Product fiche concerning the COMMISSION DELEGATED REGULATIONS

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Air Source Heat Pumps

Space Heating Test Standard: EN14825

DHW Test Standard: EN16147

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Model	Outdoor unit:	Aerona HPR290i90
	Indoor unit:	None
Air to Water Heat Pump	Yes	
Brine to Water Heat Pump	No	
Low Temperature Heat Pump	No	
Equipped with Supplementary Heater	Yes	
Heat Pump Combination Heater	Yes	
Parameters shall be declared for	Medium Temperature Applications (55°C)	
Parameters shall be declared for	Average Climate Conditions	

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated Heat Output (*)	Prated	8.76	kW	Seasonal space heating energy efficiency	ηs	146	%
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*	7.75	kW	Tj = -7°C	*COPd*	2.33	-
Degradation co-efficient (**)	*Cdh*	0.98	-				
Tj = +2°C	*Pdh*	5.18	kW	Tj = +2°C	*COPd*	3.78	-
Degradation co-efficient (**)	*Cdh*	0.96	-				
Tj = +7°C	*Pdh*	3.25	kW	Tj = +7°C	*COPd*	4.87	-
Degradation co-efficient (**)	*Cdh*	0.96	-				
Tj = +12°C	*Pdh*	2.61	kW	Tj = +12°C	*COPd*	6.55	-
Degradation co-efficient (**)	*Cdh*	0.93	-				
Tj = bivalent temperature	*Pdh*	7.75	kW	Tj = bivalent temperature	*COPd*	2.33	-
Tj = operation limit temperature	*Pdh*	7.90	kW	Tj = operation limit temperature	*COPd*	2.00	-
Tj = -15°C (if TOL < -20°C)	*Pdh*	-	kW	Tj = -15°C (if TOL < -20°C)	*COPd*	-	
Bivalent temperature	*Tbiv*	-7	°C	Operation limit temperature	*TOL*	-10	°C
				Heating water operating limit temperature	*WTOL*	75	°C

Power consumption in modes other than active mode				Supplementary Heater			
Off Mode	P_{OFF}	0.007	kW	Rate heat output	P_{sup}	3.00	kW
Thermostat-off mode	P_{TO}	0.027	kW				
Standby mode	P_{SB}	0.007	kW	Type of energy input	Electric		
Crankcase heater mode	P_{CK}	0.021	kW				

Other items							
Capacity control	Variable			Rated airflow rate, outdoors	-	3350	m³/h
Sound power level indoors/outdoors	L_{WA}	34/55	dBA				
Annual Energy consumption	Q_{HE}	4861	kWh				

For heat pump combination heater				Water heating energy efficiency	*ηwh*	130.4	%
Declared load profile		L		Reference Hot Water Temperature	θ'_{WH}	55.24	°C
Daily electricity consumption	*Qelec*	3.79	kWh	Actual Volume of cylinder under test		206.8	Litres
Annual electricity consumption	*AEC*	785.4	kWh/a	Standby Cylinder Heat Loss		1.79	kWh

Contact Details:

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(*) For heat pumps 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.

Model	Outdoor unit:	Aerona HPR290i90
	Indoor unit:	None
Air to Water Heat Pump	Yes	
Brine to Water Heat Pump	No	
Low Temperature Heat Pump	No	
Equipped with Supplementary Heater	Yes	
Heat Pump Combination Heater	Yes	
Parameters shall be declared for	Low Temperature Applications (35°C)	
Parameters shall be declared for	Average Climate Conditions	

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated Heat Output (*)	Prated	9.23	kW	Seasonal space heating energy efficiency	ηs	181	%
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*	8.17	kW	Tj = -7°C	*COPd*	2.68	-
Degradation co-efficient (**)	*Cdh*	0.98	-				
Tj = +2°C	*Pdh*	4.89	kW	Tj = +2°C	*COPd*	4.78	-
Degradation co-efficient (**)	*Cdh*	0.94	-				
Tj = +7°C	*Pdh*	3.26	kW	Tj = +7°C	*COPd*	6.84	-
Degradation co-efficient (**)	*Cdh*	0.94	-				
Tj = +12°C	*Pdh*	2.46	kW	Tj = +12°C	*COPd*	7.77	-
Degradation co-efficient (**)	*Cdh*	0.91	-				
Tj = bivalent temperature	*Pdh*	8.17	kW	Tj = bivalent temperature	*COPd*	2.68	-
Tj = operation limit temperature	*Pdh*	7.52	kW	Tj = operation limit temperature	*COPd*	2.82	-
Tj = -15°C (if TOL < -20°C)	*Pdh*	-	kW	Tj = -15°C (if TOL < -20°C)	*COPd*	-	
Bivalent temperature	*Tbiv*	-7	°C	Operation limit temperature	*TOL*	-10	°C
				Heating water operating limit temperature	*WTOL*	75	°C

Power consumption in modes other than active mode				Supplementary Heater			
Off Mode	P_{OFF}	0.007	kW	Rate heat output	P_{sup}	3.00	kW
Thermostat-off mode	P_{TO}	0.027	kW				
Standby mode	P_{SB}	0.007	kW	Type of energy input	Electric		
Crankcase heater mode	P_{CK}	0.021	kW				

Other items							
Capacity control	Variable			Rated airflow rate, outdoors	-	3350	m³/h
Sound power level indoors/outdoors	L_{WA}	34/55	dBA				
Annual Energy consumption	Q_{HE}	4158	kWh				

For heat pump combination heater				Water heating energy efficiency	η_{wh}		%
Declared load profile		NA					
Daily electricity consumption	*Qelec*		kW/h				
Annual electricity consumption	*AEC*		kW/h				

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0.9.

Model	Outdoor unit:	Aerona HPR290i90
	Indoor unit:	None
Air to Water Heat Pump	Yes	
Brine to Water Heat Pump	No	
Low Temperature Heat Pump	No	
Equipped with Supplementary Heater	Yes	
Heat Pump Combination Heater	Yes	
Parameters shall be declared for	Medium Temperature Applications (55°C)	
Parameters shall be declared for	ColderClimate Conditions	

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated Heat Output (*)	Prated	7.33	kW	Seasonal space heating energy efficiency	ηs	122	%
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*	5.57	kW	Tj = -7°C	*COPd*	2.81	-
Degradation co-efficient (**)	*Cdh*	0.98	-				
Tj = +2°C	*Pdh*	3.69	kW	Tj = +2°C	*COPd*	3.71	-
Degradation co-efficient (**)	*Cdh*	0.94	-				
Tj = +7°C	*Pdh*	2.10	kW	Tj = +7°C	*COPd*	50.6	-
Degradation co-efficient (**)	*Cdh*	0.94	-				
Tj = +12°C	*Pdh*	2.36	kW	Tj = +12°C	*COPd*	8.20	-
Degradation co-efficient (**)	*Cdh*	0.91	-				
Tj = bivalent temperature	*Pdh*	6.00	kW	Tj = bivalent temperature	*COPd*	2.04	-
Tj = operation limit temperature	*Pdh*	5.57	kW	Tj = operation limit temperature	*COPd*	1.65	-
Tj = -15°C (if TOL < -20°C)	*Pdh*	-	kW	Tj = -15°C (if TOL < -20°C)	*COPd*	-	
Bivalent temperature	*Tbiv*	-15	°C	Operation limit temperature	*TOL*	-22	°C
				Heating water operating limit temperature	*WTOL*	60	°C

Power consumption in modes other than active mode				Supplementary Heater			
Off Mode	P_{OFF}	0.007	kW	Rate heat output	P_{sup}	3.00	kW
Thermostat-off mode	P_{TO}	0.027	kW				
Standby mode	P_{SB}	0.007	kW	Type of energy input	Electric		
Crankcase heater mode	P_{CK}	0.021	kW				

Other items							
Capacity control	Variable			Rated airflow rate, outdoors	-	3350	m³/h
Sound power level indoors/outdoors	L_{WA}	34/55	dBA				
Annual Energy consumption	Q_{HE}	5960	kWh				

For heat pump combination heater				Water heating energy efficiency	η_{wh}		%
Declared load profile		-					
Daily electricity consumption	*Qelec*		kW/h				
Annual electricity consumption	*AEC*		kW/h				

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0.9.

Model	Outdoor unit:	Aerona HPR290i90
	Indoor unit:	None
Air to Water Heat Pump	Yes	
Brine to Water Heat Pump	No	
Low Temperature Heat Pump	No	
Equipped with Supplementary Heater	Yes	
Heat Pump Combination Heater	Yes	
Parameters shall be declared for	Medium Temperature Applications (55°C)	
Parameters shall be declared for	Warmer Climate Conditions	

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated Heat Output (*)	Prated	9.42	kW	Seasonal space heating energy efficiency	ηs	181	%
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*	-	kW	Tj = -7°C	*COPd*	-	-
Degradation co-efficient (**)	*Cdh*	-	-				
Tj = +2°C	*Pdh*	8.72	kW	Tj = +2°C	*COPd*	2.41	-
Degradation co-efficient (**)	*Cdh*	0.96	-				
Tj = +7°C	*Pdh*	6.04	kW	Tj = +7°C	*COPd*	3.95	-
Degradation co-efficient (**)	*Cdh*	0.96	-				
Tj = +12°C	*Pdh*	2.69	kW	Tj = +12°C	*COPd*	6.43	-
Degradation co-efficient (**)	*Cdh*	0.93	-				
Tj = bivalent temperature	*Pdh*	6.04	kW	Tj = bivalent temperature	*COPd*	3.95	-
Tj = operation limit temperature	*Pdh*	8.72	kW	Tj = operation limit temperature	*COPd*	2.41	-
Tj = -15°C (if TOL < -20°C)	*Pdh*	-	kW	Tj = -15°C (if TOL < -20°C)	*COPd*	-	
Bivalent temperature	*Tbiv*	7	°C	Operation limit temperature	*TOL*	2	°C
				Heating water operating limit temperature	*WTOL*	75	°C

Power consumption in modes other than active mode				Supplementary Heater			
Off Mode	P_{OFF}	0.007	kW	Rate heat output	P_{sup}	3.00	kW
Thermostat-off mode	P_{TO}	0.027	kW				
Standby mode	P_{SB}	0.007	kW	Type of energy input	Electric		
Crankcase heater mode	P_{CK}	0.021	kW				

Other items							
Capacity control	Variable			Rated airflow rate, outdoors	-	3350	m³/h
Sound power level indoors/outdoors	L_{WA}	34/55	dBA				
Annual Energy consumption	Q_{HE}	2771	kWh				

For heat pump combination heater				Water heating energy efficiency	*ηwh*		%
Declared load profile				Reference Hot Water Temperature	θ'_{WH}		°C
Daily electricity consumption	*Qelec*		kWh	Actual Volume of cylinder under test			Litres
Annual electricity consumption	*AEC*		kWh/a	Standby Cylinder Heat Loss			kWh

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0.9.

End of Life Information – Air Source Heat Pumps

General

Grant air source heat pumps incorporate components manufactured from a variety of different materials. However, most of these materials cannot be recycled as they are contaminated by the refrigerant and oil used in the heat pump.

Disassembly

This product may only be disassembled by a suitably qualified (F-gas) refrigeration engineer. Under no circumstances should the refrigerant be released into the atmosphere.

Recycling

In order for the heat pump to be recycled or disposed of it must be taken to a suitably licensed waste facility. You will need to contact a qualified refrigeration engineer to do this for you.

Disposal

The refrigerant will be removed and returned to the refrigerant manufacturer for recycling or disposal.

The complete heat pump unit, including the compressor and the oil contained within it, must be disposed of at a licensed waste facility, as it remains contaminated by the refrigerant.

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