HIGH-TEMPERATURE AIR-TO-WATER HEAT PUMPS

Heating

AQUASNAP® Heating

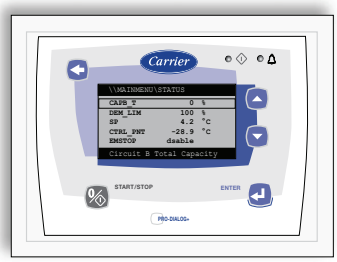
61AF

Accessories

- JBus, BacNet and LonTalk gateways
- Remote user interface
- Master/slave operation
- Hydronic module
- Water filter

Features

- Two sizes with nominal heating capacities from 14 to 20 kW.
- The Aquasnap high-temperature heat pump range was designed for commercial applications such as the heating of offices, apartments and hotels as well as domestic hot water production in new and refurbished buildings.
- Units incorporate the latest technological features: scroll compressors with vapour injection, low-noise fans made of a composite material, auto-adaptative microprocessor control, electronic expansion valve and multi-speed pump.
- Units certified to the Eurovent energy efficiency class A with a COP of over 4 and comply with the COP required by the Ecolabel certification.
- 61AF heat pumps incorporate a hydronic module with a multi-speed pump, as standard.
- Low noise levels and a very compact chassis reduce the noise disturbance from the unit.
- The operating range allows outside temperatures down to -20°C and leaving water temperatures up to 65°C for domestic hot water applications.
- Intelligent unit control permits unit operation in extreme conditions, minimising unit shut-down times.
- Systematic factory run test before shipment and quick-test function for verification of instruments, electrical components and motors.
- Low-noise scroll compressors with low vibration level.
- Simplified electrical connections.
- Comprehensive quality and endurance tests.



Pro-Dialog+ operator interface

Physical data

61AF		014-7	014-9	019
Air conditioning application as per EN14511-3 : 2011				
Condition 1				
Nominal heating capacity	kW	14.1	13.7	19.8
COP	kW/kW	3.32	3.50	3.45
Eurovent class, heating		A	A	A
Condition 2				
Nominal heating capacity	kW	13.9	13.5	20.2
COP	kW/kW	3.89	4.16	4.24
Heating application**				
Condition 1				
Nominal heating capacity	kW	14.0	13.6	19.7
COP	kW/kW	3.36	3.54	3.50
Condition 2				
Nominal heating capacity	kW	13.8	13.5	20.1
COP	kW/kW	3.94	4.22	4.32
Operating weight*				
Standard unit without hydronic module	kg	159	159	206
Standard unit with hydronic module option	kg	169	169	216
Compressor		One, hermetic scroll, 48.3 r/s		
Refrigerant***		R-407C		
Condenser		Direct-expansion plate heat exchanger		
Fan		Axial		
Quantity		2	2	2
Air flow	l/s	2050	2050	2000
Evaporator		Grooved copper tubes and aluminium fins		
Dimensions				
Length x depth x height	mm	1103 x 333 x 1278	1103 x 333 x 1278	1135 x 559 x 1579

NOTE: For the conditions please refer to page 69.

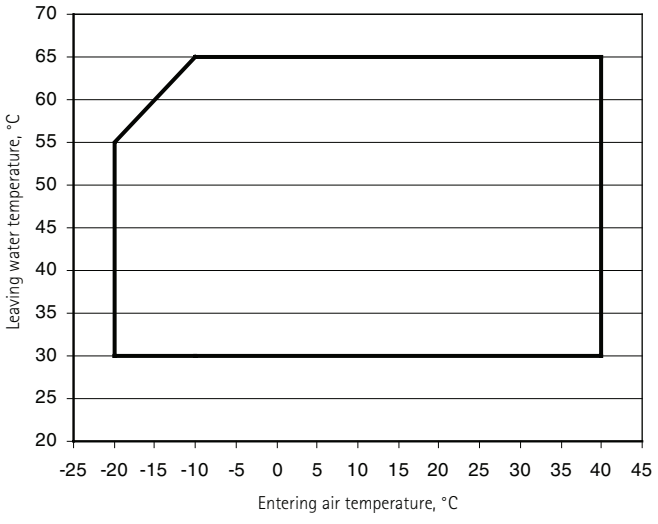
* Weight shown is a guideline only. To find out the unit refrigerant charge, please refer to the unit nameplate.

Electrical data

61AF - Standard unit		Without pump			With pump		
		014-7	014-9	019	014-7	014-9	019
Power circuit							
Nominal power supply	V-ph-Hz	230-1-50 ± 10%	400-3-50 ± 10%	400-3-50 ± 10%	230-1-50 ± 10%	400-3-50 ± 10%	400-3-50 ± 10%
Control circuit supply		24 V, via internal transformer					
Maximum start-up current (Un)*							
Standard unit	A	-	66	102	-	67	104
Unit with electronic starter option	A	47	-	-	48	-	-
Unit power factor at maximum capacity**		0.82	0.82	0.82	0.82	0.82	0.82
Maximum unit power input**	kW	6.41	5.90	8.80	6.41	6.10	9.20
Nominal unit current draw***	A	22.9	7.9	12.4	23.7	7.9	12.4
Maximum unit current draw (Un)****	A	30.7	10.8	16.0	31.5	10.8	16.0

* Maximum instantaneous start-up current at operating limit values (maximum operating current of the pump + fan current + locked rotor current of the compressor).
** Power input, compressors and fan, at the unit operating limits (saturated suction temperature 10°C, saturated condensing temperature 65°C) and nominal voltage of 400 V (data given on the unit nameplate).
*** Standardised Eurovent conditions: condenser entering/leaving water temperature 40°C/45°C, outside air temperature 7°C.
**** Maximum unit operating current at maximum unit power input and 400 V (values given on the unit nameplate).

Operating range



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Heating

AQUASNAP® Heating

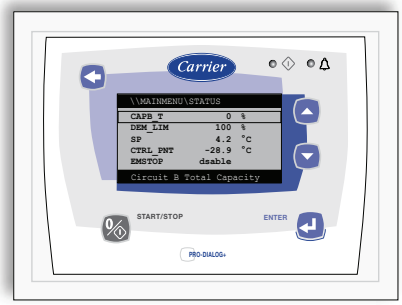
61AF

Options/accessories

- Anti-corrosion protection, traditional coils (option)
- Units with discharge air ducts (option)
- Low and very low noise level (option)
- Soft starter (option)
- Frost protection down to -20°C (option)
- Low-pressure single-pump hydronic module (option)
- JBus, BacNet and LonTalk gateways (option)
- Screw or welded water connection between the customer's condenser and the unit (option)
- Remote user interface (option)
- Master-slave operation (option)
- Heating System Manager types A, B and C: control of comfort heating (one or more zones) and domestic hot water production in installations where the 61AF is backed up by auxiliary boilers, electric resistance heaters or a district heating system (accessory)

Features

- Seven sizes with nominal heating capacities from 21 to 102 kW.
- The Aquasnap high-temperature heat pump range was designed for commercial applications such as the heating of offices, apartments and hotels as well as domestic hot water production in new and refurbished buildings.
- Units incorporate the latest technological features: scroll compressors with vapour injection, low-noise fans made of a composite material, auto-adaptative microprocessor control, electronic expansion valve and multi-speed pump.
- Increased energy efficiency - Eurovent energy efficiency class A (in accordance with EN14511-3:2011).
- Exceptional energy efficiency level (COP) - the result of a long qualification and optimisation process.
- 61AF units incorporate an optional hydronic module with a multi-speed pump.
- Low noise levels and a very compact chassis reduce the noise disturbance from the unit.
- The operating range allows outside temperatures down to -20°C and leaving water temperatures up to 65°C for domestic hot water applications.
- Intelligent unit control permits unit operation in extreme conditions, minimising unit shut-down times.
- Systematic factory run test before shipment and quick-test function for verification of instruments, electrical components and motors.
- Low-noise scroll compressors with low vibration level.
- Simplified electrical connections.
- Comprehensive quality and endurance tests.



Pro-Dialog+ operator interface

Hydronic module

Physical data

61AF		022	030	035	045	055	075	105
Air conditioning application as per EN14511-3 : 2011								
Condition 1								
Nominal heating capacity	kW	20.8	25.7	32.3	43.8	52.3	66.9	101.9
COP	kW/kW	3.45	3.45	3.37	3.56	3.65	3.41	3.58
Eurovent class, heating		A	A	A	A	A	A	A
Condition 2								
Nominal heating capacity	kW	20.8	25.7	32.3	43.7	52.2	66.8	101.7
COP	kW/kW	4.11	4.14	4.07	4.31	4.36	3.97	4.25
Heating application**								
Condition 1								
Nominal heating capacity	kW	20.8	26.2	32.6	44.2	52.1	64.9	101.9
COP	kW/kW	3.46	3.47	3.39	3.58	3.67	3.43	3.61
Condition 2								
Nominal heating capacity	kW	20.8	26.2	32.5	44.1	52.0	64.8	101.6
COP	kW/kW	4.13	4.17	4.10	4.34	4.39	4.00	4.29
Operating weight*								
Standard unit without hydronic module	kg	343	396	421	509	533	900	1020
Standard unit with hydronic module option	kg	349	403	436	524	549	926	1044
Compressor		One, hermetic scroll 48.3 r/s					Two, hermetic scroll 48.3 r/s	
Condenser		Direct-expansion plate heat exchanger						
Fan		Axial with rotating shroud, Flying Bird IV						
Quantity		1	1	1	1	1	2	2
Total air flow at high speed	l/s	3770	3748	3736	4035	4036	7479	8072
Evaporator		Grooved copper tubes and aluminium fins						
Refrigerant*		R-407C						
Dimensions								
Length x depth x height	mm	1110 x 1327 x 1330			1114 x 2100 x 1330		2273 x 2100 x 1330	

NOTE: For the conditions please refer to page 69.

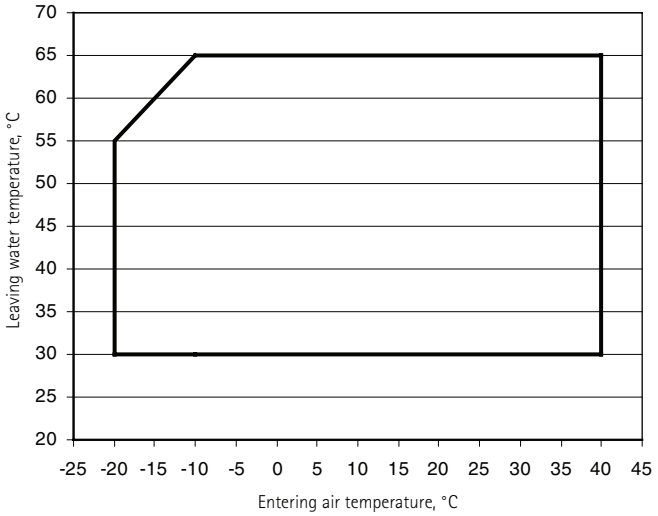
* Weight shown is a guideline only. To find out the unit refrigerant charge, please refer to the unit nameplate.

Electrical data

61AF - Standard unit (without hydronic module)		022	030	035	045	055	075	105
Power circuit								
Nominal power supply	V-ph-Hz	400-3-50 ± 10%						
Control circuit supply		24 V, via internal transformer						
Maximum start-up current (Un)*								
Standard unit	A	104	102	130	170	190	157	229
Unit with electronic starter option	A	56	55	70	91	101	101	142
Unit power factor at maximum capacity**		0.82	0.82	0.82	0.82	0.82	0.82	0.82
Maximum unit power input**	kW	8.7	11.6	12.9	14.6	16.8	25.8	33.7
Nominal unit current draw***	A	13.6	16.4	20.1	23.2	27.7	40.2	55.4
Maximum unit current draw (Un)****	A	16.8	21.1	27.0	32.8	38.8	54.0	77.6

* Maximum instantaneous start-up current at operating limit values (maximum operating current of the compressor + fan current + locked rotor current of the compressor).
** Power input, compressors and fan, at the unit operating limits (saturated suction temperature 10°C, saturated condensing temperature 65°C) and nominal voltage of 400 V (data given on the unit nameplate).
*** Standardised Eurovent conditions: condenser entering/leaving water temperature 40°C/45°C, outside air temperature 7°C/6°C.
**** Maximum unit operating current at maximum unit power input and 400 V (values given on the unit nameplate).

Operating range



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