

- EMC-M 24: from 6.1 to 24.8 kW, for heating only
- EMC-M 24/BS 80 and EMC-M 24/BS 130: from 6.1 to 24.8 kW, for heating and hot water preparation by associated DHW tank, 80 or 130 litres

- EMC-M... MI: 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



EMC-M 24
EMC-M... MI



EMC-M 24/BS 80



EMC-M 24/BS 130



EMC-M 24:
for heating only



EMC-M... MI or EMC-M 24/BS
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.

- **Boiler fully equipped:** delivered with its complete mounting frame; control panel with very easy to use essential functions that can be completed with various options enabling much broader installation parameters such as: modulating room temperature thermostats, service tool.
- 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 forced flue, to a chimney, in twin pipe or to a shared flue system.

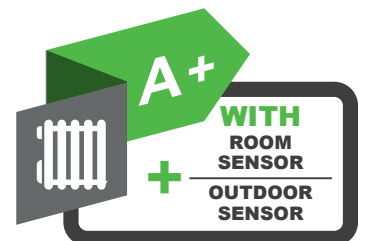
CONDITIONS OF USE

Boiler:

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

Domestic hot water:

- Max. operating pressure: 10 bar



(with room thermostat AD301, 303, 304, 288, 289)

HOMOLOGATION

B₂₃ - B_{23P} - B₃₃ - C_{13x} - C_{33x} - C_{93x} - C₅₃ - C_{43x} - C_{83x}

GAS CATEGORY

Fitted and preset to operate on natural gases. Adaptable to propane.

PRESENTATION

EMC-M 24 and EMC-M... MI boilers are delivered fully assembled and factory tested. They come ready to operate on natural gas H₂; adaptable to propane thank service tool or modulating room thermostat (option).

EMC-M 24 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 EMC-M 24/BS 80,
- 130 litres SR 130 calorifier to be placed on the floor under the boiler: version EMC-M 24/BS 130.

EMC-M... MI 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 109.2%.
- NO_x < 60 mg/kWh.

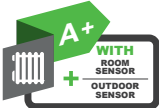














- NO_x classification: 5 according to pr EN 15502.
- Low noise level.

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 modulating heating pump with high efficiency index EEI < 0.23, the heating/DHW reversal valve, stainless steel plate exchanger for instant domestic hot water production by EMC-M... MI, the 3 bar heating safety valve, the flow limiter, the flow detector for EMC-M... MI...

- 8 litre expansion vessel integrated in the support frame,
- **Mounting frame** with prefitted water and gas valves, disconnecter (outlet and return valves, and disconnecter in composite material), mechanical manometer, flow collector and connecting pipes kit.
- **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.
- Various horizontal or vertical air/flue gas connections (homologation C_{13x} and C_{33x}), twin pipe adapter (homologation C₅₃), or shared flue (homologation C_{43x}) are available as options, see page 14.

MODELS AVAILABLE

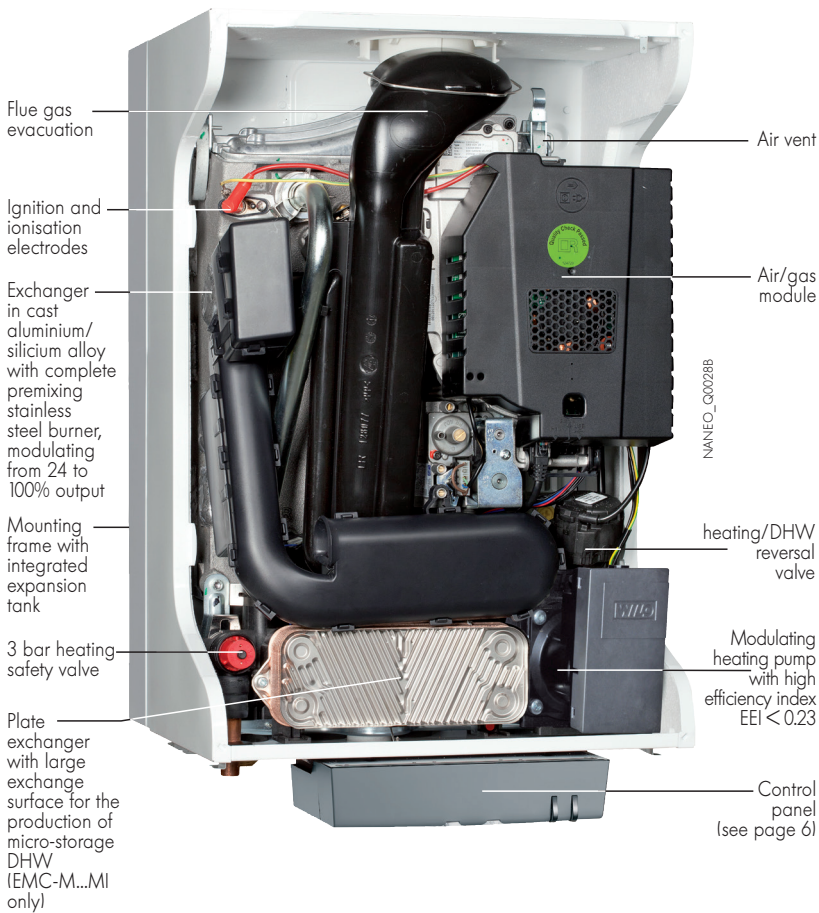
Model		Boiler	Calorifier	Boiler/ Calorifier connection kit	DHW sensor	Output (kW) (heating mode)		Output (kW) (DHW mode)
						at 50/30°C	at 80/60°C	
 EMC-M 24 For heating only <small>NANEO_Q0025</small>		 HR56	-	-	-	6.1 - 24.8	5.5 - 23.8	5.5 - 23.4
 EMC-M 24/BS 80 For heating and DWH by 80 litres calorifier to be placed at the right or at left of the boiler <small>NANEO_Q0032</small>		 HR56	 EE53	 HR93	 AD226	6.1 - 24.8	5.5 - 23.8	5.5 - 20.6
 EMC-M 24 /BS 130 For heating and DWH by 130 litres calorifier to be placed under the boiler <small>NANEO_Q0033</small>		 HR56	 EE22	 HR92	 AD226	6.1 - 24.8	5.5 - 23.8	5.5 - 22.5
 EMC-M 24/28 MI EMC-M 30/35 MI EMC-M 34/39 MI For heating and instant domestic hot water production <small>NANEO_Q0025</small>		 HR57 HR58 HR59	-	-	-	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 AD301, 303, 304, 288, 289 only

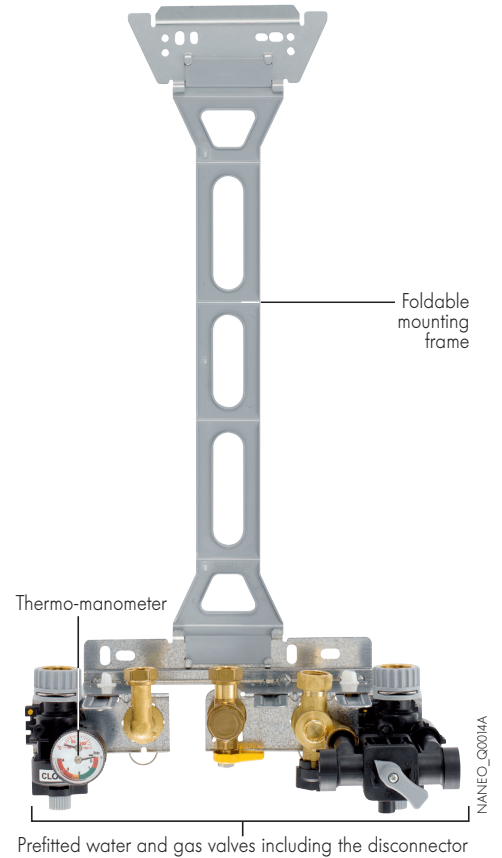
TECHNICAL SPECIFICATIONS

DESCRIPTION

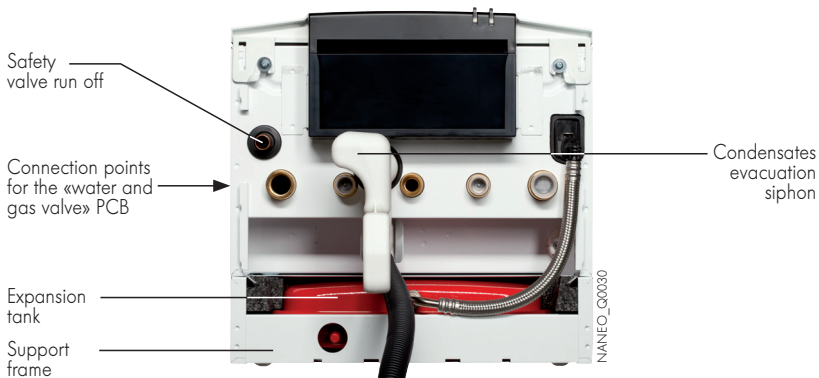
EMC-M... MI



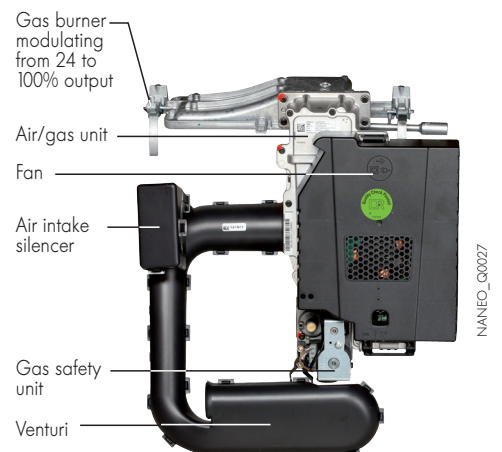
Delivered mounting frame



View of the underneath of the boiler



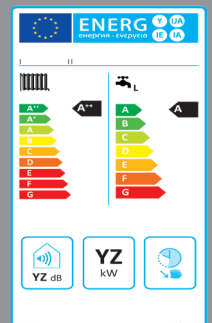
Air/gas module



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.

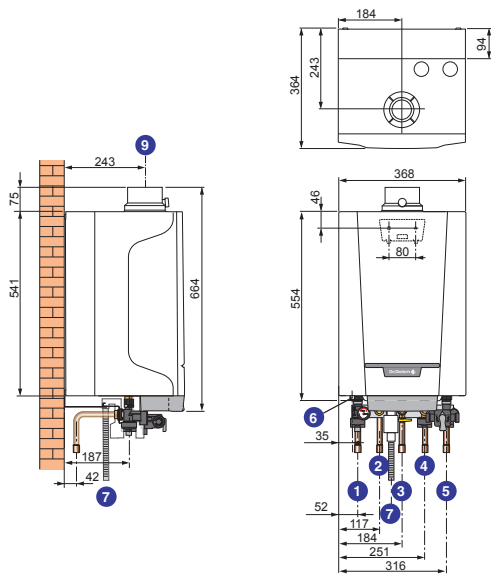
The energy label, together with the **ECO-SOLUTIONS**, shows you the performance of your chosen product. More info at www.dedietrich-heating.com



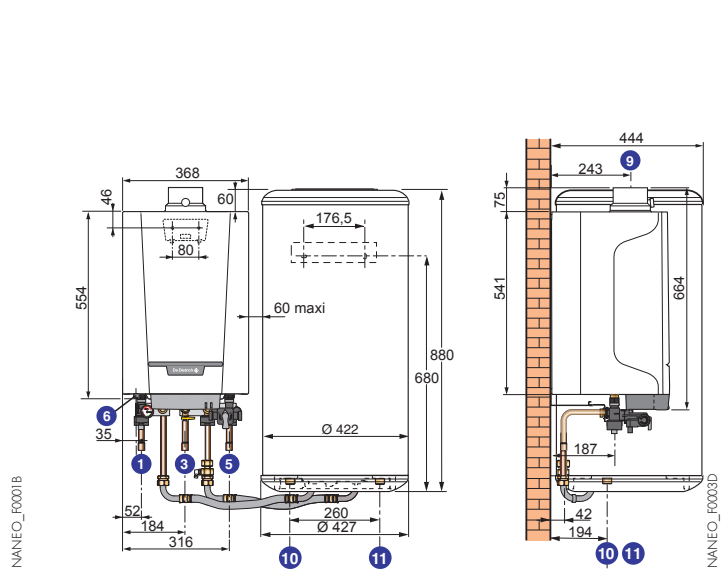
TECHNICAL SPECIFICATIONS

MAIN DIMENSIONS (IN MM AND INCHES)

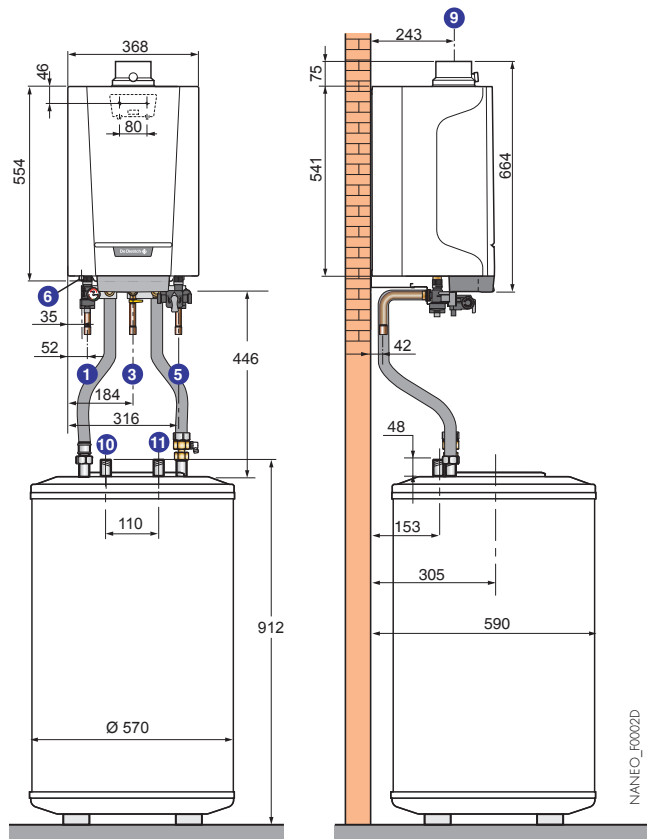
EMC-M 24 EMC-M... MI



EMC-M 24/BS 80



EMC-M 24/BS 130

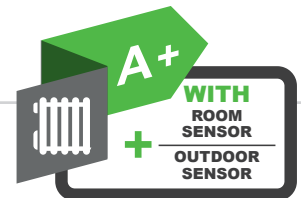


Key

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

- ⑤ Heating return \varnothing 18 mm interior
- ⑥ Safety valve outlet pipe \varnothing 15 mm
- ⑦ Condensates drain \varnothing 25 mm
- ⑧ Evacuation of combustion products and air inlet pipe \varnothing 60/100 mm
- ⑩ EMC-M 24/BS...: DHW outlet R 3/4"
- ⑪ EMC-M 24/BS...: domestic cold water inlet R 3/4"

TECHNICAL SPECIFICATIONS



(With room thermostat
AD301, 303, 304, 288, 289 only)

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: 30°C

Boiler specifications

Model	EMC-M	24	24/BS 80 24/BS 130	24/28 MI	30/35 MI	34/39 MI	
Useful output at 50/30°C Pn (heating mode)	kW	6.1-24.8	6.1-24.8	6.1-24.8	8.5-31.0	8.5-35.7	
Nominal output at 80/60°C (DHW mode)	kW	-	-	27.5	33.9	37.8	
Efficiency at...% output and ...°C water temperature	100% Pn at average temp. 70°C	%	99.1	99.1	99.1	99.3	
	100% Pn at return temp. 30°C	%	103.3	103.3	103.3	103.3	
	30% Pn at return temp. 30°C	%	110.5	110.5	110.5	110.4	
Seasonal space heating energy efficiency (I)	%	94	94	94	94	94	
Nominal water flow at Pn, Δt = 20 K	m³/h	1.03	1.03	1.03	1.25	1.50	
Min. - max. useful output at 80/60°C (heating mode)	kW	5.5-23.8	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	212	203	267	144	
Water content	l	1.4	1.4	1.6	1.7	1.7	
Gas flow max. (15°C, 1013 mbar)	- natural gas H/L	m³/h	2.54/2.95	2.54/2.95	2.98/3.47	3.68/4.28	4.13/4.80
	- propane	m³/h	0.98	0.98	1.15	1.42	1.60
Flue gas temperature max. at 80/60°C	°C	78	78	84	82	86	
Min. - max. flue gas mass flowrate	kg/h	9.4-38.7	9.4-38.7	9.4-45.5	13.1-56.2	13.1-62.9	
Flue gas pressure available	Pa	80	80	116	105	120	
Stand-by losses at Δt = 30 K	W	35	35	35	45	45	
Auxiliary electrical power (ex. heating pump) at Pn	W	40	40	40	47	61	
Electrical power heating pump (2)	W	24	24	24	24	24	
Electrical power in stand by	W	3	3	3	3	3	
Acoustic power level at nominal output	dB(A)	47.4	47.4	47.4	47.4	49.7	
Net weight	kg	25	75/95	26	29	29	

(I) According to commission regulation (EU) n°813/2013

(2) One speed circulating pump

Domestic hot water specifications

Model	EMC-M	24/BS 80	24/BS 130	24/28 MI	30/35 MI	34/39 MI
DHW calorifier capacity	l	75	125	-	-	-
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 (compliance with EN 13203-1)	l/min	16.2 (2)	20 (2)	14	17	19
Water heating energy efficiency	%	82	82	86	85	85
Coefficient of heat losses	W/K	1.26	1.38	-	-	-
Declared load profile		XL	XL	XL	XXL	XXL
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**
« www.dedietrich-heating.com »

CONTROL PANEL

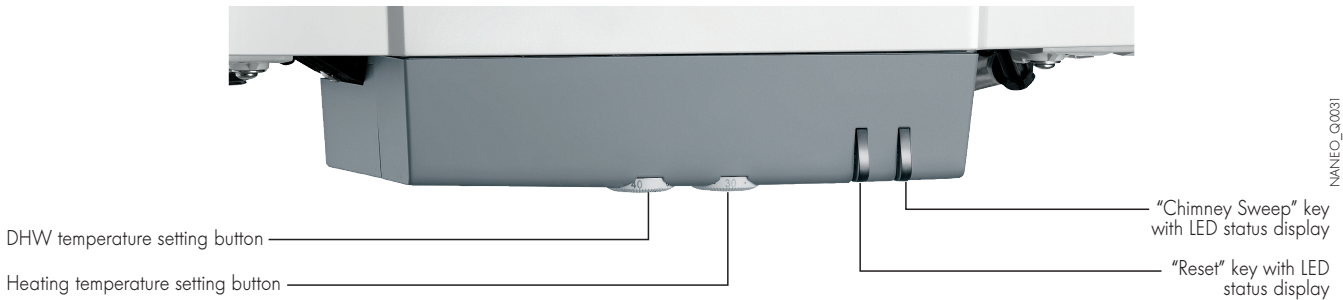
NANEO CONTROL PANEL

The control panel fitted to NANEO boilers is very easy to use. It is detachable: 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 gradient, 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.



CONTROL PANEL OPTIONS



- Programmable room thermostat (wire)** - Package AD137
- Programmable room thermostat (wire)** - Package AD247
- Programmable room thermostat (wireless)** - Package AD200
- Programmable room thermostat (wireless)** - Package AD248
- Non programmable room thermostat** - Package AD140

The programmable thermostats 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 thermostats AD137/

AD200 are equipped with: a telephone remote control, a selection of the installation type (heating or air conditioning) and a selection of the adjustment mode (On/Off or proportional). The non-programmable thermostat is used to regulate the room temperature according to the instruction given by activating the burner.



Non programmable modulating room thermostat “OpenTherm” (wire) – Package AD301

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...



- Modulating room thermostat “OpenTherm” (wire) (languages: PL, RO, BG, RU, SL, DA)** - Package AD304
- Programmable room thermostat modulating “OpenTherm” (wire) for eastern Europe (languages: NL, GB, FR, DE, ES, IT, HU, CZ)** - Package AD289
- Modulating room thermostat “OpenTherm” (wireless) (languages: PL, RO, BG, RU, SL, DA)** - Package AD303
- Programmable room thermostat modulating “OpenTherm” (wireless) for eastern Europe (languages: NL, GB, FR, DE, ES, IT, HU, CZ)** - Package AD288

These thermostats handle the regulation and programming of the heating and of DHW. They include adjustment parameters for the NANEO boiler: heating curve maxi temperature boiler, fan speed,... and an **energy metering estimate** (number of heating pump, DHW or total operating hours). 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 FM46) can be added. The version « wireless » is delivered with a transmitter-receiver to be fixed to the wall near the boiler.

CONTROL PANEL

CONTROL PANEL OPTIONS



Outside temperature sensor - Package FM46

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






Domestic hot water sensor - Package AD226

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

HYDRAULIC ACCESSORIES

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

NEW INSTALLATION

Standard	With rising column
<p>Nota:</p> <p>- For EMC-M boilers, hydraulic connection accessories: mounting frame with water and gas connection pipes are delivered with the boiler</p>	<p>Package to order:</p> <p>EMC-M 24 and EMC-M... MI: Height adjustment frame: Package HR79</p>  <p>NANECO_Q0022</p> <hr/> <p>Hydraulic connection pipe for height adjustment frame: Package HR80</p>  <p>NANECO_Q0017</p>
<p>Option:</p> <p>Pipe cover: package HR72</p> <p>Provides a neat finish underneath the boiler</p>	 <p>NANECO_Q0012</p>

BOILER OPTIONS

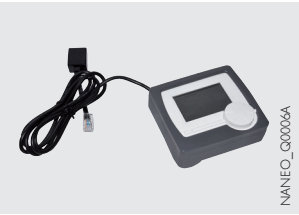


Calorifier BMR 80 - Package EE53
Connection kit BMR 80/EMC-M 24 - Package HR93
Calorifier SR 130 - Package EE22
Connection kit SR 130/EMC-M 24 - Package HR92

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 EMC 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 HR83

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:

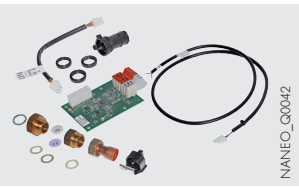
- The installation's heating gradient;

- The maximum boiler temperature;

- The fan speed;

- etc.

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



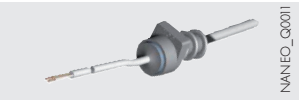
Solar kit - Package ER417

Enables connection of a solar DHW tank to an EMC-M... MI boiler. When domestic hot water is drawn off, the boiler will provide the additional temperature to satisfy the set point. (See example on page 13)



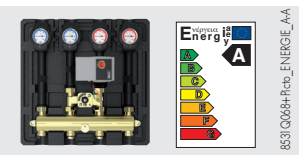
Thermostatic mixing valve - Package EC60

Used to keep the draw-off temperature in the solar tank constant between 30 and 65°C. Mandatory in solar DHW preparation installations



Flue gas temperature sensor kit - Package HR71

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



Compact module for 1 direct circuit and 1 circuit with valve - Package EA145

This module is fully assembled, insulated, tested and fitted with 4 isolating valves with thermometers, a modulating pump with high efficiency index EEI < 0.23 and a motorized 3-way valve (valve

circuit side). 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.



Cleaning tool boiler body - Package HR81

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



Cleaning tool plate exchanger - Package HR82

For EMC-M... MI only.



Condensate neutralisation station DN1 - Package SA1

Wall bracket for neutralisation station DN1 - Package SA2

Granule refill for neutralisation station DN1 (10 kg)* - 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.

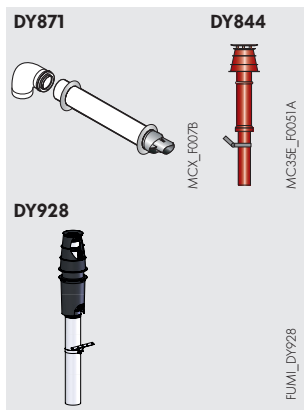
*To order at the spare parts department.

BOILER OPTIONS

AIR/FLUE GAS CONNECTION

The EMC-M... boilers can be connected to:

- a horizontal wall terminal PPS Ø 60/100 mm (package DY871) - configuration C_{13x},
 - a vertical terminal PPS Ø 80/125 mm, black (package DY843) or red (DY844) + adapter (package HR68) - configuration C_{33x}
- it is also possible to connect the boiler to a chimney (configuration B_{23p} or C_{93x}), in twin pipe (configuration C₅₃) or to a shared flue system (configuration C_{43x}). All these flue systems must be ordered separately.



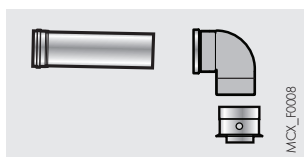
Horizontal wall terminal PPS Ø 60/100 mm with inspection elbow - Package DY871

Vertical terminal PPS Ø 80/125 mm - Package DY844 (red) or DY843 (black)

Vertical terminal PPS Ø 60/100 mm - Package DY928 (black) or DY929 (red)



Horizontal wall terminal PPS Ø 60/100 mm without elbow - Package DY920



Connecting kit for shared flue system - Package DY921

If connected to a collective duct, the adapter Ø 60/100 mm delivered with the boiler should be removed and replaced by package DY921 presented opposite, which incorporates the adapter

Ø 80/125 mm as standard. To determine the position of the connection to the shared flue system, see diagram on the next page.



Twin pipe adapter - Package HR70

For connection with separate air and flue gas pipes (C₅₃).



Adapter low profile for horizontal forced flue - Package HR67

Allows a height saving of 66 mm.



Flue gas adapter Ø 80/125 mm - Package HR68

Is fitted instead and in the place of the Ø 60/100 mm fitting delivered mounted on the boiler.

INFORMATIONS REQUIRED FOR INSTALLATION

STATUTORY INSTRUCTIONS ON INSTALLATION AND MAINTENANCE

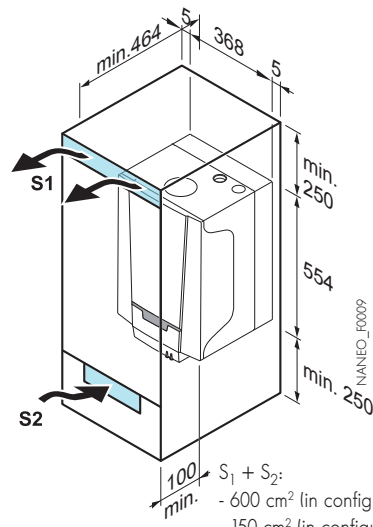
The installation and maintenance of the appliance in both residential buildings and establishments open to the public must

be carried out by a qualified professional in compliance with the statutory texts of the codes of practice in force.

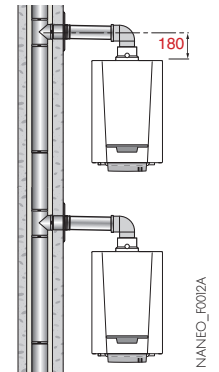
LOCATION

NANEO 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.



Connection to a shared flue system with kit DY921



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 NANEO 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 a 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

Connection to the heating circuit

NANEO 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.

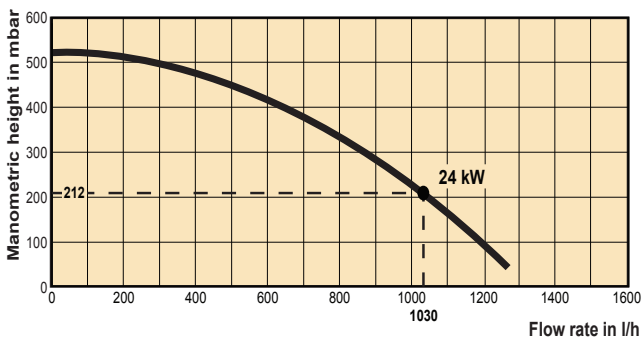
size the heating surfaces in such a way as to obtain low return temperatures, below the dew point (e.g. underfloor heating, low temperature radiators, etc.) during the entire heating period.

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).

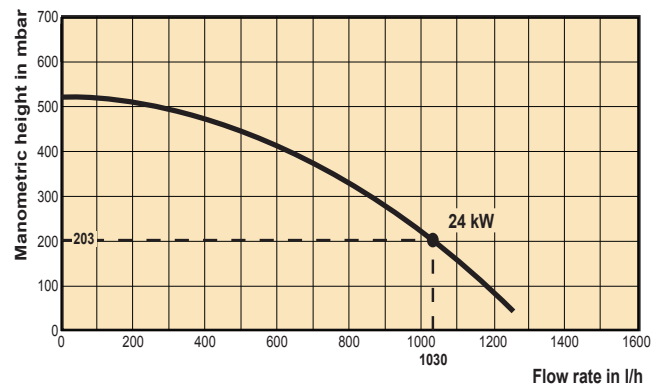
The water treatment products used must comply with regulations.

Manometric height of the heating circulating pump type WILO YONOS PARA RS 15/6 fitted to NANEO boilers

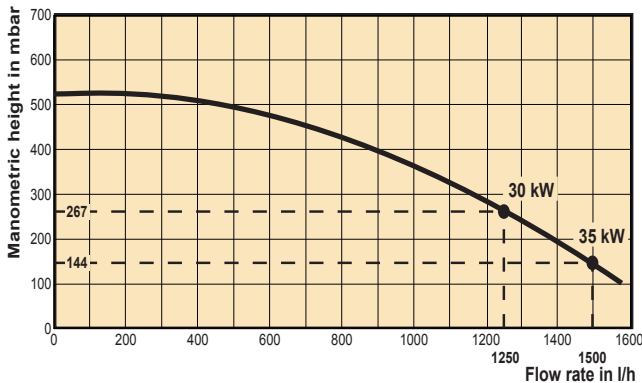
EMC-M 24



EMC-M 24/28 MI



EMC-M 30/35 MI and 34/39 MI



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

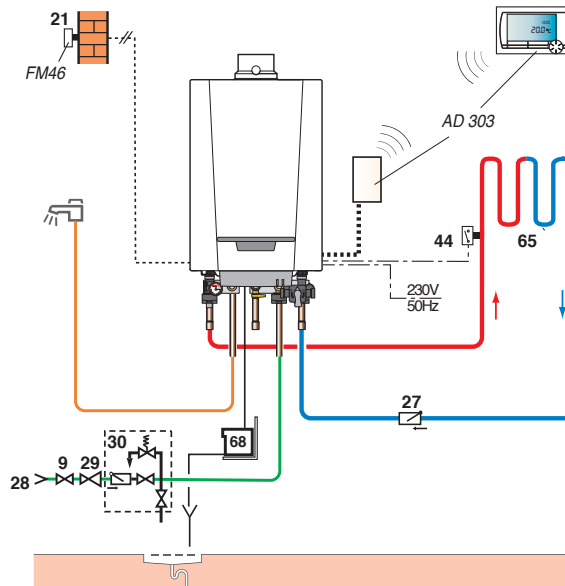
be in corrosion-resistant material. An optional condensates neutralisation system is available (package SA1 see page 8).

EXAMPLES OF INSTALLATIONS

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 NANEQ boilers) are

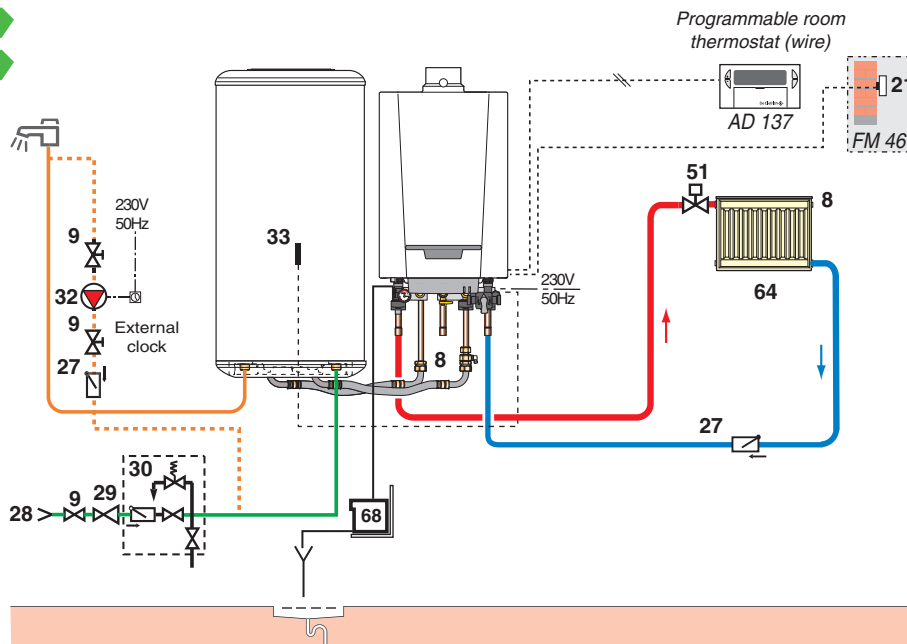
represented but it is ultimately up to installers, experts, consultant engineers and design departments to take the final decision on the safety and control devices to be used in the boiler room according to its specificities. In all cases, it is necessary to abide by the codes of practice and prevailing regulations.

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



(1) With outside sensor FM46 and room thermostat AD301/303/304/288/289

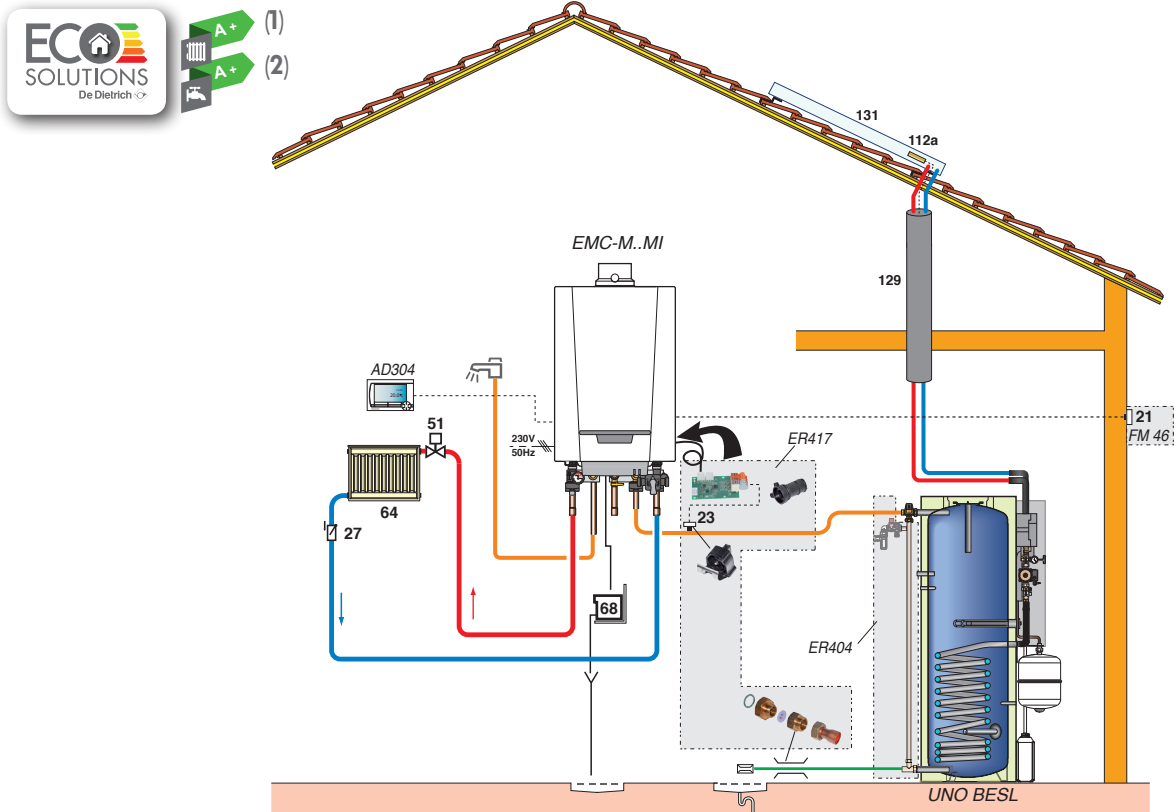
EMC-M 24/BS 80 with 1 direct circuit + DHW production circuit, controlled by a programmable room thermostat (wire) + outdoor sensor



Key: see next page

EXAMPLE OF INSTALLATIONS

EMC-M... MI with 1 direct circuit controlled by 1 modulating thermostat "OpenTherm". DWH produced by a solar calorifier with solar kit (Package ER417) + outdoor sensor



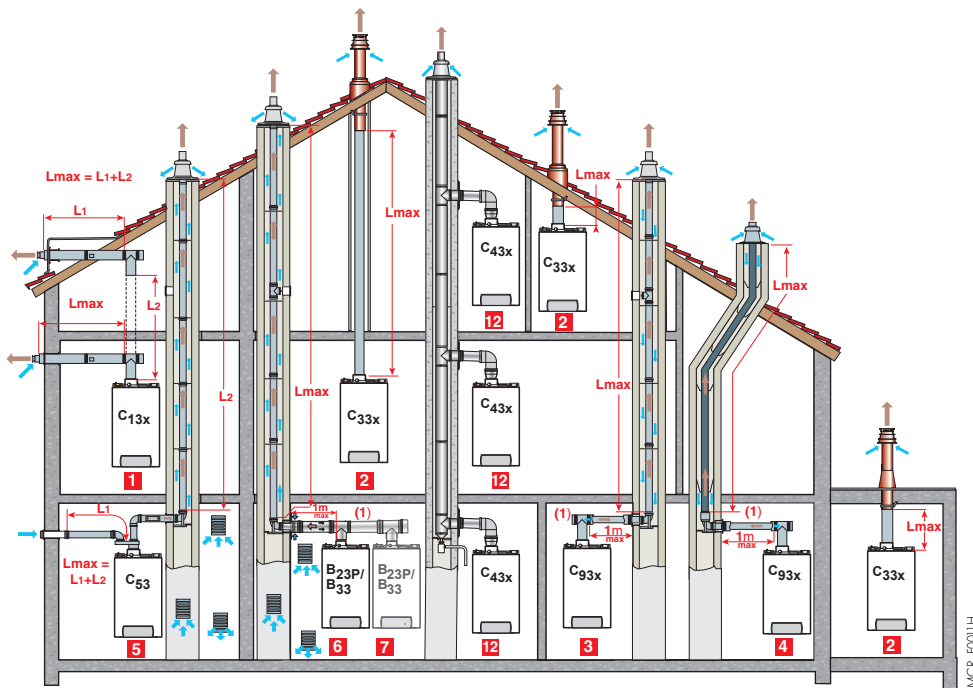
(1) With outside sensor FM46 and room thermostat AD301/303/304/288/289
 (2) With 2 solar collectors DIETRISOL PRO D230

Key

- | | | | |
|----------------------|--|---|--|
| 1 Heating outlet | 28 Domestic cold water inlet | 44 65°C limiter thermostat with manual reset for underfloor heating | 65 Low temperature circuit (underfloor heating, for example) |
| 2 Heating return | 29 Pressure reducer | 51 Thermostat valve | 68 Condensates neutralisation system |
| 3 Safety valve 3 bar | 30 Sealed safety device calibrated to 7 bars (mandatory, in compliance with safety directives) | 64 Radiator circuit (gentle heat radiators, for example) | 112a Collector sensor |
| 8 Manual air vent | 32 (Optional) DHW loop pump | | 129 Duo-Tube |
| 9 Isolation valve | 33 DHW temperature sensor | | 131 Collector field |
| 21 Outside sensor | | | |
| 27 Non-return valve | | | |

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 C₅₃:** Separate air and flue gas connection using a twin pipe adapter and single pipes (combustive air taken from outside)
- 6 Configuration B_{23p}/B₃₃:** Connection to a chimney (combustive air taken from the boiler room)
- 7 Configuration B_{23p}:** For cascade installations
- 12 Configuration C_{43x}:** Connection to a collective shared flue system

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

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

Type of air/flue gas connection			L _{max} of the connecting pipes in m			
			NANEO EMC-M			
			24	24/28 MI	30/35 MI	34/39 MI
Concentric pipes connected to a horizontal terminal (PPS)	C _{13x}	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 _{33x}	Ø 60/100 mm	9	9	5	5
		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 _{93x}	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 _{93x}	Ø 80/125 mm	20	25	15	13
		Ø 80 mm				
Twin pipe adapter and separate single air/flue gas pipes (combustive air taken from outside) (Alu)	C ₅₃	Ø 60/100 mm to 2 x Ø 80 mm	40	40	21.5	18
In the chimney (rigid or flex) (combustive air taken from the premises) (PPS)	B _{23p} /B ₃₃	Ø 80 mm (rigid)	40	40	33	29
		Ø 80 mm (flex)	39 (I)	40 (I)	21	18
Shared flue system for sealed boiler	C _{43x}	To size such a system, contact the supplier of the shared flue system duct				

(I) ⚠: Max. height in the flue pipe (configuration B_{23p}/B₃₃) 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 by slices of 25 or 30 m.

DESCRIPTION

NANEO EMC-M...

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

Brand: De Dietrich

Model:

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

Homologation: B₂₃-B_{23P}-B₃₃-C_{13x}-C_{33x}-C_{93x}-C₅₃-C_{43x}-C_{83x}

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:

- EMC-M 24/BS...: _____ kW

- EMC-M 24/28 MI: 27.5 kW

- EMC-M 30/35 MI: 33.9 kW

- EMC-M 34/39 MI: 37.8 kW

Specific flow in DHW mode:

- EMC-M 24/28 MI: 14 l/min

- EMC-M 30/35 MI: 17 l/min

- EMC-M 34/39 MI: 19 l/min

- EMC-M/BS...: _____ 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 mounting frame with prefitted water, gas valves, disconnect, manometer, flow collector, 1 modulating 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 EMC-M... MI only), automatic air vent. EMC-M/BS...: 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.

EMC-M...MI: 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
- Solar kit
- Flue gas temperature sensor, brush cleaning heat exchanger (only for EMC-M... MI)
- Service tool
- Condensate neutralisation tank
- Wall bracket for neutralisation tank
- Granule refill for neutralisation tank
- Twin pipe adapter 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 €

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

De Dietrich 
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