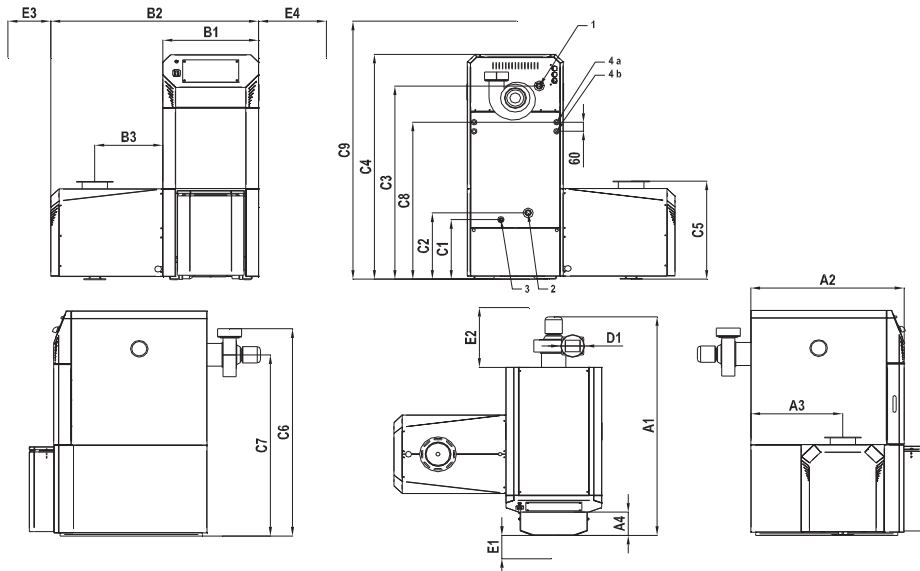


# HERZ firematic 20-101

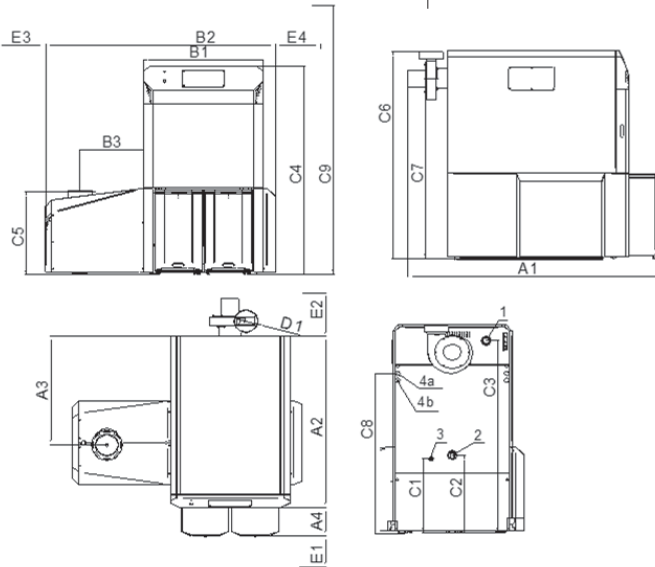
Standard specification sheet

Vers. 2.1

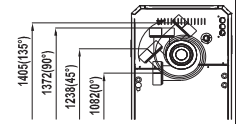
firematic 20-60



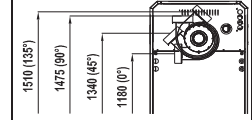
firematic 80-101



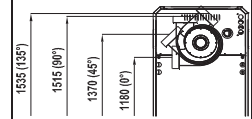
firematic 20-35



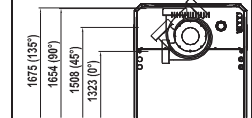
firematic 45



firematic 60

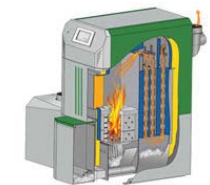


firematic 80-101

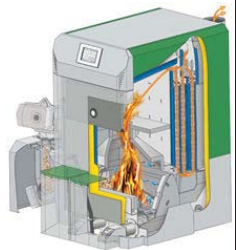


firematic	20	35	45	60	80	100	101
Power range - Declaration at nameplate [kW] - wood chips (pellets)	7,3-25,0 (-)	7,3-35 (10,2- 40)	13,1- 45 (13,9- 48)	13,1- 65,0 (13,9- 70,0)	22,0- 80 (22,2- 80)	22,0- 99 (22,2- 99)	22,0- 101 (22,2- 101)
Power range - measured [kW] - wood chips (wood pellets)	7,3-25,0 (-)	7,3-34,4 (10,2-41,3)	13,1- 48,5 (13,9- 48,4)	13,1- 63,5 (13,9- 71,6)	22,0- 80,4 (22,2- 80,0)	22,0- 99,5 (22,2- 98,9)	22,0- 99,5 (22,2- 98,9)
Continuance of combustion max. [h]	-	-	-	-	-	-	-
A1 Length	1389			1495			1709
A2 Length	960			1070			1178
A3 Length	575			635			719
A4 Length	156			152			256
B1 Width	600			710			846
B2 Breite ohne Demontage von Bauteilen	1300			1410			1636
B3 Width	430			430			477
C1 Height	395			395			519
C2 Height	440			500			690
C3 Height	1280			1375			1520
C4 Height	1490			1590			1690
C5 Height	646			646			646
C6 Height	1376			1475			1654
C7 Height	1200			1300			1441
C8 Height	1040			1125			1263
C9 Height minimal	2100			2300			2300
D1 Diameter flue pipe	150		150	180			180
E1 minimal gap	600			700			800
E2 minimal gap	500			530			450
E3 minimal gap	300			300			300
E4 minimal gap	300			300			700
<b>Inserting dimensions</b>							
Length	960			1070			1177
Width	-			-			800
Width without disassembly of the cover	621			731			907
Height	1490			1590			1692

Mounting dimensions in [mm]



firematic 20-60



firematic 80-101

fm 20-35: 1...Flow(1"), 2...Return flow(1"), 3...filling/depletion (1/2"), 4 a...Safety heat exchanger - Input (1/2" IG), 4 b...Safety heat exchanger - Output (1/2" IG)  
 fm 45-60: 1...Flow (6/4"), 2...Return (6/4"), 3...filling/depletion (1/2"), 4 a...Safety heat exchanger - Input (1/2" IG), 4 b...Safety heat exchanger - Output (1/2" IG)  
 fm 80-101: 1...Flow(2"), 2...Return(2"), 3...filling/depletion (1/2"), 4 a...Safety heat exchanger - Input (1/2" IG), 4 b...Safety heat exchanger - Output (1/2" IG)

# HERZ firematic 20-101

Standard specification sheet

Vers. 2.1

firematic	20	35	45	60	80	100	101
weight of boiler [kg]	517		620		1032		
Volume of combustion chamber [ltr.]	-		-		-		
Volume ash drawer combustion chamber [ltr.]	23		38		50		
Volume ash drawer heat exchanger [ltr.]	23		23		50		
min./max. delivery pressure [mbar]	0,05/0,1		0,05/0,1		0,05/0,1		
operating overpressure Min/Max [bar]	1,5/3		1,5/3		1,5/3		
max. operating temperature [°C]	95		95		95		
Max. setting Safetytemperaturelimiter - STL [°C]	95		95		95		
Water capacity [ltr.]	80		116		179		
Electrical connection [V,Hz,A] / delivery rate [kW]	~230,50,16/2,6		~230,50,16/2,6		~230,50,16/2,6		
Agitator - electrical connection [V]	1x230 (option: 3x400)		1x230 (option: 3x400)		3 x 400		
Resistance of boiler at dt=35K [mbar] **	-		-		-		
Resistance of boiler at dt=20K [mbar] *	5,4 (-)	10,8 (13,4)	2,2 (2,4)	4,1 (4,5)	5,7 (5,7)	8,8 (8,8)	8,8 (8,8)
Resistance of boiler at dt=10K [mbar] *	20,6 (-)	39,9 (51,9)	7,5 (8,5)	15,3 (16,3)	22,4 (22,4)	34,6 (34,6)	34,6 (34,6)
min. recomm. Flow rate dt=18K [kg/h] **	955 (-)	1672 ( 1911 )	2150 ( 2293 )	3105 ( 3344 )	3822 ( 3822 )	4729 ( 4729 )	4825 ( 4825 )
Flow rate dt=15K [kg/h] **	1433 (-)	2006 ( 2293 )	2580 ( 2752 )	3726 ( 4013 )	4586 ( 4586 )	5675 ( 5675 )	5790 ( 5790 )
Electric power consumption, nominal load [kW] *	0,214 (-)	0,266 (0,141)	0,215 (0,138)	0,285 (0,196)	0,318 (0,145)	0,386 (0,166)	0,386 (0,166)
Electric power consumption, part load [kW] *	0,097 (-)	0,097 (0,083)	0,097 (0,105)	0,097 (0,105)	0,106 (0,072)	0,106 (0,072)	0,106 (0,072)
Size of heat exchanger [m2]	1,02		1,76		3,16		
Size of combustion surface[m2]	0,0289		0,0484		0,174		
Volume combustion chamber [m3]	0,0689		0,1101		0,183		
Necessary quantity of water for safety heat exchanger [ltr./h]	-		-		-		
Heat exchanger - Number of conduits / tubes [qty.]	2 / 2x4;1x4		2 / 1x6;2x6		2 / 2x6;2x6		
Opening temperature thermal safety valve [°C]	95		95		95		
Number of thermal safety valve	1		1		1		
Recommended minimal volume of the buffer [ltr.]	800		1000		1000		
<b>Emission -Nominal load (Data according to valid test reports)</b>							
<b>Wood chips (Pellets)</b>							
Exhaust gas temperature [°C]	~110 (-)	~140 (~155)	~110 (~110)	~140 (~150)	~115 (~110)	~125 (~130)	~125 (~130)
Mass flow flue gas [kg/s] *	0,017 (-)	0,024 (0,027)	0,029 (0,024)	0,037 (0,036)	0,052 (0,045)	0,060 (0,056)	0,060 (0,056)
Mass flow flue gas [Nm³/h] ** (0°C / 1013 mbar / 13%O2)	51 (-)	72 (79)	87 (71)	114 (107)	160 (137)	201 (168)	199 (167)
Mass flow flue gas [***Om³/h] **	71 (-)	108 (124)	122 (99)	171 (165)	227 (192)	292 (248)	290 (246)
CO2 content [Vol. %] *	12,6 (-)	12,3 (12,2)	13,8 (15,5)	15 (15,6)	12,8 (13,2)	14,2 (13,3)	14,2 (13,3)
Efficiency [%] *	92 (-)	91,3 (91,0)	94,5 (95,2)	93 (93,2)	94,0 (94,6)	92,4 (94,3)	92,4 (94,3)
<b>Emission - Part load (Data according to valid test reports)</b>							
<b>Wood chips (Pellets)</b>							
Exhaust gas temperature [°C]	~60 (-)	~60 (~70)	~60 (~60)	~60 (~60)	~60 (~60)	~60 (~65)	~60 (~65)
Mass flow flue gas [kg/s] *	0,006 (-)	0,006 (0,009)	0,008 (0,009)	0,008 (0,009)	0,017 (0,018)	0,017 (0,018)	0,017 (0,018)
Mass flow flue gas [Nm³/h] ** (0°C / 1013 mbar / 13%O2)	19 (-)	17(25)	27 (28)	27 (28)	53 (57)	53 (58)	53 (58)
Mass flow flue gas [***Om³/h] **	23 (-)	21 (32)	32 (34)	32 (35)	65 (71)	65 (71)	65 (71)
CO2 content [Vol. %] *	9,4 (-)	9,4 (9,4)	13,0 (11,7)	13,0 (11,7)	10,2 (8,8)	10,2 (8,8)	10,2 (8,8)
Efficiency [%] *	90,7 (-)	90,7 (90,8)	95,0 (90,3)	95 (90,3)	93,3 (93,2)	93,3 (93,2)	93,3 (93,2)
<b>Test reports</b>							
Test report - reference number	159/12 (-)	160/12 (147/12)	161/12 (148/12)	162/12 (149/12)	163/12 (150/12)	164/12 (151/12)	165/12 (152/12)
Test report - approval number	018/13 (-)	019/13 (006/13)	020/13 (007/13)	021/13 (008/13)	022/13 (009/13)	023/13 (010/13)	024/13 (011/13)
Testing institute	BLT (-)	BLT (BLT)	BLT (BLT)	BLT (BLT)	BLT (BLT)	BLT (BLT)	BLT (BLT)
* measured value acc. to Test report ** calculated *** cubic metres at operating pressure							
<b>power input</b>							
Induced-draught fan - flue gas fan [kW]	0,072	0,072	0,072	0,12	0,12	0,12	0,12
Ind.-dr. fan-flue g.-fan-cross s.of electric cable [mm²]/amount of w.	1 / 3+3	1 / 3+3	1 / 3+3	1 / 3+3	1 / 3+3	1 / 3+3	1 / 3+3
Stoker screw [kW]	0,25	0,25	0,25	0,25	0,37	0,37	0,37
Stoker screw-cross section of el. cable [mm²]/amount of wires	0,75 / 3+2	0,75 / 3+2	0,75 / 3+2	0,75 / 3+2	0,75 / 3+2	0,75 / 3+2	0,75 / 3+2
Motor Tipping grate [kW]	0,065	0,065	0,065	0,065	0,065	0,065	0,065
Motor Tipping grate-cross s. of el. cable [mm²]/amount of wires	0,75 / 3	0,75 / 3	0,75 / 3	0,75 / 3	0,75 / 3	0,75 / 3	0,75 / 3
Motor push grate [kW]	-	-	-	-	0,065	0,065	0,065
Motor push grate- cross s. of electric ca.[mm²] / amount of wires	0,75 / 3	0,75 / 3	0,75 / 3	0,75 / 3	0,75 / 3	0,75 / 3	0,75 / 3
Heat exchanger [kW]	0,065	0,065	0,065	0,065	0,065	0,065	0,065
Heat exchanger-cross section of electric c. [mm²] / amount of w.	0,75 / 3	0,75 / 3	0,75 / 3	0,75 / 3	0,75 / 3	0,75 / 3	0,75 / 3
Ash screw - auto de ash drive [kW]	0,065	0,065	0,09	0,09	0,09	0,09	0,09
Ash screw - auto de ash dr.-cross s. of el. c.[mm²]/amount of w.	0,75 / 3	0,75 / 3	0,75 / 3	0,75 / 3	0,75 / 3	0,75 / 3	0,75 / 3
Hot-air blower; ignition fan [kW]	1,6	1,6	1,6	1,6	1,6	1,6	1,6
Hot-air blower; ignition fan-cross s. of el. c. [mm²]/amount of w.	1,5 / 3	1,5 / 3	1,5 / 3	1,5 / 3	1,5 / 3	1,5 / 3	1,5 / 3

Technical Data

Acceptable fuel:

Hackgut P16B, P 31.5, P45A according to EN 14961-1:4 bzw. G50 W 15-40 according to ONORM M 7133  
nominal power at max. W25 or heating value > 3.5 kWh/kg.  
wood pellets quality level A1 according to EN 14961-2, ENplus, ONORM M 7135, DIN plus, Swiss Pellets.

Changes in the sense of the technical progress reserve!

fm 20-35: 1...Flow(1"), 2...Return flow(1"), 3...filling/depletion (1/2"), 4 a...Safety heat exchanger - Input (1/2" IG), 4 b...Safety heat exchanger - Output (1/2" IG)  
fm 45-60: 1...Flow (6/4"), 2...Return (6/4"), 3...filling/depletion (1/2"), 4 a...Safety heat exchanger - Input (1/2" IG), 4 b...Safety heat exchanger - Output (1/2" IG)  
fm 80-101: 1...Flow(2"), 2...Return(2"), 3...filling/depletion (1/2"), 4 a...Safety heat exchanger - Input (1/2" IG), 4 b...Safety heat exchanger - Output (1/2" IG)

