

KALORINA K 90 LE-PA

Biomass boiler

Data sheet

KALORINA			K 90 LE-PA	
Carrier Fluid			Water	
Power on furnace		kW	96,2	
Nominal Power		kW	88,0	
Reduced power		kW	18,0	
Thermal efficiency		%	91,3	
Boiler class	EN 303-5:2012		5	

Construction data (1)

Dimensions	Larghezza (L)	mm	1.458
	Profondità (P)		1.521
	Altezza (H)		1.623
Dimensions of the door for manual loading	Larghezza	mm	310
	Altezza		275
Dimensions of the door for cleaning	(B)	mm	554
Min lenght for auger extraction		mm	997
Pellet Combustion chamber volume		m ³	0,16
Wood Combustion chamber volume		m ³	0,10
Fuel feeding			Extraction system through auger
Weight		kg	650
Chimney diameter	(D)	φ mm	200
Boiler body			Steel
Combustion chamber			Four wet walls
Brazier			Feeding from the bottom in inox steel and cast iron elements
Boiler body isolation			In high density material, infill panels made in anti-corrosion epoxy powder coated steel
Hopper volume		litres	376

Hydraulic data

Hydraulic pressure test		bar	6
Max working pressure		bar	3
Boiler water content		litres	268
SLEEVES UNI/DIN EN 10241-ST 37	delivery	φ mm	DN 50 V
	return		DN 40 V
	Expansion tank		DN 25 V
Residual power heat sink flange	Inlet	φ mm	DN 14
	Outlet		DN 14
Expansion tank			Open/Closed
Water pressure drop at 20 K		mBar	121,0

Functioning features

Draught pressure		Pa	20 ± 20%
Smoke temperature		°C	90 ± 30%
Max working temperature	water	°C	90
Smoke evacuation system			Automatic through Forced draught
Combustion chamber Temperature		°C	900
Power modulation			Automatic on water and smokes
Fuel flow regulation			Electronic modulating
Combustion air flow regulation			Electronic modulating
Ash flush ash system			Manual, through ash tray on board
Heat exchanger Cleaning system			Automatic
			Electrovalves with membrane, Air injecting nozzles, Multi nozzles, Three way valve, Pressure reducer, Safety hose, Electronic system adjustment.
Ash extraction from the combustion chamber			Manual
Ash tray volume		litres	29,0

Fuel ⁽²⁾

Class to be used			PELLET : EN 14961 - 2
Fuel consumption with nominal power		kg/h	20,2
Reduced consumption with nominal power		kg/h	4,2
Smokes flow at nominal power		g/s	44,3
Emissions CO (10% of O ₂)			Class 5 according to EN 303-5:2012
Dusts (10% of O ₂)			Rewarding Coefficient Ce= 1,5

Smoke treatment system

Type of technology			Multi-cyclonic with Felling dry
Type of dust separation			Centrifugal
Foldable pollutants			Dust combustion
Structure and self-supporting case			Painted sheet steel of suitable thickness
Disposition of cyclones			Vertical units arranged in parallel
Functioning description			Consists of an inner chamber with a series of little ccyclones extolling the ashes depositing them into a trayer on the machine. An electric fan positioned between the cyclone and the chimney ensures the constant negative pressure in the boiler. Thanks to the centrifugal force the dust particles are separated from the gas stream which has been imposed on the rotary flow. The technology is used for the removal of powders of larger particle diameter.

Electrical data ⁽³⁾

Adjustment and control unit			electronic type for the control and the management of the combustion through flue gas temperature and boiler temperature probes, detection sensor, safety timers, stopping due to ignition failure and various alarms. It's composed of motherboard, controller, menus with online help that allows the electronic management system with the operation status and alarm signaling
Ignition			Electronical through ignitor 250 kW
Electrical power		W	620
Medium Nominal electrical power		W	264
Nominal voltage		V	230
Nominal frequency		Hz	50
Nominal current		A	3,10

Arrangement

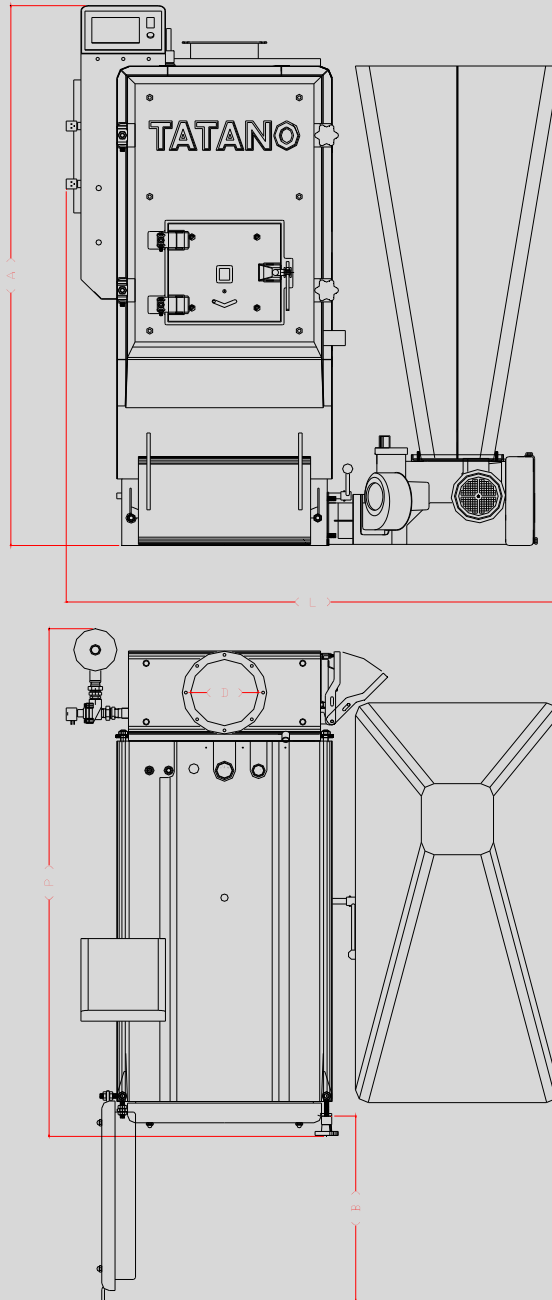
Room Thermostat			Output connection
Remote assistance			Through RS 232 connection

Optional

Hopper position			Right/left/rear side
Remote control assistance			Through GSM module
Remote assistance			Software for the managing and control through Wi-Fi or internet module

Security system

Alarm and control			Antifreeze programming
Boiler Control and lock			Through boiler probe
			Through smoke probe
			Manual resetting thermostat
			Boiler stop for open door
			End fuel sensor
Functioning error alarms			Through visual and acoustic alarms
			Inspection viewer of the combustion chamber
			Differential Pressure switch
			stop for ignition fail and various alarms
Combustion control			through Lambda probe
Smokes evacuation in emergency			Through exhaust fan in emergency function



(1) The Dimensions may vary depending on the hopper position (right or left), on the control panel position or according to the optional accessories or for constructive choices.

(2) All the data concerning the consumption and the environmental emissions may vary according to the characteristics of the fuel used, on the operating condition and by the presence of systems for the treatment of fumes.

(3) The data may vary according to the electrical components installed (motors, fans, etc.). The actual data will be reported in the plate affixed to the boiler.

The company reserves to modify dimensions and characteristics without notice, accepts no responsibility for transcription or printing errors.