

# Laboratory Fitting Installation Instructions

For use with Laboratory Water Faucets and Valves, Multi-Service Fittings, Remote Valves, and Fumehood Valves

## Overview

Chicago Faucets laboratory fittings are precision equipment for dispensing water or laboratory gases in highly specialized applications. These fittings feature interchangeable components and heavy-duty brass construction for a lifetime of reliable use.

## Notice to the Installer

- Read this entire instruction sheet before installing to ensure proper installation.
- Installation must comply with local codes and ordinances.

Pressurized plumbing fixtures shall be installed in accordance with manufacturer's recommendations. The supply piping to these devices shall be securely anchored to the building structure to prevent installed device from unnecessary movement when operated by the user. Care shall be exercised when installing the device to prevent marring the exposed surface.

NOTE: The information in this manual is subject to change without notice.

Please leave these instructions with the facility manager after completing the faucet installation. This document contains information necessary for routine maintenance and servicing.

NOTE: Before installation, turn off water supplies to existing faucet and remove faucet if replacing. Clean faucet basin and clear away debris. Flush all supply lines before connecting to faucet. Failure to do so can result in debris clogging the inlets and/or cartridges.

## SAFETY WARNING

For fittings with a serrated nozzle outlet that allows the attachment of laboratory tubing, Chicago Faucets strongly recommends the use of an in-line vacuum breaker (model E22) between the nozzle and fitting to prevent water from flowing back through the nozzle and contaminating the water supply.

## INSTALLER NOTE

For proper joint installation, DO NOT USE a pipe joint compound that contains ammonia compounds or one that can become acidic. The preferred material for threads and flanges is a fast-setting, non-hardening paste that seals thread joints, is non-toxic, and is suitable for use with potable water, natural gas, steam, compressed air, and other special gases. Teflon® tape may be used when applied in accordance with professional plumbing practices.

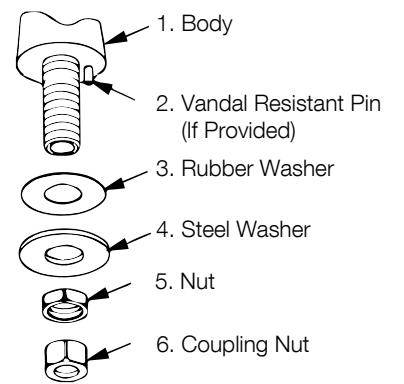


**Figure 1**

## Single-Supply Basin Fittings (including vandal resistant fittings)

NOTE: For vandal resistant fittings only, the installer must drill a hole in the deck to accommodate the Vandal Resistant Pin (Figure 1, item 2). It is important to obtain the rough-in drawing for the particular model being installed. The drawing illustrates the exact size and positioning of the pinhole.

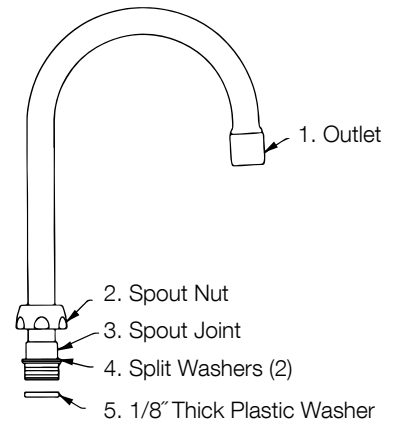
1. Apply plumber's putty or Rubber Washer (item 3) to underside of faucet body (item 1).
2. Place body shank through hole in deck. If installing a vandal resistant fitting, align Vandal Resistant Pin (item 2) with pre-drilled pinhole in deck. Assemble Steel Washer and Nut (items 4 and 5) to shank and tighten securely.
3. Flush supply line. If using a bullnose supply tube, attach to shank with Coupling Nut (item 6) and tighten securely. Flexible supply hoses do not require the Coupling Nut.
4. Assemble spout as shown in Figure 2. For Rigid Spout installation, place 1/8" Thick Plastic Washer into spout base bore and discard plastic Split Washers.
5. Attach spout to fitting and tighten Spout Nut (Figure 2, item 2). If outlet is pre-installed, remove outlet and flush fitting for one minute. Replace outlet.



**Figure 2**

## Widespread Fittings (wall and deck-mounted)

1. If Flanges (Figure 3, item 1) are included, place them over supply piping or shanks.
2. Attach Supply Arms (item 2) to threaded supply piping or shanks using pipe sealant.
3. If installing adjustable Supply Arms, align them with inlets on fitting.
4. Install Gaskets (item 3) and tighten Supply Arms to fitting with a crescent wrench. Make sure fitting is level.
5. Assemble spout as shown in Figure 2 for Rigid Spout installation, place 1/8" Thick Plastic Washer into spout base bore and discard plastic Split Washers.
6. Attach spout to fitting and tighten Spout Nut (Figure 2, item 2). If outlet is pre-installed, remove outlet and flush fitting for one minute. Replace outlet.



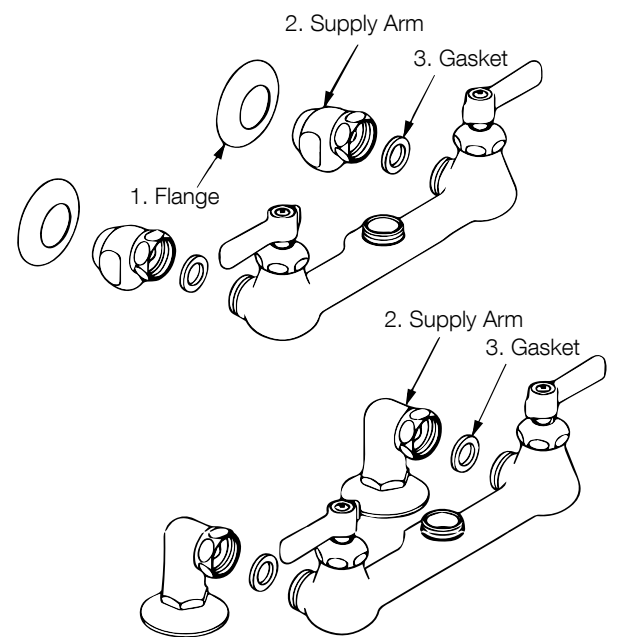
**Figure 3**

## Spouts - Rigid/Swing Conversion Gooseneck and Vacuum Breaker Gooseneck

1. If spout nut is NOT assembled to spout, remove outlet and assemble spout nut over outlet end, then run spout nut down until it sits on shoulder of spout joint. Reassemble outlet.
2. FOR RIGID SPOUTS: Place 1/8" thick plastic washer into spout base bore and discard plastic split washers.
3. Assemble spout assembly into spout base and tighten spout nut.

## Dual-Service Fittings (including 1332, 1333, 1334 Series)

1. Insure supply holes are drilled in deck, 7/8" - 1" dia. (22.22-25.4 mm). It is important to obtain the rough-in drawing for the particular model being installed. The drawing illustrates the exact size and positioning of the supply holes.
2. Install Rubber Base Gasket (Figure 4, item 1) to fitting. Insert fitting through pre-drilled holes in deck.
3. Using Washer Plate (item 2) and Locknut (item 3), secure fitting to deck.
4. Apply appropriate pipe sealant to both water and gas inlets before attaching supply lines. Connect supply lines to Water Inlet and Gas Inlet as shown in Figure 4.

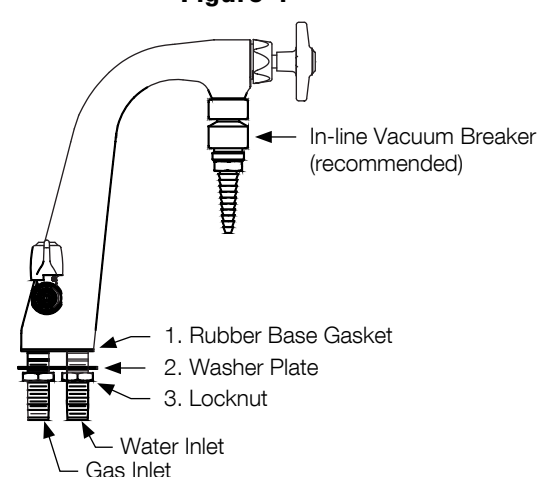
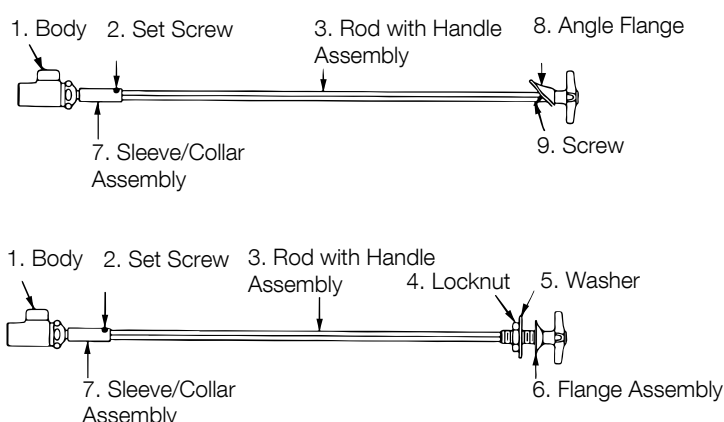


**Figure 4**

## Remote Control Fittings

1. Assemble valve Body (Figure 5, item 1) into fume hood using standard piping procedure.
2. If included, remove Locknut (item 4) and Washer (item 5) from Flange Assembly (item 6).
3. Place Flange Assembly through hole in wall and tighten securely with Locknut. For fittings with Angle Flange (item 8), secure Angle Flange to wall using the two Screws (item 9) provided.
4. If rod is too long, cut proper length from end opposite handle attachment.
5. Place Rod with Handle Assembly (item 3) through hole in flange and into Sleeve/Collar Assembly (item 7). Tighten Set Screw (item 2) to secure rod.

**Figure 5**



For additional technical assistance, call 800/TEC-TRUE (800-832-8783) or visit our website at [chicagofaucets.com](http://chicagofaucets.com).

# Laboratory Faucets Installation Instructions

(continued)

## Panel Mounted Fumehood Valves

### IMPORTANT

The front load fume hood fittings described in these installation instructions are available in both right-hand and left-hand models. Right-hand models are marked on both sides of the body with an "R" and left-hand models are marked with an "L". Due to the use of these fittings in both right- and left-hand fume hoods, the bodies are marked on both sides with directional flow arrows. Regardless of the model used, the fittings are designed to be installed such that the inlet is on the bottom.

1. Panel-mounted fume hood valves are shipped as shown in Figure 6 to ease installation. These valves are designed to be installed in a 45-degree angled fume hood equipped with 1-1/2" (38.1 mm) diameter mounting holes. Before proceeding with the installation, identify and familiarize yourself with all of the components shown in Figure 6.
2. Remove the Hold-Down Nut (item 3) from the Body and the Handle Screw (item 5) from the Cartridge Stem (item 4). With a pair of pliers, make sure the Shoulder Washer (item 2) has been tightened into place against the Body: the threads on the two components should lock together.
3. Place the front end of the Body (the end containing the operating cartridge) through the 1-1/2" diameter hole in the fume hood and secure the fitting in place by assembling the Hold-Down Nut onto the Body. Hand tighten the Hold-Down Nut from the front of the fume hood (see Figure 7). Do not fully tighten the Hold-Down Nut at this time.
4. Align the mounted fitting from the back of the fume hood so the Body inlet and outlet are in line and the Body is parallel to the fume hood sidewall. Using your free hand or a tool to support the valve body from the back, tighten the Hold-Down Nut securely with a wrench.
5. With fitting now firmly secured to the fume hood, place the handle onto the Cartridge Stem and tighten into place with the Handle Screw. If applicable, insert the appropriate index button into handle.
6. Complete the inlet and outlet piping to the fitting and check for leaks.

### IMPORTANT SERVICE NOTE

Chicago Faucets panel-mounted fume hood fittings have been designed so that servicing of the cartridge can be done from the front (user's) side of the fume hood. Before servicing, ensure that the main supply valve to the fitting has been completely turned off, then purge the fitting by completely opening the valve and releasing trapped material into the fume hood. Support the fitting by holding the Hold-Down Nut (Figure 6, item 3) in place with a wrench before loosening the cartridge cap nut.

Figure 6

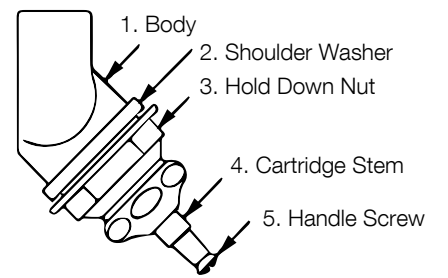
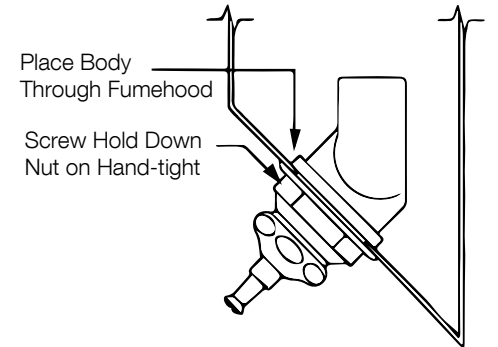


Figure 7

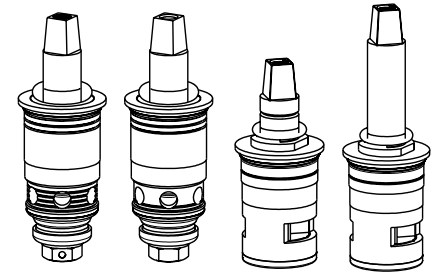


## Quatern and Slow-Compression Cartridges

Cartridges are stamped "RH" for right-hand and "LH" for left-hand.

NOTE: Always place a new cartridge in the closed position when installing into valve body.

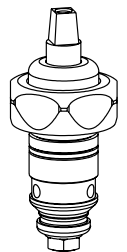
1. Push cartridge into fitting body until it is fully seated.
2. Install cap nut and hand tighten.
3. Install handle.
4. FOR RIGHT-HAND CARTRIDGE: Hold handle in CLOSED position and fully tighten cap nut to 15-25 ft/lb torque.
5. FOR LEFT-HAND CARTRIDGE: Hold handle in OPEN position and fully tighten cap nut to 15-25 ft/lb torque. Return handle to CLOSED position and check handle alignment.



## Klo-Self (Cam-in-Cap) Self-Closing Cartridges

NOTE: Right-hand and left-hand (Hot and Cold) units are identical.

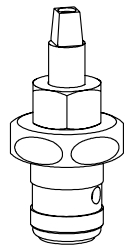
1. Place cartridge into fitting body until it is fully seated.
2. Install cap nut and hand tighten.
3. Install handle in desired position.
4. Hold handle in place and tighten cap nut with wrench to 15-25 ft/lb torque.



## Needle Valve Cartridges (models 962-X, 966-X, 966-XSS)

NOTE: Models 966-X and 966-XSS are accurate control needle valve cartridges with a fine pitch stem thread. Model 966-XSS features a stainless steel seat. These cartridges are right-hand only, closing in a clockwise direction. Excessive closing torque can damage the cartridge and should not be applied.

1. Place cartridge into fitting body until it is fully seated.
2. Be sure washer is in place under cap nut. Install cap nut and hand tighten.
3. Install handle in desired position.
4. Hold handle in place and tighten cap nut with wrench to 15-25 ft/lb torque.



# Atmospheric Vacuum Breaker Installation Instructions

For use with 892 and 893 Series vacuum breakers and Chicago Faucets gooseneck spouts that include these components.

## Overview

Installation and maintenance instructions for Chicago Faucets atmospheric vacuum breakers and fittings which incorporate these devices.

## Application

Atmospheric vacuum breakers are designed to prevent back siphonage of contaminated water into a water supply. Atmospheric vacuum breakers are not recommended for use under continuous pressure and are designed to provide back flow prevention due to back pressure, even though a check valve may be present.

## Installation

Atmospheric vacuum breakers must be installed between the discharge side of the control valve of the fixture and outlet. For proper operation there must be no shut-off or control valve downstream of the vacuum breaker outlet. Atmospheric vacuum breakers should be located not less than six inches above the flood rim, overflow or highest point of downstream piping and/or hose. Atmospheric vacuum breakers must be located in an area to allow for inspection and can be readily serviced. This device may spill water and should be installed where water spillage is not objectionable or will not cause damage.

## Important

Installation of atmospheric vacuum breakers may be subject to local installation requirements by governing authorities.

## Maintenance

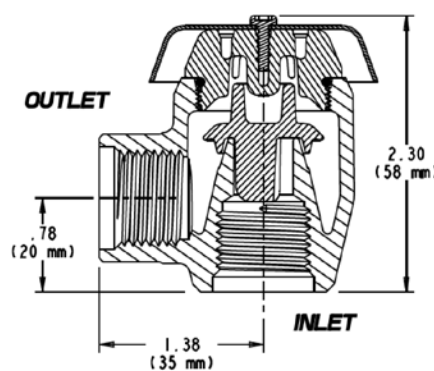
1. Remove cover screw and lift off cover.
2. Turn off supply pressure and observe poppet drop in open-air inlet.
3. If this does not occur or valve has been constantly discharging, replace components.
4. Replace poppet, seat and o-ring.
5. Restore pressure and retest using step 2 and 3.
6. Reassemble cover and screw, then restore pressure.

## Care and Maintenance

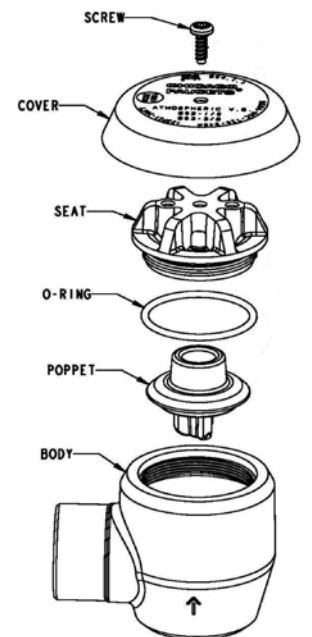
All Chicago Faucets fittings are designed and engineered to meet or exceed industry performance standards. Care should be taken when cleaning this product. Do not use abrasive cleaners, chemicals or solvents as they can result in surface damage. Use mild soap with warm water for cleaning and protecting the surface of Chicago Faucets fittings.

For additional technical assistance, call 800/TEC-TRUE (800-832-8783) or visit our website at [chicagofaucets.com](http://chicagofaucets.com).

ASSEMBLED VIEW



EXPLODED VIEW



## CHICAGO FAUCETS LIMITED WARRANTY

**TO WHOM DOES THIS WARRANTY APPLY?** — The Company extends the following limited warranty to the original user only.

**WHAT DOES THIS WARRANTY COVER AND HOW LONG DOES IT LAST?**

This warranty covers the following Commercial Products:

**LIFETIME FAUCET WARRANTY** — The "Faucet," defined as any metal cast, forged, stamped or formed portion of the Product, not including electronic or moving parts or other products separately covered by this Limited Warranty or water restricting components or other components, is warranted against material manufacturing defects for the life of the Product.

**FIVE YEAR FAUCET WARRANTY** — Certain Products and portions of the Product are warranted against material manufacturing defects for a period of five (5) years from the date of Product purchase. Products warranted against material manufacturing defects for a period of five (5) years from the date of Product purchase are referred to by the product numbers 42X, 43X, 15XX and E-Tronic® - 4X, 5X, 6X, 7X, 8X and 9X. All zinc die cast portions of Product are warranted against material manufacturing defects for a period of five (5) years from the date of Product purchase.

**THREE YEAR ELECTRONICS WARRANTY** — Electronic components, including the solenoid, are warranted for three (3) years from the date of installation.

**FIVE YEAR CARTRIDGE WARRANTY** — The "Cartridge", defined as the metal portion of any Product typically referred to by the product numbers containing 1-099, 1-100, 377X, 217X and 274X, excluding any rubber or plastic components, is warranted against material manufacturing defects for a period of five (5) years from the date of Product purchase. All Cartridges included in the Company's Single Control or Shower Products also are warranted against material manufacturing defects for a period of five (5) years from the date of Product purchase.

**ONE YEAR FINISH WARRANTY – COMMERCIAL** — For Products used in commercial applications, the finish of the Product is warranted against material manufacturing defects for a period of one (1) year from the date of Product purchase.

**OTHER WARRANTIES** — All other Products not covered above are warranted against material manufacturing defects for a period of one (1) year from the date of Product purchase.

Other restrictions and limitations apply. For complete warranty details, call Chicago Faucets Customer Service at 847-803-5000 or visit [chicagofaucets.com](http://chicagofaucets.com).

The Chicago Faucet Company  
2100 South Clearwater Drive  
Des Plaines, IL 60018  
Phone: 847/803-5000  
Fax: 847/803-5454  
Technical: 800/832-8783  
[www.chicagofaucets.com](http://www.chicagofaucets.com)