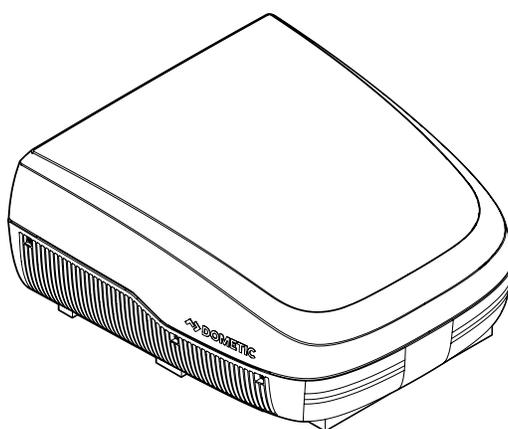




CLIMATE CONTROL AIR CONDITIONERS



Brisk Air (457915, 459516), Brisk II (B57915, B59516),
High Performance (540315, 540316), Blizzard NXT (H540315, H540316),
Penguin (640312, 640315, 640316), Penguin II (640312C, 640315C, 640316C),
FreshJet (FJX3473, FJX3573)

EN	Value Air Distribution Box, Mechanical
	Installation and Operation Manual 2

WARNING
Cancer and Reproductive Harm www.P65Warnings.ca.gov

Service Center & Dealer Locations

Visit: www.dometic.com

Please read these instructions carefully and follow all instructions, guidelines, and warnings included in this product manual in order to ensure that you install, use, and maintain the product properly at all times. These instructions **MUST** stay with this product.

By using the product, you hereby confirm that you have read all instructions, guidelines, and warnings carefully and that you understand and agree to abide by the terms and conditions as set forth herein. You agree to use this product only for the intended purpose and application and in accordance with the instructions, guidelines, and warnings as set forth in this product manual as well as in accordance with all applicable laws and regulations. A failure to read and follow the instructions and warnings set forth herein may result in an injury to yourself and others, damage to your product, or damage to other property in the vicinity. This product manual, including the instructions, guidelines, and warnings, and related documentation, may be subject to changes and updates. For up-to-date product information, please visit www.dometic.com.

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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 also will indicate the degree or level of hazard seriousness.

 **DANGER!** Indicates a hazardous situation that, if **not** avoided, will result in death or serious injury.

⚠ 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: Used to address practices **not** related to physical injury.

i Indicates additional information that is **not** related to physical injury.

1.3 Supplemental Directives

To reduce the risk of accidents and injuries, please observe the following directives before proceeding to install, operate, or service this product:

- Read and follow all safety information and instructions.
- Read and understand these instructions before installing, operating, or servicing this product.
- 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
- ANSI Z21.57, Recreational Vehicles Code

Canada

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

1.4 General Safety Messages

⚠ WARNING: ELECTRICAL SHOCK, FIRE, AND/OR EXPLOSION HAZARD. Failure to obey the following warnings could result in death or serious injury:

- Use only Dometic replacement parts and components that are specifically approved for use with the product.

- Avoid improper installation, adjustment, alterations, service, or maintenance of the product. Installation, service, and maintenance **must** be done by a qualified service person only.
- Do **not** modify this product in any way. Modification can be extremely hazardous.
- Use care when diagnosing and/or adjusting components on a powered product.
- This product is **not** intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the product by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the product.

2 Intended Use

The Value Air Distribution Box (ADB), Mechanical is part of an air conditioner (AC, also referred to as the “product” or “unit”) designed and intended for installation on the roof of a Recreational Vehicle (hereinafter referred to as “RV”) during or after the time it is manufactured. The product is comprised of two main components: the rooftop component and the internal ADB component.

This product can be installed by one person with brief help from additional personnel. Use these instructions to ensure a properly installed, and properly functioning product.

The manufacturer 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 express permission from the manufacturer
- Use for purposes other than those described in the operating manual

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

3 General Information

This section provides general information about the unit and its components.

i The images used in this document are for reference purposes only. Components and component locations may vary according to specific product models. Measurements may vary ± 0.38 in. (10 mm).

3.1 Tools and Materials

Dometic recommends that the following tools and materials be used.

Recommended Tools and Materials

Framing Wood	All-Weather Caulk
Knife/Box Cutter	Screwdrivers
Electrical Connectors	3/8" Torque Wrench Socket
Basic Electrical Connection Tools	Torque Wrench ¹ (40 in lbs)

¹ Models FJX3473 and FJX3573 require a Torque Wrench (22.2 in lbs).

Optional Parts¹

Spare Foam Divider Kit	3106756.087
------------------------	-------------

¹ Available as an accessory (not included). Accommodates a roof thickness greater than 5.5 in. (140 mm) and includes two spare 1.2 in. (30 mm) foam dividers and four 9-1/2 in. long bolts.

3.2 Model Identification

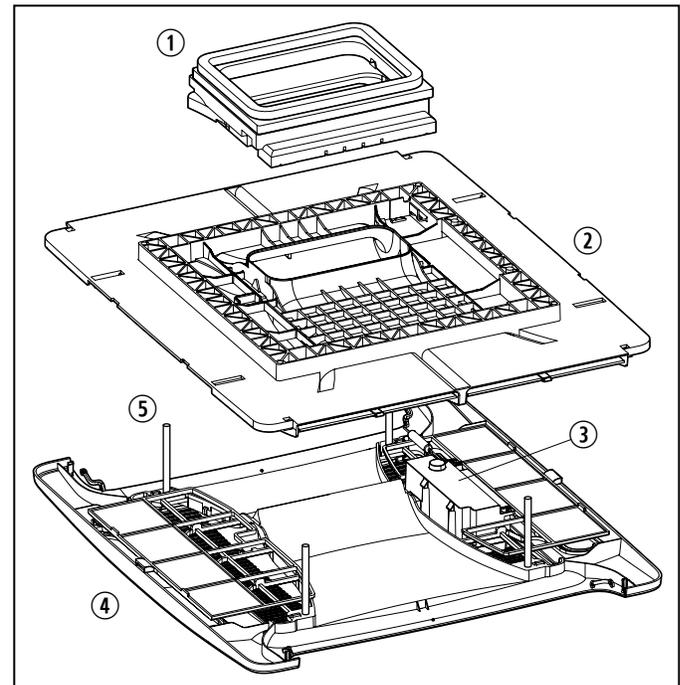
The model identification labels are located as follows:

- The rooftop component and serial numbers are found on the identification label located on the bottom of the base pan. To view the identification label, remove the return air vent grille from the ADB.
- The ADB component model and serial numbers are found on the rating plate located on the ceiling template. To view the rating plate, look through the filter opening.

i Have this information ready before contacting Dometic for service.

3.3 ADB Components

This section identifies the main ADB components.



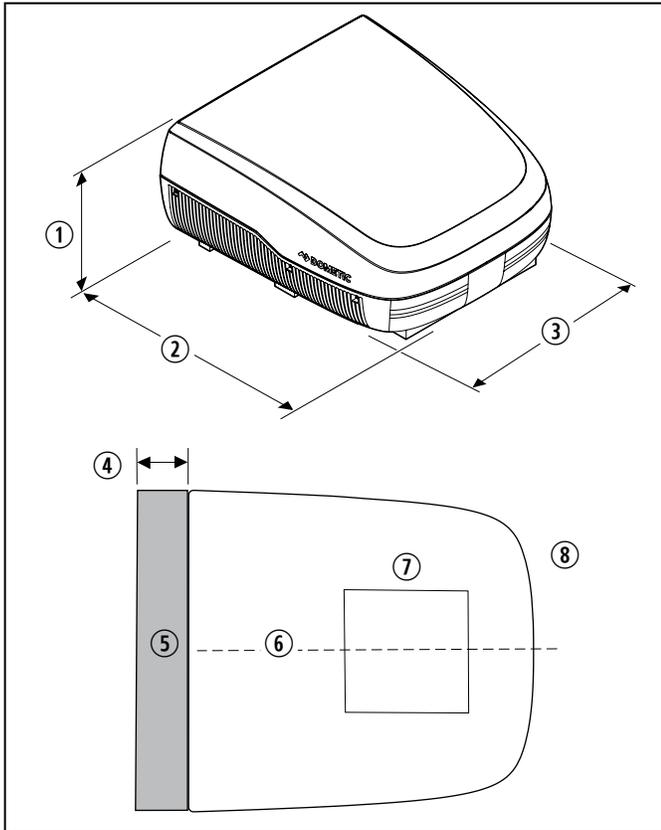
1 ADB Components

- ① Foam Dividers
- ② Ceiling Template
- ③ Control Box
- ④ ADB Cover
- ⑤ Long Bolts

3.4 Rooftop Component Dimensions by Model

This section provides the external dimensions and clearance measurements of the rooftop component.

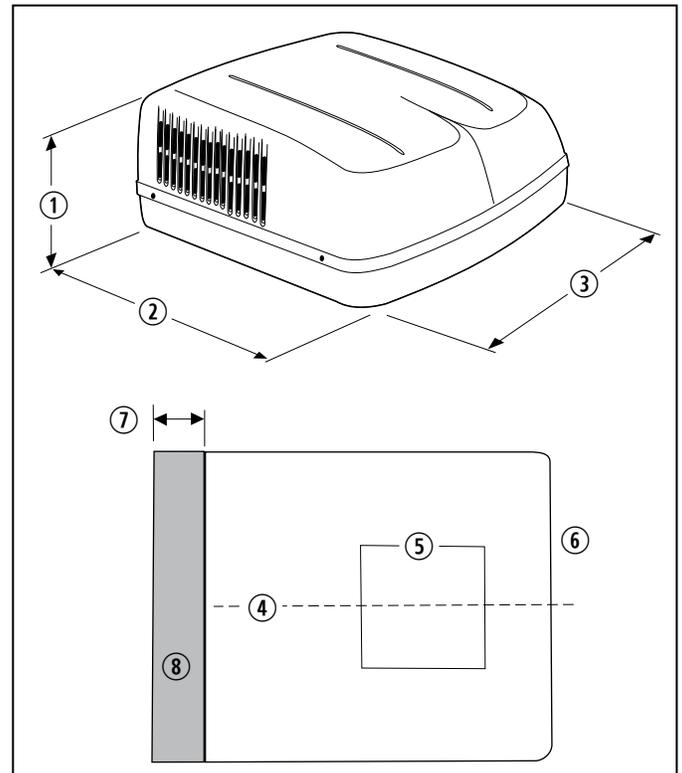
3.4.1 FreshJet



2 FreshJet (FJX3473, FJX3573)

- ① 13.8 in. (351 mm)
- ② 29.6 in. (753 mm)
- ③ 27.6 in. (702 mm)
- ④ 18.0 in. (457 mm) Clearance
- ⑤ Air Flow Clearance Area (Shaded)
- ⑥ Center Line of Unit
- ⑦ Roof Opening
- ⑧ Front of Unit

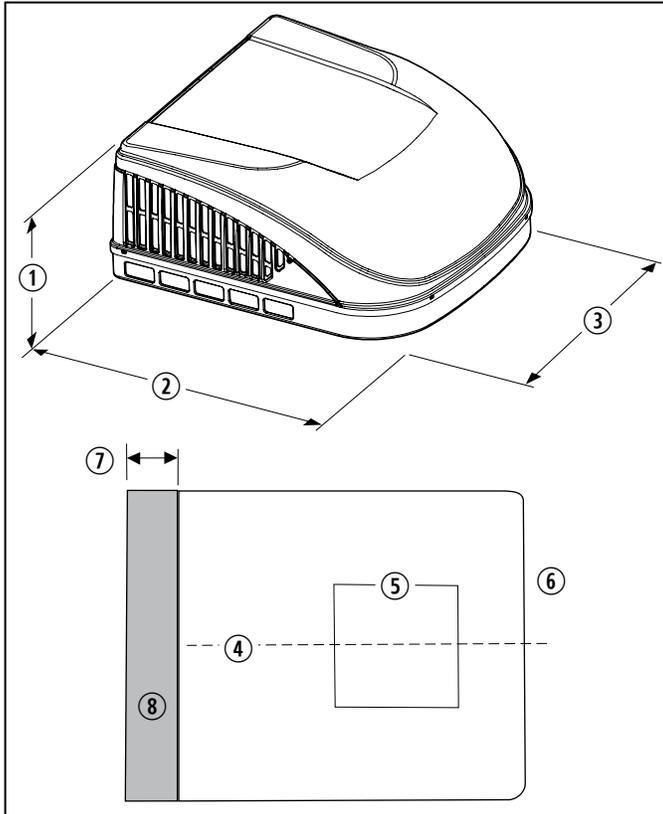
3.4.2 Brisk Air



3 Brisk Air (457915, 459516)

- ① 13.1 in. (333 mm)
- ② 34.9 in. (886 mm)
- ③ 29.9 in. (760 mm)
- ④ Center Line of Unit
- ⑤ Roof Opening
- ⑥ Front of Unit
- ⑦ 18.0 in. (457 mm) Clearance
- ⑧ Air Flow Clearance Area (Shaded)

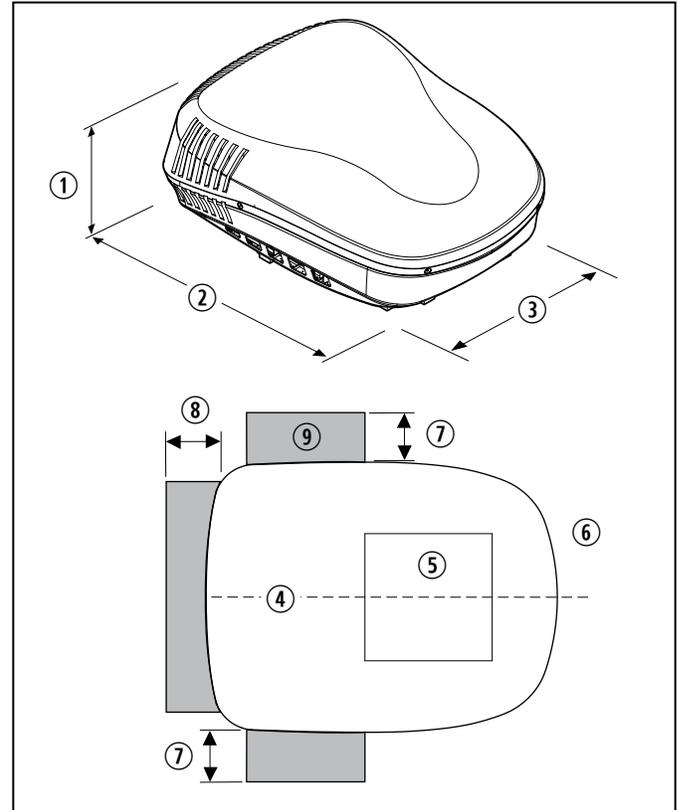
3.4.3 Brisk II



4 Brisk II (B57915, B59516)

- ① 13.7 in. (349 mm)
- ② 29.6 in. (751 mm)
- ③ 27.6 in. (701 mm)
- ④ Center Line of Unit
- ⑤ Roof Opening
- ⑥ Front of Unit
- ⑦ 18 in. (457 mm) Clearance
- ⑧ Air Flow Clearance Area (Shaded)

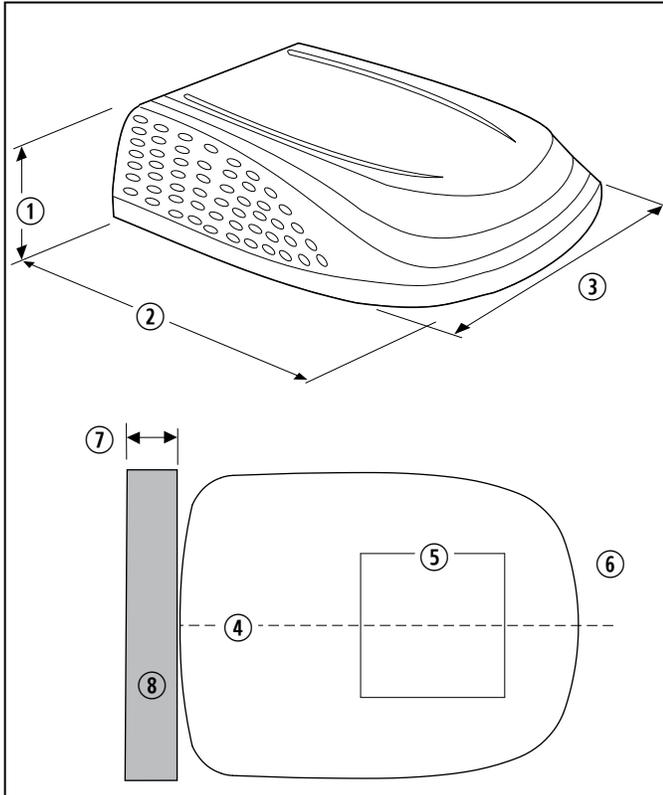
3.4.4 Blizzard NXT



5 Blizzard NXT (H540315, H540316)

- ① 13.9 in. (353 mm)
- ② 40.0 in. (1016 mm)
- ③ 30.0 in. (762 mm)
- ④ Center Line of Unit
- ⑤ Roof Opening
- ⑥ Front of Unit
- ⑦ 4.0 in. (102 mm) Clearance
- ⑧ 18.0 in. (457 mm) Clearance
- ⑨ Air Flow Clearance Area (Shaded)

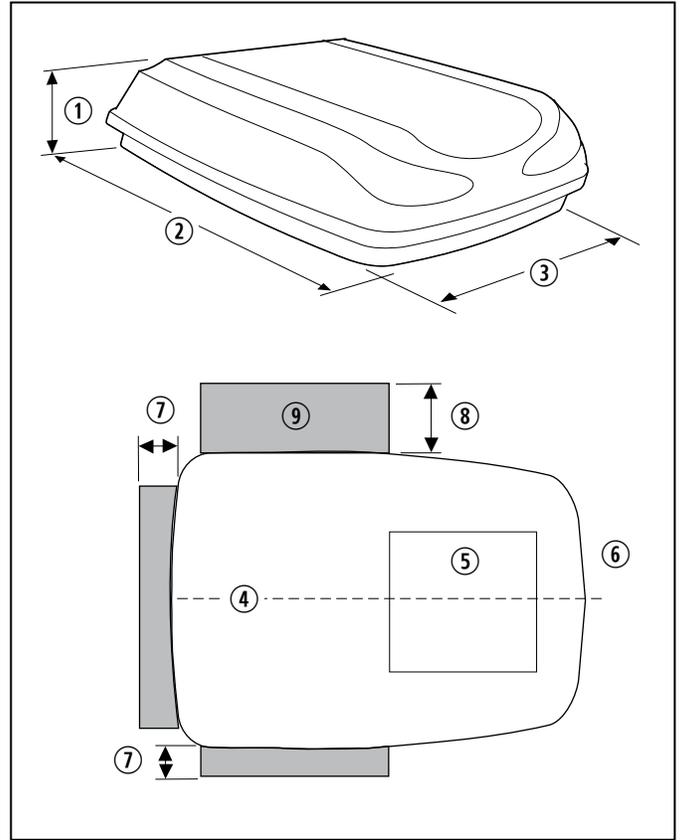
3.4.5 High Performance



6 High Performance (540315, 540316)

- ① 13.0 in. (330 mm)
- ② 39.6 in. (1006 mm)
- ③ 29.9 in. (760 mm)
- ④ Center Line of Unit
- ⑤ Roof Opening
- ⑥ Front of Unit
- ⑦ 18.0 in. (457 mm) Clearance
- ⑧ Air Flow Clearance Area (Shaded)

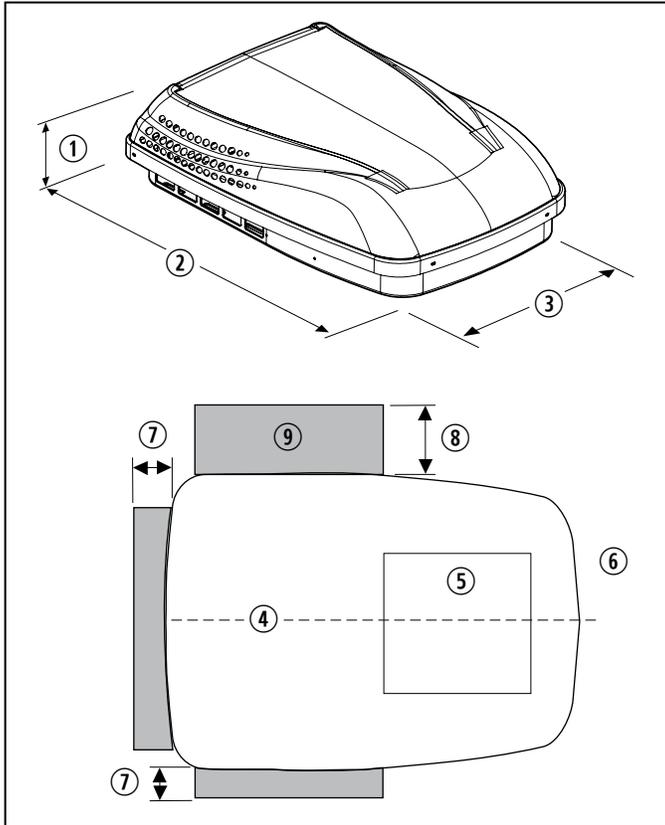
3.4.6 Penguin



7 Penguin (640312, 640315)

- ① 9.5 in. (241 mm)
- ② 40.0 in. (1016 mm)
- ③ 29.0 in. (737 mm)
- ④ Center Line of Unit
- ⑤ Roof Opening
- ⑥ Front of Unit
- ⑦ 4.0 in. (102 mm) Clearance
- ⑧ 12.0 in. (305 mm) Clearance
- ⑨ Air Flow Clearance Area (Shaded)

3.4.7 Penguin II

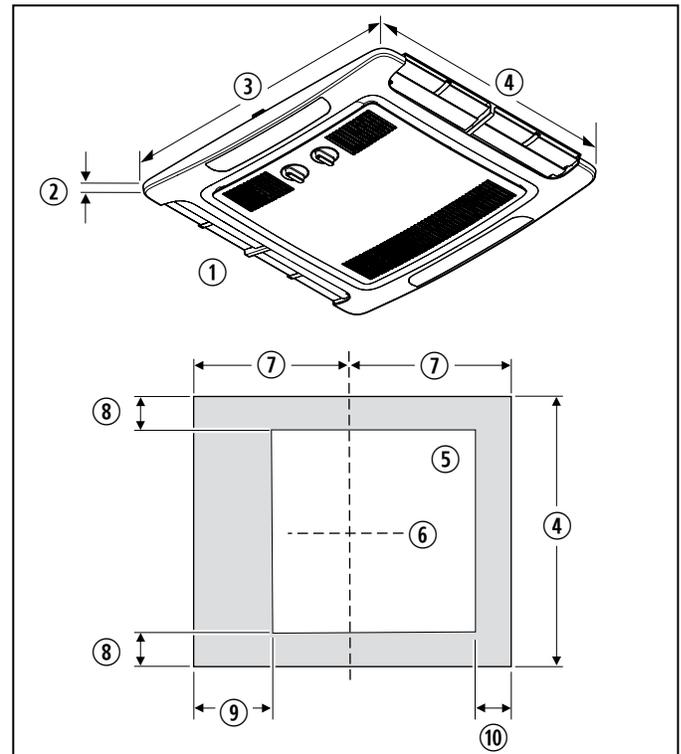


8 Penguin II (640312C, 640315C, 640316C)

- | | |
|-----------------------|------------------------------------|
| ① 10.4 in. (264 mm) | ⑦ 4.0 in. (102 mm) Clearance |
| ② 40.5 in. (1029 mm) | |
| ③ 29.0 in. (737 mm) | ⑧ 12.0 in. (305 mm) Clearance |
| ④ Center Line of Unit | |
| ⑤ Roof Opening | ⑨ Air Flow Clearance Area (Shaded) |
| ⑥ Front of Unit | |

3.5 ADB Component Dimensions

This section provides the internal dimensions of the ADB component.



9 Dimension Measurements

- | | |
|---------------------|-----------------------|
| ① Front of Unit | ⑥ Center Line of Unit |
| ② 2.3 in. (59 mm) | ⑦ 11.6 in. (295 mm) |
| ③ 23.0 in. (583 mm) | ⑧ 3.4 in. (86 mm) |
| ④ 20.4 in. (518 mm) | ⑨ 6.0 in. (152 mm) |
| ⑤ Roof Opening | ⑩ 3.0 in. (76 mm) |

3.6 Placement Requirements

The rooftop component is specifically designed for installation on the roof of an RV. To determine where to place the rooftop component, consider the following items:

- A 14.3 in. x 14.3 in. (363 mm x 363 mm) [± 0.1 in. (3 mm)] square opening and hereinafter referred to as “roof opening” is required. The roof opening is part of the return air system of the rooftop component and must be finished in accordance with NFPA 1192.
- The rafter/joist support frames must be spaced no greater than 16.0 in. (406 mm) on center. The rooftop component is designed to fit over an existing roof vent opening.
- The distance between the roof and the RV ceiling must be between 1.5 in. (38 mm) and 6.0 in. (152 mm).
- When no roof vent is available or when another location is desired, an opening must be cut through the roof and ceiling of the RV. This opening must be located between the roof reinforcing members. Consider these recommendations along with your cooling needs:
 - For a single rooftop component: mount the rooftop component slightly forward of the RV’s center (front to back) and centered from side to side.
 - For two rooftop components: measuring from the front of the RV and centering from side to side, mount the first rooftop component at 1/3 the length of the RV and the second rooftop component at 2/3 the length of the RV.

3.6.1 Tilt Requirements

When measuring for placement, confirm the following tilt requirements.

1. Make all measurements while the RV is parked on a level surface.
2. Install the rooftop component on a flat and level roof section.
3. Use the tilt allowance table to determine the maximum acceptable roof tilt.

Tilt Allowance	
Model Number	Maximum Tilt (All Directions)
457915, 459516 B57915, B59516 540315, 540316 H540315, H540316, FJX3473, FJX3573	15°
640312, 640315, 640316, 640312C, 640315C, 640316C	8°

4 Specifications

This section provides the electrical specifications by model.

Model	Nominal Capacity Cooling (BTU HR)	Electrical Rating	Compressor Amps		Fan Motor Amps		Refrigerant R-410A (oz)	Minimum Wire Size ¹	AC Circuit Protection ² (Installer Supplied)	Minimum Generator Size ³ (1 Unit/ 2 Units)
			Rated Load	Locked Rotor	Rated Load	Locked Rotor				
457915.70X	13,500	115 VAC, 60 HZ, 1 ph	12.4	63.0	2.5	5.8	18.0	12 AWG	20 Amp	3.5 kW/ 5.0 kW
457915.71X	13,500		12.4	68.0	2.5	5.8	18.0			
B57915.71X	13,500		12.4	68.0	2.5	5.8	18.0			
459516.70X	15,000		13.3	66.0	2.0	5.6	27.5			
459516.71X	15,000		13.3	70.0	2.0	5.6	27.5			
B59516.71X	15,000		13.3	70.0	2.0	5.6	18.3			
540315.70X	13,500		12.4	63.0	3.0	8.5	18.5			
540315.71X	13,500		12.4	68.0	3.0	8.5	18.5			
H540315.72X	13,500		12.7	68.0	2.8	8.0	19.5			
540316.70X	15,000		13.3	66.0	2.8	7.6	29.5			
540316.71X	15,000		13.3	70.0	2.8	7.6	29.5			
H540316.72X	15,000		13.2	70.0	2.8	8.0	20.1			
640312.80X	11,000		11.5	53.0	2.6	8.5	20.0			
640312.83X	11,000		12.5	63.0	2.6	8.5	18.0			
640312C.35X	11,000		10.5	53.0	3.5	10.0	19.0			
640312C.85X	11,000		11.5	53.0	2.6	8.5	20.0			
640315.80X	13,500		12.6	63.0	2.6	8.5	18.0			
640315.83X	13,500		12.5	63.0	2.6	8.5	19.0			
640315.84X	13,500		12.5	63.0	3.5	8.5	19.0			
640315C.75X	13,500		12.7	52.0	2.6	8.5	14.5			
640316C.75X	15,000		12.9	52.0	2.6	8.5	21.5			
FJX3473MWHAS	13,500		13.6	61.0	3.3	6.9	12.7			
FJX3473MBKAS	13,500		13.6	61.0	3.3	6.9	12.7			
FJX3573MWHAS	15,000		13.6	73.0	3.3	6.9	13.4			
FJX3573MBKAS	15,000		13.6	73.0	3.3	6.9	13.4			

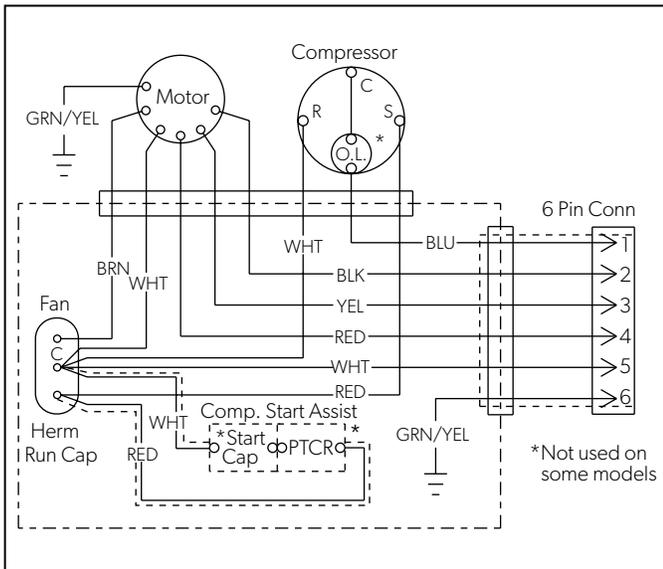
¹ The wiring size indicated is for copper wiring up to 24 ft (7.3 m) in length. For wire lengths over 24 ft (7.3 m), consult the National Electrical Code for proper sizing.

² Circuit protection: a time delay fuse or circuit breaker is required.

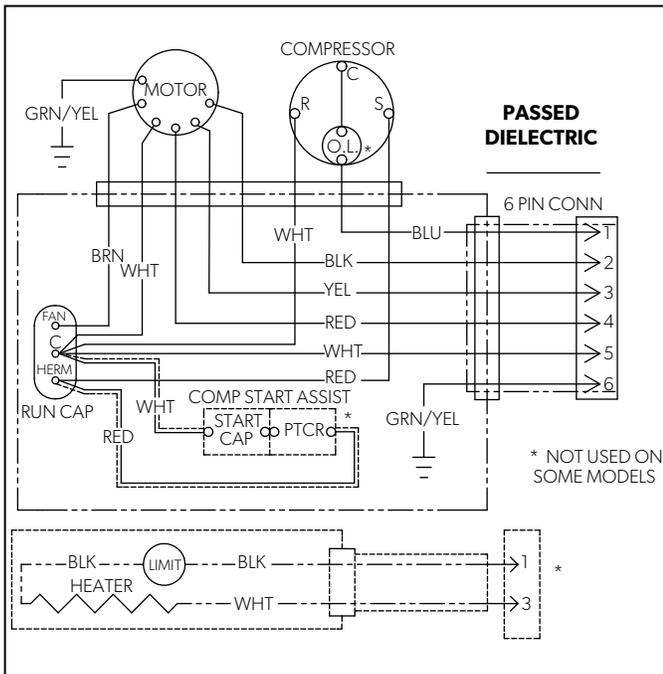
³ Dometic Corporation gives general guidelines for generator requirements. These guidelines come from experiences people have had in actual applications. When sizing the generator, the total power usage of your RV must be considered. Generators may lose power at high altitudes and from lack of maintenance.

5 Wiring Diagrams

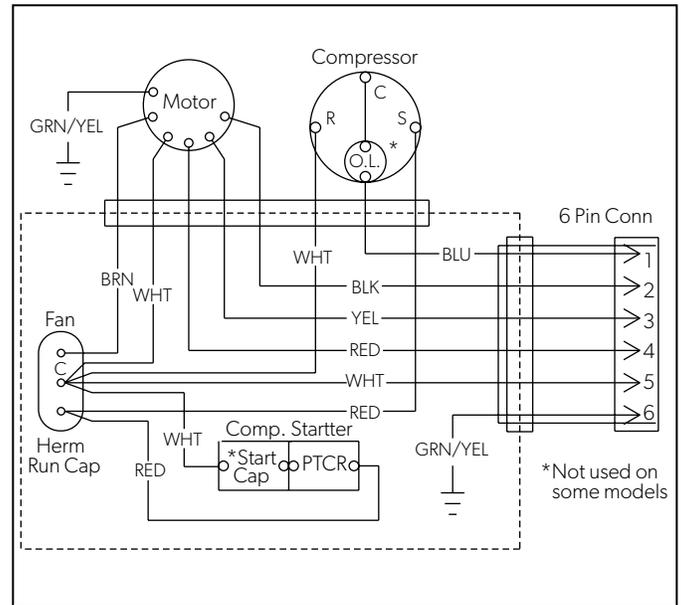
This section provides the wiring diagrams for the product.¹



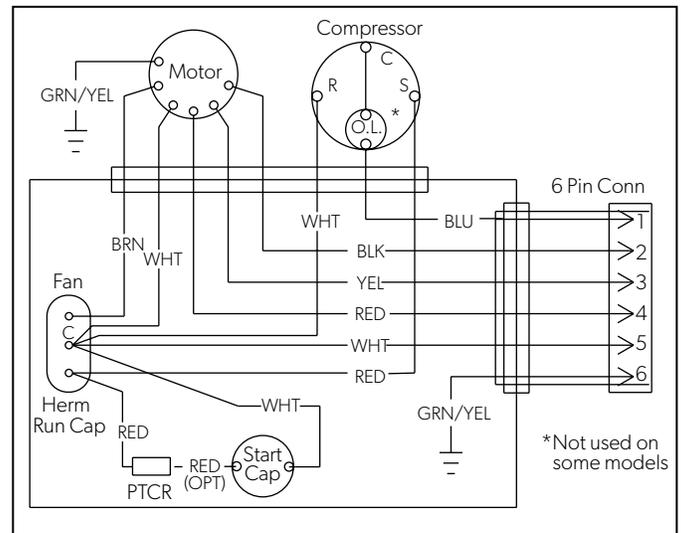
10 FreshJet (FJX3473, FJX3573)



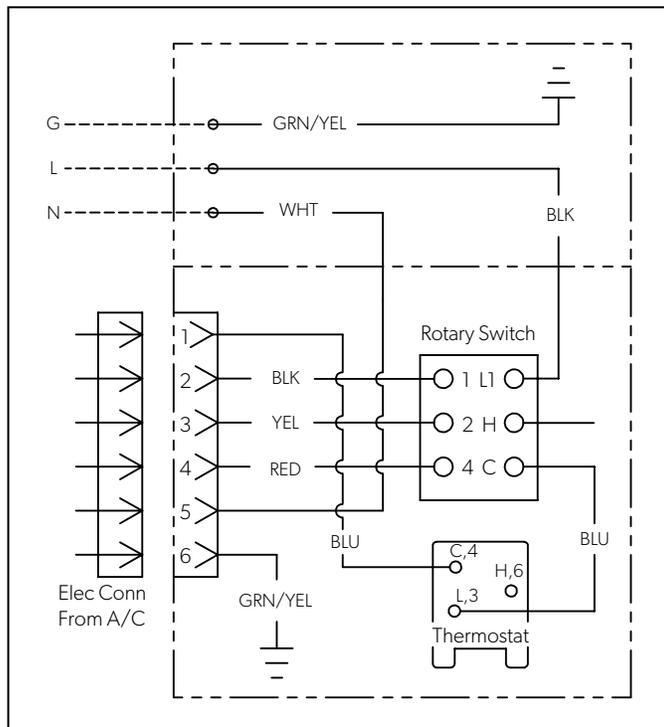
11 Brisk (457915, 459516, B57915, B59516)



12 Blizzard and High Performance (540315, 540316, H540315, H540316)



13 Penguin (640312, 640312C, 640315, 640315C, 640316, 640316C)



14 ADB Wiring Diagram - All Models

¹ Wiring Diagram Definitions; 115 VAC; 60 Hz 1 PH; Use Copper Conductors only

- Field Wiring
- Factory Wiring
- Line Splice

6 Pre-Installation

⚠ WARNING: FIRE OR ELECTRICAL SHOCK HAZARD. Failure to obey these warnings could result in death or serious injury.

- Shut off the gas supply, disconnect the 115 VAC power from the RV, and disconnect the positive (+) 12 VDC terminal from the supply battery before drilling or cutting into the RV.
- Make sure there are no obstacles such as wires or pipes inside the RV's roof.
- Provide grounding in compliance with all applicable electrical codes.

⚠ CAUTION: LIFTING HAZARD.

Use proper lifting technique and control when lifting the unit. Failure to obey this caution could result in minor or moderate injury.

NOTICE: Failure to follow these notices could result in damage to the rooftop component and/or the RV.

- **Never** create a low spot on the RV roof.
- Maintain the structural integrity of the RV roof. The roof **must** be designed to support 130 lbs (59 kg) when the RV is in motion. Normally, a 200 lb (91 kg) static load design will meet this requirement.
- Read this entire section before beginning the installation.

This section describes how to install and set up the unit.

6.1 Determining Your Cooling Needs

When determining your cooling requirements, consider the following items:

- The size of the RV
- The RV window area (which could increase heat gain)
- The amount of insulation in the walls and the roof
- The geographical location where the RV will be used
- The personal comfort level required

6.2 Preparing the RV Roof Opening

NOTICE: The roof opening **must** be structurally framed to provide adequate support and to prevent air from being drawn from the roof cavity. Framing stock with 0.75 in. (19 mm) or more thickness **must** be used. Remember to provide an entrance hole for power supplies at the front of the opening. See Figure 16.

This section describes how to prepare the RV roof opening.

6.2.1 Using an Existing Roof Vent Opening

- i** If the roof does not have an existing roof vent, skip to “Making a New Roof Opening” on page 13.

This section describes how to prepare the RV roof when using an existing vent.

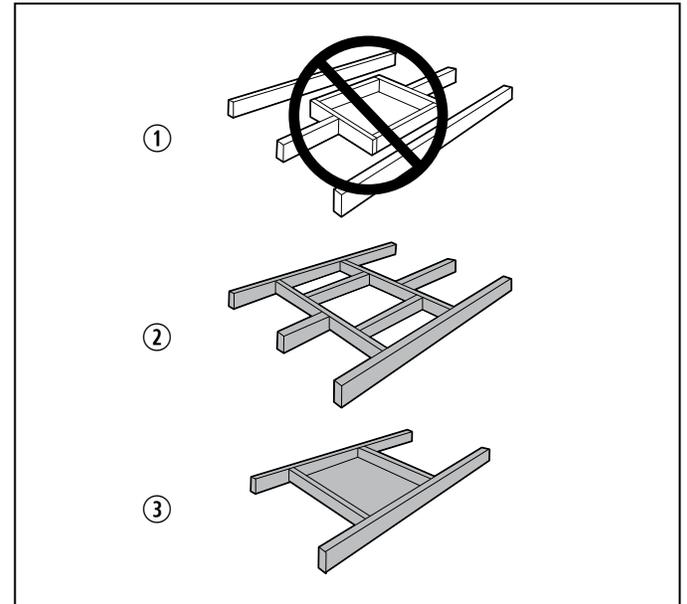
1. Shut off the gas supply, disconnect the 115 VAC power from the RV, and disconnect the positive (+) 12 VDC terminal from the supply battery.
2. Unscrew and remove the roof vent.
3. Remove the caulking compound around the opening.
4. Seal the screw holes and seams where the roof gasket will be located. Use a good grade of all-weather sealant.
5. Measure the roof opening (review “Placement Requirements” on page 9). If the roof opening is within specifications, skip to “Routing the Wiring” on page 14.
6. If the opening needs to be resized, proceed to “Making a New Roof Opening” on page 13.
 - If the opening exceeds 14.4 x 14.4 in. (366 x 366 mm), it will be necessary to reduce the size of the opening.
 - If the opening is less than 14.1 x 14.1 in. (358 x 358 mm), it will be necessary to enlarge the opening.

6.2.2 Making a New Roof Opening

- i** If the roof has an existing roof vent, see “Using an Existing Roof Vent Opening” on page 13.

This section describes how to prepare the RV roof when making a new roof opening.

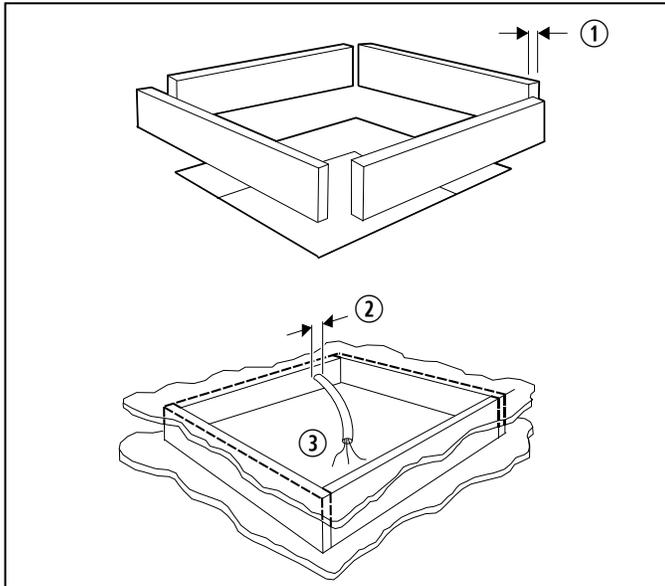
1. Shut off the gas supply, disconnect the 115 VAC power from the RV, and disconnect the positive (+) 12 VDC terminal from the supply battery.
2. Carefully mark the required roof opening. See “Placement Requirements” on page 9.



15 Structure for a New Roof Opening

- ① Incorrect ③ Correct
② Correct

3. Make sure the new opening does not compromise the roof’s structural integrity.
 - Do not cut the roof structure or the rafters.
 - The rafters should remain supported by a cross beam.
 - The opening should be between the rafters.
4. Carefully cut the required roof opening.



16 Structural Framing for a New Roof Opening

- | | |
|--|--|
| <p>① 0.8 in. (20 mm)
Minimum Width for
the Framing Stock</p> <p>② 0.3 in. (8 mm)
Minimum Width for
Access Hole</p> | <p>③ 15.0 in. (381 mm)
Exposed Length
of 115 VAC Power
Supply Wire</p> |
|--|--|

5. Frame the opening so it will not collapse when bolting the rooftop component down.
6. At the front of the frame opening, leave or create an access hole to allow for the length of exposed 115 VAC power supply wiring required to complete the installation.
7. Using the roof opening as a guide, cut a matching hole in the ceiling of the RV interior.

6.3 Routing the Wiring

- i** The power must be on an appropriately-sized separate time-delay fuse or circuit breaker. See “Specifications” on page 10.

This section describes how to route the wiring for the rooftop component.

1. Position the copper 115 VAC power supply wire, with ground, in the front portion of the roof opening.

2. Route the 115 VAC power supply wire from the time-delay fuse or circuit breaker box to the roof opening. Use a listed/certified non-metallic sheathed single strand cable. See “Specifications” on page 10.

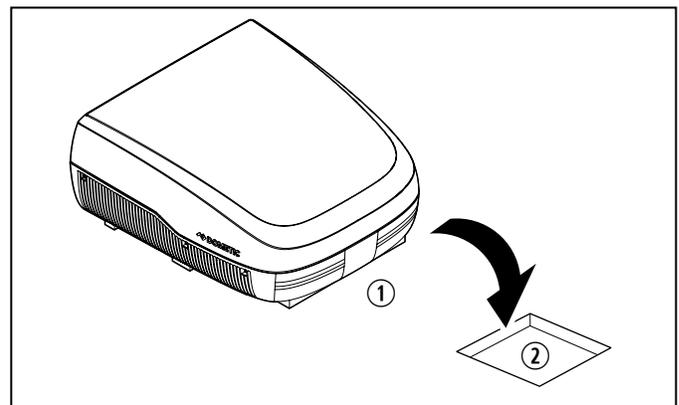
- i** If an AC or a vent fan were removed, the existing power supply wire may be used provided it is of the proper type, size, and location, and if it is correctly fused.

3. Make sure that at least 15.0 in. (381 mm) of the 115 VAC power supply wire extends into the roof opening to ensure an easy connection at the junction box.
4. Protect the 115 VAC power supply wire where it passes into the opening according to local and national standards.

6.4 Positioning the Rooftop Component

NOTICE: Do **not** slide the rooftop component along a surface. Otherwise, damage to the gasket on the bottom of the rooftop component could occur and cause a leak.

1. Remove all the contents from the carton and discard the carton.
2. Place all the ADB kit contents in the RV. The ADB kit contains mounting hardware for the ADB that will be installed inside the RV.
3. Move the rooftop component to the roof.



17 Placing the Rooftop Model Unit

- | | |
|---|-------------------------------------|
| <p>① Front of the Rooftop
Component</p> | <p>② Roof Opening
Component</p> |
|---|-------------------------------------|

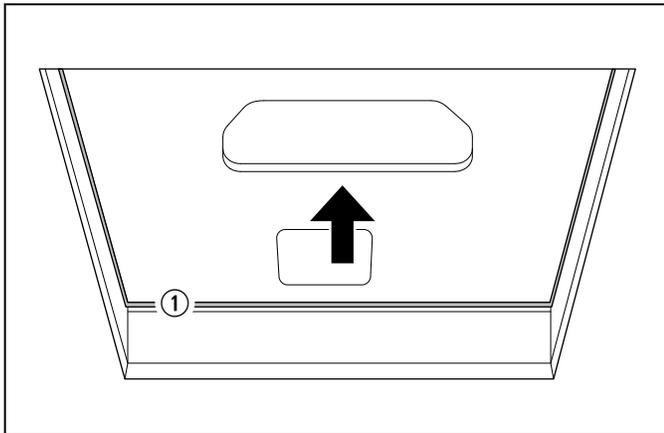
- Lift and place the rooftop component over the prepared opening using the gasket on the rooftop component as a guide.

i The outside work is complete. Minor adjustments can be made from inside the RV if required.

6.5 Preparing to Work Inside the RV

This section describes the interior preparation.

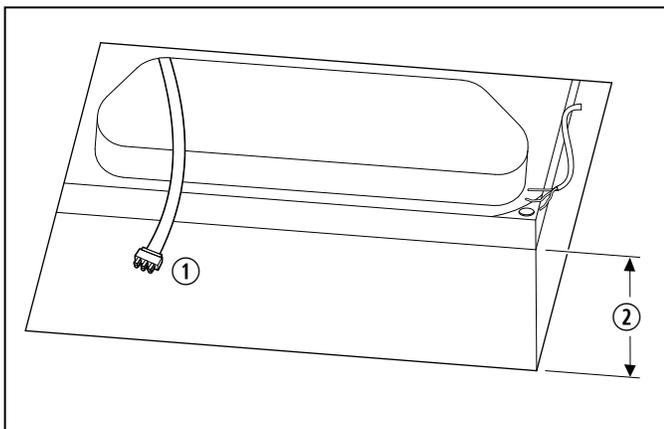
- Bring the ADB kit inside the RV. The box contains the mounting hardware for the ADB that will be used inside the RV.



18 Centering the Rooftop Model Unit from Inside the RV

① Roof Gasket

- From inside the RV, check the gasket alignment of the rooftop component over the roof opening. If necessary, adjust the rooftop component from below by slightly pushing up.



19 Return Air Opening

① Electrical Cord

② Ceiling Thickness

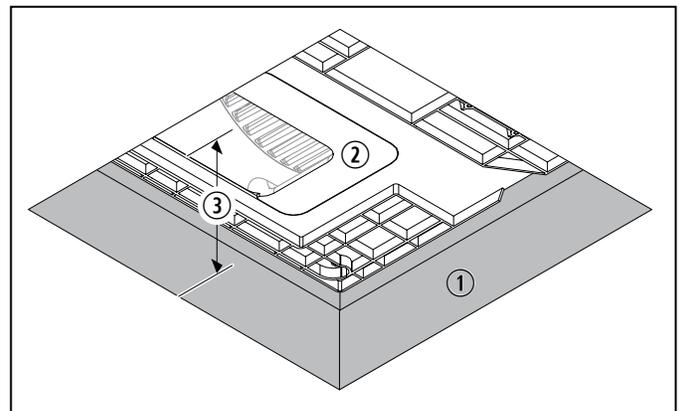
- Reach up into the return air opening of the rooftop component and pull the rooftop component electrical cord down for later connection.
- Remove the ADB and the mounting hardware from the carton. See "ADB Components" on page 4 for the parts configuration.

7 Installation

7.1 Installing the Foam Dividers

Roof thicknesses vary among RVs and the ADB installation may require additional foam to fill any gaps in thicker roofs.

This section describes how to determine if additional foam dividers are required, the number required, and the installation method.



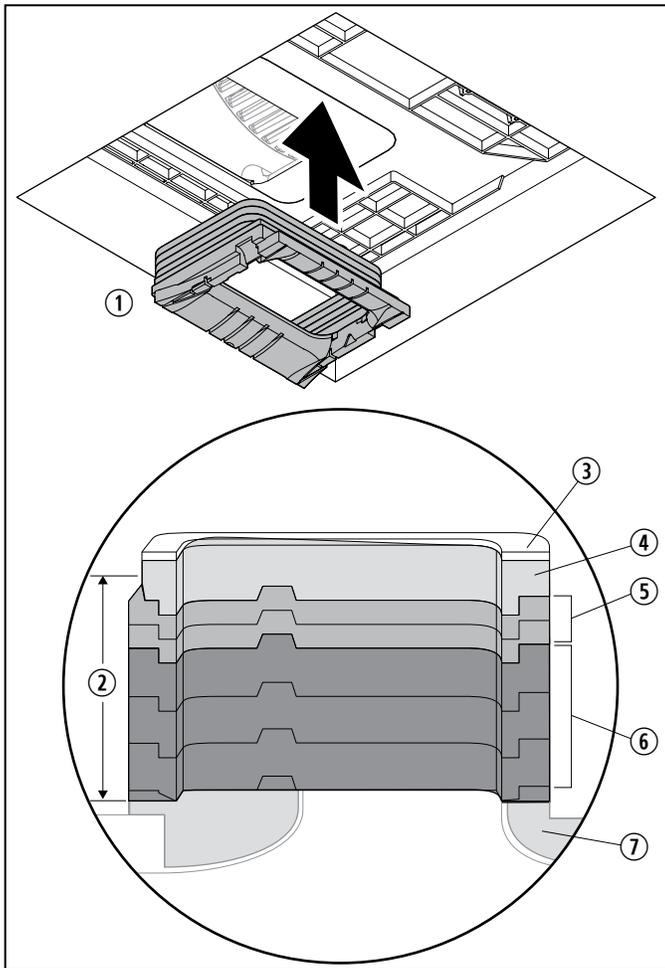
20 Measuring the Roof Thickness for Foam Divider Installation

① Ceiling Opening

③ Roof Thickness

② Rooftop Model Unit
Basepan

- Measure the roof thickness, from a flat surface of the installed rooftop component's basepan to the ceiling opening inside the RV.



21 Stacking the Foam Dividers and Placement Location

- | | |
|---------------------------------------|--------------------------------------|
| ① Stacked Foam Dividers | ⑤ Foam Divider - 0.4 in. (10 mm) (2) |
| ② Roof Thickness | ⑥ Foam Divider - 1.2 in. (30 mm) (3) |
| ③ Top Foam - 0.4 in. (10 mm) (1) | ⑦ ADB Adaptor (1) |
| ④ Top Foam Ring - 0.4 in. (10 mm) (1) | |

2. Identify the different types and sizes of foam dividers.

7.1.1 Roof Thickness 1.25 to 5.5 in. (32 to 152 mm)

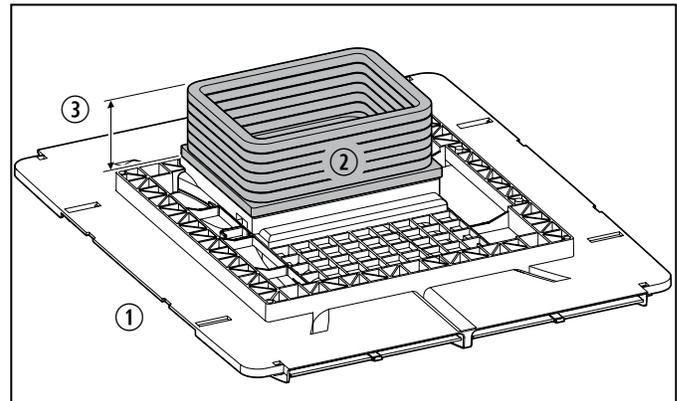
All Models										
Roof Thickness	1.25 in. (32 mm)	1.5 in. (38 mm)	2.0 in. (51 mm)	2.5 in. (64 mm)	3.0 in. (76 mm)	3.5 in. (90 mm)	4.0 in. (102 mm)	4.5 in. (114 mm)	5.0 in. (127 mm)	5.5 in. (140 mm)
Total Divider Thickness	1.7 in. (50 mm)	2.4 in. (60 mm)	2.8 in. (70 mm)	3.5 in. (90 mm)	3.9 in. (100 mm)	4.3 in. (110 mm)	4.7 in. (120 mm)	5.5 in. (140 mm)	5.9 in. (150 mm)	6.3 in. (160 mm)
Top Foam 0.4 in. (10 mm)	x	x	x	x	x	x	x	x	x	x
Top Foam Ring 0.4 in. (10 mm)	x	x	x	x	x	x	x	x	x	x
Foam Divider 0.4 in. (10 mm)		x	x	x	x		x		x	x
Foam Divider 0.4 in. (10 mm)			x		x					x
Foam Divider 1.2 in. (30 mm)				x	x	x	x	x	x	x
Foam Divider 1.2 in. (30 mm)						x	x	x	x	x
Foam Divider 1.2 in. (30 mm)								x	x	x
ADB Adaptor 1.2 in. (30 mm)	x	x	x	x	x	x	x	x	x	x

¹ Up to 0.4 in. (10 mm) of compression of the foam dividers is acceptable and may be required in some instances.

7.1.2 Roof Thickness 6.0 - 7.5 in. (152 to 191 mm)

All Models				
Roof Thickness	6.0 in. (152 mm) ²	6.5 in. (165 mm) ²	7.0 in. (178 mm) ²	7.5 in. (191 mm) ²
Total Divider Thickness	7.0 in. (180 mm)	7.5 in. (190 mm)	7.9 in. (200 mm)	8.3 in. (210 mm)
Top Foam 0.4 in. (10 mm)	x	x	x	x
Top Foam Ring 0.4 in. (10 mm)	x	x	x	x
Foam Divider 0.4 in. (10 mm)	x	x		x
Foam Divider 0.4 in. (10 mm)		x		
Foam Divider 1.2 in. (30 mm)			x	x
Foam Divider 1.2 in. (30 mm)	x	x	x	x
Foam Divider 1.2 in. (30 mm)	x	x	x	x
ADB Adaptor 1.2 in. (30 mm)	x	x	x	x
Spare ² Foam Divider 1.2 in. (30 mm)	x	x	x	x
Spare ² Foam Divider 1.2 in. (30 mm)	x	x	x	x

- Using the tables, determine the number and combination of foam dividers required based on the roof thickness.

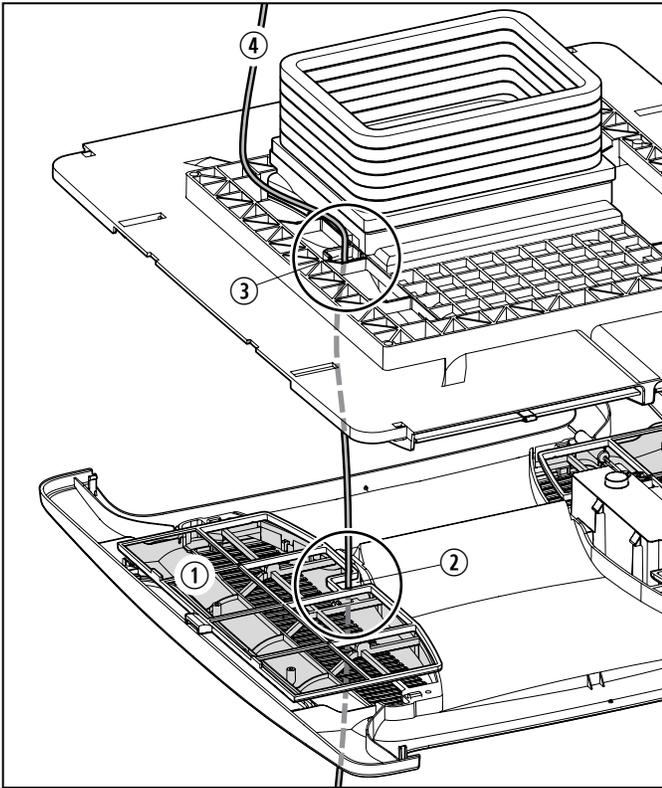


22 Confirming the Foam Divider Height Measurement

- ① Flat Surface of the ADB
 - ② Stack of Foam Dividers
 - ③ Full Height Measurement (Equal to the Roof Thickness)
- Place the ADB face down on a stable, protected, flat surface.
 - Stack the foam dividers required and place them onto the ADB.
 - Measure the full height, from the flat surface of the ADB to the top of the foam dividers to confirm the full height is equal to the previously determined roof thickness.
 - Adjust the number of foam dividers to reach the correct full height, as necessary.

¹ Up to 0.4 in. (10 mm) of compression of the foam dividers is acceptable and may be required in some instances

² To accommodate a roof thickness greater than 5.5 in. (140 mm), order the optional accessory kit. See "Tools and Materials" on page 4.



23 Passing the Wire Through the Filter Notch

- ① Filter
- ② Filter Notch
- ③ ADB Second Slot
- ④ 115 VAC Power Supply Wire and 6-pin Unit Electrical Cord

6. Slide out the filter to expose the filter notch.
7. Pass all of the available 115 VAC power supply wire and 6-pin unit electrical cord through the filter notch and through the second slot of the ADB.

7.2 Securing the Unit

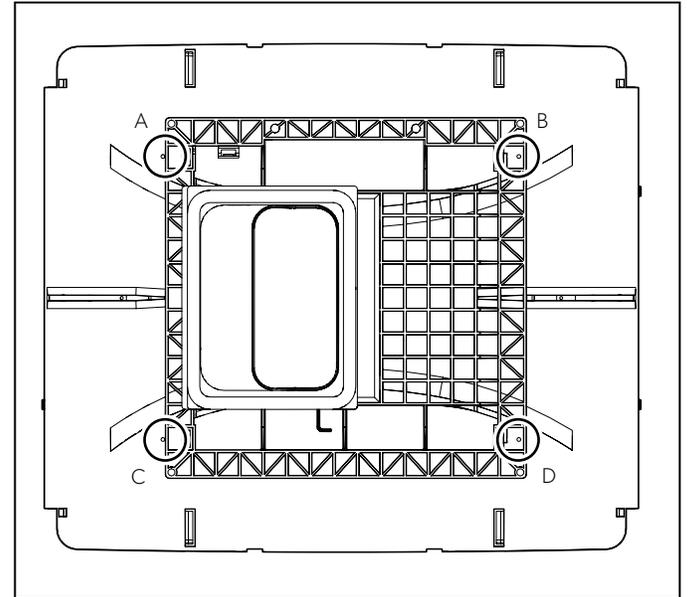
NOTICE: Overtightening could damage the rooftop component's base pan or ceiling template. Not enough torque will cause an inadequate roof seal, and could cause a leak.

i All models in this manual use a four bolt pattern to secure the ADB kit.

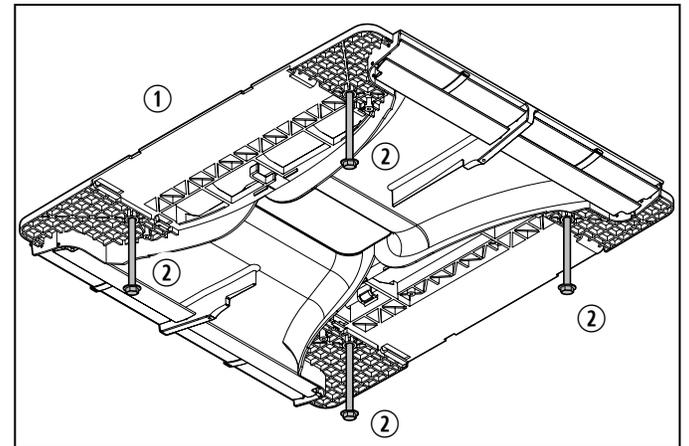
This section describes how to secure the rooftop component to the roof.

1. For units that fit within the 14.0 x 14.0 in. (366 x 366 mm) ceiling opening, press the entire unit up toward the basepan and into the ceiling opening.

2. Use the following figures to determine the proper mounting pattern and bolt location.



24 Mounting Bolt Pattern - All Models

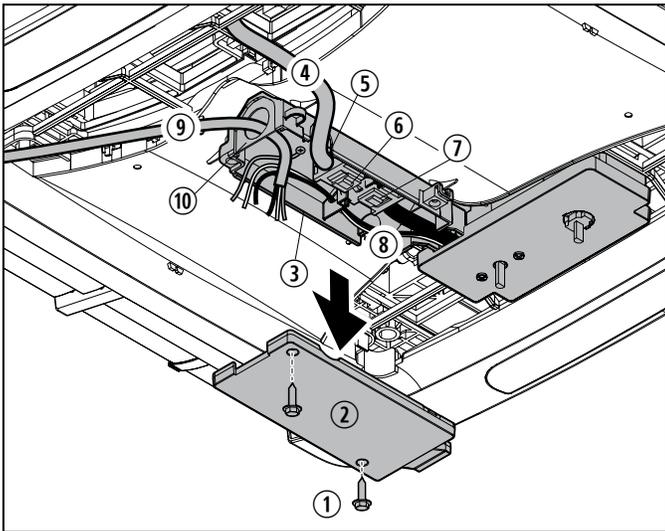


25 Mounting Bolt Location - All Models

- ① Ceiling Template
- ② Mounting Bolt

3. Start each mounting bolt by hand, through the ceiling template and up into the rooftop component base pan.
4. Tighten the mounting bolts to the correct torque specifications.
 - For the FreshJet, tighten all four mounting bolts evenly at 22.2 in. lbs (2.5 N·m).
 - For all other models, tighten all four mounting bolts evenly within 40 to 50 in. lbs (4.7 to 5.6 N·m).

7.3 Wiring the Unit to the Power Supply



26 Completing the Wiring

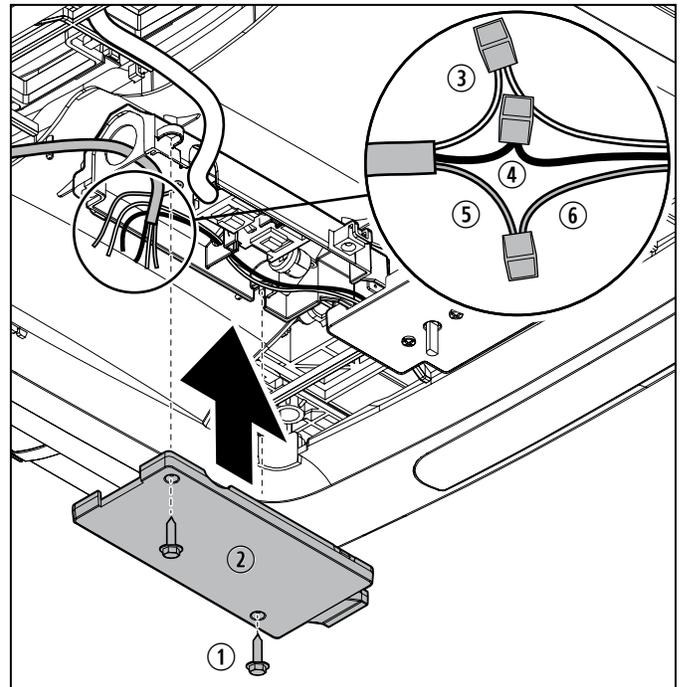
- | | |
|--|---|
| ① Junction Box Cover Screws | ⑥ Cable Connector for 6-pin Unit Electrical Cord (from the AC) |
| ② Junction Box Cover | ⑦ Cable Connector for 6-pin Unit Electrical Cord (from the ADB) |
| ③ Junction Box | ⑧ Live Black and Neutral White Wires (from the ADB) |
| ④ 6-pin Unit Electrical Cord (from the AC) | ⑨ 115 VAC Power Supply Wire (from the roof opening) |
| ⑤ Junction Box Notch | ⑩ Strain Relief |

This section describes how to wire the power supply to the rooftop component.

1. Unscrew the two junction box cover screws, and unsnap and remove the junction box cover.
2. Route the 6-pin unit electrical cord from the AC to the junction box location.
3. Plug the 6-pin unit electrical cord from the AC into the matching 6-pin cable connector in the junction box. The plug is keyed and will only fit in one direction.
4. To avoid damage, run the 6-pin unit electrical cord through the notch on the side of the junction box.

5. Route the 115 VAC power supply wire from the roof opening to the junction box location.
6. Thread the 115 VAC power supply wire through the strain relief.
7. Secure the 115 VAC power supply wire by tightening the two screws on the strain relief. Make sure not to damage the 115 VAC power supply wire.

7.4 Connecting the Power Supply



27 Junction Box

- | | |
|-----------------------------|----------------------------|
| ① Junction Box Cover Screws | ④ Live Black Wire |
| ② Junction Box Cover | ⑤ Copper Wire |
| ③ Neutral White Wire | ⑥ Green/Yellow Ground Cord |

This section describes how to connect the 115 VAC power supply wire from the rooftop component and the 6-pin unit electrical cord from the AC.

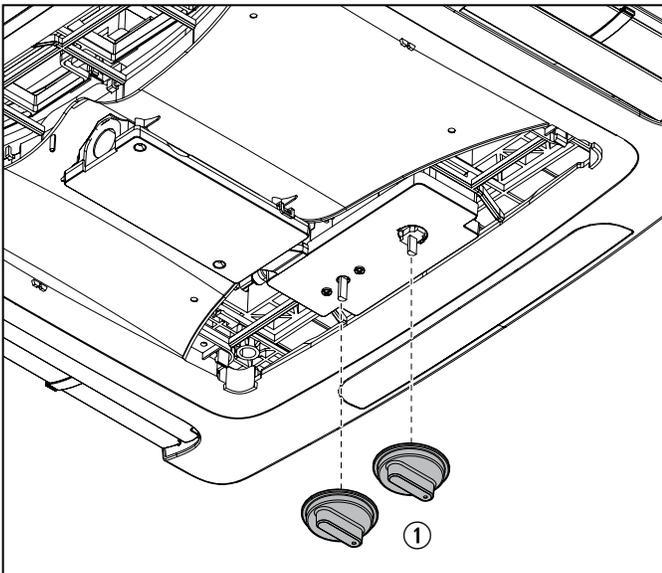
1. Connect the white neutral wires together, using appropriately-sized connectors.
2. Connect the black live wires to each other, using appropriately-sized connectors.
3. Connect the bare copper wire to the green/yellow ground cord, using appropriately-sized connectors.

4. Tape the connectors to the 115 VAC power supply wire to ensure they do not vibrate loose.
5. Push the connected wires into the junction box.
6. Align the junction box cover to the notch on the side of the junction box.
7. Snap the junction box cover into place and secure the junction box cover with the two junction box cover screws.

7.5 Finalizing the Installation

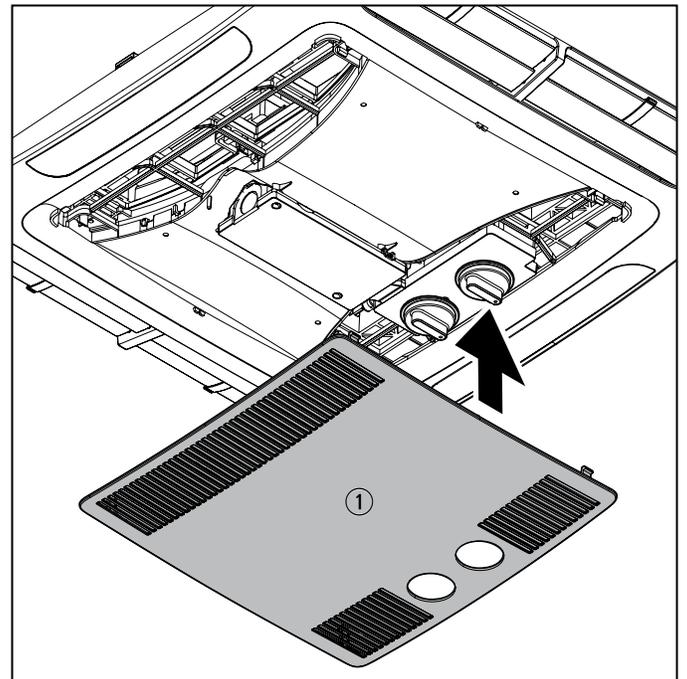
This section describes how to complete the ADB installation.

1. Push the filters in completely.



28 Attaching the Control Knobs

- ① Control Knobs (2)
2. Align the keyed control knobs to the control knob stems on the ADB.
3. Gently push the control knobs into place.



29 Attaching the Center Cover

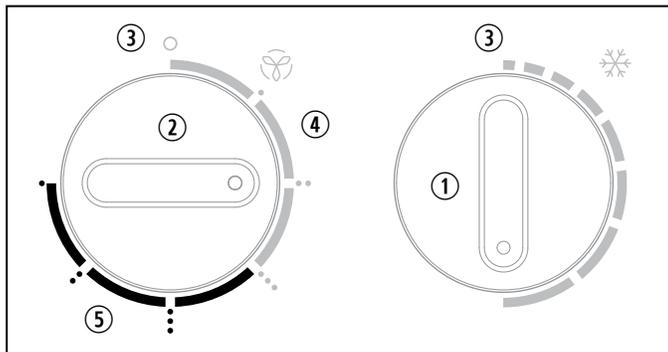
- ① Center Cover
 4. Clip the center cover to the ADB.
 5. Turn on the power supply.
 6. Verify that all the unit features work.
- i** Read the following operating instructions before attempting to run the unit.

8 Operation

This section describes the rooftop component's operating controls and settings.

8.1 Understanding the Controls

This section describes the operating controls.



30 Operating Controls

- | | |
|--|--|
| ① Temperature Control Knob (7 Positions) | ③ OFF Position |
| ② Fan Control Knob | ④ Fan-Only Speeds (3 Steel Gray Positions) |
| | ⑤ Cooling Fan Speeds (3 Dark Gray Positions) |

The temperature control knob (cool only) manages the ON/OFF operation within a temperature range of approximately 65–90 °F (18–32 °C), measured at the ADB inlet.

The fan control knob has seven positions, including OFF. This knob controls the fan-only speeds (steel gray positions) and the cooling fan speeds (dark gray positions).

8.2 Understanding the Settings

This section describes the settings for the unit.

8.2.1 Cooling Operation

NOTICE: Wait at least three minutes before restarting the compressor when it has been manually cycled off with either the selector control knob or the temperature set lever. Failing to do so will cause the unit to quick-cycle and could result in compressor or supply circuit overload.

This section describes how to use the cooling setting to reduce heat on warm days or evenings.

1. Turn the temperature control knob to one of the seven positions on the control panel.

2. Select the coolness level that best satisfies your needs:
 - Low Cool (shorter dash) maintains the room at the current comfort level. Normally, Low Cool is used for nighttime operation.
 - High Cool (medium dash) provides normal or average cooling.
 - Turbo Cool (longest dash) provides maximum cooling and dehumidification.
3. Set the thermostat at the desired temperature level.

i The compressor will cycle on and off as cooling is required to maintain the selected temperature level. The fan runs when the compressor is off to help keep the temperature uniform throughout the RV.

8.2.2 Fan-Only Operation

This section describes how to use the fan setting to circulate the RV air without cooling.

1. Turn the fan control knob to one of the three steel gray positions on the control panel.
2. Select the fan speed that best satisfies your needs.
 - Low Fan (one dot/fan symbol position) provides low air circulation.
 - High Fan (two dot position) provides normal or average cooling.
 - Turbo Fan (three dot position) provides maximum air circulation.

8.2.3 Cooling Fan Operation

This section describes how to use the cooling fan setting to circulate the RV air while cooling.

1. Turn the fan control knob to one of the three dark gray positions on the control panel.
2. Select the fan speed that best satisfies your needs.
 - Cool Low Fan (one dot/fan symbol position) provides low air circulation.
 - Cool High Fan (two dot position) provides normal or average cooling.
 - Cool Turbo Fan (three dot position) provides maximum air circulation.

9 Maintenance

This section describes routine activities to maintain properly working system components.

i The blower motor is factory-lubricated and requires no service.

9.1 Cleaning the Air Filter

NOTICE: Never run the unit without the return air filter in place. Otherwise, dirt will restrict the rooftop component's evaporator coil and may substantially degrade the performance of the unit over time.

This section describes how to maintain a clean air filter.

1. Periodically (or a minimum of every two weeks of operation) remove the return air filter located behind the return air vent grille and wash it with soap and warm water.
2. Let the filter dry completely before placing the filter back into position.

9.2 Cleaning the ADB Housing

NOTICE: Never use furniture polish or scouring powders to clean the ADB housing.

Clean the ADB housing and the control panel with a soft cloth dampened with a mild detergent.

10 Troubleshooting

The following table describes common occurrences that are not a result of defective workmanship or materials.

Problem	Possible Cause	Suggested Remedy
The product does not operate.	The circuit breaker has activated.	Set or reset the circuit breaker.
	A fuse has blown.	Replace the fuse.
The product does not operate (or operates poorly) and the RV is connected to the motor generator.	The RV is not receiving power from the motor generator.	Confirm the motor generator is running.
		Confirm the motor generator is producing power.
		Confirm the fuse or circuit breaker is open. Ensure the fuse is not blown, or circuit breaker is on and not activated.
		Contact the local service center.
The product does not operate (or operates poorly) and the RV is connected to a power supply by a land line.	The RV is not receiving power from the power supply.	Confirm the land line is plugged into the power supply.
		Confirm the land line is properly-sized for the product's power load.
		Contact the local service center.
Frost forms on the evaporator coil, as visible through the air inlet hole with the filter removed.	The product is producing very cold output at a very low air speed.	Inspect and clean the filter.
		Open the air vents and remove any obstructions.
	The outside temperature is relatively low.	Adjust the thermostat control knob to a warmer setting (counterclockwise).
		Operate the product on any Fan Only setting until the coil is free of frost.
		Contact the local service center.

Problem	Possible Cause	Suggested Remedy
The product does not maintain the desired temperature.	The product is affected by the RV's heat gain from high outdoor temperatures or humidity.	Park the RV in a shaded area.
		Use window shades, blinds, or curtains. ¹
		Keep the windows and doors closed or minimize their use.
		Avoid using heat-producing appliances inside the RV.
		Operate the product in the Turbo Fan/Cooling mode.
		Start the product before the outside temperature increases.
Condensation forms on ceilings, windows, or other surfaces. ²	The air contains water vapor that is below the dew point of the surface.	Keep doors and windows closed when the unit is in operation to reduce the formation of condensation.

¹ For a more permanent solution to high heat gain, accessories like the Dometic outdoor patio or window awnings reduce the effects of direct sunlight.

² During normal operation, this product is designed to remove a certain amount of moisture from the air, depending on the size of the space being conditioned. The manufacturer of this unit will not be responsible for damage caused by condensation forming on ceilings, windows, or other surfaces.

11 Disposal



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

LIMITED TWO-YEAR WARRANTY

LIMITED TWO WARRANTY AVAILABLE AT WWW.DOMETIC.COM/WARRANTY.

IF YOU HAVE QUESTIONS, OR TO OBTAIN A COPY OF THE LIMITED WARRANTY FREE OF CHARGE, CONTACT:

DOMETIC CORPORATION
 CUSTOMER SUPPORT CENTER
 5155 VERDANT DRIVE
 ELKHART, INDIANA, USA 46516
 1-800-544-4881 OPT 1

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