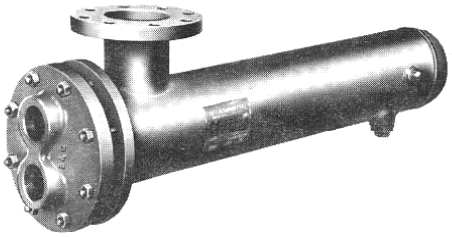
BELL & GOSSETT

SUBMITTAL

C-121.8B



20" Series
Type "SU" Heat Exchangers
"U" Tube Design

JOB

B & G REPRESENTATIVE _____

UNIT TAG NO. _____ ORDER NO. _____ DATE _____

ENGINEER _____ SUBMITTED BY _____ DATE _____

CONTRACTOR _____ APPROVED BY _____ DATE _____

DESCRIPTION

B&G "SU" Heat Exchangers 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 tubes is heated by steam condensing in the single pass shell. Tube spacers properly support and space each tube for maximum efficiency in steam condensing and drainage.

Standard "SU" Heat Exchangers are constructed according to ASME requirements for pressure and temperature. 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. The ASME "U" symbol is stamped on each vessel. In addition, each unit is registered with the National Board of Boiler and Pressure Vessel Inspectors.

RECOMMENDED "SU" HEAT EXCHANGER

MODEL NO. _____

HEATING SURFACE (SQ. FT.) _____

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

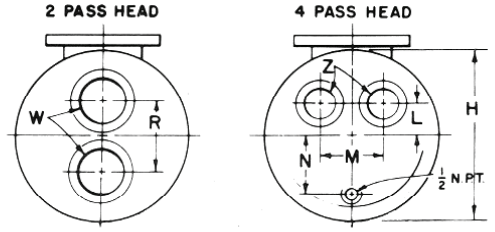
**Expressed in Proper Units and Temperature such as centipoises @ °F.

APPROVALS

Bell & Gossett

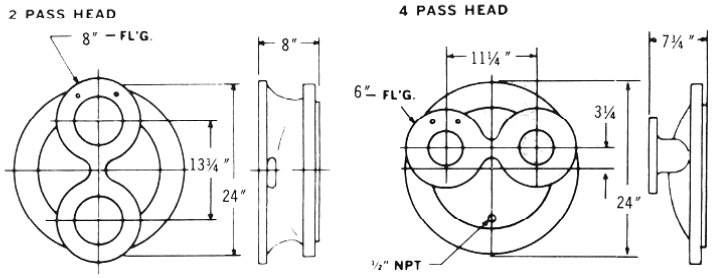
20" Series TYPE "SU" HEAT EXCHANGERS ("U" Tube Design)

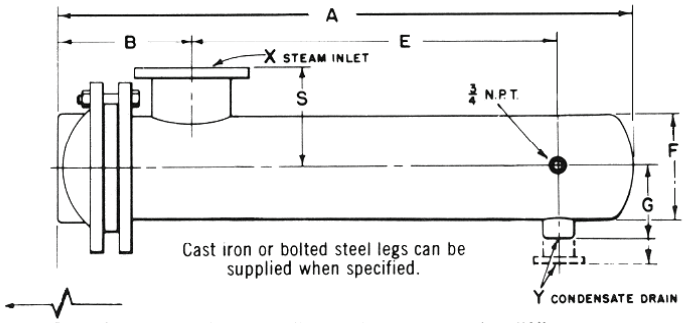
Standard Cast Iron Heads



Optional Cast Iron

150 PSI DESIGN PRESSURE HEADS (Flanged Connections)





"SU" type U tube
Shell diameter in inches
Tube length in feet
Number of tube passes

Complete sales number consists of example: SU203-2

DIMENSIONS

UNIT NUMBER			HEAD DIMENSIONS IN INCHES									DIMENSIONS IN INCHES									HEATING SURFACE SQ. FT.			Approx. Shpg. Wt.
			2 Pass		4 Pass				6 Pass*			2, 4 & 6 Pass*												
2 Pass	4 Pass	6 Pass*	W	R	L	M	N	Z	P	T	V	A	B	E	F	G	H	S	X	Y	2 Pass	4 Pass	6 Pass	(lbs.)
SU203-2	SU203-4	SU203-6	8 NPT	10⅝	4⅜	8¾	9½	6 NPT	—	—	—	49¾	21	19	20	11½	24	14½	8 FLG	2 NPT	194	188	182	1001
SU204-2	SU204-4	SU204-6	8 NPT	10⅝	4⅜	8¾	9½	6 NPT	—	—	—	61¾	21	31	20	11½	24	14½	8 FLG	2½ NPT	259	251	240	1158
SU205-2	SU205-4	SU205-6	8 NPT	10⅝	4⅜	8¾	9½	6 NPT	—	—	—	73¾	21	43	20	11½	24	14½	10 FLG	3 NPT	324	314	298	1315
SU206-2	SU206-4	SU206-6	8 NPT	10⅝	4⅜	8¾	9½	6 NPT	—	—	—	85¾	21	55	20	11½	24	14½	10 FLG	3 NPT	388	377	355	1472
SU207-2	SU207-4	SU207-6	8 NPT	10⅝	4⅜	8¾	9½	6 NPT	—	—	—	97¾	21	67	20	11½	24	14½	12 FLG	3 NPT	453	439	413	1629
SU208-2	SU208-4	SU208-6	8 NPT	10⅝	4⅜	8¾	9½	6 NPT	—	—	—	109¾	21	79	20	14½	24	14½	12 FLG	4 FLG	517	502	471	1786
SU209-2	SU209-4	SU209-6	8 NPT	10⅝	4⅜	8¾	9½	6 NPT	—	—	—	121¾	21	91	20	14½	24	14½	12 FLG	4 FLG	582	565	528	1943
SU2010-2	SU2010-4	SU2010-6	8 NPT	10⅝	4⅜	8¾	9½	6 NPT	—	—	—	133¾	21	103	20	14½	24	14½	14 FLG	4 FLG	647	628	586	2100

*All 6 pass are built to order. Consult factory for dimensions.

Dimensions are subject to change. If exact dimensions are needed for layout, write for certified prints.

DESIGN PRESSURES—ASME CONSTRUCTION CAST IRON & BRASS UNITS

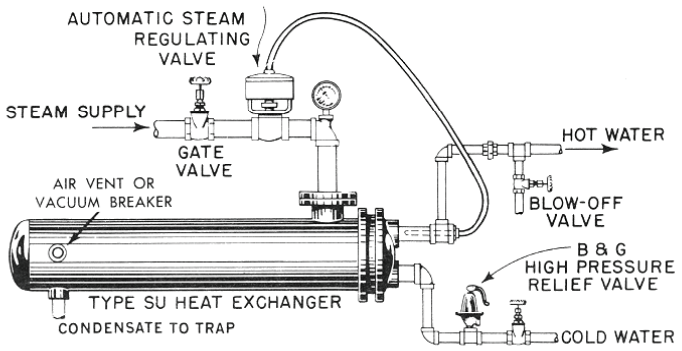
DESIGN PRESSURES*				DESIGN TEMPERATURES* TUBE & SHELL SIDE	
TUBE SIDE		SHELL SIDE			
DESIGN	TEST	DESIGN	TEST	CAST IRON	BRASS
125 psi	250 psi	150 psi	300 psi	375 F	300 F
2 & 4 Pass Head (Flanged Connections) Cast Iron only					
150 psi	300 psi	150 psi	300 psi	375 F	—

*For design pressures and temperatures higher than shown, consult B & G Representative for specifications and dimensions.

MATERIALS

PART	STANDARD CAST IRON UNIT 2 & 4 Pass	BRASS UNIT 2 & 4 Pass
Head	Cast Iron	Cast Brass
Shell	Steel	Steel
Tube Sheet	Steel	Rolled Naval Brass
Tubing	Copper ¾" O.D.	Copper ¾" O.D.
Tube Supports	Steel	Steel
Nuts & Bolts	Steel	Steel

TYPICAL INSTALLATION OF "SU" HEAT EXCHANGER



Steam hammer can cause serious damage to the tubes of any Heat Exchanger. A careful consideration of the following points before an installation is made can prevent costly repairs which may be caused by steam hammer.

(a) A vacuum breaker and/or vent, should be used in accordance with the type of steam system installed.
(b) The proper trap for the steam system installed should be used.
(c) The trap and the condensate return line to the trap should be properly sized for the total capacity of the convertor.
(d) The trap should be sized for the pressure at the trap, not the inlet pressure to the steam controller.

CAUTION: A properly sized relief valve must be installed on the heated water side to protect heat exchangers from possible damage due to volumetric expansion.

For further information, contact
Bell & Gossett Product, 175 Standard Parkway,
Cheektowaga, NY 14227, Phone: (716) 897-2800,
Facsimile: (716) 862-4176.

Bell & Gossett

PRINTED IN U.S.A. 3-86