

WARNING

1. Any person intending to operate this equipment or any person intending to be in the vicinity during its operation that cannot read or completely understand all of the warnings, operating procedures and instructions, and the rules for safer operation contained in this manual must receive proper training from their supervisor and/or employer. Consult Axxiom Manufacturing, Inc.
2. Do not operate any abrasive blaster or blast equipment before reading and completely understanding all the warnings, operating procedures and instructions, and the rules for safer operation contained in this manual.
3. Do not operate any abrasive blaster or blast equipment without following the rules for safer operation and all the operating procedures and instructions. Failure to properly use blast equipment could result in serious injury or death.
4. Do not perform any maintenance while any abrasive blaster or blast equipment is pressurized. Always depressurize any vessel before loading media or performing any maintenance.
5. Do not use abrasives containing free silica. Silica can cause silicosis or other related respiratory damage. You must wear personal protective equipment for all abrasive blasting operations. Observe all applicable local, state and federal safety regulations in conjunction with airline filters and respiratory protection. Reference OSHA (Occupational Safety and Health Administration).
6. Do not enter areas during abrasive blasting operations without breathing protection. All personnel in the vicinity of abrasive blasting operations should wear NIOSH approved air fed respirators, hoods or helmets.
7. Do not modify or alter any abrasive blaster, blast equipment or controls thereof without written consent from Axxiom Manufacturing, Inc.
8. Do not use bleeder type deadman valves on any Schmidt® abrasive blasters. The use of A-BEC, Clemco or a similar bleeder type deadman valve can cause unintentional start-up without warning, which can result in serious personal injury.
9. Do not sell, rent, or operate abrasive blasters without remote controls. OSHA regulations require remote controls on all blast machines. Failure to use remote controls can cause serious injury or death to the operator(s) or other personnel in the blasting area. (Reference OSHA regulations.)
10. Do not repair or replace any portion of Schmidt equipment using components that are not Schmidt original replacement parts. Use of replacement components that are not Schmidt original replacement parts may result in equipment failure which can result in serious personal injury and will void all warranties.

11. RULES FOR SAFER OPERATION

- 11.1 **KNOW YOUR EQUIPMENT.** Do Not operate this equipment in a manner other than its intended application. Do Not operate this equipment without following the *Rules for Safer Operation* and all the operating procedures. Failure to do so could result in serious injury or death.
- 11.2 **RECEIVE PROPER TRAINING.** Do Not operate or perform maintenance on this equipment unless you have received operational and maintenance training. Begin by thoroughly reading and understanding this document and any operational and maintenance manual or instructions for the equipment that will be used in conjunction with the Thompson Valve®. Consult an authorized Schmidt® or Axxiom distributor.
- 11.3 **USE PROPER PERSONAL PROTECTIVE EQUIPMENT.** Do Not operate or perform maintenance on this equipment without wearing OSHA approved eye, ear, foot, and lung protection.
- 11.4 **ADHERE TO ALL REGULATIONS.** Do Not operate or perform maintenance on this equipment without observing all local, state, and federal safety regulations including, but not limited to, OSHA (Occupational Health and Safety Administration).
- 11.5 **USE CORRECT REPLACEMENT PARTS.** Do Not use replacement parts that are not manufactured by Axxiom Manufacturing, Inc. and furnished by an authorized distributor of Axxiom Manufacturing, Inc. Incorrect replacement parts can result in equipment failure and cause serious injury or death.
- 11.6 **SAVE THIS OPERATION AND MAINTENANCE MANUAL.**
Refer to this operation and maintenance manual as well as any other manufacturers information included for equipment that is used in conjunction with the Thompson Valve. Never permit anyone to operate this equipment without having him/her first read this manual and receive proper training. Provisions should be made to have this manual readily available to the operating and maintenance personnel. If for any reason the manual becomes lost or illegible, have it replaced immediately. This operation and maintenance manual should be read periodically to maintain the highest skill level; it may prevent a serious accident.

TRADEMARKS, PATENTS, AND PROPRIETARY STATEMENTS

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TERAVALVE XL®

OPERATION AND MAINTENANCE MANUAL

January 2018



SAVE THIS MANUAL AND MAKE AVAILABLE
TO ALL USERS OF THIS EQUIPMENT!

Manual Part Number 7200-325

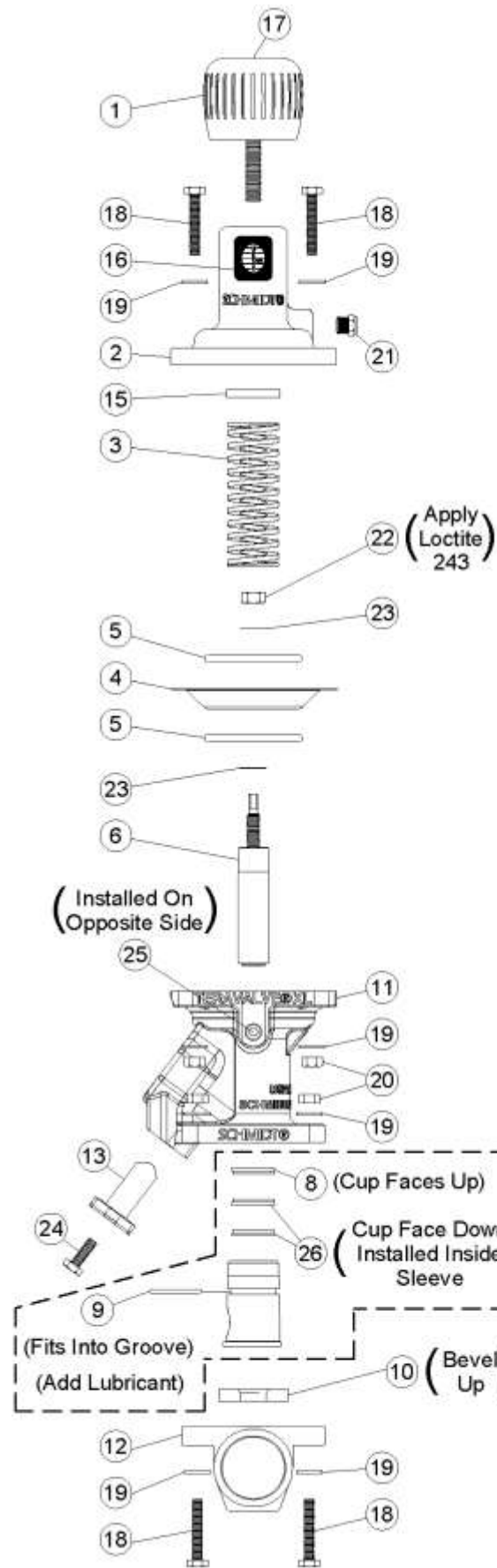
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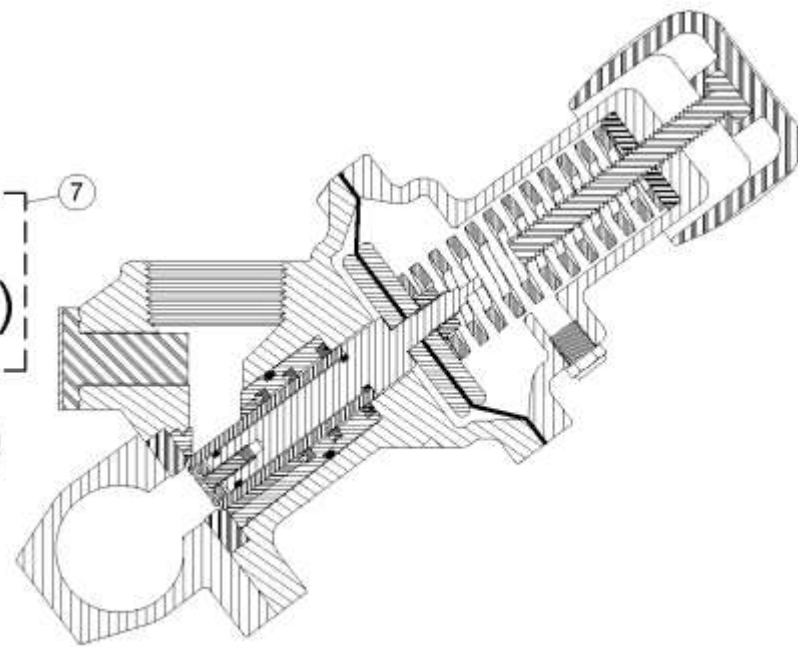
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Visit us at www.schmidtabrasiveblasting.com



No.	Part No.	Description
	2130-005	Teravalve XL, Tungsten Carbide 3/4"
	2130-006	Teravalve XL, Tungsten Carbide 1"
	2130-007	Teravalve XL, Tungsten Carbide 1 1/4"
	2130-008	Teravalve XL, Tungsten Carbide 1 1/2"
	2130-000-98	Replacement Parts Kit, Seals Only
	2130-000-99	Replacement Parts Kit
1.	2130-000-01	Knob
2.	2130-000-02	Cap
3.*	2130-000-03	Spring
4.*+	2130-000-04	Diaphragm
5.	2130-000-05	Diaphragm Plate
6.*	2130-000-06	Tungsten Carbide Plunger
7.*	2130-000-07	Tungsten Carbide Sleeve (Includes O-Ring & Internal Wipers)
8.*+	2130-000-08	Plunger Seal
9.*+	2130-000-09	Sleeve O-Ring
10.*+	2130-000-10	Seat
11.	2130-000-11	Body
12.	2130-005-12	Base 3/4" x 3/4"
	2130-006-12	Base 1" x 1 1/4"
	2130-007-12	Base 1 1/4" x 1 1/4"
	2130-008-12	Base 1 1/2" x 1 1/2"
13*	2130-000-13	Cleanout Plug
15.	2130-000-15	Vibration Disc
16.	2130-000-16	Virtual Position Indicator Decal
17.	2130-000-17	Knob Decal
18.	7010-503-08	Hex Bolt, 1/4" UNC x 1 1/2" Lg.
19.	7027-502-02	Flat Washer, 1/4" SAE
20.	7017-503	Hex Nut, 1/4" UNC
21.	2014-300	Breather Vent, 1/8"
22.	7017-505	Hex Nut, 5/16" UNC
23.*+	2123-009-01	Gasket
24.	7010-503-04	Hex Bolt, 1/4" UNC x 1/2" Lg.
25.	3032-100	Plug, 1/8"
26.*	2130-000-08	Plunger Seal (Remove O-Rings)
* Included in Replacement Parts Kit		
+ Included in Replacement Parts Kit, Seals Only		



2.0 **GENERAL INFORMATION**
 2.1 The Teravalve XL® is designed to be used in a pressurized blast system; meaning that the blast tank remains pressurized whenever the deadman lever is released. The Teravalve XL® is best used in conjunction with an automatic air valve and a G2 Deadman valve to form a pressurized blast system. Consult an authorized Schmidt® distributor or Axxiom Manufacturing, Inc. for system compatibility verification.

- 2.2 The Teravalve XL® installed in an abrasive blast control system allows metering of the abrasive flow during the blast operation. Rotate the knob (#1) clockwise to decrease abrasive flow or counter clockwise to increase abrasive flow.
- 2.3 The Virtual Position Indicator Decal (#16) located on each side of the Teravalve XL® CAP (#2) allows the operator to see the orifice size. The portion of the Virtual Position Indicator Decal (#16) uncovered by the knob (#1) represents the exact size and shape of the orifice.
- 3.0 DISASSEMBLY (refer to drawing on facing page)**
- 3.1 Remove four 1/4" bolts (#18), washers (#19) and nuts (#20) from cap (#2) using a 7/16" wrench and socket.
- 3.2 Remove cap (#2) with knob (#1) and spring (#3) from body (#11).
- 3.3 Check condition of breather vent (#21). Replace if necessary.
- 3.4 Remove four 1/4" bolts (#18), washers (#19) and nuts (#20) from base (#12) using a 7/16" wrench and socket.
- 3.5 Remove base (#12) and seat (#10) from body (#11).
- 3.6 Pull threaded end of plunger (#6) to remove the plunger (#6), diaphragm plates (#5) and diaphragm (#4) from the body (#11).
- 3.7 Remove 5/16" nut (#22) using a 1/2" wrench while holding plunger (#6) by the flats with an adjustable wrench.
- 3.8 Remove gaskets (#23), diaphragm plates (#5) and diaphragm (#4) from plunger (#6).
- 3.9 Remove sleeve (#7) and plunger seal (#8) from body (#11). It may be necessary to tap sleeve (#7) out from above.
- 3.10 Remove two 1/4" bolts (#24) from cleanout plug (#13) using 7/16" wrench.
- 3.11 Remove the cleanout plug (#13).
- 3.12 For installation of a seals kit it will be necessary to remove the sleeve wipers (#26) and the O-ring (#9) from the sleeve (#7).
- 3.13 Discard all parts that will be replaced with parts included in the replacement parts kit.
- 4.0 REASSEMBLY**
- 4.1 Clean interior cavities of body (#11) and cap (#2) removing all debris.
- 4.2 Check cap (#2), body (#11) and base (#12) for wear, cracks, or other defects. Replace if necessary.
- 4.3 Install gasket (#23), diaphragm plate (#5), diaphragm (#4), diaphragm plate (#5) and gasket (#23) onto threaded end of plunger (#6).
- 4.4 Apply a drop of Loctite 243 to plunger threads above gasket (#23) and install 5/16" nut (#22)
- 4.5 Hold plunger (#6) by flats with an adjustable wrench and tighten 5/16" nut (#22) using 1/2" wrench.
- 4.6 Insert plunger (#6) and diaphragm (#4) assembly into body (#11) (plunger (#6) side first) until diaphragm plate (#5) bottoms out.
- 4.7 Install plunger seal (#8) onto plunger (#6) with o-ring side of seal towards body (#11).
- 4.8 For installation of a seals kit install the sleeve wipers (#26) (cup facing down) and the O-ring (#9) on the sleeve (#7).
- 4.9 Apply PTFE lubricant to the sleeve O-ring (#9).
- 4.10 Insert sleeve (#7) into body (#11), making sure that flat in flange of sleeve (#7) aligns with flat in body (#11).
- 4.11 Insert seat (#10) into body (#11) with bevel side facing sleeve (#7).
- 4.12 Install base (#12) with four 1/4" bolts (#18), washers (#19) and nuts (#20) using a 7/16" wrench and socket.
- 4.13 Install spring (#3) over threaded end of plunger (#6) and 5/16" nut (#22).
- 4.14 Install cap (#2) onto body (#11) with four 1/4" bolts (#18), washers (#19) and nuts (#20) using a 7/16" wrench and socket.
- 4.15 Install cleanout plug (#13) with two 1/4" bolts (#24) using a 7/16" wrench.
- 5.0 INSTALLATION**
- 5.1 Screw media inlet of Teravalve XL® into media outlet of abrasive blaster vessel.
- 5.2 Install threaded hose coupling on outlet side of Teravalve XL® base (#12).
- 5.3 Connect the swivel fitting of the blast air hose to the inlet side of Teravalve XL® base (#12).
- 5.4 Connect the control air signal line to one of the body (#11) ports. Confirm that the second body (#11) port is plugged.
- 5.5 Follow the setup and pre-operating instructions provided with the blast system, and then test the operation of the Teravalve XL®.
- 5.6 Check for air leaks at all the connections repair as required.
- 6.0 MAINTENANCE AND INSPECTION**
- 6.1 The Teravalve XL® should be disassembled and inspected quarterly, or more frequently for heavy usage. Replace parts as needed with Schmidt® original factory replacement parts furnished by an authorized Schmidt distributor.
- ⚠ DANGER
- Depressurize vessel before performing any maintenance. Removing the Teravalve XL® bolts with the abrasive blaster pressurized will result in serious injury or death.
- 7.0 TROUBLESHOOTING**
- 7.1 Air stops but abrasive continues to flow..... (1) Trash stuck between plunger and seat in Teravalve XL® prevents closing.
 (2) Defective valve plunger in Teravalve XL® (worn by abrasive or broken).
 (3) Defective sleeve in Teravalve XL® (worn by abrasive).
 (4) Blocked signal air hose to Teravalve XL® (trash blockage or pinched hose).
 (5) Defective or broken spring in Teravalve XL® (check length of spring).
- 7.2 Air blasts but no abrasive..... (1) Blocked signal air hose to Teravalve XL® (trash blockage or pinched hose).
 (2) Teravalve XL® plunger stuck in closed position.
 (3) Trash plugging opening from tank to Teravalve XL®.
 (4) Insufficient air pressure to open Teravalve XL® (full open requires 80 psi).
 (5) Defective Teravalve XL® diaphragm (air will leak from breather).
- 7.3 Abrasive choking out of blast hose with low blast air pressure..... (1) Teravalve XL® abrasive adjustment knob (#1) is open too far.
- 7.4 Reduced pressure at the nozzle (with or without abrasive flow)..... (1) Teravalve XL® abrasive adjustment knob (#1) is open too far.
- 7.5 If problems persist, consult blaster operation and maintenance manual for further troubleshooting procedures.