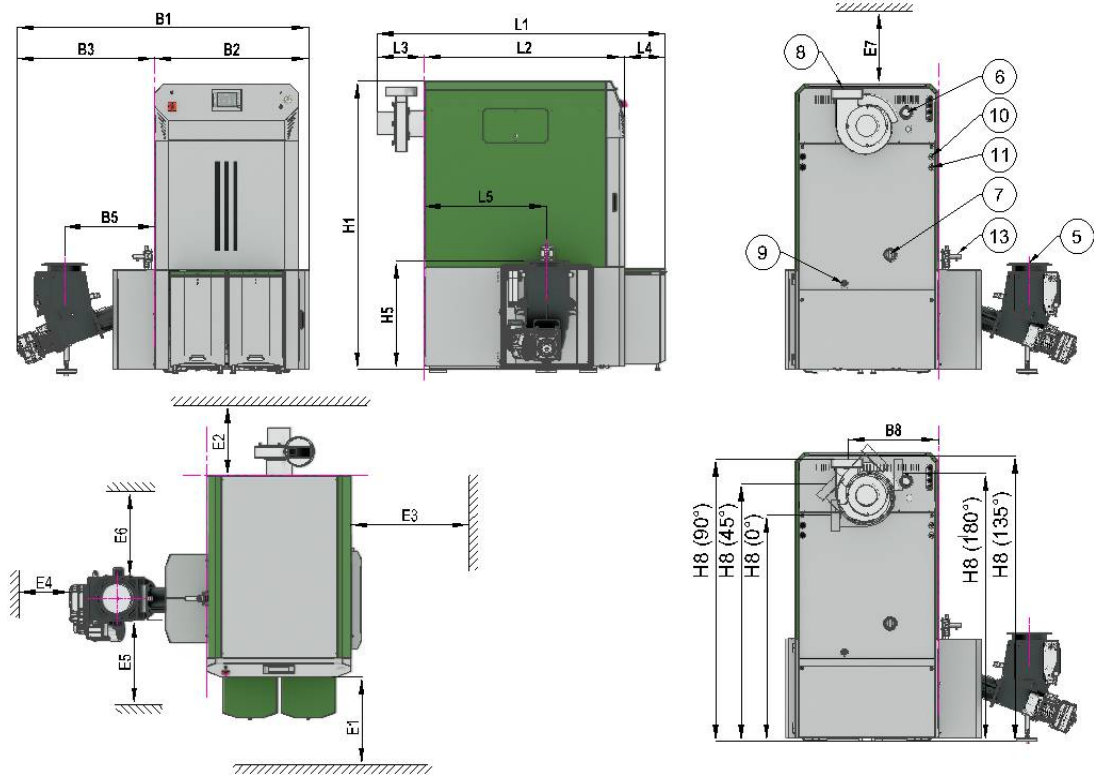


HEIM-Energie HS-F 80-100



Dimensions		80 - 100
L1 length	mm	1700
L2 length	mm	1180
L3 length	mm	280
L4 length	mm	245
B1 width	mm	1700
B2 width	mm	905
B3 width	mm	795
H1 height	mm	1690

Minimal gap		80 - 100
E1 minimal gap (front)	mm	1000
E2 minimal gap (back)	mm	750
E3 minimal gap (left)	mm	700
E4 minimal gap (right)	mm	300
E5 minimal gap	mm	500
E6 minimal gap	mm	500
E7 minimal gap (over boiler)	mm	600

Inserting Dimensions		80 - 100
length	mm	1170
width	mm	815
height	mm	1640

Connections		80 - 100
5	Insert-Flange - BFP	Øi 182,5 mm
L5	BFP (length)	mm 720
B5	BFP (width)	mm 535
H5	BFP (height)	mm 640
6	Flow	2" IG
B6	Flow (width)	mm 195
H6	Flow (height)	mm 1520
7	Backflow	2" IG
B7	Backflow (length)	mm 290
H7	Backflow (height)	mm 690
8	Flue gas pipe connection	Øa Øa 180mm
B8	Flue gas pipe (90°)	mm 555
H8	Flue gas pipe (90°)	mm 1660
H8	Flue gas pipe (0°)	mm 1330
H8	Flue gas pipe (45°)	mm 1510
H8	Flue gas pipe (135°)	mm 1670
H8	Flue gas pipe (180°)	mm 1570
9	Filling / Depletion	3/4" IG
B9	Filling / Depletion (width)	mm 560
H9	Filling / Depletion (height)	mm 520
10	Input Safety heat exchanger	1/2" IG
B10	SHE (width)	mm 45
H10	SHE (height)	mm 1260
11	Output Safety heat exchanger	1/2" IG
B11	SHE (width)	mm 45
H11	SHE (height)	mm 1200
13	Self-triggering extinguishing system	

Changes in the sense of the technical progress reserved

HEIM-Energie HS-F 80-100

Power Data		80		100	
		Woodchips	Pellets	Woodchips	Pellets
Power range - declaration at rating plate	kW	23,2 - 80		23,2 - 99	
Fuel heat output	kW	86.4	86.3	108.1	107.9
Efficiency - Nominal Load*	%	92.6	92.7	92.5	92.7
Boiler class EN 303-5		5			
Energy efficiency class		A+			
Boiler Data		80		100	
		Woodchips	Pellets	Woodchips	Pellets
Boiler weight	kg	1032			
Operation temperature [max]	°C	90			
Setting Safety Temperature Limiter [max]- STL	°C	95			
Grate area	m²	0.174			
Thermal safety valve - BFP		1			
Opening temperatur Thermal safety valve	°C	95			
Volume ash drawer heat exchanger	l	50			
Volume ash drawer combustion chamber	l	50			
Volume combustion chamber	m³	0.183			
Chimney draft (underpressure) [min-max]	Pa	5 - 10			
Operating overpressure [min - max]	bar	1,5 - 3			
Heat Exchanger		80		100	
		Woodchips	Pellets	Woodchips	Pellets
Heat exchanger [Nr. conduits / Nr. tubes]		2 / 2x6 ; 2x6			
Heat exchanger surface	m²	4.16			
Safety-Heat-Exchanger surface	m²	0.33			
Flow safety heat exchanger [min]	l/h	> 1200			
Pressure cold water [min]	bar	2			
Hydraulic Data		80		100	
		Woodchips	Pellets	Woodchips	Pellets
Water capacity	l	179			
Water flow rate (ΔT=15K) [min]	l/h	4586		5675	
Flow resistance (ΔT=10K)	mBar	22.4		34.6	
Flow resistance (ΔT=20K)	mBar	5.7		8.8	
Recommended buffer volume [min]	l	1000			
Electrical Data		80		100	
		Woodchips	Pellets	Woodchips	Pellets
Power consumption	kW	2.6			
Electrical connection	V/Hz/A	~ 230 / 50 / 16			
Electrical power consumption (nominal)*	kW	0.292	0.145	0.390	0.166
Electrical power consumption (partial)*	kW	0.105	0.072	0.105	0.072
Electrical power consumption (Stand-by)*	kW	0.017			
Test Report Data		80		100	
		Woodchips	Pellets	Woodchips	Pellets
Test report reference number		32-0129/T1			
Test institute		SZU			

Changes in the sense of the technical progress reserved

HEIM-Energie HS-F 80-100

Emission Data (Nominal Load) ($\Delta T=20K$)		80		100	
		Woodchips	Pellets	Woodchips	Pellets
Flue gas temperature	°C	~ 120		~ 150	
Flue gas mass flow**	kg/h	172.6	166.4	213.1	212.1
Flue gas flow rate**	Nm ³ /h	132.8	128	163.90	163.1
Flue gas flow rate**	Bm ³ /h	191.1	184.2	253.8	252.7
CO ₂ -Content*	Vol. %	12.95	13.7	13.53	13.36
Efficiency*	%	92.6	92.7	92.5	92.7

Emission Data (Partial Load) ($\Delta T=20K$)		80		100	
		Woodchips	Pellets	Woodchips	Pellets
Flue gas temperature	°C	~ 85			
Flue gas mass flow**	kg/h	56.5	56.3	56.5	56.3
Flue gas flow rate**	Nm ³ /h	43.5	43.3	43.5	43.3
Flue gas flow rate**	Bm ³ /h	57.0	56.8	57.0	56.8
CO ₂ -Content*	Vol. %	11.6	11.49	11.6	11.49
Efficiency*	%	92.4	93.3	92.4	93.3

Note:

* measured value according to test report

** calculated with fuel values from test report

Nm³/h = Standard cubic meters / hourBm³/h = Operating cubic meters / hour**Permissible fuel:****Wood chips** for non-industrial use with minor amount of fines according to EN ISO 17225-4 based on the following specification:

.) Property class: A1, A2, B1

.) Particle size: P16S, P31S

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

.) Net calorific value as received: $\geq 3,1$ kWh/kg.) Bulk density as received: ≥ 150 kg/m³

The nominal power output and the emission values can be guaranteed up to a maximum water content of 25% respectively to a minimum net calorific value of 3,5 kWh/kg for the authorized fuel.

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. 1 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.

Changes in the sense of the technical progress reserved