

Summary of	JAMA Star-6 inverter	Reg. No.	012-SC0664-18	
Certificate Holder		· ·		
Name	Kaukora			
Address	Tuotekatu 11	Zip	FI-21200	
City	Raisio	Country	Finland	
Certification Body	RISE CERT	RISE CERT		
Name of testing laboratory	AIT			
Subtype title	JAMA Star-6 inverter			
Heat Pump Type	Brine/Water and Water/\	Brine/Water and Water/Water		
Refrigerant	R407c			
Mass Of Refrigerant	1.16 kg			



# **Model: Star-6 inverter**

General Data		
Power supply	3x400V 50Hz	

Brine/Water Heat Pump

#### Heating

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

EN 14511-2		
	Low temperature	Medium temperature
Heat output	3.15 kW	2.78 kW
El input	0.67 kW	0.93 kW
СОР	4.72	2.99
Indoor water flow rate	0.95 m³/h	0.59 m³/h

#### **Average Climate**



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

EN 14825			
	Low temperature	Medium temperature	
$\eta_{s}$	200 %	150 %	
Prated	5.50 kW	5.50 kW	
SCOP	5.20	3.95	
Tbiv	-10 °C	-10 °C	
TOL	-10 °C	-10 °C	
Pdh Tj = -7°C	5.00 kW	5.00 kW	
COP Tj = -7°C	4.37	3.06	
Pdh Tj = +2°C	3.10 kW	3.00 kW	
COP Tj = +2°C	5.24	3.97	
Pdh Tj = +7°C	2.00 kW	2.00 kW	
COP Tj = +7°C	5.92	4.63	
Pdh Tj = 12°C	1.30 kW	1.20 kW	
COP Tj = 12°C	5.95	4.86	
Pdh Tj = Tbiv	5.40 kW	5.40 kW	
COP Tj = Tbiv	4.15	2.84	





Pdh Tj = TOL	5.40 kW	5.40 kW
COP Tj = TOL	4.15	2.84
Cdh	0.98	0.99
WTOL	65 °C	65 °C
Poff	2 W	2 W
РТО	10 W	7 W
PSB	7 W	7 W
PCK	9 W	9 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2188 kWh	2875 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

EN 14825		
Low temperature	Medium temperature	
211 %	157 %	
5.50 kW	6.00 kW	
	211 %	





This information was generated by the HP KEYMARK database on 17 Dec 2020				
SCOP	5.48	4.13		
Tbiv	-22 °C	-22 °C		
TOL	-22 °C	-22 °C		
Pdh Tj = -7°C	3.40 kW	3.40 kW		
COP Tj = -7°C	5.17	3.77		
Pdh Tj = +2°C	2.10 kW	2.10 kW		
COP Tj = +2°C	5.91	4.51		
Pdh Tj = $+7^{\circ}$ C	1.40 kW	1.40 kW		
$COPTj = +7^{\circ}C$	6.36	5.12		
Pdh Tj = 12°C	1.30 kW	1.20 kW		
COP Tj = 12°C	4.15	4.81		
Pdh Tj = Tbiv	5.40 kW	5.50 kW		
COP Tj = Tbiv	4.15	2.84		
Pdh Tj = TOL	5.40 kW	5.50 kW		
COP Tj = TOL	4.15	2.84		
Cdh	0.97	0.98		
WTOL	65 °C	65 °C		
Poff	2 W	2 W		
РТО	10 W	7 W		
PSB	7 W	7 W		
PCK	9 W	9 W		





Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2481 kWh	3287 kWh

Water/Water Heat Pump

#### Heating

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	

EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.30 kW	3.82 kW
El input	0.66 kW	1.00 kW
СОР	6.00	3.83
Indoor water flow rate	1.21 m³/h	0.75 m³/h

### **Average Climate**



EN 12102-1		
Low temperature Medium temperature		
Sound power level indoor	42 dB(A)	42 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	270 %	214 %
Prated	7.00 kW	7.00 kW
SCOP	6.95	5.55
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.30 kW	6.30 kW
COP Tj = -7°C	6.07	4.52
Pdh Tj = +2°C	3.90 kW	3.90 kW
COP Tj = +2°C	7.09	5.62
Pdh Tj = +7°C	2.50 kW	2.50 kW
COP Tj = +7°C	7.84	6.34
Pdh Tj = 12°C	1.80 kW	1.60 kW
COP Tj = 12°C	7.97	6.57
Pdh Tj = Tbiv	7.00 kW	7.00 kW
COP Tj = Tbiv	5.79	4.21





Pdh Tj = TOL	7.00 kW	7.00 kW
	7.00 KW	7.00 KH
COP Tj = TOL	5.79	4.21
Cdh	0.96	0.97
WTOL	65 °C	65 °C
Poff	2 W	2 W
РТО	18 W	15 W
PSB	10 W	7 W
PCK	9 W	9 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2078 kWh	2611 kWh

EN 12102-1			
Low temperature Medium temperature			
Sound power level indoor	42 dB(A)	42 dB(A)	

EN 14825			
emperature	nperature Medium tempera	Low tempe	
	222 %	282 %	$\eta_{s}$
	7.00 kW	7.00 kW	Prated
	7.00 kW	7.00 kW	Prated





This information was ge	Therated by the HP KETM	ARK database on 17 Dec 2020
SCOP	7.25	5.75
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.30 kW	4.30 kW
COP Tj = -7°C	7.00	5.39
Pdh Tj = +2°C	2.70 kW	2.70 kW
COP Tj = +2°C	7.83	6.21
Pdh Tj = $+7^{\circ}$ C	1.80 kW	1.80 kW
$COPTj = +7^{\circ}C$	8.14	6.85
Pdh Tj = 12°C	1.80 kW	1.60 kW
COP Tj = 12°C	7.70	6.64
Pdh Tj = Tbiv	7.00 kW	7.00 kW
COP Tj = Tbiv	5.79	4.21
Pdh Tj = TOL	7.00 kW	7.00 kW
COP Tj = TOL	5.79	4.21
Cdh	0.95	0.96
WTOL	65 °C	65 °C
Poff	2 W	2 W
РТО	18 W	15 W
PSB	10 W	7 W
PCK	9 W	9 W



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Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2378 kWh	3005 kWh



## **Model: Star-6 RST inverter**

General Data		
Power supply	1x230V 50Hz	
Off-peak product	No	

Brine/Water Heat Pump

#### Heating

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	

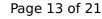
EN 14511-2		
	Low temperature	Medium temperature
Heat output	3.15 kW	2.78 kW
El input	0.67 kW	0.93 kW
СОР	4.72	2.99
Indoor water flow rate	0.95 m³/h	0.59 m³/h

#### Average Climate



EN 12102-1		
Low temperature Medium temperature		
Sound power level indoor	42 dB(A)	42 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	200 %	150 %
Prated	5.50 kW	5.50 kW
SCOP	5.20	3.95
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.00 kW	5.00 kW
COP Tj = -7°C	4.37	3.06
Pdh Tj = +2°C	3.10 kW	3.00 kW
COP Tj = +2°C	5.24	3.97
Pdh Tj = +7°C	2.00 kW	2.00 kW
COP Tj = +7°C	5.92	4.63
Pdh Tj = 12°C	1.30 kW	1.20 kW
COP Tj = 12°C	5.95	4.86
Pdh Tj = Tbiv	5.40 kW	5.40 kW
COP Tj = Tbiv	4.15	2.84

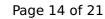




Pdh Tj = TOL	5.40 kW	5.40 kW
COP Tj = TOL	4.15	2.84
Cdh	0.98	0.99
WTOL	65 °C	65 °C
Poff	2 W	2 W
РТО	10 W	7 W
PSB	7 W	7 W
PCK	9 W	9 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2188 kWh	2875 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

EN 14825	
Low temperature	Medium temperature
211 %	157 %
5.50 kW	6.00 kW
	211 %





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SCOP	5.48	4.13
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	3.40 kW	3.40 kW
COP Tj = -7°C	5.17	3.77
Pdh Tj = +2°C	2.10 kW	2.10 kW
COP Tj = +2°C	5.91	4.51
Pdh Tj = $+7^{\circ}$ C	1.40 kW	1.40 kW
$COPTj = +7^{\circ}C$	6.36	5.12
Pdh Tj = 12°C	1.30 kW	1.20 kW
COP Tj = 12°C	4.15	4.81
Pdh Tj = Tbiv	5.40 kW	5.50 kW
COP Tj = Tbiv	4.15	2.84
Pdh Tj = TOL	5.40 kW	5.50 kW
COP Tj = TOL	4.15	2.84
Cdh	0.97	0.98
WTOL	65 °C	65 °C
Poff	2 W	2 W
РТО	10 W	7 W
PSB	7 W	7 W
PCK	9 W	9 W



Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2481 kWh	3287 kWh

#### Domestic Hot Water (DHW)

#### Average Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	102 %
СОР	2.55
Heating up time	02:23 h:min
Standby power input	50.0 W
Reference hot water temperature	50.0 °C
Mixed water at 40°C	245 I



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EN 16147	
Declared load profile	XL
Efficiency ηDHW	102 %
СОР	2.55
Heating up time	02:23 h:min
Standby power input	50.0 W
Reference hot water temperature	50.0 °C
Mixed water at 40°C	245 I

Water/Water Heat Pump

#### Heating

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

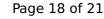


EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.30 kW	3.82 kW
El input	0.66 kW	1.00 kW
СОР	6.00	3.83
Indoor water flow rate	1.21 m³/h	0.75 m³/h

#### Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

EN 14825		
	Low temperature	Medium temperature
η <sub>s</sub>	270 %	214 %
Prated	7.00 kW	7.00 kW
SCOP	6.95	5.55
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.30 kW	6.30 kW
COP Tj = -7°C	6.07	4.52



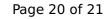


	<u> </u>	
Pdh Tj = $+2$ °C	3.90 kW	3.90 kW
COP Tj = +2°C	7.09	5.62
Pdh Tj = $+7^{\circ}$ C	2.50 kW	2.50 kW
$COP Tj = +7^{\circ}C$	7.84	6.34
Pdh Tj = 12°C	1.80 kW	1.60 kW
COP Tj = 12°C	7.97	6.57
Pdh Tj = Tbiv	7.00 kW	7.00 kW
COP Tj = Tbiv	5.79	4.21
Pdh Tj = TOL	7.00 kW	7.00 kW
COP Tj = TOL	5.79	4.21
Cdh	0.96	0.97
WTOL	65 °C	65 °C
Poff	2 W	2 W
РТО	18 W	15 W
PSB	10 W	7 W
PCK	9 W	9 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2078 kWh	2611 kWh



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	282 %	222 %
Prated	7.00 kW	7.00 kW
SCOP	7.25	5.75
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.30 kW	4.30 kW
COP Tj = -7°C	7.00	5.39
Pdh Tj = +2°C	2.70 kW	2.70 kW
COP Tj = +2°C	7.83	6.21
Pdh Tj = +7°C	1.80 kW	1.80 kW
COP Tj = +7°C	8.14	6.85
Pdh Tj = 12°C	1.80 kW	1.60 kW
COP Tj = 12°C	7.70	6.64
Pdh Tj = Tbiv	7.00 kW	7.00 kW
COP Tj = Tbiv	5.79	4.21





Pdh Tj = TOL	7.00 kW	7.00 kW
COP Tj = TOL	5.79	4.21
Cdh	0.95	0.96
WTOL	65 °C	65 °C
Poff	2 W	2 W
РТО	18 W	15 W
PSB	10 W	7 W
PCK	9 W	9 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2378 kWh	3005 kWh

Domestic Hot Water (DHW)

Average Climate



 $$\operatorname{\textit{Page}}\xspace$  21 of 21 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	117 %	
СОР	2.93	
Heating up time	02:09 h:min	
Standby power input	45.0 W	
Reference hot water temperature	49.0 °C	
Mixed water at 40°C	240 I	

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	117 %	
СОР	2.93	
Heating up time	02:09 h:min	
Standby power input	45.0 W	
Reference hot water temperature	49.0 °C	
Mixed water at 40°C	240 I	