

Installation and Owner's Manual
Manual de Instrucciones y del Propietario
Manuel d'Installation et d'Utilisation
Manual de Instalação e do Proprietário

TOTO

EcoPower Automatic Faucets
Grifos Automáticos EcoPower
Robinets Automatiques EcoPower
Torneiras e Misturadores Eletrônicos Self Power



Warranty Registration and Inquiry

For product warranty registration, TOTO U.S.A. Inc. recommends online warranty registration. Please visit our web site <http://www.totousa.com>. If you have questions regarding warranty policy or coverage, please contact TOTO U.S.A. Inc., Customer Service Department, 1155 Southern Road, Morrow, GA 30260 (888) 295-8134 or (678) 466-1300 when calling from outside of U.S.A.

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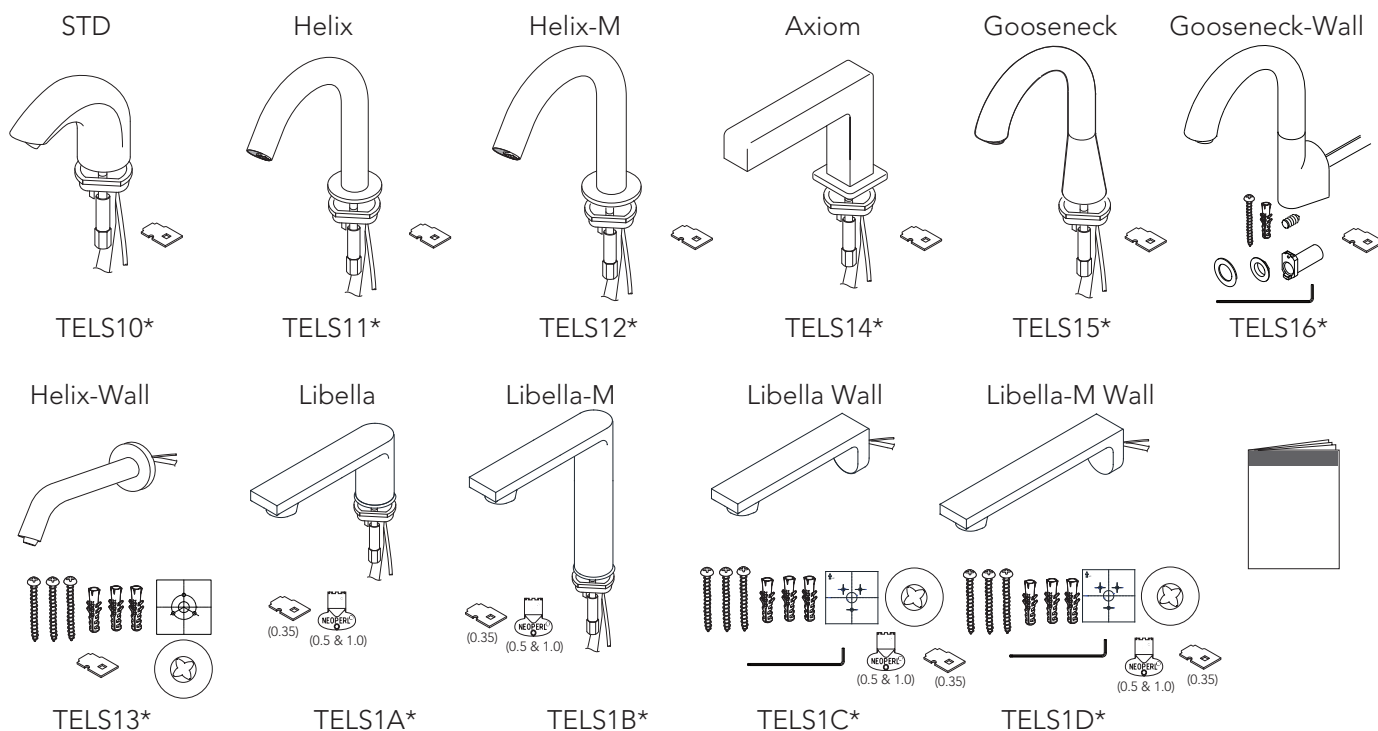
THANKS FOR CHOOSING TOTO!

The mission of TOTO is to provide the world with healthy, hygienic and more comfortable lifestyles. We design every product with the balance of form and function as a guiding principle. Congratulations on your choice.

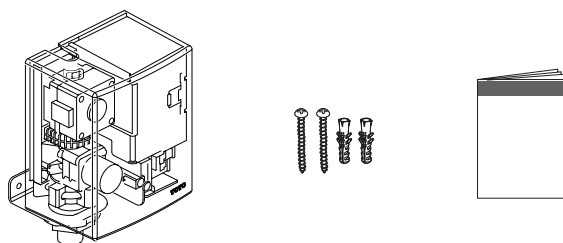
INCLUDED PARTS

Check to make sure you have all these parts from the package*:
(Appearance of some components may vary depending on the model)

SPOUT



CONTROLLER



WARNINGS

Please read and adhere to the following notes. Failure to do so could result in personal injury and/or property damage.

- No person other than a service engineer should disassemble, repair or modify this faucet, unless it is specifically described in this manual. Failure to do so may result in electric shock or product malfunction.
- Only set your faucet to the temperatures allowed in your local codes.
- Do not use this faucet in a humid location where running water or condensation may collect on the surface, especially in a sauna or steam room.
- Do not strike or kick the faucet or controller box, as this may damage the unit or cause a leak.
- Do not touch the hot surface of the stop valve of the controller, as it may be very hot.
- Disconnect the backup battery connector when the faucet is not in use for a long period of time.
- Always close the stop valve(s) before cleaning the strainer.
- Periodically check the piping for leaks.
- If the room temperature drops to freezing, wrap the pipes with insulation.
- Make sure the power cord does not come in contact with the hot water supply pipe.
- Avoid placing any objects within the detection range of the infrared sensor.

ENGLISH

BEFORE INSTALLATION

- Observe all local and plumbing codes.
- Check the cold and/or hot water supply pressure.
 - The recommended working pressure range is 20 psi - 80 psi (138 kPa - 551 kPa). If the supply pressure is higher than 80 psi (551 kPa), reduce to within recommended range by using a pressure reducing valve (sold separately).
- Check the temperature of the water supply.
 - The recommended supply temperature range is 39°F - 104°F (4°C - 40°C)
 - Never use steam as a hot water supply.
- Flush all water lines prior to installation.
- Other precautions before you begin:
 - Pay special attention so that the sensor surface is not flawed or scratched during the installation process.
 - Make sure that all pipework, stop valves, and connection lines are installed according to local codes.
 - Do not place other devices that use an inverter or infrared sensor near the faucet, as this may cause the faucet to malfunction.

Water pressures over 80 psi are not recommended for most plumbing fixtures. Check your local plumbing code for details.

INITIALIZING THE ECOPOWER PRODUCT

Please note that it will take **at least 5 minutes** after connecting the backup battery for the electronics to initialize.
This delay is a normal part of start up.
(Refer to Page 6 for more information)

INSTALLATION PROCEDURE

Install the Controller

NOTE: Before installing the product, be sure to thoroughly flush the supply pipes of dirt and debris. Shut off the water supply at the stop valves after flushing.

1. See the rough-in dimension page to determine the proper location for the controller.
2. Loosen the screw on the front of the controller cover and pull screw to remove screw and cover. (see **NOTE**)

3. Connect backup battery to controller.

NOTE: Backup Battery will require 5 min. to initialize.

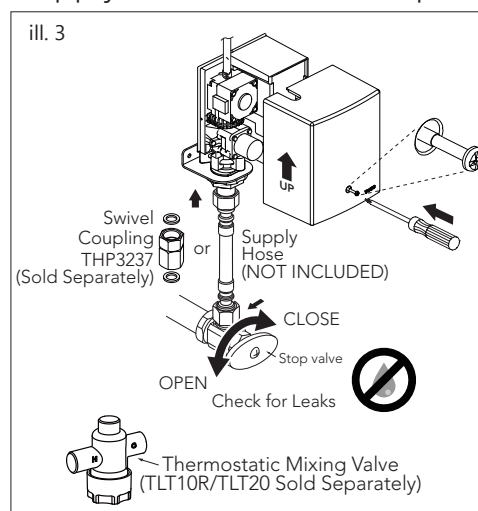
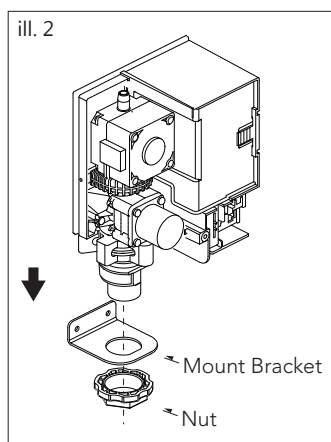
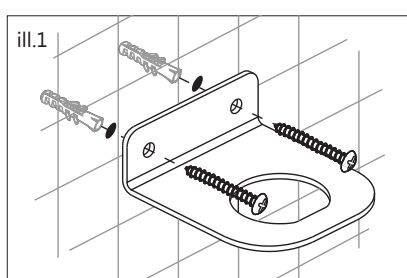
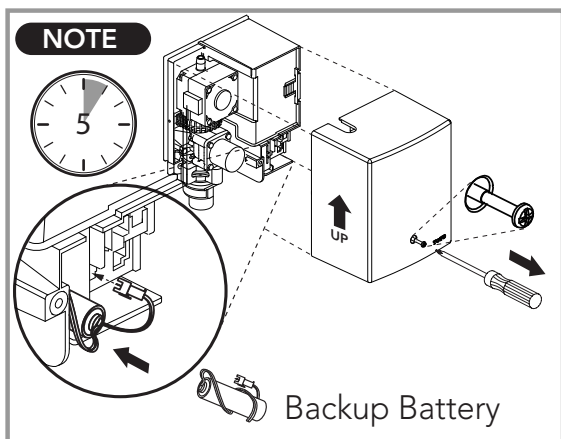
4. Mount the bracket on the wall. If necessary, use wall anchors (see ill. 1).
5. From the top, place controller into the hole in the bracket. From below the bracket, fasten the large nut to secure the controller (see ill. 2).

IMPORTANT!

Be sure to install controller in the correct orientation as shown. Otherwise, product will not function properly.

6. Connect the water supply line to the inlet adapter (see ill. 3).

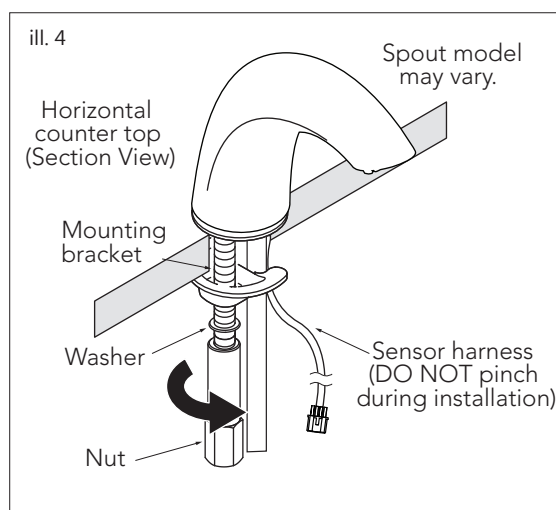
NOTE: If using a thermostatic valve (sold separately), please refer to its installation manual for details.



Install the Spout

To Install Deck-Mounted Models (ill. 4):

Secure the spout to the countertop with the included bracket and hexagonal nut. Make sure that the spout is mounted with the tip directed towards the center of the basin.

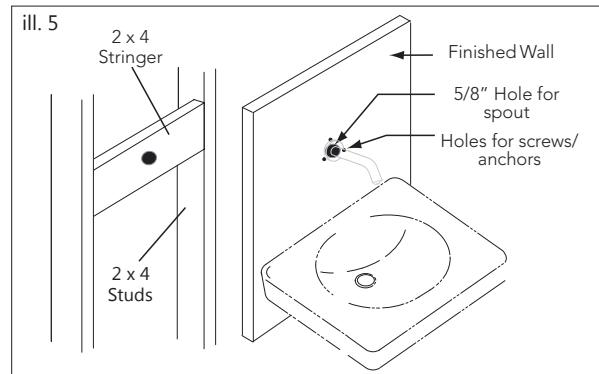


INSTALLATION PROCEDURE

To Install Helix and Libella Wall-Mounted Models (ill. 5):

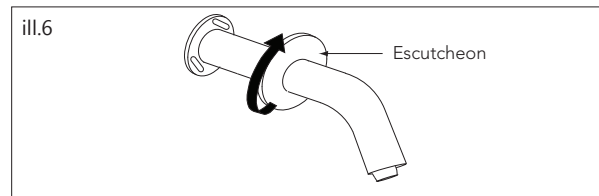
NOTE: The addition of a 2 x 4" stringer behind the spout installation location is highly recommended.

1. Place mounting template on wall at desired location and mark all holes. Drill a 5/8" (16 mm) diameter hole at the spout mounting location (center) for the supply tube and sensor cord to pass through.
2. For fastening to wood, drill three (3) pilot holes 7/64" (2.7 mm) in diameter at marked locations. For fastening to drywall or tile, drill three (3) holes 3/16" (5 mm) in diameter and insert anchors until flush. Tap lightly with a hammer if needed.



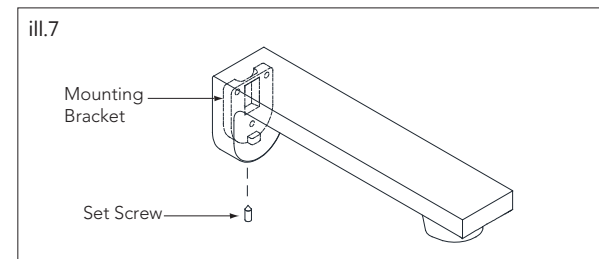
To Install Helix Wall-Mounted Models (ill. 6):

3. Feed the supply tube and sensor cord through the 5/8" (16 mm) hole in center. Place spout against wall and fasten securely with the provided screws.
4. Fasten the escutcheon to the bracket until hand-tight.



To Install Libella Wall-Mounted Models (ill. 7):

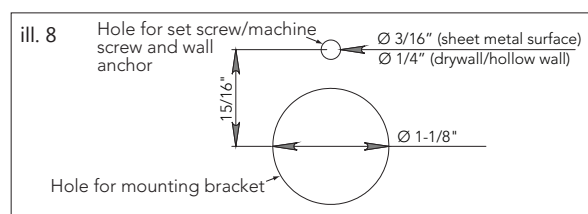
3. Place mounting bracket against wall and fasten securely with the provided screws.
4. Pass the hose and sensor cord through the mounting bracket, slide the spout base over the mounting bracket and tighten the set screw to secure the spout to the mounting bracket.



To Install Gooseneck Wall-Mounted Models (ill. 8, 9 & 10):

NOTE: Confirmation of wall strength is highly recommended before drilling.

1. Drill a 1-1/8" (29 mm) hole at the desired location for the mounting bracket. Place the mounting bracket through a hole in the wall with the set screw hole located at 12 o'clock. Mark the location of the set screw hole on the wall and remove the mounting bracket.



For sheet metal surface: Drill a 3/16" (5 mm) hole at the marked location.

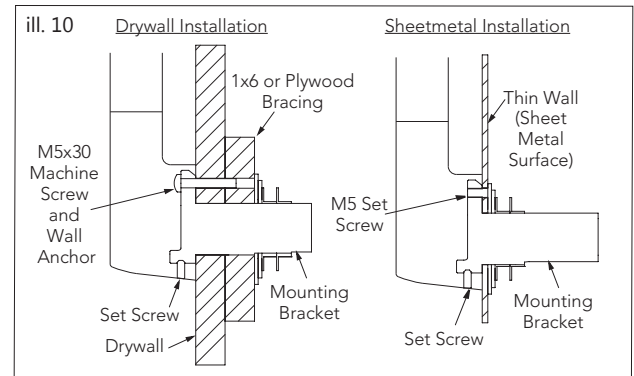
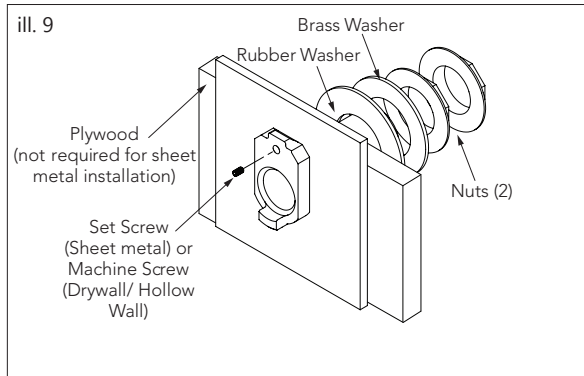
NOTE: Drill bits (not supplied) for hard materials may be required.

For a drywall/hollow wall surface: Drill a 1/4" (6.5 mm) hole at the marked location, and install the included wall anchors.

NOTE: The addition of a 1 x 6" or plywood bracing behind the mounting location is highly recommended for drywall/hollow wall installations. The overall maximum wall thickness is 2" (50 mm).

INSTALLATION PROCEDURE

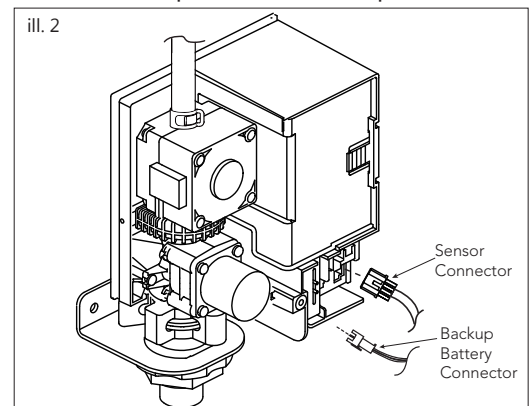
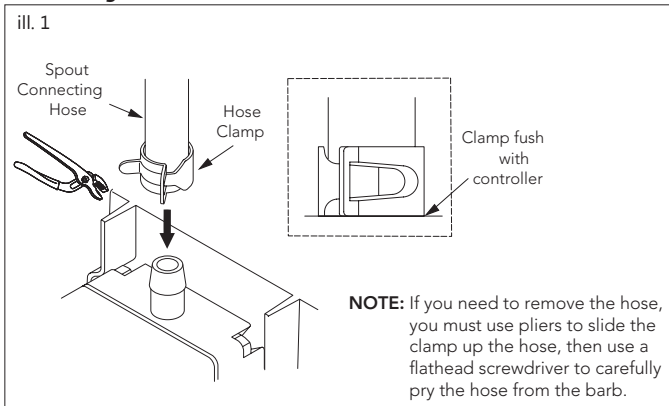
2. Install the mounting bracket using the rubber washer, brass washer, and both brass nuts on back side of the installation surface. Install the included set screw (for sheet metal installation) or 30 mm machine screw (for drywall installations).
3. Pass the hose and sensor cord through the mounting bracket, slide the spout base over the mounting bracket and tighten the set screw to secure the spout to the mounting bracket.



Connect the Spout to the Controller

1. If the spout connecting hose is too long, cut it to the appropriate length, making sure the end is square.
2. Push the spout connecting hose onto the outlet barb of the controller and secure it with the hose clamp (see ill. 1). Make sure that the hose clamp is placed fully against the controller.
3. Make sure there are no obstructions between the sensor and the basin, then connect the spout sensor connector to the controller. (see ill. 2)

If you haven't connected the backup battery, connect the backup battery connector to the controller. ⌚ **It will take at least 5 minutes after connecting the backup battery for the electronics to initialize.** This is a normal part of startup.

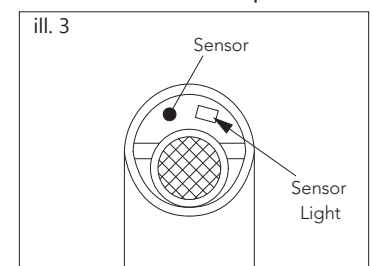


WARNING: Draw the sensor cord from the bottom of the controller while installing the controller cover to ensure that the cord is not pinched.

IMPORTANT!

The faucet will begin an automatic sensing range adjustment immediately after the sensor connector is plugged into the controller. Do not place your hands or other objects in front of the sensor. This process may take up to 20 seconds to complete.

- If the sensor light continues to flash for more than 20 seconds, the spout direction will need to be readjusted for proper operation. If adjustment is necessary, you must do it within 10 minutes of the adjustment process will end. To restart the process, unplug the sensor connector for 10 seconds, then reconnect it (see ill. 3)

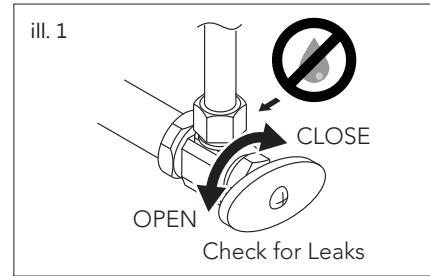


4. Double-check all connections, then reinstall the controller cover, securing it with the screws.

INSTALLATION PROCEDURE

Testing After Installation

- Turn on the water supply at the stop valves and inspect all the connections for any leaks (see ill. 1).
- Place hand under the sensor to activate.
For "C" type controller (ex. TELC105R-**C**20E): Water will run for the time period indicated by the model. Water will not stop when you remove your hand.
For "D" type controller (ex. TELC103R-**D**20E): Water will run for the time period indicated by the model, or water will stop when you remove your hand.

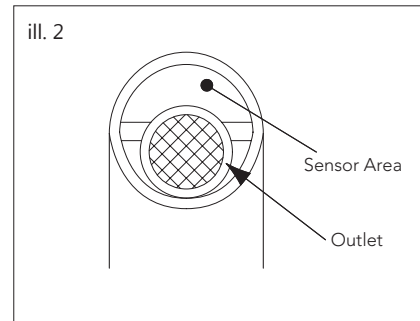


CARE & CLEANING

Spout and Sensor

IMPORTANT! Do not scratch the sensor when cleaning the spout (see ill. 2).

- Avoid using any cleaning materials that may scratch the spout surface.
- Never use polishing powder, detergent that includes coarse particles, thinners, benzene, acids, alkaline detergents, or nylon scrub brushes, as they can damage the surface of the spout.
- To safely clean the surface, wipe it using a dampened soft cloth with diluted dishwashing detergent and dry it with another soft cloth. If this does not adequately clean the surface, wipe the area with a neutral detergent and wet cloth.



PERIODIC MAINTENANCE

Check your faucet at least once a month for the following potential problems and to do the following maintenance procedures:

Inspect for Leakage

Check all water connections for signs of leakage.

Tighten the Spout

If the spout is loose, tighten the hexagonal nut underneath the spout for deck-mounted models.

To tighten the Helix Wall-Mounted Spout:

1. Unscrew the escutcheon, tighten the three screws securing the mounting bracket to the wall.
2. Reinstall escutcheon.

To tighten the Gooseneck Wall-Mounted Spout

1. Turn off the water supply at the stop valves.
2. Disconnect the spout connecting hose and sensor connector from the controller.
3. Remove the spout from the mounting bracket by removing the set screw on the bottom of the spout base.
4. Tighten the set screw on the back of the spout, then reinstall the spout on the mounting bracket.
5. As required, ensure the set screw on the mounting bracket and mounting nuts behind the sink/wall (refer to "Install the Spout" section) are tight.

PERIODIC MAINTENANCE

Cleaning the Inlet Screen and Nozzle

When the inlet screen is clogged, the flow rate will decrease. Decreased flow rate can lead to insufficient power generation, which will deplete the backup battery prematurely.

Cleaning the screen (see ill. 1 & 2):

1. Turn the water off at the stop valves.
2. Remove controller cover and quick fastener.
3. Remove controller from hose adapter.
4. Remove screen and clean it with a brush.

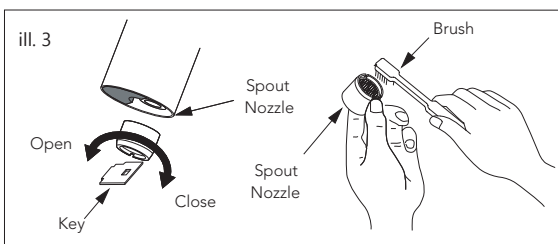
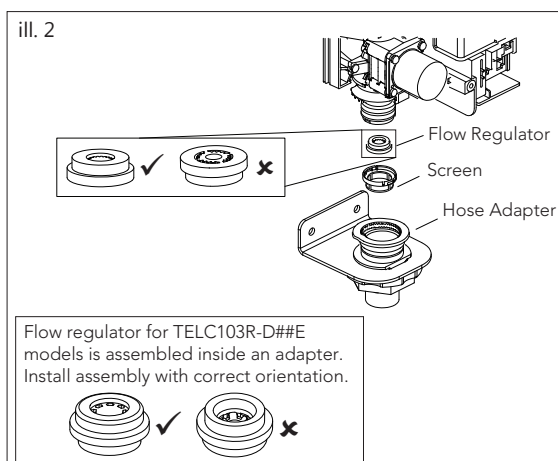
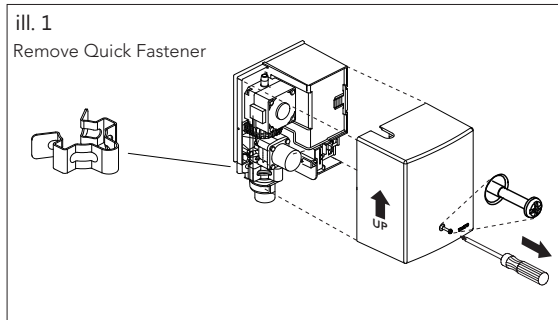
IMPORTANT!

If flow regulator (or flow regulator assembly for TELC103R-###E) falls out, reinstall it in the correct orientation (O-ring side facing screen) as shown. Otherwise, product will not function properly.

5. Reinstall the cleaned screen.
6. Reinstall the controller into the hose adapter until fully seated, and secure it with the quick fastener.
7. Reinstall cover, securing it with the screws.
8. Open stop valves and check all connections.

Cleaning the nozzle (see ill. 3):

1. Remove the nozzle from the spout with the supplied tool.
2. Clean the nozzle with a soft brush to remove any dirt from the screen.
3. Re-install the nozzle in the spout.



SPECIFICATIONS

Power supply	Hydropower Generation (self-powering power supply)			
Sensor Detection Range	5-1/8" ~ 7-7/8" (130 ~ 200mm)			
	Sensor is self-adjusting.			
Water Supply Pressure	Minimum : 15 psi (100 kPa) (Flowing)			
	Maximum : 80 psi (551 kPa)			
Water Supply Connection	G1/2 compatible with 1/2 NPSM			
Inlet Temperature range	39 ~ 110°F (4 ~ 43.3°C)			
Ambient Temperature	32 ~ 104°F (0 ~ 40°C)			
Humidity	Max. 90% RH			
Flow Rate	1.0 gpm	0.5 gpm		0.35 gpm
Duration	10 seconds	10 seconds	20 seconds	20 seconds
Volume per cycle	0.18 gpc (0.67 Lpc)	0.09 gpc (0.36 Lpc)	0.19 gpc (0.72 Lpc)	0.11 gpc (0.44 Lpc)

TROUBLESHOOTING		
Problem	Cause	Solution
Water won't begin running.	The surface of the sensor is dirty.	Clean the surface of the sensor.
	There is an obstruction in front of the sensor.	Remove the obstruction.
	The stop valve is turned off.	Turn on the valve.
	Backup battery connector is disconnected.	Connect the backup battery connector.
	The power generator and sensor connector is disconnected.	Securely attach the connector(s).
	Water supply is suspended.	Wait until the water supply is restored.
	The strainer or the regulating screen is clogged.	Clean the strainer and the regulating screen.
Water won't stop running.	The surface of the sensor is dirty.	Clean the surface of the sensor.
	There is an obstruction in front of the sensor.	Remove the obstruction.
	If the water continues to run after attempting the above solutions, turn off the stop valve.	
Low flow rate.	The stop valve is not fully opened.	Open the stop valve fully.
	The strainer or the regulating screen is clogged.	Clean the strainer and the regulating screen.
Water temperature is too high.	The temperature control handle is set at "H".	Set the temperature control handle to the middle point.
	The stop valve connected to the cold-water supply is not fully opened.	Open the cold-water stop valve fully.
Water temperature is too low.	The temperature control handle is set at "C".	Set the temperature control handle to the middle point.
	The stop valve connected to the hot water supply is not fully opened.	Open the hot water stop valve fully.
	The hot water supply temperature is lower than 120°F.	Set the hot water supply temperature to 120° F.
Water temperature is not controlled properly.	One side of the stop valve is not fully opened.	Open the stop valve fully.
	The strainer or the regulating screen is clogged.	Clean the strainer and the regulating screen.
Short detection range.	The self-adjusting sensor may not work properly when strained or blocked by water droplets.	Clean the sensor surface.

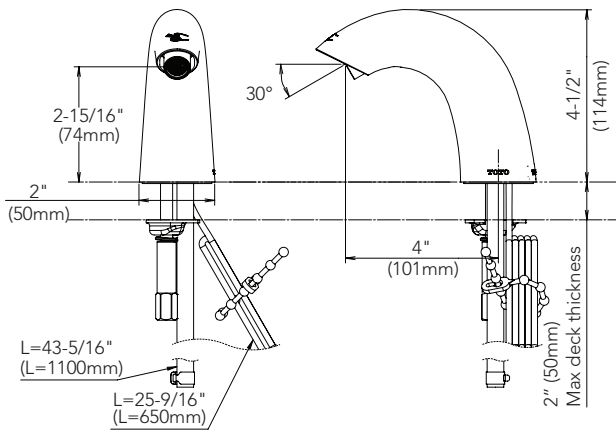
WARRANTY

1. TOTO warrants its electronic flush valves, faucets and soap dispensers ("Product") to be free from defects in materials and workmanship during normal use when properly installed and serviced, for a period of three (3) years from date of purchase. This limited warranty is extended only to the ORIGINAL PURCHASER of the Product and is not transferable to any third party, including but not limited to any subsequent purchaser or owner of the Product. This warranty applies only to TOTO Product purchased and installed in North, Central and South America.
2. TOTO's obligations under this warranty are limited to repair, replacement or other appropriate adjustment, at TOTO's option, of the Product or parts found to be defective in normal use, provided that such Product was properly installed, used and serviced in accordance with instructions. TOTO reserves the right to make such inspections as may be necessary in order to determine the cause of the defect. TOTO will not charge for labor or parts in connection with warranty repairs or replacements. TOTO is not responsible for the cost of removal, return and/or reinstallation of the Product.
3. This warranty does not apply to the following items:
 - a. Damage or loss sustained in a natural calamity such as fire, earthquake, flood, thunder, electrical storm, etc.
 - b. Damage or loss resulting from any accident, unreasonable use, misuse, abuse, negligence, or improper care, cleaning, or maintenance of the Product.
 - c. Damage or loss resulting from sediments or foreign matter contained in a liquid soap system.
 - d. Damage or loss resulting from improper installation or from installation of the Product in a harsh and/or hazardous environment, or improper removal, repair or modification of the Product.
 - e. Damage or loss resulting from electrical surges or lightning strikes or other acts which are not the fault of TOTO or which the Product is not specified to tolerate.
 - f. Damage or loss resulting from normal and customary wear and tear, such as gloss reduction, scratching or fading over time due to use, cleaning practices or water or atmospheric conditions, including but not limited to, the use of bleach, alkali, acid cleaners, dry (powder) cleaners or any other abrasive cleaners or the use of metal or nylon scrubbers.
4. In order for this limited warranty to be valid, proof of purchase is required. TOTO encourages warranty registration upon purchase to create a record of Product ownership at <http://www.totousa.com> is required. TOTO encourages registration upon purchase and failure to register will not diminish your limited warranty rights.
5. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE, PROVINCE TO PROVINCE OR COUNTRY TO COUNTRY.
6. To obtain warranty repair service under this warranty, you must take the Product or deliver it prepaid to a TOTO service facility together with proof of purchase (original sales receipt) and a letter stating the problem, or contact a TOTO distributor or products service contractor, or write directly to TOTO U.S.A., INC., 1155 Southern Road, Morrow, GA 30260 (888) 295 8134 or (678) 466-1300, if outside the U.S.A. If, because of the size of the Product or nature of the defect, the Product cannot be returned to TOTO, receipt by TOTO of written notice of the defect together with proof of purchase (original sales receipt) shall constitute delivery. In such case, TOTO may choose to repair the Product at the purchaser's location or pay to transport the Product to a service facility.

THIS WRITTEN WARRANTY IS THE ONLY WARRANTY MADE BY TOTO. REPAIR, REPLACEMENT OR OTHER APPROPRIATE ADJUSTMENT AS PROVIDED UNDER THIS WARRANTY SHALL BE THE EXCLUSIVE REMEDY AVAILABLE TO THE ORIGINAL PURCHASER. TOTO SHALL NOT BE RESPONSIBLE FOR LOSS OF THE PRODUCT OR FOR OTHER INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES OR EXPENSES INCURRED BY THE ORIGINAL PURCHASER, OR FOR LABOR OR OTHER COSTS DUE TO INSTALLATION OR REMOVAL, OR COSTS OF REPAIRS BY OTHERS, OR FOR ANY OTHER EXPENSE NOT SPECIFICALLY STATED ABOVE. IN NO EVENT WILL TOTO'S RESPONSIBILITY EXCEED THE PURCHASE PRICE OF THE PRODUCT. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTIES, INCLUDING THAT OF MERCHANTABILITY OR FITNESS FOR USE OR FOR A PARTICULAR PURPOSE, ARE EXPRESSLY DISCLAIMED. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, OR THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION AND EXCLUSION MAY NOT APPLY TO YOU.

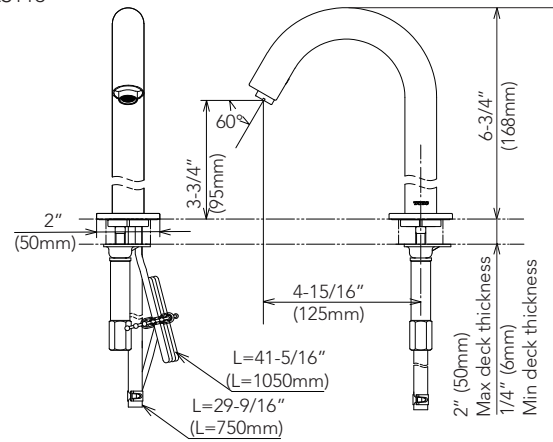
ROUGH-IN DIMENSIONS / BOSQUEJO / ROBINETTERIE BRUTE/DIMENSÕES APROXIMADAS

STD
TELS105
TELS101
TELS103



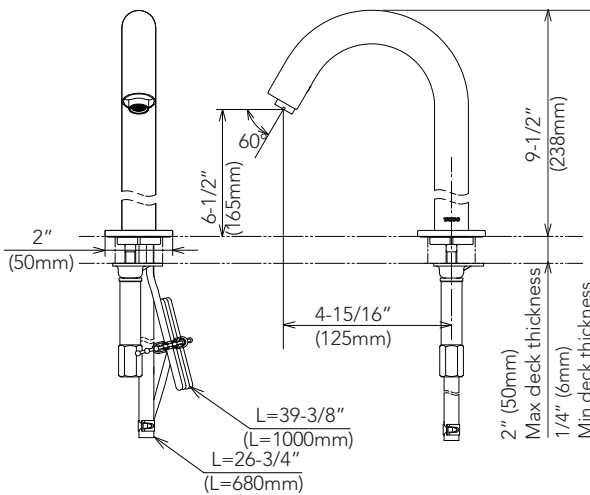
Faucet hole Ø1-1/4" (Ø32mm)- Ø1-3/8" (Ø35mm)

Helix
TELS115
TELS111
TELS113



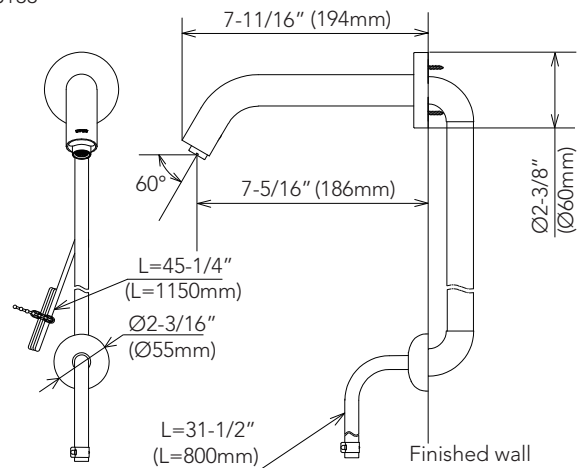
Faucet hole Ø1-1/4" (Ø32mm)- Ø1-3/8" (Ø35mm)

Helix-M
TELS125
TELS121
TELS123

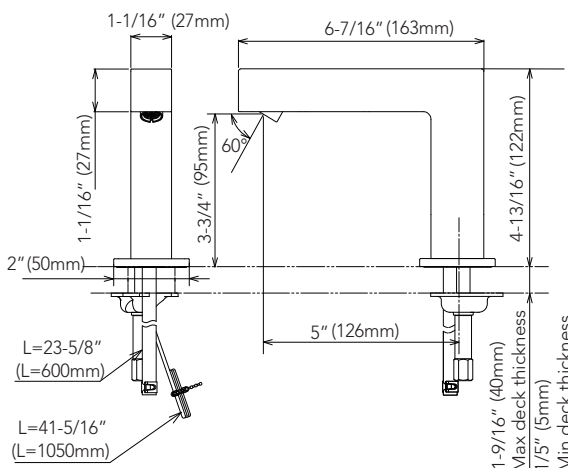


Faucet hole Ø1-1/4" (Ø32mm)- Ø1-3/8" (Ø35mm)

Helix-Wall
TELS135
TELS131
TELS133

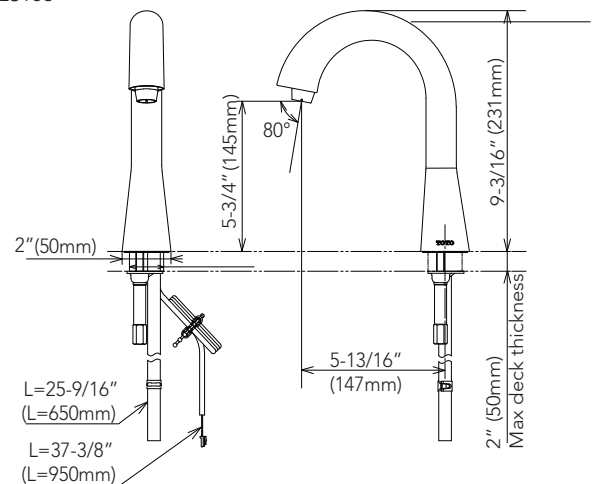


Axiom
TELS145
TELS141
TELS143



Faucet hole Ø1-1/4" (Ø32mm)- Ø1-3/8" (Ø35mm)

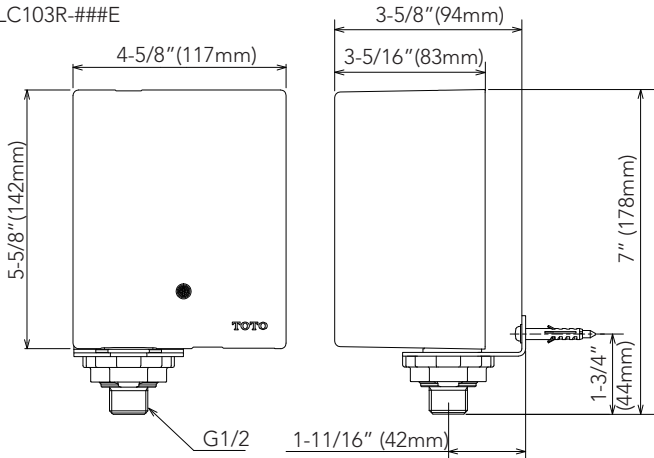
Gooseneck
TELS155
TELS151
TELS153



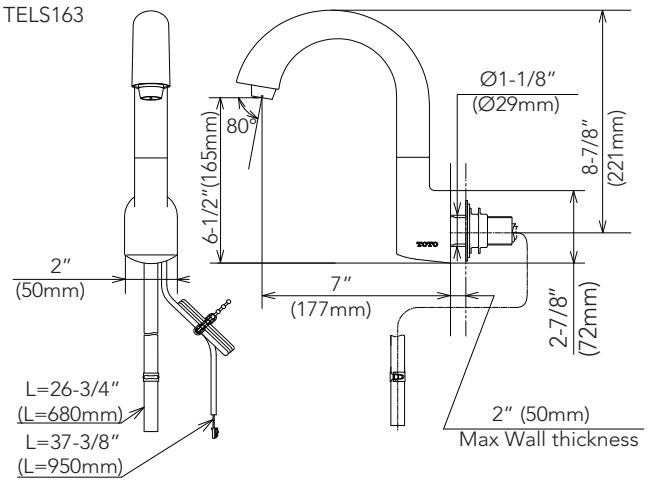
Faucet hole Ø1-1/4" (Ø32mm)- Ø1-3/8" (Ø35mm)

ROUGH-IN DIMENSIONS / BOSQUEJO / ROBINETTERIE BRUTE/DIMENSÕES APROXIMADAS

Controllers
TELC105R-###E
TELC101R-###E
TELC103R-###E

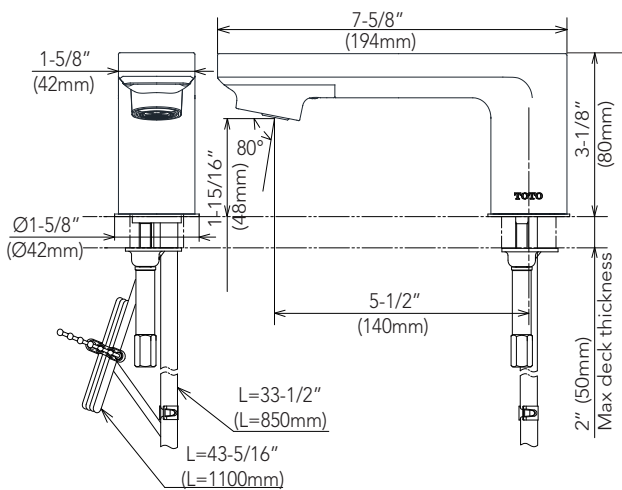


Gooseneck-Wall
TELS165
TELS161
TELS163



Libella

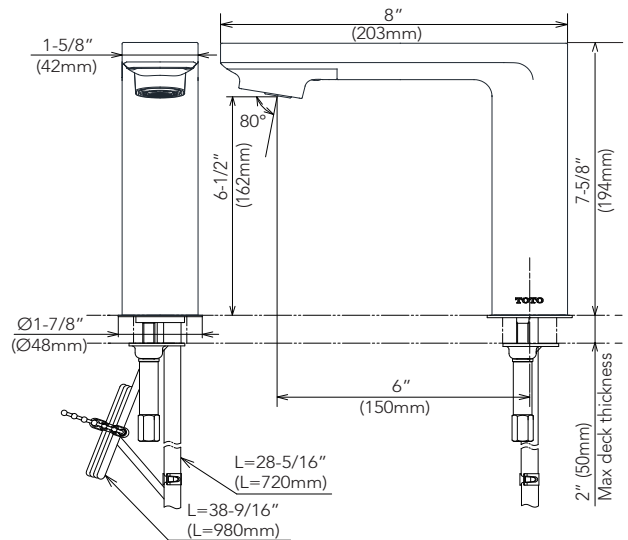
TELS1A5
TELS1A1
TELS1A3



Faucet hole $\varnothing 1-1/4"$ ($\varnothing 32\text{mm}$)- $\varnothing 1-3/8"$ ($\varnothing 35\text{mm}$)

Libella-M

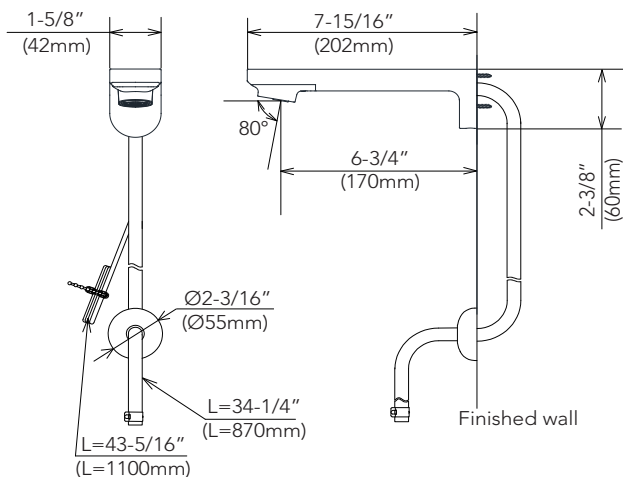
TELS1B5
TELS1B1
TELS1B3



Faucet hole $\varnothing 1-1/4"$ ($\varnothing 32\text{mm}$)- $\varnothing 1-3/8"$ ($\varnothing 35\text{mm}$)

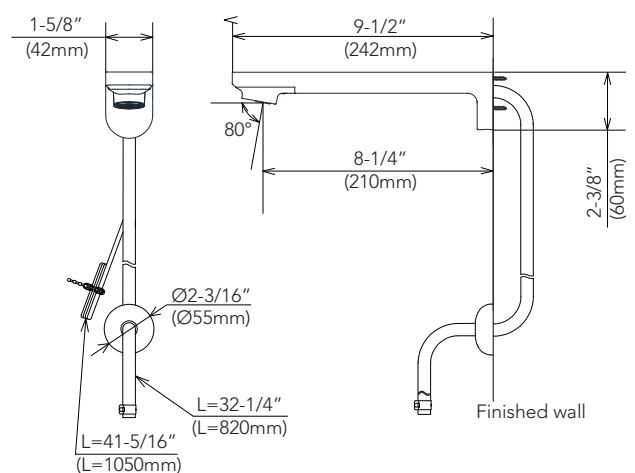
Libella Wall

TELS1C5
TELS1C1
TELS1C3



Libella-M Wall

TELS1D5
TELS1D1
TELS1D3



TOTO

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Warranty Registration and Inquiry

For product warranty registration, TOTO U.S.A. recommends online warranty registration. Please visit our web site <http://www.totousa.com>. If you have questions regarding warranty policy or coverage, please contact TOTO U.S.A. Inc., Customer Service Department, 1155 Southern Road, Morrow, GA 30260 (888) 295-8134 or (678) 466-1300 when calling from outside of U.S.A.