NANEO EMC-M

WALL-HUNG GAS CONDENSING BOILERS

- 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 thanks to the pipe kits available for our main competitors.
- 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: IPX4D

Domestic hot water:

Max. operating pressure: 10 bar

HOMOLOGATION

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

GAS CATEGORY

II_{2ESi3P}, NOx classification: 5

EASYLIFE

De Dietrich

PRESENTATION

EMC-M 24 and EMC-M… MI boilers are delivered fully assembled and factory tested. They come ready to operate on natural gas H; 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%.
- Performance class ★★★★ CE.
- 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, molded 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 (high efficiency EEI < 0,23 modulating pump as optional), 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, disconnector (outlet and return valves, and disconnector in composite materiel), 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 C_{53}), or shared flue (homologation C_{43x}) are available as options, see page 14.

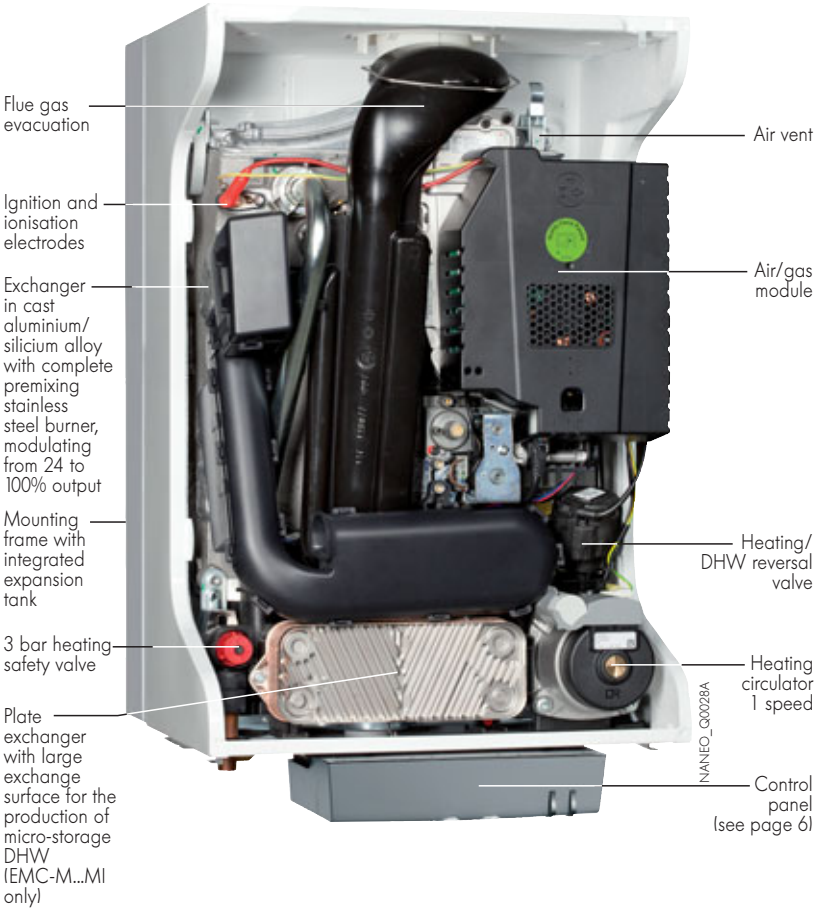
MODELS AVAILABLE

Model	Boiler	Calorifier	Boiler/ Calorifier connection kit	DHW sensor	Output (kW) (heating mode) at 50/30°C	Output (kW) (heating mode) at 80/60°C	Output (kW) (DHW mode)
 NANEO_Q0025 **EMC-M 24** For heating only	**HR 56** 	-	-	-	6.1 - 24.8	5.5 - 23.4	-
 NANEO_Q0032 **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	**HR 56**  +	**EE 53**  +	**HR 93**  +	**AD 226** 	6.1 - 24.8	5.5 - 23.4	5.5 - 20.6
 NANEO_Q0033 **EMC-M 24 /BS 130** For heating and DWH by 130 litres calorifier to be placed under the boiler	**HR 56**  +	**EE 22**  +	**HR 92**  +	**AD 226** 	6.1 - 24.8	5.5 - 23.4	5.5 - 22.5
 NANEO_Q0025 **EMC-M 24/28 MI** **EMC-M 30/35 MI** **EMC-M 34/39 MI** For heating and instant domestic hot water production	**HR 57** **HR 58** **HR 59** 	-	-	-	6.1 - 24.8 8.5 - 31.0 8.5 - 35.7	5.5 - 23.4 7.7 - 29.2 7.7 - 33.8	5.5 - 27.5 7.7 - 33.9 7.7 - 37.8

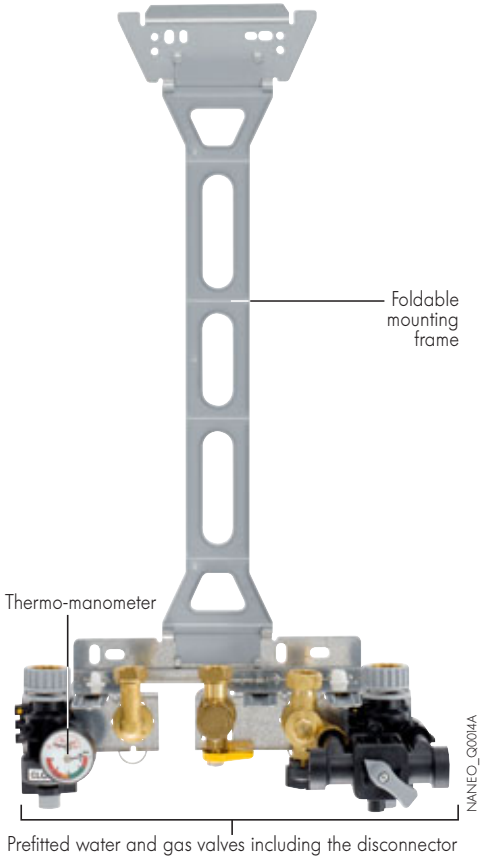
TECHNICAL SPECIFICATIONS

Description

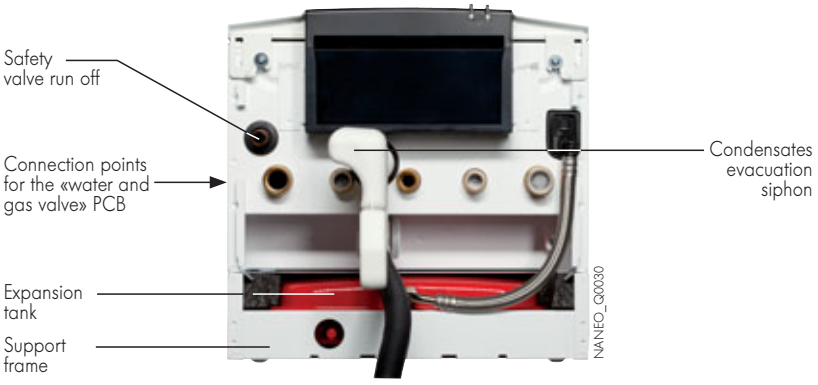
EMC-M... MI



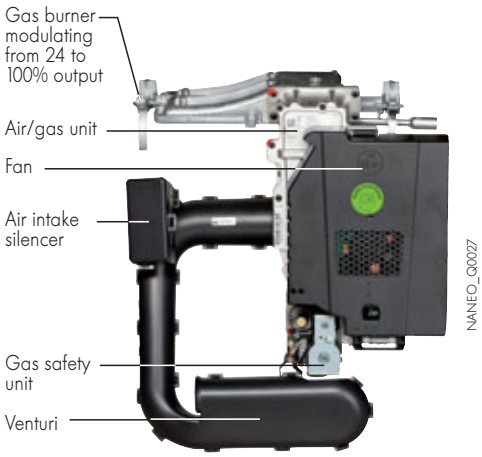
Delivered mounting frame



View of the underneath of the boiler



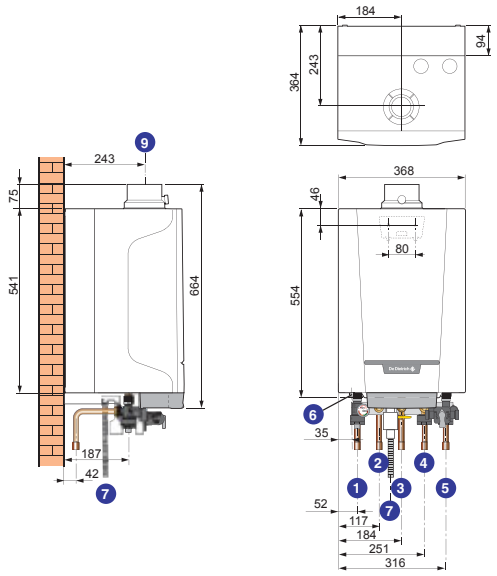
Air/gas module



TECHNICAL SPECIFICATIONS

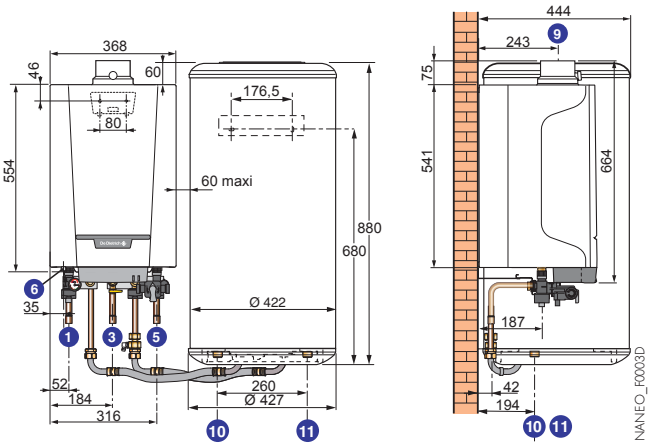
Main dimensions (in mm and inches)

EMC-M 24
EMC-M... MI



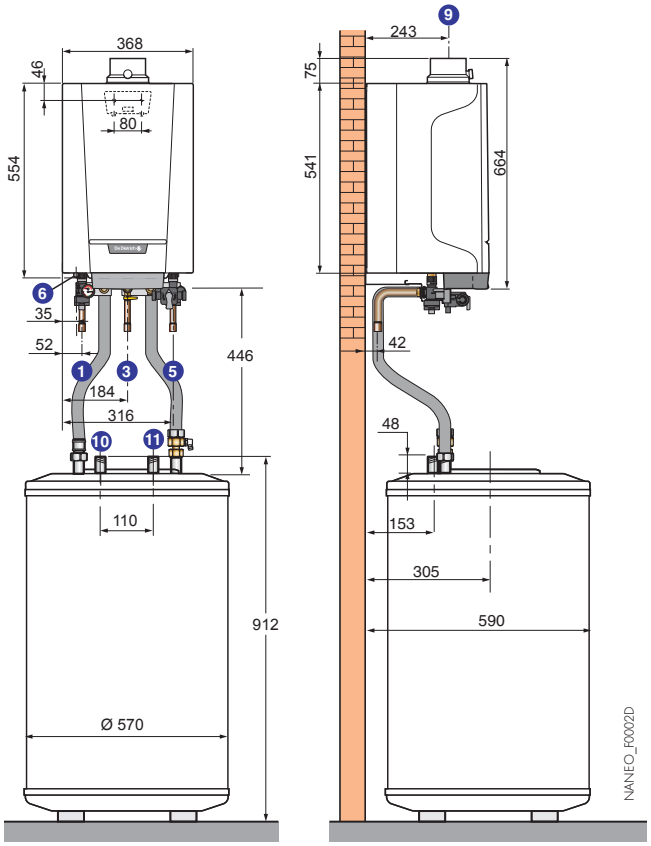
NANEO_F0001B

EMC-M 24/BS 80



NANEO_F0003D

EMC-M 24/BS 130



NANEO_F0002D

① Heating flow Ø 18 mm interior
② EMC-M 24: primary tank outlet Ø 16 mm interior (if exist)
EMC-M... MI: DHW outlet Ø 16 mm interior
③ Gas inlet Ø 18 mm interior
④ EMC-M 24: primary tank return Ø 16 mm interior (if exist)
EMC-M... MI: 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
⑨ Evacuation of combustion products and air inlet pipe Ø 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

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		EMC-M	24	24/BS 80 24/BS 130	24/28 MI	30/35 MI	34/39 MI
Type generator			Heating only	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	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…% outout and …°C water temperatur	100% Pn at average temp. 70°C	%	97.6	97.6	97.6	97.2	96.9
	100% Pn at return temp. 30°C	%	103.3	103.3	103.3	103.3	102.4
	30% Pn at return temp. 30°C	%	109.2	109.2	109.2	108.8	108.8
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	5.5-23.4	5.5-23.4	5.5-23.4	7.7-29.2	7.7-33.8
Manometric height available heating circuit at Pn		mbar	275	275	127	317	187
Water content		l	1 .4	1 .4	1 .6	1 .7	1 .7
Gas flow at Pn (15°C, 1013 mbar)	- natural gas H/L	m^3/h	2.54/2.95	2.54/2.95	2.98/3.47	3.68/4.28	4.13/4.80
	- propane	m^3/h	0.98	0.98	1 .15	1 .42	1 .60
Flue gas temperature 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	13.1-56.3	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 (1)		W	77	77	65	83	84
Electrical power at zero load		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

(1) One speed circulating pump

Domestic hot water specifications

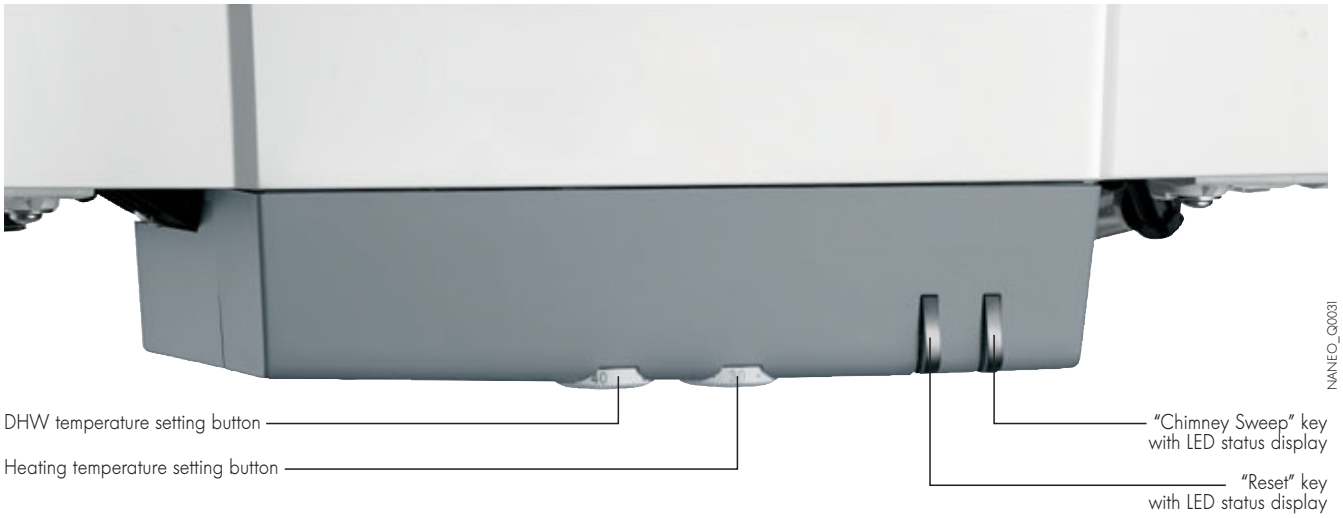
Model	EMC-M	24/BS 80	24/BS 130	24/28 MI	30/35 MI	34/39 MI
DHW calorifier capacity	l	80	130	-	-	-
Exchanged power	kW	20.6	22.5	27.5	33.9	37.8
Flow per hour at Δt = 35 K	l/h	505 (1)	560 (1)	-	-	-
Flow over 10 min at Δt = 30 K	l/10 min	162 (2)	201 (2)	-	-	-
Spec. flow at Δt = 30 K (compliance with EN 13203-1)	l/min	16.2 (2)	20 (2)	14	17	19
Cooling constant	Wh/24h.I.K.	N.C.	0.27	-	-	-
DHW losses through the outer casing at Δt = 45 K	W	N.C.	73	-	-	-
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.

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.



NANEO CONTROL PANEL OPTIONS

AD 140

8801Q003

AD 200

8666Q120A

Programmable room thermostat (**wire**) - Package AD 137
Programmable room thermostat (**wireless**) - Package AD 200
Non programmable room thermostat - Package AD 140

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 non-programmable thermostat is used to regulate the room temperature according to the instruction given by activating the burner.

AD 291

isense_Q0003

AD 292

isense_Q0004

Modulating room thermostat "Opentherm" (**wire**) - Package AD 291
Modulating room thermostat "Opentherm" (**wireless**) - Package AD 292

This thermostats handles 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,… 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.

CONTROL PANEL

NANEO CONTROL PANEL OPTIONS (CONTINUATION)

Outside temperature sensor - Package FM 46

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

Domestic hot water 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.

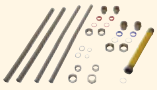
HYDRAULIC ACCESSORIES

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

NEW INSTALLATION

Standard	With rising column
Nota: - For EMC-M boilers, hydraulic connection accessories: mounting frame with water and gas connection pipes **are delivered with the boiler**	**Package to order:** EMC-M 24 and EMC-M... MI: Height adjustment frame: Package **HR 79**  NANEO_Q0022
	Hydraulic connection pipe for height adjustment frame: Package **HR 80**  NANEO_Q0017
Option: Pipe cover: package **HR 72** Provides a neat finish underneath the boiler	 NANEO_Q0012

REPLACING AN EXISTING BOILER (⚠ ONLI CONCERNS EMC-M... MI)

Package to order when replace existing boiler	Hydraulic connection pipe (water and gas) to be screwed: Package **HX 17**  MS_Q0027
Option: Pipe cover: package **HR 73**	 NANEO_Q0012

BOILERS OPTIONS

Calorifier BMR 80 - Package EE 53
Connection kit BMR 80/EMC-M 24 - Package HR 93
Calorifier SR 130 - Package EE 22
Connection kit SR 130/EMC-M 24 - Package HR 92

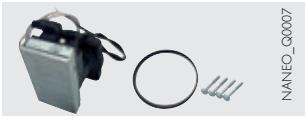
BMR 80 and SR 130 domestic hot water tanks are high performance tanks. They are protected by a lining in food quality standard high quartz content vitrified enamel and a magnesium anode.

The specifications of these tanks in combination with 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 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.

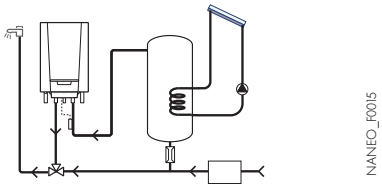


High efficiency modulating heating pump - Package HR 78

To replace the 1-speed heating pump fitted to NANEO boilers as standard.

Solar kit with thermostatic mixing valve - Package HR 84

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.



Flue gas temperature sensor kit - Package HR 71

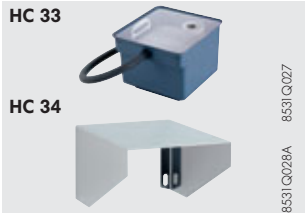
Shuts down the boiler when the flue gas temperature exceeds 110°C.

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 EMC-M… MI only.



Condensate neutralisation tank - Package HC 33
Wall bracket for neutralisation tank - Package HC 34
Granule refill for neutralisation tank - Package HC 35

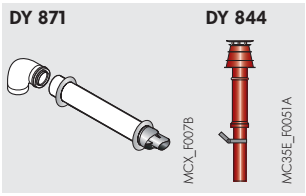
The materials used for the condensates flow pipes must be appropriate; otherwise the condensates must be neutralised. An annual check of the neutralisation system and particularly the effectiveness of the granules by measuring the pH is necessary. If need be, the granules must be replaced.

BOILERS OPTIONS

Air/flue gas connection to boiler NANEO EMC-M

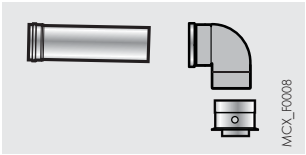
The EMC-M... boilers can be connected to:

- a horizontal wall terminal PPS Ø 60/100 mm (package DY 871) - configuration C_{13x},
- a vertical terminal PPS Ø 80/125 mm, black (package DY 843) or red (DY 844) + adapter (package HR 68) - configuration C_{33x},
- it is also possible to connect the boiler to a chimney (configuration B_{23p} or C_{93x}), in twin pipe (configuration C_{53}) 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 DY 871
Vertical terminal PPS Ø 80/125 mm - Package DY 844 (red) o 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 the shared flue system, see diagram on the next page.

Twin pipe adapter - Package HR 70

For connection with separate air and flue gas pipes (C_{53}).

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.

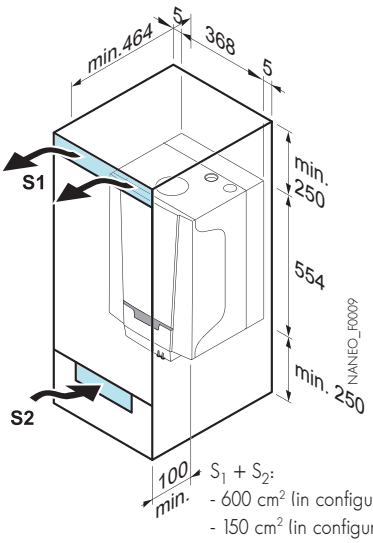
INFORMATIONS REQUIRED FOR INSTALLATION

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.

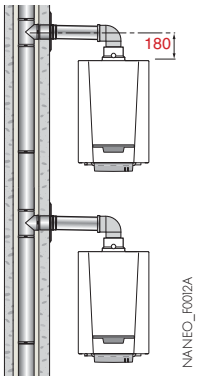
Location

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 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.



$S_1 + S_2$:
- 600 cm² (in configuration B_{23P})
- 150 cm² (in configuration C_{13x}, C_{33x}, C_{93x}, C_{53})

Connection to a shared flue system with kit DY 921



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 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.

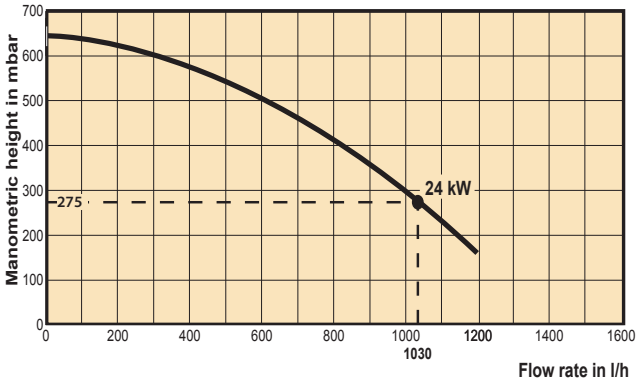
Connection to the heating circuit

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.

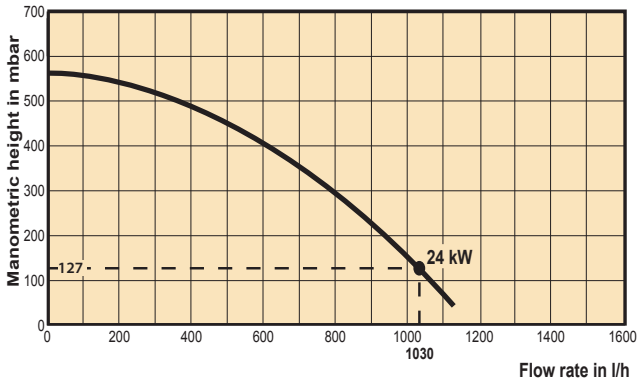
Furthermore, it is important to protect central heating installations against the risk of corrosion, scaling and microbiological growth by using a corrosion inhibitor adapted to all types of systems (steel, cast iron radiators, heated floor, PER).
The water treatment products used must comply with regulations.

Manometric height of the heating circulating pump fitted to NANEO boilers

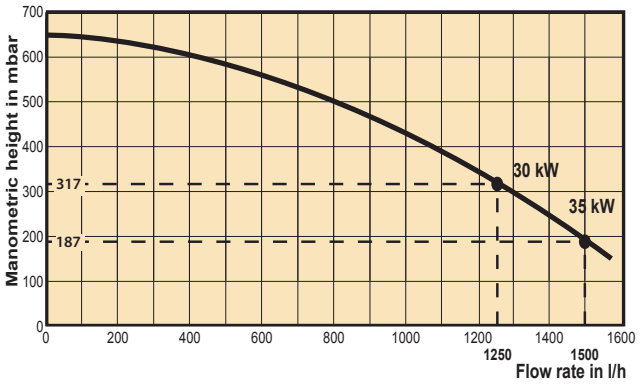
EMC-M 24



EMC-M 24/28 MI



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



NANEO_Q0008

Condensates discharge

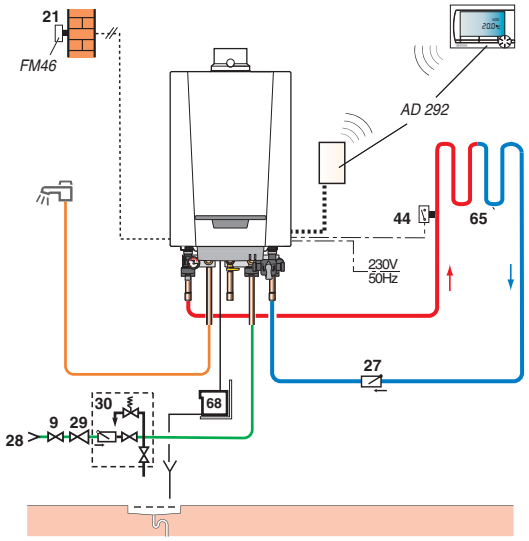
The siphon provided must be connected to the waste water discharge system. The connection must be removable and the flow of condensates visible. The connections and pipes must be in corrosion-resistant material. An optional condensates neutralisation system is available (package HC 33 see page 8).

EXAMPLES OF INSTALLATIONS

EXAMPLES OF INSTALLATIONS

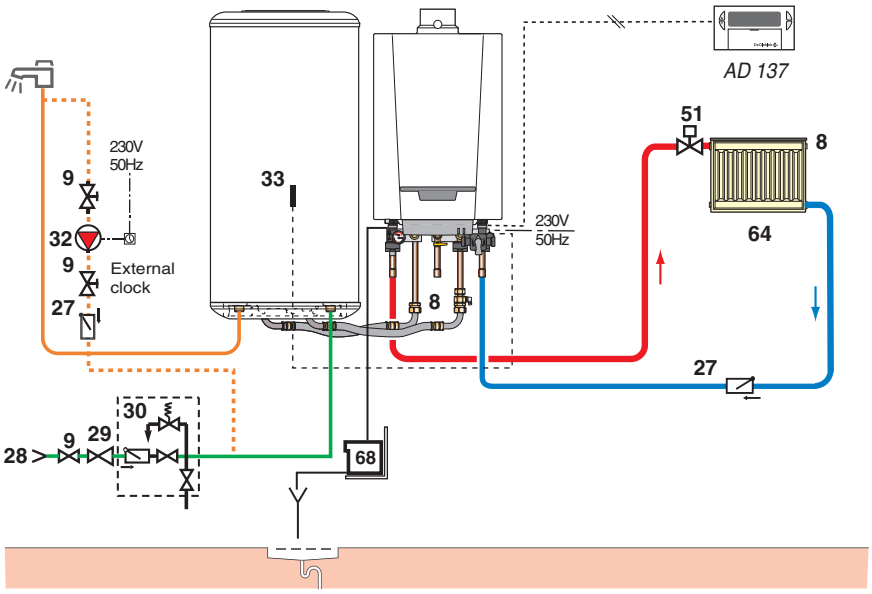
The examples presented below cannot cover the full range of installation scenarios which may be encountered.
Their purpose is to draw the attention to the basic rules to be followed. A certain number of control and safety devices (some of which are already integrated as standard in NANEO boilers) are 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" + outside temperature sensor



NANEO_F0011A

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

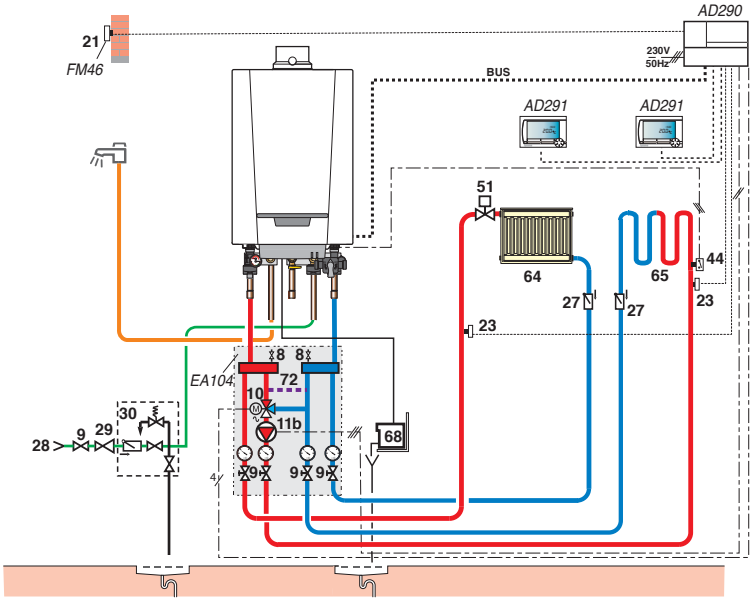


NANEO_F0010C

Legend: see next page

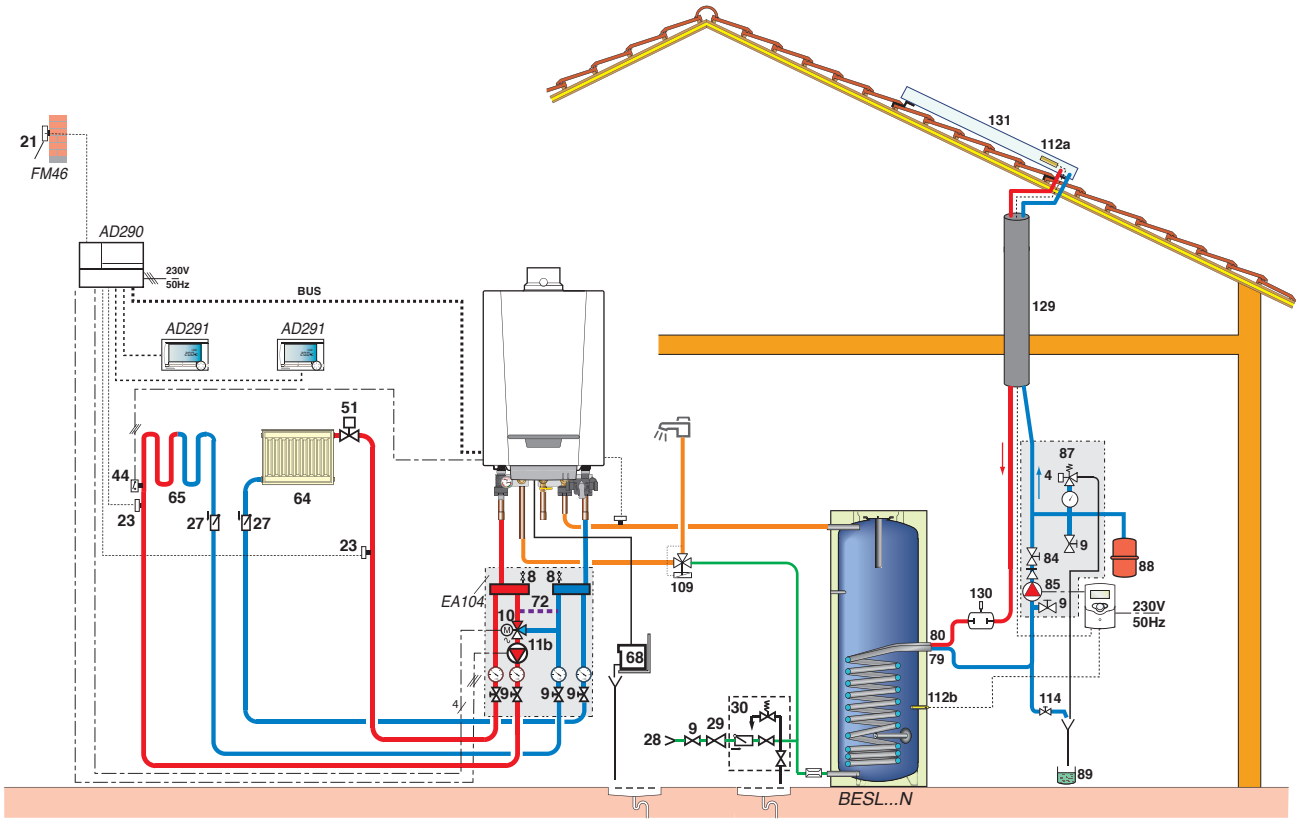
EXAMPLES OF INSTALLATIONS

EMC-M... MI with 1 underfloor circuit and 1 direct circuit and DWH production, controlled by 1 modulating thermostat «OpenTherm» + outside temperature sensor



NANEO_F0016B

EMC-M... MI with 1 underfloor circuit and 1 direct circuit . DWH produced by a solar calorifier with mixing valve kit (package HR 84)



NANEO_F0020A

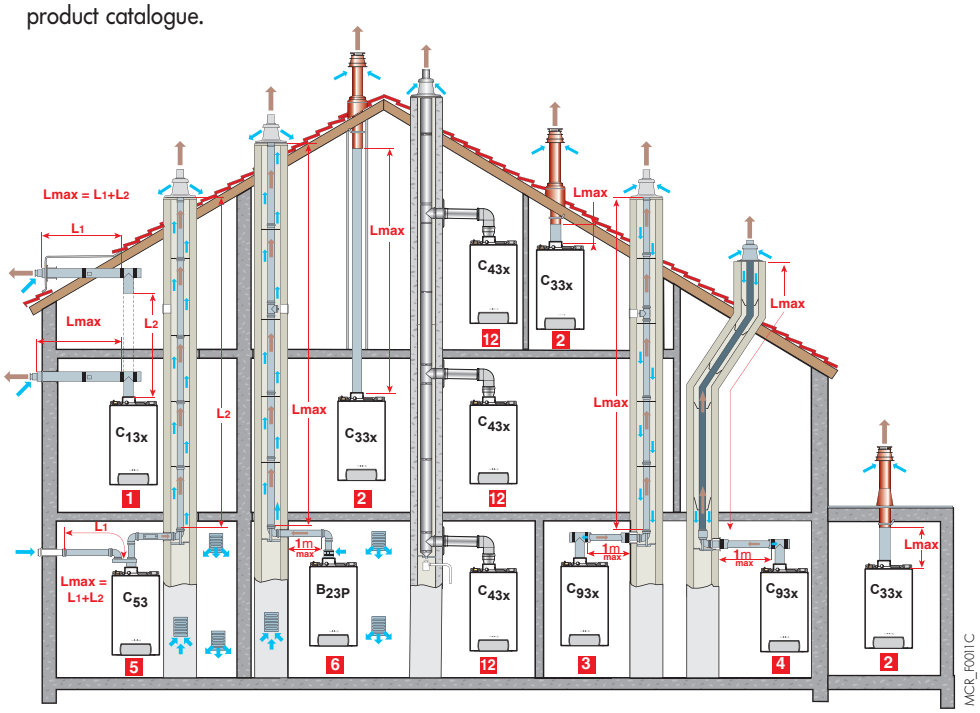
Legend

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

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 twin pipe 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 shared flue system

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 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 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 Ø 80 mm	18	23	19	17
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	20	25	15	13
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 80 mm	40	40	21 .5	18
In the chimney (rigid or flex) (combustive air taken from the premises) (**PPS**)	B_{23P}	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_{43x}	To size such a system, contact the supplier of the shared flue system duct				

(1) ⚠: Max. height in the flue pipe (configuration B_{23P}) 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
Classification: ★★★★ according to the european efficiency directive, NOx classification: 5
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: B_{23}-B_{23P}-B_{33} C_{13x}-C_{33x}-C_{93x}-C_{53}-C_{43x}-C_{83x}
Protection index: IPX4D
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

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 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, disconnector, manometer, flow collector, 1 speed heating pump, 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
- Heating pump class A, solar kit with mixing valve
- 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.

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De Dietrich