

Subtype JAMA Star-40

Certificate Holder	Kaukora
Address	Tuotekatu 11
ZIP	FI-21200
City	Raisio
Country	FI
Certification Body	RISE CERT
Subtype title	JAMA Star-40
Registration number	012-SC0670-18
Heat Pump Type	Brine/Water
Refrigerant	R407c
Mass of Refrigerant	3.4 kg
Testing laboratory	Austrian Institute of Technology (AIT)

**Model Star-40**

Model name	Star-40
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	39.94 kW	37.80 kW
EI input	8.90 kW	11.90 kW
COP	4.49	3.18

**EN 12102-1 | Average Climate**

	Low temperature	Medium temperature
Sound power level indoor	47 dB(A)	47 dB(A)

**EN 14825 | Average Climate**

	Low temperature	Medium temperature
$\eta_s$	182 %	143 %
Prated	46.00 kW	46.00 kW
SCOP	4.75	3.78
Tbiv	-7 °C	-6 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	40.10 kW	38.20 kW
COP Tj = -7°C	4.62	3.33
Pdh Tj = +2°C	40.30 kW	39.10 kW
COP Tj = +2°C	4.78	3.79
Pdh Tj = +7°C	20.30 kW	19.90 kW
COP Tj = +7°C	5.11	4.21
Pdh Tj = 12°C	20.40 kW	20.10 kW
COP Tj = 12°C	5.09	4.51
Pdh Tj = Tbiv	40.10 kW	28.40 kW
COP Tj = Tbiv	4.63	3.41

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	40.00 kW	37.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.50	3.19
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.98	0.99
WTOL	65 °C	65 °C
Poff	2 W	2 W
PTO	100 W	100 W
PSB	7 W	7 W
PCK	80 W	80 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	6.00 kW	8.20 kW
Annual energy consumption Qhe	19996 kWh	25093 kWh

**EN 12102-1 | Colder Climate**

	Low temperature	Medium temperature
Sound power level indoor	47 dB(A)	47 dB(A)

**EN 14825 | Colder Climate**

	Low temperature	Medium temperature
ηs	190 %	149 %
Prated	46.00 kW	46.00 kW
SCOP	4.95	3.93
Tbiv	-17 °C	-16 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	40.40 kW	39.00 kW
COP Tj = -7°C	4.86	3.70
Pdh Tj = +2°C	20.30 kW	19.80 kW
COP Tj = +2°C	5.16	4.19
Pdh Tj = +7°C	20.40 kW	20.00 kW
COP Tj = +7°C	5.22	4.50
Pdh Tj = 12°C	20.40 kW	20.20 kW
COP Tj = 12°C	4.95	4.65
Pdh Tj = Tbiv	40.20 kW	38.40 kW
COP Tj = Tbiv	4.67	3.43
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	40.00 kW	37.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.50	3.19
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.98	0.99
WTOL	65 °C	65 °C
Poff	2 W	2 W
PTO	100 W	100 W
PSB	7 W	7 W

PCK	80 W	80 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	6.00 kW	8.20 kW
Annual energy consumption Qhe	22939 kWh	28857 kWh