... reduces setting-up times.
... ensures precision and quality.
... is sealed against dirt and swarf.
... has lightweight pallets.
... suitable for automatic changing with System 3R’s automation program.

The machining zero point is defined by the centre of the chuck in the GPS 240 system.
The system is made for universal use and can be used in all kinds of applications milling, turning, grinding, EDM and measuring.
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.
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.
Their standardised hole pattern of the pressure-die-cast aluminium pallets allows the fixation of workpieces, fixtures and accessories such as vices, three-jaw chucks and magnetic tables directly on the pallet from below. This gives collision-free mounting, even with five-sided machining.
+ Repetition accuracy – within 0.002 mm
+ Indexing accuracy – within 0.005 mm
+ Locking force – 30 000 N (with force boost 60 000 N)
+ Fixed index positions – 4x90°
+ Required air pressure, pneumatic chuck – 6 bar
+ Recommended max workpiece weight – 150 kg
Die-cast aluminium pallets with standardised hole pattern or solid aluminium pallets.

The Z-references are air-blast cleaned, through nozzels in the Z-references of the chuck.

Clamping mechanism with spring clamping force by springs and clamping with balls.

Hardened chuck body with prisms for X/Y centring made out of the piece for maximum stability. Indexing 4x90°.

Connection bloc.

Seal for a completely sealed chuck-pallet interface against dirt and swarf.

Spring loaded clamping mechanism. Releasing by air.

Pallet with handles for manual pallet handling or automated pallet change by robot.

Die-cast aluminium pallets with standardised hole pattern or solid aluminium pallets.

Hardened chuck body with prisms for X/Y centring made out of the piece for maximum stability. Indexing 4x90°.

Connection bloc.

Seal for a completely sealed chuck-pallet interface against dirt and swarf.

Spring loaded clamping mechanism. Releasing by air.

Pallet with handles for manual pallet handling or automated pallet change by robot.
### Chucks square

<table>
<thead>
<tr>
<th>Art. No.</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>C 219 000</td>
<td>Pneumatic manual for manual machining operations</td>
</tr>
<tr>
<td>C 219 100</td>
<td>Pneumatic automatic/manual for manual and automatic machining operations</td>
</tr>
<tr>
<td>C 219 200</td>
<td>Pneumatic automatic/manual connection from below</td>
</tr>
<tr>
<td>C 219 600</td>
<td>Pneumatic automatic/manual built-in pneumatic Macro chuck</td>
</tr>
<tr>
<td>C 219 800</td>
<td>Pneumatic automatic/manual connection from below, air dock 2-fold</td>
</tr>
<tr>
<td>C 210 060</td>
<td>Pneumatic automatic/manual dummy chuck</td>
</tr>
</tbody>
</table>

### Chucks round

<table>
<thead>
<tr>
<th>Art. No.</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>C 217 100</td>
<td>Pneumatic manual through hole Ø54mm</td>
</tr>
</tbody>
</table>

### Pallets square

<table>
<thead>
<tr>
<th>Art. No.</th>
<th>Feature</th>
<th>Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C 694 100</td>
<td>Cast aluminium</td>
<td>240x240</td>
</tr>
<tr>
<td>C 694 300</td>
<td>Cast aluminium ground</td>
<td>240x240</td>
</tr>
<tr>
<td>C 694 400</td>
<td>Cast aluminium</td>
<td>240x240</td>
</tr>
<tr>
<td>C 694 610</td>
<td>Solid aluminium</td>
<td>240x240</td>
</tr>
<tr>
<td>C 694 640</td>
<td>Solid aluminium</td>
<td>300x300</td>
</tr>
<tr>
<td>C 694 810</td>
<td>Solid aluminium ground</td>
<td>240x240</td>
</tr>
</tbody>
</table>

### Pallets round

<table>
<thead>
<tr>
<th>Art. No.</th>
<th>Feature</th>
<th>Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C 694 450</td>
<td>Cast aluminium</td>
<td>Ø256</td>
</tr>
<tr>
<td>C 694 650</td>
<td>Solid aluminium</td>
<td>Ø256</td>
</tr>
<tr>
<td>C 697 100</td>
<td>Solid aluminium ground</td>
<td>Ø256</td>
</tr>
</tbody>
</table>

- Pallet with coined cams
- Pallet with spring-loaded pin
- Pallet with springy hardened cams
GPS 240 – Chucks

**GPS 240 Chucks**
- Built-up height 52 mm
- Required air pressure 6 bar
- Air-blast cleaning of the references
- Weight 17 kg.

**C 219 000**
For manual machining operations.
- One air connection
- Clamping force 30 000 N
- Recommended actuator C 810 820 or C 810 710.

**C 219 100**
For manual and automatic machining operations.
- 5 air connections
- Clamping force 30 000 N/60 000 N
- Recommended actuator C 810 830.

**GPS 240 Chuck automatic, C 219 200**
For manual and automatic machining operations.
- Built-up height 52 mm
- Air connections positioned centrally on the bottom
  - prism – air-blast cleaning of Z-references – clamping/releasing – Turbo/ventilation
- Clamping force 30 000 N/60 000 N
- Weight 17 kg.

**GPS 240 Chuck automatic with air dock, C 219 800**
For manual and automatic machining operations.
- Built-up height 52 mm
- Air connections positioned centrally on the underside
  - prism – air-blast cleaning of Z-references – clamping/releasing – Turbo/ventilation
- Air dock: 2-fold, pneumatic 6 bar
- Clamping force 30 000 N/60 000 N
- Weight 17 kg.
GPS 240 – Chucks

**GPS 240 Dummy chuck, C 210 060**
Dummy chuck for clamping a GPS 240 pallet on a exchange or draining station.
- Required air pressure 6 bar
- Weight 9.5 kg.

**GPS 240 Chuck manual round with hole Ø54 mm, C 217 100**
Pneumatic chuck for applications in lathes and milling machines.
- Built-up height 52 mm
- Required air pressure 6 bar
- Air-blast cleaning of Z-references
- Clamping force 30 000 N
- Recommended control unit C 810 820 or C 810 710
- Weight 16 kg.

**GPS 240 Pneumatic chuck with built-in Macro chuck, C 219 650**
Pneumatic chuck with built-in Macro chuck. Intended mainly for measuring machines. The following pallets can be mounted in GPS 240 by means of C 219 650 Macro 54x54 mm and Macro 70x70 mm.
- Required air pressure 6 bar
- Air-blast cleaning of the references
- Weight 24 kg.
GPS 240 – Pallets

GPS 240 Pallet EDM/Grinding, C 694 100
Cast aluminium pallet.
- Construction height 48.1 ±0.01 mm
- X/Y-centring with spring-loaded pin
- Adapted for automatic changing
- Ready for code carrier fixture C 960 740
- Supplied with C 531 500 sealing plugs.
- Recommended workpiece weight 150 kg.
- Weight 4.8 kg

S 500 090
- C 694 100 supplied in sets of 4 pcs.

S 500 100
- C 694 100 supplied in sets of 10 pcs.

GPS 240 Pallet ‘Adaption’, C 694 300
Ground cast aluminium pallet. Suitable for fixtures.
- Construction height 48.0 ±0.005 mm
- X/Y-centring with spring-loaded pin
- Adapted for automatic changing
- Ready for code carrier fixture C 960 740
- Supplied with C 531 500 sealing plugs.
- Recommended workpiece weight 150 kg.
- Weight 4.8 kg

GPS 240 Pallet ‘Production’, C 694 400
Cast aluminium pallet. Suitable for high-speed milling and arduous milling operations.
- Construction height 48.0 ±0.01 mm
- X/Y-centring with coined cam
- Adapted for automatic changing
- Ready for code carrier fixture C 960 740
- Recommended workpiece weight 150 kg.
- Supplied with C 531 500 sealing plugs.
- Weight 4.8 kg

S 500 160
- C 694 400 supplied in sets of 4 pcs

S 500 170
- C 694 400 supplied in sets of 10 pcs.

GPS 240 Pallet 240x240 mm, C 694 610
Solid aluminium pallet. Suitable for fixtures and accessories.
- Construction height 48.0 ±0.01 mm
- X/Y-centring with coined cam
- Prepared for automation
- Flatness 0.01 mm
- Ready for code carrier fixture C 960 740
- Recommended workpiece weight 150 kg.
- Weight 7.4 kg.

GPS 240 Pallet 300x300 mm, C 694 640
Solid aluminium pallet. Suitable for fixtures and accessories.
- Construction height 48.0 ±0.01 mm
- X/Y-centring with coined cam
- Flatness 0.02 mm
- Prepared for automation
- Ready for code carrier fixture C 960 740
- Recommended workpiece weight 150 kg.
- Weight 9 kg.
GPS 240 – Pallets

GPS 240 Magnetic table, C 694 260
High-precision magnetic plate for grinding work and for erode.
- Magnetic field height 5 mm
- Holding force 100 N/cm²
- Dimensions 240x240x88 mm
- X/Y-centring with coined cam
- Adapted for automatic changing
- Ready for code carrier fixture C 960 740
- Weight 23 kg.

GPS 240 Magnetic table, C 694 270
Strong magnetic plate for milling.
- Magnetic field height 10 mm
- Holding force 150 N/cm²
- Dimensions 240x240x96 mm
- X/Y-centring with spring-loaded pin
- Adapted for automatic changing
- Ready for code carrier fixture C 960 740
- Weight 27.1 kg.

GPS 240 Master pallet, C 846 600
The pallet has a ground reference ruler and a ground indication hole for alignment of the references.
- X/Y-centring: with spring-loaded pin
- Adapted for automatic changing
- Ready for code carrier fixture C 960 740
- Weight 7.4 kg.

GPS 240 Master pallet, C 846 600
The pallet has a ground reference ruler and a ground indication hole for alignment of the references.
- X/Y-centring: with spring-loaded pin
- Adapted for automatic changing
- Ready for code carrier fixture C 960 740
- Weight 7.4 kg.

GPS 240 Pallets round, C 697 100
Ground solid aluminium pallet. Suitable for fixtures.
- Construction height 46 ±0.005 mm
- X/Y-centring: with springy cams, hardened, stainless
- Adapted for automatic changing
- Ready for code carrier fixture C 960 740
- Recommended workpiece weight 150 kg.
- Weight 6.2 kg.

GPS 240 Pallets round, C 697 100
Ground solid aluminium pallet. Suitable for fixtures.
- Construction height 46 ±0.005 mm
- X/Y-centring: with springy cams, hardened, stainless
- Adapted for automatic changing
- Ready for code carrier fixture C 960 740
- Recommended workpiece weight 150 kg.
- Weight 6.2 kg.

GPS 240 pallet round, C 694 650
Solid aluminium pallet. Suitable for fixtures.
- Construction height 48.0 ±0.01 mm
- X/Y-centring with coined cam
- Adapted for automatic changing
- Ready for code carrier fixture C 960 740
- Recommended workpiece weight 150 kg.
- Weight 6.5 kg.

GPS 240 pallet round, C 694 650
Solid aluminium pallet. Suitable for fixtures.
- Construction height 48.0 ±0.01 mm
- X/Y-centring with coined cam
- Adapted for automatic changing
- Ready for code carrier fixture C 960 740
- Recommended workpiece weight 150 kg.
- Weight 6.5 kg.

GPS 240 – Pallets
Pallet with coined cams.
Pallet with spring-loaded pin.
Pallet with springy cams, hardened, stainless.
GPS 240 – Chuck adapters

Chuck adapter HP, GPS 240–GPS 120, C 522 800
Chuck adapter with built-in pneumatic GPS 120 chuck for mounting in:
- C 219 800 for automated pallet change GPS 120
- C 219 000, C 219 100, C 219 110, C 219 200 for manual pallet change GPS 120; Open/Close GPS 120 with air gun.
  • Built-up height 54 mm
  • X/Y-centering with springy cams, hardened, stainless steel
  • Simple retrofit from version „automation” to version „manual” by the operator
  • Weight 7.9 kg.

Chuck adapter Std, GPS 240–GPS 120, C 522 850
Chuck adapter with built-in pneumatic GPS 120 chuck.
  • Built-up height 57 mm
  • X/Y-centering with coined aluminium cams
  • Other specifications as C 522 800.

Chuck adapter HP, GPS 240–GPS 70, C 522 810
Chuck adapter with built-in pneumatic GPS 70 chuck for mounting in:
- C 219 800 for automated pallet change GPS 70
- C 219 000, C 219 100, C 219 110, C 219 200 for manual pallet change GPS 70; Open/Close GPS 70 with air gun.
  • Built-up height 54 mm
  • X/Y-centering with springy cams, hardened, stainless steel
  • Simple retrofit from version „automation” to version „manual” by the operator
  • Weight 7.9 kg.

Chuck adapter Std, GPS 240–GPS 70, C 522 860
Chuck adapter with built-in pneumatic GPS 70 chuck.
  • Built-up height 57 mm
  • X/Y-centering with coined aluminium cams
  • Other specifications as C 522 810.

Chuck adapter HP, GPS 240–GPS 120, C 522 820
Chuck adapter with built-in pneumatic GPS 120 chuck for mounting in:
- C 219 800 for automated pallet change GPS 120
- C 219 000, C 219 100, C 219 110, C 219 200 for manual pallet change GPS 120; Open/Close GPS 120 with air gun.
  • Built-up height 100 mm
  • X/Y-centering with springy cams, hardened, stainless steel
  • Simple retrofit from version „automation” to version „manual” by the operator
  • Weight 8.9 kg.

Chuck adapter Std, GPS 240–GPS 120, C 522 870
Chuck adapter with built-in pneumatic GPS 120 chuck.
  • X/Y-centering with coined aluminium cams
  • Other specifications as C 522 820.

Chuck adapter HP, GPS 240–GPS 70, C 522 830
Chuck adapter with built-in pneumatic GPS 70 chuck for mounting in:
- C 219 800 for automated pallet change GPS 70
- C 219 000, C 219 100, C 219 110, C 219 200 for manual pallet change GPS 70; Open/Close GPS 70 with air gun.
  • Built-up height 100 mm
  • X/Y-centering with springy cams, hardened, stainless steel
  • Simple retrofit from version „automation” to version „manual” by the operator
  • Weight 8.9 kg.

Chuck adapter Std, GPS 240–GPS 70, C 522 880
Chuck adapter with built-in pneumatic GPS 70 chuck.
  • X/Y-centering with coined aluminium cams
  • Other specifications as C 522 830.

System 3R Tooling for parts production
Pallet with coined cams.
Pallet with springy cams, hardened, stainless.
GPS 240 – Chuck adapters & accessories

Chuck adapter HP, GPS 240-Macro, C 522 520
Chuck adapter with built-in pneumatic Macro chuck.
3R-24460 for mounting in:
- C 219 800 for automated pallet change Macro
- C 219 000, C 219 100, C 219 110, C 219 200 for manual pallet change Macro; Open/Close/Turbo Macro with air gun.
- Built-up height 80 mm
- X/Y-centering with springy cams, hardened, stainless steel
- Drawbar 3R-605.1 oder 3R-504.4
- Simple retrofit from version „automation” to version „manual” by the operator
- Weight 8.5 kg.

Chuck adapter Std, GPS 240-Macro, C 522 530
Chuck adapter with built-in pneumatic Macro chuck.
- Built-up height 79 mm
- X/Y-centering with coined aluminium cams
- Other specifications as C 522 520.

Chuck adapter HP, GPS 240-MacroMagnum, C 522 540
Chuck adapter with built-in pneumatic MacroMagnum chuck
3R-90809.03 for mounting in:
- C 219 800 for automated pallet change MacroMagnum
- C 219 000, C 219 100, C 219 110, C 219 200 for manual pallet change MacroMagnum; Open/Close/Turbo MacroMagnum with air gun.
- Built-up height 80 mm
- X/Y-centering with springy cams, hardened, stainless steel
- Drawbar 3R-605.1 oder 3R-504.4
- Simple retrofit from version „automation” to version „manual” by the operator
- Weight 11.7 kg.

Chuck adapter Std, GPS 240-MacroMagnum, C 522 550
Chuck adapter with built-in pneumatic MacroMagnum chuck.
- Built-up height 79 mm
- X/Y-centering with coined aluminium cams
- Other specifications as C 522 540.

GPS 240 Controllers

C 810 820
Unit for controlling pneumatic chucks C 217 100 and C 219 000.
- 1 connection [clamping/releasing].

C 810 830
Unit for controlling pneumatic chucks C 219 100.
- 4 connections - prism - air-blast cleaning of Z-references - clamping/releasing - Turbo/ventilation.

Hand gate valve, C 810 710
For controlling pneumatic chucks C 217 100 and C 219 000.
GPS 240 – Accessories

**GPS 240 Spare parts set, S 220 000**
Contains all elements for a normal service.
- Suitable for all square chucks, apart from C 219 400
- Recommendation: every 2 years if used manually and annually if used in the automation system.

**GPS 240 Spare parts set, S 220 400**
Contains all elements for a normal service.
- Suitable for C 217 100
- Recommendation, every 2 years in manual use.

**Sealing, C 219 007**
The chuck seal is a wear part which should be replaced every three to six months.
- Material Viton.

**Sealing plugs, C 531 500**
Plugs for sealing GPS 240 pallets.
- Supplied in sets of 40.

**Seals, C 531 250**
To seal the holes in the four clamping elements of the pallet.
- Material elastomer
- Supplied in sets of 20.

**Reference protectors, C 531 210**
To protect the Z-reference of the pallet.
- Supplied in sets of 20.
GPS 240 – Accessories & user kits

**Code carriers, 3R-863.01**
With pre-programmed unique identity, designed for GPS 240 pallets.

- **3R-863.01-10**
  - Sets of 10 pieces.

**Code carrier, fixture, C 960 740**
Fixture for code carrier 3R-863.01-10.
- The code carrier can be clicked into position.

**GPS 240 Clamp strip kit, C 810 880-XX***
C 810 881 undrilled clamp strip (x2)
E 010 144 washer M10 (x4)
E 010 143 washer M8 (x4)
E 000 428 Allen screw M10x45 (x4)
E 000 354 Allen screw M8x45 (x4)
12 E 040 030 T-slot nut M10x12 (x4)
14 E 040 031 T-slot nut M10x14 (x4)
16 E 040 032 T-slot nut M10x16 (x4)
18 E 040 033 T-slot nut M10x18 (x4)

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

**GPS 240 Lifting grip, C 810 960**
Lifting gear for handling GPS 240 pallets 240x240 mm.
- Weight 2.9 kg

**GPS 240 Presetting station, C 810 650**
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.