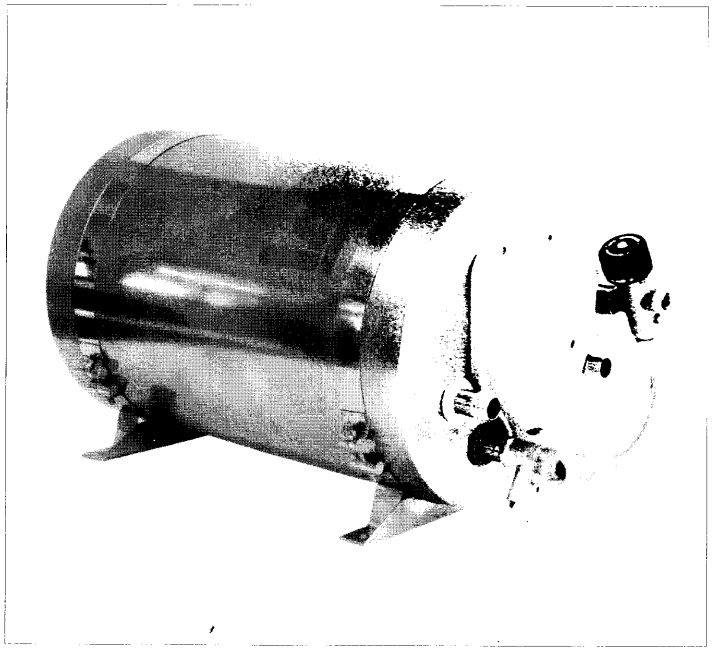
isotemp

· SCALDACQUA · WATERHEATER
· ACCUMULATEUR D'EAU CHAUDE CHAUFFE-EAU
· WARMWASSERBEREITER · VARMVATTENBEREDARE
· BOILER · CALENTADOR DE AGUA

Manuale d'installazione e di servizio	Installation and service manual	Notice d'nstallation et de mise en route	Einbau- und Bedienungs-Anleitung	Installations- och bruksanvisning
Handeleiding voor installatie en onderhoud	Manual de instalación y mantenimiento			



ENGLISH

ISOTEMP water heater have 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 dispatch and carries a factory warranty in respect of defects in material and/or manufacture according conditions valid for each country.

Installation:
1. Placing: The water heater may be situated anywhere in the vessel but must be installed with the engine water connectors on the water heater below the level of the engine header tank. It is an advantage to make the connecting pipe work between the engine and heater as short as possible to avoid heat loss, and to avoid any flow resistance which may be encountered in long hoses.

2. Mounting: It is essential to mount the heater in a horizontal position (Basic also in vertical), always having the safety valve/-drainage valve placed lowest. The mounting brackets can be turned to fit towards bottom board or bulkhead. Bear in mind the extra 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 stainless steel or brass (fitting kit no 0100K). Avoid plastic fittings if possible as they are liable to fracture causing a loss of engine coolant and hot water, also, they may become loose when subjected to very hot water. For the engine connections, use heat resistant (100°C-210°F) canvas reinforced rubber hose, which is also resistant to anti-freeze and pressure approved for 5 bar (70 psi). For the fresh water connections again use rubber hose with the same heat resistance but which can withstand a pressure of 8 bar (115 psi), also to be toxic free such as is used in the food industry. This type of hose must also be used for the cold fresh water supply. All hoses must be secured by hose clips of good quality and all threaded connections must use a good sealant e.g., Loctite 242 etc.

3:2 Connections to Engine (see schedule): ISOTEMP water heaters may be used with either fresh water or salt water-cooled engines. If a salt water-cooled engine, the outlet temperature must be 65-75°C (150-165°F), to achieve effect enough. Because the ISOTEMP has a coil of stainless steel, there are no problems in connecting directly to a seawater cooled engine. Follow the guidelines given by the engine manufacturer regarding suitable connections.
The two connection points must have enough pressure difference when engine is running to ensure that a flow, of at least 2 liters of cooling water per minute, is supplied to the water heater. If the vessel has twin engines, connect the water heater to one engine only. If a single engine installation and two water heaters are required, these may be connected in parallel by the installation of T couplings. All hoses, adaptors, fittings or tubes must not have a smaller dimension than the connections to the water heater (16 mm-5/8") to avoid any unnecessary restriction. If the engine water circulation is too low as a result of long hoses, restrictions or incorrect connection points on the engine this flow can be increased by fitting an electrical circulation pump to operate in conjunction with the engine. At connection to small diesel engines of 10-15 hp it can be necessary to reduce the flow through the water heater to keep the engines cooling capacity.

3:3 Freshwater Connections (see schedule): The water heater is fed with fresh water from an electrical pressure water pump connected to the water supply tank. It is also possible to feed the water heater from a manual (hand or foot driven) pump. In this case it is essential to have a separate pump for hot water which pressurizes the water in to the water heater, both being connected to either separate or mixer taps at each outlet. Any electrical pressure pump must not have a higher pressure than 3 bar (42 psi). The hot water outlet, which also vents the water heater, should preferably be connected to a mixer tap at sink or basin outlets, so that cold water may be mixed with this, as the temperature of the hot water may be so high as 85°C (185°F) and can be dangerous. Set a proper temperature on the mixing valve (if fitted) on the water

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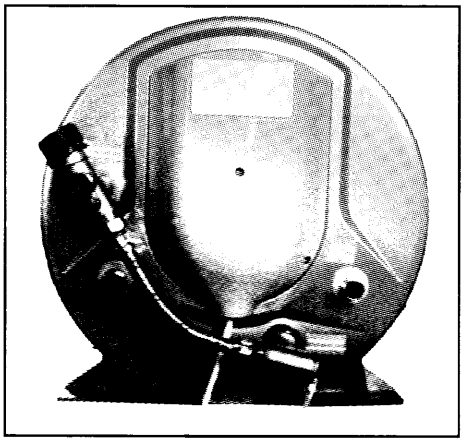

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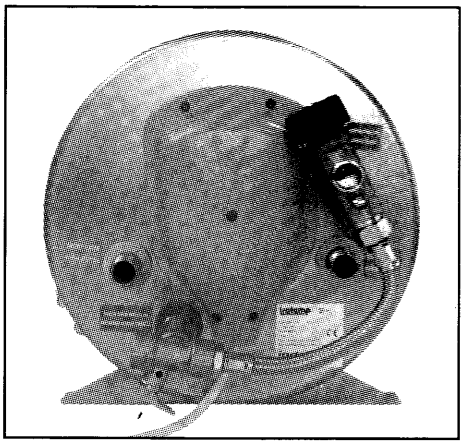

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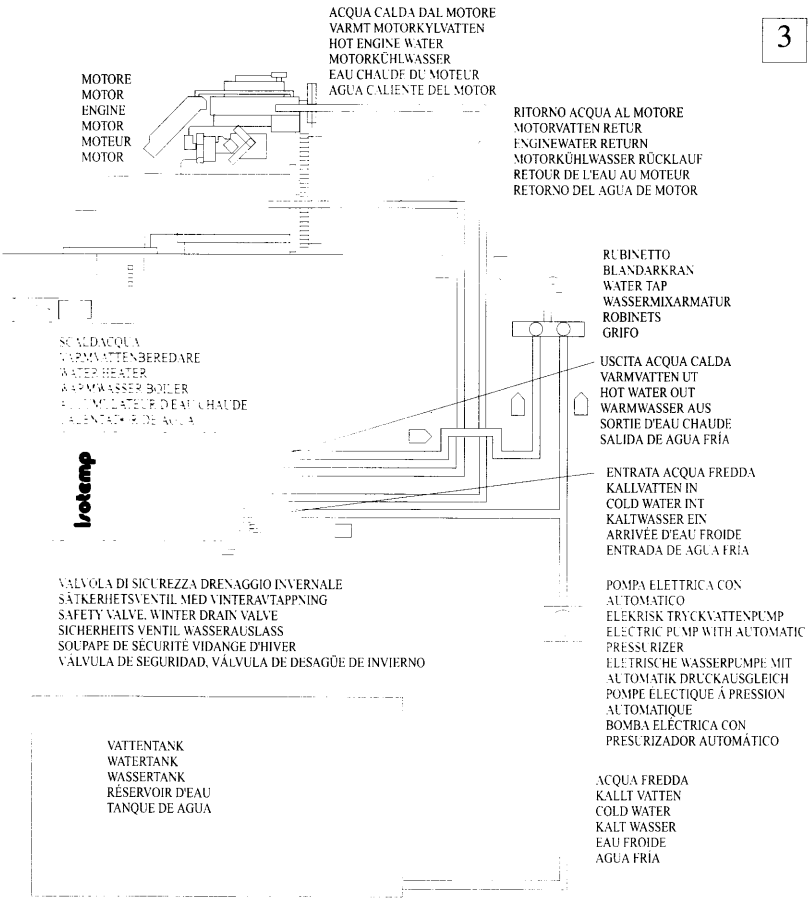

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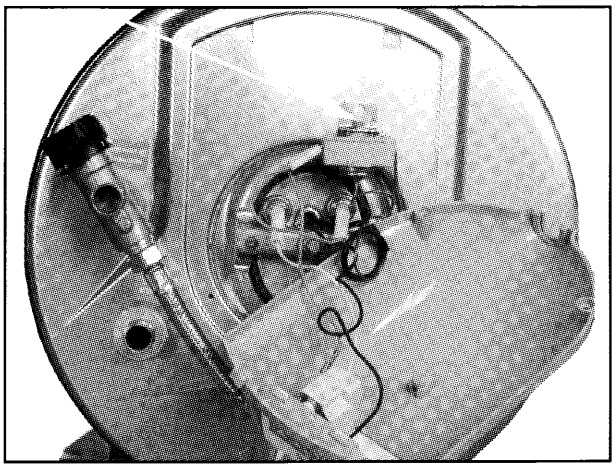

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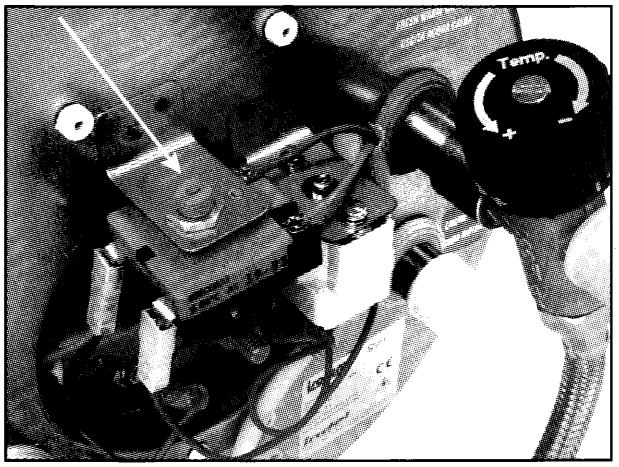

heater (Picture 1, 2 and 6). An overflow pipe from the safety valve to the bilge should be fitted. The wastewater hose must always have a free outlet. There must not be any valves or skin fittings, fitted to the wastewater hose. A small quantity of water may be expended via the safety valve during the heating up period.

3:4 Electrical Connection: All internal connections are made in the factory. The supply cable is fitted with an international plug, which should be fitted to a correctly installed socket. This socket, as all "high-voltage" installation on board, must be carried out to fulfill valid regulations. The ISOTEMP water heaters are designed to meet the EU regulations in this field. When leaving the vessel for long periods it is recommended that the plug is always disconnected. This should be done even if the shore power system is shut off, as there can be a difference in the electrical system, between the earth lead and the salt-water earth of the vessel. This can seriously damage the immersion or water heater.

4. Starting Up/Test Run: Start the engine and check the circulation of the cooling water through the water coil of the heater for airlocks, which can be eradicated by raising and lowering the supply hoses. Finally securing the hoses after checking. When using with a fresh water engine system, compensate with anti-freeze for the volume the water heater and hoses consume. Fill the water heater up with fresh water by starting the pressure pump leaving the hot water tap open, so that any air in the system can be vented out with the water flow. Check there are no water leaks and finally connect the plug for the immersion heater when the water heater is completely full. Check the function of the safety valve. The safety valve will then allow a small amount of water to flow. Check that the outlet hose is free to allow water to escape.

5 Maintenance:

5:1 Winter drain: When there is a risk of below zero temperatures the water heater must be drained. This must be done by lifting the liver of the safety valve. Open at the same time a hot water tap so that air can be drawn into the water heater allowing any water to exit through the waste hose.

If fitted, mixing valve also has an air relief screw M5, which shall be opened. (Picture 7)

If the engine is salt water cooled, or fresh water cooled without anti-freeze, the engine coil inside the water heater must also be drained. Loosen both hoses and blow air into one of the connectors thus draining the coil. The water heater can be left safely in the vessel over the winter.

5:2 Electric Immersion Heater: The immersion heater is as standard for 750 watt. If of a higher capacity, there would be a risk that the shore power supply could be overloaded. The ISOTEMP is equipped with both service and overheat thermostats, which controls the water temperature. The service thermostat cuts at 75°C (167°F) and the overheat protection thermostats at 95°C (203°F). Should the overheat thermostats trip they must be manually reset, first unplug the electrical connection and remove the cover. Reset the small buttons on the thermostats (Picture 4 and 5) and reinstall the cover at the same time making a check as to why the thermostat initially tripped before reconnection the power supply. When leaving the vessel for long periods it is recommended that the plug is always disconnected. This should be done even if the shore power system is shut off, as there can be a difference in the electrical system, between the earth lead and the salt-water earth of the vessel. This can seriously damage the immersion and water heater.

The immersion heater is also available in 115 volts to special order.

5:3 Controls:

Check regularly that there is no leakage in the connections.

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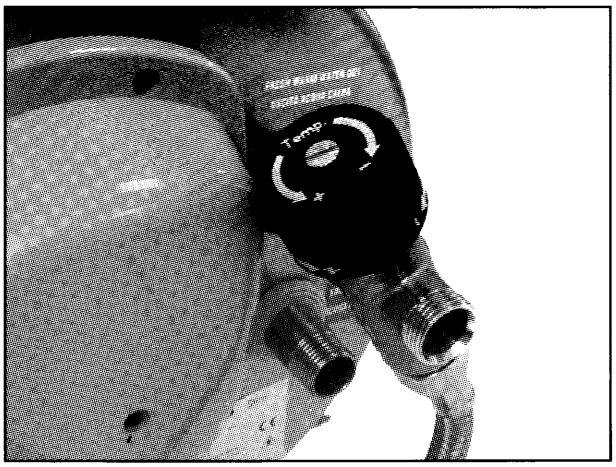

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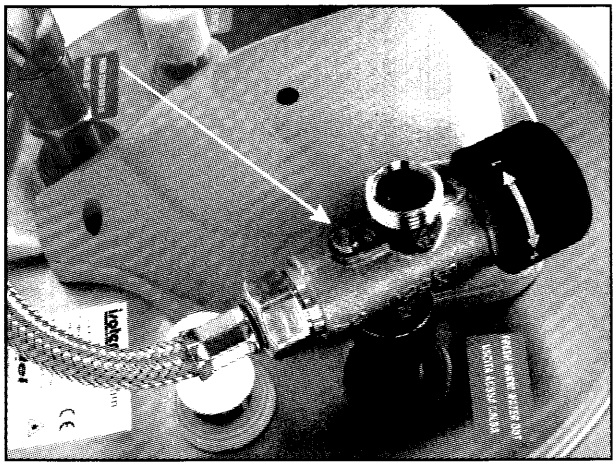


Tekniska data:

Typ:	Basic 24L	30L	40L	50L	75L	Slim B 15L	20L	25L
Volym liter:	24	30	39	50	76	15	20	25
Vikt kg tom:	11	12.5	17	20	26	9	11.5	13
Längd mm:	460	525	630	750	1040	500	615	755
Diameter mm:	390	390	390	390	390	290	290	290

Vattenanslutning färskvatten:	NPT 1/2" utvändig gänga
Vattenanslutning motorslinga:	NPT 1/2" utvändig gänga
Effekt elpatron:	750W (230V)
Säkerhetsventil öppnar:	7 bar
Material tank och anslutningar:	Rostfritt SIS 2343
Material isolering:	Polyuretanskum med hårdgjort ytskal.
Tjocklek:	20-45 mm
Värmeförlust:	Ca. 0,5°C/tim.

Rätt till ändringar i specifikation och utförande förbehålles.

Technische Daten

Typ:	Basic 24L	30L	40L	50L	75L	Slim B 15L	20L	25L
Volumen Liter:	24	30	39	50	76	15	20	25
Gewicht leer kg:	11	12.5	17	20	26	9	11.5	13
Länge mm:	460	525	630	750	1040	500	615	755
Durchmesser mm:	390	390	390	390	390	290	290	290

Anschlußgewinde Frischwasser:	NPT 1/2" Außengewinde
Anschlußgewinde Motorwasser:	NPT 1/2" Außengewinde
Leistung Heizpatrone:	750W (230V)
Sicherheitsventil öffnet bei:	7 bar
Material Behälter und Anschlüsse:	DIN 17440/AISI 316
Material Isolation:	Polyurethanschaum mit Hartschale.
Stärke:	20-45 mm
Wärmeverlust:	Ca. 0,5°C/St.

Technische Änderungen vorbehalten.

Technische specificaties

Type:	Basic 24L	30L	40L	50L	75L	Slim B 15L	20L	25L
Volume [liter]:	24	30	39	50	76	15	20	25
Gewicht leeg [kg]:	11	12.5	17	20	26	9	11.5	13
Lengte [mm]:	460	525	630	750	1040	500	615	755
Diameter [mm]:	390	390	390	390	390	290	290	290

Drinkwateraansluiting:	1/2" buitendraad
Koelwateraansluiting:	1/2" buitendraad
Vermogen verwarmingselement:	750W (230V)
Overdrukventiel opent bij:	7 bar (102 psi)
Materiaal behuizing en aansluitingen:	DIN 17440/AISI 316
Materiaal isolatie:	Polyurethaanschuim
Dikte isolatie:	20-45 mm
Temperatuurverlies:	Circa 0,5°C per uur

Techische wijzingen voorbehouden

Technical Data

Type:	Basic 24L	30L	40L	50L	75L	Slim B 15L	20L	25L
Volume litres:	24	30	39	50	76	15	20	25
Weight kg dry:	11	12.5	17	20	26	9	11.5	13
Lenght mm:	460	525	630	750	1040	500	615	755
Diameter mm:	390	390	390	390	390	290	290	290

Connection freshwater:	1/2" NPT outside thread
Connection engine water:	1/2" NPT outside thread
Heater coil capacity:	750W (230V)
Safety valve opens at:	7 bar (102 psi)
Material tank and connections:	AISI 316
Material insulation:	Polyurethane foam with hardened shell.
Thickness:	20-45 mm
Temperature loss:	Approx. 0.5°C/h

The manufacturer reserves the right to change the specification without notice.

Spécifications techniques

Typ:	Basic 24L	30L	40L	50L	75L	Slim B 15L	20L	25L
Volume litres:	24	30	39	50	76	15	20	25
Poids à vide kg:	11	12.5	17	20	26	9	11.5	13
Longueur mm:	460	525	630	750	1040	500	615	755
Diamètre mm:	390	390	390	390	390	290	290	290

Raccord d'eau froide:	NPT 1/2" Filatage extérieur
Raccord du tube échangeur:	NPT 1/2" Filatage extérieur
Puissance:	750W (230V)
La soupape de sécurité s'ouvre:	7 bar
Matériel de l'accumulateur et des raccords:	AISI 316
Matériel d'isolement:	Mousse de polyuréthane de 20-45 mm d'épaisseur. Couche extérieure durcie.
Perte de chaleur:	Environ 0.5°C par heure.

Sous réserve de modification éventualle

Especificaciones técnicas

Modelo:	Basic 24L	30L	40L	50L	75L	Slim B 15L	20L	25L
Volumen [L]:	24	30	39	50	76	15	20	25
Peso [kg] (vacío):	11	12.5	17	20	26	9	11.5	13
Largo [mm]:	460	525	630	750	1040	500	615	755
Diámetro [mm]:	390	390	390	390	390	290	290	290

Conexión para agua dulce:	NPT 1/2", rosca externa
Conexión al agua del motore:	NPT 1/2", rosca externa
Conexión del serpentín del calentador:	750W (230V)
La válvula de seguridad se abre a:	7 bar (102 psi)
Material del tanque y las conexiones:	AISI 316
Material de aislamiento:	Espuma de poliuretano
Espesore:	20-45 mm
Pérdida de temperatura:	Aprox. 0,5°C

El fabricante se reserva el derecho de modificar las especificaciones tecnicas sin preaviso.

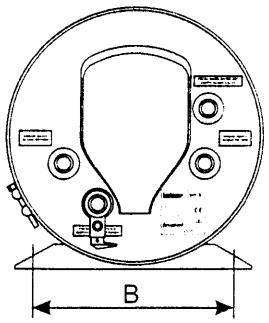
Dati tecnici

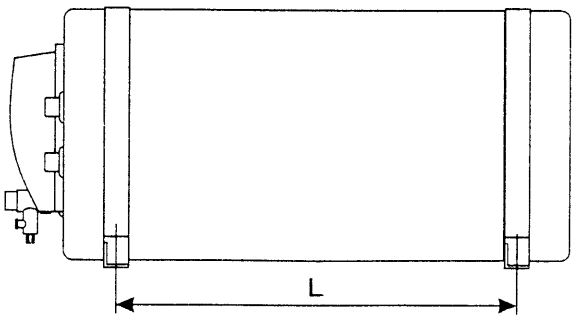
Tipo:	Basic 24L	30L	40L	50L	75L	Slim B 15L	20L	25L
Volume in litri:	24	30	39	50	76	15	20	25
Peso in kg. vuoto:	11	12.5	17	20	26	9	11.5	13
Lunghezza in mm:	460	525	630	750	1040	500	615	755
Diametro in mm:	390	390	390	390	390	290	290	290

Collegamento per l'acqua dolce:	NPT 1/2" filettatura esterna
Collegamento all'acqua del motore:	NPT 1/2" filettatura esterna
Assorbimento della serpentina del riscaldatore:	750W (230V)
La valvola di sicurezza apre a:	7 bar (102 psi)
Materiali serbatoio e collegamenti:	AISI 316
Materiale d'isolamento:	Schiuma poliuretanica.
Spessore:	20-45 mm
Perdita di temperatura:	Ca. 0,5°C/h

I costruttori si riservano il diritto di modificare le specifiche tecniche senza obbligo di preavviso.

Typ:	L	B
Basic		
24L	264	340
30L	329	340
40L	434	340
50L	554	340
75L	2x422	340
Slim		
15L	320	245
20L	444	245
25L	570	245





Specifications may be changed without prior notice