



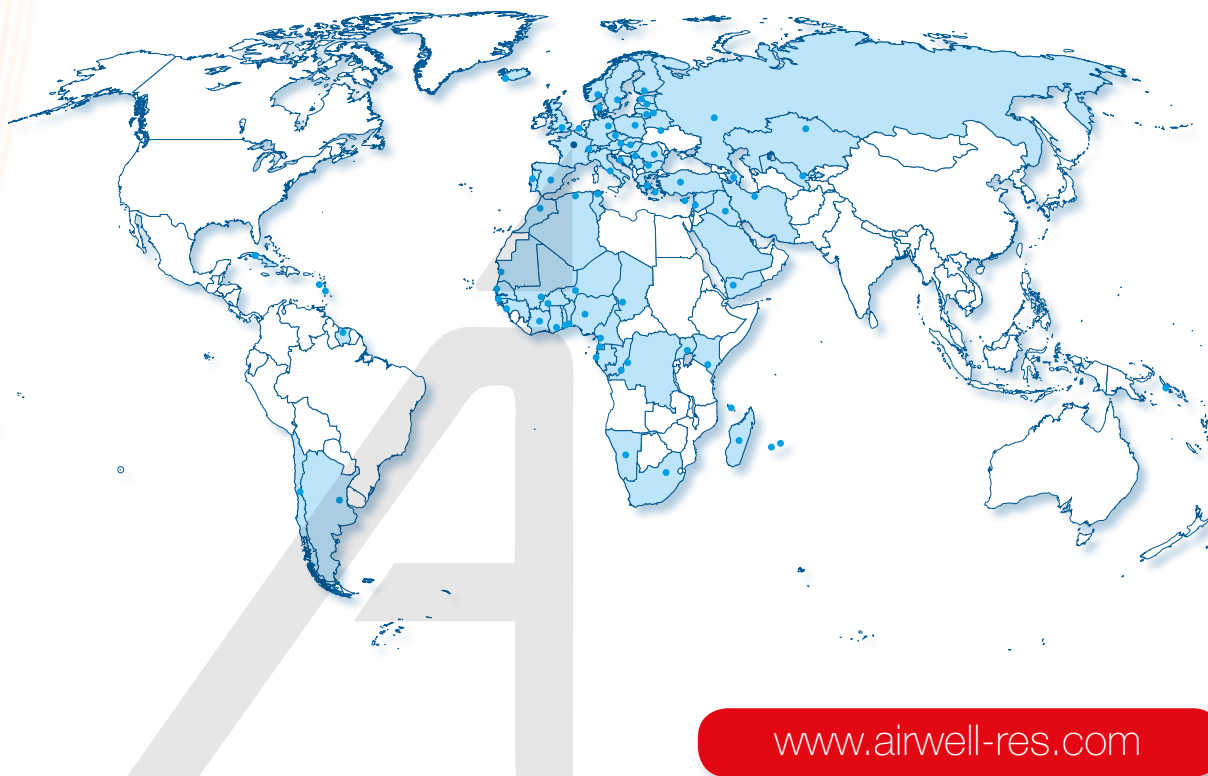
7^{1947 - 2017}
Airwell
years

Just feel well

2017/2018
Heating

Contact Us

An international sales network



www.airwell-res.com

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**Monday to Friday: from 9:00 am to 12:30 pm
and from 2:00 to 5:00 pm**



Table of contents

	PAGE
HISTORY	4
SERVICES DIVISION	6
AIR TO WATER HEAT PUMPS RANGE	20
PAC BT Monobloc Low temperature heat pump	32
PAC BT Split Low temperature heat pump with DHW tank included	32
PAC HT Monobloc High temperature heat pump	42
PAC HT Split High temperature heat pump split	48
AIR TO AIR HEAT PUMPS RANGE	56
DLSE+VAV Ducted medium static pressure monosplit	58
THERMODYNAMIC WATER HEATERS RANGE	66
TDF 190/1.5 180-L ducted water heater	70
TDF 300/3.5 280-L ducted water heater	72
ICONS GUIDE	78

History



- 1947 ■ The beginning of the Airwell's story, a french air conditioning brand.
- 1950 ■ The firm developed and began the mass production of the first window unit, to offer exceptional climate conditions, mainly dedicated to European and African markets.
- 1970 ■ Airwell developed a split system unit by splitting its core window unit in two parts. It was the first to produce wall split systems in Europe.
Implantation of historical plant Tillières-sur-Avre in France.
- 1982 ■ The company designed and produced the first European wall split system range including electronic remote control, a high technology cross-flow fan for low noise levels and rotary compressors.
- 1998 ■ The group acquired production facilities in China (Shenzhen).
- 2013 ■ The firm launched its unique and exclusive call center dedicated also to final customer.
- 2014 ■ Airwell set up presentation and training center in France and worldwide.
- 2015 ■ Airwell launched its new online order service.
- 2017 ■ Airwell celebrates its 70th anniversary.



Services division

The training solution for installers

Training courses 

In partnership with its customers, Airwell Residential provides you with Airwell Academy centers for presentations and training, both in France and worldwide. Training courses are regularly offered to present the brand's product range and unique solutions. New centers are due to open throughout the year.



For all training requests, please contact us at the following e-mail address:

■ airwell-academie@airwell-res.com





Training plan



Air conditioning

- Residential air conditioning
- Light commercial air conditioning
- Air conditioning systems regulation



Heating

- Residential heating
- Light commercial heating
- Heating systems regulation



Statutory trainings

- Solutions for hospitals
- Solutions for hotels
- Residential solutions
- Anti-legionellosis solutions
- Water treatment



Sales training



Energy performance

- Design offices
- Installers
- Architects

Read more on our website:

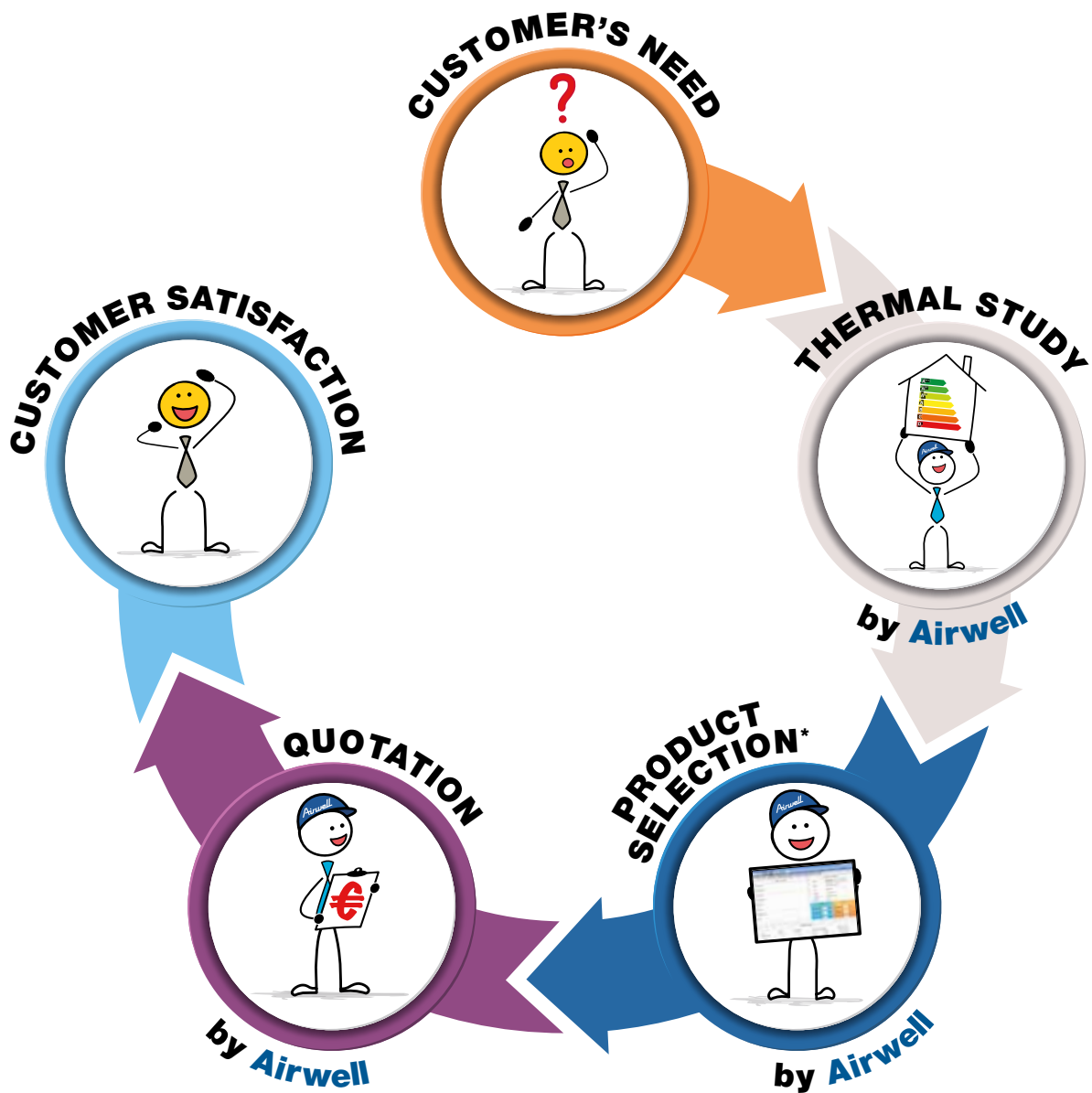
■ www.airwell-res.com

Pre-sales

Airwell Residential supports you throughout your projects (housing units, hotels, shops, industrial sites, etc.).

Before your plans are implemented, the pre-sales department studies your residential or industrial project to recommend the best technical solution.

Using selection software, the pre-sales engineer estimates and measures the dimensions of your air conditioning system.



* and installation dimensioning

Installation / Commissioning

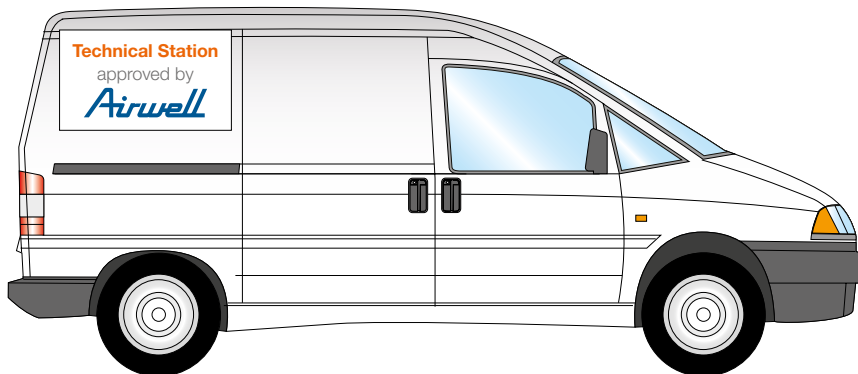
CALL CENTRE

- Quick, useful response from our experts
- Generous availability
- Multilingual call centre
- Professionals who constantly benefit from training
- A customer-based, service-orientated approach!
- As much attention and help as required for the customer to be fully satisfied



LOCAL AND REMOTE TECHNICAL SERVICE (WORLDWIDE)

- Specialized and experienced technicians
- Direct contact by telephone; on-site contact for VIP customers if required



SPARE PARTS SERVICE

- Global warehouse in France



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Airwell,
unique
heating
range

- Air to water heat pumps range
- Air to air heat pumps range
- Thermodynamic water heaters

The exclusive and unique solution thanks to a complete offer

- Modularity second to none
- A global offer of products and services

Airwell, necessarily a solution for your needs:

NEW BUILD		REFURBISHMENT	
HEAT AND DHW PRODUCTION	<p><i>Airwell PAC BT</i> (see p. 32) Low temperature heat pump</p>	<p><i>Airwell PAC HT</i> (see p. 42) High temperature monobloc heat pump + 300L domestic hot water tank</p> <p><i>Airwell PAC BT</i> (see p. 32) Low temperature monobloc heat pump + 300L domestic hot water tank</p>	
	<p><i>Airwell TDF</i> (see p. 68) Thermodynamic water heaters</p>		<p><i>Airwell TDF</i> (see p. 68) Thermodynamic water heaters</p>

EMITTER				
Heating mode PAC BT Monobloc, PAC BT Split or PAC HT	Radiant panel (35°C)	Fan-coil unit (45°C)	Average temperature heater (45°C)	High temperature heater (55°C)
Cooling mode PAC BT Monobloc or PAC BT Split	Radiant panel (7°C)	Fan-coil unit (7°C)	-	-



Heat pumps range



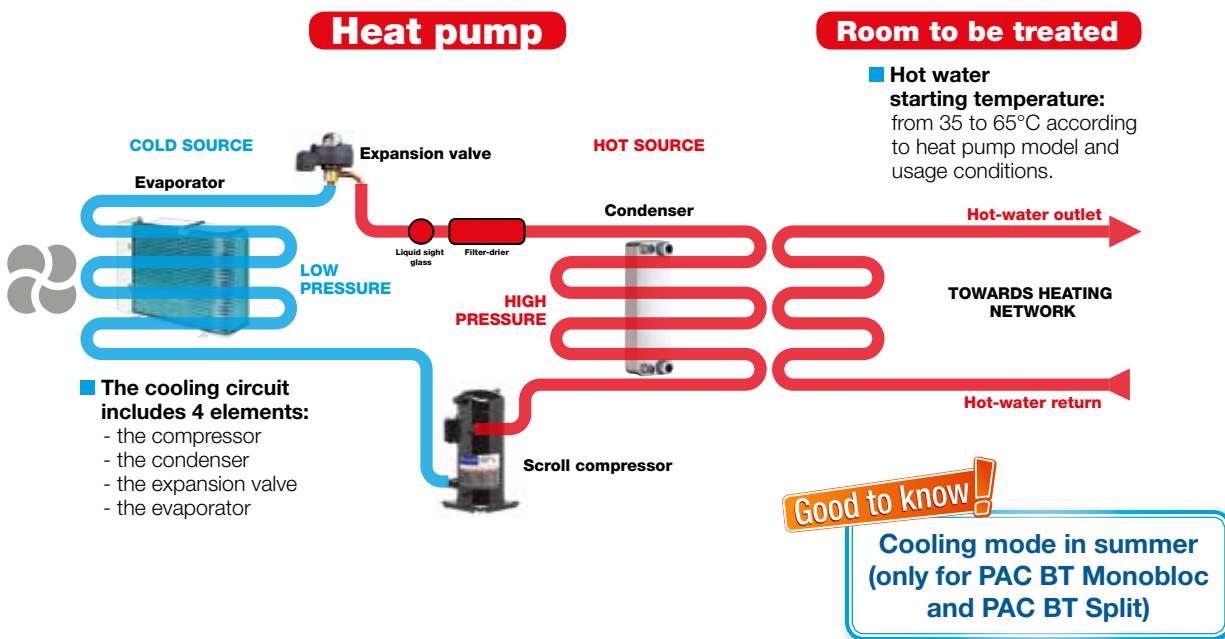
Principle of the heat pump

Heat pumps collect heat from outside the home, concentrate this heat and return it into the home.

Heat exchanges in a heat pump are related to changes of state.

- When a liquid boils, it absorbs heat.
 - When a gas condenses, it releases this heat.
- The heat is drawn from the heat source: outside air.
- It is therefore necessary to use a fluid which can change state at pressures that are compatible with the operation of the temperature and pressure compressors.

STANDARD REFRIGERANT CIRCUIT



A heat pump uses electricity to power its compressor and its circulator pump, but unlike a classic convection heater, the energy released by the emitters is much greater than the energy consumed. Seasonal coefficient of performance - SEER in cooling mode and SCOP in heating mode - are important criteria to estimate efficiency of the selected heat pump.

$$\text{SCOP} = \frac{\text{QH annual ref. heating demand in kWh/year}}{\text{QHE annual ref. electricity consumption in kWh/year}}$$

$$\text{SEER} = \frac{\text{QH annual ref. heating capacity in kWh/year}}{\text{QHE annual ref. electricity consumption in kWh/year}}$$

For all the heat pumps included in this catalogue, we have specified the SEER and SCOP for air and water regimes that are suited to all your applications (radiant panel, high-temperature hot water, very low outdoor temperatures, etc.).

Choosing a heat pump

New build or Refurbishment	Domestic Hot Water production	Cooling/Heating mode	Airwell Solution
New build	Yes	Cooling and heating	PAC BT Split
Refurbishment	Yes	Cooling and heating	PAC BT Monobloc + DHW tank
Refurbishment	No	Cooling and heating	PAC BT Monobloc
Refurbishment	No	Heating only	PAC HT monobloc or PAC HT Split
Refurbishment	Yes	Heating only	PAC HT monobloc or PAC HT Split + DHW tank

CALCULATION OF NEEDS

Calculate your needs by using the following formula:

$$D = G \times V \times \Delta T$$

- **D** represents heat loss in watts.
- **G** is the volume ratio of heat loss, corresponding to the insulation of the house (in W/m³/°K).
- **V** is volume of the house in m³.
- **ΔT** is the difference between the basic outdoor temperature and the indoor temperature.

This balance does not replace the one performed by a design office, which is recommended for all types of installations, in particular for specific buildings (architecture, insulation, etc.).

EXAMPLES	
New build (very well insulated)	G = 0.4
Insulated house	G = 0.9
Modern house	G = 1.0
Poorly insulated old house (standard wall)	G = 1.3
Veranda	G = 2.5 to 3.0

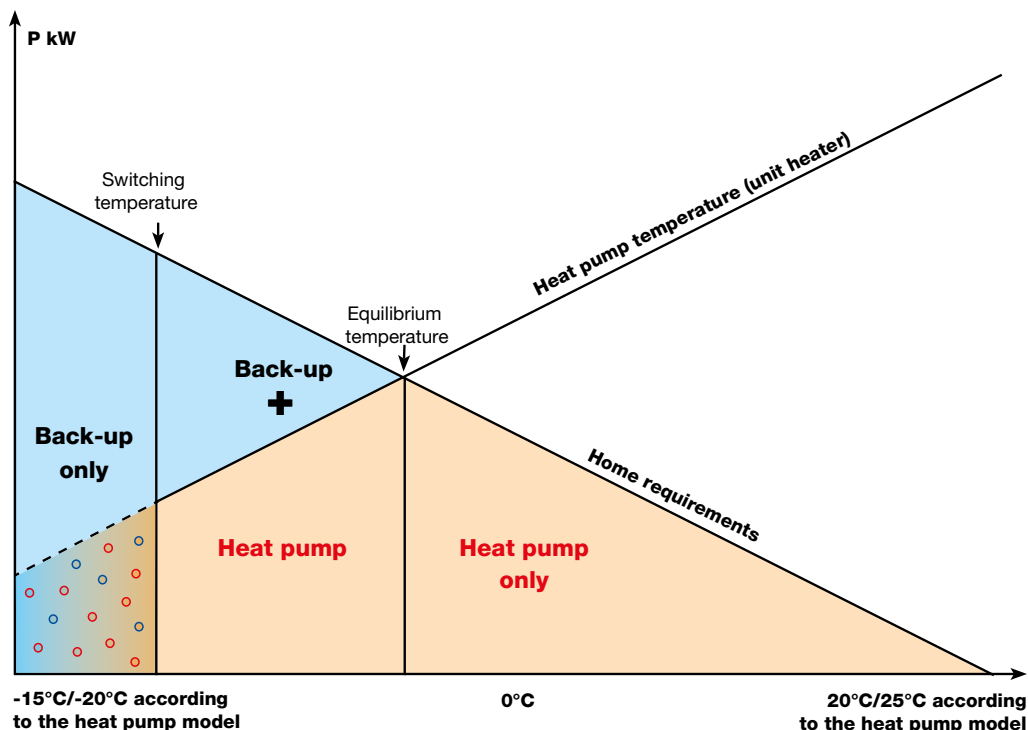
HEAT PUMP SELECTION

We recommend you to use a configuration with a back-up boiler (electrical or fossil energy) to optimize material cost and performances.

→ BACK-UP BOILER CONFIGURATION

An Airwell heat pump can adapt to any type of issuers, namely floor heating radiators at low/medium temperature (55°C) as well as for high temperature radiators (65°C).

In the case of a heat pump with back-up* (electric or boiler) it is necessary to define what is known as the equilibrium point, which matches to the outdoor temperature below which the heat pump heats the home jointly with the auxiliary power source.



→ SELECT HEAT PUMP CAPACITY DEPENDS ON HEAT LOSSES:

1. Sizing a PAC HT and its electrical backup or boiler (ON/OFF bi-compressor solution)

- 70% of losses \leq Heating capacity of the heat pump \leq 100% of losses
- 120% of losses = Total power delivered by the heat pump + backup (electrical or fossil energy).
- External temperature basis \leq Low limit of operating temperature of the heat pump - 5°C.

2. Sizing a PAC BT and its electrical backup or boiler (DC Inverter bi-compressor solution)

- 80% of losses \leq Heating capacity of the heat pump \leq 100% of losses
- 120% of losses = Total power delivered by the heat pump + backup (electrical or fossil energy).
- External temperature basis \leq Low limit of operating temperature of the heat pump - 5°C.

DHW POWER CALCULATION

Needs for Domestic Hot Water

Number of people in the home	1	2	3	4	5
Daily water needs by person (in liters of water at 40 °C)	80 ± 35	60 ± 25	50 ± 20	45 ± 20	45 ± 20

Preparation with pure accumulation: the DHW is produced in 6 or 8 hours.

Equivalent volume at 60°C :

$$V_{60} = V_x \frac{T_x - 10^\circ}{60^\circ - 10^\circ}$$

with: T_x : Storage temperature of the DHW tank
 V_x : water volume at storage temperature T_x

Step 1: Drawn energy during the day

It consists in calculating the maximum volume of hot water (equivalent to 60°C) drawn during the highest day of the year.

The energy drawn via hot water is given by the formula:

$$E_{acc} = 1,16 V_{60acc} (60^\circ - 10^\circ) / 1000$$

with: E_{acc} = drawn energy during a full day in kW/h
 V_{60acc} = total hot water drawn during a day, including all usage, adjusted to 60°C, in liters
1,16/1000 = adjustment coefficient
10° = cold water temperature

Step 2: Storing volume and exchanger capacity

Storage tank volume given in liters by:

$$\text{Volume} = \frac{1000 \times E_{acc}}{1,16 \times (T_{ec} - 10^\circ) \times a}$$

with: T_{ec} = water temperature in the tank (between 55 and 60°C)
10° = cold water temperature, being the minimum temperature reached by the water in the tank while guarantying users comfort
a = storage efficiency coefficient (between 0,8 and 0,95)

The exchanger capacity, given in kW by the following formula, allows to recover the hot water stock in 6 or 8 hours.

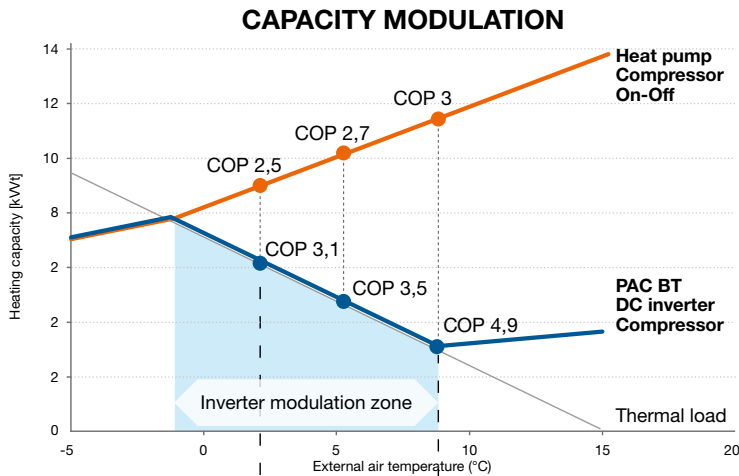
$$\text{Heat exchanger capacity (DHW)} = \frac{E_{acc}}{6 \text{ to } 8h \times 0,9} + P_{dis}$$

with: P_{dis} = losses in distribution circuit. In case of a distribution loop, it will be the power needed for maintaining the temperature in the loop
0,9 = add-on factor, compensating the storage losses during the stock recovering period

Generally, a minimum power of 10 to 12 W/l by stored liter.

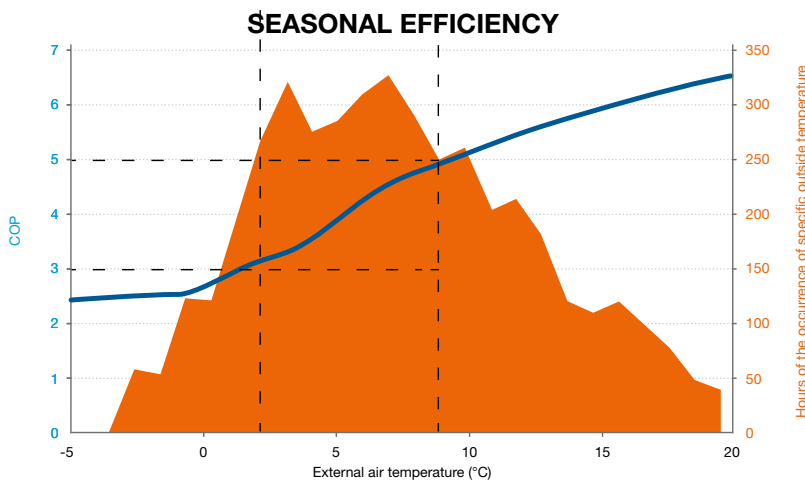
REGULATION OF LOW TEMPERATURE HEAT PUMP PAC BT

- The PAC BT range is equipped by DC Inverter compressor to meet needs.
- Comfort and seasonal efficiency (Inverter compressor)



Good to know!

- Optimized running at partial load = Higher COP
- Heating capacity = Heating needs



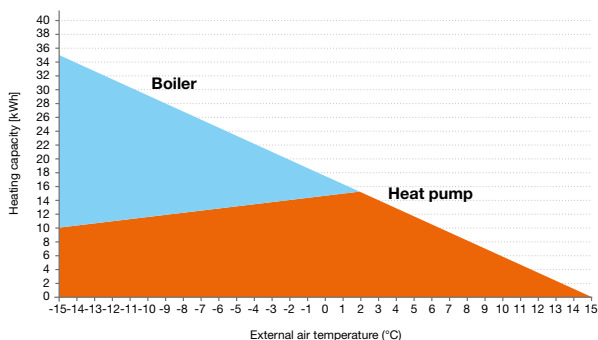
Good to know!

PAC BT works for most of the time with COP between 3 and 5

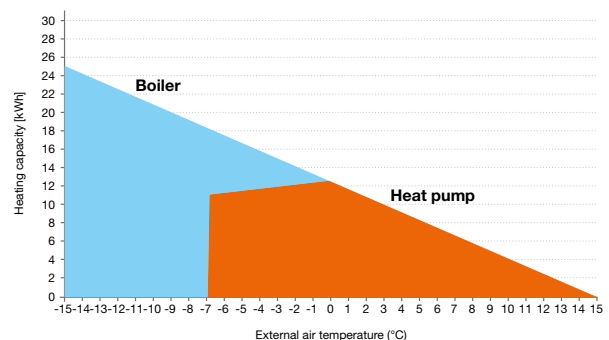
- Boiler back up regulation

There are two possibilities to regulate with boiler back up: integration or substitution.

INTEGRATION BOILER

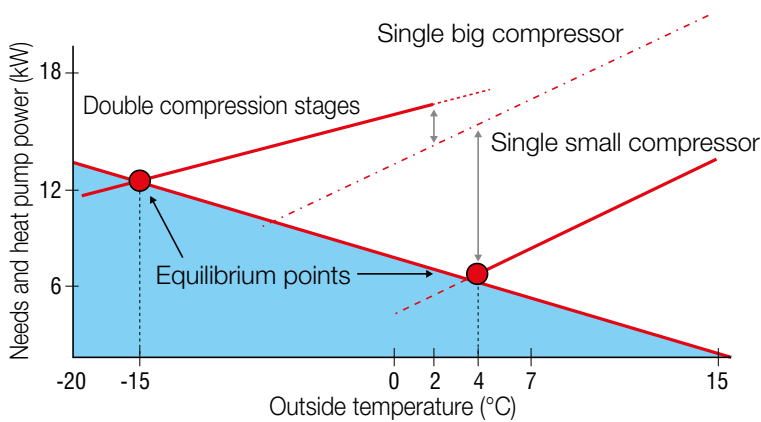


SUBSTITUTION BOILER



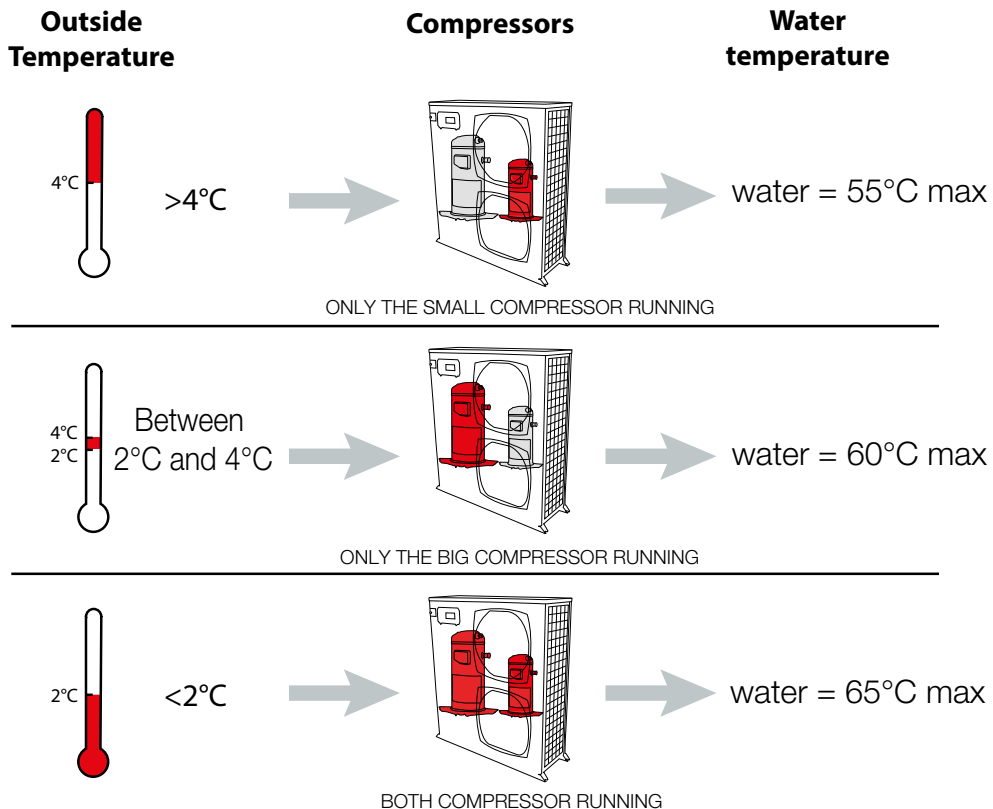
REGULATION OF HIGH TEMPERATURE HEAT PUMP PAC HT

- PAC HT is equipped with 2 ON/OFF compressors. This technology allows to modulate the capacity.
- Each compressor works with a low compression rate, ensuring longer service life and reduced electricity consumption.
- Heating power of the heat pump is maintained even at low outdoor temperatures.
- Remarkable adaptability of power supplied / requirements thanks to the option of using the compressors separately.
- Optimized domestic hot water production, staging of the compressors adapted according to the exchange capacity of the tank, while taking into account the outside temperature.







Good to know!

2 ON/OFF compressors = Modulate capacity



Air to water heat pumps range

[MODEL NAME]	Monobloc or Split system	Photo	Page
LOW TEMPERATURE HEAT PUMP	PAC BT MONOBLOC	Monobloc 	22
	PAC BT SPLIT	Split system 	32
HIGH TEMPERATURE HEAT PUMP	PAC HT MONOBLOC	Monobloc 	42
	PAC HT SPLIT	Split system 	48

Capacity range (kW)	Outdoor min operating temperature (°C)	Outlet water temperature range (°C)	New build or Refurbishment	Mode type	Domestic Hot Water	Solar connection
5-16	-20	35 to 60	Refurbishment	Cooling and Heating	Optional: 300L	No
5-17	-20	35 to 60	New build	Cooling and Heating	Integrated: 280L	Optional
6-18	-20	35 to 65	New build and Refurbishment	Heating only	Optional: 300L	No
6-18	-20	35 to 65	New build and Refurbishment	Heating only	Optional: 300L	No



COP up to 4.85

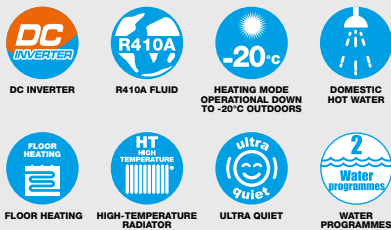
EER up to 4.55

A⁺⁺

+ PRODUCTS

- Cooling and heating mode.
- Monobloc system.
- Available in 3PH (sizes 14 to 16).
- High flexibility due to DC Inverter compressor.

FEATURES



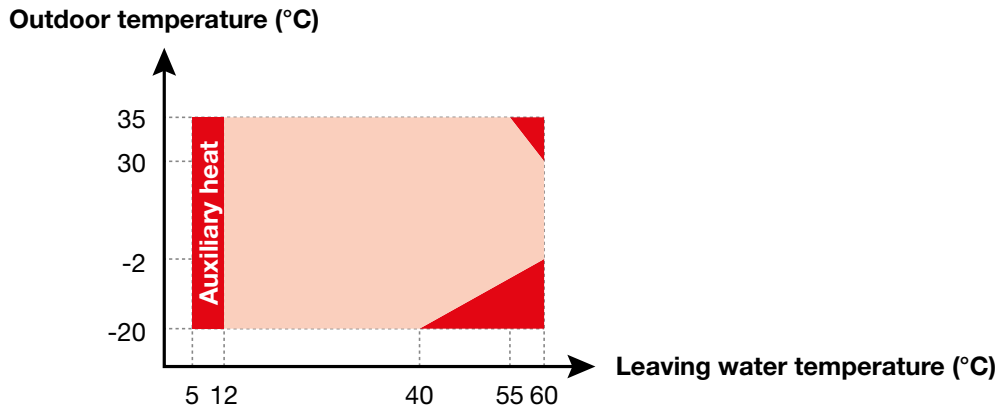
PAC BT 5-7 kW

PAC BT 9-10-12-14-16 kW

- Digital display on indoor unit: mode selection (heating, cooling and Domestic Hot Water), weekly timer and holidays, diagnosis aid (display parameters, troubleshooting).
- Provides optimal comfort all year long: Only one system for heating and cooling.
- Ideal solution for radiant panel in heating and cooling mode, low temperature heater, or fan-coil units.
- “Plug & Play” solution to replace old monobloc heat pumps.
- 4.58 to 16.30 kW in heating mode / 4.55 to 15.1 kW in cooling mode over 6 models
- Operating in heating mode up to -20°C outdoor temperature (water outlet temperature up to 60°C).
- Operating in cooling mode up to 46°C.
- Compact solution: small footprint
- Safety features included (safety valve, expansion tank).
- High performances: COP up to 4.85 and EER up to 4.55.
- Energy efficiency coefficient up to 178,3% (η_s).
- Auxiliary heat resistance included (depends on model - not included on sizes 5, 7 and 9).

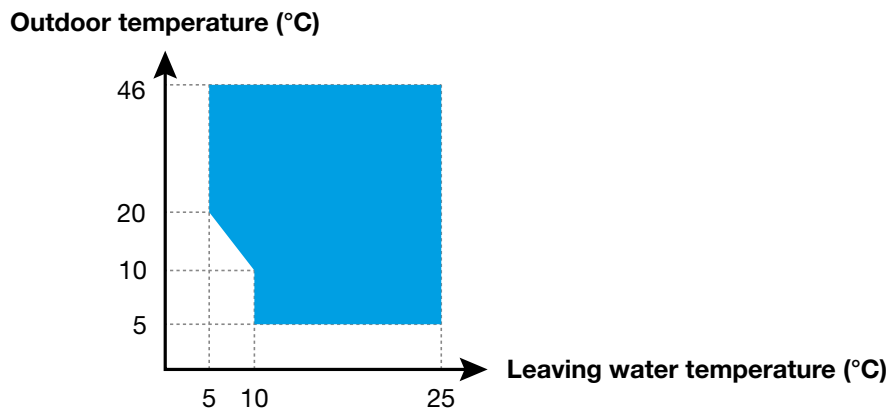
OPERATING LIMITS: User function via remote control

HEATING*

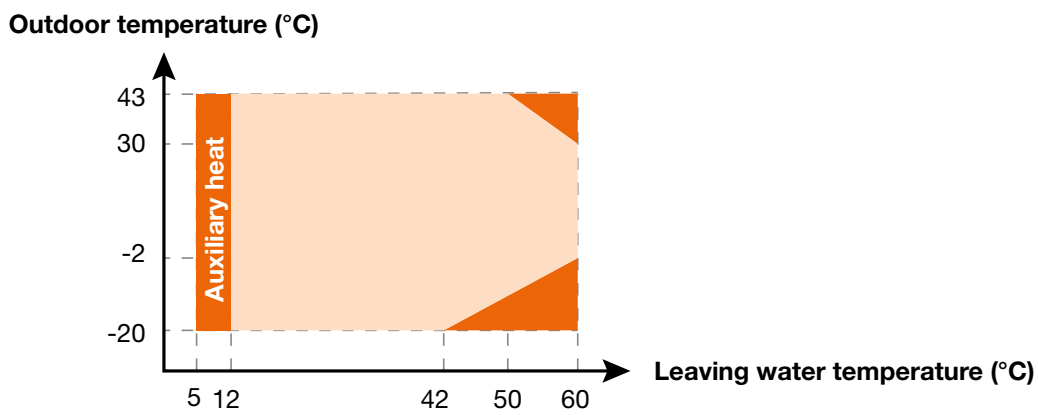


* Shaded areas indicate no heat pump operation (backup electric heater or auxiliary heat source only).

COOLING



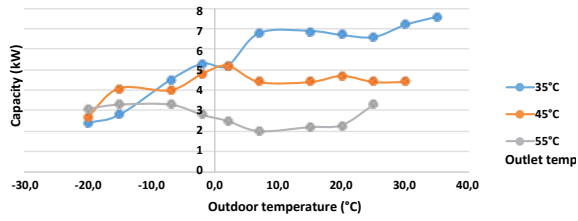
DOMESTIC HOT WATER*



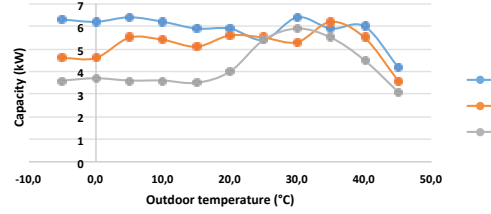
* Shaded areas indicate no heat pump operation (backup electric heater or auxiliary heat source only).

PAC BT 5 KW PERFORMANCES

HEATING

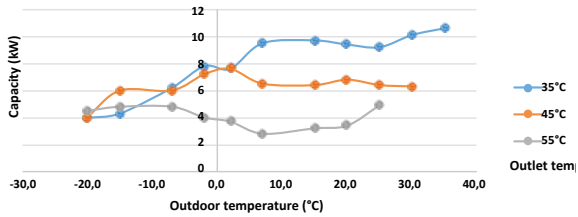


COOLING

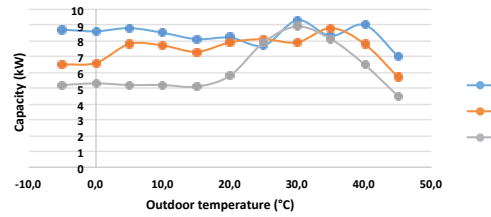


PAC BT 7 KW PERFORMANCES

HEATING

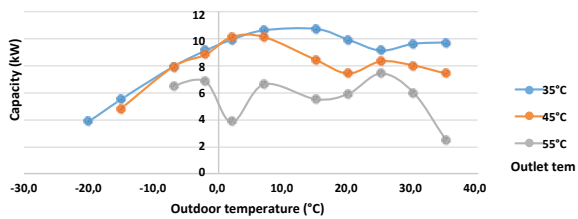


COOLING

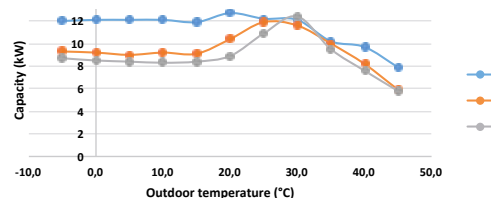


PAC BT 10 KW PERFORMANCES

HEATING

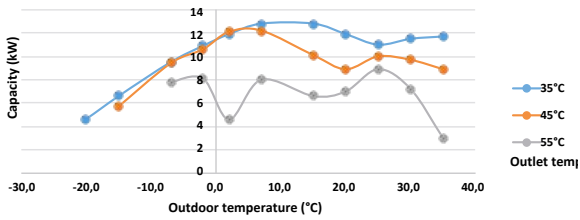


COOLING

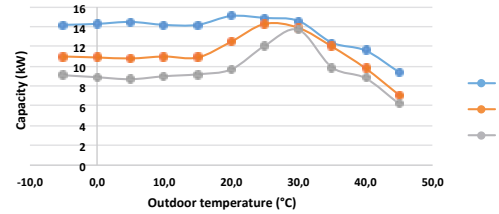


PAC BT 12 KW PERFORMANCES

HEATING

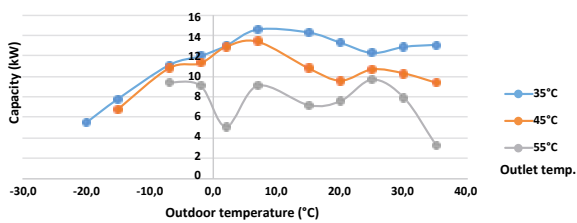


COOLING

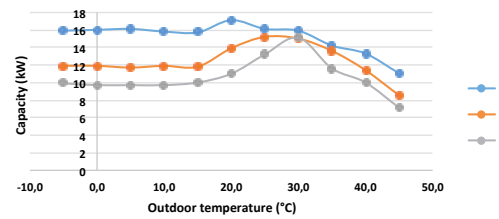


PAC BT 14 KW PERFORMANCES

HEATING

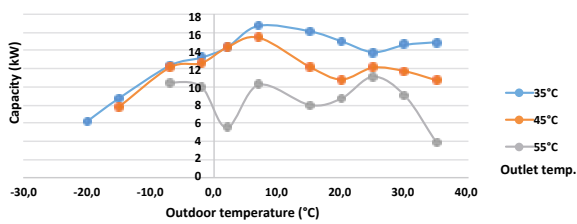


COOLING

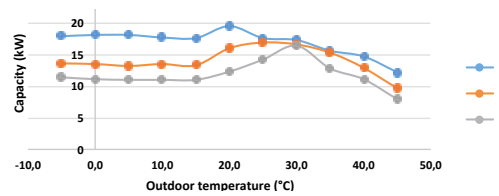


PAC BT 16 KW PERFORMANCES

HEATING



COOLING









PAC BT MONOBLOC TECHNICAL DATA - SINGLE PHASE

Models		AWHM-PAC-BT-MB-5KW-H11	AWHM-PAC-BT-MB-7KW-H11	AWHM-PAC-BT-MB-9KW-H11	AWHM-PAC-BT-MB-10KW-H11	AWHM-PAC-BT-MB-12KW-H11	AWHM-PAC-BT-MB-14KW-H11	AWHM-PAC-BT-MB-16KW-H11		
Code 1~230V-50Hz		7HP061015	7HP061016	7HP061017	7HP061018	7HP061019	7HP061020	7HP061021		
HEATING MODE - OUTDOOR AIR REGIME +7°C / 85% HUMID BULB										
Water regime 30/35°C*	Heating capacity	kW	4.58	6.55	8.64	10.43	12.17	14.76	16.33	
	Power input	kW	0.97	1.45	2.01	2.28	2.73	3.40	3.90	
	COP		4.72	4.52	4.30	4.57	4.46	4.34	4.19	
Water regime 40/45°C	Heating capacity	kW	4.67	6.69	9.19	10.17	12.58	14.08	16.12	
	Power input	kW	1.43	2.05	2.63	3.08	3.86	4.47	5.22	
	COP		3.27	3.26	3.49	3.30	3.26	3.15	3.09	
Water regime 47/55°C	Heating capacity	kW	4.76	6.24	9.35	8.89	10.55	11.64	13.43	
	Power input	kW	1.88	2.39	3.28	3.38	3.84	4.38	5.22	
	COP		2.53	2.61	2.85	2.63	2.75	2.66	2.57	
COOLING MODE - OUTDOOR AIR REGIME 35°C										
Water regime indoor 23°C outdoor 18°C	Heating capacity	kW	4.55	6.45	8.35	10.25	12.19	14.61	14.82	
	Power input	kW	1.00	1.47	2.10	2.06	2.65	3.32	3.66	
	EER		4.55	4.40	3.97	4.98	4.60	4.40	4.05	
Water regime indoor 12°C outdoor 7°C	Heating capacity	kW	4.55	6.71	8.06	10.44	12.21	12.95	13.72	
	Power input	kW	1.55	2.57	3.51	3.28	4.17	4.53	5.16	
	EER		2.94	2.61	2.30	3.18	2.93	2.86	2.66	
OTHERS FEATURES										
Energy label	Water outlet à 35°C	ηs	175.9%	178.3%	163.3%	161.7%	165.6%	172.7%	167.5%	
		class	A++	A++	A++	A++	A++	A++	A++	
	Water outlet à 55°C	ηs	125.7%	125.7%	127.1%	129.3%	129.3%	128.5%	125.1%	
		class	A++	A++	A++	A++	A++	A++	A++	
SCOP	Water outlet à 35°C		4.47	4.53	4.16	4.12	4.21	4.39	4.26	
	Water outlet à 55°C		3.22	3.22	3.25	3.31	3.31	3.29	3.20	
SEER	Water outlet à 7°C		4.61	4.75	4.52	5.24	5.34	4.86	4.34	
	Water outlet à 18°C		5.90	5.74	5.69	6.22	6.64	6.18	5.88	
Operating range	Cooling	°C							-5/46	
	Heating	°C							-20/35	
	ECS	°C							-20/43	
Water outlet temperatures	Cooling	°C							5/25	
	Heating	°C							25/60	
	ECS	°C							40/60	
Fuse rating	A	25	25	25	40	40	40	40		
Compressor type		Twin rotary DC inverter								
Outdoor fan	Number		1	1	1	2	2	2	2	
	Air flow	m³/h	3050	3050	3050	6150	6150	6150	6150	
Circulator	Head	m	6	6	6	7.5	7.5	7.5	7.5	
Refrigerant	Type		R410A							
	Precharge	kg	2.4	2.4	2.4	3.6	3.6	3.6	3.6	
Auxiliary heat resistance	Build in standard	kW	-	-	-	3	3	3	3	
	Optional	kW	3	3	3	4.5	4.5	4.5	4.5	
	Power stage number		1	1	1	2	2	2	2	
	Power supply	V/Ph/Hz	220-240/1/50							
Sound level	Heating	dB(A)	61	65	68	66	67	71	71	
	Cooling	dB(A)	64	66	67	64	67	70	70	
Outline dimensions (WxHxD)	mm	1210x945x402				1404x1414x405				
Package dimensions (WxHxD)	mm	1500x1140x450				1475x1580x440				
Net weight/Gross weight	kg	99/117				162/183				
Liquid pipe diameter	inches	1" Female BSP				1-1/4" Female BSP				
Total water volume	liters	2	2	2	5.5	5.5	5.5	5.5		

PAC BT MONOBLOC TECHNICAL DATA - THREE PHASES

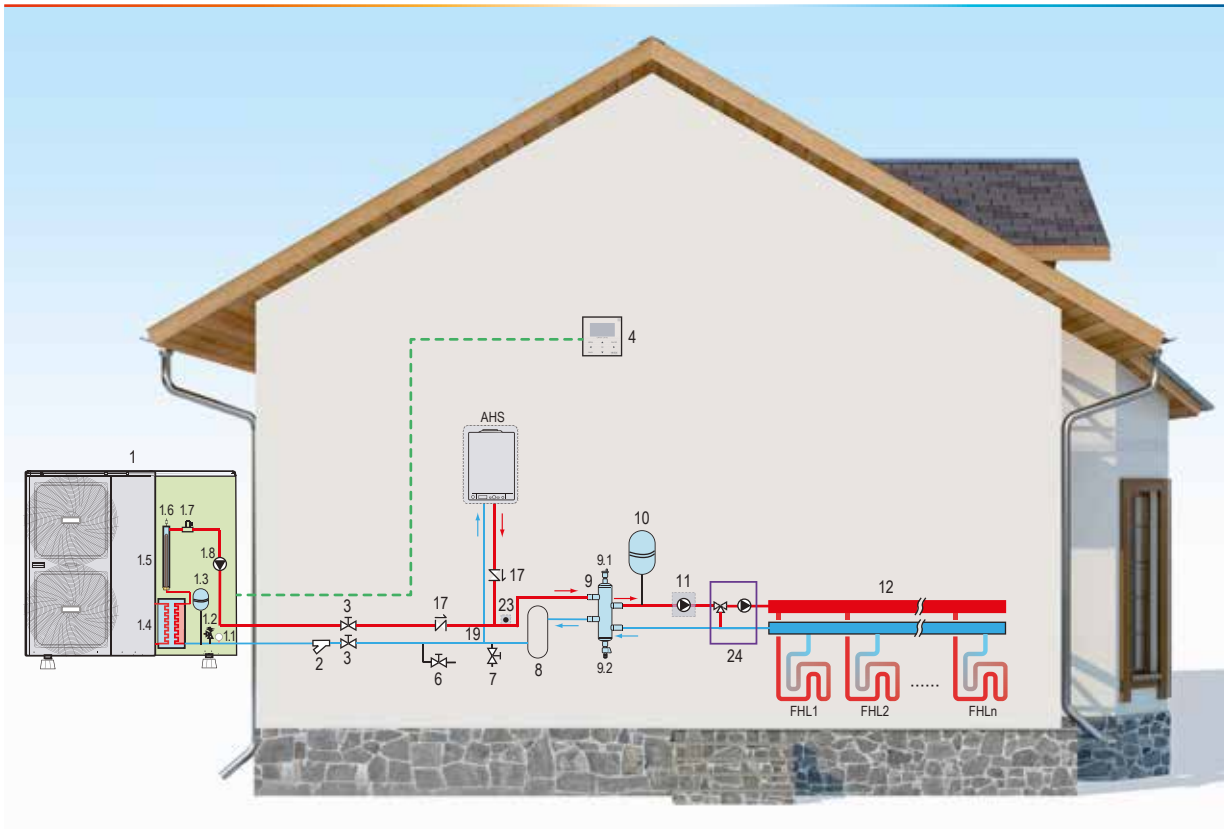
Models		AWHM-PAC-BT-MB-12KW-H13	AWHM-PAC-BT-MB-14KW-H13	AWHM-PAC-BT-MB-16KW-H13	
Code 3~400V-50Hz		7HP061022	7HP061023	7HP061023	
HEATING MODE - OUTDOOR AIR REGIME +7°C / 85% HUMID BULB					
Water regime 30/35°C*	Heating capacity	kW	12.37	14.10	16.30
	Power input	kW	2.76	3.26	3.88
	COP		4.48	4.33	4.20
Water regime 40/45°C	Heating capacity	kW	12.02	14.11	16.06
	Power input	kW	3.72	4.46	5.23
	COP		3.23	3.16	3.07
Water regime 47/55°C	Heating capacity	kW	12.51	14.41	16.15
	Power input	kW	4.43	5.16	5.86
	COP		2.82	2.79	2.76
COOLING MODE - OUTDOOR AIR REGIME 35°C					
Water regime indoor 23°C outdoor 18°C	Heating capacity	kW	12.64	14.03	15.10
	Power input	kW	2.75	3.26	3.78
	EER		4.60	4.30	4.00
Water regime indoor 12°C outdoor 7°C	Heating capacity	kW	12.58	13.80	15.26
	Power input	kW	4.32	5.14	6.41
	EER		2.91	2.68	2.38
OTHERS FEATURES					
Energy label	Water outlet à 35°C	η _s	174.9%	167.9%	163.6%
		class	A++	A++	A++
	Water outlet à 55°C	η _s	130.9%	127.9%	125.6%
		class	A++	A++	A++
SCOP	Water outlet à 35°C		4.45	4.27	4.17
	Water outlet à 55°C		3.35	3.27	3.22
SEER	Water outlet à 7°C		5.02	4.88	4.92
	Water outlet à 18°C		5.78	5.72	5.87
Operating range	Cooling	°C		-5/46	
	Heating	°C		-20/35	
	ECS	°C		-20/35	
Water outlet temperatures	Cooling	°C		5/25	
	Heating	°C		25/60	
	ECS	°C		40/60	
Fuse rating	A	20	20	20	
Compressor type			Twin rotary DC inverter		
Outdoor fan	Number		2	2	2
	Air flow	m ³ /h	6150	6150	6150
Circulator	Head	m	7.5	7.5	7.5
Refrigerant	Type		R410A		
	Precharge	kg	3.6	3.6	3.6
Auxiliary heat resistance	Build in standard	kW	4.5	4.5	4.5
	Optional	kW	-	-	-
	Power stage number		1	1	1
	Power supply	V/Ph/Hz	380-415/3/50		
Sound level	Heating	dB(A)	68	71	71
	Cooling	dB(A)	69	70	71
Outline dimensions (WxHxD)	mm	1404x1414x405			
Package dimensions (WxHxD)	mm	1475x1580x440			
Net weight/Gross weight	kg	177/198			
Liquid pipe diameter	inches	1-1/4" Female BSP			
Total water volume	liters	5.5	5.5	5.5	

PRINCIPALES OPTIONS ET ACCESSOIRES

Photo / Part number	Accessory	Function
ACCESSOIRES FOURNIS		
(included)	Y-shape filter 	Protect the heat pump from sludging and preserve optimum thermal exchange.
 (included)	User interface kit (digital remote controller)	ON/OFF unit, outside heat source. Operation Mode setting: cooling/heating/AUTO DHW setting: Fast DHW / holiday/disinfect/ DHW pump setting Temp. setting: water outlet temp, room temp. Time setting: 12H/24H Timer ON/OFF setting, Day/Weekly Display space heating/cooling set temp., water tank temp. Display components status Query, malfunction Code, Parameter, Test mode setting
(included)	T5: Thermistor for domestic hot water tank	DHW temperature control.
ACCESSOIRES OPTIONNELS		
 7ACFH0662	300 L domestic hot water tank kit	Optimised with the operation of the PAC - Programmable anti-legionellosis function - Management of the three-way valve / circulator pump couple - 3.1 m ² exchange surface
 7ACFH0822	On-line electric heater - 3 kW	It provides extra heating when the heating demand is greater than the capacity of the heat pump. It is matching only with sizes 5, 7 and 9.
 7ACFH0666	Settling filter (pot) 	Protect the heat pump from sludging and preserve optimum thermal exchange.
 7ACTL0510	Floor support rubber recycled (pair)  Long: 1 000 mm	Necessary for a professional installation.

 Mandatory accessory.

SCHEMATIC DIAGRAM LOW TEMPERATURE HEAT PUMP - MONOBLOC

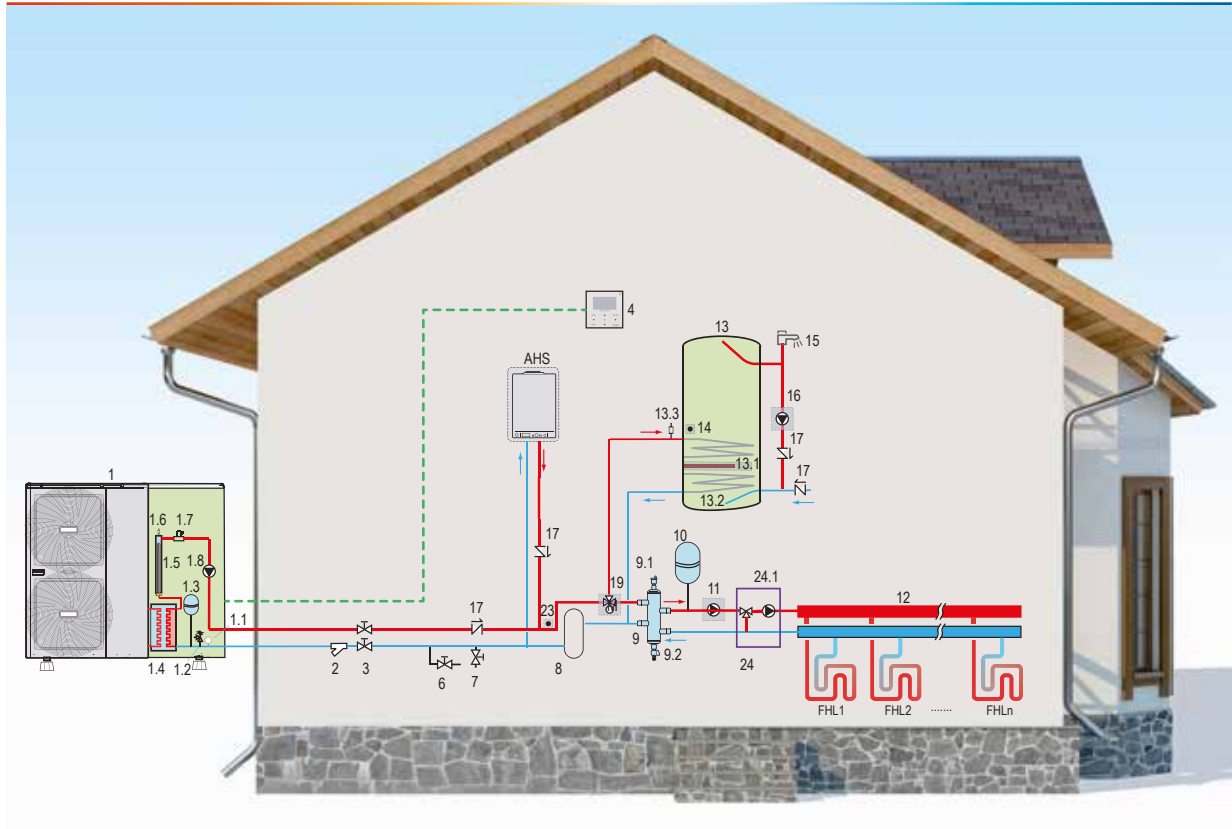


CAPTIONS

N°	NAME
1	Outdoor unit
1.1	Manometer
1.2	Pressure relief valve
1.3	Expansion vessel
1.4	Plate heat exchanger
1.5	Backup heater
1.6	Air purge valve
1.7	Flow switch
1.8	P_i: circulation pump inside the unit
2	Y-shape filter
3	Stop valve (field supply)
4	User interface
6	Drain valve (field supply)
7	Fill valve (field supply)

N°	NAME
8	Buffer tank (field supply)
9	Balance tank (field supply)
9.1	Air purge valve
9.2	Drain valve
10	Expansion vessel (field supply)
11	P_o: outside circulation pump (field supply)
12	Collector (field supply)
17	Non-return valve (field supply)
19	SV1: 3-way valve (field supply)
23	T1B: Temperature sensor (field supply)
24	Mixing station (field supply)
FHL	1...n floor heating loop
AHS	Additional heating source (boiler)

SCHEMATIC DIAGRAM LOW TEMPERATURE HEAT PUMP - MONOBLOC



CAPTIONS

N°	NAME
1	Outdoor unit
1.1	Manometer
1.2	Pressure relief valve
1.3	Expansion vessel
1.4	Plate heat exchanger
1.5	Backup heater
1.6	Air purge valve
1.7	Flow switch
1.8	P_i: circulation pump inside the unit
2	Y-shape filter
3	Stop valve (field supply)
4	User interface
6	Drain valve (field supply)
7	Fill valve (field supply)
8	Buffer tank (field supply)
9	Balance tank (field supply)
9.1	Air purge valve
9.2	Drain valve

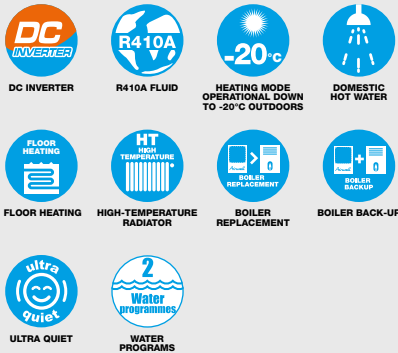
N°	NAME
10	Expansion vessel (field supply)
11	P_o: outside circulation pump (field supply)
12	Collector (field supply)
13	Domestic hot water tank (field supply)
13.1	Booster heater
13.2	Heat exchanger coil
13.3	Air purge valve
14	T5:temperature sensor
15	Hot water tap (field supply)
16	P_d: DHW pump (field supply)
17	Non-return valve (field supply)
19	SV1: 3-way valve (field supply)
23	T1B: Temperature sensor (field supply)
24	Mixing station (field supply)
24.1	P_c: mixing pump
25	3-way valve (field supply)
FHL	1...n floor heating loop
AHS	Additional heating source (boiler)



+ PRODUCTS

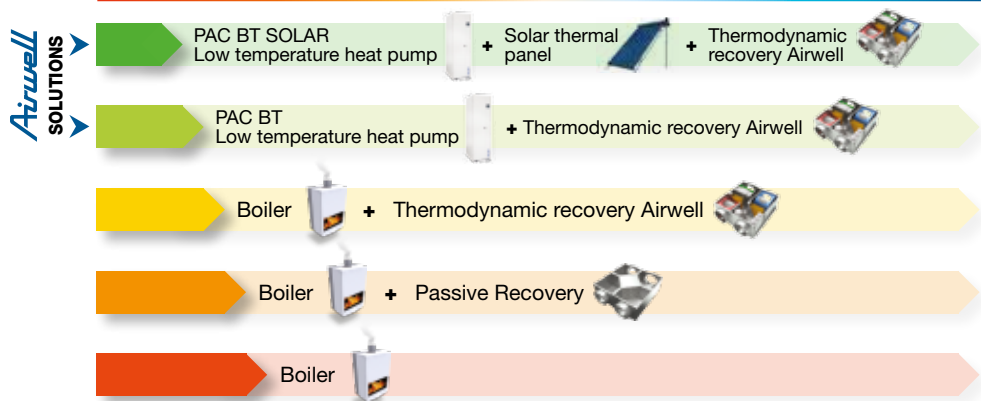
- **High efficiency:** ηs 128%.
- High flexibility due to **DC Inverter** compressor: operation optimised at partial load.
- **Very low noise level:** 49dB(A) for outdoor unit.
- Domestic Hot Water tank - 280L included: **Compact solution.**
- **Modular system:** boiler back-up (optional) and additional DHW tank (optional).

FEATURES



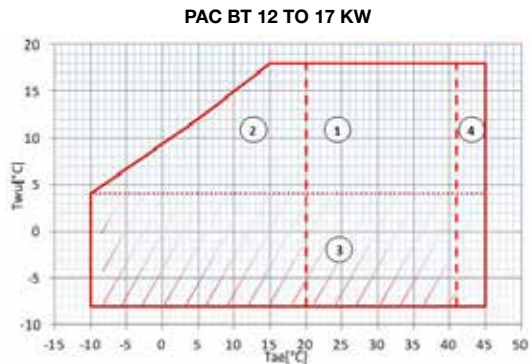
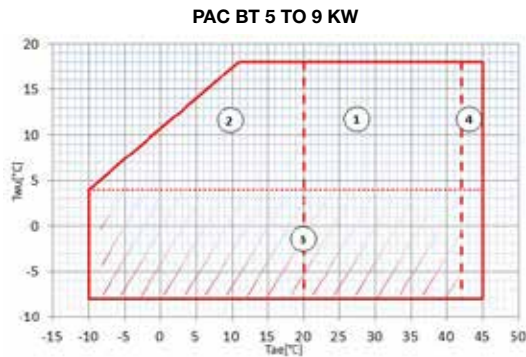
- Ideal solution for radiant panel in heating and cooling mode, high temperature heater, towel dryer or fan-coil units.
- 5.2 to 17 kW in heating mode / 4.1 to 15.5 kW in cooling mode over 6 models.
- Operating in heating mode up to -20°C outdoor temperature (water outlet temperature up to 60°C).
- Operating in cooling mode up to 45°C (outdoor temperature).
- Digital display on indoor unit: mode selection (heating, cooling and Domestic Hot Water), weekly timer and holidays, diagnosis aid (display parameters, troubleshooting).
- Provides optimal comfort all year long: Only one system for heating and cooling.
- Solar heat recovery: free energy via solar exchanger (solar connection indoor unit model).

SPECIFIC PRIMARY ENERGY FOR HEATING



OPERATING RANGE

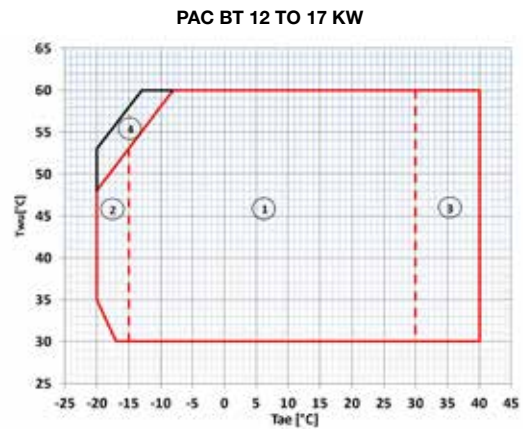
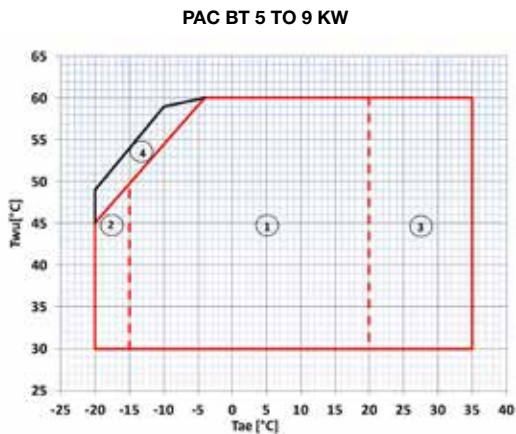
COOLING



T_{wu} [°C] = outlet exchanger water temperature. T_{ae} [°C]: External exchanger inlet air temperature.

1. Normal operating range
2. Normal operating range, with modulating fans
3. Operating range where the use of ethylene glycol is mandatory in relation to the temperature of the water at the outlet of the user side exchanger
4. Operating range with modulating compressor

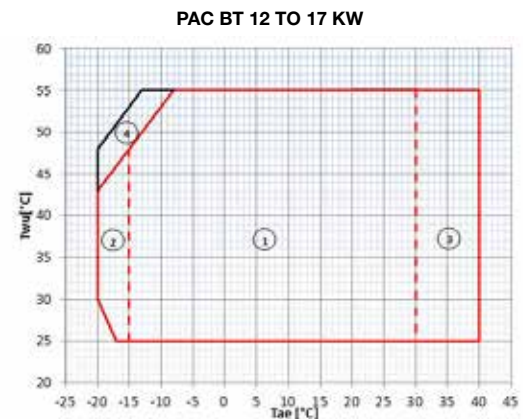
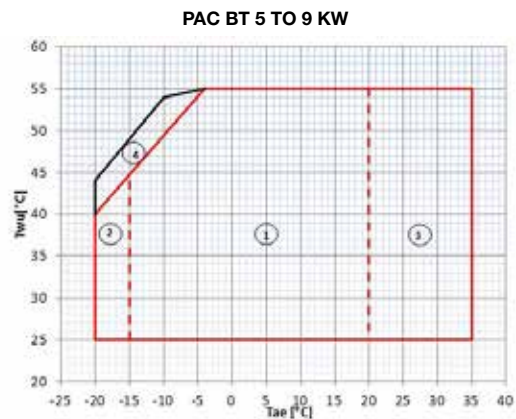
HEATING



T_{wu} [°C] = outlet exchanger water temperature. T_{ae} [°C]= External exchanger inlet air temperature.

1. Normal operating range
2. Operating range with modulating compressor
3. Operation with fans and compressors in modulation
4. Operating range with the use of the resistance (optional)

DOMESTIC HOT WATER

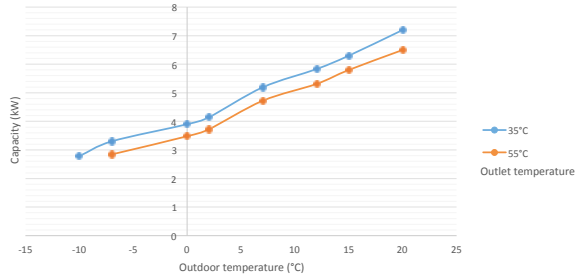


T_{wu} [°C] = outlet exchanger water temperature. T_{ae} [°C]= External exchanger inlet air temperature

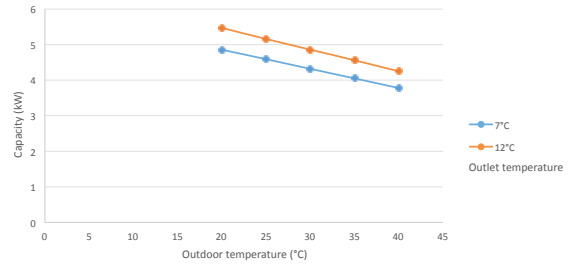
1. Normal operating range
2. Operating range with modulating compressor
3. Operation with fans and compressors in modulation
4. Operating range with the use of the resistance (optional)

PAC BT 5 KW PERFORMANCES

HEATING

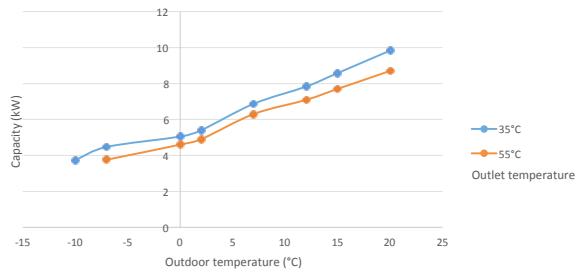


COOLING

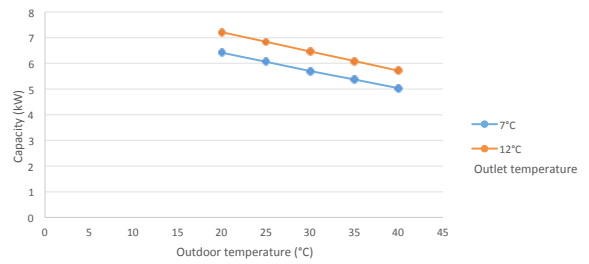


PAC BT 7 KW PERFORMANCES

HEATING

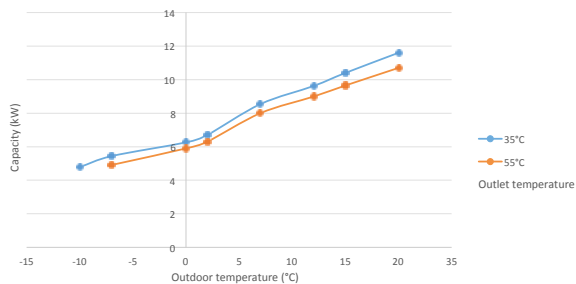


COOLING

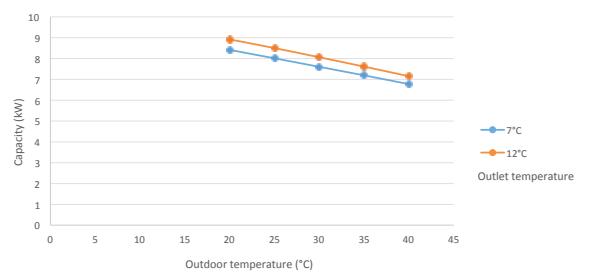


PAC BT 9 KW PERFORMANCES

HEATING

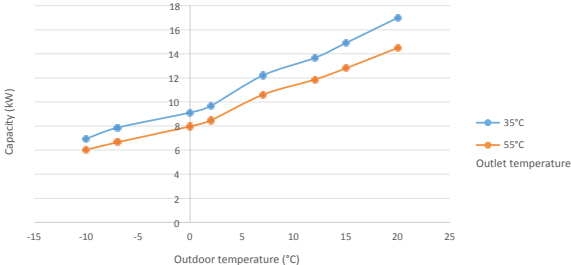


COOLING

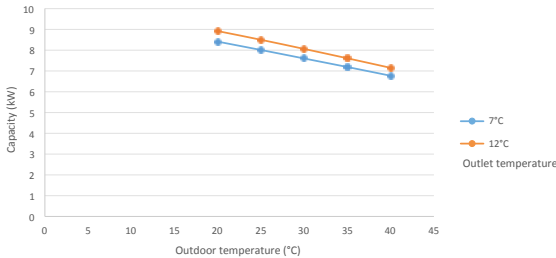


PAC BT 12 KW PERFORMANCES

HEATING

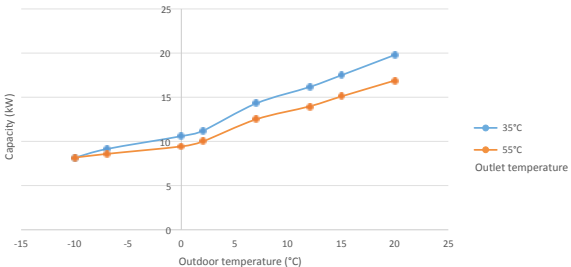


COOLING

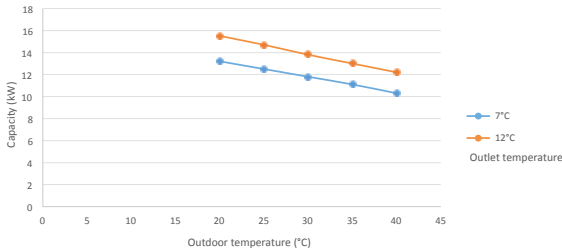


PAC BT 14 KW PERFORMANCES

HEATING

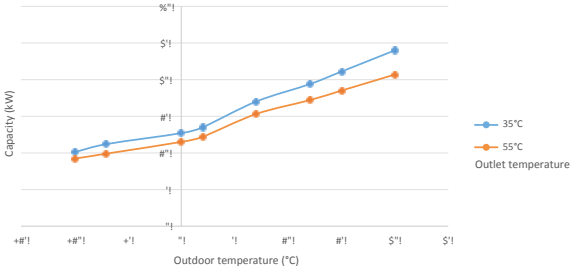


COOLING

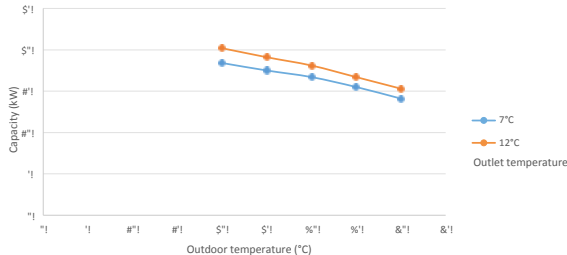


PAC BT 17 KW PERFORMANCES

HEATING



COOLING



PAC BT SPLIT TECHNICAL DATA

Indoor units		AWHK-PAC-BT-UI-5-9KW-H11	AWHK-PAC-BT-UI-5-9KW-H11	AWHK-PAC-BT-UI-5-9KW-H11	AWHK-PAC-BT-UI-12-17KW-H11	AWHK-PAC-BT-UI-12-17KW-H11	AWHK-PAC-BT-UI-12-17KW-H11
Part numbers		7HP010001	7HP010001	7HP010001	7HP010002	7HP010002	7HP010002
Solar connection indoor units		AWHK-PAC-BT-UI-5-9KWSOLAR-H11	AWHK-PAC-BT-UI-5-9KWSOLAR-H11	AWHK-PAC-BT-UI-5-9KWSOLAR-H11	AWHK-PAC-BT-UI-12-17KWSOLAR-H11	AWHK-PAC-BT-UI-12-17KWSOLAR-H11	AWHK-PAC-BT-UI-12-17KWSOLAR-H11
Part numbers		7HP010003	7HP010003	7HP010003	7HP010004	7HP010004	7HP010004
Outdoor units 1-230V-50Hz		AWAU-PAC-BT-UE-5KW-H11	AWAU-PAC-BT-UE-7KW-H11	AWAU-PAC-BT-UE-9KW-H11	AWAU-PAC-BT-UE-12KW-H11	AWAU-PAC-BT-UE-14KW-H11	-
Part numbers		7HP061005	7HP061006	7HP061007	7HP061009	7HP061011	-
Outdoor units 3-400V-50Hz-N		-	-	-	AWAU-PAC-BT-UE-12KW-H13	AWAU-PAC-BT-UE-14KW-H13	AWAU-PAC-BT-UE-17KW-H13
Part numbers		-	-	-	7HP061008	7HP061010	7HP061012
RADIANT PANEL							
Nominal water flow	l/h	900	1188	1476	2088	2448	2916
Pump nominal available pressure	kPa	51	50	47	53	47	37
Air 7°C Water 35°C							
Heating capacity	kW	5.19	6.87	8.54	12.2	14.3	17
Total power input	kW	1.32	1.76	2.18	3.12	3.66	4.35
COP ⁽¹⁾	-	3.94	3.91	3.91	3.91	3.91	3.91
Air 2°C Water 35°C							
Heating capacity	kW	4.06	5.4	6.7	9.59	11.2	13.5
Total power input	kW	1.29	1.71	2.13	3.07	3.58	4.26
COP	-	3.14	3.16	3.15	3.12	3.14	3.18
Air-7°C Water 35°C							
Heating capacity	kW	3.3	4.47	5.44	7.86	9.14	11.2
Total power input	kW	1.22	1.64	2	2.9	3.36	4.13
COP	-	2.7	2.71	2.72	2.71	2.72	2.71
Air 35°C Water 18°C							
Cooling capacity	kW	4.11	6.56	8.05	10.7	12.2	15.9
Total power input	kW	1.07	1.78	2.23	2.77	3.38	4.38
EER	-	3.85	3.69	3.61	3.86	3.61	3.64
TERMINAL UNIT							
Nominal water flow	l/h	828	1152	1512	2016	2340	2664
Pump nominal available pressure	kPa	51	50	46	55	49	72
Air 7°C Water 45°C							
Heating capacity	kW	5.01	6.59	8.65	11.6	13.6	16.6
Total power input	kW	1.59	2.11	2.69	3.77	4.5	5.5
COP	-	3.15	3.12	2.99	3.08	3.02	3.02
Air 2°C Water 45°C							
Heating capacity	kW	3.93	5.18	6.85	9.26	10.6	13.1
Total power input	kW	1.55	2.04	2.78	3.67	4.3	5.29
COP	-	2.54	2.54	2.47	2.53	2.47	2.49
Air-7°C Water 45°C							
Heating capacity	kW	3	3.9	5.3	7.28	8.65	10.6
Total power input	kW	1.47	1.69	2.59	3.64	4.13	5.17
COP	-	2.04	2.06	2.04	2	2.09	2.05
Air 35°C Water 7°C							
Cooling capacity	kW	4.05	5.37	7.19	8.65	11.1	15.5
Total power input	kW	1.46	1.93	2.79	3.12	4.51	5.95
EER	-	2.77	2.78	2.58	2.77	2.46	2.62
ESEER	-	4.08	4.02	3.89	4.03	4	4.06
RADIATOR							
Nominal water flow	l/h	396	540	684	900	1080	1332
Pump nominal available pressure	kPa	46	48	50	65	64	62
Air 7°C Water 55°C							
Heating capacity	kW	4.72	6.3	8	10.6	12.5	15.3
Total power input	kW	1.96	2.59	3.54	4.65	5.74	6.95
COP	-	2.41	2.44	2.26	2.29	2.17	2.2
Air 2°C Water 55°C							
Heating capacity	kW	3.72	4.92	6.3	8.48	10	12.1
Total power input	kW	1.9	2.48	3.39	4.58	5.65	6.69
COP	-	1.96	1.99	1.66	1.85	1.77	1.8
Air-7°C Water 55°C							
Heating capacity	kW	2.84	3.76	4.91	6.65	8.59	9.9
Total power input	kW	1.74	2.27	3.1	4.49	5.5	6.6

Indoor units		AWHK-PAC-BT-UI-5-9KW-H11	AWHK-PAC-BT-UI-5-9KW-H11	AWHK-PAC-BT-UI-5-9KW-H11	AWHK-PAC-BT-UI-12-17KW-H11	AWHK-PAC-BT-UI-12-17KW-H11	AWHK-PAC-BT-UI-12-17KW-H11
Part numbers		7HP010001	7HP010001	7HP010001	7HP010002	7HP010002	7HP010002
Solar connection indoor units		AWHK-PAC-BT-UI-5-9KWSOLAR-H11	AWHK-PAC-BT-UI-5-9KWSOLAR-H11	AWHK-PAC-BT-UI-5-9KWSOLAR-H11	AWHK-PAC-BT-UI-12-17KWSOLAR-H11	AWHK-PAC-BT-UI-12-17KWSOLAR-H11	AWHK-PAC-BT-UI-12-17KWSOLAR-H11
Part numbers		7HP010003	7HP010003	7HP010003	7HP010004	7HP010004	7HP010004
Outdoor units 1~230V-50Hz		AWAU-PAC-BT-UE-5KW-H11	AWAU-PAC-BT-UE-7KW-H11	AWAU-PAC-BT-UE-9KW-H11	AWAU-PAC-BT-UE-12KW-H11	AWAU-PAC-BT-UE-14KW-H11	-
Part numbers		7HP061005	7HP061006	7HP061007	7HP061009	7HP061011	-
Outdoor units 3~400V-50Hz-N		-	-	-	AWAU-PAC-BT-UE-12KW-H13	AWAU-PAC-BT-UE-14KW-H13	AWAU-PAC-BT-UE-17KW-H13
Part numbers		-	-	-	7HP061008	7HP061010	7HP061012
ELECTRICAL FEATURES							
Total power input max	kW	2.69	3.42	4.22	5.68	6.63	
Maximum inrush current value	A	11.99	15.13	18.61	25.26	29.54	
REFRIGERANT FEATURES							
Pipe diameter		3/8"-3/8"	1/2"-3/8"	1/2"-3/8"	5/8"-3/8"	5/8"-1/2"	3/4"-1/2"
Max length between ODU and IDU	m	25					
Max drop between IDU and ODU	m	15					
Refrigerant charge (R410A)	kg	2.9	2.9	2.9	4.9	6.6	8.5
INDOOR UNIT							
Minimal water flow	liters	17	20	25	33	40	50
Sound power level	dB(A)	42	42	42	42	42	42
Dimensions (LxHxD)	mm	600x2040x800					
Shipping weight	kg	170	170	170	190	190	190
Operating weight	kg	450	450	450	470	470	470
DHW Tank capacity	l	280					
DHW connection	inches	1/2"					
Solar exchanger capacity	W/K	2703	2703	2703	3186	3186	3186
Heating connection	inches	1"1/4					
OUTDOOR UNIT							
Sound power level	dB(A)	64	64	64	68	69	70
Sound pressure level (to 1m)	dB(A)	49	49	49	53	54	56
Dimensions (LxHxD)	mm	912x988x450	912x988x450	912x988x450	1087x1234x450	1738x1137x720	
Shipping weight	kg	102	105	113	157	161	225
Operating range - Air side - DHW	°C	-20/35	-20/35	-20/35	-20/40	-20/40	-20/40
Operating range - Air side - Cooling	°C	-10/45					
Operating range - Air side - Heating	°C	-20/35	-20/35	-20/35	-20/40	-20/40	-20/40
ERP							
SCOP		3.28	3.27	3.31	3.19	3.19	3.19
ERP system- average climate- Water 55°C (2)	Class/ ηs	A++ / 133	A++ / 133	A++ / 133	A++ / 130	A++ / 130	A++ / 130
Energy Class ERP Heating- Average climate- Water 55°C (3)	Class/ ηs system	A++ / 128	A++ / 128	A++ / 128	A++ / 125	A++ / 125	A++ / 125
Energy Class ERP DHW- Average climate- Water 55°C (4)	Class/ ηWh	A / 80	A / 80	A / 81	A / 81	A / 82	A / 82
DHW profile (5)		XL	XL	XL	XL	XL	XL

The Product is compliant with the ErP (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) No 811 / 2013 (rated heat output ≤ 70 kW at specified reference conditions) and the Commission delegated Regulation (EU) No 813 / 2013 (rated heat output ≤ 400 kW at specified reference conditions).

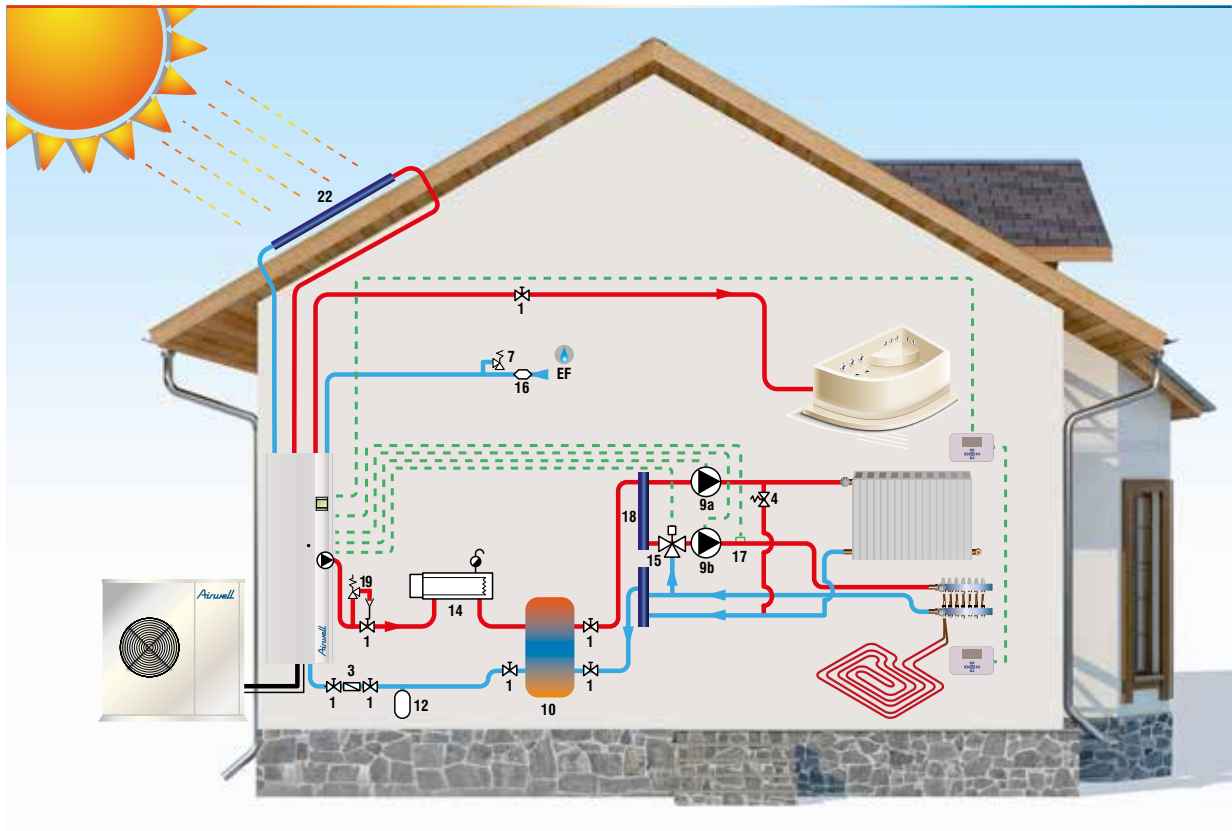
- (1) Air 7°C / Water 35°C internal water exchanger 30 / 35°C; outdoor air temperature 7°C BS / 6°C BH. Performances according to EN 14511:2013.
- (2) Seasonal Space Heating Energy Efficiency Class of the package according to Commission delegated Regulation (EU) No 811/2013.
- (3) Seasonal Space Heating Energy Efficiency Class according to Commission delegated Regulation (EU) No 811/2013. W = Water outlet temperature (°C).
- (4) Water Heating Energy Efficiency Class according to Commission delegated Regulation (EU) No 811/2013.
- (5) Considered Load profile for the definition of Domestic Hot Water Energy Class according to Commission delegated Regulation (EU) No 811/2013.

MAIN OPTIONS AND ACCESSORIES

Photo / Part number	Accessory	Function	
HYDRAULICS			
7ACFH0423	Shut-off valve with pressure tap	Control valve	
7ACFH0666	Settling filter (pot) !	Protect the heat pump from sludging and preserve optimum thermal exchange.	
7ACFH0278	Water filter !		
7ACFH0663	140-litre buffer tank / mixing tank	It protects the heat pump against short cycles that can reduce the useful life of the compressors and improves operation during defrosting phases.	
SYSTEM			
7ACFH0818	Electrical complement kit 2/4/6 kW mono/triphasis	Allows to ensure additional heating via electrical resistance.	
7ACEL1731	Boiler backup kit	Allows to connect a boiler (fuel, gas, wood...).	
7ACFH0819	Auxiliary storage tank ECS 280L	Allows to increase the storage capacity of ECS.	
7ACFH0821	Kit bi-zone 1 temperature PAC BT	Hydraulic braker with board to booster management + n°2 Booster hydraulic kit not mixed	
7ACFH0820	Kit bi-zone 2 temperature PAC BT	Hydraulic braker with board to booster management + n°1 Booster hydraulic kit not mixed + n° 1 Mixed booster hydraulic kit	
INSTALLATION AND REGULATION			
7ACEL1732 + 7ACEL1733	RCW15 Thermostat PAC BT Power supply 12V pour RCW15 PAC BT	Temperature and humidity thermostat / Remote keyboard / weekly timer.	
	7ACTL0509	Floor support rubber recycled (pair) Long: 600 mm	Necessary for a professional installation For models: 5 to 14 kW
	7ACTL0510	Floor support rubber recycled (pair) Long: 1 000 mm	Necessary for a professional installation For model: 17 kW

! Mandatory accessory.

SCHEMATIC DIAGRAM PAC BT INSTALLATION WITH THERMAL SOLAR PANEL AND TWO TEMPERATURE ZONE



This diagram is recommended when the flow rate of the heat pump is permanently guaranteed and close to the nominal value (no thermostatically controlled valve). The buffer tank (2) completes the volume of water in circulation in order to guarantee the minimum volume.

(1) The list of diagrams is not exhaustive. Each case can differ from one installation to the next.

CAPTIONS

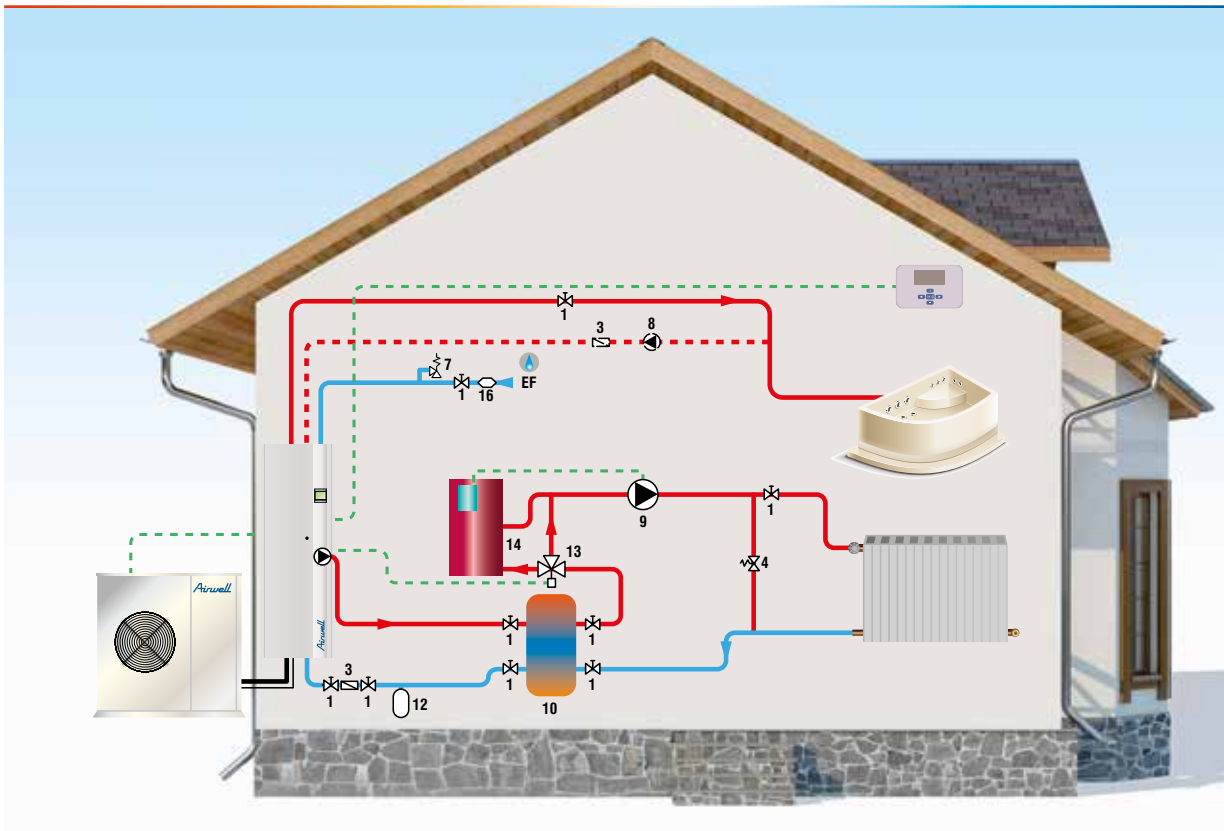
N°	NAME	CODE
1	Shut-off valve	7ACFH0423
3	Water filter Pot	7ACFH0278 7ACFH0666
4	Pressure release valve	*
7	Plumbing safety unit	*
8	Recirculator pump	*
9	Circulator pump	*
10	140 L mixing tank	7ACFH0663
12	Expansion vessel	* Dimensioning calculation needed**
13	Optional in line warmer	7ACFH0665
14	Electric heater or boiler	*
15	Safety valve	*
16	Backflow preventer	*
17	Domestic hot water preparation kit	7ACFH0789 for existing hot water tank with HIGH outlet 7ACFH0801 for existing hot water tank with LOW outlet
18	Feeder	*
19	Safety valve	*
22	Solar thermal panel	
	Cold water	
	Hot water	
	Heat pump communication	
	DHW recycling loop	

* Components not supplied.

** Always check that the capacity of the vessel is suitable for the installation.

Mandatory accessory.

SCHEMATIC DIAGRAM PAC BT INSTALLATION WITH BOILER BACK UP












We recommend installing a zone valve to avoid heat losses by the boiler when the split heat pump is operating alone. All the members must be sized such as to minimize pressure loss. The flow rate in the heating circuit is normally guaranteed by the circulator pump already in place in the installation (recommended solution) or by the circulator pump of the split heat pump. In this case, make sure that the circulator pump has enough pressure available. The small amount of water added by the presence of the split heat pump does not necessarily require the existing expansion vessel to be replaced, its volume should nevertheless be checked.

Important: The hydraulic kit proposed as an option can be used to prepare the circuit for connecting the split heat pump in accordance with our recommendations. The hydraulic kit is available with or without a boiler back-up valve.


Note: The components of the installation will be supplied by the installer.

CAPTIONS

N°	NAME	CODE
1	Shut-off valve	7ACFH0423
3	Water filter  Pot 	7ACFH0278 7ACFH0666
4	Pressure release valve	*
7	Plumbing safety unit	*
8	Recirculator pump	*
9	Circulator pump	*
10	140 L mixing tank	7ACFH0663
12	Expansion vessel 	* Dimensioning calculation needed**
13	Optional in line warmer	7ACFH0665
14	Electric heater or boiler	*
15	Safety valve 	*
16	Backflow preventer 	*
	Cold water	
	Hot water	
	Heat pump communication	
	DHW recycling loop	

* Components not supplied.

** Always check that the capacity of the vessel is suitable for the installation.

 Mandatory accessory.

Heat pumps
Heating only

PAC HT HIGH TEMPERATURE MONOBLOC HEAT PUMP



COP up to 4.52

A⁺



- Ideal for renovations (HT) as well as for new construction (LT).
- Constant operation at +65°C with -20°C outdoors.
- 6 to 18 kW of heating over 3 models.
- A single refrigerant fluid: R407C.
- Possibility of installing heat pumps in cascade.
- Patents Airwell: two-stage compression and oil management system.
- “Plug and play” system: easy for boiler replacement.
- Large digital display with diagnosis aid.
- Heating only.

+ PRODUCTS

- **Very low noise level: 67dB(A).**
- Very high performance, COP up to 4.52.
- “Antifreeze” evaporator, up to 4 hours without defrosting depending on the conditions.
- Inverter fan motor: energy saving.
- Easy maintenance.

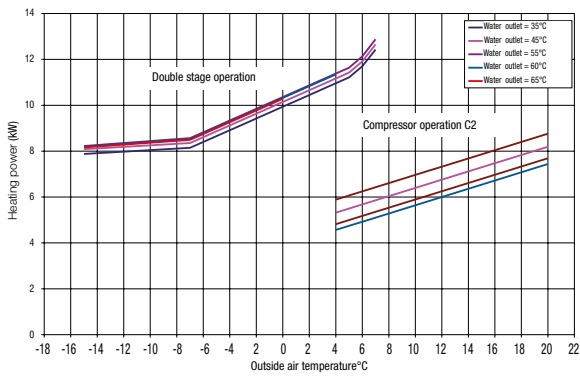
FEATURES

 R407C FLUID	 HEATING MODE OPERATIONAL DOWN TO -20°C OUTDOORS	 HIGH TEMPERATURE UP TO 65°C	 DOMESTIC HOT WATER
 FLOOR HEATING	 HIGH-TEMPERATURE RADIATOR	 BOILER REPLACEMENT	 BOILER BACK-UP
 ULTRA QUIET	 WATER PROGRAMS	 COMPRESSOR AND PARTS WARRANTY	 PATENTED

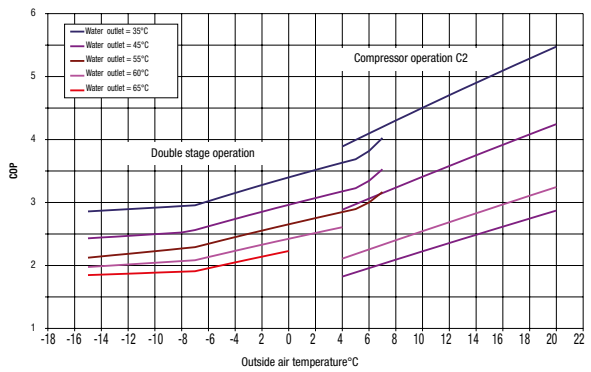


PAC HT 12-6 PERFORMANCES

HEATING

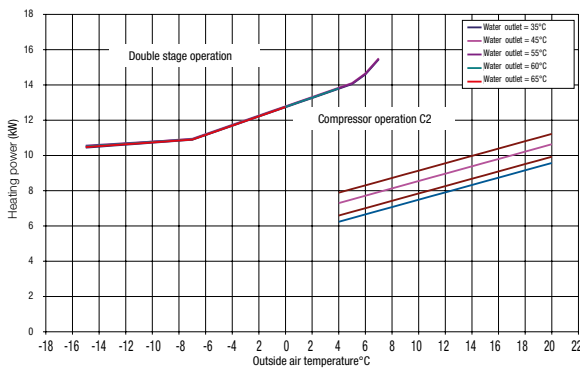


COP

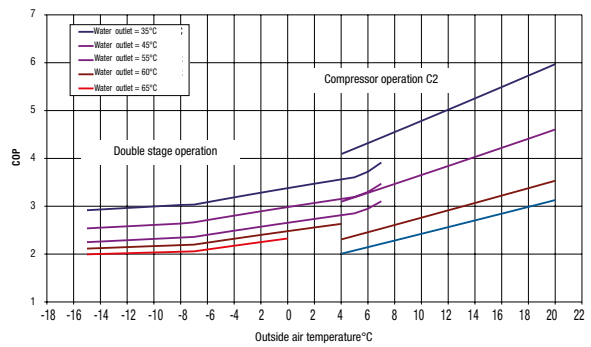


PAC HT 14-7 PERFORMANCES

HEATING

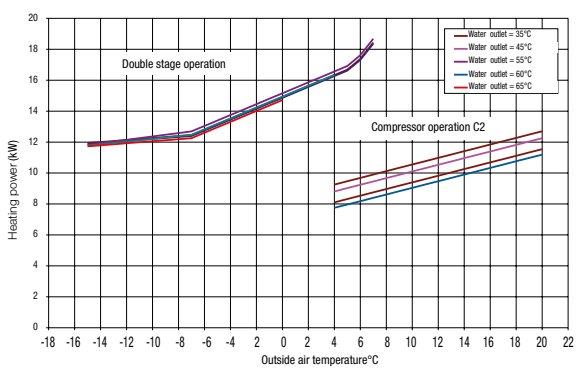


COP

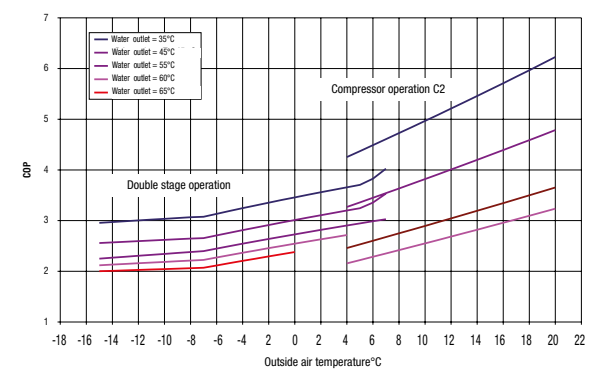


PAC HT 18-9 PERFORMANCES

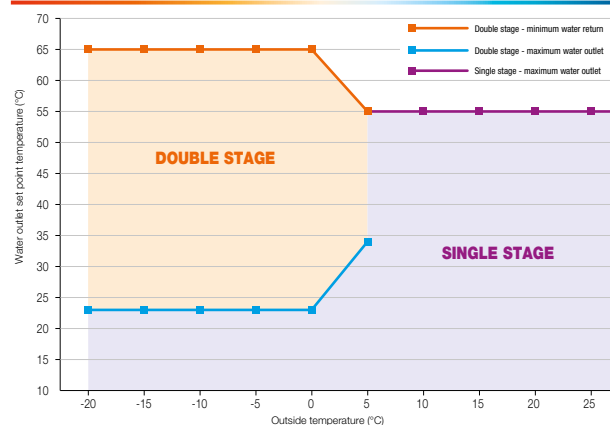
HEATING



COP



OPERATING LIMITS





PAC HT MONOBLOC TECHNICAL DATA

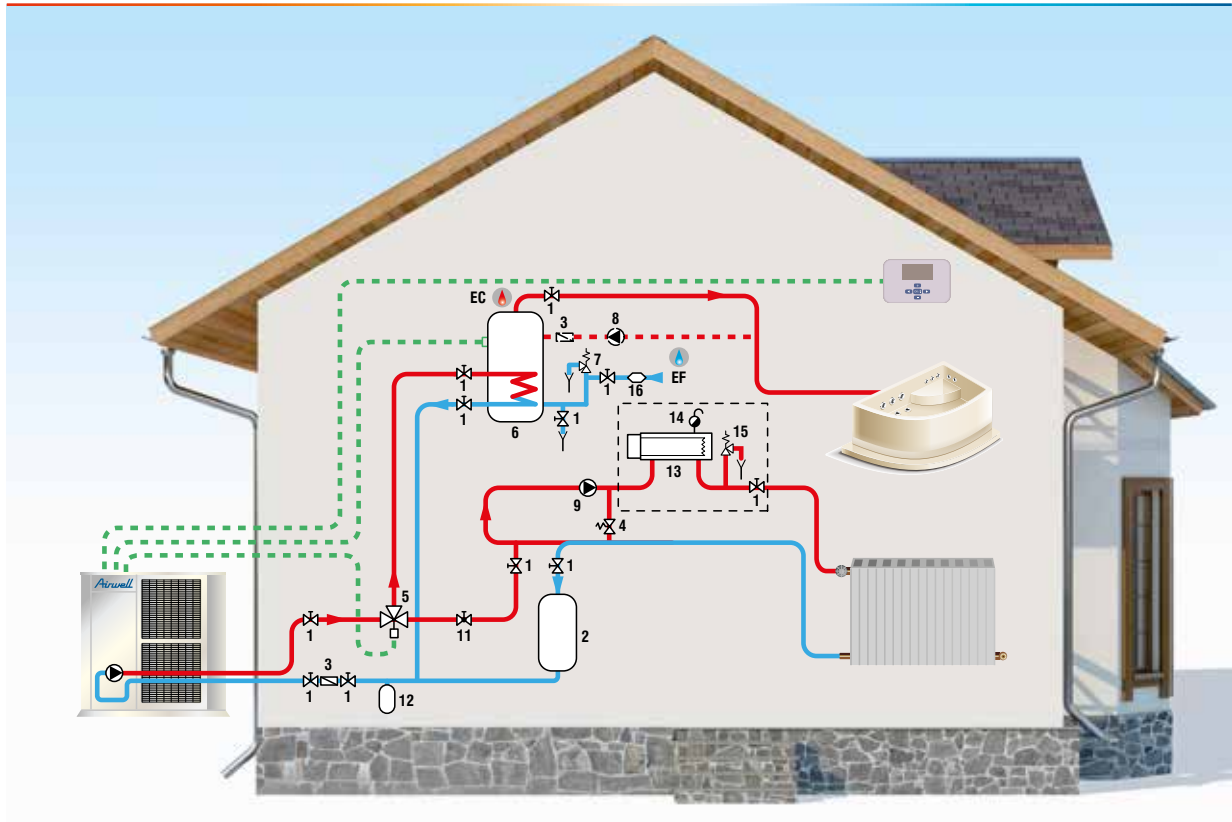
Models		PAC HT 12-6	PAC HT 14-7	PAC HT 18-9	
Part number 1~230V-50Hz		70G013011	70G013013	-	
Part number 3~400V-50Hz		70G013012	70G013014	70G013015	
SCOP/Energy label (average climate)		3.79/A+	3.85/A+	3,87/A++	
OUTDOOR AIR REGIME +7°C / +6°C HUMID BULB					
Water regime 30/35°C*	Single compressor heating power	kW	6.30	7.40	8.98
	Input power	kW	1.53	1.74	2.10
	COP		4.12	4.25	4.28
Water regime 45°C	Single compressor heating power	kW	5.74	7.77	9.27
	Input power	kW	1.86	2.35	2.67
	COP		3.09	3.31	3.47
Water regime 55°C	Bi-compressor heating power	kW	5.25	7.08	8.58
	Input power	kW	2.30	2.85	3.27
	COP		2.28	2.48	2.62
OUTDOOR AIR REGIME +2°C / +1°C HUMID BULB					
Water regime 35°C	Bi-compressor heating power	kW	10.31	13.00	15.32
	Input power	kW	2.99	3.82	4.39
	COP		3.45	3.40	3.49
OUTDOOR AIR REGIME -7°C / -8°C HUMID BULB					
Water regime 35°C	Bi-compressor heating power	kW	8.21	10.89	12.46
	Input power	kW	2.78	3.59	4.05
	COP		2.95	3.03	3.08
Water regime 55°C	Bi-compressor heating power	kW	8.40	10.71	12.44
	Input power	kW	3.74	4.63	5.29
	COP		2.25	2.31	2.35
Water regime 65°C	Bi-compressor heating power	kW	8.33	10.69	12.01
	Input power	kW	4.45	5.30	5.92
	COP		1.87	2.02	2.03
OUTDOOR AIR REGIME -15°C					
Water regime 35°C	Bi-compressor heating power	kW	7.79	10.24	11.71
	Input power	kW	2.78	3.58	4.04
	COP		2.80	2.86	2.90
OUTDOOR AIR REGIME -20°C					
Water regime 55°C	Bi-compressor heating power	kW	7.87	10.12	11.06
	Input power	kW	3.95	4.73	5.22
	COP		1.99	2.14	2.12
OTHERS FEATURES		PAC HT 12-6	PAC HT 14-7	PAC HT 18-9	
Nominal water flow	l/h	1030	1370	1580	
Available hydraulic pressure (HS)	kPa	55	48	55	
Outdoor temperature operating limits	°C	-20			
Water outlet temperatures (min./max.)	°C	+25/+65			
Sound power level	dB(A)	67			
Outdoor unit dimensions (WxHxD)	mm	1456.60 x 1308 x 516			
PIPE LINE					
Water inlet	inches	1" female			
Water outlet	inches	1" female			

*The Heat Pumps NF and Eurovent Certifications are based on these data.

MAIN OPTIONS AND ACCESSORIES

Photo / Part number	Accessory	Function
HYDRAULICS		
7ACFH0423	Shut-off valve with pressure tap	Control valve
 7ACFH0666	Settling filter (pot)	Protect the heat pump from sludging and preserve optimum thermal exchange.
7ACFH0278	Water filter	
 7ACFH0663	140-litre buffer tank / mixing tank	It protects the heat pump against short cycles that can reduce the useful life of the compressors and improves operation during defrosting phases.
SYSTEM		
 7ACFH0543	Three-way valve	Three-way valve alone for domestic hot water management or boiler back-up
 7ACFH0662	300 L domestic hot water tank kit	Optimised with the operation of the PAC HT - Programmable anti-legionellosis function - Management of the three-way valve / circulator pump couple - 3.1 m ² exchange surface
 7ACFH0789 (for existing hot water tank with high outlet) 7ACFH0801 (for existing hot water tank with low outlet)	Kit for electrical DHW tank - Top outlet	Plate exchanger and circulator pump kit for domestic hot water, top outlet (sensor supplied for installation in a thimble)
	Kit for electrical DHW tank - Bottom outlet	Plate exchanger and circulator pump kit for domestic hot water, bottom outlet (sensor supplied and installed)
 7ACFH0665	On-line electric heater - 2/4/6 kW	Installation inside the building, offers two power stages (2 and 4 kW, or 6 kW in total). Provides extra heating when the heating demand is greater than the capacity of the heat pump.
 7ACFH0490 (kit) 7ACFH0491 (alone)	Hydraulic connection kit with three-way valve	For connecting to the boiler, available alone or in a complete kit with the three-way valve. Made up of a set of assembled pipes and valves, a set of connectors with sphericalconical seat.
	Hydraulic connection kit without three-way valve	
INSTALLATION AND REGULATION		
 7ACEL1592	Wired ambient thermostat	- Adjustment of ambient temperature - Daily or weekly programming - Holiday programming, no-frost mode
 7ACEL1593	Remote wireless ambient thermostat unit	- Adjustment of ambient temperature - Daily or weekly programming - Holiday programming, no-frost mode
 7ACTL0472	Shock-absorbing support feet	Raise the heat pump by 10 cm, allow the evacuation of condensates and defrosting water.
7ACEL1535	Three-phase starting intensity limiter	Standard on single-phase

SCHEMATIC DIAGRAM HEAT PUMP MONOBLOC AND DOMESTIC HOT WATER



This diagram is recommended when the flow rate of the heat pump is permanently guaranteed and close to the nominal value (no thermostatically controlled valve). The buffer tank (2) completes the volume of water in circulation in order to guarantee the minimum volume.

(1) The list of diagrams is not exhaustive. Each case can differ from one installation to the next.

CAPTIONS

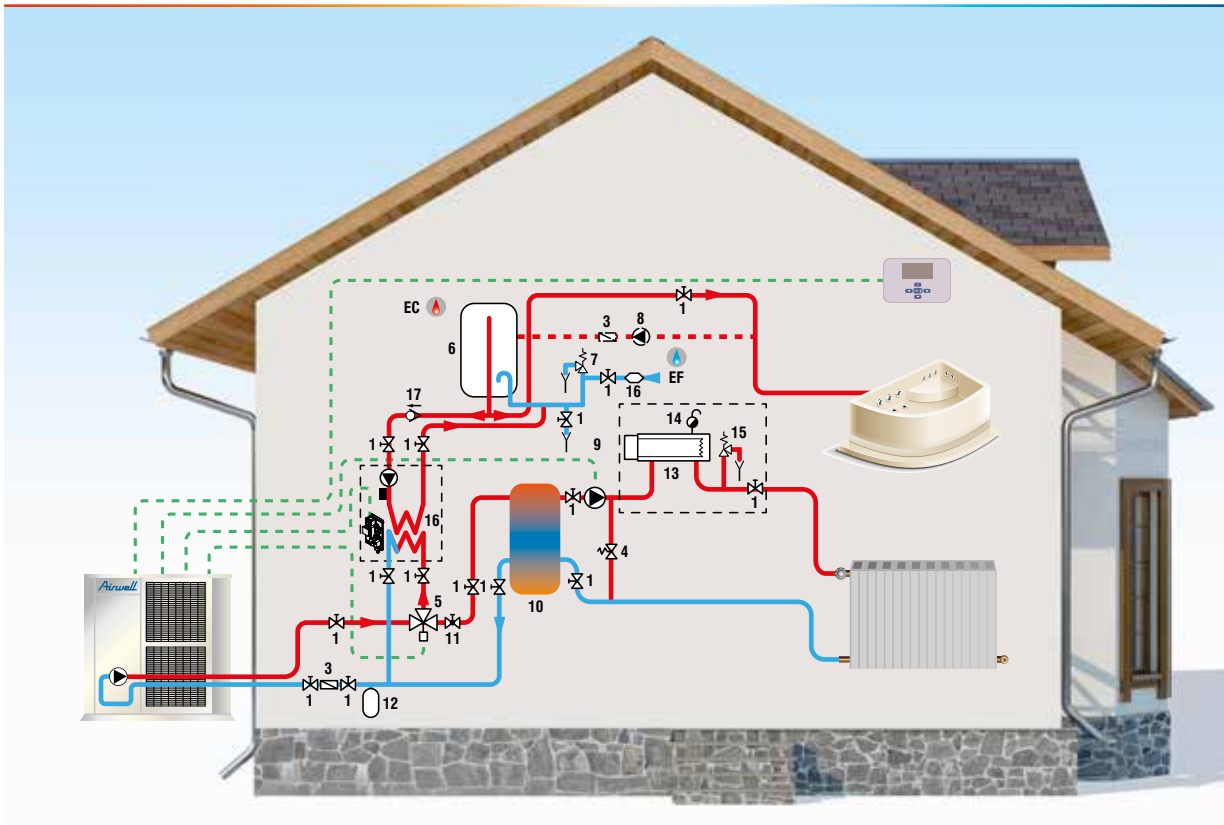
N°	NAME	CODE
1	Shut-off valve	7ACFH0423
2	Buffer tank	7ACFH0663
3	Water filter Pot	7ACFH0278 7ACFH0666
4	Pressure release valve	*
5	Domestic Hot Water 3-way valve (see lower diagram) or	7ACFH0543
6	300 L domestic hot water tank	7ACFH0662
7	Plumbing safety unit	*
8	Recirculator pump	*
9	Circulator pump	*
11	Flow adjustment valve	*
12	Expansion vessel	Dimensioning calculation needed**
13	Optional in line warmer	7ACFH0665
14	Electric heater or boiler	*
15	Safety valve	*
16	Backflow preventer	*
	Cold water	
	Hot water	
	Heat pump communication	
	DHW recycling loop	

* Components not supplied.

** Always check that the capacity of the vessel is suitable for the installation.

Mandatory accessory.

SCHEMATIC DIAGRAM **HEAT PUMP MONOBLOC** AND DOMESTIC HOT WATER PREPARATION KIT (with plate exchanger, use of the existing tank)













We recommend installing a zone valve to avoid heat losses by the boiler when the split heat pump is operating alone. All the members must be sized such as to minimize pressure loss. The flow rate in the heating circuit is normally guaranteed by the circulator pump already in place in the installation (recommended solution) or by the circulator pump of the split heat pump. In this case, make sure that the circulator pump has enough pressure available. The small amount of water added by the presence of the split heat pump does not necessarily require the existing expansion vessel to be replaced, its volume should nevertheless be checked.

Important: The hydraulic kit proposed as an option can be used to prepare the circuit for connecting the split heat pump in accordance with our recommendations. The hydraulic kit is available with or without a boiler back-up valve.

Note: The components of the installation will be supplied by the installer.

CAPTIONS

N°	NAME	CODE
1	Shut-off valve	7ACFH0423
3	Water filter  Pot 	7ACFH0278 7ACFH0666
4	Pressure release valve	*
5	Domestic Hot Water 3-way valve (see lower diagram) or	7ACFH0543
6	300 L domestic hot water tank	7ACFH0662
7	Plumbing safety unit	*
8	Recirculator pump	*
9	Circulator pump	*
10	140 L mixing tank	7ACFH0663
11	Flow adjustment valve	*
12	Expansion vessel 	* Dimensioning calculation needed**
13	Optional in line warmer	7ACFH0665
14	Electric heater or boiler	*
15	Safety valve 	*
16	Backflow preventer 	*
17	Domestic hot water preparation kit	7ACFH0789 for existing hot water tank with HIGH outlet 7ACFH0801 for existing hot water tank with LOW outlet
	Cold water	
	Hot water	
	Heat pump communication	
	DHW recycling loop	

* Components not supplied. ** Always check that the capacity of the vessel is suitable for the installation.  Mandatory accessory.

Heat pumps
Heating only

PAC HT SPLIT

HEAT PUMP SPLIT HIGH TEMPERATURE














COP up to 4.52



+ PRODUCTS

- Very low noise level: 65 dB(A) for outdoor unit, 41 dB(A) for indoor unit.
- Very high performance, COP up to 4.52.
- Aesthetics and aluminium finish.
- Light and compact wall unit (smaller in size than a boiler).
- Large digital display with diagnosis aid.

FEATURES

 R407C FLUID	 HEATING MODE OPERATIONAL DOWN TO -20°C OUTDOORS	 HIGH TEMPERATURE UP TO 65°C	 DOMESTIC HOT WATER
 HIGH-TEMPERATURE RADIATOR	 BOILER REPLACEMENT	 BOILER BACK-UP	 ULTRA QUIET
 WATER PROGRAMMES	 COMPRESSOR 2 years WARRANTY	 PATENTED	

- Ideal for renovations (HT) as well as for new construction (LT).
- Constant operation at +65°C with -20°C outdoors.
- 6 to 18 kW of heating over 3 models.
- A single refrigerant fluid: R407C.
- “Antifreeze” evaporator, up to 4 hours without defrosting.
- Inverter fan motor: energy saving.
- No risk of frost (water system in the building): not drop performance related glycol installation.
- Easy maintenance.
- Possibility of installing heat pumps in cascade.
- Patents Airwell: two-stage compression and oil management system.
- “Plug and play” system: easy for boiler replacement.
- Heating only.



UNIQUE EXCHANGER

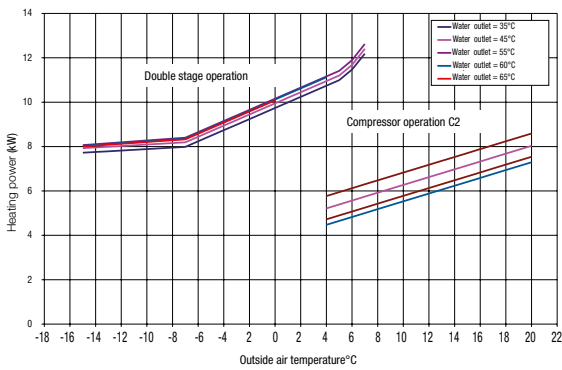


A heat exchanger with 4-mm heat sink spacing to optimize defrost:

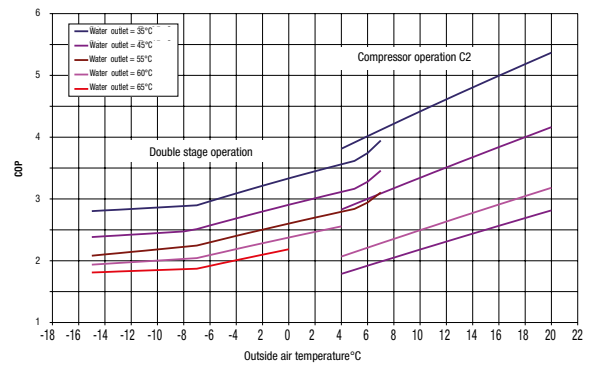
- Up to 4 hours without defrosting retaining 96% of the heating power.
- 2 hours without defrosting in the most adverse conditions.

PAC HT SPLIT 12-6 PERFORMANCES

HEATING

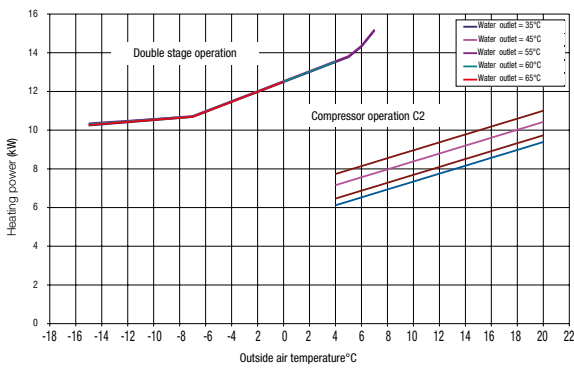


COP

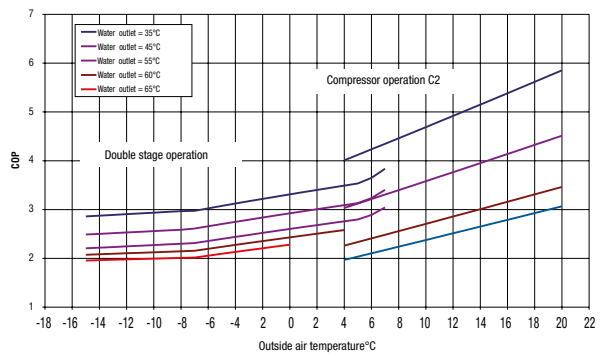


PAC HT SPLIT 14-7 PERFORMANCES

HEATING

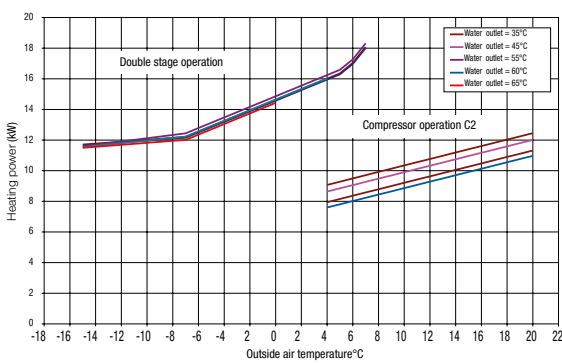


COP

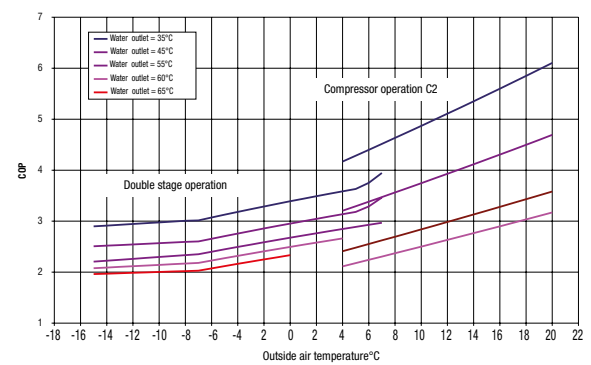


PAC HT SPLIT 18-9 PERFORMANCES

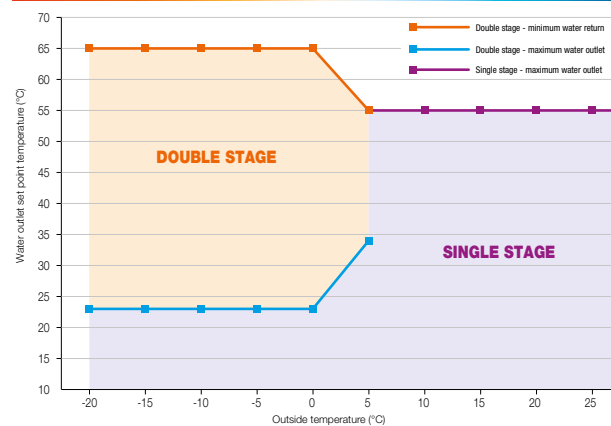
HEATING



COP



OPERATING LIMITS






PAC HT SPLIT TECHNICAL DATA

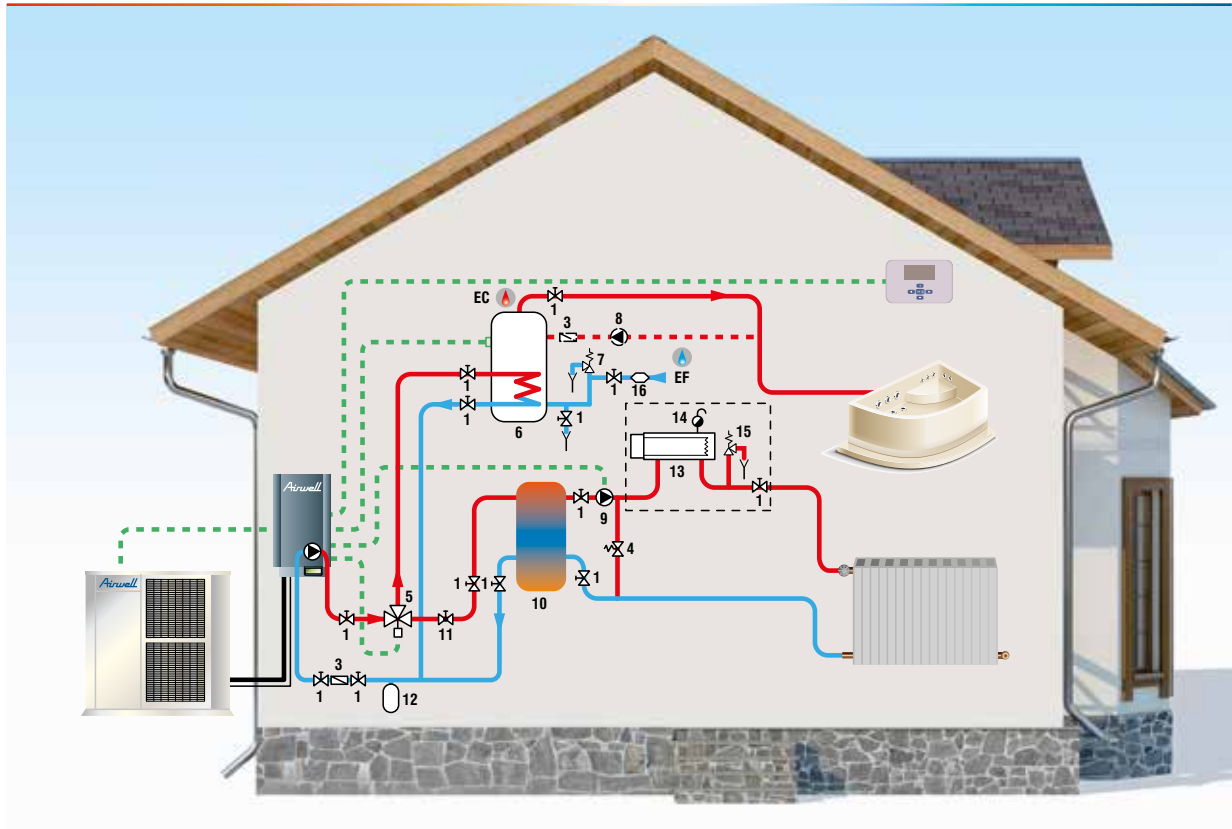
Models		PAC HT SPLIT 12-6	PAC HT SPLIT 14-7	PAC HT SPLIT 18-9	
Part number indoor units		7OG160001	7OG160001	7OG160002	
Part number outdoor units 1-230V-50Hz		7SP063001	7SP063003	-	
Part number outdoor units 3-400V-50Hz		7SP063002	7SP063004	7SP063005	
SCOP/Energy label (average climate)		3.79/A+	3.85/A+	3.87/A++	
OUTDOOR AIR REGIME +7°C / +6°C HUMID BULB					
Water regime 30/35°C	Single compressor heating power	kW	6.30	7.40	8.98
	Input power	kW	1.53	1.74	2.10
	COP		4.12	4.25	4.28
Water regime 45°C	Single compressor heating power	kW	5.74	7.77	9.27
	Input power	kW	1.86	2.35	2.67
	COP		3.09	3.31	3.47
Water regime 55°C	Bi-compressor heating power	kW	5.25	7.08	8.58
	Input power	kW	2.30	2.85	3.27
	COP		2.28	2.48	2.62
OUTDOOR AIR REGIME +2°C / +1°C HUMID BULB					
Water regime 35°C	Bi-compressor heating power	kW	10.31	13.00	15.32
	Input power	kW	2.99	3.82	4.39
	COP		3.45	3.40	3.49
OUTDOOR AIR REGIME -7°C / -8°C HUMID BULB					
Water regime 35°C	Bi-compressor heating power	kW	8.21	10.89	12.46
	Input power	kW	2.78	3.59	4.05
	COP		2.95	3.03	3.08
Water regime 55°C	Bi-compressor heating power	kW	8.40	10.71	12.44
	Input power	kW	3.74	4.63	5.29
	COP		2.25	2.31	2.35
Water regime 65°C	Bi-compressor heating power	kW	8.33	10.69	12.01
	Input power	kW	4.45	5.30	5.92
	COP		1.87	2.02	2.03
OUTDOOR AIR REGIME -15°C					
Water regime 35°C	Bi-compressor heating power	kW	7.79	10.24	11.71
	Input power	kW	2.78	3.58	4.04
	COP		2.80	2.86	2.90
OUTDOOR AIR REGIME -20°C					
Water regime 55°C	Bi-compressor heating power	kW	7.87	10.12	11.06
	Input power	kW	3.95	4.73	5.22
	COP		1.99	2.14	2.12
OTHERS FEATURES		PAC HT SPLIT 12-6	PAC HT SPLIT 14-7	PAC HT SPLIT 18-9	
Nominal water flow	l/h	1030	1370	1580	
Available hydraulic pressure (HS)	kPa	55	48	55	
Outdoor temperature operating limits	°C		-20		
Water outlet temperatures (min./max.)	°C		+25/+65		
INDOOR UNIT					
Sound power level	dB(A)		41		
Outdoor unit dimensions (WxHxD)	mm		1456.60 x 1308 x 516		
OUTDOOR UNIT					
Gas refrigerant piping (0 to 25 meters)	inches		5/8"		
Liquid refrigerant piping (0 to 25 meters)	inches		3/8"		
Gas refrigerant piping (0 to 45 meters)	inches		3/4"		
Liquid refrigerant piping (0 to 45 meters)	inches		1/2"		
Sound power level	dB(A)		65		
Indoor unit dimensions (WxHxD)	mm		400 x 720 x 260		
Refrigerant precharge	m		until 20 m		
Max. length	m		45		
REFRIGERANT CONNECTIONS - INDOOR UNIT					
Gas	inches		5/8"		
Liquid	inches		3/8"		
HYDRAULIC CONNECTIONS - INDOOR UNIT					
Water inlet	inches		1" female / Rotating nut		
Water outlet	inches		1" female / Rotating nut		

*The Heat Pumps NF and Eurovent Certifications are based on these data.

MAIN OPTIONS AND ACCESSORIES

Photo / Part number	Accessory	Function
HYDRAULICS		
7ACFH0423	Shut-off valve with pressure tap	Control valve
	Settling filter (pot)	Protect the heat pump from sludging and preserve optimum thermal exchange.
7ACFH0666		
7ACFH0278	Water filter	
	140-litre buffer tank / mixing tank	It protects the heat pump against short cycles that can reduce the useful life of the compressors and improves operation during defrosting phases.
7ACFH0663		
SYSTEM		
	Three-way valve	Three-way valve alone for domestic hot water management or boiler back-up
7ACFH0543		
	300 L domestic hot water tank kit	optimised with the operation of the PAC HT - Programmable anti-legionellosis function - Management of the three-way valve / circulator pump couple - 3.1 m ² exchange surface
7ACFH0662		
	Kit for electrical DHW tank - Top outlet	Plate exchanger and circulator pump kit for domestic hot water, top outlet (sensor supplied for installation in a thimble)
7ACFH0789 (for existing hot water tank with high outlet)		
7ACFH0801 (for existing hot water tank with low outlet)	Kit for electrical DHW tank - Bottom outlet	Plate exchanger and circulator pump kit for domestic hot water, bottom outlet (sensor supplied and installed)
	On-line electric heater - 2/4/6 kW	Installation inside the building, offers two power stages (2 and 4 kW, or 6 kW in total). Provides extra heating when the heating demand is greater than the capacity of the heat pump.
7ACFH0665		
	Hydraulic connection kit with three-way valve	For connecting to the boiler, available alone or in a complete kit with the three-way valve. Made up of a set of assembled pipes and valves, a set of connectors with sphericalconical seat.
7ACFH0490 (kit) 7ACFH0491 (alone)	Hydraulic connection kit without three-way valve	
INSTALLATION AND REGULATION		
	Wired ambient thermostat	- Adjustment of ambient temperature - Daily or weekly programming - Holiday programming, no-frost mode
7ACEL1592		
	Remote wireless ambient thermostat unit	- Adjustment of ambient temperature - Daily or weekly programming - Holiday programming, no-frost mode
7ACEL1593		
	Shock-absorbing support feet	Raise the heat pump by 10 cm, allow the evacuation of condensates and defrosting water.
7ACTL0472		
7ACEL1535	Three-phase starting intensity limiter	Standard on single-phase











SCHEMATIC DIAGRAM HEAT PUMP SPLIT AND DOMESTIC HOT WATER (hydraulic tank)




This diagram is also recommended for heating installations with highly variable operating rates (presence of thermostatically controlled valves). Observance of this minimum volume is guaranteed by a mixing tank (10). Warning: to calculate the volume of water in the installation, take only 50% of the volume of the mixing tank.

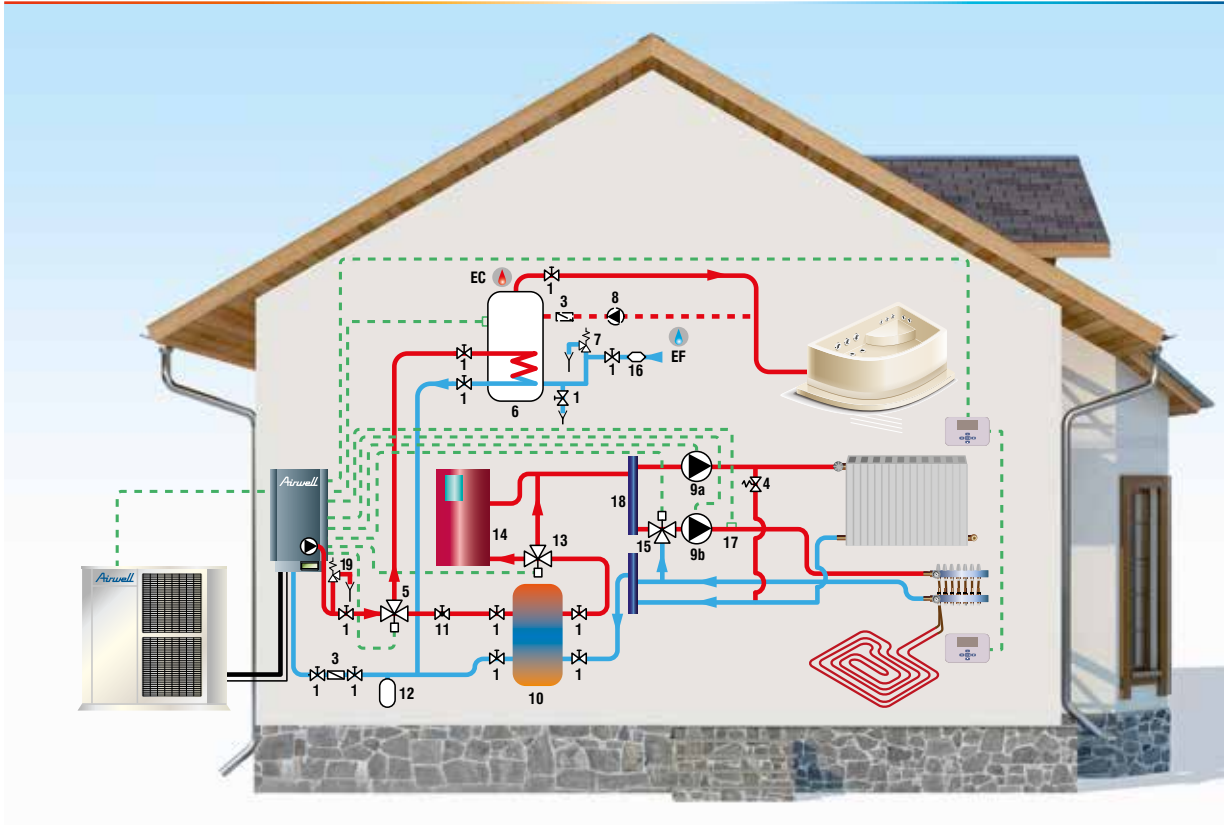
Example: For a usable volume of 100 liters, the mixing tank will have an actual volume of 200 liters. The adjustment valve (11) can be used to balance the flow rate in heating mode and in domestic hot water production mode in order to always guarantee optimal operation of the heat pump.

CAPTIONS

N°	NAME	CODE
1	Shut-off valve	7ACFH0423
3	Water filter  Pot 	7ACFH0278 7ACFH0666
4	Pressure release valve	*
5	Domestic Hot Water 3-way valve (see lower diagram) or	7ACFH0543
6	300 L domestic hot water tank	7ACFH0662
7	Plumbing safety unit	*
8	Recirculator pump	*
9	Circulator pump	*
10	140 L mixing tank	7ACFH0663
11	Flow adjustment valve	*
12	Expansion vessel 	Dimensioning calculation needed**
13	Optional in line warmer	7ACFH0665
14	Electric heater or boiler	*
15	Safety valve 	*
16	Backflow preventer 	*
17	Domestic hot water preparation kit	7ACFH0789 for existing hot water tank with HIGH outlet 7ACFH0801 for existing hot water tank with LOW outlet
18	Feeder	*
19	Safety valve 	*
	Cold water	
	Hot water	
	Heat pump communication	
	DHW recycling loop	










* Components not supplied. ** Always check that the capacity of the vessel is suitable for the installation.  Mandatory accessory.

SCHEMATIC DIAGRAM **HEAT PUMP SPLIT** INSTALLATION WITH DOUBLE ZONE (heating floor and radiators)




The split heat pump manages a radiator zone (high temperature) and a heating floor zone (low temperature) via a flow sensor in the floor, a modulating three-way valve (3-point 220 V motor) and one circulator pump per zone. Each zone can be controlled by a specific ambient terminal, thus allowing the split heat pump to manage two independent water programs. When the radiator zone is inactive, the split heat pump automatically switches to the floor water programme, thus optimizing the seasonal COP of the installation.

CAPTIONS

N°	NAME	CODE
1	Shut-off valve	7ACFH0423
3	Water filter  Pot 	7ACFH0278 7ACFH0666
4	Pressure release valve	*
5	Domestic Hot Water 3-way valve (see lower diagram) or	7ACFH0543
6	300 L domestic hot water tank	7ACFH0662
7	Plumbing safety unit	*
8	Recirculator pump	*
9	Circulator pump	*
10	140 L mixing tank	7ACFH0663
11	Flow adjustment valve	*
12	Expansion vessel 	Dimensioning calculation needed**
13	Optional in line warmer	7ACFH0665
14	Electric heater or boiler	*
15	Safety valve 	*
16	Backflow preventer 	*
	Cold water	
	Hot water	
	Heat pump communication	
	DHW recycling loop	

* Components not supplied.

** Always check that the capacity of the vessel is suitable for the installation.

 Mandatory accessory.

General recommendations for installation of air-water heat pump

HYDRAULIC ACCESSORIES AIRWELL

■ Disconnecter on water system

Regulation needs to have a disconnecter type CA or BA installed with a power less than 70kW plugged on water system, depending on the heat transfer fluid.

■ Safety valve

The heat pump must be protected by a minimum of one safety valve. It must be installed in an accessible place, with a close proximity of the outlet line of the heat pump. No isolating valve must exist between the heat pump and safety valve.

Nota : A safety valve is also necessary on the buffer folume if equipped with a complementary electric heating.

■ Safety thermostat on startup line of heating floor

Installing a safety thermostat on startup line of heating floor is mandatory.

It must have a manual reset, mechanical, without electrical supply and independent from regulation.

It must cut the heating supply to avoid the temperature in the heating floor to exceed 55°C.

In case of a temperature exceeding 55°C it must stop the heat pump and electrical complement, as well as the circulator and close the three way regulation valve.

■ Security group

The domestic hot water tank must be supplied in cold water via a security group.

There must be no piping nor any element between the security group and the water tank.

■ Expansion tank

The expansion tank must be preferably upstream of the circulator.

■ Air vent valve

The installation must include an air vent sited on the highest point of the circuit.

It's also recommended to install one on the buffer volume. The automatic air vent must be associated with an isolating valve.

■ Dirt separator and filter sieve

The installation of a dirt separator and filter sieve on upstream of the heat pump is highly recommended to protect it from molding and preserve an optimum thermal exchange.

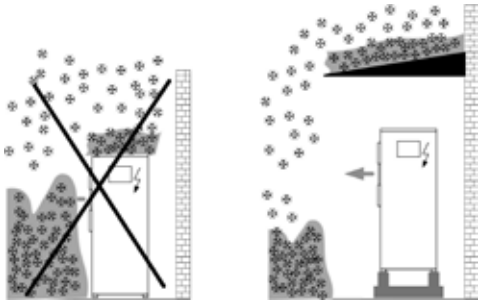
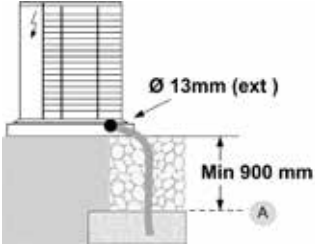
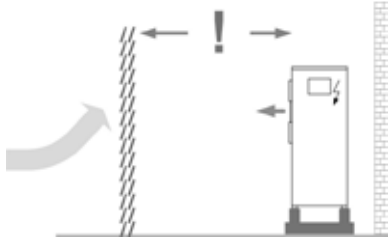

The filter sieve must of a diameter at least equal to the circuit diameter.

It's also recommended to install a drain valve on the bottom of the buffer volume to allow the evacuation of sediments.

■ Manometers on circulators

The manometer located on each circulator must be associated with two isolating valves. It allows to measure the pressure in the circulator and to evaluate the flow based on the specific curve of the circulator.

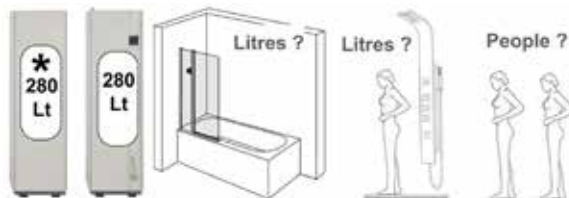
GENERAL RECOMMENDATIONS

Snowdrifts	Condensate discharge
 <p>Provide a protection</p>	 <p>To avoid the water freezing downstream of the drain, lay the tube below the frost line (A).</p>
Strong winds	Water features
 <p>Provide windbreaks or similar</p>	 <p>< 15 °f. ? If necessary, install water softener</p>

Domestic Hot Water Requirements

The requirements vary by the number of people living in the building

* Possibility of adding auxiliary cylinder in case of high hot water request



Estimated average daily per capita consumption of hot water

Requirements	Liters - day - people (bathroom)	Liters - day - people (kitchen)
Low	Min.15 > max. 30	Min. 10 > max. 20
Medium	Min.30 > max. 60	Min. 20 > max. 40
High	Min.60 > max. 120	Min. 40 > max. 80

Example: average requirement for 4 people need about 230 litres/day

Expansion tanks

Litres ? °C ?



Sizing expansion tanks according to the system features

Air to air heat pump range

[MODEL NAME]

Page

DUCTED MEDIUM
STATIC PRESSURE
MONOSPLIT

DLSE+VAV



58

18
5 kW



24
7 kW





Solution
unique

DLSE Plus VAV

Variable Air Volume



Zone control: Ideal temperature in each room



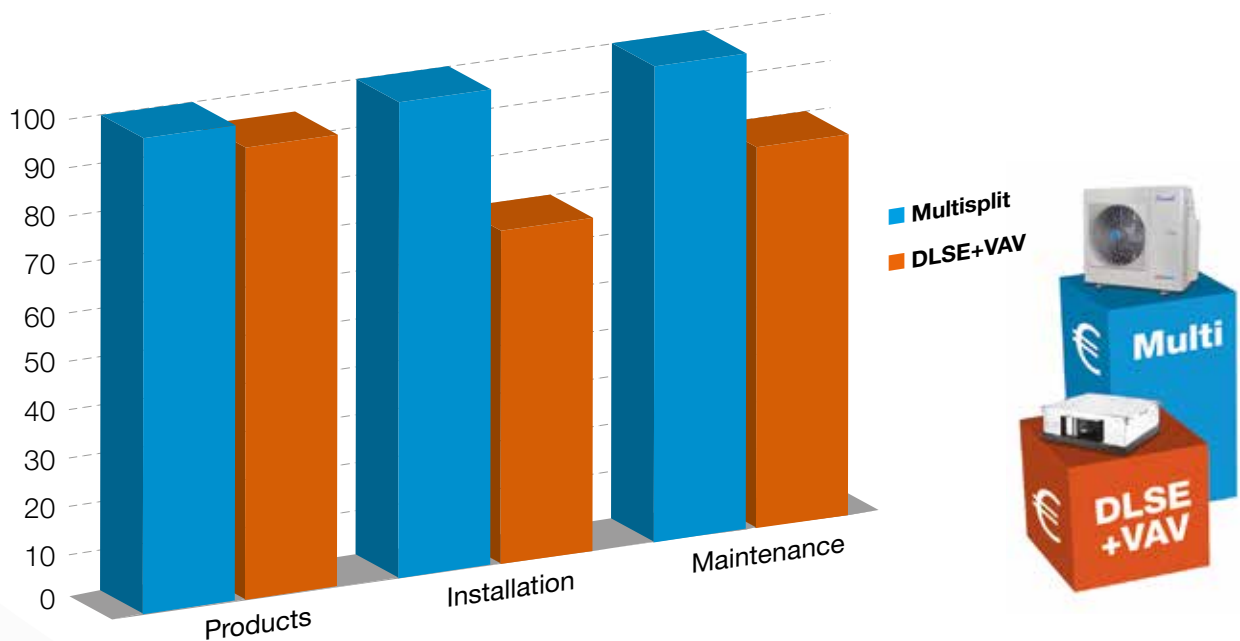
ZONE CONTROL FUNCTION

- Smart air conditioning: Controls up to 6 rooms.
- Each zone has a standalone remote control, to control temperature, "I Feel" and ON/OFF.
- Option to define automatic damper movement or manually to keep max. opening position.
- By-pass damper operates according to system load, which ensures air circulation in the indoor unit.
- Auto-mode: automatically recognizes cooling or heating mode.
- Motorized damper with DC step motor for accurate damper position.
- The blowing dampers change their position (open/close), in accordance with the temperature setpoint in each room, which keeps required temperature.

ENERGY AND COST SAVING

- Two levels of energy saving:
 - by the inverter system following the area load,
 - stops the system when all rooms have reached the chosen temperature and reduces the motor speed.

COST COMPARISON BETWEEN 2 SYSTEMS ON A "STANDARD" HOUSE.



EASY INSTALLATION

- Simple wiring connection by connectors and set up.
- Up to 70m between indoor and outdoor units.
- Monosplit indoor unit: time saving (little tubing).
- Option for installing the control box besides the unit.
- Water pump and overflow switch built in.

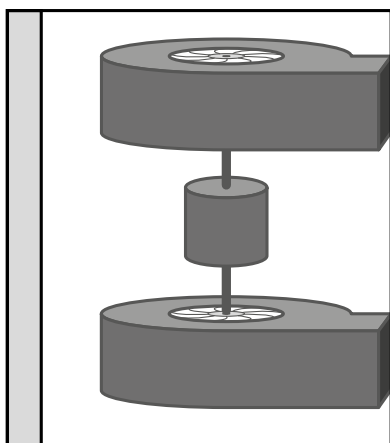
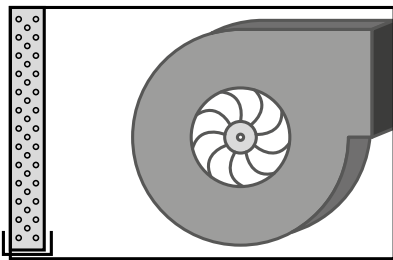
Good to know!

Use our design document to select easily your system.
Ask us this helpful file: mkg@airwell-res.com

SPECIAL DESIGN FOR YOUR CONVENIENCE

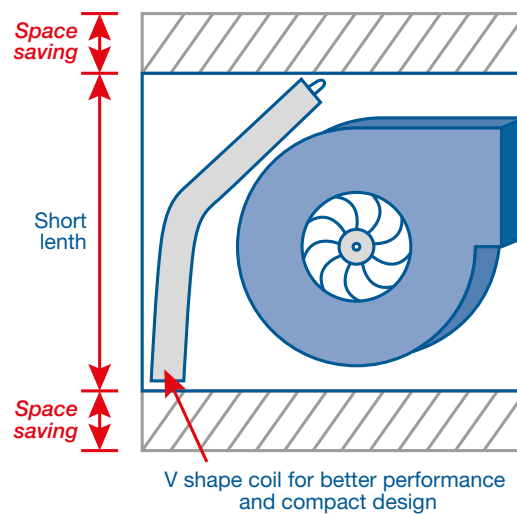
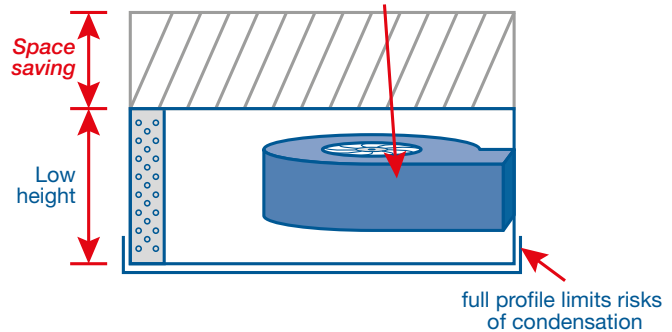
- Unique V shape coil.
- Extra slim indoor unit (low height: 256 mm only).

STANDARD DESIGN



DLSE

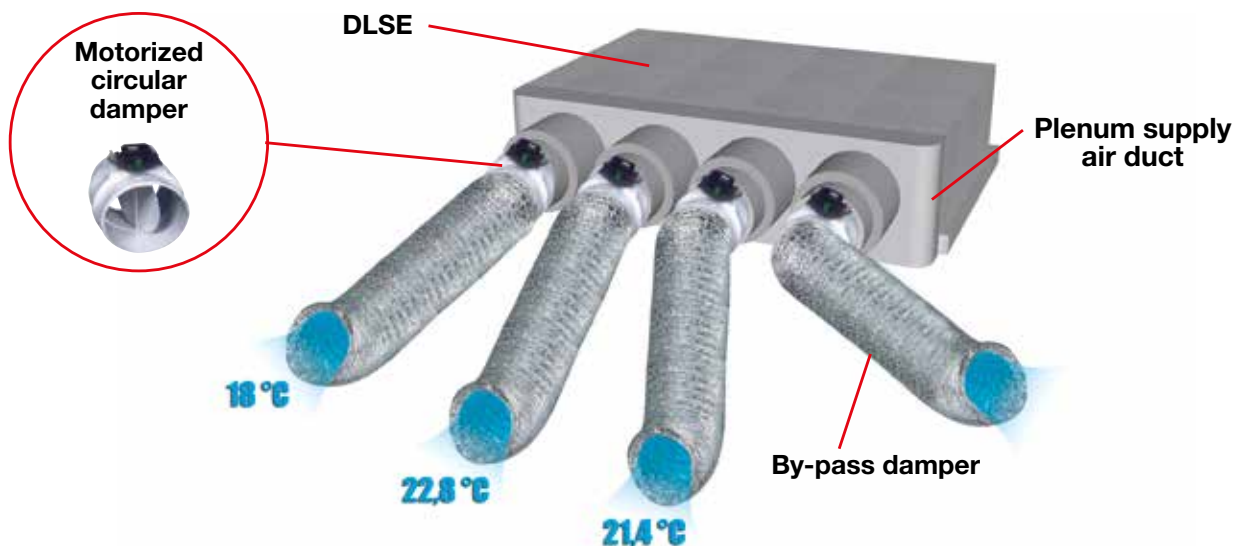
Horizontal fan, higher air volume + high static pressure



How to order?

- For each installation select first the damper type, round or rectangular.
- The main controller is identical except the set up which is done during the installation.
- After that, select motorized round damper, by-pass damper and plenum (see table below).

ROUND APPLICATION



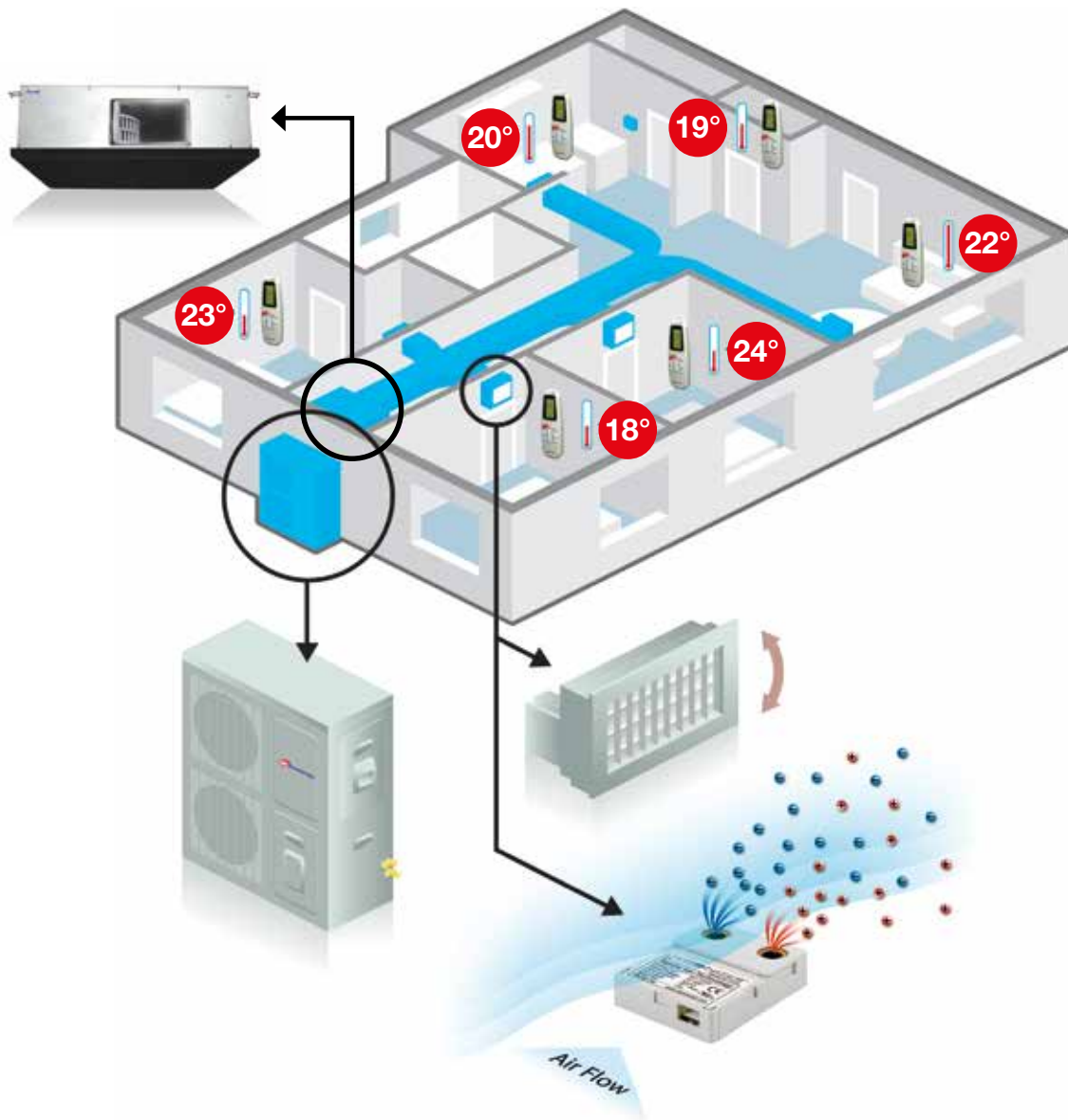
MOTORIZED ROUND TYPE ACCESSORIES

Part description	Product code
Main controller VAV kit	7ACEL1641
Motorized round damper (D=150 mm) kit (Wireless controller C85-R included)	7ACEL1648
Motorized round damper (D=200 mm) kit (Wireless controller C85-R included)	7ACEL1649
Motorized round damper (D=250 mm) kit (Wireless controller C85-R included)	7ACEL1650
Motorized by-pass round damper (D=200 mm) kit (Wireless controller C85-R included)	7ACEL1651
Motorized by-pass round damper (D=250 mm) kit (Wireless controller C85-R included)	7ACEL1652

PLENUM ACCESSORIES: ROUND APPLICATION

Part description	Models	Product code
Air duct plenum - 4 ducts + 1 by-pass	DLSE 18/24	7ACVF0130
Air duct plenum - 6 ducts + 1 by-pass	DLSE 18/24	7ACVF0131
Air return grill	DLSE 18/24	7ACVF0132
Air duct plenum - 4 ducts + 1 by-pass	DLSE 30 and up	7ACVF0133
Air duct plenum - 6 ducts + 1 by-pass	DLSE 30 and up	7ACVF0134
Air return grill	DLSE 30 and up	7ACVF0135

RECTANGULAR APPLICATION



MOTORIZED RECTANGULAR TYPE ACCESSORIES

Part description	Product code
Main controller VAV kit	7ACEL1641
Motorized grill (30 cm x 15 cm) kit (Wireless controller C85-R included)	7ACEL1642
Motorized grill (40 cm x 15 cm) kit (Wireless controller C85-R included)	7ACEL1643
Motorized grill (50 cm x 15 cm) kit (Wireless controller C85-R included)	7ACEL1644
Motorized by-pass damper (40 cm x 15 cm) kit	7ACEL1645
Motorized by-pass damper (50 cm x 15 cm) kit	7ACEL1646
Duct frame profile for grille 150 mm	7ACVF0551
Duct frame profile for grille 300 mm	7ACVF0552
Duct frame profile for grille 400 mm	7ACVF0553
Duct frame profile for grille 500 mm	7ACVF0554
Sterionizer kit for motorized grill	7ACEL1655



- "I Feel" function with precise room temperature control.
- Unique fan technology increases air volume and high static pressure while keeping low noise level.
- Quiet operation by using aerodynamic centrifugal fan.
- Space saving due to low unit height and compact dimensions.
- Tubing length up to 50 m and max. height of 30 m.
- External static pressure up to 100 Pa.
- Possibility to reverse dry contact: normally open / normally closed.

A⁺⁺

Unique solutions

+ PRODUCTS

- Variable Air Volume Solution
- Weekly timer (optional)
- Water pump included
- Super quiet



RCW2 C85-R (included with damper) RC08W (optional)

FEATURES

DC INVERTER	LOW VOLTAGE STARTUP	LOW TEMPERATURE STARTUP	R410A FLUID
VAV COMPATIBILITY	ELECTRONIC EXPANSION VALVE	I FEEL	SLEEP MODE
SUPER QUIET	TURBO MODE	PROGRAMMABLE TIMER	SELF DIAGNOSTIC
LOW BATTERY INDICATION	AUTO RESTART (MEMORY)	REMOTE CONTROL LOCK	ADVANCED DEFROST
ALARM OUTPUT	BMS COMPATIBLE	SERVICE MONITOR TOOL	POWER CONSUMPTION CONTROL
WIRED REMOTE CONTROL DIAGNOSTIC	OUTDOOR UNIT DIGITAL	OUTDOOR UNIT NIGHT MODE DRY CONTACT (DLSE 24-30-36)	OUTDOOR UNIT STAND-BY (DLSE 24-30-36)
OUTDOOR UNIT ALARM OUTPUT (DLSE 24-30-36)	TEST MODE	LOW AMBIENT COOLING	LOW AMBIENT HEATING
STERIONIZER (WITH MOTORIZED GRILL)	WiFi		



GLOBAL AND INVISIBLE SOLUTION FOR YOUR HOME

Indoor unit

Outdoor unit

OPTIONS

Accessory	Part number	Photo	Function
Wireless controller RC08W	7ACEL1741		Operation mode, sleep mode, timer, I Feel, swing, clean mode...



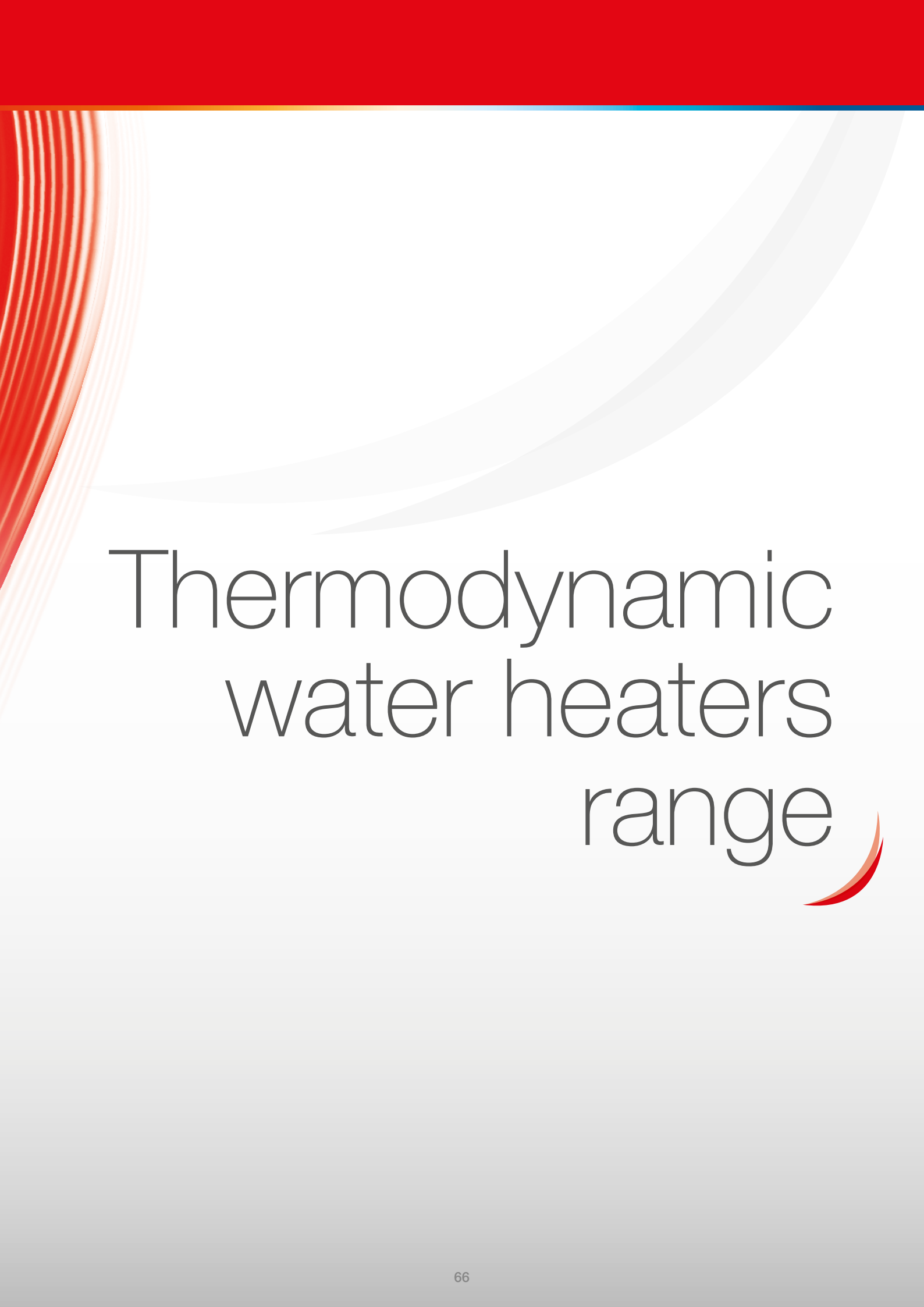
All sizes except DLSE 043

DLSE TECHNICAL DATA

Indoor units		AWSI-DLSE018-N11	AWSI-DLSE024-N11	AWSI-DLSE030-N11	AWSI-DLSE036-N11		DLSE 43 DCI R410 AW	
Outdoor units		AWAU-YBDE018-H11	AWAU-YBDE024-H11	AWAU-YBDE030-H11	AWAU-YBD036-H11	AWAU-YBD036-H13	AWAU-YBD042-H11	AWAU-YAD042-H13
COOLING								
Rated capacity	kW	5.0 (2.3-5.9)	6.8 (1.7-7.4)	7.5 (2.8-8.4)	9.5 (4.8-12.5)	9.5 (4.8-12.5)	12.5 (4.5-14.5)	12.5 (4.5-14.5)
Pdesignc	kW	5.0	6.8	7.5	9.5	9.5	-	-
Rated power input	kW	1.22	1.93	2.46	3.31	3.04	3.73	3.56
SEER/Energy label		5.8/A+	5.4/A	5.5/A	5.6/A+	4.7/B	3.35/A	3.51/A
Operating limits	°C	-10°/46° Dry bulb						
HEATING								
Rated capacity	kW	5.6 (1.9-7.5)	7.6 (1.8-8.5)	8.6 (2.8-9.4)	10.5 (2.7-12.5)	11.6 (4.9-12.5)	14.0 (4.5-16.0)	14.0 (4.5-16.0)
Pdesignh		5.5	7.5	8.6	9.5	10.5	-	-
Rated power input	kW	1.35	1.88	2.31	2.80	3.00	4.1	3.99
SCOP/Energy label (average climate)		3.9/A	3.8/A	3.9/A	3.8/A	3.9/A	3.41/B	3.51/B
SCOP/Energy label (warmer climate)		4.6/A+	4.9/A++	4.3/A+	4.6/A+	4.7/A++	-	-
Operating limits	°C	-15°/24° Dry bulb						
Capacity @ -10°C	kW	5.3	5.8	7.1	6.9	8.9	9.3	9.3
Capacity @ -15°C	kW	4.7	5.2	6.3	6.2	8.0	8.3	8.3
INDOOR UNIT								
Sound pressure level to 1 m (LS/MS/HS/SS)	dB(A)	35/38/41/43	38/42/45/48	39/43/46/48	41/45/46/48	41/45/46/48	42/46/53	42/46/53
Sound power level (LS/MS/HS/SS)	dB(A)	52/55/58/60	55/59/62/65	56/60/63/65	56/61/63/65	56/61/63/65	57/61/70	57/61/70
Airflow (LS/MS/HS/SS)	m³/h	740/875/1060/1150	870/1090/1220/1410	950/1140/1290/1410	1290/1550/1670/1750	1290/1550/1670/1750	1315/1530/2025	1315/1530/2025
External static pressure (range)	Pa	25 (25-60)	25 (25-80)	25 (25-80)	37 (37-100)	37 (37-100)	50 (50-100)	50 (50-100)
Dehumidification	l/h	1.5	2.3	2.7	3.5	4.6	3.3	3.8
Outline dimensions (WxHxD)	mm	790x256x749	790x256x749	790x256x749	854x297x816	854x297x816	854x297x816	854x297x816
Package dimensions (WxHxD)	mm	960x300x855	960x300x855	960x300x855	1005x345x915	1005x345x915	1005x345x915	1005x345x915
Net weight/Gross weight	kg	29/31.5	30/32.5	31/33.5	33/35.5	33/35.5	33/35.5	33/35.5
Part number		7SP032154	7SP032155	7SP032156	7SP032157	7SP032157	7SP032087	7SP032087
OUTDOOR UNIT								
Sound pressure level to 1 m	dB(A)	53	55	56	58	58	58	58
Sound power level	dB(A)	65	67	68	69	69	70	70
Airflow	m³/h	2500	2750	3400	4150	4150	5700	5700
Compressor type		Twin Rotary DC Inverter	Twin Rotary DC Inverter	Twin Rotary DC Inverter	Twin Rotary DC Inverter	Twin Rotary DC Inverter	Scroll DC Inverter	Twin Rotary DC Inverter
Outline dimensions (WxHxD)	mm	900x700x340	900x700x340	900x860x340	900x970x340	900x970x340	900x1250x340	900x1250x340
Package dimensions (WxHxD)	mm	985x730x435	985x730x435	985x905x435	985x1020x435	985x1020x435	980x1400x420	980x1400x420
Net weight/Gross weight	kg	56/58.5	61/63.5	66/68.5	80/82.8	85/87.8	110/121	110/121
Part number 1-230V - 50 Hz		7SP061886	7SP061887	7SP061922	7SP061923	-	7SP061815	-
Part number 3-400V - 50 Hz - N		-	-	-	-	7SP061900	-	7SP061757
POWER SUPPLY 1-230V - 50 HZ								
Power supply side		Ind. & Out.	Outdoor	Outdoor	Outdoor	-	Outdoor	-
Power cable section	mm²	3x2.5	3x2.5	3x2.5	3x4.0	-	3x6.0	-
Fuse rating	A	20	20	20	25	-	32	-
Electrical connections	mm²	4x1.5	4x1.5	4x1.5	3x1.5 + 2x0.75	-	3x1.5 + 2x0.75	-
POWER SUPPLY 3-400V - 50 HZ - N								
Power supply side		-	-	-	-	Outdoor	-	Outdoor
Power cable section	mm²	-	-	-	-	5x2.5	-	5x2.5
Fuse rating am	A	-	-	-	-	3x16	-	3x16
Electrical connections	mm²	-	-	-	-	3x1.5 + 2x0.75	-	3x1.5 + 2x0.75
PIPE LINE								
Suction pipe diameter	inches	1/2"	5/8"	5/8"	5/8"	5/8"	3/4"	3/4"
Liquid pipe diameter	inches	1/4"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
Max. length	m	30	30	50	70	70	70	70
Max. height	m	15	15	25	30	30	30	30

COMBINATIONS

Indoor unit	Compatible with outdoor unit
Ducted	Monosplit
DLSE 18 	YBDE 
DLSE 24 to 42 	YBDE 



Thermodynamic water heaters range



Thermodynamic water heaters range

[MODEL NAME]

Page

THERMODYNAMIC DUCTED
WATER HEATER 180 L

TDF 190/1.5



70

THERMODYNAMIC DUCTED
WATER HEATER 280 L

TDF 300/3.5



72

DUCTED

ENAMEL





+ PRODUCTS

- Automatic, weekly, anti-legionella function.
- Multiple safeguards: pressure valve, double safeguard against rises in temperature.
- No contamination risk: the condenser coil is outside the tank.
- Easy to install: closed refrigeration circuit - no intervention required.
- Anode and enamel provide anti-scale and anti-corrosion protection.

FEATURES



- Refrigerant: R134a.
- Water output temperature: 38 to 70°C.
- Intelligent functionality mode: economic or electric.
- Automatic regulation (heat pump and electrical resistance): thermal confort and performances.
- Forced mode (electrical resistance).
- Ready to install.
- Absent mode.
- Ideal for family of 4 people.
- Large LCD screen for ease of use.
- Air outlet delivering 25 Pa pressure: option for up to 5 m of duct.
- 4-way valve: automatic defrosting.

ACCESSORIES/OPTIONS

Accessories	Part number
Adaptation kit, 90° bend and 1m duct	7ACEL1735
Extention kit 1m duct	7ACEL1736

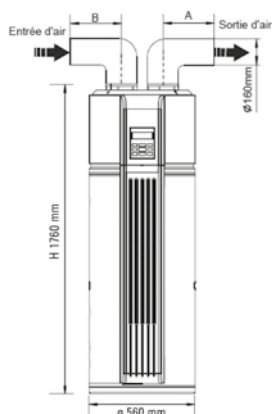
TDF 190/1.5 TECHNICAL DATA

Model		HWHM-TDF190/1.5-H31
Part number		7HP030004
COP		2.61
Water heating capacity	W	1450
Rated capacity	W/A	3900/17
Power supply		220-240V~ 50Hz
Operation control		Auto/Manual startup, error alarm, timer,etc
Protection system		TCO1, TCO2, T&P valve, automatic defrost, surge protector etc.
Electric heater capacity	W	3150
WATER PIPES		
Water inlet temperature	°C	Standard: 60°C, 38°C~70°C
Water side exchanger		Safety condenser,copper tube wrapped around outside of storage tank
Diameter of inlet		DN 20
Diameter of outlet		DN 20
Max. operating pressure	MPa	1.0
EVAPORATOR		
Type of fin		Hydrophilic aluminium, Grooved copper tube
Motor capacity	W	28
Air outlet type		Outlet/inlet vertically, duct connection available
OTHERS FEATURES		
Protection type		T 20 A 250 V c.a
Refrigerant type		R134a (1000 g)
Dimensions		ø 560 mm - 1760 H
Water tank capacity	liters	180
Weight	kg	107

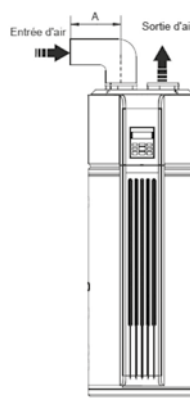
Test conditions: outdoor temperature of 15/12°C (dry bulb / wet bulb), input water temperature 15°C, output water temperature 45°C.



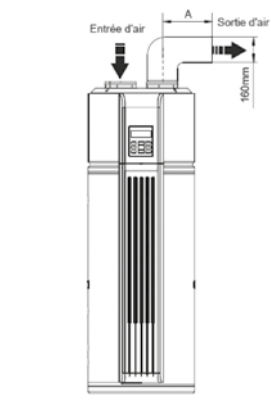
1 Inlet and outlet ducted



2 Inlet ducted



3 Outlet ducted



Max. duct length	A+B < 5 m	A < 5 m	A < 5 m
Location	Heated low volume room (< 20 m ²)	Low volume room (< 20 m ²) which can be refreshed	Heated high volume room (> 20 m ²) (kitchen, bathroom...)
Air inlet and air outlet	<ul style="list-style-type: none"> Air inlet: outdoor air or extracted air (exhaust ventilation) Air outlet: to adjacent room or outdoors 	<ul style="list-style-type: none"> Air inlet: outdoor air or extracted air (exhaust ventilation) Air outlet: in the room (ambient air) 	<ul style="list-style-type: none"> Air inlet: Ambient air Air outlet: To adjacent room or outdoors



+ PRODUCTS

- Automatic, weekly, anti-legionella function.
- Multiple safeguards: pressure valve, double safeguard against rises in temperature (manual/automatic).
- No contamination risk: the condenser coil is outside the tank.
- Easy to install: closed refrigeration circuit - no intervention required.
- Anode and enamel or stainless provide anti-scale and anti-corrosion protection

FEATURES



- Refrigerant: R134a.
- Water output temperature: 38 to 65°C.
- Automatic regulation (heat pump and electrical resistance): thermal confort and performances.
- Forced mode (electrical resistance).
- Ready to install.
- Absent mode.
- Ideal for family of 5 people.
- Large LCD screen for ease of use.
- Air outlet delivering 25 Pa pressure: option for up to 10 m of duct.
- 4-way valve: automatic defrosting.

ACCESSORIES/OPTIONS

Accessories	Part number
Adaptation kit, 90° bend and 1m duct	7ACEL1737
Kit extension gaine 1m	7ACEL1738

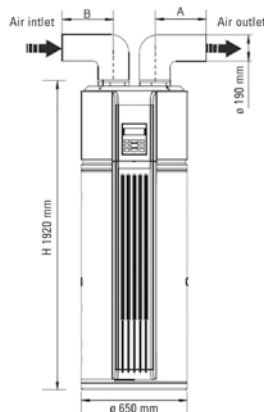
TDF 300/3.5 TECHNICAL DATA

Model		AWHM-TDF300/3.5-H31
Part number Enamel		7HP030007
COP		2.74
Water heating capacity	W	3000
Rated capacity	W/A	4300/18.7
Power supply		220-240V~ 50Hz
Operation control		Auto/Manual startup, error alarm, timer,etc
Protection system		TCO1, TCO2, T&P valve, automatic defrost, surge protector etc.
Electric heater capacity	W	3000
WATER PIPES		
Water inlet temperature	°C	Standard: 55°C, 38°C-65°C
Water side exchanger		Safety condenser,copper tube wrapped around outside of storage tank
Diameter of inlet		DN 20
Diameter of outlet		DN 20
Max. operating pressure	MPa	1.0
EVAPORATOR		
Type of fin		Hydrophilic aluminium, Grooved copper tube
Motor capacity	W	80
Air outlet type		Outlet/inlet vertically, duct connection available
OTHERS FEATURES		
Protection type		T 20 A 250 V c.a
Refrigerant type		R134a (1200 g)
Dimensions		ø 650 mm - 1920 H
Water tank capacity	liters	280
Weight	kg	145.5

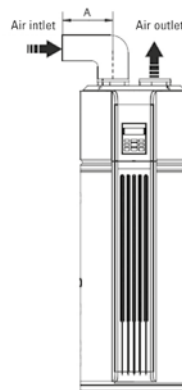
Test conditions: outdoor temperature of 15/12°C (dry bulb / wet bulb), input water temperature 15°C, output water temperature 45°C.



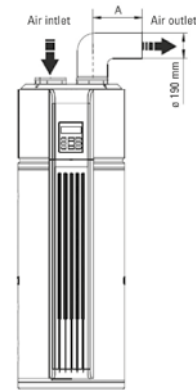
1 Inlet and outlet ducted



2 Inlet ducted



3 Outlet ducted

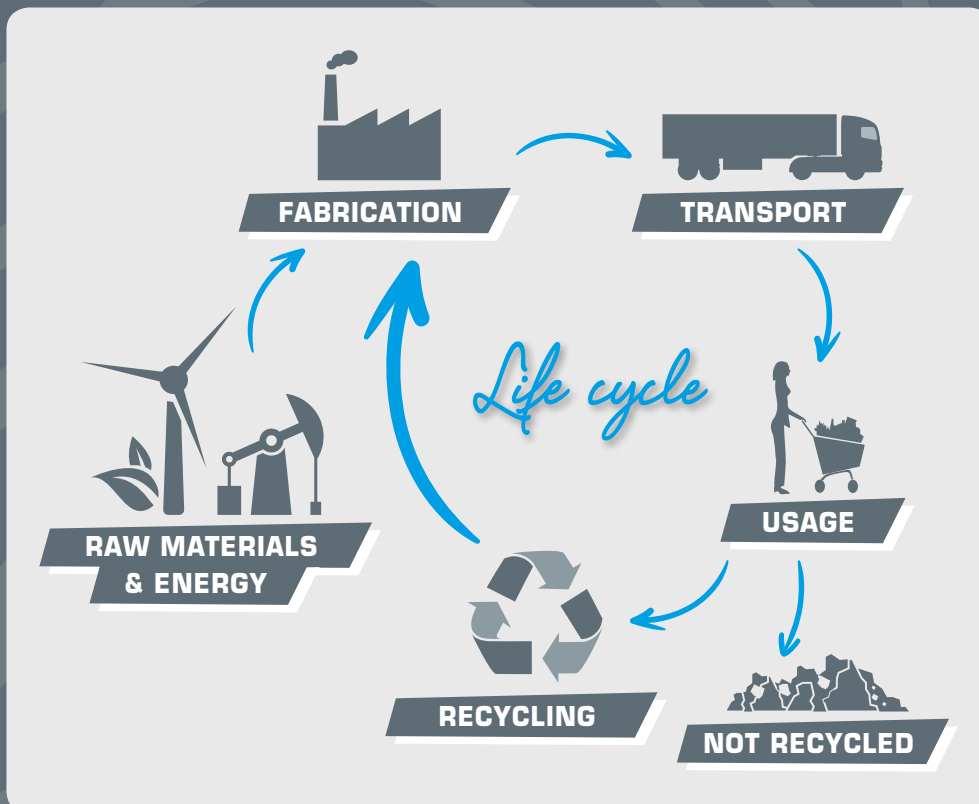


Max. duct length	A+B < 10 m	A < 10 m	A < 10 m
Location	Heated low volume room (< 20 m ²)	Low volume room (< 20 m ²) which can be refreshed	Heated high volume room (> 20 m ²) (kitchen, bathroom...)
Air inlet and air outlet	<ul style="list-style-type: none"> Air inlet: outdoor air or extracted air (exhaust ventilation) Air outlet: to adjacent room or outdoors 	<ul style="list-style-type: none"> Air inlet: outdoor air or extracted air (exhaust ventilation) Air outlet: in the room (ambient air) 	<ul style="list-style-type: none"> Air inlet: Ambient air Air outlet: To adjacent room or outdoors

Airwell is part of an eco-environmental approach including a life cycle analysis of our products while building a Product Environmental Profile (PEP).

This life cycle analysis (LCA) allowed to inventory and quantify, all along the products lifecycle, the physical material and energy flow associated to human activities. All the lifecycle phasis have been taken into account: raw materials, manufacturing, transport, distribution, usage, end of life and recycling.

The PEP fits the ISO 14025, 14040 and 14044 expectations. It allows to anticipate the regulatory obligations and forms part of the eco-conception approach which Airwell wants to follow. Finally, building a POP allowed to calculate the environmental performance of some products.



Tool box

HELP FOR DIMENSIONING THE HYDRAULIC ACCESSORIES

■ Buffer volume

Airwell recommends a minimal water capacity being plugged to the heat pump. This capacity allows:

- To ensure a sufficient inertia
- Maintain a minimum run time of the compressor (anti short cycle)

Buffer volume range for a PAC BT (runtime 6 min) :

Heat pump power (in kW) with 7°C/35°C conditions	4	6	8	10	12	14	16
Reduced power down to 20% for an Inverter heat pump (in kW)	1.2	1.8	2.4	3.0	3.6	4.2	4.8
Buffer volume capacity (in liters)	20	30	40	50	60	70	80

Buffer volume range for a PAC HT (runtime 6 min) :

Heat pump power (in kW) with 7°C/35°C conditions	4	6	8	10	12	14	16
Buffer volume capacity (in liters)	70	100	140	170	200	240	280

■ Expansion tank

The sizing of the expansion tank is to be done based on heating mode and allows to calculate:

- The inflation pressure
- Its capacity

The inflation pressure must be higher than the static pressure of the installation in such a way that, on cold cycle, the water can't come into the tank and the volume is optimum for absorbing the water dilatation.

The tank capacity must allow to collect the expansion volume of the installation.

For a pressure setting at 3 bars and a water installation at 45°C, we can use:

Maximum capacity of the installation (in liters)	Expansion tank capacity (in liters) for a static height until:		
	5 m	10 m	15 m
200	4	5	8
250	5	7	10
300	6	8	12
400	8	11	16
500	10	14	20

HEAT PUMP SELECTION

Heat pump for heating and/or domestic hot water

- Do you need an estimate for your Airwell heat pump for your customer?
- Please fill in the form below and send it to your distributor.

INFORMATION SHEET to be filled in by your approved installer

File reference:	Date:
-----------------	-------

INSTALLER	
Company:	Name:
Address:	
Post code:	Town:
Telephone:	
E-mail:	

CUSTOMER	
Company:	Name:
Address:	
Post code:	Town:
Telephone:	Mobile:
Fax:	E-mail:

LOCATION	
Location:	
Altitude:	m Design temperature: °C

HOUSE		
<input type="checkbox"/> Home energy label:	<input type="checkbox"/> Detached	<input type="checkbox"/> "Standard" insulation
<input type="checkbox"/> Veranda	Heated surface area: m ²	
Ceiling height: m	Required heating temperature*: °C	

REQUIRED HEATING INSTALLATION - AIR/WATER HEAT PUMP WITH...			
<input type="checkbox"/> Radiators	<input type="checkbox"/> Heating floor	<input type="checkbox"/> Fan coil unit	
<input type="checkbox"/> Single phased	<input type="checkbox"/> Three phased	<input type="checkbox"/> Monobloc	<input type="checkbox"/> Split

NUMBER OF PEOPLE LIVING IN THE HOUSE
Number of people:

INFORMATION / COMMENTS

* Indoor temperature recommended: 19°C (energy consumption increase of 20% for 1°C added).

REFURBISHMENT

HEAT PUMP SELECTION

- Boiler back-up
 Boiler replacement

INFORMATION SHEET to be filled in by your installer

File reference:	Date:
-----------------	-------

INSTALLER	
Company:	Name:
Address:	
Post code:	Town:
Telephone:	Mobile:
Fax:	E-mail:

CUSTOMER	
Company:	Name:
Address:	
Post code:	Town:
Telephone:	Mobile:
Fax:	E-mail:

LOCATION		
Location:	Design temperature:	°C
Altitude: m	Heated surface area:	m ²
Ceiling height: m	Required heating temperature:	°C

INSULATION		
<input type="checkbox"/> Very good	<input type="checkbox"/> Average	<input type="checkbox"/> Little or no insulation

HEATING		
<input type="checkbox"/> Not reduced	<input type="checkbox"/> Reduced at night	<input type="checkbox"/> Reduced night and daytime

HEATING INSTALLATION		
<input type="checkbox"/> Radiators	<input type="checkbox"/> Heating floor	The house is heated to: °C

WINTERTIME	
Starting temperature in the radiators: °C	Can you put your hand on the radiators? <input type="checkbox"/> YES <input type="checkbox"/> NO

BOILER			
<input type="checkbox"/> Less than 5 years	<input type="checkbox"/> 5 to 10 years	<input type="checkbox"/> 10 to 20 years	<input type="checkbox"/> Over 20 years
Does the boiler supply the domestic hot water? <input type="checkbox"/> YES <input type="checkbox"/> NO		If YES , indicate the number of people living in the house:	

POWER CONSUMPTION PER YEAR			
<input type="checkbox"/> Heating oil: liters	<input type="checkbox"/> Propane: kg	<input type="checkbox"/> Natural gas: m ³	
<input type="checkbox"/> Electricity: kW/h	Real consumption: €		

REQUIRED HEATING INSTALLATION - AIR/WATER HEAT PUMP WITH...			
<input type="checkbox"/> Single phased	<input type="checkbox"/> Three phased	<input type="checkbox"/> Monobloc	<input type="checkbox"/> Split

ADDITIONAL INFORMATION: (Boiler type, if possible draw a hydraulic diagram on a sheet of paper)

Icons guide

HEAT PUMPS / THERMODYNAMIC WATER HEATERS



R407C FLUID

R407C refrigerant fluid.



HEATING MODE OPERATIONAL DOWN TO -20°C OUTDOORS

Heating mode available even at very low outdoor temperatures through special design of the unit.



HIGH TEMPERATURE UP TO 65°C

High temperature production up to 65°C.



DOMESTIC HOT WATER

Production of domestic hot water.



FLOOR HEATING

Connection available with a low-temperature emitter.



HIGH-TEMPERATURE RADIATOR

Connection available with a high-temperature emitter.



BOILER REPLACEMENT

Replace an old, energy-consuming boiler with an efficient Airwell heat pump.



BOILER BACK-UP

Complement a boiler with a heat pump.



2 WATER PROGRAMS

The regulator maintains the power of the heat pump in accordance with a water logic based on outdoor temperature.

Two water programs available and programmable.



COMPRESSOR AND PARTS WARRANTY

A 2-year parts warranty and a 2-year compressor warranty.



PATENTED

Patented concept.



BI-COMPRESSOR

Thermodynamic system comprising two compressors.



ULTRA QUIET

Advanced design for low sound level.



CERTIFIED ELECTRICAL PERFORMANCE

The product's electrical performance is certified according to French standards (NF).



CERTIFIED HEAT PUMP PERFORMANCE

The product's heat pump performance is certified according to French standards (NF).

Airwell

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