# **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

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Model	Outdoor unit:	Aerona HPR290i40
	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 Tempe	erature Applications (55°C)
Parameters shall be declared for	Average	e Climate Conditions

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated Heat Output (*)	Prated	4.36	kW	Seasonal space heating energy efficiency	ηs	146	%
Declared capacity for heating for pa	urt load at inde	)or		Declared coefficient of performance	or primary energy	v ratio for	
Temperature 20°C and outdoor tem		001		part load at indoor temperature 20°C			
$Tj = -7^{\circ}C$	Pdh	3.93	kW	$Tj = -7^{\circ}C$	COPd	2.48	-
Degradation co-efficient (**)	Cdh	0.90	-	5			
$Tj = +2^{\circ}C$	Pdh	2.34	kW	$Tj = +2^{\circ}C$	COPd	3.73	-
Degradation co-efficient (**)	Cdh	0.90	-				
$Tj = +7^{\circ}C$	Pdh	1.92	kW	$Tj = +7^{\circ}C$	COPd	4.69	-
Degradation co-efficient (**)	Cdh	0.90	-				
$Tj = +12^{\circ}C$	Pdh	1.25	kW	$Tj = +12^{\circ}C$	COPd	6.06	-
Degradation co-efficient (**)	Cdh	0.90	-				
Tj = bivalent temperature	Pdh	3.93	kW	Tj = bivalent temperature	COPd	2.32	-
Tj = operation limit temperature	Pdh	3.80	kW	Tj = operation limit temperature	COPd	2.21	-
$Tj = -15^{\circ}C$ (if TOL < -20°C)	Pdh	-	kW	$Tj = -15^{\circ}C$ (if TOL < -20°C)	COPd	-	
Bivalent temperature	Tbiv	-8	°C	Operation limit temperature	TOL	-10	°C
				Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other	than active m	ode		Supplementary Heater			
Off Mode	POFF	0.007	kW	Rate heat output	Psup	0.520	kW
Thermostat-off mode	РТО	0.021	kW	Ĩ			I
Standby mode	PSB	0.007	kW	Type of energy input	Electric		
Crankcase heater mode	РСК	0.020	kW				
Other items							
Capacity control	Variable			Rated airflow rate, outdoors	-	2300	m³/h
Sound power level indoors/outdoors	LWA	-/48	dBA		-	1	
Annual Energy consumption	QHE	2411	kWh	4			

For heat pump combination heater				Water heating energy efficiency	ηwh	132.1	%
Declared load profile		L		Reference Hot Water Temperature	$\theta'WH$	54.98	°C
Daily electricity consumption	Qelec	3.75	kWh	Actual Volume of cylinder under test		206.8	Litres
Annual electricity consumption	AEC	774.8	kWh/a	Standby Cylinder Heat Loss		1.40	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 HPR290i40
	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 Temper	ature Applications (35°C)
Parameters shall be declared for	Average	e Climate Conditions

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated Heat Output (*)	Prated	4.09	kW	Seasonal space heating energy efficiency	ηs	200	%

Declared capacity for heating for part load at indoor Temperature  $20^{\circ}C$  and outdoor temperature Tj

Declared coefficient of performance or primary energy ratio for part load at indoor temperature  $20^{\circ}C$  and outdoor temperature Tj

$\begin{array}{c c c c c c c c c c c c c c c c c c c $								
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$Tj = -7^{\circ}C$	Pdh	3.78	kW	$Tj = -7^{\circ}C$	COPd	3.57	-
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$		Cdh	0.90	-				
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$Tj = +2^{\circ}C$	Pdh	2.40	kW	$Tj = +2^{\circ}C$	COPd	5.19	-
Degradation co-efficient (**) $Cdh$ $0.90$ $-$ Tj = +12°C $Pdh$ 1.35kWTj = +12°C $COPd$ 6.23Degradation co-efficient (**) $Cdh$ $0.90$ $   -$ Tj = bivalent temperature $Pdh$ $3.98$ kWTj = bivalent temperature $COPd$ $3.29$ Tj = operation limit $Pdh$ $3.77$ kWTj = operation limit temperature $COPd$ $3.05$ Tj = operation limit $Pdh$ $3.77$ kWTj = operation limit temperature $COPd$ $3.05$ Tj = -15°C (if TOL < -20°C)		Cdh	0.90	-				
Tj = $+12^{\circ}$ CPdh1.35kWTj = $+12^{\circ}$ CCOPd6.23Degradation co-efficient (**)Cdh0.90Tj = bivalent temperaturePdh3.98kWTj = bivalent temperatureCOPd3.293.29Tj = operation limitPdh3.77kWTj = operation limit temperatureCOPd3.05Tj = operation limitPdh3.77kWTj = operation limit temperatureCOPd3.05Tj = -15°C (if TOL < -20°C)		Pdh	1.70	kW	$Tj = +7^{\circ}C$	COPd	6.47	-
Degradation co-efficient (**) $Cdh$ $0.90$ -Tj = bivalent temperature $Pdh$ $3.98$ kWTj = bivalent temperature $COPd$ $3.29$ Tj = operation limit temperature $Pdh$ $3.77$ kWTj = operation limit temperature $COPd$ $3.05$ Tj = -15°C (if TOL < -20°C)	Degradation co-efficient (**)	Cdh	0.90	-				
Tj = bivalent temperature $Pdh$ 3.98kWTj = bivalent temperature $COPd$ 3.29Tj = operation limit temperature $Pdh$ 3.77kWTj = operation limit temperature $COPd$ 3.05Tj = -15°C (if TOL < -20°C)	$Tj = +12^{\circ}C$	Pdh	1.35	kW	$Tj = +12^{\circ}C$	COPd	6.23	-
Tj = operation limit temperature $Pdh$ $3.77$ $kW$ Tj = operation limit temperature $COPd$ $3.05$ Tj = -15°C (if TOL < -20°C)	Degradation co-efficient (**)	Cdh	0.90	-				
temperaturePan $3.77$ KWIJ = operation limit temperature $COPa$ $3.05$ Tj = $-15^{\circ}C$ (if TOL < $-20^{\circ}C$ )Pdh-kWTj = $-15^{\circ}C$ (if TOL < $-20^{\circ}C$ ) $COPd$ -Bivalent temperatureTbiv-8°COperation limit temperature $TOL$ $-10$ Heating water operating limittemperature $TOL$ $-10$ 60Power consumption in modes other than active modeSupplementary Heater $0007$ kWRate heat outputPsup $0.300$ Thermostat-off mode $POFF$ $0.007$ kWRate heat outputPsup $0.300$ $0.300$ Thermostat-off mode $PTO$ $0.021$ kW $0.007$ kW $0.007$ $0.021$ $0.007$ $0.021$ $0.007$ $0.020$ $0.020$ $0.020$ $0.020$ $0.020$ $0.020$ $0.020$ $0.020$	Tj = bivalent temperature	Pdh	3.98	kW	Tj = bivalent temperature	COPd	3.29	-
Bivalent temperature $Tbiv$ -8°COperation limit temperature $TOL$ -10Heating water operating limit temperature $WTOL$ 60Power consumption in modes other than active modeSupplementary HeaterOff Mode $POFF$ 0.007kWRate heat outputPsup0.300Thermostat-off mode $PTO$ 0.021kWStandby mode $PSB$ 0.007kWType of energy inputElectricCrankcase heater mode $PCK$ 0.020kWOther items		Pdh	3.77	kW	Tj = operation limit temperature	COPd	3.05	-
Power consumption in modes other than active mode     Supplementary Heater     WTOL     60       Power consumption in modes other than active mode     Supplementary Heater     60       Off Mode     POFF     0.007     kW     Rate heat output     Psup     0.300       Thermostat-off mode     PTO     0.021     kW           Standby mode     PSB     0.007     kW     Type of energy input     Electric        Crankcase heater mode     PCK     0.020     kW           Other items     Capacity control     Variable     Rated airflow rate, outdoors     -     2300        Sound power level     LWA     -/47     dBA            Annual Energy consumption     QHE     1664     kWh	$Tj = -15^{\circ}C$ (if TOL < -20°C)	Pdh	-	kW	$Tj = -15^{\circ}C$ (if TOL < $-20^{\circ}C$ )	COPd	-	
Image: Power consumption in modes other than active mode   Supplementary Heater     Off Mode   POFF   0.007   kW   Rate heat output   Psup   0.300     Thermostat-off mode   PTO   0.021   kW   Image: Supplementary Heater   Image: Supplementary Heater     Standby mode   PSB   0.007   kW   Rate heat output   Psup   0.300     Standby mode   PSB   0.007   kW   Type of energy input   Electric     Crankcase heater mode   PCK   0.020   kW   Image: Supplementary Heater     Other items   Image: Supplementary Heater   Image: Supplementary Heater     Sound power level   Image: Supplementary Heater   Image: Supplementary Heater     Sound power level   Image: Supplementary Heater   Image: Supplementary Heater     Annual Energy consumption   Image: Supplementary Heater   Image: Supplementary Heater     For heat pump combination heater   Image: Supplementary Heater   Image: Supplementary Heater <td>Bivalent temperature</td> <td>Tbiv</td> <td>-8</td> <td>°C</td> <td>Operation limit temperature</td> <td>TOL</td> <td>-10</td> <td>°C</td>	Bivalent temperature	Tbiv	-8	°C	Operation limit temperature	TOL	-10	°C
Off ModePOFF0.007kWRate heat outputPsup0.300Thermostat-off modePTO0.021kWStandby modePSB0.007kWType of energy inputElectricCrankcase heater modePCK0.020kWOther items </td <td></td> <td></td> <td></td> <td></td> <td>0 1 0</td> <td>WTOL</td> <td>60</td> <td>°C</td>					0 1 0	WTOL	60	°C
Thermostat-off mode     PTO     0.021     kW     Type of energy input     Electric       Standby mode     PSB     0.007     kW     Type of energy input     Electric       Crankcase heater mode     PCK     0.020     kW     Image: standard s	1			-				
Standby mode     PSB     0.007     kW     Type of energy input     Electric       Crankcase heater mode     PCK     0.020     kW     Image: Crankcase heater mode		-			Rate heat output	Psup	0.300	kW
Crankcase heater mode     PCK     0.020     kW     Normation is an interval of the second secon		-	0.021					
Other items     Capacity control     Variable     Rated airflow rate, outdoors     -     2300       Sound power level indoors/outdoors     LWA     -/47     dBA     -     -     2300       Annual Energy consumption     QHE     1664     kWh     -     -     2300       For heat pump combination heater     Variable     Water heating energy efficiency $\eta wh$ -       Declared load profile     Daily electricity consumption     Qelec     kW/h     -			0.007	kW	Type of energy input	Electric		
Capacity control     Variable     Rated airflow rate, outdoors     -     2300       Sound power level indoors/outdoors     LWA -/47     -/47     dBA       Annual Energy consumption     QHE     1664     kWh       For heat pump combination heater     Water heating energy efficiency $\eta wh$ Declared load profile	Crankcase heater mode	РСК	0.020	kW				
Capacity control     Variable     Rated airflow rate, outdoors     -     2300       Sound power level indoors/outdoors     LWA -/47     -/47     dBA       Annual Energy consumption     QHE     1664     kWh       For heat pump combination heater     Water heating energy efficiency $\eta wh$ Declared load profile	Otheritana				Γ			
Sound power level indoors/outdoors   LWA -/47   -/47   dBA dBA     Annual Energy consumption   QHE   1664   kWh     For heat pump combination heater   Water heating energy efficiency $\eta wh$ Declared load profile   Daily electricity consumption   Qelec		Variable			Rated airflow rate outdoors		2300	m³/h
Indoors/outdoors   -/4/   Intervention     Annual Energy consumption   QHE   1664   kWh     For heat pump combination heater   Water heating energy efficiency $\eta wh$ Declared load profile	1 2		1	10.4	Rated annow rate, outdoors	-	2300	111 / 11
Annual Energy consumption   QHE   1664   kWh     For heat pump combination heater   Water heating energy efficiency   ηwh     Declared load profile   Daily electricity consumption   Qelec   kW/h		LWA	-/47	dBA				
Declared load profile   Control     Daily electricity consumption   Qelec   kW/h		QHE	1664	kWh				
Declared load profile   Control     Daily electricity consumption   Qelec   kW/h								
Daily electricity consumption Qelec kW/h		•	1		Water heating energy efficiency	ηwh		%
Annual electricity consumption AEC kW/h	5 5 1	~						
	Annual electricity consumption	AEC		kW/h				

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## **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:

