

DEH vertical built-in

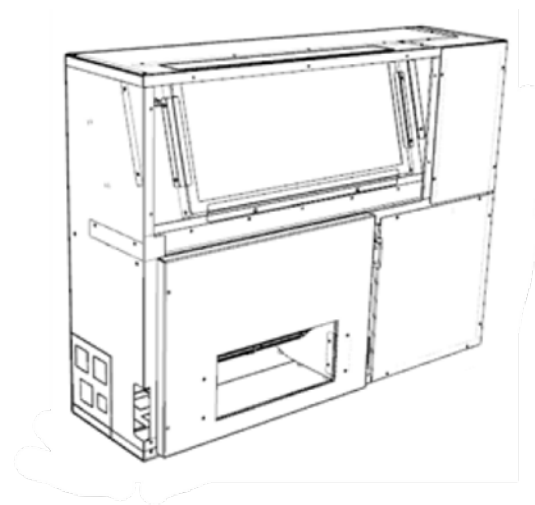
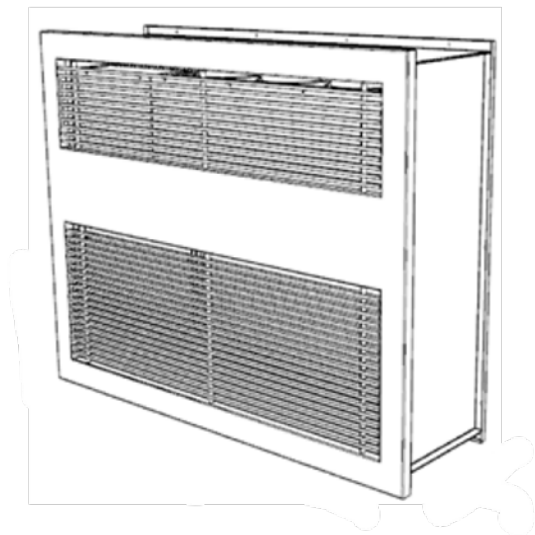
Dehumidifiers for built-in installation

With high efficiency EC motor

Ductable

For radiant systems with water connection

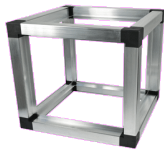
For stand-alone use without water connection and model with integration



GENERAL FEATURES

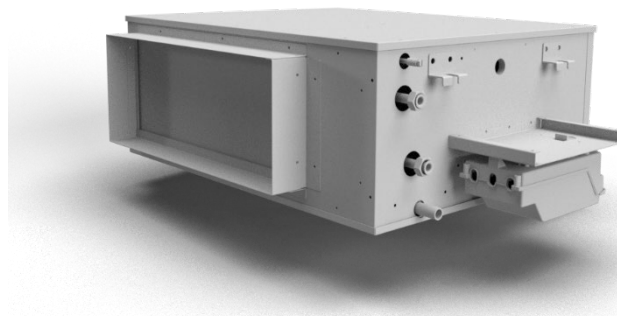
STRUCTURE

High-strength structure with self-supporting galvanized sheet metal frame
Selection of materials with high thermal and acoustic insulation characteristics



FANS

The unit is equipped with EC centrifugal fans
With high-efficiency Brushless motor



COMPRESSOR

High efficiency reciprocating compressor



FILTRATION

Flat filters with Coarse filtration class

TECHNICAL FEATURES

DEH built-in is an air conditioning unit designed for specific dehumidification/air conditioning needs in low-energy environments.

The unit is particularly suitable for single family units, apartments, offices where there is a radiant air conditioning system or places where effective dehumidification is needed such as basement rooms, bathrooms, laundries, swimming pool areas and spas.

VENTILATION:	Fans with dual-intake brushless EC motor. Very high efficiency and low noise levels Erp-compliant.
AIR HANDLING SECTION:	<p>The unit is equipped with a cooling circuit for dehumidification or integration of cooling and heating.</p> <p>In the various configurations, it will be possible to select the desired type of air treatment between dehumidification only or dehumidification with cooling.</p>
FILTRATION:	Coarse filter with low pressure drop easily removed on recirculating air.
STRUCTURE:	<p>Self-supporting perimeter structure made of galvanized sheet metal.</p> <p>Panel insulation is made of 10 mm thick polyethylene insulation.</p>
REFRIGERATION CIRCUIT:	Made of brazed copper complete with: High-efficiency compressor, finned coils, water exchanger, thermostatic valve.
ADJUSTMENT:	<p>On-board electrical panel with microprocessor and dedicated control. Fan management, timed dirty filter management, recirculation air management. Possibility of controlling the unit with these three solutions:</p> <ol style="list-style-type: none">1: Management through external controls and digital inputs2: Management through remote panel with integrated T/H sensor3: MODBUS RTU RS 485 Communication

UNIT CONFIGURATION

	-1-	-2-	-3-	-4-
DEH	35	V	I	D

(1) Defines the total max flow rate
Model 350 m³/h

2) Installation type
V: vertical

3) Construction type
I: electronics I

4) Construction type
D: Dehumidification version
DC: Version for dehumidification and integration in cooling

Dehumidification version (D)

Unit for dehumidifying only the air from the recirculating EC fan, thus allowing the refrigeration circuit to operate, obtaining dehumidified air during the summer period (compressor on).

Equipped with a hydronic post cooling/heating coil that when powered allows for supplementary cooling/heating power to be provided to the air conditioning system.

Version for dehumidification and integration in cooling (DC)

Unit for dehumidification of air from the recirculating EC fan allowing integration of cooling/heating power to the radiant air conditioning system.

During the summer period (compressor on), the unit can operate in 2 modes:

- Dehumidification: the unit condenses totally in water through the plate condenser, resulting in neutral and dehumidified air through active post;
- Dehumidification + Cooling Integration: the unit condenses totally in water excluding post, thus obtaining dehumidified and cooled air.

During the winter period (compressor off) the hydronic coils are supplied with hot water from the heating system and behaves like a fan coil.

COMPOSITION OF THE UNIT

	Version-D	Version-DC
Hermetic reciprocating compressor	●	●
Copper tube air condenser with aluminum fins	●	●
Hydronic condenser with stainless steel exchanger	/	●
Copper tube air evaporator with aluminum fins	●	●
Laminating organ	●	●
Filter drier	●	●
TX thermostatic valve	●	●
Hydronic post cooling/heating coil	●	●
Ec Brushless centrifugal forward curved fan	●	●
Recirculating Air Coarse Filters	●	●
Microprocessor	●	●

● = Installed as standard
/ = Not available

UNIT PERFORMANCE

GENERAL TECHNICAL DATA –

		DEH 35 I D	DEH 35 I DC
Aeraulic performance in dehumidification			
Nominal air flow rate	m ³ /h	320	320
Useful prevalence	Pa	50	50
Dehumidification performance (W 16; A 26)			
Dehumidification capacity	L/24h	18,0	18,0
Heating performance (W 45; A 20)			
Total power output	kW	1,10	1,10
Cooling performance (W 16; A 25)			
Total power output	kW	1,64	1,64
Sensible power output	kW	0,86	0,86
Hydronic battery power output	kW	1,25	1,25
Water flow rate	L/h	220	220
Pressure drop	kPa	5,20	5,20
Room side fan			
Type		Ec Brushless centrifugal forward curved fan	
Number	Nr.	1	1
Room air recirculation filter			
Type		Nylon flat filter	
Number	Nr.	1	1
Efficiency		Coarse	
Compressor			
Type		Alternative	
Refrigerant type		R134a	
Electrical characteristics			
Power supply	V/ph/Hz	230/1/50	
Total maximum power consumption	W	966	996
Total absorbed current	A	4,20	4,20
Degree of protection	IP	20	20
Room-side sound levels (UNI EN 3741; 3744)			
Sound power L _w	dB(A)	54	54
Average sound pressure at 1 m L _p	dB(A)	40	40
Average sound pressure at 3 m L _p	dB(A)	35	35

(1) Ambient temperature 26 °C; relative humidity 65% nominal air flow rate without water supply;

(2) Ambient temperature 26 °C; relative humidity 65%; nominal air flow; Water 7/12 °C (IN/OUT);

(3) Room temperature 20 °C; relative humidity 50%, rated air flow; Water 45/40 °C (IN/OUT);

SPECIFICATION



Dehumidifier for radiant air conditioning systems with air handling section with dehumidification and cooling.

The unit is particularly suitable for residential, commercial, or collective residential buildings and is provided plug-and-play for quick and simplified installation.

The unit consists of a monoblock including every component for proper operation and allows operation with wide outdoor temperature ranges and in conjunction with radiant systems.

CONSTRUCTION FEATURES

Self-supporting perimeter structure made of galvanized sheet metal. Panel insulation is made of 6 mm thick polyethylene insulation.

Compact size and low height for simplified installation with easily accessible bottom panel for maintenance and inspection.

Rectangular inlets with connection to ductwork or can be combined with plenums of various types as an accessory.

Quick filter inspection, and side condensate drain for condensate evacuation.

Refrigeration circuit with high-efficiency hermetic compressor, heat exchange coils, lamination organ and safety organs.

Electrical box, excluded from airflow with management boards and control terminal blocks.

Fans with dual-intake brushless EC motor; Very high efficiency and low noise levels Erp-compliant.

Coarse filter with low pressure drop easily removed on recirculating air.

On-board electrical panel with microprocessor and dedicated control.

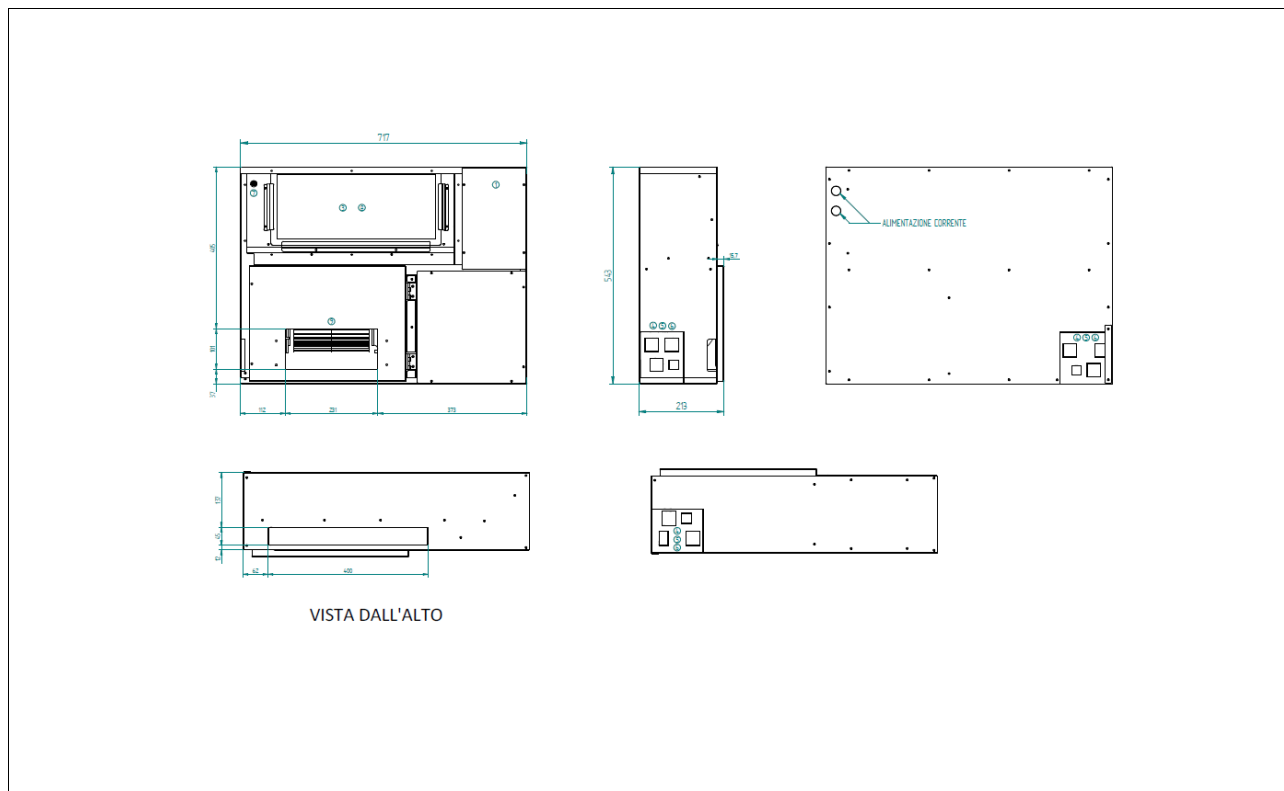
Fan management, internal machine temperature probe display, timed dirty filter management, recirculation and fresh air management.

Possibility of controlling the unit with these three solutions:

- 1: Management through external commands
- 2: Management through remote panel with integrated T/H sensor
- 3: MODBUS RTU RS 485 Communication

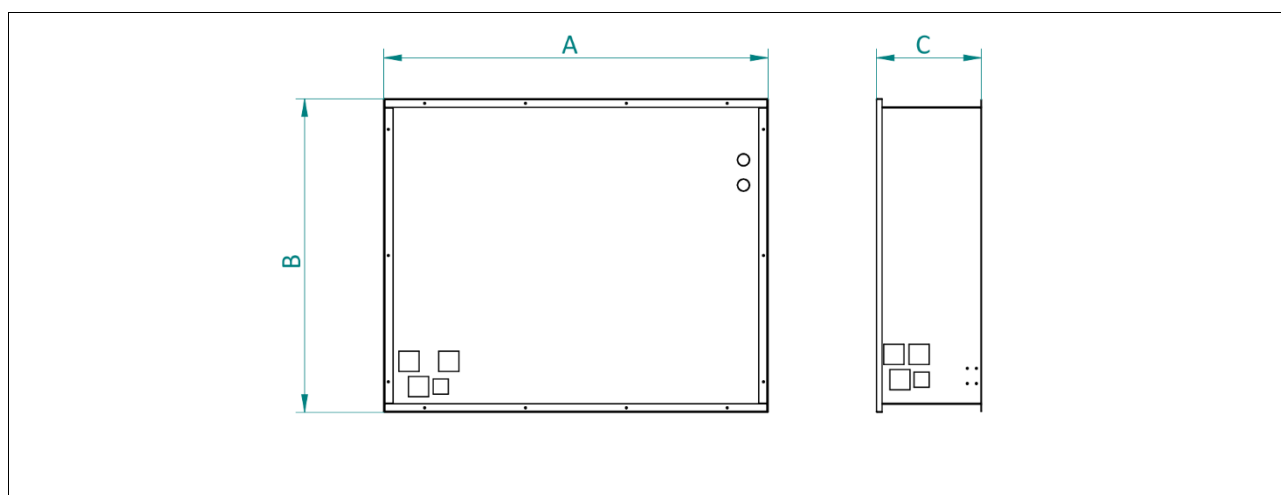
DIMENSIONAL DATA

VERTICAL VERSION



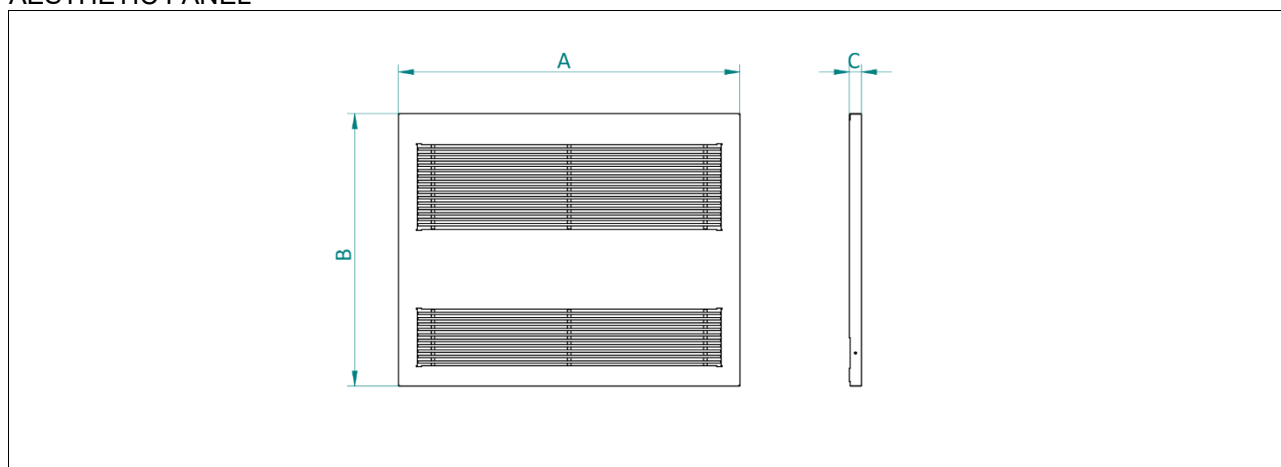
	DEH	35 D	35 DC
Width	mm	717	717
Length	mm	213	213
Height	mm	543	543
Weight	Kg	31	33

RECESSED FORMWORK



Model	DEH	35 D – 35 DC
Width A	mm	761
Height B	mm	621
Depth C	mm	208
Weight	kg	31

AESTHETIC PANEL



Model	DEH	35 D – 35 DC
Width A	mm	790
Height B	mm	630
Depth C	mm	28
Weight	kg	31

LIST OF ACCESSORIES

ECA033II / ECB033II

SMART TOUCH wall control panel with thermostat and room temperature and relative humidity probe, color black or white



2-WAY VALVE

2-way zone valve operated directly from the unit to enable hydronic coil supply.



3-WAY VALVE

3-way zone valve operated directly from the unit to enable hydronic coil supply.



CASSAFORMA

Formwork for recessed wall installation, either with front or top delivery and ducted.



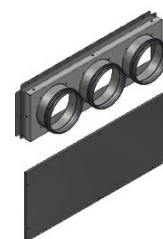
AESTHETIC PANEL

Vertical aesthetic panel with frame and grid for vertical recessed installation.

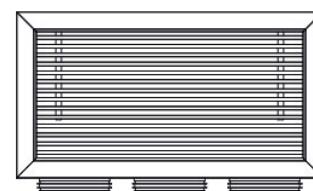


CHANNELING PREPARATION KIT

Ducting preparation kit and complete with take-up plate.

**SHOOTING GRID**

Air intake grille complete with plenum connections.

**REPLACEMENT FILTER**

Kit consisting of replacement Coarse filter; Filters are easily removed through dedicated inspectable ports.



UNIT ORDERING CODES

Unit codes

Codes	Description
Dehumidification-only version	
DHSD35W01II	DEH 35 I D - Dehumidifier for built-in installation. Installation only vertical version with dehumidifica
Dehumidification and integration in cooling version	
DHSI35W01II	DEH 35 I DC - Dehumidifier for built-in installation. Vertical installation only version with dehumidification and integration

Nota: Both "D" and "DC" versions should be connected to a hydronic circuit in cooling mode. The "D" version alone can also be installed without hydraulic connections with appropriate parameterization by the Technical Assistance Center (CAT). In this mode, the outlet air temperature is no longer neutral.

ACCESSORY ORDERING CODES

Wall control panel

Model	All	
Description	SMART TOUCH wall control panel with thermostat and room temperature and relative humidity probe. Color White	SMART TOUCH wall control panel with thermostat and room temperature and relative humidity probe. Black color
Code	ECB033II	ECA033II

Motorized 2-way valve

Model	All	
Description	2-way motorized ON/OFF valve. Valve diameter 1/2"	
Code	AHRD0314II	

Motorized 3-way valve

Model	All	
Description	3-way motorized ON/OFF valve. Valve diameter 1/2"	
Code	AHRD0315II	

Coarse replacement filters

Model	All	
Description	Coarse replacement filters	
Code	ARAD0134II	

Formwork

Model	All	
Description	Recessed galvanized steel sheet formwork	
Code	ARAD0064II	

Aesthetic panel

Model	All	
Description	Vertical aesthetic panel with frame and grille for vertical recessed installation	
Code	ARAD0074II	

Ducting preparation kit

Model	All	
Description	Ducting preparation kit complete with intake plate	
Code	AHRD0483II	

Shooting grid

Model	All	
Description	Air intake grille complete with plenum connections	
Code	AHRD0484II	

Marcatura CE

La marcatura CE (presente su ogni macchina) attesta la conformità alle seguenti norme comunitarie:

- Direttiva Bassa Tensione 2014/35/EC
- Electromagnetic Compatibility Directive 2014/30/EC

Rev.0 – 2024



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