

# Air Venturi®

The Power of Air

## Aluminum 13 cu tank Includes regulator



Patent numbers:

6,851,447 • 7,059,343 • 7,051,751

Fill pressure: 3,000 psi (200 bar)

Output: 1,100 psi +/- 10% (75bar)

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Illustrations and photographs are for demonstration purposes only and may not show the exact item purchased.

**This tank does not require a hydrostatic test every 5 years due to it's size. However, it is still recommended to do so.**

***Dealers:** This owner's manual must be given to the retail customer with the tank at the time of purchase. Shooters are advised to keep this manual and associated instructions for future reference by all users of this high-pressure air tank even if it's resold or loaned.*

# Safety System

*Removable bonnet*

*Low-profile fill valve  
(not shown)*



*ASTM  
825-14 NGO thread*

*Black  
high-pressure & low-  
pressure burst disks*

*High-pressure manometer  
(gauge)*

*ASTM  
safety vent groove*

Your Air Venturi regulator is equipped with an ASTM-compliant high-pressure bottle burst disc required by the Department of Transportation (DOT).

The regulator also has a low-pressure safety burst disk (stamped 1.8K).

The 1.8K psi safety burst disk protects you and your gun in the unlikely event the regulator fails.

If the 1.8K psi safety burst disk vents, it did so for a reason. We recommend you do the following:

1. Disassemble the regulator (see *Service and rebuild procedures*, page 5).
2. Inspect the regulator for contamination and clean it if necessary.
3. Install a new 1.8K psi burst disc (instructions on page 6).
4. If the 1.8K psi burst disc vents after rebuild, contact Air Venturi at 216-220-1180.

Your Air Venturi regulator has a safety vent groove

on the stem (see above image). This lifesaving feature allows for proper venting of the bottle in the event the regulator is unscrewed from the bottle while it's under pressure.

Always make sure there's no gap between the bottle and the regulator seal. If there IS a gap:

1. STOP!
2. Do NOT fill your system.
3. Do NOT use your system.
4. Place system on ground and wait for it to fully degas.
5. Immediately contact a qualified airsmith or Air Venturi tech support (216-220-1180).

*Make sure  
there's  
no gap here*



# Fill your tank

To fill your aluminum tank, connect the tank's fill port to the fill source.



*Fill your aluminum tank using the tank's fill port*

# Gas types

Your Air Venturi tank, regulator and fill station may be used only with dry, filtered compressed air or nitrogen.

**NEVER** exceed a pressure rating of 3,000 psi (200 bar).

It's important to keep dirt, oil and water out of your tank, fill station and

regulator. Most regulators fail due to dirt or contamination, so cover the fill nipple when not in use.

If you use compressed air, make sure the compressor providing that air is equipped with **WORKING** filters and moisture separators.



## WARNINGS:

**Use only dry, filtered compressed air or nitrogen in your tank. Use no other gas, including oxygen, which can cause a fire or explosion that may result in serious injury or death.**

**Use diver's silicone grease in your gun. Any other type of grease will void the warranty.**

**When filling the compressed air tank, the compressed air must NOT contain oil, water or any other contaminant.**

# Service & rebuild your regulator

If you aren't comfortable disassembling the regulator, bring it to a qualified airsmith or call Air Venturi at 216-220-1180



## WARNING:

MAKE SURE THE SYSTEM IS COMPLETELY DEGASSED BY DEPRESSING THE BALL VALVE TO EXHAUST ANY TRAPPED GAS.

Reference the parts list on page 15

You'll need the following tools:

- 8-32 threaded screw, 2" to 4" long
- 5/64" Allen wrench

**Before disassembly, fully de-gas your tank:**

- Point bottle away from all people and animals.
- Depress the ball valve until no air remains degases.

**To disassemble the regulator:**

1. Unscrew the bonnet from the gas distribution system to access all internal parts

**Do not apply heat to remove the bonnet! If it won't come off, depress the ball valve to completely exhaust any trapped gas.**

2. After separating the bonnet from the gas distribution system, remove the SRT piston with spring stack assembly, ball valve assembly and shims.

**Do not use tools to remove the piston spring pack, as it may damage the piston. Firmly grip the end of the piston and wiggle it while pulling.**

3. Clean the inside of the regulator body and bonnet with a cotton swab.
4. Before reassembling the regulator, lightly lubricate the SRT piston and o-rings with silicone diver's lube. DO NOT USE OIL!
5. Reinstall the output ball valve and spring.
6. Carefully push the piston assembly into the piston bore in the bonnet. The piston must be properly seated in the bonnet before proceeding further.
7. Reinstall the shims. Do not apply excessive torque when screwing together the bonnet and gas distribution system. Using a 5/64" Allen wrench, insert and securely tighten the (3) 8-32 bonnet screws.

Contact Air Venturi (216-220-1180) for replacement parts to service and rebuild your regulator.

# Low-pressure burst disk replacement

If you aren't comfortable replacing the burst disk, bring it to a qualified airsmith or call Air Venturi at 216-220-1180.



## WARNING:

Serious personal injury or death may result from improper disk replacement. It's essential that you replace failed disks with exact replacements. ASTM unified burst disks have the pressure identification stamped on the head of the unified disks. Some may have the pressure identifier on the side of the unified disk.

**The correct low-pressure burst disk for your Air Venturi 3000 psi tank is rated 1800 psi. Do not replace it with a disk with any other rating!**

### You'll need the following tools:

- 3/8" box wrench
- 3/8-24-UNF-2B go/no-go gauge
- Inch-pound torque wrench

An ASTM-compliant unified burst disk is used on your Air Venturi regulator. Burst disks are required by the U.S. Dept. of Transportation (DOT) and Transport Canada (TC).

For your 3000 psi Air Venturi aluminum tank, there's a 5000 psi high-pressure burst disk rated for N2/HPA storage bottles.

### How to replace your unified burst disk assembly:

1. Unscrew (turn counterclockwise) the failed unit and discard it. **These are not serviceable and have no further use.**
2. Visually inspect the female port for damage or debris. If you find debris, **blow it out. If the port is damaged, do NOT replace the disk.**

Call Air Venturi (216-220-1180) for assistance or contact a **qualified airsmith. We recommend that the female port be checked with a 3/8-24-UNF-2B go/no-go gauge (available at industrial supply stores or [www.msdirect.com](http://www.msdirect.com))**.

3. Screw in the new replacement unit. Using an inch-pound torque wrench, torque it to a minimum of 55 inch-pounds and maximum of 95 inch-pounds.
4. If the burst disk assembly does not seal at 95 inch-pounds, call Air Venturi at 216-220-1180 or have it inspected by a qualified airsmith.



Contact Air Venturi at 216-220-1180 for OEM replacement parts to service and rebuild your regulator.

# Fill check-valve

If you are not comfortable replacing the fill check-valve, bring it to a qualified airsmith or call Air Venturi at 216-220-1180.

**MAKE SURE THE SYSTEM IS COMPLETELY DEGASSED BY DEPRESSING THE BALL VALVE TO EXHAUST ANY TRAPPED GAS.**

Your fill check-valve requires periodic inspection. If it's leaking or you notice damage on the exterior, replace it.

Refer to the parts list on page 15.

You'll need the following tool to replace your fill check-valve:

- 7/16" wrench
- 1/8-27-NPT go/no-go thread gauge

1. Completely degas your tank by depressing the ball valve.
2. Using a 7/16" wrench, remove the old fill check-valve assembly.
3. Remove any old sealant and debris from the port.
4. Inspect the 1/8-27-NPT female fill check-valve port threads on the gas distribution body. Use your go/no-go thread gauge (available at

industrial supply stores or [www.msdirect.com](http://www.msdirect.com)) to check the threads.

**If threads are damaged or worn, STOP! Do NOT use your regulator. contact a qualified airsmith or call Air Venturi at 216-220-1180.**

5. A thread sealant has already been applied to the threads on your OEM fill check-valve. Do not use any additional sealant or PTFE tape.
6. Make sure the strut is inserted into the fill check valve as shown in the image below. The new assembly should then be screwed into the regulator. Turn it until hand-tight and then tighten it an additional 1-1/2 turns. **Do not exceed 100 inch-pounds of torque to seal. If it still leaks, contact a qualified airsmith or Air Venturi at 216-220-1180.**



*The strut in your fill check-valve has a groove across one end. This is essential for proper gas flow. When replacing the check-valve, always replace the entire unit. Use only OEM products to maintain the system's integrity.*



## WARNING:

**Never inject oil into the regulator through the full check-valve or allow oil to enter the bottle. oil droplets ignite during the fill process and can lead to injury or death.**

**Contact Air Venturi at 216-220-1180 for OEM replacement parts to service and replace your fill check-valve.**





## WARNINGS:

Not a toy. Adult supervision required. Misuse or careless use may cause serious injury or death.

Use only dry, filtered compressed air or nitrogen in your tank. Don't use any other gas, including oxygen, which can cause a fire or explosion that may result in serious injury or death.

Use diver's silicone grease where lubrication is indicated in this manual. Any other type of grease will void the warranty and may be flammable or explosive



Do NOT exceed maximum fill pressure of 200 bar/3,000 psi at room temperature!

Use only dry, filtered compressed air or nitrogen in this tank. Use no other gases—including oxygen, which can cause a fire or explosion that may result in serious injury or death.

When filling the compressed air tank, the compressed air must NOT contain oil, water or any other contaminant.

Compressed air tanks must NEVER be opened or modified mechanically by unauthorized specialists.

The compressed air tank must be protected from forceful impacts.

Compressed air tanks are NOT intended for transport of other gases.

# General maintenance

**ALWAYS** keep the universal fill adapter clean and dry

**ALWAYS** keep the threads of the valve body and cylinder free from oil, dirt and other contaminants. You may wipe these with a clean dry cloth if required.

**NEVER** overfill or have your cylinder filled beyond its rated capacity. Overfilling may result in property damage, personal injury or death.

**NEVER** tamper with or alter the cylinder valve, safety relief device or other cylinder attachments.

**NEVER** use this cylinder for applications other than charging your airgun.

**NEVER** use caustic paint strippers or corrosive cleaners, which will damage the cylinder.

**NEVER** use heat-activated paint (such as baked enamel or powder coating) on your cylinders. Use only air-drying paint.

**NEVER** use lubrication, Teflon tape or thread-locking compound.

**NEVER** alter or modify the cylinder in any way.

**NEVER** try to restrict the flow of air from your unit by using your hand to cover a port or leak. High-pressure air can cause serious physical injury if directed against the surface of your skin.

Improper use, filling, storage, disposal or failure to follow instructions may result in property damage, serious injury or death.

# Troubleshooting

In the unlikely event your tank malfunctions, DO NOT attempt to fix the problem yourself. Please call Air Venturi so we can address any issues or have you return the tank for repair.

**Air Venturi service line: 216-220-1180**

# Warranty

Your Air Venturi aluminum tank and regulator are manufactured to the highest possible standards, using the finest materials to give a lifetime of service. In the unlikely event there are defects in materials or workmanship in the first twelve (12) months after retail purchase, we will repair or replace the defective items under warranty.

**Note—The warranty will be invalid if:**

- Any items have been incorrectly disassembled, reassembled or maintained.
- The unit has not been properly lubricated or the wrong lubricant has been used.
- Parts other than original equipment manufacturer parts have been used.
- The unit has been abused, misused or improperly stored.
- The original purchase receipt cannot be presented.

**Note—The warranty does NOT cover:**

- Any damage or faults caused by owner misuse, action or inaction.
- Shipment damage to or from Air Venturi.

This warranty is in addition to your statutory rights. Retain your sales receipt as proof of purchase.

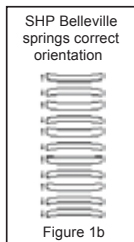
**This tank does not require a hydrostatic test every 5 years due to its size. However, it is still recommended to do so.**

The date of manufacture is listed on the label that is permanently attached to the back of your cylinder. The date follows the text **M4625** and is listed in a month-and-year format. For example, if your cylinder reads **M4625 10@13**, that means your cylinder was manufactured October 2013.

## AIR VENTURI REGULATOR SYSTEM

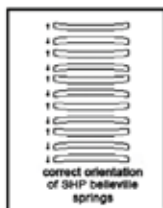
- factory set at 1100 PSI
- can be adjusted to 950 PSI with removal of all three internal shims

**NOTE: THE SHP REGULATOR can only be set at either 1100 PSI or 950 PSI. DO NOT ADD SHIMS.**



## AIR VENTURI REGULATOR ASSEMBLY

1. Dual Tank O-Rings
2. Bonnet Set Screws
3. PRO V2 Bonnet
4. Ball Valve Seat
5. Upper Piston O-Ring
6. Ball Valve
7. Pro V2 Spring
8. Pressure Adjustment Shims
9. Piston Ball Seat
10. Lower Piston O-Ring
11. Adjustment Collar Screws
12. 1.8K Burst Disk
13. Micro Fill Valve
14. Pro Reg Body
15. Micro Gauge
16. 5K Burst Disk
17. Micro Fill Valve O-Ring
18. Belleville Spring Stack (A1623132) X10
19. SRT Piston





# Notes

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