TECHNICAL SUBMITTAL

MWA ECO SYSTEMS

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Project/Block:	House Of Social
Technical Submittal No.	9
System Description:	Heating ASHP - Air-To-Water Scroll Heat Pump. (30RQP 310R)
Purpose of Issue:	Review, Comment & Approval
Submitted By:	Andy Moss
Date & Revision:	08/04/2024 (Rev P01)
Number of Pages Including Cover Sheet:	2
File Name:	HS-MWA-G523-TS-XX-009

Attached datasheets applies to Heating ASHP:

- Carrier Air-to-Water scroll heat pump with Green-speed

  Model: 30RQP 310R.

Standard Report

Leo vanBeek (26/04/2023 09:57:14)

30RQP 310R

Air-to-Water scroll heat pump with Greenspeed® Intelligence

Performance Information

Mode		Cooling	Heating
Cooling Capacity (2)	kW	302	-
Heating Capacity (2)	kW	-	209
Instantaneous Heating Capacity (1)	kW	-	235
Cooling Efficiency (EER) (2)	kW/kW	2.82	-
Heating Efficiency (COP) (2)	kW/kW	-	1.98
Unit Power Input (2)	kW	107	106
Sound power level (LwA) (2)	dB(A)	93.0	-
Sound Pressure Level at 10.0m (LpA) (2)	dB(A)	61.0	-
Minimum Capacity (3)	kW	57.9	-
Maximum Capacity	kW	302	-

(1) Not certified value not taking the potential hot gas defrost cycles into account resulting of the climatic outdoor conditions.
(2) All performances are compliant with EN14511 – 3 : 2018. Sound power level according to ISO9614 – 1.
(3) Due to the minimum flow rate allowable a lower inlet water temperature might have to be specified to achieve this performance.

Operating Conditions

System element			Cooling	Heating
Water heat exchanger				
Fluid	Fluid Type		Fresh Water	Fresh Water
	Fouling Factor	(sqm-K)/kW	0	0
	Leaving Temperature	°C	7.0	48.0
	Entering Temperature	°C	12.0	38.0
	Fluid Flow	l/s	14.3	5.68
Hydronic Module	External Static Pressure	kPa	211	257
	Pump Power Input	kW	5.89	4.09
Air heat exchanger				
Air	Entering Air Temperature (dry bulb)	°C	35.0	-5.0
	Entering Air Temperature (wet bulb)	°C	-	-5.6
	Relative Humidity	%	-	87
Altitude		m	0	

Unit Configuration

116W	HP VSD dual-pump hydraulic module (variable speed)
149	Bacnet over IP
252	Coil defrost resistance heaters
25E	Circuit Soft Starter
279a	Compressor enclosure
298A	BluEdge Digital (Connectivity embedded) Only available where CE & UKCA marking is applicable.
42A	Exchanger & hydraulic frost protection
58	Master/slave operation

Non contractual picture

Seasonal Efficiency(4)(5)

Allowed applications for CE mark:		
Low Temp. Comfort Heating : T<55°C*	**SCOP 30/35°C | ηs heat**	**3.84 | 151**
Comfort Cooling : T>=2°C	SEER 12/7°C | ηs cool	4.86 | 191
Comfort Cooling : T>=13°C	SEER 23/18°C | ηs cool	5.92 | 234
High Temp. Process Cooling : T>=2°C	SEPR 12/7°C	5.50
Other Application:		
Intermediate Temp. Comfort Heating	SCOP 40/45°C | ηs heat	3.26 | 128
High Temp. Comfort Heating	SCOP 55/65°C | ηs heat	

(4) *** ECODESIGN Compliant as per regulation (EU) N° 813/2013**
(5) All data related to seasonal efficiency are given for standard units and main options (Brine pump energy efficiency...).

Unit Information

Manufacturing Source		Montluel
RefrigerantType		R-32
Refrigerant Weight	kg	45
Tonnes CO2 Equivalent	Tonnes	30.0
Number of Refrigerant Circuit		2
Number of Passes (Evaporator)		1
Number of Compressor		5
Number of Fan		5
Fan Power Input	kW	8.49
Operating / Shipping Weight	kg	2589/2550
Unit Dimensions (LxWxH)	mm	3604x2253x2324

Electric Information

Unit Voltage	V-Ph-Hz	400-3-50
Standby Power	kW	0.321
Power Factor		0.840
Electrical Circuit		**Supply** 1
Maximum Current	A	248
Startup Current	A	409

Documentation

	PSD
	IOM
	Technical drawing
	Revit file

CARRIER participates in the ECP program for Liquid Chilling Packages and Hydronic Heat Pumps. Check ongoing validity of certificate:www.eurovent-certification.com.
Outside the scope of AHRI Air-Cooled Water-Chilling Packages Certification Program, but is rated in accordance with AHRI Standard 550/590 (I-P) and AHRI Standard 551/591 (SI).