



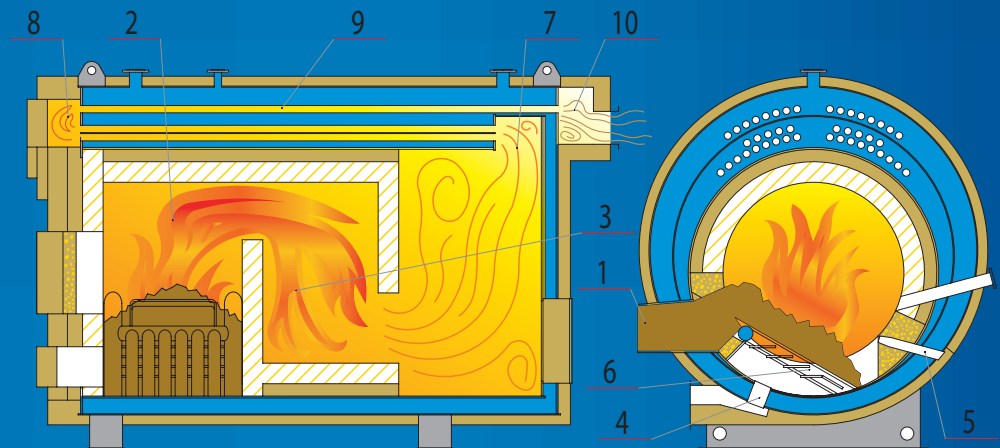
# HOT-WATER BOILER EKOVAARIANT

## Energy from biomass

Within the framework of its ecological program, TTS energy concerns itself with the utilization of energy that arises from the combusting of biomass. The basic criterion from comparing this alternative source of energy with the classically used energy system based on the combusting of fossil fuels is to what extent it influences the environment. Whereas the burning of coal, petroleum and natural gas releases carbon dioxide into the atmosphere, which is one of the most significant „greenhouse“ gases, the emission of carbon dioxide isn't increased by the combusting of organic fuels, as practically the same amount the carbon dioxide released in the burning is consumed from the atmosphere during the photosynthetic processes when the organic biomass is created. By the substituting the previous burning of coal with the burning of biomass, the emission of sulphur dioxide and heavy metals is eliminated.

## Main parts of the boiler

- 1 INPUT OF FUEL
- 2 COMBUSTION CHAMBER
- 3 BURN OUT CHAMBER
- 4 PRIMARY AIR
- 5 SECONDARY AIR
- 6 STRONG GRATE COOLING BY WATER
- 7 TURNROUND CHAMBER I.
- 8 TURNROUND CHAMBER II.
- 9 FIRE TUBES
- 10 COLLECTOR FOR DRAINING OF WASTES



## Purpose and description

EKOVAARIANT boilers are designed for heating plants of:

- Industrial buildings (hall, kiln,...)
- Building with preparing of WSW-warm service water (offices, schools,...)
- Factories with lower consumption for technological purposes (hospitals, laundries,...)
- Factories with higher consumption for technological purposes (breweries, paper-mills,...)

This conception makes it possible to manufacture a heat source having optimal parameters in accordance with in the concrete requirements of the warm-water net with minimal built-up area dimensions. Boilers can be delivered in warm-water, hot-water and steam variations, and that within the range of parameters:

Thermal output	0,1 ÷ 1,2 MW
Operating over-pressure	0,3 ÷ 1,0 MPa

The boiler has a self-supporting, entirely welded cylinder construction. The basis there is a boiler solid with cylinder form for desiderative medium and required output in horizontal three-draughting arrangement. Added flue making ideal conditions for building quit capacious combustion chamber within burn out zone and utilization of suitable grate. In the combustion chamber there is a brickwork which form and size is in accordance with concrete kind of fuel and requirements of filling up of temperature in combustion chamber with respect of perfect combusting and low emissions. In the end of combustion chamber there is a burn-out zone where coming up to cooling of ash matter and to burning out of wastes before enter to convection part of boiler. Two bundle of fire tubes and collector for draining of wastes is connected to flue with combustion chamber. Flue and both of turnround chambers having door for cleansing, service, maintenance and possible repairation.



## Parametres

LOW-PRESSURE WARM-WATER BOILERS „EKOVAARIANT“ – LINE 1:100 KW – 1200KW							
PARAMETRES OF BOILERS	QUANTITY	TYPE OF BOILER					
		EVTK100	EVTK300	EVTK500	EVTK800	EVTK1000	EVTK1200
Thermal output	kW	100	300	500	800	1000	1200
Operating over-pressure	MPa			0,3			
Weight of boiler without water*	kg	6000	8000	9300	14050	16250	17110
Max. temp. of wastes in output	°C	200 °C					
Max. temp. of heated water	°C	110 °C					
Water content of boiler	L	2500	3550	4500	6700	7100	8000
Basic dimensions of boilers **							
Length of boiler - A	mm	3000	3500	4300	4700	5300	5000
Diameter of boiler - B	mm	1920	2120	2120	2550	2550	3100/2550
Height of boiler - C	mm	2300	2500	2500	3000	3000	3500
Connecting places							
No.1 - output of heated water	DN / PN	50 / 6	65 / 6	80 / 6	100 / 6	125 / 6	125 / 6
No.2 - input of heated (return.) water	DN / PN	50 / 6	65 / 6	80 / 6	100 / 6	125 / 6	125 / 6
No.3 - safety mechanism	DN / PN	40 / 16	40 / 16	50 / 16	50 / 16	65 / 16	80 / 16
No.4 - discharge	DN / PN	3/4" / 6	3/4" / 6	3/4" / 6	3/4" / 6	3/4" / 6	3/4" / 6
No.5 - combustion neck	mm	160 x 160	200 x 200	355 x 200	450 x 225	450 x 225	500 x 225
<small>Note: All rights of change of datas in accordance with developpe of product reserved by producer.                      * said weights are for boilers with hard brickwork, for other variations the weight of boiler will be lower in accordance with kind of brickwork.                      ** said dimensions are for boilers with oblique grate and without dimensions of fuel and ash system</small>							

## Fuel

EKOVAARIANT boilers are designed for combusting of various kind of wooden fuel (sawdust, wooden chips, bark, palette, briquette, etc.) and other various physical properties (moisture, density, granularity, calorific capacity, content of ash matter, temperature of smelting ash matters, etc.) which is arising during wood processing in the sawmills, wood mining, growing works in a wood.

## Advantages of the conception

- Wide supply of combustion apparatus and its accessories which is covered all possibilities and requirements occuring during wood and wood waste combusting in practice.
- Constructionally perfectly sophisticated and integral system
- High quality of combusting and low emissions – we´re guarantee emission limits applicable in EU countries.
- High utility properties of our products
- Comprehensive and individual care about customer
- Operating after-guaranty service