High Pressure Adsorption Dryer
HLP PN 25, 0040 to 0125
HLP PN 40, 0050 to 0155

High pressure adsorption dryer, heatless regenerating, including pre-and afterfilter.

Product description:

Compressed air is lead through the inlet of the dryer (J) into the prefilter (3). At this stage, the air is cleaned from particles and condensate. The condensate is removed via a hand operated condensate drain (10) or optional via an electronic condensate drain (11). Via the shuttle valve (9) the air is lead into the absorber vessel (1), in which the air is dried to the required dryness level (pressure dewpoint). Thereafter the air flows through the upper non-return valve (9) and an afterfilter (4) which retains eventually accruing abrasion of desiccant. Via the systems outlet (O) the clean and dry air reaches the user's air net.

During one vessel is in operation, the water previously accumulated in the other adsorber is removed (regeneration phase). For this process a partial stream of already dried air is lead through a nozzle (7) and brought down to atmospheric pressure. For regeneration, purge air is lead over the desiccant bed and then released into the atmosphere via a pneumatically operated valve (5) and a silencer (6).
High Pressure Adsorption Dryer
HLP PN 25, 0260 to 1130
HLP PN 40, 0310 to 1200

High pressure adsorption dryer, heatless regenerating, including pre-and afterfilter

Product description:

Compressed air is lead through the inlet of the dryer (J) into the prefilter (3). At this stage, the air is cleaned from particles and condensate. The condensate is removed via a hand operated condensate drain (10) or optional via an electronic condensate drain (11). Via the pneumatically operated valve (V3, V4) in the valve block the air is lead into the absorber vessel (1), in which the air is dried to the required dryness level (pressure dewpoint). Thereafter the air flows through the upper non-return valve (9) and an afterfilter (4) which retains eventually accruing abrasion of desiccant. Via the systems outlet (O) the clean and dry air reaches the user's air net.

During one vessel is in operation, the water previously accumulated in the other adsorber is removed (regeneration phase). For this process a partial stream of already dried air is lead through a nozzle (7) and brought down to atmospheric pressure. For regeneration, purge air is lead over the desiccant bed and then released into the atmosphere via a pneumatically operated valve (V1, V2) and a silencer (6).
HLP PN 25, 0040 - 1130

Features HLP PN 25

<table>
<thead>
<tr>
<th>HLP PN 25</th>
<th>Volume flow in m³/h (1 bar, 20°C)*</th>
<th>Regeneration air losses m³/h (1 bar, 20°C)</th>
<th>Volume flow out (min.) m³/h (1 bar, 20°C)</th>
<th>Pressure loss initial incl. filters mbar</th>
<th>Pre-filter (afterfilter) MF (YG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0040</td>
<td>40</td>
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</tbody>
</table>

* related to 1 bar (abs) and 20 °C at intake of compressor and 7 bar system pressure and 35 °C inlet temperature into dryer

**Benefits**

Complete purification package including pre-, afterfilter and hand operated drain, electonic condensate drain optionally

- Turnkey-system; all components from one hand, technically perfectly matched to each other
- Optimally dimensioned filters
  - Safe separation of particle and aerosols (on adherence to the specified parameters), large filter surface causes low differential pressure of the unit, thereby low operating cost
- Indication of operating status (adsorption, regeneration, pressurizing, service, alarm) via LED display
  - High operating safety, all operating status can be easily detected at any time
- Intermittend operation as standard
  - Coupling with the compressor with central applications possible, thus savings of rege-neration air and operating cost
- Use of pneumatically controlled seat valves
  - High operating safety, low pressure losses, low operating and maintenance costs
- Option package available
  - Flexibility in application; option package for economic and safe system integration in the compressed air network
    - dew point-dependent capacity control
    - electronic condensate drain
    - control air supply
    - starting valve

**Product description**

Complete purification package with heatless adsorption dryer which works on the basis of pressure swing adsorption, pre-, afterfilter and hand operated drain, electronic condensate drain optionally

**Medium:**

Compressed air/ nitrogen

**Pressure dewpoint:**

-40°C at 100% load

**Sizing:**

<table>
<thead>
<tr>
<th>HLP PN 25</th>
<th>Inlet temperature</th>
<th>Operating pressure (bar)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>17</td>
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<tr>
<td>30°C</td>
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<td>35°C</td>
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<tr>
<td>45°C</td>
<td>0.44</td>
<td>0.45</td>
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<td>50°C</td>
<td>0.35</td>
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<tr>
<td>55°C</td>
<td>0.27</td>
<td>0.28</td>
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</table>

**Example:**

\[ V_{nom} = 200 \text{ m}^3/\text{h}, \quad V_{corr} = \frac{V_{nom}}{f} = \frac{200 \text{ m}^3/\text{h}}{0.63} = 317.5 \text{ m}^3/\text{h} \]

Selected adsorption dryer: HLP 0500-PN25
HLP PN 40, 0050 - 1200

<table>
<thead>
<tr>
<th>HLP PN 40</th>
<th>Volume flow (min.)</th>
<th>Regeneration air losses (1 bar, 20°C)</th>
<th>Volume flow out (min.)</th>
<th>Pressure loss initial incl. filters mbar</th>
<th>Pre-filter (afterfilter) MF (YG)</th>
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</thead>
<tbody>
<tr>
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<tr>
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<td>1200</td>
<td>46.37</td>
<td>1146.53</td>
<td>650</td>
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</table>

* Bezogen auf 1 bar (abs) und 20 °C Ansaugzustand und 7 bar (ü) und 35 °C Eintrittstemperatur

**Features HLP PN 25**

- Complete purification package including pre-, afterfilter and hand operated drain (optionally electronic condensate drain)
- Turnkey-system; all components from one hand, technically perfectly matched to each other
- Optimally dimensioned filters
  - Safe separation of particle and aerosols (on adherence to the specified parameters), large filter surface causes low differential pressure of the unit, thereby low operating cost
- Indication of operating status (adsorption, regeneration, pressurizing, service, alarm) via LED display
  - High operating safety, all operating status can be easily detected at any time
- Intermittend operation as standard
  - Coupling with the compressor with central applications possible, thus savings of regeneration air and operating cost
- Use of pneumatically controlled seat valves
  - High operating safety, low pressure losses, low operating and maintenance costs
- Option package available
  - Flexibility in application; option package for economic and safe system integration in the compressed air network
  - dew point-dependent capacity control
  - electronic condensate drain
  - control air supply
  - starting valve

**Benefits**

- Turnkey-system; all components from one hand, technically perfectly matched to each other
- Safe separation of particle and aerosols (on adherence to the specified parameters), large filter surface causes low differential pressure of the unit, thereby low operating cost
- High operating safety, all operating status can be easily detected at any time
- Coupling with the compressor with central applications possible, thus savings of regeneration air and operating cost
- High operating safety, low pressure losses, low operating and maintenance costs
- Flexibility in application; option package for economic and safe system integration in the compressed air network
- dew point-dependent capacity control
- electronic condensate drain
- control air supply
- starting valve

**Medium:**

- Compressed air/ nitrogen

**Pressure dewpoint:**

- 40°C at 100% load

**Operating pressure:**

- min. 26 bar (g), max. 40 bar (g)

**Medium temperature:**

- min. 5°C, max. 55°C

**Ambient:**

- min. 4°C, max. 50°C

**Power supply:**

- 230 V/ 50-60Hz

**Power consumtion:**

- approx 40 W

**Pressure vessel - design, manufacture, testing**

- Adsorber and filter acc. to 97/23/EC

**Declaration of conformity:**

- acc. to 97/23/EC

**Example:**

- \[ V_{\text{nom}} = 200 \text{ m}^3/\text{h} \]
- Inlet temperature = 40°C
- Operating pressure = 34 bar (ü)
- Pressure dewpoint = -40°C

- \[ V_{\text{corr}} = \frac{V_{\text{nom}}}{f} = \frac{200 \text{ m}^3/\text{h}}{0.67} = 298.5 \text{ m}^3/\text{h} \]

Selected adsorption dryer: HLP 0310-PN40
HLP PN 25, 0260-1130

<table>
<thead>
<tr>
<th>HLP PN 25</th>
<th>HLP PN 40</th>
<th>Connection DN</th>
<th>A  mm</th>
<th>B  mm</th>
<th>C  mm</th>
<th>D  mm</th>
<th>E  mm</th>
<th>F  mm</th>
<th>G  mm</th>
<th>H  mm</th>
<th>I  mm</th>
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<tbody>
<tr>
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<td>0310</td>
<td>G ¼</td>
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<td>655</td>
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<tr>
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<td>G 1</td>
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