

Technical documentation in accordance with Commission Delegated Regulation (EU) No. 813/2013 of August 2, 2013 supplementing Directive 2009/125/EC of the European Parliament and of the Council.

Technical parameters	
Model:	HTi20/12
Air-to-water heat pump:	Yes
Water-to-water heat pump:	No
Low-temperature heat pump:	No
Equipped with an additional heater:	No
Multifunctional heat pump heater:	No
Declared climatic conditions:	Temperate climate
Parameters are given for applications in:	Low temperatures

Position	Symbol	Value	Unit
Rated thermal power (*)	Prated	12	kW
Declared heating capacity at partial load at room temperature 20°C and outdoor temperature Tj			
Tj = -7°C	Pdh	6,97	kW
Tj = 2°C	Pdh	4,34	kW
Tj = 7°C	Pdh	3,68	kW
Tj = 12°C	Pdh	4,08	kW
Tj = bivalent temperature	Pdh	6,97	kW
Tj = limiting operating temperature	Pdh	7,60	kW
For air-to-water heat pumps: Tj = -15°C	Pdh	-	kW
Divalent temperature	Tbiv	-7	°C
Performance during the cycle interval	Pcych	-	kW
Loss ratio (**)	Cdh	0,96	-
Power consumption in modes other than active			
Shutdown mode	Poff	0,017	kW
Standby mode	Psb	0,017	kW
Thermostat off mode	Pto	0,017	kW
Crankcase heater on mode	Pck	0,017	kW

Position	Symbol	Value	Unit
Seasonal energy efficiency of space heating	ns	176,6	%
Declared efficiency index or primary energy consumption index at part load at room temperature 20°C and outdoor temperature Tj			
Tj = -7°C	COPd	2,6	-
Tj = 2°C	COPd	4,5	-
Tj = 7°C	COPd	6,26	-
Tj = 12°C	COPd	6,58	-
Tj = bivalent temperature	COPd	2,6	-
Tj = limiting operating temperature	COPd	2,33	-
For air-to-water heat pumps: Tj = -15°C	COPd	-	-
For air-to-water heat pumps: limit operating temperature	TOL	-10	°C
Performance during the cycle interval	COPcyc	-	-
Operating limit temp. for water heating	WTOL	62	°C
Additional heater			
Rated thermal power (*)	Psup	0,28	kW
Type of energy consumed	Electricity		

Other parameters			
Position	Symbol	Value	Unit
Capacity control	Variable performance		
Sound power level Hydraulic module/outdoor unit	LWA	45/64	dB
Annual electricity consumption	QHE	3627	kWh
For air-to-water heat pumps: rated air flow, outdoor unit	-	5000	m³/h
For water-to-water or brine-to-water heat pumps. Rated water or brine flow rate, outdoor unit exchanger	-	-	m³/h

Contact information: HKS Lazar Sp. z o. o Jastrzębie-Zdrój 44-335 ul. Wodzisławska 15B

(*) For heat pump space heaters and multifunctional heat pump heaters, the rated thermal output of Prated is equal to the design load for heating mode Pdesignh, and the rated thermal output of the auxiliary heater Psup is equal to the additional heating capacity for heating mode sup(Tj).

(**) If the Cdh coefficient is not determined by measurement, the loss coefficient takes the default value Cdh=0.9. Parameters are given for medium temperature applications, except for low temperature pumps. For low-temperature heat pumps, parameters are given for low-temperature applications. All parameters are given for moderate climate conditions.

Technical parameters	
Model:	HTi20/12
Air-to-water heat pump:	Yes
Water-to-water heat pump:	No
Low-temperature heat pump:	No
Equipped with an additional heater:	No
Multifunctional heat pump heater:	No
Declared climatic conditions:	Temperate climate
Parameters are given for applications in:	Medium temperatures

Position	Symbol	Value	Unit
Rated thermal power (*)	Prated	11	kW
Declared heating capacity at partial load at room temperature 20°C and outdoor temperature Tj			
Tj = -7°C	Pdh	4,94	kW
Tj = 2°C	Pdh	3,04	kW
Tj = 7°C	Pdh	3,47	kW
Tj = 12°C	Pdh	4,12	kW
Tj = bivalent temperature	Pdh	4,94	kW
Tj = limiting operating temperature	Pdh	4,23	kW
For air-to-water heat pumps: Tj = -15°C	Pdh	-	kW
Divalent temperature	Tbiv	-7	°C
Performance during the cycle interval	Ppsych	-	kW
Loss ratio (**)	Cdh	0,96	-
Power consumption in modes other than active			
Shutdown mode	Poff	0,017	kW
Standby mode	Psb	0,015	kW
Thermostat off mode	Pto	0,015	kW
Crankcase heater on mode	Pck	0,015	kW

Position	Symbol	Value	Unit
Seasonal energy efficiency of space heating	ns	129,4	%
Declared efficiency index or primary energy consumption index at part load at room temperature 20°C and outdoor temperature Tj			
Tj = -7°C	COPd	2,08	-
Tj = 2°C	COPd	3,23	-
Tj = 7°C	COPd	4,52	-
Tj = 12°C	COPd	5,98	-
Tj = bivalent temperature	COPd	2,08	-
Tj = limiting operating temperature	COPd	1,8	-
For air-to-water heat pumps: Tj = -15°C	COPd	-	-
For air-to-water heat pumps: limit operating temperature	TOL	-10	°C
Performance during the cycle interval	COPcyc		-
Operating limit temp. for water heating	WTOL	62	°C
Additional heater			
Rated thermal power (*)	Psup	1,36	kW
Type of energy consumed	Electricity		

Other parameters			
Position	Symbol	Value	Unit
Capacity control	Variable performance		
Sound power level Hydraulic module/outdoor unit	LWA	45/64	dB
Annual electricity consumption	QHE	3485	kWh
For air-to-water heat pumps: rated air flow, outdoor unit	-	5000	m³/h
For water-to-water or brine-to-water heat pumps. Rated water or brine flow rate, outdoor unit exchanger	-	-	m³/h

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(**) If the Cdh coefficient is not determined by measurement, the loss coefficient takes the default value Cdh=0.9. Parameters are given for medium temperature applications, except for low temperature pumps. For low-temperature heat pumps, parameters are given for low-temperature applications. All parameters are given for moderate climate conditions.