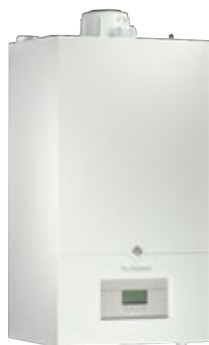


# INIDENS

## WALL-HUNG GAS CONDENSING BOILERS



• **INIDENS 24**  
5.8 to 24.7 kW, heating only, domestic hot water via a separate tank

• **INIDENS 20/24 MI, INIDENS 24/28 MI, INIDENS 30/35 MI**  
4.1 to 30.6 kW, for heating and instantaneous domestic hot water



**INIDENS 24:**  
heating



**INIDENS...MI:**  
heating and instantaneous domestic hot water production



Condensing



All natural gases, Propane



Hydrogen

### OPERATING CONDITIONS

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

#### Homologations

B23, B23P, B33, C[10]3X, C13X, C[15]3X, C[12]3X, C33X, C43P, C53X, C63X, C83, C93X

#### gas category

II2H3B/P, II2H3P  
NOx class: 6

Wall-hung gas condensing boilers, fully pre-set, equipped to operate with natural gas or propane. A trailblazer, the INIDENS is designed to operate with natural gas containing up to 20% hydrogen (H<sub>2</sub>).

Thanks to its particularly compact dimensions (700 x 395 x 285 mm) and low weight (28.5 kg for the 20/24 MI version), the INIDENS can be easily transported and installed without the need for any heavy loads to be lifted. The suspension tabs positioned above the casing facilitate mounting.

Simple and functional control panel with backlit screen, heating and DHW temperature setting buttons, access button to all the setting parameters. Thanks to the built-in pressure sensor, the water pressure can be read on the display and the system will inform you if the water needs to be made up.

Adapted to both the replacement and new market, the INIDENS has a large range of optional accessories available to adapt to all the configurations.

Remote actuation from a smartphone or tablet via the free application, thanks to the Smart TC room temperature sensors

Different air/flue gas connection solutions are also available: connection via a concentric horizontal or vertical terminals, chimney, in bi-flow or on a collective duct.



identification no.:0085CU0338

**De Dietrich**  
SUSTAINABLE COMFORT®



# PRESENTATION OF THE RANGE

INIDENS... boilers are delivered fitted, pre-set and tested in the factory. They are pre-equipped to operate with natural gas or propane.

INIDENS... MI boilers are combi boilers which produce large quantities of domestic hot water thanks to a large stainless steel plate heat exchanger. The electronic management system enables the temperature of the hot water production system to be kept constant during tapping. Hot water comes through quickly at a constant temperature each time it is required. However, the system is factory-set to "eco" mode to reduce gas consumption. INIDENS 24 boilers come equipped with a heating/DHW reversal valve for connection to a separate domestic hot water tank. There are 2 types of DHW tank available as options:

- 80-litre wallhung, BMR 80, to be placed next to the boiler on either side,
- 130-litre tank, SRB 130, positioned on the floor under the boiler.

## ENHANCED PERFORMANCE

Efficiency at 30% load up to 109.9 %

Very low polluting emissions:

- NO<sub>x</sub> ≤ 30 mg/kWh for INIDENS 24,
- NO<sub>x</sub> ≤ 32 mg/kWh for INIDENS 20/24 MI,
- NO<sub>x</sub> ≤ 30 mg/kWh for INIDENS 24/28 MI,
- NO<sub>x</sub> ≤ 28 mg/kWh for INIDENS 30/35 MI.






## PACKAGE DETAILS

INIDENS... boilers are delivered in 1 package.

## ADVANTAGES

- **Stainless steel coiled exchanger** (single-coil) with large water passages
- **Brass hydrobloc**, with built-in modulating heating pump, automatic bypass, heating/DHW reverse valve, 3 bar safety pressure relief valve, pressure manometer, high-performance stainless steel plate heat exchanger for DHW production on MI models
- **7 l expansion vessel**
- Equipped with an analogue and digital pressure manometer
- Built-in flue gas drawback valve to allow a connection to collective overpressure flue gas systems
- **Simple and functional control panel** with backlit screen, heating and DHW temperature setting buttons, access button to all the setting parameters
- **Different thermostats or room temperature sensors are available as an option:** on/off or modulating type thermostats or room temperature sensors connected for remote actuation of the heating and DHW via a free downloadable application.
- Central air/flue gas connection, Ø 60/100 mm, with easy-to-remove bayonet mounting to switch to other configuration types
- INIDENS... boilers can be connected with either a horizontal or vertical forced flue, on a chimney, in bi-flow or a collective duct. These flue system accessories must be ordered separately.

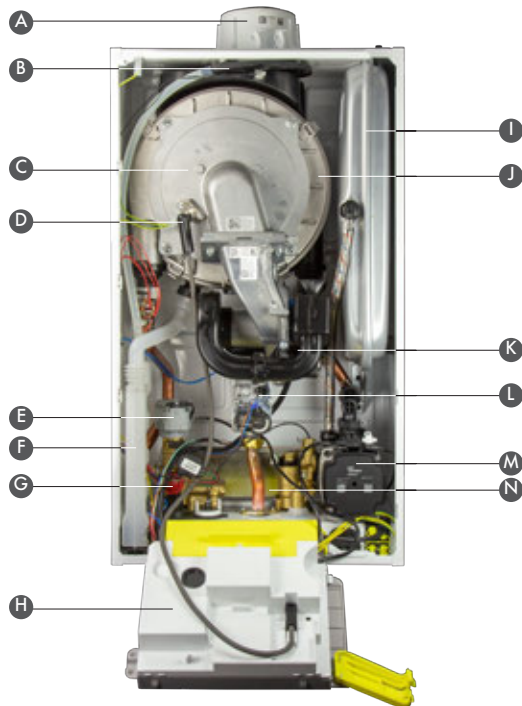
## AVAILABLE MODELS

	BOILER	MODEL	REF. BOILERS	PACKAGE	NOMINAL OUTPUT RANGE	
					Heating mode at 50/30 °C (kW)	DHW mode at 80/60 °C (kW)
	 INIDENS_Q0001 For heating only	INIDENS 24	7797978	HX140	6.3 - 26.1	28
	 INIDENS_Q0001 For heating and instantaneous domestic hot water	INIDENS 20/24 MI	7797979	HX141	5.2 - 21.8	4.9 - 2.4
		INIDENS 24/28 MI	7797980	HX142	6.3 - 26.1	6 - 28
		INIDENS 30/35 MI	7797981	HX143	7.9 - 32.5	7.3 - 34

# TECHNICAL SPECIFICATIONS

## DESCRIPTION

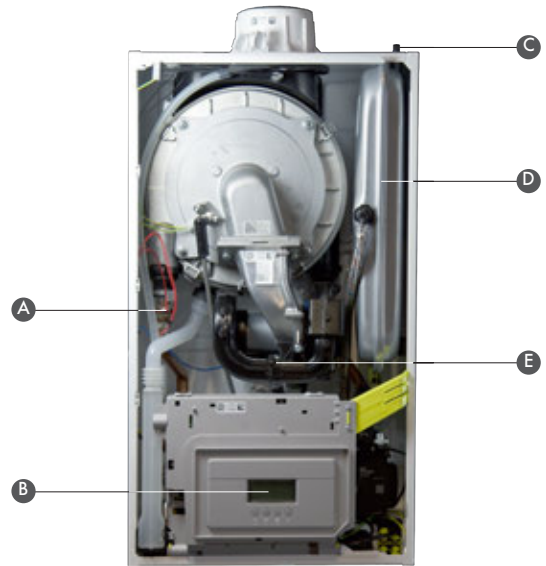
### INIDENS... MI



- |  |   |
|--|---|
| A Ø 60/100 mm air/flue gas connection with combustion measuring port | H Tilting control panel to provide access to the electrical connections |
| B Rain water collector   | I 7-litre expansion vessel  |
| C Burner   | J Heat exchanger  |
| D Ionisation/ignition electrode                                      | K Fan   |
| E Heating/DHW reversal valve motor                                   | L Modulating gas control valve  |
| F Condensates drain siphon   | M Modulating heating circulating pump                                   |
| G 3-bar heating safety pressure relief valve                         | N DHW plate heat exchanger  |

INIDENS\_Q0004

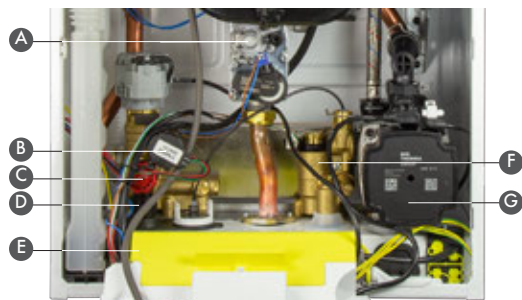
### INIDENS... MI



- |   |                            |
|---|----------------------------|
| A Heating temperature sensors               | D 7-litre expansion vessel |
| B Simple and functional control panel       | E Silencer                 |
| C Expansion vessel inflation and test valve |                            |

INIDENS\_Q0001

### BRASS HYDROBLOCK



- |                                      |  |
|--------------------------------------|--|
| A Gas control valve                  | E Access hatch to the electrical connections |
| B Pressure sensor                    | F DHW cartridge with flow rate detector      |
| C 3-bar safety pressure relief valve | G Modulating heating pump                    |
| D Drain valve                        |  |

INIDENS\_Q0004

### VIEW OF THE INIDENS... MI BOILER FROM UNDERNEATH



- |  |                                    |
|--|------------------------------------|
| A Mechanical pressure manometer                        | F G 3/4" gas connection            |
| B Drain valve and safety pressure relief valve run-off | G G 1/2" domestic cold water inlet |
| C G 3/4" heating flow                                  | H Filling valve                    |
| D Condensate run-off                                   | I G 3/4" heating return            |
| E G 1/2" DHW outlet                                    |                                    |

INIDENS\_Q0009

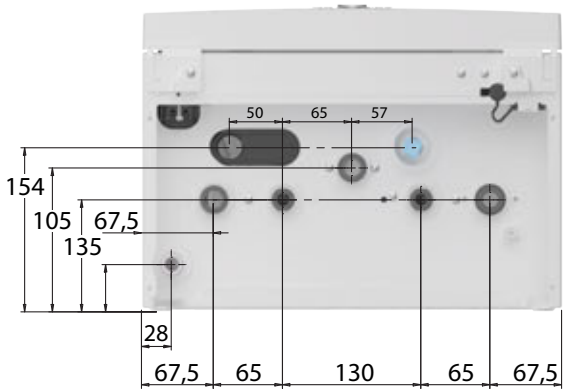
## ENERGY LABELLING

Each boiler is delivered with an energy label displaying a range of information, including energy efficiency, annual energy consumption, manufacturer name and noise level. By combining your boiler with, for example, a solar system, DHW storage tank, control system or even another generator, you can improve the performance of your installation and generate a corresponding "system" label.

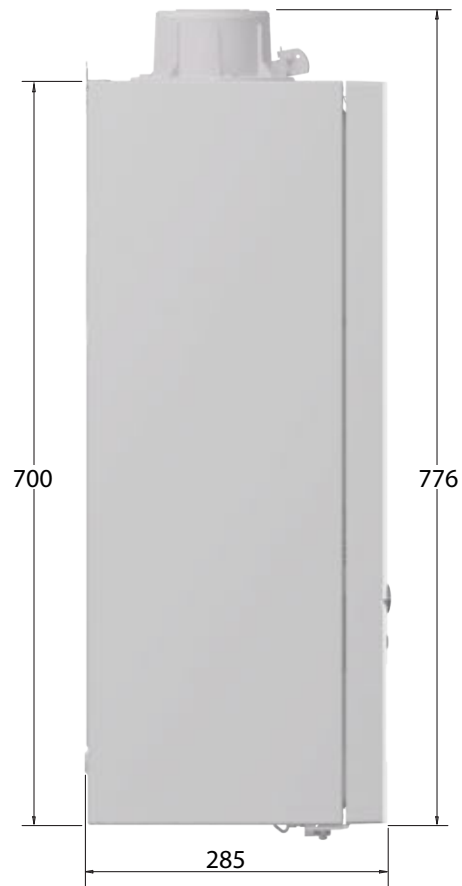
Visit our site "[ecosolutions.dedietrich-heating.com](http://ecosolutions.dedietrich-heating.com)"

# TECHNICAL SPECIFICATIONS

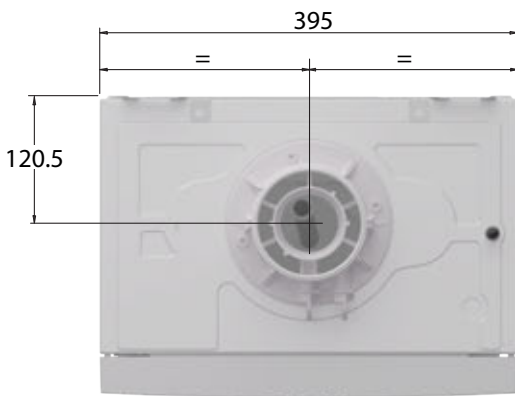
## MAIN DIMENSIONS



INI\_E0002



INI\_F0001



### KEY

- ① Mechanical pressure manometer
- ② G 3/4" heating flow
- ③ Condensate drain
- ④ G 1/2" DHW outlet for Inidens... MI version,  
DHW tank heating flow for Inidens 24
- ⑤ G 3/4" gas connection
- ⑥ G 1/2" cold water inlet
- ⑦ G 3/4" heating return
- ⑧ Filling valve

## TECHNICAL SPECIFICATIONS AND PERFORMANCES

### BOILER DATA

**Boiler type:** condensing  
**Burner:** total premix burner  
**Energy used:** natural gas or propane  
**Combustion evacuation:** chimney or forced flue  
**Temperature setting range for the heating circuit:** from 25 to 80°C

**Temperature setting range for domestic hot water:** from 35 to 60°C  
**REF. "CE certificate":** 0085CU0338  
**NOx class:** 6  
**International Protection marking:** IP X5D

### MODEL

	INIDENS	24	20/24 MI	24/28 MI	30/35 MI	
Nominal useful output at P <sub>n</sub>	kW	24	20	24	30	
Useful output at 50/30 °C (heating mode) min./max.	kW	6.3/26.1	5.2/21.8	6.3/26.1	7.9/32.5	
Useful output at 80/60 °C (heating mode) min./max.	kW	5.8/24.0	4.8/20.0	5.8/24.0	7.3/30.0	
Useful output at 80/60 °C (DHW mode)	kW	28	24	28	34	
Specific flow rate at Δt = 30 K (according to EN 13203-1)	l/min	-	11.5	13.4	16.2	
Efficiency in % LHV at ...% load - 100 % P <sub>n,gen</sub> at av. temp. 70 °C	%	97.7	97.9	97.7	97.8	
P <sub>n,gen</sub> and water temp...°C - 30 % P <sub>n,gen</sub> t return temp 30 °C	%	109.7	109.9	109.7	109.7	
Seasonal energy efficiency: product ETAS (without control system) (1)	%	94	94	94	94	
Nominal water flow rate at P <sub>n,gen</sub> , ΔT = 20 K	m <sup>3</sup> /h	1.03	0.86	1.03	1.29	
Available total dynamic head for the heating circuit at Δt = 20K	mbar	320	370	320	240	
Water content	l	2	2	2	2	
Gas flow rate at P <sub>n,gen</sub> - natural gas H	m <sup>3</sup> /h	3.06	2.61	3.06	3.69	
15 °C - 1013 mbar - Propane	kg/h	2.24	1.92	2.24	2.71	
Max. flue gas temperature at 80/60 °C	°C	80	80	80	80	
Flue gas mass flow rate	kg/s	0.003/0.013	0.002/0.011	0.003/0.013	0.004/0.016	
Pressure available at the boiler outlet	Pa	100	100	100	100	
Standby losses at Δt = 30K (Q <sub>pa30</sub> )	W	40	40	40	40	
Electrical power	- of the auxiliaries (exc. circulating pump) at P <sub>n,gen</sub> (Q <sub>aux</sub> )	W	35	27	35	48
	- of the auxiliaries in standby (Standby)	W	4	4	4	4
	- circulating pump at P <sub>n,gen</sub>	W	44	44	44	50
Sound power level	dB(A)	51 (24 kW)	49 (20 kW)	51 (24 kW)	52 (30 kW)	
Net weight	kg	29.0	28.5	30.0	30.0	

(1) In accordance with the (EU) regulation no. 813/2013.

### DHW PREPARATION WITH BMR 80 AND SRB 130 TANK

**Max. tank temperature (Θ<sub>max</sub>):** 95 °C  
**Thermostat hysteresis (ΔΘ<sub>base</sub>):** 4 K

**Max. DHW operating pressure:** 10 bar

	INIDENS	24 + BMR 80	24 + SRB 130
Energy efficiency class		C	B
DHW tank capacity	l	75	125
DHW power exchanged	kW	22.5	22.5
Hourly flow rate at ΔT = 35 K	l/h	505 (1)	560 (1)
Flow rate over 10 min at Δt = 30 K	l/10min	162 (2)	201 (2)
Specific flow rate at Δt = 30 K (according to EN 13203-1)	l/min	16.2 (2)	20.0 (2)
Heat loss coefficient (UA <sub>S</sub> )	W/K	1.26	1.09

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

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

# CONTROL PANEL

## INIDENS BOILERS CONTROL PANEL

The control panel on INIDENS boilers is an electronic board with a **simple and functional backlit** digital display. The basic settings are made using the 4 keys positioned underneath the display screen.

It comes with built-in automatic regulation of a direct circuit and a DHW circuit (DHW sensor – package AD212 - as an option for INIDENS 24).

There is also a range of room and/or outside temperature-based controllers available as an option: see next page.



Backlit screen with display:

- menus
- current functions
- readings for current values
- counters
- fault codes

Reset/Back button

DHW button:  
Browsing in the menus /  
Setting the values

Validation button

Heating button:  
browsing in the menus /  
setting the values

① + ②: press these 2 keys simultaneously to activate "Chimney sweep" mode  
③ + ④: press these 2 keys simultaneously to access the available menus

INIDENS\_Q1011

## CHOICE OF OPTIONS DEPENDING ON THE CONNECTED CIRCUITS

Circuit type	DHW	direct
INIDENS	AD212 (1)	as standard (2)
INIDENS.. MI	as standard (1)	as standard (2)

### Room and/or outside temperature-based control:

(1) The modulating room thermostats AD304, AD303 or AD324 are used to program the domestic hot water function

(2) To be completed as needed with:

- if control based on the room temperature is required:
  - room thermostat (package AD337 AD338, AD140, AD301, AD303, AD304, AD324 and AD341)
- if control based on the outdoor temperature is required:
  - outdoor temperature sensor: package FM46 (wired) or AD346\* (radio)
  - outdoor temperature sensor + room thermostat: package FM46 or AD346\* + package AD337 AD338, AD140, AD301, AD303, AD304, AD324 or AD341

\* Package AD346 in combination with AD341

## CONTROL PANEL OPTIONS



### DHW SENSOR (LENGTH 5 M) - PACKAGE AD212 - REF. 100000030

It allows control with temperature prioritised and programming of domestic hot water generation via an accumulation tank.



### PROGRAMMABLE ROOM THERMOSTAT:

- WIRED - PACKAGE AD337 - REF. 7768817
- WIRELESS - PACKAGE AD338 - REF. 7768818

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

**AUTOMATIC:** according to the timer programming, the setpoint temperature automatically switches from Comfort to Economy and vice versa. It is also possible to remain in permanent comfort mode, reduced mode or frost protection mode

**ABSENT:** This mode allows a permanent temperature of between 5° and 15° to be set

**MANUAL:** this mode is used to switch from comfort to economy (or vice versa) until the next program change

**OFF:** this mode used to stop the heat demand, for example in summer.



### NON-PROGRAMMABLE ROOM THERMOSTAT (WIRED) - PACKAGE AD140 - REF. 88017859

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

# CONTROL PANEL

## CONTROL PANEL OPTIONS



NANFO\_Q0043A

### MODULATING "OPENTHERM" REMOTE CONTROL WITH ROOM TEMPERATURE SENSOR (NON PROGR.) - PACKAGE AD301

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



AD304

### "OPENTHERM" MODULATING PROGRAMMABLE ROOM THERMOSTAT

- WIRED - PACKAGE AD304
- WIRELESS - PACKAGE AD303

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

3 operating modes are possible:

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

For operation based on the outdoor temperature, an outdoor temperature sensor (package FM46) can be added. The "wireless" version is delivered with a sender-receiver box to be mounted on the wall close to the boiler.



AD303

isense\_Q0004 + isense\_Q0003



AD324

### SMART TC° CONNECTED ROOM TEMPERATURE SENSOR

- R-BUS (WIRED) - PACKAGE AD324 - REF. 7691375
- RF (WIRELESS) - PACKAGE AD341 - REF. 7691377

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

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

For further details, see the dedicated technical leaflet



AD341

SMARTTC\_Q0500/SMARTTC\_RF Transmitter

### INSTALLATION PRINCIPLE



(1) While the SMART TC° can operate as a classic remote control, it is nevertheless recommended to connect it to the internet to benefit from the latest updates.

PAC\_E3008+INIDENS\_Q0001



AD\_Q0050

### OUTDOOR TEMPERATURE SENSOR (WIRELESS) - PACKAGE AD346 - REF. 7776874

Only compatible with the Smart TC RF communication gateway (AD341)



AD\_Q0050

### OUTDOOR TEMPERATURE SENSOR - PACKAGE FM46

The outdoor temperature sensor can be used on its own or in combination with the room thermostats, to regulate the heating based on the outdoor temperature.

### IMPORTANT: Eligibility for the "Energy Saving Certificate"

In combination with INIDENS boilers, the modulating room thermostats in packages AD303, AD304, AD324, AD341 and AD342 fall into class V. When used with the outdoor temperature sensor in package FM46 or AD346, they fall into class VI.

# BOILER OPTIONS



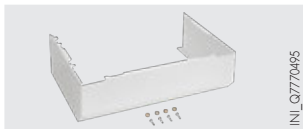
INL\_Q7679073

**INIDENS VALVE KIT, HEATING ONLY - REF. 7679073**



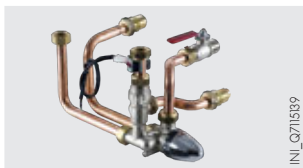
INL\_Q7679074

**INIDENS MI VALVE KIT - REF. 7679074**



INL\_Q7770495

**PIPING COVER - REF. 7770495**



INL\_Q71539

**SOLAR KIT WITH THERMOSTATIC VALVE - REF. 7737579**

for INIDENS... MI only

Used to connect a solar calorifier on an Inidens... MI boiler. When drawing down domestic hot water, the boiler will boost the temperature to meet the setpoint.



INL\_Q7783168

**DRAIN COLLECTOR SET - REF. 7783168**

This kit allows to collect the different drains : condensate flow and safety valve.



DNI\_Q0002 - DNI\_Q0001

**CONDENSATES NEUTRALISATION STATION (UP TO 75 KW) - PACKAGE SA1 - REF.: 7613605**

**WALL BRACKET FOR NEUTRALISATION STATION - PACKAGE SA2 - REF.: 7613606**

**GRANULE TOP-UP FOR NEUTRALISATION (10 KG) - REF. 94225601**

The materials used for the condensate run-off pipes must be designed for this purpose, otherwise the condensates must be neutralised. A regular inspection of the neutralisation system is required, including a check of the effectiveness of the granules via a pH measurement. The granules must be replaced as necessary.



MCK\_Q0010 - 8666Q043A

**DHW CYLINDER BMR 80 - PACKAGE EE53 -REF.: 100005562**

**DHW CYLINDER SRB 130 - PACKAGE EE81 -REF.: 7681039**

Domestic hot water tanks BMR 80 and SRB 130 are high-performance tanks. They are protected internally by food safety quality high-quartz vitrified enamel, and by a magnesium anode.

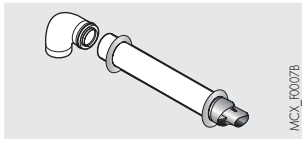
The specifications of these tanks in combination with INIDENS boilers are given on p. 5.





# BOILER OPTIONS

## AIR/FLUE GAS CONNECTION ACCESSORIES IN CONFIGURATION C13X

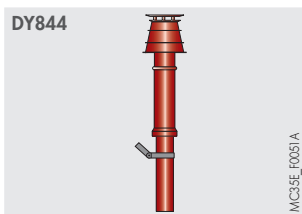


**HORIZONTAL FORCED FLUE TERMINAL, Ø 60/100 mm, LENGTH 800 mm (WITH 90° ELBOW) - PACKAGE DY871 - REF.: 100008296**

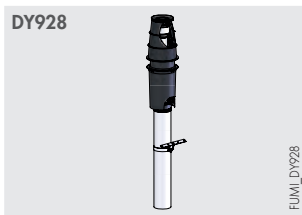


**HORIZONTAL FORCED FLUE TERMINAL, Ø 60/100 mm, LENGTH 800 mm (WITHOUT ELBOW) - PACKAGE DY920 - REF. 100019963**

## AIR/FLUE GAS CONNECTION ACCESSORIES IN CONFIGURATION C33X



**PPS VERTICAL FORCED FLUE TERMINAL, Ø 80/125 mm - PACKAGE DY844 (RED) - REF. 100002733 OR DY843 (BLACK) - REF. 100002732**



**PPS VERTICAL FORCED FLUE TERMINAL, Ø 60/100 mm - PACKAGE DY928 (BLACK) - REF. 7650968 OR DY929 (RED) - REF. 7650969**

## FLUE GAS SYSTEM ACCESSORIES SPECIFIC TO INIDENS BOILERS



**BI-FLOW ADAPTER 2 X 80 mm - REF. 7220861**

Used for the boiler's air/flue gas connection in C53.



**ADAPTER, Ø 80/125 mm - REF. 7755080**



**REDUCED ELBOW FOR HORIZONTAL FORCED FLUE TERMINAL - REF. 7782188**

Used to save headroom of 66 mm.



**PPS REDUCTION PIECE Ø 80 TO Ø 60 mm - REF. 7683812**



**PPS REDUCTION PIECE Ø 80 TO Ø 50 mm - REF. 7735536**

# INFORMATION REQUIRED

FOR INSTALLATION

## STATUTORY GUIDELINES FOR INSTALLATION AND MAINTENANCE

Installation and maintenance of the appliance, in both residential buildings and establishments open to the general public, must be performed by a qualified professional in accordance with the relevant statutory guidelines and good industry practice.

### POSITION

INIDENS condensing boilers can be installed anywhere within the home, provided that this location is not at risk of frost and can be well-ventilated; under no circumstances may it be installed on top of a heat source or cooking appliance. Thanks to their IP X5D International Protection marking, they may be installed in kitchens and bathrooms, although not in protection areas classified as 1 or 2. The wall on which the boiler is to be attached must be able to bear the weight of the boiler when filled with water.

To ensure sufficient access around the boiler, we recommend respecting the minimum dimensions detailed opposite.

### VENTILATION

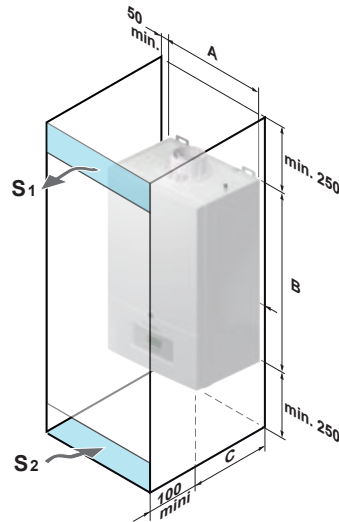
(with chimney connection - type B only)

The ventilated area of the room (where the combustion air is extracted) must comply with the local standards in force.

$S_1 + S_2$ :

- 600 cm<sup>2</sup> (with B<sub>23p</sub>/B<sub>33</sub> connection)
- 150 cm<sup>2</sup> (with C<sub>13x</sub>, C<sub>33x</sub>, C<sub>93x</sub>, C<sub>53</sub> connection)

INIDENS	A	B	C
	400	700	300



In\_100003



In order to avoid damage to the boilers, it is necessary to prevent the contamination of combustion air by chlorine and/or fluorine compounds, which are particularly corrosive. These compounds are present, for example, in aerosol sprays, paints, solvents, cleaning products, washing products, detergents, glues, road grit, etc. The following must therefore be ensured:

- Prevent the intake of air expelled by premises using such products: hairdressing salons, dry cleaners, industrial premises (solvents), premises containing refrigeration systems (risk of refrigerant leakage), etc.
- Avoid storing such products close to boilers.

**We would like to underline that, should the boiler and/or peripheral equipment be corroded by chlorine and/or fluorine compounds, the contractual guarantee will be invalidated.**

### GAS CONNECTION

The local applicable regulations and provisions must be complied with. In all cases, a shut-off valve must be placed as close to the boiler as possible.

### ELECTRICAL CONNECTION

It must comply with the local standards in force.

The boiler must be supplied via an electrical circuit which includes an omnipolar switch with an opening gap distance of > 3 mm. Protect the network connection using a 6A fuse.

#### NOTE:

- the sensor cables must be separated from the 230 V circuits by at least 10 cm,
- to help maintain the frost protection and anti-blocking functions of the pumps, we recommend that the boiler is not powered off using the mains switch.

### WATER CONNECTIONS

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

### CONNECTION TO THE HEATING CIRCUIT

INIDENS boilers must only be used in closed circuit heating systems. The central heating installations must be cleaned to eliminate any debris (copper, caulking, soldering flux) linked to setting up of the installation and deposits which could lead to a malfunction (noise within the installation, chemical reaction between the metals). More specifically, when a boiler is fitted on an existing installation, it is necessary to flush the latter thoroughly to avoid allowing sludge to enter the new boiler. Furthermore, it is important to protect the central heating installations against the risks of corrosion, scaling and microbiological growth by using a corrosion inhibitor suitable for all types of installation (steel and cast iron radiators, PER underfloor heating). The products used to treat the heating water must be approved by the local authorities.

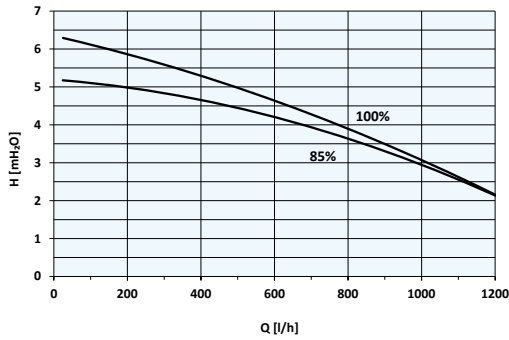
# INFORMATION REQUIRED

FOR INSTALLATION

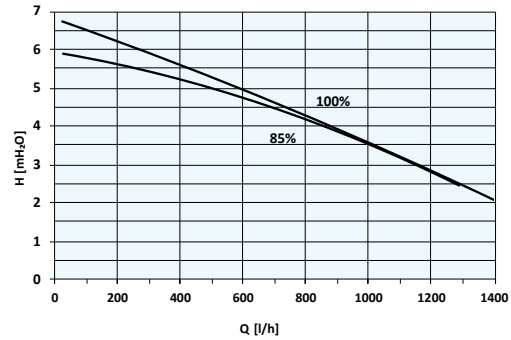
## WATER CONNECTIONS

### TOTAL DYNAMIC HEAD OF THE HEATING CIRCUIT

• INIDENS 24, INIDENS 20/24 MI and INIDENS 24/28 MI



• INIDENS 30/35 MI



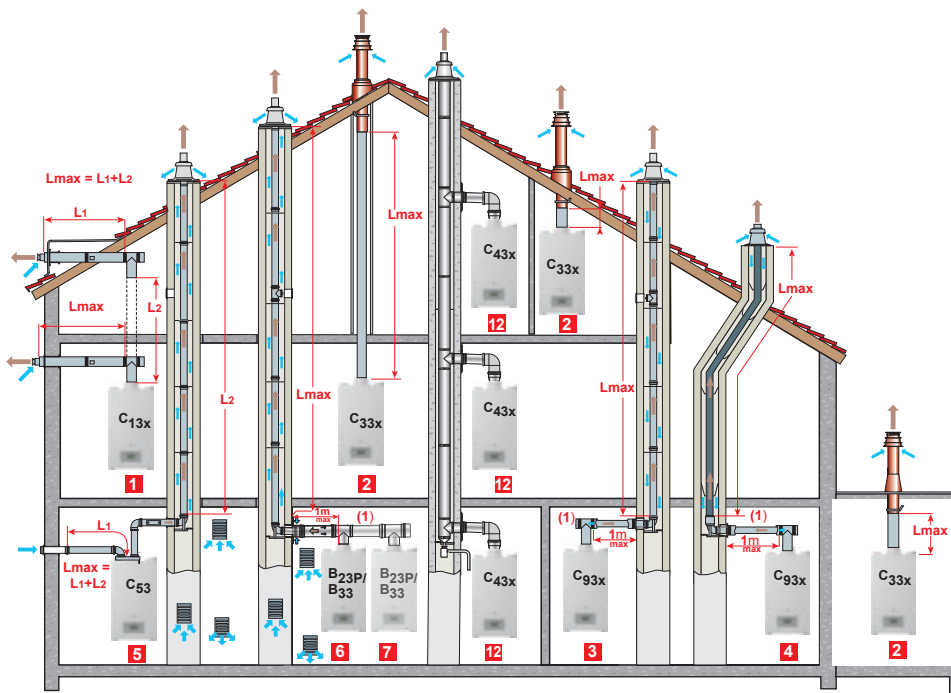
## CONDENSATE DRAIN

The siphon must be connected to the wastewater drainage system. The connector must be removable, and the condensate run-off must be visible. The connectors and pipes must be made from corrosion-resistant material.

A condensate neutralisation system is available as an option (package SA1, see page 8).

## AIR/FLUE GAS CONNECTION

For information on how to set up the air-flue gas connection ducts and the installation rules, see local applicable regulations



- 1** CONFIGURATION C<sub>13x</sub>: Air-flue gas connection via concentric ducts to a horizontal terminal ("forced flue")
  - 2** CONFIGURATION C<sub>33x</sub>: Air-flue gas connection via concentric ducts to a vertical terminal (roof outlet) or
  - 3** CONFIGURATION C<sub>93x</sub>: Air-flue gas connection via concentric ducts in chimney (combustion air in counter-current in the chimney) or
  - 4** Air/flue gas connection by concentric ducts in the boiler room and single "flex" pipe in the chimney (combustion air in counter-current in the chimney)
  - 5** CONFIGURATION C<sub>53</sub>: Air and flue gas connection separated by means of a bi-flow adapter and single pipes (combustion air taken from outside)
  - 6** CONFIGURATION B<sub>23P</sub>/B<sub>33</sub>: Connection to a chimney (combustion air taken from within the boiler room).
  - 12** CONFIGURATION C<sub>43x</sub>: Connection to a collective duct
- (I) For each additional metre of horizontal pipe, subtract 1.20 m from the vertical length  
L<sub>max</sub> indicated in the table below.

### TABLE OF MAXIMUM PERMISSIBLE AIR-FLUE GAS DUCT LENGTHS BASED ON THE BOILER TYPE (PPS)

Configuration type	L <sub>MAX</sub> EQUIVALENT MAXIMUM LENGTH OF THE CONNECTION DUCTS IN M									
	C <sub>13x</sub>		C <sub>33x</sub>		C <sub>93x</sub> (rigid)	C <sub>93x</sub> (flex)	C <sub>53</sub>	B <sub>23P</sub> /B <sub>33</sub> (rigid)	B <sub>23P</sub> /B <sub>33</sub> (flex)	C <sub>43x</sub>
Diameter (in mm)	60/100	80/125	60/100	80/125	- 80/125 in boiler room - 80 in chimney	- 80/125 in boiler room - 80 in chimney	2 x 80 (I)	80	80	To determine the size of such a system, consult the pipe supplier
INIDENS... boiler	10	25	10	25	25	25	10* + 70	65	65	

(I) For other connection dimensions in C<sub>53</sub> such as Ø 80/60 or Ø 80/50, please refer to the manual  
\* = L<sub>1</sub> max. length of the air inlet (see diagram above, item 5)

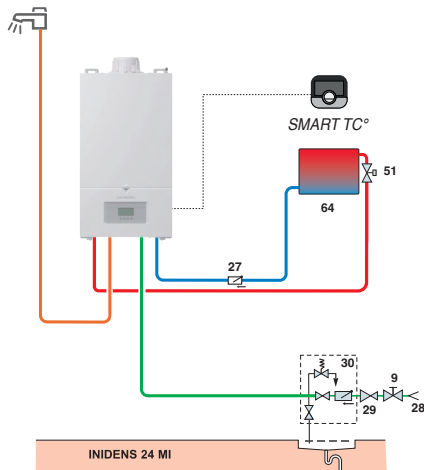
# INSTALLATION EXAMPLES

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

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

## INIDENS.. MI

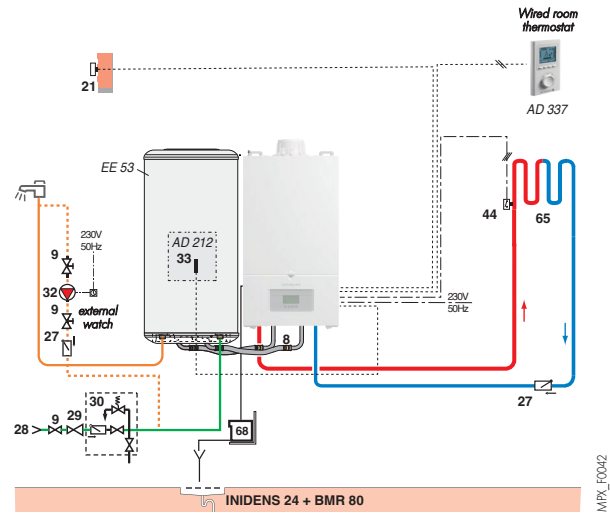
with 1 direct radiator circuit and 1 DHW circuit, controlled by a wired connected room sensor SMART TC° (Wire)



INL\_F0006

## INIDENS.. + BMR 80

with 1 direct underfloor heating circuit + 1 DHW circuit, controlled by a programmable on/off room thermostat + outdoor temperature sensor



MPK\_F0042

### KEY

- 8 Manual air vent
- 9 Isolation valve
- 10 Three-way mixing valve
- 11b Heating circulating pump for circuit with mixing valve
- 21 Outdoor temperature sensor
- 23 Flow rate sensor
- 27 Non-return valve
- 28 Domestic cold water inlet
- 29 Pressure reducer
- 30 Safety unit calibrated to 7 bar\* and sealed
- 32 DHW circulation loop pump (optional)
- 33 DHW temperature sensor
- 44 65°C limiter thermostat, with manual reset for underfloor heating

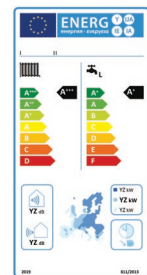
- 51 Thermostatic valve
  - 64 Radiator circuit (e.g. gentle heating radiators)
  - 65 Low temperature circuit (e.g. underfloor heating)
  - 68 Condensate neutralisation system
  - 72 Hydraulic bypass
  - 79 Solar exchanger primary outlet
  - 80 Solar exchanger primary inlet
  - 84 Isolation valve with releasable non-return valve
  - 85 Solar primary circuit pump
  - 87 Safety pressure relief valve calibrated to 6 bar and sealed
- \* Mandatory in accordance with the safety regulations: we recommend hydraulic diaphragm safety units.



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