

**RECOMMENDED SPECIFICATIONS FOR PARKER TRAY
OR SPRAY TYPE PACKAGED FEEDWATER DEAERATORS**

- A. Furnish one (1) Parker Model _____ Tray or Spray Type Packaged Deaerating System rated for _____ lb/hr. The system shall be a single tank design with integral storage and shall guarantee oxygen concentrations not to exceed .005 cc/liter throughout all load conditions from 5 percent to 100 percent of rated capacity. CO₂ levels shall be virtually zero.

The deaerator shall have _____ minutes storage capacity, & _____ gallons storage capacity, and shall be _____" diameter by _____" overall length. The tank shall be ASME Code Construction to Section VIII and, U Stamped. The vessel shall be registered with the National Board for 50 PSIG. Unit shall be factory assembled, wired and broken down for shipping, if required.

The tank stand shall be constructed of square tubing with the vessel section bolting to the pump stand.

The deaerator shall consist of a stainless steel tray or spray assembly, and a tank scrubber section. All necessary piping to field points of connection shall be provided and wiring to pumps and controls shall be included.

- B. The total inlet flow to the deaerator will be made up of the following:

_____ % make-up water @ _____ °F and _____ PSIG (standard is 50°F @ min 45 PSI)
_____ % low temperature returns @ _____ °F
_____ % medium temperature returns @ _____ °F
_____ % high temperature returns @ _____ °F

The deaerator shall serve _____ (# of) boilers of _____ HP. Operating pressure of boilers shall be _____ PSIG.

- C. Furnish _____ (#) Grundfos boiler feed pumps Model # _____ each having a capacity of _____ GPM of 225 Deg. F water at a T.D.H. of _____ ft. Pumps shall be suitably constructed for operation with water at 250 deg. F. Seals shall be of the mechanical type, suitable for the intended use. Each pump shall be coupled to it's respected _____ HP 208/230 460v/60hz/3ph, ODP, 3500 RPM NEMA rated motor. A recirculation orifice shall be provided for each pump, if required.

Boiler Feed Pumps Operation to be on, off or continuous. The boilers are fitted with No feedwater regulating valve, Modulating feedwater regulating valve or on/off solenoid feedwater regulating valve.

The entire assembly shall be factory preassembled and consist of the following accessories:

1. NEMA 4 Electronic level controller with adjustable level setting and proportional band with LCD display of level & set point.
2. Electronic high and low level lights & low water shutoff of pumps.
3. Water level gauge glass and cocks.
4. Electronic modulating makeup water control valve with stainless steel trim and dead-end shut off capability. Valve shall have a capacity of _____ gpm at _____ psig inlet water pressure.

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5. Makeup valve mounted in a three-valve bypass assembly complete with bronze inlet y-strainer.
6. NEMA 4 Electronic modulating steam pressure controller with LCD Display of temperature & set point.
7. Electronic Modulating Steam Control Valve with stainless steel trim and dead-end shut off capability. Mounted assembly consists of (2) shut off valves, check valve, strainer & pressure gauge. Inlet steam pressure to control valve _____ PSIG.
8. Overflow drainer sized to relieve full capacity of deaerator.
9. Relief valve - Sentinel 50 PSIG.
10. Vent valve.
11. Pressure gauge with siphon pipe and cock.
12. Thermometer.
13. All necessary connections.
14. Pump(s) shall be mounted on a heavy-duty base. Interconnecting piping between the deaerator storage vessel and the pump suction shall be furnished and include suction shut-off valve and strainer. Pipe sized for minimum pressure loss.
15. Furnish one complete factory wired and tested control panel and mount on deaerator. The enclosure shall be NEMA 12 complete with necessary motor starters with fused protection, disconnect control circuit transformer with fused primary and secondary circuits, terminal block, selector switches, motor running lights, and low and high water lights. All switches and lights shall be oil tight construction and lights shall be of the transformer type. Panel shall be constructed in accordance with the National Electric Code & be UL or ETL Listed.
16. Services of a factory representative shall be made available to check installation and instruct all plant personnel in recommended operation and maintenance procedures. All the above shall be supplied by a single manufacturer for undivided system responsibility.

OPTIONS:

1. Manhole (standard on tanks 42" Diameter & larger)
2. Pump standby capability with automatic start of secondary pump after pressure is not generated in feed water line after a time delay period.
3. Low water alarm
4. Low water dry contacts.
5. High water alarm
6. High water dry contacts.
7. TEFC pump motors.
8. Stainless steel dome for tray type deaerator.
9. Sample cooler mounted Copper or Stainless steel.
10. Chemical injection quill & valve sulfide (in tank), phosphate in pump suction line.
11. Flexible expansion coupling on pump inlet.
12. Pump discharge check valves.
13. Parallel pump piping with pump discharge check valves, & (2) shut off valves.
14. Factory insulated with Aluminum Metal Jacket.