RNW 200 PI

TECHNICAL SHEET

Isothermal dehumidifier with summer integration designed for the control of indoor relative humidity in underfloor/ceiling/wall radiant cooling systems. It consist of a complete refrigerant unit with pre and post treatment hydronic batteries that can use the cilled water supplied to radiant systems. Galvanised sheet metal frame and stainless steel condensate tray, siphon on condensate drain mandatory. The unit is available in 2 versions, depending from the accessories used:

- version for embedded installation in the wall (composed by recessed box, dehumidification unit and front panel);
- version for external installation on the wall (composed by dehumidification unit and cabinet)

Description	Dimensions	Weight	Code
RNW 200 PI	751x573x202 mm	29 kg	70RNWPI200

Conponents description

- **Compressor:** hermetically sealed with a bipolar single-phase asynchronous motor coupled with an alternative single cylinder compressor
- **Pre-cooling coil:** copper pipe and aluminium fins with hydrophilic treatment
- **Evaporating coil:** copper pipes and aluminium fins with hydrophilic treatment
- **Post-heating coil:** copper pipes and aluminium fins
- **Fan:** double suction centrifugal fan with with 3-speed directly coupled motor
- **Air filter:** with filtering material made of synthetic fibres, Class ISO Coarse 40% (G3)
- **Condenser temperature probe:** NTC sensor which measures the temperature of the condenser
- **Water temperature probe:** NTC sensor which measures the temperature of the water
- **Evaporator temperature probe:** NTC sensor which measures the temperature of the evaporator
- **Circuit board fuse:** 250v- 10 A
- **Plate exchanger:** B3Hx20
- **Valve:** 1/2" 3-way valve KVS 1.6

Package content

- RNW 200 PI
- Installation / Technical Manual

COMPONENTS

AIR FLOWS

SUP Supply Air

REC Recirculation Air

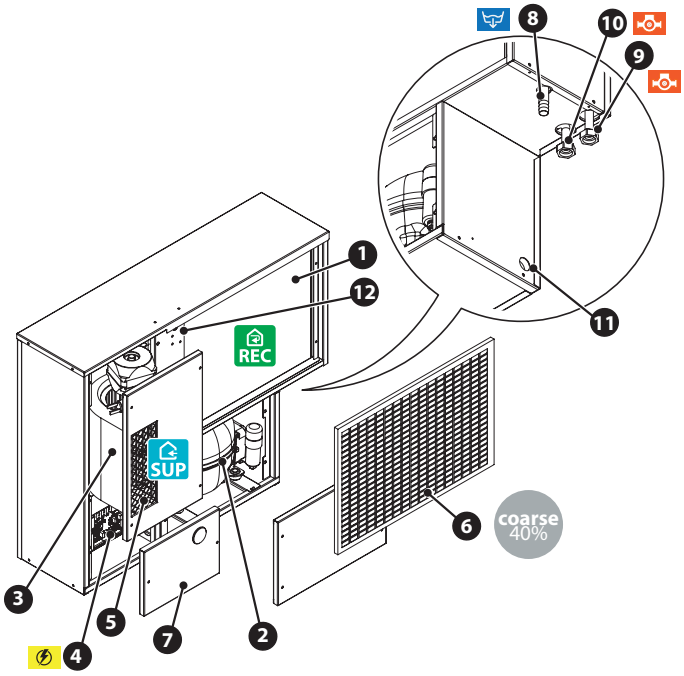
AIR FILTERS

ISO coarse **e(PM10) min ≤50 %** Hairs

Ø 14 mm Condensation Drain

1/2" F Hydraulic connection

Wiring Box



Rif.	Description	Rif.	Description
1	Exchangers	7	Switchboard
2	Compressor	8	Ø 14 mm condensation drain
3	Fan	9	Water inlet (1/2"F)
4	Electronic card	10	Water outlet (1/2"F)
5	Fan grille	11	Access to electric components
6	Filter for air inlet	12	Air vent (behind the filter)

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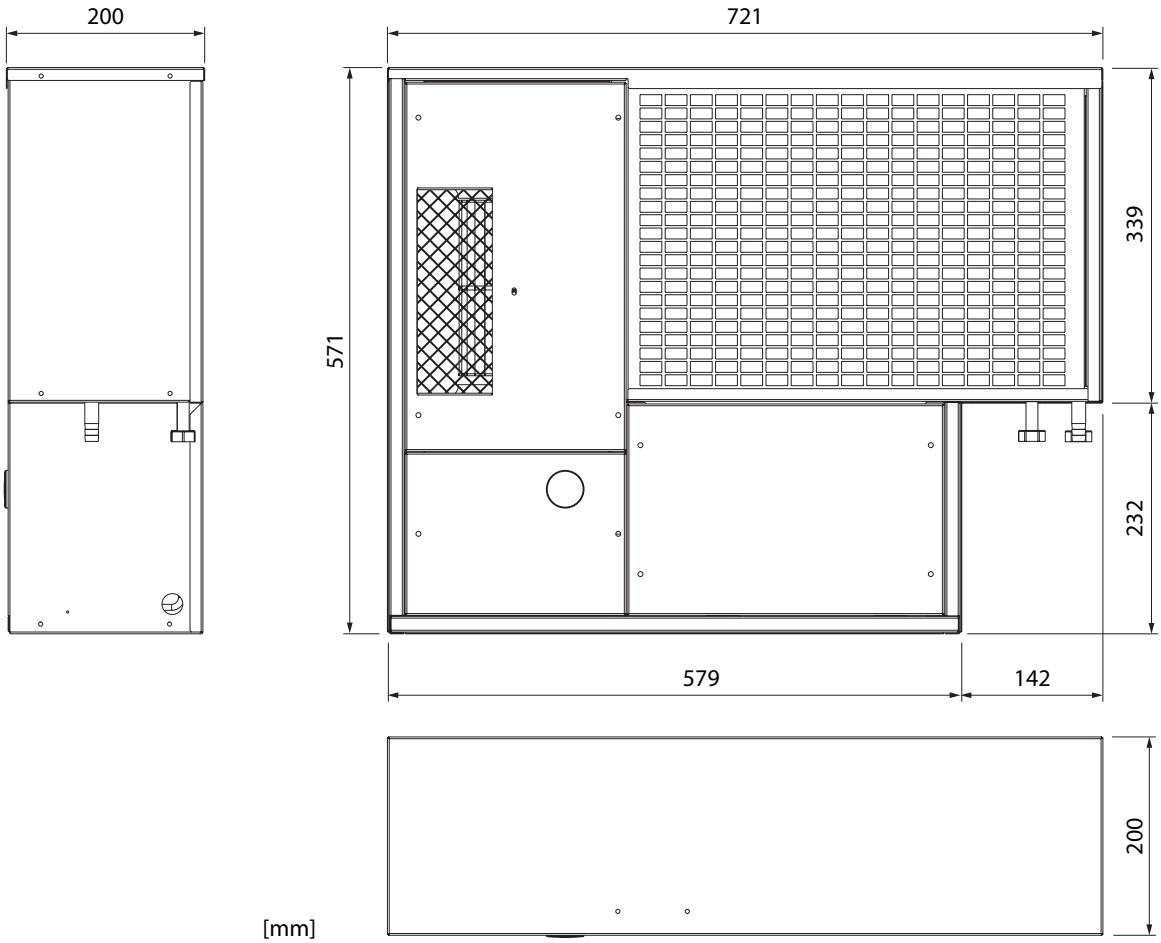
SPARE PART

Air filter kit		Code
	**RNW 200 PI FILTER KIT** Kit for complete replacement of unit filters containing: - 1 ISO Coarse 40% filter - Size 460x320x10 mm	**7044130**

DIMENSIONS AND TECHNICAL DATA



Technical characteristics		
Technical specifications		
Condensation (26° - 65%)	21	l/day
Rated electrical power	340	W
Total water flow rate	240 (*)	l/h
Pressure loss on the hydraulic circuit	34	kPa
Nominal air flow rate (free outlet)	160	m^3/h
Refrigerant R290 - GWP: 3	70	g
Carbon dioxide equivalent	0,00021	t
Overall machine dimensions		
Height	571	mm
Width	721	mm
Depth	200	mm
Weight	28,5	kg

(*) Flow rate value with +20% and -20% than the mentioned value.

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PERFORMANCE

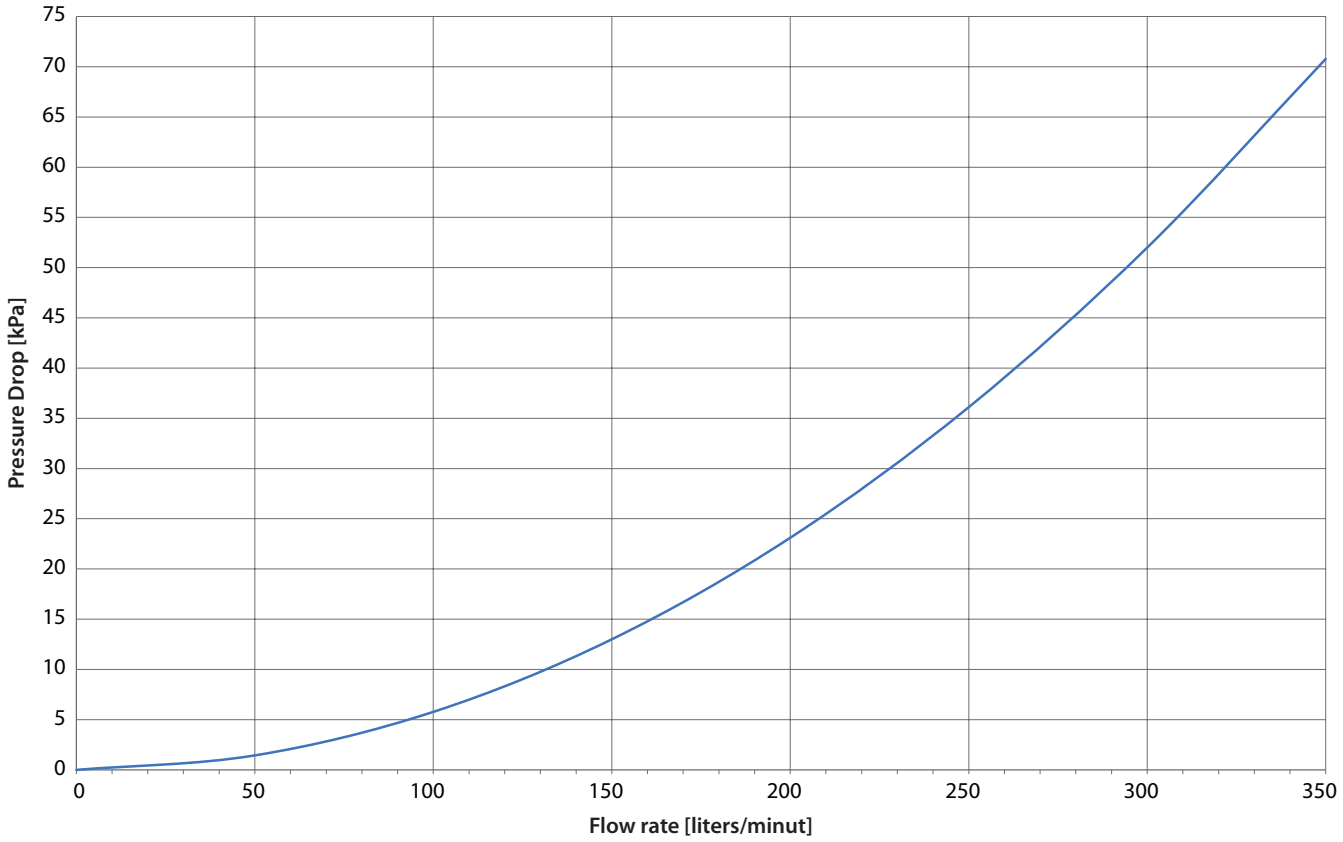
The performance of the machine is directly related to the conditions of the incoming air and its flow rate, as well as the temperature and relative flow rate of the water.

Tables legend:
- **[REC]:** Air-water inlet to the unit
- **[SUP]:** Supply air supply to the room
- **R.H.:** Relative Humidity
- **LAT.:** Latent Power
- **SEN.:** Sensible Power
- **AMB.:** Room Power
- **FRIG.:** Fridge Group Power

Air		Water	Summary													
160 m³/h		240 l/h														
Pre-Treatment		[REC] Temp.	Dehumidification								Integration					
[REC] Temp.	[REC] R.H.		[SUP] Temp.	[SUP] R.H.	Condensation		Power		Total power		[SUP] Temp.	[SUP] R.H.	Power		Total power	
							LAT.	SEN.	AMB.	FRIG.			LAT.	SEN.	AMB.	FRIG.
(°C)	(%)	(°C)	(°C)	(%)	(l/h)	(l/g)	(W)	(W)	(W)	(W)	(°C)	(%)	(W)	(W)	(W)	(W)
26	65	18	24,2	50	0,86	21	601	97	698	781	18,0	74	601	434	1035	1507
		15	22,3	50	1,04	25	735	200	934	1088	16,2	72	735	529	1264	1737
		12	20	46	1,26	30	516	324	840	1395	14,2	72	516	638	1154	1102
25	55	18	23,3	42	0,58	14	396	92	487	586	17,9	62	396	383	779	1361
		15	22	46	0,65	16	459	162	621	642	16,7	63	459	448	907	1479
		12	19	46	0,86	21	542	324	865	949	14,7	63	542	556	1097	1708
27	60	18	24,6	50	0,83	20	578	130	707	698	19,9	64	578	383	961	1537
		15	22	50	1,04	25	721	270	991	949	18,0	64	721	486	1206	1774
		12	19,7	49	1,22	29	864	394	1258	1228	15,9	63	864	599	1463	2035

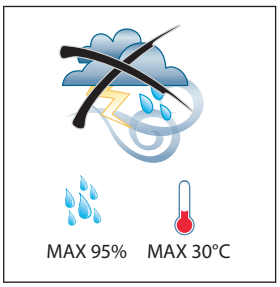
Air		Water	Summary													
160 m³/h		200 l/h														
Pre-Treatment		[REC] Temp.	Dehumidification								Integration					
[REC] Temp	[REC] R.H.		[SUP] Temp.	[SUP] R.H.	Condensation		Power		Total power		[SUP] Temp..	[SUP] R.H.	Power		Total power	
							LAT.	SEN.	AMB.	FRIG.			LAT.	SEN.	AMB.	FRIG.
(°C)	(%)	(°C)	(°C)	(%)	(l/h)	(l/g)	(W)	(W)	(W)	(W)	(°C)	(%)	(W)	(W)	(W)	(W)
26	65	18	27	43	0,83	20	589	-54	535	698	20,3	64	589	308	897	1499
		15	25,5	42	1,01	24	700	27	727	977	18,6	64	700	399	1100	1696
		12	23	43	1,22	29	855	162	1017	1256	16,8	64	855	499	1354	1947
25	55	18	25	39	0,58	14	400	0	400	628	18,0	62	400	378	778	1375
		15	24	42	0,65	16	464	54	518	791	16,8	63	464	442	907	1491
		12	21	43	0,83	20	574	216	790	1023	15,2	63	574	529	1103	1678
27	60	18	27	44	0,76	18	532	0	532	721	20,5	64	532	351	883	1484
		15	25	43	0,97	23	681	108	789	1047	18,6	64	681	453	1134	1726
		12	22,9	42	1,15	28	817	221	1038	1279	16,6	66	817	561	1378	1967

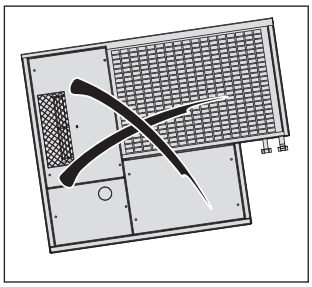
PRESSURE LOSS ON THE HYDRAULIC CIRCUIT

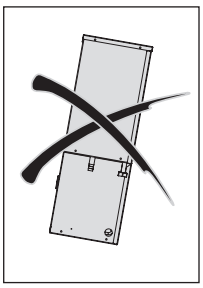


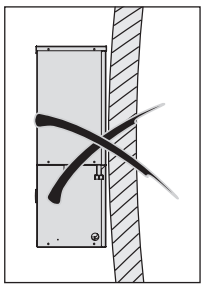
POSITIONING INDICATIONS

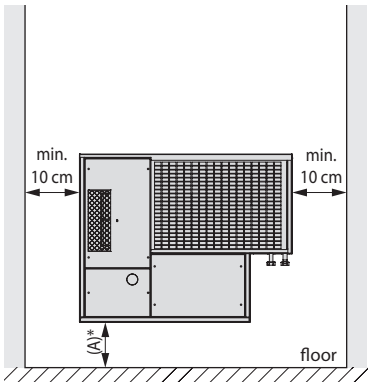
- Installation should only be carried out inside buildings.
- The dehumidifier must be installed in a place where air can circulate freely, avoiding being positioned at a dead angle, causing a short circuit in the air flow and failing to achieve the required dehumidification effect.
- The dehumidifier must be installed in a vertical position on a solid, flat wall.
- It is necessary to leave a free space of at least 3 m, from the front of the grille, for the free circulation of the dehumidified air.
- The unit should not be placed in rooms with high humidity, such as swimming pools, saunas, etc.
- Avoid positioning the unit with constant and direct exposure to sunlight or near heating.
- Avoid placing the unit in places where curtains could be placed in front of the dehumidifier, or at heights that could disturb the end user during operation.

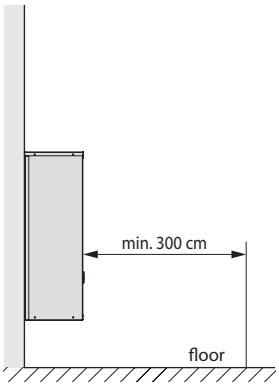












(A)*: it is possible to install the unit flush with the floor, however, to facilitate cleaning operations we recommend installation in a raised position, maintaining a height of at least 25 mm above the skirting board.

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