

Technical parameters

Model(s):	Outdoor unit: AQUE-140-V3T3 Indoor unit: AQU1-160-V3T3
Air-to-water heat pump:	YES
Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	YES
Heat pump combination heater:	NO
Declared climate condition:	AVERAGE

Parameters are declared for medium-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	14	kW	Seasonal space heating energy efficiency	η_s	129	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 °C	Pdh	12.4	kW	Tj = -7 °C	COPd	2.02	-
Tj = 2 °C	Pdh	7.5	kW	Tj = 2 °C	COPd	3.08	-
Tj = 7 °C	Pdh	5.0	kW	Tj = 7 °C	COPd	4.71	-
Tj = 12 °C	Pdh	3.4	kW	Tj = 12 °C	COPd	6.72	-
Tj = bivalent temperature	Pdh	12.4	kW	Tj = bivalent temperature	COPd	2.02	-
Tj = operating limit temperature	Pdh	10.1	kW	Tj = operating limit temperature	COPd	1.65	-
For air-to-water heat pumps: Tj = -15 °C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15 °C	COPd	-	-
Bivalent temperature	T _{biv}	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P _{cych}	-	kW	Cycling interval efficiency	COP _{cyc}	-	-
Degradation co-efficient (**)	C _{dh}	0.9	--	Heating water operating limit temperature	W _{TOL}	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{off}	0.019	kW	Rated heat output (**)	P _{sup}	3.8	kW
Standby mode	P _{sb}	0.019	kW	Type of energy input	Electrical		
Thermostat-off mode	P _{to}	0.078	kW				
Crankcase heater mode	P _{ck}	0.014	kW				

Other items			
Capacity control	variable		
Sound power level, indoors/outdoors	L _{WA}	45 / 72	dB
Annual energy consumption	Q _{HE}	8733	kWh
For air-to-water heat pumps: Rated air flow rate, outdoors	-	6500	m ³ /h
For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m ³ /h

For heat pump combination heater:							
Declared load profile	-			Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Q _{elec}	-	kWh	Daily fuel consumption	Q _{fuel}	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ

Contact details	EUROFRED S.A. Cl. Marqués de Sentmenat, 97 - 08029 Barcelona - Spain MADE IN P.R.C
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(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

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Model(s):	Outdoor unit: AQUE-140-V3T3 Indoor unit: AQUi-160-V3T3
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Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	YES
Heat pump combination heater:	NO
Declared climate condition:	COLDER

Parameters are declared for medium-temperature application.

Item	Symbol	Value	Unit
Rated heat output (*)	Prated	14	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 °C	Pdh	8.8	kW
Tj = 2 °C	Pdh	5.3	kW
Tj = 7 °C	Pdh	3.5	kW
Tj = 12 °C	Pdh	2.4	kW
Tj = bivalent temperature	Pdh	10.4	kW
Tj = operating limit temperature	Pdh	7.1	kW
For air-to-water heat pumps: Tj = -15 °C	Pdh	-	kW
Bivalent temperature	T _{biv}	-12	°C
Cycling interval capacity for heating	P _{cych}	-	kW
Degradation co-efficient (**)	C _{dh}	0.9	--
Power consumption in modes other than active mode			
Off mode	P _{off}	0.019	kW
Standby mode	P _{sb}	0.019	kW
Thermostat-off mode	P _{to}	0.078	kW
Crankcase heater mode	P _{ck}	0.014	kW

Other items			
Capacity control	variable		
Sound power level, indoors/outdoors	L _{WA}	-	dB
Annual energy consumption	Q _{HE}	13120	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η _s	103	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 °C	COPd	2.19	-
Tj = 2 °C	COPd	3.17	-
Tj = 7 °C	COPd	4.45	-
Tj = 12 °C	COPd	6.15	-
Tj = bivalent temperature	COPd	1.88	-
Tj = operating limit temperature	COPd	1.29	-
For air-to-water heat pumps: Tj = -15 °C	COPd	-	-
For air-to-water heat pumps: Operation limit temperature	TOL	-20	°C
Cycling interval efficiency	COP _{cyc}	-	-
Heating water operating limit temperature	W _{TOL}	60	°C
Supplementary heater			
Rated heat output (**)	P _{sup}	14.1	kW
Type of energy input	Electrical		

For air-to-water heat pumps: Rated air flow rate, outdoors	-	6500	m ³ /h
For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m ³ /h

For heat pump combination heater:

Declared load profile				Water heating energy efficiency			
-				η _{wh}	-		%
Daily electricity consumption	Q _{elec}	-	kWh	Daily fuel consumption	Q _{fuel}	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ

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(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

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Model(s):	Outdoor unit: AQUE-140-V3T3 Indoor unit: AQUI-160-V3T3
Air-to-water heat pump:	YES
Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	YES
Heat pump combination heater:	NO
Declared climate condition:	WARMER

Parameters are declared for medium-temperature application.

Item	Symbol	Value	Unit
Rated heat output (*)	Prated	14	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 C	Pdh	-	kW
Tj = 2 C	Pdh	14.1	kW
Tj = 7 C	Pdh	9.3	kW
Tj = 12 C	Pdh	4.2	kW
Tj = bivalent temperature	Pdh	14.1	kW
Tj = operating limit	Pdh	14.1	kW
For air-to-water heat pumps: Tj = -15 C	Pdh	-	kW
Bivalent temperature	Tbiv	2	°C
Cycling interval capacity for heating	Pcych	-	kW
Degradation co-efficient (**)	Cdh	0.9	--
Power consumption in modes other than active mode			
Off mode	Poff	0.019	kW
Standby mode	Psb	0.019	kW
Thermostat-off mode	Pto	0.078	kW
Crankcase heater mode	Pck	0.014	kW

Other items			
Capacity control	variable		
Sound power level, indoors/outdoors	LWA	-	dB
Annual energy consumption	QHE	3807	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	ηs	165	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 C	COPd	-	-
Tj = 2 C	COPd	2.31	-
Tj = 7 C	COPd	3.45	-
Tj = 12 C	COPd	5.76	-
Tj = bivalent temperature	COPd	2.31	-
Tj = operating limit	COPd	2.31	-
For air-to-water heat pumps: Tj = -15 C	COPd	-	-
For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval efficiency	COP _{cy}	-	-
Heating water operating limit temperature	WTOL	60	°C
Supplementary heater			
Rated heat output (**)	Psup	0	kW
Type of energy input	Electrical		

For air-to-water heat pumps: Rated air flow rate, outdoors	-	6500	m ³ /h
For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m ³ /h

For heat pump combination heater:							
Declared load profile	-			Water heating energy efficiency	η _{wh}	-	%
Daily electricity consumption	Q _{elec}	-	kWh	Daily fuel consumption	Q _{fuel}	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ
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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.