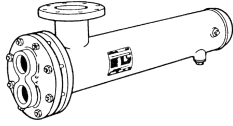


<b>JOB:</b>	<b>REPRESENTATIVE:</b>	
<b>UNIT TAG:</b>	<b>ORDER NO.:</b>	<b>DATE:</b>
<b>ENGINEER:</b>	<b>SUBMITTED BY:</b>	<b>DATE:</b>
<b>CONTRACTOR:</b>	<b>APPROVED BY:</b>	<b>DATE:</b>



## 10" Series Type "SU" Heat Exchangers "U" Tube Design

**DESCRIPTION**

B & G Types "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 condensation and drainage.

Standard "SU" Heat Exchangers are constructed according to ASME requirements for pressure and temperatures

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.** \_\_\_\_\_

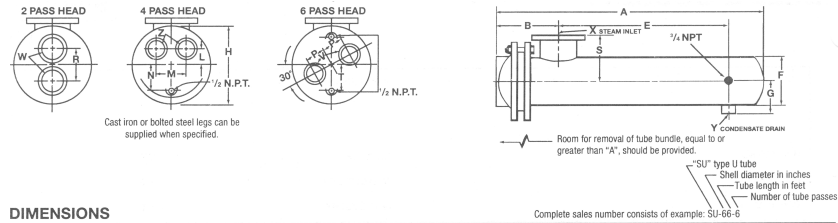
**HEATING SURFACE (SQ. FT.)** \_\_\_\_\_

**OPERATING DATA**

	<u>TUBE SIDE</u>	<u>SHELL SIDE</u>
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	_____	_____
<b>Note:</b> Following applies only to fluids other than water.		
8. Specific Gravity	_____	_____
9. Specific Heat	_____	_____
10. Latent Heat	_____	_____
11. Viscosity**	_____	_____
12. Thermal Conductivity	_____	_____

**APPROVALS**

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



DIMENSIONS

UNIT NUMBER.	DIMENSIONS IN INCHES											HEATING SURFACE	APPROX. SHIPPING WEIGHT
	2 PASS		2 AND 4 PASS										
	W	R	A	B	E	F	G	H	S	X	Y		
SU102-2	4NPT	5-7/8(149)	29(737)	10(254)	11-3/4(298)	10-3/4(273)	6-1/2(165)	14-5/8(371)	6-3/4(171)	3NPT	1NPT	27 (2.5)	184 (83)
SU103-2	4NPT	5-7/8(149)	41(1041)	10(254)	23-3/4(603)	10-3/4(273)	6-1/2(165)	14-5/8(371)	9-7/8(251)	4FLG	1NPT	42 (3.9)	230 (104)
SU104-2	4NPT	5-7/8(149)	53(1346)	10(254)	35-3/4(908)	10-3/4(273)	6-1/2(165)	14-5/8(371)	9-7/8(251)	4FLG	1.25NPT	56 (5.2)	276 (125)
SU105-2	4NPT	5-7/8(149)	65(1651)	10(254)	47-3/4(1213)	10-3/4(273)	6-1/2(165)	14-5/8(371)	9-7/8(251)	6FLG	1.25NPT	71 (6.6)	322 (146)
SU106-2	4NPT	5-7/8(149)	77(1956)	10(254)	59-3/4(1518)	10-3/4(273)	6-1/2(165)	14-5/8(371)	9-3/4(248)	6FLG	1.5NPT	86 (8)	368 (167)
SU107-2	4NPT	5-7/8(149)	89(2261)	10(254)	71-3/4(1822)	10-3/4(273)	6-1/2(165)	14-5/8(371)	9-7/8(251)	6FLG	1.5NPT	101 (9.4)	414 (188)
SU108-2	4NPT	5-7/8(149)	101(2565)	10(254)	83-3/4(2127)	10-3/4(273)	6-1/2(165)	14-5/8(371)	9-7/8(251)	6FLG	2NPT	116 (10.8)	460 (209)
SU109-2	4NPT	5-7/8(149)	113(2870)	10(254)	95-3/4(2432)	10-3/4(273)	6-1/2(165)	14-5/8(371)	9-7/8(251)	6FLG	2NPT	131 (12.2)	506 (230)
SU1010-2	4NPT	5-7/8(149)	125(3175)	10(254)	107-3/4(2737)	10-3/4(273)	6-1/2(165)	14-5/8(371)	9-7/8(251)	6FLG	2NPT	146 (13.6)	552 (250)

UNIT NUMBER.	DIMENSIONS IN INCHES													HEATING SURFACE	APPROX. SHIPPING WEIGHT
	4 PASS				2 AND 4 PASS										
	L	M	N	Z	A	B	E	F	G	H	S	X	Y		
SU102-4	2-3/8(60)	4-3/4(121)	4-3/8(111)	3NPT	29(737)	10(254)	11-3/4(298)	10-3/4(273)	6-1/2(165)	14-5/8(371)	6-3/4(171)	3NPT	1NPT	25 (2.3)	184 (83)
SU103-4	2-3/8(60)	4-3/4(121)	4-3/8(111)	3NPT	41(1041)	10(254)	23-3/4(603)	10-3/4(273)	6-1/2(165)	14-5/8(371)	9-7/8(251)	4FLG	1NPT	39 (3.6)	230 (104)
SU104-4	2-3/8(60)	4-3/4(121)	4-3/8(111)	3NPT	53(1346)	10(254)	35-3/4(908)	10-3/4(273)	6-1/2(165)	14-5/8(371)	9-7/8(251)	4FLG	1.25NPT	53 (4.9)	276 (125)
SU105-4	2-3/8(60)	4-3/4(121)	4-3/8(111)	3NPT	65(1651)	10(254)	47-3/4(1213)	10-3/4(273)	6-1/2(165)	14-5/8(371)	9-7/8(251)	6FLG	1.25NPT	68 (6.3)	322 (146)
SU106-4	2-3/8(60)	4-3/4(121)	4-3/8(111)	3NPT	77(1956)	10(254)	59-3/4(1518)	10-3/4(273)	6-1/2(165)	14-5/8(371)	9-3/4(248)	6FLG	1.5NPT	82 (7.6)	368 (167)
SU107-4	2-3/8(60)	4-3/4(121)	4-3/8(111)	3NPT	89(2261)	10(254)	71-3/4(1822)	10-3/4(273)	6-1/2(165)	14-5/8(371)	9-7/8(251)	6FLG	1.5NPT	96 (8.9)	414 (188)
SU108-4	2-3/8(60)	4-3/4(121)	4-3/8(111)	3NPT	101(2565)	10(254)	83-3/4(2127)	10-3/4(273)	6-1/2(165)	14-5/8(371)	9-7/8(251)	6FLG	2NPT	110 (10.2)	460 (209)
SU109-4	2-3/8(60)	4-3/4(121)	4-3/8(111)	3NPT	113(2870)	10(254)	95-3/4(2432)	10-3/4(273)	6-1/2(165)	14-5/8(371)	9-7/8(251)	6FLG	2NPT	124 (11.5)	506 (230)
SU1010-4	2-3/8(60)	4-3/4(121)	4-3/8(111)	3NPT	125(3175)	10(254)	107-3/4(2737)	10-3/4(273)	6-1/2(165)	14-5/8(371)	9-7/8(251)	6FLG	2NPT	138 (12.8)	552 (250)

UNIT NUMBER.	DIMENSIONS IN INCHES												HEATING SURFACE	APPROX. SHIPPING WEIGHT
	6 PASS													
	P	T	V	A	B	E	F	G	H	S	X	Y		
SU102-6	3-13/16(97)	4-7/8(124)	2.5NPT	29(737)	10(254)	11-3/4(298)	10-3/4(273)	6-1/2(165)	14-5/8(371)	6-3/4(171)	3NPT	1NPT	21 (2)	184 (83)
SU103-6	3-13/16(97)	4-7/8(124)	2.5NPT	41(1041)	10(254)	23-3/4(603)	10-3/4(273)	6-1/2(165)	14-5/8(371)	9-7/8(251)	4FLG	1NPT	33 (3.1)	230 (104)
SU104-6	3-13/16(97)	4-7/8(124)	2.5NPT	53(1346)	10(254)	35-3/4(908)	10-3/4(273)	6-1/2(165)	14-5/8(371)	9-7/8(251)	4FLG	1.25NPT	45 (4.2)	276 (125)
SU105-6	3-13/16(97)	4-7/8(124)	2.5NPT	65(1651)	10(254)	47-3/4(1213)	10-3/4(273)	6-1/2(165)	14-5/8(371)	9-7/8(251)	6FLG	1.25NPT	56 (5.2)	322 (146)
SU106-6	3-13/16(97)	4-7/8(124)	2.5NPT	77(1956)	10(254)	59-3/4(1518)	10-3/4(273)	6-1/2(165)	14-5/8(371)	9-3/4(248)	6FLG	1.5NPT	68 (6.3)	368 (167)
SU107-6	3-13/16(97)	4-7/8(124)	2.5NPT	89(2261)	10(254)	71-3/4(1822)	10-3/4(273)	6-1/2(165)	14-5/8(371)	9-7/8(251)	6FLG	1.5NPT	80 (7.4)	414 (188)
SU108-6	3-13/16(97)	4-7/8(124)	2.5NPT	101(2565)	10(254)	83-3/4(2127)	10-3/4(273)	6-1/2(165)	14-5/8(371)	9-7/8(251)	6FLG	2NPT	92 (8.5)	460 (209)
SU109-6	3-13/16(97)	4-7/8(124)	2.5NPT	113(2870)	10(254)	95-3/4(2432)	10-3/4(273)	6-1/2(165)	14-5/8(371)	9-7/8(251)	6FLG	2NPT	104 (9.7)	506 (230)
SU1010-6	3-13/16(97)	4-7/8(124)	2.5NPT	125(3175)	10(254)	107-3/4(2737)	10-3/4(273)	6-1/2(165)	14-5/8(371)	9-7/8(251)	6FLG	2NPT	116 (10.8)	552 (250)

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		CAST IRON	BRASS
DESIGN	TEST	DESIGN	TEST		
4 & 6 Pass					
150 psi	300 psi	150 psi	300 psi	375 Å°F	300 Å°F
2 Pass					
125 psi	250 psi	150 psi	300 psi	375 Å°F	300 Å°F
2 Pass Head (Flanged Connections) Cast Iron Only					
150 psi	300 psi	150 psi	300 psi	375 Å°F	-

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

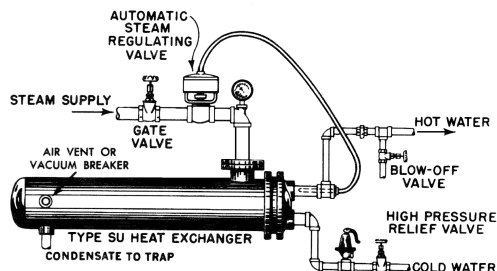
TYPICAL INSTALLATION OF "SU" HEAT EXCHANGER

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 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 converter.
- (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 heater water side to protect heat exchangers from possible damage due to volumetric expansion.

PART	MATERIALS	
	STANDARD CAST IRON UNIT	BRASS UNIT
	2, 4 & 6 Pass	2 & 4 Pass
Head	Cast Iron	Cast Brass
Shell	Steel	Steel
Tube Sheets	Steel	Royal Naval Brass
Tubing	Cooper 3/4" O.D.	Cooper 3/4" O.D.
Tube Supports	Steel	Steel
Nuts & Bolts	Steel	Steel



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Let's Solve Water

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