

True Union Ball, Ball Check & 3-Way Ball Valve Installation Instructions

U.S. Patent No. 6,899,127 & 6,260,819

TU-3A-1112



These instructions cover general installation for all PVC & CPVC True Union 2000 Industrial Ball, Ball Check & 3-Way Ball Valves, True Union 3-Way Full Port Ball Valves & Regular Style True Union Ball & Ball Check Valves. All applicable instructions & procedures should be read thoroughly before starting. Suitability of the intended service application should be determined prior to installation. Plastic piping systems should be engineered, installed, operated & maintained in accordance with accepted standards & procedures.

SPECIAL INSTALLATION INFORMATION

True Union type ball valves use removable end connectors. To avoid problems, NEVER ASSEMBLE THE JOINT TO THE END CONNECTORS WHILE THEY ARE ATTACHED TO THE VALVE CARTRIDGE.

Check Valves may be installed in either horizontal or vertical position with a minimum of 10 pipe diameters from any pump or other source of turbulence. Check valves **MUST** be installed with the valve's "FLOW" arrow pointing in the direction of flow. U.S. Patent No. 6,899,127

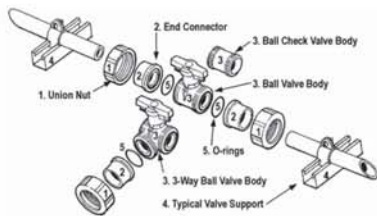
Vented Ball Valves (special ordered "Bleach Valve") Install valve with ball vent-hole on the pressure (upstream) side when in closed position.

3-Way Ball Valves: Full port and diverter valve styles.

IMPORTANT: Read Precautions & Warnings for all Valve Installations at the end of these instructions. It is absolutely necessary that all design, installation, operation & maintenance personnel be trained in proper handling, installation requirements and precautions for installation and use of plastic piping systems before starting.

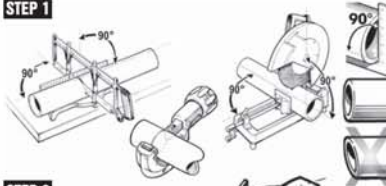
LUBRICATION WARNING: Some Lubricants, including vegetable oils, are known to cause stress cracking in thermoplastic materials. Formulation changes by lubricant manufacturers may alter compatibility of previously acceptable materials and are beyond our control. Lubricants are not required for installation of Spears® Valves.

INSTALLATION INSTRUCTIONS FOR SOLVENT WELDING APPLICATIONS

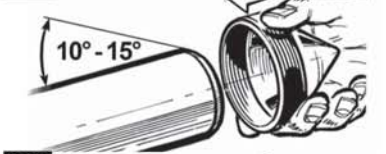


1

STEP 1



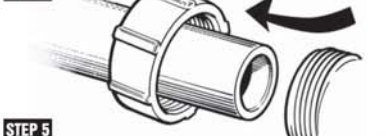
STEP 2



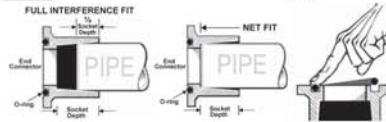
STEP 3



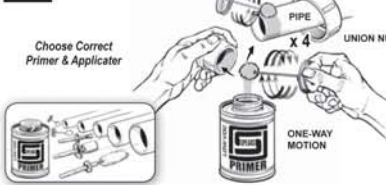
STEP 4



STEP 5



STEP 6



2

STEP 7



STEP 8

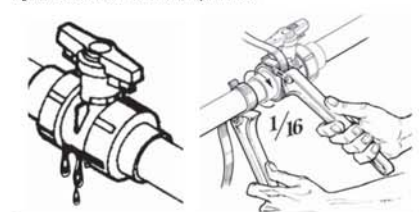


STEP 9



STEP 10

Pressure test the system only after all solvent cement joints have fully cured. If any leaks are found at End Connectors during pressure check, tighten Union Nut 1/16 turn to stop the leak.



3

THREADED CONNECTIONS

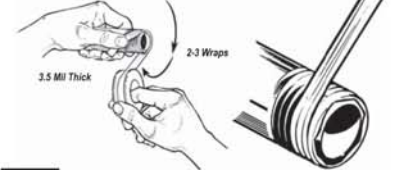
WARNING: SOME PIPE JOINT COMPOUNDS OR PTFE PASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING TO PLASTIC. TRANSITIONS TO METAL PIPE REQUIRE THOROUGH CLEANING AND DEGREASING TO REMOVE ANY PIPE THREAD CUTTING OIL.

STEP 1



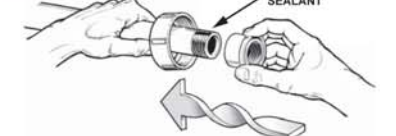
RECOMMENDED SEALANT

TAPE SEALANT



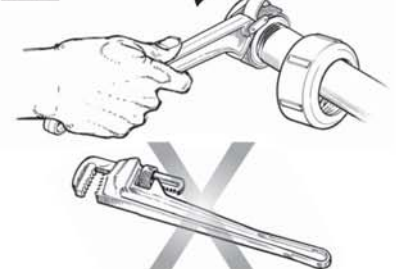
OR

STEP 2



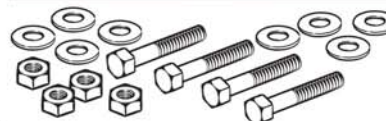
APPLY THREAD SEALANT

STEP 3



4

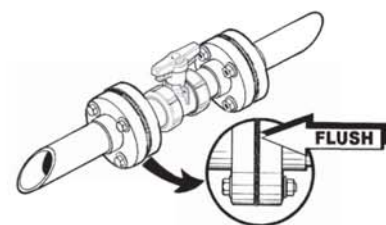
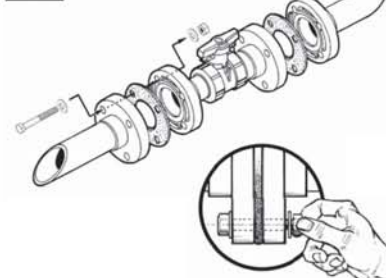
FLANGED CONNECTIONS



STEP 1

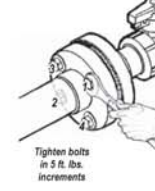


STEP 2



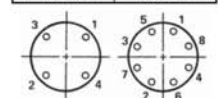
5

STEP 3



Tighten bolts in 5 ft. lbs. increments

Valve Size	Torque Value
1/2" to 1-1/2"	12 ft. lbs.
2" to 4"	25 ft. lbs.
6" Venturied	40 ft. lbs.



TU 2000 Industrial BV Lockout Handle Operation

U.S. Patent No. 6,260,819



PRECAUTIONS AND WARNINGS

CAUTION: The system must be designed and installed so as not to pull the components in any direction. Pipe system must be cut and installed in such a manner as to avoid all stress loads associated with bending, pulling, or shifting. All piping systems must be supported.

CAUTION: BEFORE THE VALVE IS CYCLED, all dirt, sand grit or other material shall be flushed from the system. This is to prevent scarring of internal components; e.g. ball, cup, wedge, seats, etc.

WARNING: System should not be operated or flushed out at flow velocities greater than 5 feet per second.

WARNING: All air must be bled from the system during the initial fluid fill. Pressure testing of the system must not be made until all solvent cement joints have properly cured. Initial pressure testing must be made at approximately 10% of the system hydrostatic pressure rating to identify potential problems prior to testing at higher pressures.

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS.

