1905-CP and 1907-CP Thermostatic Valves
Installation Instructions

CHICAGO FAUCETS®
Geberit Group

Safety Information
Read this entire user guide to ensure proper installation. Compliance and conformity to local codes and ordinances is the responsibility of the installer. The following safety notes must always be complied with during handling of this product:
• Make sure there is enough space and lighting available during installation and service.
• Do not modify or convert this Chicago Faucets product yourself. All warranties will be voided.

Notice to the Installer
• Read this entire instruction sheet before installing to ensure proper installation.
• Installation must comply with local codes and ordinances.
• Do not use pipe dope.
• Care shall be exercised when installing the device to prevent marring the exposed, decorative surfaces.

The supply piping to these devices shall be securely anchored to the building structure to prevent installed device from unnecessary movement when operated by the user.

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

Installation may be performed at different times of construction by different individuals.
For this reason, these instructions should be left on-site with the facility or maintenance manager.

NOTE: Installation should be in accordance with accepted plumbing practices. Flush all piping thoroughly before installation.

In order to complete the installation, you will need the following tools and supplies:
- Phillips Screwdriver, #1, #2, #3
- Adjustable Wrench
- Drill, with 3/16″ Bit
- Mallet
- Tape Measure
- Silicone-based Lubricant
- Sealant
- 1/2″ Deep Socket or #3 Flat Head Screwdriver

Valve Construction: Combination mixing valve, with heavy cast bronze body and brass stem. Concealed adjustable high temperature limit stop. Available with ADA-compliant ABS or metal lever handle.

Connections: 1/2″ Sweat Inlet/Outlet

Capacity: 4 gpm @ 45 psi ΔP 50/50 mix

Maximum Hot Water Supply Temperature: 190°F (88°C)

Minimum Hot Water Supply Temperature (Approach Temperature): 10°F (5.5°C) above set point

Maximum Operating Pressure: 125 psig (862 kPa)

Temperature Ranges (for +/- 3°F performance): ASSE 1016 Type T/P: 90-110°F (32-43°C)

ASSE 1016 Type T: 80-120°F (27-49°C)

High Temperature Limit Stop: Adjustable (factory set at 110°F [43°C])

Maximum Static Pressure: 125 psig (862kPa)

Minimum Flow: 0.5 gpm (1.89 L/min)

Approval Standards: ASSE 1016 / ASME A112.1016 / CSA B125.16, ASME A112.18.1 / CSA B125.1

Listing: ASSE 1016 / ASME A112.1016 / CSA B125.16, IAPMO cUPC

Shipping Weight: 3.5 lbs. (1.6 kg)

NOTE: This valve for use with shower heads rated at 1.5 GPM (5.7 L/min) or higher.

All 1905-CP and 1907-CP combination mixing valves meet above performance specifications based on typical operating conditions as stated in ASSE 1016 (45 psi pressure differential, hot water supply between 140°-180°F (60°-82°C), cold water supply less than 70°F (21°C). If your operating conditions vary from those stated in the standard, performance may vary as well. Consult your local sales representative or a Chicago Faucet Representative to discuss your specific application. All Chicago Faucets thermostatic mixing valves perform to the requirements of standards ASSE 1016 / ASME A112.1016 / CSA B125.16 and ASME A112.18.1 / CSA B125.1.

To Install
1. Position mixer 1-15/16″ ± 1/2″ [49mm ± 13mm] from inlet center to finished wall surface. The tub outlet port is marked “TUB” and should face down. Facing front of mixer, connect hot water to left side and connect cold water to right side. The valve has “C” and “H” cast into the body near the appropriate inlet ports.
2. Valve is factory-set for standard inlets. If **reversed inlets** are required due to back-to-back installation (Cold water supply on the left and Hot water supply on the right), follow instructions a – d below:
   a. Connect **cold inlet to hot port** (“H”) and **hot inlet to cold port** (“C”). **Note:** Do not turn valve upside down. If valve is upside down, water will not flow properly through tub spout or showerhead.
   b. Turn water off with checkstops, remove bonnet and cartridge.
   c. Reinstall cartridge. “H” on the cold side of the valve body and “C” should be on the hot side of the valve body.
   d. Reinstall bonnet with high temperature limit stop on it.
   Note: Be certain that valve opens in full cold!
   e. Hot and Cold inlets should be re-identified for reversed inlets to avoid confusion during future maintenance.
3. For **tub and shower installations** (see Figure 1). Pipe bottom outlet port “TUB” directly to the diverter tub spout. The mixer body is designed to operate without the use of a twin ell. Pipe top outlet port “S” to the showerhead.
4. For **shower only installation** (see Figure 2). Pipe top outlet port “S” directly to the showerhead and plug bottom port.
5. Rough-in guide installation:
   a. When piping installation is complete and before doing the finished wall, slide rough-in guide onto the mixer stem and press it into place (see Figure 4).
   b. The rough-in guide will insure the proper size opening for mixer and checkstop shut-off and repair accessibility, as well as protect the chrome-plated sleeve from damage during drywall and tile installation.
6. To install dial gaskets, peel backing off gaskets and attach gaskets to inside of dial plate. Attach indicator plate gasket to the back of the trim plate making sure horizontal holes on the gasket matches horizontal holes on the trim plate. Indicator plate locator hole matches diagonal hole on the trim plate. Peel off backing of the trim plate gasket and attach to the inside top edge of the trim plate. Gasket should be approximately 1/16″ beyond the plate edge.
7. a. Install trim plate.
   b. Snap on the indicator plate. Guide on the back of the plate goes into the locator hole.
   c. Install sleeve O-ring on the bonnet. Slide sleeve on the bonnet.

CAUTION: Indicator plate must be installed before sleeve.

   d. Install handle and tighten the set screw.

CAUTION: When soldering during installation process, do not heat the valve any higher than the temperature required to flow solder. Excessive overheating of the valve may cause damage to the cartridge mechanism. **By following this recommendation, you will be able to solder the valve without removing either the cartridge or the checkstop internals.** If either brazing or resistance (electric) solder is to be used, all valve internals must be removed.

8. Maximum temperature setting adjustment (see Figure 5) must be set on the job to in no case greater than 110°F (43°C). The high temperature limit stop is located on the bonnet. Rotate handle to the maximum desired outlet temperature. With an open-end wrench, screw high temperature limit stop into bonnet until it touches stem’s shoulder. Close valve and open it to full hot to verify settings.

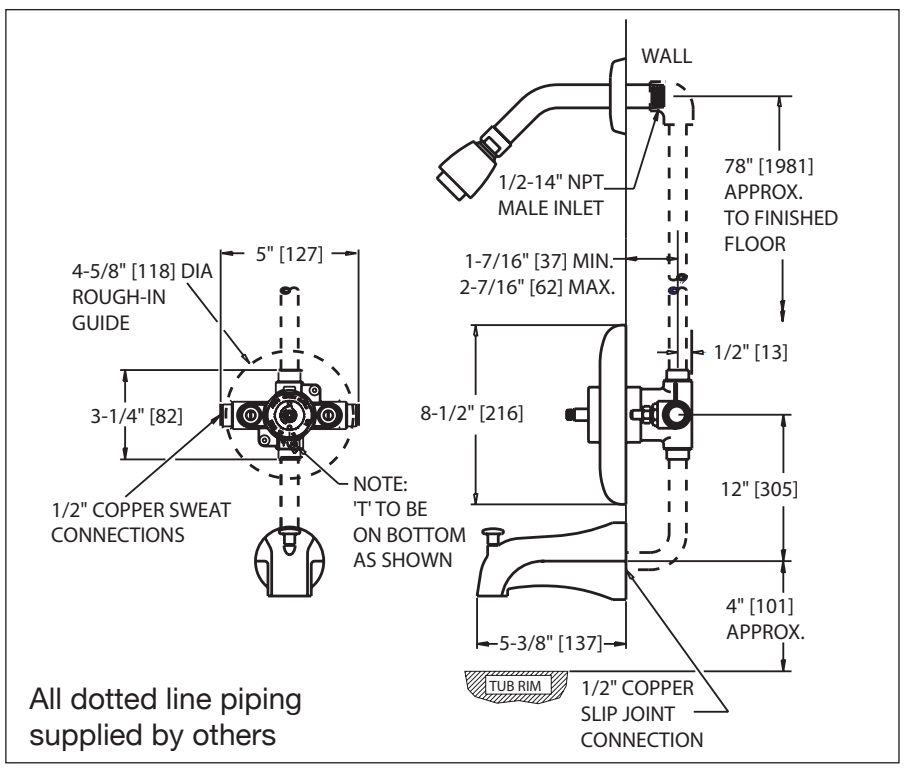

Figure 1: Rough-in Dimensions - Tub & Shower

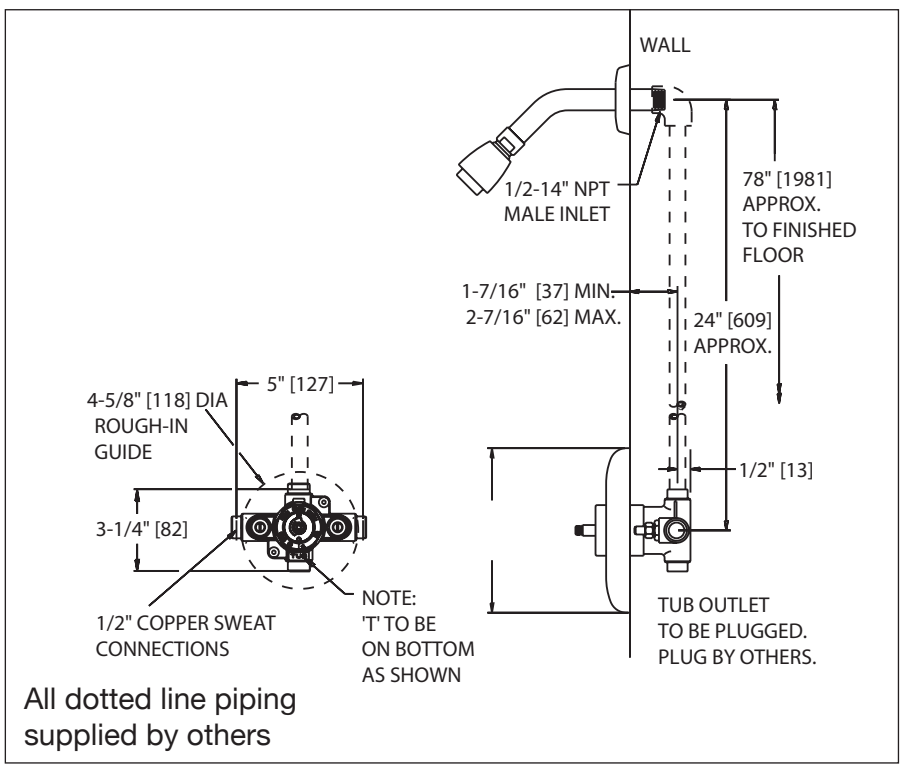

Figure 2: Rough-in Dimensions - Shower Only

See specification drawing for all other dimensions.

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

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(continued)

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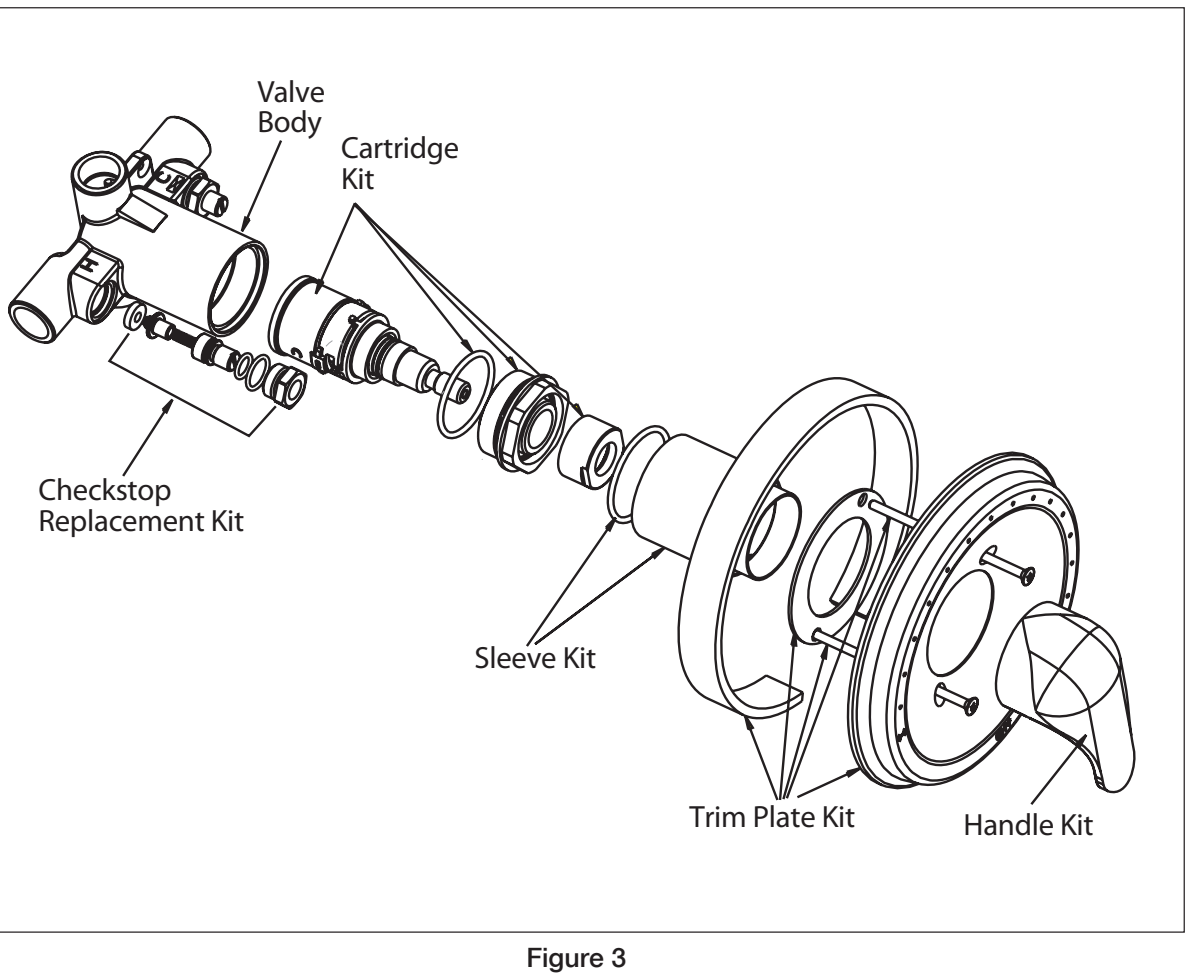

Figure 3

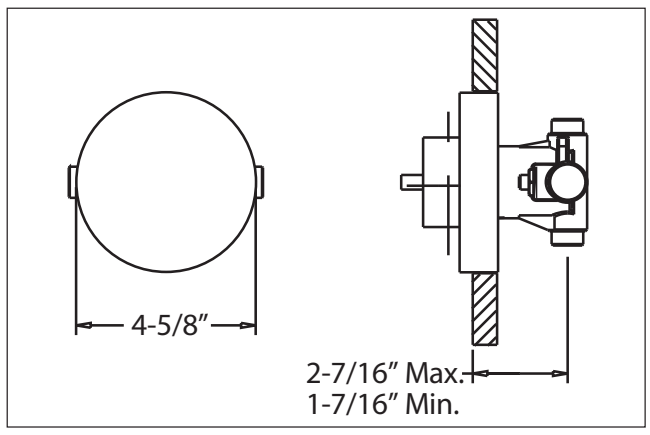

Figure 4: Rough-In Guide

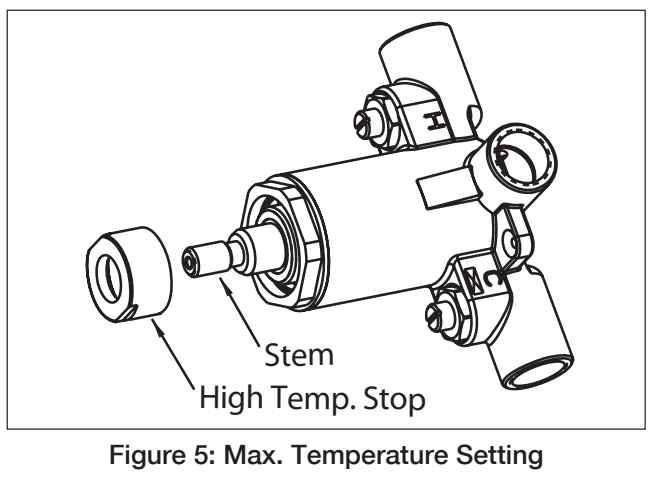

Figure 5: Max. Temperature Setting

Cartridge Replacement Instructions

Disassembly:
1. Turn off hot & cold water supply-stops.
2. Remove the handle and trim plate.
3. Remove bonnet.
4. Remove all internal components from the valve body.
5. At this point you should have an empty valve body.

You are now ready to put the new cartridge into your existing valve.

Reassembly:
1. Ensure the inside of the valve body is free of deposits and debris. Clean as necessary.
2. Place the cartridge into the body ensuring following:
   a) “C” on the cartridge should be on the cold inlet side.
   b) Align tab on the back of the cartridge to the groove in the body.
3. While holding cartridge firmly, screw bonnet into body; tighten to 100 + 20/-0 in-lbs.
4. Turn the hot and cold water supplies back on and verify there is no leakage.

Maximum Temperature Setting/Handle Rotation Stop:
The handle rotation setting must be adjusted to limit the distance the user can rotate the handle towards the full hot water position.

CAUTION: Any repair or modification of the valve may affect the high temperature setting. The maximum temperature setting must be checked by the installer before use.

5. Adjust the valve to the desired maximum outlet temperature [110°F (43°C) max]. Screw on the high temp. limit stop until it touches the stem shoulder.
6. Turn the stem clockwise until the water stops. Open valve to full hot position and verify max outlet temperature setting.
7. **(a) For 1905**

1. Install the trim plate.
2. Snap-on the indicator plate. Guide on the back of the plate goes into the locator hole.
3. Install O-ring on the bonnet, slide sleeve on the bonnet.
4. Install handle and tighten the set screw.

CAUTION: Indicator plate must be installed before sleeve.

7. **(b) For 1907**

1. Place sleeve O-ring on the bonnet shoulder. Slide sleeve over the O-ring until it stops and replace trim plate and handle.

Troubleshooting
What to look for if:

The Maximum Temperature Cannot Be Obtained:
a. Lime deposits may have accumulated in the hot water pipes, restricting the hot water supply.
b. The hot water supply temperature may be too low.
c. The handle rotation setting may be too low. Remove valve handle, and readjust the high temperature limit stop.

Flow Of Water Is Less Than Desired:
a. The upstream supply valves may not be fully open.
b. The inlet supply pressure(s) may be low.
c. The showerhead may be clogged. Remove and clean the showerhead.
d. The checkstops may be clogged. Refer to Preventative Maintenance section.

The Valve Opens With Hot Water Flow Rather Than Cold Water Flow:
a. The inlet water supplies are connected to the wrong ports or cartridge is installed improperly.

The Tempered Water Is Too Cold, Although Cartridge Has Been Replaced, 0r The Hot Water Temperature Is Below 115°F:
a. Raise the temperature of the hot water supply.

Flow Of Water Is Completely Shut Off:
a. The upstream supply valves may be completely closed.
b. The hot or cold water supply pressure may have failed. The 1905 and 1907 valves are designed to close down upon cold water supply pressure failure.
c. The checkstops may be closed. Access the checkstops and open by turning the adjustment screw fully counterclockwise.

Care and Maintenance
Periodic inspection and yearly maintenance by a licensed contractor is required for all thermostatic mixing elements. Corrosive water conditions and/or unauthorized adjustments or repair could render the thermostatic valve ineffective for service intended. Regular checking and cleaning of the valve’s internal components and check stops helps assure maximum life and proper product function. Frequency of cleaning and inspection depends on local water conditions. All Chicago Faucets fittings are designed and engineered to meet or exceed industry performance standards. Care should be taken when cleaning this product. Do not use abrasive cleaners, chemicals, or solvents as they can result in surface damage. Use mild soap with warm water for cleaning and protecting the surface of Chicago Faucets fittings.

WARNING: Before servicing checkstops or piping, always turn off the upstream water supply.

EVERY 12 MONTHS:
- Open up the checkstops and check for free movement of the poppet. To access the checkstops, remove the handle assembly and trim plate.
- Before servicing the valve, turn off the water supply upstream OR close the checkstops. To close the checkstops, turn the adjustment screw fully clockwise on each checkstop.
- Remove the valve bonnet and rinse all grit and impurities from the cartridges.
- Winterize valves that are used outdoors. Remove and store the internal components and drain all water from the valve.

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

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

WHAT DOES THIS WARRANTY COVER AND HOW LONG DOES IT LAST?
This warranty covers the following Commercial Products:

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

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

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

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

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

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

Other restrictions and limitations apply. For complete warranty details, call Chicago Faucets Customer Service at 847-803-5000 or visit chicagofaucets.com.

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