


### Herz Firematic 249-301 Boiler Specification

Category	Field	Units				
Boiler Details	Manufacturer	-	Herz	Herz	Herz	Herz
	Model/Type	-	Firematic 249	Firematic 251	Firematic 299	Firematic 301
	Turn down ratio (chip / pellet)	(%)	23% / 26%	28% / 31%	23% / 26%	23% / 26%
	Output range (chip / pellet)	kW	69.6 – 299 / 76.8 - 299	69.6 – 251 / 76.8 - 251	69.6 – 299 / 76.8 - 299	69.6 – 301 / 76.8 - 301
	RHI Certificate	Yes / No	Yes	Yes	Yes	Yes
	Clean Air Act	Yes / No	Yes	Yes	Yes	Yes
	Combustion unit/Boiler	Details	Sheet steel boiler welded and pressure tested. Fully insulated boiler casing, vertical heat exchanger with automatic cleaning			
Dimensions	Length x Width x Height (inc. Ash Bin)	mm	2672 x 2096 x 1911			
	Length x Width x Height (exc. Ash Bin)	mm	1906 x 2096 x 1911			
	Dry Weight	kg	2264	2264	2264	2264
Efficiency	Min $\eta$ @100% Load (chip / pellet)	%	93.1 / 92.8	93.1 / 92.8	92.4 / 91.2	92.4 / 91.2
	Min $\eta$ @30% Load (chip / pellet)	%	93.1 / 95.2	93.1 / 95.2	93.1 / 95.2	93.1 / 95.2
Hydraulic Details	Max flow temp	°C	85 as standard (102 upon request)	85 as standard (102 upon request)	85 as standard (102 upon request)	85 as standard (102 upon request)
	Max Working Pressure	bar	5	5	5	5
	Max Test Pressure	bar	7.5	7.5	7.5	7.5
	Water Content	l	436	436	436	436
Connections	Flow / Return	-	DN80 / PN6	DN80 / PN6	DN80 / PN6	DN80 / PN6
	Drain	"	1 / 2	1 / 2	1 / 2	1 / 2
	Thermal safety circuits flow/return	"	1 / 2	1 / 2	1 / 2	1 / 2
Flue	Size (ID)	mm	250	250	250	250
Image						
Emissions	Max NOx at min output (chip / pellet)	mg/Nm <sup>3</sup> *	67 / 89	67 / 89	67 / 89	67 / 89
	Max NOx at min output (chip / pellet)	mg/MJ	42 / 57	42 / 57	42 / 57	42 / 57
	Max NOx at max output (chip / pellet)	mg/Nm <sup>3</sup> *	92 / 127	92 / 127	101 / 132	101 / 132
	Max NOx at max output (chip / pellet)	mg/MJ	58 / 82	58 / 82	63 / 85	63 / 85
	Max PM at min output (chip / pellet)	mg/Nm <sup>3</sup> *	19 / 8	19 / 8	19 / 8	19 / 8
	Max PM at min output (chip / pellet)	mg/MJ	12 / 5	12 / 5	12 / 5	12 / 5
	Max PM at max output (chip / pellet)	mg/Nm <sup>3</sup> *	23 / 15	23 / 15	25 / 17	25 / 17
	Max PM at max output (chip / pellet)	mg/MJ	14 / 10	14 / 10	15 / 11	15 / 11
	Max COx at min output (chip / pellet)	mg/Nm <sup>3</sup> *	91 / 17	91 / 17	91 / 17	91 / 17
	Max COx at min output (chip / pellet)	mg/MJ	57 / 11	57 / 11	57 / 11	57 / 11
	Max COx at max output (chip / pellet)	mg/Nm <sup>3</sup> *	5 / 4	5 / 4	6 / 5	6 / 5
	Max COx at max output (chip / pellet)	mg/MJ	3 / 2	3 / 2	4 / 3	4 / 3
Biomass Fuel	Max Pellet Consumption Rate	kg/hr	57	67	70	70
	Pellet grade		EN 14961-2- 6mm,8mm, 10mm (class A1 or A2)			
	Max chip Consumption Rate	kg/hr	71 @W25	71 @W25	87 @W25	87 @W25
	Chip grade		EN 14961-4 - P16B P31.5 P45A (class A1, A2 or B1)			
Buffer Vessel	Volume (Recommended minimum)	l	3,000	3,000	4,000	4,000
	Max Pressure	bar	5	5	5	5
Electrical Supply	Volts/ph/Hz/A	-	400 / 3 / 50 / 16	400 / 3 / 50 / 16	400 / 3 / 50 / 16	400 / 3 / 50 / 16
Key Features	Heat exchanger bypass flap	Details	Prevents moisture condensing in the heat exchanger during start-up. Automatic operation			
	Burn back protection	Details	Back Fire Protection (BFP) flap which closes when the auger is not in use			
	Burner design	Details	Fully Modulating, 2-zone moving grate manufactured from cast chromium steel			
	Automatic heat exchanger cleaning	Details	Vertical heat exchanger tubes with automatic cleaning and ash removal using turbulators (mechanical).			

\* 0°C / 1013 mbar / 13% O<sub>2</sub>

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