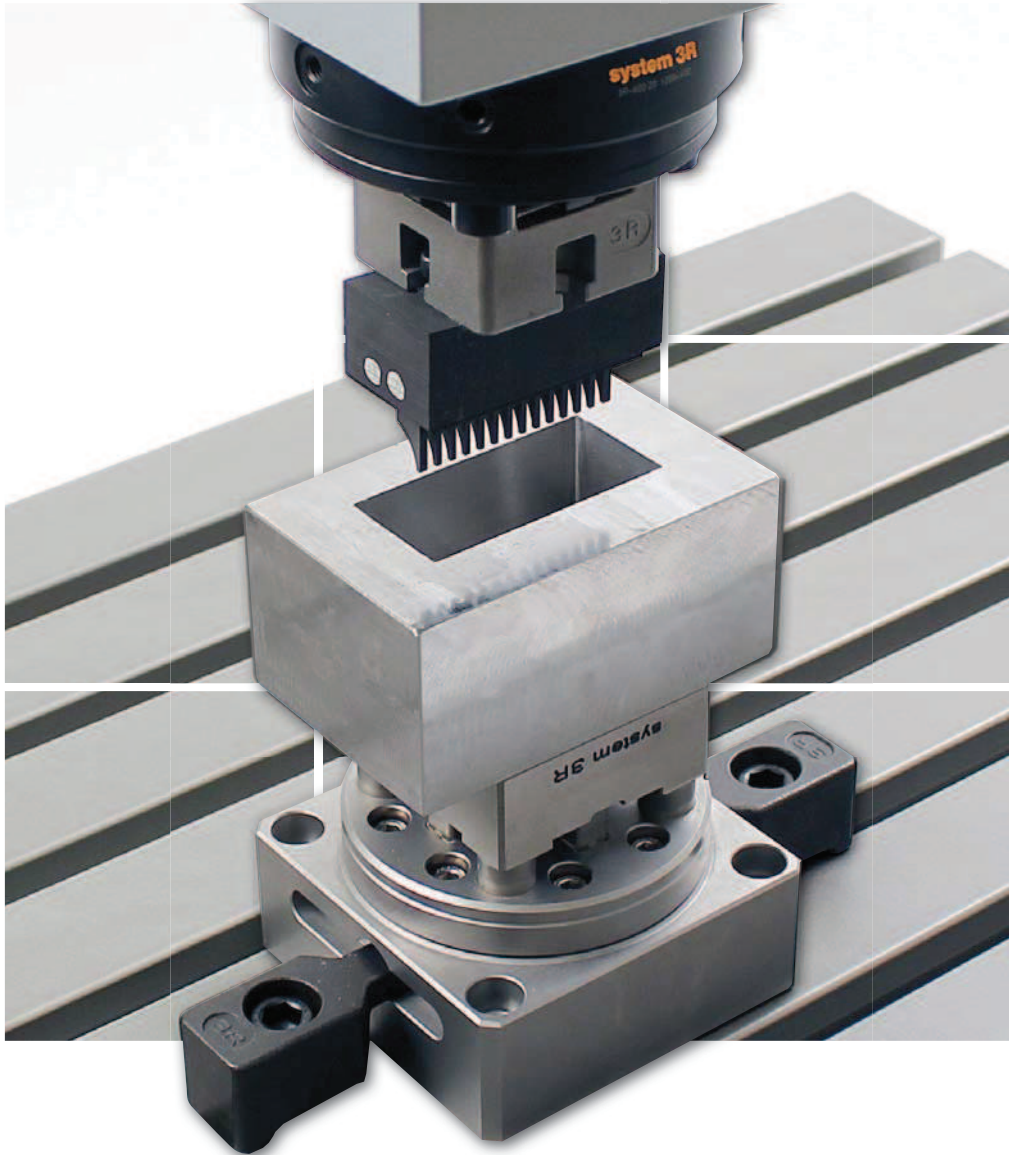
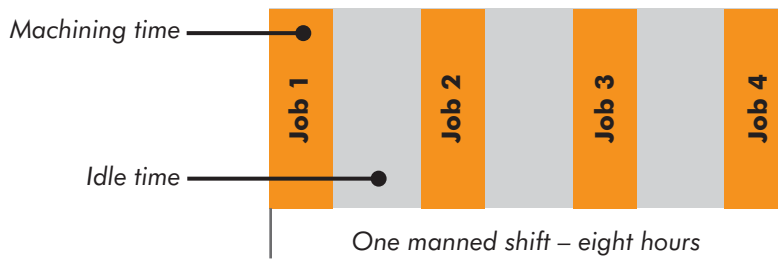


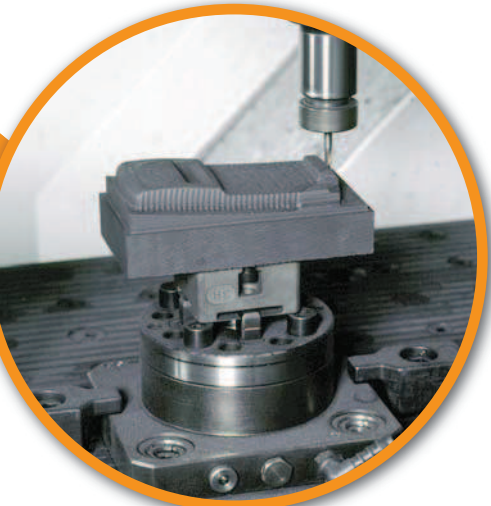
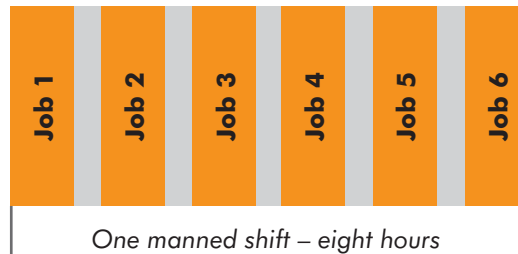
Reference systems for electrode manufacturing & EDMing



Conventional setting-up



Pallet system



Higher productivity, calculation example:

	Conventional setting-up	Pallet system
Working time per day	8	8
Setting-up time per day (hours)	-4	-0.5
Spindle time per day	=4	=7.5
Working days per week	x5	x5
Spindle time per week	= 20	=37.5

Faster payback, calculation example:

	Conventional setting-up	Pallet system
Hourly invoicing (€)	50	50
Spindle time / week (hours)	x20	x37.5
Revenue / week (€)	=1 000	=1 875
Capital cost of machine (€)	150 000	150 000
Capital cost pallet system (€)	0	+10 000
Total capital outlay (€)	=150 000	=160 000
Paybacktime (weeks)	150	85



A reference system minimises setup times

Every minute that can be converted from internal to external setting time increases the spindle time of the machine and with it the productivity of the business.

Big earnings are within your reach

The machine generates revenue when its spindle is turning – and only then.

Work smarter, not harder.

From small to large

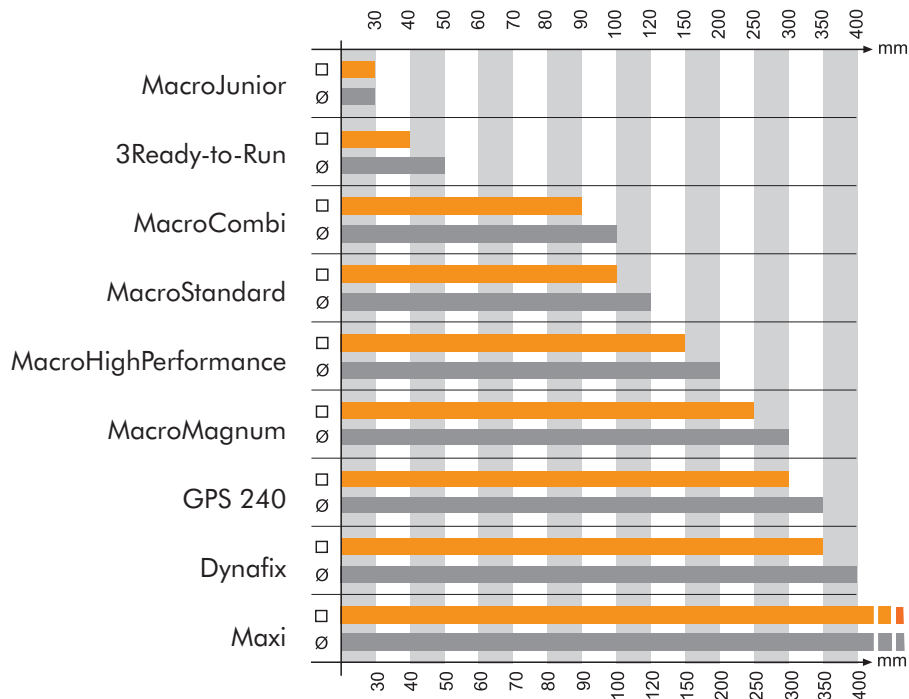
The engineering industry is complex. Every company is unique in terms of type of production, machinery, capacity etc.

To satisfy all these different requirements, System 3R has developed reference systems of exceptional flexibility.

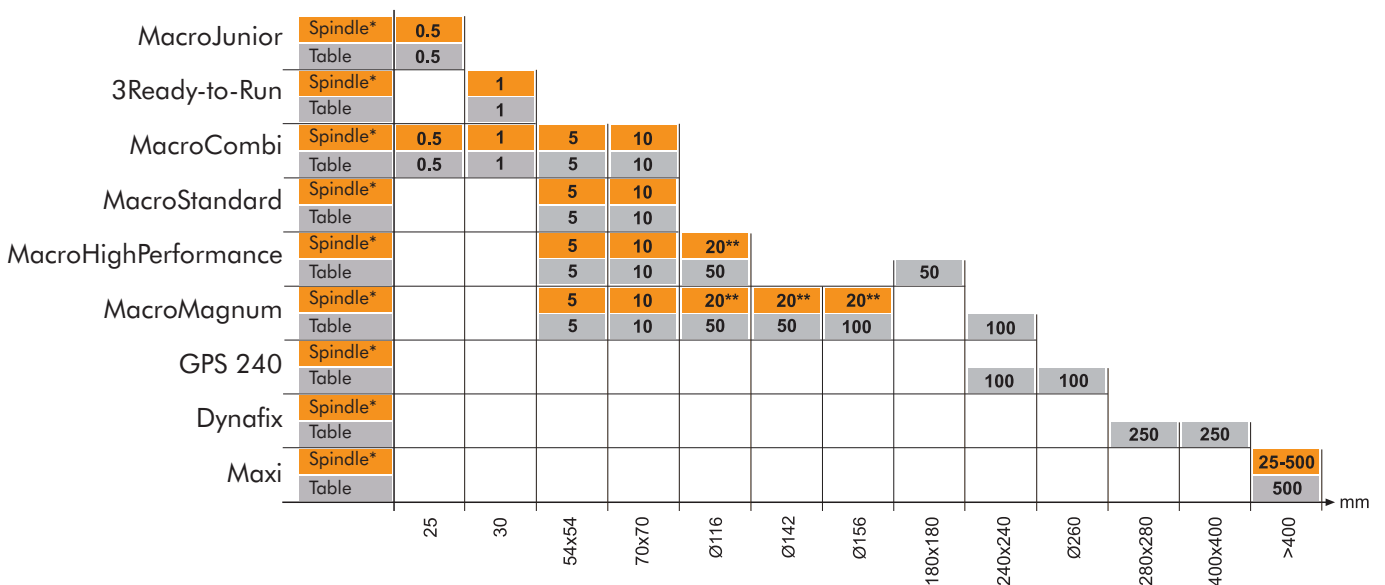
For every size of pallet there is a "recommended"

maximum workpiece size. However, this should only be regarded as a guide, since the size of the workpiece relative to the pallet depends above all on the material and the type of machining.

Maximum size of workpiece or electrode, square or round / mm



Maximum weight of workpiece or electrode, spindle chuck or table chuck / kg



* Die-sinking EDM spindle

** With automatic changing

GPS 240

- ... Seal protects the reference surfaces from dirt
- ... High locking force
- ... Inexpensive, lightweight pallets
- ... A lifting mechanism protects the references when loading heavy workpieces

The machining zero point is defined

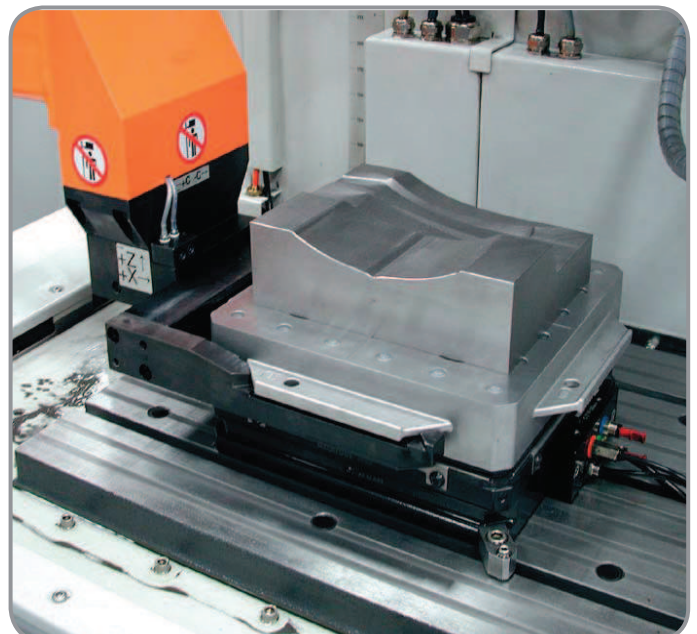
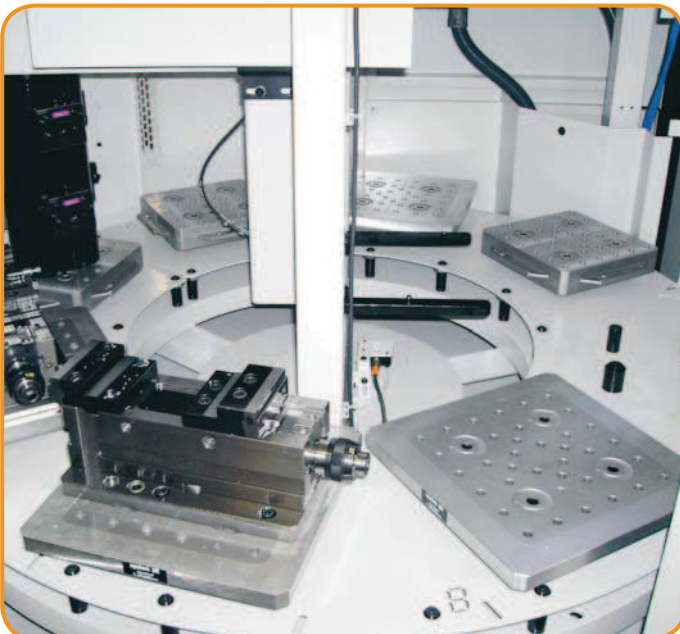
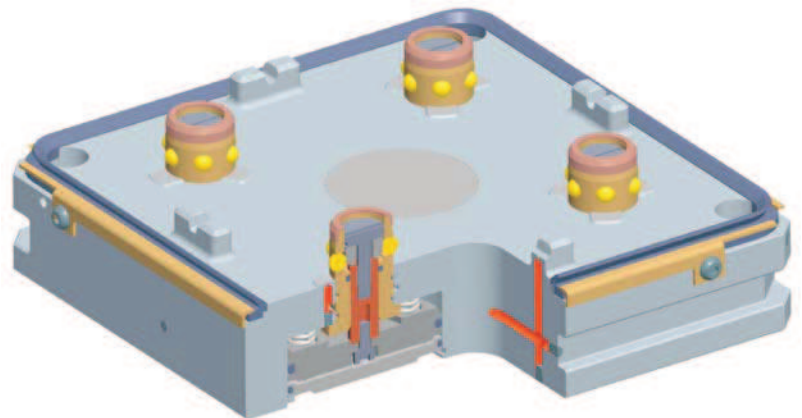
by the centre of the chuck in the GPS 240 system. The chuck can be mounted on the machine table of any machine tool.

The standardised hole pattern of the pallet allows the fixation of workpieces, fixtures and accessories such as vices, three-jaw chucks and magnetic tables from below. This gives collision-free mounting, even with five-sided machining.

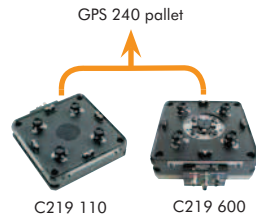
The economical, pressure-die-cast aluminium pallets are very light, making them also suitable for manual handling. Naturally the GPS 240 is also suitable for automatic changing.

The chuck seal prevents dirt penetrating between the chuck and the pallet. This simplifies maintenance and lengthens the life of the components. A lifting mechanism which operates on locking/opening protects the references when loading heavy workpieces.

- Repetition accuracy: 0.002 mm
- Clamping force: 30000 N
(with force boost: 80000 N)
- Indexing accuracy: 0.005 mm



GPS 240 – Chucks

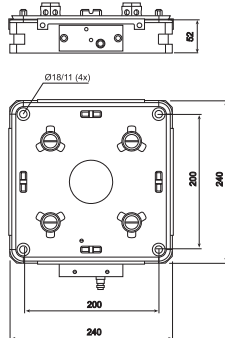
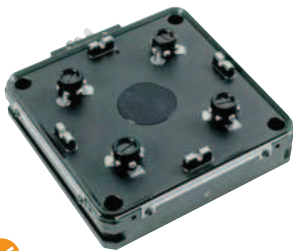


Chucks	Article number	Image	Feature
Automatic/manual	C219 110		
Automatic/manual	C219 600		Built-in Macro

GPS 240 Pneumatic chuck C219 110

Pneumatic table chuck, mainly intended for applications in die-sinking EDM machines.

- Required air pressure 6 bar
- Recommended actuator C810 830
- Air-blast cleaning of the references
- Weight 17 kg

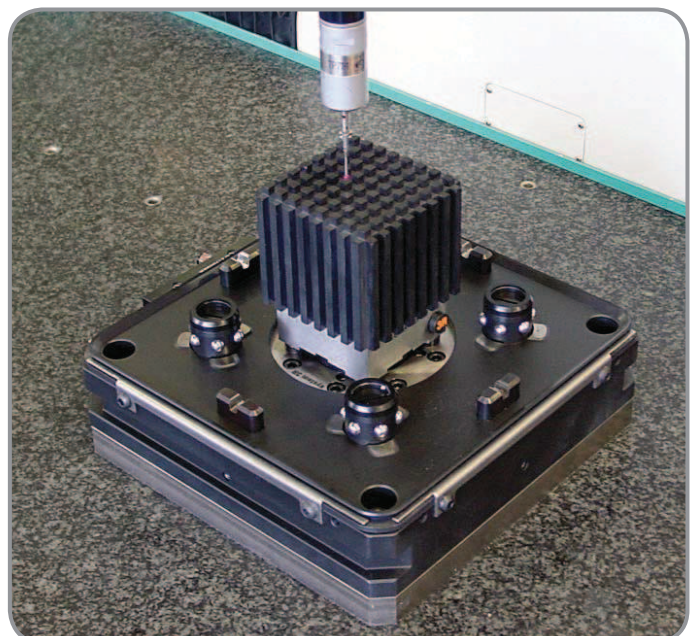
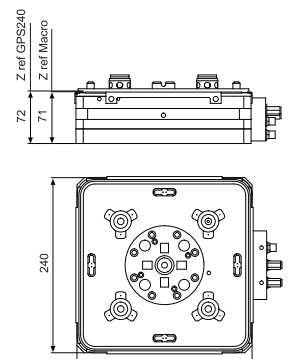


GPS 240 Pneumatic chuck C219 600

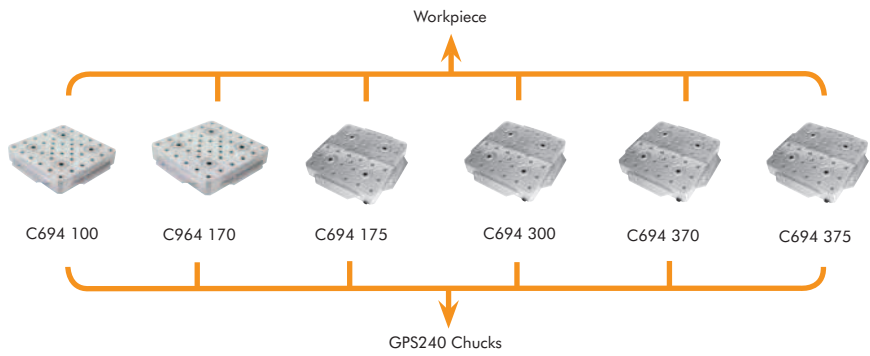
Pneumatic chuck with built-in Macro chuck. Intended for measuring machines.

NOTE: In addition, the following pallets can be mounted in GPS240 by means of C219 600:
Macro 54x54 mm and Macro 70x70 mm

- Required air pressure 6 bar
- Recommended actuator C810 810
- Air-blast cleaning of the references
- Weight 22 kg

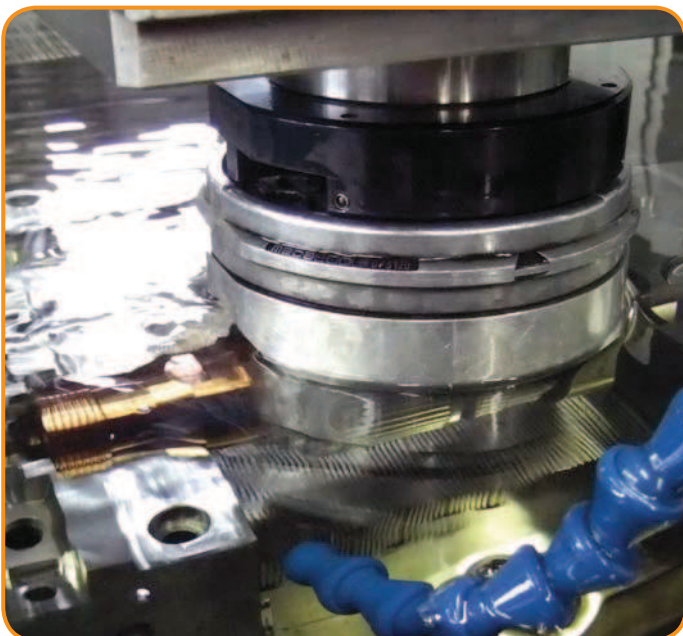


GPS 240 – Pallets



Pallets	Article number	Feature
Aluminium	C694 100	Set of 4x C694 100
Aluminium	S500 090	
Aluminium	S500 100	Set of 10x C694 100
Aluminium	C694 170	
Aluminium	S500 091	Prepared for automation
Aluminium	S500 101	
Aluminium	C694 175	Set of 4x C694 170
Aluminium	S500 092	
Aluminium	S500 102	Set of 10x C694 170
Aluminium ground	C694 300	
Aluminium ground	C694 370	Ready for automation
Aluminium ground	C694 375	

☉ Pallet with spring-loaded pin

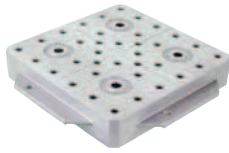


GPS 240 – Pallets

GPS 240 Palett EDM/Grinding C694 100

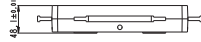
Cast aluminium pallet for EDM and grinding.

- Construction height 48.1 ± 0.01 mm
- X/Y-centring with spring-loaded pin
- Flatness 0.02 mm
- Weight 4 kg
- Recommended workpiece weight 100 kg
- Supplied with sealing plugs C531 500



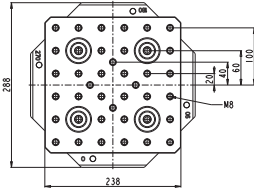
S500 090

- C694 100, Set of 4 pcs.



S500 100

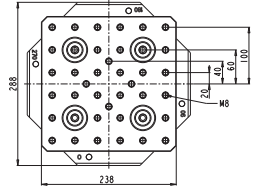
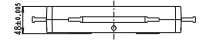
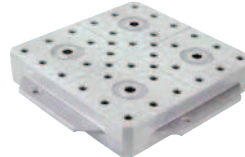
- C694 100, Set of 10 pcs.



GPS 240 Palett Adaptation C694 300

Ground cast aluminium pallet for fixtures and accessories.

- Construction height 48.0 ± 0.005 mm
- X/Y-centring with spring-loaded pin
- Flatness 0.01 mm
- Weight 4 kg
- Recommended workpiece weight 100 kg
- Supplied with sealing plugs C531 500



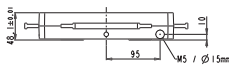
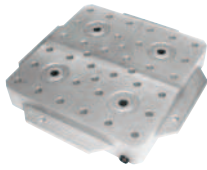
GPS 240 Palett EDM/Grinding Prepared for automation, C694 170

Cast aluminium pallet for EDM and grinding.

Prepared for automation.

Supplied with code carrier mounting, but without code carrier.

- Construction height 48.1 ± 0.01 mm
- X/Y-centring with spring-loaded pin
- Flatness 0.02 mm
- Weight 4 kg
- Recommended workpiece weight 100 kg
- Supplied with sealing plugs C531 500 and code carrier mounting C960 770

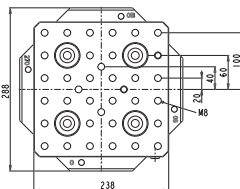


S500 091

- C694 170, set of 4 pcs.

S500 101

- C694 170, set of 10 pcs.

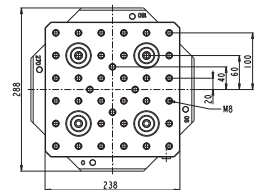
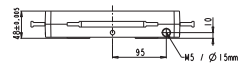
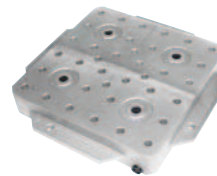


GPS 240 Palett Adaptation Prepared for automation C694 370

Ground cast aluminium pallet for fixtures and accessories.

Prepared for automation. Supplied with code carrier mounting, but without code carrier.

- Construction height 48.0 ± 0.005 mm
- X/Y-centring with spring-loaded pin
- Flatness 0.01 mm
- Weight 4 kg
- Recommended workpiece weight 100 kg
- Supplied with sealing plugs C531 500 and code carrier mounting C960 770

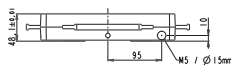
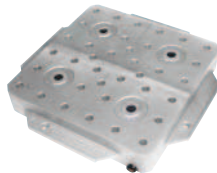


GPS 240 Palett EDM/Grinding Ready for use of automation, C694 175

Cast aluminium pallet for EDM and grinding. Ready for automation.

Supplied complete with code carrier.

- Construction height 48.1 ± 0.01 mm
- X/Y-centring with spring-loaded pin
- Flatness 0.02 mm
- Weight 4 kg
- Recommended workpiece weight 100 kg
- Supplied with sealing plugs C531 500, code carrier mounting C960 770 and code carrier 3R-863.01

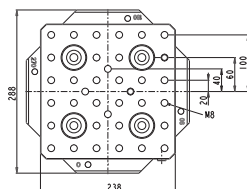


S500 092

- C694 175, set of 4 pcs.

S500 102

- C694 175, set of 10 pcs.

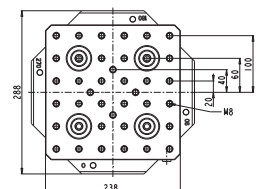
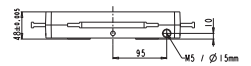
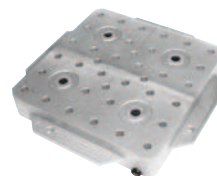


GPS 240 Palett Adaptation Ready for use of automation, C694 375

Ground cast aluminium pallet for fixtures and accessories.

Ready for automation. Supplied complete with code carrier.

- Construction height 48.0 ± 0.005 mm
- X/Y-centring with spring-loaded pin
- Flatness 0.01 mm
- Weight 4 kg
- Recommended workpiece weight 100 kg
- Supplied with sealing plugs C531 500, code carrier mounting C960 770 and code carrier 3R-863.01.



GPS 240 – Pallets & Accessories

GPS 240 Pallet with built-in Macro chuck C522 520

Adapter to accept Macro pallets.

- Material: aluminium/steel
- Weight 8.5 kg



GPS 240 Pallets with vice C585 400

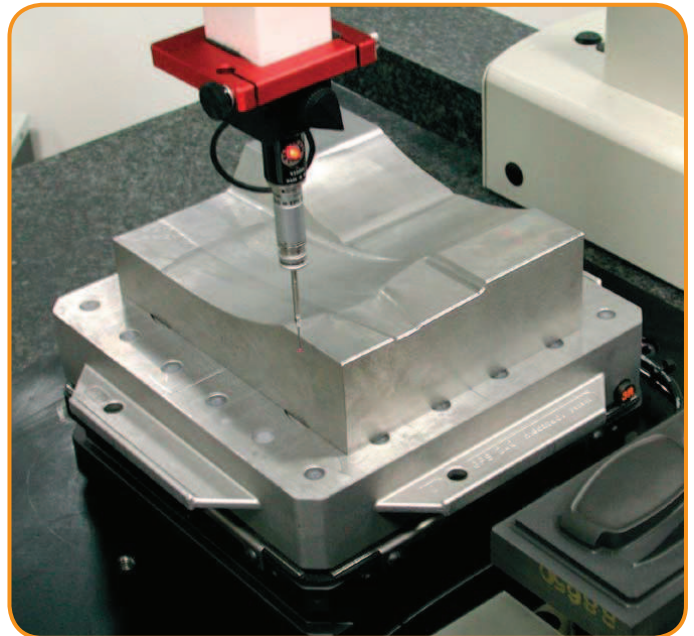
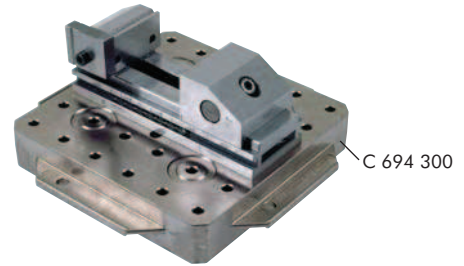
Vice for workpieces <80 mm.

- X/Y-centring with spring-loaded pin

C585 600

Vice for workpieces <120 mm.

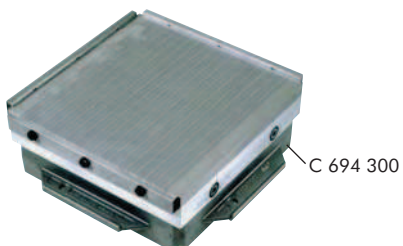
- X/Y-centring with spring-loaded pin



GPS 240 Magnetic pallet C694 260

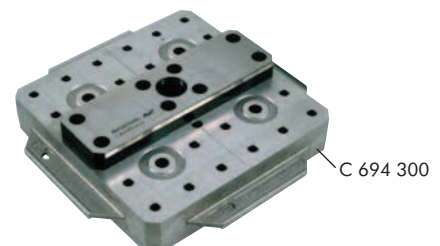
High-precision magnetic pallet for grinding work and for erode.

- Magnetic field height 5 mm
- Clamping force 100 N/cm²
- 240x240 mm
- Weight 23 kg



GPS 240 Master pallet C846 600

The pallet has a ground reference ruler and a ground indication hole for alignment of chucks.

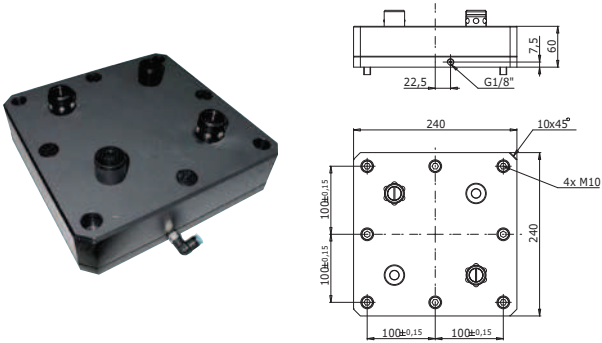


GPS 240 – Accessories

GPS 240 Dummy chuck C210 060

Dummy chuck for locking a pallet in a draining or loading station.

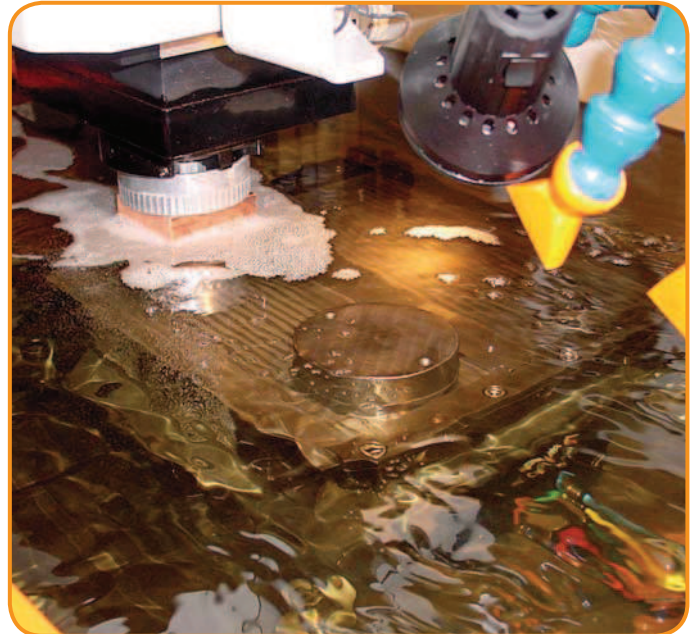
- Required air pressure 6 bar
- Weight 9.5 kg



Draining station C210 050

Drains out swarf and liquid when the dummy chuck is tipped.

- Supplied without dummy chuck
- Dimensions 820x605x1310 mm
- Weight 80 kg



Controllers

C810 830

Controller for pneumatic chuck C219 110.

- Four connections - X/Y-locating – air-blast cleaning of Z – open/lock – turbo/venting

C810 850

Controller for 2 pneumatic chucks C219 110.

- Five connections - X/Y-locating – air-blast cleaning of Z – open/lock – turbo/venting – evacuation hose

C810 810

- Six connections - X/Y-locating – air-blast cleaning of Z
 - open/lock – turbo/venting
 - Macro open/lock – Macro air-blast cleaning of Z / turbo



GPS 240 – User kits & Accessories

Clamp kit, C810 870

Contents

E030 220 clamp (x4)
 E010 144 washer M10 (x4)
 E010 143 washer M8 (x4)
 E000 428 Allen screw M10x45 (x4)
 E000 354 Allen screw M8x45 (x4)
 E040 030* T-slot nut M10x12 (x4)
 E040 031* T-slot nut M10x14 (x4)
 E040 032* T-slot nut M10x16 (x4)
 E040 033* T-slot nut M10x18 (x4)
 E040 020* T-slot nut M8x12 (x4)
 E040 021* T-slot nut M8x14 (x4)
 E040 022* T-slot nut M8x16 (x4)
 E040 023* T-slot nut M8x18 (x4)



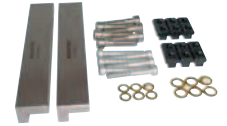
* When ordering, state the required dimension of the T-slot nut.



Clamp strip kit, C810 880

Contents

C810 881 clamp strip (x2)
 E010 144 washer M10 (x4)
 E010 143 washer M8 (x4)
 E000 428 Allen screw M10x45 (x4)
 E000 354 Allen screw M8x45 (x4)
 E040 030* T-slot nut M10x12 (x4)
 E040 031* T-slot nut M10x14 (x4)
 E040 032* T-slot nut M10x16 (x4)
 E040 033* T-slot nut M10x18 (x4)
 E040 020* T-slot nut M8x12 (x4)
 E040 021* T-slot nut M8x14 (x4)
 E040 022* T-slot nut M8x16 (x4)
 E040 023* T-slot nut M8x18 (x4)



* When ordering, state the required dimension of the T-slot nut.

Note: The holes in the clamp strips are drilled in accordance with the customer's requirements stated when ordering.



Clamp strip kit for double mounting, C810 920

For mounting two chucks on 300 mm centres.

Contents

C810 921 undrilled spacer (x1)
 C810 881 clamp strip (x2)
 E010 144 washer M10 (x6)
 E010 143 washer M8 (x6)
 E000 428 Allen screw M10x45 (x6)
 E000 354 Allen screw M8x45 (x6)
 E040 030* T-slot nut M10x12 (x6)
 E040 031* T-slot nut M10x14 (x6)
 E040 032* T-slot nut M10x16 (x6)
 E040 033* T-slot nut M10x18 (x6)
 E040 020* T-slot nut M8x12 (x6)
 E040 021* T-slot nut M8x14 (x6)
 E040 022* T-slot nut M8x16 (x6)
 E040 023* T-slot nut M8x18 (x6)



* When ordering, state the required dimension of the T-slot nut.

Note: The holes in the clamp strips are drilled in accordance with the customer's requirements stated when ordering.

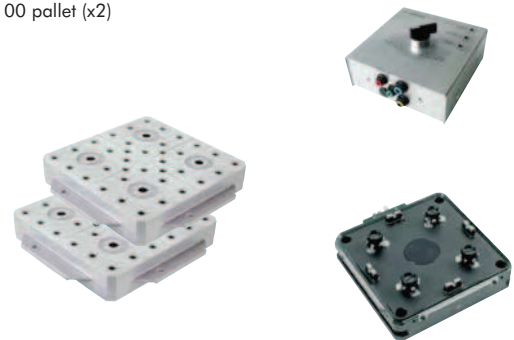


GPS 240 Starter kit S500 650

With a permanent compressed air supply a clamping force of 80000 N can be obtained.

Contents

C219 110 pneumatic chuck
 C810 830 actuator
 C694 100 pallet (x2)



Code carriers 3R-863.01

With pre-programmed unique identity, designed for GPS240.

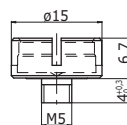
3R-863.01-10

Sets of 10 pcs.



Code carrier, fixture C960 740

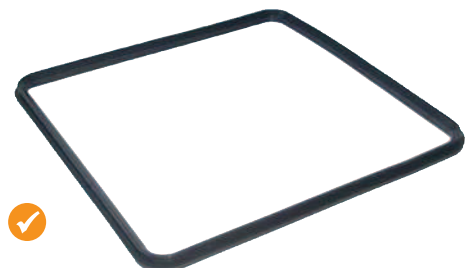
Fixture for code carrier
3R-863.01-10.



Sealing C219 007

The chuck seal is a wear part which should be replaced once a year.

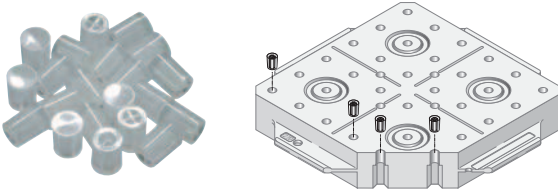
- Material: Viton
- Supplied singly



GPS 240 – Accessories

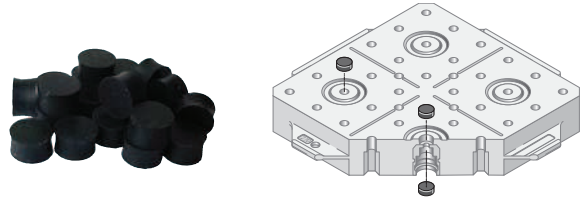
Sealing plugs C531 500

Plugs for sealing GPS 240 pallets.
• Supplied in sets of 40 pcs.



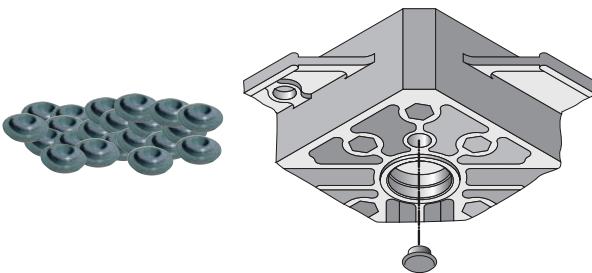
Seals C531 250

To seal the holes in the four clamping elements of the pallet.
• Material: elastomer
• Supplied in sets of 20 pcs.



Reference protectors C531 210

To protect the Z-reference of the pallet.
• Supplied only in sets of 20 (E020 897)



Lifting grip C810 960

Lifting gear for handling 240x240 mm pallets.
• Weight 2.9 kg



Presetting station C810 650

For alignment of workpieces on GPS 240 pallets.
• Parallelism 0.005 mm
• Required air pressure 6 ± 1 bar.
• Supplied with dial indicator, dial indicator holder and actuator.

