PRODUCT FICHE according to European Regulation (UE) nr 811/2013, (UE) nr 813/2013

KAISAI

Technical parameters

Model(s):	KHY-12PY3
Air-to-water heat pump	YES
Water-to-water heat pump	NO
Brine-to-water heat pump	NO
Low-temperature heat pump	NO
Equipped with a supplementary heater	NO
Heat pump combination heater	NO
Declared climate condition	AVERAGE

Parameters are declared for low-temperature application

Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9,000	kW
Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature Tj			
Tj = -7°C	Pdh	8,30	kW
Tj = 2°C	Pdh	4,82	kW
Tj = 7°C	Pdh	5,67	kW
Tj = 12°C	Pdh	6,60	kW
Tj = bivalent temperature	Pdh	8,30	kW
Tj = operation limit temperature	Pdh	9,04	kW
For air-to-air heat pumps: Tj = – 15 °C	Pdh	-	kW
Bivalent temperature	T_{biv}	-7	°C
Cycling interval capacity for heating	P_{cych}	-	kW
Degradation co-efficient (**)	C_{dh}	0.98	--
Power consumption in modes other than active mode			
Off mode	P_{off}	0.010	kW
Standby mode	P_{sb}	0.010	kW
Thermostat-off mode	P_{to}	0.019	kW
Crankcase heater mode	P_{ck}	0.010	kW

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	ηs	175,2	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20°C and outdoor temperature Tj			
Tj = -7°C	COPd	3,13	-
Tj = 2°C	COPd	4,20	-
Tj = 7°C	COPd	5,70	-
Tj = 12°C	COPd	7,29	-
Tj = bivalent temperature	COPd	3,13	-
Tj = operation limit temperature	COPd	2,80	-
For air-to-air heat pumps: Tj = – 15 °C	COPd	-	-
For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval efficiency	COP_{cyc}	-	-
Heating water operating limit temperature	W_{TOL}	70	°C
Equipped with a supplementary heater:			
Rated heat output(**)	P_{sup}	0,00	kW
Type of energy input	Electrical		

Capacity control	variable		
Sound power level, indoor/outdoor	L_{WA}	-/63	dB
Annual energy consumption	Q_{HE}	4220	kWh

For air-to-water heat pumps: Rated air flow rate, outdoors	-	-	m^3/h
For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m^3/h

Contact details	KLIMA-THERM sp. z o.o. ul. Ostrobramska 101A, 04-041 Warszawa, Polska

(*) For heat pump 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

(***) Declared data according to European Regulation UE nr 811/2013:

Items	The class of the temperature control	The correction factor per class
On/off Room Thermostat	I	1,0%
Weather compensator control, for use with modulating heaters	II	2,0%
Weather compensator control, for use with on/off output heaters	III	1,5%
TPI (Time-Proportional-Integral) room thermostat, for use with on/off output heaters	IV	2,0%
Modulating room thermostat, for use with modulating heaters	V	3,0%
Weather compensator and room sensor, for use with modulating heaters	VI	4,0%
Weather compensator and room sensor, for use with on/off output heaters	VII	3,5%
Multi-sensor room temperature control, for use with modulating heaters	VIII	5,0%

PRODUCT FICHE according to European Regulation (UE) nr 811/2013, (UE) nr 813/2013

KAISAI

Technical parameters

Model(s):	KHY-15PY3
Air-to-water heat pump	YES
Water-to-water heat pump	NO
Brine-to-water heat pump	NO
Low-temperature heat pump	NO
Equipped with a supplementary heater	NO
Heat pump combination heater	NO
Declared climate condition	AVERAGE

Parameters are declared for low-temperature application

Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12,6	kW
Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature Tj			
Tj = -7°C	Pdh	11,20	kW
Tj = 2°C	Pdh	6,52	kW
Tj = 7°C	Pdh	8,10	kW
Tj = 12°C	Pdh	9,13	kW
Tj = bivalent temperature	Pdh	11,20	kW
Tj = operation limit temperature	Pdh	12,43	kW
For air-to-air heat pumps: Tj = – 15 °C	Pdh	-	kW
Bivalent temperature	T_{biv}	-7	°C
Cycling interval capacity for heating	P_{cych}	-	kW
Degradation co-efficient (**)	C_{dh}	0.98	--
Power consumption in modes other than active mode			
Off mode	P_{off}	0.013	kW
Standby mode	P_{sb}	0.013	kW
Thermostat-off mode	P_{to}	0.028	kW
Crankcase heater mode	P_{ck}	0.013	kW

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	ηs	162,8	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20°C and outdoor temperature Tj			
Tj = -7°C	COPd	2,46	-
Tj = 2°C	COPd	3,91	-
Tj = 7°C	COPd	5,95	-
Tj = 12°C	COPd	7,46	-
Tj = bivalent temperature	COPd	2,46	-
Tj = operation limit temperature	COPd	2,07	-
For air-to-air heat pumps: Tj = – 15 °C	COPd	-	-
For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval efficiency	COP_{cyc}	-	-
Heating water operating limit temperature	W_{TOL}	70	°C
Equipped with a supplementary heater:			
Rated heat output(**)	P_{sup}	0,17	kW
Type of energy input	Electrical		

Capacity control	variable		
Sound power level, indoor/outdoor	L_{WA}	-/62	dB
Annual energy consumption	Q_{HE}	6359	kWh

For air-to-water heat pumps: Rated air flow rate, outdoors	-	-	m^3/h
For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m^3/h

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(*) For heat pump 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

(***) Declared data according to European Regulation UE nr 811/2013:

Items	The class of the temperature control	The correction factor per class
On/off Room Thermostat	I	1,0%
Weather compensator control, for use with modulating heaters	II	2,0%
Weather compensator control, for use with on/off output heaters	III	1,5%
TPI (Time-Proportional-Integral) room thermostat, for use with on/off output heaters	IV	2,0%
Modulating room thermostat, for use with modulating heaters	V	3,0%
Weather compensator and room sensor, for use with modulating heaters	VI	4,0%
Weather compensator and room sensor, for use with on/off output heaters	VII	3,5%
Multi-sensor room temperature control, for use with modulating heaters	VIII	5,0%