

Design and Installation Guidelines

Hole Sizing

WaterSaver fixtures are furnished with standard size inlet shanks to penetrate the deck or wall surface. Minimum hole sizes for these are listed below:

Inlet Shank	Minimum Hole
3/8" IPS Shank (all fixtures with BI131 series turret, BI158 flange, most mixing faucets, etc.)	3/4" (.750)
1/2" IPS Shank (L2700 series faucets, deck mounted eye washes, but except L600 series faucets)	7/8" (.875)
1/2" IPS Shank (L600 series faucets)	1-1/8" (1.125)
3/4" IPS Shank (electric pedestal boxes, AAP100/101 burette sockets)	1-1/8" (1.125)
1-3/16" dia. Shank (L400 series and L2200 series faucets)	1-3/8" (1.375)

Pipe Sizing and Material

Requirements for the size and material of supply piping are generally covered by local plumbing codes. Reference should be made to local codes when laying out piping for service fixtures and safety equipment. Pipe sizing is also affected by the number of fixtures or outlets installed. Typical piping standards for single fixtures and outlets are as follows:

Service	Piping Material	Minimum Size
Gas	Black Iron	3/8"
Air/Vacuum	Copper	3/8"
Special Gases	Copper or Stainless Steel	3/8"
Steam	Black Iron	3/8"
Water	Copper	3/8"
Distilled, Deionized and Ultra-Pure Water	PVC/Polypropylene/PVDF	1/2"
Emergency Showers	Copper	1"
Eye, Eye/Face Wash and Drench Hose Units	Copper	1/2"
Safety Stations	Copper	1-1/2"

Installation Procedures

Installation Procedures Installing WaterSaver laboratory faucets, valves and safety equipment requires the use of common plumbing techniques. Observing the following guidelines will help to assure troublefree installation:

1. Thoroughly clean and flush supply lines prior to installing faucets and valves. Pipe shavings, scale, tape and other debris can be drawn into a pipe and into a faucet or valve when the system is activated. This debris can damage valve components and interfere with the operation of the faucet or valve.
2. When placing a faucet or valve on a laboratory countertop or wall, secure the fixture using the lockwasher and locknut. Tighten sufficiently to secure the fixture to the counter or wall. Do not overtighten.

- 3.** Generally, WaterSaver fixtures have American National standard taper pipe threads (NPT) on the inlet. Use Teflon tape to seal these threads. Do not apply the sealant in a way that will permit it to enter into the faucet or valve. The faucets which do not (such as our L400 series, L600 series and L2200 series) are furnished with 1/2" OD slip joint connections.
- 4.** Observe the maximum test and working pressures for faucets and valves. Testing or using a valve at pressures for which result in leakage or failure. Refer to the Valve Selection Guide on page 5 for information on maximum test and working pressures.
- 5.** Do not use valves for services and applications for which they are not intended. In particular:
 - Ground key cock valves are for vacuum service only and at pressures of less than 40 PSI.
 - Valves for oxygen service and high purity gases must be specially lubricated and packed. Ground key cock valves and needle valves which have not been specially cleaned are not acceptable.Do not be used for gas services only. They are generally not suitable for use with water or steam.
- 6.** To prevent surface damage, use caution when applying a wrench or other tool to the exterior of a faucet or valve.
- 7.** Every WaterSaver faucet is fully assembled at the factory. This includes installing the gooseneck into the faucet body and the gooseneck. Mounting shanks are furnished loose (designated by the suffix "WS") or assembled (designated by the suffix "A").
- 8.** WaterSaver valve assemblies (such as needle valve or ground key cock valve assemblies) are factory assembled, inspected. Mounting shanks are furnished loose (designated by the suffix "WS") or assembled (designated by the suffix "WSA"), as order permits us to test the connections between the valve, the mounting fitting (turret or flange) and the mounting shank. Factory assembly minimizes the field labor required to install the fixture and minimizes the possibility of damaging the fixture's finish during installation.
- 9.** Clean faucets and valves using a soft cloth and soapy water. Do not use abrasives, detergents or other cleaners which can damage the fixture. In particular, do not use any solvent in or near a faucet or valve. Solvents can dissolve the lubricants used in the valves.

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