

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

WARNING

Use proper safety equipment at all times.

Before installation or removal of any globe valve, the system must be purged completely of all product. 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 ANHYDROUS AMMONIA. To prevent the accidental opening of any valve, never grasp or carry a valve by its handwheel or handle.

This equipment must be installed, operated and maintained in accordance with federal, state and local codes, and manufacturer's instructions. In addition, in most states the installation must also comply with ANSI K61.1 standards. Only personnel trained in the proper procedures, codes, standards and regulations should install, inspect repair and/or replace this equipment. Failure to follow these instructions or to properly install and maintain this equipment could result in property damage and/or personal injury or death.

To ensure 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.

CAUTION: Contact with or inhalation of Liquid Anhydrous Ammonia or its 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.

TOOLS REQUIRED: Safety Equipment (i.e. Gloves, Goggles, and Clothing), Bench-Mounted Vise, 12" Adjustable Wrench, and 18" Pipe Wrench, Unirex N2 or an equivalent, Torque Wrench

Removal of any Globe Valve for Repair or Replacement (Refer to Figure 1 for Item Numbers)

- Step 1: Safety equipment (i.e. gloves, goggles, and clothing) must be worn before proceeding to the next step.
- Step 2: Before removing the valve from the tank, place the valve in the **FULL OPEN POSITION** to ensure all pressure is bled from the system. See WARNING at the top of this page.
- Step 3: Place an 18" adjustable wrench on the body portion ⑰ of the valve and turn counter-clockwise to remove.

Disassembly Procedure for Repair (Refer to Figure 1 for Item Numbers)

- Step 1: With the valve secured in a bench-mounted vise, remove the Bonnet ⑤ from the Body ⑰, which will expose the complete Bonnet and Stem Assembly.
NOTE: It is important to inspect the Disc Holder ⑦ rotation. If it does not rotate freely, do not use the valve. Consult your local dealer for instructions.
- Step 2: Remove the old O-ring ⑱ from the Bonnet ⑤.
- Step 3: Secure the Bonnet ⑤ in the bench-mounted vise and remove the two Disc Nuts ① & ⑨, the Flat Washer ⑩, the Disc Washer ⑧, Disc ⑥, and the Handwheel ②.
- Step 4: Remove the Packing Nut ④, Chevron Packing ⑫, Male Adapter ⑬, and Packing Spring ⑮ over the end of the Stem ③.
- Step 5: Rotate the Stem ③ clockwise (using the Handwheel ②, if necessary) until the Stem is disengaged from the Bonnet ⑤. Remove the old Gasket ⑭ from the Male Adapter ⑬.
- Step 6: Before re-assembly, clean and inspect the valve seat at ①. Clean all metal components with solvent and wipe or blow dry with air.

Assembly Procedure

- Step 1: Install the Disc ⑥, with the injection marks against the Disc Holder ⑦, Disc Washer ⑧, and Disc Nut ⑨ to Disc Holder ⑦. Secure the Disc Nut ⑨ to the threads of the Disc Holder ⑦ with the center-punch mark at the thread interface.
- Step 2: Lubricate the threads of the stem with a good quality grease and install the Stem ③ into the Bonnet ⑤ until the Disc Holder ⑦ rests against the bottom of the bonnet.
- Step 3: With the bonnet and stem assembly secured in the bench-mounted vise, install the Gasket ⑭ and Packing Spring ⑮.
- Step 4: Replace the O-Ring ⑱ in the groove of the Packing Nut ④.
- Step 5: Install the Chevron Packing ⑫ and the Male Adapter ⑬ into the Packing Nut ④.
- Step 6: Lubricate the exposed surface of the Stem ③ with Unirex N2 or an equivalent.
- Step 7: Place the Packing Nut ④ (with the packing in place) over the Stem ③ and engage the bonnet threads in the Bonnet ⑤. Rotate the Packing Nut ④ while making contact with the bonnet threads. Tighten the packing nut with a torque wrench to 90 ft.-lbs.
- Step 8: Secure the Body ⑰ in the vise, place the Body O-Ring ⑲ over the bonnet threads and lubricate the threads with a good quality grease
- Step 9: Install the bonnet assembly into the body and tighten with the wrench.
- Step 10: Install the Handwheel ② the Flat Washer ⑩, and tighten the Handwheel Nut ① on the Stem ③.
- Step 11: Check the stem packing and valve seat for leaks. Operate the handwheel FULL OPEN to FULL CLOSED to ensure smooth operation.

Installation of New or Repaired Globe Valves

- Step 1: Apply Teflon® tape or sealant on the male pipe threads of the mating part, and place the handwheel in the FULL OPEN position.
- Step 2: Install the valve and tighten to the desired position, taking care to not over-tighten.

Safety Tips for Shut-Down and Storage

- Step 1: Make sure all valves are CLOSED and any exposed outlets/inlets are capped to keep out debris and moisture, which will help 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.

ITEM	QTY.	DESCRIPTION	AVAILABLE KITS			
			KIT NUMBERS		KIT NAME & PARTS INCLUDED	ASSEMBLY PROCEDURE
21	1	INFORMATION DISC	A333	A334		
20	1	WARNING LABEL			480-0022	480-0022
19	1	1/4" NPT HEX HEAD PLUG				
18	1	DISC HOLDER RETAINING RING	S481-1100	S481-1100		
17	1	BODY				
16	1	BODY O-RING				
15	1	PACKING SPRING				
14	1	GASKET				
13	1	MALE ADAPTER				
12	2	CHEVRON PACKING				
11	1	O-RING				
10	1	FLAT WASHER				
9	1	JAM NUT				
8	1	DISC WASHER				
7	1	DISC HOLDER				
6	1	DISC				
5	1	BONNET				
4	1	PACKING NUT				
3	1	STEM				
2	1	HANDWHEEL				
1	1	HANDWHEEL NUT/DISC NUT				
ITEM	QTY.	DESCRIPTION				

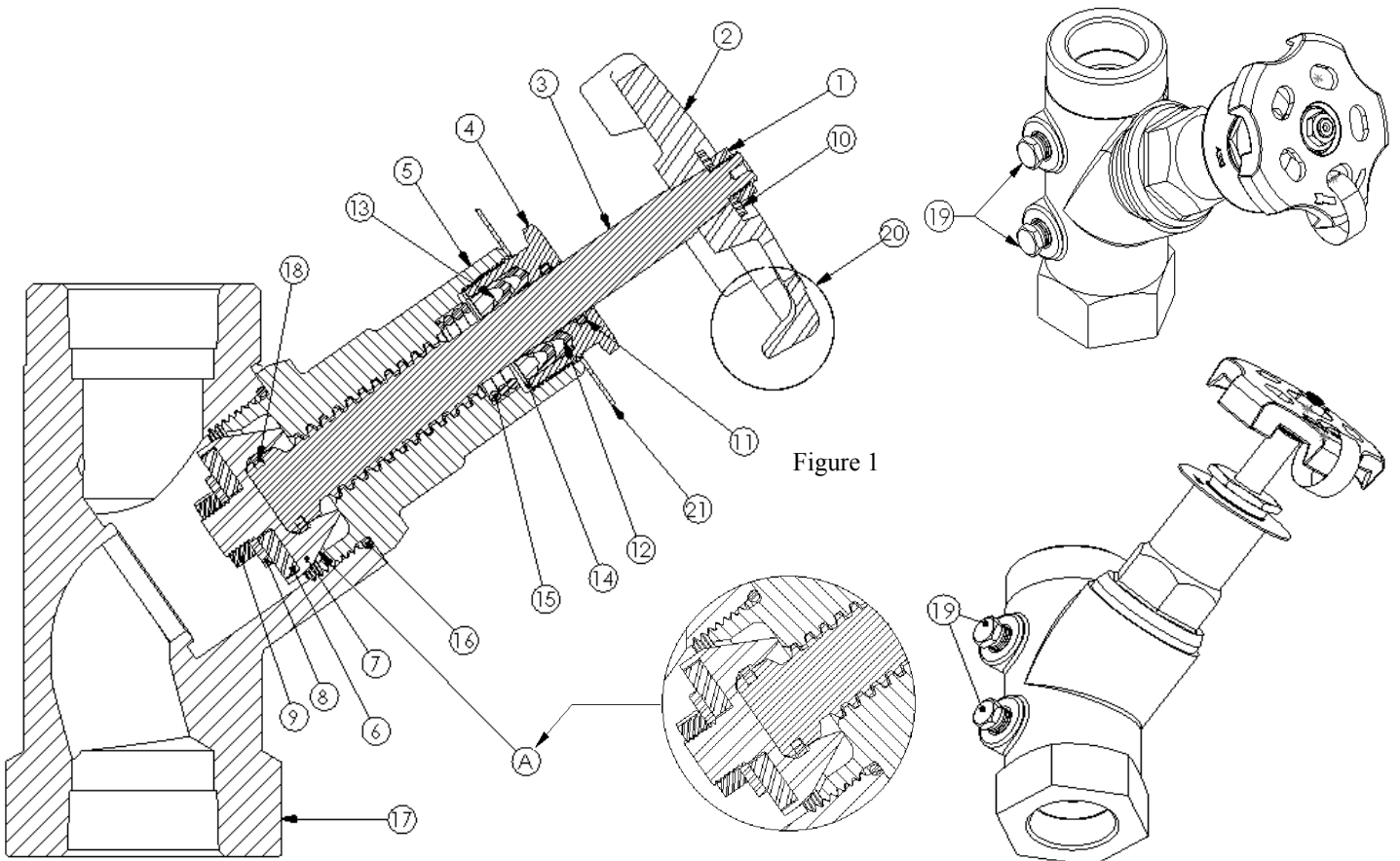


Figure 1