The 1st Choice for vacuum solutions
Support

BOC Edwards service operates in every major semiconductor region worldwide – ensuring you have local support wherever you are.

Building on our product leadership position and our widening base of strategic alliances, we have developed our FABMAX support programme. FABMAX includes a full range of support services from design and project management through to on and off site material and hardware support.

With over 700 fully qualified service personnel and a site presence at nearly 100 fabs in 12 countries, FABMAX will contribute to your success wherever you may be.
BOC Edwards is a world leader in process-enabling equipment, materials and services for the semiconductor industry. A truly global business, it operates in every major semiconductor manufacturing region, employs 5000 people and has annual sales in excess of $1b.

BOC Edwards is unique in offering a single source of technological expertise, innovative products and services to semiconductor device makers and process tool manufacturers. These include vacuum pumps, exhaust management systems, chemical management systems, bulk and process gases, temperature control units, waste management systems, monitoring and control, design and project management, on-site services and component cleaning.

iH Series Drypumps provide proven high reliability and low cost of ownership for difficult processes such as etch, PECVD and LPCVD where particulate, condensable and corrosive by-products are present.

iL Series Drypumps provide very low cost of ownership and high reliability for clean and light duty processes.
iH & iL Benefits

Proven high reliability

The iH & iL Series Drypumps have been specifically designed to provide reliable operation over a wide range of applications.

The unique cantilevered shaft design eliminates bearings from the high vacuum end of the drypump and booster.

In addition to the cantilevered design, a high operating temperature and specially profiled rotors make the iH Series ideally suited to tough deposition and etch processes.

Low cost of ownership

The iH & iL Series have been designed to minimise cost of ownership. Power and nitrogen requirements have been significantly reduced and cooling water usage has been minimised.

iH & iL Series require zero maintenance between overhauls, eliminating expensive periodic servicing and downtime.

Small footprint

iH & iL Series have been designed to feature a small footprint, saving valuable fab floor space.

The pumps can be stacked to further minimise floor space requirements.
The design of iH & iL Series Drypumps has been the culmination of nearly 20 years’ experience in drypumping and field experience from over 70,000 installed drypumps worldwide. iH & iL Series are now the pumps of choice for the world’s first 300mm production lines.

iH & iL Series operate under the most arduous conditions in the world’s top wafer manufacturing plants and have been proven to require zero periodic maintenance. The iH & iL Series provide application specific solutions for the full range of semiconductor fabrication processes.

iH Series

The iH Series provides vacuum pumping solutions for a wide range of applications including the most difficult processes such as metal etch, PECVD and LPCVD.

iL Series pumps have been designed for clean applications such as load lock and transfer chambers and feature zero nitrogen consumption.

iLN Series pumps feature shaft seal nitrogen purge capability ideal for light duty applications such as dielectric etch.
**Specifications**

<table>
<thead>
<tr>
<th></th>
<th>iL70/iL70N</th>
<th>iL70N/iL70N</th>
<th>iL600/iL600N</th>
<th>iL600N/iL600N</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Peak speed</strong></td>
<td>70 (m³/h)</td>
<td>84 (m³/h)</td>
<td>518 (m³/h)</td>
<td>600 (m³/h)</td>
</tr>
<tr>
<td></td>
<td>41 (cfm)</td>
<td>49 (cfm)</td>
<td>305 (cfm)</td>
<td>353 (cfm)</td>
</tr>
<tr>
<td></td>
<td>1166 (l/min)</td>
<td>1400 (l/min)</td>
<td>8635 (l/min)</td>
<td>10000 (l/min)</td>
</tr>
<tr>
<td><strong>Ultimate vacuum</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 x 10⁻² (mbar)</td>
<td>3 x 10⁻² (mbar)</td>
<td>3 x 10⁻³ (torr)</td>
<td>2 x 10⁻³ (torr)</td>
</tr>
<tr>
<td></td>
<td>3.8 x 10⁻² (torr)</td>
<td>2.3 x 10⁻² (torr)</td>
<td>2.3 x 10⁻³ (pa)</td>
<td>1.5 x 10⁻³ (pa)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Typical iL shaft seal nitrogen flow</strong></td>
<td>0 (slm)</td>
<td>0 (slm)</td>
<td>0 (slm)</td>
<td>0 (slm)</td>
</tr>
<tr>
<td><strong>Typical iLN shaft seal nitrogen flow</strong></td>
<td>4 (slm)</td>
<td>4 (slm)</td>
<td>4 (slm)</td>
<td>4 (slm)</td>
</tr>
<tr>
<td><strong>Inlet connection</strong></td>
<td>- (ISO63)</td>
<td>- (ISO63)</td>
<td>- (ISO100)</td>
<td>- (ISO100)</td>
</tr>
<tr>
<td><strong>Outlet connection</strong></td>
<td>- (NW40)</td>
<td>- (NW40)</td>
<td>- (NW40)</td>
<td>- (NW40)</td>
</tr>
<tr>
<td><strong>Typical cooling water flow at 15 psi pressure drop</strong></td>
<td>90 (l/h)</td>
<td>90 (l/h)</td>
<td>150 (l/h)</td>
<td>150 (l/h)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>230 (kg)</td>
<td>230 (kg)</td>
<td>405 (kg)</td>
<td>405 (kg)</td>
</tr>
<tr>
<td><strong>Power input at ultimate</strong></td>
<td>1.3 (kW)</td>
<td>1.5 (kW)</td>
<td>1.8 (kW)</td>
<td>2.0 (kW)</td>
</tr>
<tr>
<td><strong>Rated motor power</strong></td>
<td>1.8 (kW)</td>
<td>2.2 (kW)</td>
<td>3.6 (kW)</td>
<td>4.4 (kW)</td>
</tr>
<tr>
<td><strong>Oil capacity</strong></td>
<td>0.75 (l)</td>
<td>0.75 (l)</td>
<td>1.5 (l)</td>
<td>1.5 (l)</td>
</tr>
</tbody>
</table>

*All figures are typical*

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**Pumping Speed Curves - iL70/iL70N**

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**Pumping Speed Curves - iL600/iL600N**
iL Dimensions

iL70/iL70N

A

1 INLET
2 OUTLET
3 AIR EXTRACTION PORT
A SIDE VIEW
B PLAN VIEW

iL600/iL600N

A

B

1 INLET
2 OUTLET
3 AIR EXTRACTION PORT
A SIDE VIEW
B PLAN VIEW
### Specifications

- **Peak Speed**
  - m³/h: 86, 103
  - cfm: 51, 61
  - l/min: 1433, 1717

- **Ultimate vacuum**
  - mbar: 3 × 10⁻², 1 × 10⁻²
  - torr: 2.3 × 10⁻², 7.5 × 10⁻²

- **Typical shaft seal nitrogen flow**
  - slm: 4, 4

- **Inlet connection**
  - ISO 63

- **Outlet connection**
  - NW 40

- **Typical cooling water flow at 15 psi pressure drop**
  - l/h: 120, 120
  - l/min: 2, 2

- **Weight**
  - kg: 240, 240

- **Power input at ultimate**
  - kW: 2.4, 2.7

- **Rated motor power**
  - kW: 2.9, 3.5

- **Oil capacity**
  - l: 0.85, 0.85

**All figures are typical and without gas ballast.**

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### Pumping Speed Curves

**iH600 and iH80**

- **50 Hz**
  - Speed (m³/h): 518, 600
  - Pressure: 8635, 10000

- **60 Hz**
  - Speed (m³/h): 950, 1000
  - Pressure: 15837, 16670

**iH1000**

- **50 Hz**
  - Speed (m³/h): 305, 353
  - Pressure: 560, 589

- **60 Hz**
  - Speed (m³/h): 353, 560
  - Pressure: 589, 640
iH Dimensions

iH80

A

B

iH600/iH1000

A

B

1 INLET
2 OUTLET
3 AIR EXTRACTION PORT
4 INVERTER BOX (iH1000 ONLY)
A SIDE VIEW
B PLAN VIEW