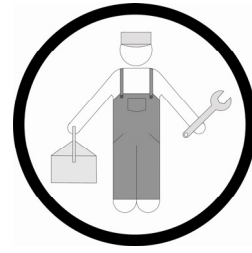
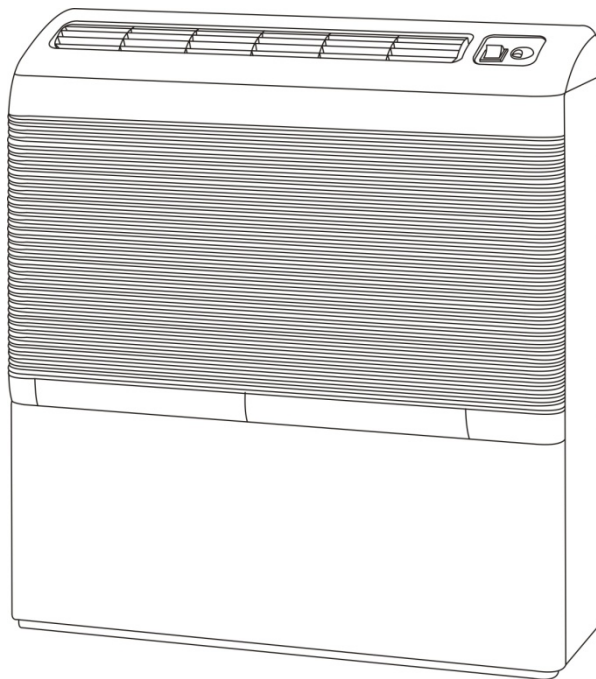


EN Installation instructions and use



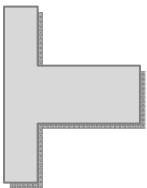
DT 850



EN Air dehumidifier for indoor swimming pools

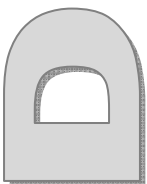
SUMMARY

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See the appendices at the end of the manual:


- Electrical diagram
- Dimensions



1. Installation

1.1 General

Read this manual carefully before installing, maintaining or repairing this appliance!

The  symbol indicates important information that must be taken into account in order to avoid the risk of injury and/or damage to the appliance.

The  symbol indicates useful information.

1.1.1 Precautions



This device must be installed and serviced by certified professionals approved in the electrical, hydraulic and cooling domains.



Before working on the appliance, ensure that it is disconnected from the power supply.



Never place any conductive parts in contact with water



Do not insert any objects into the openings.



Do not discharge R407C fluid into the atmosphere: R407C is a fluorinated greenhouse effect gas, covered by the Kyoto Protocol, with a Global Warming Potential (GWP) = 1653 - (Directive EC 842/2006).



Removing or shunting any of the safety or remote control parts will automatically void the guarantee; the same will apply for the replacement of parts by non-original parts.

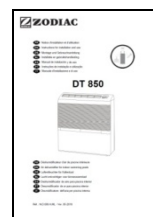
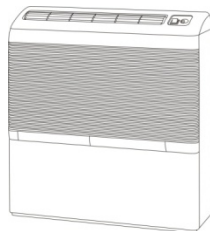
1.1.2 General terms of delivery

Any equipment, even CARRIAGE and PACKING FREE, travels at the addressee's risk. Addressees must indicate any reserves in writing on the carrier's delivery bill in the case of damage caused during transport (confirmation to be sent to the carrier within 48 hours by registered mail and Acknowledgement of Receipt).



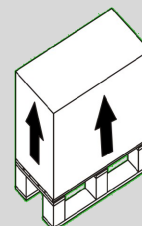
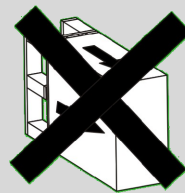
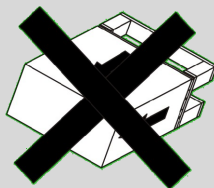
The appliance must be transported upright on its pallet, in its original packaging. If the appliance has been overturned make written reserves in writing to the transporter.

Contents:



1.1.3 Storage and transport conditions

The appliance must be transported upright on its pallet.



1.1.4 Field of application



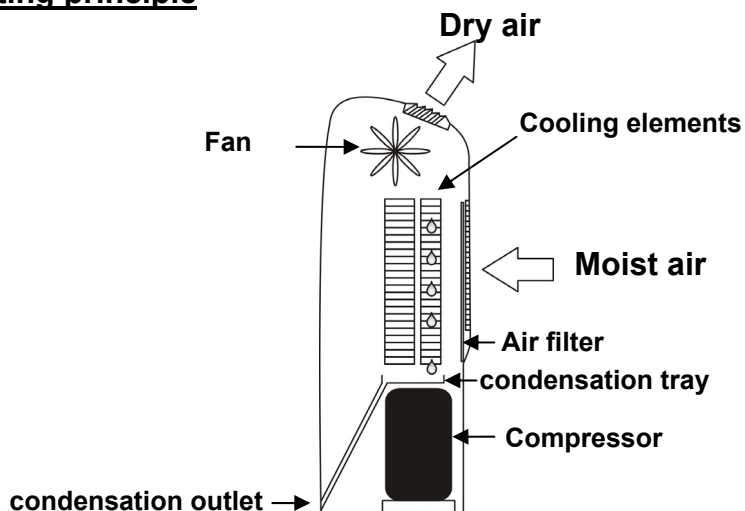
Exclusive use: dehumidifying swimming pool halls.

Not to be used for any other purpose.

It must be installed indoors, in the swimming pool premises, in a location that is not subject to freezing and no pool maintenance products should be stored nearby.



1.1.5 Operating principle



1.2 Description

1.2.1 Technical specifications

Appliance	Dehumidifying capacity*	Power consumed*	Power restored on the ambient air*	Air flow-rate
	L/h	W	W	m ³ /h
DT 850	1.88 L/h	850 W	2100 W	500 m ³ /h

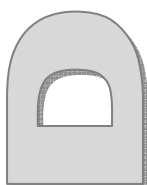
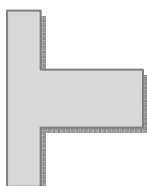
* under the following nominal conditions: air 30°C - humidity 70%.

L/day	Hygrometry (%HR)				
	Ambient temperature (°C)	55	60	65	70
35	43	45	49	54	60
32	37	39	43	49	54
30	33	36	40	45	50
29	31	34	38	43	48
28	29	33	37	41	46
27	27	31	35	40	44
26	25	29	33	38	42
25	23	27	32	36	40
24	21	26	30	34	38
20	16	18	24	27	30
15	10	14	15	19	22

- unit protection class: IP 44
- class: I
- refrigerant gas: **R407C**
- refrigerant charge: see product information plate

1.2.2 Operating conditions

- operating range: 7 °C to 35 °C (temperature in the swimming pool hall)
- optimum operating conditions: between 25 °C and 30 °C



1.3 Installation

1.3.1 Electrical regulations for swimming pools

Refer to the current regulations in force in your country.

French standard C15.100 Section 702 - U.T.E:

In volumes 0 and 1, only protection using Very Low Voltage (article 411.1) with a nominal voltage not exceeding 12 V AC or 30V DC is allowed. The protection must be installed outside volumes 0, 1 and 2 (the appliance has a protection index of at least IP X5).

In volume 2 (see figures 702A and 702B), the appliances must be:

- either class II for lighting,
- or class I protected by a 30 mA or less ground fault circuit breaker,
- or powered by a separation transformer in compliance to paragraph 413.5.1

The appliance has a protection index of at least IP X2.

EN

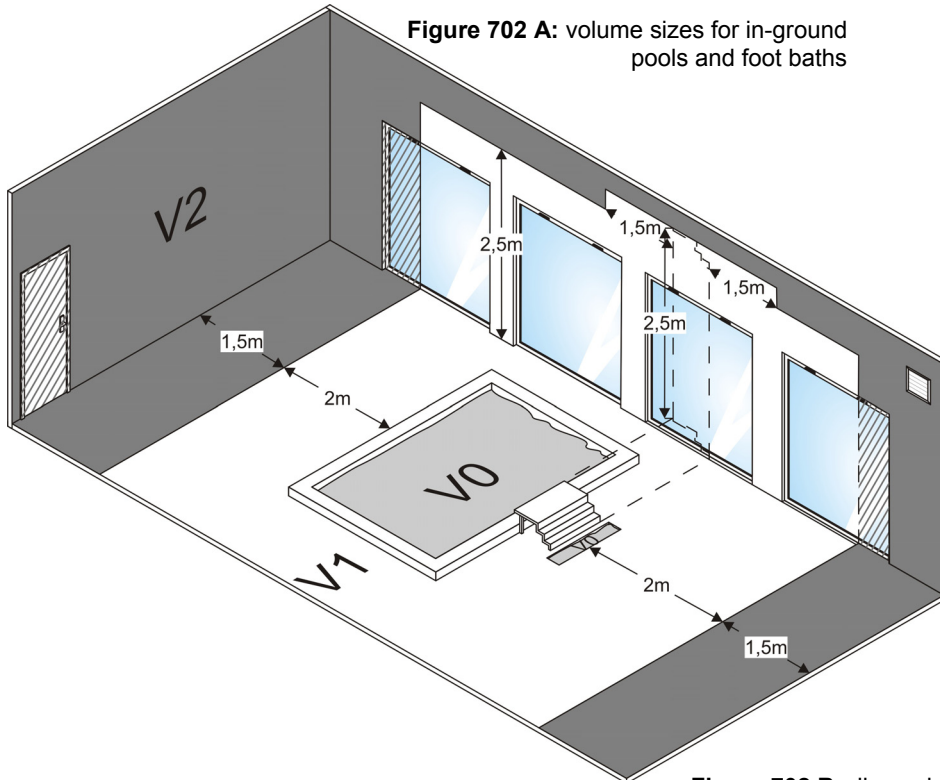


Figure 702 A: volume sizes for in-ground pools and foot baths

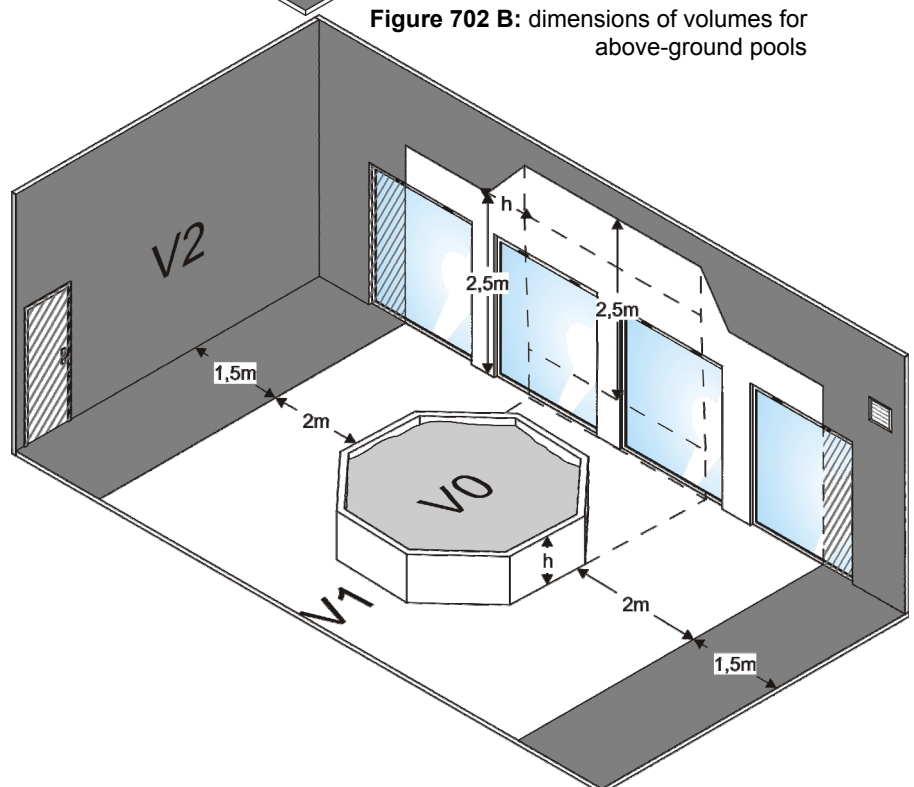


Figure 702 B: dimensions of volumes for above-ground pools

h: unknown variable
V: volume

1.3.2 Installation requirements

- 1) **Install the appliance on a level base**, to avoid any overflows from the condensation tray,
- 2) **Easy access** to the appliance for maintenance and connections,
- 3) **Place nothing in front of or on the blowing and suction grates**,
- 4) For a **swimming pool building with a high ceiling or visible roof frame**:
 - destratification of the upper layers of the room = one or several fans with PVC blades or an air extractor with fresh air intake.



Warning! 230 V AC appliances = must be outside volume 1 (see §1.3.1),

- 5) **Building requirements:** swimming pool building = very damp room
During building make sure that:

- the materials used are compatible with a swimming pool environment,
- the walls are sufficiently waterproofed and insulated to avoid condensation forming in the room when relative humidity reaches 60 to 70%.



Light structure buildings (verandas, shelters...): there is no risk of deterioration of the structure, even in case of dew as they are designed to support this (even with a relative humidity of 70%)

- 6) **Risk of stratification:**

- height of the room < 4 to 5 meters: mechanical ventilator unit or extractor,
- height of the room > 7 to 8 meters: ceiling fans with large blades,

- 7) **Ventilation**, renewal of air,
 - private pools: highly recommended
 - public pools: compulsory

The air can be renewed by:

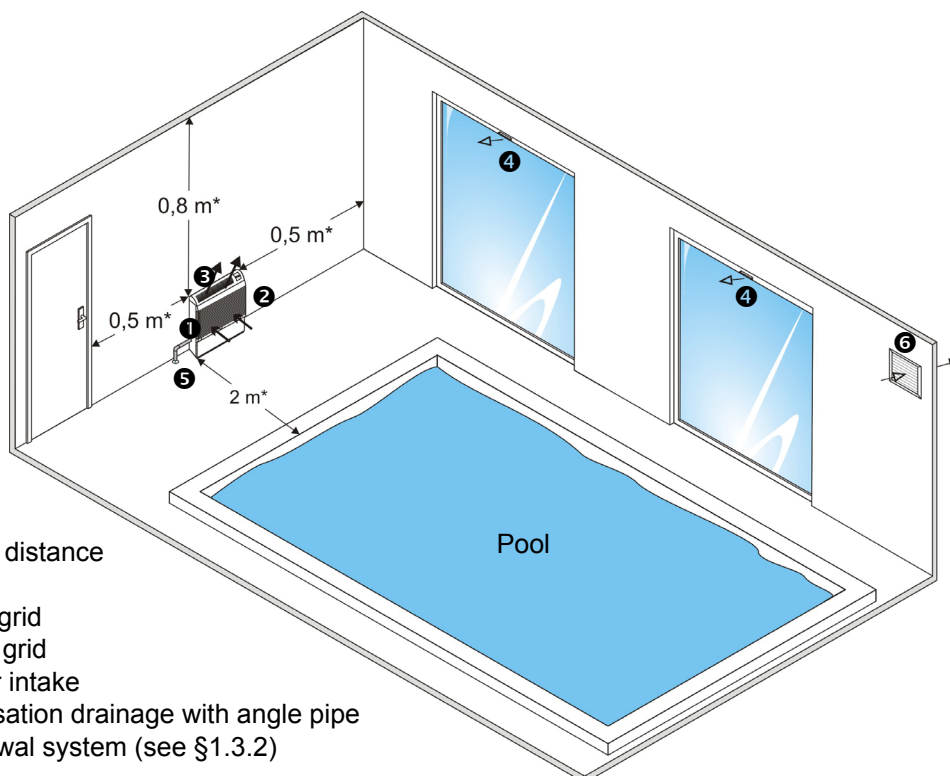
- a simple mechanical ventilation unit,
- a wall or roof extractor with fresh air intakes.

This ventilation ensures the hygienic renewal of air, the removal of any chloramines present in the air, and the elimination of excessively hot air, whilst contributing to the dehumidification of the room.

1.3.3 Connection to surrounding air

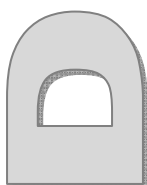
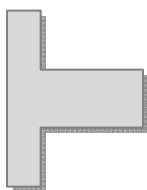
1.3.3.1 Appliance on the ground (or on a support)

Do not place the device right up against a wall (risk of vibration).



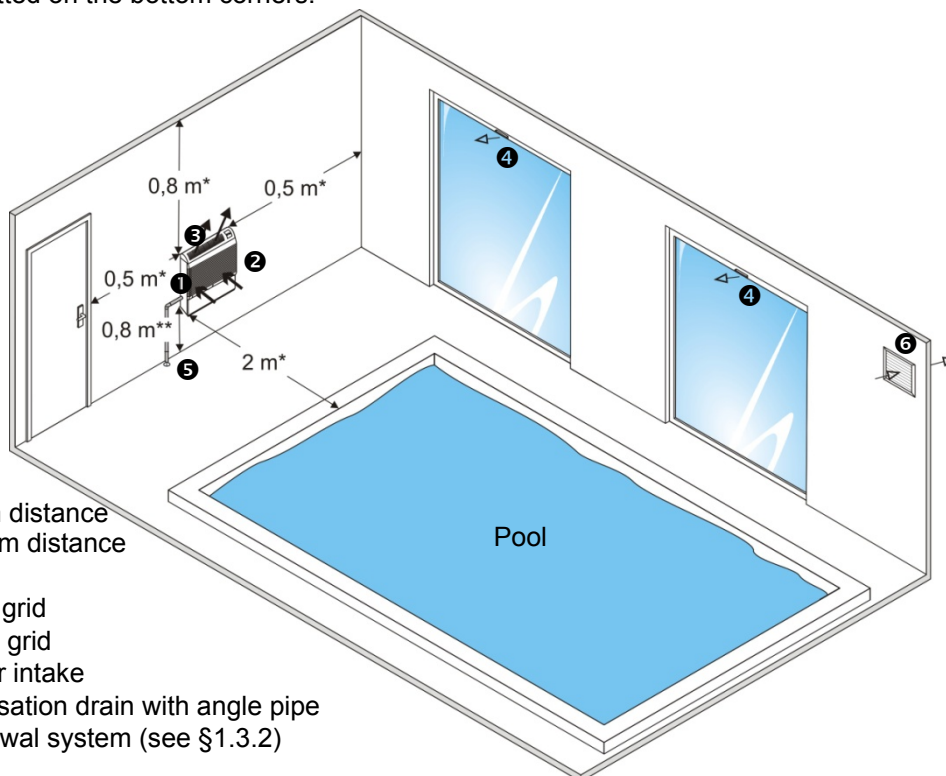
* minimum distance

- ❶ DT 850
- ❷ suction grid
- ❸ blowing grid
- ❹ fresh air intake
- ❺ condensation drainage with angle pipe
- ❻ air renewal system (see §1.3.2)



1.3.3.2 Appliance fixed to the wall

Using the two anchoring points at the back of the appliance in a "solid wall" (see emplacement and dimensions in the appendix - fixing elements not supplied). Make sure that the 2 anti-vibration rubber parts are fitted on the bottom corners.



* minimum distance
 ** maximum distance

- ❶ DT 850
- ❷ suction grid
- ❸ blowing grid
- ❹ fresh air intake
- ❺ condensation drain with angle pipe
- ❻ air renewal system (see §1.3.2)

1.3.4 Connection of the condensation drain

- fit a drain pipe of appropriate size and length on the original outlet pipe (Ø16 outer diam.)
- allow a sufficient slope to ensure a proper flow for the drained water,
- connect the extremity of the pipe to a water evacuation drain with U-bend,
- ensure that the pipe is not bent or angled, and that the extremity of the pipe is not immersed.

The outlet is located on the right side of the device when viewed from the front (see marker "AØ16" § "Dimensions" in the appendix). This outlet can be moved to the left side (access via the rear panel).

1.3.5 Electrical connections

1.3.5.1 Voltage and protection

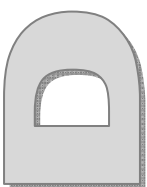
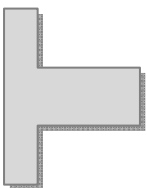
Prior to any operation, check that:

- the voltage on the identification plate of the appliance corresponds to the mains voltage available on site.
- the socket and the power supplied are adapted to the power requirements of the dehumidifier,
- the male plug on the power cord is adapted to the socket available.

- The electrical supply must be provided through a protection and circuit breaking device (not supplied) complying with the standards and regulations in force in the country where it is installed (in France standard NF C 15100).
- use the supply cable delivered with the appliance: 2 poles + Earth 10/16 A in 3G1.5 (section 1.5mm²),
- **Extension cords and adapters must NOT be used.** An adequately protected electrical socket must be installed close to the device by a qualified technician,
- Electrical protection: 30 mA ground fault circuit breaker (at the head of the line),

ⓘ • Electric cables must be fixed.

The appliance must be earthed.
 Risk of electrical shock inside the device. Only a qualified and experienced technician must install the device cables.
 If the power cable is damaged it must be replaced by a qualified technician or by a Zodiac Pool Care Europe service station.



1.3.5.3 Cable sizes

- Supply cable size: for cables of a maximum length of 20 metres (calculation basis: 5A/mm²), this must be checked and adapted depending on installation conditions.

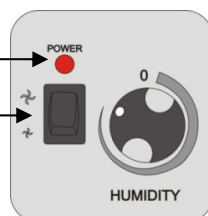
	Voltage	Nominal power consumption	Maximum power consumption	Cable size	
DT 850	230V-50 Hz-	4.5 A	18 A	3 x 2.5 mm ²	3G2.5

1.4 Operation

1.4.1 Control unit

Operating indicator (light on when the ventilation is on)

Switch for selecting fan speed



Button for adjusting the hygrometer (note: 0 = 100% hygrometry)

1.4.2 Starting the appliance

- Put the appliance under power by connecting the power cord,
- First run:
 - turn the hygrometer dial completely clockwise (the appliance will run permanently),
 - let the dehumidifier run until the desired hygrometry level is reached (typically 65%),
 - turn the dial in the opposite direction until the indicator light switches off,
 - the dehumidifier will now automatically maintain this level of hygrometry.



When making a dehumidification request, there will be a temporisation of 3 minutes before the fan and the compressor begin to operate.

- Adjusting fan speed:



- high speed: if the pool is not covered
- low speed: if the pool is covered (bubble cover, section cover, etc...)
- Defrosting control and protection of the compressor: this dehumidifier features an automatic battery defrosting system that operates by stopping the compressor and using forced ventilation. This defrosting cycle is controlled and triggered by an Alpha 14/1 electronic module that monitors the state of the evaporator sensor/probe (S.IN) every 20 minutes (the compressor stops for 8 minutes maximum) and the condenser sensor (S.OUT) protects the compressor. If the HP temperature is higher than 65 °C: the appliance will stop and forced ventilation will run until the temperature drops to under 50 °C.

1.4.3 Checks

- check that the appliance is draining condensation,

2. Maintenance

2.1 Maintenance instructions



A general servicing of the appliance is strongly recommended to check the proper operation of the appliance, maintain its performance, to avoid certain faults and preserve the building in good condition.

2.1.1 Monthly checks

- check visually that the condensation is drained.



Appliance powered off and unplugged from power supply!

- check for clogging in the filter:
 - wash the filter with warm soapy water,
 - rinse it abundantly and dry it,
 - replace it if necessary.



The appliance must have filters fitted when operating.

2.1.2 Annual checks

- check the cleanliness of the condensation drainage tube,
- check that the power cord is in perfect condition
- check the adjustment and operation of the hygostat,
- clean the whole unit with a slightly damp cloth,



Do not clean by spraying or immersing into water.

2.2 Spare parts

Naming	Item number	Representation
Filter	W28FIDT5	

2.3 Recycling the product

Your appliance has reached the end of its working life. You would like to dispose of it or replace it. Please do not throw it into your dustbin or into your local selective sorting containers.

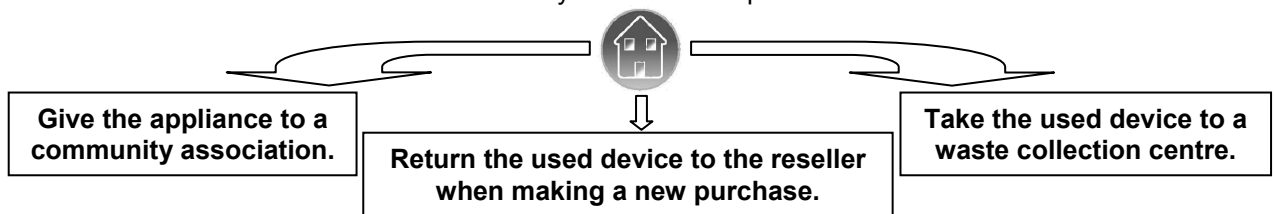


When this symbol appears on a new appliance, it means that the equipment must not be thrown away and that it will be collected selectively so that it can be reused, recycled or recovered. Any substances it may contain which are potentially dangerous to the environment will be eliminated or neutralised.

You can give it to a community association which will be able to repair it and put it back into circulation. If you buy a new appliance, you can take the old one back to the reseller or ask the transporter to take it back.

This is known as a “One-for-One” exchange.

Otherwise please take it to a waste collection centre, if your local council has set up a selective collection system for these products.




2.4 EC compliance certificate

Z Z.P.C.E. declares that the products or ranges below:

SPECIAL POOL DEHUMIDIFIERS

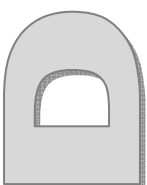
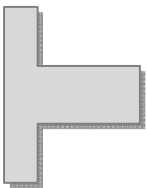
DT 850

are in compliance with the provisions of the:

 **ELECTROMAGNETIC COMPATIBILITY directive 89/336/EEC.**
LOW VOLTAGE directive 73/23/EEC, as amended by 93/068/EEC.

The following harmonised standards have been applied:

EN 60335.2.40

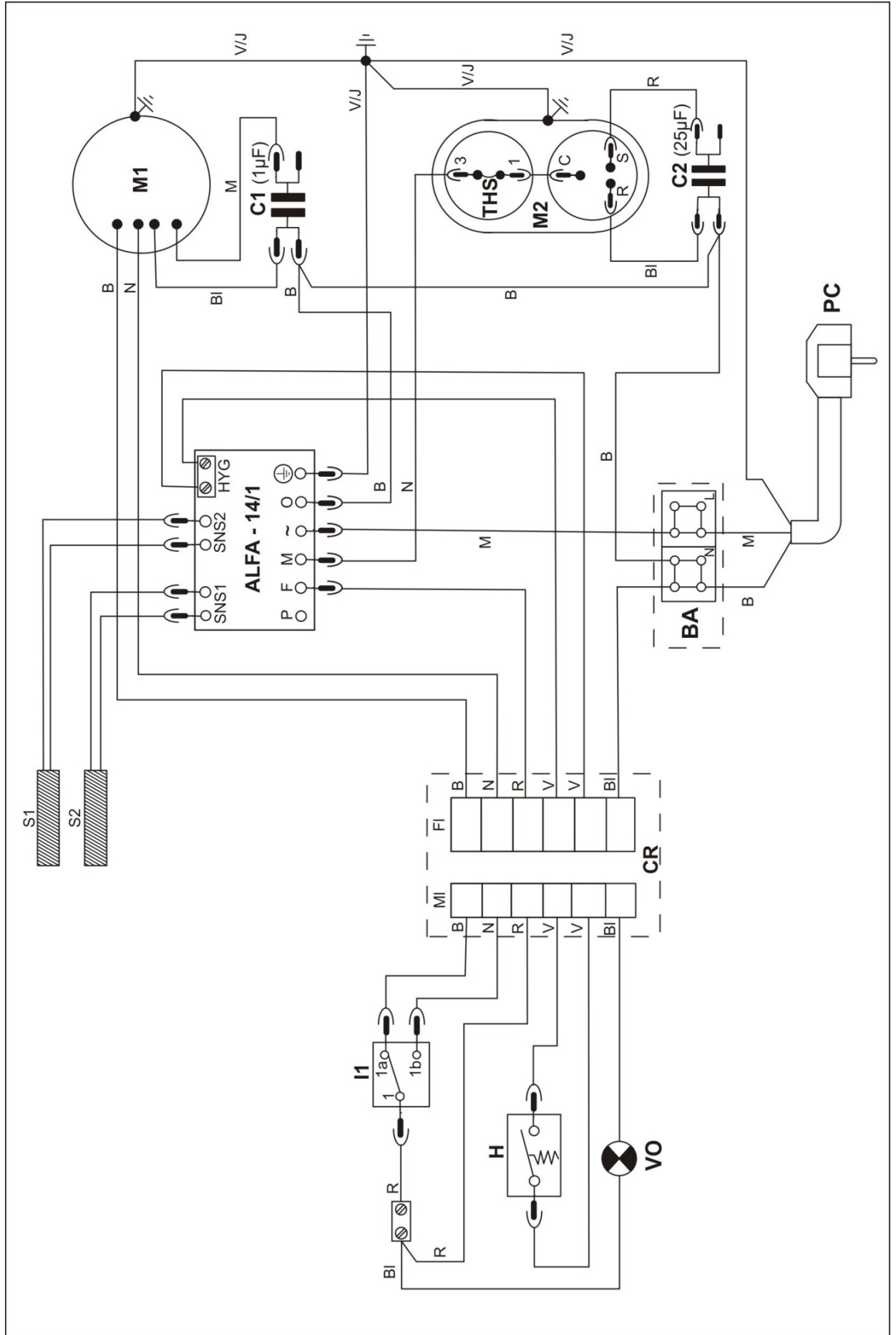



In the context of ongoing improvement, our products may be subject to change without notice.

Version 05/2010

Electrical diagram

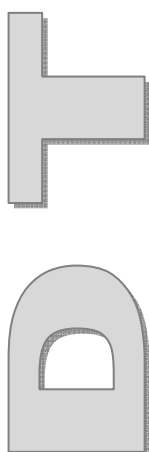
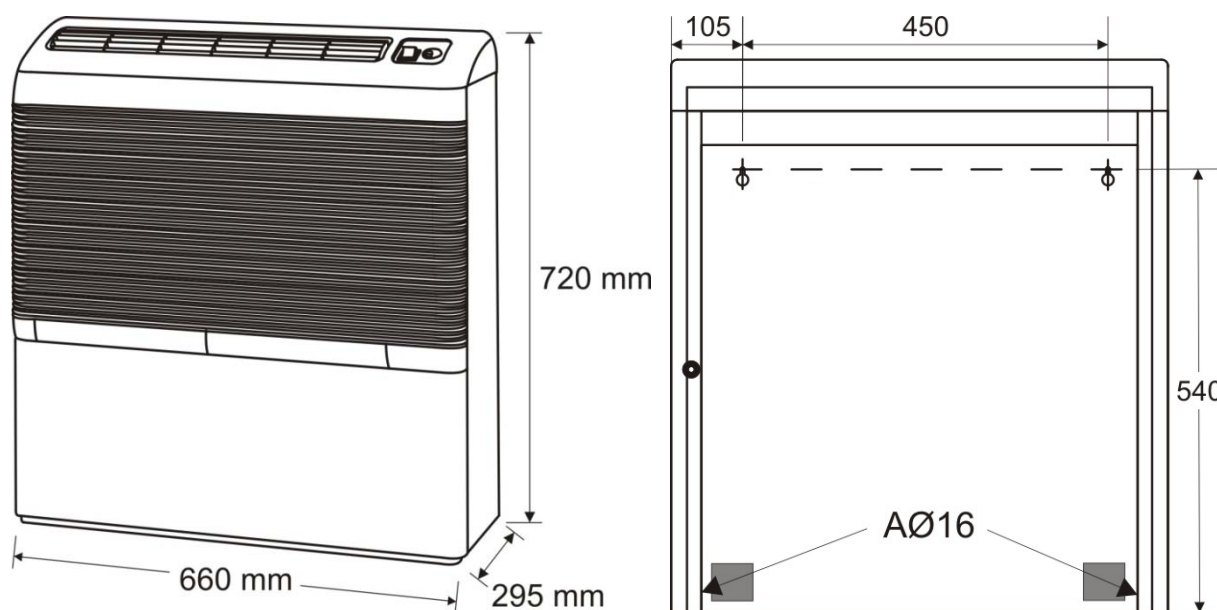
DT 850



	English
L-N	Power supply 230V-1N-50 Hz
	Earth
M1	Fan
M2	Compressor
C1	Fan capacitor 1µF
C2	Compressor capacitor 25µF
ALFA-14/1	Defrost clock
S1	Condenser probe
S2	Evaporator probe
VO	Under voltage light
CR	Plug connector
MI	Male plug
FI	Female plug
I1	Fan speed selector
H	Hygrostat
THS	Compressor safety thermostat
BA	Power supply terminal block
PC	Electric plug
N	Black
B	Blue
M	Brown
G	Grey
BI	White
R	Red
V	Purple
V/J	Green-yellow

Dimensions

	Weight Kg
DT 850	41





ZODIAC

Plaque signalétique – Product name plate

Votre installateur – Your installer

Chauffage et déshumidification de piscines – Heating and dehumidification of pools

Zodiac Pool Care Europe – Boulevard de la Romanerie – BP 90023

49180 Saint Barthélémy d'Anjou cedex – France

www.zodiac-poolcare.com

Global provider of innovative pool products and services
Produits et services innovants pour la piscine