Patented factory-made hybrid system with high efficiency heat pump with direct refrigerant/water exchange to produce domestic hot water and heating for medium users with or without solar thermal integration





MADE IN ITALY



EASY MOUVE



HEATING



INSTALLATION PLUG AND PLAY





COMPRESSOR

DHW NO

I FGIONFI I A



PHOTOVOLTAIC



SOLAR



PdC

SYSTEM



REVERS



GAS Ecological

**R410A** 

#### **Technical and construction characteristics**

HUB RADIATOR PLUS SPLIT INVERTER HYBRID it is a factory made hybrid system for winter air conditioning and the production of domestic hot water that uses the innovative patented HUB RADIATOR direct refrigerant/water heat exchange system. The system is composed of:

- One or two external Moto-evaporating Booster models "HR 9.0 only hot" which close the refrigeration circuit and which directly transfer the heat taken from the external air to the technical water of the accumulator, the Booster uses the heat contained in the technical water accumulator in the coldest periods of the year to carry out very rapid defrosts with low energy impact;
- Inertial accumulation of 315 liters of technical water, with a patented immersion water refrigerant condenser ed a 4.54 m2 finned copper rapid DHW exchanger;
- Back-up modulating condensing boiler with dirt separator self cleaning magnetic;
- DHW thermostatic mixing valve;
- High efficiency inverter electronic circulator for powering a high temperature heating circuit;
- Microprocessor command and control panel for the management of the factory made hybrid system;
- 2.0 kW back-up electrical resistance, which can be activated in mode emergency or in integration mode;
- N. 2 expansion tanks (puffers) of 8 liters each;
- Manual filling group composed of pressure gauge, tap and non return valve;
- Safety valve calibrated at 3 bar;
- Automatic air vent jolly valve;
- Wheel kit to facilitate movement of the internal unit. The internal unit presents a perfect balance between compact dimensions, energy efficiency and innovative design. This product can be combined with a forced circulation solar thermal system (optional) which acts as an integration for the production of DHW and for winter air conditioning.

HUB RADIATOR PLUS SPLIT INVERTER HYBRID, thanks to the use of a puffer equipped with a rapid finned copper DHW exchanger, it is able to deliver large quantities of domestic hot water, without the need to carry out anti-legionella thermal shock cycles, in fact, this innovative system uses the first method in first out, which guarantees maximum hygiene of the sanitary circuit, definitively eliminating the problem of limescale deposits inside the accumulation.

The internal storage unit is equipped with the hydraulic components necessary for the correct functioning of the system, all installed and tested in the factory. The system can be equipped with a second electronic inverter circulator (optional), installed in the factory, inside the storage unit to power a second high or low temperature heating circuit.

Model	Code	€
HUB RADIATOR PLUS SPLIT INVERTER HYBRID 9.0/20	37308060	12.960,00
HUB RADIATOR PLUS SPLIT INVERTER HYBRID 9.0/24	37308061	13.160,00
HUB RADIATOR PLUS SPLIT INVERTER HYBRID 9.0/32	37308062	13.360,00
HUB RADIATOR PLUS SPLIT INVERTER HYBRID 9.0+9.0/34	37308063	18.520,00



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Kit solar HUB RADIATOR PLUS SPLIT INVERTER HYBRID	Code	€
KIT SOLAR HR 1 x 2.0 pitched roof	37308030	2.686,00
KIT SOLAR HR 1 x 2.0 flat roof	37318030	2.646,00
KIT SOLAR HR 1 x 2.5 pitched roof	37308031	2.836,00
KIT SOLAR HR 1 x 2.5 flat roof	37318031	2.824,00
KIT SOLAR HR 2 x 2.0 pitched roof	37308032	3.710,00
KIT SOLAR HR 2 x 2.0 flat roof	37318032	3.602,00
KIT SOLAR HR 2 x 2.5 pitched roof	37308033	4.064,00
KIT SOLAR HR 2 x 2.5 flat roof	37318033	3.968,00
KIT SOLAR HR 3 x 2.0 pitched roof	37308034	4.830,00
KIT SOLAR HR 3 x 2.0 flat roof	37318034	4.734,00
KIT SOLAR HR 3 x 2.5 pitched roof	37308035	5.404,00
KIT SOLAR HR 3 x 2.5 flat roof	37318035	5.308,00

Accessories HUB	RADIATOR PLUS SPLIT INVERTER HYBRID		Code	€
	Mud filter self-cleaning magnetic dirt separator pre- assembled in the internal unit with 3/4" connections for the back-up boiler		INCLUDED	
	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
	Additional low temperature system pump kit with climatic mixing		75151005	760,00
	Mixing valve for radiant systems mod. fixed mechanic mod. motoriz	cal adjustment ed adjustment		120,00 600,00
7 **	Anchoring shelf for external Booster including rubber vibration dampers		37081061	90,00
**	Anchor bracket for sloping roof for external Booster including rubber vibration dampers		37081064	218,00
	Anti-vibration kit for installation on shelves		75100022	22,00
33	Stainless steel spring anti-vibration kits complete with bolts, washers and nuts (pack of 2)		37081066	64,00
	Auxiliary tray for installation under shelf equipped with 90 W heating cable		37081070	300,00
	Floor support complete with auxiliary tray equipped with 90 W heating cable	H fixed H variable	37081073 37081074	350,00 370,00



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ccessories HUB R	ADIATOR PLUS SPLIT INVERTER HYB	RID	Code	
	Vulcanized rubber anti-vibration floor base (height from the ground 95 mm) with level and s	crews (pack of 2 pieces)	75100018	102,00
	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
	Domestic hot water recirculation inverter electro brass body max flow rate 0.4 m3/h max head 1.0		35006004	260,00
	Forced circulation solar thermal exchanger with 1.50 m2 exchange surface		75101002	644,00
	Daily/weekly digital programmer clock		35639904	30,00
	Load control relay for managing absorbed power	mod. Connection BUS mod. Radiofrequence	37081062 37081063	172,00 460,00
	Flexible anti-vibration joint kit with connection plate and straight union (5/8")		75100014	120,00
	Flexible anti-vibration joint kit with connection plate and 90° curved union (5/8")		75100016	120,00
	Open shelf for n. 2 Booster external units mod. I 9.0 complete with vibration dampers (fig.1)	HR	75060406	290,00
(fig.1) (fig.2)	RACK 2 cabinet for n. 2 Booster external units mod. HR 9.0 (fig.2)		75060306	1.060,00
0 0	Coaxial vertical outlet Ø 60/100 with smoke extraction		30403124	32,00
	Coaxial starting curve Ø 60/100 at 90° with smoke extraction		30403123	38,00
88	Separate duct kits Ø 80/80 with smoke extraction		30403022	50,00
P	Curve 90° Ø 80 M/F		30403013	8,00
	Curve 45° Ø 80 M/F		30403012	8,00
	Extension Ø 80 M/F = 1000 mm		30403011	10,00
60	Curve 90° coaxial Ø 60/100 M/F		30403004	38,00
	Curve 45° coaxial Ø 60/100 M/F		30403003	30,00
0	Extension coaxial Ø 60/100 M/F = 1000 mm		30403002	28,00
	Smoke exhaust kit coaxial Ø 60/100		30403000	60,00
	Roof terminal coaxial Ø 60/100		30403014	144,00

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#### Pool heater kit to match HUB RADIATOR PLUS SPLIT INVERTER HYBRID

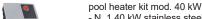


316L stainless steel exchanger

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





- 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 40 kW	75050810	1.300,00
	Code	€



Circulator

Control

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

	Code	€
Pool heater kit 70 kW	75050820	1.700,00

#### Solar thermal kits to combine with HUB RADIATOR PLUS SPLIT INVERTER HYBRID



Collector sun BLUH+ BLUHX+



Anchoring kit BLUH+ BLUHX+



sun station UNIT 2 PLUS



sun CONTROL MULTI 06 S



expantion sun tank



string fitting kit



kit glycole antifreeze

#### KIT SOLAR HR PLUS 2.0 m<sup>2</sup>

- N. 1 BLUH+ collector 2.0 m2
- BLUH+ 2.0 m2 anchoring kit
- 2-way solar station mod. UNIT 2 PLUS
- CONTROL MULTI 06 S solar control unit
- 12 liter expansion vessel
- String fittings kit
- Glycol antifreeze (1 3 liter canister)

### KIT SOLAR HR PLUS 2.5 m<sup>2</sup>

- N. 1 BLUHX+ collector 2.5 m2
- BLUHX+ 2.5 m2 anchoring kit
- 2-way solar station mod. UNIT 2 PLUS
- CONTROL MULTI 06 S solar control unit
- 18 liter expansion vessel
- String fittings kit
- Glycol antifreeze (1 4 liter canister)

### KIT SOLAR HR PLUS 2 x 2.0 m<sup>2</sup>

- N. 2 BLUH+ 2.0 m2 collectors
- Anchoring kit 2 BLUH+ 2.0 m2
- 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)
- Antifreeze glycol (2 3-litre cans)

#### KIT SOLAR HR PLUS 2 x 2.5 m<sup>2</sup>

- N. 2 BLUH+ 2.5 m2 collectors
- Anchoring kit 2 BLUH+ 2.5 m2
- 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)
- Antifreeze glycol (2 4 liter cans)

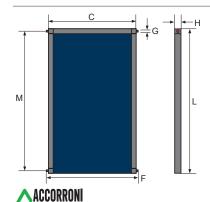
#### KIT SOLAR HR PLUS 3 x 2.0 m<sup>2</sup>

- N. 2 BLUH+ 2.5 m2 collectors
- Anchoring kit 2 BLUH+ 2.5 m2
- 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)
- Antifreeze glycol (2 4 liter cans)

#### KIT SOLAR HR PLUS 3 x 2.5 m<sup>2</sup>

- N. 3 BLUHX+ 2.5 m2 collectors
- Anchor kit 3 BLUHX+ 2.5 m2
- 2-way solar station mod. UNIT 2 PLUS
- CONTROL MULTI 06 S solar control unit
- 40 liter expansion vessel
- String fittings kit (1 string-3 collectors)
- Antifreeze glycol (3 4 liter cans)

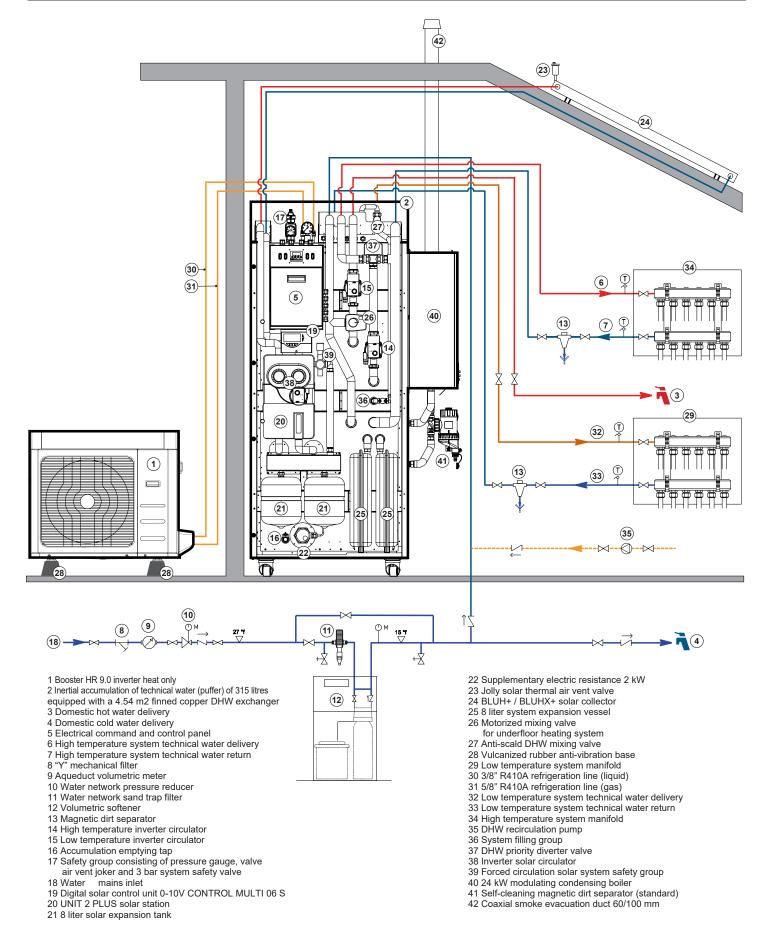
#### Solar collector dimensions and dimensions BLUH+ - BLUHX+ (vertical installation)



Mod.	U.M.	BLUH+	BLUHX+
L	mm	1987	1987
С	mm	984	1270
Н	mm	100	100
М	mm	1876	1876
G	mm	22	22
F	mm	1050	1340
Weight	Kg	32	42

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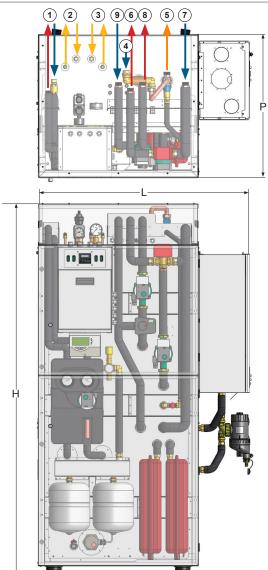
### Application example HUB RADIATOR PLUS SPLIT INVERTER HYBRID 9.0/24



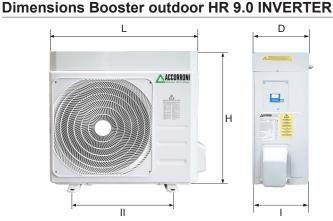


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#### **Dimensions U.I. PLUS SPLIT INVERTER HYBRID**



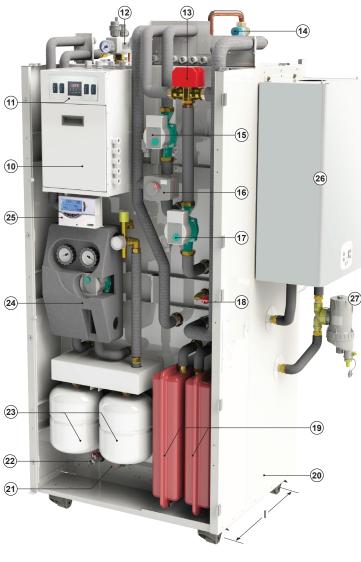
## Ш



Model	L	Н	D	I	II	Weight
	mm	mm	mm	mm	mm	kg
HR 9.0 INVERTER (U.E.)	925	785	380	358	540	62
PLUS SPLIT INV. HYBRID* (U.I.)	1058	1902	715	534	645	214

- Minimum distance between outdoor unit and indoor unit 2.5 m
- Maximum distance between outdoor unit and indoor unit without charging 5.0 m
- Maximum distance between outdoor unit and indoor unit with additional charging 15.0 m (20 g/m after the first 5 m)
  Maximum height difference between external unit and internal unit 5.0 m
- (always respecting the maximum distance of 15 m)

### **Axonometry U.I. PLUS SPLIT INVERTER HYBRID**



- 1 3/4"M solar thermal system delivery and return
- 2 Cooling line connections 1st Booster HR 9.0 3/8" 5/8"
- 3 Cooling line connections 2nd Booster HR 9.0 3/8" 5/8"
- 4 Domestic cold water inlet 1"M
- 5 Mixed domestic hot water delivery 1"M
- 6 1st heating circuit flow 1"M
- 1st heating circuit return 1"M
- 8 2nd heating circuit flow 1"M
- 9 2nd heating circuit return 1"M
- 10 Electrical panel with connection terminal block for U.E.
- 11 Electronic command and control unit
- 12 Safety group consisting of pressure gauge, jolly valve air vent and 3 bar system safety valve
- 13 DHW priority diverter valve
- 14 Anti-scald DHW mixing valve
- 15 E.C. circulator for the 2nd heating circuit (optional)
- 16 Electronic mixing valve for radiant systems (optional)
- 17 E.C. circulator for the 1st heating circuit (standard)
- 18 Manual puffer filling group
- 19 8 liter system expansion vessel
- 20 Inertial accumulation of technical water (puffer) of 315 litres equipped with a 4.54 m2 finned copper DHW exchanger
- 21 2 kW supplementary electrical resistance
- 22 Accumulation emptying tap
- 23 8 liter solar expansion tank
- 24 UNIT 2 PLUS solar station
- 25 Digital solar control unit 0-10V CONTROL MULTI 06 S
- 26 Support modulating condensing boiler
- 27 Self-cleaning magnetic dirt separator (standard)



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#### DHW withdrawal technical data table HUB RADIATOR PLUS SPLIT INVERTER HYBRID

DESCRIPTION	U.M.	9.0/20	9.0/24	9.0/32	9.0+9.0/34
Production DHW ΔT 25 °C	l/min	17,3	18,0	23,6	29,2
Production DHW ΔT 30 °C	l/min	14,4	14,9	17,8	21,2
Production DHW ΔT 35 °C	l/min	12,3	13,0	17,1	20,7
Production DHW ΔT 40 °C	l/min	10,8	11,7	14,9	18,1
Production DHW ΔT 45 °C	l/min	9,6	10,3	13,2	16,1

Tachnical data table	Doostor LIID DAI		INVERTER HYBRID
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DESCRIPTION	U.M.	HR 9.0 INVERTER
Thermal power <sup>(1)</sup>	kW	3,54 / 8,01 / 8,81*
Absorbed power (1)	kW	1,89
C.O.P. (1)	W/W	4,24
Thermal power <sup>(2)</sup>	kW	2,85 / 7,92 / 8,71*
Absorbed power (2)	kW	2,39
C.O.P. (2)	W/W	3,31
Thermal power <sup>(3)</sup>	kW	2,54 / 7,04 / 7,74*
Thermal power (3)	kW	2,00
C.O.P. (3)	W/W	3,52
Thermal power <sup>(4)</sup>	kW	2,46 / 6,82 / 7,50*
Thermal power <sup>(4)</sup>	kW	2,74
C.O.P. (4)	W/W	2,68
Thermal power <sup>(5)</sup>	kW	2,31 / 6,41 / 7,05*
Thermal power <sup>(5)</sup>	kW	2,54
C.O.P. (5)	W/W	3,04
Thermal power <sup>(6)</sup>	kW	2,25 / 6,25 / 6,88*
Thermal power (6)	kW	2,68
C.O.P. (6)	W/W	2,39
SCOP (7)	W/W	3,94
Seasonal heating efficiency (ηs)		159,62%
Energy efficiency class (8)		A++ / A+++
Type compressor		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
Quantity of refrigerant (pre-entered)	kg	2,2
Min distance between outdoor and indoor unit	m	3
Max dist. betw. outdoor and indoor unit without charging	m	5
Max dist. betw. external and internal unit with charging	m	15
Max height diff. betw. external and internal unit	m	5
Refrigerant gas line connection R410A		5/8"
Coolant line connection R410A		3/8"
Sound power (9)	dB(A)	64,0
Sound pressure at one meter (10)	dB(A)	32,8
External temperature operating limits	°C	-20 / +46
Power supply		230V/1/50Hz
Max power absorbed	kW	4,70
Max current absorbed	Α	20,40
Weight	Kg	62
(1) Heating: external air temperature 7 °C d b = 6 °C b w : inlet	outlet water	temperature 30/35 °C

<sup>(1)</sup> Heating: external air temperature 7 °C d.b. - 6 °C b.w.; inlet/outlet water temperature 30/35 °C (2) Heating: external air temperature 7 °C d.b. - 6 °C b.w.; 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: external air temperature -7 °C db; inlet/outlet water temperature 40/45 °C (8) Heating: external air temperature -7 °C db; inlet/outlet water temperature 40/45 °C (9) Heating: external air temperature -7 °C db; inlet/outlet water temperature 40/45 °C (9) Heating: external air temperature -7 °C db; inlet/outlet water temperature 40/45 °C (9) Heating: external air temperature -7 °C db; inlet/outlet water tempera



<sup>(7)</sup> Heating: average climate conditions; inlet/outlet water temperature 30/35 °C

<sup>(8)</sup> Water 35°C / 55°C

<sup>(9)</sup> Measurements carried out according to UNI EN 14511 in heating mode and boundary conditions (1)

<sup>(10)</sup> Value calculated according to ISO 3744: 2010 (\*) By activating the maximum HZ function

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#### Indoor unit technical data table HUB RADIATOR PLUS SPLIT INVERTER HYBRID

maddi ami tadimida data table 1105 KABIATOKT 200 K	O. L	**=:::=::			
DESCRIPTION	U.M.	20	24	32	34
Device category			II2H	13P	
Minimum heat output of the boiler in methane gas heating G20	kW	2,8	2,8	3,4	3,4
Maximum heat output of the boiler in methane gas heating G20	kW	20,0	24,0	32,0	34,5
Minimum heat output of the boiler in LPG gas heating	kW	2,8	2,8	3,4	3,4
Maximum heat output of the boiler in LPG gas heating	kW	20,0	24,0	32,0	34,5
Minimum thermal power in heating (80-60 °C) G20 methane gas	kW	2,5	2,5	3,3	3,3
Maximum thermal power in heating (80-60 °C) G20 methane gas	kW	19,2	23,7	31,3	33,3
Minimum thermal power in heating (80-60 °C) LPG gas	kW	2,5	2,5	3,3	3,3
Maximum thermal power in heating (80-60 °C) LPG gas	kW	19,2	23,7	31,3	33,3
Minimum thermal power in heating (50-30 °C) methane gas G20	kW	2,9	2,9	3,5	3,5
Maximum thermal power in heating (50-30 °C) G20 methane gas	kW	20,7	24,9	35,1	36,1
Minimum boiler heat output in heating (50-30 °C) LPG gas	kW	2,9	2,9	3,5	3,5
Maximum boiler heat output in heating (50-30 °C) LPG gas	kW	20,7	24,9	35,1	36,1
Supply pressure for boiler powered by G20 methane gas	mbar	20,1	24,3		30,1
LPG gas boiler supply pressure	mbar		30,		
Diaphragm diameter of boiler powered by G20 methane gas		5.6			6.2
Diaphragm diameter of boiler powered by LPG gas	mm	5,6 5,6	5,6 5,6	6,3 6,3	6,3 6,3
	mm			-	
Minimum CO2 emission from boiler powered by G20 methane gas		8,5 %	9,3%	8,4%	8,5%
Maximum CO2 emission from boiler powered by G20 methane gas		9,5 %	9,8%	10,6%	9,5%
Minimum CO2 emission boiler powered by LPG gas		10,0 %	10,4%	10,5%	10,0%
Maximum CO2 emission from boiler powered by LPG gas		10,9 %	10,7%	10,6%	10,9%
Minimum pressure of the heating circuit	bar		0		
Maximum pressure of the heating circuit	bar		3		
Boiler useful thermal efficiency at maximum power (60/80 °C)		95,8%	98,8%	97,1%	97,3%
Boiler useful thermal efficiency at maximum power (30/50 °C)		103,4%	103,7%	109,8%	104,5%
Boiler useful thermal efficiency at minimum power (60/80 °C)		90,0%	90,0%	95,7%	95,7%
Boiler useful thermal efficiency at minimum power (30/50 °C)		102,1%	102,1%	103,5%	103,5%
Useful thermal efficiency of the boiler at 30% of the load		109,8%	109,8%	110,7%	110,0%
NOx emission class			(	6	
NOx emission	mg/kWh	23	23	55	55
Fume temperature at max. power	°C	70,0	70,0	74,5	74,5
Max operating temperature in heating	°C		85	5,0	
Methane gas consumption at maximum flow rate in heating (1)	m³/h	2,08	2,54	3,37	3,55
LPG consumption at maximum flow rate in heating(1)	m³/h	0,64	0,75	0,97	1,35
Seasonal space heating boiler energy efficiency			92,	0%	
Useful efficiency at nominal thermal power. (high temperature) (2)		86,3%	86,4%	86,7%	87,6%
Useful efficiency at 30% of the nominal thermal power. (low temperature) (3)			96,	4%	
Heat loss in boiler stand-by	kW	0,069	0,069	0,071	0,069
Boiler annual energy consumption	GJ	11,0	42,2	62,7	103,4
Boiler seasonal energy efficiency class			· .		
Inertial technical water storage volume		315		15	
Volume of expansion vessels	I		3		
	I	6+8+8	3	9+8+8	
System delivery/return connections	1	6+8+8		9+8+8	
System delivery/return connections  Domestic hot water and cold water connections	I	6+8+8	1	"	
Domestic hot water and cold water connections	I	6+8+8	1	"	
Domestic hot water and cold water connections G20/LPG methane gas inlet connection	l l	6+8+8	1 1 3/	" 4"	
Domestic hot water and cold water connections G20/LPG methane gas inlet connection Boiler condensate drain hose diameter	I I	6+8+8	1 1 3/	" 4" 2	
Domestic hot water and cold water connections G20/LPG methane gas inlet connection Boiler condensate drain hose diameter Coaxial smoke extraction duct diameter	mm	6+8+8	1 1 3/ 2 60/	" "4" 2 100	
Domestic hot water and cold water connections G20/LPG methane gas inlet connection Boiler condensate drain hose diameter Coaxial smoke extraction duct diameter Diameter of double rope evacuation ducts	mm mm	6+8+8	1 1 3/ 2 60/ 8	" 4" 2 100	
Domestic hot water and cold water connections G20/LPG methane gas inlet connection Boiler condensate drain hose diameter Coaxial smoke extraction duct diameter Diameter of double rope evacuation ducts Maximum system circulator flow rate	mm mm m³/h	6+8+8	1 1 3/ 2 60/ 8 3	" 4" 2 100 0 ,3	
Domestic hot water and cold water connections G20/LPG methane gas inlet connection Boiler condensate drain hose diameter Coaxial smoke extraction duct diameter Diameter of double rope evacuation ducts Maximum system circulator flow rate Maximum system circulator head	mm mm m³/h m		1 1 3/ 2 60/ 8 3 6	" 4" 2 100 0 3	400
Domestic hot water and cold water connections G20/LPG methane gas inlet connection Boiler condensate drain hose diameter Coaxial smoke extraction duct diameter Diameter of double rope evacuation ducts Maximum system circulator flow rate Maximum system circulator head Maximum electrical power absorbed	mm mm m³/h	6+8+8	1 1 3/ 2 60/ 8 3 6	" 4" 2 100 0 ,3 2	102
Domestic hot water and cold water connections G20/LPG methane gas inlet connection Boiler condensate drain hose diameter Coaxial smoke extraction duct diameter Diameter of double rope evacuation ducts Maximum system circulator flow rate Maximum system circulator head	mm mm m³/h m		1 1 3/ 2 60/ 8 3 6	" 4" 2 100 0 ,3 2	102

<sup>(1)</sup> Value referred to the temperature of 15 °C external and 1013 mbar - (2) High temperature regime with 60 °C return and 80 °C delivery (3) Low temperature regime 30 °C (return temperature inside boiler inlet)

