

VIVADENS SMART

WALL-HUNG GAS CONDENSING BOILERS



VIVADENS SMART 24
VIVADENS SMART 32
VIVADENS SMART 24/29 MI
VIVADENS SMART 32/35 MI



VIVADENS SMART 24/35 BIC



VIVADENS SMART 24/BMR 80
VIVADENS SMART 32/BMR 80



VIVADENS SMART 24/SRB 130
VIVADENS SMART 32/SRB 130

- **VIVADENS SMART 24**
3,1 to 24 kW, for heating only
- **VIVADENS SMART 32**
3,5 to 32 kW, for heating only
- **VIVADENS SMART 24/35 BIC**
3,5 to 34,9 kW, for heating and domestic hot water production with the built-in 45 stainless steel litre tank, with an output of 35 kW in domestic water mode

- **VIVADENS SMART 24-32/BMR 80 AND VIVADENS SMART 24-32/SRB130**
3,1 to 32 kW, for heating and domestic hot water production with the associated tank
- **VIVADENS SMART 24/29MI AND 32/35MI**
3,1 to 32 kW, for heating and micro-accumulated domestic hot water production with an output of up to 35 kW in domestic water mode



VIVADENS SMART 24/32: heating only



VIVADENS SMART ...MI
VIVADENS SMART 24/25 BIC
VIVADENS SMART 24/32 WITH
BMR 80 OR SRB 130 TANK:

Heating and domestic hot water using micro-accumulation, independent or a built-in cylinder



Natural gas
Propane



Brass hydroblock



Smart TC° room thermostat (wired or wireless remote control)



Hydrogen 20°



With SMART TC° room temperature sensor and cloud-based outside temperature or an outside temperature sensor (option)

OPERATING CONDITIONS

boiler:

Max. operating pressure: 3 bar
Max. operating temperature: 80 °C
Safety temperature limiter: 110 °C
Power supply: 230 V/50 Hz
International Protection marking: IP X5D

DHW cylinder:

DHW max. operating pressure: 8 bar

homologations

B23,B23P,B33, C10J3X,C13X,C33X, C43P, C43X, C53,C53X,C63X,C83,C93X

gas category

See national or local regulations
NOx class: 6

All the boilers in the Vivadens Smart range are supplied equipped with an E-Pilot control panel with clear text and access to all the control system parameters.

The boilers can be connected using the SMART TC° range of room temperature sensors as an option.

Various air/flue gas connection configurations are possible:

we offer solutions for connection with a horizontal or vertical forced flue, to a chimney, or to a collective flue (3 CEp).

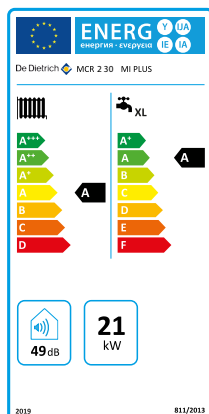
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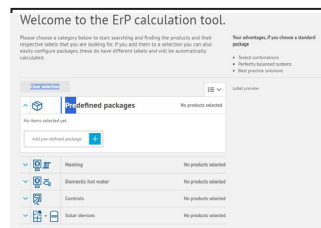
ENERGY LABELLING

Vivadens Smart boilers are delivered with an energy label displaying a range of information, including energy efficiency, annual energy consumption, manufacturer name and noise level. By combining your boiler with, for example, a solar system, DHW storage tank, control system or even another generator, you can improve the performance of your installation and generate a corresponding "system" label with our [calculator and label generator tool](https://erp.bdrthermea.com/index.xhtml) on the De Dietrich site (<https://erp.bdrthermea.com/index.xhtml>)

Example label:



Access to the tool:



PRESENTATION

Vivadens Smart 24, 32, Vivadens Smart 24/35 BIC and Vivadens Smart... MI boilers are factory tested. They are pre-equipped to operate with natural gas; they can also be easily adjusted to operate with propane.

Vivadens Smart boilers are supplied equipped with a wall mounting frame with prefitted water and gas valves, a modulating heating circulating pump with an energy efficiency index (EEI) < 0.23, a heating safety pressure relief valve, an expansion vessel, and a heating/DHW diverter valve.

Two versions are available with DHW cylinders:

- Vivadens Smart 24 or 32 /BS 80: an 80-litre BMR 80 tank is placed either to the left or right of the boiler,
- Vivadens Smart 24 or 32 /BS 130: a 130-litre SRB 130 tank is placed on the ground, underneath the boiler.

The Vivadens Smart... MI versions are combination boilers and produce large quantities of domestic hot water using an oversized plate heat exchanger and highly responsive electronics.

The Vivadens Smart 24/35 BIC version is particularly compact and high-performance: DHW is produced using a built-in 45-litre stainless steel storage tank with a heating coil.

ENHANCED PERFORMANCE

- Efficiency up to 110%,
- Low sound level,

- NO_x class 6, in line with EN 15 502,
- NO_x < 25 mg/kWh

TECHNICAL SPECIFICATIONS

FOR VIVADENS SMART BOILERS

ADVANTAGES

E-PILOT CONTROL SYSTEM

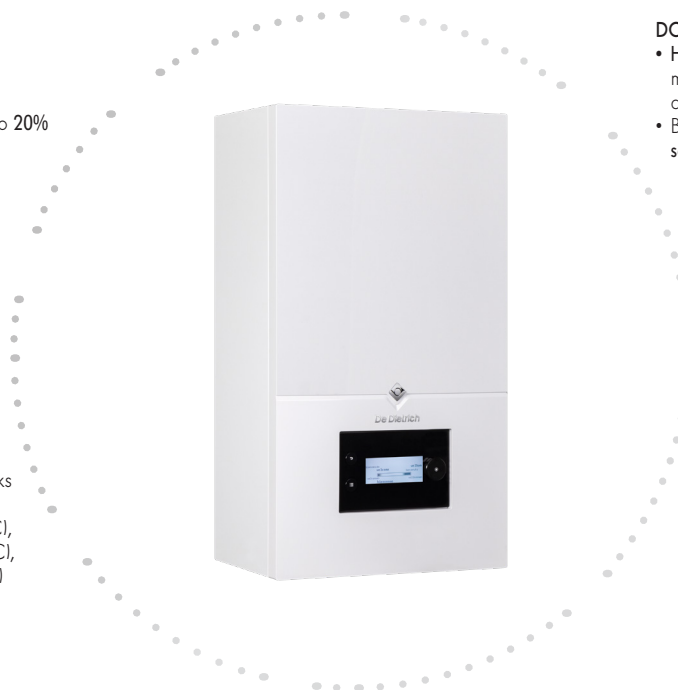
- Intuitive control system with **clear text**
- **Simplified** access to all operating modes
- **Permanent** water pressure indicator
- Remote control with our Smart TC° range of smart room temperature sensors
- When using the cloud-connected Smart TC°, there is no need to install an outside sensor option.
- Integrated energy metering
- Compatible with our **De Dietrich Start** and **De Dietrich Service Tool** applications with the GTW35 Bluetooth gateway, available as an option

NEW-GENERATION BOILER

- Automatic combustion control
- **Output modulation** from 10% to 100%
- Suitable for G20 gas containing up to **20% Hydrogen (H₂)**
- **Silent operation** with soundproofing
- **Central** flue gas outlet
- **Built-in** exhaust gas non-return valve

COMPACT

- Compact and easy to integrate thanks to its smaller dimensions:
Width 395 mm (600 mm for the BIC),
Height 700 mm (900 mm for the BIC),
Depth 285 mm (471 mm for the BIC)



DOMESTIC HOT WATER PERFORMANCES

- High DHW performances:
micro-accumulation (MI): 13.9 and 16.2 l/mn
accumulation (BI): 19.2 l/mn
- BIC version with **45 L stainless steel tank** and scale-resistant heating coil

ROBUST

- **Stainless steel** coiled heat exchanger
- **Brass** hydraulic hydroblock across the entire range.
- **Copper** tubes

EASY TO ASSEMBLE

- Reduced installation time thanks to the wall mounting frame provided in the boiler package
- Installation and commissioning aids: mounting template, quick guide, interactive control system

TABLE OF USE FOR THE ROOM THERMOSTATS AND SENSORS (OPTIONS)

Description	Control system class	Reference	Package	Connection	Batteries	Timer programme	Internet connected
SMART TC° connected room temperature sensor (wired)	Class V Class VI *	7691375	AD324	(wired)	no	✓	✓
SMART TC° RF smart room temperature sensor (wireless)	Class V Class VI **	7691377	AD341	wireless	✓	✓	✓
SMART TC° RF option for second circuit (wireless)	Class V Class VI **	7765144	AD342	wireless	✓	✓	✓
Wired modulating room thermostat	Class V Class VI *	7609763	AD304	(wired)	no	✓	no
Radio modulating room thermostat	Class V Class VI *	7609762	AD303	wireless	✓	✓	no
Non-programmable modulating room thermostat	Class V Class VI *	7612097	AD301	(wired)	no	no	no
Programmable room thermostat (wired)	Class IV Class IV *	7768817	AD337	(wired)	✓	✓	no
Programmable room thermostat (wireless)	Class IV Class IV *	7768818	AD338	wireless	✓	✓	no
Non-programmable room thermostat	Class I Class III *	88017859	AD140	(wired)	no	no	no
Outside temperature sensor (wired)	-	85757741	FM46	(wired)	no	no	no
Outside temperature sensor (wireless) for SMART TC° RF	-	7776874	-	wireless	no	no	no

* with wired outside temperature sensor 85757741

** with wired (85757741) or wireless (7776874) outside temperature sensor

Vivadens Smart_Q3001

TECHNICAL SPECIFICATIONS

FOR THE BOILERS

TECHNICAL SPECIFICATIONS AND PERFORMANCE

BOILER

Boiler type: condensing
 Burner: modulating total premix
 Energy used: natural gas (20% H₂) or propane

Combustion evacuation: chimney or balanced flue
 CE certificate ref.: 0085DL0336

Min. average operating temperature: 25 °C
 Max. average operating temperature: 80 °C

MODEL		24	32	24/35 BIC	24/BMR 80 24/SRB 130	32/BMR 80 32/SRB 130	24/29 MI	32/35 MI	
Generator type		Heating only		Heating and DHW with built-in 45 L tank	Heating and DHW with separate tank		Heating and DHW		
Rated heating capacity	<i>Prated</i>	kW	24	32	24	32	24	32	
Useful output	- at rated pressure and high temp. <i>P4</i> (1)	kW	24	32	24	32	24	32	
	- at 30% of rated pressure and low temp. <i>P1</i> (2)	kW	8,1	10,9	8,1	10,9	8,1	10,9	
Usable output range at flow/return t°	- 50/30 °C min.-max.	kW	3,3 - 26,1	3,7 - 34,9	3,7 - 26,1	3,3 - 26,1	3,7 - 34,9	3,3 - 26,1	3,7 - 34,9
	- 80/60 °C min.-max.	kW	3,0 - 24	3,4 - 32,0	3,4 - 24	3,0 - 24	3,4 - 32,0	3,0 - 24	3,4 - 32,0
Useful efficiency	- at rated pressure and high temp. <i>η4</i> (1)	%	87,9	87,9	88,1	87,9	87,9	87,9	
	- at 30% of rated pressure and low temp. <i>η1</i> (2)	%	98,8	98,8	99,0	98,8	98,8	98,8	
Seasonal energy efficiency (without control system) <i>ηs</i>		%	94	94	94	94	94	94	
Energy efficiency for the DHW (without control system) <i>ηwh</i>		%	-	-	81	82	82	88	87
Declared load profile		-	-	-	XL	XL	XL	XL	XL
Nitrogen oxide (NO _x) emissions		mg/kWh	21	30	21	30	21	30	
Heat loss on standby <i>Pstby</i>		W	40	40	35	40	40	40	
Auxiliary electricity consumption	- full load <i>elmax</i>	W	33	52	28	33	52	33	52
	- part load <i>elmin</i>	W	11	11	11	11	11	11	11
	- standby <i>PSB</i>	W	4	4	4	4	4	4	4
Gas consumption	- G20 (lmin/maxl)	m ³ /h	0,33/3,17	0,37/3,70	0,38/3,81	0,33/3,17	0,37/3,70	0,33/3,17	0,37/3,70
	- butane G30 (lmin/maxl)	kg/h	0,24/2,36	0,28/2,75	0,29/2,84	0,24/2,36	0,28/2,75	0,24/2,36	0,28/2,75
	- propane G31 (lmin/maxl)	kg/h	0,24/2,33	0,27/2,71	0,28/2,79	0,24/2,33	0,27/2,71	0,24/2,33	0,27/2,71
Flue gas mass flow rate (lmin)		kg/s	0,001	0,002	0,002	0,001	0,002	0,001	0,002
Flue gas mass flow rate (lmax)		kg/s	0,011	0,015	0,017	0,014	0,016	0,014	0,016
Sound power level, indoors <i>LWA</i>		dB(A)	50	53	50	50	53	50	53
Expansion vessel water capacity		l	8	8	10	8	8	8	8
DHW expansion tank capacity (option)		l	-	-	2	-	-	-	-
Maximum flue gas pressure at boiler outlet, CH/DHW-mode		Pa	89/93	92/93	84/150	89/93	89/93	89/93	92/93
Empty net weight (excl. forced flue)		kg	28,5	28,5	58	Vivadens Smart 24 = 28,5 BMR 80 = 45,2 SRB 130 = 60,6	Vivadens Smart 32 = 28,5 BMR 80 = 45,2 SRB 130 = 60,6	28,5	29,2
Net weight, filled with water (excl. forced flue)		kg	31	31	100	-	31	31	31,7

(1) High temperature setting: return temperature at the boiler inlet 60 °C and flow temperature at the boiler outlet 80 °C.

(2) Low temperature: return temperature (at the heater inlet) for condensing boilers 30 °C, for low temperature boilers 37 °C, and for other heaters 50 °C

DHW GENERATION

Maximum tank temperature (lmax): 95 °C

Location of the control system sensor (z-reg_base): zone 1

Tank thermostat hysteresis (Δ_{basel}): 5 K

MODEL	24/35 BIC	24/BMR 80	24/SRB 130	24/29MI	32/35MI	32/BMR80	32/SRB130	
Minimum water flow	l/min	2,0	-	-	2,0	-	-	
Total tank water capacity (V _{tot})	l	45	75	125	-	75	125	
Power exchanged	kW	34,9	22,1	24	31	34	22,1	24
Flow rate over 10 minutes at Δt = 30 K	l/10 min	192	165	200	-	220	310	
Hourly flow rate at ΔT = 35 K	l/h	670	543	588	-	543	590	
Specific flow rate at Δt = 30 K according to EN 13203-1	l/min	19,2	16,5	20,0	14,3	16,7	22	31
Minimum water flow rate	l/min	2,0	-	-	2,0	2,0	-	-
Minimum dynamic water pressure	bar	0,15	-	-	0,15	0,15	-	-
Heat loss coefficient (UA _S)	W/K	1,42	1,26	1,09	-	-	1,26	1,09

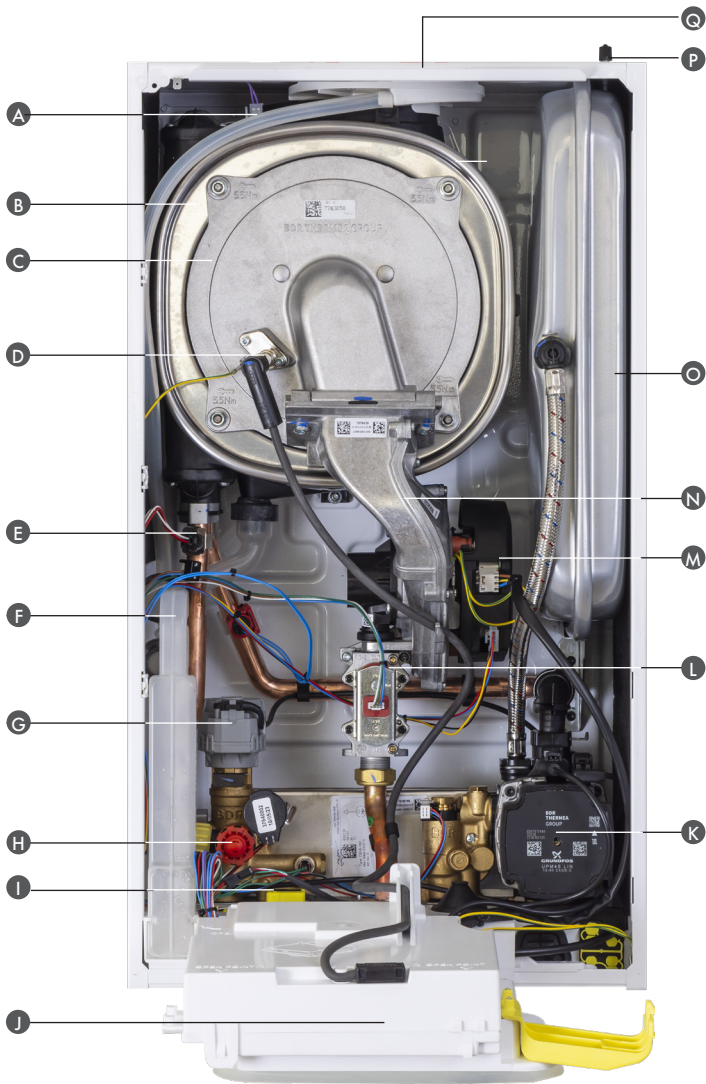
Domestic hot water performances at ambient temp. 20 °C, cold water temp. 10 °C, primary hot water temp. 80 °C, storage temp.
 Domestic water performances according to EN13203-1

TECHNICAL SPECIFICATIONS

FOR VIVADENS SMART BOILERS

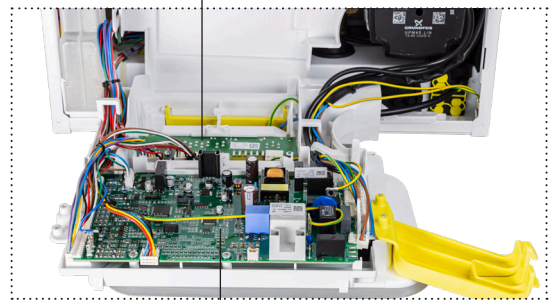
DESCRIPTION OF THE MAIN COMPONENTS

VIVADENS SMART 24 / 32 AND VIVADENS SMART... MI

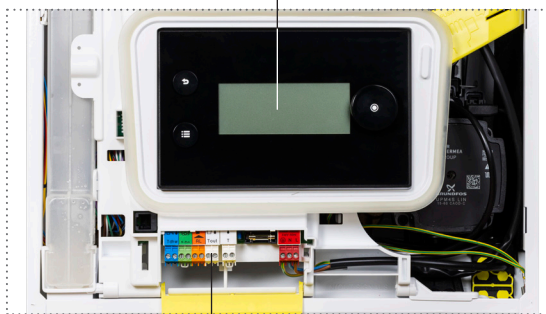


- A Flue gas temperature sensor
- B Single-coil stainless steel heat exchanger
- C Burner door
- D Ignition electrode / combustion hygiene probe
- E Flow temperature sensor and limit thermostat
- F Pull-out siphon
- G Diverter valve motor
- H 3-bar safety valve and drain valve
- I Plug and play connection
- J Housing for boiler control and safety boards
- K PWM controlled pump with LIN-bus communication
- L Electronic gas valve
- M Modulating fan
- N Air/gas manifold pipe
- O 8-litre expansion vessel / 1 bar pre-pressure
- P Expansion vessel air control/filling valve
- Q Connector for flue gas evacuation

Clip-in slot for the optional SCB 17B zoning extension module



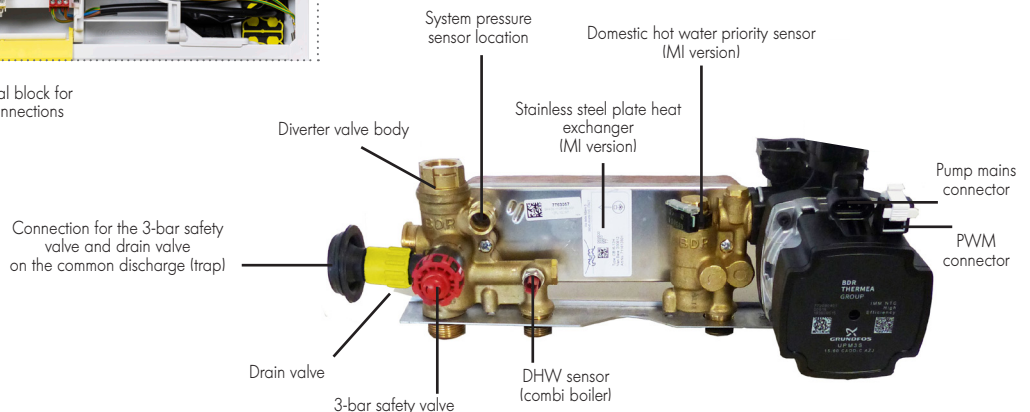
Main PCB



E-PILOT control panel

Screw terminal block for electrical connections

BRASS HYDROBLOCK

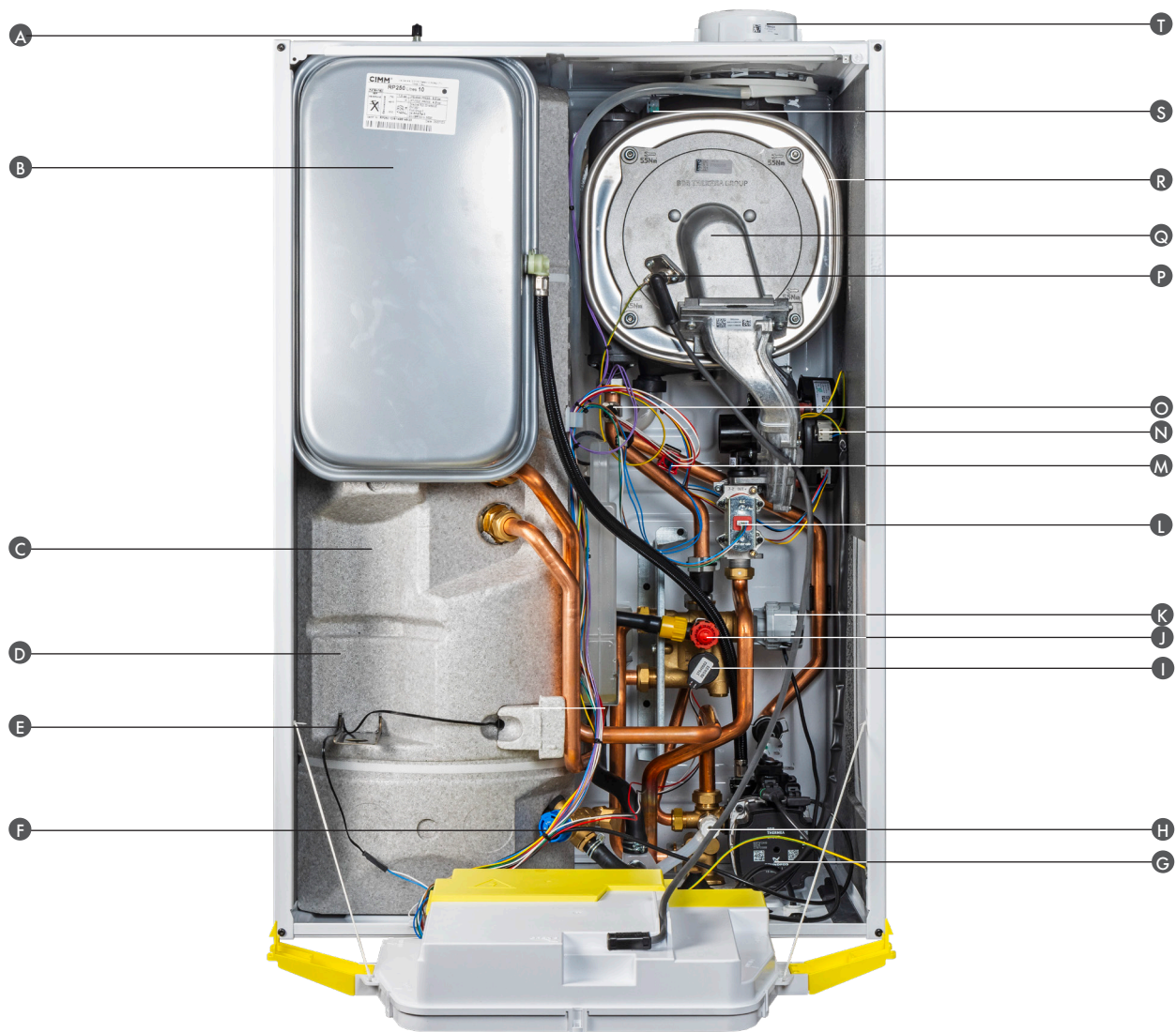


TECHNICAL SPECIFICATIONS

FOR THE BOILERS

DESCRIPTION OF THE MAIN COMPONENTS

VIVADENS SMART 24/35 BIC



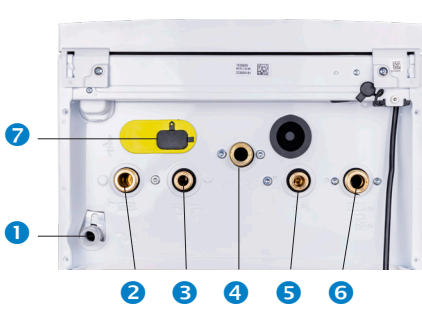
- A Control for the expansion vessel
- B Heating expansion vessel (10 litres)
- C Domestic water tank (145 litres)
- D Space for the domestic water expansion vessel (2 litres, optional)
- E Tank sensor
- F 8-bar domestic water safety pressure relief valve
- G PWM controlled pump with LIN-bus communication
- H Boiler drain valve
- I Pressure sensor
- J 3-bar safety valve and drain valve
- K Motorised diverter valve
- L Electronic gas valve with no adjustment
- M Return sensor
- N Fan
- O Heating circuit water flow temperature sensor and limiter thermostat
- P Detection/ignition electrode
- Q Burner flange
- R Stainless steel coiled heat exchanger
- S Flue gas temperature sensor
- T Connector for flue gas evacuation

TECHNICAL SPECIFICATIONS

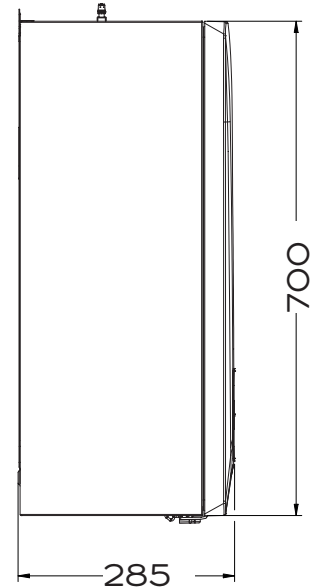
FOR VIVADENS SMART BOILERS

MAIN DIMENSIONS (in mm and inches)

VIVADENS SMART 24, 32 , VIVADENS SMART... MI



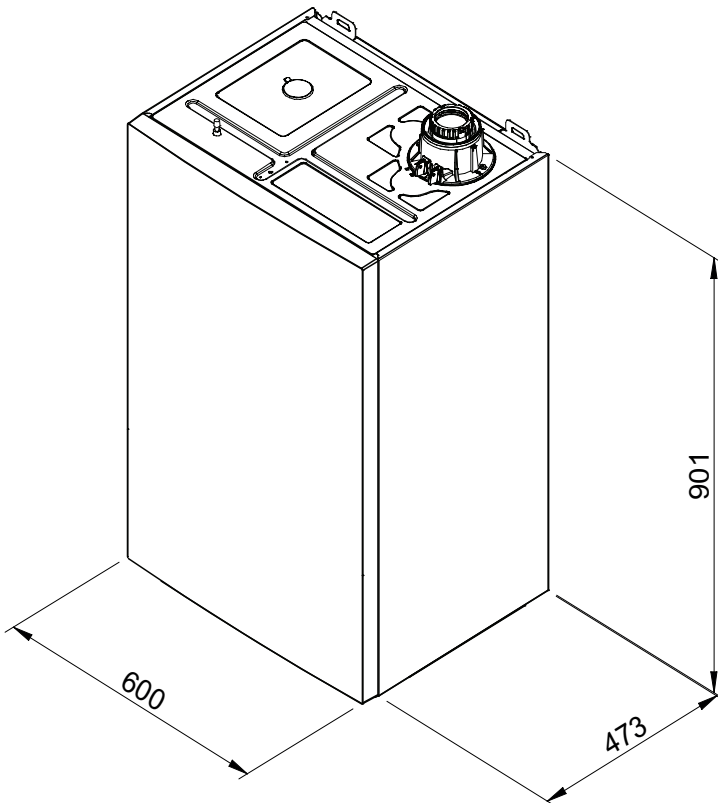
Vivadens Smart_Q009



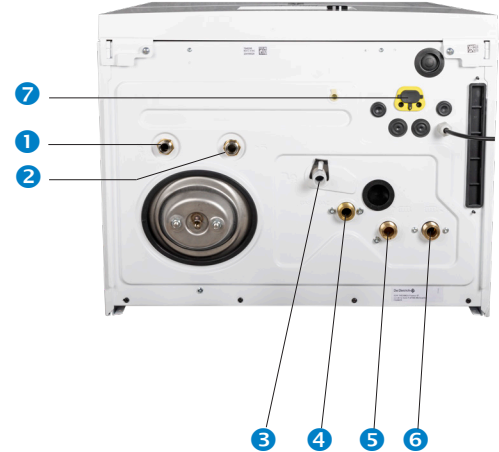
Vivadens Smart_F000

- 1 Condensate/safety pressure relief valve outlet
- 2 Heating circuit flow [3/4"]
- 3 DHW outlet [1/2"] on MI models or primary cylinder flow [1/2"] on 24/32 models
- 4 Gas inlet [3/4"]
- 5 DHW inlet [1/2"] / system filling [1/2"]
- 6 Heating circuit return [3/4"] on MI models or return heating circuit / primary cylinder return [3/4"] on models 24/32
- 7 Plug and play connector with service and L-bus connection

VIVADENS SMART 24/35 BIC



Vivadens SmartBIC_F000



Vivadens SmartBIC_Q006

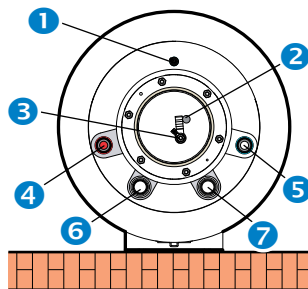
- 1 Domestic hot water (DHW) outlet connector (1/2")
- 2 Domestic cold water inlet connector (1/2")
- 3 Ø 21.8 mm adapter for system/condensate drain
- 4 Gas inlet connector (3/4")
- 5 Heating circuit flow connector (3/4")
- 6 Heating circuit return connector (3/4")
- 7 Plug and play connector with service and L-bus connection

TECHNICAL SPECIFICATIONS

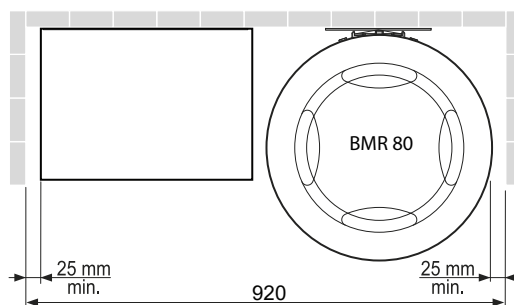
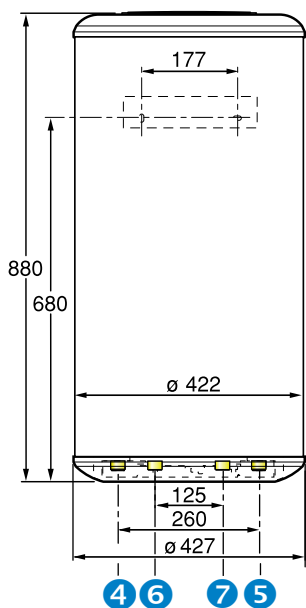
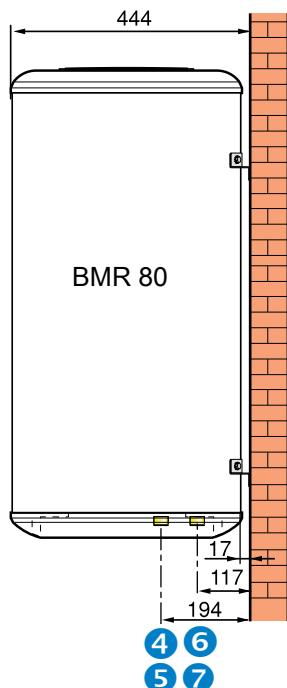
FOR VIVADENS SMART BOILERS

MAIN DIMENSIONS (in mm and inches)

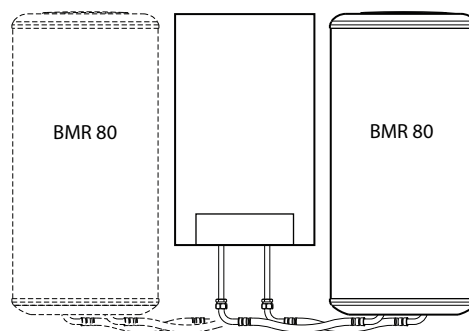
BMR 80 DHW CYLINDER



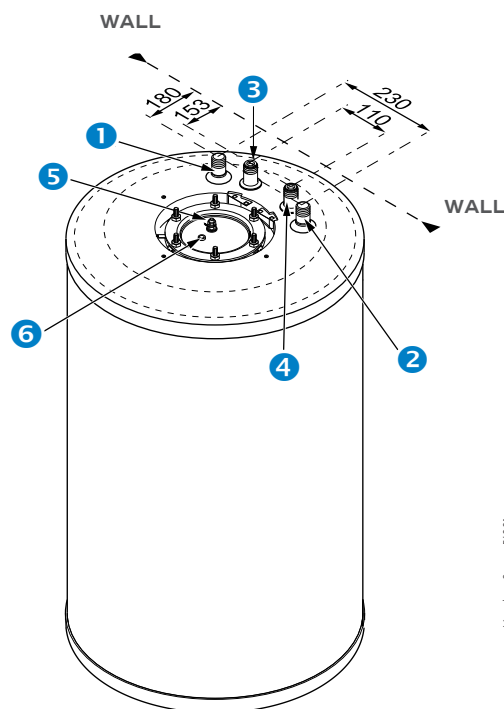
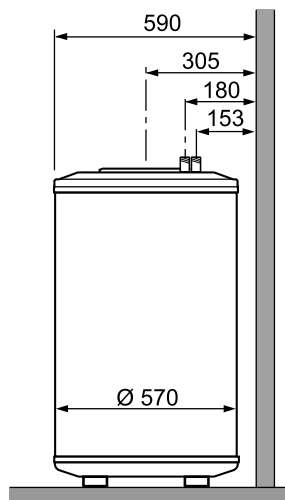
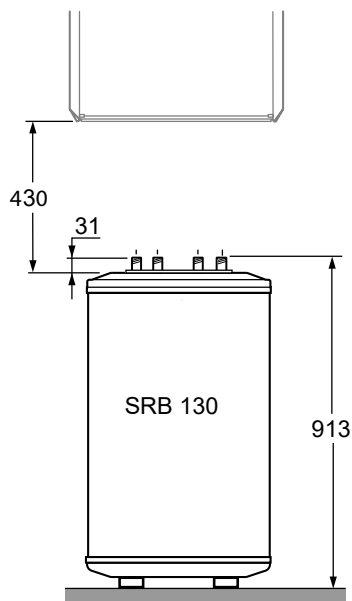
- 1 Heat exchanger bleed valve
- 2 Sensor pocket for domestic hot water sensor
- 3 Magnesium anode
- 4 Domestic hot water outlet - R 3/4"
- 5 Domestic cold water inlet - R 3/4"
- 6 Exchanger inlet - G 3/4"
- 7 Exchanger outlet - G 3/4"



BMR 80 CYLINDER ON LEFT OR RIGHT



SRB 130 DHW CYLINDER



- 1 Primary inlet - G 3/4"
- 2 Primary outlet - G 3/4"
- 3 Domestic hot water outlet - R 3/4"
- 4 Domestic cold water inlet - R 3/4"

- 5 Magnesium anode
- 6 Sensor pocket

CONTROL PANEL

VIVADENS SMART

THE E-PILOT CONTROL PANEL

Vivadens Smart boilers are fitted with the E-Pilot electronic control system which adapts the heating output to the actual needs of the installation, based on the outside temperature.

The control system allows management of a direct circuit which can be a radiator circuit or 1 low temperature underfloor heating circuit.

E-PILOT is preequipped to manage up to 3 independent heating zones and 1 domestic water zone, based on the options.

E-PILOT can be connected up to the SMART TC[®] room temperature sensors.

E-PILOT is Bluetooth compatible using our GTW35-Bluetooth communication gateway.



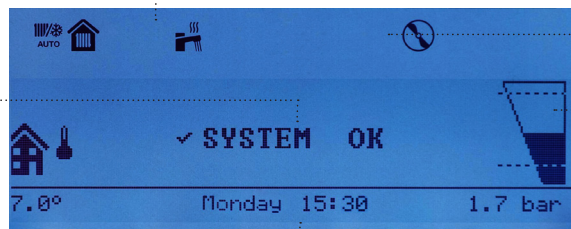
DESCRIPTION OF THE DISPLAY

Access to the various menus allows configuration of the parameters in the boiler's different operating modes (heating, heating + DHW, DHW only). The screen allows the boiler status and operating mode to be viewed at a glance.

STANDBY SCREEN

Icons indicating the operating mode of the appliance

General system status



Flame present

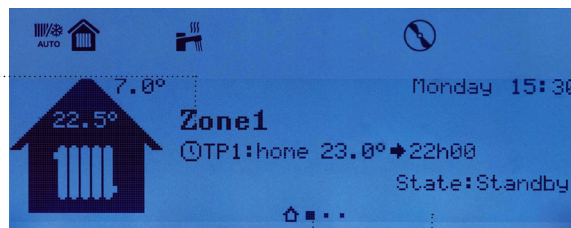
Hydraulic pressure in the installation

Day and time

HOME SCREEN

Temperature measured by the boiler flow sensor

Indication for the number of zones: The number of dots shows the number of zones included in the installation



Day and time

Appliance operating status

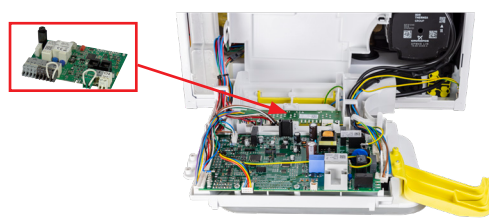
MULTIZONE MANAGEMENT

Two solutions are possible for multizone management:

VIVADENS SMART HYDRAULIC SHARING MODULE EQUIPPED WITH THE SCB-17B PCB



SCB-17B PCB CAN ONLY BE INTEGRATED INTO THE BOILER CONTROL PANEL



THE APPS

VIVADENS SMART

REMOTE CONTROL WITH SMART TC° AS AN OPTION



When combined with its application, the SMART TC° smart room thermostat, available as an option, combines the height of comfort with ease of installation and use. The temperature of your home and your domestic hot water can be controlled wherever you are, both at home and remotely, and programmed hours entered to suit your lifestyle or requirements.

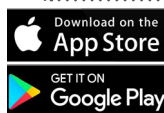
- "User friendly" with room thermostat with attractive design
- Remote heating management via the application
- Quick and easy programming aid
- Monitoring of heating and DHW consumption *
- Fault alert
- Operates as a room temperature sensor
- Controls your heating with voice commands **

* depending on the model

** with Amazon ALEXA and Google Home



DE DIETRICH SMART



Control your heating wherever you are in the world.

The SMART TC° functions in tandem with your Vivadens Smart boiler to give you new ways of using your system.

COMMISSIONING APPLICATION FOR PROFESSIONALS WITH GTW35-BLUETOOTH GATEWAY AS AN OPTION



DE DIETRICH START

The DE DIETRICH START application is used with the GTW35-Bluetooth option to guide you step-by-step through the commissioning of De Dietrich products. You configure the products by answering questions – simple and intuitive, with no parameter codes to remember.

With this application, you can:

- Configure De Dietrich products
- Program the zone temperatures
- Save an installation configuration
- Send an installation report by e-mail
- Duplicate an installation configuration



MAINTENANCE AND DIAGNOSTIC APPLICATION FOR PROFESSIONALS WITH THE GTW35-BLUETOOTH GATEWAY OPTION



DE DIETRICH SERVICE TOOL

The DE DIETRICH SERVICE TOOL application is used with the GTW 35 - Bluetooth gateway, and is designed for professionals.

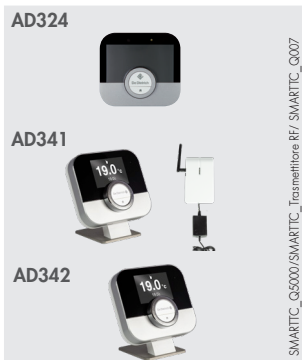
This application is a practical tool which can be used for all types of work: installation, maintenance and troubleshooting. The local Bluetooth connection ensures quick and easy access to all of the control system parameters:

- The status of the generator
- The values and measurements
- Viewing and resetting of errors
- Viewing and resetting of meters
- Fault messages in clear text format
- Viewing and resetting of service messages

THE BOILER OPTIONS

VIVADENS SMART

THE E-PILOT CONTROL PANEL OPTIONS



SMART TC° SMART ROOM TEMPERATURE SENSOR

R-BUS (WIRED) - REF.: 7691375

RF (WIRELESS) - REF.: 7691377

RF (WIRELESS) FOR SECOND CIRCUIT - REF.: 776514

Equipped with a backlit colour screen and a dropdown menu for simplified use, it enables remote control of the heating and domestic hot water via a free application to download application easy for the user to learn, with the option of providing a professional with access to their installation (via authorisation). It enables precise remote control of temperatures and modulation, incorporates various timer programmes with programming help, and provides access to the installation's parameters, including monitoring of consumption, with data backup.

While the SMART TC° can operate as a classic remote control without Wi-Fi or the app, it is nevertheless recommended to connect it to the internet to benefit from the latest updates.

For further details, see the dedicated technical leaflet



WIRELESS OUTSIDE TEMPERATURE SENSOR - REF.: 7776874

WIRED OUTSIDE TEMPERATURE SENSOR - REF.: 85757741

The wireless outside temperature sensor is only compatible with the Smart TC RF communication gateway (ref.: 7691377).



"OPENTHERM" MODULATING PROGRAMMABLE ROOM THERMOSTAT, WIRED - REF.: 7609763

WIRELESS - REF.: 7609762

These thermostats are used for controlling and programming the heating and the domestic hot water. They integrate the setting parameters for the boiler: heating gradient, max. boiler temperature, fan speed, and the estimated energy metering (number of pump, DHW, and total operating hours, etc., in accordance with the RE 2020 specifications). The control system adapts the boiler output to the actual requirements.

Three operating modes are possible:

- **AUTOMATIC:** based on the set weekly programming; the setpoint temperature can be indicated for each programmed period.
- **PERMANENT:** used to permanently maintain the selected temperature for the day, night or frost protection.
- **HOLIDAY:** designed for absences of a long duration. Used to enter start and end dates for an absence and for the temperature to be maintained.

For operation based on the outside temperature, an outside temperature sensor (ref. 85757741) can be added.

The "wireless" version is delivered with a sender-receiver box to be mounted on the wall close to the boiler.



"OPENTHERM" MODULATING REMOTE CONTROL WITH ROOM TEMPERATURE SENSOR (NON-PROGRAMMABLE) - REF. 7612097

This remote control uses its room temperature sensor to regulate the temperature of a reference room, adapting the boiler output to obtain the setpoint temperature set by the user. It also regulates the DHW temperature. It integrates the setting parameters for the boiler: temperature display and setting including the DHW temp. and max. heating temp., counter functions (number of start-ups, number of pump, DHW or total operating hours, etc.), display of the "error codes", etc



PROGRAMMABLE ROOM THERMOSTAT (WIRED) - REF.: 7768817

PROGRAMMABLE ROOM THERMOSTAT (WIRELESS) - REF.: 7768818

These thermostats are used to regulate the heating according to various operating modes:

- AUTOMATIC:** according to the timer programming, the setpoint temperature automatically switches from Comfort to Economy and vice versa. It is also possible to remain in permanent comfort mode, reduced mode or frost protection mode
- ABSENT:** This mode allows a permanent temperature of between 5° and 15° to be set
- MANUAL:** this mode is used to switch from comfort to economy (or vice versa) until the next programme change
- OFF:** this mode used to stop the heat demand, for example in summer.



NON-PROGRAMMABLE ROOM THERMOSTAT (WIRED) - REF.: 88017859

This room thermostat is used to control the room temperature from 6 to 30 °C.



SCB-17B EXPANSION PCB KIT - REF.: 7800385

This PCB can be installed to provide additional functions such as the management of multiple zones.



FLOW SENSOR AFTER MIXING VALVE - REF.: 88017017



LONG DHW SENSOR (5M) - REF.: 100000030



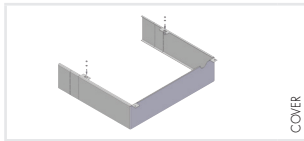
GTW-35 COMMUNICATION GATEWAY - REF.: 7745796

Only available as a spare part.

THE BOILER OPTIONS

VIVADENS SMART

VIVADENS SMART ACCESSORIES



VALVE COVER:

- Equipped for Vivadens Smart (heating only and MI) - Height 100 mm - REF.: 7776960
- Equipped for Vivadens Smart BIC - Height 155 mm - REF: 7859367



SPACER FRAME WITH TUBES:

- Equipped for Vivadens Smart (heating only and MI) - Depth 40 mm - REF.: 7776961
- Equipped for Vivadens Smart BIC - Depth 40 mm - REF: 7860330



2-LITRE DOMESTIC HOT WATER EXPANSION VESSEL FOR VIVADENS SMART BIC - REF: 7860329



BOILER CONNECTION KIT BMR80 - REF: 10001287



BOILER CONNECTION KIT SRB130 - REF: 10001288



1/2" - 3/4" OFFSET WRENCH - REF.: C71414101

THE BOILER OPTIONS

VIVADENS SMART

THE HYDRAULIC SHARING MODULES



2-ZONE SHARING MODULE (1 DIRECT+1 MIXED) - REF.: 7801430

This module with compact dimensions (700mm x 450mm x 210mm) is supplied with the following:

- 2 self-modulating pumps
- 1 mixing valve
- 1 safety temperature limiter
- 1 negative temperature flow sensor for the mixed circuit
- 2 non-return valves
- SCB-17B expansion PCB



3-ZONE SHARING MODULE (1 DIRECT+2 MIXED) - REF.: 7801432

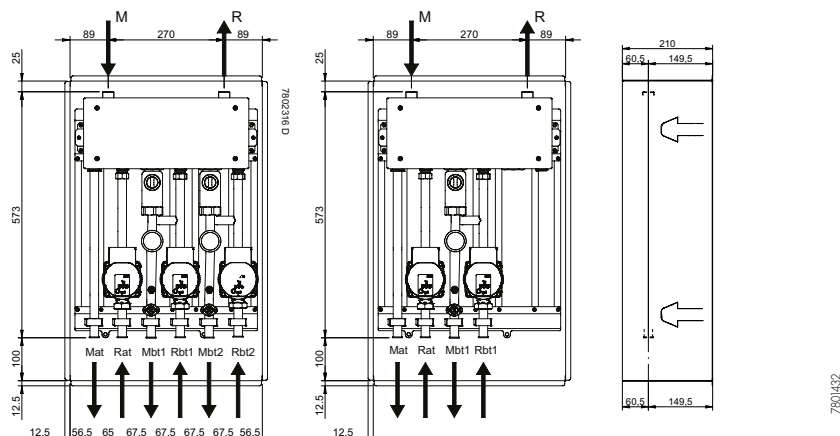
This module with compact dimensions (700mm x 450mm x 210mm) is supplied with the following:

- 3 self-modulating pumps
- 2 mixing valves
- 2 safety temperature limiters
- 2 negative temperature flow sensors for the mixed circuit
- 3 non-return valves
- SCB-17B and SCB-04



CASING FOR THE SHARING MODULE - REF.: 7222565

DIMENSIONS OF THE SHARING MODULES (IN MM)



CHOICE OF OPTIONS DEPENDING ON THE CIRCUITS CONNECTED WITH THE E-PILOT CONSOLE

Circuit type (I)						
Boiler	Options	DHW	1 direct circuit	1 direct circuit + 1 mixed circuit		1 direct circuit + 2 mixed circuits
Vivadens Smart 24/32	Control system (I)	100000030 DHW sensor	✓	7801430 (Sharing module with control system PCB included)	7800385 (SCB-17B expansion PCB) + 88017017 (flow sensor)	7801432 (Sharing module with control system PCB included)
	Hydraulic system	✓	✓		External hydraulic module	
Vivadens Smart ... MI Vivadens Smart 24/35 BIC	Control system (I)	✓	✓	7801430 (Sharing module with control system PCB included)	7800385 (SCB-17B expansion PCB) + 88017017 (flow sensor)	7801432 (Sharing module with control system PCB included)
Hydraulic system	✓	✓	External hydraulic module			

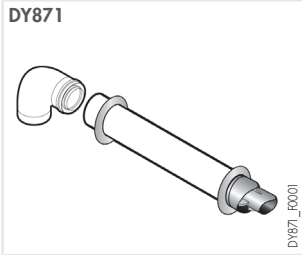
(I) Each of the "heating" circuits can be completed with either a sensor or a room thermostat from those listed in the options.

✓ : function included as standard.

THE BOILER OPTIONS

VIVADENS SMART

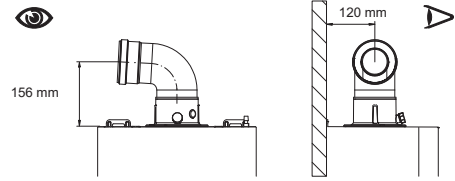
FLUE SYSTEM ACCESSORIES



PPS HORIZONTAL FLUE TERMINAL, Ø 60/100 MM L=800 MM - REF. 100008296

Contains:

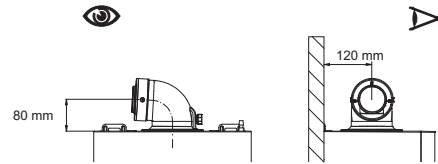
- 60/100 mm flow elbow
- Interior and exterior escutcheon plates
- 800 mm horizontal flue terminal



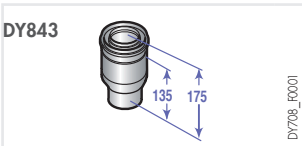
CONNECTING KIT FOR SHARED FLUE SYSTEM 3 CEP, Ø 80/125 MM- DY921 - REF. 84887708



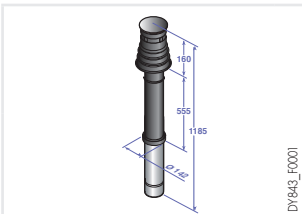
PPS COMPACT ELBOW Ø 60/100 MM - REF. 7220862



FLUE GAS OUTLET Ø 80/125 MM - REF. 7755080



ADAPTER Ø 60/100 MM - Ø 80/125 MM - REF. 84887708



PPS VERTICAL FLUE TERMINAL Ø 80/125 MM BLACK - REF. 100002732 RED - REF. 100002733



MCR REPLACEMENT ELBOW Ø 60/100 MM - REF. 7802898



BI-FLUE ADAPTER 2 X 80 MM - REF. 7220861

Allows C53 parallel pipe installation



REDUCED ELBOW FOR HORIZONTAL FORCED FLUE TERMINAL - REF. 7782188

Saves space at heights up to 66 mm



PPS REDUCTION PIECE Ø 80 TO Ø 60 MM - REF. 7683812



PPS REDUCTION PIECE Ø 80 TO Ø 50 MM - REF. 7735536

INFORMATION REQUIRED

FOR INSTALLATION OF THE VIVADENS SMART

STATUTORY INSTRUCTIONS ON INSTALLATION AND MAINTENANCE

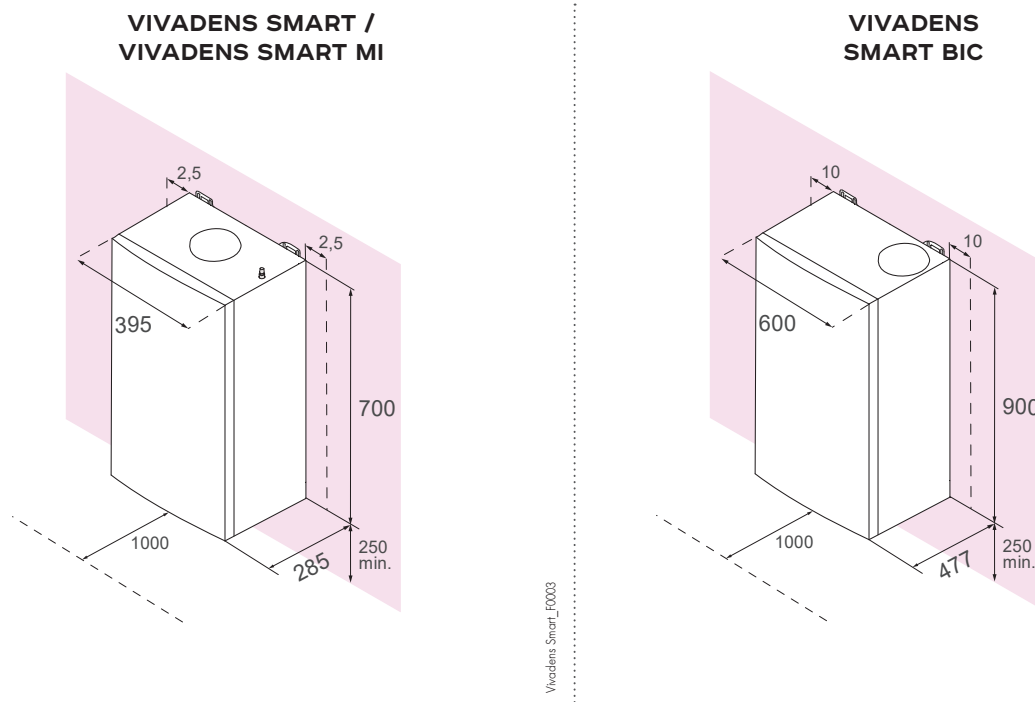
The installation of the appliance in both residential buildings and establishments open to the public and its maintenance must be carried out by a qualified professional in compliance with the applicable statutory codes of practice.

LOCATION

Vivadens Smart condensing boilers must be installed in a frost-free location, which can also be ventilated. Under no circumstances may they be installed above a heat source or cooking appliance.

The IP X5D protection index enables them to be installed in kitchens and bathrooms, with the exception of volume areas 1 and 2. The wall to which the boiler is secured must be capable of bearing the weight of the boiler when filled with water.

To ensure adequate access to the boiler, we recommend the minimum dimensions indicated below are respected.



VENTILATION

Ventilation must comply with the applicable regulations.

GAS CONNECTION

Comply with all applicable national or local instructions and regulations. In all cases, an isolation valve must be fitted as close as possible to the boiler. This valve is prefitted to the hydraulic connection plate delivered with Vivadens Smart boilers. A gas filter must be fitted to the boiler inlet.

Gas supply pressure:

- 20 mbar for natural gas H, G20,
- 25 mbar for natural gas L, G25,
- 37 mbar for propane, G31.

This appliance is designed to operate with natural gas containing up to 20% hydrogen (H₂).

CERTIFICATE OF CONFORMITY

The installer is required to draw up a certificate of conformity in line with article 21 of the order dated 23rd February 2018.

ELECTRICAL CONNECTION

The electrical safety of the equipment is only ensured when it is correctly connected to an effective earthing system in accordance with the applicable safety standards for installations.

The boiler must be electrically connected to a 230 V single-phase + earth mains supply.

This must comply with the applicable standard.

The boiler must be powered by an electrical circuit comprising an all-pole switch with an opening distance > 3 mm. Protect the connection to the mains with a 6 A fuse.

IMPORTANT: Condensing boilers are based on the principle of recovering the energy contained in the steam from the flue gases (latent heat from vaporisation). As a result, to achieve an annual operating efficiency of around 109%, the heating surfaces must be sized so as to obtain low return temperatures, below the dewpoint (for example, underfloor heating, low temperature radiators, etc.). This must be ensured throughout the heating period.

INFORMATION REQUIRED

FOR INSTALLATION OF THE VIVADENS SMART

WATER CONNECTIONS

CONNECTION TO THE HEATING CIRCUIT

Vivadens Smart boilers must only be used in closed-circuit heating installations. The central heating systems must be cleaned to remove the debris resulting from installation of the system (copper, strands, brazing flux) and any deposits that could cause malfunctions (noise in the system, chemical reaction between metals). More specifically, if fitting a boiler within an existing installation, it is strongly recommended that sludge is eliminated from the system before installing the new boiler.

Furthermore, it is important to protect central heating installations against the risk of corrosion, scaling and microbiological growth by using a corrosion inhibitor adapted to all types of system (steel, cast iron radiators, underfloor heating, PERI).

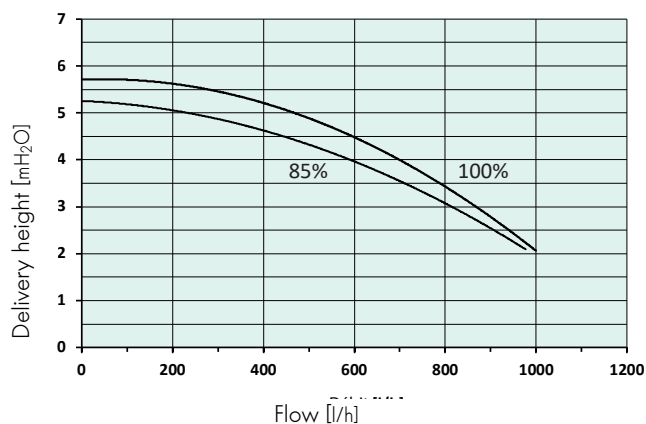
The water treatment products used must comply with regulations.

CHARACTERISTICS OF THE CIRCULATING PUMP

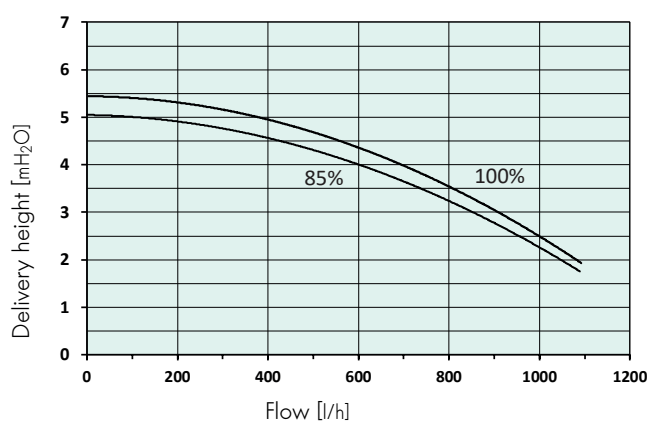
The pump used is a modulating type pump with high head suitable for use on any type of single or two-pipe heating system. The automatic air vent valve built into the pump body enables fast venting of the heating installation.

To prevent flow noise, you must pay attention to the hydraulic design of the heating installation.

VIVADENS SMART 24 AND VIVADENS SMART 24/29 MI



VIVADENS SMART 32 -32/35MI AND VIVADENS SMART 24/35 BIC



Output of the pump in DHW mode → fixed at 100%.
Output of the pump in heating mode → modulating from 85% to 100%.

CONDENSATE DRAIN

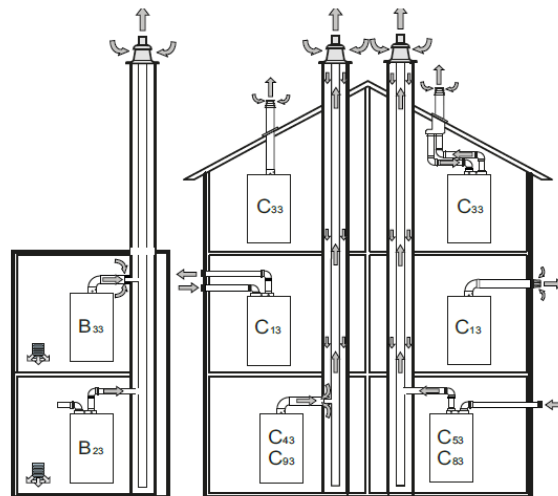
The trap provided must be connected to the wastewater discharge system. The connection must be removable and the flow of condensates visible. The connections and pipes must be made from corrosion-resistant material. An optional condensate neutralisation system is available.

INFORMATION REQUIRED

FOR INSTALLATION OF THE VIVADENS SMART

AIR/FLUE GAS CONNECTION

For information on how to set up the air-flue gas connection ducts and the installation rules, see the "flue system" brochure. For details of the different configurations, see the "flue system" brochure or current price list.



The Vivadens Smart boiler is an appliance which includes the fan upstream of the combustion chamber/heat exchanger.

Type B CONFIGURATIONS:

Appliance designed to be connected to an exhaust pipe for the evacuation of combustion products outside of the room in which it is installed. The combustion air is taken directly from the room.

B23 Appliance designed to be connected to a chimney for the evacuation of combustion products outside of the room in which it is installed. The combustion air is taken directly from the room.

B23P The B23P appliance is designed to be connected to an exhaust system which operates with positive pressure.

B33 Appliance designed for connection to a collective flue. This system consists of a single natural draught channel. The boiler exhaust pipe is contained inside a pipe for the intake of the combustion air, which is taken from inside the room. The combustion air penetrates through the openings in the surface of the appliance's concentric pipe.

Type C CONFIGURATIONS:

Appliance with a combustion circuit (air supply, combustion chamber, heat exchanger and evacuation of combustion products) which is sealed off from the room in which it is installed.

C(10)3X Appliance designed for connection to an exhaust system which operates with positive pressure.

C(11)3X Appliance designed for connection to an exhaust system which operates with positive pressure, provided by the manufacturer.

C13X Appliance designed to be connected via its pipes to a horizontal terminal, which supplies fresh air to the burner while simultaneously evacuating the combustion products to the outside, through openings which are concentric or which are close enough to be exposed to comparable wind conditions. The terminals for the split exhaust must be located within a square measuring 50 x 50 cm. Detailed instructions are provided together with the individual accessories

C33X Appliance designed to be connected via its pipes to a vertical terminal, which supplies fresh air to the burner while simultaneously evacuating the combustion products to the outside through openings which are concentric or which are close enough to be exposed to comparable wind conditions. The terminals for the split exhaust must be located within a square measuring 50 x 50 cm. Detailed instructions are provided together with the individual accessories.

C43X Appliance designed for connection to a system with a common pipe used by more than one device, via its two supply pipes. This system with a common pipe consists of two pipes connected to a terminal, which supplies fresh air to the burner while simultaneously evacuating the combustion products to the outside through openings which are concentric or which are close enough to be exposed to comparable wind conditions.

C43P The C43 appliance is designed for connection to an exhaust system which operates with positive pressure.

C53 Appliance connected, via its separate pipes, to two distinct terminals for drawing in the combustion air and evacuating the combustion products. These pipes may end in areas with different pressures, but not on different walls of the building.

C53X Appliance connected, via its separate pipes, to two distinct terminals for drawing in the combustion air and evacuating the combustion products. These pipes may end in areas with different pressures, but not on different walls of the building.

C63X Appliance designed for connection to an approved exhaust system (sold separately) for the intake of combustion air and the evacuation of the combustion products. The maximum pipe pressure loss must not exceed 100 Pa. The pipes must be certified for the specific use and for a temperature exceeding 100°C. The chimney terminal used must be certified according to standard EN 1856-1.

C83 Appliance connected, via its exhaust pipe, to a system with a common or individual pipe. This system consists of a single natural draught channel. The appliance is connected, via a second pipe, to a terminal for the intake of combustion air from outside the building.

C93X Appliance connected, via its exhaust pipe, to a vertical terminal and, via its combustion air intake pipe, to an existing chimney. The terminal supplies fresh air to the burner while simultaneously evacuating the combustion products to the outside through openings which are concentric or which are close enough to be exposed to comparable wind conditions.

INFORMATION REQUIRED

FOR INSTALLATION OF THE VIVADENS SMART

AIR/FLUE GAS CONNECTION

**TABLE OF MAXIMUM PERMISSIBLE AIR-FLUE GAS DUCT LENGTHS
BASED ON THE BOILER TYPE**

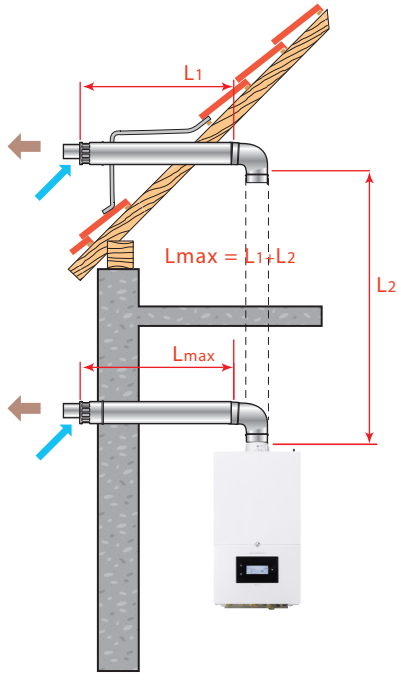
TYPE OF AIR-FLUE GAS CONNECTION			EQUIVALENT MAXIMUM LENGTH OF THE CONNECTION DUCTS IN M					
			LMAX:					
			VIVADENS SMART 24	VIVADENS SMART 32	VIVADENS SMART 24/29 MI	VIVADENS SMART 32/35 MI	VIVADENS SMART 24/25 BIC	
1	Flue gas/air supply ducts connected to a horizontal flue terminal (PPS)	C13	Ø 60/100 mm	10	10	10	10	10
			Ø 80/125 mm	25	25	25	25	25
2	Flue gas/air supply ducts connected to a vertical terminal (PPS)	C33	Ø 60/100 mm	10	10	10	10	10F
			Ø 80/125 mm	25	25	25	25	25
3	Duct(s): - concentric in boiler room, - single rigid or flexible in the chimney (combustion air in counter-current) (PPS)	C93	Ø 60/100 mm	1	1	1	1	1
			Ø 80 mm	30	30	30	20	20
			Ø 60/100 mm	1	1	1	1	1
			Ø 60 mm	30	30	30	20	20
			Ø 60/100 mm	1	1	1	1	1
			Ø 50 mm	30	30	30	20	20
4	Duct(s): - concentric in boiler room, - single rigid or flexible in the chimney (combustion air taken from within the premises)	B23P/ B33	Ø 60/100 mm	1	1	1	1	1
			Ø 80 mm	30	30	30	20	20
			Ø 60/100 mm	1	1	1	1	1
			Ø 60 mm	30	30	30	20	20
			Ø 60/100 mm	1	1	1	1	1
			Ø 50 mm	30	30	30	20	20
4	Duct(s): - concentric in boiler room, - single rigid in the chimney (combustion air taken from within the premises)	B23	Ø 60/100 mm	-	-	-	3	3
			Ø 40 mm	-	-	-	25,2	25,2
5	Separate air and flue gas pipes with bi-flow adapter (combustive air taken from outside)	C53	Ø 60/100 mm su 2 x 80	80	80	80	80	80

INFORMATION REQUIRED

FOR INSTALLATION OF THE VIVADENS SMART

AIR/FLUE GAS CONNECTION

1 CONFIGURATION C₁₃ - ALUMINIUM/PPS CONCENTRIC HORIZONTAL FORCED FLUE (connection to outside wall or with roof outlet)

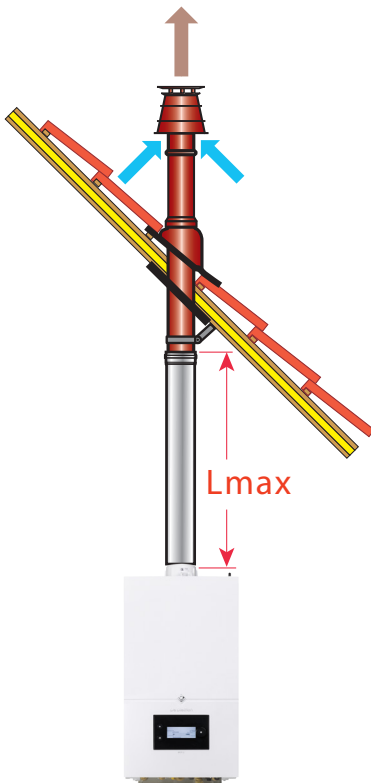


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CONNECTION Ø (mm) ▶	L _{MAX} (m) 60/100	L _{MAX} (m) 80/125
▼ BOILER TYPE		
Vivadens Smart 24	10	25
Vivadens Smart 32	10	25
Vivadens Smart 24/29 MI	10	25
Vivadens Smart 32/35 MI	10	25
Vivadens Smart 24/35 BIC	10	25

CONNECTION Ø (mm) ▶	EQUIVALENT LENGTH (m)	
	60/100	80/125
87° elbow	1,0	1,0
45° elbow	0,5	0,25

2 CONFIGURATION C₃₃ - ALUMINIUM/PPS CONCENTRIC VERTICAL FORCED FLUE (connection to sloping or flat roof)



FUMI_F010B

CONNECTION Ø (mm) ▶	L _{MAX} (m) 60/100	L _{MAX} (m) 80/125
▼ BOILER TYPE		
Vivadens Smart 24	10	25
Vivadens Smart 32	10	25
Vivadens Smart 24/29 MI	10	25
Vivadens Smart 32/35 MI	10	25
Vivadens Smart 24/35 BIC	10	25

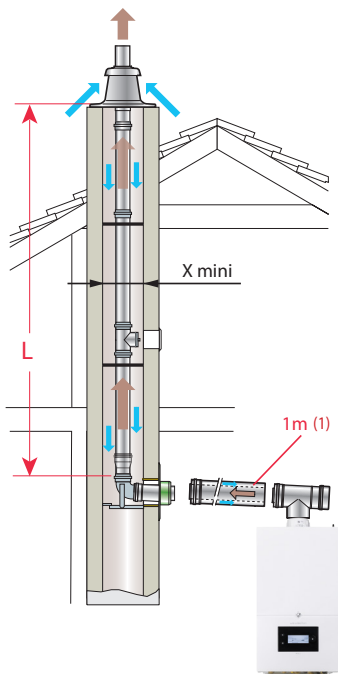
CONNECTION Ø (mm) ▶	EQUIVALENT LENGTH (m)	
	60/100	80/125
87° elbow	1,0	1,0
45° elbow	0,5	0,25

INFORMATION REQUIRED

FOR INSTALLATION OF THE VIVADENS SMART

AIR/FLUE GAS CONNECTION

3 CONFIGURATION C₉₃ - ALUMINIUM/PPS FLUE GAS/AIR SUPPLY DUCTS IN THE BOILER ROOM, SINGLE "RIGID" PPS DUCTS IN THE CHIMNEY (combustion air in counter-current)



FUMI_F0111B

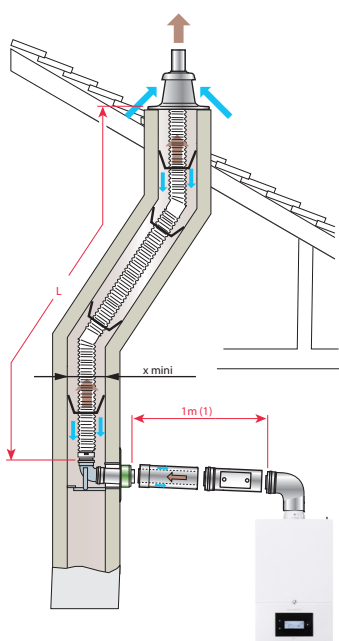
Boiler shown:
Vivadens Smart connected to the Ø 80/125 mm pipe in the boiler room and a rigid Ø 80 mm pipe in the chimney

CONNECTION Ø (mm):		L _{MAX} (m)		
		80/125	60/100	60/100
IN THE BOILER ROOM ▶		80 RIGID	60 RIGID	60/100
IN THE CHIMNEY ▶		80 RIGID	60 RIGID	50 RIGID
▼ BOILER TYPE				
Vivadens Smart 24		30	30	30
Vivadens Smart 32		30	30	30
Vivadens Smart 24/29 MI		30	30	30
Vivadens Smart 32/35 MI		20	20	20
Vivadens Smart 25/35 BIC		20	20	20
X min	∩	140	140	140
	∅	160	160	160

CONNECTION Ø (mm) ▶	EQUIVALENT LENGTH (m)				
	60/100	80/125	80	60	50
87° elbow	1,0	1,0	0,5	2	3
45° elbow	0,5	0,25	0,25	-	-

(1) For each additional metre of horizontal pipe, subtract 1.2 m from the vertical length L_{max} indicated in the table above.

3 CONFIGURATION C₉₃ - ALUMINIUM/PPS FLUE GAS/AIR SUPPLY DUCTS IN THE BOILER ROOM, SINGLE "FLEXIBLE" PPS DUCTS IN THE CHIMNEY (combustion air in counter-current)



FUMI_F0128B

Boiler shown:
Vivadens Smart connected to the Ø 80/125 mm pipe in the boiler room and a flexible Ø 80 mm pipe in the chimney

CONNECTION Ø (mm):		L _{MAX} (m)		
		80/125	60/100	60/100
IN THE BOILER ROOM ▶		80 FLEX	60 FLEX	60/100
IN THE CHIMNEY ▶		80 FLEX	60 FLEX	50 FLEX
▼ BOILER TYPE				
Vivadens Smart 24		30	30	30
Vivadens Smart 32		30	30	30
Vivadens Smart 24/29 MI		30	30	30
Vivadens Smart 32/35 MI		20	20	20
Vivadens Smart 24/35 BIC		20	20	20
X min	∩	140	140	140
	∅	160	160	160

CONNECTION Ø (mm) ▶	EQUIVALENT LENGTH (m)				
	60/100	80/125	80	60	50
87° elbow	1,0	1,0	0,5	2	3
45° elbow	0,5	0,25	0,25	-	-

(1) For each additional metre of horizontal pipe, subtract 1.2 m from the vertical length L_{max} indicated in the table above.

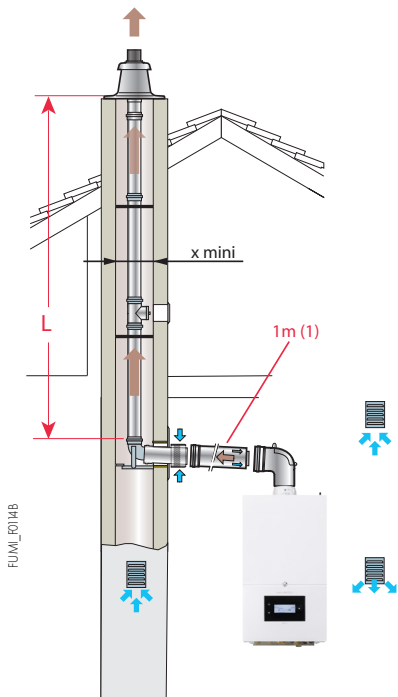
INFORMATION REQUIRED

FOR INSTALLATION OF THE VIVADENS SMART

AIR/FLUE GAS CONNECTION

- 4 **CONFIGURATION B_{23p}/B₃₃ - CONNECTED TO A CHIMNEY BY ALUMINIUM/PPS FLUE GAS/AIR SUPPLY DUCTS IN THE BOILER ROOM, SINGLE PPS DUCTS IN THE CHIMNEY** (combustion air taken from the boiler room or in the installation room)

RIGID CHIMNEY DUCT:

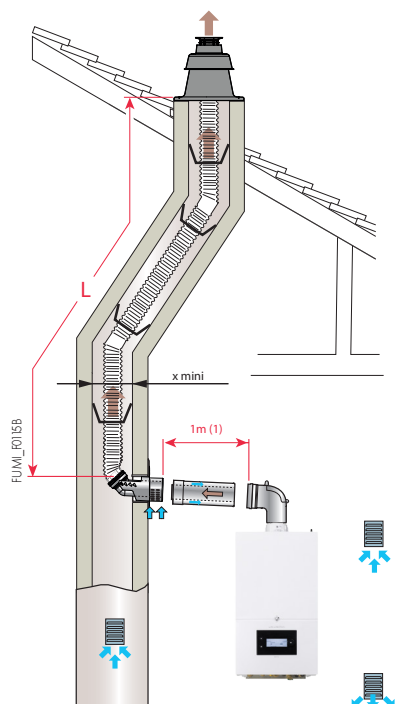


CONNECTION Ø (mm): IN THE BOILER ROOM ► IN THE CHIMNEY ►	L _{MAX} (m)		
	80/125 80 RIGID	60/100 60 RIGID	60/100 50 RIGID
▼ BOILER TYPE			
Vivadens Smart 24	30	30	30
Vivadens Smart 32	30	30	30
Vivadens Smart 24/29 MI	30	30	30
Vivadens Smart 32/35 MI	20	20	20
Vivadens Smart 24/35 BIC	20	20	20
X min	140	140	140
	Ø	160	160

CONNECTION Ø (mm) ►	EQUIVALENT LENGTH (m)				
	60/100	80/125	80	60	50
87° elbow	1,0	1,0	0,5	2	3
45° elbow	0,5	0,25	0,25	-	-

(I) For each additional metre of horizontal pipe, subtract 1.2 m from the vertical length L_{max} indicated in the table above.

FLEXIBLE CHIMNEY DUCT:



CONNECTION Ø (mm): IN THE BOILER ROOM ► IN THE CHIMNEY ►	L _{MAX} (m)		
	80/125 80 FLEX	60/100 60 FLEX	60/100 50 FLEX
▼ BOILER TYPE			
Vivadens Smart 24	30	30	30
Vivadens Smart 32	30	30	30
Vivadens Smart 24/29 MI	30	30	30
Vivadens Smart 32/35 MI	20	20	20
Vivadens Smart 24/35 BIC	20	20	20
X min	140	140	140
	Ø	160	160

CONNECTION Ø	EQUIVALENT LENGTH (m)				
	60/100	80/125	80	60	50
87° elbow	1,0	1,0	0,5	2	3
45° elbow	0,5	0,25	0,25	-	-

(I) For each additional metre of horizontal pipe, subtract 1.2 m from the vertical length L_{max} indicated in the table above.

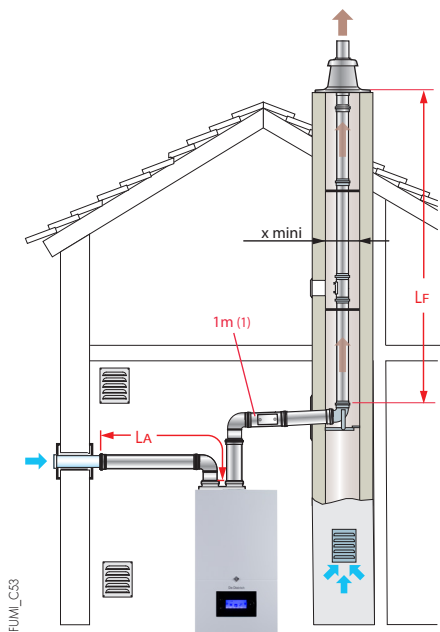
INFORMATION REQUIRED

FOR INSTALLATION OF THE VIVADENS SMART

FOR INSTALLATION OF THE VIVADENS SMART

5 CONFIGURATION C₅₃ - SEPARATE AIR AND FLUE GAS PIPES WITH BI-FLOW ADAPTER (COMBUSTIVE AIR TAKEN FROM OUTSIDE)

PIPE OF RIGID CHIMNEY



CONNECTION Ø (mm):
 IN THE BOILER ROOM ►
 IN THE CHIMNEY ►

60/100 MM SU 2X80 MM

▼ BOILER TYPE		L (M)	LF (M)	LA (M)
Vivadens Smart 24		80	70	10
Vivadens Smart 32		80	65	15
Vivadens Smart 24/29 MI		80	70	10
Vivadens Smart 32/35 MI		80	65	15
Vivadens Smart 24/35 BIC		80	70	10
X min	☑		140	
	∅		160	

(I) For each additional metre of horizontal pipe, subtract 1.2 m from the vertical length L_{max} indicated in the table above.

INSTALLATION EXAMPLE

VIVADENS SMART

The examples shown below cannot include all of the possible installation scenarios that may be encountered. They are intended to draw attention to the basic rules to be respected. A number of safety and control components (including some built into Vivadens Smart... boilers as standard) are shown, though ultimate responsibility for providing the final safety and control components in the boiler room, based on its individual requirements, lies with the installers, consultant engineers and design offices. In every case, it is important to comply with the applicable regulations and adhere to good industry practice.

Caution: When connecting on the domestic hot water side, if the distribution pipes are made from copper, a sleeve made from steel, cast iron or any other insulating material must be placed between the hot water outlet and these pipes in order to prevent any corrosion phenomena on the connections.

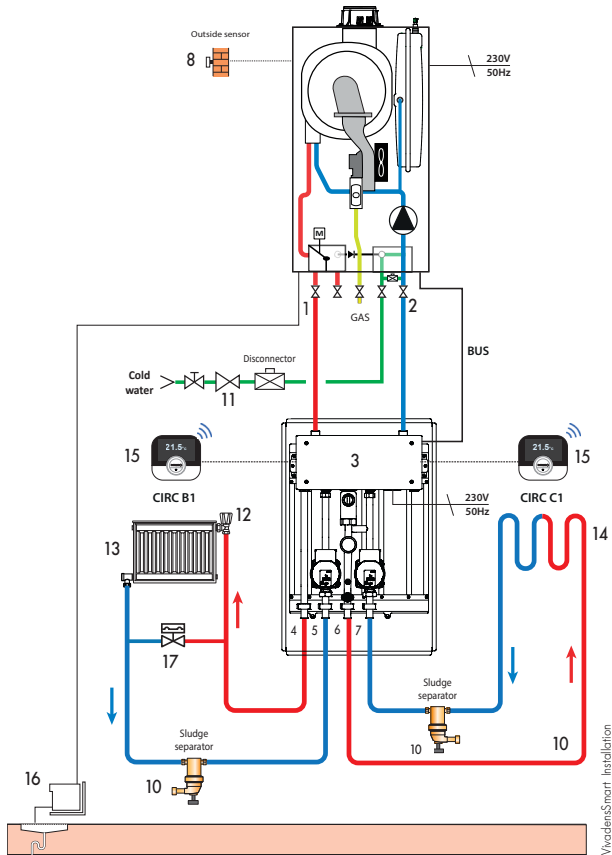
VIVADENS SMART 24 WITH 2 HEATING CIRCUITS

- 1 direct "radiator" circuit
- 1 direct "underfloor heating" circuit
- 1 DHW production with a BMR 80 tank

system

With SMART TC° room temperature sensor and cloud-based outside temperature or an outside temperature sensor (option)

A



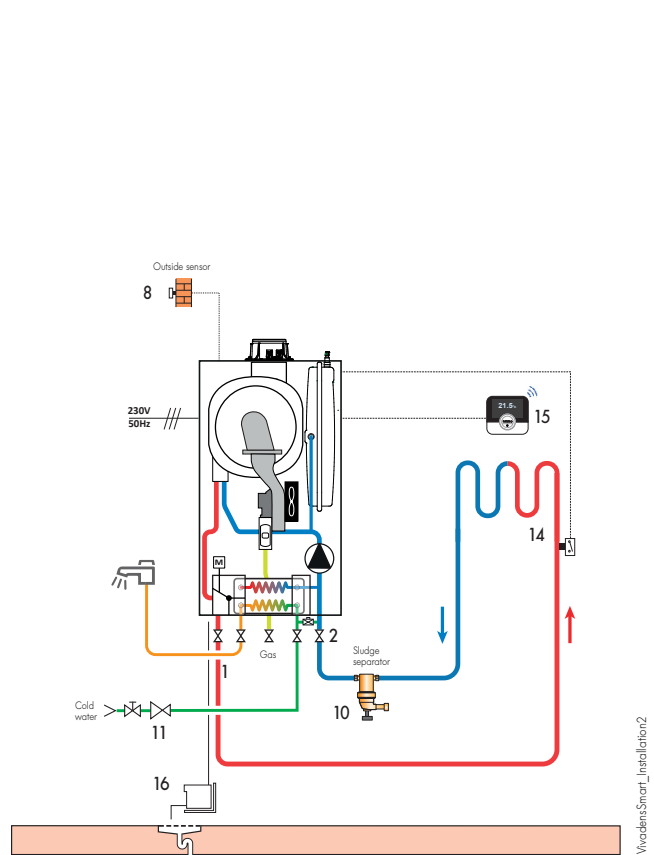
VIVADENS SMART 24 ...MI

- 1 direct underfloor heating circuit and DHW production, controlled by 1 SMART TC° connected room thermostat + outside temperature sensor

system

With SMART TC° room temperature sensor and cloud-based outside temperature or an outside temperature sensor (option)

A



KEY

- | | | |
|------------------------------------|---------------------------------------|-------------------------------------|
| 1 Heating flow | 4 Heating flow direct circuit | 11 Pressure reducer |
| 2 Heating return | 5 Heating return direct circuit | 12 Radiator valve |
| 3 2-zone sharing module including: | 6 Heating flow mixed circuit | 13 Radiator circuit |
| • SCB 17 PCB | 7 Heating return mixed circuit | 14 Low temperature circuit |
| • Heating accelerators | 8 Optional outside temperature sensor | 15 SMART TC° smart room thermostat |
| • Three-way mixing valve | (if you not using a cloud connected | 16 Condensate neutralisation system |
| • Flow sensor after valve | outside temperature) | 17 Pressure actuated bypass valve |
| • Safety temperature limiter | 10 Dirt separator | |

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