

Technical data



Pellematic® Maxi 41 - 64 kW

ENGLISH



Author

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1 Technical data

Information according to EU regulation 2015/1187 and 2015/1189

Designation of the series	Pellematic			
Model designation: Pellematic PE(S)	PESK 41	PESK 49	PESK 55	PESK 64
Manufacturer and contact details	ÖkoFEN Forschungs- und Entwicklungs GmbH, Gewerbepark 1, 4133 Niederkappel, Austria			
Boiler class	5			
Heat-up mode	Automatically			
Condensing boiler	yes			
Solid fuel boiler with cogeneration system	no			
Combined heater	no			
Energy efficiency class	A++			
Energy efficiency index (EEI)	132	135	137	140
seasonal space heating energy efficiency in active mode η_{son}	94	96	97	99
Seasonal space heating energy efficiency η_s (based on upper heating value)	90	92	93	95
Delivered useful heat at nominal heat power P_n [kW]	41,0	49,0	55,0	64,0
Delivered useful heat at 30 % of the nominal heat power P_p [kW]	12,0	15,0	17,0	19,0
Fuel efficiency at nominal heat output η_n (based on upper heating value) [%]	94,3	95,8	97,0	98,8
Fuel efficiency at 30% of the nominal heat power η_p (based on upper heating value) [%]	93,9	95,6	96,8	98,7
Boiler eff. rated power standard heat. mode [%]*	104,1	105,3	106,2	107,5

* Test bench value related to the lower calorific value of the fuel. Determined at continuous full-load ideal operation according to the measurement procedures in EN303-5. Practical values and seasonal efficiencies may deviate due to local conditions, fuel properties and individual modes of operation. The values do not refer to an individual boiler, but serve solely for comparison purposes between the different boiler types.

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Fuel	Pellets made of 100% natural wood according to EN ISO 17225-2, class A1			
Colorific value [kWh/kg]	≥ 4,6			
Bulk density [kg/m ³]	≥ 600			
Water content [Gew.%]	≤ 10			
Ash parts [Gew.%]	≤ 0,7			
Length [mm]	≤ 40			
Diameter [mm]	6 ±1			

Annual space heating emissions	
PM [mg/m ³]	< 40
OGC [mg/m ³]	< 20
CO [mg/m ³]	< 500
NOx [mg/m ³]	< 200

Auxiliary power consumption	
Auxiliary power consumption at nominal heat power $e_{l_{max}}$ [kW]	0,114
Auxiliary power consumption at 30 % of nominal heat power $e_{l_{min}}$ [kW]	0,039
Standby auxiliary power consumption P_{SB} [kW]	0,007

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Water area				
Cleaning connection [inch]	3/4			
Water capacity [l]	135 + 24			
Feed / return connection [inch]	2			
Feed / return connection Ø [DN]	50			
Water resistance at 10K [mbar]	90	123	123	123
Water resistance at 20K [mbar]	43	48	48	48
Boiler temperature [°C]	65 - 90			
Minimum boiler temperature [°C]	55			
Operating pressure maximum [Bar]	3			
Test pressure [Bar]	4,6			

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Flue gas area (Flue gas = F.g.)				
Available delivery pressure of fan [mBar]	0,05			
Combustion chamber temperature [°C]	500 - 870			
Flue gas tube diameter (at the boiler) [mm]	180			
F.g. temp. rated power condensation mode [°C]	45 - 80			
F.g. temp. partial load condensation mode [°C]	40 - 80			
F.g. volume rated power at f.g.tem. condensation mode [kg/h]	97,5	104	109	117
F.g. volume partial load at f.g. tem. condensation mode [kg/h]	31	34	17	37
F.g. vol. rated power at AGT condens. mode [m ³ /h]	75	81	86	93
F.g. vol. partial load at AGT condens. mode [m ³ /h]	24	26	28	30
Flue gas tube diameter (at the boiler) [mm]	182,5			
Chimney diameter	as per chimney calculation			
Chimney construction	qualified for condensing, solid fuel, damp resistant, N1 or P1 (depending on chimney calculation)			

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Chimney calculation				
Rated heating power [kW]	41	49	55	64
Firing thermal capacity nominal load [kW]	39,9	46,5	53,5	62,3
CO2 volume concentration nominal load [%]	14,3	14,4	14,4	17,3
Flue gas inertia current for chimney calculation nominal load [kg/s]	0,0271	0,0290	0,0304	0,0325
Flue gas temperature for chimney calculation nominal load [° C]	55			
Required (+) or maximum (-) delivery pressure nominal load [Pa]	-5	-5	-5	-5
Rated heating power partial load [kW]	15	15	17	19,2
Rated thermal power partial load [kW]	14,7	14,29	16,7	18,8
CO2 volume concentration partial load [%]	8,6	7,6	7,6	12,6
Flue gas inertia current for chimney calculation partial load [kg/s]	0,0086	0,0094	0,0098	0,0103
Flue gas temperature for chimney calculation partial load [° C]	50			
Required (+) or maximum (-) delivery pressure partial load [Pa]	-8	-8	-8	-8

Weight	
Overall Weight [kg]	734
Ash capacity ash box [kg]	30
Volume hopper [kg]	66

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Electrical Components				
Connection value	230 VAC, 50Hz, 16A			
Main Drive [W]	40			
Standby power [W]	7			
Drive Motor [W]	250 / 370			
Flue gas fan [W]	25			
Electrical Ignition - [W]	250			
Cleaning Motor [W]	40			
Protection class	IP20			



Further technical data and results of the type test available on request from your ÖkoFEN contact.

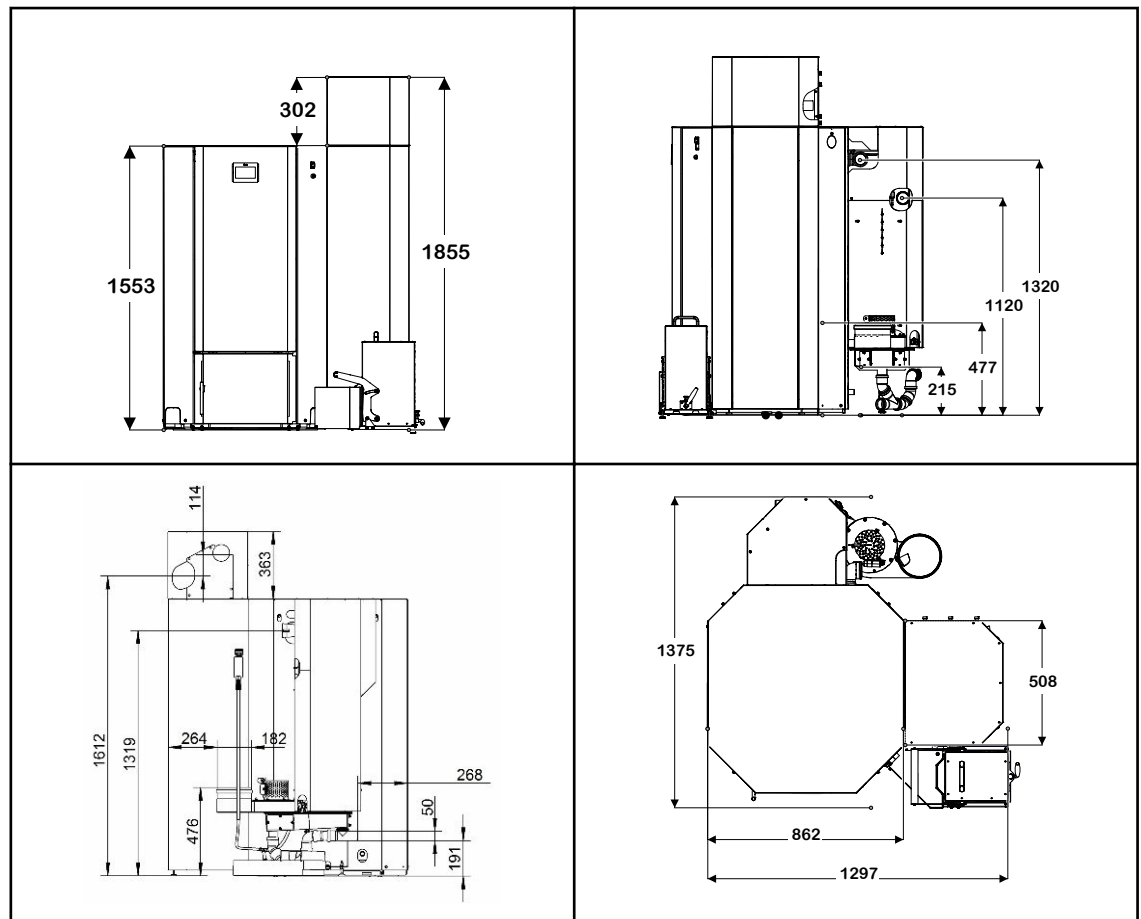
2 Notes on bringing the unit into the building

Before bringing the unit into the building, check the dimensions of all doors to ensure that the boiler has sufficient clearance and can be set up properly.

Minimum door width – max. unit dimension

PESK 41-64	800 mm
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Boiler dimensions



Boiler weight

		PESK 41-64
Weight of boiler packaged on 2 pallets with wooden frame	kg	780
Weight of boiler with casing, hopper, burner and condensing heat exchanger	kg	734
Weight of boiler without casing, hopper, burner and condensing heat exchanger	kg	330

Minimum clearance dimensions required



To install the heating system properly and ensure economical operation, you need to make sure that minimum clearance dimensions indicated below are observed when setting up the boiler.

In addition, make sure that legislation in your country is complied with relating to the minimum clearance of the flue gas tube.

	a	Min. clearance of flue gas connection from wall or part of building	50 mm
	b	Min. clearance of side of boiler from wall or part of building	50 mm
	c	Min. clearance of front of boiler from wall or part of building	700 mm
	d	Min. clearance of side of burner from wall or part of building	300 mm



The indicated values must not fall below by piping or other.

NOTICE

Due to a low boiler surface temperature, the specified minimum distances can be observed.

- Legislation in your country must be observed!

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