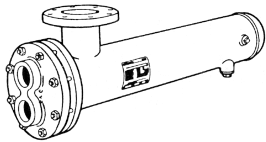


JOB:		REPRESENTATIVE:	
UNIT TAG:		ORDER NO.	DATE:
ENGINEER:		SUBMITTED BY:	DATE:
CONTRACTOR:		APPROVED BY:	DATE:



6" 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.

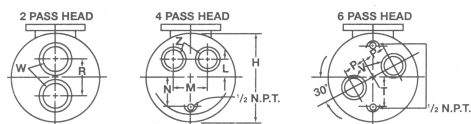
RECOMMENDED "SU" HEAT EXCHANGER  
MODEL NO.

	HEATING SURFACE (SQ. FT.)	
	TUBE SIDE	SHELL SIDE
1. Steam Pressure	_____	_____
2. Fluid Circulated	_____	_____
3. Total Flow (Expressed in GPM, GRH 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	_____	_____
**Expressed in Proper Units and Temperature such as centipoises @ °F		

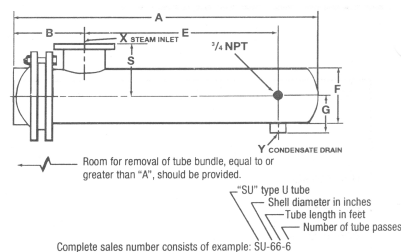
APPROVALS

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

C-121.1A



## 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		
SU62-2	2NPT	3-3/4(95)	28-1/8(714)	7-3/8(187)	15-1/2(394)	6-5/8(168)	4-1/8(105)	10-1/2(267)	4-1/2(114)	1.5NPT	1NPT	8.0 (0.7)	68 (31)
SU63-2	2NPT	3-3/4(95)	40-1/8(1019)	7-3/8(187)	27-1/2(698)	6-5/8(168)	4-1/8(105)	10-1/2(267)	4-1/2(114)	2NPT	1NPT	12.7 (1.2)	93 (42)
SU64-2	2NPT	3-3/4(95)	52-1/8(1324)	7-3/8(187)	39-1/2(1003)	6-5/8(168)	4-1/8(105)	10-1/2(267)	5-1/16(129)	2.5NPT	1NPT	17.4 (1.6)	118 (54)
SU65-2	2NPT	3-3/4(95)	64-1/8(1629)	7-3/8(187)	51-1/2(1308)	6-5/8(168)	4-1/8(105)	10-1/2(267)	5-1/16(129)	2.5NPT	1NPT	22.1 (2.1)	143 (65)
SU66-2	2NPT	3-3/4(95)	76-1/8(1934)	7-3/8(187)	63-1/2(1613)	6-5/8(168)	4-1/8(105)	10-1/2(267)	5-1/16(129)	3NPT	1NPT	26.8 (2.5)	168 (76)
SU67-2	2NPT	3-3/4(95)	88-1/8(2238)	7-3/8(187)	75-1/2(1918)	6-5/8(168)	4-1/8(105)	10-1/2(267)	5-1/16(129)	3NPT	1NPT	31.5 (2.9)	193 (88)
SU68-2	2NPT	3-3/4(95)	100-1/8(2543)	7-3/8(187)	87-1/2(2222)	6-5/8(168)	4-1/8(105)	10-1/2(267)	5-1/16(129)	3NPT	1NPT	36.2 (3.4)	218 (99)

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		
SU62-4	1-19/32 (40)	3-3/16 (81)	2-13/16 (71)	1.5NPT	28-1/8(714)	7-3/8 (187)	15-1/2(394)	6-5/8 (168)	4-1/8 (105)	10-1/2 (267)	4-1/2(114)	1.5NPT	1NPT	8.0 (0.7)	68 (31)
SU63-4	1-19/32 (40)	3-3/16 (81)	2-13/16 (71)	1.5NPT	40-1/8(1019)	7-3/8 (187)	27-1/2(698)	6-5/8 (168)	4-1/8 (105)	10-1/2 (267)	4-1/2(114)	2NPT	1NPT	12.7 (1.2)	93 (42)
SU64-4	1-19/32 (40)	3-3/16 (81)	2-13/16 (71)	1.5NPT	52-1/8(1324)	7-3/8 (187)	39-1/2 (1003)	6-5/8 (168)	4-1/8 (105)	10-1/2 (267)	5-1/16 (129)	2.5NPT	1NPT	17.4 (1.6)	118 (54)
SU65-4	1-19/32 (40)	3-3/16 (81)	2-13/16 (71)	1.5NPT	64-1/8(1629)	7-3/8 (187)	51-1/2 (1308)	6-5/8 (168)	4-1/8 (105)	10-1/2 (267)	5-1/16 (129)	2.5NPT	1NPT	22.1 (2.1)	143 (65)
SU66-4	1-19/32 (40)	3-3/16 (81)	2-13/16 (71)	1.5NPT	76-1/8(1934)	7-3/8 (187)	63-1/2 (1613)	6-5/8 (168)	4-1/8 (105)	10-1/2 (267)	5-1/16 (129)	3NPT	1NPT	26.8 (2.5)	168 (76)
SU67-4	1-19/32 (40)	3-3/16 (81)	2-13/16 (71)	1.5NPT	88-1/8(2238)	7-3/8 (187)	75-1/2 (1918)	6-5/8 (168)	4-1/8 (105)	10-1/2 (267)	5-1/16 (129)	3NPT	1NPT	31.5 (2.9)	193 (88)
SU68-4	1-19/32 (40)	3-3/16 (81)	2-13/16 (71)	1.5NPT	100-1/8 (2543)	7-3/8 (187)	87-1/2 (2222)	6-5/8 (168)	4-1/8 (105)	10-1/2 (267)	5-1/16 (129)	3NPT	1NPT	36.2 (3.4)	218 (99)

UNIT NUMBER.	DIMENSIONS IN INCHES												HEATING SURFACE	APPROX. SHIPPING WEIGHT
	6 PASS													
	P	T	V	A	B	E	F	G	H	S	X	Y		
SU62-6	2-11/32(60)	2-13/16(71)	1.25NPT	28-1/8(714)	7-3/8(187)	15-1/2(394)	6-5/8(168)	4-1/8(105)	10-1/2(267)	4-1/2(114)	1.5NPT	1NPT	6.0 (0.6)	68 (31)
SU63-6	2-11/32(60)	2-13/16(71)	1.25NPT	40-1/8(1019)	7-3/8(187)	27-1/2(698)	6-5/8(168)	4-1/8(105)	10-1/2(267)	4-1/2(114)	2NPT	1NPT	9.6 (0.9)	93 (42)
SU64-6	2-11/32(60)	2-13/16(71)	1.25NPT	52-1/8(1324)	7-3/8(187)	39-1/2(1003)	6-5/8(168)	4-1/8(105)	10-1/2(267)	5-1/16(129)	2.5NPT	1NPT	13.1 (1.2)	118 (54)
SU65-6	2-11/32(60)	2-13/16(71)	1.25NPT	64-1/8(1629)	7-3/8(187)	51-1/2(1308)	6-5/8(168)	4-1/8(105)	10-1/2(267)	5-1/16(129)	2.5NPT	1NPT	16.7 (1.6)	143 (65)
SU66-6	2-11/32(60)	2-13/16(71)	1.25NPT	76-1/8(1934)	7-3/8(187)	63-1/2(1613)	6-5/8(168)	4-1/8(105)	10-1/2(267)	5-1/16(129)	3NPT	1NPT	20.2 (1.9)	168 (76)
SU67-6	2-11/32(60)	2-13/16(71)	1.25NPT	88-1/8(2238)	7-3/8(187)	75-1/2(1918)	6-5/8(168)	4-1/8(105)	10-1/2(267)	5-1/16(129)	3NPT	1NPT	23.8 (2.2)	193 (88)
SU68-6	2-11/32(60)	2-13/16(71)	1.25NPT	100-1/8(2543)	7-3/8(187)	87-1/2(2222)	6-5/8(168)	4-1/8(105)	10-1/2(267)	5-1/16(129)	3NPT	1NPT	27.3 (2.5)	218 (99)

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 SIDE		SHELL SIDE		TUBE & 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

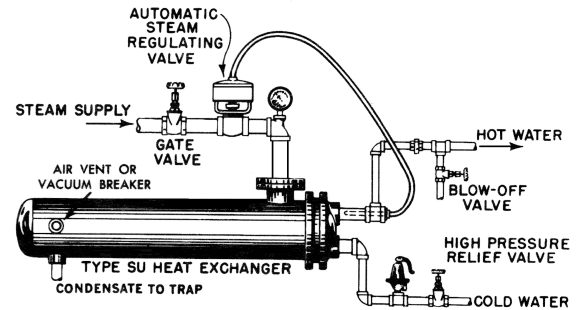
## TYPICAL INSTALLATION OF "SU" HEAT EXCHANGER

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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