

Subtype Hydro 12, Hydro 16

Certificate Holder	Alpha Therm Ltd.
Address	Nepicar House, London Road
ZIP	TN15 7RS
City	Kent
Country	GB
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	Hydro 12, Hydro 16
Registration number	011-1W0591
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	2.2 kg
Certification Date	14.04.2023
Testing basis	HP KEYMARK certification scheme rules V11

Model Hydro 12

Model name	Hydro 12
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
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}	110 %
COP	2.72
Heating up time	1:30 h:min
Standby power input	62.0 W
Reference hot water temperature	52.1 °C
Mixed water at 40°C	206 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	12.00 kW	11.30 kW
El input	2.65 kW	3.73 kW
COP	4.53	3.03

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	185 %	138 %
Prated	13.00 kW	12.00 kW

SCOP	4.69	3.51
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.50 kW	10.60 kW
COP Tj = -7°C	2.71	2.16
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	7.00 kW	6.50 kW
COP Tj = +2°C	4.48	3.45
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	5.60 kW	4.20 kW
COP Tj = +7°C	6.86	4.57
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	4.80 kW	4.40 kW
COP Tj = 12°C	8.95	6.12
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	11.50 kW	10.60 kW
COP Tj = Tbiv	2.71	2.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.00 kW	12.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.37	1.96
WTOL	65 °C	65 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	5725 kWh	7051 kWh

Model Hydro 16		
Model name	Hydro 16	
Application	Heating + DHW + low temp	
Units	Indoor, Outdoor	
Climate zone (for heating)	n/a	
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}	110 %	
COP	2.72	
Heating up time	1:30 h:min	
Standby power input	62.0 W	
Reference hot water temperature	52.1 °C	
Mixed water at 40°C	206 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	16.00 kW	15.00 kW
El input	3.62 kW	5.18 kW
COP	4.42	2.90
EN 12102-1 Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	66 dB(A)	66 dB(A)
EN 14825 Average Climate		
	Low temperature	Medium temperature
η_s	176 %	138 %
Prated	16.00 kW	16.00 kW

SCOP	4.48	3.53
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	14.15 kW	14.15 kW
COP Tj = -7°C	2.65	2.06
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	8.62 kW	8.62 kW
COP Tj = +2°C	4.11	3.31
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	5.54 kW	5.54 kW
COP Tj = +7°C	6.86	5.23
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	5.20 kW	4.49 kW
COP Tj = 12°C	8.81	6.35
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	14.15 kW	14.15 kW
COP Tj = Tbiv	2.65	2.06
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.80 kW	14.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.37	1.82
WTOL	65 °C	65 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.20 kW	2.00 kW
Annual energy consumption Qhe	7385 kWh	9379 kWh