T S EC-3100 Series CheckPoint Instruction Manual

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Installation and Maintenance Instructions

EC-3100 Series

ChekPoint

ELECTRONIC SENSOR OPERATED FAUCET:

- **DECK MOUNT & WALL MOUNT**
- **GOOSENECK & CAST SPOUT**
- **SINGLE HOLE, 4" CENTERSET & 4" c/c (DUAL HOLE)**

Limited Three Year Warranty (Commercial Applications) T&S warrants to the original purchaser (other than for purposes of resale) that such product is free from defects in material and workmanship for a period of three (3) years from the date of purchase. During this three-year warranty period, if the product is found to be defective, T&S shall, at its options, repair and/or replace it. To obtain warranty service, products must be returned to…
T&S Brass and Bronze Works, Inc. Attn: Warranty Repair Department
2 Saddleback Cove Travelers Rest, SC 29690

Shipping, freight, insurance, and other transportation charges of the product to T&S and the return of repaired or replaced product to the purchaser are the responsibility of the purchaser. Repair and/or replacement shall be made within a reasonable time after receipt by T&S of the returned product. This warranty does not cover Items which have received secondary finishing or have been altered or modified after purchase, or for defects caused by physical abuse to or misuse of the product, or shipment of the products.

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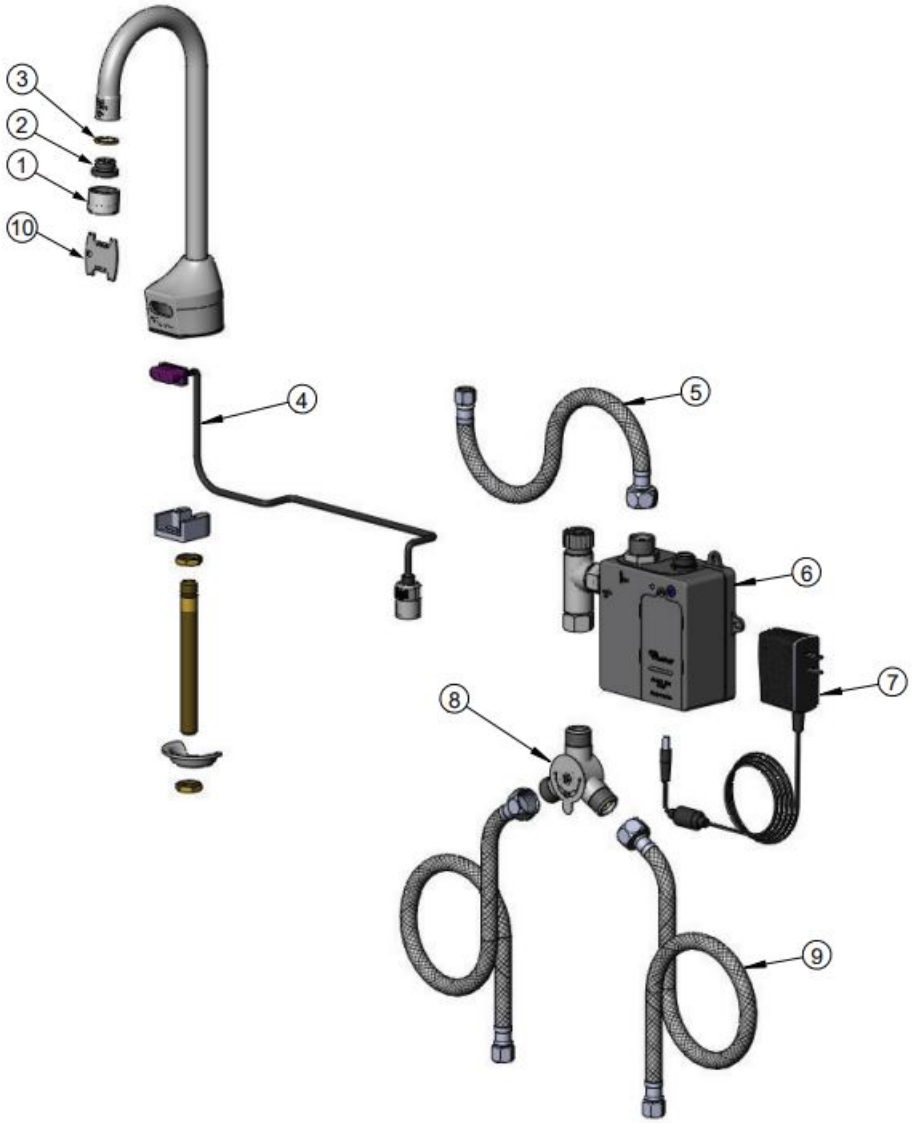
Attention California Residents:
⚠ **WARNING** This product can expose you to chemicals including Lead, Chromium (hexavalent compounds) and Phthalates (DEHP) which are known to the State of California to cause cancer and birth defects or other reproductive harm.

For more information go to **www.P65Warnings.ca.gov**.
P/N: 098-016361-45 Rev.11
Date: 09-13-19
Drawn: TED
Checked: DMH 12-16-19
Approved: JHB 02-14-20

Contents

Exploded View

EC-3100



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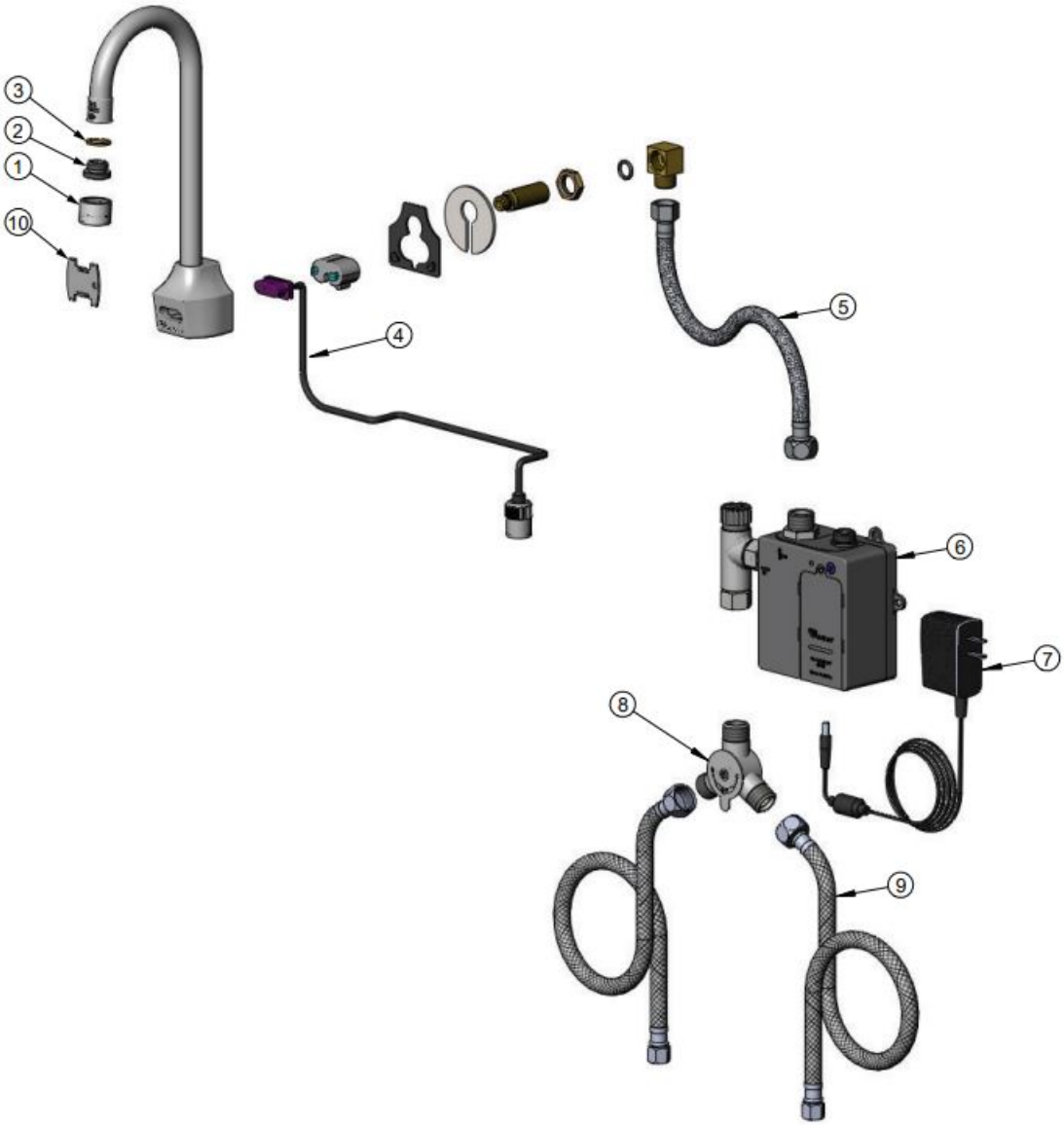

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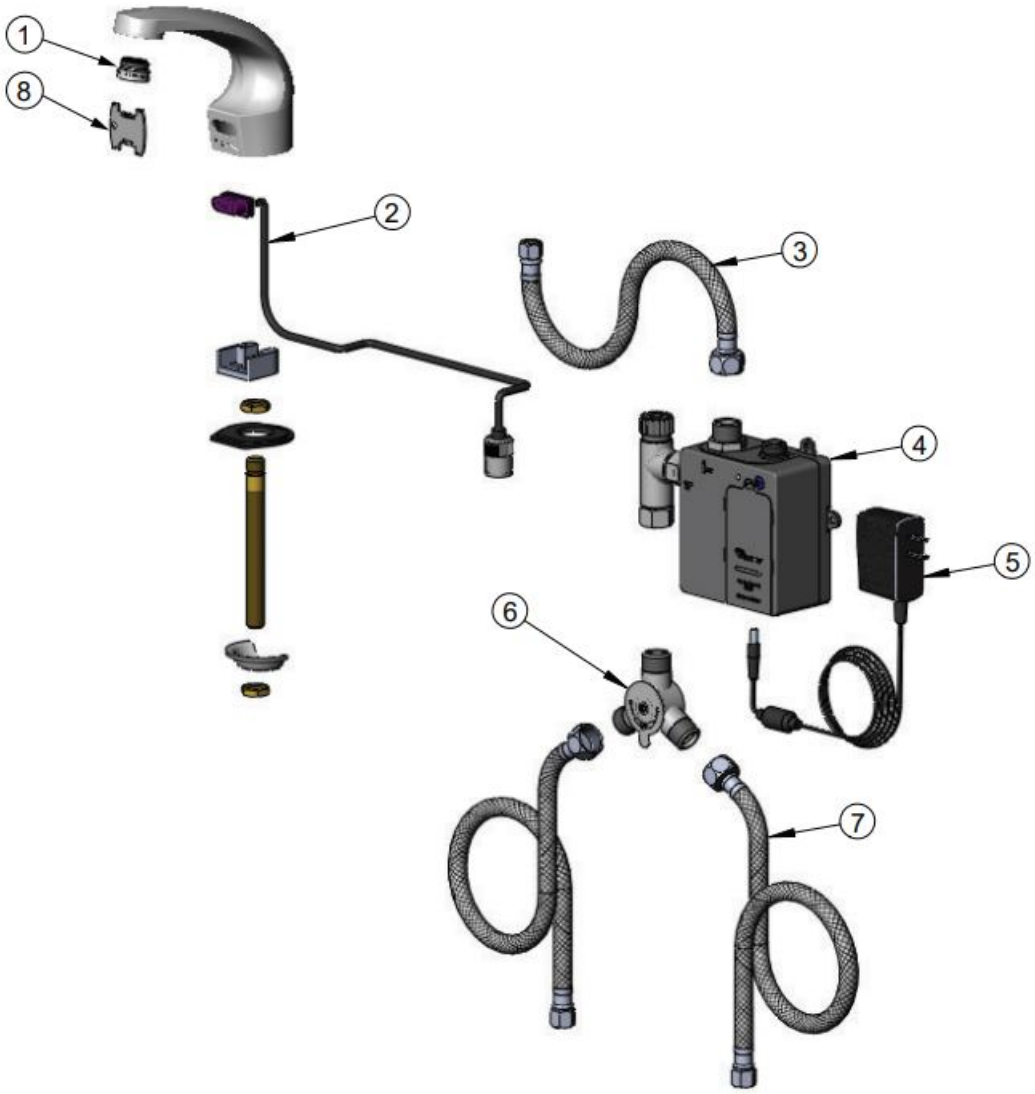

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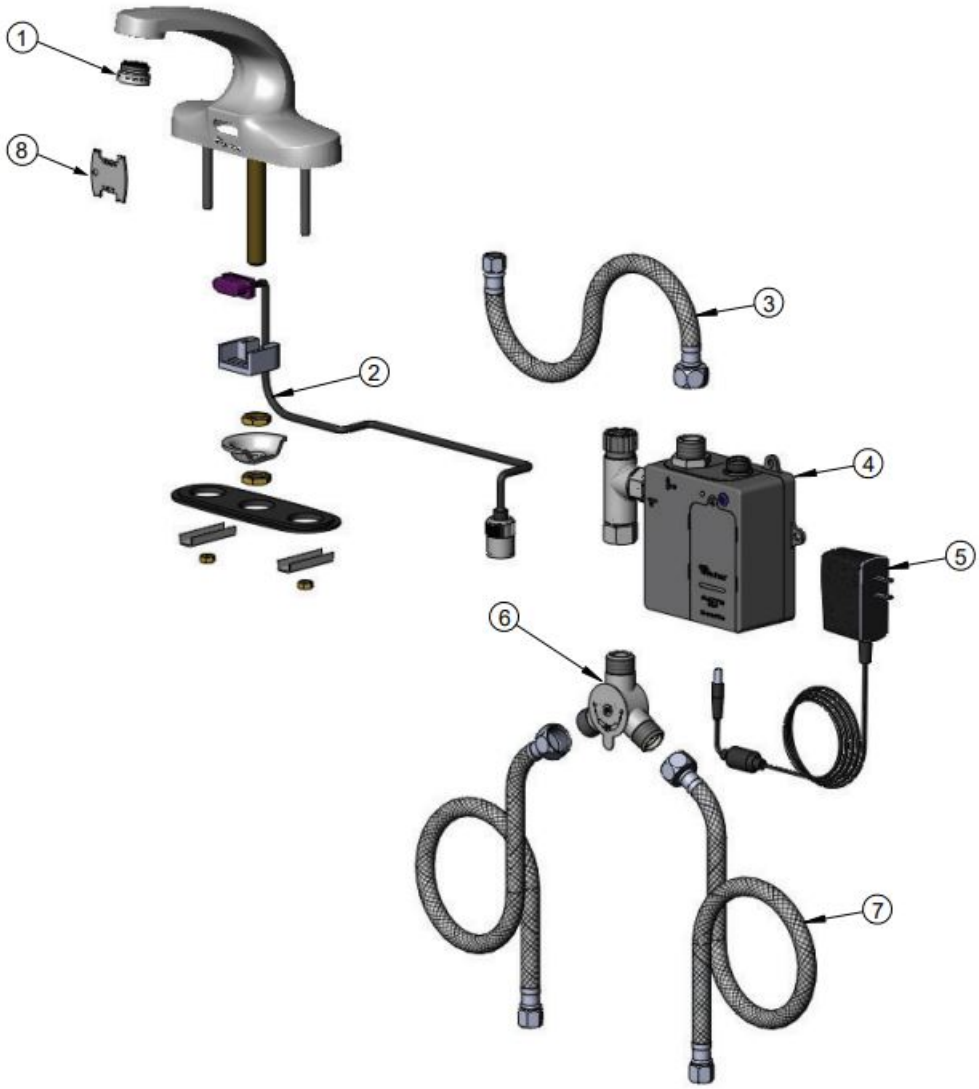

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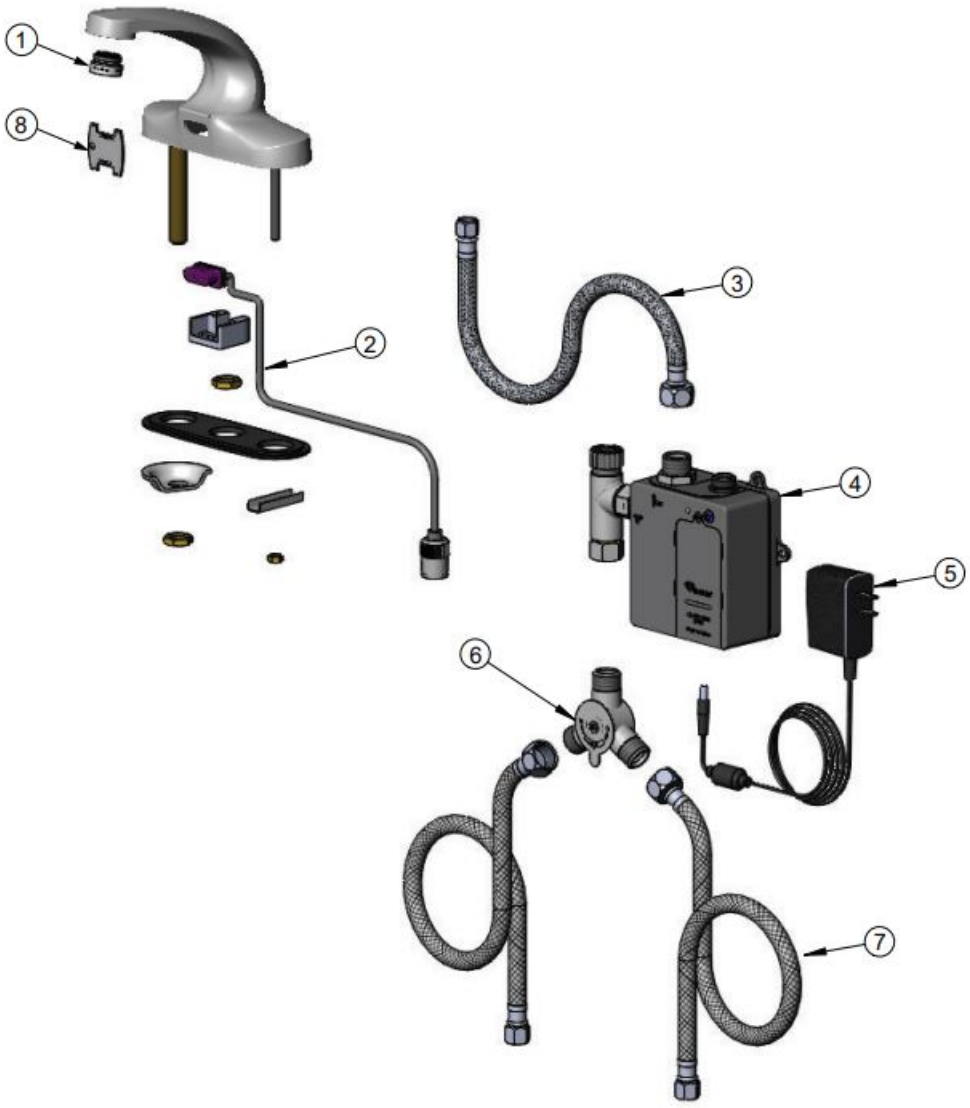

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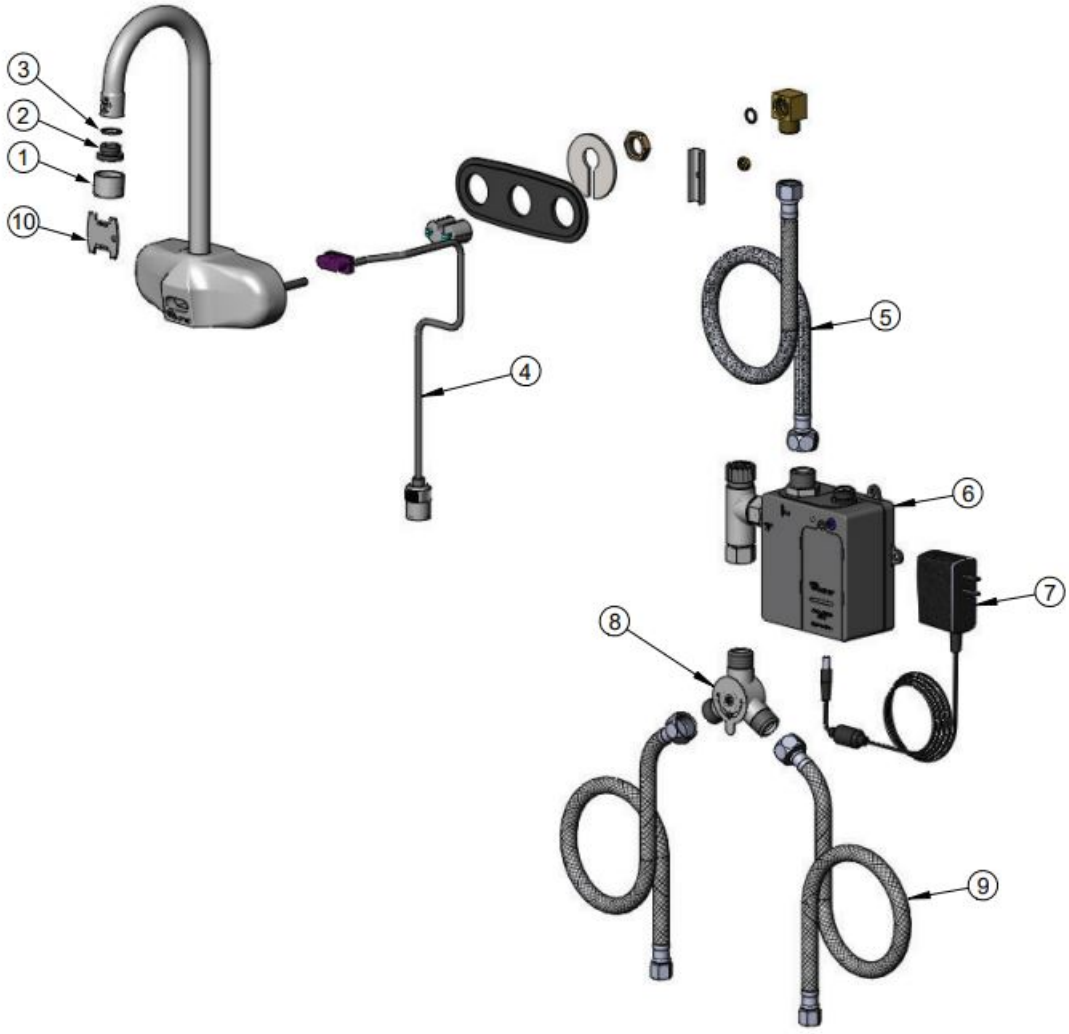

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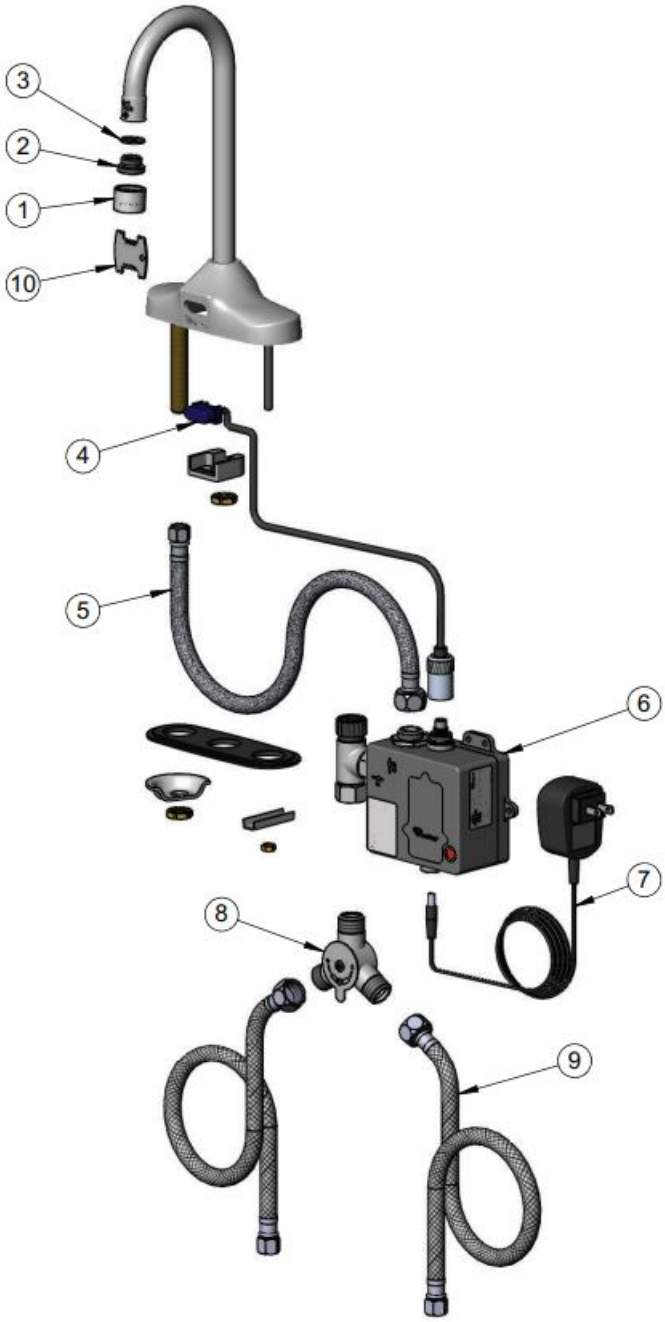


Part Number Guide

EC-3100, EC-3101 & EC-3105 Electronic Faucets

1	Aerator, Vandal Resistant	B-0199-06
2	Adapter for Non-Splash Aerator	044A
3	O-Ring	006575-45
4	Angled Sensor w/ Cable	017195-45
5	Inlet Hose for use with EC-3100	N/A
	1/2" NPSM-F x 1/4" NPSM-F x 18" Long	016297-45
5	Inlet Hose for use with EC-3101 & EC-3105	N/A
	1/2" NPSM-F x 3/8" NPSM-F x 30" Long	016325-45
6	Electronic Module	016647-45
7	A/C Transformer	5EF-0002
8	Manual Mixing Valve	5EF-0006
9	Supply Hose, 9/16-24 UN Female x 1/2" NPSM	5EF-0005
10	Vandal Resistant Key	015425-45

EC-3102, EC-3103 & EC-3104 Electronic Faucets

1	Aerator, Vandal Resistant, 2.2 GPM	B-0199-08
2	Angled Sensor w/ Cable	017195-45
3	Inlet Hose, Faucet, 1/2" NPSM-F x 1/4" NPSM-F	016297-45
4	Electronic Module	016647-45
5	A/C Transformer	5EF-0002
6	Manual Mixing Valve	5EF-0006
7	Supply Hose, 9/16-24 UN Female x 1/2" NPSM	5EF-0005
8	Vandal Resistant Key	015425-45

EC-3107 Electronic Faucet

1	Aerator, Vandal Resistant, 2.2 GPM	B-0199-06
2	Adapter for Non-Splash Aerator	044A
3	O-Ring	006575-45
4	Angled Sensor w/ Cable	017195-45
5	Inlet Hose, Faucet, 1/2" NPSM-F x 1/4" NPSM-F	016297-45
6	Electronic Module	016647-45
7	A/C Transformer	5EF-0002
8	Manual Mixing Valve	5EF-0006
9	Supply Hose, 9/16-24 UN Female x 1/2" NPSM	5EF-0005
10	Vandal Resistant Key	015425-45

Important:

- ALL ELECTRICAL WIRING IS TO BE INSTALLED IN ACCORDANCE WITH NATIONAL/LOCAL CODES AND REGULATIONS.
- ALL PLUMBING IS TO BE INSTALLED IN ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS.

- USE APPROPRIATE PRECAUTIONS WHILE CONNECTING TRANSFORMER TO 120 VAC POWER SOURCE.
- DO NOT PLUG TRANSFORMER INTO POWER SOURCE (RECEPTACLE) UNTIL ALL WIRING IS COMPLETED.
- FLUSH ALL WATER LINES UNTIL WATER IS CLEAR BEFORE CONNECTING FAUCET TO SUPPLY STOPS.

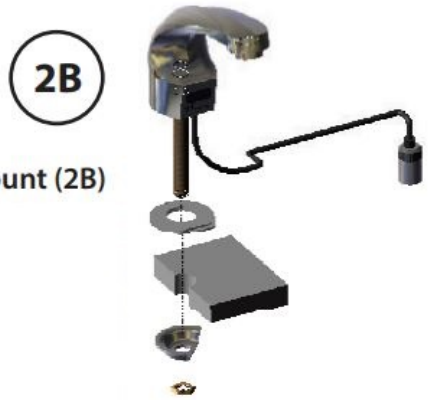
Tools Required For Installation of Faucets

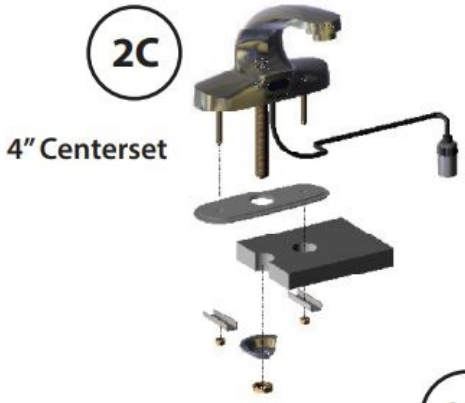
- 8″ (200mm) adjustable wrench
- Slotted screwdriver, 3/16″
- 1/8″ hex key wrench
- Phillips head screwdriver, #1
- Basin wrench
- Pliers

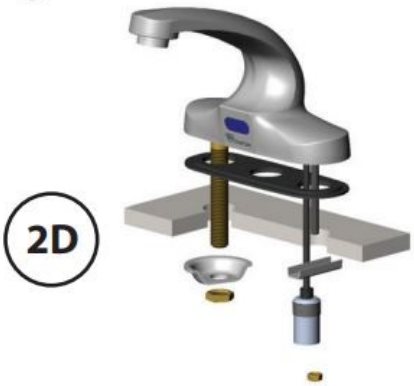
Prior to Installation:
Prior to installing the T&S ChekPoint Series Faucet, install the items listed below. Also, refer to Figure 1.

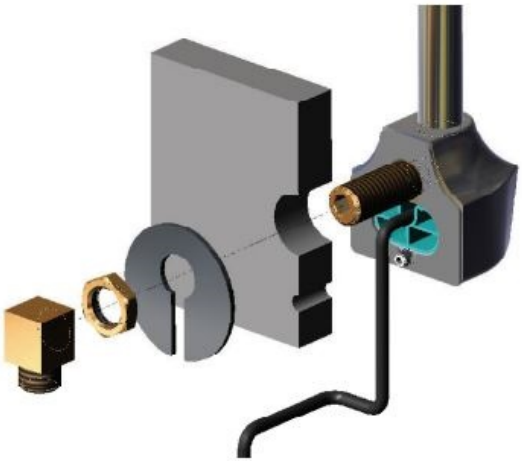
- Provide electrical receptacle within approximately 6′ from sink for plug-in transformer — 120 VAC, 2 amp service for each plug-in transformer used.
- Scrub or wash-up sink
- Drain line
- Hot and cold water supply lines

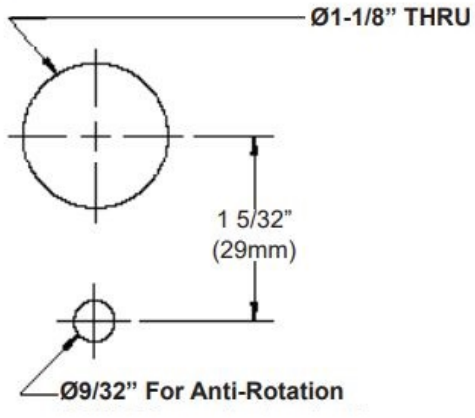
Mixing Valve
When installing the faucet with the mixing valve the instructions on page 15 MUST be followed.
Installation of ChekPoint Faucets
The T&S ChekPoint Sensor Operated Faucet is a pre-tempered faucet. A mixing valve (supplied) must be used in conjunction with the faucet. Water temperature can be controlled by adjusting the mixing valve.
Install Faucet Assembly (Figures 2A, 2B, 2C, 2D & 2E)
Insert faucet cable and spout shank through base gasket and then through the mounting hole of scrub or wash-up sink. Secure using lockwasher and nut supplied.







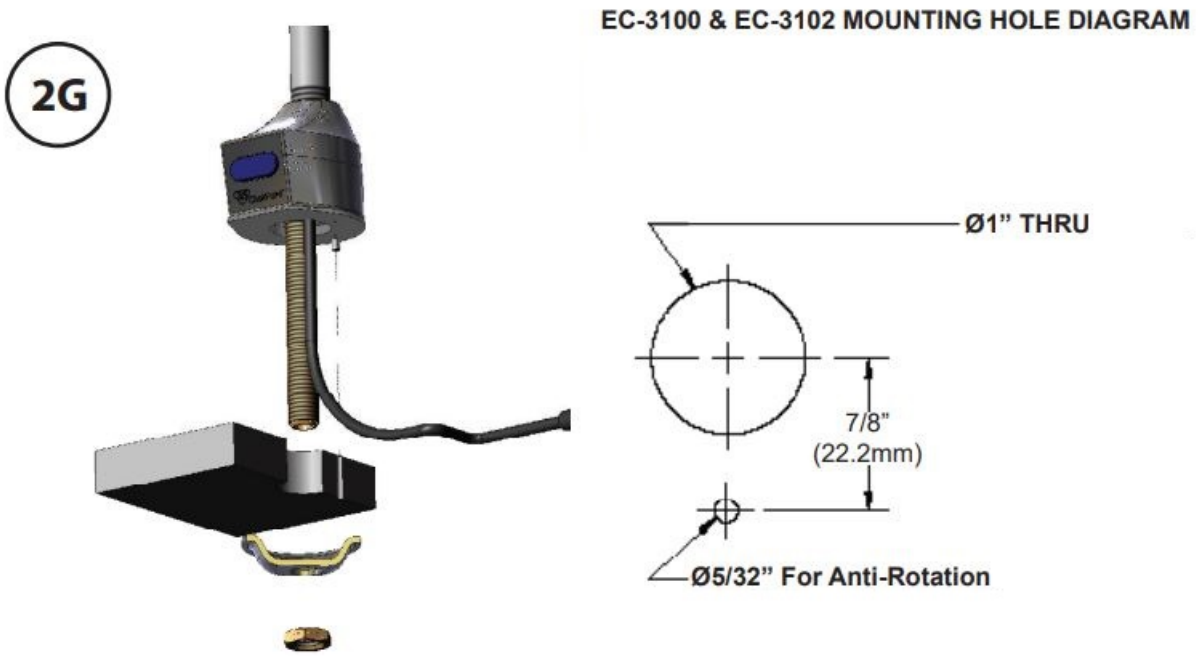




OPTIONAL ANTI-ROTATION FEATURE
Wall-Mount Model: EC-3101 (Figure 2F)

Note: The anti-rotation feature uses a set screw to anchor the faucet in the vertical position and is intended for use ONLY on stainless steel sinks.
Use the mounting hole diagram or faucet base gasket as a template by placing it in position over the faucet mounting hole. Mark the stainless steel mounting surface at the center of the small notch at the bottom of the base

gasket. Drill a 9/32″ (7.14 mm) diameter hole through the stainless steel mounting surface. Extend the 1/4-20 set screw installed in the back of the faucet body by unscrewing it (counterclockwise) with a 1/8″ hex key wrench. Unscrew it far enough that it protrudes past the base gasket and into the 9/32″ drilled hole. Assemble the washer and nut to secure the faucet in place.



OPTIONAL ANTI-ROTATION FEATURE
Deck-Mount Models: EC-3100 & EC-3102 (Figure 2G)

Note: The anti-rotation feature uses a pin to anchor the faucet in position and is intended for use ONLY on stainless steel sinks.
Use the mounting hole diagram or the faucet base gasket as a template by placing it in position over the faucet mounting hole. Mark the stainless steel mounting surface at the center of the small hole at the bottom of the base gasket. Drill a 5/32″ (4 mm) diameter hole through the stainless steel mounting surface. Install the faucet aligning the pin with the small hole. Assemble the washer and nut to secure the faucet in place. Note: The pin can be removed with pliers if not needed.

Install Mixing Valve Assembly (Figure 3) (If supplied separately)

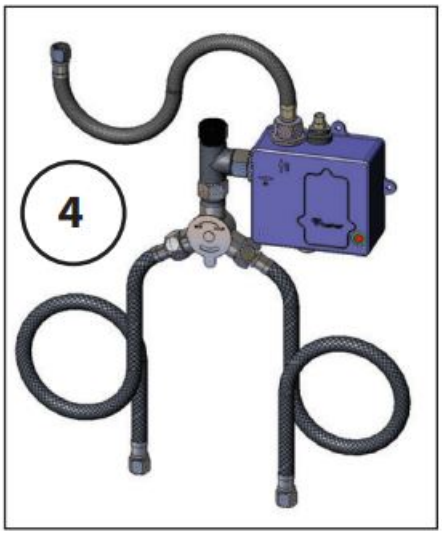
Install mixing valve into fitting on control module as shown in Figure 3. Tighten fitting snugly BUT DO NOT OVERTIGHTEN. No thread sealant is necessary.

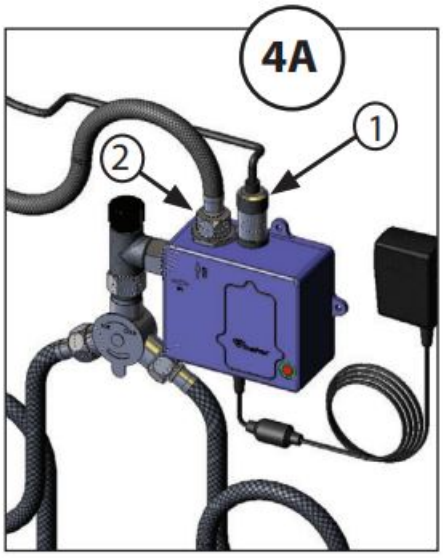
Important: Orient mixing valve as shown in Figure 3.

Mount Control Module to Wall
Install the control module in an appropriate location. When installed all cables and hoses should have some slack. Mount control module to wall using mounting screws and plastic anchors (not included). It is important to have the control box mounted securely before any further
connections are made.

FOR HOT AND COLD WATER SUPPLY APPLICATIONS

Supply stops must be furnished by installer or purchased from T&S. Flush supply lines of any debris. Tighten compression fittings securely on supply lines.





Sensor Cable and Supply Line Connections (Figures 4 & 4A)
Route the sensor cable from the spout to the top of the control module. Align the (2) white arrows (one on the male side and one on the female side) and plug the mating connectors together. Drop the chrome sleeve down over the sensor plug and screw to tighten (Fig. 4A). Secure the supply line from the spout to the fitting on top of the controller (do not overtighten). (Fig. 4A) Tighten the compression fitting securely on the supply lines but do not over tighten.

TRANSFORMER OPTION (Figure 5)
Important: DO NOT plug Transformer into receptacle until all wiring has been completed.
This type of Transformer is designed to be plugged into a 120 VAC wall receptacle. The Transformer is supplied with a 6 foot Cable. Remove the rubber plug from the transformer connector on the control module. Plug the transformer cable into the transformer connector.

BATTERY OPTION

Note: Should you choose to run your sensor faucet on battery power, it will require (4) AA alkaline batteries.

1. If the AC adapter is plugged in, unplug it from its power source and the control module.
2. With the help of a Philips head screwdriver, remove the battery cover's three (3) fasteners and pull cover away from the control box.
3. Replace old batteries if needed.
4. Install the new AA batteries, making sure that the + and – ends are facing the correct direction. Return the battery cover to its spot and tighten fasteners.
5. With the disconnection of power, the sensor range is saved and will revert to the last setting when power is restored.

Note: For the Hydro Generator (EC-HYDROGEN) power option, refer to the instruction manual in the EC-HYDROGEN kit ordered separately. For hard wiring and hard wire ganging (EC-HARDWIRE) and easy-wire (EC-EASYWIRE) ganging power options , refer to the instruction manual in each respective kit when ordered separately.

SENSOR RANGE SETUP

The sensor range is preset at the faucet during assembly but can be further adjusted by using the steps below.

1. The sensing distance is adjustable from ¾" (2cm) to 6 11/16″ (17cm). If there is a disruption in power, the sensor range is saved and will revert to the last setting when power is restored.
2. The faucet sensor range is set by simply using the on/o button on the front of the control module. Do not attempt to open the control module box.
3. Push and hold the on/o button; water will flow. After holding the button 5 to 7 seconds, the water flow will stop and the red LED in the sensor lens will turn on solid.
4. Release the on/o button. The red LED will turn o signalling that the sensor is ready for set-up for the next 15 seconds.
5. Hold your hand still in front of the sensor at the desired sensor distance. The red LED will flash roughly 5 times then remain on for 2 seconds indicating the new range has been set.
6. If step 5 is not done within 15 seconds, the red LED will blink quickly then stop indicating the sensor range has NOT been changed. Start over at step 3 to change the sensor range.

OPERATION

1. Place hands under spout. Water will flow for as long as the user's hands remain within sensor range and will shut o after 15 seconds (time adjustable).
2. Keep electronic eye cover clean.
3. Red flashing in the electronic eye indication low batteries. (Replacement batteries: Alkaline AA.)
4. Solid red light in the electronic eye and no water flow indicated batteries are dead.
5. When used in conjunction with the optional AC adapter, the faucet will automatically switch to

AC power and conserve its battery power. Fresh alkaline batteries should last 450,000 on/o cycles.

Running Time Range: 15 seconds – 20 minutes (6 presets selectable)
Response Time: 0.3 seconds
Sensing Range: 3/4” to 6-11/16” (2-17 cm) from sensor
Power Source: AC and/or DC
Low Battery Indicator: Red LED on

CARE AND CLEANING OF CHROME AND SPECIAL FINISHES

DO NOT use abrasive or chemical cleaners (including chlorine bleach) to clean faucets as they may dull the luster and attack the chrome or special decorative finishes. Use ONLY soap and water, then wipe dry with clean cloth or towel. While cleaning the bathroom tile, the faucet should be protected from any splattering of cleaner. Acids and cleaning fluids will discolor or remove chrome plating. Do not use abrasive or chemical cleaners on the sensor lens as this will damage it and a ect operation.

FEATURES

AUTO-ADJUSTMENT SCAN PERIOD
Two scan periods of 0.4 seconds or 0.7 seconds are automatically adjusted. The scan period at 0.4 seconds occurs while the faucet is at standby. The scan period will change to 0.7 seconds when the faucet detects an object in the front of the sensor.
WATER FLOW CONTROL ADJUSTMENTS
The ChekPoint controller o ers a selection of pre-set flow control adjustments. These selections are made by configuring a bank of six switches, SW(1) to SW(6), according to the tables below.

The flow control switches are located inside the ChekPoint control module in a black box next to the battery compartment. To access the switches, remove the (4) screws and back cover of the control module.

AUTO TIME-OUT ADJUSTMENT (SWITCHES 1-3)
The ChekPoint controller provides six periods to select from for shutting o the water when the object is left in front of the electronic eye. The time periods to select from are: 15 seconds, 30 seconds, 45 seconds, 60 seconds, 3 minutes and 20 minutes. The default setting is 15 seconds. Note: The chart below indicates the switch positions required for each auto time-out mode.

AUTO-FLUSH (SWITCH 4)
The ChekPoint controller o ers the option to select the Auto Flush mode in switch 4 position. When enabled, the controller will flush the ChekPoint faucet every 12 hours for 25-30 seconds when the faucet is not used. Default setting from the factory is in the “o ” position.

Auto Time Out Selection			
PERIOD	SW(1)	SW(2)	SW(3)
15 seconds	OFF	OFF	OFF
30 seconds	OFF	OFF	ON
45 seconds	OFF	ON	OFF
60 seconds	OFF	ON	ON
3 minutes	ON	OFF	OFF
20 minutes	ON	OFF	ON

Water Shut Off Delay Selection		
PERIOD	SW(5)	SW(6)
1 seconds	OFF	OFF
10 seconds	OFF	ON
15 seconds	ON	OFF
30 seconds	ON	ON

Auto Flush Mode SW (4)
ON - (Enable)
OFF - (Disable)

WATER SHUT-OFF DELAY ADJUSTMENT (SWITCHES 5 & 6)
The ChekPoint controller provides four periods to select from for shutting o the water when the object is removed from in front of the electronic eye. The time periods to select from are: 1 second, 10 seconds, 15 seconds, and 30 second. The default setting is 1 second.

LOW BATTERY DETECTION

- A red flashing light in the electronic eye indicates low batteries.
- A solid red light in the electronic eye and no water flow indicates the batteries are dead.
- The user should change new batteries immediately.

POWER SAVING

- If the electronic eye (sensor) has not detected object motion within 30 minutes, the controller will enter its lowest scan period of 1.4 seconds
- When object motion is detected, the controller will change the scan period from 0.4 seconds to 0.7 seconds and change back to 0.4 seconds when the object removed.

ANTI-INTEFERENCE SYSTEM

- Sunlight or other types of lighting may interfere with the distance sensing range. In this case, the controller will compensate the sensing distance to a safe range temporarily. The controller will adjust the distance to the normal range when no interference is detected.

Q&A

Q: Can I operate the faucet manually, without using the electronic eye?

A: Yes. Press the on/off button and water will start flowing. To turn water off , press on/off button again. If you forget to turn the water off , the faucet will automatically turn it off at the set Auto Time-Out time (see Auto Time-Out Adjustment section).

Q: What is the optimal sensing distance?

A: About 2” from sensor.

Q: Does the electronic eye require special maintenance?

A: In order for the sensor to function, the electronic eye must be clean. Use only mild soaps and water. Wipe with a soft cloth.

Q: Why doesn’t the water shut itself off after I have moved my hands away from the electronic eye?

A: Sensor range could be too long. User may have to adjust sensor range.

Q: No water will come out of the faucet and the red LED stays on. What is the problem?

A: Replace the batteries.

TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE/SOLUTION
No Water When Activated Red LED in electronic eye	**If red LED stays on or is flashing:** 1. Replace batteries and/or make sure transformer is plugged in. 2. If appropriate action from no. 1 does not correct problem: • Sensor range too long/picking up sink. Reduce range. • Sensor is faulty; replace sensor module.
Very Low Flow or Slow Dribble	1. Check supply stop(s); open if closed. 2. Debris in solenoid filter; remove, clean and reinstall. 3. Debris in aerator or spray head; remove, clean and reinstall.
False Triggering (Unit goes on by itself)	1. Range too long; decrease detection zone. Check surroundings for factors that can contribute to the range; for example, bright lights, highly reflective surfaces, sunlight, etc.
Continues to Run (Even after power to faucet has been disconnected)	1. Debris in solenoid valve, won’t close properly. 2. Control module is faulty; replace control module.

EC-3130

ChekPoint Above-Deck Electronic Faucet, Swivel Goosneck w/ 2.2 GPM Aerator

EC-3132

ChekPoint Above-Deck Electronic Faucet, Cast Spout w/ 2.2 GPM Aerator

T&S BRASS AND BRONZE WORKS, INC.
A firm commitment to application-engineered plumbing products

2 Saddleback Cove, P.O. Box 1088,
Travelers Rest, SC 29690
Phone: (864) 834-4102
Fax: (864) 834-3518
E-mail: **tsbrass@tsbrass.com**

T & S Brass-Europe `De Veenhoeve' Oude Nieuwveenseweg 84 2441 CW Nieuwveen
The Netherlands

Documents / Resources

	T S EC-3100 Series CheckPoint [pdf] Instruction Manual EC-3100 Series CheckPoint, EC-3100 Series, EC-3100, CheckPoint

References

- P65Warnings.ca.gov