



RAD A

**AUTONOMOUS
HEAT RECOVERY UNIT
WITH REFRIGERANT
CIRCUIT WITH
INTEGRATED
DIRECT
EXPANSION**



SOMETHING DIFFERENT

GB



RAD A

AUTONOMOUS HEAT RECOVERY UNIT WITH REFRIGERANT CIRCUIT WITH INTEGRATED DIRECT EXPANSION

New air treatment unit, with total renewal, equipped with a high-efficiency recovery unit and freecooling.

The unit is equipped with an on-board compressor, so in summer it can work as a stand-alone unit and does not need to be fed chilled water.

The unit works 100% with outdoor air and can operate without being powered separately.

The isothermal dehumidification function is not available because dehumidification is always accompanied by a decrease in the air temperature.

In winter, the coil can be supplied with hot water to supplement operation of the radiant system.

AN INTEGRATED AND COMPACT SYSTEM

THE IDEAL TECHNOLOGY FOR (RADIANT OR TRADITIONAL RADIATOR) HEATING SYSTEMS LOCATED IN "DRY" CLIMATIC ZONES.

A SINGLE UNIT INTEGRATES THE FUNCTIONS OF AIR RENEWAL, FILTRATION, THERMAL INTEGRATION AND DEHUMIDIFICATION, USING A SINGLE AIR DISTRIBUTION SYSTEM.

ENERGY EFFICIENCY

WHETHER THEY ARE INTENDED 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 AND COOLING

NORMALLY RAD A UNITS CAN INTEGRATE THE HEATING SYSTEM, IN WINTER OPERATION MODE.

IN SUMMER, THANKS TO THE STAND-ALONE REFRIGERATION CIRCUIT, A RAD A UNIT IS ABLE TO COOL AND DEHUMIDIFY AIR AT THE SAME TIME.

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TECHNICAL DATA

		RAD 20 A
		W
AEREAULIC DATA - RENEWAL MODE WITH PASSIVE RECOVERY		
Delivery air flow	m3/h	200
Stale air intake flow rate	m3/h	200
Outdoor air intake flow rate	m3/h	200
Exhaust air flow rate	m3/h	200
Working delivery head (@200m3/h)	Pa	350
Working exhaust head (@200m3/h)	Pa	350
AEREAULIC DATA - RENEWAL MODE WITH PASSIVE AND ACTIVE RECOVERY		
Delivery air flow	m3/h	200
Stale air intake flow rate	m3/h	200
Outdoor air intake flow rate	m3/h	400
Exhaust air flow rate	m3/h	400
Working delivery head (@200m3/h)	Pa	350
Working exhaust head (@400m3/h)	Pa	135
EFFICIENCY WITH PASSIVE AND ACTIVE RECOVERY (indoor air 27°C, 47% RH; outdoor 35°C, 50% RH)		
Passive recovery cooling capacity	W	439
Passive recovery efficiency		82.9%
Direct expansion circuit cooling capacity	W	1770
EER (direct expansion circuit)	W/W	2.80
Total cooling capacity (passive + active recovery)	W	2209
Total EER (passive + active recovery)	W/W	3.50
Total absorbed capacity	W	632
Available cooling capacity	W	400
Inlet temperature	°C	16.6
EFFICIENCY WITH PASSIVE AND ACTIVE RECOVERY (indoor air 27°C, 47% RH; outdoor 30°C, 50% RH)		
Passive recovery cooling capacity	W	165
Passive recovery efficiency		82.9%
Direct expansion circuit cooling capacity	W	1750
EER (direct expansion circuit)	W/W	3.16
Total cooling capacity (passive + active recovery)	W	1915
Total EER (passive + active recovery)	W/W	3.46
Total absorbed capacity	W	554
Available cooling capacity	W	1160
Inlet temperature	°C	12.4
EFFICIENCY WITH PASSIVE AND ACTIVE RECOVERY (indoor air 24°C, 50% RH; outdoor 35°C, 50% RH)		
Passive recovery cooling capacity	W	608
Passive recovery efficiency		82.8%
Direct expansion circuit cooling capacity	W	1770
EER (direct expansion circuit)	W/W	2.93
Total cooling capacity (passive + active recovery)	W	2378
Total EER (passive + active recovery)	W/W	3.93
Total absorbed capacity	W	605
Available cooling capacity	W	190
Inlet temperature	°C	15.6

RAD A

EFFICIENCY WITH PASSIVE AND ACTIVE RECOVERY (indoor air 24°C, 50% RH; outdoor 30°C, 50% RH)			
Passive recovery cooling capacity	W	332	
Passive recovery efficiency		82.8%	
Direct expansion circuit cooling capacity	W	1700	
EER (direct expansion circuit)	W/W	3.07	
Total cooling capacity (passive + active recovery)	W	2032	
Total EER (passive + active recovery)	W/W	3.67	
Total absorbed capacity	W	554	
Available cooling capacity	W	880	
Inlet temperature	°C	11.7	
EFFICIENCY WITH PASSIVE AND ACTIVE RECOVERY (indoor air 24°C, 50% RH; outdoor 30°C, 50% RH) (indoor air 20°C, 50% RH; outdoor -5°C, 80% RH)			
Passive recovery thermal capacity	W	1506	
Passive recovery efficiency		89.1%	
Heating coil thermal power	water 70/60°C	W	2150
Heating power available		W	1969
Inlet temperature		°C	49.4
Water flow rate		l/h	190
Water head losses		kPa	2.5
Heating coil thermal power	water 50/45°C	W	1360
Heating power available		W	1179
Inlet temperature		°C	37.6
Water flow rate		l/h	240
Water head losses		kPa	4.0
Heating coil thermal power	water 40/35°C	W	860
Heating power available		W	678
Inlet temperature		°C	30.1
Water flow rate		l/h	150
Water head losses		kPa	1.8
GENERAL DATA			
Power supply	V-Hz	230V-50Hz	
Max absorbed compressor power	W	690	
Max absorbed fan power	W	2x 72	
Total max absorbed current	A	4.6	
Refrigerant gas	R410a		
Weight of vertical version (V)	kg	100	
Sound power (*)	dB(A)	47	
Sound pressure (**)	dB(A)	38	

(*) Irradiated sound power with unit ducted at 50Pa

(**) Sound pressure at above stated conditions, measured at 1m distance

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