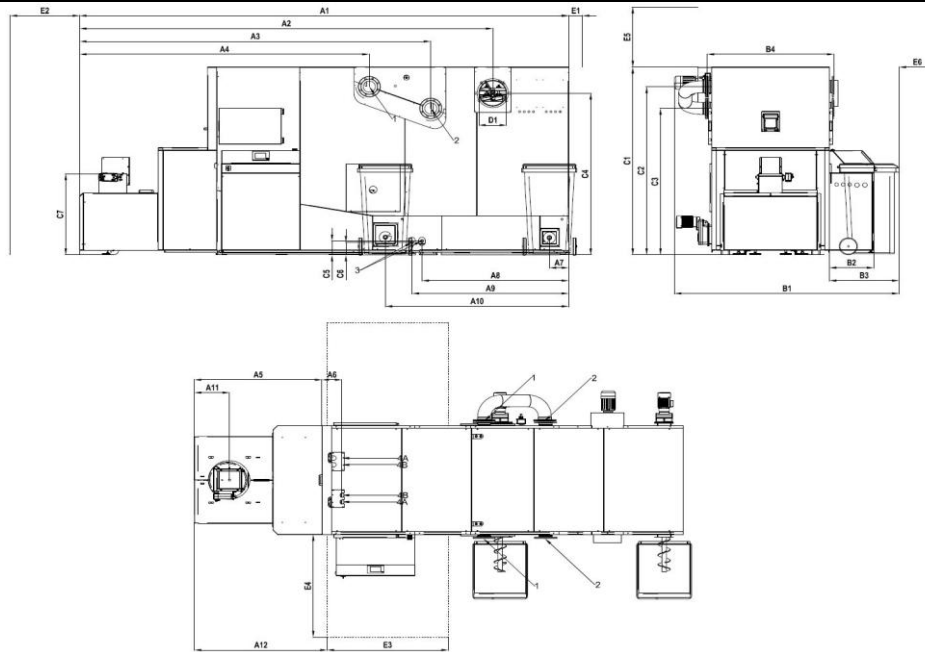


BioFire 500-1500

data sheet

Vers. 2.9



	dimensions	500	600	800	1000	1250	1500
A1	length [mm]	4485	4980		5285	5880	
A2	length [mm]	3800	4160		4465	5075	
A3	length [mm]	3255	3490		3795	4405	
A4	length [mm]	2600	2825		3130	3740	
A5	length [mm]	1380	1380		1380	1560	
A6	length [mm]	215	215		215	200	
A7	length [mm]	210	210		210	195	
A8	length [mm]	1230	1585		1585	1570	
A9	length [mm]	1340	1690		1690	1680	
A10	length [mm]	1630	1905		1980	1965	
A11	length [mm]	380	380		380	380	
A12	length [mm]	1450	1435		1435	1640	
B1	width [mm]	2425	2425		2425	2795	
B2	width [mm]	480	480		480	480	
B3	width [mm]	750	750		750	750	
B4	width [mm]	1375	1375		1375	1735	
C1	height [mm]	1975	1990		2190	2470	
C2	height [mm]	1775	1760		1985	2265	
C3	height [mm]	1525	1510		1710	2010	
C4	height [mm]	1685	1685		1890	2185	
C5	height [mm]	165	165		165	165	
C6	height [mm]	150	150		150	150	
C7	height [mm]	945	945		945	945	
D1	diameter flue pipe [mm]	300	300		300	300	
E1	free area [mm]	150	150		150	150	
E2	free area [mm]	750	750		750	750	
E3	free area [mm]	1100	1310		1310	1450	
E4	free area [mm]	1200	1200		1200	1200	
E5	free area [mm]	700	700		700	850	
E6	free area [mm]	400	400		400	400	
	connections	500	600	800	1000	1250	1500
1	flow	DN100 / PN6	DN125 / PN6		DN125 / PN6	DN125 / PN6	
2	backflow	DN100 / PN6	DN125 / PN6		DN125 / PN6	DN125 / PN6	
3	filling/depletion	3/4" IG	3/4" IG		3/4" IG	3/4" IG	
4A	safety heat exchanger input	1" IG	1" IG		1" IG	1" IG	
4B	safety heat exchanger output	1" IG	1" IG		1" IG	1" IG	
	technical data	500	600	800	1000	1250	1500
power range (according to nameplate) - wood chips [kW]							
		150 - 500	180 - 600	240 - 800	300 - 1000	375 - 1250	450 - 1500
power range - wood chips [kW]*							
		150 - 500	-	240 - 800	300 - 995	375 - 1250	450 - 1500
power range (according to nameplate) - wood pellets [kW]							
		150 - 500	180 - 600	240 - 800	300 - 1000	375 - 1250	450 - 1500
power range - wood pellets [kW]*							
		-	-	240 - 800	300 - 995	375 - 1250	450 - 1500
continuous output (over 10 hrs.) [kW/h]							
		-	-	-	-	-	-
boiler class							
		-	-	-	-	-	-
weight of boiler [kg]							
		5317	5915		6796	10003	
weight of combustion chamber modul [kg]							
		1263	1375		1650	2232	
weight of heat exchanger modul [kg]							
		2138	2430		2828	4200	
weight feed-in (charging auger with RSE) [kg]							
		180	180		180	241	
weight of boiler covering and controlGewicht [kg]							
		471	511		571	611	
weight of burner (trough, grate elements, drive, etc.) [kg]							
		675	750		835	1530	
weight of combustion chamber stones [kg]							
		470	550		613	1010	
weight of accessories and ash removal [kg]							
		120	120		120	180	
min. / max. delivery pressure [mbar]							
		0,05 / 0,10	0,05 / 0,10		0,05 / 0,10	0,05 / 0,10	
min. / max. operating overpressure [bar]							
		1,5 / 5 (6)	1,5 / 5 (6)		1,5 / 5 (6)	1,5 / 5 (6)	
max. operating temperature [°C]							
		102	102		102	102	
max. operating combustion chamber temperature [°C]							
		-	-		-	-	
max. setting safetytemperaturelimiter - STL [°C]							
		110	110		110	110	
water capacity [litr.]							
		1146	1660		1950	3275	
min. flow rate at ΔT = 20K and partial load [kg/h]							
		6449	7739	10318	12898	16122	19347
resistance of boiler at ΔT = 10K [mbar]							
		36	28	31	-	-	-
resistance of boiler at ΔT = 20K [mbar]							
		47	37	41	-	51	74
resistance of boiler at ΔT = 35K [mbar]							
		88	61	-	185	-	-

changes in the senses of the technical progress reserve!

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BioFire 500-1500

size of heat exchanger [m²]	31,23	37,25	42,85	70,7
heat exchanger - number of tube rows / conduits	1 / 63	1 / 77	1 / 77	1 / 110
size of grate surface [m²]	0,68	0,83	1,01	1,25
volume of combustion chamber [m³]	1	1,15	1,66	2,5
size of safety heat exchanger [m²]	1,64	1,95	2,27	2,27
minimum flow safety heat exchanger [ltr./h]	> 1200			
minimum pressure cold water [bar]	2			
opening temperature thermal safety valve [°C]	95 - 108			
number of thermal safety valve [Stk.]	2			
minimal volume of buffer tank [litr.]	5000	10000	20000	
electrical datas	500	600	800	1000
electrical connection [V/Hz/A] / delivery rate [kW]	3x 400/50/16 / -			
electric power consumption at nominal load [kW]	~1,8	~2,2	~2,7	~3,3
electric power consumption at part load [kW]	~0,7	~0,9	~1,1	~1,4
electric power consumption at "stand by" mode [kW]	-	-	-	-
secondary air fan 1 [kW]	0,38	0,38	0,38	0,38
secondary air fan 1 - cable cross section [mm²] / amounth "wires"	0,5 / 6	0,5 / 6	0,5 / 6	0,5 / 6
secondary air fan 2 [kW]	0,38	0,38	0,38	0,38
secondary air fan 2 - cable cross section [mm²] / amounth "wires"	0,5 / 6	0,5 / 6	0,5 / 6	0,5 / 6
motor burn back protection device [kW]	0,0065	0,0065	0,0065	0,0065
motor bbpd - cable cross section [mm²] / amounth "wires"	0,75 / 6	0,75 / 6	0,75 / 6	0,75 / 6
bypass motor [kW]	0,0065	0,0065	0,0065	0,0065
bypass motor - cable cross section [mm²] / amounth "wires"	0,75 / 6	0,75 / 6	0,75 / 6	0,75 / 6
heat exchanger cleaning [kW]	0,55	0,55	0,55	0,55
heat exchanger cleaning - cable cross section [mm²] / amounth "wires"	1 / 4	1 / 4	1 / 4	1 / 4
flue ash discharge [kW]	0,37	0,37	0,37	0,37
flue ash discharge - cable cross section [mm²] / amounth "wires"	1 / 4	1 / 4	1 / 4	1 / 4
ash discharge [kW]	0,37	0,37	0,37	0,37
ash discharge - cable cross section [mm²] / amounth "wires"	1 / 4	1 / 4	1 / 4	1 / 4
primary air fan 1 [kW]	0,4	0,4	0,4	0,4
primary air fan 1 - cable cross section [mm²] / amounth "wires"	1 / 3	1 / 3	1 / 3	1 / 3
primary air fan 2 [kW]	0,12	0,12	0,12	0,12
primary air fan 2 - cable cross section [mm²] / amounth "wires"	0,5 / 6	0,5 / 6	0,5 / 6	0,5 / 6
motor ash scraper floor [kW]	0,37	0,37	0,37	0,37
motor ash scraper floor - cable cross section [mm²] / amounth "wires"	- / -	- / -	- / -	- / -
motor grate above/below [kW]	0,25	0,25	0,25	0,25
motor grate above/below - cable cross section [mm²] / amounth "wire"	1 / 3	1 / 3	1 / 3	1 / 3
motor feeding [kW]	0,55	0,55	0,55	0,55
motor stoker - cable cross section [mm²] / amounth "wires"	1,5 / 4	1,5 / 4	1,5 / 4	1,5 / 4
ignition fan [kW]	1,6	1,6	1,6	1,6
ignition fan - cable cross section [mm²] / amounth "wires"	1 / 3	1 / 3	1 / 3	1 / 3
flue gas fan [kW]	3	6	6	6
flue gas fan - cable cross section [mm²] / amounth "wires"	2,5 / 5	2,5 / 5	2,5 / 5	2,5 / 5
emissions (nominal load) - wood chips	500	600	800	1000
exhaust gas temperature [°C]	~150 / 150	~120 / 120	~140 / 140	~160 / 160
mass flow flue gas [kg/s]**	0,365 / ~0,358	~0,45 / 0,441	0,532 / 0,514	0,678 / 0,63
volume flow flue gas [Nm³/h]**	1012 / ~992	~1245 / 1222	1473 / 1424	1877 / 1743
volume flow flue gas [***Bm³/h]**	1567 / ~1537	~1929 / 1984	2228 / 2154	2977 / 2765
CO ₂ -content [Vol. %]*	12,33 / ~12	~12 / 12	12,55 / 12,54	12,27 / 12,71
efficiency [%]	92,4 / ~93	~92,5 / 93	93,2 / 93,4	91,1 / 91,6
emissions (part load) - wood chips	500	600	800	1000
exhaust gas temperature [°C]	~90 / 90	~90 / 90	~90 / 90	~90 / 90
mass flow flue gas [kg/s]**	0,122 / ~0,118	~0,147 / 0,120	0,177 / 0,172	0,221 / 0,215
volume flow flue gas [Nm³/h]**	337 / ~326	~407 / 333	490 / 477	612 / 597
volume flow flue gas [***Bm³/h]**	448 / ~434	~541 / 443	651 / 635	814 / 793
CO ₂ -content [Vol. %]*	11,23 / ~11	~11 / 11	11,02 / 10,73	10,82 / 11,11
efficiency [%]	91,2 / ~91,5	~92,5 / 93	94,5 / 94,9	94,5 / 94,9
reportdatas	500	600	800	1000
report log-number	39-9910/T4	-	39-9910/T2	39-9910/T3
testing institute	SZU	-	SZU	SZU
inserting dimensions heat exchanger module	500	600	800	1000
length [mm]	1400	1600	1600	1600
width [mm]	1400	1400	1400	1400
height [mm]	1977	1977	1977	2177
inserting dimensions combustion chamber module	500	600	800	1000
length [mm]	2200	2400	2400	2400
width [mm]	140	1400	1400	1400
height [mm]	1977	1977	1977	2177

notes:

* measured value according test report

** calculated with fuel values from test report

*** Operating cubic meter (calculated with fuel values from test report)

technical notes:

acceptable fuel

wood pellets according to - EN ISO 17225-2 quality class A1 - Enplus - DINplus - Swiss pellet

wood chips M40 water content max. 40% / water content min. 15%) according - EN ISO17225-4: quality class A1, A2, B1 and particle size P16S and P31S

heating water:

With regard to the quality of the heating water, take into account ÖNORM H 5195 (current edition), EN 12828 part 1, for germany: VDI 2035.

Regardless of the respective standards or guidelines, the following values apply as a minimum requirement 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 is to be used. The heating water must be checked at regular intervals in accordance with the applicable regulation. The results must be documented and kept.

buffer tank:

A buffer tank is not required if guaranteed:

permanent minimum heat decline: 100% of the nominal load for min. 3 hrs. or 30% of the nominal load for min. 5 hrs.

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

minimum heat loss:

permanent minimum heat loss (24 hrs.) for maintenance of combustion:

40% of nominal load at moist fuel M40 or „W40“

changes in the senses of the technical progress reserve!

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