

CYLINDER METAL FIBER BURNER



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History & Growth

The Founder, Sid E. Parker, designed the first Parker Boiler, bearing his name. Sid E. Danenhauer joined his uncle in California as a partner in the Parker Boiler Company. Together, they made Parker Boiler into an Industry leader. Sid E. Danenhauer was born in 1916 in the small mining town of Clifton, Arizona. After an outstanding high school career he attended the University of Arizona on a full track scholarship. He participated in the US Olympic track and field trials in Los Angeles until an injury forced his withdrawal. Two years after graduating with a degree in business he joined Parker Boiler. Sid E. Danenhauer was president and was elected chairman of the board. He served in this capacity until a week before his death in 1996.

Under his leadership, Parker Boiler has become a multi-million dollar corporation and is recognized as an Industry pioneer and leader. Sid E. Danenhauer helped develop the original Water Tube Steam Boiler, the famous Parker H-Drum Boiler, and the new Low NOx Boilers.

His son, Greg E. Danenhauer, our VP of Engineering continues his ingenuity with more products offerings, such as Low NOx Boilers, Condensing Boilers, boilers interfacing to BAS and boiler dashboards.

Parker Boiler also has built a reputation of taking care of its customers. This is true whether we are working with a design engineer from concept to beyond the job completion or just simply promptly returning phone calls. The Heavy Steel All Welded Flexible Construction cannot be surpassed for safety and permits free expansion and contraction with change in temperatures. Thermal Shocks are readily absorbed without hazard or damage to the boiler. No other Boiler Manufacturer can truthfully claim to have a better record of safety of its boiler products. Parker Boiler has lived up to and deservingly earned the Motto established 50 years ago "Never a Compromise for Quality or Safety".

The Danenhauer family continues to own and operate the business with considerable family pride and tradition.



Sid E. Danenhauer



Sid E. Parker, Founder

Innovation & Value

Parker Boiler's large, modern office and manufacturing facility provides the space needed for volume production with an efficient plant layout. Parker's own engineers have developed computerized and microprocessor controlled manufacturing machines that assure precision fabrication, and higher quality standards. Waste caused by human error is eliminated which reduces manufacturing costs and helps hold down product prices.

Quality Value

All of Parker's superior quality boilers are available at competitive prices and have been distributed through our representatives for more than 65 years.

Environmentally Responsible

We presently have a large number of products available which meet or exceed existing Low NOx Rules. We continue to work on newer, less costly and more reliable alternatives to meet these new requirements. Our Premix Low NOx Burner System meets current Best Available Control Technology Requirements that exist today. The Metal Fiber Burner has been used successfully in Europe for Low NOx Burner Systems since the early 1980's and many Parker Boiler installations have been on-line since 1991.

Custom Built

Special configurations of our standard products can be built to meet a customer's specific need. These configurations include reverse trim, breakdown construction for tight entries or even complete installation on a metal skid.

Market Diversification

Since its inception, Parker Boiler products have been developed and introduced into many Industries. Parker Boiler products are widely used in various heat applications such as processing and manufacturing plants which supply essential materials for almost every use from aerospace to food processing.

WE ARE ALWAYS
IMPROVING OUR
PRODUCTS. OUR
DEPENDABILITY,
SERVICE AND
SAFETY ARE NEVER
COMPROMISED.



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We manufacture steam boilers, condensing boilers, hot water boilers, thermal liquid heaters, indirect water heaters, low NOx burner systems, automatic water softener systems, feedwater return systems, feedwater deaerators, blowoff tanks, storage tanks and boiler room accessories.

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Industry Leading Manufacturer In Industrial Boilers

Due to our continuous product improvement, over time Parker Boiler has grown to become a world leading company in design, safety and most importantly longevity.

Steam Boilers

We have designed our Parker Steam Boiler Series with our customers in mind. The design is an evolution of decades of design development. The boilers utilize natural thermal circulation. Our Steam Boilers are designed with individual tube sections, each connected to the boiler drum and lower headers by pipe unions. To replace any section of tubing, it's only necessary to undo the unions and remove that section of tubing. It's even possible to temporarily operate our steam boilers with a tube section completely removed by replacing the unions with pipe caps. Many sections of tubing are interchangeable and low in cost!

Parker Low NOx System

The Parker System consists of a Heavy Duty Metal Fiber Burner (MFB). Through a gas/air premix manifold, the burner may be linked to a fully modulating blower mixer which offers precise control of combustion through the full range of modulation. Parker uses a variety of premix gas/air mixing & delivery systems for it's "L" System boilers. Parker's Low NOx Systems are typically designed for a 20 or 30 ppm level corrected at 3% O₂, however, special 9 or 12 ppm Low NOx boilers are also provided. In all cases, a Premixed gas/air is distributed to the burners by a manifold. By precisely controlling the gas/air ratio provided to the burners, Low NOx emission & efficient clean combustion is obtained.

Deaerators

Deaeration is the process of removing the dissolved oxygen from the boiler feed water. Additionally, in the deaeration process the CO₂ is also removed. Removal of these two gases is important in boiler feed water as both of these gases promote corrosion in the boiler or steam system. An additional benefit of a deaerator is the conservation of flash steam in systems with large amounts of condensate return. This can result in substantial energy savings of up to 14%.

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Dependable Products You Can Rely On

Parker Boiler has furnished dependable, quality boilers for almost every type of service throughout the United States and around the world. Parker boilers are a better value because they are better engineered, designed and packaged. We are always improving our products. Our dependability, service and safety is never compromised.

Throughout the United States and around the world, Parker boilers are dependably furnishing steam and hot water for almost every type of service. If maintenance costs are high or your present boiler is the cause of expensive shutdowns, now is the time to contact your Parker Boiler representative. Learn how a truly superior Parker boiler can cut your steam or hot water generating costs. Parker Boiler offers a wide range of options from Gas (Natural Gas or LPG), Oil, Biogas or Combination firing models. Low NOx is available on all models. (Most models are UL or ETL Listed.)

204WW Direct Fired Hot Water Wall Boiler

Mid Efficiency Boilers For "H" Heating Power & "S" High Temperature Systems

Parker Water Wall Hot Water Boilers are designed specifically to fit through a standard 36" doorway without disassembly. Our Water Wall Hot Water Boilers are available as Gas (Natural Gas or LPG), Oil, Biogas or Combination with a conventional power burner.

Additionally Parker Water Wall Boilers can be equipped with a Low NOx Premix Metal Fiber Burner. These direct fired Low NOx boiler units are SCAQMD 1146.2 Certified to less than 20ppm and incorporate a VFD Blower.



SCAQMD
Certified to 1146.2



Quality Engineered

Parker boilers are engineered for more efficient operation (whether Natural Gas or LPG, Low NOx, oil or combination gas/oil fired) for delivery of hot, dry steam in less than ten minutes! Parker boilers have a longer service life for a greater return on your investment. Parker boilers are also UL or ETL listed, ASME constructed and National Board registered.



Quality Design

Parker boilers are designed for ease of routine, maintenance and on-site repairs so there is less down time and more reliability. Parker boilers also have an extra heavy, insulated, double-wall steel cabinet construction.



Quality Packaging

All Parker boilers are delivered as a complete packaged boiler, ready to connect to utilities. Every boiler is fire tested and put through a comprehensive check-list before it leaves the factory so you can count on getting it up-and-running.





Low NOx Premix Metal Fiber Burners

The burners consist of a metal fiber surface (hot face) constructed from a special metal alloy. The metal fiber is either sintered or woven. The metal fiber offers an insulating effect which lowers burner surface, flame temperatures and NOx levels.

Low NOx Premix Metal Fiber Burners

Parker Boilers Premix Low NOx Burner System utilizes a variety of metal fiber burners. These are Flat-Strip-Box Type Burners or Cylinder Type L for sealed combustion chambers.

The burners consist of a metal fiber surface (hot face) constructed from a special metal alloy. The metal fiber is either sintered or woven. The metal fiber offers an insulating effect which lowers burner surface, flame temperatures and NOx levels. These burners have distribution and backing plates. The metal fiber thickness varies between 1-8 mm.

Extremely Low NOx Levels can be achieved with these burners and many Parker Boiler systems are installed and running at under 9-12 ppm.

The burners if kept clean and adjusted properly will offer many years of trouble free service.

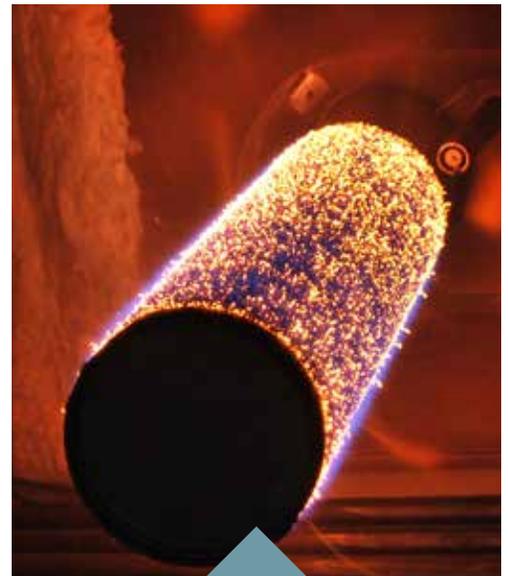
Cylindrical Metal Fiber Burners

Cylindrical Metal Fiber Burners (MFB) are used on Parker Water Wall Hot Water Boilers and Condensing Boilers. This cylinder burner is supplied with a ratio control gas air mixture to the firing head.

The metal fiber surface offers an extremely low thermal conductivity insulating back drop so flame temperatures are low. These low flame temperatures promote Low NOx emissions in the combustion process. In combination with the Parker Boiler sealed Water Wall combustion chamber we realize high efficiencies.

This burner will also be used in Parker Steam Boilers which will incorporate a Water Wall Furnace.

The single Metal Fiber Burner (MFB) offers a price advantage over multiple Metal Fiber Burners Strips.



Cylindrical Metal Fiber Burner

Pictured above is a Cylindrical Metal Fiber Burner firing in a Parker Water Wall Hot Water Boiler.

MFB-22.5, MFB-36

The MFB-22.5 and 36 have been in use since 1992. They utilize a sintered metal fiber hot face. We have installed approximately 20,000 of these burners in the field. The burners are utilized for a 20 or 30 ppm NOx level. These burners are designed to run in a blue (convective) flame mode.

PB-20.5, PB-22.5, PB-36

The PB-20.5, PB-22.5 or PB-36 utilize a woven metal fiber. They were developed as replacements for the MFB Series. The metal fiber on these burners covers the entire top of the burner offering improved service life under severe heat conditions. All PB Burners are constructed of stainless steel. These burners can operate in a blue flame or radiant mode if desired.

PB22.5LN, PB-36LN

The PB-22.5LN and PB-36LN were developed to address the 9 and 12 ppm NOx levels imposed by various air districts. The burners utilize the NIT100S material on 100% of the firing surface plus they utilize a series of stripes of woven metal fiber strips to break the surface flame pattern.

Industry Standard Parts

Parker Boiler utilizes standard controls that are readily available through our representative network and/or at any supply house or wholesaler. We only use Listed components that have undergone extensive testing on boilers running in our R&D department, factory, or in our local service area. The fact that we maintain our own local service fleet enables us to limit problems with direct feedback using warranty tracking software. This assures the controls we choose are rigorously tested before they are used on our equipment to assure long, trouble-free service.

Fair Play

Parker Boiler takes sincere pride in its established reputation of high business ethics and fair play to its customers and employees. The experience and dedication of Parker employees to maintain high standards and product quality has earned Parker Boiler the reputation of having one of the best and safest boilers in the Industry.



Quality & Safety

One of the main reasons for Parker Boiler's continued growth and success is its established reputation for the superior quality, safety, reliability, low cost operation and maintenance of the Parker boiler. Our boilers were developed with safety as the primary goal. This was even more important in the earlier years before the present-day safety controls. No Parker boiler has ever been known to experience an internal explosion, nor has it been possible to induce an explosion under severe testing. The heavy steel, all welded flexible construction cannot be surpassed for safety. It permits free expansion and contraction with changes in temperature. Thermal shocks are readily absorbed without hazard or damage to the boiler. No other boiler manufacturer can truthfully claim to have a better record of safety with its boiler products. Parker Boiler has lived up to, and deservedly earned, the motto "Never a Compromise for Quality and Safety."

Experienced Engineering Management & Personnel

Another key reason for our success is that Parker Boiler has been most fortunate in finding capable personnel that have become proficient and dedicated to the high ethics and goals of the company. Many years ago, Parker Boiler recognized the importance that experience plays in the growth and continued success of operating a business of this type. Few companies can match the experience, and years of dedicated service, of the personnel at Parker Boiler. The engineering, sales and management personnel have an average of 20 years of experience at Parker Boiler. In addition, the service and production departments average over 18 years of service at Parker Boiler. In order to maintain Parker's leadership in the field, Parker's entire staff is dedicated to continue using their experience to provide the Industry with the best and safest boiler products.

Ease of Inspection

Parker Steam boilers have been designed to provide complete accessibility for internal inspection. Full length cabinet doors on both sides provide internal accessibility to the drum, blowoff lines, burners and boiler tubes. Tube access openings are provided at ends of every tube, permitting internal inspection to be made in a matter of minutes. Special designed plugs, with straight fitted threads and gaskets, are easy to remove under all conditions. The time required for an internal inspection is a fraction of that required for firetube or straight tube boilers.



Flexible Construction

Flexible tube design eliminates maintenance costs resulting from warping and leaking associated with rigid straight-tube design. Each tube can expand and contract independently on heating and cooling without setting up concentrated metal fatigue points as opposed to straight-tube design, rigidly held between headers and tube sheets. This is why we provide a 25 year guarantee against thermal shock.

Easily Repaired

Any steam boiler will likely require retubing sooner or later, depending on care and operating conditions. Recognizing this, special design consideration was given to this concern. Parker Steam Boiler Tubing is constructed in several individual sections, each connected to the boiler drum and lower headers by pipe unions. To replace any section of tubing, it is only necessary to undo the union and remove that section of tubing. It's possible to temporarily operate the boiler with a tube section completely removed by replacing the unions with pipe caps. All sections of tubing are interchangeable and so low in cost that many owners purchase an extra section of tubing to have on hand to meet any emergency requirement. Furthermore, the tubing sections on most models can be turned over after several years of operation adding many additional years of service.



Our Future

The future is very promising for Parker Boiler and our customers, as Parker continues to excel in new product development. Parker is a proven leader in Low NOx technology development. This is evidenced by the fact that Parker was the first boiler company to have units certified to the South Coast Air Quality Management District Low NOx rule 1146.2. Also, Parker Boiler is meeting the new Ultra Low NOx standards for large boilers with new Metal Fiber Premix Burners. We are developing Low NOx higher efficiency boilers on an ongoing basis. The WaterWall Series is a line of hot water boilers designed to fit through a small doorway with forced draft burners and steel tube flexible construction. Parker's variable speed, Low NOx, premix system sets the bar very high for our competition. Not only are NOx levels less than 9 PPM achieved but electrical energy is saved by controlling fan speed with the linkageless system.

Thermal Liquid Heater

Thermal liquid heating is a specialized form of process heating that utilizes the forced circulation of special heating medium as a liquid. In many types of process heating, high temperature, rather than high pressure, is essential where heat, not vapor or steam per se, is required. Thermal Liquid Systems can generally be used at high temperature without a corresponding high pressure.

Pictured on the right is the Parker Boiler HT1008 (1,008,000 BTU input) industrial high temperature thermal liquid heater at World's Finest® Chocolate. 30 years after installing a Parker Thermal Fluid Heater, World's Finest® Chocolate only has had to undertake routine cleaning. No replacement parts have been ordered in all that time.



Made In America, Roasting Almonds In Chicago, IL

How many times have you been approached by a student or Scout at a grocery store selling candy bars for a fundraiser? If it was for a value priced caramel or chocolate bar, it was probably bearing the name "World's Finest® Chocolate".

Well known for their fundraising opportunities, World's Finest® Chocolate is a family owned company and has over 65 years of experience in manufacturing chocolate, candy bars, and other related products. They boast dedicated personnel and use the most modern machinery and the finest ingredients to make consistently delicious chocolates. They are known for their consistency, quality, versatility and dependability.

World's Finest® Chocolate utilizes state of the art technology and high volume production efficiencies. We are pleased to be part of World's Finest® Chocolate's best selling products, the Continental® Almonds; chocolate covered almonds packaged in a one pound gift box. Back in the mid 80's, Parker Boiler sold an HT1008 Thermal Fluid Heater and related accessories to go with the Sandvik Jahn almond roaster. After fabrication, delivery and installation of our equipment and system, Parker Boiler usually does not hear from our customers for many years. As the saying goes, "No news is good news".

After contacting World's Finest® Chocolate and after an array of internal emails, it was discovered that the original purchaser,

Vice President of Engineering, Rich Kessell, who had originally been involved in the project is still with the company. According to Rich, the heater has been in service and is still running strong after 30 years and the reason it has lasted so long is the technology of thermal fluid as opposed to the potentially corrosive fluids of glycol, water or steam vapor. The only service done to the heater is a couple of burner cleanings. They have no purchase history of parts and we are proud to say that this is proof that we sell high quality, long lasting products.

Tube Design

The Parker Direct Fired Type Heater represents an ideal heating system for thermal liquids. Our all double welded, bent steel liquid tube design allows for the continuous expansion and contraction to which the heater must be subjected without damage. The double welded construction eliminates the problems of rolled tubes, ferrell fits, retainer clips, etc, experienced in competitive units. Thermal liquids at advanced temperatures are so thin that only the finest welding can contain the fluid without leakage. Since all fluids will burn in the ambient temperature of the gas flame, this leakage can be serious.

The Parker Boiler Design

The Parker liquid tube design offers an extremely efficient, reliable heater built for the long term with ease of maintenance. The Parker design offers many advantages. Compare ours to the competition.

Safety

Our ASME tube bundle is extremely flexible and offers a long life with a 25 year warranty against thermal shock. No Parker Boiler has ever been known to experience an internal explosion.

Low Cost Operation

The staggered tubing design provides a 10-pass self-baffled heating surface to increase efficiency.

Applications

Process heating applications which require temperatures between 350°F and 650°F can frequently be serviced more dependably, efficiently, uniformly and safely with a Thermal Liquid System as opposed to a steam, water, electric or direct fired system.

Over the past 50 years, thermal liquid systems have been used in a wide variety of applications. The following are some common uses:

- Chemical Plants
- Plastic Molding
- Cooking of Fish Sticks and Potatoes
- Distillation
- Pipe Coating
- Asphalt Heating
- Laundries / Dye Houses
- Wood Veneer Manufacturing
- Particle Board Pressing
- Soil Remediation

It is probable that more and varied applications will continue to be found.

CAL STATE UNIVERSITY, LONG BEACH, CENTRAL PLANT

Shown are ten T6800LR models Hot Water Boilers at California State University, Long Beach. The 85% efficiency, 12PPM NOx boilers have been running since 1996 without any problems. The modular design has saved over a million dollars a year in energy costs.

These ten 6.3 million BTU boilers provide hot water to the campus to heat the buildings during the winter seasons. These high efficiency boilers are equipped with The Parker Premix Metal Fiber Low NOx Burner System to meet the new AQMD emissions requirements. Hot water is circulated to the campus via the underground piping system at approximately 180°F.



Parker Boiler's Standard Line of Products

Steam Boilers Hot Water Boilers Indirect Hot Water Heaters

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

The standard natural gas fired model is furnished as an Underwriters' Laboratories, Inc. Listed Gas Fired Boiler Assembly and displays their symbol on the nameplate. Outdoor, propane and Low NOx models are ETL listed. Canadian models are C-ETL Listed Industrial and Commercial Gas Fired Packaged Boilers certified to CAN/CGA 1-3.1 and UL 795.

| Parker Boiler Deaerators

Deaerating is occurring in the Parker Boiler vessel via two separate actions. In the tank of the deaerator, there is a scrubber, which continually circulates the water in the deaerator bringing it in contact with steam and causing deaeration of this water. The water level control is based on an electronic water level sensor and controller, which generates a 4-20 milliamp signal to an electronic modulating make-up valve. The steam is controlled in a similar manner via a similar controller and is based on temperature in the vessel that controls an electronic modulating steam make-up valve. The Parker Boiler Deaerator design has been shown to reduce the residual oxygen level in make-up water to below 7ppb or .005cc per liter. CO₂ is virtually zero.

| Parker Boiler Heat Reclaimers

The Parker Boiler Heat Reclaimer is a device designed to produce additional hot water from exhaust stacks of gas and oil burning appliances. On Parker Steam Boilers, Hot Water Boilers and Indirect Fired Heaters it is inserted in the vent stack between the boiler and the draft hood or barometric damper.



Economizers
Up to 250PSI and Up to 750°F

102 Series 1-1/2 to 3HP 103 Series Steam Boilers 7 to 25HP 15-250PSI

- Large Heating Surface Internal
- Accessibility
- Ease of Inspection and Repair
- Low Cost Operation
- Heavy Duty Tubes
- Simplicity

103L Series Steam Boilers Low NOx Models 7 to 25HP 15-250PSI

- Low NOx
- VFD/Premix System
- Low Emissions
- Ease of Inspection and Repair
- Low Cost and Efficient Operation
- Large Heating Surface
- Simplicity

104 Series Steam Boilers Atmospheric Models 30 to 50HP 15-250PSI

- Large Heating Surface
- Internal Accessibility
- Ease of Inspection and Repair
- Low Cost Operation
- Heavy Duty Tubes
- Heavy Duty Insulated Cabinet
- Simplicity



STEAM BOILERS

The Parker Boiler water tube design offers an extremely efficient, reliable steam boiler built for long term and ease of maintenance. The Parker Boiler design offers many advantages from Internal Accessibility to Low Cost Operation and many more advantages.

Parker Boiler's Standard Line of Products



104L Series Steam Boilers Low NOx Models 30 to 50HP 15-250PSI

- Low NOx
- VFD/Premix System
- Low Emissions
- Ease of Inspection and Repair
- Low Cost and Efficient Operation
- Large Heating Surface
- Simplicity



105L Series Steam Boilers Low NOx Models 70 to 150HP 15-250PSI

- Low NOx
- VFD/Premix System
- Low Emissions
- Ease of Inspection and Repair
- Low Cost and Efficient Operation
- Large Heating Surface



100-5 Series Steam Boilers Low NOx Available 9.5 to 150HP 15-250PSI

- Dependable Power Burner
- Large Heating Surface
- Internal Accessibility
- Ease of Inspection and Repair
- Low Cost Operation
- Gas, Oil, Bio, and Combination



106 Series Feedwater Return System For Boilers from: 3 to 450HP

- Heavy Duty Pumps
- Easy Installation
- Heavy Steel Construction or Optional SS
- Automatic Float Valve Assembly
- Electric Water Fill System (Option)



105 Series Steam Boilers Atmos. Models 70 to 150HP 15-250PSI

- Large Heating Surface
- Internal Accessibility
- Ease of Inspection and Repair
- Low Cost Operation
- Heavy Duty Tubes
- Heavy Duty Insulated Cabinet
- Simplicity



106DA Series Deaerators Tray & Spray Type 3,500-51,750 LBS/HR

- Oxygen Removal to .005cc per liter
- CO₂ Removal to Virtually Zero
- Reduced Boiler and System Corrosion
- ASME Code Vessel Construction
- Reduced Oper. Cost

FEEDWATER TANK

The Parker Boiler Automatic Return System provides a quality, heavy duty packaged unit fully assembled and ready to install. The system consists of a durable tank with automatic water make-up valve, suction stop valve, strainer, discharge check valve and heavy duty boiler feed pump with motor.

DEAERATOR

The Parker Boiler Deaerator design has been shown to reduce the residual oxygen level in make-up water to below 7ppb or .005cc per liter, CO₂ is virtually zero. The unit provides a complete packaged assembly for easy field installation.

Parker Boiler's Standard Line of Products

115 Series Blowoff Tanks For Boilers from: 1-1/2-150HP 12-266 Gal. Capacity



- Safe Blowoff
- Non-Restrictive
- Blowoff Cooling Assembly - Option
- Heavy Internal Baffle
- Heavy Duty ASME Construction
- NB Registered

201 Series 201R Series (Heat Reclaimer) Hot Water Boilers 300,000-6,800,000 BTU



- Large Heating Surface
- Heavy Flexible Tube Construction
- R-Model With Additional Internal Finned Steel Tube Bundle
- Ease of Inspection and Repair

201L Series 201LR Series (Heat Reclaimer) Hot Water Boilers 300,000-6,300,000 BTU



- Low NOx
- VFD/Premix System
- LR-Model With Additional Internal Finned Steel Tube Bundle
- Even Heat Distribution
- Heavy Flexible Tube Construction

203-5 Series 203-5L Series Low NOx Available Hot Water Boilers 432,000-6,250,00 BTU Up To 300PSI

- Dependable Power Burner
- Large Heating Surface
- Low Cost Operation
- Heavy Flexible Tube Construction
- Gas, Oil, Bio, and Combination

204 Series 500,000-3,080,000 BTU 207WW(HT) (Thermal Liquid) 500,000-2,500,000 BTU

- Dependable Power Burner
- Sealed Combustion Chamber
- No Thermal Shock Problems
- Ultra Low NOx Option
- Gas, Oil, Bio, and Combination

204L Series Low NOx 672,000-3,120,000 BTU 207LWW(HT) (Thermal Liquid) 672,000-2,500,000 BTU

- Low NOx
- VFD/Premix System
- Sealed Combustion Chamber
- No Thermal Shock Problems
- Heavy Flexible Tube Construction

Gas or
Combination Fired



Gas or
Combination Fired



DIRECT FIRED BOILERS - BUILT-IN HEAT RECOVERY

The Parker Boiler Hot Water Boiler incorporates a built-in finned steel tube bundle in addition to the standard boiler 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.

CONDENSING BOILERS

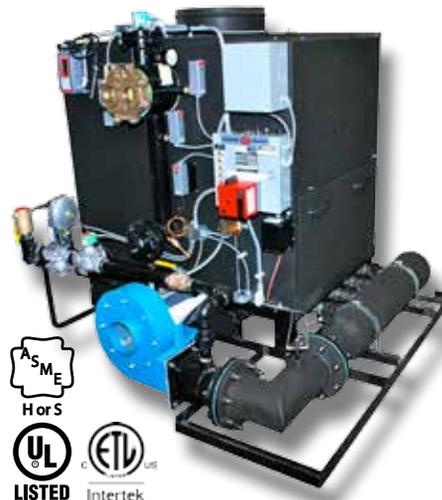
The Parker Boiler TC Series is one of the most efficient boilers available in the world today. The TC Series is a modern stainless and carbon steel condensing boiler. Packaged with conventional boiler controls for simplicity and high efficiency operating for use in closed system heating applications.

Parker Boiler's Standard Line of Products



205 Series Condensing Hot Water Boilers Power Burner 399,000-5,443,000 BTU

- Dependable Power Burner
- Stainless Steel Flue Passages
- Gas, Oil, Bio, and Combination
- Combustion Chamber
- Ultra High Efficiency
- Large Heating Surface



210 Series 210L Series (Low NOx) Indirect Hot Water Heaters 300,000-3MM BTU

- Low NOx (Available)
- Durable Low NOx Burners
- Low Maintenance
- Heavy Duty Insulated Cabinet
- Gas, Oil, Bio, and Combination



205L Series Condensing Hot Water Boilers Low NOx Models 399,000-5,443,000 BTU

- Low NOx
- VFD/Premix System
- Durable Low NOx Burner
- Sealed Combustion Chamber
- Ultra High Efficiency
- Gas, Oil or Bio Gas Available



301-11 Series Water Softeners 4,500-750,000 Grain Softening Capacity

- Reliable Control Valve
- Safe Low Voltage Control
- Ion Exchange Resin
- Fiberglass Reinforced Pressure Vessel
- Distributor System



207 Series 207L Series (Low NOx) Thermal Liquid Heaters 126,000-6,250,000 BTU

- Low NOx (Available)
- VFD/Premix System
- Large Heating Surface
- Controlled Flow
- Durable Cabinet
- Bent Tube Design for Expansion
- Heavy Duty Tubes

500-14 Series Parker Tanks 4.6-2,930GAL Heat Exchangers For Steam/Water ASME Const.

- Storage Tanks
- Expansion Tanks
- Distribution Tanks
- Air Separators
- Vertical and Horizontal Tanks
- Tank Heater Bundles/Heat Exchanger



THERMAL LIQUID HEATER

The Parker Boiler Thermal Liquid Heating is a specialized form of process heating that utilizes the forced circulation of special heating medium as a liquid. In many types of process heating, high temperature, rather than high pressure, is essential where heat, not vapor of steam is required.

INDIRECT FIRED WATER HEATER

The Parker Boiler Indirect Fired Water Heater is designed for economically heating large volumes of domestic or process water. The all bronze waterways and copper (optional 316SS or copper/nickel available) heat transfer coil eliminate the possibility of rust in the unit.

Parker Boiler's BMS Products

Responding to the need (let's call it demand) of boiler owners, specifying engineering, facility staff and contractors for a fully viewable and controllable boiler system, Parker Boiler has responded with a number of different products, solutions and systems. This might be called the "new thing" in boiler designs.

Integrated Boiler Control



Parker Boiler provides certain products with Modbus RTU open protocol for direct integration to Building Automation Systems (BAS) or other monitoring devices. Since other protocols are widely used in the industry, we are offering the ProtoNode which converts the Modbus into other popular communication protocols.

The ProtoNode is available to connect Parker Boiler Modbus equipped products to:

Options

- **BACnet MSTP (RS-485)**
- **BACnet IP (Ethernet)**
- **Modbus TCP/IP (Ethernet)**
- **Metasys N2 (RS-485)**
- **LonWorks**

Communications Converter ProtoNode:

The ProtoNode Panel comes ready to run. Software comes stored inside the device so set up is fast and easy. Included with the device are utility software tools for network discovery, testing and configuration. Complete installation and operation manual is included and phone and remote desktop support is available. A listing of the comprehensive Read and Read-Write points of the Parker product is provided.

The ProtoNode may come as a loose item or it can be mounted in the boiler panel or an independent enclosure with power supply. It includes a point communication list:

Options

- **Honeywell SOLA Boilers**
- **Honeywell 7800 Series Control**
- **Siemens RWF Controls**
- **Siemens LMV Controls**
- **IDEC PLC**

Ability to automatically support multiple known controller profiles.

Three methods of configuration:

- **Configuration Auto-Selector (via DIP switches)**
- **Auto-Discover known devices**
- **Profile selection via Web Configurator to load multiple configurations**

Support one or many field protocols with a single ProtoNode. Supports up to 1,500 host and field protocol memory points BACnet COV support provides fast data communication while reducing network traffic. Virtual nodes allow the ProtoNode to represent multiple devices on the network. Multi-client and multi-server support ensures interoperability between any Industrial and or Building Automation protocols.



ProtoNode for Lonworks



ProtoNode for BACnet MSTP/IP

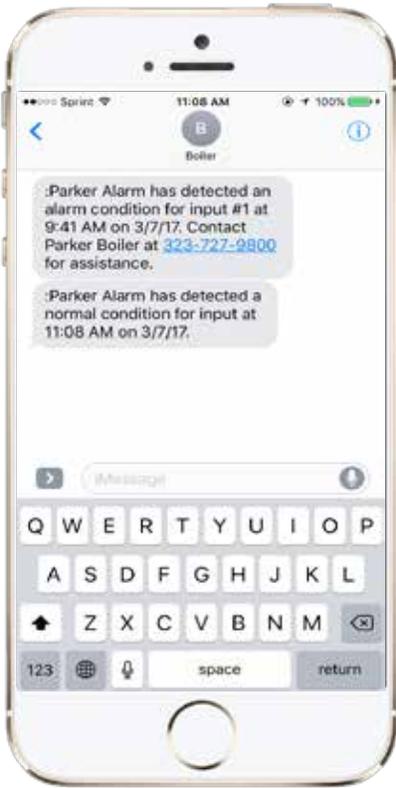
Parker Boiler's BMS Products

ParkerView- Alarm (PV-A) is a simple to setup, use, and maintain cellular based alarming system for use on boilers or other devices. It allows the owner or operator of the boiler or other device to be off site and be alerted when an alarm condition is detected, cleared or when there is a power loss.

ParkerView Alarm (PV-A):

The ParkerView Alarm allows the owner or operator of the boiler or other device to be off site and be alerted when an alarm condition is detected, cleared or when there is a power loss.

When an alarm condition is detected PV-A will text up to 3 phone numbers to indicate there is a problem. If the alarm is cleared an additional text is sent to an offsite owner or operator.



PV-A is standardly provided in a 12x12x4 plastic weather proofed Nema 1 enclosure to improve cellular transmission. It can be mounted indoors or outdoors and requires a 115V/60Hz/1Ph power source. It contains a UL Listed power supply and a Verizon Network certified cellular modem.

Options exist for a remote antenna for those basement boiler rooms. PV-A can be purchased as a stand-alone device and installed in the field by others or it can be provided, mounted on a new boiler.

The system can monitor two boilers or alarm points. Dry contacts on the boiler (or other device) are required, these dry contacts should close when an alarm is present.



This device could allow a boiler service company to know of a boiler problem before the customer is even aware of a down boiler. When the PV-A is purchased it is required that a low cost one year cellular plan also be purchased. This plan can be initially purchased through Parker Boiler. Subsequent years must be purchased from the third party. Yearly subscription must be renewed.

Once installed it takes under 3 minutes to setup the cellular text list and custom names. It will operate with no maintenance for years and is backed by a 1 year warranty.

PV-A is part of Parker Boiler's BMS solutions which include an array of communication products designed to meet customer demands.

Options

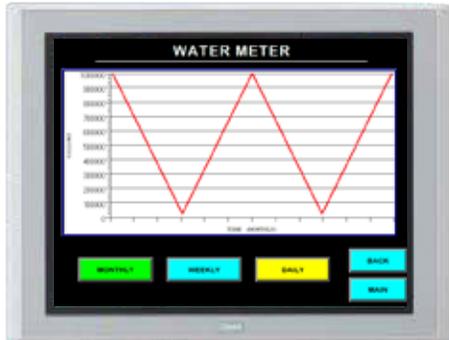
- Remote Antenna
- 24Vac Version



Parker Boiler's BMS Products

ParkerView Lead Lag Leads The Way:

ParkerView Lead Lag (PV-LL) panels provide a complete boiler control and monitoring system. They are custom designed for each application and can accommodate the control and monitoring of various equipment. The PV-LL can monitor the system setpoint and stage the boilers to meet the load requirements. We are able to monitor and control boilers, pumps and isolation valves. We have multiple panels online that give the user access to all the settings and system parameters.



PV-LL's are successfully integrated to many front end BMS software systems and can transmit if the boilers are on, their temperature, system pressure, alarm conditions and other useful information. Give us a call and we can custom build one for your system needs.

Our PV-LL's come with an 8.4" touch screen and IDEC PLC and all the necessary modules installed in a Nema 4 enclosure.



A modem is provided for remote access through your phone or computer to a custom built dashboard. Please see below for more information. Having a modem installed gives us the ability to provide live online support during a startup and make any necessary updates to the PLC.

Parker Boiler Dashboards Go Live

www.parkerview.com

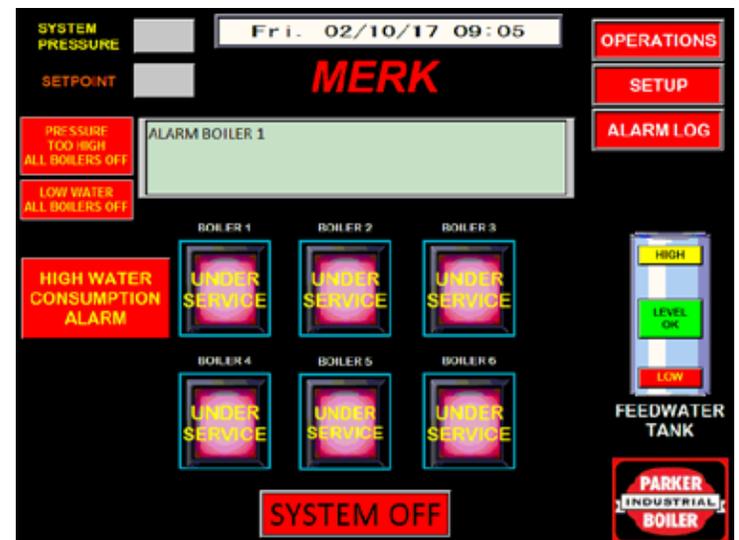
The world is connected, and so are our boilers. In 2015 we put online multiple boiler dashboards and are currently helping plant managers and business owners monitor their system online. It allows them to know if the system is ready for production or if it needs attending and they can do this in the palm of their hand.



ParkerView.com is a custom designed web based monitoring system for boiler systems and other mechanical devices. It is a perfect addition to our ParkerView Lead Lag panels. Through a modem, or proper internet connection, we are able to display online system data including trending of the equipment, temperature, pressure, firing rate, burner status, etc.

If an alarm is present, the alarm will display on the boiler dashboard and will send an e-mail or text letting the right people know the reason for the alarm. This can save the owners time and money by being able to schedule maintenance.

ParkerView Screenshot Sample:



LOCAL AMUSEMENT PARK IN HOLLYWOOD, CA

Pictured below are (2) Parker 9.5HP Low NOx Steam Boilers with our VMU system. The boilers came equipped with a ProtoNode Controller which provides certain products with ModBus RTU open protocol for direct integration to Building Automation Systems (BAS) or other monitoring devices.



Parker Boiler High End Packaging

Complete Skids Single Source Responsibility

There is continued growth in the number of skid mounted boiler systems Parker Boiler is producing whether it is steam, hot water, glycol heaters or thermal liquid heaters. More and more engineers, contractors, OEM's and customers feel comfortable with a single source responsibility of a package working the way it was designed and intended to. Our sales and engineering teams have put together some packages that perform with the correct size pumps, expansion tanks, controls, pipe sizing and trim. This eliminates any finger pointing because part of a system is not operating properly.



Kinder Morgan - Skid Mounted Equipment

Shown above is one of the few dozen skids we have built for gas-utility-compressor-stations nationwide. They are skid mounted, Low NOx High Efficiency T-LR Hot Water/Glycol Heaters. This package included a Parker Boiler T3600LR Heater, a single point NEMA 4 control panel, pump with standby pump, Parker TAV1224 Air Separator and a TEH3048 Horizontal Expansion Tank. The entire skid was pre-piped, wired and insulated with metal jackets and removable blankets over serviceable items.



Wagner Equipment - V.T. Industries

Shown above is a Thermal Fluid Skid System manufactured and assembled at Parker Boiler in 2015. Wagner Equipment in Indianapolis made the sale to V.T. Industries in New Albany Indiana. The skid incorporates a G2304R(HT) 2,000,000 BTUH Thermal Fluid Heater, Central Distribution Tank, Heater and System Pumps, Expansion Tank and a Single Point Electrical Panel. The Control Panel features easy start-stop, pump interlock and pump off time delay.



Southern California - Amusement Park

Pictured above is a complete steam boiler system. The steam boiler system was skid mounted for convenient and easy installation for a local amusement park in Southern California. It was mounted outdoors on the roof with a Parker 20HP Low NOx Steam Boiler, Parker ORR1336 Kompact Mounted Feedwater Return Tank, duplex pumps, Parker BD2048 Blowoff Tank, water softener, and chemical feed system all with outdoor trim, piped and wired on a single skid.

Parker Boiler High End Packaging

Complete Skids **Single Source Responsibility**

There is continued growth in the number of skid mounted boiler systems Parker Boiler is producing whether it is steam, hot water, glycol heaters or thermal liquid heaters. More and more engineers, contractors, OEM's and customers feel comfortable with a single source responsibility of a package working the way it was designed and intended to. Our sales and engineering teams have put together some packages that perform with the correct size pumps, expansion tanks, controls, pipe sizing and trim. This eliminates any finger pointing because part of a system is not operating properly.

GAS UTILITY SKID MOUNTED EQUIPMENT

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They are skid mounted, Low NOx High Efficiency T-LR Hot Water/Glycol Heaters. This package included a Parker Boiler T3600LR Heater, a single point NEMA 4 control panel, pump with standby pump, Parker TAV1224 Air Separator and a TEH3048 Horizontal Expansion Tank. The entire skid was pre-piped, wired and insulated with metal jackets and removable blankets over serviceable items.



WAGNER EQUIPMENT V.T. INDUSTRIES

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SOUTHERN CALIFORNIA AMUSEMENT PARK

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NGM BIOPHARMACEUTICALS STEAM BOILER SYSTEM

Parker Boiler alongside San Jose Boiler Works, was able to design a pre-packaged skid system that included nine Parker 9.5HP Low NOx Steam Boilers, a Parker WRH3660 Feedwater Return Tank, a Parker BD1248 Blowoff Tank and a ParkerView Lead Lag Control Panel specifically designed and programmed to meet any and all requirements for this job. These nine 9.5HP Low NOx Steam Boilers were also installed with a weather protective cover for outdoor installation.

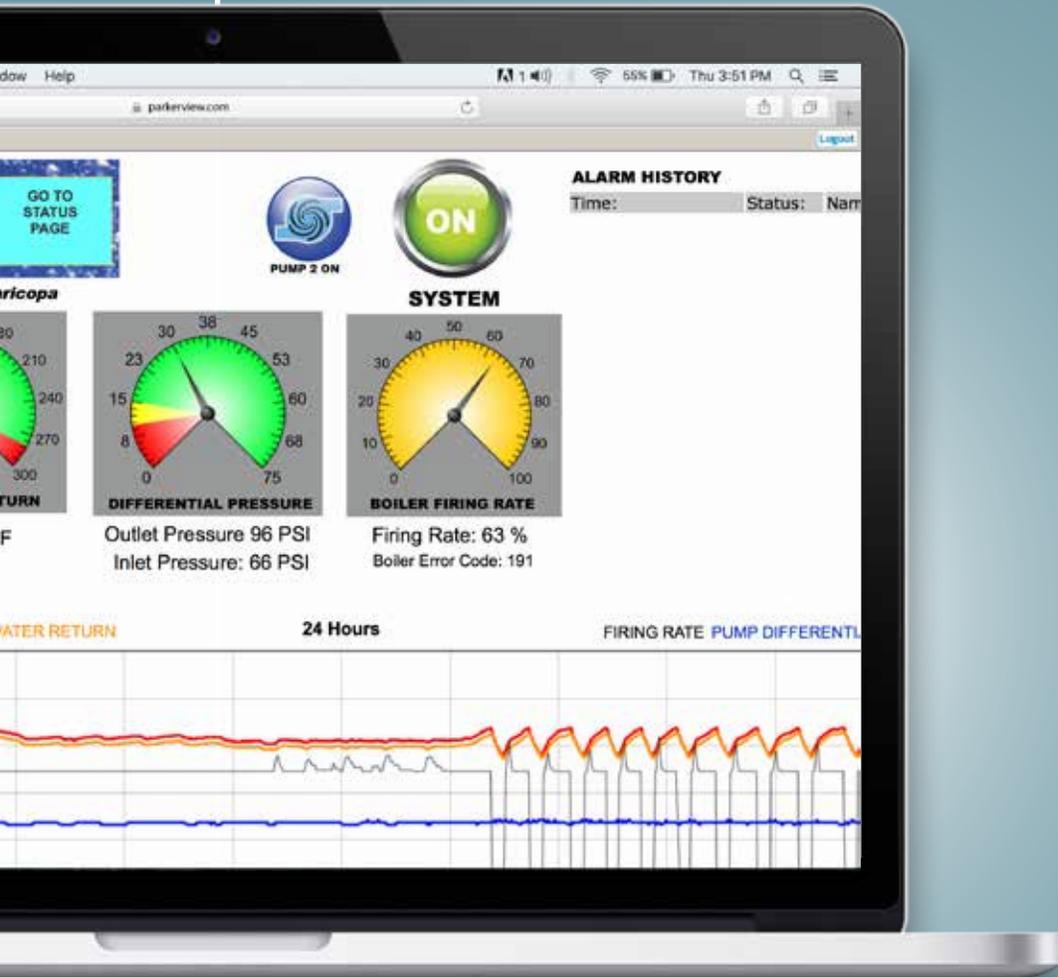


GILEAD TC205 SERIES CONDENSING BOILERS

San Jose Boiler Works worked with Southland on a design build job, centered around six 3MM BTU competitive lightweight condensing hot water boilers. San Jose Boiler Works was able to value engineer this project and instead install three Heavy Duty Parker Boiler TC1450L's, 5,443,000 BTUH, 98% efficient boilers.

The equipment can achieve sub 9 ppm NOx through the firing range with parallel positioning and special Low NOx Metal Fiber Burners. These boilers are equipped with touchscreen panels and produce a total of 16MM BTU's of energy. The end user for these boilers is Gilead, a world leader in the biotechnological industry, with many facilities world wide. They now have 9 Parker TC Boilers on line.





BMS

Responding to the need (let's call it demand) of boiler owners, specifying engineering, facility staff and contractors for a fully viewable and controllable boiler system, Parker Boiler has responded with a number of different products, solutions and systems.

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