

Subtype Matrix series 8 10kW with 190L tank

Certificate Holder	INVENTOR A.G. SINGLE MEMBER ELECTRIC APPLIANCES S.A.
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Country	GR
Certification Body	BRE Global Limited
Subtype title	Matrix series 8 10kW with 190L tank
Registration number	041-K014-16
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	1.65 kg
Certification Date	20.04.2023
Testing basis	Heat Pump Keymark Scheme Rules Rev 08
Testing laboratory	TÜV SÜD Certification and Testing Co., Ltd. Guangzhou Branch, CN

Model ATS08S / HU100WT190S3

Model name	ATS08S / HU100WT190S3
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	n/a

Outdoor Air/Water**EN 16147 | Average Climate**

Declared load profile	L
Efficiency η_{DHW}	125 %
COP	3.02
Heating up time	1:38 h:min
Standby power input	23.0 W
Reference hot water temperature	47.0 °C
Mixed water at 40°C	200 l

EN 16147 | Colder Climate

Declared load profile	L
Efficiency η_{DHW}	107 %
COP	2.61
Heating up time	1:32 h:min
Standby power input	25.0 W
Reference hot water temperature	47.0 °C
Mixed water at 40°C	200 l

EN 16147 | Warmer Climate

Declared load profile	L
Efficiency η_{DHW}	151 %
COP	3.66
Heating up time	1:30 h:min
Standby power input	21.0 W
Reference hot water temperature	47.0 °C
Mixed water at 40°C	200 l

EN 14511-4 | Heating

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

Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.30 kW	7.50 kW
El input	1.60 kW	2.36 kW
COP	5.20	3.18

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	205 %	132 %
Prated	8.12 kW	6.60 kW
SCOP	5.21	3.36
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.19 kW	5.84 kW
COP Tj = -7°C	3.35	2.16
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	4.65 kW	3.76 kW
COP Tj = +2°C	5.09	3.30
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	2.90 kW	2.43 kW
COP Tj = +7°C	6.82	4.34
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	1.63 kW	1.40 kW
COP Tj = 12°C	8.35	5.33
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	7.19 kW	5.84 kW
COP Tj = Tbiv	3.35	2.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.45 kW	4.91 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.04	1.84
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity

Supplementary Heater: PSUP	1.68 kW	1.69 kW
Annual energy consumption Qhe	3223 kWh	4056 kWh
EN 12102-1 Colder Climate		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)
EN 14825 Colder Climate		
	Low temperature	Medium temperature
η_s	170 %	112 %
Prated	6.98 kW	5.78 kW
SCOP	4.32	2.88
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.46 kW	3.86 kW
COP Tj = -7°C	3.66	2.48
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	2.70 kW	2.21 kW
COP Tj = +2°C	5.20	3.35
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	1.66 kW	1.44 kW
COP Tj = +7°C	6.53	4.11
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	1.66 kW	1.47 kW
COP Tj = 12°C	7.96	5.92
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	5.69 kW	4.71 kW
COP Tj = Tbiv	2.83	1.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.06 kW	2.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.95	1.22
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.91 kW	2.99 kW
Annual energy consumption Qhe	3978 kWh	4950 kWh
Pdh Tj = -15°C (if TOL	5.69	4.71
COP Tj = -15°C (if TOL	2.83	1.90
Cdh Tj = -15 °C	0.90	0.90
EN 12102-1 Warmer Climate		

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_S	273 %	176 %
P _{rated}	8.12 kW	7.56 kW
SCOP	6.99	4.47
T _{biv}	7 °C	7 °C
TOL	2 °C	2 °C
P _{dh} T _j = +2°C	7.57 kW	7.55 kW
COP T _j = +2°C	3.98	2.59
Cd _h T _j = +2 °C	0.900	0.900
P _{dh} T _j = +7°C	5.22 kW	4.86 kW
COP T _j = +7°C	6.26	3.92
Cd _h T _j = +7 °C	0.900	0.900
P _{dh} T _j = 12°C	2.45 kW	2.32 kW
COP T _j = 12°C	9.02	5.55
Cd _h T _j = +12 °C	0.900	0.900
P _{dh} T _j = T _{biv}	5.22 kW	4.86 kW
COP T _j = T _{biv}	6.26	3.92
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	7.57 kW	7.55 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	3.98	2.59
Cd _h T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}		
WTOL	65 °C	65 °C
P _{off}	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.55 kW	0.01 kW
Annual energy consumption Q _{he}	1569 kWh	2259 kWh

Model ATS10S / HU100WT190S3

Model name	ATS10S / HU100WT190S3
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	n/a

Outdoor Air/Water**EN 16147 | Average Climate**

Declared load profile	L
Efficiency η_{DHW}	125 %
COP	3.02
Heating up time	1:38 h:min
Standby power input	23.0 W
Reference hot water temperature	47.0 °C
Mixed water at 40°C	200 l

EN 16147 | Colder Climate

Declared load profile	L
Efficiency η_{DHW}	107 %
COP	2.61
Heating up time	1:31 h:min
Standby power input	25.0 W
Reference hot water temperature	47.0 °C
Mixed water at 40°C	200 l

EN 16147 | Warmer Climate

Declared load profile	L
Efficiency η_{DHW}	151 %
COP	3.66
Heating up time	1:30 h:min
Standby power input	21.0 W
Reference hot water temperature	47.0 °C
Mixed water at 40°C	200 l

EN 14511-4 | Heating

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

Defrost test	passed	
Starting and operating test	passed	
EN 14511-2 Heating		
	Low temperature	Medium temperature
Heat output	10.00 kW	9.50 kW
El input	2.00 kW	3.06 kW
COP	5.00	3.10
EN 12102-1 Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	60 dB(A)	60 dB(A)
EN 14825 Average Climate		
	Low temperature	Medium temperature
η_s	205 %	137 %
Prated	9.17 kW	7.67 kW
SCOP	5.19	3.49
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.11 kW	6.78 kW
COP Tj = -7°C	3.23	2.24
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	5.18 kW	4.29 kW
COP Tj = +2°C	5.01	3.42
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	3.32 kW	2.77 kW
COP Tj = +7°C	7.08	4.52
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	1.65 kW	1.58 kW
COP Tj = 12°C	8.58	5.68
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	8.11 kW	6.78 kW
COP Tj = Tbiv	3.23	2.24
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.40 kW	5.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.96	1.83
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity

Supplementary Heater: PSUP	1.76 kW	2.28 kW
Annual energy consumption Qhe	3647 kWh	4539 kWh
EN 12102-1 Colder Climate		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	60 dB(A)	60 dB(A)
EN 14825 Colder Climate		
	Low temperature	Medium temperature
η_s	170 %	116 %
Prated	7.75 kW	6.71 kW
SCOP	4.32	2.99
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.83 kW	4.27 kW
COP Tj = -7°C	3.60	2.54
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	2.94 kW	2.57 kW
COP Tj = +2°C	5.26	3.51
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	1.92 kW	1.66 kW
COP Tj = +7°C	7.08	4.37
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	1.66 kW	1.48 kW
COP Tj = 12°C	7.96	5.96
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	6.32 kW	5.48 kW
COP Tj = Tbiv	2.64	2.00
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.63 kW	2.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.97	1.22
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.13 kW	3.91 kW
Annual energy consumption Qhe	4424 kWh	5540 kWh
Pdh Tj = -15°C (if TOL	6.32	5.48
COP Tj = -15°C (if TOL	2.64	2.00
Cdh Tj = -15 °C	0.90	0.90
EN 12102-1 Warmer Climate		

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	60 dB(A)	60 dB(A)
EN 14825 Warmer Climate		
	Low temperature	Medium temperature
ηs	279 %	180 %
Prated	8.58 kW	8.63 kW
SCOP	7.12	4.58
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.44 kW	8.06 kW
COP Tj = +2°C	3.84	2.59
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	5.52 kW	5.55 kW
COP Tj = +7°C	6.18	4.10
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	2.62 kW	2.53 kW
COP Tj = 12°C	9.04	5.82
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	5.52 kW	5.55 kW
COP Tj = Tbiv	6.18	4.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.44 kW	8.16 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.84	2.61
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.14 kW	0.48 kW
Annual energy consumption Qhe	1628 kWh	2516 kWh