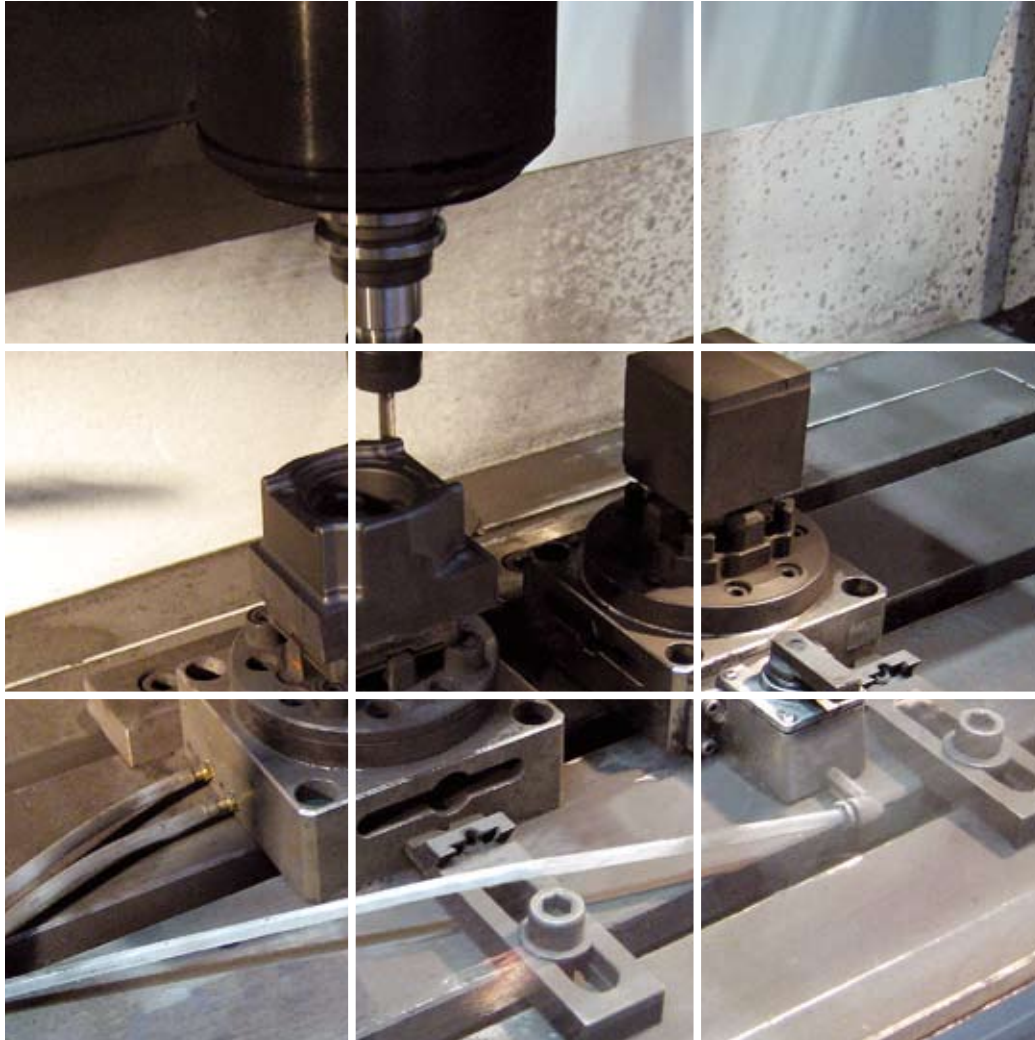


Reference systems for electrode manufacture
and die-sinking EDM.
The standard range.

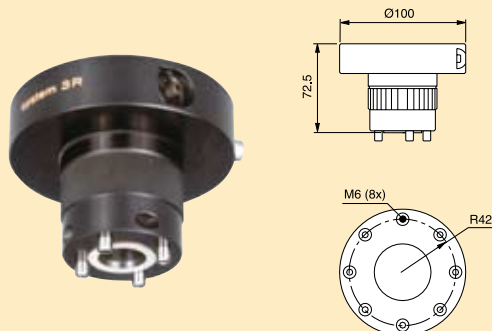




Manual chuck 3R-321.5

Hydraulic chuck for mounting on machine spindle with 3R-A3620.

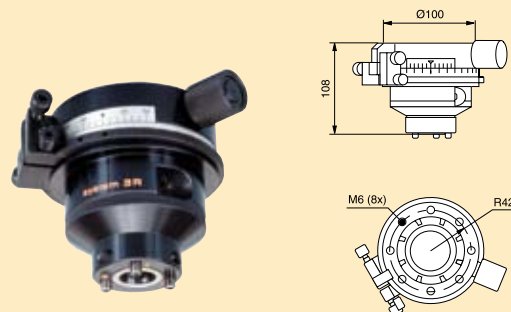
- Fixed index positions 4x90°
- Flushing connection
- Weight 1.8 kg



Manual C-axis 3R-321.65

Hydraulic chuck for mounting on machine spindle with 3R-A3620.

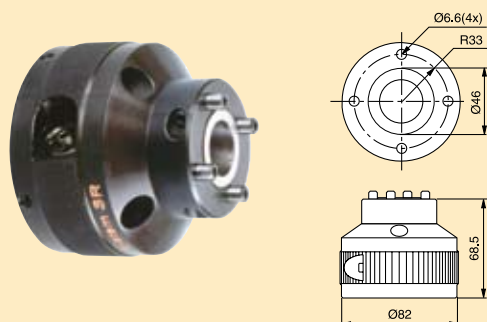
- Fixed index positions 24x15°
- Vernier scale
- Flushing connection
- Weight 3.6 kg



Manual lathe chuck 3R-321.2-4x90°

Hydraulic chuck with set screws, for mounting on a lathe taper.

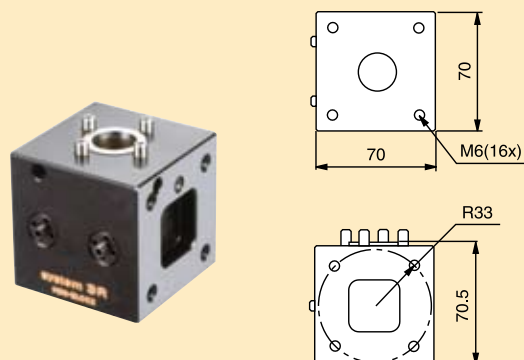
- Fixed index positions 4x90°
- Weight 1 kg



MiniBlock 3R-321.46

Manual hydraulic chuck for vertical or horizontal mounting on the machine table.

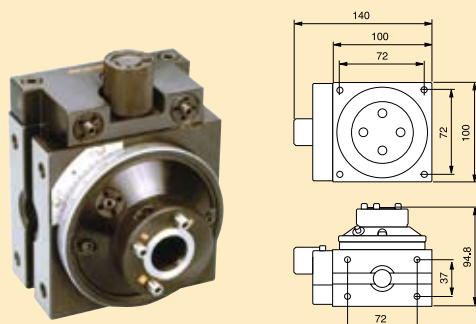
- Fixed index positions 4x90°
- Weight 2.3 kg



3R block 3R-321.4

Manual hydraulic chuck for vertical or horizontal mounting on the machine table.

- Fixed index positions 72x5°
- Vernier scale
- Weight 5.4 kg

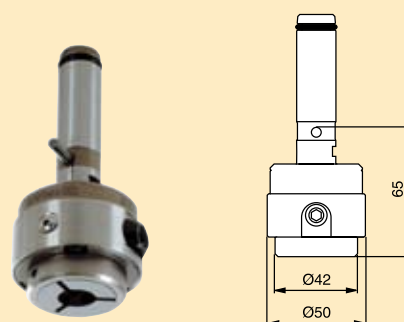


Manual chuck adapter 3R-443AEC

For mounting MacroJunior holders in the Mini system. Channel for flushing through the electrode..

Note: For EDM machining only.

- Adapted for automatic changing
- Required drawbar 3R-405.21RS
- Fixed index positions 3x120°
- Weight 0.8 kg



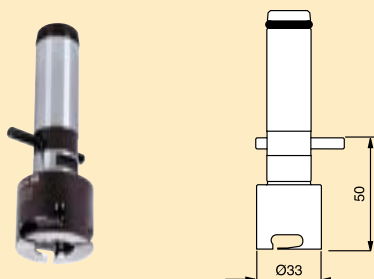


Manual chuck adapter 3R-463/5033

For mounting MacroJunior holders in the Mini system.
Axial locking screw with channel for flushing through the electrode.

Note: For EDM machining only.

- Adapted for automatic changing
- Fixed index positions 3x120°
- Weight 0.8 kg

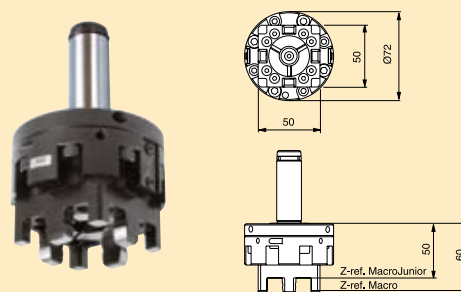


Manual chuck adapter D-40011

For mounting MacroJunior holders in the Mini system.

Note: Must be permanently mounted in the Mini system

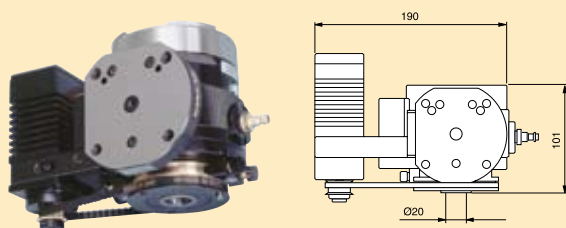
- Required drawbar for Macro holder 3R-405.16
- Required drawbar for MacroJunior holder 3R-405.11
- Weight 1.2 kg



Rotating spindle 3R-1.6S

Electric rotating spindle for electrodes on Mini holders.
Vertical or horizontal mounting.

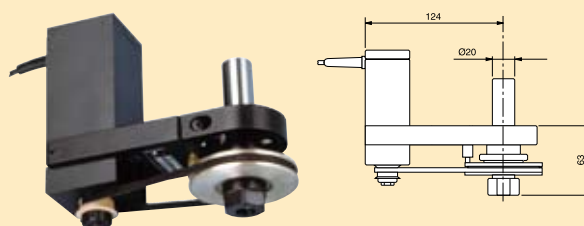
- Immersible
- Maximum electrode weight 2 kg
- Speed range 20-200 rev/min
- Flushing connection
- Weight 11.6 kg



Rotating spindle 3R-1.321-HS

Electric spindle for tubular electrodes in collets ER16.

- Supplied with collet set 3R-ER16E
- Electrode sizes Ø0.5 - 10 mm.
- Speed range 200 - 2000 rev/min.
- Recommended maximum flushing pressure 15 bar.
- Weight 1.4 kg



OVERVIEW OF ELECTRODE HOLDERS

Mini – electrode holders

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ELECTRODE HOLDER Ø20 mm	3R-322/50S	50 mm	68
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COLLET CHUCK	3R-311.2	< Ø13 mm	69
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NOTE: In addition, the following pallets can be mounted in Mini by means of chuck adapters

MacroJunior Ø25 mm

MacroJunior 3Ready-to-Run

Macro 54x54 mm

Macro 70x70 mm

Electrode holder Ø20 mm

Holder with hardened reference part and unhardened electrode mounting part.



3R-322/25S

- Electrode mounting part 25 mm
- Flushing duct
- Supplied in sets of 30
- Weight per set 7 kg



3R-322/50E

- Adapted for automatic changing
- Electrode mounting part 50 mm
- Flushing duct
- Supplied in sets of 30
- Weight per set 7.7 kg



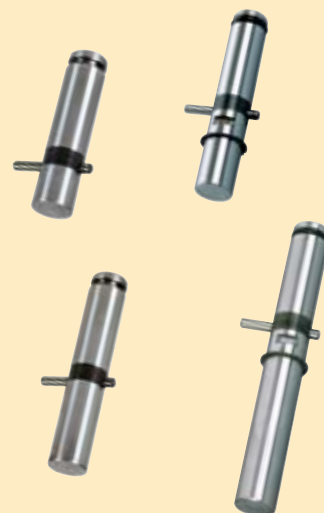
3R-322/50S

- Electrode mounting part 50 mm
- Flushing duct
- Supplied in sets of 30
- Weight per set 7.7 kg



3R-322/100

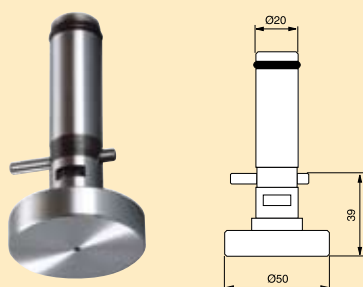
- Adapted for automatic changing
- Electrode mounting part 100 mm
- Flushing duct
- Supplied in sets of 10
- Weight per set 3.8 kg



Electrode holder 3R-310EE

Holder with hardened reference part Ø20 mm and unhardened flange Ø50 mm.

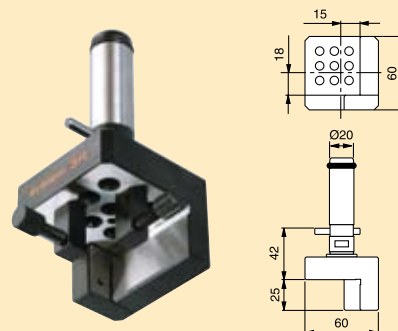
- Adapted for automatic changing
- Electrode mounting part 39 mm
- Flushing duct
- Supplied in sets of 10
- Weight per set 4 kg



Electrode holder 3R-13.321

Holder with hardened reference part Ø20 mm for mounting square and flat electrodes.

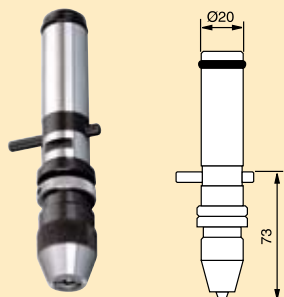
- Adapted for automatic changing
- Flushing duct
- Weight 1 kg



✓ Three-jaw chuck 3R-311.4

Chuck Ø20 mm for Ø0.1-3 mm electrodes.

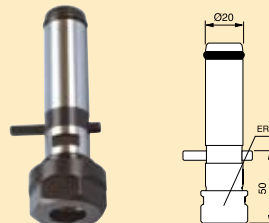
- Adapted for automatic changing
- Weight 0.3 kg



✓ Collet chuck ER20 3R-311.2

Chuck Ø20 mm for collets ER20 with electrodes < Ø13 mm.

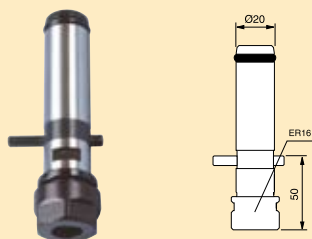
- Adapted for automatic changing
- Weight 0.2 kg



✓ Collet chuck ER16 3R-311.3

Chuck Ø20 mm for collets ER16 with electrodes < Ø10 mm.

- Adapted for automatic changing
- Weight 0.2 kg



✓ Check mandrel 3R-23

Ground C-reference.

- Measuring length 100 mm
- Weight 0.6 kg



✓ Check ruler 3R-314.2

For setting angular positions.

- Measuring length 96 mm
- Weight 0.4 kg



✓ Indicating spindle 3R-3.321-2

For measuring centre holes.

- Dial indicator required
- Weight 0.4 kg



Microscope 3R-4.321

With transformer (110/220V) for integral lighting.

- Magnification x25
- Field of view Ø6 mm
- Weight 0.6 kg



Scriber 3R-5.321

Used in conjunction with the microscope.

- Weight 0.4 kg



Clip 3R-301

For angular fixing of Mini holders.

- Supplied in sets of ten



✓ Soldering kit 3R-403

For soldering electrode blanks on Mini holders. Supplied with flux.



✓ Electrode cassette 3R-150/5

For Mini holder x30.

- Supplied in sets of five



Adapter plate 3R-601.6

For mounting (for example) rotating spindles in the Macro system.

- MacroHP coupling
- Rust-resistant



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