### DESICCANT DRYERS

<table>
<thead>
<tr>
<th>Bulletin Number</th>
<th>Bulletin Description</th>
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<tbody>
<tr>
<td>IS-DD153060</td>
<td>Rev. 3 DD15 Desiccant Air Dryer, Installation &amp; Service</td>
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<tr>
<td>IS-DD303060</td>
<td>Rev. 3 DD30 Desiccant Air Dryer, Installation &amp; Service</td>
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<tr>
<td>IS-DD603060</td>
<td>Rev. 3 DD60 Desiccant Air Dryer, Installation &amp; Service</td>
</tr>
<tr>
<td>Safety Guide</td>
<td>PDN Safety Guide</td>
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</tbody>
</table>

Visit [www.pdnplu.com](http://www.pdnplu.com) for additional instruction sheets.
Introduction

Desiccant dryers are a convenient and cost-effective means of ensuring your sensitive pneumatic applications are never exposed to damaging moisture. Compact in size, and no external power sources required, desiccant dryers can be used almost anywhere.

When air is compressed, the temperature of the air is increased, as is its capacity to hold moisture. As the hot, moist air travels downstream through the lines, it cools, allowing the moisture to condense. After coolers, filters, drain traps, and drip legs are effective for removing liquid condensate. However, a desiccant dryer is designed to remove residual water vapor and aerosols with a very absorbent bed of silica gel beads (desiccant).

The desiccant dryer is designed so that, as air enters the unit and passes through the desiccant, any moisture is absorbed into the pores of the desiccant reducing the moisture content (dew point) of the outlet air. When the desiccant reaches its level of saturation (if using indicating desiccant the color will change from blue to pink), the dew point of the outlet air will begin to rise. At saturation, the desiccant dryer to catch any residual desiccant dust. All desiccant dryers are individually regeneration and model DD60 holds 10 lb of desiccant. To regenerate Silica Gel desiccant, bake desiccant for 4 hours at 275°F.

Maintenance

1. IMPORTANT: Depressurize dryer before servicing!
2. UnscREW the metal collar holding the dryer bowl to the head, and remove bowl and collar.
3. Dumps old desiccant out of bowl.
4. If the pressure drop across the dryer has become unacceptable, the bronze element in bottom of bowl may have become clogged. If this happens, blow air through the flow tube by placing a blow gun at the top of the tube. If element replacement is needed, disassemble flow tube from bowl by removing the end cap and bottom nut from the bottom of the bowl, replace element and reassemble tube in bowl.
5. Refill bowl with new or regenerated desiccant. Model DD15 holds 2-1/2 lb. of desiccant, model DD30 holds 5 lb. of desiccant and model DD60 holds 10 lb. of desiccant. To regenerate Silica Gel desiccant, bake desiccant for 4 hours at 275°F.
6. Reassemble bowl to head, making sure that the O-Ring in the head is in place.

Operating Pressure:

<table>
<thead>
<tr>
<th>Maximum Inlet Pressure</th>
<th>kPa</th>
<th>PSIG</th>
<th>bar</th>
</tr>
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<tr>
<td></td>
<td>2068</td>
<td>300</td>
<td>21.0</td>
</tr>
</tbody>
</table>

⚠️ WARNING

To avoid unpredictable system behavior that can cause personal injury and property damage:
- Disconnect electrical supply (when necessary) before installation, service, or conversion.
- Disconnect air supply and depressurize all air lines connected to this product before installation, servicing, or conversion.
- Operate within the manufacturer’s specified pressure, temperature, and other conditions listed in these instructions.
- Medium must be moisture-free if ambient temperature is below freezing.
- Service according to procedures listed in these instructions.
- Installation, service, and conversion of these products must be performed by knowledgeable personnel who understand how pneumatic products are to be applied.
- After installation, servicing, or conversion, air and electrical supplies (when necessary) should be connected and the product tested for proper function and leakage. If audible leakage is present, or the product does not operate properly, do not put into use.
- Warnings and specifications on the product should not be covered by paint, etc. If masking is not possible, contact your local representative for replacement labels.

Safety Guide

For more complete information on recommended application guidelines, see the Safety Guide section of Pneumatic Division catalogs or you can download the Pneumatic Division Safety Guide at: www.wattsfluidair.com
### Service Kits / Parts Available

<table>
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<tr>
<th>Description</th>
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<tbody>
<tr>
<td>Desiccant - Silica Gel 100% Indicating – 6 x .88 lb. Bags</td>
<td>SGM100-1</td>
</tr>
<tr>
<td></td>
<td>SGM100-4</td>
</tr>
<tr>
<td>Flow Tube Repair Kit (Tube, Filter Element(s), Adaptor)</td>
<td>RKDD15-02-06</td>
</tr>
<tr>
<td>Mounting Brackets (Pair of Pipe Mounted Brackets)</td>
<td></td>
</tr>
<tr>
<td>1/4 Inch Pipe Size</td>
<td>SA200YW57</td>
</tr>
<tr>
<td>1 Inch Pipe Size</td>
<td>SA200CW57</td>
</tr>
<tr>
<td>Spring Check Valve for Inlet (250 PSIG max.) (Maximizes Life of Desiccant)</td>
<td></td>
</tr>
<tr>
<td>1/4 Inch NPT</td>
<td>003393001</td>
</tr>
<tr>
<td>3/8 Inch NPT</td>
<td>003393002</td>
</tr>
<tr>
<td>1/2 Inch NPT</td>
<td>003393003</td>
</tr>
<tr>
<td>3/4 Inch NPT</td>
<td>003393004</td>
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</tbody>
</table>

- Lightly grease with provided lubricant.
- Inspect for nicks, scratches, and surface imperfections. If present, reduced service life is probable and future replacement should be planned.
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1. GENERAL INSTRUCTIONS

1.1. Scope: This safety guide is designed to cover general guidelines on the installation, use, and maintenance of Pneumatic Division Valves, FRLs (Filters, Pressure Regulators, and Lubricators), Vacuum products and related accessory components.

1.2. Fail-Safe: Valves, FRLs. Vacuum products and their related components can and do fail without warning for many reasons. Design all systems and equipment in a fail-safe mode, so that failure of associated valves, FRLs or Vacuum products will not endanger persons or property.


1.4. Distribution: Provide a copy of this safety guide to each person that is responsible for selection, installation, or use of Valves, FRLs or Vacuum products. Do not select, or use Parker valves, FRLs or vacuum products without thoroughly reading and understanding this safety guide as well as the specific Parker publications for the products considered or selected.

1.5. User Responsibility: Due to the wide variety of operating conditions and applications for valves, FRLs, and vacuum products Parker and its distributors do not represent or warrant that any particular valve, FRL or vacuum product is suitable for any specific end use system. This safety guide does not analyze all technical parameters that must be considered in selecting a product. The user, through its own analysis and testing, is solely responsible for:

- Making the final selection of the appropriate valve, FRL, Vacuum component, or accessory.
- Assuring that all user’s performance, endurance, maintenance, safety, and warning requirements are met and that the application presents no health or safety hazards.
- Complying with all existing warning labels and / or providing all appropriate health and safety warnings on the equipment on which the valves, FRLs or Vacuum products are used; and,
- Assuring compliance with all applicable government and industry standards.

1.6. Safety Devices: Safety devices should not be removed, or defeated.

1.7. Warning Labels: Warning labels should not be removed, painted over or otherwise obscured.

1.8. Additional Questions: Call the appropriate Parker technical service department if you have any questions or require any additional information. See the Parker publication for the product being considered or used, or call 1-800-CPARKER, or go to www.parker.com, for telephone numbers of the appropriate technical service department.

2. PRODUCT SELECTION INSTRUCTIONS

2.1. Flow Rate: The flow rate requirements of a system are frequently the primary consideration when designing any pneumatic system. System components need to be able to provide adequate flow and pressure for the desired application.

2.2. Pressure Rating: Never exceed the rated pressure of a product. Consult product labeling, Pneumatic Division catalogs or the instruction sheets supplied for maximum pressure ratings.

2.3. Temperature Rating: Never exceed the temperature rating of a product. Excessive heat can shorten the life expectancy of a product and result in complete product failure.

2.4. Environment: Many environmental conditions can affect the integrity and suitability of a product for a given application. Pneumatic Division products are designed for use in general purpose industrial applications. If these products are to be used in unusual circumstances such as direct sunlight and/or corrosive or caustic environments, such use can shorten the useful life and lead to premature failure of a product.

2.5. Lubrication and Compressor Carryover: Some modern synthetic oils can and will attack nitrile seals. If there is any possibility of synthetic oils or greases migrating into the pneumatic components check for compatibility with the seal materials used. Consult the factory or product literature for materials of construction.

2.6. Polycarbonate Bowls and Sight Glasses: To avoid potential polycarbonate bowl failures:

- Do not locate polycarbonate bowls or sight glasses in areas where they could be subject to direct sunlight, impact blow, or temperatures outside of the rated range.
- Do not expose or clean polycarbonate bowls with detergents, chlorinated hydro-carbons, keytones, esters or certain alcohols.
- Do not use polycarbonate bowls or sight glasses in air systems where compressors are lubricated with fire resistant fluids such as phosphate ester and di-ester lubricants.
2.7. Chemical Compatibility: For more information on plastic component chemical compatibility see Pneumatic Division technical bulletins Tec-3, Tec-4, and Tec-5

2.8. Product Rupture: Product rupture can cause death, serious personal injury, and property damage.
- Do not exceed the maximum primary pressure rating of any pressure regulator or any system component.
- Consult product labeling or product literature for pressure rating limitations.

3. PRODUCT ASSEMBLY AND INSTALLATION INSTRUCTIONS

3.1. Component Inspection: Prior to assembly or installation a careful examination of the valves, FRLs or vacuum products must be performed. All components must be checked for correct style, size, and catalog number. DO NOT use any component that displays any signs of nonconformance.

3.2. Installation Instructions: Parker published Installation Instructions must be followed for installation of Parker valves, FRLs and vacuum components. These instructions are provided with every Parker valve or FRL sold, or by calling 1-800-CPARKER, or at www.parker.com.

3.3. Air Supply: The air supply or control medium supplied to Valves, FRLs and Vacuum components must be moisture-free if ambient temperature can drop below freezing.

4. VALVE AND FRL MAINTENANCE AND REPLACEMENT INSTRUCTIONS

4.1. Maintenance: Even with proper selection and installation, valve, FRL and vacuum products service life may be significantly reduced without a continuing maintenance program. The severity of the application, risk potential from a component failure, and experience with any known failures in the application or in similar applications should determine the frequency of inspections and the servicing or replacement of Pneumatic Division products so that products are replaced before any failure occurs. A maintenance program must be established and followed by the user and, at minimum, must include instructions 4.2 through 4.10.

4.2. Installation and Service Instructions: Before attempting to service or replace any worn or damaged parts consult the appropriate Service Bulletin for the valve or FRL in question for the appropriate practices to service the unit in question. These Service and Installation Instructions are provided with every Parker valve and FRL sold, or are available by calling 1-800-CPARKER, or by accessing the Parker web site at www.parker.com.


4.4. Visual Inspection: Any of the following conditions requires immediate system shut down and replacement of worn or damaged components:
- Air leakage: Look and listen to see if there are any signs of visual damage to any of the components in the system. Leakage is an indication of worn or damaged components.
- Damaged or degraded components: Look to see if there are any visible signs of wear or component degradation.
- Kinked, crushed, or damaged hoses. Kinked hoses can result in restricted air flow and lead to unpredictable system behavior.
- Any observed improper system or component function: Immediately shut down the system and correct malfunction.
- Excessive dirt build-up: Dirt and clutter can mask potentially hazardous situations.

Caution: Leak detection solutions should be rinsed off after use.

4.5. Routine Maintenance Issues:
- Remove excessive dirt, grime and clutter from work areas.
- Make sure all required guards and shields are in place.

4.6. Functional Test: Before initiating automatic operation, operate the system manually to make sure all required functions operate properly and safely.

4.7. Service or Replacement Intervals: It is the user’s responsibility to establish appropriate service intervals. Valves, FRLs and vacuum products contain components that age, harden, wear, and otherwise deteriorate over time. Environmental conditions can significantly accelerate this process. Valves, FRLs and vacuum components need to be serviced or replaced on routine intervals. Service intervals need to be established based on:
- Previous performance experiences.
- Government and / or industrial standards.
- When failures could result in unacceptable down time, equipment damage or personal injury risk.

4.8. Servicing or Replacing of any Worn or Damaged Parts: To avoid unpredictable system behavior that can cause death, personal injury and property damage:
- Disconnect electrical supply (when necessary) before installation, servicing, or conversion.
- Disconnect air supply and depressurize all air lines connected to system and Pneumatic Division products before installation, service, or conversion.
- Installation, servicing, and / or conversion of these products must be performed by knowledgeable personnel who understand how pneumatic products are to be applied.
- After installation, servicing, or conversions air and electrical supplies (when necessary) should be connected and the product tested for proper function and leakage. If audible leakage is present, or if the product does not operate properly, do not put product or system into use.
- Warnings and specifications on the product should not be covered or painted over. If masking is not possible, contact your local representative for replacement labels.

4.9. Putting Serviced System Back into Operation: Follow the guidelines above and all relevant Installation and Maintenance Instructions supplied with the valve FRL or vacuum component to insure proper function of the system.