

Model	Enviroair ASH004FHP
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	

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated Heat Output ⁽¹⁾	P_{rated}	5.50	kW	Seasonal space heating energy efficiency	η_s	191	%
Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20°C and outdoor temperature T _j			
T _j = -7°C (A Condition)	P _{dh}	4.88	kW	T _j = -7°C (A Condition)	COP _d	3.19	-
T _j = +2°C (B Condition)	P _{dh}	3.05	kW	T _j = +2°C (B Condition)	COP _d	4.78	-
T _j = +7°C (C Condition)	P _{dh}	1.93	kW	T _j = +7°C (C Condition)	COP _d	6.13	-
T _j = +12°C (D Condition)	P _{dh}	1.48	kW	T _j = +12°C (D Condition)	COP _d	8.05	-
T _j = bivalent temperature	P _{dh}	4.88	kW	T _j = bivalent temperature	COP _d	3.19	-
T _j = TOL (E Condition)	P _{dh}	4.41	kW	T _j = TOL (E Condition)	COP _d	2.86	-
T _j = -15°C (if TOL < -20°C)	P _{dh}	-	kW	T _j = -15°C (if TOL < -20°C)	COP _d	-	-
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		65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode				Rated heat output			
P _{OFF}		0.014	kW	P _{sup}		-	kW
Thermostat-off mode				Type of energy input			
P _{TO}		0.024	kW	Electric			
Standby mode							
P _{SB}		0.014	kW				
Crankcase heater mode							
P _{CK}		0.000	kW				
Other items							
Capacity control				Rated air flow rate, outdoors			
Variable							
Sound power level, indoors/outdoors				Rated water flow rate, indoor heat exchanger			
L _{WA}		55	dB				
Annual energy consumption				Rated brine or water flow rate, outdoor heat exchanger			
Q _{HE}		2351	kWh				
For heat pump combination heater							
Declared load profile				Water heating energy efficiency			
-				η _{wh}			
Capacity of heat pump				Reference hot water temperature			
P _{rated}		-	kW	Θ _{WH}			
Daily electricity consumption				Vol. of DHW accounted for in test			
Q _{elec}		-	kWh				
Annual electricity consumption				Standby heat loss / day			
AEC		-	kWh				
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.

Model	Enviroair ASH004FHP
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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated Heat Output ⁽¹⁾	P_{rated}	4.4	kW	Seasonal space heating energy efficiency	η_s	130	%
Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20°C and outdoor temperature T _j			
T _j = -7°C (A Condition)	P _{dh}	3.89	kW	T _j = -7°C (A Condition)	COP _d	2.17	-
T _j = +2°C (B Condition)	P _{dh}	2.38	kW	T _j = +2°C (B Condition)	COP _d	3.30	-
T _j = +7°C (C Condition)	P _{dh}	2.94	kW	T _j = +7°C (C Condition)	COP _d	4.41	-
T _j = +12°C (D Condition)	P _{dh}	1.32	kW	T _j = +12°C (D Condition)	COP _d	5.66	-
T _j = bivalent temperature	P _{dh}	3.89	kW	T _j = bivalent temperature	COP _d	2.17	-
T _j = TOL (E Condition)	P _{dh}	3.42	kW	T _j = TOL (E Condition)	COP _d	1.91	-
T _j = -15°C (if TOL < -20°C)	P _{dh}	-	kW	T _j = -15°C (if TOL < -20°C)	COP _d	-	-
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 = 65 °C			
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.014	kW	Rated heat output	P _{sup}	-	kW
Thermostat-off mode	P _{TO}	0.024	kW	Type of energy input	Electric		
Standby mode	P _{SB}	0.014	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
Other items				Rated air flow rate, outdoors			
Capacity control	Variable			2770 m ³ /h			
Sound power level, indoors/outdoors	L _{WA}	55	dB	Rated water flow rate, indoor heat exchanger			
Annual energy consumption	Q _{HE}	2744	kWh	- m ³ /h			
For heat pump combination heater				Rated brine or water flow rate, outdoor heat exchanger			
				- m ³ /h			
Declared load profile	L			Water heating energy efficiency	η _{wh}	124.3	%
Capacity of heat pump	P _{rated}	-	kW	Reference hot water temperature	Θ _{WH}	46.44	°C
Daily electricity consumption	Q _{elec}	3.86	kWh	Vol. of DHW accounted for in test		196	Litres
Annual electricity consumption	AEC	823	kWh	Standby heat loss / day		1.66	kWh
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(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