HPR // High Precision Pressure Regulator
1/8'', 1/4'', 1/2'' aluminium precision pressure regulator
General Features

Light and compact precision pressure regulator with aluminium painted body. Complete with 2-position bracket, gauge on request.

The 0.05÷8 Bar regulation range allows great precision, due to the multi-diaphragm construction concept, the air escape and the high exhaust capacity for over pressure. These factors guarantee a rapid pressure regulation, while limiting fluctuation.

Vesta HPR Series is perfect for contact pressure control, for regulating balancing and precise tension, and to control sealing and pressure-loss systems.

The high precision pressure regulators are available in three sizes, for different air flows and ports (1/8'', 1/4'', 1/2'').
# Technical Features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure range</td>
<td>A – 0.05+2 Bar</td>
</tr>
<tr>
<td></td>
<td>B – 0.05+4 Bar</td>
</tr>
<tr>
<td></td>
<td>C – 0.05+8 Bar</td>
</tr>
<tr>
<td>Maximum inlet pressure</td>
<td>10 Bar</td>
</tr>
<tr>
<td>Minimum operating pressure</td>
<td>Set pressure +0.05</td>
</tr>
<tr>
<td>Air consumption (NL/min) 1 Bar</td>
<td>HPR18 – Max 3.5</td>
</tr>
<tr>
<td></td>
<td>HPR14 – Max 3.1</td>
</tr>
<tr>
<td></td>
<td>HPR12 – Max 9.5</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>0.2% F.S.</td>
</tr>
<tr>
<td>Accuracy</td>
<td>+/- 0.5% F.S.</td>
</tr>
<tr>
<td>Gauge port size</td>
<td>G1/8&quot;</td>
</tr>
<tr>
<td>Weight</td>
<td>HPR18 – 150gr</td>
</tr>
<tr>
<td></td>
<td>HPR14 – 320gr</td>
</tr>
<tr>
<td></td>
<td>HPR12 – 685gr</td>
</tr>
<tr>
<td>Ambient temperature:</td>
<td>-5/+60°C</td>
</tr>
</tbody>
</table>

**NOTE:** Filtered air, NOT lubricated
Ordering Codes

**HPR□□ - □ - □ - □**

**Model:**
- 18 – G1/8" port
- 14 – G1/4" port
- 12 – G1/2" port

**Pressure range:**
- A (0.05÷2 Bar)
- B (0.05÷4 Bar)
- C (0.05÷8 Bar)

**Bracket:**
- - No bracket
- B - Bracket

**Gauge:**
- - No gauge
- G - Gauge
Dimensions HPR18/14/12

<table>
<thead>
<tr>
<th>TYPE</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
<th>K</th>
<th>L</th>
<th>M</th>
<th>N</th>
<th>O</th>
<th>P</th>
</tr>
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<tbody>
<tr>
<td>HPR18</td>
<td>35</td>
<td>90</td>
<td>35</td>
<td>10</td>
<td>51</td>
<td>44</td>
<td>17.5</td>
<td>25</td>
<td>42</td>
<td>2</td>
<td>G1/8</td>
<td>28</td>
<td>4.5</td>
<td>Ø 8.5</td>
<td>G1/8</td>
<td>Ø 10.5</td>
</tr>
<tr>
<td>HPR14</td>
<td>50</td>
<td>123</td>
<td>50</td>
<td>18</td>
<td>71</td>
<td>63</td>
<td>25</td>
<td>30</td>
<td>50</td>
<td>2</td>
<td>G1/8</td>
<td>36</td>
<td>5.5</td>
<td>Ø 9.5</td>
<td>G1/4</td>
<td>Ø 12.5</td>
</tr>
<tr>
<td>HPR12</td>
<td>66</td>
<td>148</td>
<td>66</td>
<td>22</td>
<td>76</td>
<td>76</td>
<td>33</td>
<td>48</td>
<td>82</td>
<td>2.3</td>
<td>G1/8</td>
<td>60</td>
<td>9</td>
<td>Ø 15.5</td>
<td>G1/2</td>
<td>Ø 12.5</td>
</tr>
</tbody>
</table>
Flow Rate HPR18

A  Primary pressure 5 Bar

B  Primary pressure 7 Bar

C  Primary pressure 10 Bar

Secondary pressure Bar

Flow NL/min

Secondary pressure Bar

Flow NL/min

Secondary pressure Bar

Flow NL/min
Relief Characteristics HPR18

A  Back pressure 5 Bar

B  Back pressure 7 Bar

C  Back pressure 10 Bar
Pressure Characteristics HPR18

A
Supply pressure 7 Bar
Secondary pressure 2 Bar
Flow: 0 LN/min

B
Supply pressure 7 Bar
Secondary pressure 2 Bar
Flow: 0 LN/min

C
Supply pressure 7 Bar
Secondary pressure 2 Bar
Flow: 0 LN/min
Flow Rate HPR14

A Primary pressure 5 Bar

B Primary pressure 7 Bar

C Primary pressure 10 Bar

Flow NL/min

Secondary pressure Bar

Flow NL/min

Secondary pressure Bar

Flow NL/min

Secondary pressure Bar
Relief Characteristics HPR14

A Back pressure 5 Bar

B Back pressure 7 Bar

C Back pressure 10 Bar

Flow NL/min

Secondary pressure Bar

Flow NL/min

Secondary pressure Bar

Flow NL/min

Secondary pressure Bar
Pressure Characteristics HPR14

A
Supply pressure 7 Bar
Secondary pressure 2 Bar
Flow: 0 LN/min

B
Supply pressure 7 Bar
Secondary pressure 2 Bar
Flow: 0 LN/min

C
Supply pressure 7 Bar
Secondary pressure 2 Bar
Flow: 0 LN/min

Secondary pressure Bar
Secondary pressure Bar
Secondary pressure Bar

Supply pressure Bar
Supply pressure Bar
Supply pressure Bar

0 3 4 5 6 7 8 9 10
0 3 4 5 6 7 8 9 10
0 3 4 5 6 7 8 9 10
Flow Rate HPR12

A  Primary pressure 5 Bar

B  Primary pressure 7 Bar

C  Primary pressure 10 Bar

Flow NL/min

Secondary pressure Bar

0 1000 2000 3000 4000 5000

Flow NL/min

Secondary pressure Bar

0 1000 2000 3000 4000 5000

Flow NL/min

Secondary pressure Bar

0 1000 2000 3000 4000 5000
Relief Characteristics HPR12

A Back pressure 5 Bar

B Back pressure 7 Bar

C Back pressure 10 Bar

Flow NL/min

Secondary pressure Bar
Pressure Characteristics HPR12

A
Supply pressure 7 Bar
Secondary pressure 2 Bar
Flow: 0 LN/min

B
Supply pressure 7 Bar
Secondary pressure 2 Bar
Flow: 0 LN/min

C
Supply pressure 7 Bar
Secondary pressure 2 Bar
Flow: 0 LN/min
Vesta Automation S.r.l.
Via Martiri di Belfiore 69/A
45100 Rovigo – Italy
Tel. +39 0425 474838
Fax +39 0425 474670
E-mail: info@vesta.it
Website: www.vesta.it
@gruppovesta
Vesta Automation Srl