

Model	Enviroair ASH016FHP
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}	15.2	kW	Seasonal space heating energy efficiency	η_s	181.7	%	
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}	13.45	kW	T _j = -7°C (A Condition)	COP _d	2.72	-	
T _j = +2°C (B Condition)	P _{dh}	8.56	kW	T _j = +2°C (B Condition)	COP _d	4.41	-	
T _j = +7°C (C Condition)	P _{dh}	5.70	kW	T _j = +7°C (C Condition)	COP _d	6.56	-	
T _j = +12°C (D Condition)	P _{dh}	3.78	kW	T _j = +12°C (D Condition)	COP _d	8.51	-	
T _j = bivalent temperature	P _{dh}	13.45	kW	T _j = bivalent temperature	COP _d	2.72	-	
T _j = TOL (E Condition)	P _{dh}	12.52	kW	T _j = TOL (E Condition)	COP _d	2.48	-	
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				
Standby mode	P _{SB}	0.014	kW	Electric				
Crankcase heater mode	P _{CK}	0.000	kW	Rated air flow rate, outdoors				
Other items				Rated water flow rate, indoor heat exchanger				
Capacity control	Variable			Rated brine or water flow rate, outdoor heat exchanger				
Sound power level, indoors/outdoors	L _{WA}	68	dB	Water heating energy efficiency				
Annual energy consumption	Q _{HE}	6804	kWh	η _{wh}		-	%	
For heat pump combination heater				Reference hot water temperature		Θ _{WH}	-	°C
Declared load profile	-			Vol. of DHW accounted for in test		-	Litres	
Capacity of heat pump	P _{rated}	-	kW	Standby heat loss / day		-	kWh	
Daily electricity consumption	Q _{elec}	-	kWh	Contact Details:				
Annual electricity consumption	AEC	-	kWh	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 ASH016FHP
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}	13.0	kW	Seasonal space heating energy efficiency	η_s	134	%
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}	11.52	kW	T _j = -7°C (A Condition)	COP _d	1.99	-
T _j = +2°C (B Condition)	P _{dh}	7.18	kW	T _j = +2°C (B Condition)	COP _d	3.34	-
T _j = +7°C (C Condition)	P _{dh}	4.67	kW	T _j = +7°C (C Condition)	COP _d	4.61	-
T _j = +12°C (D Condition)	P _{dh}	3.31	kW	T _j = +12°C (D Condition)	COP _d	6.07	-
T _j = bivalent temperature	P _{dh}	11.52	kW	T _j = bivalent temperature	COP _d	1.99	-
T _j = TOL (E Condition)	P _{dh}	10.33	kW	T _j = TOL (E Condition)	COP _d	1.80	-
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			4650 m ³ /h			
Sound power level, indoors/outdoors	L _{WA}	65	dB	Rated water flow rate, indoor heat exchanger			
Annual energy consumption	Q _{HE}	7895	kWh	- m ³ /h			
For heat pump combination heater				Rated brine or water flow rate, outdoor heat exchanger			
				- m ³ /h			
Declared load profile	XL			Water heating energy efficiency	η _{wh}	130	%
Capacity of heat pump	P _{rated}	-	kW	Reference hot water temperature	Θ _{WH}	47.15	°C
Daily electricity consumption	Q _{elec}	6.026	kWh	Vol. of DHW accounted for in test	288 Litres		
Annual electricity consumption	AEC	1288	kWh	Standby heat loss / day	1.76 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.

