

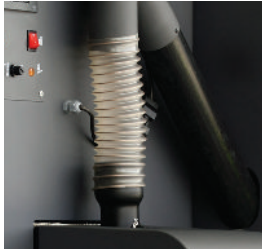


## Full Automatic Pellet Fired Boilers The New Generation **Caria Series**



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# Features



## Backburn Control:

Fire backburn is prevented by keeping the Burner feed way always with constant negative pressure. A high temperature limit switch increases safety.

Plastic connection pipe prevents heat conduction.



## Advanced control system:

An advanced central system connects every component to the microprocessor which regulates the system constantly in correlation with the data provided by sensors.



## Compact Burner Unit:

Easily dismountable burner unit provides service friendly maintenance as well as accessibility when needed.



## High Capacity Air Feed:

High capacity Flue gas vacuum fans, allows precise regulation of boiler capacity.



## Ash Removing System:

Combustion ash and wastes are collected automatically through an automated conveyor to an external box, making cleaning simple and easy.



## Advanced Combustion System:

An incredible net efficiency of 94% is attained by advanced combustion system. Low Power, double ignition units ensure reliable and economic operation.



## New Elegant Control Panel

Every system on boiler is controlled by user friendly control panel. All functions are intuitive and expressed by symbols for language free-software interface.



## Automated Tube Cleaning System:

Special motorized cleaning system allows periodic cleaning of smoke tubes triggered by the software in control panel. These are enabled by user settings in the control panel.



## Automated Burner Cleaning System:

Burner employs a unique and patented cleaning system which effectively cleans the burner grate even from the most stubborn cinder.



## Pellet Silo Variations:

Different variations for different boiler rooms. Detachable silos fit even the most space tight rooms.

# A Smart Investment

## The New Generation **Caria Series**



## Minimum user intervention was our main target when designing Caria systems.

The new generation of popular Caria Series boilers are designed to offer even more comfort than before. The Caria burner (Patent: PCT/IB2012/054583) comes with an auto-ignition equipment that ignites the wood pellets under 4 minutes.\*

Compared to other wood pellet fired boilers, the cleaning requirements of Caria boilers have been significantly reduced. In principle there can be several weeks between cleaning and emptying the ash drawer thanks to its built in screw feeder which periodically carries all ashes and wastes to an external box.

\* May Change by and Climatic conditions

# Efficient Than Ever

The burner comes with unique logical controls which helps to attain **94% efficiency\*\*** values. The system is also equipped with numerous safety measures that ceases operation in case of any kind of malfunction that leads to over heating of boiler.

The **combustion chamber** employs an **automatic self cleaning system** (Patent:PCT/IB2012/054583) to ensure air flow throughout the burner is never blocked thus keeping the efficiency at maximum at all times.

Switching from fossil fuels to pellets with Caria System yields economic savings of more than 50% and as well as environmental of 100%.

Caria series always work under **negative pressure** which eliminates any smoke and gas leakages.

The compact structure of Caria series systems are extremely flexible and makes it particularly suitable for any type of installation. Caria boilers can be equipped with an external sanitary hot water heat exchanger and also with buffer tanks to increase the customer convenience as well as the efficiency.

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## Benefits of Complete Pellet System

- Automatic ignition,
- Automatic tube cleaning,
- Automatic burner grate cleaning,
- Automatic ash removal,
- Automatic pellet dosage,
- 9 stage step modulation and PID control
- External fuel hopper,
- User friendly control panel,
- Unique Software for product,
- Service friendly design,
- Flexible installation options.

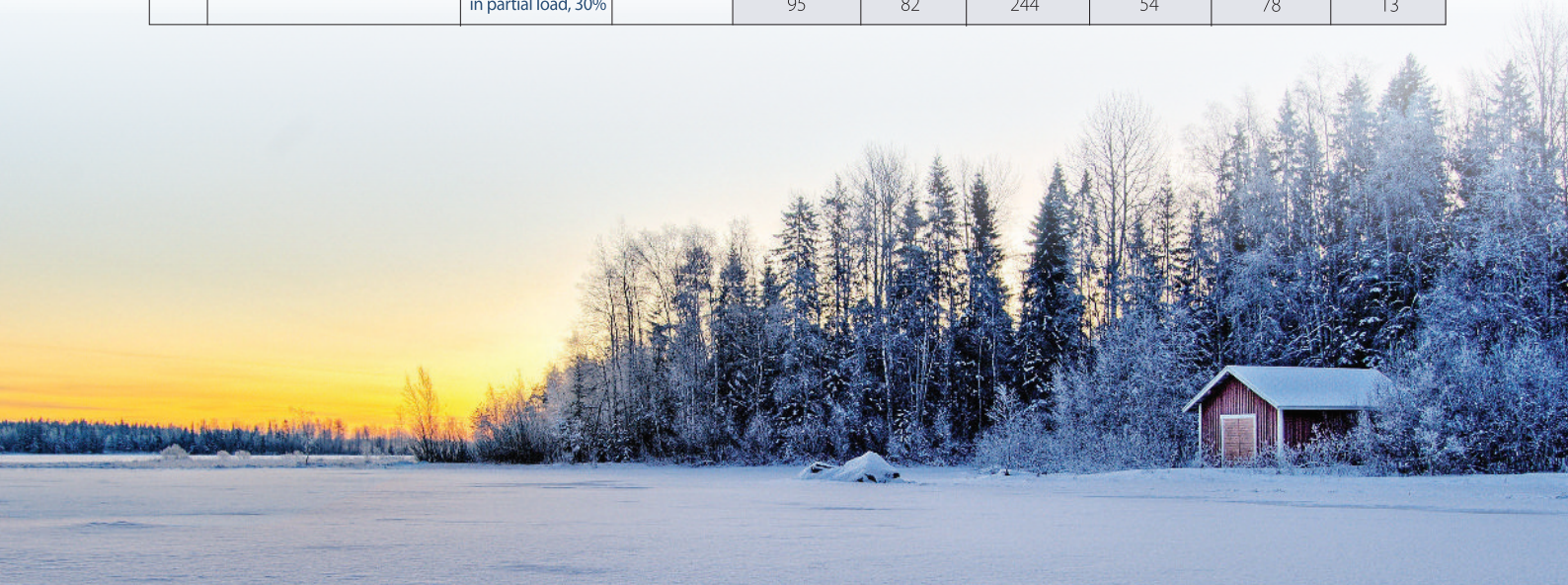


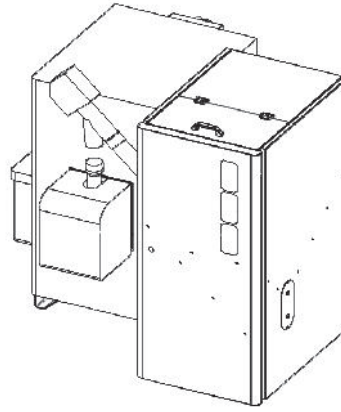
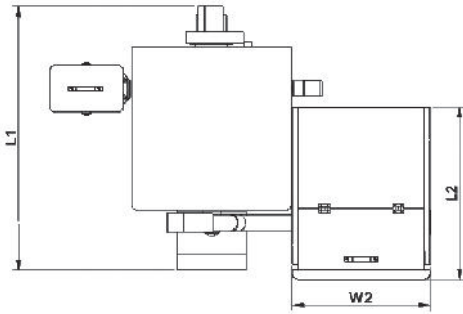
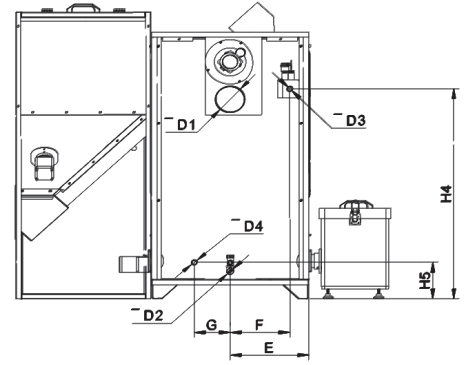
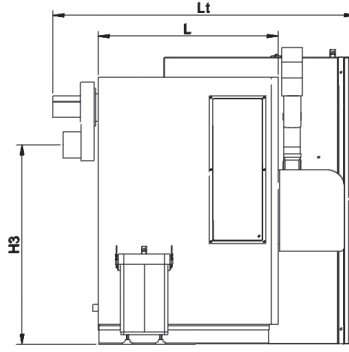
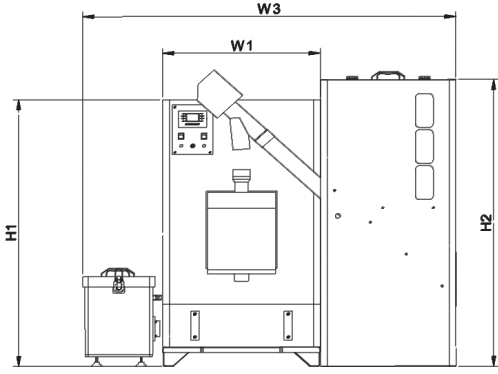
100 kw caria system

\*\* Tested and Certified according to EN303-5

# Technical Specifications

	TECHNICAL SPECIFICATION OF CARIA BOILERS		UNIT	BOILER TYPE						
				CP-12	CP-23	CP-40	CP-60	CP-80	CP-100	
CAPACITY	Nominal Heat Output		kW	12	23	40	60	80	100	
			kcal/h	10.320	19.780	34.400	51.600	68.800	86.000	
	Minimum Heat Output		kW	3.6	6.9	12	18	24	30	
			kcal/h	3.096	5.934	10.320	15.480	20.640	25.800	
Net Efficiency	in full load, 100%		%	93.5	93.2	93.4	92.8	93.7	92.2	
	in partial load, 30%			97.2	97.2	97.1	96.9	96.0	95.5	
OPERATING CONDITIONS	Safety Limit Temperature		°C	95						
	Max. Operating Temperature		°C	80						
	Min. Water Return Temperature		°C	55						
	Operating Pressure		bar	3						
	Boiler Test Pressure		bar	4,5						
	Electrical Connection		-	230V <sub>ac</sub> , 50Hz						
	Recommended Fuel Types		-	Ø 6-8 mm high quality pellet, olive stone						
MAIN CONDITIONS	W <sub>1</sub> , Cabin Width		mm	700		750		750		
	H <sub>1</sub> , Height		mm	1333		1433	1633	1435		
	L <sub>1</sub> , Total Boiler Depth, + 2		mm	1280	1295	1330	1330	2125		
	Stack Size, (Outer, ØD <sub>1</sub> - Inner Diameter)		mm	130-125		150-146		180-176		
	H <sub>3</sub> , Height of Stack Connection		mm	996		1093	1293	1100		
	Water Content		lt	99	91	116	140	290		
	Empty Weight		kg	295	315	404	444	850	870	
	Transport Dimensions, (W x H x D)		mm	900 x 1450 x 1630		900 x 1450 x 1830		900 x 2900 x 1830		
	Transport Weight		kg	348	368	462	502	970	990	
	Filling & Drain Connections		Diameter, ØD <sub>2</sub>	inch		½"		½"		
	Hot Water Outlet Connections		Diameter, ØD <sub>3</sub>	inch		1 ½", Male		2", Male		
	Water Inlet Connections		Diameter, ØD <sub>4</sub>	inch		1", Male		1 ¼", Male		
EMISSIONS	Flue Gas Temperature		°C	in full load, 100%	90	120	120	130	110	140
				in partial load, 30%	55	55	70	70	60	65
	CO		mg/m <sup>3</sup>	in full load, 100%	99	22	152	176	61	105
				in partial load, 30%	95	82	244	54	78	13





FUEL STORAGE CONTAINER			UNIT	RECOMMENDED BOILER TYPE					
				CP-12	CP-23	CP-40	CP-60	CP-80	CP-100
SILO TYPE	PS300	W <sub>2</sub> Silo Width	mm	600					
		L <sub>2</sub> Silo Length	mm	850					
		H <sub>2</sub> Silo Height	mm	1433					
		W <sub>3</sub> Total Width with Boiler	mm	1655					
		Lt Total Length with Boiler	mm	1343					
		Net Volume	lt	325					
	PS500	W <sub>2</sub> Silo Width	mm	850					
		L <sub>2</sub> Silo Length	mm	850					
		H <sub>2</sub> Silo Height	mm	1433					
		W <sub>3</sub> Total Width with Boiler	mm	1928		1962			
		Lt Total Length with Boiler	mm	1312		1318			
		Net Volume	lt	507					
	PS800	W <sub>2</sub> Silo Width	mm	950					
		L <sub>2</sub> Silo Length	mm	950					
		H <sub>2</sub> Silo Height	mm	1633					
		W <sub>3</sub> Total Width with Boiler	mm	2038		2063			
		Lt Total Length with Boiler	lt	1383		1394			
		Net Volume		800					

