






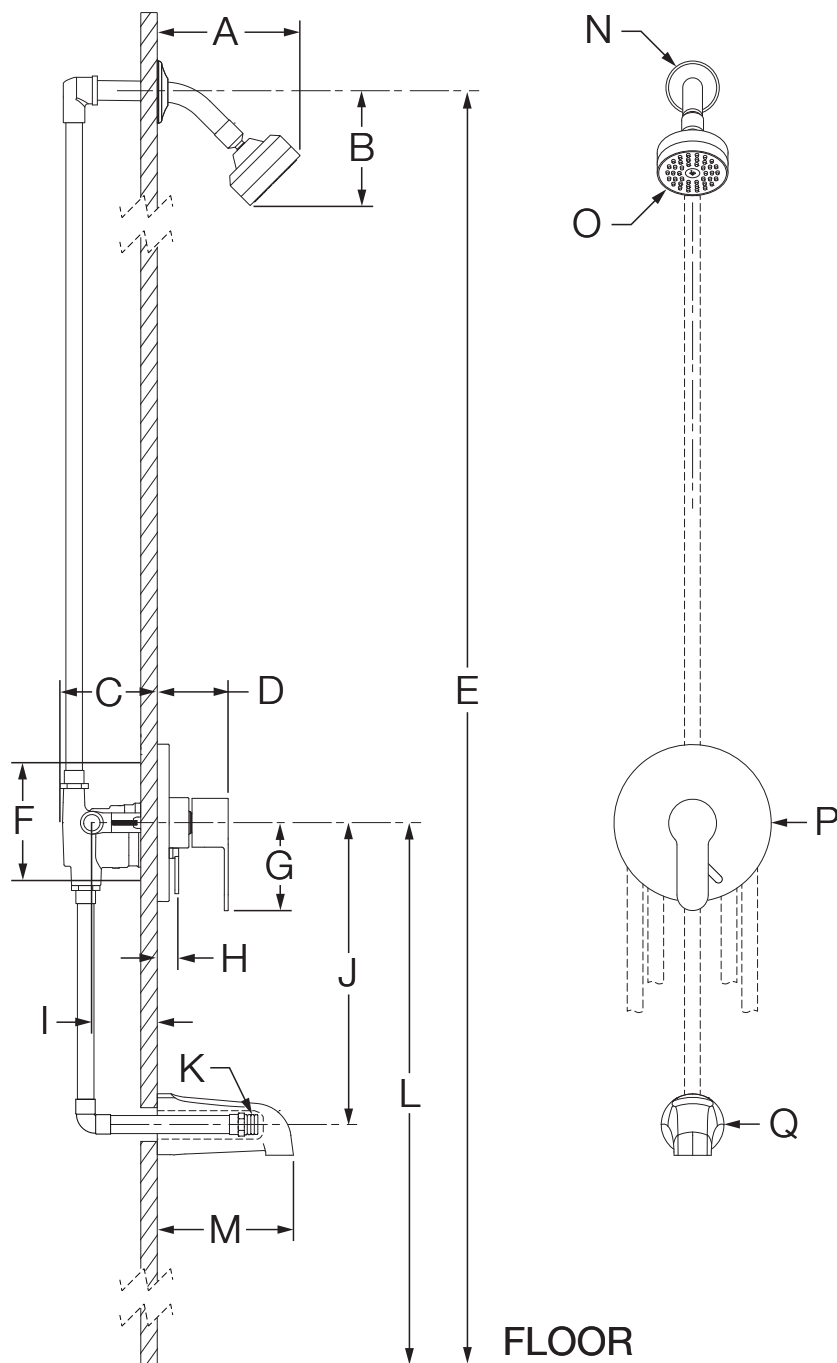


S-6700, S-6700TS, S-6701, S-6702 Operation & Maintenance Manual

Model Numbers	Specification
<input type="checkbox"/> S-6700 <i>Identity Shower System</i> <input type="checkbox"/> S-6700TS <i>Identity Tub/Shower System</i> <input type="checkbox"/> S-6701 <i>Identity Shower System</i> <input type="checkbox"/> S-6702 <i>Identity Tub/Shower System</i>	<p>S-6700 Shower system powered by the Temptrol® pressure-balancing valve with integrated volume control. Valve body includes adjustable stop screw to limit handle turn.</p> <p>S-6700TS Tub/shower system powered by the Temptrol® pressure-balancing valve with integrated diverter. Valve body includes adjustable stop screw to limit handle turn.</p>
Modifications	<p>S-6701 Shower system powered by the Temptrol® pressure-balancing valve. Features adjustable stop screw to limit handle turn, integrated volume control, 1 mode showerhead with easy to clean rubber nozzles and standard 2.5 gpm (9.5 L/min) flow restrictor.</p> <p>S-6702 Tub/shower system powered by the Temptrol® pressure-balancing valve. Features adjustable stop screw to limit handle turn, integrated diverter, non-diverter tub spout, 1 mode showerhead with easy to clean rubber nozzles and standard 2.5 gpm (9.5 L/min) flow restrictor.</p> <p>Components made from metal and nonmetallic materials, plated in standard polished chrome finish.</p>  
<input type="checkbox"/> -1.5  1.5 gpm (5.7 L/min) flow restrictor <input type="checkbox"/> -2.0 2.0 gpm (7.6 L/min) flow restrictor <input type="checkbox"/> -143 3 mode showerhead <input type="checkbox"/> -145 5 mode showerhead <input type="checkbox"/> -231 2 mode showerhead <input type="checkbox"/> -CHKS Integral check stops - for use in installations where a positive shut-off device is used downstream of mixing valve <input type="checkbox"/> -IPS 1/2" female IPS connections <input type="checkbox"/> -L/HD Less showerhead <input type="checkbox"/> -LP Loop handle <input type="checkbox"/> -LR Lever handle <input type="checkbox"/> -OP 13" oval plate <input type="checkbox"/> -REB-TRM Rebuild trim kit <input type="checkbox"/> -REV Reverse coring, hot on right, cold on left, for back to back installations <input type="checkbox"/> -SS Slip spout on any tub/shower unit <input type="checkbox"/> -STN Satin Nickel finish <input type="checkbox"/> -TRM Trim only, valve not included <input type="checkbox"/> -X Integral service stops - allows water shutoff at valve for service	<p>Compliance</p> <p>-ASME A112.18.1/CSA B125.1 -WaterSense 1.5 gpm (5.7 L/min)</p>   <p><u>For California Residents</u> WARNING: This product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.</p>
	<p>Warranty</p> <p>Limited Lifetime - to the original end purchaser in consumer/residential installations. 5 Years - for industrial/commercial installations. Refer to www.symmons.com/warranty for complete warranty information.</p>

Note: Append appropriate -suffix to model number.

Dimensions

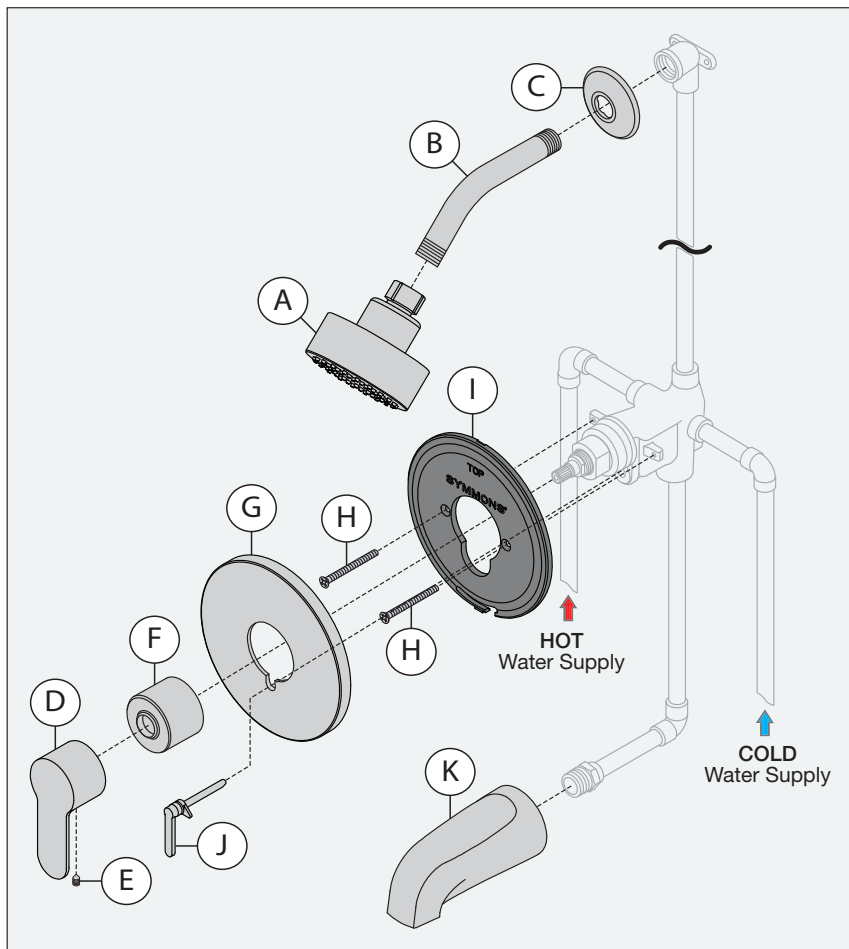


Measurements	
A	5-7/8", 149 mm
B	4-5/8", 117 mm
C	3-1/2", 89 mm
D	2-7/8", 73 mm
E	Ref. 77", 1956 mm
F	Shower Valve Hole Size Min. Ø 3", 76 mm Max. Ø 4", 102 mm
G	3-1/2", 89 mm
H	7/8", 22 mm
I	Rough-in 2-3/8" ± 1/2", 60 mm ± 13 mm
J	12", 305 mm
K	Male 1/2" NPT fitting must protrude 4" (102 mm) from finished wall
L	S-6700TS, S-6702 Ref. 32", 813 mm S-6700, S-6701 Ref. 42", 1067 mm
M	5-1/2", 140 mm
N	Ø 2-1/2", 64 mm
O	Ø 3-1/8", 79 mm
P	Ø 6-3/8", 162 mm
Q	Ø 2-1/2", 64 mm

Notes:

- 1) All dimensions measured from nominal rough-in (see I as reference).
- 2) Dimensions subject to change without notice.

Parts Breakdown



Notes:


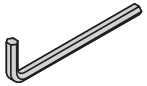
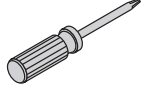

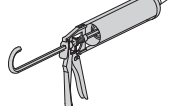
- 1) Apply a bead of silicone around the perimeter of all shower trim installed flush to the finished wall (less mounting plates and brackets). Leave opening on bottom of escutcheons for weep hole.
- 2) Apply plumber tape to all threaded connections.

Replacement Parts

Item	Description	Part Number
A	Showerhead	672SH*
B	Shower Arm	300S*
C	Flange	
D	Handle	RTS-084*
E	Set Screw	
F	Dome Cover	T-19*
G H I	Shower Escutcheon Kit	(S-6700TS, S-6702) S-6700TS-ESC* (S-6700, S-6701) S-6700-ESC*
J	Secondary Handle	RTS-083*
K	Tub Spout	060*

***Note:** Append -STN to part number for Satin Nickel finish.

Tools Required for Installation

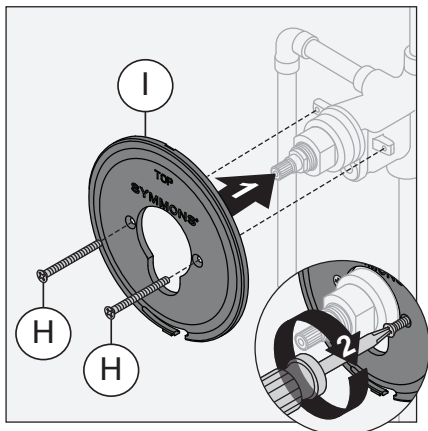
Adjustable Wrench	
Allen Wrench 3/32"	
Phillips Head Screwdriver	
Plumber Tape	
Silicone	

Installation

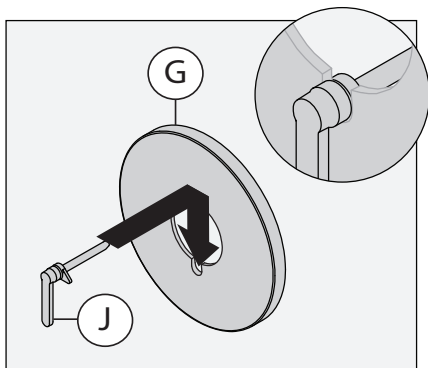
Note:

For valve body installation, please see valve body manual.

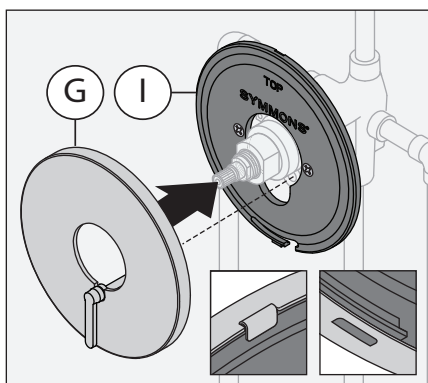
- 1) Install shower mounting plate (I) to shower valve. Secure with two screws (H).



- 2) Install secondary handle (J) to shower escutcheon (G).

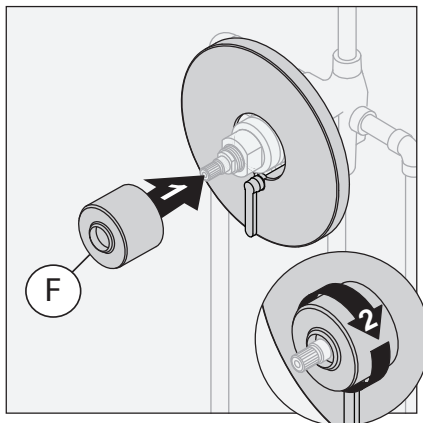


- 3) Attach shower escutcheon (G) to shower mounting plate (I).

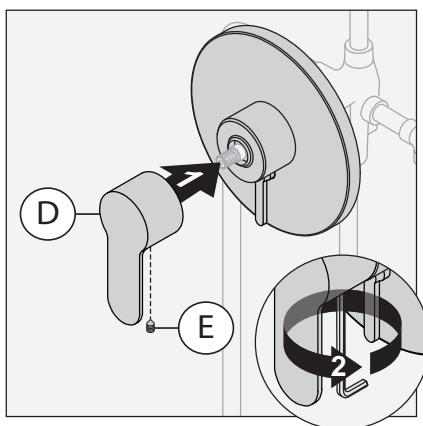


Note: Tabs should snap into place.

- 4) Install dome cover (F) to shower valve by turning clockwise.

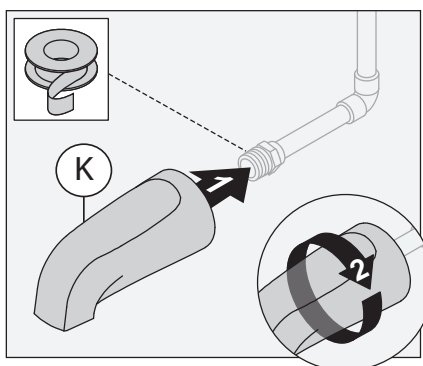


- 5) Install handle (D) to shower valve. Secure handle with set screw (E).

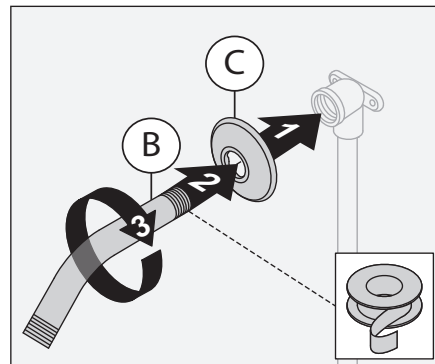


Note: Handle should be facing the 6 o'clock position.

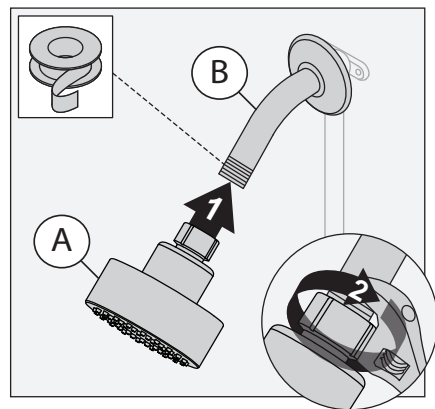
- 6) Install tub spout (K) to pipe fitting. Turn clockwise to tighten.



- 7) Attach shower arm (B) and flange (C) to vertical shower pipe. Turn clockwise to tighten.

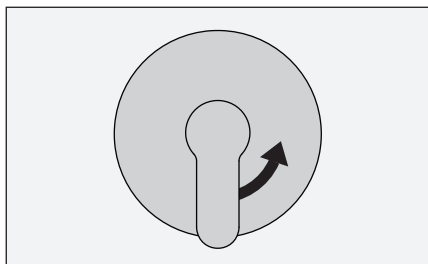


- 8) Install showerhead (A) to shower arm (B). Turn clockwise to tighten.

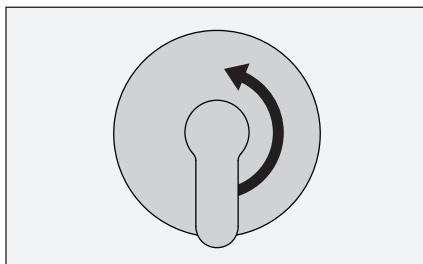


Operation (Temperature Control)

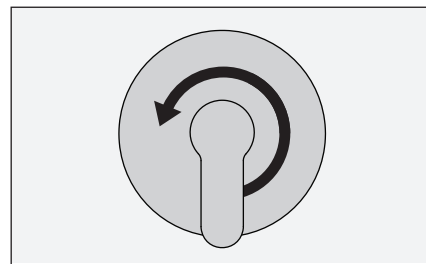
1) Turn shower handle counter-clockwise approximately 1/4 turn to put valve in cold position.



2) Turn shower handle counter-clockwise approximately 1/2 turn to put valve in warm position.

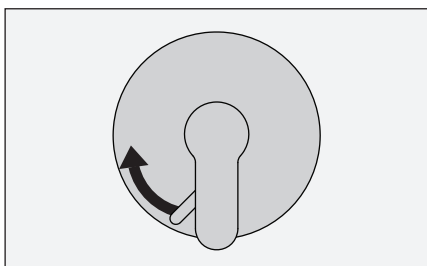


3) Turn shower handle counter-clockwise approximately 3/4 turn to put valve in hot position.

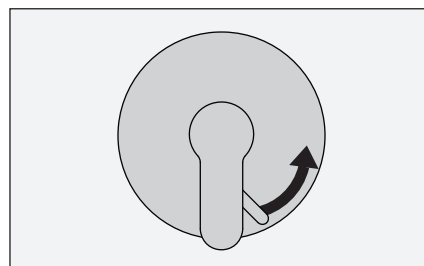


Operation (Diverter Control for S-6700TS, S-6702)

1) Turn diverter handle left for tub spout operation.

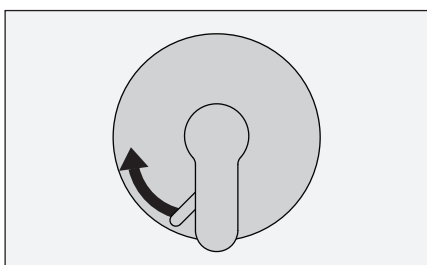


2) Turn diverter handle right for showerhead operation.

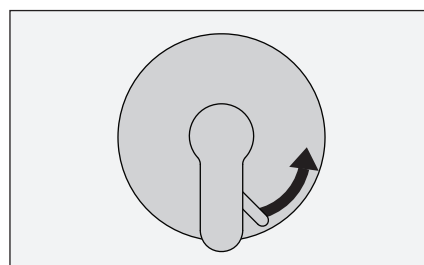


Operation (Volume Control for S-6700, S-6701)

1) Turn volume control handle left for high flow.



2) Turn volume control handle right for low flow.



Troubleshooting Chart

Problem	Cause	Solution
Finish is spotting.	Elements in water supply may cause water staining on finish.	Clean finished trim area with a soft cloth using mild soap and water or a non-abrasive cleaner and then quickly rinse with water.



Identity Trim Series

Identity Trim Series with TA-10 Flow Control Spindle & T-12A Cap Assembly Installation & Operation Instructions

Model Numbers

TRIM ONLY

6700-TRM
Shower Valve Trim

6701-TRM
Shower Trim

6702-TRM
Tub/Shower Trim

6703-TRM
Hand Shower Trim

6705-TRM
Shower/Hand Shower Trim

6706-TRM
Tub/Shower/Hand Shower Trim

TRIM, TA-10, T-12A

6700TRMTC
Shower Valve Trim

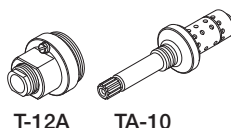
6701TRMTC
Shower Trim

6702TRMTC
Tub/Shower Trim

6703TRMTC
Hand Shower Trim

6705TRMTC
Shower/Hand Shower Trim

6706TRMTC
Tub/Shower/Hand Shower Trim



T-12A

TA-10



6700-TRM
6700TRMTC



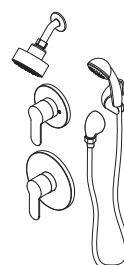
6701-TRM
6701TRMTC



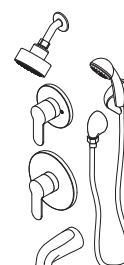
6702-TRM
6702TRMTC



6703-TRM
6703TRMTC



6705-TRM
6705TRMTC



6706-TRM
6706TRMTC

Compliance

- ASME A112.18.1/CSA B125.1



Warranty

Limited Lifetime - to the original end purchaser in consumer/residential installations.

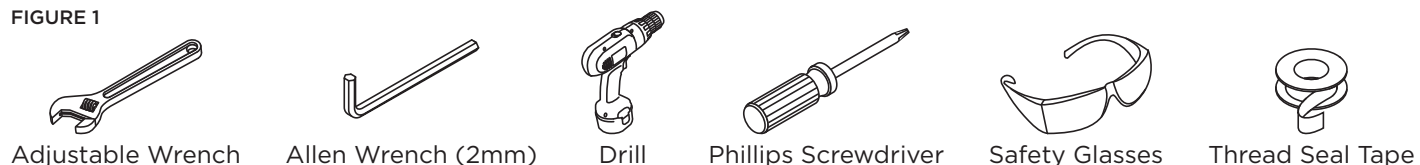
5 Years - for industrial/commercial installations.

Refer to www.symmons.com/warranty for complete warranty information.

Go to www.symmons.com/register to register your Symmons product.

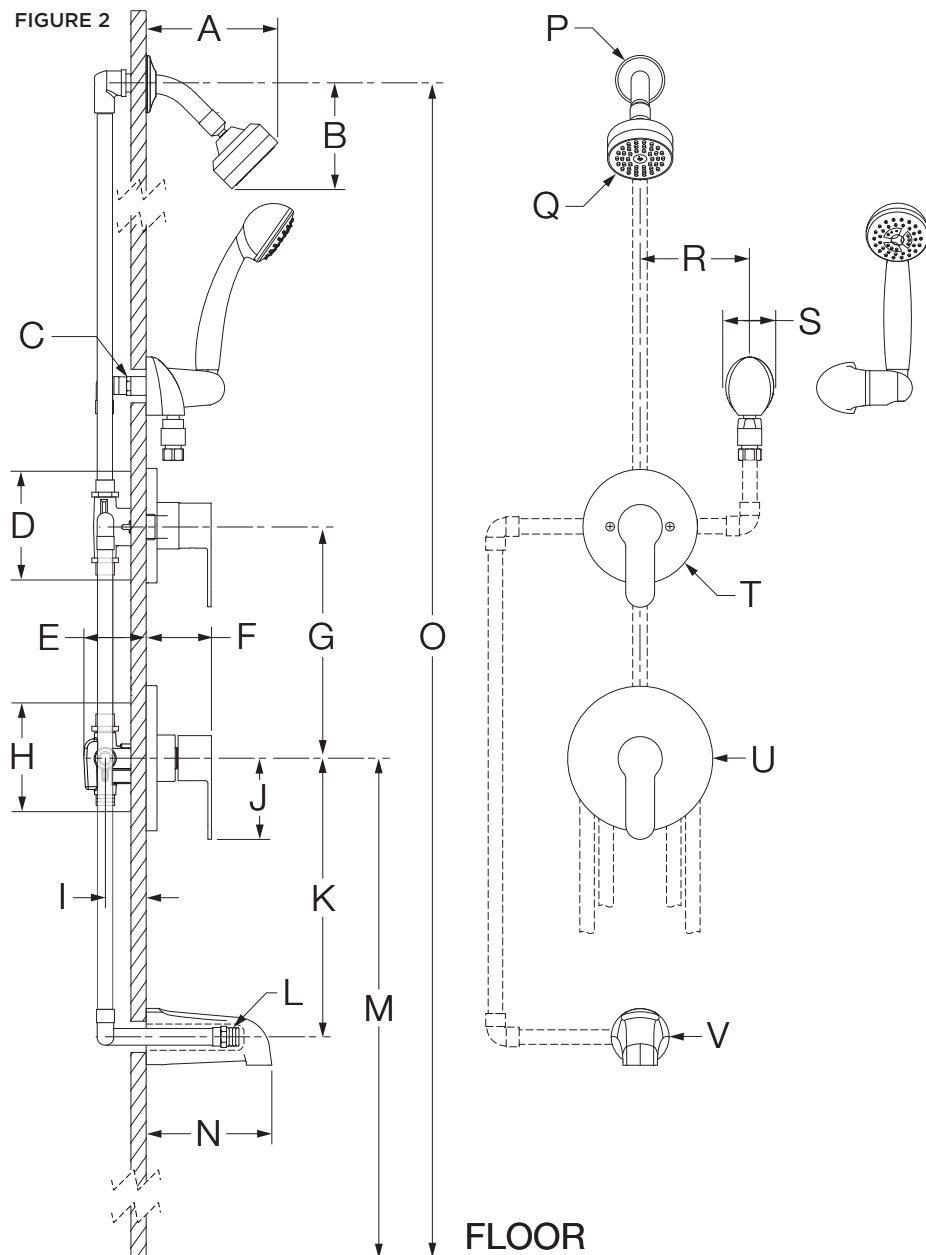
1. Recommended Tools

FIGURE 1



2. Dimensions

FIGURE 2



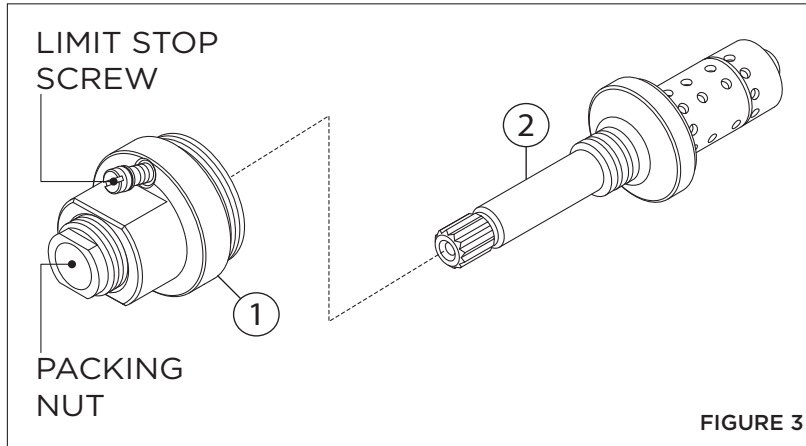
Measurements

A	5-7/8", 149 mm
B	4-5/8", 117 mm
C	Male 1/2" NPT fitting must be recessed 1/4" (6 mm) from finished wall
D	Diverter Valve Hole Size Min. Ø 3", 76 mm Max. Ø 3-1/4", 83 mm
E	3-5/8", 92 mm
F	2-7/8", 73 mm
G	Ref. 10", 254 mm
H	Shower Valve Hole Size Min. Ø 3", 76 mm Max. Ø 4", 102 mm
I	Rough-in 2-3/8" ± 1/2", 60 mm ± 13 mm
J	3-1/2", 89 mm
K	12", 305 mm
L	Male 1/2" NPT fitting must protrude 4" (102 mm) from finished wall
M	6700, 6701, 6703, 6705: Ref. 42", 1067 mm 6702, 6706: Ref. 32", 813 mm
N	5-1/2", 140 mm
O	Ref. 77", 1956 mm
P	Ø 2-1/2", 64 mm
Q	Ø 3-1/8", 79 mm
R	6", 152 mm
S	2-1/8", 54 mm
T	Ø 5", 127 mm
U	Ø 6-3/8", 162 mm
V	Ø 2-1/2", 64 mm

Notes:

- 1) Valve body and piping not included and shown as reference only.
- 2) Plaster shield (p/n T-176) for dry wall, plaster or other type walls 1/2" or greater.
- 3) All dimensions measured from nominal rough-in (see I as reference).
- 4) Dimensions subject to change without notice.

3. Parts Breakdown (Model Numbers Ending in TRMTC)



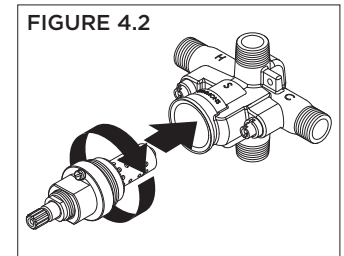
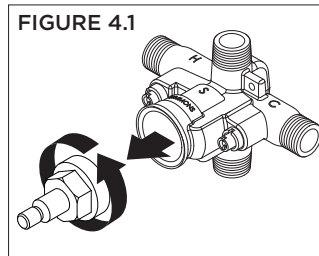
Replacement Parts		
Item	Description	Part Number
1	Cap Assy.	T-12A
2	Flow Control Spindle	TA-10

IMPORTANT: Model numbers ending in **TRMTC** coordinate with Temptrol pressure balancing valves ordered with Test Cap. The Test Cap is used to allow pressurization of system. **Do not** remove test cap from valve during wall construction, installation of valve or pressurization of system.

4. Installation - Remove Test Cap (Model Numbers Ending in TRMTC)

Flow control spindle (TA-10) and cap assembly (T-12A) will come factory assembled for all model numbers ending in **TRMTC**. When ready to remove Test Cap and install trim, follow the instructions below:

- 1) Check for leaks around the valve assembly and all pipe fittings.
- 2) Remove test cap from valve (FIGURE 4.1).
- 3) If system is dirty, flush valve.
- 4) Thread flow control spindle and cap assembly into valve body. Turn clockwise to secure to valve (FIGURE 4.2).



5. Installation - Adjust Packing Nut (Model Numbers Ending in TRMTC)

- 1) Turn hot and cold supplies on. Valve will not operate unless both hot and cold water supply pressures are on.
- 2) Place handle over flow control spindle.
- 3) Tighten packing nut for positive frictional resistance as handle is rotated from shut-off position across adjustment range.

6. Installation - Setting Limit Stop Screw (Model Numbers Ending in TRMTC)

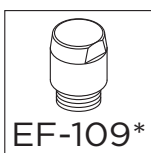
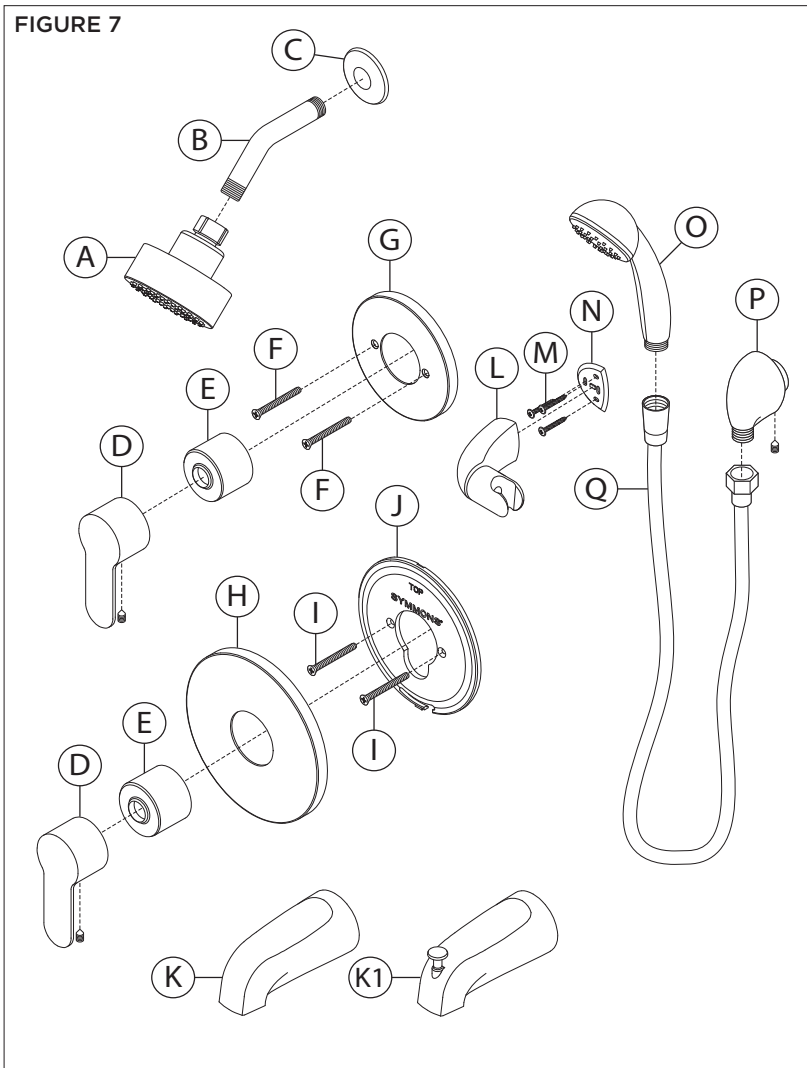
The temperature limit stop screw limits valve handle from being turned to maximum position resulting in excessive hot water discharge temperatures.

⚠ WARNING: Failure to adjust limit stop screw properly may result in serious scalding.

- 1) Turn hot and cold supplies on. Valve will not operate unless both hot and cold water supply pressures are on.
- 2) Place handle on flow control spindle and open valve to maximum desired temperature.
- 3) Turn limit stop screw clockwise until it seats.

7. Parts Breakdown

FIGURE 7



*Order in-line vacuum breaker (EF-109) for hand shower systems without dual checks.

Replacement Parts		
Item	Description	Part Number
A	Showerhead	672SH
B	Shower Arm	300S
C	Flange	
D	Handle Assy.	RTS-084
E	Dome Cover	T-19
F	Diverter Escutcheon	67-DIV-ESC
G	Screws	
H	Shower Escutcheon	6700-ESC
I	Screws	
J	Mounting Plate	
K	Tub Spout	060
K1	Diverter Tub Spout	054
L	Wall Cradle	EF-106
M	Screws	
N	Mounting Plate	
O	Hand Shower	EF-100
P	Wall Elbow	EF-105
Q	60" Hose	RTS-045

Notes:

- 1) Append appropriate suffix for premium finish.
- 2) Append appropriate flow rate to showerhead or hand shower for low flow.
- 3) Apply a bead of silicone around the perimeter of all shower trim installed flush to the finished wall. Leave opening on bottom of escutcheons for weep hole.
- 4) Apply plumber tape to all threaded connections.

8. Installation - Shower Valve Trim

- 1) Secure large mounting plate to Temptrol pressure balancing valve using mounting screws (FIGURE 8.1).
- 2) Secure large shower escutcheon to mounting plate. Tabs should snap in place (FIGURE 8.2).
- 3) Install dome cover by turning clockwise (FIGURE 8.3).
- 4) Install handle to shower valve. Secure with set screw (FIGURE 8.4).

FIGURE 8.1

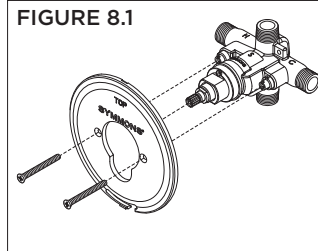


FIGURE 8.2

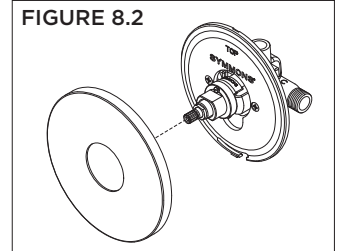


FIGURE 8.3

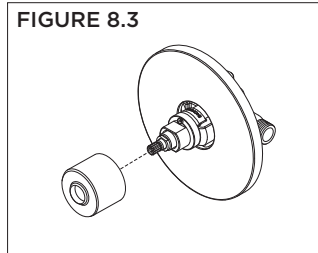
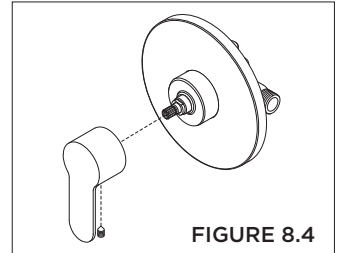


FIGURE 8.4



9. Installation - Diverter Valve Trim

- 1) Secure small diverter escutcheon to Symmons diverter valve using mounting screws (FIGURE 9.1).
- 2) Install dome cover by turning clockwise (FIGURE 9.2).
- 3) Install handle to diverter valve. Secure with set screw (FIGURE 9.3).

FIGURE 9.1

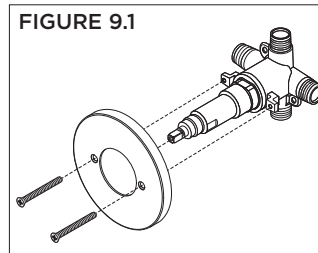


FIGURE 9.2

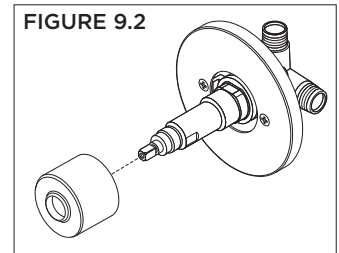
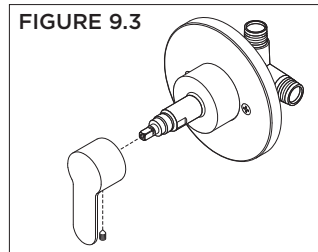


FIGURE 9.3



10. Installation - Showerhead & Tub Spout

- 1) Attach arm and flange to shower pipe. Turn clockwise to tighten (FIGURE 10.1).
- 2) Install showerhead to shower arm. Turn clockwise to tighten (FIGURE 10.2).
- 3) Install tub spout to stub out pipe. Turn clockwise to tighten (FIGURE 10.3).

FIGURE 10.1

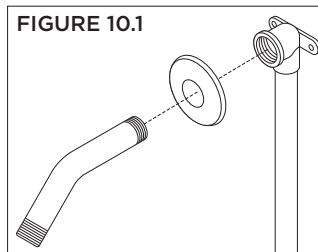


FIGURE 10.2

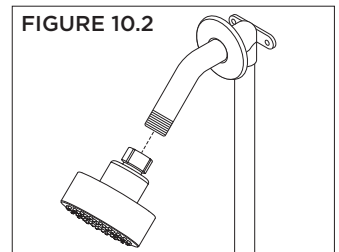
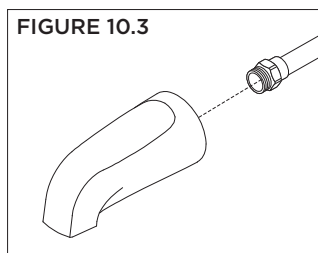


FIGURE 10.3

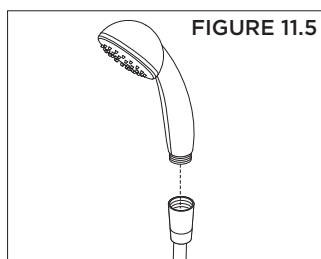
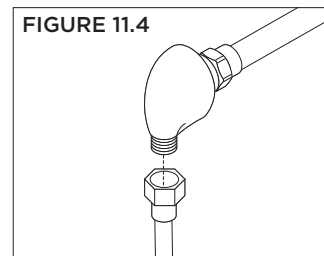
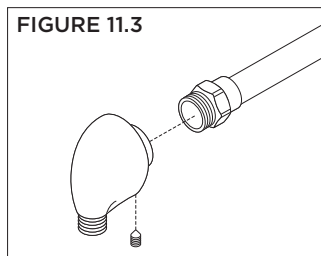
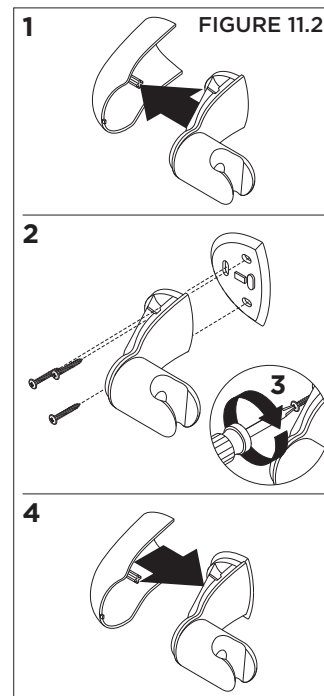
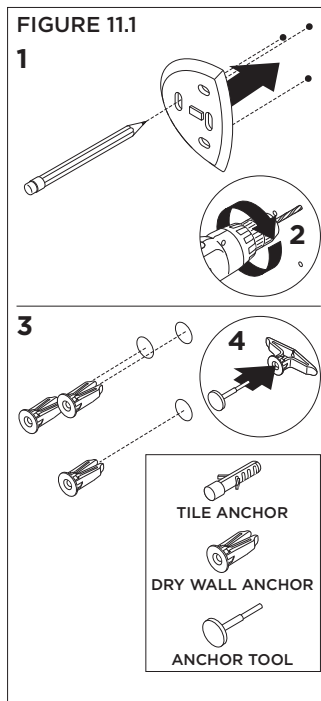


11. Installation - Slide Bar Assembly

- 1) Place mounting plate in position. Mark and drill $\frac{3}{16}$ " holes for tile anchors, $\frac{5}{16}$ " holes for drywall anchors. Install anchors (FIGURE 11.1).

Note: For dry wall $\frac{1}{2}$ " thick or less, insert anchor tool into drywall anchor to secure behind wall prior to installing wall cradle.

- 2) Remove cover of hand shower cradle. Install cradle and mounting plate. Secure with three screws. Replace cover on hand shower cradle (FIGURE 11.2).
- 3) Install wall elbow to stub out pipe. Tighten set screw to secure (FIGURE 11.3).
- 4) Attach small end of hand shower hose to wall elbow. Turn clockwise to tighten (FIGURE 11.4).
- 5) Attach large end of hand shower hose to hand shower wand. Turn clockwise to tighten (FIGURE 11.5).



12. Operation (Temperature Control)

- 1) Turn shower handle counter-clockwise approximately 1/4 turn to put valve in cold position (FIGURE 12.1).
- 2) Turn shower handle counter-clockwise approximately 1/2 turn to put valve in warm position (FIGURE 12.2).
- 3) Turn shower handle counter-clockwise approximately 3/4 turn to put valve in hot position (FIGURE 12.3).

FIGURE 12.1

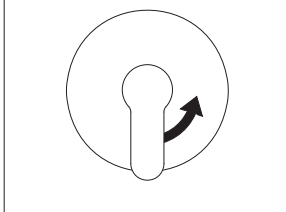


FIGURE 12.2

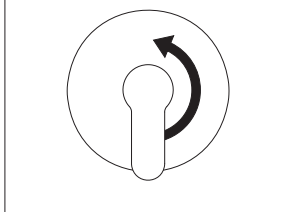
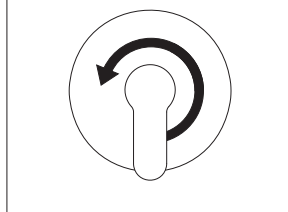


FIGURE 12.3



13. Operation (Dual Outlet Diverter Control)

Note: Additional handle positions for same output are illustrated.

- 1) Cartridge is factory set to divert to function 1 (FIGURE 13.1).
- 2) Turn handle to position 2 to divert to function 2 (FIGURE 13.2).
- 3) Turn handle to position 3 to share functions 1 and 2 (FIGURE 13.3).

FIGURE 13.1

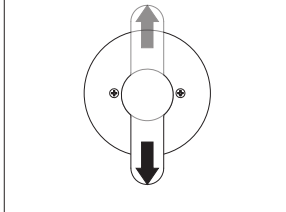


FIGURE 13.2

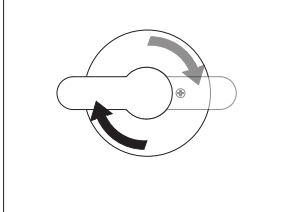
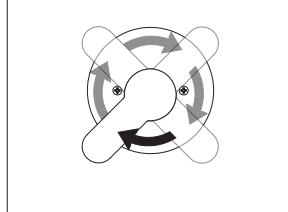


FIGURE 13.3



14. Operation (Triple Outlet Diverter Control)

- 1) Cartridge is factory set to divert to function 1 (FIGURE 14.1).
- 2) Turn handle to position 2 to divert to function 2 (FIGURE 14.2).
- 3) Turn handle to position 3 to divert to function 3 (FIGURE 14.3).
- 4) Turn handle to position 4 to share functions 2 and 3 (FIGURE 14.4).
- 5) Turn handle to position 5 to share functions 1 and 3 (FIGURE 14.5).
- 6) Turn handle to position 6 to share functions 1 and 2 (FIGURE 14.6).

FIGURE 14.1

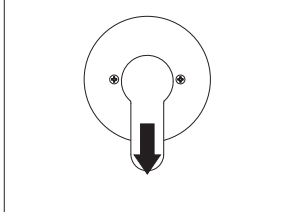


FIGURE 14.2

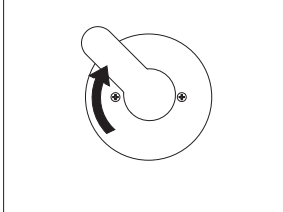


FIGURE 14.3

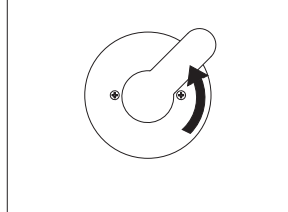


FIGURE 14.4

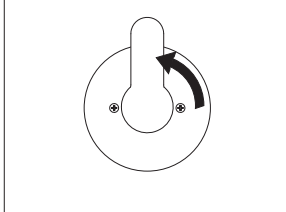


FIGURE 14.5

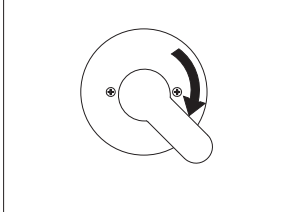
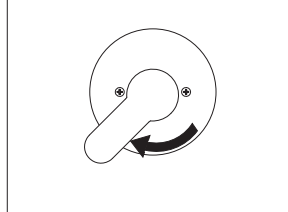



FIGURE 14.6



15. Troubleshooting Chart

Problem	Cause	Solution
Finish is spotting.	Elements in water supply may cause water staining on finish.	Clean finished trim area with a soft cloth using mild soap and water or a non-abrasive cleaner and then quickly rinse with water.

 **WARNING:** This product can expose you to chemicals including lead, which is known to the state of California to cause cancer, birth defects, or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.



Wall Mounted Slide/Grab Bar & ADA Hand Shower with non-positive shut-off **T724, T736, T748 Series** **Installation Guide**



Model Numbers

T724

24 inch slide/grab bar with polished chrome or satin nickel ADA hand shower

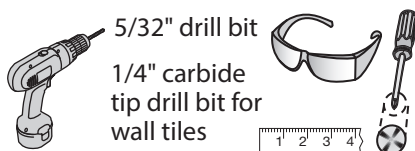
T736

36 inch slide/grab bar with polished chrome or satin nickel ADA hand shower

T748

48 inch slide/grab bar with polished chrome or satin nickel ADA hand shower

Tools and Materials



Compliance

-ASME A112.18.1/CSA B125.1

-WaterSense 1.5 gpm and 2.0 gpm



Need Help?

Symmons customer service:

Phone: (800) 796-6667

gethelp@symmons.com

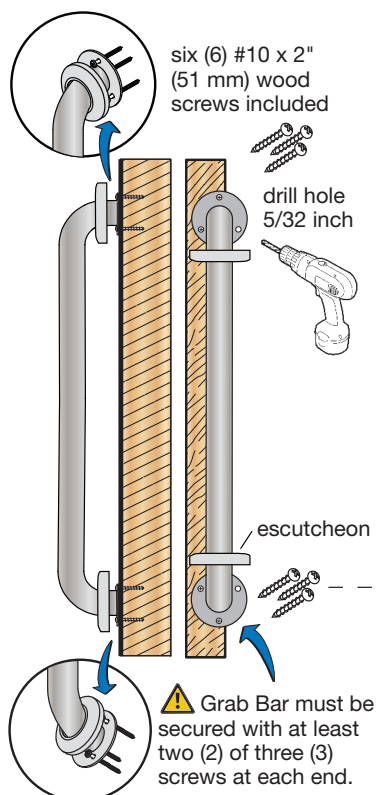
Mon - Fri 7:30 am - 7:00 pm EST

www.symmons.com/service

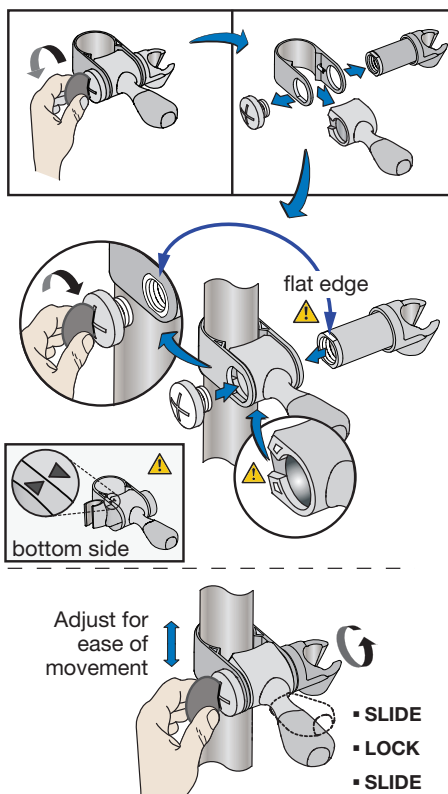
- Technical help
- Product information
- Warranty policy

Visual Guide Wall Mounted Slide/Grab Bar & Hand Shower

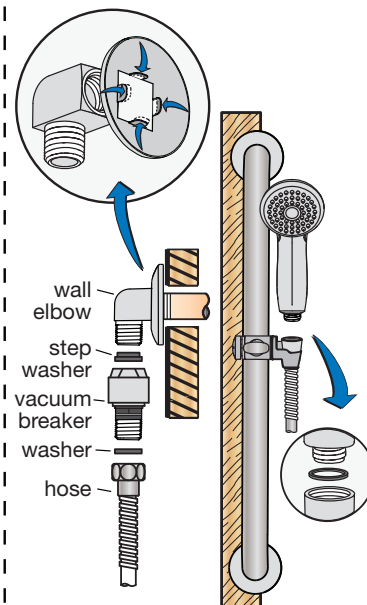
Step 1 Mount grab bar



Step 2 Attach slider assembly



Step 3 Install hand shower



For California Residents

WARNING: This product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

Installation Notes

Grab Bar Location

For proper mounting heights and location consult with your state and local code official having jurisdiction over the installation.

Solid Support

- Grab Bar must be mounted with both ends positioned over a wall stud. A stud finder can be used to locate wall studs.
- Secure through wall board or tile to the wall stud so as to hold a minimum of 250 pounds of force.

- At least two (2) of the three (3) screws provided must be used on each end of the Grab Bar to properly secure.

Note: Standard size wall stud limits using more than two (2) screws.

Mounting Grab Bar

- Drill all holes through wall board into wood wall studs using a power drill and a 5/32 inch drill bit.
- Ceramic tiles - If installing Grab Bar

over ceramic tiles, first drill a pilot hole through the tile using a 1/4 inch carbide tip drill bit to prevent damage to the tiles.

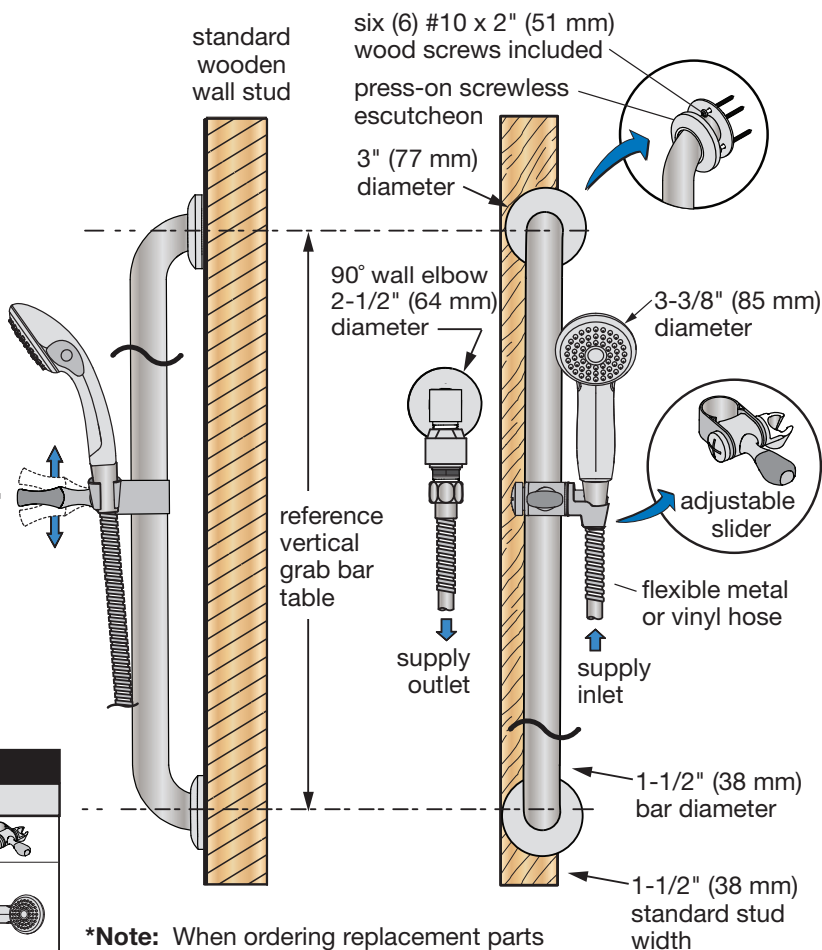
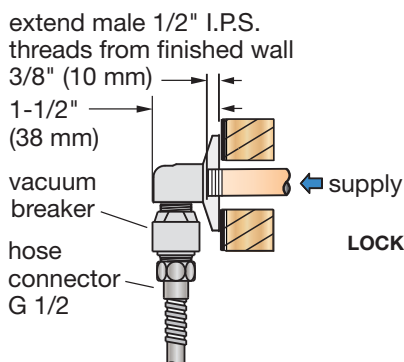
Next, drill a pilot hole into the wood wall stud using the 5/32 inch drill bit.

Care and Cleaning

Mild soap and water or a non-abrasive cleaner is recommended for cleaning.

Dimensions Wall Mounted Slide/Grab Bar & ADA Hand Shower

Vertical Grab Bar	
Model	Length
T724	24" (610 mm)
T736	36" (914 mm)
T748	48" (1219 mm)



Replacement Parts	
Part Number	Item
FP-SM6*	slider assembly
ADACHS*	wand
FP-40*	wall elbow & flange
INLINE-VB*	vacuum breaker
SP-4*	Hand Shower Hose
SP-4-6*	flexible metal (5')
ST-12RV	flexible metal (6')
ST-12RV6	vinyl (5')
	vinyl (6')

***Note:** When ordering replacement parts for product with an optional decorative finish, append appropriate three letter finish suffix code to part numbers marked with an asterisk (*).

Ordering replacement parts:

Call Symmons customer service at (800) 796-6667, (781) 848-2250 M-F 7:30 am - 7:00 pm EST or check our website at symmons.com for a list of Symmons distributors.


Note: Dimensions subject to change without notice



4-163

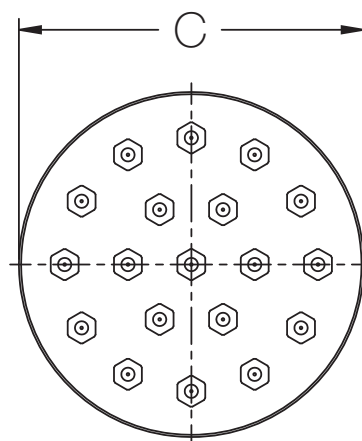
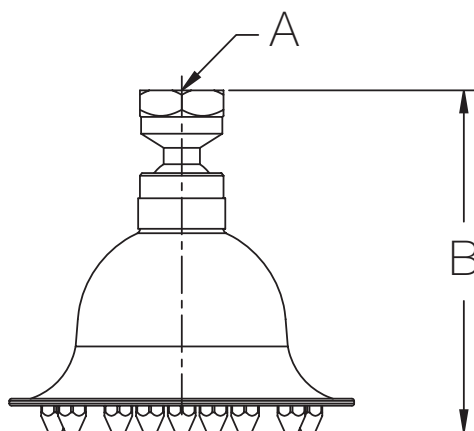
1 Mode Showerhead

Operation & Maintenance Manual

Model Number	Specification
<input type="checkbox"/> 4-163 <i>1 Mode Showerhead</i>	<ul style="list-style-type: none"> 1 mode showerhead 2.5 gpm (9.5 L/min) standard flow restrictor Showerhead shall be metal construction, plated in standard polished chrome finish
Modifications	Compliance
<input type="checkbox"/> -1.5 CG <i>1.5 gpm (5.7 L/min) flow restrictor</i> <input type="checkbox"/> -2.0 <i>2.0 gpm (7.6 L/min) flow restrictor</i> <input type="checkbox"/> -STN <i>Satin Nickel finish</i>	- ASME A112.18.1/CSA B125.1 - WaterSense 1.5 gpm & 2.0 gpm 
	Warranty
	<p>Limited Lifetime - to the original end purchaser in consumer installations.</p> <p>5 Years - for commercial installations.</p> <p>Refer to www.symmons.com/warranty for complete warranty information.</p>

Note: Append appropriate -suffix to model number.

Dimensions

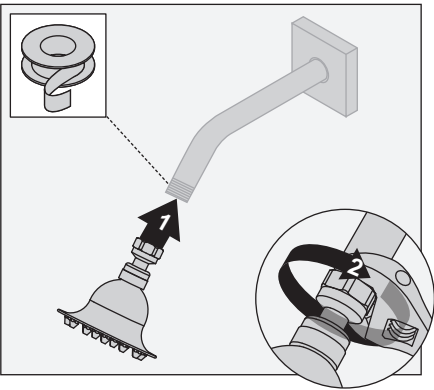


Measurements	
A	1/2-14 NPT
B	3-7/8", 98 mm
C	Ø 3-7/8", 98 mm

Note: Dimensions subject to change without notice.

Installation

- 1) Install showerhead to shower arm (not included) turning clockwise to tighten.



Tools Required	
Plumber Tape	

Care and Cleaning

- 1) Clean finished trim area with a soft cloth using mild soap and water or a non-abrasive cleaner and then quickly rinse with water.

Troubleshooting Chart

Problem	Cause	Solution
Finish is spotting.	Elements in water supply may cause water staining on finish.	Clean finished trim area with a soft cloth using mild soap and water or a non-abrasive cleaner and then quickly rinse with water.
Showerhead is leaking from shower arm when valve is in “on” position.	Coupling connecting showerhead to shower arm is cracked or washer inside coupling is worn.	Inspect coupling and washer and replace showerhead if necessary.

⚠ WARNING: This product can expose you to chemicals including lead, which is known to the state of California to cause cancer, birth defects, or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

Location:



Showerhead 412SH Specification Submittal



Model Numbers

- ☐ 412SH Showerhead

Finish Options / Modifications

Append appropriate -suffix to model number.

- ☐ -STN Satin nickel finish
- ☐ -PNL Polished nickle finish
- Polished chrome finish (standard finish)

Options / Modifications

Append appropriate -suffix to model number.

- ☐ **CG** -1.5 1.5 gpm (5.7 L/min) Flow rate restrictor
- ☐ **CG** -1.75 1.75 gpm (6.6 L/min) Flow rate restrictor
- ☐ -2.0 2.0 gpm (7.6 L/min) Flow rate restrictor

Feature Highlights

- Three mode showerhead
- 2.5 gpm (9.6 /min) standard flow rate
- Polished chrome finish (standard)

Standards / Certifications

ASME A112.18.1/CSA B125.1

WaterSense 1.5 gpm (5.7 L/min)

1.75 gpm (6.6 L/min)

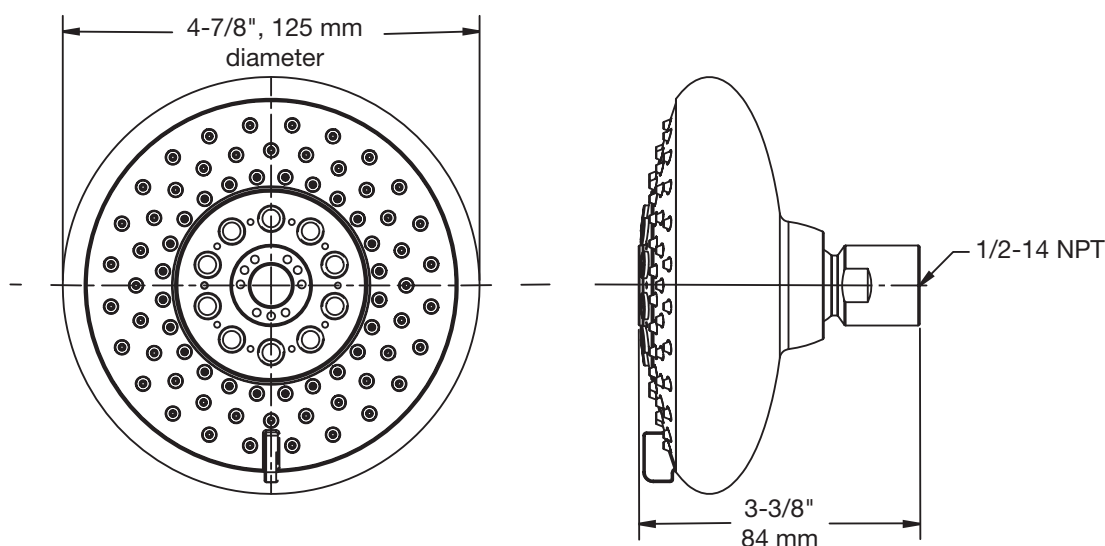
2.0 gpm (7.6 L/min)



Warranty

- Limited Lifetime - to the original end purchaser in consumer installations.
- 5 years - for commercial installations

Dimensions Showerhead, 412SH






Note: Dimensions subject to change without notice.



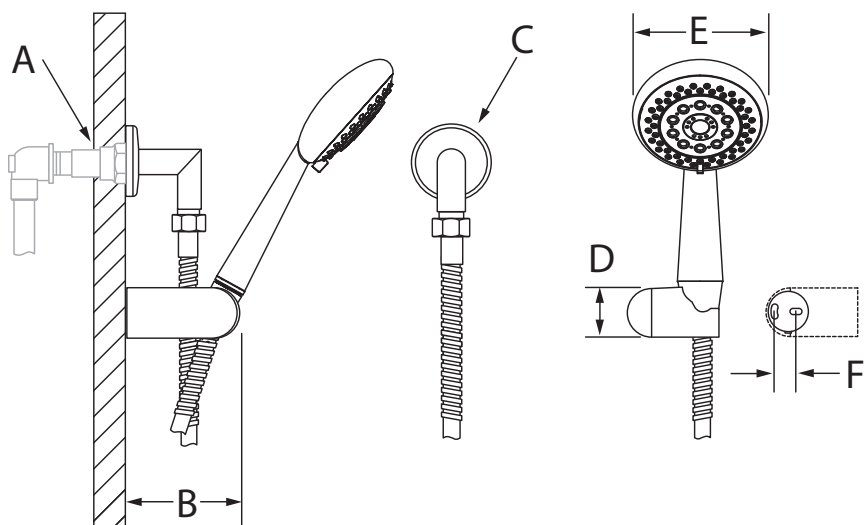
412HS, 412SH, 412W
Accessory Suite
Operation & Maintenance Manual



Model Numbers	Specification
<input type="checkbox"/> 412HS <i>Hand Shower Assembly</i> <input type="checkbox"/> 412SH <i>3 Mode Showerhead</i> <input type="checkbox"/> 412W <i>3 Mode Hand Shower Wand</i>	Hand shower assembly includes dual checks for back flow protection, 3 mode showerhead and 3 mode hand shower wand with standard 2.5 gpm (9.5 L/min) flow restrictor. Components are made from metal and nonmetallic materials plated in standard polished chrome finish.
Modifications	Compliance
<input type="checkbox"/> -1.5  <i>1.5 gpm (5.7 L/min) flow restrictor</i> <input type="checkbox"/> -2.0 <i>2.0 gpm (7.6 L/min) flow restrictor</i> <input type="checkbox"/> -PNL <i>Polished Nickel finish</i> <input type="checkbox"/> -STN <i>Satin Nickel finish</i>	<div> <div> -ASME A112.18.1/CSA B125.1 -WaterSense 1.5, 2.0 gpm (412SH only) </div> <div>   </div> </div>
<p>Note: Append appropriate -suffix to model number.</p>	Warranty
	<p>Limited Lifetime - to the original end purchaser in consumer installations. 5 Years - for commercial installations. Refer to www.symmons.com/warranty for complete warranty information.</p>

Dimensions

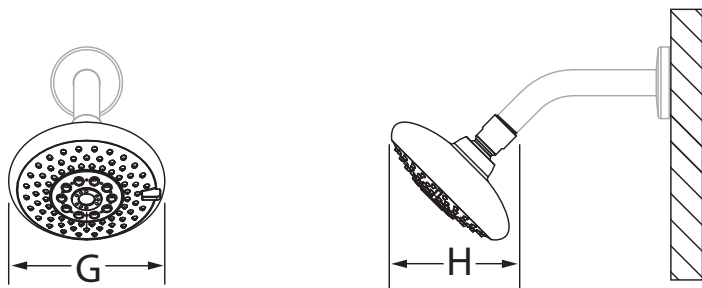
412HS



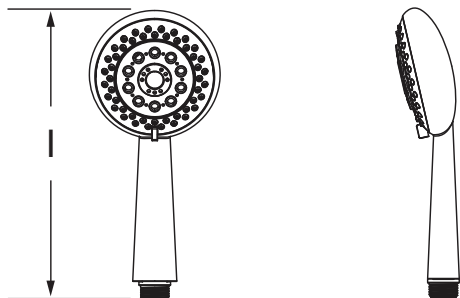
Measurements

A	Female 1/2" IPS thread must be recessed 7/8", 22 mm from finished wall
B	3-1/4", 83 mm
C	Ø 2-1/4", 57 mm
D	Ø 1-1/2", 38 mm
E	3-3/4", 95 mm
F	11/16" ± 1/8" 17 mm ± 3 mm
G	5", 127 mm
H	3-5/8", 92 mm
I	8-1/4", 210 mm

412SH



412W



Note: Dimensions subject to change without notice.


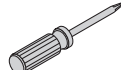

Parts Breakdown



Replacement Parts		
Item	Description	Part Number
A	Wall Elbow	T-444-KIT
B	Wall Elbow Flange	
C	60" Hose	EF-02976
D	Cradle Mount	T-545
E	Cradle Mounting Screws	
F	Anchors	
G	Washer	
H	Cradle Arm	
I	Set Screw	
J	Hand Shower	412W
K	Showerhead	412SH

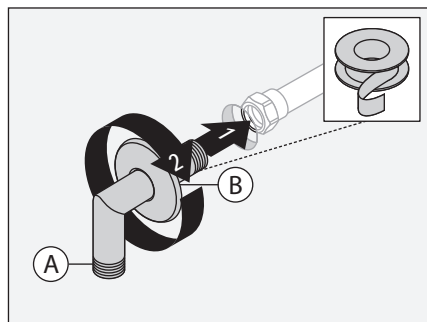
Notes:

- 1) Append -PNL to part number for polished nickel finish; -STN for satin nickel.
- 2) Append -1.5 or -2.0 to showerhead or hand shower for low flow.

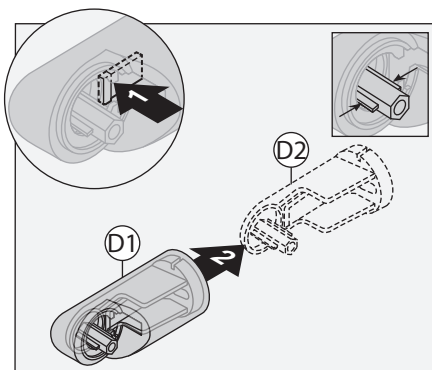
Required for Installation	
Adjustable wrench	
Phillips head screwdriver	
Plumber tape	

Installation

- 1) Install wall elbow (A) and flange (B) to recessed pipe fitting. Turn elbow clockwise to tighten (412HS only).

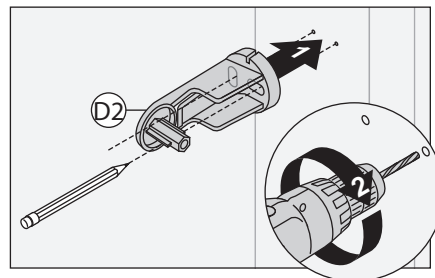


- 2) Press tab to remove mounting plate (D2) from cradle mount cover (D1).

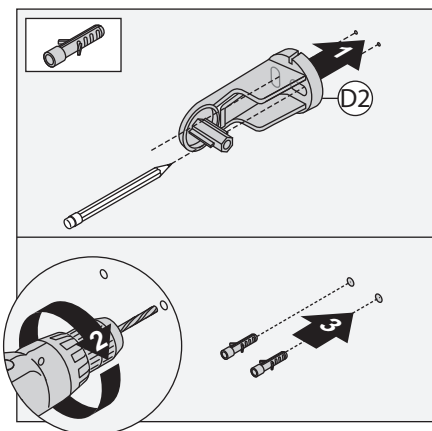


Note: Mounting plate (D2) center tabs must be horizontal for removal.

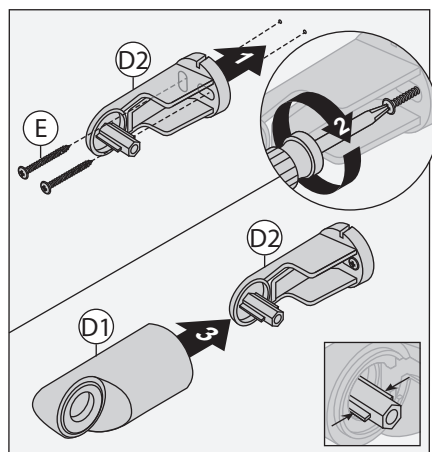
- 3a) Place mounting plate (D2) in position. Mark and drill 1/8" (3 mm) pilot holes into stud.



- 3b) **Option:** Place mounting plate (D2) in position. Mark and drill 1/4" (6 mm) holes into wall. Install anchors.

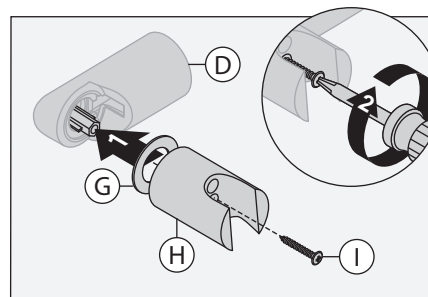


- 4) Install mounting plate (D2). Secure with two screws (E). Replace cradle mount cover (D1).



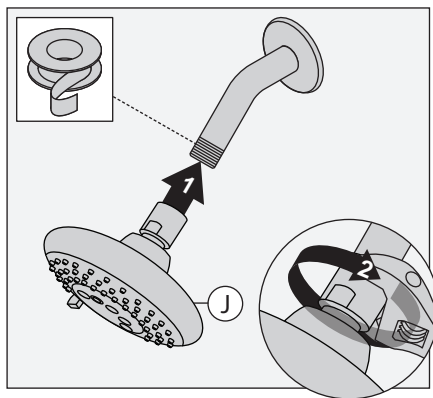
Note: Mounting plate (D2) center tabs must be horizontal for installation.

- 5) Attach cradle arm (H) and washer (G) to cradle mount (D). Secure with set screw (I).

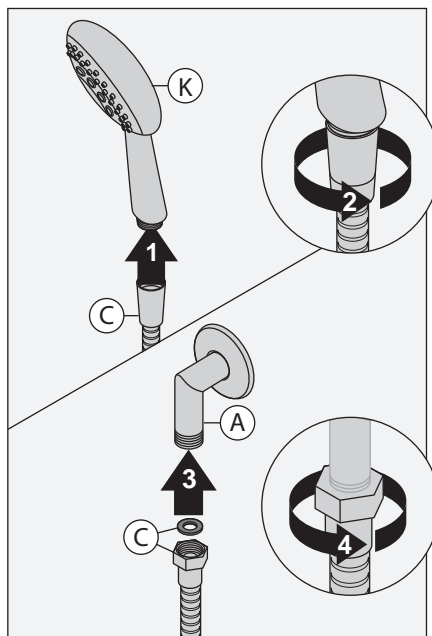


Installation Cont.

- 6) Install showerhead (J) to shower arm turning clockwise to tighten (412SH only).



- 7) Attach large end of hand shower hose (C) to hand shower wand (K). Attach small end of hand shower hose (C) and washer to wall elbow (A). Turn clockwise to tighten.



Notes:

- 1) DO NOT use plumber tape on fittings with face seal washers or o-ring seals.
- 2) DO NOT OVERTIGHTEN fittings with face seal washers or o-ring seals.

Troubleshooting Chart

Problem	Cause	Solution
Finish is spotting.	Elements in water supply may cause water staining on finish.	Clean finished trim area with a soft cloth using mild soap and water or a non-abrasive cleaner and then quickly rinse with water.







SYMMONS[®] Identity[™]

the smart choice[™]

SLS-6710-1.5, SLS-6712-1.5
Single Handle Lavatory Faucet

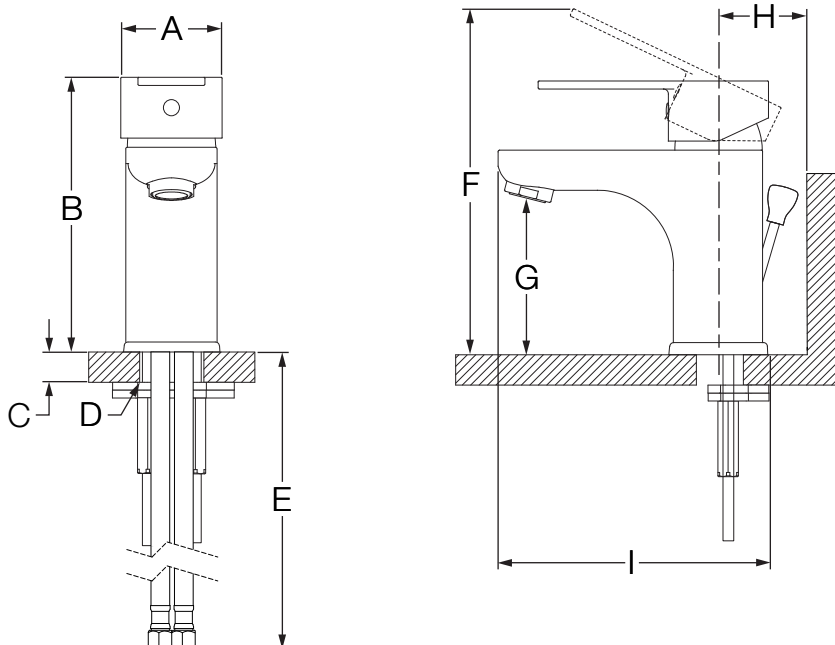
Operation & Maintenance Manual



Model Numbers	Specification
<input type="checkbox"/> SLS-6710-1.5 <i>Single Handle Lavatory Faucet</i> <input type="checkbox"/> SLS-6712-1.5 <i>Single Handle Lavatory Faucet with lift rod and 50/50 pop-up drain assembly</i>	<p>Single handle lavatory faucet features single hole mount, ceramic cartridge with temperature limit stop, 20" braided hose connections, 50/50 pop-up drain assembly and standard 1.5 gpm (5.7 L/min) flow restrictor. Faucet constructed from brass, plated in standard polished chrome finish.</p> 
Modifications	Compliance
<input type="checkbox"/> -0.5  0.5 gpm (1.9 L/min) flow restrictor <input type="checkbox"/> -1.0  1.0 gpm (3.8 L/min) flow restrictor <input type="checkbox"/> -Delete Suffix 1.5 2.2 gpm (8.3 L/min) flow restrictor <input type="checkbox"/> -DP4 4" deck plate for single hole mount faucets <input type="checkbox"/> -MP Metal pop-up drain in place of standard <input type="checkbox"/> -STN Satin Nickel finish <input type="checkbox"/> -VP Vandal resistant aerator	<p>ASME A112.18.1/CSA B125.1 NSF/ANSI 61.9, NSF/ANSI 376 WaterSense 1.5 gpm & 1.0 gpm</p> 
	Warranty
	<p>Limited Lifetime - to the original end purchaser in consumer/residential installations. 5 Years - for industrial/commercial installations. Refer to www.symmons.com/warranty for complete warranty information.</p>

Note: Append appropriate -suffix to model number.

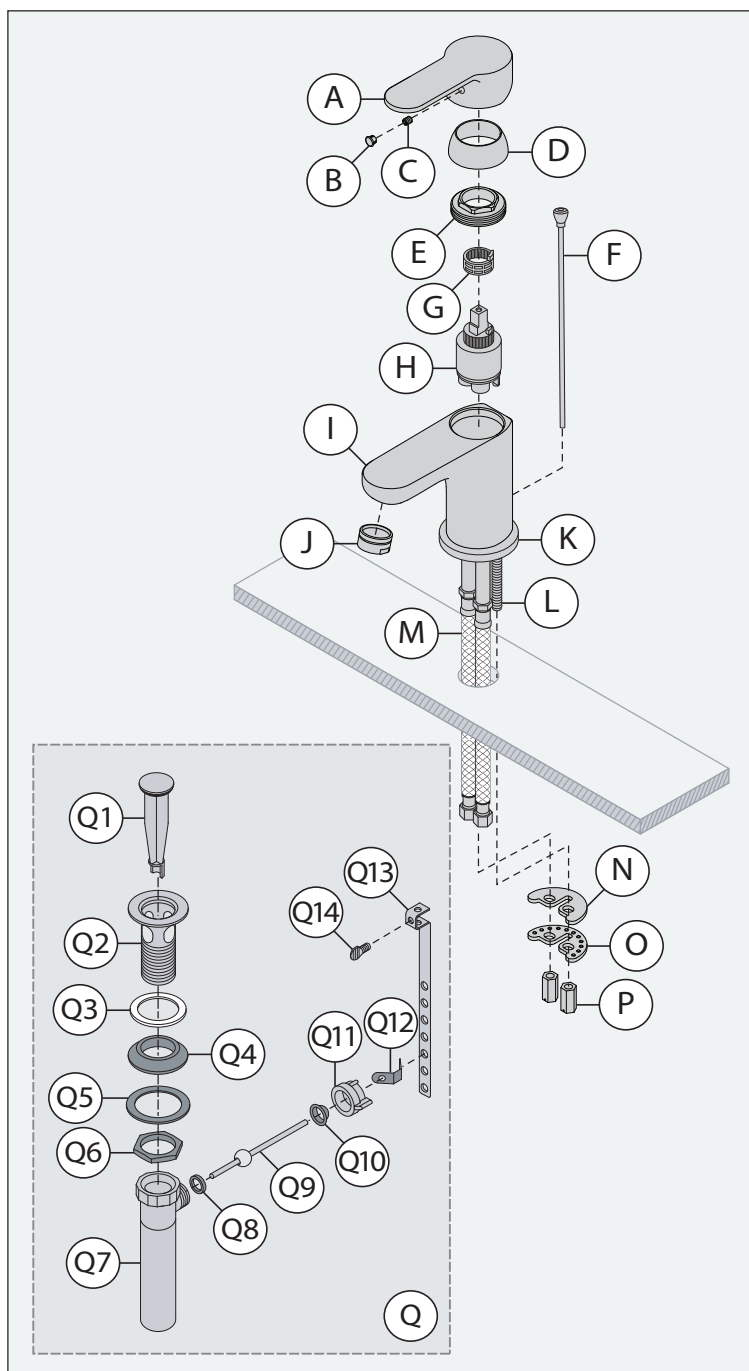
Dimensions



Measurements	
A	Ø 2", 51 mm
B	5-5/16", 135 mm
C	Deck Thickness Ref. Min. 1-3/4", 44 mm Max. 2-1/4", 57 mm
D	Hole Size Ø 1-1/2", 38 mm
E	20", 508 mm
F	6-1/2", 165 mm
G	3", 76 mm
H	Min. 2", 51 mm
I	5-3/8", 137 mm

Note: Dimensions subject to change without notice.

Parts Breakdown



Replacement Parts		
Item	Description	Part Number
A B C	Handle Kit	LN-01449*
F	Lift Rod	RL-014*
G H	Temperature Limit Stop Cartridge	RL-070
J	Aerator Kit (2.2) Aerator Kit (1.5) Aerator Kit (1.0) Laminar Flow Kit (2.2) Laminar Flow Kit (1.5) Laminar Flow Kit (1.0) Laminar Flow Kit (0.5) Vandal Proof Kit (2.2) Vandal Proof Kit (1.5) Vandal Proof Kit (1.0) Vandal Proof Kit (0.5)	LN-15* FLR-110-1.5* FLR-110-1.0* RL-019-2.2* RL-019-1.5* RL-019-1.0* RL-019* RL-315-2.2* RL-315-1.5* RL-315-1.0* RL-315-0.5*
N O P	Mounting Hardware	RL-238
Q	50/50 Pop-Up Drain Assembly	RL-223*

***Note:** Append -STN to part number for Satin Nickel finish.

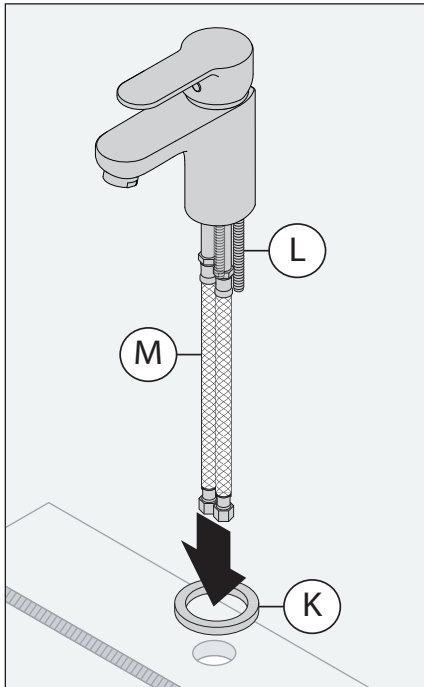
Tools Required	
Adjustable Wrench	
Allen Wrench 3/32"	
Plumber Putty	
Plumber Tape	

Installation

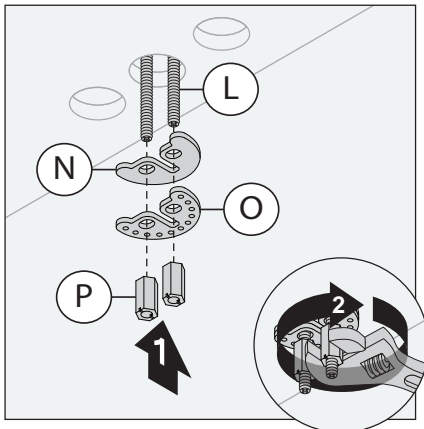
! If replacing an older faucet ensure water supply is turned OFF before removing, then turn faucet control valve ON to relieve water pressure.

! DO NOT use pipe dope or thread sealant on drain assembly, or any plastic threaded components.

- 1) Insert supply lines (M) and threaded rods (L) through escutcheon (K) and sink hole.

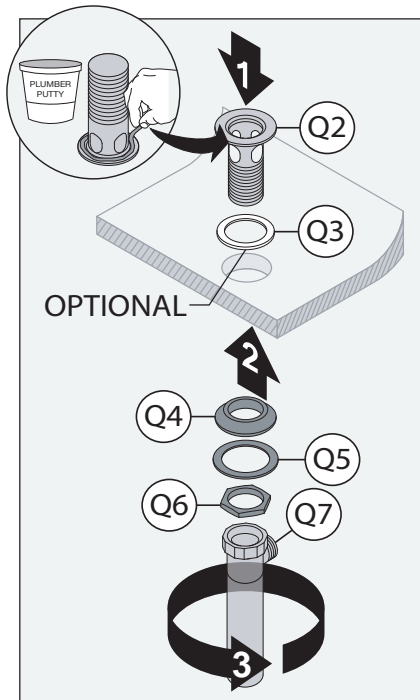


- 2) Place rubber washer (N), metal washer (O) onto threaded rods (L). Secure with nuts (P).

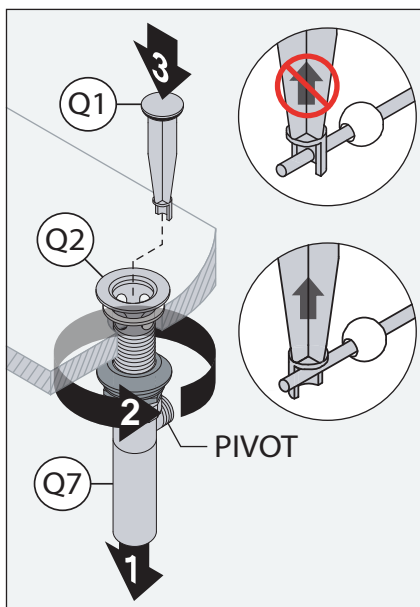


Note: Hoses removed for clarity.

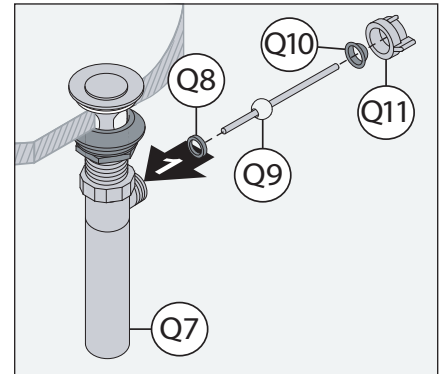
- 3) Seat flange (Q2) into sink. Install gasket (Q4), washer (Q5) and nut (Q6) onto flange from below sink, but do not secure nut. Screw on tail piece (Q7) and hand tighten.



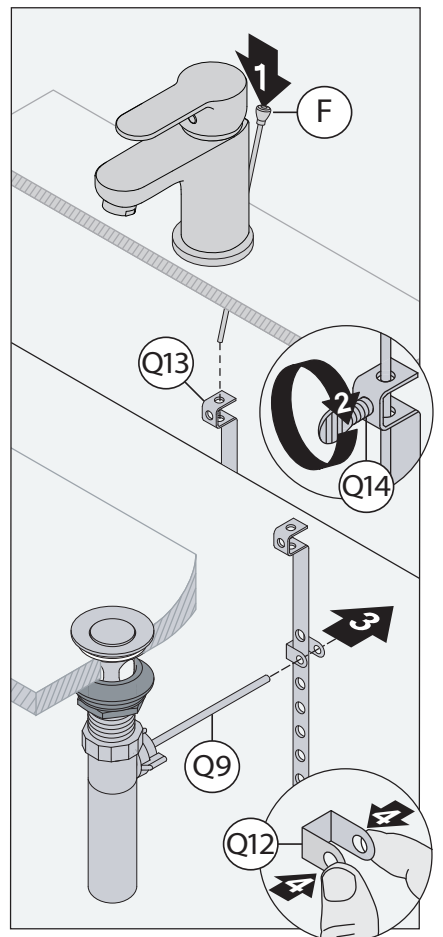
- 4) Turn tail piece (Q7) and flange (Q2) so pivot is facing toward faucet. Pull assembly down into drain hole. Secure hardware from below sink. Install stopper (Q1) in the removable or non-removable position.



- 5) Attach inner washer (Q8), pivot rod (Q9) and outer washer (Q10) to tail piece (Q7). Hand tighten nut (Q11) to secure pivot rod (Q9).

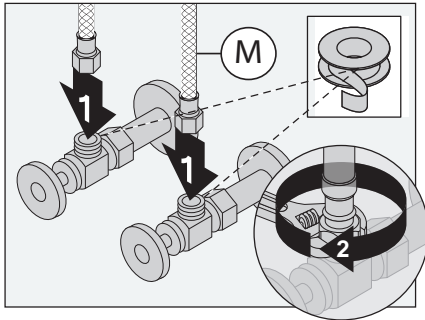


- 6) Connect lift rod (F) to clevis strap (Q13) and secure with thumb screw (Q14). Insert pivot rod (Q9) through spring clip (Q12) and clevis strap (Q13). Secure with spring clip (Q12) and adjust linkage if necessary.

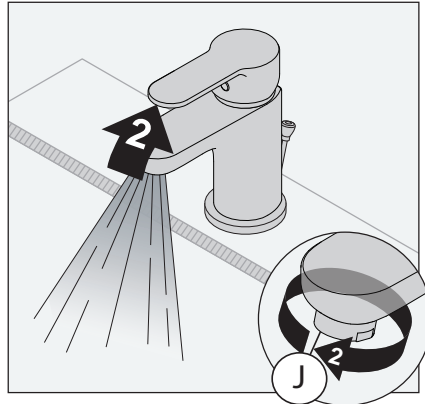


Installation

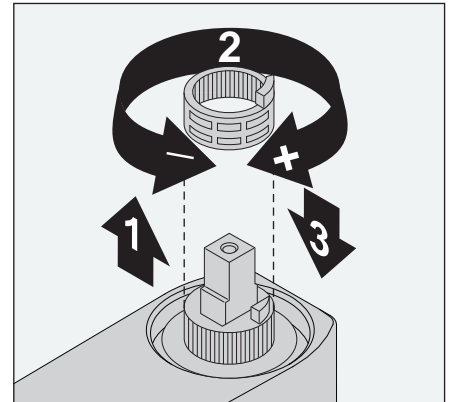
- 7) Attach supply lines (M) to shut-off valves and hand tighten. Using a wrench, finish with one-half turn. **DO NOT** overtighten.



- 8) Remove flow restrictor (J) and flush supply lines free of debris. Check for leaks.



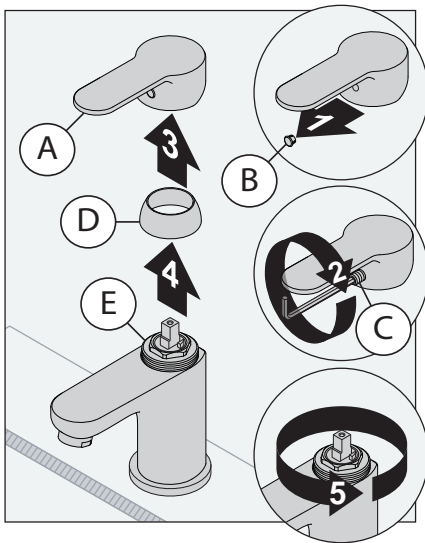
- 9) **Optional:** Adjust limit stop washer to limit handle turn to the hot position if desirable.



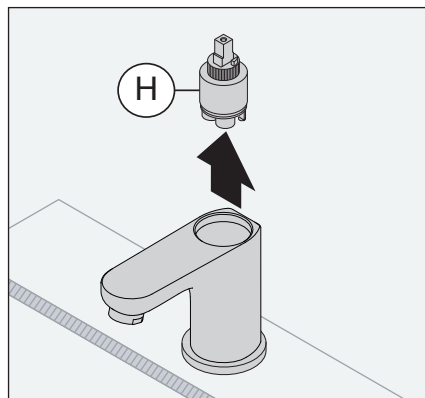
Note: Counterclockwise to lower temperature, clockwise to increase temperature.

Maintenance

- 1) Turn off water supply. Remove plug button (B). Loosen and remove the handle set screw (C), handle (A), collar (D) and nut (E).



- 2) Remove cartridge (H) and inspect for debris. Replace cartridge if necessary.



- 3) Install cartridge following steps 1 & 2 in reverse.

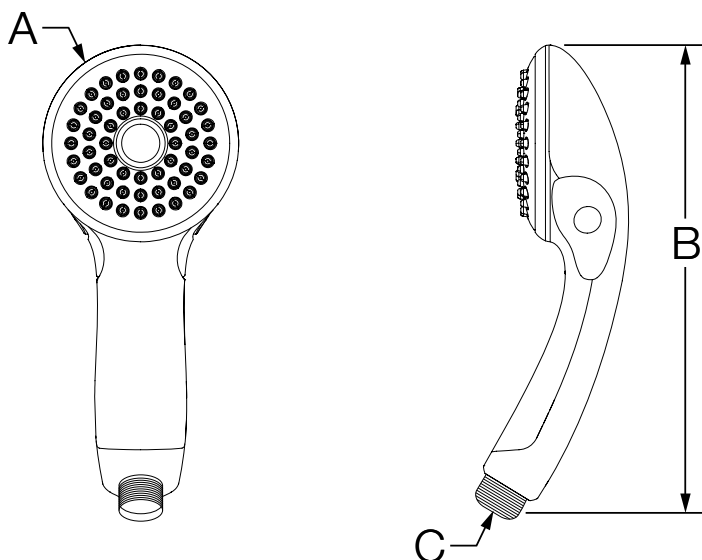
Troubleshooting Chart

Problem	Cause	Solution
Finish is spotting.	Elements in water supply may cause water staining on finish.	Clean finished trim area with a soft cloth using mild soap and water or a non-abrasive cleaner and then quickly rinse with water.

⚠ WARNING: This product can expose you to chemicals including lead, which is known to the state of California to cause cancer, birth defects, or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.



Dimensions

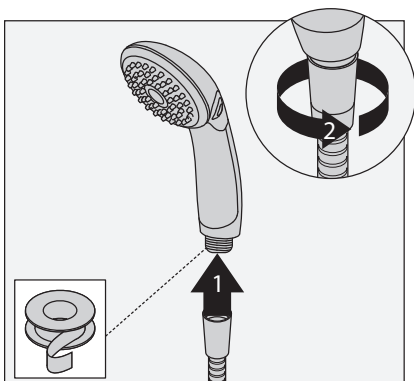


Measurements	
A	Ø 3-3/8", 85 mm
B	7-7/8", 201 mm
C	G 1 1/2", 13 mm

Note: Dimensions subject to change without notice.

Installation

- 1) Attach hose to hand shower wand. Turn clockwise to tighten.



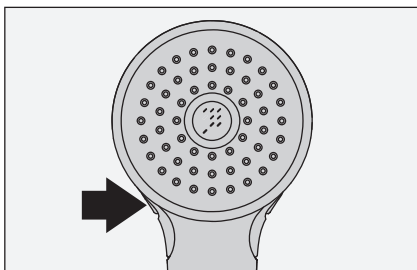
Tools Required

Plumber
tape

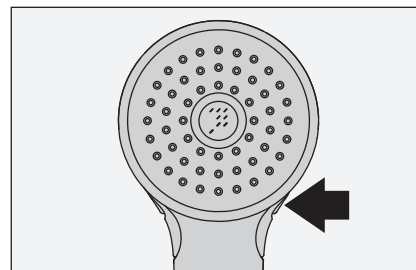


Operation

- 1) Push button on left side of hand shower wand for full volume.



- 2) Push button on right side of hand shower wand to reduce volume to a trickle.



Troubleshooting Chart

Problem	Cause	Solution
Finish is spotting.	Elements in water supply may cause water staining on finish.	Clean finished trim area with a soft cloth using mild soap and water or a non-abrasive cleaner and then quickly rinse with water.



SYMMONS® Symmetrix™

Service Sink Faucet S-2490, S-2490-CHKS

Installation Brief

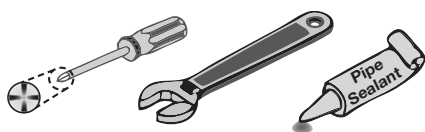


Model Numbers

S-2490 Service sink faucet

S-2490-CHKS Service sink faucet
with integral checks

Tools & Materials



**Caution - For installation
with atmospheric vacuum
breakers**

Faucet should never be used in installations that are under continuous pressure when installed with spouts having atmospheric vacuum breakers (AVB'S). Therefore, never place a self closing, shut-off valve down stream of an AVB.

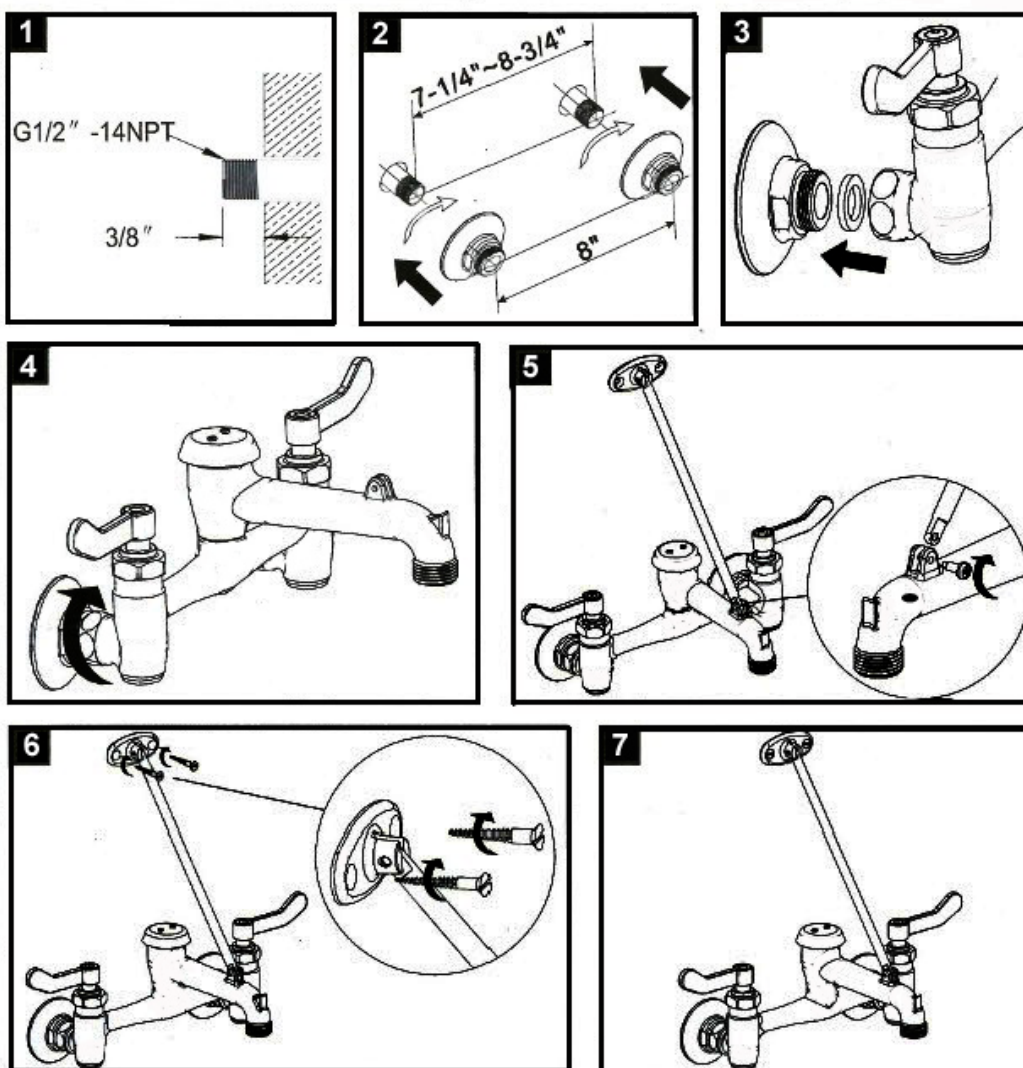
☎ Need Help?

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(800) 796-6667, (781) 848-2250
customerservice@symmons.com
Mon - Fri 7:30 am - 6:00 pm EST

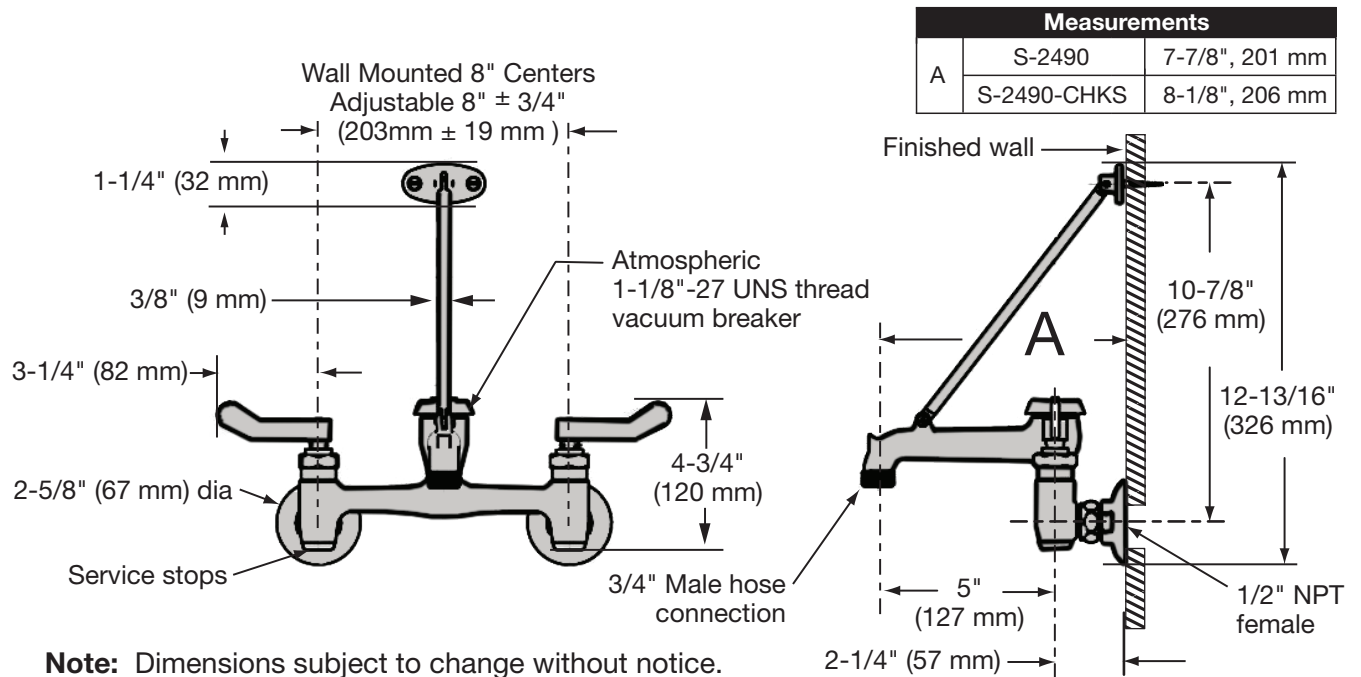
🌐 www.symmons.com/service

- Technical help
- Product information
- Warranty policy

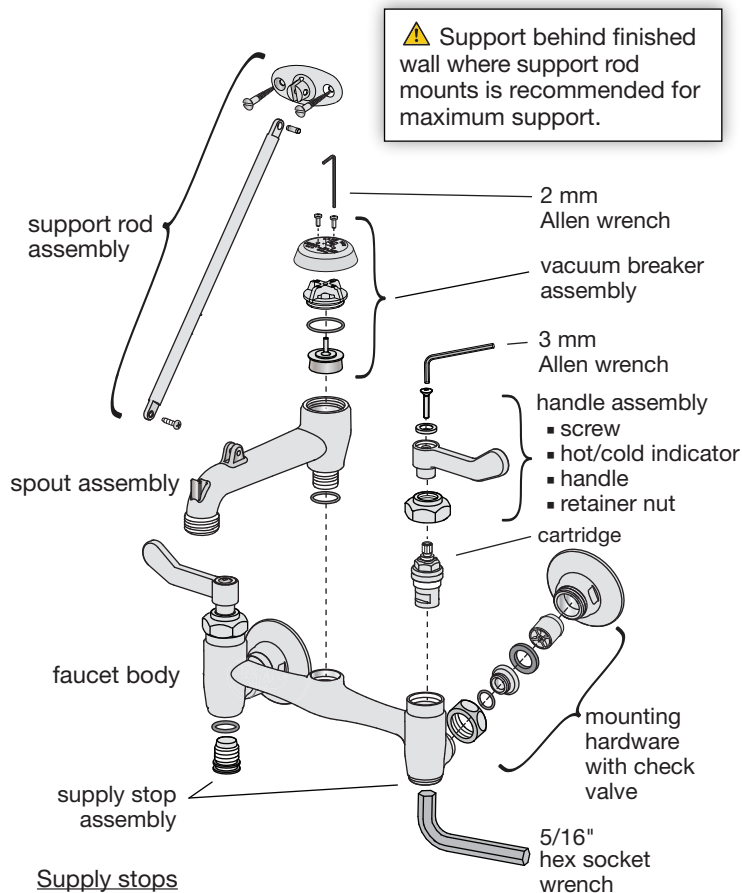
Installation Guide Symmetrix Service Sink Faucet S-2490, S-2490-CHKS



Dimensions Symmetrix™ Service Sink Faucet S-2490, S-2490-CHKS



Parts Assembly Symmetrix™ Service Sink Faucet S-2490, S-2490-CHKS



Supply stops

OFF - Turn (CCW) counterclockwise

ON - Turn (CW) clockwise a maximum of three complete turns

Symmons Part Number	Replacement Parts
RL-050	Mounting hardware kit
RL-147 (-CHKS only)	Mounting hardware kit with check valves
RL-051	Handle assembly kit (2 handles included)
RL-052 RL-053	Cartridge, HOT Cartridge, COLD
RL-054	Supply stop assembly kit (Includes both hot and cold supply stop assemblies)
RL-055	Vacuum breaker assembly kit
RL-056	Support rod assembly kit

Ordering replacement parts:

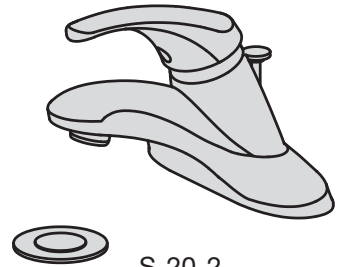
Call Symmons customer service at (800) 796-6667, (781) 848-2250 M-F 7:30 am - 6:00 pm EST
Check our website at www.symmons.com for a list of Symmons distributors.



SYMMONS® Symmetrix®

Lavatory Faucet S-20-BC Series

Installation Brief




S-20-2
Standard handle

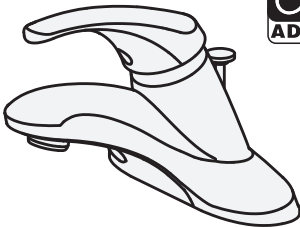

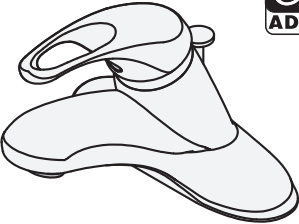

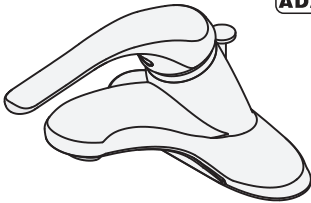

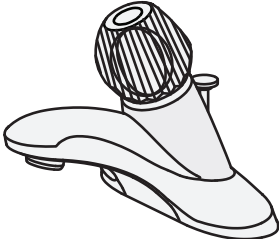
Feature Highlights

- Single lever faucet with red & blue indicators on handle
- Standard aerator, 2.2 gpm flow rate (8.3 L/min)
- Supply has 6 inch 3/8 inch copper tubing, 4 inch (102mm) centers
- Metal construction, brushed chrome finish

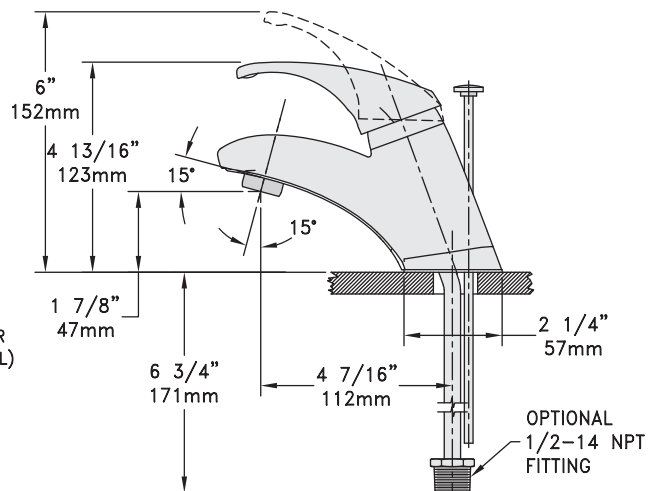
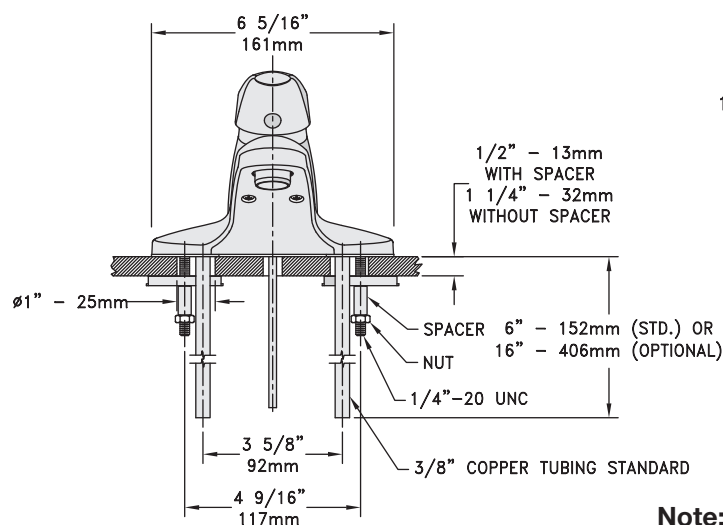
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Email: customerservice@symmons.com
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 Please check Symmons website for technical help, the latest product information and warranty policy.
Website: www.symmons.com/service

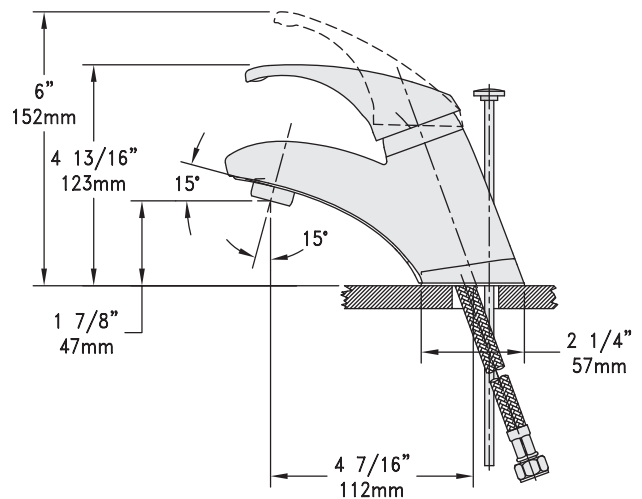
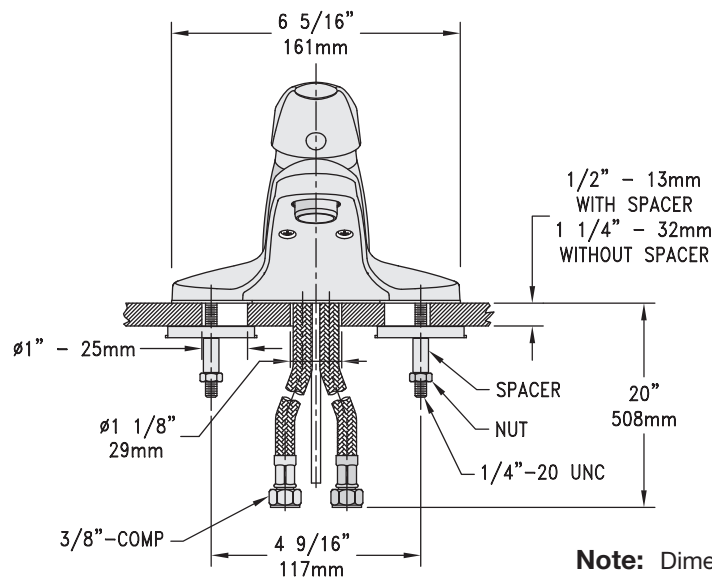
S-20 series handle options			
Standard	LP	W	LCT
 	 	 	
Model Numbers Append appropriate -suffix to model number. <ul style="list-style-type: none"> <input type="checkbox"/> S-20-BC Faucet only with lift rod hole <input type="checkbox"/> S-20-0-BC Faucet only with no lift rod hole <input type="checkbox"/> S-20-1-BC Faucet with lift rod <input type="checkbox"/> S-20-2-BC Faucet with pop-up drain & lift rod <input type="checkbox"/> S-20-2-G-BC ...Faucet with grid strainer drain 		Handle Options / Modifications Append appropriate -suffix to model number. <ul style="list-style-type: none"> <input type="checkbox"/> -LP Loop handle with metal finish <input type="checkbox"/> -LCT Clear acrylic handle (only available with option BH, braided supply hose) <input type="checkbox"/> -W Lever handle with metal finish, 6 inch (152mm) handle with red & blue indicators on handle (Chrome only) 	
Finish Options / Modifications <ul style="list-style-type: none"> <input type="checkbox"/> -STN Satin nickel <input type="checkbox"/> -CHM Polished chrome finish - Brushed chrome (standard finish) <p>*Note (1) Handles with red/blue indicators are not available with decorative finishes.</p>		Other Options Append appropriate -suffix to model number. <ul style="list-style-type: none"> <input type="checkbox"/> -LST 16 inch copper supply tubing <input type="checkbox"/> -BH 20 inch braided supply hose <input type="checkbox"/> -IPS 1/2 inch IPS connections <input type="checkbox"/> -OFG Offset grid strainer (model S-20-2-G only) <input type="checkbox"/> -.5 .5 gpm (1.9 L/min) flow restrictor, vandal resist. <input type="checkbox"/> -1.0 1.0 gpm (3.8 L/min) flow restrictor, vandal resist. <input type="checkbox"/> -1.5 1.5 gpm (5.7 L/min) flow restrictor, vandal resist. <input type="checkbox"/> -VP Standard aerator is vandal resistant type <input type="checkbox"/> -NA Non-aerated, laminar flow outlet 	

Dimensions Symmetrix Lavatory Faucet, S-20-2



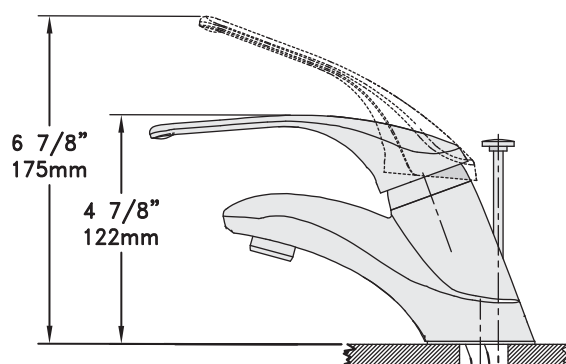
Note: Dimensions subject to change without notice.

Dimensions Symmetrix Lavatory Faucet, S-20-2-BH (with braided supply hose)

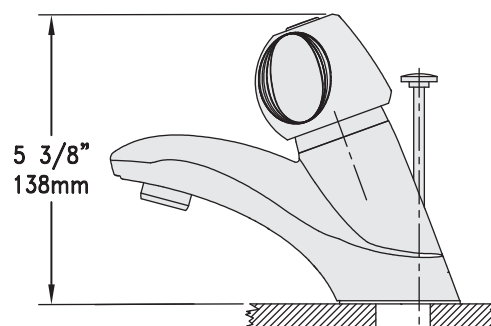


Note: Dimensions subject to change without notice.

Dimensions Symmetrix Lavatory Faucet, S-20-2-W (S-20 Series with optional lever handle, option W)



Dimensions Symmetrix Lavatory Faucet, S-20-2-LCT (S-20 Series with acrylic handle, option LCT)



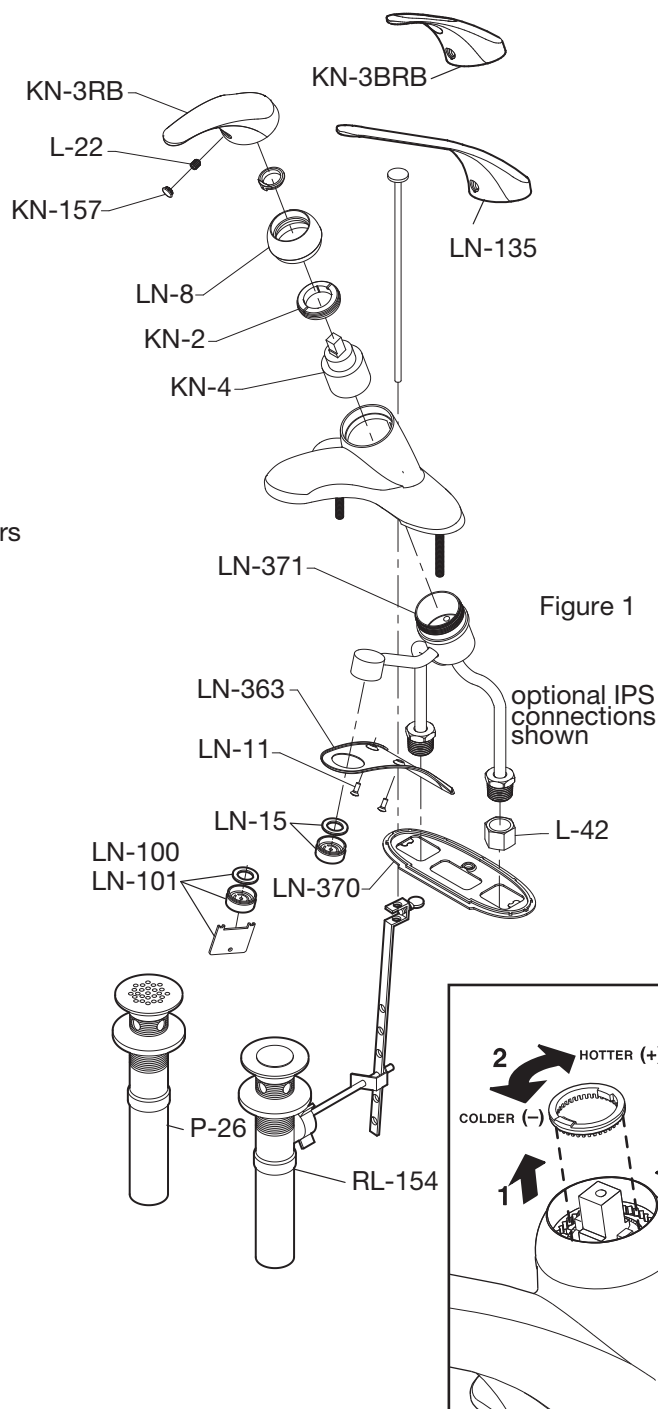
Parts Assembly *Symmetrix Lavatory Faucet, S-20 series*

KN-2	Compression ring
KN-3RB*	Solid handle
KN-3BRB*	Loop handle
KN-4	Cartridge
KN-23	Anchor bar (2)
KN-26	Mounting spacer (2)
KN-157	Plug button
LN-8*	Valve cap
LN-11*	Screw (2)
LN-15*	Aerator
LN-34	Cartridge wrench (not shown)
LN-100	Aerator (vandal resistant 0.5 gpm)
LN-101	Aerator (vandal resistant)
LN-135	6" lever handle with red/blue indicators
LN-363*	Undercover plate
LN-370	Mounting gasket
LN-371	Cartridge housing assembly
L-22	Set screw
L-36	Mounting nut (2)
L-42	Nut (2)
RL-154*	Pop-up drain assembly (complete)
P-26	Grid drain assembly (complete)

Note: For Decorative Finish Faucets add suffix to parts marked with an asterisk as follows:

Suffix -STN: Radiance® Satin finish

Suffix -BC: Brushed Chrome



Parts Assembly Symmetrix Lavatory Faucet, S-20-BH Series

KN-2	Compression ring
KN-3RB*	Solid handle
KN-3BRB*	Loop handle
KN-4	Cartridge
KN-23	Anchor bar (2)
KN-26	Mounting spacer (2)
KN-157	Plug button
LN-8*	Valve cap
LN-11*	Screw (2)
LN-15*	Aerator
LN-34	Cartridge wrench (not shown)
LN-100	Aerator (vandal resistant 0.5 gpm)
LN-101	Aerator (vandal resistant)
LN-122	Acrylic Handle
LN-135	6" lever handle with red/blue indicators
LN-171	Screw
LN-363*	Undercover plate
LN-370	Mounting gasket
LN-371BH	Cartridge housing assembly
L-22	Set screw
L-36	Mounting nut (2)
L-42	Nut (2)
RL-154*	Pop-up drain assembly (complete)
P-26	Grid drain assembly (complete)
T-33	Plug button

For Decorative Finish Faucets add suffix to parts marked with an asterisk as follows:

Suffix -STN: Radiance® Satin finish

Suffix -BC: Brushed chrome

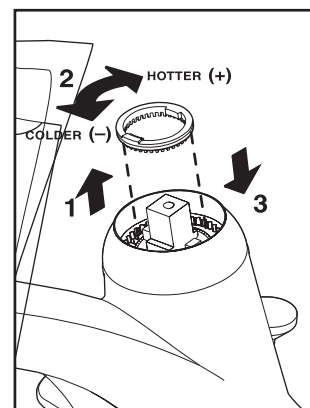
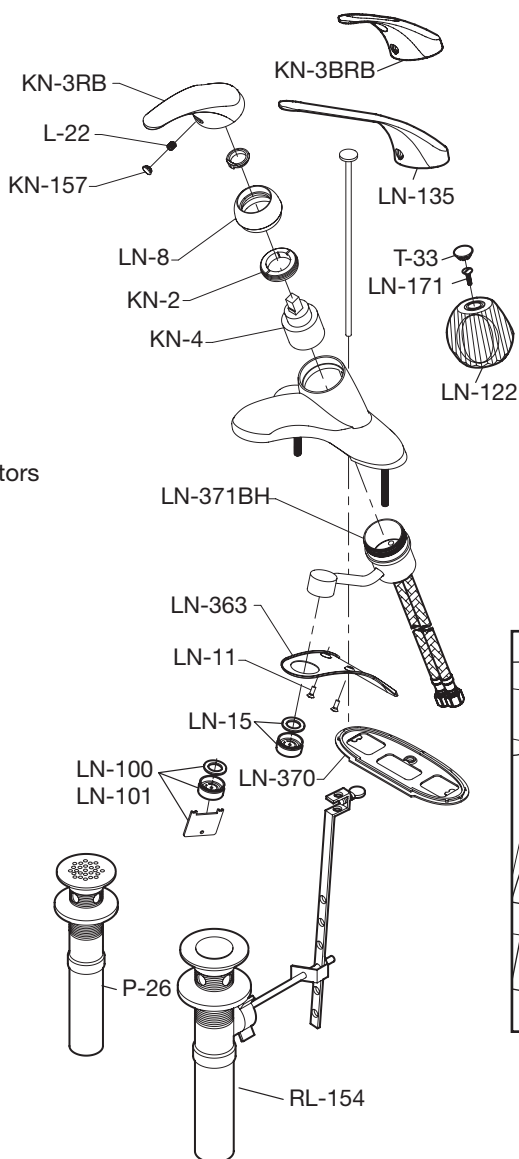


Figure 1



SYMMONS® Origins®

Kitchen Faucet S-23 Series

Installation and Service Instructions



Installation

Caution: Be sure to turn off hot and cold water supplies before installing or servicing faucet.

Step 1 If installing model with hose and spray, install hose guide into hole in sink (normally the far right hole on four hole sink). From underneath sink place washer then nut over hose guide and secure to sink. Insert hose through hose guide and up through middle hole from left in sink. Place gasket on base of escutcheon. From above sink attach hose securely to nipple on base of faucet.

Step 2 Align faucet to sink by matching underside arrow and letter "F" on escutcheon with front of sink. Without straightening copper supplies insert through center hole of sink. Secure faucet to sink by tightening the anchor bar (KN-23), spacer (KN-26) and nut (L-36) on the mounting bolts from underside. (If sink surface is uneven use putty or sealant to make proper seal under base.)

Step 3 Carefully straighten copper supplies to avoid kinking tubing. Connect hot supply to left tube and cold supply to right tube using appropriate connectors.

Step 4 It is very important to thoroughly flush the supply lines to prevent foreign matter, i.e. copper chips, sand, stones, etc. from damaging the sealing surfaces of cartridge. Remove aerator and turn valve handle on to full cold position, open cold supply. Without closing, turn handle to full hot and open hot supply. Let water run in hot only and cold only positions long enough to flush supply lines thoroughly. If equipped with a hose and spray, direct spray head into sink and activate spray. Shut off faucet and replace aerator. Check for leaks.

Step 5 The handle limit stop can be set to limit handle turn to the hot position. The limit mechanism is factory set to allow full handle travel. To adjust the limit stop, turn handle to the full hot position and lift handle to open faucet approximately half way to obtain a smooth flow for correct initial temperature measurement.

Step 6 If when faucet is on and in full hot position and water is too hot, shut water off, remove plug button (KN-157), loosen set screw (L-22) and remove handle (KN-3RB or KN-3BRB), lift limit stop using a small flat head screw driver and rotate clockwise to lower temperature. If water is not hot enough, rotate counter clockwise (See Figure 1 on reverse side). After correct temperature is achieved, reattach handle, reversing procedure above.

Cartridge Replacement (KN-4)

Step 1 Remove plug button (KN-157), loosen set screw (L-22) and remove handle (KN-3RB or KN-3BRB).

Step 2 Engage tabs in cartridge wrench (LN-34) with slots in

compression ring (KN-2) and use screwdriver in wrench holes or pliers on wrench and turn counter clockwise until compression ring engages with cap (KN-1). Continue turning counter clockwise so that cap/ring assembly is removed from the body (KN-11).

Step 3 Remove cartridge and o-ring seal (KN-4).

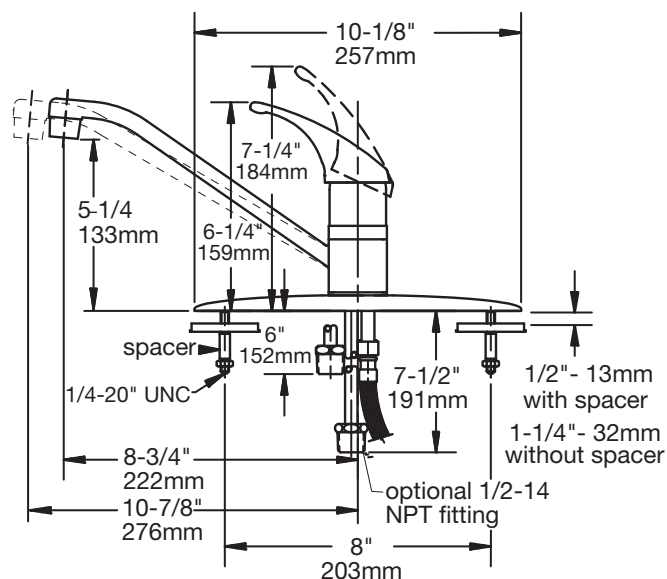
Step 4 Install new cartridge while taking care to maintain position of the o-ring seal at the base of the cartridge. Match posts in base of cartridge with alignment holes in adapter plate during assembly.

Step 5 Reassemble faucet in reverse fashion. Thread cap onto body firmly by hand. Do not use a wrench which may damage the finish. Tighten compression ring (KN-2) finger tight using the wrench (LN-34) then 1/4 to 1/2 turn further. Set hot water limit stop in accordance with installation step 6 above.

Diverter replacement (KN-169)

1. Follow cartridge replacement steps 1 through 5 above.
2. Remove retaining ring (K-44) with 3/8" hex key wrench.
3. Remove diverter and o-ring (K-46).
4. Grease diverter o-ring and install into body.
5. Press diverter into o-ring and body.
6. Replace retaining ring.

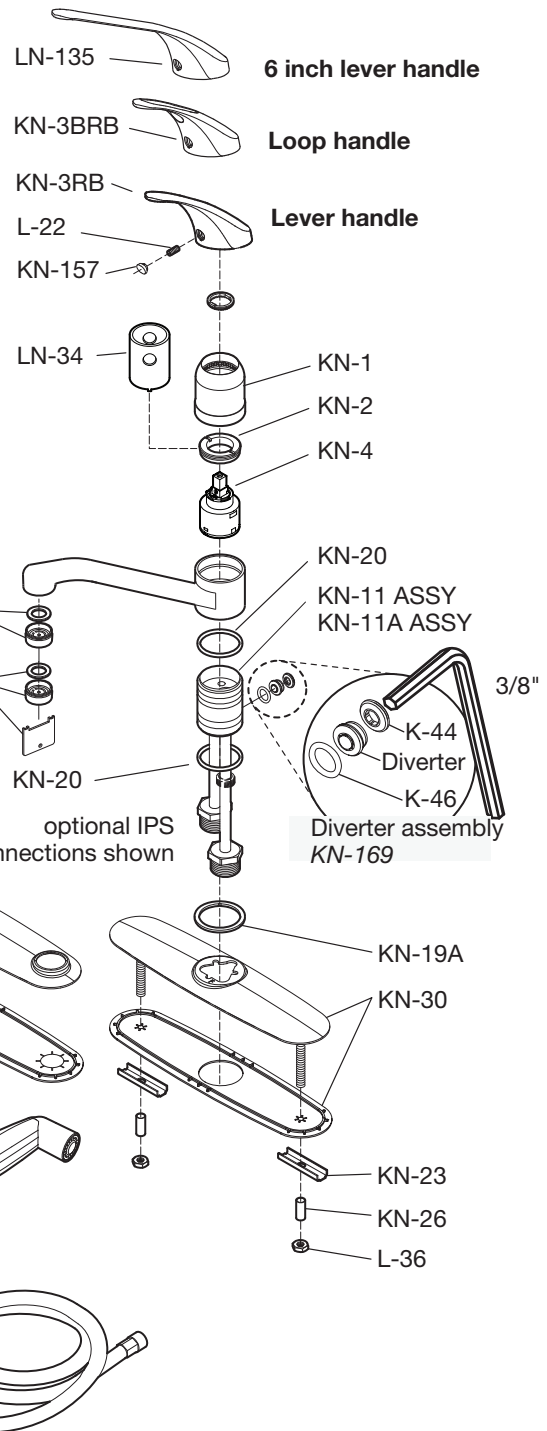
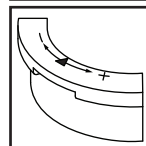
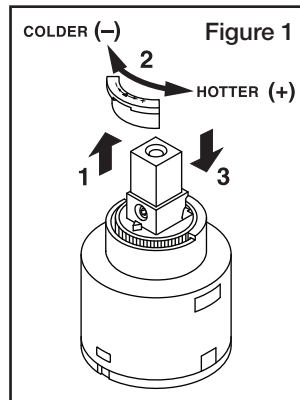
Dimensions Origins Kitchen Faucet, S-23




Note: Dimensions subject to change without notice.

Parts Assembly *Origins Kitchen Faucet, S-23 Series*

K-41/42*	Hand spray and holder
K-43	Diverter valve
K-44	Retainer ring
K-46	O-ring
KN-1*	Valve cap
KN-2	Compression ring
KN-3RB*	Solid Handle
KN-3BRB*	Loop Handle
KN-4	Cartridge
KN-11 ASSY	Supply body assembly with diverter
KN-11A ASSY	Supply body assembly without diverter
KN-19A	Spacer
KN-20	O-ring (2)
KN-23	Anchor bar (2)
KN-26	Mounting spacer (2)
KN-30*	Escutcheon
KN-30A*	Escutcheon with hand spray hole
KN-157	Plug button
KN-169	Diverter assembly
L-22	Set screw
L-36	Mounting nut (2)
LN-216*	Aerator (Faucet with hand spray)
LN-34	Cartridge wrench
LN-135	6" lever handle with red/blue indicators



Aerator (flow regulator)	Part Number*	
	Standard Aerator	Vandal Resistant with removal tool
2.2 gpm (8.3L/min)	LN-15	LN-101
1.5 gpm (5.7L/min)	FLR-110-1.5	FLR-110-1.5-VP
1.0 gpm (3.8L/min)	FLR-110-1.0	RL-288-VP-1.0
.5 gpm (1.9L/min)	----	LN-100
Removal tool part number, LL-60K 		

* Note: When ordering parts for products with an optional decorative finish, append appropriate three letter finish suffix code to part numbers marked with an asterisk (*).

WARNING: This product can expose you to chemicals including lead, which is known to the state of California to cause cancer, birth defects, or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

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SYMMONS®
the smart choice™



SYMMONS® Symmetrix®

Bar Sink and Lavatory Faucet, S-245 & 249 Series

Installation and Service Instructions



S-249 with std LCT handles



S-245 with std LCT handles

INSTALLATION:

Caution: Be sure to turn off hot and cold water supplies before installing or servicing faucet.

1. Align flat edge of escutcheon showing logo with the back of sink. Insert faucet supplies through holes in sink. Secure faucet to sink by tightening flange nuts (KN-116) from underside. (If sink or counter surface is uneven, use putty or sealant to make proper seal under base.)
2. Connect hot supply to left tube and cold supply to right tube using appropriate connectors.
3. **It is very important to thoroughly flush the supply lines to prevent foreign matter, i.e. copper chips, sand, stones, etc. from damaging the sealing surfaces of cartridge.** Remove aerator (bar faucet) and turn cold valve handle on to full cold position, open cold supply. Without closing, turn hot valve handle to full hot position and open hot supply. Let water run in hot only and cold only positions long enough to flush supply lines thoroughly. Shut off faucet and replace aerator. Check for leaks.

Cartridge Replacement

Faucets with standard LCT handles

1. Remove plug button (T-33, T-33R or T-33B), loosen phillip head screw (LN-121A) and remove handle (LN-140, LN-131 or LN-102).

2. Place wrench on cartridge hex nut (KN-113, KN-114). Turn wrench counter clockwise until cartridge is removed.
3. Install new cartridge. Turn cartridge with wrench until cartridge does not turn easily then turn 1/4 or 1/2 turn further. Reassemble handle in reverse fashion.

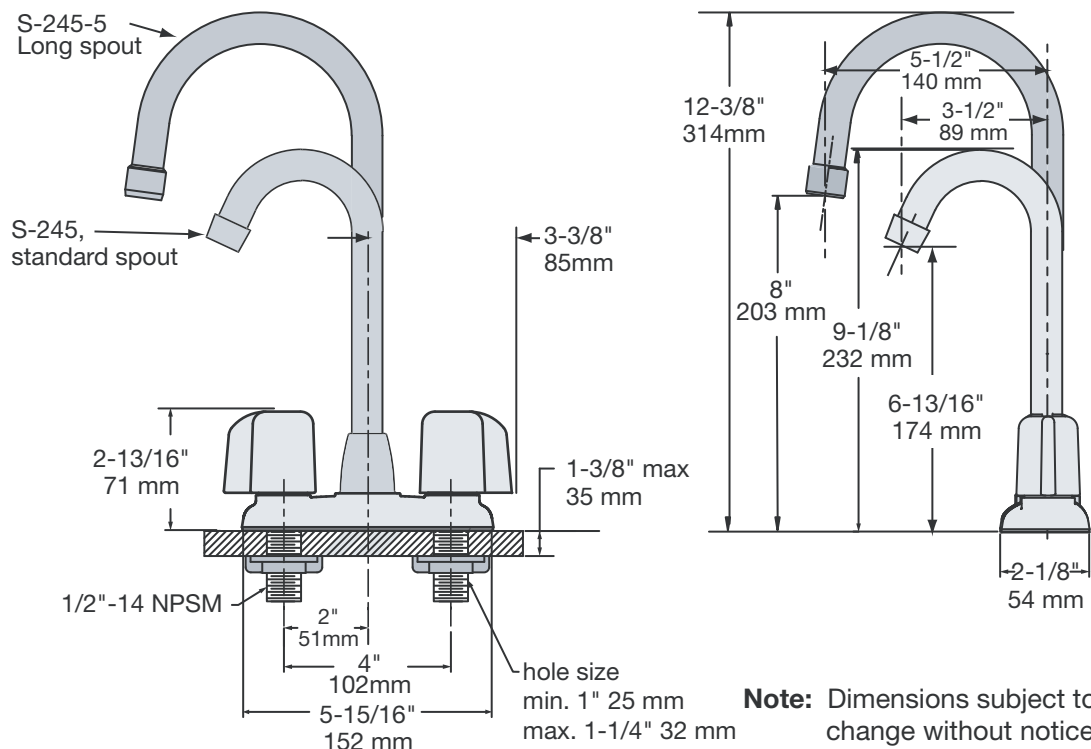
Faucets with optional LCF, LPO or LAM handles:

1. Loosen phillip oval head screw (LN-134) and remove handle (LN-152).
2. Remove collar (LN-112) by turning counter clockwise, do not use wrench as this may damage the surface finish.
3. Place wrench on cartridge hex nut (KN-113, KN-114). Turn wrench counter clockwise until cartridge is removed.
4. Install new cartridge. Turn cartridge with wrench until cartridge does not turn easily then 1/4 or 1/2 turn further. Reassemble handle in reverse fashion.

To lock spout:

1. See instructions in lock (BL-114) package.

Dimensions Symmetrix® Bar Sink Faucet, S-245 and S-245-5

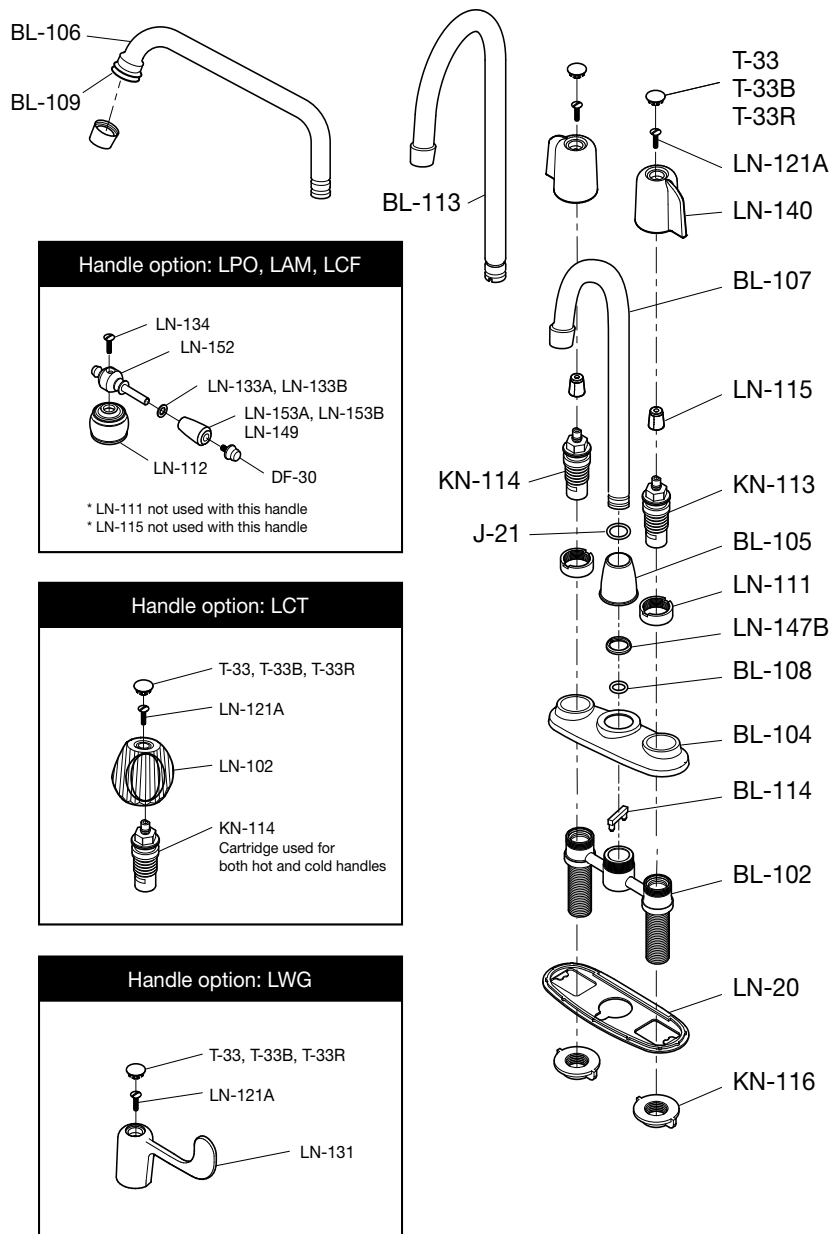



WARNING: This product can expose you to chemicals including lead, which is known to the state of California to cause cancer, birth defects, or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

Parts Assembly Symmetrix Lavatory / Bar Sink Faucet, S-245 & S-249

BL-102	Tubing assembly
BL-104*	Escutcheon
BL-105*	Nut, spout
BL-107*	Spout (S-245 Series)
BL-106	Spout (S-249 Series)
BL-108	O-ring
BL-109	Adaptor, 3/4" hose (S-249 Series)
BL-113*	Spout (S-245-5 Series)
BL-114	Spout lock
DF-30*	Finial, lever, Handle (2)
KN-113	Valve cartridge, cold
KN-114	Valve cartridge, hot
KN-116	Flange nut (2)
LN-20	Gasket
LN-102	Acrylic handle (2)
LN-111*	Lock ring (2)
LN-112*	Collar (lever handle) (2)
LN-115	Bushing (2)
LN-121A	Philips pan head screw (2)
LN-131	ADA handle (2)
LN-133A	Temperature indicator (red)
LN-133B	Temperature indicator (blue)
LN-134*	Oval Philips head screw (2)
LN-140*	Lever handle (2)
LN-147B	Snap ring
LN-149	Clear, Lever, Handle (2)
LN-152*	Handle lever
LN-153A	White, Lever, Handle (2)
LN-153B	Chrome, Lever, Handle (2)
J-21	O-ring
T-33*	Plug Button (2)
T-33B	Plug Button, Blue
T-33R	Plug Button, Hot

*For Decorative Finish Faucets (S-245 Series only) add suffix to parts marked with an asterisk as follows:
 Suffix -STN: Satin Nickel finish



Flow Regulator	Part Number			
	Standard Aerator	Vandal Resistant	Laminar Stream	Spray (non-aerated)
2.2 gpm (8.3 L/min)	L-5	L-5VP	---	---
1.5 gpm (5.7 L/min)	FLR-111-1.5	---	---	---
1.0 gpm (3.8 L/min)	FLR-111-1.0	---	---	---
0.5 gpm (1.9 L/min)	---	LL-60B	SWA-17-0.5-NA	LN-650
Removal tool part number (vandal resistant aerators), LL-60K 				

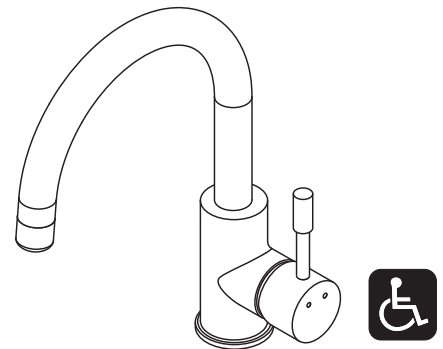
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SYMMONS®
 the smart choice™



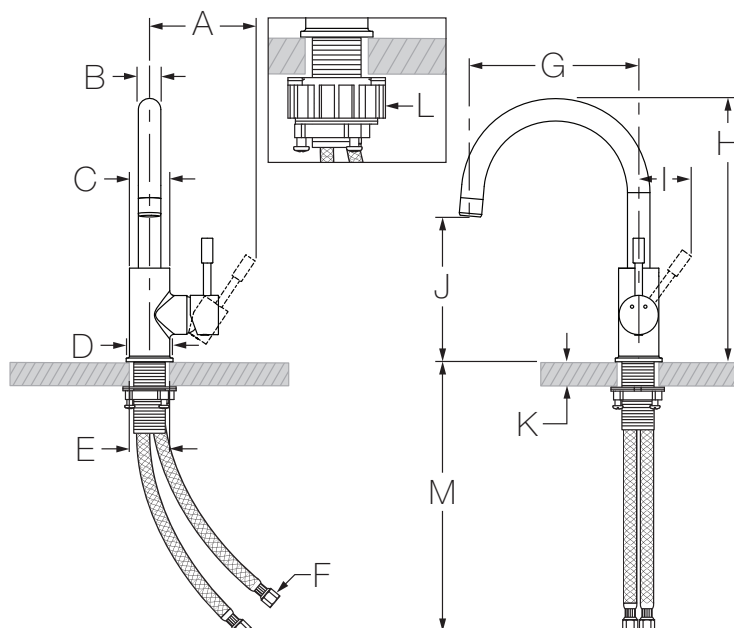
SPB-3510-1.5 Single Handle Bar Sink Faucet Operation & Maintenance Manual



Model Numbers	Feature Highlights
<input type="checkbox"/> SPB-3510-1.5 <i>Single Handle Bar Sink Faucet</i>	<ul style="list-style-type: none"> • Single hole mount configuration • 3 hole mount configuration for optional 8 inch deck plate • Quarter turn ceramic cartridge • Braided hose water supply connections • Standard swivel spout with option of rigid spout • Standard 1.5 gpm (5.7 L/min) flow rate • Faucet shall be metal construction, plated in standard polished chrome finish
Options/Modifications	
<input type="checkbox"/> -0.5 <i>0.5 gpm (1.9 L/min) aerator</i> <input type="checkbox"/> -1.0 <i>1.0 gpm (3.8 L/min) aerator</i> <input type="checkbox"/> -1.2 <i>1.2 gpm (4.5 L/min) aerator</i> <input type="checkbox"/> Delete Suffix 1.5 <i>2.2 gpm (8.3 L/min) aerator</i> <input type="checkbox"/> -DP <i>8 inch deck plate</i> <input type="checkbox"/> -NA <i>1.5 gpm (5.7 L/min) laminar flow</i> <input type="checkbox"/> -STN <i>Satin Nickel finish</i>	
Note: Append appropriate -suffix to model number.	
Compliance	Warranty
-ASME A112.18.1/CSA B125.1 -NSF/ANSI 61.9; NSF/ANSI 372	Limited Lifetime - to the original end purchaser in consumer/residential installations. 5 Years - for industrial/commercial installations. Refer to www.symmons.com/warranty for complete warranty information.



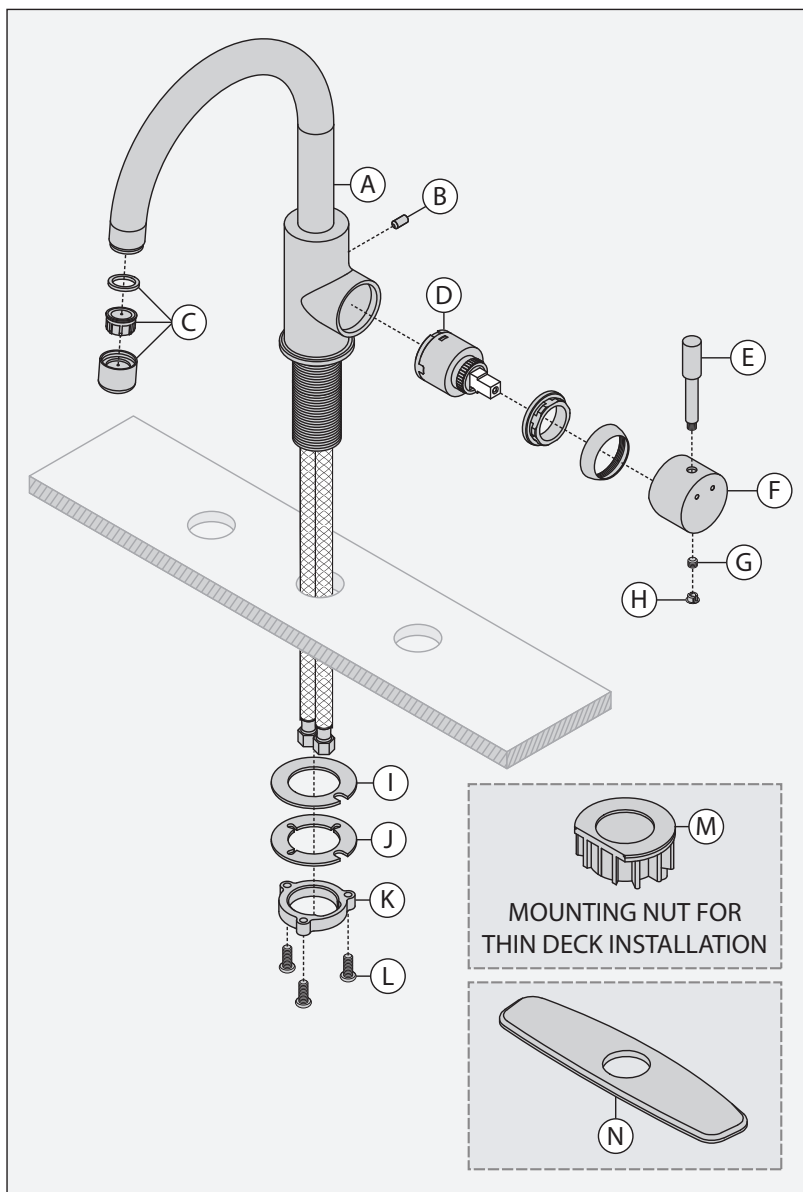
Dimensions



Measurements	
A	3-13/16", 97 mm
B	Ø 15/16", 24 mm
C	Ø 1-11/16", 43 mm
D	Ø 1-15/16", 49 mm
E	Hole Size Min. Ø 1-3/8", 35 mm Max. Ø 1-1/2", 38 mm
F	3/8" compression
G	7-1/16", 179 mm
H	11-1/16", 281 mm
I	Distance to Backsplash Ref. Min. 3-7/8", 98 mm
J	6-1/8", 156 mm
K	Deck Thickness Ref. Max. 2-3/16", 56 mm
L	Use large mounting nut for thin deck applications
M	22-11/16", 576 mm


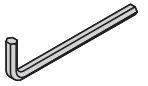
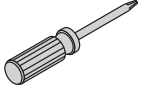
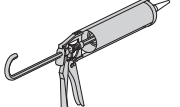
Note: Dimensions subject to change without notice.

Parts Breakdown



Replacement Parts		
Item	Description	Part Number
C	0.5 gpm aerator	RL-092-0.5*
	1.0 gpm aerator	RL-092-1.0*
	1.2 gpm aerator	RL-092-1.2*
	1.5 gpm aerator	RL-092-1.5*
	2.2 gpm aerator	RL-092-2.2*
D	Cartridge	RL-093
E	Lever Handle	RL-094*
F	Handle Hub	
G	Set Screw	
H	Plug Button	
I	Rubber Washer	RL-095
J	Metal Washer	
K	Mounting Nut	
L	Mounting Screws	
N	Optional 8" Deck Plate	RL-032*


***Note:** Append appropriate -suffix to repair part number for premium finish or flow rate.

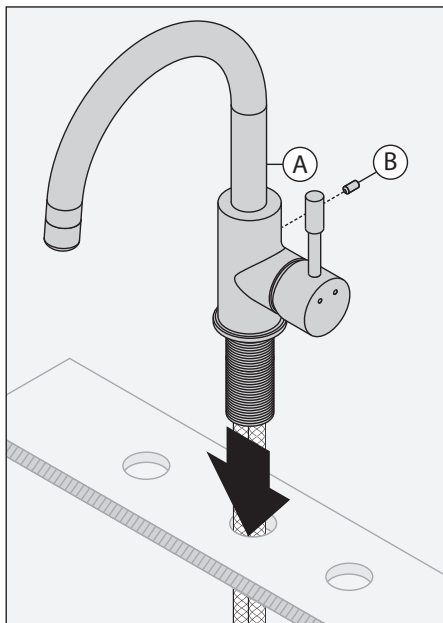
Tools Required for Installation	
Adjustable Wrench	
Allen Wrench: Handle (2.5mm) Spout (2mm)	
Phillips Head Screwdriver	
Silicone	

Installation Notes:

- 1) Apply a bead of silicone around the perimeter of trim installed flush to sink.
- 2) DO NOT use plumber putty or plumber tape on fittings with face seal washers or o-ring seals.
- 3) DO NOT OVERTIGHTEN fittings with face seal washers or o-ring seals.

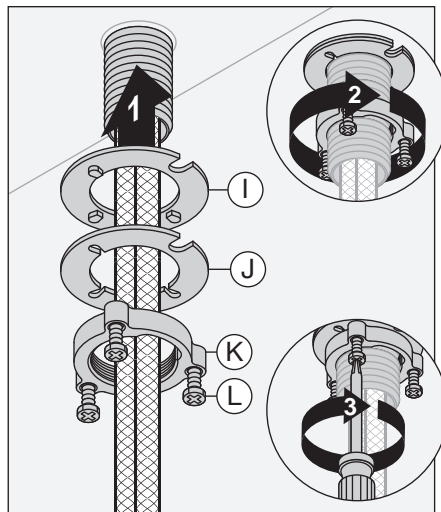
Installation

 Water lines **MUST** be thoroughly flushed **BEFORE** and **AFTER** installing the faucet to prevent foreign matter i.e. copper chips, sand, stones, etc. from clogging and possibly damaging the sealing surfaces of the cartridge.

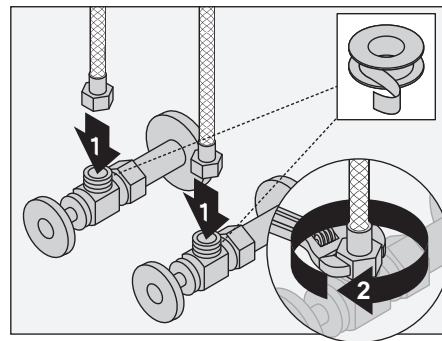


1) Insert faucet body (A) through deck surface.

Optional: To make swivel spout rigid, secure spout (A) with set screw (B) using a 2mm allen wrench.

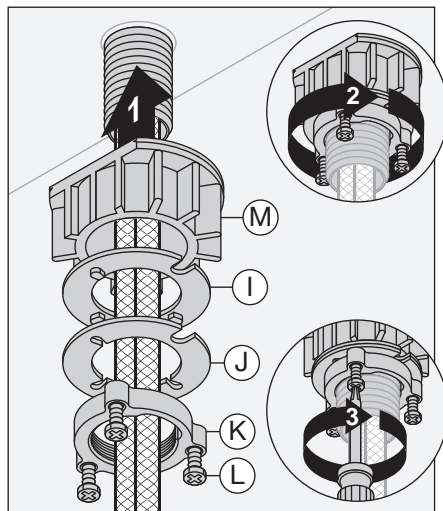


2) Slide rubber washer (I) and metal washer (J) on to valve body. Thread small mounting nut (K) on to valve body. Hand tighten nut (K), then tighten screws (L).



3) Attach supply lines to shut-off valves and hand tighten. Using a wrench, finish with one-half turn. **DO NOT** overtighten.


Installation (for thin deck applications)



1) Thread large mounting nut (M) on to valve body. Slide rubber washer (I) and metal washer (J) on to valve body. Thread small mounting nut (K) on to valve body. Hand tighten nut (K), then tighten screws (L).

Troubleshooting Chart

Problem	Cause	Solution
Finish is spotting.	Elements in water supply may cause water staining on finish.	Clean finished trim area with a soft cloth using mild soap and water or a non-abrasive cleaner and then quickly rinse with water.
Faucet is leaking from handle or faucet body.	Remove cartridge and inspect for foreign matter. Replace cartridge if necessary.	Cartridge o-rings are worn or foreign matter (dirt, chips) is lodged between cartridge and o-rings.
Faucet no longer maintains desired temperature.	Hard water deposit inside of cartridge is preventing accurate mix of hot and cold water.	Soak cartridge in white vinegar for 1 hour to breakdown hard water deposits, then rinse with water. Replace cartridge if necessary.

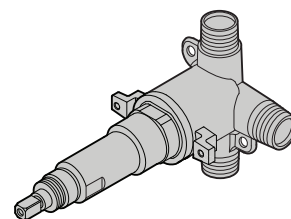
 **WARNING:** This product can expose you to chemicals including lead, which is known to the state of California to cause cancer, birth defects, or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.






2DIVBODYNSSRT

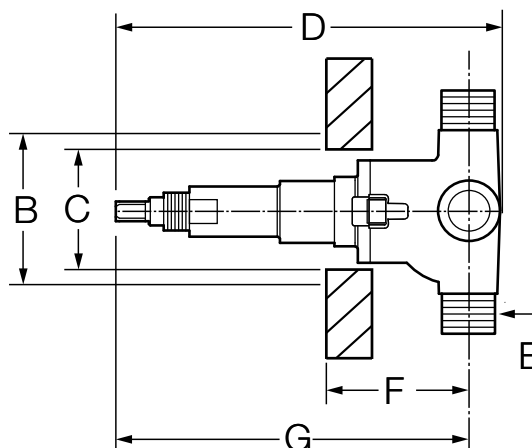
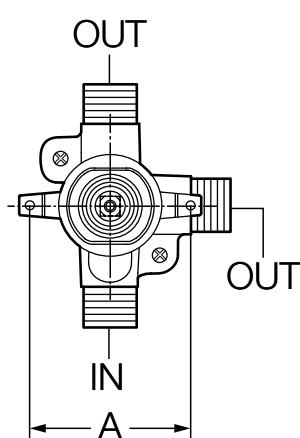
Dual Outlet Diverter, Non-Sharing

Operation & Maintenance Manual



Model Numbers	Specification
<input type="checkbox"/> 2DIVBODYNSSRT <i>Dual Outlet Diverter, Non-Sharing</i>	<p>Dual outlet diverter valve with no shared functionality. Features male 1/2" IPS and 1/2" sweat inlet/outlet connections (in common plane), defined detents, 2 discreet positions and stringer mounts. Components made from lead free metal construction.</p>  
Warranty	Compliance
<p>Limited Lifetime - to the original end purchaser in consumer/residential installations. 5 Years - for industrial/commercial installations. Refer to www.symmons.com/warranty for complete warranty information.</p>	<p>-ASME A112.18.1/CSA B125.1</p> 

Dimensions

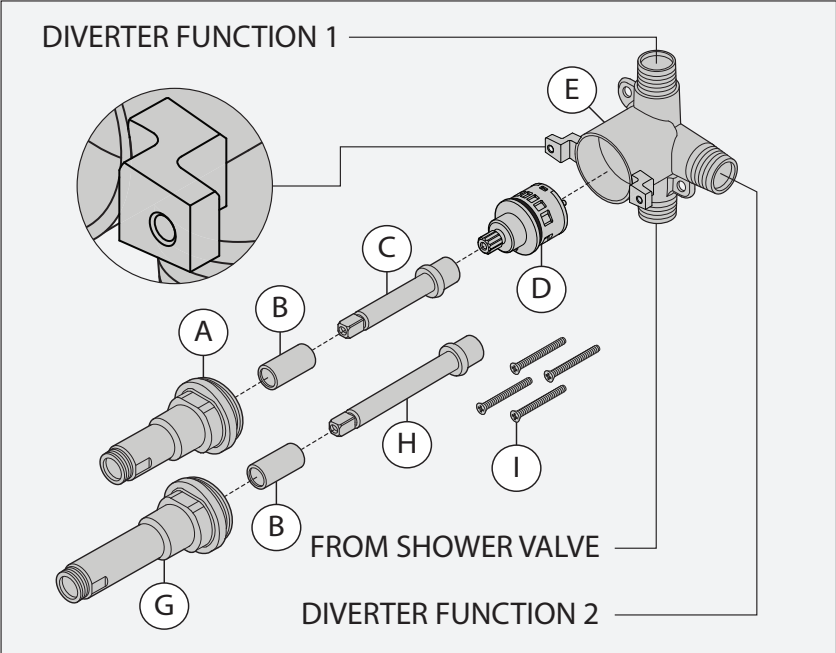



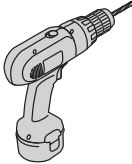



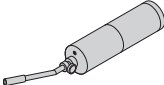
Measurements	
A	2-5/8", 67 mm
B	Screwless Escutcheons Hole Size Min. Ø 3", 76 mm Max. Ø 3-1/4", 83 mm
C	Screw Escutcheons Hole Size Min. Ø 1-3/4", 44 mm Max. Ø 2", 51 mm
D	5-1/4", 133 mm
E	(3x) 1/2" male IPS & (3x) 1/2" sweat
F	See note 1
G	4-7/8", 124 mm

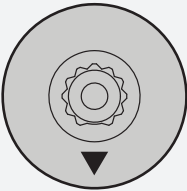
Notes:

- Figure is determined by style of trim attached to shower valve. See rough-in dimension drawing for shower valve application with diverter valve.
- Dimensions subject to change without notice.

Parts Breakdown



Replacement Parts		
Item	Description	Part Number
A	Cap Assembly	RTS-DIVCAP-NS-SRT
B	Spacer	
C	Cartridge Extender	RTS-DIVEXT-NS-SRT
D	Cartridge	RTS-2DIV-NS
B	Spacer	RTS-DIV-1EXT-NS
G	1" Cap Extender	
H	1" Cartridge Extender	
I	4" Mounting Screws	
Tools Required		
Adjustable Wrench		
Drill (optional)		
Plumber Tape		
Safety Glasses		
Solder		
Torch		



Important:
Cartridge (D)
must be installed
with arrow
facing down.

Installation



Important: Do not plug outlet ports. Do not use diverter as shut-off valve.



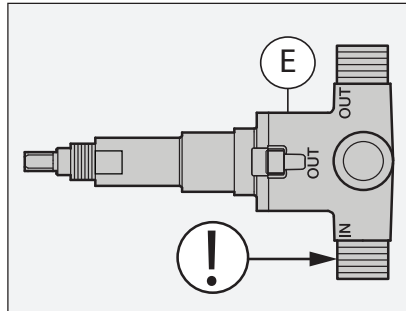
Important: Do not expose diverter valve to heat for longer than 2 minutes when sweating in copper tubing. Doing so may damage the internal components of the valve and will void the product warranty.

Note: Diverter valve can be installed in wall with shower valve or in an adjoining wall to shower valve.

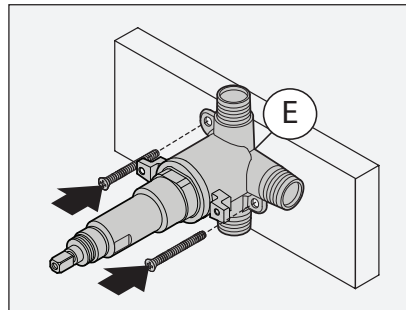
1) Reference rough-in dimension for shower application with diverter for proper installation of diverter valve.

2) Shut-off water supplies.

3) Position diverter valve (E) so port marked **IN** is facing down.

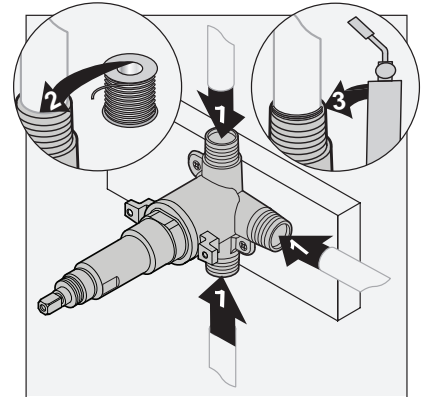


4) Secure stringer mounts on diverter valve (E) to wood blocking for support.



Note: Securing stringer mounts is necessary for applications where PEX, or other non rigid tubing, is used to install diverter valve.

5) Sweat 1/2" copper tubing from inlet port on diverter valve to water source. Sweat 1/2" copper tubing from outlet ports to desired accessories.

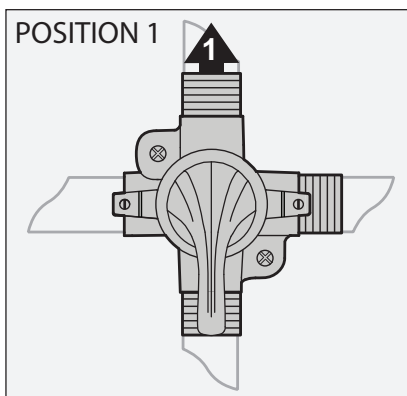


Optional: Apply plumber tape to male IPS threads on the inlet and outlet ports of diverter valve. Install 1/2"-14 NPT copper fittings to the inlet and outlet ports. Connect outlets to desired accessories.

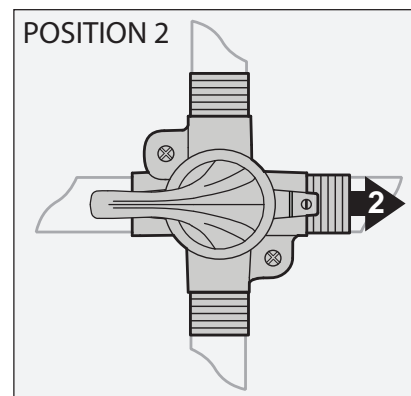
6) Turn on water supplies to flush plumbing lines free of debris. Check for leaks.

Operation

1) Cartridge is factory set to divert to function 1.

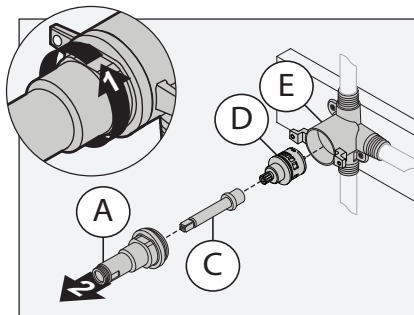


2) Turn handle to position 2 to divert to function 2.



Maintenance (Cartridge Replacement)

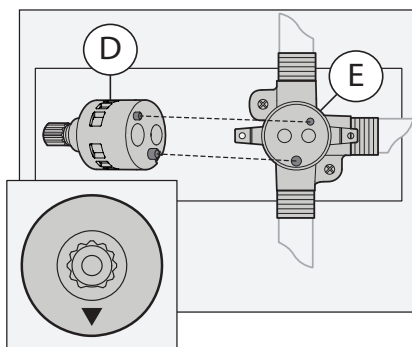
- 1) Remove cap assembly (A) from diverter valve by turning counterclockwise. Remove cartridge extender (C) and cartridge (D).



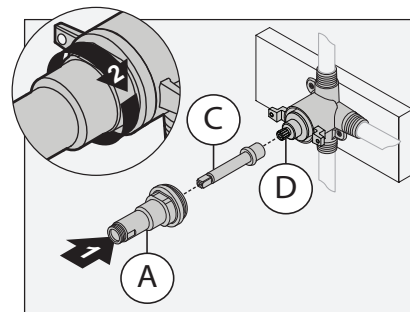
Note: Spacer (B) will be seated inside cap assembly (A).

- 2) Inspect cartridge for debris. Replace cartridge if necessary.

- 3) Orient new cartridge (D) with arrow facing down. Align pegs on cartridge (D) with indents inside diverter valve (E).



- 4) Align spindle extender (C) with broach on cartridge (D). Install spindle extender (C) and cap assembly (A) to cartridge (D). Secure cap assembly (A) by turning clockwise.



Notes:

- 1) Use caution not to dislodge cartridge from valve body when installing cap assembly (A).
- 2) Tighten cap assembly (A) to 75 ± 5 lbf-in of torque.

Troubleshooting Chart

Problem	Cause	Solution
Diverter valve will not divert water.	Foreign matter in water supply may cause blockages in plumbing lines and the diverter valve cartridge.	Remove cartridge from diverter valve. Flush lines free of foreign matter. Inspect cartridge for debris. Replace cartridge if necessary.
Water is leaking from the face of the diverter valve.	Cap assembly is not fully sealed to diverter valve.	Remove cap assembly. Inspect threads for debris. Reinstall cap assembly to diverter valve at 75 ± 5 lbf-in of torque.
Diverter trim will not install to diverter valve.	Diverter valve body rough-in is too deep.	Use RTS-DIV-1EXT-NS to extend diverter stem 1 inch.

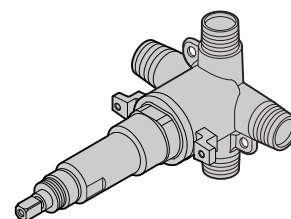
⚠ WARNING: This product can expose you to chemicals including lead, which is known to the state of California to cause cancer, birth defects, or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.






3DIVBODYNSSRT

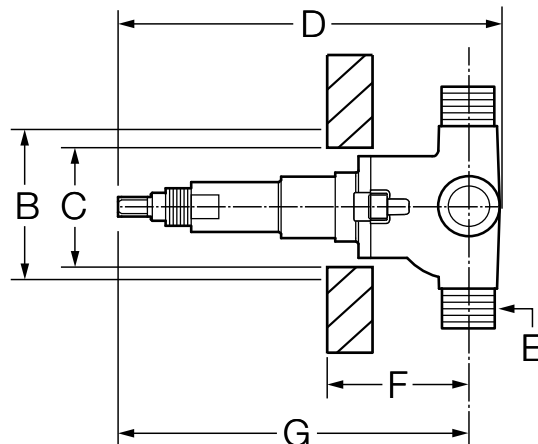
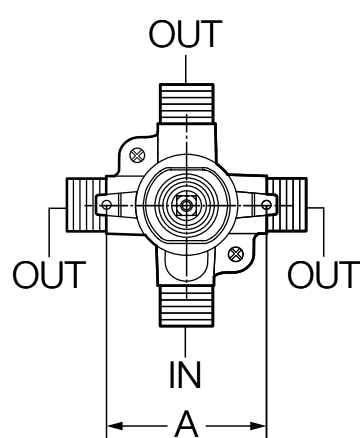
Triple Outlet Diverter, Non-Sharing

Operation & Maintenance Manual



Model Numbers	Specification
<input type="checkbox"/> 3DIVBODYNSSRT <i>Triple Outlet Diverter, Non-Sharing</i>	<p>Triple outlet diverter valve with no shared functionality. Features male 1/2" IPS and 1/2" sweat inlet/outlet connections (in common plane), defined detents, 3 discreet positions and stringer mounts. Components made from lead free metal construction.</p>  
Warranty	Compliance
<p>Limited Lifetime - to the original end purchaser in consumer/residential installations. 5 Years - for industrial/commercial installations. Refer to www.symmons.com/warranty for complete warranty information.</p>	<p>-ASME A112.18.1/CSA B125.1</p> 

Dimensions

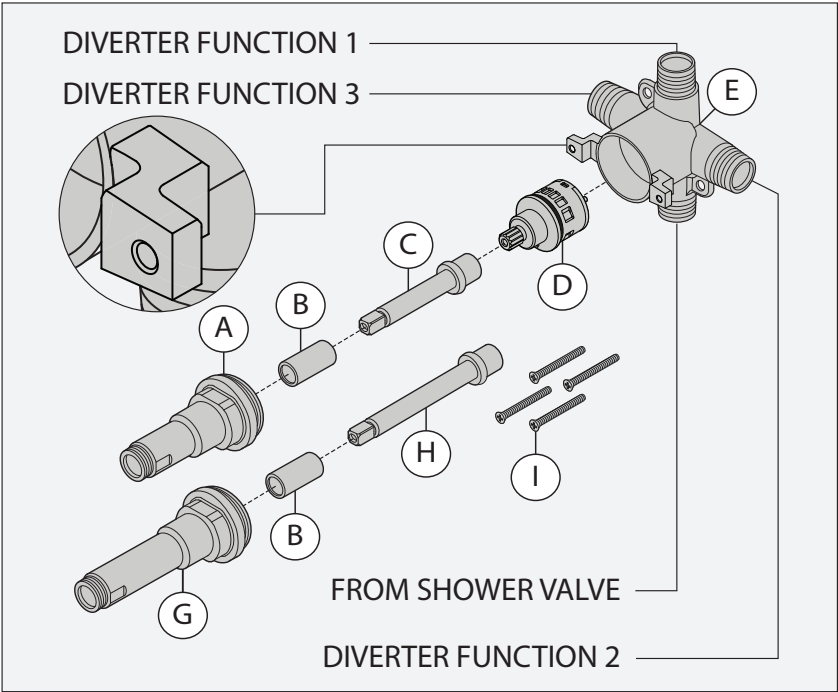



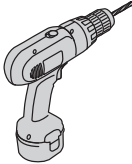



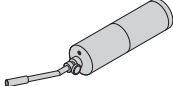
Measurements	
A	2-5/8", 67 mm
B	Screwless Escutcheons Hole Size Min. Ø 3", 76 mm Max. Ø 3-1/4", 83 mm
C	Screw Escutcheons Hole Size Min. Ø 1-3/4", 44 mm Max. Ø 2", 51 mm
D	5-1/4", 133 mm
E	(4x) 1/2" male IPS & (4x) 1/2" sweat
F	See note 1
G	4-7/8", 124 mm

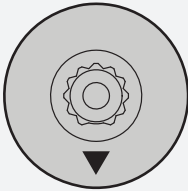
Notes:

- Figure is determined by style of trim attached to shower valve. See rough-in dimension drawing for shower valve application with diverter valve.
- Dimensions subject to change without notice.

Parts Breakdown



Replacement Parts		
Item	Description	Part Number
A	Cap Assembly	RTS-DIVCAP-NS-SRT
B	Spacer	RTS-DIVCAP-NS-SRT
C	Cartridge Extender	RTS-DIVEXT-NS-SRT
D	Cartridge	RTS-3DIV-NS
B	Spacer	RTS-DIV-1EXT-NS
G	1" Cap Extender	
H	1" Cartridge Extender	
I	4" Mounting Screws	
Tools Required		
Adjustable Wrench		
Drill (optional)		
Plumber Tape		
Safety Glasses		
Solder		
Torch		



Important:
Cartridge (D)
must be installed
with arrow
facing down.

Installation



Important: Do not plug outlet ports. Do not use diverter as shut-off valve.



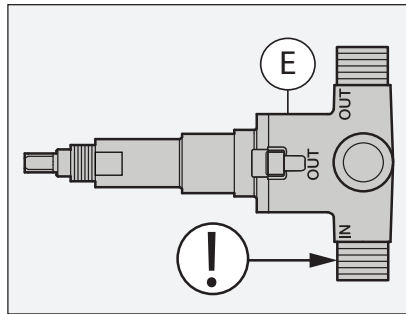
Important: Do not expose diverter valve to heat for longer than 2 minutes when sweating in copper tubing. Doing so may damage the internal components of the valve and will void the product warranty.

Note: Diverter valve can be installed in wall with shower valve or in an adjoining wall to shower valve.

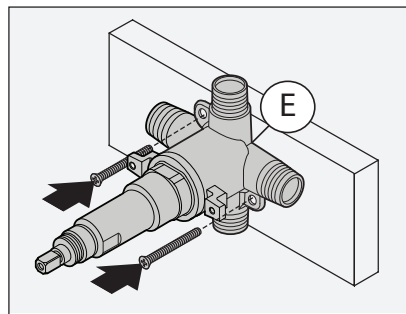
1) Reference rough-in dimension for shower application with diverter for proper installation of diverter valve.

2) Shut-off water supplies.

3) Position diverter valve (E) so port marked **IN** is facing down.

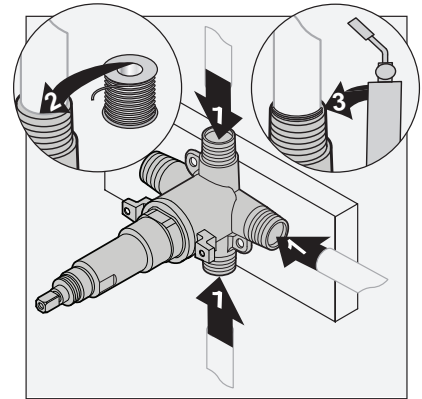


4) Secure stringer mounts on diverter valve (E) to wood blocking for support.



Note: Securing stringer mounts is necessary for applications where PEX, or other non rigid tubing, is used to install diverter valve.

5) Sweat 1/2" copper tubing from inlet port on diverter valve to water source. Sweat 1/2" copper tubing from outlet ports to desired accessories.

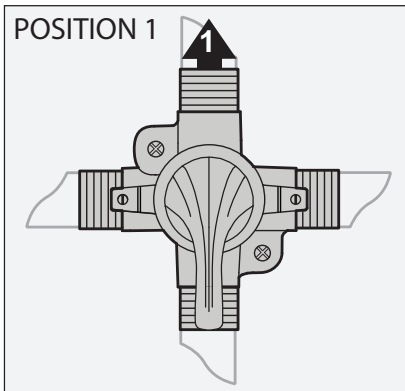


Optional: Apply plumber tape to male IPS threads on the inlet and outlet ports of diverter valve. Install 1/2"-14 NPT copper fittings to the inlet and outlet ports. Connect outlets to desired accessories.

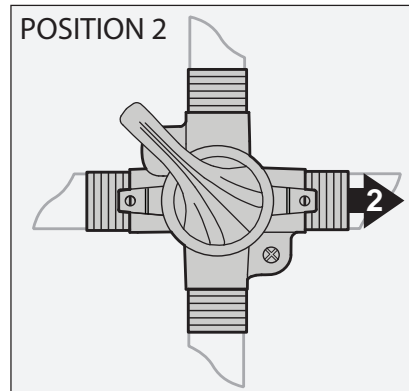
6) Turn on water supplies to flush plumbing lines free of debris. Check for leaks.

Operation

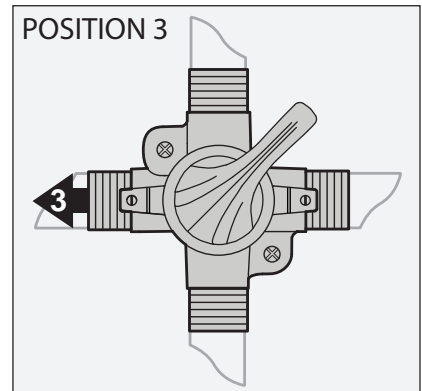
1) Cartridge is factory set to divert to function 1.



2) Turn handle to position 2 to divert to function 2.

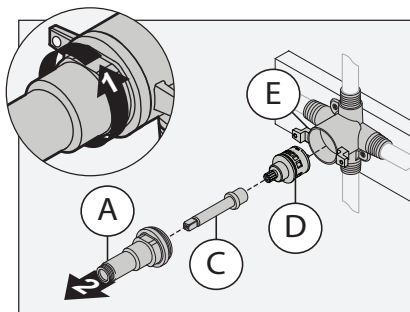


3) Turn handle to position 3 to divert to function 3.



Maintenance (Cartridge Replacement)

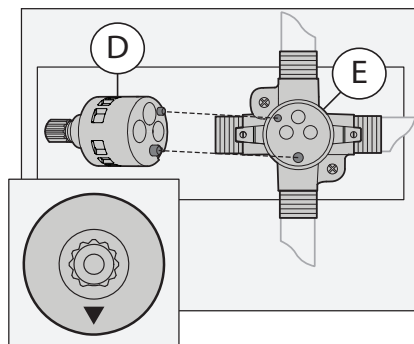
- 1) Remove cap assembly (A) from diverter valve by turning counterclockwise. Remove cartridge extender (C) and cartridge (D).



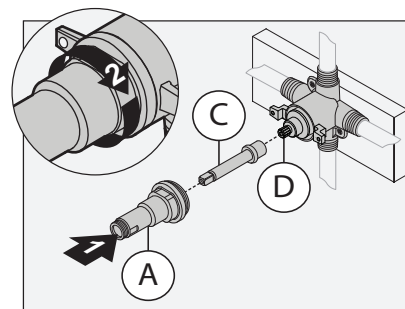
Note: Spacer (B) will be seated inside cap assembly (A).

- 2) Inspect cartridge for debris. Replace cartridge if necessary.

- 3) Orient new cartridge (D) with arrow facing down. Align pegs on cartridge (D) with indents inside diverter valve (E).



- 4) Align spindle extender (C) with broach on cartridge (D). Install spindle extender (C) and cap assembly (A) to cartridge (D). Secure cap assembly (A) by turning clockwise.



Notes:

- 1) Use caution not to dislodge cartridge from valve body when installing cap assembly (A).
- 2) Tighten cap assembly (A) to 75 ± 5 lbf-in of torque.

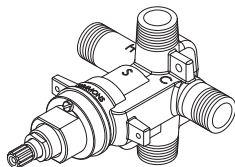
Troubleshooting Chart

Problem	Cause	Solution
Diverter valve will not divert water.	Foreign matter in water supply may cause blockages in plumbing lines and the diverter valve cartridge.	Remove cartridge from diverter valve. Flush lines free of foreign matter. Inspect cartridge for debris. Replace cartridge if necessary.
Water is leaking from the face of the diverter valve.	Cap assembly is not fully sealed to diverter valve.	Remove cap assembly. Inspect threads for debris. Reinstall cap assembly to diverter valve at 75 ± 5 lbf-in of torque.
Diverter trim will not install to diverter valve.	Diverter valve body rough-in is too deep.	Use RTS-DIV-1EXT-NS to extend diverter stem 1 inch.

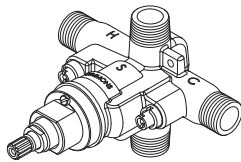
⚠ WARNING: This product can expose you to chemicals including lead, which is known to the state of California to cause cancer, birth defects, or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.



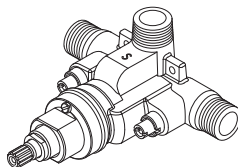
Temptrol® Pressure Balancing Valve Installation Instructions



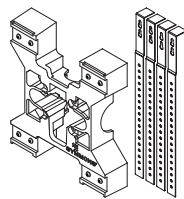
262BODY
(4 PORT)



262XBODY
(4 PORT, SERVICE STOPS)



261XBODY
(3 PORT, SERVICE STOPS)



RTS-076
(BRACKET)

COMPLIANCE

-ASME A112.18.1/CSA B125.1

-ASSE 1016

-Buy American Act Compliant



IMPORTANT / FOR INSTALLER

⚠ WARNING:

As the installer of this valve, you **must** first carefully read and understand the material covered in this manual before installing and adjusting this valve per instructions. Failure to do so may compromise the installation, operation and/or serviceability of this valve.

Do not install positive shut-off devices on the outlet of this valve, or devices that do not allow the valve to flow at least 1.5 GPM at 45 psi inlet pressure. Exception: If a self-closing or slow-closing valve is installed on the outlet, the supplies of the valve must be equipped with checks to eliminate hot to cold bypass in the event the valve's handle is not turned off after use.

When installing this valve, failure to adjust limit stop screw properly may result in serious scalding.

LIFETIME LIMITED WARRANTY

All warranty claims **MUST** be pre-approved by Symmons.

All parts and finishes of the Symmons products are warranted to the original consumer purchaser to be free from manufacturing defects in material and workmanship for 5 years Non-Residential or Commercial Applications. Symmons warrants to the original consumer purchaser/end-user that any Symmons product will be free of defects in material and workmanship during normal domestic use for the life of your home.

Symmons recommends using a professional plumber for all installation and repair. During the warranty period, Symmons at its sole option, will provide replacement part(s) or product (or, if no longer available, a comparable product) to replace those which have proven defective in materials or workmanship under normal installation, use and service, **FREE OF CHARGE** for the time period of 5 years from the date of purchase. (BATTERIES NOT INCLUDED)

This warranty is extensive in that it covers replacement of all defective parts and even finish, but these are the only two things that are covered. Damage due to installation error, product abuse, product misuse, or use of cleaners containing abrasives, alcohols, or other organic solvents, whether performed by a contractor, Service Company or yourself are excluded from this warranty. Symmons will not be responsible for labor charges and/or damage incurred in installation or repair or replacement, nor for any indirect, incidental or consequential damages, losses, injury or costs of any nature relating to the bathing products. Except provided by law, this warranty is in

lieu of and excluded all other warranties, conditions and guarantees, whether expressed or otherwise, including without restriction those of merchantability or of fitness for use.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. This warranty gives you specific legal rights, and you also may have other rights which vary from state to state. This warranty is not transferable. This warranty does not cover damage or defects relating to misuse, abuse, negligence, normal wear and tear, accident, acts of God, repairs or alterations not authorized in writing by Symmons, or improper installation, storage or handling.

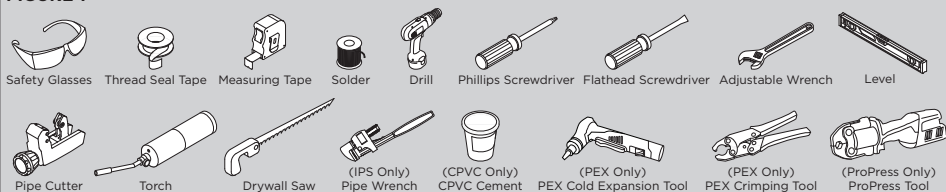
The above mentioned warranty information includes each product that falls under the following: Symmons Bathing Products Warranty- Non-Residential or Commercial Applications; Symmons Non-Electronic Lifetime Faucet and Finish Limited Warranty Non-Residential or Commercial Applications; Symmons Electronic Faucet Limited Warranty - Non-Residential, Commercial and Residential Applications; Symmons Bathing Products Warranty- Residential Application Symmons Non-Electronic Lifetime Faucet and Finish Limited Warranty Residential Application

If you have any questions regarding technical support, installation or concerns regarding our warranty plan, please email us at GetHelp@symmons.com or call us at: 1-800-796-6667.

1. RECOMMENDED TOOLS

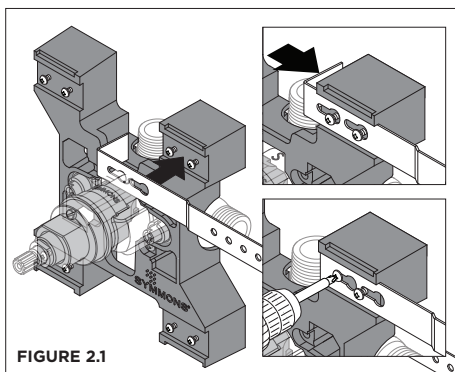
Copper, IPS, CPVC, PEX (Crimp) & PEX (Cold Expansion)

FIGURE 1



2. MOUNTING BRACKET INSTALLATION

2.1 Metal Straps

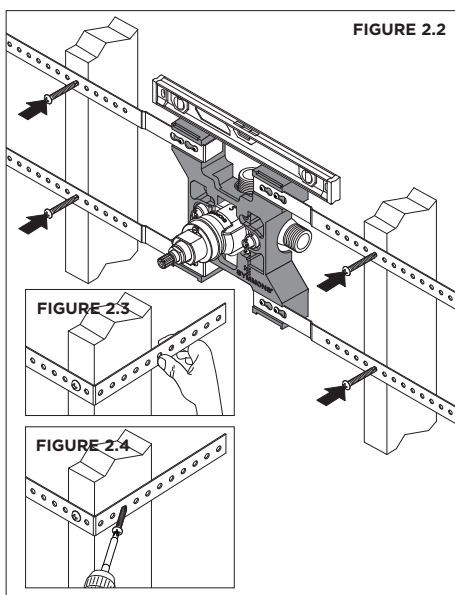


Mounting bracket is used to secure valve between wall studs up to 24 inches, center to center.

1. Place metal straps (x4) over screws. Screws will come preassembled to bracket.
2. Pull metal straps tight against bracket ears. Screws will protrude through small screw hole in metal straps.
3. Drive screws into bracket to secure straps.
⚠ Use caution not to strip screws.

NOTE: Valve will come preassembled to mounting bracket unless specified otherwise.

2.2 Install Bracket

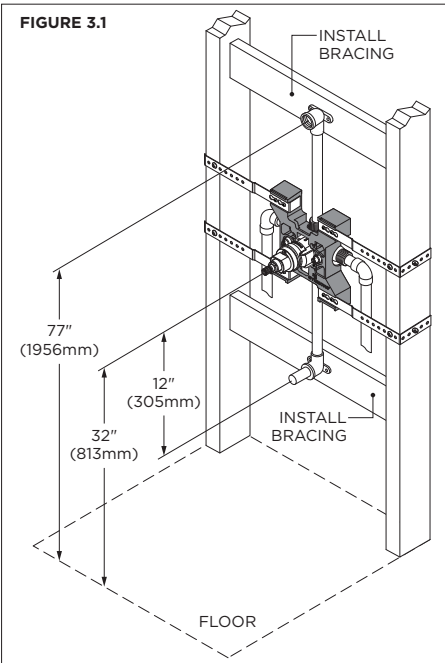


Mounting bracket will locate valve body in wall cavity at appropriate depth (valve body rough-in is not required).

1. Confirm valve body and mounting bracket are level. Drive (x4) wood screws through metal straps into wood studs (see FIGURE 2.2)
2. Bend excess strap around wood studs. (see FIGURE 2.3)
3. Drive (4x) wood screws, at inward angle, through metal straps into sides of wood studs (see FIGURE 2.4). Installing wood screws at inward angle will pull metal straps tight against wood studs.

NOTE: If not using mounting bracket, see STEP 5.1 for stringer mounts installation.

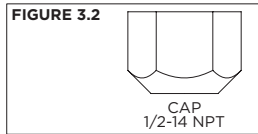
3.1 Tub/Shower Systems



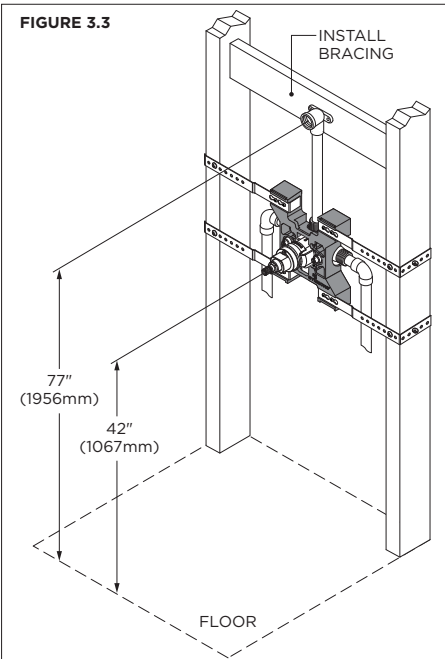
Valve should be positioned 32 inches above the tub basin floor. Shower arm should be 77 inches above the tub basin floor. Tub spout should be positioned approximately 12 inches below the valve.

IMPORTANT: The design of this valve requires a rigid copper tubing connection between the tub port and the tub spout with no more than one (1) 90 degree bend allowed. Failure to do so, or to substitute PEX, CPVC, or any other connection type or outlet accessory such as a hand or body-spray, other than the Symmons tub spout provided, may result in excessive backpressure through the system, and compromise operation.

When valve is used in shower only or tub spout only installation, apply plumber tape to outlet that will not be used and install the enclosed cap to that outlet (see FIGURE 3.2).



3.2 Shower Systems



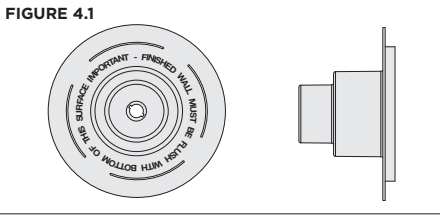
Valve should be positioned 42 inches above the tub basin floor. Shower arm should be 77 inches above the tub basin floor.

NOTE: For ADA compliance (Americans with Disabilities Act) consult your local municipality for proper product choice and mounting locations.

4. DETERMINE WALL TYPE

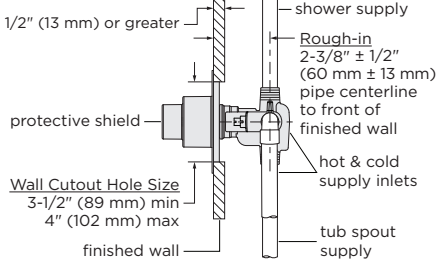
4.1 Protective Shield

FIGURE 4.1



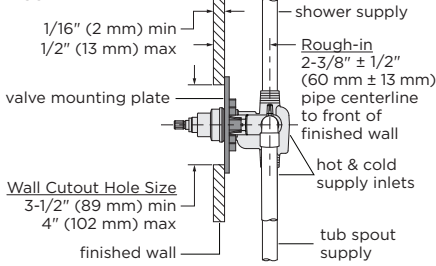
4.3 Drywall or Other Type Wall

FIGURE 4.3



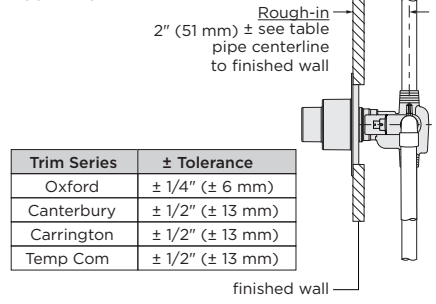
4.4 Thin Wall Installation

FIGURE 4.4



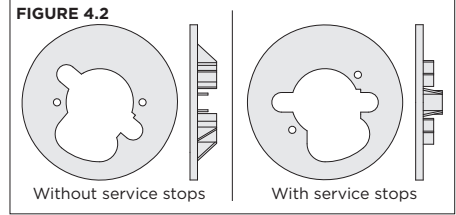
4.5 Alternative Rough-ins

FIGURE 4.5



4.2 Valve Mounting Plate

FIGURE 4.2



Protective shield is **required** for drywall, plaster or other type walls with:

- 1/2 inch (13 mm) or greater wall thickness

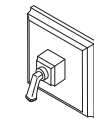
1. Attach protective shield by snap fitting over end of valve spindle to protect valve during wall construction.
2. Finished wall must be flush with back side of protective shield surface.

Valve mounting plate is **required** for fiberglass or acrylic walls, and **optional** for plaster or other type walls with:

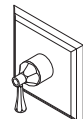
- Minimum 1/16 inch (2 mm) wall thickness
- Maximum 1/2 inch (13 mm) wall thickness

1. Seat mounting plate against valve (see FIGURE 4.2 for orientation).
2. Valve mounting plate must be flush with inner wall.

When installing valve used with any of the shower or tub/shower trims shown below, reference rough-in dimensions as shown in FIGURE 4.5 instead of standard valve rough-in:



Oxford



Canterbury



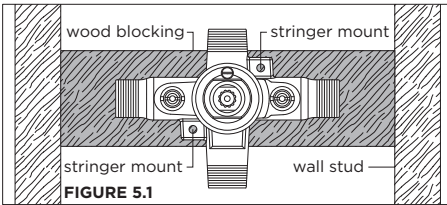
Carrington



Temptril Commercial

5. VALVE BODY INSTALLATION

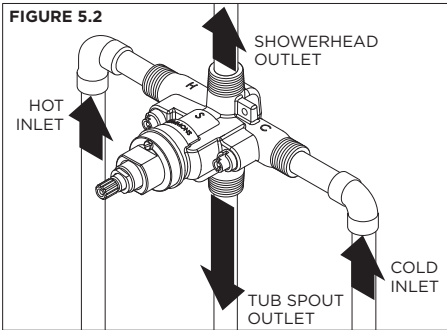
5.1 Stringer Mounts



Stringer mounts are used to secure valve body to wood blocking for valve bodies without mounting bracket. (see FIGURE 5.1).

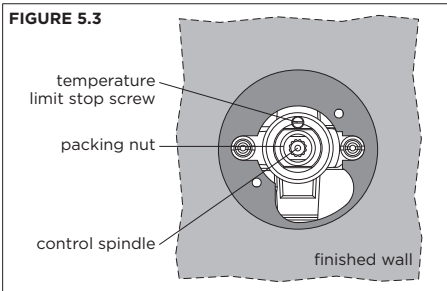
For valve body installation with mounting bracket see STEPS 2.1 & 2.2.

5.2 Install Piping/Fittings (Bracket Removed for Clarity)



1. Install valve as specified in FIGURES 4.3 - 4.5, per application.
2. Pipe from outlet port on the valve marked **S** to showerhead mounting arm location.
3. Connect hot water supply to valve inlet marked **H** and cold water supply to valve inlet marked **C**.
4. Pipe from outlet port on valve marked **T** to tub spout (262BODY & 262XBODY only).
5. Remove protective shield snap fitted over the end of valve flow control spindle once valve is securely installed and wall finish work has been completed.

5.3 Adjust Valve Packing Nut



1. Turn hot and cold supplies on. Valve will not operate unless both hot and cold water supply pressures are on.
2. Place handle over flow control spindle.
3. Tighten packing nut for positive frictional resistance as handle is rotated from shut-off position across adjustment range.

5.4 Flush System

1. Turn valve to the warm position and run for a few minutes.
2. If system is dirty, remove TA-10 flow control spindle in center of valve to ensure proper flushing (see STEP 8.1).
3. Check for leaks around valve assembly and all pipe fittings.

5.5 Set Temperature Limit Stop Screw

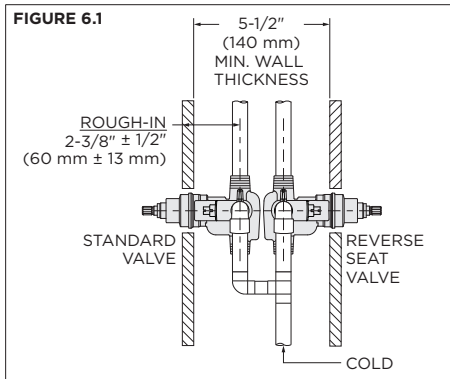
The temperature limit stop screw limits valve handle from being turned to maximum position resulting in excessive hot water discharge temperatures.

⚠ WARNING: Failure to adjust temperature limit stop screw properly may result in serious scalding.

1. Place handle on flow control spindle and open valve to maximum desired temperature.
2. Turn limit stop screw clockwise until it seats (see FIGURE 5.3).

6. BACK TO BACK INSTALLATION

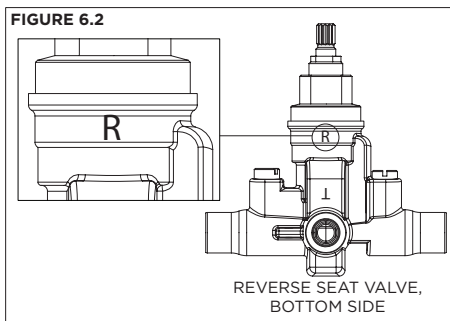
6.1 Back to Back Wall Type



1. To simplify piping on back to back installations use one **standard valve** (hot on left, cold on right) and one **reverse seat valve** (hot on right, cold on left) as shown in FIGURE 6.1.

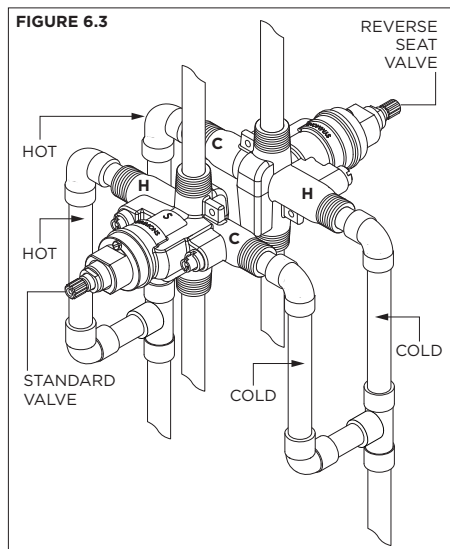
NOTE: Back to back installations require 5-1/2" (140 mm) minimum wall thickness for proper installation, with or without bracket.

6.2 Identify Reverse Seat Valve



1. Locate the "R" stamp on bottom side of the valve casting to identify reverse seat valve as shown in FIGURE 6.2.

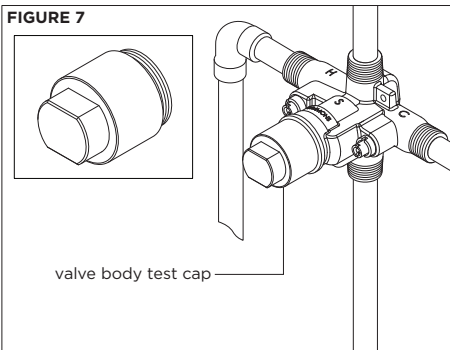
6.3 Install Piping/Fittings (Bracket Removed for Clarity)



1. Inlet marked **H** on **standard valve** should be plumbed to inlet marked **C** on **reverse seat valve**. Inlet marked **C** on **standard valve** should be plumbed to inlet marked **H** on **reverse seat valve** (see FIGURE 6.3).
2. Follow STEPS 5.3 - 5.5 to complete installation of valve bodies.

7. VALVE BODY TEST CAP (162BODY, 162XBODY, 161XBODY)

7.1 Install Valve Body with Test Cap



Test cap will come installed to valve to allow pressurization of system. **Do not** remove test cap from valve during wall construction, installation of valve or pressurization of system.

⚠ WARNINGS:

1. Do not expose valve with test cap to heat for longer than 2 minutes when soldering copper tubing. Doing so may damage the internal components of the valve and will void the product warranty.
2. Ensure test cap is **tightened securely** after soldering valve body.

To install valve body with test cap, follow instructions outlined in STEP 5.2.

7.2 Preparing Valve Body with Test Cap for Trim

TA-10 flow control spindle will be included with shower and tub/shower trim. When ready to install trim to valve:

3. Check for leaks around the valve assembly and all pipe fittings.
4. Remove test cap from valve.
5. If system is dirty, flush valve.
6. Install flow control spindle and cap assembly to valve (see STEP 8.5).
7. Adjust packing nut and set temperature limit stop screw (see STEPS 5.3 & 5.5).

8. SERVICE INSTRUCTIONS

8.1 Removing Flow Control Spindle

Reference parts breakdown (see FIGURE 9.1). See trim manual for trim removal instructions.

1. Shut off water supply to valve. Turn valve's TA-10 flow control spindle to open position using trim handle.
2. Remove trim handle and dome cover.
3. Remove escutcheon plate by first removing escutcheon screws.
4. Unscrew both T-12A cap assembly and flow control spindle together.

8.2 Hot/Cold Seat Repair Kit

Service requires TA-4 hot and cold seats and T-35C removal tools.

1. Remove flow control spindle (see STEP 8.1).
2. Remove both seats with removal tools, turning counterclockwise.
3. Replace both seats even if only one appears worn.
4. Install and tighten both seats to 15 foot pounds of torque, turning clockwise.

8.3 Flow Control Spindle Washer Repair Kit

Service requires TA-9 washer repair kit.

1. Remove flow control spindle (see STEP 8.1).
2. Remove cold washer by holding flow control spindle using trim handle and unscrew cold washer retainer using channel lock pliers, turning counterclockwise.
3. Remove hot washer by removing hot washer screw.

8.4 Checking Water Pressure Balancing Piston

The perforated end of the flow control spindle houses the water pressure-balancing piston.

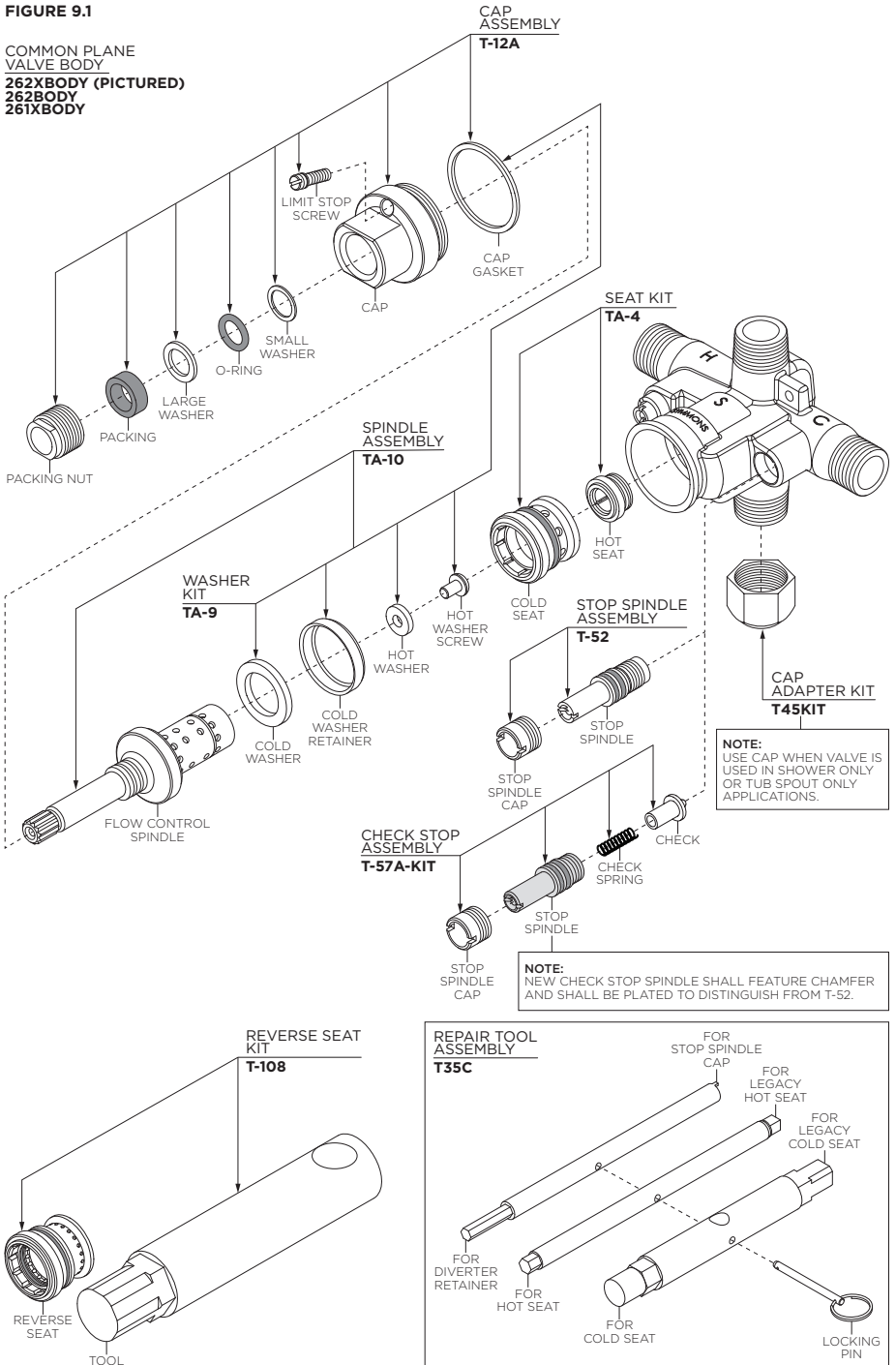
1. Remove flow control spindle (see STEP 8.1).
2. Shake flow control spindle and listen for clicking noise. Piston should be free to slide back and forth the full length of its travel.
3. If piston appears restricted then do the following: a) tap the handle, or the stem end of flow control spindle, against a solid object to free the piston, or b) try soaking in household vinegar and repeat tapping handle or stem of flow control spindle.
4. If unable to free piston, replace flow control spindle.

8.5 Valve Reassembly

Reassemble valve, reversing the procedure in STEP 8.1. Be sure flow control spindle is drawn close to the cap before screwing cap assembly back into valve.

FIGURE 9.1

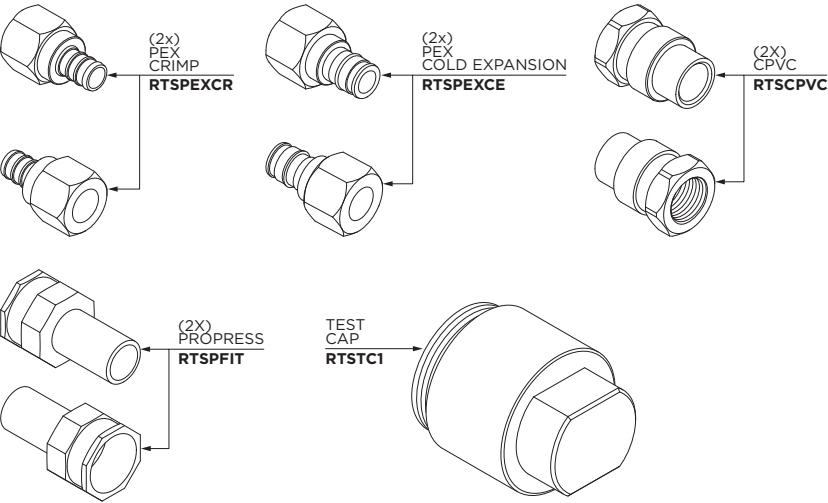
COMMON PLANE
VALVE BODY
262XBODY (PICTURED)
262XBODY
261XBODY



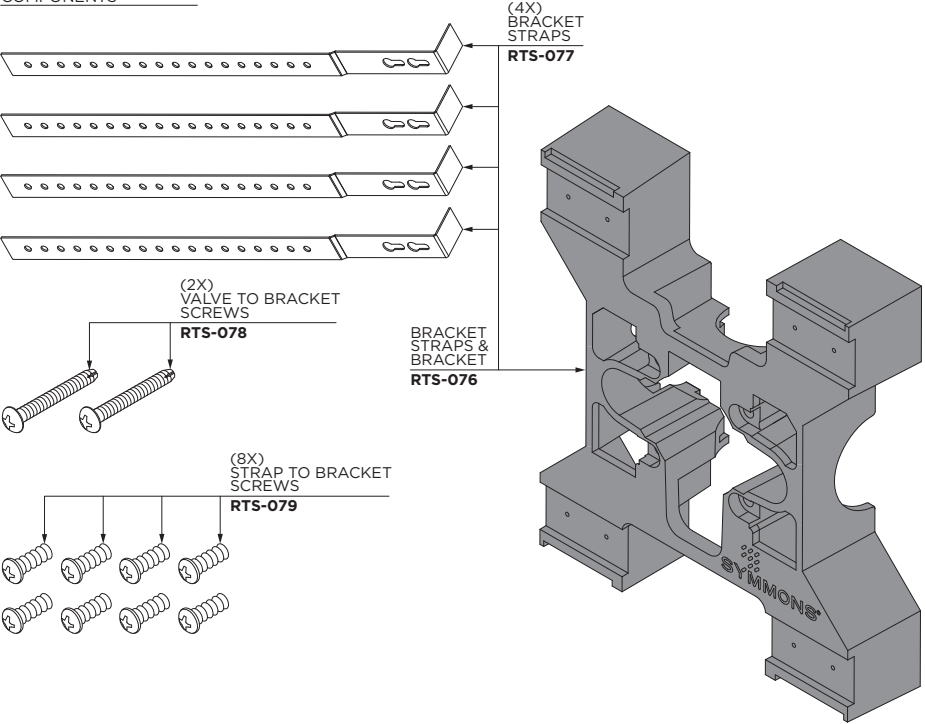
9. PARTS BREAKDOWN

FIGURE 9.2

VALVE BODY
FITTING MODIFICATIONS



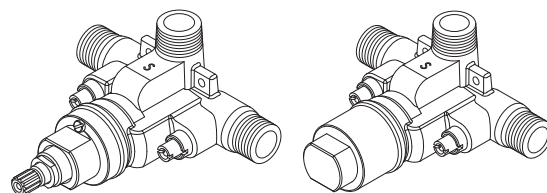
MOUNTING BRACKET
COMPONENTS



10. TROUBLESHOOTING CHART

PROBLEM	CAUSE	SOLUTION
Valve will not pass water.	Both hot and cold water supplies are not turned on.	Turn on both supplies. Valve will not operate unless both hot and cold water pressure is on.
Valve leaks when shut off.	Hot and cold washers are worn or foreign matter (dirt, chips) is lodged between washers and seat surfaces.	Replace washers using TA-9 washer repair kit. Replace hot & cold seats using TA-4 hot/cold seat repair kit.
Temperature control handle is turned from cold to hot (or hot back to cold) and volume from spout or head is not constant.	Pressure-balancing piston housed in spindle assembly is restricted from free movement by foreign matter.	Open valve halfway, remove handle and tap spindle with plastic hammer. Check water pressure balancing piston in control spindle. See service instructions. Replace TA-10 flow control spindle.
Valve delivers sufficient quantity of cold, but little hot, or the reverse.	Same as above.	Same as above.
Temperature varies without moving handle.	Same as above.	Same as above.
Valve delivery temperature reduces gradually during use; handle must be turned to hotter positions to maintain constant temperature.	Overdraw on hot water supply (i.e. running out of hot water).	Reduce maximum flow by using volume control adjustment on valve or showerhead. This will allow longer period of use before overdrawing hot water supply.
Valve delivers hot water when initially opened. Water turns colder as handle is rotated in a counterclockwise direction toward the hot position.	Valve is piped incorrectly (i.e. the hot supply is piped to the valve's cold inlet and the cold supply is piped to the hot inlet.)	If piping is accessible, correct connections to the valve. If piping is not accessible, order T-108 reverse seat and tool kit. Older installations may also require replacing the TA-4 hot/cold seat repair kit.

PRESSURE BALANCING TUB/SHOWER VALVE BODY SPECIFICATION SUBMITTAL



261XBODY

161XBODY

MODEL NUMBERS

- ☐ **261XBODY**
Pressure Balancing shower valve body with service stops
- ☐ **161XBODY**
Pressure Balancing shower valve body with pressure testing cap and service stops

FEATURE HIGHLIGHTS

- Brass, bronze and stainless steel construction
- Pressure balancing mixing valve to maintain safe shower temperature
- Adjustable stop screw to control maximum hot water temperature to valve
- Integral service stops allow water shut-off for valve servicing
- 3 port valve body in common plane
- Inlets: 1/2" IPS and 1/2" sweat
- Outlet: 1/2" IPS and 1/2" sweat
- Accommodates back to back installations
- Accommodates thin wall installations
- Stringer mounts included

OPTIONS/MODIFICATIONS

- ☐ **-BR** Temptrol Rapid Install™ Bracket
- ☐ **-CHKS** Integral check stops for use in installations where a positive shut-off device is used downstream of valve
- ☐ **-RV** Reverse seat for back to back installations

INLET ADAPTERS

- ☐ **-CP** CPVC fittings
- ☐ **-P1** PEX crimp fittings
- ☐ **-P2** PEX expansion fittings
- ☐ **-P3** ProPress fittings

COMPLIANCE

- ASME A112.18.1/CSA B125.1
- ASSE 1016
- Buy American Act Compliant

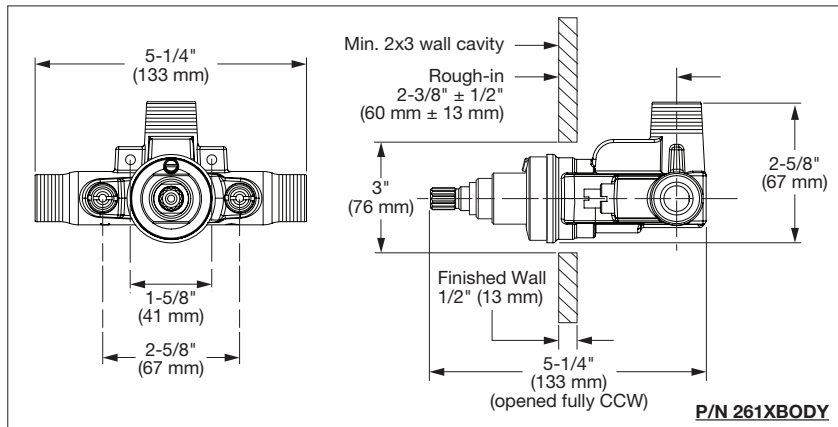


WARRANTY

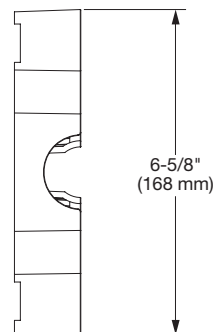
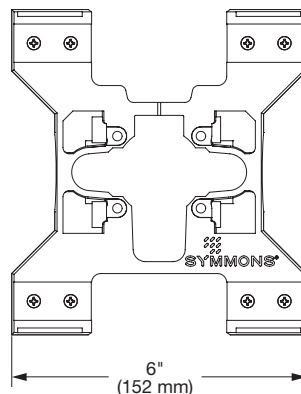
Limited Lifetime - to the original end purchaser in consumer installations.

5 Years - for commercial installations.

Refer to www.symmons.com/warranty for complete warranty information.

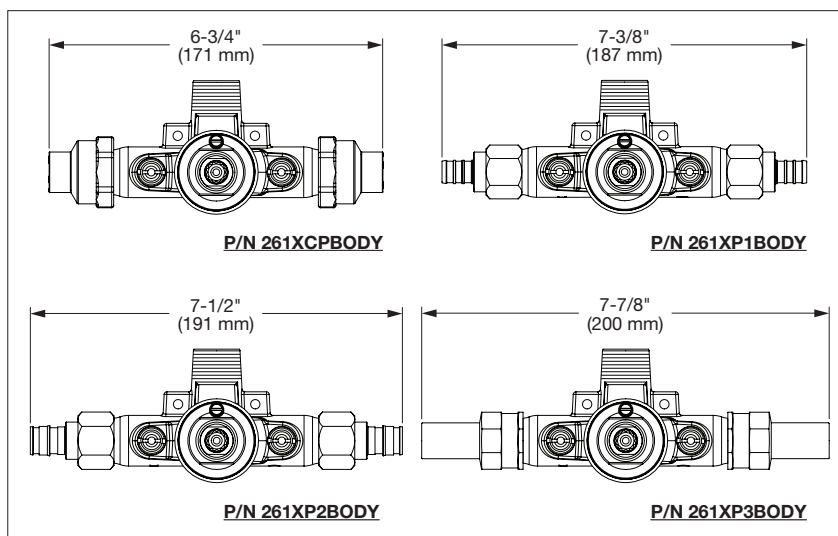


TEMPROL RAPID INSTALL™ BRACKET

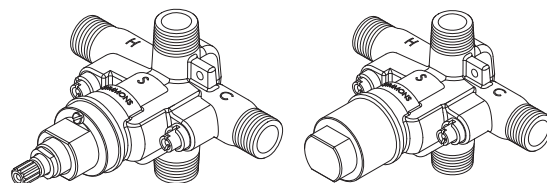


NOTES:

- 1) Min. 2x3 wall cavity
- 2) Rough-in 2-7/8" (73 mm)



PRESSURE BALANCING TUB/SHOWER VALVE BODY SPECIFICATION SUBMITTAL



262XBODY

162XBODY

MODEL NUMBERS

- ☐ **262XBODY**
Pressure Balancing tub/shower valve body with service stops
- ☐ **162XBODY**
Pressure Balancing tub/shower valve body with pressure testing cap and service stops

FEATURE HIGHLIGHTS

- Brass, bronze and stainless steel construction
- Pressure balancing mixing valve to maintain safe shower temperature
- Adjustable stop screw to control maximum hot water temperature to valve
- Integral service stops allow water shut-off for valve servicing
- 4 port valve body in common plane
- Inlets: 1/2" IPS and 1/2" sweat
- Outlets: 1/2" IPS and 1/2" sweat
- Accommodates back to back installations
- Accommodates thin wall installations
- Stringer mounts included

OPTIONS/MODIFICATIONS

- ☐ **-BR** Temptrol Rapid Install™ Bracket
- ☐ **-CHKS** Integral check stops for use in installations where a positive shut-off device is used downstream of valve
- ☐ **-RV** Reverse seat for back to back installations

INLET ADAPTERS

- ☐ **-CP** CPVC fittings
- ☐ **-P1** PEX crimp fittings
- ☐ **-P2** PEX expansion fittings
- ☐ **-P3** ProPress fittings

COMPLIANCE

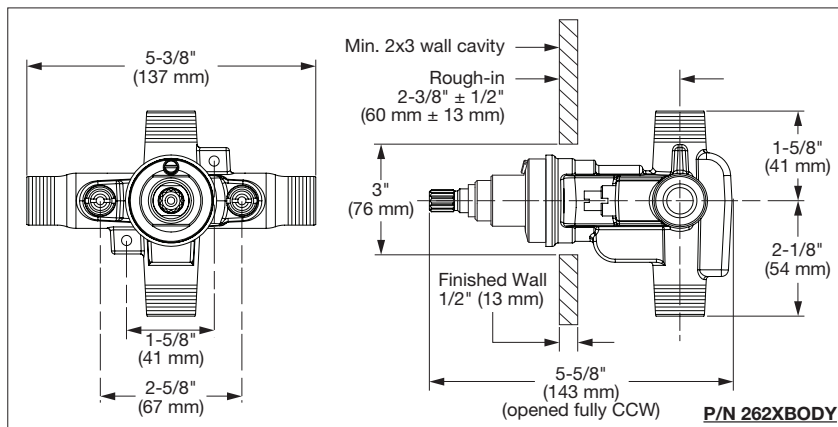
- ASME A112.18.1/CSA B125.1
- ASSE 1016
- Buy American Act Compliant



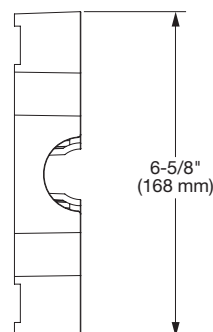
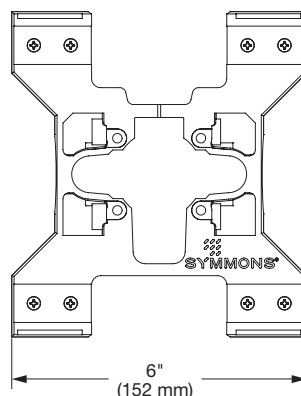
WARRANTY

Limited Lifetime - to the original end purchaser in consumer installations.

5 Years - for commercial installations.
Refer to www.symmons.com/warranty for complete warranty information.



TEMPROL RAPID INSTALL™ BRACKET



NOTES:

- 1) Min. 2x3 wall cavity
- 2) Rough-in 2-7/8" (73 mm)

P/N RTS-076

