

Petersen® Air Inflation Controller and 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 Alarm** is available for all inflatable devices.



2. Components of the Air Inflation Controller:

- 2.1. **Inlet Port** – ¼" or ½" male quick disconnect inflatable device or male cam and groove connection.
- 2.2. **Regulator** – Used to maintain a constant inflation pressure delivered to the inflatable device. This relieving style regulator will bleed off the regulated pressure should the inflation pressure increase due to temperature or head pressure fluctuations.
- 2.3. **Pressure Ball Valve** – Used to start or stop the pressure from the Regulator to the Inflatable device.
- 2.4. **Pressure Gauge** – (sold separately) inflatable devices into quick disconnect to display inflatable device inflation pressure. Check calibration before each use.
- 2.5. **Relief Valve** – (sold separately) inflatable devices into quick disconnect to help avoid over inflation of the inflatable device and slowly bleeds off inflation pressure if it exceeds the relief valve setting.
- 2.6. **3-Way Inflation/Deflation Valve** – Directs inflation pressure to the inflatable device or deflates the inflatable device out to atmosphere.
- 2.7. **Outlet Port** – ¼" or ½" female quick disconnect coupling or female cam and groove connection.

3. Inflating with the Air Inflation Controller:

- 3.1. **Wear Eye protection when inflating any device.**
- 3.2. **An inflatable device may generally be inflated with air, nitrogen or other inert gas.** Never exceed the Maximum rated Inflation Pressure. Never use a gas cold enough to crystallize rubber.
- 3.3. **Close the Ball Valve next to the Pressure Regulator and open the 3-Way Valve to inflate the Inflatable device.** The ball Valve handle will be perpendicular to flow and 3-Way Valve handle parallel.
- 3.4. **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.
- 3.5. **Connect the Pressure Gauge and Pressure Relief Valve** to the Inflation Controller quick disconnects between the two valves.
- 3.6. **Connect inflation hose** between inflatable device and outlet end of the Air Inflation Controller and connect

inflation source hose to pressure regulator. Use an inflation hose long enough to allow inflation from a safe area.

- 3.7. **Open Pressure Ball Valve** and set the pressure on the Pressure Regulator to the pressure required for the Inflatable device.
- 3.8. **To deflate the inflatable device** turn off the ball valve next to the regulator, then turn the 3-way valve to deflate.
- 3.9. **Do not remove the pressure source** until the inflatable device inflation pressure stabilizes at the rated pressure for at least an hour. Turn off the ball valve next to the Pressure Regulator if the pressure source is removed to prevent bleed back through the Regulator and check the inflatable device inflation pressure regularly.

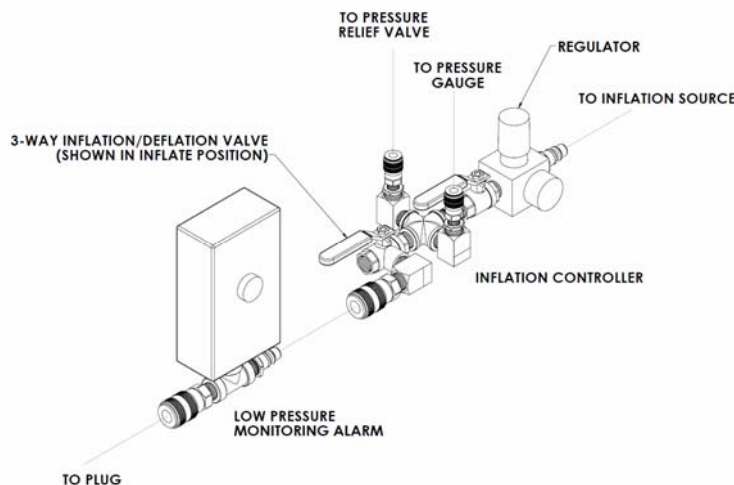
4. Petersen® Low Pressure Alarm (sold separately) will help monitor the inflation pressure.

- 4.1. **When a Petersen® Low Pressure Alarm is shipped with a Inflatable device**, the Low Pressure Alarm is set for use with the pressure of that Petersen® Inflatable device. The pressure setting may be changed inside the Alarm box. (see below)
- 4.2. **Verify that the Regulator is set** to the inflatable device rated inflation pressure.
 - 4.2.1. **Connect the Low Pressure Alarm** between the regulated outlet of the Air Inflation Controller and the Inflatable device.
 - 4.2.2. **Turn on** the Low Pressure Alarm.
 - 4.2.3. **Verify alarm setting is correct** by decreasing the pressure of the Regulator to 10% below the Inflatable device rated pressure. Alarm should sound at this point.
 - 4.2.4. **Adjust the Regulator** to the inflatable device rated pressure to silence the alarm.
- 4.3. **A Petersen® Low Pressure Alarm is adjusted for use with any other inflatable devices.**
 - 4.3.1. **Remove the Low Pressure Alarm cover.**
 - 4.3.2. **Connect the Low Pressure Alarm** to the regulated outlet of the Air Inflation Controller.
 - 4.3.3. **Adjust the Regulator** to a pressure 10% below the inflatable device rated pressure.
 - 4.3.4. **Turn on** the Low Pressure Alarm.
 - 4.3.5. **Adjust the alarm internal pressure switch** until the alarm is silenced / sounded.
 - 4.3.6. **Adjust the Regulator** to the inflatable device rated pressure to silence the alarm.
 - 4.3.7. **Replace the Low Pressure Alarm cover.**



5. Deflating with the Air Inflation Controller:

- 5.1. **Turn off** the Low Pressure Alarm.
- 5.2. **To deflate the inflatable device**, turn off Ball Valve next to the Pressure Regulator.
- 5.3. **Slowly turn the 3-Way Inflation Valve to the deflate position.** Take care that the escaping air does not blow debris and cause injury.



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