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Login

Summary of	JAMA Star-16 inverter	Reg. No.	012-SC0666-18		
Certificate Holder	Certificate Holder				
Name	Kaukora				
Address	Tuotekatu 11	Zip	FI-21200		
City	Raisio	Country	Finland		
Certification Body	RISE CERT				
Subtype title	JAMA Star-16 inverter				
Heat Pump Type	Brine/Water and Water/Water				
Refrigerant	R407c				
Mass of Refrigerant	2.2 kg				



Model: Star-16 inverter

Configure model		
Model name Star-16 inverter		
Application	Heating (medium temp)	
Units	Indoor	
Climate Zone	Colder Climate	
Reversibility	No	
Cooling mode application (optional)	n/a	

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	8.89 kW	8.54 kW	
El input	1.83 kW	2.72 kW	
СОР	4.85	3.14	

Colder 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_{s}	211 %	159 %
Prated	16.00 kW	16.00 kW
SCOP	5.48	4.18
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	9.80 kW	9.80 kW
COP Tj = -7°C	5.10	3.80
Pdh Tj = +2°C	6.00 kW	6.00 kW
COP Tj = +2°C	6.10	4.70
Pdh Tj = +7°C	5.70 kW	5.60 kW
COP Tj = +7°C	6.10	5.00
Pdh Tj = 12°C	5.70 kW	5.60 kW
COP Tj = 12°C	5.60	5.00
Pdh Tj = Tbiv	15.90 kW	16.00 kW
COP Tj = Tbiv	3.90	2.80



Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	15.90 kW	16.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.90	2.80
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	0.10 kW	0.00 kW
Annual energy consumption Qhe	7218 kWh	9434 kWh

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

EN 14825		
Low temperature Medium temperature		
η_{S}	199 %	154 %
Prated	16.00 kW	16.00 kW
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5.18	4.05
-10 °C	-10 °C
-10 °C	-10 °C
14.20 kW	14.20 kW
4.19	3.00
8.70 kW	8.70 kW
5.26	4.10
5.70 kW	5.60 kW
6.06	4.90
5.80 kW	5.50 kW
5.85	5.00
15.90 kW	16.00 kW
3.90	2.80
15.90 kW	16.00 kW
3.90	2.80
0.98	0.99
65 °C	65 °C
2 W	2 W
30 W	30 W
7 W	7 W
30 W	30 W
	-10 °C -10 °C 14.20 kW 4.19 8.70 kW 5.26 5.70 kW 6.06 5.80 kW 5.85 15.90 kW 3.90 15.90 kW 3.90 2.2 W 30 W 7 W





Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.10 kW	0.00 kW
Annual energy consumption Qhe	6373 kWh	8167 kWh

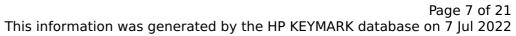
Water/Water Heat Pump

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	11.20 kW	10.90 kW
El input	1.84 kW	2.79 kW
СОР	6.11	3.91

Colder 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 _s	265 %	202 %
Prated	19.00 kW	19.00 kW
SCOP	6.82	5.25
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	11.60 kW	11.60 kW
COP Tj = -7°C	6.51	4.82
Pdh Tj = +2°C	7.30 kW	7.10 kW
COP Tj = +2°C	7.56	5.87
Pdh Tj = +7°C	7.30 kW	7.00 kW
$COP Tj = +7^{\circ}C$	7.62	6.24
Pdh Tj = 12°C	7.30 kW	7.00 kW
COP Tj = 12°C	7.46	6.47
Pdh Tj = Tbiv	19.00 kW	19.00 kW
COP Tj = Tbiv	5.01	3.51





Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	19.00 kW	19.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.01	3.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.96	0.98
WTOL	65 °C	65 °C
Poff	2 W	2 W
РТО	45 W	35 W
PSB	10 W	7 W
PCK	30 W	30 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	6861 kWh	8907 kWh

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

EN 14825		
	Low temperature	Medium temperature
η_{S}	265 %	202 %
Prated	19.00 kW	19.00 kW





SCOP	6.47	5.00
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	16.90 kW	16.90 kW
$COP Tj = -7^{\circ}C$	5.34	3.82
Pdh Tj = $+2$ °C	10.30 kW	10.30 kW
COP Tj = +2°C	6.61	5.08
Pdh Tj = $+7^{\circ}$ C	7.20 kW	7.00 kW
$COPTj = +7^{\circ}C$	7.50	5.93
Pdh Tj = 12°C	7.30 kW	7.10 kW
COP Tj = 12°C	7.61	6.28
Pdh Tj = Tbiv	19.00 kW	19.00 kW
COP Tj = Tbiv	5.01	3.51
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	19.00 kW	19.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.01	3.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.97	0.98
WTOL	65 °C	65 °C
Poff	2 W	2 W
РТО	45 W	35 W
PSB	10 W	7 W
PCK	30 W	30 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	6070 kWh	7834 kWh



Model: Star-16 RST inverter

Configure model		
Model name	Star-16 RST inverter	
Application	Heating + DHW + low temp	
Units	Indoor	
Climate Zone	Colder Climate	
Reversibility	No	
Cooling mode application (optional)	n/a	

General Data	
Power supply	3x400V 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	8.89 kW	8.54 kW
El input	1.83 kW	2.72 kW
СОР	4.85	3.14

Colder Climate

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

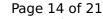
EN 14825		
	Low temperature	Medium temperature
η_{s}	211 %	159 %
Prated	16.00 kW	16.00 kW
SCOP	5.48	4.18
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	9.80 kW	9.80 kW
COP Tj = -7°C	5.10	3.80
Pdh Tj = +2°C	6.00 kW	6.00 kW
COP Tj = +2°C	6.10	4.70
Pdh Tj = +7°C	5.70 kW	5.60 kW
COP Tj = +7°C	6.10	5.00
Pdh Tj = 12°C	5.70 kW	5.60 kW
COP Tj = 12°C	5.60	5.00
Pdh Tj = Tbiv	15.90 kW	16.00 kW



COP Tj = Tbiv	3.90	2.80
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	15.90 kW	16.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.90	2.80
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	65 °C	65 °C
Poff	2 W	2 W
РТО	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	0.10 kW	0.00 kW
Annual energy consumption Qhe	7218 kWh	9434 kWh

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

EN 14825		
	Low temperature	Medium temperature
η_s	199 %	154 %





Prated	16.00 kW	16.00 kW
SCOP	5.18	4.05
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7° C	14.20 kW	14.20 kW
$COP Tj = -7^{\circ}C$	4.19	3.00
Pdh Tj = $+2$ °C	8.70 kW	8.70 kW
COP Tj = +2°C	5.26	4.10
Pdh Tj = $+7^{\circ}$ C	5.70 kW	5.60 kW
$COP Tj = +7^{\circ}C$	6.06	4.90
Pdh Tj = 12°C	5.80 kW	5.50 kW
COP Tj = 12°C	5.85	5.00
Pdh Tj = Tbiv	15.90 kW	16.00 kW
COP Tj = Tbiv	3.90	2.80
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	15.90 kW	16.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.90	2.80
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.98	0.99
WTOL	65 °C	65 °C
Poff	2 W	2 W
РТО	30 W	30 W
PSB	7 W	7 W



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PCK	30 W	30 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.10 kW	0.00 kW
Annual energy consumption Qhe	6373 kWh	8167 kWh

Domestic Hot Water (DHW)

Colder Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	98 %
СОР	2.45
Heating up time	01:04 h:min
Standby power input	50.0 W
Reference hot water temperature	50.0 °C
Mixed water at 40°C	240

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	98 %	
СОР	2.45	
Heating up time	01:04 h:min	
Standby power input	50.0 W	
Reference hot water temperature	50.0 °C	
Mixed water at 40°C	240	

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

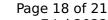


EN 14511-2			
Low temperature Medium temperature			
Heat output	11.20 kW	10.90 kW	
El input	1.84 kW	2.79 kW	
СОР	6.11	3.91	

Colder Climate

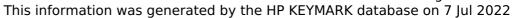
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)

	Low temperature	Medium temperature
η_{s}	265 %	202 %
Prated	19.00 kW	19.00 kW
SCOP	6.82	5.25
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	11.60 kW	11.60 kW
COP Tj = -7°C	6.51	4.82
Pdh Tj = $+2$ °C	7.30 kW	7.10 kW





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COP Tj = +2°C	7.56	5.87
Pdh Tj = $+7^{\circ}$ C	7.30 kW	7.00 kW
$COP Tj = +7^{\circ}C$	7.62	6.24
Pdh Tj = 12°C	7.30 kW	7.00 kW
COP Tj = 12°C	7.46	6.47
Pdh Tj = Tbiv	19.00 kW	19.00 kW
COP Tj = Tbiv	5.01	3.51
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	19.00 kW	19.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.01	3.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.96	0.98
WTOL	65 °C	65 °C
Poff	2 W	2 W
РТО	45 W	35 W
PSB	10 W	7 W
PCK	30 W	30 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	6861 kWh	8907 kWh





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

EN 14825		
	Low temperature	Medium temperature
η_{s}	265 %	202 %
Prated	19.00 kW	19.00 kW
SCOP	6.47	5.00
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	16.90 kW	16.90 kW
COP Tj = -7°C	5.34	3.82
Pdh Tj = +2°C	10.30 kW	10.30 kW
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Pdh Tj = 12°C	7.30 kW	7.10 kW
COP Tj = 12°C	7.61	6.28
Pdh Tj = Tbiv	19.00 kW	19.00 kW
COP Tj = Tbiv	5.01	3.51





Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	19.00 kW	19.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.01	3.51
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WTOL	65 °C	65 °C
Poff	2 W	2 W
РТО	45 W	35 W
PSB	10 W	7 W
PCK	30 W	30 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW

6070 kWh

7834 kWh

Domestic Hot Water (DHW)

Annual energy consumption Qhe

Colder Climate



EN 16147		
Declared load profile	XL	
Efficiency ηDHW	113 %	
СОР	2.82	
Heating up time	00:58 h:min	
Standby power input	45.0 W	
Reference hot water temperature	45.0 °C	
Mixed water at 40°C	235 I	

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	113 %	
СОР	2.82	
Heating up time	00:58 h:min	
Standby power input	45.0 W	
Reference hot water temperature	45.0 °C	
Mixed water at 40°C	235 I	