Ingersoll Rand DA25INA100

Ingersoll Rand DA25INA100 15 CFM Non-Cycling Refrigerated Dryer User Manual

Model: DA25INA100

Overview Setup Operation Maintenance Troubleshooting Specifications Warranty & Support
Introduction Safety Information Product

1. Introduction

This manual provides essential information for the safe and efficient operation of your Ingersoll Rand DA25INA100 15 CFM Non-Cycling Refrigerated Dryer. This unit is designed to remove moisture from compressed air, enhancing the performance and longevity of downstream pneumatic equipment. Please read this manual thoroughly before installation, operation, or maintenance.

The DA25INA100 dryer utilizes R513A refrigerant, a low Global Warming Potential (GWP) solution, aligning with environmental sustainability goals while delivering reliable and energy-efficient performance for small-scale industrial applications.

2. Safety Information

WARNING: Failure to follow these safety instructions could result in serious injury or death.

- Always disconnect power before performing any maintenance or service.
- Ensure proper ventilation around the unit to prevent overheating.
- Do not operate the dryer if any components are damaged or missing.
- This equipment operates under pressure. Depressurize the system before servicing.
- Only qualified personnel should perform electrical connections and refrigerant system service.
- Wear appropriate personal protective equipment (PPE) during installation, operation, and maintenance.
- The unit is certified to UL 60335-1, UL 60335-2-40, CSA 22.2 #60335-1, and CSA 22.2 #60335-2-40. Adhere to all local codes and regulations.

3. Product Overview

The Ingersoll Rand DA25INA100 is a compact and efficient non-cycling refrigerated air dryer. Key components include a high-quality aluminum heat exchanger, a constant pressure valve, and a robust refrigeration system designed for continuous operation.

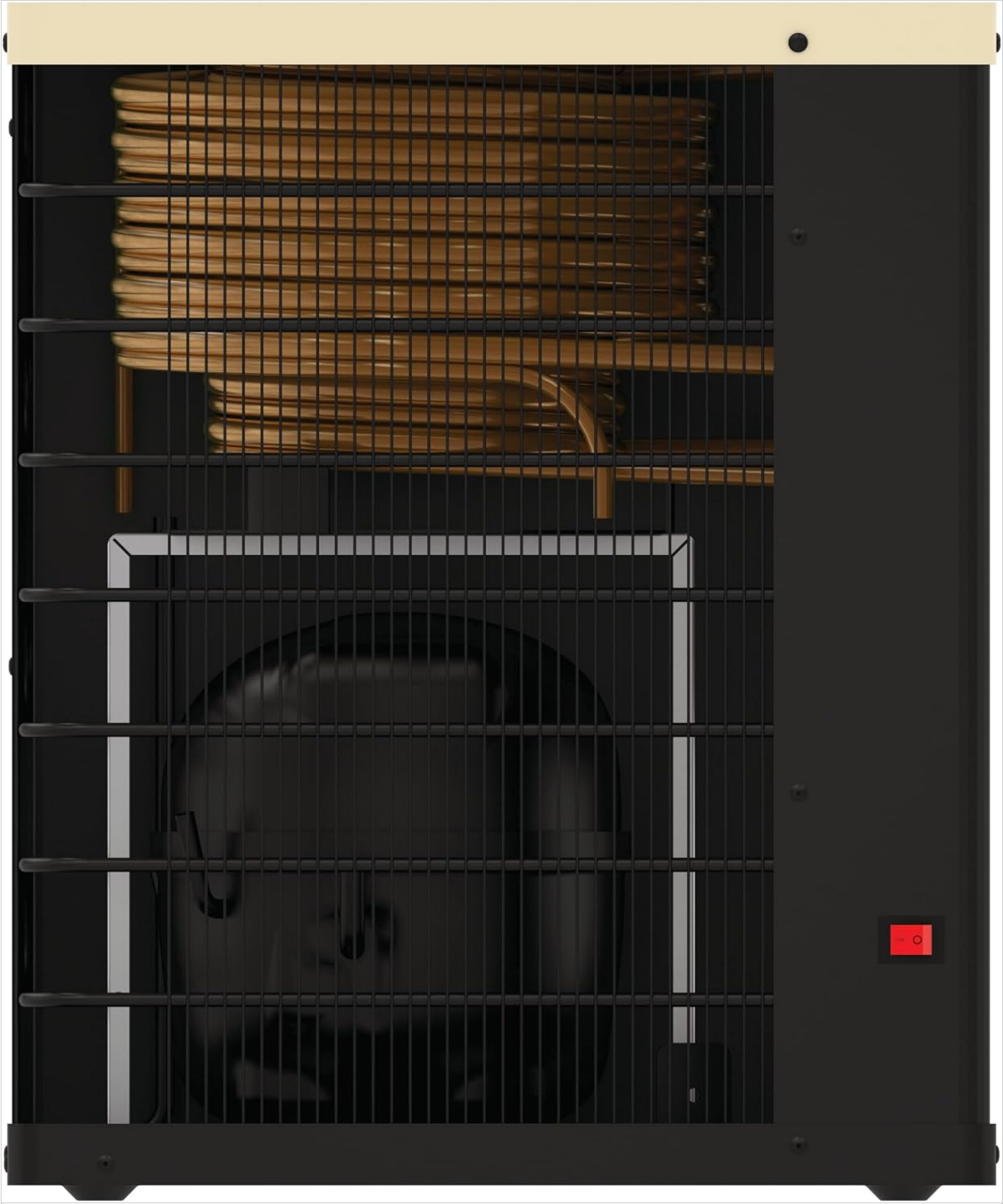


Figure 3.1: Side view of the DA25INA100 dryer, illustrating the internal heat exchanger and cooling fan behind the protective grille.



Figure 3.2: Rear view of the DA25INA100 dryer, highlighting the compressed air inlet and outlet ports for system integration.

The unit is designed for ease of maintenance and integration into existing compressed air systems, providing clean, dry air essential for many industrial processes.

4. Setup and Installation

4.1 Unpacking and Inspection

1. Carefully remove the dryer from its packaging.
2. Inspect the unit for any visible damage incurred during shipping. Report any damage to the carrier immediately.
3. Verify that all included components are present (One Non-Cycling Dryer).

4.2 Location Requirements

- Install the dryer in a clean, dry, and well-ventilated area.
- Maintain at least 12 inches (30 cm) of clearance around the unit for proper airflow and heat dissipation.
- Ensure the installation surface is level and capable of supporting the unit's weight (approximately 57.5 pounds).
- Avoid locations with extreme temperatures, direct sunlight, or corrosive atmospheres.

4.3 Air Connections

- Connect the compressed air supply line to the dryer's inlet port.
- Connect the treated air line from the dryer's outlet port to your downstream equipment.
- Use appropriate pipe thread sealant on all connections to prevent leaks.
- Install a bypass line with shut-off valves around the dryer to allow for maintenance without interrupting compressed air supply (recommended).

4.4 Electrical Connection

- The dryer requires a 115-volt, single-phase electrical supply.
- Connect the unit to a dedicated, properly grounded electrical circuit protected by an appropriate circuit breaker or fuse.
- Ensure the power cord is not damaged or pinched.

5. Operating Instructions

5.1 Initial Startup

1. Ensure all air connections are secure and leak-free.
2. Open the inlet and outlet valves to allow compressed air to flow through the dryer.
3. Connect the power cord to the electrical outlet.
4. Turn the power switch to the 'ON' position. The dryer will begin its refrigeration cycle.
5. Allow the unit to operate for at least 15-20 minutes to reach its optimal operating temperature before evaluating performance.

5.2 Normal Operation

The DA25INA100 is a non-cycling dryer, meaning its refrigeration system runs continuously to maintain a consistent dew point. The dryer will automatically drain condensate through its internal drain mechanism.

- Monitor the pressure gauge to ensure proper airflow and pressure within the system.
- Listen for any unusual noises or vibrations.
- Periodically check the condensate drain for proper operation.

5.3 Shutting Down

1. Turn the power switch to the 'OFF' position.
2. Close the inlet and outlet valves.
3. Depressurize the dryer by slowly opening a bleed valve or disconnecting an air line (if safe to do so).
4. Disconnect the power cord if the unit will be stored or serviced.

6. Maintenance

CAUTION: Always disconnect power and depressurize the system before performing any maintenance.

6.1 Daily/Weekly Checks

- **Condensate Drain:** Verify the automatic condensate drain is functioning correctly and discharging water. Clear any blockages.
- **Pressure Gauges:** Check inlet and outlet pressure readings for any significant drops, which could indicate a blockage.
- **Visual Inspection:** Look for any signs of leaks (air or refrigerant), unusual wear, or damage.

6.2 Monthly/Quarterly Maintenance

- **Heat Exchanger/Condenser Fins:** Clean the external fins of the heat exchanger and condenser with compressed air or a soft brush to remove dust and debris. This ensures efficient heat transfer.
- **Electrical Connections:** Inspect all electrical connections for tightness and signs of corrosion.

6.3 Annual Maintenance

- **Refrigerant System Check:** Have a qualified refrigeration technician inspect the refrigerant charge and system components. Do not attempt to service the refrigerant system yourself.
- **Overall System Check:** Perform a thorough inspection of all components, including piping, valves, and electrical wiring.

7. Troubleshooting

This section provides solutions to common issues. For problems not listed here, contact customer support.

Problem	Possible Cause	Solution
Dryer does not power on	No power supply Blown fuse/tripped breaker Faulty power switch	Check power outlet and cord Reset breaker or replace fuse Contact customer support
Air is not dry (high dew point)	Ambient temperature too high Airflow exceeds dryer capacity Refrigerant leak/low charge Dirty condenser fins	Improve ventilation, relocate dryer Reduce airflow or use larger dryer Contact qualified technician Clean condenser fins
Excessive pressure drop	Blocked heat exchanger Restricted piping	Clean heat exchanger Inspect and clear piping
Condensate not draining	Drain clogged Automatic drain malfunction	Clear drain line Inspect or replace drain mechanism
Unusual noise/vibration	Loose components Fan motor issue Refrigeration system problem	Inspect and tighten components Contact customer support Contact qualified technician

8. Specifications

Technical specifications for the Ingersoll Rand DA25INA100 15 CFM Non-Cycling Refrigerated Dryer:

Feature	Specification
Brand	Ingersoll Rand

Feature	Specification
Model Number	DA25INA100
Air Flow Capacity	15 CFM
Maximum Pressure	200 psi
Voltage	115 volts
Power Source	Corded Electric
Item Weight	57.5 pounds
Dimensions (L x W x H)	14.96"L x 17.52"W x 21.26"H
Refrigerant Type	R513A (Low GWP)
Recommended Uses	Removing Moisture and Drying Air
Included Components	One Non-Cycling Dryer
Certifications	UL 60335-1, UL 60335-2-40, CSA 22.2 #60335-1, CSA 22.2 #60335-2-40

9. Warranty & Support

9.1 Warranty Information

Ingersoll Rand products are manufactured to high standards and are backed by a limited warranty. For specific warranty terms and conditions applicable to your DA25INA100 dryer, please refer to the warranty card included with your product or visit the official Ingersoll Rand website. Keep your proof of purchase for warranty claims.

9.2 Customer Support

If you require technical assistance, have questions about operation, or need to order replacement parts, please contact Ingersoll Rand customer support. Have your model number (DA25INA100) and serial number ready when contacting support.
For the most current contact information, please visit the official Ingersoll Rand website or refer to the documentation provided with your purchase.

© 2023 Ingersoll Rand. All rights reserved.