Subtype JAMA Star-12

Certificate Holder	Kaukora
Address	Tuotekatu 11
ZIP	FI-21200
City	Raisio
Country	FI
Certification Body	RISE CERT
Subtype title	JAMA Star-12
Registration number	012-SC0660-18
Heat Pump Type	Brine/Water
Refrigerant	R407c
Mass of Refrigerant	2 kg
Testing laboratory	Austrian Institute of Technology (AIT)

Model Star-12	
Model name	Star-12
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	Colder Climate
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data	
Power supply	3x400V 50Hz
Off-peak product	No

Brine/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	11.89 kW	10.84 kW
El input	2.70 kW	3.78 kW
COP	4.40	2.91

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
ηs	183 %	141 %
Prated	14.00 kW	14.00 kW
SCOP	4.78	3.73
Tbiv	-5 °C	-4 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.50 kW	10.80 kW
COP Tj = -7°C	4.70	3.30
Pdh Tj = +2°C	11.60 kW	11.10 kW
COP Tj = +2°C	4.94	3.80
Pdh Tj = +7°C	11.70 kW	11.30 kW
COP Tj = +7°C	5.10	4.10
Pdh Tj = 12°C	11.80 kW	11.50 kW
COP Tj = 12°C	5.14	4.40
Pdh Tj = Tbiv	11.50 kW	10.90 kW
COP Tj = Tbiv	4.75	3.46

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.50 kW	10.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.56	3.12
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	65 °C	65 °C
Poff	2 W	2 W
PTO	30 W	30 W
PSB	7 W	7 W
PCK	30 W	30 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.50 kW	3.30 kW
Annual energy consumption Qhe	6042 kWh	7785 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	189 %	145 %
Prated	14.00 kW	14.00 kW
SCOP	4.93	3.83
Tbiv	-15 °C	-14 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	11.70 kW	11.00 kW
COP Tj = -7°C	4.98	3.70
Pdh Tj = +2°C	11.70 kW	11.20 kW
COP Tj = +2°C	5.12	4.06
Pdh Tj = +7°C	11.80 kW	11.40 kW
COP Tj = +7°C	5.22	4.37
Pdh Tj = 12°C	11.80 kW	11.50 kW
COP Tj = 12°C	4.94	4.50
Pdh Tj = Tbiv	11.60 kW	10.90 kW
COP Tj = Tbiv	4.81	3.49
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.50 kW	10.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.56	3.12
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	65 °C	65 °C
Poff	2 W	2 W
PTO	30 W	30 W
PSB	7 W	7 W

PCK	30 W	30 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.50 kW	3.30 kW
Annual energy consumption Qhe	6993 kWh	9049 kWh

Model Star-12 RST	
Model name	Star-12 RST
Application	Heating + DHW + low temp
Units	Indoor
Climate zone (for heating)	Colder Climate
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data	
Power supply	3x400V 50Hz
Off-peak product	No

Brine/Water

EN 16147 | Average Climate	
Declared load profile	XL
Efficiency ηDHW	96 %
COP	2.40
Heating up time	00:58 h:min
Standby power input	55.0 W
Reference hot water temperature	50.0 °C
Mixed water at 40°C	230 l

EN 16147 | Colder Climate	
Declared load profile	XL
Efficiency ηDHW	96 %
COP	2.40
Heating up time	00:58 h:min
Standby power input	55.0 W
Reference hot water temperature	50.0 °C
Mixed water at 40°C	230 l

EN 14511-4 | Heating	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

EN 14511-2 | Heating	Low temperature	Medium temperature
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El input	2.70 kW	3.78 kW
COP	4.40	2.91

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