



Installation, Operation, Maintenance Disassembly and Assembly Instructions for Model AL479 Vapor or Liquid Withdrawal Valve

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Form FVC 035 - Rev. 1

KEEP THIS DOCUMENT WITH THE PRODUCT UNTIL IT REACHES THE END USER.

WARNING

Before installation or removal of any withdrawal valves, the system must be purged completely of all product. Use proper safety equipment at all times. An abundant supply of clean water must be readily available and easily accessible as a means of providing IMMEDIATE First Aid treatment for exposure to ammonia. To insure long term safe operation, the manufacturer recommends that under normal service conditions this product should be inspected at least once every five (5) years and be repaired or replaced as required. To prevent the accidental opening of any valve, never carry or grasp a valve by its handwheel or handle.

CAUTION: Contact with or inhalation of Liquid Anhydrous Ammonia or L-P Gas or their vapors can cause serious injury or death. Dispersment must be in accordance with local regulations.
For the proper handling and storage of Anhydrous Ammonia refer to ANSI Standard K61.1.
For the proper handling and storage of Liquefied Petroleum Gas refer to NFPA Pamphlet 58.

TOOLS REQUIRED: Safety Equipment (i.e. gloves, goggles, and clothing), 12" Adjustable Wrench, and 18" Pipe Wrench

Removal of Tank Valve for Repair or Replacement

REFER TO FIGURE 1 FOR THE FOLLOWING STEPS:

- Step 1: Safety equipment (i.e. gloves, goggles and clothing) must be worn before continuing with the next step.
- Step 2: Before removing valve from tank, place in **FULL OPEN POSITION** to insure all pressure is bled from system.
Note: An 18" Pipe Wrench will be required. See Warning at top of page.

Disassembly Procedure For Repair

REFER TO FIGURE 1 FOR THE FOLLOWING STEPS DEPENDING ON THE TYPE OF REPAIR REQUIRED:

- Step 1: With valve secured in a bench vise, remove Bonnet (11) from the Body (13), which will expose the complete Bonnet and Stem Assembly. Note: It is important to inspect Disc Holder (14) rotation. If it does not rotate freely, do not use valve but consult your local dealer for instructions. Remove old Gasket (12).
- Step 2: Secure Bonnet (11) in a bench vise and remove Handwheel Nut (3) and Disc Nut (19).
- Step 3: Remove Disc Washer (18), Disc (17), Washer (2), and Handwheel (1).
- Step 4: Remove Packing Nut (5), Chevron Packing (7), Male Adapter (8), and Packing Spring (10) over the end of Stem (4).
- Step 5: Rotate Stem (4) clockwise (CW) using Handwheel (1) if necessary, until stem is disengaged from Bonnet (11). Remove old Gasket (9).
- Step 6: Before reassembly, clean and inspect the valve seat at (B). Clean all metal components with solvent and wipe or blow dry with air.

Assembly Procedure

DEGREE OF ASSEMBLY DEPENDS UPON TYPE OF REPAIR TO BE MADE.

REFER TO FIGURE 1 FOR THE FOLLOWING STEPS:

- Step 1: Install Disc (17), Disc Washer (18), and Disc Nut (19) to Disc Holder (14). Secure Disc Nut (19) to threads of Disc Holder (14) with center punch mark at thread interface.
- Step 2: Lubricate threads of stem with a good quality grease and install Stem (4) into Bonnet (11) until Disc Holder (14) rests against bottom of bonnet.
- Step 3: With the bonnet and stem assembly secured in a bench vise install Gasket (9) and Packing Spring (10).
- Step 4: Replace O-ring (6) in groove of Packing Nut (5).
- Step 5: Install Chevron Packing (7) and Male Adapter (8) into Packing Nut (5).
- Step 6: Lubricate exposed surface of Stem (4) with John Crane Style 279A Packing Lubricant or equal.
- Step 7: Place Packing Nut (5) with packing in place over Stem (4) and engage bonnet threads in Bonnet (11). Rotate Packing Nut (5) while making contact with bonnet threads. Tighten packing nut with torque wrench to 55 ft-lbs.
- Step 8: Secure Body (13) in vise. Place Body Gasket (12) over bonnet threads and lubricate threads with a good quality grease.
- Step 9: Install bonnet assembly into body and tighten with torque wrench to 95 ft-lbs.
- Step 10: Install Handwheel (1), and tighten Handwheel Nut (3) on Stem (4).
- Step 11: Check stem packing and valve seat for leaks. Operate handwheel full open to full closed to insure smooth operation.

(OVER)

Inspection of the Excess Flow Assembly

Step 1: Excess Flow Valves are a Safety Device which will Close in the event of a hose failure i.e., pull away or accident which causes the hose to be Severed Completely. It is of utmost importance that these valves be Installed and Operated Properly in order to provide the Safety Protection they were designed to give. Valves must be full open with no flow restriction downstream. Please read and understand Excess Flow Valve Technical Bulletin 7.96. If you do not have a copy you may contact your local distributor or Squibb-Taylor at 1-800-345-8105.

a.) **TO INSPECT:** Push against the end of Check Stem (22) and depress Spring (23) until Check Disc (24) is at full stroke against the Valve Body Seat (A). Release the Check Stem (22), and observe the spring return stroke. If the excess flow assembly does not move freely toward Body Seat (A) or exhibit a snap action on the spring return stroke, do not use valve, but consult your local dealer.

Installation of New or Repaired Tank Valves

REFER TO FIGURE 1 FOR THE FOLLOWING STEPS:

- Step 1: Holding the valve in hand, depress and release Check Stem (22) to insure that it is operating smoothly.
- Step 2: Apply Teflon tape or sealant on 1-1/2" NPT Threads, and place handwheel in full open position.
- Step 3: Install valve into threaded tank fitting and tighten to desired position, taking caution to not overtighten.
CAUTION: Do not damage Check Stem (22) while installing valve.

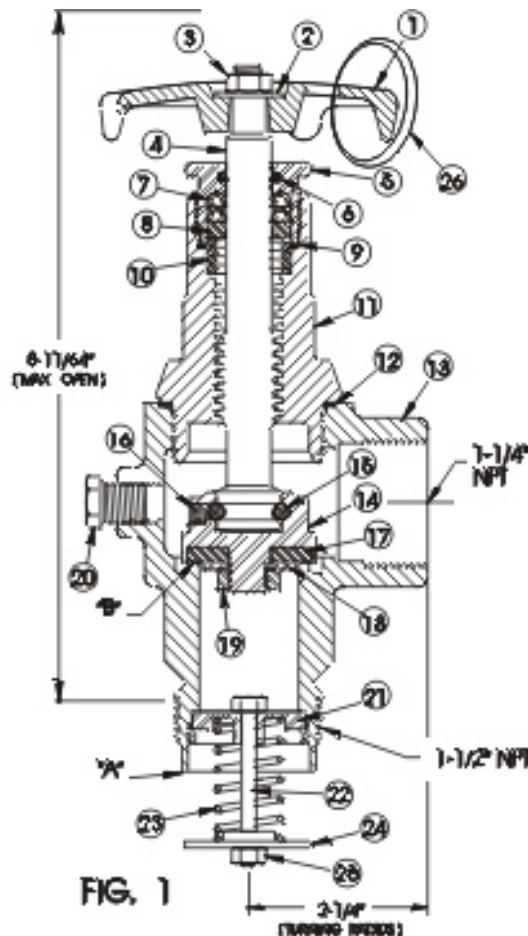
Safety Tips for Shut-down and Storage

SAFETY TIPS FOR SHUT-DOWN AND STORAGE WHEN TANKS ARE NOT IN USE:

- Step 1: Make sure all valves are closed with any exposed outlets / inlets capped to keep out debris and moisture, which will help to prevent condensation or corrosion of internal parts.
- Step 2: Store tanks in accordance with federal, state, and local codes and manufacturer's instructions. Check periodically for leakage or excessive pressure build-up. Make corrections or repairs as necessary.

WARNING: The Model AL479 is equipped with an open yoke style excess flow valve. In tank applications it must be installed in combination with a 2.402" I.D. dip tube. An undersize dip tube will cause premature closing while withdrawing liquid. An oversize dip tube will not allow the valve to close in the event of a total hose failure. In 2" NPT pipe riser applications it must be installed in combination with a 2" x 1-1/2" NPT special reducer bushing, Part No. 479-5050, and a 2" NPT Tee.

26	1	WARNING LABEL
26	1	8-32 HEX NUT
24	1	CHECK DISC
23	1	SPRING
22	1	CHECK STEM
21	1	STEM GUIDE
20	1	1/4" NPT HEX PLUG
19	1	DISC NUT
18	1	DISC WASHER
17	1	DISC
16	1	RETAINING SCREW
15	18	BALL
14	1	DISC HOLDER
13	1	BODY
12	1	GASKET
11	1	BONNET
10	1	SPRING
9	1	GASKET
8	1	MALE ADAPTOR
7	2	CHEVRON PACKING
6	1	O-RING
5	1	PACKING NUT
4	1	STEM
3	1	3/8"-24 HEX JAM NUT
2	1	3/8" FLAT WASHER
1	1	HANDWHEEL
ITEM	QTY	DESCRIPTION



AVAILABLE KITS		
NUMBER	NAME & PARTS INCLUDED	ASSEMBLY PROCEDURE
479-0022	BAL KIT ⑤ ⑦ ⑨ ⑫ ⑬	1 THRU 11
8872-1800	STEM AND DISC HOLDER ASSEMBLY ④ ⑬ ⑮ ⑯ ⑰ ⑱ ⑲	2 THRU 11
6479-1100	BONNET ASSEMBLY ② ③ ④ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑰ ⑱ ⑲	8 THRU 11