Changeover in seconds!

QUIRI HYDROMECHANIQUE
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Tél. : +33 3 88 04 84 00 Fax. : +33 3 88 04 84 01 Email : quiri.hydro@quiri.com
QUIRI Hydromécanique is specialized in designing and manufacturing of components and mechanical installations that use high-pressure fluids for process plant applications.

We apply our know-how and experience to small-and medium-scale manufacturing of products with high technical added-value, and to installations specifically adapted to our client’s needs.

To provide our clients with complete solutions, QUIRI Hydromécanique retains control over all the specialist skills involved in hydraulic engineering [electronic and mechanical engineering, computer control] and high pressure pneumatic through its engineering design department, in-house precision machining, assembly and testing.

Its extensive research and development activities, combined with over 50 years experience in hydraulic systems means that it can incorporate the most effective technology into its products, and apply continuous innovation to provide new solutions.

For every project, each client is in relation with a single representative (a Project Engineer or Product Manager) who is responsible for ensuring that orders are fulfilled, right up to the time of delivery. This structure makes us more reactive whilst still allows us to retain control over all those aspects that contribute to the quality of our products [managed through a rigorous quality system certified to ISO 9001, 2000].

QUIRI Hydromécanique is based at in France near Strasbourg and exports a great share of its production within Europe (Germany, Spain and elsewhere) to Asia (Japan, China and Korea) and America.

QUIRI Hydromécanique supplies to major industrial groups, who rely on us to provide innovative and competitive solutions in the following sectors:

- Automotive and vehicles
- Aerospace and defence
- Power and transport
Advice. Orders. Sales.

Just call us – we are here to help you. Our specialists will be happy to advise you on the products in which you are interested with no obligation.
Pricing pressure? Margins pressure? Competition from low-wage countries?

The smart move from set-up time to productivity!

**Example:**

Assuming:
- 200 working days
- machining hour € 80.–

<table>
<thead>
<tr>
<th>Set-up change</th>
<th>Set-up change</th>
</tr>
</thead>
<tbody>
<tr>
<td>conventional</td>
<td>with QUIRIZero</td>
</tr>
</tbody>
</table>

### Sample 1:

- 1 machine
- 1 shift
- 2 set-up change / shift: 133 h
- 4 set-up change / shift: 266 h

<table>
<thead>
<tr>
<th>Machine down time</th>
<th>Set-up change</th>
<th>Additional earning</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 Min.</td>
<td>133 h</td>
<td>120 h € 9576.–</td>
</tr>
<tr>
<td>2 Min.</td>
<td>13,3 h</td>
<td>239 h € 19152.–</td>
</tr>
</tbody>
</table>

### Sample 2:

- 5 machines
- 2 shifts
- 2 set-up change / shift: 1330 h
- 4 set-up change / shift: 2660 h

<table>
<thead>
<tr>
<th>Machine down time</th>
<th>Set-up change</th>
<th>Additional earning</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 Min.</td>
<td>133 h</td>
<td>1197 h € 95760.–</td>
</tr>
<tr>
<td>2 Min.</td>
<td>133 h</td>
<td>2394 h € 191520.–</td>
</tr>
</tbody>
</table>

Change parts with the accuracy of QUIRIZero Point Zéro clamping systems.
Zero-point clamping

PZ  
The zero-point clamping system with patented collet lock

PZ 20  
Page 9 – 20
Pull-in force per unit: 12'500 N  
Retention force per unit: 40'000 N

PZ 30  
Page 21 – 28
Pull-in force per unit: 20'000 N  
Retention force per unit: 60'000 N

PZ 50  
Page 29 – 34
Pull-in force per unit: 30'000 N  
Retention force per unit: 90'000 N

PZA 30  
Page 35 – 40
Pull-in force per unit: 20'000 N  
Retention force per unit: 60'000 N
The only Zero-point clamping system with a patented collet lock.

Developed for you
Made of cold-work corrosion resistant steel Approved design, umpteen thousand sold

The modular QUIRI® build up not just guarantees enormous time and cost savings but assures great flexibility in production. The unique interface enables setups where they actually belong, outside the machine tools, without blocking any machining time. Whether it is measuring, turning, milling, grinding or edming, with QUIRI® your production is much more flexible, while costs and delivery time are reduced. Our long time experience on Zero point workholding permits us to quote cost efficient premium solutions specifically designed to your needs.

QUIRI® with power and safety

<table>
<thead>
<tr>
<th></th>
<th>pull-in force per unit</th>
<th>retention force per unit</th>
<th>piston position control</th>
</tr>
</thead>
<tbody>
<tr>
<td>QUIRI®PZ 20</td>
<td>12’500 N</td>
<td>40'000 N</td>
<td>✓</td>
</tr>
<tr>
<td>QUIRI®PZ 30</td>
<td>20’000 N</td>
<td>60’000 N</td>
<td>✓</td>
</tr>
<tr>
<td>QUIRI®PZ 50</td>
<td>30’000 N</td>
<td>90’000 N</td>
<td>✓</td>
</tr>
</tbody>
</table>

Air-blast and piston position monitoring: Process reliability.
Superior form fit clamping with collet lock.
Push up function produces easy handling

Tilted fixture cause no problem

Highest pull-in and retention forces. Mechanically clamped by disc springs released by hydraulic
Zero-point clamping

QUIRI Point Zéro

PZ 20

Pull-in force per unit: 12'500 N
Retention force per unit: 40'000 N

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Built-in cylinders Page 12 – 13
Built-up cylinders Page 14
Pneumatically activated units Page 15
Plugs Page 16 – 19
Accessories Page 20

PZ 20

Zero-point clamping

QUIRI Point Zéro

PZ 20

Pull-in force per unit: 12'500 N
Retention force per unit: 40'000 N

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Built-in cylinders Page 12 – 13
Built-up cylinders Page 14
Pneumatically activated units Page 15
Plugs Page 16 – 19
Accessories Page 20

Flanged cylinders

Built-in cylinders

Built-up cylinders

Pneumatically activated units

Plugs

Accessories

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Flanged cylinders
for direct integration into machine tables, pallets and fixtures

pull-in force: 12'500 N  retention force: 40’000 N

PZ2160  Standard
PZ2160 L  with air-blast cleaning
PZ2160 LU  with air-blast cleaning and rear side media connection

PZ2160 I  with indexing grooves
PZ2160 LI  with air-blast cleaning and indexing grooves
PZ2160 LIU  with air-blast cleaning, indexing grooves and rear side media connection

Max. operating pressure 70 bar.
Flanged cylinders
for direct integration into machine tables, pallets and fixtures

pull-in force: 12’500 N  retention force: 40’000 N

PZ2160 LA  with air-blast cleaning through center and support isles
PZ2160 LAU with air-blast cleaning through center and support isles and rear side connection for oil and air

PZ2160 LAK  with air-blast cleaning through center, support isles and piston position monitoring

Max. operating pressure 70 bar.
Built-in cylinders
for base-plates, set-up stations, measuring machines

pull-in force: 12'500 N  retention force: 40’000 N

PZ2150  standard
PZ2150 L  with air-blast cleaning

PZ2150 I  with indexing grooves
PZ2150 LI  with air-blast cleaning and indexing grooves

Max. operating pressure 70 bar.
**Built-in cylinders**
for base-plates, set-up stations, measuring machines

- pull-in force: 12'500 N
- retention force: 40’000 N

**PZ2150 LA**
with air-blast cleaning through center and support isles

Max. operating pressure 70 bar.
Built-up cylinders
for flexible configuration

pull-in force: 12’500 N
retention force: 40’000 N

PZ2110 standard
PZ2110 L with air-blast cleaning

PZ2110 I with indexing grooves
PZ2110 LI with air-blast cleaning and indexing grooves

Indexing grooves
Pallets and indexing set screws see page 52

Socket head screw M12x35 PZ1175
Bracket PZ1172

Max. operating pressure 70 bar.
Pneumatically activated units

**Flanged cylinders**

- **PZ2160 P** Standard
- **PZ2160 LP** with air-blast cleaning
- **PZ2160 LUP** with air-blast cleaning and rear side media connection
- **PZ2160 IP** with indexing grooves
- **PZ2160 LIP** with air-blast cleaning and indexing grooves
- **PZ2160 LIUP** with air-blast cleaning, indexing grooves and rear side media connection
- **PZ2160 LAP** with air-blast cleaning through center and support isles
- **PZ2160 LAUP** with air-blast cleaning, through center and support isles and rear side media connection
- **PZ2160 LAKP** with air-blast cleaning through center and support isles and piston position monitoring

**Built-in cylinders**

- **PZ2150 P** Standard
- **PZ2150 LP** with air-blast cleaning
- **PZ2150 IP** with indexing grooves
- **PZ2150 LIP** with air-blast cleaning and indexing grooves
- **PZ2150 LAP** with air-blast cleaning through center and support isles

**Built-up cylinders**

- **PZ2110P** Standard
- **PZ2110 LP** with air-blast cleaning
- **PZ2110 IP** with indexing grooves
- **PZ2110 LIP** with air-blast cleaning and indexing grooves

Pression de service minimale 5 bar

PZ 30 sur demande
PZ 50 sur demande
The centering plug defines the zero-point. It centers with the diameter.

The compensation plug defines the X- or Y-axis. The cam line must be set 90° to the line connecting with the centering plug. Compensates for variations in temperature.

Plugs without centering only serve for clamping.
**Plugs long**

**Plug fitting versions** (preferably version A)

<table>
<thead>
<tr>
<th>Type</th>
<th>without air-blast</th>
<th>with air-blast</th>
<th>fitting version A</th>
<th>fitting version B</th>
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<tbody>
<tr>
<td>PZ2500</td>
<td>x</td>
<td>x</td>
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<td>x</td>
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<tr>
<td>Centering plug</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>PZ2504</td>
<td>x</td>
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<td>Centering plug</td>
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<tr>
<td>PZ2510</td>
<td>x</td>
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<td>x</td>
</tr>
<tr>
<td>Plug without centering</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PZ2520</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Compensation plug</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Plugs short**

**Plug fitting versions** (preferably version C)

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td><strong>C</strong></td>
<td>Tightening moment: 20 Nm</td>
<td><strong>D</strong></td>
<td>Tightening moment: 20 Nm</td>
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<tr>
<td>Ø15</td>
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<td>Ø8</td>
<td></td>
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<td>Ø9</td>
<td></td>
<td></td>
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<td>Ø25</td>
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<td>9</td>
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<table>
<thead>
<tr>
<th>Description</th>
<th>PZ2502</th>
<th>PZ2505</th>
<th>PZ2512</th>
<th>PZ2522</th>
<th>PZ2523</th>
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</thead>
<tbody>
<tr>
<td>Centering plug</td>
<td>X</td>
<td>X</td>
<td>✗</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Plug without centering</td>
<td>x</td>
<td>x</td>
<td>✗</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Compensation plug</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Two-piece compensation plug</td>
<td>x</td>
<td>x</td>
<td>✗</td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

Without air-blast

With air-blast

Fitting version C

Fitting version D

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Plugs
Special applications

Plug fitting versions (preferably version E)

<table>
<thead>
<tr>
<th>Plug Type</th>
<th>Description</th>
<th>Diagram</th>
<th>without air-blast</th>
<th>with air-blast</th>
<th>fitting version A/B</th>
<th>fitting version C/D</th>
<th>fitting version E/F</th>
</tr>
</thead>
<tbody>
<tr>
<td>PZ2515</td>
<td>Centering plug medium length e.g. for vises</td>
<td><img src="image1.png" alt="Diagram" /></td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>PZ2516</td>
<td>Compensation plug medium length e.g. for vises</td>
<td><img src="image2.png" alt="Diagram" /></td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>PZ2501</td>
<td>Oversize Centering plug long Bore size Ø 26 1/4&quot;, mm</td>
<td><img src="image3.png" alt="Diagram" /></td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>PZ2503</td>
<td>Oversize Centering plug short Bore size Ø 26 1/4&quot;, mm</td>
<td><img src="image4.png" alt="Diagram" /></td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>

Special fitting of plugs

**PZ1552**
- Stud screw to clamp DockLock plug into M10 blind hole

**PZ1548**
- Stud screw to clamp DockLock plug into M12 blind hole
PZ1590  Setup plug for built-up cylinder

PZ1550  stud bolt M8 x 30 for blind hole mounting of plugs

PZ1580  Indexing set-screw M8 (12.9) hardened, for Mini basic pallet PZ1601

PZ1551  Socket head screw M8 x 25 (12.9) for through hole plug mounting

PZ199  Brass coverdisc

PZ1998  Ø 10,5 mm thickness 1 mm
PZ1999  Ø 8,55 mm thickness 1 mm

Swarf protection of counterbores on QUIRI units.

Attention: most important for automated applications

Fitting: fit flush by using a plastic faced hammer

Removal: Strike the center with a small punch and pull out with a scriber or similar tool.

775 ...  T-Slot Nuts

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>775 PT06 1412</td>
<td>22,0</td>
<td>16,0</td>
<td>13,8</td>
<td>8,0</td>
<td>M12</td>
<td>28</td>
<td>0,048</td>
</tr>
<tr>
<td>775 PT06 1816</td>
<td>28,0</td>
<td>20,0</td>
<td>17,7</td>
<td>10,5</td>
<td>M16</td>
<td>30</td>
<td>0,085</td>
</tr>
</tbody>
</table>

PZ1570  Mounting adapter for plugs

PZ1159  Aluminium cover

PZ2534  Cover plug

PZ1172  Bracket

PZ1175  Socket head screw M12 x 35 to bracket PZ1 172

PZ2 00090  Collet

PZ1 00094  circular spring

PZ1 00091  Circlip

PZ2165K  Spacers used to compensate height variations on flanged cylinder cavities PZ 20. Thickness 2 mm

PZ2004-1.2  Washer for inclined lifting
Zero-point clamping

QUIRI Point Zéro

PZ 30

Pull-in force per unit: 20,000 N
Retention force per unit: 60,000 N

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Built-up cylinders  Page 24
Plugs  Page 25 – 26
Accessories  Page 27

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www.QUIRI.com
Flanged cylinders
for direct integration into machine tables, pallets and fixtures

pull-in force: 20’000 N  retention force: 60’000 N

PZ2172  Standard
PZ2172 U  with rearside media connection
PZ2172 L  with air-blast cleaning
PZ2172 LU  with air-blast cleaning and rear side media connection

PZ2172 I  with indexing grooves
PZ2172 LI  with air-blast cleaning and indexing grooves
PZ2172 LIU  with air-blast cleaning, indexing grooves and rear side media connection

Max. operating pressure 70 bar.
Flanged cylinders
for direct integration into machine tables, pallets and fixtures

pull-in force: 16’000 N  retention force: 50’000 N

PZ2176  Standard  PZ2176 I  with indexing grooves

Indexing grooves

Pallets and indexing set screws see page 52

Max. operating pressure 70 bar.
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Built-up cylinders
for flexible configuration

PZ 30

pull-in force: 20’000 N
retention force: 60’000 N

PZ2178 Standard
PZ2178 L with air-blast cleaning
PZ2178 I with indexing grooves
PZ2178 LI with air-blast cleaning and indexing grooves

Max. operating pressure 70 bar.
Plugs
recommended plug arrangement

1. Centering plug - ground Ø 36 ± 0.01 mm
   The centering plug defines the zero-point. It centers with the diameter.

2. Compensation plug - two ground raised cams Ø 36 ± 0.01 mm
   The compensation plug defines the X- or Y-axis. The cam line must be set 90° to the line connecting with the centering plug. Compensates for variations in temperature.

3. Plug without centering - Ø 34.5 ± 0.1 mm
   Plugs without centering only serve for clamping.

1 The centering plug defines the zero-point.
2 The compensation plug defines the X- or Y-axis.
3 Plugs without centering only serve for clamping.

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Plugs

Plug fitting versions (preferably version A)

A

Centering plug

Tightening moment: 60 Nm

B

Plug without centering

Tightening moment: 30 Nm

<table>
<thead>
<tr>
<th>Plug</th>
<th>with air-blast</th>
<th>with air-blast</th>
<th>fitting version A</th>
<th>fitting version B</th>
</tr>
</thead>
<tbody>
<tr>
<td>PZ2702</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>PZ2712</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>PZ2722</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>
PZ2790
Setup plug for built-up cylinder

PZ2551
Socket head screw M10 x 40 (12.9) for mounting plugs from underneath

PZ3580
Indexing set-screw M10 (12.9) hardened, for Mini basic pallet PZ601

PZ3551
Socket head screw M12 x 50 (12.9) for through hole plug mounting

PZ1998
Brass coverdisc for Ø 10,5 + 0,10 mm thickness 1 mm

Swarf protection of counterbores on QUIRI® units.
Attention: most important for automated applications
Fitting: fit flush by using a plastic faced hammer
Removal: Strike the center with a small punch and pull out with a scriber or similar tool.

775 ...
T-Slot Nuts

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>kg</th>
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<tbody>
<tr>
<td>22,0</td>
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<td>8,0</td>
<td>M12</td>
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<td>17,7</td>
<td>10,5</td>
<td>M16</td>
<td>30</td>
<td>0,085</td>
</tr>
</tbody>
</table>

PZ3555
Socket head screw M6 x 30 low head for flange mounting

PZ2734
Cover plug

PZ3170
Bracket

PZ3552
Socket head screw M16 x 54 to bracket PZ3170

PZ2 0095
Collet

PZ2 0094
circular spring

PZ2168
Spacers used to compensate height variations on flanged cylinder cavities PZ 30. Thickness 2 mm

PZ2006-1
Washer for inclined lifting
Examples

PZ 30

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Zero-point clamping

QUIRI PZ 50

Pull-in force per unit: 30'000 N
Retention force per unit: 90'000 N

- Flanged cylinders
- Built-up cylinders
- Plugs
- Accessories

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Flanged cylinders
for direct integration into machine tables, pallets and fixtures

pull-in force: 30’000 N  retention force: 90’000 N

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PZ3172</td>
<td>Standard</td>
</tr>
<tr>
<td>PZ3172 U</td>
<td>with rearside media connection</td>
</tr>
<tr>
<td>PZ3172 L</td>
<td>with air-blast cleaning</td>
</tr>
<tr>
<td>PZ3172 LU</td>
<td>with air-blast cleaning and rear side media connection</td>
</tr>
<tr>
<td>PZ3172 I</td>
<td>with indexing grooves</td>
</tr>
<tr>
<td>PZ3172 LI</td>
<td>with air-blast cleaning and indexing grooves</td>
</tr>
<tr>
<td>PZ3172 LIU</td>
<td>with air-blast cleaning, indexing grooves and rear side media connection</td>
</tr>
</tbody>
</table>

Max. operating pressure 70 bar.
Built-up cylinders for flexible configuration

PZ 50

pull-in force: 30’000 N
retention force: 90’000 N

PZ3178 Standard
PZ3178 L with air-blast cleaning
PZ3178 I with indexing grooves
PZ3178 LI with air-blast cleaning and indexing grooves

Max. operating pressure 70 bar.

Indexing grooves
Pallets and indexing set screws see page 52

Socket head screw M16x45 PZ3552
Bracket PZ3170

Max. operating pressure 70 bar.
Plugs
recommended plug arrangement

1 Centering plug
- ground Ø 48 ± 0.01 mm
   The centering plug defines the zero-point.
   It centers with the diameter.

2 Tirette dépincée
- two ground raised cams
  Ø 48 ± 0.01 mm
   The compensation plug defines the X- or Y-axis.
   The came line must be set 90° to the line connecting with
   the centering plug. Compensates for variations in temperature.

3 Plug without centering
- Ø 46.5 ± 0.1 mm
   Plugs without centering only serve for clamping

1 The centering plug defines the zero-point.
2 The compensation plug defines the X- or Y-axis.
3 Plugs without centering only serve for clamping.
## PZ 50

### Plugs

#### Plug fitting versions (preferably version A)

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tightening moment: 90 Nm</td>
<td>Tightening moment: 55 Nm</td>
</tr>
</tbody>
</table>

#### Plug fitting versions

<table>
<thead>
<tr>
<th>Plug</th>
<th>Description</th>
<th>with air-blast</th>
<th>without air-blast</th>
<th>fitting version A</th>
<th>fitting version B</th>
</tr>
</thead>
<tbody>
<tr>
<td>PZ3702</td>
<td>Centering plug</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
</tr>
<tr>
<td>PZ3712</td>
<td>Plug without centering</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
</tr>
<tr>
<td>PZ3722</td>
<td>Compensation plug</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
</tr>
</tbody>
</table>

**Tightening moment:**
- 55 Nm
- 90 Nm

**Contact:**
- QUIRI HYDROMECANIQUE
  - 6 Rue Denis Papin 67120 DUTTLENHEIM
  - Tél.: +33 3 88 04 84 00
  - Fax.: +33 3 88 04 84 01
  - Email: quiri.hydro@quiri.com
  - www.QUIRI.com
**Accessories**

**PZ3591**
Set up plug for built-up cylinder

**PZ3551**
Socket head screw M12 x 50 (12.9) for mounting plugs from underneath

**PZ3580**
Indexing set screw M10 (12.9) hardened for basic indexing pallet PZ3601

**PZ3998**
Brass cover disc

**PZ3998** Ø 13,5 ± 0,05 mm thickness 1 mm

Swarf protection of counterbores on QUIRI units.

**Attention:**
most important for automated applications

**Fitting:**
fit flush by using a plastic faced hammer

**Removal:**
Strike the center with a small punch and pull out with a scriber or similar tool.

**775 ...**
T-slot Nuts

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>775 PT06 1816</td>
<td>28,0</td>
<td>20,0</td>
<td>17,7</td>
<td>10,5</td>
<td>M16</td>
<td>30</td>
<td>0,085</td>
</tr>
<tr>
<td>775 PT06 2016</td>
<td>32,0</td>
<td>20,0</td>
<td>19,0</td>
<td>11,9</td>
<td>M16</td>
<td>30</td>
<td>0,098</td>
</tr>
</tbody>
</table>

**PZ3556**
Socket head screw M8 x 40 low head for flange mounting

**PZ3159**
Aluminium cover

**PZ3534**
Cover plug

**PZ3170**
Bracket

**PZ3552**
Socket screw M16 x 45 for bracket PZ3170

**PZ3 00095**
Collet

**PZ3 00094**
circular spring

**PZ3165**
Spacers used to compensate height variations on cavities for flanged cylinders PZ 50. Thickness 3 mm

**PZ3023-1**
Washer for inclined lifting

---

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www.QUIRI.com
Zero-point clamping

QUIRI Point Zéro

PZA 30

Pull-in force per unit: 20'000 N
Retention force per unit: 60'000 N

Automated manufacturing with the highest degree of security!
Flanged cylinders
Plugs
Accessories

Page 36
Page 37
Page 38 – 39
Page 40
The PZA Series are representing a veritable break-through for the automation of zero-point workholding

- total protection from dirt by automatical sealing of the collet lock *1.
- air-blast cleaning from swarf and coolant through the center *2 and support isles *3.
- absolut operational security by monitoring of piston position and isle surfaces.
- pre-locking effect of the collet, important on vertical arrays.
- form-fit connection between the patented collet lock and the plugs through large contact area.
- the pre-centering of the plug facilitates the automated loading.
- accessible from the top makes for easy servicing.
Flanged cylinders
Maximal safety in automatic production!

pull-in force: 20’000 N  retention force: 60’000 N

PZ2170-31 LAK  with air-blast cleaning through center, and support isles, pneumatic support control for isles, hydraulic piston position monitoring

PZ2170-31 LAUK  with air-blast cleaning through center, and support isles, pneumatic support control for isles, hydraulic piston position monitoring, rear side media connection

Max. operating pressure 70 bar (max. 95 bar)
**Quiri Zero PZA 30**

**Plugs**

**Recommended plug arrangement**

1. **Centering plug**
   - Ground Ø 30 \( \pm \frac{0.01}{\text{mm}} \)
   - The centering plug defines the zero-point. It centers with the diameter.

2. **Tirette dépincée**
   - Two ground raised cams
   - Ø 30 \( \pm \frac{0.01}{\text{mm}} \)
   - The compensation plug defines the X- or Y-axis.
   - The came line must be set 90° to the line connecting with the centering plug. Compensates for variations in temperature.

3. **Plug without centering**
   - Ø 28,9 \( \pm \frac{0.05}{\text{mm}} \)
   - Plugs without centering only serve for clamping.

---

**Centering plug**

**Compensation plug**

**Plug without centering**

1. The centering plug defines the zero-point.
2. The compensation plug defines the X- or Y-axis.
3. Plugs without centering only serve for clamping.
## Plug fitting versions (preferably version A)

<table>
<thead>
<tr>
<th></th>
<th>without air-blast</th>
<th>with air-blast</th>
<th>fitting version A</th>
<th>fitting version B</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PZ2704</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Centering plug</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td><strong>PZ2714</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plug without centering</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td><strong>PZ2724</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compensation plug</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td><strong>PZ2705</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Centering plug <strong>long version</strong></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td><strong>PZ2715</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plug without centering <strong>long version</strong></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td><strong>PZ2725</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compensation plug <strong>long version</strong></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>
## Accessories

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PZ3551</td>
<td>Socket head screw M12 x 50 (12.9) for mounting plugs from underneath</td>
</tr>
<tr>
<td>PZ1998</td>
<td>Brass cover disc</td>
</tr>
<tr>
<td>PZ1998</td>
<td>Ø 10.5 ± 0.10 mm thickness 1 mm</td>
</tr>
<tr>
<td>PZ3555</td>
<td>Socket head screw M6 x 30 low head for flange mounting (6 pieces per cylinder)</td>
</tr>
<tr>
<td>PZ1557</td>
<td>Socket head screw M6x25 low head for flange mounting (2 pieces per cylinder)</td>
</tr>
<tr>
<td>PZ200095-AS</td>
<td>Collet circular spring</td>
</tr>
<tr>
<td>PZ200094</td>
<td>Spacers used to compensate height variations on cavities for flanged cylinders PZA Thickness 2 mm</td>
</tr>
<tr>
<td>PZ2540</td>
<td>Supportring hardened Thickness 3 mm (at plug PZ2704, PZ2714, PZ2724)</td>
</tr>
<tr>
<td>PZ2541</td>
<td>Supportring hardened Thickness 6 mm (at plug PZ2705, PZ2715, PZ2725)</td>
</tr>
</tbody>
</table>

**Swarf protection of counterbores on QUIRI units.**

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most important for automated applications

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fit flush by using a plastic faced hammer

**Removal:**
Strike the center with a small punch and pull out with a scriber or similar tool.

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