

Subtype Matrix series 4 6 kW with 190L tank

Certificate Holder	INVENTOR A.G. SINGLE MEMBER ELECTRIC APPLIANCES S.A.
Address	2 Thoukididou str. & 24th km National Road Athens - Lamia
ZIP	14565
City	Agios Stefanos
Country	GR
Certification Body	BRE Global Limited
Subtype title	Matrix series 4 6 kW with 190L tank
Registration number	041-K014-14
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	1.5 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 ATS04S / HU100WT190S3

Model name	ATS04S / 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}	127 %
COP	3.10
Heating up time	1:47 h:min
Standby power input	22.0 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}	102 %
COP	2.50
Heating up time	1:54 h:min
Standby power input	24.0 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}	157 %
COP	3.80
Heating up time	1:31 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	4.25 kW	4.40 kW
El input	0.82 kW	1.49 kW
COP	5.20	2.95

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	191 %	130 %
Prated	5.52 kW	4.40 kW
SCOP	4.85	3.31
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.88 kW	3.89 kW
COP Tj = -7°C	3.19	2.17
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	3.06 kW	2.38 kW
COP Tj = +2°C	4.78	3.30
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	1.93 kW	2.95 kW
COP Tj = +7°C	6.13	4.41
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	1.48 kW	1.32 kW
COP Tj = 12°C	8.05	5.66
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	4.88 kW	3.89 kW
COP Tj = Tbiv	3.19	2.17
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.42 kW	3.42 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.86	1.91
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	1.11 kW	0.98 kW
Annual energy consumption Q _{he}	2351 kWh	2744 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η _s	159 %	102 %
Prated	4.57 kW	3.37 kW
SCOP	4.06	2.63
T _{biv}	-15 °C	-15 °C
TOL	-22 °C	-22 °C
P _{dh} T _j = -7°C	2.76 kW	2.14 kW
COP T _j = -7°C	3.49	2.32
C _{dh} T _j = -7 °C	0.90	0.90
P _{dh} T _j = +2°C	1.77 kW	1.28 kW
COP T _j = +2°C	4.95	2.99
C _{dh} T _j = +2 °C	0.90	0.90
P _{dh} T _j = +7°C	1.17 kW	1.01 kW
COP T _j = +7°C	5.53	3.86
C _{dh} T _j = +7 °C	0.90	0.90
P _{dh} T _j = 12°C	1.43 kW	1.36 kW
COP T _j = 12°C	7.67	6.28
C _{dh} T _j = +12 °C	0.90	0.90
P _{dh} T _j = T _{biv}	3.72 kW	2.75 kW
COP T _j = T _{biv}	2.57	1.74
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	2.80 kW	1.64 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	1.97	1.02
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	1.76 kW	1.73 kW
Annual energy consumption Q _{he}	2770 kWh	3159 kWh
P _{dh} T _j = -15°C (if TOL	3.72	2.75
COP T _j = -15°C (if TOL	2.57	1.74
C _{dh} T _j = -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	56 dB(A)	56 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	254 %	162 %
Prated	5.54 kW	5.02 kW
SCOP	6.52	4.14
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.35 kW	4.84 kW
COP Tj = +2°C	3.94	2.51
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	3.56 kW	3.23 kW
COP Tj = +7°C	5.92	3.68
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	1.64 kW	1.47 kW
COP Tj = 12°C	7.91	5.15
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	3.56 kW	3.23 kW
COP Tj = Tbiv	5.92	3.68
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.35 kW	4.84 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.94	2.51
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	0.19 kW	0.18 kW
Annual energy consumption Qhe	1152 kWh	1621 kWh

Model ATS06S / HU100WT190S3

Model name	ATS06S / 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}	127 %
COP	3.10
Heating up time	1:47 h:min
Standby power input	22.0 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}	102 %
COP	2.50
Heating up time	1:54 h:min
Standby power input	24.0 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}	157 %
COP	3.80
Heating up time	1:31 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	6.20 kW	6.00 kW
El input	1.24 kW	2.00 kW
COP	5.00	3.00

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	58 dB(A)	58 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	195 %	138 %
Prated	6.82 kW	5.70 kW
SCOP	4.95	3.52
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.03 kW	5.05 kW
COP Tj = -7°C	3.09	2.17
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	3.88 kW	3.12 kW
COP Tj = +2°C	4.85	3.51
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	2.40 kW	2.09 kW
COP Tj = +7°C	6.63	4.54
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	1.39 kW	1.28 kW
COP Tj = 12°C	7.83	5.59
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	6.03 kW	5.05 kW
COP Tj = Tbiv	3.09	2.17
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.36 kW	4.52 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.76	1.91
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	1.45 kW	1.18 kW
Annual energy consumption Q _{he}	2846 kWh	3345 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	58 dB(A)	58 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	165 %	111 %
Prated	5.63 kW	4.26 kW
SCOP	4.21	2.85
T _{biv}	-15 °C	-15 °C
TOL	-22 °C	-22 °C
P _{dh} T _j = -7°C	3.42 kW	2.70 kW
COP T _j = -7°C	3.59	2.46
C _{dh} T _j = -7 °C	0.90	0.90
P _{dh} T _j = +2°C	2.06 kW	1.61 kW
COP T _j = +2°C	5.21	3.36
C _{dh} T _j = +2 °C	0.90	0.90
P _{dh} T _j = +7°C	1.47 kW	1.02 kW
COP T _j = +7°C	6.24	3.94
C _{dh} T _j = +7 °C	0.90	0.90
P _{dh} T _j = 12°C	1.44 kW	1.37 kW
COP T _j = 12°C	7.66	6.35
C _{dh} T _j = +12 °C	0.90	0.90
P _{dh} T _j = T _{biv}	4.60 kW	3.48 kW
COP T _j = T _{biv}	2.53	1.86
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	3.48 kW	2.10 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	1.96	1.13
WTOL	65 °C	65 °C
P _{off}	20 W	20 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	2.15 kW	2.16 kW
Annual energy consumption Q _{he}	3301 kWh	3681 kWh
P _{dh} T _j = -15°C (if TOL	4.60	3.48
COP T _j = -15°C (if TOL	2.53	1.86
C _{dh} T _j = -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	58 dB(A)	58 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	258 %	165 %
Prated	6.12 kW	5.15 kW
SCOP	6.63	4.19
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.94 kW	5.03 kW
COP Tj = +2°C	3.91	2.48
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	3.93 kW	3.31 kW
COP Tj = +7°C	5.89	3.67
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	1.80 kW	1.60 kW
COP Tj = 12°C	8.20	5.29
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	3.93 kW	3.31 kW
COP Tj = Tbiv	5.89	3.67
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.94 kW	5.03 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.91	2.48
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	0.18 kW	0.12 kW
Annual energy consumption Qhe	1251 kWh	1640 kWh