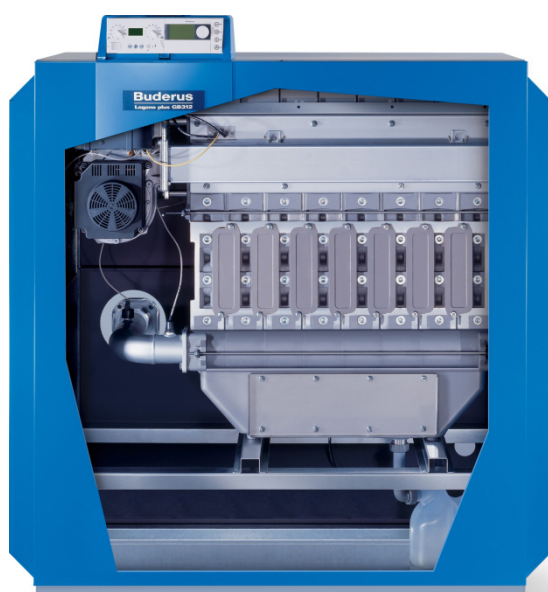


TECHNICAL DATA SHEET

PRODUCT: Buderus GB312 Boiler

GB312 Floor Standing Condensing Boiler:

GB312 – 90	31 – 90kW @50/30
GB312 – 120	31 – 120kW @50/30
GB312 – 160	42 – 160kW @50/30
GB312 – 200	62 – 200kW @50/30
GB312 – 240	75 – 240kW @50/30
GB312 – 280	87 – 280kW @50/30



- ▶ Individual boiler outputs from 90 to 280 kW. Cascade of two boilers up to 560kW
- ▶ Highest efficiency up to 108% (NCV), 96% Seasonal efficiency (L2B)
- ▶ Aluminium heat exchanger
- ▶ Modulating pre-mix gas burner with NOx emissions below 40mg/kWh
- ▶ Lightweight and compact
- ▶ Easy transport frame
- ▶ Easy service and maintenance. Total front servicing
- ▶ SAFE – Digital combustion control
- ▶ Energy Management system (EMS) controls
- ▶ 4000 series controls

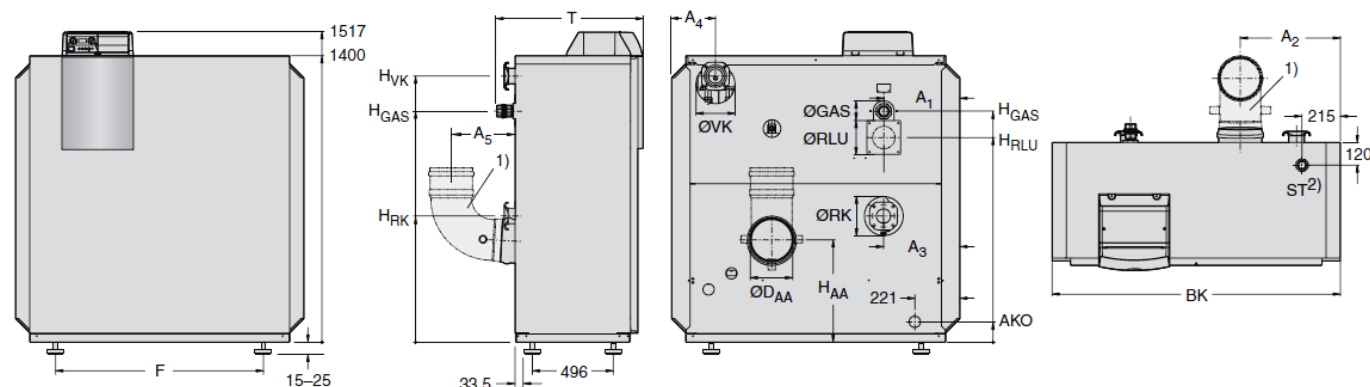
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TECHNICAL DATA SHEET

PRODUCT: Buderus GB312 Boiler

GB312 Dimensions:



- 1) Not included in the delivery
 2) Connection for Safety equipment (available as an accessory)

GB312		Unit	90	120	160	200	240	280
Height (max incl Controls)		mm	1532 - 1542					
Depth	T	mm	717					
Width	B _k	mm	994		1202		1410	
Transport (DxWxH)		mm	612x851x1400		612x1059x1400		612x1267x1400	
Clearance (Boiler feet)	F	mm	800		1008		1216	
Net weight (dry)		kg	205	205	240	265	300	330
Condensate outlet	AKO	Inch	¾	¾	¾	¾	¾	¾
Flue gas connection	Ø D _{AA}		DN160	DN160	DN160	DN200	DN200	DN200
	H _{AA}	mm	470	470	470	495	495	495
	A ₂	mm	332	332	384	436	488	540
	A ₅	mm	145	145	145	310	310	310
Boiler flow connection	Ø V _K		Rp2"	Rp2"	DN65	DN65	DN65	DN65
	H _{VK}	mm	1308	1308	1300	1300	1300	1300
	A ₄	mm	215	215	215	215	215	215
Boiler return connection	Ø R _K		Rp2"	Rp2"	DN65	DN65	DN65	DN65
	H _{RK}	mm	615	615	615	615	615	615
	A ₃	mm	270	270	374	270	374	270
Gas connection	Ø G _{AS}	Inch	R¾	R¾	R1¼	R1¼	R1¼	R1¼
	H _{GAS}	mm	1143	1143	1143	1143	1143	1143
	A ₁	mm	270	270	374	270	374	270
*Safety valve connection	ST	Inch	R1	R1	R1½	R1½	R1½	R1½
Balanced flue connection *(Optional)	Ø R _{LU}		DN100	DN100	DN100	DN100	DN100	DN100
	H _{RLU}	mm	1018	1018	1018	1018	1018	1018
	A ₁	mm	270	270	374	270	374	270

*Safety equipment and balanced flue connection pieces available as an accessory, for more information please contact your local sales manager.

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TECHNICAL DATA SHEET

PRODUCT: Buderus GB312 Boiler

GB312 Technical Specification:

GB312		Unit	90	120	160	200	240	280
Nominal heat output @ 50/30 °C	Full load	kW	90	120	160	200	240	280
	Part load	kW	31	31	42	62	75	87
Nominal heat output @ 80/60 °C	Full load	kW	84	113	150	187	225	263
	Part load	kW	28	28	38	55	66	77
Rated heat input	Full load	kW	87	116	155	193	232	271
	Part load	kW	34	34	46	57	69	80
Net efficiency (NCV)		%	108	108	108	108	108	108
Seasonal efficiency (L2B)		%	96.3	96.2	96.4	96.2	96.1	95.8
Max flow temperature		°C	85					
Max working pressure		bar	4					
Safety temperature cut-out		°C	100					
Water content		l	16	16	20	24	27	30
Water flow resistance	ΔT 20k	mbar	37	67	65	76	64	62
	ΔT 11k	mbar	136	223	195	227	215	219
Flue gas temperature @ 50/30 °C	Full load	°C	50	56	54	55	55	56
	Part load	°C	34	33	30	33	33	33
Flue gas temperature @ 80/60 °C	Full load	°C	70	78	77	76	75	78
	Part load	°C	58	57	56	58	56	58
Flue gas mass flow rate @ 50/30 °C	Full load	g/s	38.2	53.8	70.2	87.8	106	125.9
	Part load	g/s	13.6	10.1	12.9	21.5	23.0	28.4
Flue gas mass flow rate @ 80/60 °C	Full load	g/s	38.9	53.7	70.2	89.3	107.4	125.4
	Part load	g/s	14.5	15.7	20.5	26.7	32.4	37.5
CO ₂ content	Full load	%	9.1					
	Part load	%	9.3					
NO _x rating @ 0% oxygen, dry		mg/kWh	29	33	39	37	34	39
Available flue pressure		Pa	100					
Sound emission level	Full load	dB(A)	55					
	Part load	dB(A)	40					
Electrical power consumption	Full load	W	84	150	190	230	270	330
	Part load	W	40	40	45	50	50	50
Power supply			230 VAC / 50 Hz					
Electrical ingress protection			IP 40					
CE certification, product ID no.			CE0085BP5508					
Gas pressure – Natural Gas (G20)			17 - 25 mbar					
Gas rating – Natural Gas (G20)		m ³ /hr	9.2	12.3	16.4	20.4	24.6	28.7

Water Quality

As with all high performance commercial condensing boilers with aluminium heat exchangers, it is important to fill and top up the system with water that does not contain a lot of calcium carbonate. In areas where the water hardness is described as moderately hard, hard or very hard (i.e. water hardness is above 10.6° English (Clarke) hardness or has a level of calcium carbonate above 50 mg/l) it is important that the water is treated. The information about local water hardness is readily available from the supplying water company or simple testing kits available. In cases where water treatment is required Buderus recommends the use of Sentinel X100. Failure to manage water hardness can reduce the performance of the boiler or cause boiler failure which is not covered by the guarantee.

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