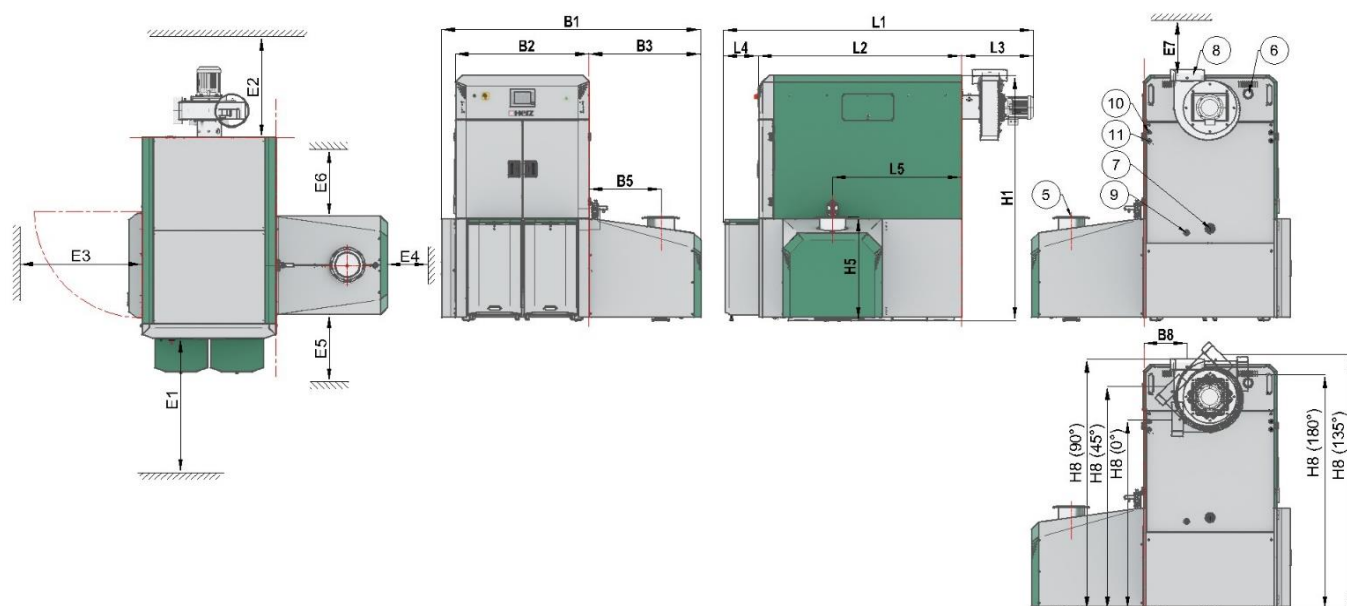


Created: PK

Responsible: RST (Construction)

Created: 30.06.2023

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Dimensions		180 - 199 - 201
L1	length	mm 2280
L2	length	mm 1500
L3	length	mm 530
L4	length	mm 255
B1	width	mm 1910
B2	width	mm 990
B3	width	mm 820
H1	height	mm 1830

minimal gap		180 - 199 - 201
E1	minimal gap (front)	mm 1000
E2	minimal gap (back)	mm 750
E3	minimal gap	mm 700
E4	minimal gap	mm 300
E5	minimal gap	mm 500
E6	minimal gap	mm 500
E7	minimal gap (over boiler)	mm 595

Inserting Dimensions		180 - 199 - 201
length	mm	1500
width	mm	910
height	mm	1830

Connections		180 - 199 - 201
5	Insert-Flange - BFP	Øi 182,5 mm
L5	BFP (length)	mm 950
B5	BFP (width)	mm 355
H5	BFP (height)	mm 770
6	Flow	2" IG
B6	Flow (width)	mm 770
H6	Flow (height)	mm 1690
7	Backflow	2" IG
B7	Backflow (length)	mm 490
H7	Backflow (height)	mm 685
8	Flue gas pipe connection	Øa Øa 200mm
B8	Flue gas pipe (90°)	mm 320
H8	Flue gas pipe (90°)	mm 1870
H8	Flue gas pipe (0°)	mm 1420
H8	Flue gas pipe (45°)	mm 1670
H8	Flue gas pipe (135°)	mm 1900
H8	Flue gas pipe (180°)	mm 1740
9	Filling / Depletion	3/4" IG
B9	Filling / Depletion (width)	mm 315
H9	Filling / Depletion (height)	mm 655
10	Input Safety heat exchanger	1/2" IG
B10	SHE (width)	mm 45
H10	SHE (height)	mm 1400
11	Output Safety heat exchanger	1/2" IG
B11	SHE (width)	mm 45
H11	SHE (height)	mm 1340

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Power Data		180		199		201	
		woodchips	pellets	woodchips	pellets	woodchips	pellets
Power range - declaration at rating plate	kW	35,1-180	34,8-180	35,1-199	34,8-199	35,1-201	34,8-201
Fuel heat output	kW	192,5	194,8	216,1	216,3	218,2	218,5
Efficiency - Nominal Load*	%	93,5	92,4	92,1	92,0	92,1	92,0
Boiler class EN 303-5		5					
Energy efficiency class		A+					
Boiler Data		180		199		201	
		woodchips	pellets	woodchips	pellets	woodchips	pellets
Boiler weight	kg	1570					
Operation temperature [max]	°C	90					
Setting Safety Temperature Limiter [max] - STL	°C	95					
Grate area	m ²	0,307					
Thermal safety valve - BFP		1					
Opening temperatur Thermal safety valve	°C	95					
Volume ash drawer heat exchanger	l	75					
Volume ash drawer combustion chamber	l	75					
Volume combustion chamber	m ³	0,3181					
Chimney draft (underpressure) [min-max]	Pa	5 - 10					
Operating overpressure [min - max]	bar	1,5 - 5					
Heat Exchanger		180		199		201	
		woodchips	pellets	woodchips	pellets	woodchips	pellets
Heat exchanger [Nr. conduits / Nr. tubes]		2 / 3x10; 3x10					
Heat exchanger surface	m ²	8,6					
Safety-Heat-Exchanger surface	m ²	0,57					
Flow safety heat exchanger [min]	l/h	> 1200					
Pressure cold water [min]	bar	2					
Hydraulic Data		180		199		201	
		woodchips	pellets	woodchips	pellets	woodchips	pellets
Water capacity	l	295					
Water flow rate (ΔT=15K) [min]	l/h	10318		11407		11522	
Flow resistance (ΔT=10K)	mBar	50,2		65,2		65,2	
Flow resistance (ΔT=20K)	mBar	13		16,9		16,9	
Recommended buffer volume [min]	l	2000		3000			
Electrical Data		180		199		201	
		woodchips	pellets	woodchips	pellets	woodchips	pellets
Power consumption	kW	3,1					
Electrical connection	V/Hz/A	~ 400 / 50 / 16					
Electrical power consumption (nominal)*	kW	0,270	0,239	0,290	0,261	0,290	0,261
Electrical power consumption (partial)*	kW	0,095 / 0,106					
Electrical power consumption (Stand-by)*	kW	0,017					
Test Report Data		180		199		201	
		woodchips	pellets	woodchips	pellets	woodchips	pellets
Test report reference number		31-10133/T5		31-10133/T6		31-10133/T7	
Test institute		SZU					

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Emission Data (Nominal Load) ($\Delta T=20K$)		180		199		201	
		woodchips	pellets	woodchips	pellets	woodchips	pellets
Flue gas temperature	°C	~ 160		~ 180		~ 180	
Flue gas mass flow**	kg/h	399,5	387,6	451,7	428,5	456,3	432,8
Flue gas flow rate**	Nm ³ /h	307,3	298,2	347,50	329,6	351,0	332,9
Flue gas flow rate**	Bm ³ /h	487,3	472,8	576,5	546,8	582,3	552,3
CO ₂ -Content*	Vol. %	13,83	13,66	13,52	13,75	13,52	13,75
Efficiency*	%	93,5	92,4	92,1	92,0	92,1	92,0

Emission Data (Partial Load) ($\Delta T=20K$) (woodchips/pellets)		180		199		201	
		woodchips	pellets	woodchips	pellets	woodchips	pellets
Flue gas temperature	°C	~ 85					
Flue gas mass flow**	kg/h	88,9 / 91,3					
Flue gas flow rate**	Nm ³ /h	68,4 / 70,2					
Flue gas flow rate**	Bm ³ /h	89,7 / 92,1					
CO ₂ -Content*	Vol. %	11,74 / 10,75					
Efficiency*	%	94,7 / 94,7					

Note:

* measured value according to test report

** calculated with fuel values from test report

Nm³/h = Standard cubic meters / hour

Bm³/h = Operating cubic meters / hour

Permissible fuel:
Woodchips for non-industrial use with low fines content according to EN ISO 17225-4 in accordance with the following specification:

.) Property class: A1, A2, B1

.) Particle size: P16S, P31S

.) Water content: min. 15 m-%, max. 40 m-% (M40)

.) Calorific value as delivered: ≥ 3.1 kWh/kg

.) Bulk density as delivered: ≥ 150 kg/m³
Wood pellets for non-industrial use according to Enplus, Swisspellet, DINplus or pellets according to EN 17225-2 according to the following specification:

.) property class A1, A2

.) the maximum permissible fines content in the fuel store must not exceed 8% of the stored fuel volume (determined with perforated screen hole diameter 5mm)!

.) fine fraction at the time of loading: < 1.0 m-%

.) heating value in delivery condition > 4.6 kWh/kg

.) bulk density BD in delivery condition > 600 kg/m³

.) mechanical strength DU, EN 15210-1 in delivery condition, m-%: DU97.5 ≥ 97.5

.) diameter 6mm

Heating water:

Please observe ÖNORM H 5195 (current edition), EN 12828 Part 1 with regard to the condition of the heating water and VDI 2035 for Germany.

Irrespective of the respective standards or directives, the following values apply as minimum requirements for filling and supplementary water:

.) pH: 8,2 - 10

.) conductivity: $< 150 \mu S$

.) total hardness: $< 0,1$ mmol/l

If a standard or guideline requires a lower value, this must be used. The heating water must be checked at regular intervals in accordance with the applicable regulations. The results must be documented and stored.

Chimney:

The chimney system must be moisture-resistant and approved for solid fuels. The diameter of the chimney system must be calculated according to EN 13384-1, but the diameter must be at least equal to the diameter of the flue pipe connection (connection 8). The chimney system must achieve tightness class N1 or P1 according to the calculation. The connecting pipe must be installed so that it rises steadily (min. 5%). In addition, all regional regulations must be observed.

Buffer tank:

A buffer tank is not required if guaranteed:

permanent minimum heat decline: 100% of the nominal power for min. 0,75 hours or 30% of the nominal power for mind. hour.

The size of the buffer depends on the system. This must be calculated by a planner in accordance with the present heating system!

Maintenance/service:

The specified free areas must be strictly adhered to when carrying out maintenance and service work.