

WAGGONER CRUISING GUIDE

SELECTING A DIESEL HEATING SYSTEM: Part 3

There are so many anchorages to explore that it would take more than a lifetime to visit them all. But with cooler weather affecting us much of the year it only makes sense to have an adequate heating system aboard to extend the cruising season.

Now that we have discussed the basics and the types of diesel heaters available in the previous two parts of this article, now we are going to discuss other consideration when installing a diesel heating system:

- Diesel heating systems comparison
- Installation considerations
- Power requirements
- Maintenance

But first let's review our previous discussion on a heater with a quick comparison:

Heater Type	Btu/hrs.	Price Range*	Pros	Cons	Manufactures
Bulk & Freestanding	6,500 – 16,250	\$1,100 - \$1,350	Efficient, simple, ambience	Takes up living space, central heat only, large stack, soot, potential back drafts	Dickinson
Galley Range and Blower	3,000 – 6,500	\$1,500 - \$2,650	Quiet, clean burning	Expensive, Central heating	Wallas
Forced Air	2,900 – 45,000	\$2,200 - \$3,500	More heat, thermostat controlled, central heating system, fast <u>warmup</u>	Expensive, noisy, cycles often, can't be zoned, may experience cooler air at end of run	Espar, Webasto, Wallas,
Hydronic	17,000 – 105,000	\$2,000 - \$5,500	Most efficient use of fuel, uses less space, thermostat controlled, zone heating, can be plumbed to heat hot water tank or preheat engine	Expensive, takes a few minutes to produce heat, uses more 12 and 24v power, complex	Espar, Kabola, Hurricane, Webasto

*Prices are for the heater only and does not include installation labor, mounting hardware, wiring, ducting, hoses, silent kit, fans, valves, fittings, pumps, heat exchangers, thermostat, exhaust fittings, etc.

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INSTALLATION

Regardless of the type of heating system you select, considerable care and attention must be given to each unit's exhaust system. Installing a heater to your boat is not a do-it-yourself job for most. The manufacturer's installation instructions must be followed meticulously. For this reason, the installer of your system must be fully familiar with the components, have an attention to detail and possess an American Boat and Yacht Council (ABYC) certification to ensure adherence to the appropriate standards. Your pride and joy was probably built to ABYC standards, keep it that way.

The exhaust gases produced by diesel heaters are quite hot. Forced-air and hydronic systems typically require the installation of an "exhaust pipe", a tube or conduit that safely carries these hot gases from the furnace to the exterior of the boat. These exhaust pipes or tubs are often made of flexible yet gastight stainless-steel tubing that is wrapped with insulation.

The exhaust port of forced-air or hydronic heating systems is typically installed in the boat's hull side or transom. If installed in the side of the hull, placement critical, to ensure during operation while dockside or rafted, as it variably will be, will ensure combustibles such as fenders, lines, docks and other vessels are not overheated or burned by the exhaust gases. Most installations use a highly desirable combination air intake and gas port, which draws combustion air through the perimeter of the exhaust outlet, effectively cooling the exhaust pipe in the process. While the metal port doesn't get as hot, the gases still remain capable of causing damage or a fire.

POWER REQUIREMENTS

The forced-air and hydronic units are offered in 12- and 24-volt models. Power draw (for the blower, heat exchanger fans, fuel pump, and igniter) is occasionally a concern, but most boats have sufficient house battery capacity to keep these systems working smoothly through a long winter night. However, bear in mind that excessive voltage drop will cause almost any advanced heating device to run poorly or even fail overnight.

MAINTENANCE

Diesel heating systems are reliable and trouble-free when maintained in accordance with manufacturer's suggested maintenance schedule. The amount of maintenance required to keep things running smoothly is another consideration when choosing a heating system. Although live-a-board applications typically require more maintenance due to their continuous use.

The adage "use it or lose it" applies to the more complex heating solutions as well. Sitting unused and neglected for months at a time will shorten the efficiency and lifespan of nearly any system. This is why some manufacture suggests running your system once a month throughout the year.

AT THE END OF THE DAY

With the wealth of options available, finding the right heating solution for your boat is not always an easy task. Key considerations include anticipated air and water temperatures, and pattern of off-season use. Take your time to do some homework; the high quality of today's heating systems makes a bad choice very unlikely.

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~ Deane Hislop

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