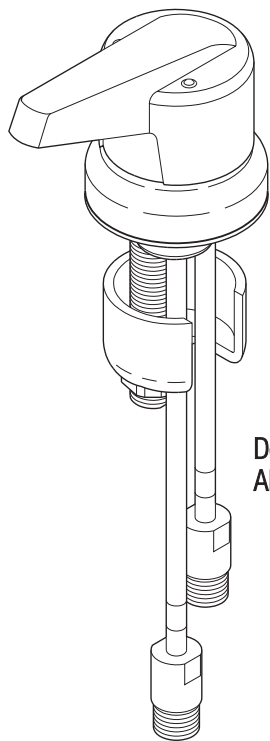
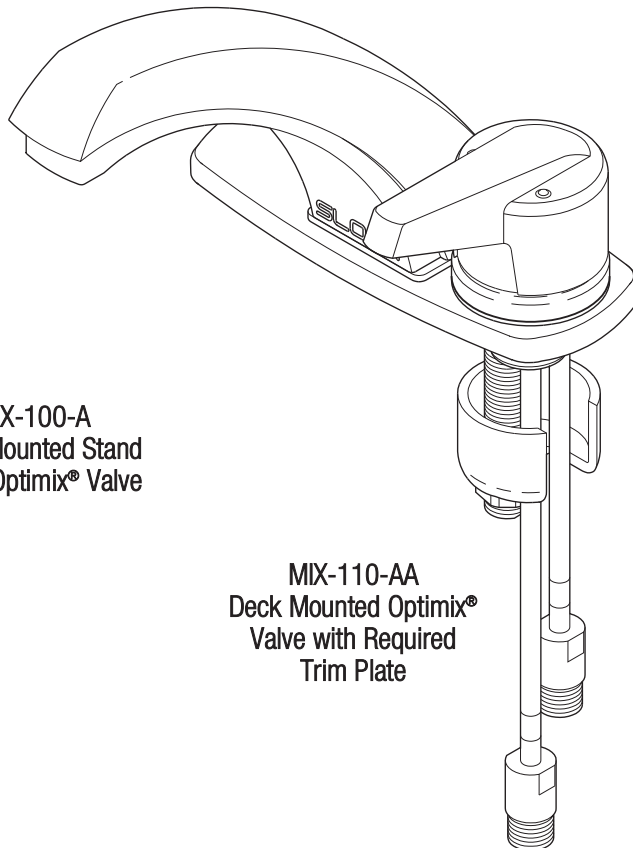


INSTALLATION INSTRUCTIONS FOR MIX-100-A AND MIX-110-AA OPTIMIX[®] VALVES



MIX-100-A
Deck Mounted Stand
Alone Optimix[®] Valve



MIX-110-AA
Deck Mounted Optimix[®]
Valve with Required
Trim Plate

MIX-100-A

Hot and Cold Ceramic Optimix[®] Valve with Standard Lever Handle — Deck Mounted Stand Alone

MIX-110-AA

Hot and Cold Ceramic Optimix[®] Valve with Standard Lever Handle — Deck Mounted on a Trim Plate

For Installation with Sloan OPTIMA[®] and OPTIMA *Plus*[®] Faucet Models

This manual instructs you only on how to install Optimix valves. Use these instructions in conjunction with the separate installation instructions included with each Sloan OPTIMA[®] or OPTIMA *Plus*[®] faucet.

Attain the desired hand washing water temperature by combining Sloan's MIX-100-A or MIX-110-AA Optimix Valve with an automatic, "hands-free" OPTIMA or OPTIMA *Plus* Series Faucet. Both Optimix Valves are designed for ease of installation on new as well as retrofit applications.

The MIX-100-A Stand Alone Optimix Valve is designed for use in applications that do not require a trim plate. The MIX-110-AA Optimix Valve is designed for use in applications where the Optimix Valve and OPTIMA or OPTIMA *Plus* Series Faucet share a trim plate. Valves are furnished complete with a flexible supply line, valve

body with ceramic cartridge, mounting hardware, lever handle and hot water temperature limit stop.

The following instructions will serve as a guide when installing the Optimix Valve with a Sloan OPTIMA or OPTIMA *Plus* Series Faucet. As always, good safety practices and care are recommended when installing your new Optimix Valve. If further assistance is required, contact your nearest Sloan Representative office or Sloan's Installation Engineering department.

LIMITED WARRANTY

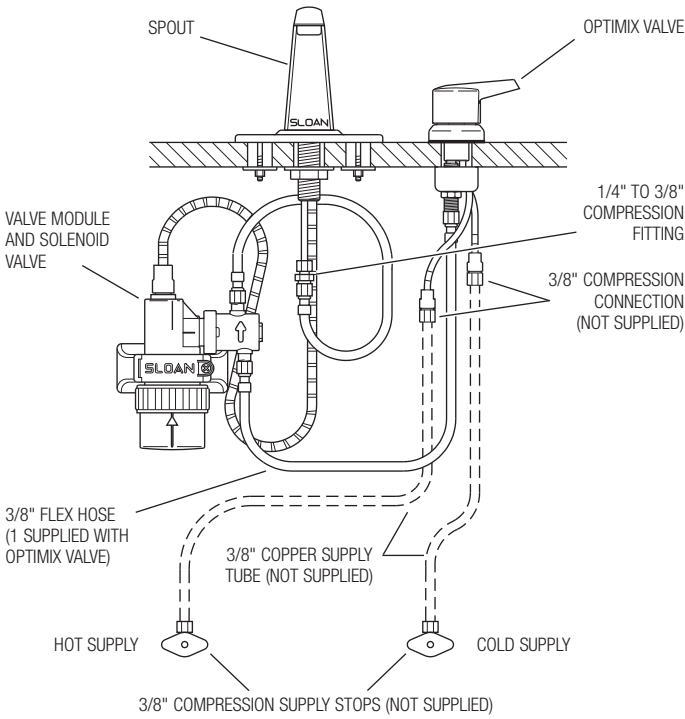
Sloan Valve Company warrants its Optimix[®] valves to be made of first class materials, free from defects of material or workmanship under normal use and to perform the service for which they are intended in a thoroughly reliable and efficient manner when properly installed and serviced, for a period of three years from date of purchase. During this period, Sloan Valve Company will, at its option, repair or replace any part or parts which prove to be thus defective if returned to Sloan Valve Company, at customer's cost, and this shall be the sole remedy available under this warranty. No claims will be allowed for labor, transportation or other incidental costs. This warranty extends only to persons or organizations who purchase Sloan Valve Company's products directly from Sloan Valve Company for purpose of resale.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. IN NO EVENT IS SLOAN VALVE COMPANY RESPONSIBLE FOR ANY CONSEQUENTIAL DAMAGES OF ANY MEASURE WHATSOEVER.

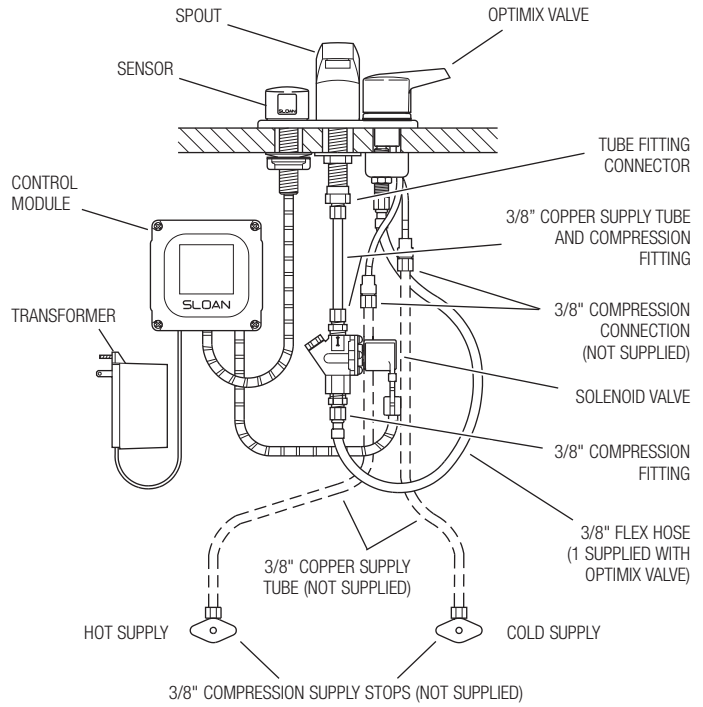
MIXING VALVE ROUGH-IN WITH FAUCETS

Figure 1

EBF-85 FAUCET WITH MIX-100-A OPTIMIX VALVE



ETF-660 FAUCET WITH MIX-110-AA OPTIMIX VALVE



ALSO AVAILABLE WITH FAUCET MODELS:

EBF-187	EBF-615	EBF-625	EBF-750	ETF-80
ETF-610	ETF-660	ETF-700	ETF-770	ETF-880

PRIOR TO INSTALLATION

Before installing the Optimix Valve with a Sloan OPTIMA or OPTIMA Plus Series Faucet, ensure that the following materials are available:

- Installation Instructions for the Sloan OPTIMA or OPTIMA Plus Series Faucet
- Sloan OPTIMA or OPTIMA Plus Series Faucet (new or existing)

NOTE: The MIX-100-A Stand Alone Valve is designed for use in applications that do not require a trim plate. It is recommended that the Valve be installed in a hole other than the faucet mounting holes. The MIX-110-AA Valve is designed for use in applications where the Valve and OPTIMA or OPTIMA Plus Series Faucet share a trim plate. Refer to Figure 1, Representative Faucet Rough-ins, for examples of installations.

Before installing the Optimix Valve with a Sloan OPTIMA or OPTIMA Plus Series Faucet, install the following items. Also, refer to Rough-Ins, Representative Faucet Rough-ins, for examples of installations.

- Lavatory/sink
- Drain line
- Hot and cold water supply lines

For applications where faucets are powered by electrical transformer(s), install electrical transformer(s) according to instructions included with the faucet.

Important:

- **ALL PLUMBING SHOULD BE INSTALLED IN ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS.**
- **FLUSH ALL WATER LINES UNTIL WATER IS CLEAR BEFORE CONNECTING OPTIMIX TO SUPPLY STOPS.**

TOOLS REQUIRED FOR INSTALLATION

- Open end wrenches for the following hex sizes: 1/2", 5/8" and 3/4"
- 1-1/8" Drill (for installations that require drilling a sink deck hole for the MIX-100-A Stand Alone Valve)
- Hex wrench: 5/64" (supplied, use for set screw in lever handle)
- Other tools as recommended in the Faucet Installation Instructions

INSTALLATION OF MIX-100-A AND MIX-110-AA OPTIMIX VALVES

New Installation

If the application includes a new Faucet/Optimix Valve combination, install the Faucet according to the Installation Instruction Manual included with the Faucet. The Optimix Valve should be installed after the Faucet Spout and Trim Plate, if applicable. Connect the Optimix Valve inline between the Hot and Cold Water Supply Lines and Solenoid Inlet as illustrated in Rough-ins on previous page, Representative Faucet Rough-in examples.

NOTE: DO NOT connect Water Supply Lines until after the Optimix Valve is installed.

Existing Application

When adding an Optimix Valve to an existing application, remove the cock hole cover or existing mixing valve, if applicable, and install the Optimix Valve into that hole. If there is no open hole in the sink, drill a mounting hole 1-1/8" (29 mm) and install the Optimix Valve into that hole. Connect the Optimix Valve inline between the Hot and Cold Water Supply Lines and Solenoid Inlet as illustrated in Rough-ins, Representative Faucet Rough-in examples.

NOTE: For existing applications where the faucet and trim plate (if applicable) is already installed, proceed to Step 2. For applications where the faucet is not installed, continue with Step 1.

1 - INSTALL FAUCET SPOUT (NEW APPLICATIONS)

- A** Install the Faucet Spout (and Trim Plate if applicable), Module and Solenoid Valve, as instructed in the Installation Instructions included with the Faucet, see Figure 1 for Sloan faucet models available with Optimix mix valve and rough-ins.

NOTE: DO NOT connect Water Supply Lines until after Optimix Valve is installed.

NOTE: Please visit our website for installation instructions, if needed, for Sloan Valve Company faucets.

2 - INSTALL FLANGE

- A** Slide Flange over Hot and Cold Inlet Supply Lines (see Figure 2) of the Optimix Valve. Thread Flange onto Optimix Valve until fully seated against the Valve Shoulder.

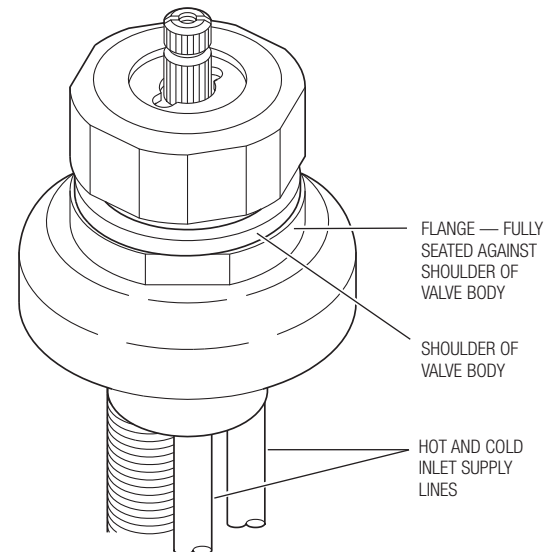


Figure 2

3 - INSTALL OPTIMIX VALVE

Note: Check Valves are located on the ends of the Hot and Cold Inlet Supply Lines of the Optimix Valve.

A Align Optimix Valve Base Gasket on top of the appropriate hole on Sink Deck or Trim Plate. Insert Optimix Valve Inlet Supply Lines through the Base Gasket, Trim Plate if applicable, and deck hole as illustrated in Figures 3A and 3B. Rest bottom of Optimix Valve Assembly on top of Base Gasket.

MIX-100-A INSTALLATION

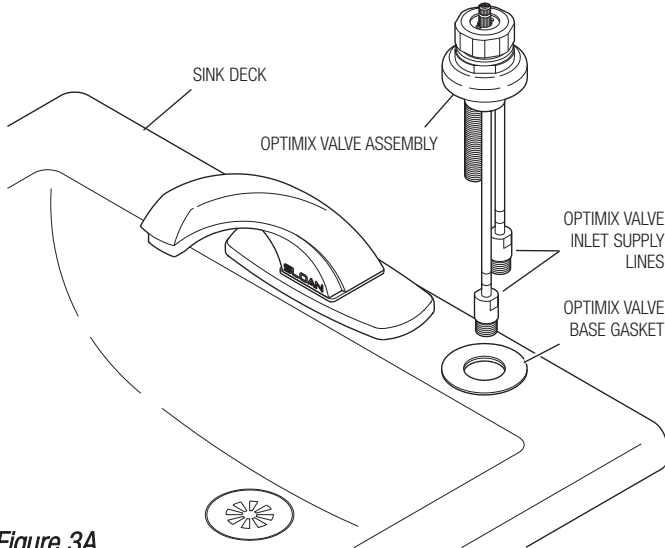


Figure 3A

Important: For MIX-110-AA installations, the Valve Body **MUST** be installed into the Trim Plate so that the flats of the Valve Body and Trim Plate are aligned as illustrated in Figure 3B. When aligned correctly, the Valve Body will drop into place and rest on the Base Gasket.

MIX-110-AA INSTALLATION

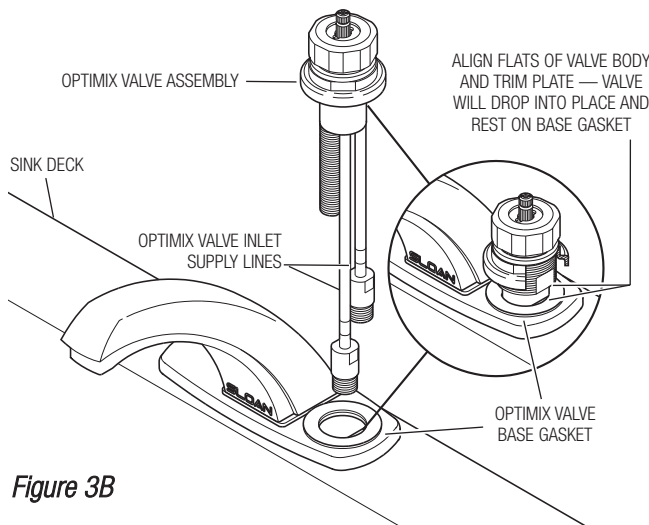


Figure 3B

B Hold Cup Washer with flat side facing bottom of deck. Slide open end of Cup Washer over the Optimix Valve Supply Lines and Outlet Shank as illustrated in Figures 3C and 3D. Slide Cup Washer up toward bottom of deck. Hold Cup Washer in place. Bend and spread the Hot and Cold Inlet Supply Lines away from the Outlet Shank to make clearance for the Mounting Nut as illustrated in Figure 3E. Install Mounting Nut onto Outlet Shank. Tighten the Mounting Nut until the Cup Washer is seated securely against the bottom of the deck.

MIX-100-A INSTALLATION

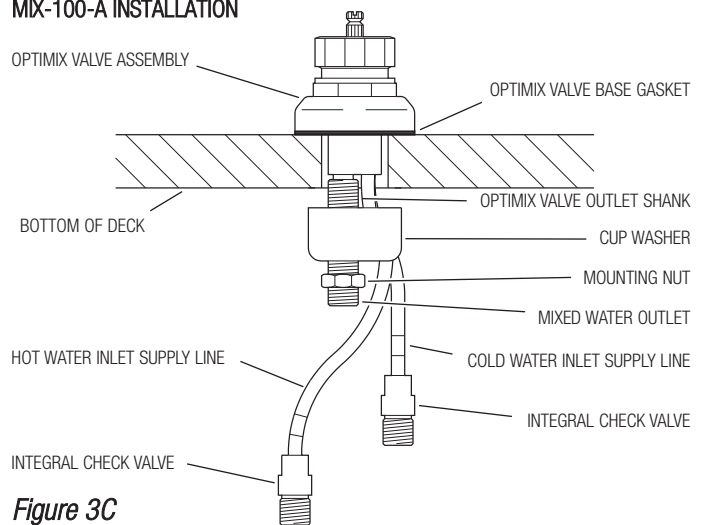


Figure 3C

MIX-110-AA INSTALLATION

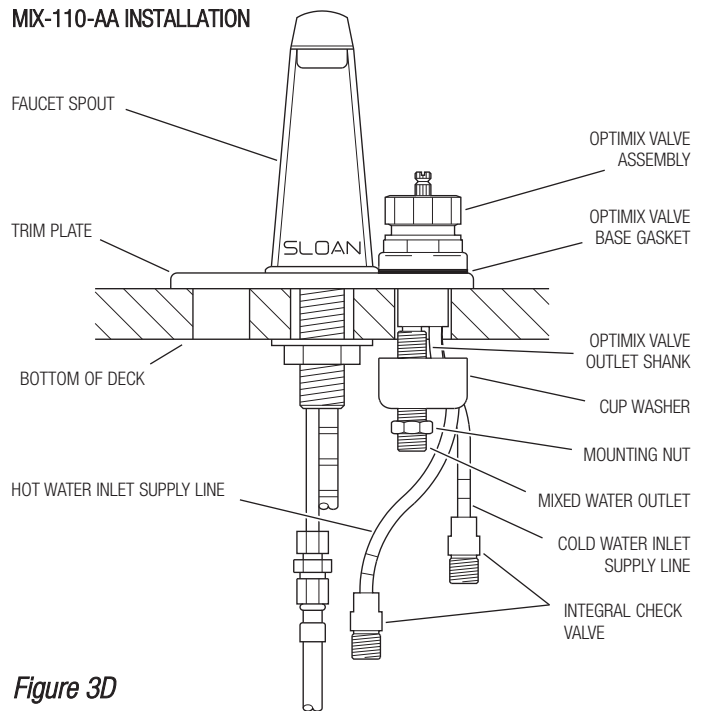


Figure 3D

BEND AND SPREAD SUPPLY LINES TO MAKE CLEARANCE FOR MOUNTING NUT

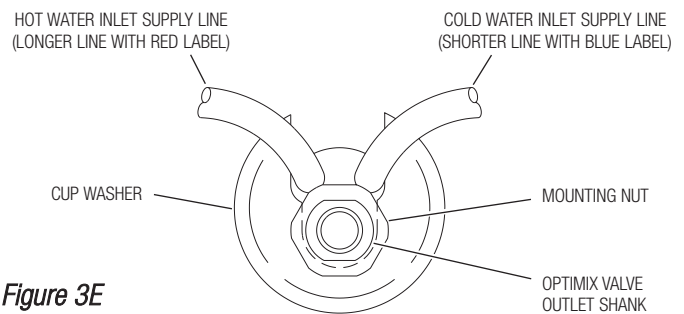


Figure 3E

4 - INSTALL HOT WATER TEMPERATURE LIMIT STOP (IF APPLICABLE)

IMPORTANT: CONSULT LOCAL PLUMBING CODES FOR INFORMATION RELATED TO HOT WATER TEMPERATURE LIMIT STOP REQUIREMENTS.

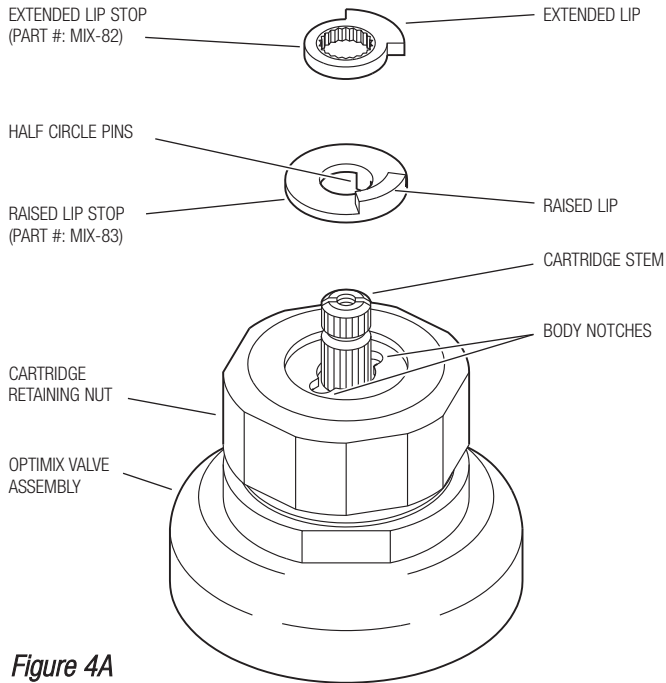


Figure 4A

INSTALL EXTENDED LIP STOP (Figures 4C through 4D)

Note: The maximum water temperature achieved depends on the temperatures of the hot and cold water supply sources. Seasonal climate changes may also affect water temperature.

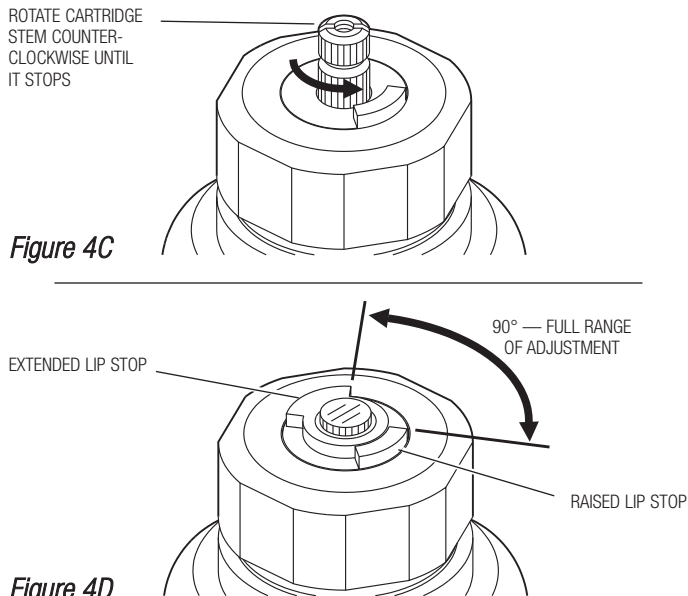


Figure 4C

Figure 4D

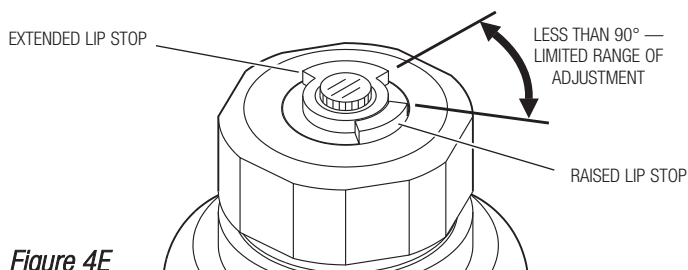


Figure 4E

INSTALL RAISED LIP STOP (Figures 4A and 4B)

- A** Install the Raised Lip Stop so that the two Half Circle Pins fit into the two Body Notches of the Cartridge Retaining Nut.

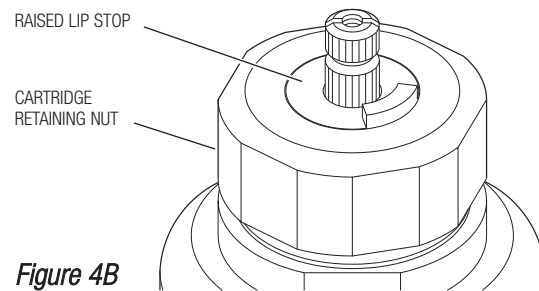


Figure 4B

- B** Rotate the Cartridge Stem counterclockwise until it stops. Refer to Figure 4C. It is important that the Cartridge Stem remains in this position when installing the Extended Lip Stop.

- C** Positioning of the Extended Lip Stop on the Cartridge Stem regulates the water temperature range. For maximum temperature range, position the Extended Lip Stop so that the Extended Lip is 90 degrees from the Raised Lip Stop as illustrated in Figure 4D.

- D** For a limited (smaller) temperature range, position the Extended Lip Stop so that the Extended Lip is less than 90 degrees from the Raised Lip Stop as illustrated in Figure 4E.

5 - INSTALL OPTIMIX VALVE HANDLE

- A** Install the Handle onto the Cartridge Stem (Figure 5). Check that Handle is positioned correctly for ease of use. Install Set Screw below Handle Blade using the 5/64" Hex Wrench supplied. Tighten Set Screw securely.

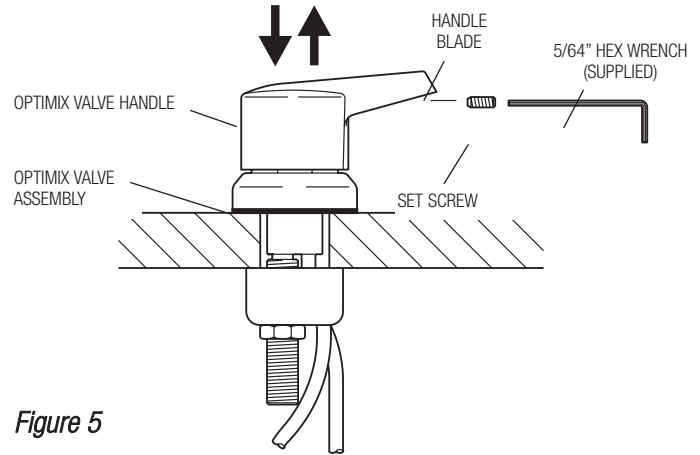


Figure 5

6 - CONNECT INLET SUPPLY LINES

NOTE: 3/8" Copper Inlet Supply Line, Compression Nuts and Ferrules are not supplied.

- A** Install the Cold Water Supply Line as Follows:

Slide a Compression Nut and Ferrule over one end of the Cold Water Copper Supply Line. Attach that end onto the Cold Water 3/8" Compression Supply Stop. Tighten Compression Nut securely. Slide a Compression Nut and Ferrule over the other end of the Copper Supply Line. Attach that end to the Cold Inlet Supply Line (shorter line with blue label) of the Optimix Valve. Tighten Compression Nut securely.

- B** Install the Hot Water Supply Line as Follows:

Slide a Compression Nut and Ferrule over one end of the Hot Water Copper Supply Line. Attach that end onto the Hot Water 3/8" Compression Supply Stop. Tighten Compression Nut securely. Slide a Compression Nut and Ferrule over the other end of the Copper Supply Line. Attach that end to the Hot Inlet Supply Line (longer line with red label) of the Optimix Valve. Tighten Compression Nut securely.

7 - CONNECT FLEX HOSE (SUPPLIED) FROM OPTIMIX VALVE OUTLET TO SOLENOID VALVE INLET

- A** Attach one end of the Flexible Supply Hose to the Optimix Valve Shank (outlet). Tighten Compression Nut securely.

Note: An arrow on the body of the Solenoid Valve indicates the water flow direction.

- B** Attach the other end of the Flexible Supply Hose to the bottom inlet Compression Fitting on the Solenoid Valve. Tighten Compression Nut securely.

8 - FINISH INSTALLATION PROCEDURE

- A** If applicable, complete the faucet installation as instructed in the Installation Instructions furnished with the faucet.

- B** Open Supply Lines at Compression Stops. Check for leaks and repair if necessary.

CERAMIC CARTRIDGE REPLACEMENT (SEE FIGURE 6)

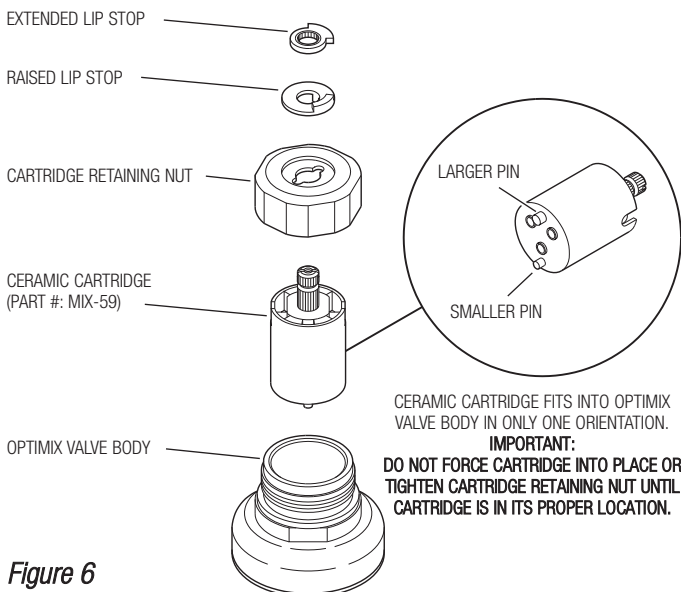


Figure 6

- A** Remove Optimix Valve Handle (Figure 7) – Close Supply Lines at Compression Stops. Activate faucet to release water pressure from the system. Remove Set Screw from below Handle Blade using the 5/64" Hex Wrench supplied. Remove the Handle from the Optimix Valve Assembly by lifting straight up.

- B** Remove Hot Water Temperature Limit Stop (if applicable)

If Hot Water Temperature Limit Stop is not installed, disregard this Step and continue with instructions at Step 3.

Rotate the Cartridge Stem counterclockwise until it stops. Mark the position of the Extended Lip Stop on the Raised Lip Stop for reinstallation. Remove the Extended Lip Stop and Raised Lip Stop from the Optimix Valve Assembly.

CERAMIC CARTRIDGE REPLACEMENT (SEE FIGURE 6) - CONTINUED

- C Replace Ceramic Cartridge** — Remove Cartridge Retaining Nut from Optimix Valve Assembly. Pull the Ceramic Cartridge out from the Valve Body and replace with a new MIX-59 Ceramic Cartridge. Rotate the Cartridge until the Cartridge Pins set into the corresponding holes of the Valve Body. The Cartridge is designed to fit into the Valve Body in only one orientation. **Be certain that the larger Pin sets into the corresponding larger hole and the smaller Pin into the corresponding smaller hole of the Valve Body; refer to Figure 6. DO NOT force Cartridge into place or tighten Cartridge Retaining Nut until Cartridge is in its proper location.** Reinstall the Cartridge Retaining Nut and tighten hand-tight.

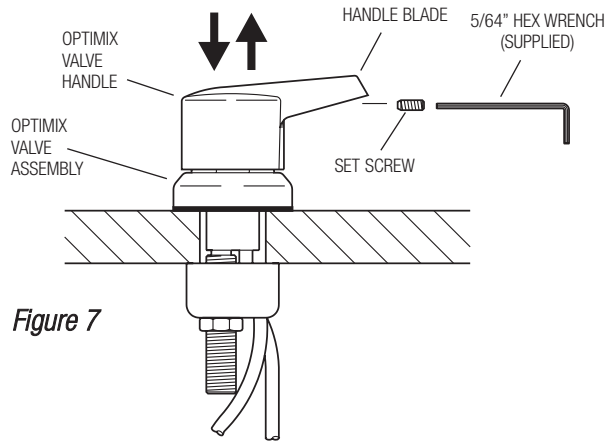


Figure 7

- D Install Hot Water Temperature Limit Stop (if applicable)**

If Hot Water Temperature Limit Stop was not initially installed, disregard this Step and continue with instructions at Step 5. If installing a Hot Water Temperature Limit Stop at this time, continue with this Step.

Install Hot Water Temperature Limit Stop as instructed in Step 4 on Page 5.

- E Install Optimix Valve Handle (Figure 11)**

Install the Handle onto the Cartridge Stem. Check that Handle is positioned correctly for ease of use. Install Set Screw below Handle Blade using the 5/64" Hex Wrench supplied. Tighten Set Screw securely.

Open Supply Lines at Compression Stops. Check for leaks and repair if necessary.

CHECK VALVE REPLACEMENT (SEE FIGURE 8)

- A Disconnect Supply Lines at Check Valve Body**

Close Water Supply Lines at Compression Stops. Activate Faucet to release water pressure from the system. Disconnect Supply Line(s) at Check Valve Body.

- B Replace Check Valve**

Remove old Check Valve by inserting the tip of a small screwdriver under the lip of the Check Valve and pry up and out of the Check Valve Body. Replace with a new MIX-79 Check Valve.

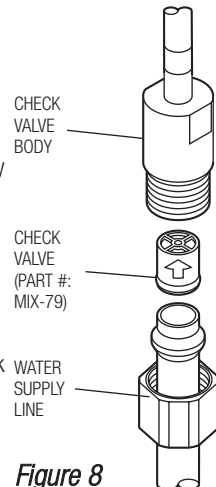


Figure 8

- C Connect Supply Lines to Check Valve Body**

Connect Water Supply Line(s) at Check Valve Body. Refer to Figure 1 for correct Water Line connections. Open Supply Lines at Compression Stops. Check for leaks and repair if necessary.

Important: Make sure that the arrow on the Check Valve points in the direction of the water flow.

TROUBLESHOOTING GUIDE

PROBLEM: Water temperature changes do not correspond with red (HOT) and blue (COLD) markings shown on the Handle.

Cause: Hot and Cold Water Supply Lines are reversed.

Solution: Close Supply Lines at Compression Stops. Activate faucet to release water pressure from the system. Disconnect and reverse Supply Lines at Compression Stops. Connect the Cold Supply to the shorter Cold inlet Supply Line (blue label) of the Optimix Valve. Connect the Hot Supply to the longer Hot inlet Supply Line (red label) of the Optimix Valve. Open Supply Lines at Compression Stops.

PROBLEM: Water flow is slow.

Cause: Extra set of Check Valves installed inline between Supply Compression Stops and the Optimix Valve Check Valves.

Solution: Close Supply Lines at Compression Stops. Activate faucet to release water pressure from the system. Remove existing Check Valve(s) installed between Supply Compression Stop and the Integral Check Valve of the Optimix Valve. Connect 3/8" Supply Lines from the Compression Stops directly to the Integral Check Valves of the Optimix Valve. Open Supply Lines at Compression Stops.

Cause: Check Valve is clogged or damaged.

Solution: Replace Check Valve as instructed in the Section Entitled "Check Valve Replacement," Page 7 of this Installation Instructions.

PROBLEM: Cartridge not working or turning.

Cause: Ceramic Cartridge is damaged.

Solution: Replace Ceramic Cartridge as instructed in the Section Entitled "Ceramic Cartridge Replacement," Page 6 of this Installation Instructions.

Cause: Optimix Valve Handle position interferes with operation.

Solution: Adjust position of Optimix Valve Handle. Remove Set Screw from below Handle Blade using the 5/64" Hex Wrench supplied. Remove the Handle from the Optimix Valve by lifting straight up. Reinstall Handle on the Cartridge Stem so that its swing does not interfere with operation. Reinstall the Set Screw below the Handle Blade and tighten securely.

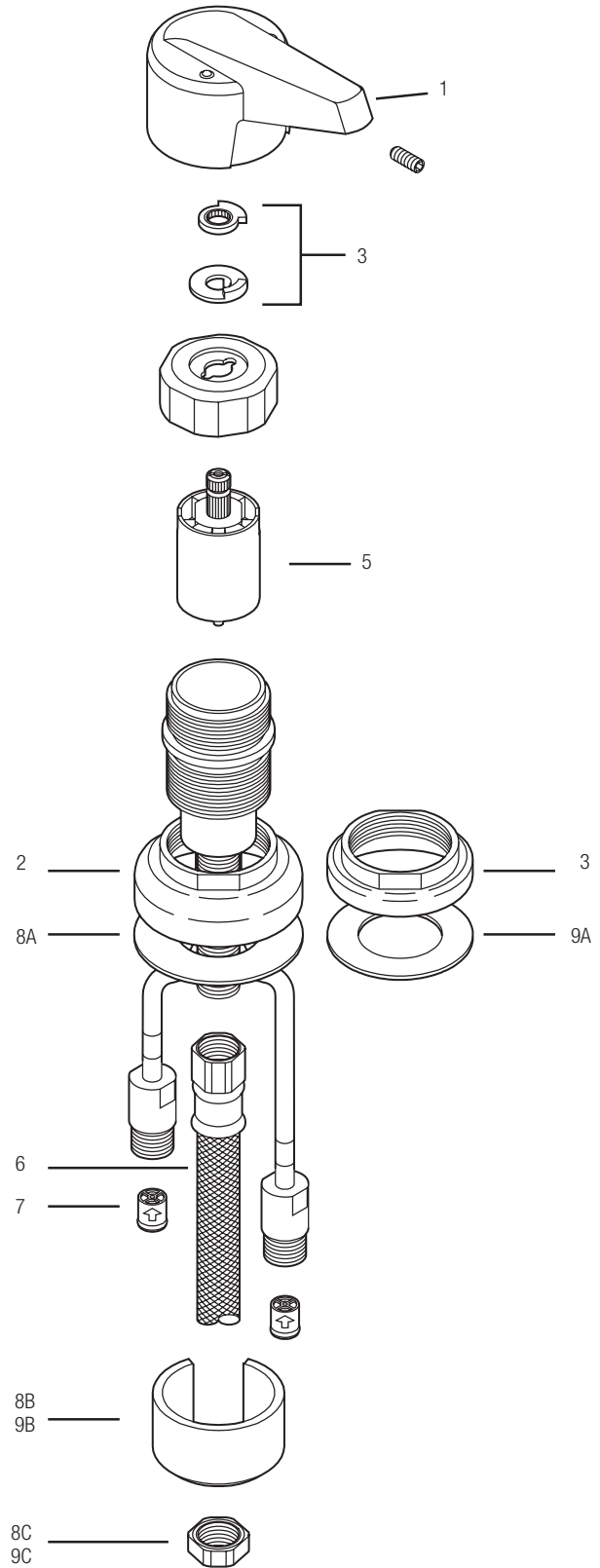
If further assistance is required, please contact the Sloan Valve Company Installation Engineering Department at 1-888-SLOAN-14 (1-888-756-2614).

PARTS LIST

Item No.	Part No.	Description
	MIX-100-A	Ceramic Stand Alone Optimix Valve Assembly, includes Part Numbers 1 and 4 through 8 ‡.
	MIX-110-AA	Ceramic Optimix Valve Assembly with Trim Plate, includes Part Numbers 2 through 7 and 9 ‡.
1	MIX-123-A	Handle Assembly, includes 8-32x5/8 Cone Point Stainless Steel Set Screw
2	MIX-144	Flange for Stand Alone (MIX-100-A)
3	MIX-143	Flange for Trim Plate Mount (MIX-110-AA)
4	MIX-87-A	Hot Water Temperature Limit Stop Kit, includes Extended Lip Stop and Raised Lip Stop
5	MIX-59	Ceramic Cartridge
6	MIX-19	Flexible Supply Hose, 20"
7	MIX-79	Check Valve – 2/pack
8	MIX-84-A	Mounting Hardware for MIX-100-A Valve, includes Part Numbers 7A through 7C †
8A	–	Base Gasket
8B	–	Cup Washer
8C	–	Mounting Nut
9	MIX-111-A	Mounting Hardware for MIX-110-AA Valve, includes Part Numbers 8A through 8C †
9A	–	Base Gasket
9B	–	Cup Washer
9C	–	Mounting Nut

† Mounting Hardware Kit also includes 5/64" Hex Wrench and Spacer (not shown).

‡ Older mixing valves MIX-25-A or MIX-30-A only available repair part is MIX-1-A Repair Cartridge.



NOTICE: The information contained in this document is subject to change without notice.

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