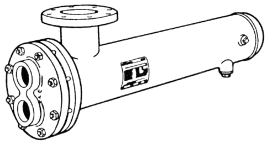
Bell & Gossett

SUBMITTAL

C-121C

JOB:	**REPRESENTATIVE:**	
UNIT TAG:	**ORDER NO.**	**DATE:**
ENGINEER:	**SUBMITTED BY:**	**DATE:**
CONTRACTOR:	**APPROVED BY:**	**DATE:**



4" 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 construced according to ASME requirements for pressure and temperatures

A Manufacturers' Data Report for Pressure Vessels, Form No. U-1, as required by the preovisionsof the ASME Code Rules, is furniahed with each unit upon request. This form is signed by an authorized inspector, holding a national Board Commision, 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.)** _____

	TUBE SIDE	SHELL SIDE
1. Steam Pressure		
2. Fluid Circulated		
3. Total Flow (Expressed in GPM, GRH or lbs./hr)		
4. Teperature In/Out		
5. Heat Load BTU/hr		
6. Pressure Drop (Maximum)		
7. Fouling Factor or Percentage of Additional Surface		
Note: 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

xylem
Let's Solve Water

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

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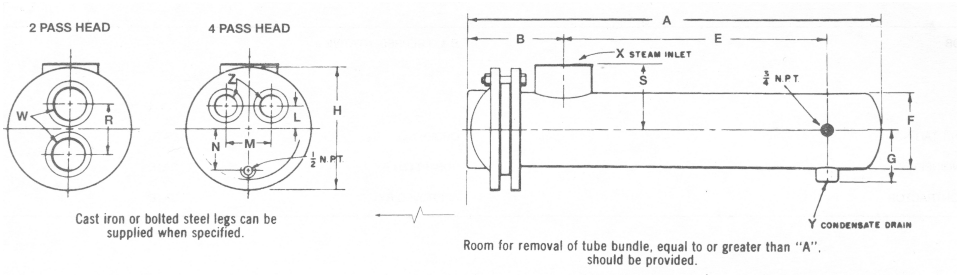

UNIT NUMBER.	DIMENSIONS IN INCHES											HEATING SURFACE	APPROX. SHIPPING WEIGHT
	2 PASS		2 AND 4 PASS										
	W	R	A	B	E	F	G	H	S	X	Y		
SU42-2	1.5N	2-5/8(67)	29(737)	7(178)	16-1/4(413)	4-1/2(114)	3-1/4(83)	7-1/4(184)	3-1/4(83)	2N	1N	4.5 (0.4)	56 (25)
SU43-2	1.5N	2-5/8(67)	41(1041)	7(178)	28-1/4(718)	4-1/2(114)	3-1/4(83)	7-1/4(184)	3-1/4(83)	2N	1N	6.8 (0.6)	70 (32)
SU44-2	1.5N	2-5/8(67)	53(1346)	7(178)	40-1/4(1022)	4-1/2(114)	3-1/4(83)	7-1/4(184)	3-1/4(83)	3N	1N	9.2 (0.9)	84 (38)
SU45-2	1.5N	2-5/8(67)	65(1651)	7(178)	52-1/4(1327)	4-1/2(114)	3-1/4(83)	7-1/4(184)	3-1/4(83)	3N	1N	11.5 (1.1)	98 (44)
SU46-2	1.5N	2-5/8(67)	77(1956)	7(178)	64-1/4(1632)	4-1/2(114)	3-1/4(83)	7-1/4(184)	3-1/4(83)	3N	1N	13.9 (1.3)	112 (51)
SU47-2	1.5N	2-5/8(67)	89(2261)	7(178)	76-1/4(1937)	4-1/2(114)	3-1/4(83)	7-1/4(184)	3-1/4(83)	3N	1N	16.3 (1.5)	126 (57)

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		
SU42-4	1(25)	2-1/4(57)	1-3/4(44)	1.25N	29(737)	7(178)	16-1/4(413)	4-1/2(114)	3-1/4(83)	7-1/4(184)	3-1/4(83)	2N	1N	4.5 (0.4)	56 (25)
SU43-4	1(25)	2-1/4(57)	1-3/4(44)	1.25N	41(1041)	7(178)	28-1/4(718)	4-1/2(114)	3-1/4(83)	7-1/4(184)	3-1/4(83)	2N	1N	6.8 (0.6)	70 (32)
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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
150 psi	300 psi	150 psi	300 psi	375 °F	300 °F

MATERIALS

PART	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

TYPICAL INSTALLATION OF "SU" HEAT EXCHANGER

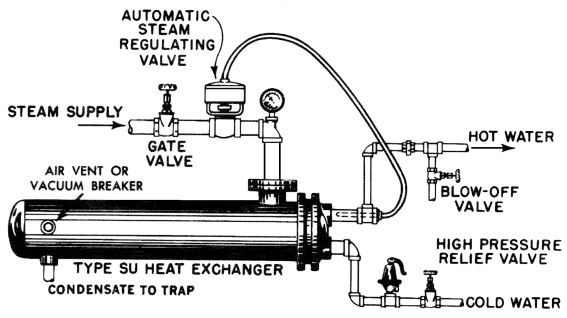
Steam Hammer can cause serious damage to the tubes of any Heat Exchanger. A careful consideration of the following points before an installation is made can prevent costly repairs which may be caused by steam hammer.

(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.



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Let's Solve Water