Technical Data Sheet Concerning the COMMISSION DELEGATED REGULATIONS

(EU)No 811/2013 of 18 February 2013

(EU)No 813/2013 of 2 August 2013

Air Source Heat Pumps

Space Heating Test Standard: EN14825

DHW Test Standard: EN16147

Grant Engineering (Ireland) ULC
Barrack Street, Crinkle, Birr, Co. Offaly, R42 D788, Ireland.

t: +353 (0)57 91 20089 f: +353 (0)57 91 21060
e: info@grantengineering.ie w: www.grantengineering.ie

Model	Outdoor unit:	Aerona HPR290i160
	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	No	
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	14.01	kW	Seasonal space heating energy efficiency	ηs	133	%
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*	12.40	kW	Tj = -7°C	*COPd*	1.82	-
Degradation co-efficient (**)	*Cdh*	0.90	-				
Tj = +2°C	*Pdh*	7.71	kW	Tj = +2°C	*COPd*	3.39	-
Degradation co-efficient (**)	*Cdh*	0.90	-				
Tj = +7°C	*Pdh*	5.19	kW	Tj = +7°C	*COPd*	4.73	-
Degradation co-efficient (**)	*Cdh*	0.90	-				
Tj = +12°C	*Pdh*	4.63	kW	Tj = +12°C	*COPd*	6.56	-
Degradation co-efficient (**)	*Cdh*	0.90	-				
Tj = bivalent temperature	*Pdh*	12.40	kW	Tj = bivalent temperature	*COPd*	1.82	-
Tj = operation limit temperature	*Pdh*	11.79	kW	Tj = operation limit temperature	*COPd*	1.90	-
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*	60	°C

Power consumption in modes other than active mode				Supplementary Heater			
Off Mode	POFF	0.009	kW	Rate heat output	Psup	2.040	kW
Thermostat-off mode	PTO	0.03	kW				
Standby mode	PSB	0.009	kW	Type of energy input	Electrical		
Crankcase heater mode	PCK	0.0027	kW				

Other items							
Capacity control	Variable			Rated airflow rate, outdoors	-	4050	m³/h
Sound power level indoors/outdoors	*LWA*	-/53	dBA				
Annual Energy consumption	*QHE*	8505	kWh				

For heat pump combination heater				Water heating energy efficiency	***ηwh***	118.2	%
Declared load profile		L		Reference Hot Water Temperature	***θ'WH***	55.71	°C
Daily electricity consumption	*Qelec*	4.26	kWh	Actual Volume of cylinder under test		206.8	Litres
Annual electricity consumption	*AEC*	866.3	kWh/a	Standby Cylinder Heat Loss		1.40	kWh

Contact Details:

Grant Engineering (Ireland) ULC, Barrack Street, Crinkle, Birr, Co. Offaly, R42 D788, Ireland.

(*) 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 HPR290i160
	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	No	
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	14.8	kW	Seasonal space heating energy efficiency	ηs	182	%
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*	13.09	kW	Tj = -7°C	*COPd*	2.67	-
Degradation co-efficient (**)	*Cdh*	0.90	-				
Tj = +2°C	*Pdh*	8.79	kW	Tj = +2°C	*COPd*	4.72	-
Degradation co-efficient (**)	*Cdh*	0.90	-				
Tj = +7°C	*Pdh*	5.79	kW	Tj = +7°C	*COPd*	6.21	-
Degradation co-efficient (**)	*Cdh*	0.90	-				
Tj = +12°C	*Pdh*	4.22	kW	Tj = +12°C	*COPd*	7.82	-
Degradation co-efficient (**)	*Cdh*	0.90	-				
Tj = bivalent temperature	*Pdh*	13.1	kW	Tj = bivalent temperature	*COPd*	2.67	-
Tj = operation limit temperature	*Pdh*	12.8	kW	Tj = operation limit temperature	*COPd*	2.2	-
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*	60	°C

Power consumption in modes other than active mode				Supplementary Heater			
Off Mode	*POFF*	0.009	kW	Rate heat output	Psup	1.860	kW
Thermostat-off mode	*PTO*	0.030	kW				
Standby mode	*PSB*	0.009	kW	Type of energy input	Electrical		
Crankcase heater mode	*PCK*	0.019	kW				

Other items							
Capacity control	Variable			Rated airflow rate, outdoors	-	4050	m³/h
Sound power level indoors/outdoors	*LWA*	-/53	dBA				
Annual Energy consumption	*QHE*	6605	kWh				

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

Contact Details:

Grant Engineering (Ireland) ULC, Barrack Street, Crinkle, Birr, Co. Offaly, R42 D788, Ireland.

(*) 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.

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.

Authorized by: