FOCUSED ON
COMPRESSED AIR TREATMENT
Cycling Refrigerated Air Dryer | DRD Series
FOCUSED ON
ENERGY EFFICIENCY

Energy efficient and environmentally sound, DRD Series dryers are designed not only to minimize the use of compressed air and electricity in their operation, but also to significantly reduce the operational costs of the compressor by minimizing pressure loss.

These costly contamination problems can be avoided by installing a DRD Series cycling refrigerated air dryer (ranging from 325 - 6000 scfm) package complete with Parker high efficiency filtration.

Our SmartPack 4-in-1 heat exchanger offers minimal pressure drops and class leading performance, and significantly increases the efficiency of the whole compressed air treatment process.

The innovative SmartControl function automatically and continuously adjusts dryer operation to the effective working conditions, minimizing operating costs and maximizing performances.

Compressed air purification equipment must deliver uncompromising performance and reliability while providing the right balance of air quality with the lowest cost of operation. Many manufacturers offer products for the filtration and purification of contaminated compressed air, which are often selected only upon their initial purchase cost, with little or no regard for the air quality they provide, the cost of operation throughout their life or their environmental impact. When purchasing purification equipment, delivered air quality, the overall cost of ownership and the equipment’s environmental impact must always be considered.

Model DRD

- Optimum dewpoint levels for highest system performance
- Advanced patented design solutions
- Unique 4-in-1 SmartPack heat exchanger
- High reliability, easy to use and maintain
- Environmental, lowest real operating costs
- Dual mode integrated energy saving no loss level drain with back up timer drain with alarm
- Extremely low pressure drop design
- Crankcase heater
- SmartControl energy saving function
- Advanced scroll compressor with Phase Monitor
- Oversized condenser to operate in ambient to 122°F (50°C) with pre-filter
- ETL listed CRN registered complete unit (except Alberta)
- Dryers manufactured in facility certified to ISO9001, ISO14001
- CAGI Performance verification
Lowest Full-load Power Consumption
Parker DRD Series is the most energy efficient air dryer on the market, under all operating conditions. DRD Series leads the market with the lowest full-load power consumption due to its oversized heat exchanger, compliant scroll compressors, R407C environmentally friendly refrigerant and direct operation, avoiding the increased energy consumption of thermal mass-type dryers. Parker’s DRD Series consumes less energy at full load and saves more energy at partial loads. Electrical consumption usually accounts for around 50% of the air dryer’s total cost over a five-year period.

Minimal Direct Energy Costs
The SmartSave control automatically and precisely adjusts energy consumption in response to actual operating conditions [air variability and seasonal changes], avoiding unnecessary waste. SmartControl controls the dryer operation via multiple sensors guaranteeing maximum savings and avoiding dewpoint surges. SmartPack’s all-in-one design and thermal insulation further enhance the overall energy-savings.

Reduced Indirect Costs
Electricity required by the compressor to compensate for pressure drops in the air dryer accounts for around 25% of its total cost over 5 years. Parker’s DRD Series offers average pressure drops which are about one half those of conventional systems. The air compressor requires additional energy to offset the drop in compressed air pressure caused by traditional condensate drains. Zero air loss drains automatically adjust drainage patterns to avoid compressed air loss thereby saving energy.

Lowest Differential Pressure
Parker DRD Series cycling refrigerated dryers have an average of 2.0 psid versus the industry average of 5.0 psid.

Example: 500 scfm dryer operating, 8760 hours per year

<table>
<thead>
<tr>
<th>Cost of Power</th>
<th>Savings Realized</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.05 per KW</td>
<td>$544 per year</td>
</tr>
<tr>
<td>$0.10 per KW</td>
<td>$1091 per year</td>
</tr>
<tr>
<td>$0.15 per KW</td>
<td>$1638 per year</td>
</tr>
</tbody>
</table>

Environmentally Friendly
Montreal Protocol compliant R407C refrigerant allows for zero ozone depletion, low global warming potential and low refrigerant charge.
Advanced Scroll Compressors
(400 scfm and up)

Parker’s DRD Series features advanced scroll compressors, offering energy savings of 20% when compared with piston compressors. The ability to tolerate liquid returns coupled with 50% less moving parts render them nearly indestructible and highly reliable. Low vibration levels increase overall refrigeration circuit longevity.

FOCUSED ON INNOVATION

Model DRD is equipped with innovative smart technology to help take your operation to the next level.
Optional Smart BMS Interface

Simple BMS interface includes:
- RS485 serial card provides direct communication to Modbus and requires no gateway or A.N.I.
- Provides visualization of dewpoint, alarm conditions and service indication.
- Provides remote control of the dryer including on/off and alarm reset (depending on actual alarm)

SmartPack Heat Exchanger Provides Less Than 2 PSI Pressure Drop

The patented SmartPack heat exchanger features an extremely robust, all-in-one aluminum design, with no interconnecting tubing. The flow path of the heat exchanger has been designed in order to optimize its performances. In particular, large volumes allow low air velocity through the heat exchanger section, resulting in high exchange efficiency and low pressure drops. Pressure drops are further improved thanks to the absence of interconnecting pipes through the different sections of the heat exchanger and to a straightforward path of the compressed air flow with smooth and minimum changes of flow directions.

SmartControl with SmartSave Cycling

The multifunction SmartControl provides a versatile platform for user interface and SmartSave Cycling (if enabled). The innovative SmartSave Cycling Control continuously monitors the demand placed on the dryer. At conditions of low demand the refrigerant compressor is cycled off to save energy. A sophisticated algorithm continuously adapts the operation of the dryer for optimum energy efficiency while minimizing the dewpoint spikes common to traditional thermal mass dryers.

User Interface
- Multi-functional digital display
- Digital dew point temperature readout
- Synoptic panel/alarms list
- Programmable parameters
- Average energy savings being achieved

Maintenance
- Alarm report (last 8 alarms)
- Maintenance warning
- Hours counter (dryer and compressor)

Accessories
- Voltage-free alarm contacts
- Remote on-off contact
- RS-485 interface
Add to Your Savings with Parker domnick hunter Filtration

Compressed air and gas lines typically contain water, oil, and particulate contamination.

The contaminants of greatest concern in precision compressed air systems are water, oil, and solids.

Water vapor is present in all compressed air and it becomes greatly concentrated by the compression process. While air dryer systems can be used effectively to remove water from compressed air, they will not remove oil, which is the second major liquid contaminant.

Most oil comes from compressor lubrication carry-over, but even the air produced by oil-free compressors has hydrocarbon contamination brought into the system through the intake.

The third contaminant is solid matter including dirt, rust, and scale. Solid particulates, combined with aerosols of water and oil, can clog and shorten the life of air system components and can foul processes.

Parker domnick hunter OIL-X - a new series of compressed air filters, taking efficiency to a different level.

Built on Parker’s worldwide expertise in filtration, the OIL-X range has been developed to ensure consistent outstanding air quality, guaranteed for 12 months, and third party validated to meet ISO 8573-1.
Combining the unique filter element with a specially designed advanced air flow management system, the Parker domnick hunter OIL-X range is engineered to not only deliver air quality in accordance with ISO 8573-1 classifications, but it does so with an extremely low differential pressure - ensuring maximum efficiency and productivity.

FOCUSED ON MARKET
LEADING LOW DIFFERENTIAL PRESSURE

> Unique filter element
Specifically constructed for reduced air flow velocity, reduced pressure loss, increased dirt holding capacity, and improved efficiency. Includes a 12-month air quality guarantee.

> Flow management system
Specially engineered 'bell mouth', with 90-degree elbow, flow distributor and conical flow diffuser, to promote a consistent, optimum air flow.

> Filter housing
Designed to allow easy maintenance and element replacement, and covered by a 10-year guarantee.

> Flexible connections
A wide range of port sizes and filter connections, for added flexibility.

> Epoxy coating
Finished with alocrom corrosion protection and a tough, dry powder epoxy coating for a high quality feel.
## Technical (DRD325 - DRD6000)

### Product Selection

<table>
<thead>
<tr>
<th>Model</th>
<th>Air In/Out</th>
<th>Nominal Capacity (scfm)¹</th>
<th>Dimensions ins (mm)</th>
<th>Weight</th>
<th>Filtration²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>H</td>
<td>W</td>
<td>D</td>
<td>lbs</td>
</tr>
<tr>
<td>DRD325-**</td>
<td>2” NPT</td>
<td>325</td>
<td>41.9 (1044)</td>
<td>27.8 (706)</td>
<td>41.2 (1044)</td>
</tr>
<tr>
<td>DRD400-**</td>
<td>2” NPT</td>
<td>400</td>
<td>41.9 (1044)</td>
<td>27.8 (706)</td>
<td>41.2 (1044)</td>
</tr>
<tr>
<td>DRD500-**</td>
<td>2” NPT</td>
<td>500</td>
<td>41.9 (1044)</td>
<td>27.8 (706)</td>
<td>41.2 (1044)</td>
</tr>
<tr>
<td>DRD700-**</td>
<td>3” NPT</td>
<td>700</td>
<td>52.0 (1316)</td>
<td>31.7 (806)</td>
<td>45.9 (1166)</td>
</tr>
<tr>
<td>DRD800-**</td>
<td>3” NPT</td>
<td>800</td>
<td>52.0 (1316)</td>
<td>31.7 (806)</td>
<td>45.9 (1166)</td>
</tr>
<tr>
<td>DRD1000-**</td>
<td>3” NPT</td>
<td>1000</td>
<td>52.0 (1316)</td>
<td>31.7 (806)</td>
<td>45.9 (1166)</td>
</tr>
<tr>
<td>DRD1200-**</td>
<td>3” NPT</td>
<td>1200</td>
<td>66.5 (1690)</td>
<td>39.7 (1007)</td>
<td>43.2 (1097)</td>
</tr>
<tr>
<td>DRD1600-**</td>
<td>4” Flg</td>
<td>1600</td>
<td>67.8 (1722)</td>
<td>39.7 (1007)</td>
<td>71.2 (1808)</td>
</tr>
<tr>
<td>DRD2000-**</td>
<td>6” Flg</td>
<td>2000</td>
<td>67.8 (1722)</td>
<td>39.7 (1007)</td>
<td>71.2 (1808)</td>
</tr>
<tr>
<td>DRD2400-**</td>
<td>6” Flg</td>
<td>2400</td>
<td>67.8 (1722)</td>
<td>39.7 (1007)</td>
<td>71.2 (1808)</td>
</tr>
<tr>
<td>DRD3000-**</td>
<td>6” Flg</td>
<td>3000</td>
<td>81.0 (2048)</td>
<td>39.7 (1007)</td>
<td>71.2 (1808)</td>
</tr>
<tr>
<td>DRD3800-**</td>
<td>6” Flg</td>
<td>3800</td>
<td>81.0 (2048)</td>
<td>39.7 (1007)</td>
<td>71.2 (1808)</td>
</tr>
<tr>
<td>DRD5000-**</td>
<td>8” Flg</td>
<td>5000</td>
<td>87.0 (2210)</td>
<td>39.7 (1007)</td>
<td>89 (2261)</td>
</tr>
<tr>
<td>DRD6000-**</td>
<td>8” Flg</td>
<td>6000</td>
<td>87.0 (2210)</td>
<td>39.7 (1007)</td>
<td>89 (2261)</td>
</tr>
</tbody>
</table>

### Notes
1. Flowrates at the following climatic conditions - Ambient Temperature: 100°F (38°C), Inlet Temperature: 100°F (38°C), Inlet Pressure: 100 psi g (7 bar g)
2. Filter packages recommended based on connection size.
3. Filters supplied loose.
4. CF = Consult Factory
5. For DRD1000 & up, only 460/3/60 and 575/3/60 available.

For reliable operation a Parker pre-filter is recommended. Dryers not operated in accordance with ISO air quality class 3 for solids may see degradation in performance and/or premature dryer failure.
Replacement Elements

<table>
<thead>
<tr>
<th>Model</th>
<th>Pre-Filter Element</th>
<th>After-Filter Element</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRD325-**</td>
<td>P040AO</td>
<td>P040AA</td>
</tr>
<tr>
<td>DRD400-**</td>
<td>P040AO</td>
<td>P040AA</td>
</tr>
<tr>
<td>DRD500-**</td>
<td>P045AO</td>
<td>P045AA</td>
</tr>
<tr>
<td>DRD700-**</td>
<td>P055AO</td>
<td>P055AA</td>
</tr>
<tr>
<td>DRD800-**</td>
<td>P055AO</td>
<td>P055AA</td>
</tr>
<tr>
<td>DRD1000-**</td>
<td>P055AO</td>
<td>P055AA</td>
</tr>
<tr>
<td>DRD1200-**</td>
<td>P055AO</td>
<td>P055AA</td>
</tr>
<tr>
<td>DRD1600-**</td>
<td>CF</td>
<td>CF</td>
</tr>
<tr>
<td>DRD2000-**</td>
<td>CF</td>
<td>CF</td>
</tr>
<tr>
<td>DRD2400-**</td>
<td>CF</td>
<td>CF</td>
</tr>
<tr>
<td>DRD3000-**</td>
<td>CF</td>
<td>CF</td>
</tr>
<tr>
<td>DRD3800-**</td>
<td>CF</td>
<td>CF</td>
</tr>
<tr>
<td>DRD5000-**</td>
<td>CF</td>
<td>CF</td>
</tr>
<tr>
<td>DRD6000-**</td>
<td>CF</td>
<td>CF</td>
</tr>
</tbody>
</table>

Notes
• Filters supplied loose

Correction Factors
To obtain dryer capacity at new conditions, multiply nominal capacity x C1 x C2 x C3.

<table>
<thead>
<tr>
<th>Ambient Temperature (C1)</th>
<th>°F</th>
<th>70</th>
<th>80</th>
<th>90</th>
<th>100</th>
<th>110</th>
<th>120</th>
<th>122</th>
</tr>
</thead>
<tbody>
<tr>
<td>°C</td>
<td></td>
<td>21</td>
<td>27</td>
<td>32</td>
<td>38</td>
<td>43</td>
<td>49</td>
<td>50</td>
</tr>
<tr>
<td>CF</td>
<td></td>
<td>1.22</td>
<td>1.15</td>
<td>1.05</td>
<td>1</td>
<td>0.94</td>
<td>0.79</td>
<td>0.71</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Inlet Temperature (C2)</th>
<th>°F</th>
<th>90</th>
<th>100</th>
<th>110</th>
<th>120</th>
<th>130</th>
<th>140</th>
</tr>
</thead>
<tbody>
<tr>
<td>°C</td>
<td></td>
<td>32</td>
<td>38</td>
<td>43</td>
<td>49</td>
<td>54</td>
<td>60</td>
</tr>
<tr>
<td>CF</td>
<td></td>
<td>1.22</td>
<td>1</td>
<td>0.82</td>
<td>0.68</td>
<td>0.56</td>
<td>0.46</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Working Pressure (C3)</th>
<th>psi g</th>
<th>60</th>
<th>80</th>
<th>100</th>
<th>125</th>
<th>150</th>
<th>174</th>
<th>203</th>
</tr>
</thead>
<tbody>
<tr>
<td>bar g</td>
<td></td>
<td>4</td>
<td>6</td>
<td>7</td>
<td>9</td>
<td>10</td>
<td>12</td>
<td>14</td>
</tr>
<tr>
<td>CFR</td>
<td></td>
<td>0.83</td>
<td>0.93</td>
<td>1</td>
<td>1.07</td>
<td>1.12</td>
<td>1.15</td>
<td>1.18</td>
</tr>
</tbody>
</table>

Technical Data

<table>
<thead>
<tr>
<th>Models</th>
<th>Max Ambient Temperature</th>
<th>Max Inlet Temperature</th>
<th>Min Ambient Temperature</th>
<th>Max Inlet Pressure</th>
<th>Refrigerant</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRD325 - DRD4000</td>
<td>122°F (50°C)</td>
<td>149°F (65°C)</td>
<td>41°F (5°C)</td>
<td>203 psi g (14 bar g)</td>
<td>R407c</td>
</tr>
</tbody>
</table>
Compressed air equipment users demand much more than the supply of high quality products in order to maintain a competitive edge.

Modern production technology is increasingly demanding the provision of a higher purity and more reliable compressed air supply. Products and solutions that are manufactured by Parker domnick hunter are designed to provide air quality that meets and often exceeds international standards.

As well as the requirement for air purity and reliability, there are additional factors to consider when choosing the right service provider for your compressed air and gas purification system. For example, knowledge of the many regulations regarding the management of industrial waste, energy efficiency improvement programs and consideration of any environmental impact. It is anticipated that future legislations will demand further in-depth technical and knowledge-based support from service providers.

Our commitment to industry does not stop with the supply of high quality products. We are also committed to ensuring that our equipment provides high performance by providing a trouble-free service from a bespoke maintenance and verification package – all tailored to your own specific requirements.

We offer a wide range of valuable services that will impact positively on your drive towards improved production efficiency and product quality with reduced production rejections and operational costs.

From initial selection to installation, commissioning, preventative maintenance and specialized services, Parker domnick hunter is redefining customer service.

Next steps

To find out more about Parker’s expertise and solutions for non-cycling refrigerated air dryers please call 800 343 4048.
# Worldwide Filtration Manufacturing Locations

## North America
### Compressed Air Treatment
**Industrial Gas Filtration & Generation Division**
- Artek/Finite/domnick hunter/Zander
  - Lancaster, NY
  - 716 686 6400
  - www.parker.com/gsf

- Balston
  - Havehill, MA
  - 978 858 0505
  - www.parker.com/balston

### Engine Filtration
**Racor**
- Modesto, CA
  - 209 521 7860
  - www.parker.com/racor

- Holly Springs, MS
  - 602 252 2656
  - www.parker.com/racor

### Hydraulic Filtration
**Hydraulic & Fuel Filtration**
- Metamora, OH
  - 419 644 4311
  - www.parker.com/hydraulicfilter

- Laval, QC Canada
  - 450 629 8694
  - www.parkerfarr.com

- Velcon
  - Colorado Springs, CO
  - 719 531 5855
  - www.velcon.com

### Process Filtration
**domnick hunter Process Filtration**
- Scilog
  - Oxnard, CA
  - 805 604 3400
  - www.parker.com/processfiltration

### Water Purification
**Village Marine, Sea Recovery, Horizon Reverse Osmosis**
- Carson, CA
  - 310 637 3400
  - www.parker.com/watermakers

## Europe
### Compressed Air Treatment
**Gas Separation & Filtration Division EMEA**
- Gateshead, England
  - +44 (0) 191 402 9000
  - www.parker.com/gsfe

- Membrane and Modules
  - Etten-Leur, Netherlands
  - +31 76 508 5300
  - www.parker.com/gsfe

- Hiross Zander
  - Essen, Germany
  - +49 2054 9340
  - www.parker.com/gsfe

### Engine Filtration & Water Purification
**Racor**
- Dewsbury, England
  - +44 (0) 1924 487 000
  - www.parker.com/rfdw

- Racor Research & Development
  - Stuttgart, Germany
  - +49 (0) 711 7071 290-10

### Hydraulic Filtration
**Hydraulic Filter**
- Arnhem, Holland
  - +31 26 3760376
  - www.parker.com/hfdw

- Urjala, Finland
  - +358 20 753 2500

### Condition Monitoring
**Parker Kittiwake**
- West Sussex, England
  - +44 (0) 1903 731 470
  - www.kittiwake.com

### Process Filtration
**domnick hunter Process Filtration**
- Parker Twin Filter BV
  - Birtley, England
  - +44 (0) 191 410 5121
  - www.parker.com/processfiltration

## Asia Pacific
### Australia
- Castle Hill, Australia
  - +61 2 9634 7777
  - www.parker.com/australia

### China
- Shanghai, China
  - +86 21 5031 2525
  - www.parker.com/china

### India
- Chennai, India
  - +91 22 4391 0700
  - www.parker.com/india

### Japan
- Tokyo, Japan
  - +81 45 870 1522
  - www.parker.com/japan

### Korea
- Hwaseon-City
  - +82 31 359 0852
  - www.parker.com/korea

### Singapore
- Jurong Town, Singapore
  - +65 6887 6300
  - www.parker.com/singapore

### Thailand
- Bangkok, Thailand
  - +66 2186 7000
  - www.parker.com/thailand

### Latin America
**Parker Comercio Ltda. Filtration Division**
- Sao Paulo, Brazil
  - +55 12 4009 3500
  - www.parker.com/br

### Pan American Division
- Miami, FL
  - 305 470 8800
  - www.parker.com/panam

### Africa
- Aeroport Kempton Park, South Africa
  - +27 11 9610700
  - www.parker.com/africa

© 2017 Parker Hannifin Corporation. Product names are trademarks or registered trademarks of their respective companies