Petersen® Air Inflation Deflation Control With Alarm
Generic Instruction Summary

Warning! Read and understand instructions before using Petersen® Inflatable devices. Failure to comply may result in property damage, serious injury or death!

SAFETY IS EVERYONE'S RESPONSIBILITY!

Very high forces are involved in many pipeline-inflatable situations. Forces increase dramatically as pressure and pipe diameter increase. Extreme care must be taken to assure the safe use of any Pipe Inflatable device. Maximum inflation pressure and backpressure limits for Inflatable devices are affected by many factors including pipeline debris, temperature, fluid, and surface condition. These instructions are general and a competent professional engineer must calculate forces involved and adapt these instructions for the specific project safety requirements. ***The instructions must be provided to all Petersen® Inflatable device users and workers on the job trained for proper use****.*

1. Purpose of the Petersen® Air Inflation Controller:

1.1. **Petersen® Inflatable devices** must be inflated using a relieving style pressure regulator and a relief valve to maintain the correct pressure with changing temperature and head pressure.

1.2. **The Inflation Controller may be used to control inflation and may be used with air, nitrogen or other inert gas.**

1.3. **Petersen® Low Pressure Monitoring Alarm** is available for all inflatable devices.

2. Air Inflation Controller Components:

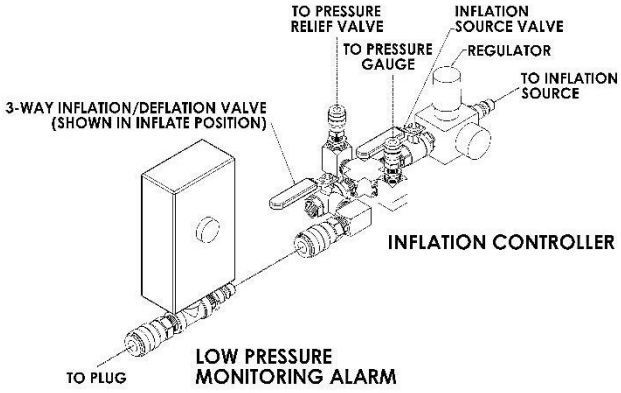
2.1. **Used for inflation and when only one hose is used for both inflation and pressure monitoring.**

2.2. **Two ¼" quick disconnect couplings** for pressure gauges and/or pressure relief valve.

2.3. **Inlet Port and Outlet Ports** – ½" coupling quick disconnects for inflatable device and plug for the pressure source. Adapters available for other connections.

2.4. **Regulator** – Used to maintain a constant inflation pressure delivered to the inflatable device. This relieving style regulator will slowly bleed off the regulated pressure should the inflation pressure increase due to slow temperature or head pressure fluctuations.

2.5. **Inflation Source Valve** – Used to start or stop the pressure from the Regulator to the Inflatable device.



Petersen Products • P.O. Box 340 • 421 Wheeler Avenue • Fredonia, Wisconsin 53021-0340
Tel: 800-926-1926 / (262)-692-2416 • Fax: 800-669-1434 / (262)-692-2418
Email: sales@petersenproducts.com • www.petersenproducts.com

2.6. **3-Way Inflation/Deflation Valve** – Directs inflation pressure to the inflatable device or deflates the inflatable device out to atmosphere.

3. Pressure Monitoring Valve Assembly:

3.1. Used for pressure monitoring generally when an inflatable device has a separate pressure monitoring port from the one used for inflation. May also be used for inflation when the above Regulator Inflation Controller is not required for a regulated source pressure.
3.2. Valve is used for deflation out to atmosphere.
3.3. Two **¼" quick disconnect couplings** are for two pressure monitoring gauges and/or a pressure relief valve.

4. Pressure Gauge – For monitoring inflation pressure. ¼" quick disconnect plug connects to Inflation Controller or Pressure Monitoring Valve Assembly. It is best to use two gauges that agree and verify accuracy before each use.

5. Relief Valve –Plugs into Inflation Controller or Pressure Monitoring Valve Assembly to help avoid over inflation of inflatable devices. Must be adjusted to 10% over inflatable device rated pressure.

6. Petersen® Low Pressure Alarm (sold separately) will help monitor the inflation pressure.

6.1. Standard Alarms are available for 0-15 PSI, 10-90 PSI, 20-300 PSI, and 20-500 PSI. Custom alarms are available upon request with a ¼" Plug and Coupling Disconnect.
6.2. The plug rated pressure should be within the Alarm high and low pressure rating. The plug pressure rating near the mid-range of the Alarm is preferred. The Alarm should never be connected to a pressure higher than its high pressure limit.

7. Venturi Vacuum Generator - Used for vacuuming especially large inflatable devices to a small size.

Low Pressure Alarm Pressure Adjustment

7.1. Connect to a pressure source regulated to the low range of the Alarm.
7.2. Turn on the Low Pressure Alarm switch.
7.3. Open the Low Pressure Alarm cover.
7.4. Adjust the Alarm pressure switch and regulated air source to activate the Alarm at 10% below the inflation device required pressure. Increase the source pressure to silence the alarm.
7.5. Close the Low Pressure Alarm cover.

8. Pressure Relief Valve Pressure Adjustment

8.1. Connect to a pressure source regulated to the low range of the Relief Valve.
8.2. Adjust the Relief Valve and regulated air source to open the relief valve at 10% above the inflation device required pressure. Decrease the source pressure to verify the Relief Valve closes again at the inflatable device rated pressure.

Petersen Products • P.O. Box 340 • 421 Wheeler Avenue • Fredonia, Wisconsin 53021-0340
Tel: 800-926-1926 / (262)-692-2416 • Fax: 800-669-1434 / (262)-692-2418
Email: sales@petersenproducts.com • www.petersenproducts.com

9. Inflation with the Petersen Air Inflation Controller:

9.1. Wear Eye protection when inflating any device with air, nitrogen or other inert gas.
9.2. Never exceed the Maximum rated Inflation Pressure. Never use a gas cold enough to crystallize rubber.
9.3. Close the Inflation Source Valve next to the Pressure Regulator, the valve handle will be perpendicular to the flow.
9.4. Open the 3-Way Valve to connect Inflatable device, the valve handle parallel with the flow.
9.5. Set the Regulator pressure to zero. Pull up on Regulator cap to unlock it. Turn cap counterclockwise to decrease pressure or clockwise to increase it. Lock cap by snapping down.
9.6. Connect inflation source hose to pressure regulator end of the Inflation Controller.
9.7. Connect inflation hose between inflatable device and outlet end of the Air Inflation Controller.
9.8. Connect a Pressure Monitoring Hose between the inflatable device and the Pressure monitoring Valve assembly if the inflatable device has a separate pressure monitoring port.
9.9. Hoses must be long enough to monitor the plug from a safe distance.
9.10. Connect the Pressure Gauge and Pressure Relief Valve to the quick disconnects on the inflation controller if only one hose is used or the pressure monitoring Valve Assembly if two hoses are used. Turn the valve to direct plug pressure to the gauges.
9.11. Open Inflation Source Valve and adjust the Pressure Regulator Inflatable device required pressure.
9.12. Do not remove the inflation source until the inflatable device inflation pressure stabilizes at the rated pressure for at least an hour.
9.13. Turn off the Inflation Source Valve next to the Pressure Regulator if the inflation source is removed to prevent bleed-back through the Regulator.
9.14. Monitor inflation pressure regularly.

10. Deflation of Inflatable Device:

10.1. Turn off the Inflation pressure source valve next to regulator.
10.2. Turn the 3-way valve connected to the inflation hose to deflate.

11. Deflation with Petersen Venturi Vacuum Generator.

11.1. When required especially for large devices.
11.2. After the Inflatable device pressure drops to zero disconnect the Inflation hose from the Inflation Controller.
11.3. Connect the Inflation hose to the quick disconnect coupling on the Venturi Vacuum Generator.
11.4. Verify the source pressure valve is closed and connect the outlet of the Inflation Controller to the quick disconnect plug on the Venturi Vacuum Generator.
11.5. Increase the pressure supplied to the Venturi Vacuum Generator to no more than 100 PSI.
11.6. Open the source pressure valve.
11.7. You will hear an audible change in sound when the vacuum pressure increases indicating the inflatable device is fully deflated.
11.7.1. Alternatively you can connect the Pressure Monitoring Valve assembly between the vacuum generator and inflation hose and use a vacuum type pressure gauge to monitor the vacuum.

Petersen Products • P.O. Box 340 • 421 Wheeler Avenue • Fredonia, Wisconsin 53021-0340
Tel: 800-926-1926 / (262)-692-2416 • Fax: 800-669-1434 / (262)-692-2418
Email: sales@petersenproducts.com • www.petersenproducts.com