

Subtype M thermal A Series 4 6 kW with 240L tank

Certificate Holder	EAS Electric Smart Technology SL.
Address	Poligono Industrial San Carlos Parcela 13 03370 Redovan
ZIP	
City	Alicante
Country	ES
Certification Body	BRE Global Limited
Subtype title	M thermal A Series 4 6 kW with 240L tank
Registration number	041-K066-03
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	1.5 kg
Certification Date	06.10.2023
Testing basis	Heat Pump Keymark Scheme Rules Rev 12
Testing laboratory	TÜV SÜD Certification and Testing Co., Ltd. Guangzhou Branch, CN

Model ETH04VA + ETHKH100A240

Model name	ETH04VA + ETHKH100A240
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	XL
Efficiency η_{DHW}	136 %
COP	3.34
Heating up time	2:21 h:min
Standby power input	22.0 W
Reference hot water temperature	48.0 °C
Mixed water at 40°C	275 l

EN 16147 | Colder Climate

Declared load profile	XL
Efficiency η_{DHW}	107 %
COP	2.63
Heating up time	2:38 h:min
Standby power input	24.0 W
Reference hot water temperature	48.0 °C
Mixed water at 40°C	275 l

EN 16147 | Warmer Climate

Declared load profile	XL
Efficiency η_{DHW}	174 %
COP	4.24
Heating up time	2:09 h:min
Standby power input	22.0 W
Reference hot water temperature	48.0 °C
Mixed water at 40°C	275 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 Qhe	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 %
P _{rated}	4.57 kW	3.37 kW
SCOP	4.06	2.63
T _{biv}	-15 °C	-15 °C
T _{OL}	-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
Cd _h 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
Cd _h 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
Cd _h 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
Cd _h 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 = T _{OL} or P _{dh} T _j = T _{designh} if T _{OL} < T _{designh}	2.80 kW	1.64 kW
COP T _j = T _{OL} or COP T _j = T _{designh} if T _{OL} < T _{designh}	1.97	1.02
WT _{OL}	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 Qhe	2770 kWh	3159 kWh
P _{dh} T _j = -15°C (if T _{OL})	3.72	2.75
COP T _j = -15°C (if T _{OL})	2.57	1.74
Cd _h 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 %
P _{rated}	5.54 kW	5.02 kW
SCOP	6.52	4.14
T _{biv}	7 °C	7 °C
TOL	2 °C	2 °C
P _{dh} T _j = +2°C	5.35 kW	4.84 kW
COP T _j = +2°C	3.94	2.51
Cd _h T _j = +2 °C	0.90	0.90
P _{dh} T _j = +7°C	3.56 kW	3.23 kW
COP T _j = +7°C	5.92	3.68
Cd _h T _j = +7 °C	0.90	0.90
P _{dh} T _j = 12°C	1.64 kW	1.47 kW
COP T _j = 12°C	7.91	5.15
Cd _h T _j = +12 °C	0.90	0.90
P _{dh} T _j = T _{biv}	3.56 kW	3.23 kW
COP T _j = T _{biv}	5.92	3.68
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	5.35 kW	4.84 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	3.94	2.51
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	0.19 kW	0.18 kW
Annual energy consumption Q _{he}	1152 kWh	1621 kWh

Model ETH06VA + ETHKH100A240

Model name	ETH06VA + ETHKH100A240
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	XL
Efficiency η_{DHW}	136 %
COP	3.34
Heating up time	2:21 h:min
Standby power input	22.0 W
Reference hot water temperature	48.0 °C
Mixed water at 40°C	275 l

EN 16147 | Colder Climate

Declared load profile	XL
Efficiency η_{DHW}	107 %
COP	2.63
Heating up time	2:38 h:min
Standby power input	24.0 W
Reference hot water temperature	48.0 °C
Mixed water at 40°C	275 l

EN 16147 | Warmer Climate

Declared load profile	XL
Efficiency η_{DHW}	174 %
COP	4.24
Heating up time	2:09 h:min
Standby power input	22.0 W
Reference hot water temperature	48.0 °C
Mixed water at 40°C	275 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 Qhe	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
ηs	165 %	111 %
Prated	5.63 kW	4.26 kW
SCOP	4.21	2.85
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	3.42 kW	2.70 kW
COP Tj = -7°C	3.59	2.46
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	2.06 kW	1.61 kW
COP Tj = +2°C	5.21	3.36
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	1.47 kW	1.02 kW
COP Tj = +7°C	6.24	3.94
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	1.44 kW	1.37 kW
COP Tj = 12°C	7.66	6.35
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	4.60 kW	3.48 kW
COP Tj = Tbiv	2.53	1.86
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.48 kW	2.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.96	1.13
WTOL	65 °C	65 °C
Poff	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 Qhe	3301 kWh	3681 kWh
Pdh Tj = -15°C (if TOL	4.60	3.48
COP Tj = -15°C (if TOL	2.53	1.86
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	58 dB(A)	58 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_S	258 %	165 %
P _{rated}	6.12 kW	5.15 kW
SCOP	6.63	4.19
T _{biv}	7 °C	7 °C
TOL	2 °C	2 °C
P _{dh} T _j = +2°C	5.94 kW	5.03 kW
COP T _j = +2°C	3.91	2.48
Cd _h T _j = +2 °C	0.90	0.90
P _{dh} T _j = +7°C	3.93 kW	3.31 kW
COP T _j = +7°C	5.89	3.67
Cd _h T _j = +7 °C	0.90	0.90
P _{dh} T _j = 12°C	1.80 kW	1.60 kW
COP T _j = 12°C	8.20	5.29
Cd _h T _j = +12 °C	0.90	0.90
P _{dh} T _j = T _{biv}	3.93 kW	3.31 kW
COP T _j = T _{biv}	5.89	3.67
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	5.94 kW	5.03 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	3.91	2.48
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	0.18 kW	0.12 kW
Annual energy consumption Q _{he}	1251 kWh	1640 kWh