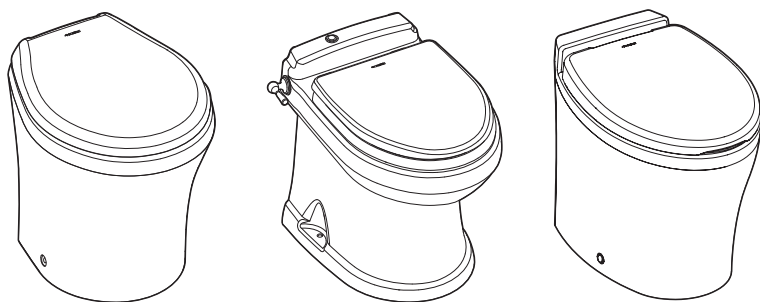


DOMETIC SANITATION TOILETS



4500/4600/4700/4800

EN

4000 Series

Installation Manual

NORTH AMERICAN ADDRESS INFORMATION

U.S.A. & CANADA

Service Office
Dometic Corporation
13128 St. Rte. 226
Big Prairie, OH 44611

**Service Center & Dealer
Locations**

Refer to “8 Customer Service” on
page 16

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Read these instructions carefully. These instructions MUST stay with this product.

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1 EXPLANATION OF SYMBOLS AND SAFETY INSTRUCTIONS

This manual has safety information and instructions to help you eliminate or reduce the risk of accidents and injuries.

1.1 Recognize safety information



This is the safety alert symbol. It is used to alert you to potential physical injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

1.2 Understand signal words

A signal word will identify safety messages and property damage messages, and will indicate the degree or level of hazard seriousness.

⚠ WARNING indicates a hazardous situation that, if **not** avoided, could result in death or serious injury.

⚠ CAUTION indicates a hazardous situation that, if **not** avoided, could result in minor or moderate injury.

NOTICE is used to address practices **not** related to physical injury.



indicates additional information that is **not** related to physical injury.

1.3 Supplemental directives



Read and follow all safety information and instructions to avoid possible injury or death. Read and understand these instructions before installation of this product. Incorrect installation of this product can lead to serious injury. The installation must comply with all applicable local or national codes, including the latest edition of the following standards:

U.S.A.

- ANSI/NFPA70, National Electrical Code (NEC)
- ANSI/NFPA 1192, Recreational Vehicles Code
- ABYC guidelines for marine installations

Canada

- CSA C22.1, Parts I & II, Canadian Electrical Code
- CSA Z240 RV Series, Recreational Vehicles

1.4 General safety messages

⚠ WARNING Failure to obey the following warnings could result in property damage, serious injury, or death:

- This product must be installed and serviced by a qualified service technician.
- Do **not** modify this product in any way. Modification can be extremely hazardous.
- FLOOD HAZARD:
 - Seacocks must be installed in all piping connected to through-the-hull fittings. Seacocks must be easily accessible to all users of the toilet, or secondary valves should be fitted in hose runs where they are easily accessible.
 - If the toilet is connected to any through-the-hull fittings: always close seacocks when toilet is not in use (even if the boat is unattended for a brief period).
 - Valves must be full-bore valves of marine sanitation quality. Do **not** use screw-to-close gate valves.
 - Flexible hoses must be of marine sanitation quality and must be secured to any

fittings with two stainless steel, worm-drive, hose-band clamps at each connection. Check connections frequently for integrity.

- Use properly positioned, ventilated loops when the potential exists for the toilet rim to fall below the waterline during any heel, load, or trim condition, or when the toilet is connected to any through-the hull fittings. The ventilated loops must be installed in the intake (if connected to raw water) and/or the discharge piping.
- Ensure that all electrical power to the toilet is turned off and that seacocks are in the closed or off position before installing the toilet or performing any maintenance.
- If the toilet uses fresh water for flushing and is connected directly or indirectly to a shoreside municipal water system at any time, shoreside water connections must be disconnected if the boat is unattended (even if boat is unattended for a brief period).
- If the toilet is connected to any through-the-hull fittings, all flexible hoses must be of marine sanitation quality and must be secured to any fittings (such as those at seacock, vented loop or toilet) with two stainless steel, worm-drive hose band clamps at each connection. Connections must be checked frequently for integrity.
- If the toilet uses raw water for flushing at any time, a raw-water pump controlled by an automatically operating demand switch must **not** be installed. If the onboard water valve or any plumbing connections were to leak, the automatically operated pump would start and could flood the boat.

NOTICE RISK OF PROPERTY DAMAGE. Failure to comply may cause damage to the toilet or toilet system.

- Only flush water, bodily wastes, and rapid-dissolving toilet tissue.
- Do **not** overfill the holding tank, or serious damage can occur to the sanitation system. Overfilling the holding tank can rupture the holding tank or release tank contents into the bilge.

2 GENERAL INFORMATION

Included Parts

- | | |
|------------------------------|------------------------------|
| • Vacuum toilet | • Floor-bracket hardware kit |
| • Discharge adapter fittings | • Floor-mounting template |

Optional Parts*

DTM01C tank monitor

DTM04 four-level tank monitor

*Available as accessory (not included)



A flush switch and vacuum source (purchased separately) are required. A status panel is required for flush-handle models.

3 INTENDED USE

The 4000 Series toilets are designed and intended for use only inside a boat or recreational vehicle (hereinafter referred to as "RV") for which it is supplied. Use the instructions to ensure correct installation of the toilet. Dometic Corporation accepts no liability for damage in the following cases:

- Faulty assembly or connection.
- Damage to the product resulting from mechanical influences and excess voltage.
- Alterations to the product without expressed permission from Dometic Corporation.
- Use for purposes other than those described in the operating manual.

Dometic Corporation reserves the right to modify appearances and specifications without notice.

4 SPECIFICATIONS

4.1 Materials

Component	4500, 4600, 4700, 4800
Toilet	vitreous ceramic
Discharge fitting	polypropylene / PVC

4.2 Minimum system requirements

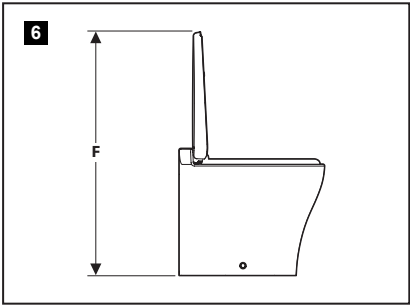
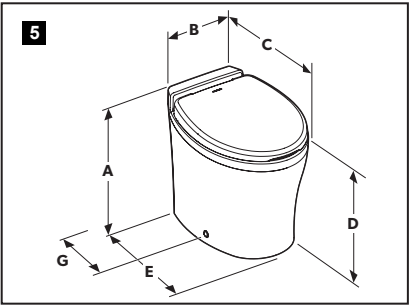
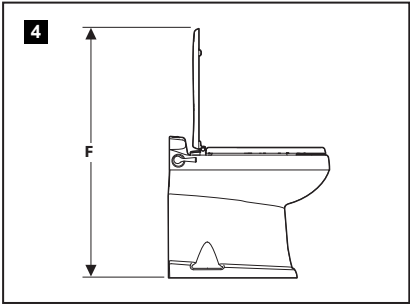
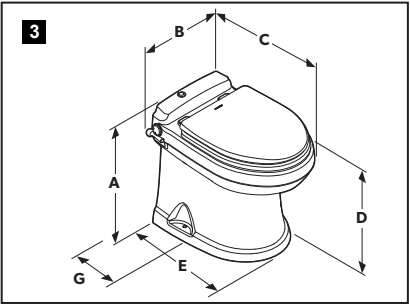
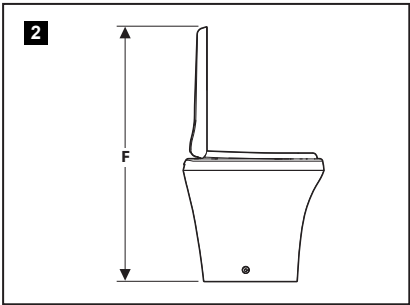
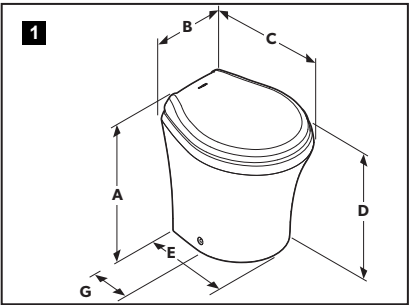
	4600, 4800	4500, 4700
Electrical		
Circuit breaker	2 amps/12VDC; 1 amp/24 VDC*	
Wiring	Marine: Refer to ABYC recommendations. RV: Refer to ANSI/RVIA LV and NFPA 70/NEC Standards for recommended wire gauge (USA). Refer to CEC I and II Standards for recommended wire gauge (Canada).	
Water Supply		
Fitting	1/2" NPT	
Flow rate	2.0 gpm/7.6 lpm minimum	2.5 gpm/9.5 lpm minimum
Discharge		
Inside diameter	1.5" (38 mm) PVC pipe or sanitation hose	
Horizontal run	maximum 50' (15 m) from toilet to vacuum source maximum 20' (6.1 m) from vacuum source to holding tank	
Vertical run	maximum 6' (1.8 m) from toilet to vacuum source maximum 6' (1.8 m) from vacuum source to holding tank	

* The circuit board contains a resettable fuse that can be reset by turning the electrical power to the toilet OFF, then ON again.



Refer to ANSI 1192 and Z240 RV Series standards, where applicable, for additional RV toilet installation guidelines. Specifications are subject to change without notice.

4.3 Dimensions



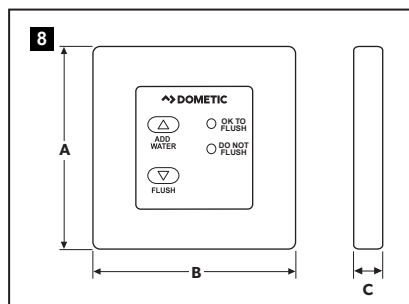
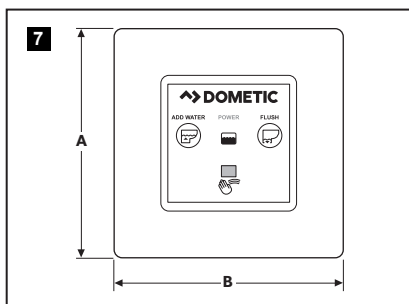
Low-profile dimensions

Reference	4600 Series (fig. 1 and 2)	4800 Series (fig. 1 and 2)
A	15"	14.75"
B	14.75"	14.75"
C	19.75"	18.25"
D	14"	13.625"
E	15.375"	14.875"
F	30.5"	30.25"
G	10.375"	8.375"

Standard height dimensions

Reference	4500 Series (fig. 5 and 6)	4600 Series (fig. 1 and 2)	4700 Series (fig. 3 and 4)	4800 Series (fig. 1 and 2)
A	19"	18.125"	19"	18.125"
B	14.75"	14.75"	Touchpad 14" Flush handle 15.75"	14.75"
C	22"	19.75"	21.5"	18.625"
D	17.5"	17"	17.5"	17"
E	17.5"	16"	17"	15.75"
F	37"	33.5"	33.5"	33.5"
G	10.5"	10.5"	10"	8.625"

Panel and control module dimensions



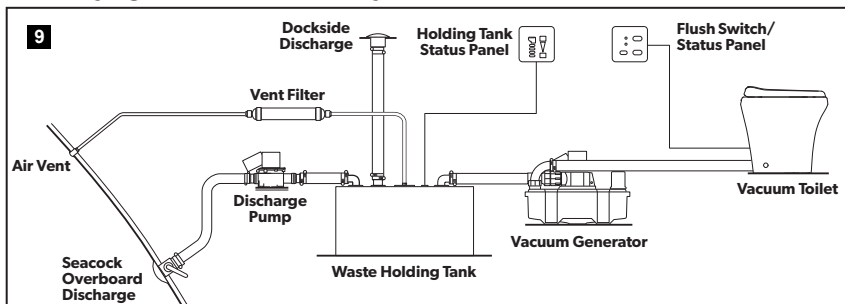
Reference	Touch Panel (VFSHW) (Figure 7)	Flush Switch (VFS) (Figure 8)
A	3"	3.25"
B	3.44"	3.25"
C	—	4"

5 PREPARE FOR INSTALLATION

⚠ WARNING Failure to obey the following warnings could result in property damage, serious injury, or death:

- **FLOOD HAZARD.** For toilets that use raw-water systems: Do **not** install a raw-water pump controlled by an automatic demand switch.
- **SHOCK OR FIRE HAZARD.** Use the recommended fuse, circuit breaker, and wire size. Failure to comply could result in a fire.

5.1 Laying out the fresh-water system



Use cold water only. Install a shut-off valve in the water line for maintenance purposes.

5.2 Wiring/electronic control module connections



Read **before** proceeding:

- There must be a circuit breaker or fuse for every toilet.
- For marine applications, follow ABYC guidelines.
- For RV applications, refer to ANSI/RVIA LV and NFPA70/NEC standards (U.S.A.) or CEC I and II standards (Canada) for the recommended wire gauge. Refer to "1.3 Supplemental directives" on page 3.
- Use tinned, stranded copper wire.
- Use crimp-type wire connections. Do **not** use wire nuts, as wire nuts can corrode.

5.3 Planning the electrical connections

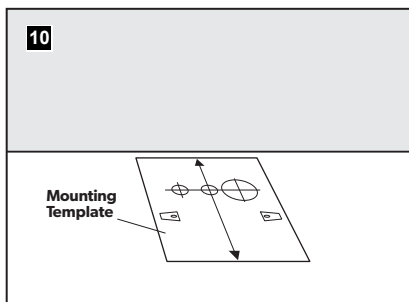
- Plan all component locations so that the wires are installed in locations that will always remain dry.



Several flush-switch assembly options are available from Dometic. Follow the instructions included with each flush switch assembly.

6 INSTALLATION

6.1 Installing the toilet with through-the-floor connections



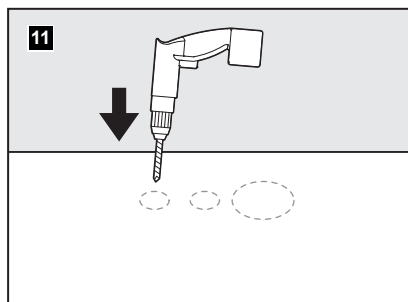
- Place the floor-mounting template in the desired location. Keep at least 11" between the centerline of the template and any walls or interior fixtures.
- Punch through the center of the holes and mounting-bracket corners in the template.



4700 model toilets do not require floor-mounting brackets.



Templates and hole configurations vary by model.



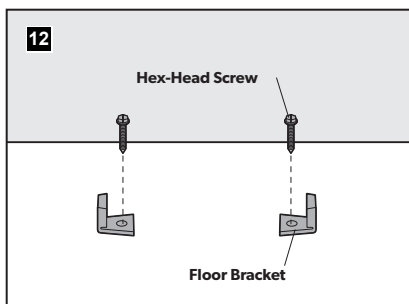
- Remove the template from the floor.
- Drill all access and fastener holes as indicated on the template, using the center punches as guides.



4500, 4600, 4800 models

only: Do **not** drill mounting-bracket corners.

- Repeat the steps under figure 12 and 13 using the wall switch template.
- Drill a 1" diameter hole.

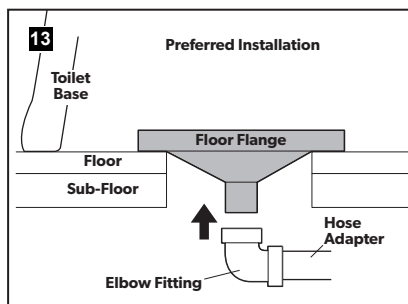


4500, 4600, 4800 models only

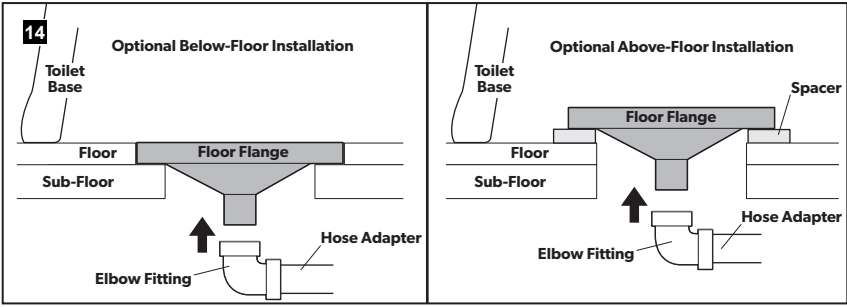
- Secure the floor brackets to the floor using the long hex-head screws from the toilet floor-bracket kit.
- Loosely tighten with a 3/8" socket wrench, using the mounting bracket corner marks as guides.



Do **not** completely tighten the hex-head screws to the floor. Brackets will tighten when fastening the toilet to the brackets.



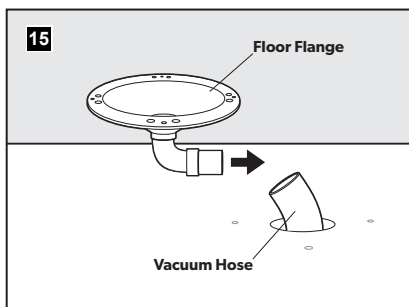
The space between the bottom of the toilet base and the bottom of the floor flange rim should be no greater than 3/8".



- Cut out the discharge hole. Refer to the following table for discharge hole diameters.

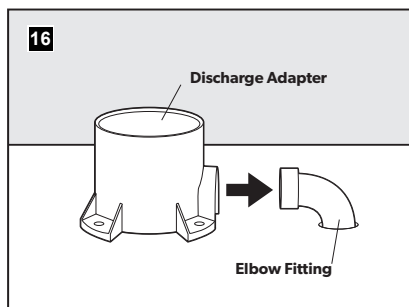
Model	Discharge Hole Diameter
xx06	4-1/2" discharge flange hole
xx09	4-3/4" discharge flange hole
xx48	2-1/2" discharge pipe hole

- Using a PVC primer and solvent cement, attach the desired discharge fittings.
 - **Vertical discharge hose:** Attach the hose adapter directly to the discharge flange outlet.
 - **Horizontal discharge hose:** Attach the elbow fitting directly to the discharge flange outlet. Attach the hose adapter to the elbow fitting.
- Allow the cement to cure before handling the fitting.
- Insert the discharge flange into the hole with the elbow fitting or hose adapter pointing in the direction of the discharge plumbing.



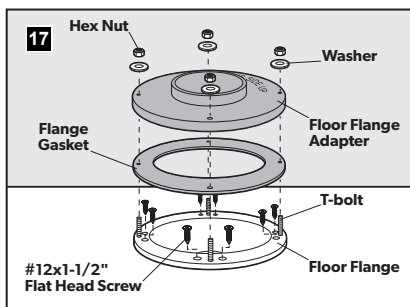
Models xx06 and xx09 floor flange only:

- Mark the floor through the mounting holes on the floor flange.
- Remove the flange and drill the pilot holes using an 11/64" drill bit.
- Route the vacuum hose from the vacuum generator or vacuum tank up through the discharge flange hole.
- Lubricate the inside of the hose with liquid dish soap and install the hose onto the adapter.
- Secure the connection using two stainless-steel hose clamps.



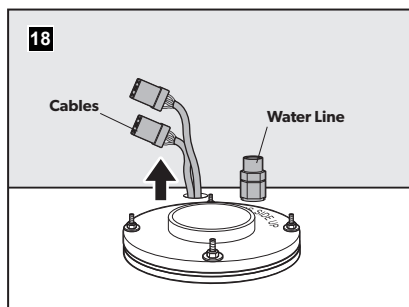
Model xx48 discharge adapter:

- Mark the floor through the mounting holes on the discharge adapter.
- Remove the discharge adapter and drill the pilot holes using an 11/64" drill bit.
- Mount the discharge adapter to the floor using the four #14x1" pan-head phillips-head screws and washers provided.
- Connect the discharge plumbing to the vacuum tank or vacuum generator. Use a 1-1/2" OdorSafe Plus flexible sanitation hose or 1-1/2" PVC schedule 40 pipe.
- If using a flexible hose, lubricate the inside of the hose with liquid dish soap and attach the hose to the adapter.
- Secure the connection using two stainless-steel hose clamps.



Models xx06 and xx09 floor flange:

- Insert four T-bolts into the discharge flange from the underside.
- Insert the discharge flange and connected hose or pipe into the discharge hole and secure it to the floor using the eight #12x1-1/2" flat-head screws provided.
- Install the flange gasket over the T-bolts.
- Install the floor flange adapter with the words THIS SIDE UP facing up. Tighten the adapter to the floor in a criss-cross pattern, using four flat washers and hex nuts.

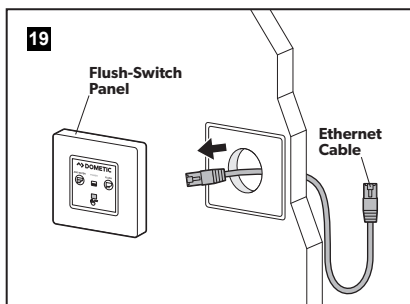


- Route the DC power wiring and 1/2" diameter water line through the drilled holes. A shut-off valve should be placed in the water line to the toilet for maintenance or repair.



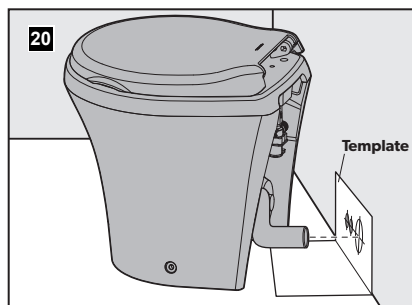
Refer to "5.2 Wiring/electronic control module connections" on page 8, and to the wiring diagram provided with the toilet model's parts list. Connector configuration varies by model.

- Provide extra discharge hose length for connection to the toilet. Refer to "4.2 Minimum system requirements" on page 5.

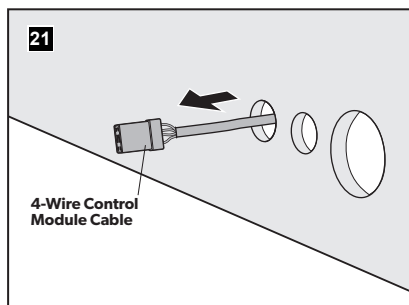


- Route the flush-switch Ethernet cable from the Ethernet connection on the toilet control board through the access hole on the wall.
- Secure the Ethernet cable to the flush-switch panel.
- Snap the flush-switch panel cover onto the panel bracket.
- Proceed to "6.5 Finalizing the installation" on page 14.

6.2 Installing the toilet with through-the-wall connections

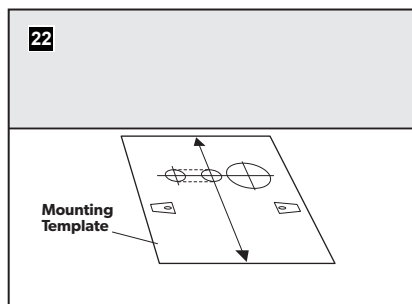


- Use the floor template to locate the vertical centerline of each hole.
- Place the toilet in the desired position and mark the horizontal centerlines.
- Drill the hole sizes according to the template.

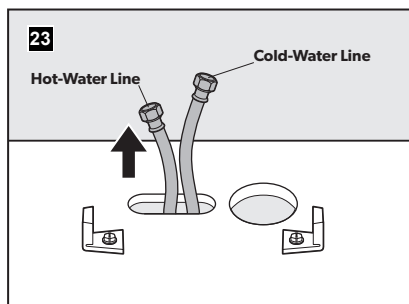


- Route the wiring and plumbing through the drilled holes.
- i** Refer to "5.2 Wiring/electronic control module connections" on page 8.
- Proceed to "6.5 Finalizing the installation" on page 14.

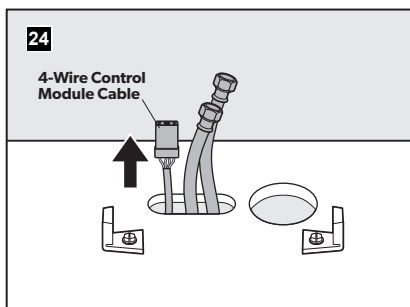
6.3 Installing a toilet and bidet combination



- Place the floor-mounting template in the desired location. Keep at least 11" between the centerline of the template and any walls or interior fixtures.
- Punch through the center of the holes and mounting bracket corners in the template.
- Cut out the oblong access hole as marked on the floor template.



- Secure the floor brackets to the floor using the long hex-head screws from the toilet floor-bracket kit.
- Tighten with a 3/8" socket wrench, using the corner marks as guides.
- i** Do **not** completely tighten the hex-head screws to the floor. Brackets will tighten when fastening the toilet to the brackets.
- Route the cold-water supply line to the toilet/bidet mixer-valve water line (blue band).
- Route the hot-water supply line to the bidet faucet hot-water line (red band).



- Route the wiring and discharge plumbing through the holes.
- Provide extra discharge hose length to connect to the toilet. Refer to “4.2 Minimum system requirements” on page 5.
- Proceed to “6.5 Finalizing the installation” on page 14.

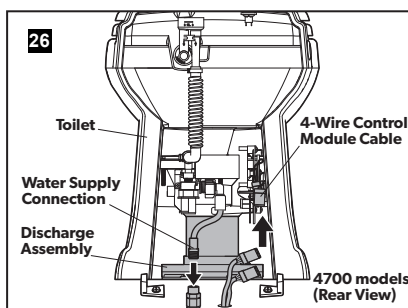
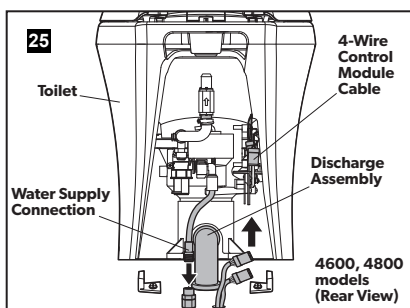
6.4 Toilet system with “full tank” shut-down relay and tank monitor system



All installations can be set up to include “full tank” shut-down relay and tank monitor system options. Consult the wiring diagrams included with the product for further details. Wiring associated with these options needs to be done prior to the next step.

- Route the input power wires from the “full tank” shut-down relay to the flush-switch panel.
- Proceed to “6.5 Finalizing the installation” on page 14.

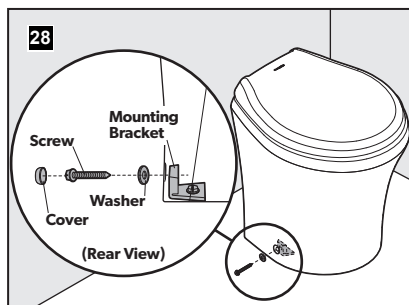
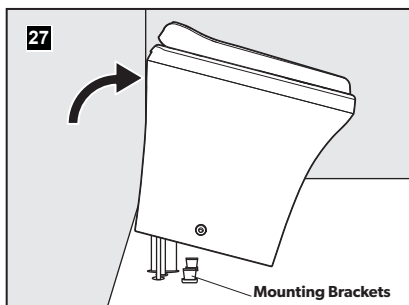
6.5 Finalizing the installation



4500, 4600, 4700, and 4800 models

- Set the toilet in front of the discharge adapter.
- Connect the toilet water line to the water supply line.
- Make the final wiring connection:
 - **4500, 4600, and 4800 models:** Connect the 4-pin connector to the control module cable.
 - **4700 models:** Connect the 3-pin flush handle connector to the 3-pin wire from the control module.

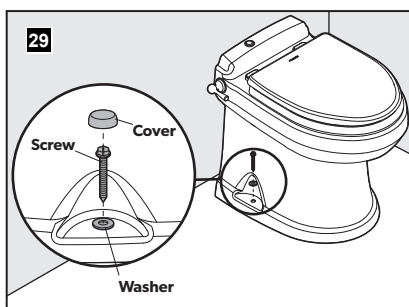
- Lubricate the O-ring around the bottom of the toilet base using liquid dish-washing soap.
- Pick up the toilet and insert the plastic base assembly into the discharge adapter. Make sure the mounting brackets on the floor do not interfere with the bottom of the toilet.
- Insert the two plastic flange bushings into the toilet mounting holes and secure the toilet to the mounting brackets, using the two flat-head wood screws provided. Drive the fasteners into the mounting brackets at a downward angle.
- Press the decorative screw covers over the flange bushings.



- Position the toilet over the floor brackets and tilt it up from the back.
- Push the discharge-assembly fitting and hose into the discharge-loop outlet.
- Tighten the band clamp.
- Lower the toilet back down to the floor.
- Turn on the water supply and electrical power to the toilet.
- Check for leaks by pressing the flush switch. If there is a leak, tighten the connection.

4500, 4600, 4800 models

- Insert the plastic washers from the floor-bracket kit into the fastener holes.
- Fasten the toilet to the brackets using the short screws included with the floor-bracket kit.
- Place the plastic covers over the floor-bracket screws.



4700 models only

- Drill pilot holes at the floor-mounting holes.
- Install the screws and washers (provided) using a $3/8$ " socket wrench.
- Place the plastic covers over the screws.

7 DISPOSAL



Place the packaging material in the appropriate recycling waste bins, whenever possible. Consult a local recycling center or specialize dealer for details about how to dispose of the product in accordance with all applicable national and local regulations.

8 CUSTOMER SERVICE

For the Authorized Service Center near you, call between 8:00 a.m. and 5:00 p.m. (ET), Monday through Friday, or contact the nearest Parts Distributor.

Telephone:	1 800-321-9886	U.S.A. and Canada
	330-439-5550	International
Fax:	330-496-3097	U.S.A. and Canada
	330-439-5567	International

Website: www.dometic.com