

USE AND MAINTENANCE MANUAL



FSC25

PAY ATTENTION: when switch over from AUTomatic to CONTinuous functioning using front switch, wait at least one second in position OFF (0); otherwise it's possible to cause the fuse cut off.

Don't move the machine without disconnecting the plug if the tank is not empty



1. SAFETY WARNINGS

This machine must be always connected using earthed electrical plugs as required for all electrical appliances; FRAL Company declines any responsibility for any danger or damage whenever this norm is not complied with.

Any intervention on the machine using any instrument must be carried out only by a qualified technician.

When the machine is connected with a power socket, it must be in vertical position and any rough move must be avoided because it could cause some water to come into contact with electrical parts; it is, therefore, recommended to remove the plug from the socket before moving around the machine; if any water may have been spread on the machine, following some rough handling of the same, then, the machine must be turned off and can be started up again only after 8 hours.

The cold air Outlet can be ducted only using the apposite pipes. Not use other pipes or ducts. Minimum diameter for ducting hot air pipes is 12 inches. Using lower diameters machine can be damaged.

The machine must not be set running in narrow areas, which do not allow a proper diffusion in the room of the air coming out from the machine. It is, instead, allowed to set the machine on the sides near the walls.

This machine has been designed and manufactured in compliance with the strictest safety rules. Therefore, pointed instruments (screw drivers, wool needles or similar ones) are not to be inserted in the grilles or in any other opening of the panels, especially when it is opened to remove the filter.

Never remove front grille or open any part of the machine without removing first the socket from the plug.

The machine must not be cleaned using water. To clean the machine use a wet cloth. Remember to disconnect the plug from the socket before.

The front panel should not be used to lay over it cloths or other things: it could cause damages or dangers.

The filter should be cleaned periodically (normally every month), but in dusty rooms it should be cleaned more often. Remember that when the filter is dirty, the air circulation and, consequently, the machine performance is reduced.

2. PERTINENT TECHNICAL NORMS AND REGULATIONS

The machine has been designed, manufactured and distributed by Fral according to safety and electro-magnetic compatibility to European Norms and Regulations:

MACHINES NORMS (2006/42/CE - 17.05.2006) ;
SECURITY REGULATIONS FOR LOW TENSION APPLIANCES 2006/95/CE - 12.12.2006;
ELECTROMAGNETIC COMPATIBILITY (EMC) – 2004/108/CE – 15.12.2004.

It is hereby certified that this Dehumidifier conform to the:
IEC Regulations **CEI-EN 60335-2-40, CEI-EN 55014-1, 55014-2.**

The machine is built according to RoHS European Norms:
2011/65/UE year 2011 and **CEI-EN 50581.**

3. USE AND MAINTENANCE

3.1 DESCRIPTION OF THE MACHINE

This machine is a particular air conditioner, mono-block. Cold air is sucked through the front grille, and supplied through the two holes located in the front panel. On these two holes can be put two flexible pipes for creating a spot cooled area.

Hot air is sucked from the back filter and the outlet is on the top. On the neck of the hot air supply can be placed a flexible pipe for bringing far away the hot air.

In the front of the machine, under the two holes for cold air supply, there is the control panel as described below.

The machine includes a 20 litre capacity tank for collecting condensed water. When the tank is full the machine stops.

3.2. FUNCTIONING AND CONTROL PANELS

The compressor uses R407c Refrigerant and directly cools the air. The machine includes: one compressor, a thermostatic automatic valve, two motor fans, an automatic functioning thermostat, a defrosting thermostat, a low pressure switch, an high pressure switch, a PCB, and a plug with fuse.

- **FRONT CONTROL PANEL includes:**

An Ambient Temperature Thermostat, located in the front control panel allows to choose the desired room temperature with range 10-35 °C.

A Fan Speed Switch, also located in the front control panel, allows to choose among 2 different internal fan speeds.

A Main Switch allows to choose among: **OFF** position (0 = nothing works) – **AUT** position (the machine is cooling according with preset room temperature) – **CONT.** position (the machine works not depending on thermostat).



- **WARNING LIGHTS:**

Green Light FULL : indicates that the condensed water is full, and machine stops.

High Pressure Red Light: if “ON”, it means that pressure inside the refrigerant circuit is too high; manual reset pushing the button in the side connectors panel, removing the electric panel cover;

Low Pressure Red Light: if “ON”, it means that there is too low pressure inside the refrigerant circuit; automatic reset.

3.3 START OPERATIONS

1. **Insert the socket** in an earthed plug
2. **Select desired fan speed**
3. **Select desired Room Temperature**
4. **Move the main switch** from **Off (0)** position to **Aut.** or **Cont.** position

If Main switch is in Cont. Position or in Aut position and Temperature set of Thermostat is under ambient temperature, the machine should start. Immediately start cooled front air Motor fan; then, the compressor, after approx. 5 minutes, starts to work.

If the main switch is in Auto position and the thermostat set to over 35 ° C will have only the fan.

If room temperature is lower than 18-20°C, automatic defrost system can start working; periodically the compressor stops till any Ice on the evaporator coil have been melt.

4. PERIODICAL MAINTENANCE

Two maintenance operations are very important:

Cleaning of front air filter (at least ONCE a month) located inside the front grille. For removing the front grille, lift and pull out the grille itself. Also every month must be cleaned **the back hot air filter**, that can be removed directly lifting it by means of the two small handles located on the filter.

The filter scan be cleaned under water flow from a faucet.

If the machine is used in dusty ambient, the filter cleaning must be done more frequently.

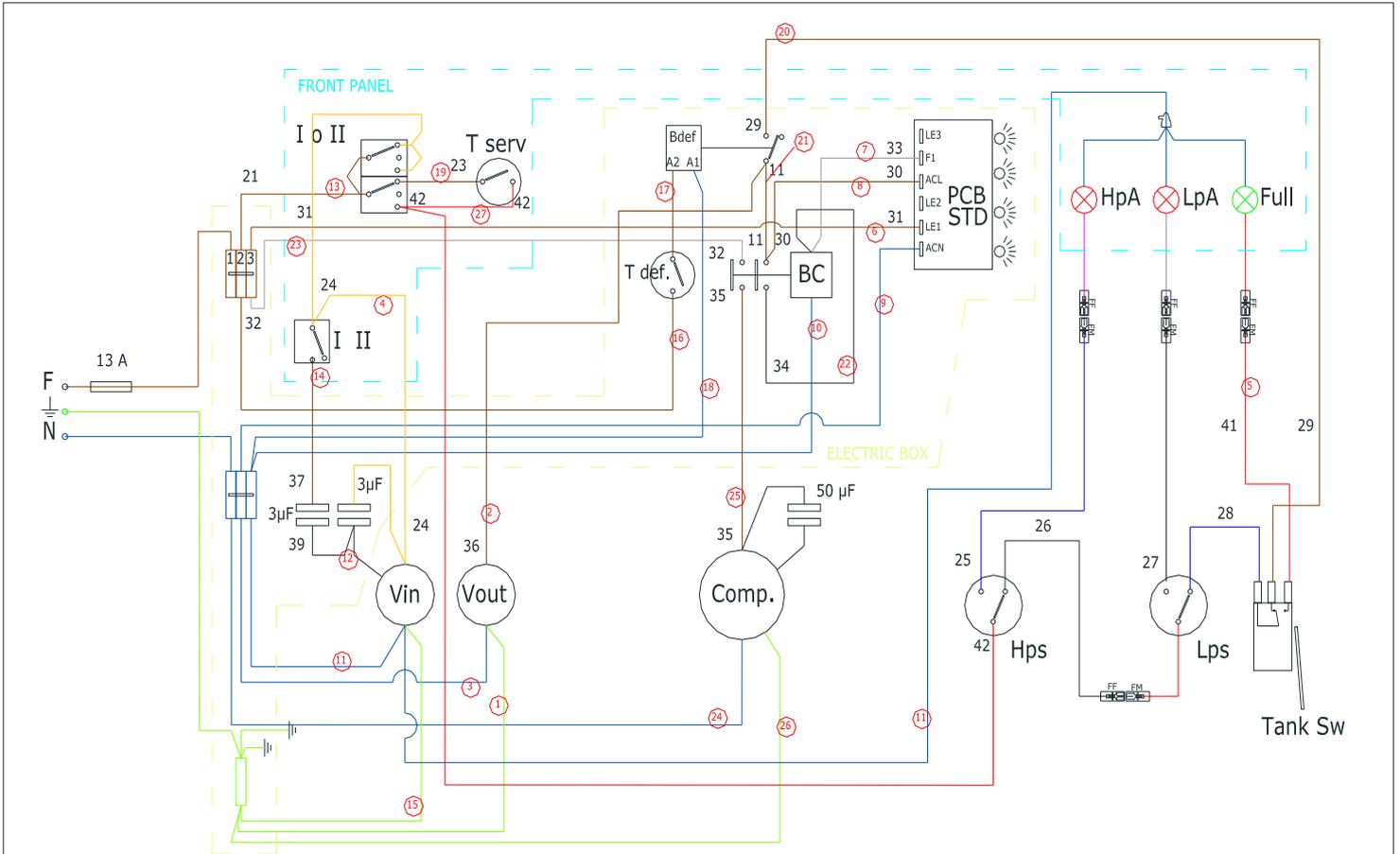
5 IF THE MACHINE DOESN'T WORK

1. Check that the plug is socket is supplied, and the plug is correctly inserted.
2. Check if **Green Light** in front control panel is '**ON**'; In this case remove the tank and empty it.
3. If **High Pressure Light** is '**ON**', check the cleaning of back filter; or if ambient temperature is too high (over 38-40°C situation can be critic).
4. If **fuses** are broken, check everything as above at point 2, and also if inside temperature is too high.
5. If **Low Pressure Light** is '**ON**', it may mean that the inside air filter is very dusty; another cause may be that there is a refrigerant leakage in the refrigerant circuit.

6. TECHNICAL DATA

TECHNICAL DATA:	FSC25
Cooling Capacity (Room Amb. 28°C 55%):	7100 W
Cooling Capacity (Room Amb. 28°C 55%):	24400 BTU/h
Absorbed Power (28°C 55% indoor, 30°C Outdoor):	2350 W
Room Ambiente operating Temperature Range	10 - 38°C
Absorbed Current (28°C 55% indoor, 32°C Outdoor):	11,7 A
Max. absorbed Power (40°C hot zone/32°C cooled zone)	2900 W
Max. Absorbed Current (40°C hot zone/32°C cooled zone)	12,5 A
Cooling Section Air flow:	
Fan speed : - High Speed	1020 cm/h
- Low Speed	800 cm/h
Heating Section Airflow (High/Low speed) - Factory pre-setted	2200/1800 cm/h
High Efficiency Compressor	Rotary
Indoor Unit Noise (at 3m in free field) at low speed	58 dB(A)
Dimensions WxDxH mm:	500x615x1290
Weight	83,5 Kg

7. ELECTRIC DIAGRAM



- | | | | |
|--------------------------------------|--------------------------------|----------------------------------|----------------------|
| I o II : Main Switch | T serv : Service Thermostat | I II : Cool Air Fan speed Switch | Bdef : Defrost relay |
| T def. : Defrost Thermostat set -1°C | PCB : Electronic Card standard | BC : Compressor Contactor | |
| Vin : Cool Air Motor Fan | Vout : Hot Air Motor Fan | Comp. : Compressor | |
| Hps : High pressure Switch | Lps : Low Pressure Switch | Tank Sw : Full Tank Microswitch | |

Electric Diagram FSC25

REV. DATA REVISIONE / REVISION DATE
 FSC2453 2 02/05/2011

Front filter dismounting



Flexible pipe mounting



Rear handles mounting



Supply Cable



DECLARATION OF CONFORMITY



(Community directives Low Voltage and Electro-magnetic Compatibility)

FRAL Company s.r.l. Viale dell'Industria e dell'Artigianato 22/c – 35010 Carmignano di Brenta – PD – hereby declares that the following products:

Water Split Air Conditioner

FSC25

Has been designed, manufactured and distributed according to safety and electro-magnetic compatibility to European Norms and Regulations:

MACHINES NORMS (2006/42/CE - 17.05.2006) ;
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Carmignano di Brenta, 21/02/2013

The Legal Agent
Ing. Alberto Gasparini

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