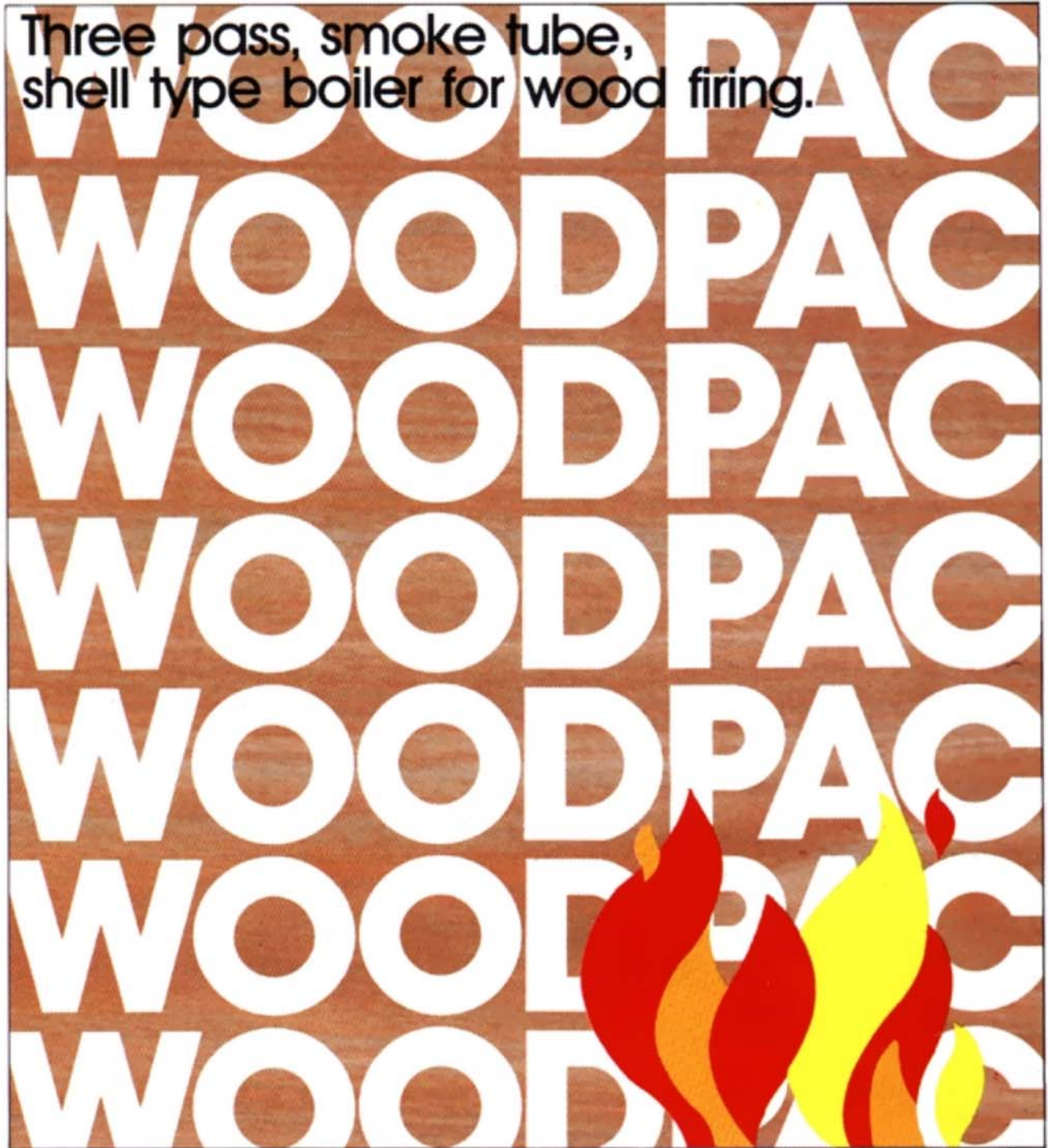




# WOODPAC®

Three pass, smoke tube,  
shell type boiler for wood firing.



INTERNATIONAL

**W**oodpac® is a three-pass, smoke tube, shell type boiler for wood firing. With an integral corrugated furnace, it is a compact, rugged and dependable boiler. Woodpac® is available in the range of 1 T/hr to 6 T/hr F&A 100°C (2200 lbs/hr to 13200 lbs/hr F&A 212°F) with pressures, ranging from 10.54 kg/cm<sup>2</sup>g (150 lb/in<sup>2</sup>g) to 17.5 kg/cm<sup>2</sup>g (250 lb/in<sup>2</sup>g). Woodpac offers a rated output on wood of 3300 kcal/kg (5940 btu/lb.) and an efficiency upto 70%. Woodpac can be modified to oil firing with minimum downtime.

**WOODPAC®**

# Significant User Benefits

**Easy Operation & Maintenance** : The strategic position of charging and ash cleaning door, boiler mountings, make the boiler easy to operate. The steam pressure at boiler outlet makes the ON/OFF system automatic . Optimally sized smoke tubes facilitate easy cleaning and maintenance of pressure parts.

**Complete Combustion** : The location of primary air and secondary air jets coupled with the post combustion chamber, ensures complete combustion.

**Minimum carry over** : Different ash trapping points, resulting in negligible carry over.

**Compact Design** : The integral corrugated furnace makes for a compact and rugged design. It can withstand the high cyclic

thermal stresses due to ON/OFF operation of the burner.

**High Efficiency** : Efficiency of 70% on wood of calorific value of 3300 kcal/kg (5940 BTU/lb) is achievable. A higher efficiency of about 76% can be achieved with a heat recovery unit depending on wetness and quality of wood.

**Dry Steam** : The shell type design with dry pan assembly ensures dry steam.

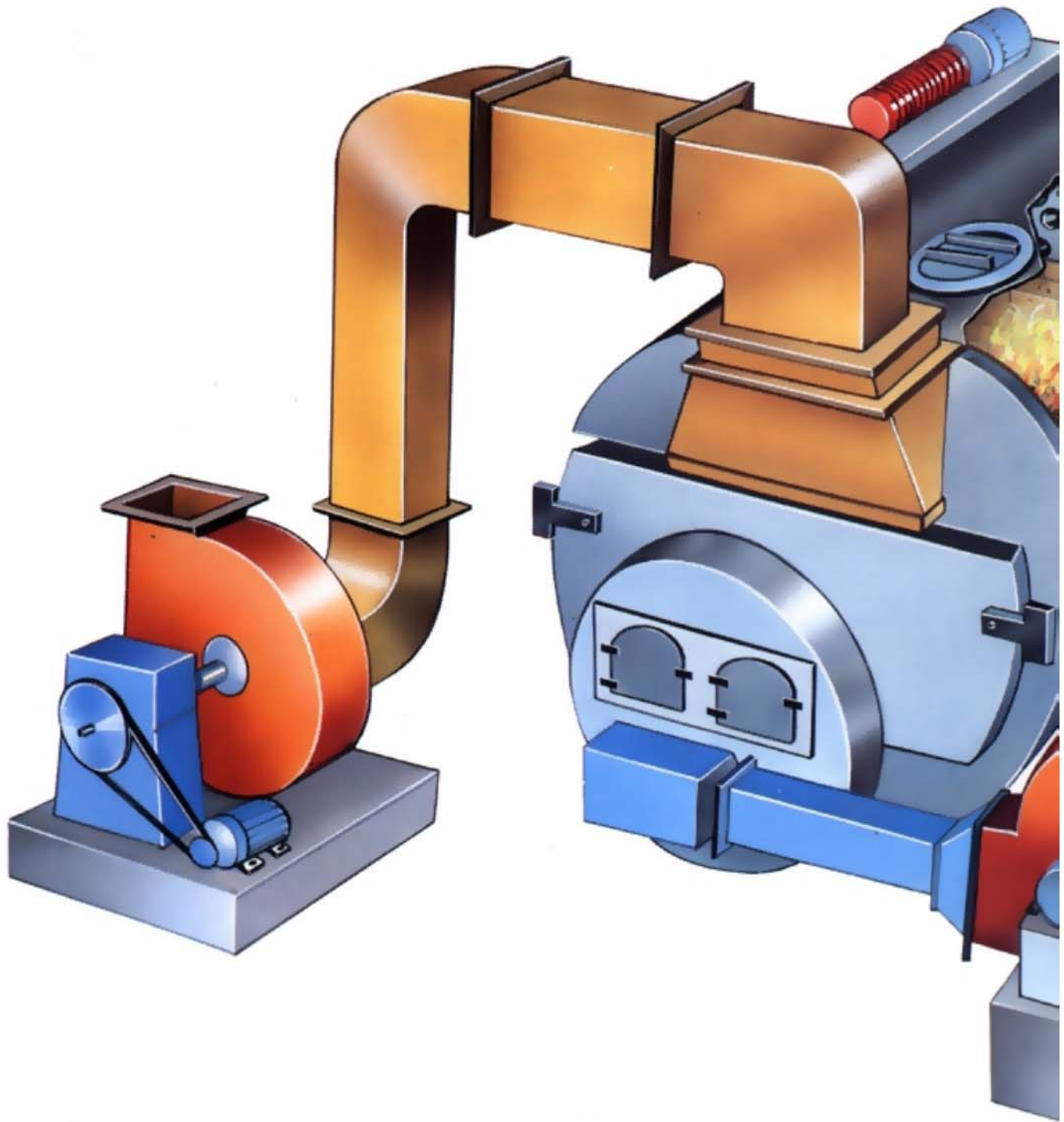
**Low stack temperature** : the unique construction of furnace and heat exchanger ensure low stack temperatures at boiler outlet. The low stack temperatures ensure high-efficiency.

**Prompt Service** : Prompt and attentive after sales service through a network of offices.

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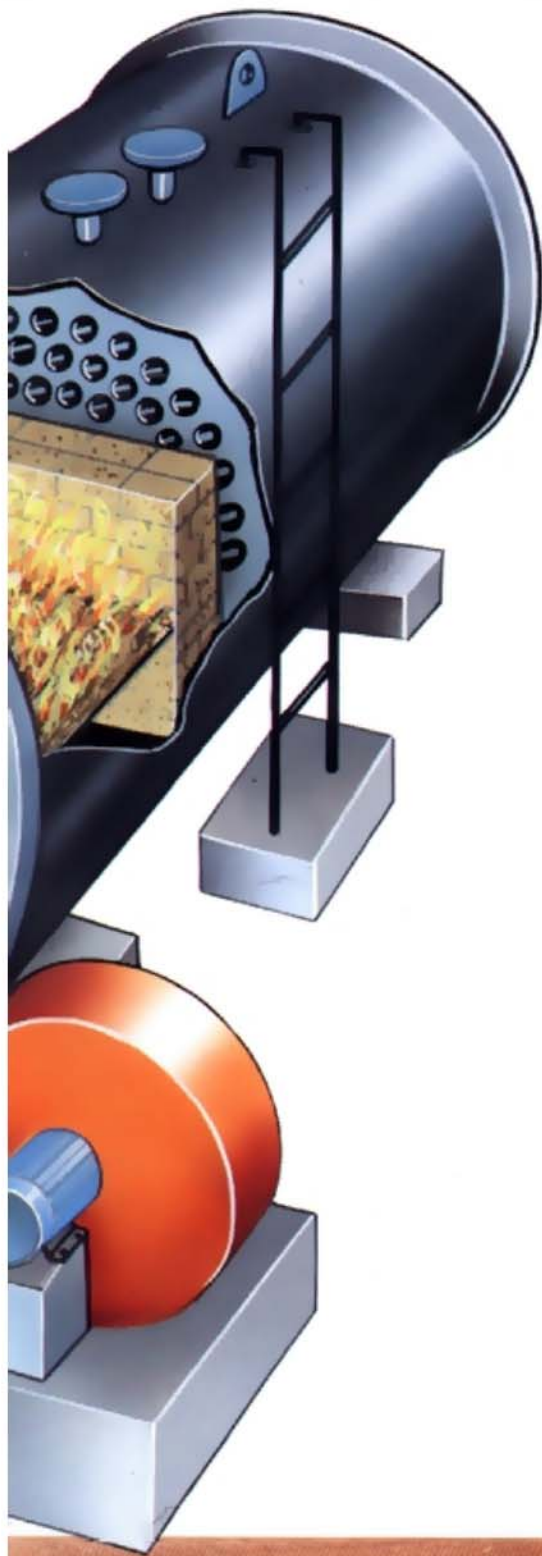
## Controls and Safeties

- The woodpac steam boiler is provided with adequate safety systems.
- Two Mobrey systems for automatic pump operation and maintaining the water level. It ensures water in the boiler at all times and trips the boiler at low levels.
- Pressure operated automatic shutdown systems for combustion fans to control the steam pressure.



Three pass, smoke tube, shell boiler for wood firing

# SALIENT DESIGN AND CONSTRUCTION FEATURES



## Boiler

The boiler is of a three-pass, partial wet back, smoke tube design with a corrugated integral furnace.

## Integral Furnace

The fuel is fired on grate bars in the integral furnace. Heat transfer by radiation takes place in the first pass, followed by two convective passes. The first convective pass is immediately after the radiation pass, and the flue gases are reversed in the second convective pass. The spirals in the tubes ensure a high rate of heat transfer and a low stack temperature at boiler outlet.

## Reversal Chamber

The smoke box at the end of second pass acts as a reversal chamber. The hinged construction of the smoke chamber makes the cleaning of tubes easy. It also facilitates the settling of ash.

## Balanced Draft

The boiler is supplied with a forced draft primary air fan. As wood contains a lot of volatiles, a secondary air ducting is provided for complete combustion in the furnace.

An induced draft fan is provided for overcoming the resistance in the heat exchanger. The furnace is always maintaining a balanced draft, resulting in minimum leakage of air.

I type

# RESPONSIVE & RESPONSIBLE

Thermax has been in the business of boilers for over 25 years – and today is the leading thermal engineering company of India.

With its strong in-house R&D, absorption and adoption of the latest technologies and a committed technical team – Thermax manufactures the widest range of process heating equipment for diverse industrial applications. Its experience in handling various fuels, firing systems, and retrofits is unmatched.

More important, Thermax sees its role not only as a supplier of heating equipment but as a provider of total customer solutions – by designing total systems, carefully selecting components and providing services through its franchisee-based all-India service network.

Thermax delivers what it promises – customer satisfaction with a difference.

If you  
need  
the heat,  
we have  
the  
source.



**THERMAX**

**THERMAX LIMITED**

**INTERNATIONAL DIVISION**

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In view of our constant endeavour to improve the quality of our products, we reserve the right to alter or change specifications without prior notice.