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Quick Installation Guide

**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.

In additional to this Quick Installation Guide, a complete product manual is available for access by scanning this QR code:



Or by visiting this link:

https://www.rfstechnologies.com/images/pressurization_products/kd-c70_manual_10000036987.pdf

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1. WARNINGS, CAUTIONS & NOTES

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

WARNING

Power source of the dehydrator must have proper ground connection, to reduce 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.



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 25°C (77F°)	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 -30°C (-22°F) at 25°C (77F°)		
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	-20°C to +50°C (-4°F to 122°F), ≤95% Humidity		
Product Dimensions	H x L x D: 10.8x12.4x5.9inches (275x315x150mm) (Feet not included)		
Net Weight	18.7 Lbs. (8.5kg)	16.1 Lbs. (7.3kg)	
Shipping Dimensions	H x L x D: 13.4x16.9x9.8 inches (340x430x250mm)		
Shipping Weight	22 Lbs. (10kg)	19.2 Lbs. (8.7kg)	
Network Management	Web Browser		
Alarms	Low-Pressure, High-Pressure, Excess Run		
Installation	Desktop, Wall		

2.4 Appearance and Interface



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



- 6. Gas Outlets
- 7. Alarm terminal
- 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
4	Teflon tape x 1 roll	KD29001

5	PU tube x 33ft (10m) length	KD24009
6	Brackets x1 pair	KD30004

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)
				

3.3 Staging the Dehydrator

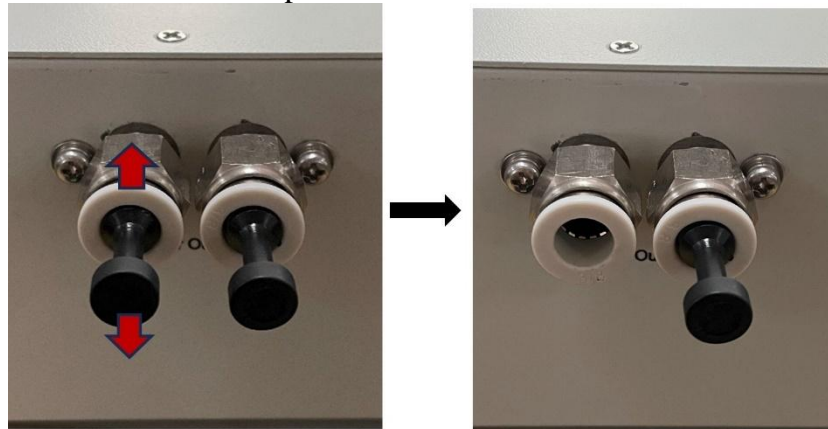
Leave the power switch on the dehydrator in the OFF position. Connect the unit to the appropriate power source using the power cord provided.

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

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. 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.

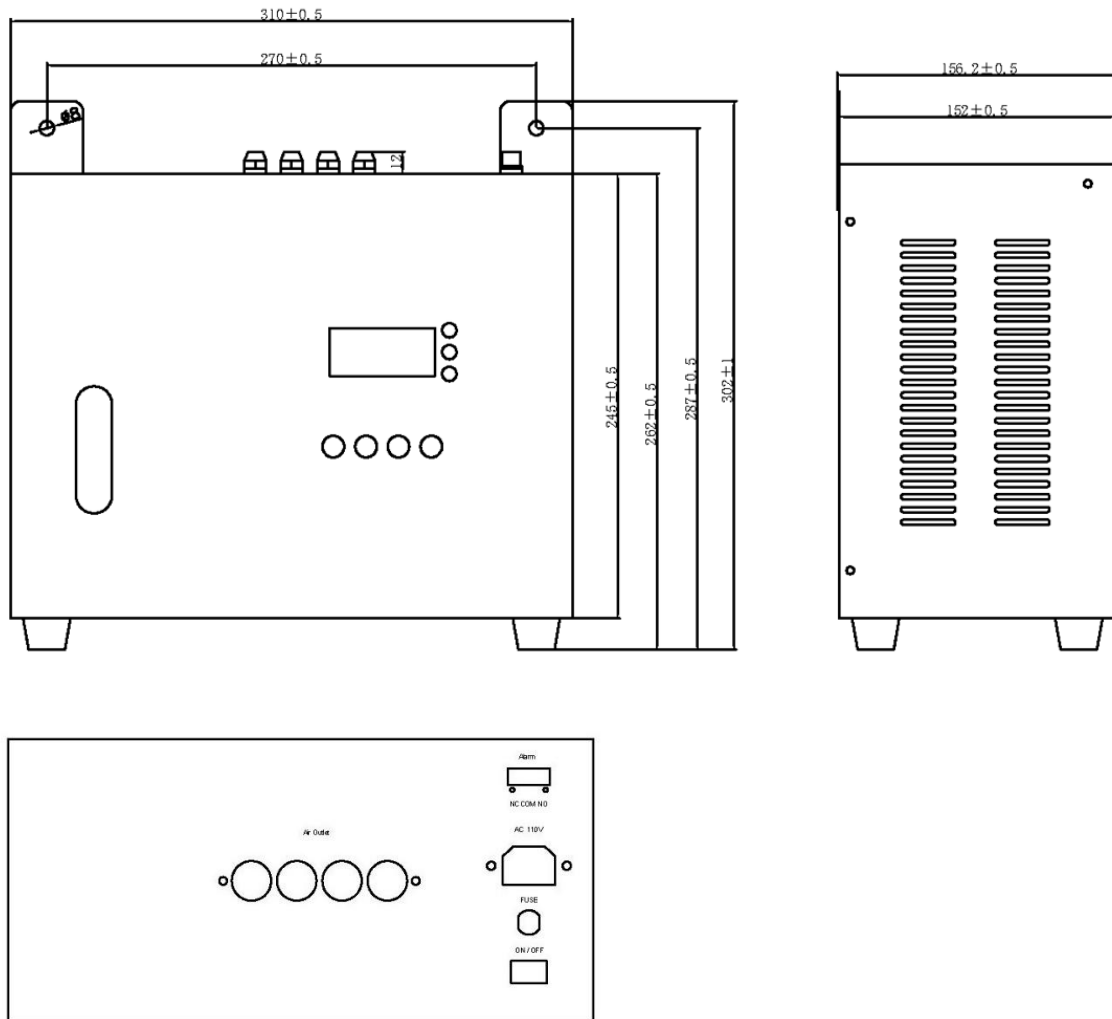
3.4 Installation Mode of KD-C70 Series

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

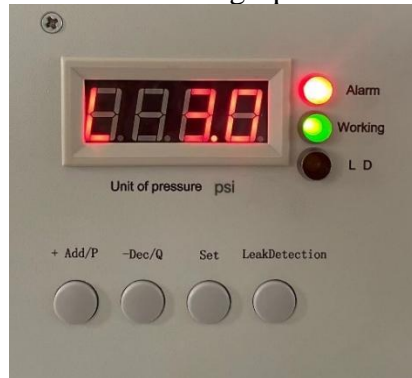
3.6.1 High-Pressure Limit

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.



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.

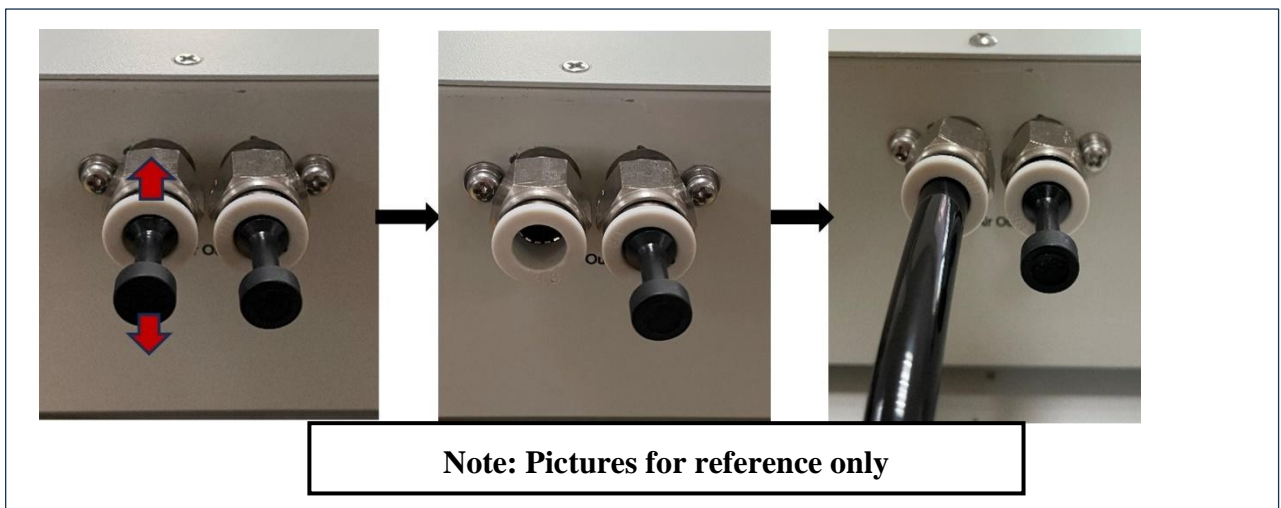
3.7 Connect the Dehydrator to the Tubing and the System

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. Each 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.



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.

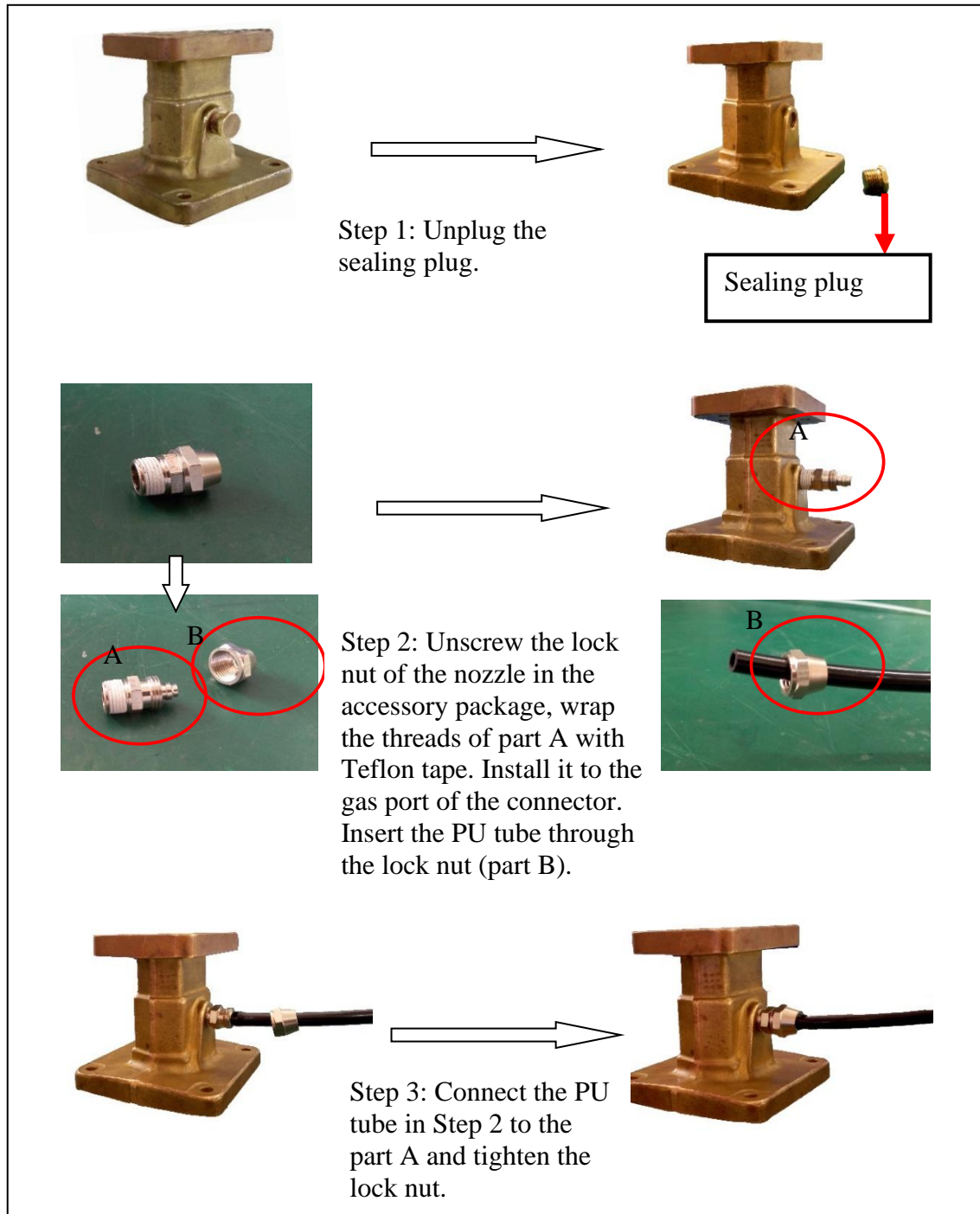
3.7.2 Connect the Tubing to the System

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

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.



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.

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.