INNOVENS MCA

WALL-HUNG GAS CONDENSING BOILERS

- MCA...: from 3.4 to 35.9 kW, for heating only
- MCA 25/28 BIC: from 5.6 to 25.5 kW, for heating and domestic hot water production by integrated DHW tank with output of 29.9 kW in DHW mode
- MCA.../BS 60 and MCA.../BS 130: from 3.4 to 35.9 kW, for heating and domestic hot water preparation by associated DHW tank
- MCA 25/28 MI: from 5.6 to 25.5 kW, for heating and instant domestic hot water production with output of 28.6 kW in DHW mode

MCA...
MCA 25/28 MI

MCA 25/28 BIC

MCA/BS 60

MCA/BS 130

MCA...:
for heating only

MCA 25/28 BIC, MCA.../BS or MCA 25/28 MI
Heating and domestic hot water by integrated, independent calorifier or micro-accumulated

Condensing

All natural gases
Propane

EC identification No.:
0063BT3444

All of these boilers are factory fitted with
- modulating heating circulator,
- mounting frame with prefitted water and gas valves
- **DIEMATIC iSystem** control panel with new ergonomics to control and regulate up to 3 circuits + 1 DHW circuit, depending on optional equipment connected, according to the outside temperature. It can also be used to optimise management of combined control systems and control cascades of 2 to 10 boilers.

Various air/flue gas connection configurations are possible:
we offer solutions for connection by horizontal or vertical forced flue, to a chimney, in bi-flow or to a collective 3CEP flue pipe.

CONDITIONS OF USE

Boiler:
Max. operating pressure: 3 bar
Max. operating temperature: 90°C
Safety thermostat: 110°C
Power supply: 230 V/50 Hz
Protection index: IPX4D

Domestic hot water:
Max. operating pressure: 10 bar

HOMOLOGATION

B_{23P} - C_{13x} - C_{33x} - C_{93x} - C_{53} - C_{43x}- C_{83}

PRESENTATION

MCA…, MCA 25/28 BIC, MCA 25/28 MI boilers are delivered fully assembled and factory tested.
They come ready to operate on natural gas H; operation on propane is possible.
MCA 15/25/35 boilers are factory fitted with a heating/DHW reversal valve for connection to an independent hot water calorifier: 2 types of optional DHW calorifiers are available:
- 60 litres, BS 60: equipped with "Titan Active System" (wear-free anode), calorifier to be juxtaposed to the right or left of the boiler: version MCA…/BS 60,
- 130 litres, SR 130: equipped with magnesium anode calorifier to be placed on the floor under the boiler: version MCA…/BS 130

The boiler/DHW tank connection pipes and the DHW sensor are included in delivery with the MCA…/BS 60 and MCA…/BS models.
The MCA 25/28 BIC boiler is fitted with a DHW tank comprising 3 interconnected fully insulated stainless steel stratification tanks, combined with a plate exchanger and a load pump, with a total capacity of 40 litres, integrated in the boiler.
The MCA 25/28 MI boiler is mixed boiler and produce large quantities of domestic hot water (*** classification according to the standard EN 13203) thanks to an oversized stainless stell plate exchanger and very reactive electronics.

They offer high levels of performance:

- Annual operating efficiency up to 109%
- Very low pollutant emissions: NOx ⩽ 51 mg/kWh
- NOx classification: 5 according to pr EN 483
- Low noise level, in compliance with NRA

Strong points:

- Particularly compact, light boilers.
- Perfect adaptation of boiler output to actual needs thanks to the stainless steel gas burner with complete premixing, modulating from 22 to 100% output, fitted with a silencer on the air intake.
- **New compact and ultra-responsive exchanger in cast Aluminium/Silicium alloy.**
- Electronic ignition and ionisation flame check.
- Delivered with a mounting frame with prefitted water and gas valves (including the disconnector), 12 litre expansion tank (except MCA 35), automatic air vent.
- Modulating pump high performance energy class A (except MCA 35) for greater energy savings and lower noise levels.

- DHW expansion vessel and safety valve integrated in the boiler for MCA 25/28 BIC.
- **DIEMATIC iSytem** control panel in which the control system is open to all installation configurations, including the most complex. As delivered, it can be used to control and regulate a direct circuit.
  With the addition of a sensor, it can be used to regulate a primary circuit with mixing valve; with the addition of a PCB + sensor, it can control a secondary circuit with mixing valve.
  Installation of a DHW sensor enables regulation with priority to a DHW circuit. It is specifically designed to enable **the optimisation of management of combined systems.**
- Fan fitted with a nonreturn valve operated by air intake to run with pressurised flue gas evacuation systems.
- The boilers are delivred with a PPS horizontal air/flue gas vent Ø 60/100 mm with inspection elbow or with a PPS vertical air/flue gas vent Ø 80/125 mm + Adapter.
- For the various air/flue gas connection options, see page 15.

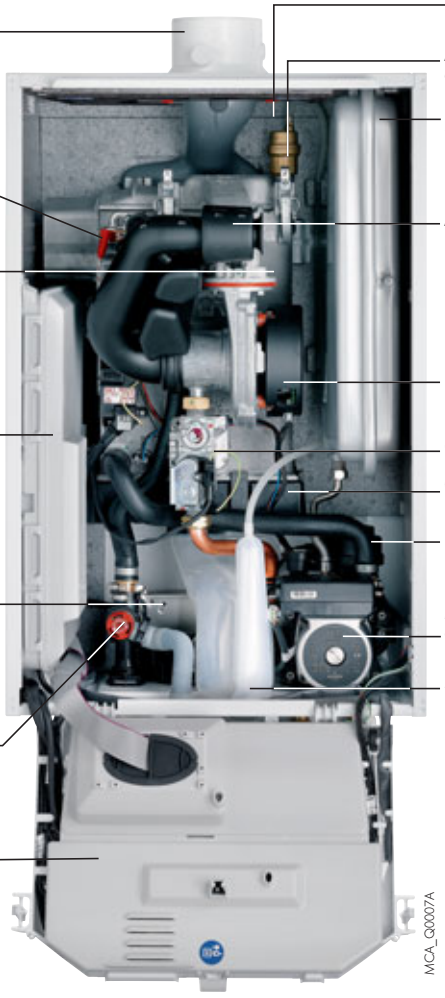
MODELS AVAILABLE

Boiler		Model with air/flue gas vent: horizontal (Ø 60/100 mm)	Model with air/flue gas vent: vertical (Ø 80/125 mm + adapter)	Useful output: heating mode at 50/30°C (kW)	Useful output: DHW mode at 80/60°C (kW)
 MCA_Q0001A	For heating only	MCA 15 VH MCA 25 VH MCA 35 VH	MCA 15 VV MCA 25 VV MCA 35 VV	3.4-15.8 5.6-25.5 7.0-35.9	– – –
 MCA_Q0005	For heating and domestic hot water by integrated calorifier with a total capacity of 40 litres	MCA 25/28 BIC VH	MCA 25/28 BIC VV	5.6-25.5	5.0-29.9
 MCA_Q0006	For heating and domestic hot water by 60 litre calorifier to be placed at right or at left of the boiler	MCA 15 VH/BS 60 MCA 25 VH/BS 60 MCA 35 VH/BS 60	MCA 15 VV/BS 60 MCA 25 VV/BS 60 MCA 35 VV/BS 60	3.4-15.8 5.6-25.5 7.0-35.9	3.0-14.5 5.0-24.1 6.3-34.0
 MCA_Q0003A	For heating and domestic hot water by 130 litre calorifier to be placed under the boiler	MCA 15 VH/BS 130 MCA 25 VH/BS 130 MCA 35 VH/BS 130	MCA 15 VV/BS 130 MCA 25 VV/BS 130 MCA 35 VV/BS 130	3.4-15.8 5.6-25.5 7.0-35.9	3.0-14.5 5.0-24.1 6.3-34.0
 MCA_Q0001A	For heating and instant domestic hot water production	MCA 25/28 MI/VH	MCA 25/28 MI/VV	5.6-25.5	5.0-28.6

TECHNICAL SPECIFICATIONS

Description

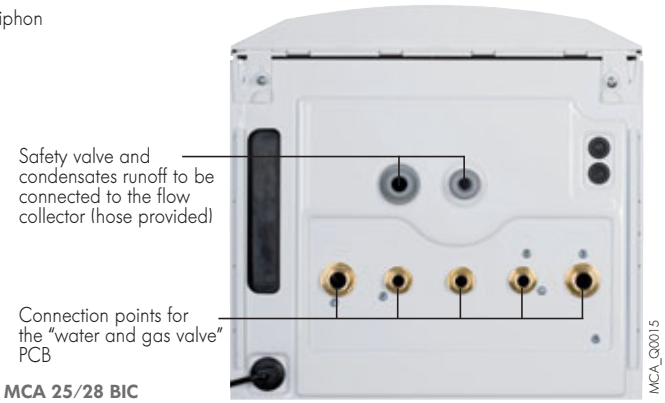
MCA 15, MCA 25, MCA 35
MCA 25/28 MI



Detail of the boiler's internal lighting

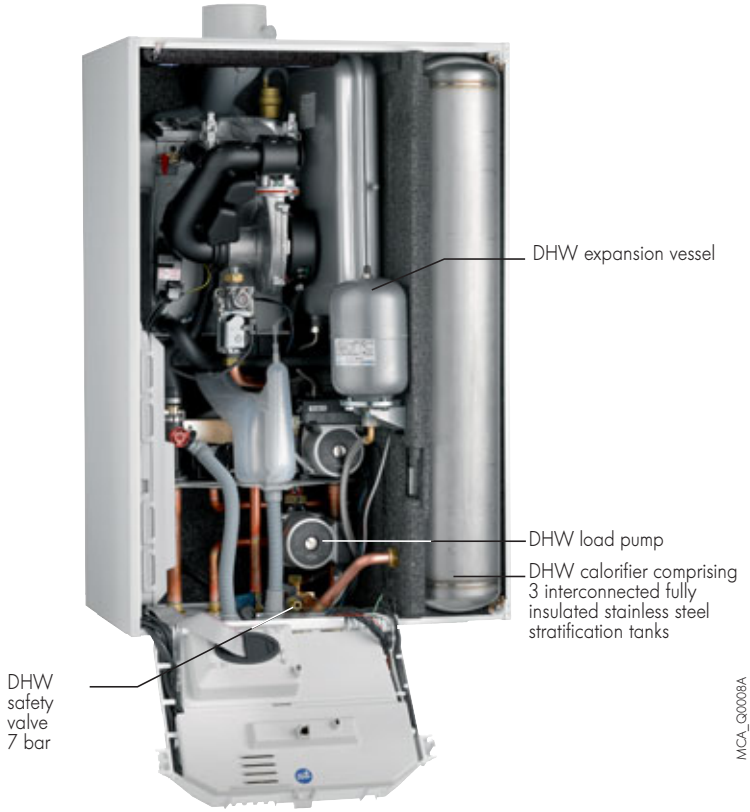
Exchanger/burner

View of the underneath of the boiler



Mounting frame delivered with the boiler MCA...

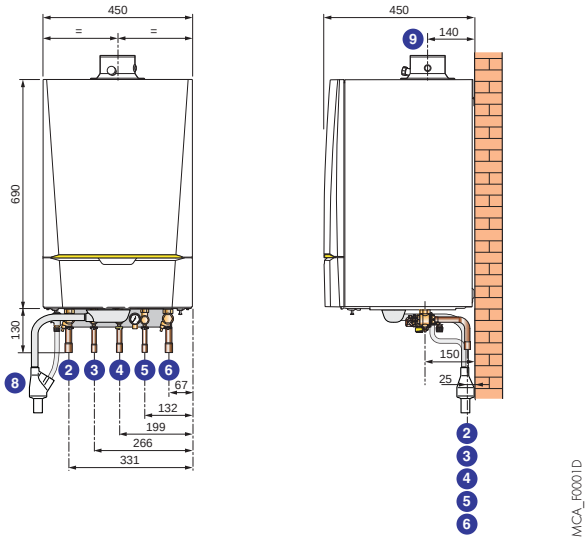
MCA 25/28 BIC



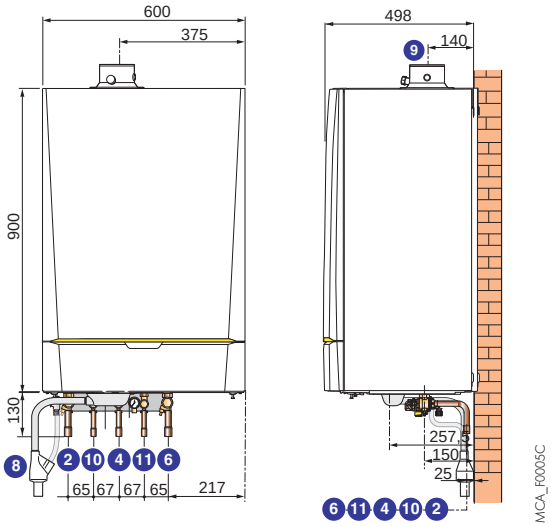
TECHNICAL SPECIFICATIONS

Main dimensions (in mm and inches)

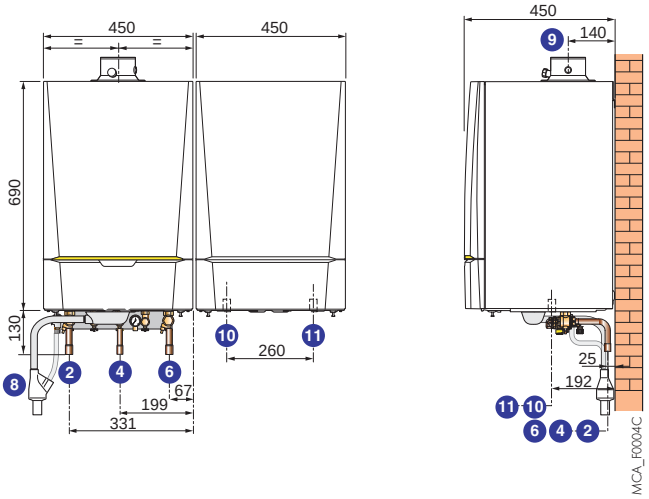
MCA 15, MCA 25, MCA 35
MCA 25/28 MI



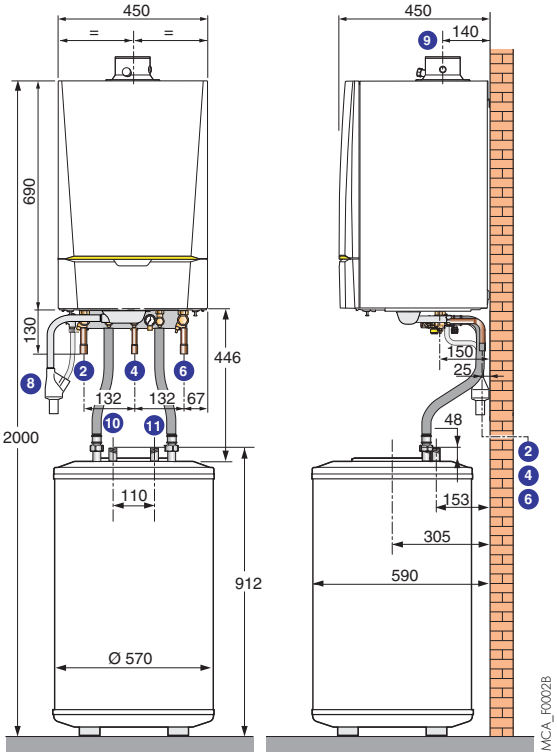
MCA 25/28 BIC



MCA 15/BS 60, MCA 25/BS 60, MCA 35/BS 60



MCA 15/BS 130, MCA 25/BS 130, MCA 35/BS 130



② Heating outlet interior Ø 22 mm
③ MCA 15, MCA 25, MCA 35: Primary calorifier outlet, interior Ø 16 mm (1)
MCA 25/28 MI: Domestic hot water outlet, interior Ø 16 mm
④ Gas inlet interior Ø 18 mm
⑤ MCA 15, MCA 25, MCA 35: Primary calorifier return, interior Ø 16 mm (1)
MCA 25/28 MI: Domestic cold water inlet, interior Ø 16 mm
⑥ Heating return interior Ø 18 mm
⑧ Condensates drain (flow collector delivered) PVC Ø 32 mm to be sticked
⑨ Evacuation of combustion products and air inlet pipe Ø 60/100 mm

⑩ Domestic hot water outlet: - MCA…/BS: R 3/4
- MCA 25/28 BIC: interior Ø 16 mm
⑪ Domestic cold water inlet: - MCA…/BS: R 3/4
- MCA 25/28 BIC: interior Ø 16 mm

(1) if a DHW calorifier is connected
R: threading

TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS

Boiler

Boiler type: condensing
Burner: modulating with complete premixing
Energy used: natural gas or propane

Combustion evacuation: chimney or sealed
Min. flow temperature: 15°C
Min. return temperature: none

Ref. CE certificate: 0063BT3444

Model		MCA 15	MCA 25	MCA 35	MCA 25/28 BIC	MCA 15/ BS 60 MCA 15/ BS 130	MCA 25/ BS 60 MCA 25/ BS 130	MCA 35/ BS 60 MCA 35/ BS 130	MCA 25/28 MI
Type generator		Heating only			Heating and DHW production with integrated calorifier	Heating and DHW production with separate DHW tank			Heating and DHW with additional storage of ≤ 10 litres integrated in the secondary circuit
Useful output at 50/30°C Pn (heating mode)	kW	3.4-15.8	5.6-25.5	7.0-35.9	5.6-25.5	3.4-15.8	5.6-25.5	7.0-35.9	5.6-25.5
Nominal output at 80/60°C (DHW mode)	kW	-	-	-	29.9	14.5	24.1	34.0	28.6
Efficiency in% of low calor., 100% Pn at ave. temp. 70°C	%	96.5	96.3	96.9	96.3	96.5	96.3	96.9	96.3
power at load....% 100 % Pn at return temp. 30°C	%	105.3	102.0	102.2	102.2	105.3	102.0	102.2	102.0
and water temp. ...°C 30 % Pn at return temp. 30°C	%	108.5	108.0	108.2	108.0	108.5	108.0	108.2	108.0
Nominal water output at Pn, Δt = 20 K	m^3/h	0.62	1.04	1.45	1.04	0.62	1.04	1.45	1.04
Useful output at 80/60°C min./max.	kW	3.0-14.5	5.0-24.1	6.3-34.0	5.0-24.1	3.0-14.5	5.0-24.1	6.3-34.0	5.0-24.1
Manometric height avail. heating circuit	mbar	545	295	360	295	545	295	360	295
Water capacity	l	1.7	1.7	2.3	1.8	1.7	1.7	2.3	1.7
Gas flow at Pn - gaz H	m^3/h	1.59	2.65	3.71	3.10	1.59	2.65	3.71	2.96
(15 °C, 1013 mbar) - propane	m^3/h	0.61	1.02	1.44	1.20	0.61	1.02	1.44	1.15
Max flue gas temperature	°C	65	80	75	85	65	80	75	85
Max mass flue gas output	kg/h	25.2	42.1	57.3	49.3	25.2	42.1	57.3	47.1
Pressure available at the boiler outlet	Pa	80	120	140	130	80	120	140	130
Acoustic power level		Complies with the NRA, report available on request							
Net weight	kg	43	43	46	70	118	118	121	44

Specifications domestic hot water

Model		MCA 25/28 BIC	MCA 15/ BS 60	MCA 15/ BS 130	MCA 25/ BS 60	MCA 25/ BS 130	MCA 35/ BS 60	MCA 35/ BS 130	MCA 25/28 MI
DHW calorifier capacity	l	40	60	130	60	130	60	130	-
Exchanged power	kW	29.9	14.5	14.5	22	24	25	25	28.6
Flow over 10 min at Δt = 30 K	l/10 min	200	125	200	145	200	150	200	-
Flow per hour at Δt = 35 K	l/h	670	355	355	540	590	615	615	-
Spec. flow at Δt = 30 K (compliance with EN 13203-1)	l/min	20.0	12.5	20.0	14.5	20.0	15.0	20.0	14
Min. pressure for a flow of 11 l/min	bar	-	-	-	-	-	-	-	1.3
Cooling constant	Wh/24hl.K.	-	0.43	0.27	0.43	0.27	0.43	0.27	-

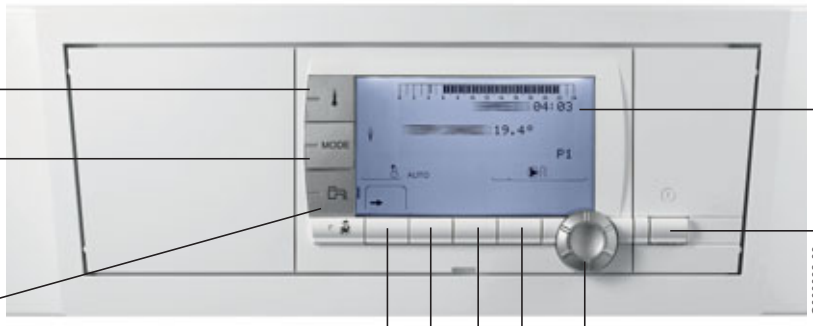
Domestic performance at room temp. 20°C, cold water temp. 10°C, primary hot water temp. 85°C

CONTROL PANEL DIEMATIC iSystem

CONTROL PANEL DIEMATIC iSystem

The DIEMATIC iSystem control panel is a very advanced control panel, with new control ergonomics which includes electronic programmable regulation as standard to modulate the boiler temperature by activating the modulating burner according to the outside temperature and the room temperature if a CDI D.iSystem, CDR D.iSystem or simplified interactive remote control is connected (optional).
As standard, DIEMATIC iSystem is capable of automatically operating a central heating installation with a direct circuit without mixing valve and 1 circuit with mixing valve (the flow sensor - package AD 199 - must be ordered separately, however).

By connecting another "PCB + sensor for 1 valve circuit" option (package AD 249), it is therefore possible to control up to 3 circuits in total and each of these circuits can be fitted with a CDI or CDR D.iSystem remote control (optional).
Connection of a domestic hot water sensor makes it possible to programme and regulate a DHW circuit.
This control system has been specifically developed to enable **optimum management of systems combining various heating generators** (boiler + heat pump or + solar system…).
It allows the installer to set the parameters for the entire heating installation regardless of its degree of complexity.
In the context of larger installations, it is also possible to connect 2 and as many as 10 boilers in cascade.



DIEMATIC iSystem CONTROL PANEL OPTIONS

Domestic hot water sensor - Package AD 212

This is used for regulating the DHW temperature as a priority and programming of domestic hot water production with an independent calorifier.

Outlet sensor downstream of the valve - Package AD 199

This sensor is required to connect the first circuit with mixing valve to a boiler fitted with a DIEMATIC iSystem control panel.

PCB + sensor for 1 mixing valve - Package AD 249

This is used to control a mixing valve with an electromechanical or electrothermal motor. The PCB is inserted into the DIEMATIC iSystem panel connected by pin connections. DIEMATIC iSystem can receive 1 "PCB + sensor" option, enabling it to control 1 additional mixing valve.

CONTROL PANEL DIEMATIC iSystem

DIEMATIC iSystem CONTROL PANEL OPTIONS

AD 253/254

CALENTA_Q0005

AD 252

8666Q172A

CDI D. iSystem interactive remote control - Package AD 254
CDR D. iSystem interactive "radio" remote control (without transmitter / receiver radio) - Package AD 253
Radio boiler module DIEMATIC iSystem (transmitter / receiver) - Package AD 252

These are used to override all instructions from the DIEMATIC iSystem control panel from the room in which they are installed. In addition, they enable the self-adaptability of the heating regime for the circuit concerned (one CDI D.iSystem or CDR D.iSystem per circuit).

In the case of the CDR D.iSystem, the data are transmitted by radio waves from the place where the CDR D.iSystem is installed to the transmitter/ receiver box (package AD 252) placed close to the boiler.

8575Q037

Simplified remote control with room sensor - Package FM 52

This is used from the room in which it is installed to override certain instructions from the DIEMATIC iSystem panel:
- room temperature program and instruction override. It is also used to enable the self-adaptability of the heating curve for the circuit concerned (1 remote control per circuit).

8227Q020

BUS connection cable (length 12 m) - Package AD 134

The BUS cable is used to make the connection between 2 boilers fitted with the DIEMATIC iSystem control panel in a cascade installation, as well as the connection of a DIEMATIC VM control unit or a telemonitoring network transmitter.

MCA_Q0012

Sensor for storage tank - Package AD 250

Includes 1 sensor for managing a storage tank with a boiler fitted with a DIEMATIC iSystem control panel.

AD 251

8575Q034

AD 252

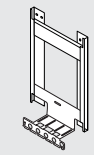
8666Q172A

Radio outside temperature sensor - Package AD 251
Boiler radio module (radio transmitter) **-** Package AD 252

The radio outside temperature sensor can be delivered as optional equipment for systems in which the installation of the external wire connection sensor delivered with DIEMATIC iSystem control panel would be too complex.

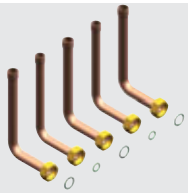
If this sensor is used:
- With a wire connection remote control (AD 254 or FM 52), it is necessary to order the "Boiler radio module"
- With a radio remote control (AD 253), already combined with a "boiler radio module" (AD 252), control of a second module is not necessary.

BOILERS OPTIONS



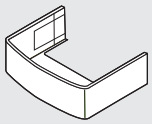
MCA_F0015

Stand-off frame (all models except MCA 25/28 BIC) - Package HR 39
Stand-off frame for MCA 25/28 BIC - Package HR 50
This frame replaces the mounting frame delivered as standard with MCA boilers in order to make it possible to pass the water and gas connection pipes behind the boiler (upwards). The plumbing fixtures are taken from the original frame and fitted to the stand-off frame.



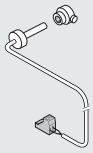
MCX_F0005

Connecting pipe kit for stand-off frame - Package HR 40
This kit comprises the 5 water and gas connecting pipes to be connected to the plumbing fixtures on the MCA mounting frames to be passed behind the top rear section of the boiler through the stand-off frame (option above).



MCA_F0015

Pipe cover (all models except MCA 25/28 BIC) - Package HR 42
Pipe cover for MCA 25/28 BIC - Package HR 52
Provides a neat finish underneath the boiler.

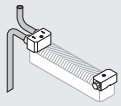


MCA_F0015

Flue gas thermostat (all models except MCA 25/28 BIC) - Package HR 43
Flue gas thermostat for MCA 25/28 BIC - Package HR 53
This thermostat cut the boiler when the flue gas temperature exceeds 110°C.

MCA_F0015

Cleaning tool boiler body - Package HR 45
Connects to a classic vacuum cleaner and allows an easy boiler body cleaning.



MCA_F0015

Cleaning tool plate exchanger - Package HR 44
(for MCA 25/28 MI only)

8575Q026

HWPlus 70 disconnecting cylinder - Package HC 28
For all installations with several circuits (1 direct circuit + 1 valve circuit) or for installations in cascade up to 70 kW, the use of a disconnecting cylinder is highly recommended.
The HWPlus 70 cylinder is delivered with 1 manual air vent and 1 drainage valve. It can be pivoted on itself for connection to the left or right of the boiler.
It is delivered insulated and fitted with a bracket to secure it to the wall.

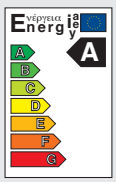
8575Q025

Hydraulic modules
- with electronic pump:
- **for 1 direct circuit -** Package EA 65
- **for 1 circuit with valve** - Package EA 67

- with a high performance energy pump, class A
- **for 1 direct circuit -** Package EA 135
- **for 1 circuit with valve** - Package EA 136

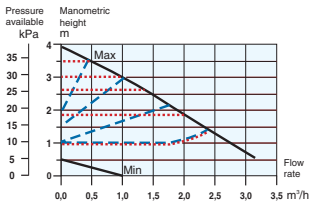
These modules are fully assembled, insulated and tested; fitted with an electronic pump, a motorized 3-way mixing valve (packages EA 67 and EA 136 only), thermometers built into the gate valves and a non-return valve built into the outlet valve.

EA 135/136:

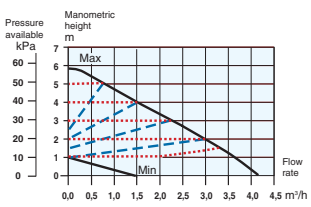


Technical specifications of heating circulator fitted to the hydraulic modules:

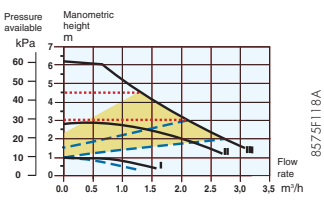
EA 65



EA 67



EA 135/136



8575FI118A

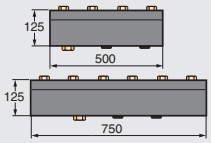
Constant pressure — *Proportional pressure* — *Pump on "AutoAdapt" position*

BOILERS OPTIONS


8531Q068

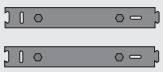
Compact module for 1 direct circuit and 1 circuit with valve - Package EA 104

This module is fully assembled, insulated, tested and fitted with 4 isolating valves with thermometers, a 3-speed pump and a motorized 3-way valve (valve circuit side), as well as 1 manual air vent per circuit. It is connected directly under the boiler to the hydraulic connection kit; if a DHW tank is fitted under the boiler, it can also be relocated to the side.



8575F074B

Collector for 2 hydraulic modules - Package EA 59
Collector for 3 hydraulic modules - Package EA 60
With an installation with 2 or 3 circuits.


8575F074B

Set of 2 walls consoles for hydraulic modules - Package EA 74

These consoles are used to fix the hydraulic modules for direct circuit or circuit with mixing valve to the wall. With a unit with 3 modules, the installation of this set of consoles is compulsory so the fitter can construct the boiler/module connection.


DTG130_Q0021

Set connection G in R (1" and 3/4") - Package BH 84

This kit includes 2 G 1-R 1 fittings and 1 G 3/4-R 3/4 fitting with gaskets and can be used to switch from flat gasket fittings to conical fittings (water tightness in the threading).

HC 33


8531Q027

HC 34


8531Q028A

Condensate neutralisation tank - Package HC 33
Wall bracket for neutralisation tank - Package HC 34
Granule refill for neutralisation tank - Package HC 35 (2 kg)

The materials used for the condensates flow pipes must be appropriate; otherwise the condensates must be neutralised. An annual check of the neutralisation system and particularly the effectiveness of the granules by measuring the pH is necessary. If need be, the granules must be replaced.
Principle : The acidic condensates flow through a tank filled with granules before being discharged into the waste water network.

STOVE FITTING ACCESSORIES SPECIFIC TO BOILERS INNOVENS MCA


MCA_Q0016

PPS/ALUMINIUM wall terminal Ø 60/100 mm - Package HR 48
(delivered with the MCA…VH models)

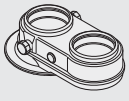
DY 844


MC35E_F0051A

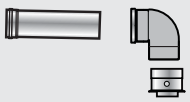
Vertical terminal PPS/ALUMINIUM Ø 80/125 mm black - Package DY 843
Vertical terminal PPS/ALUMINIUM Ø 80/125 mm red - Package DY 844
(delivered with the MCA…VV models)


MCA_Q0004

Adapter Ø 80/125 mm - Package HR 38
(delivered with the MCA…VV models)
Is fitted instead and in the place of the Ø 60/100 mm fitting delivered mounted on the boiler. It enables the **direct** connection of a vertical forced flue Ø 80/125 mm or a boiler connection kit if connected to the 3 CEP duct, see diagram on next page.


MCA_F0015

Adapter Bi-flow Ø 60/100 mm to 2 x 80 mm - Package DY 868
For connection with separate air and flue gas pipes.


MCX_F0008

Connecting kit Ø 80/125 mm on 3 CEP duct - Package DY 887

If connected to a 3 CEP duct, the adapter Ø 60/100 mm delivered with the boiler should be removed and replaced by package DY 887 presented opposite, which incorporates the adapter Ø 80/125 mm as standard. To determine the position of the connection to the 3 CEP duct, see diagram on next page.

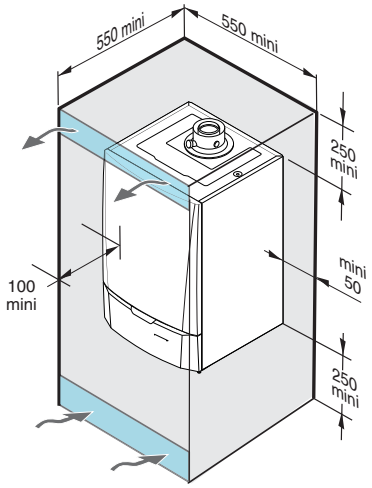
INFORMATIONS REQUIRED FOR INSTALLATION

Statutory instructions on installation and maintenance

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

Location

MCA condensing boilers must be installed in premises protected from frost, which can also be ventilate, they must in no event be installed above a heat source or a cooking appliance.
The IPX4D 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.
In order to ensure adequate accessibility around the boiler, particularly if the boiler is installed in a closed casing we recommend that you respect the minimum dimensions given opposite.



Ventilation

This must comply with prevailing regulations.

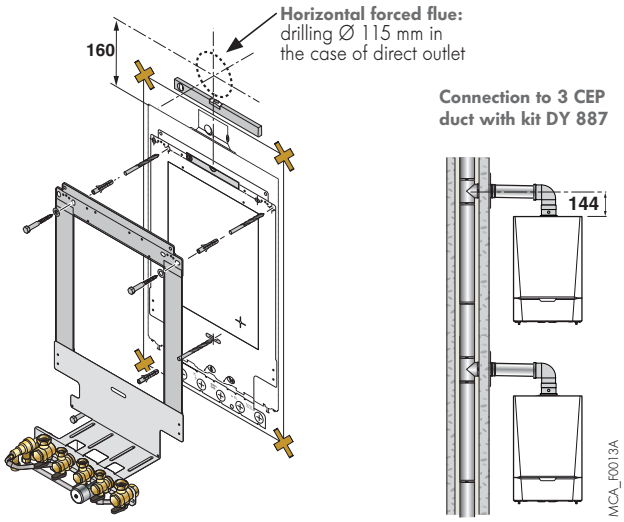
In order to avoid damage to boilers, it is necessary to prevent the contamination of combustion air by chloride and/or fluoride compounds, which are particularly corrosive.

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

It is therefore necessary:

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

Please note that, if the boiler and/or its peripherals become corroded by chloride and/or fluoride compounds, our contractual warranty cannot be invoked.



Gas connection

Comply with prevailing national or even local instructions and regulations. In all cases, a sectional valve is fitted as close as possible to the boiler. This valve is delivered prefitted to the hydraulic connection plate delivered with MCA boilers. A gas filter must be fitted to the boiler inlet.

INFORMATIONS REQUIRED FOR INSTALLATION

Electrical connection

This must comply with the prevailing standard.
The boiler must be powered by an electrical circuit comprising a omnipole switch with an opening distance > 3 mm. Protect the connection to the mains with a 6A fuse.

Notes:
- 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.

Hydraulic connections

Important: 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 109%, 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.

Connection to the heating circuit

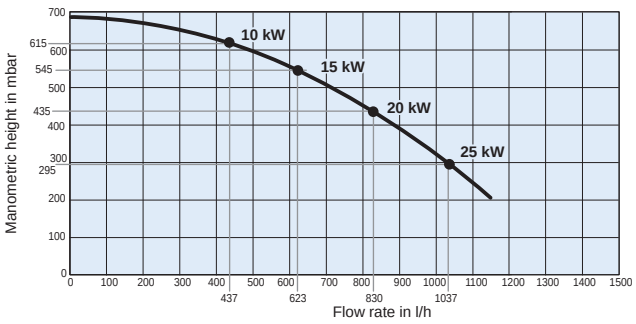
MCA boilers must only be used in closed circuit heating installations. The central heating systems must be cleaned to eliminate the debris (copper, strands, brazing flux) linked to the installation of the system and deposits that can cause malfunctions (noise in the system, chemical reaction between metals). More particularly, if fitting a boiler to an existing installation, it is strongly recommended that you clear sludge out of 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 systems (steel, cast iron radiators, heated floor, PER).

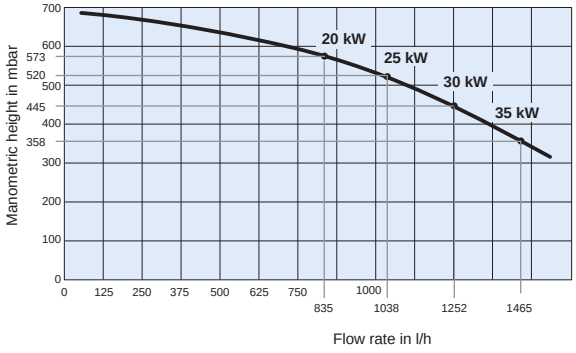
The water treatment products used must comply with regulations.

Manometric height available for heating circuit

MCA 15, MCA 25, MCA 25/28 MI, MCA 25/28 BIC



MCA 35



Condensates discharge

The siphon provided 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. An optional condensates neutralisation system is available (package HC 33 see page 9).

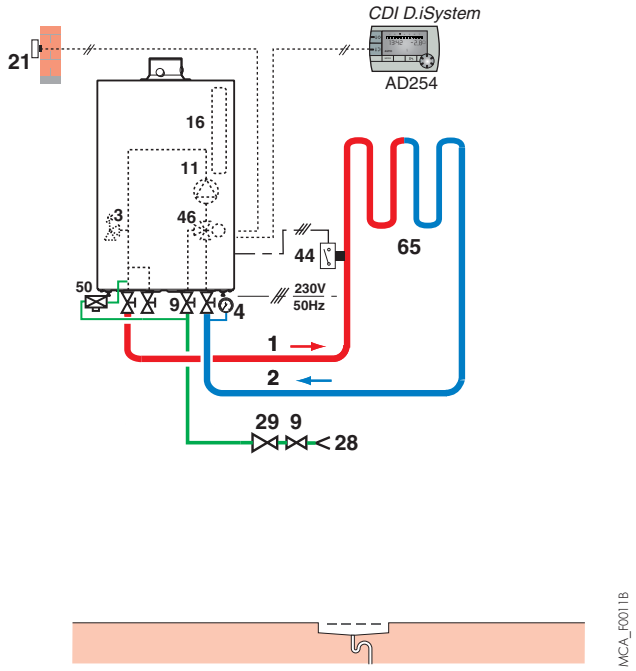
Examples of installation

The examples presented below cannot cover the full range of installation scenarios which may be encountered.
Their purpose is to draw the attention to the basic rules to be followed. A certain number of control and safety devices (some of which are already integrated as standard in MCA boilers) are represented but it is ultimately up to installers, experts, consultant engineers and design departments to take the final decision on the safety and control devices to be used in the boiler room according to its specificities. In all cases, it is necessary to abide by the codes of practice and prevailing regulations.

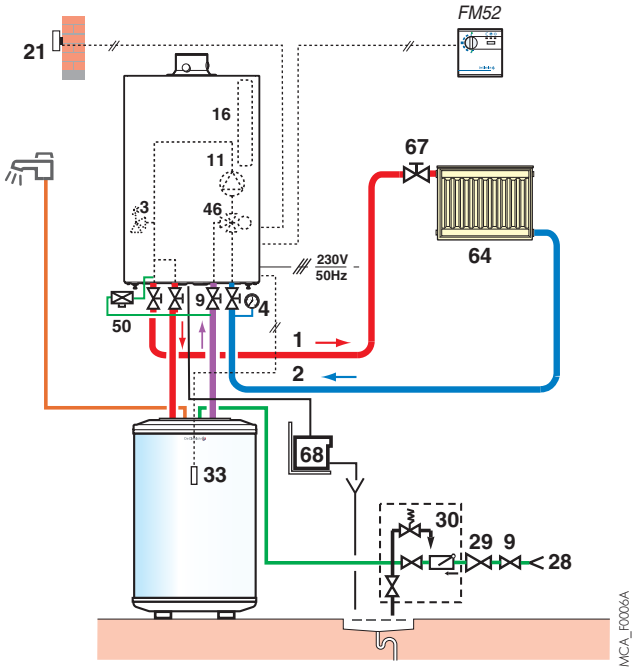
Attention : For the connection of domestic hot water, a sleeve made of steel, cast iron or any other insulating material must be interposed between the hot water outlet and these pipes to prevent any corrosion to the connections, if the distribution pipes are made of copper.

INFORMATIONS REQUIRED FOR INSTALLATION

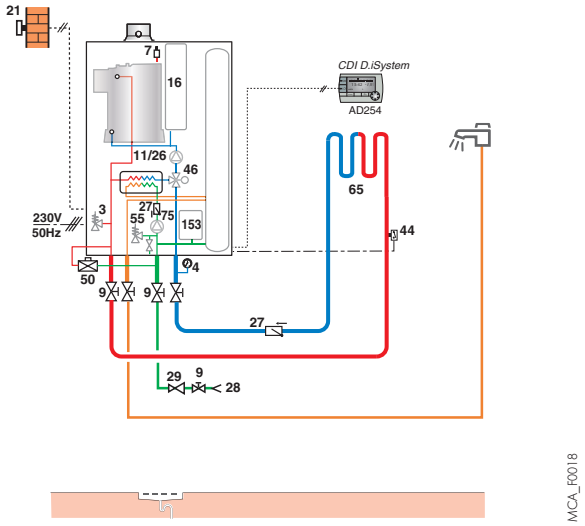
Installation of a MCA 15, MCA 25 or MCA 35 with 1 direct underfloor heating circuit



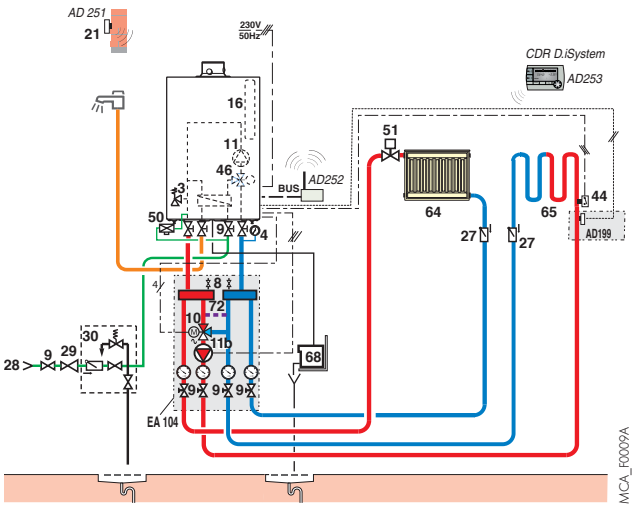
Installation of MCA.../BS 130 with 1 radiator circuit



MCA 25/28 BIC with 1 direct underfloor heating circuit



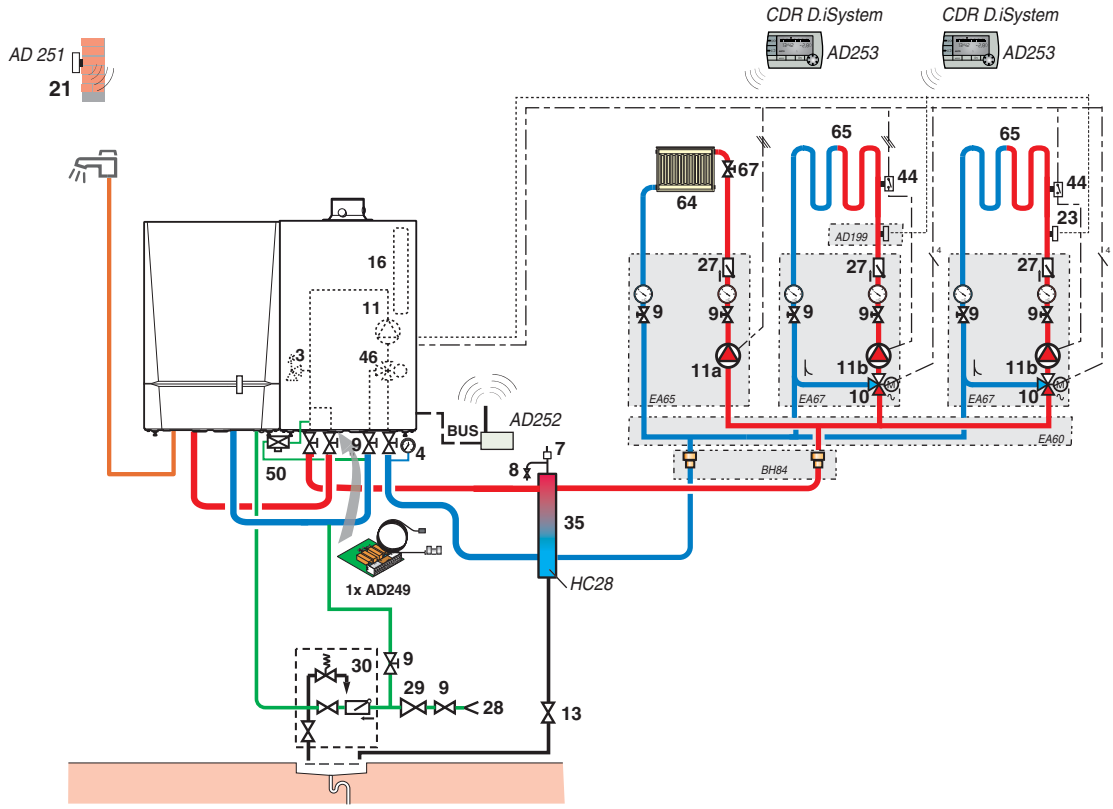
Installation of a MCA 25/28 MI with 1 direct circuit + 1 underfloor heating circuit with mixing valve (by means of a compact hydraulic module - Package EA 104)



Legends: see page 14

INFORMATIONS REQUIRED FOR INSTALLATION

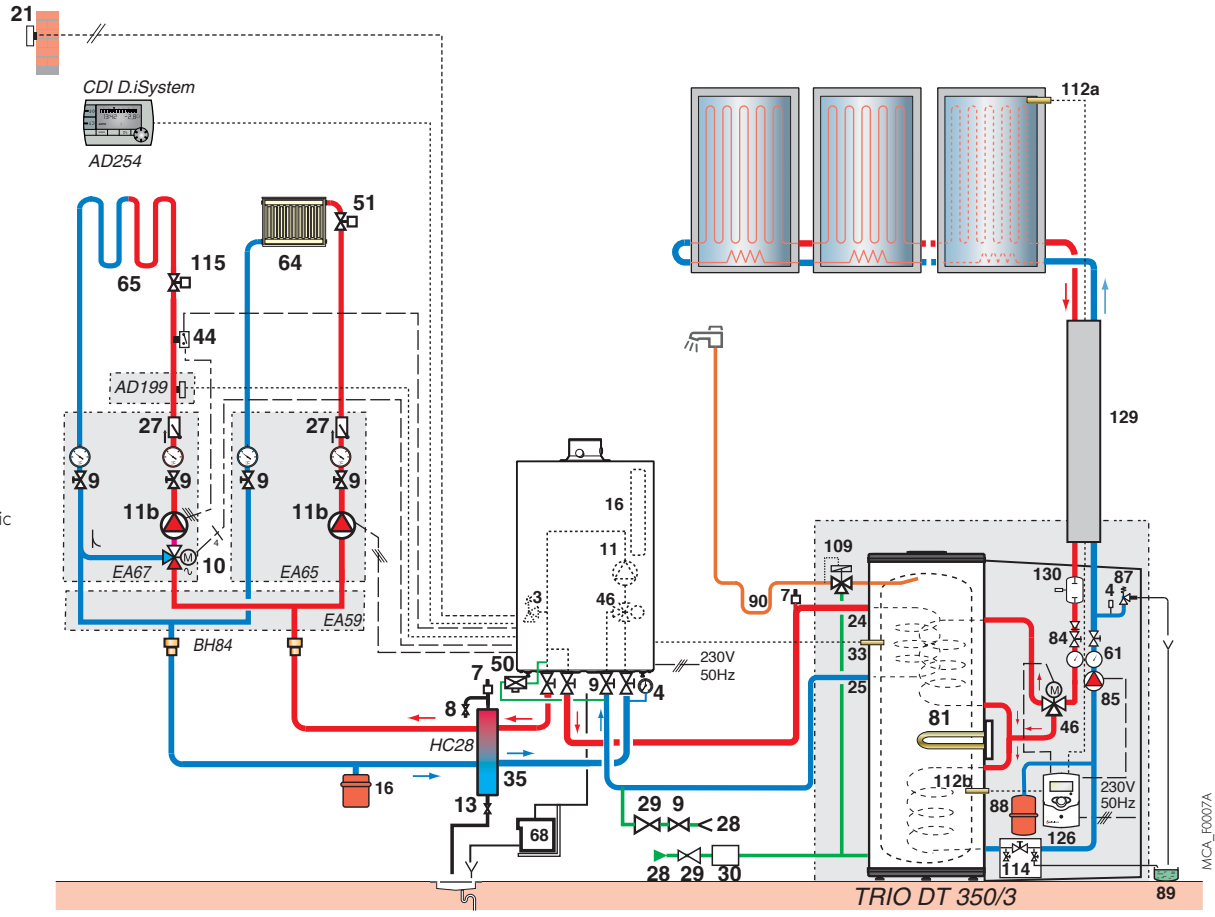
Installation of a MCA…/BS 60 with 1 direct circuit + 2 circuits with mixing valve, all behind a disconnecting cylinder



Note:
Other hydraulic modules, see page 8

MCA_F0008A

Installation of a MCA 15, MCA 25 or MCA 35 with 1 radiator circuit + 1 circuit with mixing valve, behind a disconnecting cylinder + 1 solar system DIETRISOL TRIO for DHW production



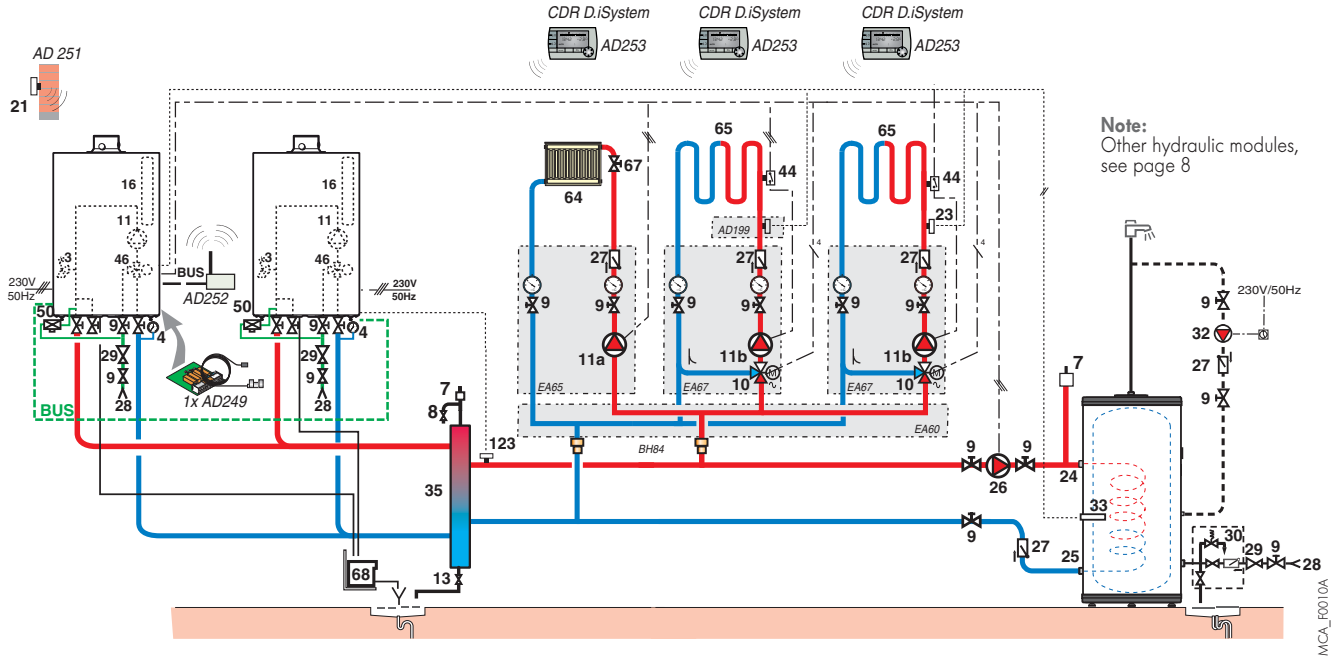
Note:
Other hydraulic modules, see page 8

MCA_F0007A

Legends: see page 14

INFORMATIONS REQUIRED FOR INSTALLATION

Installation of 2 MCA... boilers in cascade, with 1 direct circuit, 2 circuits with mixing valve and 1 DHW production circuit, all 4 behind a disconnecting cylinder



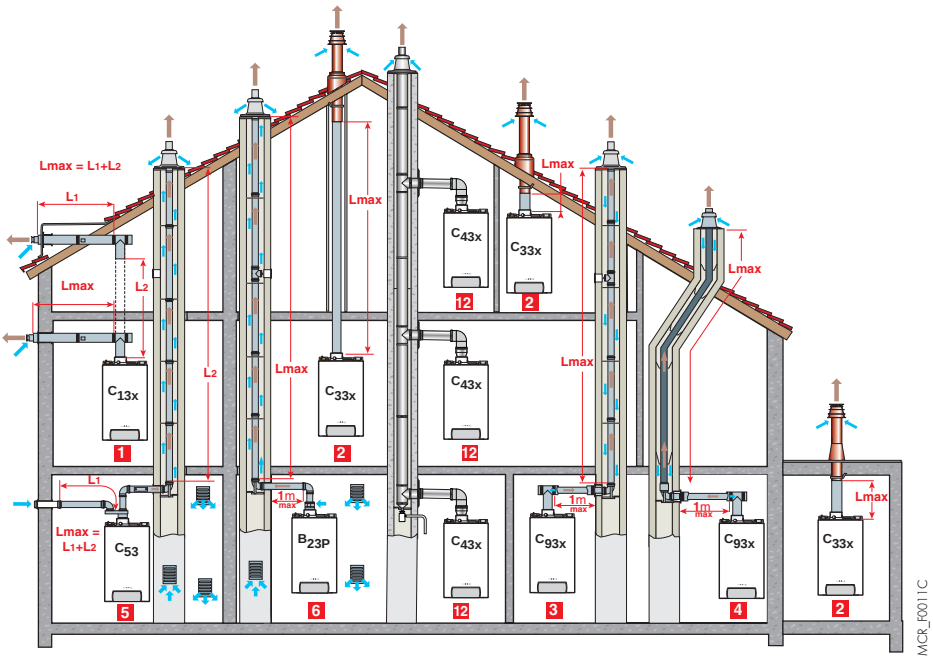
Legend

1 Heating outlet
2 Heating return
3 Safety valve 3 bar
4 Pressure gauge
7 Automatic air vent
8 Manual air vent
9 Isolation valve
10 3-way mixing valve
11 Electronic heating pump
11a Electronic heating pump for direct circuit
11b Electronic heating pump for circuit with mixing valve
13 Flush valve
16 Expansion tank (except MCA 35)
18 Heat circuit filling
21 Outside sensor
23 Outlet temperature sensor after mixing valve
24 Primary inlet on the DHW tank exchanger
25 Primary outlet on the DHW tank exchanger
26 Domestic water load pump
27 Non-return valve
28 Domestic cold water inlet
29 Pressure reducer
30 Sealed safety device calibrated to 7 bars (1)
32 (Optional) DHW loop pump
33 DHW temperature sensor
35 Disconnecting cylinder (available as an option - see page 8)
37 Compensating valve
44 65°C limiter thermostat with manual reset for underfloor heating
46 3 way-directional valve with motor reversing
50 Disconnector
51 Thermostat valve
55 Sealed DHW safety valve calibrated to 7 bars
61 Thermometer
64 Radiator circuit (gentle heat radiators, for example)
65 Low temperature circuit (underfloor heating, for example)
67 Manual valve
68 Condensates neutralisation system
72 Hydraulic bypass
75 Pump for sanitary use
79 Primary outlet of the solar exchanger
80 Primary inlet of solar exchanger
81 Electrical resistance
84 Stop valve with releasnon return valve
85 Solar circuit pump
86 Flow control
87 Safety valve sealed and calibrated to 6 bars
88 Solar expansion tank
89 Recepient for heat transfer fluid
90 Antithermosiphon loop (≈ 10 x Ø tube)
109 Thermostatic mixing valve for domestic hot water
112a Collector sensor
112b Solar tank sensor
114 Solar circuit drainage valve (note: propyleneglycol)
115 Thermostatic distribution valve per zone
123 Cascade flow sensor (to connect to the slave boiler)
126 Solar regulator
129 DUO tube
130 Degasser with manual purge (Airstop)
153 DHW expansion vessel
(1) mandatory, in compliance with safety directives

INFORMATIONS REQUIRED FOR INSTALLATION

AIR/FLUE GAS CONNECTION

For the use of the air/flue gas connection pipes and the rules on installation, see details of the various configurations in the current product catalogue.



1 **Configuration C_{13x} :** Air/flue gas connection by means of concentric pipes to a horizontal terminal (so-called forced flue)

2 **Configuration C_{33x} :** Air/flue gas connection by means of concentric pipes to a vertical terminal (roof outlet)

or

3 **Configuration C_{93x} :** Air/flue gas connection using concentric pipes in the boiler room and single pipes in the chimney (combustive air with counter current in the chimney)

or

4 Air/flue gas connection using concentric pipes in the boiler room and single "flex" pipes in the chimney (combustive air with counter current in the chimney)

5 **Configuration C_{53} :** Separate air and flue gas connection using a bi-flow adapter and single pipes (combustive air taken from outside)

6 **Configuration B_{23P} :** Connection to a chimney (combustive air taken from the boiler room)

12 **Configuration C_{43x} :** Connection to a collective 3 CEP conduit

Table of maximum air/flue gas pipe lengths admissible according to boiler type

Type of air/flue gas connection			Lmax of the connecting pipes in m INNOVENS MCA			
			15	25	35	25/28 MI 25/28 BIC
Concentric pipes connected to a horizontal terminal (**PPS**)	C_{13x}	Ø 60/100 mm	12	3.5	3.5	4.2
		Ø 80/125 mm	12.3	20	17.6	20
Concentric pipes connected to a vertical terminal (**PPS**)	C_{33x}	Ø 60/100 mm	13	4.9	–	5.5
		Ø 80/125 mm	10.7	20	19	20
Pipes - concentric in the boiler room, - single in the chimney (combustive air with counter current) (**PPS**)	C_{93x}	Ø 60/100 mm Ø 60 mm	15	8.1	2.8	9
		Ø 60/100 mm Ø 80 mm	9.9	20	18.0	20
		Ø 80/125 mm Ø 80 mm	–	–	20	–
Pipes - concentric in the boiler room, - "flex" in the chimney (combustive air with counter current) (**PPS**)	C_{93x}	Ø 80/125 mm Ø 80 mm	11.1	20	20	20
Bi-flow adapter and separate single air/flue gas pipes (combustive air taken from outside) (**Alu**)	C_{53}	Ø 60/100 mm to 2 x 80 mm	40	40	32	40
In the chimney (rigid or flex) (combustive air taken from the premises) (**PPS**)	B_{23P}	Ø 80 mm (rigid)	40 (1)	40 (1)	40 (1)	40 (1)
		Ø 80 mm (flex)	40 (1)	40 (1)	28 (1)	40 (1)
Collective **3 CEP** conduit for sealed boiler	C_{43x}	To size such a system, contact the supplier of the 3 CEP duct				

(1) ⚠ : Max. height in the flue pipe (C_{93X}, B_{23P} configurations) from the support elbow to the outlet musn't exceed :
- 30 m for rigid PPs
- 25 m for flex PPs
In case of higher lengths, holding collars must be added by slices of 25 or 30 m.

DESCRIPTION

INNOVENS MCA...

WALL-HUNG GAS CONDENSING BOILER FOR CONNECTION TO A CHIMNEY OR A FORCED FLUE

Brand : De Dietrich
Classification: **** according to the european efficiency directive, NOx classification: 5
Model :
MCA… for heating only
MCA…/BS 60 or BS 130 for heating and domestic hot water preparation by associated DHW tank
MCA 25/28 MI: for heating and instant domestic hot water production
MCA 25/28 BIC: for heating and domestic hot water production by integrated DHW tank
Homologation : B_{23P}-C_{13x}-C_{33x}-C_{93x}-C_{53}-C_{43x}-C_{83}
Protection index: IPX4D
Power supply: 230 V/50 Hz
Useful output in heating mode at 50/30 C : _____kW
Useful output in DHW mode at 80/60°C:
MCA /BS…: _____kW
MCA 25/28 MI: 28.6 kW
MCA 25/28 BIC: 29.9 kW
Specific flow in DHW mode:
MCA 25/28 MI: 14 l/min
MCA…/BS 60: _____l/min
MCA…/BS 130: _____l/min
MCA 25/28 BIC: 20 l/min
Max. operating temperature: 90°C
Max. operating pressure: 3 bar
Safety thermostat: 110°C
Dimensions: ___ x ___ x ___ mm
Weight empty: _____kg

DESCRIPTON

Complies with the requirements of European Directives
New compact and ultra-responsive exchanger in cast Aluminium/Silicium alloy
Stainless steel gas burner with complete premixing, modulating from 22 to 100% output, fitted with a silencer on the air intake
The DIEMATIC iSystem control panel is a highly advanced control panel with new control ergonomics and incorporates a programmable electronic control system as standard. Suitable for managing a direct circuit + 1 valve circuit (optional flow sensor). Capable of managing 1 DHW circuit (sensor optional) and 1 additional valve circuit (PCB + sensor optional).
New ergonomics and optimisation of management of combined heating systems.
Boiler delivered with a mounting frame with prefitted water and gas valves, modulating pump, 3-bar safety valve, 12-litre expansion tank (except MCA 35), heating/DHW reversal valve for MCA 15/25/35, plate exchanger with large exchange surface for the production of DHW with flowrate detector for MCA 25/28 MI, or load pump for MCA 25/28 BIC, automatic air vent.
MCA…/BS: with enamelled 60 litre DHW calorifier placed to the right or to the left of the boiler, or 130 litre DHW calorifier placed under the boiler. Boiler/tank connecting pipes and DHW sensor included.
MCA 25/28 BIC: with DHW calorifier comprising 3 interconnected fully insulated stainless steel stratification tanks, with a total capacity of 40 litres, integrated in the boiler.
Air/flue gas connection Ø 60/100 mm with measuring point

Control panel options
- Domestic hot water sensor
- Outlet sensor downstream of the valve
- PCB + sensor for 1 mixing valve
- CDI D. iSystem interactive remote control
- CDR D. iSystem interactive "radio" remote control (without transmitter / receiver radio)
- Radio boiler module DIEMATIC iSystem (transmitter/receiver)
- Simplified remote control with room sensor
- BUS connection cable (length 12 m)
- Sensor for storage tank
- Radio outside temperature sensor

Boiler options
- Stand-off frame
- Connecting pipe kit for stand-off frame
- Pipe cover
- Flue gas thermostat
- Cleaning tool boiler body
- Cleaning tool plate exchanger (MCA 25/28 MI)
- HWPlus 70 disconnecting cylinder
- Hydraulic module for 1 direct circuit
- Hydraulic module for 1 circuit with valve
- Compact module for 1 direct circuit and 1 circuit with valve
- Collector for 2 hydraulic modules
- Collector for 3 hydraulic modules
- Wall consoles for 2 hydraulic modules
- Set connection G in R (1" and 3/4")
- Condensate neutralisation tank
- Wall bracket for neutralisation tank
- Granule refill for neutralisation tank

DE DIETRICH THERMIQUE
S.A.S. with corporate capital of 22 487 610 €
57, rue de la Gare - F – 67580 Mertzwiller
Tel. +33 3 88 80 27 00 - Fax +33 3 88 80 27 99
www.dedietrich-heating.com

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