SUPER HUB RADIATOR

Patented high efficiency heat pump system with direct refrigerant/water exchange
to produce heating and domestic hot water for medium and large users

Technical and construction characteristics

Many years of experience in the Green Economy sector has allowed us to understand well the real needs of medium/large users (condominiums, sports centres, campsites, hotels, tertiary sectors, etc.). In this context linked to energy saving and the use of renewable energy, the SUPER HUB RADIATOR system was born, capable of producing heating and domestic hot water according to the canons of new sustainable development. The main features of the SUPER HUB RADIATOR are:

INTEGRATED SOLUTIONS
The SUPER HUB RADIATOR was designed to function as a large thermal energy accumulator, also offering extensive configuration possibilities in combination with solar thermal and biomass.

HIGH EFFICIENCY
The particular construction of multiple patented condensers with direct refrigerant/water exchange combined with cascade HR Boosters guarantee energy savings, greater yield, great reliability and simplified maintenance.

NO LEGIONELLA
The SUPER HUB RADIATOR with the first in - first out method guarantees maximum performance of the heat pump and maximum hygiene of the domestic hot water circuit which always works separately from the technical water. These particular copper exchangers allow us to eliminate the great problem of legionella in the bud.
ENERGY SAVING
The exclusive HUB RADIATOR patent redefines the performance parameters of air/water heat pumps, reaching the maximum performance levels of the system even in very cold winters with the "direct exchange of the refrigerant/water condenser".
This allows you to return on your investment very quickly.

CASCADE BOOSTER
The high versatility and modularity of the SUPER HUB RADIATOR system allows all operators in the sector to configure their own thermal power plant by choosing between different RM technical water inertial accumulators in which to connect multiple HR Boosters that work with direct exchange with load partialization steps to obtain the required thermal power.

Model unit Moto-evaporating split outdoor U.E.	Code	€
External unit Booster HR 2.5 only heat	**76010240**	**2.000,00**
External unit Booster HR 7.0 only heat	**76010500**	**3.700,00**
External unit Booster HR 9.0 only heat INVERTER	**76030500**	**6.360,00**

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Inertial technical accumulation model SUPER HUB RADIATOR U.I.

	DHW Exchanger	Solar exchanger	Biomass exchanger	Code	€
Tank RM1 300	Removable 4,54 m^2	-	-	**37310300**	**2.870,00**
Tank RM1 500	Removable 4,54 m^2	-	-	**37310500**	**3.060,00**
Tank RM1 800	Removable 5,26 m^2	-	-	**37310800**	**4.060,00**
Tank RM1 1000	Removable 5,26 m^2	-	-	**37311000**	**4.320,00**
Tank RM1 1500	Removable 6,34 m^2	-	-	**37311500**	**5.070,00**
Tank RM1 2000	Removable 6,34 m^2	-	-	**37312000**	**6.380,00**
Tank RM2 300	Removable 4,54 m^2	Fixed 1,40 m^2	-	**37320300**	**3.160,00**
Tank RM2 500	Removable 4,54 m^2	Fixed 2,00 m^2	-	**37320500**	**3.610,00**
Tank RM2 800	Removable 5,26 m^2	Fixed 2,50 m^2	-	**37320800**	**4.430,00**
Tank RM2 1000	Removable 5,26 m^2	Fixed 3,50 m^2	-	**37321000**	**4.510,00**
Tank RM2 1500	Removable 6,34 m^2	Fixed 4,00 m^2	-	**37321500**	**6.340,00**
Tank RM2 2000	Removable 6,34 m^2	Fixed 4,80 m^2	-	**37322000**	**6.860,00**
Tank RM3 300	Removable 4,54 m^2	Fixed 1,40 m^2	Fixed 1,10 m^2	**37330300**	**3.370,00**
Tank RM3 500	Removable 4,54 m^2	Fixed 2,00 m^2	Fixed 1,80 m^2	**37330500**	**4.060,00**
Tank RM3 800	Removable 5,26 m^2	Fixed 2,50 m^2	Fixed 2,00 m^2	**37330800**	**4.680,00**
Tank RM3 1000	Removable 5,26 m^2	Fixed 3,50 m^2	Fixed 2,50 m^2	**37331000**	**4.970,00**
Tank RM3 1500	Removable 6,34 m^2	Fixed 4,00 m^2	Fixed 2,80 m^2	**37331500**	**6.860,00**
Tank RM3 2000	Removable 6,34 m^2	Fixed 4,80 m^2	Fixed 3,80 m^2	**37332000**	**7.180,00**

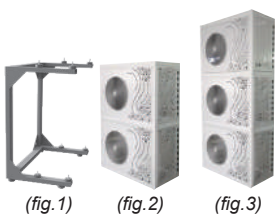
Accessories SUPER HUB RADIATOR

	230 V single-phase integrative electrical resistance IP 65 protection rating	**mod. 1500 W** **mod. 2000 W** **mod. 3000 W**		**75050102** **75050103** **75060300**	**200,00** **220,00** **240,00**
	Additional inverter electronic circulator max flow rate 3.3 m3/h max head 6.2 m min. electrical absorption 4W - max 45W			**35006001**	**230,00**
	System pump kit which includes: inverter electronic circulation pump complete with shut-off valves, jolly air vent valve, safety valve, threaded plugs and probe holders			**75100011**	**400,00**
	High head system pump kit which includes: complete inverter electronic circulation pump of shut-off valves, jolly air vent valves, safety valves, threaded plugs and probe holders			**75100009**	**700,00**
	High efficiency wet rotor inverter electronic circulator with ECM permanent magnet motor	**mod. 3/6** **mod. 9/10** **mod. 18/12** **mod. 27/16** **mod. 30/18G**	**Q max 3,2 m³/h** **Q max 9 m³/h** **Q max 18 m³/h** **Q max 27 m³/h** **Q max 30 m³/h**	**H max 6,6 m** **H max 10,5 m** **H max 12,8 m** **H max 16,0 m** **H max 18,0 m**	**35006002** **36576012** **36576013** **36576014** **36576015**	**540,00** **1.250,00** **2.500,00** **3.850,00** **6.600,00**
	Flush-mounted command and remote control panel for 503 box				**75100005**	**102,00**
	Wall or wall adapter for control panel and remote control				**75100029**	**24,00**
	Relè di controllo carichi per la gestione della potenza assorbita		**mod. Connection BUS** **mod. Radio frequency**		**37081062** **37081063**	**172,00** **460,00**
	Web server home automation control unit				**75101005**	**580,00**

ACCORRONI Climate Technology

SUPER HUB RADIATOR

Sistema brevettato ad alta efficienza in pompa di calore a scambio diretto refrigerante/acqua per produrre riscaldamento ed acqua calda sanitaria per medie e grandi utenze

Accessories SUPER HUB RADIATOR			Code	€
	Mixing valve for radiant systems	**mod. fixed mechanical adjustment** **mod. motorized adjustment**	**75101032** **75101033**	**120,00** **600,00**
	Additional condenser for Booster HR	**mod. only heat HR 2.5** **mod. only heat HR 7.0 - 9.0**	**26505565** **26515565**	**340,00** **380,00**
	Anchoring shelf for external Booster including rubber vibration dampers	**mod. HR 2.5** **mod. HR 7.0 - 9.0**	**37081060** **37081061**	**50,00** **90,00**
	Anchoring shelf for sloping roof for external Boosters mod. HR 2.5 - 7.0 - 9.0 including rubber vibration dampers		**37081064**	**218,00**
	Anti-vibration floor base in vulcanized rubber (height from the ground 95 mm) with level and screws for Booster HR 2.5 - 7.0 - 9.0 (pack of 2 pieces)		**75100018**	**102,00**
	Anti-vibration kit for installation on shelves		**75100022**	**22,00**
	Stainless steel spring anti-vibration kits complete with bolts, washers and nuts (pack of 2)	**mod. HR 2.5** **mod. HR 7.0 - 9.0**	**37081065** **37081066**	**62,00** **64,00**
	Anti-freeze condensate heating cable with thermal sensor, factory mounted	**mod. 3 m. 90 W** **mod. 6 m. 120 W**	**37081067** **37081068**	**76,00** **80,00**
	Auxiliary tray for under-shelf installation equipped with 90 W heating cable	**mod. HR 2.5** **mod. HR 7.0 - 9.0**	**37081069** **37081070**	**280,00** **300,00**
	Floor support complete with auxiliary basin equipped with 90 W heating cable	**mod. HR 2.5 H fixed** **mod. HR 7.0 - 9.0 H fixed** **mod. HR 7.0 - 9.0 H variable**	**37081071** **37081073** **37081074**	**320,00** **350,00** **370,00**
	DHW thermostatic mixer for anti-scald solar thermal systems	**mod. MIX L** **mod. MIX XL** **mod. MIX XXL**	**50103015** **50203015** **50303015**	**470,00** **490,00** **1.370,00**
	Additional heat generator electronic management kit with external temperature probe (for Booster 2.5 - 7.0)		**75100024**	**220,00**
	Flexible anti-vibration joint kit with connection plate and straight union	**mod. HR 7.0 - 9.0 (5/8")** **mod. HR 2.5 (3/8")**	**75100014** **75100015**	**120,00** **60,00**
	Flexible anti-vibration joint kit with connection plate and 90° curved union	**mod. HR 7.0 - 9.0 (5/8")** **mod. HR 2.5 (3/8")**	**75100016** **75100017**	**120,00** **60,00**
	Daily/weekly digital programmer clock		**35639904**	**30,00**
	AIR BOX cabinet for cylindrical internal unit - external covering frame of the technical storage	**mod. 300 L 950 P 930 - H 1950** **mod. 500 L 950 P 930 - H 1950** **mod. 800 L 1200 P 1180 - H 2100**	**75060202** **75060203** **75060204**	**700,00** **1.100,00** **1.200,00**
 (fig.1) (fig.2) (fig.3)	*Open shelf for n. 2 Booster external units mod. HR 7.0 - 9.0 complete with vibration dampers (fig.1)*		**75060406**	**290,00**
	RACK 2 cabinet for n. 2 Booster external units mod. HR 2.5 - 7.0 - 9.0 (fig.2)		**75060306**	**1.060,00**
	RACK 3 cabinet for n. 3 Booster external units mod. HR 2.5 - 7.0 - 9.0 Height 210 cm Width 96 cm Depth 54 cm (fig.3)		**75060206**	**1.200,00**

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Solar thermal kits to combine with the systems SUPER HUB RADIATOR

solar collector
BLUH+ BLUHX+

solar thermal kit 1 x 2.0 m2
- N. 1 BLUH+ 2.0 m2 flat sheet panel
- Anchoring kit for 1 BLUH+ 2.0 m2 collector
- 2-way solar station mod. UNIT 2 PLUS
- CONTROL MULTI 06 S solar control unit
- 12 liter expansion vessel
- String fittings kit (1 string - 1 manifold)
- Concentrated glycol 1 3 liter tank

Kit Solar HR 1 x 2.0	Code	€
Flat roof / 1 x 2.0	37318030	2.554,00
Pitched roof / 1 x 2.0	37308030	2.566,00

solar thermal kit 1 x 2.5 m2
- N. 1 BLUHX+ 2.5 m2 flat sheet panel
- Anchoring kit for 1 BLUHX+ 2.5 m2 collector
- 2-way solar station mod. UNIT 2 PLUS
- CONTROL MULTI 06 S solar control unit
- 18 liter expansion tank
- String fittings kit (1 string - 1 manifold)
- Concentrated glycol 1 4 liter tank

Kit Solar HR 1 x 2.5	Code	€
Flat roof / 1 x 2.5	37318031	2.744,00
Pitched roof / 1 x 2.5	37308031	2.744,00

Anchoring kit
BLUH+ BLUHX+

solar thermal kit 2 x 2.0 m2
- N. 2 BLUH+ 2.0 m2 flat sheet panels
- Anchoring kit for 2 BLUH+ 2.0 m2 collectors
- 2-way solar station mod. UNIT 2 PLUS
- CONTROL MULTI 06 S solar control unit
- 25 liter expansion vessel
- String fittings kit (1 string - 2 collectors)
- Concentrated glycol 1 7 liter tank

Kit Solar HR 2 x 2.0	Code	€
Flat roof / 2 x 2.0	37318032	3.710,00
Pitched roof / 2 x 2.0	37308032	3.602,00

solar thermal kit 2 x 2.5 m2
- N. 2 BLUHX+ 2.5 m2 flat sheet panels
- Anchoring kit for 2 BLUHX+ 2.5 m2 collectors
- 2-way solar station mod. UNIT 2 PLUS
- CONTROL MULTI 06 S solar control unit
- 25 liter solar expansion vessel
- String fittings kit (1 string - 2 collectors)
- Concentrated glycol 1 8 liter tank

Kit Solar HR 2 x 2.5	Code	€
Flat roof / 2 x 2.5	37318033	4.064,00
Pitched roof / 2 x 2.5	37308033	3.968,00

Solar station
UNIT 2 PLUS

solar thermal kit 3 x 2.0 m2
- N. 3 BLUH+ 2.0 m2 flat sheet panels
- Anchoring kit for 3 BLUH+ 2.0 m2 collectors
- 2-way solar station mod. UNIT 2 PLUS
- CONTROL MULTI 06 S solar control unit
- 25 liter solar expansion vessel
- String fittings kit (1 string - 3 collectors)
- Concentrated glycol 1 10 liter tank

Kit Solar HR 3 x 2.0	Code	€
Flat roof / 3 x 2.0	37318034	4.830,00
Pitched roof / 3 x 2.0	37308034	4.734,00

Solar control box
CONTROL
MULTI 06 S

solar thermal kit 3 x 2.5 m2
- N. 3 BLUHX+ 2.5 m2 flat sheet panels
- Anchoring kit for 3 BLUHX+ 2.5 m2 collectors
- 2-way solar station mod. UNIT 2 PLUS
- CONTROL MULTI 06 S solar control unit
- 25 liter solar expansion vessel
- String fittings kit (1 string - 3 collectors)
- Concentrated glycol 2 7 liter cans

Kit Solar HR 3 x 2.5	Code	€
Flat roof / 3 x 2.5	37318035	5.404,00
Pitched roof / 3 x 2.5	37308035	5.308,00

Expansion
solar tank

solar thermal kit 5 x 2.5 m2
- N. 5 BLUHX+ 2.5 m2 flat sheet panels
- Anchoring kit for 5 BLUHX+ 2.5 m2 collectors
- 2-way solar station mod. UNIT 2 PLUS
- CONTROL MULTI 06 S solar control unit
- 50 liter expansion vessel
- String fittings kit (1 string - 5 collectors)
- Concentrated glycol 2 10 liter cans

Kit Solar HR 5 x 2.5	Code	€
Flat roof / 5 x 2.5	37318036	8.038,00
Pitched roof / 5 x 2.5	37308036	7.846,00

Fitting kit

solar thermal kit 6 x 2.5 m2
- N. 6 BLUHX+ 2.5 m2 flat sheet panels
- Anchoring kit for 6 BLUHX+ 2.5 m2 collectors
- 2-way solar station mod. UNIT 2 PLUS
- CONTROL MULTI 06 S solar control unit
- 60 liter expansion vessel
- String fittings kit (1 string - 6 collectors)
- Concentrated glycol 3 10 liter cans

Kit Solar HR 6 x 2.5	Code	€
Flat roof / 6 x 2.5	37318037	9.502,00
Pitched roof / 6 x 2.5	37308037	9.214,00

solar thermal kit 10 x 2.5 m2
- N. 10 BLUHX+ 2.5 m2 flat sheet panels
- Anchoring kit for 10 BLUHX+ 2.5 m2 collectors
- 2-way solar station mod. UNIT 2 XL PLUS
- CONTROL MULTI 06 S solar control unit
- 100 liter expansion vessel
- String fittings kit (2 strings - 10 collectors)
- Concentrated glycol 4 10 liter cans

Kit Solar HR 10 x 2.5	Code	€
Flat roof / 10 x 2.5	37318038	13.976,00
Pitched roof / 10 x 2.5	37308038	13.496,00

Kit glycol
antifreeze

solar thermal kit 12 x 2.5 m2
- N. 12 BLUHX+ 2.5 m2 flat sheet panels
- Anchoring kit for 12 BLUHX+ 2.5 m2 collectors)
- 2-way solar station mod. UNIT 2 XL PLUS
- CONTROL MULTI 06 S solar control unit
- 100 liter expansion vessel
- String fittings kit (2 strings - 12 collectors)
- Concentrated glycol 5 10 liter cans

Kit Solar HR 12 x 2.5	Code	€
Flat roof / 12 x 2.5	37318039	18.588,00
Pitched roof / 12 x 2.5	37308039	18.012,00

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Pool heater kits to match the systems SUPER HUB RADIATOR

316L stainless steel exchanger

Pump inverter

Control box

Hydraulic fitting kit

pool heater kit mod. 20 kW
- N. 1 20 kW stainless steel exchanger
- N. 1 2 m3/h inverter electronic circulator
- N. 1 digital electronic control unit
- N. 1 3/4" hydraulic fitting kit

pool heater kit mod. 40 kW
- N. 1 40 kW stainless steel exchanger
- N. 1 2 m3/h inverter electronic circulator
- N. 1 digital electronic control unit
- N. 1 3/4" hydraulic fitting kit

pool heater kit mod. 70 kW
- N. 1 70 kW stainless steel exchanger
- N. 1 3 m3/h inverter electronic circulator
- N. 1 digital electronic control unit
- N. 1 1" hydraulic fitting kit

pool heater kit mod. 100 kW
- N. 1 100 kW stainless steel exchanger
- N. 1 5 m3/h inverter electronic circulator
- N. 1 digital electronic control unit
- N. 1 1" hydraulic fitting kit

pool heater kit mod. 140 kW
- N. 2 70 kW stainless steel exchanger
- N. 2 inverter electronic circulators 3 m^3/h
- N. 1 digital electronic control unit
- N. 2 hydraulic fitting kit 1"

	Code	€
Pool heater kit 20 kW	**75050800**	**1.120,00**

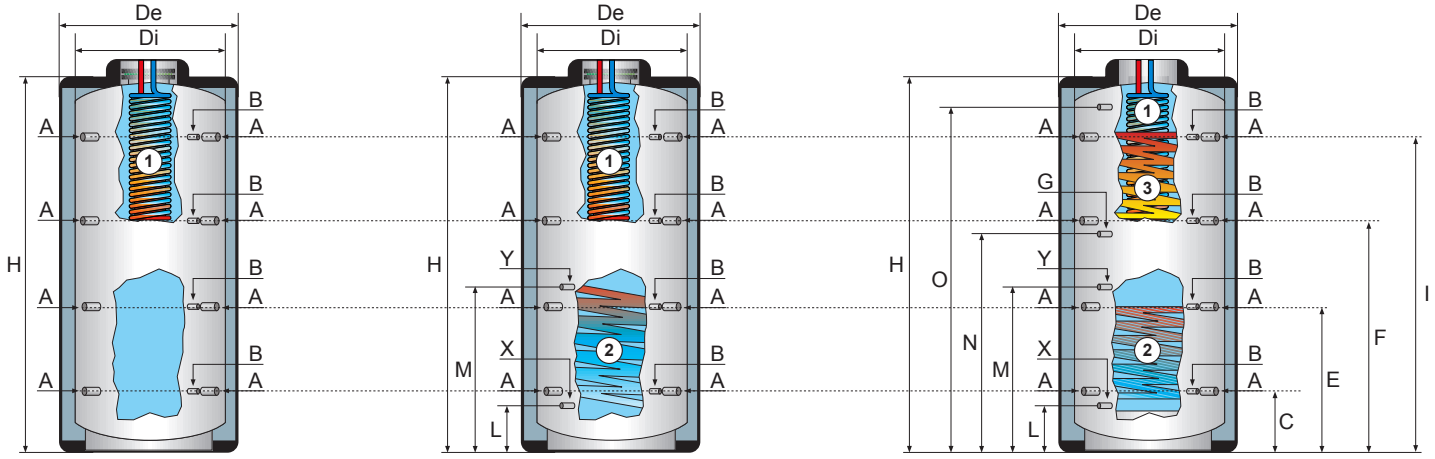
	Code	€
Pool heater kit 40 kW	**75050810**	**1.300,00**

	Code	€
Pool heater kit 70 kW	**75050820**	**1.700,00**

	Code	€
Pool heater kit 100 kW	**75050830**	**2.350,00**

	Code	€
Pool heater kit 140 kW	**75050840**	**3.600,00**

Dimensions and technical characteristics of technical water tanks RM1 - RM2 - RM3 SUPER HUB RADIATOR



RM1 **RM2** **RM3**

Dimensions tank	U.M.	**300**	**500**	**800**	**1000**	**1500**	**2000**
De	mm	600	750	1050	1050	1260	1360
Di	mm	500	650	790	790	1000	1100
H	mm	1595	1645	1750	2110	2115	2380
C	mm	215	240	275	275	340	370
E	mm	595	615	655	810	765	930
F	mm	1080	1105	1145	1355	1400	1435
I	mm	1350	1375	1410	1755	1725	1945
L	mm	290	315	355	350	420	450
M	mm	810	835	875	1035	1080	1090
N	mm	930	955	1015	1195	1220	1230
O	mm	1290	1315	1345	1675	1620	1710
X - Y - G - D		1"	1"	1"	1"	1"	1"
A		1" 1/2	1" 1/2	1" 1/2	1" 1/2	1" 1/2	1" 1/2
B		1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Technical water volume	l	289,8	499,8	749,3	931,0	1472,4	1950,0
Surface extractable DHW exchanger(1)	m^2	4,54	4,54	5,26	5,26	6,34	6,34
Surface fixed exchanger inferior (2)	m^2	1,4	2,0	2,5	3,5	4,0	4,8
Surface fixed exchanger superior (3)	m^2	1,1	1,8	2,0	2,5	2,8	3,8
Insulation thickness	mm	50	50	100	100	100	100
Accumulation operating pressure	bar	4	4	4	4	4	4
Maximum operating temperature	°C	95	95	95	95	95	95
Fixed exchanger operating pressure	bar	12	12	12	12	12	12
Thermal dispersion	W	57,3	69,7	109,9	113,8	132,8	143,5
Empty weight RM1	Kg	81	115	148	186	232	308
Empty weight RM2	Kg	92	129	168	208	260	356
Empty weight RM3	Kg	101	143	186	231	288	386

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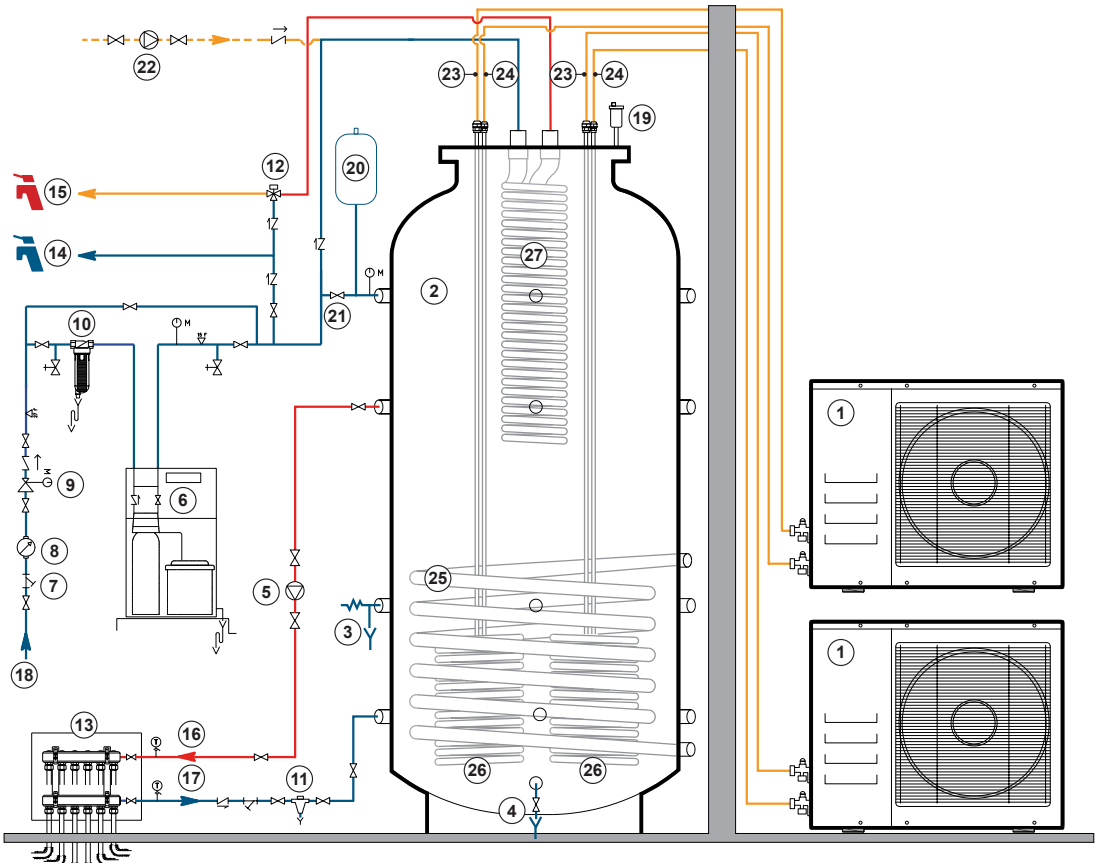
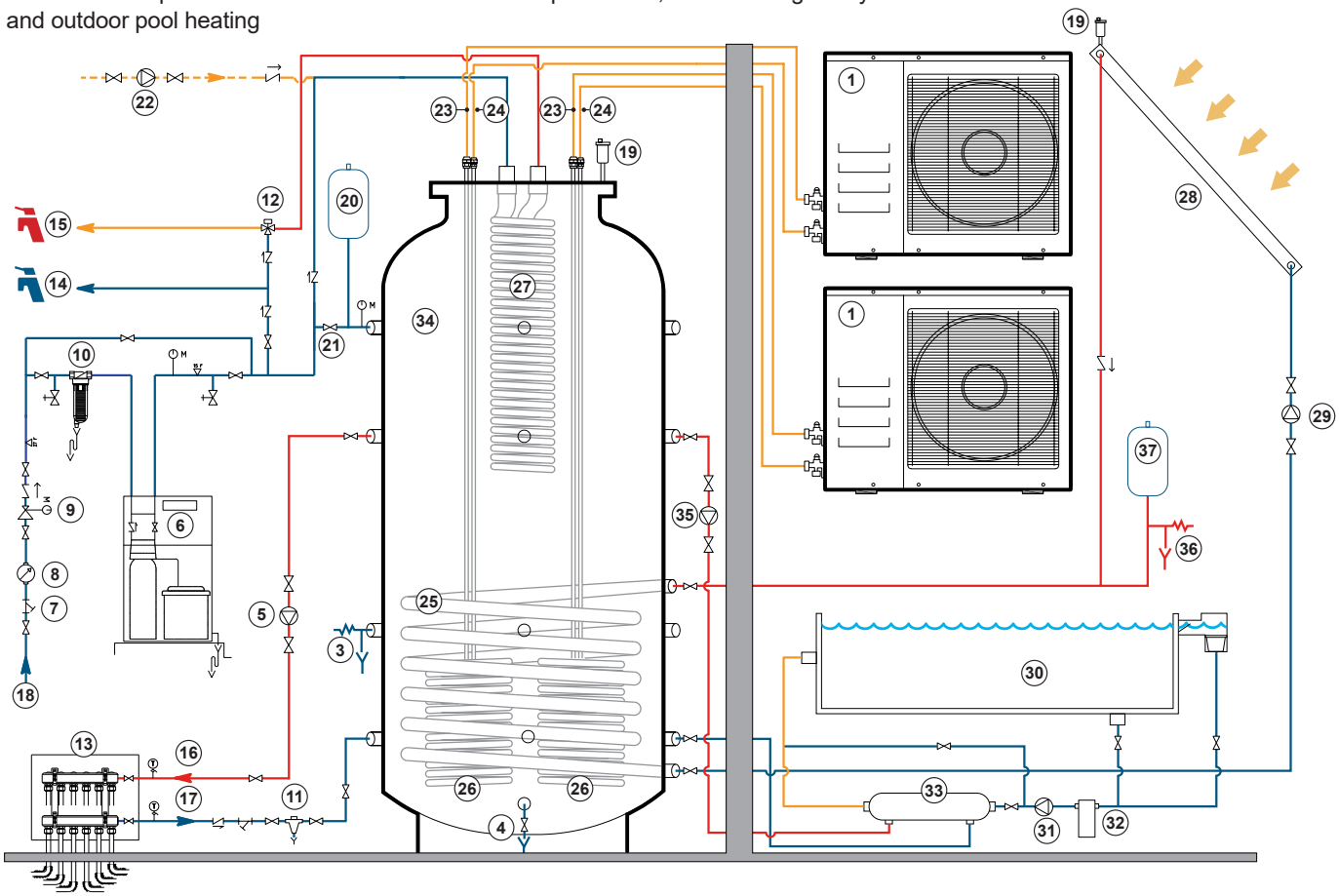
Application examples SUPER HUB RADIATOR

SUPER HUB RADIATOR with 300 liter technical water storage powered by 2 HR 7.0 external boosters for DHW production and room heating via hydronic terminals



1 external moto-evaporator Booster HR 7.0 just hot
2 300 l technical storage unit RM2 300
3 Safety valve
4 Drainage tap
5 System inverter electronic circulator
6 Water softener
7 "Y" filter
8 Aqueduct meter
9 Pressure reducer
10 Sand trap filter
11 Magnetic dirt separator
12 DHW mixing valve
13 System manifold
14 Cold water delivery
15 DHW delivery
16 System delivery
17 System return
18 Water mains input
19 Jolly air vent valve
20 System expansion vessel
21 System make-up cock
22 DHW recirculation pump
23 1/4" R410A refrigeration line (liquid)
24 5/8" R410A refrigeration line (gas)
25 Lower fixed exchanger for solar thermal predisposition
26 Patented immersion exchanger External booster
27 Finned copper exchanger for DHW production without legionella
28 Number of 3 SKY solar collectors
29 Solar thermal circulator
30 Outdoor swimming pool
31 Circulation group for the system of swimming pool filtering
32 Swimming pool filter system
33 Shell and tube heat exchanger in stainless steel technical water/chlorinated water
34 500 l technical storage unit RM2 500
35 Exchanger inverter electronic circulator pool
36 Solar safety valve 37 Solar expansion vessel

SUPER HUB RADIATOR with 500 liter technical water storage powered by 2 HR 7.0 external boosters and 3 SKY flat plate solar thermal collectors for DHW production, room heating via hydronic terminals and outdoor pool heating



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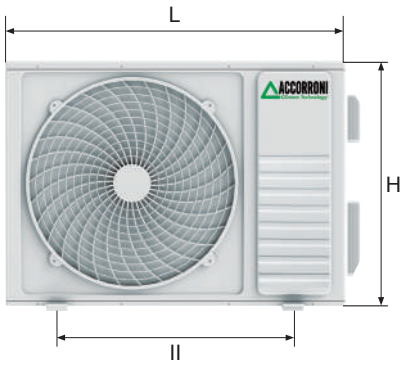
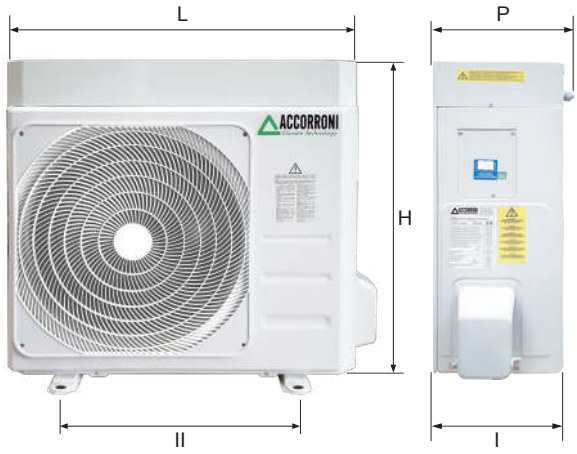
Dimensions Booster outdoor HR 2.5 - 7.0



Model outdoor unit	L	H	P	I	II	Weight
	mm	mm	mm	mm	mm	kg
Booster HR 2.5	700	552	256	275	435	25
Booster HR 7.0	830	585	300	330	515	43

Dimensions Booster outdoor HR 9.0 INVERTER



Model outdoor unit	L	H	P	I	II	Weight
	mm	mm	mm	mm	mm	kg
Booster HR 9.0 inverter	925	785	380	358	540	62

Examples of DHW production with finned exchanger and storage at 55 °C

Mod. tank	DHW exchanger surface	Booster HR	DHW available in a single withdrawal*	Recovery time**
300 l	4,54 m^2	7.0	173 l	0,64 h
300 l	4,54 m^2	9.0	176 l	0,59 h
500 l	4,54 m^2	7.0 + 2.5	288 l	0,77 h
800 l	5,26 m^2	7.0 x 2	482 l	0,86 h
800 l	4,54 m^2	9.0 x 2	488 l	0,79 h
1000 l	5,26 m^2	7.0 x 2	679 l	1,08 h
1000 l	5,26 m^2	9.0 x 2	692 l	0,99 h
1500 l	6,34 m^2	7.0 x 2	865 l	1,61 h
1500 l	6,34 m^2	9.0 x 2	872 l	1,48 h
2000 l	6,34 m^2	7.0 x 3	1210 l	1,43 h
2000 l	6,34 m^2	9.0 x 3	1236 l	1,32 h

DHW withdrawn at 40 °C, Starting technical water temp. at 55 °C, Aqueduct temp. 10 °C after restoration

***Temp. external air 7 °C, reset from 40 °C to 55 °C*

Lower fixed exchanger heat output hypothesis

Mod. tank	Exchanger surface	Power ΔT 10°C*	Power ΔT 15°C*	Power ΔT 20°C*	Flow rate	Pressure drop
300 l	1,4 m^2	9,0 kW	13,4 kW	17,9 kW	620 l/h	2 kPa
500 l	2,0 m^2	12,8 kW	19,2 kW	25,6 kW	880 l/h	4 kPa
800 l	2,5 m^2	16,0 kW	24,0 kW	32,0 kW	1090 l/h	5 kPa
1000 l	3,5 m^2	22,4 kW	33,6 kW	44,8 kW	1310 l/h	6 kPa
1500 l	4,0 m^2	25,6 kW	38,4 kW	51,2 kW	1720 l/h	8 kPa
2000 l	4,8 m^2	30,7 kW	46,0 kW	61,4 kW	1880 l/h	10 kPa

**Thermal power referred to the differential between the average temperature of the heating fluid inside the exchanger and the average temperature of the heated fluid*

Upper fixed exchanger heat output hypothesis

Mod. tank	Surf. excahnger	Power ΔT 10°C*	Power ΔT 15°C*	Power ΔT 20°C*	Flow rate	Pressure drop
300 l	1,1 m^2	7,0 kW	10,6 kW	14,1 kW	400 l/h	1 kPa
500 l	1,8 m^2	11,5 kW	17,3 kW	23,0 kW	700 l/h	3 kPa
800 l	2,0 m^2	12,8 kW	19,2 kW	23,6 kW	900 l/h	3 kPa
1000 l	2,5 m^2	16,0 kW	24,0 kW	32,0 kW	1100 l/h	6 kPa
1500 l	2,8 m^2	17,9 kW	26,9 kW	35,8 kW	1400 l/h	8 kPa
2000 l	3,8 m^2	24,3 kW	36,5 kW	48,6 kW	1600 l/h	10 kPa

**Thermal power referred to the differential between the average temperature of the heating fluid inside the exchanger and the average temperature of the heated fluid*

SUPER HUB RADIATOR

Patented high efficiency heat pump system with direct refrigerant/water exchange
to produce heating and domestic hot water for medium and large users

Technical data table Booster SUPER HUB RADIATOR

DESCRIPTION	U.M.	HR 2.5	HR 7.0	HR 9.0 INVERTER
Thermal power (1)	kW	2,48	7,02	3,54/8,01/8,81*
Absorbed power (1)	kW	0,60	1,70	1,89
C.O.P. (1)	W/W	4,14	4,12	4,24
Thermal power (2)	kW	2,37	6,79	2,85/7,92/8,71*
Absorbed power (2)	kW	0,78	2,21	2,39
C.O.P. (2)	W/W	3,02	3,07	3,31
Thermal power (3)	kW	2,06	5,90	2,54/7,04/7,74*
Absorbed power (3)	kW	0,63	1,75	2,00
C.O.P. (3)	W/W	3,28	3,37	3,52
Thermal power (4)	kW	2,24	6,44	2,46/6,82/7,50*
Absorbed power (4)	kW	0,90	2,54	2,74
C.O.P. (4)	W/W	2,50	2,53	2,68
Thermal power (5)	kW	2,11	5,52	2,31/6,41/7,05*
Absorbed power (5)	kW	0,75	2,00	2,54
C.O.P. (5)	W/W	2,81	2,76	3,04
Thermal power (6)	kW	1,99	5,20	2,25/6,25/6,88*
Absorbed power(6)	kW	0,94	2,53	2,68
C.O.P. (6)	W/W	2,11	2,05	2,39
SCOP (7)	W/W	3,78	3,71	3,94
Seasonal heating efficiency (ηs)	%	153,1	150,3	159,62
Energy efficiency class (8)		A / A++		A++ / A+++
Type compressor		Rotation ON-OFF		Twin Rotary DC INV.
Compressors	n.	1		
Refrigerant circuits	n.	1		
Defrosting method		Cycle reversal with immersion condenser		
Type of refrigerant		R410A		
Technical water temperature min/max	°C	+30 / +55		
Refrigerant quantity (pre-inserted)	kg	0,8	1,5	2,2
Min distance between outdoor and indoor unit	m	3		
Max distance betw. outdoor/indoor unit without charging	m	5		
Max distance betw. external/internal unit with charging	m	15		
Max height difference betw. external/internal unit	m	5		
Refrigerant gas line connection R410A		3/8”	5/8”	5/8”
Coolant line connection R410A		1/4”	1/4”	3/8”
Sound power (9)	dB(A)	65,1	68,4	64,0
Sound pressure at one meter(10)	dB(A)	51,2	54,7	49,8
External temperature operating limits	°C	-15 / +45		-20 / +45
Power supply		230V/1/50Hz		
Max power absorbed	kW	0,94	2,53	4,70
Max current absorbed	A	4,30	11,57	20,40
Weight	Kg	25	43	62

(1) Heating: external air temperature 7 °C d.b. - 6 °C b.u.; inlet/outlet water temperature 30/35 °C
(2) Heating: external air temperature 7 °C d.b. - 6 °C b.u.; inlet/outlet water temperature 40/45 °C
(3) Heating: external air temperature 0 °C db; inlet/outlet water temperature 30/35 °C
(4) Heating: external air temperature 0 °C d.b.; inlet/outlet water temperature 40/45 °C
(5) Heating: external air temperature -7 °C db; inlet/outlet water temperature 30/35 °C
(6) Heating: external air temperature -7 °C db; inlet/outlet water temperature 40/45 °C
(7) Heating: average climate conditions; inlet/outlet water temperature 30/35 °C
(8) Water 35°C/55°C
(9) Measurements carried out according to UNI EN 14511 in heating mode and boundary conditions (1)
(10) Value calculated according to ISO 3744: 2010
(*) By activating the maximum HZ function