



WARE's Super-High-Efficiency Mobile Boiler Rooms

WARE began providing boiler rental services in 1971. We've had 46 years to study the business and determine how to best meet our customers' needs.

That education has led us to develop our own Super-High-Efficiency Mobile Boiler Rooms, complete with absolutely everything you need to run a boiler at your facility, including a water softener and full-sized de-aerator (DA) tank—all in a single trailer (more on that later).

The water softener system is sized for 100% make-up, even without a condensate return. The DA itself is insulated to keep ambient temperature down, and we installed an electric heater next to the water softener to keep the it and other pipes from freezing in cold weather.

One issue we ran into while constructing these units was the lack of headroom on the DA pumps. It simply isn't possible to achieve the necessary headroom in these trailers. We fixed that by outfitting the DA pumps with booster pumps to maintain 10 PSI of positive pressure on the inlet pumps. This extends the life of the pumps and adds reliability to the system. Achieving maximum efficiency was a priority for these boiler rooms. Variable speed drives on all the feed water pump motors and blower motors make them as energy efficient as possible. Instead of running at one RPM all the time,

these motors are able to run at the RPM required by the system.

We made sure every detail of this mobile boiler room served the purpose of efficiency or longevity. The floors were sprayed with Line-X to prevent slipping and increase the longevity of the unit, and the walls are lined with stainless steel to allow for easy clean-up and increased longevity as well.

There are two chemical pumps in the system: one to handle sulfites in the DA and the other to handle phosphates in the discharge line of the feed water pump.

All the controls for the burner and control system are located on the wall. This makes it exceptionally easy for the technician to make adjustments when necessary. We decided on a touch-screen Autoflame control system because it's both easy-to-read and easy-to-use. We also put a chiller in the Autoflame panel to maintain a safe temperature within the panel.

The units feature Victory Energy boilers with X-ID tubes and a Limpsfield pre-mix burner that allows less than 3% O₂ throughout the range. This burner and boiler system uses no linkages and is all servomotor- and microprocessor-controlled. This setup is so reliable and efficient it's become our standard here at WARE.

We even worked with Victory Energy to custom-design the boiler's front doors. The custom design makes the doors easy-to-open and maintain within the unit. We also insulated the front of the boiler to keep ambient temperature down.

The whole unit is designed to allow for ease-of-access, which makes it easy to work on. No boiler-room acrobatics are required to keep this thing up and running. The controls, limit switches, fuel valves, and oil valves are all situated so they are easy-to-access and easy-to-maintain.

All blowdown valves have been piped to the back of the boiler so they can be accessed from the back of the trailer. All the blowdown valves are collected in one place, but all drains are separate from one another to keep things simple. There are separate connections for:

- DA Trap Drain
- DA Tank Drain
- Feed Water Inlet
- Return Line
- Water Softener Drain

All of the connections (minus the steam connection) on the boiler have been placed low to allow for easy access.

These Super-High-Efficiency Mobile Boiler Rooms are self-contained

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WARE Boiler University Training Center

WARE is excited to announce the grand opening of its new, cutting edge training facility in 2018.

The facility features a state-of-the-art college-style lecture hall, classroom, open area & cafeteria and a hands-on equipment lab with advanced boiler room equipment.

The college-style lecture hall, which features an ipad controlled projector and sound system is perfect for boiler industry employees, contractors, plant managers, operators, maintenance employees, production employees, and engineers to learn about boiler related concepts that keep employees safe and knowledgeable.

On top of an amazing lecture hall, our new facility features a hands-on training lab that our instructors use to train employees on how to safely and efficiently run boiler room equipment. The equipment featured in our lab includes 4 fully functional boilers & burners, Autoflame & Seimens technology, deaerator tank, water softener system, and even see-through steam lines so students can see the condensate flowing through the steam traps!

On top of all these great features, our school ensures a great total experience for students including a full continental breakfast and a hearty lunch in our open area cafeteria that features a great, relaxing break time experience with surround sound and a large projector television. We want our students to learn while having the best experience imaginable.

We believe our instructors are the best in the business and what makes our training experience so special. The instructors have over 50 years of experience in the boiler industry and receive great reviews from our previous Boiler University Students.

We would love the opportunity to increase your or your employees' knowledge and safety through the teaching and hands-on learning of boiler related topics in our new training facility. We don't just want people to operate boilers by pushing buttons and turning knobs, we want people to understand the things they do when boiler equipment is in operation. You can request more information by calling 502-968-2211 or by E-mailing us at info@wareboileruniversity.com. You can also visit our website to see our course descriptions and schedule at <http://www.wareinc.com/boiler-training/boiler-university>.

101 Classes

Boiler 101 is a two-day introduction to the boiler room, covering all of the important aspects from water treatment, to boiler operations, to condensate systems. This seminar style, media-rich class offers a great

first look at boilers for beginners, a great review for experienced operators, maintenance employees, plant engineers, contractors, production employees, service technicians, or a great starting point for anyone in a boiler room, and will provide a roadmap to keep your boiler room on the right track.

Two Days, \$1,200.00

February	06 - 07, 2018	- Knoxville, TN
March	13 - 14, 2018	- Bowling Green, KY
April	07 - 18, 2018	- Chattanooga, TN
May	15 - 16, 2018	- Louisville, KY
July	10 - 11, 2018	- Louisville, KY
August	14 - 15, 2018	- Chattanooga, TN
September	25 - 26, 2018	- Louisville, KY
September	11 - 12, 2018	- Augusta, GA
October	16 - 17, 2018	- Nashville, TN

201 Classes

Boiler 201 is a three-day program building on the 101 foundation, but adding the full experience of our Louisville Boiler Lab, providing hands-on opportunities on many subjects with our four fully-operational lab boilers. Beginners will get the full perspective of an operating system, and even seasoned operators and contractors will gain valuable insight from displays, such as our fully glass piped steam and condensate system demonstrator.

Three Days, \$1,800.00

January	09-11, 2018	- Louisville, KY
April	24-26, 2018	- Louisville, KY
August	21-23, 2018	- Louisville, KY
November	13-15, 2018	- Louisville, KY



**Watch Video for more Information:
Inside Look at WARE's
New Boiler University
Training Center**

Preparing Your Boiler for the Coming Cold Season

Winter is on its way, and if you don't prepare your boiler for the coming cold season, you risk both downtime and costly repairs.

Prepping your boiler for cold weather is smart because:

1. Boilers use water.
2. Winter is cold, often below 32 degrees, which causes water to freeze.
3. When water freezes, it expands.

If you don't prepare your boiler for cold weather, you'll likely end up with busted pipes, a boiler that doesn't work, and a hefty bill.

Luckily, preparing your boiler for the coming cold season is simple. Here's what you need to know, according to Steve Taylor, Director of Rental and Equipment Sales:

"Any line that does not have water flowing through it will freeze up."

There are two ways you can prevent these lines from freezing.

1. Insulation
2. Heat tracing

Insulation is great for holding heat in, but by itself is not enough to prepare your boiler for freezing temperatures. Insulation is only effective when the area around the line is already warm enough to allow water flow. If the boiler goes down, and there's no heat source to keep water above 32 degrees Fahrenheit, it will freeze and bust the pipe.

That's where heat tracing comes in. Heat tracing is accomplished by running heated tubing around piping and insulating the pipe to keep the heat in. The heat from the



tubing keeps the pipes above 32 degrees Fahrenheit, so the water inside doesn't freeze.

At WARE, we typically use electric heat tracing. However, you can use steam heat tracing if you have a second source of steam. If the boiler is your only source of steam, you can't use steam for heat tracing. Here's why: if the boiler goes down, you lose the heat source being used to keep the water in it from freezing.

In addition to your boiler's pipes freezing, controls can freeze as well...even while the boiler is running. This can cause the controls to give a false signal to the boiler, stating the boiler either has or has not satisfied its pressure, causing the boiler to shut off too soon or run for too long.

While winter is filled with many great things—Christmas, snow, hot chocolate—it can wreak havoc on your boiler if you don't prepare. Getting your boiler ready for freezing temperatures isn't

complicated. Just remember: any line that does not have water flowing through it will freeze up. These lines must be heat traced and insulated to keep the water in them from freezing and your pipes from bursting.



Watch a video on -
Freeze Protection
on a Rental Boiler

WARE making it easier
With Over
40,000 parts
on-line

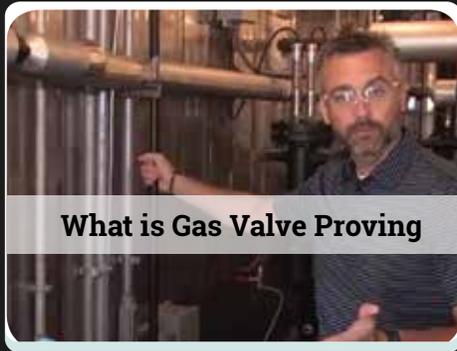




BOILING POINT



Steam Heat Exchanger



What is Gas Valve Proving



How a FireTube Boiler Works

STEAM CULTURE



Wood Bending with Steam



A Year with Steam Culture



Nuclear Fission and Steam

PRODUCT VIDEOS

HelioJet industrial cleaning technology - water jet

Heat Sponge

CASE STUDIES

Heaven Hill - 78,000PPH install

Amelin

EKU - 48,000 Coal Boiler Retube

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NEW VIDEOS UPLOADED ALL THE TIME.



WARE
new and used
List

All equipment listed is for sale or lease and subject to availability

Unit	HP/PPH	Year	Manf.	Fuel	Type	PSI	Ctrl.
779	82,500	2013	Victory Energy Limpsfield	(Low NOx) G/#2	Steam	350	IRI
796	82,500	2016	Victory Energy Faber	(Low NOx) G/#2	Steam	350	IRI
797	82,500	2016	Victory Energy Faber	(Low NOx) G/#2	Steam	350	IRI
767	75,000	2011	Victory Energy	(Low NOx) G/#2	Steam/SH	750/750	IRI
747	75,000	2000	B&W	(Low NOx) G/#2	Steam/SH	750/750	IRI
791	75,000	2016	Victory Energy	(Low NOx) G/#2	Steam/SH	750/750	IRI
750	70,000	1996	Nebraska	(Low NOx) G/#2	Steam/SH	750/750	IRI
709	60,000	1979	Zurn	(Low NOx) G/#2	Steam	500	IRI
741	60,000	1979	Zurn	G/#2	Steam	550	IRI
795	40,000	1986	Cleaver Brooks	Gas	Steam	260	IRI
496	800	1990	York-Shipley	(Low NOx) G/#2	Steam	200	IRI
634	800	1972	York-Shipley	G/#2	Steam	150	IRI
SSB30	800XID	2014	York Shipley	(Low NOx) G/#2	Steam	250	UL/CSD-1
620	800	1975	York-Shipley	G/#2	Steam	250	IRI
SSB28	600XID	2012	York Shipley	(Low NOx) G/#2	Steam	250	UL/CSD-1
SSB15	500XID	2011	York Shipley	(Low NOx) G/#2	Steam	150	UL/CSD-1
SB139	500	2001	Cleaver Brooks		Steam	150	
SB226	400	2016	Victory Energy	(Low NOx) G/#2	Steam	150	UL/CSD1
SB138	350	1994	Cleaver Brooks		Steam	150	
SSB39	300XID	2016	Victory Energy	(Low NOx) G/#2	Steam	150	UL/CSD-1
SSB40	250	2017	Victory Energy	(Low NOx) G/#2	Steam	150	UL/CSD-1
415	250	1980	Eclipse	#2 Oil	HT/HW	954	IRI
SB216	250XID	2015	York-Shipley	(Low NOx) G/#2	Steam	150	UL/CSD-1
SB148	200	1995	Kewanee	Gas	Steam	325	IRI
SB146	200	1995	Kewanee	Gas	Steam	325	IRI
SB213	175XID	2014	York-Shipley	G/#2	Steam	150	UL/CSD-1
SB220	175XID	2015	York-Shipley	G/#2	Steam	150	UL/CSD-1
SB240	175XID	2017	Victory Energy	G/#2	Steam	150	UL/CSD-1
SSB20	175XID	2012	York Shipley	(Low NOx) G/#2	Steam	150	UL/CSD-1
SWVB1	1200	2017	Victory Energy	(Low NOx) G/#2	Steam	250	UL/CSD-1
SWVB2	1500	2017	Victory Energy	(Low NOx) G/#2	Steam	250	UL/CSD-1

One hour quote on-line at www.wareinc.com or call 800-228-8861

continued

WARE new and used List

All equipment listed is for sale or lease and subject to availability

Unit	HP/PPH	Year	Manf.	Fuel	Type	PSI	Ctrl.
SSB38	150	2016	Victory Energy	(Low NOx) G/#2	Steam	150	UL/CSD-1
SB235	150	2016	Victory Energy	G/#2	Steam	150	UL/CSD1
SB236	150	2016	Victory Energy	G/#2	Steam	150	UL/CSD1
769	150	1998	Precision	Electric	Steam	150	UL
SB-232	100	2016	Victory Energy	G/#2	Steam	150	UL/CSD-1
SB-228	100	2016	Victory Energy	G/#2	Steam	150	UL/CSD-1
SSB41	100	2017	Victory Energy	(Low NOx) G/#2	Steam	150	UL/CSD-1
SB-237	70	2016	Victory Energy	G/#2	Steam	150	UL/CSD-1
SB-238	70	2016	Victory Energy	G/#2	Steam	150	UL/CSD-1
SSB35	70	2016	Victory Energy	(Low NOx) G/#2	Steam	150	UL/CSD-1
SB-234	50	2016	Victory Energy	G/#2	Steam	150	UL/CSD-1
SB-227	50	2016	Victory Energy	G/#2	Steam	150	UL/CSD-1
SSB33	50	2015	York Shipley	(Low NOx) G/#2	Steam	150	UL/CSD-1
Unit	Size	Manf.	Volt.	Type	Year		
RC-24	30 ton	Mc Quay	480v	3 ph	2000		
RC-26	40 Ton	Mc Quay	480 v	3 ph	1999		
RC-1	60 Ton	Mc Quay	480 v	3 ph	1995		
RC-13	60 Ton	Trane	200-230 v	3 ph	1989		
RC-5	95 Ton	Mc Quay	480 v	3 ph	1995		
RC-6	105 Ton	Mc Quay	480 v	3 ph	1995		
RC-10	195 Ton	Mc Quay	480 v	3 ph	1995		
RC-11	195 Ton	Mc Quay	480 v	3 ph	1995		

Chillers

One hour quote on-line at www.wareinc.com or call 800-228-8861

Events

WARE will be exhibiting

Power Gen - December 5 - 7, 2017

AHR EXPO - January 22 - 24, 2018



inside 57-foot, tri-axle trailers. (We spent nearly two years designing the trailer itself.) It's got extra-high side rails and heavy-duty beams underneath to support its 59,200-pound load. We put an extra set of dollies on the back to take the weight off the tires and axles.

The entire unit runs off a single 480-volt connection. No complicated wiring or electrical skills necessary. Step-down transformers, breakers, and the distribution center are already installed in the unit. Just plug it in and go.

We spent six years designing these Super-High-Efficiency Mobile Boiler Rooms including being the first company to put a 1000 hp complete boiler system in a trailer. They are the culmination of 46 years in the boiler rental industry. We've selected the highest-quality equipment and packaged it in a format that allows for reliability and ultimate efficiency. If you're ready to simplify your boiler room, give us a call.



WARE BOILER UNIVERSITY

2017 Classes

October 10 - 12 Paducah, KY
November 14 - 16 Chattanooga, TN

For more details visit WAREBOILERU.COM



2018 Classes Available @wareinc.com

FREE SHIPPING



All net proceeds from the sale of SteamWARE T-shirts go to Kosair Charities, where health care is provided to Children when there is no one else to turn to.

4STEAMWARE.COM

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