

Technical Specification

NOXmatic™ type A

Burner assembly

Furnish one (1) packaged S.T. Johnson NOXmatic™ Axial-flow burner assembly capable of maintaining sub- 9 ppm NOx, corrected to 3% O2 firing natural gas fuel throughout the firing range of the boiler. The burner shall be capable of firing #2 fuel oil as an emergency backup fuel. The burner shall include:

1. A hinged swing-open blower housing to gain easy access to the pilot, electrode, scanner and all other firing head components without disconnecting any wiring, piping, or linkage.
2. An ultra-low NOx metal alloy fiber mat burner head that shall be serviceable and removable through the swing-open housing for ease of maintenance and minimal service downtime.
3. Interchangeable gas and oil firing head assemblies.
4. High efficiency variable speed blower.
5. Gas-electric pilot ignition system with prepiped and wired pilot gas train.
6. Gas control valve with factory mounted servo motor.
7. Oil metering valve with factory mounted servo motor.
8. An integral air filter with washable element and prefilter.
9. A spare washable prefilter.
10. Burner wiring junction box with color coded wiring and terminal strip.

The burner shall be electrically checked out for functionality at the factory prior to shipment. The manufacturer shall have installed and operating the combination burner Ultra Low NOx with oil back up.

Control panel

Furnish one (1) UL508A Listed burner control panel with the following features:

1. NEMA12 enclosure.
2. Color coded wiring and numbered terminal strip.
3. Fireye YB110UV flame safeguard control system.
4. Fireye PPC6000 parallel-positioning fuel-air ratio controller with VFD interface module.
5. Allen Bradley Powerflex Variable Frequency Drive rated for 230 or 460 VAC three phase power.
6. 60 Amp non-fused main disconnect switch
7. Control circuit breaker
8. Annunciating lights for Power, Load Demand, Limits Complete, Safety.
9. Cal Code lights for Low Water and High Water (water level controls not included).
10. Alarm horn and silencing switch.

Gas-electric pilot ignition and fuel train

Furnish one (1) gas-electric pilot ignition system with 6,000V spark ignition, integral flame holder and pilot venturi. The flame detector and scanner tube shall be integral with the ignition assembly for reliable ignition and positive flame detection. The integral flame holder prevents ignition spark pickup by the flame detector, and provides stable and reliable pilot performance.

Main gas fuel train

Furnish one (1) block and bleed main gas train assembly capable of 10 psig maximum inlet pressure including:

1. Main shutoff cock.
2. Siemens VGD dual blocking shutoff valve body.
3. One (1) SKP15 blocking shutoff valve with proof of closure switch.
4. One (1) SKP25 combination main shutoff valve and gas pressure regulating actuator.
5. High and low gas pressure switches.
6. Leak test shutoff cock.
7. Normally open vent valve.

Main oil fuel train

Furnish one (1) NFPA8501 fuel oil train

1. Main shutoff valve with proof of closure interlock.
2. Blocking shutoff valve with proof of closure interlock.
3. Low oil pressure switch.
4. Low atomizing air pressure switch.
5. Oil backpressure regulating valve.
6. Main oil supply pressure gauge.
7. Nozzle oil pressure gauge.
8. Atomizing air pressure gauge.
9. Plant air oil atomizing valve train with pressure regulating valve.
10. Separately mounted oil pump set.
11. 1-1/4" NPT oil filter.
12. (Optional) Separately mounted reciprocating air compressor.
13. (Optional) Atomizing steam train.