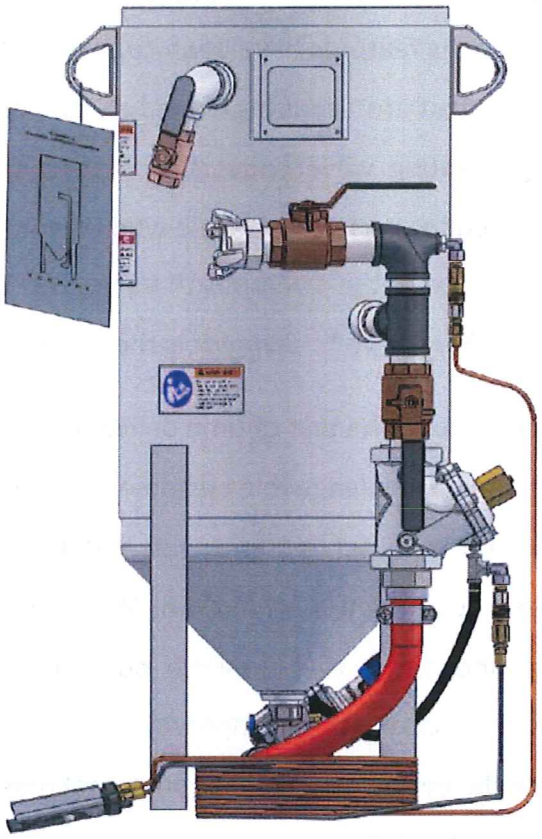
TeraValve™ II
Conversion Installation Instructions

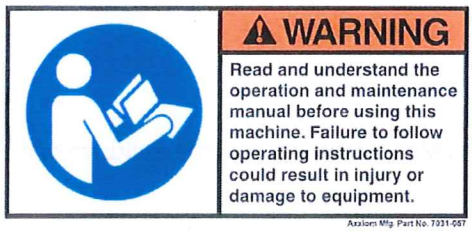
for the following part numbers:

0009-072 0009-082



SCHMIDT®

AXXIOM MANUFACTURING, INC.
engineered abrasive systems



SCHMIDT®

AXXIOM Manufacturing, Inc.
11927 S. Highway 6, Fresno, Texas 77545
800.231.2085 * 281.431.0581 * fax 281.431.1717

TOOLS REQUIRED:

- Pipe wrench (18" minimum)
- Combination wrench set
- 3/8" Torque wrench
- Adjustable wrench (10" minimum)
- Box knife
- 3/8" Ratchet set
- Small wire brush

Document No. 7200-0009-082 © 2018 Axxiom Manufacturing, Inc.

CONGRATULATIONS!

Congratulations on your purchase of the new & improved Schmidt® Valve Conversion Kit, so advanced and improved that its features have been copyrighted. By purchasing this kit of original Schmidt® parts, you are acquiring an enhanced version of the industry's most popular and profit-generating valve conversion system to upgrade and super-power your blast pot. Delivered to you by the people who invented and brought you the MicroValve®, the MV2® valve, the Thompson® Valve, the Thompson® II Valve, the ComboValve® and the new TeraValve™. Schmidt is the name you know – the name you trust.

The Schmidt product line has stood the test of time delivering proven innovations and leading the industry. We know knowledgeable customers understand the difference between the genuine value of original Schmidt products and deceptive imitations. Insist upon Schmidt OEM parts and equipment from Axxiom. We are committed to continue our efforts in developing innovations that improve our existing product line, while introducing new products that assist you in improving your job productivity, worker safety, and compliance with the ever-changing environmental pressures. These are the products you can continue to rely upon.

Thank you for your investment in Schmidt quality and your support for the value we put behind the Schmidt product line.

Respectfully,

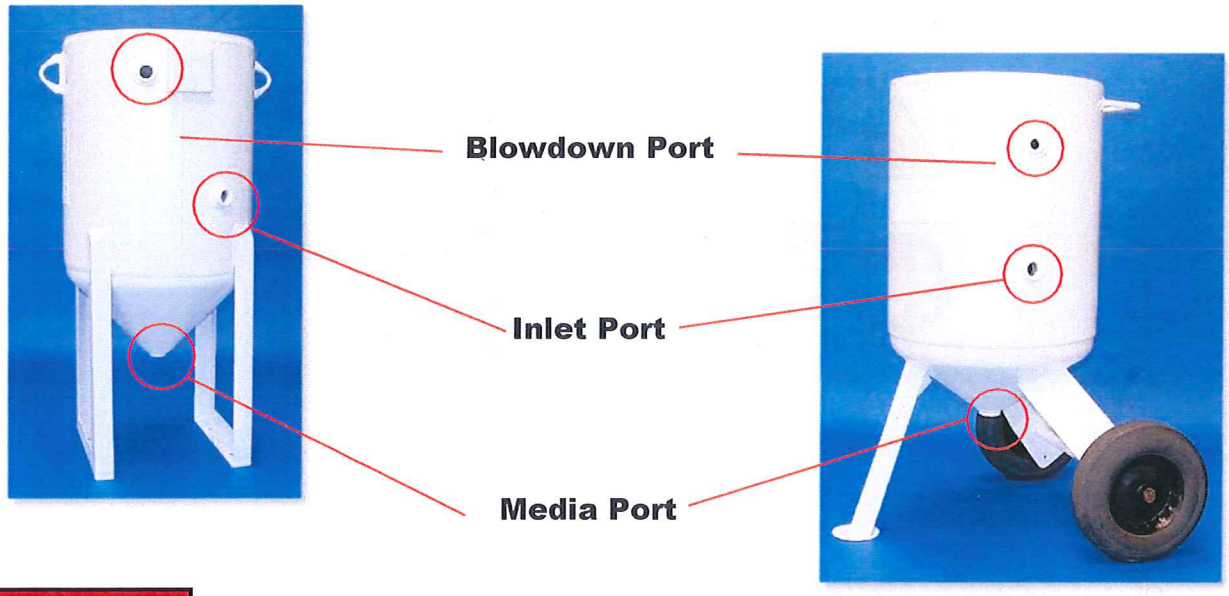
John Pirotte, President

On behalf of the people of Axxiom Manufacturing, Inc., the exclusive manufacturer of Schmidt abrasive blast equipment and parts.

TeraValve™ Conversion Installation Instructions

Offset Style

In-line Style



⚠ DANGER

The abrasive blaster is a Pressurized Vessel. All operators must completely read and understand all sections of the *Abrasive Blaster Operation and Maintenance Manual* before beginning the blast operation.

⚠ WARNING

Do Not attempt to install any portion of the conversion kit prior to confirming the vessel meets the requirements detailed below.

- Referenced Sections in **bold** below are in the *Abrasive Blaster Operation and Maintenance Manual* included in the conversion kit. Refer to this manual as needed.

Abrasive Blast Vessel requirements:

- Vessel must be a certified ASME pressure vessel. Confirm presence of the ASME nameplate **Refer to Section 1.25.**
- The vessel interior and exterior should be inspected before any work is performed. If any flaws such as wear, cracks, severe corrosion (pitting), or modifications to the pressure vessel are found, the vessel should be taken out of service until a certified agency certifies it as a valid vessel. Refer to **Section 8.0** for inspection instructions.
- Vessel should be emptied and stripped of all existing external piping and controls.
- Pop up should be inspected for wear as well as alignment. Refer to **Section 8.4.**
- Handway assembly components should be inspected for wear. Refer to **Section 6.3** for in section and installation instructions.
- All threaded ports should be cleaned, free of corrosion, and in good condition.

NOTE: If your vessel differs from Offset or In-Line styles shown, please contact your conversion kit supplier.

Assembly Notes:

- All threaded connections require thread sealant supplied in kit.
- All threaded connections should engage 4 to 5 threads to ensure seal.

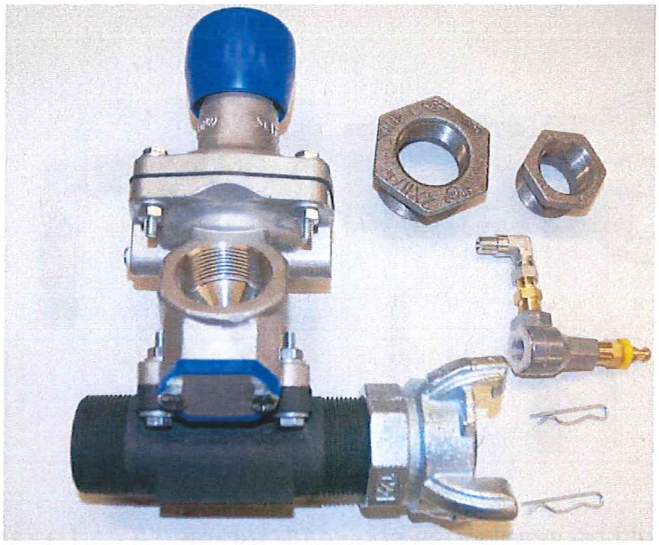
Sub-kit A

- All warning decals should be located in such a place as to be visible when unit is in service. Refer to **Section 0.0.**
- Care should be taken to clean all areas before decals are installed to ensure adhesion.
- Operation and maintenance manual should be attached to vessel or located in a safe, accessible storage area.

Offset Style

In-line Style

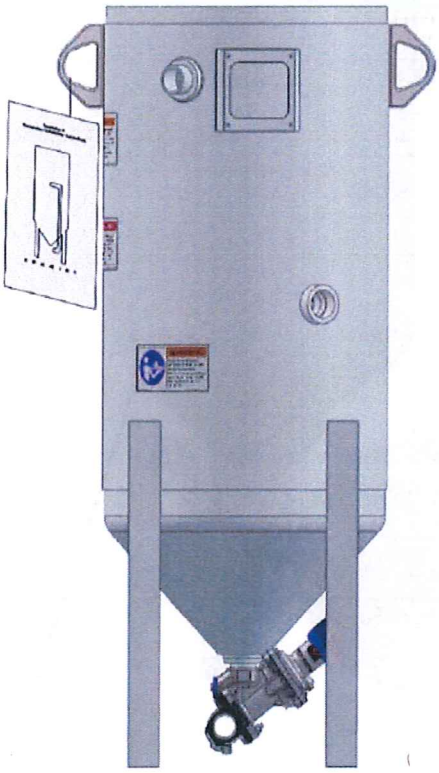
Sub-kit B



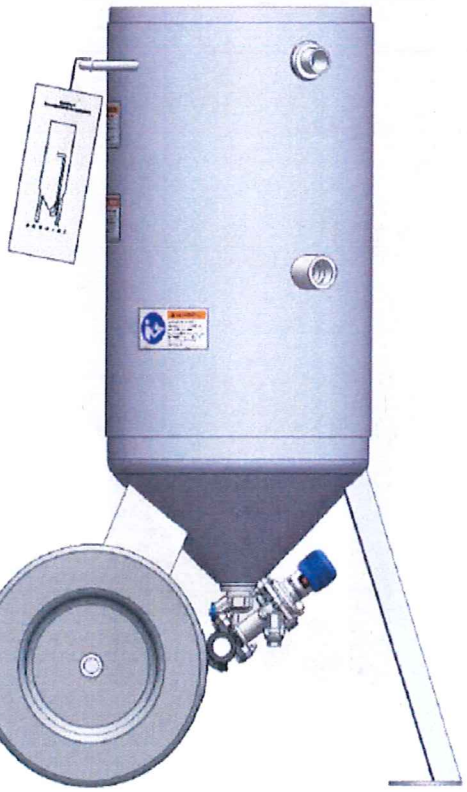
- TeraValve™ metering valve should be installed as shown (1-1/4" media port arrangement shown).

NOTE: Not all vessels have the same thread size of media port. For larger media port sizes (1- 1/2", and 2"), install the appropriate bushing included in the kit. Media port sizes smaller than 1-1/4" require fittings that are not included in the kit. Contact your conversion kit supplier.

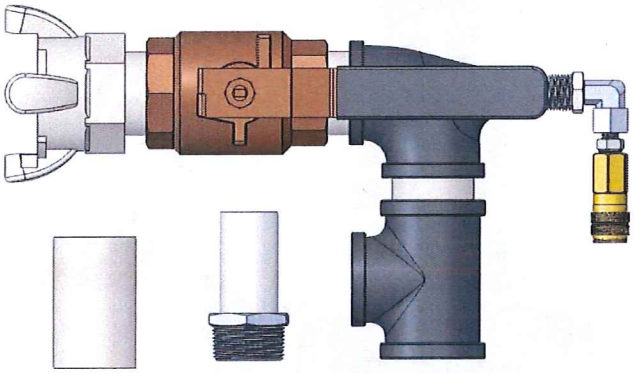
Offset Style



In-line Style



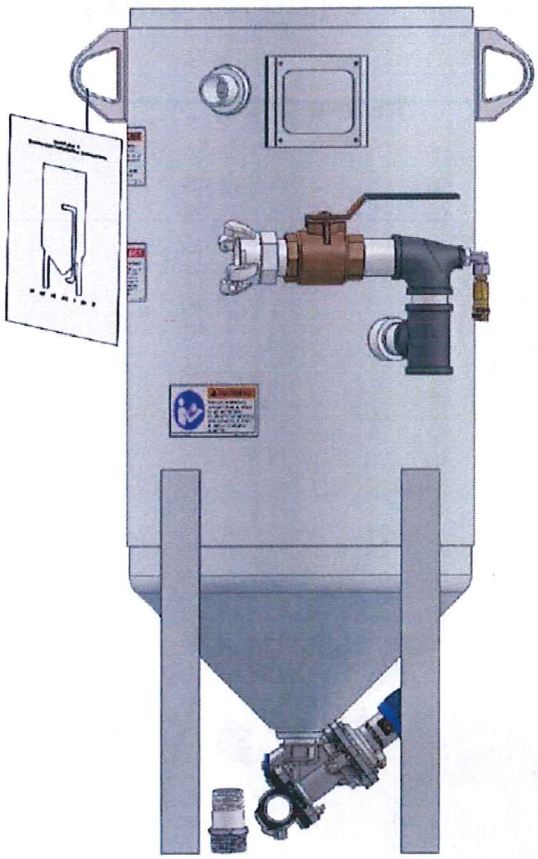
Sub-Kit C



- Vessel inlet piping should be installed as shown (1-1/4" media port arrangement shown). Care should be taken to tighten this sub-kit 5 to 6 threads, as other piping is supported by it.

NOTE: Not all vessels have the same thread size of inlet port. For 1" inlet port, install the bushing and pipe nipple included in the kit. Inlet port sizes other than 1" or 1-1/4" require fittings that are not included in the kit. Contact your conversion kit supplier.

Offset Style



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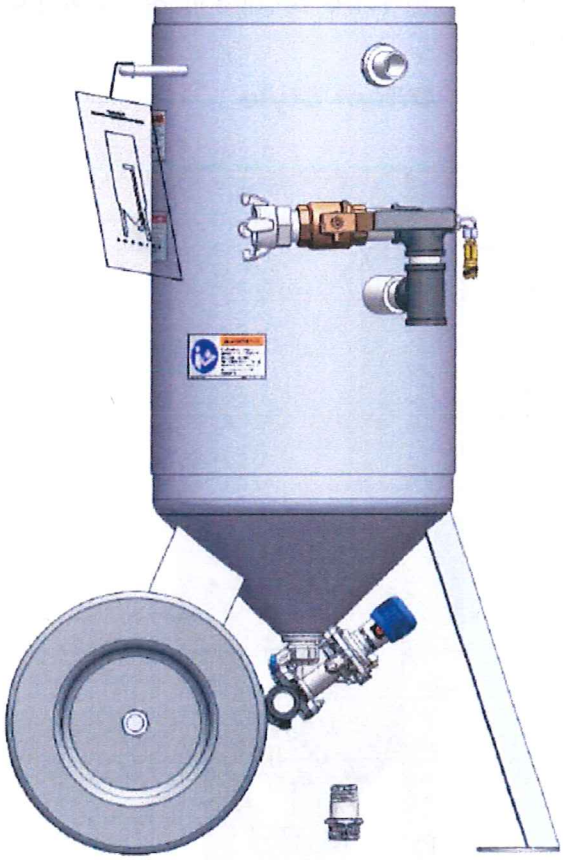
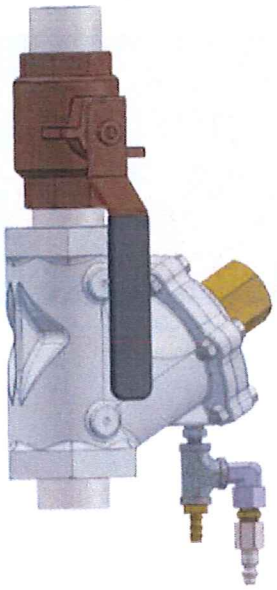


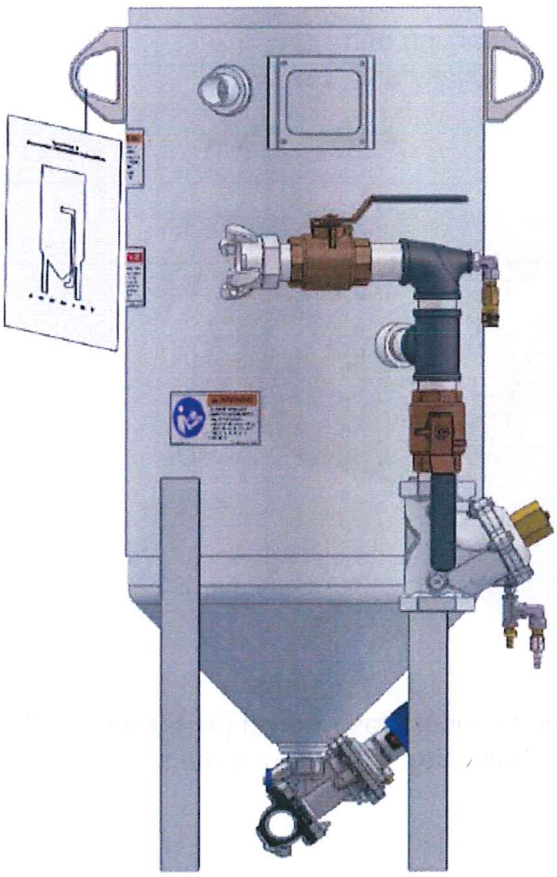
Sub-Kit D



- Auto Air Valve should be installed as shown.

NOTE: If the AutoAir Valve hits the vessel, rotate the vessel inlet piping CCW 1/4 turn to allow clearance. Once the sub-kit is installed, rotate the vessel inlet piping to original position.

Offset Style



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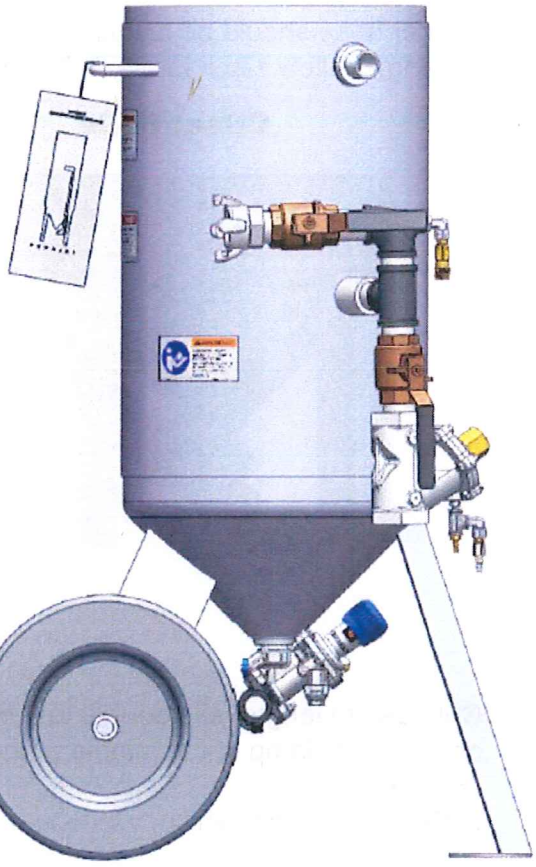
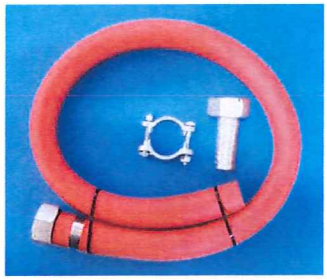


Sub-kit E

Offset Style

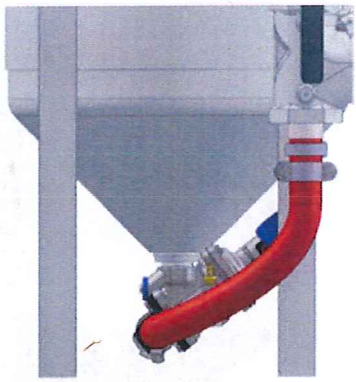


In-line Style

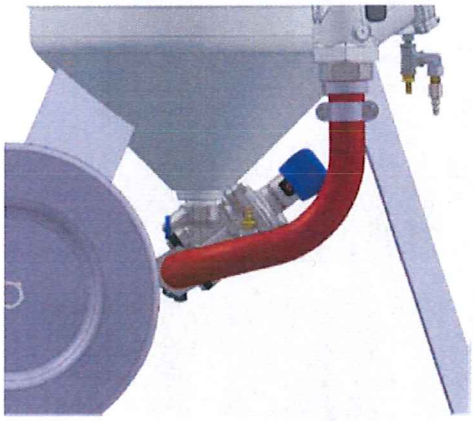
Note: The above images do not show TeraValve™; however, they are intended to aid in the installation of the red pusher hose only.

- Pusher hose should be installed as shown to allow marking of h
  for length, allow slack for flexibility, but make sure no kinks are possible.

Offset Style

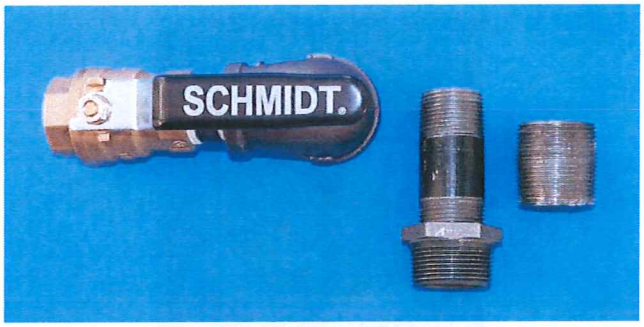


In-line Style



- Cut hose to length, slip double bolt clamp over hose, insert hose swivel (w/gasket), tighten double bolt clamp in the middle of the hose barb until snug. Then torque the two clamp bolts to 25 ft-lb.
- Install hose as shown.

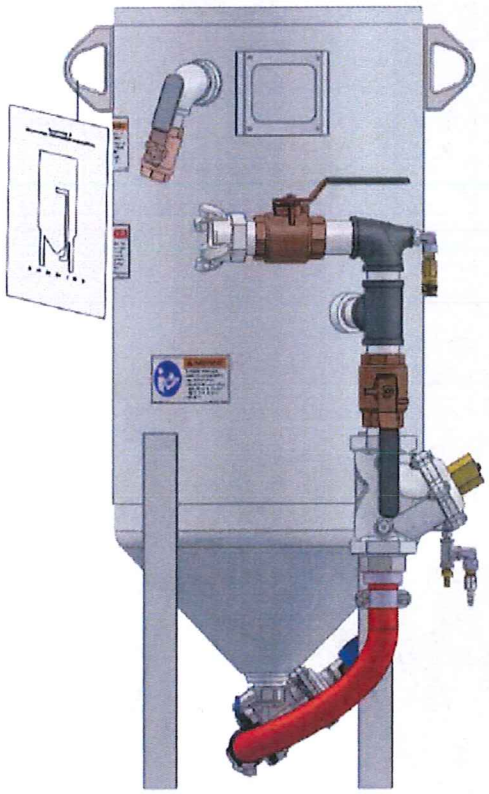
Sub-kit F



- Blowdown sub-kit should be installed as shown (1-1/4" blowdown port arrangement shown). Make certain blowdown valve exhaust flow is directed away from operating personnel and equipment.

  NOTE: Not all vessels have the same thread size on blowdown port. For 1" blowdown port, install the bushing and pipe nipple included in the kit. Blowdown port sizes other than 1" or 1-1/4" require fittings that are not included in the kit. Contact your conversion kit supplier.

Offset Style



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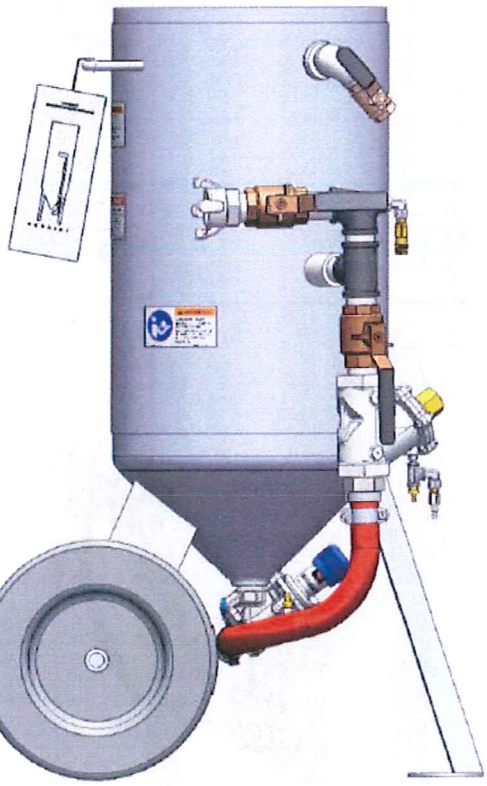


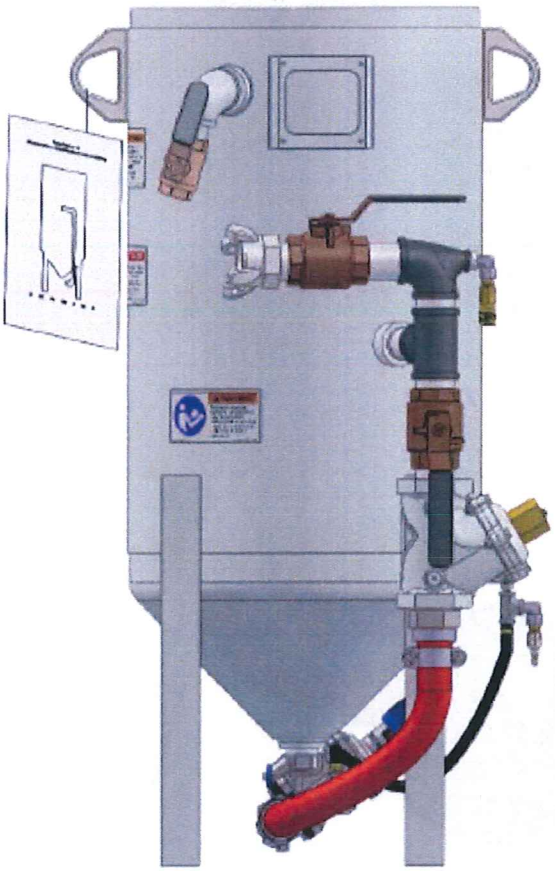
⚠ WARNING

Airborne particles and loud noise hazards from blowdown exhaust air can cause serious injury and loss of hearing. Wear approved eye and ear protection. Stay clear of blowdown air path. DO NOT place hands or other body parts in the blowdown air path. Make sure no personnel are in the blow-down air path.

Sub-kit G

- Install push-on hose as shown.
  NOTE: Make certain hose barbs are fully engaged. Organize push-on hoses with supplied wire ties.

Off-line Style



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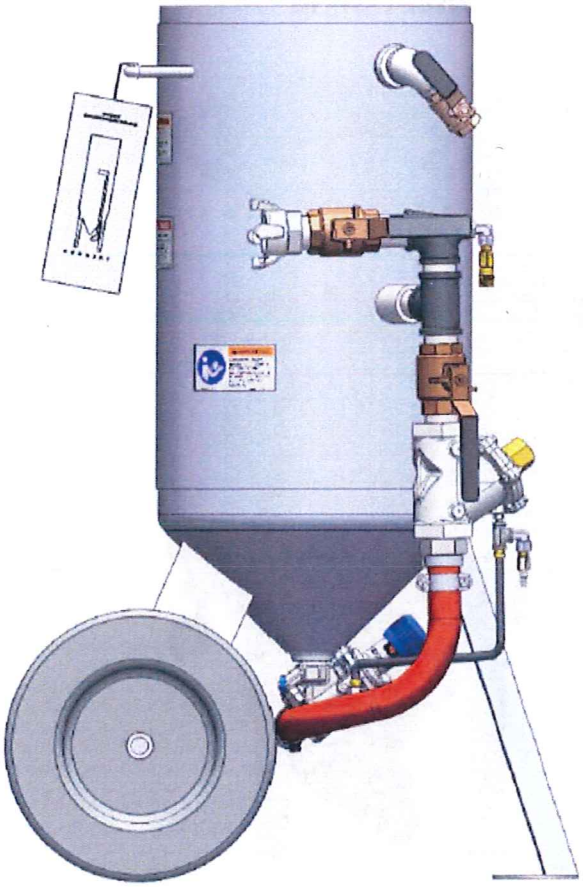
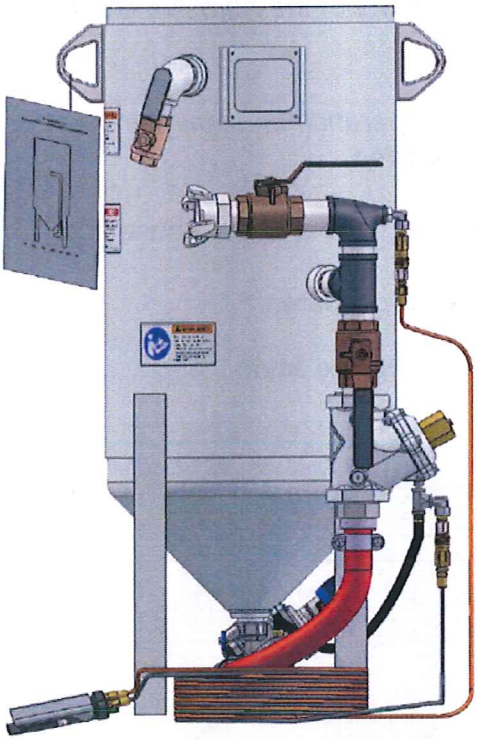
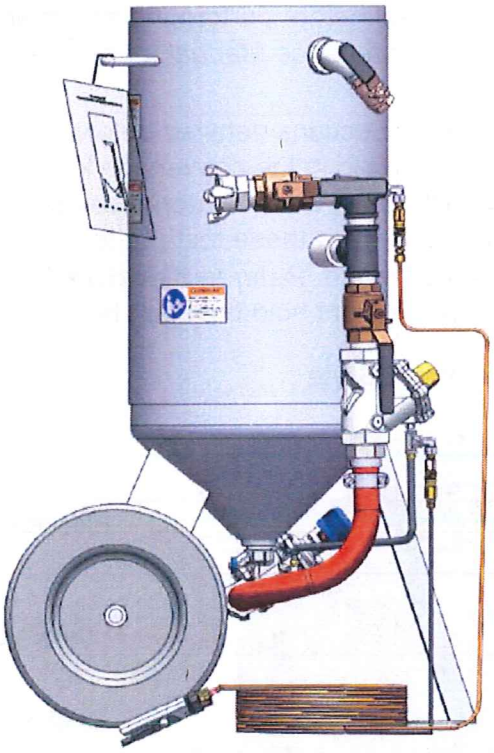


Sub-kit H

Offset Style



In-line Style



- Install Twinline sub-kit as shown.

Vessel is ready for testing. After completing test, attach deadman to the blast hose with clamps provided.

NOTE: Do not fill vessel with any abrasive prior to testing per the Testing Procedures included.

⚠ WARNING

Do Not operate the abrasive blaster prior to testing per the Testing Procedures included.

TeraValve™ Conversion Testing Procedures

⚠ DANGER

The abrasive blaster is a Pressurized Vessel. All operators must completely read and understand all sections of the *Abrasive Blaster Operation and Maintenance Manual* before beginning the blast operation.

⚠ DANGER

Failure to follow the procedures below could result in serious injury or death. Refer to **Section 6.0** of the *Abrasive Blaster Operation and Maintenance Manual* for pre-operation procedures.

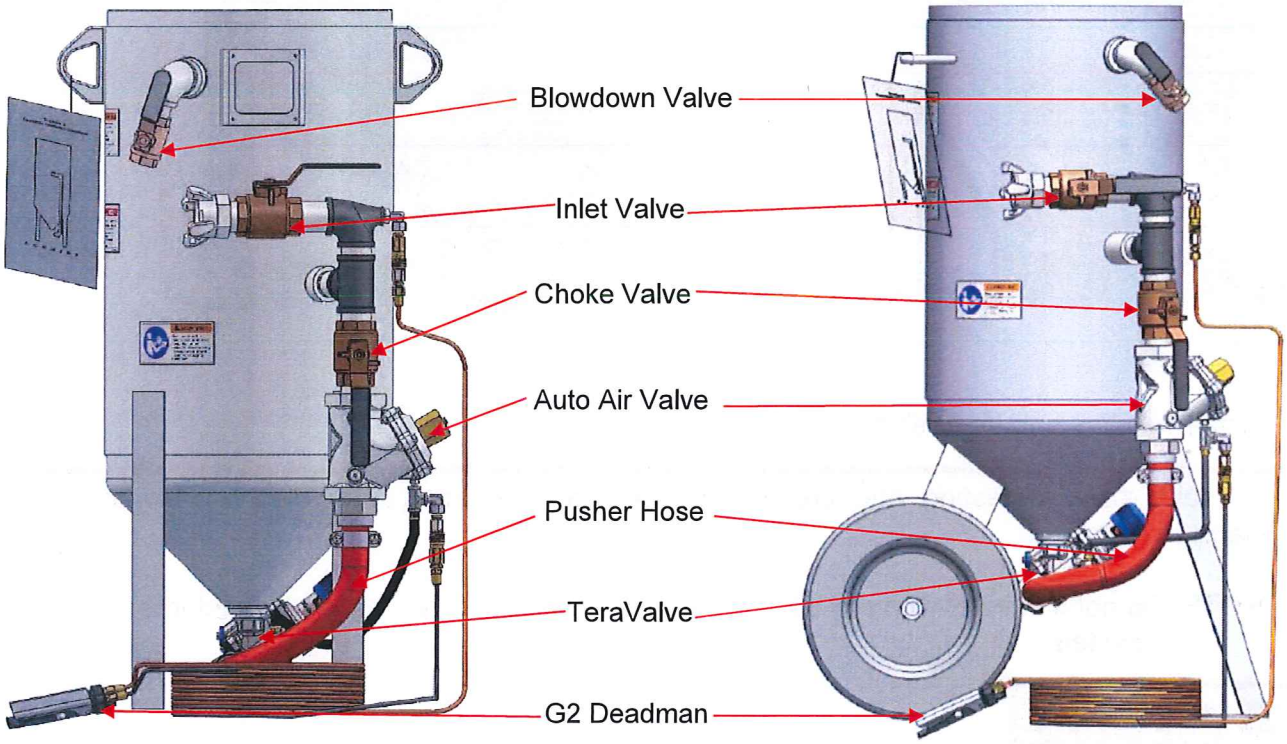
⚠ DANGER

The Abrasive Blaster is a pressurized vessel. Propelled objects will cause serious injury or death. Depressurize vessel before performing any maintenance. See **Section 6.2** of the *Abrasive Blaster Operation and Maintenance Manual* for depressurizing procedure.

Test Notes:

- Referenced Sections detailed below are in the *Abrasive Blaster Operation and Maintenance Manual* included in the conversion kit. Refer to this manual as needed.
- Do Not fill vessel with any abrasive prior to testing.
- Before performing these test procedures, make certain the air inlet hose and blast hose are properly attached. Refer to **Section 6.1.**
- Have an assistant hold the blast hose and nozzle during the test procedures.

Offset Style **In-line Style**



⚠ WARNING

Airborne particles and loud noise hazards from blowdown exhaust air can cause serious injury and loss of hearing. Wear approved eye and ear protection. Stay clear of blowdown air path. DO NOT place hands or other body parts in the blowdown air path. Make sure no personnel are in the blow-down air path.

Testing the Pop Up for proper operation:

- Close inlet valve.
- Close blowdown valve.
- Close choke valve.
- Turn supply air on.
- Open inlet valve ¼ turn.
- The pop up should seal immediately upon contact with the pop up gasket. If leakage occurs, pop up should be checked for alignment or wear. Refer to **Section 8.4** inspection instructions.
- Close inlet valve.
- Open blowdown valve to depressurize vessel. Refer to **Section 6.2.**
- Once the vessel depressurizes, the pop up should fall by itself. If the pop up sticks in the closed position, it should be checked for alignment.
  Refer to **Section 8.4** for inspection instructions.
- Repeat this process 3 to 4 times for assurance.

Testing the Deadman Valve:

- Close blowdown valve.
- **CRITICAL**: Leave choke valve closed for this procedure
- Open inlet valve to pressurize vessel.
- With forefinger and thumb, pinch push-on hose on the bottom of the automatic air valve
- Engage deadman, you should feel the air pressure in the hose pushing your fingers apart.
- Release deadman, you should feel the pressure in the hose release.
- Repeat this process 3 to 4 times for assurance.

Testing of Auto Air Valve:

- Completely close the Teravalve by turning the knob clockwise until it bottoms.
- Open choke valve.
- **CRITICAL**: Have an assistant hold the blast hose and nozzle during this test procedure.
- Engage deadman.
- Auto Air Valve should open and allow air into pusher hose.
- Release deadman.
- Auto Air Valve should close, stopping flow of air into pusher hose.
- Repeat this process 3 to 4 times for assurance.

Testing of TeraValve™:

- **CRITICAL**: Close choke valve for this procedure.
- Completely open the TeraValve™ by turning the knob counterclockwise 8 turns.
- **CRITICAL**: Have an assistant hold the blast hose and nozzle during this test procedure.
- Engage deadman. There should be air coming out of blast nozzle.
- Release deadman. Air should stop coming out of nozzle.
- Repeat this process 3 to 4 times for assurance.

Testing Equipment for Leaks:

- Open choke valve.
- Completely close the TeraValve™ by turning the knob clockwise until it bottoms.
- **CRITICAL**: Have an assistant hold the blast hose and nozzle during this test procedure.
- Engage deadman.
- Wrap hands around all piping and hose connections checking for leaks.
- Check handway gasket for leaks. Refer to **Section 6.3** for inspection and installation instructions.
- Close inlet ball valve.
- Open blowdown valve to depressurize vessel. Refer to **Section 6.2.**
- Repair any leaks that are found. Re-test for leaks.

⚠ WARNING

Airborne particles and loud noise hazards from blowdown exhaust air can cause serious injury and loss of hearing. Wear approved eye and ear protection. Stay clear of blowdown air path. DO NOT place hands or other body parts in the blowdown air path. Make sure no personnel are in the blowdown air path.

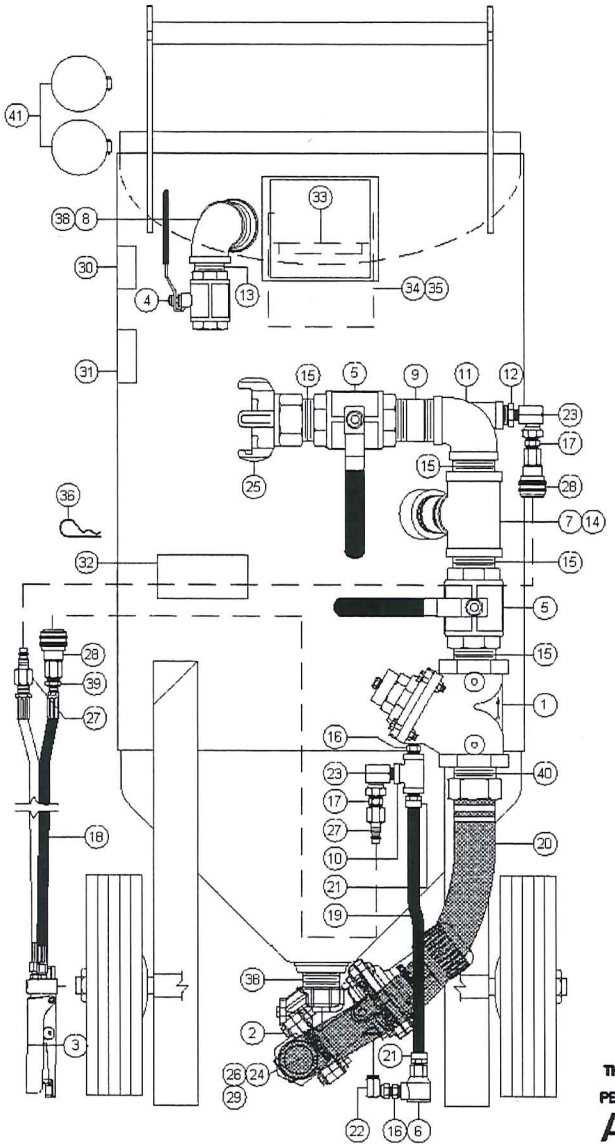
Should any problems arise during these test procedures refer to **Section 11.0** of the *Abrasive Blaster Operation and Maintenance Manual* for troubleshooting procedures.

This completes the testing procedure. The vessel is ready to be put into production.

⚠ DANGER

Do Not operate the abrasive blaster prior to performing all the pre-operation procedures detailed in **Section 6.0** of the *Abrasive Blaster Operation and Maintenance Manual.*

Offset Style



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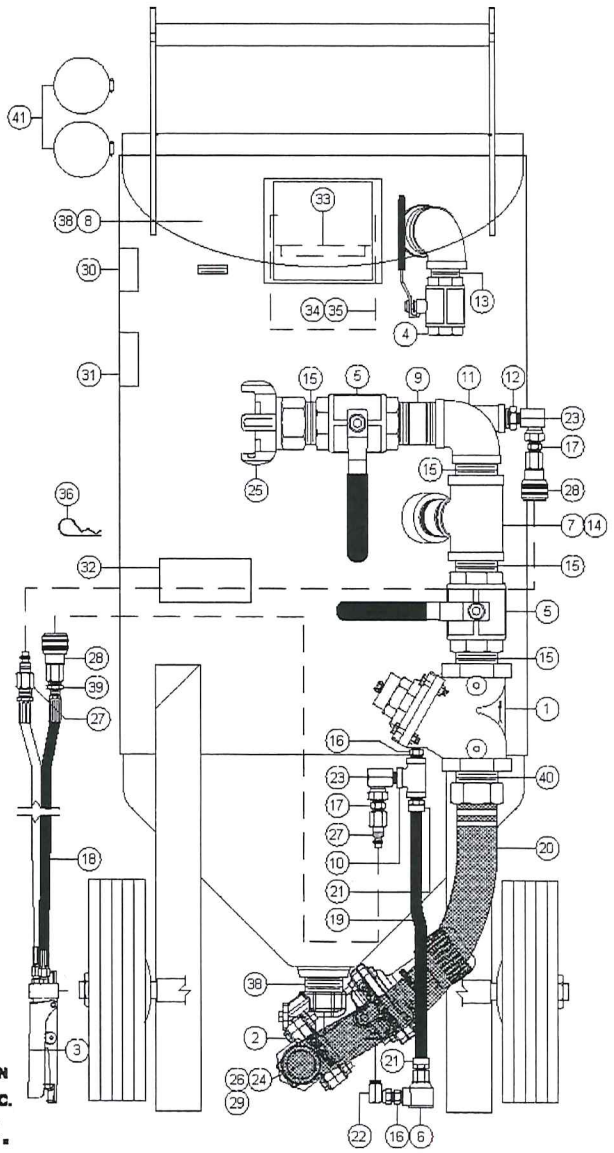

0009-082		Teravalve XL Conversion Kit, 1 1/2"	
No.	Qty	Part. No.	Description
1.	1	2123-108	Auto Air Valve, N/C 1 1/2"
2.	1	2130-008	Teravalve XL, 1 1/2"
3.	1	2263-002	Axxiom G2 Deadman, Pneumatic
4.	1	2401-506	Ball Valve, Full Port 1"
5.	2	2401-508A	Ball Valve, Full Port 1 1/2"
6.	1	2509-002	Quick Exhaust Valve, 1/4" NPT
7.	1	3036-008-07	Tee, Reducing Iron 1 1/2" x 1 1/4" x 1 1/2"
8.	1	3010-007-06	Elbow, Reducing Iron 1 1/4" x 1"
9.	1	3029-008-11	Nipple TBE, Iron 1 1/2" x 3"
10.	1	3011-102	Tee, Galvanized 1/4"
11.	1	3013-008-04	Tee, Reducing Run Iron 1 1/2" x 1/2" x 1 1/2"
12.	1	3026-504-02	Bushing, Plated 1/2" x 1/4"
13.	1	3029-006-99	Nipple TBE, Iron 1" x Close
14.	1	3029-007-11	Nipple TBE, Iron 1 1/4" x 3"
15.	4	3029-008-99	Nipple TBE, Iron 1 1/2" x Close
16.	2	3031-302-00	Hex Nipple, 1/4" x 1/8" w/ Ball Seat
17.	2	3031-512-02	Hex Nipple, 1/4" x 1/4" Carbon Steel
18.	1	4100-501	Hose, Twinline Assy 3/16" x 55'
19.	10	4101-002	Hose, Push On 1/4"
20.	1	4102-108-04	Hose Assy, 1 1/2" x 4' w/ Insert and Swival
21.	2	4200-302-02	Push-On Hose Insert, 1/4" x 1/4"
22.	1	4203-500-00	Swivel 90, 1/8"M x 1/8"F
23.	2	4203-502-02	Swivel 90, 1/4"M x 1/4"F
24.	1	4205-108	Hose Swival w/ Gasket, 1 1/2"
25.	1	4211-108	Crowfoot 4-Lug 1 1/2" FNPT
26.	1	4214-108	Coupling, Threaded GI 1 1/2" NPT
27.	2	4224-300-02	Quick Connect Plug, 1/4"
28.	2	4224-301-02	Quick Connect Socket, 1/4"
29.	1	4235-008	Hose Clamp, Double Bolt 1 1/2"
30.	1	7031-054	Decal "Airborne Particles & Loud Noise"
31.	1	7031-007B	Decal "Pressurized Vessel"
32.	1	7031-057	Decal "Read Manual"
33.	1	7031-077	Decal "Pinch Point Hazard"
34.	1	7031-079	Decal "Control System Converted By Schmidt"
35.	1	7031-082	Decal "Handway/Manway Safety"
36.	6	7119-002	Safety Pin
37.	1	7200-325	Operation Manual, Teravalve XL (Not Shown)
38.	2	3029-007-99	Nipple TBE, Iron 1 1/4" x Close
39.	1	3026-502-00	Bushing, Plated 1/4" x 1/8"
40.	1	3036-008-99	Nipple TBE, Iron 1 1/2" x Close Sch. 80
41.	2	4229-510	Hose Clamp, Adjustable 2 1/2"

PROPRIETARY INFORMATION

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