Aertesi airpower

RAD

INTEGRATED SYSTEM FOR RADIANT SYSTEMS OF AIR RENEWAL AND DEHUMIDIFICATION

SOMETHING DIFFERENT

GB

RAD

INTEGRATED SYSTEM FOR RADIANT SYSTEMS OF AIR RENEWAL AND DEHUMIDIFICATION

RAD is a ventilation unit with heat recovery that can be used to integrate heating/cooling systems in both residential and commercial buildings.
Thanks to the efficient heat exchange that takes place inside its finned exchanger, RAD quickly cools and dehumidifies the surrounding environment.
The direct expansion refrigeration circuit combined with a counter-current, cross-flow heat recovery unit allows considerable heat recovery to be achieved;
ambient air exchange takes place in compliance with regional and national regulations.

The main features of the RAD are:

- Renewal with high efficiency heat recovery (>90%);
- Heating/cooling (thermal) integration in summer and winter;
- Isothermal dehumidification in summer;
- Management of mixing valve and main components of the radiant system;
- Operation option via voltage-free contacts (by an external controller) or via independent regulation;
- Autonomous management of the radiant system with outside-compensated temperature curve

INTEGRATED COMPACT SYSTEM

THE IDEAL TECHNOLOGY FOR HEATING/COOLING RADIANT SYSTEMS. A SINGLE UNIT INTEGRATES THE FUNCTIONS OF AIR RENEWAL, FILTRATION AND DEHUMIDIFICATION, USING A SINGLE AIR DISTRIBUTION SYSTEM.

HIGH COMFORT

RAD UNITS FOR RESIDENTIAL APPLICATIONS ARE AVAILABLE IN DIFFERENT CONFIGURATIONS AND SIZES, DEPENDING ON ACTUAL NEEDS. THEY GUARANTEE A HIGH LEVEL OF COMFORT IN ANY ENVIRONMENT, THROUGHOUT A YEAR-LONG CYCLE.

ENERGY EFFICIENCY

WHETHER THEY ARE FOR NEW BUILDINGS OR RENOVATIONS, RAD UNITS MAKE ANY ENVIRONMENTS COMFORTABLE, HEALTHY AND ENERGY EFFICIENT.
IN LINE WITH CURRENT REGULATIONS, AIR IS RENEWED BY RECOVERING HEAT FROM THE ENVIRONMENT.
THE USE OF INNOVATIVE EC FANS HELPS ENERGY CONTAINMENT.

THERMAL INTEGRATION

RAD UNITS CAN BE CONFIGURED IN AN INTEGRATION VERSION, TO WORK WITH RADIANT SYSTEMS IN THE SUMMER AND WINTER SEASONS.

HORIZONTAL OR VERTICAL VERSIONS

OUR HOMES OFTEN HAVE LIMITED OR NON-EXISTENT TECHNICAL SPACES AVAILABLE. TO ALLOW THE APPLICATION OF THIS TOP CLASS TECHNOLOGY, UNITS SUITABLE FOR HORIZONTAL OR VERTICAL INSTALLATION HAVE BEEN DEVELOPED.

DEHUMIDIFICATION
27/84 l/24h

INTEGRTION
1.6/4.5 kw

HEATING
1.5/4.2 kw

AIR FLOW
260-520 m³/h
renewal+recirculation

CONFIGURATIONS

W
WATER
WITHOUT COMPRESSOR

D
WATER
ISOTHERM
WITH COMPRESSOR

I
WATER
ISOTHERM
AND INTEGRATION
WITH COMPRESSOR

VERSIONS

H VERSION HORIZONTAL

V VERSION VERTICAL

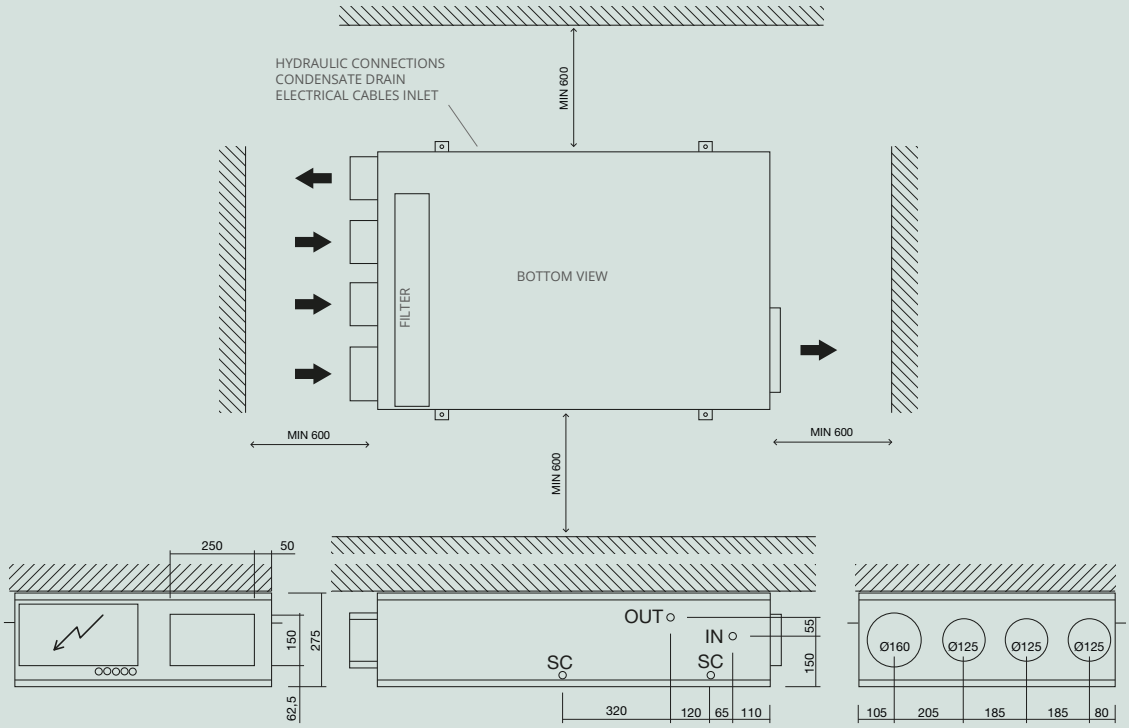
DIMENSIONAL DWGS

	HORIZONTAL				VERTICAL			
SIZE	A	B	C	WEIGHT	A	B	C	WEIGHT
80	1160	275	760	100	605	1105	485	120
160	1300	385	855	130	655	1345	585	150

A = length mm
B = height mm
C = depth mm

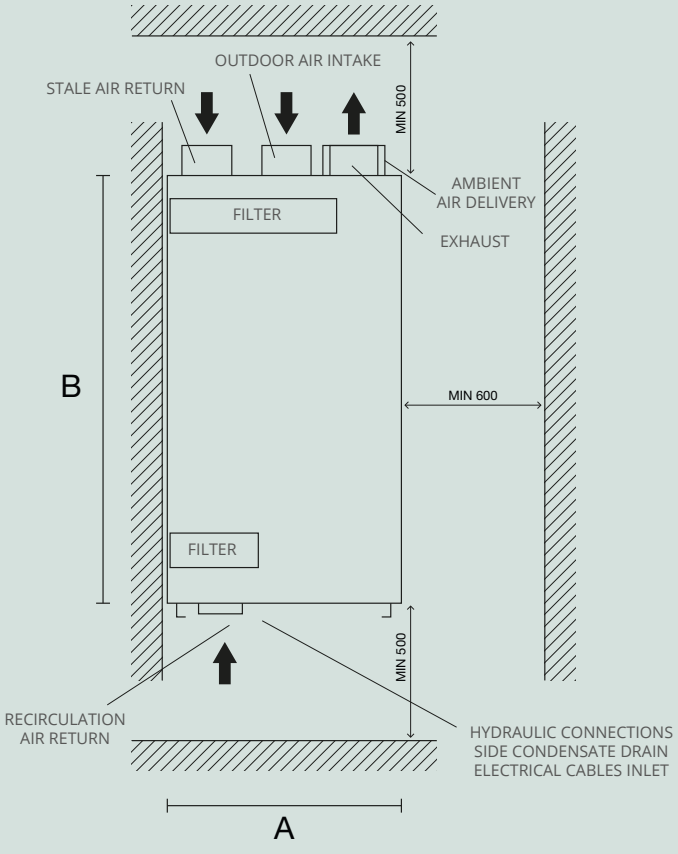
RAD 80 H

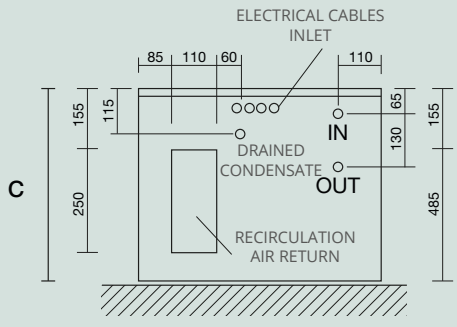
HORIZONTAL

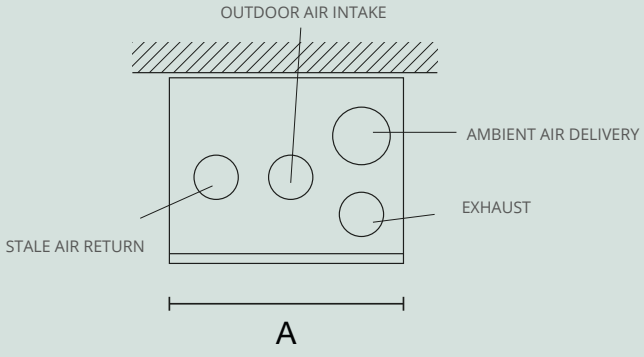


RAD 80 V

VERTICAL







RAD

TECHNICAL DATA

		RAD 80			RAD 160		
		I	D	W	I	D	W
Dehumidification capacity	l/24h	26.5	26.5	43.2	62.4	62.4	84.0
Total cooling capacity	W	1590	nd	2280	3500	nd	4510
Total heating capacity (50°C water inlet)	W	1550	940	2120	3150	1880	4220
Total heating capacity (35°C water inlet)	W	760	470	1050	1550	940	2100
Recovery unit nominal efficiency in winter	%	93			91		
Recovery unit nominal efficiency in summer	%	89			85		
Power supply	V-Hz	230V-50Hz			230V-50Hz		
Compressor power absorption	W	300	300	nd	600	600	nd
Delivery fan power (*)	W	57			129		
Exhaust fan power (*)	W	22			55		
Delivery fan available pressure (*)	Pa	170			230		
Exhaust fan available pressure (*)	Pa	140			195		
Coil water flow rate	l/h	230	230	390	480	480	770
Hydraulic circuit pressure drops	kPa	25	30	20	30	35	20
Outside air flow rate	m3/h	130			260		
Delivery air flow rate in renewal only	m3/h	130			260		
Delivery air flow rate in renewal+recirculation	m3/h	260			520		
Maximum absorbed current	A	3.6	3.6	1.1	6.5	6.5	2.2
Refrigerant gas		R134a	R134a	nd	R410a	R410a	nd
Weight of horizontal version (H)	kg	100			130		
Weight of vertical version (V)	kg	120			150		
Sound power (**)	dB(A)	47	47	46	52	52	51
Sound pressure (***)	dB(A)	38	38	37	43	43	42

(*) Data referred to fans calibrated at 8V (on a scale up to max 10V) at nominal air flow rate
(**) Irradiated sound power with unit ducted at 50Pa
(***) Sound pressure under above conditions, measured at 1m distance

Performance values are referred to the following conditions:

SUMMER:
Room temperature 26°C; relative humidity 65%,
Outside air temperature 35°C; relative humidity 50%
Water inlet temperature 15°C (for versions D and I)
Water inlet temperature 7°C (for version W)

WINTER:
Outside air temperature -5°C; relative humidity 80%,
Room temperature 20°C; relative humidity 50%
Water inlet temperature: refer to data in table

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