

EN

**Macerator Toilet
Installation**



**8700 Series
MasterFlush®
Toilets
INSTALLATION**

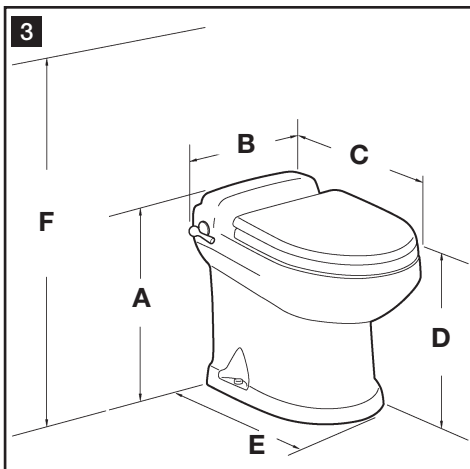
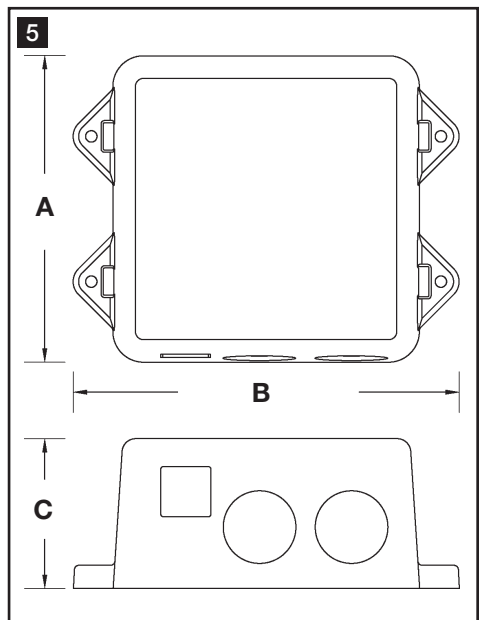
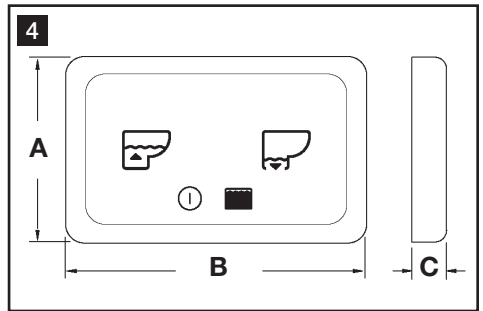
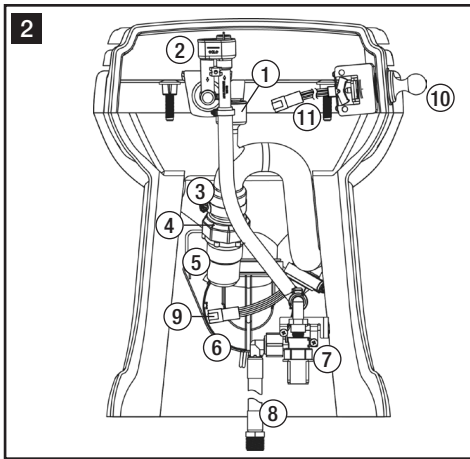
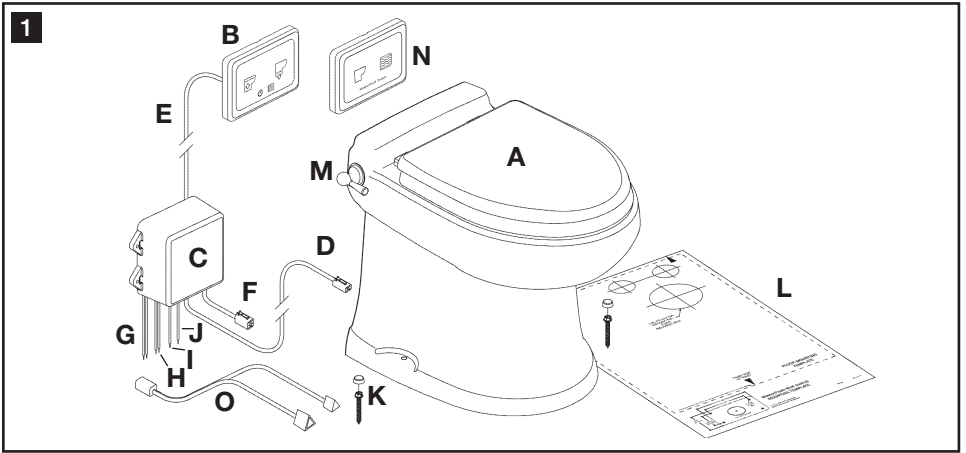


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1 Notes on using the manual



Caution!

Safety Instruction: Failure to observe this instruction can cause material damage and impair the function of the device.



Note

Supplementary information for operating the device.

fig. 1 A, page 2: This refers to an element in an illustration. In this example, item A in figure 1 on page 2.

2 General safety instructions

The manufacturer will not be held liable for claims for damage resulting from the following:

- Faulty assembly or connection
- Damage to the unit from mechanical influences, misuse or abuse
- Alterations to the unit without express written permission from the manufacturer
- Use for purposes other than those described in the operating manual

2.1 Warnings – marine and recreation vehicle applications

The following statements must be read and understood before installing, servicing and/or operating this product on a boat. Modification of this product may result in property damage.

Dometic recommends that a qualified marine or RV technician or electrician install or service this product. Equipment damage, injury to personnel or death could result from improper installation. DOMETIC ACCEPTS NO RESPONSIBILITY OR LIABILITY FOR DAMAGE TO EQUIPMENT, OR PERSONAL INJURY OR DEATH THAT MAY RESULT FROM IMPROPER INSTALLATION, SERVICE OR OPERATION OF THIS PRODUCT.

2.2 Warnings – marine applications



Caution! Hazard of Flooding

If the toilet is connected to ANY through-the-hull fittings, properly installed 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 fitted in hoses where they are easily accessible. All valves MUST be full bore valves and of marine quality. Screw-to-close gate valves are not recommended. Failure to do so can result in flooding which can cause loss of property and life.



Caution! Hazard of Flooding

If 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. Failure to comply can result in flooding which can cause loss of property and life.



Caution! Hazard of Flooding

If toilet rim is below the waterline at ANY time (during any conditions of heel, load or trim) and is connected to ANY through-the-hull fittings, properly positioned ventilated (vented) loops MUST be installed in intake* or discharge piping to prevent potential back siphonage of seawater into the boat. Failure to do so can result in flooding which can cause loss of property and life.



** if connected to raw water*



Caution! Hazard of Flooding

If 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. Failure to comply can cause loss of property and life.



Caution! Hazard of Flooding

Before beginning any work on this product, be sure that all electrical power to the unit has been turned off and that seacocks are in the CLOSED or OFF position. Failure to do so can result in flooding which can cause loss of property and life.



Caution! Hazard of Shock or Fire

Always use recommended fuse, circuit breaker and wire size. Failure to do so can result in fire that can cause the loss of property and life.



Caution!

Overfilling the holding tank can create serious damage to the sanitation system, such as rupturing the holding tank and releasing tank contents into the bilge. To prevent this possibility, Dometic recommends using the "full" tank shut-down relay in the toilet's electronic control module. The "full" signal from the holding tank can be generated by an optional Dometic DTM01C tank monitor or DTM04 four-level tank monitor system.

3 Components

(fig. **1**, page 2)

| Ref. | Description |
|------|---|
| A | Macerator toilet |
| B | Dometic DFT flush switch |
| C | Control module |
| D | 4-wire cable to toilet macerator pump and water valve |
| E | Cable for Dometic DFT flush switch or DSS status panel (RJ45/ethernet) |
| F | Cable to toilet's electronic flush handle (for flush handle model) |
| G | Incoming electrical power wires |
| H | Power wires to raw water pump (opt.) |
| I | Wire for "3/4-full tank" signal |
| J | Wire for "full tank" signal |
| K | Floor mounting hardware kit |
| L | Floor mounting template |
| M | Flush handle (for flush handle model) |
| N | Dometic DSS status panel (for flush handle model) |
| O | Cable for flush handle and other mfr. status panel (for flush handle model) |

(fig. **2**, page 2)

| Ref. | Description |
|------|---|
| 1 | Anti-siphon valve |
| 2 | Vacuum breaker |
| 3 | Discharge loop outlet |
| 4 | Discharge adapter fitting |
| 5 | Discharge hose fitting |
| 6 | Macerator pump |
| 7 | Water valve |
| 8 | Water line - 0.5 in. NPT fitting |
| 9 | 4-pin cable connector |
| 10 | Flush handle (on flush handle model only) |
| 11 | Flush handle cable connector |

Refer to complete parts list (packed separately) for additional information.

4 Specifications

4.1 Materials

Toilet: vitreous ceramic

Macerator pump body: glass-filled polypropylene

Control module housing: ABS

Dometic DFT switch panel frame: ABS

Dometic DFT switch panel: polycarbonate resin

Flush handle: plated brass (on applicable toilet models)

4.2 Minimum System Requirements

| | | |
|--------------|-----------------------|--|
| Electrical | Circuit breaker | 20 amps/12 V DC; 15 amps/24 V DC |
| | Wiring* | 12 ga. (up to 20 ft./6.1 m from breaker) |
| Water Supply | Fitting | 1/2 in. NPT |
| | Flow rate | 2.5 gpm / 9.5 lpm |
| | Maximum flow pressure | 40 PSI / 276 kPa |
| Discharge | Inside diameter | 1.5 in. / 38 mm or 1 in. / 25 mm |
| | Horizontal run** | 98 ft. / 30 m maximum |
| | Vertical run** | 9.8 ft. / 3 m maximum |

* For RV installation, see Appendix on page 15.

** Horizontal and vertical run distances are not cumulative. Check for adequate discharge flow if installation nears one of these limits. Specifications are subject to change without notice.

4.3 Dimensions (fig. 3, page 2)

Models with wall-mounted flush touchpad (no flush handle)

| Ref. | Dimension |
|------|---------------------------------|
| A | 19 in. / 483 mm |
| B | 14 in. / 356 mm |
| C | 21.5 in. / 546 mm |
| D | 17.5 in. / 445 mm - seat height |
| E | 17 in. / 432 mm |
| F | 33.5 in. / 851 mm - seat lid up |

Models with flush handle

| Ref. | Dimension |
|------|---------------------------------|
| A | 19 in. / 483 mm |
| B | 15.75 in. / 400 mm |
| C | 21.5 in. / 546 mm |
| D | 17.5 in. / 445 mm - seat height |
| E | 17 in. / 432 mm |
| F | 33.5 in. / 851 mm - seat lid up |

Dometic flush switch/status panel (fig. 4, page 2)

| Ref. | Dimension |
|------|--------------------|
| A | 2 in. / 51 mm |
| B | 3.25 in. / 83 mm |
| C | 0.4375 in. / 11 mm |

Control module (fig. 5, page 2)

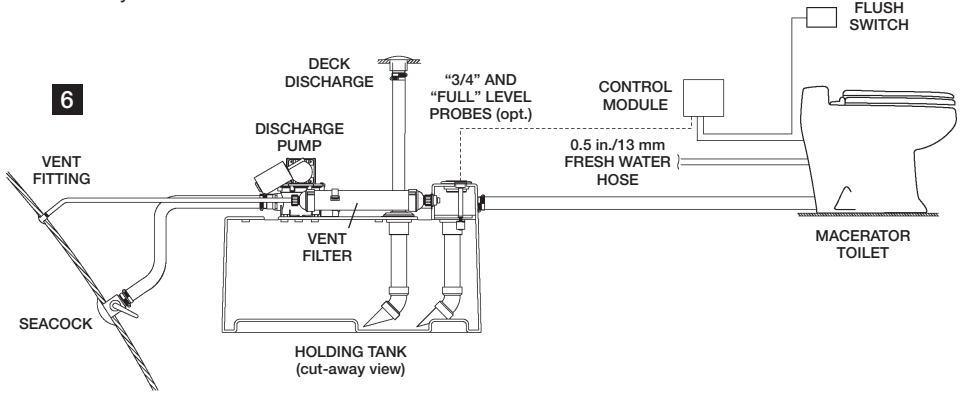
| Ref. | Dimension |
|------|--------------------|
| A | 4.187 in. / 106 mm |
| B | 5.25 in. / 133 mm |
| C | 2.063 in. / 52 mm |

5 Installation

5.1 Fresh water system layout - marine application

Dometic 8700 series macerator toilets can operate with an onboard pressurized freshwater system with a minimum flow rate of 2.5 gpm (9.5 lpm) at the toilet. Onboard fresh-water demand systems include a water pump that automatically draws water from a water

storage tank when a valve anywhere in the piping system is opened. Dometic toilets are equipped with an electrically operated water valve and a backflow preventer to prevent contamination of onboard potable supplies.

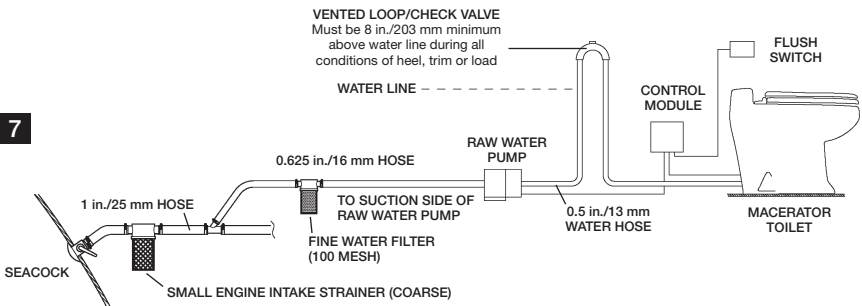


Note

Use cold water only. Include shut-off valve in water line for maintenance purposes.

5.2 Raw water system layout - marine application (additional components required)

Dometic macerator toilets can flush on seawater but require a separate pump for this purpose. The pump is activated by the signal from the toilet's electronic control module that would operate the integral water valve in a fresh water system. If the raw water pump draws more than 18 amps of current, a 12 or 24 V DC electrical relay must be installed.

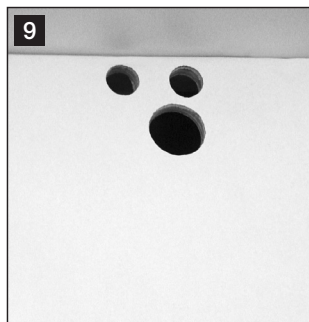
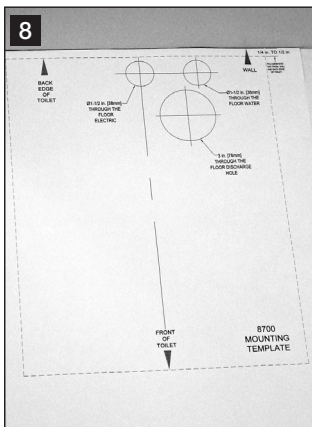


Notes

- Use cold water only. Include shut-off valve in water line for maintenance purposes.
- Use primary and secondary raw water filters.
- Raw water pump **MUST NOT** be demand-type. Pump is controlled by control module.
- Install vented loop as shown. It must be equipped with integral check valve that permits air into line to prevent siphoning.

5.3 Toilet system with wall touchpad and through-the-floor connections - all applications

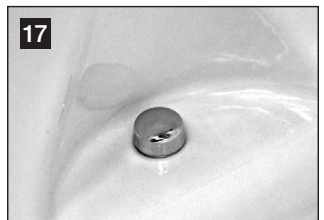
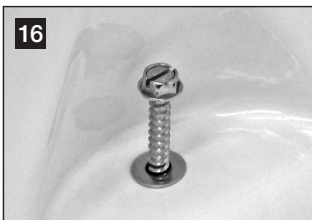
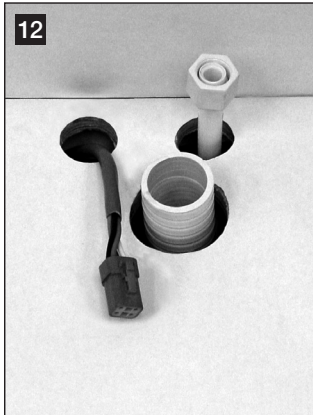
- Place floor mounting template in desired location (fig. **8**). For optimal user comfort, make sure walls or other interior fixtures are at least 11 in. (279 mm) away from centerline of template.
- Center punch all holes through template.
- Remove template from floor. Drill all access holes as indicated on template (fig. **9**).
- Plan flush switch panel and electronic control module locations so that electrical connections can be made with cables provided. Be sure module and wires cannot get wet.
- Use Dometic wall switch template to mark location of fastener and access holes. Drill 1 in. (25 mm) hole, then fasten panel bracket to wall (fig. **10**).
- Route Dometic flush switch panel cable (fig. **1 E**, p. 2) from ethernet connector on control module to access hole at flush switch panel location. Attach cable to Dometic DFT flush switch panel, then snap the panel cover onto the panel bracket (fig. **10**).
- Install control module in cool, dry location, then attach Dometic flush switch cable to ethernet connector on control module (fig. **11**).
- With electrical power off, complete wiring connections to control module. Refer to wiring diagram printed with parts list (packed separately).
- Route 4-wire control module cable (fig. **1 D**, page 2) to toilet through access hole in floor.
- Route water supply and discharge plumbing to toilet according to system requirements (Section 4.2). Make sure to provide extra discharge hose length to assure easy connection to toilet (fig. **12**, page 9).



Note

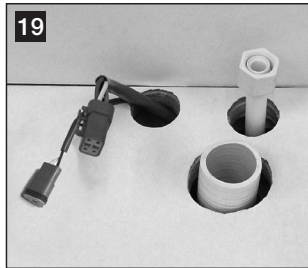
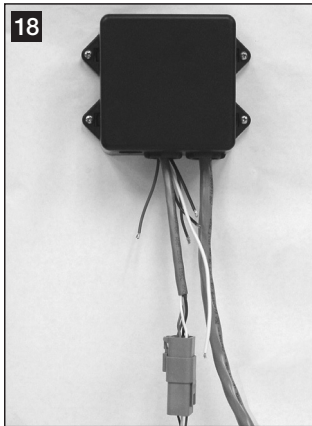
When installing Vimar or Gewiss flush switch/status panel, disregard instructions for installing Dometic touchpad switch. Install Vimar or Gewiss component on wall according to manufacturer's instructions, then attach end of cable to 6-wire connector (fig. **1 D**, page 2) at control module.

11. Loosen band clamp on discharge loop outlet and remove discharge adapter fitting/hose fitting assembly (fig. **13**).
12. Lubricate discharge fitting assembly and inside end of discharge hose with liquid dishwashing soap. Push discharge fitting assembly into discharge hose and connect with two hose clamps. Be sure to position hose clamp screws 180° apart from each other (fig. **14**). Place toilet near access holes and floor brackets.
13. Connect toilet water line and 4-pin connector to water supply line and control module cable.
14. Position toilet over floor brackets and tilt toilet up from back. Push discharge assembly fitting and hose up into discharge loop outlet. Lower toilet to floor and tighten band clamp (fig. **15**).
15. Turn on water supply and electrical power to toilet, and check for leaks. Press "Flush" switch (fig. **4 2**, page 2). If leak occurs, tighten connection.
16. At floor mounting holes, drill pilot holes for hex-head floor fasteners. Install fasteners and washers using a 3/8 in. (10 mm) socket wrench (fig. **16**).
17. Cover floor fasteners with plastic covers (fig. **17**).



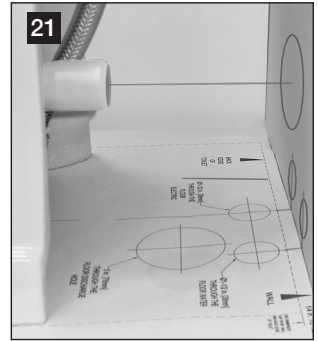
5.4 Toilet system with flush handle and through-the-floor connections - all applications

1. Follow steps 1-3 in Section 5.3.
2. Plan electronic control module and status panel locations so that electrical connections can be made with cables provided. Be sure module and wires cannot get wet.
3. Use Dometic wall switch template to mark location of fastener and access holes for DSS status panel (fig. **1 N**, p. 2). Drill wiring access hole, then fasten panel bracket to wall.
4. Route flush handle cable (fig. **1 O**, p. 2) from flush handle cable on control module (fig. **1 F**, p. 2) to toilet location, and route ethernet cable (fig. **1 E**, p. 2) to DSS status panel location.
(If using status panel other than Dometic DSS panel, route orange connector end of Dometic flush handle cable (fig. **1 O**, p. 2) through access hole at toilet location. Route other section of cable through status panel access hole and connect to panel wires. Attach status panel to wall.)
5. Install control module in cool, dry location, then attach Dometic flush switch/status panel cable(s) to control module (fig. **18**).
6. With electrical power off, complete wiring connections to control module. Refer to wiring diagram printed with parts list (packed separately).
7. Route 4-wire control module cable (fig. **1 D**, p. 2) to toilet through access hole.
8. Route water supply and discharge plumbing to toilet according to system requirements (Section 4.2). Make sure to provide extra discharge hose length to assure easy connection to toilet (fig. **19**).
9. Follow steps 11-13 in Section 5.3 to connect discharge plumbing and 4-pin connector at toilet.
10. Connect 3-pin flush handle cable connector to 3-pin wire from control module (fig. **20**).
11. Follow steps 14-17 from Section 5.3 to finish installation and testing. Press flush handle down when testing operation and checking connections.



5.5 Toilet system with through-the-wall connections

1. To route wiring and plumbing connections through the wall, use floor template to locate the vertical centerline of each hole.
2. Place toilet in proper position and mark horizontal centerlines (fig. 21).
3. Drill holes sizes as indicated on template.
4. Route wiring and plumbing through holes, then follow toilet installation instructions beginning at Section 5.3 or Section 5.4, step 4.



6 RV installation appendix

Wiring / Electronic Control Module Connections



Warning!

Hazard of Shock or Fire: Always use recommended fuse, circuit breaker and wire size. Failure to do so can cause the loss of property and life.



Installation notes

- Each toilet must have its own circuit breaker or fuse.
- Wire sizes must be appropriate for the installation. All other installation factors must be in accordance with ISO electrical standards.
- Always use stranded copper wire (preferably tinned).
- Always use crimp-type wire connections. Do not use wire nuts (they corrode).

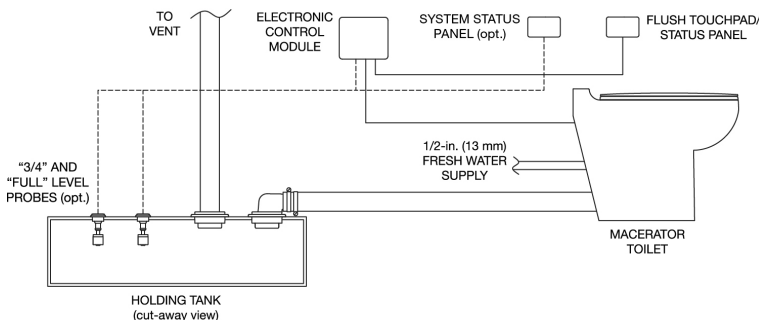
When installing a Dometic macerator toilet in a recreation vehicle, please use the following wiring information.

WIRE SIZING CHART

| Wire size per length of run* | 0-15 ft. | 16-30 ft. | 31-50 ft. |
|---|----------|-----------|-----------|
| 12 volts DC | #14 | #12 | #10 |
| * Distance from circuit breaker to electronic control module. | | | |

CONVERSION TABLE

| Wire – AWG to mm ² | | | | Feet to Meters | | | | | |
|-------------------------------|-----|-----|-----|----------------|-----|-----|-----|-----|------|
| AWG | 14 | 12 | 10 | Ft | 10 | 15 | 20 | 30 | 50 |
| mm ² | 2.5 | 4.0 | 6.0 | M | 3.1 | 4.6 | 6.1 | 9.2 | 15.2 |



7 Customer service

There is a strong, worldwide network to assist in servicing and maintaining your sanitation system. For the Authorized Service Center near you, please call from 8:00 a.m. to 5:00 p.m. (ET) Monday through Friday.

You may also contact or have your local dealer contact the Parts Distributor nearest you for quick response to your replacement parts needs. They carry a complete inventory for the Dometic product line.

| | | |
|------------|--------------------------------|------------------------------------|
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