

# LOW NO<sub>x</sub> HIGH EFFICIENCY PREMIX BURNER DIRECT FIRED HOT WATER BOILER

Bent Steel Water Tube Parker "LR" Model  
Premix Gas Fired

## THE PARKER DESIGN

A time proven product backed by one of the largest and most successful Manufacturers of Packaged boilers whose name is synonymous with quality and safety. Every boiler is thoroughly factory fire tested and is required to meet the highest standards in all phases of mechanical and operating efficiency before shipment.

Parker Hot Water Boilers are designed specifically to provide the building heating and industrial processing industries with a Superior Quality Boiler with Unequaled Advantages in Safety, Long Life Service and Economical Operation.

## BENT TUBE CONSTRUCTION

The Parker Bent Tube All-Welded construction is the most flexible and durable on the market.

## ADVANTAGES

### 1. Low NO<sub>x</sub>

The burner system will meet most Best Available Control Technology Requirements that exist now. The system has the ability to be adjusted to extremely Low NO<sub>x</sub> emissions.

### 2. High Efficiency

These High Efficiency "LR" models incorporate a built in finned steel tube bundle in addition to the standard tubes. These heavy duty finned tubes are placed above the standard Parker tubes, and they significantly increase the amount of heat absorbed from the flue gases, thus increasing boiler efficiency.

With the additional heating surface, the already long Parker Hot Water Boiler life is extended even further. The efficiency ranges from 83 to 85%.

### 3. Safety

Our ASME tube bundle is extremely flexible and offers a long life with a 20 year warranty against thermal shock. No Parker Boiler has ever been known to experience an internal explosion.

### 4. Heavy Welded Flexible Tube Construction

The Parker steel tube bundle is 1<sup>5</sup>/<sub>16</sub>" OD (.133") thick, and the finned tubes are minimum 1" OD (.11"), heavy

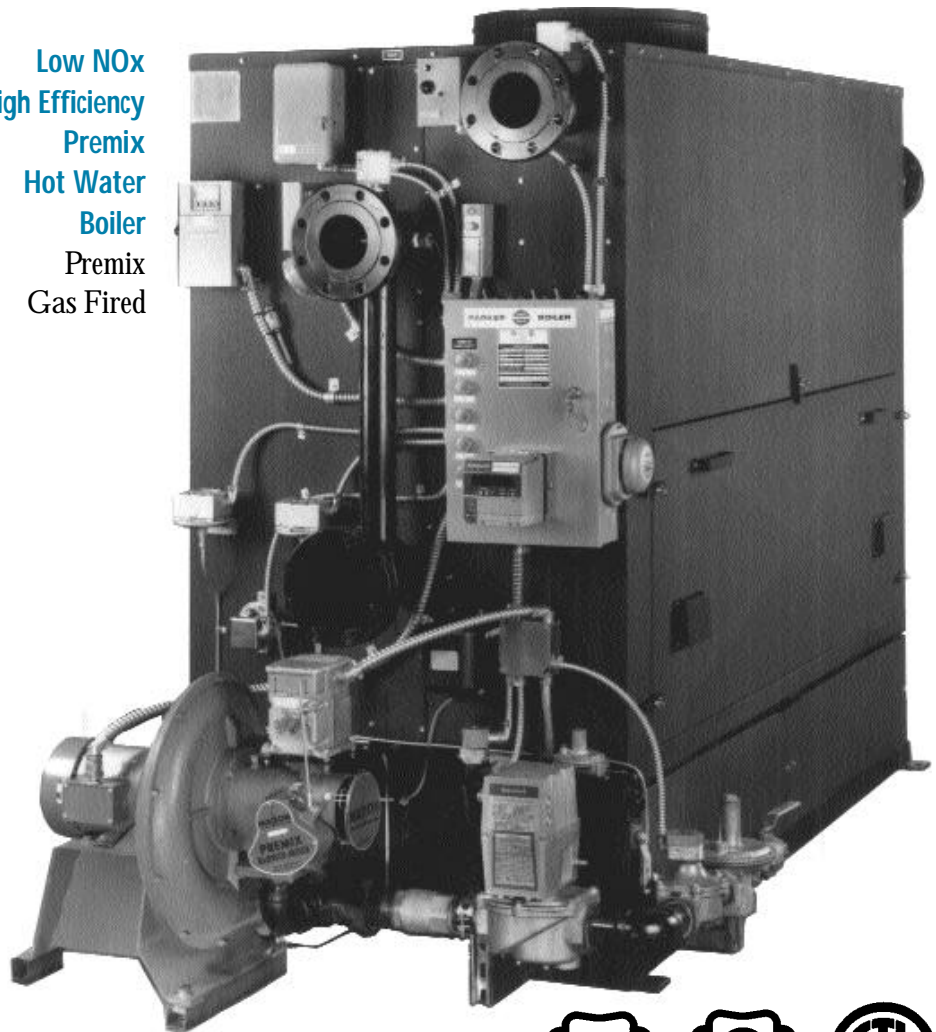
thickness steel. This thickness is almost double standard gauge boiler tubing for the same diameter. The bent tube design permits free expansion and contraction of each tube independently with changes in temperatures, eliminating strain on the metal, warping and leaking, typical of rigid straight tube designs. This construction utilizes heavy material with flexibility to provide extreme safety and long life.

### 5. Codes

All Parker Direct Fired Boilers are manufactured in accordance with the ASME Power and Heating Boiler Codes and registered with the National Board of Boiler and Pressure Vessel Inspectors.

Natural gas and LPG fired models are ETL Listed "Industrial and Commercial Gas Fired Packaged Boilers" certified to UL795, for indoor or outdoor service. Canadian models are C-ETL Listed.

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High Efficiency  
Premix  
Hot Water  
Boiler  
Premix  
Gas Fired



**PARKER**  
**BOILER CO.**

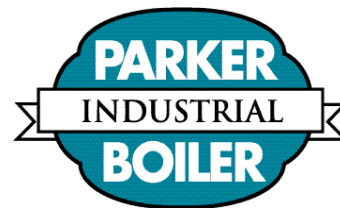
NEVER A COMPROMISE FOR QUALITY OR SAFETY

5930 Bandini Boulevard  
Los Angeles CA 90040  
Fax (323) 722-2848  
www.parkerboiler.com

Phone (323) 727-9800

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## Parker "LR" Model

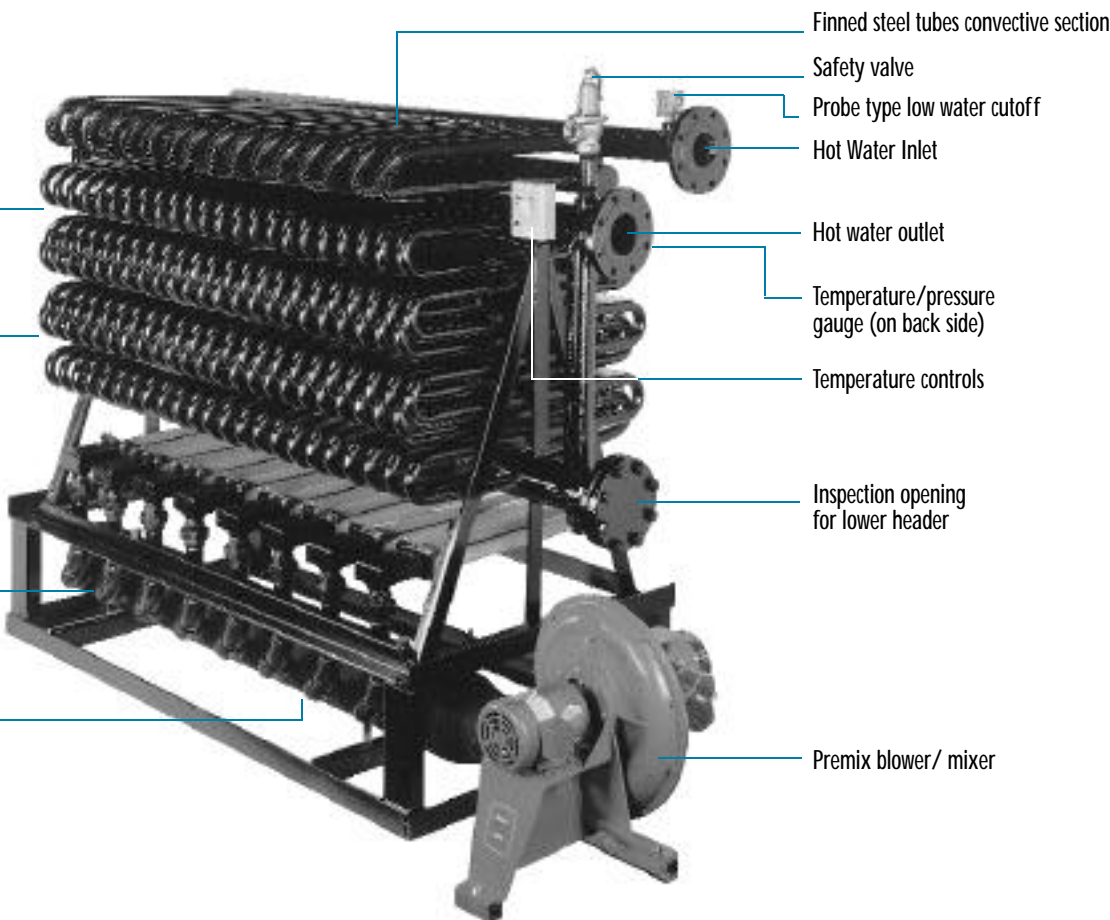
Staggered tubes provide 10-pass self baffled heating surface for high efficiency

Tubes are heavy thickness, welded to headers with high tensile weld metal

Flexibility designed to permit free expansion and contraction, eliminating warping and leaking

Multiple metal fiber burners for uniform heat distribution

Premix manifold (bottom mounted shown)



## THE PARKER PREMIX BURNER SYSTEM

The Parker Premix System consists of a burner bed of Heavy Duty Metal Fiber Burners (MFB). Through a gas/air premix manifold, the burners may be linked to a fully modulating blower mixer which offers precise control of combustion through the full range of modulation.

## BURNER SYSTEM ADVANTAGES Durability and Testing

The Parker System offers an extremely durable and field proven Low NO<sub>x</sub> Premix Burner, with hundreds of successful field installations in harsh boiler environments providing heat, day in and day out. Extensive factory and field testing has occurred.

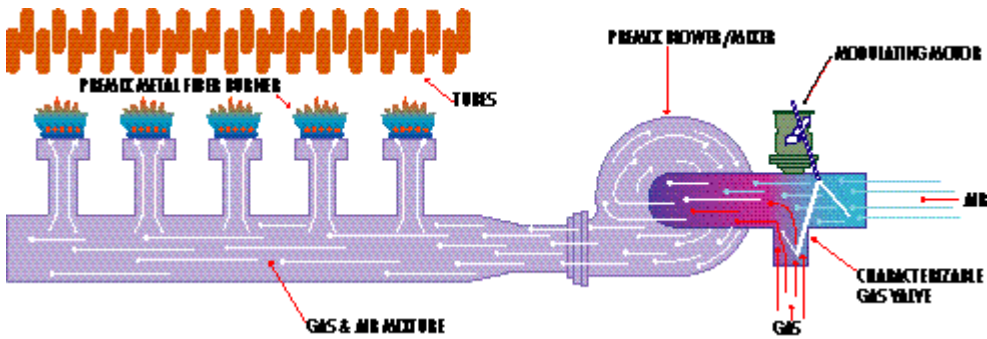
## Even Heat Distribution

Unlike Conventional Power Burner Technology, the burner bed provides a uniform heat distribution on all boiler tubes for improved heat transfer and boiler efficiency. Uniform heat over the entire heating surface at high, low and modulating firing rates provides longer tube life by eliminating concentrated firing on limited tube surface.

## Low Maintenance, Simple Adjustment

The simplicity of the System with no FGR fan or valve, allows normal boiler operators to adjust and service the System. Allen screws provide simple precise adjustments through a characterizable fuel valve. Filters are not normally required. Combustion repeatability is unsurpassed.

Ultra Low NO<sub>x</sub> High Efficiency Premix Burner System with heavy duty burners. The Heart of the Low NO<sub>x</sub> Boiler.



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