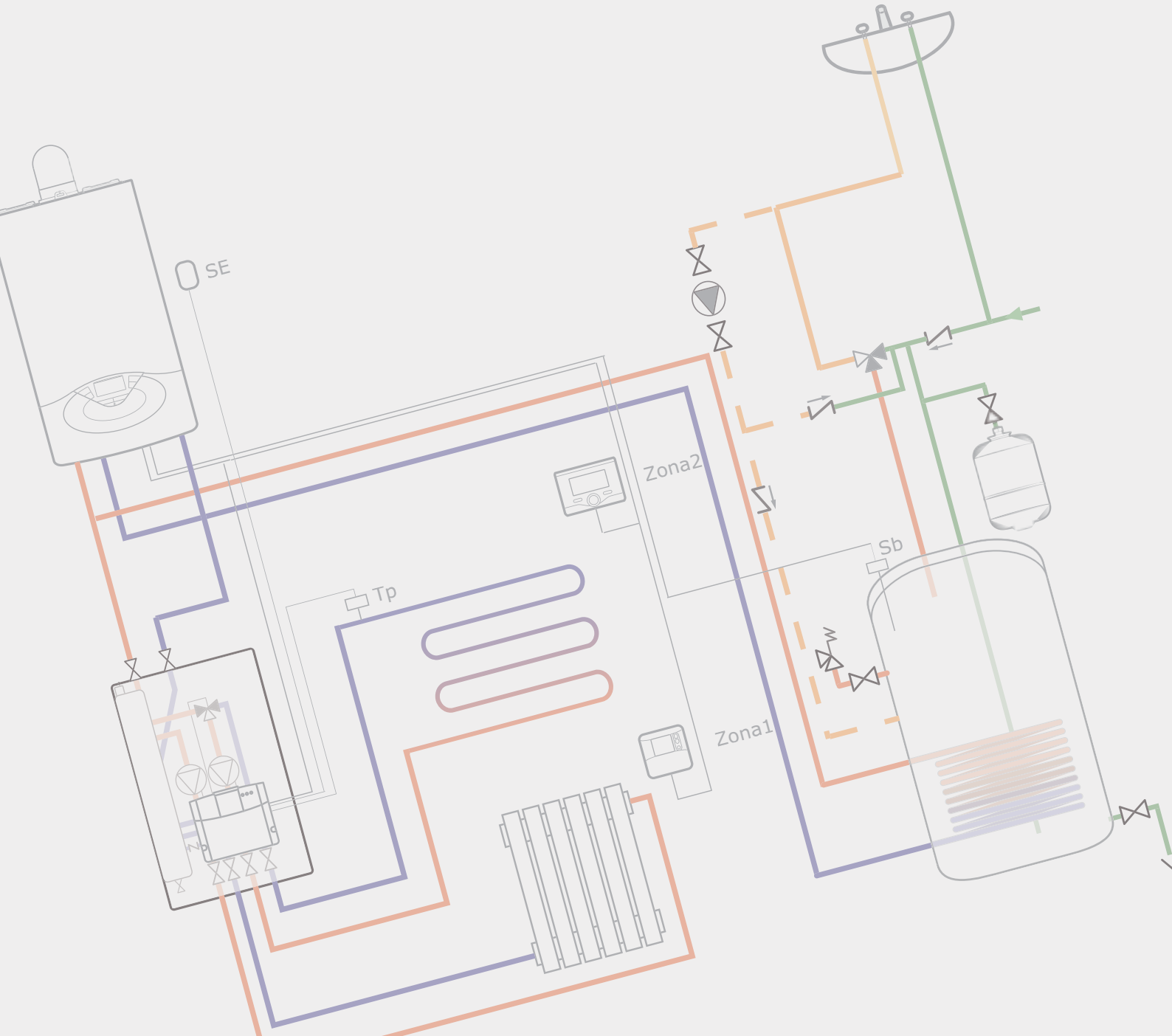


**GENUS
PREMIUM EVO HP**
HIGH POWER CONDENSING
BOILERS >35 KW



CONDENSING BOILERS

GENUS PREMIUM EVO HP



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1. Features and application field



Instantaneous only-heating boiler,
with sealed chamber

GENUS PREMIUM EVO HP 45
GENUS PREMIUM EVO HP 65



Instantaneous only-heating boiler,
with sealed chamber

GENUS PREMIUM EVO HP 85
GENUS PREMIUM EVO HP 100
GENUS PREMIUM EVO HP 115
GENUS PREMIUM EVO HP 150

HIGH POWER CONDENSING WALL-HUNG BOILER

The high-power condensing wall-hung boiler GENUS PREMIUM EVO HP is the maximum technological innovation expression of the new ARISTON brand boilers in terms of efficiency, ecology, comfort, installation flexibility and use.

The great improvement of the new wall-hung boiler will allow to manage up to 8 boilers in back to back cascade installation, and up to 6 boilers in line installation (with the new cascade control unit RVS 63), to ensure a higher overall efficiency and lower costs.

GENUS PREMIUM EVO HP boiler, by using a heat exchanger in stainless steel AISI 304L, and thanks to the fully premix combustion system guarantees maximum efficiency (4 combustion efficiency stars) and extremely low polluting emissions (NO_x 5 class).

GENUS PREMIUM EVO HP is perfect both for heating domestic systems with high volume (two-family, multi-family houses, blocks of flats), and business/industrial activities.

In case of boiler single installation or in cascade one, it is possible to connect a separate tank for the domestic hot water production with an external threeway valve or a dedicated pump.

In case of operation in cascade, it is possible to connect the boilers to flow/return distribution collectors, easy to assemble. A separate hydraulic separator allows to adapt the heat generator to the system characteristics. The generators can be installed both on the wall and in any point of the thermal station thanks to an appropriate self-supporting frame.

The management of the boilers in cascade, besides the rotation (to obtain the same operation time for the different boilers), also allows the di-

vision of the power supplied on more generators so that the ratio power/exchange surface allows to exploit at maximum the condensing heat exchanger technology.

The wide DOT MATRIX LCD display with blue backlit is completely customizable both in terms of information shown (base or complete initial display) and of backlight level.

GENUS PREMIUM EVO HP can be used to make advanced systems with high efficiency since it is arranged for the connection with a wide range of climatic thermoregulation devices (Sensys, room sensor, outdoor sensor, ...) and of hydraulic modules for managing multi-zone and multi-temperature heating systems. Lastly, since it is also arranged for the integration and management of solar thermal systems, GENUS PREMIUM EVO HP is the perfect solution for systems that use renewable energy sources.

2. Specification description

GENUS PREMIUM EVO HP 45 - 65 - 85 - 100 - 115 - 150

Condensing wall-hung boiler, forced flow sealed chamber, for heating internal installations.

Combustion group

- Condensing technology with fully premix system that has very high efficiency on all the modulating range;
- The exchanger consists of smooth stainless steel pipes that ensure the maximum thermal exchange. Inside it, it integrates the additional flue gas exhaust functions, manual air release valve, condensate discharge;
- Ionization electronic control with ignition and flame detection electrodes;
- "Premix" burner – fully air/gas premix in stainless steel consisting of: an external perforated casing where the combustion takes place, an internal perforated casing for the internal gas diffusion balancing, working with all gas types;
- Integrated regulation gas valve and venturi for the air-gas mixture;
- Self-adapting and modulating fan with electronic speed change,
- NTC contact probes on primary flow and return for temperature controls;

Hydraulic group

- Two speed circulation pump, autoadaptive according to the system flow and return temperature difference (only for 45-65 kW);
- Automatic air release function of the air release (only for 45-65 kW) the heating system;
- Two speed autoadaptive pump (available as accessory for 85-100 kW), and full modulating pump (available as accessory for 85-100-115-150 kW) autoadaptive according to the system flow and return temperature difference;
- Pumps with integrated automatic air release valve, based on the system flow and return temperature difference;

Condensate and flue

- Condensate discharge through integrated siphon with inspection directly accessible;
- Combustion analysis intakes integrated in the flue gas exhaust connector;
- Coaxial flue gas exhaust connections, 80 / 125 mm (air/flue gas split configuration 80 / 80 with appropriate accessory), for 45-65 kW; split flue exhaust connections, diameter 100/100, for 85-100-115-150 kW;

Electronics

- Microprocessor P.C.B.;
- The wide blue backlit LCD DOT MATRIX display is fully customizable both in terms of information shown (base or complete initial display) and of backlight level;
- Arranged for system configuration integration through

the new bus bridgenet communication protocol;

- Self-diagnosis system with setting visualization on the LCD DOT MATRIX display of operation technical parameters and failure codes;

Arranged for thermoregulation, heating and solar thermal systems' management

- Arranged for multi-zone climatic thermoregulation;
- Arranged for multi-temperature and multi-zone system management modules' connection;
- Arranged for solar thermal systems' management and integration;

Safety and control

- Low pressure switch integrated in the boiler;
- Anti-freeze protection system on heating operating on two temperature levels (at 8°C only circulation pump activation, at 3°C burner activation);
- Primary heat exchanger over-temperature protection, water side, through primary circuit flow probe limit temperature;
- Primary heat exchanger over-temperature protection, flue gas side, through thermal fuse;
- Primary heat exchanger over-temperature protection, flue gas side, through thermostat and additional thermofuse on 85-100-115-150 kW;
- Primary circuit water circulation lack protection through flow and return temperature probes;
- Circulation pump anti-lock system that activates every 21 hours if the boiler hasn't been used for this amount of time;
- Post-circulation system on the heating circuit;
- Filters on heating and circuits;
- Anti-freeze protection system on the heating and operating on two temperature levels (at 8°C only circulation pump activation, at 3°C burner activation);
- IPX4D protection rating (IP20 for 115-150 kW);

Special functions

Heating

- Automatic air release function for the air release from the heating system;
- "Chimney sweep" function for the combustion analysis;
- "AUTO" function to optimize automatically the boiler heating mode, according to the room and external conditions;

Domestic hot water

- The domestic hot water production is allowed through the connection with 3 way valve kit;

Accessories included

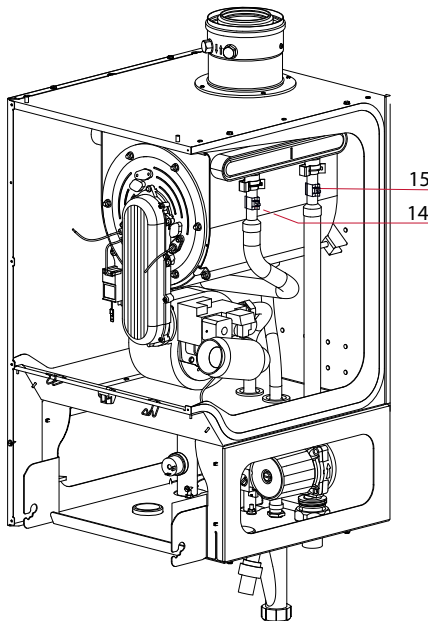
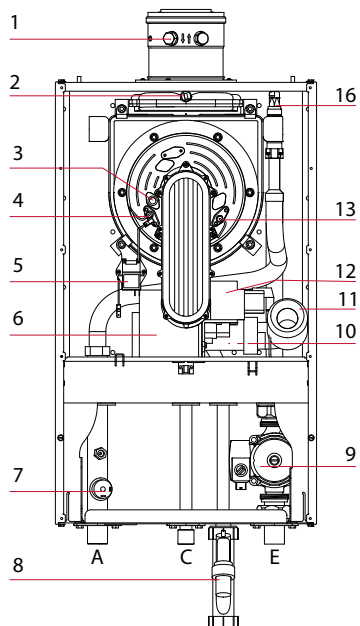
- Wall-fixing bracket;
- LPG conversion kit;

3. Technical data

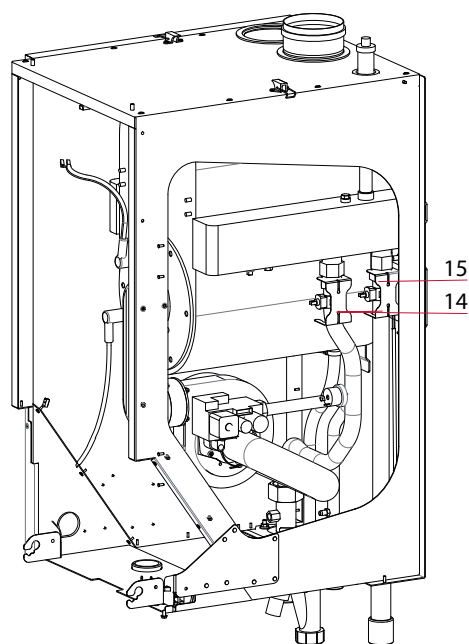
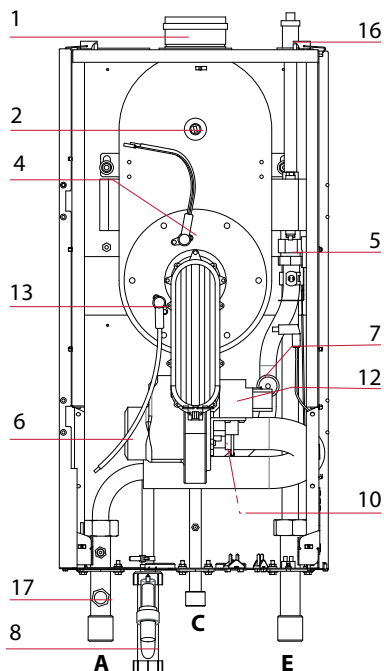
Model GENUS PREMIUM EVO HP			45	65	85	100	115	150
General Note	CE Certification (pin)		0063BT3414					
	Boiler type		C13-C33-C43-C53-C83-B23-B23p-B33-B33p					
Power Specifications	Max/min nominal calorific flow rate (Pci) Qn	kW	41,0 / 12,2	58,0 / 17,4	80,0 / 20,0	88,3 / 22,1	109,0 / 27,3	140,0 / 35,0
	Max/min nominal calorific flow rate (Pcs) Qn	kW	45,6 / 13,6	64,4 / 19,3	88,9 / 22,2	98,1 / 24,6	121,1 / 30,3	155,6 / 38,9
	Max/min power output (80°C-60°C) (Central Heating) Pn	kW	39,8 / 11,7	57,3 / 17,3	78,0 / 19,7	86,1 / 21,7	106,3 / 26,9	136,2 / 34,4
	Max/min power output (50°C-30°C) (Central Heating) Pn	kW	43,6 / 13,1	62,3 / 19,1	84,5 / 21,6	94,0 / 23,9	115,8 / 29,6	148,5 / 38,0
	Max/min power output (40 °C - 30 °C) Pn	kW	43,7 / 13,1	62,8 / 19,3	84,9 / 21,7	94,5 / 23,9	117,1 / 29,6	150,1 / 38,0
	Combustion efficiency (of flue gas)	%	97,3	97,3	97,3	97,3	96,8	96,9
	Nominal calorific flow rate efficiency (60/80°C) max/min	%	97,0 / 96,1	98,8 / 99,4	97,5 / 98,4	97,5 / 98,4	97,5 / 98,4	97,3 / 98,4
	Nominal calorific flow rate efficiency (30/50°C) max/min	%	106,4 / 107,5	107,4 / 109,5	105,6 / 108,1	106,5 / 108,1	106,2 / 108,4	106,1 / 108,3
	Nominal calorific flow rate efficiency (30/40 °C) max/min	%	106,5 / 107,7	108,2 / 110,0	106,1 / 108,3	107,0 / 108,3	107,7 / 108,6	107,2 / 108,7
	Efficiency at 30% at 30°C	%	107,4	109,8	108,1	108,1	108,3	108,5
	Efficiency at 30% at 47°C	%	104,8	105,3	104,9	104,9	102,5	103,0
	Efficiency rating (dir. 92/42/EEC)	star	****	****	****	****	****	****
	Sedbuk Rating	band						
	Loss when stopped (ΔT = 50°C)	%	0,24	0,24	0,25	0,25	<-0,15	<-0,15
	Loss of burner gas when operating	%	2,8	2,8	2,8	2,8	3,2	3,1
Emissions	Available air pressure	Pa	130	150	140	140	180	200
	NOx class (Less than 70 mg/kWh)	class	5	5	5	5	5	5
	Flue gas temperature (G20) (80°C-60°C)	°C	67/63	68/61	61 / 63	68 / 63	76 / 65	74 / 63
	CO2 content (G20) max/min	%	9,0 / 8,4	9,0 / 8,4	9,0 / 8,4	9,0 / 8,4	9,0 / 8,4	9,0 / 8,4
	CO2 content (G31) max/min	%	9,8 / 9,2	9,8 / 9,2	9,8 / 9,2	9,8 / 9,2	9,8 / 9,2	9,8 / 9,2
	CO content (0%O2) (80°C-60°C)	ppm	88	109	95	90	117	131
	O2 content (G20)	%	4,8	4,8	4,8	4,8	4,8	4,8
	Maximum flue gas flow (G20) (80°C-60°C)	m3/h	53	74	102	113	143	182
	Excess air max load	%	27	27	27	27	27	27
Heating circuit	Residual head DT = 20°C	mCa-l/h	2,2	1,1				
	Maximum/Minimum heating pressure	bar (MPa)	4 / 0,7 (0,4/0,07)	4 / 0,7 (0,4/0,07)	6 / 0,7 (0,6/0,07)	6 / 0,7 (0,6/0,07)	6 / 0,7 (0,6/0,07)	6 / 0,7 (0,6/0,07)
	Min/max heating temperature (high temperature range)	°C	35 / 82	35 / 82	35 / 82	35 / 82	35 / 85	35 / 85
	Min/max heating temperature (low temperature range)	°C	20 / 45	20 / 45	20 / 45	20 / 45	20 / 45	20 / 45
Domestic hot water circuit	Domestic hot water min/max temperature	°C	40 / 60	40 / 60	40 / 60	40 / 60	40 / 60	40 / 60
Electrical	Power supply voltage/frequency	V/Hz	230 / 50	230 / 50	230 / 50	230 / 50	230 / 50	230 / 50
	Total electrical power absorbed	W	148	198	101	111	215	246
	Minimum ambient temperature for use	°C	+5	+5	+5	+5	+5	+5
	Protection level for the electrical appliance	IP	IPX4D	IPX4D	IPX4D	IPX4D	IP20	IP20
	Max condensate production (40°C- 30°C, max load - 20°C ambient)	l/h	8,8	13,4	16,4	19,1	24,6	31,1
	Condensate pH		3,2	3,2	3,2	3,2	3,2	3,2
	Weight	kg	45	50	80	83	83	90
	Dimensions (DxWxH)	mm	440/910/510	440/910/510	585/465/1010	585/465/1010	585/465/1010	595/465/1010

4. Main components

GENUS PREMIUM EVO HP 45/65



GENUS PREMIUM EVO HP 85/100

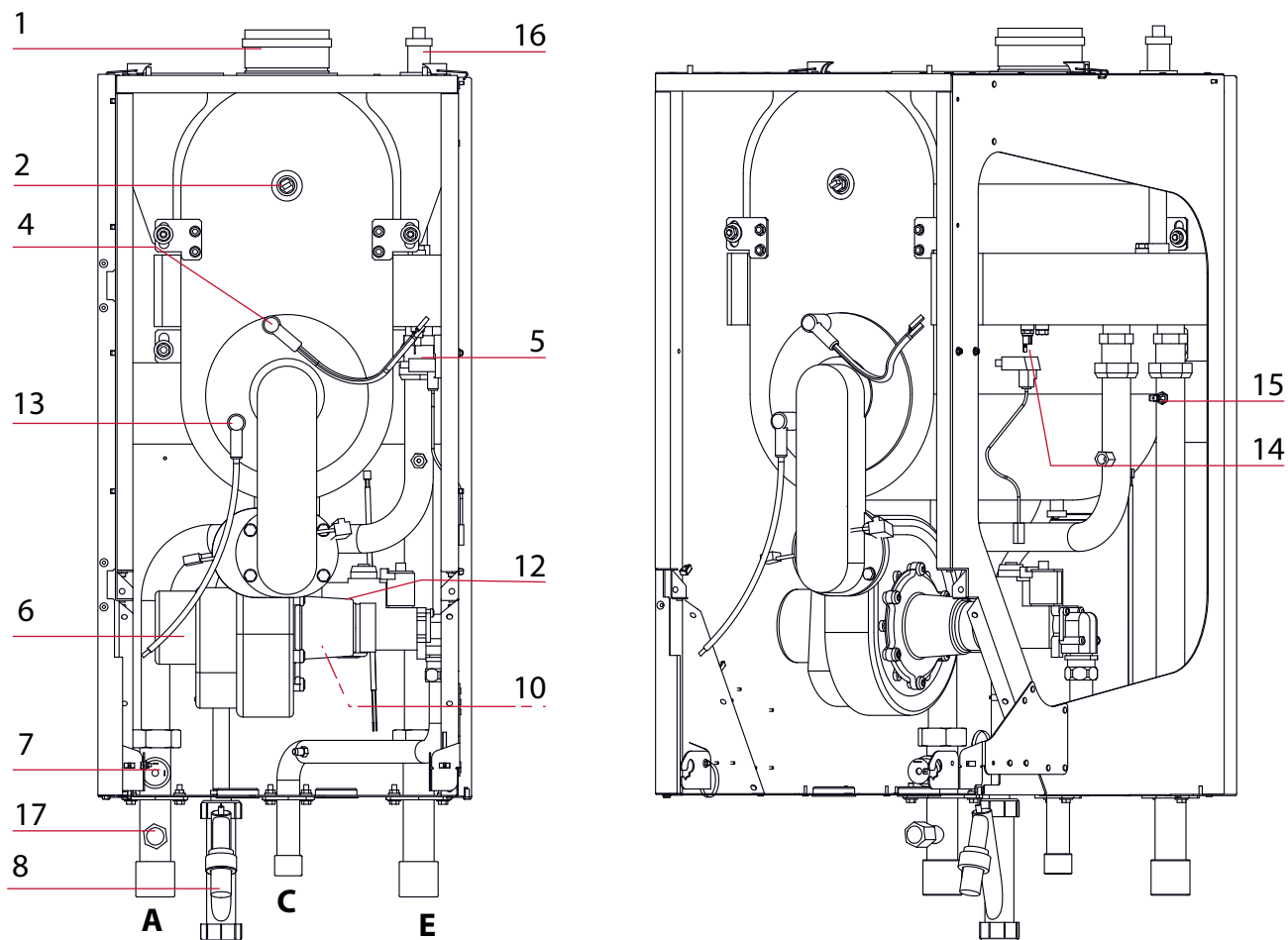


LEGEND

- | | | | |
|-----|---|-----|-------------------------------|
| 1. | Combustion analysis test point | 14. | C.H. Flow temperature probe |
| 2. | Flue overheat thermostat | 15. | C.H. Return temperature probe |
| 3. | Flame inspection glass | 16. | Air relief valve |
| 4. | Ignition electrode | 17. | Connection for Safety valve |
| 5. | Ignitor | | |
| 6. | Modulating fan | A. | Central Heating Flow |
| 7. | Minimum water pressure switch | C. | Gas Inlet |
| 8. | Siphon | E. | Central Heating Return |
| 9. | Circulation pump with air release valve | | |
| 10. | Mixer | | |
| 11. | Silencer | | |
| 12. | Gas valve | | |
| 13. | Detection electrode | | |

4. Main components

GENUS PREMIUM EVO HP 115/150

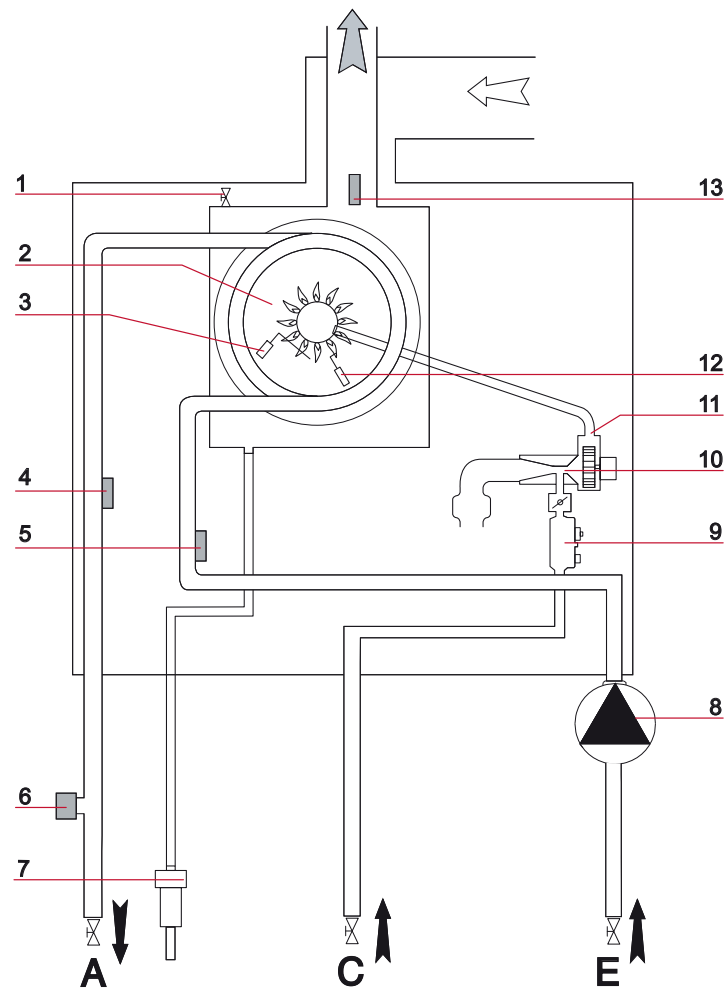


LEGEND:

- | | | | |
|-----|---|-----|-------------------------------|
| 1. | Combustion analysis test point | 15. | C.H. Return temperature probe |
| 2. | Flue overheat thermostat | 16. | Air relief valve |
| 3. | Flame inspection glass | 17. | Connection for Safety valve |
| 4. | Ignition electrode | A. | Central Heating Flow |
| 5. | Ignitor | C. | Gas Inlet |
| 6. | Modulating fan | E. | Central Heating Return |
| 7. | Minimum water pressure switch | | |
| 8. | Siphon | | |
| 9. | Circulation pump with air release valve | | |
| 10. | Mixer | | |
| 11. | Silencer | | |
| 12. | Gas valve | | |
| 13. | Detection electrode | | |
| 14. | C.H. Flow temperature probe | | |

5. Hydraulic diagram

GENUS PREMIUM EVO HP

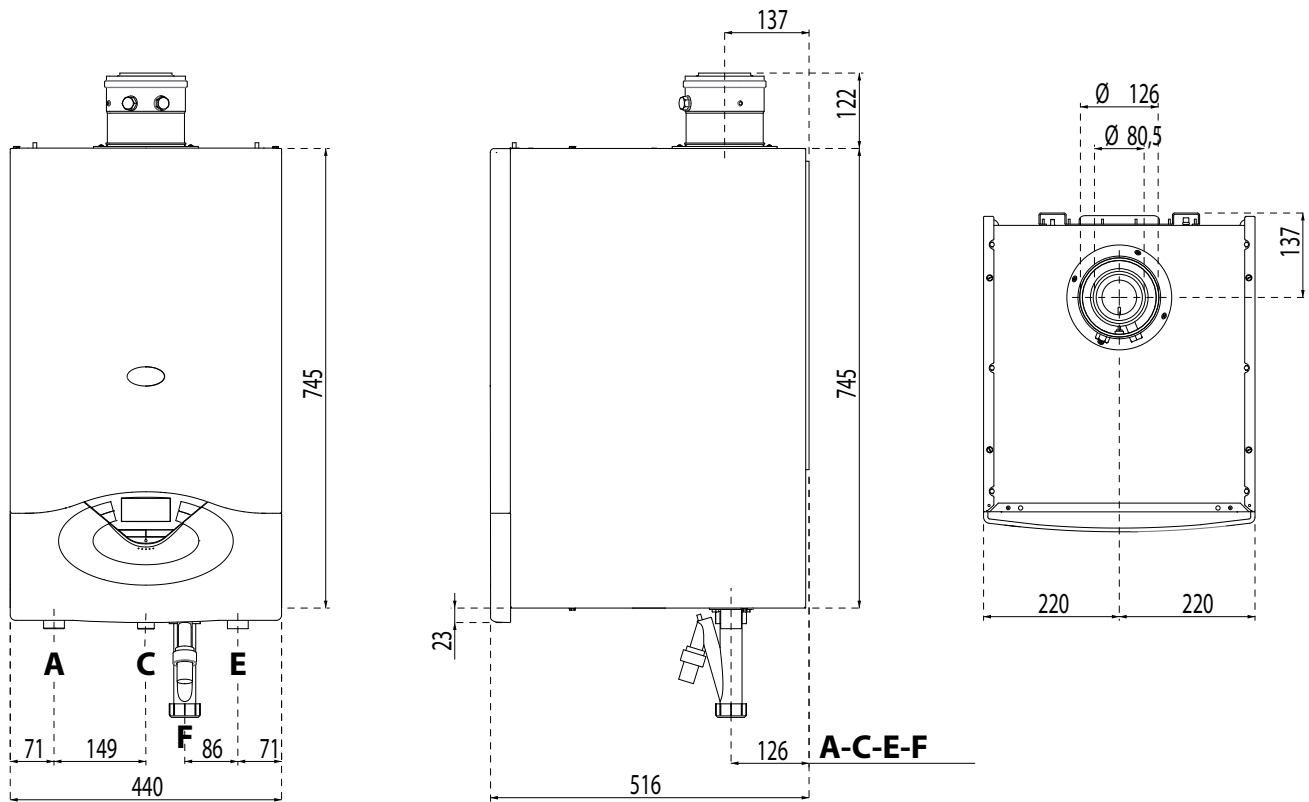


LEGEND:

1. Manual air vent
2. Main heat exchanger
3. Detection Electrode
4. C.H. Flow temperature probe
5. C.H. Return temperature probe
6. Minimum water pressure switch
7. Siphon
8. Circulation Pump (optional for 85/100/115/150)
9. Gas valve
10. Modulating fan
11. Mixer
12. Ignition electrode
13. Flue overheat thermostat

6. Dimensions and connections

GENUS PREMIUM EVO HP 45/65

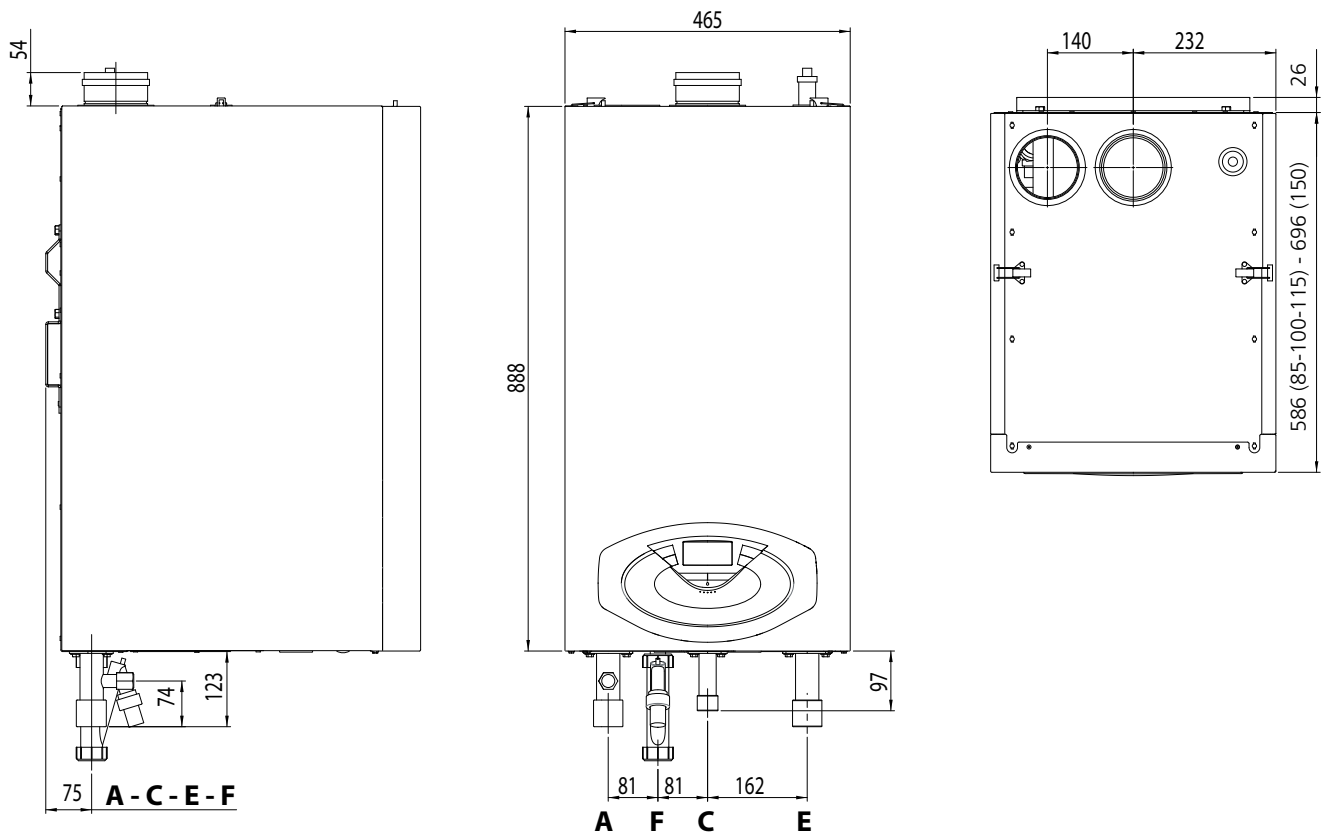


LEGEND:

- A. Central Heating Flow 1" M
- C. Gas Inlet $\frac{3}{4}$ " M
- E. Central Heating Return 1" M
- F. Condensate discharge

6. Dimensions and connections

GENUS PREMIUM EVO HP 85/100/115/150



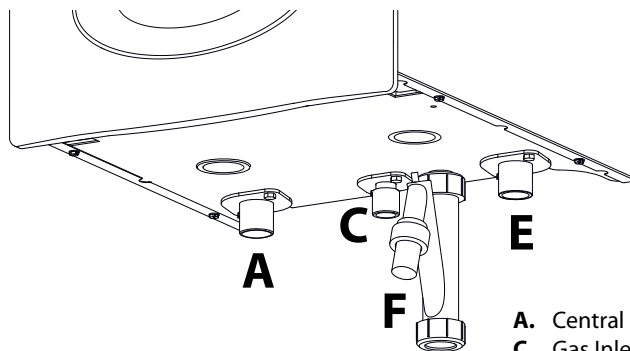
LEGEND:

- A. Central Heating Flow 1" 1/4 M (for 85-100) ; Central Heating Flow 1" 1/2 M (for 115-150)
- C. Gas Inlet 1" M
- E. Central Heating Flow 1" 1/4 M (for 85-100) ; Central Heating Flow 1" 1/2 M (for 115-150)
- F. Condensate discharge

6. Dimensions and connections

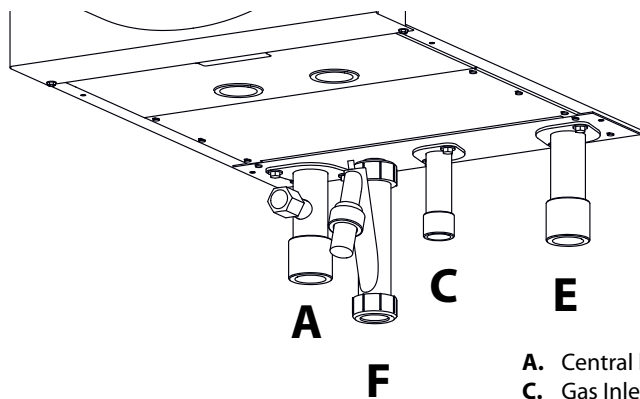
Water / Gas connection and Condensate Discharge

GENUS PREMIUM EVOHP 45/65



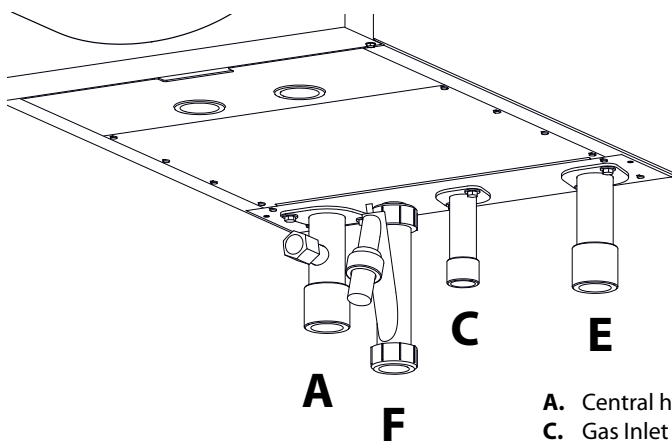
- A. Central heating Flow 1" M
- C. Gas Inlet 3/4" M
- E. Central Heating Return 1" M
- F. Drain condensate

GENUS PREMIUM EVO HP 85/100



- A. Central heating Flow 1" 1/4 M
- C. Gas Inlet 1" M
- E. Central Heating Return 1" 1/4 M
- G. Drain condensate

GENUS PREMIUM EVO HP 115/150

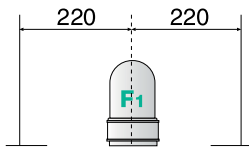


- A. Central heating Flow 1" 1/2 M
- C. Gas Inlet 1" M
- E. Central Heating Return 1" 1/2 M
- G. Drain condensate

7. Air intake/ flue gas exhausts

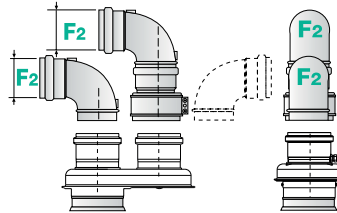
45 - 65 kW

Coaxial exhausts

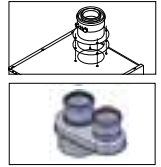


F1: 80/125
F2: 80/80

Twin pipes exhausts



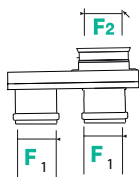
GENUS PREMIUM EVO HP 45/65 is equipped for connection to a 80/125 coaxial flue gas suction and exhaust system. A suitable adapter must be used when using 80/80 split suction and exhaust systems (code 3580784).



Flue gas exhaust type		Maximum extension exhaust-air (m)				Diameter of pipe (mm)	Maximum extension exhaust-air (m)				Diameter of pipe (mm)
		45		65			85		100		
		min	max	min	max		min	max	min	max	
Coaxial systems	C13					ø 80/125					ø 110/150
	C33	1	12	1	8		1	5	1	5	
	C43										
	B33	1	12	1	8	ø 80/125	1	5	1	5	ø 110/150
Twin-pipe System	C13	S1=S2				ø 80/80	S1=S2				ø 100/110
	C23										
	C33	0,5/0,5	24/24	0,5/0,5	15/15		0,5/0,5	24/24	0,5/0,5	24/24	
	C43										
	C53	1 + S2		1 + S2		ø 80/80	1 + S2		1 + S2		ø 100/110
	C83	1	49	1	16		1	49	1	49	
	B23	0,5	49	0,5	30	ø 80	0,5	49	0,5	49	ø 110

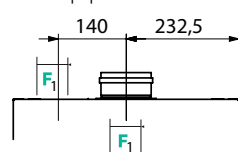
85 - 100 - 115 - 150 kW

Coaxial exhausts



F1: 100
F2: 110/150

Twin pipes exhausts



GENUS PREMIUM EVO HP 85/100/115/150 is equipped for connection to a 100/110 twin-pipe flue gas suction and exhaust system, but is necessary to use the adapter.

A suitable adapter must be used when using coaxial system 110/150 or 100/150

Adapter Ø100/110, for air intake (it includes combustion-analysis port) 3590237.

Starting exhaust adapter Ø100/110 (it includes combustion-analysis port) 3590230.

Flue adapter, parallel to concentric - Ø100/100mm to Ø110/150mm (code 12076281)

Flue adapter, parallel to concentric - Ø100/100mm to Ø100/150mm (code 12076292)



Flue gas exhaust type		Maximum extension exhaust-air (m)				Diameter of pipe (mm)
		115		150		
		min	max	min	max	
Twin-pipe System	C13	S1=S2		S1=S2		ø 100/110
	C23					
	C33	0,5/0,5	21/21	0,5/0,5	14/14	
	C43					
	C53	1 + S2		1 + S2		ø 100/110
	C83	1	44	1	27	
	B23	0,5	43	0,5	28	ø 110

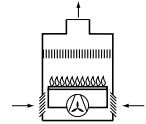
S1 = air suction S2 = Flue gas exhaust

7. Air intake/ flue gas exhausts

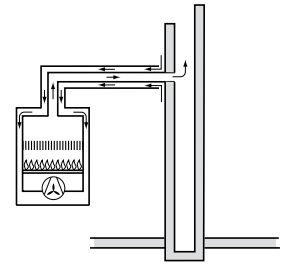
EUROPEAN REGULATION UNI 10642 Boiler Type Classification

Type B - Combustion air taken from the room in which the appliance is installed

- B22 External flue gas exhaust
- B23 Air intake from the room

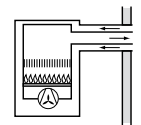


- B32 Flue gas exhaust through individual or shared flue ducting integrated into the building
- B33 Air drawn from the room

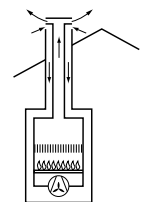


Type C - Combustion air drawn from outside

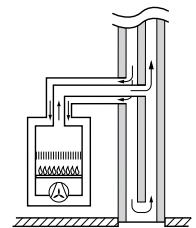
- C12 Flue gas exhaust and air intake duct through external wall in the same range of pressure



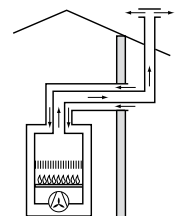
- C32 Flue gas exhaust and air suction duct from outside with roof terminal in the same range of pressure



- C42 Individual or shared flue gas exhaust and air suction through flue ducting built into the building

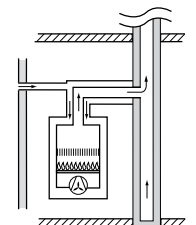


- C52 Flue gas exhaust leading outside and air intake duct through external wall not in the same range of pressure



- C62 This appliance is approved for connection to air intake and exhaust systems which have received separate approval

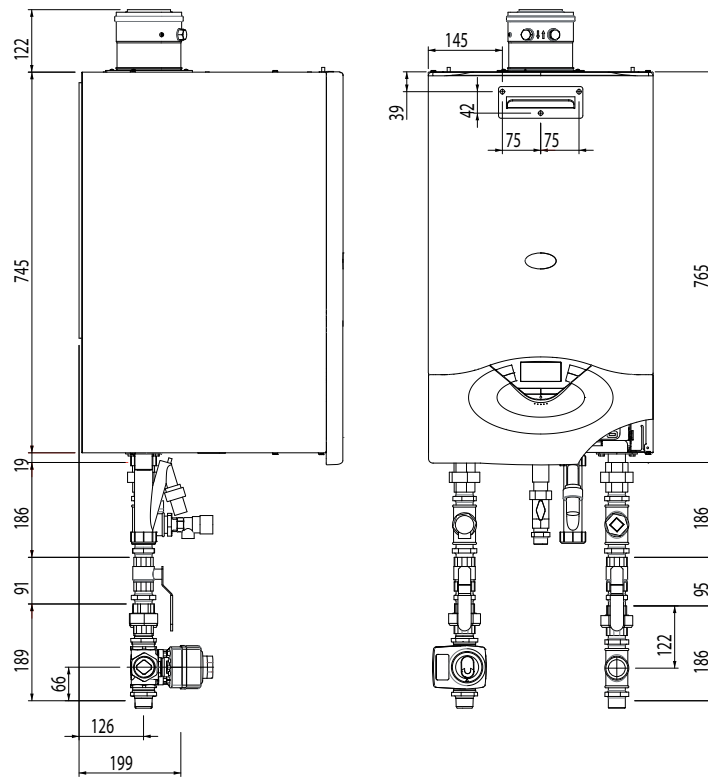
- C82 Flue gas exhaust through individual or shared flue ducting built into the building
Air intake through external wall



8. Installation support

INSTALLATION LAYOUT

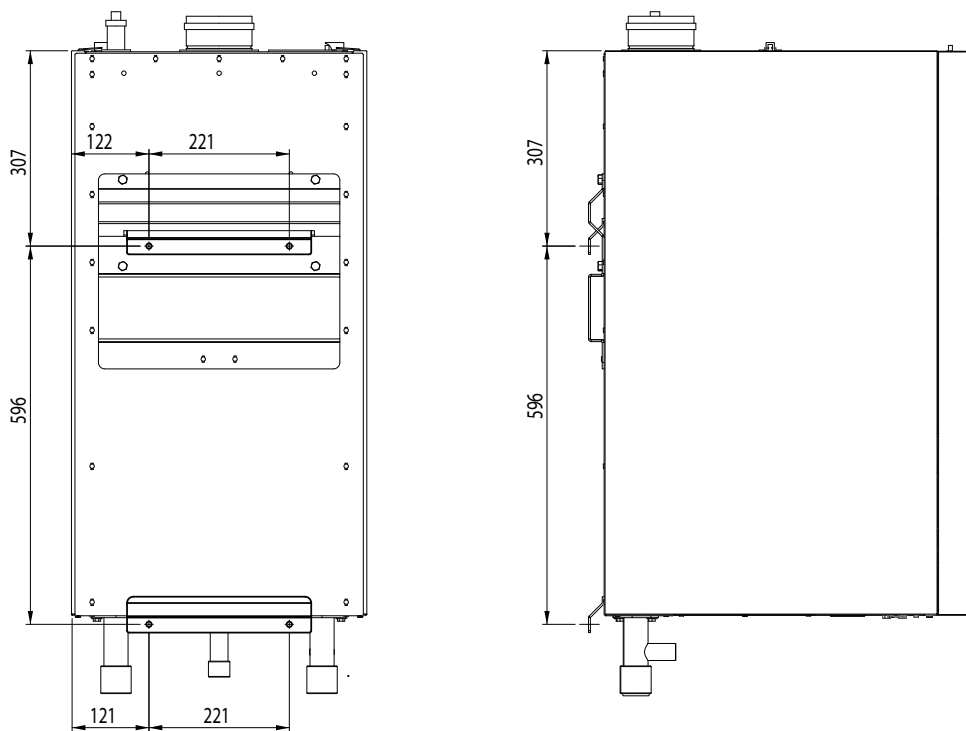
GENUS PREMIUM HP EVO 45/65



Dimensions in mm.

INSTALLATION TEMPLATE

GENUS PREMIUM EVO HP 85-100-115-150



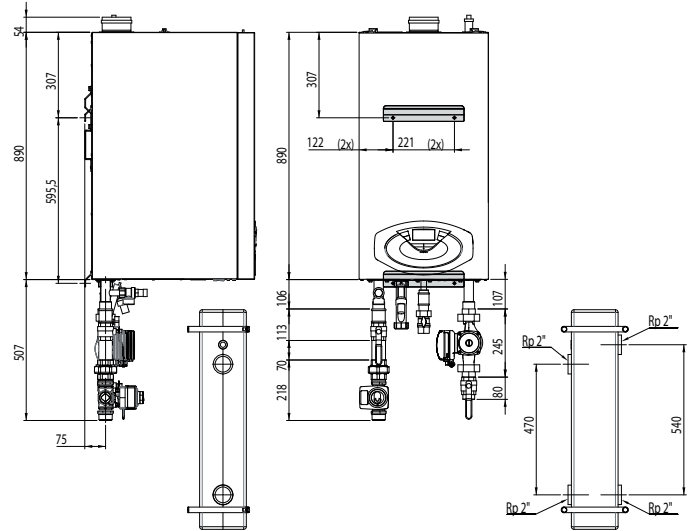
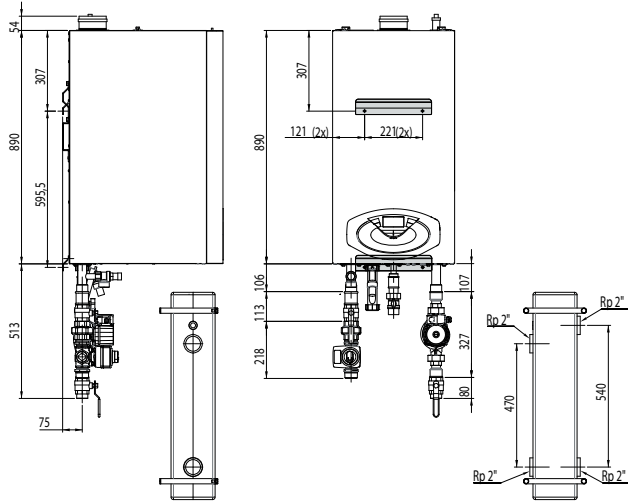
Dimensions in mm.

8. Installation support

INSTALLATION LAYOUT

GENUS PREMIUM EVO HP 85/100
with two speed pump kit

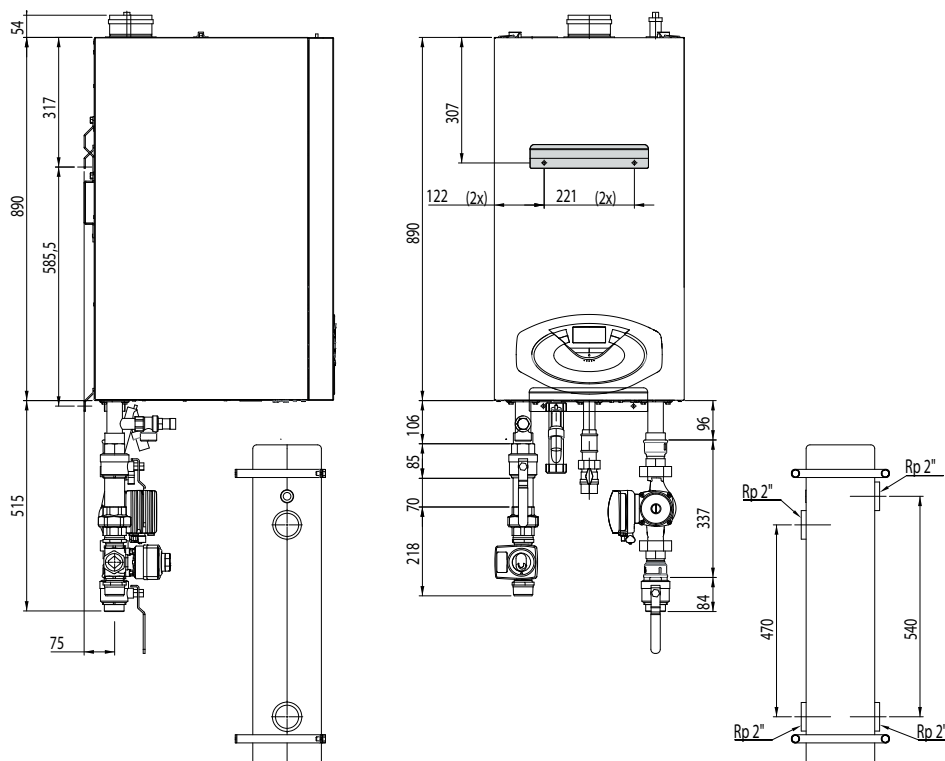
GENUS PREMIUM EVO HP 85/100
with full modulating pump kit



Dimensions in mm.

INSTALLATION LAYOUT

GENUS PREMIUM EVO HP 115/150

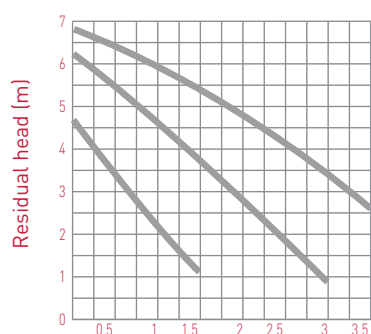


Dimensions in mm.

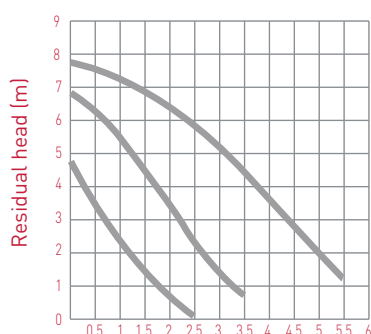
9. Pump groups

Two - Speed Pump Features


		45 FF	65 FF	85 FF	100 FF	115 FF	150 FF
HYDRAULIC DATA							
Flow Rate $\Delta T=20K$	m ³ /h	1,7	2,5	3,4	3,7	4,6	5,9
Pressure drop at the nominal flow rate	kPa	34	40	23	23	26	37
TWO - SPEED PUMP DATA							
Pump model and type of control	-	RS 25/7-2 130	RS 25/7-2 130	RSG 25/8-2-C	RSG 25/8-2-C	-	-
	Code	Included	Included	3590441	3590441	-	-
Voltage	V	230	230	230	230	-	-
Maximum consumption	W	93	111	151	151	-	-
Minimum consumption	W	62	62	81	81	-	-
Residual head at the nominal flow rate	kPa	56	51	46	41	-	-



Flow rate (m³/h)
RS 25/7-2 130
(included in 45-65 kW)

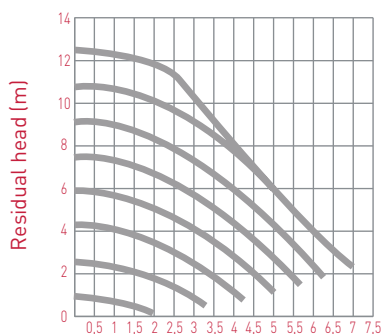


Flow rate (m³/h)
RSG 25/8-2-C


	Code
Two - Speed Pump 	3590441

High-Efficiency Full Modulating Pump Features

		45 FF	65 FF	85 FF	100 FF	115 FF	150 FF
HYDRAULIC DATA							
Flow Rate $\Delta T=20K$	m ³ /h	1,7	2,5	3,4	3,7	4,6	5,9
Pressure drop at the nominal flow rate	kPa	34	40	23	23	26	37
HIGH-EFFICIENCY FULL MODULATING PUMP DATA							
Pump model and type of control	-	-	-	UPMXL GEO 25-125	UPMXL GEO 25-125	UPMXL GEO 25-125	UPMXL GEO 25-125
	Code	-	-	3590442	3590442	3590442	3590442
Voltage	V	-	-	230	230	230	230
Maximum consumption	W	-	-	180	180	180	180
Minimum consumption	W	-	-	8	8	8	8
Residual head at the nominal flow rate	kPa	-	-	96	90	72	50

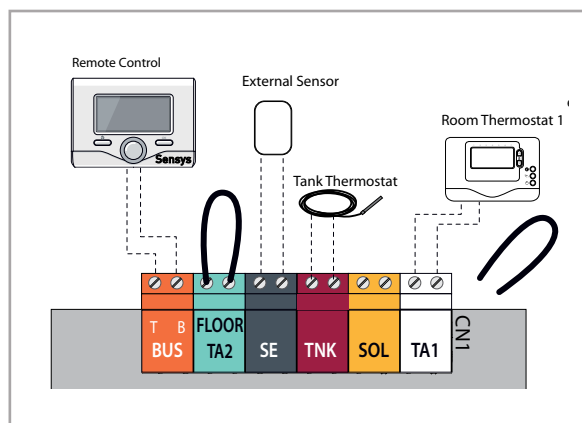
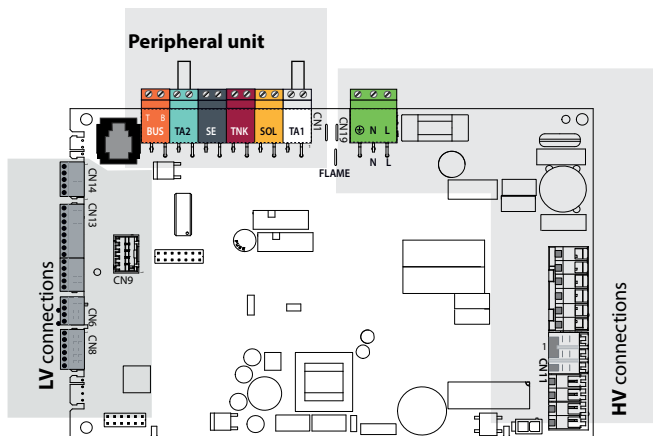


Flow rate (m³/h)
UPMXL GEO 25-125

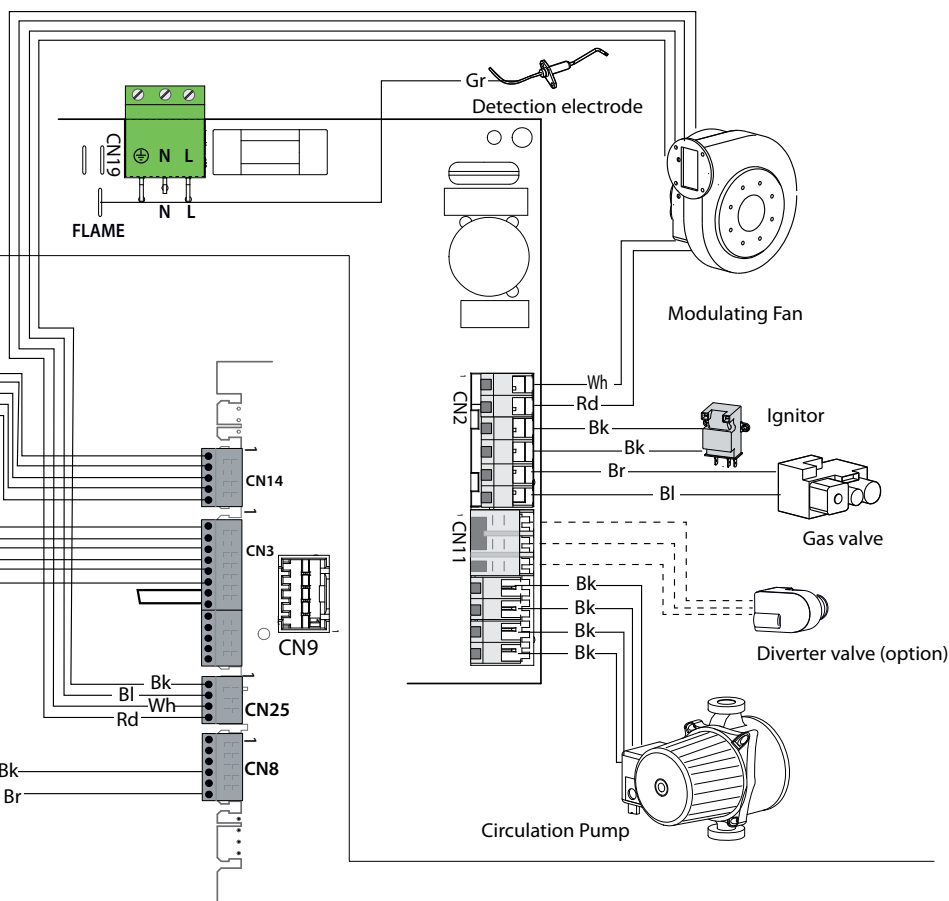
	Code
High-Efficiency Full Modulating Pump 	3590442

10. Electric diagram and Control panel

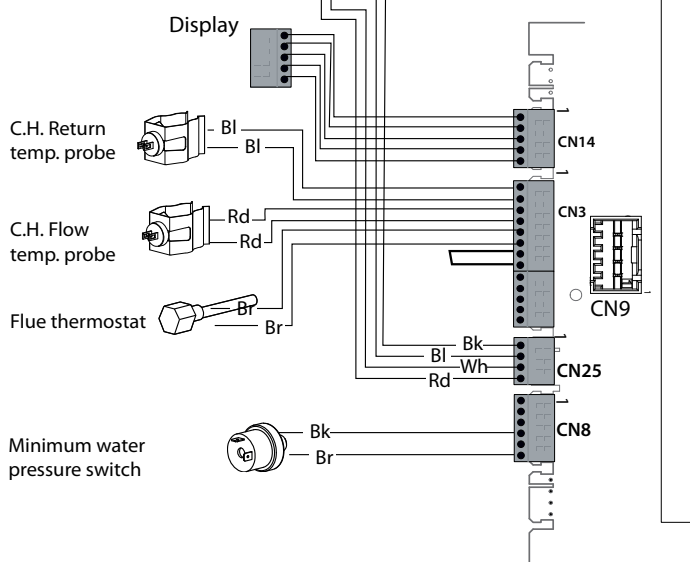
GENUS PREMIUM EVO HP 45/65



HV connection



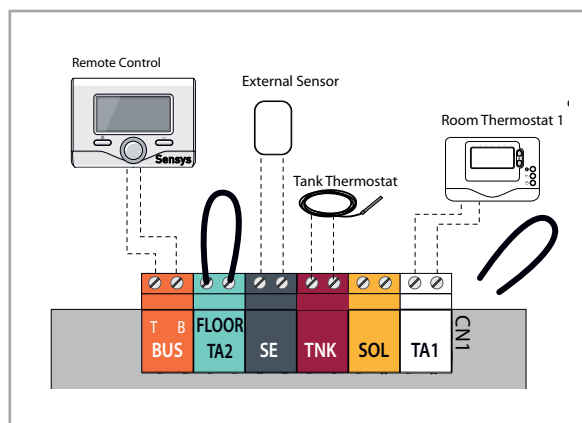
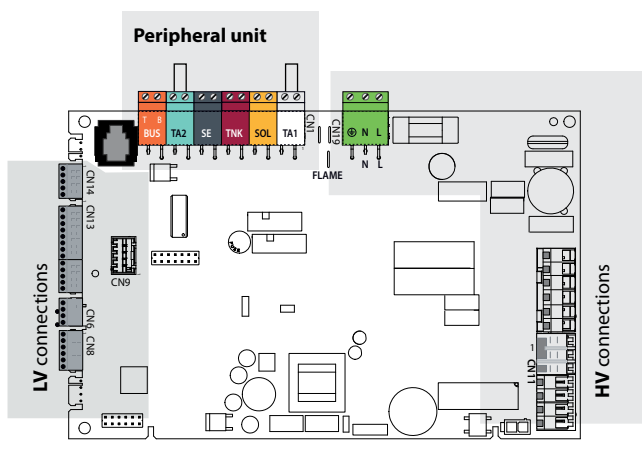
LV connection



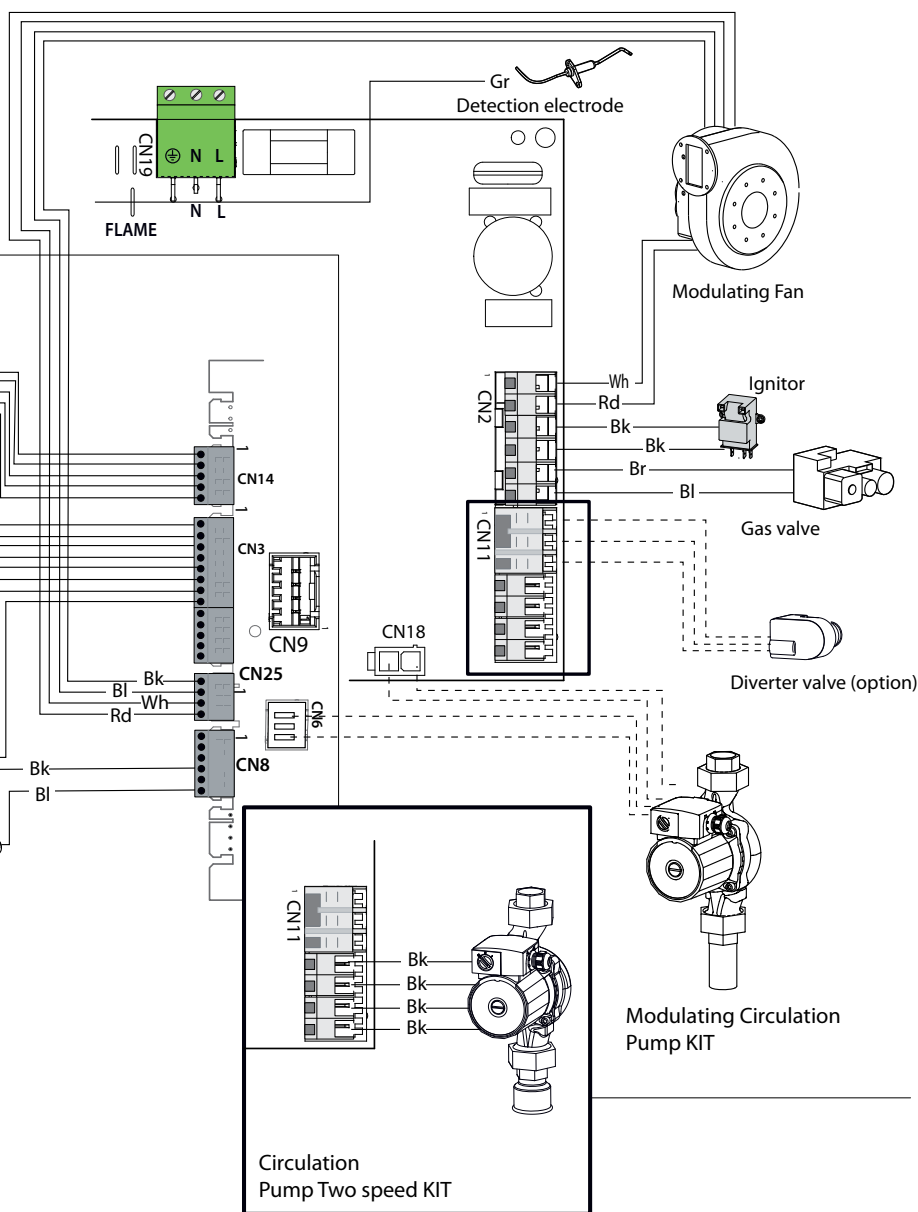
- Bk= Black
- Rd = Red
- Gr = Green
- Bl = Blu
- Br = Brown
- Wh = White
- Gry = Grey

10. Electric diagram and Control panel

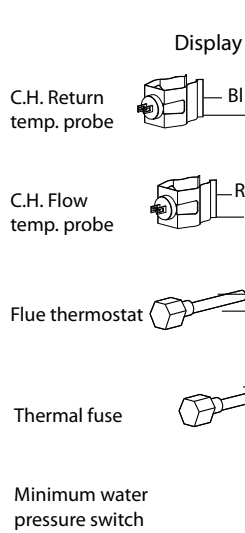
GENUS PREMIUM EVO HP 85/100



HV connection



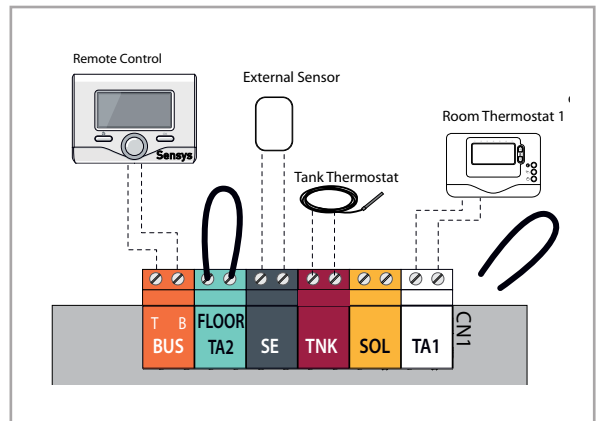
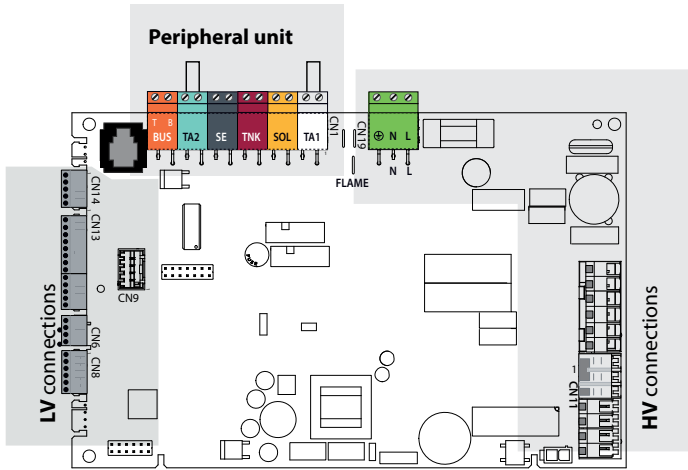
LV connection



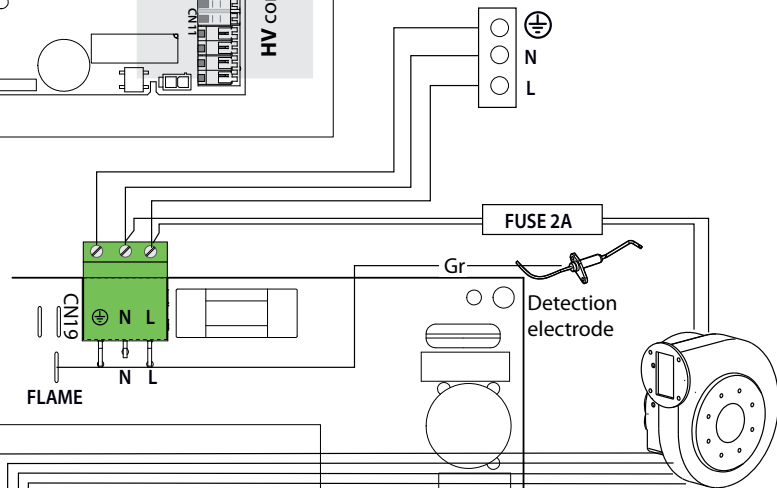
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- Bl = Blu
- Br = Brown
- Wh = White
- Gry = Grey

10. Electric diagram and Control panel

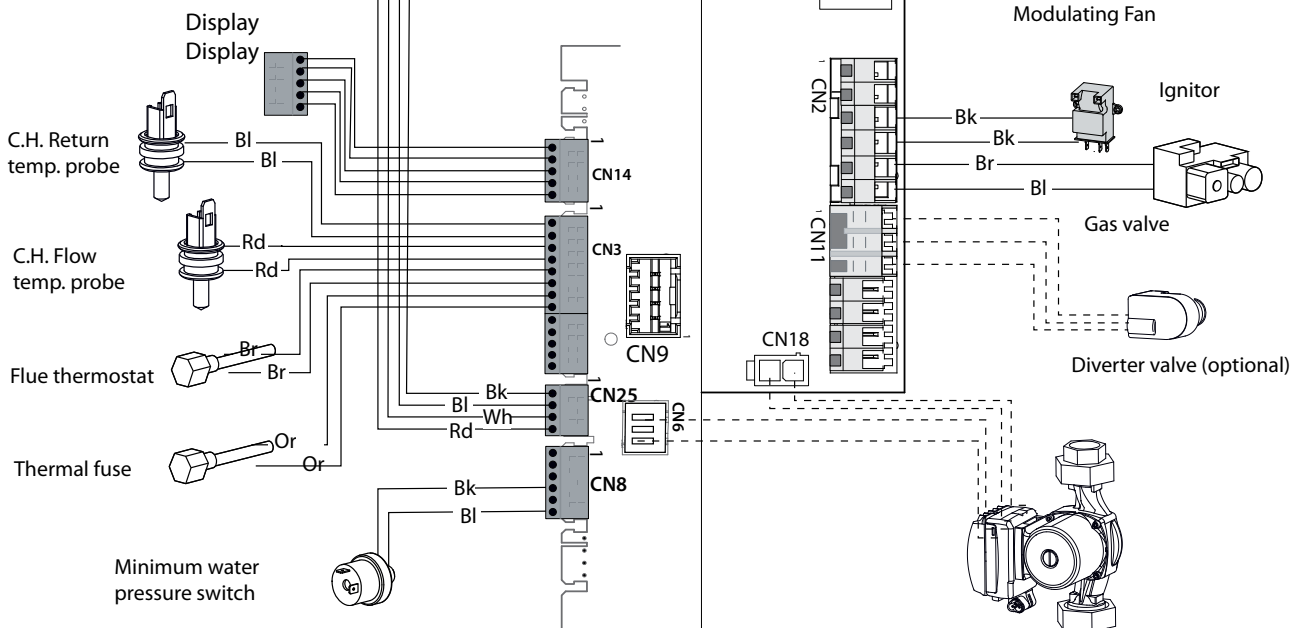
GENUS PREMIUM EVO HP 115/150



HV connection



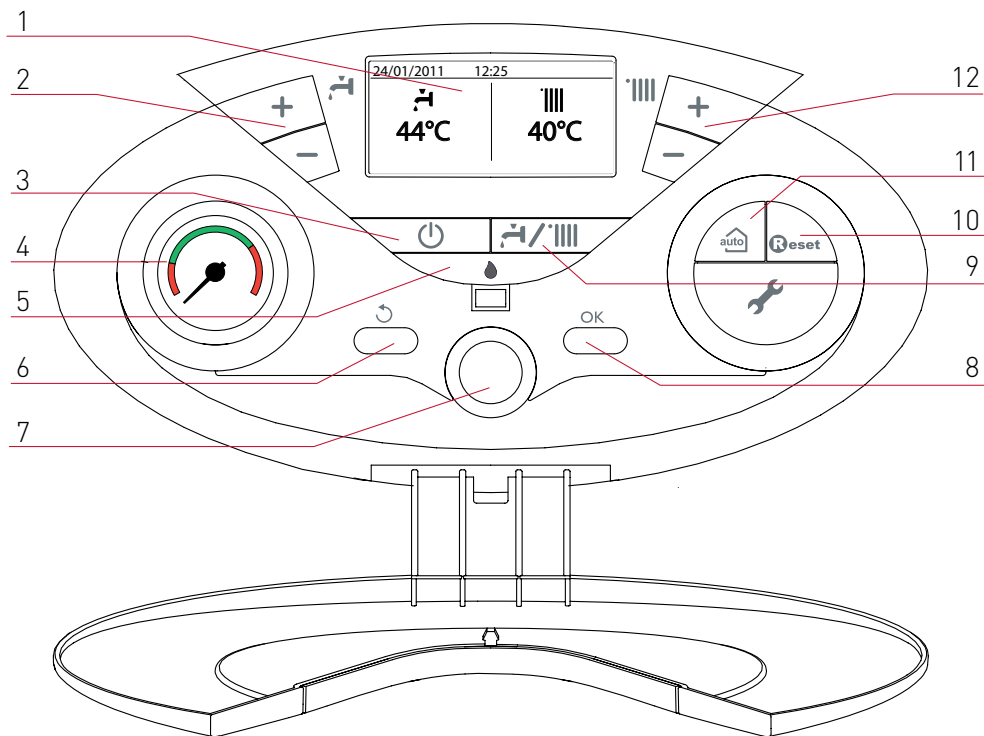
LV connection



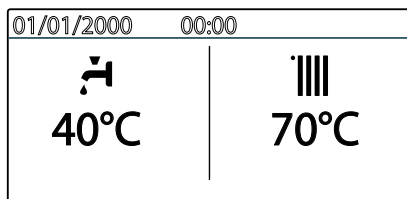
- Bk= Black
- Rd = Red
- Gr = Green
- Bl = Blu
- Br = Brown
- Wh = White
- Gry = Grey

10. Electric diagram and Control panel

GENUS PREMIUM EVO - GENUS PREMIUM EVO SYSTEM












Display



LEGEND:

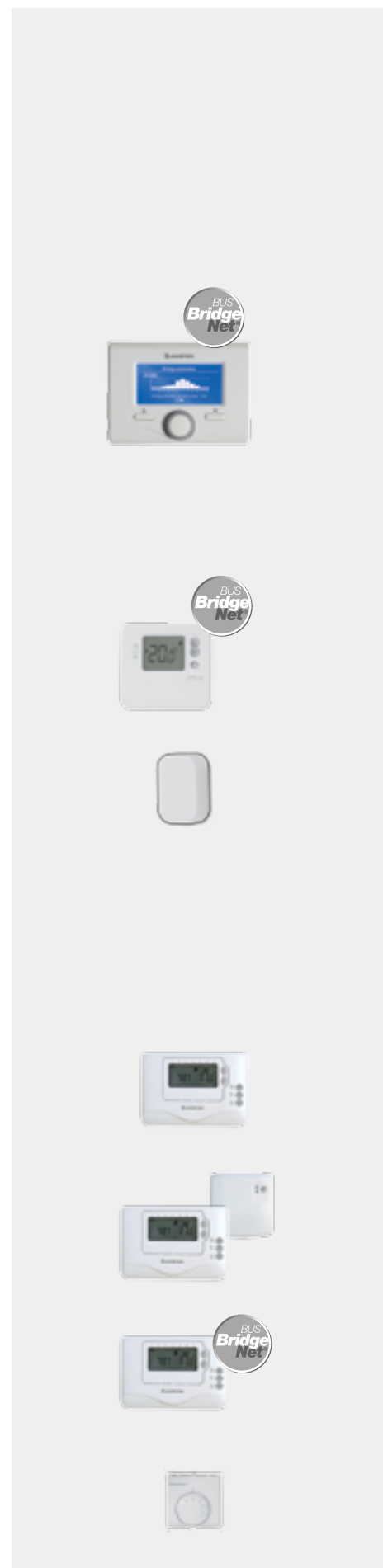
1. Display
2. Domestic Hot Water adjustment button +/-
3. ON/OFF button
4. Pressure gauge
5. Flame detected Blue LED
6. ESC button (Back)
7. "encoder" programming knob
8. Ok button programming key
9. MODE button
[Operation mode selection summer/winter]
10. Reset button
11. Auto button [To activate Thermoregulation]
12. Heating temperature adjustment button +/-

	DESCRIPTION
	Heating mode ON (without heat need) and heating set temperature
	Heating heat need and heating set temperature
	Domestic hot water mode ON (without heat need) and domestic hot water set temperature
	Domestic hot water heat need and domestic hot water set temperature
	Outdoor temperature (with outdoor sensor connected)
	Error warning
	Auto Function ON
COMFORT	Comfort function ON
	Solar P.C.B connected (complete display mode)
	Flame ON and burner power level (complete display mode)
1.3 bar	System pressure information (complete display mode)

11. Boiler Accessories - Single Installation

Modulating thermoregulation	Code	Genus Premium EVO HP Genus Premium EVO, Genus EVO, Clas Premium EVO, Clas EVO, GENUS PREMIUM EVO system, CLAS PREMIUM EVO system, CLAS EVO system
Sensys, modulating system manager (wired) - Remote control of all boiler functions through the BUS Bridgenet protocol - User-Friendly Setting/Configuration of system parameters - thermoregulation - Display of solar system working (if connected) - Display of energy reports (kWh), solar energy production, CO2 savings, stored DHW - Modulating sensor for detecting of the room temperature - User-friendly daily and weekly scheduling of central heating - User-friendly daily and weekly scheduling of domestic hot water (only in case of only-heating boiler coupled to a tank)	3318585 IT-EN-FR-ES-PT	•
	3318613 TK-RUS-GR-HR-SRB	
	3318615 PL-CZ-HU-RO	
Modulating room sensor (wired) -modulating sensor for detecting of room temperature	3318586	•
External probe (wired) - modulating sensor for detecting of external temperature	3318588	•

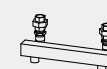
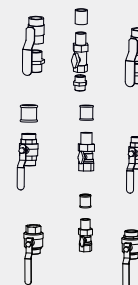
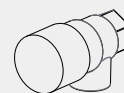
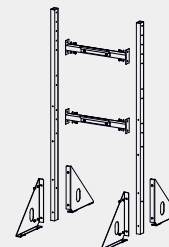
On-off thermoregulation accessories	Code	Genus Premium EVO HP, Genus EVO, Clas Premium EVO, Clas EVO, GENUS PREMIUM EVO system, CLAS PREMIUM EVO system, CLAS EVO system
On-off chronothermostat (wired) Daily and weekly programming of central heating. Proportional integral control (it anticipates the boiler shutdown according to the speed of reaching the set temperature)	3318590	•
On-off chronothermostat (wireless) Daily and weekly programming of central heating. Proportional integral control (it anticipates the boiler shutdown according to the speed of reaching the set temperature)	3318591	•
BUS supplied, on-off chronothermostat (wired, no batteries) Daily and weekly programming of central heating. Proportional integral control (it anticipates the boiler shutdown according to the speed of reaching the set temperature)	3318593	•
Room ON/OFF thermostat	3318594	•



11. Boiler Accessories - Single Installation

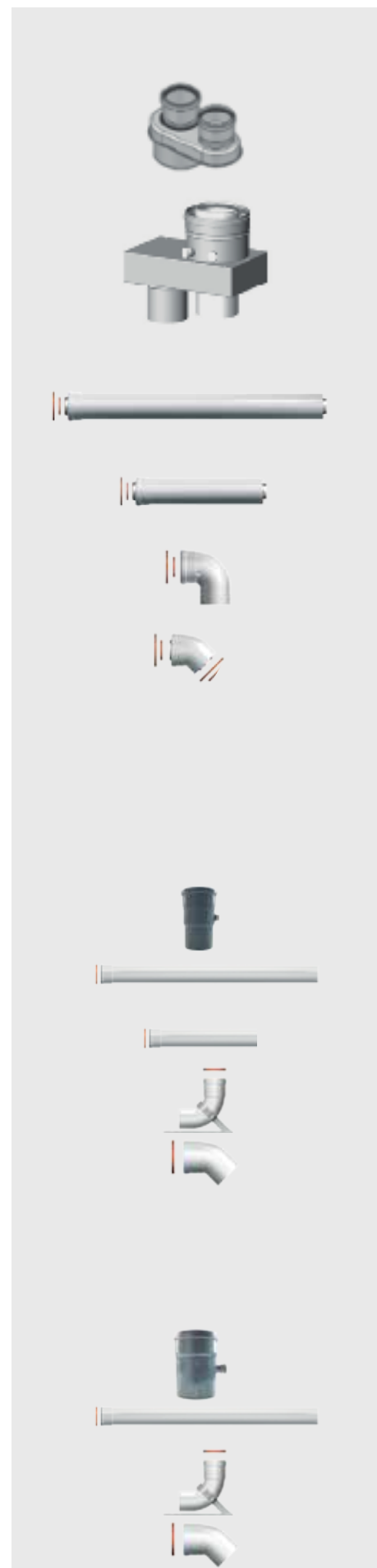
Installation accessories Single and Cascade	Code	GENUS PREMIUM EVO HP 45 - 65	GENUS PREMIUM EVO HP 85 - 100	GENUS PREMIUM EVO HP 115-150
Frame vertical bar (2 pcs needed)	3590279	•	•	•
Frame horizontal bar (1 pcs needed)	3590280	•	•	•
Collector support left (to be used for cascade)	3590472	•	•	•
Collector support right (to be used for cascade)	3590443	•	•	•
Frame foot (2 pcs needed)	3590283	•	•	•

Single installation hydraulic accessories	Code	GENUS PREMIUM EVO HP 45 - 65	GENUS PREMIUM EVO HP 85 - 100	GENUS PREMIUM EVO HP 115-150
Safety valve kit 3 bar	3590431	•		
	3590432		•	
	3590330			•
Shut off valve kit n. 2 Valves 1" F; n. 1 Gas valve 3/4" F; n. 4 Nipple 1" M/M; n. 1 Nipple 3/4" M/M.	3590433	•		
	3590434		•	
	3590335			•
Domestic hot water 3-way valve kit n. 1 T connection 1"; n. 1 Threaded pipe 1"; n. 1 Threaded pipe 1" M/M; n. 2 Double nipple 1"; n. 1 Diverter valve 1"; n. 1 Actuator; n. 1 tank probe.	3590436	•		
	3590437		•	
	3590438			•
header for 45-65 single installation n. 1 hydraulic separator; n. 2 double nipple 1" M/M	3580787	•		
header for 85-100-115-150 single installation n. 1 hydraulic separator; n. 2 double nipple 1" M/M	3590435		•	•
Boiler pump - 2 speed including connection cable	3590441		•	
High efficiency , full modulating pump including connection cable	3590442		•	•



12. Flue pipe systems

Genus Premium EVO HP single installation	Code	Genus Premium EVO HP 85-100-115-150 kW	Genus Premium HP 45-65 kW
Flue adapter $\varnothing 80/125 - \varnothing 80/80$ for twin pipe systems	3580784		●
Flue adapter, parallel to concentric - $\varnothing 100/100\text{mm}$ to $\varnothing 110/150\text{mm}$	12076281	●	
Flue adapter, parallel to concentric - $\varnothing 100/100\text{mm}$ to $\varnothing 100/150\text{mm}$	12076292	●	
Coaxial extension $\varnothing 110/150 - L 1000\text{mm}$	3590224	●	
Coaxial extension $\varnothing 110/150 - L 500\text{mm}$	3590225	●	
Coaxial elbow $90^\circ - \varnothing 110/150$	3590226	●	
Coaxial elbow $45^\circ - \varnothing 110/150$	3590227	●	
End-roof coaxial terminal $\varnothing 110/150$	3590228	●	
End-wall coaxial terminal $\varnothing 110/150$	3590229	●	
Starting exhaust adapter $\varnothing 100/110$ (it includes combustion-analysis port)	3590230	●	
Exhaust extension $\varnothing 110 - L 1000\text{mm}$	3590231	●	
Exhaust extension $\varnothing 110 - L 500\text{mm}$	3590232	●	
Exhaust elbow $90^\circ, \varnothing 110$	3590233	●	
Exhaust elbow $45^\circ, \varnothing 110$	3590234	●	
Exhaust end-roof terminal $\varnothing 110$	3590235	●	
Exhaust end-wall terminal $\varnothing 110$	3590236	●	
Adapter $\varnothing 100/110$, for air intake (it includes combustion-analysis port)	3590237	●	
Air intake extension L 1000 mm (aluminium)	3590238	●	
Air intake elbow $90^\circ, \varnothing 100$ (aluminium)	3590239	●	
Air intake elbow $45^\circ, \varnothing 100$ (aluminium)	3590240	●	



13. Cascade sizing

CASCADE SIZING

Sizing of the cascade systems should be done respecting the following guidelines.

Max. boilers in a system:

- LINE configurations can be made with a maximum of 6 boilers;
- B2B (back to back) can be made with a maximum of 8 boilers.

Cascade collector size:

- DN65 cascade collectors can be used up to a total output of 462kW;
- DN100 cascade collectors can be used up to a total output size of 1100kW;

Low loss header size:

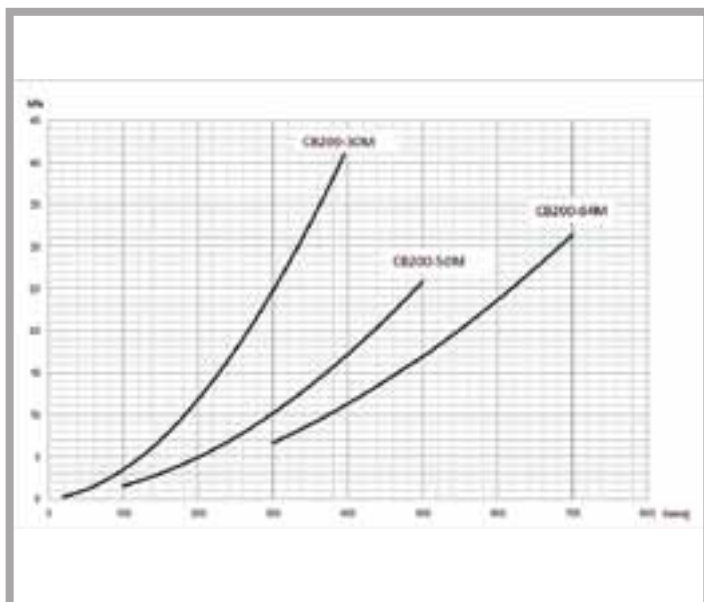
- DN65 low loss header can be used up to a total output of 462kW;
- DN100 low loss header can be used up to a total output size of 1100kW.

PLATE HEAT EXCHANGER SIZING

For DN65 cascade collector systems, a plate heat exchanger kit is available as alternative to a low loss header kit. Sizing of the plate heat exchanger should be done with respect to boiler output and required ΔT . Below table and graph show the relation between these parameters and can be used to select the correct plate heat exchanger kit.

NOTE

In case of not using the standard accessories as shown in this manual, then sizing of the different components should be done by the person/company responsible for the system design.

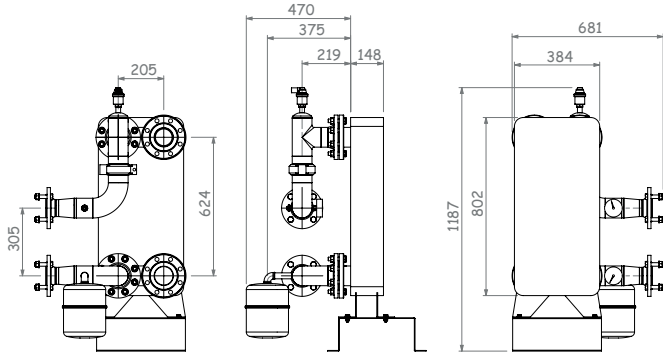


			0-250 kW	251-462 kW
Primary circuit	dT=20K	m3/h	10.8	19.9
Expansion vessel		L	4	8
Secondary circuit	dT=20K	header type	CB200-30M	CB200-50M
		m3/h kPa	10.8 9.0	19.9 12.6
	dT=15K	header type	1 + S2	ø 80/80
		m3/h kPa	14.3 20.0	26.5 21.3
	dT=10K	header type	CB200-30M	CB200-64M
		m3/h kPa	21.5 35.8	39.7 29.4

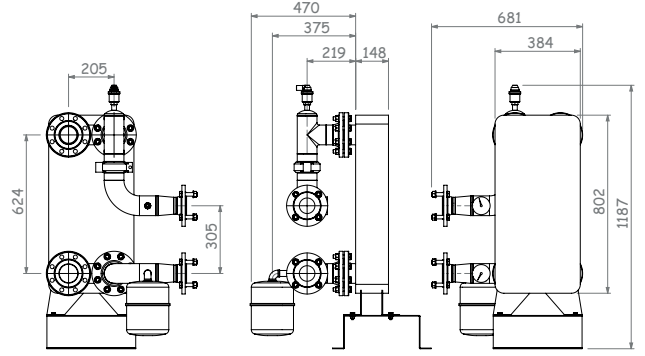
13. Cascade sizing

PLATE HEAT EXCHANGER SIZING

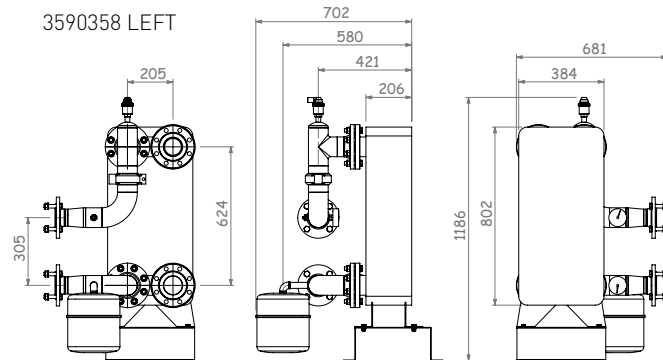
3590357 LEFT



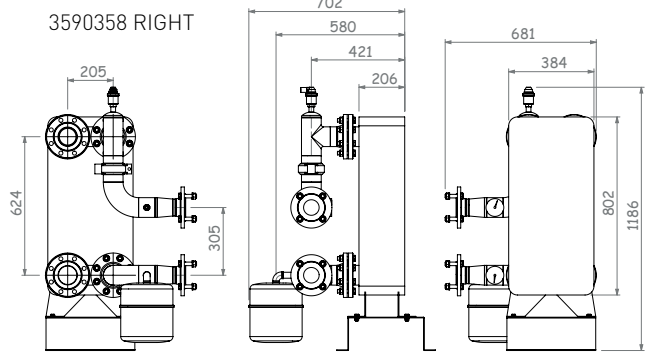
3590357 RIGHT



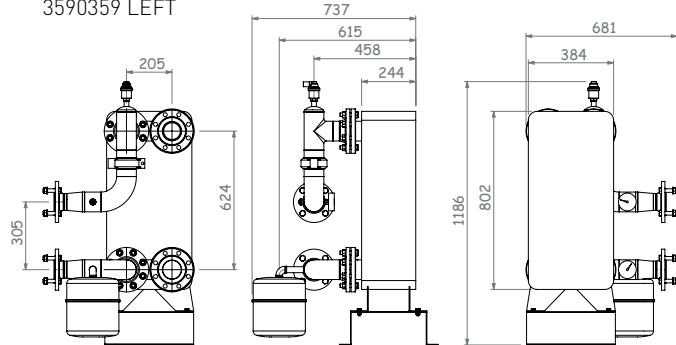
3590358 LEFT



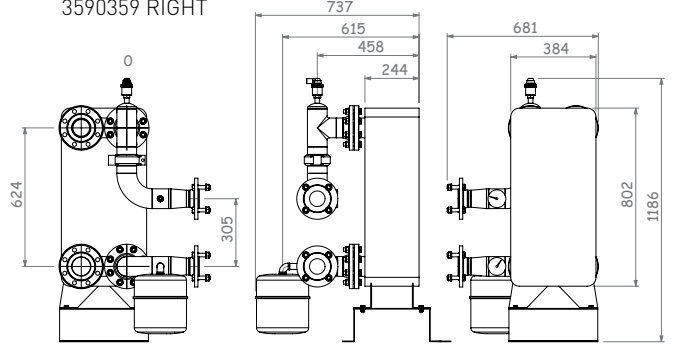
3590358 RIGHT



3590359 LEFT



3590359 RIGHT



The expansion vessel must be ordered separately

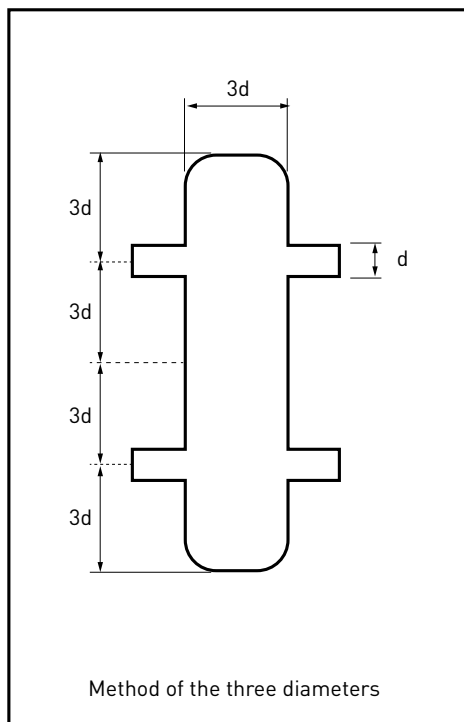
Dimensions in mm

13. Cascade sizing

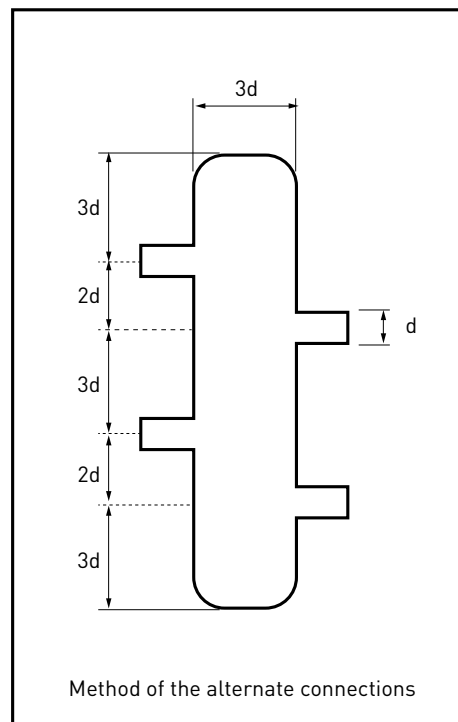
LOW LOSS HEADER SIZING

The low loss header has the aim to avoid the mutual interaction of pumps working for different circuits. That's the reason why the sizing should be very accurate: a wrong choice of the low loss header can lead to very high Δ pressure or Δ temperature due to mixing phenomena (the hot water flow can mix with the cold water return). If not considered, the phenomena can affect seriously the performances of radiators and radiant panels.

General Criteria



The first method can be used in case of flow speed up to 0,9 m/s. Considering this restriction, it's possible to ensure a very low pressure drop to the hydraulic connections, allowing the air venting, and avoiding the impurity sedimentation;

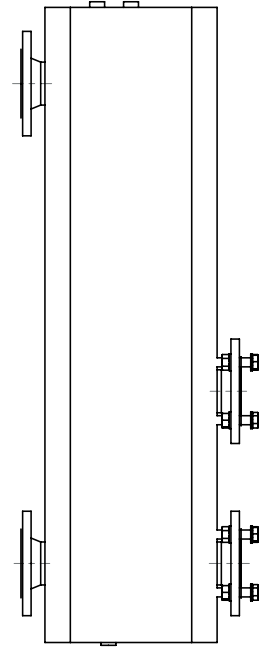
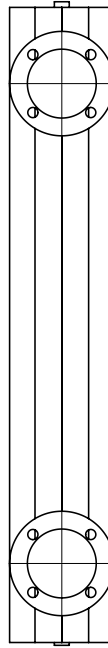
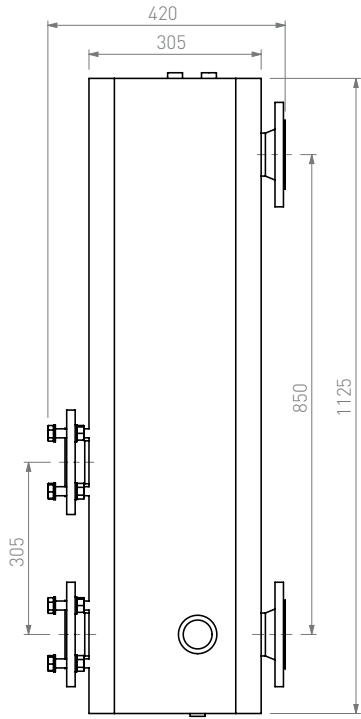


The second method can be used in case of flow speed up to 1,2 m/s. This approach allows higher speeds due to the configuration that reduces the risk of turbulence and double circulation.

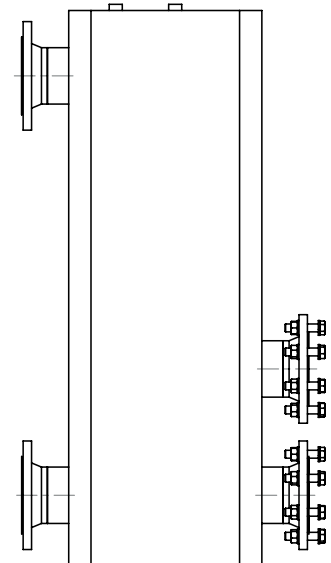
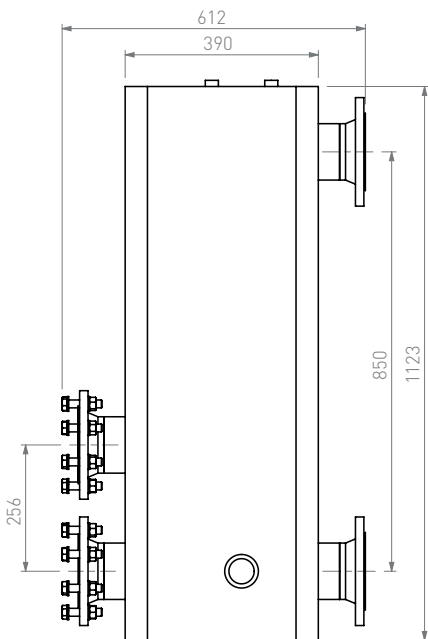
13. Cascade sizing

LOW LOSS HEADER SIZING

3590444








3590445



Dimensions in mm

13. Cascade sizing

CHOICE TABLE OF ACCESSORIES FOR WALL-MOUNTED LINE INSTALLATION

ACCESSORY KITS - CASCADE INSTALLATION		Cascade output power		DN65: 90-600 kW		DN100: 601-1200 kW	
		n° of boilers	45-65	85-150	45-65	85-150	
LINE - WALL MOUNTED Contents: - collector supports; - collectors water and gas & blind flanges; - boiler connection kits with shut-off valves, non-return valve and safety valve 3 bar; - cascade manager RVS63; - communication gateway for boilers - header sensor.	2 	Code	3318835	3318840	-	-	
	3 	Code	3318836	3318841	-	-	
	4 	Code	3318837	3318842	-	3318843	
	5 	Code	3318838	-	-	3318844	
	6 	Code	3318839	-	-	3318845	
	Insulation for collector		collector 2 boilers	Code	3590458		3590470
		collector 3 boilers	Code	3590459		3590471	
Insulation for connection kit (one for each boiler)		Code	3590460				
Low loss header (one for the whole system)		Code	3590444		3590445		
Insulation for low loss header (one for the whole system)		Code	3590456		3590457		
Plated heat exchanger kit incl. insulation (one for the whole system, in alternative to the low loss header)	$\Delta T = 15-20K$	kW	82-250	251-462	-		
		Type	CB200-30M	CB200-50M	-		
		Code	3590357	3590358	-		
	$\Delta T = 10K$	kW	82-250	251-462	-		
		Type	CB200-30M	CB200-64M	-		
		Code	3590357	3590359	-		
Expansion vessel (to be connected to the plate heat exchanger)		kW	0-250 kW	251-462 kW	-		
		L	4	8	-		
		Code	3590198	3590199	-		
Gas filter incl. connection material (one for the whole system)		Code	3590298		3590300		
Extension pipe for gas filter (one for the whole system)		Code	3590299		3590301		
Outdoor temperature sensor sensor QAC34 (excl. cable)		Code	171237				
Hot water temperature sensor sensor QAZ36 incl. 6m cable		Code	12081759				
Heating zone temperature sensor sensor QAD36 incl. 4m cable		Code	11002600				
Room controller (sensor + controls) Room unit QAA75		Code	12048253				

PUMP KITS

Pump kits (1 for each boiler required)		45-65kW	85-100kW	115-150kW
Boiler pump - 2 speed including connection cable	Type Code	RS 25/7-2 130 * ¹	RSG 25/8-2-C 3590441	-
Boiler pump - high efficiency modulating including connection cable	Type Code	-	UPMXL GEO 25-125 3590442	

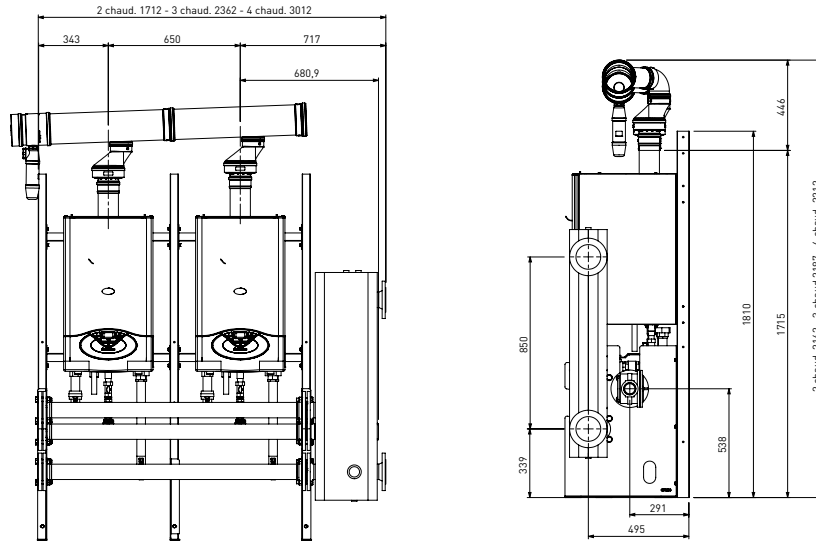
*¹ included in boiler

13. Cascade sizing

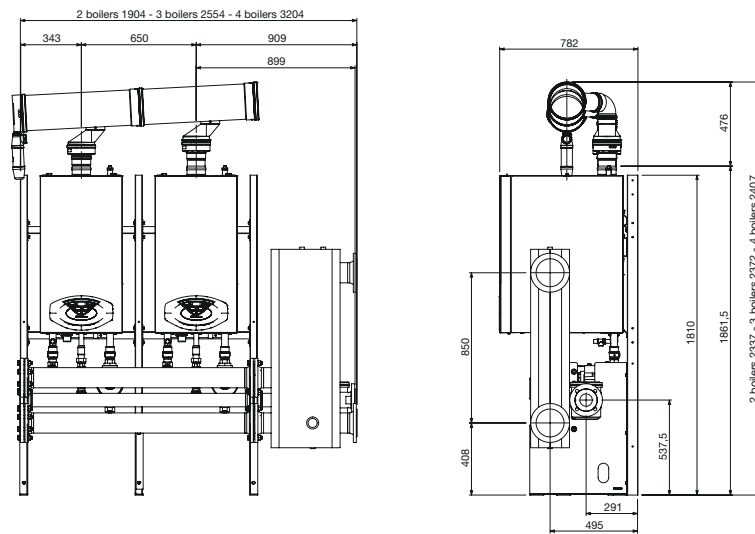
INSTALLATION SCHEME FOR LINE CASCADE BOILERS

The cascade configuration allows the installation from 2 up to 6 boilers. Regarding the sizes, please refer to the dimensions shown in the drawings, since the installation is modular.

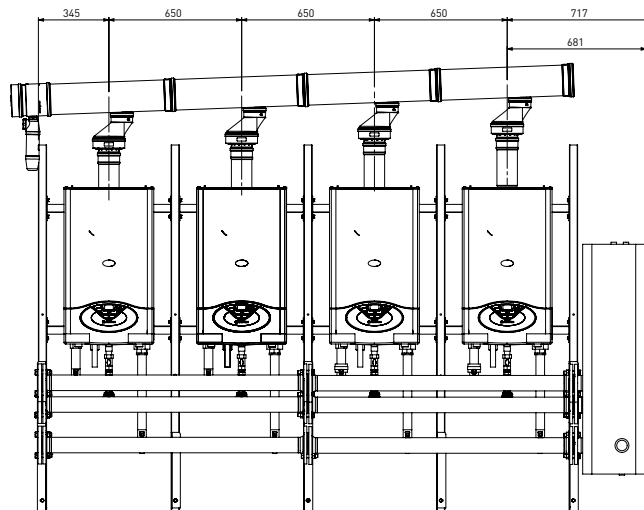
2 GENUS PREMIUM EVO HP
DN65



2 GENUS PREMIUM EVO HP
DN100








4 GENUS PREMIUM EVO HP
DN65



13. Cascade sizing

CHOICE TABLE OF ACCESSORIES FOR LINE INSTALLATION

ACCESSORY KITS - CASCADE INSTALLATION		Cascade output power		DN65: 90-600 kW		DN100: 601-1200 kW	
		n° of boilers	GHP EVO	45-65	85-150	45-65	85-150
LINE - FRAME Contents: - collector supports & boiler frame; - collectors water and gas & blind flanges; - boiler connection kits with shut-off valves, non-return valve and safety valve 3 bar; - cascade manager RVS63; - communication gateway for boilers - header sensor.		2 	Code	3318809	3318814	-	-
		3 	Code	3318810	3318815	-	-
		4 	Code	3318811	3318816	-	3318817
		5 	Code	3318812	-	-	3318818
		6 	Code	3318813	-	-	3318819
Insulation for collector		collector 2 boilers	Code	3590458		3590470	
		collector 3 boilers	Code	3590459		3590471	
Insulation for connection kit (one for each boiler)			Code	3590460			
Low loss header (one for the whole system)			Code	3590444		3590445	
Insulation for low loss header (one for the whole system)			Code	3590456		3590457	
Plated heat exchanger kit incl. insulation (one for the whole system, in alternative to the low loss header)		$\Delta T = 15-20K$	kW	82-250	251-462	-	
			Type	CB200-30M	CB200-50M	-	
			Code	3590357	3590358	-	
		$\Delta T = 10K$	kW	82-250	251-462	-	
			Type	CB200-30M	CB200-64M	-	
			Code	3590357	3590359	-	
Expansion vessel (to be connected to the plate heat exchanger)		kW	0-250 kW	251-462 kW	-		
		L	4	8	-		
		Code	3590198	3590199	-		
Gas filter incl. connection material (one for the whole system)			Code	3590298		3590300	
Extension pipe for gas filter (one for the whole system)			Code	3590299		3590301	
Outdoor temperature sensor sensor QAC34 (excl. cable)			Code	171237			
Hot water temperature sensor sensor QAZ36 incl. 6m cable			Code	12081759			
Heating zone temperature sensor sensor QAD36 incl. 4m cable			Code	11002600			
Room controller (sensor + controls) Room unit QAA75			Code	12048253			

PUMP KITS

Pump kits (1 for each boiler required!)		45-65kW	85-100kW	115-150kW
Boiler pump - 2 speed including connection cable	Type	RS 25/7-2 130	RSG 25/8-2-C	-
	Code	*1	3590441	
Boiler pump - high efficiency modulating including connection cable	Type	-	UPMXML GEO 25-125	
	Code		3590442	

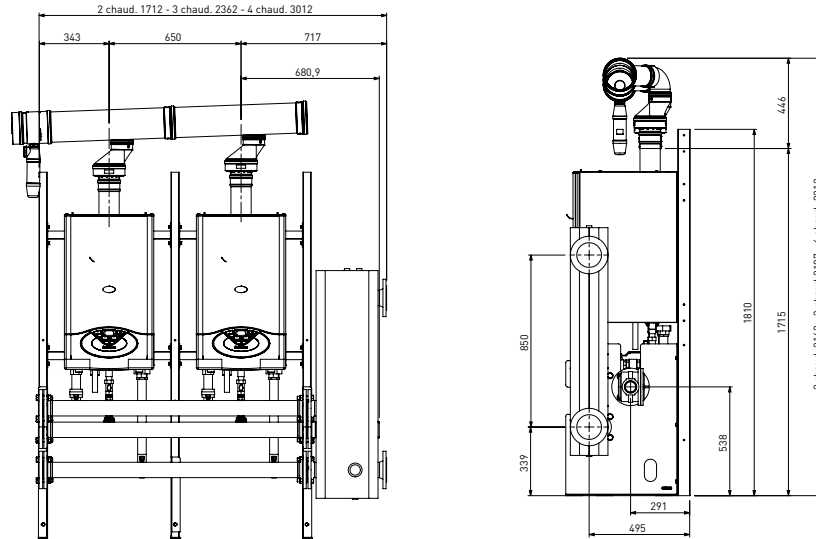
*1 included in boiler

13. Cascade sizing

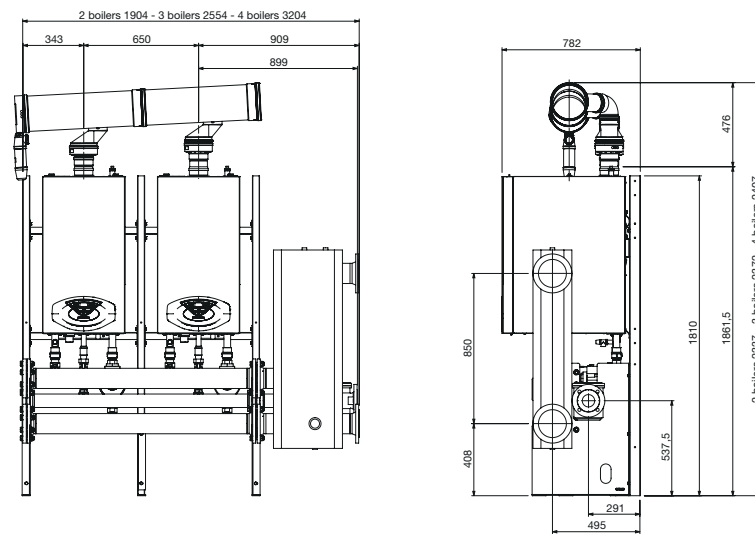
INSTALLATION SCHEME FOR LINE CASCADE BOILERS

The cascade configuration allows the installation from 2 up to 6 boilers. Regarding the sizes, please refer to the dimensions shown in the drawings, since the installation is modular.

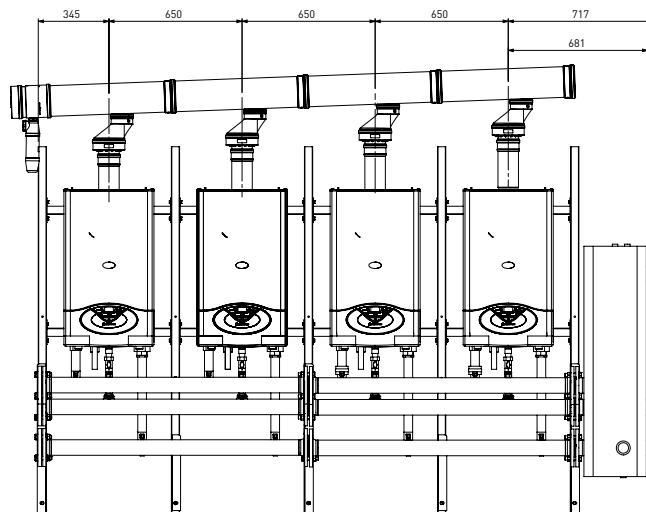
2 GENUS PREMIUM EVO HP
DN65



2 GENUS PREMIUM EVO HP
DN100



4 GENUS PREMIUM EVO HP
DN65



13. Cascade sizing

CHOICE TABLE OF ACCESSORIES FOR FRAME BACK TO BACK INSTALLATION

ACCESSORY KITS - CASCADE INSTALLATION	Cascade output power		DN65: 90-600 kW		DN100: 601-1200 kW		
	n° of boilers	GHP EVO	45-65	85-150	45-65	85-150	
BACK TO BACK - FRAME Contents: - collector supports & boiler frame; - collectors water and gas & blind flanges; - boiler connection kits with shut-off valves, non-return valve and safety valve 3 bar; - cascade manager RVS63; - communication gateway for boilers - header sensor.	3	Code	3318820	3318826	-	-	
	4	Code	3318821	3318827	-	3318829	
	5	Code	3318822	3318828	-	3318830	
	6	Code	3318823	-	-	3318831	
	7	Code	3318824	-	-	3318832	
	8	Code	3318825	-	-	3318833	
	Insulation for collector	collector 2 boilers	Code	3590458		3590470	
		collector 3 boilers	Code	3590459		3590471	
Insulation for connection kit (one for each boiler)		Code	3590460				
Low loss header (one for the whole system)		Code	3590444		3590445		
Insulation for low loss header (one for the whole system)		Code	3590456		3590457		
Plated heat exchanger kit incl. insulation (one for the whole system, in alternative to the low loss header)	ΔT = 15-20K	kW	82-250	251-462	-		
		Type	CB200-30M	CB200-50M	-		
		Code	3590357	3590358	-		
	ΔT = 10K	kW	82-250	251-462	-		
		Type	CB200-30M	CB200-64M	-		
		Code	3590357	3590359	-		
Expansione vessel (to be connected to the plate heat exchanger)	kW	0-250 kW	251-462 kW	-			
	L	4	8	-			
	Code	3590198	3590199	-			
Gas filter incl. connection material (one for the whole system)		Code	3590298		3590300		
Extension pipe for gas filter (one for the whole system)		Code	3590299		3590301		
Outdoor temperature sensor sensor QAC34 (excl. cable)		Code	171237				
Hot water temperature sensor sensor QAZ36 incl. 6m cable		Code	12081759				
Heating zone temperature sensor sensor QAD36 incl. 4m cable		Code	11002600				
Room controller (sensor + controls) Room unit QAA75		Code	12048253				

PUMP KITS

Pump kits		45-65kW	85-100kW	115-150kW
Boiler pump - 2 speed including connection cable	Type	RS 25/7-2 130	RSG 25/8-2-C	-
	Code	*1	3590441	
Boiler pump - high efficiency modulating including connection cable	Type	-	UPMXL GEO 25-125	
	Code		3590442	

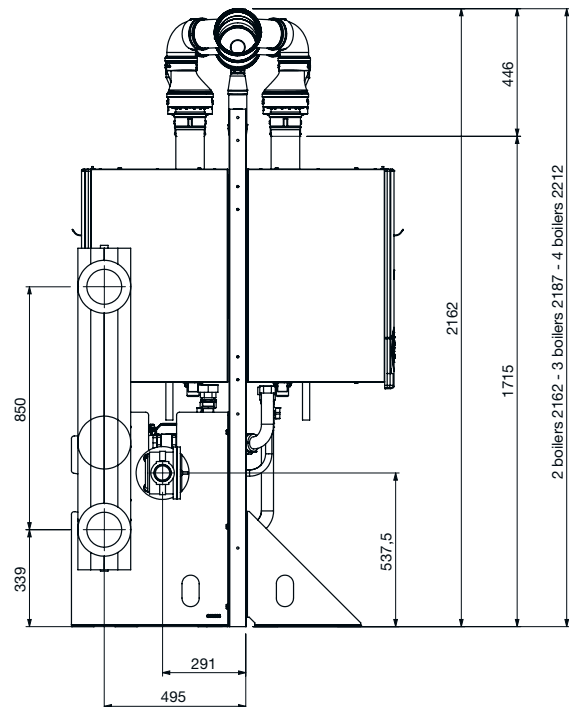
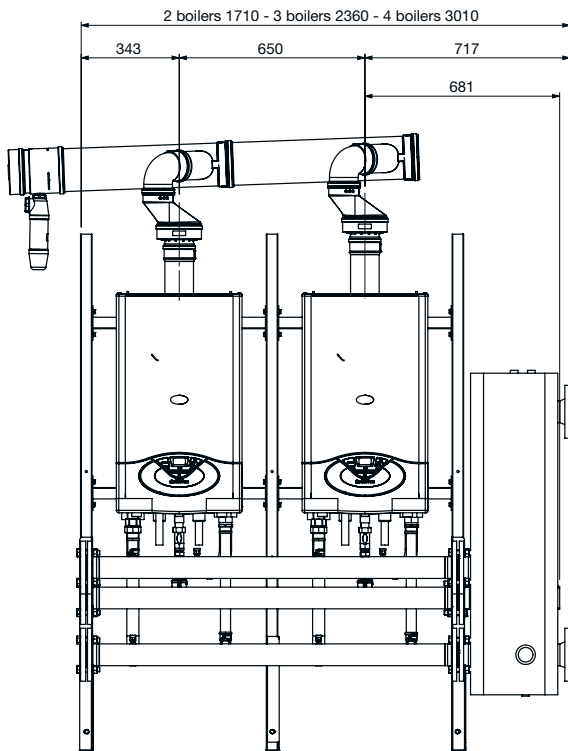
*1 included in boiler

13. Cascade sizing

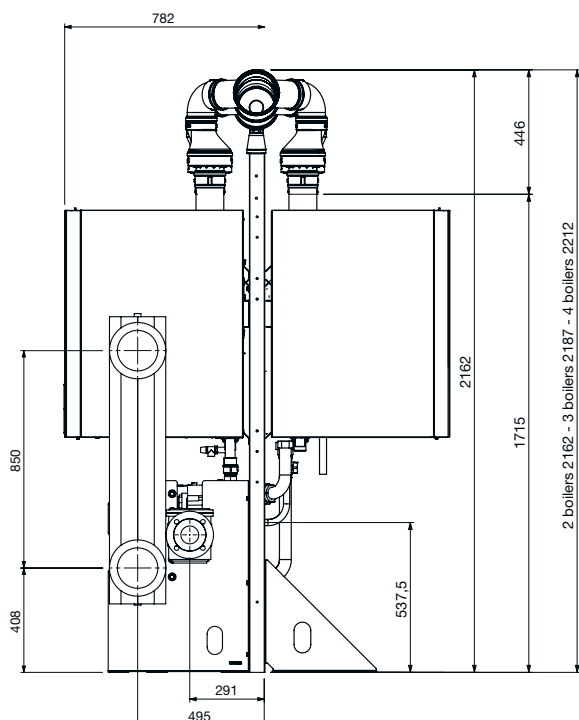
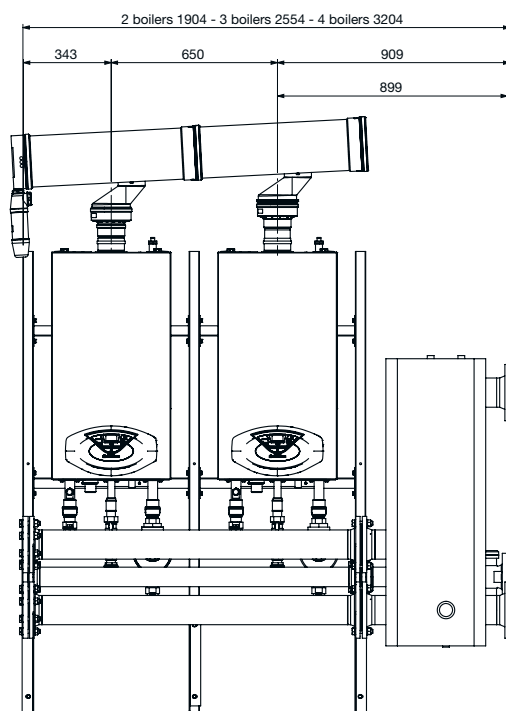
Installation scheme for back to back cascade boilers

The cascade configuration allows the installation from 3 up to 8 boilers. Regarding the sizes, please refer to the dimensions shown in the drawings, since the installation is modular.

2 GENUS PREMIUM EVO HP DN65



2 GENUS PREMIUM EVO HP DN100



14. Boiler Accessories for cascades

Line cascade installation father codes

	Code	Description	LINE - WALL MOUNTED										
			DN65						DN100				
			45-65kW			85-150kW			85-150kW				
			3318835	3318836	3318837	3318838	3318839	3318840	3318841	3318842	3318843	3318844	3318845
		n° of boilers	2	3	4	5	6	2	3	4	4	5	6
Installation accessories	3590472	COLLECTOR SUPPORT LEFT	1	1	2	2	2	1	1	2	2	2	2
	3590443	COLLECTOR SUPPORT RIGHT	1	1	1	1	1	1	1	1	1	1	1
Hydraulic accessories	3590253	COLLECTOR FLOW/RETURN DN65 2B LINE	2		4	2		2		4			
	3590254	COLLECTOR FLOW/RETURN DN65 3B LINE		2		2	4		2				
	3590255	COLLECTOR FLOW/RETURN DN100 2B LINE									4	2	
	3590256	COLLECTOR FLOW/RETURN DN100 3B LINE										2	4
	3590267	COLLECTOR GAS DN65 2B LINE / 4B B2B	1		2	1		1		2	2	1	
	3590268	COLLECTOR GAS DN65 3B LINE / 6B B2B		1		1	2		1			1	2
	3590269	FLANGE KIT DN65	1	1	1	1	1	1	1	1			
	3590270	FLANGE KIT DN100									1	1	1
	3590271	CONNECTION KIT 2 COLLECTORS DN65			1	1	1			1			
	3590272	CONNECTION KIT 2 COLLECTORS DN100									1	1	1
	3590446	CONNECTION KIT GHP 45-65 LINE	2	3	4	5	6						
3590447	CONNECTION KIT GHP 85-150 LINE						2	3	4	4	5	6	
Thermo-regulation accessories	3590475	RVS63 + WALL HUNG BOX	1	1	1	1	1	1	1	1	1	1	1
	12081759	HEADER/HOT WATER SENSOR QAZ36 CABLE 6M	1	1	1	1	1	1	1	1	1	1	1
	3318642	BUS INTERFACE THERMOWATT-SIEMENS	2	3	4	5	6	2	3	4	4	5	6

	Code	Description	LINE										
			DN65						DN100				
			45-65kW			85-150kW			85-150kW				
			3318809	3318810	3318811	3318812	3318813	3318814	3318815	3318816	3318817	3318818	3318819
		n° of boilers	2	3	4	5	6	2	3	4	4	5	6
Installation accessories	3590279	FRAME VERTICAL SUPPORT	3	4	5	6	7	3	4	5	5	6	7
	3590280	FRAME HORIZONTAL SUPPORT	2	3	4	5	6	2	3	4	4	5	6
	3590472	COLLECTOR SUPPORT LEFT	1	1	2	2	2	1	1	2	2	2	2
	3590443	COLLECTOR SUPPORT RIGHT	1	1	1	1	1	1	1	1	1	1	1
	3590283	FRAME FOOT	3	4	4	5	6	3	4	4	4	5	6
Hydraulic accessories	3590253	COLLECTOR FLOW/RETURN DN65 2B LINE	2		4	2		2		4			
	3590254	COLLECTOR FLOW/RETURN DN65 3B LINE		2		2	4		2				
	3590255	COLLECTOR FLOW/RETURN DN100 2B LINE									4	2	
	3590256	COLLECTOR FLOW/RETURN DN100 3B LINE										2	4
	3590267	COLLECTOR GAS DN65 2B LINE / 4B B2B	1		2	1		1		2	2	1	
	3590268	COLLECTOR GAS DN65 3B LINE / 6B B2B		1		1	2		1			1	2
	3590269	FLANGE KIT DN65	1	1	1	1	1	1	1	1			
	3590270	FLANGE KIT DN100									1	1	1
	3590271	CONNECTION KIT 2 COLLECTORS DN65			1	1	1			1			
	3590272	CONNECTION KIT 2 COLLECTORS DN100									1	1	1
	3590446	CONNECTION KIT GHP 45-65 LINE	2	3	4	5	6						
3590447	CONNECTION KIT GHP 85-150 LINE						2	3	4	4	5	6	
Thermo-regulation accessories	3590475	RVS63 + WALL HUNG BOX	1	1	1	1	1	1	1	1	1	1	1
	12081759	HEADER/HOT WATER SENSOR QAZ36 CABLE 6M	1	1	1	1	1	1	1	1	1	1	1
	3318642	BUS INTERFACE THERMOWATT-SIEMENS	2	3	4	5	6	2	3	4	4	5	6

14. Boiler Accessories for cascades

Back to back cascade installation father codes

	Code	Description	BACK TO BACK													
			DN65						DN100							
			45-65kW			85-150kW			85-150kW							
			3318820	3318821	3318822	3318823	3318824	3318825	3318826	3318827	3318828	3318829	3318830	3318831	3318832	3318833
		n° of boilers	3	4	5	6	7	8	3	4	5	4	5	6	7	8
Installation accessories	3590279	FRAME VERTICAL SUPPORT	3	3	4	4	5	5	3	3	4	3	4	4	5	5
	3590280	FRAME HORIZONTAL SUPPORT	2	2	3	3	4	4	2	2	3	2	3	3	4	4
	3590472	COLLECTOR SUPPORT LEFT	1	1	1	1	2	2	1	1	1	1	1	1	2	2
	3590443	COLLECTOR SUPPORT RIGHT	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	3590283	FRAME FOOT	4	4	6	6	7	7	4	4	6	4	6	6	7	7
Hydraulic accessories	3590257	COLLECTOR FLOW DN65 4B B2B	1	1			2	2	1	1						
	3590258	COLLECTOR RETURN DN65 4B B2B	1	1			2	2	1	1						
	3590259	COLLECTOR FLOW DN65 6B B2B			1	1					1					
	3590260	COLLECTOR RETURN DN65 6B B2B			1	1					1					
	3590261	COLLECTOR FLOW DN100 4B B2B										1			2	2
	3590262	COLLECTOR RETURN DN100 4B B2B										1			2	2
	3590263	COLLECTOR FLOW DN100 6B B2B											1	1		
	3590264	COLLECTOR RETURN DN100 6B B2B											1	1		
	3590267	COLLECTOR GAS DN65 2B LINE / 4B B2B	1	1			2	2	1	1		1			2	2
	3590268	COLLECTOR GAS DN65 3B LINE / 6B B2B			1	1					1		1	1		
	3590269	FLANGE KIT DN65	1	1	1	1	1	1	1	1	1					
	3590270	FLANGE KIT DN100										1	1	1	1	1
	3590271	CONNECTION KIT 2 COLLECTORS DN65					1	1								
	3590272	CONNECTION KIT 2 COLLECTORS DN100													1	1
	3590273	BLIND KIT FOR 1 BOILER	1		1		1		1		1		1		1	
	3590446	CONNECTION KIT GHP 45-65 LINE	2	2	3	3	4	4								
	3590447	CONNECTION KIT GHP 85-150 LINE							2	2	3	2	3	3	4	4
3590448	CONNECTION KIT GHP 45-65 B2B	1	2	2	3	3	4									
3590449	CONNECTION KIT GHP 85-150 B2B							1	2	2	2	2	3	3	4	
Thermo-regulation accessories	3590475	RVS63 + WALL HUNG BOX	1	1	1	1	1	1	1	1	1	1	1	1	1	
	12081759	HEADER/HOT WATER SENSOR QAZ36 CABLE 6M	1	1	1	1	1	1	1	1	1	1	1	1	1	
	3318642	BUS INTERFACE THERMOWATT-SIEMENS	3	4	5	6	7	8	3	4	5	4	5	6	7	8

14. Boiler Accessories for cascades

Hydraulic accessories for cascade installation	Code	GENUS PREMIUM EVO HP 45 - 65 - 85 - 100 - 115 - 150
Collector flow/return DN 65, for 2 boilers in line	3590253	see pag 34-35
Collector flow/return DN 65, for 3 boilers in line	3590254	see pag 34-35
Collector flow/return DN 100, for two boilers in line	3590255	see pag 34-35
Collector flow/return DN100 for 3 boilers in line	3590256	see pag 34-35
Collector flow DN65, for 4 boilers in back to back installation	3590257	see pag 34-35
Collector return DN65, for 4 boilers in back to back installation	3590258	see pag 34-35
Collector flow DN65, for 6 boilers in back to back installation	3590259	see pag 34-35
Collector return DN65, for 6 boilers in back to back installation	3590260	see pag 34-35
Collector flow DN100, for 4 boilers in back to back installation	3590261	see pag 34-35
Collector return DN100, for 4 boilers in back to back installation	3590262	see pag 34-35
Collector flow DN100, for 6 boilers in back to back installation	3590263	see pag 34-35
Collector return DN100, for 6 boilers in back to back installation	3590264	see pag 34-35
Gas collector DN65 for 2 boilers in line / 4 boilers in back to back installation	3590267	see pag 34-35
Gas collector DN65 for 3 boilers in line / 6 boilers in back to back installation	3590268	see pag 34-35



14. Boiler Accessories for cascades

Hydraulic accessories for cascade installation	Code	GENUS PREMIUM EVO HP 45 - 65	GENUS PREMIUM EVO HP 85 - 100	GENUS PREMIUM EVO HP 115-150
Flange kit DN65 for line and back to back cascade	3590269	•	•	•
Flange kit DN100 for line and back to back cascade	3590270		•	•
Connection kit 2 collectors DN65 (back to back and line cascade)	3590271	•		
Connection kit 2 collectors DN100 (back to back and line cascade)	3590272		•	•
Blind kit for 1 boiler	3590273	•	•	•
Gas filter incl. connection material, for line and back to back installation from 90 to 600 kW	3590298	•	•	•
Gas filter incl. connection material, for line and back to back installation from 601 to 1200 kW	3590300		•	•
Extension pipe for gas filter, for line and back to back installation from 90 to 600 kW	3590299	•	•	•
Extension pipe for gas filter, for line and back to back installation from 601 to 1200 kW	3590301		•	•
Low loss header DN 65	3590444	•		
Low loss header DN 100	3590445		•	•
Insulation for collector of 2 boilers DN 65	3590458	•		
Insulation for collector of 3 boilers DN 65	3590459	•		
Insulation for collector of 2 boilers DN 100	3590470		•	•
Insulation for collector of 3 boilers DN 100	3590471		•	•



14. Boiler Accessories for cascades

Hydraulic accessories for cascade installation	Code	GENUS PREMIUM EVO HP 45 - 65	GENUS PREMIUM EVO HP 85 - 100	GENUS PREMIUM EVO HP 115-150
CONNECTION KIT GHP 45-65 LINE	3590446	•		
CONNECTION KIT GHP 85-150 LINE	3590447		•	•
CONNECTION KIT GHP 45-65 B2B	3590448	•		
CONNECTION KIT GHP 85-150 B2B	3590449		•	•
Insulation for connection kit	3590460	•	•	•
Insulation for low loss header DN 65	3590456	•		
Insulation for low loss header DN 100	3590457		•	•
Plated heat exchanger kit incl. insulation , $\Delta T = 15-20K$, CB200-30M, from 90 to 300 kW	3590357	•	•	•
Plated heat exchanger kit incl. insulation , $\Delta T = 15-20K$, CB200-50M, from 301 to 600 kW	3590358	•	•	•
Plated heat exchanger kit incl. insulation , $\Delta T = 10K$, CB200-64M, from 301 to 600 kW	3590359	•	•	•
4 liter expansione vessel (to be connected to the plate heat exchanger)	3590198	•		
8 liter Expansione vessel (to be connected to the plate heat exchanger)	3590199	•		
Condensate neutralisation box DN1 (without pump) - for boilers 0 - 75 kW - Dimensions 300x200x220 (LxPxH mm) - Granulate included	3590027	•		
Condensate neutralisation box DN2 (without pump) - for boilers 76 - 450 kW - Granulate Included 20 kg - Dimensions 420x300x240 (LxPxH mm)	3580794		•	•
Condensate neutralisation box HN1.5 (incl. pump) - for boilers 0 - 280 kW - Pump flow rate 12 l/min - Residual head 6 m - Granulate Included 10 kg - Dimensions 410x300x290 (LxPxH mm);	3580796	•	•	•
Granulate refill for neutralisation box 10kg	3590033	•	•	•



15. Exhausts for cascades

FLUE SYSTEM - LINE

The flue system should always be mounted with a light angle of minimum 3° , in order to enable a proper discharge of condensate from the flue system. To get this angle, the vertical section B should be adapted to the proper configuration from the boiler to the collector.

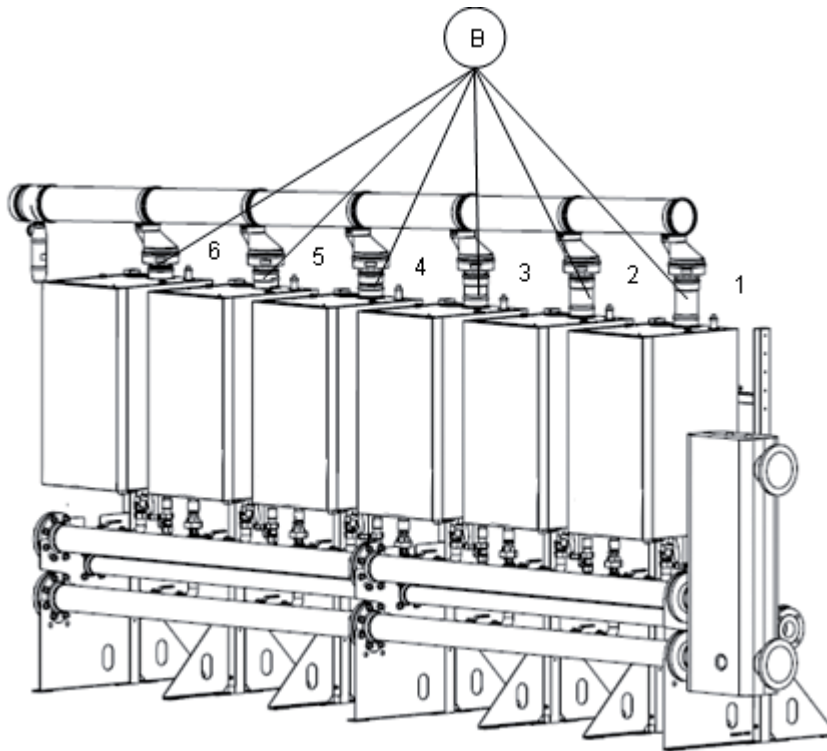
Below the table gives the pipe lengths for the vertical section B for each boiler. The vertical section, in the standard delivery, has a length of 250mm and needs to be shortened accordingly.

NOTE:

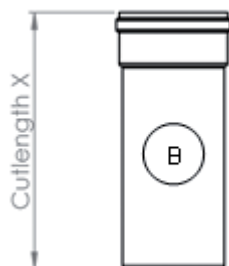
For boiler type 45, an additional adapter from 80mm to 100mm is required for each boiler.

NOTE:

The mechanical non-return valve C should always be mounted in vertical position.



Boiler no.	Length X [mm]
1	250
2	216
3	182
4	148
5	114
6	80



15. Exhausts for cascades

FLUE SYSTEM - BACK TO BACK

The flue system should always be mounted with a light angle of minimum 3°, in order to enable a proper discharge of condensate from the flue system. To get this angle, the vertical section B should be adapted to the proper configuration from the boiler to the collector.

Below the table gives the pipe lengths for the vertical section B for each boiler. The vertical section, in the standard delivery, has a length of 250mm and needs to be shortened accordingly.

NOTE:

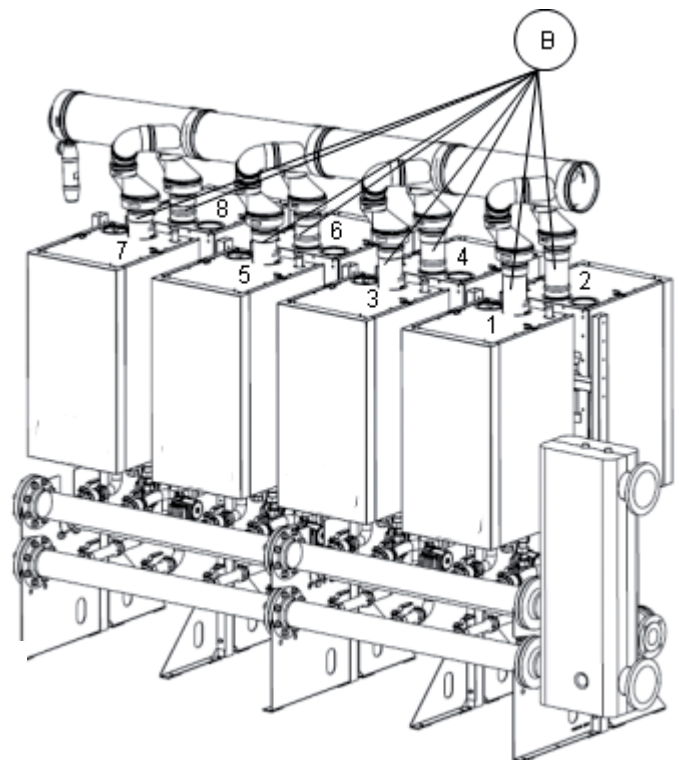
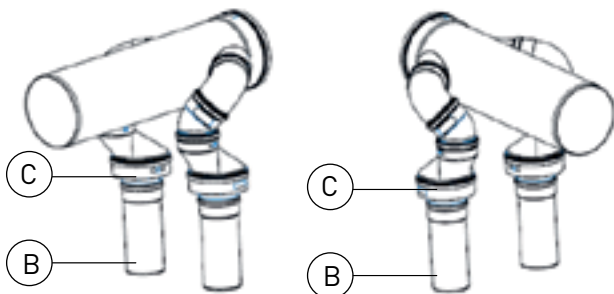
For boiler type 45, an additional adapter from 80mm to 100mm is required for each boiler.

NOTE:

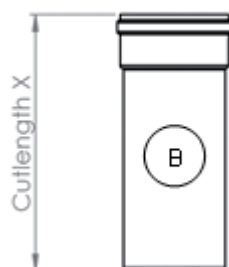
The mechanical non-return valve C should always be mounted in vertical position.

Front view

Back view



Boiler no.	Length X [mm]
1+2	250
3+4	216
5+6	182
7+8	148



15. Exhausts for cascades

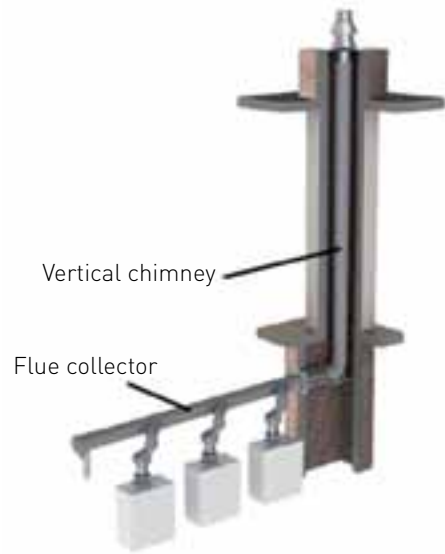
Exhaust configuration

CHIMNEY SELECTION (diameter for required output):

Max. output [kW] by diameter (collector/chimney)			
Diameter	Chimney height		
	5m	15m	30m
150/150mm	327	313	288
150/200mm	450	412	370
200/200mm	530	500	482
200/250mm	697	675	646
200/300mm	855	835	797

Calculation based on 3m horizontal flue in boiler room

The cascade flue systems are available with a diameter of 150 and 200 mm. Horizontal collector's and vertical chimney's diameters depend on the total installed power, and on vertical chimney length. The table shows the maximum power, in accordance with the vertical length of the chimney.



The informations are indicative and the proper sizing of an exhaust system depends on the chimney configuration.

Flue system composition		DN150										
		LINE					BACK 2 BACK					
	boilers	2	3	4	5	6	3	4	5	6	7	8
Cascade flue kit basic LINE	3590461	2	3	4	5	6	1		1		1	
Cascade flue kit basic BACK 2 BACK	3590462	-	-	-	-	-	1	2	2	3	3	4
Condensate trap + syphon + cap	3590463	1	1	1	1	1	1	1	1	1	1	1
Adapter 80 to 100mm for 45-65kW boiler	3590467	2*	3*	4*	5*	6*	3*	4*	5*	6*	7*	8*

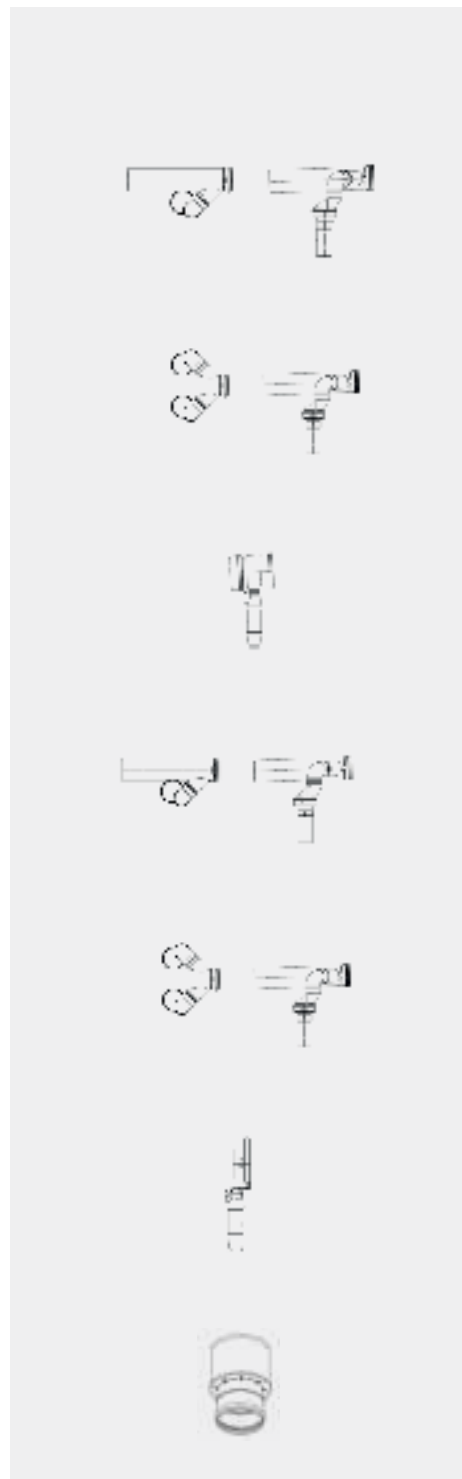
* Only in case of 45-65kW boilers

Flue system composition		DN200										
		LINE					BACK 2 BACK					
	boilers	2	3	4	5	6	3	4	5	6	7	8
Cascade flue kit basic LINE	3590464	2	3	4	5	6	1		1		1	
Cascade flue kit basic BACK 2 BACK	3590465	-	-	-	-	-	1	2	2	3	3	4
Condensate trap + syphon + cap	3590466	1	1	1	1	1	1	1	1	1	1	1
Adapter 80 to 100mm for 45-65kW boiler	3590467	2*	3*	4*	5*	6*	3*	4*	5*	6*	7*	8*

* Only in case of 45-65kW boilers

15. Exhausts for cascades

Genus Premium EVO HP cascade installation	Code	Genus Premium HP 45-65-85-100-110-150 kW
Cascade flue kit basic LINE DN 150	3590461	see pag. 41
Cascade flue kit basic BACK 2 BACK DN 150	3590462	see pag. 41
Condensate trap, syphon, cap DN 150	3590463	see pag. 41
Cascade flue kit basic LINE DN 200	3590464	see pag. 41
Cascade flue kit basic BACK 2 BACK DN 200	3590465	see pag. 41
Condensate trap, syphon, cap DN 200	3590466	see pag. 41
ADAPTER FOR CONNECTION GHP 45-65	3590467	see pag. 41



16. Cascade Management

Thermoregulation accessories for cascade installation	Code	GENUS PREMIUM EVO HP
Bus Interface for the connection boiler-cascade manager RVS63 It is used to connect the cascade manager with the boiler (It is necessary one CoCo MTS for every boiler). With the micro-switch of the CoCo MTS it is possible to assign the identification number to the boiler.	3318642	•
Cascade Manager RVS63 + wall hung installation box (DE-EN-FR-ES-CZ-SLO-TK-PL-RU-HU) It is the climatic regulator and boilers cascade manager. -to rule three zones (2 mixed zones + 1 direct zone) and one DHW tank -the regulation of a maximum series of 8 boilers in cascade -to provide the ignition priority rotation of the boilers (for a uniform usage) -the division of the power supplied on more generators -thermoregulation management -management of a sanitary circuit With the use of a bus it is possible to connect various peripheral.	3590475	•
External probe (exc. cable) QAC 34.101	171237	•
Room sensor (sensor + controls) QAA75.610/101 With the Remote control QAA75, it is allowed the complete management of the zone where it is installed and the visualization of the anomaly.	12048253	•
Motorized mixing valve 3/4" - it's necessary in case of two zone systems with different temperatures, or in case of integration with an external tank for the production of DHW - the management is carried out by the cascade manager	3318145	•
Motorized mixing valve 1 e 1/4" - it's necessary in case of two zone systems with different temperatures, or in case of integration with an external tank for the production of DHW - the management is carried out by the cascade manager	3318147	•
Flow sensor QAZ36 (6 mt cable) - it's needed for the detection of the temperature on the header, and on the flow of the heating circuit	12081759	•
Tank probe		•
Sensor QAD36 incl. 4m cable Heating zone temperature sensor	11002600	•



16. Cascade Management

PERIPHERALS CONNECTION

Connecting boilers to the control unit
 The cascade interface PCB is used to connect the RVS control unit to the boilers. One cascade interface PCB must be used for every boiler of the cascade (e.g. 3 boilers with 3 interfaces).

- A. boiler connection via BridgeNet BUS
- B. RVS63 connection via LPB
- C. LED
- D. LED
- E. micro-switches

Boiler address allocation

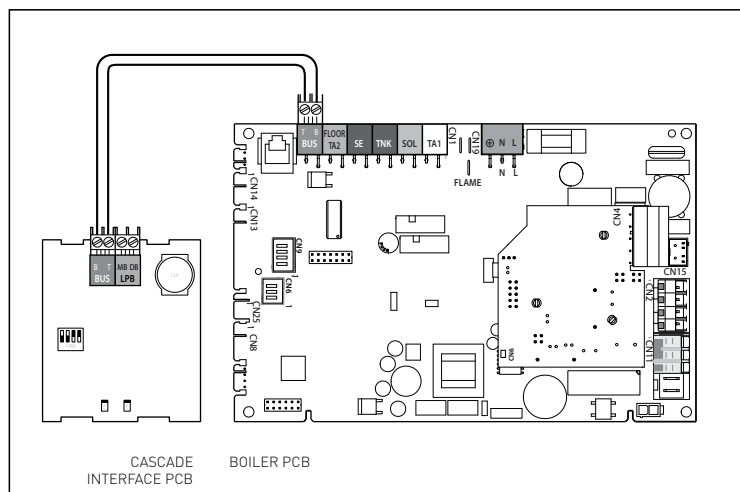
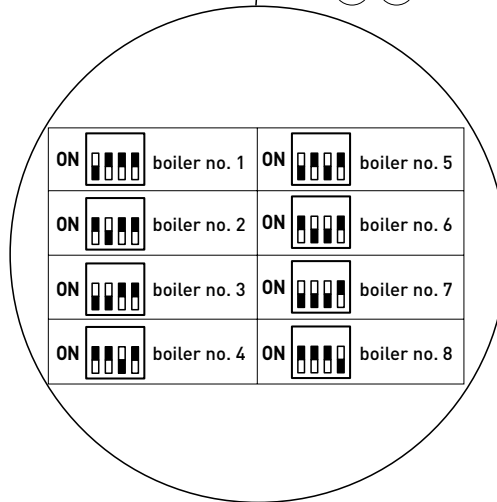
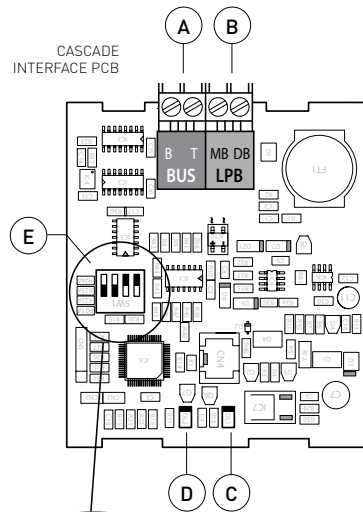
Every boiler communicates with the control unit through the cascade interface PCB. In the cascade operation (maximum 8 elements) it is necessary to allocate an LPB (Siemens BUS) address to each boiler. For the cascade to function properly, a single address must be allocated to each boiler through the corresponding configuration of the "E" micro-switches on the interface. Refer to the adjacent figure for setting the addresses.

Diagnostics

- LEDs C and D OFF
 cascade interface not connected
- LED C ON
 cascade interface powered
- LED D flashing
 LPB communication present
- LED D OFF
 LPB communication absent

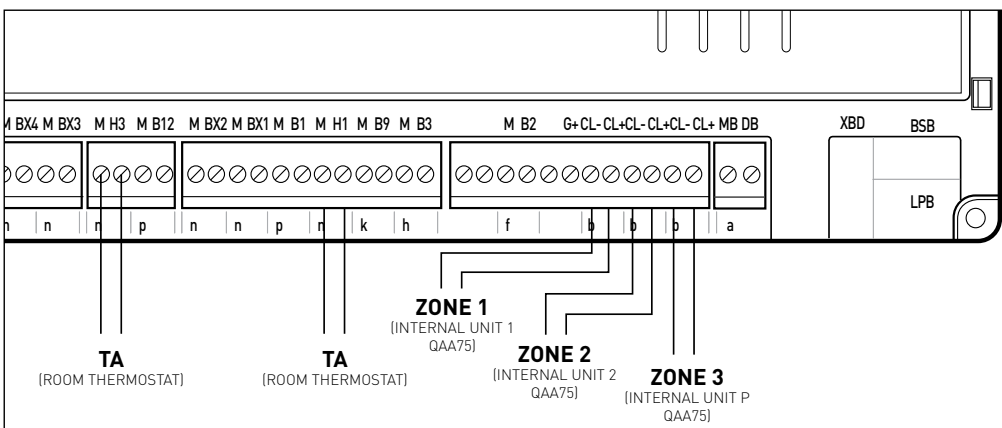
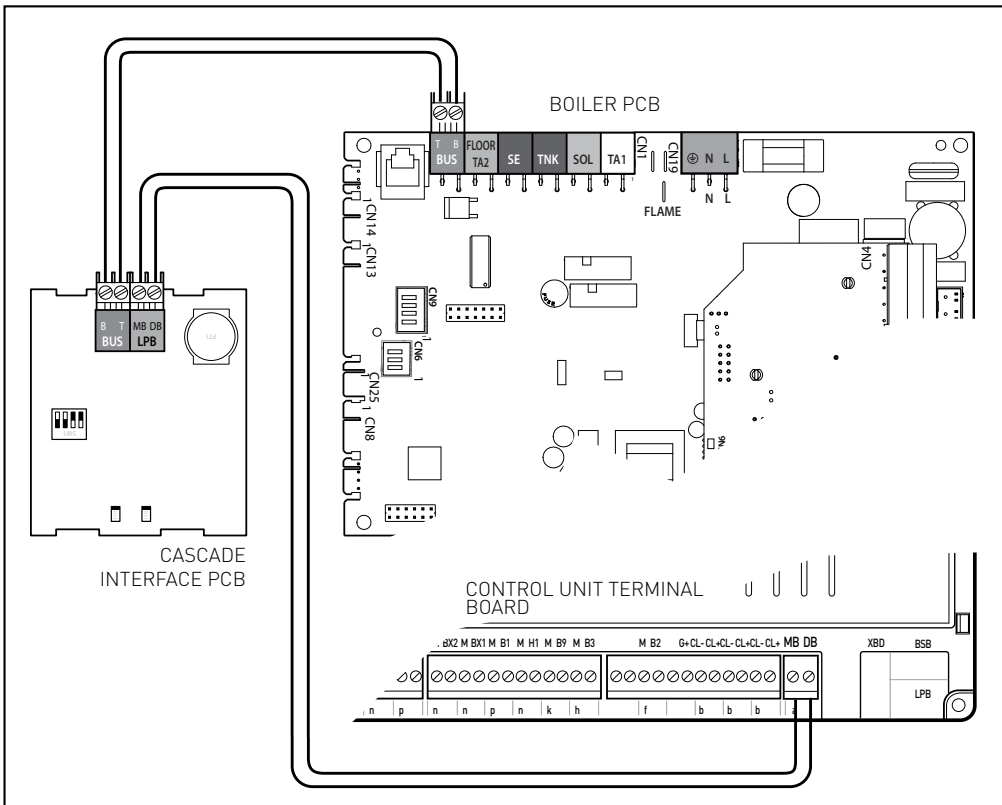
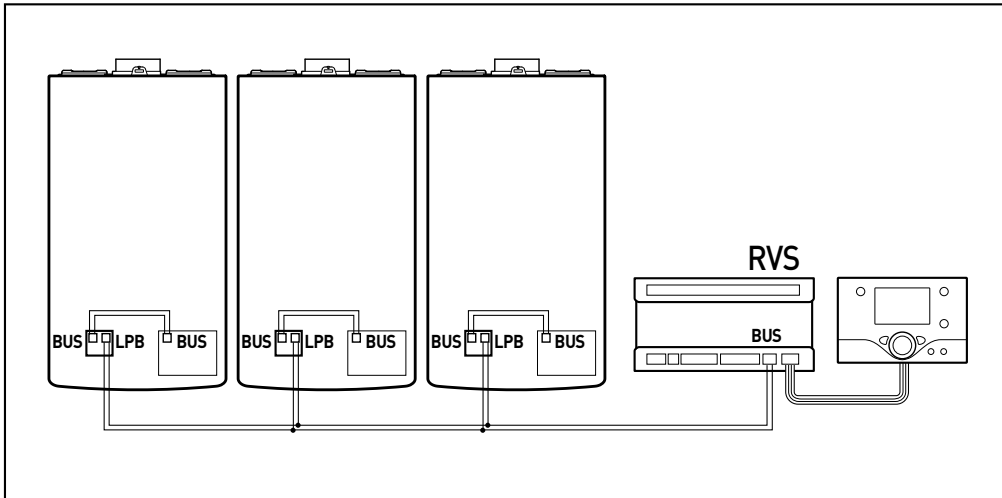
Connecting the cascade interface PCB to the boiler

The cascade interface PCB is housed in the boiler's instrument compartment. Each PCB is connected to its boiler through the Bridgenet BUS connection. All cascade interface PCBs are connected in parallel to the RVS control unit through LPB.



16. Cascade Management

PERIPHERALS CONNECTION



16. Cascade Management

CASCADE MANAGER RVS63 - PRODUCT DESCRIPTION

Buttons

- 1. DHW operating mode button**
For activating domestic hot water production (bar on the display beneath the tap symbol)
- 2. Heating circuit operating mode button**
For setting 4 different heating operating modes:
 - automatic clock-based: automatic operation based on time schedule day 24 hours: heating with comfort set-point
 - night 24 hours: heating with reduced set-point
 - anti-freeze mode: heating disengaged, anti-freeze function activated.
- 3. Information button**
For consulting information without affecting temperature control, heating/DHW operating status, error signals
- 5. Room temperature control knob**
For adjusting the room temperature
For selecting and modifying settings during programming.
- 4. ESC button (4)**
- 6. Confirm button (OK)**
Both buttons are used together with the - + knob for programming and configuring the control unit.
Pressing ESC allows for accessing the upper level each time; the modified values are not restored.
For skipping to the next control level or saving modified data, press the OK button.

- 7. Manual operation button**
Pressing the button engages the manual operating mode; all pumps function, the mixing valve is no longer controlled and the burner is set to 60°C (the screwdriver symbol appears on the display).
- 8. Chimney sweep function button**
This button has no function.

Display

- Heating with comfort set-point
- Heating with reduced set-point
- Heating with Frost protection setpoint
- Process running - wait
- Burner in operation
- Error signals
- INFO** Information level activated
- PROG** Programming activated
- ECO** Heating temporarily off; ECO function active
- Holiday function active
- 1** **2** Heating circuit indicator
- Manual mode
- No.** Command line number (parameter number)

Basic visualisation

Press the OK button once.

- Turn the knob and select the desired menu
- Confirm with the OK button
- Turn the knob and set the desired value
- Confirm with the OK button
- Press ESC to return to the basic visualisation

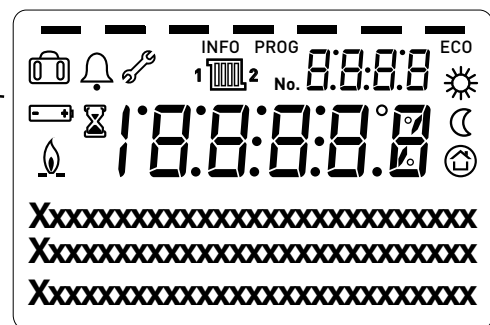
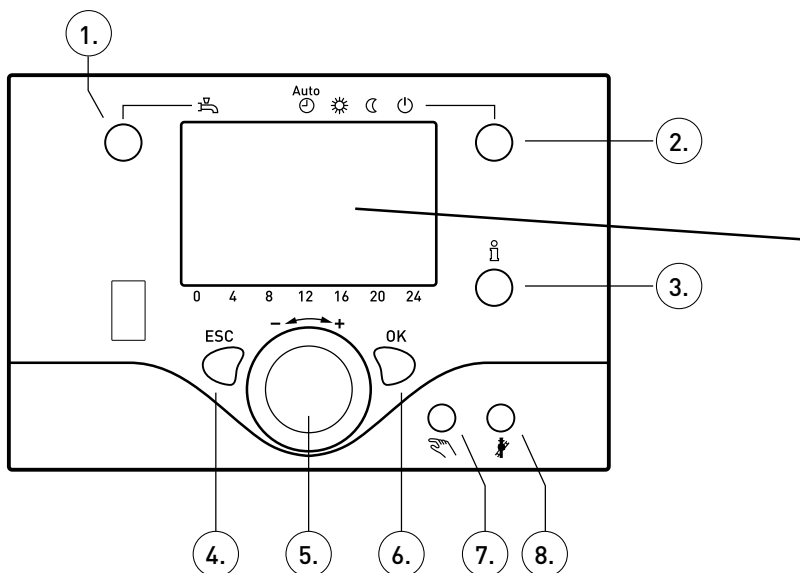
Technical Area visualisation

press the OK button once
press the INFO button
until the menu list appears

- Turn the knob and select the desired menu
- Confirm with the OK button

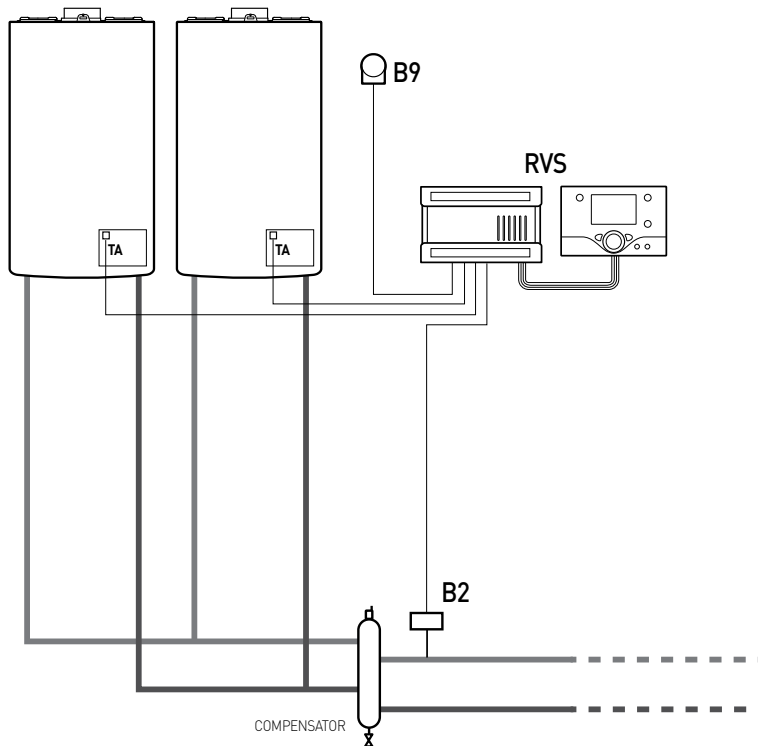
- Enduser
- Commissioning
- Engineer
- OEM (not configurable)

- Turn the knob and select the desired parameter
- Confirm with the OK button
- Turn the knob and set the desired value
- Confirm with the OK button
- Press ESC to return to the basic visualisation

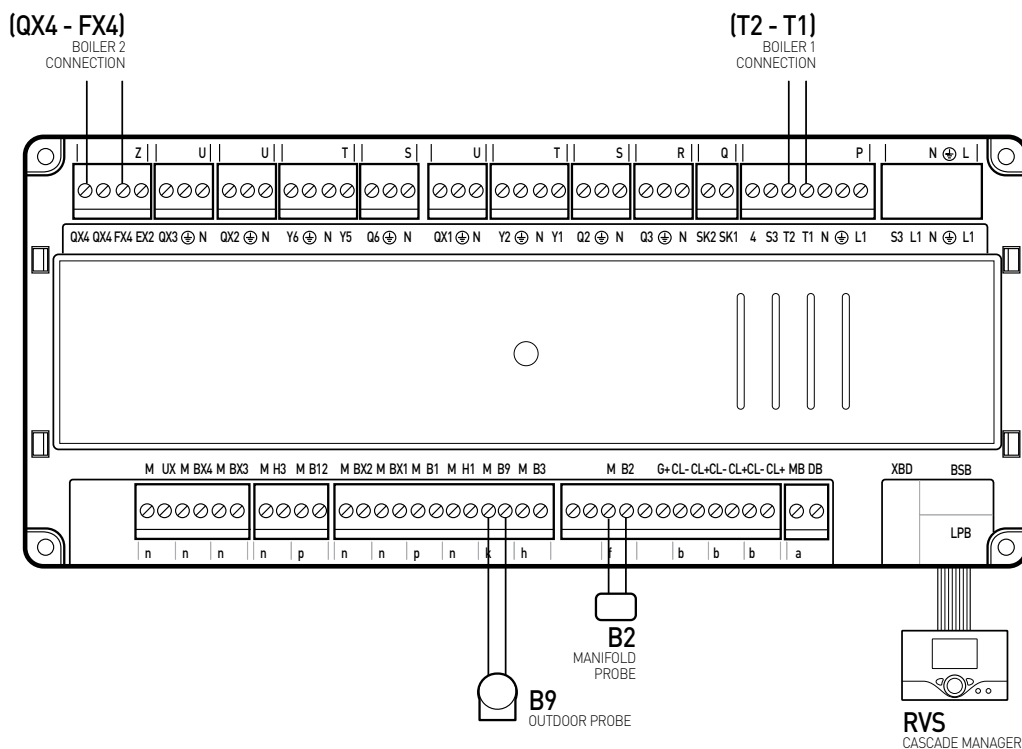


16. Cascade Management

GENERIC BOILERS DIAGRAM

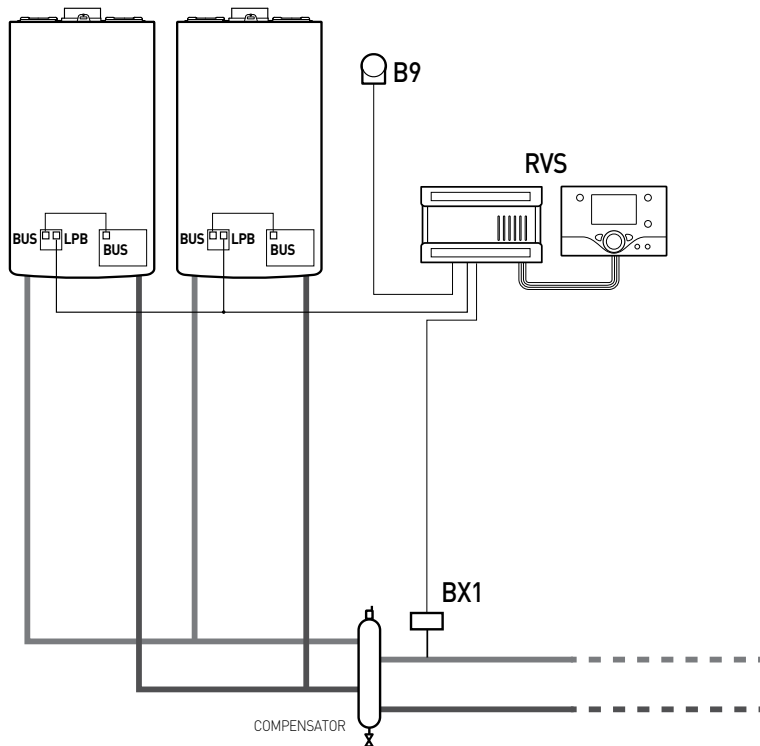


	MENU	PARAMETER	DESCRIPTION	VALUE
Engineer	Configuration	5770	Source type	2x1 cascade
Engineer	Configuration	5894	Relay output QX4	Heat request K27
Engineer	Configuration	5950	Function input H1	Optg mode changeover HC1

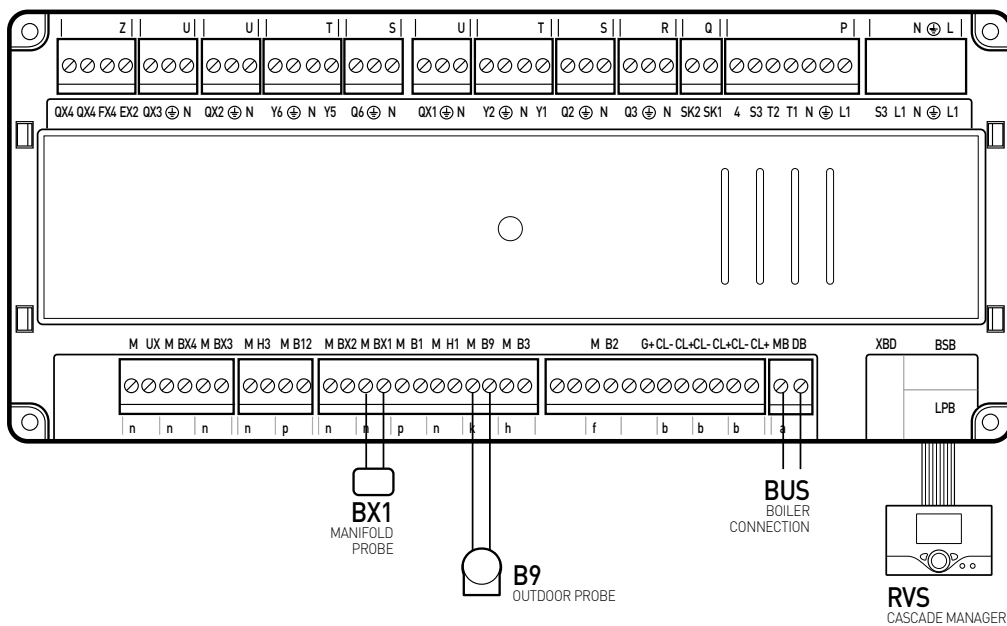


16. Cascade Management

BRIDGENET BUS BOILERS DIAGRAM

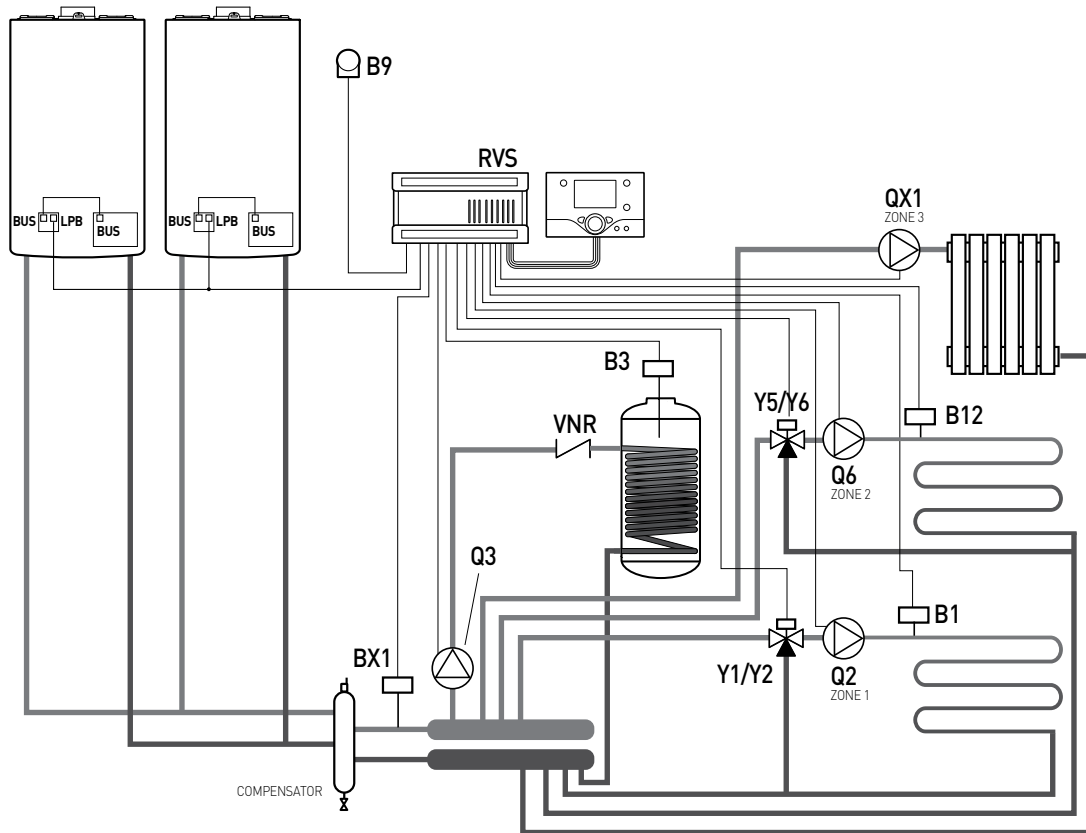


	MENU	PARAMETER	DESCRIPTION	VALUE
Engineer	Configuration	5950	Function input H1	Optg mode changeover HC1

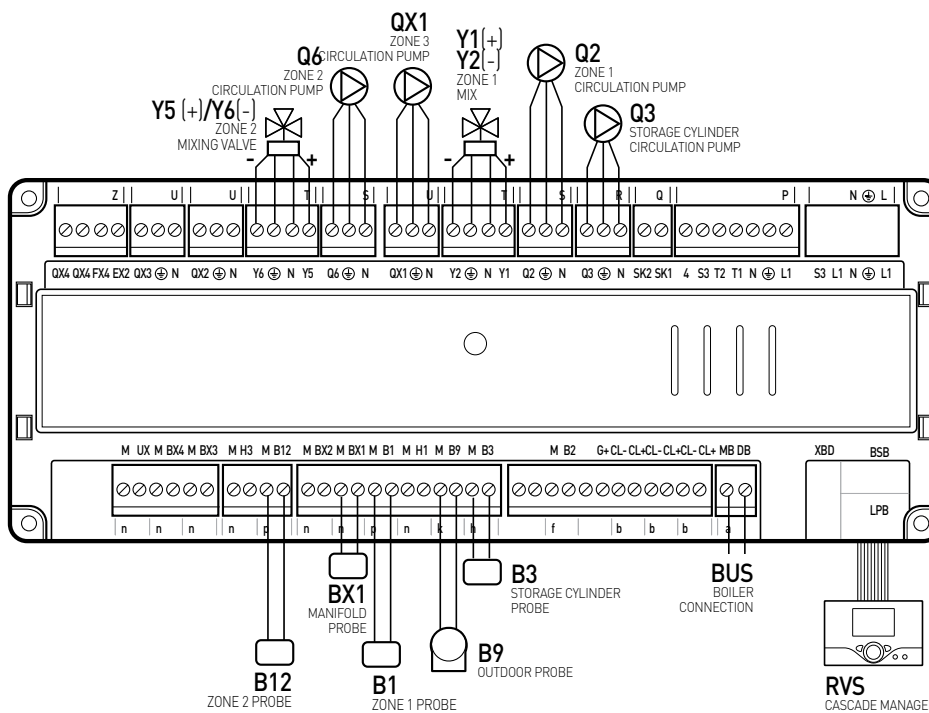


16. Cascade Management

BRIDGENET BUS BOILER DIAGRAM 1 DIRECT ZONE, 2 LOW TEMPERATURE ZONES AND DOMESTIC HOT WATER STORAGE CYLINDER

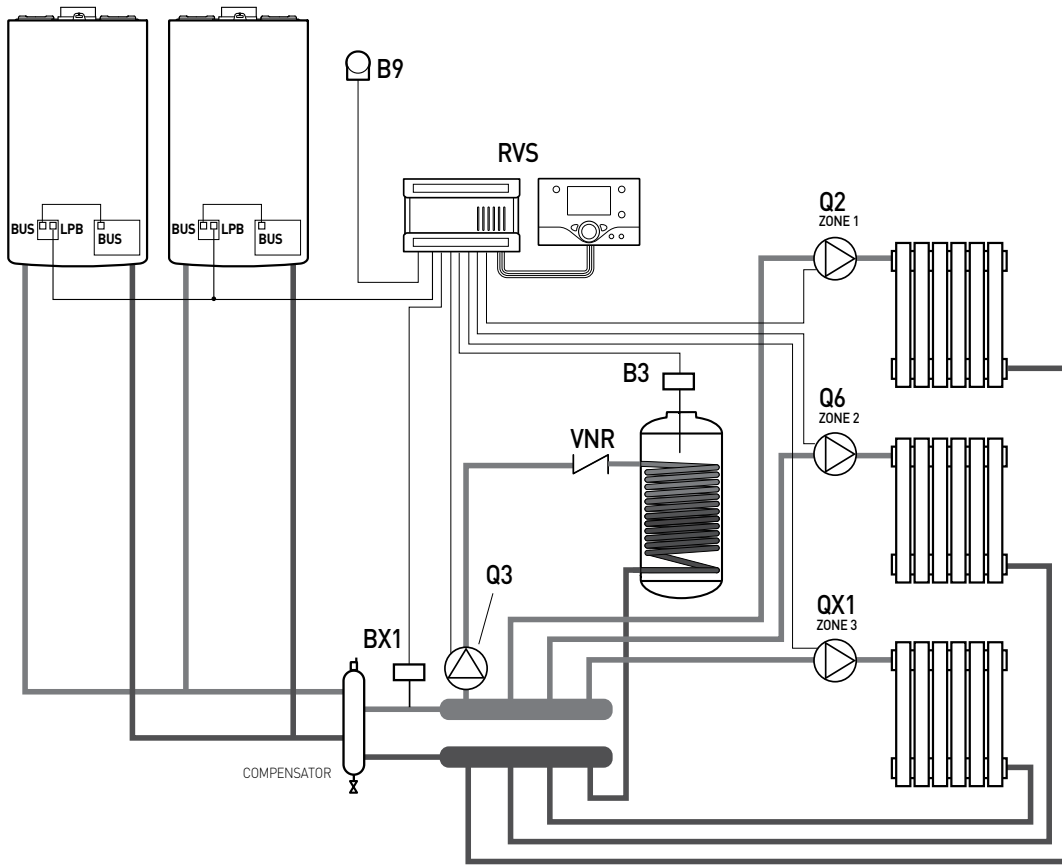


	MENU	PARAMETER	DESCRIPTION	VALUE
Engineer	Configuration	5715	Heating circuit 2 (zone 2 activation)	On
Engineer	Configuration	5890	Relay output QX1 (activation of zone 3 management)	Heat circuit pump HCP Q20

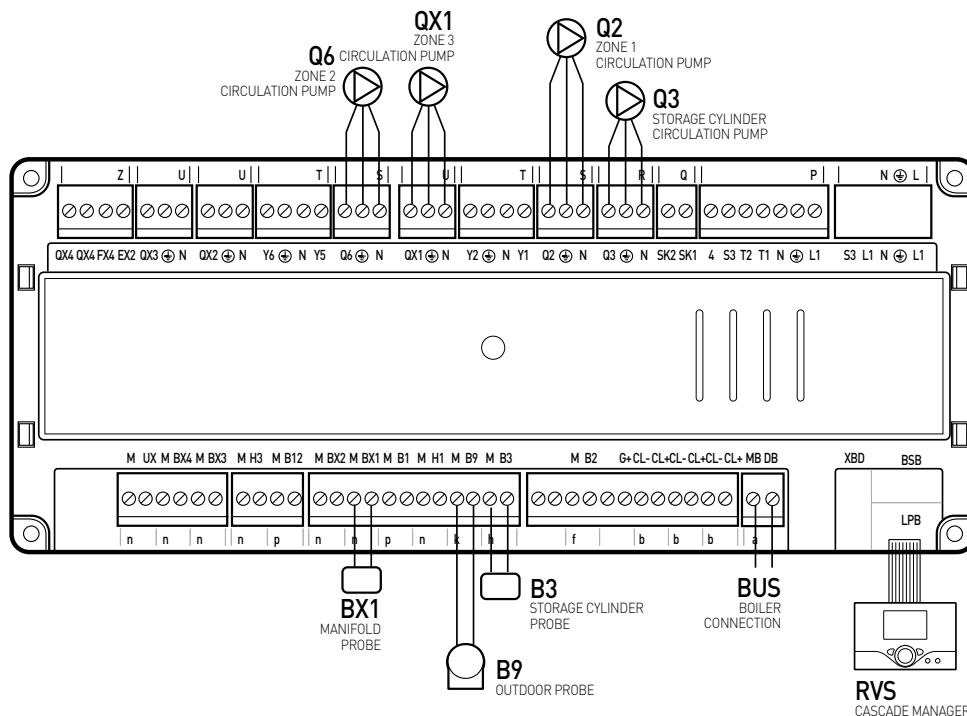


16. Cascade Management

BRIDGENET BUS BOILER DIAGRAM 3 DIRECT ZONES AND DOMESTIC HOT WATER STORAGE CYLINDER

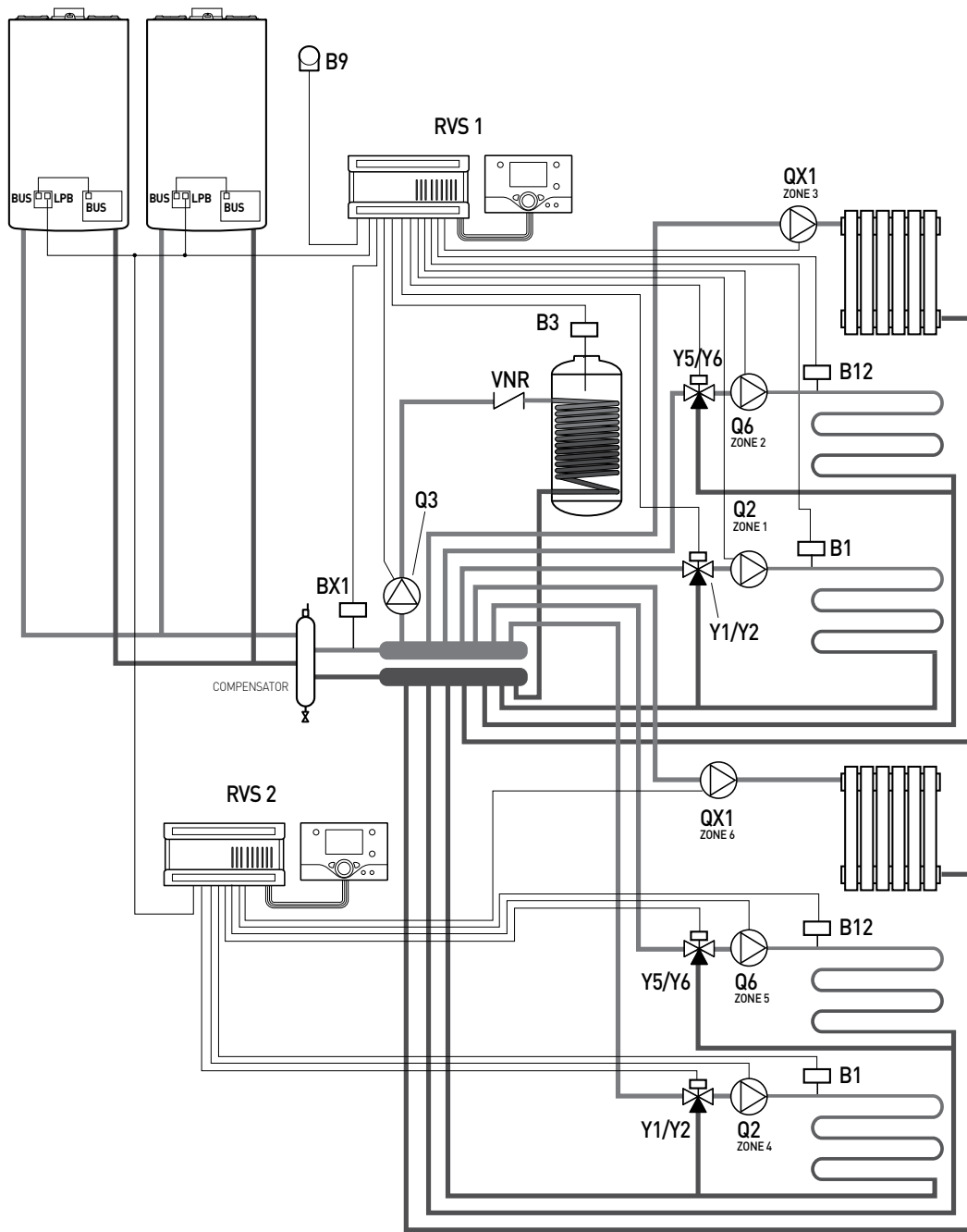


	MENU	PARAMETER	DESCRIPTION	VALUE
Engineer	Configuration	5715	Heating circuit 2 (zone 2 activation)	On
Engineer	Configuration	5890	Relay output QX1 (activation of zone 3 management)	Heat circuit pump HCP Q20



16. Cascade Management

BRIDGENET BUS BOILER DIAGRAM 2 DIRECT ZONES, 4 LOW TEMPERATURE ZONES AND DOMESTIC HOT WATER STORAGE CYLINDER

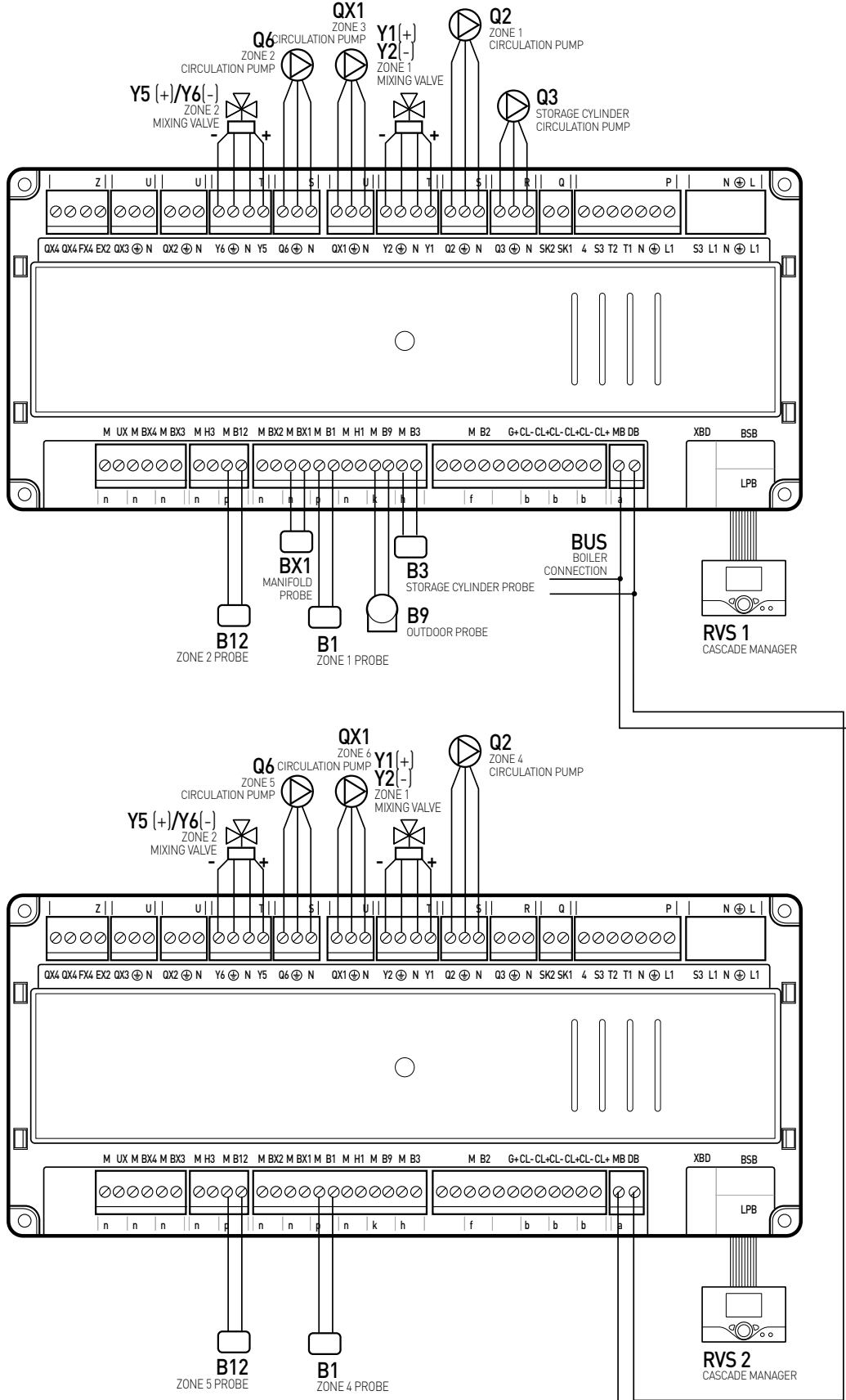


RVS 1	MENU	PARAMETER	DESCRIPTION	VALUE
Engineer	Configuration	5715	Heating circuit 2 (zone 2 activation)	On
Engineer	Configuration	5890	Relay output QX1 (activation of zone 3 management)	Heat circuit pump HCP Q20
RVS 2	MENU	PARAMETER	DESCRIPTION	VALUE
Engineer	Configuration	5715	Heating circuit 2 (zone 5 activation)	On
Engineer	Configuration	5890	Relay output QX1 (activation of zone 6 management)	Heat circuit pump HCP Q20
Engineer	LPB	6600	Device address	2
Engineer	LPB	6640	Clock mode	Slave without remote setting

16. Cascade Management

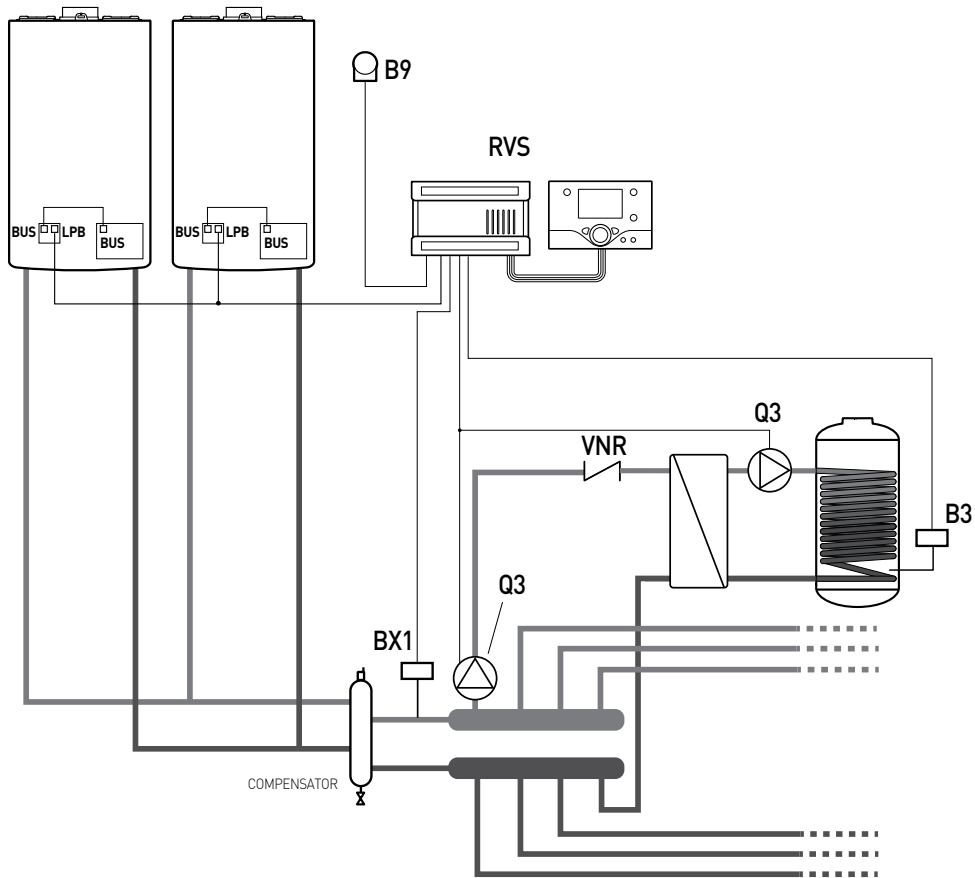
PERIPHERALS CONNECTION

BRIDGENET BUS BOILER DIAGRAM 2 DIRECT ZONES, 4 LOW TEMPERATURE ZONES AND DOMESTIC HOT WATER STORAGE CYLINDER

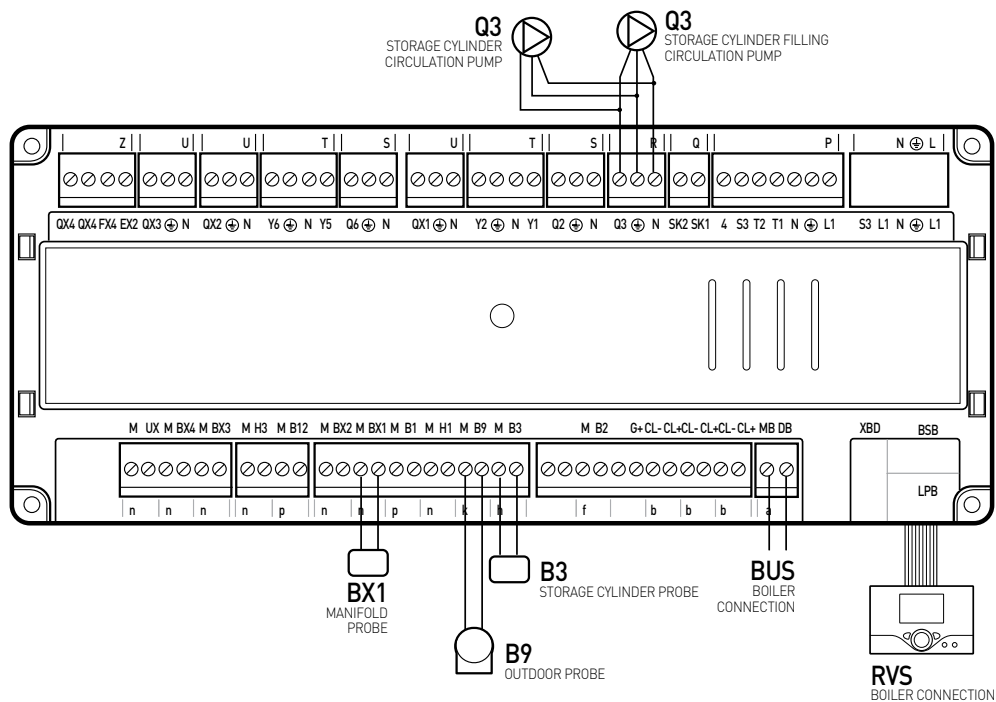


16. Cascade Management

BRIDGENET BUS BOILER DIAGRAM EXTRA - HYDRAULIC UNIT FOR FILLING THE STORAGE CYLINDER

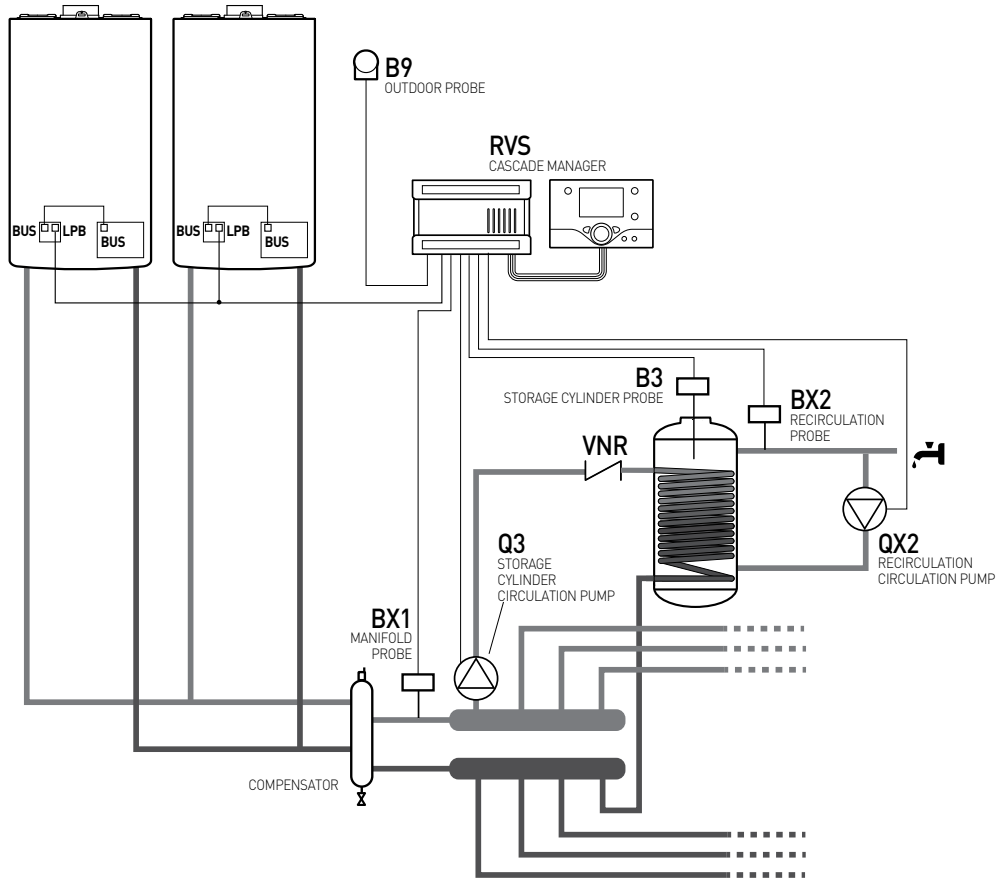


	MENU	PARAMETER	DESCRIPTION	VALUE
--	--	--	--	--

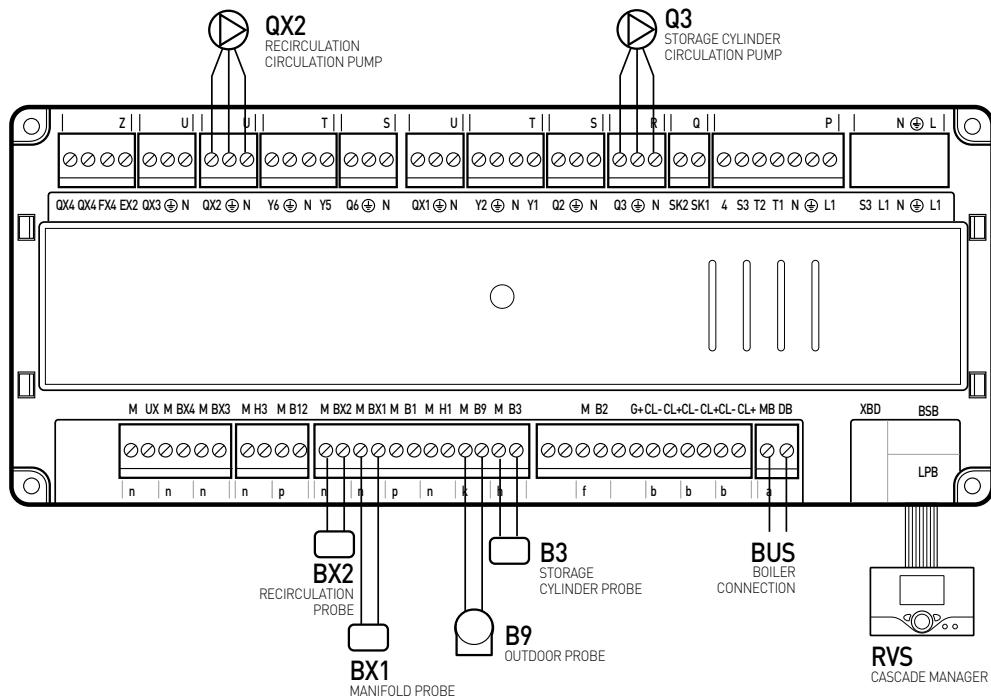


16. Cascade Management

BRIDGENET BUS BOILER DIAGRAM EXTRA - DHW RECIRCULATION

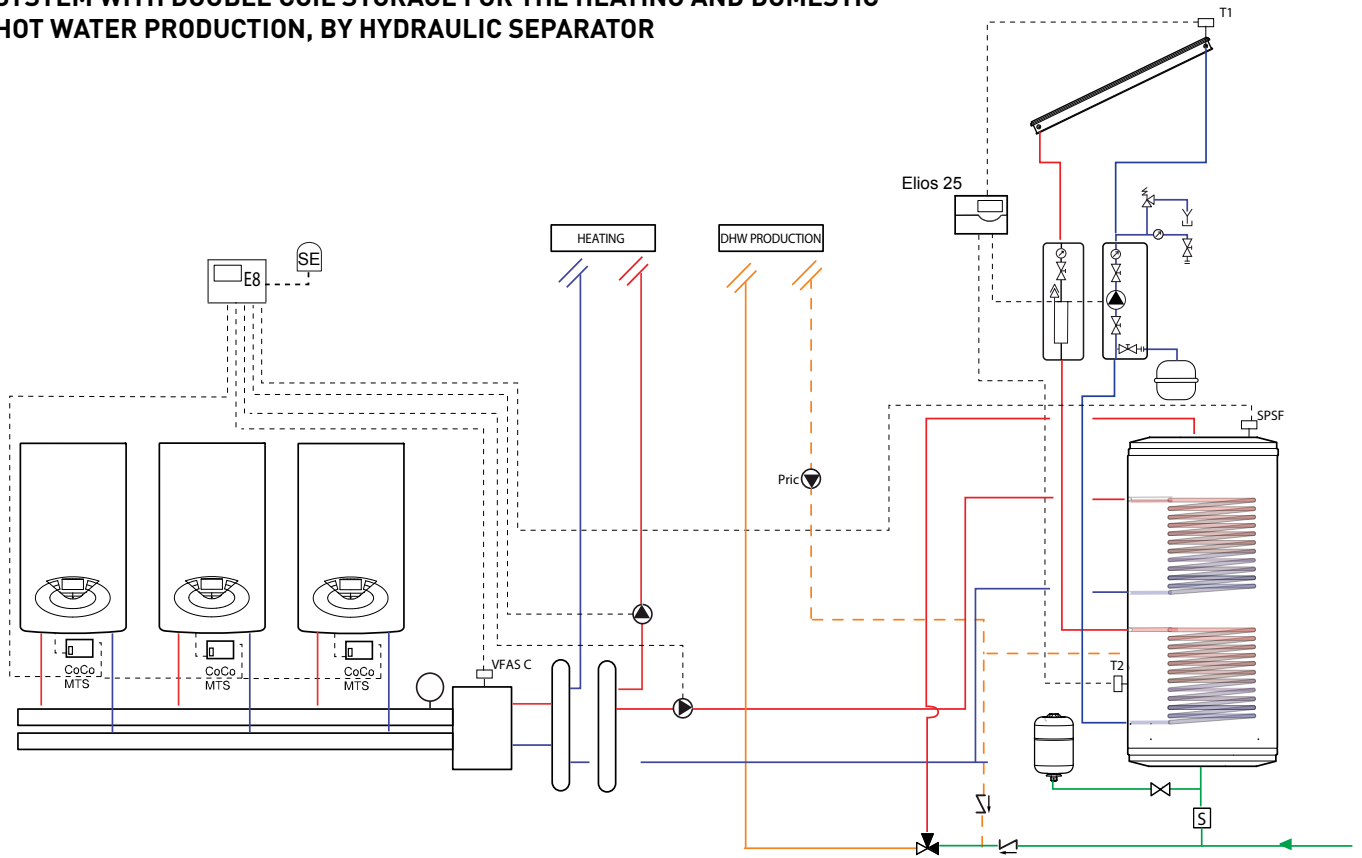


	MENU	PARAMETER	DESCRIPTION	VALUE
Engineer	Configuration	5891	Relay output QX2 (recirculation pump activation)	Circulating pump Q4
Engineer	Configuration	5931	Input probe BX2 (recirculation probe activation)	DHW circulation sensor B39

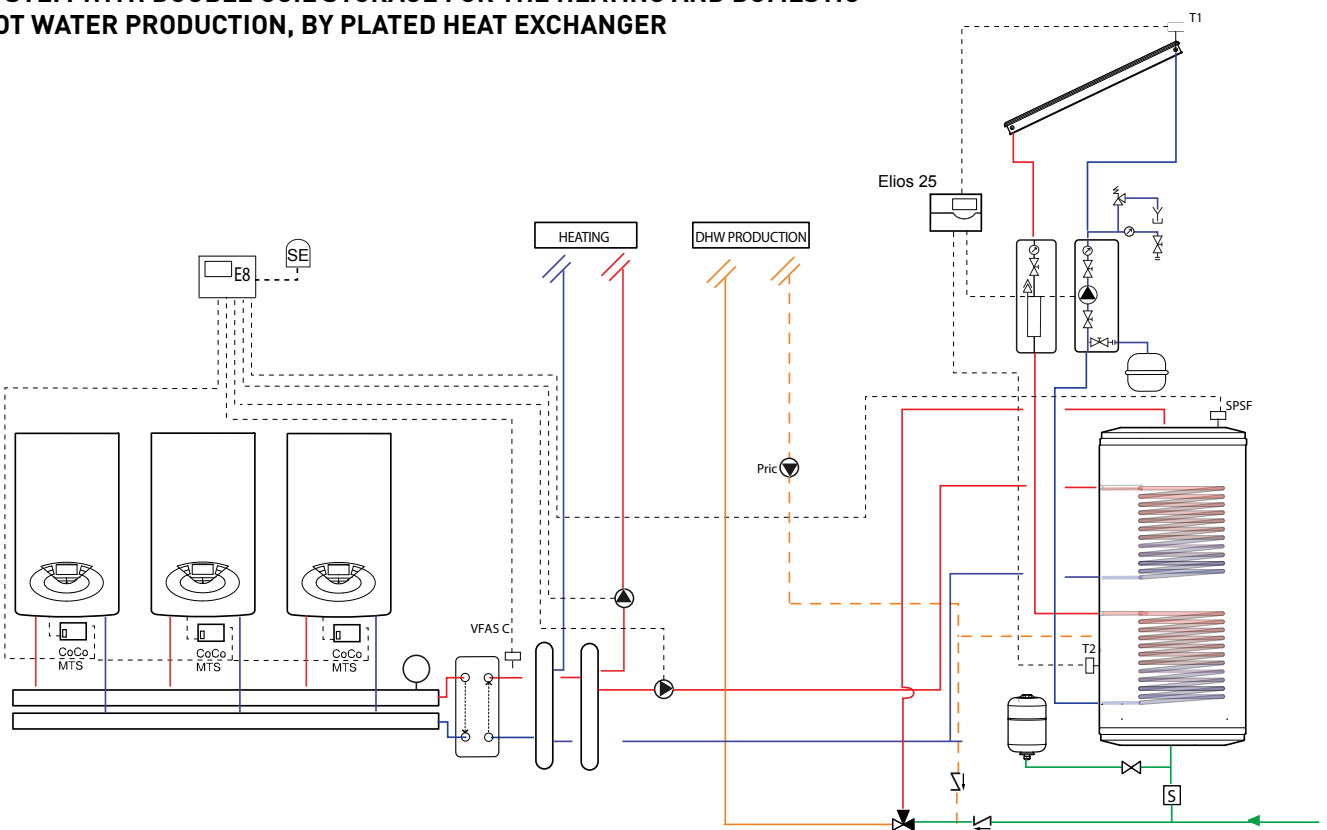


17. System Solutions with Solar Collectors

SYSTEM WITH DOUBLE COIL STORAGE FOR THE HEATING AND DOMESTIC HOT WATER PRODUCTION, BY HYDRAULIC SEPARATOR

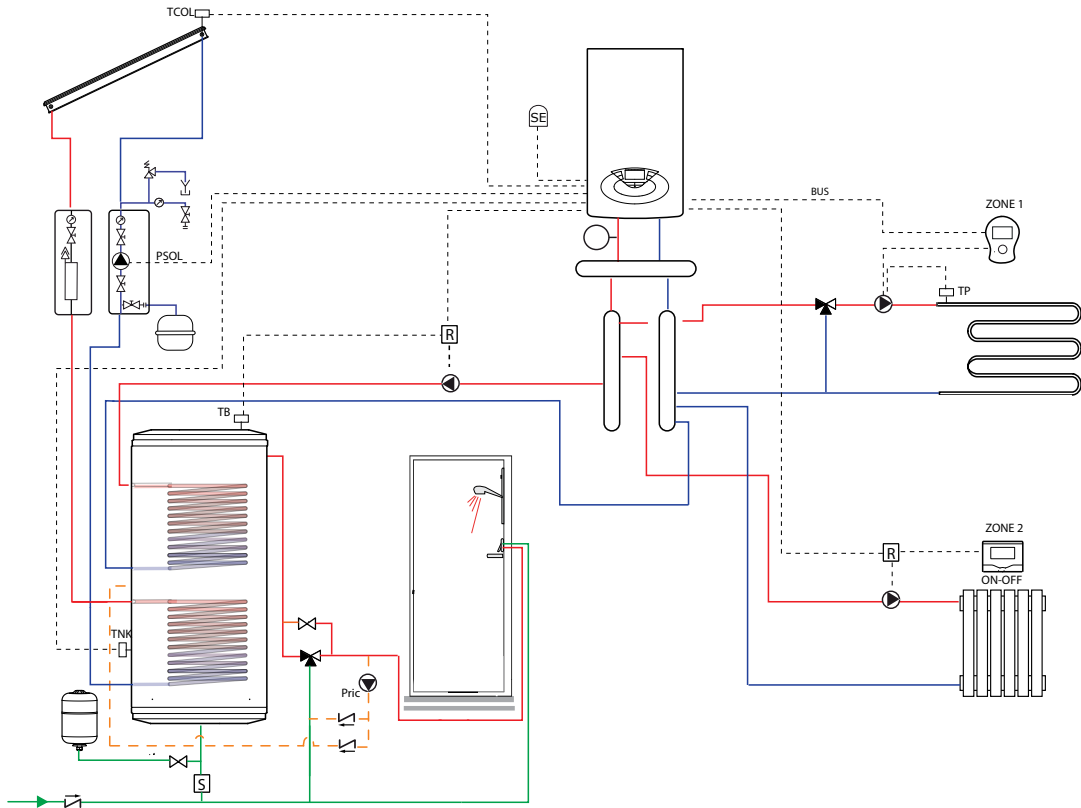


SYSTEM WITH DOUBLE COIL STORAGE FOR THE HEATING AND DOMESTIC HOT WATER PRODUCTION, BY PLATED HEAT EXCHANGER

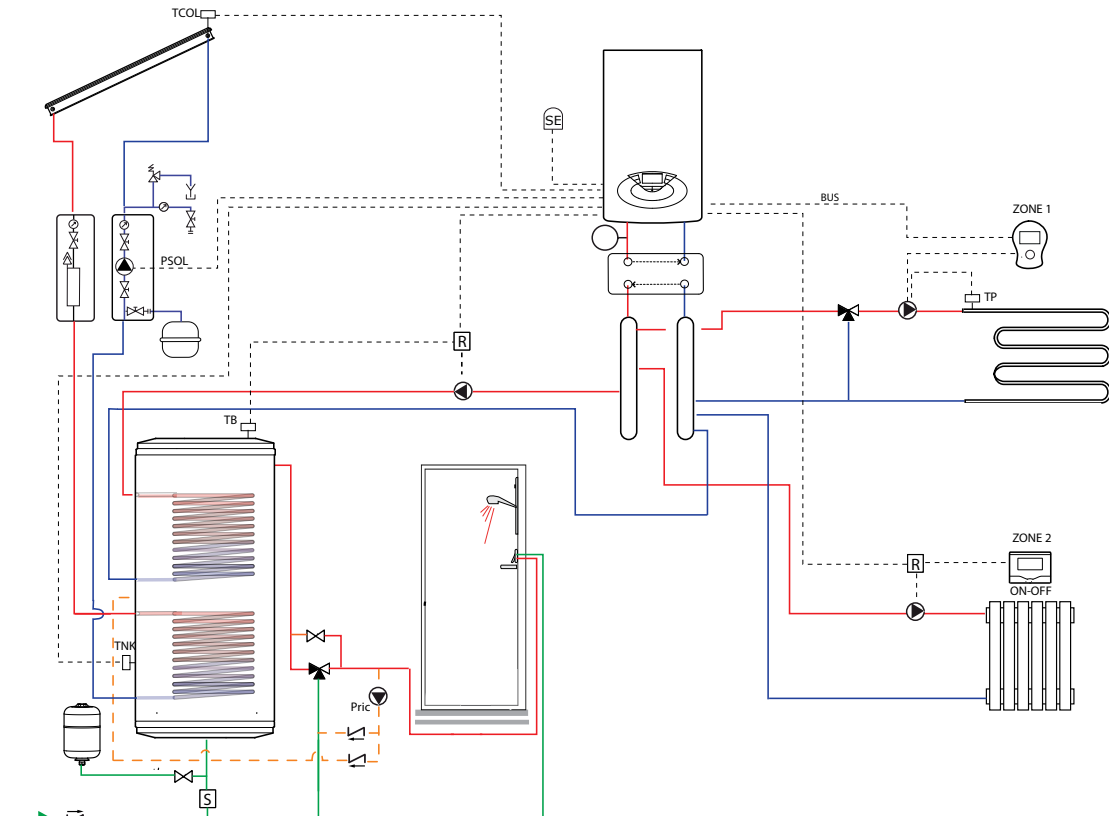


17. System Solutions with Solar Collectors

SYSTEM WITH DOUBLE COIL STORAGE FOR THE HEATING AND DOMESTIC HOT WATER PRODUCTION, BY HYDRAULIC SEPARATOR



SYSTEM WITH DOUBLE COIL STORAGE FOR THE HEATING AND DOMESTIC HOT WATER PRODUCTION, BY PLATED HEAT EXCHANGER



Certificate



Number	54754/02	Replaces	54754
Issued	31-07-2013	Scope	2009/142/EC 92/42/EEC
Report number	178414/2		
PM	0063BT3414	Contract no.:	E6600

EC TYPE EXAMINATION CERTIFICATE

Kiwa hereby declares that the Central Heating Boilers,

brand **Ariston**, types:

Genus Premium EVO HP 45	Genus Premium EVO HP 100
Genus Premium EVO HP 65	Genus Premium EVO HP 115
Genus Premium EVO HP 85	Genus Premium EVO HP 150

manufactured by **Rendamax B.V.**
Kerkrade, The Netherlands

meet the essential requirements as described in the
Directive 2009/142/EC on appliances burning gaseous fuels and in the
Directive 92/42/EEC on efficiency requirements.

Appliance types	: B23(p), B33(p), C13, C33, C43, C53, C63, C83
Appliance categories	: I2H, I2E(S)B, I2E(R)B, I3P, I2Esi, I2E, II2H3P, II2Esi3P, II2E3P

Countries:

Argentina	Finland	Lithuania	Slovakia
Austria	France	Luxembourg	Slovenia
Belgium	Germany	Malta	Spain
Bulgaria	Greece	Netherlands, the	Sweden
China	Hungary	Norway	Switzerland
Croatia	Iceland	Poland	Tunisia
Cyprus	Ireland	Portugal	Turkey
Czech Republic	Italy	Romania	Ukraine
Denmark	Latvia	Russia	United Kingdom
Estonia	Liechtenstein		

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www.kiwa.com
GASTEC



B. Meekma
Bouke Meekma
Kiwa





Number	79033/01	Replaces	--
Issued	31-07-2013	Scope	92/42/EEC
Report number	178414/2	Contract number	E 6600
PN	0063BT3414		

Energy Performance Labels Declaration

Kiwa hereby declares that the Central Heating Boilers, brand **ARISTON**:

Types	Star label
Genus Premium EVO HP 45	★★★★
Genus Premium EVO HP 65	★★★★
Genus Premium EVO HP 85	★★★★
Genus Premium EVO HP 100	★★★★
Genus Premium EVO HP 115	★★★★
Genus Premium EVO HP 150	★★★★

manufactured by **Rendamax BV**
Kerkrade, The Netherlands

have been awarded the star labels based on the
Directive on efficiency requirements (92/42/EEC) Annex II of 21 May 1992
 amended by Rectification of 22 June 1992 (O.J. L 167), by
Directive 93/68/EEC of 22 July 1993 and by **Directive 04/8/EC of**
11 February 2004.

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GASTEC

Kiwa Nederland B.V.

Ing. A.A. Slomp
 Certification Manager.

kiwa
 Approved

EC Directive



92/42/EEC

GASTEC

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