



SOLAR  
SOLID FUEL  
HEAT PUMPS  
CONDENSING OIL/GAS

# Innovens Pro

PROJECT



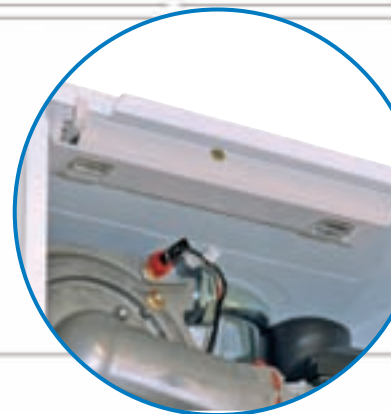
## Condensing boilers working for everyone

- >> Compact, light and powerful
- >> Optimised for the environment
- >> Cascade systems

NEW

**De Dietrich**   
Sustainable Comfort®

<< [dedietrich-heating.com](http://dedietrich-heating.com) >>



LED lighting  
for your convenience



## >> TRIED AND TESTED PERFORMANCE FOR COMMERCIAL OUTLETS

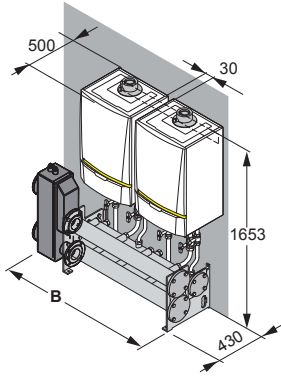
Energy-saving, environmental friendly, offering excellent performances, the new generation of De Dietrich condensing boilers satisfies the problematics of current projects

**Today, De Dietrich is expanding its condensing range with wall-hung boilers from 8 to 115 kW to provide an appropriate response, whatever the configuration.**

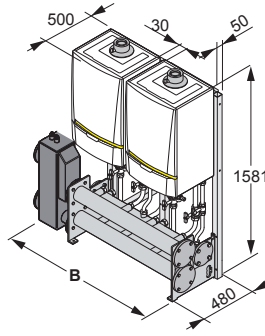
# >> A SOLUTION FOR EVERY SITUATION

- They can be fitted **alone or in cascade**:
  - attached to a wall (7 max)
  - in line on the floor (7 max)
  - back to back on the floor (10 max; 5+5).
- They make it possible to size the installation very precisely, practically made to measure, with an installed output of **up to 1140 kW** (corresponding to 10 MCA 115 boilers in cascade).

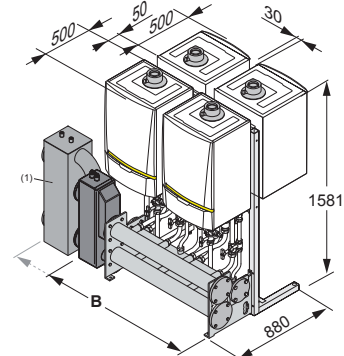
## EXAMPLES OF CASCADE SYSTEMS



In wall-hung alignment: LV  
Example with 2 boilers



In floor-standing alignment: LV  
Example with 2 boilers

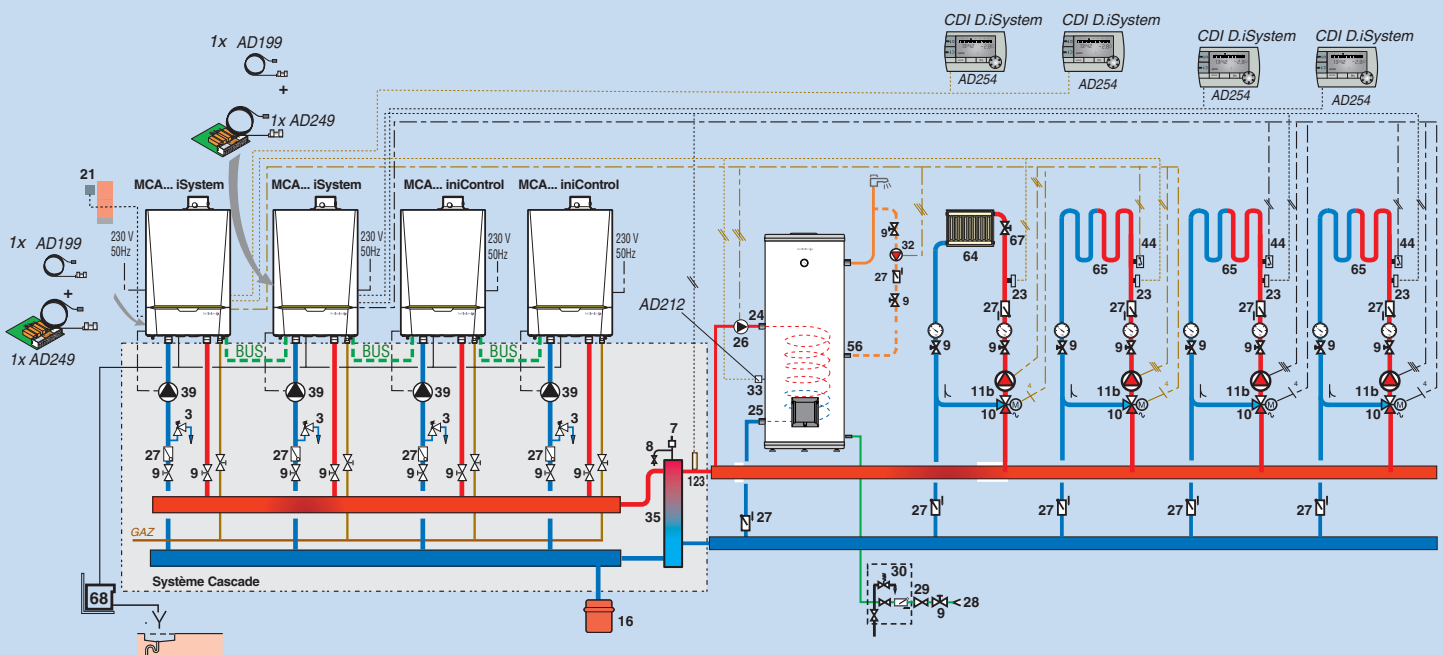


Back to back alignment: RG  
Example with 4 boilers

# >> EXAMPLE OF CASCADE INSTALLATION

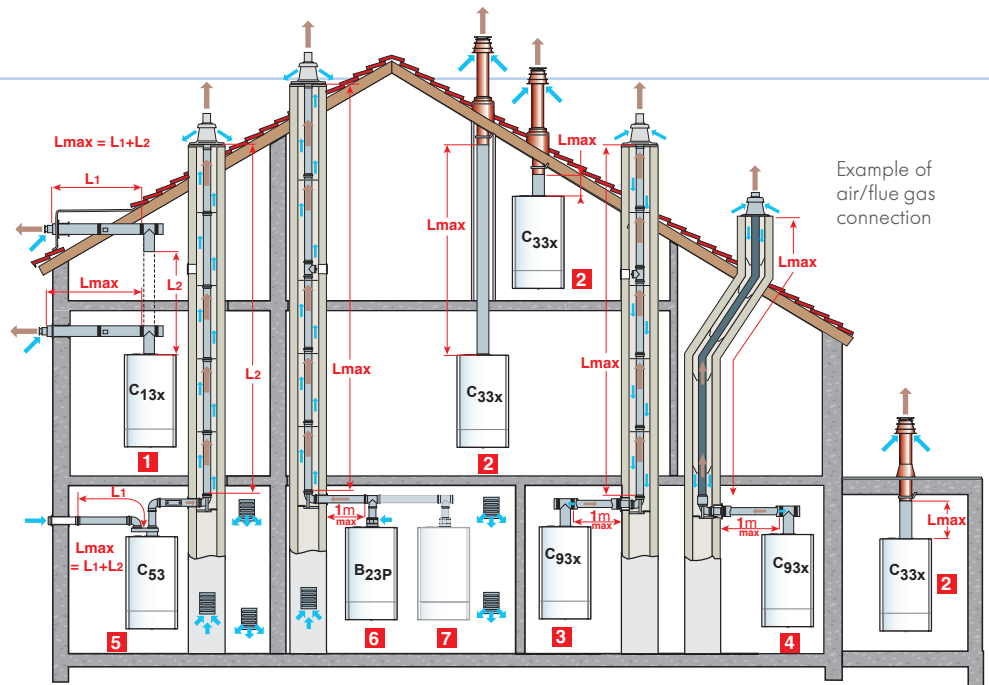
## OPERATING PRINCIPLE

The Diematic iSystem enables the connection of up to 10 boilers in cascade. Various configurations are possible for the evacuation of flue gases (C13, C33, C53, B23P). Current local regulations must be respected.



Installation of 4 boilers in cascade incorporating 2 MCA... iSystem boilers and 2 MCA... iniControl boilers with 4 circuits with mixing valve

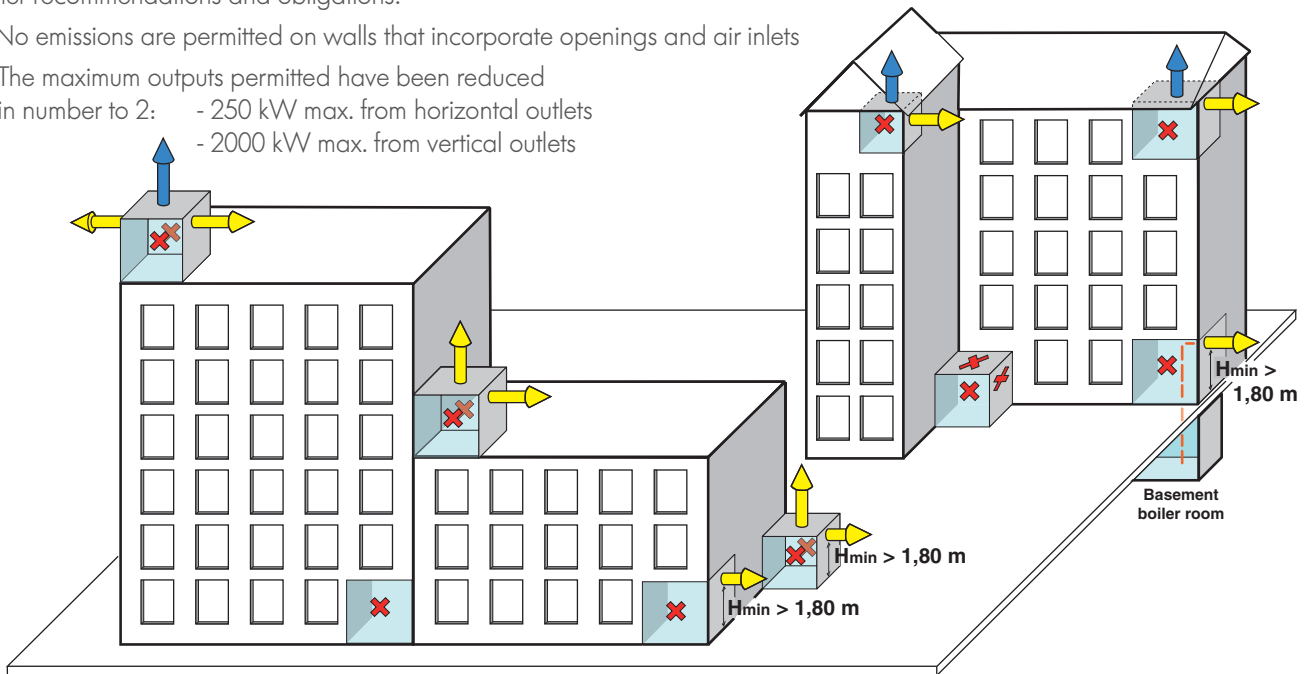
- **Various flue systems** are possible, with either forced flue or chimney connection, in compliance with local specific regulations.



### Installation rule for a boiler with a total output > 70 kW using gas fuels

Other recommendations and obligations:

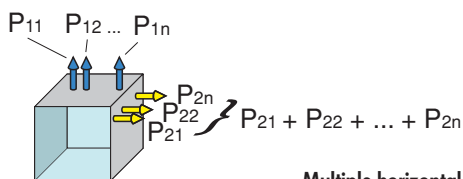
- 1) No emissions are permitted on walls that incorporate openings and air inlets
- 2) The maximum outputs permitted have been reduced in number to 2:
  - 250 kW max. from horizontal outlets
  - 2000 kW max. from vertical outlets



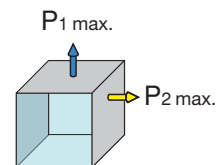
Source: Practical guide on the installation of leak proof appliance terminals (type C) installed in boiler rooms using gas fuels. © GDF - Suez

#### Legend:

- $P_u \leq 250 \text{ kW}$
- $P_u \leq 2000 \text{ kW}$
- Blank wall
- Boiler room
- Cases in which the outlet from a leak proof appliance terminal is prohibited



Multiple horizontal and vertical outlets



Horizontal and vertical outlets

	in the upper sections of buildings	at the foot of buildings
$P_{11} + P_{12} + \dots + P_{1n}$	$\leq 2000 \text{ kW}$ and $\leq 2000 \text{ kW} - (P_{21} + P_{22} + \dots + P_{2n})$	$\leq 250 \text{ kW} - (P_{21} + P_{22} + \dots + P_{2n})$
$P_{21} + P_{22} + \dots + P_{2n}$	$\leq 250 \text{ kW}$	$\leq 250 \text{ kW}$

	in the upper sections of buildings	at the foot of buildings
$P_{1 \text{ max.}}$	$= 2000 \text{ kW} - P_2$	$= 250 \text{ kW} - P_2$
$P_{2 \text{ max.}}$	$= 250 \text{ kW}$	$= 250 \text{ kW}$

## >> EASIER ASSEMBLY AND MAINTENANCE

As they take up less space and are low in weight, these boilers are easy to install. They are also fitted with devices that make easier handling during maintenance and reduce this expense in the annual budget!

- Dimensions identical for the entire range
- A very low noise level, thanks to a silencer fitted to the air inlet.
- The boilers in this range are low in weight: **less than 1 kg per kW** of output (MCA 65, MCA 90 and MCA 115).
- Access to internal components, particularly the heating body, is easy by simply removing the front panel.
- Access to the siphon and the air vent from the outside, offering appreciable time savings.
- **These boilers operate on natural gas and propane.**
- **A hydraulic connection kit is available as optional equipment;** this includes sectional valves (flow, heating return and gas), a safety valve, a filling valve and an outlet for connection to an expansion tank.

## >> A TAILOR-MADE CONTROL SYSTEM

Depending on the type of installation, two levels of control are available:

### INICONTROL BASIC CONTROL

For simple needs or in renovation projects with existing control systems: an LCD display for setting the boiler parameters.



### DIEMATIC ISYSTEM HIGH PERFORMANCE CONTROL SYSTEM

For comprehensive management of the primary and secondary circuits based on the Diematic structure, which incorporates all of the intelligence needed for optimal installation management.

#### Diematic iSystem, the intelligent control system

To meet requirements on performance and reduction of energy consumption, the Innovens boiler range is fitted with a new generation control system, which is more user friendly and more intuitive: Diematic iSystem.

With its integrated control panel, it comes complete with new, more user friendly, faster programming ergonomics, thanks in particular to the replacement of the control buttons by a single rotary turn/push button.

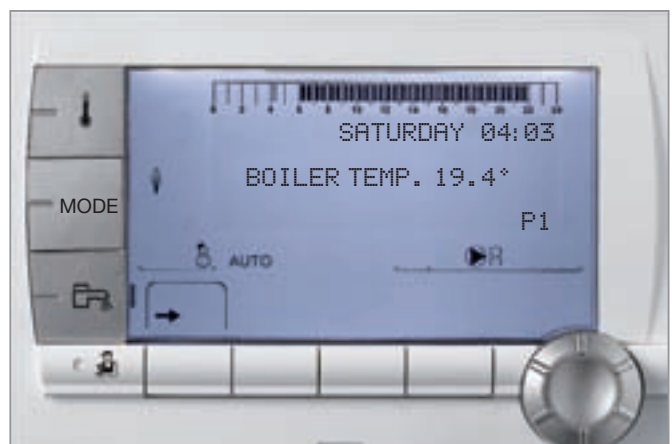
Its new large LCD screen enables quick, intuitive access to:

- An integrated summary of instructions
- A conversational clear text system
- The allocation of names to the circuits and generators
- Handy troubleshooting assistance for maintenance and after sales service

#### A control system designed for the integrated management of multi-energy systems

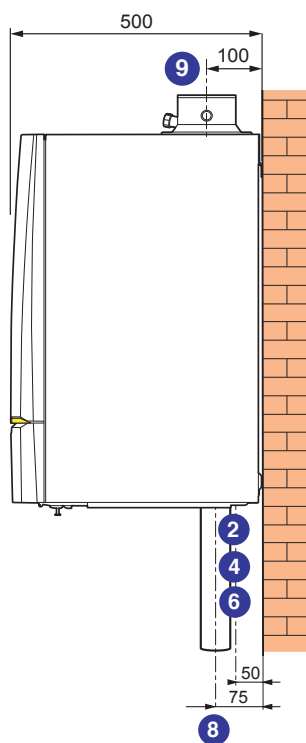
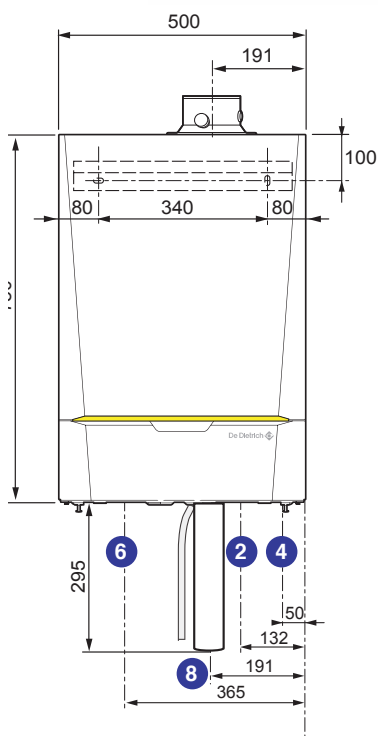
The multifunction nerve centre of the INNOVENS boiler, the Diematic iSystem control system is fitted with open intelligence capable of managing the diversity of modern heating solutions.

By incorporating several heating circuits, it will thus enable you to optimise operation of a combined condensing boiler + solar or condensing boiler + heat pump system.



Innovens Pro MCA boilers are wall-hung gas condensing boilers with the option of a forced flue or chimney outlet fitted.

## >> Innovens Pro - from 8 to 115 kW



- ② Heating flow R1 1/4
- ④ Gas inlet R 3/4
- ⑥ Heating return R1 1/4
- ⑧ Condensates evacuation (siphon and ribbed run-off hose ext. Ø 25 mm provided)
- ⑨ Combustion products discharge and air inlet pipe  
MCA 45: Ø 80/125 mm  
MCA 65, 90 and 115 Ø 100/150 mm

A single block heating body in cast aluminium-silicium which is highly resistant to corrosion.

- **Does not impose return temperature constraints**
- Condensing: classification\*\*\*\* EC in accordance with European Directive 94/42 EEC
- High operating efficiency of up to 109%
- Practical access for easy maintenance

A surface total premix burner with stainless steel braid, modulating from 18 to 100% in output.

- Optimal combustion hygiene and minimal pollutant emissions (NOx < 46 mg/kWh and CO < 21 .5 mg/kWh)
- A low noise level
- So easy to install

## Innovens MCA boilers



Model		MCA 45	MCA 65	MCA 90	MCA 115	
Max. nominal output at 50/30°C	kW	43	65	89,5	115	
Efficiency in % LCV	{ 100% Ave. Temp 70°C 100% Return Temp 30°C 30% Return Temp 30°C	97,2	98,3	97,9	96,6	
loading on ...%		102,9	104,6	104,1	102,5	
a water temp. ...°C		107,7	108,9	108,1	107,1	
Nominal water flow rate at Pn and Δt = 20 K	m <sup>3</sup> /h	1,72	2,62	3,62	4,60	
Standby losses at Δt = 30 K	W	NC	NC	NC	NC	
% losses through the outer casing	%	75	75	75	75	
Auxiliary electrical power at Pn/pmin (ex circulating pump)	W	68/18	88/23	125/20	199/45	
Output at 50/30°C min/max	kW	8,9-43	13,3-65,0	15,8-89,5	18,4-114	
Output at 80/60°C min/max	kW	8-40	12-61	14,1-84,2	16,6-107	
Min/max mass flue gas flow rate	kg/h	14/69	21/104	28/138	36/178	
Pressure at boiler outlet	Pa	150	100	160	220	
Water content	l	5,5	6,5	7,5	7,5	
Minimum water flow rate required (*)	m <sup>3</sup> /h	0,4	0,4	0,4	0,4	
Water resistance Δt = 20 K	mbar	90	130	140	250	
Gas flow rate	natural gas H/L Propane	m <sup>3</sup> /h	4,4/5,0	6,6/7,5	9,1/9,8	11,7/13,7
(15°C - 1013 mbar)			1,7	2,5	3,5	4,7
Weight empty		kg	53	60	68	69

(\*) If operating > 75°C, the minimum flow rate should be calculated at Δt = 45 K

## A MARK OF EXCELLENCE

For 300 years, De Dietrich's success was based on some key fundamental values: quality, reliability, durability. Through its concern for the environment and for your comfort, De Dietrich has now a comprehensive understanding of the various renewable energies through multi-energy systems that protect the planet. Therefore, heating appliances which bear the De Dietrich name are at the cutting-edge of innovation and have the advantage as they benefit from the commitment and the on-going expertise of their 2400 employees.

*De Dietrich: choosing Sustainable Comfort®*

**De Dietrich**   
Sustainable Comfort®

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