

**PMC-M 24 PLUS:** from 6.1 to 24.8 kW, for heating and hot water preparation by associated DHW tank BMR 80 or SR 130

**PMC-M... MI PLUS:** from 6.1 to 35.7 kW, for heating and instant domestic hot water production with output up to 37.8 kW in DHW mode



PMC-M 24 PLUS  
PMC-M... MI PLUS



PMC-M 24 PLUS  
+ BMR 80



PMC-M 24 PLUS  
+ SR 130



PMC-M 24 PLUS  
for heating only



PMC-M... MI PLUS or  
PMC-M 24 PLUS + BMR/SR  
heating and domestic hot water  
by integrated, independent  
calorifier or micro-accumulated



Condensing



All natural gases  
Propane



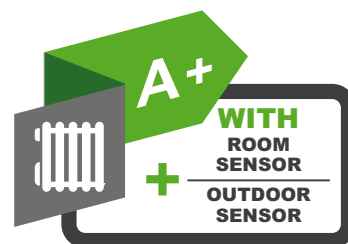
CE identification No.:  
0063CM3019

**Very compact boiler** in an **innovative design**: 368 x 589 x 364 mm and extremely light.

- To equip with a complete mounting frame or a single hydraulic connecting set to be ordered separately; control panel very easy to use with essential functions that can be completed with various options enabling much broader installation parameters such as: modulating room temperature thermostats, service tool, outdoor sensor.
- Equally suited to new installations and the replacement market.
- Various air/flue gas connection configurations are possible: we offer solutions for connection by horizontal or vertical terminal, to a chimney, in twin pipe or to a collective flue system.

### CONDITIONS OF USE

Max. operating pressure: 3 bar  
Max. operating temperature: 90°C  
Safety thermostat: 110°C  
Power supply: 230 V/50 Hz  
Protection index: IP X4D



(with room thermostat AD 301, 303, 304)

### HOMOLOGATION

B<sub>23</sub> - B<sub>23p</sub>/B<sub>33p</sub> - B<sub>33</sub> - C<sub>13x</sub> - C<sub>33x</sub> - C<sub>93x</sub> - C<sub>53</sub> - C<sub>43x</sub> - C<sub>83x</sub>

### GAS CATEGORY

II<sub>2ESi3P</sub>, NO<sub>x</sub> classification: 5

# PRESENTATION

PMC-M 24 PLUS and PMC-M... MI PLUS boilers are delivered fully assembled and factory tested. They come ready to operate on natural gases, adaptable to propane through service tool or modulating room thermostat (option).

**PMC-M 24 PLUS** 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:

- 80 litres BMR 80, calorifier to be juxtaposed to the right or the left of the boiler: version PMC-M 24 PLUS + BMR 80,
- 130 litres SR 130 calorifier to be placed on the floor under the boiler: version PMC-M 24 PLUS + SR 130.

**PMC-M... MI PLUS** are mixed boilers and produce large quantities of domestic hot water (\*\*\*) classification according to the standard EN 13203) thanks to an oversized steel plate exchanger and very reactive electronics.

## HIGH LEVELS OF PERFORMANCE

- Efficiency at 30% at 50/30°C up to 110,2%
- NOx < 60 mg/kWh















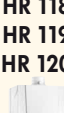
- NOx classification: 5 according to pr EN 483
- Low noise level

## STRONG POINTS

- Wall-hung gas condensing boiler, fully preset
- **Boiler of innovative design, very compact:** 368 x 589 x 364 mm, extremely light - 25 kg,
- **Compact exchanger, moulded cast alloy aluminium/silicium** high efficiency,
- **Air/gas module with gas burner, modulating from 24 to 100%** for a perfect adaptation of boiler output to actual needs, with non return valve to run with pressurised evacuation system, the central unit, the venturi, the fan with air intake silencer and the gas supply pipe,
- **Hydraulic module** integrating the 1 speed heating pump (modulating pump class A as optional), the heating/DHW reversal valve, stainless steel plate exchanger for instant domestic hot water production by PMC-M... MI PLUS, the 3 bar heating safety valve, the flow limiter, the flow detector for PMC-M... MI PLUS,
- 8 litre expansion vessel integrated in the support frame,

- **Removable control panel**, located under the boiler, can be deported to the wall, connected to the central unit by BUS. Easy to use, it allows a basic setting via 2 buttons heating and DHW temperatures. Other parameters can be set through modulating room thermostats and service tool, see page 6 and 8.
- **The PMC-M PLUS boilers can be connected to:**
  - a horizontal wall terminal PPS Ø 60/100 mm, (package DY 871) - homologation C<sub>13x</sub>,
  - a vertical terminal PPS Ø 80/125 mm black (package DY 843) or red (DY 844) + adapter (package HR 68) - homologation C<sub>33x</sub>,
  - It is also possible to connect the boiler to a chimney (homologation B<sub>23p</sub>/B<sub>33p</sub> or C<sub>93x</sub>), in twin pipe (homologation C<sub>53</sub>) or to a shared flue system (homologation C<sub>43x</sub>), All these air/flue systems must be ordered separately.
- The PMC-M PLUS and ... MI PLUS boilers are delivered fully assembled with a mounting bracket, a condensates evacuation siphon and flow collector.

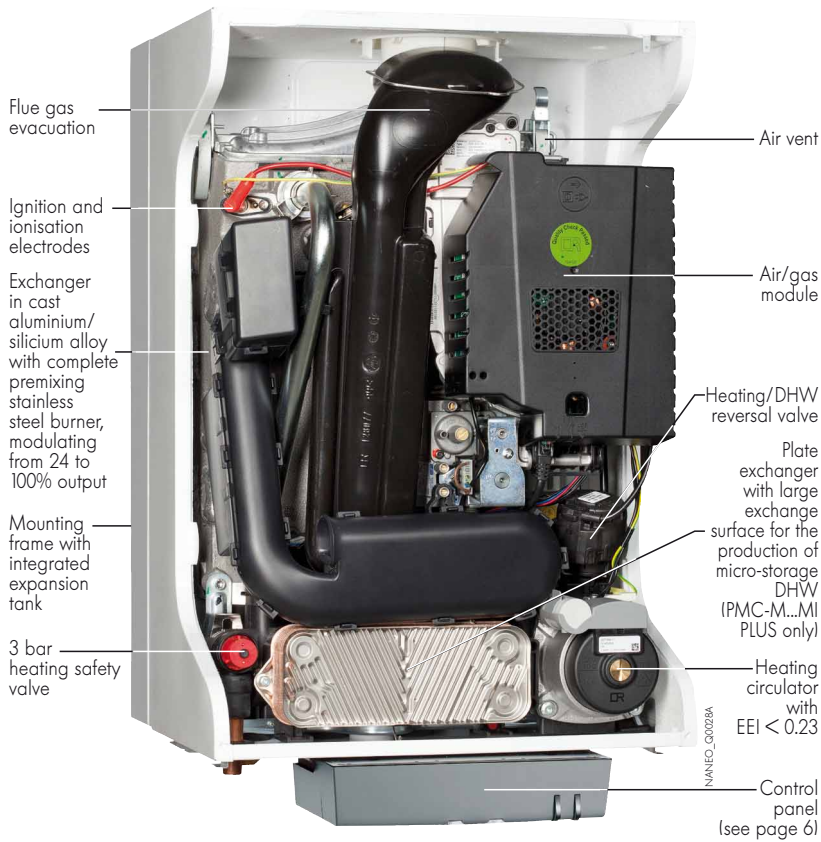
# MODELS AVAILABLE

Model		Boiler	Calorifier	Boiler/ Calorifier connection kit	DHW sensor	Output (kW) (heating mode)		Output (kW) (DHW mode)
						at 50/30°C	at 80/60°C	
 <b>PMC-M 24 PLUS</b> For heating only			-	-	-	6.1 - 24.8	5.5 - 23.8	-
 <b>PMC-M 24 PLUS + BMR 80</b> For heating and DWH by 80 litres calorifier to be placed at the right or at left of the boiler						6.1 - 24.8	5.5 - 23.8	5.5 - 20.6
 <b>PMC-M 24 PLUS + SR 130</b> For heating and DWH by 130 litres calorifier to be placed under the boiler						6.1 - 24.8	5.5 - 23.8	5.5 - 22.5
 <b>PMC-M 24/28 MI PLUS</b> <b>PMC-M 30/35 MI PLUS</b> <b>PMC-M 34/39 MI PLUS</b> For heating and instant domestic hot water production			-	-	-	6.1 - 24.8 8.5 - 31.0 8.5 - 35.7	5.5 - 23.8 7.7 - 29.8 7.7 - 34.7	5.5 - 27.5 7.7 - 33.9 7.7 - 37.8

\* with room thermostat AD 301, 303, 304

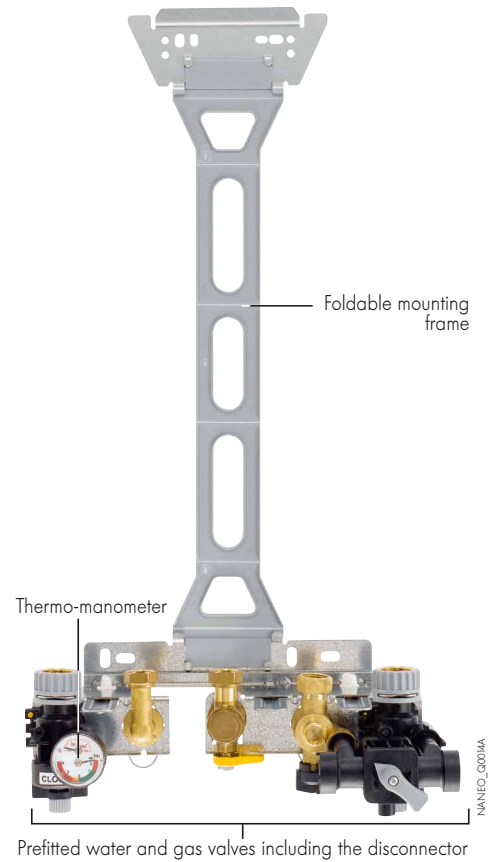
# TECHNICAL SPECIFICATIONS

## DESCRIPTION PMC-M... MI PLUS



### Mounting frame

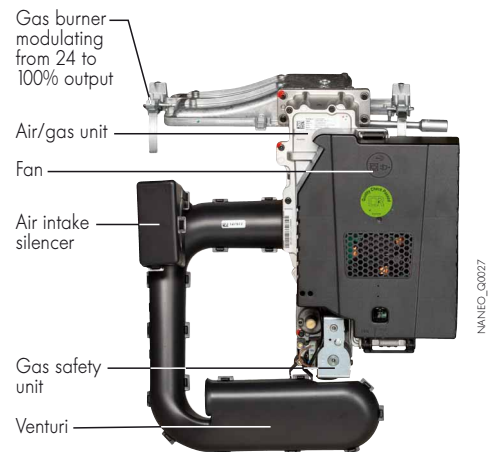
(accessory to order separately - Package HR 75/HR 74)



### View of the underneath of the boiler



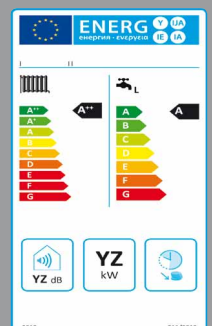
### Air/gas module



Created by De Dietrich, the **ECO-SOLUTIONS** label guarantees you a range of products compliant with the European Eco-design and Energy Labelling directives. These directives apply from 26 September 2015 to heating and domestic hot water appliances.

With De Dietrich **ECO-SOLUTIONS**, you can benefit from the latest generation of multi-energy systems, easier to use, with better performance and energy savings, designed to give you greater comfort while caring for the environment. **ECO-SOLUTIONS** also mean expertise, advice and a wide range of services from the De Dietrich professional network.

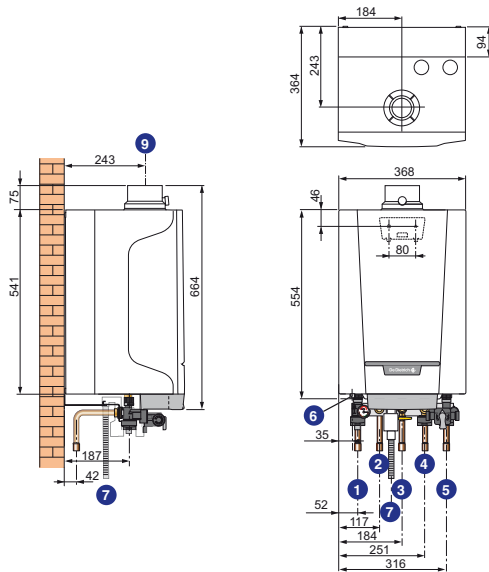
The energy label, together with the **ECO-SOLUTIONS**, shows you the performance of your chosen product. More info at [ecodesign.dedietrich-heating.com](http://ecodesign.dedietrich-heating.com)



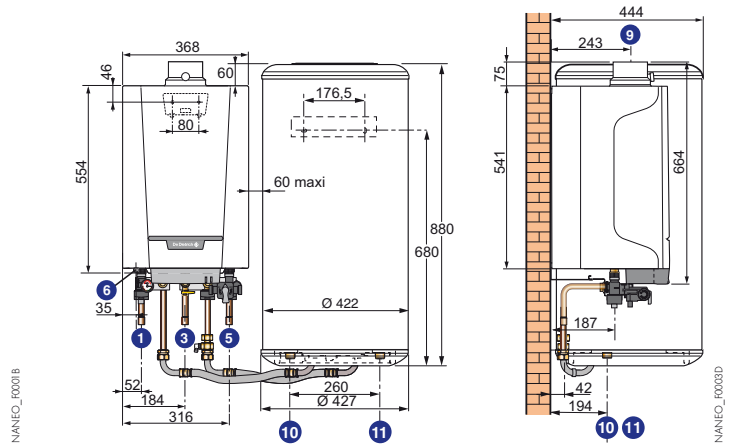
# TECHNICAL SPECIFICATIONS

## MAIN DIMENSIONS (IN MM AND INCHES)

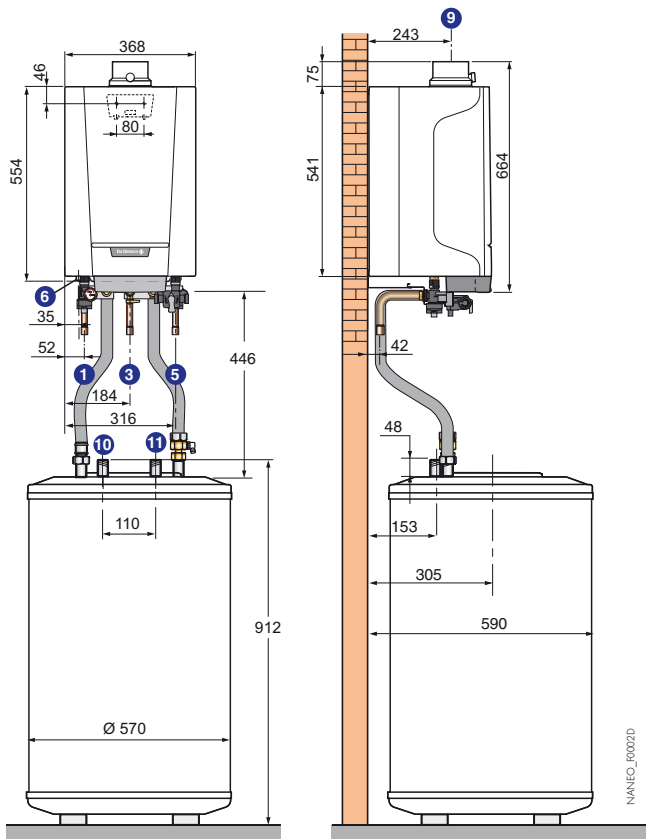
**PMC-M 24 PLUS**  
**PMC-M... MI PLUS**  
 with mounting frame and hydraulic connection kit



**PMC-M 24 PLUS + BMR 80**  
 with mounting frame and hydraulic connection kit



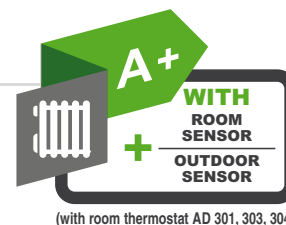
**PMC-M 24 PLUS + SR 130**  
 with mounting frame and hydraulic connection kit



- ① Heating flow Ø 18 mm interior
- ② PMC-M 24 PLUS: primary tank outlet Ø 16 mm interior (if exist)  
 PMC-M... MI PLUS: DHW outlet Ø 16 mm interior
- ③ Gas inlet Ø 18 mm interior
- ④ PMC-M 24 PLUS: primary tank return Ø 16 mm interior (if exist)  
 PMC-M... MI PLUS: domestic cold water inlet Ø 16 mm interior

- ⑤ Heating return Ø 18 mm interior
- ⑥ Safety valve outlet pipe Ø 15 mm
- ⑦ Condensates drain Ø 25 mm
- ⑧ Evacuation of combustion products and air inlet pipe Ø 60/100 mm
- ⑩ PMC-M 24 PLUS + SR/BMR: DHW outlet R 3/4
- ⑪ PMC-M 24 PLUS + SR/BMR: domestic cold water inlet R 3/4

# TECHNICAL SPECIFICATIONS



## TECHNICAL SPECIFICATION

### Boiler

Boiler type: condensing  
Burner: modulating with complete premixing

Energy used: natural gas or propane  
Combustion evacuation: chimney or sealed

Min. flow temperature: 30°C

### Boiler specifications

Model	PMC-M...PLUS	24	24/28 MI	30/35 MI	34/39 MI
Type generator		Heating only	Heating and DHW with additional storage of ≤10 litres integrated in the secondary circuit		
Useful output at 50/30°C Pn (heating model)	kW	6.1-24.8	6.1-24.8	8.5-31.0	8.5-35.7
Nominal output at 80/60°C (DHW model)	kW	-	27.5	33.9	37.8
Efficiency at... output and... °C water temperature	%	99.1	99.1	99.1	99.1
- 100% Pn at average temp. 70°C	%	103.3	103.3	103.3	102.4
- 100% Pn at return temp. 30°C	%	110.5	110.5	110.4	110.4
- 30% Pn at return temp. 30°C	%				
Nominal water flow at Pn, Δt = 20 K	m³/h	1.03	1.03	1.25	1.50
Seasonal heating energy efficiency	%	94	94	94	94
Min.-max. useful output at 80/60°C (heating model)	kW	5.5-23.8	5.5-23.8	7.7-29.8	7.7-34.7
Manometric height available heating circuit at Pn	mbar	> 212	203	267	144
Water content	l	1.4	1.6	1.7	1.7
Gas flow at Pn (15°C, 1013 mbar)	m³/h	2.54/2.95	2.98/3.47	3.68/4.28	4.13/4.80
- natural gas H/L	m³/h	0.98	1.15	1.42	1.60
- propane	m³/h				
Flue gas temperature at 80/60°C	°C	78	84	82	86
Min.-max. flue gas mass flowrate	kg/h	9.4-38.7	9.4-45.5	13.1-56.3	13.1-62.9
Flue gas pressure available	Pa	80	116	105	120
Stand-by losses at Δt = 30 K	W	35	35	45	45
Auxiliary electrical power (ex. heating pump) at Pn	W	40	40	47	61
Electrical power heating pump at Pn	W	24	24	24	24
Electrical power at zero load	W	3	3	3	3
Acoustic power level at nominal output	dB(A)	47.4	47.4	47.4	49.7
Net weight	kg	25	26	29	29

### Domestic hot water specifications

Model	PMC-M...PLUS	24 + BMR 80	24 + SR 130	24/28 MI	30/35 MI	34/39 MI
DHW calorifier capacity	l	74	122.3	-	-	-
Exchanged power	kW	20.6	22.5	27.5	33.9	37.8
Flow per hour at Δt = 35 K	l/h	505 (1)	560 (1)	-	-	-
Flow over 10 min at Δt = 30 K	l/10 min	162 (2)	201 (2)	-	-	-
Spec. flow at Δt = 30 K (according to EN 13203-1)	l/min	16.2 (2)	20 (2)	14	17	19
Coefficient of heat losses	W/K	1.26	1.38	-	-	-
Auxiliary electrical power in DHW mode	W	117	117	117	145	159

(1) Domestic performance at room temp.: 20°C, cold water temp.: 10°C, primary hot water temp.: 80°C.

(2) Domestic performance at room temp.: 20°C, cold water temp.: 10°C, primary hot water temp.: 85°C, storage temp.: 60°C.

## ENERGY LABEL

Each boiler comes with its energy label, which incorporates various items of information: energy efficiency, annual energy consumption, manufacturer's name, noise level...

If you combine your boiler, for instance, with a solar system, a DHW storage tank, a control device or another generator,

you can improve your system's performance and generate the corresponding «system» label: **go to our website**

« [ecodesign.dedietrich-heating.com](http://ecodesign.dedietrich-heating.com) »

# CONTROL PANEL

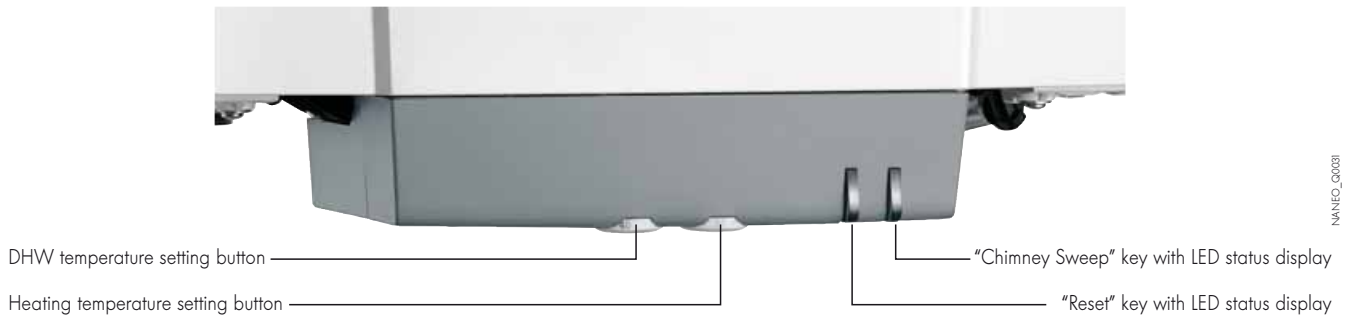
## PMC-M PLUS CONTROL PANEL

The control panel fitted to PMC-M...PLUS boilers is very easy to use. It is removable: located under the boiler, it can also be mounted on the wall.

As standard, it enables basic settings to be made using the 2 buttons to set the heating and DHW temperatures. Two keys – “Reset” and “Chimney Sweep” – with display LED complete the

unit. Other parameters can be set using a service tool (such as the setting of the heating curve, the maximum boiler temperature, etc. – see p. 8) or a modulating room temperature thermostat (options below).

A control system option according to the room temperature and/or the outside temperature is also available: see below.



## PMC-M...PLUS CONTROL PANEL OPTIONS

AD 247



**Programmable room thermostat (wire) - Package AD 247**

**Programmable room thermostat (wireless) - Package AD 248**

**Programmable room thermostat 230 V - Package AD 269**

**Non programmable room thermostat - Package AD 140**

AD 269



The programmable thermostats AD 247/AD 248 handle the control and weekly programming of the heating by activating the burner in accordance with the various operating modes: “Automatic” according to the programme, “Permanent” at a set temperature or “Holidays”. The “wireless” versions are delivered with a receiver box to be affixed to the wall close to the boiler.

The programmable room thermostat AD 269 with an analog (clock doesn't require battery power supply but is connected to 230 V).

The non-programmable thermostat (AD 140) is used to regulate the room temperature according to the instruction given by activating the burner.

AD 140



**Non programmable modulating room thermostat « OpenTherm » (wire) – Package AD 301**

This thermostat handles the regulation of the room temperature adapting the boiler power according to the preset temperature. Handles also the regulation of the DHW temperature. It includes adjustment parameters for the NANEO boilers:

read out and setting DHW temperature, max. heating temperature..., energy counters (number of startings, number of heating pump, DHW or total operating hours, ...), service alerts, etc...

AD 304



**Modulating room thermostat “OpenTherm” (wire) - Package AD 304**

**Modulating room thermostat “OpenTherm” (wireless) - Package AD 303**

This thermostats handles the regulation and programming of the heating and of DHW. They include adjustment parameters for the PMC-M... PLUS boiler: heating curve maxi temperature boiler, fan speed,... The regulator adapts the power boiler to the needs. 3 modes of operating are possible:

- **AUTOMATIC:** according the weekly programming used: for each programmed period, we can indicate the set temperature.

- **PERMANENT:** maintains the set temperature chosen for the day, night or antifreeze.

- **VACATION:** intended for absences of long duration. Allows to bring in the dates of beginning and end of the vacation as well as the desired temperature.

For operation according to the outside temperature, a outside sensor (package FM 46) can be added. The version «wireless» is delivered with a transmitter-receiver to be fixed to the wall near the boiler.

AD 303





# CONTROL PANEL

## PMC-M...PLUS CONTROL PANEL OPTIONS (CONTINUATION)



### Outdoor sensor - Package FM 46

The outdoor sensor can be used alone or in combination with room thermostat.



### DHW temperature sensor - Package AD 226

The domestic hot water sensor is used to apply priority regulation to DHW production by an independent tank.



### Module to control 2 circuits - Package AD 290









Works only in combination with one or two modulating room thermostat « OpenTherm », enables to control and modulate a direct circuit and a circuit with mixing valve or 2 circuits with

mixing valve. It is delivered with a flow sensor for each circuit, an outside sensor and a supply cable. The boiler/module connection is made with an « OpenTherm » BUS cable.



# HYDRAULIC ACCESSORIES

Below the list of hydraulic connection accessories to be ordered in the following cases:

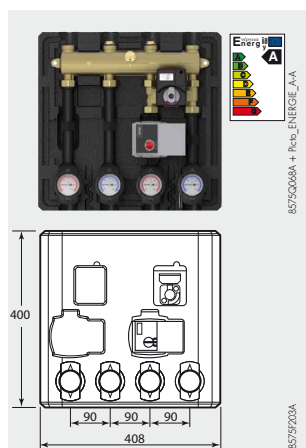
## NEW INSTALLATION

Standard	With rising column
<b>Package to order</b> <b>⇒ With mounting frame:</b> <ul style="list-style-type: none"> <li>- for PMC-M 24 PLUS: mounting frame <b>HR 75</b> + hydraulic connection kit - package <b>HR 77</b> (pipes to be welded),</li> <li>- for PMC-M... MI PLUS: mounting frame - package <b>HR 74</b> + hydraulic connection kit - package <b>HR 77</b> (pipes to be welded)</li> </ul> <b>⇒ Without mounting frame:</b> <ul style="list-style-type: none"> <li>- for PMC-M 24 PLUS: hydraulic connection kit - package <b>HR 101</b> (to be screwed),</li> <li>- for PMC-M... MI PLUS: hydraulic connection kit - package <b>HR 102</b> (to be screwed)</li> </ul>	<b>Package to order</b> <ul style="list-style-type: none"> <li>- for PMC-M 24 PLUS: mounting frame - package <b>HR 75</b> + Stand-off frame - package <b>HR 79</b> + Piping kit for stand-off frame - package <b>HR 80</b>,</li> <li>- for PMC-M... MI PLUS: mounting frame - package <b>HR 74</b> + Stand-off frame - package <b>HR 79</b> + Piping kit for stand-off frame - package <b>HR 80</b></li> </ul>
   	  
<b>Option:</b> Pipe cover (provides a neat finish underneath the boiler) - for PMC-M 24 PLUS and PMC-M... MI PLUS: package <b>HR 72</b>	

## REPLACING AN EXISTING BOILER (⚠ ONLY CONCERNS PMC-M... MI PLUS)

<b>Package to order when replace existing boiler</b>	Hydraulic connection pipe (water and gas) to be screwed: Package <b>HX 17</b>
<b>Option:</b> Pipe cover: package <b>HR 73</b>	 

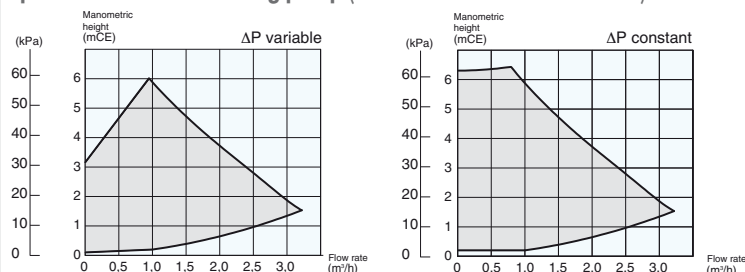
# BOILER OPTIONS



## Hydraulic module for 2 circuits (with pump with Energy Efficiency Index $EEI < 0.23$ ) - Package EA 145

This module is fitted with the heating pump and a 3-way motorized mixing valve (valve circuit valve), thermometers built into the gate valves for 2 circuits.

### Specifications of the heating pump (WILO-YONOS PARA RS 15/6) fitted to the hydraulic module EA 145



## Calorifier BMR 80 - Package EE 53

### Connection kit BMR 80/PMC-M 24 PLUS - Package HR 93

## Calorifier SR 130 - Package EE 22

### Connection kit SR 130/PMC-M 24 PLUS - Package HR 92

BMR 80 and SR 130 domestic hot water tanks are high performance tanks. They are protected by a lining in food quality standard high quartz content vitrified enamel and a magnesium anode.

The specifications of these tanks in combination with PMC boilers are given on page 5.

The boiler/tank connection kits available include rigid and/or flexible connection pipes between the boiler and the tank.



## Service tool - Package HR 83

This tool, at the disposal of the installer, is necessary whenever it comes to setting installation parameters different from the factory settings.

It can be used, for example, to modify the settings if the gas type is changed or to modify:

- The installation's heating gradient;

- The maximum boiler temperature;
- The fan speed;
- etc.

It can also be used to help with troubleshooting by displaying an error code.



## Solar kit with mixing valve - Package ER 417

Enables connection of a solar DHW tank to an PMC-M... MI PLUS boiler. When domestic hot water is drawn off, the boiler will provide the additional temperature to satisfy the set point.



## Flue gas temperature sensor kit - Package HR 71

Shuts down the boiler when the flue gas temperature exceeds 110°C.



## Cleaning tool boiler body - Package HR 81

Connects to a classic vacuum cleaner and allows an easy boiler body cleaning.



## Cleaning tool plate exchanger - Package HR 82

For PMC-M... MI PLUS only.



## Condensate neutralisation tank (until 75 kW) - Package SA 1

### Wall bracket for neutralisation tank - Package SA 2

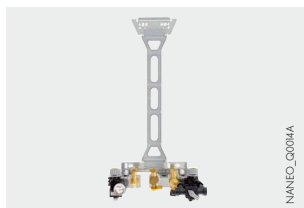
### Granule refill for neutralisation tank - ref. 94225601

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.



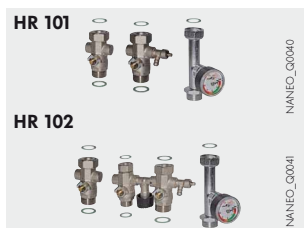
# BOILER OPTIONS



**Mounting frame for PMC-M 24 PLUS** - Package HR 75  
**Mounting frame for PMC-M... MI PLUS** - Package HR 74  
 Foldable mounting frame prefitted water and gas valves, disconnect, thermo-manometer.



**Hydraulic connection kit** - Package HR 77  
 To be welded.

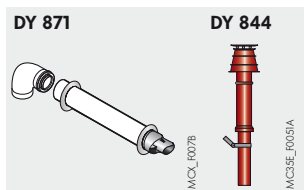


**Hydraulic connection kit for PMC-M 24 PLUS** - Package HR 101  
**Hydraulic connection kit for PMC-M... MI PLUS** - Package HR 102  
 To be screwed directly on the boiler.

## AIR/FLUE GAS CONNECTION TO BOILER PMC-M...PLUS

The PMC-M...PLUS boilers can be connected to:

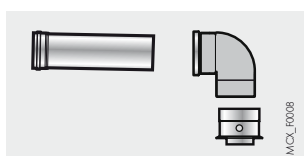
- a horizontal wall terminal PPS Ø 60/100 mm (package DY 871) - configuration C<sub>13x</sub>,
- a vertical terminal PPS Ø 80/125 mm, black (package DY 843) or red (DY 844) + adapter (package HR 68) - configuration C<sub>33x</sub>,
- it is also possible to connect the boiler to a chimney (configuration B<sub>23p</sub>/B<sub>33p</sub> or C<sub>93x</sub>), in twin pipe (configuration C<sub>53</sub>) or to a shared flue system (configuration C<sub>43x</sub>). All these flue systems must be ordered separately.



**Horizontal wall terminal PPS Ø 60/100 mm with elbow** - Package DY 871  
**Vertical terminal PPS Ø 80/125 mm** - Package DY 844 (red) or DY 843 (black)



**Horizontal wall terminal PPS Ø 60/100 mm without elbow** - Package DY 920



**Connecting kit for shared flue system** - Package DY 921

If connected to a collective duct, the adapter Ø 60/100 mm delivered with the boiler should be removed and replaced by package DY 921 presented opposite, which incorporates the adapter

Ø 80/125 mm as standard. To determine the position of the connection to a collective duct, see diagram on the next page.



**Adapter bi-flow** - Package HR 70  
 For connection with separate air and flue gas pipes (C<sub>53</sub>).



**Adapter low profile for horizontal forced flue** - Package HR 67  
 Allows a height saving of 66 mm.



**Flue gas adapter Ø 80/125 mm** - Package HR 68  
 Is fitted instead and in the place of the Ø 60/100 mm fitting delivered mounted on the boiler.

# INFORMATION 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.

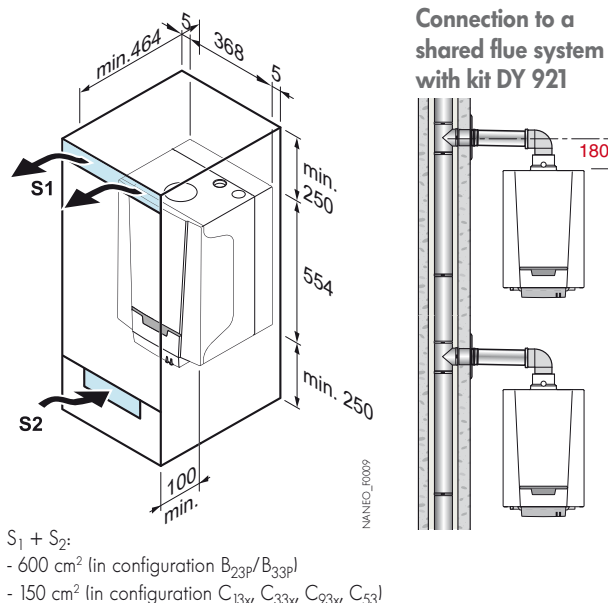
## LOCATION

PMC-M...PLUS 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 IP X4D 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 PMC-M...PLUS boilers. A gas filter must be fitted to the boiler inlet.

Gas supply pressure:

- 20 mbar on natural gas H, 25 mbar on natural gas L,
- 37 on propane.

## ELECTRICAL CONNECTION

This must comply with the prevailing standard.

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

# INFORMATIONS REQUIRED FOR INSTALLATION

## 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

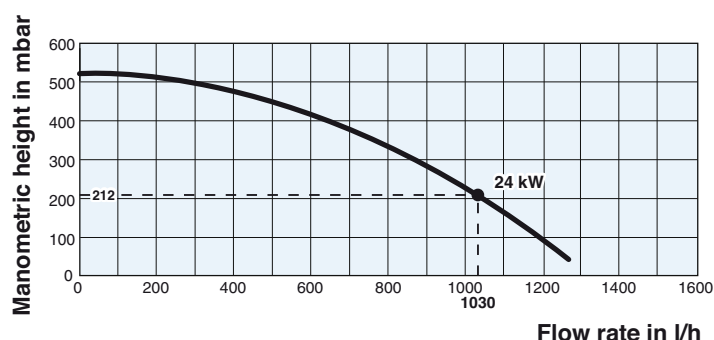
PMC-M...PLUS boilers must only be used in closed circuit heating installations. The central heating systems must be cleaned to eliminate the debris (copper, strands, brazing flux) linked to the installation of the system and deposits that can cause malfunctions (noise in the system, chemical reaction 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).

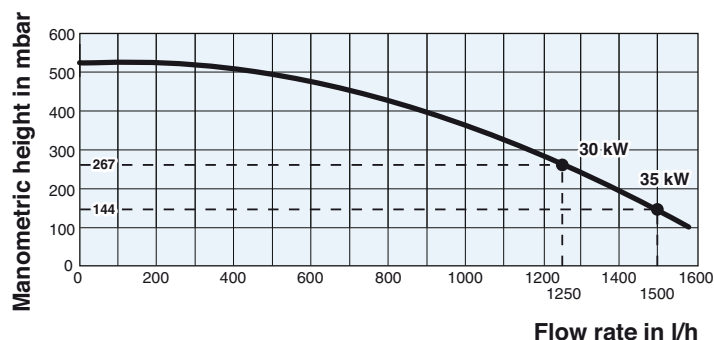
The water treatment products used must comply with regulations.

### Manometric height of the heating circulating pump fitted to PMC-M...PLUS boilers

#### PMC-M 24 PLUS and PMC-M 24/28 PLUS



#### PMC-M 30/35 MI PLUS and 34/39 MI PLUS



### 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 SA 1 see page 8).

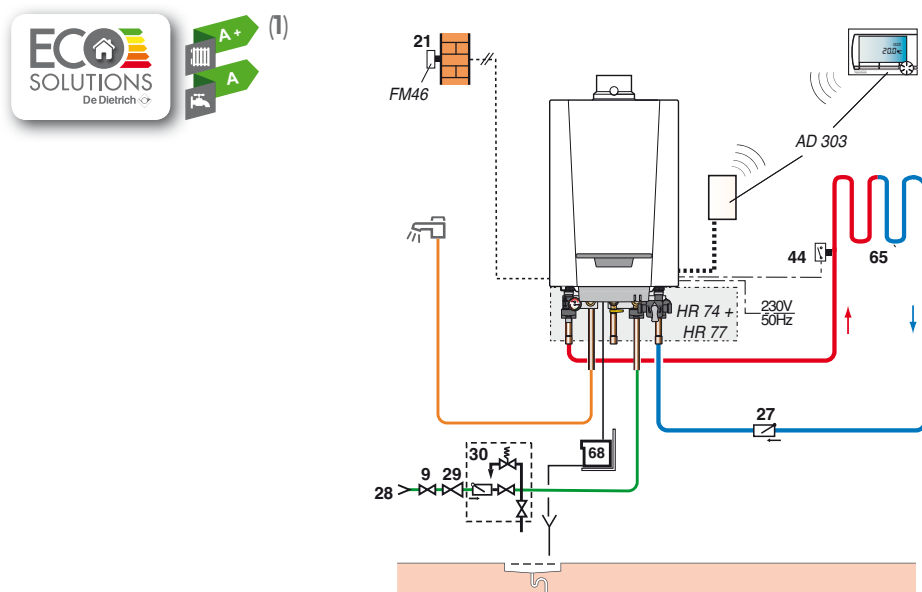
# EXAMPLES OF INSTALLATION

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 PMC-M...PLUS 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.

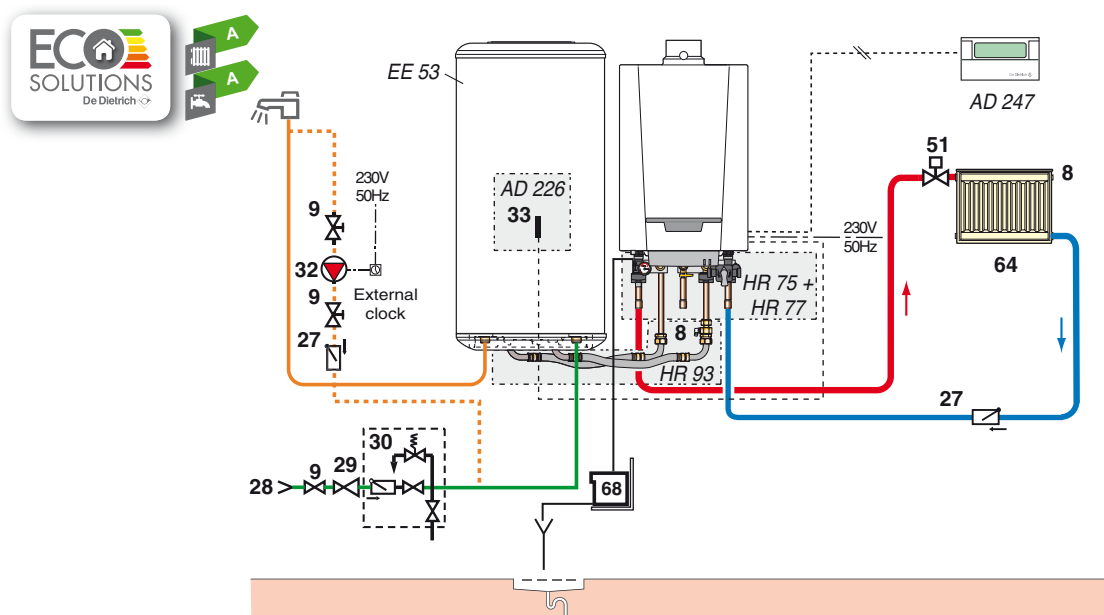
**Attention:** For the connection of domestic hot water, a sleeve made of steel, cast iron or any other insulating material must be interposed between the hot water outlet and these pipes to prevent any corrosion to the connections, if the distribution pipes are made of copper.

## PMC-M... MI PLUS with 1 direct underfloor heating circuit and DHW production, controlled by 1 wireless modulating thermostat "OpenTherm" + outdoor temperature sensor



(I) Completed with and outside sensor and a modulating room thermostat (AD 301, AD303, AD 304)

## PMC-M 24 PLUS + BMR 80 with 1 direct circuit + DHW production circuit, controlled by a programmable room thermostat (wire) + outdoor temperature sensor

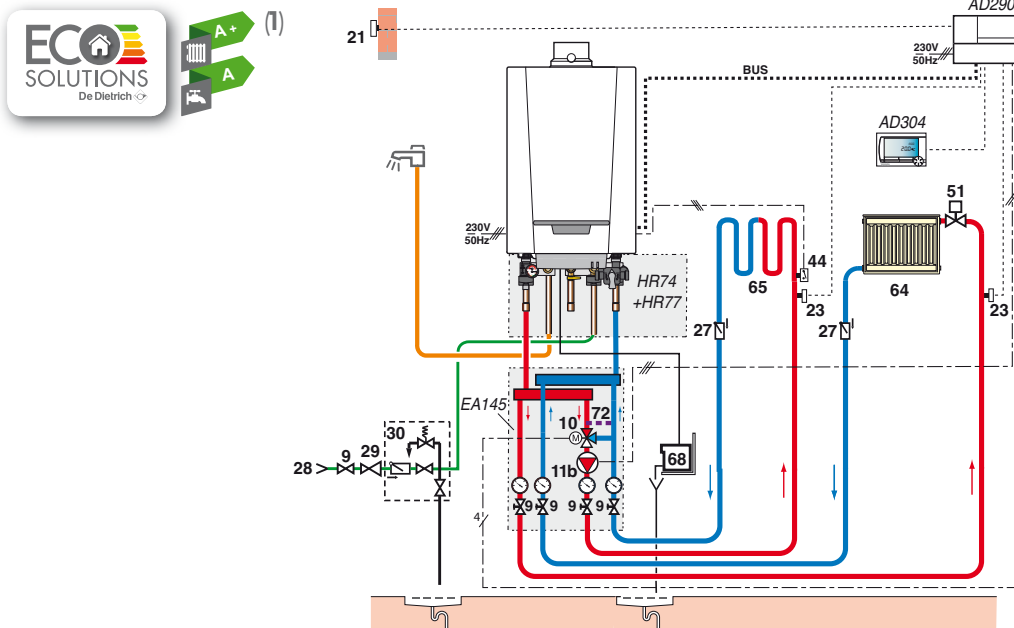


### Legend

- |  |  |   |
|--|--|---|
| 3 Safety valve 3 bar                           | 27 Non-return valve                          | 44 65°C limiter thermostat with manual reset for underfloor heating |
| 8 Manual air vent                              | 28 Domestic cold water inlet                 | 51 Thermostat valve   |
| 9 Isolation valve                              | 29 Pressure reducer                          | 64 Radiator circuit (gentle heat radiators, for example)            |
| 10 3-way mixing valve                          | 30 Sealed safety device calibrated to 7 bars | 65 Low temperature circuit (underfloor heating, for example)        |
| 11b Heating pump for circuit with mixing valve | 32 (Optional) DHW loop pump                  |   |
| 21 Outside sensor                              | 33 DHW temperature sensor                    |   |
| 23 Flow sensor                                 |  |   |

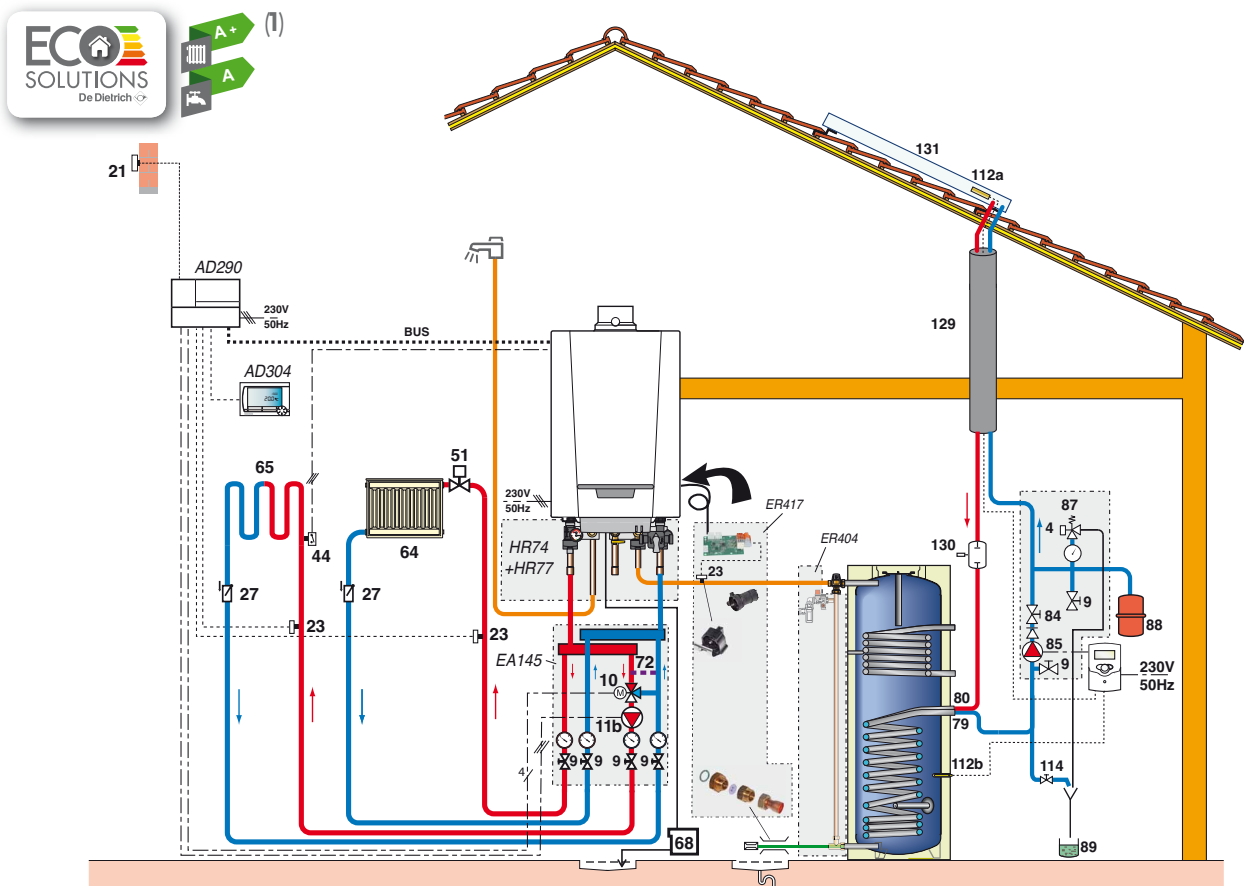
# EXAMPLES OF INSTALLATION

PMC-M... MI PLUS with 1 direct circuit, 1 circuit with mixing valve controlled by a 2 circuit control module (AD 290) and a modulating "OpenTherm" thermostat



(I) Completed with and outside sensor and a modulating room thermostat (AD 301, AD303, AD 304)

PMC-M 24 PLUS with 1 direct circuit + 1 circuit with mixing valve controlled by a 2 circuit control module (AD 290) + 1 solar circuit with DHW preheating



(I) Completed with and outside sensor and a modulating room thermostat (AD 301, AD303, AD 304)

- 68 Condensates neutralisation system
- 72 Hydraulic bypass required with floor heating systems
- 79 Primary solar exchanger outlet
- 80 Primary solar exchanger inlet
- 84 Stop valve with unlockable non-return valve

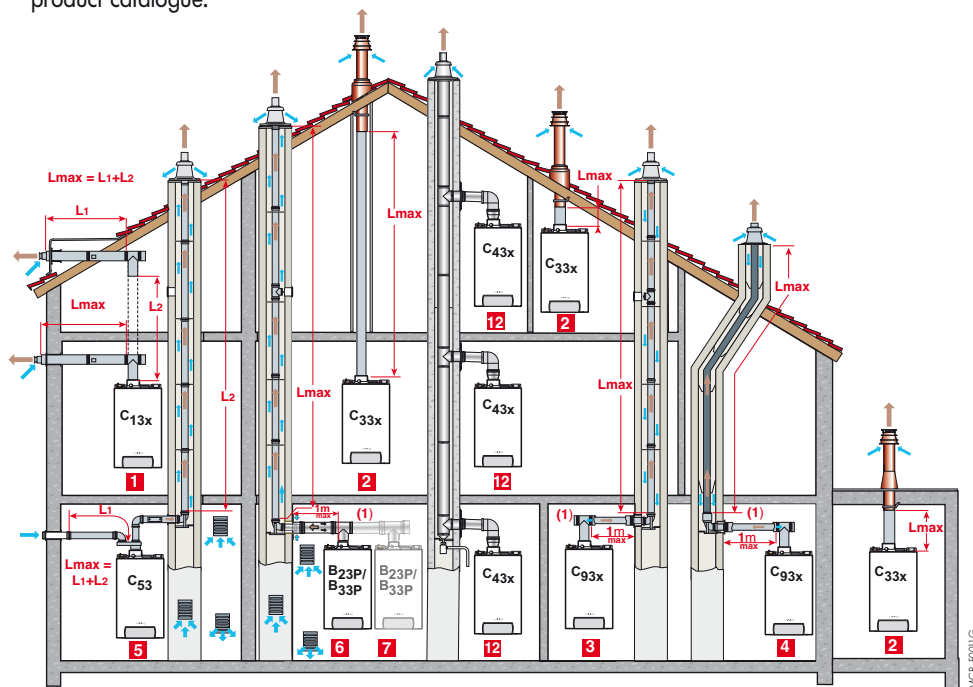
- 85 Primary solar circuit pump (to be connected to DIEMASOL)
- 87 Safety valve calibrated to 6 bar
- 88 Solar circuit expansion vessel
- 89 Container for solar fluid
- 112a Collector sensor
- 112b Solar DHW tank sensor

- 129 Duo-Tube
- 114 System for filling and draining primary solar circuit
- 129 DUO TUBES
- 130 Degasser with manual vent
- 131 Collector field

# INFORMATION 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<sub>13x</sub>:** Air/flue gas connection by means of concentric pipes to a horizontal terminal (so-called forced flue)
- 2 Configuration C<sub>33x</sub>:** Air/flue gas connection by means of concentric pipes to a vertical terminal (roof outlet) or
- 3 Configuration C<sub>93x</sub>:** 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<sub>53</sub>:** Separate air and flue gas connection using a bi-flow adapter and single pipes (combustive air taken from outside)
- 6 Configuration B<sub>23p</sub>/B<sub>33p</sub>:** Connection to a chimney (combustive air taken from the boiler room)
- 12 Configuration C<sub>43x</sub>:** Connection to a shared flue system

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

Type of air/flue gas connection			L <sub>max</sub> of the connecting pipes in m			
			PMC-M...PLUS			
			24	24/28 MI	30/35 MI	34/39 MI
Concentric pipes connected to a horizontal terminal (PPS)	C <sub>13x</sub>	Ø 60/100 mm	7	7	3	3
		Ø 80/125 mm	21.5	25.5	11.5	9.5
Concentric pipes connected to a vertical terminal (PPS)	C <sub>33x</sub>	Ø 80/125 mm	19.5	24	13.5	11.5
Pipes: - concentric in the boiler room, - single in the chimney (combustive air with counter current) (PPS)	C <sub>93x</sub>	Ø 80/125 mm	18	23	19	17
		Ø 80 mm				
Pipes: - concentric in the boiler room, - "flex" in the chimney (combustive air with counter current) (PPS)	C <sub>93x</sub>	Ø 80/125 mm	20	25	15	13
		Ø 80 mm				
Bi-flow adapter and separate single air/flue gas pipes (combustive air taken from outside) (Alu)	C <sub>53</sub>	Ø 60/100 mm to 2 x 80 mm	40	40	21.5	18
In the chimney (rigid or flex) (combustive air taken from the premises) (PPS)	B <sub>23p</sub> /B <sub>33p</sub>	Ø 80 mm (rigid)	40	40	33	29
		Ø 80 mm (flex)	39 (1)	40 (1)	21	18
Shared flue system for sealed boiler	C <sub>43x</sub>	To size such a system, contact the supplier of the shared flue system				

(1) Δ: Max. height in the flue pipe (configuration B<sub>23p</sub>/B<sub>33p</sub>) from the support elbow to the outlet mustn't exceed 25 m for flex PPS.

In case of higher lengths, holding collars must be added every 25 m or 30 m.



# DESCRIPTION

## PMC-M...PLUS

### 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:

- PMC-M 24 PLUS for heating only
- PMC-M 24 PLUS + BMR 80 or SR 130 for heating and domestic hot water preparation by associated DHW tank
- PMC-M 24/28 -30/35-34/39 MI PLUS: for heating and instant domestic hot water production

Homologation: B<sub>23</sub> -B<sub>23p</sub>/B<sub>33p</sub> -B<sub>33</sub> C<sub>13x</sub>-C<sub>33x</sub>-C<sub>93x</sub>-C<sub>53</sub>-C<sub>43x</sub>-C<sub>83x</sub>

Protection index: IP X4D

Power supply: 230 V/50 Hz

Gas category: all natural gases, propane

Useful output in heating mode at 50/30°C: \_\_\_\_\_ kW

Nominal output in DHW mode at 80/60°C:

- PMC-M 24 PLUS+ BMR/SR ....: \_\_\_\_\_ kW

- PMC-M 24/28 MI PLUS: 27.5 kW

- PMC-M 30/35 MI PLUS: 33.9 kW

- PMC-M 34/39 MI PLUS: 37.8 kW

Specific flow in DHW mode:

- PMC-M 24/28 MI PLUS: 14 l/min

- PMC-M 30/35 MI PLUS: 17 l/min

- PMC-M 34/39 MI PLUS: 19 l/min

- PMC-M 24 PLUS+ BMR/SR ....: \_\_\_\_\_ l/min

Max. operating temperature: 90°C

Max. operating pressure: 3 bar

Safety thermostat: 110°C

Dimensions: 368 x 589 x 364 mm

Weight empty: \_\_\_\_\_ kg

## DESCRIPTION

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 24 to 100% output, fitted with a silencer on the air intake

**Removable control panel located under the boiler can be deported to the wall.** As delivered, it can be used to control and regulate a direct circuit and 1 DHW circuit (sensor optional). Boiler delivered with a heating pump with energy efficiency index EEI < 0.23, 3 bar safety valve, 8 litres expansion tank, heating/DHW reversal valve, plate exchanger with large exchange surface for the production of DHW (for PMC-M ...MI PLUS only), automatic air vent.

**PMC-M 24 PLUS+ BMR/SR...** with enamelled 80 litre DHW calorifier placed to the right or to the left of the boiler, or 130 litres DHW calorifier placed under the boiler. Boiler/tank connecting pipes and DHW sensor have to be ordered separately.

**PMC-M...MI PLUS:** the plate exchanger produces large quantities of instant hot water. Model is equipped with a flow limiter.

Air/flue gas connection Ø 60/100 mm with measuring point.

### Control panel options

- Domestic hot water sensor
- Programmable room thermostat (wire and wireless)
- Modulating room thermostat (wire and wireless)
- Outside temperature sensor
- Domestic hot water sensor.

### Boiler options

- Height adjustment frame, connecting pipe kit for height adjustment frame
- Pipe cover, connection pipe kit for replacing an existing boiler
- Flue gas temperature sensor, brush cleaning heat exchanger (only for PMC-M ...MI PLUS)
- Service tool
- Condensate neutralisation tank
- Wall bracket for neutralisation tank
- Granule refill for neutralisation tank
- Adapter bi-flow 2 x Ø 80 mm, flue gas adapter low profile
- Horizontal terminal PPS Ø 60/100 mm
- Flue gas adapter Ø 80/125 mm
- Vertical flue terminal Ø 80/125 mm (black and red)
- Calorifier BMR 80 and SR 130, connection kit boiler/calorifier.

DE DIETRICH THERMIQUE

S.A.S. with corporate capital of 22 487 610 €

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**De Dietrich** 

