

<b>PRODUCT CARD</b>				<b>Low temperature application</b>			
Product information in accordance with (in accordance with EU Regulation No. 813/2013)				<b>Average climate</b>			
Model: ZHHH-01-10K-R290-R5-M							
Air-to-water heat pump: YES							
Brine-to-water heat pump: NO							
Low-temperature heat pump: NO							
Equipped with a supplementary heater: NO							
Heat pump combination heater: NO							
Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low temperature heat pumps, parameters shall be declared for low-temperature application							
Parameters shall be declared for average climate conditions.							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output	$P_{rated}$	7	kW	Seasonal space heating energy efficiency	$\eta_s$	179	%
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 $T_j$			
$T_j = -7\text{ °C}$	$P_{dh}$	5,7	kW	$T_j = -7\text{ °C}$	COPd or PERd	2,92	-
$T_j = +2\text{ °C}$	$P_{dh}$	3,6	kW	$T_j = +2\text{ °C}$	COPd or PERd	4,48	-
$T_j = +7\text{ °C}$	$P_{dh}$	2,5	kW	$T_j = +7\text{ °C}$	COPd or PERd	5,87	-
$T_j = +12\text{ °C}$	$P_{dh}$	2,6	kW	$T_j = +12\text{ °C}$	COPd or PERd	7,16	-
$T_j = \text{bivalent temperature}$	$P_{dh}$	6,7	kW	$T_j = \text{bivalent temperature}$	COPd or PERd	2,62	-
$T_j = \text{operation limit temperature}$	$P_{dh}$	6,7	kW	$T_j = \text{operation limit temperature}$	COPd or PERd	2,62	-
For air-to-water heat pumps: $T_j = -15\text{ °C}$ (if $TOL < -20\text{ °C}$ )	$P_{dh}$	-	kW	For air-to-water heat pumps: $T_j = -15\text{ °C}$ (if $TOL < -20\text{ °C}$ )	COPd or PERd	-	-
Bivalent temperature	$T_{biv}$	-10	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	$P_{cych}$	-	kW	Cycling interval efficiency	COPcyc or PERcyc	-	-
Degradation co-efficient (**)	$C_{dh}$	0,95	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	$P_{OFF}$	0,019	kW	Rated heat output	$P_{sup}$	0,000	kW
Thermostat-off mode	$P_{TO}$	0,020	kW	Type of energy input	Electric		
Standby mode	$P_{SB}$	0,019	kW				
Crankcase heater mode	$P_{CK}$	0,000	kW				
Other items							
Capacity control	Variable			Rated air flow rate, outdoors		3500	m <sup>3</sup> /h
Sound power level outdoors	$L_{WA}$	50	dB	Rated brine or water flow rate, outdoor heat exchanger		-	m <sup>3</sup> /h
Annual electricity consumption	$Q_{HE}$	2943/11	kWh/GJ				

PRODUCT CARD				Medium temperature application			
Product information in accordance with (in accordance with EU Regulation No. 813/2013)				Average climate			
Model: ZHHH-01-10K-R290-R5-M							
Air-to-water heat pump: YES							
Brine-to-water heat pump: NO							
Low-temperature heat pump: NO							
Equipped with a supplementary heater: NO							
Heat pump combination heater: NO							
Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low temperature heat pumps, parameters shall be declared for low-temperature application							
Parameters shall be declared for average climate conditions.							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output	$P_{rated}$	7	kW	Seasonal space heating energy efficiency	$\eta_s$	138	%
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 $T_j$			
$T_j = -7\text{ °C}$	$P_{dh}$	5,8	kW	$T_j = -7\text{ °C}$	COPd or PERd	2,28	-
$T_j = +2\text{ °C}$	$P_{dh}$	3,5	kW	$T_j = +2\text{ °C}$	COPd or PERd	3,41	-
$T_j = +7\text{ °C}$	$P_{dh}$	2,3	kW	$T_j = +7\text{ °C}$	COPd or PERd	4,46	-
$T_j = +12\text{ °C}$	$P_{dh}$	2,5	kW	$T_j = +12\text{ °C}$	COPd or PERd	6,28	-
$T_j = \text{bivalent temperature}$	$P_{dh}$	6,7	kW	$T_j = \text{bivalent temperature}$	COPd or PERd	2,06	-
$T_j = \text{operation limit temperature}$	$P_{dh}$	6,7	kW	$T_j = \text{operation limit temperature}$	COPd or PERd	2,06	-
For air-to-water heat pumps: $T_j = -15\text{ °C}$ (if TOL < -20 °C)	$P_{dh}$	-	kW	For air-to-water heat pumps: $T_j = -15\text{ °C}$ (if TOL < -20 °C)	COPd or PERd	-	-
Bivalent temperature	$T_{biv}$	-10	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	$P_{cych}$	-	kW	Cycling interval efficiency	COPcyc or PERcyc	-	-
Degradation co-efficient (**)	$C_{dh}$	0,95	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	$P_{OFF}$	0,019	kW	Rated heat output	$P_{sup}$	0,000	kW
Thermostat-off mode	$P_{TO}$	0,020	kW	Type of energy input	Electric		
Standby mode	$P_{SB}$	0,019	kW				
Crankcase heater mode	$P_{CK}$	0,000	kW				
Other items							
Capacity control	Variable			Rated air flow rate, outdoors		3500	m3/h
Sound power level outdoors	$L_{WA}$	50	dB	Rated brine or water flow rate, outdoor heat exchanger		-	m3/h
Annual electricity consumption	$Q_{HE}$	3802/14	kWh/GJ				

Product information (in accordance with EU Regulation No. 811/2013)			
Supplier Name:		<b>JBG-2 Sp. z o.o.</b>	
Contact details:		<b>ul. Gajowa 5, 43-254 Warszawice, Poland</b>	
Supplier's model identifier:		ZHHH-01-10K-R290-R5-M	
Average climate	Seasonal space heating energy efficiency class	W35	A+++
		W55	A++
	Seasonal space heating energy efficiency	W35	179%
		W55	138%
	Rated heat output	W35	7 kW
		W55	7 kW
	Annual electricity consumption	W35	2943 kWh/year
		W55	3802 kWh/year
SCOP	W35	4,56	
	W55	3,53	
Cold climate	Seasonal space heating energy efficiency class	W35	-
		W55	-
	Seasonal space heating energy efficiency	W35	-
		W55	-
	Rated heat output	W35	9 kW
		W55	9 kW
	Annual electricity consumption	W35	-
		W55	-
SCOP	W35	-	
	W55	-	
Warm climate	Seasonal space heating energy efficiency class	W35	-
		W55	-
	Seasonal space heating energy efficiency	W35	-
		W55	-
	Rated heat output	W35	7 kW
		W55	7 kW
	Annual electricity consumption	W35	-
		W55	-
SCOP	W35	-	
	W55	-	
Outdoors	Sound power level $L_{wa}$	50 dB	
Special precautions for assembly, installation and maintenance are included in the separate file named: „Precautions Heat Pump JBG2.pdf”			

W35 - low temperature heating; W - water temperature at the outlet from the heat pump  
W55 - medium temperature heating; W - water temperature at the outlet from the heat pump