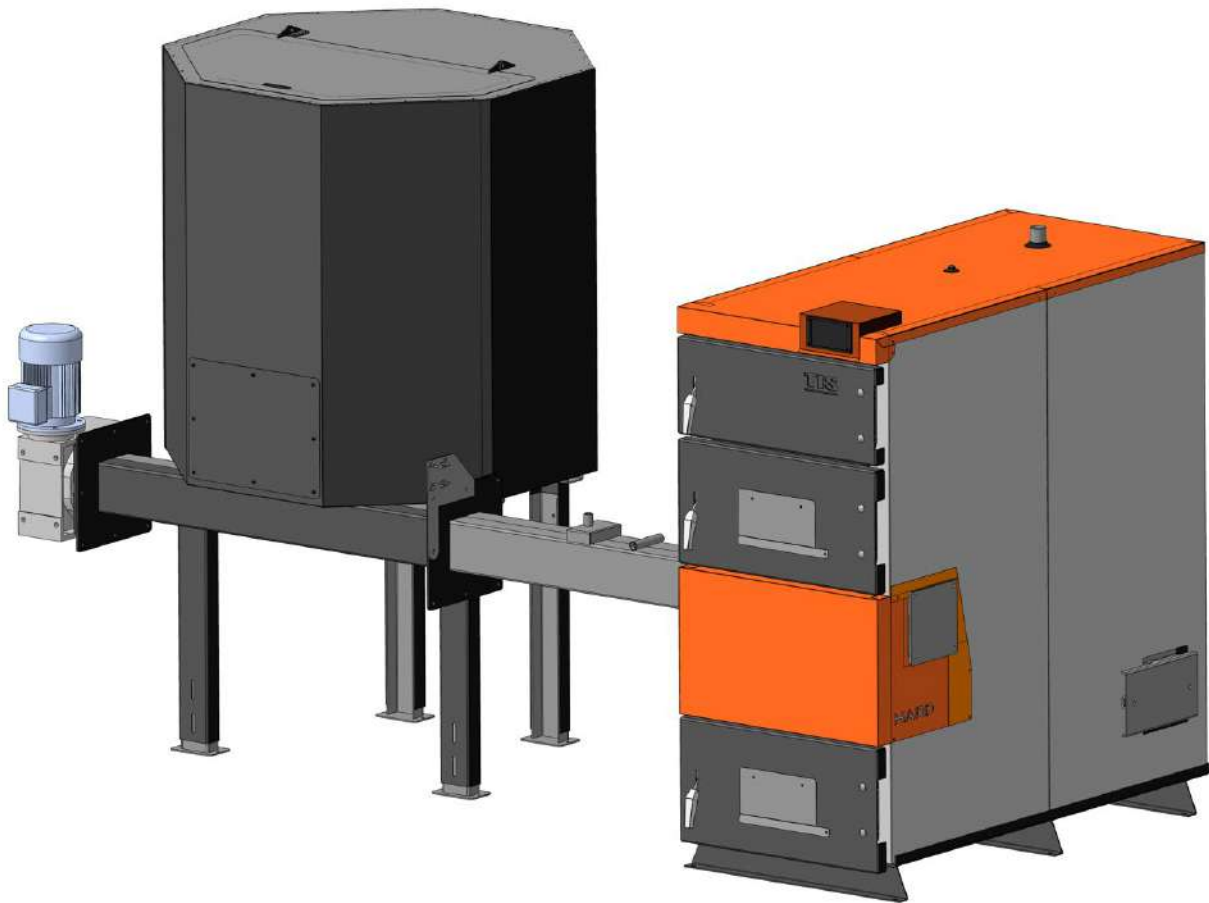




TIS BIO DUO 150

TIS BIO DUO 150 BOILER

BIO DUO 150 is a modern boiler capable of heating output of 150k BTU to 500k with automatic fuel supply for burning wood chips, designed to work in heating systems of residential and industrial facilities. The boiler's distinctive feature is its ability to work on fuel from wood waste of any quality. Completed with a hopper, which has a feeder, and an automatic control system. A reliable security system, with thermal water protection and a fuel line temperature control sensor, protects the boiler from fuel ignition in the auto feed system.

This boiler is also retrofitted with a combustion products after burning chamber, which is implemented in the form of ceramic concrete slabs, located in a certain order in the furnace back. The combustion process takes place in the lower part of the boiler. The combustion temperature reaches up to 2400° F. At peak temperatures, the process of decomposition of harmful substances, released during combustion, takes place, so the gasses released into the atmosphere comply with environmental standards for emissions. After passing through the combustion chamber, the gasses enter the upper heat exchanger and further into the chimney.

Fuel requirements: wood chips with a moisture content of no more than 40%.

Boiler operation on wood chips with a moisture content of up to 60% is possible with a deviation from the factory parameters.

Wood chip size - length 1/4 - 2" , thickness no more than 1 1/4" (maximum allowable length is 4" , thickness - 2" with a content of no more than 10% in the fuel volume).

Outgoing flue gas temperature is no more than 360° F (when the boiler is operating within the range of the specified operating temperature with Δt no more than 30° F and the return line temperature is no less than 135° F). In case of deviation from the recommended operating conditions, boiler operation parameters and fuel requirements, flue gasses may exceed up to 500° F. The operating pressure must not exceed 15 psi. The maximum test pressure is 50 psi.

Boiler features:

- Rated power efficiency – no less than 86%;
- Maximum allowable humidity - 60%;
- Maximum allowable fuel length is 4", thickness - 2" (containing no more than 10% in the fuel volume);

*** when the boiler is operating in the range of the specified operating temperature with Δt no more than 30°F and the return line temperature is no less than 135°F;*

- It is possible to reach up to 500°F flue gas depending on the operating conditions and parameters of the boiler;
- The boiler is made of with the highest quality certified boiler steel ASTM A106;
- Thermal insulation is 2" thick;
- Powder coated boiler casing;
- Wide door opening angle;
- The boiler cleaning and maintenance are carried out from the boiler front;
- It is possible to complete with an ash removal system;
- Equipped with TIS TRONIC 660HD automation.

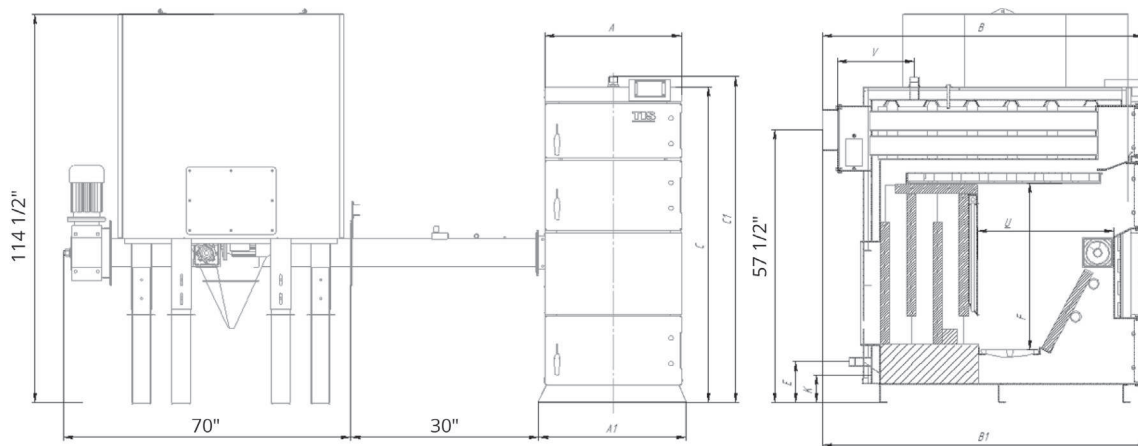


TIS BIO DUO 150 BOILER

Automation TIS TRONIC 660HD combines the following features:

- Boiler fan control;
- Boiler feeder control;
- Boiler circuits and heating system circulation pumps control;
- Exhaust gas temperature control;
- Boiling protection;
- It is possible to connect a room temperature controller and the Internet module TIS TRONIC 520.

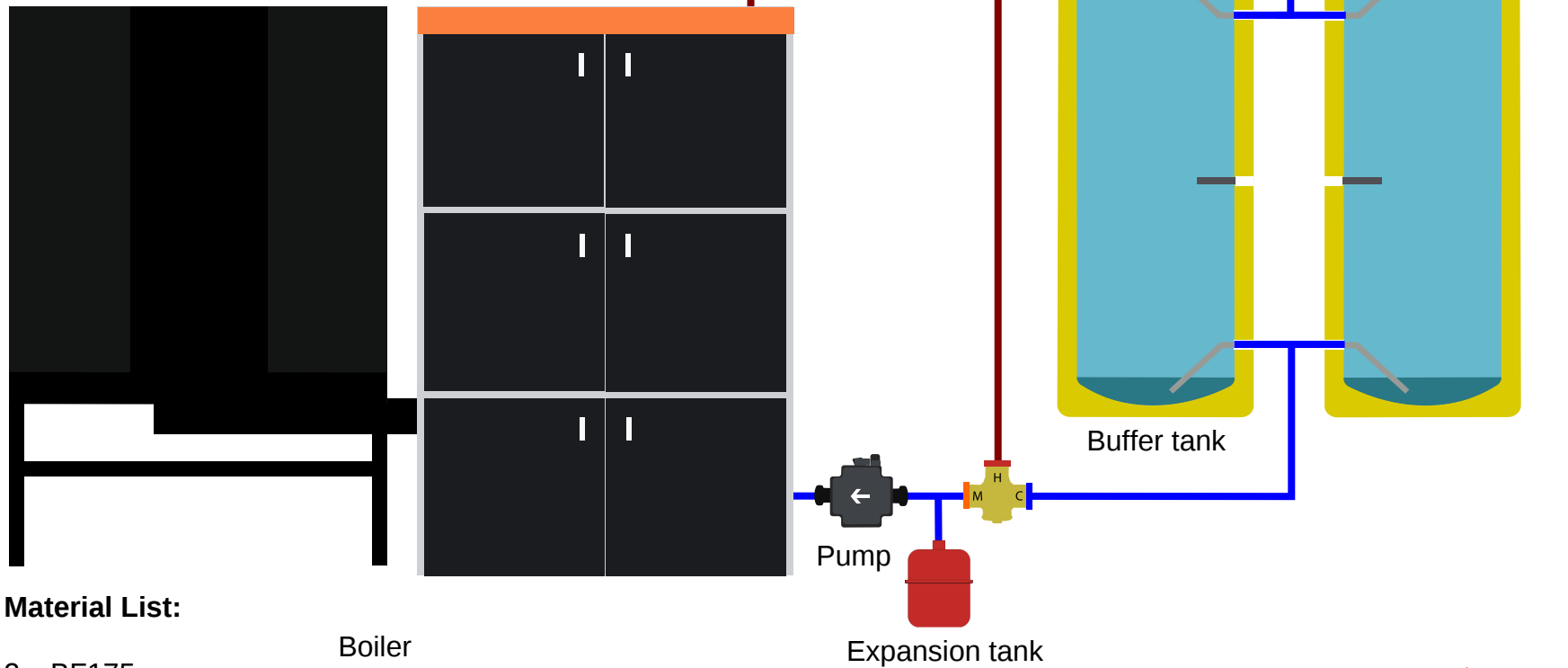
THE BOILER BODY GUARANTEE IS 5 YEARS



TECHNICAL DATA

Boiler parameters	UOM	BIO DUO 150
Power (heating capacity)	KBTU	150-500
Maximum operating temperature	°F	185
Maximum working water pressure	psi	15
Coefficient of efficiency	%	86
Heating surface	feet ²	130
Maximum fuel consumption	lb/h	86
Water flow through the boiler	gpm	29
Water volume in the boiler	gal	110
Connections	inch	2"
Chimney diameter	inch	8"
Boiler weight	lbs	2170
Boiler width (A)	inch	28 1/2 "
Boiler depth (B)	inch	66 1/2 "
Boiler height (C)	inch	67 1/2 "
Size A1	inch	31 1/2 "
Size B1	inch	72 1/2 "
Size C1	inch	68 1/2 "
Size D	inch	57 1/2 "
Size E	inch	16 1/2 "
Size V	inch	12 1/2 "
Size K	inch	11 1/2 "
Furnace volume	gal	159 "
Furnace width	inch	21 1/2 "
Furnace depth (U)	inch	51 1/2 "
Furnace height (F)	inch	36 "
Note: Possible deviation of dimensions and weights is within ±5%		
Estimated fuel type, calorific value	BTU / lb	4500

HARD BIO 150: System safety (thermal water protection with sensor fuel line temperature control) protects the boiler from fuel ignition in the system auto-feed. Due to the design features boiler and unique manufacturing technologies maximum possible recovery is achieved by the thermal energy of the combusted fuel. The exhaust gas temperature is not more than 155 °C.



Material List:

- 2 x BF175
- 2 x Pump 2"
- 1 x BIO DUO 150
- 1 x BPV 2"
- 1 x Flow Bypass Valve 2"



For custom drawing please contact us: info@mbtek.com



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