

Description:

Condensate released from process at high pressure has a tendency to vaporize due to pressure drop. This possibility leads to water hammer in condensate lines leading to a dirty and high-loss condensate network. Flash Vessels are recommended for collecting high pressure condensate before it is returned to boiler feed water circuit.

Available sizes and Pipe Connections :

Size	Condensate Inlet	Condensate Outlet	Flash Steam Outlet
6	80 NB FLG TAB 'F'	50 NB FLG TAB 'F'	80 NB FLG TAB 'F'
8	80 NB FLG TAB 'F'	50 NB FLG TAB 'F'	80 NB FLG TAB 'F'
12	80 NB FLG TAB 'F'	50 NB FLG TAB 'F'	80 NB FLG TAB 'F'
16	150 NB FLG TAB 'F'	50 NB FLG TAB 'F'	125 NB FLG TAB 'F'
18	150 NB FLG TAB 'F'	50 NB FLG TAB 'F'	125 NB FLG TAB 'F'

Drain : Provided at the bottom 1" BSP

Limiting Conditions

Maximum Working Pressure = 10.5 kg/cm²
 Maximum Working Temperature = 180°C
 Cold hydraulic test pressure = 21.0 kg/cm²

Installations

The flash vessel should be mounted with the flash steam outlet at the top

Material

No.	Description	Material	Standard
1.	Main Shell	Carbon Steel	IS 2062

Dimensions : (approximate) in millimetres

Sr.	SizeFV	A	B	C	D	E	H
1	6"	640	244	624	286	408	1378
2	8"	550	211	591	300	471	1396
3	12"	550	131	526	301	568	1420
4	16"	730	170	710	301	652	1721
5	18"	830	130	760	301	703	1897

Features of UKL Flash Vessels

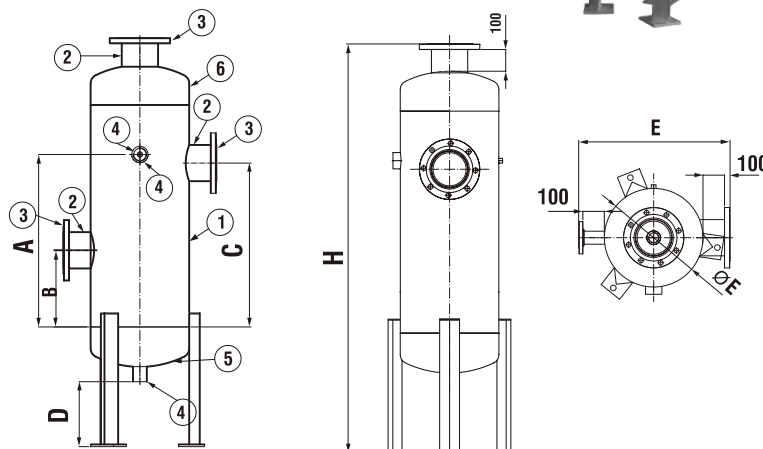
UKL Flash Vessel is an excellent tool for energy conservation. Under different operating parameters UKL Flash Vessel pays back for its cost in less than 45 days.

High pressure condensate will release as much as 10-15% of LP steam that can be put back into process loop for substantial monetary gains.

The UKL Flash Vessel is generously sized to ensure low flow velocities that help easy separation of released steam from the condensate.

A safety valve provided on the flash vessel will ensure safety of the equipment where this LP steam is proposed to be used.

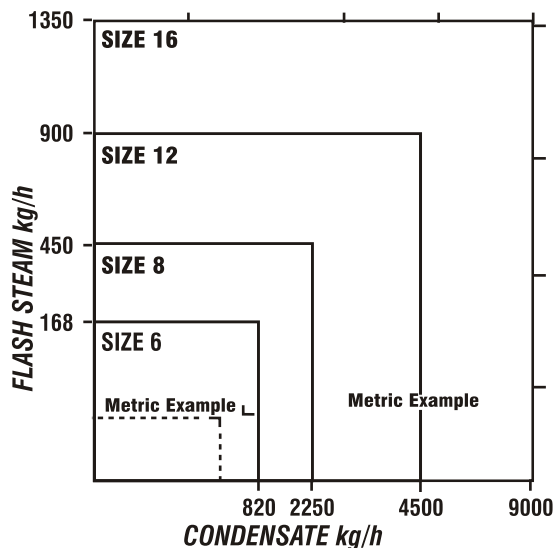
A check valve if fitted at the outlet of flash steam will ensure preventing any back pressure that may cause in the event HP condensate is not generated in the process.



Bill of Material UKL Flash Vessel Assembly

Sr.	Description	Type	MOC	Qty	Specification
1	Flash Vessel	Part	Carbon Steel	1	Pipe as per IS 1239/3589
2.	Flange Pipe	Part	Carbon Steel	1	Pipe as per IS 1239
3.	Flange	Part	IS 2062 B	3	SORF Flange Class 150
4.	Socket With Nipple	Part	A234 WPB / A 105	3	BSP Half Coupling as per ASME 16.11 Heavy Port
5	Torispherical Bottom End	Part	A515 Gr. 70	1	--
6	Torispherical Top End	Part	A515 Gr.70	1	--

Flash Vessel	Safety Valve	Float Trap	Strainer
Size 6 & 8	25NB	50 NB	50 NB
Size 12	25NB	50 NB	50 NB
Size 16 & 18	25NB	50 NB	50 NB



How to size .

The graph shows the proportion by weight of flash steam formed from condensate with various pressure drops. Underneath it is a sizing chart.

1. From the graph find the weight of flash per unit weight of condensate. Multiply this by the maximum condensation rate to get the maximum weight of flash steam expected from the Flash Vessel.
2. Select the appropriate size of Flash Vessel from the chart by finding the smallest area within which lie both the condensate rate and the flash steam weight.

Where the condensate is contaminated by solids - as with flash recovery from boiler slowdown - select the next size larger

Sizing Example: A Heat Exchanger working at 7 bar condenses 1000 kg/h of steam. Flash steam is to be used at 1 bar in sir- heater battery. Which size of Flash Vessel is suitable?

From the graph we see that when condensate at 7 bar is flashed to 1 bar about 10 % of flash steam is formed: 0.1 kg per kg of condensate. So total flash steam is $1000 \times 0.1 = 100$ kg/h Now look at the chart. The condensate load of 1000 kg/h meets the flash steam load of 100 kg/h in the Size 8 area, so this is the size to use.

Available accessories

Pressure gauge (with syphon and cock)

A 3/8 " screwed boss is provided for pressure gauge

Safety Valve

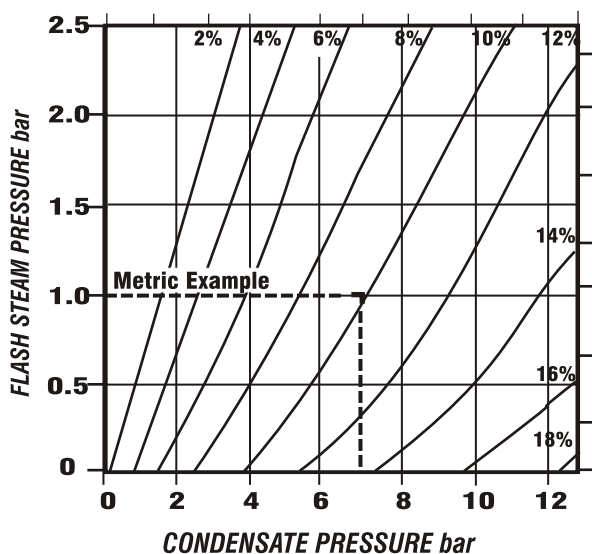
For Flash Vessel Size 6- 3/4" Size 8-1" Size 12 & 16 & 18-2 "

Steam Float Trap

A suitable size of Float Trap to drain through outlet with a suitable size of strainer before the Float Trap

How to Order

Example: Size 12 UKL Flash Vessel



FCD Products: Cast / Forged Steel Piston Valves, Strainers - "Y" Type, High Pressure Gate/Globe Valves, Condensate Lifting Pump Steam Traps-Thermodynamic, Thermostatic & Ball Float Traps, Pressure Reducing Station, Condensate Recovery Products Level Gauges - Reflex, Transparent & Bicolor., Flash Vessel, Hot Water Generation System, Bellow Seal Valves, ITVS, Moisture Separator

FSD Products: Compressed Asbestos / Non Asbestos Fibre Sheeting / Cut Gaskets, Spiral Wound Gaskets.

In view of technical progress designs and dimensions are subject to change without notice.



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