

# SPECIALTY PRODUCTS

## WFLV Series

### Flash Recovery Vessel

Model	<b>WFLV</b>
Sizes	<b>6", 8", 12", 16"</b>
Connections	<b>150# RF</b>
Body Material	<b>Carbon Steel</b>
PMO Max. Operating Pressure	<b>150 PSIG</b>
TMO Max. Operating Temperature	<b>366°F</b>
PMA Max. Allowable Pressure	<b>150 PSIG @ 562°F</b>

Note: 250 PSIG unit available. Consult factory.

### TYPICAL APPLICATION

The WFLV 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

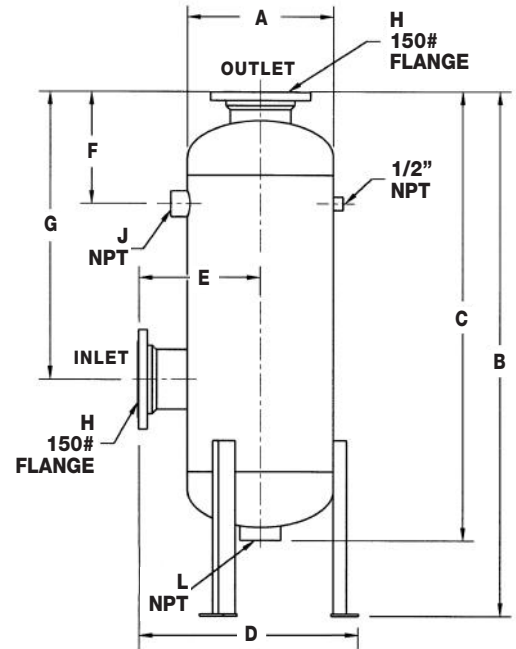
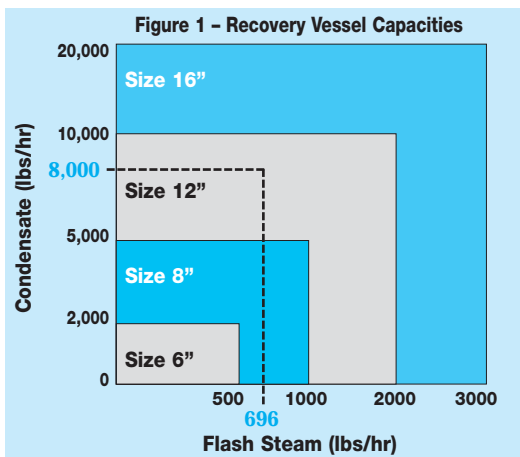
Use **Table 1** to determine amount of Flash Steam that will be generated by the hot pressurized condensate. The percentage of Flash Steam formed is found where Condensate Pressure and Flash Tank Pressure intersect.

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 x 8000 = 696 lbs/hr of flash steam**

Therefore Choose: **12" FLASH TANK**



Note: All Watson McDaniel 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 <sup>5</sup> / <sub>8</sub>	47	38 <sup>1</sup> / <sub>2</sub>	12	8	9	25 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>2</sub>	3/4	1 <sup>1</sup> / <sub>2</sub>	75
8"	8 <sup>5</sup> / <sub>8</sub>	48	39 <sup>3</sup> / <sub>4</sub>	13	8 <sup>1</sup> / <sub>2</sub>	9 <sup>1</sup> / <sub>2</sub>	25 <sup>5</sup> / <sub>8</sub>	4	3/4	2	150
12"	12 <sup>3</sup> / <sub>4</sub>	49 <sup>1</sup> / <sub>2</sub>	41 <sup>1</sup> / <sub>4</sub>	21	11 <sup>3</sup> / <sub>4</sub>	11 <sup>1</sup> / <sub>2</sub>	26	5	1 <sup>1</sup> / <sub>2</sub>	3	165
16"	16	58	50	24	13 <sup>3</sup> / <sub>8</sub>	12 <sup>1</sup> / <sub>2</sub>	32	6	2	3	215