

Johnson Controls A-4423-2

Johnson Controls A-4400 Series Refrigerated Air Dryer Instruction Manual

Model: A-4423-2

PRODUCT OVERVIEW

The Johnson Controls A-4400 Series Refrigerated Air Dryers are engineered for continuous operation, providing dry air essential for pneumatic control systems. These units are built with components selected for dependable service and minimal maintenance requirements.

This model, the A-4423-2, utilizes R-134a refrigerant, an environmentally friendly HFC, reducing risks and costs associated with refrigerant use and disposal. For systems not equipped with an optional factory-mounted Air Purification System, a properly configured air supply system must include a coalescing oil removal filter and an activated carbon oil vapor removal filter.



Image: The Johnson Controls A-4423-2 Refrigerated Air Dryer, shown with its protective cover removed, revealing internal components such as the compressor, heat exchanger, and various connections. A ruler is visible on the left, indicating the compact size of the unit.

KEY FEATURES

- Hermetically sealed compressor, heat exchanger, and automatic condensate drain trap.
- An insulating sleeve covers the automatic condensate drain trap to eliminate external condensation.
- Evaporator pressure gauge and the automatic condensate drain trap with particle filter are internally mounted and are easily accessible through the end of the unit.
- Includes a standard cord and plug for 115 volt 60 Hz single-phase electrical service.
- Includes a removable protective cover.

SETUP AND INSTALLATION

1. Unpacking and Inspection

Carefully remove the air dryer from its packaging. Inspect the unit for any signs of shipping damage. Report any damage to the carrier immediately.

2. Location Requirements

- Install the unit in a clean, dry, and well-ventilated area.
- Ensure adequate clearance around the unit for proper airflow and maintenance access.
- Avoid locations with extreme temperatures or direct sunlight.

3. Electrical Connection

The A-4423-2 requires a 115 volt, 60 Hz, single-phase electrical service. Connect the standard cord and plug to a suitable grounded outlet. Ensure the electrical supply matches the unit's requirements to prevent damage.

4. Air Line Connection

Connect the compressed air inlet and outlet lines to the appropriate ports on the dryer. Ensure all connections are secure and leak-free. For optimal performance and longevity, it is recommended to install a coalescing oil removal filter and an activated carbon oil vapor removal filter upstream of the dryer if the unit is not equipped with an integrated air purification system.

OPERATING INSTRUCTIONS

1. Initial Startup

1. Before applying power, ensure all air line connections are tight.
2. Open the air supply valve to allow compressed air to flow through the dryer.
3. Plug the unit into the electrical outlet. The compressor will start, and the unit will begin the drying process.

2. Normal Operation

The A-4400 Series dryer is designed for continuous operation. The internal refrigeration system will cool the compressed air, causing moisture to condense and be removed by the automatic condensate drain trap. Monitor the

evaporator pressure gauge to ensure proper operation.

3. Shut Down

To shut down the unit, first close the air supply valve, then unplug the unit from the electrical outlet.

MAINTENANCE

1. Condensate Drain Trap

The automatic condensate drain trap is designed to operate with minimal intervention. Periodically inspect the drain trap for proper function and ensure it is not clogged. Clean if necessary.

2. Air Filters (if applicable)

If external coalescing and activated carbon filters are used, follow the manufacturer's recommendations for their inspection and replacement. Clogged filters can reduce dryer efficiency and air quality.

3. General Cleaning

Keep the exterior of the unit clean and free of dust and debris to ensure proper heat dissipation. Do not obstruct the ventilation openings.

4. Refrigerant System

The refrigerant system is hermetically sealed and requires no routine maintenance. Any service to the refrigerant system should only be performed by qualified personnel.

TROUBLESHOOTING

Problem	Possible Cause	Solution
Unit does not power on	No electrical power; tripped circuit breaker; faulty power cord.	Check power supply and outlet; reset circuit breaker; inspect power cord for damage.
Air is not dry	Ambient temperature too high; excessive air flow; clogged condensate drain; refrigerant leak.	Ensure proper ventilation; check air flow rate against specifications; inspect and clean drain trap; contact qualified service personnel for refrigerant issues.
Excessive noise	Loose components; compressor issue.	Inspect for loose parts and tighten; if compressor noise persists, contact service.

SPECIFICATIONS

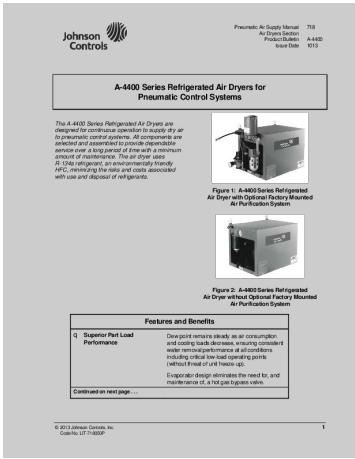
- **Model Number:** A-4423-2
- **Refrigerant:** R-134a (Environmentally friendly HFC)
- **Electrical Service:** 115 Volt, 60 Hz, Single-Phase
- **Flow Capacity:** 23 scfm
- **Dimensions:** 9 x 7 x 5 inches
- **Weight:** 7.26 ounces
- **Manufacturer:** Johnson Controls Inc

WARRANTY AND SUPPORT

For warranty information and technical support, please contact Johnson Controls directly or refer to the official documentation provided with your purchase. Keep your purchase receipt and model number handy for faster service.

Johnson Controls Contact Information:

Please refer to the official Johnson Controls website or product packaging for the most current contact details.

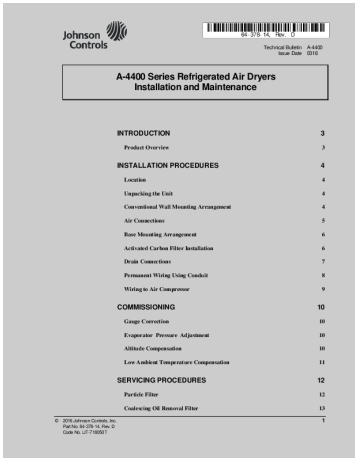


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A 4400 Series Refrigerated Air Dryers for Pneumatic Control Systems Product Bulletin Code No LIT 718050P Johnson Controls Refer to Table 1 a comprehensive listing of refrigerated air dryers available As outlined in Data 4000 and the Installation Service Manual UTF 8 Q 5F2013 10 filename* 2013 docs johnsoncontrols bas api khub documents fO7io06luWpUkt~eXOQNGg content |||

Pneumatic Air Supply Manual Air Dryers Section Product Bulletin Issue Date 718 A-4400 1013 A-4400 ... 7 No 67 A-4417-1 17 8.0 Yes 78 A-4417-2 17 8.0 No 73 A-4423-1 23 10.9 Yes 78 **A-4423-2** 23 10.9 No 72 * The rated condition is 20 psig 140 kPa supply pressure, 100F 38C ...

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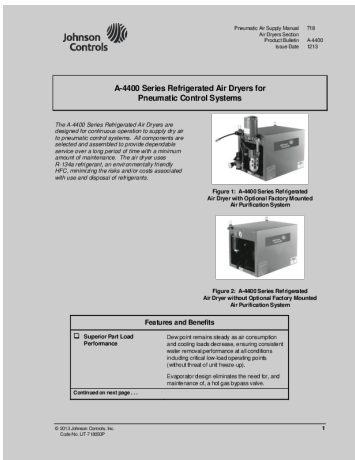


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A 4400 Series Refrigerated Air Dryers Installation and Maintenance Technical Bulletin 64 378 14 Johnson Controls Inc Note An override feature is incorporated in the coalescing oil removal filter automatic condensate drain trap which allows manual draining of bowl To 718050t 718050T cgproducts johnsoncontrols met 80 MET temperaturecontrolsystems

64- 378- 14, Rev. D Technical Bulletin A-4400 Issue Date 0316 A-4400 Series Refrigerated Air Dryers ... cation No. 2629 . Table 1: Ordering Data Code Number A-4412-1 A-4412-2 A-4417-1 A-4417-2 A-4423-1 **A-4423-2** Flow Capacity at Rated Condition* scfm L/s 12 5.7 12 5.7 17 8.0 17 8.0 23 10.9 ...

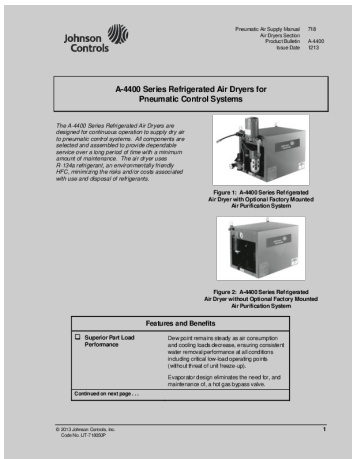
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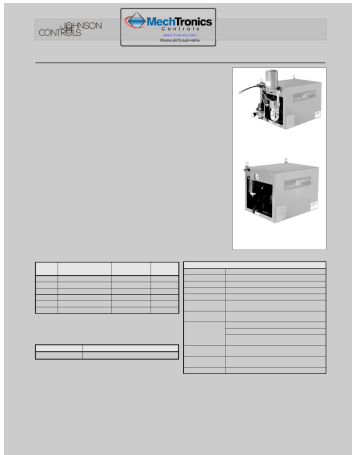
A 4400 Series Refrigerated Air Dryers for Pneumatic Control Systems Product Bulletin Installation and Service Manual PureFlow Compressors Publication No 2629 clean dry oil free air is essential to any pneumatic control system Existence of water or particulate in lines instruments can cause instrument calibration drift often leading equipment failure For 718050P cgproducts johnsoncontrols MET Pneumatic Air Supply Manual Air Dryers Section Product Bulletin Issue Date 718 A-4400 1213 A-4400 ... 7 No 67 17 A-4417-1 8.0 Yes 78 A-4417-2 17 8.0 No 73 A-4423-1 23 10.9 Yes 78 **A-4423-2** 23 10.9 No 72 * The rated condition is 20 psig 140 kPa supply pressure, 100F 38C ...

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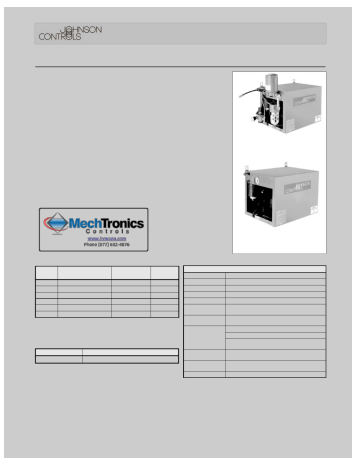
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A 4400 Series Refrigerated Air Dryers for Pneumatic Control Systems Product Bulletin Code No LIT 718050P Hankison 8010 8015 8025 Robertshaw 2815 201 001 The air dryer shall be of the refrigeration type designed for UTF 8 Q 5F2013 12 filename* 2013 docs johnsoncontrols bas api khub documents AKi6TeosizC4G UAY4 WGQ content ||| Pneumatic Air Supply Manual Air Dryers Section Product Bulletin Issue Date 718 A-4400 1213 A-4400 ... 7 No 67 17 A-4417-1 8.0 Yes 78 A-4417-2 17 8.0 No 73 A-4423-1 23 10.9 Yes 78 **A-4423-2** 23 10.9 No 72 * The rated condition is 20 psig 140 kPa supply pressure, 100F 38C ... lang:en score:12 filesize: 327.41 K page_count: 12 document date: 2024-02-01



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Pneumatic Air Supply Manual 718

Air Dryers Section

Technical Bulletin A-4400

Issue Date 0907

A-4400 Series Refrigerated Air Dryers

Installation and Maintenance

Introduction

• Product Overview

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• Air Connections

• Base Mounting Arrangement

• Activated Carbon Filter Installation

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• Permanent Wiring Using Conduit

• Wiring to Air Compressor

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• Altitude Compensation

• Low Ambient Temperature Compensation

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A 4400 Series Refrigerated Air Dryers Installation and Maintenance Technical Bulletin Code No LIT 718050T 64 378 14 Johnson Controls Inc Dryer Compressor Motor Wiring Circuit 23 ○ Excessive Vibration 24 Repair Information 26 2 Dryers—A Page 3 UTF 8 Q 5F2007 09 filename* 2007 docs johnsoncontrols bas api khub documents cj0 nxM2jSV1 dDkMmx5og content |||

Pneumatic Air Supply Manual Air Dryers Section Technical Bulletin Issue Date 718 A-4400 0907 A-440 ... cation No. 2629 . Table 1: Ordering Data Code Number A-4412-1 A-4412-2 A-4417-1 A-4417-2 A-4423-1 **A-4423-2** Flow Capacity at Rated Condition* scfm L/s 12 5.7 12 5.7 17 8.0 17 8.0 23 10.9 ...

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