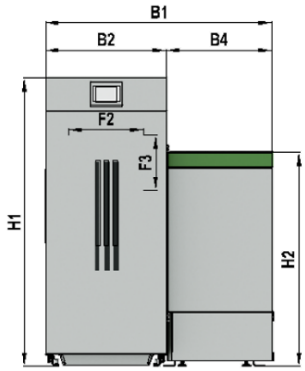
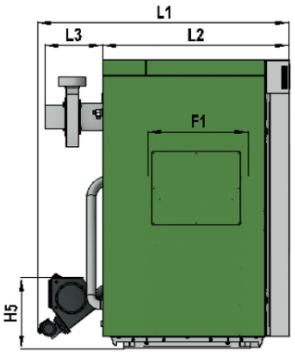
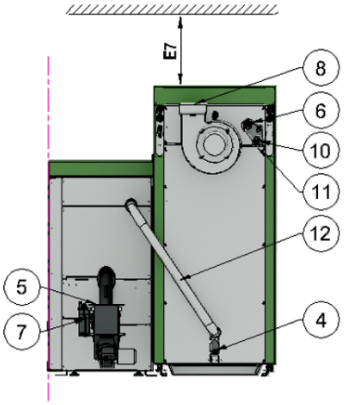
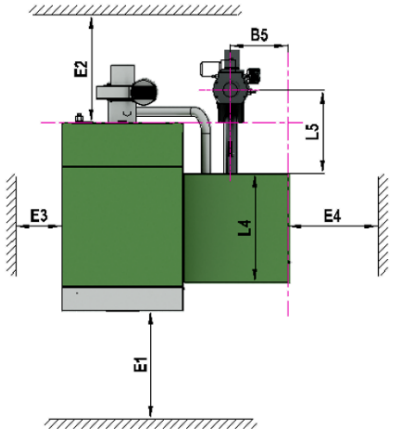
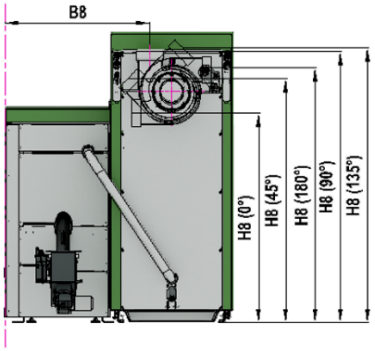
HEIM-Energie HSHP-K 20/20 - 40/30











Dimensions			20/20 - 30/30 - 40/30
L1	length	mm	1390
L2	length	mm	1035
L3	length	mm	320
L4	length	mm	600
B1	width	mm	1255
B2	width	mm	670
B4	width	mm	585
H1	height	mm	1595
H2	height	mm	1180

Minimal gap			20/20 - 30/30 - 40/30
E1	minimal gap (front)	mm	600
E2	minimal gap (back)	mm	600
E3	minimal gap (left)	mm	250 / (500)
E4	minimal gap (right)	mm	500 / (150)
E7	minimal gap (over boiler)	mm	400

Filling chute			20/20 - 30/30 - 40/30
F1	Filling chute depth	mm	560
F2	Filling chute witdth	mm	418
F3	Filling chute height	mm	305

Inserting Dimensions		20/20 - 30/30 - 40/30
length	mm	1210 / 1100
width	mm	670 / 590
height	mm	1595 / 1570

Connections			20/20 - 30/30 - 40/30
5	Insert-Flange - BFP		Øi 90 mm
L5	BFP (length)	mm	465
B5	BFP (width)	mm	320
H5	BFP (height)	mm	395
6	Flow		5/4" IT
B6	Flow (length)	mm	1105
H6	Flow (width)	mm	1380
7	Backflow		5/4" IT
B7	Backflow (length)	mm	215
H7	Backflow (width)	mm	320
8	Flue gas pipe connection		Ø 150 mm
B8	Flue gas pipe (90°)	mm	800
H8	Flue gas pipe (90°)	mm	1500
H8	Flue gas pipe (0°)	mm	1160
H8	Flue gas pipe (45°)	mm	1350
H8	Flue gas pipe (135°)	mm	1520
H8	Flue gas pipe (180°)	mm	1395
9 / 9´	Filling / Depletion (behind casing)		1/2" IT
B9/B9´	Filling / Depletion (width)	mm	920
H9/H9´	Filling / Depletion (height)	mm	140
10	Input Safety heat exchanger		1/2" ET
11	Output Safety heat exchanger		1/2" ET
B10/11	SHE (width)	mm	1155
H10/11	SHE (height)	mm	1300
12	Bypass		

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Power Data		**20 / 20**		**30 / 30**		**40 / 30**	
		log wood	**pellets**	**log wood**	**pellets**	**log wood**	**pellets**
Power range - declaration at rating plate	kW	9,0 - 20,0	6,1 - 20,0	9,0 - 30,0	6,1 - 30,0	9,0 - 40,0	6,1 - 30,0
Fuel heat output	kW	21.5	21.5	32.2	32.0	43.4	32.0
burning period - softwood/hardwood [max]	h	6,5 / 8	-	6 / 7	-	3,5 / 4,5	-
Efficiency - Nominal Load*	%	93.2	93.1	93.1	93.7	92.1	93.7
Boiler class EN 303-5		5					
Energy efficiency class		A+					
Boiler Data		**20 / 20**		**30 / 30**		**40 / 30**	
		log wood	**pellets**	**log wood**	**pellets**	**log wood**	**pellets**
Boiler weight	kg	813,5 (624,5+189)					
Operation temperature [max]	°C	90					
Setting Safety Temperature Limiter [max]- STL	°C	95					
Grate area	m²	-	0.012	-	0.012	-	0.012
Filling chute content	ltr.	160	-	160	-	160	-
Volume ash drawer	ltr.	14	10.5	14	10.5	14	10.5
Volume combustion chamber	m³	0.2	0.026	0.2	0.026	0.2	0.026
Chimney draft (underpressure) [min-max]	Pa	5 - 20					
operating overpressure [min - max]	bar	1,5 - 3					
Heat Exchanger		**20 / 20**		**30 / 30**		**40 / 30**	
		log wood	**pellets**	**log wood**	**pellets**	**log wood**	**pellets**
Heat exchanger [Nr. conduits / Nr. tubes]		1 / 6					
Heat exchanger surface	m²	1.24					
Safety-Heat-Exchanger surface	m²	0.122					
Flow safety heat exchanger [min]	ltr./h	>1200					
Pressure cold water [min]	bar	2					
Hydraulic Data		**20 / 20**		**30 / 30**		**40 / 30**	
		log wood	**pellets**	**log wood**	**pellets**	**log wood**	**pellets**
Water capacity	ltr.	137 (108 + 29)					
Water flow rate (ΔT=15K) [min]	ltr./h	0.516	0.350	0.516	0.350	0.516	0.350
Flow resistance (ΔT=10K)	mBar	15		45		44	
Flow resistance (ΔT=20K)	mBar	4		13		12	
Recommended buffer volume [min]	ltr.	2000					
Electrical Data		**20 / 20**		**30 / 30**		**40 / 30**	
		log wood	**pellets**	**log wood**	**pellets**	**log wood**	**pellets**
Power consumption	kW	0.7					
Electrical connection	V/Hz/A	~230 / 50 / 16					
Electrical power consumption (nominal)*	kW	0.070	0.087	0.072	0.107	0.075	0.107
Electrical power consumption (partial)*	kW	0.046	0.055	0.055	0.055	0.051	0.055
Electrical power consumption (Stand By)*	kW	0.009					
Test Report Data		**20 / 20**		**30 / 30**		**40 / 30**	
		log wood	**pellets**	**log wood**	**pellets**	**log wood**	**pellets**
Test report reference number		39-15505-4-T					
Test institute		SZU					

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HEIM-Energie HSHP-K 20/20 - 40/30

Emmission Data (Nominal Load) (ΔT=20K)		20 / 20		30 / 30		40 / 30	
		log wood	pellets	log wood	pellets	log wood	pellets
Flue gas temperature	°C	~ 130	~ 110	~ 150	~ 120	~ 170	~ 120
Flue gas mass flow**	kg/h	46.8	50.4	64.8	68.4	82.8	68.4
Flue gas flow rate**	Sm^3/h	30.3	38.4	48,6	53.1	63.4	53.1
Flue gas flow rate**	Bm^3/h	47.9	51.1	76.3	74.4	103.6	74.4
CO_2-Content*	Vol. %	15.42	11.61	15.39	12.57	15.68	12.57
Efficiency*	%	93.2	93.1	93.1	93.7	92.1	93.7

Emmission Data (Partial Load) (ΔT=20K)		20 / 20		30 / 30		40 / 30	
		log wood	pellets	log wood	pellets	log wood	pellets
Flue gas temperature	°C	~ 90	~ 80	~ 90	~ 80	~ 90	~ 80
Flue gas mass flow**	kg/h	21.6					
Flue gas flow rate**	Sm^3/h	17.0	16.1	17.0	16.1	17.0	16.1
Flue gas flow rate**	Bm^3/h	21.8	19.6	21.8	19.6	21.8	19.6
CO_2-Content*	Vol. %	13.54	9.66	13.54	9.66	13.54	9.66
Efficiency*	%	90.2	91.2	90.2	91.2	90.2	91.2

Note:
* measured value according to test report
** calculated with fuel values from test report
*** The specified volume flows are not suitable for design for an electrostatic filter or downstream flue gas cleaning.
They are used exclusively for chimney
calculation according to EN 13384.
Sm^3/h = Standard cubic meters / hour
Om^3/h = Operating cubic meters / hour
Door hinge on the right of the boiler standard --> door hinge on the left optionally possible

Fuel:
permissible fuel:
Log wood according to EN ISO 17225-5 based on the following specification:
.) Proberty class: A1, A2, B
.) Length: L50 (max. 55 cm)
.) Diameter [mm]: D15 (5 < D < 15)
.) Water content: max. 25 m-(M25)
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
.) 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/m^3
.) 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 für germany.
Irrespective of the respective standards or directives, the following values apply as minimum requirements for filling and supplementary water:
conductivity:
.)<150µS
.)pH: 8,2 - 10
.)total hardness: <0,1mmol/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.

Changes in the sense of the technical progress reserved