



Ventum Series

The new Generation Wood Gasification Boilers



Europe's Fastest Selling Wood Gasification Boiler.

The New Generation Ventum Series leaps forward in gasification technology making them the fastest selling boilers in their class across Europe. It is designed for efficiency, economy and protection of the environment. With 92% efficiency, emissions (250 mg/m³ CO) below European and German regulations, adaptable to wood fuel moistures up to 33%, superior health and safety features and easy to use electronic controls, this gasification boiler is a testament of quality and perfection.



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Ventum Series

Wood Gasification Boilers FEATURES

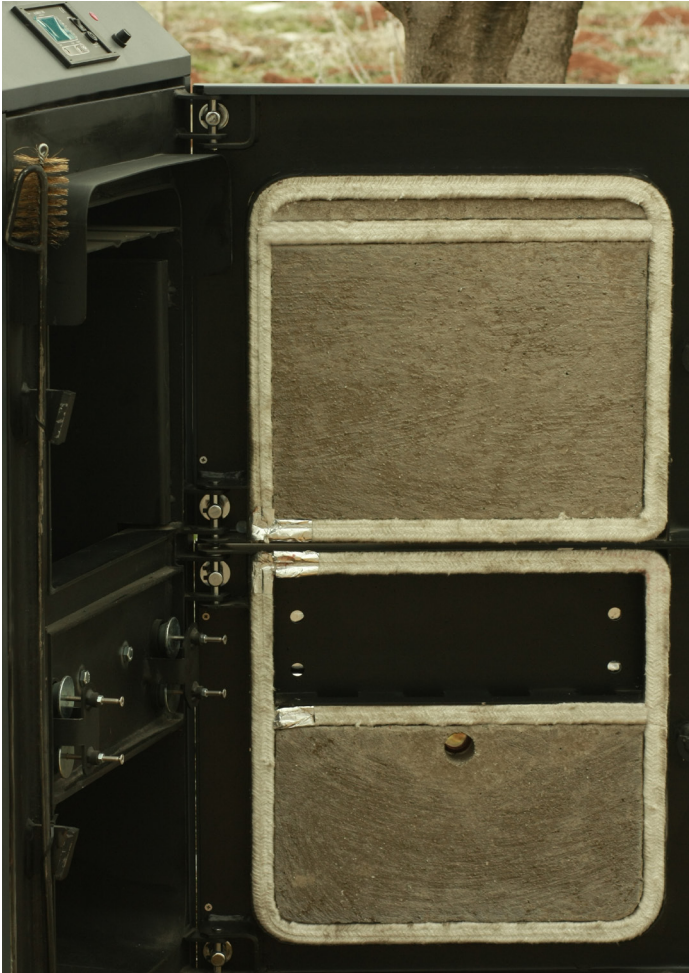


As a stand-alone boiler or integrated with other heat systems the Ventum Gasification Boiler is fully adaptable and connectable with summer / winter season adjustment. Combined with a buffer tank, efficiency and performance is further increased as well as decreasing refuelling intervals.

- Independently adjustable primary and secondary combustion air.
- Functional and User Friendly Control Panel.
- Modulating induced draft fan.
- Vertical heat exchanger tubes with turbulators.
- Easy cleaning without removing any plate,
- Newly designed Refractory Concrete parts are:
 - Smaller and Lighter for easy servicing,
 - Modular for easy replacement,
- Bypass duct is larger than ever. A mechanical switch senses the door is open and orders the fan to work in full capacity.
- Ellipsoid form of the combustion chamber allows more fuel to be loaded.
- Boiler basement design allows both Forklift and pallet truck transport with ease.
- Long service life with robust structure.
- Interior negative pressure ensures safety.
- Interchangeable emergency heat discharge system".
- Dual purpose Anti-Tarring Plates:
 - Prevents and reduces condensation in the boiler
 - Increases efficiency by acting as a pre-heating intake air duct
- Large collection tray for ease of cleaning and ash removal.

Why the Ventum is Europe's Fastest Selling Wood Gasification Boiler

- High > 92 % net.
- Low emissions < 250 mg/m³ CO
- Only 15 mg/m³ dust.



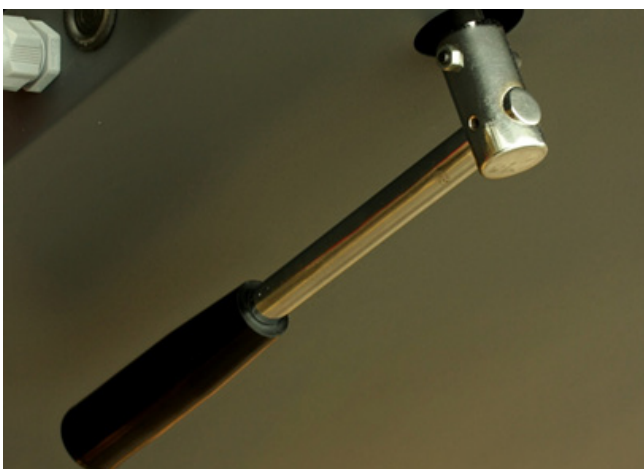
Robust and years of proven hinge system



*Large loading door at waist level



Special air ducts inside the doors allows pre-heating combustion air via natural air flow



Cleaning made easier by a simple swing of an external lever



Electronic Management with Smart Control panel is able to check flue gas temperature and regulate the fan for optimal heat production output.



Observation Glass to Monitor Gasification Process



Interchangeable Overheat Discharge Assembly



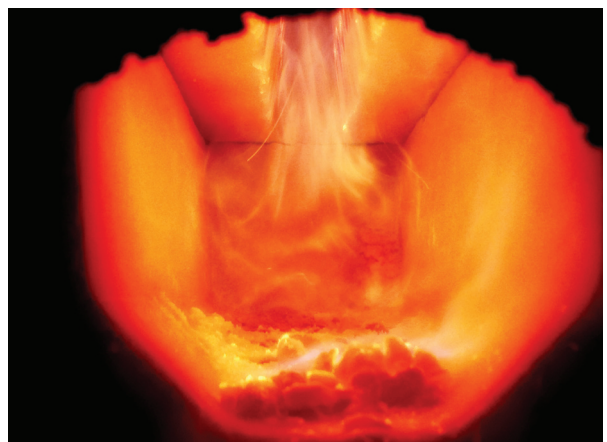
Independently adjustable Primary and secondary air inlets



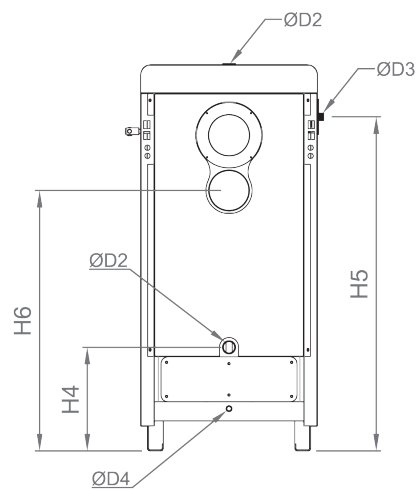
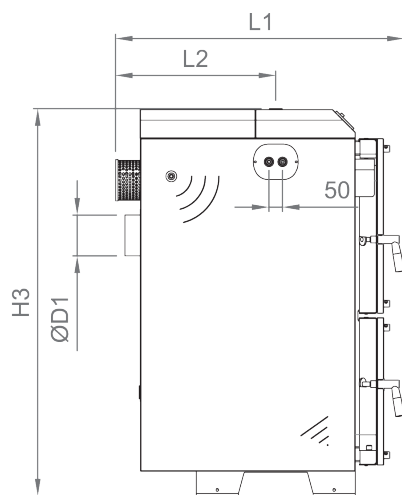
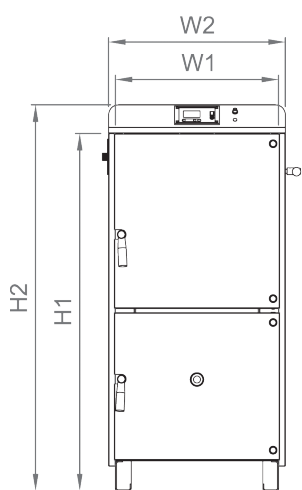
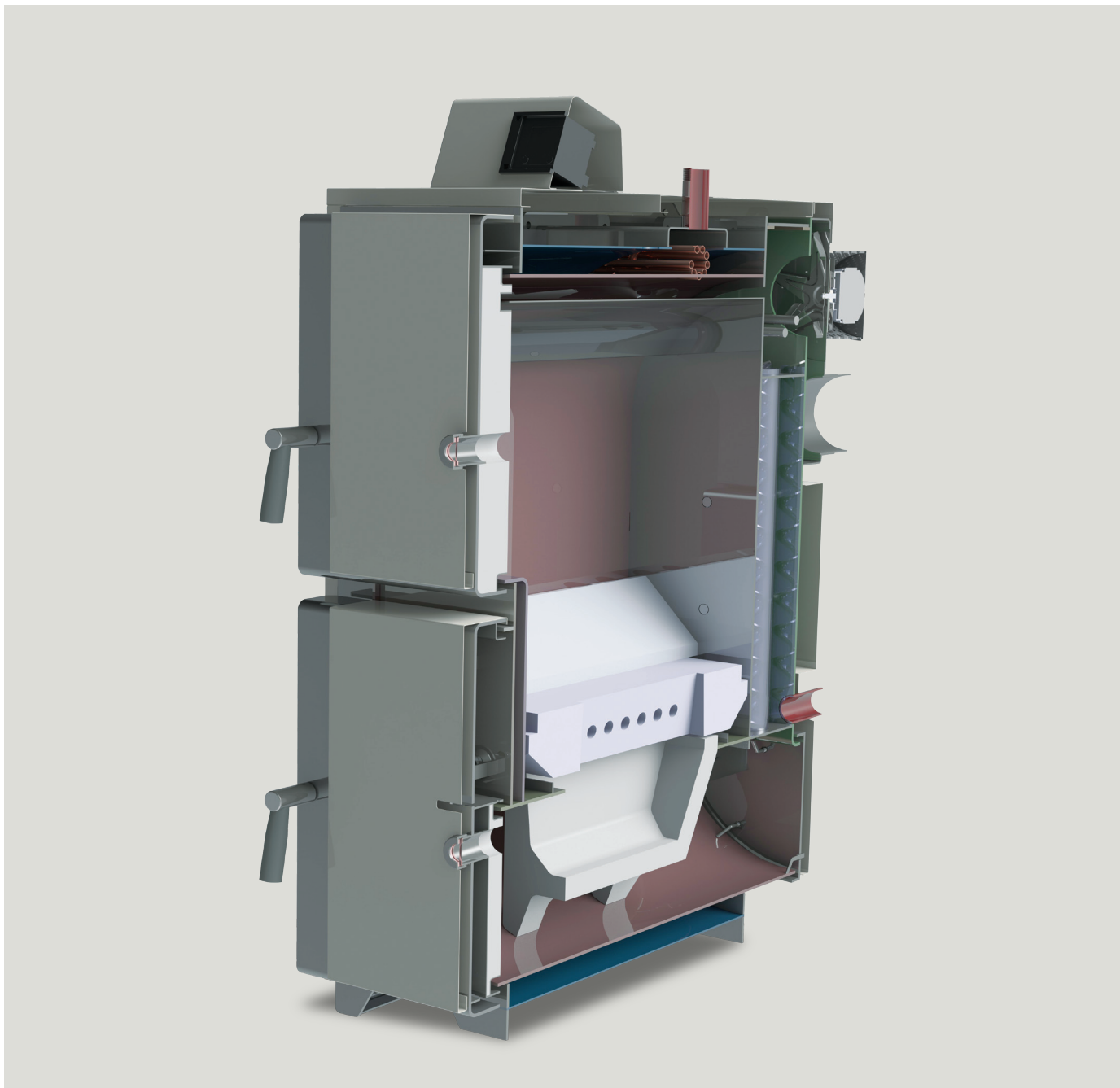
Induced draft fan keeps the system in constant vacuum eliminating the possibility of a smoke leakage to the ambient



Bypass system automatically engages and prevents smoke bursts when the door is open meeting highest Health and Safety Standards in force.



Faster and longer gasification



Technical Specifications

TECHNICAL SPECIFICATION OF VENTUM TYPE WOOD GASIFICATION BOILERS		UNIT	BOILER TYPE				
			VG20	VG30	VG40	VG60	
CAPACITY	Nominal Heat Output	kW	20	30	40	60	
		kcal/h	17.200	25.800	34.400	51.600	
	Direct Efficiency	%	90,1	90,4	91,2	91,7	
OPERATING CONDITIONS	Boiler Class	-	CLASS 5 acc. To EN 303-5				
	Safety Limit Temperature	°C	97				
	Setting Range of Operating Temperature	°C	85-55				
	Min. Water Return Temperature	°C	55				
	Operating Pressure	bar	3				
	Boiler Test Pressure	bar	4.5				
	Electrical Connection	-	230 V _{acr} 50 Hz				
	Recommended Fuel Types	-	Ø80 x500mm			Ø80 x 700mm	
			Hard Wood, 15% < Humidity < 30%*				
	Minimum Required Stack Draught	Pa	10				
	Boiler Gas Side Resistance	Pa	125	110	140	230	
	Boiler Water Side Pressure Drop $\Delta T = 10\text{ }^{\circ}\text{C}$	mbar	11,0	3,2	5,5	23,0	
	Fuel Filling Volume	lt	89	113	137	200	
		kg	30	40	50	70	
	Apx. Combustion Endurance	h	5				
Required Accumulation Tank Volume	lt	1000	1500	2000	3000		
Noise Level	dB	<60dB					
MAIN DIMENSIONS	W ₁ - Width	mm	600				
	W ₂ - Total width with cover plates	mm	650				
	L ₁ - Length	mm	1060			1360	
	H ₁ - Height	mm	1060	1210	1310	1360	
	H ₂ - Total Height	mm	1165	1315	1415	1465	
	Stack Diameter ØD1 (inner-outer)	mm	125 - 130		146 - 150		
	H ₆ - Height of Stack Connection	mm	715	865	955	1005	
	Water Content	lt	90	104	104	168	
	Transport Weight	kg	415	455	495	630	
	Tranport Dimensions	mm	780x1100x1355	780x1140x1495	780x1140x1595	780x1450x1650	
	Hot Water Outlet Connection	Diameter, ØD2	inch	1 ½"			
		Position, H ₃	mm	1137	1287	1387	1437
		Position, L ₂	mm	590			890
	Water Inlet Connection	Diameter, ØD2	inch	1 ½"			
		Position, H ₄	mm	380			
	Safety Cooling Heat Exchanger 15 °C, 2 bar cold water	Diameter, ØD ₃	inch	¾"			
		Position, H ₅	mm	975	1125	1225	1275
	Filling & Drain Connection	Diameter, ØD ₄	mm	½"			
EMISSION RATES	Flue Gas Temperature	°C	145-165				
	Average Mass Flow Rate of Solid Pollutants (dust)	g/h	1,8	2,3	2,9	4,6	
	CO	mg/m ³	<700				
POWER CONSUMPTIONS	Average Electricity Consumption	in stand-by	W				
		in full load, 100%	W	57	64	70	79



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