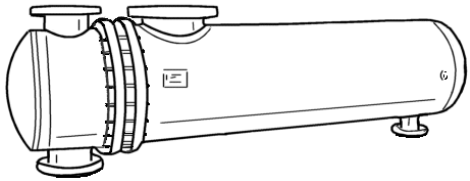


<b>JOB:</b>	<b>REPRESENTATIVE:</b>	
<b>UNIT TAG:</b>	<b>ORDER NO.</b>	<b>DATE:</b>
<b>ENGINEER:</b>	<b>SUBMITTED BY:</b>	<b>DATE:</b>
<b>CONTRACTOR:</b>	<b>APPROVED BY:</b>	<b>DATE:</b>



## 28" 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.

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.

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

**RECOMMENDED "SU" HEAT EXCHANGER**

	HEATING SURFACE (SQ. FT.)		
		<b>TUBE SIDE</b>	<b>SHELL SIDE</b>
1. Fluid Circulated.....	_____	_____	<b>APPROVALS</b>
2. Total Flow Expressed in GPM, GRH or lbs./hr.....	_____	_____	
3. Temperature In/Out.....	_____ / _____	_____ / _____	
4. Transfer BTU/hr.....	_____	_____	
5. Pressure Drop.....	_____	_____	
6. Fouling Factor or Percentage of Additional Surface.....	_____	_____	
<b>Note:</b> Following applies only to fluids other than water			
7. Specific Gravity.....	_____	_____	
8. Specific Heat.....	_____	_____	
9. Latent Heat.....	_____	_____	
10. Viscosity**.....	_____	_____	
11. Thermal Conductivity.....	_____	_____	

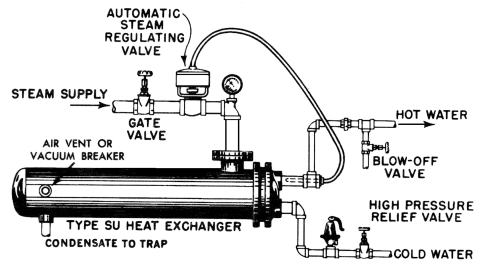
\*\*Expressed in Proper Units and Temperature such as centipoises @ °F

**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.

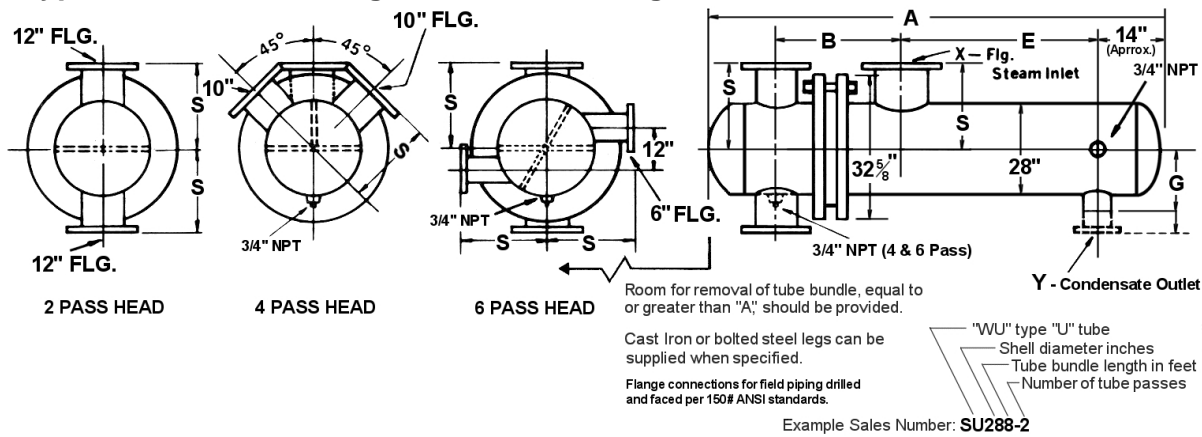
- (a) A vacuum breaker and/or vent, should be used in accordance with the type of system installed.
- (b) The proper trap for the steam system installed should be used. (c) The trap and the condensate return line to the trap should be properly sized for the total capacity of the converter.
- (d) The 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.



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

C-121.12A



UNIT NUMBER.	DIMENSIONS IN INCHES							HEATING SURFACE Sq. Ft. (Sq. M.)	APPROX. SHIPPING WEIGHT LBS. (KG)
	A	B	E	G	S	X	Y		
SU284-2	78-5/8 (1997)	25-5/8 (651)	20-5/8 (524)	18-1/2 (470)	18-1/2 (470)	12 FLG	4 FLG	456 (42.4)	2502 (1135)
SU285-2	90-5/8 (2302)	26-5/8 (676)	31-5/8 (803)	18-1/2 (470)	18-1/2 (470)	14 FLG	4 FLG	587 (54.5)	2785 (1263)
SU286-2	102-5/8 (2607)	27-7/8 (708)	41-5/16 (1049)	18-1/2 (470)	18-1/2 (470)	16 FLG	6 FLG	717 (66.6)	3068 (1392)
SU287-2	114-5/8 (2911)	27-7/8 (708)	53-5/16 (1354)	18-1/2 (470)	18-1/2 (470)	16 FLG	6 FLG	848 (78.8)	3351 (1520)
SU288-2	126-5/8 (3216)	28-5/8 (727)	64-1/4 (1632)	18-1/2 (470)	18-1/2 (470)	18 FLG	6 FLG	978 (90.9)	3634 (1648)
SU289-2	138-5/8 (3521)	28-5/8 (727)	76-9/16 (1945)	18-1/2 (470)	18-1/2 (470)	18 FLG	6 FLG	1110 (103.1)	3917 (1777)
SU2810-2	150-5/8 (3826)	29-7/8 (759)	87-5/16 (2218)	18-1/2 (470)	18-1/2 (470)	20 FLG	6 FLG	1240 (115.2)	4200 (1905)

UNIT NUMBER.	DIMENSIONS IN INCHES							HEATING SURFACE Sq. Ft. (Sq. M.)	APPROX. SHIPPING WEIGHT LBS. (KG)
	A	B	E	G	S	X	Y		
SU284-4	75-3/8 (1915)	24-1/8 (613)	20-5/8 (524)	18-1/2 (470)	18-1/2 (470)	12 FLG	4 FLG	447 (41.5)	2502 (1135)
SU285-4	87-3/8 (2219)	25-1/8 (638)	31-5/8 (803)	18-1/2 (470)	18-1/2 (470)	14 FLG	4 FLG	575 (53.4)	2785 (1263)
SU286-4	99-3/8 (2524)	26-3/8 (670)	41-5/16 (1049)	18-1/2 (470)	18-1/2 (470)	16 FLG	6 FLG	703 (65.3)	3068 (1392)
SU287-4	111-3/8 (2829)	26-3/8 (670)	53-5/16 (1354)	18-1/2 (470)	18-1/2 (470)	16 FLG	6 FLG	831 (77.2)	3351 (1520)
SU288-4	123-3/8 (3134)	27-1/8 (689)	64-1/4 (1632)	18-1/2 (470)	18-1/2 (470)	18 FLG	6 FLG	959 (89.1)	3634 (1648)
SU289-4	135-3/8 (3439)	27-1/8 (689)	76-9/16 (1945)	18-1/2 (470)	18-1/2 (470)	18 FLG	6 FLG	1088 (101.1)	3917 (1777)
SU2810-4	147-3/8 (3743)	28-3/8 (721)	87-5/16 (2218)	18-1/2 (470)	18-1/2 (470)	20 FLG	6 FLG	1216 (113)	4200 (1905)

UNIT NUMBER.	DIMENSIONS IN INCHES							HEATING SURFACE Sq. Ft. (Sq. M.)	APPROX. SHIPPING WEIGHT LBS. (KG)
	A	B	E	G	S	X	Y		
SU284-6	70-1/16 (1780)	21-5/8 (549)	20-5/8 (524)	18-1/2 (470)	18-1/2 (470)	12 FLG	4 FLG	420 (39)	2502 (1135)
SU285-6	82-1/16 (2084)	22-5/8 (575)	31-5/8 (803)	18-1/2 (470)	18-1/2 (470)	14 FLG	4 FLG	540 (50.2)	2785 (1263)
SU286-6	94-1/16 (2389)	23-7/8 (606)	41-5/16 (1049)	18-1/2 (470)	18-1/2 (470)	16 FLG	6 FLG	661 (61.4)	3068 (1392)
SU287-6	106-1/16 (2694)	23-7/8 (606)	53-5/16 (1354)	18-1/2 (470)	18-1/2 (470)	16 FLG	6 FLG	781 (72.6)	3351 (1520)
SU288-6	118-1/16 (2999)	24-5/8 (625)	64-1/4 (1632)	18-1/2 (470)	18-1/2 (470)	18 FLG	6 FLG	901 (83.7)	3634 (1648)
SU289-6	130-1/16 (3304)	24-5/8 (625)	76-9/16 (1945)	18-1/2 (470)	18-1/2 (470)	18 FLG	6 FLG	1022 (94.9)	3917 (1777)
SU2810-6	142-1/16 (3608)	25-7/8 (657)	87-5/16 (2218)	18-1/2 (470)	18-1/2 (470)	20 FLG	6 FLG	1142 (106.1)	4200 (1905)

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

## DESIGN PRESSURES - ASME CONSTRUCTION

DESIGN PRESSURES				DESIGN TEMPERATURES* TUBE & SHELL SIDE
TUBE SIDE		SHELL SIDE		
DESIGN	TEST	DESIGN	TEST	
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 CONSTRUCTION
Head	Steel
Shell	Steel
Tube Sheets	Steel
Tubing	Cooper 3/4" O.D.
Tube Supports	Steel
Nuts & Bolts	Steel

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