WATER HEATERS

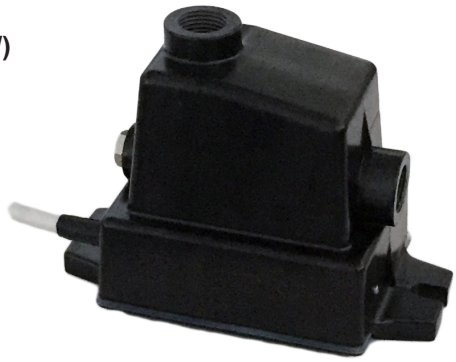
Suitable for heating water in diesel engines with closed circuit cooling

The heater prevents the cooling circuit temperature from falling below a certain value.
This value is regulated by an internal thermostat. A second internal thermostat protects the appliance from any overheating.

INSTRUCTION AND USE MANUAL

Version with GAS ½" thread

Type
RA-0511 **(500 W)**
RA-1011 **(1000 W)**



The key features of our water heaters:

- **Direct assembly, without the use of brackets.**
- **Presence of a coolant drainage plug.**
- **Factory fitted 3-metre power feed cable.**
- **Special electro-coating applied to body that protects from glycol corrosion**

Version with hose connector- for hose with 16 internal Ø

Type
RA-0500 **(500 W)**
RA-1000 **(1000 W)**
RA-1500 **(1500 W)**



Version with GAS ½" thread

Type
RA-0501 **(500 W)**
RA-1001 **(1000 W)**
RA-1501 **(1500 W)**
RA-2501 **(2500 W)**

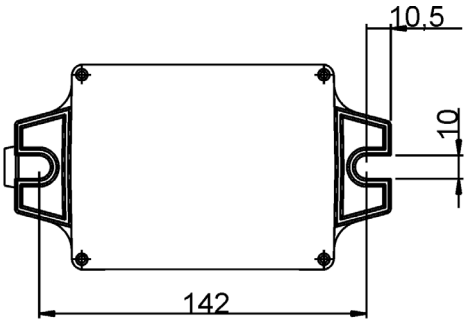


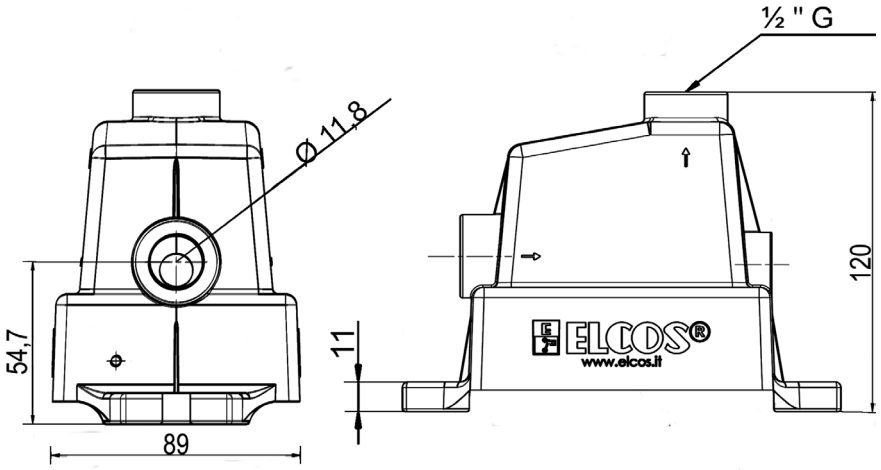
- OPTIMUM DIELECTRIC STRENGTH.
- EASY CONNECTION VIA CABLE.
- TEMPERATURE MAINTAINED BY AN INTERNAL THERMOSTAT.

A SECOND INTERNAL THERMOSTAT PROTECTS THE APPLIANCE FROM ANY OVERHEATING.
- CAN BE MOUNTED DIRECTLY ONTO THE ENGINE.

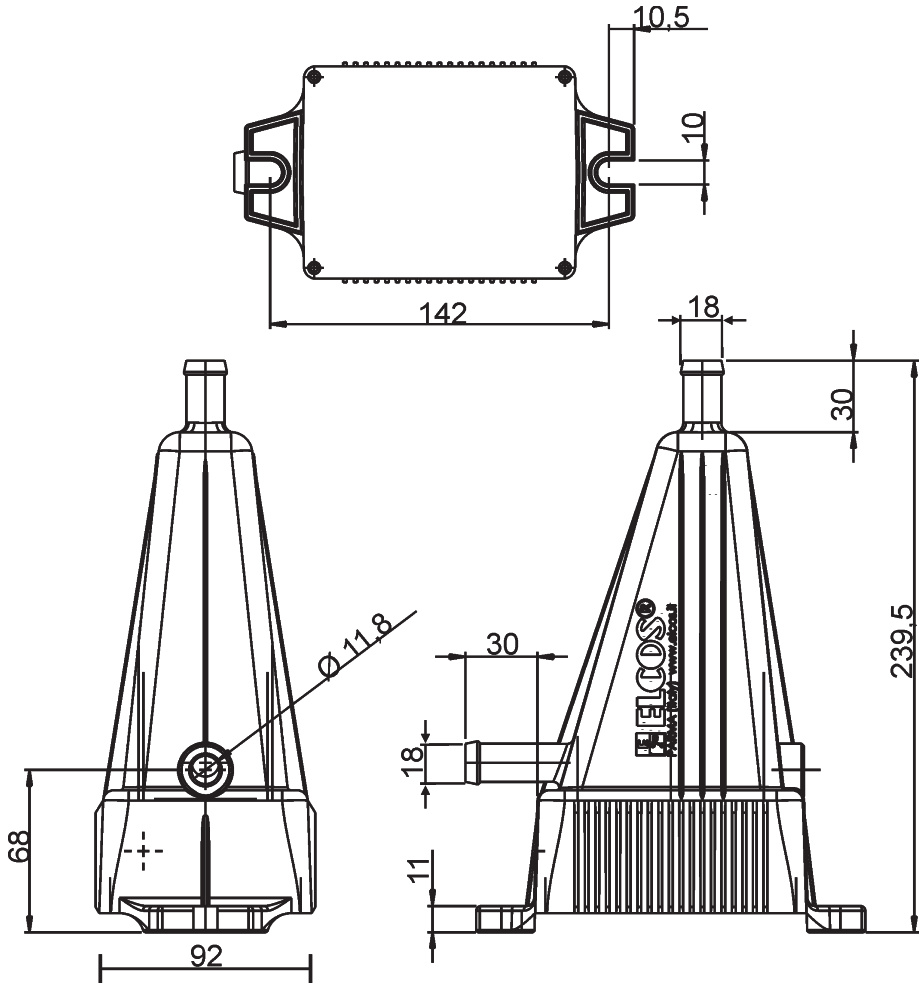
PARMA ELCOS® ITALY
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Type **RA-0511**
RA-1011

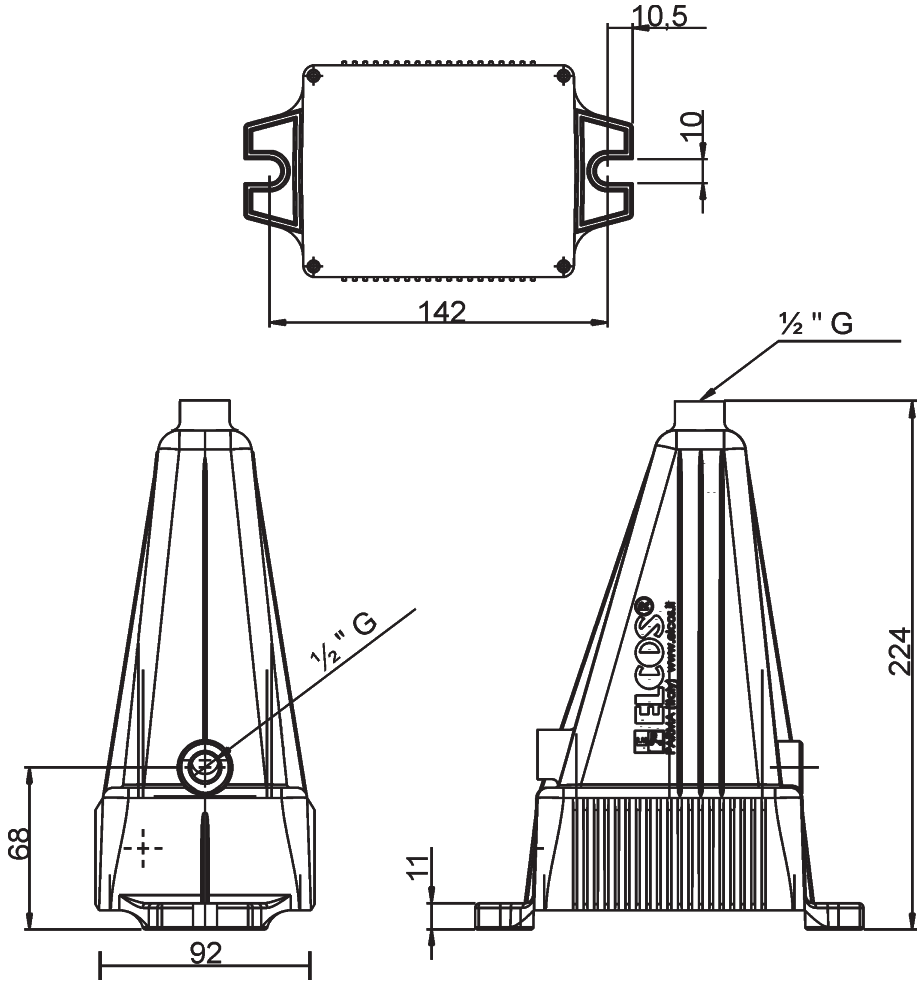




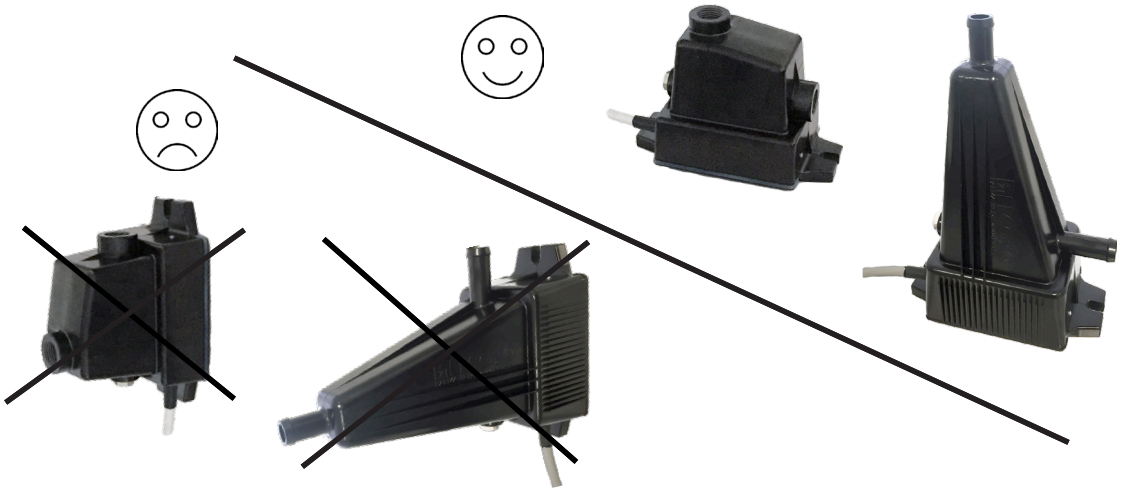
Type **RA-0500**
RA-1000
RA-1500



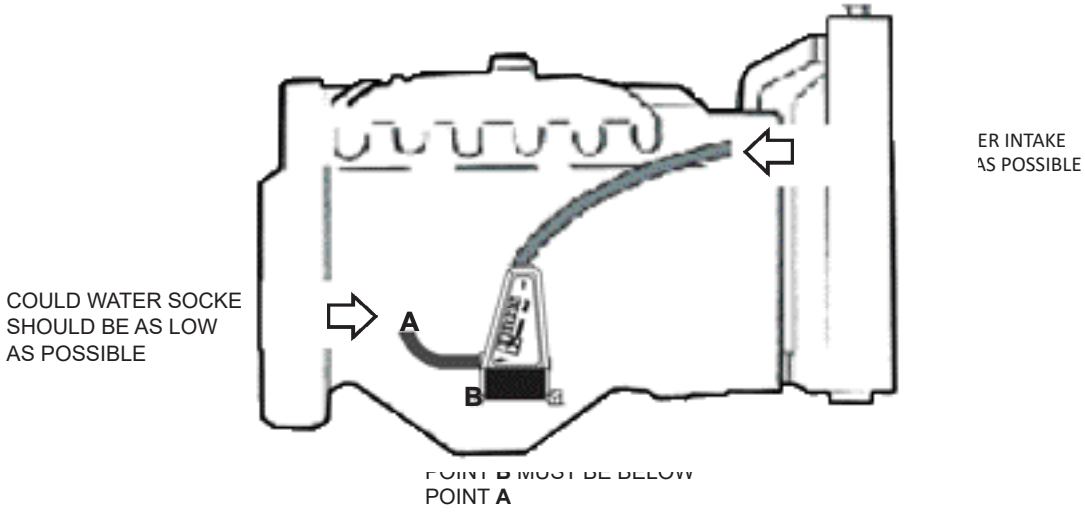
Type **RA-0501**
RA-1001
RA-1501
RA-2501



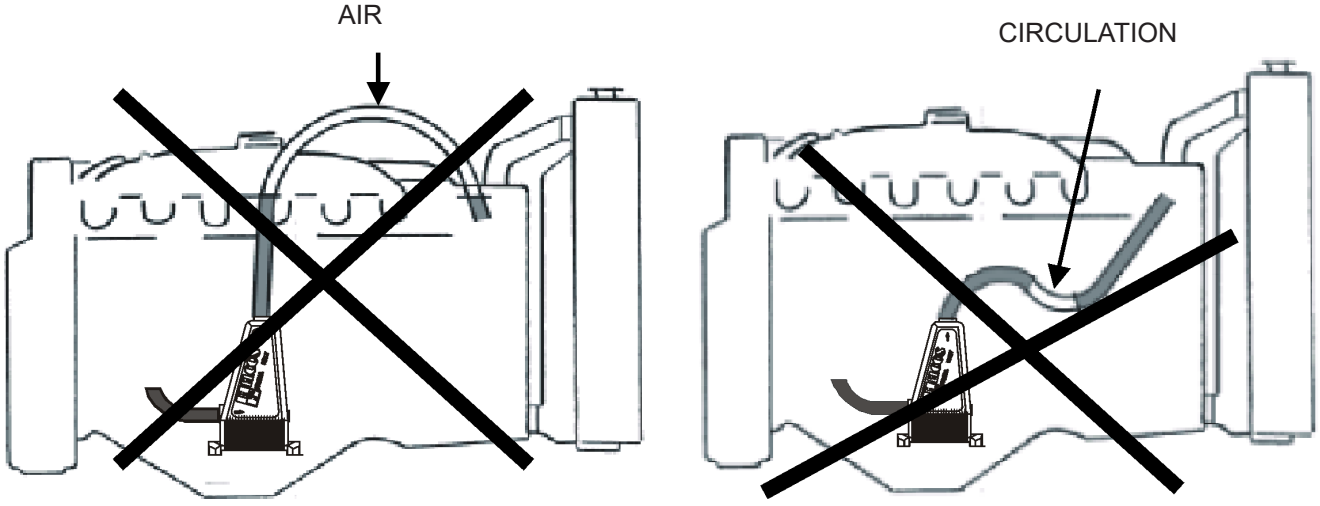
MOUNTING DIRECTION



INSTALLATION



BEFORE INSTALLING THE HEATER, CLEAN THE COOLING CIRCUIT



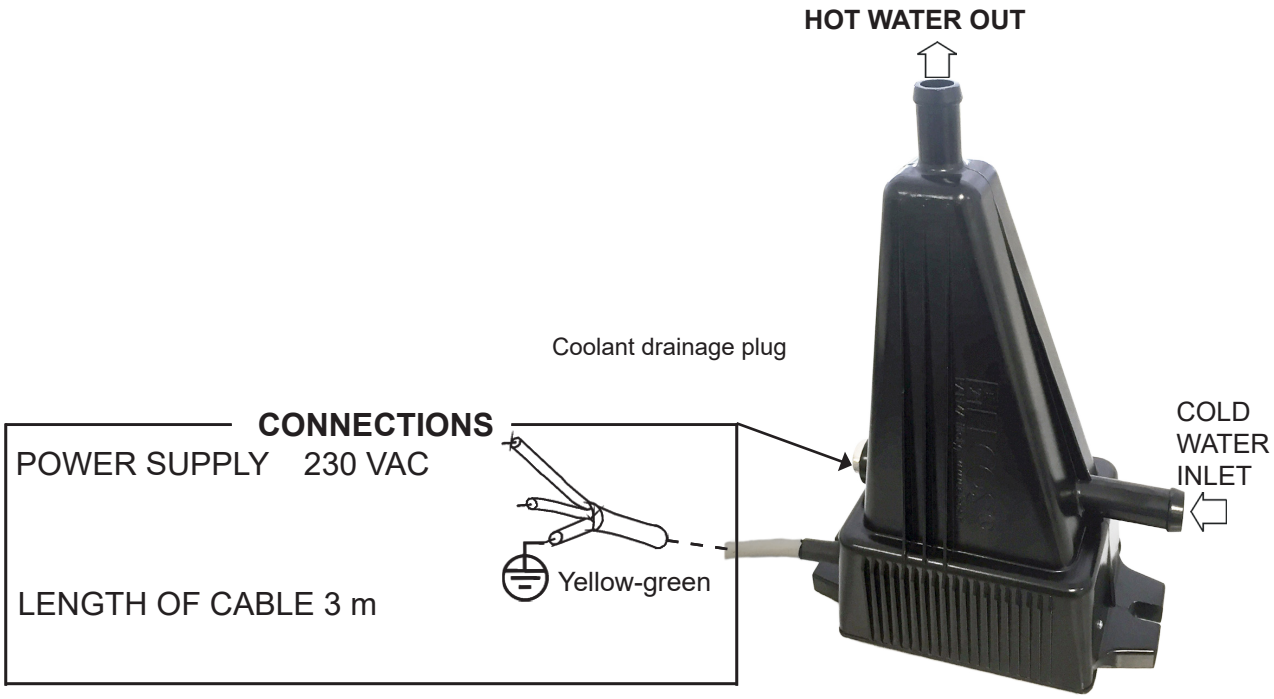
TO AVOID SIPHONS BEING PRODUCED; THERE SHOULD BE NO CURVES IN THE FLEXIBLE TUBES.

ENGINE COOLANT

Use the same type of coolant to top up the cooling system.

DO NOT USE HARD WATER.

CONNECTIONS



The installer has to mount the mains power supply circuit overcurrent protection:
- fuses 10A (16A version 2500W)- 250V or
- automatic switch 10 A - 250V (16A version 2500W).

NOTICES

TYPE RA-0511 RA-1011
RA-0500 RA-0501
RA-1000 RA-1001
RA-1500 RA-1501
RA-2501

Used to pre-heat the water cooled Diesel engine, heating the cooling liquid.
Designed to be installed also on board the machine.

Warning:
adhere closely to the following advice

- Take great care to connect correctly the conductors coming out of the equipment.
- Adhere closely to the installation indications on page 4-5.
- Never supply the equipment unless it has liquid inside.
- During operation the device is at high temperature (~ 70°C).
- During operation, if it is necessary to open the radiator plug, protect with Individual Safety Devices from any boiling water sprays.
- Do not use calcareous water as cooling liquid.
- Perform discharge actions only when device is cold and unsupplied.

THIS HEATER IS NOT SUITABLE FOR OPERATING IN THE FOLLOWING CONDITIONS:
- where the environmental temperature is outside the limits indicated in the technical sheet on page 7.
- where there are high levels of pollution caused by dust, smoke, vapour, salts and corrosive or radioactive particles.
- where attacks from mould or small animals are possible.
- where there is the risk of fire or explosions.
- where the panel can receive strong vibrations or knocks.

ELECTROMAGNETIC COMPATIBILITY
This equipment functions correctly only if inserted in plants which conform with the CE marking standards; it meets the exemption requirements of the standard EN61326-1 but it cannot be excluded that malfunctions could occur in extreme cases due to particular situations.
The installer has the task of checking that the disturbance levels are within the requirements of the standards.

CONDUCTION AND MAINTENANCE
The following maintenance operations should be performed every week:
- check the condition of the hydraulic connection tubes, sleeves and joints.
- check that the terminals to which the equipment is connected are tight.
- check the condition of the supply cable sheath. If the mains power supply cable is damaged, it has to be replaced by the manufacturer.

Every year the plant should be descaled and the operating thermostat should be checked.

UNLESS WE MAKE A WRITTEN DECLARATION STATING THE CONTRARY, THIS HEATER IS NOT SUITABLE FOR USE AS A CRITICAL COMPONENT IN EQUIPMENT OR PLANTS RESPONSIBLE FOR KEEPING PERSONS OR OTHER LIVING BEINGS ALIVE.

Any use which differs from that which is indicated in this instruction and user manual must be authorized by the manufacturer.

YOUR ELECTRICAL TECHNICIAN CAN ASK US ANYTHING ABOUT THIS HEATER
BY TELEPHONING ONE OF OUR TECHNICIANS

TECHNICAL DATA

MAINS POWER SUPPLY	230VAC (± 10%) 50÷60 Hz
DIELECTRIC STRENGTH BETWEEN TERMINALS AND APPLIANCE	1250V x 1 MINUTE
POWER ABSORBED: TYPE RA-0511 RA-0500 RA-0501	500 W
RA-1011 RA-1000 RA-1001	1000 W
RA-1500 RA-1501	1500 W
RA-2501	2500 W
SERVICE	CONTINOUS
OPERATIONAL THERMOSTAT	NON ADJUSTABLE
DISENGAGED HEATING	a 53° C ± 5%
ENGAGED HEATING	a 33° C ± 5%
SAFETY THERMOSTAT TRIPPING TEMPERATURE	96°C ± 5%
CONNECTION CABLES	FROR 450 / 750 V
DEGREE OF PROTECTION	IP54
TEMPERATURE LIMITS (ONLY IF SUPPLIED)	-20° C ÷ 120 °C
WEIGHT: TYPE RA-0511 RA-1011	1100 gr
RA-500 RA-501 RA-1000 RA-1001 RA-1500 RA-1501	1270 gr
RA-2501	1800 gr

ORDERING INFORMATION

HEATER

Type	Code
RA-0511	00706162
RA-1011	00706164
RA-0500	00706161
RA-1000	00706163
RA-1500	00706165
RA-0501	00706168
RA-1001	00706169
RA-1501	00706170
RA-2501	00706173