



FDNF

FDND

ECO

# PROFESSIONAL PORTABLE DEHUMIDIFIERS

# FD ECO - FDND - FDNF SERIES

The Fral portable professional dehumidifiers of the series FDNF - FDND are high-performance appliances, equipped with robust galvanized steel frame painted with epoxy resins and mounted on 4 swivel casters that make it easy to move. They have a high efficiency air filter in polyurethane, washable and easily replaceable, and a very large condensate collection tank with the possibility of direct drain.

It is possible to install a condensate lifting pump instead of the tank, that allows condensate pumping up to a height of 3.5 meters from the machine positioning level.

The main characteristic of all the Fral portable professional models of the series FDNF - FDND is the evaporation coil that consists of smooth tubes in aluminium (with the exception of the ECO model). This unique arrangement derived from professional dehumidifiers allows a lower power consumption of the appliance, with a very high efficiency even at low relative humidity. All models include the defrost timer and Hot Gas defrost (except for ECO).

## FEATURES

### FRAME

The frame and the sheets are hot galvanised, epoxy powder coated, ensuring high strength and durability.

### COMPRESSOR

Rotative compressor, mounted on vibration dampers.

### REFRIGERANT CIRCUIT

**Evaporator:** the evaporation coil consists of smooth tubes in aluminium. The smooth tubes ensure a high yield of the dehumidifier, significantly reducing energy consumption, even at low relative humidity.

**Condenser:** the coil is made of copper pipes and aluminium fins, the wide size of the condenser fins ensures resistance to dust, long life and easy maintenance of the machine.

### CONDENSATE COLLECTION TANK

The condensate collection tank, installed as standard, is very large and can be easily removed. The machine is also ready for connection to a fixed condensate drain.

### 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. Equipped with an alarm for dehumidifier stop in the case of pump failure.

Alternatively, it is available a condensate lifting pump kit, easily applicable outside the dehumidifier, provided with malfunction alarm that switches off the machine.

### FAN

Axial fan, statically and dynamically balanced, long-lasting and durable.

### AIR FILTER

The air filter, supplied as standard with the unit, is washable and easily replaceable. High-efficiency filter.

### MICROPROCESSOR

Controls the defrosting cycles with hot gas, the timer of the compressor and the alarm card.

### CONTROL PANEL

Located at the top of the machine.

Executed according to the European standards in force.

### 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

|   | FD 33 ECO       | FDND 33         | FDNF 33         | FDNF 44         | FDNF 62         | FDNF 96          |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|
| Average rated power consumption (20 °C - 60% R.H.)    | 430 W           | 410 W           | 410 W           | 570 W           | 720 W           | 1050 W           |
| Rated average power consumption (26.7 °C - 60% R.H.)  | 535 W           | 520 W           | 520 W           | 710 W           | 800 W           | 1280 W           |
| Maximum power consumption (35 °C - 70% R.H.)          | 620 W           | 590 W           | 590 W           | 810 W           | 920 W           | 1480 W           |
| Maximum current consumption (35 °C - 70% R.H.) F.L.A. | 3.3 A           | 3.2 A           | 3.2 A           | 3.9 A           | 4.2 A           | 7.2 A            |
| Start up current L.R.A.                               | 10 A            | 10 A            | 10 A            | 18 A            | 20 A            | 29 A             |
| Air flow  | <b>350 mc/h</b> | <b>380 mc/h</b> | <b>380 mc/h</b> | <b>450 mc/h</b> | <b>550 mc/h</b> | <b>1000 mc/h</b> |
| Sound pressure level (3 meters in open field)         | 43 db (A)       | 43 db (A)       | 43 db (A)       | 46 db (A)       | 46 db (A)       | 52 db (A)        |
| Refrigerant   | R410a           | R410a           | R410a           | R410a           | R410a           | R410a            |
| Capacity of the condensate water tank                 | 7 kg            | 8 kg            | 8 kg            | 8 kg            | 14 kg           | 14 kg            |
| Fitting on the machine for condensate drain           | 16 mm           | 3/4"            | 3/4"            | 3/4"            | 3/4"            | 3/4"             |
| Operational range (temperatures)                      | 6÷33 °C         | 1÷35 °C         | 1÷35 °C         | 1÷35 °C         | 1÷35 °C         | 1÷35 °C          |
| Operating range (relative humidity) T < 30 °C         | 35÷98%          | 30÷98%          | 30÷98%          | 30÷98%          | 30÷98%          | 30÷98%           |
| Operating range (relative humidity) T 30÷32 °C        | 35÷90%          | 30÷90%          | 30÷90%          | 30÷90%          | 30÷90%          | 30÷90%           |
| Operating range (relative humidity) T 32÷35 °C        | 35÷70%          | 30÷70%          | 30÷70%          | 30÷70%          | 30÷70%          | 30÷70%           |

## ACCESSORIES

■ STANDARD

□ OPTIONAL

⊠ NOT AVAILABLE

|                                      |   |   |   |   |   |   |
|--------------------------------------|---|---|---|---|---|---|
| Hot gas defrost                      | ⊠ | ■ | ■ | ■ | ■ | ■ |
| Timer                                | ■ | ■ | ■ | ■ | ■ | ■ |
| Mechanical humidistat                | ■ | ■ | ■ | ■ | ■ | ■ |
| Condensate lifting pump              | □ | □ | □ | □ | □ | □ |
| External condensate lifting pump kit | □ | □ | □ | □ | □ | □ |
| Electronic control                   | □ | ⊠ | ⊠ | ⊠ | ⊠ | ⊠ |

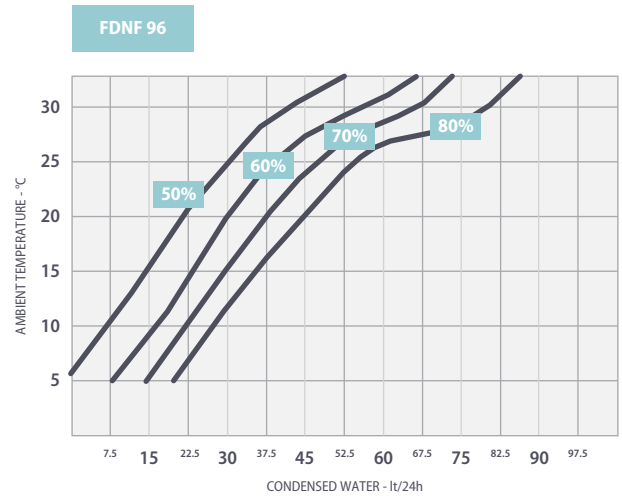
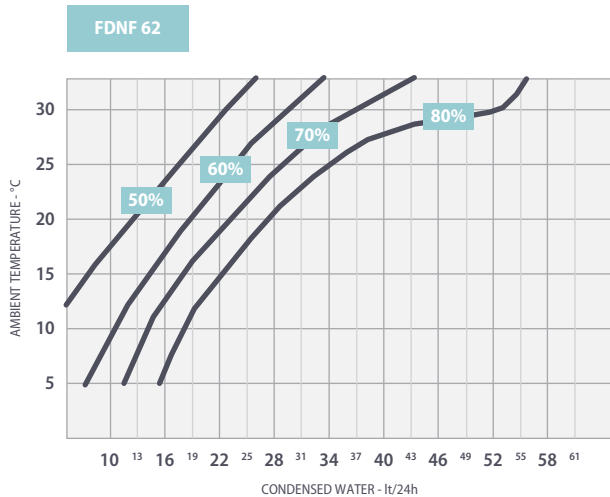
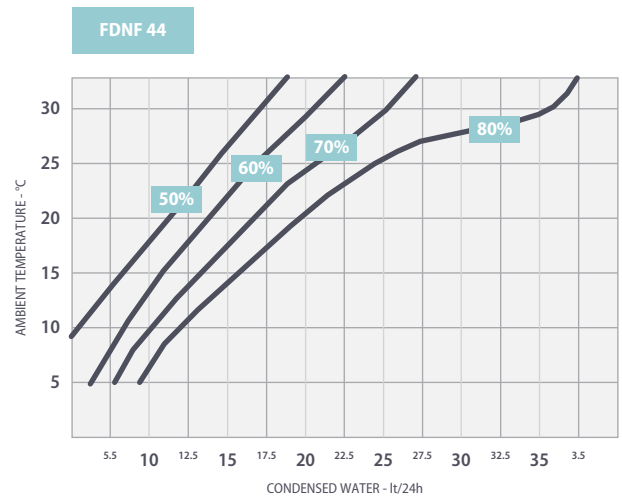
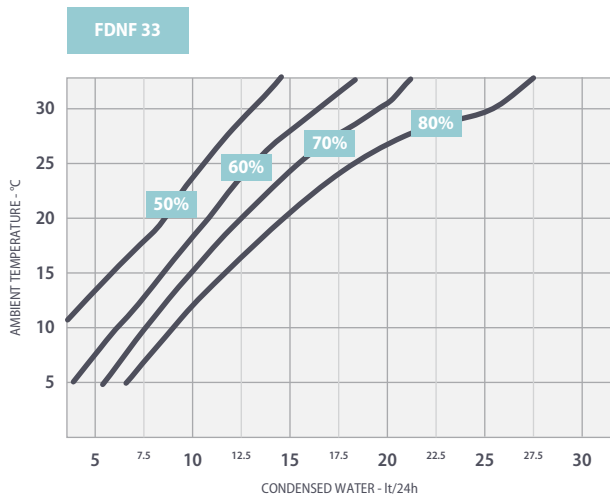
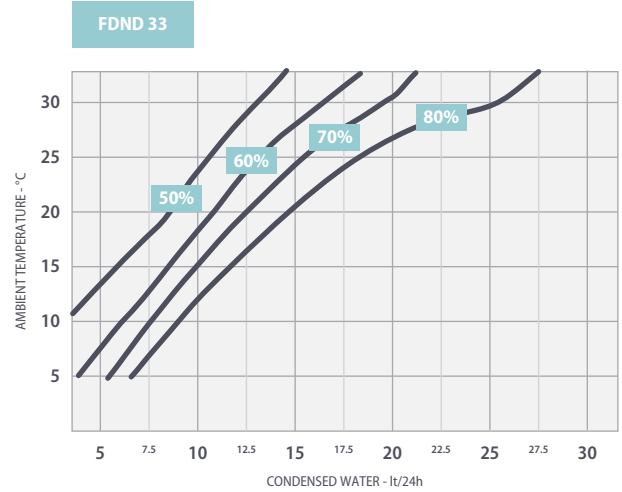
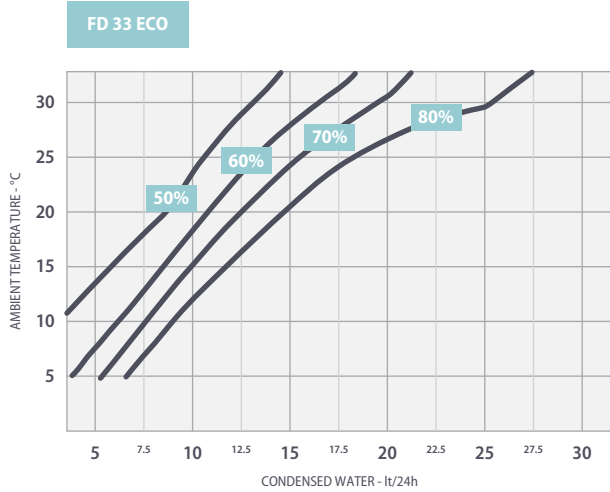
## DIMENSIONS AND WEIGHTS

|        |         |         |         |        |        |        |
|--------|---------|---------|---------|--------|--------|--------|
| Width  | 320 mm  | 350 mm  | 350 mm  | 350 mm | 435 mm | 545 mm |
| Height | 595 mm  | 700 mm  | 690 mm  | 720 mm | 770 mm | 900 mm |
| Depth  | 330 mm  | 370 mm  | 370 mm  | 380 mm | 410 mm | 420 mm |
| Weight | 23.5 kg | 31.5 kg | 31.5 kg | 39 kg  | 42 kg  | 56 kg  |

## DIMENSIONS AND WEIGHTS WITH PACKING

|        |         |         |         |        |        |        |
|--------|---------|---------|---------|--------|--------|--------|
| Width  | 385 mm  | 450 mm  | 450 mm  | 440 mm | 480 mm | 580 mm |
| Height | 660 mm  | 760 mm  | 760 mm  | 840 mm | 840 mm | 950 mm |
| Depth  | 385 mm  | 450 mm  | 450 mm  | 440 mm | 480 mm | 470 mm |
| Weight | 24.5 kg | 33.5 kg | 33.5 kg | 41 kg  | 44 kg  | 58 kg  |

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



|                  | 10 °C<br>60% | 10 °C<br>80% | 15 °C<br>60% | 15 °C<br>80% | 20 °C<br>60% | 20 °C<br>80% | 25 °C<br>60% | 25 °C<br>80% | 26.7 °C<br>60% | 27 °C<br>80% | 30 °C<br>80% | 32 °C<br>90% |
|------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|--------------|--------------|--------------|
| <b>FD 33 ECO</b> | 4.5          | 7            | 5.5          | 9            | 10           | 12.5         | 11.5         | 17           | 12             | 18           | 26           | 33           |
| <b>FDND 33</b>   | 5.5          | 8            | 8            | 11           | 10           | 13.5         | 12           | 17           | 13             | 18           | 26           | 33           |
| <b>FDNF 33</b>   | 5.5          | 8            | 8            | 11           | 10           | 13.5         | 12           | 17           | 13             | 18           | 26           | 33           |
| <b>FDNF 44</b>   | 8            | 11.5         | 11           | 16           | 14           | 19           | 17           | 25           | 18             | 26           | 36           | 44           |
| <b>FDNF 62</b>   | 10           | 17           | 14           | 22           | 19           | 27           | 23           | 34           | 27             | 36           | 52           | 62           |
| <b>FDNF 96</b>   | 18           | 26           | 24           | 37           | 30           | 45           | 36           | 52           | 44             | 56           | 80           | 96           |







APPLICATIONS

GYMS

NEW BUILDINGS

WAREHOUSES

ARCHIVES

PUMP ROOMS

SECOND HOMES

LAUNDRY

RENTAL

LIBRARIES

BASEMENT ROOMS