FRAL
RIGHT HUMIDITY ON DEMAND

DEHUMIDIFIERS FOR SWIMMING POOLS

DEHUMIDIFICATION FOR SWIMMING POOLS

FSW SERIES

The Fral FSW series fixed dehumidifiers are high-performance appliances, usable in a variety of applications. They are particularly suited to dehumidify swimming pool environments, since they are resistant to corrosion due to chlorine. They feature a high efficiency air filter in polyurethane, washable and easily replaceable, and the possibility of direct drain. Optionally, it is possible to install a condensate lifting pump that allows condensate pumping up to a height of 3.5 meters from the machine positioning level.

The Fral fixed dehumidifiers series FSW can be equipped with electrical resistances or hot water coil for heating.
Their elegant design makes them particularly suitable for installation in special environments such as libraries and offices.

FEATURES

FRAME
All FSW units are made in galvanised sheet metal, powder coated with enamelat 180° C polyurethane powders to ensure the best resistance against the atmospheric agents. The frame is self-supporting.

COMPRESSOR
Rotative compressor.
The compressor features:
1. High efficiency for saving in energy consumption.
2. Low noise level, quiet operation.
3. Use of the HFC refrigerant for the protection of the environment.
4. High reliability, long life.

REFRIGERANT CIRCUIT
The refrigerant gas used in these units is R410a. The refrigeration circuit is realized in conformity with ISO 97/23 concerning welding procedures and PED regulations.

The refrigerant circuit includes:
• drying filter.
• Schrader valve for maintenance and control.
• capillary tube expansion.
• compressor.
• condenser and evaporator made in copper tubing with aluminium fins

CONDENSATE COLLECTION TANK
Stainless steel tank; condensate drain tube fitting: ¾" Female.

FAN
Centrifugal fan.

AIR FILTER
Made in synthetic material, the air filter is washable and easily replaceable.

MICROPROCESSOR
The microprocessor controls all the functions of the machine, such as: general operation, automatic defrost system, alarms, and adjustment of humidity and temperature (temperature only for machine version with hot water coil).

CONTROL PANEL
The electrical panel complies with the electromagnetic compatibility standards (2004/108 EEC) and the rules of electrical safety for Low Voltage appliances 2006/95 EEC.

The electric panel features the following components:
1. Remote control terminals;
2. Electronic card;
The installation must comply with the safety rules and laws in force. Provide a main disconnector, if necessary.

TESTING
Tests are performed to check the tightness of the refrigeration circuit. Electrical discharge tests and functional tests are performed as well.

TECHNICAL STANDARDS
This dehumidifier meets the essential requirements included in the Directives of the European Community 2006/95/EC of 12 December 2006 on the safety of electrical products for use in Low Voltage; 2004/108/EC of 15 December 2004 in the field of electromagnetic compatibility; 2006/42/EC of 17 May 2006 in the fields of machinery safety.
The conformity is declared with reference to the following harmonized technical standards:
CEI-EN 60335-2-40, CEI-EN 55014-1, CEI-EN 55014-2.
We also declare that the product is manufactured in compliance with the RoHS Directive in force, that is 2002/95/EC, transposed with the Legislative Decree of 25 July 2005 no. 151 (article 5).

TECHNICAL SPECIFICATIONS

	FSW96
Rated Average Power Consumption (27 °C - 60% R.H.)	980 W
Max Power Consumption (35 °C - 70% U.R.)	1350 A
Max. Current Consumption (35°C - 70% R.H.) F.L.A.	7.2 A
Max Power Consumption with electrical resistances (35°C - 70% U.R.)	4900 W
Max. Current Consumption with electrical resistances (35°C - 70% U.R.)	18 A
Start up current L.R.A.	28 A
Rated air flow	**800 mc/h**
Sound Pressure Level (at 3 mts in free field)	49 db(A)
Refrigerant	R410a
Fitting on the machine for condensate drain	3/4"
IP	IPX2
Hot water coil heating capacity (environment 27°C, water 70/60 °C)	4.5 kW
Electric resistance power	4 kW
Operational range (temperatures)	7÷35 °C
Operating range (relative humidity) T < 30 °C	40÷99%
Operating range (relative humidity) T 30÷32 °C	40÷90%
Operating range (relative humidity) T 32÷35 °C	40÷70%
Available voltage and frequency	230/1/50

ACCESSORIES

■ STANDARD □ OPTIONAL ☒ NOT AVAILABLE

Hot gas defrost	☒
Humidity and temperature electronic control	■
Condensate lifting pump	□
How water coil	□
Electric resistances	□
Remote electronic control humidity and temperature (up to two meters)	□
Remote electronic dehumidistat	□

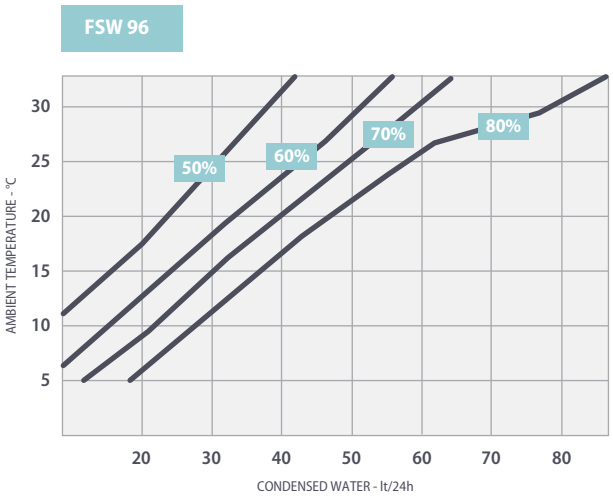
DIMENSIONS AND WEIGHTS

Width	500 mm
Height	1750 mm
Depth	290 mm
Weight	72kg

DIMENSIONS AND WEIGHTS WITH PACKING

Width	600 mm
Height	1800 mm
Depth	320mm
Weight	75 Kg

CONDENSED WATER AT DIFFERENT AMBIENT TEMPERATURE AND HUMIDITY CONDITIONS (lt/24h)



	10 °C 60%	10 °C 80%	15 °C 60%	15 °C 80%	20 °C 60%	20 °C 80%	25 °C 60%	25 °C 80%	26.7 °C 60%	27 °C 80%	30 °C 80%	32 °C 90%
FSW 96	16	28	24	37	32	45	40	56	48	60	80	100

OPTIONAL ACCESSORIES

ELECTRICAL HEATERS IN STAINLESS STEEL
Shielded electrical resistances in stainless steel.

HOT WATER COIL
This coil can help to warm the environment of the swimming pool.

ON/OFF 3 WAY VALVE
Controls the flow of water inside the hot water exchanger. Controlled from the control panel of the machine.

REMOTE CONTROL CARD
A complete card for remote control of the humidity and temperature (up to a maximum of two meters from the dehumidifier) can be supplied.

REMOTE CONTROL (humidistat) (On/Off):
You can use the machine with a remote control. In this case, a humidistat connected to the terminal blocks of the electrical panel should be used in place of the standard humidistat (already installed on the machine). It is also possible to have an ON-OFF switch, electrically connected in series to the humidistat.

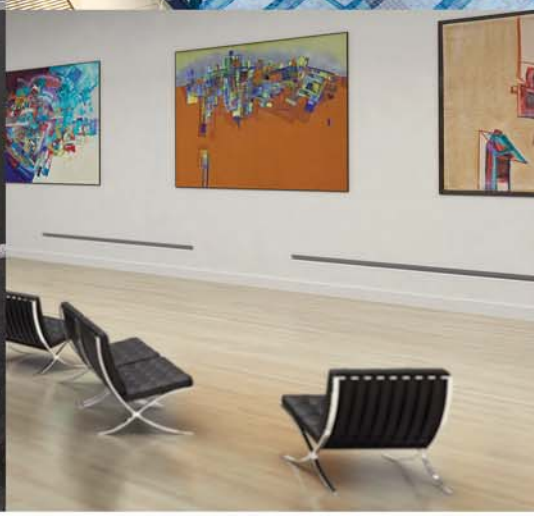
CONDENSATE LIFTING PUMP
Optional in all versions, it replaces the condensate collection tank and allows to remove the condensed water up to a height of 3.5 mt with respect to the position of the machine.

NOTES







APPLICATIONS | SWIMMING POOL | ARCHIVES | GYMS | HOUSES

BASEMENT ROOMS | LAUNDRY | LIBRARIES | MUSEUMS

FRAL SRL | via dell'industria e dell'artigianato, 22/C - 35010 Carmignano di Brenta - PADOVA - ITALY
TELEPHONE: +39 049 9455839 | **FAX:** +39 049 5991129 | **E-MAIL:** info@fral.it | **WEB:** www.fral.it

CE