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Product improvement is a continuing goal at Ingersoll Rand. Designs and specifications are subject to change without notice or obligation.

Ingersoll Rand Industrial Technologies provides products, services and solutions that enhance our customers’ energy efficiency, productivity and operations. Our diverse and innovative products range from complete compressed air systems, tools and pumps to material and fluid handling systems and environmentally friendly microturbines. We also enhance productivity through solutions created by Club Car, the global leader in golf and utility vehicles for businesses and individuals.

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Heatless and Heated Blower Desiccant Air Dryers
160–14,900 m³/hr

Innovation
Reliability
Efficiency
Innovative Design is Now Within Reach

Ingersoll Rand heatless and heated blower desiccant dryers—are engineered for easy access, maximum efficiency and long life—are delivered in a state-of-the-art low profile package, making installation and operation a snap!

Low Profile for Easy Maintenance
One look tells you that Ingersoll Rand desiccant dryers are like no others. Our low profile design provides easy access to key maintenance points at operator level for faster servicing and less downtime. The lower silhouette also allows upright shipment and facilitates simpler installation.

With manifolds angled toward the centre at operator level, the high performance valves are easily accessed for maintenance. For example, a typical diaphragm valve in a heatless dryer can be rebuilt in less than ten minutes, without removing the valve from the manifold.

Innovative Controls and Design Lower Energy Costs
Our new dryers offer the state-of-the-art Energy Management System (EMS) that maximises energy efficiency while maintaining a constant dew point. By using a humidity sensor to continuously monitor the dew point, EMS minimises the compressed air used in regeneration, and optimises heater and blower operation.

Heated blower models are equipped with solid state soft starters that limit inrush current to ensure a smooth start and longer blower motor life.

The dryers are engineered for low pressure drop through valve selection, tower size and filter design.

On heated blower models, the heater and blower are controlled by the outlet regeneration temperature that shuts off to save electrical power once desiccant has been thoroughly regenerated.

Solid state relays provide precise heater control, reduced heating times and extended heater life.

State-of-the-art Microprocessor Controller
- Maintains dryer performance at optimum levels, constantly monitors functions and provides maintenance alerts and protection notification, minimising downtime.
- Matches the dryer control to the load/unload state of the air compressor.
- Modbus compatible.
- LCD display for easy viewing.

Heavy Duty Filters For Longevity
- Standard heavy duty pre-filters and after-filters extend desiccant life and provide maximum particle protection of the downstream air.

Ingersoll Rand heatless and heated blower desiccant dryers are engineered for easy access, maximum efficiency and long life—are delivered in a state-of-the-art low profile package, making installation and operation a snap!
Selecting the Right Desiccant Dryer

It’s all about choices. Whether it’s lower operating costs or a lower capital investment, Ingersoll Rand has a desiccant dryer that fits your needs.

What Differentiates Ingersoll Rand Desiccant Dryers
Ingersoll Rand desiccant dryers are designed to virtually eliminate costly production interruptions due to moisture. All of our dryers use twin desiccant towers and strategically positioned valves for drying compressed air. Switching valves are normally open, while purge valves are normally closed to allow air flow through the dryer in case of power loss. Strategically-placed filters that remove oil and contaminants ensure only clean, dried air exits the dryer. Every dryer features an IP54 package, providing increased protection of electrical components, controls and displays. Both heatless and heated blower dryers have several standard features to ensure high quality operation as well as options to customise dryers to fit the needs of your air system.

How Desiccant Dryers Work
Highly adsorbent desiccant removes moisture from compressed air as it passes through the online dryer tower. The difference between our two technologies is how moisture is desorbed from the desiccant (regeneration) – see diagrams on page 5.

<table>
<thead>
<tr>
<th>Features and Options</th>
<th>Heatless Desiccant Dryer</th>
<th>Heated Blower Desiccant Dryer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Management System (EMS)</td>
<td>Option</td>
<td>Standard</td>
</tr>
<tr>
<td>Compressed Air Used for Regeneration</td>
<td>15%</td>
<td>0%</td>
</tr>
<tr>
<td>Controller</td>
<td>Digital Microprocessor</td>
<td>Digital Microprocessor</td>
</tr>
<tr>
<td>Environmental Protection</td>
<td>IP54 (Option for IP65)</td>
<td>IP54 (Option for IP65)</td>
</tr>
<tr>
<td>Available Flow Range</td>
<td>2.8 m³/min - 55.9 m³/min</td>
<td>(8.9 m³/min - 248.6 m³/min)</td>
</tr>
<tr>
<td>Constant Pressure Dew Point</td>
<td>-40°C</td>
<td>-40°C</td>
</tr>
<tr>
<td>Included Filtration</td>
<td>Heavy Duty Pre-filters &amp; After-filters</td>
<td>Heavy Duty Pre-filters &amp; After-filters</td>
</tr>
<tr>
<td>Pressure Rating</td>
<td>10 bar g</td>
<td>10 bar g</td>
</tr>
<tr>
<td>Tower Insulation</td>
<td>Not Available</td>
<td>Option</td>
</tr>
<tr>
<td>Stainless Steel Control Lines</td>
<td>Option</td>
<td>Option</td>
</tr>
<tr>
<td>Dryer Bypass</td>
<td>Option</td>
<td>Option</td>
</tr>
<tr>
<td>Heatless Back-up Mode</td>
<td>Not Applicable</td>
<td>Standard</td>
</tr>
</tbody>
</table>

Heatless Desiccant Dryers
Drying: (1) From the air compressor, the air enters the dryer through a pre-filter that removes contaminants to protect the desiccant. (2) The air is directed through the drying tower. (3) The desiccant removes moisture from the air through adsorption. (4) Dry air passes through an after-filter removing any contaminate particles before entering into the air system. (5) A small amount of the compressed air (15%) is redirected to the regenerating tower.

Regeneration: (1) Dry air flows in the reverse direction through the regenerating tower, removing trapped moisture from the desiccant. (2) Moist air exits the dryer through an exhaust port equipped with a silencing muffler to reduce noise.

Heated Blower Desiccant Dryers
Drying: (1) From the air compressor, the air enters the dryer through a pre-filter that removes contaminants to protect the desiccant. (2) The air is directed through the drying tower. (3) The desiccant removes moisture from the air through adsorption. (4) The dry air passes through an after-filter removing any contaminate particles before entering into the air system.

Regeneration: (1) Ambient air enters through the blower intake. (2) Air temperature is elevated as air moves across the external heater. (3) The hot air is directed to the regenerating tower. (4) Hot air flows in the reverse direction through the regenerating tower, removing the adsorbed moisture from the desiccant. (5) Moist air exits the dryer through an exhaust port equipped with a silencing muffler to reduce noise.
Desiccant Dryer Features and Benefits

A Microprocessor Controller
- Controls valve switching to correctly direct air flow and operation of blowers and heaters.
- Protects the dryer via continuously monitoring operating parameters.

B Environmental Protection
- IP54 rating provides protection against dust and moisture contamination (IP65 option for wash down applications).

C Motor Protection/Soft Starter (heated blower only)
- Reduces inrush current and stress on the mechanical system.

D Power Supply
- Dryers operate at 50 Hz (all models) or 60 Hz (optional).
- Pneumatic options also available on heatless models.

E Centrifugal Blower (heated blower only)
- High performance centrifugal blower enables the use of ambient air for regeneration, eliminating compressed air loss.

F High Performance Heater (heated blower only)
- Heats the air used for regeneration to increase the efficiency of moisture removal.

G Desiccant
- Reliable high strength non-acidic desiccant provides maximum performance and is easily stored and handled.

H Silencing Muffler
- Reduce the exhausted air noise level to ensure a worker-friendly environment.

I High Performance Valves
- High performance butterfly valves with self-energised sealing provide quick response and long life. The valves are centrally angled for easy access.

J Heavy Duty Filters
- Pre-filter: High efficiency removing oil aerosol content down to 0.1 mg/m³ @ 21°C protecting and extending the life of the desiccant.
- After-filter: Heavy duty removing particles down to 1 micron insuring high air quality downstream to the customer.

K Safety Relief Valve
- Protects the dryer from over pressurisation incase of fire.

L Desiccant Towers
- The towers are rated for continuous 10 bar g operation.
- The digital controller turns the towers off and on for regeneration regulation.

M Humidity Sensor
- The sensor is part of the EMS package that allows continuous monitoring of the dew point.

N Cool Sweep Mode (heated blower only)
- Reduces temperature and humidity spikes that may occur during switching.

So, how do you select the right desiccant dryer technology?
That depends on the variables, such as system demand, compressed air capacity, air quality requirements and applicable life cycle costs that are unique to your compressed air system.

### Desiccant Dryer Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Flow -40°C PDP m³/hr</th>
<th>Flow -70°C PDP m³/hr</th>
<th>Ins/Out Connection</th>
<th>Width mm</th>
<th>Depth mm</th>
<th>Height mm</th>
<th>Weight kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>D160IL</td>
<td>94</td>
<td>160</td>
<td>75</td>
<td>128</td>
<td>1.0 BSP</td>
<td>1,029</td>
<td>762</td>
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<td>D200IL</td>
<td>118</td>
<td>200</td>
<td>94</td>
<td>160</td>
<td>1.0 BSP</td>
<td>1,029</td>
<td>762</td>
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<td>D275IL</td>
<td>163</td>
<td>275</td>
<td>136</td>
<td>220</td>
<td>1.5 BSP</td>
<td>1,130</td>
<td>813</td>
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<tr>
<td>D350IL</td>
<td>206</td>
<td>350</td>
<td>165</td>
<td>280</td>
<td>1.5 BSP</td>
<td>1,130</td>
<td>813</td>
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<td>D500IL</td>
<td>294</td>
<td>500</td>
<td>231</td>
<td>400</td>
<td>2.0 BSP</td>
<td>1,232</td>
<td>813</td>
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<td>D700IL</td>
<td>412</td>
<td>700</td>
<td>336</td>
<td>580</td>
<td>2.0 BSP</td>
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<td>813</td>
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<td>D900IL</td>
<td>530</td>
<td>900</td>
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<td>D1000IL</td>
<td>687</td>
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<td>544</td>
<td>920</td>
<td>2.0 BSP</td>
<td>1,556</td>
<td>914</td>
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### Heated Blower Desiccant Dryer Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Flow -40°C PDP m³/hr</th>
<th>Heater kW</th>
<th>Blower kW</th>
<th>Ins/Out Connection</th>
<th>Width mm</th>
<th>Depth mm</th>
<th>Height mm</th>
<th>Weight kg</th>
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</thead>
<tbody>
<tr>
<td>D500IB</td>
<td>294</td>
<td>500</td>
<td>6.0</td>
<td>3.0</td>
<td>1.5 BSP</td>
<td>2,134</td>
<td>961</td>
<td>1,217</td>
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<td>D900IB</td>
<td>530</td>
<td>900</td>
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<td>4.0</td>
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<td>964</td>
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<td>D1400IB</td>
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<td>D1800IB</td>
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<td>2,134</td>
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<td>3,900</td>
<td>45</td>
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<td>D5300IB</td>
<td>3,120</td>
<td>5,249</td>
<td>50</td>
<td>15.0</td>
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<td>2,134</td>
<td>1,676</td>
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<td>D7000IB</td>
<td>4,121</td>
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<td>60</td>
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<td>DN150</td>
<td>2,134</td>
<td>1,936</td>
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<tr>
<td>D9300IB</td>
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<td>2,210</td>
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<td>D10600IB</td>
<td>6,241</td>
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<td>85</td>
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<td>2,616</td>
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<td>D14900IB</td>
<td>8,772</td>
<td>14,900</td>
<td>125</td>
<td>37.0</td>
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<td>2,134</td>
<td>2,567</td>
<td>2,855</td>
</tr>
</tbody>
</table>

Referenced to 20°C and 1 bar a, inlet 35°C and 7 bar g. Maximum working pressure is 10 bar g.
Desiccant is factory-installed on all models except D500IB to D14900IB. Dimensions and weights are approximate.

Ingersoll Rand Ultra Care

Helping you maintain a healthy business
UltraCare five year maintenance and performance agreements have been designed to be easy to understand with absolutely no surprises.
Find out more about protecting the heart of your business contact your local distributor or Ingersoll Rand Sales office.