

# POWER UNIT

Compact and modular technical inertial accumulations for the creation of advanced and customized thermal power plants



## TECHNICAL FEATURES

POWER UNIT is an extremely compact inertial technical water puffer, available in various sizes and dimensions. Through these innovative compact parallelepiped-shaped puffers it is possible to design multiple customized heating plants with the minimum space available in order to produce heating, air conditioning and domestic hot water for small, medium and large users.

The POWER UNIT technical water storage tanks are equipped as standard with four 1"1/4 threaded connections (two on the right side and two on the left side) and can be connected to monobloc hydronic heat pumps, condensing boilers and biomass boilers in order to obtain a volume of technical water that acts as a hydraulic separator in which one can be applied or more inverter electronic circulators to power the various ones secondary circuits for summer and winter air conditioning.

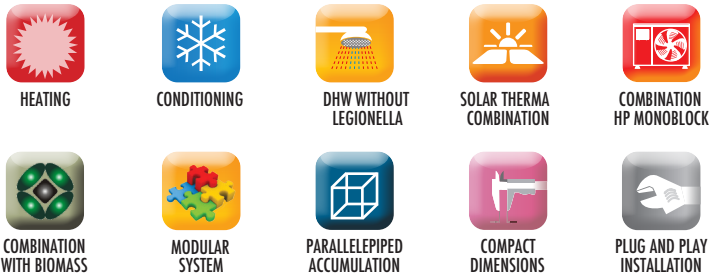
The POWER UNIT technical water accumulations, thanks to their extreme compactness, can also be applied to existing summer and winter air conditioning systems in order to improve their performance.

The POWER UNIT puffers can be installed both horizontally and vertically and thanks to their particular configuration they can also be located inside special false ceilings. POWER UNIT can be equipped with a finned copper exchanger (to be chosen as an optional) so as to be able to produce domestic hot water with maximum hygiene, completely avoiding anti-legionella thermal shocks.

The POWER UNIT technical storage units can be equipped with a solar exchanger to connect one or two flat plate collectors that work with forced circulation. All POWER UNIT technical storage units are equipped as standard with a jolly valve for automatic air venting, a safety valve with 3 bar calibration, a draining tap and rubber adjustment feet.





To each POWER UNIT technical storage unit it is possible to optionally apply up to two system circulators (direct or mixed) and a back-up electric resistance.

All POWER UNIT inertial technical storage tanks are equipped with high-density extruded expanded polystyrene insulation specially protected and finished with panels made of aluminised sheet metal in RAL 9010 colour.






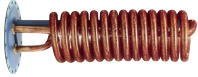






Model	Code	€
POWER UNIT 80 LT - H 160	76011500	1.580,00
POWER UNIT 105 LT - H 210	76012500	1.680,00
POWER UNIT 130 LT - H 250	76011501	1.740,00
POWER UNIT 165 LT - H 160 DOUBLE	76011505	1.890,00
POWER UNIT 220 LT - H 210 DOUBLE	76012502	1.990,00
POWER UNIT 315 LT - H 170	76012503	2.100,00

## Accessories POWER UNIT






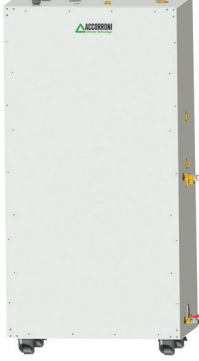
	Hot water thermostat with well 1/2" L 100 mm	75060403	76,00	
	Hot water thermometer with 1/2" L 100 mm well	75060404	26,00	
	230 V single-phase integrative electrical resistance IP 65 protection rating	mod. 1500 W - 1" 1/4	75050102	200,00
		mod. 2000 W - 1" 1/2	75050103	220,00
		mod. 3000 W - 1" 1/2	75060300	240,00
	400 V three-phase integrative electrical resistance IP 65 protection rating	mod. 6000 W - 1" 1/2	75050105	528,00
		mod. 9000 W - 1" 1/2	75050106	534,00

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Accessories POWER UNIT		Code	€
	Additional inverter electronic circulator, max flow rate 3.3 m <sup>3</sup> /h, max head 6.2 m, min. electrical absorption. 4W - max 45W	<b>35006001</b>	<b>230,00</b>
	<b>mod. 3/6</b> Q <sub>max</sub> 3,2 m <sup>3</sup> /h H <sub>max</sub> 6,6 m	<b>35006002</b>	<b>540,00</b>
	<b>mod. 9/10</b> Q <sub>max</sub> 9 m <sup>3</sup> /h H <sub>max</sub> 10,5 m	<b>36576012</b>	<b>1.250,00</b>
	<b>mod. 18/12</b> Q <sub>max</sub> 18 m <sup>3</sup> /h H <sub>max</sub> 12,8 m	<b>36576013</b>	<b>2.500,00</b>
	<b>mod. fixed mechanical adjustment</b>	<b>75101032</b>	<b>120,00</b>
	<b>mod. motorized adjustment</b>	<b>75101033</b>	<b>600,00</b>
	<b>mod. 2,22 m<sup>2</sup></b>	<b>37310031</b>	<b>560,00</b>
	<b>mod. 3,15 m<sup>2</sup></b>	<b>37310010</b>	<b>750,00</b>
	<b>mod. 4,54 m<sup>2</sup></b>	<b>37370012</b>	<b>1.400,00</b>
	<b>mod. 1/2"</b>	<b>75100023</b>	<b>170,00</b>
	<b>mod. 3/4"</b>	<b>75100031</b>	<b>170,00</b>
	<b>mod. 1"</b>	<b>75100027</b>	<b>180,00</b>
	<b>mod. 0,75 m<sup>2</sup></b>	<b>75100002</b>	<b>390,00</b>
	<b>mod. 1,50 m<sup>2</sup></b>	<b>75101002</b>	<b>680,00</b>
	Anchor brackets for ceiling installation	<b>75100040</b>	<b>90,00</b>
	Domestic hot water recirculation inverter electronic circulator with brass body max flow rate 0.4 m <sup>3</sup> /h max head 1.0 m	<b>35006004</b>	<b>260,00</b>
	3-way motorized diverter valve with 1" connections and spring return	<b>16205308</b>	<b>204,00</b>
	8 liter fixed membrane technical water expansion vessel - 3bar	<b>75060307</b>	<b>110,00</b>

## Description and representation of technical storage units POWER UNIT

80 LT	105 LT	130 LT	165 LT	220 LT	315 LT
					
79,2 l	105,0 l	132,0 l	166,5 l	224,4 l	314,2 l
Dimensions L 340,5 mm P 340,5 mm H 1656,2 mm	Dimensions L 340,5 mm P 340,5 mm H 2156,2 mm	Dimensions L 340,5 mm P 340,5 mm H 2524,3 mm	Dimensions L 594,6 mm P 340,5 mm H 1656,2 mm	Dimensions L 594,6 mm P 340,5 mm H 2156,2 mm	Dimensions L 803,4 mm P 461,1 mm H 1690,0 mm

# POWER UNIT

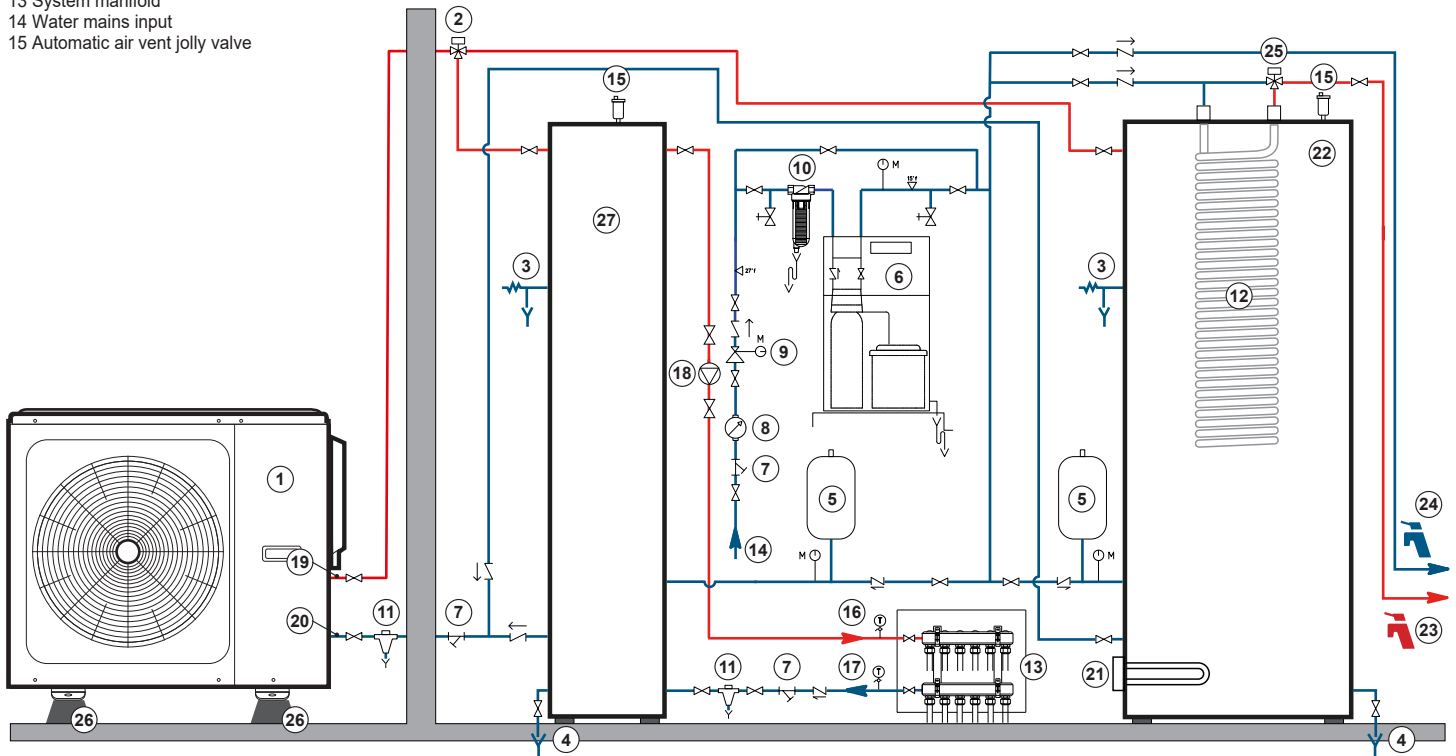
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## Thermal power plant for summer/winter air conditioning and for the production of DHW

- 1 HPE EVO monobloc heat pump
- 2 Sanitary priority diverter valve
- 3 Safety valve
- 4 Drainage tap
- 5 Technical water expansion tank
- 6 Volumetric softener
- 7 "Y" mechanical filter
- 8 Aqueduct meter
- 9 Automatic pressure reducer
- 10 Sand trap filter
- 11 Magnetic dirt separator
- 12 DHW finned exchanger 3.15 m<sup>2</sup>
- 13 System manifold
- 14 Water mains input
- 15 Automatic air vent jolly valve

- 16 Air conditioning system delivery
- 17 Air conditioning system return
- 18 System inverter electronic circulator
- 19 Heat pump delivery
- 20 Heat pump return
- 21 Integrative electrical resistance
- 22 POWER UNIT 220 LT - H 210 DOUBLE
- 23 Domestic hot water delivery
- 24 Domestic cold water delivery
- 25 Thermostatic mixing valve
- 26 Vulcanized rubber anti-vibration base
- 27 POWER UNIT 105 LT - H 210

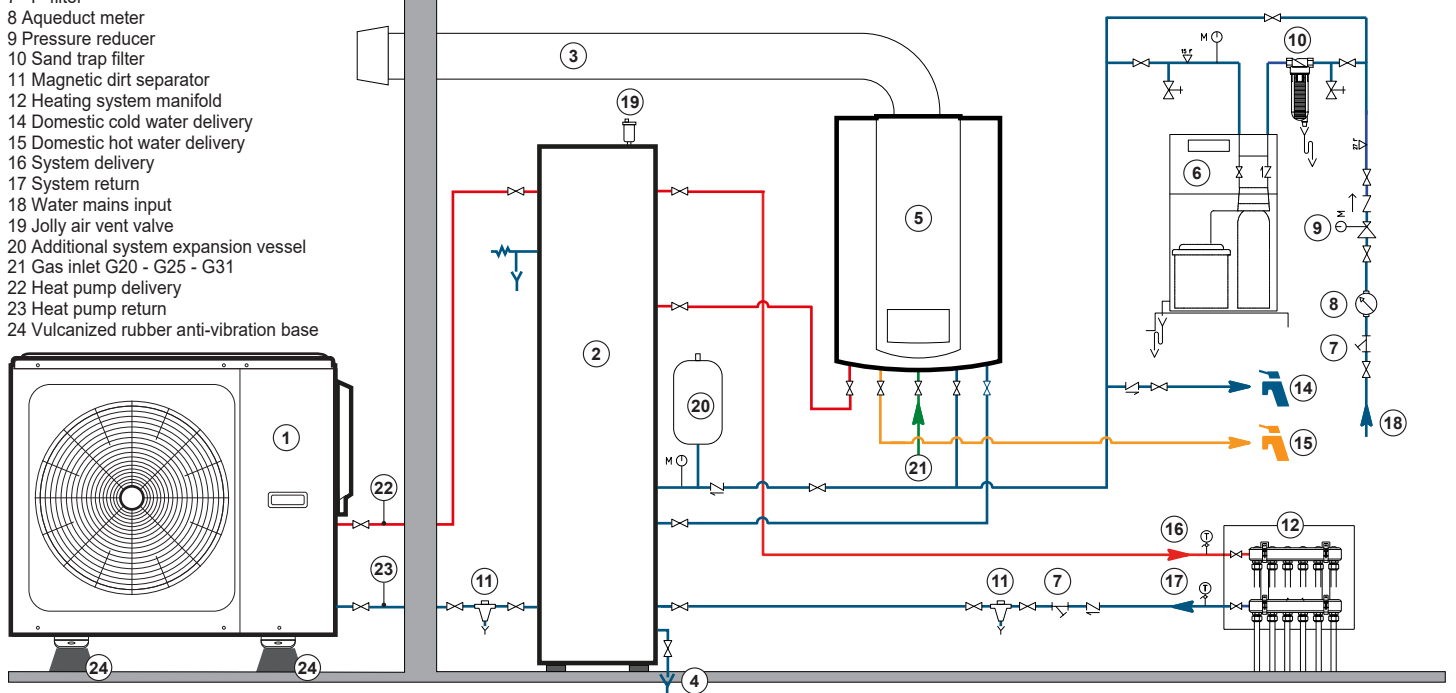
Heating plant composed of a technical inertial storage model POWER UNIT 105 LT - H 210 and a technical inertial storage model POWER UNIT 165 LT - H 210 DOUBLE both powered by a monobloc heat pump equipped with a motorized diverter valve, for the production of heating, cooling and domestic hot water. This solution is recommended if there is a summer and winter radiant air conditioning system; the design approach in this case is to divide the air conditioning system from the DHW production system. In the winter period this system solution allows you to manage a double storage temperature, for example it is possible to keep the 105 liter accumulation directly at 35 °C (so as to power the radiant system without the application of a mixing valve), while the 165 liter storage tank equipped with a DHW finned exchanger can be maintained at 45 °C for the production of domestic hot water.



## Hybrid thermal power plant for winter air conditioning and DHW production

- 1 HPE EVO monobloc heat pump
- 2 POWER UNITS 80 LT
- 3 Boiler smoke evacuation duct
- 4 Drainage tap
- 5 Condensing boiler
- 6 Water softener
- 7 "Y" filter
- 8 Aqueduct meter
- 9 Pressure reducer
- 10 Sand trap filter
- 11 Magnetic dirt separator
- 12 Heating system manifold
- 14 Domestic cold water delivery
- 15 Domestic hot water delivery
- 16 System delivery
- 17 System return
- 18 Water mains input
- 19 Jolly air vent valve
- 20 Additional system expansion vessel
- 21 Gas inlet G20 - G25 - G31
- 22 Heat pump delivery
- 23 Heat pump return
- 24 Vulcanized rubber anti-vibration base

Technical inertial storage model POWER UNIT 80 LT - H 160 powered by an HPE EVO monobloc heat pump and a supporting condensing boiler, for the production of heating in hybrid mode. This system solution involves the use of the condensing boiler for the instant production of domestic hot water, while the winter air conditioning is entrusted to the monobloc heat pump which will be assisted by the boiler only if strictly necessary. POWER UNIT in this case acts as a technical inertial accumulation and as a hydraulic separator in order to allow the right combination between the two energy vectors present.



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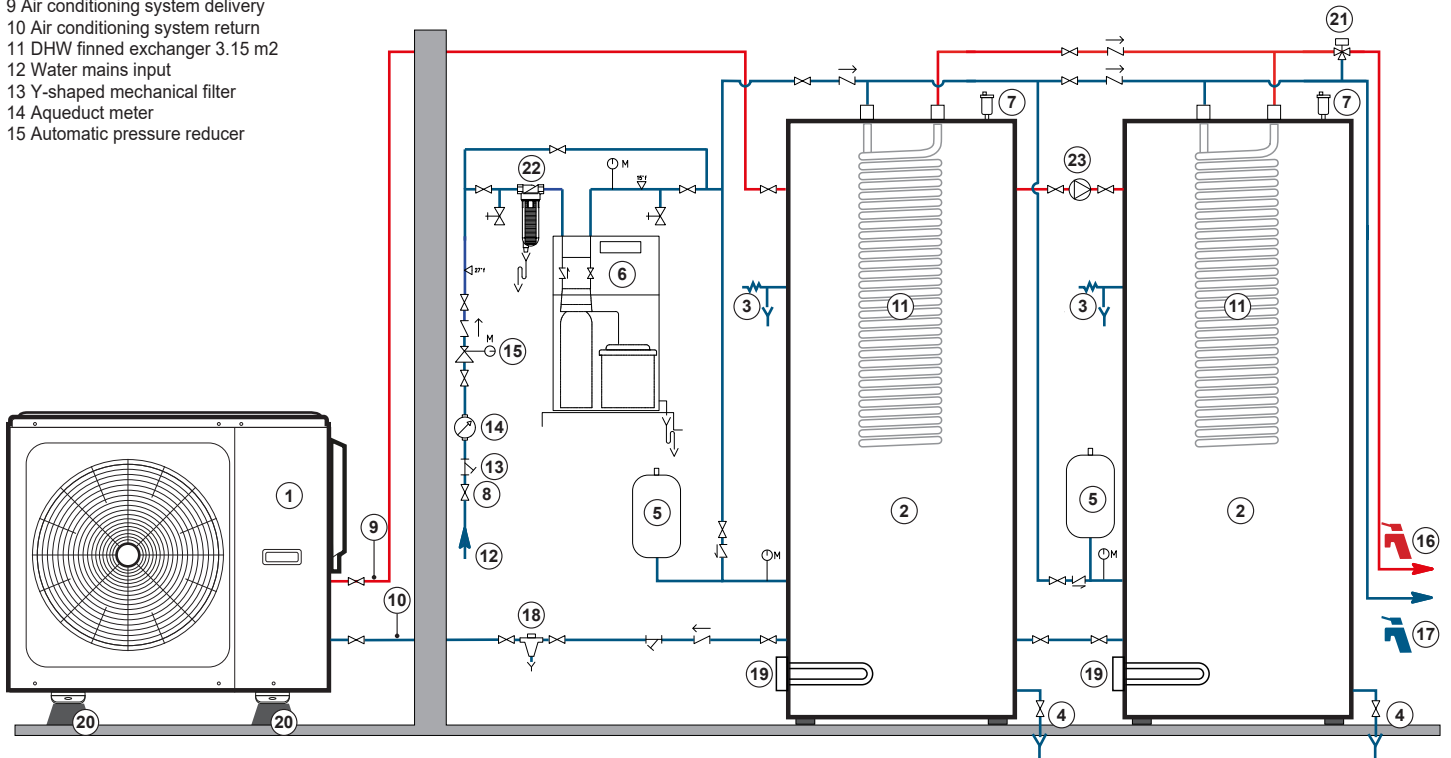
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## Thermal power plant for the production of domestic hot water with cascade accumulations

- 1 HPE EVO monobloc heat pump
- 2 POWER UNIT 165 LT - H 210 Double I.U.
- 3 Safety valve
- 4 Drainage tap
- 5 System expansion vessel
- 6 Volumetric softener
- 7 Automatic air vent jolly valve
- 8 Technical water replenishment tap
- 9 Air conditioning system delivery
- 10 Air conditioning system return
- 11 DHW finned exchanger 3.15 m<sup>2</sup>
- 12 Water mains input
- 13 Y-shaped mechanical filter
- 14 Aqueduct meter
- 15 Automatic pressure reducer

- 16 Domestic hot water delivery
- 17 Domestic cold water delivery
- 18 Magnetic dirt separator
- 19 Backup electrical resistance
- 20 Vulcanized rubber anti-vibration base
- 21 Thermostatic mixing valve
- 22 Sand trap filter
- 23 Inverter electronic circulator

Cascade system composed of two inertial technical storage tanks model POWER UNIT 165 LT - H 210 DOUBLE both equipped with a 3.15 m<sup>2</sup> finned copper exchanger for the production of domestic hot water. This modular solution allows you to produce large quantities of domestic hot water via a monobloc heat pump, all with maximum hygiene without the need to carry out anti-legionella thermal shock cycles.

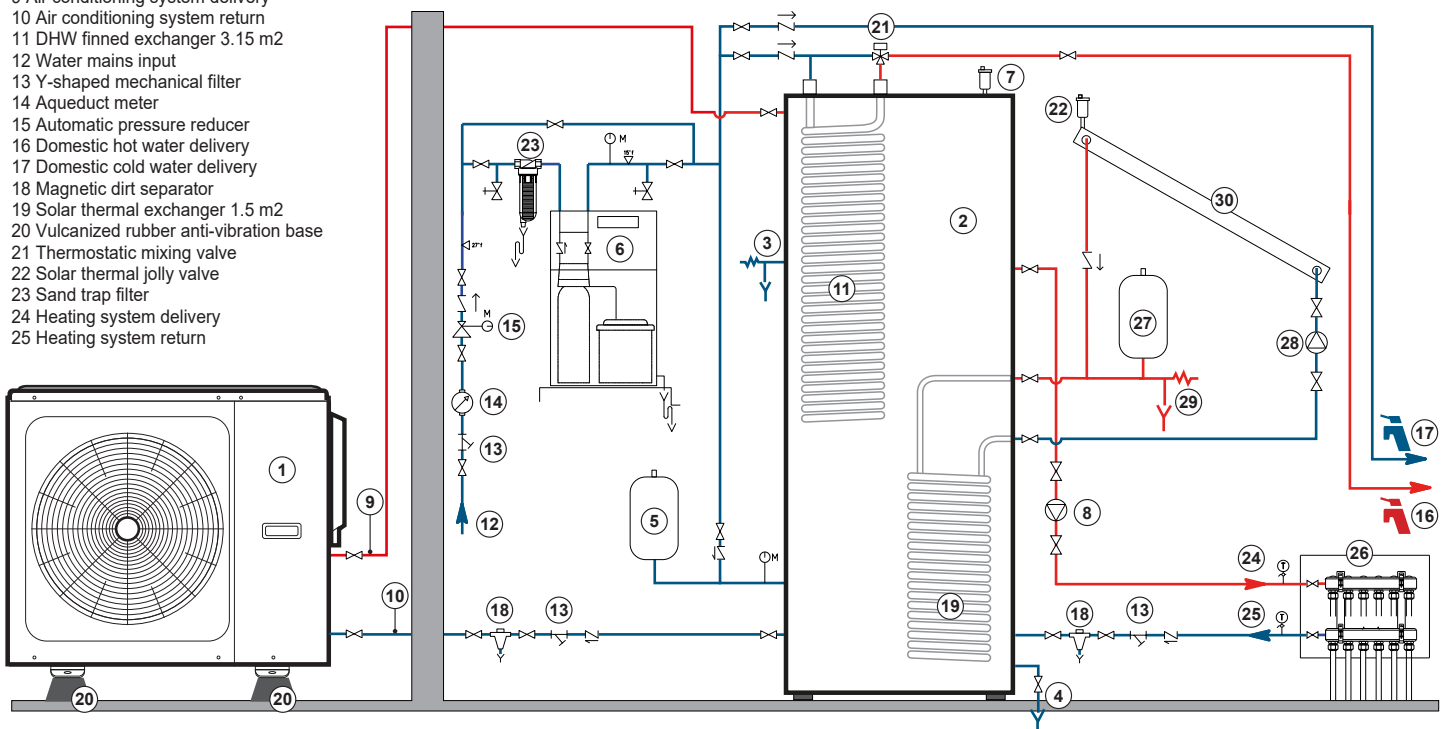


## New thermal power plant for heating and DHW production with solar thermal integration

- 1 HPE EVO monobloc heat pump
- 2 POWER UNIT 220 LT - H 210 Double I.U.
- 3 System safety valve
- 4 Drainage tap
- 5 System expansion vessel
- 6 Volumetric softener
- 7 Automatic air vent jolly valve
- 8 System circulator
- 9 Air conditioning system delivery
- 10 Air conditioning system return
- 11 DHW finned exchanger 3.15 m<sup>2</sup>
- 12 Water mains input
- 13 Y-shaped mechanical filter
- 14 Aqueduct meter
- 15 Automatic pressure reducer
- 16 Domestic hot water delivery
- 17 Domestic cold water delivery
- 18 Magnetic dirt separator
- 19 Solar thermal exchanger 1.5 m<sup>2</sup>
- 20 Vulcanized rubber anti-vibration base
- 21 Thermostatic mixing valve
- 22 Solar thermal jolly valve
- 23 Sand trap filter
- 24 Heating system delivery
- 25 Heating system return

- 26 System manifold
- 27 Solar expansion vessel
- 28 Solar thermal circulator
- 29 Solar safety valve
- 30 Solar thermal collector

System composed of technical storage units model POWER UNIT 220 LT - H 210 Double and a monobloc heat pump for winter air conditioning and the production of domestic hot water, with solar thermal integration. This innovative, extremely compact thermal power plant provides 220 liters of inertial flywheel at a maximum temperature of 55 °C which will be used both for winter air conditioning and for the production of DHW via a finned copper exchanger directly immersed in technical water without the need to carry out anti-legionella thermal shock cycles.



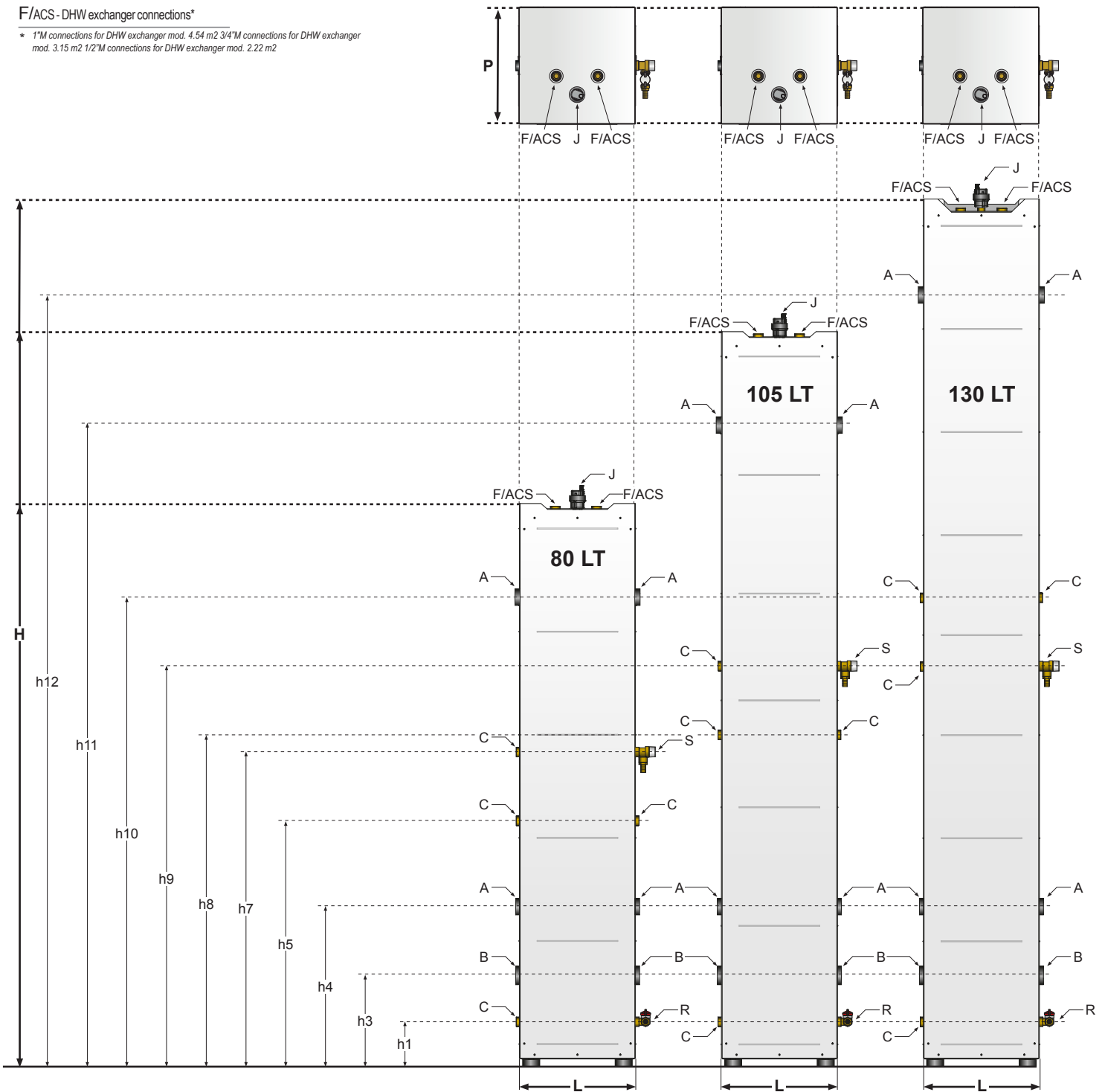
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## Dimensions puffer POWER UNIT 80 LT - 105 LT - 130 LT

F/ACS - DHW exchanger connections\*

\* 1" M connections for DHW exchanger mod. 4.54 m2 3/4" M connections for DHW exchanger mod. 3.15 m2 1/2" M connections for DHW exchanger mod. 2.22 m2



Model	L	P	H	h1	h3	h4	h5	h7	h8	h9	h10	h11	h12
80 LT	340,5	340,5	1656,2	130,0	265,0	465,0	715,0	915,0	-	-	1365,0	-	-
105 LT	340,5	340,5	2156,2	130,0	265,0	465,0	-	-	965,0	1165,0	-	1865,0	-
130 LT	340,5	340,5	2524,3	130,0	265,0	465,0	-	-	-	1165,0	1365,0	-	2245,0

Values expressed in mm

Model	Connections Used			Free Connections						Weight Kg		Lt	
	R - Drain cock*	J - Valve Jolly*	S - Safety valve*	A	B	C	D	E	F	Wmpty	Exercise		
80 LT													
105 LT	1/2"	3/8"	1/2"	1 1/4"	1 1/2"	1/2"	3/8"	1"	3/4"	57,4	136,2	79,2	
130 LT										74,7	179,7	105,0	
										86,9	218,5	132,0	

\*Accessory supplied as standard, pre-assembled at the factory

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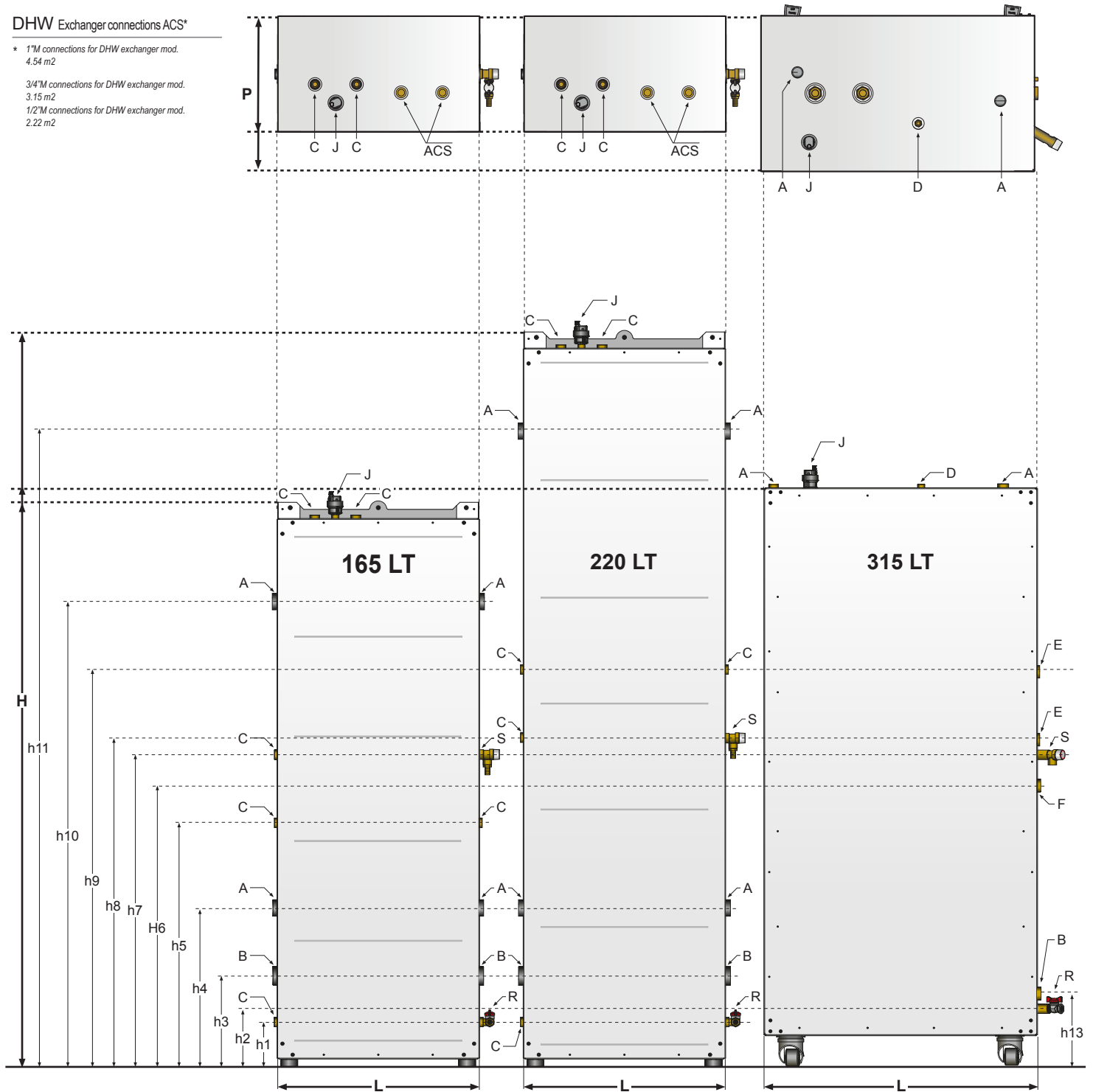
## Dimensions puffer POWER UNIT 165 LT - 220 LT - 315 LT

DHW Exchanger connections ACS\*

\* 1" connections for DHW exchanger mod.  
4.54 m<sup>2</sup>

3/4" connections for DHW exchanger mod.  
3.15 m<sup>2</sup>

1/2" connections for DHW exchanger mod.  
2.22 m<sup>2</sup>



Model	L	P	H	h1	h2	h3	h4	h5	h6	h7	h8	h9	h10	h11	h13
165 LT	594,6	340,5	1656,2	130,0	-	265,0	465,0	715,0	-	915,0	-	-	1365,0	-	-
220 LT	594,6	340,5	2156,2	130,0	-	265,0	465,0	-	-	915,0	965,0	1165,0	-	1865,0	-
315 LT	803,4	461,1	1690,0	-	165,0	-	-	-	815,0	915,0	965,0	1165,0	-	-	185,0

Model	Connections Used			Free Connections						Weight Kg		Lt		
	R - Drain cock*	J - Valve Jolly*	S - Safety valve*	A	B	C	D	E	F	Empty	Exercise			
165 LT												102,0	268,5	166,5
220 LT	1/2"	3/8"	1/2"	1 1/4	1 1/2	1/2"	3/8"	1"	3/4"			121,0	343,4	224,4
315 LT												230,0	544,2	314,2

\*Accessory supplied as standard, pre-assembled at the factory