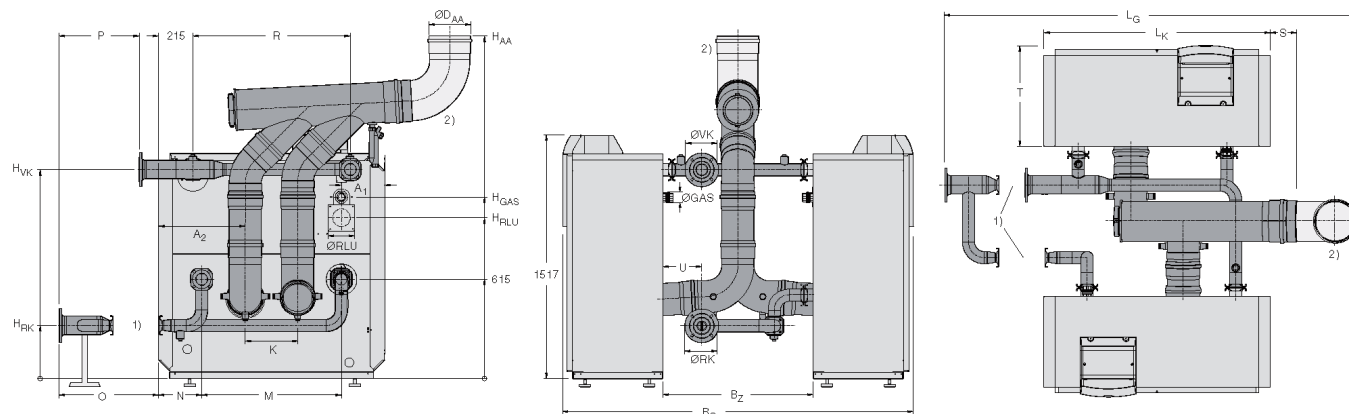


# TECHNICAL DATA SHEET

## PRODUCT: Buderus GB312 Accessories

### GB312 Cascade dimensions:



- 1) Pumps to be sized and supplied by installer  
 2) Not included within cascade kit (Available as an accessory)

GB312 Cascade		Unit	180	240	320	400	480	560
Length	L <sub>K</sub>	mm	994	994	1202	1202	1410	1410
	L <sub>G</sub>	mm	2041	2041	2243	2421	2620	2573
	S	mm	176	176	125	210	157	106
Width	T	mm	717	717	717	717	717	717
	B <sub>G</sub>	mm	1842	1842	1995	2135	2139	2135
	B <sub>Z</sub>	mm	640	640	795	935	939	935
Flue gas connection	Ø D <sub>AA</sub>		DN200	DN200	DN200	DN250	DN250	DN250
	H <sub>AA</sub>	mm	1335	1335	1342	2126	2135	2130
	A <sub>2</sub>	mm	332	332	384	436	488	540
Cascade flow connection	Ø V <sub>K</sub>		DN65	DN65	DN80	DN80	DN100	DN100
	H <sub>V<sub>K</sub></sub>	mm	1308	1308	1300	1300	1300	1300
Cascade return connection	Ø R <sub>K</sub>		DN65	DN65	DN80	DN80	DN100	DN100
	H <sub>R<sub>K</sub></sub>	mm	339.5	339.5	330	330	330	330
Gas Connection	Ø GAS	Inch	R <sup>3</sup> / <sub>4</sub>	R <sup>3</sup> / <sub>4</sub>	R1 <sup>1</sup> / <sub>4</sub>	R1 <sup>1</sup> / <sub>4</sub>	R1 <sup>1</sup> / <sub>4</sub>	R1 <sup>1</sup> / <sub>4</sub>
	H <sub>GAS</sub>	mm	1143	1143	1143	1143	1143	1143
	A <sub>1</sub>	mm	270	270	374	270	374	270
Balanced flue connection *(Optional)	Ø R <sub>LU</sub>		DN100	DN100	DN100	DN100	DN100	DN100
	H <sub>RLU</sub>	mm	1018	1018	1018	1018	1018	1018
	A <sub>1</sub>	mm	270	270	374	270	374	270
Installation dimensions	K	mm	327	327	433	327	431	327
	M	mm	455	455	453	663	663	871
	N	mm	270	270	375	270	369	270
	O	mm	518	518	563	567	619	619
	P	mm	500	500	500	500	500	500
	R	mm	565	565	775	773	982	981
	U	mm	226	226	263	259	259	259

\*Balanced flue connection pieces available as an accessory, for more information please contact your local sales manager

Whilst it is always our intention to fully assist, it is essential to recognise that all information given by the company in response to an enquiry of any nature is provided in good faith and based upon the information provided with the enquiry. We recommend that advice should always be checked with your installer or contract partner. Consequently, the company cannot be held responsible for any liability relating to the use or repetition of such information or part thereof. In addition, whilst making every reasonable effort to monitor the performance and quality of our supply, installation and service network, we do not accept responsibility for the workmanship or operation of any third party company that the company may have promoted either in conversation, e-mail or other communication.

Similarly, the views and opinions expressed in communication with individuals within the company may not reflect that of the business as a whole.

# TECHNICAL DATA SHEET

## PRODUCT: Buderus GB312 Accessories

### GB312 Cascade Technical Specification:

GB312 Cascade		Unit	180	240	320	400	480	560
Nominal heat output @ 50/30 °C	Full load	kW	180	240	320	400	480	560
	Part load	kW	31	31	42	62	75	87
Nominal heat output @ 80/60 °C	Full load	kW	168	226	300	374	450	526
	Part load	kW	28	28	38	55	66	77
Rated heat input	Full load	kW	173	232	310	386	464	542
	Part load	kW	34	34	46	57	69	80
Max flow temperature		°C	85					
Max working pressure		bar	4					
Safety temperature cut-out		°C	100					
Water content		l	32	32	40	48	54	60
Water flow resistance	ΔT 20k	mbar	46	80	77	90	88	88
	ΔT 11k	mbar	157	270	233	273	286	309
Min flue gas temperature @ 50/30 °C	Full load	°C	50	55	55	55	55	55
	Part load	°C	35	35	35	35	35	35
Min flue gas temperature @ 80/60 °C	Full load	°C	70	75	75	75	75	75
	Part load	°C	55	55	55	55	55	55
Flue gas mass flow rate @ 50/30 °C	Full load	g/s	76.4	107.6	140.4	175.6	212.0	251.8
	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	77.8	107.4	140.4	178.6	214.8	250.8
	Part load	g/s	14.5	15.7	20.5	26.7	32.4	37.5
CO <sub>2</sub> content	Full load	%	9.1					
	Part load	%	9.3					
Available flue pressure		Pa	50					
Sound emission level	Full load	dB(A)	55					
	Part load	dB(A)	40					
Electrical power consumption	Full load	W	168	300	380	460	540	660
	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.			CE 0085BP5508					
Gas pressure – Natural Gas (G20)			17 - 25 mbar					
Gas rating – Natural Gas (G20)		m <sup>3</sup> /hr	18.4	24.6	32.8	40.8	49.2	57.4

### 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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