Manual - Basic water heater

Isotemp Basic water heater has been designed and produced to ensure that your water heater will give long and trouble free operation for many years.
It is important, however, that your Isotemp water heater is correctly installed and maintained. During the winter period when the unit is not being used it is essential that it is drained to avoid risk of damage due to freezing.
Every single Isotemp water heater is individually pressure tested prior to delivery and carries a 2 year factory warranty in respect of defects in material and/or manufacture and a limited 5 year warranty on the inner tank.

Installation:
1. Placement: The water heater may be placed in a suitable place with the engine water connectors on the water heater below the level of the engine header tank. The connection hoses between the engine and the water heater should be kept as short as possible.

2. Mounting: The water heater can be mounted horizontal, with the safety valve lowest, or vertical with all connections pointing downwards. The mounting brackets can be turned to fit the bottom or a bulkhead on board. Bear in mind the weight of the unit when full of water.

3. Water connections:
3.1 Fittings: Use only fittings and accessories made of non-corrosive material such as brass or stainless steel. Avoid plastic fittings on the water heater depending on the heat. For the engine cooling water connections, use heat resistant (100°C/210°F) reinforced rubber hoses, resistant to anti-freeze and pressure proved for 5 bar (70 psi). For the fresh water, use heat resistant fresh water hoses (food industry quality). They shall be rated 8 bar (115 psi).
Seal the threaded connections with e.g. LocTite 242.

3.2 Engine connections (see schedule): The water heater may be used with either fresh or sea water cooled engines. The flow of cooling water from the engine through the water heater must be at least 2 litres/min. If the boat has two engines, connect the water heater to one engine only.
Connection to the engine shall be done with min. 16 mm / 5/8" hoses and adaptors to avoid restrictions. See the instructions in the engine operators manual, regarding hose connection points.

3.3 Freshwater connections (see schedule): The water heater is fed with fresh water from the electrical fresh water pump. Max pressure 3 bar (42 psi). The hot water outlet, which also vents the water heater, should be connected to a mixer tap at the sink and/or basin outlet. Cold water can be mixed with hot to avoid scalding. Set a proper temperature on the thermostat mixing valve on the water heater, if fitted. The waste water hose must always have a free outlet. There must be no valves or skin fittings, fitted to the waste water hose. A small quantity of water may be expended via the safety valve during the heating up period.

3:4 Electrical connection: All internal connections are made in the factory. The mains power supply cable is fitted with an international plug (EU plug), which should be fitted to a correctly installed socket. This socket as all "high-voltage" installations on board, must be carried out to fulfill valid regulations. The Isotemp Slim water heater is designed to meet EU regulations in this field. When leaving the boat for longer periods, it is recommended to pull out the cable connector from the socket. This should be done even if the shore power system is shut off, as there can be a potential difference in the electrical system, between the earth and the salt-water earth of the boat. This can seriously damage the immersion or water heater.

4. Start up/Test: Start the engine and check the circulation of the cooling water. Secure the hoses after checking. When using with a fresh water engine system, compensate with anti-freeze for the additional volume in hoses and heat exchanger. Fill up the water heater with fresh water by starting the fresh water pump, leaving the hot water tap open to air the system. Check there are no water leaks and finally connect the power cable when the water heater is full. Check that the safety valve outlet is free to allow water to escape.

5. Maintenace:

5:1 Winter drain: When there is a risk of freezing temperatures, the water heater must be drained. This is done by pulling the lever on the safety valve to its open position. Take off the hot water hose and/or open the air bleeder screw on the mixer valve, to allow air coming into the tank.
The water heater can be left safely on board over winter.

5:2 Immersion heater: The immersion heater is on 750W. The thermostat has an integrated working thermostat and a double over heat protection thermostat. This is manually re-settable, by pushing the white indicator pin, under a white cap, at the top of the overheat thermostat. Also check why the overheat thermostat initially tripped before re-connection the power supply.
When leaving the boat for long periods, it is recommended to dis-connect the power supply cable plug. This should be done even if the shore power system is shut off, as there can be a potential difference in the electrical system, between the earth lead and the salt water earth of the boat. This can seriously damage the immersion and water heater.
The immersion heater is also available in other versions as well as in 115 volt on special order.

5:3 Controls: Check regularly that there is no leakage in the connections.

Technical data

Type	Volume lit.	L x øD x H mm	Weight kg	Immersion heater
602431B000000	24	460 x 390 x 395	11	230V/750W
604031B000000	40	630 x 390 x 395	17	230V/750W
605031B000000	50	750 x 390 x 395	20	230V/750W
607531B000000	75	1040 x 390 x 395	26	230V/750W

Connection freshwater. BSP ½" outside, Engine water BSP ½" outside
Material: Tank and connections AISI 316, outside cover and mounting feet AISI 304
Safety valve: 4.5 bar / 65 psi
Insulation: Polyurethan foam
The manufacturer reserves the right to change the specifications without prior notice

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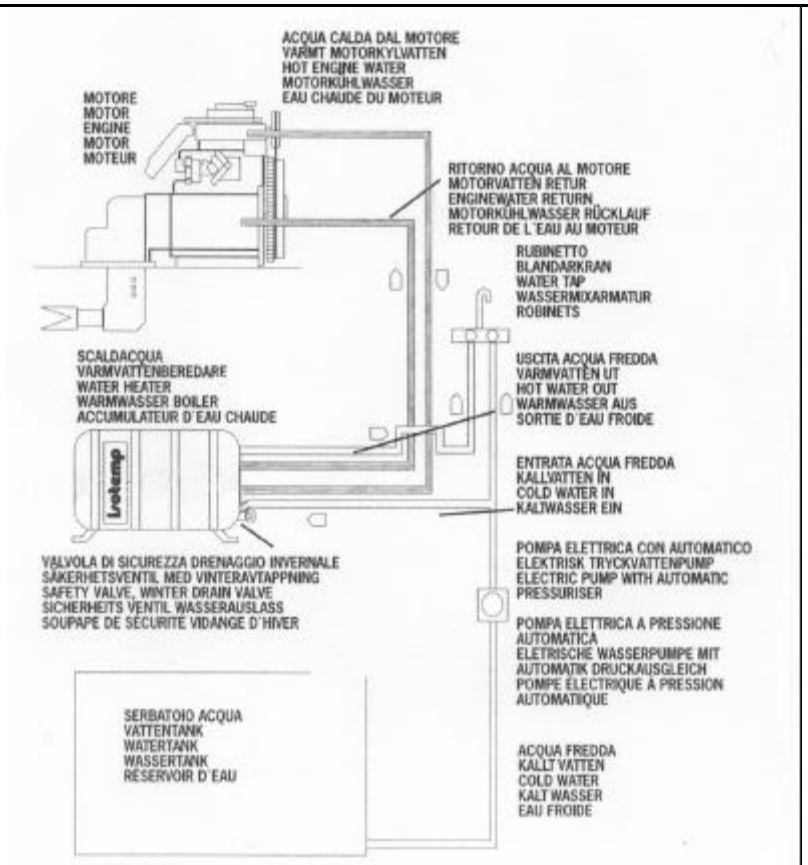
ACQUA CALDA DAL MOTORE
VARMT MOTORKYLVATTEN
HOT ENGINE WATER
MOTORKÜHLWASSER
EAU CHAUDE DU MOTEUR
MOTORE
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MOTOR
MOTEUR
RITORNO ACQUA AL MOTORE
MOTORVATTEN RETUR
ENGINEWATER RETURN
MOTORKÜHLWASSER RÜCKLAUF
RETOUR DE L'EAU AU MOTEUR
RUBINETTO
BLANDARKRAN
WATER TAP
WASSERMIXARMATUR
ROBINETS
SCALDACQUA
VARMVATTENBEREDARE
WATER HEATER
WARMWASSER BOILER
ACCUMULATEUR D'EAU CHAUDE
USCITA ACQUA FREDDA
VARMVATTEN UT
HOT WATER OUT
WARMWASSER AUS
SORTIE D'EAU FROIDE
ENTRATA ACQUA FREDDA
KALLVATTEN IN
COLD WATER IN
KALTWASSER EIN
VALVOLA DI SICUREZZA DRENAGGIO INVERNALE
SÄKERHETSVENTIL MED VINTERAVTAPPNING
SAFETY VALVE, WINTER DRAIN VALVE
SICHERHEITS VENTIL WASSERAUSLASS
SOUPAPE DE SÉCURITÉ VIDANGE D'HIVER
POMPA ELETTRICA CON AUTOMATICO
ELEKTRISK TRYCKVATTENPUMP
ELECTRIC PUMP WITH AUTOMATIC
PRESSURISER
POMPA ELETTRICA A PRESSIONE
AUTOMATICA
ELETRISCHE WASSERPUMPE MIT
AUTOMATIK DRUCKAUSGLEICH
POMPE ELECTRIQUE A PRESSION
AUTOMATIQUE
SERBATOIO ACQUA
VATTENTANK
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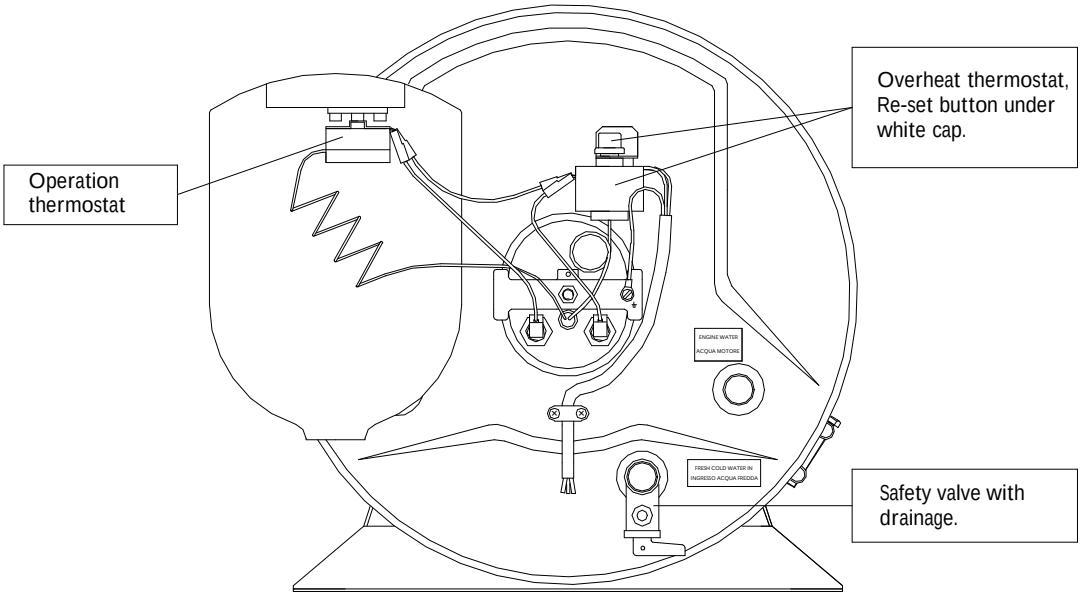
RÉSERVOIR D'EAU
ACQUA FREDDA
KALLT VATTEN
COLD WATER
KALT WASSER
EAU FROIDE


Operation thermostat
Overheat thermostat, Re-set button under white cap.
Safety valve with drainage.