



VFT Series Flash Tanks

Vertical ASME Code Section VIII Design and Construction

Model	VFT
Sizes	6,8,12,14"
Connections	
Body Material	Carbon Steel
PMO Max. Operating Pressure	150 PSIG
TMO Max. Operating Temperature	366°F
PMA Max. Allowable Pressure	150 PSIG @ 400F

Note: 250 PSIG unit available. Consult factory.
Larger Sizes Available Contact Thermaflo

TYPICAL APPLICATION

The VFT flash recovery vessels are installed in condensate return systems in order to capture and utilize the flash steam coming off of the hot condensate. This flash steam is typically piped away for use on low pressure steam processes.

HOW TO SIZE/ORDER

Use **Table 1** to determine amount of Flash Steam that will be generated by the hot pressurized condensate. The percentage of Flash Steam formed is found where Condensate Pressure and Flash Tank Pressure intersect.

Multiply your Condensate Load by the decimal equivalent of the Flash Steam Percent to determine the amount of Flash Steam in lbs/hr. Then, use **Figure 1** to determine Flash Tank Size required:

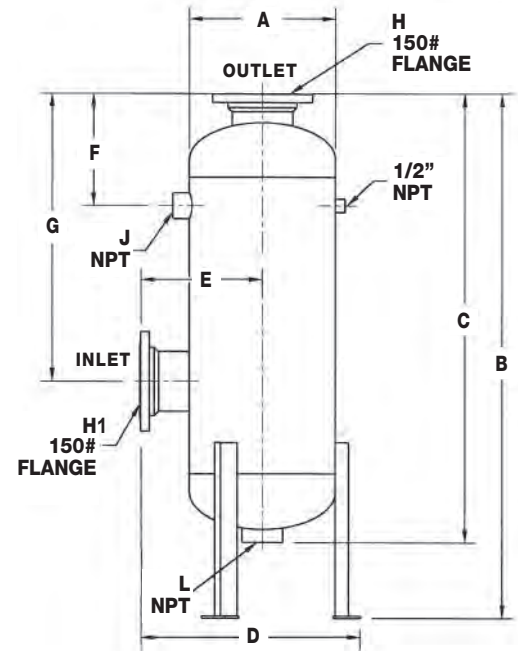
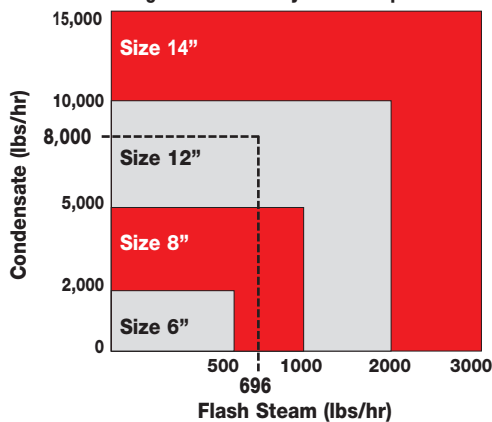
Example: Condensate Pressure: **100 PSIG**
Flash Tank Pressure: **20 PSIG**
Condensate Load: **8,000 lbs/hr**
% Flash Steam: **8.7%** from chart
Decimal Equivalent % Flash Steam = **.087**

$$.087 \times 8000 = 696 \text{ lbs/hr of flash steam}$$

Therefore Choose: **12" FLASH TANK**

Always check vent pipe sizing and limit flash steam flow to 1000 to 1500' min

Figure 1 – Recovery Vessel Capacities



Note: All Thermaflo flash recovery vessels are supplied with ASME Section VIII Code Stamp.

Table 1 – PERCENT (%) FLASH STEAM

Produced when condensate is discharged to atmosphere (0 PSIG) or into a flash tank controlled at various pressures

Condensate Pressure (PSIG)	Flash Tank Pressure (PSIG)								
	0	5	10	20	30	40	60	80	100
5	1.6	0.0							
10	2.9	1.3	0.0						
15	3.9	2.4	1.1						
20	4.9	3.3	2.1	0.0					
30	6.5	5.0	3.7	1.7	0.0				
40	7.8	6.3	5.1	3.0	1.4	0.0			
60	10.0	8.5	7.3	5.3	3.7	2.3	0.0		
80	11.8	10.3	9.1	7.1	5.5	4.2	1.9	0.0	
100	13.3	11.8	10.6	8.7	7.1	5.8	3.5	1.6	0.0
125	14.9	13.5	12.3	10.4	8.8	7.5	5.3	3.4	1.8
150	16.3	14.9	13.7	11.8	10.3	9.0	6.8	4.9	3.3
200	18.7	17.3	16.2	14.3	12.8	11.5	9.4	7.6	6.0
250	20.8	19.4	18.2	16.4	14.9	13.7	11.5	9.8	8.2
300	22.5	21.2	20.0	18.2	16.8	15.5	13.4	11.7	10.2
350	24.1	22.8	21.7	19.9	18.4	17.2	15.1	13.4	11.9
400	25.6	24.2	23.1	21.4	19.9	18.7	16.7	15.0	13.5

DIMENSIONS & WEIGHTS – inches/pounds

Size	A	B	C	D	E	F	G	H/H1	J	L	Weight (lbs)
6"	6 ⁵ / ₈	51	38 ¹ / ₂	12	8	10	25 ¹ / ₂	2/2	3/4	1 ¹ / ₂	75
8"	8 ⁵ / ₈	52	39 ³ / ₄	13	8 ¹ / ₂	12	25 ⁵ / ₈	3/2	3/4	2	150
12"	12 ³ / ₄	53	41 ¹ / ₄	21	11 ³ / ₄	13	26	4/3	1 ¹ / ₂	2	165
14"	16	62	50	24	13 ³ / ₈	14	32	6/3	2	2	185

2" and under connections are NPT, 2.5" and above are 150lb ANSI Flanged Vent sizes "H" are the standard. However if venting to atmosphere the vent size should be designed at 1000 to 1500' per min. Consult Thermaflo at 704-940-1228 Newberry, South Carolina 29108.

Made in USA www.thermafloengineering.com