

Air Actuated Dispense Valve

312782J

EN

To dispense plural component fluids and solvents. For professional use only.

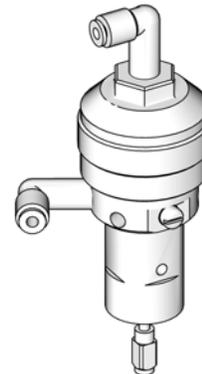
Part No. 15X303, 26A355

High Pressure Dispense Valve
 3000 psi (21 MPa, 207 bar) Maximum Fluid Working Pressure
 100 psi (0.7 MPa, 7 bar) Maximum Air Working Pressure

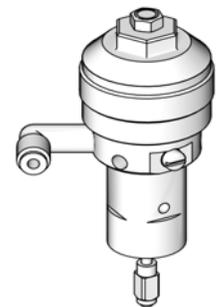
High Pressure Valves

15X303, 24T785,
and 26A355

26A313



T111581A



ti30189a

Part No. 24T785

High Pressure Dispense Valve for Acid Catalyzed Materials
 3000 psi (21 MPa, 207 bar) Maximum Fluid Working Pressure
 100 psi (0.7 MPa, 7 bar) Maximum Air Working Pressure

Part No. 26A313

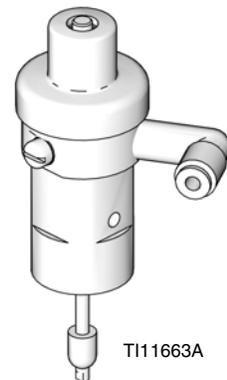
High Pressure Dump Valve for Acid Catalyzed Materials
 3000 psi (21 MPa, 207 bar) Maximum Fluid Working Pressure
 100 psi (0.7 MPa, 7 bar) Maximum Air Working Pressure

Part No. 15X304

Low Pressure Dispense Valve
 300 psi (2.1 MPa, 21.0 bar) Maximum Fluid Working Pressure
 100 psi (0.7 MPa, 7 bar) Maximum Air Working Pressure

Low Pressure Valve

15X304



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Important Safety Instructions

Read all warnings and instructions in this manual. For complete warnings and instructions see your proportioning system manual. Hazard symbols refer to specific procedure risks. Save all instructions.

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Related Manuals

See the following manuals for additional information on the dispense valves.

Manual	Description
312775	ProMix 2KS Manual System Installation
312776	ProMix 2KS Manual System Operation
312777	ProMix 2KS Manual System Repair-Parts
312778	ProMix 2KS Automatic System Installation
312779	ProMix 2KS Automatic System Operation
312780	ProMix 2KS Automatic System Repair-Parts
332457	ProMix PD2K Manual System with Advanced Display Module Installation
332562	ProMix PD2K Manual System with Advanced Display Module Operation
3A2800	ProMix PD2K Manual System with Advanced Display Module Repair-Parts
332339	ProMix PD2K Dosing Pumps
312781	Fluid Mix Manifold
312783	Color and Catalyst Change Valve Stacks
312786	ProMix 2KS Dump Valve and Third Purge Valve Kits
312787	Color Change Module Kits for ProMix 2KS or ProMix 3KS Electronic Proportioners
332455	Color Change Kits for ProMix PD2K Electronic Proportioners
312782	Dispense Valve

Installation

FIG. 2 shows the dispense valves installed in an electronic 2-component proportioning system. In this example, the dispense valves are used as dose valves for components A and B (DVA, DVB), an air purge valve (APV), and a solvent purge valve (SPV).

FIG. 3 shows a pneumatic schematic of a complete 2-component proportioning system, in which the dispense valves are also used as A and B dump valves, and color change valves.

NOTE: See manual 332339 for instructions on how to install the dispense valves in a ProMix PD2K Electronic Positive Displacement Proportioning System.

Connect the Air Lines

Clean all lines and connections of dirt, burrs, etc., and blow them out with clean air before connecting them to the system. The air supply line should contain an air filter to remove harmful dirt and moisture from the compressed air.

Use a normally closed 4-way air solenoid valve to control the dispense valve. Attach 5/32 in. (4 mm) OD air supply lines from the 4-way valve to the air inlets of the dispense valve.

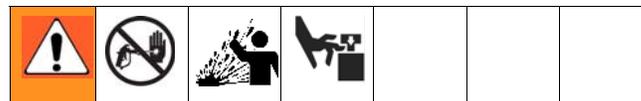
Connect the Fluid Lines

Connect a grounded fluid line from the pump or meter to the 1/4 npt fluid inlet of the dispense valve adapter.

If fluid is supplied by a pump, install a fluid pressure regulator upstream of the dispense valve. A fluid regulator enables you to control fluid pressure more accurately than by regulating air pressure to the pump.

Install a fluid filter to remove particles and sediment which may clog the nozzle.

Accessories



Two accessories are required in your system: a bleed-type master air valve and a fluid drain valve. These accessories help reduce the risk of serious injury including fluid injection, splashing in the eyes or on the skin, and injury from moving parts if you are adjusting or repairing the pump.

The bleed-type master air valve is required only with air-powered pumps. It relieves air trapped between this valve and the pump after the air regulator is shut off. Trapped air can cause the pump to cycle unexpectedly. Locate the valve close to the pump.

The fluid drain valve helps relieve fluid pressure in the displacement pump, hose, and dispense valve; triggering the valve to relieve pressure may not be sufficient.

Grounding



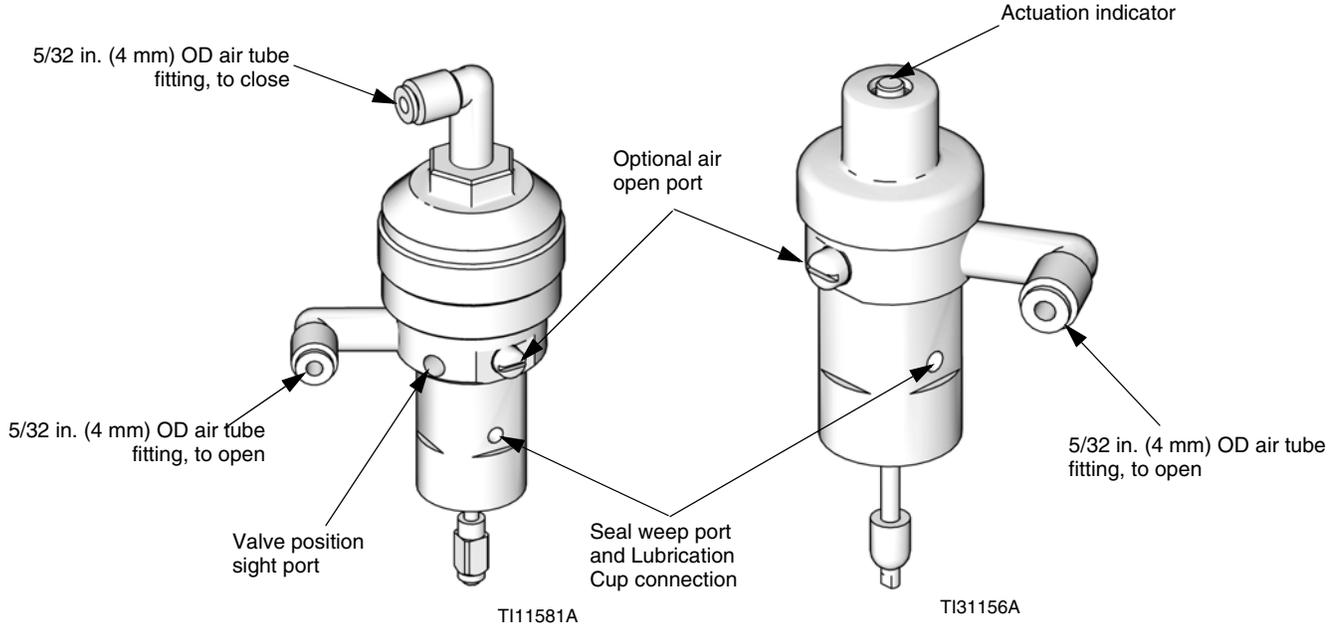
To reduce the risk of static sparking, ground the pump and all other components used or located in the dispensing area. Check your local electrical code for detailed instructions for your area and type of equipment and be sure to ground all of these components.

- *Fluid hoses:* use only electrically conductive hoses with a maximum of 500 feet (150 m) combined hose length to ensure grounding continuity.
- *Dispense valve:* obtain grounding through connection to a properly grounded fluid hose and pump.

Components

15X303, 24T785, and 26A355 High Pressure Dispense Valves

15X304 Low Pressure Dispense Valve



26A313 High Pressure Dump Valve

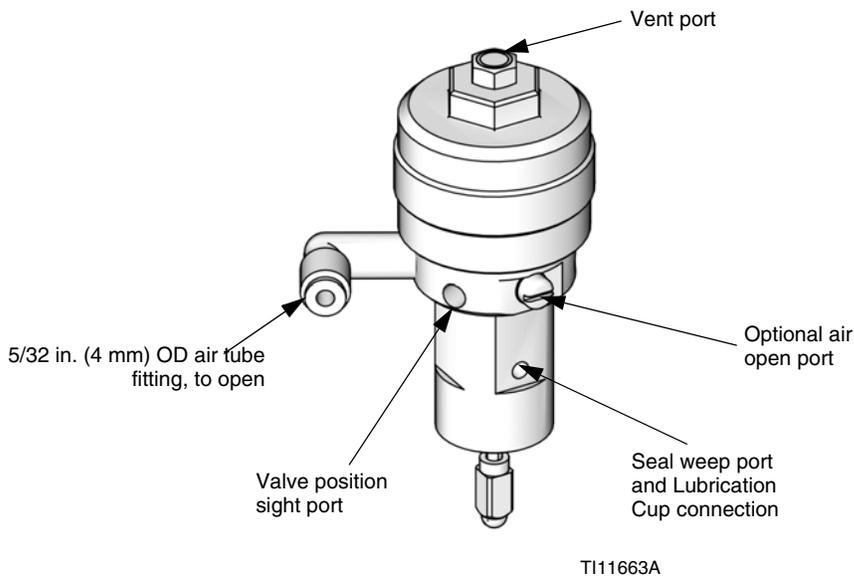
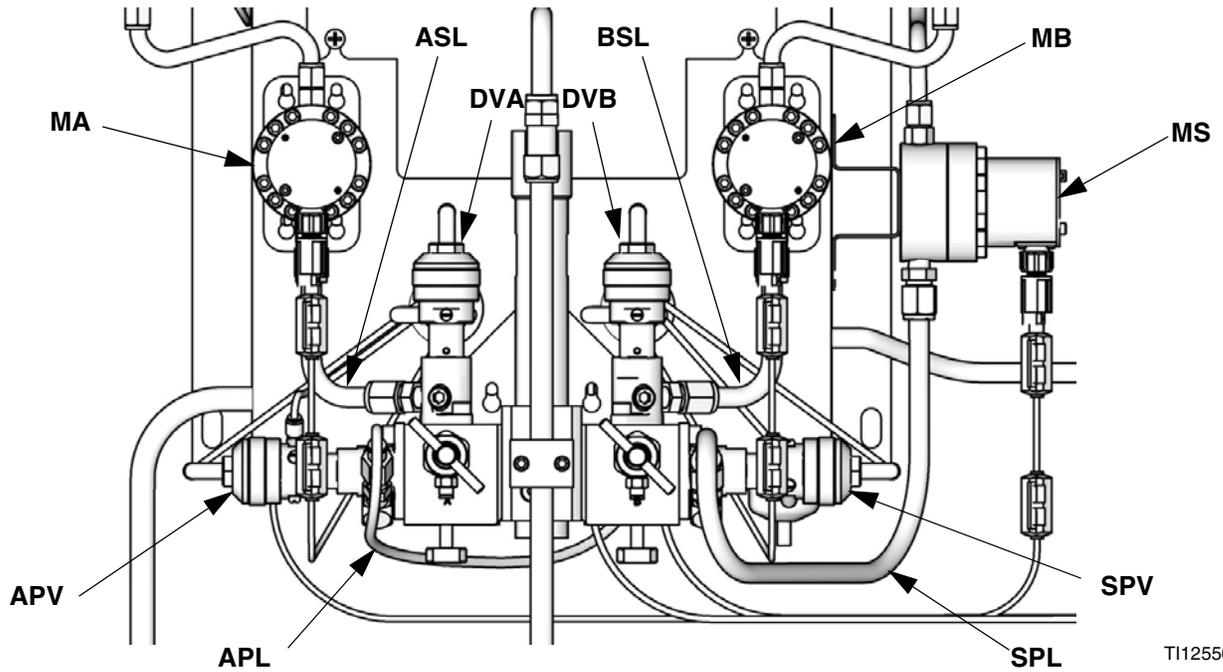


FIG. 1. Valve Air Ports

Typical Installation



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FIG. 2: Typical Installation

Key:

- MA Component A Meter
- DVA Component A Dose Valve
- MB Component B Meter
- DVB Component B Dose Valve
- MS Solvent Meter
- SPV Solvent Purge Valve
- APV Air Purge Valve
- ASL Component A Supply Line
- BSL Component B Supply Line
- APL Air Purge Line
- SPL Solvent Purge Line

System Pneumatic Schematic (used with ProMix 2KS)

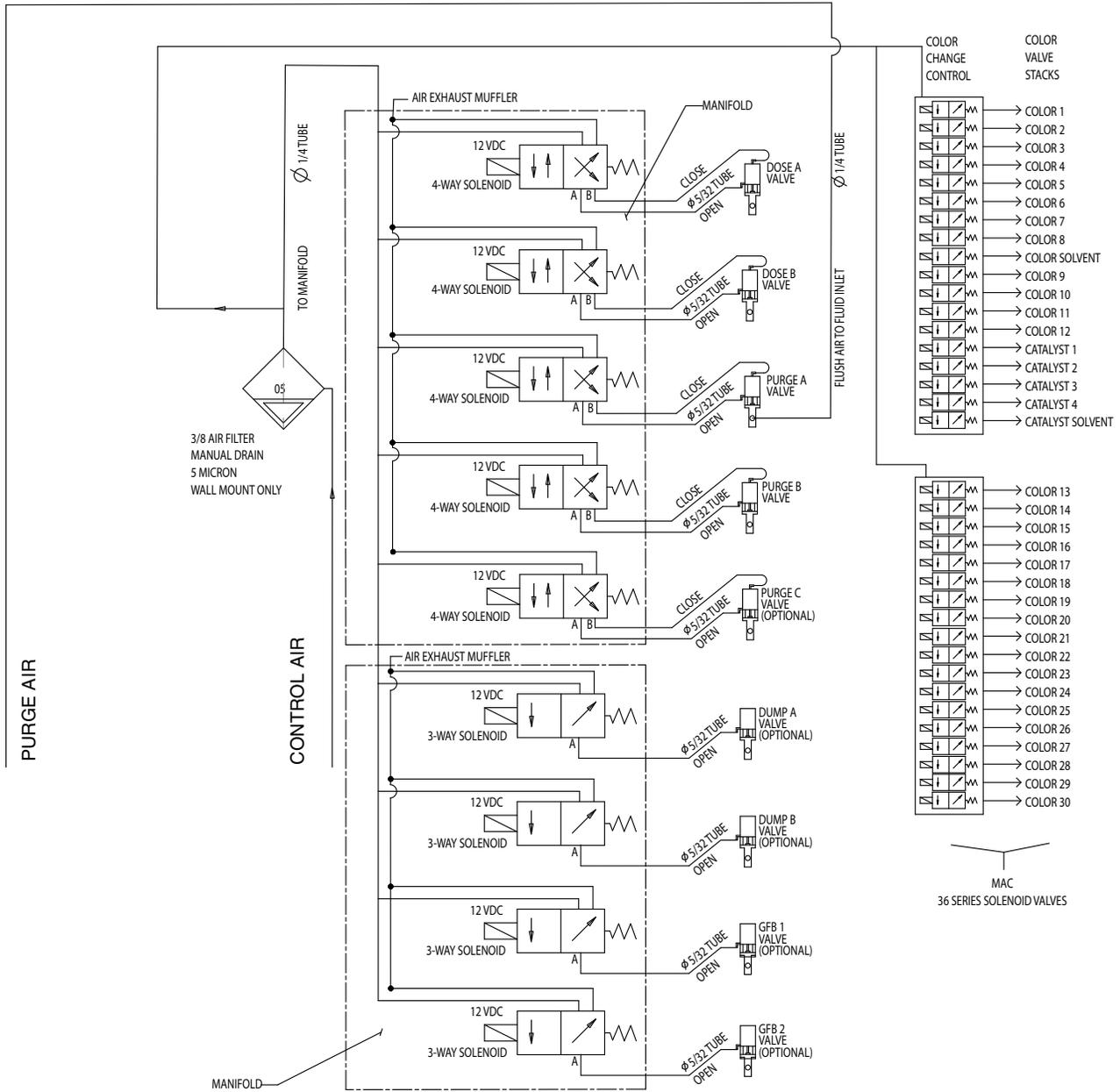


FIG. 3. System Pneumatic Schematic

Operation (ProMix 2KS Only)

Settings and Adjustments

Set the actuating air to at least 75 psi (0.52 MPa, 5.2 bar) and start the pump. Adjust the pump speed and pressure to obtain the desired flow rate. Always use the lowest pump speed necessary to get the results you want.

To decrease needle travel, turn the cap (11, see pages 10, 11, and 13) clockwise; to increase, turn counter-clockwise. The valve is factory set at one open turn. **The maximum setting is four turns open.**

Pressure Relief Procedure



1. Shut off the fluid supply to the dispense valve.
2. Actuate the dispense valve to relieve fluid pressure in the valve.
3. Relieve fluid pressure upstream and downstream of the dispense valve. See your system operation manual.
4. If you suspect the spray tip or hose is clogged or that pressure has not been fully relieved after following the steps above, **very slowly** loosen tip guard retaining nut or hose end coupling to relieve pressure gradually, then loosen completely. Clear hose or tip obstruction.

Operation (ProMix PD2K Only)

See the ProMix PD2K Electronic Proportioner Operation manual (332562) for operating instructions.

Maintenance

Clean the Dispense Valve Daily



NOTICE
Be sure the solvent used is compatible with the fluid being dispensed, to avoid clogging the valve's fluid passages.

An important part of the care and maintenance of your automatic dispense valve is proper flushing. Flush the valve daily with a compatible solvent until all traces of fluid are removed from the valve passages. **Relieve the pressure** before flushing.

Clean the outside surfaces of the valve by wiping with a soft cloth dampened with a compatible solvent.

NOTICE
Never immerse the entire dispense valve in solvent. Immersing in solvent removes lubricants and may damage the o-rings.

Flushing



Before flushing, be sure the entire system and flushing pails are properly grounded. Refer to **Grounding** on page 3. **Relieve the pressure.** Always use the lowest possible fluid pressure, and maintain firm metal-to-metal contact between the dispense valve and the pail during flushing to reduce the risk of fluid injection injury, static sparking, and splashing.

Start the pump and flush the system with a compatible solvent as explained in the instructions for your pump. Check the system under pressure for leaks; if any are found, **relieve the pressure** and repair the leaks. Pressurize the system again and make sure the leaking has stopped.

Troubleshooting



Before servicing this equipment always make sure to **relieve the pressure.**

NOTE: Check all possible causes and solutions before disassembling.

Problem	Cause	Solution
Valve will not close.	Fluid needle binding.	Clean, repair.
	Piston o-rings binding.	Repair.
	Obstructed or worn needle or seat.	Clean or replace.
Valve will not open.	Fluid needle binding.	Clean or repair.
	Piston o-rings binding.	Repair.
	No trigger or actuator pressure.	Check, clean all lines.
	Worn or dry piston o-rings.	Replace.
Valve will not dispense.	Fluid supply source is not operating.	Check on fluid supply source.
	Fluid line clogged.	Clear.
	Fluid valve closed.	Open.
	Clogged orifice or needle seat.	Clean.

Repair

NOTE: See the Dosing Pumps manual (332339) for disassembly instructions on PD2K system.

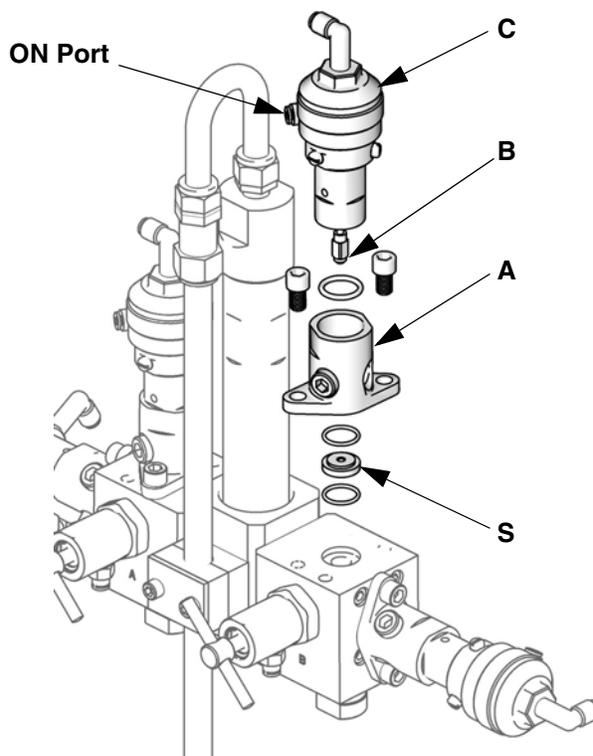
Disassembly

1. Relieve the pressure.
2. Flush the valve with a compatible solvent.
3. Relieve the pressure after flushing and disconnect the fluid and air hoses.
4. Unscrew the cap (C) to remove spring pressure on the valve.

NOTE: Another method of removing spring pressure is by applying air to the ON port, to lift the valve needle off the seat.

5. Unscrew the dispense valve from the adapter (A). Inspect the needle ball (B). Also inspect the seat (S) in the adapter for damage. The seat is reversible. See FIG. 4.

NOTE: See Fluid Mix Manifold Manual 312781 for seat replacement instructions and part numbers.



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FIG. 4. Valve Adapter and Seat

NOTE: See the parts drawings on pages 10 and 13.

6. Unscrew valve cap (11). Remove the spring (12).
7. Hold the needle flats with a wrench to keep it from turning. Unscrew the piston (9, high pressure valves) or retainer (10, low pressure valves) from the needle.
8. Remove the o-rings (7, 8) from the piston (9).
9. Push the needle (22) from the top while pulling it from the bottom of the fluid body (3).

NOTE: Needle may be hard to remove.

10. Unscrew the needle ball assembly (23) from the needle (22).
11. Unscrew the fluid body (3) from the air body (6). Remove the packing (19), bearing (5), and u-cup (4) from the fluid body.
12. On high pressure valves, remove the o-ring (17) from the air body (6).
13. Clean, inspect, and replace parts as needed.

Reassembly

NOTE: Seal Kits 15U933 (for high pressure dispense valve 15X303 and 26A355), 24T817 (for acid catalyzed valves 24T785 and 26A313), and 15W621 (for low pressure dispense valve 15X304) are available to replace the seals. Parts included in the kit are marked with an asterisk, for example (4*). For best results, use all the parts in the kit.

NOTE: Use the 262028 Seal Installation Tool (supplied with the ProMix 2KS) to ensure proper installation of the u-cup (4).

1. Using the 262028 Installation Tool, install the u-cup (4*) into the fluid body (3) with the lips facing down. Install the bearing (5*) and packing (19*).
2. Slide the needle (22*) into the fluid body (3) **from the top**, down through the packing (19), bearing (5), and u-cup (4).
3. Apply thread sealant and screw the needle ball assembly (23*) onto the needle (22*).
4. Apply thread sealant and screw the fluid body (3) onto the air body (6).

5. On high pressure valves, install the o-ring (17*) on the air body (6).
6. Install the o-rings (7*, 8*) on the piston (9). Lubricate the o-rings.
7. Reinstall the piston (9):
 - a. *On high pressure valves*, apply thread sealant to the top threads of the needle (22*). Holding the needle (22) steady by its flats, screw the piston (9) onto the needle (22*).
 - b. *On low pressure valves*, slide the piston (9) onto the needle (22*). Apply thread sealant to the top threads of the needle. Holding the needle (22) steady by its flats, screw the retainer (10) onto the needle.
8. Before performing step 9, screw the dispense valve securely into the adapter (A, FIG. 4).
9. Install the spring (12) and valve cap (11).

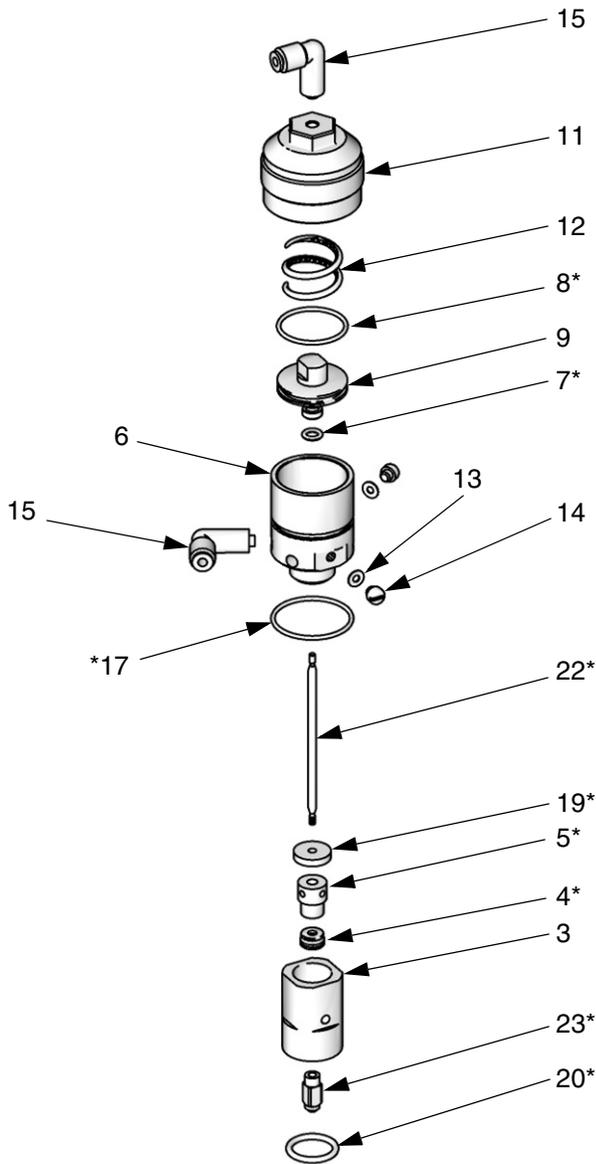
NOTE: *On high pressure valves*, screw the valve cap (11) onto the air body (6) only until slight resistance is felt as the cap contacts the o-ring (17*). **Do not tighten the valve cap (11) at this time.**

10. Screw the valve cap (11) down onto the air body (6) until additional resistance is felt and the cap is tight with the body.
11. Unscrew the valve cap (11) one complete turn for the factory needle setting, or unscrew cap to setting prior to repair.

NOTE: To decrease needle travel, turn the cap (11) clockwise; to increase, turn counterclockwise. The valve is factory set at one open turn. **The maximum setting is four turns open.**

Parts

15X303 and 26A355 High Pressure Valve



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Ref. No.	Part No.	Description	Qty
3	---	BODY, fluid	1
4*	---	SEAL, u-cup, spring applied; uhmwpe	1
5*	---	BEARING, needle	1
6	---	BODY, air	1
7*	---	O-RING, shaft, piston; buna-N	1
8*	---	O-RING, body, piston; buna-N	1
9	15T413	PISTON	1
11	---	CAP, valve	1
12	17B769	SPRING, compression (Model 15X303)	1
	15T454	SPRING, compression (Model 26A355)	1
13	104640	GASKET; buna-N	2
14	104644	PLUG, screw	2
15	109193	ELBOW, tube fitting; 10-32 x 5/32 in. (4 mm) OD tube (Model 15X303)	2
	110460	ELBOW, tube fitting; 10-32 x 5/32 in. (4 mm) OD tube; nickel plated brass (Model 26A355)	2
17*	---	O-RING, body, air; buna-N	1
19	---	PACKING; uhmwpe	1
20*	---	O-RING; ptfe	1
22*	---	SHAFT, needle	1
23*	---	BALL ASSEMBLY, needle	1
24	15V818	VENT, breather; not shown; remove (15) and install breather vent in (11) when valve is used as dump valve or color change valve	1
25‡	17B969	SPRING, compression (not shown)	1

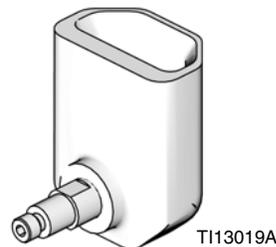
* Parts included in Rebuild Kit 15U933 (purchase separately).

--- These parts are not available separately.

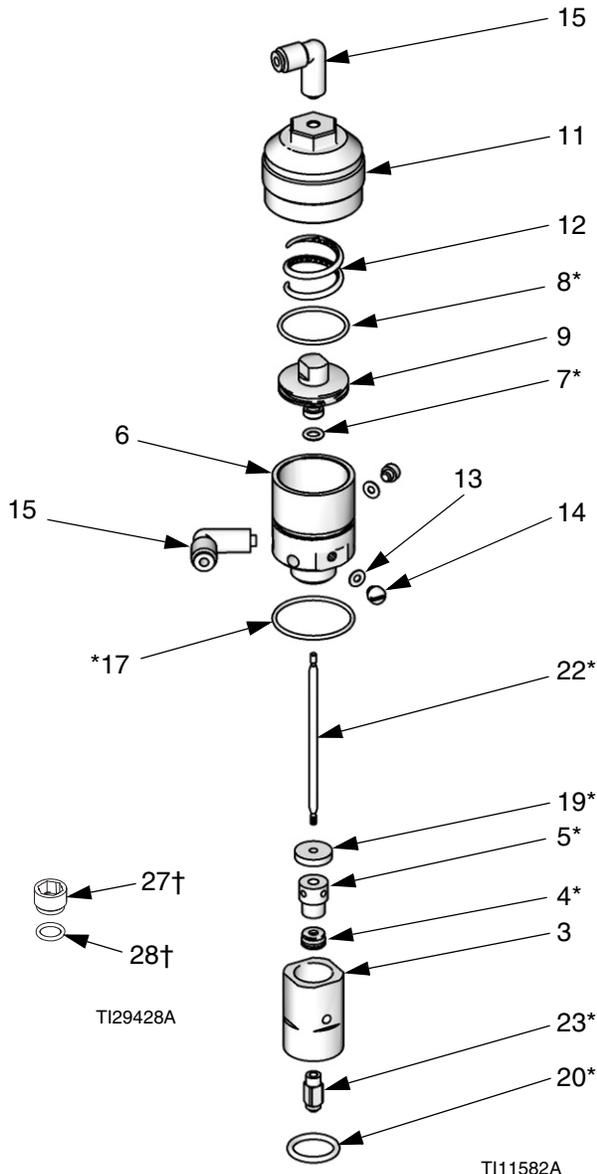
‡ Remove (12) and replace with this spring (marked with black stain) when valve is used as a dump valve or color change valve.

15V737 Valve Lubricator Cup (Option)

Install in fluid body (3) to lubricate seal (4).



24T785 High Pressure Valve for Acid Catalyzed Materials



Ref. No.	Part No.	Description	Qty
3	---	BODY, fluid	1
4*	---	SEAL, u-cup, spring applied; uhmwpe	1
5*	---	BEARING, needle	1
6	---	BODY, air	1
7*	---	O-RING, shaft, piston; buna-N	1
8*	---	O-RING, body, piston; buna-N	1
9	15T413	PISTON	1
11	---	CAP, valve	1
12	15T454	SPRING, compression	1
13	104640	GASKET; buna-N	2
14	104644	PLUG, screw	2
15	109193	ELBOW, tube fitting; 10-32 x 5/32 in. (4 mm) OD tube	2
17*	---	O-RING, body, air; buna-N	1
19	---	PACKING; uhmwpe	1
20*	---	O-RING; ptfe	1
22*	---	SHAFT, needle	1
23*	---	BALL ASSEMBLY, needle	1
27†	---	SEAT, valve, retainer	1
28†	---	O-RING, ptfe	1

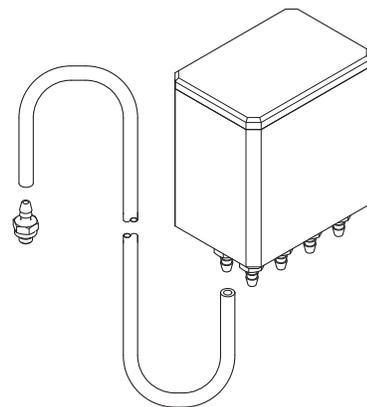
* Parts included in Rebuild Kit 24T817 and 25N725 (purchase separately). Rebuild Kit 24T817 contains a PEEK seat retainer. Rebuild Kit 25N725 contains a 17-4 PH stainless steel seat retainer.

--- These parts are not available separately.

† For PD2K system: When replacing the 24T785 dispense valve, install a new valve seat retainer (27) and o-ring (28) into the manifold or adapter.

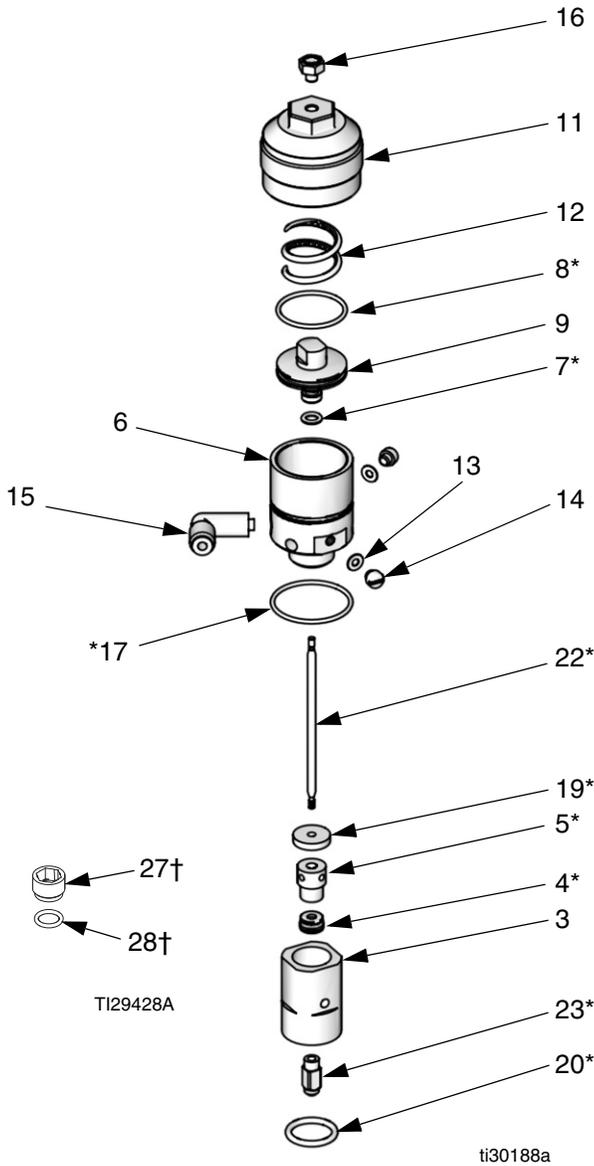
24T302 TSL Cup (Option)

Mount the cup and connect one tube to fluid body (3) to lubricate seal (4). See the ProMix PD2K Installation manual for instructions.



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26A313 High Pressure Dump Valve for Acid Catalyzed Materials



Ref. No.	Part No.	Description	Qty
	3	--- BODY, fluid	1
	4*	--- SEAL, u-cup, spring applied; uhmwpe	1
	5*	--- BEARING, needle	1
	6	--- BODY, air	1
	7*	--- O-RING, shaft, piston; buna-N	1
	8*	--- O-RING, body, piston; buna-N	1
	9	15T413 PISTON	1
	11	--- CAP, valve	1
	12	17B969 SPRING, compression	1
	13	104640 GASKET; buna-N	2
	14	104644 PLUG, screw	2
	15	109193 ELBOW, tube fitting; 10-32 x 5/32 in. (4 mm) OD tube	1
	16	15V818 VENT, breather	1
	17*	--- O-RING, body, air; buna-N	1
	19	--- PACKING; uhmwpe	1
	20*	--- O-RING; ptfe	1
	22*	--- SHAFT, needle	1
	23*	--- BALL ASSEMBLY, needle	1
	27†	--- SEAT, valve, retainer	1
	28†	--- O-RING, ptfe	1

* Parts included in Rebuild Kit 24T817 and 25N725 (purchase separately). Rebuild Kit 24T817 contains a PEEK seat retainer. Rebuild Kit 25N725 contains a 17-4 PH stainless steel seat retainer.

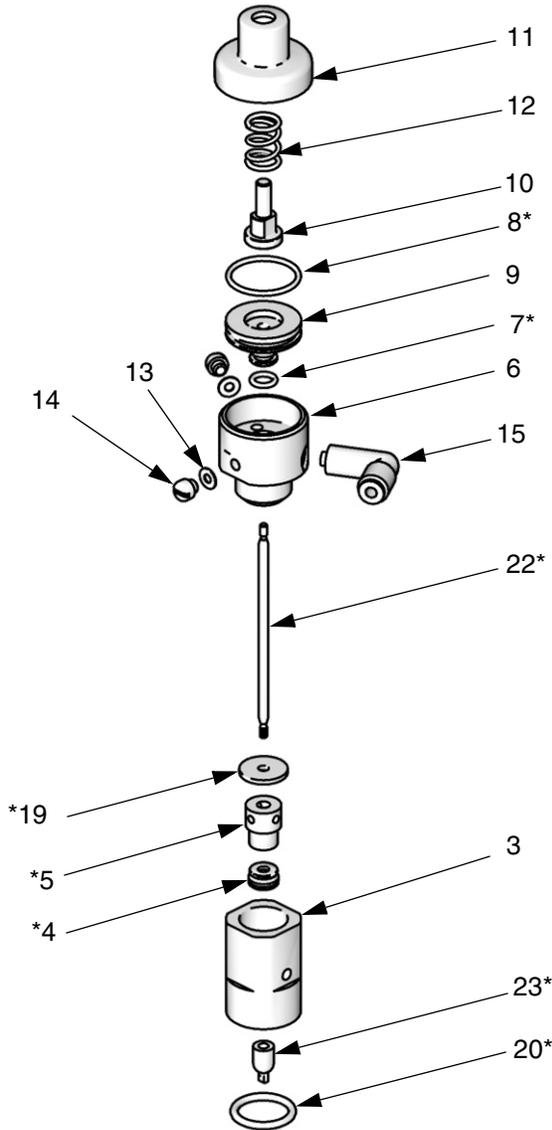
--- These parts are not available separately.

† When replacing the 26A313 dump valve, install a new valve seat retainer (27) and o-ring (28) into the manifold or adapter.

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15X304 Low Pressure Valve



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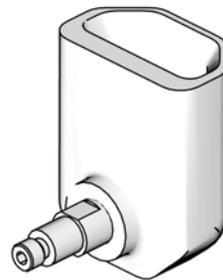
Ref. No.	Part No.	Description	Qty
3	---	BODY, fluid	1
4*	---	SEAL, u-cup, spring applied; uhmwpe	1
5*	---	BEARING, needle	1
6	---	BODY, air	1
7*	---	O-RING, shaft, piston; buna-N	1
8*	---	O-RING, body, piston; buna-N	1
9	180538	PISTON	1
10	15T452	RETAINER, piston	1
11	180612	CAP, valve	1
12	108017	SPRING, compression	1
13	104640	GASKET; buna-N	2
14	104644	PLUG, screw	2
15	109193	ELBOW, tube fitting; 10-32 x 5/32 in. (4 mm) OD tube	1
19*	---	PACKING; uhmwpe	1
20*	---	O-RING; ptf	1
22*	---	SHAFT, needle	1
23*	---	BALL ASSEMBLY, needle	1

* Parts included in Rebuild Kit 15W621 (purchase separately).

--- These parts are not available separately.

15V737 Valve Lubricator Cup (Option)

Install in fluid body (3) to lubricate seal (4).



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Technical Data

Air Specifications

Maximum Air Input Pressure 100 psi (0.7 MPa, 7 bar)
Minimum Air Pressure 75 psi (0.52 MPa, 5.2 bar)
Air Inlet Fitting Size 5/32 in. (4 mm) OD tube

Fluid Specifications

Maximum Fluid Working Pressure. Model 15X303: 3000 psi (21 MPa, 207 bar)
Model 26A355: 3000 psi (21 MPa, 207 bar)
Model 24T785: 3000 psi (21 MPa, 207 bar)
Model 26A313: 3000 psi (21 MPa, 207 bar)
Model 15X304: 300 psi (2.1 MPa, 21 bar)

Wetted Parts 303 SST, 17-4 PH SST, Tungsten Carbide (with nickel binder), UHMWPE

Wetted Parts (24T785, 26A313) 316 SST, 17-4 PH SST, PEEK, UHMWPE

Weight Model 15X303: 0.5 lb (0.23 kg)
Model 26A355: 0.5 lb (0.23 kg)
Model 24T785: 0.5 lb (0.23 kg)
Model 26A313: 0.5 lb (0.23 kg)
Model 15X304: 0.3 lb (0.14 kg)

Graco Standard Warranty

Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

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Original instructions. This manual contains English. MM 312782

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Revision J, October 2018