

FORTÉ

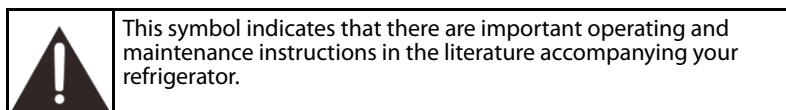
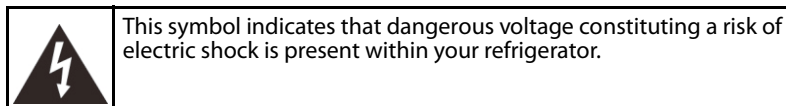
DISHWASHER

Installation Manual



Built-In Dishwasher
F24DWS650PR

IMPORTANT SAFETY INSTRUCTIONS



BEFORE YOU BEGIN

Read these instructions completely and carefully.

IMPORTANT

- Observe all governing codes and ordinances.
- **Note to Installer** – Be sure to leave these instructions for the consumer's and local inspector's use.
- **Note to Consumer** – Keep these instructions with your *User Guide* for future reference.
- **Skill Level** – Installation of this dishwasher requires basic mechanical and electrical skills. **Proper installation is the responsibility of the installer. Product failure due to improper installation is not covered under the appliance warranty.**
- **Completion Time** – One to three hours. New installations require more time than replacement installations.

IMPORTANT

- The dishwasher **MUST** be installed to allow for future removal from the enclosure if service is required.
- If you received a damaged dishwasher, you should immediately call customer service.

FOR YOUR SAFETY

Read and observe all CAUTIONS and WARNINGS shown throughout these instructions. While performing installations described in this booklet, gloves and safety glasses or goggles should be worn.

Warning

This dishwasher comes with a heating element to heat the water. To avoid the risk of a serious burn, don't touch the heating element when the dishwasher is on.



WARNING: To reduce the risk of electrical shock, fire, or injury to persons, the installer must ensure that the dishwasher is completely enclosed at the time of installation.

READ CAREFULLY.

KEEP THESE INSTRUCTIONS.

If you have an installation problem, contact your dealer or installer. You are responsible for providing adequate electrical, exhausting, and other connecting facilities.

Preparing to install your dishwasher

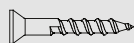
Parts supplied:



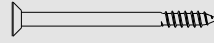
Screws A
ST4 x 20 (4)



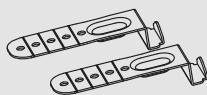
Screws B
ST4 x 14 (8)



Screws C
ST3.5 x 25 (2)



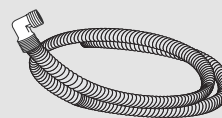
Screws D
ST3.5 x 45 (4)



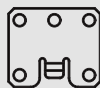
Top mounting clips (2)



Hose clamp



Drain hose



Brackets (2)

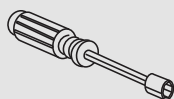


Top Hook
Mounting Seats (2)

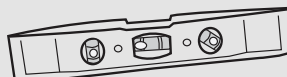
Tools needed:



Phillips screwdriver



1/4 in. and 5/16 in.
Nut driver



Level



Flashlight



Gloves



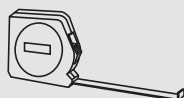
Bucket



Adjustable wrench



Carpenter's
square

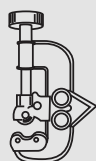


Measuring tape

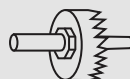


Safety glasses

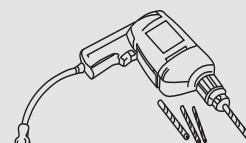
New installations only



Tubing cutter

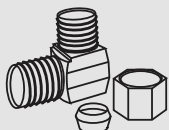


Hole saw
set



Drill and bits

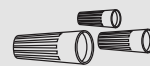
Materials needed (kit purchased separately):



90° Elbow, ferrule and compression nut. (3/8 NPT external thread on one end. Other end sized to fit water supply line)

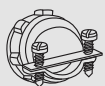


Teflon thread seal tape



Three wire nuts (UL listed) (two included in kit)

New installations only



Strain relief (for electrical connections)



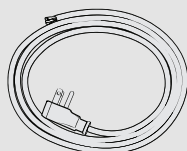
Hot water line (min. 3/8 in. copper) kit



"T" connection



Gardenhose connection



Electrical cable or power cord (See *Electrical Requirements* section)

Not included in kit



Hand shut-off valve



Waste tee for house plumbing (if applicable)



Screw-type hose clamps



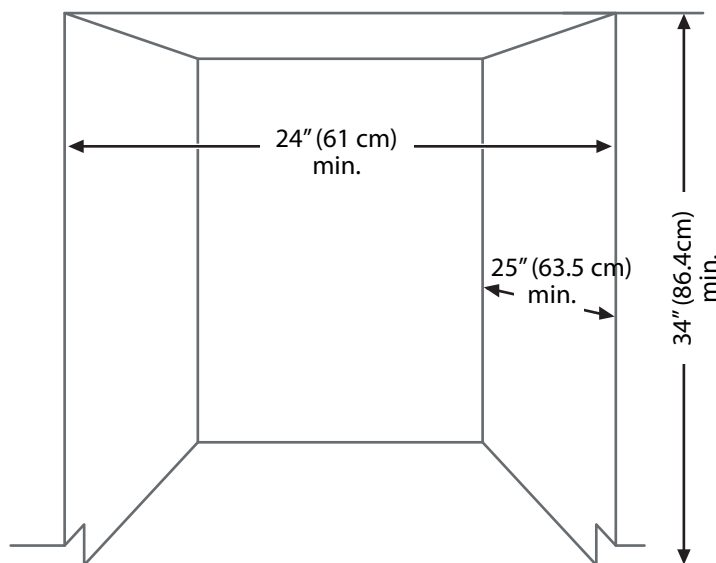
Coupler for extending drain line (if applicable)



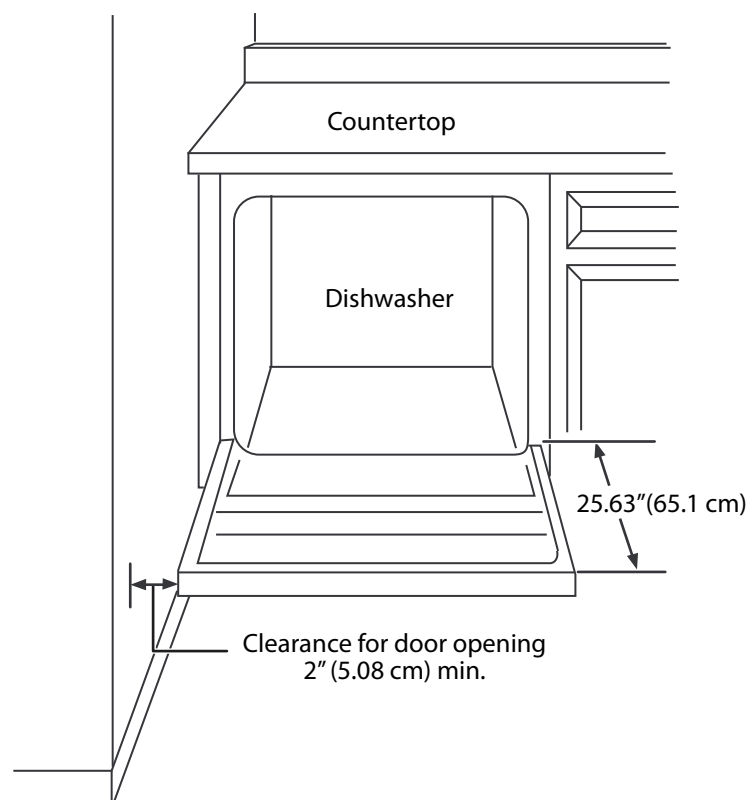
Air gap (if required)

Enclosure requirements

- The dishwasher must be installed so that the drain hose is no more than 10 feet (3.01 m) in length, for proper drainage.
- This dishwasher is designed to be enclosed on the top and on both sides by a standard residential kitchen cabinet unit.
- The installation enclosure must be clean and free of any obstructions.
- The enclosure must be at least 24 inches (61 cm) wide, 25 inches (63.5 cm) deep, and 34 inches (86.4 cm) high.
- For the front door of the dishwasher to be flush with the front edge of the counter top, the counter top must be 25 inches (63.5 cm) deep.



If installing into a corner, allow 2 in. (5.08 cm) min. clearance between dishwasher and adjacent cabinet, wall, or other appliances. Allow 25.63 in. (65.1 cm) min. clearance from the front of the dishwasher for opening the door.



Drain requirements

- Follow all local codes and ordinances.
- Do not exceed 10 ft. (3.01 m) of drain hose.
- Do not connect the drain lines from other devices to the dishwasher drain hose.
- The dishwasher must be connected to a waste line with an air gap (not provided) or a 32 in. (81.28 cm) high (min.) drain loop, depending on local codes and ordinances, to prevent back flow into the dishwasher.
- An air gap must be used if the waste tee or garbage disposal connection is less than 18 in. (45.72 cm) above the floor, to prevent siphoning.

Drain preparation

The type of drain installation required depends on the answers to the following questions:

- Do local codes or ordinances require an air gap?
- Will the waste tee or garbage disposal connection be less than 18 in. (45.72 cm) above the floor?
- Will installation have a drain loop less than 32 in. (81.28 cm) above the floor?

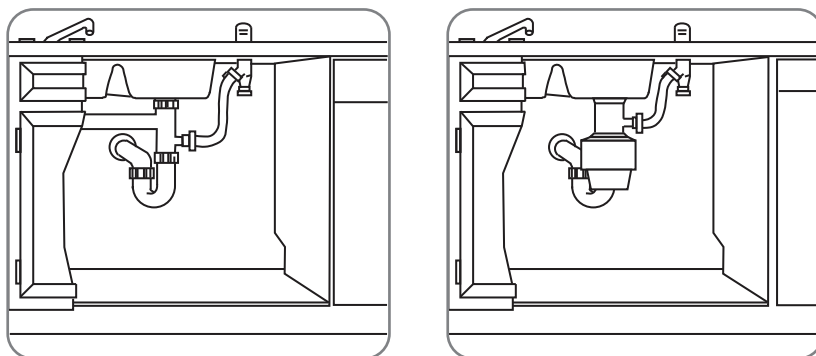
If the answer to **ANY** of these questions is **YES, Method 1 MUST be used**. Otherwise, either Method 1 or Method 2 may be used.

Caution:

- An air gap **MUST BE USED** if the drain hose is connected to a waste tee or garbage disposal lower than 18 in. (45.72 cm) above the floor.
- Failure to provide the proper drain connection height with an air gap or 32 in. (81.28 cm) (min.) high drain loop will result in improper draining of the dishwasher.

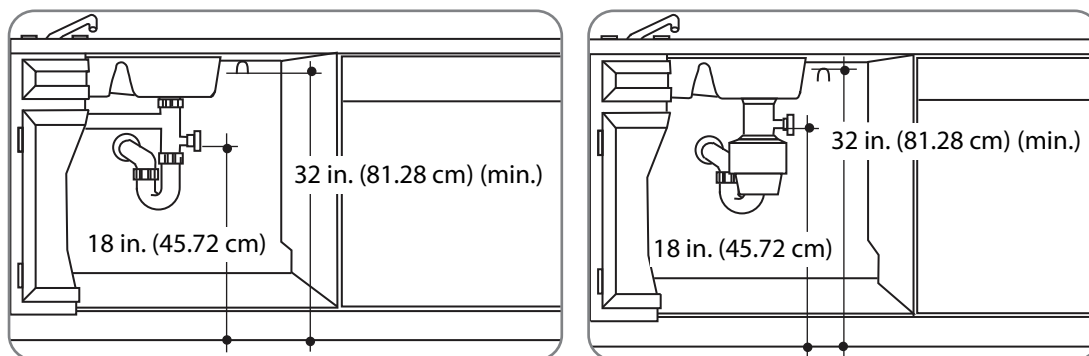
Install the waste tee or garbage disposal connection and air gap according to manufacturer's instructions.

Method 1 - Air gap with a waste tee or garbage disposal connection



Method 2 - High drain with a waste tee or garbage disposal connection

You must provide a method to attach the drain hose to the underside of the countertop.



Electrical requirements

- This appliance must be supplied with 120V, 60 Hz, and it must be connected to its own, properly grounded branch circuit that is protected by a 15 or 20 ampere circuit breaker or time delay fuse.
- Wiring must be two wire with ground.
- If the electrical supply does not meet the above requirements, call a licensed electrician before proceeding.



Warning: Remove the house fuse or open the circuit breaker before beginning the installation. Do not use an extension cord or adapter plug with this appliance.

GROUNDING INSTRUCTIONS

Grounding Instructions – Cable Direct

This appliance must be connected to a grounded metal, permanent wiring system, or an equipment grounding conductor must be run with the circuit conductors and be connected to the equipment grounding terminal or lead on the appliance.

Grounding Instructions – Power Cord Models

This appliance must be grounded. In the event of a malfunction or breakdown, grounding will reduce the risk of electrical shock by providing a path of least resistance for electric current. The plug must be plugged into an appropriate outlet that is installed and grounded in accordance with local codes and ordinances.



WARNING

The improper connection of the equipment grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service representative if you are in doubt that the appliance is properly grounded.

Direct Wire Method

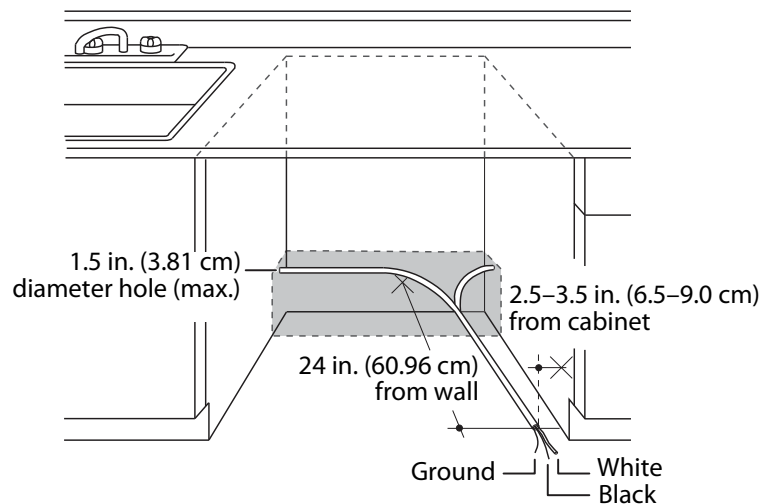
- The cable must be routed as shown in [Cabinet preparation and wire routing on page 8](#), and extend a minimum of 24 in. (60.96 cm) from the rear wall.
- Use flexible, armored, or nonmetallic sheathed, copper wire with grounding wire that meets the wiring requirements for your home and local codes and ordinances.
- Use a UL Listed/CSA Approved strain relief.

Power Cord Method

- Install a 3-prong grounding type receptacle. The wall outlet can be installed in a cabinet or on a wall adjacent to the undercounter space in which the dishwasher is to be installed.
- Use power cord kit (part number 5304504505) under Smart Choice brand marked with Dishwasher Install Kit With Power Cord, available for purchase from an authorized store. The power cord and connections must comply with local codes and ordinances.
- The recommended power cord length is 54 in. (1.4 m) min. and 64 in. (1.6 m) max.

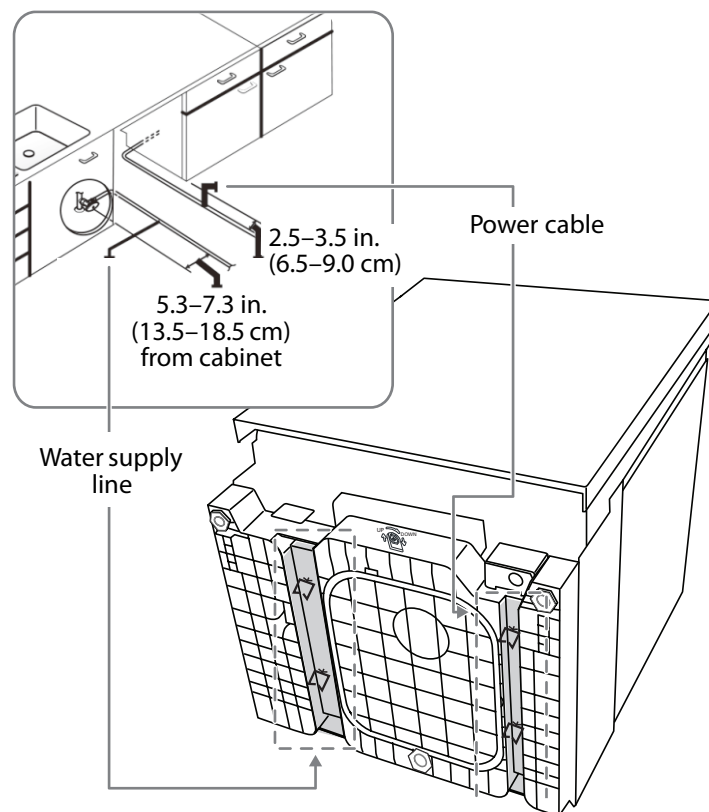
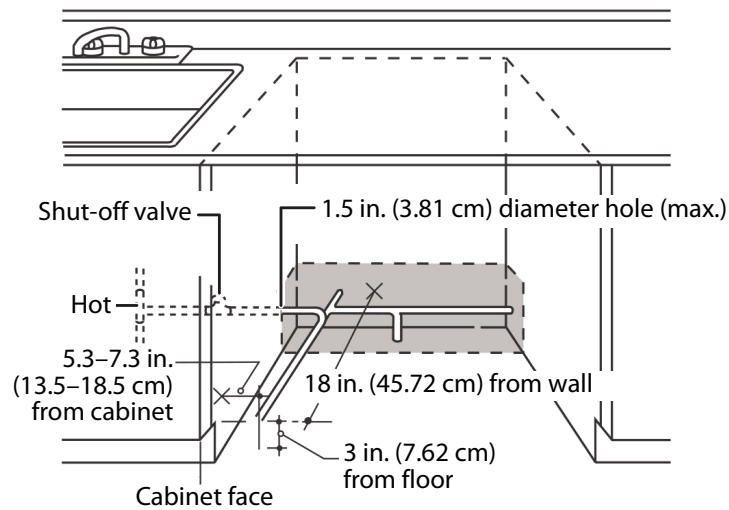
Cabinet preparation and wire routing

- The wiring may enter the opening from either side, the rear, or the floor within the shaded area.
- The electrical connection is on the front right of the dishwasher.
- Drill a 1.5 in. (3.81 cm) maximum diameter hole to run the electrical cable through the wall of the cabinet.
- The hole must be free of sharp edges. If the cabinet wall is metal, the hole edge must be covered with a bushing or rubber grommet.
- Cable direct connections may pass through the same hole as the drain hose and hot water line, but power cords with plugs must pass through a separate hole.



Preparing the hot water line

- The water connection is on the left side of dishwasher.
- The hot water line may enter the opening from either side, the rear, or the floor within the shaded area.
- The hot water line may pass through the same hole as the electrical and drain hose. Or, you can drill an additional 1.5 in. (3.81 cm) maximum diameter hole for the hot water line.
- If a power cord with a plug is used, the hot water line may not pass through the same hole as the power cord.



Connecting the water line to the water supply

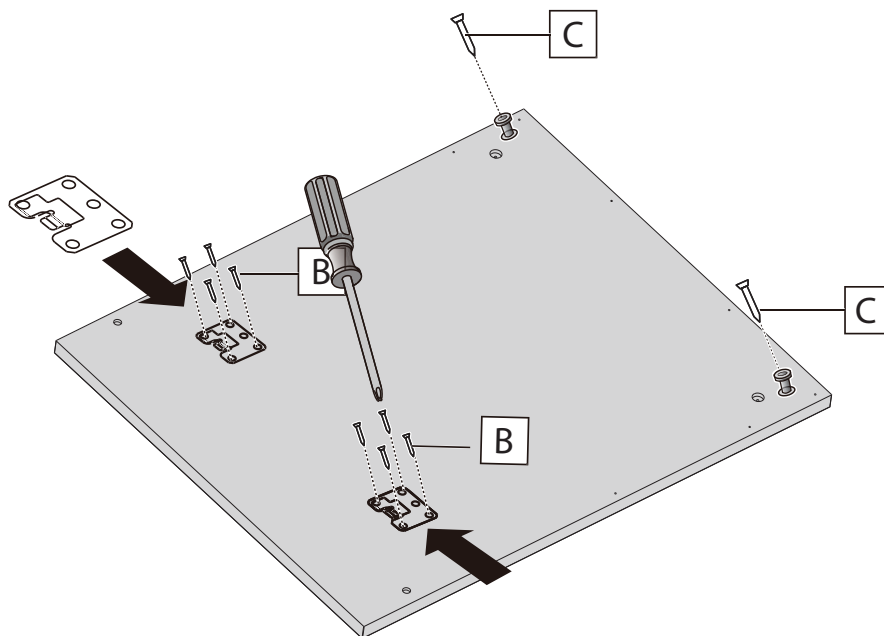
- 1 Turn off the water supply.
- 2 Install a hand shut-off valve in an accessible location, such as under the sink. This is optional, but strongly recommended, and may be required by local codes.
- 3 Install the hot water inlet line, using at least 3/8 in. O.D. copper tubing. Route the line as shown in the figure above and extend it forward at least 18 in. (45.72 cm) from the rear wall of the enclosure.
- 4 Adjust the water heater to a temperature of 120° F to 150° F (49° C to 65° C).
- 5 Flush the water line to clean out any debris.

Note: The hot water pressure must be between 20 and 120 psi (138 and 827 kPa).

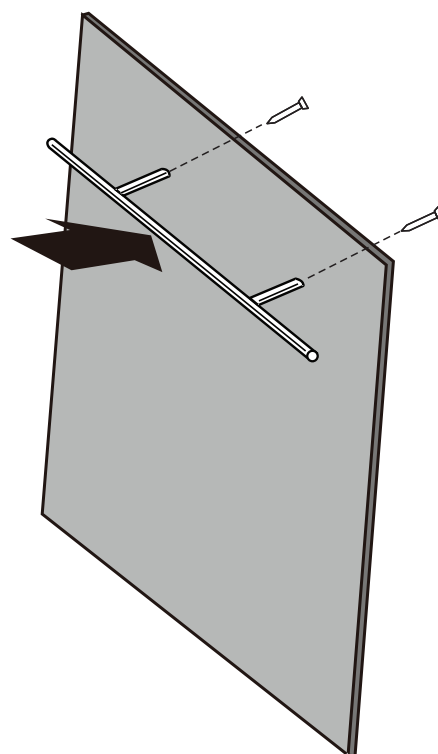
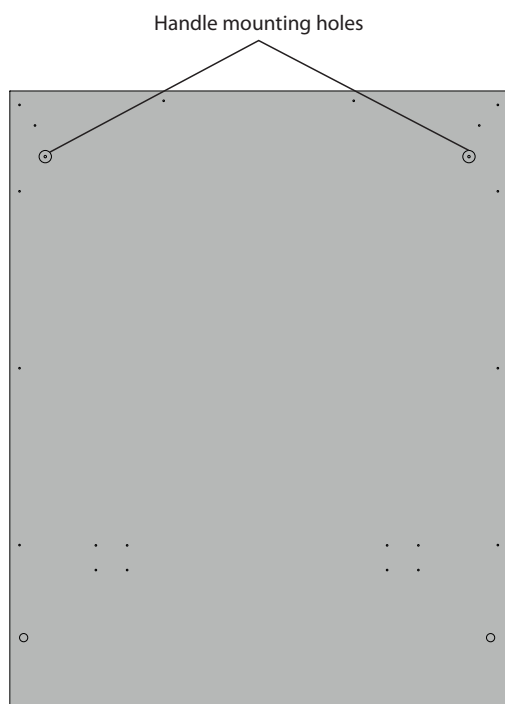
Installation instructions

Step 1: Install the decoration door to the outer door of the dishwasher

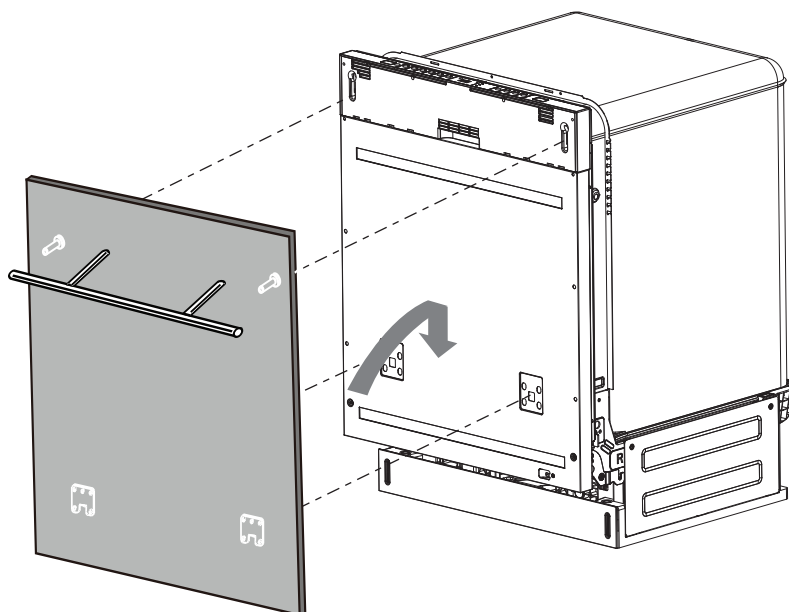
- 1 Install the hook and brackets on the decoration door.



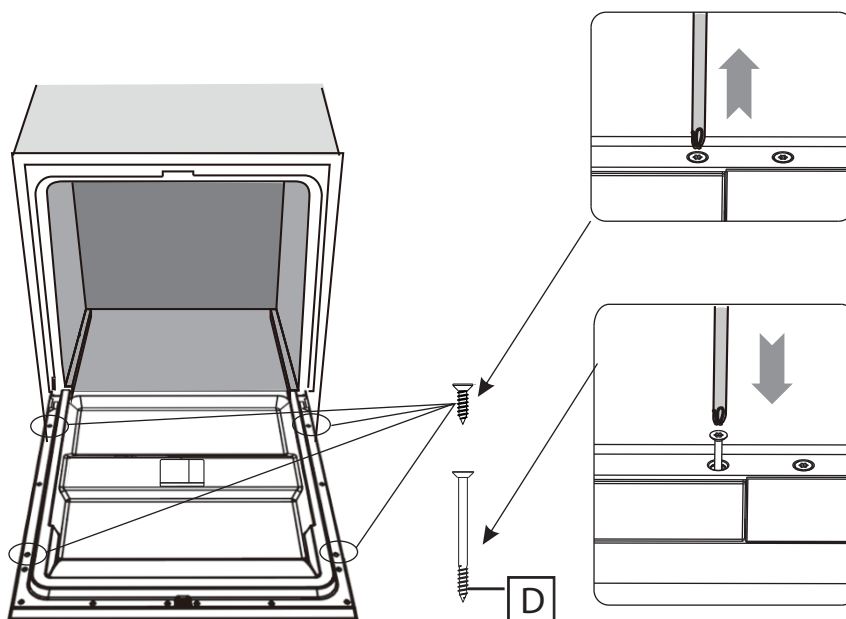
- 2 Install the handle to the outer door.



- 3 Put the hook into the slot of the outer door, for the positioning.



- 4 Fix the decoration door onto the outer door by screws and bolts.

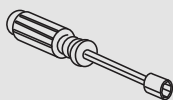


ATTENTION: you need an assistant to hold the top of the machine to prevent it forward.

You'll need:



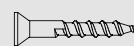
Phillips screwdriver



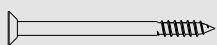
1/4 in. and 5/16 in.
Nut driver



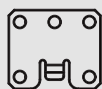
Screws B
ST4 x 14 (8)



Screws C
ST3.5 x 25 (2)



Screws D
ST3.5 x 45 (4)



Brackets (2)



Top Hook
Mounting Seats (2)

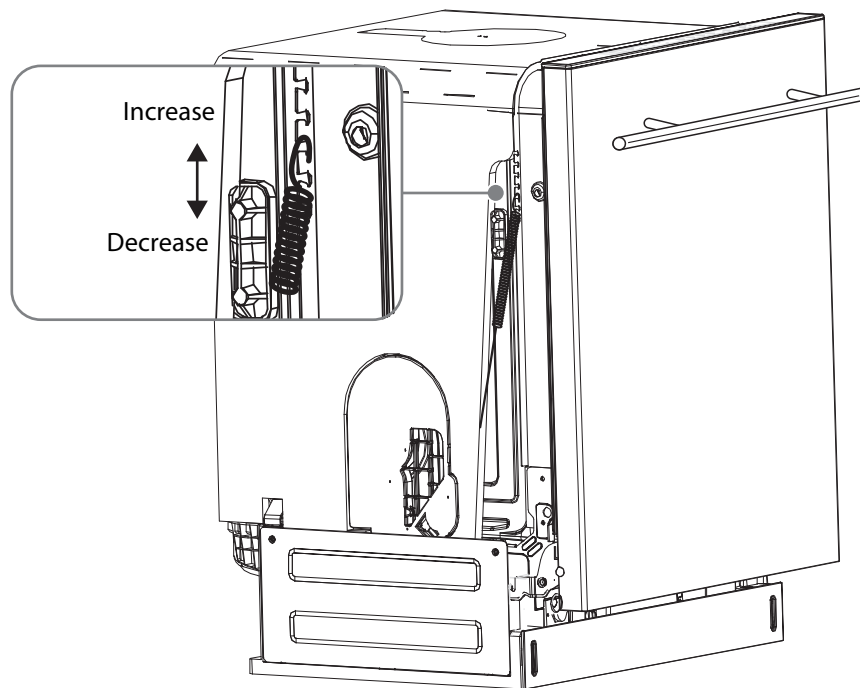
Step 2: Check the door balance

Caution:

- Opening the door of your dishwasher before it is installed will cause it to tip forward. Do not open the door until you are ready to install your dishwasher.
- If it is necessary to open the door, hold the top of the dishwasher securely with one hand and hold the door with the other hand.

- 1 Hold the top of the dishwasher firmly.
- 2 Open the door slowly, then release it. If the door drops, increase the spring tension. If the door closes, decrease the spring tension.
- 3 Continue moving the spring pin until the door is balanced. Adjust both springs to the same tension.

Note: If you choose the mood decoration door (about 3.5KG), you can choose the fifth groove counting from the top groove. If you choose the metal decoration door (about 7.5KG), you need fix the springs to the third groove in the same method.

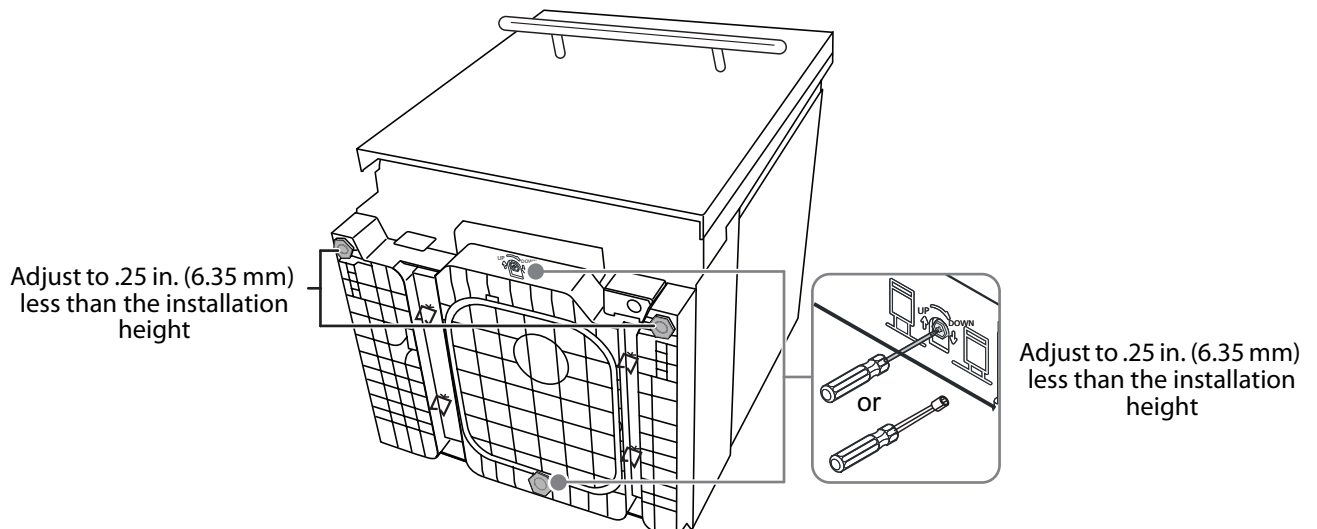


Step 3: Adjust the leveling legs

- 1 Move the dishwasher close to the installation location and lay it on its back.

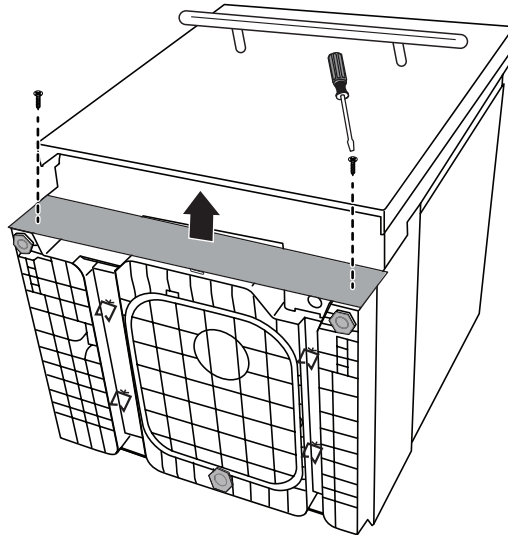
Note: Make sure that the leveling feet are loosened before standing the dishwasher upright. They may be tight from shipping/packaging.

- 2 Measure the installation height and the dishwasher height.
- 3 Extend the leveling legs out from the dishwasher base .25 in. (6.35 mm) less than the installation height.

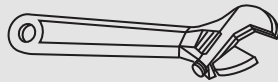


Step 4: Remove the toekick

- Remove the two toekick screws with a Phillips screwdriver, then remove the toekick.



You'll need:



Adjustable wrench



Phillips screwdriver

Step 5: Install to power

Turn off the electricity to the dishwasher's electrical circuit.

Make sure that the electrical power is turned off at the source.



Warning:

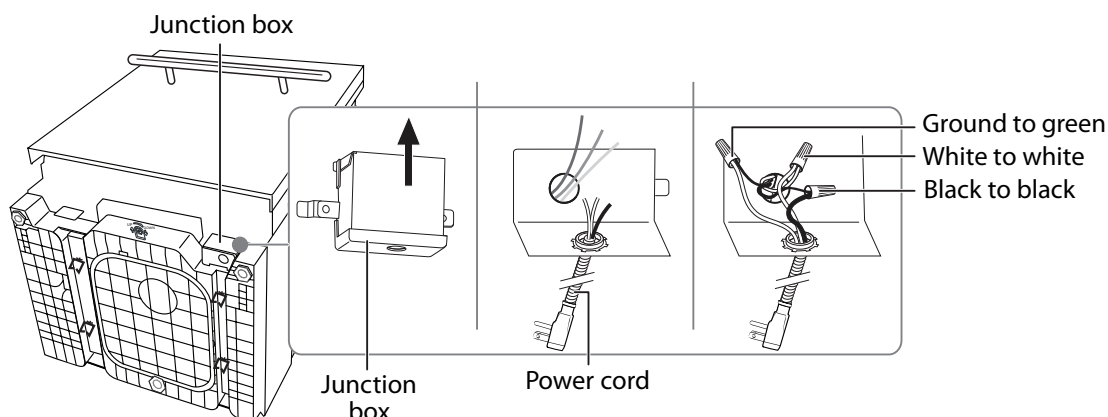
- If your house wiring is not 2-wire with a ground, a ground must be provided by the installer.
- If your house wiring is aluminum, be sure to use cUL/UL Listed anti-oxidant compound and aluminum-to-copper connectors.

Power cord

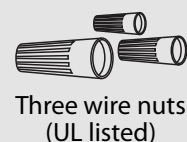
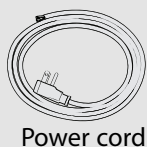
- 1 Remove the junction box cover on the front right of the dishwasher.
- 2 Make sure that the junction box's electrical wires are pulled inside of the junction box.
- 3 Remove the lock nut from the strain relief, then push the strain relief into the round opening of the junction box.
- 4 Install the lock nut on the strain relief from inside the junction box.
- 5 Insert the ends of the power cord's electrical wires into the junction box through the strain relief.
- 6 Connect the incoming white (or ribbed) wire to the dishwasher's white wire, the black (or smooth) wire to the dishwasher's black wire, and the ground wire to the dishwasher's green wire. Use cUL/UL listed wire nuts of the appropriate size.
- 7 Tighten the strain relief screws and lock nut to stabilize the power cord's electrical wires, then make sure that all of the connections are secure.

- 8 Replace the junction box cover on the right front of the dishwasher. Be sure that the wires are not pinched under the cover.

Note: If you have trouble replacing the junction box cover, loosen the screws on the strain relief.

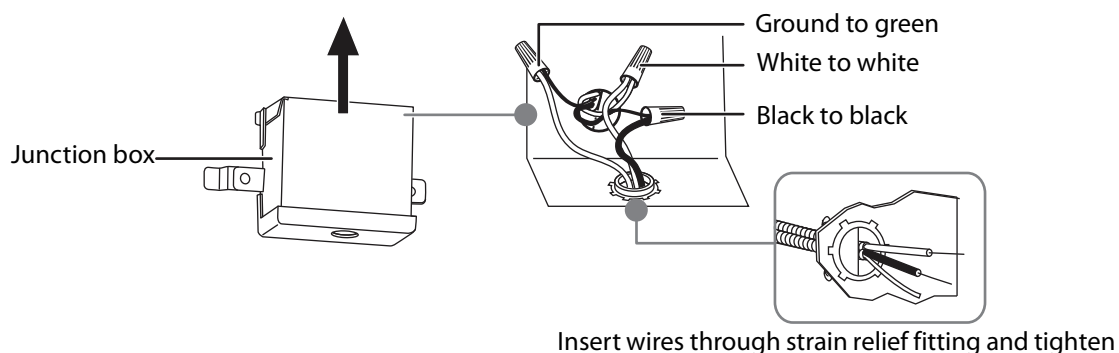


You'll need:



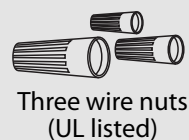
Direct wiring

- 1 Remove the junction box cover from the power supply junction box on the wall.



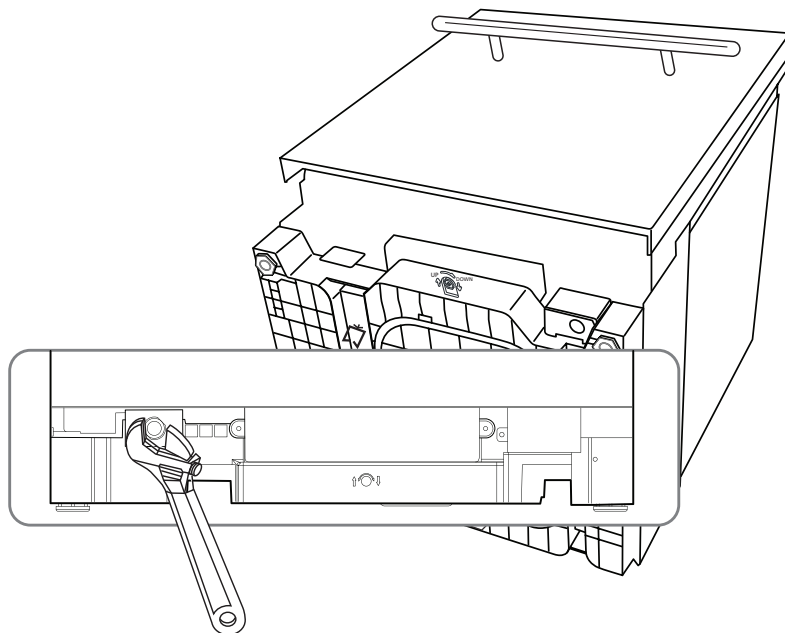
- 2 Locate the three dishwasher wires, (white, black, and green) with stripped ends, then insert the dishwasher wires through the small hole in the junction box.
- 3 Secure the house wiring to the bottom of the junction box with a strain relief fitting.
- 4 Use wire nuts to connect incoming ground to green, white to white, and black to black.
- 5 Replace the junction box cover. Make sure that no wires are pinched under the cover.

You'll need:

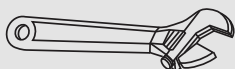


Step 6: Install the 90° water supply elbow

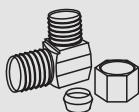
- 1 Wrap the male thread of the 90° elbow with Teflon thread seal tape twice. **Do not use plumber's putty.**
- 2 Install the 90° elbow onto the water valve. Do not overtighten the 90° elbow. The water valve bracket could bend or the water valve fitting could break.
- 3 Position the end of the elbow to face the floor when the dishwasher is upright.



You'll need:



Adjustable wrench



90° elbow

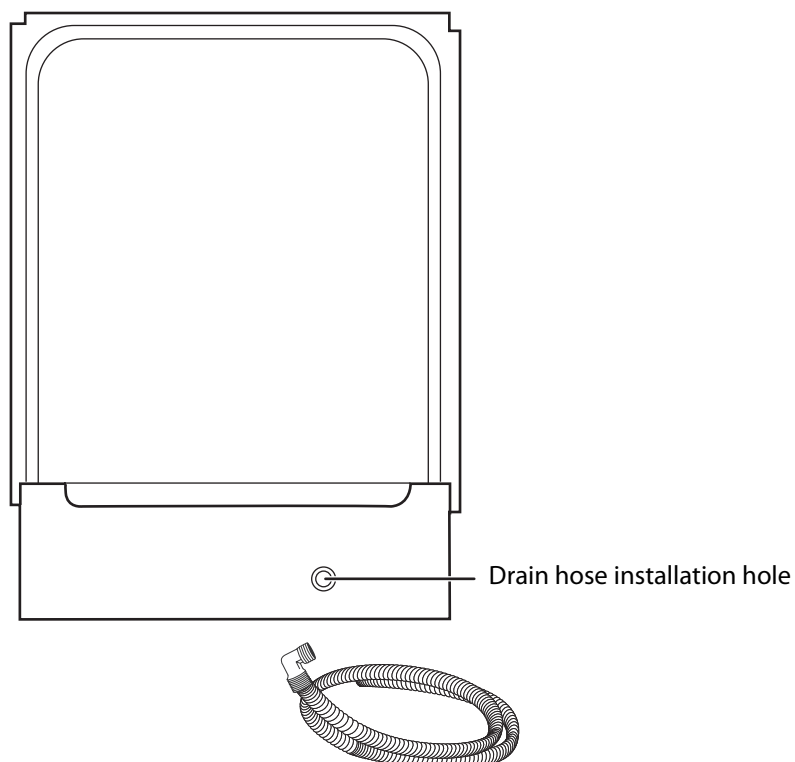


Teflon thread
seal tape

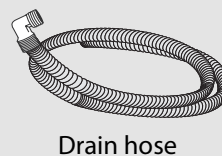
Step 7: Install the drain hose

- 1 Make sure that the leveling feet are loosened before standing the dishwasher upright. They may be tight from shipping/packaging.
- 2 Turn the dishwasher upright.
- 3 Slide a screw-type hose clamp onto the right-angled end of the drain hose.
- 4 Install the drain hose to the dishwasher drain outlet on the back of the dishwasher, then tighten the screw-type hose clamp.

Back of dishwasher



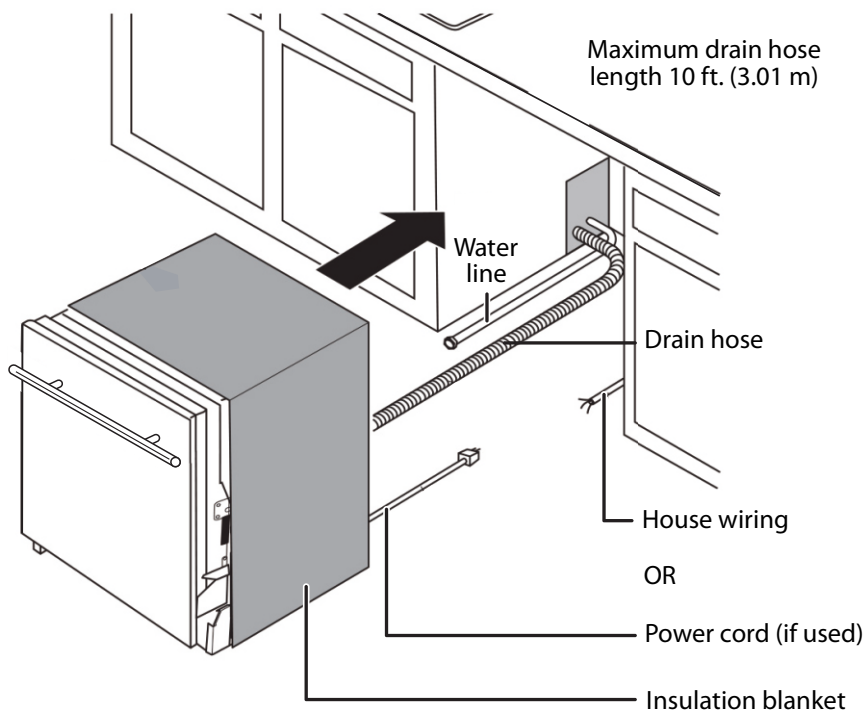
You'll need:



Step 8: Inserting the drain hose through the cabinet

- Insert the drain hose into the hole in the cabinet wall. If a power cord is used, guide the end through a separate hole.

Tip: Position the water line and house wiring on the floor to avoid interfering with the base of the dishwasher.



Step 9: Slide the dishwasher partially into the cabinet

Caution: Do not push against the front panel with your knees. Damage will occur.

- 1 Position the dishwasher in front of the opening, then slide the dishwasher into the opening a few inches at a time.
- 2 Pull the drain hose through the opening under the sink as you proceed. Stop when the dishwasher is a few inches in front of the adjacent cabinetry.
- 3 Make sure that the drain hose is not kinked under the dishwasher and that there is no interference with the water line, wiring, or any other component.

Do not push against the front door panel with your knees. You will damage the front panel.



Step 10: Position the dishwasher under the countertop

- 1 Make sure that the wires are secure under the dishwasher and not pinched or in contact with door springs or other dishwasher components.

Tip: Check tub insulation blanket, if equipped. It should be positioned so it is not bunched up or interfering with door springs. Check by opening and closing the door.

- 2 Push the dishwasher into the cabinet. The front corners of the dishwasher door should be flush with the cabinet doors. Be careful not to dent the front panel with your knees or damage the countertop or cabinets with dishwasher parts.

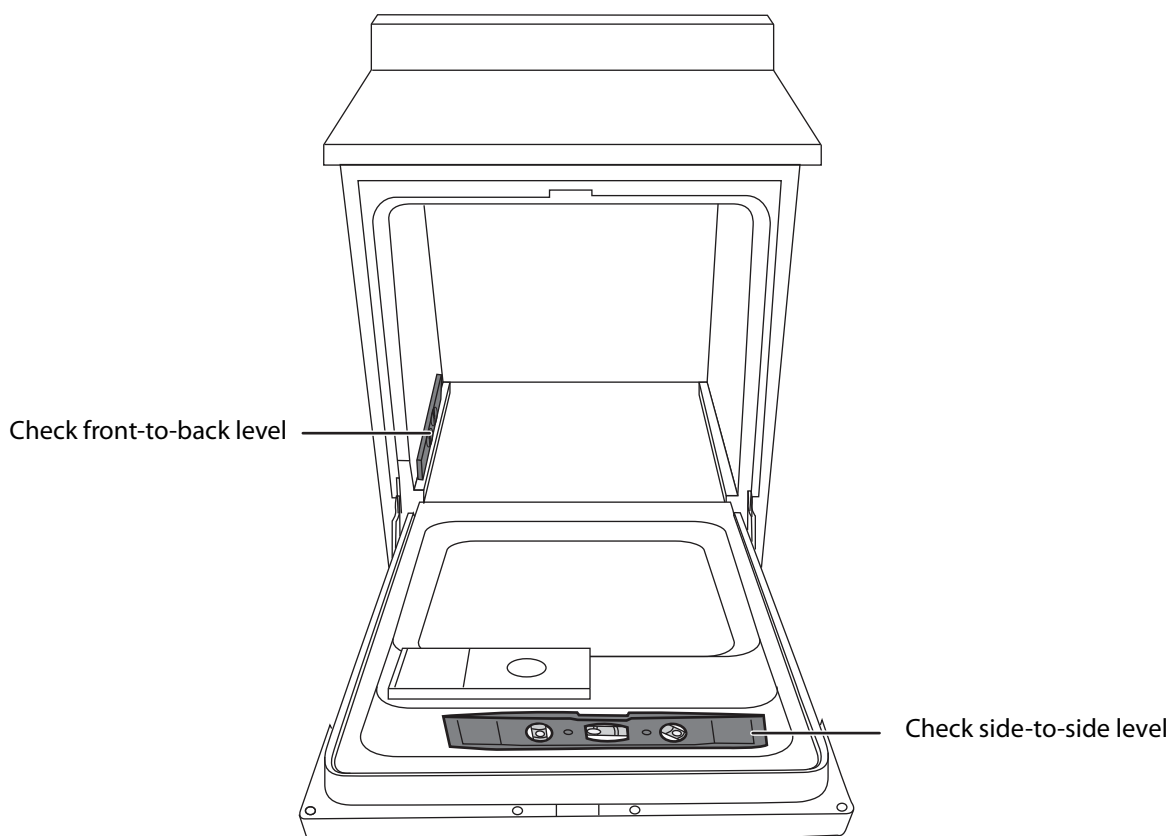
Note: You will not have access to the back leveling legs once the dishwasher is put in place.



Step 11: Level the dishwasher

IMPORTANT: The dishwasher must be level for proper dish rack operation and wash performance.

- 1 Open the door, then place a level on the door and on the rack track inside the tub to make sure that the dishwasher is level.



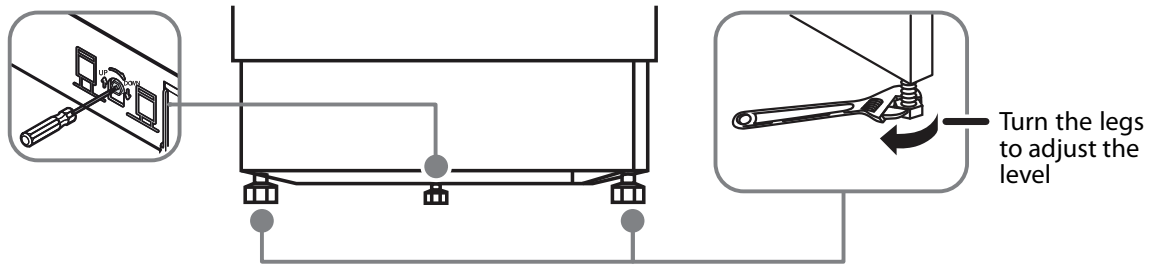
- 2 Level the dishwasher by adjusting the four leveling legs individually.

Tip: Pull the lower rack out about halfway. Make sure that the rack does not roll forward or back into the dishwasher. If the rack rolls in either direction, you must level the dishwasher again.

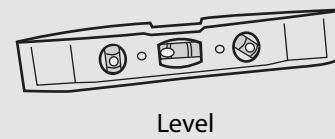
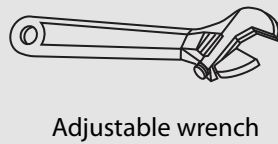
Note: You may need to pull your dishwasher out of the cabinet if major adjustments to the four leveling legs are required.

- 3 If the edge of the door hits the side of the tub, the dishwasher is not installed correctly. Adjust the leveling legs to align the door to the tub.

Note: Keep the dishwasher level.



You'll need:



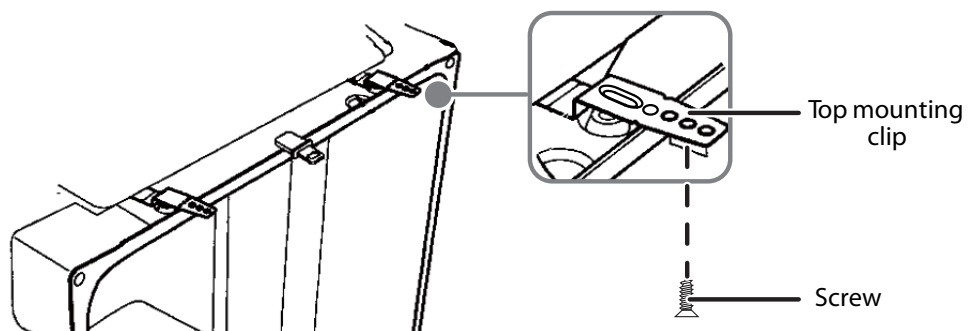
Step 12: Securing the dishwasher to the countertop

- For countertops made of wood or materials that won't be damaged by drilling, use Method 1.
- For countertops made of granite, marble, or other materials that could be damaged by drilling, use Method 2.
- If the gap between the control panel and the cabinet is less than 0.4 in. (10 mm), use Method 2.

Method 1

- 1 Insert the long top mounting clips into the slot.
- 2 Bend the brackets to secure them to the dishwasher tub.
- 3 Secure the dishwasher to the countertop through the holes in the brackets, using the screws provided.

IMPORTANT: Drive the screws straight and flush. Protruding screw heads will scratch the top of the control panel and interfere with the door closing.

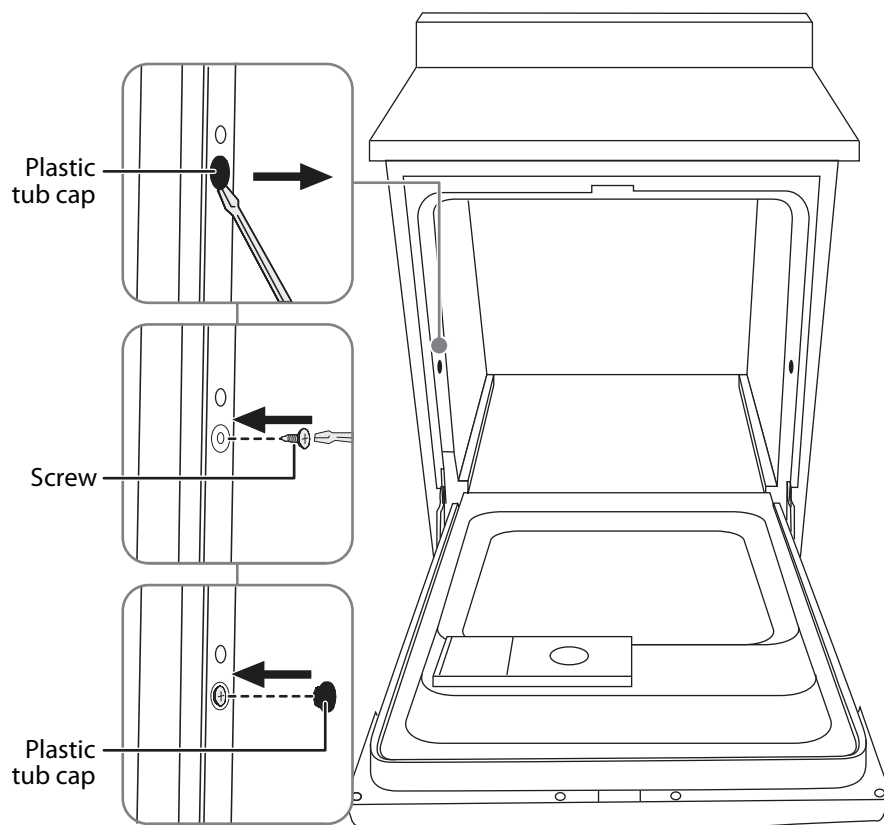


Method 2

- 1 Remove the plastic tub caps from the inside of the dishwasher tub.
- 2 Drive a wood screw through the hole in the side of the dishwasher into the cabinet frame.


IMPORTANT: Drive the screws straight and flush. Protruding screw heads will scratch the side of the dishwasher. This method is for attaching the dishwasher to the side of the cabinet, and it should be done when the countertop is made of granite or other breakable materials.

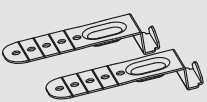
- 3 Reinsert the plastic tub caps.



You'll need:


Phillips screwdriver


Screws A
ST4 x 20 (2)
(two for each method)


Top mounting clips (2)

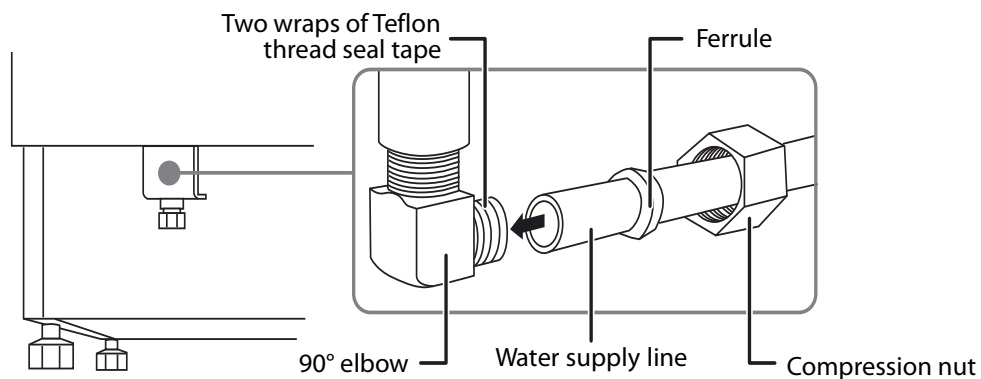
Step 13: Connecting the water supply line

- 1 Make sure that you wrapped the 90° elbow with Teflon thread seal tape twice.
- 2 Slide the compression nut, then the ferrule over the end of the water supply line.

Note: If you have a steel-grated line, you do not need a ferrule or compression nut.

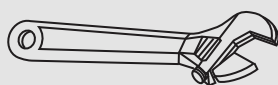
- 3 Insert the water supply line into the 90° elbow.
- 4 Slide the ferrule against the 90° elbow and secure it with the compression nut.

Back of dishwasher

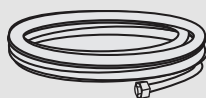


IMPORTANT: Make sure that the door spring does not rub or contact the water supply line or drain hose. Test by opening and closing the door. Reroute the lines if interference occurs.

You'll need:



Adjustable wrench



Hot water line kit

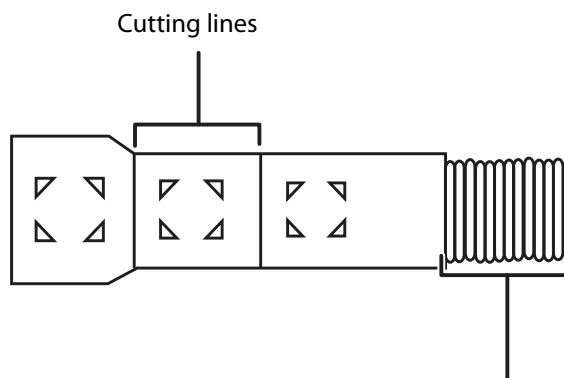


Teflon thread seal tape

Step 14: Connecting the drain hose

IMPORTANT: Follow all local codes and ordinances.

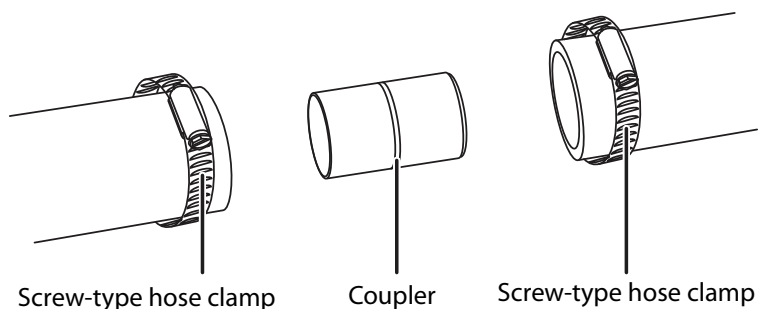
- 1 Cut on the marked line as required for your installation. The drain hose's molded end will fit 5/8" or 1" diameter connections on the air gap, waste tee, or garbage disposal.



IMPORTANT: Do not cut corrugated portion of hose

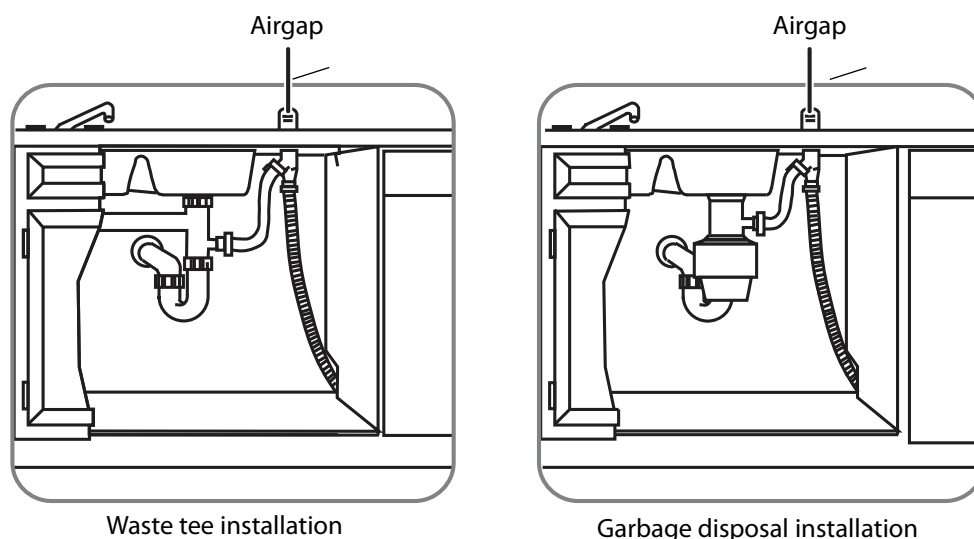
- 2 If a longer drain hose is required, you can add up to 42" (1.1 m) of length, for a total of 10 ft. (3.01 m) to the factory installed hose. Use 5/8" or 7/8" inside diameter hose and a coupler to connect the two hose ends. Secure the connection with screw-type hose clamps.

IMPORTANT: For proper drain operation, the total drain hose length must not exceed 10 ft. (3.01 m).

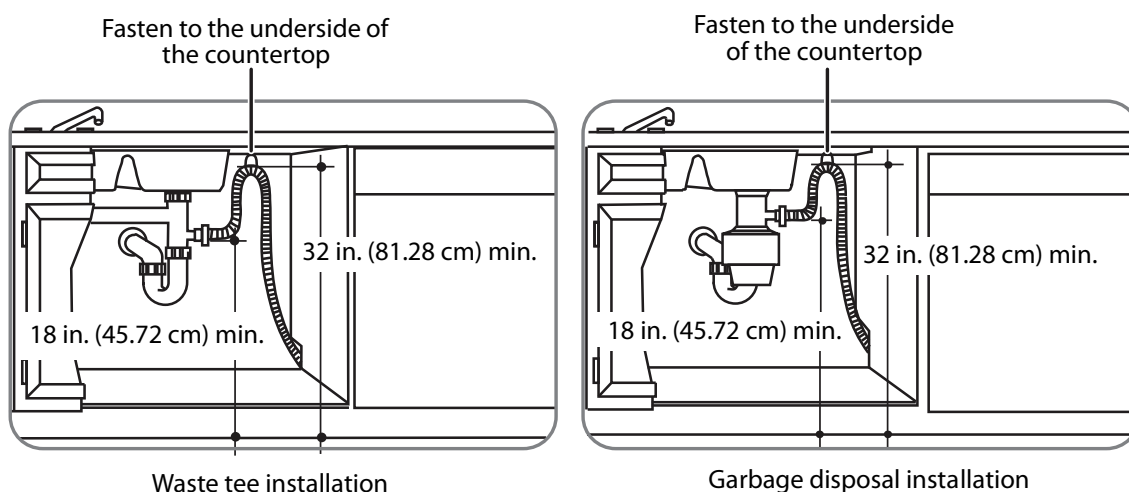


- 3 Secure the drain hose to the air gap, waste tee, or garbage disposal with a screw-type clamp, using the appropriate method below. See "Drain preparation" on page 6, if you do not know which method to use.

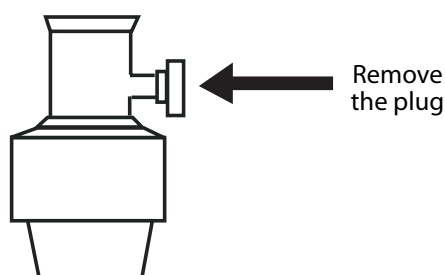
Method 1 - Air gap to a waste tee or garbage disposal.



Method 2 - High drain loop to a waste tee or garbage disposal



- 4 If connecting the drain line to a garbage disposal, make sure that the drain plug has been removed. Your dishwasher will not drain if the plug is left in place.



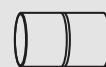
You'll need:



Phillips screwdriver



Screw-type
hose clamps



Coupler for
extending drain line
(if applicable)

Step 15: Performing a pre-test check

Review this list after installing your dishwasher to avoid problems or charges for a service call not covered by your warranty.

- Make sure that power is turned OFF.
- Open the door and remove all foam and paper packaging.
- Locate the *User Guide* in the literature package.
- Read the *User Guide* for operating instructions.
- Check the door opening and closing. If the door does not open and close freely, or tends to fall, check the spring adjustments. See [Step 1: Check the door balance on page 12](#).
- Make sure that the wiring is secure under the dishwasher and not pinched or in contact with door springs or other components. See [Step 10: Position the dishwasher under the countertop on page 18](#).
- Check the door alignment with the tub. If the door hits the tub, level the dishwasher. See [Step 11: Level the dishwasher on page 18](#).
- Pull the lower rack out about half way. Make sure that it does not roll back or forward on the door. If the rack moves, adjust the leveling legs. See [Step 11: Level the dishwasher on page 18](#).
- Check the door alignment with the cabinet. If the door hits the cabinet, reposition or relevel the dishwasher. See [Step 11: Level the dishwasher on page 18](#).
- Make sure that water supply and drain lines are not kinked or in contact with other components. Any contact with the motor or dishwasher frame could cause a noise. See [Step 9: Slide the dishwasher partially into the cabinet on page 17](#).
- Turn on the sink hot water faucet and verify the water temperature. Incoming water temperature must be between 120°F and 150°F. A minimum of 120°F temperature is required for best wash performance. See [Preparing the hot water line on page 21](#).
- Add a half gallon (2 l) of water to the bottom of the dishwasher to lubricate the pump seal.
- Turn on the water supply. Check for leaks. Tighten connections if needed.
- Remove any protective film (if present) from the control panel and door.

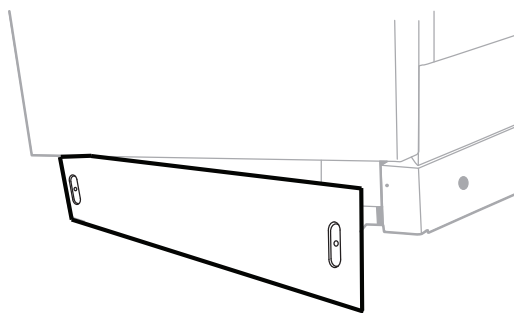
Step 16: Wet testing the dishwasher

- 1 Turn on the power supply (or plug the power cord into the outlet, if equipped).
- 2 Turn on your dishwasher (refer to the *User Guide* for instructions).
- 3 Open the door, select the Rinse only cycle, and press **START/Cancel**, close the door within four seconds of pressing **START/Cancel**.
- 4 Make sure that water enters the dishwasher. If water does not enter the dishwasher, check to be sure that water and power are turned on.
- 5 Check for leaks under the dishwasher. If a leak is found, turn the power supply off, then tighten connections. Restore power after the leak is corrected.
- 6 Check for leaks around the door. A leak around the door could be caused by door rubbing or hitting against adjacent cabinetry. Reposition the dishwasher if necessary. See "Step 10: Position the dishwasher under the countertop" on page 18.
- 7 When the dishwasher is draining, check the drain lines. If leaks are found, turn power off at the breaker and correct plumbing as necessary.
- 8 Restore the power after corrections are made. See "Step 13: Connecting the water supply line" on page 21.
- 9 Open the dishwasher door and make sure that most of the water has drained. If not, check that the disposer plug has been removed and/or the air gap is not plugged. See "Step 14: Connecting the drain hose" on page 21. Also check the drain line for kinking.
- 10 Run the dishwasher through another fill and drain cycle. Check for leaks and correct if required.

Step 17: Replacing the toekick

- Place the toekick against the legs of the dishwasher. The slots should align with the toekick bracket screw holes. Allow the toekick to touch the floor. Install the toekick screws.

Note: Make sure that you install the toekick in the correct direction. The toekick should be aligned correctly with the junction box.



You'll need:



Phillips screwdriver