Important Safeguards
(For your safety, please follow the instructions below.)

In this Instruction Manual, the following symbols are shown for safe and proper use of your automatic faucet and in order to alert you to the possibility of personal injury and damage to your property. The symbols and their meanings are as follows.

⚠️ Warning
Ignoring these symbols may cause personal injury and/or property damage.

*Some models may have different components from the ones illustrated below.

Do not place the Automatic Faucet in a high humidity area such as shower room or sauna.
This may cause damage.

Do not strike or kick the Automatic Faucet.
This may cause damage or water leakage.

Never attempt to disassemble, reassemble, repair or modify the Automatic Faucet, unless you are an electrician, or qualified service person.
This may cause property damage or personal injury.

Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>EcoPower® type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model number</td>
<td>RYOHAN™</td>
</tr>
<tr>
<td>Helix™ Wall mount</td>
<td>TEL3GMY</td>
</tr>
<tr>
<td>Helix™ Wall mount</td>
<td>TEL3GW#CP</td>
</tr>
<tr>
<td>Duration of water discharge</td>
<td>60 seconds (TEL3 - 60)</td>
</tr>
<tr>
<td>Power supply</td>
<td>—</td>
</tr>
<tr>
<td>Battery life</td>
<td>—</td>
</tr>
<tr>
<td>Detection range from the sensor</td>
<td>5-1/8<del>7-7/8” (130</del>200 mm)</td>
</tr>
<tr>
<td>Water supply pressure</td>
<td>minimum required water pressure: 14.5 PSI (100 kPa) (Flowing)</td>
</tr>
<tr>
<td></td>
<td>maximum water pressure: 125 PSI (862 kPa) check local building codes for maximum water pressure allowed</td>
</tr>
<tr>
<td>Water supply connection</td>
<td>1/2” NPSM</td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>32<del>104°F (0</del>40°C)</td>
</tr>
<tr>
<td>Humidity</td>
<td>Max. 90% RH</td>
</tr>
<tr>
<td>Flow rate</td>
<td>0.8 gallon per minutes (3 L/min.)</td>
</tr>
<tr>
<td>Discharge quantity</td>
<td>Max. 0.25 gallon per cycle (0.95 L/cycle)</td>
</tr>
</tbody>
</table>
3 Before Installing

1. Check the pressure of cold and hot water supply
   - When the water supply pressure is higher than 125PSI (862kPa), be sure to reduce the pressure within a range of 20 to 80 PSI by using a pressure reducing valve available in the market.
   - Optimum working pressure range is from 14.5PSI to 125PSI (100kPa to 862kPa). Make sure the water pressure is within this range.

2. Piping
   - Flush all water lines prior to installation.

3. Others
   - Pay special attention so that the sensor surface is not flawed or scratched.
   - Prepare stop valve and flexible hose or copper tube.
   - Do not place other devices using inverter or infrared sensor near the Automatic Faucet, this may cause malfunction.
   - There is no problem with the Automatic Faucet if water remains inside.

4 Set-up Drawing

Some models may have different components as illustrated below.

**Ryohan™**

**Helix™ Wall Mount**

- Ø4x40
- 3 screws
- with anchors

- Faucet Hole Diameter
  - Min. 28mm (~1-1/16")
  - to
  - Max. 35mm (~1-3/8")

- Please confirm the basin dimension of lavatory, to which the faucet will be installed, making sure that it has recommended minimum dimensions of
  - (L x W: 15" x 15")

- Optimum working pressure range is from 14.5PSI to 125PSI (100kPa to 862kPa). Make sure the water pressure is within this range.

- Pay special attention so that the sensor surface is not flawed or scratched.

- Prepare stop valve and flexible hose or copper tube.

- Do not place other devices using inverter or infrared sensor near the Automatic Faucet, this may cause malfunction.

- There is no problem with the Automatic Faucet if water remains inside.
## Installation

*Some models may have different component as illustrated below.

<table>
<thead>
<tr>
<th>Control box</th>
<th>Water inlet bracket</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Control box" /></td>
<td><img src="image" alt="Water inlet bracket" /></td>
<td><img src="image" alt="Allen wrench" /></td>
</tr>
<tr>
<td>EcoPower® type</td>
<td>Screw (Ø3 mm×10)</td>
<td>Installation manual</td>
</tr>
<tr>
<td>Quick fastener</td>
<td>Allen wrench Size: 1/16”(2mm)</td>
<td>Instruction manual</td>
</tr>
<tr>
<td>Self tapping screw (×3) (Ø4.5 mm×38)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Spout, Flexible tube and Open-close tool are included.

### Flexible tube installation

- **RYOHAN™ Spout**
  - Flexible tube is installed through spout connecting hose.
  - ![RYOHAN™ Spout](image)
  - ![Flexible tube](image)
  - ![Others](image)
  - ![Drain](image)
  - ![Drain Pipe](image)
  - ![Open-close tool](image)

- **Helix™ Wall Mount Spout**
  - Flexible tube is installed through spout connecting hose.
  - ![Helix™ Wall Mount Spout](image)
  - ![Flexible tube](image)
  - ![Others](image)
  - ![Open-close tool](image)
  - 3 Phillip Screws (Ø4×40)
  - 3 screw anchors
Installation Procedure

**STEP 1** Water supply pipe

Before installing the faucet, be sure to thoroughly flush away any foreign matter such as dirt and sand trapped in the water supply pipe.

**STEP 2** Remove the controller cover

- Pull and open the controller cover to the direction as shown right.

**STEP 3-A** Mount the water inlet bracket on the wall

- Mount the water inlet bracket on the wall and temporarily tighten the screws.
- Make sure that the controller can be attached to the water inlet bracket.
- Tighten the water inlet bracket with the three self tapping screws. Note: Anchors for wall may be needed.

**Caution**

Be sure to mount the water inlet bracket in the correct direction. Otherwise, the strainer on the water inlet bracket will be inaccessible for cleaning.

To be continued on the back
STEP 3-B Mount the water inlet bracket on the wall

- Connect the water supply lines to the water inlet bracket.

Flexible hose
Copper tube

not included
Flexible hose
Nut
Packing

not included
Copper tube
Nut
Friction ring
Cone washer

STEP 4 Connect the controller to the water inlet bracket

- Connect the controller to the water inlet bracket.

- Attach it with a quick fastener.

Controller
Quick fastener
Water inlet bracket

STEP 5 Cut the spout connecting hose if necessary

- Cut the spout connecting hose to the appropriate length.

\[\text{Cutting length: 4 inches or less}\]

- If the spout connecting hose is too long, cut it to proper length. Do not cut the hose more than 4 inches. Be sure to cut the hose carefully with a cutter, so the surface is square.

- Insert the spout connecting hose into the flexible tube.

Flexible tube
Spout connecting hose

STEP 6 Connect the spout connecting hose to the controller

- Insert the spout connecting hose into the controller.

- Fasten the hose with the hose clamp.

Quick fastener
Spout connecting hose

Caution

- Check that the spout connection hose is firmly in place.
- Do not bend the spout connection hose.
- The hose clamp should be attached at the specified position.
- The spout connection hose must be fastened with the hose clamp.

Cone washer
Friction ring
Nut
Packing
Flexible hose
Copper tube
STEP 7  Attach the connector to the controller

- Attach the back-up battery connector (white) to the controller.
- Allow the circuit board to stabilize for 2 minutes, then attach the sensor connector (green).

- Make sure there are no obstructions between the sensor and the basin. The controller starts setting right after the sensor connector is attached. (This sensor setting operation is completed in approx 20 seconds.)
- Make sure that no electric cord comes in contact with the hot water supply pipe.

- EcoPower® type needs about two minutes for its controller to be ready for operation after attaching the back-up connector to the controller.

Caution

STEP 8  Install the spout (Helix™ Wall Mount)

- Make 3/4" diameter hole for water supply pipe and sensor cord.
- Then, drill 3 holes, not bigger than 3/16" (5 mm) diameter, for screw anchors provided with 3 Phillip screws.

Install the spout by tightening 3 Phillip screws (Ø4x40 mm) provided, and make sure that spout is firmly installed.

Caution

STEP 8  Fasten the spout (Ryohan™)

- Affix the spout by tightening the hexagonal nut.

Caution

Be sure to mount the faucet body with its spout tip directed toward the basin center.

- Confirm there are no obstructions within the detection range.
- If light continues to flash, the spout direction will need to be readjusted for proper operation.

Caution

The light will only blink for 10 minutes. If all adjustment are not made during this 10 minutes, unplug sensor connector for 10 seconds to reset the unit.
**STEP 9**  
**Attach the controller cover**

After checking the connectors are securely attached, cover the controller.

**STEP 10**  
**Install the Drain** (Ryohan™ only)

Install the main drain body, Gasket, washer, and Lock Nut in that order.

---

**Remove the drain cup unit**

1. Pull the drain cup unit firmly to the drain part then release it.
2. Turn the drain cup unit clockwise (About 45 degrees)
3. Pull the drain cup upwards and out

*If the drain cup unit does not come out, put it back, and while turning it clockwise once again, slowly pull it out.*

**Install the Drain cup**

1. Insert the drain cup into the main drain body
2. Turn the drain cup counter-clockwise making the cross-bar align with the notches in the angles.
3. Pull firmly on the drain cup unit, being careful not to remove it, then release it.

*If the drain cup is accidentally removed, begin the process over from the beginning.*

4. Push the drain cup unit in.
# Function Test

## 1. Checking after installation

After your Automatic Faucet is installed, check it according to the following procedures.

- **Check for water leakage**
  - Open the stop valve and check for water leakage.
- **Operation**
  - <Check the sensor operation>
    - When hands are placed under the faucet, water starts flowing.
    - When hands are removed, water stops in one or two seconds.
    - For safety and conservation reasons, after detecting objects continuously for about 10 seconds or 60 seconds, water automatically stops.

If the Automatic Faucet does not operate properly, contact TOTO® or your plumbing contractor.

## 2. Cleaning of the strainer

- Close stop valve by hand.
  - Use the open-close tool to remove the strainer cover.

After installation, be sure to clean the strainer periodically. When the strainer is clogged, the flow rate will decrease and the Automatic Faucet may not operate properly.

## 3. Adjustment of flow rate

The flow controller regulates flow rate to 0.8gpm (3 L/min.), there is no need to adjust the flow rate.

Use the Automatic Faucet with the stop valve fully opened. However, if you need to regulate the flow rate because the wash basin is small or that the water supply pressure is too strong, adjust the flow rate by turning the stop valve clockwise.

### Caution

The EcoPower® type must be used with the stop valve fully opened. Insufficient flow rate may cause power shortage, resulting in consumption of the built-in back-up battery.

- If you need to regulate the flow rate, make sure that the flow rate is more than 0.76gpm (2.7L / min).
- If the water pressure is low and the water flow rate is below 0.76gpm (2.7L/min.) the back up battery will run down quickly. To test water flow rate run water for 13 second cycles into a 20 ounce bottle or container.

Faucet should flow at least 20 ounces in 13 second cycles.