

MODULENS G®

FLOOR-STANDING GAS CONDENSING BOILERS FROM 3.4 TO 35.9 KW

- AGC 15-25-35: for heating only
- AGC.../V 100 HL: for heating and DHW production by 100 litre stratification calorifier placed under the boiler
- AGC.../V 160 SL: for heating and DHW production by 160 litre enamelled calorifier with coil placed under the boiler
- AGC.../B 160 SL: for heating and DHW production by 160 litre enamelled calorifier with coil placed to the left or to the right of the boiler
- AGC.../V 220 SHL: for heating and DHW production by 220 litre enamelled solar calorifier placed under the boiler
- AGC.../B 220 SHL: for heating and DHW production by 220 litre enamelled solar calorifier placed to the left or to the right of the boiler



AGC 15-25-35 AGC.../V 100 HL AGC.../V 160 SL AGC.../B 160 SL AGC.../V 220 SHL AGC.../B 220 SHL



AGC 15-25-35:
For heating only



AGC.../V..., and B/...:
For heating and domestic hot water



Condensing



All natural gases
Propane



AGC.../V 220 SHL
and /B 200 SHL



EC identification No:
0085CM0178

The MODULENS boiler range includes models for heating only and models comprising boilers combined with 100, 160 or 200 litre calorifiers for DHW production. MODULENS boilers are fully equipped as standard with:

- a modulating heating pump of class A (high performance energy) (except on model AGC 35),
- a 18 litre expansion vessel, an automatic air vent, a draining valve, the heating safety valve, a heating/DHW reversal valve,
- an DIEMATIC iSystem control panel with new ergonomics allows connected with options, the command and control of up to 3 circuits (an traditional or solar DHW circuit) according to the outside temperature. It also allows the optimum management of systems combining various heating generators (boiler + heat pump or + solar system...) or the control of cascade with 2 to 10 boilers.

Various air/flue gas connection configurations are possible: we offer solutions for connection by horizontal or vertical forced flue, to a chimney, in bi-flow or to a collective flue system.

CONDITIONS OF USE

Boilers:

- Max. operating temperature: 90°C
- Max. operating pressure: 3bar
- Power supply: 230V/50Hz
- Protection index: IP 21

Calorifiers:

- Max. operating pressure: 10bar
- Max. operating temperature: 95°C
- Solar max. operating pressure: 6bar (220 SHL)

HOMOLOGATION

B23p, B33, C13x, C33x, C93x, C53, C43x, C83x

GAZ CATEGORY

Fitted and preset to operate on natural gases. Propane operating with conversion kit (option).

ADVANCE

De Dietrich 

PRESENTATION

The AGC boilers in the MODULENS range are factory-tested and delivered fully assembled. They are prefitted to run on type H natural gas but can also be converted to run on propane (using the conversion kit available as an option).

The **AGC 15-25-35** boilers are fitted as standard with a modulating heating pump of class A (except on AGC 35, this boiler is fitted with standard modulating pump), an expansion vessel 18 litre (except on AGC 35), an automatic air vent, a draining valve, a heating safety valve, a hydroblock, a heating/DHW reversal valve.

The **AGC.../V 100 HL** models comprise the boilers AGC 15-25-35 combined with the 100 litre 100 HL (High Load) calorifier and a connecting kit under the boiler to form a uniform «column». The calorifier is equipped with a TAS (Titan Active System®) anode, which does not consume matter, guaranteeing protection of the tank, a draining valve, a coupling for a circulation loop, boiler/calorifier connecting pipes, 1 DHW sensor, adjustable feet.

The 100 HL calorifier is a high performance, enamelled stratification calorifier, equipped with a plate exchanger combined with a load pump. It is insulated with high density injected CFC-free polyurethane foam.

The **AGC.../V 160 SL and AGC.../B 160 SL** models comprise the boilers AGC 15-25-35 combined with the 160 litre

160 SL (Standard Load) calorifier and a connecting kit under the boiler to form a uniform «column» (.../V 160 SL) or placed to the left or to the right of the boiler (.../B 160 SL). The calorifier is equipped with a TAS (Titan Active System®) anode, which does not consume matter, guaranteeing protection of the tank, a draining valve, a coupling for a circulation loop, boiler/calorifier connecting pipes, a DHW sensor, adjustable feet.

The 160 SL calorifier is an enamelled coil calorifier. It is insulated with high density injected CFC-free polyurethane foam.

The **AGC.../V 220 SHL and AGC.../B 220 SHL** models comprise the boilers AGC 15-25-35 combined with the 220 litre 220 SHL (Solar High Load) calorifier and a connecting kit under the boiler to form a uniform «column» (.../V 220 SHL) or placed to the left or to the right of the boiler (.../B 220 SHL). The solar calorifier is equipped with a TAS (Titan Active System®) anode, which does not consume matter, guaranteeing protection of the tank, a draining valve, a coupling for a circulation loop, 1 DHW sensor, adjustable feet.

It is also equipped with a complete solar unit: pump, expansion vessel (delivered separately – Package ER 229), safety unit, air vent, glycol tank, solar control system.

The 220 SHL solar calorifier is an enamelled stratification calorifier equipped with a plate exchanger combined with a load pump and a coil for connection to a solar system. It is insulated with high density injected CFC-free polyurethane foam.

HIGH LEVELS OF PERFORMANCE

- Annual operating efficiency up to 109%,
- NOx classification: 5 according to EN 483,
- Low noise level,
- Low pollutant emissions:

MODULENS AGC...	NOx* (mg/kWh)	CO** (ppm)
AGC 15...	33	51
AGC 25...	38	94
AGC 35...	42	114

* according to EN 297 A3 ** by Qmax.

STRONG POINTS

- Compact boilers of modular design with the same aesthetic as the DHW calorifiers with which they can be combined,
- New compact and ultra-responsive exchanger in cast aluminium/silicium alloy,
- Perfect adaptation of boiler output to actual needs thanks to the stainless steel gas burner with complete premixing, modulating from 22 to 100% output, fitted with a silencer on the air intake,
- Internal lighting that comes on automatically when the appliance is powered up to facilitate maintenance work,
- Fan fitted with a nonreturn valve on the air intake to run with pressurised evacuation systems (3 CEp),
- Electronic ignition and ionisation flame check,
- DIEMATIC iSystem control panel that can be used in all installation configurations, including the most complex; it is designed to command and control a direct circuit as standard. With the addition of a sensor, it can be used to regulate a primary circuit with mixing valve; with the addition of a PCB + sensor, it can control a secondary circuit with mixing valve. Installation of a DHW sensor enables regulation with priority to a DHW circuit. It is specifically designed to enable the optimisation of management of combined systems (solar systems). The position of the control module is adjustable for ease of use regardless of height.

MODELS AVAILABLE

BOILER FOR HEATING ONLY

Models	Boiler type			Tank	Tank connecting-set	Solar expansion vessel
	AGC 15	AGC 25	AGC 35			
 AGC... Fully equipped boiler AGC_Q0001	JA 2	-	-	-	-	-
	-	JA 3	-	-	-	-
	-	-	JA 4	-	-	-

BOILER WITH DHW TANK PLACED UNDER THE BOILER

Models	Boiler type			Tank	Tank connecting-set	Solar expansion vessel
	AGC 15	AGC 25	AGC 35			
 AGC.../V 100 HL With an 100 litre DHW enamelled stratification calorifier « High Load » AGC_Q0002	JA 2	-	- +	 ER 225	 JA 9	-
	-	JA 3	- +			
	-	-	JA 4 +			
 AGC.../V 160 SL With an 160 litre DHW calorifier with enamelled coil « Standard Load » AGC_Q0003	JA 2	-	- +	 ER 223	 JA 8	-
	-	JA 3	- +			
	-	-	JA 4 +			
 AGC.../V 220 SHL With an 220 litre DHW enamelled stratification calorifier « High Load » equipped with a solar coil AGC_Q0005	JA 2	-	- +	 ER 220	 JA 9	 ER 229
	-	JA 3	- +			
	-	-	JA 4 +			

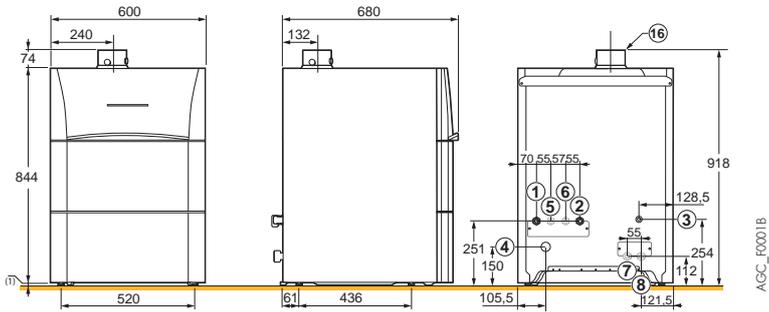
BOILER WITH DHW TANK PLACED TO THE LEFT OR TO THE RIGHT OF THE BOILER

Models	Boiler type			Tank	Tank-boiler connecting-set	Solar expansion vessel
	AGC 15	AGC 25	AGC 35			
 AGC.../B 160 SL With an 160 litre DHW calorifier with enamelled coil « Standard Load » AGC_Q0004	JA 2	-	- +	 ER 223	 ER 228	-
	-	JA 3	- +			
	-	-	JA 4 +			
 AGC.../B 220 SHL With an 220 litre DHW enamelled stratification calorifier « High Load » equipped with a solar coil AGC_Q0006	JA 2	-	- +	 ER 220	 ER 216	 ER 229
	-	JA 3	- +			
	-	-	JA 4 +			

TECHNICAL SPECIFICATIONS

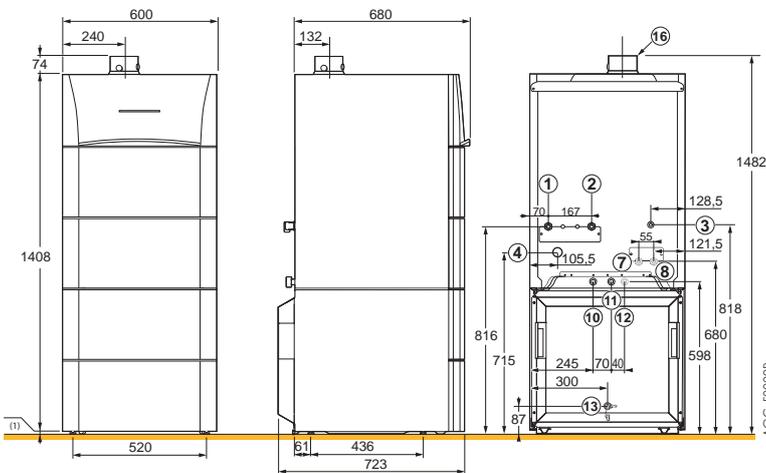
MAIN DIMENSIONS (IN MM AND INCHES)

AGC 15, 25, 35



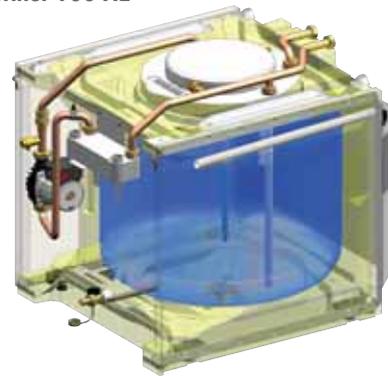
AGC_F0001B

AGC 15, 25, 35/V 100 HL



AGC_F0002B

Calorifier 100 HL

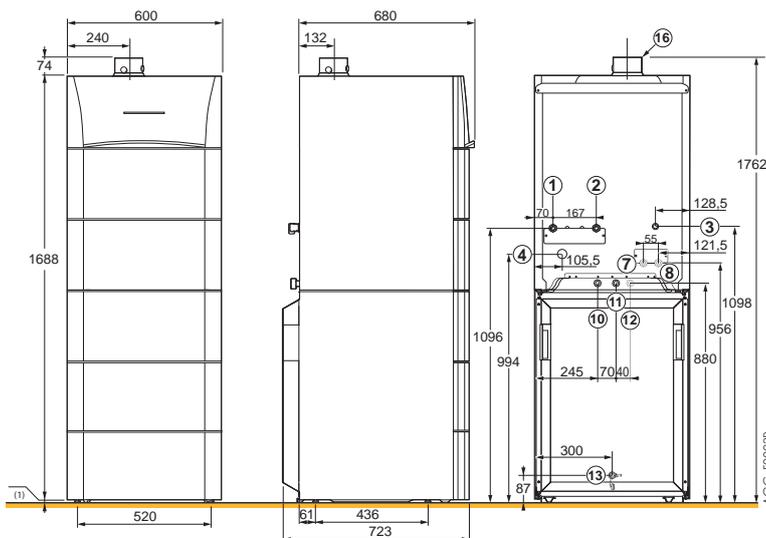


AGC_Q0024

Stratification calorifier equipped:

- with a load pump
- with a plate exchanger
- with a draining valve
- with protection of the enamelled tank by TAS (Titan Active System®)
- with a DHW sensor

AGC 15, 25, 35/V 160 SL



AGC_F0003B

Calorifier 160 SL



AGC_Q0025

DHW coil calorifier equipped with:

- a draining valve
- a imposed current anode TAS (Titan Active Système®) to protect the enamelled tank
- a DHW sensor

Legend

- ① Heating flow/return direct circuit G 3/4
- ② Gas inlet Ø G 1/2
- ③ Condensate drain, siphon provided, PVC pipe Ø 24 x 19mm
- ④ Primary return/inlet from independent calorifier (with package JA 10 - option) G 3/4
- ⑤ Heating flow/return circuit with mixing valve G 3/4 (with package JA 6: Internal pipe kit with motorised 3-way valve and pump, or with package JA 7: Pipes only kit - options)

- ⑩ Domestic cold water inlet G 3/4
- ⑪ Domestic hot water outlet G 3/4
- ⑫ DHW circulation loop return G 3/4 (with package ER 218: Recirculation kit for 100 HL calorifiers or with package ER 219: Recirculation kit for 160 SL and 220 SHL calorifier - options)
- ⑬ Drain tap connection for pipe Ø ext. 14mm
- ⑭ Primary inlet from solar coil Cu 18mm
- ⑮ Primary outlet from solar coil Cu 18mm

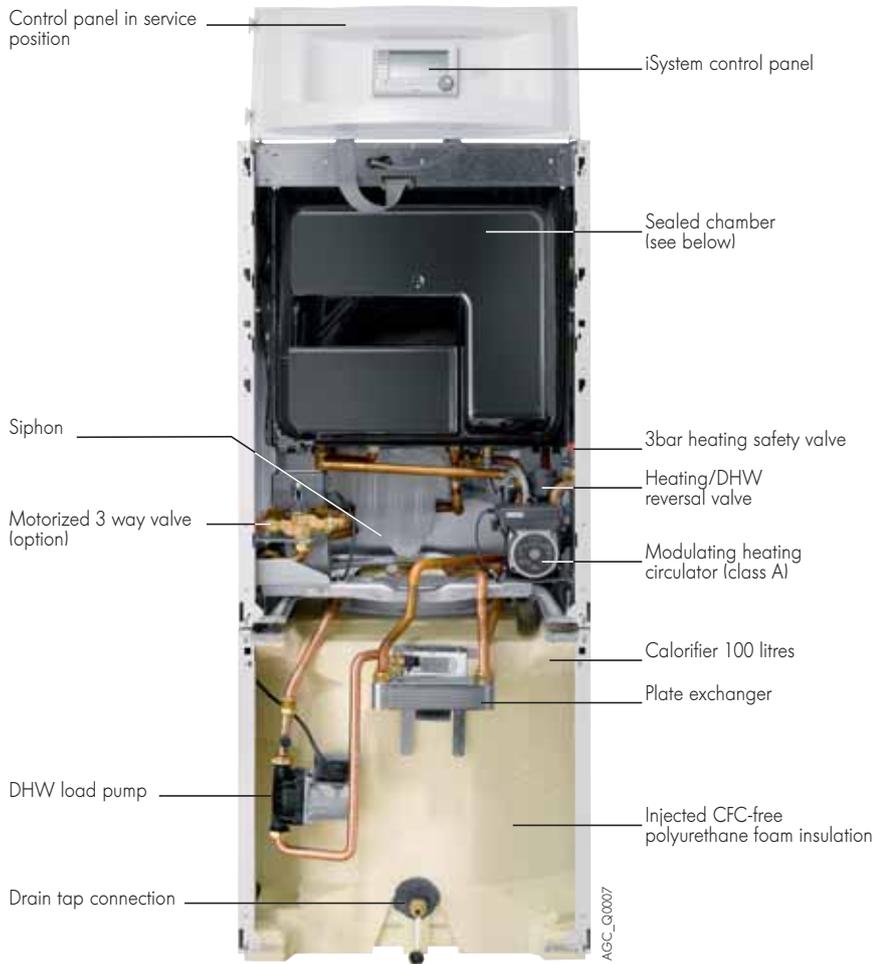
- ⑯ Evacuation of combustion products and air inlet pipe Ø 60/100mm

- (1) Feet adjustable from 0 to 20mm
G: Cylindrical external thread (water tightness by flat gasket)

TECHNICAL SPECIFICATIONS

DESCRIPTION

AGC.../V 100 HL



Detail of the boiler's internal lighting



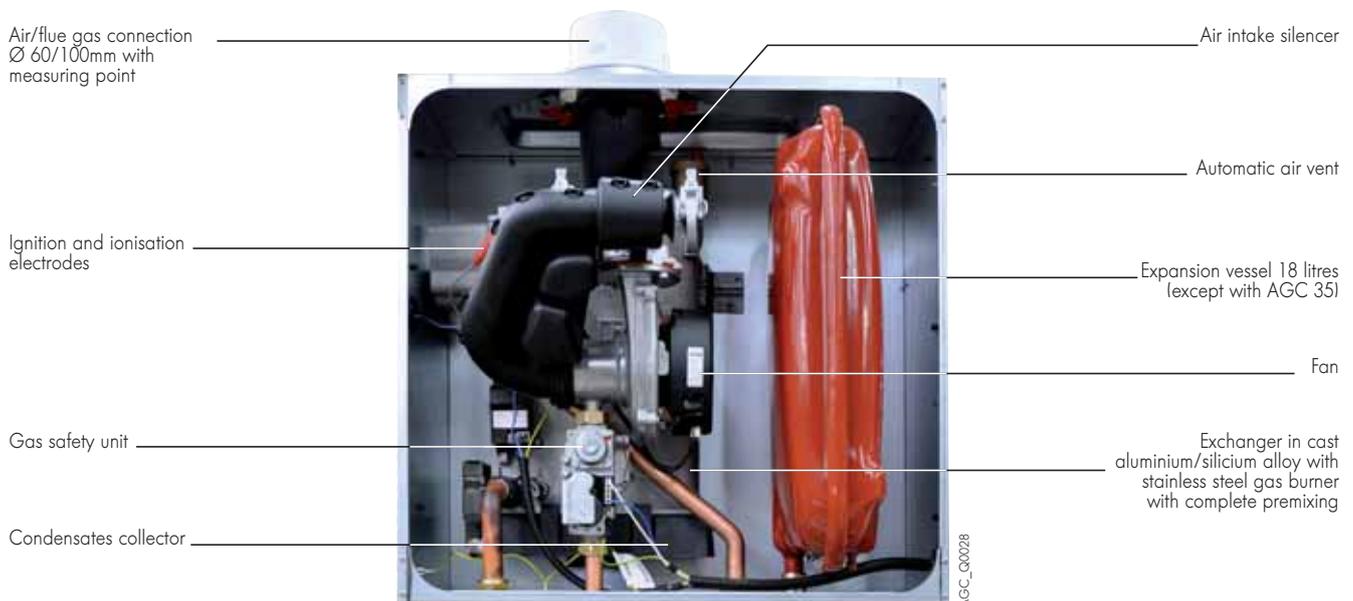
Exchanger/burner



Heating body (section view)



Sealed chamber



TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS

Type generator:

- AGC... : heating only
- AGC.../V... : heating + DHW with calorifier placed under the boiler
- AGC.../B... : heating + DHW with calorifier placed to the left or to the right of the boiler

Boiler type: condensing

- Burner: modulating with complete premixing
- Energy used: natural gas or propane
- Combustion evacuation: chimney or forced flue
- Min. flow temperature: 20°C
- Min. return temperature: 20°C
- Ref. CE certificate: CE-0085CM0178

Boiler specifications

Boiler type	AGC...	15 15/V... 15/B...	25 25/V... 25/B...	35 35/V... 35/B...
Useful output at 50/30°C Pn in heating mode (min.-max.)	kW	3.4-15.8	5.6-25.5	7.0-35.9
Efficiency at... % output and... °C water temp.	100% Pn, at average temp. 70°C 100% Pn, at return temp. 30°C 30% Pn, at return temp. 30°C	% % %	96.5 105.3 108.5	96.3 102.0 108.0
Nominal water flow at Pn, Δt = 20K	m ³ /h	0.62	1.04	1.46
Stand-by losses at Δt = 30K	W	78	78	85
Auxiliary electrical power at Pmin./Pn (without circul. pump)	W	18/31	18/46	18/53
Power heating pump at Pmin./Pn	W	5/70	5/70	45/120
Useful output at 80/60°C (min.-max.)	kW	3.0-14.5	5.0-24.1	6.3-34.0
Manometric height available heating circuit	mbar	545	295	180
Gas flow at Pn (15°C-1 013mbar)	gas H propane	m ³ /h m ³ /h	1.59/1.85 0.61	3.10/3.61 1.20
Flue gas temperature (min.-max.)	°C	30-65	30-80	30-75
Mass flue gas output (min.-max.)	kg/h	5.3-25.2	8.9-42.1	11.1-57.3
CO ₂ content on natural gas H (min.-max.)	%	8.4-8.8	8.4-8.8	8.6-9.0
Pressure available at the boiler outlet	Pa	80	130	140
Water capacity	l	1.9	1.9	2.5
Net weight AGC 15, 25 and 35	kg	60	60	54

Specifications domestic hot water

Boiler type	AGC...	15/V 100 HL	25/V 100 HL	35/V 100 HL	15/V 160 SL	25/V 160 SL	35/V 160 SL	15/V 220 SHL	25/V 220 SHL	35/V 220 SHL
					15/B 160 SL	25/B 160 SL	35/B 160 SL	15/B 220 SHL	25/B 220 SHL	35/B 220 SHL
DHW calorifier capacity	l	100	100	100	160	160	160	220	220	220
Exchanged power	kW	15	28	32	15	28	32	15	28	32
Flow over 10 min at Δt = 30K	l/10 min	210	255	280	235	240	245	200	240	260
Flow per hour at Δt = 35K	l/h	370	690	790	370	690	790	370	690	790
Spec. flow at Δt = 30K*	l/min	21	25.5	28	20	24	24.5	20	24	26
Auxiliary electrical power in DHW mode**	W	70/45	70/63	120/85	70	70	120	70/45	70/63	120/85
DHW losses through the outer casing at Δt = 45K	W	62	62	62	80	80	80	117	117	117
Cooling constant	Wh/24h.l.K	0.34	0.34	0.34	0.26	0.26	0.26	0.28	0.28	0.28
Net weight	kg	113	113	107	140/142	140/142	134/136	185/190	185/190	179/184

Domestic performance at room temp. 20°C, cold water temp. 10°C, hot water temp. at Pn 45°C, primary hot water temp. 80°C, stockage temp. 60°C

* compliance with EN 13203

** primary side/secondary side

Solar component data

Boiler type	AGC...	/V 220 SHL and /B 220 SHL
Solar volume/back-up volume	l	135/85
Solar exchanger capacity	l	8.4
Solar exchange surface	m ²	1.25

CONTROL PANEL DIEMATIC iSystem

CONTROL PANEL DIEMATIC iSystem

The **DIEMATIC iSystem** control panel is a very advanced control panel, with new control ergonomics which includes electronic programmable regulation as standard to modulate the boiler temperature by activating the modulating burner according to the outside temperature and the room temperature if a CDI D.iSystem, CDR D.iSystem or simplified interactive remote control is connected (optional).

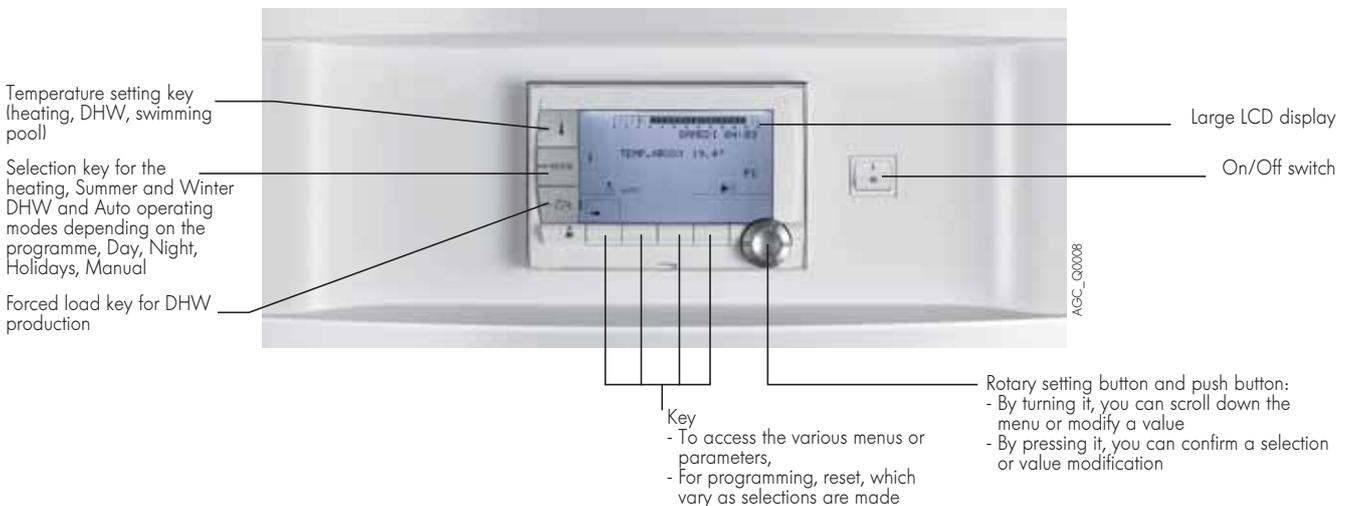
As standard, DIEMATIC iSystem is capable of automatically operating a central heating installation with a direct circuit without mixing valve and 1 circuit with mixing valve (the flow sensor - package AD 199 - must be ordered separately, however).

By connecting another "PCB + sensor for 1 valve circuit" option (package AD 249), it is therefore possible to control up to 3

circuits in total and each of these circuits can be fitted with a CDI or CDR D.iSystem remote control (optional).

Connection of a domestic hot water sensor makes it possible to programme and regulate a DHW circuit.

This control system has been specifically developed to enable **optimum management of systems combining various heating generators** (boiler + heat pump or + solar system...). It allows the installer to set the parameters for the entire heating installation regardless of its degree of complexity. In the context of larger installations, it is also possible to connect 2 and as many as 10 boilers in cascade. It is possible to install additional circuits through the regulation VM iSystem.



DIEMATIC iSystem CONTROL PANEL OPTIONS



Domestic hot water sensor - Package AD 212

This is used for regulating the DHW temperature as a priority and programming of domestic hot water production with an independent calorifier.



Outlet sensor downstream of the valve - Package AD 199

This sensor is required to connect the first circuit with mixing valve to a boiler fitted with a DIEMATIC iSystem control panel.



PCB + sensor for 1 mixing valve - Package AD 249

This is used to control a mixing valve with an electromechanical or electrothermal motor. The PCB is inserted into the DIEMATIC iSystem panel connected by pin connections. DIEMATIC iSystem

can receive 1 "PCB + sensor" option, enabling it to control 1 additional mixing valve.



Sensor for storage tank - Package AD 250

Includes 1 sensor for managing a storage tank with a boiler fitted with a DIEMATIC iSystem control panel.

CONTROL PANEL DIEMATIC iSYSTEM

DIEMATIC iSystem CONTROL PANEL OPTIONS



CDI D. iSystem interactive remote control - Package AD 254
CDR D. iSystem interactive "radio" remote control (without transmitter/receiver radio) - Package AD 253
Radio boiler module DIEMATIC iSystem (transmitter/receiver) - Package AD 252

These are used to override all instructions from the DIEMATIC iSystem control panel from the room in which they are installed. In addition, they enable the self-adaptability of the heating regime for the circuit concerned (one CDI D.iSystem or CDR D.iSystem per circuit).

In the case of the CDR D.iSystem, the data are transmitted by radio waves from the place where the CDR D.iSystem is installed to the transmitter/receiver box (package AD 252) placed close to the boiler.



Simplified remote control with room sensor - Package FM 52

This is used from the room in which it is installed to override certain instructions from the DIEMATIC iSystem panel:

- room temperature program and instruction override. It is also used to enable the self-adaptability of the heating curve for the circuit concerned (1 remote control per circuit).



BUS connection cable (length 12m) - Package AD 134

The BUS cable is used to make the connection between 2 boilers fitted with the DIEMATIC iSystem control panel in a cascade installation, as well as the

connection of a DIEMATIC VM iSystem control unit or a telemonitoring network transmitter.



Radio outside temperature sensor - Package AD 251
Boiler radio module (radio transmitter) - Package AD 252

The radio outside temperature sensor can be delivered as optional equipment for systems in which the installation of the external wire connection sensor delivered with DIEMATIC iSystem control panel would be too complex.

- If this sensor is used:
- With a wire connection remote control (AD 254 or FM 52), it is necessary to order the "Boiler radio module"
 - With a radio remote control (AD 253), already combined with a "boiler radio module" (AD 252), control of a second module is not necessary.



VM iSystem wall-hung control unit - Package AD 281

The VM iSystem electronic control system, incorporated in a wall-mounted box, is used to manage and control two heating circuits and a DHW circuit and each of the heating circuits may be a direct circuit or a circuit with motorised 3-way mixing valve.

It is possible to interlink up to 20 VM iSystem control systems and thus configure numerous combinations, regardless of the type of installation:

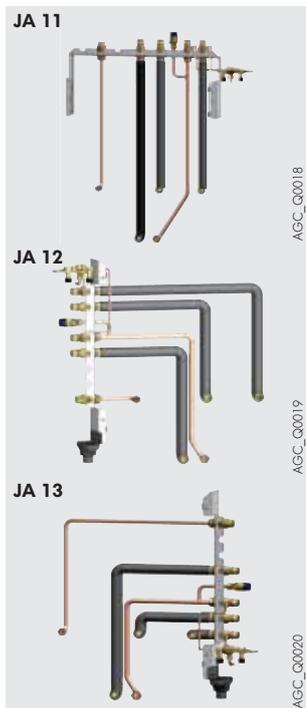
- VM iSystem can be used in combination with an existing generator to control additional heating and DHW circuits.
- VM iSystem can also be used fully autonomously on its own to control heating and DHW circuits

- according to the outside temperature (sensor to be ordered separately – package FM 46) independently of the generator.
- VM iSystem can control a boiler via OpenTherm (existing outlet on VM iSystem) for a boiler equipped with an OpenTherm bus, or as «ON/OFF» via the auxiliary contact for any other generator (burner, HP, wood-fired boiler...).
- VM iSystem can control a cascade of boilers:
 - Equipped with a DIEMATIC control panel
 - Equipped with an OpenTherm BUS via an interface board (1 board per generator).

BOILER OPTIONS

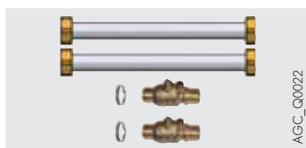
HYDRAULIC CONNECTING KITS

⇒ For AGC.../V 100 HL, V 160 SL and V 220 SHL



Central connection kit - Package JA 11
Left connection kit - Package JA 12
Right connection kit - Package JA 13
 Connection kits with prefitted water and gas stop cocks, integrated disconnecter and DHW safety unit and boiler connecting pipes in the middle (Package

JA 11), to the right (Package JA 13) or to the left (Package JA 12).



Connecting pipes between the "3-way valve" kit (JA 6) or the adapter kit (JA 7) and a hydraulic connection kit - Package JA 35

This kit comprises two ribbed pipes and two hydraulic valves. Allowed to connect the « internal 3 way valve » kit (JA 6) or the adapter kit for

« external 3 way valve » (JA 7) to the connection kit used (JA 34 or JA 11, 12 or 13).

⇒ For AGC... (heating only) and AGC.../B 160 SL and AGC.../B 220 SHL



Solo connecting kit - Package JA 34

This board is delivered with the water and gas valves prefitted. It is attached to the back of the

boiler and is used to carry the gas inlet, the heating return and the heating flow to the top.

HYDRAULIC MODULES

Using the various elements presented below, it is possible to put together complete hydraulic connection kits depending on the installation to be constructed.

List of packages required by the type of installation to achieve:

Type of installation to achieve	1 radiator circuit or 1 direct underfloor heating circuit	1 circuit with mixing valve + 1 radiator direct circuit (or underfloor circuit)	3 circuits, 2 with mixing valve
AGC... AGC.../V... AGC.../B...	—	JA 6	JA 7 + EA 59 + 2 x EA 67 or EA 136 (I)
Options needed	—	—	PCB AD 249 Sensor AD 199

(1) The boiler/collector connections should be made by the installer

BOILER OPTIONS

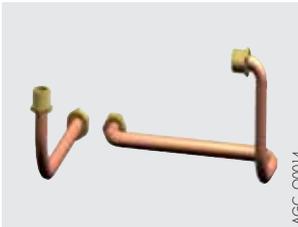
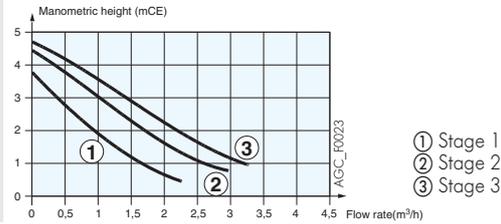
HYDRAULIC MODULES



Internal 3-way valve kit (with engine) - Package JA 6

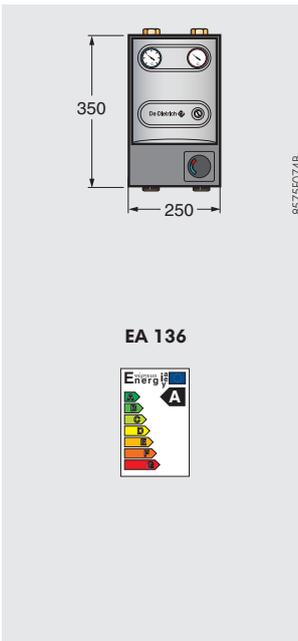
Permits the connection of a circuit with mixing valve. This kit will be integrated under the casing and includes the sensor.

Specifications of the pump in the 3-way valve kit - Package JA 6:



Adapter kit for external 3-way valve - Package JA 7

Allows the connection of two circuits with mixing valve on the outside of the boiler.



Hydraulic module for 1 circuit with valve

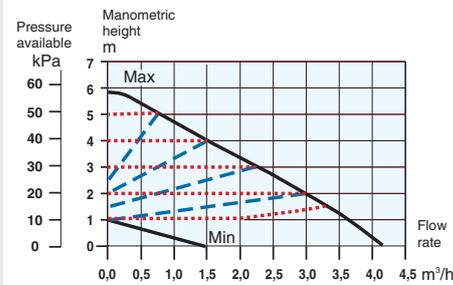
- Package EA 67 (with electronic pump) or
- Package EA 136 (with a high performance energy pump class A)

These moduls are fully assembled, insulated and tested, fitted with an pump, a motorized 3-way mixing valve, a differential safety valve,

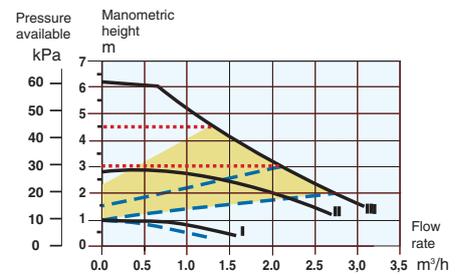
thermometers built into the gate valves and a non-return valve built into the outlet valve.

Technical specifications of heating circulator fitted to the hydraulic modules:

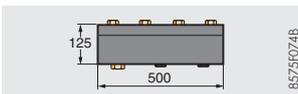
EA 67



EA 136



..... Constant pressure - - - - - Proportional pressure ■ Pump on "AutoAdapt" position



Collector for 2 circuits - Package EA 59

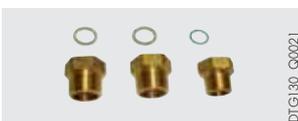
With an installation with 2 or 3 circuits.



Set of 2 walls consoles for hydraulic modules - Package EA 74

These consoles are used to fix the hydraulic modules for direct circuit or circuit with mixing valve to the wall. With a unit with 3 modules, the installation of

this set of consoles is compulsory so the fitter can construct the boiler/module connection.



Set connection G in R (1" and 3/4") - Package BH 84

This kit includes 2 G 1-R 1 fittings and 1 G 3/4-R 3/4 fitting with gaskets and can be used to switch

from flat gasket fittings to conical fittings (water tightness in the threading).

8875F118B

BOILER OPTIONS

OTHER ACCESSORIES



HWPlus 70 decoupling cylinder - Package HC 28

For all installations with 2 circuits (1 direct circuit + 1 valve circuit) or for installations in cascade up to 70kW is the use of decoupling cylinder highly recommended. The HWPlus 70 cylinder is delivered

with 1 manual air vent and 1 drainage valve. It can be pivoted on itself for connection to the left or right of the boiler. He is delivered insulated and fitted with a bracket to secure it to the wall.

8875Q026



Cleaning tool boiler body - Package HR 45

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

MCA_F0015



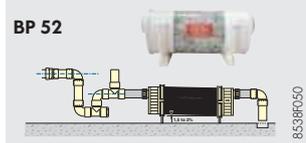
DU 13

Condensates neutralisation system with pump - Package DU 13

Condensates neutralisation system without pump - Package BP 52

Neutralisation granules (10kg) Ref. 94225601

C210_Q0014



BP 52

8538F050



HC 33

Condensate neutralisation tank - Package HC 33

Wall bracket for neutralisation tank - Package HC 34

Granule refill for neutralisation tank (2kg) - Package HC 35

The materials used for the condensates flow pipes must be appropriate; otherwise the condensates must be neutralised.

Principle: The acidic condensates flow through a tank filled with granules before being discharged into the waste water network.

HC 34

8531Q028A



Flue gas thermostat - Package JA 38

This thermostat cut the boiler when the flue gas temperature exceeds 110°C.

AGC_Q0023

Propane conversion kit for AGC 15..., / V..., /B... - Package JA 39

Propane conversion kit for AGC 25..., / V..., /B... - Package JA 40

Propane conversion kit for AGC 35..., / V..., /B... - Package JA 41

BOILER OPTIONS

STOVE FITTING ACCESSORIES SPECIFIC TO BOILERS AGC



Adapter Ø 80/125mm - Package HR 38

Is fitted instead and in place of the Ø 60/100mm fitting delivered mounted on the boiler. It enables the direct connection of a vertical forced flue

Ø 80/125mm or a boiler connection kit if connected to the collective flue system duct.



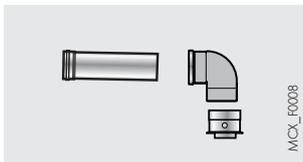
Adapter bi-flow Ø 60/100mm to 2 x Ø 80mm - Package DY 868



Reducing elbow - Package JA 43

When, for reasons of space, the horizontal forced flue with its elbow cannot be installed, this elbow is mounted instead and in place of the fitting

(Ø 60/100mm) on the boiler and thus allows a height saving of 70 mm.



Connecting kit Ø 80/125mm on collective flue system duct - Package DY 887

If connected to a collective flue system duct, the adapter Ø 60/100mm delivered with the boiler should be removed and replaced by

package DY 887, which incorporates the adapter Ø 80/125mm.

FOR DHW PRODUCTION



Domestic hot water sensor - Package AD 212

This is used for regulating the DHW temperature as a priority and programming of domestic hot water

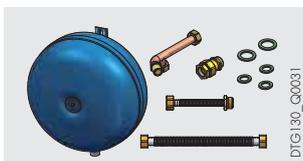
production with an independent calorifier.



Magnesium anode kit for tank protection - Package EA 103

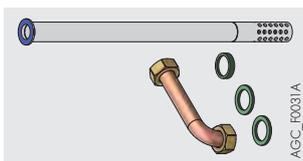
For DHW calorifier models AGC.../V... and AGC.../B..., if the "Titan Active System[®]" self-adapting current anode fitted as standard is not

permanently activated (in secondary homes, for example).



Kit DHW expansion vessel for AGC.../V 100 HL and /V 160 SL - Package ER 233

Can be integrated in the boiler, prevents water loss during tank reheating in DHW mode.



Recirculation kit for calorifier 100 HL - Package ER 218



Recirculation kit for calorifiers 160 SL and 220 SHL - Package ER 219



Connecting kit for the connection of an independent calorifier - Package JA 10

For AGC... (heating only), this kit mounted under the casing of the boiler allows the connection of an independent calorifier.

BOILER OPTIONS

FLAT COLLECTORS RECOMMENDED WITH BOILER AGC.../V 220 SHL AND AGC.../B 220 SHL

Number of people living in the home		from  to 	
Flat solar collectors or solar collector field («roof» packs) recommended:	Package	For installation on roof or terrace (1) 2 x PRO 2,3 ST (4.2 m ²) EC 583 or EC 518 (2) (3)	For installation into the roof (1) 2 x PRO 2,3 IT (4.2 m ²) EC 589 or EC 528 (2) (3)
"High performances" heat transfer fluid (20 litre, - 26°C)	Package	EG 100	EG 100

(1) For other options, refer to current catalogue or "DIETRISOL" technical manual.

(2) Type of anchorage fittings to select depending of the roof type (refer to current catalogue or "DIETRISOL" technical manual).

(3) According to delivery: horizontally or vertically.

INFORMATION REQUIRED FOR INSTALLATION

STATUTORY INSTRUCTIONS ON INSTALLATION AND MAINTENANCE

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

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

LOCATION

The AGC condensing boilers must be installed in premises protected from frost, which can also be ventilated.

Compliance with a minimum distance between the flue gas evacuation system or the boiler and combustible materials (furniture, for example) is not necessary.



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. Please note that, if the boiler and/or its peripherals become corroded by chloride and/or fluoride compounds, our contractual warranty cannot be invoked.

Ventilation

(chimney connection only B_{23p})

The cross-section of the boiler room ventilation (through) which combusting air is taken in must comply with the prevailing standard.

Note:

- For boilers connected to a concentric forced flue (type C_{13x} or C_{33x} connections) ventilation of the installation premises is not necessary, unless the gas supply includes one or more mechanical connections (cf. prevailing standard).
- See also recommendations in the «Flue Systems» booklet.

INFORMATION REQUIRED FOR INSTALLATION

GAS CONNECTION

Compliance with prevailing instructions and regulations is mandatory. In all cases, a sectional valve is fitted as close as possible to the boiler. This valve is delivered in the hydraulic connection kits available as optional equipment. A gas filter must be fitted to the boiler inlet.

The diameters of the pipes must be defined according to the prevailing regulations:

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

Certificate of conformity

The installer is required to draw up a certificate of conformity approved by the ministers responsible for construction and gas safety.

ELECTRICAL CONNECTION

This must comply with the prevailing national or even local instructions and regulations.

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

Note:

- The sensor cables must be separated from the 230V circuits by at least 10cm
- In order to protect the pump antifreeze and cleaning functions, we recommend not switching off the boiler at the mains switch.

HYDRAULIC CONNECTION

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

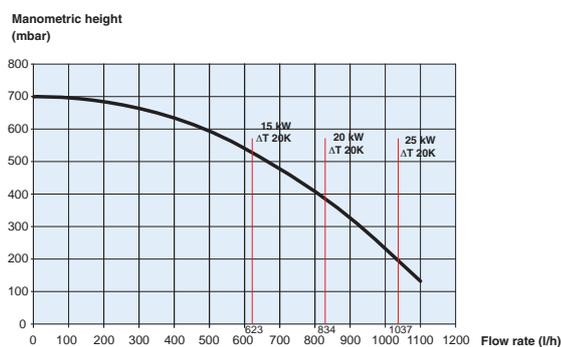
AGC boilers must only be used in closed circuit heating installations. The central heating systems must be cleaned to eliminate the debris (copper, strands, brazing flux) linked to the installation of the system and deposits that can cause malfunctions (noise in the system, chemical reaction between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

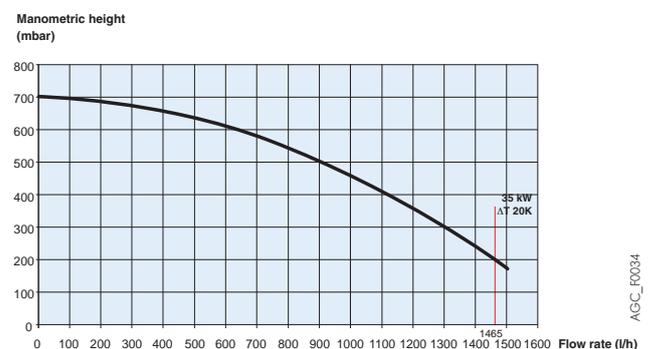
The water treatment products used must comply with regulations.

Manometric height available for heating circuit

AGC 15-25/...



AGC 35/...



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 9).

EXAMPLES OF INSTALLATIONS

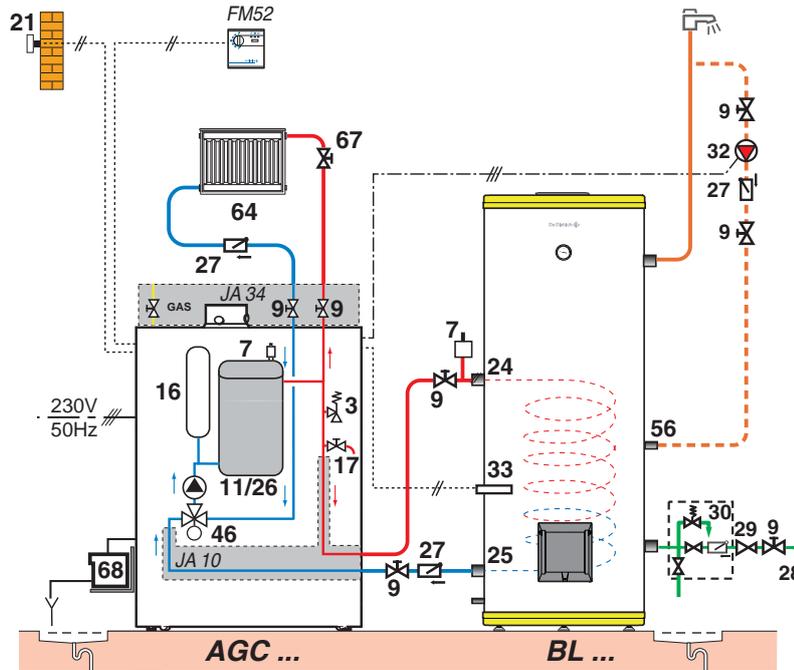
The examples presented below cannot cover the full range of installation scenarios which may be encountered.

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 AGC boilers) are represented but it is ultimately up to installers, experts, consultant engineers and design departments to take the final decision on the safety and control devices to be used

in the boiler room according to its specificities. In all cases, it is necessary to abide by the codes of practice and prevailing regulations.

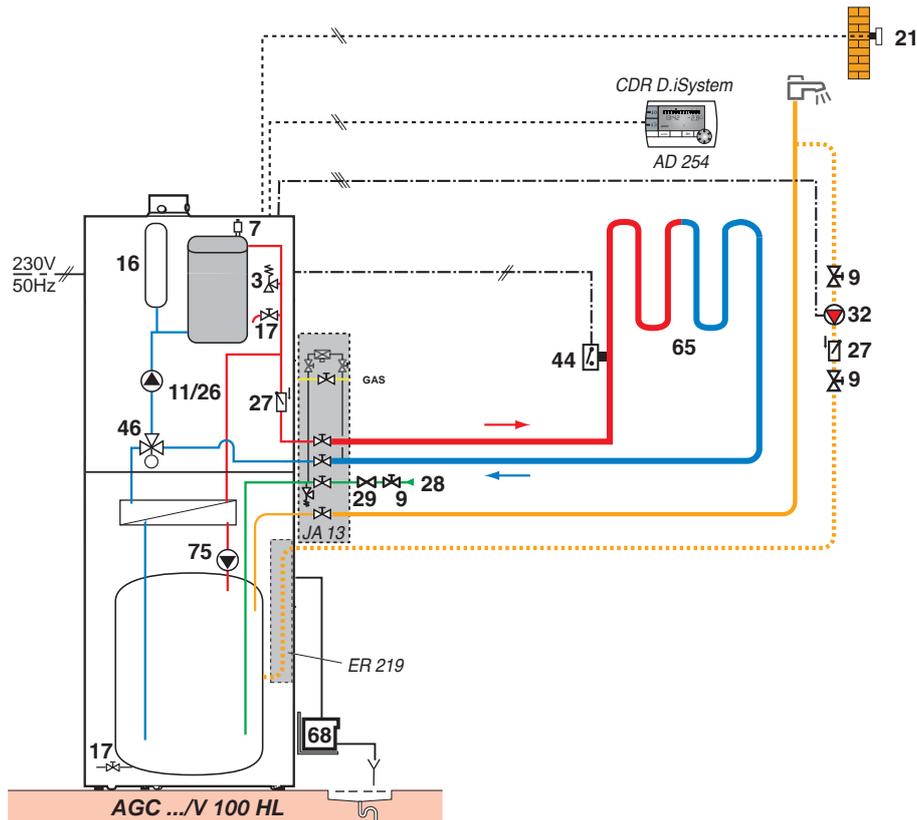
Attention: For the connection of domestic hot water, a sleeve made of steel, cast iron or any other insulating material must be interposed between the hot water outlet and these pipes to prevent any corrosion to the connections, if the distribution pipes are made of copper.

AGC...with 1 radiator circuit (direct) + 1 DHW circuit with independent calorifier, outside sensor, remote control



AGC_F0025

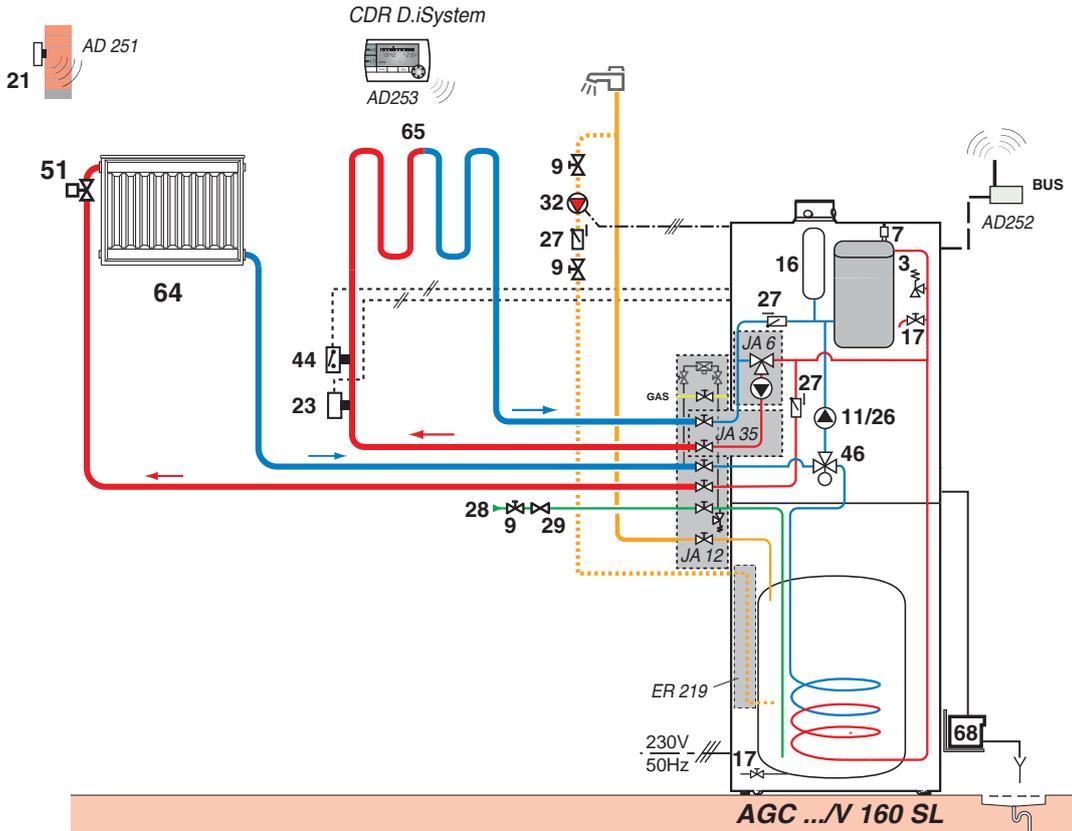
AGC.../V 100 HL with 1 underfloor heating circuit (direct), outside sensor, interactive remote control (wire)



AGC_F0026A

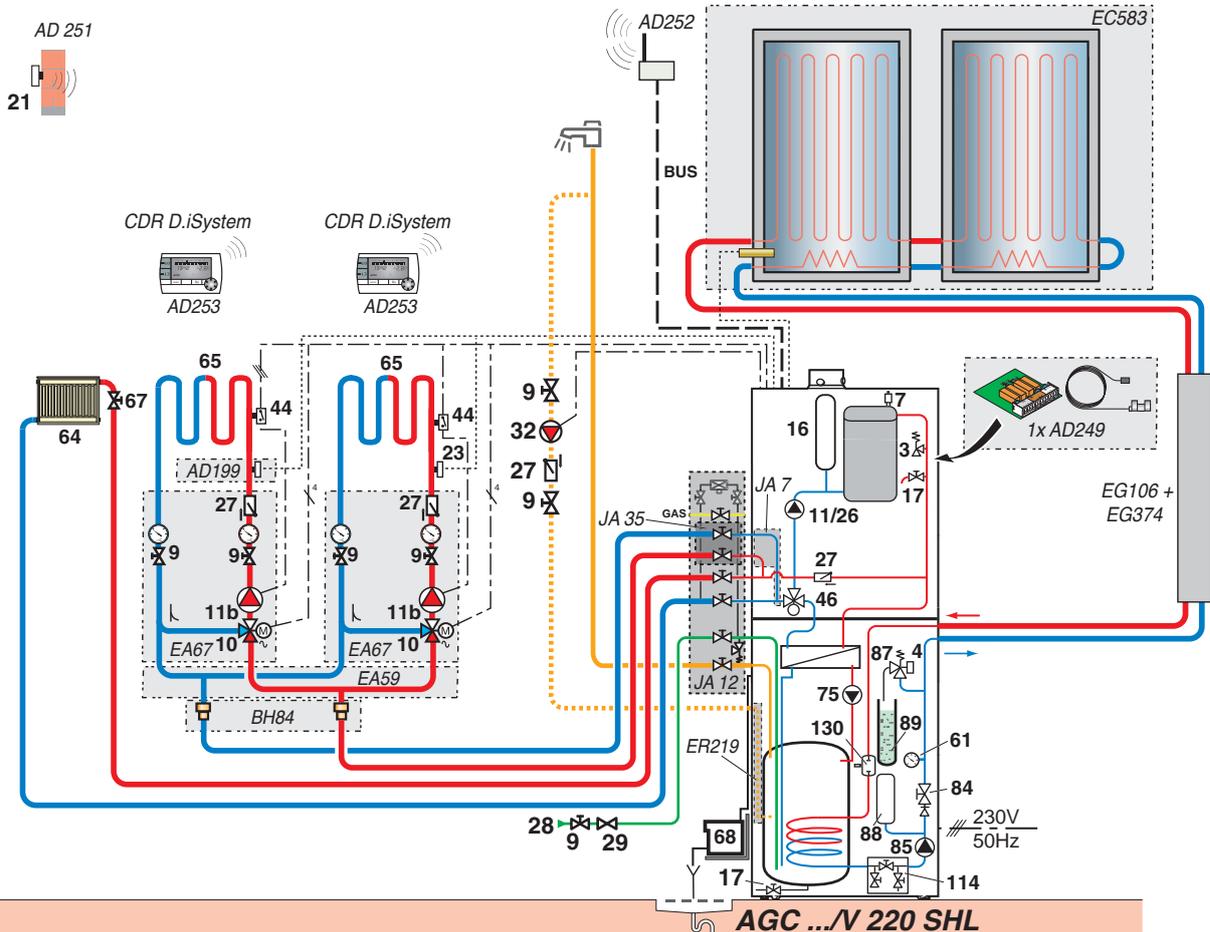
EXAMPLES OF INSTALLATIONS

AGC.../V 160 SL with 1 radiator circuit (direct) + 1 underfloor heating circuit with mixing valve (integrated in the boiler), outside sensor, interactive wireless remote control



AGC_I0027A

AGC.../V 220 SHL with 1 radiator circuit (direct) + 2 circuits with mixing valve, 2 flat collectors PRO 2,3, outside sensor, 2 interactive wireless remote control

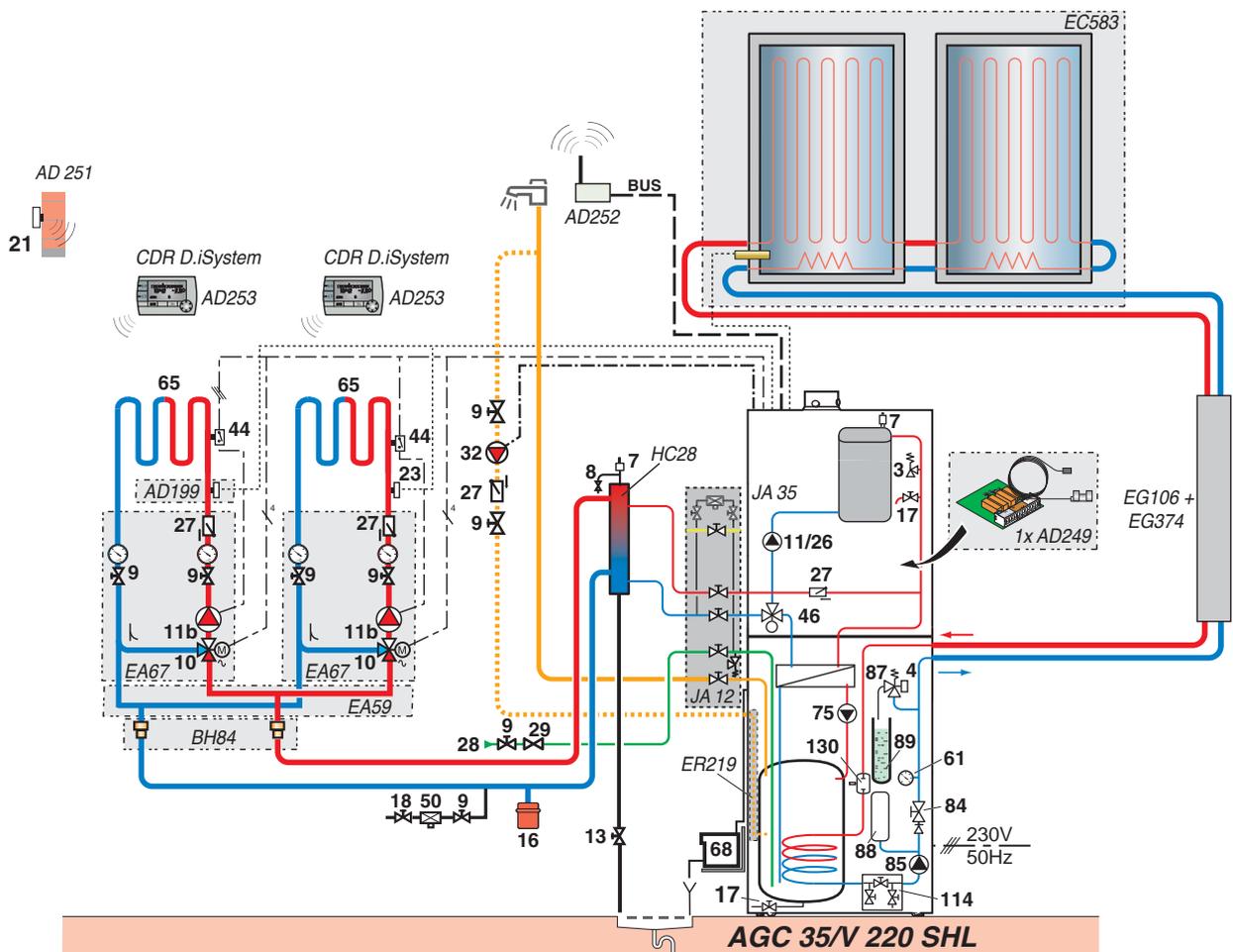


AGC_I0029C

Legend: see page 18

EXAMPLE OF INSTALLATION

AGC 35/V 220 SHL with 2 circuits with mixing valve, 2 flat collectors PRO 2,3, outside sensor, 2 interactive wireless remote control



Note: in this example, the limited manometric height of the pump fitted to the AGC 35 requires the use of a disconnecting cylinder (option HC 28).

Legend

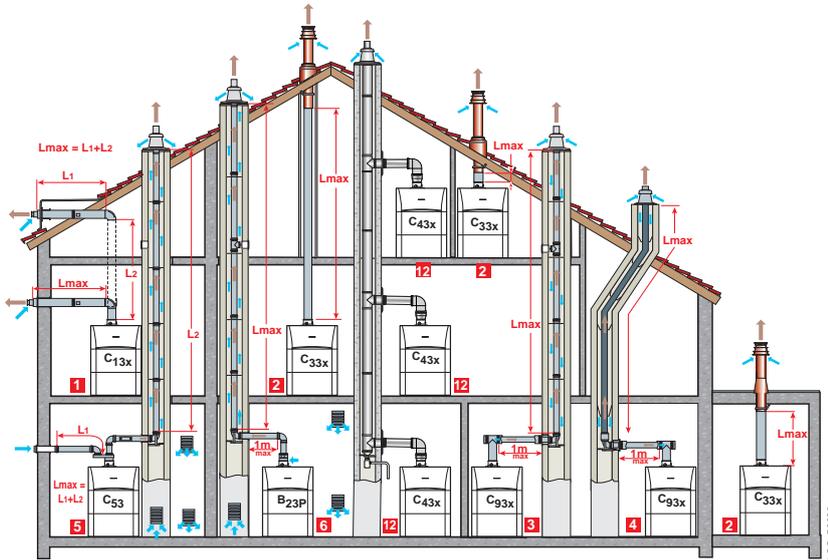
- | | | | |
|---|---|--|--|
| 3 Safety valve 3 bar | 25 Primary outlet on the DHW tank exchanger | 46 3 way-directional valve with motor reversing | 84 Stop valve with releas non return valve |
| 4 Pressure gauge | 26 Domestic water load pump | 50 Disconnector | 85 Solar circuit pump (to connect to the solar control) |
| 7 Automatic air vent | 27 Non-return valve | 51 Thermostatic valve | 87 Safety valve sealed and calibrated to 6 bar |
| 8 Manual air vent | 28 Domestic cold water inlet | 56 DHW circulation loop return | 88 Solar expansion tank 18 l |
| 9 Isolation valve | 29 Pressure reducer | 61 Thermometer | 89 Receptient for heat transfer fluid |
| 11 Electronic heating pump | 30 Sealed safety device calibrated to 7 bars | 64 Radiator circuit (gentle heat radiators, for example) | 109 Thermostatic mixing valve |
| 11a Electronic heating pump for direct circuit | 32 (Optional) DHW loop pump | 65 Low temperature circuit (underfloor heating, for example) | 114 Solar circuit drainage valve (note: propyleneglycol) |
| 11b Electronic heating pump for circuit with mixing valve | 33 DHW temperature sensor | 67 Manual valve | 130 Degasser with manual purge (Airstop) |
| 13 Flush valve | 35 Decoupling cylinder (available as an option - see page 12) | 68 Condensates neutralisation system | |
| 16 Expansion tank | 39 Injection pump | 72 Hydraulic bypass | |
| 21 Outside sensor | 44 65°C limiter thermostat with manual reset for underfloor heating | 75 Domestic water pump | |
| 23 Outlet temperature sensor after mixing valve | | 79 Primary outlet of the solar exchanger | |

INFORMATION REQUIRED FOR INSTALLATION

AIR/FLUE GAS CONNECTION

For the use of the air/flue gas connection pipes and the rules on installation, see details of the various configurations in the current product catalogue.

Classification



- 1 Configuration C13x:** Air/flue gas connection by means of concentric pipes to a horizontal terminal (so-called forced flue)
- 2 Configuration C33x:** Air/flue gas connection by means of concentric pipes to a vertical terminal (roof outlet)
- or
- 3 Configuration C93x:** 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 bi-flow adapter and single pipes (combustive air taken from outside)
- 6 Configuration B23p:** Connection to a chimney (combustive air taken from the boiler room)
- 12 Configuration C43x:** Connection to a collective flue system conduit

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 MODULENS AGC			
		15	25	35	
Concentric pipes connected to a horizontal terminal (PPS)	C13x	Ø 60/100mm	12	3.5	3.5
		Ø 80/125mm	12.3	20	17.6
Concentric pipes connected to a vertical terminal (PPS)	C33x	Ø 60/100mm	13	4.9	-
		Ø 80/125mm	10.7	20	19
Pipes - concentric in the boiler room, - single in the chimney (combustive air with counter current) (PPS)	C93x C33x	Ø 60/100mm Ø 60mm	15	8.1	9
		Ø 60/100mm Ø 80mm	9.9	20	18
		Ø 80/120mm Ø 80mm	-	-	20
Pipes - concentric in the boiler room, - "flex" in the chimney (combustive air with counter current) (PPS)	C93x C33x	Ø 80/125mm Ø 80mm	11.1	20	20
Bi-flow adapter and separate single air/flue gas pipes (combustive air taken from outside) (Alu)	C53	Ø 60/100mm to 2 x Ø 80mm	40	40	32
In the chimney rigid or flex, (combustive air taken from the premises) (PPS)	B23p	Ø 80mm (rigid)	40	40	40
		Ø 80mm (flex)	40(1)	40 (1)	28 (1)
Collective flue system conduit for sealed boiler	C43x	To size such a system, contact the supplier of the collective flue system			

(1) **△: Max. height in the flue pipe (C93x and B23p configurations) from the support elbow to the outlet musn't exceed 25m for flex PPS. In case of higher lengths, holding collars must be added by slices of 25m.**

DESCRIPTION

MODULES AGC...

FLOOR-STANDING GAS CONDENSING BOILER FOR CONNECTION TO A CHIMNEY OR A FORCED FLUE

Brand: De Dietrich
directive, NOx classification: 5
Model:
AGC 15, 25, 35: for heating only
AGC 15, 25, 35/V 100 HL: for heating and domestic hot water preparation by associated 100 litre DHW stratification calorifier placed under the boiler.
AGC 15, 25, 35/V 160 SL and .../B 160 SL: for heating and domestic hot water preparation by associated 160 litre DHW calorifier with coil placed under the boiler (.../V 160 SL) or placed to the left or to the right of the boiler(.../B 160 SL).
AGC 15, 25, 35/V 220 SHL and .../V 220 SHL: for heating and domestic hot water preparation by associated 220 litre Solar DHW tank placed under the boiler (.../V 220 SHL) or placed to the left or to the right of the boiler(.../B 220 SHL).
Homologation: B23p-B33-C13x-C33x-C93x-C53-C43x-C83x
Protection index: IP 21
Power supply: 230V/50Hz
Useful output in heating mode at 50/30°C (max.)

AGC 15: _____ kW
AGC 25: _____ kW
AGC 35: _____ kW

Specific flow in DHW mode:
AGC .../V 100 HL: _____/min
AGC .../V 160 SL and .../B 160 SL: _____l/min
AGC .../V 220 SHL and .../B 220 SHL: _____l/min

Boiler:
Max. operating temperature: 90°C
Max. operating pressure: 3bar
Safety thermostat: 110°C
Calorifier:
Max. operating temperature: 95°C
Max. operating pressure: 10bar
Solar calorifier max. operating pressure: 6bar (220 SHL)
Dimensions: _____ x _____ x _____ 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 22 to 100% output, fitted with a silencer on the air intake.
The DIEMATIC iSystem control panel is a control panel with new control ergonomics and incorporates a programmable electronic control system as standard. Suitable for managing a direct circuit + 1 valve circuit (optional flow sensor). Capable of managing 1 DHW circuit (sensor optional) and 1 additional valve circuit (PCB + sensor optional) and a DHW circuit.
New ergonomics and optimisation of management of combined heating systems.
Boiler delivered and prefitted with, a modulating heating pump of class A (except AGC 35), 3-bar safety valve, 18-litre expansion vessel (except AGC 35), heating/DHW reversal valve, automatic air vent.
- AGC .../V 100 HL: with enamelled, insulated 100 litre DHW "High Load" calorifier placed under the boiler. Boiler/tank connecting pipes, tank protection with Titan Active System®, a drain valve and DHW sensor included.
- AGC .../V 160 SL and .../B 160 SL: with insulated 160 litre DHW "Standard load" calorifier placed under the boiler (.../V 160 SL) or placed to the left or to the right of the boiler(.../B 160 SL). Boiler/tank connecting pipes, tank protection with Titan Active System®, a drain valve and DHW sensor included.
- AGC .../V 220 SHL and .../B 220 SHL: with enamelled, insulated 200 litre solar DHW calorifier placed under the boiler (.../V 220 SHL) or placed to the left or to the right of the boiler(.../B 220 SHL). Boiler/tank connecting pipes, tank protection with Titan Active System®, a drain valve and DHW sensor included. Pre-fitted with all the components required to connect and control a solar installation: solar station with pump, expansion vessel, safety unit, solar regulation, degasser, glycol recovery tank.
Air/flue gas connection Ø 60/100 mm with measuring point.

Control panel options

- Domestic hot water sensor
- Sensor for 1 mixing valve
- PCB + sensor for 1 mixing valve

- Sensor for storage tank
- CDI D. iSystem interactive remote control
- CDR D. iSystem interactive "radio" remote control
- Radio boiler module DIEMATIC iSystem
- Simplified remote control with room sensor
- BUS connection cable
- Radio outside temperature sensor
- Boiler radio module
- Control unit VM iSystem

Boiler options

- Central connection kit
- Left connection kit
- Right connection kit
- Solo connection kit
- 3-way internal valve kit
- External circuit kit
- Hydraulic module with electronic pump
- Hydraulic module with a high performance energy pump class A
- Collector for 2 hydraulic modules
- Set of 2 walls consoles for hydraulic modules
- Set connection G in R
- HWPlus 70 decoupling cylinder
- Cleaning tool boiler body
- Condensates neutralisation system with pump
- Condensates neutralisation system without pump
- Neutralisation granules (10kg)
- Condensate neutralisation tank
- Wall bracket for neutralisation tank
- Granule refill for neutralisation tank (2kg)
- Flue gas thermostat
- Propane conversion kit
- Adapter Ø 80/125mm
- Adapter bi-flow Ø 60/100mm to 2 x Ø 80mm
- Reducing elbow
- Connecting kit Ø 80/125mm on collective flue system duct
- Magnesium anode for tank protection
- Kit DHW expansion vessel for AGC .../V 100 HL and /V 160 SL
- Recirculation kit for calorifier 100 HL
- Recirculation kit for calorifiers 160 SL and 220 SHL

DE DIETRICH THERMIQUE

S.A.S. with corporate capital of 22 487 610 €
57, rue de la Gare - 67580 Mertzwiller
Tél. +33 3 88 80 27 00 - Fax +33 3 88 80 27 99
www.diedietrich-heating.com

De Dietrich 