QUALITY WITHOUT COMROMISE

Radijator ENGINEERING

BIOMASS BOILERS series **TKAN 1** and **TKAN 2**

Biomass boilers series TKAN 1 and TKAN 2 were developed with the goal of "Radiator Engineering" offer to the market that the boiler is on its mechanical and thermal properties of highlydedicated biomass as fuel.

Using a generalized notion of "Biomsa" course that is primarily referring to pellets, but should emphasize the possibilityof firing with stone fruit (cherries and cherry) and shavings fromwood processing.When using these fuels means the automatic control of main operating parameters.

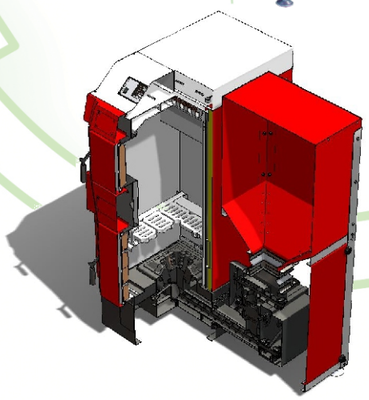
For all other forms of biomass burning consult the manufacturer of boilers. Other demands of the market are alwayspointing towards the universalityof higher fuel, so give boilers series TKAN 1 and TKAN 2 possible heat and solid gore we live (wood, charcoal ...) and then manually Heating. Burning in this situation takes place under the forced draft fan, so that the boilers series TKAN 1 and TKAN 2 in these conditions more efficient than its predecessors, which operate on the principle of free airflow.

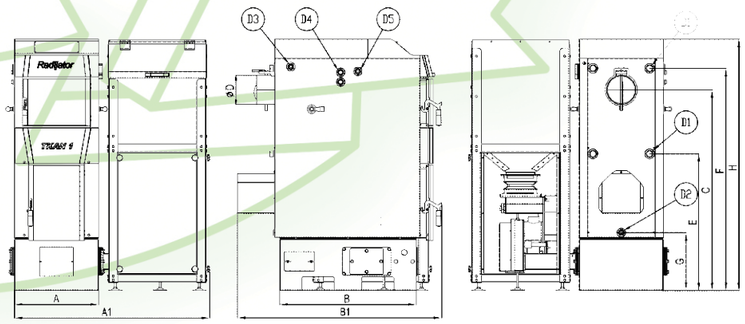
Efficiencyof pellet is over 90%.

In normal mode temperature flue gas exit is about 120° C, and the maximummode is below 150 °C. These values mayat anytime to take in the display. Each biomass boilers series TKAN 1 and TKAN 2 has a copper heat for joining the fan for thermal insurance and valves for kindling. All parts of the water of the boiler are made of seamless pipes and boiler plate thickness of 5 mm or more, depending on the power boiler. Only the firebox is made of insulating material and massive graycast. Biomass boilers series TKAN 1 and TKAN 2 are produced in two variants of power. TKAN 1 covers a range of forces from 20 to 35 kW and TKAN 2 is in the range 40 to 49.5 kW.

BOILER TYPE		TKAN 1.1	TKAN 2
CE designation		CE	CE
Class of Boiler according to EN 303-5:2012		C1	C1
Working Pressure	bar	3	3
Test Pressure	bar	4,5	4,5
Volume of combustion chamber	L	50	80
Volume of water in the boiler	L	97	125
Weight	kg	560	650
Cross section of chimney	mm	180	200
Necessary chimney draft	mbar/Pa	0.18/18	0.18/18
Boiler temperature (min / max)	°C	60-90	60-90
Minimum return temperature	°C	60	60
Efficiency degree	%	90.33	90.33
Flue gas mass flow Qnom/Qmin	kg/s	0,0209/0,0234	0,0255/0,0280
Nominal Power	(kW)	35	49,5
Minimum / Maximmum Power of Boiler	(kW)	20-35	40-49.5
Pressure drop in boiler	mbar	20	23
Carbon monoxide (CO) with a minimum thermal input	CO	315.1mg/m3, 13%O2	346.6mg/m3, 13%O2
Carbon monoxide (CO) at a nominal heat power	CO	105.95mg/m3, 13%O2	116.54mg/m3, 13%O2
Dust	(mg/m3)	26.7 ,13%O2	29,4 ,13%O2
Dimenzije			
	A	520	670
	A1	1210	1340
	B	845	960
	B1	1270	1325
	C	1245	1350
	D	180	200
	E	850	475
	F	1380	1470
	G	360	365
	H	1560	1700
Connections for hot and cold water boiler from boiler	D1	1"	5/4"
Connections for filling and emptying boiler	D2	1/2"	1/2"
Connections for the safety valve and vent pressure	D3	1/2"	1/2"
Connector for thermal valve insurance swelling VTO	D4	1/2"	1/2"
Connections for probe VTO	D5	1/2"	1/2"

* We reserve the right to change





Radijator ENGINEERING

BOILER series **BIOmax**

Boilers **BIOmax 35** and **BIOmax 23** came after many years of experience with pellet boilers series. Of course it is still possible to use other than wood pellets and pitted cherries, cherry, etc...

For other fuels that would use automatic ordering are needed additional adaptation mechanism for dosage, so you should consult our construction department.

The last time all the present and agro pellets. This series generators can be used as fuel, but it should be noted that the prescribed power boiler is very dependent on the calorific power of agro pellets and that the process cleaning should be done more frequently as compared to wood pellets, because the larger amount of ash.

One of the main features in terms of universal fuel for BIOmax 35 and BIOmax 23 series is to shift the automatic loading of pellets, the hand-firing wood and coal by only a few seconds. This is remained one of the comparative advantages of our construction, with the difference that now Rostova for wood and coal from cast iron and easily interchangeable.

What is it that distinguishes these boilers in a special series?

First of all BIOmax 35 and BIOmax 23 have tube exchangers. The seamless boiler tubes are properly quartered spiral turbulators. This affected both the degree of utilization and the better and easier cleaning. These boilers are within the combustion chamber stainless steel nozzles for the distribution of secondary air. I come from a special air centrifugal fan that has nothing to do with the primary the air. Secondary air quality affects the exhaust gases and dust, which affects the occurrence of severe nesagorelih matter in the changer. Thus, the direct method reduces fuel consumption. The new nozzle design of refractory cast iron that comes through the primary air for combustion.

The new form of nozzles enable a better distribution of air pellet burning. Also nozzles that fire up at the corners of the retort can be inclined at any time and thus reach the nozzle and carried out the air. This is very easy cleaning nozzles.

This structure has the possibility of easily upgrading the fan inlet flue gas and process automation, which dictates burning based on the information on the quantity of air in the flue gases, which sends lambda probe. This is currently possible only on special request.

All these improvements in a series of constructive BIOmax 35 and BIOmax 23 came to an exceptional degree of utilization and combustion chamber and heat exchanger and the percentage goes above 90 percent. limits CO, CO2 and dust particles in the framework of EU standards, so this series has all the prerequisites for obtaining benefits on the EU market because of its economic characteristics.

Type of boiler		**BIOmax 23.1**	**BIOmax 35**
CE designation		CE	CE
Class of Boiler according to EN 303-5:2012		C1	C1
Working Pressure	**bar**	3	3
Test Pressure	**bar**	4,5	4,5
Volume of combustion chamber	**L**	50	80
Volume of water in the boiler	**L**	75	95
Weight	**kg**	490	570
Cross section of chimney	**mm**	130	160
Necessary chimney draft	**mbar/Pa**	0,2/20	0,2/20
Boiler temperature (min / max)	**°C**	60-90	60-90
Minimum return temperature	**°C**	60	60
Efficiency degree	**%**	90,3 - 92,2	90,72 - 92,5
Flue gas mass flow Qnom/Qmin	**kg/s**	0,0209/0,0234	0,0255/0,0280
Nominal Power	**(kW)**	23	34,9
Minimum / Maximmum Power of Boiler	**(kW)**	15-23	20-34,9
Pressure drop in boiler	**mbar**	20	23
Carbon monoxide (CO) with a minimum thermal input	**CO**	299,6mg/m3, 13%O2	415,05mg/m3, 13%O2
Carbon monoxide (CO) at a nominal heat power	**CO**	154,8mg/m3, 13%O2	327mg/m3, 13%O2
Dust	**(mg/m3)**	20,39,13%O2	16,13%O2
	Dimenzije		
	A	450	520
	A1	1135	1205
	As	605	605
	B	790	845
	B1	1380	1490
	C	1315	1420
	D	130	160
	E	400	400
	F	1167	1275
	G	400	400
	H	1460	1570
	Hs	1460	1550
Connections for hot water boiler from boiler	**D1**	1"	1"
Connections for cold water boiler	**D2**	1"	1"
Connections for filling and emptying boiler	**D3**	1/2"	1/2"
Connections for the safety valve and vent pressure	**D4**	1/2"	1/2"
Connector for thermal valve insurance swelling VTO	**D5**	1/2"	1/2"
Connections for probe VTO	**D6**	1/2"	1/2"

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