

VA ANN ARBOR 8TH FLOOR MENTAL HEALTH

- G. Steam Trap: Each type of trap shall be the product of a single manufacturer. Provide trap sets at all low points and at 61 m (200 feet) intervals on the horizontal main lines.
1. Floats and linkages shall provide sufficient force to open trap valve over full operating pressure range available to the system. Unless otherwise indicated on the drawings, traps shall be sized for capacities indicated at minimum pressure drop as follows:
 - a. For equipment with modulating control valve: 1.7 kPa (1/4 psig), based on a condensate leg of 300 mm (12 inches) at the trap inlet and gravity flow to the receiver.
 - b. For main line drip trap sets and other trap sets at steam pressure: Up to 70 percent of design differential pressure. Condensate may be lifted to the return line.

Will cast iron traps be acceptable?

Cast iron traps may be used.

2. Trap bodies: Steel, constructed to permit ease of removal and servicing working parts without disturbing connecting piping. The use of 4 bolt raised face flange is required. The use of unions is unacceptable for steam trap maintenance. For systems without relief valve traps shall be rated for the pressure upstream of the PRV supplying the system.

STEAM TO WATER HEAT EXCHANGER SCHEDULE

WATER CONDITIONS							STEAM PRESSURE				CONTROL VALVE		TRAP		
FLOW		EWT		LWT		WPD		ENT CONTROL VALVE		ENT HEAT...		CONTROL VALVE		TRAP #	CAPAC
GPM	[Us]	°F	[°C]	°F	[°C]	FT	[kPa]	PSIG	[kPa]	PSIG	[kPa]	LBS/HR	[kg/HR]		LBS/HR
40	[3]	140	[60]	160	[71]	1.6	[5]	15	[100]	15	[100]	423	[190]	1W-ST-2	470

BUILDING · STEAM TRAP SCHEDULE

MARK	LOCATION	SYSTEM AND/OR...	CAPACITY AT MIN DIFF PRESS		MIN DIFF PRESS		MIN INLET PRESS		TRAP TYPE	TRAP
			LBS/HR	[kg/HR]	PSI	[kPa]	PSI	[kPa]		IN
1W-ST-1	SUB BASEMENT	PRV	435	[200]	65	[450]	65	[450]	F&T	.75
1W-ST-2	SUB BASEMENT	PRV	220	[100]	65	[450]	65	[450]	F&T	.75
1W-ST-3	SUB BASEMENT	HX	652	[300]	15	[100]	15	[100]	F&T	.75

1. Based on the HX load of 470#/hr the trap should be sized with a 2:1 safety factor @ 1/2psig, which equates to a trap capacity of 940#/hr at 1/2psig and a 1-1/2" F&T trap. Please advise? Use 1-1/2" trap
2. For the PRV's drip traps, can IB traps be provided?

Inverted bucket traps may be used on high pressure side, but may not be used where loads vary.