

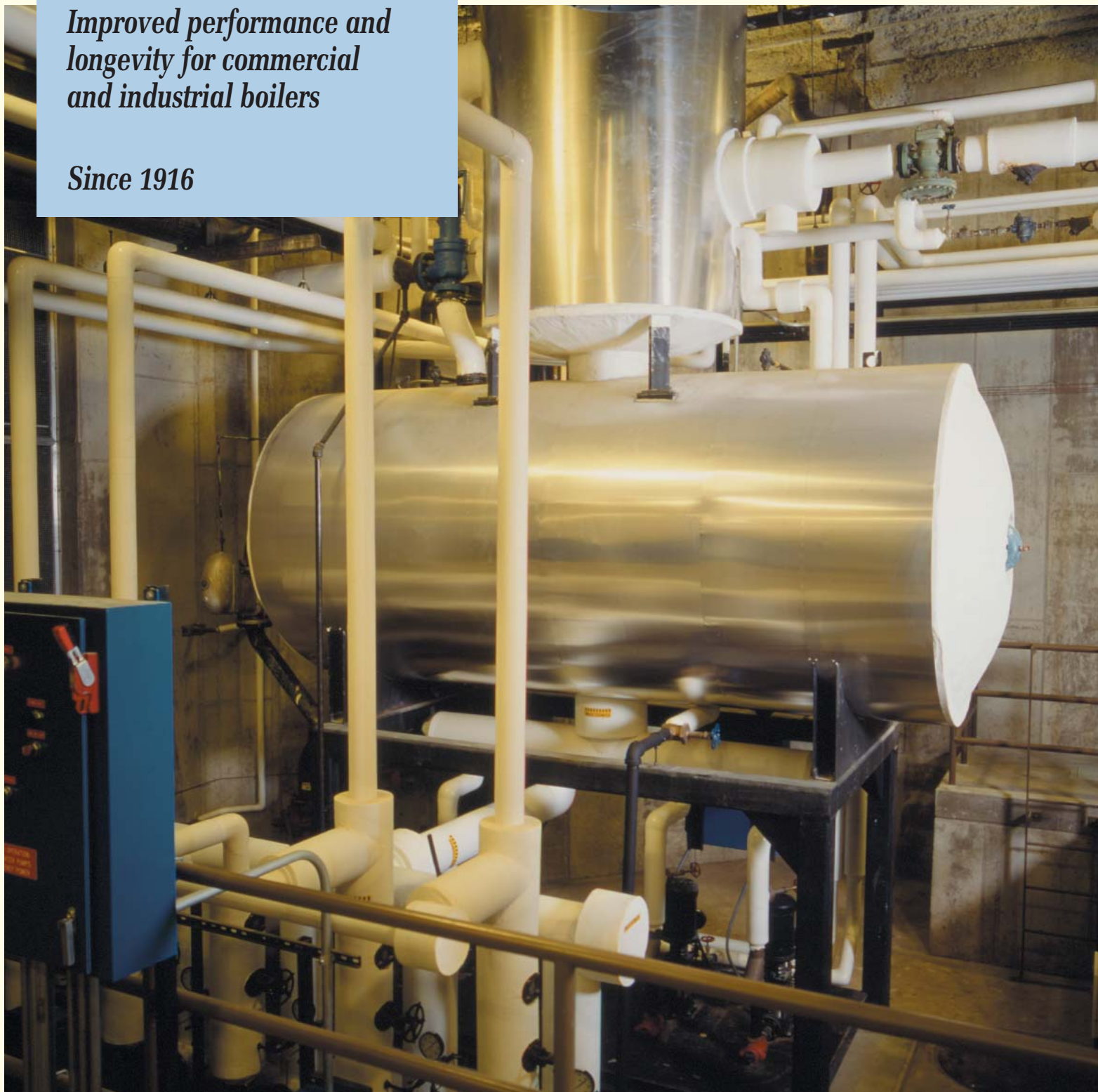


BRYAN[®] STEAM

Boiler Accessories

*Improved performance and
longevity for commercial
and industrial boilers*

Since 1916





Save energy and reduce



Model B-26S-D

Condensate Transfer Stations

- 6 to 60 GPM pump capacities**
- 10 to 60 PSI discharge pressures**
- 8 to 50 gallon receivers**

In most heating systems, condensate, and sometimes steam, is trapped out of heaters, kettles, hot presses, molds, absorbers, and other equipment and drained to a return unit having given up some of its heat in the process. If a trap malfunctions, the condensate can be passed to the return unit at a much higher temperature causing the return unit to fail. When using Bryan Condensate Transfer Stations as the return unit, this problem is overcome because they are designed to eliminate cavitation at high temperatures. In addition, Bryan Condensate Transfer Stations are designed to handle the higher load placed on them during cold starts and are supplied with reliable pumps that are designed to handle hotter water and develop higher pressures at lower speeds.

Bryan Condensate Transfer Stations are ideal for remote or non-accessible locations where unattended, dependable performance is essential.



Model HFS-15-100-100-D

Horizontal Boiler Feed Systems

- Capacities to 500 boiler HP**
- 15 through 250 PSI boilers**

The Bryan horizontal boiler feed system is a conventional stand-mounted feed system that is completely packaged, but is also flexible to meet each customer's specific needs.

Features

- Atmospheric tank built from heavy ¼" minimum steel thickness
- Tank sizes from 50 to 500 gallons
- Factory packaged for ease of installation
- Packages based on 1 gallon storage per 1 BHP minimum
- Available with single or multiple pump packages
- Pumps mounted in front of tank for ease of maintenance and replacement
- TEFC pump motors and NEMA 12 enclosures are standard
- Heavy duty stand with pump platform
- Integral steam preheater optional

operating cost by re-using condensate

Compact Boiler Feed Systems

Capacities from 20 to 80 boiler HP
15 through 150 PSI boilers



Model CFS-100-80-80-D

The Bryan compact boiler feed system requires a minimal amount of boiler room space while providing many of the same rugged features as competitive stand-mounted feed systems.

Features

- Atmospheric tank built from heavy ¼" minimum steel thickness
- Tank sizes from 20 to 80 gallons
- Factory packaged for ease of installation
- Packages based on 1 gallon storage per 1 BHP minimum
- Available with simplex and duplex pump packages
- Top mounted pumps for ease of maintenance and replacement
- TEFC pump motors are standard
- All units designed to fit through standard 36" doorway

Horizontal Transfer Systems

Capacities to 1000 boiler HP
15 through 250 PSI boilers

The Bryan horizontal transfer system is also used as a boiler feed system when dished heads are preferred or more than 500 gallons is needed for storage.

Features

- Atmospheric tank with dished heads
- Tank sizes from 60-1000 gallons standard. Larger sizes available upon request.
- Factory packaged for ease of installation
- Packages based on 1 gallon storage per 1 BHP minimum
- Available with multiple pumps and different electrical packages
- Various pump manufacturers available mounted and wired
- TEFC pump motors and NEMA 12 enclosures are standard
- Heavy duty stand with pump platform
- Integral steam preheater optional



Model HTS-150-100-100-D

Spray Type and Tray Type Deaerator Features

- Constructed and Stamped to ASME Section VIII, Division 1 for 50 psig
- 1/16" corrosion allowance
- Easily accessible manway
- 10 minutes of deaerated water storage to overflow
- All internal surfaces that contact undeaerated water are constructed of stainless steel
- 2-stage deaeration
- Structural steel stand/pump platform
- Available as completely packaged unit including pumps and control panel

Why deaerate boiler feedwater?

There are many advantages to deaerating water prior to boiler input, but they all boil down to reduced cost operations.

- Water is heated during deaeration to near the temperature of the boiler water, thus minimizing the risk of thermal shock damage to a high value boiler system.
- The deaerating process removes noncondensable gases (oxygen and carbon-dioxide) which tend to act as insulators inhibiting the transfer of heat within the boiler.
- Removal of corrosive oxygen and carbon-dioxide controls corrosion within the boiler and piping, extending the life expectancy of the system and reducing maintenance cost.
- Higher temperature feedwater reduces the drop in boiler operating pressure which can occur when cold water is added.
- Recycling of steam from vents and flash steam from traps that would otherwise be vented to the atmosphere can result in appreciable energy savings.
- Mechanical deaeration by a feedwater deaerator can cut the amount of chemical consumables used for water conditioning for a continuing operating cost saving.



Model DSH-150-5-2-2

Pressurized Spray Type Deaerator

Capacities from 5,000 pph - 60,000 pph

Bryan spray-scrubber type deaerators offer a competitive alternative for feedwater deaeration. The initial investment is lower, yet they offer comparable results, particularly where wide or rapid fluctuations in load are not anticipated. The spray type deaerator may also be advantageous in situations where headroom in the boiler room is restricted.

The Bryan spray type deaerator is rated for oxygen removal to .005cc/l (7 PPB) and CO₂ to zero measurable across its entire operating range. With its all stainless steel spring loaded spray valve and second stage steam scrubber, the spray type deaerator is a good choice for most deaerator applications.

Units are available with a complete range of boiler feed-pumps and control options making them a total deaerator package with minimal amount of field assembly.

Efficiency by pre-heating/deaerating boiler feed water

Pressurized Tray Type Deaerator

Capacities from 5,000 pph - 300,000 pph and beyond

The Bryan tray type deaerator is unsurpassed in performance and reliability. These units are ASME Code pressurized units, and are guaranteed to deliver deaerated water at a maximum oxygen content of .005cc/l (7 PPB) and zero measurable CO₂. All internal surfaces that come in contact with undeaerated water are constructed of type 304L stainless steel for long life and low maintenance. Residence time for undeaerated water inside a tray type deaerator is longer, providing more efficient deaeration, particularly where wide load swings occur. A large diameter hinged door affords easy access to internal trays. Spray tubes are accessible from outside of the vessel for maintenance and replacement. A complete line of boiler feedpump and control packages is available making the Bryan tray deaerator a completely packaged unit ready for installation with the minimum amount of field assembly.



Model DTA-150-300-60-4



Model DTV-150-5-1-2

The Bryan "Low Profile" tray type deaerator is the industry leader in compact, space saving design. This series packs all of the same high performance design features as other Bryan tray type deaerators. The combination of the Bryan tray type deaerator and the industry's first true 1' NPSH pump has resulted in a true space saving unit. The overall height saved is unparalleled.



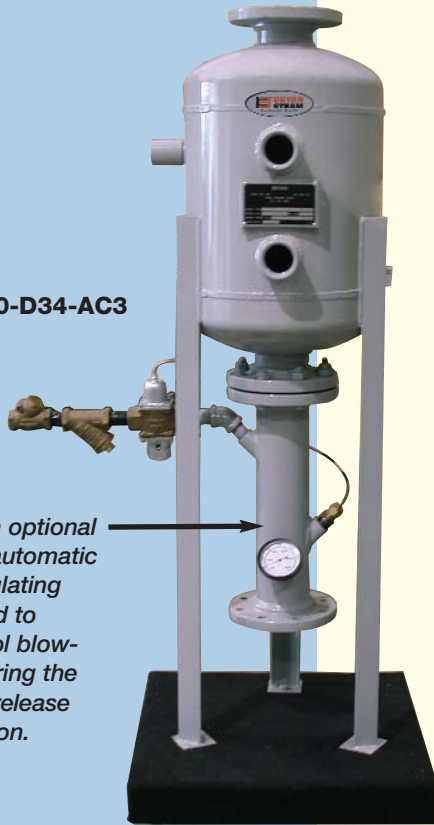
Model LDTV-150-5-1-1

For efficient separation

Blowdown Separator

For new installations or retrofitting to existing boilers, Bryan Blowdown Separator vents off pressure from blowdown water and tempers it to an acceptable level before draining to the outside. Dry steam vents to the atmosphere. Stainless steel wear plate protects inlet connection. Large vent connection insures quiet operation. Constructed and stamped to ASME code Sect. VIII for 150 psig. Standard sizes for boilers up to 250 psi, models for higher pressures available.

Model BDS-1630-D34-AC3



Aftercooler — An optional aftercooler with automatic temperature regulating valve can be used to automatically cool blowdown water entering the drain to prevent release of thermal pollution.

Vertical Blowdown Tank

The tanks are designed to hold one boiler blowdown and they meet stringent New Jersey and National Board standards. Stainless steel wear plate protects inlet connection. Large vent connection assures quiet operation. Constructed and stamped to ASME code Sect. VIII for 50 psig. Wide range of standard sizes for boilers up to 200 psig. Models for higher pressures available.



Model BDT-2447-50-D34

Boiler Feedwater Softener Systems

Capacities to 100 gpm

The Bryan boiler feedwater softener uses the Kinetico® non-electric control valve for efficient, low cost operation. The patented control valve is hydraulically driven and eliminates the need for electric power or components. Water pressure runs the system. As water passes through, a metering device counts the number of gallons of water that have been processed. The valve initiates regeneration after the predetermined amount of water has been treated.

The system comes standard with two media tanks. When one tank is exhausted, the other comes on-line to ensure an uninterrupted supply of conditioned water. The exhausted tank regenerates while off-line to provide an unlimited supply of clean, soft water. This configuration uses soft water for the complete regeneration process to substantially improve system efficiency and water quality.



Model BKS-2000-2-1

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of steam and water

Automatic Blowdown System

All boilers require proper care and maintenance to assure optimal performance. In particular, steam boilers will operate more efficiently if serviced by a surface or bottom blowdown system. Bryan Steam can provide these systems in either manual or automatic designs. A regular blowdown procedure to remove accumulated sludge will extend the life and performance of your boiler. A Bryan system will assure that your boiler has regular blowdown on a preset schedule.



Model ASBD-1

Steam Exhaust Head

Size ranges from 1" - 24"

The Bryan exhaust head gives three levels of protection against oil and water pollution: first, an expansion chamber; second, an impingement cone; and third, a catch trough and drain. What one misses, another gets, resulting in oil-free, water-free exhaust steam.



Model HEH-2

Overflow Trap

Size ranges from 2" - 6"

Overflow traps are primarily used on pressurized deaerators in order to keep the pressure in the deaerator, but to also overflow water to a drain if the deaerator becomes flooded. Bryan overflow trap bodies are constructed of cast iron. Inside the body, a double-seated brass valve is automatically operated by a stainless steel ball float.



Model HT-6

Chemical Water Treatment

All boilers require proper care and maintenance to maintain optimal performance. In particular, steam boilers will operate more efficiently if serviced properly by chemical feed systems, water meters, and chemical shot feeders. Bryan Steam can provide all of these enhanced boiler-operating items.



Model BCFS-30-D

Chemical Feed System

30 - 100 gallon capacity
Pumps 1.8 - 6 GPH

Shot Feeder

$\frac{3}{4}$ - 5 gallon capacity
Up to 300 psi rating



Model SF-2-HP



Water to Water



Model UW-6-2-2



Model SH-16-32-PW

Bryan U-Tube Heat Exchangers

Bryan's U-tube heat exchangers are built to offer long life and maximum performance in all applications, including service water, space heating, radiation, swimming pool heating and various process applications.

These instantaneous heaters operate with steam or water on the shellside and water on the tubeside. Bryan offers U-tube heat exchangers in sizes ranging from 4" diameter to 12" diameter and lengths up to 10', in both two and four pass designs.

Steam to Water



Model US-8-5-2

Heat Exchanger Type Pool Heater

All of the features and quality of the time proven Bryan "Indirect Heaters" are now available using an existing central boiler heating plant as the heat source. Hot water or steam is taken from the heating main and circulated thru the Exchanger shell. The pool water is heated as it passes through the copper "Indirect" coil.

A Reputation for Quality

Bryan continues to combine the advantages of past experience with advanced technology, moving into the future as the leader in design, manufacture and application of accessory equipment to optimize performance and enhance longevity of your boilers.

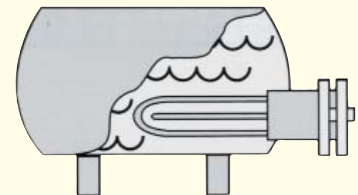
Indirect Tank Heater

U-tube tank heaters are mounted in a new Bryan tank or supplied for mounting in an existing tank.



Model UT-10-10-2

This installation diagram shows a typical application of the tank heater installed in the tank. Horizontal or vertical tanks are available with tank heater factory installed.



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