Document No.: 10000036987

Product Manual

DESICCANT AIR DEHYDRATOR
KD-C70 Serie

Model Covered by This Manual:
KD-C70/KD-C72/KD-C74-DC

PLEASE READ THIS MANUAL THOROUGHLY AND SAVE FOR FUTURE REFERENCE.

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1. WARNINGS, CAUTIONS & NOTES

NOTE: Read this manual before installation or operation of the dehydrator.

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W A R N I N G

Power source of the dehydrator must have proper ground connection, to reduces the risk of electrical shock, electrocution, and fires caused by unexpected voltage spikes or short circuits.

High noise may be generated when the dehydrator operates.

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**Hazardous voltages exist inside the unit. Unplug
the power before servicing.
Do not energize or operate the unit with the lid
removed.**

**The unit starts automatically when power
switches to on. Do not operate unit without cover
secured properly in place.**

2. PRODUCT INTRODUCTION

2.1 Product Description

The KD-C70 series Air Dehydrator is designed to provide a source of dry, pressurized air by removing moisture from the ambient air. The unit automates the process by employing high-performance allochroic silica gel as a desiccant. The desiccant requires regular regeneration.

2.2 KD-C70 Series Dehydrator Models

| Model	Description
KD-C70	0.71 SCFM (1200L/h), 0.2 to 7psi Configurable Pressure, 110VAC Dehydrator with Web Browser Management
KD-C72	0.64 SCFM (1080L/h), 0.2 to 7psi Configurable Pressure, 220VAC Dehydrator with Web Browser Management
KD-C74-DC	0.64 SCFM (1080L/h), 0.2 to 7psi Configurable Pressure, -48VDC Dehydrator with Web Browser Management

2.3 Product Specification

Model	KD-C70	KD-C72	KD-C74-DC
Flow Rate at 25⁰C (77F⁰)	0.71 SCFM (1200L/h) ±10%	0.64 SCFM (1080L/h) ±10%	
Power Supply	110VAC ±10%, 60Hz	220VAC ±10%, 50/60Hz	-48VDC ±10%
Power Consumption	120W max		
Working Pressure	0.2 to 7psi (1 to 50kPa), Field Adjustable. Factory set low pressure at 3 psi (20.7kPa), and high pressure at 5 psi (35.5kPa)		
Dew Point	Better Than -30⁰C (-22⁰F) at 25⁰C (77F⁰)		
Drying Method	Allochroic silica gel (cobalt-free)		
Gas Outlet	4 Outlets, Push-on quick fit for 3/8" OD tube		
Noise Level	<65dB at 1m		
Operation Conditions	-20⁰C to +50⁰C (-4⁰F to 122⁰F), ≤95% Humidity		
Product Dimensions and Weight	H x L x D: 10.8x12.4x5.9inches (275x315x150mm) (Feet not include) 16.1 Lbs (7.3kg)		
Shipping Dimensions and Weight	H x L x D: 13.4x16.9x9.8 inches (340x430x250mm) 19.2 Lbs (8.7kg)		
Network Management	Web Browser		
Alarms	Low-Pressure, High-Pressure, Excess Run		
Installation	Desktop, Wall		

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2.4 Appearance and Interface

1. Desiccant observation window
2. Digital display
3. Control buttons
4. Indicator lights
5. RJ45 port

Top View
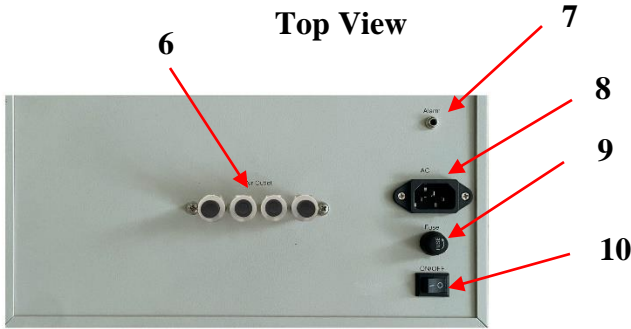
6. Gas Outlets
7. Alarm port
8. Power socket
9. Fuse
10. Power switch

3. INSTALLATION STEPS

3.1 Installation Location

The Dehydrator KD-C70 Series is versatile in its placement options, designed for installation on a desktop or wall.

To maintain optimal performance, place the Dehydrator in a dry, well-ventilated location with access to the power supply and gas inlet of the pressurized dry air distribution system. Ensure that there are no flow restrictions in the location of the dehydrator and the dry air system.

3.2 Unpacking and Inspection

Carefully inspect the package before unpacking. Record any damage on the packaging.

Unpack the dehydrator in an environmentally controlled location consistent with the operating conditions of the dehydrator. Place the unit on a flat, stable surface.

Check the contents of the package against the packing list and inspect the appearance of the dehydrator. Please inform RFS Technologies or the distributor if the unit is damaged or if any items are missing from the package.

The following accessories are included with the dehydrator：

	KD-C70 Series	**Part Number**
1	Power cord x 1 piece, 6ft (1.8m) length	AC: KD25002 DC: KD25004
2	Fuse x 2 pieces	See table below
3	Nozzle connector x 4 pieces, G 1/8 to 3/8" tube	KD26001

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4	Teflon tape x 1 roll	KD29001
5	PU tube x 33ft (10m) length	KD24009
6	Brackets x1 pair	KD30004
7	3.5mm plug x 1 piece	KD28004

Dehydrator Model	KD-C70	KD-C72	KD-C74-DC
Fuse Model	2A	1A	4A
Part Number	KD22002	KD22001	KD22008

Included (Picture for reference only): Power cord, Nozzle Connector, Fuse, PU tube, Brackets (Already Installed), 3.5mm plug

3.3 Staging the Dehydrator

Leave the power switch on the dehydrator in the OFF position. Connect the unit to the appropriate power source using the power cord provided.

Remove the insert from one of the gas outlets by following these steps:

Step1, Depress the release ring: using your thumb and forefinger, gently depress the white plastic ring of the gas outlet towards the unit. This will disengage the locking mechanism holding the insert in place.

Step 2, Pull the insert out: while holding the release ring, pull the black insert away from the gas port with a firm, straight motion. Refer to the following pictures.

Step 3, Store the insert in a safe place for future use.
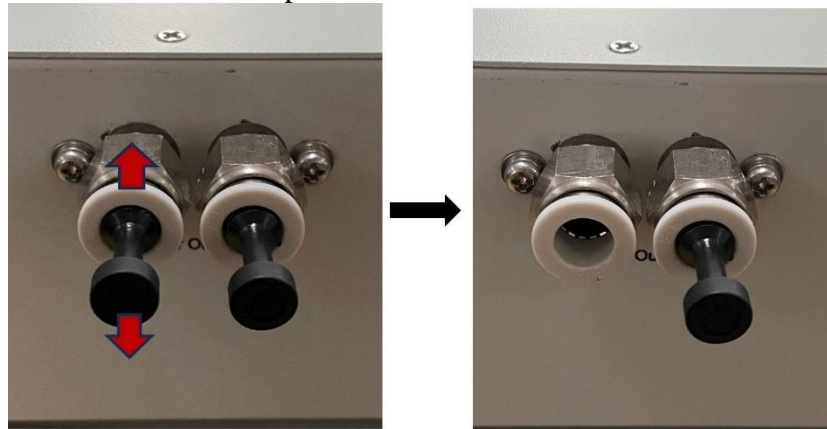
Switch on the power to activate the dehydrator and let it run for 3-5 minutes with nothing attached to the dry air outlet fitting. Check the airflow coming from the gas outlet using your finger. Disregard any alarms shown on the front panel.

If the dryer does not operate, please check the power supply. Report the issue if the dehydrator does not function correctly or if there is no airflow from the gas outlet.

Upon completion of the staging process, power off the dehydrator and proceed with its installation at the designated final location.

3.4 Installation Mode of KD-C70 Series

The Dehydrator is designed for desktop, and wall mounting. Please select an appropriate installation model based on the actual site conditions.

3.4.1 Desktop Installation

Place the dehydrator on a solid, level surface. Allow at least 2" clearance at the top for proper heat dissipation. Allow sufficient space at the rear for power cord and gas line connections.

3.4.2 Wall Installation
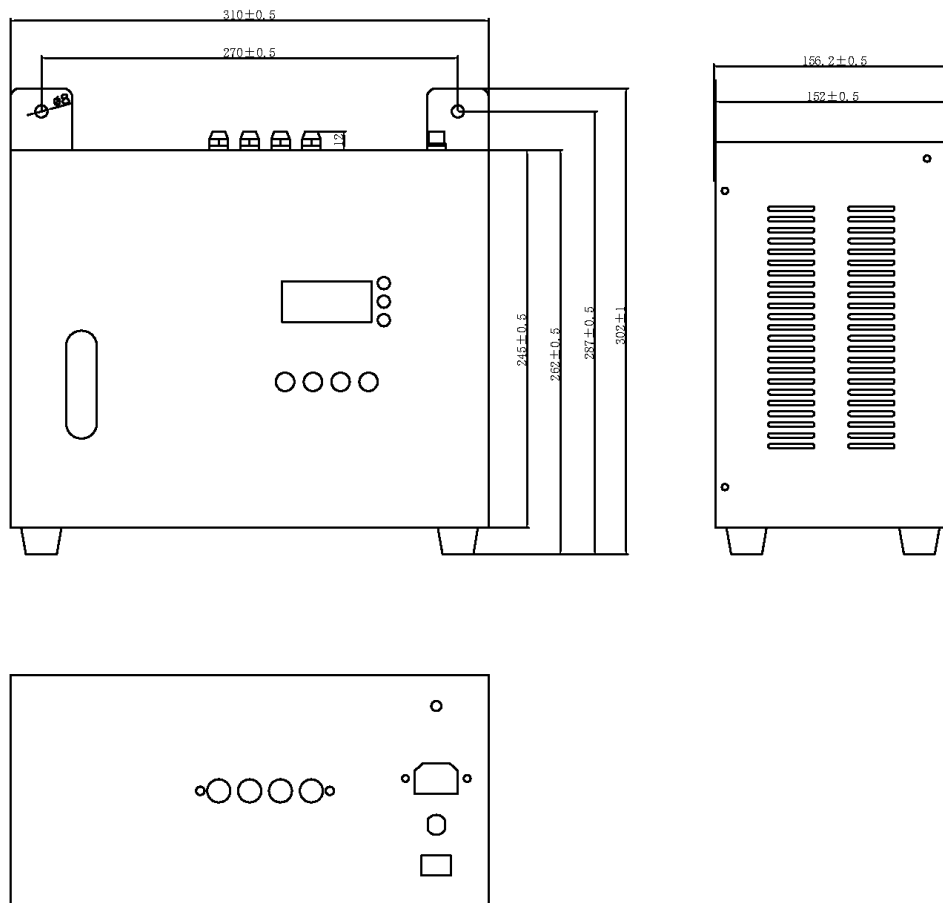
The dehydrator can be mounted on a wall using the supplied brackets. Following the hole location diagram shown in the figure.

Step 1: Loosen the screws securing the brackets on the back of the dehydrator.
Step 2: Rotate the brackets to position the holes facing upward.
Step 3: Tighten the screws to secure the brackets in their new positions.
Step 4: Place the dehydrator on the wall with expansion anchor bolts.

3.5 Connect to the Power Supply

After installing the dehydrator, leave the power switch on the unit in the OFF position. Connect the dehydrator to the appropriate power source using the power cord provided.

### 3.6 Change the Dehydrator Configuration

Switch the power to the ON position to turn on the dehydrator. When the dehydrator is operating, the digital display window on the front panel will show "P XX" where "XX" represents the current system pressure value.

The dehydrator is pre-programmed with the following configurations as shown in the table below. If no configuration changes are required, skip the following steps and proceed directly to Section 3.7.

Parameter	KD-C70 Default Setting
Low-Pressure Limit	3 psi
High-Pressure Limit	5 psi
Alarm Buzzer	Off

3.6.1   High-Pressure Limit

When the display shows "P XX", press and hold the "Set" button for 5 seconds to enter the high-pressure limit setting interface. The display will change to "H XX" where XX is the current high-pressure limit setting. Press the "+Add" or "-Ded/Q" button on the front panel to increase or decrease the value. The adjustable range of the high-pressure limit is between 0.4 and 7 psi.
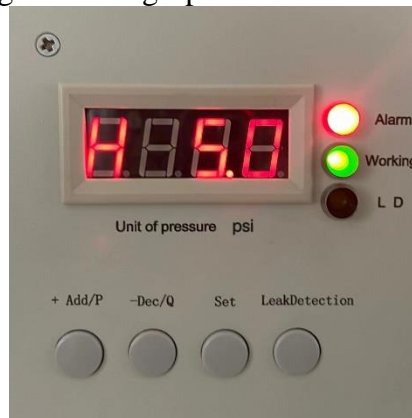
3.6.2   Low-Pressure Limit

At the "H XX" interface, press the "Set" button once to enter the low-pressure limit setting interface. The display will change to "L XX" where XX is the current low-pressure limit setting. Press the "+Add/P" or "-Ded/Q" button to change the setting. The factory setting for the low-pressure limit is 3psi. The adjustable range for the low-pressure limit is between 0.2 and 6.8 psi. And the low-pressure limit setting must be lower than the high-pressure limit.

3.6.3   Alarm Buzzer on/off

The Alarm Buzzer provides an audible sound to notify users of an alarm or alarms.

At the "L XX" interface, press the "Set" button again to enter the Alarm Buzzer setting interface. The display will show the current setting. The default setting is "off". Press the "+Add/P" or "-Ded/Q" button to change the setting.

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3.6.4   Save Settings

At the Alarm Buzzer setting interface, press "Set" again to save and apply the new configurations to the dryer. The display will then return to the "P XX" interface.

Configuration is not lost or changed when the dehydrator is turned off.

3.7 Connect the Dehydrator to the Tubing and the System

Check the configuration of the dryer and make sure the settings are correct. Turn off the unit and begin connecting the tubing.

3.7.1   Connect the Tubing with the Dehydrator

The dehydrator has four gas outlet ports and can be connected to four gas lines. Eash outlet port is sealed by an insert. Follow the instructions below to connect the tubing.

[Caution] Retain removed inserts for future use. Do not remove inserts from unused ports.
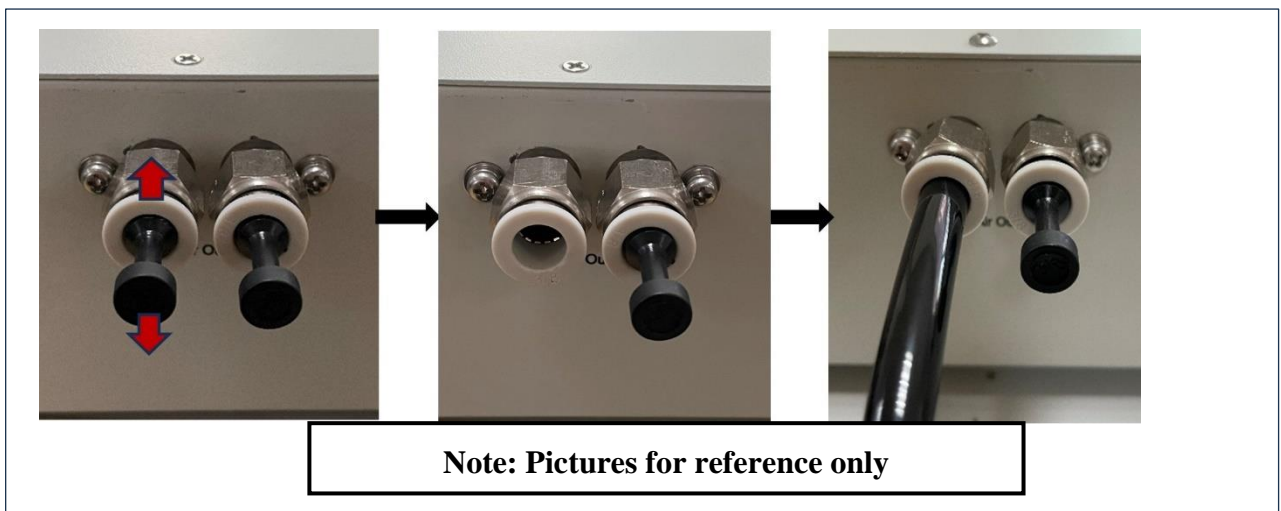
Note: Pictures for reference only

Step 1, Depress the release ring: using your thumb and forefinger, gently depress the white plastic ring of the gas outlet towards the unit. This will disengage the locking mechanism holding the insert in place.

Step 2, Pull the insert out: while holding the release ring, pull the black insert away from the gas port with a firm, straight motion.

Step 3, Push the tube in: insert the 3/8" tube into the gas port until it cannot go in any further. Make sure the tube is securely locked in place by the locking mechanism.
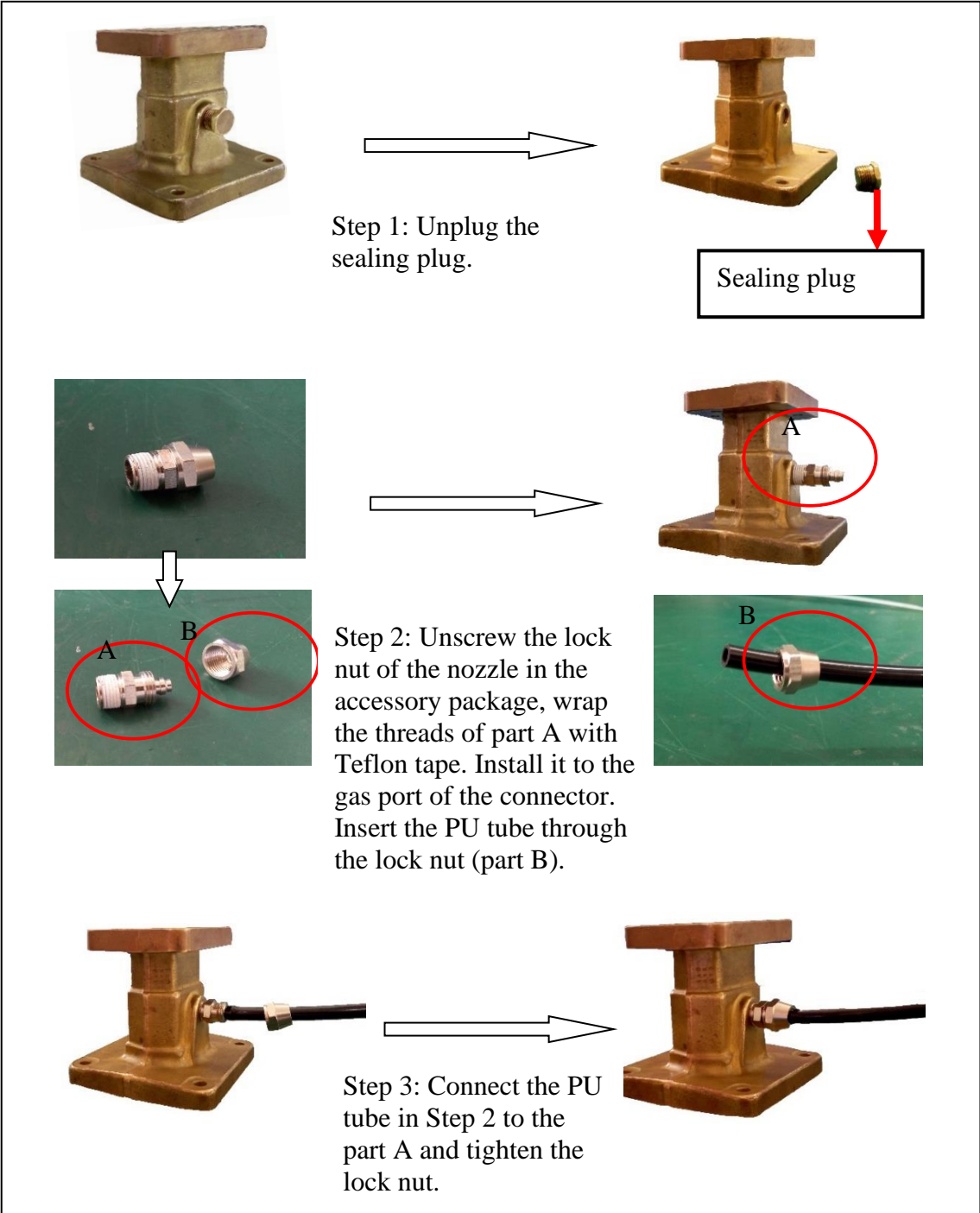
3.7.2   Connect the Tubing to the System

Connect the other end of the tubing to the site distribution system or to the inlets to be pressurized. Different products and systems may use different connection methods. Four gas inlet/pipe

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adapters are supplied with the dryer. The nozzle has a G 1/8 thread and is compatible with tubing with an outer diameter of 3/8" or 9 mm.

Refer to the following instructions when using these adapters to connect the tubing to the connector.

[Caution] Please wrap the threads of the gas adapter with Teflon tape before screwing it into the port. After connecting, please check the air tightness strictly.

Step 1: Unplug the sealing plug.

Sealing plug

Step 2: Unscrew the lock nut of the nozzle in the accessory package, wrap the threads of part A with Teflon tape. Install it to the gas port of the connector. Insert the PU tube through the lock nut (part B).

Step 3: Connect the PU tube in Step 2 to the part A and tighten the lock nut.

After connecting the tubing, make sure that the air path of the tubing between the dehydrator and the feeder system is unobstructed. Do not bend the tubing.

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3.8 System Purging

It is important to properly purge the site distribution system prior to completing the dehydrator installation. Failure to do so may result in moisture being present in the system after the dehydrator is installed. This moisture will remain in the system until it is purged from the system by normal operation of the dehydrator.

If the purge is left to the dehydrator's normal operation, the process may take days, weeks, or longer depending on the dehydrator's installed options, system size, moisture levels, and other variables.

Use the following steps to purge the system.

3.8.1 If the System Has a Remote Exhaust Vent

Open the exhaust vent, start the dehydrator, and allow it to run for at least one hour. Close the exhaust port and complete the purge.

3.8.2 If the System Doesn't Have a Remote Exhaust Vent

Start the dehydrator and allow it to run until it stops when the high-pressure limit is reached. Wait 15 minutes to allow the dry air to mix with the humid air in the feeder. Disconnect the dehydrator hose and allow the air to escape. Reconnect the tubing and repeat these steps ten times to complete purging.

3.9 Leak Detection

After purging, re-connect the dehydrator to the system. The next step involves checking the airtightness of the feeder system using the leak detection function. Follow these steps for the leakage test:

- Press the "Leak Detection" button and observe the pressure value on the front panel.
- The dehydrator will halt inflation and the "L D" yellow indicator will illuminate when the button is pressed.
- Monitor the change in pressure value to assess the airtightness of the system. Quick drops imply the need for better sealing.
- If the pressure value remains stable, the feeder system is airtight.
- Press the "Leak Detection" button again to end the test, the yellow indicator lights off, and resume normal dehydrator operation.

[Caution]

Address any leaks promptly to prevent alarms, excess running and system performance decline due to humidity.

Use this function solely for testing purposes. Remember to exit using the "Leak Detection" button and restore the dehydrator operation. The "L D" indicator will turn off.

3.10 Completion of the Installation

After completing the previous steps, the installation process is now finished. Verify that the dehydrator is functioning normally by ensuring that the alarm indicator is not illuminated and that the dehydrator stops inflating once the high-pressure limit is reached.

4. OPERATION

4.1 General Description

The KD-C70 series dehydrators operate automatically once powered on. The system constantly monitors the pressure during standby mode. If the pressure falls below the lower limit, the dehydrator will activate and pressurize the system with dry air. You will notice the green "Working" indicator on the front panel illuminating when the dehydrator is inflating. Once the pressure reaches the upper limit, the dehydrator will return to standby mode and the "Working" indicator will turn off.

The KD-C70 dehydrators use high-performance allochroic silica gel as the desiccant, providing exceptional drying performance and durability. This desiccant is cobalt-free which addresses

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environmental issues, mitigates potential health and safety risks, ensures regulatory compliance, and meets increasing demand for sustainable and ethically sourced products.

When air flows through the desiccant, the silica gels absorb moisture, resulting in the drying of the air. The color of the silica gels changes according to its humidity level. Regeneration is needed when the desiccant changes to a dark green color, signaling that it has reached its maximized absorption capacity.

The dehydrator is equipped with a desiccant display window located in the lower left corner of the front panel, allowing users to easily monitor the dryness of the output air and the condition of the desiccant. Below are the colors of the desiccant and their corresponding indications:

Orange: The dryness of the output air is good. The desiccant is in good condition.

Tan: The dryness of the output air is acceptable. The desiccant is close to saturation.

Dark Green: The dryness of the output air is poor. The desiccant must be regenerated or replaced.

It is important to monitor the air dryness from the desiccant display window on a regular basis, and regenerate the desiccant as needed to maintain the dehydrator's performance and efficiency. See Sections 5.1 and 5.2 for the desiccant replacing and regeneration.

4.2 Indicators

The front panel consists of three indicators: Alarm, Working, and L D.

4.2.1 Alarm Indicator

If the red "Alarm" indicator on the front panel is illuminated, it means there is at least one alarm in the dehydrator. For more information on the alarms, refer to Section 4.4.

4.2.2 Working Indicator

During the inflation process of the dehydrator, the green light labeled "Working" illuminates. Conversely, the "Working" indicator remains off during all non-inflating intervals.

4.2.3 L D Indicator

When the "L D" indicator turns yellow, it means the leak detection function is in operation. For a detailed explanation of this function, refer to Section 3.9.

4.3 Control Buttons

On the front panel, you will find four control buttons: +Add/P, -Dec/Q, Set, and Leak Detection.

4.3.1 +Add/P Button

The "+Add/P" button is utilized to increase the value in the pressure (H XX and L XX) or switch the value in the buzzer (on/off) setting interface.

4.3.2 -Dec/Q Button

The "-Dec/Q" button is utilized to decrease the value in the pressure (H XX and L XX) or switch the value in the buzzer (on/off) setting interface. Additionally, the "-Dec/Q" button is used to access the dehydrator's logs. For more information, refer to Section 4.5.

4.3.3 Set Button

The primary function of the "Set" button is to confirm and store values or status in the setting interfaces. Additionally, it can be used to switch the dehydrator to a different interface. By pressing and holding it for 5 seconds in the "P XX" interface, the dehydrator will switch to the setting interface. Pressing it once in the checking logs interface will bring the dehydrator back to the "P XX" interface.

4.3.4 Leak Detection Button

Press the "Leak Detection" button to initiate the leak detection process. For further details, please see Section 3.9.

[Caution] Avoid pressing the "Leak Detection" button if the dehydrator's operation should not be disrupted.

4.4 Alarms

The dehydrator is equipped with three types of alarms: high-pressure alarm, low-pressure alarm, and excess run alarm. When there is a situation involving one or more alarms, the red alarm indicator illuminates, and the unit produces an audible sound if the Alarm Buzzer setting is ON.

4.4.1 Identify Alarms

To identify alarms, start by checking the pressure reading (P) on the digital display located on the front panel. Compare it with the set values of low-pressure limit (L) and high-pressure limit (H). If P<L-0.1psi, it is a low-pressure alarm. If P>H+0.5psi, it is a high-pressure alarm. Otherwise, it is an excess-run alarm. It is possible to have both low-pressure and excess-run alarm simultaneously.

Another way is to use the web browser interface to view alarm messages on the dehydrator status page. See to Section 6.2 for details on managing the dehydrator using a web browser.

Once the alarm is identified, refer to Section 5.3 for troubleshooting instructions.

4.4.2 High-Pressure Alarm

The dehydrator will show an alarm if the system pressure exceeds the high-pressure limit of **0.5psi (P>H+0.5psi).** Once the pressure returns to normal, the alarm will automatically reset.

[Attention] High pressure can damage pressure sensitive components like pressure windows in the system. Set the high-pressure limit parameter correctly, taking into account the upper-pressure limit of the entire system.

4.4.3 Low-Pressure Alarm

The dehydrator will show an alarm if the system pressure falls below the set lower limit of **0.1psi (P<L-0.1psi).** Typically, a low-pressure alarm is triggered by a leak in the system. You can use the "Leak Detection" function explained in Section 3.9 to verify this.

4.4.4 Excess-Run Alarm

The dehydrator will show an alarm if it runs continuously for 30 minutes without reaching the high-pressure limit. A leak is the main cause of this alarm. In this situation, the dehydrator will not stop until it reaches the high-pressure limit or runs continuously for 60 minutes. If the high-pressure limit is reached, the dehydrator will stop, and the alarm will be cleared. If the dehydrator runs for 60 minutes without reaching the high-pressure limit, it will enter an idling-inflating cycle where it will alternate between stopping and inflating for 60 minutes each. This cycle will continue until the high-pressure limit is reached and the alarm is cleared.

[Attention] **The dehydrator may start frequently or excessively run over 30 minutes during the initial inflation, which is a common occurrence.**

4.5 Alarm Port

The dehydrator is equipped with an alarm summary output feature through the 3.5mm headphone interface located on the top panel. This alarm port enables external monitoring equipment provided by the customer to monitor the dehydrator's status. Utilizing a contact relay, the alarm summary output operates passively, requiring an external power supply for the alarm devices. The contact opens (Normally Open) in the event of an alarm or multiple alarms, while it remains closed (Normally Closed) when there are no alarms. The contact's load capacity is 30VDC/1.0A or 125VAC/0.5A.

4.5.1 Alarm Output Wiring

A 3.5mm plug is provided in the accessory package which can be used to connect the alarm port to the external alarm device. Unscrew the plug cover to reveal the internal pins. Put a double-core cable through the cover and connect the wires to pins 1 and 2, as shown in the picture below. Once the wires are soldered, securely fasten the plug cover back together.

4.5.2   Verify the Alarm Output Functionality

Use this straightforward process to test the alarm output functionality. First, insert the 3.5mm plug into the alarm port on the top of the dehydrator. Second, set a multimeter to measure resistance (Ω) and connect its probes to pin 1 and pin 2 or wires soldered on those pins respectively.

Then check the multimeter's reading in three different scenarios:

a. When the dehydrator is turned off, the multimeter should show a connection (continuity).

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b. When the dehydrator is turned on, operating without any alarms, the multimeter should show a connection (continuity).

c. When the dehydrator has an active alarm or multiple alarms, the multimeter should show a disconnection (no continuity).

If all three readings match the expected results, the dehydrator alarm output function is working correctly.

4.6 Dehydrator Status and Logs

The KD-C70 dehydrator also offers information about the operational states of the unit. It provides these log information to aid in comprehending the dehydrator's status and troubleshooting any issues.

4.6.1 Number of Inflating: CXXX

At the "P XX" interface, press the "-Ded/Q" button. The display window shows "C XXX" where "XXX" represents the total number of inflations by the dehydrator. The maximum value is 255 and the counter resets after 255. Press the "Set" button to return to "P XX" from the number of inflating interface.
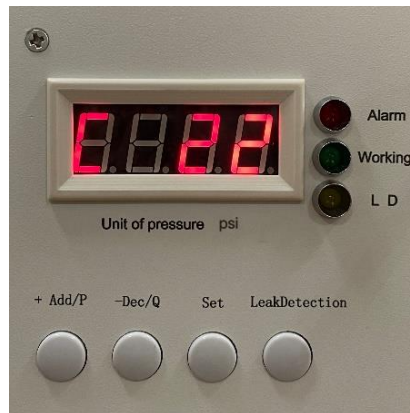
[Attention] During the initial operation of the dehydrator, it is anticipated to observe a significant increase in the number of inflating instances. The duration of these inflating instances and the logs documenting the number of inflating occurrences is valuable for identifying and resolving issues. For instance, if there is a leak in the system, both logs would display higher values than usual.

4.6.2 Power-on Time: t XX

At the "P XX" interface, press the "-Ded/Q" button twice. The power-on time will be displayed as "t XX", with "XX" indicating the total hours since the dehydrator was turned on. This log refreshes every 24 hours and the maximum value displayed is 23. Press the "Set" button to return to "P XX" from the power-on time interface.

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[Attention] Pressing the "Set" button on any of the mentioned status and logs interfaces will cause a switch back to the "P XX" interface. If there is no button pressed within 20 seconds on any of the status and logs interfaces, it will also return to the "P XX" interface.

5 MAINTENANCE AND TROUBLESHOOTING

5.1 Replacing the Desiccant

The dehydrator uses high-performance, cobalt-free allochroic silica gel as a desiccant. When the desiccant in the desiccant display window turns to dark green color, follow these steps to replace it:

Cylinder cover and Feeding hole

Step 1: Power off the dehydrator and disconnect the power cord, and the gas tubes if necessary. Let the dehydrator cool down completely.

Step 2: Locate the cylinder cover at the bottom of the dehydrator. Gently rotate it counterclockwise to open it, then empty the saturated desiccant into a container.

Step 3: Place the dehydrator upside down on a table so that the feeding hole is facing upwards. Refill with regenerated desiccant. Remove any debris around the hole and securely tighten the cylinder cover.

Step 4: Reinstall the dehydrator along with its power cord and gas tubes. Turn on the unit and make sure it operates properly.

It is recommended to replace the desiccant when 50% of the silica gels become crushed or when there is a significant dust accumulation. Use part number KD27002 to order the desiccant replacement kit. **[Attention]: It is advised to only fill the dehydrator's desiccant cylinder up to 90% of its capacity with the fresh desiccant. This leaves room for the desiccant to expand and maximizes efficiency during operation. Exceeding the recommended capacity may impede performance and potentially damage the dehydrator.**

The dehydrator comes with 90% of the cylinder's capacity pre-loaded with desiccant. The desiccant replacement kit KD27002 is also filled to 90% capacity.

5.2 Desiccant Regeneration

To regenerate the saturated dark green desiccant, follow these steps:

Step 1: Place the desiccant in a heat-resistant, shallow container.

Step 2: Put the container in a microwave oven or conventional oven, heat it to 250°F ± 50°C (120°C ± 10°C) for 15 to 20 minutes, until the desiccant turns to orange color.

Step 3: Cool down the regenerated desiccant naturally, then fill it back to the cylinder.

[Attention]: Do not remove the drying cylinder from the dehydrator when replacing the desiccant in order to prevent any loosening of connection lines and tubes, which could impact the proper function of the dehydrator.

5.3 Troubleshooting

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5.3.1 Dehydrator Won't Power On

Possible Cause	Check	Solution
Power switch in OFF position		Turn the Power switch to ON position
No power was supplied to the dehydrator	Power cord and power source, measure the incoming voltage	Use the right power supply or cord with the right voltage
Fuse is blown	Fuse box on the panel	Replace the fuse, see the instructions below

5.3.2 Display Pressure Is Always At 0 Or Stays at A Very Low-Pressure Value

Step 1: Remove the fuse box by rotating it counterclockwise.

Step 2: Peel off the protective layer outside the fuse tube in the accessories

Step 3: Insert the new fuse into the fuse box.

Step 4: Screw the fuse box into the panel clockwise to complete the replacement.

Possible Cause	Check	Solution
Leak in the dehydrator	Feel the air flow from the dehydrator outlets by hand, block the outlets and see the pressure display change	If there is no airflow from the outlet, the dehydrator is not functioning properly. Contact the after-sale service.

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Serious leak in the feeder system		If there is an airflow, the pressure value will go up quickly to reach the high-pressure limit when you block the outlet, and this value can remain for a certain time. Check the leak in the feeder system.
Pressure sensor failure		If there is an airflow, and after blocking the outlet the display still is 0. Contact the after-sale service.

5.3.3 High-Pressure Alarm

Possible Cause	Check	Solution
The dehydrator detects the high limit and stops to inflate	The alarm is normal, no need to check	It is common to observe a quick high-pressure alarm when the dehydrator inflating for a while.
Feeder system installed in a high-temperature environment or the air in the feeder expands from exposure to the sun	Environmental temperature	Disconnect the tubing to release the pressure. Adjust the high-pressure limit setting considering the impact of heat.
High-pressure limit set to too low	High-pressure limit setting	Raise the high-pressure limit setting.

5.3.4 Low-Pressure Alarm

Possible Cause	Check	Solution
The dehydrator detects the lower limit and starts to inflate	The alarm is normal, no need to check	It is common to observe a quick low-pressure alarm when the dehydrator restarts to inflate.
First time dehydrator operation		It is common to observe a low-pressure alarm when the dehydrator is switched on and begins operating for the first time.
Leak in the dehydrator	Feel the airflow from the dehydrator outlets by hand, block the outlets and see the pressure display change	If there is no airflow from the outlet, the dehydrator is not functioning properly. Contact the after-sale service.
System leak	Use leakage detection function (Section 3.9)	Locate the leak and fix it.

5.3.5 Excess-run Alarm

Possible Cause	Check	Solution
First time dehydrator operation		It is common to observe a excess-run alarm when the dehydrator is switched on and begins operating for the first time.
System leak	Use leakage detection function (Section 3.9)	Locate the leak and fix it.
Leak in the dehydrator	Feel the air flow from the dehydrator outlets by hand, block	If there is no airflow from the outlet, the dehydrator is not

	the outlets and see the pressure display change	functioning properly. Contact the after-sale service.

5.3.6 Compressor Is Not Functioning

Possible Cause	Check	Solution
System program crashes		Toggle the ON/OFF switch.
Compressor failure		Contact the after-sale service.

6 MANAGING DEHYDRATORS BY WEB BROWSER

The KD-C70 dehydrators can be managed through a web browser running on a computer connected to the dehydrator. Remote management is also possible, provided that the dehydrator is properly configured and connected to the Internet.

6.1 RJ45 Port

To facilitate the web browser management, connect the management computer to the dehydrator's RJ45 port on the front panel using an Ethernet cable. The default Ethernet setting of the dehydrator is as following:

IP address	192.168.1.10
subnet mask	255.255.255.0
gateway	192.168.1.1

6.2 Managing the Dehydrator

Configure the management computer's IP parameters to match the dehydrator's IP settings. For example, IP address is 192.168.1.9, and the subnet mask is 255.255.255.0 if dehydrator is using default settings. Launch a web browser and type in the dehydrator's IP address to access the management web page as below.

6.2.1 Dehydrator Status

The "Dehydrator status" page is the default page of the web browser management interface. It displays various information including System pressure in psi, Inflating times, Working hours, Dehydrator status, Alarm type (including low-pressure alarm, high-pressure alarm, excess-run alarm), Buzzer status, Upper pressure limit, and Lower pressure limit.

6.2.2 Leak Detection Function

The dehydrator status page has two buttons located at the bottom: Start leak detection and Stop leak detection as shown in the figure below. They operate in the same way as the Leak Detection button on the front panel. See Section 3.9 for an instruction on how to use this function.
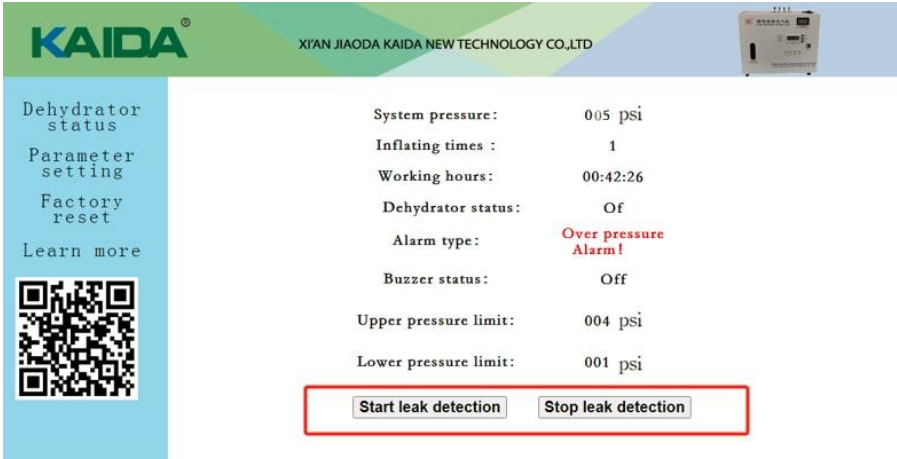
6.2.3 Parameter Setting

Click "Parameter setting" menu on the left side of the page will enter the parameter setting interface. The dehydrator's IP address, subnet mask, and gateway information can be modified on this page. Furthermore, the upper-limit and lower-pressure limit settings can be adjusted. Click the Update button to save the new changes. The latest settings for the Upper pressure limit and Lower pressure limit are shown at the bottom of this page.
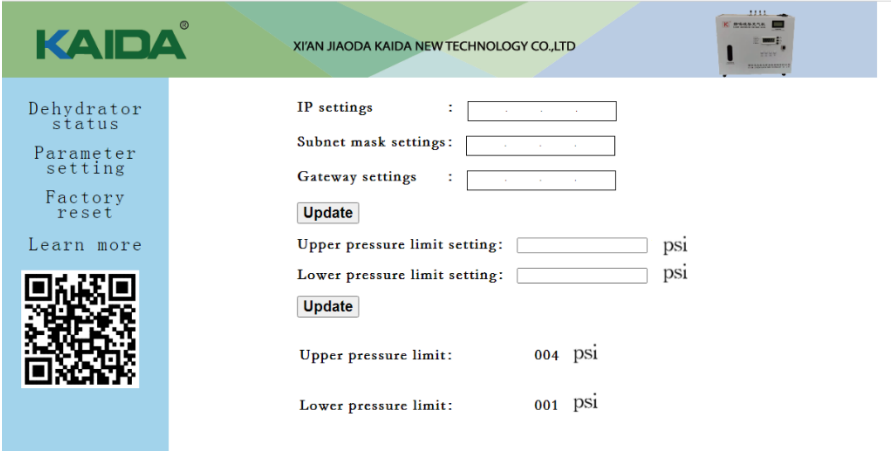
6.2.4 Restoring Factory Settings

Click "Factory reset" menu on the left side of the page will enter factory reset page. Pressure limits and IP information are shown in this page. Click the "Factory reset" button at the bottom of the page will restore the dehydrator to its factory settings, as shown in the following figure.
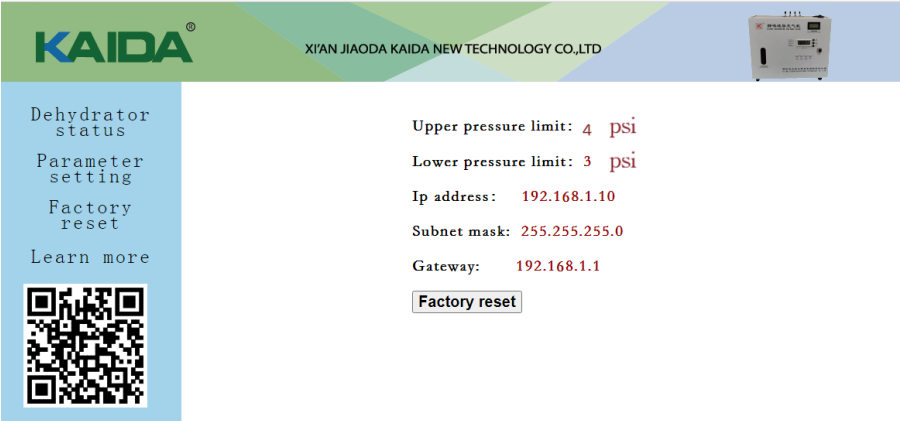
7 TRANSMISSION LINE VOLUMES

The tables below contain estimated volume per linear unit for the most common transmission lines.

RFS/RFS Technologies Elliptical Waveguide volumes:

Waveguide Type	Liters per meter (l/m)	Cubic foot per foot (ft³/ft)
E38/EP38	2.34	0.0252
E46/EP46	1.68	0.0181
ES46/ESP46	1.58	0.0170
E60/EP60	1.02	0.0110
E65/EP65	0.83	0.00894
EP70	0.72	0.00775
E78/EP78	0.60	0.00646
EP100	0.38	0.00409
E105/EP105	0.31	0.00334
E130/EP130	0.24	0.00258
E150/EP150	0.18	0.00194
E185/EP185	0.11	0.00118
E220	0.08	0.000861
E250	0.06	0.000646
E300	0.037	0.000398
EO38	0.07	0.000754
E380	0.03	0.000323

RFS/RFS Technologies Air Dielectric Coaxial cable volumes:

Cable Type	Liters per meter (l/m)	Cubic foot per foot (ft³/ft)
HCA38	0.107	0.00115
HCA12	0.134	0.00144
ICA12	0.131	0.00141
HCA58	0.252	0.00271
HCA78	0.34	0.00366
HCA118	0.6	0.00646
HCA158	1.4	0.0151
HCA214	2.11	0.0227
HCA295	2.91	0.0313
HCA300	3.0	0.0323
HCA400	5.0	0.0538
HCA495	8.3	0.0894
HCA550	14.0	0.151
HCA618	19.0	0.205
HCA800	30.15	0.325
HCA900	40.16	0.432

CommScope/Andrew Elliptical Waveguide volumes:

Waveguide Type	Liters per meter (l/m)	Cubic foot per foot (ft³/ft)
EW17	6.60	0.0710
EW20	5.62	0.0605
EW37	1.96	0.0211
EW43	1.69	0.0182
EW52	1.045	0.0112
EW63	0.855	0.0092
EW64	0.725	0.0078
EW77	0.585	0.0063
EW85	0.39	0.0042
EW90	0.334	0.0036
EW127A	0.25	0.0027
EW132-137	0.167	0.0018
EW132-140	0.167	0.0018
EW132-144	0.167	0.0018

EIA Rectangular Waveguide (TE10 mode) Volumes:

Waveguide Type	Liters per meter (l/m)	Cubic foot per foot (ft³/ft)
WR340 / WG9A	3.73	0.0401
WR284 / WG10	2.46	0.0264
WR229 / WG11A	1.70	0.0183
WR187 / WG12	1.05	0.0113
WR159 / WG13	0.816	0.00878
WR137 / WG14	0.551	0.00593
WR112 / WG15	0.360	0.00387
WR90 / WG16	0.232	0.00250
WR75 / WG17	0.181	0.00195
WR62 / WG18	0.125	0.00134
WR51 / WG19	0.0839	0.000903
WR42 / WG20	0.0461	0.000496
WR28 / WG22	0.0253	0.000272
WR22 / WG23	0.0162	0.000174
WR19 / WG24	0.0114	0.000123
WR15 / WG25	0.00707	0.0000761
WR12 / WG26	0.00480	0.0000517

Rigid Coaxial Transmission Line (50-ohm) volumes:

Line Size	Liters per meter (l/m)	Cubic foot per foot (ft³/ft)
7/8"	0.255	0.0027
1-5/8"	0.958	0.0103
3-1/8"	3.77	0.0405
4-1/16"	6.36	0.0685
6-1/8"	14.70	0.158
7-3/16"	22.80	0.245
8-3/16"	29.77	0.320
9-3/16"	33.30	0.358

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