



# Flash Vessels RV

## DESCRIPTION

The flash vessel is the main component in any flash recovery system. It can be used in all steam plants where high pressure condensate is reduced to a lower pressure, so that flash steam is formed by revaporization. This steam can be used in low pressure process or heating equipments.

Connections are flanged or screwed on request.

## MAIN FEATURES

Several possibilities of installation and special sizes and types (available on request).

**OPTIONS:** Complete stainless steel construction.  
Installation supports on body (without supporting feet).

**USE:** High pressure condensate.  
Boiler blowdown heat recovery systems.

## AVAILABLE

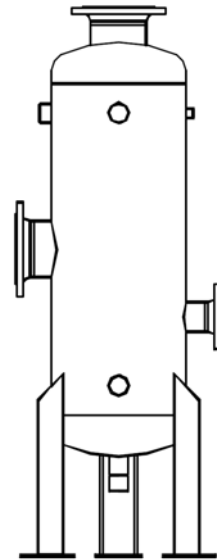
**MODELS:** RV/S - carbon steel body.  
RV/SS - stainless steel body.

**SIZES:** RV06, RV08, RV12, RV16 and RV18

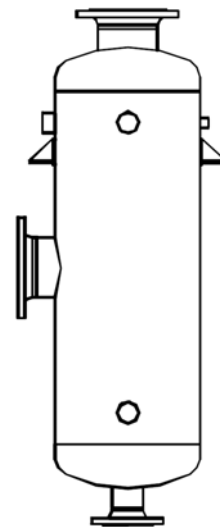
**CONNECTIONS:** Flanged DIN. Special flanges upon request.

**INSTALLATION:** Vertical installation. Horizontal condensate inlet and outlet or alternative horizontal inlet and vertical condensate outlet.

How to order: i.e. FV 08A /S flash vessel.



Type I (in line conn.)



Type A (angle conn.)

BODY LIMITING CONDITIONS		
RATING	PRESS. bar	TEMP. °C
DIN PN16	16	120
	14	198
ANSI CL.150	13	250
	16	120
	14	198

## SIZING:

It is necessary to know the pressure on the steam traps or boiler pressure in the case of blowdown heat recovery, the flash steam pressure (desired or existing) and the condensate or blowdown flowrate.

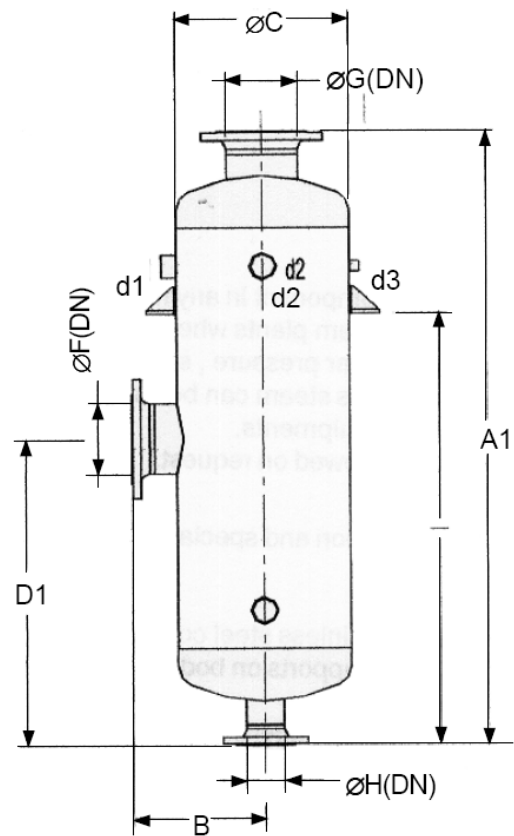
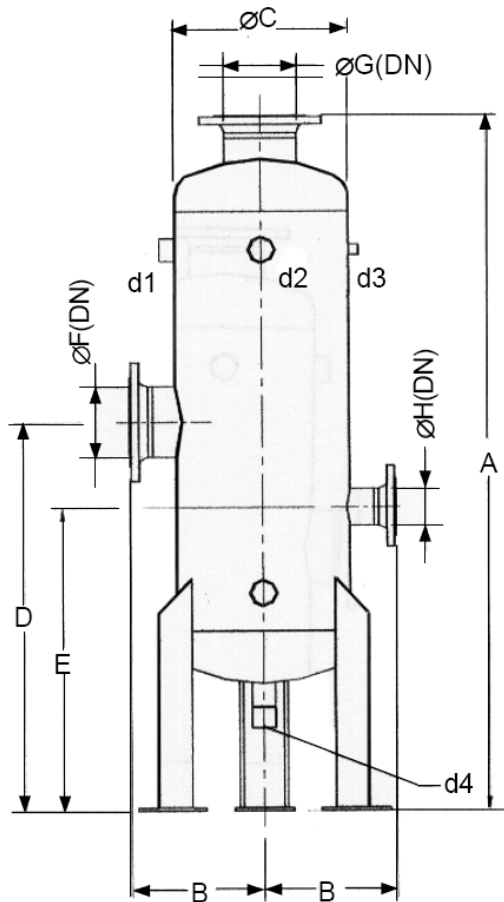
Auxiliary equipment is recommended such as steam trap, safety valve, pressure gauge, pressure reducing valve, etc.

GROUP 2 GASES CATEGORIES		
RATING	SIZES	Category
DIN PN 16	RV 06	2
	RV 08	2
	RV 12	3
	RV 16	3
	RV 18	3

## CE Marking :

This product has been designed for use on water and steam which are in Group 2 of the PED-European Pressure Equipment Directive 97/23/EC and it complies with those requirements.

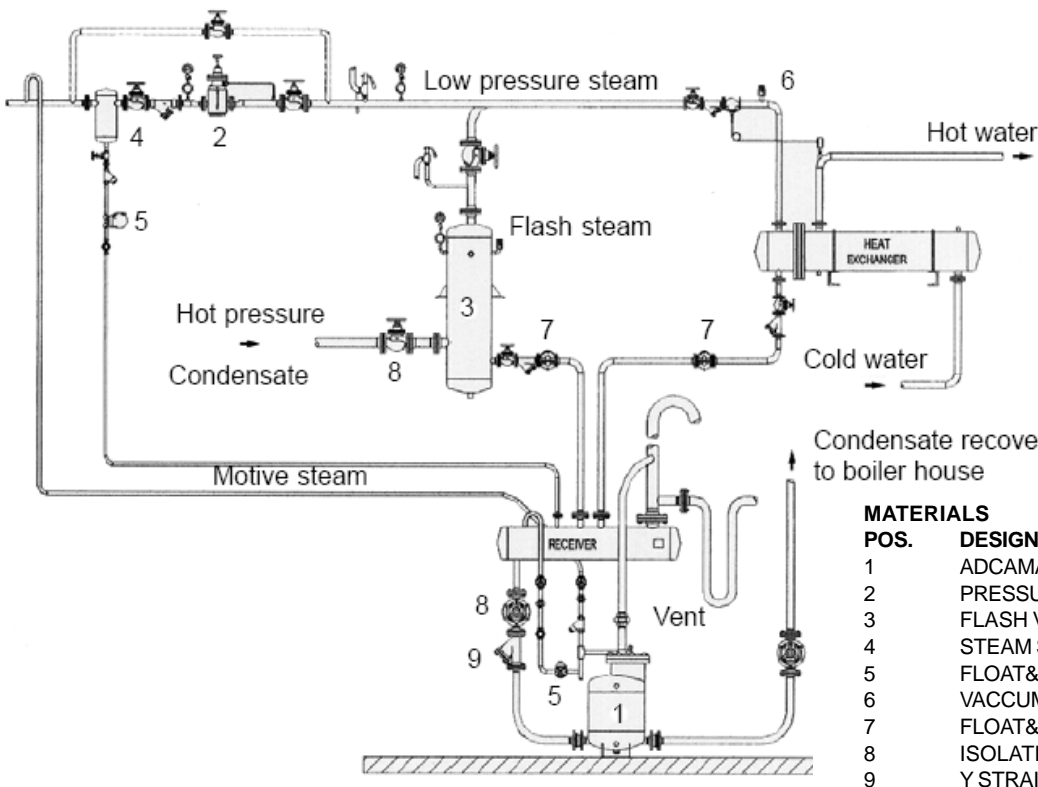
The product carries the CE mark when falling in category 1 and above.



**DIMENSIONS DIN FLANGES (mm)**

TYPE	A	A1	B	C	D	D1	E	F	G	H	I	I1	d1	d2	d3	d4	WGT/kg
RV06	1400	1200	185	170	800	600	635	50	50	50	853	-	3/4"	2"	1/2"	1"	80
RV08	1500	1300	210	220	810	610	645	80	80	50	908	-	1"	2"	1/2"	1"	125
RV12	1540	1340	265	325	830	630	660	100	100	50	908	-	1-1/2"	2"	1/2"	1"	195
RV16	1660	1460	310	410	930	730	725	150	150	80	990	-	1-1/2"	2"	1/2"	1-1/2"	290
RV18	1610	1410	330	460	965	765	755	150	150	80	-	485	2"	2"	1/2"	1-1/2"	385

**Note: Dimensions subject to change without notice. Consult factory for certified dimensions. Other sizes can be supplied on request.**



**Typical Installation**

**MATERIALS**

POS.	DESIGNATION	MODEL
1	ADCAMAT PUMP	POP-S
2	PRESSURE REDUCING VALVE	PRV 37
3	FLASH VESSEL	RV
4	STEAM SEPARATOR	S 25
5	FLOAT&THERMOST.STEAM TRAP	FLT 17
6	VACCUM BREAKER	VB 21
7	FLOAT&THERMOST.STEAM TRAP	FLT 16
8	ISOLATING VALVE	—
9	Y STRAINER	IS 16

## INSTALLATION AND MAINTENANCE INSTRUCTIONS RV FLASH VESSELS

### GENERAL

1.The flash vessel is the main component in any flash recovery system.It allows flash steam from high pressure condensate to separate out and thus provide a low pressure steam supply, which has the same heat content as live steam at the same pressure.

#### **Warning !**

-If malfunction of any other equipment or system operation failure may result in a dangerous overpressure ,overtemperature or even vacuum condition, a safety device must be included in the system to prevent such situations .A safety valve socket connection is provided on the vessel.If the selection of safety valve recommend the use of a valve connection bigger than that included on the vessel, then , we recommend it's installation as mentioned on fig.1.

-Do not touch the equipment without appropriate protection during working operation because it may conduct heat if the used fluid is at high temperature.

-Before starting maintenance be sure that the equipment is not pressurized or hot .

-If any of the socket connections is not being used, it must be closed with an appropriate carbon steel plug.

-Do not remove the nameplate attached to the equipment.Serial number and other useful information is stamped on it.

### INSTALLATION

1.Prior to installation check that the product is suitable for the intended application : materials and pressure/temperature ratings.

2.Before to installation remove plastic covers placed on flanges or connection ends. The equipment has an arrow or Inlet/Outlet designations.Be sure that it will be installed on the appropriate flow direction.

3.External stresses that may be induced by the system doing to pipe expansion,etc, can affect this product. The necessary precautions are recommend during the system design and equipment assembly.

4.The flash vessel must be installed on vertical position always with the flash steam outlet on the top. A float and thermostatic steam trap is recommended to automatically discharge the condensate .For detailed system design please consult factory and assembling instructions AS 9.703.

### MAINTENANCE

1.The flash steam doesn't need any specific type of maintenance. Regular inspection may be recommended by local authorities according to specific or general pipe and/or vessels assembly procedures.

Estimated lifetime under satisfactory working conditions : 5 years ; after this period we recommend the wall thickness examination using appropriated inspection equipment.Poor quality water or corrosive fluids will reduce this period.

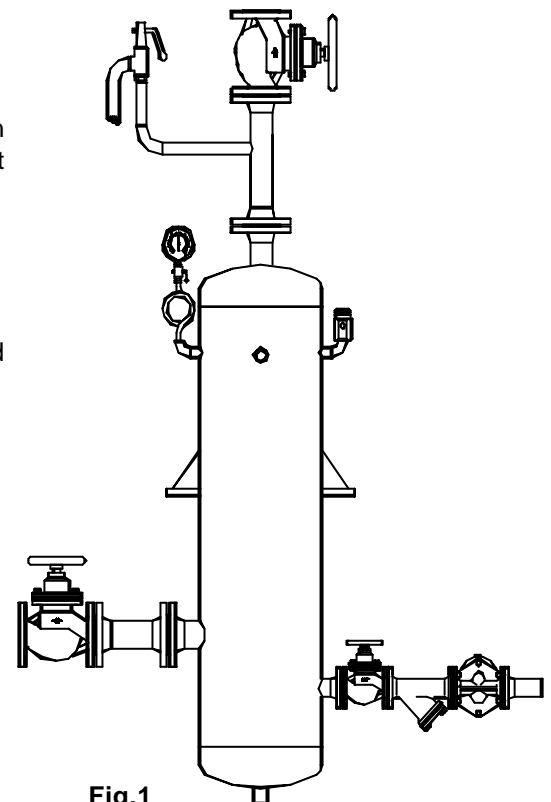


Fig.1

#### BODY LIMITING CONDITIONS

RATING	PRESS. bar	TEMP. °C
DIN PN16	16	120
	14	198
	13	250
ANSI CL.150	16	120
	14	198

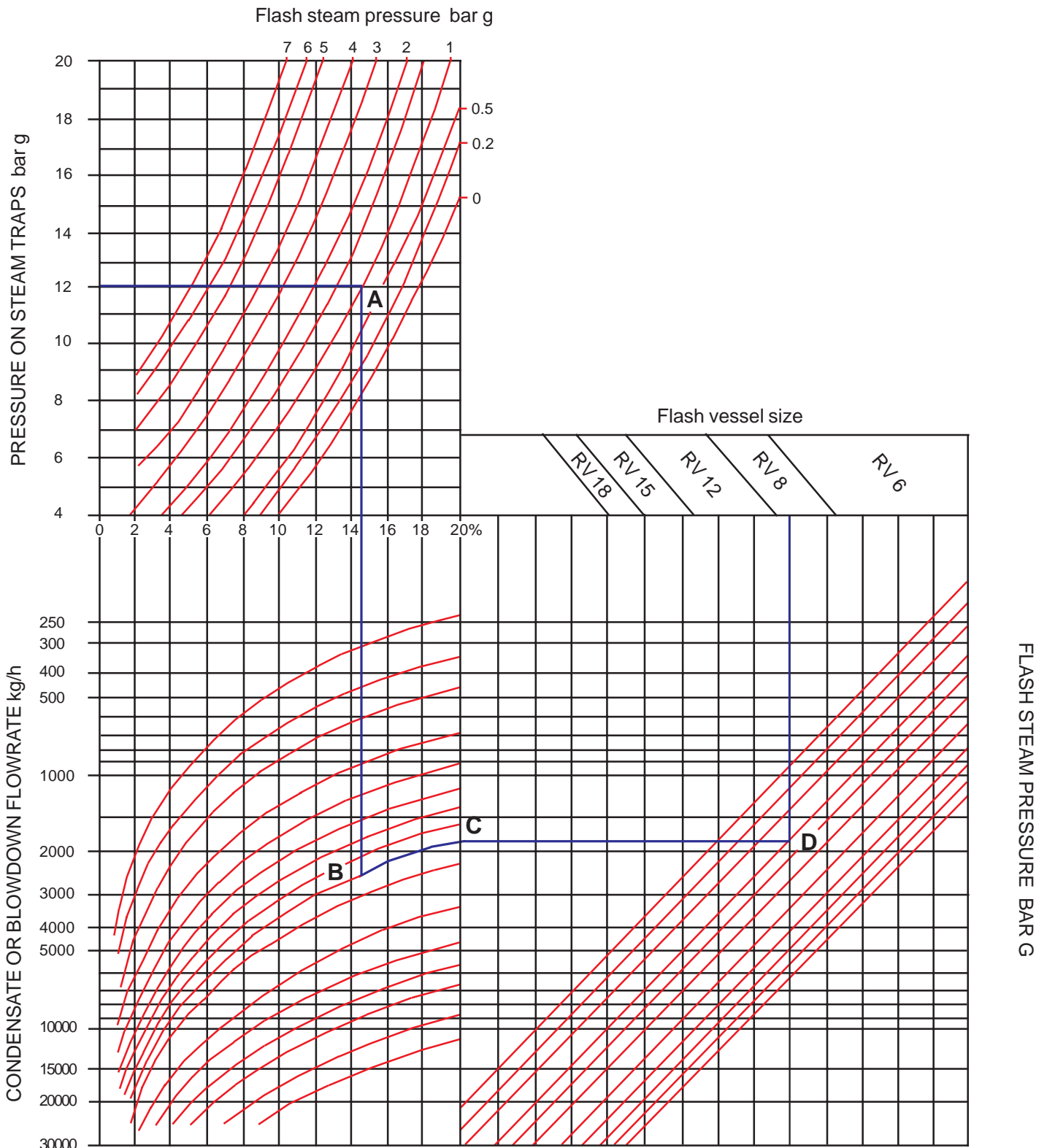
#### GROUP 2 GASES CATEGORIES

RATING	SIZES	Category
DIN PN 16	RV 06	2
	RV 08	2
	RV 12	3
	RV 16	3
	RV 18	3

#### CE Marking :

This product fully complies with the requirements of PED European Pressure Equipment Directive 97/23/CE and has been design for use with water, steam, air and other gases within group 2.

# FLASH VESSEL SIZING CHART



**Example** Determine the size of a flash vessel to suit the following conditions : The pressure onto the steam traps is 12 bar g with total condensate flow of 2500 kg/h. The flash steam from the vessel is to be supplied to equipment using low pressure steam at 1 bar g.

**Method :**

1. From the "Pressure on steam traps" axis at 12 bar g. move horizontally to the 1 bar g flash steam pressure curve at point A.
2. Drop down vertically to the condensate flowrate level of 2500 kg/h, point B, and follow the curved line to point C.
3. Move right from point C to meet. the 1 bar g flash line at point D.
4. Move upwards to the flash vessel size and select the vessel.

For this example, an RV8 flash vessel would be selected.

# FLASH TANK SIZING CHART

Condensate Pressure , psig (Boiler Pressure , psig)

