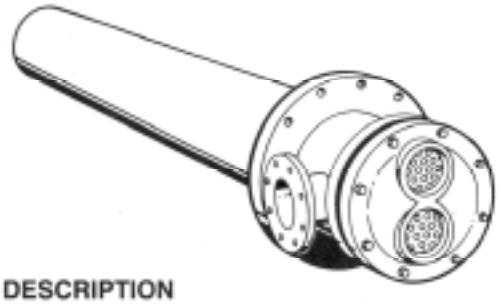
BELL & GOSSETT

SUBMITTAL
C-138B

JOB	B & G REPRESENTATIVE	
UNIT TAG NO.	ORDER NO.	DATE
ENGINEER	SUBMITTED BY	DATE
CONTRACTOR	APPROVED BY	DATE



Type "TSS" & "TSW" Tank Suction Heaters

"U" Tube Design

DESCRIPTION

B&G "TSS" & "TSW" Tank Suction Heaters are of the shell and tube type. The tube bundle is of "U" bend construction with tube ends expanded into a stationary tube sheet. This construction permits ample expansion or contraction for wide temperature variations. A fluid entering the shell is heated or cooled by a fluid being circulated through the tubes. The unit is designed primarily for high viscosity shellside liquids.

Standard "TSS" & "TSW" Tank Suction Heaters are constructed according to ASME Section VIII Div. 1 requirements for pressures and temperature noted in table. A Manufacturers' Data Report for Pressure Vessels, Form No. U-1, as required by the provisions of the ASME Code Rules, is furnished with each unit upon request. This form is signed by an authorized inspector, holding a National Board Commission, and who is employed by an authorized inspection agency, certifying that construction conforms to the latest ASME code for pressure vessels. In addition, each unit is registered with the National Board of Boiler and Pressure Vessel Inspectors. The ASME "U" symbol is stamped on each vessel.

CONSTRUCTION: Head—Cast Iron
Tube Sheet—Steel
Shell—Steel
Tubes—¾ - 16 BWG Steel
Baffles—Steel

DESIGN PRESSURE: 125 PSI (For TS-10", 12" & 14" Series)
150 PSI (For TS-6" & 8" Series)

DESIGN TEMPERATURE: 375°F

RECOMMENDED "TS" TANK SUCTION HEATER MODEL NO. _____

HEATING SURFACE (SQ. FT.) _____

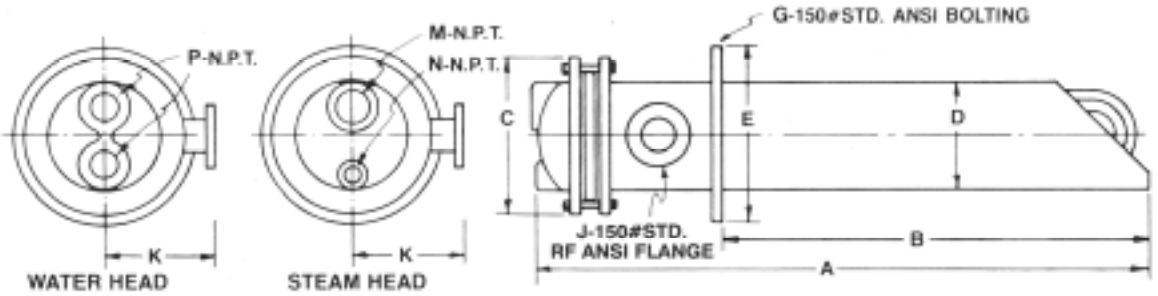
APPROVALS

	OPERATING DATA	
	TUBE SIDE	**SHELL SIDE**
1. Fluid circulated		
2. Total Flow* (*Expressed in GPM, GPH, or lbs./hr.)		
3. Temperature In/Out	/	/
4. Transfer BTU/hr.		
5. Pressure Drop (Maximum)		
6. Fouling Factor or Percentage of Additional Surface		
Note: Following applies only for fluids other than water.		
7. Specific Gravity		
8. Specific Heat		
9. Latent Heat		
10. Viscosity**		
11. Thermal Conductivity		

**Expressed in Proper Units and Temperature such as centipoises @ °F.

Bell & Gossett

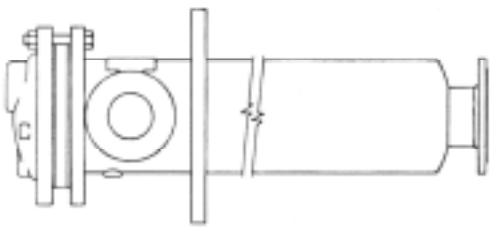
Tank Suction Heaters



MODEL NO.	DIMENSIONS—INCHES						Q DIMENSION IS SQ. FT. SURFACE					
	A	B	C	D	E	G	J	K	M	N	P	Q
TS-62	30	18½	10½	6⅝	13½	8	2	9	2	1	2	8.0
63	42	30½	10½	6⅝	13½	8	2	9	2	1	2	12.7
64	54	42½	10½	6⅝	13½	8	2	9	2	1	2	17.4
65	66	54½	10½	6⅝	13½	8	2	9	2	1	2	22.1
66	78	66½	10½	6⅝	13½	8	2	9	2	1	2	26.8
67	90	78½	10½	6⅝	13½	8	2	9	2	1	2	31.5
68	102	90½	10½	6⅝	13½	8	2	9	2	1	2	36.2
TS-82	30⅝	17 1/16	12½	8⅝	16	10	3	10	3	1¼	3	15
83	42⅝	29 1/16	12½	8⅝	16	10	3	10	3	1¼	3	23
84	54⅝	41 1/16	12½	8⅝	16	10	3	10	3	1¼	3	32
85	66⅝	53 1/16	12½	8⅝	16	10	3	10	3	1¼	3	41
86	78⅝	65 1/16	12½	8⅝	16	10	3	10	3	1¼	3	49
87	90⅝	77 1/16	12½	8⅝	16	10	3	10	3	1¼	3	58
88	102⅝	89 1/16	12½	8⅝	16	10	3	10	3	1¼	3	67
89	114⅝	101 1/16	12½	8⅝	16	10	3	10	3	1¼	3	75
TS-102	31⅜	15¼	14⅝	10¾	19	12	4	12	4	2	4	27
103	43⅜	27¼	14⅝	10¾	19	12	4	12	4	2	4	42
104	55⅜	39¼	14⅝	10¾	19	12	4	12	4	2	4	56
105	67⅜	51¼	14⅝	10¾	19	12	4	12	4	2	4	71
106	79⅜	63¼	14⅝	10¾	19	12	4	12	4	2	4	86
107	91⅜	75¼	14⅝	10¾	19	12	4	12	4	2	4	101
108	103⅜	87¼	14⅝	10¾	19	12	4	12	4	2	4	116
109	115⅜	99¼	14⅝	10¾	19	12	4	12	4	2	4	131
1010	127⅜	111¼	14⅝	10¾	19	12	4	12	4	2	4	146
TS-123	44⅜	27¼	16⅝	12¾	21	14	4	13	4	2	4	61
124	56⅜	39¼	16⅝	12¾	21	14	4	13	4	2	4	83
125	68⅜	51¼	16⅝	12¾	21	14	4	13	4	2	4	104
126	80⅜	63¼	16⅝	12¾	21	14	4	13	4	2	4	126
127	92⅜	75¼	16⅝	12¾	21	14	4	13	4	2	4	148
128	104⅜	87¼	16⅝	12¾	21	14	4	13	4	2	4	169
129	116⅜	99¼	16⅝	12¾	21	14	4	13	4	2	4	191
1210	128⅜	111¼	16⅝	12¾	21	14	4	13	4	2	4	213
1211	140⅜	123¼	16⅝	12¾	21	14	4	13	4	2	4	234
1212	152⅜	135¼	16⅝	12¾	21	14	4	13	4	2	4	256
TS-143	45½	24⅞	17⅞	14	23½	16	6	14	6	3	6	86
144	57½	36⅞	17⅞	14	23½	16	6	14	6	3	6	116
145	69½	48⅞	17⅞	14	23½	16	6	14	6	3	6	146
146	81½	60⅞	17⅞	14	23½	16	6	14	6	3	6	175
147	93½	72⅞	17⅞	14	23½	16	6	14	6	3	6	204
148	105½	84⅞	17⅞	14	23½	16	6	14	6	3	6	234
149	117½	96⅞	17⅞	14	23½	16	6	14	6	3	6	263
1410	129½	108⅞	17⅞	14	23½	16	6	14	6	3	6	292
1411	141½	120⅞	17⅞	14	23½	16	6	14	6	3	6	322
1412	153½	132⅞	17⅞	14	23½	16	6	14	6	3	6	351

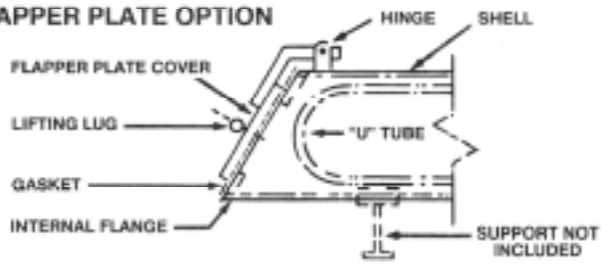
NOTE: When ordering, please specify either steam or water head: TSS or TSW Dimensions subject to change. If exact dimensions are required request certified prints.

TANK SUCTION HEATER WITH BOLTING FLANGE.



A bolting flange for a shut off valve may be supplied to allow removal of the head and tube bundle for inspection without removing the liquid from the tank.

FLAPPER PLATE OPTION



An optional flapper plate is offered to provide the customer a means of shutting off all flow for tube bundle removal. The gasketed flapper plate is held shut by oil pressure in the tank surrounding the tank suction heater. Chains or other lifting devices are not included.

Bell & Gossett

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ISO 9001 Certified