



PRECISION BOILERS

ST "SERIES II" ELECTRIC STEAM BOILERS



DESIGN ADVANTAGES

- Heavy duty 16 gauge cabinet and structural steel base provide greater strength.
- All electrical components are UL listed or recognized.
- All units meet CSD-1 requirements.
- Large steam chest effects high quality steam/minimum carryover.
- Optional features and trim available to meet any custom design criteria.
- Large control cabinets with ample room for addition of options or field mounted interfaces. All wiring is color-coded and all electrical components are readily accessible for ease of field service.
- Individual immersion heating elements are 2 1/2" square flanged for ease of replacement. The elements are made of a highly corrosion-resistant Incoloy-sheath (332 SS), with nickel-chromium resistance wire packed in magnesium oxide powder, and configured in a U-tube design. Elements are available in both 1-phase and 3-phase ratings, and are limited to 75 watts per square inch power density to assure long life.

STRINGENT STANDARDS

- ASME Section IV "H" Code (≤ 15 PSI)
- ASME Section I "S" Code (> 15 PSI)
- UL Subject 834
- NEC/NFPA Article 424-G
- ASME Safety Code CSD-1

Contact Your Sales Representative

for Many Other Options

to Meet Your

Specific Requirements.

STANDARD FEATURES AND ACCESSORIES

- ASME National Board Registered Pressure Vessel ("H" or "S" Code)
- Full Size Structural Steel Base
- Heavy Duty Steel Boiler Vessel Housing
- Three Inch Fiberglass Insulation
- ASME Safety Valve(s) (2 on units > 1100 KW)
- Pressure Gauge with Gauge Cock
- Feedwater Stop & Check Valves
- Full-Port Bottom Blowdown Valve(s) (2 on units > 100 gal)
- Combination Float-Type Level Control/Low Water Cutoff with Blowdown Valve
- Water Level Sight Gauge with Blowdown Valve
- Manual Reset Probe-type Low Water Cutoff with Pilot Light
- Surface Blowoff Provision
- Incoloy-Sheathed Elements @ 75 WSI
- Construction per NEC & UL, with UL Label
- Integral Electric Control Panel with Key-Locked Door(s)
- Internal Branch Circuit Fusing
- Magnetic Contactors rated 500,000 Cycles
- Main Supply Circuit Lugs
- 120 Volt Fused Control Transformer
- On/Off Switch with Pilot Light
- Status Pilot Light for each Step
- Two Adjustable High Limit Cut-offs: w/Common Pilot Light
 - (1) Auto Reset (1) Manual Reset
- Pressure Control Via:
 - Staged On/Off Pressure Switches (Units of 1, 2, or 3 Steps)
 - Proportional Progressive Sequence Step Control (Units > 3 Steps)
- Manual Limit Toggle Switches (one per step)



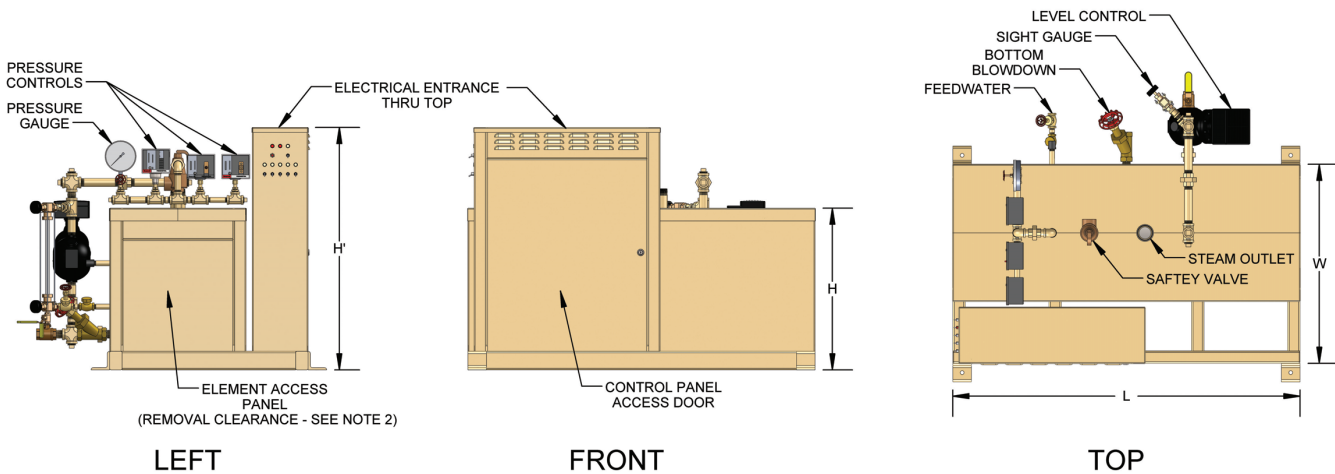
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OPTIONAL EQUIPMENT AND ACCESSORIES

- Non-Fused Disconnect or Non-Auto Breaker
- Fused Disconnect or Automatic Breaker
- Shunt Trip Circuit Interrupter
- Ground Fault Detection System
- Ammeter (1 or 3 phase)
- Voltmeter (1 or 3 phase)
- Watt-hour Meter
- Time Clock (24 hour or 7 day)
- Alarm Buzzer with Silencing Switch
- Safety Door Interlock
- Auxiliary Float-Type Low Water Cutoff
- Vacuum Breaker (Installed)
- Design Pressures Above 150 PSI
- Integral Feed System
- Cabinet Over-Temperature Alarm System
- Stainless Steel Construction (100PSI / 200KW Max)
- Packaged with Feed Systems and Blowdown Tank
- Automatic Feedwater Solenoid Valve (Installed)
- Automatic Timed Surface Blowoff System (Installed)
- Low Pressure Switch/Alarm

DIMENSIONAL DATA



NOTE: MINIMUM CLEARANCE OF 24" AROUND BOILER, 18" FROM TOP OF CONTROL PANEL AND 36" IN FRONT OF CONTROL PANEL.

(1) Model Number	Max Input KW	Steam F&A 212F (PPH)	Max # of Elements	Connection Sizes (NPT)						Tank Data		Dimensions (2) (Inches)				Weights (Pounds)	
				Feed Water	Blowdown		Steam Outlet			Dims (In)	Vol (Gal)	L(3)	W	H	H'	Ship	Oper
					15PSI	>15PSI	15PSI	50PSI	150PSI								
ST12S-	60	205	3	1/2"	3/4"	3/4"/1"	1-1/4"	1"	3/4"	12X42	20	50	28	24	27	550	650
ST16S-	140	478	7	1/2"	3/4"	3/4"/1"	2"	1"	1"	16X42	32	50	32	26	33	750	910
ST16D-	200	682	10	1/2"	3/4"	3/4"/1"	2"	1-1/4"	1"	16X42	32	54	32	26	33	800	960
ST20S-	240	819	12	3/4"	1"	1"	2-1/2"	1-1/4"	1-1/4"	20X42	41	50	36	30	51	1000	1200
ST20D-	320	1092	16	3/4"	1"	1"	3"	1-1/2"	1-1/4"	20X42	41	54	36	30	51	1050	1250
ST24S-	360	1228	18	3/4"	1-1/4"	1"	3"	1-1/2"	1-1/2"	24X44	74	52	40	34	51	1300	1670
ST24D-	600	2047	30	3/4"	1-1/4"	1"	4" FLG	2"	1-1/2"	24X44	74	56	40	34	51	1400	1770
ST30D-	960	3276	48	3/4"	1-1/2"	1"	6" FLG	3" FLG	2"	30X46	124	60	48	40	63	1700	2340
ST36D-	1280	4367	64	1"	1-1/2"	1"	6" FLG	3" FLG	2-1/2"	36X46	166	60	54	46	63	2100	2960
ST42D-	1880	6415	94	1"	1-1/2"	1"	8" FLG	4" FLG	3" FLG	42X48	230	64	62	52	81	2800	4000
ST48D-	2400	8325	122	1"	2"	1-1/4"	8" FLG	5" FLG	3" FLG	48X54	345	70	68	58	87	4600	6300
ST54D-	3040	11598	152	1-1/4"	2"	1-1/4"	10" FLG	6" FLG	4" FLG	54X60	500	76†	74	66	89	5600	8100
ST60D-	4000	13640	200	1-1/4"	2"	1-1/2"	10" FLG	6" FLG	4" FLG	60X66	725	82†	80	72	89	6300	10100

(1) For complete model number, suffix given number by KW, element designation letter (B=15KW; C=18KW; D=20KW), voltage and pressure (eg, ST24D-540C-480-150)

(2) Element removal clearance (R") is equal to 2 times the element KW. NOTE: Required both ends on "D" models; left end only on "S" models.

† Length of control panel may exceed this dimension. Actual Dimensions Depend on Options (Eg. # of Steps, Disconnect, Etc.).

(3) Add 30" to "L" for Jumbo Tanks. Desirable for cyclic loads and Low Pressure Applications.



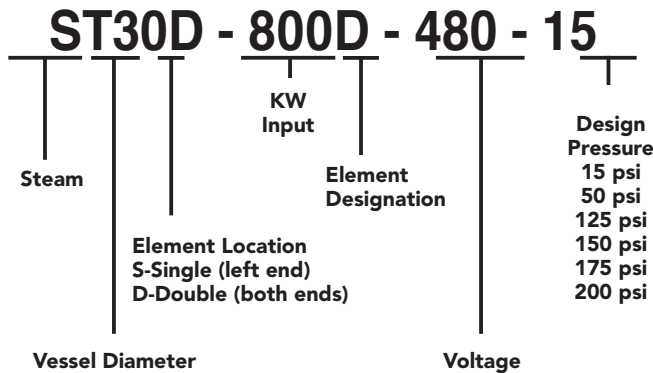
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CONVERSIONS/EQUATIONS

$KW = \frac{GPH \times \Delta T (^{\circ}F)}{410} = \frac{LPH \times \Delta T (^{\circ}C)}{862}$ $KW = GPM \times \Delta T (^{\circ}F) \times .146$ $10KW = 1.02 BHP = 34 \text{ Lbs Steam/H} = 34,120 \text{ BTU/H}$ $GPH = \frac{KW \times 410}{\Delta T (^{\circ}F)} \quad \text{Amps (3 phase)} = \frac{KW \times 1000}{\text{Volts} \times 1.732}$ $GPH = \frac{BTU/H}{8.33 \times \Delta T (^{\circ}F)} \quad \text{Amps (1 phase)} = \frac{KW \times 1000}{\text{Volts}}$ $BTU/H = KW \times 3412 \quad BTU/H = \Delta T \times 500 \times GPM$ $1 \text{ gal water at } 62^{\circ}F = 8.34 \text{ Lbs} \quad 1 \text{ cu ft} = 7.48 \text{ gallons}$ $1 \text{ cu ft water at } 62^{\circ}F = 62.4 \text{ Lbs} \quad 1 \text{ ft water} = 0.435 \text{ psi}$ $\text{Enthalpy of water} = \text{Temp } (^{\circ}F) - 32 \text{ BTU/LB}$	<p>SATURATED STEAM: PRESSURE vs. TEMPERATURE</p> <table border="0"> <tr> <td>0 psig = 0 KPa = 212°F</td> <td>150 psig = 1034 KPa = 366°F</td> </tr> <tr> <td>8 psig = 55 KPa = 235°F</td> <td>175 psig = 1207 KPa = 377°F</td> </tr> <tr> <td>15 psig = 103 KPa = 250°F</td> <td>200 psig = 1379 KPa = 388°F</td> </tr> <tr> <td>30 psig = 207 KPa = 274°F</td> <td>225 psig = 1551 KPa = 397°F</td> </tr> <tr> <td>50 psig = 345 KPa = 298°F</td> <td>250 psig = 1724 KPa = 406°F</td> </tr> <tr> <td>80 psig = 552 KPa = 324°F</td> <td>300 psig = 2068 KPa = 422°F</td> </tr> <tr> <td>100 psig = 690 KPa = 338°F</td> <td>350 psig = 2413 KPa = 436°F</td> </tr> <tr> <td>125 psig = 862 KPa = 353°F</td> <td>400 psig = 2758 KPa = 448°F</td> </tr> </table>	0 psig = 0 KPa = 212°F	150 psig = 1034 KPa = 366°F	8 psig = 55 KPa = 235°F	175 psig = 1207 KPa = 377°F	15 psig = 103 KPa = 250°F	200 psig = 1379 KPa = 388°F	30 psig = 207 KPa = 274°F	225 psig = 1551 KPa = 397°F	50 psig = 345 KPa = 298°F	250 psig = 1724 KPa = 406°F	80 psig = 552 KPa = 324°F	300 psig = 2068 KPa = 422°F	100 psig = 690 KPa = 338°F	350 psig = 2413 KPa = 436°F	125 psig = 862 KPa = 353°F	400 psig = 2758 KPa = 448°F
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HOW TO SELECT A MODEL NUMBER



208 & 240 VOLT RATINGS*

Model Number	Rating		Elements		Number of:		Amps (208/3)	Model Number	Rating		Elements		Number of:		Amps (208/3)
	PPH*	KW	Qty	KW	Circuits	Steps @ KW			PPH*	KW	Qty	KW	Circuits	Steps @ KW	
ST12S-015B	51	15	1	15	1	1@15	42	ST24S-255B	870	255	17	15	17	1@45,7@30	709
ST12S-030B	102	30	2	15	2	1@30	84	ST24S-270B	921	270	18	15	18	1@60,7@30	751
ST12S-045B	154	45	3	15	3	1@15,1@30	125	ST24D-285B	972	285	19	15	19	1@60,1@45,6@30	793
								ST24D-300B	1024	300	20	15	20	2@60,6@30	834
ST16S-060B	205	60	4	15	4	2@30	167	ST24D-315B	1075	315	21	15	21	2@60,1@45,5@30	876
ST16S-075B	256	75	5	15	5	1@15,2@30	209	ST24D-330B	1126	330	22	15	22	3@60,5@30	918
ST16S-090B	307	90	6	15	6	3@30	251	ST24D-345B	1177	345	23	15	23	3@60,1@45,4@30	959
ST16S-105B	358	105	7	15	7	1@15,3@30	292	ST24D-360B	1228	360	24	15	24	4@60,4@30	1001
ST16D-120B	409	120	8	15	8	4@30	334	ST24D-375B	1280	375	25	15	25	4@60,1@45,3@30	1042
ST16D-135B	461	135	9	15	9	1@15,4@30	376	ST24D-390B	1331	390	26	15	26	5@60,3@30	1084
ST16D-150B	512	150	10	15	10	5@30	417	ST24D-420B	1433	420	28	15	28	6@60,2@30	1167
								ST24D-450B	1535	450	30	15	30	7@60,1@30	1251
ST20S-165B	563	165	11	15	1	1@15,5@30	459	(See t)							
ST20S-180B	614	180	12	15	12	6@30	501	ST30D-480B	1638	480	32	15	32	8@60	1334
ST20D-195B	665	195	13	15	13	1@15,6@30	542	ST30D-510B	1740	510	34	15	34	7@60,3@30	1418
ST20D-210B	717	210	14	15	14	7@30	584	ST30D-540B	1842	540	36	15	36	8@60,2@30	1501
ST20D-225B	768	225	15	15	15	1@15,7@30	626	ST30D-570B	1945	570	38	15	38	9@60,1@30	1584
ST20D-240B	819	240	16	15	16	8@30	667	ST30D-600B	2047	600	40	15	40	10@60	1667

*From & At 212°F.

†Models above 390KW are also available in 15KW increments.



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480 VOLT RATINGS*

Model Number	Rating		Elements		Number of:		Amps (480/3)	Model Number	Rating		Elements		Number of:		Amps (480/3)
	PPH*	KW	Qty	KW	Circuits	Steps @ KW			PPH*	KW	Qty	KW	Circuits	Steps @ KW	
ST12S-030B	102	30	2	15	1	1@30	36	ST30D-640D	2184	640	32	20	16	8@80	771
ST12S-036C	123	36	2	18	1	1@36	44	ST30D-680D	2320	680	34	20	17	7@80,3@40	819
ST12S-040D	136	40	2	20	1	1@40	48	ST30D-720D	2457	720	36	20	18	8@80,2@40	867
ST12S-045B	154	45	3	15	2	1@15,1@30	54	ST30D-760D	2593	760	38	20	19	9@80,1@40	915
ST12S-054C	184	54	3	18	2	1@18,1@36	65	ST30D-800D	2730	800	40	20	20	10@80	963
ST16S-060B	205	60	4	15	2	2@30	72	ST30D-840D	2866	840	42	20	21	9@80,3@40	1011
ST16S-072C	246	72	4	18	2	2@36	87	ST30D-880D	3003	880	44	20	22	10@80,2@40	1059
ST16S-080D	273	80	4	20	2	2@40	96	ST30D-920D	3139	920	46	20	23	11@80,1@40	1107
ST16S-090C	307	90	5	18	3	1@54,1@36	109	ST30D-960D	3276	960	48	20	24	12@80	1155
ST16S-100D	341	100	5	20	3	1@60,1@40	121	ST36D-1000D	3412	1000	50	20	25	1@120,11@80	1204
ST16S-090B	307	90	6	15	3	3@30	109	ST36D-1040D	3548	1040	52	20	26	2@120,10@80	1252
ST16S-108C	368	108	6	18	3	3@36	130	ST36D-1120D	3821	1120	56	20	28	4@120,8@80	1348
ST16S-120D	409	120	6	20	3	3@40	145	ST36D-1200D	4094	1200	60	20	30	6@120,6@80	1444
ST16S-126C	430	126	7	18	4	1@18,3@36	152	ST36D-1280D	4367	1280	64	20	32	8@120,4@80	1540
ST16S-140D	478	140	7	20	4	1@20,3@40	169	(See †)							
ST16D-144C	491	144	8	18	4	4@36	173	ST42D-1320D	4504	1320	66	20	33	9@120,3@80	1589
ST16D-150B	512	150	10	15	5	5@30	181	ST42D-1400D	4777	1400	70	20	35	11@120,1@80	1685
ST16D-160D	546	160	8	20	4	4@40	193	ST42D-1480D	5050	1480	74	20	37	9@120,5@80	1781
ST16D-180C	614	180	10	18	5	5@36	217	ST42D-1560D	5323	1560	78	20	39	11@120,3@80	1877
ST16D-200D	682	200	10	20	5	5@40	241	ST42D-1640D	5596	1640	82	20	41	13@120,1@80	1973
ST20S-180B	614	180	12	15	6	6@30	217	ST42D-1720D	5869	1720	86	20	43	11@120,5@80	2070
ST20S-198C	676	198	11	18	6	1@18,5@36	238	ST42D-1800D	6142	1800	90	20	45	13@120,3@80	2166
ST20D-210B	717	210	14	15	7	7@30	253	ST42D-1880D	6415	1880	94	20	47	15@120,1@80	2262
ST20S-216C	737	216	12	18	6	6@36	260	ST48D-1920D	6551	1920	96	20	48	16@120	2310
ST20S-220D	751	220	11	20	6	1@20,5@40	265	ST48D-2000D	6824	2000	100	20	50	14@120,4@80	2406
ST20S-240D	819	240	12	20	6	6@40	289	ST48D-2080D	7097	2080	104	20	52	16@120,2@80	2503
ST20D-252C	860	252	14	18	7	7@36	303	ST48D-2160D	7370	2160	108	20	54	18@120	2599
ST20S-260D	887	260	13	20	7	1@20,6@40	313	ST48D-2240D	7643	2240	112	20	56	16@120,4@80	2695
ST20D-270C	921	270	15	18	8	1@18,7@36	325	ST48D-2320D	7916	2320	116	20	58	18@120,2@80	2791
ST20D-280D	955	280	14	20	7	7@40	337	ST48D-2400D	8189	2400	120	20	60	20@120	2888
ST20D-320D	1092	320	16	20	8	8@40	385	ST54D-2480D	8462	2480	124	20	62	18@120,4@80	2984
ST24D-360D	1228	360	18	20	9	9@40	433	ST54D-2560D	8735	2560	128	20	64	20@120,2@80	3080
ST24D-400D	1365	400	20	20	10	10@40	481	ST54D-2640D	9008	2640	132	20	66	22@120	3176
ST24D-440D	1501	440	22	20	11	1@80,9@40	530	ST54D-2720D	9281	2720	136	20	68	20@120,4@80	3272
ST24D-480D	1638	480	24	20	12	2@80,8@40	578	ST54D-2800D	9554	2800	140	20	70	22@120,2@80	3369
ST24D-520D	1774	520	26	20	13	3@80,7@40	626	ST54D-2880D	9827	2880	144	20	72	24@120	3465
ST24D-560D	1911	560	28	20	14	4@80,6@40	674	ST54D-2960D	10100	2960	148	20	74	2@160,22@120	3561
ST24D-600D	2047	600	30	20	15	5@80,5@40	722	ST54D-3040D	10372	3040	152	20	76	4@160,20@120	3657

*From & At 212°F.

**These models may require 2 power panels (add 12" to "W" dim).

† Models above 1040KW are also available in 40KW increments.

380 & 415 VOLT RATINGS*

Model Number	Rating		Elements		Number of:		Amps (380/3)	Model Number	Rating		Elements		Number of:		Amps (380/3)
	PPH*	KW	Qty	KW	Circuits	Steps @ KW			PPH*	KW	Qty	KW	Circuits	Steps @ KW	
ST12S-030B	102	30	2	15	1	1@30	46	ST36D-750B	2559	750	50	15	25	1@90,11@60	1141
ST12S-045B	154	45	3	15	2	1@15,1@30	69	ST36D-780B	2661	780	52	15	26	2@90,10@60	1186
ST16S-060B	205	60	4	15	2	2@30	91	ST36D-810B	2764	810	54	15	27	3@90,9@60	1232
ST16S-075B	256	75	5	15	3	1@45,1@30	114	ST36D-840B	2866	840	56	15	28	4@90,8@60	1277
ST16S-090B	307	90	6	15	3	3@30	137	ST36D-900B	3071	900	60	15	30	6@90,6@60	1368
ST16S-105B	358	105	7	15	4	1@15,3@30	160	ST36D-960B	3276	960	64	15	32	8@90,4@60	1460
ST16D-120B	409	120	8	15	4	4@30	183	(See †)							
ST16D-135B	461	135	9	15	5	1@15,4@30	205	ST42D-990B	3378	990	66	15	33	9@90,3@60	1505
ST16D-150B	512	150	10	15	5	5@30	228	ST42D-1020B	3480	1020	68	15	34	10@90,2@60	1551
ST20S-180B	614	180	12	15	6	6@30	274	ST42D-1080B	3685	1080	72	15	36	12@90	1642
ST20D-210B	717	210	14	15	7	7@30	319	ST42D-1140B	3890	1140	76	15	38	10@90,4@60	1733
ST20D-240B	819	240	16	15	8	8@30	365	ST42D-1200B	4094	1200	80	15	40	12@90,2@60	1824
ST24S-270B	921	270	18	15	9	1@60,7@30	410	ST42D-1260B	4299	1260	84	15	42	14@90	1915
ST24D-300B	1024	300	20	15	10	2@60,6@30	456	ST42D-1320B	4504	1320	88	15	44	12@90,4@60	2007
ST24D-330B	1126	330	22	15	11	3@60,5@30	502	ST42D-1380B	4709	1380	92	15	46	14@90,2@60	2098
ST24D-360B	1228	360	24	15	12	4@60,4@30	547	ST48D-1440B	4913	1440	96	15	48	16@90	2189
ST24D-390B	1331	390	26	15	13	5@60,3@30	593	ST48D-1500B	5118	1500	100	15	50	14@90,4@60	2280
ST24D-420B	1433	420	28	15	14	6@60,2@30	638	ST48D-1560B	5323	1560	104	15	52	16@90,2@60	2371
ST24D-450B	1535	450	30	15	15	7@60,1@30	684	ST48D-1620B	5527	1620	108	15	54	18@90	2462
ST30D-480B	1638	480	32	15	16	8@60	730	ST48D-1680B	5732	1680	112	15	56	16@90,4@60	2554
ST30D-510B	1740	510	34	15	17	7@60,3@30	775	ST48D-1740B	5937	1740	116	15	58	18@90,2@60	2645
ST30D-540B	1842	540	36	15	18	8@60,2@30	821	ST48D-1800B	6142	1800	120	15	60	20@90	2736
ST30D-570B	1945	570	38	15	19	9@60,1@30	866	ST54D-1860B	6346	1860	124	15	62	18@90,4@60	2827
ST30D-600B	2047	600	40	15	20	10@60	912	ST54D-1920B	6551	1920	128	15	64	20@90,2@60	2918
ST30D-630B	2150	630	42	15	21	9@60,3@30	957	ST54D-1980B	6756	1980	132	15	66	22@90	3009
ST30D-660B	2252	660	44	15	22	10@60,2@30	1003	ST54D-2040B	6960	2040	136	15	68	20@90,4@60	3101
ST30D-690B	2354	690	46	15	23	11@60,1@30	1049	ST54D-2100B	7165	2100	140	15	70	22@90,2@60	3192
ST30D-720B	2457	720	48	15	24	12@60	1094	ST54D-2160B	7370	2160	144	15	72	24@90	3283
								ST54D-2220B	7575	2220	148	15	74	2@120,22@90	3374
								ST54D-2280B	7779	2280	152	15	76	4@120,20@90	3465

*From & At 100°C.

**These models may require 2 power panels (add 12" to "W" dim).

† Models above 840KW are also available in 30KW increments.



PRECISION BOILERS

ST "SERIES II" ELECTRIC STEAM BOILERS

SPECIFICATIONS

1. GENERAL

Furnish and install as shown on the plans ___ electric steam boilers, fabricated per these specifications, including all accessories and construction features as described herein. Boilers shall be completely factory assembled and pre-tested prior to shipment. Boilers shall be UL labeled and shall include an ASME Section I or IV pressure vessel which has been fabricated under inspection by an authorized inspector holding a National Board commission and subsequently stamped and National Board registered. Units greater than 117 KW shall also comply with CSD-1.

2. RATINGS

Boilers shall each be PRECISION "Series II" Model No. ST____ - ____ rated _____ KW, designed and fabricated for a balanced 3-phase, 3-wire, delta load at ____ volts, 3-phase, ____ hertz. The boilers shall be designed for 15/150 psi.

3. PRESSURE VESSEL

The pressure vessel and all trim shall be as set forth in the ASME Code, including ASME "HV" or "V" stamped safety relief valve sized as required. The vessel shall be provided with a (threaded) (flanged) ____" outlet, plus safety valve, feedwater inlet, and surface and bottom blowdown connections as required. The pressure vessel shall be housed in a 16-gauge steel enclosure allowing 3 inches of insulation space around the vessel and filled with 3 inches of 3/4 pound-density fiberglass insulation. The electric panel and vessel shall be mounted on a common, structural steel base with overall dimensions of the unit not to exceed ____"D x ____"W x ____"H.

4. INTERNAL POWER DISTRIBUTION

The power distribution shall be through cable connection to mechanical lugs. Power shall be fed through current limiting fuses to magnetic contactors, and then to the heating element circuits. Contactors shall be 3-pole magnetic contactors tested by UL for 500,000 cycles at full load, The coil voltage shall be 120-volts. Internal wiring shall be in accordance with UL & NEC.

5. HEATING ELEMENTS

Elements shall be individually mounted in steel flanges. The flange size shall not exceed 2 1/2 inches square, with a maximum of three single-bend U-shaped element blades per flange. Element sheath material shall be Incoloy; element watt density shall be 75 WSI.

6. CONTROLS

The control circuit shall be 120-volt single-phase, one side grounded. Control voltage shall be provided by an integral control circuit transformer, fused on both legs of the primary, with a control circuit fuse on the ungrounded leg of the secondary. The controls shall include an ON/OFF switch, proportional pressure control and solid state progressive sequence step control(____steps) (above 3 stages), indicator lights for each stage of heating, a combination float-type level control/low water cutoff, a manual reset low water cutoff, and one auto reset and one manual reset high limit pressure switches.

7. MANUFACTURER

Boilers shall be PRECISION Model ST____ - ____ or approved equivalent. Alternate bids shall indicate any deviations from these specifications, and shall state price additions or deductions for substitution of said alternates.



PRECISION BOILERS

ST "SERIES II" ELECTRIC STEAM BOILERS

LIMITED WARRANTY

PRECISION warrants all electrical components (except pilot lights and fuses), pressure vessel and heating elements, if found defective in workmanship or material while under normal use and service within the first year of operation or until 18 months after shipment from PRECISION'S factory, whichever occurs first, after authorized return by purchaser to PRECISION (at purchaser's expense) and after examination discloses to PRECISION'S reason-

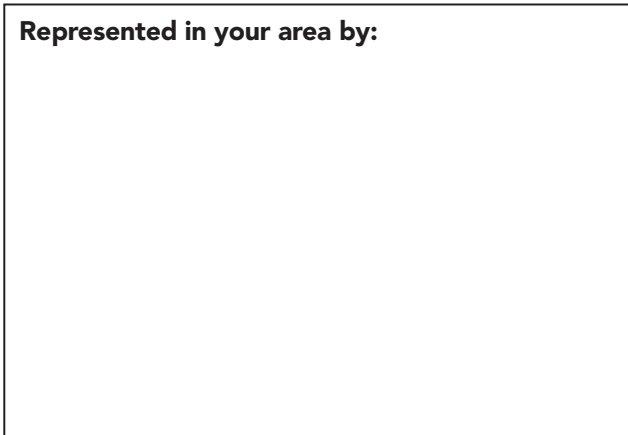
able satisfaction to be defective. The repair or replacement of defective parts will be made by PRECISION without charge. PRECISION will not be held responsible for any field charges in connection with the removal or replacement of allegedly defective parts, nor for incidental or consequential damages. This guarantee does not include damage resulting from unsuitable water.

CONTACT US FOR THESE QUALITY PRODUCTS

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- Steam Superheaters-Electric
- Circulation Heaters-Electric
- Gas or Oil-Fired Vertical Firetube Boilers and Water Heaters
- Gas or Oil-Fired WaterTube Boilers (Flextube Type)
- Chemical Bypass Feeders and Automatic Chemical Feed Systems

NOTE: In pursuing our policy of continuous development of products, PRECISION reserves the right to vary any detail in this bulletin without notice.

Represented in your area by:



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