

About



Power Plant Equipment Company manufactures the brand name "Blue Valley" deaerators, boiler feed systems, blowdown heat recovery systems, blowdown receivers, sample coolers and other custom boiler room products.

The Blue Valley brand has been used worldwide since 1976. Many of our customers include several utility plant design consulting engineers as well as many national industrial plants, universities and hospitals.

We strive for prompt response, accurate shipment dates, superior designs and above all, a quality standard better than others. Please consider PPE manufactured products for your next project.



Manufacturers of Boiler Room Equipment & Custom Fabrication

CUSTOM FABRICATION

Power Plant Equipment's custom fabrication capabilities include the design, fabrication, piping, wiring, painting and testing of deaerator systems, feedwater tanks, blowdown equipment and mechanical equipment skid packages. We can provide packaged systems with pumps, heat exchangers, boilers and other miscellaneous equipment for cost effective, convenient installations.



Contact us:

14400 College Blvd. ■ Lenexa, KS 66215
913-592-4111

Or visit us online:

www.powerplantequip.com



SPRAY DEAERATOR

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SPRAY DEAERATOR

FEATURES

CONSTANT RECYCLING guarantees deaeration of all dissolved oxygen in excess of .005 cc/liter from 0% to 100% of deaerator capacity.

PNEUMATIC MODULATING INSTRUMENTATION is standard equipment for water makeup.

SEPARATE DEAERATING & MIXING SECTIONS offer a two-stage cycle which provides maximum quality deaerated water.

ONLY STAINLESS STEEL components come in contact with undeaerated water.

A.S.M.E. CODE and NATIONAL BOARD stamped receivers at 30 or 50 psig is standard.

CUSTOM ENGINEERED PACKAGED SYSTEM and low headroom with 2-foot NPSH pumps.

ADVANTAGES

Industrial steam's exclusive constant recycling feature, and the use of a partitioned receiver, provide the advantages of a two-tank system as a package. These advantages are available without the necessity for an on-site erection or field installed piping. Expanded deaerating sections are available for surge condensate loads.

The deaerating section operates under constant flow rate, which stabilizes deaerator operation and offers maximum feedwater quality at all load conditions.

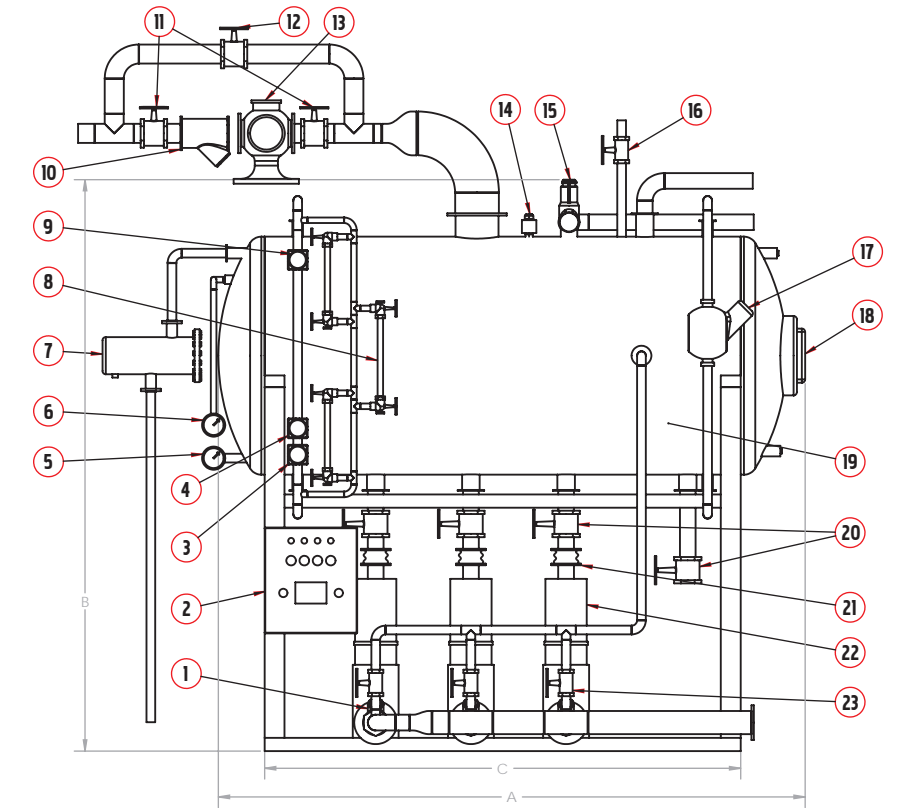
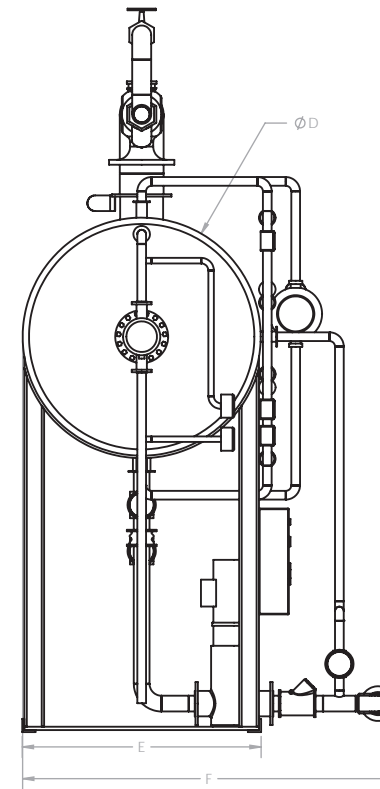
Selection of quality components insures long, carefree service, and there is a single source of responsibility for all major components.

OPERATION

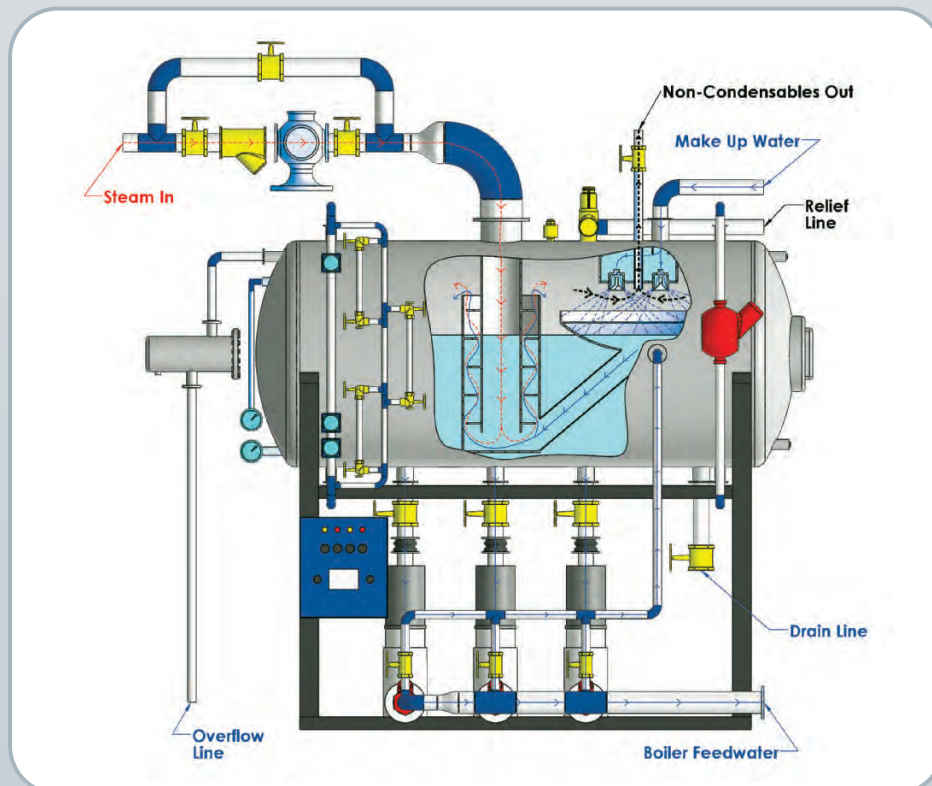
Makeup water is sprayed through stainless steel spring-loaded nozzles into a stainless steel internal vent condenser which is located in the mixing section. This incoming water is heated instantly by direct contact with steam. Returned condensate is also sprayed and deaerated in the same section.

The deaerated water is then pumped into the deaerating section where it is blasted through stainless steel wide-angle, full-cone unrestricted nozzles. The last traces of oxygen are shaken out at the source of the purest steam. The pumped transfer rate is approximately 125% of deaerator capacity, which enables the deaerator to furnish the boiler with deaerated water from start up. Deaeration is accomplished from 0% to 100% load, and the thermal stratification is eliminated.

Excess deaerated water, which is not required by the boiler, recycles into the deaerating section through the compartment overflow. This deaerated water is blended with makeup water and is constantly rescrubbed. Non-condensable vapors are expelled from the top of the deaerator through the internal vent condenser.



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|---|-----------------------------------|---------------------------------|
| 1. Check Valve | 9. High Water Level Alarm | 17. Level Controller |
| 2. Electrical Control Panel | 10. Steam Y-Strainer | 18. Access Manway 12' x 16' |
| 3. Low Water Pump Cut-Off | 11. PRV Isolation Valve | 19. ASME Code Tank Section VIII |
| 4. Low Water Level Alarm | 12. Steam Bypass Globe Valve | 20. Tank Isolation Valve |
| 5. Temperature Gauge | 13. Steam Pressure Reducing Valve | 21. Flexible Coupling |
| 6. Pressure Gauge | 14. Thermostatic Vent | 22. Boiler Feed Pump |
| 7. Overflow Trap | 15. Pressure Relief Valve | 23. Pump Isolation Valve |
| 8. Safety Type Full Length Sight Glass Assembly | 16. Continuous Vent Valve | |



Cut-Away View

Product Measurements

Model	Rate Capacity (lbs/hr)	Capacity (hp)	6 min Storage						10 min Storage					
			A	B	C	D	E	F	A	B	C	D	E	F
SS5	5,000	145	58	96	46	24	24	40	58	102	46	30	30	43
SS10	10,000	290	71	102	57	30	30	43	81	108	66	36	36	46
SS20	20,000	580	95	108	80	36	36	46	90	120	72	48	48	54
SS30	30,000	870	103	114	87	42	42	49	106	138	86	54	54	60
SS40	40,000	1,159	106	120	88	48	48	54	115	144	93	60	60	66
SS50	50,000	1,449	106	138	86	54	54	60	140	144	118	60	60	66
SS75	75,000	2,174	154	138	134	54	54	60	171	150	148	66	66	72
SS100	100,000	2,899	166	144	144	60	60	66	192	168	167	72	72	78
SS125	125,000	3,623	164	150	141	66	66	72	177	180	149	84	84	90
SS150	150,000	4,348	174	168	149	72	72	78	211	180	183	84	84	90
SS200	200,000	5,797	171	180	143	84	84	90	239	204	208	96	96	102
SS250	250,000	7,246	211	180	183	84	84	90	298	204	267	96	96	102