



VFT Series Flash Tanks

Vertical ASME Code Section VIII Design and Construction

| | |
|--------------------------------|------------------|
| Model | VFT |
| Sizes | 6", 8", 12", 16" |
| 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

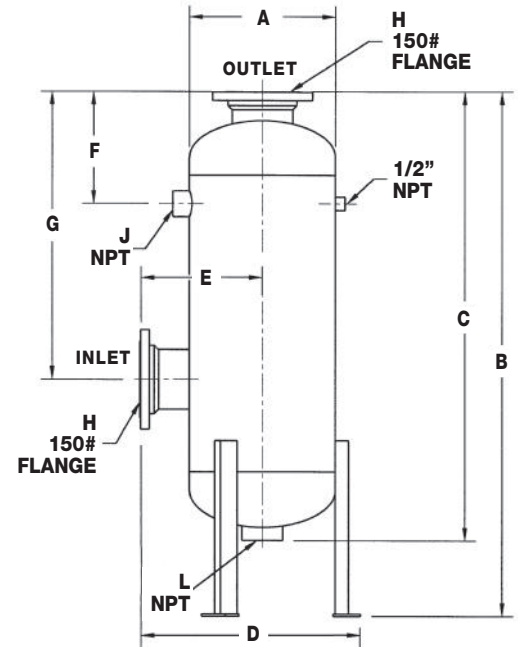
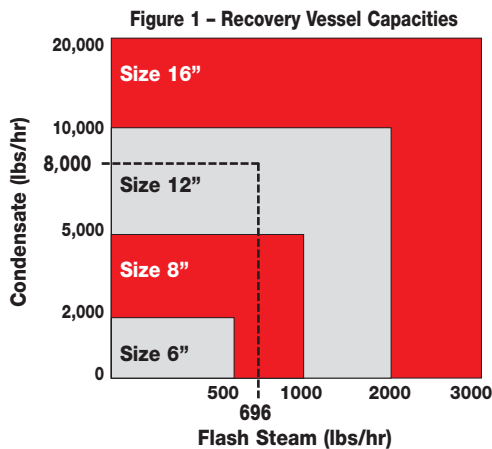
Use **Table 1** to determine amount of Flash Steam that will be generated by the hot pressurized condensate. The percentage of Flash Steam formed is found where Condensate Pressure and Flash Tank Pressure intersect.

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**



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 | J | L | Weight (lbs) |
|------|--------------------------------|----|--------------------------------|----|--------------------------------|----|--------------------------------|-------|-------------------------------|-------------------------------|--------------|
| 6" | 6 ⁵ / ₈ | 51 | 38 ¹ / ₂ | 12 | 8 | 10 | 25 ¹ / ₂ | 2 NPT | 3/4 | 1 ¹ / ₂ | 75 |
| 8" | 8 ⁵ / ₈ | 52 | 39 ³ / ₄ | 13 | 8 ¹ / ₂ | 12 | 25 ⁵ / ₈ | 3 | 3/4 | 2 | 150 |
| 12" | 12 ³ / ₄ | 53 | 41 ¹ / ₄ | 21 | 11 ³ / ₄ | 13 | 26 | 6 | 1 ¹ / ₂ | 2 | 165 |
| 16" | 16 | 62 | 50 | 24 | 13 ³ / ₈ | 14 | 32 | 6 | 2 | 2 | 215 |