nHT SERIES
HIGH THROUGHPUT DIFFUSION PUMPS
Edwards is a world leader in the design, technology and manufacture of vacuum pumps for industrial applications with over 100 years’ history.

We believe in delivering results that bring value to our customers by using our breadth of industry experience to identify and apply solutions. Using the most innovative and up-to-date modelling techniques, we can optimise the pumping configuration for customers to provide a system design giving the maximum performance in the most reliable and cost-effective way.

nHT SERIES

NEXT GENERATION HIGH THROUGHPUT DIFFUSION PUMPS

Edwards nHT series diffusion pumps provide stable high throughput vacuum performance. Designed for optimum energy efficiency, flexibility and low maintenance, the nHT series is the ideal solution for a variety of demanding industrial applications.

ENERGY EFFICIENCY

nHT series diffusion pumps have been designed for optimum heat transfer into the oil, resulting in faster heat up times and a significant reduction in energy consumption. In addition, use of the Energy Efficiency Controller (EEC) provides further reduction in power consumption – up to 30% without loss of pumping performance.

Energy Efficient Controller

Cutting energy consumption by up to 30%

- 100% power during the warm up phase
- 70% power on reaching required oil temperature
- Further energy reduction by use of standby mode
- USB interface and Ethernet connectivity
- Ease of operation and control
Optimised pumping speed and high throughput with good stability between $10^{-2}$ to $10^{-3}$ mbar range – critical for many applications.

**Economy**

Significant energy savings through innovative heating design providing faster warm-up time. When used with the Energy Efficiency Controller a further energy saving can be achieved – up to 30%.

**Reliability**

Smart temperature control and onboard sensors as standard ensure minimum load with longer lifetime for heaters and oil. Increased productivity through long maintenance intervals with non-wearing components and easy change heater cartridges.

**ADVANTAGES**

- High throughput pumping performance
- Energy efficiency
- High system uptime
- Simple to operate
- Low and simple maintenance
- Control capability via Energy Efficiency Controller (optional accessory)

**APPLICATIONS**

**Metallurgy**
- Sintering, Precision Investment Casting (PIC)

**Heat Treatment**
- Quenching, Tempering, Annealing

**Welding**
- E-beam Welding, Plasma Welding

**Coating**
- Glass Coating
- Surface Coating (Plasma, Spray, Surface Activation, Hard Coating, Reflective, Decorative, Plasma Deposition)
- Roll/Web Coating, Optical/Ophthalmic Coating, Display Coating

**Vacuum Drying**

**Research & Development**
**FEATURES**

- Integrated cold cap prevents fluid back migration to ensure a clean vacuum system
- Converging backing cone increases the critical backing pressure. This enables effective cross-over from the backing pump
- Terminal box/Energy Efficiency Controller interface
  - The electrical box provides connectivity options for both OEM and end-user
- High precision jet assembly ensures high stability and consistent jet performance
- Ejector stage ensures high-pressure pumping speed and greater resistance to pressure surges from the backing pump
- Innovative cartridge heating system providing optimum heat transfer into the oil resulting in faster heat up times reducing energy consumption
- Oil sight glass combined with drain and fill port. Easy to view and maintain oil level and quality

**TECHNICAL DATA**

### nHT Series Diffusion Pumps

<table>
<thead>
<tr>
<th>Voltage Variant</th>
<th>nHT10</th>
<th>nHT16</th>
<th>nHT20</th>
<th>nHT35</th>
</tr>
</thead>
<tbody>
<tr>
<td>B81130400</td>
<td>3.0 – 4.0</td>
<td>3.5 – 4.5</td>
<td>5.5 – 7.0</td>
<td>9.0 – 11.0</td>
</tr>
<tr>
<td>440-480V (50/60Hz)</td>
<td>B81130460</td>
<td>3.0 – 4.0</td>
<td>3.5 – 4.5</td>
<td>5.5 – 7.0</td>
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</tbody>
</table>

**nHT Series Accessories**

<table>
<thead>
<tr>
<th>Component</th>
<th>nHT10</th>
<th>nHT16</th>
<th>nHT20</th>
<th>nHT35</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inlet valve</td>
<td>B81130100</td>
<td>B81132100</td>
<td>B81130100</td>
<td>B81132100</td>
</tr>
<tr>
<td>Baffle cap (external)</td>
<td>B81130200</td>
<td>B81132200</td>
<td>B81130200</td>
<td>B81132200</td>
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<tr>
<td>Extended cold cap (internal)</td>
<td>-</td>
<td>B81233100</td>
<td>B81433100</td>
<td>B81533100</td>
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<tr>
<td>Inlet baffle (external)</td>
<td>-</td>
<td>B81234100</td>
<td>B81434100</td>
<td>B81534100</td>
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<tr>
<td>Energy Efficiency Controller (EEC)</td>
<td>B81001100</td>
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<tr>
<td>Cooling protection switch</td>
<td>B81003100</td>
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<tr>
<td>Water flow monitor</td>
<td>B81002100</td>
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</tbody>
</table>

**ORDERING INFORMATION**

- Measures as per DIN 28 427
- ANSI ISO ANSI ISO ANSI ISO ANSI ISO
- nHT10 nHT16 nHT20 nHT35
nHT series diffusion pumps are designed with a number of features which enable routine maintenance to be conducted ensuring optimum performance and safe operation. Scheduled routine maintenance shall include activities deemed beneficial to the continued performance and longevity of the product. All work must be completed by a suitably trained personnel. Before any maintenance operations are carried out, the pump must be isolated from the electrical supply and vacuum system.

Our field service teams carry out essential maintenance, repair and commissioning service at your site. We can also assist site staff in performing routine maintenance.

We offer original spares kits for nHT series diffusion pumps. This enables your maintenance team to start work with all the materials they need to complete the job successfully, saving time, reducing cost and extending the life of your product.