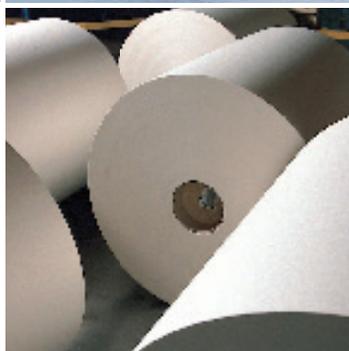


# Boiler Systems ... For Every Industry



"...Integrity, Dependability, Real Customer Service."

## A Unique Company...

Nationwide Boiler Incorporated® has been a leader in the boiler industry for nearly half a century.



### “Find the most cost-effective way to provide temporary boilers to industry.”

This was the goal and driving force behind the founding of Nationwide Boiler in 1967. Since then, we have provided competent technical support and service during boiler selection, installation, and start-up processes. By following this course of action, we have created a successful company that has expanded far beyond its original charter of renting temporary boilers.

Although system rentals still constitute a substantial part of our business, we are now involved in virtually every other aspect of the boiler industry, including boiler system sales, service, operation, and repair. Under the direction of a seasoned management team, our company has grown to be a recognized leader within the boiler industry.

In 1967, we built the world’s first trailer-mounted package boiler designed for commercial rentals. Since then, we have supported hundreds of companies and institutions in thousands of boiler installations throughout the world.

Nationwide Boiler earned its reputation for quality products and exceptional service through hard work and a solid commitment to helping solve customers’ problems. We maintain that reputation through integrity and dependability in dealing with our customers, suppliers, and employees.



## ...With a Sound Operating Philosophy

Nationwide Boiler is committed to providing our customers with timely, technically superior, high quality, and cost-effective solutions for both their temporary and permanent boiler system needs. We demonstrate responsiveness by making every attempt to provide exactly what our customers need, no more and no less—and with no surprises.

Nationwide Boiler is the industry’s first company to convert its entire fleet of rental boilers to meet current low NOx emission standards. Offering low NOx and ultra low NOx boilers for rent, lease, and sale is just one example of how we incorporate new boiler technology into our products.

To ensure quality products, we test fire every boiler before it is dispatched to a job site. In addition, our technicians, mechanics, and service personnel are fully trained and certified.

Nationwide Boiler operates under a simple set of guidelines:

- Be responsive to each customer’s needs.
- Stay abreast of advances in boiler technology.
- Provide only quality products and services.
- Charge a fair price.
- Treat every customer with respect.



Every boiler system, part, and service provided by Nationwide Boiler is priced competitively. This is evidenced by the numerous competitive-bid, fixed-price contracts that we have been awarded by both industry and the U.S. Navy.

Repeat customers account for nearly 75% of all Nationwide Boiler business. We believe that treating customers honestly and with respect are the major reasons for this success.

## ...And the Required Resources

When choosing a supplier, it is essential to select one with all the resources needed to meet your requirements. These include:

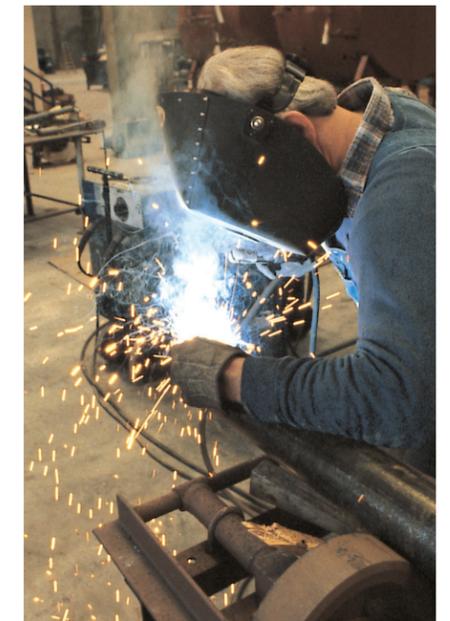
- Facilities
- Experienced personnel
- Adequate financial resources

Nationwide Boiler has assembled all the resources required to ensure that every job will be completed properly and in a timely way. We own and operate a modern boiler overhaul, repair, and test facility, designed and built specifically to support our customer’s needs. In addition, we have strategic-partner companies in major cities throughout

the world, operating similar facilities that are utilized to accommodate our systems for repair and local delivery.

The average length of employment at Nationwide Boiler exceeds 15 years. Continued training and advanced certification provide every employee with the opportunity to expand his or her capabilities. We believe that promotion from within should be the rule, not the exception.

With one of the largest and most modern fleet of rental boilers in the world, along with solid financial strength and long-standing relationships with our suppliers, Nationwide Boiler will continue to expand in this capital-intensive industry, providing our customers with the highest quality products, support, and service.





The world's largest trailer-mounted boiler (previously 120,000 lb/hr; now 125,000 lb/hr) leaving Nationwide Boiler's headquarters in Fremont, California.



Trailer-mounted boilers can be dispatched on short notice and require no special cranes or rigging at either the storage yard or the user's facility.



Large skid-mounted boilers can be moved by truck or rail.

## A Rental Boiler to Meet Every Requirement...

Nationwide Boiler pioneered the concept of trailer-mounting package boilers. The company's leadership role in this dynamic industry continues through innovative products and solid engineering.

Although Nationwide Boiler did not invent the rental boiler, it did conceive and build the first trailer-mounted watertube boiler. This accomplishment transformed the rental industry by expediting the fast delivery and installation of temporary boilers. It also expanded the market by increasing the viability of renting boiler systems to every institutional and industrial sector.

Today, Nationwide Boiler maintains an inventory of rental boilers ranging in size from 50 hp firetube boilers to 200,000 lb/hr watertube boilers. Whether the job calls for a moderate-size hot-water boiler, a large-capacity 750 psi/750°F superheat boiler, or almost anything in between, Nationwide Boiler combines the right equipment with the knowledge and experience to successfully meet a broad range of rental boiler requirements.

Rental boilers are available in three distinct packaging arrangements:

- Mobile boiler rooms
- Trailer-mounted boilers
- Skid-mounted boilers

### ...Mobile Boiler Rooms

Mobile boiler rooms are generally outfitted with firetube boilers in sizes from 47.5 to 1,000 hp. They offer many of the same advantages as trailer-mounted boilers but, in addition, they provide:

- **Enclosed work area**—The entire steam plant, including water treatment equipment and system controls, is mounted inside a van-type structure.
- **Inclement weather protection**—No additional structures are required for protecting the equipment from rain, freezing temperatures, etc.
- **Personnel convenience**—These units provide office space for maintaining log books, water chemistry, etc., and for the comfort of boiler operators.

### ...Trailer-Mounted Boilers

These systems range in size from 30,000 lb/hr to 125,000 lb/hr—the world's largest—and are mounted on customized, highway-legal trailers. The major advantages of trailer-mounted boilers include:

- **Quick response**—Boilers are mounted on highway-legal trailers and can be dispatched to a job site, frequently in only a few hours.
- **No cranes required**—There are no requirements for special handling to load or unload boilers at either the storage yard or the user's facility.
- **Simple to position and install**—Maneuverability of trailer-mounted boilers is facilitated by their dedicated trailers.
- **Fast, easy start-up**—Because trailer-mounted boilers are essentially self-contained, only connections to an electric power source, water and fuel supplies, and a steam header are required for operation.

### ...And Skid-Mounted Boilers

With both firetube and watertube boilers available, this arrangement lacks the flexibility of both trailer-mounted boilers and mobile boiler rooms, but it does offer the following advantages:

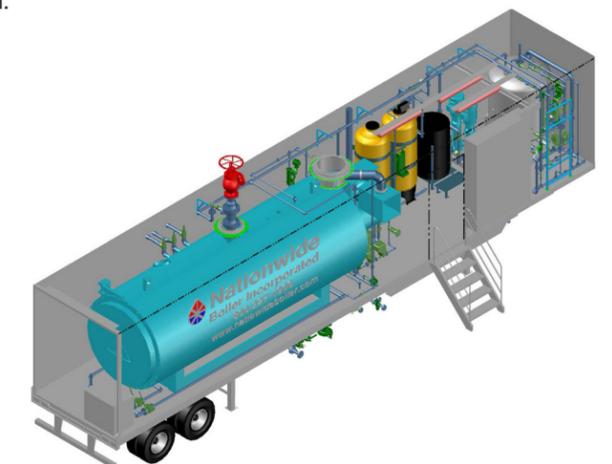
- **Smallest footprint**—Since there is no trailer running gear attached to the boiler, it is possible to place a higher-capacity system in a smaller space.
- **Most economical**—Although there are rigging and handling costs at the storage yard and the user's facility, for some long-term rentals, those costs can be offset by lower rental charges.



Nationwide Boiler offers a wide selection of rental boilers ranging in size from 50 hp firetube boilers to 200,000 lb/hr watertube boilers.



Mobile boiler rooms are complete steam plants offering convenience and an attractive appearance.





Nationwide Boiler was proud to supply and operate a steam plant that provided heating and hot water services at ground zero in the aftermath of the tragedy on September 11, 2001.

## Complete Steam Plants...

Nationwide Boiler has the experience, resources, and personnel required to successfully develop complete steam plants that meet the widest range of performance requirements and operating scenarios.

Having a third-party design, construct, own, operate, and maintain a steam plant, can provide significant technical and economic advantages to companies and institutions. Nationwide Boiler is playing an increasingly important role in this approach to steam plant management.

The build, own, operate, and maintain concept extends beyond that of a turnkey project, since the steam plant is owned by the third-party. Also, its operation and maintenance are the third-party's responsibility. There are numerous advantages to this arrangement. Owners can conserve capital, reduce the need to hire employees to operate and maintain the steam plant, and have a higher confidence in the on-line, reliable operation of the system.

The responsibility for maintaining water chemistry, meeting emission level limits, and ensuring the overall efficient operation of the steam plant lies with the third-party. As a result, many of the concerns that are normally associated with boiler operation are avoided by the facility owner.

With our extensive experience in the installation and operation of steam plants, Nationwide Boiler is uniquely qualified to play an even bigger role in this rapidly growing segment of the boiler industry.

## ...Turnkey Installations

Completing a steam-plant project on time and within budget requires exceptional technical and managerial skills. Nationwide Boiler has those skills and has demonstrated their effectiveness on many occasions.

Turnkey projects normally begin with the critical task of establishing system requirements and performance criteria. These are followed by engineering design and major component selection. Only when the responsible firm has years of experience in the design, construction, and operation of steam plants can an owner be assured that these most critical steps will be carried out properly and efficiently. And only with this breadth of experience can the many potential pitfalls be avoided that are so often encountered in steam plant construction and activation. Nationwide Boiler has many years of experience in each of these areas.

It also takes experience to successfully manage the construction, equipment installation, and start-up phases of a turnkey steam-plant project. As a company actively engaged in renting temporary boilers, Nationwide Boiler goes through much of this process on virtually every boiler rental job. This level of experience in installation, start-up, and boiler operation under the widest possible range of applications uniquely qualifies Nationwide Boiler for turnkey projects.

Nationwide Boiler engineers and managers have demonstrated their competence in turnkey steam plant projects from New York to California and from Florida to Washington. They possess capabilities that are hard to find in any other company.



Nationwide Boiler provides complete turnkey services, including engineering, design, fabrication, installation and start-up, to a wide range of industrial customers.

## ...And Custom-Designed, Integrated Steam Plants

The concept of packaging a complete steam plant in an enclosure is relatively new in the boiler industry. Nationwide Boiler has designed, built, tested, and delivered more of these systems than any other company.

Custom-designed, integrated steam plants are similar to those built by Nationwide Boiler for the U.S. Navy. Everything required, including water treatment, deaeration equipment, controls, safety equipment, and an operator station, is included in the enclosure.

This makes it possible to move the

package, usually skid-mounted, into position; connect fuel, electric power, make-up water, and a steam main; and put the system into service.

The advantages of custom-designed, integrated steam plants are many. The time to install is measured in days rather than months for a typical boiler facility. The system is factory assembled and tested, so, once it arrives at the user's site, it is complete and ready to operate. And should the time come to relocate, the steam plant can be moved as a unit, just like many other items of capital equipment. These are only three of the important advantages of mobile steam plants.

Nationwide Boiler is the leader in the design and production of custom-designed, integrated steam plants. Although this approach is not the best solution for every situation, it can be cost-effective and technically attractive for many applications where steam capacity requirements range up to 35,000 lb/hr.



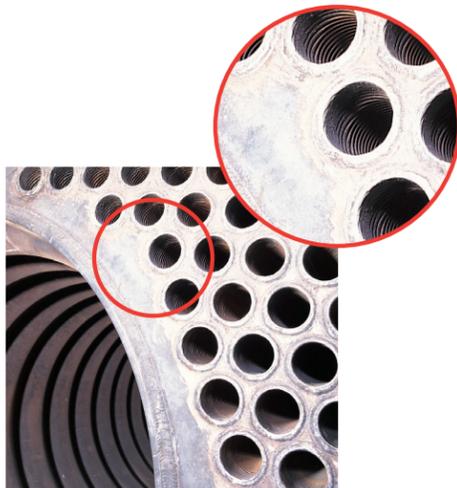
The interior of a custom-designed, integrated steam plant.



Custom-designed, integrated boiler systems have been produced in several configurations.

## Special Purpose Boilers...

Over the years, Nationwide Boiler has created a number of boiler-system solutions designed to meet the special needs of select industry segments. Whether a job involves special operating characteristics or unique system packaging issues, Nationwide Boiler engineers have proven time and time again that they are up to the task.



### ...Such As High-Pressure Superheat Boilers

Both utilities and manufacturing industries need high-pressure, superheat steam. Power-generating utilities frequently need high-pressure superheat boilers during the start-up of new or overhauled turbines. Manufacturers engaged in petrochemical and pulp and paper processing are other examples of industries requiring this capability.

Nationwide Boiler meets these requirements with trailer-mounted package boilers rated from 40,000 to 110,000 lbs/hr, at up to 750 psi design pressure and 750°F superheated steam temperature. Nationwide Boiler was the first in the rental boiler industry to offer these modern, highly efficient package boiler systems, providing exceptional performance and quality.

### ...High-Capacity Mobile Boiler Rooms

These fully integrated steam plants, housed in highway-legal trailers, produce 85% more steam than conventional mobile boiler rooms. They were developed by Nationwide Boiler engineers using special finned tubes with additional heat-transfer surface and non-laminar flow characteristics that alter the gas-flow patterns. These characteristics greatly increase the heat transfer rate, and thus, the boiler capacity.

### ...The World's Largest Trailer-Mounted Boiler

Introduced by Nationwide Boiler in 2016 (and previously in different capacities), this 125,000 lb/hr, 750 psi design highway-legal, trailer-mounted boiler provides quick delivery and cost savings for companies with large steam capacity requirements.

## ...And Environmental Compliant Boilers

Nationwide Boiler engineers have introduced many innovations to the boiler industry. The design of energy efficient boiler systems that produce the lowest greenhouse gas emissions and are environmentally compliant is one example of how Nationwide Boiler concentrates on developing advanced steam plant designs with the customer in mind.

Nationwide Boiler's Best Performance Standards (BPS) boilers offer the maximum emission reductions and the highest thermal efficiency possible. These watertube or firetube boilers are designed with the latest equipment upgrades including high turndown controls, O<sub>2</sub> trim, variable frequency drives, extended surface EconoStak economizers and the CataStak™ SCR system to achieve the maximum NO<sub>x</sub> and CO control with the greatest energy cost savings possible. The yearly energy and emission reductions that are achieved with a BPS boiler provide a greater return on investment with added compliance assurance.

Another innovation that Nationwide Boiler has introduced to the market is a trailer-mounted boiler rated at 99 mmbtuh (82,500 lb/hr). This system operates below the 100 mmbtuh government-imposed ceiling (New Source Performance Standards) and can operate without continuous emission monitoring systems (CEMS). These boilers eliminate the cost of CEMS systems and the manpower required to maintain them.

In addition to providing the most technologically advanced boiler systems, Nationwide Boiler also offers units that provide fuel-flexibility. This includes the option to burn non-standard fuels such as biofuels or refinery gas, ensuring that customers can operate within their specific fuel requirements.



A CataStak™ SCR system retrofit of a vertical 75,000 lb/hr package boiler for 5 ppm NO<sub>x</sub>.



An 82,500 lb/hr trailer-mounted boiler designed by Nationwide Boiler engineers to operate below the 100 mmbtuh ceiling, thus avoiding the need for CEMS monitoring and reporting.



A new 75,000 pph boiler being set onto a concrete boiler pad on site at a specialty materials company's facility.

### ...New Boilers

There is a continuous and growing need for boilers in newly constructed industrial and commercial facilities, as well as the replacement of aging units. To meet this need, we maintain a sizable inventory of a wide range of both firetube and watertube boilers. Although this inventory changes regularly, at any one time, a dozen or more new boilers can be in stock and ready for shipment within days of receiving an order.

For years, we have maintained excellent working relationships, in some cases as sales representatives, with many boiler auxiliary equipment manufacturers. Because of these relationships, we are able to provide a variety of quality equipment options and solutions that best meet our customers' needs.

### ...Reconditioned Boilers

We are continually on the look-out for good used boilers, which, after complete overhaul, thorough inspection, and exhaustive testing, are ready to provide many years of satisfactory service.

Our fabrication facility is staffed with experienced, certified welders, pipe fitters, electricians, technicians, and



Several used boilers being completely overhauled at Nationwide Boiler's fabrication facility.



A customized 650 hp ultra low NOx skid-mounted firetube boiler ready for installation.

## Equipment Sales Including...

Nationwide Boiler maintains a large inventory of new and reconditioned boilers, available for immediate shipment worldwide. In addition, we stock many components required to modify standard package boilers to meet a wide range of custom specifications.

mechanics. Each has extensive training and holds the appropriate credentials and ASME stamps for the work assigned. In addition, our quality control department is staffed by certified boiler inspectors. These capabilities make us fully qualified to refurbish and upgrade modern boilers to considerably extend their useful life. Boilers reconditioned by Nationwide Boiler are attractive alternatives for many industrial customers.

### ...And Custom Systems

Nationwide Boiler has exceptionally strong project management and engineering design teams. These

experienced, skilled professionals are responsible for developing custom boiler systems and auxiliary systems.

Over fifty years ago, Nationwide Boiler's first project was to custom-design a new watertube boiler on a highway-legal trailer, specifically designed for highway use. Since then, hundreds of custom boiler systems have been designed and built by the company's engineering team. These designs involve much more than boilers alone:

- Low and ultra low NOx mobile boilers
- Van-mounted mobile boiler rooms
- Skid-mounted package boilers
- Complete skid-mounted steam plants
- Water treatment and feedwater systems

- Van-mounted 140,000 lb/hr water treatment systems
- Special purpose deaerator systems
- The world's largest trailer-mounted, saturated steam boiler (125,000 lb/hr)
- The world's largest trailer-mounted, high-pressure superheat steam boiler (110,000 lb/hr)
- The world's largest mobile boiler room (1,000 hp)

From establishing requirements, defining system components, and preparing production as-built drawings, to the most comprehensive performance verification testing, Nationwide Boiler's engineering team has repeatedly demonstrated a remarkable capability for flexibility, resourcefulness, and quality.



Nationwide Boiler has sold equipment all over the world and we can ship equipment by highway-legal trailer, rail, sea or by plane.



A customized 250,000 lb/hr boiler being off-loaded at a Northern California petrochemical plant.

## Auxiliary Equipment...

Achieving the goal of reliable, long-term, and cost-effective operation of a boiler system, whether for a short-term rental or a permanent installation, requires several items of auxiliary equipment. Nationwide Boiler offers an extensive line of such items to ensure that this goal is met.



## ...Including Mobile Feedwater Systems

The world's largest mobile deaerating feedwater van designed and built by Nationwide Boiler is available for rent. With a rated capacity of 300 gpm it can provide 100% of the make-up water required to support a 140,000 lb/hr boiler installation. In addition to pumping, deaerating, and heating the feedwater, these units include complete conditioning and treating of feedwater to ensure safe and trouble-free boiler operation.



## ...Water Softeners

Large-capacity water softeners provide water treatment features, including a duplex tank design with alternating 1,500,000 grain capacity and meter-initiated regeneration controls for fully automatic operation. These units are included in the mobile feedwater vans or can be supplied as skid-mounted, stand-alone units. In addition to being used for feedwater treatment, they can be used as general-purpose water softeners for any industrial application.

## ...Deaerators

Many different deaerator configurations have been designed to meet both standard and project-unique requirements. A typical deaerator and the one included in the mobile feedwater van consists of an ASME vessel with associated valves, gauges, controls, pumps, and chemical feed stations.



## ...Emissions & Efficiency Monitoring Systems

In today's marketplace, energy and facility engineers not only want to know the emissions, efficiency, and carbon footprint of their boilers, but they need to know this information for reporting purposes. Nationwide Boiler designed and produced a first of its kind system to provide all of this information from one convenient, on-site source.

The DataStak™ is more than just a combustion and NOx analyzer. It is a cost effective, packaged emissions and efficiency monitoring system with O2, NOx, CO and CO2 measurements, in addition to real time boiler efficiency, fuel usage, and carbon footprint calculations. It can operate on any boiler, and works independent from existing boiler controls.

## ...And Performance-Enhancement Products

As allowable stack emission regulations become more stringent, boiler owners seek the lowest possible emissions to meet the newest standards. Nationwide Boiler developed the CataStak™ selective catalytic reduction (SCR) system to offer an efficient and cost-effective way to achieve the goal of <5 ppm NOx reduction.

The Nationwide CataStak™ system is a portable, low temperature SCR consisting of a single-reactor housing with low temperature catalyst and an ammonia or urea injection skid. The system is capable of reducing NOx emissions up to 99%. The system

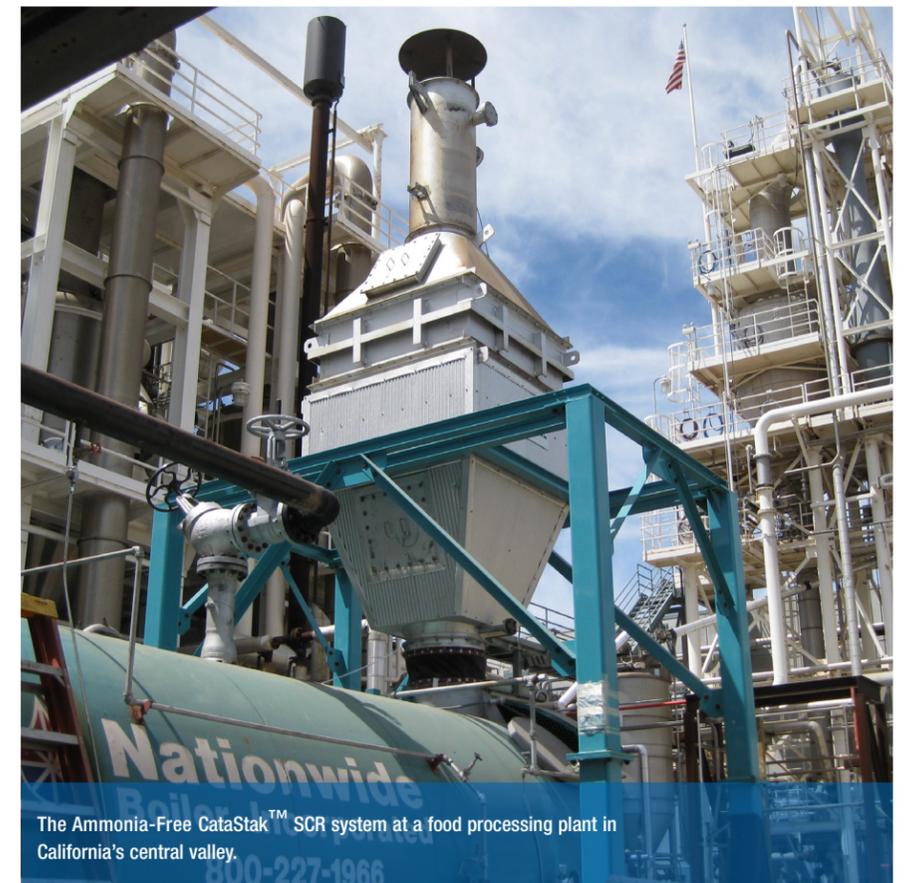


provides flexibility with the option of utilizing anhydrous ammonia, aqueous ammonia, or a 32.5% liquid-urea solution (otherwise known as DEF).

Another Nationwide Boiler performance-enhancement product is the EconoStak economizer designed to reduce fuel costs by 5% or more. It consists of a field-proven, extended surface finned-tube economizer and all the associated piping and structural support required for safe and efficient operation. In addition to fuel savings, EconoStak economizers reduce stack emissions and substantially lower thermal pollution.

Nationwide Boiler's E<sup>2</sup>Stak combines CataStak™ SCR low emission technology with the energy efficiency of EconoStak economizers for immediate energy savings and emission reduction benefits in one complete engineered package.

Both EconoStak economizers and CataStak™ SCR systems are designed for new equipment, field retrofit on package boilers, or as optional equipment on most rental boilers. These systems can be utilized in other demanding applications, including gas turbines, fired heaters, once-through steam generators, HRSG's and thermal oxidizers.



## Customer Support in Every Sense...

Nationwide Boiler has built its reputation for outstanding customer service in many ways. Company management believes in true partnering with their customers. This means anticipating needs, being responsive to requirements, and providing continuing support after equipment is delivered.

### ...Technology

Nationwide Boiler anticipated the need for lower-emission boilers as early as 1985. At that time, the company initiated a program to convert its entire rental fleet to meet emerging low NOx standards. A comprehensive test program was undertaken to assure customers that the most efficient and reliable burner technology was being implemented.

By 1995, Nationwide Boiler's entire rental fleet had been converted to meet the lowest NOx emission limit mandated by laws then in effect, and became the only major company in the

rental boiler industry to accomplish this. Furthermore, several rental units were converted to ultra low NOx and carbon monoxide rates.

Nationwide Boiler did not limit its experience in low NOx boilers to rental units. Many custom-designed, integrated steam plants were built meeting these low emission standards. Similarly, the company was involved in providing numerous fixed-boiler installations with low NOx and ultra low NOx performance.

Following Nationwide Boiler's low NOx market experience and success, the company decided to expand its role as



a proven low NOx solutions provider with the introduction of the company's strategic business unit, Nationwide Environmental Solutions.

Focused on lowering overall industrial greenhouse gas emissions and increasing efficiency, Nationwide Environmental Solutions is able to reduce NOx emissions to as low as 2.5 ppm for many industries. They also specialize in the custom design and supply of SCR systems for boilers, gas turbines, heaters, and furnaces, in addition to providing technical support and service during installation and start-up.

Today, Nationwide Boiler remains active in providing rental boilers, new boiler systems, engineering, and support. With the help of Nationwide Environmental Solutions, we can now assure our customers that not only will their temporary boiler needs be fulfilled, but permanent plant-wide environmental solutions and efficiency improvements will be addressed as well.

Many other technology development programs have been completed within Nationwide Boiler which includes fuel-cell research, emission controls, and mobile cogeneration plants. Our goal is to anticipate what our customers will need and be prepared to meet those needs.

### ...Quality

The success of an enterprise is often directly related to the quality of the products and services it provides. At Nationwide Boiler, we are committed to providing our customers with the highest quality products and services possible. We feel that our success is due, in large part, to this commitment.

Our Quality Assurance Manager reports directly to the company president. This is just one of the many steps we have taken to ensure that quality is given the level of importance and attention it deserves. Also, we hold American Society of Mechanical Engineers (ASME) certifications "S" and "U", as well as the National Board of Boiler and Pressure Vessel Inspectors Repair Shop "R" certification.

We are members in good standing of the American Boiler Manufacturers Association (ABMA) and Council of Industrial Boiler Owners (CIBO), as well as other industry associations.

### ...Leasing and Financing

Nationwide Boiler has established an excellent working relationship with its bankers. Because of this long-standing, successful relationship, we are able to offer exceptional assistance to our customers in arranging myriad financial programs. These include long-term leases, purchase financing, lease-to-own programs, and virtually every other type of financial instrument available to industry.

### ...And Partnering

Since its founding, the underlying business philosophy of Nationwide Boiler has been one of partnerships with its customers. This may involve the type of technology development programs described previously, or a routine rental project. All are equally important and treated as true partnerships.

One example of technology development partnership programs took place when Nationwide Boiler engineers worked closely with a well-known Northern California research facility on developing underground-water contamination clean-up techniques. Also, Nationwide Boiler supported the efforts of a Southern California utility in developing a solar-energy demonstration plant in the Mohave Desert.



Whether a project is undertaken as a simple short-term rental or a multi-year research project, we consider ourselves a full partner in every respect and are dedicated to each project's successful completion.

Partnering is the single most important contribution to the success of Nationwide Boiler and we look forward to continuing this tradition and providing our customers with "integrity, dependability, and real customer service."



A CataStak™-GT SCR system including HRSG and a duct burner by Nationwide Environmental Solutions.



Nationwide Boiler is a member of the following organizations:



## True Nationwide Coverage & Beyond



### Corporate Headquarters

42400 Christy Street, Fremont, CA 94538  
510-490-7100 | Fax: 1-510-490-0571

### Central Valley Sales Office

7211 W. Preshing Ct, Ste E, Visalia, CA 93291  
559-623-9318 | Fax: 1-559-802-3929

*Additional Sales Offices Located Worldwide*

### Texas Storage & Maintenance Facility

2545 E Highway 6, Alvin, TX 77511  
800-227-1966

### Nationwide Control Solutions

3720 South Truman Street, Washougal, WA 98671  
360-335-1443 | -360-335-1663

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