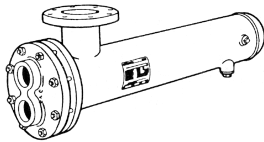


JOB:	REPRESENTATIVE:	
UNIT TAG:	ORDER NO.	DATE:
ENGINEER:	SUBMITTED BY:	DATE:
CONTRACTOR:	APPROVED BY:	DATE:



12" 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.

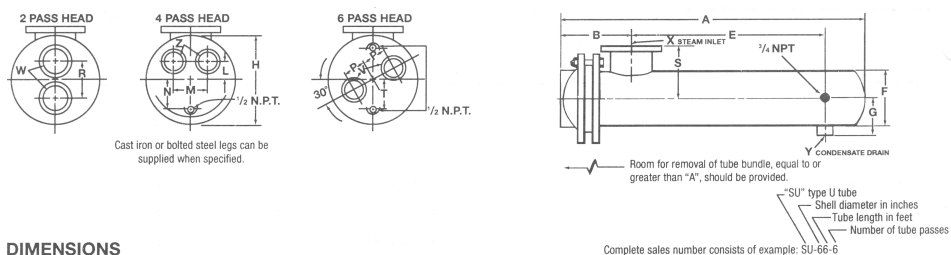
RECOMMENDED "SU" HEAT EXCHANGER

MODEL NO.	HEATING SURFACE (SQ. FT.)		APPROVALS
	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			
Note: 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

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

C-121.4D



DIMENSIONS

UNIT NUMBER.	DIMENSIONS IN INCHES												HEATING SURFACE	APPROX. SHIPPING WEIGHT
	2 PASS			2 AND 4 PASS										
	B ¹	W	R	A	B	E	F	G	H	S	X	Y		
SU123-2	2-7/8(73)	4NPT	7-3/4(197)	41-1/2(1054)	12(305)	21-1/2(546)	12-3/4(324)	7-3/4(197)	16-5/8(422)	10-7/8(276)	4FLG	1.25NPT	61 (5.7)	294 (133)
SU124-2	2-7/8(73)	4NPT	7-3/4(197)	53-1/2(1359)	12(305)	33-1/2(851)	1275(32385)	7-3/4(197)	16-5/8(422)	10-7/8(276)	6FLG	1.25NPT	83 (7.7)	363 (165)
SU125-2	2-7/8(73)	4NPT	7-3/4(197)	66-1/2(1689)	12(305)	45-1/2(1156)	12-3/4(324)	7-3/4(197)	16-5/8(422)	10-7/8(276)	6FLG	1.5NPT	104 (9.7)	432 (196)
SU126-2	2-7/8(73)	4NPT	7-3/4(197)	77-1/2(1968)	12(305)	57-1/2(1460)	12-3/4(324)	7-3/4(197)	16-5/8(422)	10-7/8(276)	6FLG	2NPT	126 (11.7)	501 (227)
SU127-2	2-7/8(73)	4NPT	7-3/4(197)	89-1/2(2273)	12(305)	69-1/2(1765)	12-3/4(324)	7-3/4(197)	16-5/8(422)	10-7/8(276)	8FLG	2NPT	147 (13.7)	570 (259)
SU128-2	2-7/8(73)	4NPT	7-3/4(197)	101-1/2(2578)	12(305)	81-1/2(2070)	12-3/4(324)	7-3/4(197)	16-5/8(422)	10-7/8(276)	8FLG	2NPT	169 (15.7)	639 (290)
SU129-2	2-7/8(73)	4NPT	7-3/4(197)	113-1/2(2883)	12(305)	93-1/2(2375)	12-3/4(324)	7-3/4(197)	16-5/8(422)	10-7/8(276)	8FLG	2.5NPT	191 (17.7)	107 (49)
SU1210-2	2-7/8(73)	4NPT	7-3/4(197)	125-1/2(3188)	12(305)	105-1/2(2680)	12-3/4(324)	7-3/4(197)	16-5/8(422)	10-7/8(276)	8FLG	2.5NPT	212 (19.7)	777 (352)

UNIT NUMBER.	DIMENSIONS IN INCHES														HEATING SURFACE	APPROX. SHIPPING WEIGHT
	4 PASS					2 AND 4 PASS										
	B ¹	L	M	N	Z	A	B	E	F	G	H	S	X	Y		
SU123-4	2-7/8 (73)	2-5/8 (67)	5-7/8 (149)	5-7/8 (149)	4NPT	41-1/2(1054)	12 (305)	21-1/2(546)	12-3/4(324)	7-3/4 (197)	16-5/8 (422)	10-7/8 (276)	4FLG	1.25NPT	58 (5.4)	294 (133)
SU124-4	2-7/8 (73)	2-5/8 (67)	5-7/8 (149)	5-7/8 (149)	4NPT	53-1/2(1359)	12 (305)	33-1/2(851)	1275 (32385)	7-3/4 (197)	16-5/8 (422)	10-7/8 (276)	6FLG	1.25NPT	78 (7.2)	363 (165)
SU125-4	2-7/8 (73)	2-5/8 (67)	5-7/8 (149)	5-7/8 (149)	4NPT	66-1/2(1689)	12 (305)	45-1/2(1156)	12-3/4(324)	7-3/4 (197)	16-5/8 (422)	10-7/8 (276)	6FLG	1.5NPT	98 (9.1)	432 (196)
SU126-4	2-7/8 (73)	2-5/8 (67)	5-7/8 (149)	5-7/8 (149)	4NPT	77-1/2(1968)	12 (305)	57-1/2(1460)	12-3/4(324)	7-3/4 (197)	16-5/8 (422)	10-7/8 (276)	6FLG	2NPT	119 (11.1)	501 (227)
SU127-4	2-7/8 (73)	2-5/8 (67)	5-7/8 (149)	5-7/8 (149)	4NPT	89-1/2(2273)	12 (305)	69-1/2(1765)	12-3/4(324)	7-3/4 (197)	16-5/8 (422)	10-7/8 (276)	8FLG	2NPT	139 (12.9)	570 (259)
SU128-4	2-7/8 (73)	2-5/8 (67)	5-7/8 (149)	5-7/8 (149)	4NPT	101-1/2 (2578)	12 (305)	81-1/2(2070)	12-3/4(324)	7-3/4 (197)	16-5/8 (422)	10-7/8 (276)	8FLG	2NPT	160 (14.9)	639 (290)
SU129-4	2-7/8 (73)	2-5/8 (67)	5-7/8 (149)	5-7/8 (149)	4NPT	113-1/2 (2883)	12 (305)	93-1/2(2375)	12-3/4(324)	7-3/4 (197)	16-5/8 (422)	10-7/8 (276)	8FLG	2.5NPT	180 (16.7)	107 (49)
SU1210-4	2-7/8 (73)	2-5/8 (67)	5-7/8 (149)	5-7/8 (149)	4NPT	125-1/2 (3188)	12 (305)	105-1/2 (2680)	12-3/4(324)	7-3/4 (197)	16-5/8 (422)	10-7/8 (276)	8FLG	2.5NPT	200 (18.6)	777 (352)

UNIT NUMBER.	DIMENSIONS IN INCHES													HEATING SURFACE	APPROX. SHIPPING WEIGHT
	6 PASS														
	B ¹	P	T	V	A	B	E	F	G	H	S	X	Y		
SU123-2	2-7/8 (73)	4-1/2 (114)	5-13/16 (148)	3NPT	41-1/2(1054)	12 (305)	21-1/2(546)	12-3/4(324)	7-3/4 (197)	16-5/8 (422)	10-7/8 (276)	4FLG	1.25NPT	50 (4.6)	294 (133)
SU124-2	2-7/8 (73)	4-1/2 (114)	5-13/16 (148)	3NPT	53-1/2(1359)	12 (305)	33-1/2(851)	1275 (32385)	7-3/4 (197)	16-5/8 (422)	10-7/8 (276)	6FLG	1.25NPT	68 (6.3)	363 (165)
SU125-2	2-7/8 (73)	4-1/2 (114)	5-13/16 (148)	3NPT	66-1/2(1689)	12 (305)	45-1/2(1156)	12-3/4(324)	7-3/4 (197)	16-5/8 (422)	10-7/8 (276)	6FLG	1.5NPT	85 (7.9)	432 (196)
SU126-2	2-7/8 (73)	4-1/2 (114)	5-13/16 (148)	3NPT	77-1/2(1968)	12 (305)	57-1/2(1460)	12-3/4(324)	7-3/4 (197)	16-5/8 (422)	10-7/8 (276)	6FLG	2NPT	103 (9.6)	501 (227)
SU127-2	2-7/8 (73)	4-1/2 (114)	5-13/16 (148)	3NPT	89-1/2(2273)	12 (305)	69-1/2(1765)	12-3/4(324)	7-3/4 (197)	16-5/8 (422)	10-7/8 (276)	8FLG	2NPT	121 (11.2)	570 (259)
SU128-2	2-7/8 (73)	4-1/2 (114)	5-13/16 (148)	3NPT	101-1/2 (2578)	12 (305)	81-1/2(2070)	12-3/4(324)	7-3/4 (197)	16-5/8 (422)	10-7/8 (276)	8FLG	2NPT	139 (12.9)	639 (290)
SU129-2	2-7/8 (73)	4-1/2 (114)	5-13/16 (148)	3NPT	113-1/2 (2883)	12 (305)	93-1/2(2375)	12-3/4(324)	7-3/4 (197)	16-5/8 (422)	10-7/8 (276)	8FLG	2.5NPT	156 (14.5)	107 (49)
SU1210-2	2-7/8 (73)	4-1/2 (114)	5-13/16 (148)	3NPT	125-1/2 (3188)	12 (305)	105-1/2 (2680)	12-3/4(324)	7-3/4 (197)	16-5/8 (422)	10-7/8 (276)	8FLG	2.5NPT	174 (16.2)	777 (352)

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
6 Pass					
150 psi	300 psi	150 psi	300 psi	375 °F	300 °F
2 & 4 Pass					
125 psi	250 psi	150 psi	300 psi	375 °F	300 °F
2 Pass Head (Flanged Connections) Cast 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

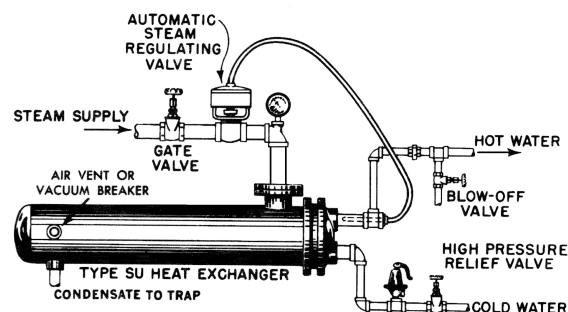
PART	STANDARD CAST IRON UNIT	BRASS UNIT
	2, 4 & 6 Pass	2 & 4 Pass
Head	Cast Iron	Cast Brass
Shell	Steel	Steel
Tube Sheets	Steel	Royal Naval Brass
Tubing	Cooper 3/4" O.D.	Cooper 3/4" O.D.
Tube Supports	Steel	Steel
Nuts & Bolts	Steel	Steel

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.

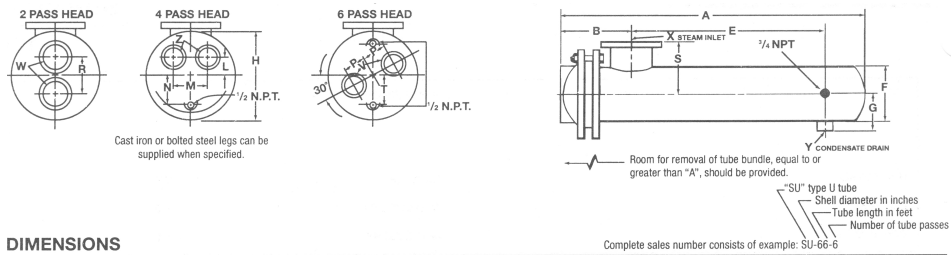


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8200 N. Austin Avenue
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xylem
Let's Solve Water

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

C-121.4D



DIMENSIONS

UNIT NUMBER.	DIMENSIONS IN INCHES												HEATING SURFACE	APPROX. SHIPPING WEIGHT
	2 PASS			2 AND 4 PASS										
	B ¹	W	R	A	B	E	F	G	H	S	X	Y		
SU123-2	2-7/8(73)	4NPT	7-3/4(197)	41-1/2(1054)	12(305)	21-1/2(546)	12-3/4(324)	7-3/4(197)	16-5/8(422)	10-7/8(276)	4FLG	1.25NPT	61 (5.7)	294 (133)
SU124-2	2-7/8(73)	4NPT	7-3/4(197)	53-1/2(1359)	12(305)	33-1/2(851)	1275(32385)	7-3/4(197)	16-5/8(422)	10-7/8(276)	6FLG	1.25NPT	83 (7.7)	363 (165)
SU125-2	2-7/8(73)	4NPT	7-3/4(197)	66-1/2(1689)	12(305)	45-1/2(1156)	12-3/4(324)	7-3/4(197)	16-5/8(422)	10-7/8(276)	6FLG	1.5NPT	104 (9.7)	432 (196)
SU126-2	2-7/8(73)	4NPT	7-3/4(197)	77-1/2(1968)	12(305)	57-1/2(1460)	12-3/4(324)	7-3/4(197)	16-5/8(422)	10-7/8(276)	6FLG	2NPT	126 (11.7)	501 (227)
SU127-2	2-7/8(73)	4NPT	7-3/4(197)	89-1/2(2273)	12(305)	69-1/2(1765)	12-3/4(324)	7-3/4(197)	16-5/8(422)	10-7/8(276)	8FLG	2NPT	147 (13.7)	570 (259)
SU128-2	2-7/8(73)	4NPT	7-3/4(197)	101-1/2(2578)	12(305)	81-1/2(2070)	12-3/4(324)	7-3/4(197)	16-5/8(422)	10-7/8(276)	8FLG	2NPT	169 (15.7)	639 (290)
SU129-2	2-7/8(73)	4NPT	7-3/4(197)	113-1/2(2883)	12(305)	93-1/2(2375)	12-3/4(324)	7-3/4(197)	16-5/8(422)	10-7/8(276)	8FLG	2.5NPT	191 (17.7)	107 (49)
SU1210-2	2-7/8(73)	4NPT	7-3/4(197)	125-1/2(3188)	12(305)	105-1/2(2680)	12-3/4(324)	7-3/4(197)	16-5/8(422)	10-7/8(276)	8FLG	2.5NPT	212 (19.7)	777 (352)

UNIT NUMBER.	DIMENSIONS IN INCHES														HEATING SURFACE	APPROX. SHIPPING WEIGHT
	4 PASS					2 AND 4 PASS										
	B ¹	L	M	N	Z	A	B	E	F	G	H	S	X	Y		
SU123-4	2-7/8 (73)	2-5/8 (67)	5-7/8 (149)	5-7/8 (149)	4NPT	41-1/2(1054)	12 (305)	21-1/2(546)	12-3/4(324)	7-3/4 (197)	16-5/8 (422)	10-7/8 (276)	4FLG	1.25NPT	58 (5.4)	294 (133)
SU124-4	2-7/8 (73)	2-5/8 (67)	5-7/8 (149)	5-7/8 (149)	4NPT	53-1/2(1359)	12 (305)	33-1/2(851)	1275 (32385)	7-3/4 (197)	16-5/8 (422)	10-7/8 (276)	6FLG	1.25NPT	78 (7.2)	363 (165)
SU125-4	2-7/8 (73)	2-5/8 (67)	5-7/8 (149)	5-7/8 (149)	4NPT	66-1/2(1689)	12 (305)	45-1/2(1156)	12-3/4(324)	7-3/4 (197)	16-5/8 (422)	10-7/8 (276)	6FLG	1.5NPT	98 (9.1)	432 (196)
SU126-4	2-7/8 (73)	2-5/8 (67)	5-7/8 (149)	5-7/8 (149)	4NPT	77-1/2(1968)	12 (305)	57-1/2(1460)	12-3/4(324)	7-3/4 (197)	16-5/8 (422)	10-7/8 (276)	6FLG	2NPT	119 (11.1)	501 (227)
SU127-4	2-7/8 (73)	2-5/8 (67)	5-7/8 (149)	5-7/8 (149)	4NPT	89-1/2(2273)	12 (305)	69-1/2(1765)	12-3/4(324)	7-3/4 (197)	16-5/8 (422)	10-7/8 (276)	8FLG	2NPT	139 (12.9)	570 (259)
SU128-4	2-7/8 (73)	2-5/8 (67)	5-7/8 (149)	5-7/8 (149)	4NPT	101-1/2 (2578)	12 (305)	81-1/2(2070)	12-3/4(324)	7-3/4 (197)	16-5/8 (422)	10-7/8 (276)	8FLG	2NPT	160 (14.9)	639 (290)
SU129-4	2-7/8 (73)	2-5/8 (67)	5-7/8 (149)	5-7/8 (149)	4NPT	113-1/2 (2883)	12 (305)	93-1/2(2375)	12-3/4(324)	7-3/4 (197)	16-5/8 (422)	10-7/8 (276)	8FLG	2.5NPT	180 (16.7)	107 (49)
SU1210-4	2-7/8 (73)	2-5/8 (67)	5-7/8 (149)	5-7/8 (149)	4NPT	125-1/2 (3188)	12 (305)	105-1/2 (2680)	12-3/4(324)	7-3/4 (197)	16-5/8 (422)	10-7/8 (276)	8FLG	2.5NPT	200 (18.6)	777 (352)

UNIT NUMBER.	DIMENSIONS IN INCHES													HEATING SURFACE	APPROX. SHIPPING WEIGHT
	6 PASS														
	B ¹	P	T	V	A	B	E	F	G	H	S	X	Y		
SU123-2	2-7/8 (73)	4-1/2 (114)	5-13/16 (148)	3NPT	41-1/2(1054)	12 (305)	21-1/2(546)	12-3/4(324)	7-3/4 (197)	16-5/8 (422)	10-7/8 (276)	4FLG	1.25NPT	50 (4.6)	294 (133)
SU124-2	2-7/8 (73)	4-1/2 (114)	5-13/16 (148)	3NPT	53-1/2(1359)	12 (305)	33-1/2(851)	1275 (32385)	7-3/4 (197)	16-5/8 (422)	10-7/8 (276)	6FLG	1.25NPT	68 (6.3)	363 (165)
SU125-2	2-7/8 (73)	4-1/2 (114)	5-13/16 (148)	3NPT	66-1/2(1689)	12 (305)	45-1/2(1156)	12-3/4(324)	7-3/4 (197)	16-5/8 (422)	10-7/8 (276)	6FLG	1.5NPT	85 (7.9)	432 (196)
SU126-2	2-7/8 (73)	4-1/2 (114)	5-13/16 (148)	3NPT	77-1/2(1968)	12 (305)	57-1/2(1460)	12-3/4(324)	7-3/4 (197)	16-5/8 (422)	10-7/8 (276)	6FLG	2NPT	103 (9.6)	501 (227)
SU127-2	2-7/8 (73)	4-1/2 (114)	5-13/16 (148)	3NPT	89-1/2(2273)	12 (305)	69-1/2(1765)	12-3/4(324)	7-3/4 (197)	16-5/8 (422)	10-7/8 (276)	8FLG	2NPT	121 (11.2)	570 (259)
SU128-2	2-7/8 (73)	4-1/2 (114)	5-13/16 (148)	3NPT	101-1/2 (2578)	12 (305)	81-1/2(2070)	12-3/4(324)	7-3/4 (197)	16-5/8 (422)	10-7/8 (276)	8FLG	2NPT	139 (12.9)	639 (290)
SU129-2	2-7/8 (73)	4-1/2 (114)	5-13/16 (148)	3NPT	113-1/2 (2883)	12 (305)	93-1/2(2375)	12-3/4(324)	7-3/4 (197)	16-5/8 (422)	10-7/8 (276)	8FLG	2.5NPT	156 (14.5)	107 (49)
SU1210-2	2-7/8 (73)	4-1/2 (114)	5-13/16 (148)	3NPT	125-1/2 (3188)	12 (305)	105-1/2 (2680)	12-3/4(324)	7-3/4 (197)	16-5/8 (422)	10-7/8 (276)	8FLG	2.5NPT	174 (16.2)	777 (352)

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
6 Pass					
150 psi	300 psi	150 psi	300 psi	375 °F	300 °F
2 & 4 Pass					
125 psi	250 psi	150 psi	300 psi	375 °F	300 °F
2 Pass Head (Flanged Connections) Cast 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	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

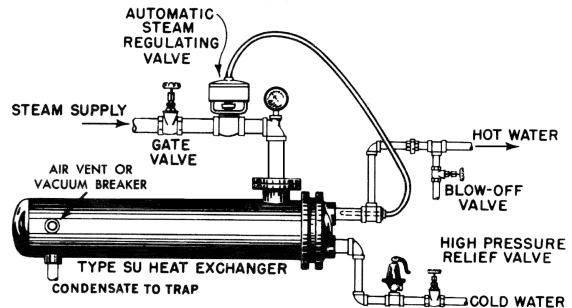
Steam Hammer can cause serious damage to the tubes of any Heat Exchanger. A careful consideration of the following points before an installation is made can prevent costly repairs which may be caused by steam hammer.

(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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