

SEA FROST®



Keeping It Cold . . .



Refrigeration is often the single greatest energy demand onboard a cruising sailboat. And because boats don't generally have a continuous power supply, a specialized refrigeration system is needed — one geared toward the type of power available.

Insulation thickness, the volume of refrigerated space and climate are all factors in energy needs. Your cruising habits and size of crew dictate whether a freezer is needed.

Each of our systems has advantages in certain applications. Our **BD systems** (compact, pre-charged, easily installed 12/24 volt D.C. refrigeration conversion kits) are designed for state of the art efficiency.

For cruising with no extra battery power for refrigeration, the **Sea Frost Engine Drive** holdover plate system provides fast, powerful refrigeration with minimum running time. A **Shore Assist** may be added for dockside operation.

If your boat is fitted with a generator, and has large refrigeration needs, the high capacity **BG 1000** holdover plate series might be considered as it draws from either generator or dockside power.

Boats with large battery banks and battery charging capability are often fitted with a half-horsepower, 12/24 volt **DC 5000** holdover plate system.

Dual compressor systems can be set up with any holding plate system to customize the choice of power used. Combining any of these models adds redundancy and versatility.

We also offer a line of pre-charged **Bait Freezers** used on sport fishing boats as catch box chillers, bait freezers or in the galley.

The primary design objective of each Sea Frost system and component is efficient, long-lasting performance in the marine environment.

Visit our website, www.seafrost.com, for detailed specs, applications, installation manuals, and pricing information. Call us; we'll be happy to discuss your particular needs.

Best regards,

Dr. Ice



BD SERIES

BD Direct Evaporator Systems are advanced design 12- or 24-volt D.C. conversion kits perfect for well insulated refrigerator boxes. Each system consists of two components—a remotely located compressor and a half-inch thick polished stainless steel cold plate that

can be mounted on a shelf, wall or ceiling. Dockside, the systems operate via the boat's battery charger. Models include the standard **BD**, the 30% higher capacity **BDxp**, and the **BDxpx**—a specialized system ideally suited for the largest refrigerator boxes or applications requiring subzero freezing. All utilize state of the art, electronically-controlled, variable speed Danfoss® hermetic compressors and come factory pre-charged. Options on all BD units include custom plate sizes, custom line lengths, 2-plate freezer systems, freezer bin, remote thermostat, electronic control and ice-making tray kits.

"The Sea Frost BD I installed works magnificently! I have proudly shown my installation to quite a few fellow sailors, . . .all impressed with the neat package supplied with the unit. As my daughters put it, 'Way Cool, Dad!' "

— D. Richmond



ENGINE DRIVE

The Sea Frost **Engine Drive System** offers true cold storage refrigeration for offshore cruising. The cold storage method is like having a "self-replenishing block of ice" and is the best way to refrigerate a boat when a continuous power source is not available or when battery banks are

inadequate to support electric systems. Driving the compressor from the engine rapidly freezes the contents of the holdover plate converting engine power to 'cold' directly — an extremely efficient energy transfer. A well designed Engine Drive system can accomplish a day's worth of refrigeration in under an hour while otherwise using the engine: motoring, charging your batteries, making and/or heating water.

Water cooling is achieved by using a flow-through condenser (heat exchanger) and the engine raw water pump. This eliminates an additional water pump, strainer and through-hull fittings.

The Engine Drive is easily combined with other types of Sea Frost systems, including our dockside, generator or 12 volt models.



DC 5000

Sea Frost's **DC 5000** is designed to refrigerate boats equipped with large battery banks and alternative energy systems for battery charging. This direct drive system freezes holdover plates rapidly and maintains thermostatically controlled temperatures by operating on demand from battery power. It can also be operated when under power or generator to freeze holdover plates, eliminating battery draw.

The DC 5000 is powerful enough to run a three-plate, twin valve refrigerator/freezer and may be combined with the Engine Drive and/or air cooled Shore Assist for the ultimate in versatility and redundancy. The DC 5000 is a lightweight, compact, one-piece design.

"We installed our Sea Frost in 1987, just before we left on a 4-year circumnavigation. It worked perfectly the whole time and we're still using the same system. Of all the systems we saw while cruising, Sea Frost was the most reliable. I would never own anything else."

— S. Kuhner



BG SERIES

BG systems are high capacity, generator-driven units. The **BG 1000** is a 3/4 h.p. water-cooled 110- or 220-volt AC compressor that operates using either dockside power or the boat's onboard generator. It is designed to be installed as a primary system but can be installed

with the Engine Drive, DC 5000 or Shore Assist, and is best fitted to a boat that uses its generator more than the main engine. The BG 1000 is fitted with a thermostatic control, allowing the boat to be left dockside for extended periods of time while maintaining even refrigeration temperatures.

The **BG 2000** is a one h.p. system designed for trawlers and other boats with either onboard or dockside AC power generation. This extremely powerful refrigerator/freezer system combines holding plates and refrigerant R-404a for a fast freeze and ultra cold temperatures utilizing generator power when available. This means minimal daily running time and peaceful evenings with no machinery noise. Because there is no battery or inverter use, larger freezers are possible.



PLATES

Holdover plate size and piping configurations can be customized for any installation. Information regarding the size of your box, and the insulation thickness and value will allow us to help you design the proper system.



TRADEWINDS

The **Tradewinds** DC incorporates alternate energy into the powering of your refrigerator/freezer system. It is designed to be used with wind power or solar panels, with back up battery power. It is fitted with either holdover or evaporator plates and depending on the model has either ducted air or air/water cooling. A water cooled option can be added to allow the selection of air or air/water cooled operation. The **Tradewinds XP** has 30% more capacity for larger cabinets and two plate hookups. The Tradewinds compressor is similar to the BD.

"If a good stove is the heart of any galley, a good refrigeration system is its very soul. Probably the most successful single system aboard Calypso is the refrigerator/freezer engineered by Sea Frost. . .impeccable reputation, good engineering and unmatched after-the-sale service."

— Nick Nicholson, for Practical Sailor



FREEZERS

All freezers should be designed with two plates on opposite walls of the cabinet. Holdover plate surface area must be increased over that of the refrigerated space. A **spillover system** consists of two holdover plates in the freezer section of the divided box—a vent at the top allowing air to circulate between the two. The box is divided by an air tight insulated wall, with a self-contained temperature control air damper (thermodamper) fitted at the bottom automatically controlling the amount of cold air flowing between the two boxes. A return air port is fitted at the top of the divider wall. In a large cabinet, or if the freezer section is not large enough to fit plates to cool both refrigerator and freezer boxes, a series system will be needed involving two plates in the freezer and one plate in the refrigerator. In a **single valve** set up, all three plates are piped in series. A **twin valve system** is used where the freezer is not always needed, where the freezer needs more running time than the refrigerator, or where the cabinets are not adjacent to each other. Two zones are created and the freezer, refrigerator or both may be operated. Electric twin valve systems have two separate thermostats.



ICE-MAKING KITS

Our optional, vertical ice-making trays can be used with any refrigerator or freezer application (see brochure cover). Designed to expand as the water freezes, the trays hang vertically on the cold plate. Each vertical tray kit includes two vertical trays and splines, mounting rod and clips.



SHORE ASSIST

Shore Assist units are added to holdover plate systems to maintain the boat's refrigerator/freezer box at a set temperature via a thermostat when the boat is dockside. Tropically rated ducted air cooling is offered on the smaller models (SA-I and SA-II). When the boat is left unattended, air cooling offers

reliability over water cooling which could be stopped by weeds and flotsam restricting the water intake.

The **SA-I** is fitted to a single block or single holdover plate. Air cooling is ducted to allow installation in a confined space. The **SA-II** is used in multiple plate series systems. Air cooling is ducted to allow installation in a confined space. The **SA-III**, the largest capacity Shore Assist, is water cooled to maintain a compact size and to allow installation in a confined area. It is used with multiple plate systems and is standard with a twin valve system. The SA-III should be considered over an SA-II in a boat with a generator, as the rate of cooling is faster and greater benefit will result during the generator's operation.

Shore Assist systems are often purchased with the Engine Drive.

"In March I took delivery of an Engine Drive system with Shore Assist. I bought from Sea Frost because of your reputation and the fact I've chartered boats with Sea Frost installed. Most important was your terrific support all the way through from start to finish."

— D. Timm



BF SERIES BAIT FREEZERS

Sea Frost **Bait Freezers** (BF series) are compact, 110 or 220 volt A.C. powered units adaptable as catch box chillers, bait freezers or galley refrigerators/freezers. These can be bulkhead or shelf-mounted and are capable of maintaining an insulated cabinet below freezing temperatures when operating from a continuous power source. The remote mounted compressor and condenser are housed in a compact, rust-proof, fiberglass housing. Temperature

is controlled with a digital, low-voltage thermostat.

Typical freezer installation requires two stainless steel direct evaporator plates (or a hidden cooling coil if the installation is new construction). Plates are 1/2" thick with sealed backs and are available in custom sizes with stainless steel or copper refrigerant tubes. Models include the **BF1—1/4 hp**, air cooled; **BF2—1/4 hp**, either air or water cooled; and **BF3—3/8 hp**, air or water cooled.

What Our Customers Have to Say...

"We have just returned from a two week cruise to Nantucket with our shiny, new Sea Frost system and it works even better than you said it would. I want to thank you for helping us design a custom unit. Sea Frost is an extraordinary company with which to do business, and you have added immensely to our enjoyment of our thirteen year old sailboat."

— S. Blunden

"You have a great company. I only wish you sold more boat stuff so I could buy it all from Sea Frost. Unbelievable service."

— N. deCarlo

"Our Sea Frost is doing very well with the tropics and we are very pleased. If you need an endorsement from happy 'Tropical' customers, please let us know!"

— D. Russell

"The refrigeration system has continued to run flawlessly and based on the quality of your products...and the customer support . . . I would certainly recommend Sea Frost to anyone considering refrigeration for their boat."

— J. Mahoney

"I have sincerely appreciated your patience and help through my buying decision and through the installation and start up. I have recommended Sea Frost to several people."

— D. Kay

"Refrigeration is the greatest thing to happen to sailing since fiberglass! For 20 years I spent more money on ice than fuel and never had enough room in the icebox for any food since it was so full of ice. Many thanks for helping me on this."

— A. Ames

"Just a note to let you know how well your refrigeration system works. We just completed a five month trip in the eastern Caribbean and the system works very well. It is certainly one of the better systems on our boat."

— H. Haltom

"I used my new system from December through April on a cruise from St. Maarten to Grenada and back. The system worked perfectly and I am very pleased with it."

— T. Humphreys

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