Technical parameters							
Model(s):	Outdoor unit: ACHP-H12/5R3HA-O Indoor unit: ACHP-H12/5R3HA-I						
Air-to-water heat ump:	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	Warmer						
Declared temperature application	Low						
Item	**Symbol**	**Value**	**Unit**	**Item**	**Symbol**	**Value**	**Unit**
Rated heat output(*)	Prated	11.1	kW	**Seasonal space heating energy efficiency**	η_s	245	%
Declared capacity for heating for part load at indoor temperature 20℃ and outdoor temperature T_j				Declared coeffient of performance or primary energy ratio for part load at indoor temperature 20℃ and outdoor temperature T_j			
T_j = -7℃	Pdh	-	kW	T_j = -7℃	COPd	-	-
T_j = +2℃	Pdh	10.90	kW	T_j = +2℃	COPd	3.59	-
T_j = +7℃	Pdh	7.14	kW	T_j = +7℃	COPd	5.87	-
T_j = +12℃	Pdh	3.17	kW	T_j = +12℃	COPd	7.94	-
T_j = bivalent temperature	Pdh	7.14	kW	T_j = bivalent temperature	COPd	5.87	-
T_j = operation limit temperature	Pdh	10.90	kW	T_j = operation limit temperature	COPd	3.59	-
For air-to-water heat pumps: T_j = -15℃ (if TOL < -20℃)	Pdh	-	kW	For air-to-water heat pumps: T_j = -15℃ (if TOL < -20℃)	COPd	-	-
Bivalent temperature	T_{biv}	7	℃	For air-to-water heat pumps: Operation limit temperature	TOL	2	℃
Cycling interval capacity for heating	P_{cych}	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient(**)	Cdh	0.9	-	Heating water operating limit temperature	WTOL	60	℃
Power consumption in modes other than active mode				Supplemantary heater			
Off mode	P_{OFF}	0.020	kW	Rated heat output (*)	Psup	0.20	kW
Thermostat-off mode	P_{TO}	0.030	kW	Type of energy input	Electricity		
Standby mode	P_{SB}	0.020	kW				
Crankcase heater mode	P_{CK}	0.000	kW				
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	4650	m^3/h
Sound power level, indoors/outdoors	L_{WA}	-	dB	For water-/brine-to-water heat pumps:Rated brine or water flow rate, outdoor heat exchanger	-	-	m^3/h
Annual energy consumption	Q_{HE}	2391	kWh				
For heat pump combination heater							
Declaed load profile	-			Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Q_{elec}	-	kWh	Daily fuel consumption	Q_{fuel}	-	kWh
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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(T_j).

(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0.9

Technical parameters							
Model(s):	Outdoor unit: ACHP-H12/5R3HA-O Indoor unit: ACHP-H12/5R3HA-I						
Air-to-water heat ump:	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	Warmer						
Declared temperature application	Medium						
Item	**Symbol**	**Value**	**Unit**	**Item**	**Symbol**	**Value**	**Unit**
Rated heat output(*)	Prated	12.5	kW	**Seasonal space heating energy efficiency**	η_s	171	%
Declared capacity for heating for part load at indoor temperature 20℃ and outdoor temperature T_j				Declared coeffient of performance or primary energy ratio for part load at indoor temperature 20℃ and outdoor temperature T_j			
T_j = -7℃	Pdh	-	kW	T_j = -7℃	COPd	-	-
T_j = +2℃	Pdh	12.30	kW	T_j = +2℃	COPd	2.31	-
T_j = +7℃	Pdh	8.04	kW	T_j = +7℃	COPd	3.86	-
T_j = +12℃	Pdh	3.57	kW	T_j = +12℃	COPd	5.70	-
T_j = bivalent temperature	Pdh	8.04	kW	T_j = bivalent temperature	COPd	3.86	-
T_j = operation limit temperature	Pdh	12.30	kW	T_j = operation limit temperature	COPd	2.31	-
For air-to-water heat pumps: T_j = -15℃ (if TOL < -20℃)	Pdh	-	kW	For air-to-water heat pumps: T_j = -15℃ (if TOL < -20℃)	COPd	-	-
Bivalent temperature	T_{biv}	7	℃	For air-to-water heat pumps: Operation limit temperature	TOL	2	℃
Cycling interval capacity for heating	P_{cych}	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient(**)	Cdh	0.9	-	Heating water operating limit temperature	WTOL	60	℃
Power consumption in modes other than active mode				Supplemantary heater			
Off mode	P_{OFF}	0.020	kW	Rated heat output (*)	Psup	0.20	kW
Thermostat-off mode	P_{TO}	0.030	kW	Type of energy input	Electricity		
Standby mode	P_{SB}	0.020	kW				
Crankcase heater mode	P_{CK}	0.000	kW				
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	4650	m^3/h
Sound power level, indoors/outdoors	L_{WA}	-	dB	For water-/brine-to-water heat pumps:Rated brine or water flow rate, outdoor heat exchanger	-	-	m^3/h
Annual energy consumption	Q_{HE}	3831	kWh				
For heat pump combination heater							
Declaed load profile	-			Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Q_{elec}	-	kWh	Daily fuel consumption	Q_{fuel}	-	kWh
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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(T_j).

(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh =0.9

Technical parameters							
Model(s):	Outdoor unit: ACHP-H12/5R3HA-O Indoor unit: ACHP-H12/5R3HA-I						
Air-to-water heat ump:	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						
Declared temperature application	Low						
Item	**Symbol**	**Value**	**Unit**	**Item**	**Symbol**	**Value**	**Unit**
Rated heat output(*)	Prated	12.2	kW	**Seasonal space heating energy efficiency**	η_s	190	%
Declared capacity for heating for part load at indoor temperature 20℃ and outdoor temperature T_j				Declared coeffient of performance or primary energy ratio for part load at indoor temperature 20℃ and outdoor temperature T_j			
T_j = -7℃	Pdh	10.79	kW	T_j = -7℃	COPd	3.02	-
T_j = +2℃	Pdh	6.57	kW	T_j = +2℃	COPd	4.83	-
T_j = +7℃	Pdh	4.22	kW	T_j = +7℃	COPd	6.27	-
T_j = +12℃	Pdh	1.88	kW	T_j = +12℃	COPd	9.38	-
T_j = bivalent temperature	Pdh	10.79	kW	T_j = bivalent temperature	COPd	3.02	-
T_j = operation limit temperature	Pdh	10.1	kW	T_j = operation limit temperature	COPd	2.61	-
For air-to-water heat pumps: T_j = -15℃ (if TOL < -20℃)	Pdh	-	kW	For air-to-water heat pumps: T_j = -15℃ (if TOL < -20℃)	COPd	-	-
Bivalent temperature	T_{biv}	-7	℃	For air-to-water heat pumps: Operation limit temperature	TOL	-10	℃
Cycling interval capacity for heating	P_{cych}	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient(**)	Cdh	0.9	-	Heating water operating limit temperature	WTOL	60	℃
Power consumption in modes other than active mode				Supplemantary heater			
Off mode	P_{OFF}	0.020	kW	Rated heat output (*)	Psup	2.10	kW
Thermostat-off mode	P_{TO}	0.030	kW	Type of energy input	Electricity		
Standby mode	P_{SB}	0.020	kW				
Crankcase heater mode	P_{CK}	0.000	kW				
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	4650	m^3/h
Sound power level, indoors/outdoors	L_{WA}	-	dB	For water-/brine-to-water heat pumps:Rated brine or water flow rate, outdoor heat exchanger	-	-	m^3/h
Annual energy consumption	Q_{HE}	5230	kWh				
For heat pump combination heater							
Declaed load profile	-			Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Q_{elec}	-	kWh	Daily fuel consumption	Q_{fuel}	-	kWh
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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(T_j).

(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0.9

Technical parameters							
Model(s):	Outdoor unit: ACHP-H12/5R3HA-O Indoor unit: ACHP-H12/5R3HA-I						
Air-to-water heat ump:	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						
Declared temperature application	Medium						
Item	**Symbol**	**Value**	**Unit**	**Item**	**Symbol**	**Value**	**Unit**
Rated heat output(*)	Prated	12	kW	**Seasonal space heating energy efficiency**	η_s	136	%
Declared capacity for heating for part load at indoor temperature 20℃ and outdoor temperature T_j				Declared coeffient of performance or primary energy ratio for part load at indoor temperature 20℃ and outdoor temperature T_j			
T_j = -7℃	Pdh	10.62	kW	T_j = -7℃	COPd	2.11	-
T_j = +2℃	Pdh	6.46	kW	T_j = +2℃	COPd	3.43	-
T_j = +7℃	Pdh	4.15	kW	T_j = +7℃	COPd	4.59	-
T_j = +12℃	Pdh	1.85	kW	T_j = +12℃	COPd	6.90	-
T_j = bivalent temperature	Pdh	10.62	kW	T_j = bivalent temperature	COPd	2.11	-
T_j = operation limit temperature	Pdh	9.16	kW	T_j = operation limit temperature	COPd	2.68	-
For air-to-water heat pumps: T_j = -15℃ (if TOL < -20℃)	Pdh	-	kW	For air-to-water heat pumps: T_j = -15℃ (if TOL < -20℃)	COPd	-	-
Bivalent temperature	T_{biv}	-7	℃	For air-to-water heat pumps: Operation limit temperature	TOL	-10	℃
Cycling interval capacity for heating	P_{cych}	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient(**)	Cdh	0.9	-	Heating water operating limit temperature	WTOL	60	℃
Power consumption in modes other than active mode				Supplemantary heater			
Off mode	P_{OFF}	0.020	kW	Rated heat output (*)	Psup	2.84	kW
Thermostat-off mode	P_{TO}	0.030	kW	Type of energy input	Electricity		
Standby mode	P_{SB}	0.020	kW				
Crankcase heater mode	P_{CK}	0.000	kW				
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	4650	m^3/h
Sound power level, indoors/outdoors	L_{WA}	43/64	dB	For water-/brine-to-water heat pumps:Rated brine or water flow rate, outdoor heat exchanger	-	-	m^3/h
Annual energy consumption	Q_{HE}	7131	kWh				
For heat pump combination heater							
Declaed load profile	-			Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Q_{elec}	-	kWh	Daily fuel consumption	Q_{fuel}	-	kWh
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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(T_j).

(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0.9

Technical parameters							
Model(s):	Outdoor unit: ACHP-H12/5R3HA-O Indoor unit: ACHP-H12/5R3HA-I						
Air-to-water heat ump:	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	Colder						
Declared temperature application	Low						
Item	**Symbol**	**Value**	**Unit**	**Item**	**Symbol**	**Value**	**Unit**
Rated heat output(*)	Prated	11.4	kW	**Seasonal space heating energy efficiency**	η_s	159	%
Declared capacity for heating for part load at indoor temperature 20 ℃ and outdoor temperature T_j				Declared coeffient of performance or primary energy ratio for part load at indoor temperature 20℃ and outdoor temperature T_j			
T_j = -7℃	Pdh	7.05	kW	T_j = -7℃	COPd	3.48	-
T_j = +2℃	Pdh	4.67	kW	T_j = +2℃	COPd	4.96	-
T_j = +7℃	Pdh	3.14	kW	T_j = +7℃	COPd	6.10	-
T_j = +12℃	Pdh	3.57	kW	T_j = +12℃	COPd	7.87	-
T_j = bivalent temperature	Pdh	9.28	kW	T_j = bivalent temperature	COPd	2.59	-
T_j = operation limit temperature	Pdh	7.01	kW	T_j = operation limit temperature	COPd	1.98	-
For air-to-water heat pumps: T_j = -15℃ (if TOL < -20℃)	Pdh	-	kW	For air-to-water heat pumps: T_j = -15℃ (if TOL < -20℃)	COPd	-	-
Bivalent temperature	T_{biv}	-15	℃	For air-to-water heat pumps: Operation limit temperature	TOL	-22	℃
Cycling interval capacity for heating	P_{cych}	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient(**)	Cdh	0.9	-	Heating water operating limit temperature	WTOL	52	℃
Power consumption in modes other than active mode				Supplemantary heater			
Off mode	P_{OFF}	0.020	kW	Rated heat output (*)	Psup	4.39	kW
Thermostat-off mode	P_{TO}	0.030	kW	Type of energy input	Electricity		
Standby mode	P_{SB}	0.020	kW				
Crankcase heater mode	P_{CK}	0.000	kW				
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	4650	m^3/h
Sound power level, indoors/outdoors	L_{WA}	-	dB	For water-/brine-to-water heat pumps:Rated brine or water flow rate, outdoor heat exchanger	-	-	m^3/h
Annual energy consumption	Q_{HE}	6926	kWh				
For heat pump combination heater							
Declaed load profile	-			Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Q_{elec}	-	kWh	Daily fuel consumption	Q_{fuel}	-	kWh
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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(T_j). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh =0.9							

Technical parameters							
Model(s):	Outdoor unit: ACHP-H12/5R3HA-O Indoor unit: ACHP-H12/5R3HA-I						
Air-to-water heat ump:	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	Colder						
Declared temperature application	Medium						
Item	**Symbol**	**Value**	**Unit**	**Item**	**Symbol**	**Value**	**Unit**
Rated heat output(*)	Prated	10.3	kW	**Seasonal space heating energy efficiency**	η_s	117	%
Declared capacity for heating for part load at indoor temperature 20℃ and outdoor temperature T_j				Declared coeffient of performance or primary energy ratio for part load at indoor temperature 20℃ and outdoor temperature T_j			
T_j = -7℃	Pdh	6.63	kW	T_j = -7℃	COPd	2.63	-
T_j = +2℃	Pdh	4.06	kW	T_j = +2℃	COPd	3.60	-
T_j = +7℃	Pdh	2.78	kW	T_j = +7℃	COPd	4.54	-
T_j = +12℃	Pdh	3.33	kW	T_j = +12℃	COPd	6.25	-
T_j = bivalent temperature	Pdh	8.41	kW	T_j = bivalent temperature	COPd	1.84	-
T_j = operation limit temperature	Pdh	4.19	kW	T_j = operation limit temperature	COPd	1.13	-
For air-to-water heat pumps: T_j = -15℃ (if TOL < -20℃)	Pdh	-	kW	For air-to-water heat pumps: T_j = -15℃ (if TOL < -20℃)	COPd	-	-
Bivalent temperature	T_{biv}	-15	℃	For air-to-water heat pumps: Operation limit temperature	TOL	-22	℃
Cycling interval capacity for heating	P_{cych}	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient(**)	Cdh	0.9	-	Heating water operating limit temperature	WTOL	52	℃
Power consumption in modes other than active mode				Supplemantary heater			
Off mode	P_{OFF}	0.020	kW	Rated heat output (*)	Psup	6.11	kW
Thermostat-off mode	P_{TO}	0.030	kW	Type of energy input	Electricity		
Standby mode	P_{SB}	0.020	kW				
Crankcase heater mode	P_{CK}	0.000	kW				
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	4000	m^3/h
Sound power level, indoors/outdoors	L_{WA}	-	dB	For water-/brine-to-water heat pumps:Rated brine or water flow rate, outdoor heat exchanger	-	-	m^3/h
Annual energy consumption	Q_{HE}	8453	kWh				
For heat pump combination heater							
Declaed load profile	-			Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Q_{elec}	-	kWh	Daily fuel consumption	Q_{fuel}	-	kWh
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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(T_j).
(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0.9