

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.

















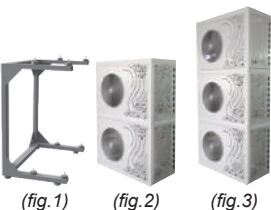

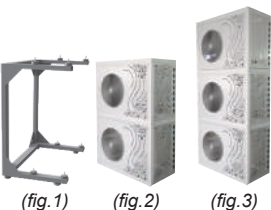
	DHW Exchanger	Solar exchanger	Biomass exchanger	Code	€
Tank RM1 300	Removable 4,54 m ²	-	-	37310300	2.870,00
Tank RM1 500	Removable 4,54 m ²	-	-	37310500	3.060,00
Tank RM1 800	Removable 5,26 m ²	-	-	37310800	4.060,00
Tank RM1 1000	Removable 5,26 m ²	-	-	37311000	4.320,00
Tank RM1 1500	Removable 6,34 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 - 1" 1/4 mod. 2000 W - 1" 1/2 mod. 3000 W - 1" 1/2	75050102 75050103 75060300	200,00 220,00 240,00
	Additional inverter electronic circulator max flow rate 3.3 m ³ /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 Q max 3,2 m ³ /h H max 6,6 m mod. 9/10 Q max 9 m ³ /h H max 10,5 m mod. 18/12 Q max 18 m ³ /h H max 12,8 m mod. 27/16 Q max 27 m ³ /h H max 16,0 m mod. 30/18G Q max 30 m ³ /h 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

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 120,00 75101033 600,00
	Additional condenser for Booster HR	mod. only heat HR 2.5 mod. only heat HR 7.0 - 9.0	26505565 340,00 26515565 380,00
	Anchoring shelf for external Booster including rubber vibration dampers	mod. HR 2.5 mod. HR 7.0 - 9.0	37081060 50,00 37081061 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 62,00 37081066 64,00
	Anti-freeze condensate heating cable with thermal sensor, factory mounted	mod. 3 m. 90 W mod. 6 m. 120 W	37081067 76,00 37081068 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 280,00 37081070 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 320,00 37081073 350,00 37081074 370,00
	DHW thermostatic mixer for anti-scald solar thermal systems	mod. MIX L mod. MIX XL mod. MIX XXL	50103015 470,00 50203015 490,00 50303015 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 120,00 75100015 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 120,00 75100017 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 700,00 75060203 1.100,00 75060204 1.200,00
	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 thermal kit 1 x 2.0 m2	Kit Solar HR 1 x 2.0	Code	€
	- 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	Flat roof / 1 x 2.0	37318030	2.554,00
solar collector BLUH+ BLUHX+		Pitched roof / 1 x 2.0	37308030	2.566,00
	solar thermal kit 1 x 2.5 m2	Kit Solar HR 1 x 2.5	Code	€
	- N. 1 BLUH+ 2.5 m2 flat sheet panel - Anchoring kit for 1 BLUH+ 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	Flat roof / 1 x 2.5	37318031	2.744,00
Anchoring kit BLUH+ BLUHX+		Pitched roof / 1 x 2.5	37308031	2.744,00
	solar thermal kit 2 x 2.0 m2	Kit Solar HR 2 x 2.0	Code	€
	- 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	Flat roof / 2 x 2.0	37318032	3.710,00
Solar station UNIT 2 PLUS		Pitched roof / 2 x 2.0	37308032	3.602,00
	solar thermal kit 2 x 2.5 m2	Kit Solar HR 2 x 2.5	Code	€
	- N. 2 BLUH+ 2.5 m2 flat sheet panels - Anchoring kit for 2 BLUH+ 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	Flat roof / 2 x 2.5	37318033	4.064,00
Solar control box CONTROL MULTI 06 S		Pitched roof / 2 x 2.5	37308033	3.968,00
	solar thermal kit 3 x 2.0 m2	Kit Solar HR 3 x 2.0	Code	€
	- 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	Flat roof / 3 x 2.0	37318034	4.830,00
Expansion solar tank		Pitched roof / 3 x 2.0	37308034	4.734,00
	solar thermal kit 3 x 2.5 m2	Kit Solar HR 3 x 2.5	Code	€
	- N. 3 BLUH+ 2.5 m2 flat sheet panels - Anchoring kit for 3 BLUH+ 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	Flat roof / 3 x 2.5	37318035	5.404,00
Fitting kit		Pitched roof / 3 x 2.5	37308035	5.308,00
	solar thermal kit 5 x 2.5 m2	Kit Solar HR 5 x 2.5	Code	€
	- N. 5 BLUH+ 2.5 m2 flat sheet panels - Anchoring kit for 5 BLUH+ 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	Flat roof / 5 x 2.5	37318036	8.038,00
Kit glycol antifreeze		Pitched roof / 5 x 2.5	37308036	7.846,00
	solar thermal kit 6 x 2.5 m2	Kit Solar HR 6 x 2.5	Code	€
	- N. 6 BLUH+ 2.5 m2 flat sheet panels - Anchoring kit for 6 BLUH+ 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	Flat roof / 6 x 2.5	37318037	9.502,00
Fitting kit		Pitched roof / 6 x 2.5	37308037	9.214,00
	solar thermal kit 10 x 2.5 m2	Kit Solar HR 10 x 2.5	Code	€
	- N. 10 BLUH+ 2.5 m2 flat sheet panels - Anchoring kit for 10 BLUH+ 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	Flat roof / 10 x 2.5	37318038	13.976,00
Fitting kit		Pitched roof / 10 x 2.5	37308038	13.496,00
	solar thermal kit 12 x 2.5 m2	Kit Solar HR 12 x 2.5	Code	€
	- N. 12 BLUH+ 2.5 m2 flat sheet panels - Anchoring kit for 12 BLUH+ 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	Flat roof / 12 x 2.5	37318039	18.588,00
Kit glycol antifreeze		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 m³/h
 - N. 1 digital electronic control unit
 - N. 2 hydraulic fitting kit 1"

	Code	€
Pool heater kit 20 kW	75050800	1.120,00

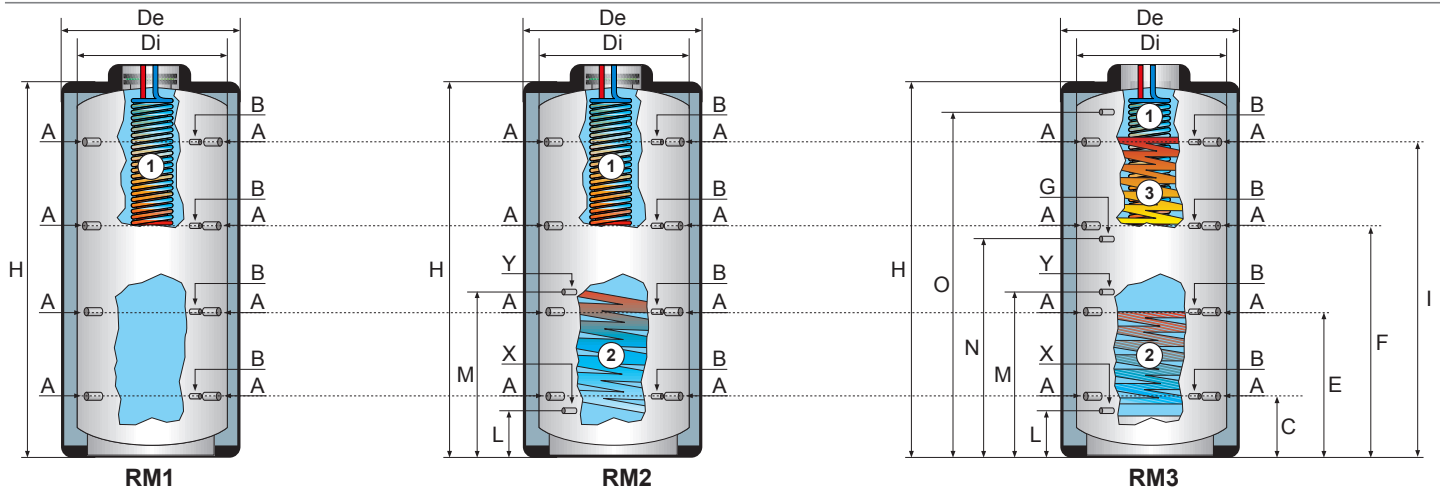
	Code	€
Pool heater kit 40 kW	75050810	1.300,00

	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



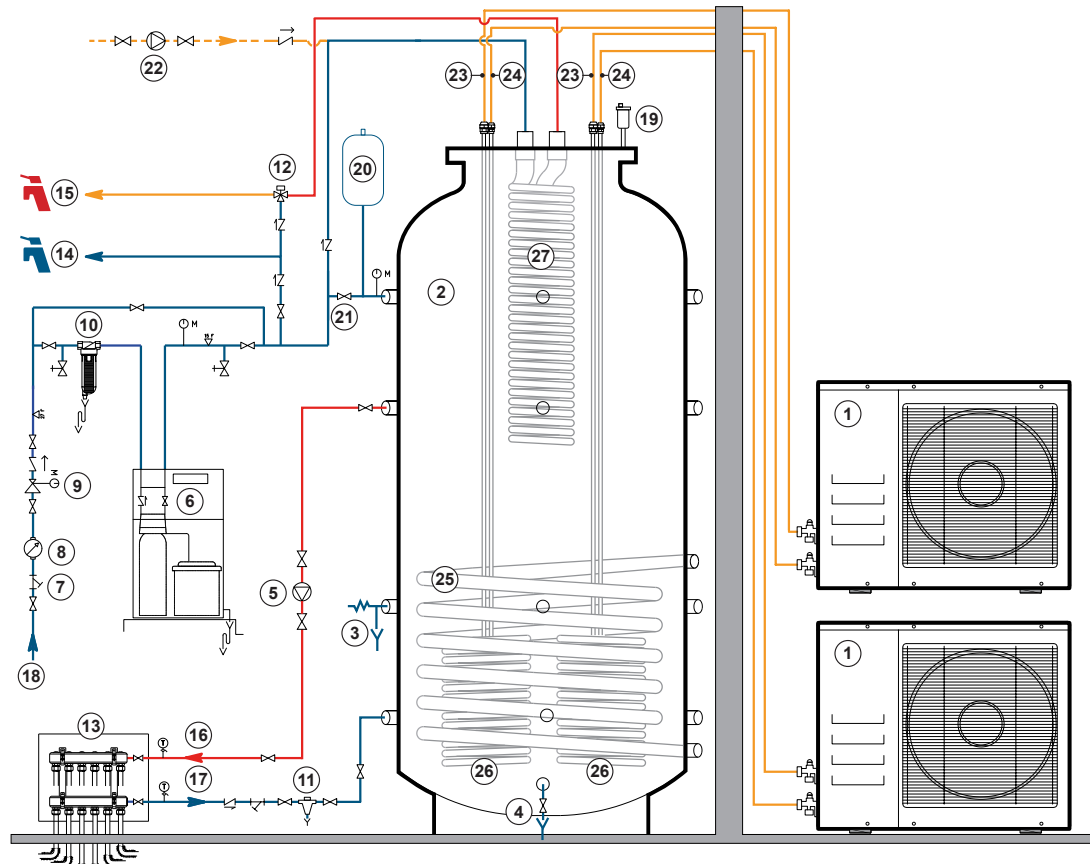
Dimensions tank	U.M.	300	500	800	1000	1500	2000
De	mm	600	750	1050	1050	1260	1360
Di	mm	500	650	790	790	1000	1100
H	mm	1595	1645	1750	2110	2115	2380
C	mm	215	240	275	275	340	370
E	mm	595	615	655	810	765	930
F	mm	1080	1105	1145	1355	1400	1435
I	mm	1350	1375	1410	1755	1725	1945
L	mm	290	315	355	350	420	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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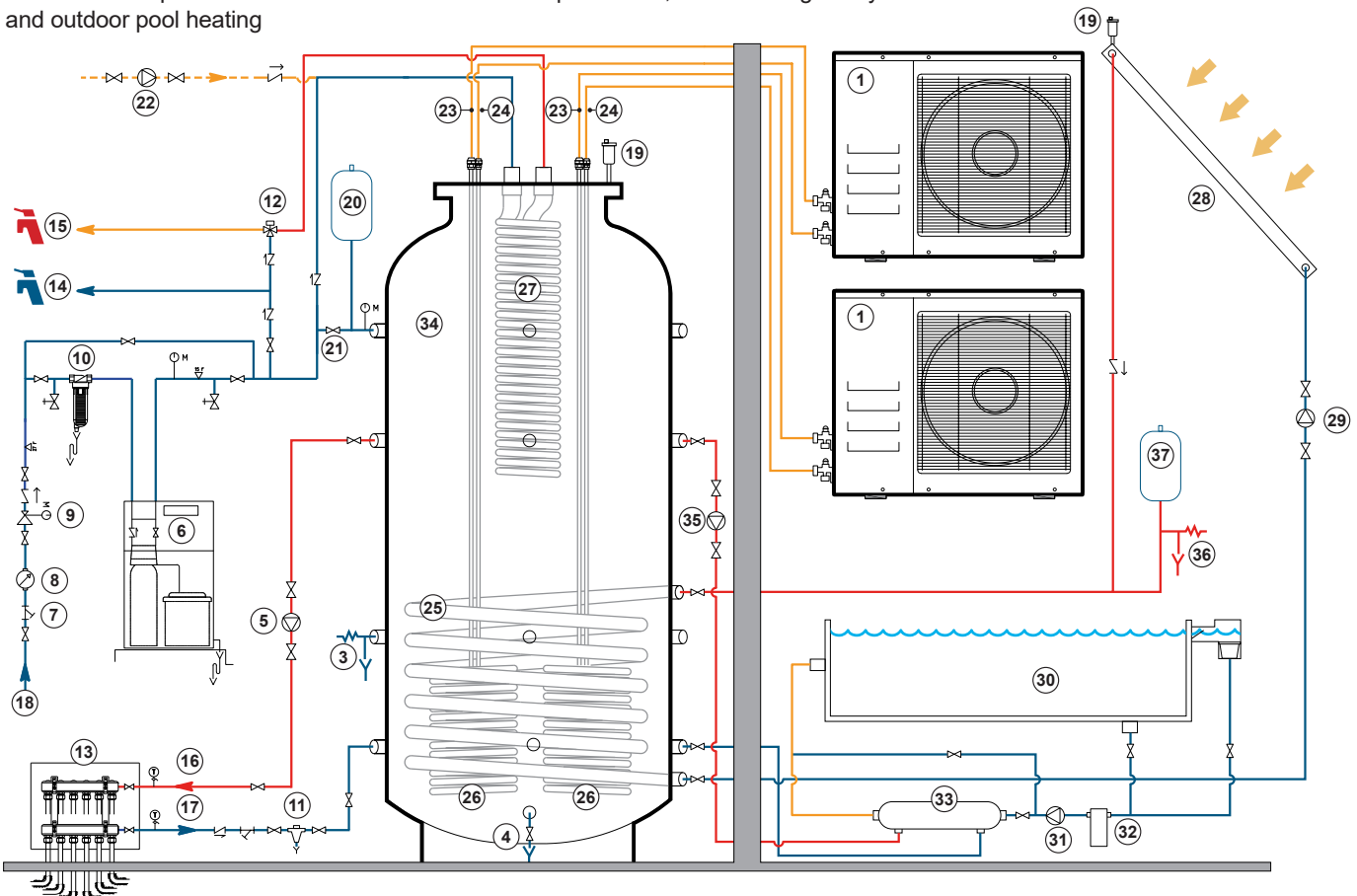
Application examples SUPER HUB RADIATOR

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

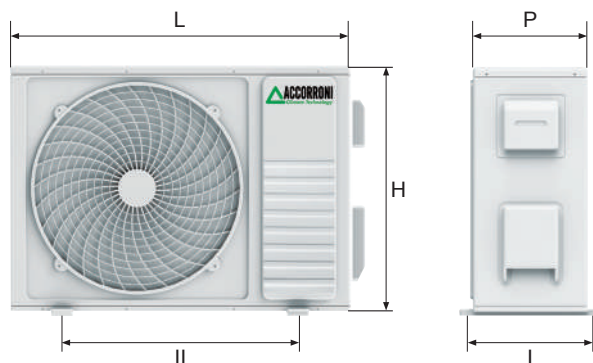
SUPER HUB RADIATOR with 500 liter technical water storage powered by 2 HR 7.0 external boosters and 3 SKY flat plate solar thermal collectors for DHW production, room heating via hydronic terminals and outdoor pool heating



SUPER HUB RADIATOR

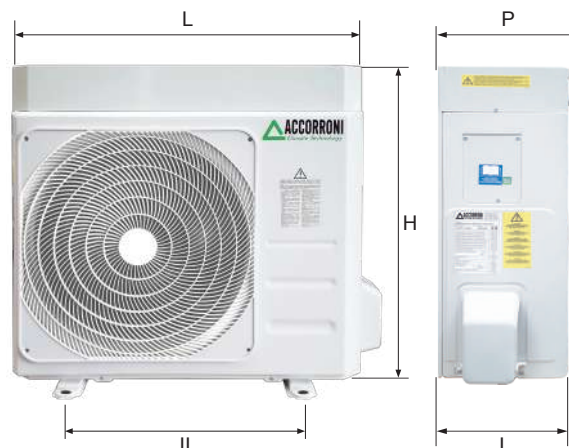
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Dimensions Booster outdoor HR 2.5 - 7.0



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. exchanger	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

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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 (η _s)	%	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