

CFS Series

Compact Type Boiler Feed Systems

The feed system shall be a Bryan Model _____ compact type boiler feed system, with a tank size of _____ (20, 40, 60 or 80) gallons design to operate at _____ PSI boiler relief valve setting with a total boiler capacity of _____ lbs/Hr or _____ boiler HP.

The boiler feed system shall be of the same manufacturer as the boiler for single source responsibility. The boiler feed system shall have a minimum of one gallon of storage for each boiler horsepower. Storage capacity will be to the overflow and not to the flooded state. The boiler feed system shall be of vertical design and capable of entering through a standard 36" door in its completely assembled state.

The vessel will be made of carbon steel and shall be ¼" thick minimum for durability and have floor mounting brackets for ease of installation. The vessel shall be designed to mount directly to the floor without a stand to support or elevate the tank. The vessel shall have the following connections as a minimum: drain, clean-out, make-up water inlet, condensate return, overflow, vent, gauge glass, temperature gauge, and openings for two pumps as standard.

The pump(s) supplied with the boiler feed system shall be the vertical multistage type and have a submersible pump end and a motor that is directly mounted to the top of the pump. The pump(s) shall mount directly in the top of the tank, not requiring any suction piping and shall be removable without draining the tank. The pumps shall be sized to meet the boiler feedwater requirements of the ASME Boiler and Pressure Vessel Code. The over-all height of the boiler feed system shall be less than 48".

The pump motor stool and pump shaft coupling shall be constructed of cast iron. The impellers, pump shaft, diffuser chambers, outer discharge sleeve and impeller seal rings or seal ring retainers shall be constructed of stainless steel. The impellers shall be secured directly to the pump shaft by means of a splined shaft. Intermediate and lower shaft bearings shall be Tungsten Carbide and Ceramic. Pumps shall be equipped with a high temperature mechanical seal assembly mounted in stainless steel components and capable of pumping 210F water. The motor shall be Totally Enclosed Fan Cooled as standard with a NEMA C face design operating at a nominal 3450-RPM with a

minimum service factor of 1.15. The pump motor shall have built-in thermal protection. Lower motor bearings shall be adequately sized to ensure long motor life.

The boiler feed system shall include the following:

- Qty: _____ (1 or 2) pump(s) as described above with TEFC motors
- Mechanical ½" valve for make-up water with adjustable float
- Gauge glass with shut-off valves
- Thermometer
- Liquid-filled pump discharge gauge for each pump

Optional Electrical Equipment:

(1HP and below): Pump shall be _____ HP, _____ / 1 / _____, TEFC motor with a disconnect switch. The switch shall be a UL listed disconnect switch mounted in an enclosure with at least a NEMA 12 rating. The conduit from the switch to the pump motor shall be liquid tight. The switch shall be factory mounted and wired.

(Above 1HP): Pump shall be _____ HP, _____ / 3 / _____, TEFC motor with a motor starter and properly sized overloads. The motor starter shall be mounted in an enclosure with at least a NEMA 12 rating and shall include an HOA switch w/external reset button. The conduit from the enclosure to the pump motor shall be liquid tight. The enclosure shall be UL listed and be factory mounted and wired.

(Alternating relay): An electrical alternating relay shall be required to alternate the two pumps. Pumps shall alternate with each cycle for even wear. The alternating relay shall be factory mounted and wired in an enclosure with at least a NEMA 12 rating. The enclosure shall be UL listed.