



SUPERIOR
BOILER
BUILT TO OUTPERFORM

MODULAR BOILER SYSTEM



Description of the Modular System:

Superior Boiler's design and manufacturing capabilities extend beyond the typical packaged boiler with our modular skid-type construction.

In this case, the steel base boiler frame is extended and floor decking added allowing the shop install of the Burner, Fuel Train (as space allows), Feedwater Station, Boiler Control Panel and Main Electrical Panels and all interconnecting piping in a single integral, fully enclosed, insulated, enclosure. All local instrumentation and controls shall be installed, prewired and labeled, to a common junction box for customer's tie-in. The Boiler Combustion Control system shall be pre-installed with one point of electrical interconnecting for the module. Pipe termination points will be at edge of skid.

A louvered exhaust fan, personnel door and/or double-wide entranceway, interior lighting, and thermostat-controlled unit heater are a standard part of this enclosure. Fire/Gas detection systems and Hazardous Area Class equipment are available options.

This assembly is designed to be shipped by truck as one compact unit to be placed directly on your site pad. It can be quickly realized that this single module option is an economical and efficient choice, reducing the installing time and schedule.

Other supplied auxiliary equipment outside the module envelope will ship loose for field installation by the installing contractor.

Advantages of the Modular System:

- The burner and controls will arrive in a pre-engineered water tight, heated environment from the factory which will eliminate the need for the site to engineer and construct a building
- Reduce the amount of field labor.
- Reduce the onsite construction time.
- A unit heater is provided inside the module, eliminating the need for heat tracing
- Most controls and instrumentation come to the site mounted, wired and plumbed with stainless steel tubing
- All feed water piping within the enclosure is tested, installed, and insulated.
- All the BMS and CCS controls are mounted and prewired to all the instrumentation and supports are provided for the field wiring to be brought in and tied into the controls.
- 480V power is brought to a single point within the module. Equipment within the module is pre-wired, including FD fan motor. A step-down transformer is provided in order to supply 120VAC power.
- Basically, the site will have about half dozen connection points.
 - A) Electrical in to a single point
 - B) Feed water in to a single point
 - C) Steam out from a single point
 - D) Module common drain
 - E) Fuel in to a single point (Per fuel)

Breakdown of Shop Installed vs. Field Installed Components:

Ship Loose Comparison	
Module	Ship Loose Option
Boiler Module	Boiler
Platforms (if applicable)	Platforms (if applicable)
Relief Valves	Relief valves
Steam Non-return valve, stop gate and spool piece	Steam Non-return valve, stop gate and spool piece
FGR Duct (if applicable)	Combustion air inlet assembly
Economizer with support steel and breeching	FGR Duct (if applicable)
Field mounted instrumentation (flow meters etc)	Economizer with support steel and breeching
	Combustion air fan
	Fuel train skid
	BMS/CCS Panel
	Feedwater CV station and interconnecting piping

Additionally, the following items would need to be designed and field mounted/fabricated in order to install the “ship loose” boiler:

- Design and install power distribution system
- Install and Wire BMS/CCS panel to transmitters and burner
- Insulate piping outside of SB scope of supply
- Install and furnish necessary heat tracing for freeze protection for instrumentation mounted outdoors

Current Superior Boiler Module Units in Service:

- Bechtel-Pueblo, CO
 - Two-45,000 lb/hr boilers and controls
- AEP-Lee County, VA
 - one-50,000 lb/hr boiler with controls, DA, and blowdown system
- Nestle-Fremont, MI
 - One-70,000 lb/hr boiler and controls
- Invista-Waynesboro, VA
 - Two-82,000 lb/hr boiler with controls, blowdown system and PRV stations
- Invista-Camden, SC
 - Two-78,000 lb/hr boilers with Superheater and controls
- Tracey, CA
 - one-35,000 lb/hr boiler with controls, DA, and blowdown system
- PGE-Boardman, OR
 - One-30,000 lb/hr boiler ,controls and DA
- Bechtel-Hummel Station, PA
 - Two-30,000 lb/hr boiler with controls and DA
- Osage Bio Energy- Hopewell, VA
 - Two-82,000 lb/hr boilers, controls and DA

- Rock Tenn-Lynchburg, VA
 - one-80,000 lb/hr boiler with DA, and chemical feed
- Honeywell- Shreveport, LA
 - One-27,000 lb/hr boiler with controls, DA and blowdown system
- International Paper- Franklin, VA
 - One-80,000 lb/hr boiler with superheater, controls and DA
- Desert Boiler- Las Vegas, NV
 - One-10,000 lb/hr boiler and controls
- Bechtel-Quezon, Philippines
 - one-25,000 lb/hr boiler with controls
- Dominion Power- Possum Point-Stafford, VA
 - One-80,000 lb/hr boiler with controls, DA and blowdown system
- Bechtel- Cricket Valley Energy Center, NY
 - One-45,000 lb/hr boiler with controls and DA
- Bechtel- Southfield Energy, OH (*In house, under construction*)
 - One-35,500 lb/hr boiler with controls and DA

Photos of Completed Modular Boiler Systems:





