Weight 8.5 kg.



 Pallet with springy hardened cams.

Macro – Chuck adapters & rotating spindles

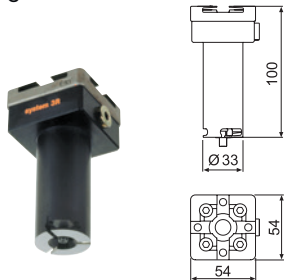
Manual chuck adapters, Macro-MacroJunior

For mounting in the Macro system. Axial locking screw with channel for flushing through the electrode.

NOTE: For EDM machining only.

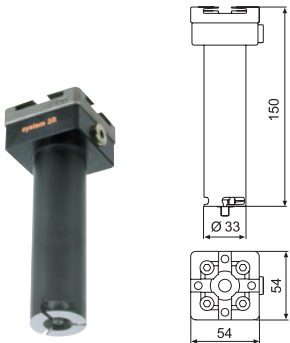
3R-466.10033

- Fixed index positions 3x120°
- Adapted for automatic changing
- Height 100 mm
- Weight 0.8 kg.

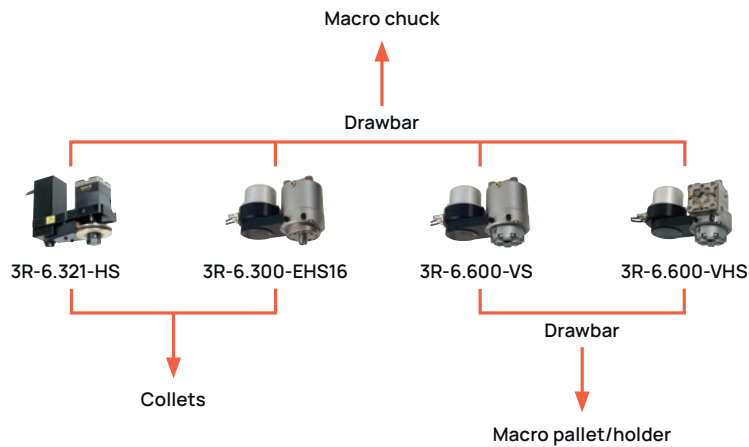


3R-466.15033

- Fixed index positions 3x120°
- Adapted for automatic changing
- Height 150 mm
- Weight 1.2 kg.

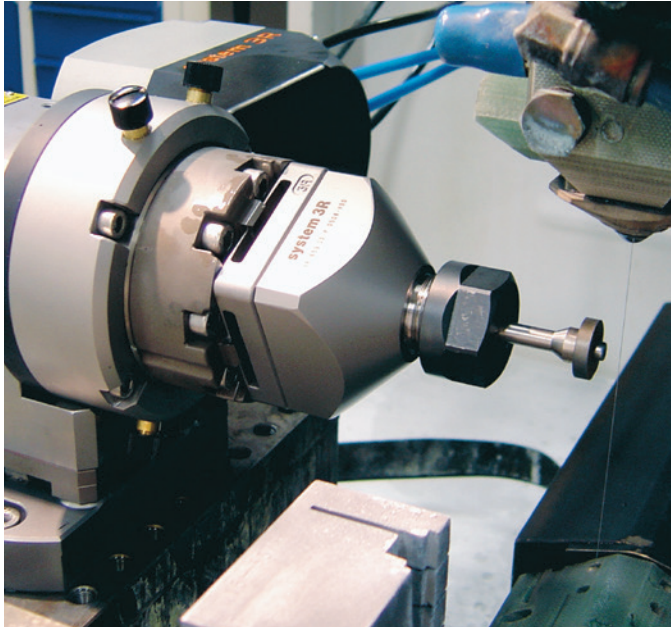


Macro – Rotating spindles



Rotating spindles	Article number	Drawbar	Feature
Vertical standard	3R-6.321-HS		collets
Vertical standard	3R-6.600-VS	3R-605.2	rust resistant
Vertical and horizontal standard	3R-6.600-VHS	3R-605.2	rust resistant
Vertical standard	3R-6.300-EHS16		collets, ER-16, rust-resistant

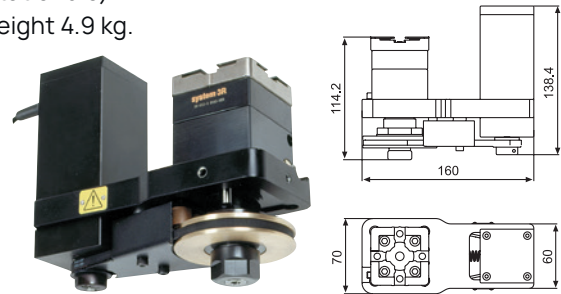
Macro – Rotating spindles



Rotating spindle, 3R-6.321-HS

Electrical spindle for round electrodes.

- Supplied with collet chuck set 3R-ER16E
- Electrode sizes \varnothing 0.5-10 mm
- Speed range 200-2,000 rpm
- Recommended maximum flushing pressure 1 bars (dynamic/rotating)
- Recommended maximum flushing pressure 10 bars (static/idle)
- Weight 4.9 kg.



Rotating spindles

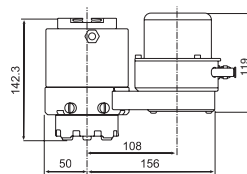
For mounting in a Macro chuck. Flush-
ing via flushing connection.

- Control unit included
- Required drawbar 3R-605.2, but 3R-605.2RS in wire EDM machines
- Rust resistant
- Immersible
- Maximum electrode weight 5 kg
- Maximal flushing pressure through the chuck 40 bars
- Weight 9.5 kg.

3R-6.600-VS

For vertical mounting in
EDM machines.

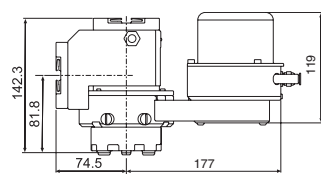
- Speed range 60-2,000 rpm.



3R-6.600-VHS

For vertical mounting in die-sinking
EDM machines and horizontal mount-
ing in wire EDM machines.

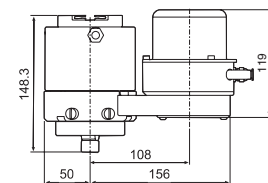
- Speed range 60-1,500 rpm.



Rotating spindles, 3R-6.300-EHS16

For clamping in a vertical Macro chuck.
Flushing via flushing connection.

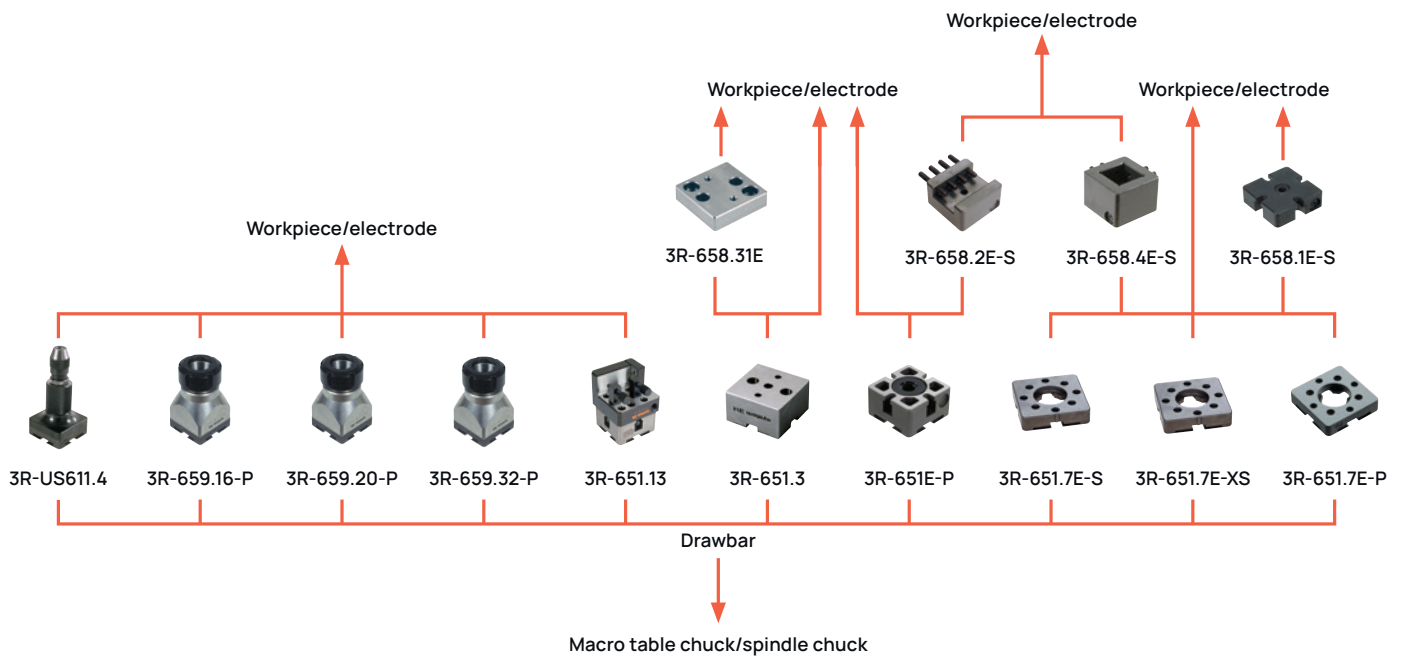
- Drawbar depends on chosen chuck
- Control unit included
- Rust resistant
- Immersible
- Speed range 60-2,000 rpm
- Maximum flushing pressure 80 bars
- Weight 10 kg



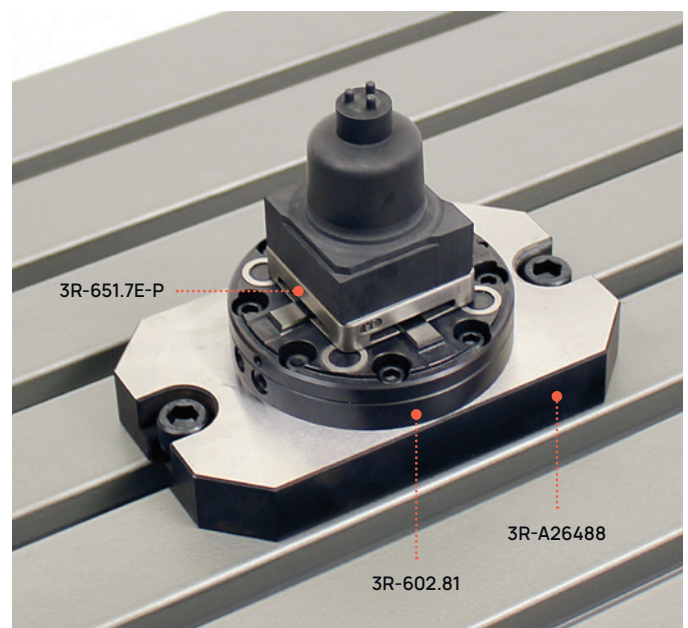
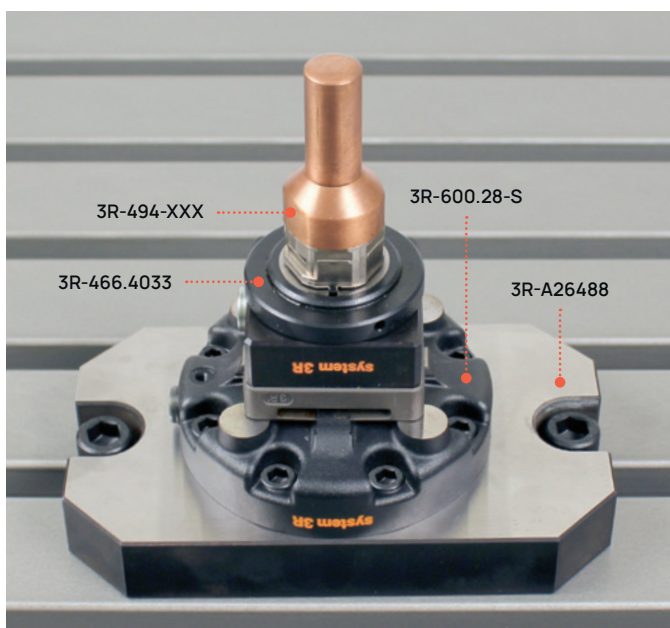
Recommended collet sets

Make	Collet set	Size (mm)	Nut M19x1
Baltzer	EHS16	\varnothing 0.09-3	Integral
Regofix	ER16, ER16-UP	\varnothing 0.5-10	ERM16, ERM16, ER16 MS
Tecnopinz	ETS16	\varnothing 1.25-10	ETS16,2

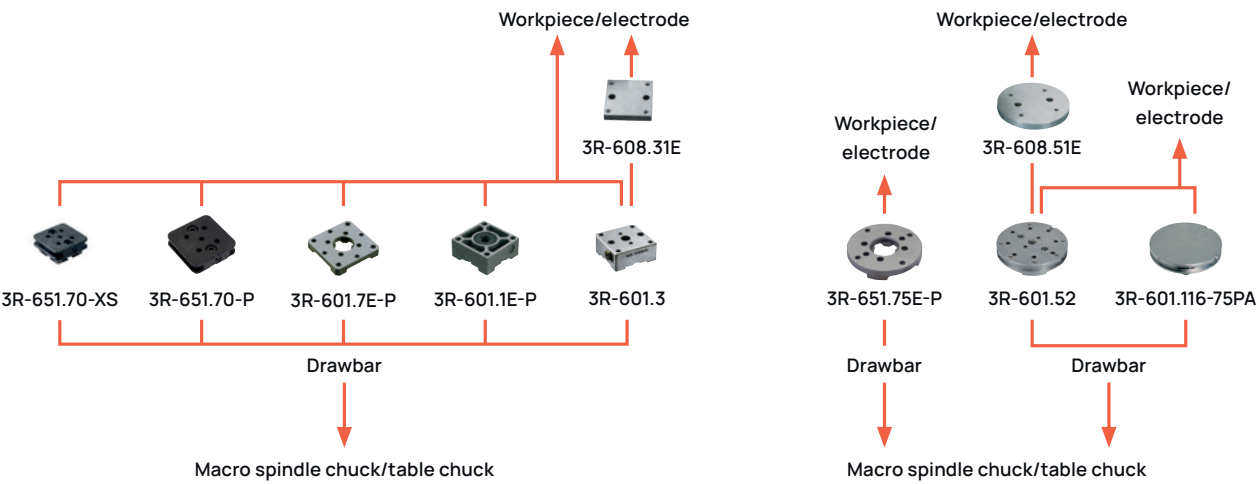
Macro – Pallets, holders & reference elements



Holders, pallets and ref. elements, 54x54 mm	Article number	Feature
Hardened reference element 12.5 mm, HP	3R-651.7E-P	rust resistant
Hardened reference element 12.5 mm, Std	3R-651.7E-XS	
Hardened reference element 12.5 mm, Std	3R-651.7E-S	surface treated
Hardened pallet 30 mm, HP	3R-651E-P	rust resistant
Hardened pallet 30 mm, HP	3R-651.3	52x52 mm / 3Refix Ø 10, rust resistant
Unhardened pallet 14.4 mm	3R-658.31E	52x52 mm / 3Refix Ø 10
Hardened holder, HP	3R-651.13	< 30x30 mm
Unhardened holder	3R-658.4E-S	< 30x30 mm
Unhardened holder	3R-658.2E-S	< 30 mm
Spacer plate, Std and HP	3R-658.1E-S	
Collet chuck ER16, HP	3R-659.16-P	Ø 0,5-10 mm, rust resistant
Collet chuck ER20, HP	3R-659.20-P	Ø 1-13 mm, rust resistant
Collet chuck ER32, HP	3R-659.32-P	Ø 2-20 mm, rust resistant
Three-jaw chuck	3R-US611.4	



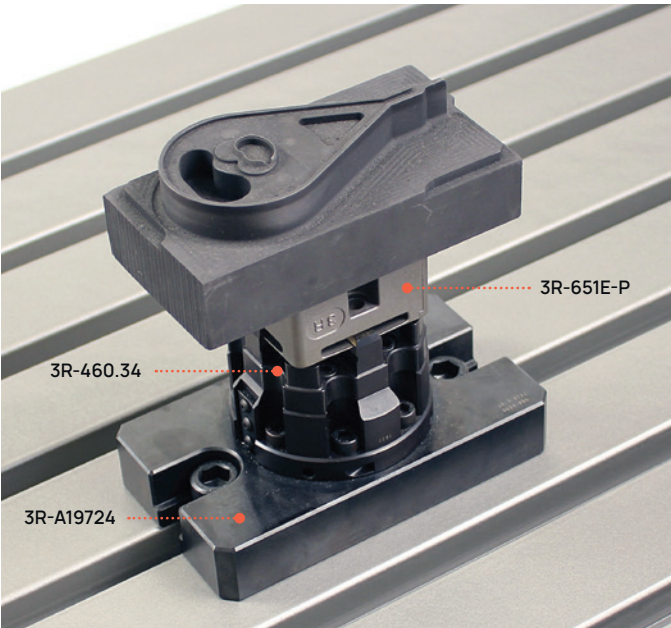
Macro – Pallets & reference elements



Pallets and ref. elements, 70x70 mm	Article number	Feature
Hardened reference element 12.5 mm, HP	3R-601.7E-P	rust resistant
Hardened pallet 30 mm, HP	3R-601.1E-P	rust resistant
Hardened pallet 30 mm, HP	3R-601.3	rust resistant, 3Refix Ø 10
Unhardened pallet 14.2 mm	3R-608.31E	3Refix Ø 10 mm
Unhardened pallet, HP	3R-651.70-P	reference element 54x54 mm
Unhardened pallet, Std	3R-651.70-XS	reference element 54x54 mm

Ref. element, Ø 75 mm	Article number	Feature
Hardened reference element 12.5 mm standard and HP	3R-651.75E-P	rust resistant

Pallets, Ø 116 mm	Article number	Feature
Hardened pallet, HP	3R-601.52	3Refix Ø 10 mm, rust resistant
Unhardened pallet, HP	3R-601.116-75PA	with reference element Ø 10 mm
Unhardened pallet	3R-608.51E	3Refix Ø 10 mm



Macro – Pallets, reference elements & spacers

Reference element 54x54 mm, MacroStd

Hardened reference element for copper electrodes and workpieces.

NOTE: Must be mounted on the copper blank/workpiece before it is locked in a chuck.

NOTE: For graphite electrodes, spacer plate 3R-658.1E-S is required.

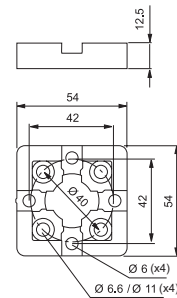
3R-651.7E-S

- Nickel-plated side faces
- Supplied in sets of 8
- Weight per set 1.3 kg.



3R-651.7E-XS

- Untreated side faces
- Supplied in sets of 8
- Weight per set 1.3 kg.

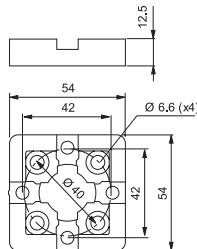


Reference element 54x54 mm, MacroHP, 3R-651.7E-P

Hardened and precision-cast, with clearance holes for four fixing screws.

NOTE: Must be mounted on the workpiece/fixture before it is locked in a chuck.

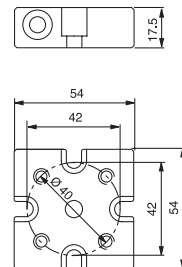
- Parallel-ground top and bottom faces
- Fixed index positions 4x90°
- Rust resistant
- Supplied in sets of 8
- Weight per set 1.3 kg.



Spacer plate, 54x54 mm, 3R-658.1E-S

For graphite electrodes or copper electrodes/workpieces with a rough mounting surface. To be mounted on 3R-651.7E-S, 3R-651.7E-XS or 3R-651.7E-P.

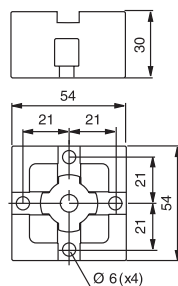
- Ready for code carrier
- Supplied in sets of 8
- Weight per set 2.5 kg.



Pallet, 54x54 mm, MacroHP, 3R-651E-P

Hardened, with clearance holes for four fixing screws.

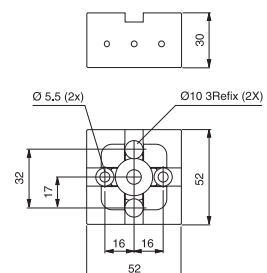
- Ready for code carrier
- Fixed index positions 4x90°
- Rust resistant
- Flushing duct
- Supplied in sets of 8
- Weight per set 3.4 kg.



Pallet, 52x52 mm, MacroHP, 3R-651.3

Hardened, with 3Refix holes, flushing connection and clearance holes for two fixing screws.

- 3Refix Ø10 mm
- Ready for code carrier
- Parallel-ground top and bottom faces
- Fixed index positions 4x90°
- Rust resistant
- Flushing duct
- Weight 0.5 kg.

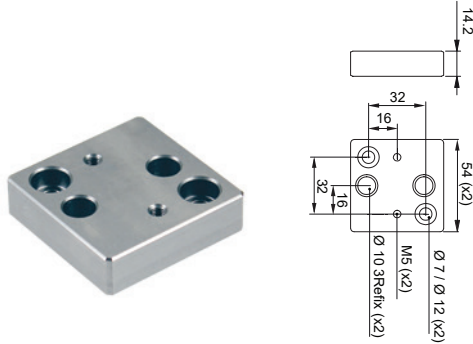


Macro – Pallets & holders

Pallet, 52x52 mm, 3R-658.31E

Unhardened, has 3Refix holes and two M5 threads. Designed to be mounted on 3R-651.3.

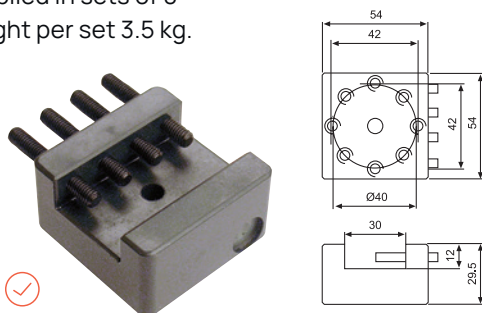
- 3Refix Ø 10 mm
- In-Build height 14.4 mm
- Supplied in sets of 10
- Weight per set 2.2 kg.



Holder, 54x54 mm, 3R-658.2E-S

Unhardened holder for flat electrodes with maximum width 30 mm. To be mounted on 3R-651.7E-S, 3R-651.7E-XS or 3R-651.7E-P.

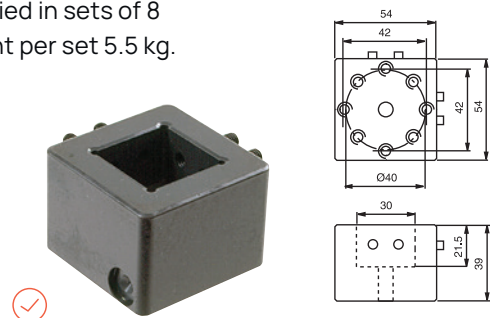
- Ready for code carrier
- Flushing duct
- Supplied in sets of 8
- Weight per set 3.5 kg.



Holder, 54x54 mm, 3R-658.4E-S

Unhardened holder for square or round electrodes, max. 30 mm. To be mounted on 3R-651.7E-S, 3R-651.7E-XS or 3R-651.7E-P.

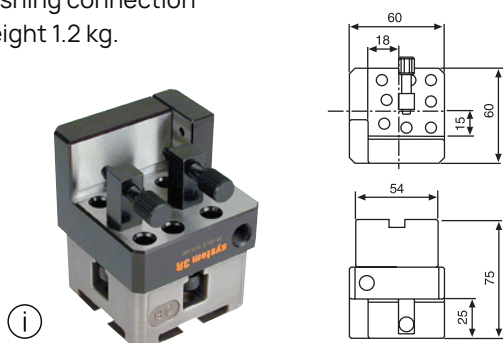
- Ready for code carrier
- Flushing duct
- Supplied in sets of 8
- Weight per set 5.5 kg.



Holder, MacroHP, 3R-651.13

Hardened holder for square electrodes max. 30 mm.

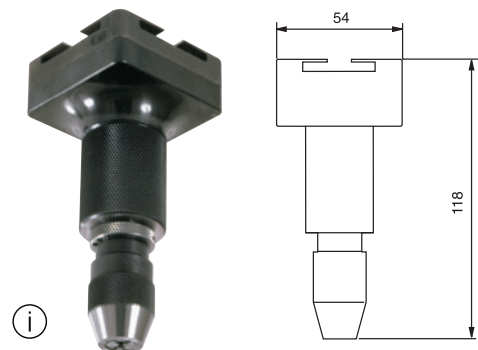
- Max. workpiece 32x28 mm
- Ready for code carrier
- Parallel-ground top and bottom faces
- Fixed index positions 4x90°
- Flushing connection
- Weight 1.2 kg.



Three-jaw chuck, 3R-US611.4

For 0-3 mm electrodes.

- Weight 0.8 kg.

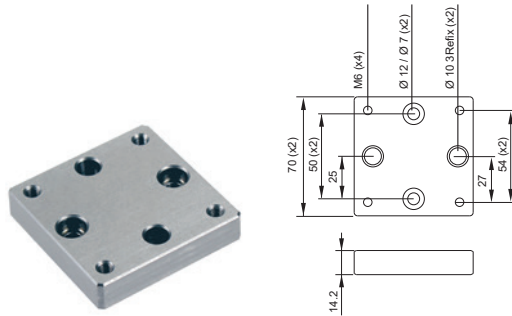


Macro – Pallets & reference elements

Pallet, 70x70 mm, 3R-608.31E

Unhardened, has 3Refix holes and four M6 threads. Designed to be mounted on 3R-601.3 or 3R-601.52.

- 3Refix Ø 10 mm
- Build-in height 14.2 mm
- Supplied in sets of 10
- Weight per set 4.4 kg.

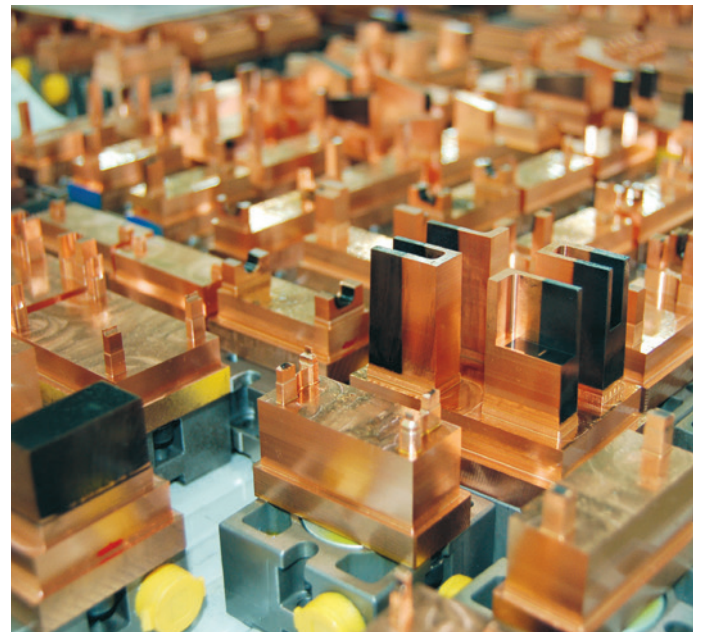
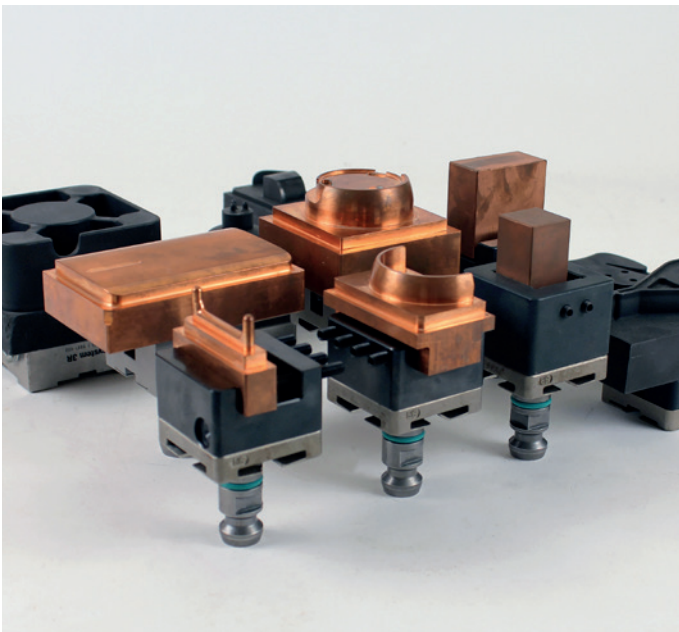
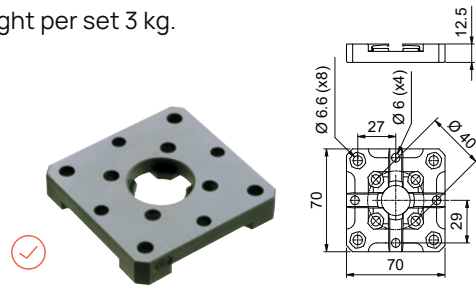


Reference element, 70x70 mm, MacroHP, 3R-601.7E-P

Hardened and precision-cast, has clearance holes for four fixing screws.

NOTE: Must be mounted on the workpiece/fixture before it is locked in a chuck.

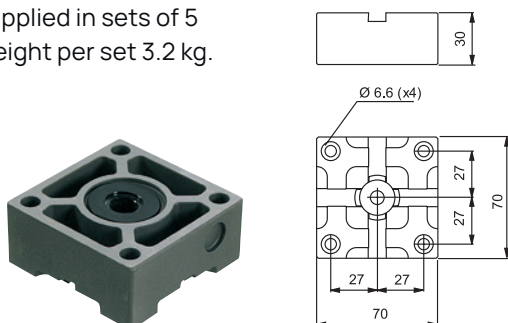
- Parallel-ground top and bottom faces
- Fixed index positions 4x90°
- Rust resistant
- Supplied in sets of 5
- Weight per set 3 kg.



Pallet, 70x70 mm, MacroHP, 3R-601.1E-P

Hardened, has clearance holes for four fixing screws.

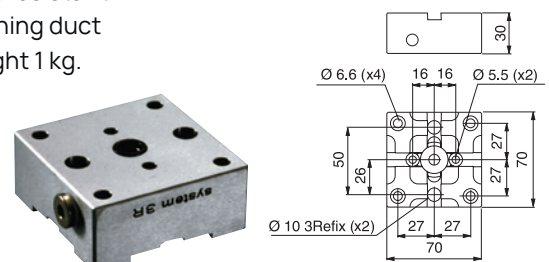
- Ready for code carrier
- Fixed index positions 4x90°
- Rust resistant
- Flushing duct
- Supplied in sets of 5
- Weight per set 3.2 kg.



Pallet, 70x70 mm, MacroHP, 3R-601.3

Hardened, has 3Refix holes, flushing connection and clearance holes for six fixing screws.

- 3Refix Ø 10 mm
- Ready for code carrier
- Parallel-ground top and bottom faces
- Fixed index positions 4x90°
- Rust resistant
- Flushing duct
- Weight 1 kg.



Macro – Pallets, reference elements & accessories

PT Pallet, 70x70 mm, 3R-651.70-P

Unhardened pallet; has reference element 3R-651.7-P.

- Ready for code carrier
- Ready for automation
- Grip outside the pallet
- Sealing ring between pallet and chuck
- Weight 1 kg.



PT

PT Pallet, 70x70 mm, 3R-651.70-XS

Unhardened pallet; has reference element 3R-651.7-XS.

- X, Y and Z-references hardened
- Ready for code carrier
- Ready for automation
- Grip outside the pallet
- Sealing ring between pallet and chuck
- Weight 1 kg.



PT

ACCESSORIES

PT Sealing ring, High, 3R-612.54-A

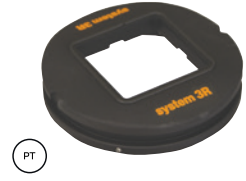
Suitable for some Macro chucks with drawbar 3R-605.1*.



PT

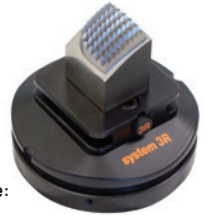
PT Sealing ring, Low, 3R-612.54-S

Suitable for some Macro chucks with drawbar 3R-605.2*.



PT

* For further details, please ask System 3R.



PT

= Process Tooling

Application example:

Reference element, Ø 75 mm, 3R-651.75E-P

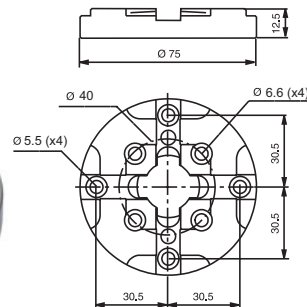
Hardened and milled; has clearance holes for eight fixing screws.

NOTE: Must be mounted on the workpiece/fixture before it is locked in a chuck.

- Fixed index positions 4x90°
- Parallel-ground top and bottom faces
- Rust resistant
- Supplied in sets of 10
- Weight per set 2.7 kg.



✓



Collet chucks, MacroHP

3R-659.16-P

- For ER16 collets
- Electrode sizes 0.5-10 mm
- Flushing duct
- Build-in height 62 mm
- Weight 0.8 kg. ✓

3R-659.20-P

- For ER20 collets
- Electrode sizes 1-13 mm
- Flushing duct
- Build-in height 69 mm
- Weight 1.2 kg. ✓



3R-659.32-P

- For ER32 collets
- Electrode size 2-20 mm
- Flushing duct
- Build-in height 94 mm
- Weight 1.2 kg. ✓

Gate chuck, 3R-US90-601

Fixed index positions at 0, 30, 45, 60 and 90 degrees. Other angles are set with a sine rule.

- Weight 1.1 kg.



i

Macro – Pallets & user kits

Pallet, Ø 116 mm, 3R-601.116-75PA

Unhardened pallet, has reference element 3R-651.75-P.

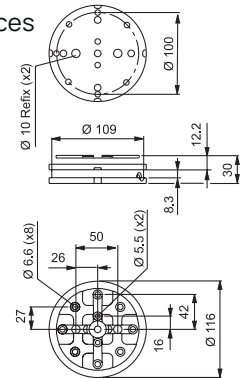
- X, Y & Z-references hardened
- Ready for code carrier
- Adapted for automatic changing.



Pallet, Ø 116 mm, MacroHP, 3R-601.52

Hardened, has 3Refix holes and clearance holes for ten fixing screws.

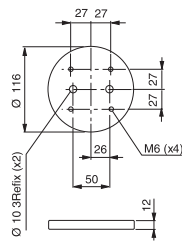
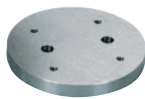
- 3Refix Ø 10 mm
- Adapted for automatic changing
- Ready for code carrier
- Parallel-ground top and bottom faces
- Fixed index positions 4x90°
- Rust resistant
- Weight 1.9 kg.



Pallet, Ø 116 mm, 3R-608.51E

Unhardened, has 3Refix holes and four M6 threads. Designed to be mounted on 3R-601.3 or 3R-601.52.

- 3Refix Ø 10 mm
- Supplied in sets of 10
- Weight per set 10 kg.



Sealing ring, High, 3R-612.116-A

Suitable for some Macro chucks with drawbar 3R-605.1*.

NOTE: Only suitable for Ø 116 mm pallets.



*For more info please ask System 3R.

Sealing ring, Low, 3R-612.116-S

Suitable for some Macro chucks with drawbar 3R-605.2*.

NOTE: Only suitable for Ø 116 mm pallets.



User kit, 3R-628.31-S

3R-605.1	Drawbar, long	x4
3R-605.2	Drawbar, short	x2
3R-610.21-S	Manual table chuck	x1
3R-651.7-XS	Ref. element 54x54 mm	x12
3R-656.1	Check ruler	x1
3R-658.1-S	Spacer plate 54x54 mm	x2
3R-658.4-S	Holder 54x54 mm	x4
3R-658.2-S	Holder 54x54 mm	x4

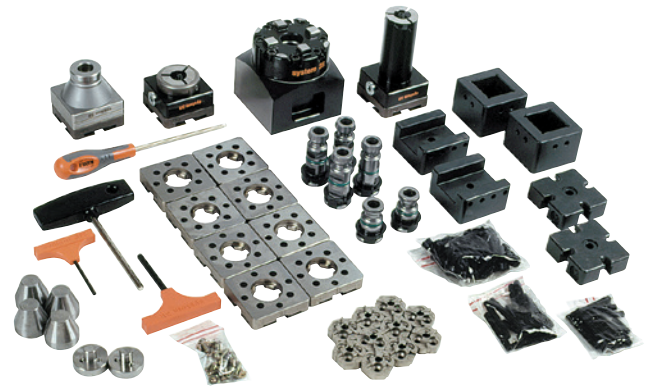


* For further details, please ask System 3R.

Macro – User kits & accessories

User kit, 3R-628.41-S

3R-465.1-A	Holder with MacroJunior taper	x4
3R-461.1-GA	Holder with MacroJunior journal	x2
3R-466.4033	Chuck adapter Macro/MacroJunior	x1
3R-466.10033	Chuck adapter Macro/MacroJunior	x1
3R-491	Pallet 25 mm MacroJunior	x10
3R-605.1	Drawbar, long	x4
3R-605.2	Drawbar, short	x2
3R-610.21-S	Manual table chuck, Macro	x1
3R-651.7-XS	Reference element 54x54 mm	x8
3R-656.1	Check ruler	x1
3R-658.1-S	Spacer plate 54x54 mm	x2
3R-658.4-S	Holder 54x54 mm	x2
3R-658.2-S	Holder 54x54 mm	x2
	Screw MTF4x12	x90
	Screw wrench	x1



Drawbars

3R-605.1

- Ø 20x57.1 mm with flushing hole Ø 7 mm
- Supplied 1 pc.

3R-605.1E

- Supplied in sets of 10.

3R-605.1EE

- Supplied in sets of 40.



3R-605.2RS

- Ø 20x36.9 mm with flushing holes Ø 7 mm
- Rust resistant
- Supplied 1 pc.



3R-605.14E

- Ø 20x57 mm with flushing hole Ø 7 mm
- Intended for MacroCombi automatic electrode changers
- Supplied in sets of 10.



Drawbars

3R-605.2

- Ø 20x36.9 mm with flushing hole Ø 7 mm
- Supplied 1 pc.

3R-605.2E

- Supplied in sets of 5.

3R-605.2EE

- Supplied in sets of 20.



3R-605.10

- Ø 20x13 mm
- Rust resistant
- Supplied 1 pc.

3R-605.10E

- Supplied in sets of 10.

3R-605.10EE

- Supplied in sets of 20.



3R-605.4E

For round pallets adapted for automatic changing

- Ø 20x57.1 without flushing hole
- Supplied in sets of 10.

3R-605.4EE

- Supplied in sets of 40.



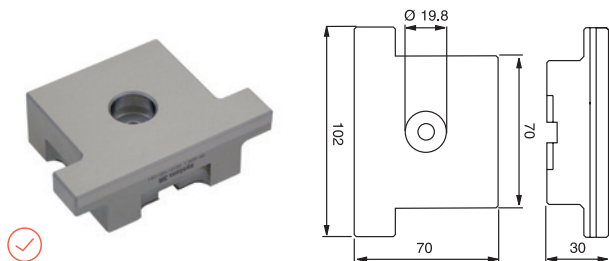
*1 Except 3R-605.2EE.

Macro – Accessories

Control ruler, 3R-606.1

For setting angular positions and for centring Macro chucks.

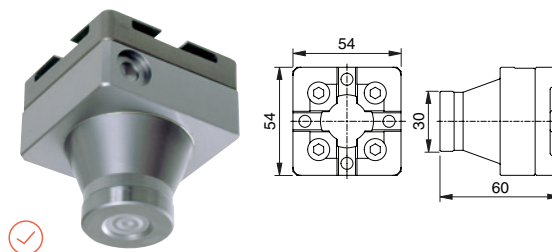
- Ground hole for centring
- Measuring length 100 mm
- Weight 1.4 kg.



Control ruler, 3R-656.1

For setting angular positions. Ground outside diameter for centring.

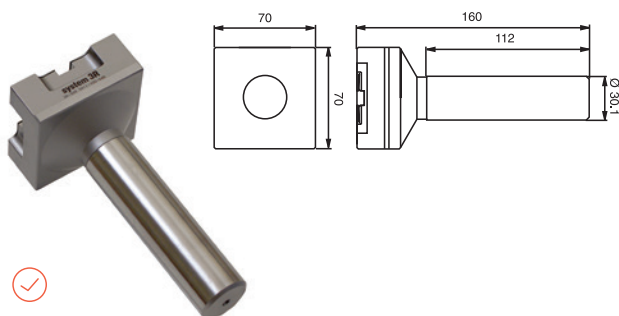
- Measuring length 50 mm
- Weight 0.8 kg.



Control rod, 3R-606

Check mandrel with ground C-reference for setting Macro chucks.

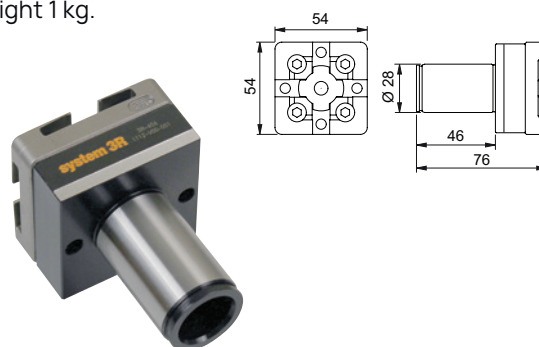
- Measuring length 110 mm
- Weight 2.3 kg.



Control rod, 3R-656

Check mandrel with ground C-reference for setting Macro chucks.

- Measuring length 38 mm
- Weight 1 kg.



Measuring probes

Measuring probes with Renishaw measuring head for machines with measurement cycle function.

- Max. ball deflection:
X-axis $\pm 10^\circ$
Y-axis $\pm 10^\circ$
Z-axis ± 3 mm.

3R-656.31-3P

- Build-in height 112 mm
- Measuring ball Ø 3 mm
- Weight 0.6 kg.



3R-656.31-5P

- Build-in height 112 mm
- Measuring ball Ø 5 mm
- Weight 0.6 kg.

Measuring probe, 3R-656.21-SP03

Measuring probe with measuring head for machines with measurement cycle function.

- Build-in height 130 mm
- Measuring ball Ø 3 mm
- Stiff probe
- Weight 0.8 kg.



Macro – Accessories

Indicating spindle, 3R-656.2-P

For measuring centre holes.

- Dial indicator required
- Weight 0.6 kg.



Centring ring, 3R-612.6

For centring 3R-600.20.



Splash guard, 90027

Splash guard for Macro chucks with long drawbar. Can also be used as a cover for unused chucks.

NOTE: Does not work with sealing ring 3R-612.116.



Splash guard, 90027.01

Fits MacroStandard chucks with drawbar 3R-605.2.



Macro – Accessories

Clamping force meter kit, 3R-SSP115-Base

For both pneumatic and manual chucks. In combination with individual drawbars or drawbar kits, this stand-alone unit can be used with MacroJunior, Macro, MacroMagnum and Dynafix.

NOTE: Requires drawbars with bayonet interface similar to 3R-605.1.

- Add-on kit for use in Macro/MacroMagnum, 3R-SSP115-Macro
- Operating temp. +10 to + 40° C
- Gauge size Ø 90x47 mm
- Working range 1-22 kN
- Deviation ± 0.1 kN
- Weight display 0.34 kg, gauge 1.3 kg.



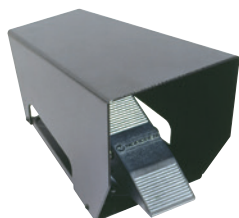
Add-on kit, 3R-SSP115-Macro

Add-on kit for 3R-SSP115-Base.



Air unit, 3R-611.2

Foot operation of pneumatic chucks.



Air unit, 3R-611.4

Unit for operation of pneumatic chucks. Two functions, open/close.



Locking ring key, 3R-605-GE

To lift drawbar locking rings.

- Supplied in sets of 2.



Code carriers, 3R-863.01-10

With pre-programmed unique identity, designed for use on pallets.

- Supplied in sets of 10.



Sealing ring, High, 3R-612.70-A

For reference element 70x70 mm. Suitable for some Macro chucks*.



Sealing ring, Low, 3R-612.70-S

For reference element 70x70 mm. Suitable for some Macro chucks*.



Sealing ring, Low, 3R-612.75-S

For reference element Ø 75 mm. Suitable for some Macro chucks*.



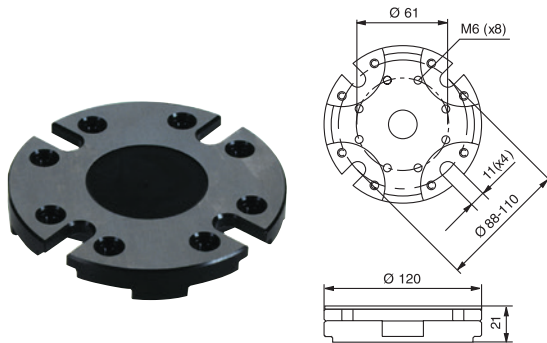
*For more info please ask System 3R.

Macro – Accessories

Adapter plate, 3R-A11489

For mounting 3R-400.34, 3R-460.34 or 3R-600.24-S.

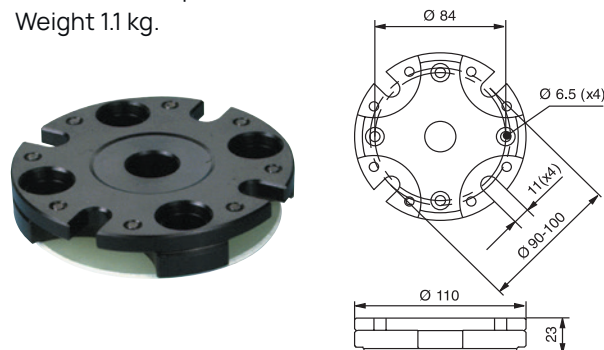
- Supplied with insulation plate and fixing screws
- Flushing connection
- Weight 1.4 kg.



Adapter plate, 3R-A3620

Adapter plate with eight adjusting screws for mounting spindle chucks. For mounting 3R-460.1-1, 3R-600.1-30 or 3R-600.20.

- Supplied with insulation plate and fixing screws
- M10 for 90 mm pitch circle
- M6 for 96 mm pitch circle
- M8 for 100 mm pitch circle.
- Weight 1.1 kg.

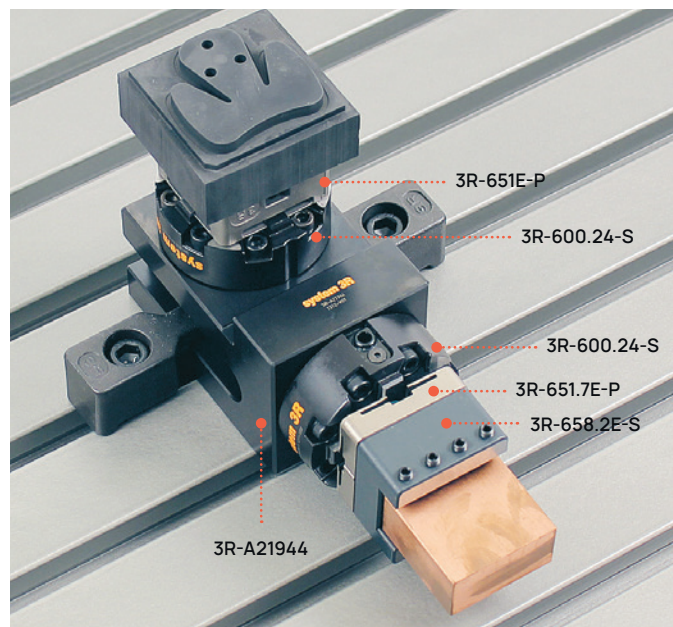
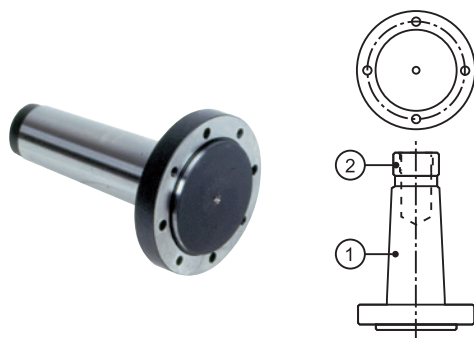


Lathe taper, 3R-TXXXX

Taper attachment for mounting chucks in taper spindles.

NOTE: Manufactured on request. State machine type, taper (1), drawbar thread (2) and which 3R chuck is to be mounted.

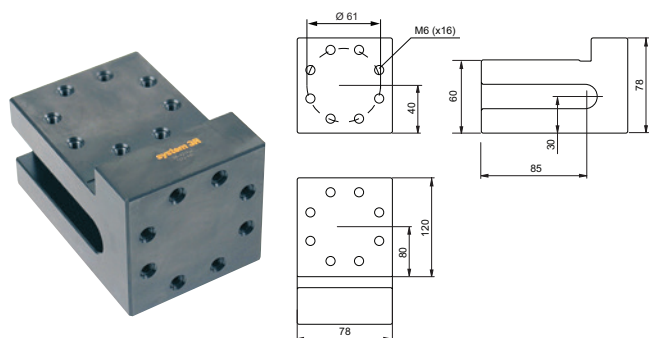
Use the order form at the end of the catalogue.



Angle shelf, 3R-A21944

For vertical or horizontal mounting of 3R-400.34, 3R-460.34 or 3R-600.24-S on machine table. Intended for milling.

NOTE: Chuck to be ordered separately.

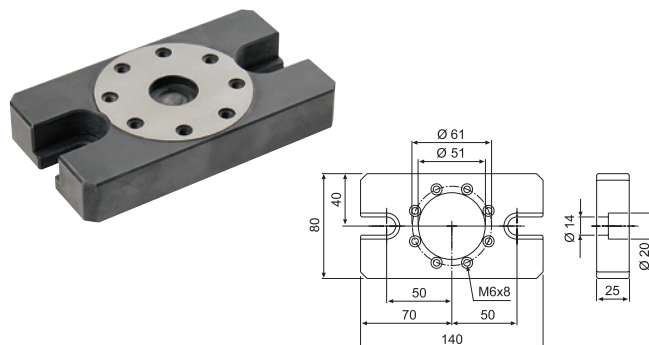


Adapter plate, 3R-A19724

For mounting 3R-400.34, 3R-460.34 or 3R-600.24-S on machine table.

NOTE: Chuck to be ordered separately.

- Supplied with fixing screws for chuck and table.



Macro – Accessories

Electrode cassette, 3R-650/8x5

For eight electrodes 52x52 and 54x54 mm.

- Supplied in sets of 5.



3Refix mandrel, 3R-901-10E-TX

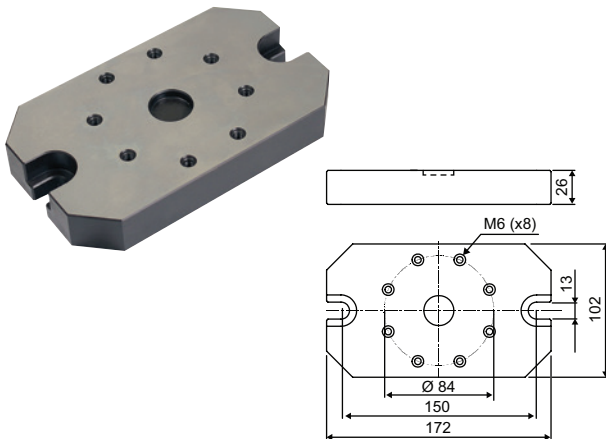
- 3Refix Ø 10 mm
- Recommended tightening torque 4 Nm
- Supplied in sets of 10
- Weight per set 0.2 kg.

NOTE: When positioning with 3Refix mandrels, always tighten the expanding mandrel in the R0 hole first.



Adapter plate, 3R-A26488

For mounting 3R-600.28-S, 3R-600.14-30 or 3R-602.81.



Converter kit, 90842.01

To convert 3R-600.24-S to enable long drawbar 3R-605.1.



Torque wrenches, 3R-614-04

Mainly for MacroCombi and Ø 10 3Refix mandrels.

- 4 Nm.

3R-614-06

For Macro chucks.

- 6 Nm.

