

LAF 50 / 100 / 150

Condensing dehumidifiers for professional use

VEAB condensing dehumidifiers are designed for professional use in application in which strict demands are made on capacity. The LAF is therefore suitable for building sites and for dealing with water damage in order to achieve a sufficiently low humidity of the building materials, carpets and wall covering materials. In basements and warehouses, the LAF can maintain sufficiently low humidity to avoid corrosion, smells and mould problems. Drying by means of a LAF dehumidifier is very economical and efficient. The energy consumption is minimal compared to warming and then ventilating away the humid air. For every litre of water evaporated, 700 Wh of heat are recovered.

- Energy-efficient rotary compressor - saves about 30 % of energy compared to a piston compressor
- Efficient tubular evaporator that dehumidifies even when the temperature is low and when the humidity is low
- Demand-controlled hot gas defrosting
- Service temperature range 3 - 30°C
- Humidity operating range 25 - 100% RH
- Automatic stop when the condensate container is full
- Easy to handle - large wheels ensure good mobility (Ø 250 mm)
- Robust, durable design suitable for building sites - can be lifted by the handle
- LAF 50S/ES/E2S is stackable

Design

The casing is made of galvanized and painted sheet steel. Built-in condensate collecting container with level switch and provision for connecting a drain hose (Ø 13 mm). Electronic demand-controlled hot gas defrosting offers quick and effective defrosting. The different models of LAF50 is stackable, at a height of two, to save space in storage. Degree of protection IPX4 (splash-proof design).

Electric heating, designation suffixe -E, -ES and -E2S

The LAF 50ES/100E/150E models have a built-in 1500 W electric heater element and the LAF 50E2S model has a 2000 W heater element. All E, ES and E2S models have a switch for selecting dehumidification with or without electric heating. A permanently preset room thermostat controls the electric heating to 22°C.

Connection

All models are delivered with a 2-metre long 230 V power supply cable, with plug fitted.



Approvals

The dehumidifiers have been tested and approved by Intertek SEMKO in accordance with:
 LVD Directive: EN 60335-1 and EN 60335-2-40
 EMC Directive: EN 61000-6-1 and EN 61000-6-3
 EMF Directive: EN 62233



Product range overview

Type		LAF 50S	LAF 50ES	LAF 50E2S	LAF 100	LAF 100E	LAF 150	LAF 150E
Operating humidity range	% RH	25-100	25-100	25-100	25-100	25-100	25-100	25-100
Operating temp. range	°C	+3 - +30	+3 - +30	+3 - +30	+3 - +30	+3 - +30	+3 - +30	+3 - +30
Power supply	V	230V~	230V~	230V~	230V~	230V~	230V~	230V~
Fuse	A	10	10	16	10	16	10	16
Max. power consumption	W	600	2100	2600	1070	2570	1400	2900
Power consumption W at 20°C / 60% RH	W	400	400*	400*	720	720*	1070	1070*
Additional heating	W	-	1500	2000	-	1500	-	1500
Dehumidification at 20°C, 60% RH	l / 24h	14.9	14.9	14.9	25	25	36	36
Dehumidification at 30°C, 80% RH	l / 24h	24.9	24.9	24.9	49	49	71	71
Power consumption at 20°C, 60% RH	kW / l	0,73	0,73 ¹	0,73 ¹	0,69	0,69 ¹	0,71	0,71 ¹
Refrigerant		R 410A	R 410A	R 410A	R 410A	R 410A	R 407C	R 407C
Rotary compressor		yes	yes	yes	yes	yes	yes	yes
Air flow rate	m ³ /h	500	500	500	850	850	925	925
Sound level ²	dB	45	45	45	54	54	59	59
Volume of collecting container	l	9	9	9	11	11	11	11
Degree of protection		IPX4	IPX4	IPX4	IPX4	IPX4	IPX4	IPX4
Weight	kg	37	38	38	51	52	57	58
Depth	mm	440	440	440	450	450	450	450
Width	mm	540	540	540	640	640	640	640
Height	mm	980	980	980	960	960	1110	1110

¹⁾ Power consumption excluding heater element.

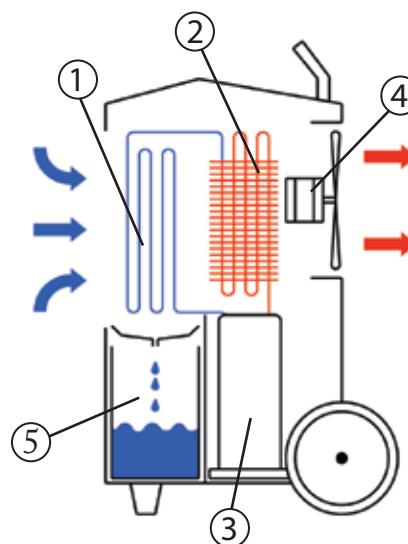
²⁾ Measured at a distance of 3 metres in front of the unit.

How the dehumidifier works

The built-in fan continuously circulates the room air through the dehumidifier. When the humid air flows through the evaporator (cooling element), it will be cooled to its dew point and condensate will be precipitated out of the air. The water runs down into the condensate collecting container. The built-in level switch will stop the dehumidifier when the condensate container is full. The dry and cold air then flows through the condenser where it is heated by the compressor heat and by the energy recovered in the earlier conversion of water vapour into water. The dry and warm air is discharged back into the premises, where it absorbs more moisture.

At certain temperature/humidity conditions, frost will form on the cooling element. Automatic defrosting control is then activated once an hour and delivers the warm gas to the cooling element so that the frost will be thawed and will run down into the condensate collecting container (hot gas defrosting).

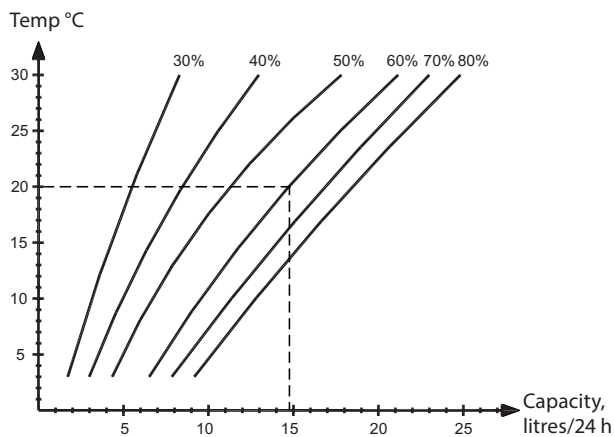
In order to speed up the drying process, models E, ES and E2S of the LAF have built-in electric heaters that raise the temperature in the premises, thus accelerating the drying process.



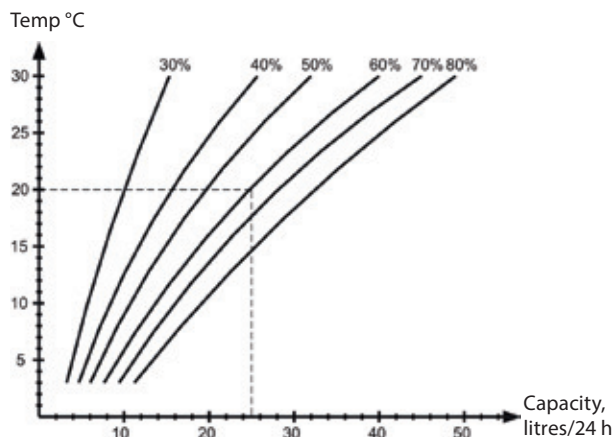
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|----------------------|------------------------------------|
| 1. Evaporator | 4. Fan |
| 2. Condenser | 5. Condensate collecting container |
| 3. Rotary compressor | |

Selection of dehumidifier

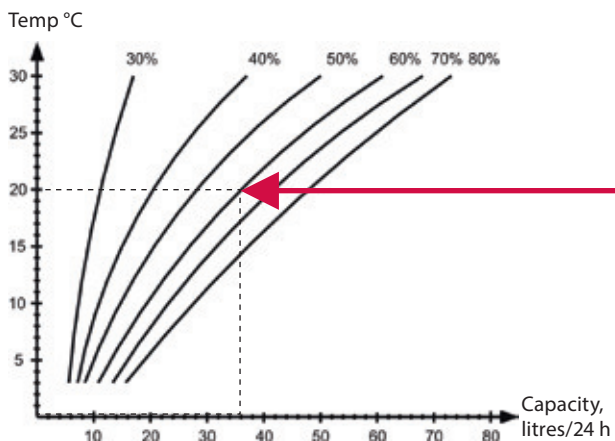
Capacity of LAF 50



Capacity of LAF 100



Capacity of LAF 150



When selecting a dehumidifier, it is important to compare the capacity at a normal operating point. A normal operating point for dehumidification is 20°C and 60% RH. (The capacity at 30°C and 80% RH is of no interest in normal use.)

Dehumidification tips

- Locate the dehumidifier to ensure the best possible air circulation in the room.
- Keep the doors and windows closed.
- A higher room temperature accelerates the dehumidification process.
- Untreated iron surfaces will not rust at ambient humidities below 50% RH.
- No significant growth of mould occurs at ambient humidities below 65%.

Accessories

	Product
	<p>Humidistat LAF-HY A humidistat is available as an accessory for controlling the room humidity. The humidistat is connected to the dehumidifier by means of a plug directly at the normal cable connection of the dehumidifier. Including mounted cables. Degree of protection IP21. (Not for use on building sites).</p>
	<p>Operating hour meter LAF-OHM The operating hour meter measures the compressor operating time. Can be factory-fitted to the humidifier or as an accessory for retrofitting.</p>
	<p>Condensate collecting container with pump LAF-P The pump is fitted with a level switch that automatically starts and stops the pump. The collecting container has a socket to which the dehumidifier plug can be connected. Power supply: 230V. Connection for Ø 13 mm i.d. hose. Max. pump delivery head: 3 metres</p>
	<p>Wall bracket LAF-W For permanent installation of the dehumidifier.</p>