

BAXI

Luna Duo-tec MP/MP+ for centralized heating systems installations



Luna Duo-tec MP+ 35-150 kW

Wall hung commercial condensing boilers

The range of high output wall hung boilers LUNA DUO-TEC MP + consists of condensing heat generators for heating only, with output between 35 and 150 kW (50/30°C).

Main features:

- **high modulation ratio (1:9)** - 1:5 for 1.115, 1.130 and 1.150 models;
- nominal **efficiency 50/30°C: 105%**;
- **high efficiency full modulating circulating pump** included in the boiler;
- **heat exchanger** with combustion chamber and stainless steel coil hydraulic system, single chamber models from 50 to 70 kW, double chamber models 90 - 150 kW
- low water content in the exchanger that means very limited thermal inertia and therefore a rapid response to the variations in thermal energy required by the system;
- premixing unit with double clapet technique, ensuring that the burner constantly has an optimal air/gas ratio independently from the number of fan revs, keeping consumption to a minimum and always guaranteeing correct combustion and consequently a reduction in polluting emissions;
- **NTC sensor on flow and return** for a more precise modulation;
- **digital PCB with latest generation double microprocessor**;
- control panel with large back-lit LCD;
- **stainless steel burner** for 1.50, 1.70, 1.90, 1.130 and 1.150 models and metallic fiber for 1.110 model;
- adjustable speed fan and insulation for a noiseless operation;
- **electronics that allows great flexibility** in highly diversified contexts. With specific accessories that can also be installed inside the boiler, it is possible to control mixing zones, daily and weekly programming of heating and sanitary functions, cascade, recirculation and other functions;
- 0-10 V control available as optional;
- accessories for single or cascade installation, for wall hung mounting or with metal frame;
- hydraulic accessories to install from 2 to 6 boilers in cascade;
- operation with natural gas and LPG (with LPG conversion kit).

Available models

Heating only boilers with possibility to connect a DHW tank

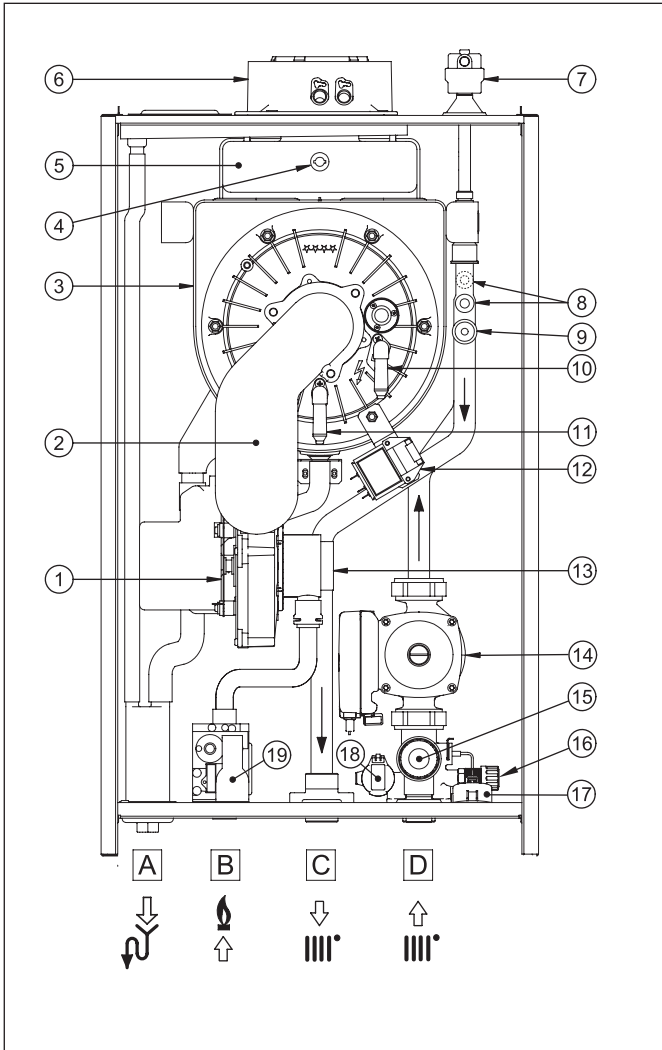


Model	Power range (kW)	
	ΔT 50/30°C	ΔT 80/60 °C
Luna Duo-tec MP/MP+ 1.35	5,4 to 36,5	5 to 33,8
Luna Duo-tec MP/MP+ 1.50	5,4 to 48,6	5 to 45
Luna Duo-tec MP/MP+ 1.60	6,6 to 59,4	6,1 to 55
Luna Duo-tec MP/MP+ 1.70	7,8 to 70,2	7,2 to 65
Luna Duo-tec MP/MP+ 1.90	10,2 to 91,8	9,4 to 85
Luna Duo-tec MP/MP+ 1.110	12,3 to 110,2	11,4 to 102
Luna Duo-tec MP+ 1.115	26,2 to 121,4	24,3 to 112,8
Luna Duo-tec MP+ 1.130	26,2 to 130,6	24,3 to 121,5
Luna Duo-tec MP+ 1.150	30,2 to 150,9	28,1 to 140,3

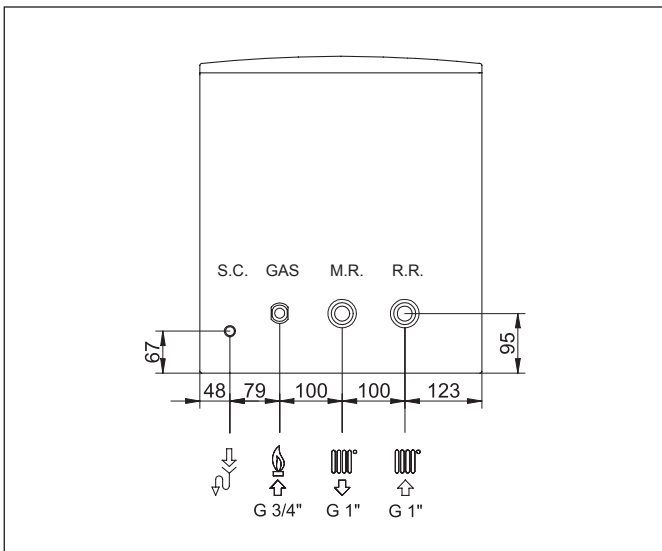
Model	NO _x EMISSION LEVEL
Luna Duo-tec MP/MP+ 1.35	< 29 mg/kWh
Luna Duo-tec MP/MP+ 1.50	< 29 mg/kWh
Luna Duo-tec MP/MP+ 1.60	< 31 mg/kWh
Luna Duo-tec MP/MP+ 1.70	< 31 mg/kWh
Luna Duo-tec MP/MP+ 1.90	< 31 mg/kWh
Luna Duo-tec MP/MP+ 1.110	< 22 mg/kWh
Luna Duo-tec MP+ 1.115	< 17 mg/kWh
Luna Duo-tec MP+ 1.130	< 17 mg/kWh
Luna Duo-tec MP+ 1.150	< 23 mg/kWh

Technical specifications

Luna Duo-tec MP/MP+ 1.35 - 1.50 - 1.60 - 1.70



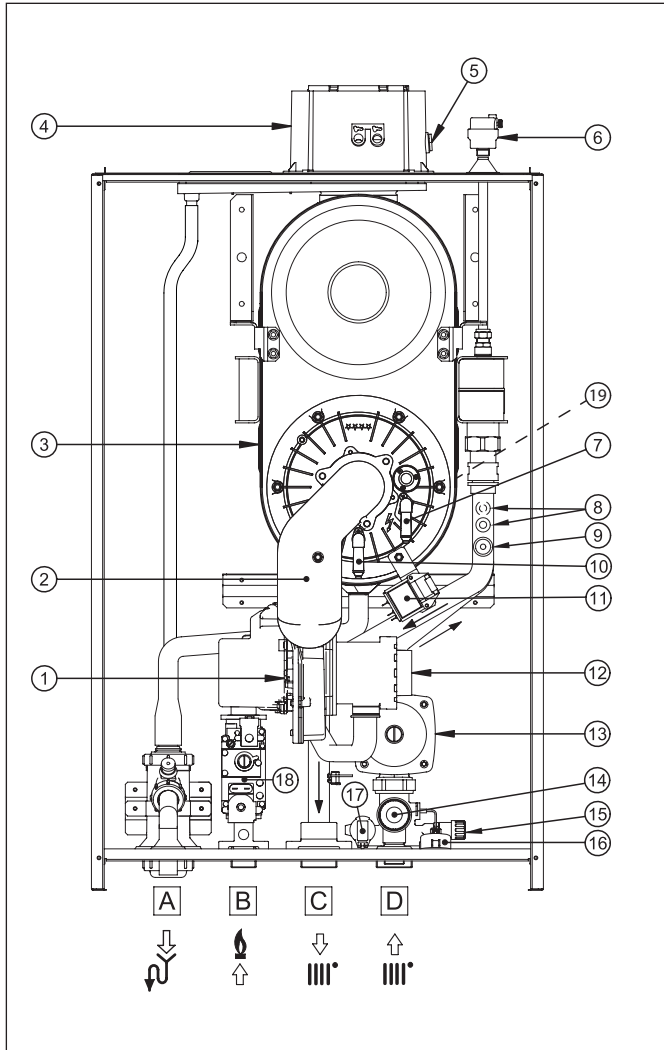
- 1 Fan
- 2 Air/gas blend manifold
- 3 Primary exchanger
- 4 Flue sensor
- 5 Flue hood
- 6 Coaxial connector
- 7 Automatic air vent
- 8 NTC heating sensor
- 9 Safety thermostat
- 10 Ignition electrode
- 11 Flame detection electrode
- 12 Spark generator
- 13 Venturi
- 14 Pump
- 15 Hydraulic safety valve
- 16 Boiler drain tap
- 17 Pressure gauge
- 18 Hydraulic pressure sensor
- 19 Gas valve
- A Siphon with condensate drain
- B Gas inlet connection
- C Heating flow connection
- D Heating return connection



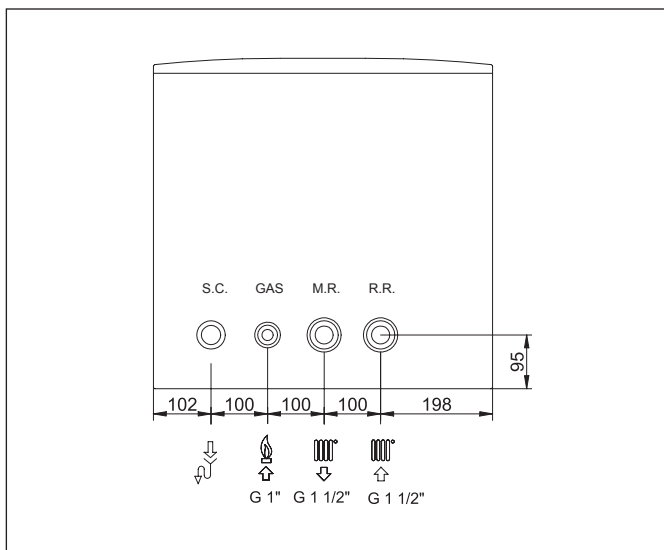
- S.C. Siphon with CONDENSATE drain
- GAS GAS INLET connection
- M.R. Heating FLOW connection
- R.R. Heating RETURN connection

Technical specifications

Luna Duo-tec MP/MP+ 1.90 - 1.110



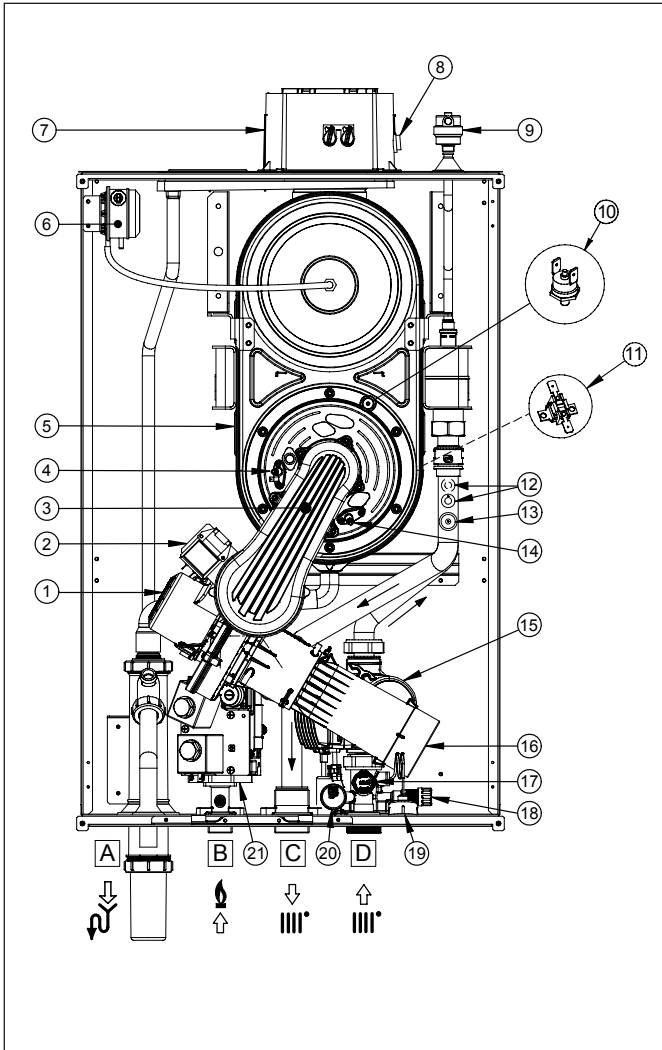
- 1 Fan
- 2 Air/gas blend manifold
- 3 Primary exchanger
- 4 Coaxial flue connector
- 5 Flue hood
- 6 Automatic air vent
- 7 Ignition electrode
- 8 NTC water heating sensor (flow and return)
- 9 Safety overflow temperature thermostat
- 10 Flame detection electrode
- 11 Spark generator
- 12 Venturi
- 13 Pump
- 14 Hydraulic safety valve
- 15 Boiler drain tap
- 16 Pressure gauge
- 17 Hydraulic pressure sensor
- 18 Gas valve
- 19 Thermal fuse (positioned behind the exchanger)
- A Trap condensate drain
- B Gas inlet connection
- C Heating flow connection
- D Heating return connection



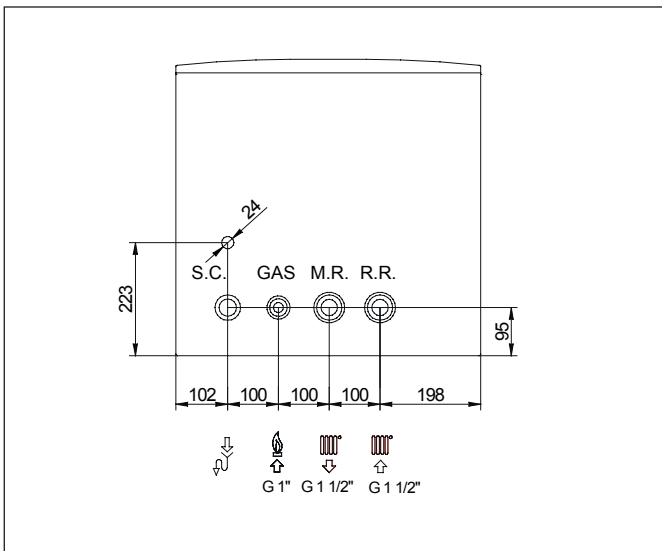
- S.C. Siphon with CONDENSATE drain
- GAS GAS INLET connection
- M.R. Heating FLOW connection
- R.R. Heating RETURN connection

Technical specifications

Luna Duo-tec MP+ 1.115 - 1.130 - 1.150



- 1 Fan
- 2 Spark generator
- 3 Air/gas blend manifold
- 4 Ignition electrode
- 5 Primary exchanger
- 6 Fumes pressure switch
- 7 Coaxial flue connector
- 8 Flue sensor
- 9 Automatic air vent
- 10 Exchanger flange thermostat
- 11 Thermal fuse
- 12 NTC water heating sensor (flow and return)
- 13 Safety overflow temperature thermostat
- 14 Flame detection electrode
- 15 Pump
- 16 Venturi
- 17 Hydraulic Safety valve
- 18 Boiler drain tap
- 19 Pressure gauge
- 20 Hydraulic Pressure Sensor
- 21 Gas valve
- A Trap condensate drain
- B Gas inlet connection
- C Heating flow connection
- D Heating return connection



- S.C. Siphon with CONDENSATE drain
- GAS GAS INLET connection
- M.R. Heating FLOW connection
- R.R. Heating RETURN connection

Luna Duo-tec MP/MP+

		Heating only								
Luna Duo-tec MP/MP+		1.35	1.50	1.60	1.70	1.90	1.110	1.115	1.130	1.150
Maximum heat input (heating)	kW	34,8	46,3	56,6	66,9	87,4	104,9	115	123,8	143
Minimum heat output	kW	5,1	5,1	6,3	7,4	9,7	11,7	24,8	24,8	28,6
Rated heat output (80/60°C)* P_4	kW	33,8	45	55	65	85	102	112,8	121,5	140,3
Minimum heat output (80/60°C)	kW	5	5	6,1	7,2	9,4	11,4	24,3	24,3	28,1
Maximum heat output (50/30°C)	kW	35,6	48,6	59,4	70,2	91,8	110,2	121,4	130,6	150,9
Minimum heat output (50/30°C)	kW	5,4	5,4	6,6	7,8	10,2	12,3	26,2	26,2	30,2
Useful heat output at 30% of rated heat output and low temperature regime** P_1	kW	11,2	14,9	18,2	21,5	28,2	33,8	37,5	40,4	46,6
Seasonal space heating energy efficiency class***		A	A	A	A	-	-	-	-	-
Efficiency η_n (lower calorific value) - Average temperature 70°C	%	97,4	97,4	97,2	97,2	97,3	97,2	98,1	98,1	98,1
Efficiency at 30% (lower calorific value) - Return temperature 30°C	%	107,7	107,8	107,4	107,1	107,5	107,4	108,6	108,6	108,6
Useful efficiency at rated heat output and high temperature regime η_4	%	87,7	87,7	87,6	87,6	87,7	87,6	88,4	88,4	88,4
Useful efficiency at 30% of rated heat output and low temperature regime η_1	%	97	97,1	96,8	96,5	96,8	96,8	97,8	97,8	97,8
Seasonal space heating energy efficiency η_s	%	92	92	92	92	93	93	93	93	93
Minimum heat output to the heat exchanger	m ³ /h	0,8	0,8	1	1,5	2	2,25	5,4	5,4	5,6
NOx emissions	mg/kWh	29	29	31	31	31	22	17	17	23
Maximum pressure heating circuit	bar	4	4	4	4	4	4	6	6	6
Maximum inlet temperature heating circuit	°C	90	90	90	90	90	90	90	90	90
Heating temperature range	°C	25-80	25-80	25-80	25-80	25-80	25-80	25-80	25-80	25-80
Water content	l	4	4	5	6	9	10	10	10	11
Coaxial flue system	mm	80/125	80/125	80/125	80/125	110/160	110/160	110/160	110/160	110/160
Dual flue system	mm	80+80	80+80	80+80	80+80	110+110	110+110	110+110	110+110	110+110
Minimum working temperature	°C	-5	-5	-5	-5	-5	-5	-5	-5	-5
Maximum flue mass flow rate	kg/s	0,016	0,021	0,026	0,031	0,040	0,047	0,052	0,056	0,064
Minimum flue mass flow rate	kg/s	0,002	0,002	0,003	0,004	0,005	0,005	0,012	0,012	0,014
Maximum flue temperature	°C	76	80	80	74	70	70	70	70	70
Residual fumes prevalence	Pa	160	270	270	270	200	200	180	180	270
Dimensions (hxwxhd)	mm	766x450x377	766x450x377	766x450x377	766x450x505	952x600x584	952x600x584	952x600x584	952x600x584	952x600x584
Net weight	kg	40	40	40	50	83	93	93	93	96
Gas type		Natural Gas/LPG								
Gas supply pressure (G20/G31)	mbar	20/37	20/37	20/37	20/37	20/37	20/37	20/37	20/37	20/37
Power consumption	W	180	230	230	230	275	320	325	360	460
Auxiliary electrical power consumption - Full load el_{max}	W	70	80	95	95	130	165	172	187	283
Auxiliary electrical power - Partial load el_{min}	W	20	20	20	20	17	18	51	51	52
Auxiliary electrical power - Stand-by P_{SB}	W	3	3	3	3	3	3	3	3	3
Outdoor sensor cable maximum length	m	120	120	120	120	120	120	120	120	120
Sound power level, indoor L_{WA}	dB	58	62	59	62	63	63	58	60	64
Grade of protection		IPX5D	IPX5D	IPX5D	IPX5D	IPX5D	IPX5D	IPX5D	IPX5D	IPX5D

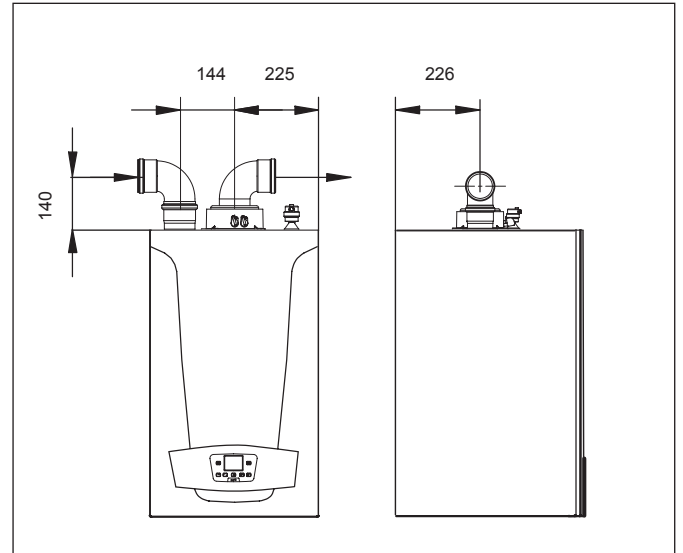
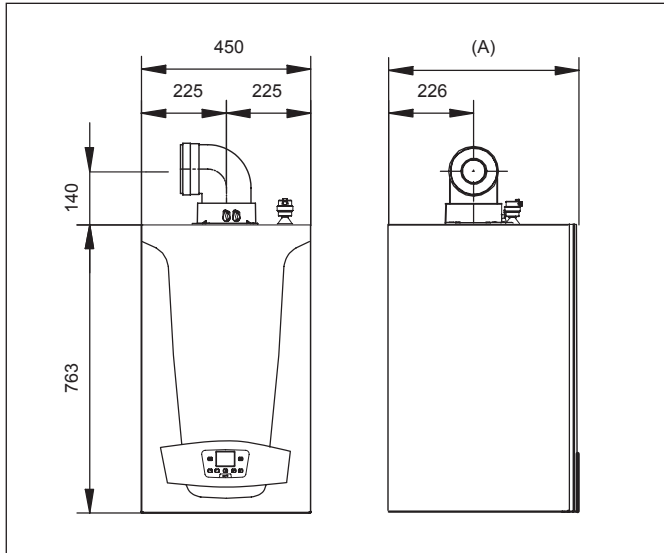
* High temperature regime: 60°C return temperature at heater inlet and 80°C feed temperature at heater outlet.

** Low temperature regime: 30°C return temperature (at heater inlet).

*** Products with nominal output >70 kW are not subjected to energy labelling according to ErP regulation

Technical specifications

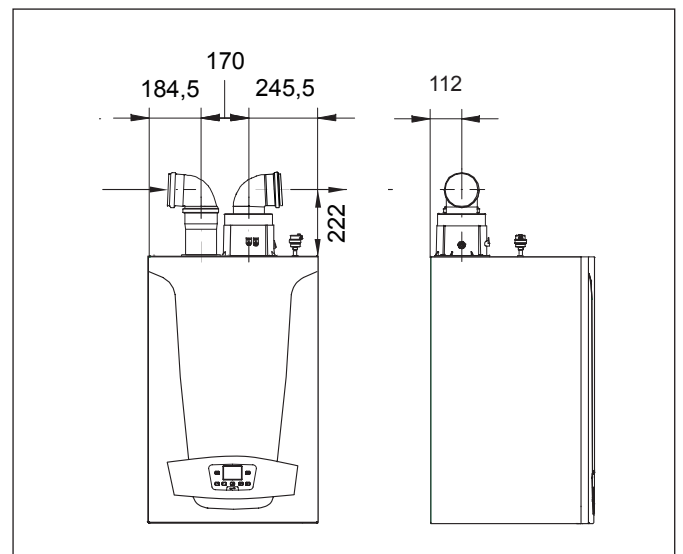
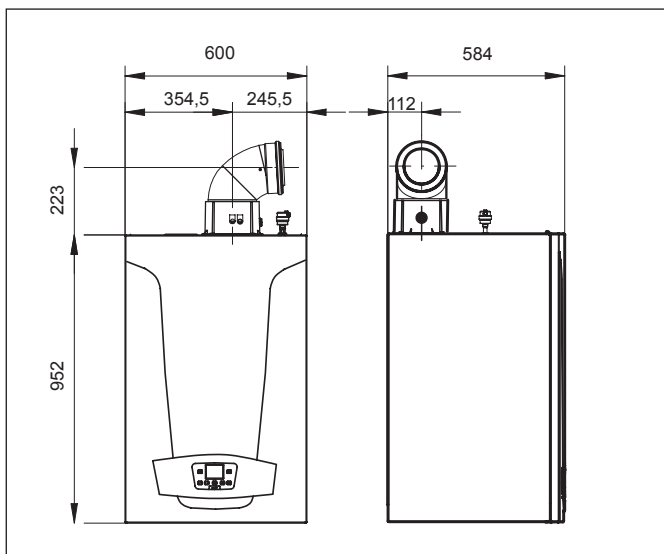
Luna Duo-tec MP+ 1.35 - 1.50 - 1.60 - 1.70



(A) 377 mm mod. 1.35 - 1.50 - 1.60
505 mm mod. 1.70

Coaxial flue system \varnothing 80/125
Dual flue system \varnothing 80

Luna Duo-tec MP+ 1.90 - 1.110 - 1.115 - 1.130 - 1.150



Coaxial flue system \varnothing 110/60
Dual flue system \varnothing 110

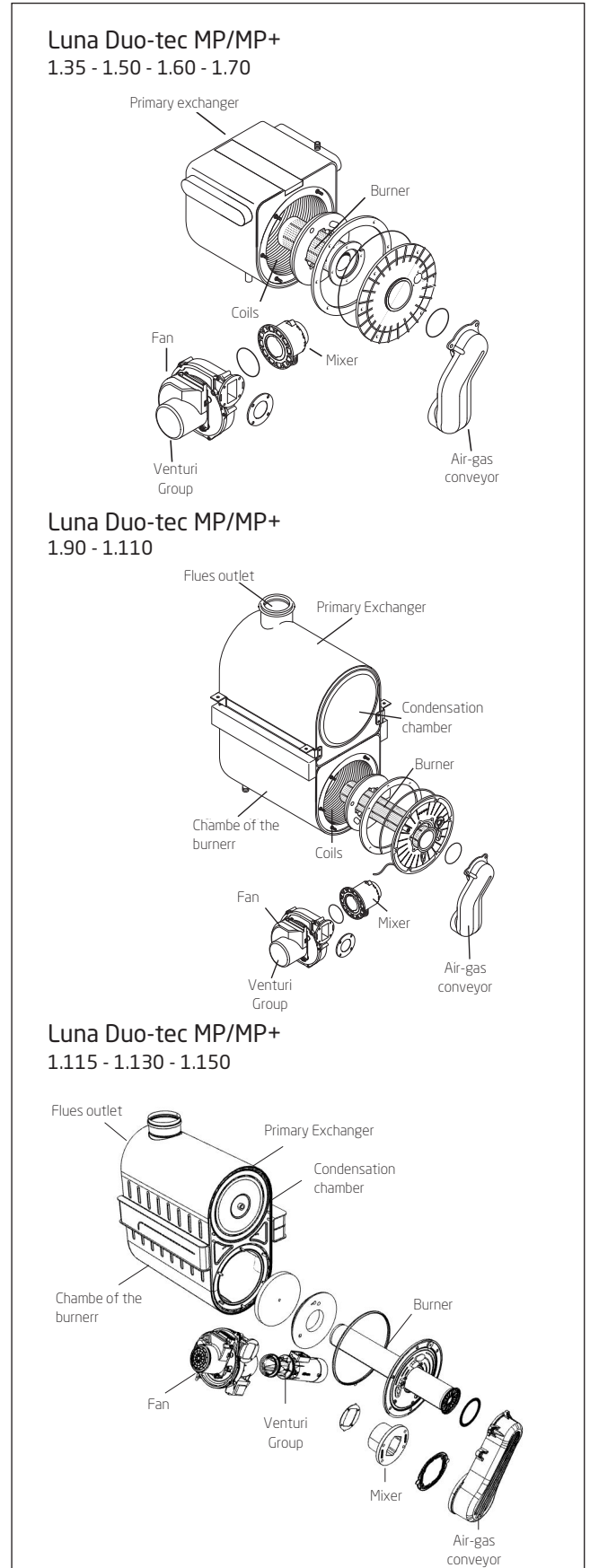
Burner / Exchanger unit

The air-gas premixing unit, the burner and the primary exchanger are the components that ensure high performances from these condensing heat generators.

The premixing unit is a new conception which, thanks to a new design and the double clapet technique, ensures that the burner constantly has an optimal air/gas ratio independently from the number of fan revs, keeping consumption to a minimum and always guaranteeing correct combustion and consequently a reduction in polluting emissions. On the same subject of energy saving and highest performances, this new component permits achievement of a modulation ratio of 1:9, giving the generator such great flexibility as to be adaptable to great variations in thermal load, as happens increasingly in new generation multifamily homes.

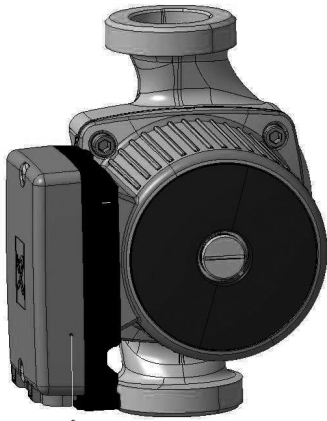
In the range from 50 to 70 kW the stainless steel burner, through the internal diffuser and special micro-perforation on the cylindrical surface, achieves uniform distribution of the air/gas mixture independently of its length. In the range from 50 to 70 kW the primary exchanger, entirely in stainless steel, comprises one single burner/ fumes chamber, which keeps the size of the generator down for high power and actually more versatile installations even in relatively restricted spaces.

The highest powered generators (90 and 150 kW) employ the dual chamber exchanger in stainless steel. The two cylindrical fumes chambers set vertically (burner chamber and condensation chamber) contain the stainless steel coils that carry the primary circuit water. In the upper chamber the hot exhaust gases transfer heat to the system return water in the coils, bringing about condensation of the fumes themselves and thus transferring the latent heat to the water, preheating it prior to its entry into the burner chamber.



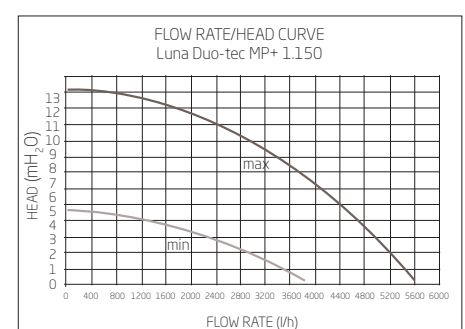
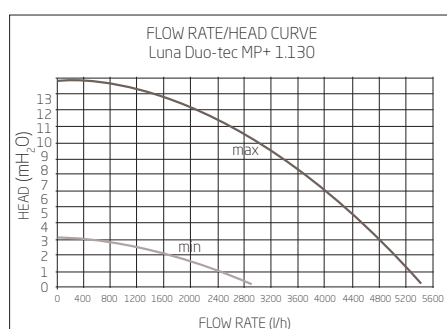
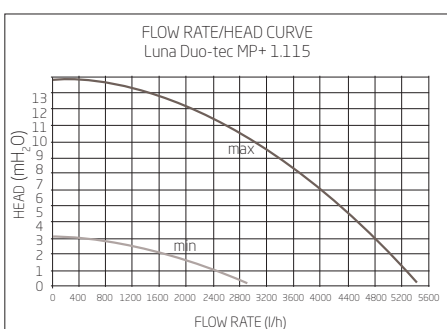
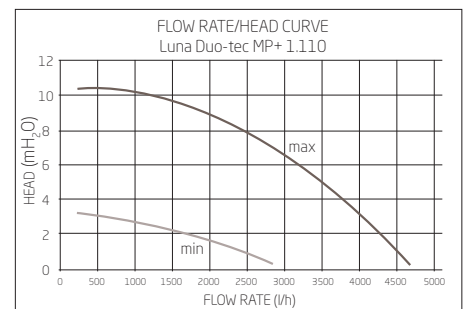
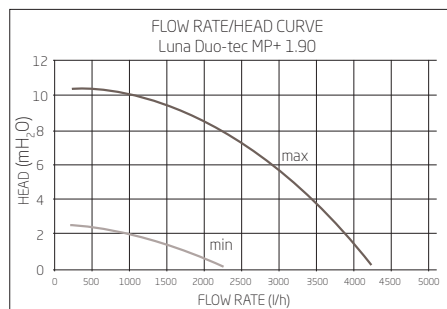
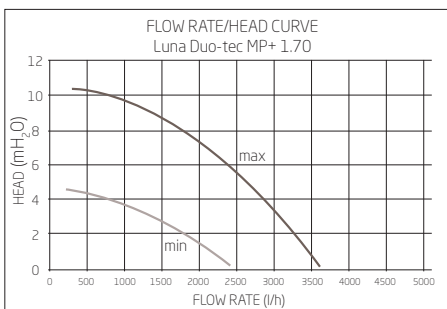
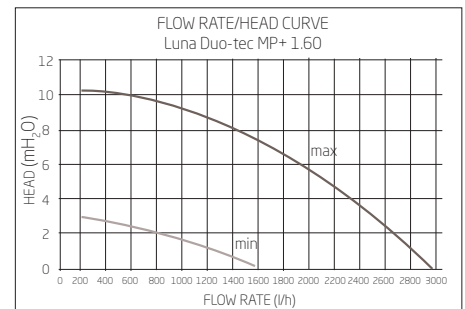
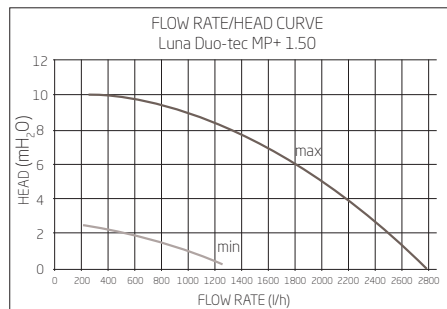
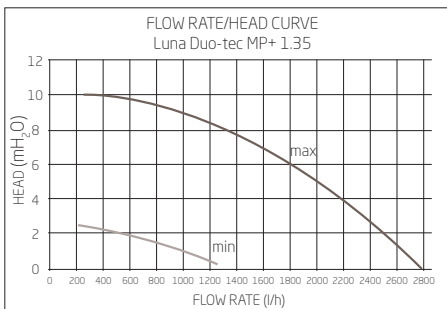
Pump unit performances

(including the residual head of the boilers)



ErP Pump - main features (Luna Duo-tec MP+ model)

- Remotely speed-controlled, high-efficiency pump fitted with electronically commutated motor (ECM) with permanent-magnet rotor and frequency converter
- Validated components, second generation of the first boiler-integrated variable-speed ECM circulator pumps
- Fits into existing boiler ranges, no expanded space requirements, possible use of existing pump housings, electrical compatibility with existing PWM controllers and no ambient-temperature constraints (EN 60335)
- Energy-optimized due to improved hydraulic efficiency. Use up to 80% less electrical power than conventional constant-speed pumps



Control panel

The whole range of LUNA DUO-TEC MP/MP+ high power wall-mounted boilers are equipped with an extensive control panel: each key activates a specific function and the LCD simultaneously shows numbers and symbols indicating the functioning status, facilitating easy interpretation and immediate programming, adjustment and control of parameters.

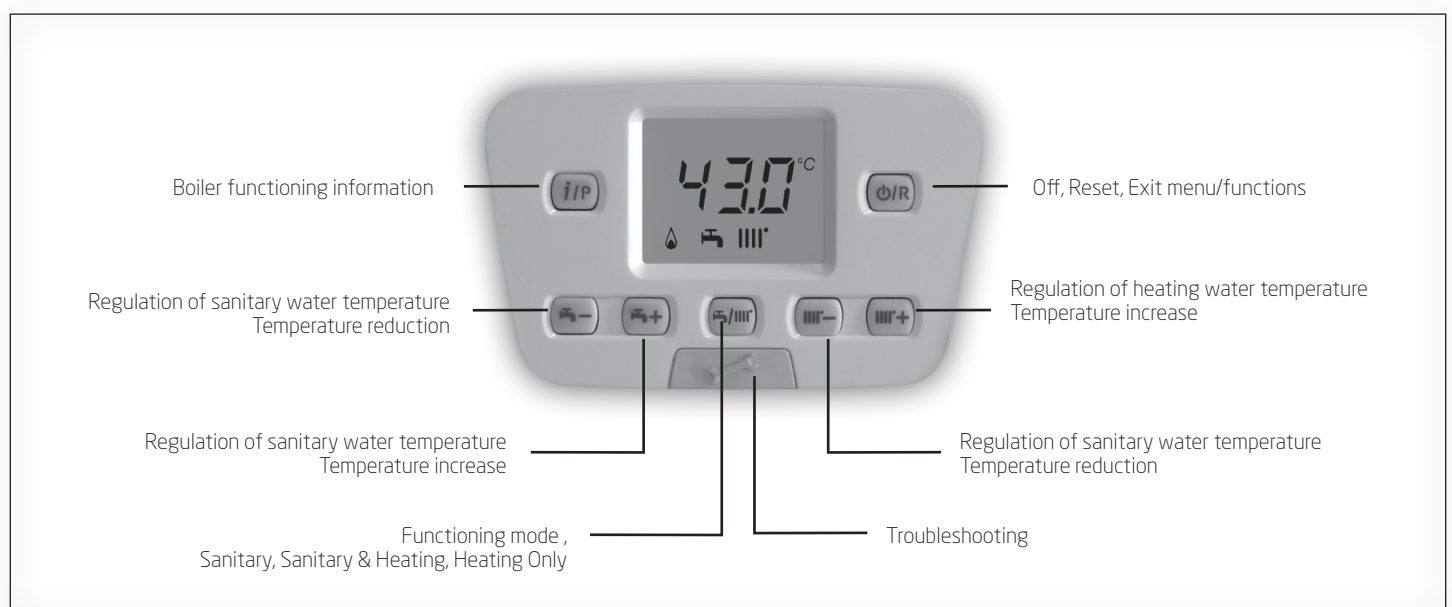
The boiler electronic PCB has been specially designed to run premixing condensation boilers and permits start-up, control and supervision of this kind of gas fired heat generator with view to obtaining best use of the burner for applications in the field of central heating and the generation of hot sanitary water.

Indubitably the most important feature of this new generation of electronic boards is its ability to integrate different heat generation technologies through the use of small interface boards and by means of a communication protocol that allows dialogue among the various parts of the heating system.

All the control, management and communications software (meaning the whole intelligent part of a heating system) resides in the boiler PCB, so the only interfaces needed for integration with other types of generator are hardware items such as extensions of connectors on the motherboard and, where required, an additional display (text knob) for the parameter programming of a complex heating system.

Features

- Double microprocessor: latest generation software for control of the generator, or also of a complete heating system
- Management of primary circuit pump modulation by PWM controller
- Daily heating programme and generation of hot sanitary water
- Electronic thermometer
- Automatic troubleshooting: signalling and description of possible anomalies
- Incorporated climatic regulation (external sensor available as optional)
- Automatic summer/winter changeover with external sensor connected
- Preset for installation in cascade with control software included in the PCB
- Preset for installation in mixing systems (low and high temperature)



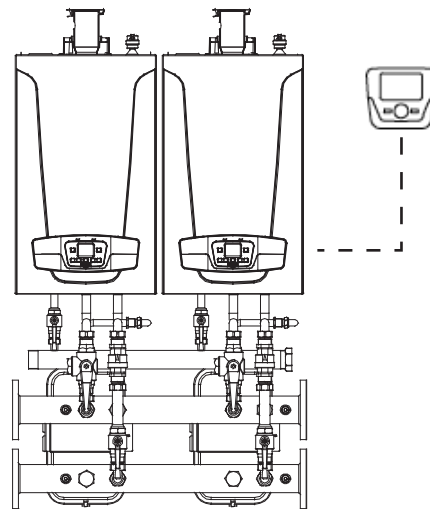
Electronic accessories for installations

Remote control THINK



Code 7102442 (wired)
Code 7102443 (wireless)

The room unit is an accessory for controlling the temperature of the space to be heated. It is not only a modulating climate controller, capable of adjusting the delivery temperature from the boiler to obtain the desired room temperature with greatest efficiency: it also functions as a programmer, setting heating system parameters, including boilers in cascade and various low temperature zones.

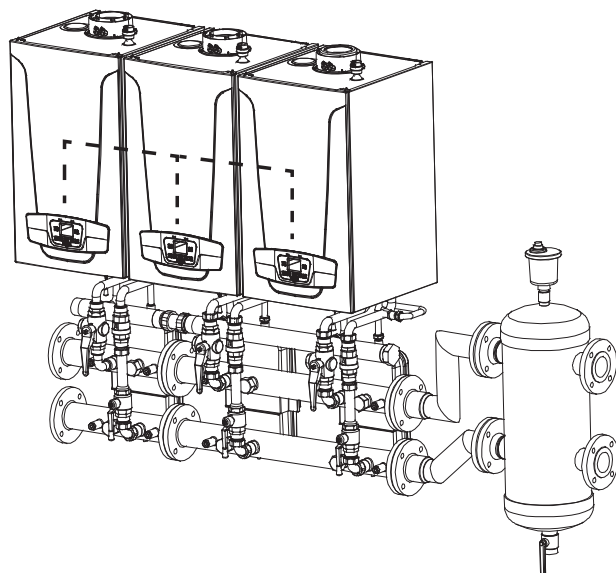


Bus module (OCI 345)



Code 7104408

The THINK interface for boilers in cascade (BUS MODULE) is an electronic device that allows the bus communication (two wires) between boilers in a cascade system or between a single boiler (or the cascade boiler system) and a mixed zone controller THINK.



Electronic accessories for installations

Programmable
clip-in module
THINK
(AGU 2.550)



Code 7100345

With this accessory the device can run: heating circuits at different temperatures, solar system and other specific applications (pools, sanitary recirculation pump etc.). This accessory can directly manage the circuit components (pump, temperature sensor, mixing valve etc.) up to a maximum of 3 independent relay outlets, 2 temperature sensors and 1 control inlet. Some predefined functions can be used.

Programmable
external module
THINK
(AVS 75)



Code 7105037

Use of the external module means that a heating system with max 16 boilers in cascade can be run, with separate storage for hot sanitary water where required. This accessory, connected to one of the boilers, can directly control the circuit components up to a max of 3 independent relay outlets, 2 inlet temperature sensors, 1 connector for limit thermostat in HV and one control inlet (for example TA).

Heating controller
for mixing zones THINK
(RVS 46)



Code 7105199

Heat regulation control unit to drive a mixing zone (usually low temperature). It can manage a mixing valve, a pump and the flow sensor of the controlled zone. It can also exchange data with the boiler board by means of the connection bus.

With this controller is always necessary to use the Remote Controller THINK for the programming.






BMS interface Kit



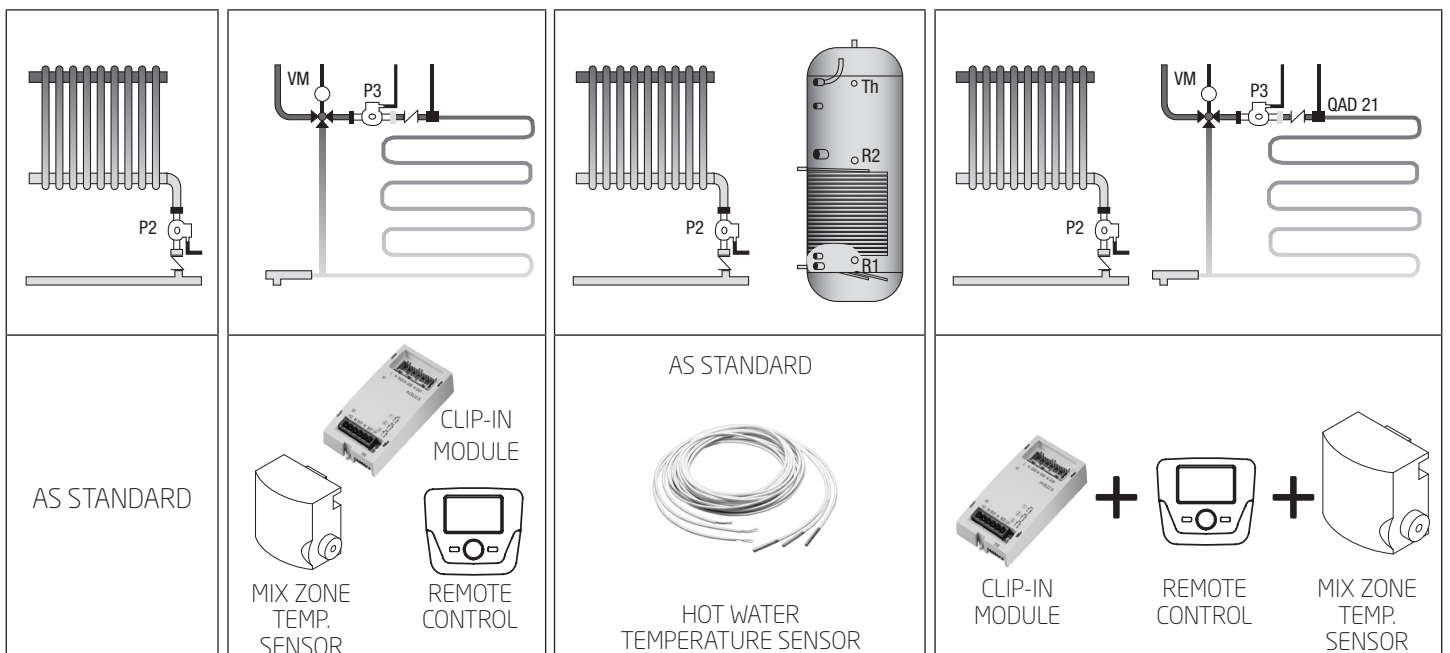
Code 7721218

The BMS interface kit is an accessory composed by a web server and a gateway, able to discover all the registers of the boilers connected to the Siemens OZW Web Interface and automatically configure them for use in a system adopting the following protocols : BACnet®1MS/TP, BACnet/IP, Modbus TCP/IP or Modbus RTU.

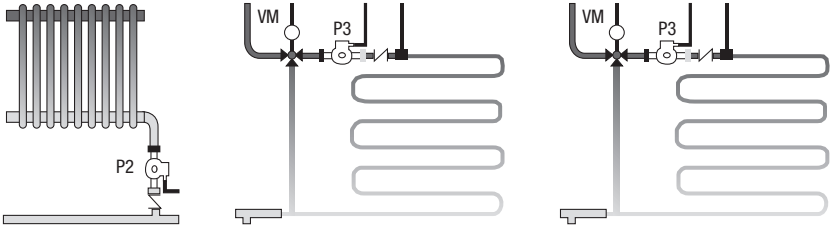
Use allowed with a maximum of four boilers in cascade.

	<p>Wireless Aerial Kit Code 7102343</p>	<p>This accessory permits installation of the outdoor sensor THINK (wireless) and/or Remote control THINK (wireless). If the 5 LED interface circuit with support is installed this accessory need not to be installed.</p>
	<p>Outdoor sensor THINK (QAC 34) Code 7104873 (wired) Code 7103027 (wireless)</p>	<p>Outdoor sensor is a temperature sensor which communicates to the boiler the temperature outside the dwelling so that the generator adapts the flow temperature to the effective needs of heating the environment as set by the user. Wireless model to be ordered with the wireless aerial (7102343).</p>
	<p>Flow sensor for clip-in module THINK (QAD 36) Code KHG71407891</p>	<p>This sensor is necessary to detect the delivery temperature of the mixed zones in the heating plant. It have to be connected to the THINK CLIP IN or external module.</p>
	<p>Hot water temperature sensor Code KHG71407681</p>	<p>This is the sensor that detects the DHW tank temperature.</p>
	<p>Sensor for solar controller Code LNC71000004</p>	<p>Sensor connected to the electronic platform THINK that detects the temperature of the solar collectors.</p>

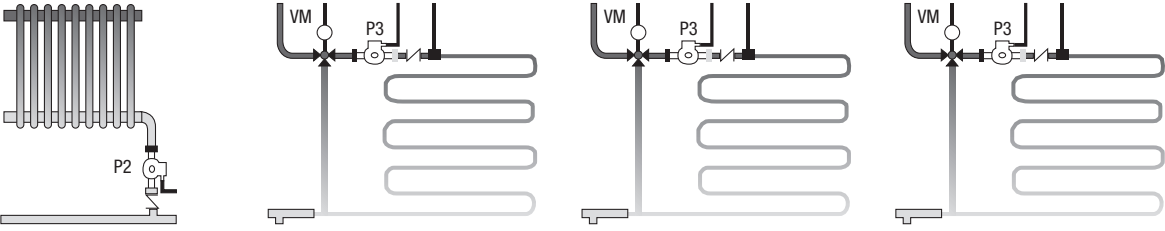
All the configurations must have the OUTDOOR SENSOR



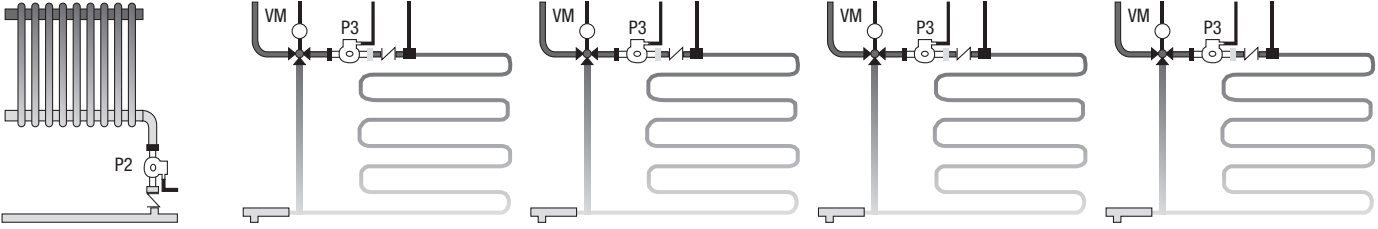
Luna Duo-tec MP/MP+



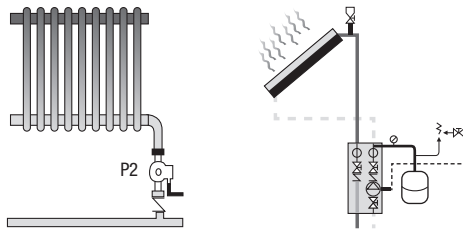
CLIP-IN MODULE + EXTERNAL MODULE + REMOTE CONTROL + n°2 MIX ZONE TEMP. SENSOR



CLIP-IN MODULE + n°2 EXTERNAL MODULE + REMOTE CONTROL + n°3 MIX ZONE TEMP. SENSOR



CLIP-IN MODULE + n°2 EXTERNAL MODULE + n°1 BUS MODULE + MIX ZONE CONTROL + n°2 REMOTE CONTROL + n°4 MIX ZONE TEMP. SENSOR



CLIP-IN MODULE

+



REMOTE CONTROL

+

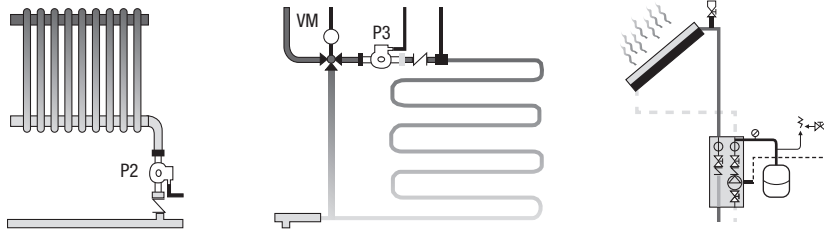


SOLAR TEMP. SENSOR

+



TANK TEMP. SENSOR



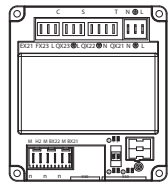
CLIP-IN MODULE

+



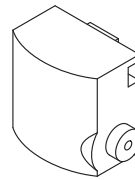
REMOTE CONTROL

+



EXTERNAL MODULE

+



MIX ZONE
TEMP. SENSOR

+



SENSOR FOR
SOLAR CONTROLLER

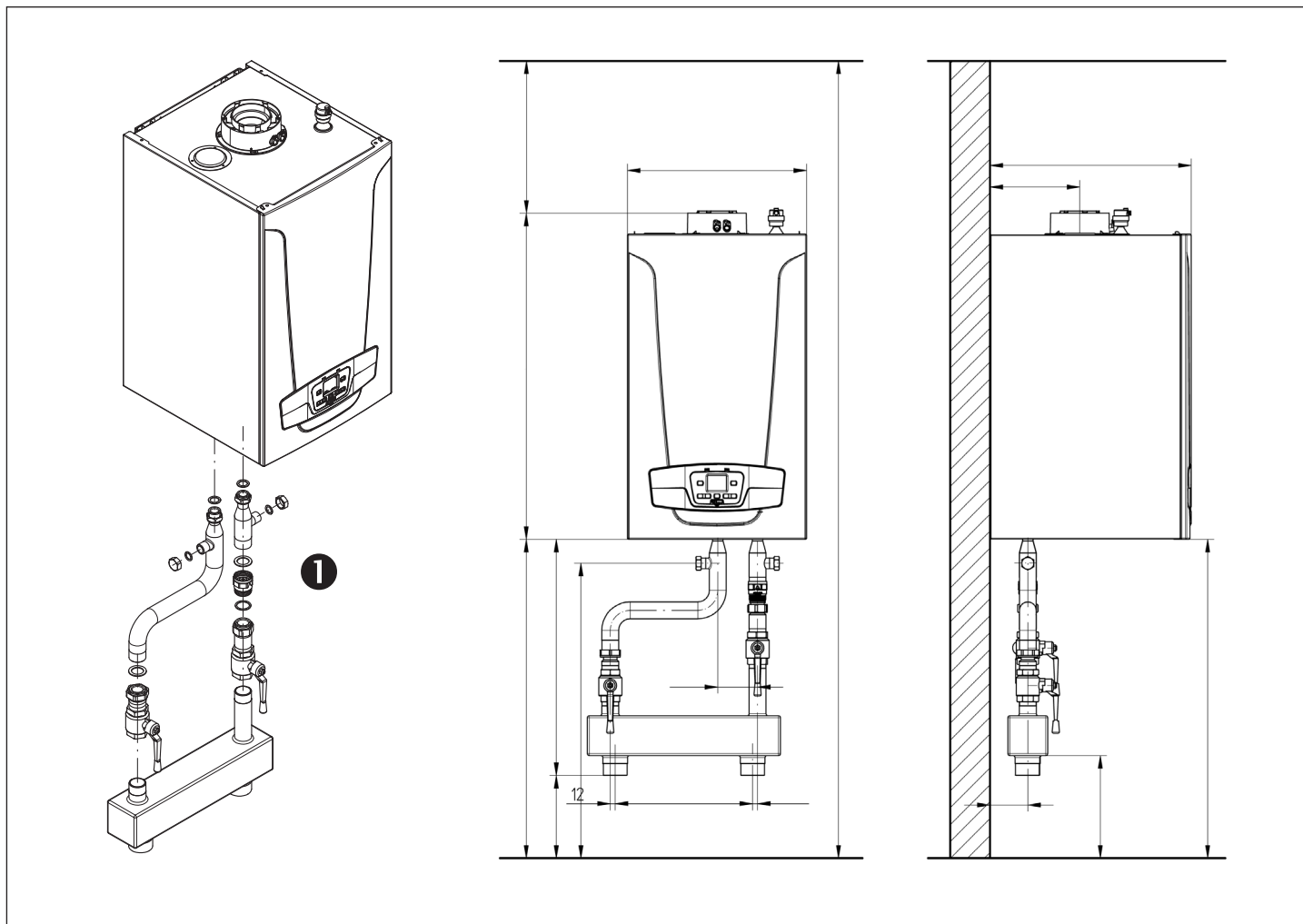
+



HOT WATER
TEMPERATURE SENSOR

Single installation

Luna Duo-tec MP/MP+ 1.35 - 1.50 - 1.60 - 1.70



A = 377 mm
mod. 1.50 - 1.60

505 mm - mod. 1.70

Installation kit

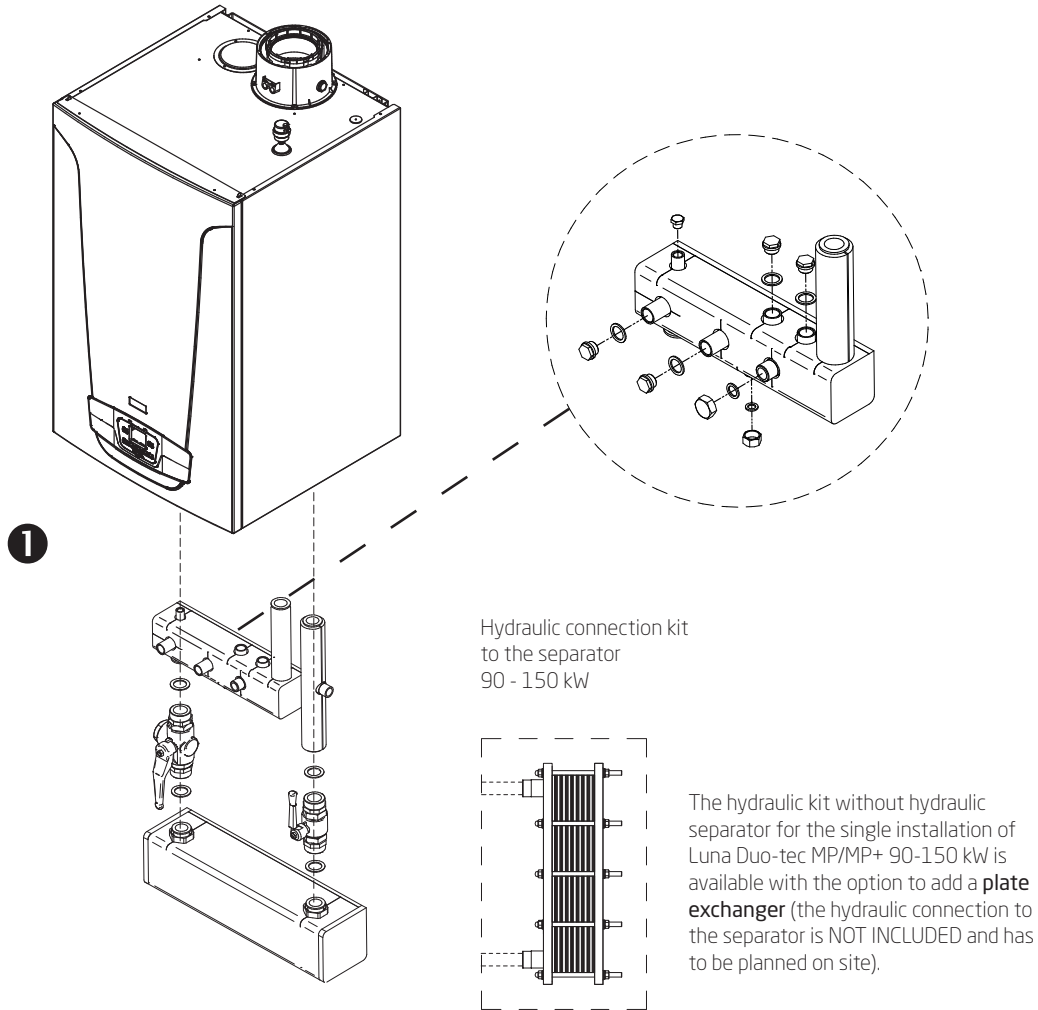
Hydraulic kit with hydraulic separator

1 Hydraulic kit with hydraulic separator for single installation 35 - 50 - 60 - 70 kW		
Models Luna Duo-tec MP/MP+	Code	Kit consisting of:
1.50-1.60-1.70	7111633	<ul style="list-style-type: none"> • flow manifold with safety valve fitting • flow shut-off valve (two way) • return shut-off valve (two way) • check valve • hydraulic separator (connections: 2" male threaded) • gaskets G 1 1/2" - G 1" - G 3/4"

Single installation

Luna Duo-tec MP/MP+ 1.90 - 1.110 - 1.115 - 1.130 - 1.150

Installation with dedicated accessory
without flow/return mainfolds



Installation kit

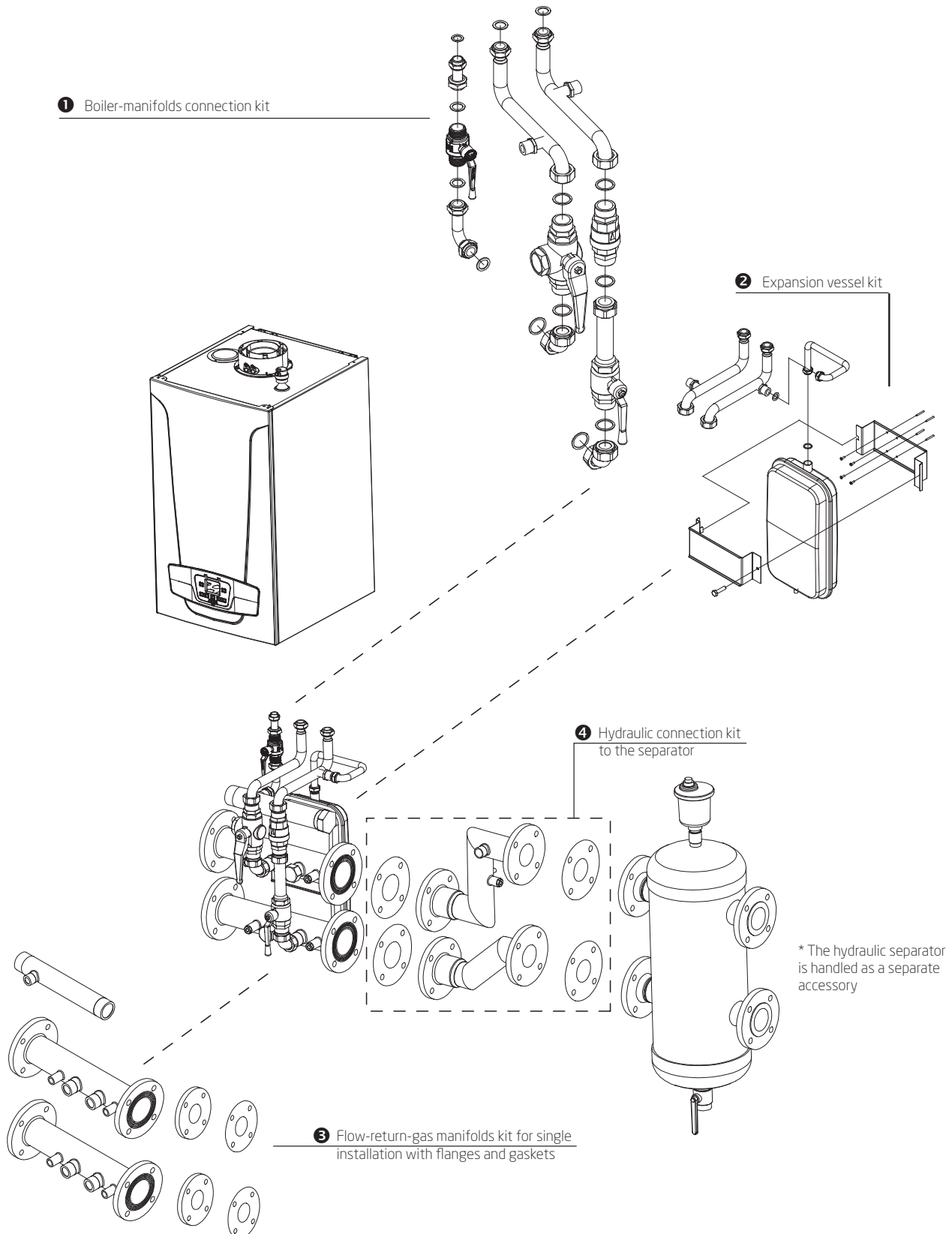
Hydraulic kit with hydraulic separator

1 Hydraulic kit with hydraulic separator for single installation 90 - 110 - 115 - 130 - 150 kW

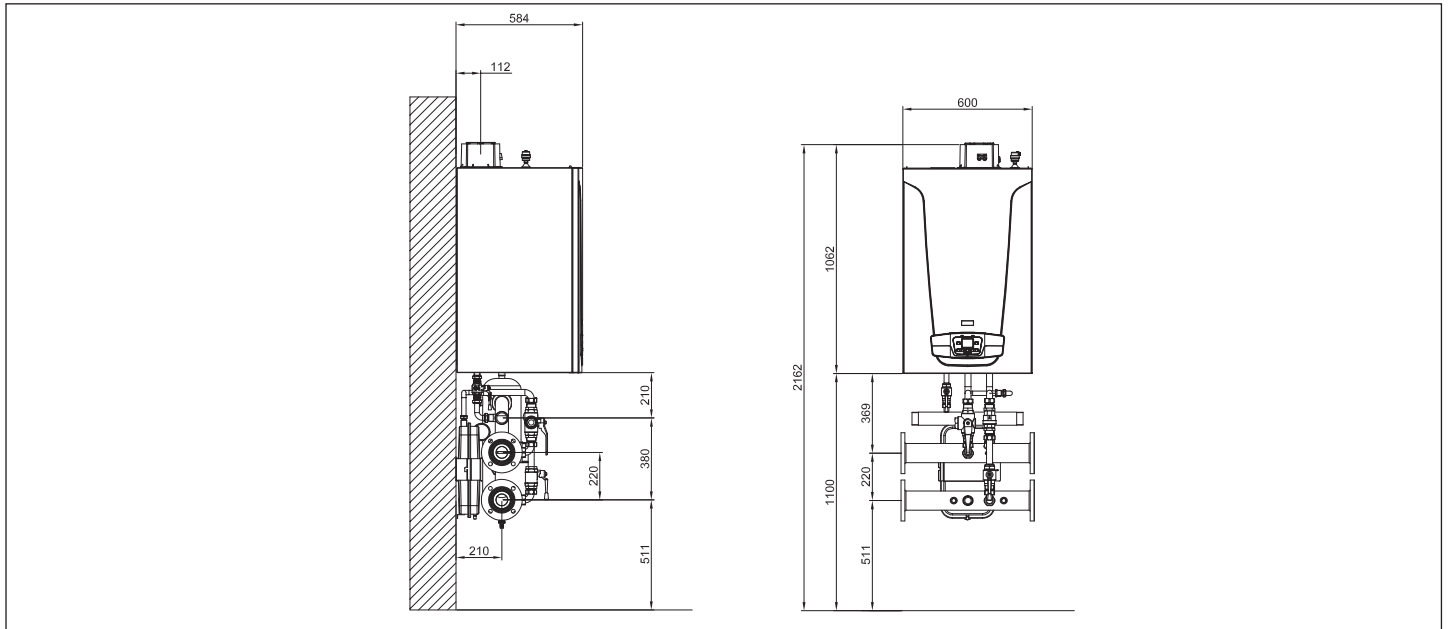
Models Luna Duo-tec MP/MP+	Code	Kit consisting of:
90-150 kW	7696021	<ul style="list-style-type: none"> • boiler connection pipes • horizontal hydraulic separator with square section (120mm x 120mm) • 3,5 bar check valve G$\frac{3}{4}$" • flow shut-off valve (3 way) • return shut-off valve (2 way) • gaskets G$1\frac{1}{2}$" - G1" - G$\frac{3}{4}$"

Single installation

Luna Duo-tec MP/MP+ 1.90 - 1.110 - 1.115 - 1.130 - 1.150



Dimensions and installation kit



1 Boiler-manifolds connection kit		
Models Luna Duo-tec MP/MP+	Code	Kit consisting of:
90-150 kW	7106783*	<ul style="list-style-type: none"> • gas manifold hook-up with tap • shutoff valve 3 way in delivery G1-1/4" • shutoff valve 2 way on return G1-1/4" • cap G1-1/4" and gaskets • check valve nipples G1-1/4" • expansion vessel connector
2 Expansion vessel kit		
Models Luna Duo-tec MP/MP+	Code	Kit consisting of:
90-150 kW	7105838	<ul style="list-style-type: none"> • boiler-extension tank connection pipe • 10 litres expansion vessel • expansion vessel support brackets
3 Flow-return-gas manifolds kit for single installation with flanges and gaskets		
Models Luna Duo-tec MP/MP+	Code	Kit consisting of:
90-150 kW	7662214▲	<ul style="list-style-type: none"> • gas manifold 2" • delivery manifold 3" DN80 PN6 • return manifold 3" DN80 PN6 • flanges and gaskets • insulation kit for single boiler flow/return manifolds
4 Hydraulic connection kit to the separator kit		
Models Luna Duo-tec MP+ 90-150 kW	Code	Kit consisting of:
Hydraulic connection kit to the separator G2" 8,5 m³/h	7218613	<ul style="list-style-type: none"> • flow/return manifolds to separator, with insulation, flanges and gaskets kit
Hydraulic connection kit to the separator DN65 18 m³/h	7218614	
Hydraulic connection kit to the separator DN65 28 m³/h	7218615	

For further details on hydraulic separators see the relevant section on page 39.

* Boiler - manifolds connection kit for boilers 90-150 kW without gas line cod. 7108862

▲ Flow - return-gas connection kit for single boilers 90-150 kW without gas line cod. 7662218


















Coaxial flue system accessories Ø80/125

Luna Duo-tec MP/MP+ 1.35-1.70

Picture	Description	Code
	PP coaxial flue system Ø 80/125 1040 mm it includes external sealing collar	KHG 71408891
	PP coaxial pipe extension Ø 80 L=1000 mm	KHG 71408851
	PP coaxial pipe extension Ø 80 L=500 mm	KHG 71408861
	PP 90° coaxial bend Ø 80/125	KHG 71408871
	PP 45° coaxial bend Ø 80/125	KHG 71408881
	Coaxial vertical chimney terminal Ø80/125 1150 mm	KHG 71409351
	Flat roof tile Ø 125 to be used with a vertical chimney terminal	KHG 71409361
	Pitched roof tile Ø 125 to be used with a vertical chimney terminal; it is adjustable from 15° to 45°	KHG 71409371







Dual flue system accessories Ø80

Luna Duo-tec MP/MP+ 1.35-1.70

Picture	Description	Code
	PP dual flue system Ø 80 it includes: flue reduction, intake connection	KHG 71408901
	PP pipe extension Ø 80 L=1000 mm	KHG 71405941
	PP pipe extension Ø 80 L=500 mm	KHG 71405991
	PP pipe extension Ø 80 L=250 mm	7107183
	PP 87° bend Ø 80	KHG 71405921
	PP 45° bend Ø 80	KHG 71405931
	Pipe Ø 80 centring kit (pack of 5)	KHG 71403741
	Clamp centring kit Ø 80	KHG 71410611
	Pipe Ø 80 supporting bracket (pack of 5)	KHG 71403731
	Internal sealing collar Ø 80	KHG 71401851
	External sealing collar Ø 80	KHG 71401841
	Coaxial vertical chimney terminal 80/125	KHG 71409351
	Dual flue pipes adapter for coaxial chimney	KHG 71409381
	Flue terminal Ø 80	LSD 79000015
	Dual flue terminal Ø 80	KHG 71401041
	Flat roof tile Ø 125 to be used with a vertical chimney terminal	KHG 71409361
	Pitched roof tile Ø 125 to be used with a vertical chimney terminal; it is adjustable from 15° to 45°	KHG 71409371







Flexible ducting system accessories

Luna Duo-tec MP/MP+ 1.35-1.70

Picture	Description	Code
	PP flexible pipe Ø 80 L= 1,5 m	KHG 71410571
	PP flexible pipe Ø 80 L= 20 m	KHG 71410581
	PP tee joint Ø 80 with supporting bracket and condensate drainings	KHG 71410591
	PP 90° bend Ø 80 with supporting bracket	KHG 71410601
	Flexible centring kit Ø 80 (pack of 3)	KHG 71410621
	Triple lips gaskets kit Ø 80 (pack of 5)	KHG 71411121



Coaxial flue system accessories Ø110/160

Power HT+ 1.90-1.150

Picture	Description	Code
	PP coaxial pipe extension Ø 80 L=1000 mm	KUG 71413381
	PP coaxial pipe extension Ø 80 L=500 mm	KUG 71413371
	PP 90° coaxial bend Ø 80/125	KUG 71413361
	PP 45° coaxial bend Ø 80/125	KUG 71413351
	Coaxial vertical chimney terminal Ø110/160 1150 mm	KUG 71413341
	Coaxial horizontal chimney terminal Ø110/160 1000 mm	KUG 71413331








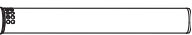


Coaxial flue system accessories Ø110/160

Power HT+ 1.90-1.150

Picture	Description	Code
	Flat roof tile Ø 160 to be used with a vertical chimney terminal	KHG 71410481
	Pitched roof tile Ø 160 to be used with a vertical chimney terminal; it is adjustable from 15° to 45°	KHG 71410491

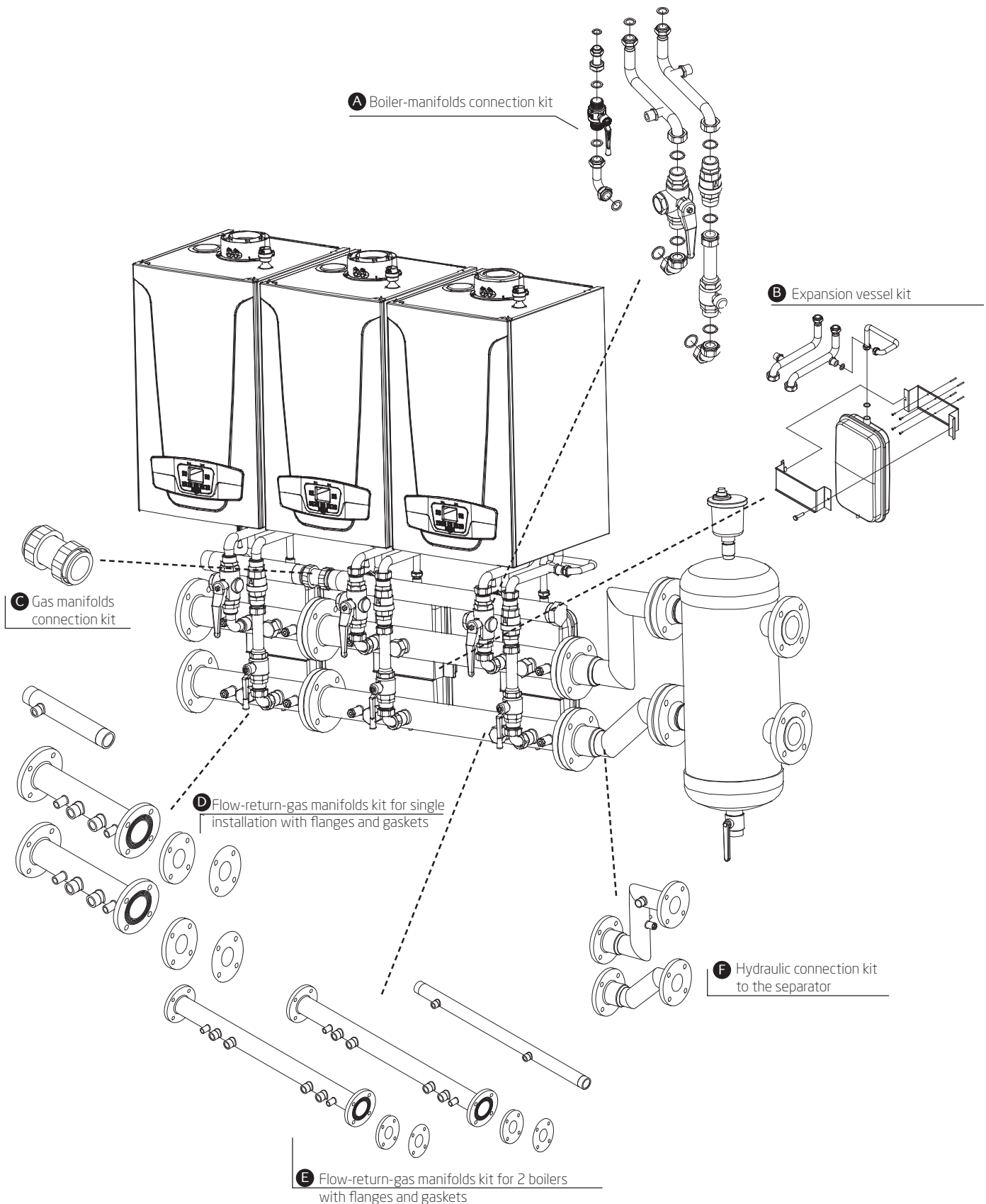
Dual flue system accessories Ø 110

Luna Duo-tec MP/MP+ 1.90 -1.150

Picture	Description	Code
	PP dual flue kit Ø 110/110	7106314
	PP pipe extension Ø 110 L=1000 mm	KUG 71413321
	PP pipe extension Ø 110 L=500 mm	KUG 71413311
	PP pipe extension Ø 110 L=250mm	7107185
	PP 90° bend Ø 110	KUG 71413301
	PP 45° bend Ø 110	KUG 71413291
	PP vertical chimney terminal Ø 110	KUG 71413281
	PP horizontal chimney terminal Ø 110	KUG 71413271
	Flat roof tile to be used with a vertical chimney terminal Ø 110/160	KHG 71410481
	Pitched roof tile to be used with a vertical chimney terminal 110/160; it is adjustable from 15° to 45°	KHG 71410491

Cascade installation

Luna Duo-tec MP/MP+ 1.35-1.150 boilers



Accessories, 2 boilers in cascade

	Code	70kW	100kW	120Kw	140Kw	180Kw	200Kw	220Kw	260 Kw	300 Kw
BOILERS	Luna Duo-tec MP/MP+ 1.35	7106815/7221291	2							
	Luna Duo-tec MP/MP+ 1.50	7104050/7221292		2						
	Luna Duo-tec MP/MP+ 1.60	7104051/7221293			2	2				
	Luna Duo-tec MP/MP+ 1.70	7104052/7221294				2				
	Luna Duo-tec MP/MP+ 1.90	7104651/7221295					2	1		
	Luna Duo-tec MP/MP+ 1.110	7104652/7221296						1	2	
	Luna Duo-tec MP+ 1.130	7671757							2	
	Luna Duo-tec MP+ 1.150	7685036								2
THERMOREGULATION	Outdoor sensor THINK (QAC 34)	7104873	1	1	1	1	1	1	1	1
	Interface kit for boilers in cascade THINK (BUS MODULE OCI 345)	7104408	2	2	2	2	2	2	2	2
	Remote control THINK	7102442	1	1	1	1	1	1	1	1
	Hot water temperature sensor	KHG 71407681	1	1	1	1	1	1	1	1
	Flow sensor (QAD 36)	KHG 71407891	1	1	1	1	1	1	1	1
<i>Optional programmable external module THINK (AVS 75) in case of multiple zones</i>	7105037	1 to 3								
HYDRAULIC ACCESSORIES	Flow-return-gas manifolds kit for 2 boilers 50-60-70 kW with flanges and gaskets	Ⓔ 7662215*	1	1	1	1				
	Flow-return-gas manifolds kit for 2 boilers 90-150 kW with flanges and gaskets	Ⓔ 7662216*					1	1	1	1
	Expansion vessel kit	Ⓑ 7105838	2	2	2	2	2	2	2	2
	Boiler-manifolds connection kit 50-60-70 kW	Ⓐ 7106738▲	2	2	2	2				
	Boiler-manifolds connection kit 90-150 kW	Ⓐ 7106783▲					2	2	2	2
	Hydraulic connection kit to the separator 8,5 m³/h G2")	7218613	1	1						
	Hydraulic separator 8,5 m³/h G2"	LSD 79000031	1	1						
	Hydraulic connection kit to the separator 18 m³/h DN65 (ΔT 20°C)	Ⓕ 7218614			1	1	1	1	1	1
Hydraulic separator 18 m³/h DN65 (ΔT 20°C)	Ⓕ LSD 79000032			1	1	1	1	1	1	
FLUE ACCESSORIES	Shutter kit Ø110/80 with condensing trap	7106820	2	2	2	2				
	Shutter kit Ø110/110 with condensing trap	7106821					2	2	2	
	Flue pipe kit for 2 boilers Ø125/110	7107168	1	1	1	1				
	Flue pipe kit for 2 boilers Ø160	7107152					1	1	1	
	PP Pipe extension Ø110 L=250mm	7107185					2	2	2	
Flue pipe kit for 2 boilers Ø160 130-150 kW	A7716634								1	1

* Flow-return manifolds kit for 2 boilers without gas line 50-70 kW cod. 7662219 / 90-150kW cod. 7662220

▲ Boiler-manifolds connection kit without gas line 50-70 kW cod. 7108861 / 90-150kW cod. 7108862

Accessories, 3 boilers in cascade

	Code	105 Kw	150 Kw	180 Kw	210 Kw	270 Kw	290 Kw	330 Kw	390 Kw	450 Kw	
BOILERS	Luna Duo-tec MP/MP+ 1.35	7106815/7221291	3								
	Luna Duo-tec MP/MP+ 1.50	7104050/7221292		3							
	Luna Duo-tec MP/MP+ 1.60	7104051/7221293			3						
	Luna Duo-tec MP/MP+ 1.70	7104052/7221294				3					
	Luna Duo-tec MP/MP+ 1.90	7104651/7221295					3	2			
	Luna Duo-tec MP/MP+ 1.110	7104652/7221296						1	3		
	Luna Duo-tec MP+ 1.130	7671757								3	
	Luna Duo-tec MP+ 1.150	7685036									3
THERMOREGULATION	Outdoor sensor THINK (QAC 34)	7104873	1	1	1	1	1	1	1	1	
	Interface kit for boilers in cascade THINK (BUS MODULE OCI 345)	7104408	3	3	3	3	3	3	3	3	
	Remote control THINK	7102442	1	1	1	1	1	1	1	1	
	Hot water temperature sensor	KHG 71407681	1	1	1	1	1	1	1	1	
	Flow sensor (QAD 36)	KHG 71407891	1	1	1	1	1	1	1	1	
	Optional programmable external module THINK (AVS 75) in case of multiple zones	7105037	1 to 3								
HYDRAULIC ACCESSORIES	Flow-return-gas manifolds kit for 2 boilers 50-60-70 kW	Ⓔ 7662215*	1	1	1	1					
	Flow-return-gas manifolds kit for 1 boiler 50-60-70 kW	Ⓓ 7662213■	1	1	1	1					
	Flow-return-gas manifolds kit for 2 boilers 90-150 kW	Ⓔ 7662216*					1	1	1	1	
	Flow-return-gas manifolds kit for 1 boiler 90-150 kW	Ⓓ 7662214■					1	1	1	1	
	Expansion vessel kit	Ⓑ 7105838	3	3	3	3	3	3	3	3	
	Connection between gas manifolds	Ⓒ 7105832	1	1	1	1	1	1	1	1	
	Boiler-manifolds connection kit 50-60-70 kW	Ⓐ 7106738▲	3	3	3	3					
	Boiler-manifolds connection kit 90-150 kW	Ⓐ 7106783▲					3	3	3	3	
	Hydraulic connection kit to the separator 18 m³/h DN65 (ΔT 20°C)	7218614	1	1	1	1					
	Hydraulic separator 18 m³/h DN65 (ΔT 20°C)	LSD79000032	1	1	1	1					
	Hydraulic connection kit to the separator separator 28 m³/h DN80 (ΔT 20°C)	7218615					1	1	1	1	
	Hydraulic separator 28 m³/h DN80 (ΔT 20°C)	LSD79000033					1	1	1	1	
	FLUE ACCESSORIES	Shutter kit Ø110/80 with condensing trap	7106820	3	3	3	3				
Shutter kit Ø110/110 with condensing trap		7106821					3	3	3		
Flue pipe kit for 2 boilers Ø125/110		7107168	1	1	1						
Flue pipe kit for 2 boilers Ø160		7107152				1	1	1	1		
Flue pipe kit for the 3 rd boiler Ø125		7107177	1	1	1						
Flue pipe kit for the 3 rd boiler Ø160		7107163				1	1	1	1		
PP Pipe extension Ø110 L=250mm		7107185	1	1	1	1	3	3	3		
Flue pipe kit for 2 boilers Ø160 130-150 kW		A7716634								1	1
Flue pipe kit for the 3 rd boiler with shutter Ø250 130-150 kW		A7716635								1	1

* Flow-return manifolds kit for 2 boilers without gas line 50-70 kW cod. 7662219 / 90-150kW cod. 7662220
 ■ Flow-return manifolds kit for single boiler without gas line 50-70 kW cod. 7662217 / 90-150kW cod. 7662218
 ▲ Boiler-manifolds connection kit without gas line 50-70 kW cod. 7108861 / 90-150kW cod. 7108862

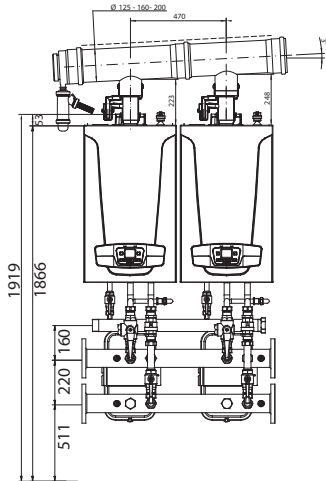
Accessories, 4 boilers in cascade

	Code	140 Kw	200 Kw	240 Kw	280 Kw	360 Kw	440 Kw	520 Kw	600 Kw
BOILERS	Luna Duo-tec MP/MP+ 1.35	7106815/7221291	4						
	Luna Duo-tec MP/MP+ 1.50	7104050/7221292		4					
	Luna Duo-tec MP/MP+ 1.60	7104051/7221293			4				
	Luna Duo-tec MP/MP+ 1.70	7104052/7221294				4			
	Luna Duo-tec MP/MP+ 1.90	7104651/7221295					4		
	Luna Duo-tec MP/MP+ 1.110	7104652/7221296						4	
	Luna Duo-tec MP+ 1.130	7671757							4
	Luna Duo-tec MP+ 1.150	7685036							4
THERMOREGULATION	Outdoor sensor THINK (QAC 34)	7104873	1	1	1	1	1	1	1
	Interface kit for boilers in cascade THINK (BUS MODULE OCI 345)	7104408	4	4	4	4	4	4	4
	Remote control THINK	7102442	1	1	1	1	1	1	1
	Hot water temperature sensor	KHG 71407681	1	1	1	1	1	1	1
	Flow sensor (QAD 36)	KHG 71407891	1	1	1	1	1	1	1
	Optional programmable external module THINK (AVS 75) in case of multiple zones	7105037	1 to 3						
HYDRAULIC ACCESSORIES	Flow-return-gas manifolds kit for 2 boilers 50-60-70 kW	Ⓔ 7662215*	2	2	2	2			
	Flow-return-gas manifolds kit for 2 boilers 90-150 kW	Ⓔ 7662216*					2	2	2
	Expansion vessel kit	Ⓑ 7105838	4	4	4	4	4	4	4
	Connection between gas manifolds	Ⓒ 7105832	1	1	1	1	1	1	1
	Boiler-manifolds connection kit 50-60-70 kW	Ⓐ 7106738^	4	4	4	4			
	Boiler-manifolds connection kit 90-150 kW	Ⓐ 7106783^					4	4	4
	Hydraulic connection kit to the separator 18 m³/h DN65 (ΔT 20°C)	7218614	1	1	1				
	Hydraulic separator 18 m³/h DN65 (ΔT 20°C)	LSD79000032	1	1	1				
	Hydraulic connection kit to the separator 28 m³/h DN80 (ΔT 20°C)	7218615				1	1	1	
	Hydraulic separator 28 m³/h DN80 (ΔT 20°C)	LSD79000033				1	1	1	
	Hydraulic separator 56 m³/h DN100 (ΔT 20°C)	LSD79000034							1
FLUE ACCESSORIES	Shutter kit Ø110/80 with condensing trap	7106820	4	4	4	4			
	Shutter kit Ø110/110 with condensing trap	7106821					4	4	
	Flue pipe kit for 2 boilers Ø125/110	7107168	1						
	Flue pipe kit for 2 boilers Ø160	7107152		1	1				
	Flue pipe kit for 2 boilers Ø200	7107156				1	1	1	
	Flue pipe kit for 3 boilers Ø200	7107164				2	2	2	
	Flue pipe kit for 2 boilers Ø160 130-150 kW	A7716634							1
	Flue pipe kit for the 3 rd boiler with shutter Ø250 130-150 kW	A7716635							1
	Flue pipe kit for the 4 th boiler with shutter Ø250 130-150 kW	A7716636							1

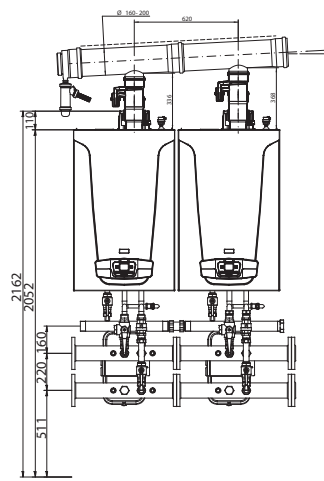
* Flow-return manifolds kit for 2 boilers without gas line 50-70 kW cod. 7662219 / 90-150kW cod. 7662220
 ■ Flow-return manifolds kit for single boiler without gas line 50-70 kW cod. 7662217 / 90-150kW cod. 7662218
 ▲ Boiler-manifolds connection kit without gas line 50-70 kW cod. 7108861 / 90-150kW cod. 7108862

Cascade installation dimensions

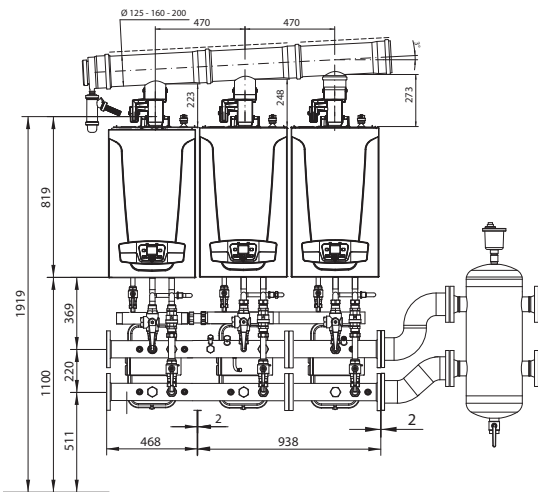
Luna Duo-tec MP/MP+ 1.35 -1.50 - 1.60 - 1.70



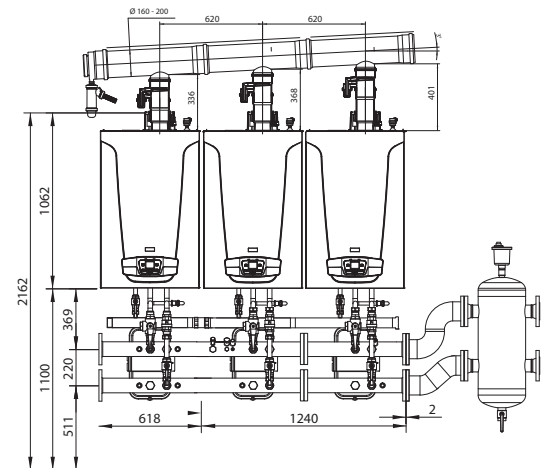
Luna Duo-tec MP/MP+ 1.90 - 1.110 -1.115- 1.130 - 1.150



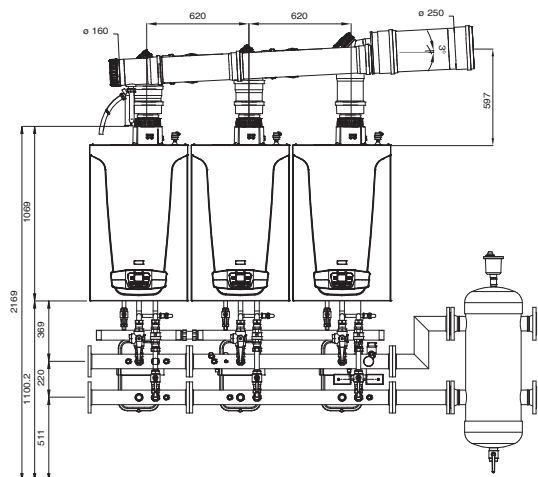
Luna Duo-tec MP/MP+ 1.35 -1.50 - 1.60 - 1.70



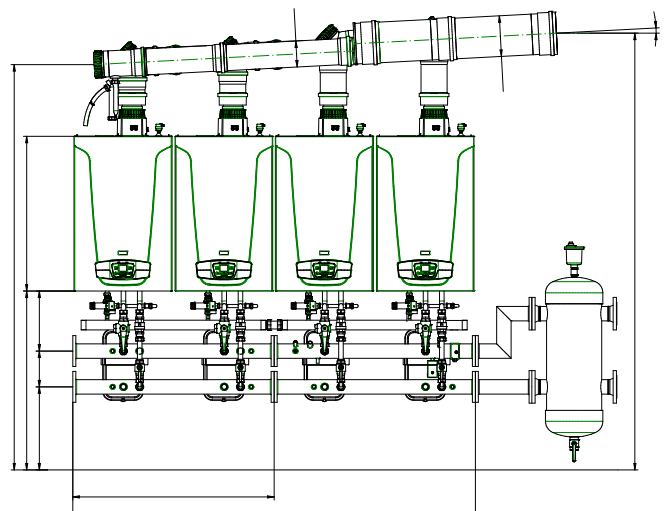
Luna Duo-tec MP/MP+ 1.90 - 1.110



Luna Duo-tec MP/MP+ 1.115 -1.130 - 1.150



Luna Duo-tec MP/MP+ 1.115 -1.130 - 1.150







The cascade systems are composed by different hydraulic accessories: boiler-manifolds connection kit; flow-return-gas manifolds for single boiler; flow-return-gas manifolds for two boilers; expansion vessel kit; gas manifolds connection kit; manifold hydraulic kit for hydraulic separator.

Flue accessories

Cascade installation Luna Duo-tec MP/MP+ 1.35 - 1.110



Picture	Description	Code
	PP flue pipe kit Ø 160 for two boilers	7107152
	PP flue pipe kit Ø 200 for two boilers	7107156
	PP flue pipe kit Ø 160 for the third boiler	7107163
	PP flue pipe kit Ø 200 for the third boiler	7107164
	PP 87° bend Ø 160	KHW 71409781
	PP 87° bend Ø 200	KHW 71409821
	PP extension Ø 160 L=1000 mm	KHW 71409771
	PP extension Ø 110 L=250 mm	7107185
	PP extension Ø 200 L=1000 mm	KHW 71409811

Cascade installation Luna Duo-tec MP/MP+ 1.35 - 1.50 - 1.60 - 1.70

Picture	Description	Code
	PP flue pipe kit for two boilers Ø 125	7107168
	PP flue pipe kit Ø 125 for the third boiler	7107177
	PP 87° bend Ø 125	KHG 71409441
	PP 45° bend Ø 125 (pack of 2)	KHG 71409451

Flue accessories




Cascade installation Luna Duo-tec MP/MP+ 1.35 - 1.50 - 1.60 - 1.70

Picture	Description	Code
	PP extension Ø 125 L=1000 mm	KHG 71409461
	PP shutter kit Ø 110/80 with condensing trap	7106820

Cascade installation Luna Duo-tec MP/MP+ 1.90 - 1.110

Picture	Description	Code
	Shutter kit Ø 110/110 with condensing trap	7106821

Cascade installation Luna Duo-tec MP/MP+ 1.115 - 1.150

Picture	Description	Code
	Flue pipe kit for 2 boilers Ø160 130-150 kW	A7716634
	Flue pipe kit for the third boiler with shutter Ø250 130-150 kW	A7716635
	Flue pipe kit for the fourth boiler with shutter Ø250 130-150 kW	A7716636

Information required for the installation

The installation must satisfy the requirements of UNI and CEI standards and local by-laws and technical regulations. Moreover, the installation technician must be qualified to install heating appliances. Additionally, bear in mind the following:

- The boiler can be used with any kind of convector plate, radiator or thermoconvector. Design the system sections as usual, though, bearing in mind the available capacity-head at the plate.
- Initial ignition of the boiler must be carried out by the Authorised Service Center.

LOCATION

LUNA DUO-TEC MP/MP+ condensing boilers must be installed in premises protected from frost, which can also be ventilate, they must never be installed above a heat source or a cooking appliance.

The IPX5D protection index enables them to be installed in kitchens and bathrooms, excluding protection volumes 1 and 2, however. The wall to which the boiler is secured must be capable of bearing the weight of the boiler when full of water.

VENTILATION (CHIMNEY CONNECTION ONLY B23)

The cross-section of the boiler room ventilation (through which combustive air is taken in) must comply with the prevailing standard. N.B.: For boilers connected to a concentric forced flue (type C13 or C33 connections) ventilation of the installation premises is not necessary, unless the gas supply includes one or more mechanical connections (see prevailing standard).

VENTILATION

Direct air inlet according to the prevailing standard. Top and bottom ventilation vents mandatory

TOP VENTILATION:

Cross section equal to half of the total cross section of the flue gas conduits with a minimum of 2,5 dm²

BOTTOM VENTILATION

Direct air inlet

$$S \text{ (dm}^2\text{)} \geq 0,86P/20 \text{ with } P = \text{installed output in kW}$$

The location of air inlets in relation to the top ventilation openings will ensure that air is renewed in the entire volume of the boiler room.

In order to avoid damage to boilers, it is necessary to prevent the contamination of combustion air by chloride and/or fluoride compounds, which are particularly corrosive.

These compounds are present, for example, in aerosol spray cans, paints, solvents, cleaning products, washing powders/liquids, detergents, glues, snow cleaning salts, etc.

It is therefore necessary:

- To avoid sucking in air discharged from premises using such products: hairdresser, dry cleaners, industrial premises (solvents), premises containing refrigeration systems (risk of leaking refrigeration fluids), etc.
- To avoid the storage of such products close to boilers.

GAS CONNECTION

Compliance with prevailing instructions and regulations is mandatory. In all cases, a sectional valve must be fitted as close as possible to the boiler. A gas filter should be fitted to the boiler inlet.

The diameters of the pipes must be defined according to the prevailing regulations.

Gas supply pressure:

- 20 mbar on Natural Gas
- 37 mbar on propane

ELECTRICAL CONNECTION

The boiler is only electrically safe if it is correctly connected to an efficient earth system in compliance with current safety regulations. Connect the boiler to a 230V single-phase earthed power supply using the supplied three-pin cable, observing correct Live-Neutral polarity.

Use a double-pole switch with a contact separation of at least 3 mm.

Note:

- The sensor cables must be separated from the 230 V circuits by at least 10 cm
- In order to protect the pump antifreeze and cleaning functions, we recommend not switching off the boiler at the mains switch.

HEATING PLANT

The principle of a condensing boiler is to recycle the energy contained in the water vapour in the combustion gases (latent vaporisation heat). Consequently, to achieve an annual operating efficiency in the order of 110%, it is necessary to size the heating surfaces in such a way as to obtain low return temperatures, below the dew point (e.g. underfloor heating, low temperature radiators, etc.) during the entire heating period.

CONDENSING DISCHARGE

It must be connected to the waste water discharge system. The connection must be removable and the flow of condensates visible. The connections and pipes must be in corrosion-resistant material. Condensates neutralisation stations are available as optional equipment.

REQUIREMENTS ON HEATING WATER

- pH: 6.5 to 8.5
- Chloride content < 50 mg/l
- Conductivity < 500 S/cm to 25°C

Flue system - single installation

The boiler can be easily installed thanks to the flue accessories provided by BAXI, which offer a great flexibility of use.

The product is certified for the following flue types:

B₂₃ – C₁₃ – C₃₃ – C₄₃ – C₅₃ – C₆₃ – C₈₃ – C₉₃

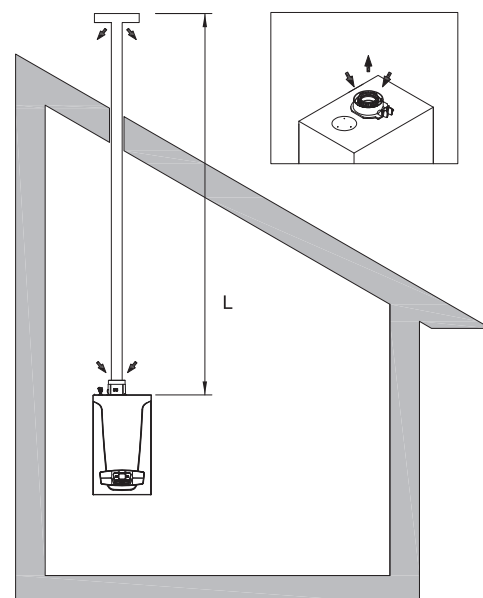
C₆₃ The maximum pressure drop in the pipes ΔP not provided by BAXI must not exceed the values given in the table below.

Flue type	C ₆₃	
	Fan pressure drop (*) [Pa]	Flue pipe Ø [mm]
Luna Duo-tec MP/MP+ 1.35	160	80
Luna Duo-tec MP/MP+ 1.50	270	80
Luna Duo-tec MP/MP+ 1.60	270	80
Luna Duot-ec MP/MP+ 1.70	270	80
Luna Duo-tec MP/MP+ 1.90	200	110
Luna Duo-tec MP/MP+ 1.110	200	110
Luna Duo-tec MP+ 1.115	200	110
Luna Duo-tec MP+ 1.130	180	110
Luna Duo-tec MP+ 1.150	270	110

In case of installation of flue pipe not provided by BAXI, the pipes must be certified for this type of use and for a temperature higher than 100°C. The terminal part of the flue gas pipe must be certified as complying with the EN 1856-1 standard.

B₂₃ The below table shows the maximum length of the flue pipe connected to a chimney using flue systems provided by BAXI and air taken from the boiler room.

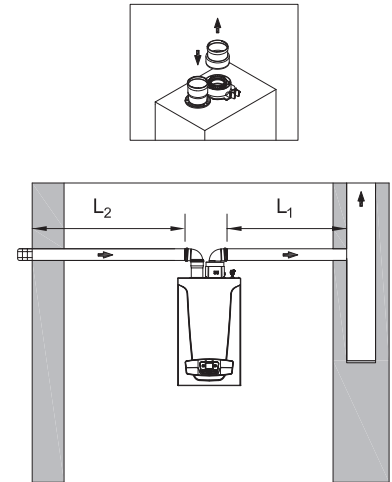
Flue type	B ₂₃ VERTICAL	
	Flue pipe Ø [mm]	Maximum length L [m]
Luna Duo-tec MP/MP+ 1.35	80	60
Luna Duo-tec MP/MP+ 1.50	80	60
Luna Duo-tec MP/MP+ 1.60	80	40
Luna Duot-ec MP/MP+ 1.70	80	30
Luna Duo-tec MP/MP+ 1.90	110	27
Luna Duo-tec MP/MP+ 1.110	110	27
Luna Duo-tec MP+ 1.115	110	20
Luna Duo-tec MP+ 1.130	110	20
Luna Duo-tec MP+ 1.150	110	20



Luna Duo-tec MP/MP+

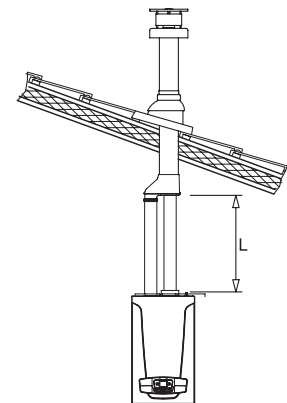
C₅₃ The maximum length of the dual inlet/outlet pipes provided by BAXI are shown in the table below.

Flue type	C ₅₃		
	HORIZONTAL		
	Dual flue Ø [mm]	Maximum length L ₁ +L ₂ [m]	Inlet pipe maximum length L ₂ [m]
Luna Duo-tec MP/MP+ 1.35	80+80	60	15
Luna Duo-tec MP/MP+ 1.50	80+80	60	15
Luna Duo-tec MP/MP+ 1.60	80+80	40	15
Luna Duo-tec MP/MP+ 1.70	80+80	30	15
Luna Duo-tec MP/MP+ 1.90	110+110	27	7
Luna Duo-tec MP/MP+ 1.110	110+110	27	7
Luna Duo-tec MP+ 1.115	110+110	20	10
Luna Duo-tec MP+ 1.130	110+110	20	10
Luna Duo-tec MP+ 1.150	110+110	20	10



Do not fit the flue and air duct terminals on opposite walls of the building.

Flue type	C ₅₃	
	VERTICAL	
	Dual flue Ø [mm]	Maximum length L [m]
Luna Duo-tec MP+ 1.35-1.50-1.60-1.70	80+80	15
Luna Duo-tec MP+ 1.90-1.110-1.115-1.130-1.150	110+110	15



For flue pipes provided by BAXI (flue type B23 and C53):

- the insertion of a 90° bend reduces the total length of the pipe by 0,5 meter.
- the insertion of a 45° bend reduces the total length of the pipe by 0,25 meter.
- the first 90° bend is not taken into account in calculating the maximum length available.

Note: the minimum slope of the flue pipe toward the boiler must be 5 cm every meter of length.

Caution for other flue installation types:

C₁₃: The terminal parts of the singled-up flue pipe must be installed in a 50 cm square.

C₃₃: The terminal parts of the singled-up flue pipe must be installed inside a 50 cm square.

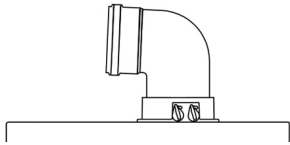
C₄₃: The chimney or flue pipe must be suitable for such use.

C₈₃: The chimney or flue pipe must be suitable for such use.

Pipes maximum lengths are subjected to technical evaluation and must meet the requirements of the prevailing installation standards in the country.

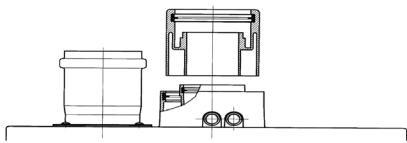
Flue installation requirements

Single installation Luna Duo-tec MP/MP+ 35 - 70 kW



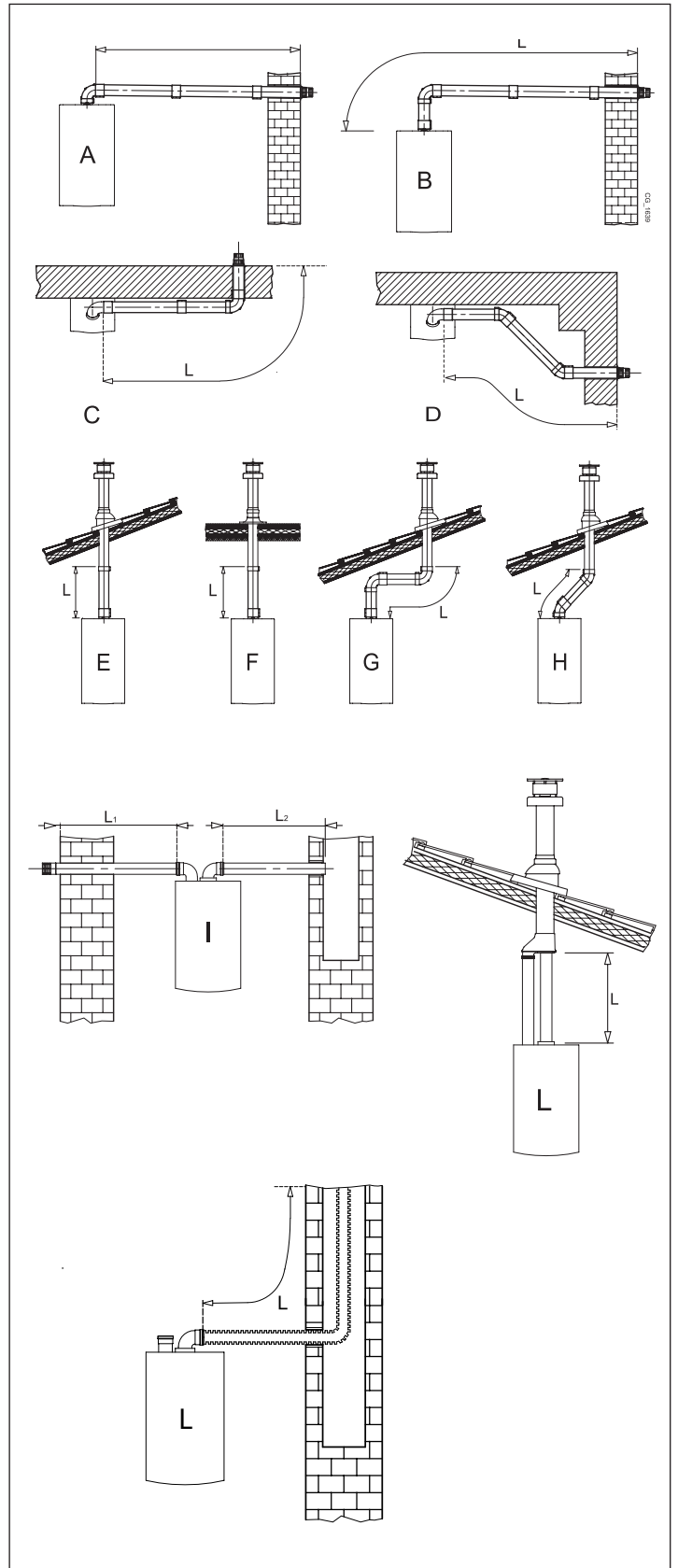
Luna Duo-tec MP/MP+ 1.35 - 1.50 - 1.60 - 1.70

AB	$L_{max} = 10\text{ m} - \varnothing 80/125\text{ mm}$
CD	$L_{max} = 9\text{ m} - \varnothing 80/125\text{ mm}$
EF	$L_{max} = 10\text{ m} - \varnothing 80/125\text{ mm}$
G	$L_{max} = 8\text{ m} - \varnothing 80/125\text{ mm}$
H	$L_{max} = 9\text{ m} - \varnothing 80/125\text{ mm}$



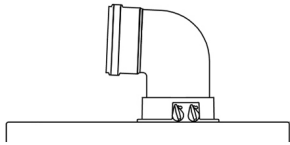
Luna Duo-tec MP/MP+ 1.35 - 1.50 - 1.60 - 1.70

I	$(L1+L2)_{max} = 60\text{ m} - \varnothing 80\text{ mm}$ (1.50 MP/MP+) $(L1+L2)_{max} = 40\text{ m} - \varnothing 80\text{ mm}$ (1.60 MP/MP+) $(L1+L2)_{max} = 30\text{ m} - \varnothing 80\text{ mm}$ (1.70 MP/MP+) $L1_{max} = 15\text{ m}$ $L2_{max} = 20\text{ m} - \varnothing 80\text{ mm}$ (1.70 MP/MP+)
L	$L_{max} = 15\text{ m}$



Flue installation requirements

Single installation Luna Duo-tec MP/MP+ 90 - 150 kW

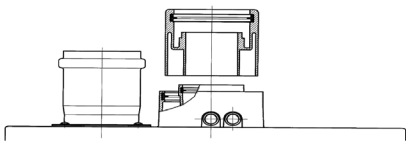


Luna Duo-tec MP/MP+ 1.90 - 1.110

AB	$L_{max} = 10 \text{ m} - \text{Ø} 110/160 \text{ mm}$
CD	$L_{max} = 9 \text{ m} - \text{Ø} 110/160 \text{ mm}$
EF	$L_{max} = 10 \text{ m} - \text{Ø} 110/160 \text{ mm}$
G	$L_{max} = 8 \text{ m} - \text{Ø} 110/160 \text{ mm}$
H	$L_{max} = 9 \text{ m} - \text{Ø} 110/160 \text{ mm}$

Luna Duo-tec MP/MP+ 1.115 - 1.130 - 1.150

AB	$L_{max} = 8 \text{ m} - \text{Ø} 110/160 \text{ mm}$
CD	$L_{max} = 7 \text{ m} - \text{Ø} 110/160 \text{ mm}$
EF	$L_{max} = 8 \text{ m} - \text{Ø} 110/160 \text{ mm}$
G	$L_{max} = 6 \text{ m} - \text{Ø} 110/160 \text{ mm}$
H	$L_{max} = 7 \text{ m} - \text{Ø} 110/160 \text{ mm}$

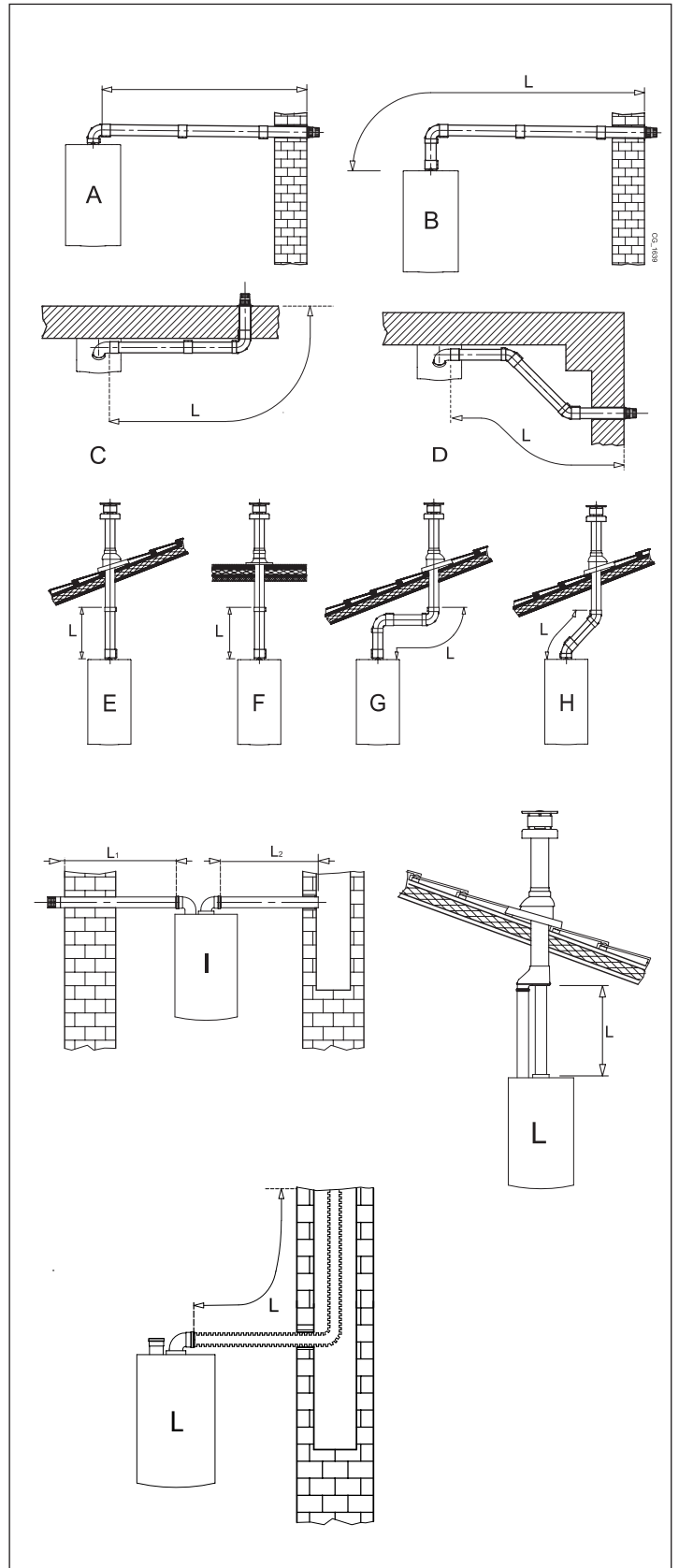


Luna Duo-tec MP/MP+ 1.90 - 1.110

I	$(L1+L2)_{max} = 27 \text{ m} - \text{Ø} 110 \text{ mm}$ $L1_{max} = 7 \text{ m}$
L	$L_{max} = 15 \text{ m}$

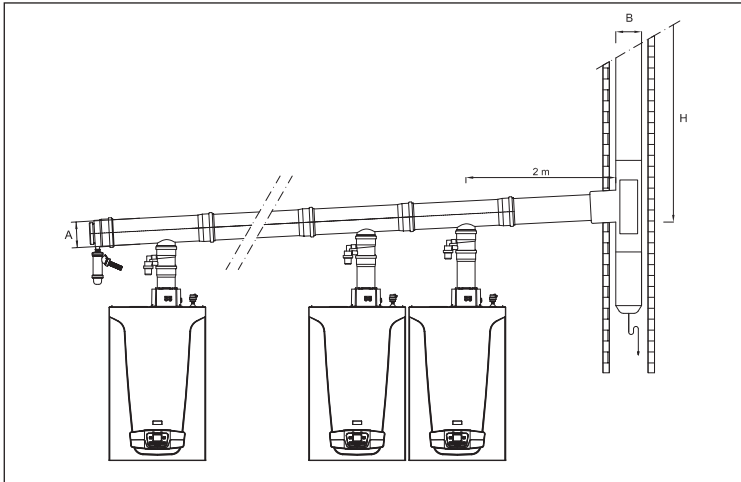
Luna Duo-tec MP/MP+ 1.115 - 1.130 - 1.150

I	$(L1+L2)_{max} = 20 \text{ m} - \text{Ø} 110 \text{ mm}$ $L1_{max} = 10 \text{ m}$
L	$L_{max} = 15 \text{ m}$








Flue systems - cascade installation

The table shows the diameters of the flue manifold and the flue for various configurations of boilers in cascade and for various heights of flue.



Remarks

- distance of the manifold from the first boiler to the vertical chimney 2 meters;
- shutter kit installed in each boiler in cascade;
- the flue pipes and the connections between the flue manifold of the cascade and the chimney are not supplied by BAXI, also the manifolds for cascade installation with diameter bigger than 200 mm are not supplied by BAXI,
- the calculation has been made assuming a PP "double wall" flue duct.

N° boilers in cascade		1.50	1.60	1.70	1.90	1.110	1.130	1.150
2 	Nominal heat output Total 50°/30° C (kW)	100	120	140	180	220	260	300
	Flue manifold Ø mm (A)	125	125	125	160	160	160	160
	Flue Ø mm (B) - H= 5-20 m	125	125	125	160	160	160	160
3 	Nominal heat output Total 50°/30° C (kW)	150	180	210	270	330	390	450
	Flue manifold Ø mm (A)	125	125	125	160	160	160	160
	Flue Ø mm (B) - H= 5-20 m	125	125	160	160	160	160	160
4 	Nominal heat output Total 50°/30° C (kW)	200	240	280	360	440	520	600
	Flue manifold Ø mm (A)	125	125	160	200	200	200	200
	Flue Ø mm (B) - H= 5-20 m	160	160	160	200	200	200	200
5 	Nominal heat output Total 50°/30° C (kW)	250	300	350	450	550	650	750
	Flue manifold Ø mm (A)	160	160	160	200	200	Flue pipes to be sized after technical evaluation and must meet the requirements of the prevailing installation standards in the country.	
	Flue Ø mm (B) - H= 5-20 m	160	160	200	200	200		
6 	Nominal heat output Total 50°/30° C (kW)	300	360	400	540	660	780	900
	Flue manifold Ø mm (A)	160	160	200	200	200	Flue pipes to be sized after technical evaluation and must meet the requirements of the prevailing installation standards in the country.	
	Flue Ø mm (B) - H= 5-20 m	160	160	200	200	250		

Luna Duo-tec MP/MP+

Boilers in cascade can be connected to a sole flue manifold with a shutter kit connection.

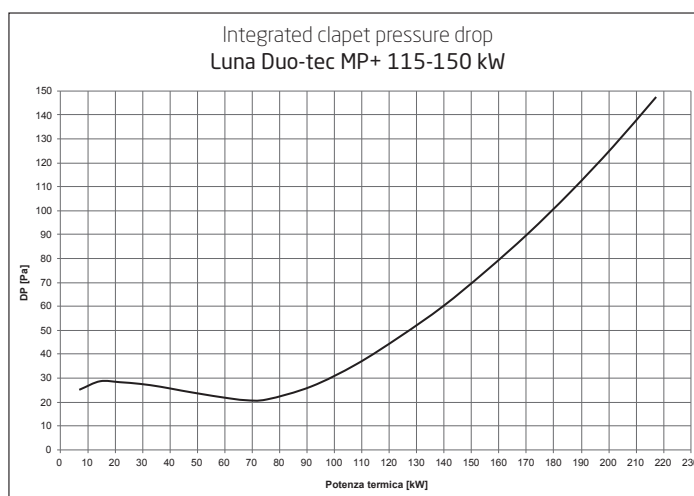
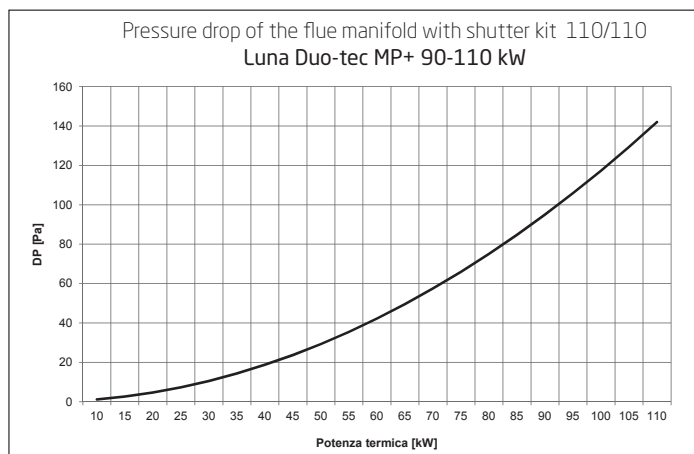
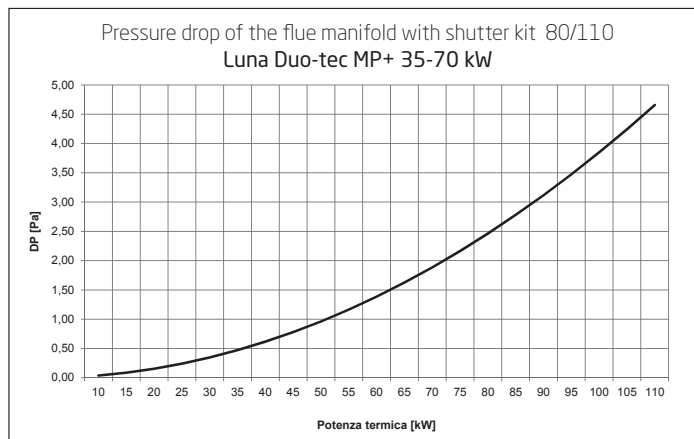
The shutter kit connection is equipped with condensing trap and it has the following diameters:

mod. 1.50-1.70: 80/110 mm;

mod. 1.90-1.110: 110/110 mm.

mod. 1.115-1.130-1.150: included in the cascade installation manifold.

The graphs show the pressure drop of the flue manifold with shutter kit as a function of the heat output.



In Luna Duo-tec MP+ 1.115, 1.130 and 1.150 boilers the shutter kit connection with condensing trap is included in the cascade installation manifold.

Pipes maximum lengths are subjected to technical evaluation and must meet the requirements of the prevailing installation standards in the country.

Neutralizer filters


Neutralizer filter to process the water deriving from the condensation of BAXI wall hung condensing boilers

Code KHG 71412561

Recharge for neutralizer kit for wall-hung boilers up to 100 kW

Code KHG 71413531

Wall hung neutralizer filter for boilers up to 116 kW - bottom vertical mounting		
Maximum condensate water flow	l/h	15
Max potentiality of the boiler	kcal/h	100.000
Max potentiality of the boiler	kW	fino a 116
Maximum working pressure	bar	4
Maximum temperature of the water content	°C	Corresponding to the maximum temperatures of the condensate waters
Min/Max room temperature	°C	5-40
Diameter	mm	87,5
Height	mm	365



Neutralizer kit for wall hung boilers
up to 120 kW
KHG 71412561


Neutralizer filter to process the water deriving from the condensation of BAXI condensing boilers in cascade installations

Code KHG 71412571

Recharge for neutralizer kit for wall-hung boilers up to 350 kW

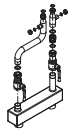

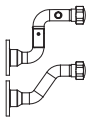

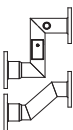
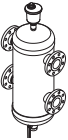
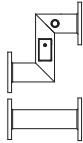
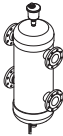
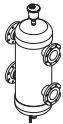
Code KHG 71413541

Floor standing neutralizer filter for boilers up to 350 kW - cascade installation		
Maximum condensate water flow	l/h	56
Max potentiality of the boiler	kcal/h	300.000
Max potentiality of the boiler	kW	350
Maximum working pressure	bar	2
Maximum temperature of the water content	°C	Corresponding to the maximum temperatures of the condensate waters
Min/Max room temperature	°C	5-40
Quantity of the first charge of product	Kg	5
Next recharges	Kg	4,5
Dimensions (hxwx dx)	mm	260x480*x225



Neutralizer kit for wall hung boilers
up to 350 kW
Code KHG 71412571

Hydraulic separator kit

Picture	Description	Code
	Hydraulic kit with hydraulic separator (single installation 50-60-70 kW) WITHOUT SAFETY DEVICES	7111633
	Hydraulic kit with hydraulic separator (single installation 90-150 kW) WITHOUT SAFETY DEVICES	7696021
	Hydraulic connection kit to the separator 8,5 m ³ /h G2" (it consists of: manifold insulation kit and flanges and gaskets kit)	7218613
	Hydraulic separator HS 8.5 of 8.5 m ³ /h - 2" threaded connectors	LSD 79000031
	Hydraulic connection kit to the separator 18 m ³ /h DN 65 (it consists of: manifold insulation kit and flanges and gaskets kit)	7218614
	Hydraulic separator HS 18 of 18 m ³ /h - Ø 65 flanged connectors	LSD 79000032
	Hydraulic connection kit to the separator 28 m ³ /h DN 80 (it consists of: manifold insulation kit and flanges and gaskets kit)	7218615
	Hydraulic separator HS 28 of 28 m ³ /h - Ø 80 flanged connectors	LSD 79000033
	Hydraulic separator HS 56 of 56 m ³ /h - Ø 100 flanged connectors	LSD 79000034

Plates exchangers

Picture	Description	Code
	Brazed exchanger SPS250 - 30 plates	7215320
	Brazed exchanger SPS250 - 40 plates	7215321
	Brazed exchanger SPS250 - 50 plates	7215322
	Inspectable exchanger SPI3- 13 plates	7215323
	Inspectable exchanger SPI3- 21 plates	7215324
	Inspectable exchanger SPI3- 27 plates	7111961
	Inspectable exchanger SPI3- 33 plates	7111962
	Inspectable exchanger SPI3- 41 plates	7111964
	Inspectable exchanger SPI3- 45 plates	7215325
	Inspectable exchanger SPI3- 57 plates	7215326
	Inspectable exchanger SPI3- 67 plates	7215327
	Manifold kit L=495 to be installed for Luna Duo-tec MP/MP+ in cabinets (GMC+)	LSD 79000012

Before the installation it is compulsory to choose the right exchanger that are subjected to technical evaluation and must meet the requirements of the prevailing installation standards in the country.

Plate exchangers

Selection charts

Primary circuit temperature 80°C - 60°C ΔT primary (20°C)

Secondary circuit temperature 50°C - 70°C ΔT secondary (20°C)

Rated heat output kW	Model	Connections	Heat input primary circuit m ³ /h	Heat input secondary circuit m ³ /h	Pressure drop primary circuit mH ₂ O	Pressure drop secondary circuit mH ₂ O
34	SPS250 - 30p	1"	1,49	1,49	0,42	0,43
45	SPS250 - 30p	1"	1,98	1,97	0,70	0,72
65	SPS250 - 40p	1"	2,86	2,84	0,80	0,82
85	SPS250 - 50p	1"	3,74	3,72	0,86	0,88
102	SPI3 - 13p	2"	4,48	4,45	1,35	1,37
130	SPI3 - 21p	2"	5,71	5,69	0,83	0,84
170	SPI3 - 21p	2"	7,47	4,77	1,35	1,37
195	SPI3 - 27p	2"	8,57	8,53	1,07	1,10
204	SPI3 - 27p	2"	8,97	8,92	1,17	1,19
255	SPI3 - 33p	2"	11,21	11,16	1,20	1,22
260	SPI3 - 33p	2"	11,43	11,37	1,24	1,27
306	SPI3 - 33p	2"	13,45	13,39	1,67	1,70
340	SPI3 - 41p	2"	14,94	14,87	1,35	1,37
408	SPI3 - 45p	2"	17,93	17,85	1,58	1,61

Primary circuit temperature 80°C - 60°C ΔT primary (20°C)

Secondary circuit temperature 55°C - 70°C ΔT secondary (15°C)

Rated heat output kW	Model	Connections	Heat input primary circuit m ³ /h	Heat input secondary circuit m ³ /h	Pressure drop primary circuit mH ₂ O	Pressure drop secondary circuit mH ₂ O
34	SPS250 - 30p	1"	1,49	1,99	0,42	0,73
45	SPS250 - 40p	1"	1,98	2,63	0,41	0,70
65	SPI3 - 13p	2"	2,86	3,8	0,59	1,02
85	SPI3 - 21p	2"	3,74	4,96	0,38	0,65
102	SPI3 - 21p	2"	4,48	5,96	0,53	0,91
130	SPI3 - 27p	2"	5,71	7,59	0,51	0,88
170	SPI3 - 33p	2"	7,47	9,93	0,57	0,98
195	SPI3 - 33p	2"	8,57	11,39	0,74	1,26
204	SPI3 - 41p	2"	8,97	11,91	0,53	0,91
255	SPI3 - 45p	2"	11,21	14,89	0,67	1,15
260	SPI3 - 45p	2"	11,43	15,18	0,70	1,19
306	SPI3 - 57p	2"	13,45	17,87	0,60	1,03
340	SPI3 - 57p	2"	14,94	19,85	0,73	1,25
408	SPI3 - 67p	2"	17,93	23,83	0,76	1,29

Primary circuit temperature 80°C - 60°C primary (20°C)








Secondary circuit temperature 55°C - 65°C secondary (10°C)

Rated heat output kW	Model	Connections	Heat input primary circuit m ³ /h	Heat input secondary circuit m ³ /h	Pressure drop primary circuit mH ₂ O	Pressure drop secondary circuit mH ₂ O
34	SPS250 - 30p	1"	1,49	2,97	0,42	1,52
45	SPS250 - 30p	1"	1,98	3,94	0,70	2,53
65	SPS250 - 40p	1"	2,86	5,69	0,80	2,88
85	SPS250 - 50p	1"	3,74	7,44	0,86	3,10
102	SPI3 - 21p	2"	4,48	8,92	0,53	1,91
130	SPI3 - 21p	2"	5,71	11,37	0,83	2,97
170	SPI3 - 27p	2"	7,47	14,87	0,84	3,01
195	SPI3 - 33p	2"	8,57	17,06	0,74	2,65
204	SPI3 - 33p	2"	8,97	17,85	0,80	2,87
255	SPI3 - 41p	2"	11,21	22,31	0,80	2,87
260	SPI3 - 41p	2"	11,43	22,75	0,83	2,97
306	SPI3 - 41p	2"	13,45	26,77	1,11	4,00
340	SPI3 - 45p	2"	14,94	29,75	1,13	4,07
408	SPI3 - 57p	2"	17,93	35,7	1,02	3,66

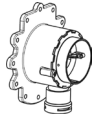
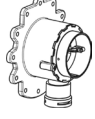
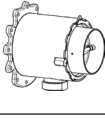
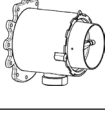
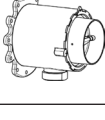
Before the installation it is compulsory to choose the right exchanger that are subjected to technical evaluation and must meet the requirements of the prevailing installation standards in the country.

Other accessories

Thermoregulation

Picture	Description	Code
	Mixing valve motor	KHG 71407851
	Mixing valve G1"	KHG 71407831
	Mixing valve G1/2"	KHG 71407861
	Mixing valve G3/4"	KHG 71407871
	Flow sensor for clip-in module THINK	KHG 71407891
	Hot water temperature sensor	KHG 71407681
	Sensor for solar controller	LNC 71000004

LPG conversion kit

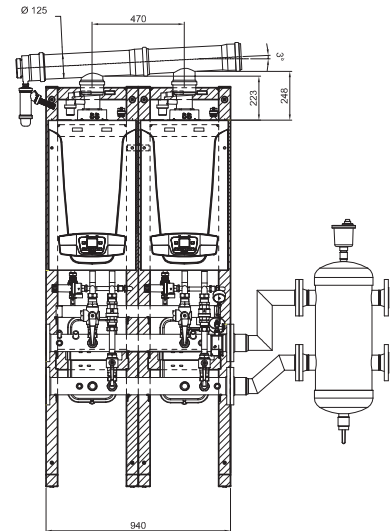
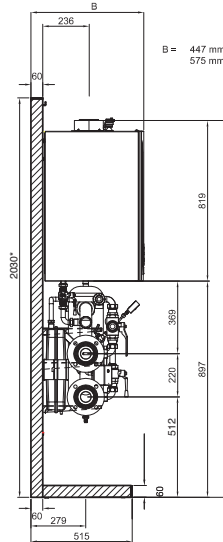
Picture	Description	Code
	LPG conversion kit for LUNA DUO-TEC MP/MP+ 1.50	7107186
	LPG conversion kit for LUNA DUO-TEC MP/MP+1.60	7107187
	LPG conversion kit for LUNA DUO-TEC MP/MP+1.70	7107188
	LPG conversion kit for LUNA DUO-TEC MP/MP+ 1.90	7107189
	LPG conversion kit for LUNA DUO-TEC MP/MP+ 1.110	7107190
	LPG conversion kit for LUNA DUO-TEC MP/MP+ 1.130-1.150	A7713043

Frame dimensions

Luna Duo-tec MP/MP+ 1.35 - 1.50 - 1.60 - 1.70

B = 447 mm mod. 1.50 e 1.60
575 mm mod. 1.70

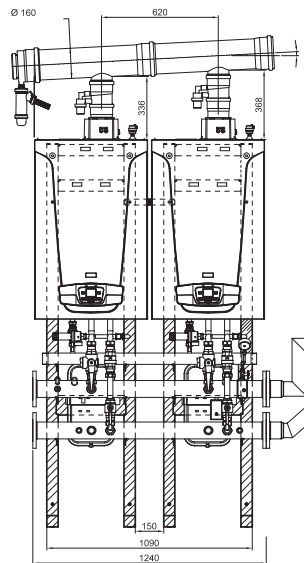
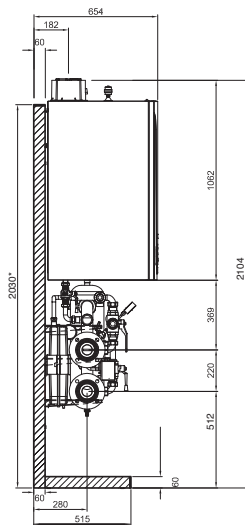
* Excluding adjustable feet



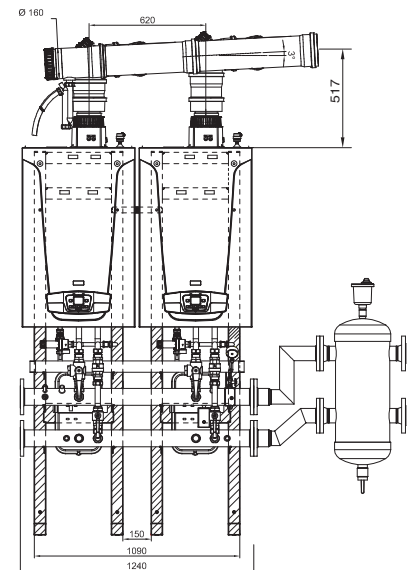
Luna Duo-tec MP/MP+ 1.90 - 1.150

Maximum pressure heating circuit 4 bar ▲

* Excluding adjustable feet



mod. 1.90 - 1.110

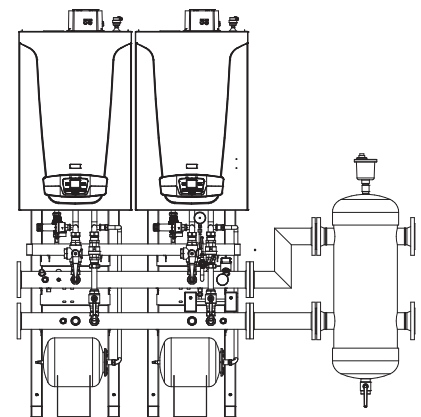
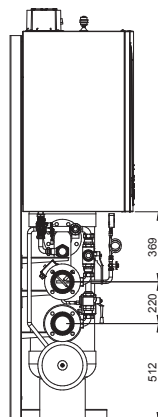


mod. 1.115-1.130 - 1.150

Luna Duo-tec MP+ 1.115 - 1.130 - 1.150

Maximum pressure heating circuit 6 bar ▲

▲ A 4 bar pressure heating circuit can satisfy the needs of a 10-storey building; a 6 bar pressure heating circuit can satisfy the needs of a 16-storey building.



GMC+ cabinets








Features:

- GMC+ range includes pre-assembled solutions in 1, 2 or 3-door cabinets, suitable for wall hung boilers between 35 and 150 kW (Luna Duo-tec MP/MP+)
- 175 cm height (excluding chimney terminals)
- The hydraulic separator can be located inside, if required
- Included outside sensor
- Hydraulic collectors already insulated and supported by brackets
- Included condensate drain duct
- The product is delivered completely assembled and tested

GMC+ modular generators are Luna Duo-tec MP/MP+ wall-mounted condensing boilers placed in a cabinet suitable for placing outside buildings. The system includes hydraulic manifolds with safety devices.

The cabinet may contain single generator or in cascade. In the latter case the system requires a cascade controller with climate adjustment function.

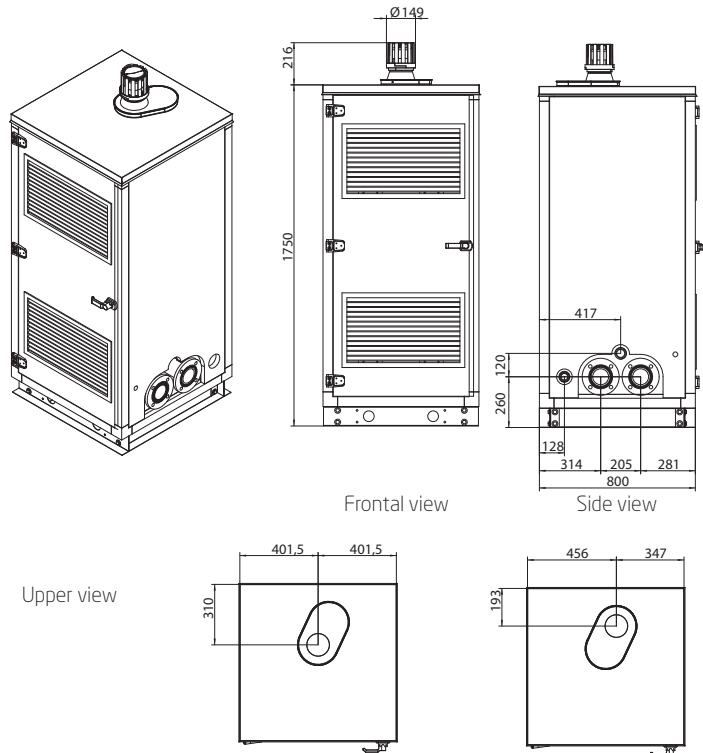
Model	N° of boilers	LUNA DUO-TEC MP/MP+ solutions	kW total
1 door*		1.35 1.50 1.60 1.70	from 35 kW to 150 kW
		1.90 1.110 1.115 1.130 1.150	
2 doors*	 or 	1.35 1.50 1.60 1.70 1.90 1.110 1.115 1.130 1.150	from 35 kW to 300 kW
		1.35 1.50 1.60 1.70 1.90 1.110 1.115 1.130 1.150	
3 doors*	 or 	1.35 1.50 1.60 1.70 1.90 1.110 1.115 1.130 1.150	from 100 kW to 450 kW
		1.35 1.50 1.60 1.70 1.90 1.110 1.115 1.130 1.150	

(*) An additional 2 or 3 doors cabinet may be ordered to shelter the hydraulic compensator and system accessories from bad weather.

GMC+ dimensions

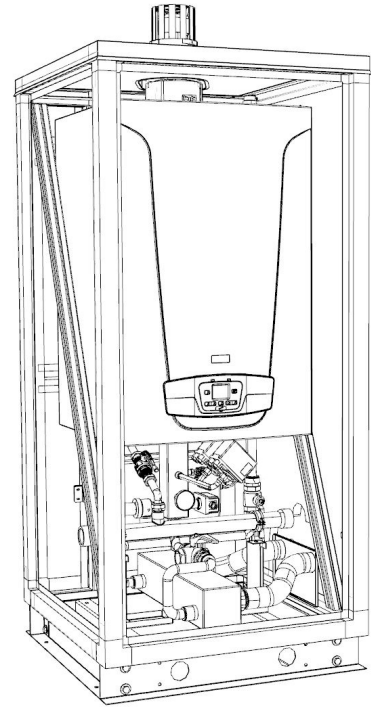
Cabinets for high output condensign boilers - 1 door

Luna Duo-tec MP/MP+ 1.35 - 1.150



Luna Duo-tec MP/MP+ 1.90 - 1.150

1 door cabinet with integrated separator

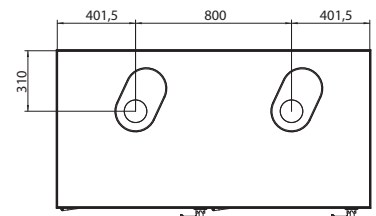
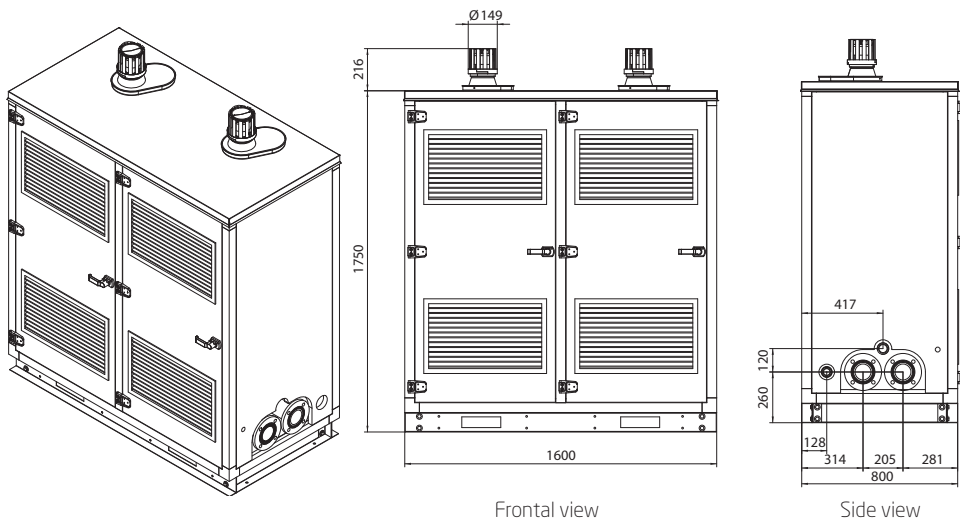


Dimensions (mm)	L	H	P	Ø
1 door	803	1750	800	DN 80 GAS: G2"

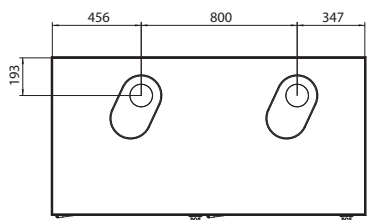
The one door cabinet with intgrated hydraulic separator is available for 1.90 - 1.110 - 1.115 - 1.130 - 1.150 models. The dimensions are the same as the one of the 1 door cabinet without hydraulic separator (on the left).

Cabinets for high output condensign boilers - 2 doors

Luna Duo-tec MP/MP+ 1.35 - 1.150



Luna Duo-tec MP/MP+ 35-50-60-70



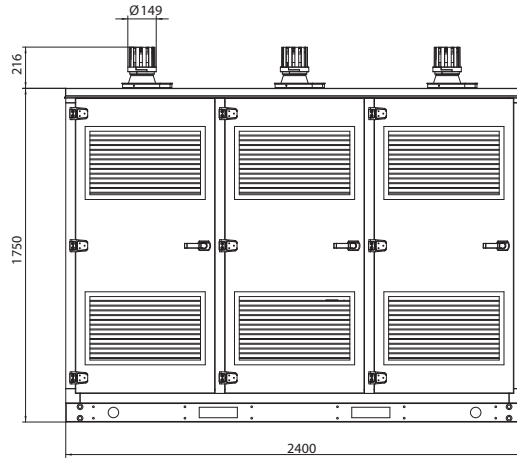
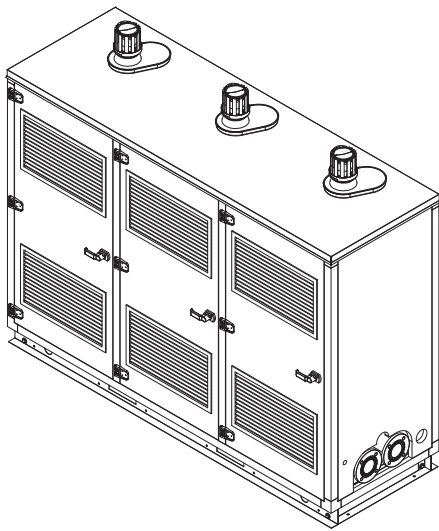
Luna Duo-tec MP/MP+ 90-110-115-130-150

Dimensions (mm)	L	H	P	Ø
2 doors	1600	1750	800	DN 80 GAS: G2"

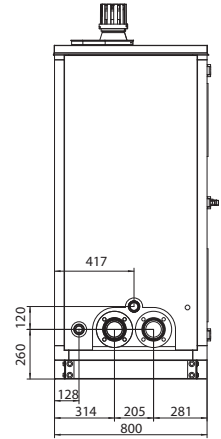
GMC+ dimensions

Cabinets for high output condensign boilers - 3 doors

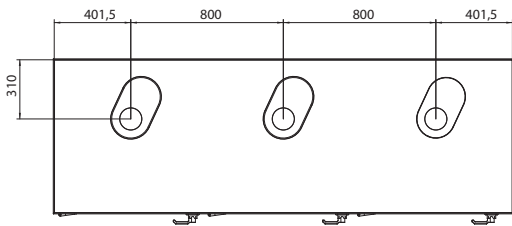
Luna Duo-tec MP/MP+ 1.35 - 1.150



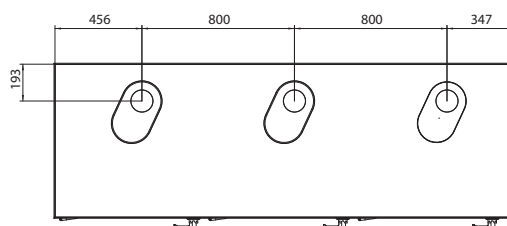
Frontal view



Side view



Luna Duo-tec MP/MP+ 35-50-60-70



Luna Duo-tec MP/MP+ 90-110-115-130-150

Dimensions (mm)	L	H	P	Ø
3 doors	2400	1750	800	DN 80 GAS: G2"



Quality Environment Safety

are Baxi strategic aims and the awarded certifications ensure compliance with the specific regulations

BAXISPA

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