FRIGOMAR®
EXCLUSIVE MARINE REFRIGERATION
& AIR CONDITIONING SYSTEMS

MADE IN ITALY

SELF CONTAINED UNIT INVERTER BLDC

TECHNOLOGY

THE FIRST IN THE MARINE MARKET

ADVANTAGE OF USE

Advanced Inverter Brushless DC technology coupled with R410A refrigerant provides the benefits of:

- elimination of starting current peaks (only 2A)
- energy saving (-45%)
- generator down sizing
- low operating noise and vibration
- rapid cooling and heating

EASY INSTALLATION

The compact overall dimensions and low weight allow the installation onboard all types of boats.

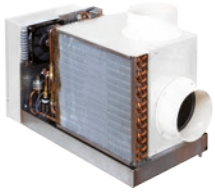
COMPLY WITH EMC DIRECTIVE

The equipment complies with the Electromagnetic Compatibility (EMC) Directive 2004/108/EC.

AIR CONDITIONER ADVANCED BRUSHLESS DC INVERTER

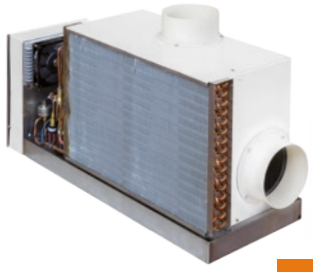
Variable Capacity Operation

Inverter air conditioning is able to vary its operation capacity. Non-inverter air conditioners can only operate at a fixed capacity.



MAX CAPACITY 10.000 — ITEM 597 NT

MAX CAPACITY 16.000 — ITEM 598 NT



MAX CAPACITY 27.000 — ITEM 599 NT

597NT SELF-CONTAINED UP TO 10.000 BTU/H

Frequency Hz	Cooling capacity BTU/h	Input power cooling W	Heating capacity BTU/h	Input power heating W	Workload
70	10.000	560	10.000	690	100%
50	6.800	355	6.800	440	71%
35	4.800	245	4.800	300	50% (ECO)

598NT SELF-CONTAINED UP TO 16.000 BTU/H

Frequency Hz	Cooling capacity BTU/h	Input power cooling W	Heating capacity BTU/h	Input power heating W	Workload
100	15.600	950	15.600	1098	100%
80	12.400	730	12.400	830	80%
60	9.200	495	9.200	590	60%
40	5.900	305	5.900	365	40% (ECO)

599NT SELF-CONTAINED UP TO 27.000 BTU/H

Frequency Hz	Cooling capacity BTU/h	Input power cooling W	Heating capacity BTU/h	Input power heating W	Workload
100	26.600	1850	26.600	1995	100%
80	22.400	1400	22.400	1540	80%
60	16.600	930	16.600	1070	60%
40	10.800	580	10.800	685	40% (ECO)

TECHNICAL DATA

Inverter Brushless DC Technology

This technology is used to control the speed of the compressor motor to allow continuously regulated temperature; by contrast traditional air conditioners regulate temperature by using a compressor that is periodically either working at maximum capacity or completely switched off.

The inverter air conditioner is equipped with a variable frequency driven brushless DC compressor that incorporates an adjustable electrical inverter to control the speed of the motor and thus the compressor and cooling output. Eliminating stop-start cycles considerably increases the energy efficiency, extends the life of components and eliminates sharp fluctuations on water temperature and power supply.
By using the Inverter Brushless DC Air conditioner it is possible to reduce on board the size of power generator.

Energy saving (-45% in average electrical energy consumption)

After the air temperature approaches the set temperature, Inverter Control adjusts to low capacity operation to maintain this temperature. Variable capacity operation together with brushless DC motor higher efficiency make inverter air conditioning more energy-saving than non-inverter models, which must repeatedly start or stop their compressors to maintain the water temperature.
In term of Seasonal Efficiency Ratio, the average reduction in electrical energy consumption is 45%, compared to the equivalent traditional air conditioner.

Smooth starting (No peak current at start)

Starting ramp is set at very low frequency (20 Hz) allowing very low starting torque and starting current, far below the nominal value. The max starting current is 2 A, while for the equivalent traditional air conditioner the max starting current is approx 50 A, even with soft starting devices.

Powerful

Inverter air conditioning operates at maximum capacity after start up phase. As a result, the set temperature is reached more quickly.

Comfortable

Inverter air conditioning finely adjust capacity according to changes in the air-conditioning load and the difference between the air temperature and set temperature is very small. These give much higher comfort levels than with non-inverter air conditioners.
Thanks to brushless DC motors the operation noise is very low.

Relaiable

Brushless DC motor together with variable capacity operation allow a much longer compressor lifetime than non-inverter models, which must repeatedly start or stop their compressors during operation stressing motor coils.

Easy installation

Very small overall dimensions, with possibility to pump out condensig water through an accessory kit. Display controller can be installed in different position and managed through touch screen or remote controller.

Comply with EMC Directive

The equipment complies with the Electromagnetic Compatibility (EMC) Directive 2004/108/EC.

TECHNICAL DATA

Model	597NT	598NT	599NT
Width	442 mm (519 mm*)	499 mm (576 mm*)	702 mm (779 mm*)
Height	319 mm	346 mm	471 mm
Depth	291,5 mm	291,5 mm	340 mm
Weight	27 kg	30 kg	44 kg
Voltage	230 V / 1ph / 50-60 Hz	230 V / 1ph / 50-60 Hz	230 V / 1ph / 50-60 Hz
Cooling/Heating capacity	5.000 - 10.000 BTU/h	6.000 - 16.000 BTU/h	11.000 - 27.000 BTU/h

Model	597NT	598NT	599NT
Max input power cooling	560 W	950 W	1850 W
Max input power heating	690 W	1098 W	1995 W
Max Current	3,1 A	4,9 A	8,9 A
Air exit duct (for max capacity)	2 x Ø 120 mm	2 x Ø 152 mm	4 x Ø 152 mm
Refrigerant fluid	R410A	R410A	R410A
Refrigerant charge	0,50 kg	0,57 kg	0,95 kg

***including electrical box**

Working limits
Seawater temperature in winter mode > + 5°C
Seawater temperature in summer mode < 40°C

Designed and Manufactured in Italy

In ISO 9001:2008 certified factory

Techincals and aesthetics caracteristics, weights and measures shown on our catalogue are susceptible to be modified without notice.

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