EXT255H Compound Molecular Pump

**TECHNICAL DATA**

- **Inlet flange**: DN100ISO-K or DN100CF
- **Outlet flange**: DN25NW
- **Vent-port**: 1/8 inch BSP female
- **Purge-port**: 1/8 inch BSP female
- **Pumping speed**:
  - $N_2$: 220 l s$^{-1}$
  - $He$: 230 l s$^{-1}$
  - $H_2$: 180 l s$^{-1}$
- **Compression ratio**:
  - $N_2$: $>1 \times 10^8$
  - $He$: $4 \times 10^5$
  - $H_2$: $1.6 \times 10^4$
- **Recommended backing pump**: RV3
- **Maximum continuous inlet pressure**:
  - Water cooling at 15 °C, 40 °C ambient: $5 \times 10^{-2}$ mbar
  - Air cooling at 35 °C ambient: $5 \times 10^{-3}$ mbar
  - Free convection at 40 °C ambient: $4 \times 10^{-4}$ mbar
- **Nominal rotational speed**: 60000 rpm
- **Standby rotational speed**: 42000 rpm
- **Run-up time to 90% speed**:
  - EXC100E: 190 s
  - EXC120: 130 s
  - EXC300: 100 s
- **Cooling method**: Forced air or water
- **Maximum inlet flange temperature**: 100 °C
- **Ambient air temperature operating range**:
  - With forced air cooling: 0-35 °C
  - Water temperature range (for water cooling): 10-20 °C
- **Minimum water flow rate** (at 15 °C): 15 l h$^{-1}$
- **Operating attitude**: Vertical and upright, through to horizontal
- **Noise level at 1 metre**: 15 l h$^{-1}$ Vertical and upright, through to horizontal <50 dB(A)
- **Recommended Controller** (80 V):
  - EXC100, EXC120 or EXC300
- **Controller** (24 V d.c.):
  - EXDC80 and EXDC160
- **Other compatible Controller**: EXC300
- **Quiescent electrical power**: 25 W
- **Interstage pumping speed (Hi variant)**:
  - $N_2$: 10 l s$^{-1}$
  - $H_2$: 10 l s$^{-1}$

<table>
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<tr>
<th>INLET FLANGE</th>
<th>DN100ISO-K</th>
<th>DN100CF</th>
</tr>
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<tbody>
<tr>
<td>Ultimate pressure (mbar)</td>
<td>$&lt;5 \times 10^{-9}$</td>
<td>$&lt;5 \times 10^{-10}$</td>
</tr>
<tr>
<td>Rotary vane pump$^*$</td>
<td>$&lt;5 \times 10^{-8}$</td>
<td>$&lt;5 \times 10^{-9}$</td>
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<tr>
<td>Diaphragm pump$^*$</td>
<td>$&lt;5 \times 10^{-10}$</td>
<td>$&lt;5 \times 10^{-9}$</td>
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<tr>
<td>Weight (kg)</td>
<td>5.6</td>
<td>8.2</td>
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</tbody>
</table>

$^*$ Pumping speeds are without an inlet screen. Inlet screens are supplied fitted and reduce speed by about 10%.  
$^*$ A larger backing pump may be required for maximum throughput. A suitable diaphragm backing pump with ultimate <5 mbar may also be used.  
$^*$ With backing pressure <0.1 mbar. Above this inlet pressure, rotational speed drops to below nominal.  
$^*$ Ultimate pressure 48 hours after bakeout with 2 stage rotary pump.  
$^*$ Using a diaphragm pump with ultimate <5 mbar.

**ORDERING INFORMATION**

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<tr>
<td>EXT255H</td>
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<td>EXT255Hi</td>
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<td><strong>TIC compatible packages</strong> (24 V d.c.)</td>
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</tbody>
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$^*$ EXDC 160 (P/N D39460000) or EXDC 80 (P/N D39465000) control module also required.  
See the TIC Turbo/Instrument controller entry at the end of this section for more information.

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