

Air Actuated Dispense Valve

312782L

EΝ

To dispense plural component fluids and solvents with a ProMix[®] proportioner. For professional use only.

High Pressure Valves

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

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

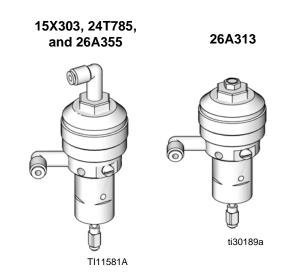
Part No. 15X304, 26B108

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

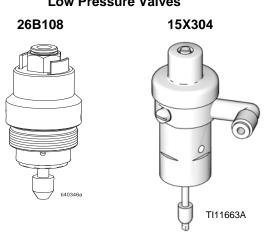


Important Safety Instructions

Read all warnings and instructions in this manual and in your proportioning system manual before using the equipment. Save all instructions.



Low Pressure Valves



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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
3A8637	IniFlex [™] , Instructions-Parts

Installation

The top installation in 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).

The bottom installation in Fig. 2 shows the IniFlex valves installed in an electronic 2-component proportioning system. In this example, the valves are used as color change valves (CCV), flush valves A and B (FVA, FVB), 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 proportioner or meter to the 1/4 npt fluid inlet of the dispense valve adapter. See the IniFlex manual for connections in IniFlex configurations.

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



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

Two accessories are required in your system: a bleed-type master air valve and a fluid drain valve.

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

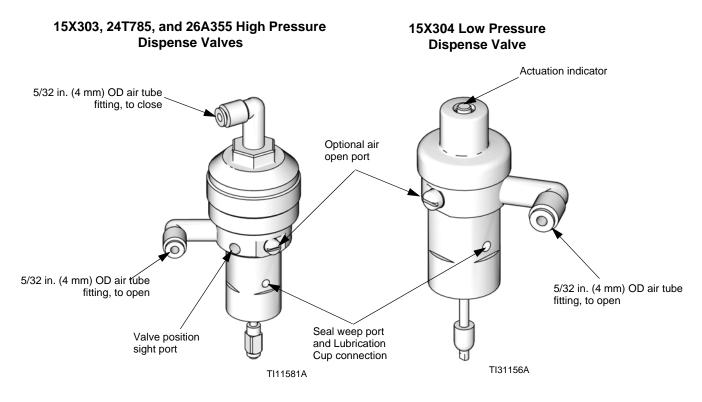


The equipment must be grounded to reduce the risk of static sparking. Static sparking can cause fumes to ignite or explode. Grounding provides an escape wire for the electric current.

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:* Ground by connection to a properly grounded fluid hose and pump.

Components



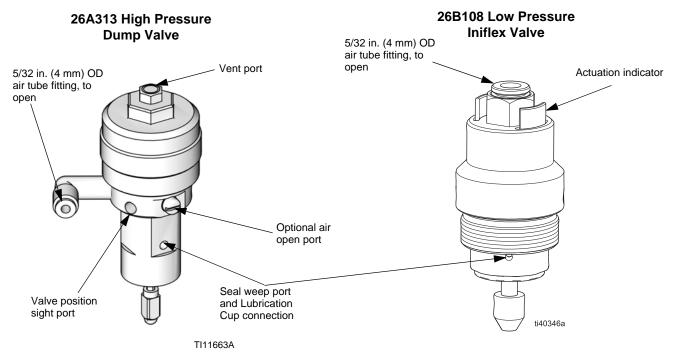


Fig. 1. Valve Air Ports

Typical Installation

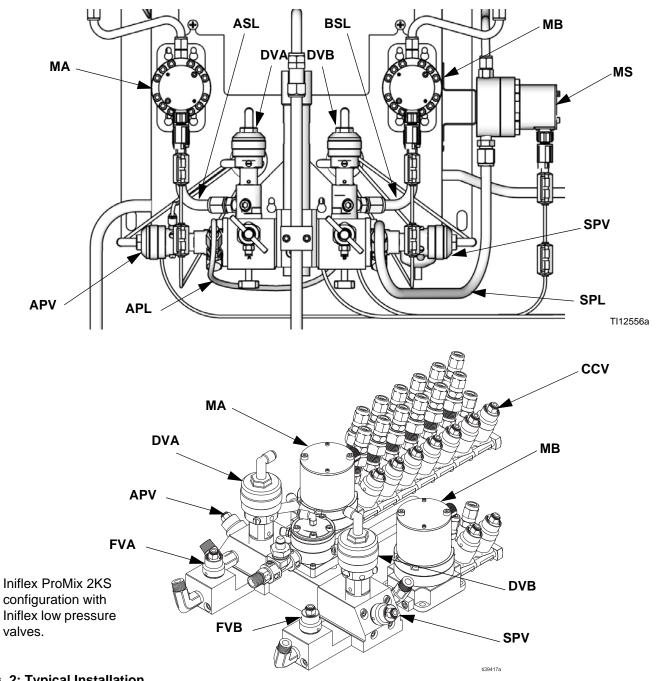


Fig. 2: Typical Installation

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V6.	

MA	Component A Meter	ASL	Component A Supply Line
DVA	Component A Dose Valve	BSL	Component B Supply Line
MB	Component B Meter	APL	Air Purge Line
DVB	Component B Dose Valve	SPL	Solvent Purge Line
MS	Solvent Meter	FVA	Flush Valve A
SPV	Solvent Purge Valve	FVB	Flush Valve B
APV	Air Purge Valve	CCV	Color Change Valve

System Pneumatic Schematic (used with ProMix 2KS)

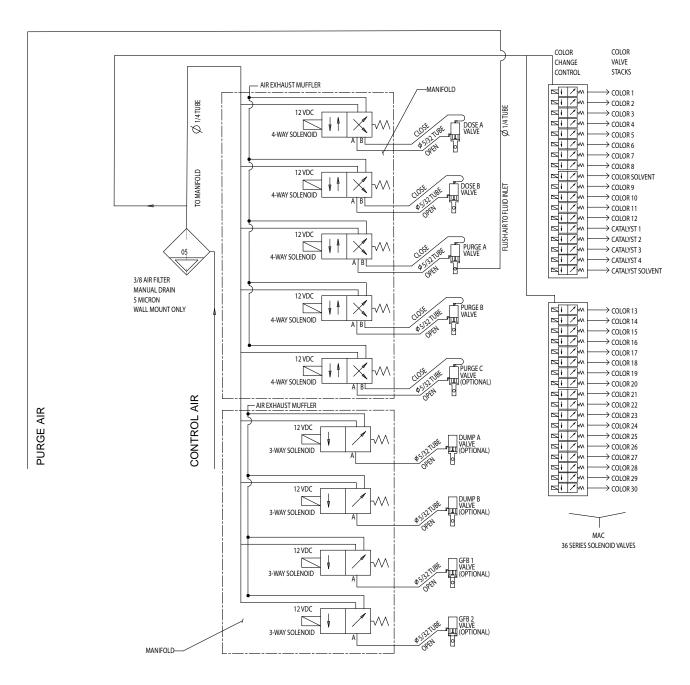


Fig. 3. System Pneumatic Schematic

Operation

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 11, 12, and 14) clockwise; to increase, turn counterclockwise. The valve is factory set at one open turn. The maximum setting is four turns open.

Pressure Relief Procedure



Follow the Pressure Relief Procedure whenever you see this symbol.



This equipment stays pressurized until pressure is manually relieved. To help prevent serious injury from pressurized fluid, such as skin injection and splashing fluid, wear the appropriate protective equipment and follow your proportioner's Pressure Relief Procedure when you stop spraying and before cleaning, checking, or servicing the equipment.

To relieve pressure in your air actuated dispense valve, follow the pressure relief procedure in your ProMix Proportioner Operation manual.

Maintenance

Clean the Dispense Valve Daily

NOTE: 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. Follow the **Flushing** procedure, page 7, 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



To avoid fire and explosion, always ground equipment and waste container. To avoid static sparking and injury from splashing, always flush at the lowest possible pressure, and wear appropriate protective equipment.

Before flushing, be sure the entire system and flushing pails are properly grounded. Refer to **Grounding** on page 3. Follow the **Pressure Relief Procedure**, page 7. Always use the lowest possible fluid pressure, and maintain firm metal-to-metal contact between the dispense valve and the pail during flushing.

Start the proportioner and flush the system with a compatible solvent as explained in the instructions for your proportioner. Check the system under pressure for leaks; if any are found, follow the **Pressure Relief Procedure**, page 7, and repair the leaks. Pressurize the system again and make sure the leaking has stopped.

Troubleshooting



SKIN INJECTION HAZARD

High-pressure fluid from hose leaks or ruptured components will pierce skin. This may look like just a cut, but it is a serious injury that can result in amputation. **Get immediate surgical treatment.** To help prevent serious injury: do not put your hand over the fluid outlet or try to stop or deflect leaks; follow the **Pressure Relief Procedure**, page 7, when you stop dispensing and before cleaning, checking, or servicing equipment; tighten all fluid connections; and check hoses and couplings daily, and replace immediately as necessary.

PERSONAL PROTECTIVE EQUIPMENT

Wear appropriate protective equipment when in the work area to help prevent serious injury, including eye injury, hearing loss, inhalation of toxic fumes, and chemical burns.

Follow the **Pressure Relief Procedure**, page 7, before checking or repairing the equipment.

NOTE: Check all possible causes and solutions before disassembling.

NOTE: 26B108 valves are non-serviceable.

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



SKIN INJECTION HAZARD

High-pressure fluid from hose leaks or ruptured components will pierce skin. This may look like just a cut, but it is a serious injury that can result in amputation. **Get immediate surgical treatment.** To help prevent serious injury: do not put your hand over the fluid outlet or try to stop or deflect leaks; follow the **Pressure Relief Procedure**, page 7, when you stop dispensing and before cleaning, checking, or servicing equipment; tighten all fluid connections; and check hoses and couplings daily, and replace immediately as necessary.

PERSONAL PROTECTIVE EQUIPMENT

Wear appropriate protective equipment when in the work area to help prevent serious injury, including eye injury, hearing loss, inhalation of toxic fumes, and chemical burns.

NOTE: 26B108 valves are non-serviceable.

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

Disassembly

- 1. Follow the **Pressure Relief Procedure**, page 7.
- 2. Follow the **Flushing** procedure, page 7, with a compatible solvent.
- 3. Follow the **Pressure Relief Procedure**, page 7, 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.

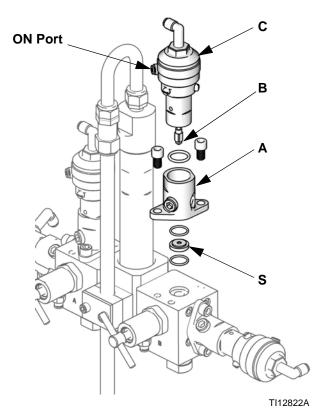


Fig. 4. Valve Adapter and Seat

NOTE: See the parts drawings on pages 11-14.

- 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).

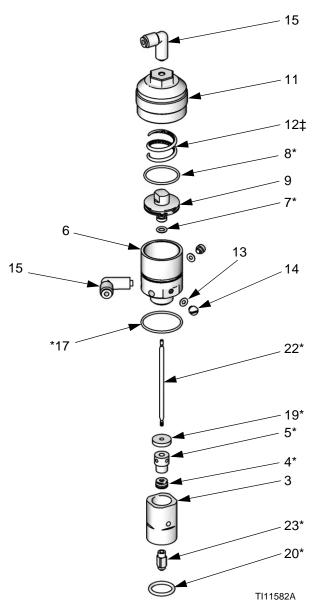
NOTE: On high pressure valves, screw the valve cap (11) onto the air body (6) only until slight resistance is felt as the cap contacts the o-ring (17*). **Do not tighten the valve cap (11) at this time.**

- 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



Ref. No.	Part No.	Description	Qty
3		BODY, fluid	1
4*		SEAL, u-cup, spring applied;	1
		uhmwpe	
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

Ref. No.	Part No.	Description	Qty
11		CAP, valve	1
12‡	17B969	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

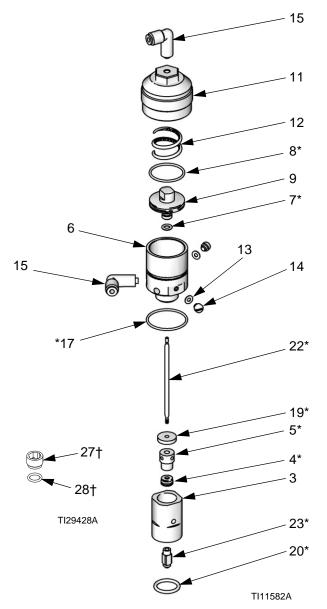
- Parts included in Rebuild Kit 15U933 (purchase separately).
- --- These parts are not available separately.
- ‡ Remove (12) and replace with this spring (marked with black stain) when valve is used as a dump valve or color change valve.

15V737 Valve Lubricator Cup (Option)

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



24T785 High Pressure Valve for Acid Catalyzed Materials



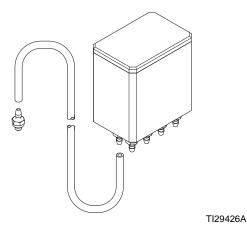
Ref. No.	Part No.	Description	Qty
3		BODY, fluid	1
4*		SEAL, u-cup, spring applied;	1
		uhmwpe	
5*		BEARING, needle	1
6		BODY, air	1
7*		O-RING, shaft, piston; buna-N	1
8*		O-RING, body, piston; buna-N	1
9	15T413	PISTON	1
11		CAP, valve	1
12	15T454	SPRING, compression	1
13	104640	GASKET; buna-N	2

Part No.	Description	Qty
104644	PLUG, screw	2
109193	, 0,	2
	O-RING, body, air; buna-N	1
	PACKING; uhmwpe	1
	O-RING; ptfe	1
	SHAFT, needle	1
	BALL ASSEMBLY, needle	1
	SEAT, valve, retainer	1
	O-RING, ptfe	1
	104644	109193 ELBOW, tube fitting; 10-32 x 5/32 in. (4 mm) OD tube O-RING, body, air; buna-N PACKING; uhmwpe O-RING; ptfe SHAFT, needle BALL ASSEMBLY, needle SEAT, valve, retainer

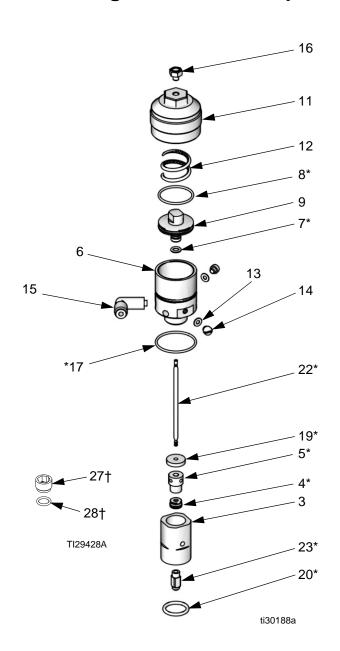
- * Parts included in Rebuild Kit 24T817 and 25N725 (purchase separately). Rebuild Kit 24T817 contains a PEEK seat retainer. Rebuild Kit 25N725 contains a 17-4 PH stainless steel seat retainer.
- --- These parts are not available separately.
- † For PD2K system: When replacing the 24T785 dispense valve, 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.



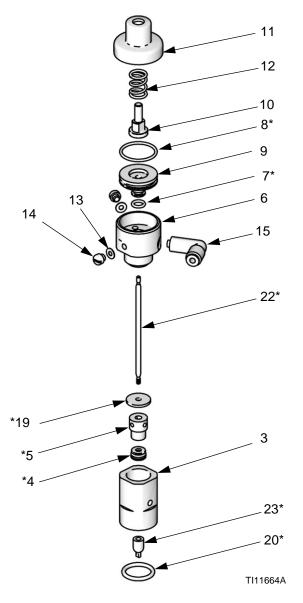
26A313 High Pressure Dump Valve for Acid Catalyzed Materials



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

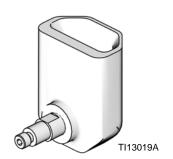
- * Parts included in Rebuild Kit 24T817 and 25N725 (purchase separately). Rebuild Kit 24T817 contains a PEEK seat retainer. Rebuild Kit 25N725 contains a 17-4 PH stainless steel seat retainer.
- --- These parts are not available separately.
- † When replacing the 26A313 dump valve, install a new valve seat retainer (27) and o-ring (28) into the manifold or adapter.

15X304 Low Pressure Valve



15V737 Valve Lubricator Cup (Option)

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

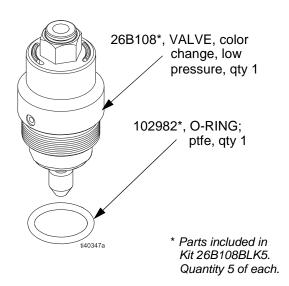


Ref. No.	Part No.	Description	Qty
3		BODY, fluid	1
4*		SEAL, u-cup, spring applied;	1
		uhmwpe	
5*		BEARING, needle	1
6		BODY, air	1
7*		O-RING, shaft, piston; buna-N	1
8*		O-RING, body, piston; buna-N	1
9	180538	PISTON	1
10	15T452	RETAINER, piston	1
11	180612	CAP, valve	1
12	108017	SPRING, compression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

- * Parts included in Rebuild Kit 15W621 (purchase separately).
- --- These parts are not available separately.

26B108 IniFlex Low Pressure Valve

26B108 is non-serviceable.



Technical Specifications

	US	Metric	
Maxiumum air input pressure	100 psi	0.7 MPa, 7 bar	
Minimum air pressure			
Model 26B108	70 psi	0.48 MPa, 4.8 bar	
All models except 26B108	75 psi	0.52 MPa, 5.2 bar	
Maximum fluid working pressure			
Models 15X304, 26B108	300 psi	2.1 MPa, 21 bar	
Models 15X303, 26A355, 24T785, 26A313	3000 psi	21 MPa, 207 bar	
Inlet/Outlet Sizes			
Air inlet fitting size	5/32 in. (4 mm) OD tube		
Materials of Construction			
Wetted parts (all models)	303 SST, 316 SST, 17-4 SST, Tungsten Carbide, PTFE, PEEK		
Wetted parts (24T785, 26A313)	316 SST, 17-4 SST, Tungsten Carbide (with nickel binder), UHMWPE		
Wetted parts (26B108)	301 SST, 17-4 PH SST, UHMW		
Weight (by Model)			
26B108	0.1 lb.	0.04 kg	
15X304	0.3 lb.	0.14 kg	
15X303, 26A355, 24T785, 26A313	0.5 lb.	0.23 kg	
Notes			

California Proposition 65

CALIFORNIA RESIDENTS

↑ WARNING: Cancer and reproductive harm – www.P65warnings.ca.gov.

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.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

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Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

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In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

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