

# HIGH EFFICIENCY JOHNSTON BOILERS

WATER-BACK, FIRETUBE, 3- OR 4-PASS, STEAM OR HOT WATER BOILERS

## Quality, Longevity, Minimum Maintenance and Maximum Efficiency.

Since 1864 Johnston Boiler Company has been known for quality, dependability, and efficiency. Johnston manufactures the highest quality packaged boilers on the market that can reduce your operating costs by offering the highest efficiencies and best warranties in the industry. Their main product lines include water-back, firetube, 3- or 4-pass, steam or hot water boilers.

### Higher Efficiencies

Johnston's design provides a more effective heat transfer surface because the furnace and rear combustion chamber are completely surrounded by water. This design feature maximized fuel-to-steam efficiency. Stack temperatures taken at a typical system installation equate to an efficiency of 85%.

### Full Water Back Design

Johnston Boilers fully submerged waterback design rear turn chamber eliminates costly refractory repair and reduces thermal stress on the rear tube sheet. This feature alone will save thousands of dollars in costly repairs and boiler downtime simply because no repairs are needed over the life cycle of the system.

### Higher Heat Transfer

Up to 15% of the heat transfer takes place at the rear water wall affording potential increase of 1% to 3% in efficiency in Johnston Boilers over refractory back designs.



### Minimum Maintenance

Minimal use of refractory, and the full water back design, reduce maintenance while at the same time increasing pressure vessel longevity.

### Steam Storage Area

The steam volume stored within the pressure vessel is often two or more times greater than that of other firetube boilers.

### Best Life Cycle Costs

The conservative design of Johnston boilers provides excellent fuel-to-steam efficiency resulting in the best life cycle costs in the industry. As an example, a medium-sized 1,500 horsepower boiler can easily burn \$3,000,000 of fuel per year. Using conservative savings of 3% compared to most other scotch marine boilers on the market, results in a savings of \$90,000 per year or \$1,800,000 over 20 years.

A larger steam volume allows the boiler to react quickly to load swings and high steam demands.

### Only 15-Year Warranty in the Industry

Nothing matches Johnston boilers quality and dependability. From front to back and top to bottom, every Johnston boiler comes with an unprecedented, industry-leading 15-year warranty, covering the tube sheets, furnace, rear combustion chamber, flue doors, materials, and labor.



INTELLIGENT STEAM, AIR AND WATER SOLUTIONS

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### Fully Factory Fire-Tested

Each boiler is fully factory fire-tested at all applicable loads and fuels prior to painting and shipment. The boilers are built in accordance with the latest ASME code requirements, National Electric Code and other required local, state and insurance requirements.

### Steaming Height

Steaming height, the distance from normal water line to steam nozzle, is up to two times greater than that of other firetube boilers. This feature ensures the steam supplied to your system is 99.5% dry, thereby avoiding damage to critical components within the steam system.

### Fully Packaged System

As much as possible Johnston will pre-pipe and wire all fuel trains, electrical components, blowdown piping, valves, water level controls, operating controls, limits and firing rate controls which saves you costly field labor.

### Green Technology

Johnston Boiler Company has proven technology that will increase the reliability and efficiency in your facility making it the Big Green Machine that saves you money. In many cases we are able to exceed the emissions requirements set by the EPA.

### Digital Design Specific Boilers

Since the boiler needs of each customer can vary greatly, Johnston Boiler's engineering department has the ability to digitally design and manufacture custom boilers to meet specific requirements. Even the large 2500 horsepower boilers move efficiently through the production process.

## Designed For Optimum Performance

Johnston's engineering department has the ability to digitally design specific boilers for optimal performance. Depending on design and operating pressure...

**Efficiencies reach 90% – the highest in the industry without turbulators or an economizer.**

### More Cost-Effective Inspection

Johnston water-back construction requires only washout and hand-hole gasket replacement annually compared to costly refractory door repairs or replacement.

### Separate Rear Tube Sheets

Johnston incorporates separate rear tube sheets where flue gas temperature differentials between flue passes may be as high as 1500°F.

### Weigh 20% More

Most boilers aren't built like they used to be, however Johnston Boilers – weighing 20% more than standard boilers – are crafted to meet your demands for decades.

### Locked Tube Sockets

Standard tube attachments allow linear movement in the tube socket requiring re-rolling to eliminate leaking. Johnston's design locks tubes in place reducing leaking and the need for re-rolling tubes.

### No Proprietary Parts

Unlike many competitors, Johnston Boilers do not require proprietary parts. As a result, even routine maintenance and gasket replacement is lower in cost with Johnston than with most other boilers.

### Special Applications

We assist customers on very special applications: Waste Heat, Special Fuels, Hazardous Location and Marine Applications and Digital Fuel-Air Control Systems.

### Full Product Line

Johnston also offers a complete line of deaerators, surge tanks and blowdown heat recovery systems. These feedwater systems are built to a quality standard which allows Johnston to offer a 10 year warranty, the only one in the industry.

## Contact Campbell-Sevey

Johnston's strategic goal is to provide the most durable, dependable and highest efficiency products to ensure the lowest life cycle costs. Contact Campbell-Sevey to find the right products for your specific applications.

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