

PRODUCT FICHE ACCORDING TO COMMISSION DELEGATED REGULATIONS (EU) 811/2013 OF 18TH FEBRUARY 2013 AND
 (EU) 813/2013 OF 2ND AUGUST 2013

Model		Enviroair 16 kW					
Type of heat source		Air-to-water					
Low-temperature heat pump		No					
Equipped with supplementary heater		No					
Heat pump combination heater		Yes					
Climate condition		Average					
Temperature application		Low temperature (35°C)					
Applied standards EN14511, EN14825 (Space Heating), EN16147 (DHW), EN12102							
Rated Heat Output ⁽¹⁾	P_{rated}	16.0	kW	Seasonal space heating energy efficiency	η_s	153	%
Declared capacity for part load at outdoor temperature T_j				Declared coefficient of performance for part load at outdoor temperature T_j			
T _j = -7°C (A Condition)	P _{dh}	13.80	kW	T _j = -7°C (A Condition)	COP _d	2.40	kW/kW
T _j = +2°C (B Condition)	P _{dh}	8.40	kW	T _j = +2°C (B Condition)	COP _d	3.90	kW/kW
T _j = +7°C (C Condition)	P _{dh}	5.40	kW	T _j = +7°C (C Condition)	COP _d	5.00	kW/kW
T _j = +12°C (D Condition)	P _{dh}	3.50	kW	T _j = +12°C (D Condition)	COP _d	6.00	kW/kW
T _j = biv	P _{dh}	13.80	kW	T _j = biv	COP _d	2.40	kW/kW
T _j = TOL (E Condition)	P _{dh}	14.10	kW	T _j = TOL (E Condition)	COP _d	2.30	kW/kW
T _j = -15°C (if TOL < -20°C)	P _{dh}		kW	T _j = -15°C (if TOL < -20°C)	COP _d		kW/kW
Bivalent temperature				Operation limit temperature			
	T _{biv}	-7	°C		TOL	-10	°C
Cycling interval capacity for heating				Cycling interval efficiency			
	P _{cych}		kW		COP _{cyc}		-
Degradation co-efficient ⁽²⁾				Heating water operating limit			
	C _{dh}	0.90	-		WTOL	55	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.013	kW	Rated heat output			
Thermostat-off mode	P _{TO}	0.000	kW				
Standby mode	P _{SB}	0.013	kW	Type of energy input			
Crankcase heater mode	P _{CK}	0.000	kW				
Other items							
Capacity control				Rated air flow rate, outdoors			
	Variable						m ³ /h
Sound power level, indoors/outdoors	L _{WA}	-/69	dB	Rated water flow rate, indoor heat exchanger			
							m ³ /h
Annual energy consumption	Q _{HE}	8287	kWh	Rated brine or water flow rate, outdoor heat exchanger			
							m ³ /h
For heat pump combination heater							
Declared load profile		XL		Water heating energy efficiency		h_{WH}	114.04 %
Capacity of heat pump		P _{rated}	7.272 kW	Reference hot water temperature		Θ_{WH}	49.3 °C
Daily electricity consumption		Q _{elec}	kWh	Vol. of DHW accounted for in test			374.7 Litres
Annual electricity consumption		AEC	kWh	Standby heat loss / day			kWhr
Contact Details:		Firebird Heating Solutions Ltd., Údarás Industrial Estate, Baile Mhic Íre, Co. Cork, P12 HK51					

(1) For heat pumps space heaters and heat pump combination heaters, the rated heat output P_{rated} is equal to the design load for heating P_{designh}, and the rated heat output of a supplementary heater P_{sup} is equal to the supplementary capacity for heating sup(T_j).

(2) If C_{dh} is not determined by measurement then the default degradation coefficient is C_{dh} = 0.9.

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Type of heat source		Air-to-water					
Low-temperature heat pump		No					
Equipped with supplementary heater		No					
Heat pump combination heater		Yes					
Climate condition		Average					
Temperature application		Medium temperature (55°C)					
Applied standards EN14511, EN14825 (Space Heating), EN16147 (DHW), EN12102							
Rated Heat Output ⁽¹⁾	P_{rated}	14.0	kW	Seasonal space heating energy efficiency	η_s	125	%
Declared capacity for part load at outdoor temperature T_j				Declared coefficient of performance for part load at outdoor temperature T_j			
T _j = -7°C (A Condition)	P _{dh}	11.20	kW	T _j = -7°C (A Condition)	COP _d	1.60	kW/kW
T _j = +2°C (B Condition)	P _{dh}	6.82	kW	T _j = +2°C (B Condition)	COP _d	3.35	kW/kW
T _j = +7°C (C Condition)	P _{dh}	4.38	kW	T _j = +7°C (C Condition)	COP _d	4.35	kW/kW
T _j = +12°C (D Condition)	P _{dh}	3.60	kW	T _j = +12°C (D Condition)	COP _d	5.50	kW/kW
T _j = biv	P _{dh}	11.20	kW	T _j = biv	COP _d	1.60	kW/kW
T _j = TOL (E Condition)	P _{dh}	10.50	kW	T _j = TOL (E Condition)	COP _d	1.40	kW/kW
T _j = -15°C (if TOL < -20°C)	P _{dh}		kW	T _j = -15°C (if TOL < -20°C)	COP _d		kW/kW
Bivalent temperature				Operation limit temperature			
	T _{biv}	-7	°C		TOL	-10	°C
Cycling interval capacity for heating				Cycling interval efficiency			
	P _{cych}		kW		COP _{cyc}		-
Degradation co-efficient				Heating water operating limit			
	C _{dh}	0.9	-		WTOL	55	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.013	kW	Rated heat output			
Thermostat-off mode	P _{TO}	0.000	kW				
Standby mode	P _{SB}	0.013	kW	Type of energy input			
Crankcase heater mode	P _{CK}	0.000	kW				
Other items							
Capacity control				Rated air flow rate, outdoors			
	Variable						m ³ /h
Sound power level, indoors/outdoors	L _{WA}	-/69	dB	Rated water flow rate, indoor heat exchanger			
							m ³ /h
Annual energy consumption	Q _{HE}	8170	kWh	Rated brine or water flow rate, outdoor heat exchanger			
							m ³ /h
For heat pump combination heater							
Declared load profile		XL		Water heating energy efficiency		h_{WH}	114.04 %
Capacity of heat pump		P _{rated}	7.272 kW	Reference hot water temperature		Θ_{WH}	49.3 °C
Daily electricity consumption		Q _{elec}	kWh	Vol. of DHW accounted for in test			374.7 Litres
Annual electricity consumption		AEC	kWh	Standby heat loss / day			kWhr
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