


Herz Firematic 349-499 Boiler Specification

Category	Field	Units	Value	Value	Value
Boiler Details	Manufacturer	-	Herz	Herz	Herz
	Model/Type	-	Firematic 349	Firematic 401	Firematic 499
	Turn down ratio (chip / pellet)	(%)	30% / 30%	26% / 26%	21% / 21%
	Output range (chip / pellet)	kW	103.9 – 349 / 104.0 - 349	103.9 – 401 / 104.0 - 401	103.9 – 499 / 104.0 - 499
	RHI Certificate	Yes / No	Yes	Yes	Yes
	Clean Air Act	Yes / No	Yes - from October 2015		
	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	3015 x 1700 x 2185		
	Length x Width x Height (exc. Ash Bin)	mm	2710 x 1700 x 2185		
	Dry Weight	kg	4393		
Efficiency	Min η @100% Load (chip / pellet)	%	93.4 / 93.4	93.4 / 93.4	92.4 / 93.0
	Min η @30% Load (chip / pellet)	%	93.8 / 93.7	93.8 / 93.7	93.8 / 93.7
Hydraulic Details	Max flow temp	°C	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
	Max Test Pressure	bar	7.5	7.5	7.5
	Water Content	l	1130	1130	1130
Connections	Flow / Return	-	DN100 / PN6	DN100 / PN6	DN100 / PN6
	Drain	"	1 / 2	1 / 2	1 / 2
	Thermal safety circuits flow/return	"	1 / 2	1 / 2	1 / 2
Flue	Size (ID)	mm	250	250	250
Image					
Emissions	Max NOx at min output (chip / pellet)	mg/Nm ³ *	78 / 86	78 / 86	78 / 86
	Max NOx at min output (chip / pellet)	mg/MJ	52 / 57	52 / 57	52 / 57
	Max NOx at max output (chip / pellet)	mg/Nm ³ *	90 / 107	90 / 107	107 / 116
	Max NOx at max output (chip / pellet)	mg/MJ	60 / 71	60 / 71	71 / 77
	Max PM at min output (chip / pellet)	mg/Nm ³ *	14 / 7	14 / 7	14 / 7
	Max PM at min output (chip / pellet)	mg/MJ	10 / 5	10 / 5	10 / 5
	Max PM at max output (chip / pellet)	mg/Nm ³ *	13 / 13	13 / 13	12 / 13
	Max PM at max output (chip / pellet)	mg/MJ	9 / 8	9 / 8	8 / 8
	Max COx at min output (chip / pellet)	mg/Nm ³ *	49 / 31	49 / 31	49 / 31
	Max COx at min output (chip / pellet)	mg/MJ	34 / 21	34 / 21	34 / 21
	Max COx at max output (chip / pellet)	mg/Nm ³ *	20 / 18	20 / 18	17 / 18
Max COx at max output (chip / pellet)	mg/MJ	14 / 12	14 / 12	11 / 12	
Biomass Fuel	Max Pellet Consumption Rate	kg/hr	81	93	116
	Pellet grade		EN 14961-2- 6mm,8mm, 10mm (class A1 or A2)		
	Max chip Consumption Rate	kg/hr	101 @W25	115 @W25	144 @W25
	Chip grade		EN 14961-4 - P16B P31.5 P45A (class A1, A2 or B1)		
Buffer Vessel	Volume (Recommended minimum)	l	5,000	5,000	5,000
	Max Pressure	bar	5	5	5
Electrical Supply	Volts/ph/Hz/A	-	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% O₂

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