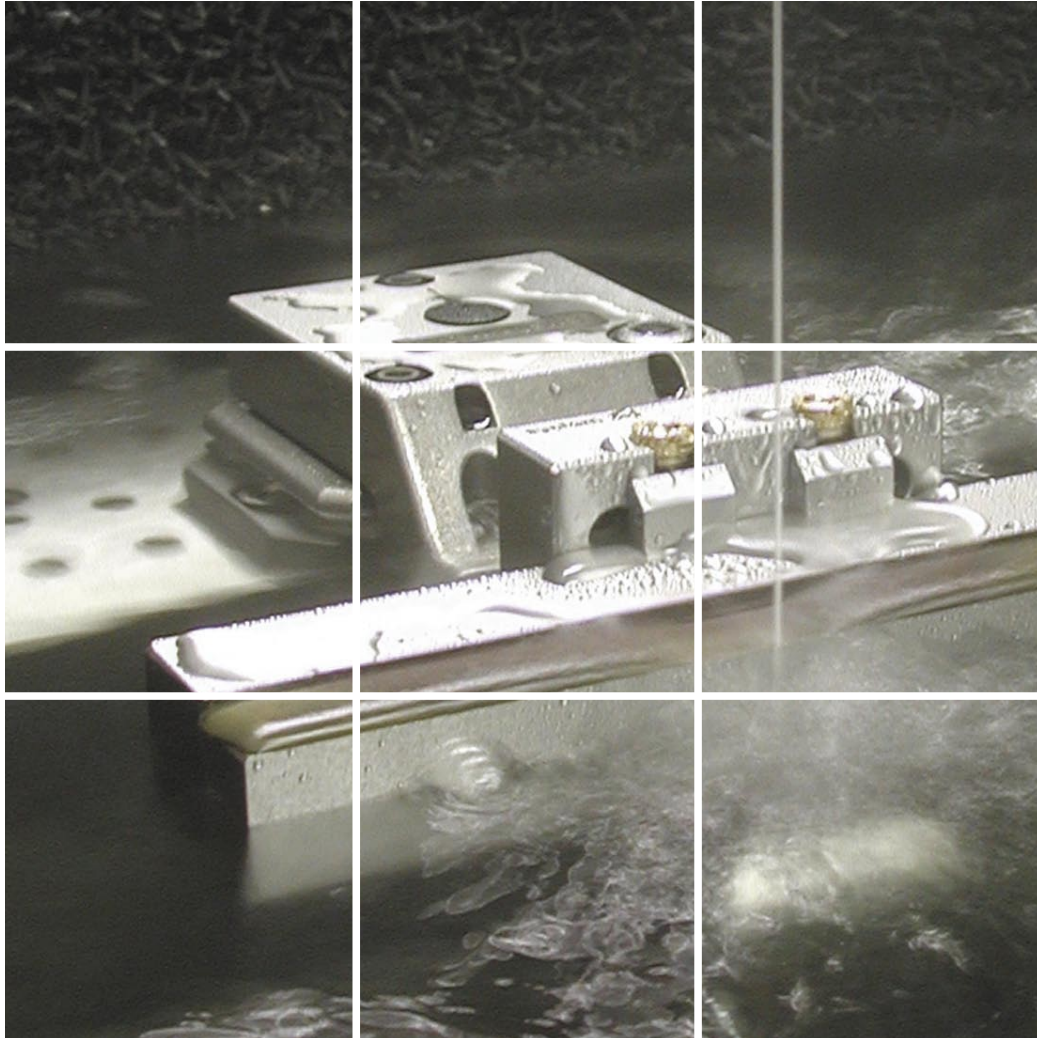


Reference system for wire EDM machining.
The standard range.



Focus on the complete picture for greater competitiveness.

It's a well-known fact that competition in the manufacturing industry is constantly growing. The trend towards shorter runs and more variations means that the total time from order to delivery is the crucial factor in the choice of a supplier. And it's not just the process time in the various machines that counts here. Profitability is determined increasingly by the ability to minimise dead time in the machines and to have efficient flows of material and information in the workshop.

So what really matters is to focus on the complete picture. Total throughput time instead of individual process time! The company that can offer the quickest delivery of small batches of customer-specific products will win out in future competition situations.

The solution is a stable and exact reference system. This lets you preset away from the machine and then set up the machine in seconds. In fact, this is an essential requirement for modern production.

With System 3R reference systems, you radically increase the capacity of your machines. Partly by minimising setting-up times. And partly because the reference systems are compatible with every machine in your workshop. And – not the least important point – it's only a short step to automation.

You get a reference system that you can build on steadily, bit by bit. Always flexible. Always reliable. Absolutely stable and exact.

In addition, there's no longer any need for skilled operators to waste time on tricky and time-consuming alignments. Instead they are free to do far more stimulating work, where their professional skill really comes into its own.

Other advantages: downstream machining time is shorter, because accuracy becomes greater. The number of rejected workpieces is reduced, meaning less raw material to be stored.

In other words, with the System 3R's reference systems, production takes place in a more sensible and more economical way. Both in financial and in human terms.

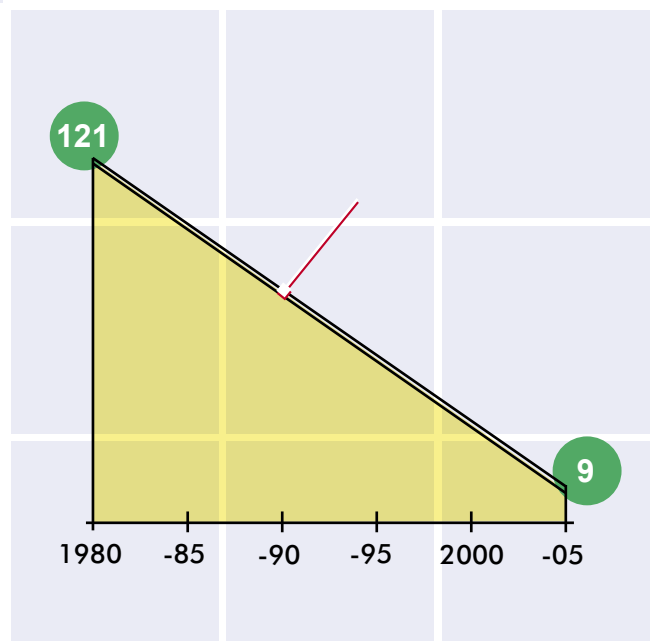
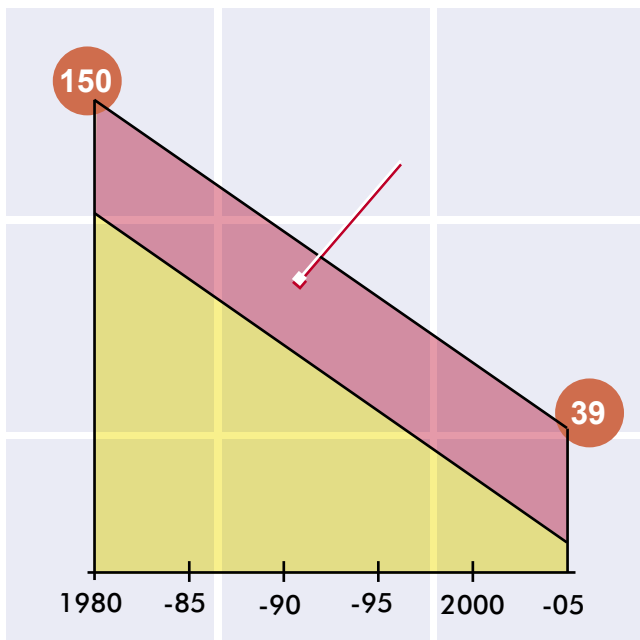
Work smarter.

Anyone can get a fantastic machine tool, loaded with every conceivable feature. With modern machines, making complex parts with close tolerances seldom presents any problems.

The real challenge lies in raising the profitability of the business at the same time. The truth is, measures to reduce machine downtimes are almost always significantly more profitable than chasing seconds in the actual machining process. What matters is to keep the machines running. It's simply a matter of working smarter.

And helping you work smarter is what we at System 3R are in business to do.

1980	35
1985	80
1990	200
1995	250
2000	300
2005	500



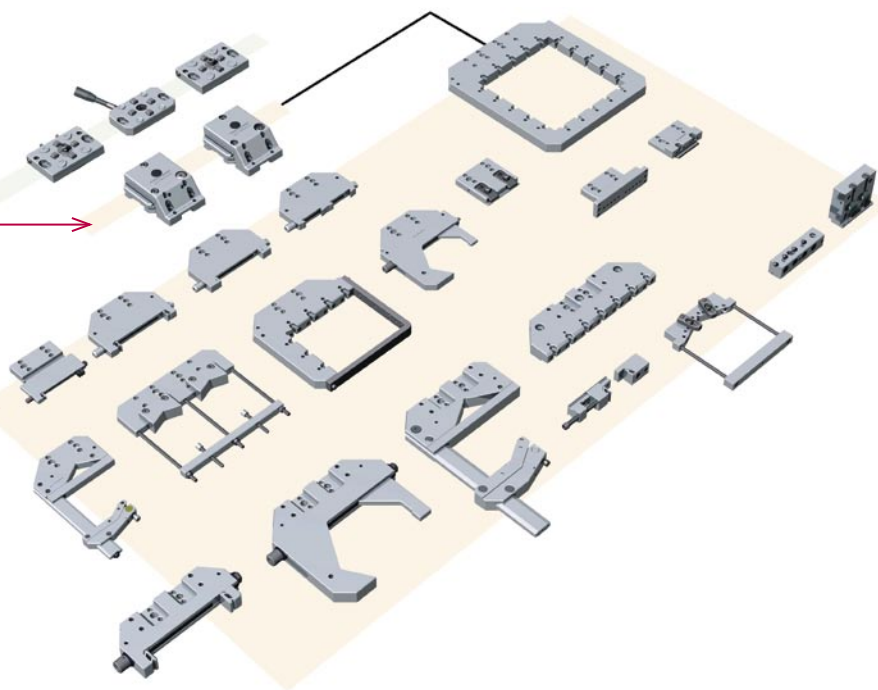
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Mecatool

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A green or yellow dot alongside the article numbers in the catalogue means:



In stock. Can be dispatched immediately.



Not a stocked item. Manufactured to order.

The broadest product range on the market

Nowadays, wire EDM machines offer ample potential for a broad range of applications and efficient production. Even so, few users are able to benefit fully from this potential. One common cause is problems clamping the workpiece within the working area of the machine and doing so with minimised risk of collision in relation to the upper and lower wire guiding of the machine. With the aid of System 3R's well-thought-out product range you can position the workpiece in the working area of the machine and on the zero line of the machine. Whether the workpiece is square, round, small or large, thin or high, it is clamped with minimal risk of collision. There

are infinitely many possible combinations in the product range, the only limitation being the user's imagination.

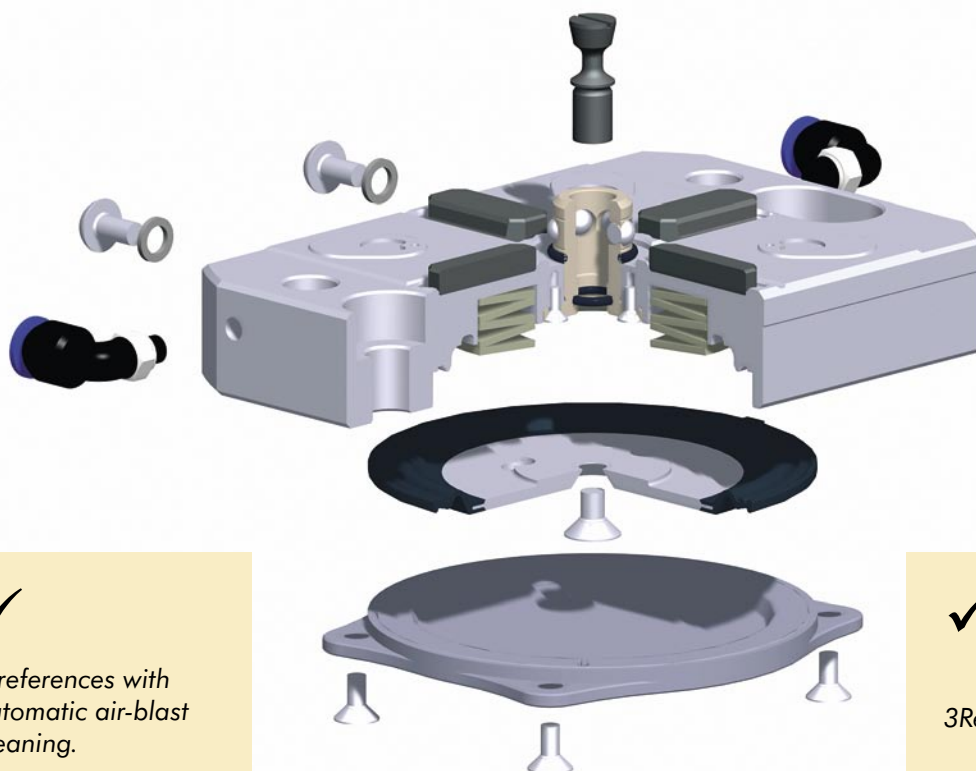
Without doubt, System 3R offers the most comprehensive product range on the market. What is more, it also leads in terms of number of installations.

With System 3R's basic equipment on the machine table, you have access to an exceptional range of products for efficient wire EDM. The basic elements accessories upgrade the versatility and boost the productivity of your machine by practically eliminating setup times.

By consistent use of 3R technology, you can transfer accessories between different machines. You can do this without loss of accuracy, since the accessory connection repeats to within two thousandths of a millimetre.

If you choose a Macro chuck as basic equipment on the machine table, you can interconnect all your machines to form a single system. Move the workpiece from wire EDM to die-sinking EDM to grinding machine, all without subsequent alignment – quickly and precisely.

And if you choose an automatic Macro chuck, you can operate round-the-clock production if you wish.



Z-references with automatic air-blast cleaning.



3Refix Ø10 mm.



Macro – the key to automation.



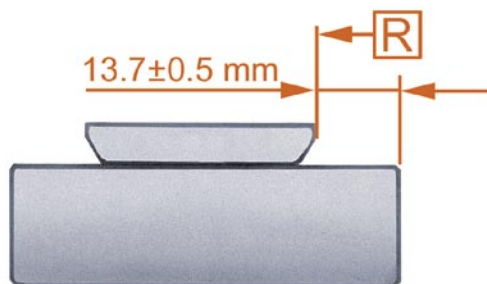
X/Y-references in cemented carbide.



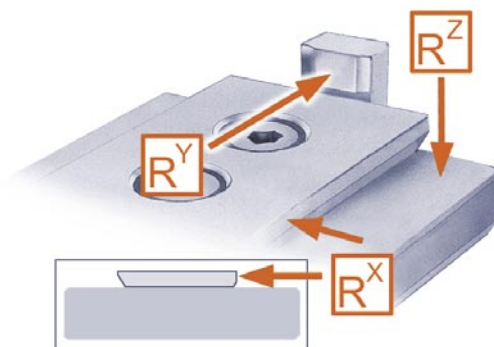
Turbo-locking – the blast cleaning air boosts the clamping force.



Macro – the same interface for all your machines.



Alignment of 3R reference elements in relation to the machine's X/Y motions takes place by indexing on, for example, the surface R.



The 3R reference elements are equipped with end stops, thus giving fixed references in three directions.

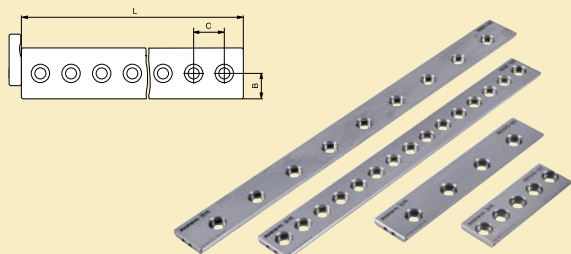
Reference element WEDM

3R-200.XJ.X

Reference elements for machines with zero-line table. The length (L), hole spacing (C) and hole edge spacing (B) of the hardened reference elements are matched to the machine in question.

Note: When ordering, state machine make and type.

- Supplied with end stops

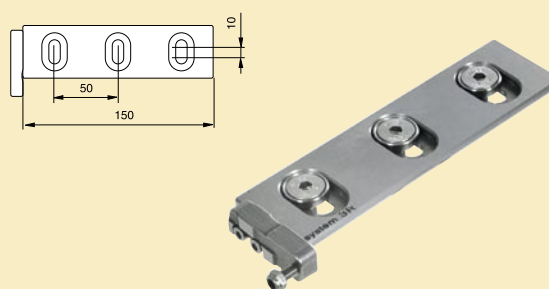


Reference element WEDM

3R-200.1J-U

Universal 140 mm reference element, with oval holes, for all machines that have M8 holes in the machine table, 30 to 40 mm from the edge of the table.

- Weight 0.4 kg.

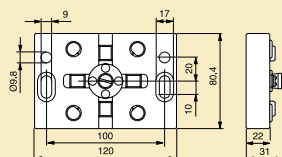


Automatic chuck, Macro

3R-602.10

Pneumatic chuck for Macro holder. Horizontal mounting on the machine table. Supplied with drawbar and protective cover.

- Required drawbar 3R-605.10.
- Required air pressure 6 ± 1 bar.
- Clamping force 4500 N.
- Fixed index positions $4 \times 90^\circ$.
- Air-blast cleaning of Z-reference.
- Weight 1.1 kg.

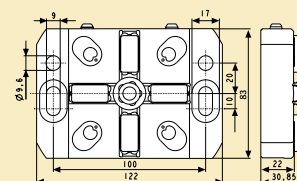


Macro automatic chuck.

3R-602.10HP

Pneumatic chuck with enhanced clamping force for Macro holders. Horizontal mounting on the machine table. Supplied with drawbar and protective cover.

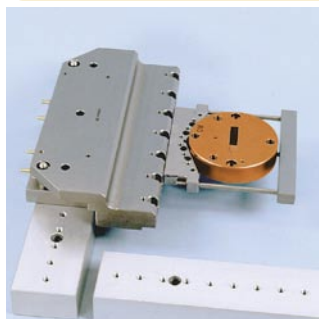
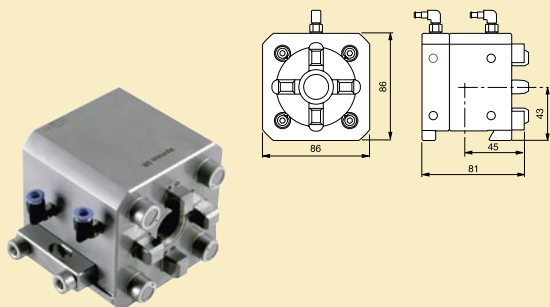
- Required drawbar 3R-605.10.
- Required air pressure 6 ± 1 bar.
- Clamping force 7000 N.
- Fixed index positions $4 \times 90^\circ$.
- Air-blast cleaning of Z-reference.
- Weight 1.1 kg.



Automatic chuck, Macro 3R-602.4.1

Pneumatic chuck for Macro holder. Vertical mounting on the machine table or in the WEDM system.

- Required drawbar 3R-605.1RS.
- Required air pressure 6 ± 1 bar.
- Clamping force 4500 N.
- Fixed index positions $4 \times 90^\circ$.
- Air-blast cleaning of Z-reference.
- Weight 3.7 kg.

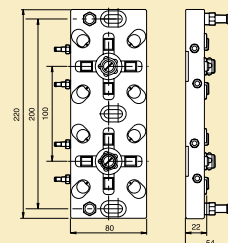
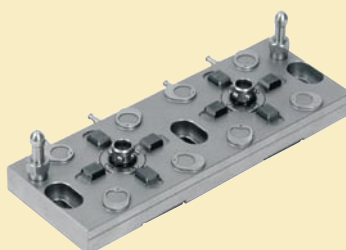


Automatic chuck, Macro 3R-602.12

Pneumatic chuck for Macro or MacroTwin holder with workpieces <25 kg. Horizontal mounting on the machine table. Supplied with two protective covers.

Note: On automatic changing with WorkPal – only MacroTwin holders.

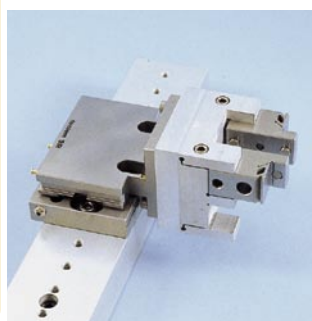
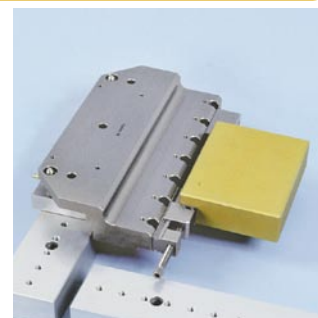
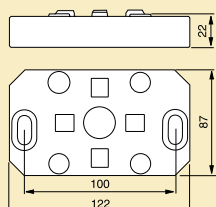
- Required drawbar 3R-605.10 x2.
- Required air pressure 6 ± 1 bar.
- Clamping force 4500 N (x2).
- Fixed index positions $4 \times 90^\circ$.
- Air-blast cleaning of Z-reference.
- Weight 2.2 kg.



Manual chuck, Macro 3R-602.27

Manual chuck with lever for Macro holder. Horizontal mounting on the machine table. Supplied with drawbar.

- Required drawbar 3R-605.27RS.
- Clamping force 6000 N.
- Fixed index positions $4 \times 90^\circ$.
- Weight 1.1 kg.



Drawbars

3R-605.1RS

- Drawbar Ø20x57.1 mm with flushing hole Ø7 mm.
- Rust-resistant.
- Supplied singly.

3R-605.10

- Drawbar Ø20x13 mm.
- Rust-resistant.
- Supplied singly.

3R-605.27RS

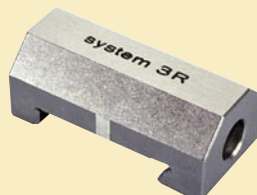
- Drawbar Ø20x27 mm.
- Rust-resistant.
- Supplied singly.



Reference stop 3R-225

Can be moved infinitely along the entire reference element.

- Hardened.
- Weight 0.4 kg.



Reference stop 3R-225.1

Mounts in any of the mounting holes in the reference element.

- Weight 0.15 kg.



Insulation kit K-30266

Insulation kit for 3R-602.10, 3R-602.10HP, 3R-602.20 and 3R-602.27.



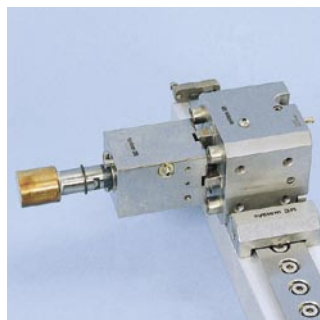
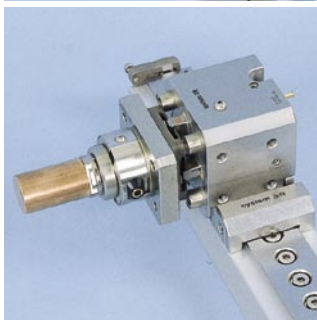
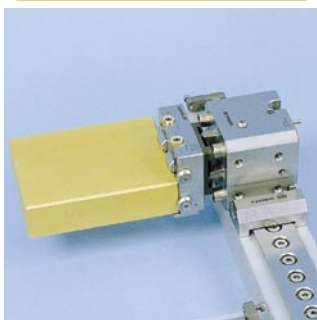
Control unit 3R-611.41

Unit for hand operation of pneumatic chucks. Three functions – open/neutral/closed.



Control unit 3R-611.2

Unit for foot operation of pneumatic chucks.



Recommendations for loading in Macro chucks.

Table chuck with horizontal fixing of the workpiece.

Atricle number	Maximum torque	Capacity		
		X=150 mm	X=200 mm	X=300 mm
3R-602.10	22,5 Nm	15 kg	11 kg	7,5 kg
3R-602.10HP	30 Nm	20 kg	15 kg	10 kg
3R-602.12HP	37,5 Nm	25 kg	12,5 kg	12,5 kg
3R-602.27	30 Nm	20 kg	15 kg	10 kg
3R-602.27-1	30 Nm	20 kg	15 kg	10 kg

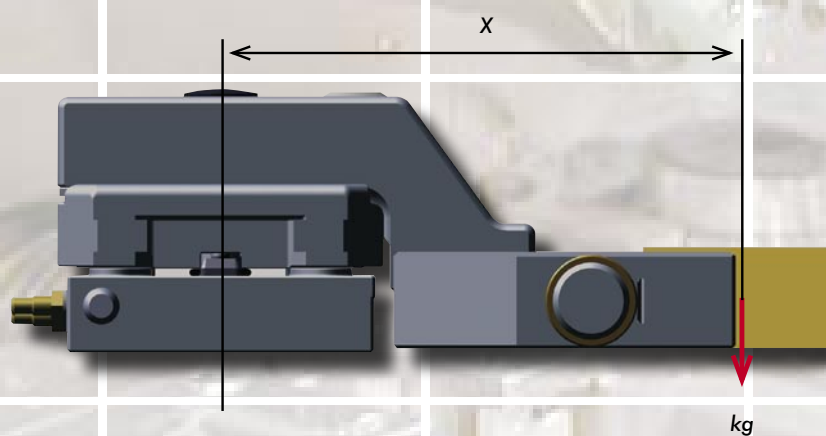
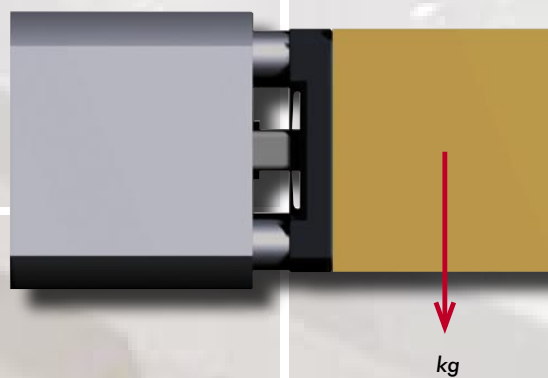


Table chuck with vertical fixing of the workpiece.

Atricle number	Capacity
3R-602.4.1	7-8 kg
3R-602.24-RS	7-8 kg
3R-602.27-1	7-8 kg
3R-602.24-4RS	7-8 kg

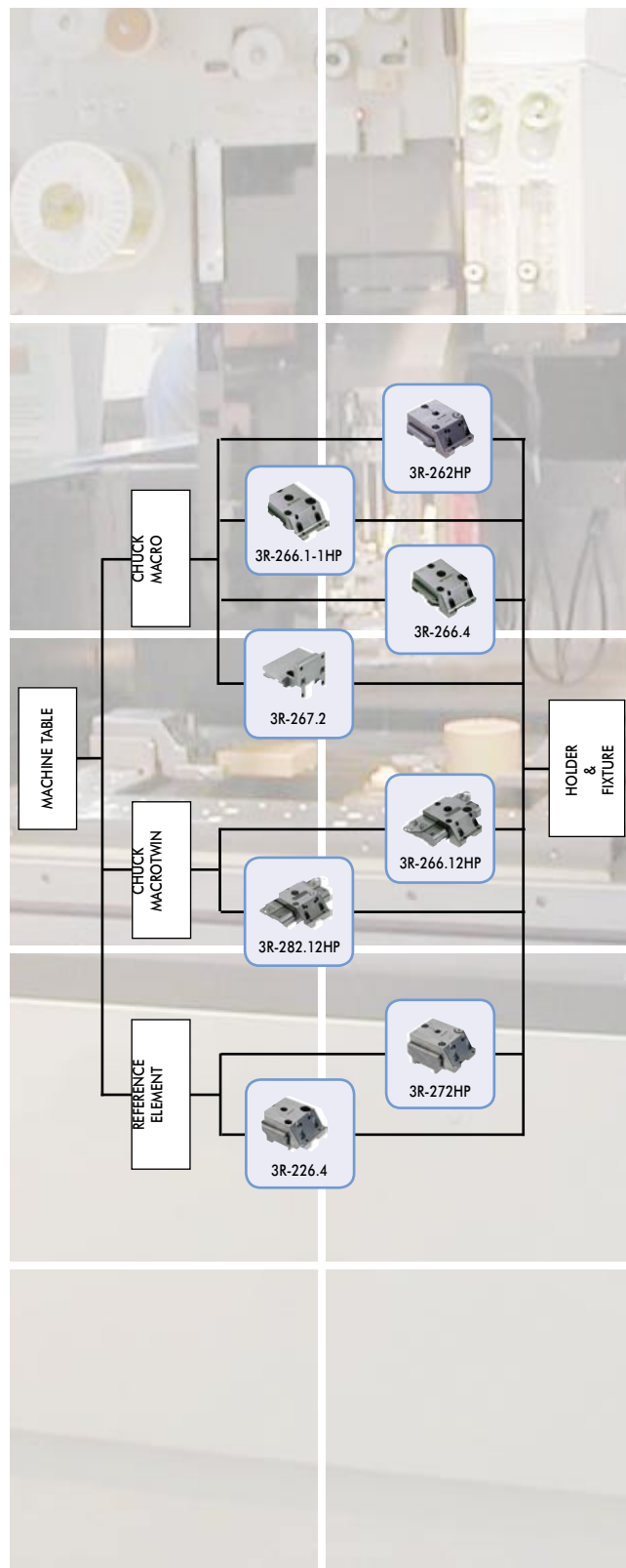
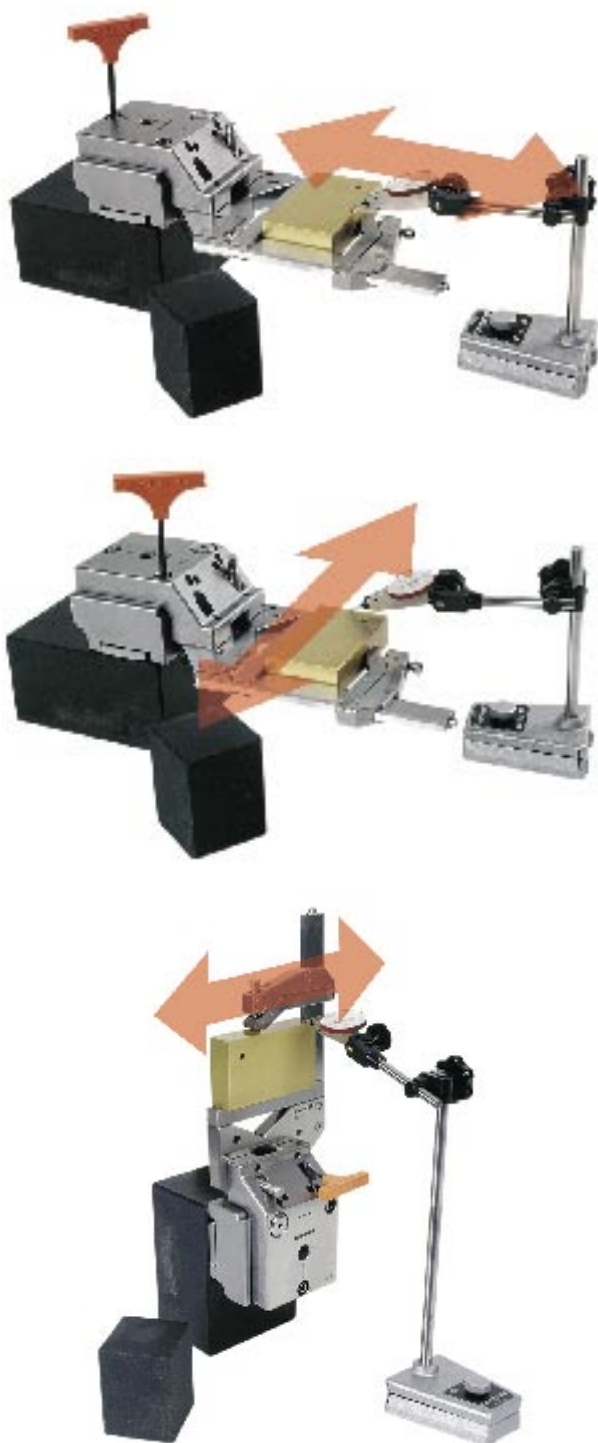


MOUNTING HEADS

System 3R's hardened and rust-resistant levelling adapters, in combination with a SuperVice, for example, allow presetting in three axes. This can be done with an accuracy of thousandths of a millimetre!

The simple, directly measurable references of the levelling adapter mean that presetting can be done in with the aid of one of System 3R's presetting stones, even on an ordinary surface plate.

Preset away from the machine. Lift the preset package into place – levelling adapter, holder and workpiece – fix with a few simple manual operations, press the start button and the machine is back in service. Quick and precise!



The capability of today's modern wire EDM machines in terms of accuracy and material removal far exceeds what used to be possible. However, faster machines with higher rates of removal and increased flushing pressures cause

resonance and vibration. So in order to fully utilise the capability of the machines it is necessary to have stable, vibration-free tools and workpiece fixings.



3HP minimises recoils.



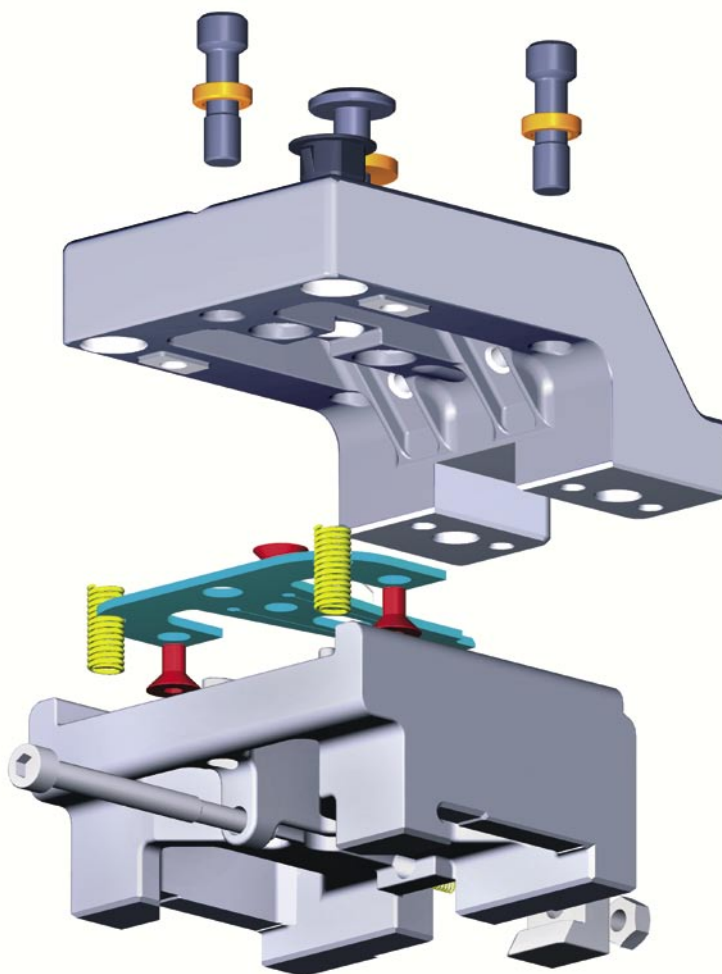
3HP exploits the capability of the machine. Achieves higher accuracy and a higher rate of removal than any other leveling adapter.



3HP gives maximum workpiece precision.



3HP allows higher and variable flushing pressure.



3HP minimises vibration.



3HP give setup times in seconds.



3HP minimises resonance.



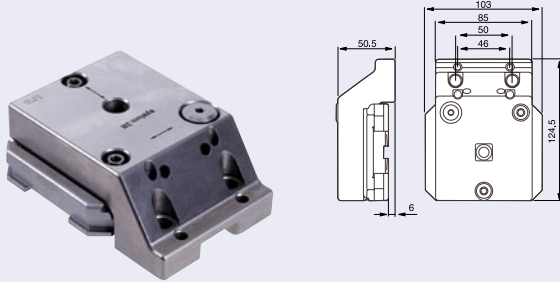
3HP – twice as stable as any alternative on the market.

Levelling adapter, Macro 3R-262HP

For mounting SuperVice, a holder or a fixture in the Macro system.

Note: All holders including HP can be fixed.

- Adjustable in three axes.
- Adapted for automatic changing.
- Supplied without drawbar.
- Ready for code carrier.
- Recommended maximum load 15 kg.
- Weight 2.4 kg.

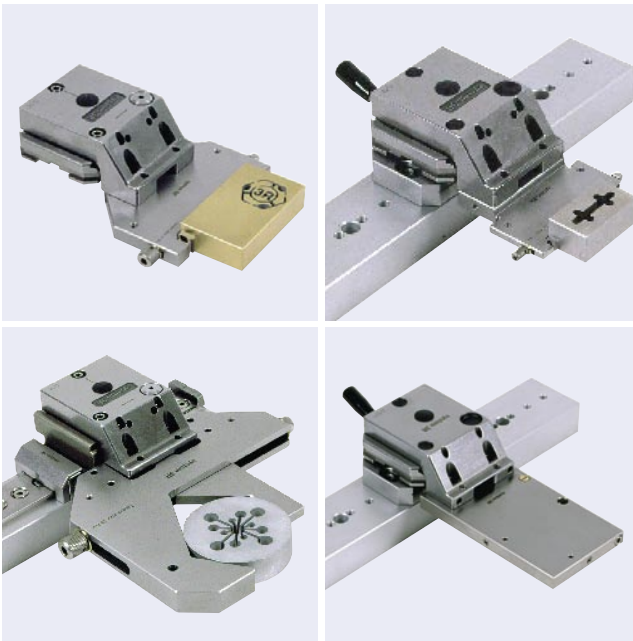
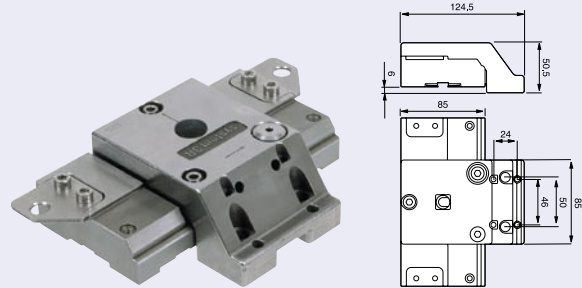


Levelling adapter Magnum MacroTwin 3R-282.12HP

For mounting a Magnum holder in the MacroTwin-system.

Note: All holders including HP can be fixed.

- Can be adapted to automatic changing with 3R-W12-S.
- Supplied with drawbar 3R-605.10 x2.
- Ready for code carrier.
- Recommended maximum load 15 kg.
- Weight 3,1 kg.



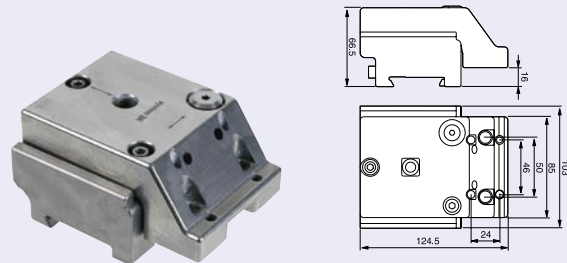
Levelling adapter, WEDM 3R-272HP

For manual mounting of SuperVice, a holder or a fixture in the WEDM system.

Note: All holders including HP can be fixed.

Note: Also fits the ICS system if the clamping jaw (17850-00) is changed.

- Adjustable in three axes.
- Supplied without drawbar.
- Recommended maximum load 15 kg.
- Weight 1.4 kg.

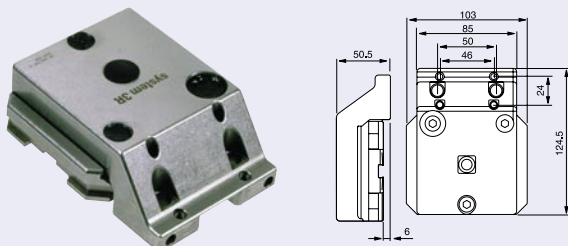


Fixed mounting head, Macro 3R-266.4

For mounting SuperVice, a holder or a fixture in the Macro system.

Note: All holders including HP can be fixed.

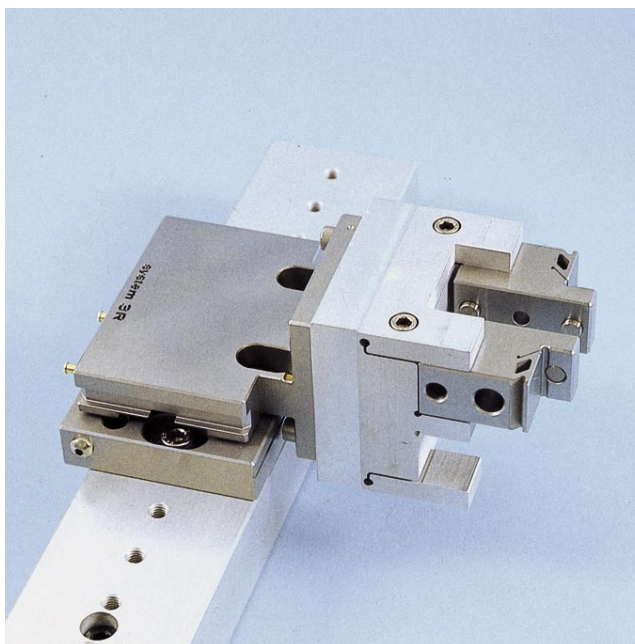
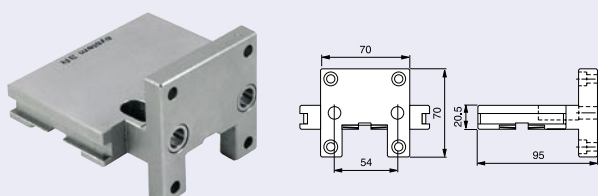
- Adapted for automatic changing.
- Supplied without drawbar.
- Ready for code carrier.
- Recommended maximum load 15 kg.
- Weight 1.4 kg.



Angled fixed mounting head, Macro 3R-267.2

Fixed 90-degree head with 3Refix holes for mounting fixtures in the Macro system.

- 3Refix Ø10 mm.
- Adapted for automatic changing.
- Ready for code carrier.
- Supplied without drawbar.
- Recommended maximum load 7 kg.
- Weight 3 kg.

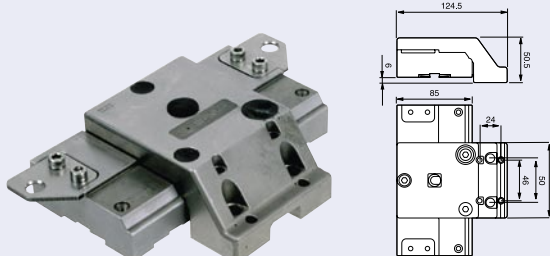


Fixed mounting head, Magnum MacroTwin 3R-266.12HP

For manual mounting of Magnum holders in the MacroTwin system.

Note: All holders including HP can be fixed.

- Can be adapted to automatic changing with 3R-W12-S.
- Supplied with drawbar 3R-605.10 x2.
- Ready for code carrier holder 3R-U30638.
- Recommended maximum load 15 kg.
- Weight 3.1 kg.

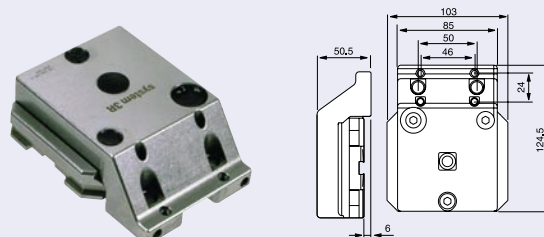


Fixed mounting head, Macro 3R-266.1-1HP

Fixed head with 3Refix holes for mounting SuperVice, a holder or a fixture in the Macro system.

Note: All holders including HP can be fixed.

- 3Refix Ø10 mm.
- Adapted for automatic changing.
- Ready for code carrier.
- Supplied without drawbar.
- Recommended maximum load 7 kg.
- Weight 1.4 kg.



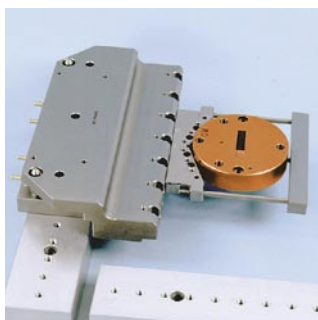
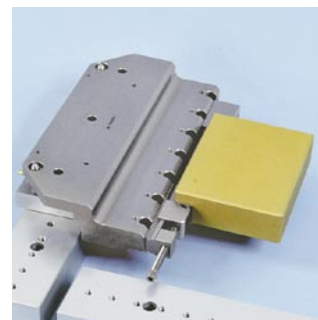
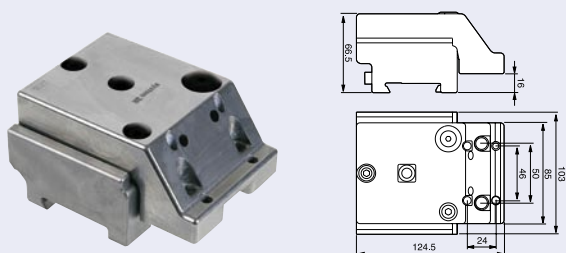
Fixed mounting head, WEDM 3R-226.4

For manual mounting of SuperVice, a holder or a fixture in the WEDM system.

Note: All holders including HP can be fixed.

Note: Also fits the ICS system if the clamping jaw (17850-00) is changed.

- Recommended maximum load 12 kg.
- Weight 1.4 kg.

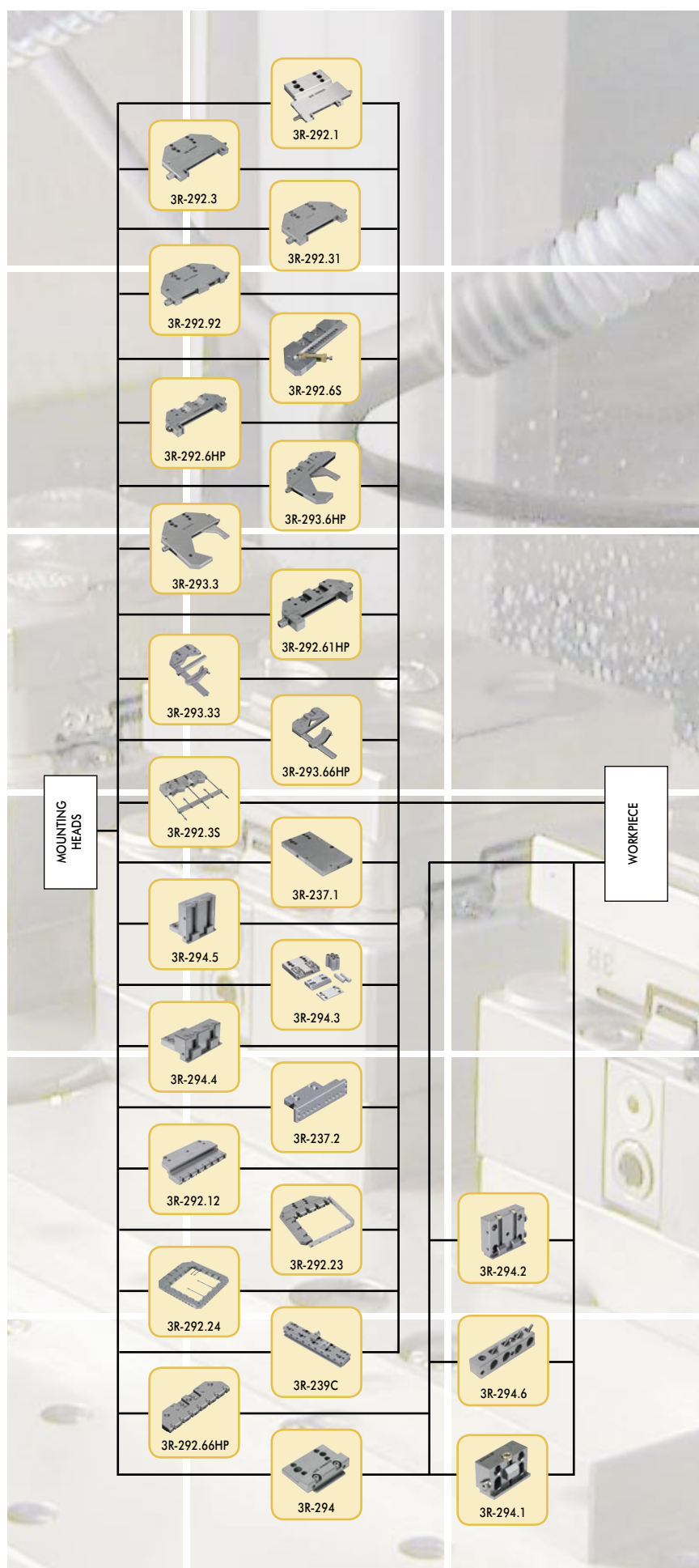


MOUNTING HEADS – HOLDERS AND VICES

System 3R's patented vice – SuperVice – solves setting-up problems for the most frequently occurring sizes of workpiece – small to medium-sized.

Whether the workpiece is square, round, small or large, thin or high, you will find a solution in the System 3R product range. A product program which upgrades the versatility of your machine and minimises setting-up times.

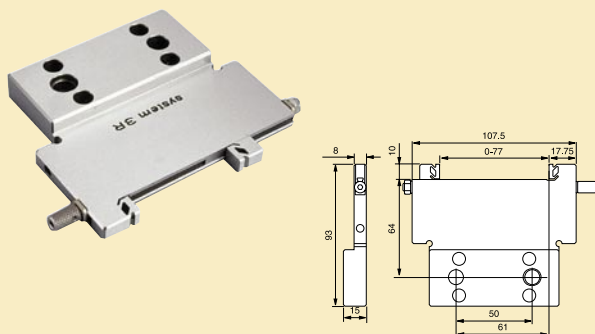
The new HP versions are tailor-made for the latest generation of machines, with variable and/or high flushing pressure. Vices that hold fast when others lose their grip. The springback is minimal and resonance damping is significant. Add this together and you have a very firm grip on production.



SuperVice 3R-292.1

Vice for horizontal clamping of rectangular workpieces <77 mm.

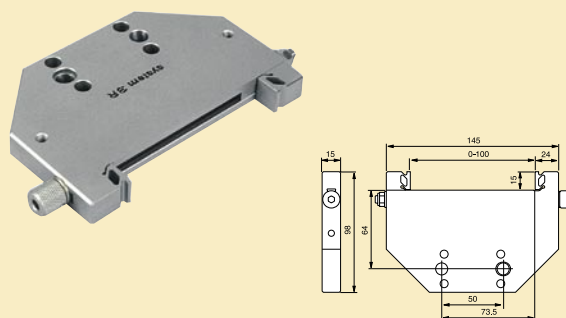
- Recommended maximum workpiece weight 3 kg.
- Recommended tightening torque 3 Nm.
- Weight 0.6 kg.



SuperVice 3R-292.3

Vice for horizontal clamping of rectangular workpieces <100 mm.

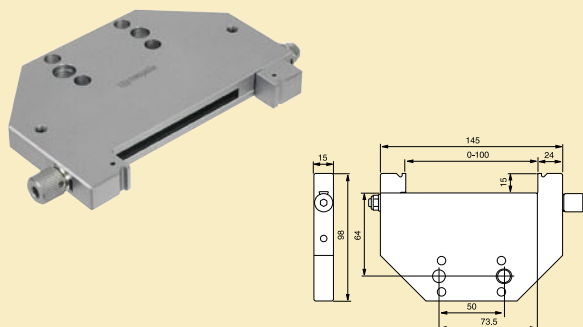
- Recommended maximum workpiece weight 7 kg.
- Recommended tightening torque 7 Nm.
- Weight 1.1 kg.



SuperVice 3R-292.31

Vice with solid jaws for horizontal clamping of rectangular workpieces <100 mm.

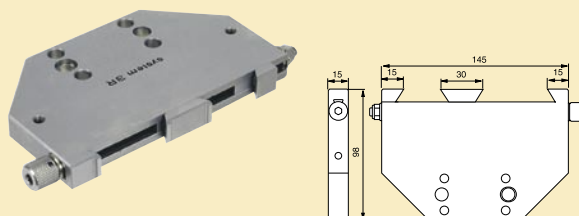
- Recommended maximum workpiece weight 7 kg.
- Recommended tightening torque 7 Nm.
- Weight 1.1 kg.



SuperVice 3R-292.92

Vice, intended specially for clamping tool blanks with 30-degree dovetail connection. Removable middle jaw allows clamping of either one large or two small blanks.

- Recommended maximum workpiece weight 7 kg.
- Recommended tightening torque 7 Nm.
- Weight 1.1 kg.

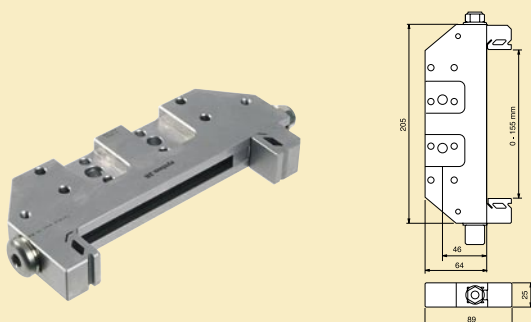


SuperVice Magnum 3R-292.6HP

Vice for horizontal clamping of rectangular workpieces <155 mm.

Note: Mounts on HP, Magnum or MacroTwin levelling adapter.

- Recommended maximum workpiece weight 12 kg.
- Recommended tightening torque 15 Nm.
- Weight 2.8 kg.

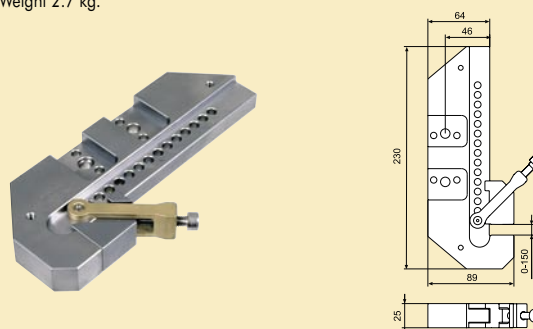


SuperVice Magnum 3R-292.6S

Vice for horizontal clamping of rectangular workpieces >150 mm.

Note: Mounts on HP, Magnum or MacroTwin levelling adapter.

- Recommended maximum workpiece weight 12 kg.
- Recommended tightening torque 10 Nm.
- Weight 2.7 kg.

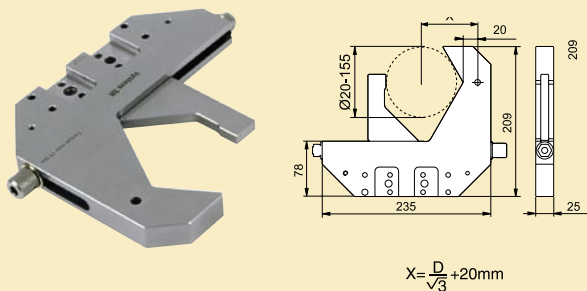


SuperVice Magnum 3R-293.6HP

Vice for horizontal clamping of round workpieces 15-155 mm.

Note: Mounts on HP, Magnum or MacroTwin levelling adapter.

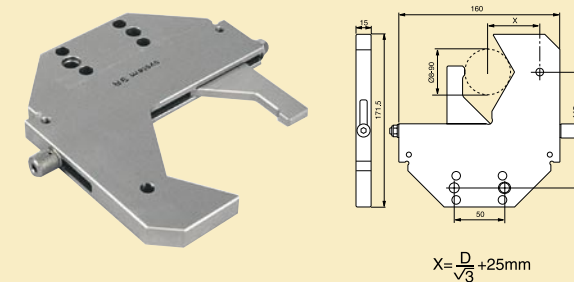
- Recommended maximum workpiece weight 12 kg.
- Recommended tightening torque 15 Nm.
- Weight 4.5 kg.



SuperVice 3R-293.3

Vice for horizontal clamping of round workpieces 8-90 mm.

- Recommended maximum workpiece weight 7 kg.
- Recommended tightening torque 7 Nm.
- Weight 1.7 kg.

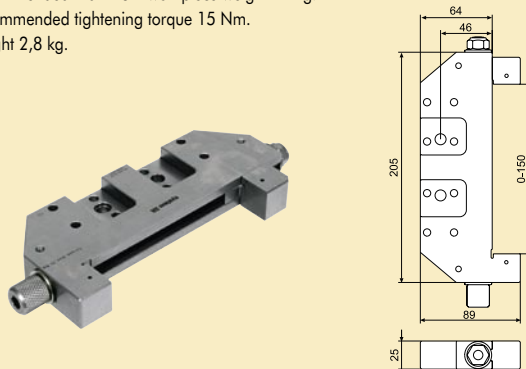


Magnum SuperVice 3R-292.61HP

Vice with solid jaws for horizontal clamping of rectangular workpieces <150 mm.

Note: Mounts on HP, Magnum or MacroTwin levelling adapter.

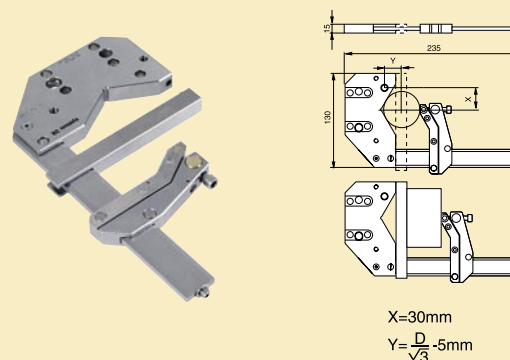
- Recommended maximum workpiece weight 12 kg.
- Recommended tightening torque 15 Nm.
- Weight 2,8 kg.



Universal holder 3R-293.33

Holder for round workpieces 8-100 mm, or rectangular workpieces up to 100 mm.

- Recommended maximum workpiece weight 7 kg.
- Recommended tightening torque 3 Nm.
- Weight 1.5 kg.

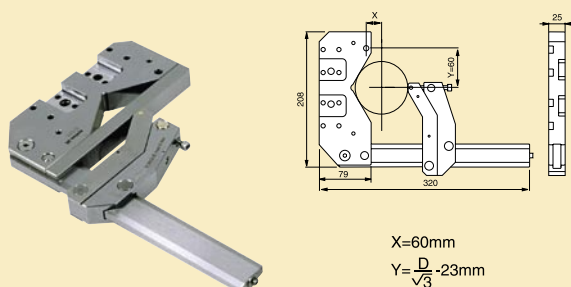


Universal holder, Magnum 3R-293.66HP

For round workpieces 15-150 mm diameter, or rectangular workpieces up to 150 mm.

Note: Mounts on HP, Magnum or MacroTwin mounting head.

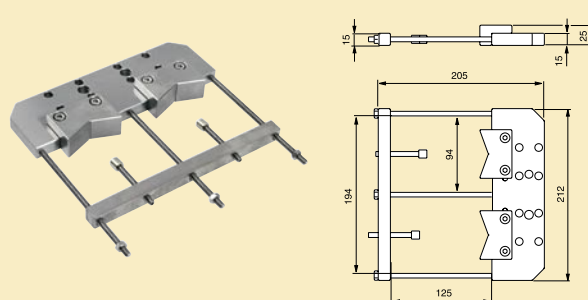
- Recommended maximum workpiece weight 12 kg.
- Recommended tightening torque 4 Nm.
- Weight 4.4 kg.



Universal holder 3R-292.3S

Holder for round workpieces <90 mm, or rectangular workpieces up to 100x90 mm.

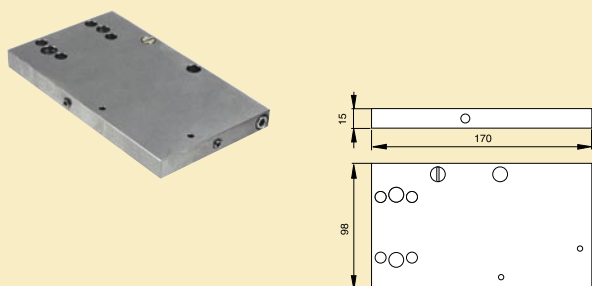
- Recommended maximum workpiece weight 7 kg.
- Recommended tightening torque 4 Nm.
- Weight 2.3 kg.



Holder 3R-237.1

Stainless steel hardened "Do-it-yourself" holder. With start hole for wire EDM of the required shape for clamping in one or more workpieces.

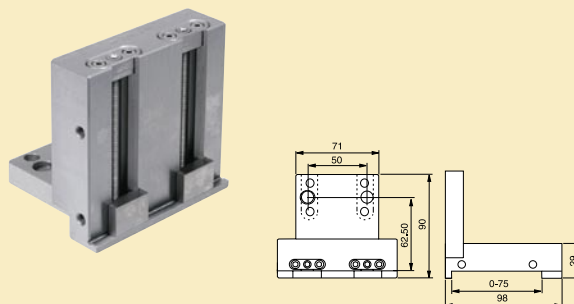
- Recommended maximum workpiece weight 7 kg.
- Weight 1.2 kg.



Vice 3R-294.5

For vertical clamping of workpieces up to 75 mm.

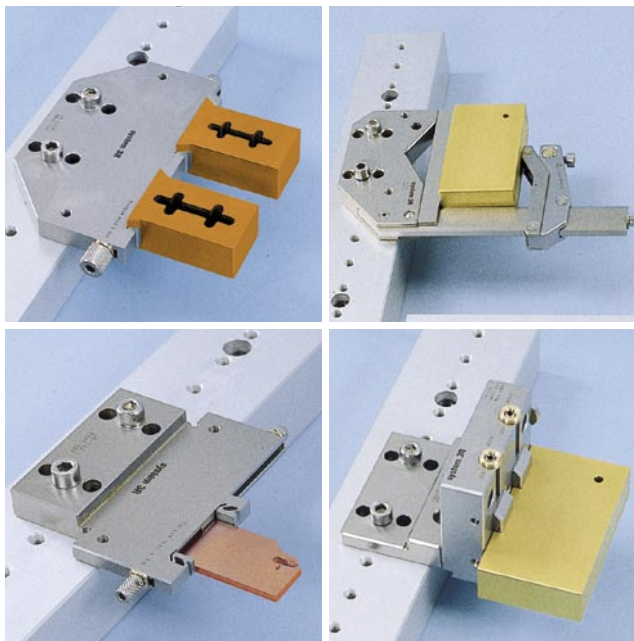
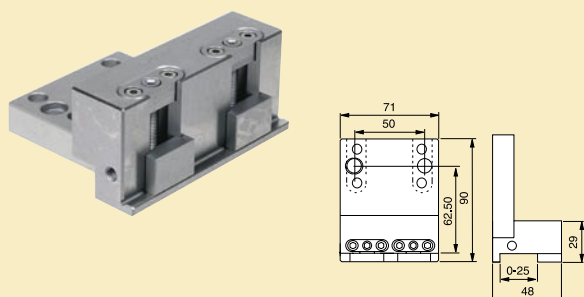
- Recommended maximum workpiece weight 7 kg.
- Recommended tightening torque 3 Nm.
- Weight 2.4 kg.



Vice 3R-294.4

For vertical clamping of workpieces up to 25 mm.

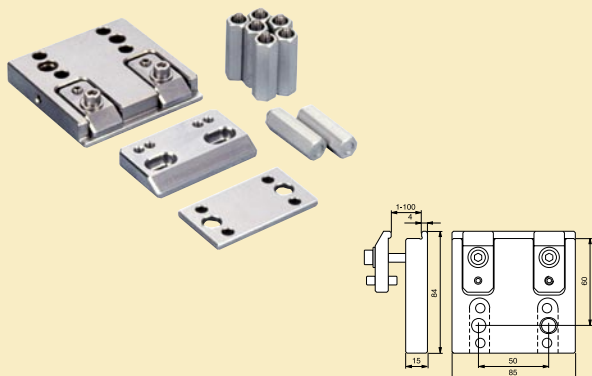
- Recommended maximum workpiece weight 7 kg.
- Recommended tightening torque 3 Nm.
- Weight 1.4 kg.



Vice 3R-294.3

For vertical clamping of workpieces up to 100 mm.

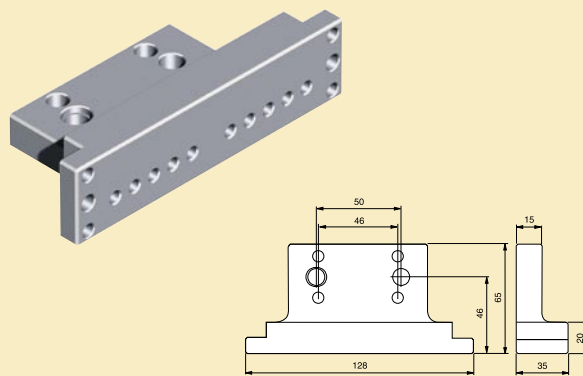
- Recommended maximum workpiece weight 7 kg.
- Recommended tightening torque 7 Nm.
- Weight 0.7 kg.



Holder 3R-237.2

For fixture, workpiece or 3R-239.2, 3R-239.3, 3R-294.1, 3R-294.2, 3R-294.6 and 3R-402.1.

- Recommended maximum workpiece weight 7 kg.
- Weight 0.6 kg.

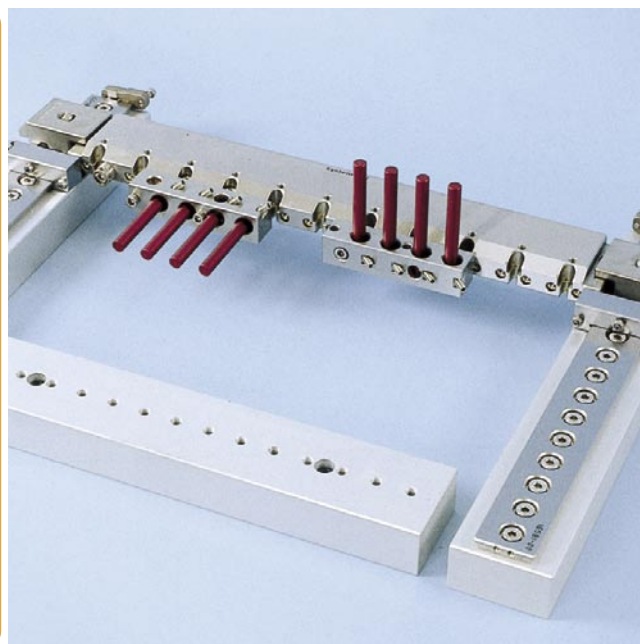
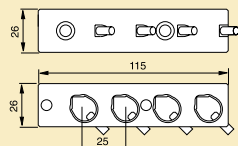


Multiple holder

3R-294.6

For simultaneous mounting of four workpieces Ø5-13 mm. Mounts on 3R-237.2, 3R-294, 3R-292.66HP or a ruler in the 3Ruler system.

- Recommended tightening torque 3 Nm.
- Weight 0.6 kg.



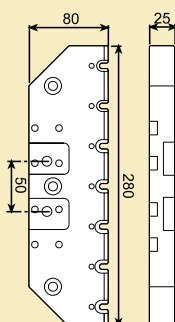
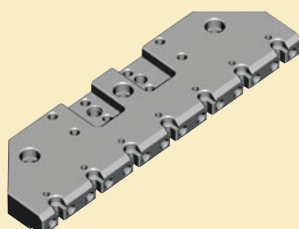
Holder, Magnum

3R-292.66HP

Can be supplemented with 3Ruler accessories.

Note: Mounts on an HP mounting head.

- Recommended maximum workpiece weight 12 kg.
- Weight 3 kg.

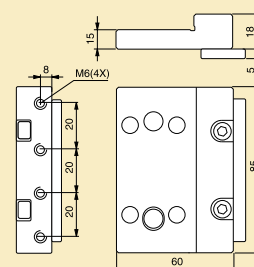


Adapter

3R-294

For mounting 3R-294.1, 3R-294.2 and 3R-294.6 on a levelling adapter.

- Recommended maximum load 7 kg.
- Weight 0.6 kg.

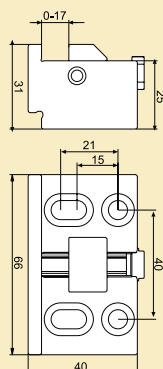


Vice

3R-294.1

For clamping workpieces up to 17 mm. Mounts on 3R-237.2, 3R-294 or rulers in the 3Ruler system.

- Recommended maximum workpiece weight 2.5 kg.
- Recommended tightening torque 3 Nm.
- Weight 0.5 kg.

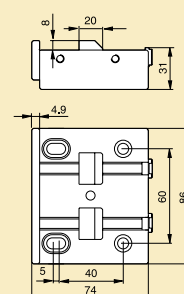


Vice

3R-294.2

Mounts on 3R-237.2, 3R-294, 3R-292.66HP, a ruler in the 3Ruler system, or Macro element.

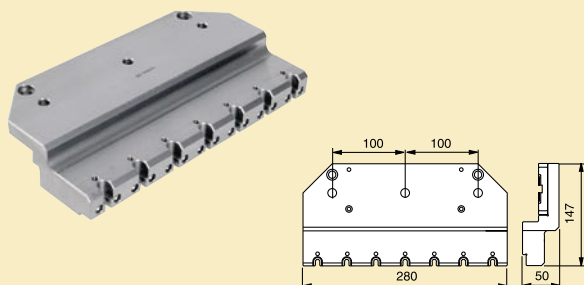
- Recommended maximum workpiece weight 5 kg.
- Recommended tightening torque 3 Nm.
- Weight 1.2 kg.



Holder, MacroTwin Magnum 3R-292.12

Can be supplemented with 3Ruler accessories.

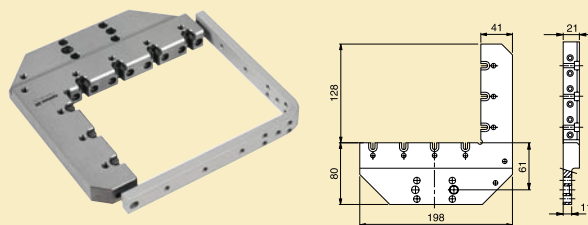
- Can be adapted to automatic changing with 3R-W12-S.
- Ready for code carrier holder 3R-U30639.
- Supplied with drawbar 3R-605.10 x2.
- Recommended maximum workpiece weight 15 kg.
- Weight 5.3 kg.



Angled holder 3R-292.23

Holder for clamping a workpiece or fixture in the mounting head. Can be supplemented with 3Ruler accessories.

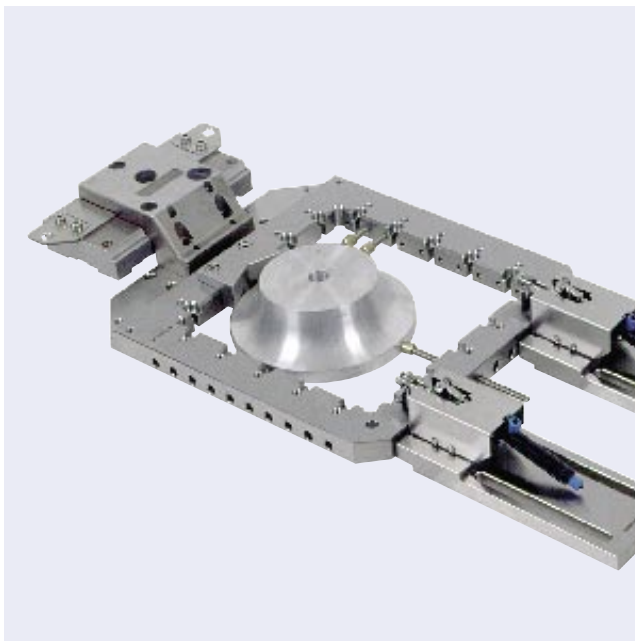
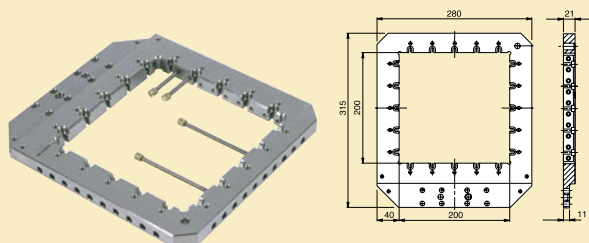
- Recommended maximum workpiece weight in Magnum & MacroTwin: 15 kg.
- Recommended maximum workpiece weight in Macro: 7 kg.
- Weight 3 kg.



Frame holder 3R-292.24

For clamping a workpiece or fixture to a mounting head, primarily of the fixed type. Can be supplemented with 3Ruler accessories and cross ruler.

- Mounting range 200x200 mm.
- Recommended maximum workpiece weight 15 kg.
- Weight 5.9 kg.



Adjustable holder 3R-261PN

Pneumatic holder to be mounted on the machine table. Supplements 3R-294.24 for automatic changing. The pneumatics can be connected in parallel with the table chuck.

- Required air pressure 6 ± 1 bar.
- Adjustable length 0-100 mm.
- Recommended maximum load 20 kg.
- Weight 1.8 kg.



Cross ruler 3R-239C

For mounting in 3R-292.24. Can be supplemented with 3Ruler accessories.

- Dimensions 200x45x28 mm.
- Weight 1.9 kg.

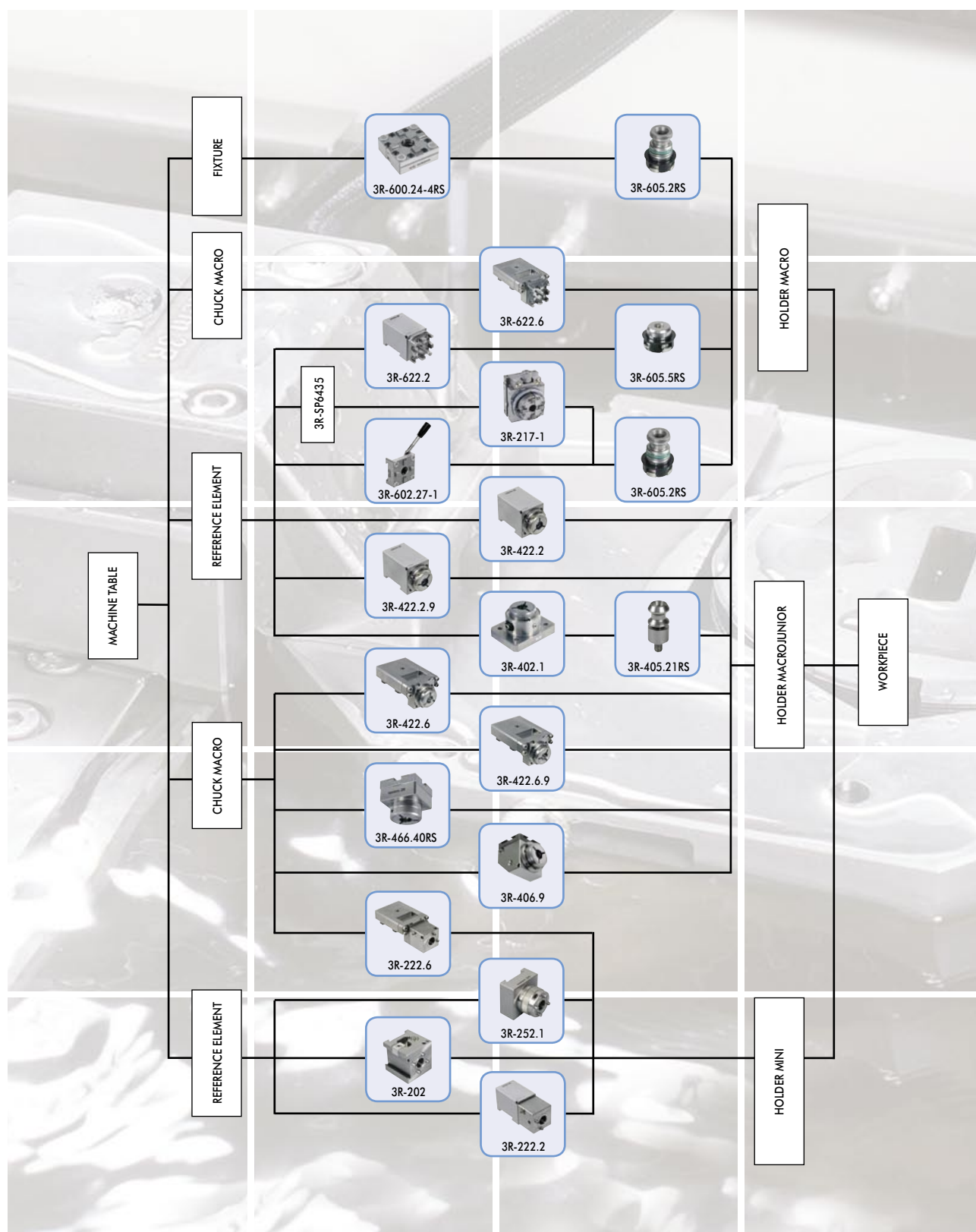


CHUCK ADAPTERS

For mounting workpieces on pallets in the Macro-, MacroJunior- and Mini systems, System 3R offers a broad range of chuck adapters, whose main field of application is the manufacture of electrodes for die-sinking EDM. Chuck adapters which connect all your machines together to form a

single system.

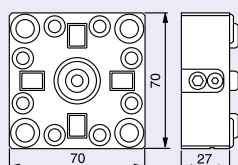
All chucks are hardened and rust-resistant.



Manual chuck, Macro 3R-600.24-4RS

Chuck for Macro holder. Mounts on a suitable fixture.

- Required drawbar 3R-605.2RS.
- Fixed index positions 4x90°.
- Weight 1 kg.

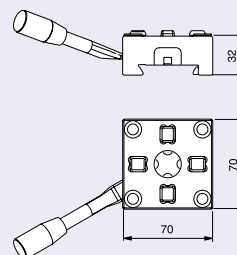


Manual chuck, Macro 3R-602.27-1

Chuck adapter with lever for Macro holder in the WEDM system. Supplied with drawbar.

Note: When mounted on the reference element, the two clamping jaws must be tightened with the same torque, 4 Nm.

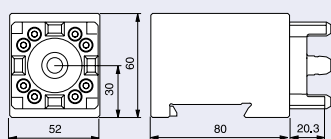
- Required drawbar 3R-605.27.
- Clamping force 6000 N.
- Fixed index positions 4x90°.
- Recommended maximum workpiece weight 7 kg.
- Weight 1.1 kg.



Manual chuck, Macro 3R-622.2

Chuck adapter for Macro holders in the WEDM system.

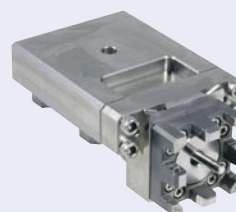
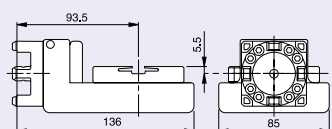
- Supplied with drawbar 3R-605.5RS.
- Fixed index positions 4x90°.
- Weight 1.9 kg.



Manual chuck, Macro 3R-622.6

Chuck adapter for mounting 90° Macro holders in the Macro system.

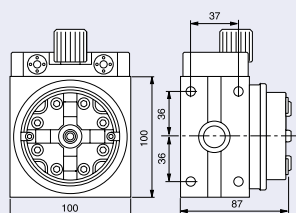
- Supplied with drawbar 3R-605.5RS.
- Fixed index positions 4x90°.
- Ready for code carrier holder 3R-U30638.
- Can be adapted to automatic changing with 3R-WP1.
- Weight 2.3 kg.



3R-block Macro 3R-217-1

Manual block for Macro holder. Vertical or horizontal mounting on the machine table, or alternatively the WEDM system with the aid of 3R-SP6435.

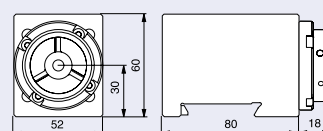
- Required drawbar 3R-605.2RS.
- Fixed index positions 24x15°.
- Vernier scale.
- Weight 5.4 kg.



Manual chuck, MacroJunior 3R-422.2

Chuck adapter with axial locking screw for MacroJunior holders in the WEDM system.

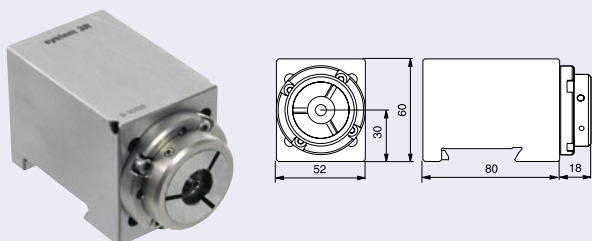
- Fixed index positions 3x120°.
- Weight 1.8 kg.



Manual chuck, MacroJunior 3R-422.2.9

90° chuck adapter with axial locking screw for MacroJunior holders in the WEDM system.

- Fixed index positions 3x120°.
- Weight 1.8 kg.



Manual chuck, MacroJunior 3R-422.6

Chuck adapter with axial locking screw for MacroJunior holders in the Macro system.

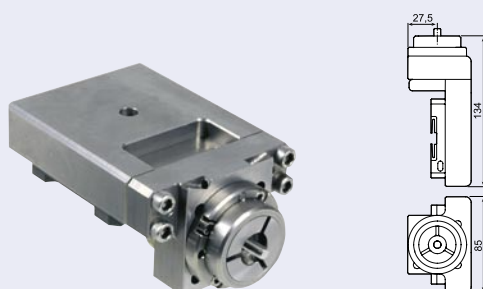
- Fixed index positions 3x120°.
- Ready for code carrier holder 3R-U30638.
- Can be adapted to automatic changing with 3R-WP1.
- Weight 2.3 kg.



Manual chuck, MacroJunior 3R-422.6.9

90° chuck adapter with axial locking screw for MacroJunior holders in the Macro system.

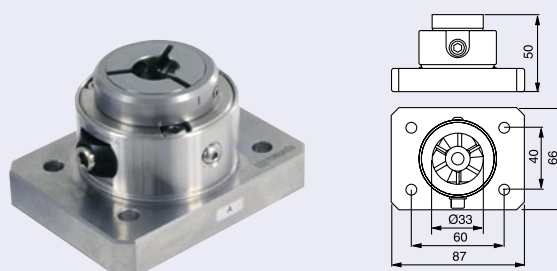
- Fixed index positions 3x120°.
- Ready for code carrier holder 3R-U30638.
- Can be adapted to automatic changing with 3R-WP1.
- Weight 2.3 kg.



Manual chuck, MacroJunior 3R-402.1

Chuck for MacroJunior holder. Can be mounted on 3R-237.2, 3R-292.66HP, 3R-294, the 3Ruler system, or on Macro element 54x54.

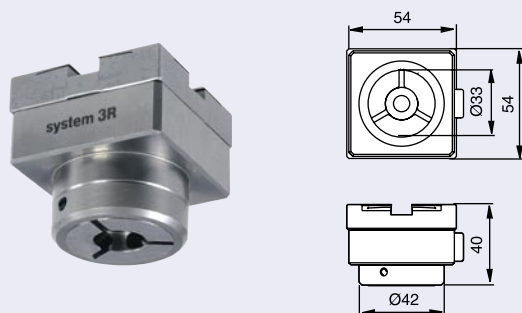
- Required drawbar 3R-405.21RS.
- Rust-resistant.
- Fixed index positions 3x120°.
- Weight 1.2 kg.



Manual chuck, MacroJunior 3R-466.40RS

Chuck adapter, stainless steel, for MacroJunior holders in the Macro system. Axial locking screw.

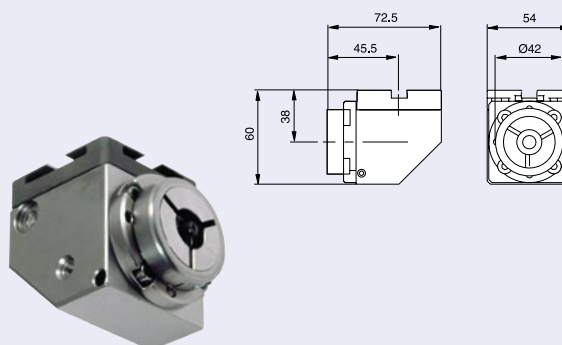
- Fixed index positions 3x120° and 4x90°.
- Weight 0.4 kg.



Manual chuck adapter 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 1.2 kg.

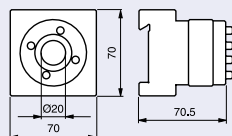


Manual chuck, Mini

3R-252.1

Chuck adapter with dual hydraulic chambers for Mini holders in the WEDM system.

- Fixed index positions 4x90°.
- Weight 1.6 kg.

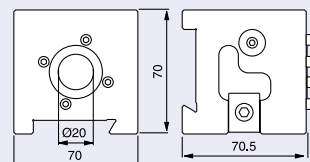
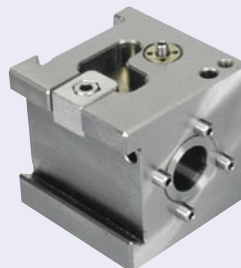


MiniBlock

3R-202

Manual chuck with dual hydraulic chambers for Mini holders. Vertical or horizontal mounting in the WEDM system.

- Fixed index positions 4x90°.
- Weight 1.9 kg.

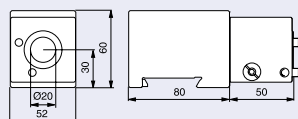


Manual chuck, Mini

3R-222.2

Chuck adapter with dual hydraulic chambers for Mini holders in the WEDM system.

- Fixed index positions 2x90°.
- Weight 2.5 kg.

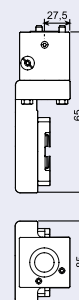


Manual chuck, Mini

3R-222.6

Manual chuck adapter with dual hydraulic chambers for Mini holders in the Macro system.

- Fixed index positions 2x90°.
- Ready for code carrier holder 3R-U30638.
- Can be adapted to automatic changing with 3R-WP1.
- Weight 2.5 kg.



Drawbars

3R-405.21RS

- Drawbar Ø15x24 mm.
- Rust-resistant.
- Supplied singly.



- Supplied singly.

3R-605.5RS

- Drawbar Ø20x19 mm.
- Rust-resistant.



3R-605.2RS

- Drawbar Ø20x36.9 mm with flushing hole Ø7 mm.
- Rust-resistant.



- Supplied singly.

3R-605.27RS

- Drawbar Ø20x27 mm.
- Rust-resistant.



Adapter

3R-SP6435

Adapter element for mounting 3R-217-1 in the WEDM system.



The holders, which are designed for modern machine with high flushing pressure, are intended mainly for mounting small to medium-sized workpieces on the zero line of the machine.

3R-207.6 in ny produkt

3R-613.6

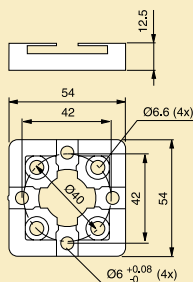
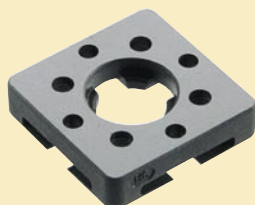


Reference element, Macro 54x54 mm 3R-651.7E-P

Hardened precision-cast reference element MacroHP with clearance holes for four fixing screws.

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

- Built-in height 12.5 mm.
- Rust-resistant.
- Supplied in sets of eight.
- Weight per set 1.2 kg.

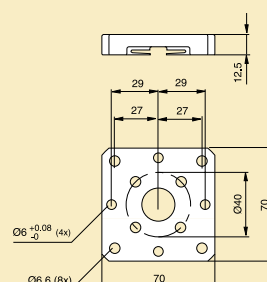
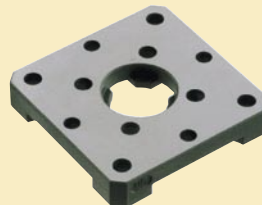


Reference element 70x70 mm 3R-601.7E-P

Hardened precision-cast reference element MacroHP with clearance holes for eight fixing screws.

Note: Must be mounted on the workpiece/fixture with all eight screws before it is locked in the chuck.

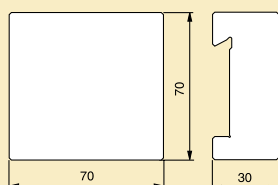
- Rust-resistant.
- Supplied in sets of five.
- Weight per set 3 kg.



Holder, WEDM 3R-205.2

Unhardened holder for mounting in the WEDM system.

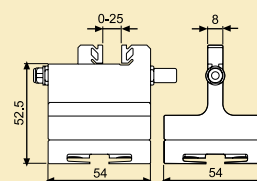
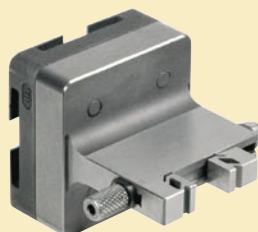
- Recommended maximum workpiece weight 7 kg.
- Rust-resistant.
- Weight 1 kg.



SuperVice Macro 3R-613.4

Vice for mounting rectangular 0-25 mm workpieces in the Macro system.

- Recommended maximum workpiece weight 2 kg.
- Recommended tightening torque 3 Nm.
- Rust-resistant.
- Weight 0.6 kg.

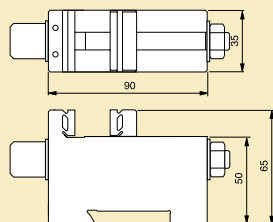


SuperVice, WEDM

3R-232.8

Vice for mounting rectangular (<60 mm) and round (8-45 mm) workpieces in the WEDM system.

- Recommended maximum workpiece weight 7 kg.
- Recommended tightening torque 15 Nm.
- Rust-resistant.
- Weight 1.5 kg.

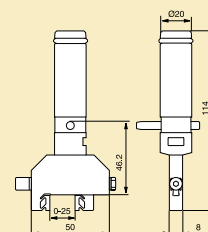


SuperVice, Mini

3R-213.4

Vice for mounting rectangular workpieces <25 mm in the Mini system.

- Recommended maximum workpiece weight 2 kg.
- Recommended tightening torque 3 Nm.
- Rust-resistant.
- Weight 0.4 kg.

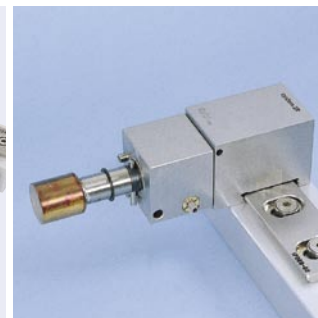
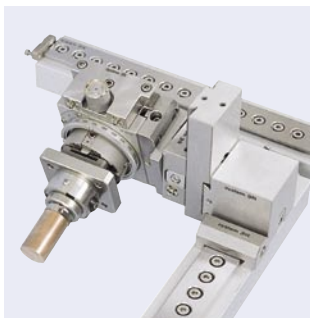
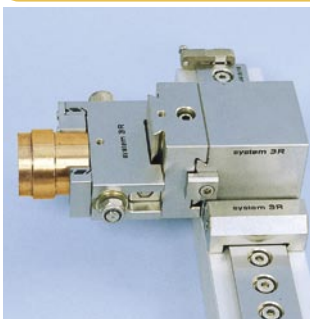
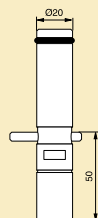


Holder, Mini

3R-322/50E

Electrode holder for the Mini system, with 50 mm long unhardened electrode mounting part.

- Adapted for automatic changing.
- Hardened reference part.
- Flushing duct.
- Supplied in sets of 30.
- Weight per set 7.7 kg.



3Ready-to-Run

3R-494-XXX

Holder with factory-fitted electrode blanks of copper. Supplied in sets of ten.

Note: There are local variations in the ranges stocked, in terms of electrode materials and dimensions. Contact the local 3R representative for further information.



Article number

3R-494-D10x50
3R-494-D12x50
3R-494-D16x50
3R-494-D22x50
3R-494-D26x50
3R-494-D32x50
3R-494-D40x50
3R-494-D50x50
3R-494-S12x50
3R-494-S22x50
3R-494-S26x50
3R-494-S32x50
3R-494-S40x50
3R-494-32x22x50
3R-494-40x22x50

Dimensions

Round blank Ø10x50 mm
Round blank Ø12x50 mm
Round blank Ø16x50 mm
Round blank Ø22x50 mm
Round blank Ø26x50 mm
Round blank Ø32x50 mm
Round blank Ø40x50 mm
Round blank Ø50x50 mm
Rectangular blank 12x12x50 mm
Rectangular blank 22x22x50 mm
Rectangular blank 26x26x50 mm
Rectangular blank 32x32x50 mm
Rectangular blank 40x40x50 mm
Rectangular blank 32x22x50 mm
Rectangular blank 40x22x50 mm

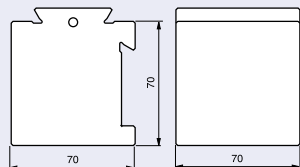
Adapter elements make it possible to machine workpieces with complex geometries, even if the machine is not the very latest model. The product range includes adapter elements for rotation (swivelling) or height adjustment, as well as plain spacer elements and adapter elements for

mounting holders/fixtures.

All adapter elements are hardened and rust-resistant.

Adapter WEDM 90° 3R-201J

- Weight 2.7 kg.



Angle shelf 3R-201.4

Mounts directly on the machine table. For vertical mounting of a Macro chuck or short reference element in the machine. Supplied with M8 screw and washer (x3).

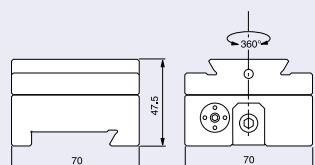
- Weight 4.2 kg.

Swivelling element, WEDM 360° 3R-203

Hydraulic locking of set position.

Note: For angle setting, 3R-216 is recommended.

- Weight 1.5 kg.



Swivelling element Macro 360° 3R-203.6

Hydraulic locking of set position. Supplied with drawbar 3R-605.27RS.

Note: For angle setting, 3R-606.1 and sine ruler 3R-216 are recommended.

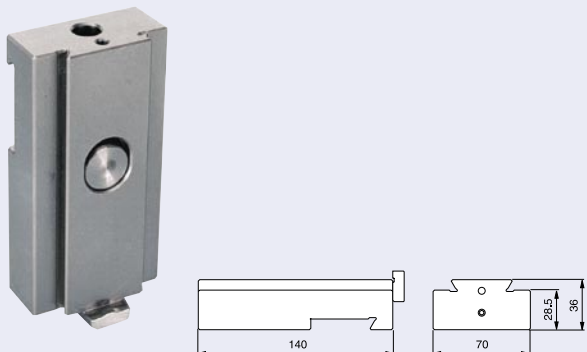
- Weight 2.7 kg.



Height adapter, WEDM

3R-204

- Height adjustment ± 70 mm.
- Weight 1.9 kg.



Angled holder, Macro

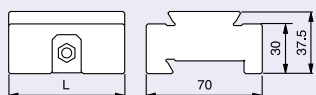
3R-226.6

For horizontal mounting of SuperVice and holders in vertical Macro chucks.

- Weight 1.4 kg.



Spacer element, WEDM 30 mm

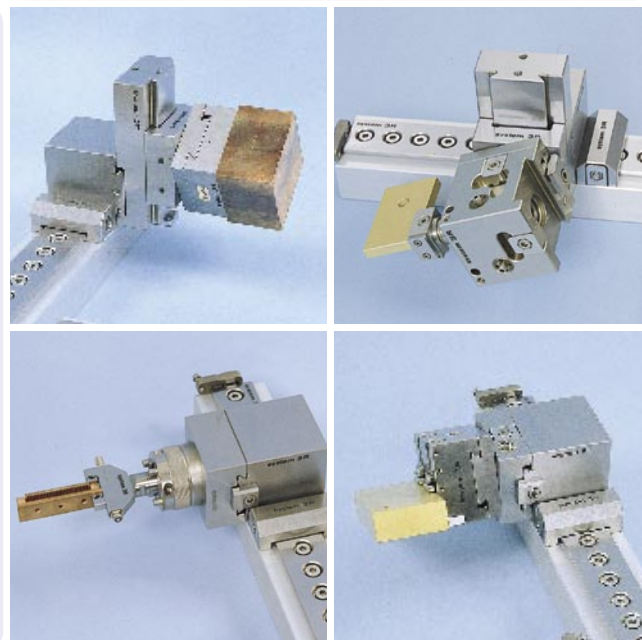


3R-223

- Length 70 mm.

3R-223.3

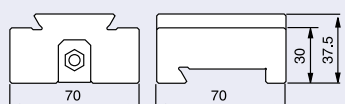
- Length 140 mm.



Spacer element, WEDM 90°

3R-224

- 30 mm.
- Weight 1.1 kg.

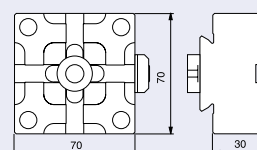


Adapter, Macro

3R-602

For mounting WEDM accessories on machine tables fitted with Macro chuck.

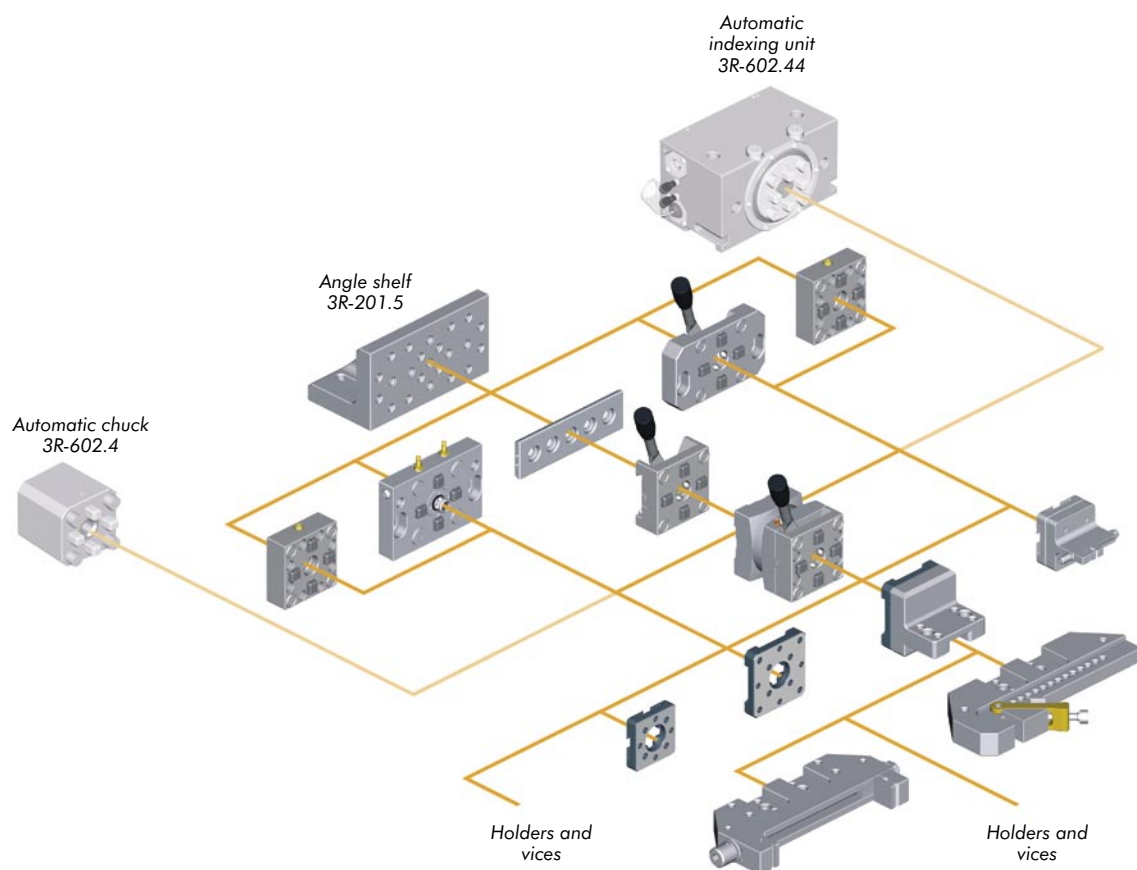
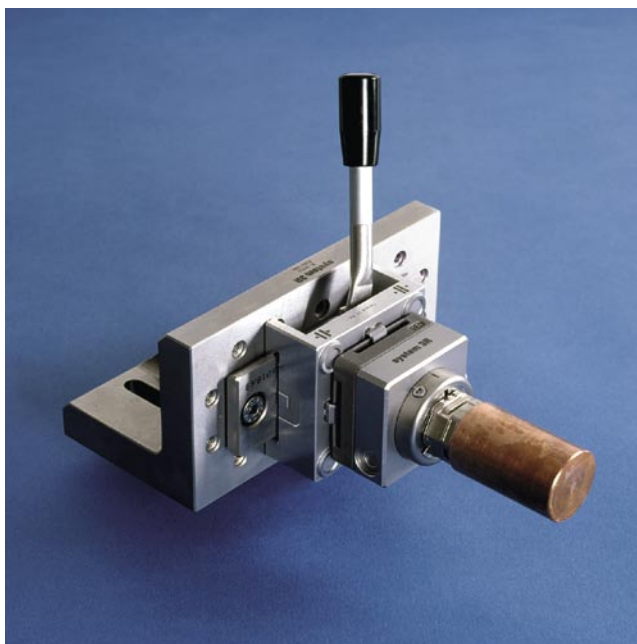
- Drawbar required.
- Weight 1.2 kg.



Greater flexibility.

It is impossible to overstate the importance of a high-class tool system. Considerable cost savings can be achieved. Assured quality, reduced scrap, faster throughput time. In brief – higher productivity!

Angle shelf 3R-201.4 offers many vertical positioning options on the machine table. WEDM or the Macro system. Tool systems you can build on. Bit by bit. Unlimited scope for expansion. Flexible. Reliable. The choice is yours!



System 3R's ruler system – 3Ruler – was developed for machining medium-size and large workpieces in machines with a parallel or U-shaped machine table, as well as in machines with a frame table. The rulers, which have built-in height adjustment, are used singly or in pairs.

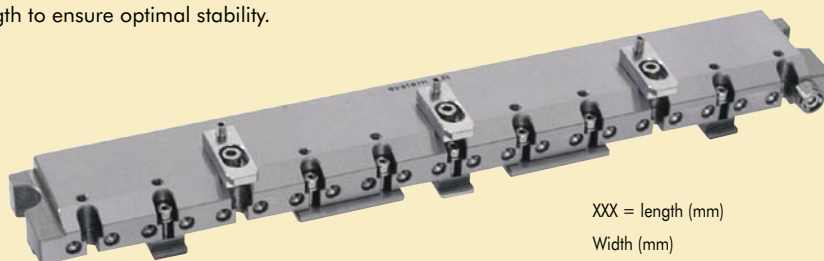
A comprehensive range of accessories gives the rulers an unsurpassed range of applications. With the aid of 3Ruler, rectangular or round workpieces, large or small, lightweight or heavy, are located on the machine zero line, without risk of collision.

System 3R's WEDM accessories upgrade the versatility and productivity of your machine by practically eliminating setup times.

3Ruler

3R-239-XXX

The rulers are available in various lengths (-XXX), for different machines. The cross-section is matched to the length to ensure optimal stability.

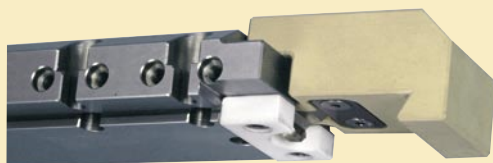


XXX = length (mm)	< 370	371-595	596-950	> 950
Width (mm)	45	60	86	86
Height (mm)	30	30	36	36
Eccentric stops supplied	1	1	1	1
Quick fasteners supplied	2	2	2	2
Zero line tabs supplied	2	2	3	5
5 mm tabs supplied	2	2	2	3
Clamps supplied	2	2	3	5

Insulated 3Ruler

3R-239-XXX-10

Insulated rulers are available in various lengths (-XXX), for different machines. The cross-section is matched to the length to ensure optimal stability.

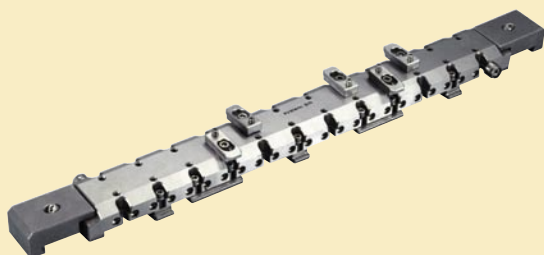


XXX = length (mm)	< 370	371-595	596-950	> 950
Width (mm)	45	60	86	86
Height (mm)	30	30	36	36
Eccentric stops supplied	1	1	1	1
Quick fasteners supplied	2	2	2	2
Zero line tabs supplied	2	2	2	2
5 mm tabs supplied	2	2	2	3
Clamps supplied	2	2	2	2

Double-sided 3Ruler

3R-239-XXX-D

Double-sided rulers are available in various lengths (-XXX), for different machines. The cross-section is matched to the length to ensure optimal stability. With these rulers, accessories can be mounted on both sides of the ruler.



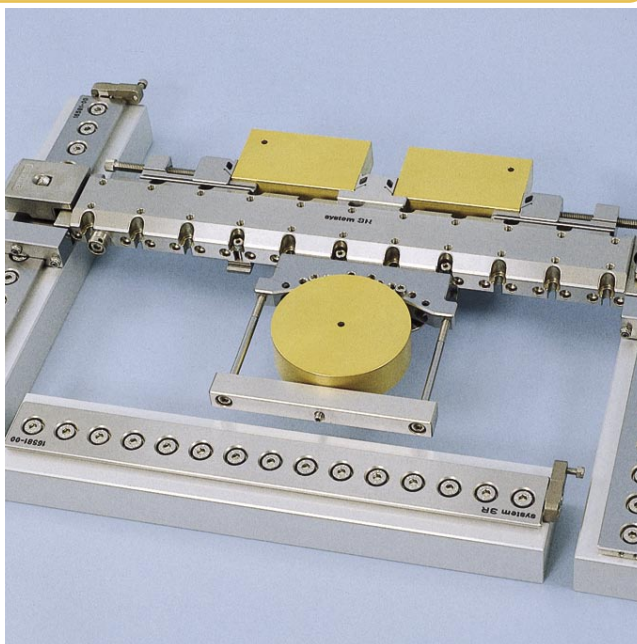
XXX = length (mm)	< 370	371-595	596-950	> 950
Width (mm)	45	60	86	86
Height (mm)	30	30	36	36
Eccentric stops supplied	2	2	2	2
Quick fasteners supplied	2	2	2	2
Zero line tabs supplied	4	4	6	10
5 mm tabs supplied	4	4	4	6
Clamps supplied	4	4	6	10

Ruler vice

3R-239.1

Movable jaws of SuperVice design provide a wide clamping range for rectangular workpieces. Detachable Z support tabs ensure simple setting-up.

- Hardened.
- Recommended maximum workpiece weight with one vice: 15 kg.
- Recommended maximum workpiece weight with two vices: 200 kg.
- Recommended tightening torque 8 Nm.
- Weight 0.7 kg.



Low-profile holder 3R-239.2

For clamping thin workpieces.

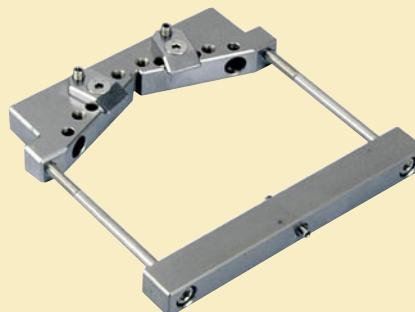
- Hardened.
- Clamping range 0-27 mm.
- Supplied in sets of four.
- Weight per set 0.6 kg



V-holder 3R-239.3

For clamping round workpieces.

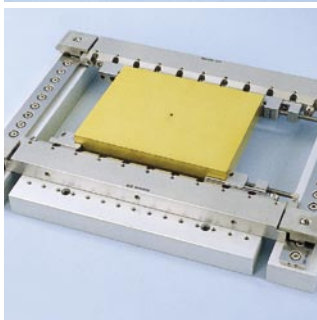
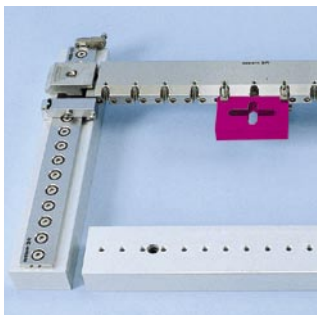
- Hardened.
- Clamping range $\varnothing 25$ -300 mm.
- Weight 0.9 kg.



3Ruler kit 3R-239.20

Kit for clamping rectangular, round or thin workpieces.

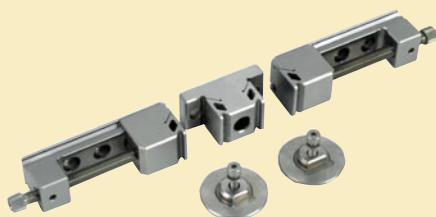
Contents:
 3R-239.1 Ruler vice
 3R-239.2 Low-profile holder
 3R-239.3 Vee holder
 3R-914-10L Torque wrench, 8 Nm
 3R-33-03 Allen key, 3 mm
 Allen key, 4 mm



Double ruler vice 3R-239.11

Movable jaws for mounting two rectangular workpieces at the same time. Detachable Z support tabs ensure simple setting-up.

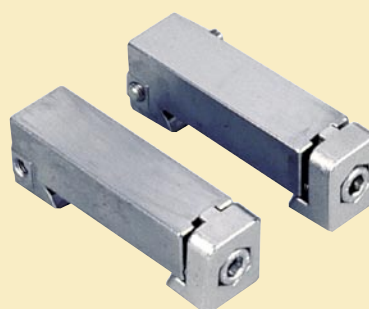
- Hardened.
- Recommended maximum workpiece weight 7 kg.
- Recommended tightening torque 8 Nm.
- Weight 1 kg.



Reference stop 3R-225.2

For positioning 3Ruler anywhere on the reference elements. The stops have adjusting screws for accurate alignment.

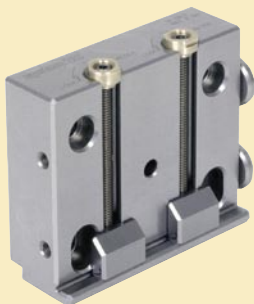
- Supplied in sets of two.
- Weight per set 0.6 kg.



Vice**3R-294.2**

Mounts on 3R-237.2, 3R-292.12, 3R-292.66HP, 3R-294, a ruler in the 3Ruler system, or Macro element 54x54.

- Hardened.
- Clamping range 0-50 mm.
- Recommended maximum workpiece weight 5 kg.
- Recommended tightening torque 3 Nm.
- Weight 1.2 kg.

**Vice****3R-294.1**

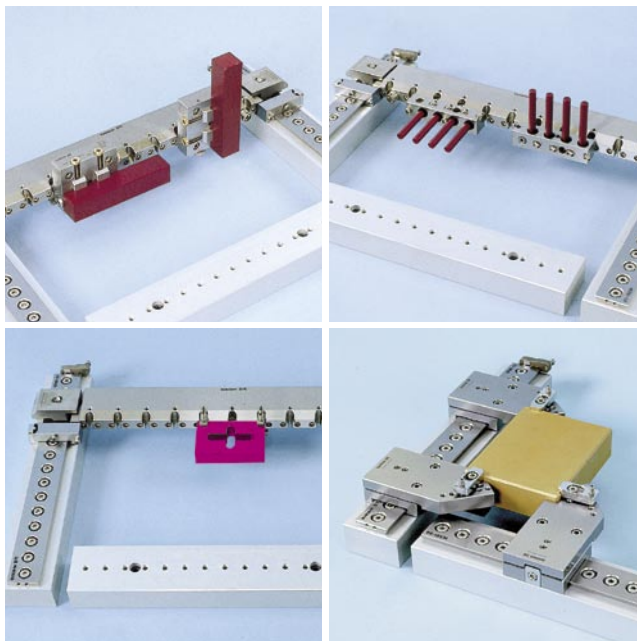
For clamping workpieces up to 17 mm. Mounts on 3R-237.2, 3R-292.12, 3R-292.66HP, 3R-294 or a ruler in the 3Ruler system.

- Recommended maximum workpiece weight 5 kg.
- Recommended tightening torque 3 Nm.
- Weight 0.5 kg.

**Multiple holder****3R-294.6**

For simultaneous mounting of four workpieces Ø5-13 mm. Mounts on 3R-237.2, 3R-292.12, 3R-292.66HP, 3R-294 or a ruler in the 3Ruler system.

- Recommended tightening torque 3 Nm.
- Weight 0.6 kg.

**3R-239.1****Zero-line support
tab 5 mm****3R-239.22**

- Hardened.
- Recommended maximum workpiece weight per stop 50 kg.
- Supplied in sets of two.

**Mini-clamp****3R-239.24**

For clamping thin workpieces. To be fitted together with zero-line support tab.

- Recommended maximum workpiece weight per stop 1 kg.
- Supplied in sets of two.

**Clamp****3R-A239**

Clamp of aluminium for mounting a ruler directly on the machine table without reference elements.

- Supplied in sets of two, with M8 screw and washers.
- Weight per set 0.3 kg.



Three-point mounting with minimal collision risk. 3P is equally well suited to square or round workpieces. Clamping takes only seconds.

3P has been developed for medium-size and large workpieces in wire-EDM machines with an L-shaped or U-shaped machine table, as well as in machines with a frame table. The holders are matched to the size of the workpiece by sliding them along the reference elements. The holders can be adjusted vertically.

3P holder Sets

Set of three holders and fixing parts.

3R-218/13

- Reversible jaws.
- Holder length 20 mm.
- Recommended maximum workpiece weight 50 kg.
- Weight per set 3 kg.

3R-218/20

- Reversible jaws.
- Holder length 25 mm.
- Recommended maximum workpiece weight 50 kg.
- Weight per set 3 kg.

3R-218/65

- Reversible jaws.
- Holder length 45 mm (x2) and 70 mm (x1).
- Recommended maximum workpiece weight 50 kg.
- Weight per set 3 kg.

3R-218/70

- Reversible jaws.
- Holder length 70 mm.
- Recommended maximum workpiece weight 50 kg.
- Weight per set 3 kg.



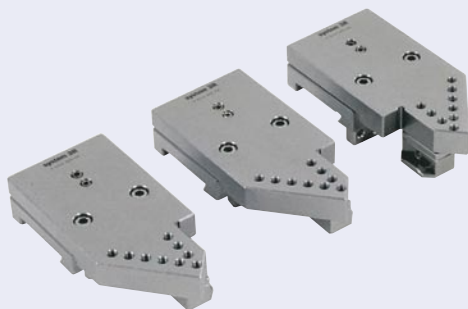
Set

3R-218/30S

Set of three holders.

Note: Cannot be upgraded with insulating kit 3R-218/10.

- Holder length 30 mm.
- Recommended maximum workpiece weight 50 kg.
- Weight per set 3 kg.

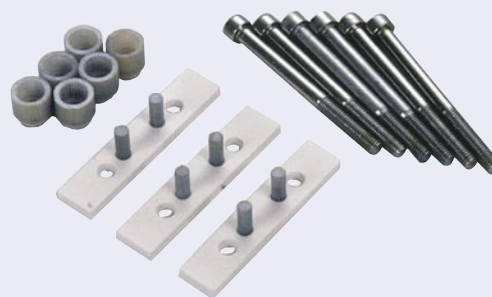


Insulating Kit

3R-218/10

Insulating kit 3R-218/13, -/20, -/65 and -/70.

- Weight 1.8 kg.

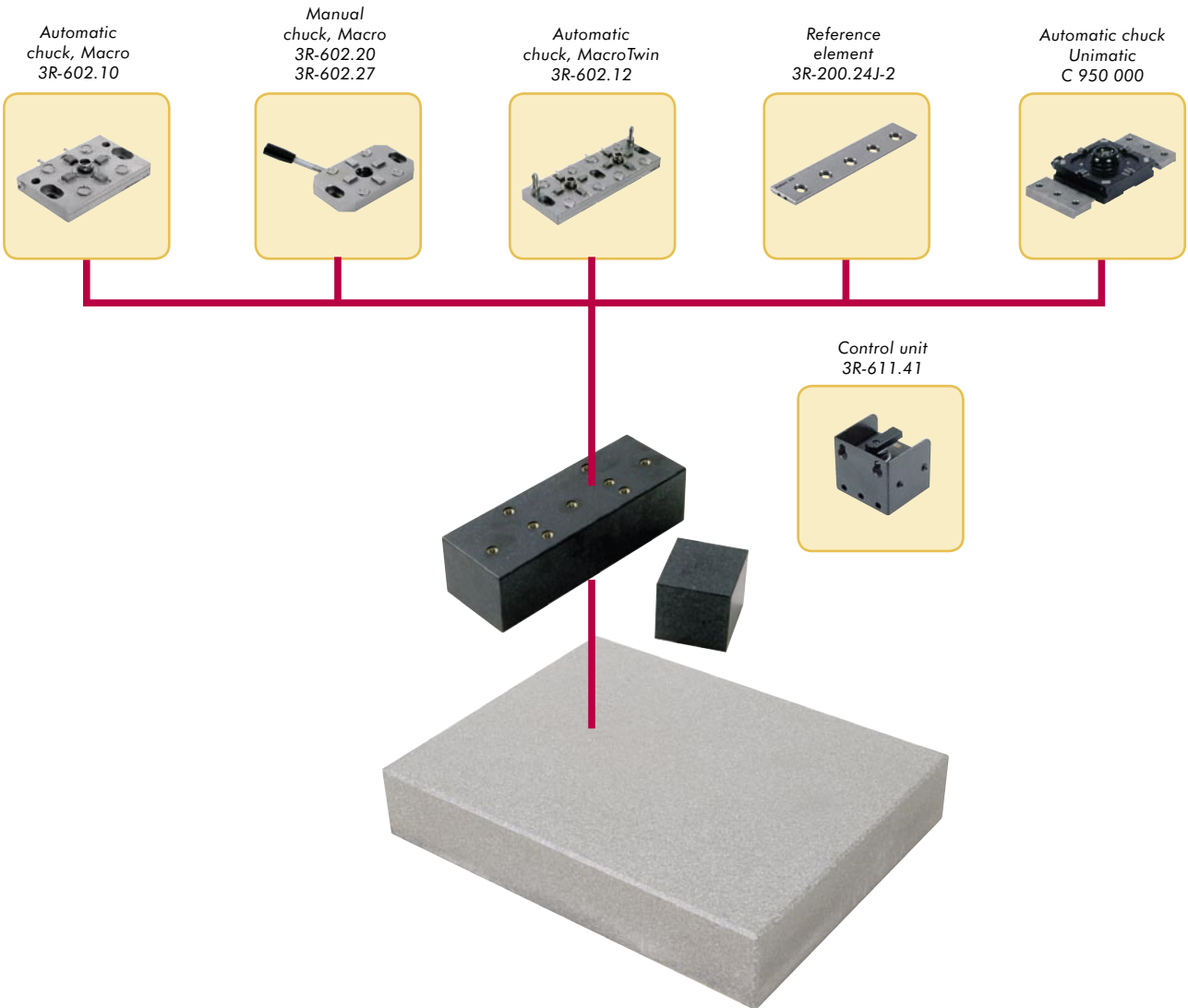


Available machine time can be used either for active machining or for non-productive setting-up on the idle machine.

You can optimise machine capacity by presetting away from the machine in a presetting station, while the machine is actively working on another workpiece.

So – preset away from the machine, lift in the preset package, secure it with a few simple manual operations, press the start button and the wire EDM machine is working again – One Minute Set-up.

System 3R's presetting stations are constructed on a modular system, where the customer chooses a suitable packet of prepared "measuring stones", for which the customer chooses the necessary chuck/reference elements in order to match the installation on the wire EDM machine table, as well as a pneumatic control unit if required.



Presetting stone

3R-228J

Stone with three ground faces, a reference element and a clearance stone. Together with a surface plate and a dial indicator, 3R-228J is an excellent presetting tool for a modest outlay.

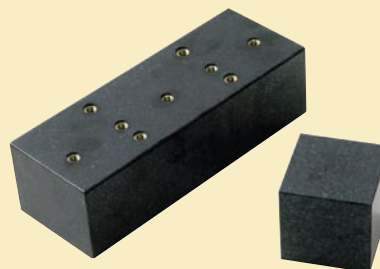
- Dimensions 150x110x80 mm.
- Weight 5.4 kg.



Presetting station

3R-228S

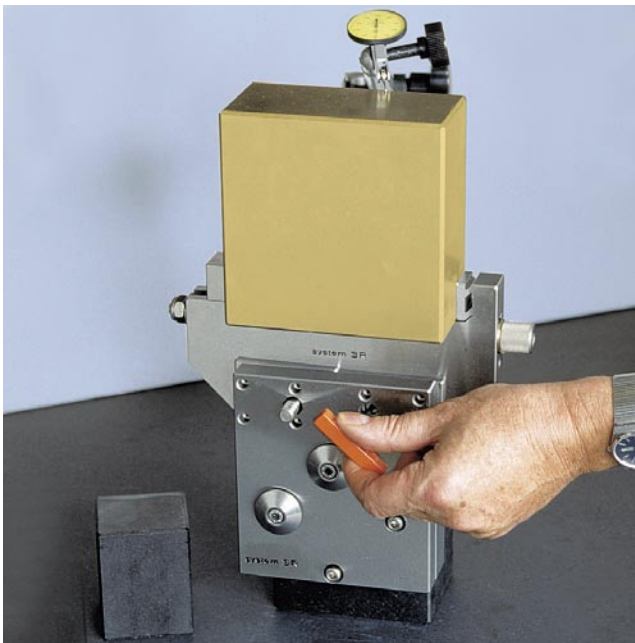
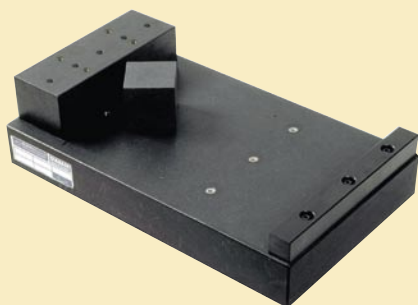
Mounting stone with bushings and holes for mounting chuck/reference elements, as well as a check stone. Use together with existing measuring machine or surface plate and a dial indicator.



Presetting station

3R-228.1

A surface plate with reference stops, a mounting stone with bushings and holes for mounting a chuck/reference element and through holes for mounting on the surface plate, and a check stone. A dial indicator is required.

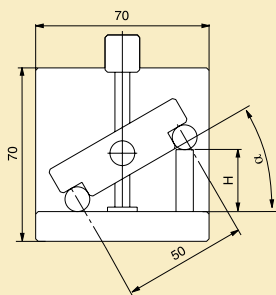


Sine ruler

3R-216

With magnetic attachments for setting angles on swivelling elements. Angles are set with gauge blocks.

- Measuring length 50 mm.



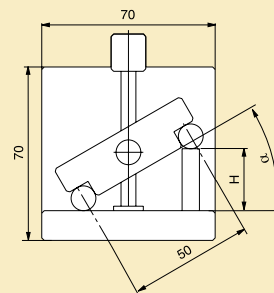
$$\sin \alpha = \frac{H}{50}$$

Sine ruler, Macro

3R-216.6

For setting angles on swivelling elements. Angles are set with gauge blocks.

- Measuring length 50 mm.
- Weight 1.4 kg.



$$\sin \alpha = \frac{H}{50}$$

Master

3R-206.10

Master for horizontal Macro chucks. One long side ground to the Macro references. Supplied with engraved dimensions in the X-, Y- and Z-directions.

- Supplied with drawbar 3R-605.10.
- For automatic changing, 3R-WP1 must be added.

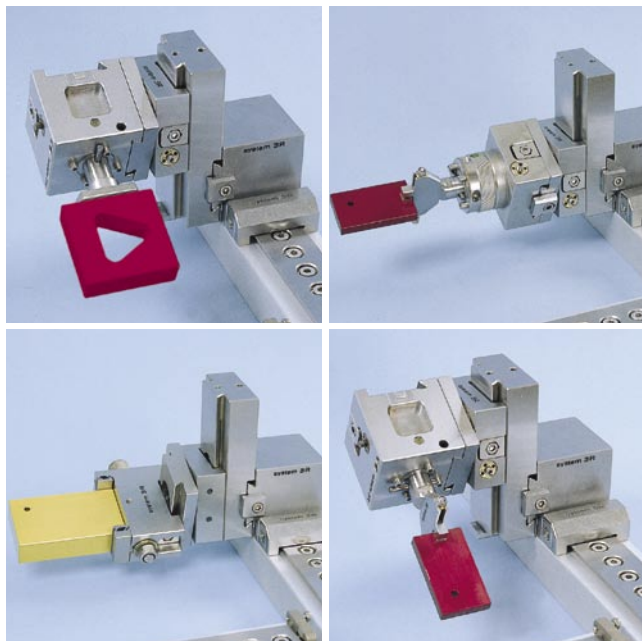
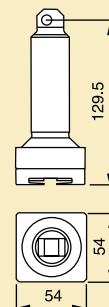


Master

3R-606.2

Master for determining the position of vertical Macro chucks. Cylinder ground to the Macro references. Supplied with engraved dimensions in the X-, Y- and Z-directions.

- Supplied without drawbar.

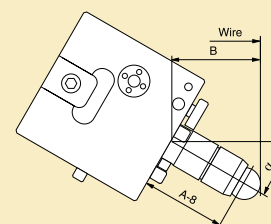
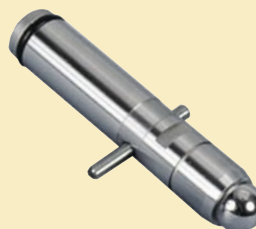


Reference ball

3R-215

For finding positions of applications with swivelling elements.

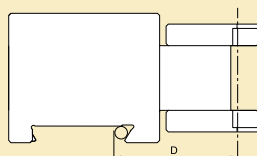
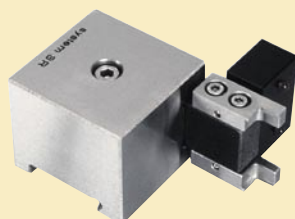
- Magnetic attachment for Ø16 mm ball.
- Supplied with two balls.



$$B = (A - 8) \cos \alpha + 8$$

Wire alignment units

Units with double insulated reference contacts for wire alignment.



3R-220.1

- Two wires in the cable.
- Distance between table and lower measuring point 5 mm.
- Length D=60 mm.
- Measuring length 50 mm.
- Weight 2.2 kg.

3R-220.3

- For Mitsubishi machines.
- Four wires in the cable.
- Distance between table and lower measuring point 5 mm.
- Length D=60 mm.
- Measuring length 50 mm.
- Weight 2.2 kg.

3R-220.4

- For AGIE machines.
- Two wires in the cable.
- Distance between table and lower measuring point 5 mm.
- Length D=72 mm.
- Measuring length 50 mm.
- Weight 2.3 kg.

Control unit

3R-611.41

Unit for hand operation of pneumatic chucks. Three functions – open/neutral/closed.

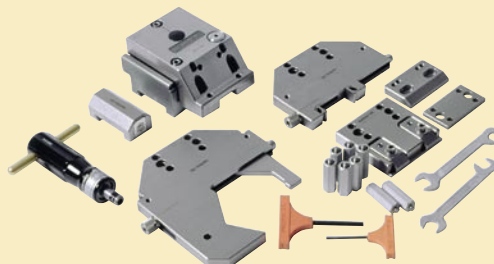


The modular design of the systems enables every user to choose precisely the products best suited for their work. For those unfamiliar with System 3R's broad product range, one of the user kits may be a simple way to get started.

User kit

3R-242HP

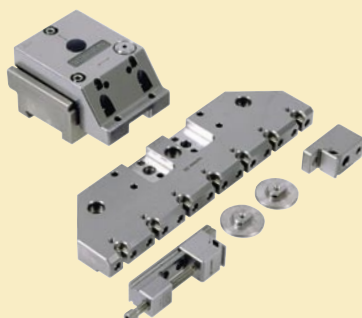
3R-225	Reference stop	x1
3R-272HP	Levelling adapter, HP	x1
3R-292.3	SuperVice <100 mm	x1
3R-293.3	SuperVice Ø8-90 mm	x1
3R-294.3	Vice <100 mm	x1
3R-914.07	Torque wrench 7 Nm	x1
3R-333-03	Allen key 3 mm	x1
3R-333.0	Allen key 5 mm	x1
Weight		10 kg



User kit

3R-242.82HP

3R-239.1	Ruler vice	x1
3R-272HP	Levelling adapter, HP	x1
3R-292.66	Holder, Magnum	x1
Weight		9.4 kg



User kit

3R-243J

3R-201J	Adapter 90°	x1
3R-202	MiniBlock	x1
3R-203	Swivelling adapter 360°	x1
3R-204	Height adapter	x1
3R-215	Reference ball	x1
3R-216	Sine ruler	x1
3R-333-03	Allen key 3 mm	x1
3R-333.05	Allen key 5 mm	x1
Weight		12 kg



User kit

3R-243.2-1

3R-201J	Adapter 90°	x1
3R-204	Height adapter	x1
3R-602.27-1	Manual chuck, Macro	x1
3R-605.27RS	Drawbar	x1
3R-333-03	Allen key 3mm	x1
3R-333-05	Allen key 5 mm	x1
Weight		12 kg



Clamping kit M6

3R-230.1

For clamping workpieces on rulers, etc.

- Weight 1.8 kg.



W12-S & Robotgrepp twin in

Expanding mandrel 3Refix

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

3R-901-10RS

- 3Refix Ø10 mm.
- Rust-resistant.
- Recommended tightening torque 4 Nm.
- Supplied singly.
- Weight 0.05 kg.

3R-901-20RS

- 3Refix Ø20 mm.
- Rust-resistant.
- Recommended tightening torque 10 Nm.
- Supplied singly.
- Weight 0.1 kg.



Drawbars

3R-405.21RS

- Drawbar Ø15x24 mm.
- Rust-resistant.
- Supplied singly.

3R-605.1RS

- Drawbar Ø20x57.1 mm with flushing hole Ø7 mm.
- Rust-resistant.
- Supplied singly.

3R-605.2RS

- Drawbar Ø20x36.9 mm with flushing hole Ø7 mm.
- Rust-resistant.
- Supplied singly.

3R-605.5RS

- Drawbar Ø20x19 mm.
- Rust-resistant.
- Supplied singly.

3R-605.10

- Drawbar Ø20x13 mm.
- Rust-resistant.
- Supplied singly.

3R-605.27RS

- Drawbar Ø20x27 mm.
- Rust-resistant.
- Supplied singly.

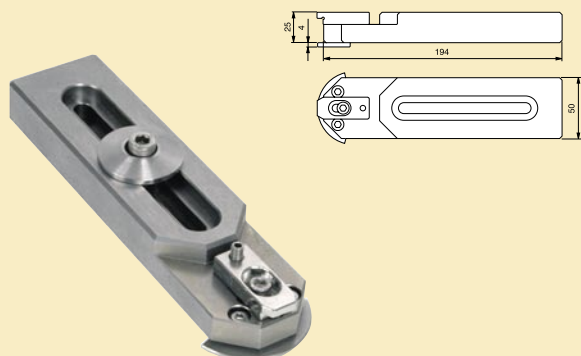


Adjustable Support

3R-261.1

For mounting directly on the machine table.

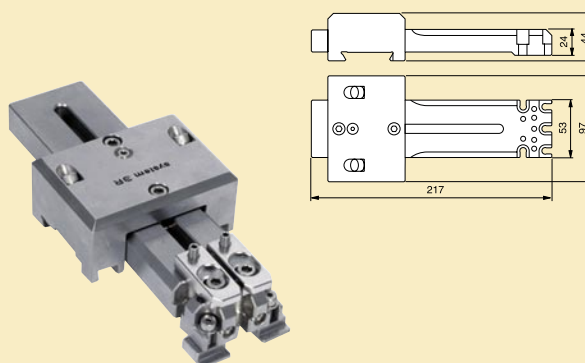
- Adjustable length 35-135 mm.
- Recommended maximum workpiece weight 20 kg.
- Weight 1.5 kg.



Adjustable support, WEDM

3R-261

- Adjustable length 38-138 mm.
- Adjustable height 0-0.2 mm.
- Recommended maximum workpiece weight 20 kg.



Rotating spindle, Macro 3R-6.600-S

For mounting in Macro chucks. Horizontal mounting in wire EDM machines.

- Stainless steel.
- Required control unit: 3R-6.46.
- Speed range 2-1800 rev/min.



Rotating spindle, MacroJunior 3R-6.400-S

For mounting in Macro chucks. Horizontal mounting in wire EDM machines.

- Stainless steel.
- Required control unit: 3R-6.46.
- Required drawbar 3R-405.21RS.
- Speed range 2-1800 rev/min.



Control unit 3R-6.46

To control the speed of rotating spindles.



Cleaning agent 3R-N009

Highly effective cleaning agent for EDM machines and accessories.

- Supplied in one-litre packs.



Circlip key 3R-605-GE

To lift the circlip of drawbars.

- Supplied in sets of two.



Torque wrenches

3R-414.03

- Torque 3 Nm

3R-414.04

- Torque 4 Nm

3R-914.07

- Torque 7 Nm

3R-914.10L

- Torque 8 Nm

3R-914.10

- Torque 10 Nm

3R-914.15

- Torque 15 Nm



Spare parts kit 3R-SSP014

Spare parts kit including instructions for 3R-602.10.

Spare parts kit 3R-SSP044

Spare parts kit including instructions for 3R-602.10HP.

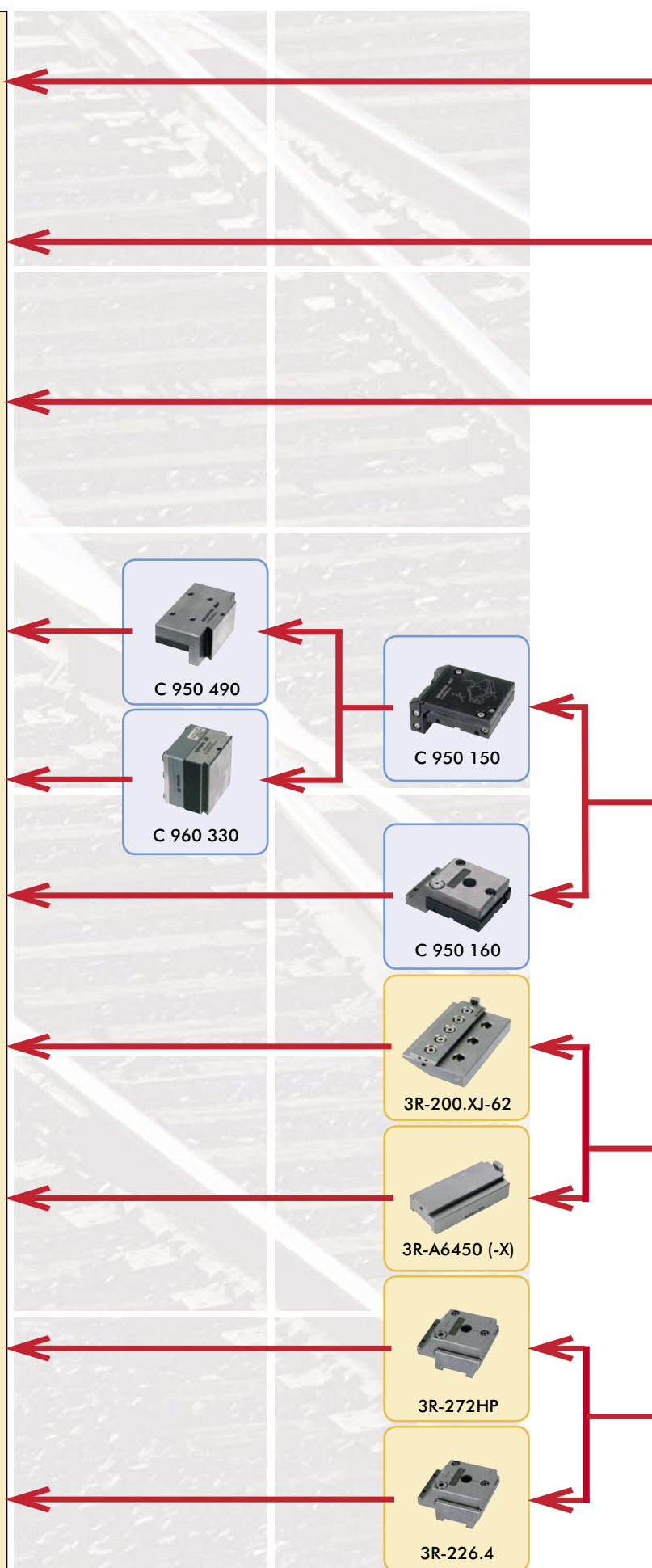
In a changing world where new products are constantly being developed and brands merge with other brands, you can be sure that System 3R will always see to it, as an essential part of its obligations to its customers, that existing equipment can be integrated into the new product ranges.

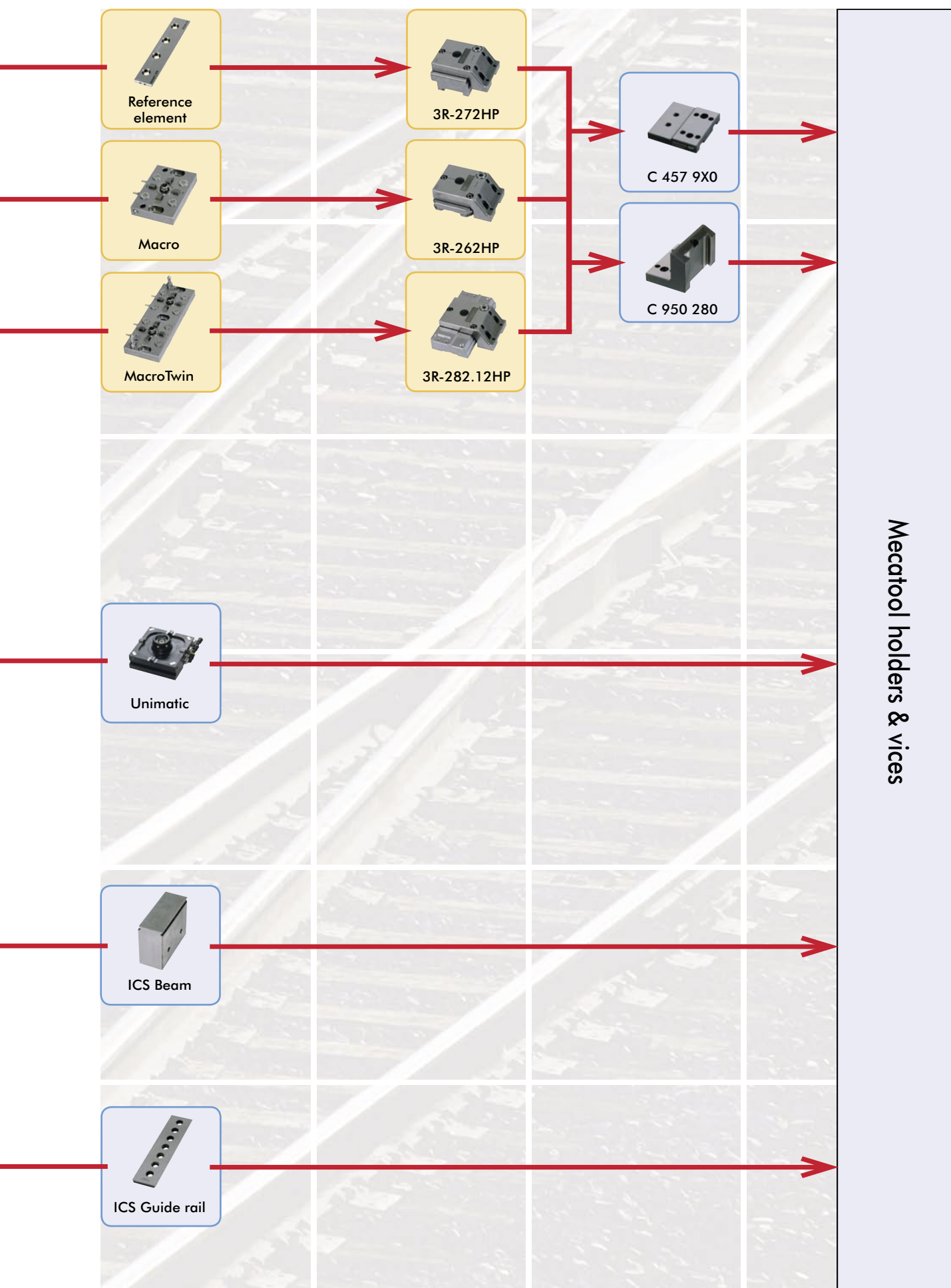
If you have ICS as the basic equipment on the WEDM machine table, you only need System 3R's new leveling adapter to be able to access System 3R's broad range of accessories.

If you have Unimatic as the basic equipment on the WEDM machine tables, buy an adapter element and System 3R's outstanding accessories are at your disposal.

If you have invested in a large number of accessories from Mecatool but are planning a move towards automation, or if you want to integrate the WEDM machine with the die-sinking EDM machine and the milling machine, buy System 3R's basic equipment for the machine table and an adapter which lets you go on using the Mecatool accessories for manual machining in the WEDM machine.

System 3R holders & vices





Adapters

For upgrading machines fitted with ICS. The adapters give access to the entire System 3R range of WEDM accessories.

3R-200.1J-62

- Length 140 mm.
- Weight 2.3 kg.

3R-200.2J-62

- Length 317 mm.
- Weight 5.2 kg.

3R-200.3J-62

- Length 452 mm.
- Weight 7.4 kg.



Adapters

For upgrading machines fitted with ICS. The adapters enable you to use System 3R's levelling adapters, holders, SuperVice, adapters and chucks.

3R-A6450

- Length 85 mm.
- Weight 1.2 kg.

3R-A6450-1

- Length 140 mm.
- Weight 2 kg.



Adjustable adapters

C 950 160

For mounting System 3R holders and vices in Unimatic chucks. Adjustable in three axes.



Adapters

For mounting ICS holders in System 3R mounting heads.

C 457 940

- ICS A.

C 457 960

- ICS B.

C 457 980

- ICS C.



Adapter

C 950 490

For mounting System 3R holders and vices in Unimatic mounting heads.



Adapter

C 950 280

For mounting Unimatic holders in System 3R mounting heads.



Adapter

C 960 330

For mounting Macro holders in Unimatic mounting heads.

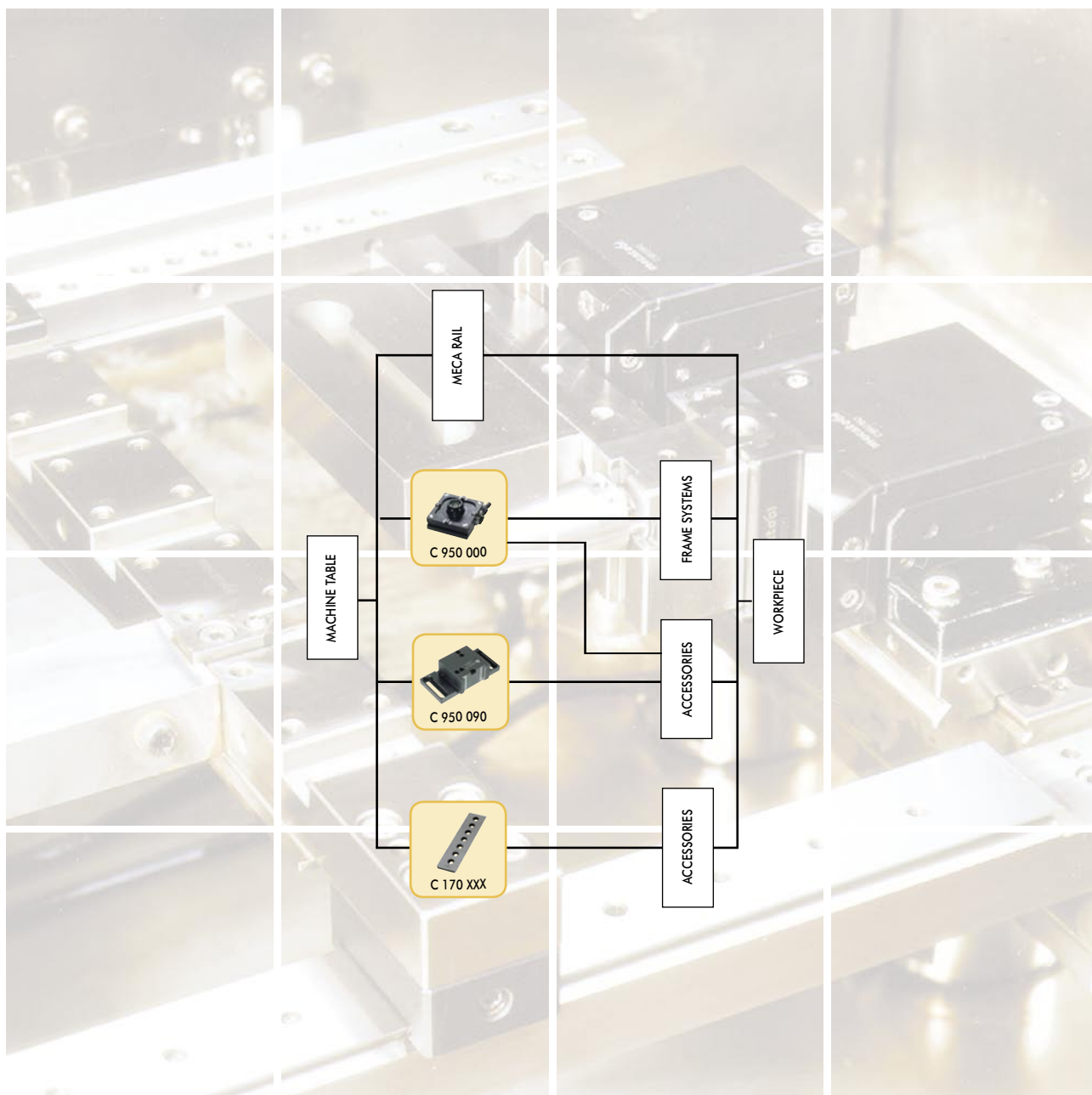


Adapter

C 463 180

For mounting Macro holders in ICS B mounting heads.





Guide rail, ICS

C 170 XXX

Guide rails for machines with zero-line table. Length, hole pitch and hole size are suited to the respective machine.

Note: When ordering, state machine make and type.



Automatic chuck, Unimatic

C 950 000

Pneumatic chuck for horizontal mounting on the machine table.



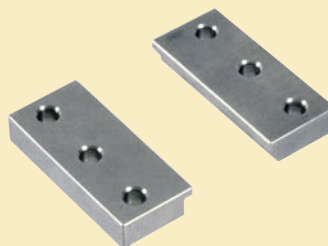
Manual chuck, Unimatic C 950 090

Manual chuck for horizontal mounting on the machine table.
Adjustable ± 0.2 mm in three axes.



Fixing parts C 950 0XX

For mounting C 950 000 on the machine table. The dimensions are suited to the respective machine.
Note: When ordering, state machine make and type.



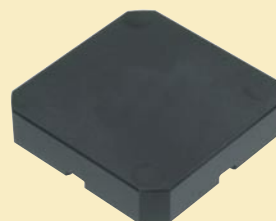
Reference elements, zero line C 960 440

Reference elements for the zero line when mounting accessories in a manual Unimatic chuck.



Covers C 960 710

Protects unused Unimatic chucks.



Actuator C 960 500

To control a pneumatic chuck.



Controllers

S 190 520

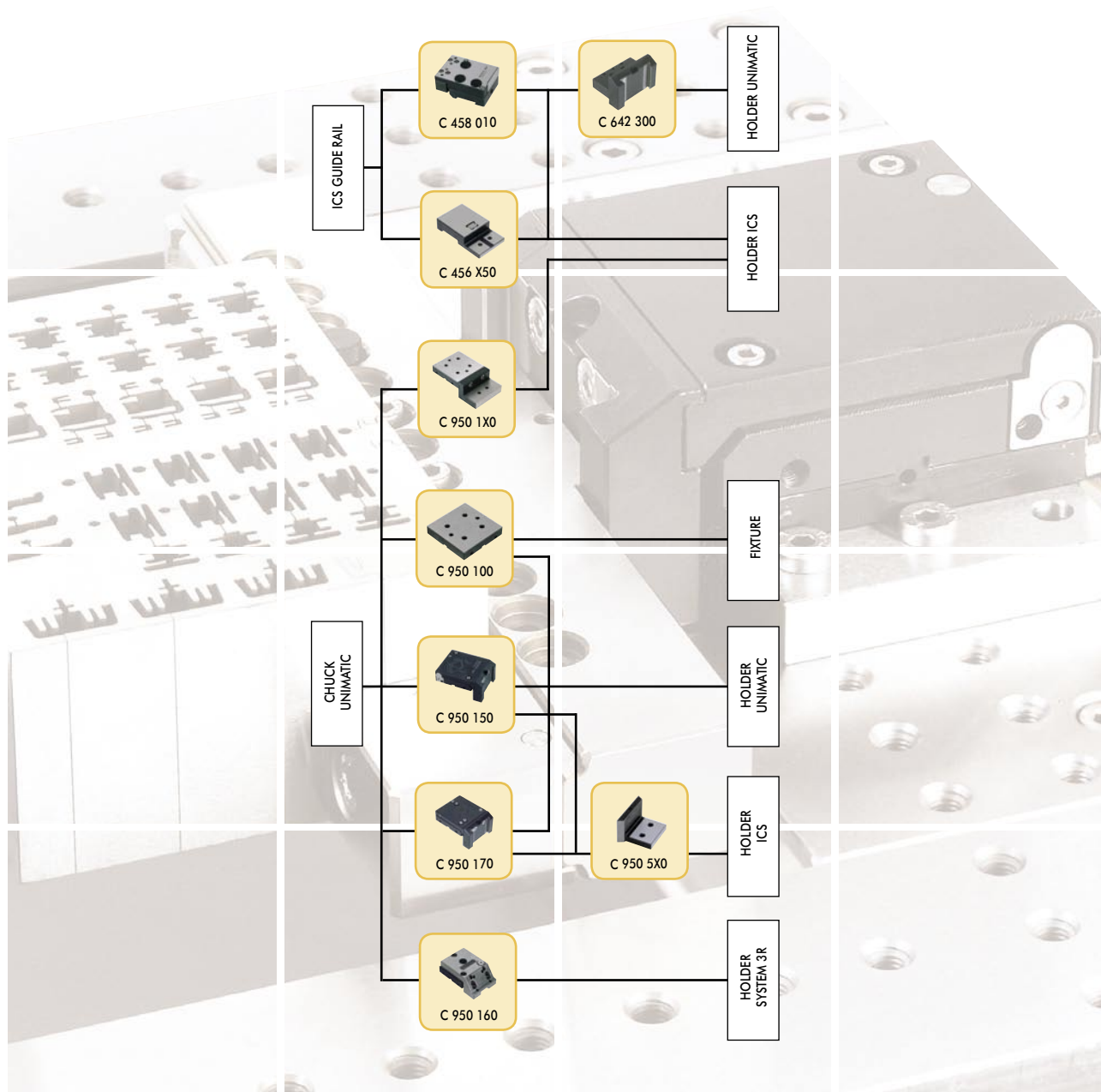
To control two pneumatic chucks.

S 190 530

To control three pneumatic chucks.

S 190 540

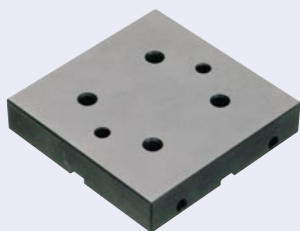




Unimatic pallet

C 950 100

For mounting accessories and fixtures in a Unimatic chuck.



Levelling pallet, Unimatic

C 950 150

For mounting in a Unimatic chuck. Adjustable in three axes within ± 1 mm.



Adjustable Unimatic pallet C 950 170

For mounting in a Unimatic chuck. Adjustable in three axes within ± 0.2 mm.



Levelling adapter, Unimatic C 950 160

For mounting System 3R holders and vices in Unimatic chucks. Adjustable in three axes within ± 0.2 mm.



Pallets, Unimatic

For mounting ICS holders in machines with Unimatic chuck on the machine table.

C 950 120

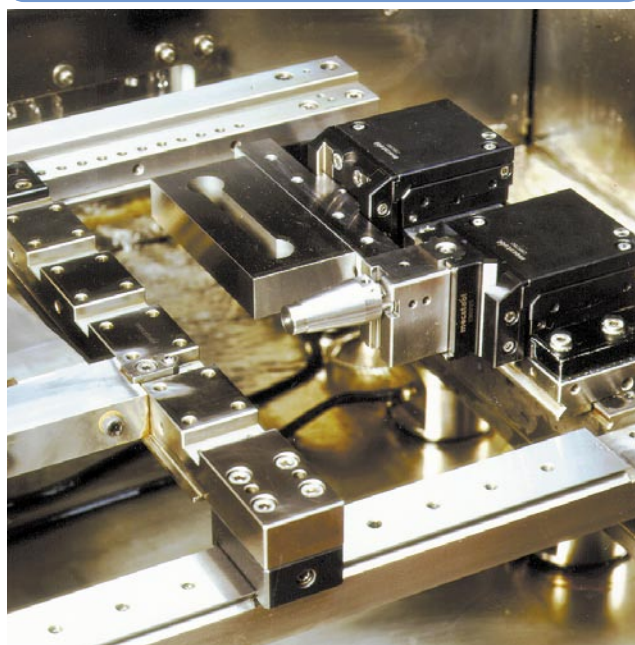
- ICS A.

C 950 130

- ICS B.

C 950 140

- ICS C.



Adapters, Unimatic

For mounting ICS holders in machines with C 950 150, C 950 160 or C 950 170.

C 950 510

- ICS A.

C 950 530

- ICS B.

C 950 550

- ICS C



Levelling adapter, ICS

C 458 010

For mounting on ICS guide rail. Adjustable in three axes within ± 1 mm.



Adapters, ICS

For mounting ICS holders in machines with ICS guide rail on the machine table.

C 456 250

- ICS A.

C 456 350

- ICS B.

C 456 450

- ICS C.



Adapter ICS B.

C 642 300

For mounting Unimatic holders in machines with ICS guide rail on the machine table.



Adapter, Unimatic

C 950 280

For mounting Unimatic holders in C 950 160.



Adapter

C 960 300

For mounting holder GPS 70 in Unimatic.



Height adapter, Unimatic

C 960 350

- Height adjustment 150 mm.



ICS A, Mecavice

C 577 250

Vice for clamping rectangular workpieces up to 70 mm.

- Height 13 mm.
- Recommended maximum workpiece weight 3 kg.



ICS B, Mecavice

C 577 350

Vice for clamping rectangular workpieces 15-150 mm.

- Height 22 mm.
- Recommended maximum workpiece weight 10 kg.

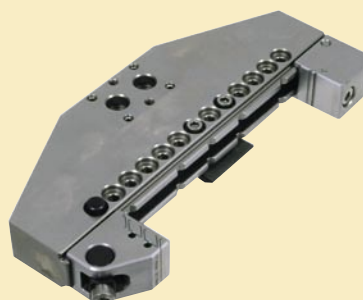


ICS B, Mecavice

C 577 370

Vice for clamping rectangular workpieces up to 175 mm.

- Height 30 mm.
- Recommended maximum workpiece weight 12 kg.



ICS B, V-block

C 596 050

Vice for clamping round workpieces 10-100 mm.

- Height 30 mm.
- Recommended maximum workpiece weight 10 kg.

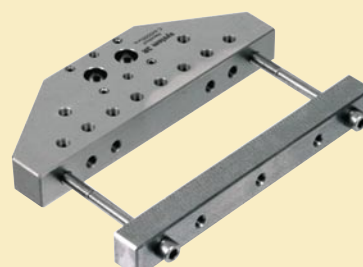


ICS B, holder

C 642 050

Holder for workpieces 26-200 mm.

- Height 26 mm.
- Recommended maximum workpiece weight 10 kg.



ICS B, vice
C 573 550

Vice for clamping rectangular workpieces up to 20 mm.
• Recommended maximum workpiece weight 6 kg.



ICS B, vice
C 574 150

Vice for clamping rectangular workpieces up to 30 mm.
• Recommended maximum workpiece weight 10 kg.



ICS B, V-blocks
C 596 650

For workpieces under 50x50 mm.

C 596 950

For workpieces under 75x75 mm.

C 597 250

For workpieces under 100x100 mm.

C 597 550

For workpieces Ø100-150 mm.



ICS B, holder
C 552 300

Holder for clamping workpieces 12-50 mm.

• Recommended maximum workpiece weight 10 kg.



ICS B, holder, right
C 552 400

Holder for clamping workpieces 12-50 mm.

• Recommended maximum workpiece weight 10 kg.



ICS B, holder, left
C 552 500

Holder for clamping workpieces 12-50 mm.

• Recommended maximum workpiece weight 10 kg.



ICS C, Mecavice C 575 600

Vice for clamping rectangular workpieces up to 100 mm.

- Height 50 mm.
- Recommended maximum workpiece weight 15 kg.



ICS C, vice C 574 550

Vice for clamping rectangular workpieces 10-40 mm.

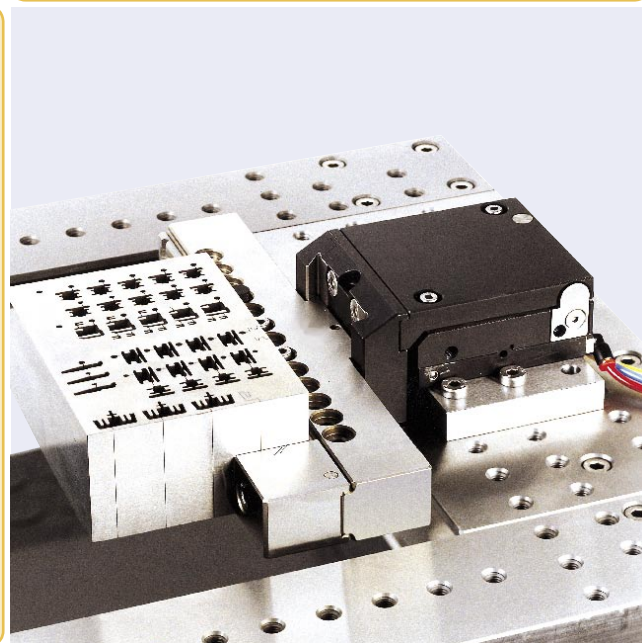
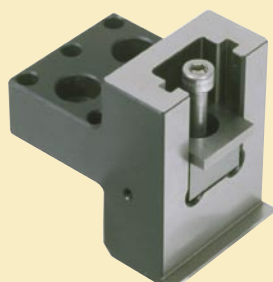
- Recommended maximum workpiece weight 12 kg.



ICS C, vice C 575 050

Vice for clamping rectangular workpieces 26-60 mm.

- Recommended maximum workpiece weight 15 kg.



ICS C, vice C 575 550

Vice for clamping rectangular workpieces 50-100 mm.

- Recommended maximum workpiece weight 15 kg.



Unimatic, vice C 960 160

Vice for clamping rectangular workpieces up to 100 mm.

- Height 50 mm.
- Recommended tightening torque 20 Nm.
- Recommended maximum workpiece weight 15 kg.

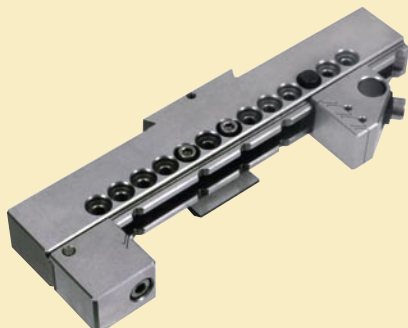


Unimatic, vice

C 960 180

Vice for clamping rectangular workpieces up to 175 mm.

- Height 30 mm.
- Recommended tightening torque 20 Nm.
- Recommended maximum workpiece weight 12 kg.



Unimatic, indexable vice

C 960 100

Vice for clamping rectangular workpieces up to 55 mm, or round workpieces 10-45 mm.

- Recommended tightening torque 9 Nm.
- Recommended maximum workpiece weight 8 kg.



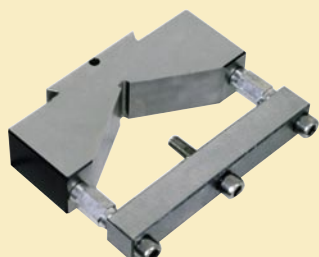
Unimatic, V-blocks

C 960 250

For workpieces Ø15-100 mm.

C 960 260

For workpieces Ø15-150 mm.



Unimatic, vices

Vice for clamping rectangular workpieces.

- Recommended tightening torque 9 Nm.

C 960 110

Clamping range 10-30 mm.

- Recommended maximum workpiece weight 12 kg.

C 960 120

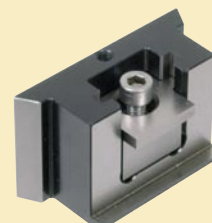
Clamping range 20-60 mm.

- Recommended maximum workpiece weight 15 kg.

C 960 130

Clamping range 40-100 mm.

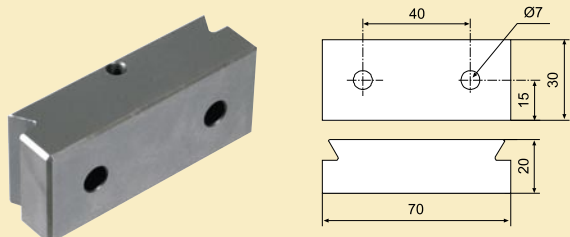
- Recommended maximum workpiece weight 15 kg.



Unimatic holder 30x70

C 960 010

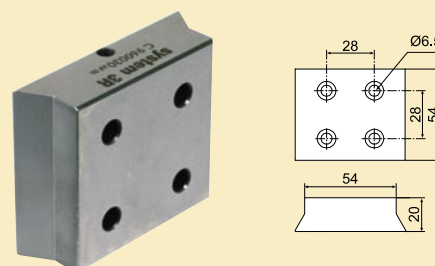
For mounting a workpiece or fixture in a Unimatic mounting head.



Unimatic holder 54x54

C 960 030

For mounting a workpiece or fixture in a Unimatic mounting head.



Single-sided rulers

C 557 XXX

The rulers, which are supplied with fixings, are available in lengths suitable for different machines.

Note: When ordering, state machine make and type.



Double-sided rulers, Mecarail

C 558 XXX

The rulers, which are supplied with fixings, are available in lengths suitable for different machines.

Note: When ordering, state machine make and type.



Vice, Mecarail

S 150 000

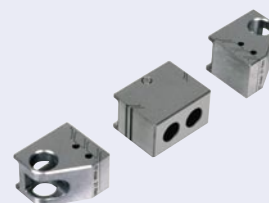
- Height 30 mm.
- Recommended maximum workpiece weight 12 kg.



Double vice, Mecarail

S 149 900

- Height 30 mm.
- Recommended maximum workpiece weight 16 kg.



Clamping element, Mecarail

C 552 600

For clamping thin workpieces (<10 mm) 4 mm above the zero line.



Clamping element, Mecarail

C 552 610

For clamping thin workpieces (<10 mm) on the zero line.



V-holder, Mecarail

C 597 560

For clamping round workpieces 20-150 mm.

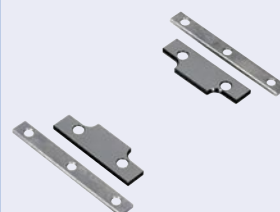
- Height 30 mm.



Spacer, 4 mm

S 150 310

For collision-free mounting of Mecatool rulers.

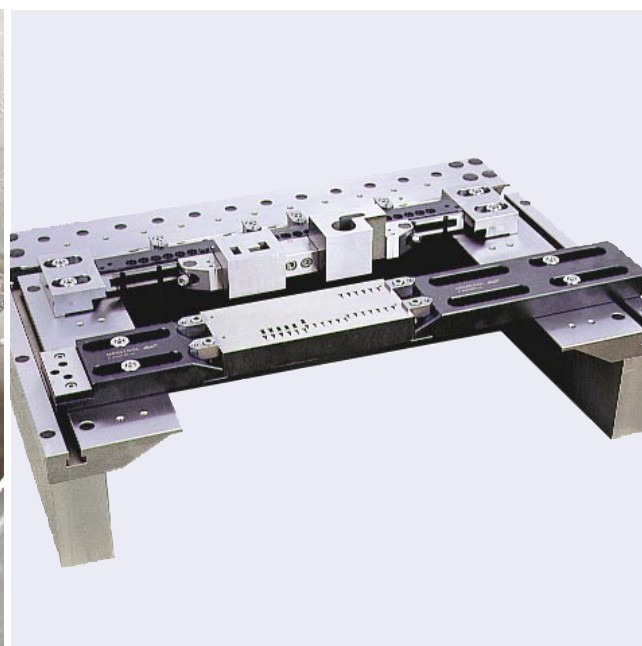
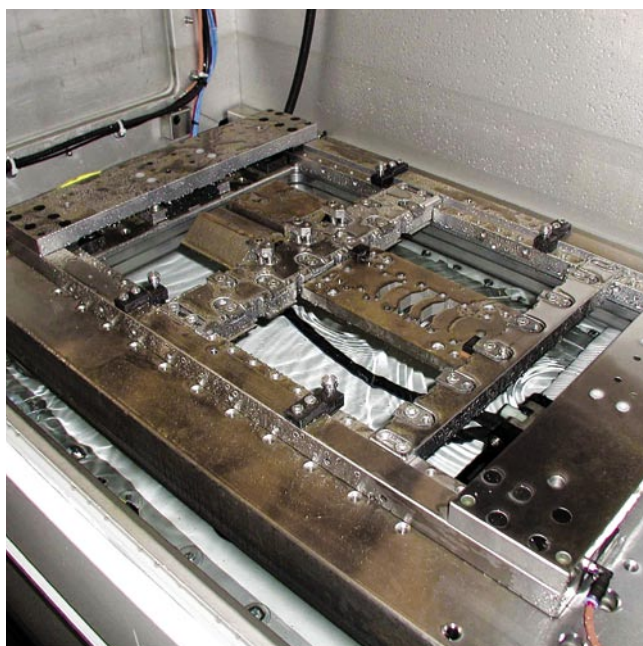
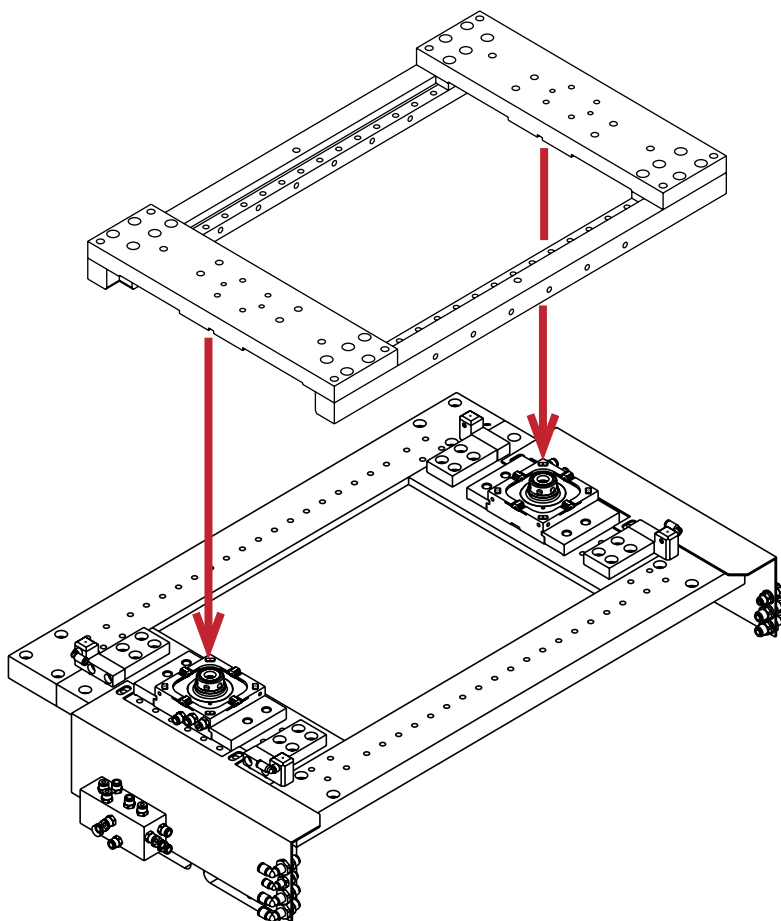


Changing frames

For manual or automatic changing in machines with Unimatic (x2) or Macro chucks (x2). Supplied with chucks, stops and pneumatic units. The size of the changing frames is matched to the machine.

Note: When ordering, state machine make and type.

Note: Not a stocked item. Manufactured to order.





Single-sided cross-rulers

The cross rulers are supplied with stops for the zero line and for +4 mm. The length of the rulers is matched to different machines.

Note: When ordering, state machine make and type.

C 917 080

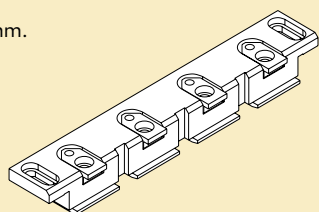
Dimensions 230 x 40 x 30 mm.

C 917 020

Dimensions 290 x 40 x 30 mm.

C 917 030

Dimensions 360 x 40 x 30 mm.



Double-sided cross rulers

The cross rulers are supplied with stops for the zero line and for +4 mm. The length of the rulers is matched to different machines.

Note: When ordering, state machine make and type.

C 917 090

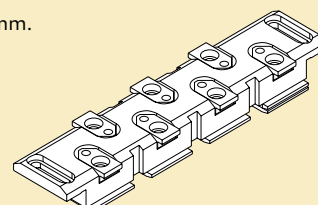
Dimensions 230 x 55 x 30 mm.

C 917 050

Dimensions 290 x 70 x 30 mm.

C 917 060

Dimensions 360 x 70 x 30 mm.



Actuator S 190 520

To control the chucks during manual changing.



Master, Unimatic C 960 450

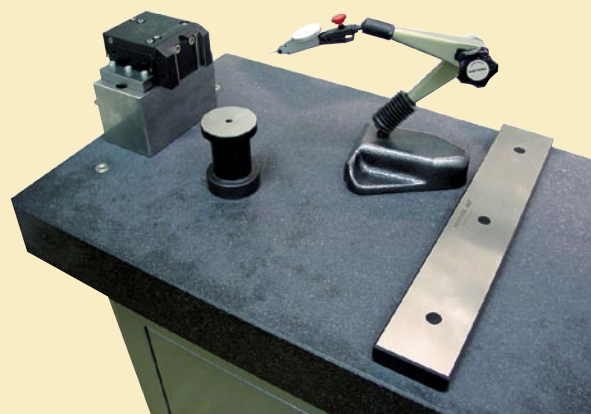
Master for horizontal Unimatic chucks. One long side ground to the Unimatic references, and ground reference holes. Reference dimension 160 mm.



Presetting station, Unimatic, horizontal S 206 200

Complete surface plate for presetting the workpieces.

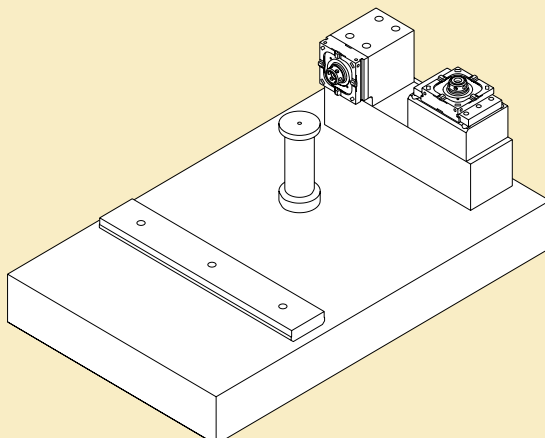
Contents	
Granite plate 100x500x800 mm	x1
Chuck, Unimatic	x1
Fixing parts, chuck,	x1
Stop ruler	x1
Inspection element, zero line	x1
Stand with dial indicator, 0.002 mm	x1
Mounting piece, chuck	x1
Actuator	x1



Presetting station Unimatic, horizontal and vertical S 206 220

Complete surface plate for presetting the workpieces.

Contents	
Granite plate 100x500x800 mm	x1
Chuck, Unimatic	x2
Fixing parts, chuck,	x2
Stop ruler	x1
Inspection element, zero line	x1
Stand with dial indicator, 0.002 mm	x1
Mounting pieces, chuck	x3
Actuator	x1



Set ICS Standard Mini

S 150 500

For mounting directly on the machine table.

Contents

C 666 020 Clamping element 300 mm	x1
C 660 040 Clamping element 180 mm	x1
N 150 000 Stop, +4 mm	x4
C 666 022 Stop, zero line	x4
S 150 350 Set of screws	x1
N 153 010 Bush M8	x6
N 153 020 Bush M6	x6
E 100 007 Set of Allen keys	x1



Clamping element

C 666 040

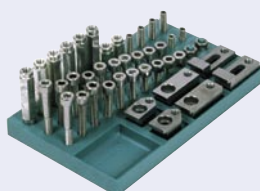
For clamping ICS B and ICS C holders directly to the machine table.



Clamping kit M8

C 860 000

For clamping workpieces to the machine table.



Clamping element

C 665 900

For clamping ICS B holders directly to the machine table. Supplied with 4 mm spacers for collision-free mounting.



Adapter plate

C 665 200

For mounting a workpiece or a fixture on the zero line on an ICS beam. Dimensions 70x118x22 mm.



Adapter plate

C 665 400

For mounting a workpiece or a fixture on the zero line on an ICS beam. Dimensions 110x118x22 mm.

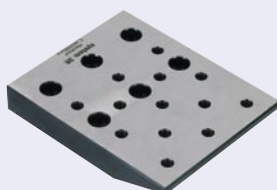


Adapter plate

C 665 500

For mounting a workpiece or a fixture on the zero line on an ICS beam.

Dimensions 145x118x22 mm.



Rectangular magnets

To secure a cut-out part. Transverse pin for wire positioning.

C 844 000

Medium-strong
Dimensions 8x12x55 mm

C 844 100

Strong
Dimensions 8x18x55 mm

C 844 200

Extra strong
Dimensions 8x30x55 mm

C 844 300

Medium-strong
Dimensions 8x12x30 mm



Circular magnets

To secure a cut-out part.

C 868 000

Medium-strong
Dimensions Ø20x8 mm.

C 868 100

Strong
Dimensions Ø28x8 mm.



Today, the reality confronting manufacturing industry is different from the reality that confronted it only a few years ago. Customers are demanding ever shorter deliveries. Production runs are getting shorter. Products need to be more accurate. Prices are steadily falling. Competition is becoming more and more global.

All these demands must be met with increased flexibility, increased quality and increased productivity. In the long term there is only one viable solution – automation!

Automation means that the skilled workers in the workshop can concentrate on stimulating work which makes demands on their professional skill and can forget about monotonous routine tasks. Automation keeps production going every day of the week and every hour of the day.

Enhanced quality assurance.

You can opt for simple auto-changing of pallets in the same machine. Or auto-changing of workpieces or tools between, for instance, a wire EDM machine and a grinding machine. You can choose to automate only a part of the production line. Or all of it. Whichever approach you choose, it will be a far-sighted investment.

Whatever the degree of automation, 3R automation systems are always user-friendly. Operator errors become rarer. Leading to less stress and better quality assurance.

3R-6.46.....	39	3R-239.20.....	31	3R-494-D16x50	25
3R-6.400-S	39	3R-239.22.....	32	3R-494-D22x50	25
3R-6.600-S	39	3R-239.24.....	32	3R-494-D26x50	25
3R-200.XJX.....	6	3R-242HP	37	3R-494-D32x50	25
3R-200.1J-U.....	6	3R-242.82HP	37	3R-494-D40x50	25
3R-200.1J-62	42	3R-243J	37	3R-494-D50x50	25
3R-200.2J-62	42	3R-243.2-1	37	3R-494-S12x50	25
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3R-203.....	26	3R-262HP	12	3R-494-32x22x50	25
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3R-215.....	36	3R-272HP	12	3R-602.10.....	6
3R-216.....	35	3R-282.12HP	12	3R-602.10HP	6
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3R-217-1	21	3R-292.3.....	15	3R-602.27.....	7
3R-218/10	33	3R-292.3S.....	16	3R-602.27-1	21
3R-218/13	33	3R-292.6HP	15	3R-602.44.....	7
3R-218/20	33	3R-292.6S.....	15	3R-605.1RS.....	8, 38
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3R-220.1.....	36	3R-292.31.....	15	3R-605.27RS.....	8, 23, 38
3R-220.3.....	36	3R-292.61HP	16	3R-605-GE.....	39
3R-220.4.....	36	3R-292.66HP	18	3R-606.2.....	36
3R-222.2.....	23	3R-292.92.....	15	3R-611.2.....	8
3R-222.6.....	23	3R-293.3.....	16	3R-611.41.....	8, 36
3R-223.....	27	3R-293.33.....	16	3R-611.44.....	8
3R-223.3.....	27	3R-293.6HP	16	3R-613.4.....	24
3R-224.....	27	3R-293.66HP	16	3R-622.2.....	21
3R-225.....	8	3R-294.....	18	3R-622.6.....	21
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3R-226.6.....	27	3R-294.4.....	17	3R-914.07.....	39
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3R-228S.....	35	3R-294.6.....	18, 32	3R-914.10L.....	39
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3R-239C.....	19	3R-414.04.....	39	3R-SP6435	23
3R-239-XXX.....	29	3R-422.2.....	21	3R-SSP014	39
3R-239-XXX-10.....	30	3R-422.2.9.....	22	3R-SSP044	39
3R-239-XXX-D.....	30	3R-422.6.....	22	C 170 XXX.....	43
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