



# DESSALATOR®

## WATERMAKERS



**30 years of experience in  
reverse osmosis desalination**

*...the professionals choice*





Innovative and reliable :

The Dessalator machines, of innovative design and with conservative ratings, are designed to supply fresh water on board on a 24 hour basis. Their working principle is that water is forced by high pressure through membranes, which are molecular filters. They allow only pure water to pass, and the salty elements are returned to the sea. We use high-pressure pumps with ceramic piston. An accumulator stores energy peaks and assures a smooth and stable working pressure. This provides long life for the membranes, as they are sensitive to pressure changes.

High technical quality:

Some models, our DUOS®, can operate either on direct current ( batteries, charger) or alternating current (local generator or port supply). Our machines consume less than 7 Watt-hours to produce one litre of water. (This is comparable to that of certain machines styled "energy recovery" but those machines produce a pulsed working pressure which is hard on the membranes and other parts.) At the end of a period of water production the membranes in our machines are automatically rinsed and the filters cleaned.

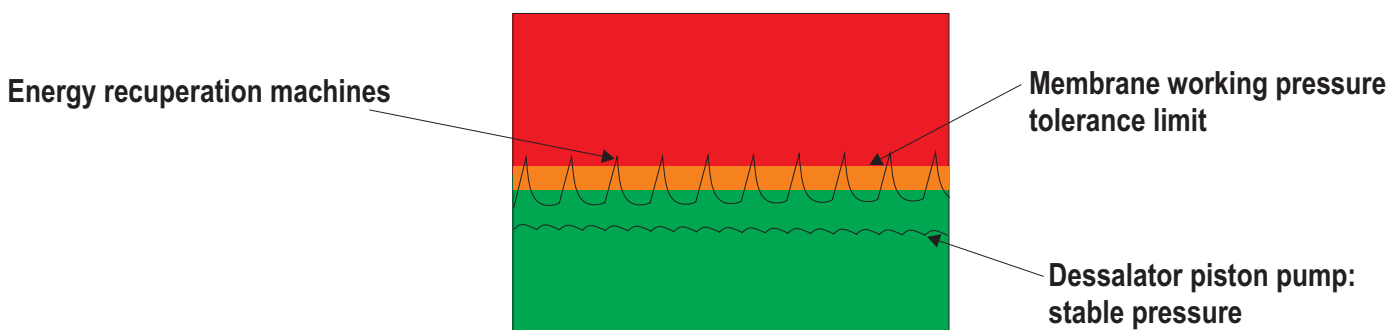
Reliable:

We have developed a specific controller which checks the quality of the output water and also protects the machine against various risks such as lack of water or excessive pressure. This system also functions in a fail-safe mode in the event of sensors failing. It can be connected via a serial link to a Centralised Management System for continuous supervision. The local control panel has three status lamps, pressure gauges and a flow indicator, so that the operator can see the status of the machine, its working pressure and the rate of water production at a glance.

Adaptable:

We produce a wide range of products with output capacities from 30 l/h to 2.000 l/h. An extensive choice of models and a modular structure assures optimal adaptation to all types of boat. Some models provide a choice of vertical (narrow) or horizontal (wide) control panels, and some are available in two versions: "remote control" or "compact". Our machines are available as standard fittings from the majority of French boat builders and also in boats from some suppliers in some other countries.

**COMPARATIVE CURVES OF WORKING PRESSURE**





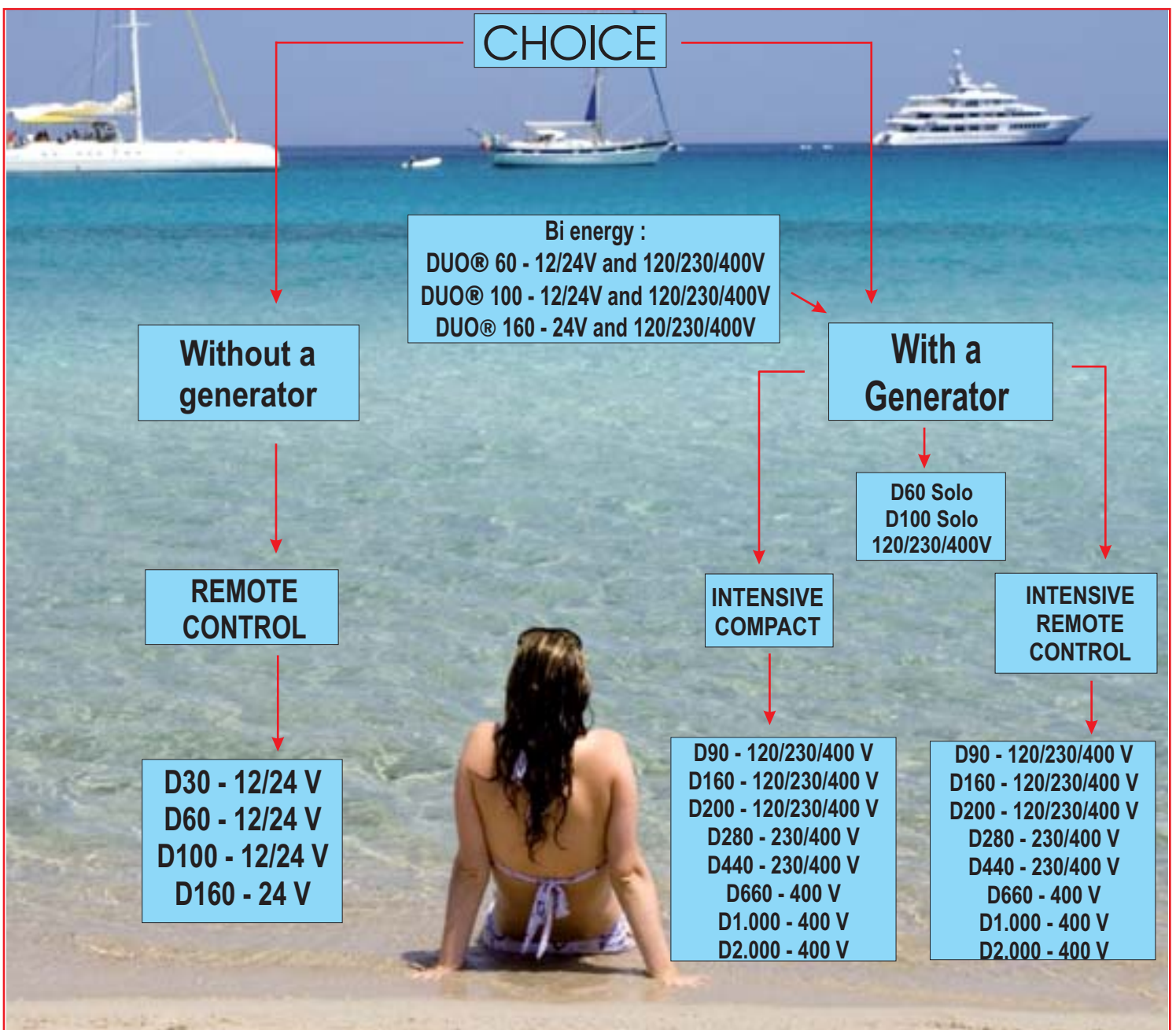
## SELECTION GUIDE

### 1. Fresh Water Requirement:

Do not underestimate! A dessalinator provides a degree of comfort on board which quickly becomes indispensable. With this machine we no longer need to ration water and can use a similar quantity to that we use on land.

### 2. Available energy, type of supply, capacity:

- If the boat does not have an a.c. generator we shall need to use the motor for general power, and the D30, D60 or D100 (12/24V) models will be suitable.
- If there is a small generator, the DUO® 60, DUO® 100 or DUO® 160 dual-supply models can be used, or the SOLO D60 or D100 models will also be suitable.





## MACHINES UP TO 100 L/H

Remote Control D30, D60, D100 Registered Model



Dimensions: L: 31.5 cm, H: 20 cm, D: 12 cm

### CONTROL PANEL

This includes:

- Start/Stop switch,
- 3 indicators displaying status (Wait, production, alarm),
- Control knob for working pressure adjustment,
- Pressure gauge showing working pressure with coloured zones (Desalator registered model),
- Flow indicator showing water production and indicating the quantity

Engine block D30, D60: 17 kg  
Engine block D100: 18Kg



Dimensions:  
D30, D60: L 52cm x H 26cm x D 31cm  
D100 :  
L 52cm x 26cm x D 36cm



Consumption:  
· D30, D60: 32 A in 12V, 18 A in 24 V  
D100 - 12V 48A - 24 V 30 A

## In 120, 230, and 400 volts



SOLO D60S and D100S

Engine block: L 52cm x H 26cm x D 31cm:



Membranes and supply

Membrane dimensions  
D30: L 70cm x 8cm  
D60: L 70cm x 16cm  
D100: L 70cm x 32 cm





**DUO® 160 - NEW MODEL**

1500 W on 120/230/400Volts, or 1500W at 24 Volts

**DUO® BI-POWERED MODELS (DUO® 60 and DUO® 100)**

**DUO® 60**

The DUO® 60 is a patented dual-energy desalinating machine with two motors, providing 60 litres/hour. It functions either on D.C. ( 12 or 24 Volts) or on A.C. (120, 230 or 400 Volts.) at the turn of a switch. By means of this system, either motor can be engaged, independently, without requiring electrical clutches or pulley movements by hand. 100% sure and reliable, these DUO® models give a 2-in-1 capability. For example, when the motor is running, copious D.C. power is available at 12 or 24 Volts: the DUO® 60 only requires 370 W to function. When moored, with the generator running, the 230 Volts mode can be used and as this only requires 3 Amps the generator can also be charging the batteries. A port supply might also be available to provide A.C. power.

The DUO 100 shares many of the features of the DUO®60:

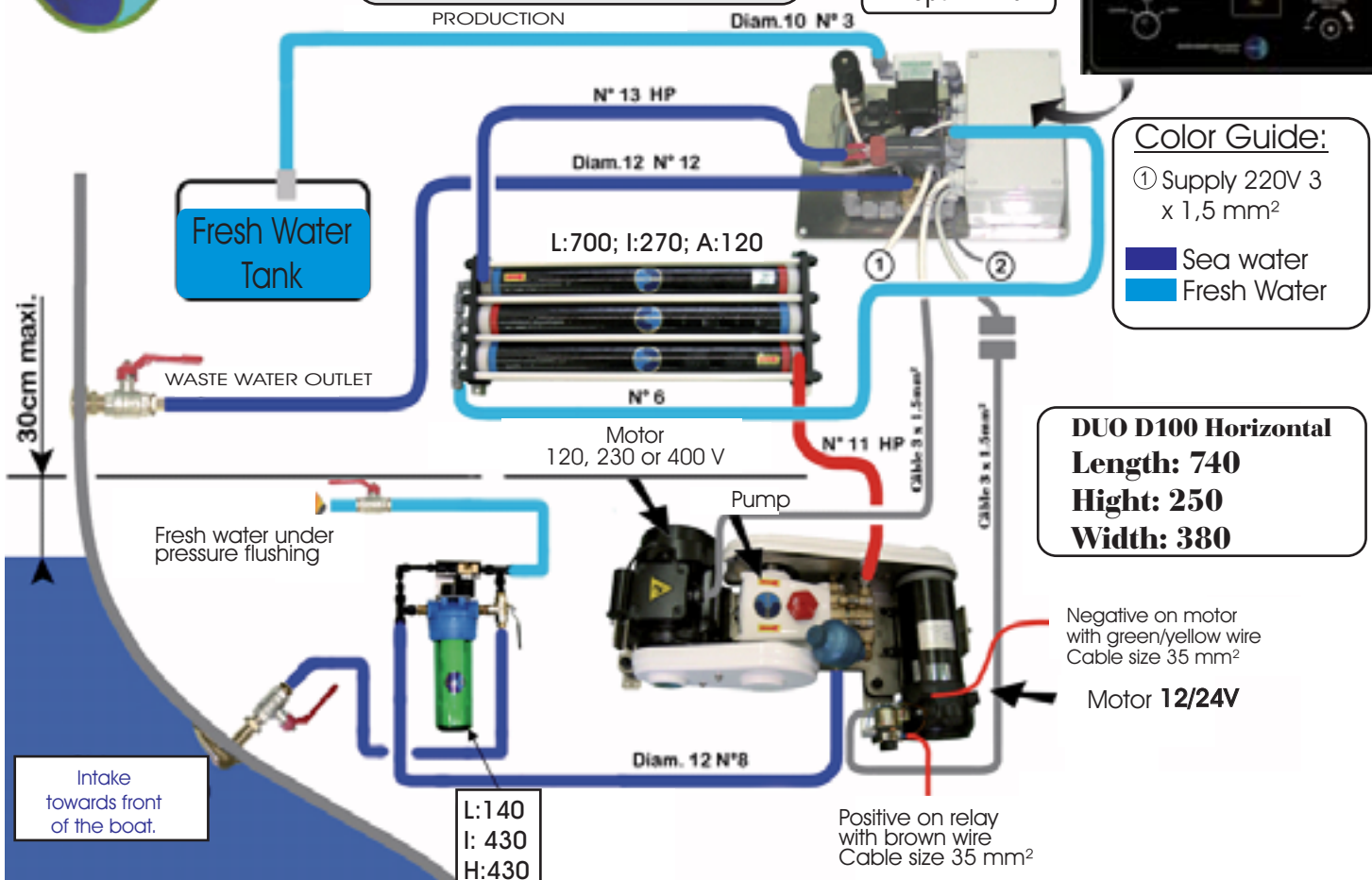
- Stainless steel laser-cut chassis
- ABS moulded belt covers
- Latest generation electronic controller
- Automatic rinsing
- Three composite membrane tubes
- Remote control panel option
- DESSALATOR® patent.

The energy consumption of the DUO® 100 is 750 Watts (on A.C. at 12, 230 or 400 Volts.) This translates to 6.7 Wh per litre of pure water ( 6.7 kWh for 1m<sup>3</sup> or 1.8 Wh/ U.S. gallon).



**INSTALLATION PLAN  
DESSALINISATOR DUO® D100**

Length: 320  
Width: 200  
Depth: 120





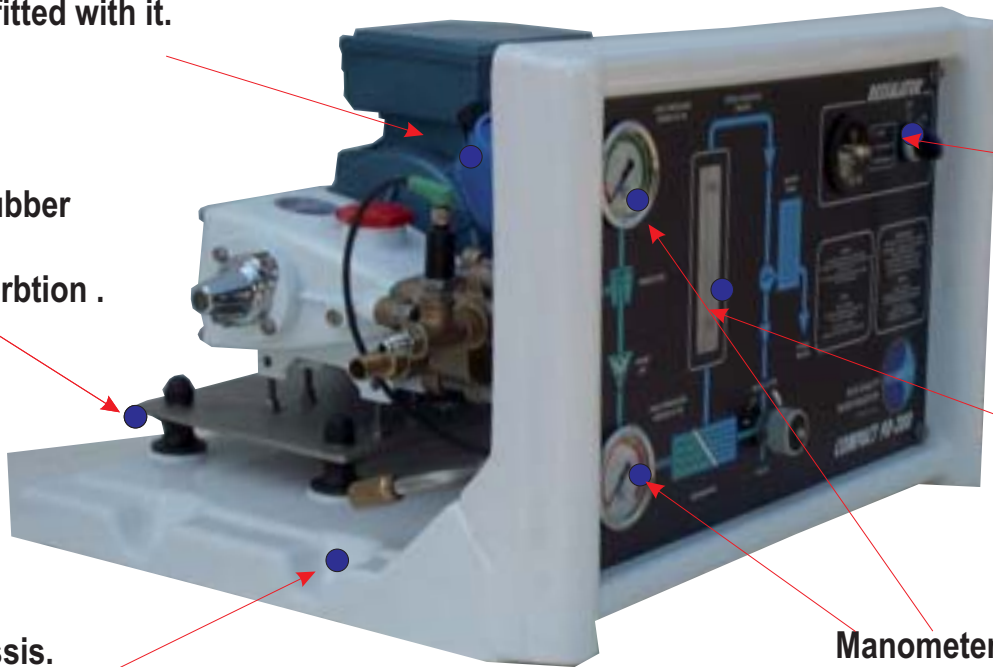
**INTENSIVE UTILISATION**  
**COMPACT MODEL: FROM D90 TO D280**

On the machines designed for intensive use and equipped with a low-pressure pump, an inlet pressure manometer is included, which allows diagnosing when to change the pre-filters.

**Anti water - hammer**  
**All our desalinisation machines are fitted with it.**  
**Safety.**

**DIMENSIONS: L 56 CM X H 36 CM X D48 CM**  
**Weight: 40 KG**

**Mounted on rubber**  
**for maximum**  
**vibration absorbtion .**



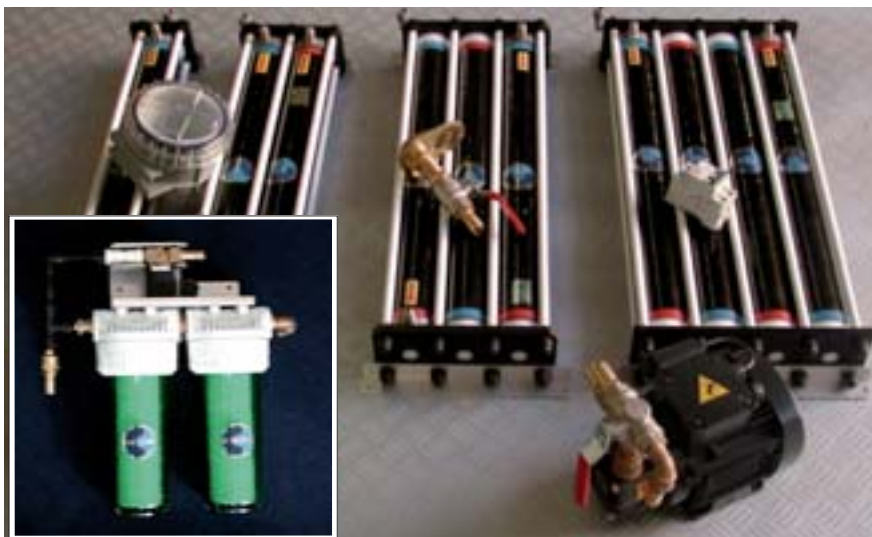
**Start / Stop Switch.**  
**Design.**

**Flowmeter.**  
**Security.**

**L-shaped chassis.**  
**Accessibility to all its components.**

**Manometers (universal reading)**  
**Models patented by Dessalator.**  
**Simplicity.**

**Membrane (s) :**



D90 : L116cm x 8cm      -    D160 : L116cm x 16cm  
D200 : L116cm x 24cm    -    D280 : L116cm x 32cm





INTENSIVE USE FROM D90 TO D280  
Remote control

Motor units for 120, 230 or 400 volts have been specially conceived to be housed inside engine compartments, under the floor, under the bunks, ...



Motor unit: L 55cm x H 32 cm x D 32 cm  
Horizontal profile: L 41 cm x H 24 cm x D 15 cm  
Vertical profile: L 22 cm x H 43.5 cm x D 15 cm

MODELS 440 L/H (5,5 KW), 660 L/H (6,5 KW), 1.000 L/H (7,5 KW) AND 2.000 L/H (9 KW)

Specially adapted to pleasure boats, cargo ships, merchant ships, ...

MOTOR UNIT



L : 120 cm, H : 600 cm, D : 600 cm



SUPPLY TO D440 and D660:  
Stainless steel double pre-filter,  
bronze low pressure pump,  
carbon membrane tubes.



L : 100 cm/ H : 52,5 cm / D : 35 cm



# Analysis table of the sea water desalinisation

Treated by DESSALATOR



	Sea Water	Drinking Water
Conductivity (micro-ohms / cm)	45.000	550
TDS (mg/l)	36.073	250
Chloride (mg/l)	17.600	183
Sodium (mg /l)	11.000	105
Hardness in CaCO3	6.140	28
Sulphate (mg/l)	2.436	2,3
Magnesium (mg/l)	418	6,4
Potassium (mg/l)	418	6,4
Calcium (mg/l)	315	0,8
Alkalinity from CaCO3 (mg/l)	104	8
Bromide (mg/l)	85	0,85
Bicarbonate (mg/l)	63	4,9
Strontium (mg/l)	13,8	0,4
Silica (SiO2) (mg/l)	10,7	5,0
pH	7,7	7,4
Boron (mg/l)	4,0	0,4
Nitrate (mg/l)	2,0	2,0
Fluoride (mg/l)	0,8	0,1
Iron (mg/l)	0,3	0,1
Turbidity (FTU2)	0,28	0,13
Manganese (mg/l)	0,1	0,1
Total sulphurs (mg/l)	0,1	0,1
P-alkaline CaCO3 (mg/l)	0	0

**INTERNATIONAL AGENTS FOR DESSALATOR® :**

**AUSTRALIA  
BRASIL  
CANADA  
CANARY ISLANDS  
CHILE  
DENMARK  
GRAN CANARIA  
UNITED KINGDOM  
GUADELOUPE  
ITALY  
MALTA  
MARTINIQUE  
NEW CALEDONIE  
NEW ZEALAND  
NORWAY  
POLYNESIA  
PORTUGAL  
SPAIN  
ST. BARTHELEMY  
ST. MARTIN  
TAIWAN  
TENERIFE  
THAILAND  
THE BALEARICS  
(IBIZA, PALMA)  
THE NETHERLANDS  
TUNISIA  
TURKEY  
UKRAINE  
USA**

At DESSALATOR, we appreciate and thank our customers, boat builders, ship yards and other professionals who have helped us to continuously improve our product line over the years

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