GT 330-GT 430-GT 530

CAST IRON FLOOR-STANDING OIL / GAS BOILERS

- GT 330: boiler from 70 to 330kW (60,2 to 283,8 Mcal/h)
- GT 430: boiler from 300 to 780kW (258,0 to 670,8 Mcal/h)
- GT 530: boiler from 348 to 1450kW (299,3 to 1247,0 Mcal/h)

GT 330 DIEMATIC-m3

GT 430 B3

GT 530

Heating only
(DHW production by independent tank)

Oil or natural gas

See table of specifications for the boiler concerned

GT 330, GT 430 and GT 530 boilers are pressurised, cast iron boilers with high combustion efficiency, to be fitted with an oil or gas burner.

They are all available with various control panels which can be used to control 2-stage or modulating burners:

- standard control panel: for installations without a control system or with a control cabinet in the boiler room
- B3 control panel: heating water regulation by electronic thermostat; integrated DHW priority
- DIEMATIC-m3 control panel: heating management by electronic control system used to control up to 3 circuits + 1 DHW circuit, depending on the options connected. Combined with a boiler with a specific K3 control panel, this can manage cascade installations of 2 to 10 boilers.

CONDITIONS OF USE

Max. operating pressure: 6 bar
Max. operating temperature: 90°C
Adjustable thermostat: - GT 330: from 30 to 85°C
- GT 430/530: from 40 to 85°C
Safety thermostat: 110°C

De Dietrich

GT 330 RANGE : presentation and specifications

Strong points

The **GT 330** is a low temperature, cast iron boiler with an output of 70 to 330 kW, high combustion efficiency (up to 93%) and **CE classification, with a pressurised combustion chamber to be fitted with an oil or gas burner:

- Heating body in eutectic cast iron, which is highly resistant to corrosion, for low temperature operation modulated to 30°C.
- Body design with 3-path flue gas evacuation providing advantageous acoustic properties, with a large combustion chamber to enable perfect adaptation to all types of burner, flue ways with fins including baffle plates for optimum heat exchange, available in separate sections for adaptation to boiler rooms with difficult access.
- Burner and sweeping doors mounted on reversible hinges.
- Enhanced, 100 mm thick glass wool insulation.
- Available with various control panels, all of which can be used to control 2-stage or modulating burners: see pages 8 to 12.

Models available

Boiler		Output kW	Output Mcal/h	Control panel: standard (see p 9)	Control panel: B3 (see p 9)	Control panel: DIEMATIC-m3 (see p 10)	Control panel: K3 (1) (see p 10)
 GT_330Q0001	GT 330: for heating only, DHW production by independent tank	70-105	62,0-90,3	GT 334	GT 334 B3	GT 334 DIEMATIC-m3	GT 334 K3
		105-140	90,3-120,4	GT 335	GT 335 B3	GT 335 DIEMATIC-m3	GT 335 K3
		140-180	120,4-154,8	GT 336	GT 336 B3	GT 336 DIEMATIC-m3	GT 336 K3
		180-230	154,8-197,8	GT 337	GT 337 B3	GT 337 DIEMATIC-m3	GT 337 K3
		230-280	197,8-240,8	GT 338	GT 338 B3	GT 338 DIEMATIC-m3	GT 338 K3
		280-330	240,8-283,8	GT 339	GT 339 B3	GT 339 DIEMATIC-m3	GT 339 K3

(1) The GT 330 K3 operates only in combination with a GT 330 DIEMATIC-m3 as part of a cascade installation

Main specifications

Type: Heating only
Energy used: oil / gas

Ref. "EC certificate": CE 1312BR4783
Combustion evacuation: chimney

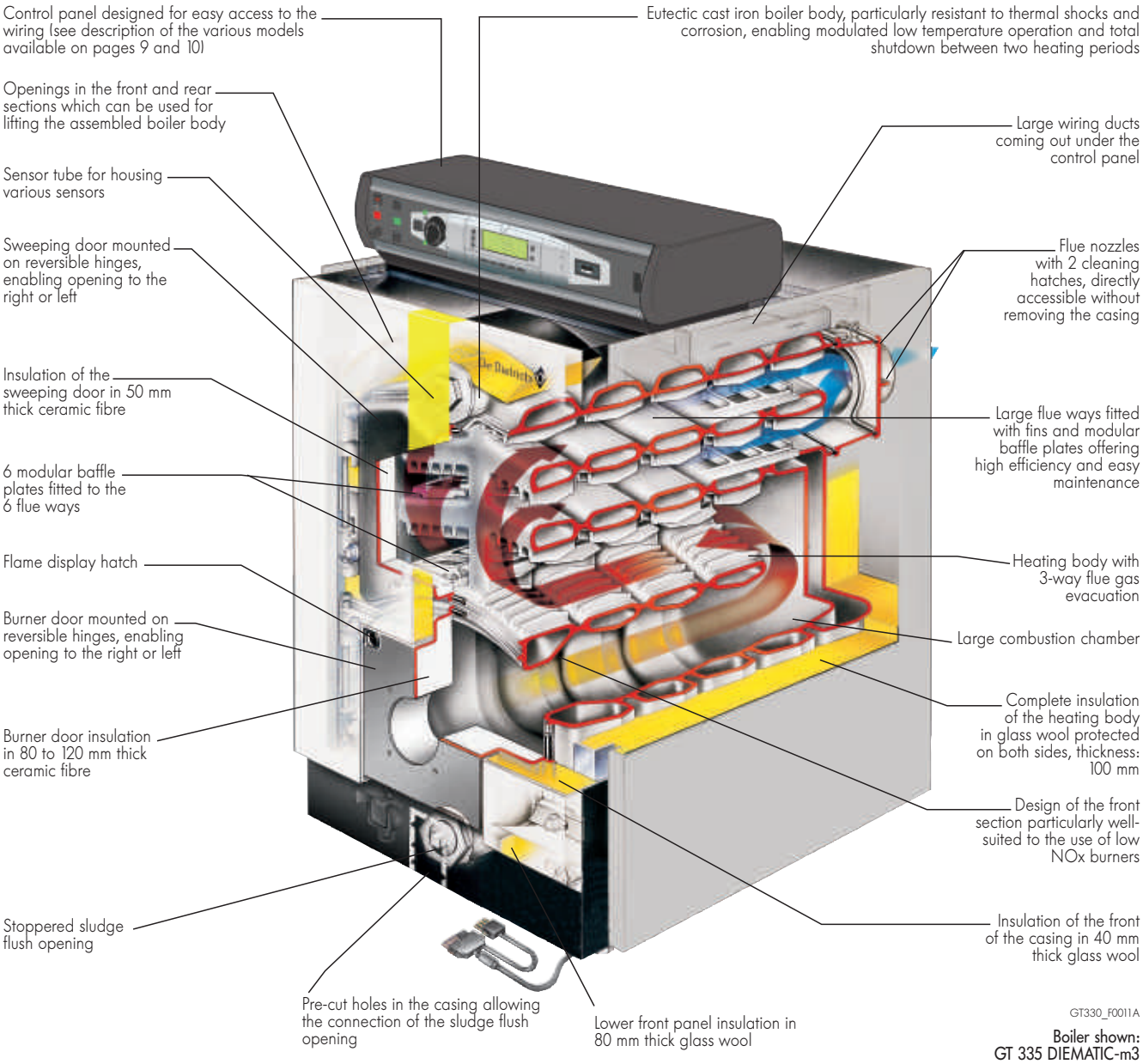
Min. return temperature: none
Min. flow temperature: 30°C

Model		GT	334	335	336	337	338	339
Useful output		kW	70-105	105-140	140-180	180-230	230-280	280-330
		Mcal/h	60,2-90,3	90,3-120,4	120,4-154,8	154,8-197,8	197,8-240,8	240,8-283,8
Nominal input		kW	79,5-119,3	119,3-159,1	159,1-204,5	204,5-261,4	261,4-318,2	318,2-375,0
Water content		litres	96	116	136	156	176	196
Water resistance Δt: 15 K (1)		mbar	6,2	10,9	20,4	30	44,5	63,8
Combustion chamber	inscribed Ø	mm	377	377	377	377	377	377
	Length	mm	571	731	891	1051	1211	1371
	Volume	m^3	0,096	0,122	0,148	0,174	0,200	0,226
Flue gas circuit volume (combustion chamber + flue ways)		m^3	0,163	0,206	0,249	0,292	0,335	0,378
Flue gas mass flow rate (1)	domestic fuel oil	kg/h	178	238	306	391	475	560
	natural gas	kg/h	187	250	334	410	499	588
Flue gas temperature (1)		°C	210	210	210	210	210	210
Pressure in the combustion chamber for draught at the nozzle = 0 (1)		mbar	0,3	0,6	1,1	1,6	2,2	2,5
Number of sections			4	5	6	7	8	9
Net weight (with DIEMATIC-m3 control panel)		kg	612	736	846	981	1103	1230

(1) At nominal stage (high boiler output), operating on domestic oil: CO2 = 13%, operating on natural gas: CO_2 = 9.0%, draught at the nozzle = 0

In practice, 1 mbar is equivalent to a 10 mm water column or 100 Pascal. 1 K = 1°C

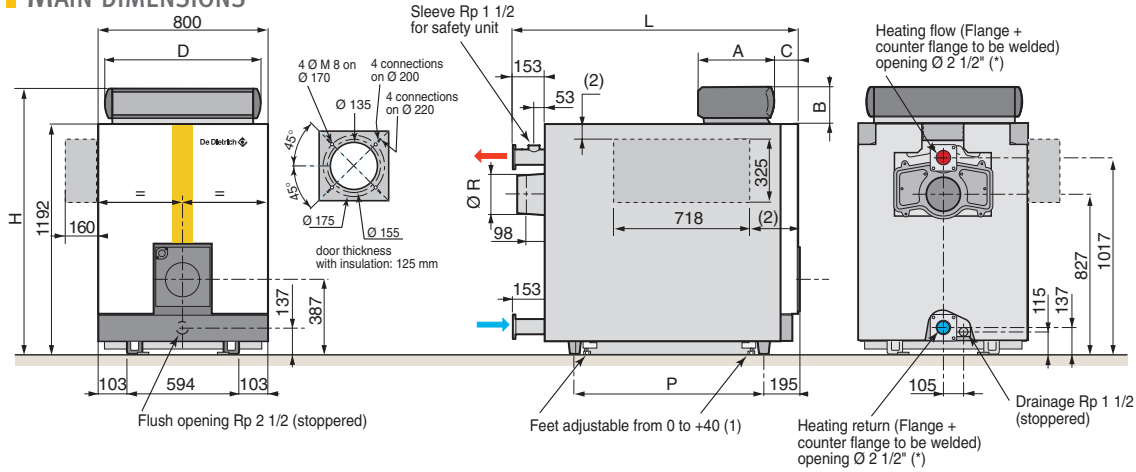
Description



GT330_F0011A

Boiler shown:
GT 335 DIEMATIC-m3

Main dimensions



R: threading
Rp: tapped connection
(*) Ø 2" optional

GT330_F0001C

(1) If using the "adjustable feet", the whole boiler is lifted from 0 to 40 mm.
(2) Lateral control panel (specify when ordering): its position on one of the lateral panels is left to the installer's discretion.

GT	334	335	336	337	338	339
L	991	1151	1311	1471	1631	1791
P	490	650	810	970	1130	1290
Ø R	180	180	180	200	200	200

Control Panel	A	B	C	D	H
Standard	130	105	165	738	1297
B3, K3 and DIEMATIC-m3	355	190	150	755	1387

GT 430 RANGE FROM 300 TO 780 kW: presentation and specifications

Strong points

The **GT 430** is a low temperature, cast iron boiler with an output of 300 to 780 kW, high combustion efficiency with a pressurised combustion chamber to be fitted with an oil or gas burner:

- Heating body in eutectic cast iron, which is highly resistant to corrosion, for low temperature operation modulated to 40°C.
- Body design with 3-path flue ways with a large combustion chamber and horizontal flue ways with fins to optimise heat exchange.
- Burner and sweeping doors mounted on hinges (reversible on burner door).
- Enhanced insulation in 100 mm thick glass wool and double insulation at the front.
- Preset flow controller supplied.
- Cable way inside the boiler.
- Available with various control panels, all of which can be used to control 2-stage or modulating burners: see pages 8 to 12.
- Suitable for new or existing boiler rooms: as the heating body is delivered in separate sections to be fitted to the base frame, it can be installed in boiler rooms with difficult access (heating body also available assembled on request).

Models available

Boiler		Output kW	Output Mcal/h	Control panel: standard (see p 9)	Control panel: B3 (see p 9)	Control panel: DIEMATIC-m3 (see p 10)	Control panel: K3 (1) (see p 10)
 GT_430Q0001	GT 430: for heating only, DHW production by independent tank	300-390	258,0-335,4	GT 430-8	GT 430-8 B3	GT 430-8DIEMATIC-m3	GT 430-8 K3
		390-450	335,4-387,0	GT 430-9	GT 430-9 B3	GT 430-9 DIEMATIC-m3	GT 430-9 K3
		450-540	387,0-464,4	GT 430-10	GT 430-10B3	GT 430-10 DIEMATIC-m3	GT 430-10 K3
		540-600	464,4-516,0	GT 430-11	GT 430-11 B3	GT 430-11 DIEMATIC-m3	GT 430-11 K3
		600-670	516,0-576,2	GT 430-12	GT 430-12 B3	GT 430-12 DIEMATIC-m3	GT 430-12 K3
		670-720	576,2-619,2	GT 430-13	GT 430-13 B3	GT 430-13 DIEMATIC-m3	GT 430-13 K3
		720-780	619,2-670,8	GT 430-14	GT 430-14 B3	GT 430-14 DIEMATIC-m3	GT 430-14 K3

(1) The GT 430 K3 operates only in combination with a GT 430 DIEMATIC-m3 as part of a cascade installation.

Technical specifications

Type: Heating only
Energy used: oil / gas

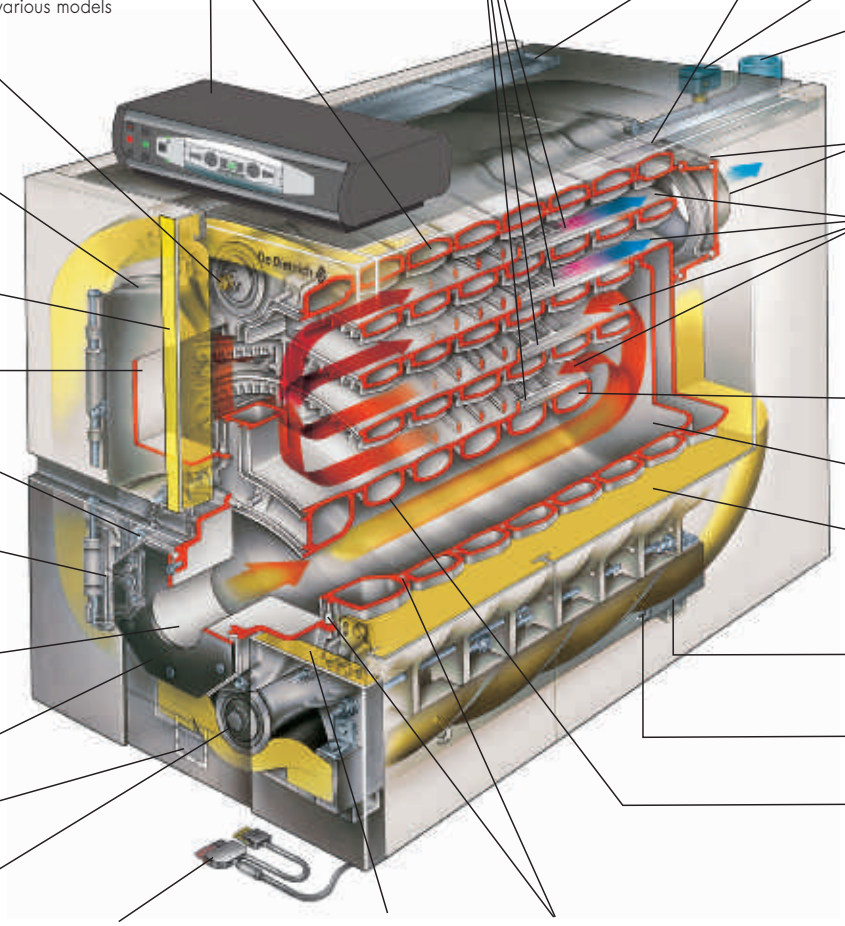
Ref. "EC certificate": CE 1312AQ0952
Combustion evacuation: chimney

Min. return temperature: none
Min. flow temperature: 40°C

Model		GT	430-8	430-9	430-10	430-11	430-12	430-13	430-14
Useful output		kW	300-390	390-450	450-540	540-600	600-670	670-720	720-780
		Mcal/h	258,0-355,4	335,4-387,0	387,0-464,4	464,4-516,0	516,0-576,2	576,2-619,2	619,2-670,8
Nominal input		kW	333,7-443,3	443,3-511,4	511,4-613,6	613,6-681,8	681,8-761,4	761,4-818,2	818,2-886,4
Water content		litres	366	409	452	495	538	581	624
Water resistance for Δt = 15 K (1)		mbar	17	26,5	40,8	45,3	56,4	68,8	86,8
Combustion chamber	inscribed Ø	mm	530	530	530	530	530	530	530
	Width	mm	638	638	638	638	638	638	638
	Length	mm	1183	1343	1503	1663	1823	1983	2143
	volume	m^3	0,310	0,354	0,396	0,439	0,481	0,523	0,565
Flue gas circuit volume		m^3	0,563	0,638	0,712	0,787	0,860	0,934	1,008
Flue gas mass flow rate (1)	domestic fuel oil	kg/h	650	750	900	1000	1116	1200	1450
	natural gas	kg/h	700	810	972	1080	1207	1297	1405
Pressure in the combustion chamber for draught at the nozzle = 0 (1))		mbar	1,1	1,5	2	2,5	2,5	2,5	2,5
Number of sections			8	9	10	11	12	13	14
Net weight		kg	1470	1650	1830	2010	2190	2370	2550

(1) At nominal stage (high boiler output), operating on domestic oil: CO_2 = 13%, operating on natural gas: CO_2 = 9.0%, draught at the nozzle = 0
In practice, 1 mbar is equivalent to a 10 mm water column or 100 Pascal. 1 K = 1°C

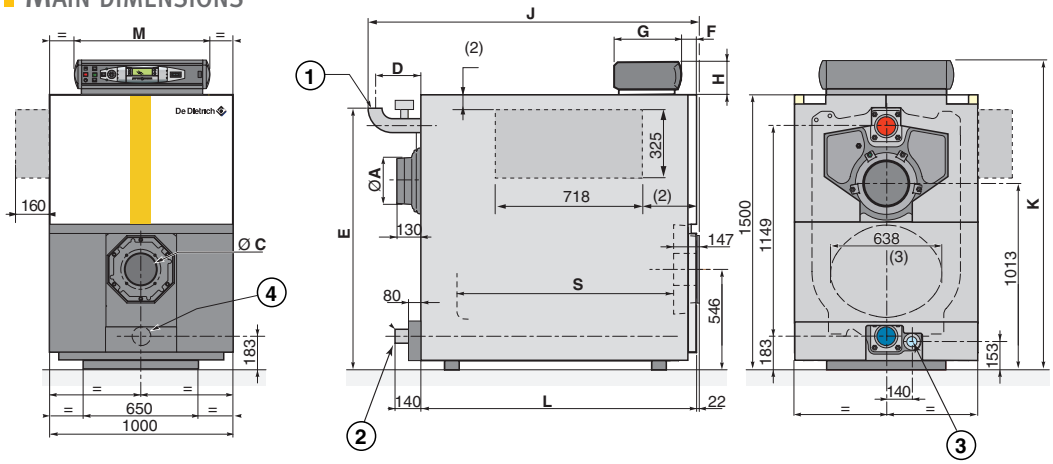
Description



GT430_Q0007

Boiler shown:
GT 430-8 B3

Main dimensions



① : Heating flow Ø B (to be welded)
② : Heating return Ø B (to be welded)
③ : Drainage Rp 2 (stoppered)
④ : Flush opening Rp 2 1/2 (stoppered)

(2) Lateral control panel (specify when ordering): its position on one of the lateral panels is left to the installer's discretion
(3) inscribed Ø of the combustion chamber: front section: Ø 455 mm, middle section: Ø 530 mm, Ø equivalent combustion chamber: 573 mm
R: Threading
Rp: Tapped connection

GT430_F0001

GT	Ø A ext.	Ø B	Ø C	D	E	J	L	S
430-8	250	2"1/2	whole or pre-drilled plate with ø of 135, 175, 190, 240, 250 or 290 on request	235	1427	1800	1505	1183
430-9	250	2"1/2		235	1427	1950	1665	1343
430-10	250	2"1/2		235	1427	2120	1825	1503
430-11	300	3"		254	1447	2305	1985	1663
430-12	300	3"		254	1447	2465	2145	1823
430-13	300	3"		254	1447	2625	2305	1983
430-14	300	3"		254	1447	2785	2465	2143

Control Panel	F	G	H	K	M
Standard	127,5	130	105	1605	738
B3, K3 and DIEMATIC-m3	113,5	355	190	1690	755

GT 530 RANGE : presentation and specifications

Strong points

The **GT 530** is a cast iron boiler with an output of 348 to 1450 kW, high combustion efficiency and a pressurised combustion chamber to be fitted with an oil or gas burner:

- Heating body in eutectic cast iron, which is highly resistant to corrosion, for low temperature operation modulated to 40°C.
- Front section with damp walls increasing the heat exchange surface in the combustion chamber and reducing NOx emissions.
- 4-path combustion products circuit in parallel series for a loss of load in the flue gas circuit inferior to traditional pressurised boilers.
- Burner door on reversible hinge, maintenance access from the front with fast opening system.
- Enhanced insulation of 100 mm to 120 mm in the upper section.
- Access way on the top central section of the boiler.
- Preset flow rate controller supplied.
- Cable ways inside the boiler.
- Available with various control panels, all of which can be used to control 2-stage or modulating burners: see pages 8 to 12.
- Suitable for new or existing boiler rooms: as the heating body is delivered in separate sections, it can be installed in boiler rooms with difficult access; heating body also available assembled on request.

Models available

GT 530 :
for heating only,
DHW production by
independent tank

Boiler	Output kW	Output Mcal/h	Control panel: standard (see p 9)	Control panel: B3 (see p 9)	Control panel: DIEMATIC-m3 (see p 10)	Control panel: K3 (1) (see p 10)
GT 530	348-406	299,3-349,2	GT 530-7	GT 530-7 B3	GT 530-7DIEMATIC-m3	GT 530-8 K3
	406-464	349,2-399,0	GT 530-8	GT 530-8 B3	GT 530-8DIEMATIC-m3	GT 530-8 K3
	464-522	399,0-448,9	GT 530-9	GT 530-9 B3	GT 530-9 DIEMATIC-m3	GT 530-9 K3
	522-580	448,9-498,8	GT 530-10	GT 530-10B3	GT 530-10 DIEMATIC-m3	GT 530-10 K3
	580-638	498,8-548,7	GT 530-11	GT 530-11 B3	GT 530-11 DIEMATIC-m3	GT 530-11 K3
	638-696	548,7-598,6	GT 530-12	GT 530-12 B3	GT 530-12 DIEMATIC-m3	GT 530-12 K3
	696-754	598,6-648,4	GT 530-13	GT 530-13 B3	GT 530-13 DIEMATIC-m3	GT 530-13 K3
	754-812	648,4-698,3	GT 530-14	GT 530-14 B3	GT 530-14 DIEMATIC-m3	GT 530-14 K3
	812-870	698,3-748,2	GT 530-15	GT 530-15 B3	GT 530-15 DIEMATIC-m3	GT 530-15 K3
	870-928	748,2-798,1	GT 530-16	GT 530-16 B3	GT 530-16 DIEMATIC-m3	GT 530-16 K3
	928-986	798,1-848,0	GT 530-17	GT 530-17 B3	GT 530-17 DIEMATIC-m3	GT 530-17 K3
	986-1044	848,0-897,8	GT 530-18	GT 530-18 B3	GT 530-18 DIEMATIC-m3	GT 530-18 K3
	1044-1102	897,8-947,7	GT 530-19	GT 530-19 B3	GT 530-19 DIEMATIC-m3	GT 530-19 K3
	1102-1160	947,7-997,6	GT 530-20	GT 530-20 B3	GT 530-20 DIEMATIC-m3	GT 530-20 K3
	1160-1218	997,6-1047,5	GT 530-21	GT 530-21 B3	GT 530-21 DIEMATIC-m3	GT 530-21 K3
	1218-1276	1047,5-1097,4	GT 530-22	GT 530-22 B3	GT 530-22 DIEMATIC-m3	GT 530-22 K3
	1276-1334	1097,4-1147,2	GT 530-23	GT 530-23 B3	GT 530-23 DIEMATIC-m3	GT 530-23 K3
	1334-1400	1147,2-1204,0	GT 530-24	GT 530-24 B3	GT 530-24 DIEMATIC-m3	GT 530-24 K3
	1400-1450	1204,0-1247,0	GT 530-25	GT 530-25 B3	GT 530-25 DIEMATIC-m3	GT 530-25 K3

(1) The GT 530 K3 operates only in combination with a GT 530 DIEMATIC-m3 as part of a cascade installation.

Technical specifications

Type: Heating only
Energy used: oil / gas

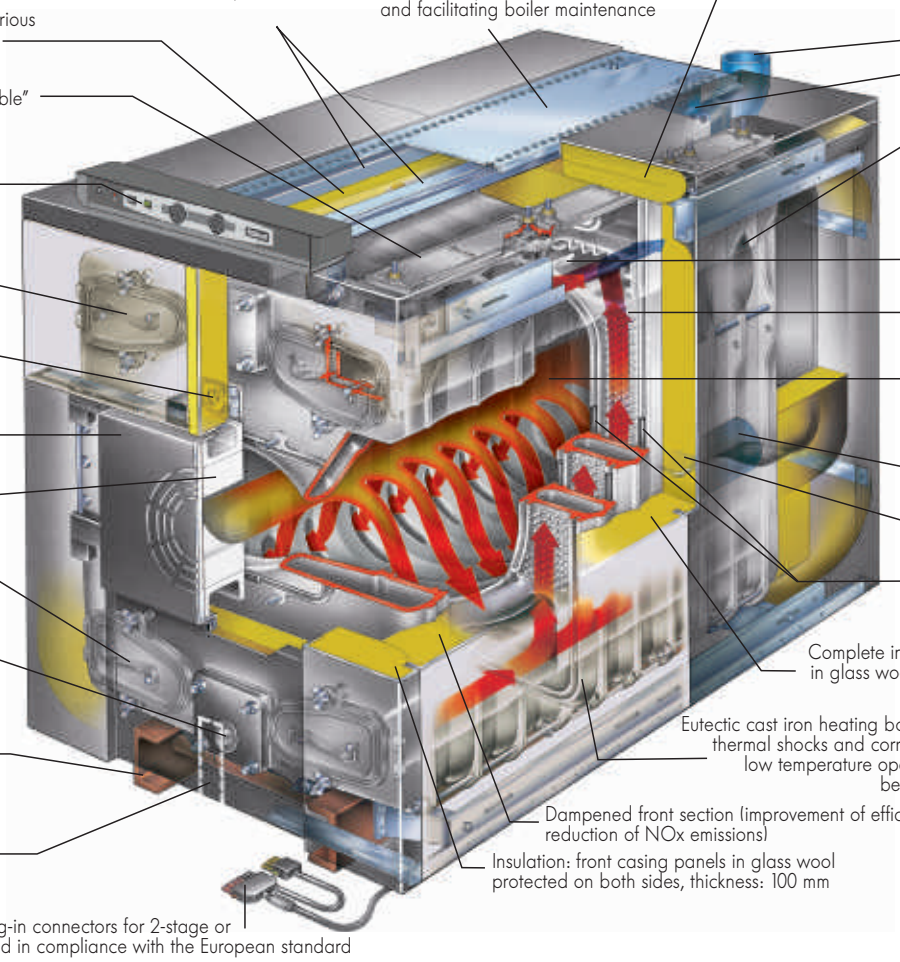
Ref. "EC certificate": CE 1312AQ0954
Combustion evacuation: chimney

Min. return temperature: none
Min. flow temperature: 40°C

Model	GT530-	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Useful output	kW	348-406	406-464	464-522	522-580	580-638	638-696	696-754	754-812	812-870	870-928	928-986	986-1044	1044-1102	1102-1160	1160-1218	1218-1276	1276-1334	1334-1400	1400-1450
	Mcal/h	299,3-349,2	349,2-399,0	399,0-448,9	448,9-498,8	498,8-548,7	548,7-598,6	598,6-648,4	648,4-698,3	698,3-748,2	748,2-798,1	798,1-848,0	848,0-897,8	897,8-947,7	947,7-997,6	997,6-1047,5	1047,5-1097,4	1097,4-1147,2	1147,2-1204,0	1204,0-1247,0
Nominal input	kW	387-451	451-516	516-580	580-644	644-709	709-773	773-838	838-902	902-967	967-1031	1031-1096	1096-1160	1160-1224	1224-1289	1289-1358	1358-1418	1418-1482	1482-1547	1547-1611
Water content	litres	389	427	465	503	541	579	617	655	693	731	769	807	845	905	943	981	1019	1057	1095
Water resistance for Δt: 15 K (1)	mbar	8	9,9	12,6	15,5	18,7	22,4	25,8	30,0	34,7	11,7	13,5	14,0	18,5	21,5	24,0	26,5	29,0	32,0	35,0
Combustion chamber: width 683 mm, l	mm	706	817	928	1039	1150	1261	1372	1483	1594	1705	1816	1927	2038	2189	2300	2411	2522	2633	2744
Combustion chamber: volume	m^3	0,28	0,32	0,36	0,40	0,45	0,49	0,53	0,57	0,61	0,65	0,70	0,74	0,78	0,84	0,88	0,92	0,96	1,00	1,05
Flue gas mass flow rate (1): domestic fuel oil	kg/h	620	700	770	850	920	1000	1070	1150	1220	1300	1370	1450	1520	1600	1670	1750	1820	1900	1970
Flue gas mass flow rate (1): gas	kg/h	650	730	810	890	970	1040	1120	1200	1280	1360	1440	1520	1590	1670	1750	1830	1910	1990	2070
Combustion chamber pressure (1)	mbar	1,7	1,75	1,8	1,9	2,0	2,1	2,2	2,3	2,4	2,5	2,6	2,7	2,85	3,0	3,1	3,2	3,3	3,4	3,5
Net weight	kg	1852	2046	2237	2412	2601	2810	3000	3171	3364	3561	3756	3955	4124	4343	4538	4734	4930	5107	5297

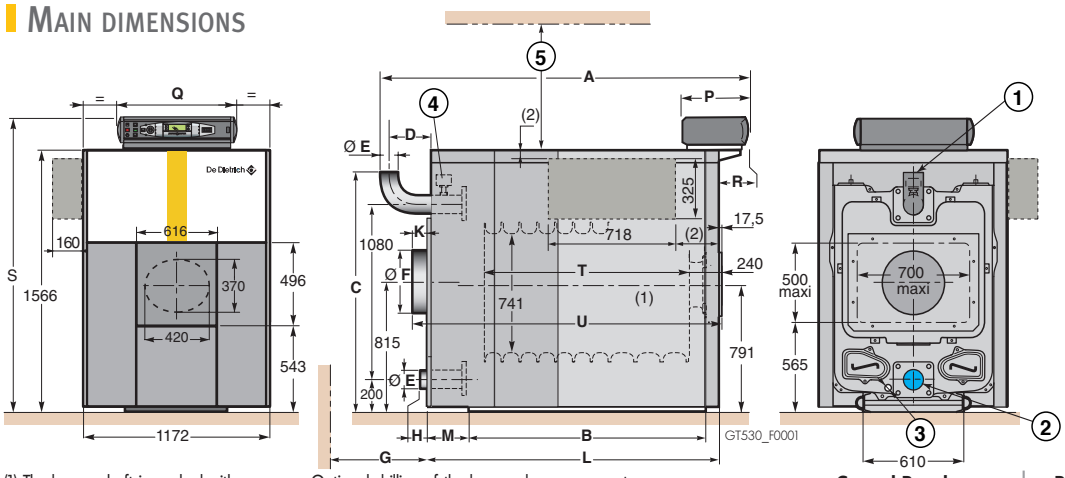
(1) At nominal stage, CO_2: 13% with oil and 9.5% with natural gas, draught at the nozzle = 0.

Description



Boiler shown: GT 530-10

Main dimensions



①: Heating flow Ø E (to be welded)
②: Heating return Ø E (to be welded)
③: Drainage Rp 3/4
④: Flow rate detector
⑤: Min. height for maintenance = 850 mm

* Full plate to be cut out Max. cut-out 500 x 700 mm, delivered without connection nozzle
** length required for clearance of the equidistribution water pipe équirépartiteur d'eau
*** Dimension corresponding to the extremity of the chimney connection (with nozzle, height 100 mm)
R: Threading
Rp: Tapped connection

(1) The burner shaft is marked with an arrow. Optional drilling of the burner door on request and without additional cost in diameters of 165, 186, 210, 240 or 290 mm.
(2) Lateral control panel (specify when ordering): its position on one of the lateral panels is left to the installer's discretion.

Control Panel	P	Q	R	S
Standard	130	738	20	1670
B3, K3 and DIEMATIC-m3	355	755	175	1760

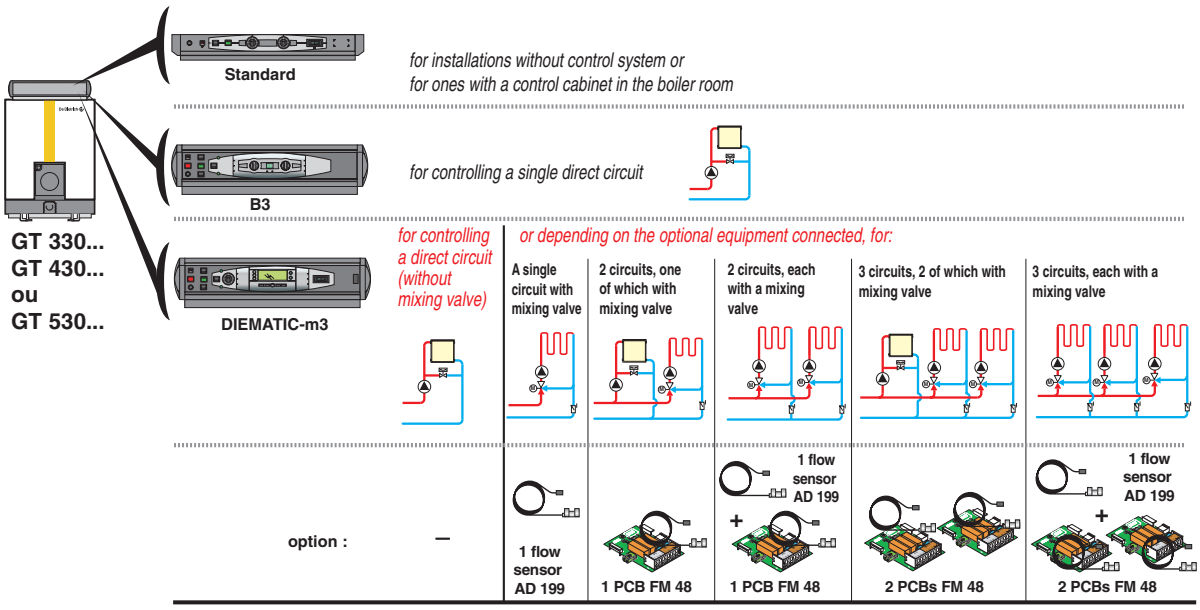
Boiler GT530-	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
A standard control panel	1606	1717	1828	1939	2050	2161	2272	2383	2494	2605	2716	2862	2973	3124	3235	3346	3457	3568	3679
B3, K3 and DIEMATIC-m3 control panels	1761	1872	1983	2094	2205	2316	2427	2538	2649	2760	2871	3017	3128	3279	3390	3501	3612	3723	3834
B	967	1078	1078	1300	1300	1522	1522	1744	1744	1966	1966	2188	2188	2450	2450	2672	2672	2894	2894
C	1488	1488	1488	1488	1488	1488	1488	1488	1488	1488	1488	1504	1504	1504	1504	1504	1504	1504	1504
D	240	211	212	233	234	255	256	217	188	189	210	236	257	208	209	230	231	252	253
ø E (to be welded)	139,7	139,7	139,7	139,7	139,7	139,7	139,7	139,7	139,7	139,7	139,7	159	159	159	159	159	159	159	159
ø F	300	300	300	350	350	350	350	400	400	400	400	400	400	400	*	*	*	*	*
G	-	-	-	-	-	-	-	-	150	150	370	370	370	650	650	650	980	980	980
H	21	-8	-7	14	15	36	37	-2	-31	-30	-9	-8	13	-36	-35	-14	-13	8	9
K**	33	4	5	26	27	48	49	10	-19	-18	3	4	25	-24	-23	-2	-1	20	21
L	1305	1445	1555	1645	1755	1845	1955	2105	2245	2355	2445	2555	2645	2845	2955	3045	3155	3245	3355
M	248	265	319	243	297	221	275	259	324	269	321	265	299	269	324	269	324	249	303
T	706	817	928	1039	1150	1261	1372	1483	1594	1705	1816	1927	2038	2189	2300	2411	2522	2633	2744
U	1355	1466	1577	1688	1799	1910	2021	2132	2243	2354	2465	2576	2687	2838	2949	3060	3171	3282	3393

CHOICE OF CONTROL PANEL

The control panel is chosen according to the installation to be constructed:

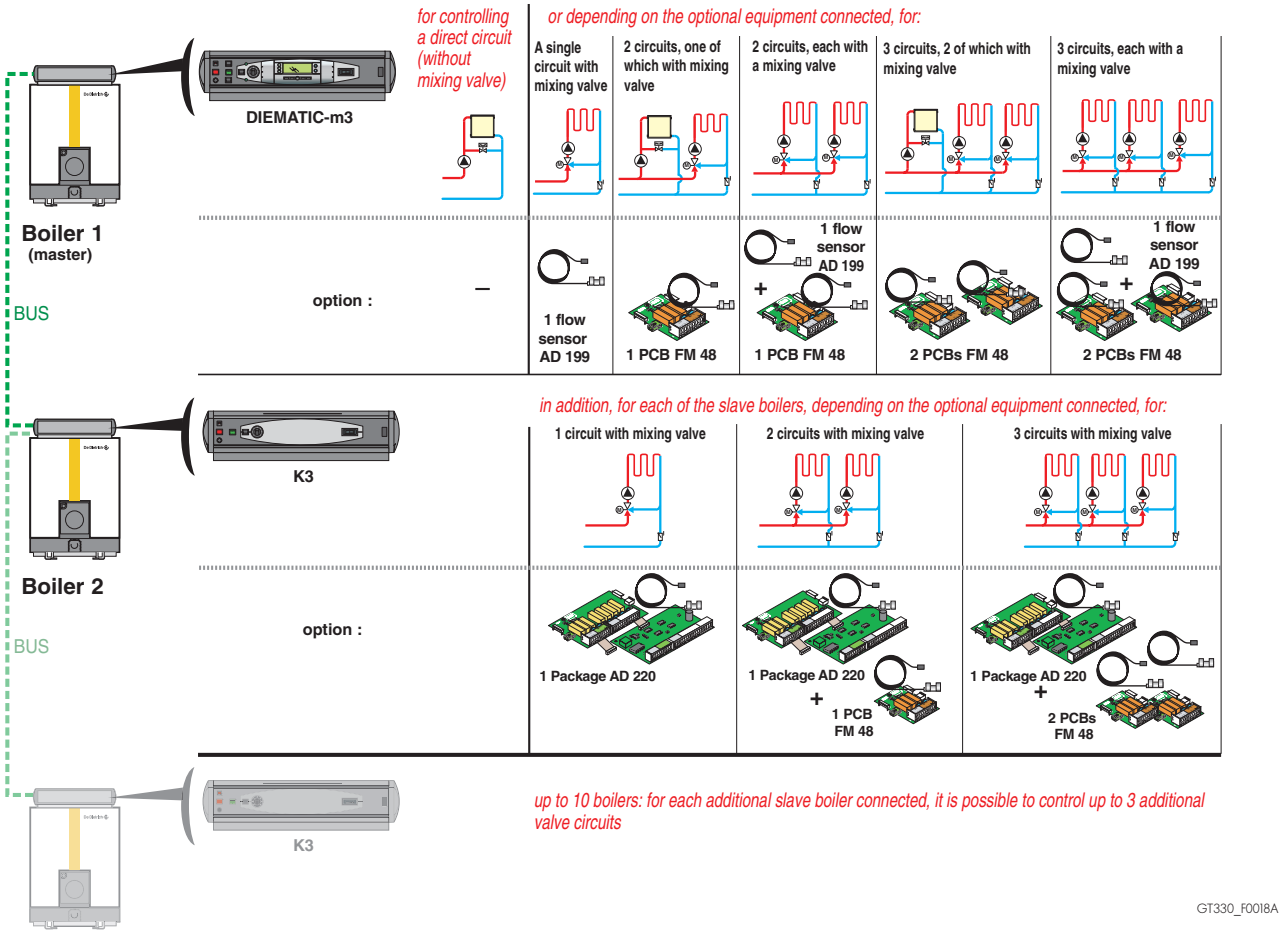
INSTALLATION WITH A SINGLE BOILER

3 types of control panel are possible:



CASCADE INSTALLATION OF 2 TO 10 BOILERS

2 types of control panel are required: 1 DIEMATIC-m3 control panel for the first boiler in the cascade (master boiler) and 1 K3 control panel for each of the slave boilers.



GT330_F0018A

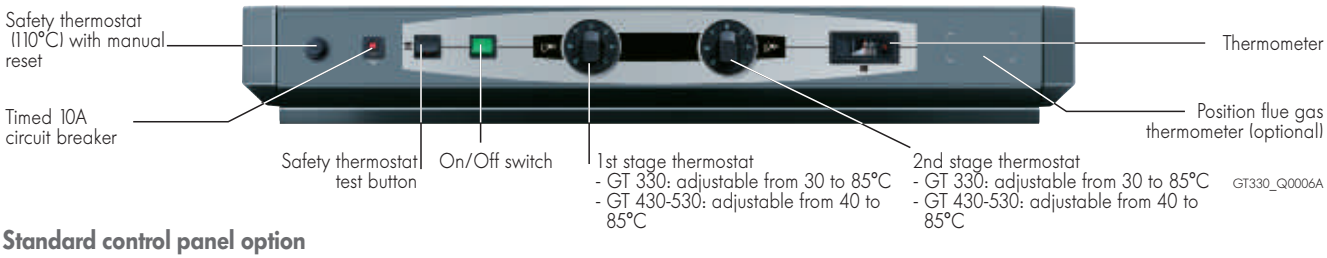
DHW PRODUCTION

The B3 and DIEMATIC-m3 control panels include the "DHW priority" function and can therefore be complemented with 1 DHW sensor – package AD 212 – for controlling an independent hot water tank.

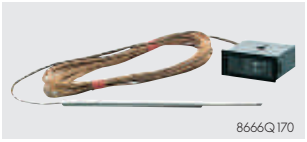
THE VARIOUS CONTROL PANELS

STANDARD CONTROL PANEL

GT 330, GT 430 and GT 530 boilers are delivered with a standard control panel for controlling 1- or 2-stage burners. These configurations are recommended for heating installations without a control system or with a control cabinet in the boiler room.



Standard control panel option

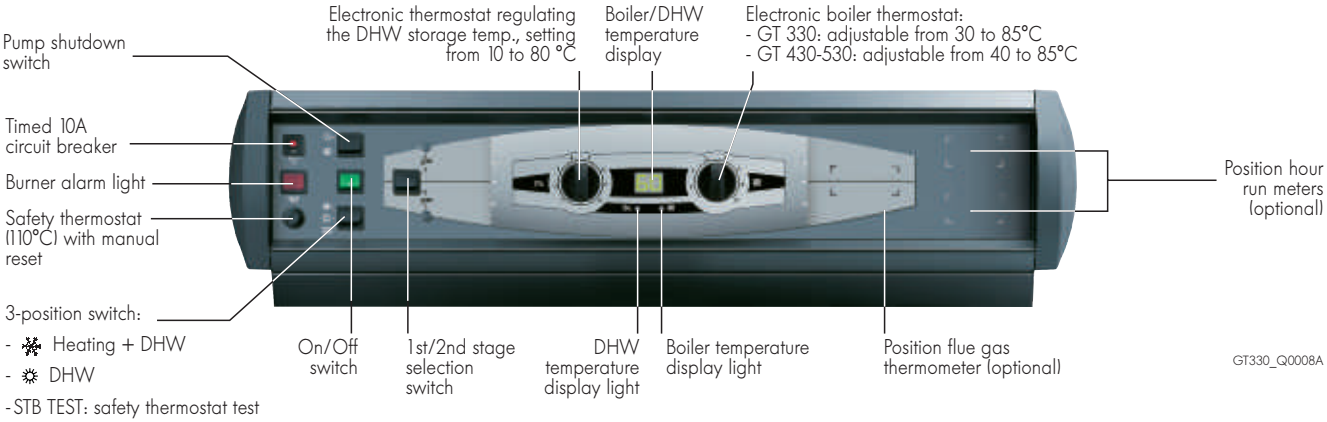


Flue gas thermometer - Package BP 28

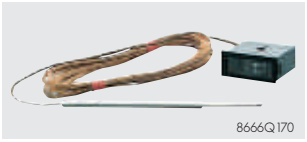
This is clipped into the position provided on the control panel.

B3 BASIC CONTROL PANEL

The B3 control panel fitted to GT 330 B3, GT 430 B3 and GT 530 B3 boilers is used to control 1- or 2-stage burners. It includes control and safety devices used to operate the installation by regulating its temperature with the boiler thermostat. It is fitted as standard with domestic hot water production priority (optional DHW sensor: package AD212) when the GT… B3 is connected to an independent tank.



B3 control panel options



Flue gas thermometer - Package BP 28

This is clipped into the position provided on the control panel.

Hour run meter - Package BG 40

Used to display the number of hours of burner operation. If using a 2-stage burner, 2 hour run meters displaying the number of hours of operation for each stage are required. Can be clipped into the positions provided in the control panel.

Domestic hot water sensor - Package AD 212

This is used to regulate the boiler with domestic hot water temperature priority.

Programmable wire-controlled room thermostat - Package AD 137
Programmable wireless room thermostat - Package AD 200
Non-programmable room thermostat - Package AD 140

These thermostats handle the regulation or weekly heating programme on a direct circuit (models AD 137 and AD 200) by activating the burner.

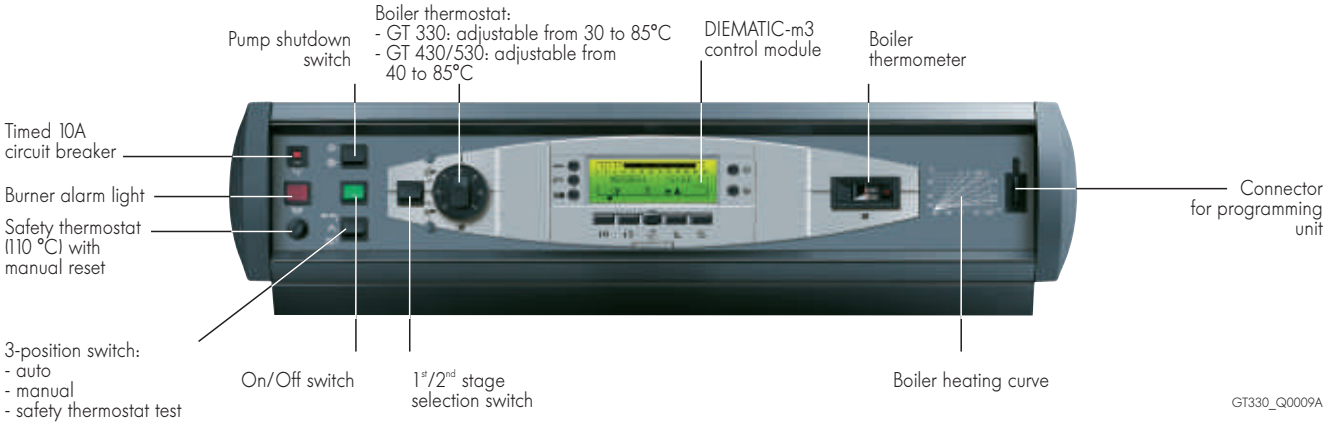
THE VARIOUS CONTROL PANELS

DIEMATIC-m3 AND K3 CONTROL PANELS

The DIEMATIC-m3 control panel is a very advanced control panel, which includes electronic programmable regulation as standard to modulate the boiler temperature by activating the burner (1, 2 stages or modulating) according to the outside temperature and the room temperature if a CDI 2 or CDR 2 interactive remote control is connected (optional)
As standard, DIEMATIC-m3 is capable of automatically operating a central heating installation with a direct circuit without mixing valve or a circuit with mixing valve (the flow sensor – package AD 199 – must be ordered separately, however).
By connecting another 1 or 2 "PCB + sensor for 1 valve circuit" options (package FM 48), it is therefore possible to control up to 3 circuits with mixing valve and each of these circuits can be fitted with a CDI 2 or CDR 2 remote control (optional)
Connection of a domestic hot water sensor enables the programming and regulation of a DHW circuit by activating a control system on the load pump; DHW looping can be handled thanks to the auxiliary contact which includes its own programming.

DIEMATIC-m3 also provides antifreeze protection for the installation and the living space if the home is unoccupied and can be programmed 1 year in advance for a period of up to 99 days.
Furthermore, the control system includes an "anti-legionella" protection option.
Moreover, in the context of larger installations, it is possible to connect from 2 to 10 boilers in cascade: only the first of these boilers will be fitted with the DIEMATIC-m3 control panel, whilst the others will be fitted with the K3 control panel. Each of these GT 330 K3, GT 430 K3 or GT 530 K3 boilers can in turn be complemented with PCBs (AD 220 + 1 or 2 x FM 48) for controlling up to 3 circuits with mixing valve (see p. 5) with or without CDI 2 or CDR 2 remote control.

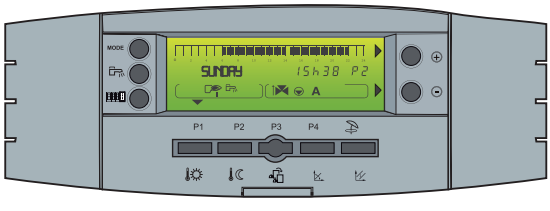
DIEMATIC-m3 control panel



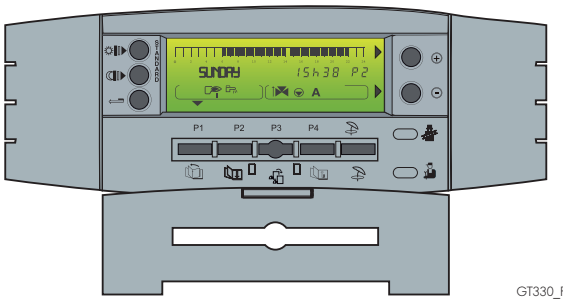
DIEMATIC-m3 control module:

The control module integrated into the DIEMATIC-m3 control panel enables the installer to set the parameters for the entire heating installation, whatever its degree of complexity. It can be used to manage equally well:
- a GT 330 DIEMATIC-m3, GT 430 DIEMATIC-m3 or GT 530 DIEMATIC-m3 boiler installed on its own,
- or a cascade of boilers in which only the first will be fitted with the DIEMATIC-m3 control panel, all the others being fitted with the K3 control panel.

It also enables the user to programme each of the circuits in the installation independently, including those connected to the slave boilers with K3 control panel in a cascade installation. It makes it possible to select the appropriate operating mode for heating (Auto mode depending on programming, "Day", "Night" or "Antifreeze" temperature mode, whether temporary or permanent), and for domestic hot water production (Auto, temporary or permanent forced load). It also makes it possible to access the various settings parameters and measurements in the installation to modify them or simply consult them, etc.



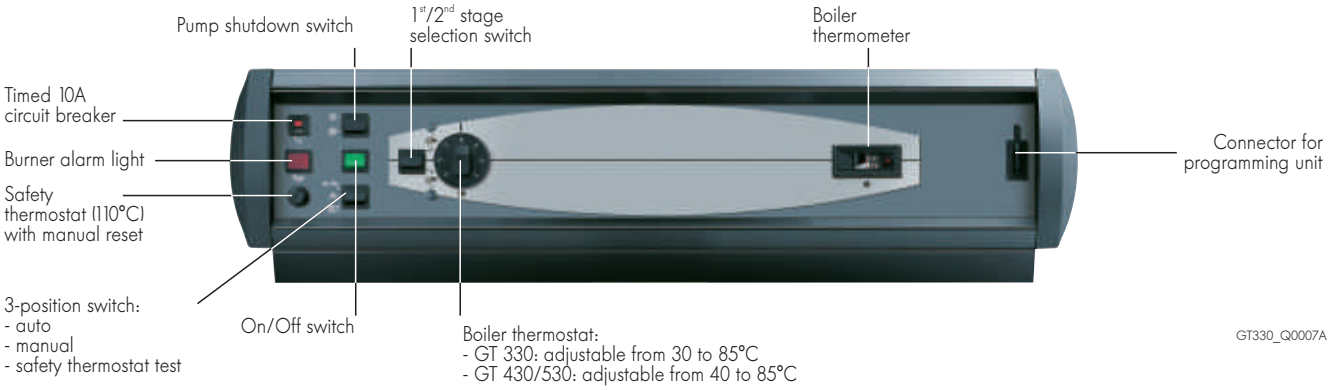
Control module, flap closed



Control module, flap open

THE VARIOUS CONTROL PANELS

K3 control panel



NB: All of the settings and measurement parameters on each of the boilers in cascades fitted with the K3 control panel can be accessed on the DIEMATIC-m3 control panel on the master boiler

DIEMATIC-m3 and K3 control panel options

Flow sensor downstream of the valve - Package AD 199

This sensor is required in installations which have only circuits with mixing valve (no direct circuit) to connect the first of these circuits to the DIEMATIC-m3 control panel – see page 8.

PCB + sensor for 1 mixing valve - Package FM 48

This is used to control a mixing valve with a 2-direction electrothermal or electromechanical motor. The valve circuit and its circulating pump can be programmed independently.

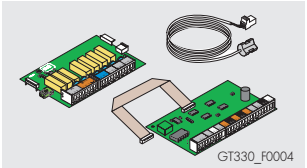
Notes:

- In addition to the sensor AD 199 for the first valve circuit, DIEMATIC-m3 can be fitted with 1 or 2 additional "PCB + sensor for 1 mixing valve" option(s) – see p. 8.
- K3 can also be fitted with these PCBs in addition to the AD 220 PCB required for the first valve circuit connected to a GT… K3.

Domestic hot water sensor - Package AD 212

This is used for priority temperature regulation and programming domestic hot water production

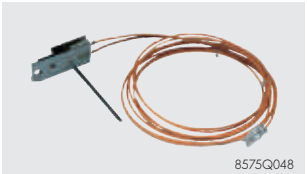
It handles the **boiler sensor function for the GT… K3** in a modulating cascade installation.



Relay PCB + sensors for the first valve circuit on a GT… K3 - Package AD 220

This PCB is required to connect the first valve circuit with mixing valve to a **GT… boiler with K3 control panel** as part of a cascade installation.

NB: 1 "relay PCB + sensors for first valve circuit" per GT… K3 boiler can be connected.



Flue gas sensor - Package FM 47

This can be fitted to a GT… DIEMATIC-m3 boiler or, in cascade installations, to each of the GT… DIEMATIC-m3 or GT… K3 boilers in this cascade.

It enables the user to read the flue gas temperature and thus check the cleanliness of the heat exchange surfaces in the boiler body.

THE VARIOUS CONTROL PANELS

DIEMATIC-m3 and K3 control panel options (contd.)


8575Q026

CDI 2 interactive remote control – Package FM 51
CDR 2 interactive "radio" remote control (with radio transmitter) – Package FM 161
CDR 2 "radio" remote control module (without transmitter) – Package FM 162

These are used to override all instructions from the DIEMATIC-m3 or K3 control panel from the room in which they are installed. In addition, they enable the heating control to adapt itself to the circuit concerned (one CDI 2 or CDR 2 per circuit). In the case of the CDR 2, data are transmitted by radio waves from their point of installation to the transmitter/receiver box located close to the boiler.


8575Q037

Simplified remote control with room sensor – Package FM 52

The connection of a simplified remote control is used to override certain instructions from the DIEMATIC 3 or K3 control panel from the room in which it is installed: programme override (permanent comfort or low) and set room temperature override (±3.5°C). It is also used to enable the self-adaptability of the heating curve for the circuit concerned (1 simplified remote control per circuit).


8227Q020

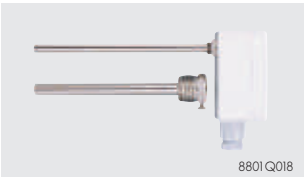
BUS connecting cable (length 12 m) – Package AD 134

This cable is used to make the connection between the DIEMATIC-m3 control panel and the transmitter on a remote management network or a DIEMATIC VM control system.


8199Q063

BUS connecting cable (length 40 m) – Package DB 119

This armoured cable is intended to replace the BUS cable delivered with the GT… K3 (length 12 m) or the 12 m BUS cable (package AD 134) presented above, when these turn out to be too short.


8801Q018

Dip sensor with sensor tube – Package AD 218

This dip sensor (NTC 147) is delivered with an IP54 junction box and a 1/2" sensor tube, length under head 120 mm. It is used instead of the attachable sensors provided with the valve PCB options. It can also be used on the decoupling tank in the context of a cascade installation, for example.

DIEMATIC VM control system – Package AD 120

With the addition of a BUS cable, the DIEMATIC-m3 control panel can be completed with one or more DIEMATIC VM modules (up to 20), making it possible to control 2 additional hydraulic circuits each

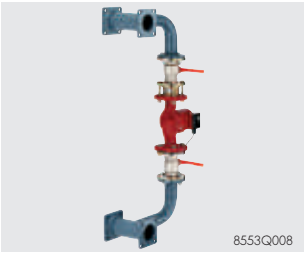
Each of these circuits may be either:
- a heating circuit with motorised 2-way valve
- or a domestic hot water preparation circuit
- or an auxiliary circuit. See specific instruction booklet for the "DIEMATIC VM Control System".

BOILER OPTIONS

Options specific to GT 330

Recirculation kit up to 150 kW – Package FD 36 (for GT 334-335 and 336)

This kit, which includes a pump and two gate valves, is fitted to the outlet and return flanges to the rear of the boiler, either right or left. It is used in installations with a single boiler with flow/return collector.



Recirculation kit from 150 to 330 kW – Package FD 46 (for GT 337-338-339)

This kit, which includes a pump and two gate valves, is fitted to the outlet and return flanges to the rear of the boiler, either right or left. It is used in installations with a single boiler with flow/return collector.

Safety unit up to 115 kW – Package FD 39 (for GT 334-335)
or
Safety unit from 115 to 330 kW – Package FD 42 (for GT 336 to 339)

Includes an automatic air vent, a safety valve calibrated to 6 bar, and a pressure gauge.

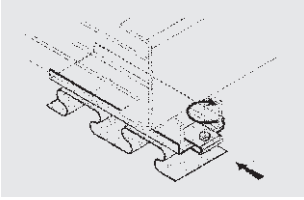
Flush valve kit – Package FD 37

Is connected to the flush opening Rp 2 1/2 provided for this purpose on the front of the boiler.

Set of 2 counter flanges with shoulder Ø 2" – Package FD 38

To replace the 2 1/2" Ø counter flanges delivered as standard with the GT 330.

Options specific to GT 430



Anti-vibration studs – Package CS 60 and CS 61

Boiler	Type	GT 430-8 to 430-10	GT 430-11 to 430-14
Package	N°	CS 60	CS 61
Length	mm	271	271
Height	mm	58	58
Number of parts per package		4	6

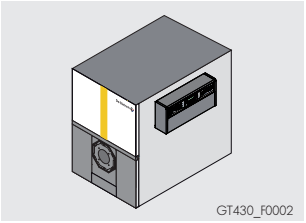
Options specific to GT 530

Set of anti-vibration studs – Package AK 18 to AK 21

Boiler	Type	GT 530-7 to 430-9	GT 530-10 to 530-16	GT 530-17 to 530-20	GT 530-21 to 530-25
Package	N°	AK 18	AK 19	AK 20	AK 21
Length	mm	100	100	100	100
Height	mm	43	43	43	43
Compression	mm	5	5	5	5
Number of parts per package		4	4	4	4

BOILER OPTIONS

Options common to GT 330, GT 430 and GT 530


GT430_F0002

B3 lateral control panel – Package MD140
K3 lateral control panel – Package MD139
DIEMATIC-m3 lateral control panel – Package MD138

The B3, K3 and DIEMATIC-m3 control panels delivered from the factory with GT 330, GT 430 and GT 530 boilers are designed to be fitted to the front and on top of the boiler.

For reasons of accessibility in the boiler room, it may be an advantage to have control panels that can be fitted to the side of the boiler.


8801Q019

Burner relay box 230 V – Package BP 51

By using simple plug-in connectors, this box is used to relay a 230 V burner with specifications higher than the values admitted by the control panel: mechanical output higher than 450 W and a start-up intensity higher than 16 A.
The values admissible are then 1500 W mechanical and 50 A max. for 0.5 seconds.


M300S M300_Q0001

M40S 8802Q016


G300N G300_Q0002


G50S 8802Q034

M... oil or G... gas burners

The oil or gas burners available are particularly compact burners, especially designed to obtain optimum performance in combination with each of the De Dietrich boilers to which they can be fitted: high efficiency and combustion quality.

Burner recommendations per boiler type:

Boiler/Burners	domestic fuel oil	gas Low NOx	gas Eco. NOx
GT 334	M302-1S	-	G 201-2N or G203-2N
GT 335	M301-2S or M302-2S	G 301-2S or G 303-2S	G 303-2N
GT 336	M301-3S or M302-3S	G 301-3S or G 303-2S	G 303-3N
GT 337	M301-4S ou M 302-4S	G 303-5S	G 303-3N
GT 338	M302-5S	G 303-5S	G 303-5N
GT 339	M302-5S	G 303-5S	G 303-5N
GT 430-8	M302-6S	G 43-1S	-
GT 430-9	M42-2S or M42-3S	G 43-1S	-
GT 430-10 and 430-11	M42-4S	G 43-2S	-
GT 430-12 to 430-14	M42-5S	G 43-3S	-
GT 530-7	M42-1S	G43-1S	-
GT 530-8	M42-2S or M42-3S	G43-1S	-
GT 530-9 and 530-10	M42-4S	G43-2S	-
GT 530-11	M42-4S	G43-3S	-
GT 530-12 to 530-16	M42-5S	G43-3S	-
GT 530-17 to 530-23	M52-1S	G53-1S	-
GT 530-24 and 530-25	M52-1S	G53-2S	-

NB: G 40/G 50 burners should be completed with a gas train adapted to the mains gas pressure

The specifications and performances of these burners are given in the various technical booklets which cover them.


8980Q206
8962Q001

Domestic hot water production

De Dietrich BP or BC series independent hot water tanks with a capacity of 150 to 500 litres or the B 800/1000 can be used for domestic hot water production for individual and collective dwellings as well as for industrial and commercial premises
They are lined with food quality standard high quartz content vitrified enamel and protected by an anode (magnesium for BC/BP..., "Correx®" imposed current for B 800/1000). The specifications and performances of these tanks are given in the technical leaflets – BP/BC 150 to 500 and B 800-1000 Independent Hot Water Tanks.

INFORMATION REQUIRED FOR INSTALLATION

INSTALLATION IN BOILER ROOMS

Ventilation

This must comply with prevailing national regulations
Examples (France) :
Top and bottom ventilation mandatory
- Top ventilation:
  Cross section equal to half of the total cross section of the flue gas conduits with a minimum of 2.5 dm^2
- Bottom ventilation:
  Direct air inlet: S (dm^2) $\geq \frac{0,86\ P}{20}$

P = *Installed output in kW*

The air inlets must be located in such a way in relation to the top ventilation vents that air is renewed in the entire volume of the boiler room.

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.

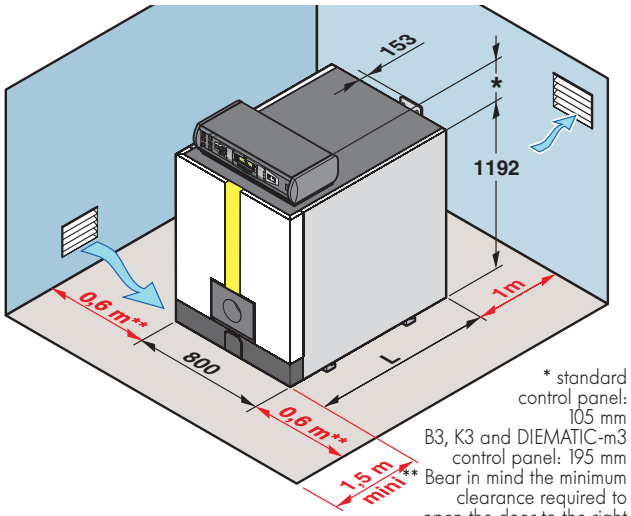
Installation

The dimensions shown in red are the minimum recommended dimensions for providing adequate access around the boiler. They are given in metres.
These dimensions also allow clearance for the assembly tools in front of and behind the boiler when assembling the boiler body.

Dimensions of the assembled body and the base frame

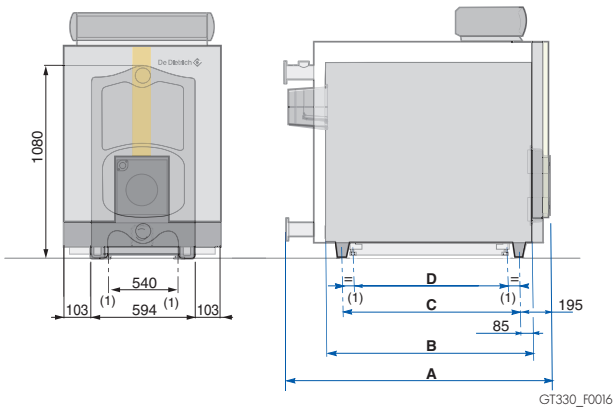
The dimensions indicated provide adequate access in the boiler room and also allow for the dimensions of the base frame.
The upper lateral openings on the front and rear sections can be used for lifting the assembled boiler body.

⇨ GT 330



* standard control panel: 105 mm
B3, K3 and DIEMATIC-m3 control panel: 195 mm
** Bear in mind the minimum clearance required to open the door to the right or to the left when the burner is fitted.

GT330_F0012B



GT330_F0016

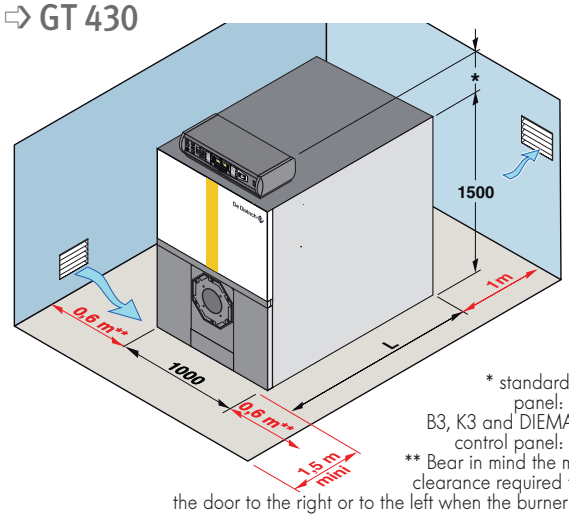
GT		334	335	336	337	338	339
L	mm	840	1000	1160	1320	1480	1640

GT		334	335	336	337	338	339
A	mm	991	1151	1311	1471	1631	1791
B	mm	660	820	980	1140	1300	1460
C	mm	490	650	810	970	1130	1290
D	mm	413	573	733	893	1053	1213

(1) 4 feet adjustable from 0 to 40 mm

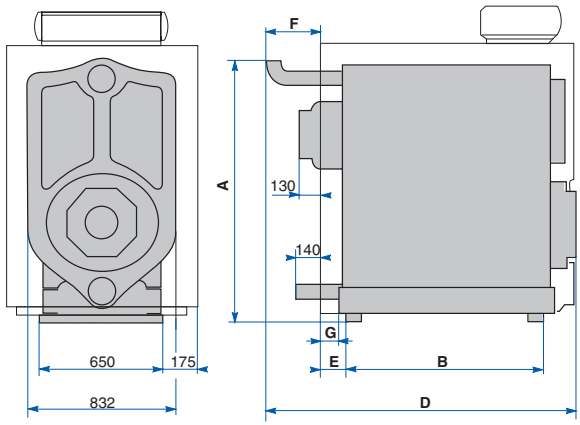
INFORMATION REQUIRED FOR INSTALLATION

⇨ GT 430



* standard control panel: 105 mm
B3, K3 and DIEMATIC-m3 control panel: 195 mm
** Bear in mind the minimum clearance required to open the door to the right or to the left when the burner is fitted

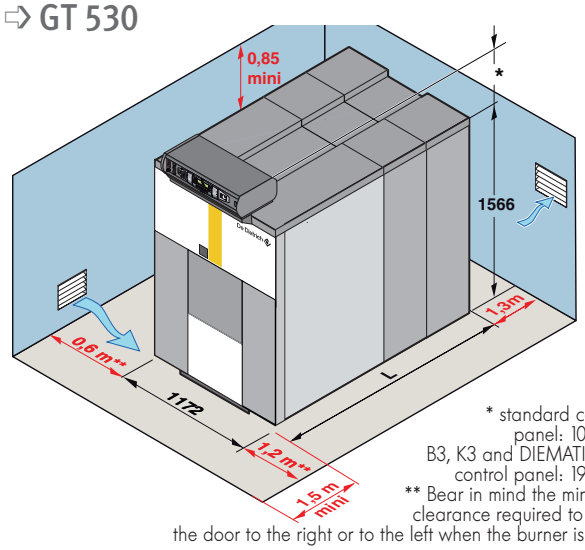
GT430_F0002



GT		408	409	410	411	412	413	414
L	mm	1505	1665	1825	1985	2145	2305	2465
C		1,5	2	2	2	2,5	2,5	2,5

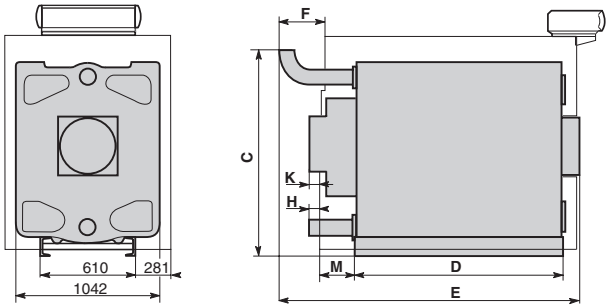
GT		408	409	410	411	412	413	414
A	mm	1427	1427	1427	1447	1447	1447	1447
B		1210	1530	1530	1850	1850	2170	2170
D		1803	1963	2123	2309	2469	2629	2789
E		170	0	160	0	160	0	160
F		276	276	276	302	302	302	302

⇨ GT 530



* standard control panel: 105 mm
B3, K3 and DIEMATIC-m3 control panel: 195 mm
** Bear in mind the minimum clearance required to open the door to the right or to the left when the burner is fitted

GT530_F0002



8555F005A

GT	530-	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Dimension L	mm	1305	1445	1555	1645	1755	1845	1955	2105	2245	2355	2445	2555	2645	2845	2955	3045	3155	3245	3355
Dimension C	mm	1488	1488	1488	1488	1488	1488	1488	1488	1488	1488	1488	1504	1504	1504	1504	1504	1504	1504	1504
Dimension D	mm	967	1078	1078	1300	1300	1522	1522	1744	1744	1966	1966	2188	2188	2450	2450	2672	2672	2984	2984
Dimension E	mm	1604	1715	1826	1937	2048	2159	2270	2381	2492	2603	2714	2860	2971	3122	3233	3344	3455	3566	3677
Dimension F	mm	310	281	282	303	304	325	326	287	258	259	280	316	337	288	289	310	311	332	333
Dimension H	mm	21	-8	-7	14	15	36	37	-2	-31	-30	-9	-8	13	-36	-35	-14	-13	8	9
Dimension K*	mm	33	4	5	26	27	48	49	10	-19	-18	3	4	25	-24	-23	-2	-1	20	21
Dimension M	mm	248	265	319	243	297	221	275	259	324	269	321	265	299	269	324	269	324	249	303

* Dimension corresponding to the extremity of the chimney connection (nozzle height 100 mm)

CONNECTION TO THE CHIMNEY

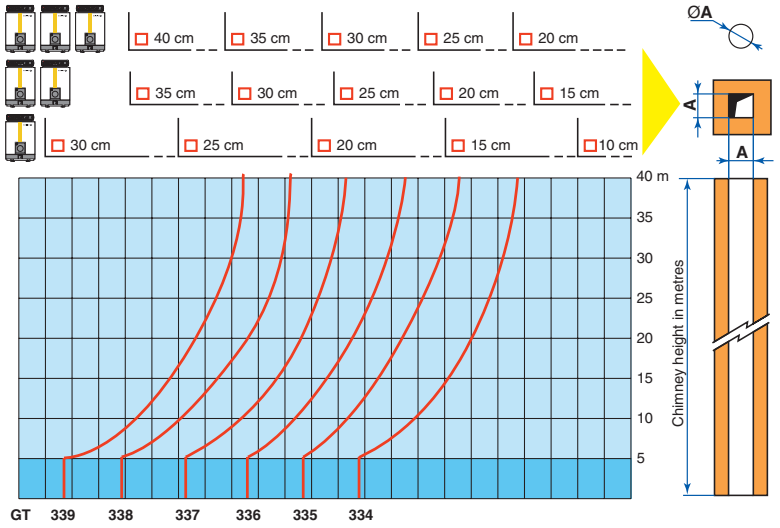
The high performances of modern boilers, their use in particular conditions connected with the development of burner technologies (operation at 1st stage or at the lower end of the modulation range) provide low, or even very low flue gas temperatures. This necessitates the use of flues designed to enable the flow of the condensates which may result from such operating modes, thus preventing the risk of damage to the chimney.

To define the cross section and height of the chimney, refer to the prevailing regulations. It should be noted that GT 430/430/530 boilers are boilers with a sealed pressurised combustion chamber and that the nozzle pressure must not exceed 0 mbar unless particular precautions have been taken to check the seal, in the case of connection to a static recuperator/condenser, for example.

INFORMATION REQUIRED FOR INSTALLATION

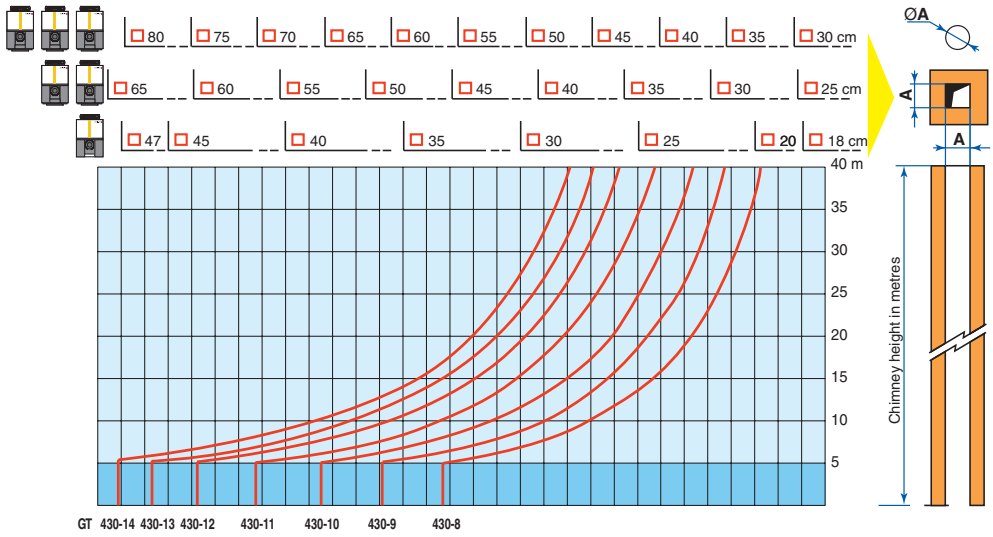
The calculation charts below show the minimum dimension (in cm) of the sides of a chimney with a square cross section, depending on its height (in m) for each type of GT 330/430/530 boiler with the connection of one, two or three boilers per chimney. If using tubing, its interior diameter will be equal to dimension A.
These dimensions are given as a rough guide for a horizontal connection length between the nozzle and the chimney equal to 5 m maximum, comprising a maximum of one 90° elbow and one T-vent. However, care must be taken to comply with prevailing (national or local) regulations.
Note: Depending on the configuration of the chimney, it may be necessary to add a draft moderator to ensure a partial vacuum of zero at the boiler nozzle.

⇨ GT 330



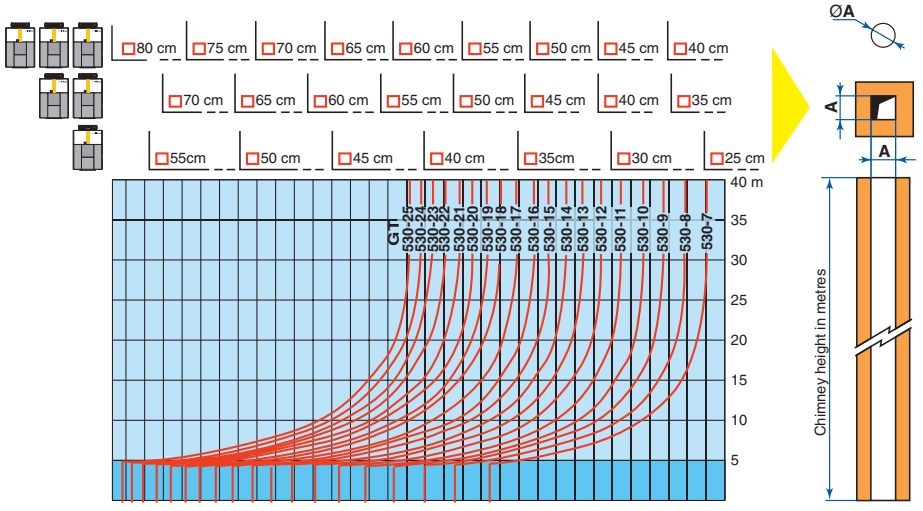
GT330_F0021

⇨ GT 430



GT430_F0003

⇨ GT 530



GT530_F0003

INFORMATION REQUIRED FOR INSTALLATION

Instructions for the hydraulic connection of boilers with an output equal to or greater than 116 kW

Operating in cascade

After stopping the burner:
- time delay required before the order to close a gate valve: 3 min.
- order to stop the shunt pump (located between the boiler and the gate valves) using the limit switch contact on the gate valve.

Operation in 2 stages with an oil or gas burner

– boiler temperature maintained at 50°C or higher; the first stage must be set to a minimum of 30% of the nominal output.
- operating at modulated low temperature; the first stage must be set to a minimum of 50% of the nominal output.

Operating with a modulating gas burner

– boiler temperature maintained at 50°C or higher; the burner can modulate down to 30% of the nominal output.
– operating at low modulated temperature; the burner can modulate down to 50% of the nominal output.

Water flow rate in the boiler

When the burner is operating, the water flow rate in the boiler must be between 1/3 of the nominal flow rate and 3 times the nominal flow rate.

$$\text{Nominal flow } Qn = \frac{0{,}86\ Pn}{15}$$

$$\text{Minimum flow } Qmin = \frac{Qn}{3} = \frac{0{,}86\ Pn}{45}$$

$$\text{Maximum flow } Qmax = 3 \times Qn = \frac{0{,}86\ Pn}{5}$$

Qn *in* m^3/h

Pn *Nominal output (maximum boiler output) in kW*

Installation diagrams

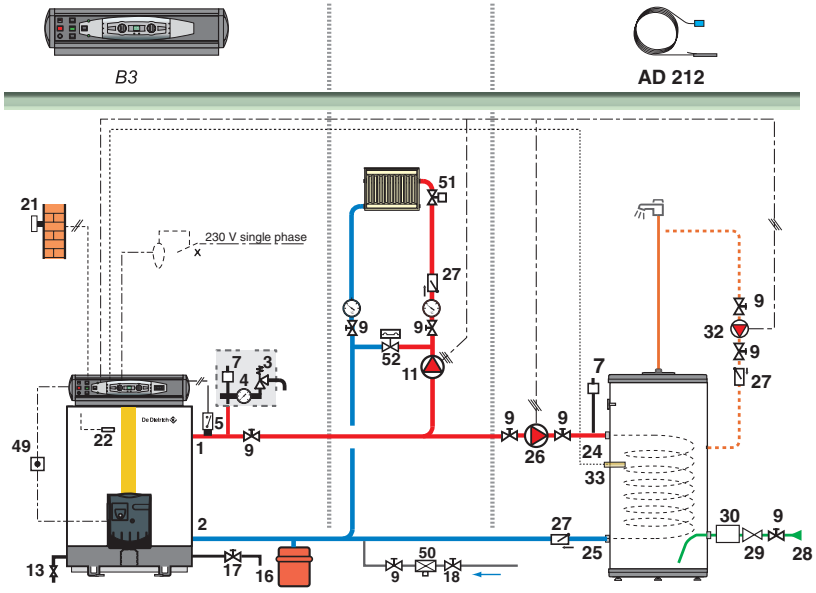
The examples presented below cannot cover the full range of installation scenarios which may be encountered. Their purpose is to draw the attention to the basic rules to be followed. A certain number of control and safety devices are represented but, in the last resort, it is up to the experts, consultant engineers and design departments to make the final decision on the control and safety devices to be used in the boiler room, depending on its specificities.
In all events, it is necessary to abide by the codes of practice and the prevailing local and national regulations.

NB: 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.
* mandatory, in compliance with safety directives: we recommend hydraulic safety units with membranes.

INFORMATION REQUIRED FOR INSTALLATION

Installation of a GT 330 B3 with 1 direct circuit + 1 domestic hot water circuit

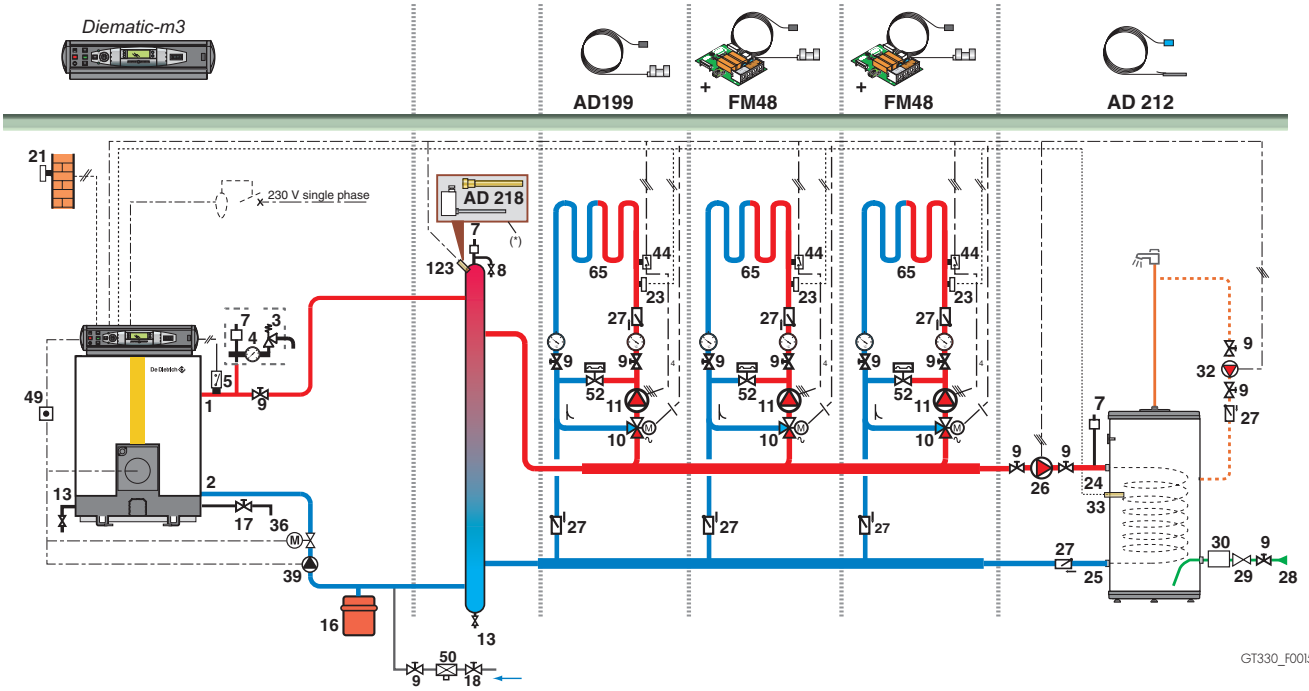
(Schematic valid by analogy for a GT 430 B3 or a GT 530 B3)



GT330_F0014

Installation of a GT 330 DIEMATIC-m3 with 3 circuits with mixing valve + 1 domestic hot water circuit, all behind a decoupling cylinder

(Schematic valid by analogy for a GT 430 DIEMATIC-m3 or a GT 530 DIEMATIC-m3)

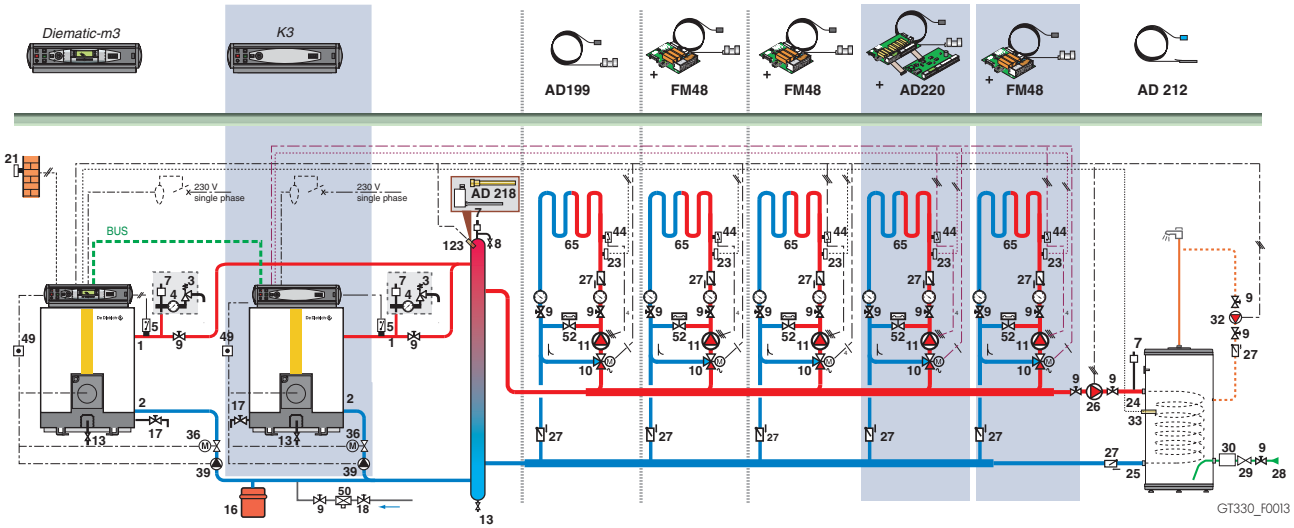


GT330_F0015

See captions on page 20

INFORMATION REQUIRED FOR INSTALLATION

Installation of 2 boilers in cascade with 3 circuits with mixing valve + 1 domestic hot water circuit connected to the GT 330, 430 or 530 DIEMATIC-m3 master boiler, and 2 circuits with mixing valve connected to boiler no. 2: GT 330/430/530 K3, all of these circuits behind a decoupling cylinder



1 Heating flow
2 Heating return
3 Safety valve
4 Pressure gauge
5 Flow rate controller
7 Automatic air vent
8 Manual air vent
9 Valve
10 3-way mixing valve
11 Heating pump
13 Flush valve
16 Expansion tank
17 Drainage valve
18 Heat circuit filling
21 Outside temperature sensor
22 Boiler control system sensor
23 Flow temp. sensor downstream of mixing valve
24 Primary inlet on the DHW tank exchanger
25 Primary outlet on the DHW tank exchanger
26 DHW load pump
27 Non-return valve
28 Domestic cold water inlet
29 Pressure reducer
30 Sealed safety unit calibrated to 7 bar
32 DHW loop pump (optional)
33 DHW temperature sensor
36 Motorised gate valve
39 Injection pump
44 Thermostat limiting the temperature to 65°C with manual reset for underfloor heating
49 Contactor mandatory if the burner is powered with three-phase current or if the specifications of the 230 V burner are higher than those admissible by the control panel
50 Disconnector
51 Thermostatic valve
52 Differential valve (only with module fitted with a 3-speed pump)
56 DHW circulation loop return
61 Thermometer
65 Low temperature circuit (radiator or underfloor heating)
123 Cascade flow sensor
(*) In this kind of system, the installation of a dip sensor (package AD 218) in the decoupling cylinder is recommended. However, it is also possible to use the boiler sensor provided with the GT 330 DIEMATIC-m3

DE DIETRICH THERMIQUE
S.A.S. with registered capital of 21 697 200 €
57, rue de la Gare - F 67580 Mertzwiller
Tel. + 33 3 88 80 27 00 - Fax + 33 3 88 80 27 99
www.dedietrich-heating.com

07/07 – 300014061 – 347555.559 Strasbourg Companies Register – Document not contractually binding - Printed in France - OTT imprimeurs - 67310 Wasselonne - 72319