

Superior Boiler helps you **outwit your challenges** 









#### WHY SUPERIOR BOILER?

### ENGINEERED AND BUILT TO ORDER

Customized packages to meet your requirements.

- ✓ Fluctuating load demands
- ✓ Emissions compliance
- ✓ Energy efficiency
- ✓ Fuel flexibility
- ✓ Redundancy
- ✓ Footprint challenges

#### **SUPERIOR QUALITY**

We are an ISO 9001:2015 Certified company, meaning customers know they're getting a quality product.





#### **BOILERS BUILT TO LAST**

- ▼ Thicker, longer-lasting boiler shells
- ✓ Thicker, standard-spaced tubesheets
- ✓ Thicker, corrosion-protective boiler tubes

#### **BURNER FLEXIBILITY**

Superior boilers are burner neutral and work with any brand, making them easier and more cost-effective to maintain.

#### **NON-PROPRIETARY PARTS**

We use non-proprietary parts, so maintenance and repairs can be completed by the qualified boiler contractor of your choice. We carry a large selection of boiler equipment parts inventory.

#### GLOBAL NETWORK OF PROBLEM SOLVERS

More than 50 well-respected companies represent territories across the U.S. and around the world. Many of these companies are full line watertube/firetube representatives.













#### DAKOTA

- √ 2-pass dryback design
- √ Compact footprint with X-ID® tubes
- √ Sizes from 100 2,500 HP
- ✓ Design pressures\* from 15 300 psig steam & 30 - 160 psig hot water
- ✓ Capable of burning fuels such as natural gas, propane, hydrogen, & #2 oil
- √ Generous furnace volume for low heat releases & ultra low NOx compliance



#### APACHE

- √ 2-pass dryback design with turbulators
- √ Sizes from 10 2,500 HP
- √ Design pressures\* from 15 300 psig steam & 30 - 160 psig hot water
- √ Capable of burning fuels such as natural gas, propane, hydrogen, & #2 oil
- √ Rugged, simple design



#### **AZTEC**

- ✓ 2-pass dryback design with turbulators
- √ Sizes from 30 1,000 HP
- √ Design pressures\* from 15 300 psig steam & 30 - 160 psig hot water
- √ Capable of burning fuels such as natural gas, propane, hydrogen, & #2 oil
- √ Generous furnace volume for low heat releases & ultra low NOx compliance



#### **SENECA**

- √ 3-pass dryback design
- √ Sizes from 30 300 HP
- √ Design pressures\* from 30 160 psig hot water
- √ Capable of burning fuels such as syngas, digester gas, hydrogen, bio-diesel, natural gas, #2 oil, & heavy-oil



- √ 3-pass dryback design
- √ Sizes from 30 1,000 HP
- √ Design pressures\* from 15 300 psig steam & 30 - 160 psig hot water
- √ Capable of burning fuels such as syngas, digester gas, hydrogen, bio-diesel, natural gas, #2 oil, & heavy-oil
- √ Generous furnace volume for low heat releases & ultra low NOx compliance







#### **WICHITA**

- √ 2-pass wetback design
- √ All X-ID® tubes for high efficiency & compact footprint
- √ Sizes from 200 2,500 HP
- ✓ Design pressures\* from 15 300 psig steam & 30 - 160 psig hot water
- √ Capable of burning fuels such as natural gas, propane, hydrogen, & #2 oil
- √ Generous furnace volume for low heat releases & ultra low NOx compliance



- √ 3-pass wetback design
- √ Sizes from 50 2,000 HP
- ✓ Design pressures\* from 15 300 psig steam & 30 - 160 psig hot water
- √ Capable of burning fuels such as syngas, digester gas, hydrogen, bio-diesel, natural gas, #2 oil, & heavy-oil



#### **SUPER SEMINOLE**

- √ 3-pass wetback design
- ✓ Highest efficiency model with X-ID® tubes
- ✓ Sizes from 50 2,000 HP
- ✓ Design pressures\* from 15 300 psig steam & 30 - 160 psig hot water
- √ Capable of burning fuels such as natural gas, propane, hydrogen, & #2 oil
- √ Generous furnace volume for low heat releases & ultra low NOx compliance



#### **MOHICAN**

- √ 4-pass wetback design
- √ Highest efficiency model with all smooth tubes
- √ Sizes from 50 1,500 HP
- ✓ Design pressures\* from 15 300 psig steam & 30 - 160 psig hot water
- √ Capable of burning fuels such as syngas, digester gas, hydrogen, bio-diesel, & heavy-oil
- √ Generous furnace volume for low heat releases & ultra low NOx compliance

### **WATERTUBE**





## **SHAWNEE** DS-TYPE

- √ Sizes from 10,000 300,000 lb/hr
- √ Design pressure up to 1,200 psig
- √ Convective type superheaters up to 900°F
- √ Side or top flue gas discharge



### **DENALI**D-TYPE

- ✓ Sizes from 10,000 300,000 lb/hr
- ✓ Design pressure up to 1,200 psig
- √ Convective type superheaters up to 900°F
- ✓ Side flue gas discharge



# **OTTAWA** *O-TYPE*

- √ Sizes from 10,000 300,000 lb/hr
- ✓ Design pressure up to 1,200 psig
- √ Radiant type superheaters up to 900° F
- √ Top flue gas discharge



### **APPALACHIA**

#### A-TYPE

- √ Sizes from 10,000 300,000 lb/hr
- ✓ Design pressure up to 1,200 psig
- √ Two (2) lower drums
- √ Radiant type superheaters up to 900°F
- √ Top flue gas discharge
- ✓ Option for open bottom for ash removal



#### **TOMAHAWK**

#### TANDEM STEAM GENERATOR UNIT

- √ Sizes from 250,000 500,000 lb/hr
- √ Design pressure up to 1,200 psig
- √ Superheated steam up to 900°F
- ✓ Modular design to solve shipping constraints

#### **MODULAR SYSTEMS**

- √ Fully modular skidded assembly
- ✓ Includes boiler, controls, dearator, feedwater pumps, & water treatment system
- ✓ Enclosure complete with all interconnecting wiring & piping
- ✓ Can be commissioned in 2 weeks after placement on pad
- ✓ Sizes starting from 10,000 lb/hr
- √ Conditioned environment eliminates heat tracing of all this equipment









#### HURON

#### HRSG

- √ Sizes from 1,000 200,000 lb/hr
- √ Supplemental & fresh air firing capabilities
- ✓ Saturated or superheated steam





#### **KONZA**

#### **iHRSG**

- √ Integrated heat recovery steam generator
- ✓ Sizes up to 1,000 HP
- ✓ Supplemental & fresh air firing capabilities
- √ Saturated or superheated steam
- ✓ Low emission fresh air fired with dual fuel capability



#### **LAKOTA**

#### **HIGH TEMP HOT WATER**

- √ High temperature hot water generator
- ✓ Patented membrane style construction
- √ Sizes from 20 250 MM btu/hr output
- √ Capable of burning natural gas, #2
  oil, and other various liquid and
  gaseous fuels
- √ Welded tube to header joint



### **IROQUOIS**

#### FLEXTUBE - MPSM

- √ Sizes from 350 800 HP
- √ Applicable for low & high pressure steam applications
- √ Convertible configuration from steam
  to hot water or vice versa
- √ ASME Section I & IV
- ✓ Operating efficiency for 83% for low pressure steam, 80% for high pressure steam
- ✓ Optional radiant superheater available



# **IROQUOIS**FLEXTUBE - MPHW

- √ Sizes from 350 800 HP
- ✓ Available for low & medium temperature applications
- √ ASME Section I & IV
- ✓ Operating efficiency of 85% for low & medium temperature applications





- √ High-efficiency hot water condensing boiler
- √ 4.0 12.0 million BTU/HR
- ✓ Design pressure of 125 psig standard, 160 psig optional
- √ Choice of UL listed burner packages
- ✓ Proven efficiency
- √ NOx emissions of 30 PPM or less available at all firing rates
- √ Ultra Low NOx option (<9 ppm)
  </p>
- ✓ Dual fuel capabilities with natural gas/oil



#### **WASTE HEAT**

- √ Engineered for specific job conditions
- ✓ Available in single-pass, 2-pass, 3-pass and dual chamber configurations
- √ Supplemental & fresh air firing capabilities
- √ Designed to meet the specific requirements of each application



- ✓ Down-fired vertical firetube boiler
- ✓ Sizes from 60 150 HP

UTE

- ✓ Design pressures\* from 15 200 psig steam & 16 - 160 psig hot water
- √ Industry-leading furnace volume
- ✓ Dual fuel & non-standard fuel capable
- ✓ Available with low emissions <30ppm technology</p>



#### **OSAGE** FIREBOX

- √ 3-pass firebox design
- √ Sizes from 15 450 HP
- √ Design pressures\* from 15 psig steam and 30 psig hot water
- √ Large furnace and rear turnaround volume for complete combustion
- ✓ Capable of burning fuels such as syngas, digester gas, hydrogen, bio-diesel, & heavy-oil



# **ARROWHEAD**MODIFIED FIREBOX

- √ 3-pass modified firebox design with X-ID® tubes
- ✓ Sizes from 10 100 HP
- √ Design pressures\* from 15 psig steam and 30 psig hot water
- √ Capable of burning fuels such as natural gas, propane, hydrogen, & #2 oil
- ✓ Compact, exceptional value
- √ Available with NOx reduction technology to 9 ppm



#### **TRIAD**

- √ Sizes from 7 50 HP
- ✓ Design pressures\* from 15 - 150 psig steam & 30 -125 psig hot water
- √ Very small footprint for tight-fit applications
- √ Extremely rugged design
- √ Low-NOx pre-certified

# SUPERIOR BOILER

### **BOILER ROOM EQUIPMENT**



#### **DEARATOR SYSTEMS**

- ✓ Spray scrubber, tray type, & dual tank spray designs
- √ ASME Section VIII Div 1 tank
- √ Design pressure up to 50 psig
- √ Sizes up to 300,000 pph for spray systems and 400,000 pph for tray systems
- √ Available with stainless steel surge tank or liner



- √ ASME Section VIII Div 1 tank
- ✓ For low & high pressure boilers
- √ Features a stainless steel strike plate
- ✓ Optional after cooler available



#### **FEEDWATER TANKS**

- √ Standard units sized to handle
  30 1,000 gallons
- ✓ Condensate up to 190°F
- √ Equipped with spare tube



#### **ECONOMIZER**

- √ Sizes from 50 2,500 HP for firetube and up to 300,000 lbs/hr for watertube
- ✓ Coiled and rectangular units supplied
- √ Two-stage units can boost efficiency into 90% range with suitable cold water heat sink
- √ All units feature individually removable finned tube elements
- √ Available in carbon steel and stainless steel



- √ Configurations available with vertical, 2-pass, or 3-pass boilers
  - Vertical steam or hot water
  - 2-pass dryback or wetback
  - 3-pass dryback or wetback
- √ Very small footprint for tight-fit applications
- √ Design pressures up to 300 psig steam & 160 psig hot water
- √ Extremely rugged design
- ✓ Packages available with:
  - Single-point electric panel
  - Feedwater system
  - Blowdown separators
  - Feedwater softener
  - Chemical feed system
  - Boiler economizer



