

# Vented Condensate Pump Package

## with Flash Steam Heat Recovery (Steam Pressure-Powered)

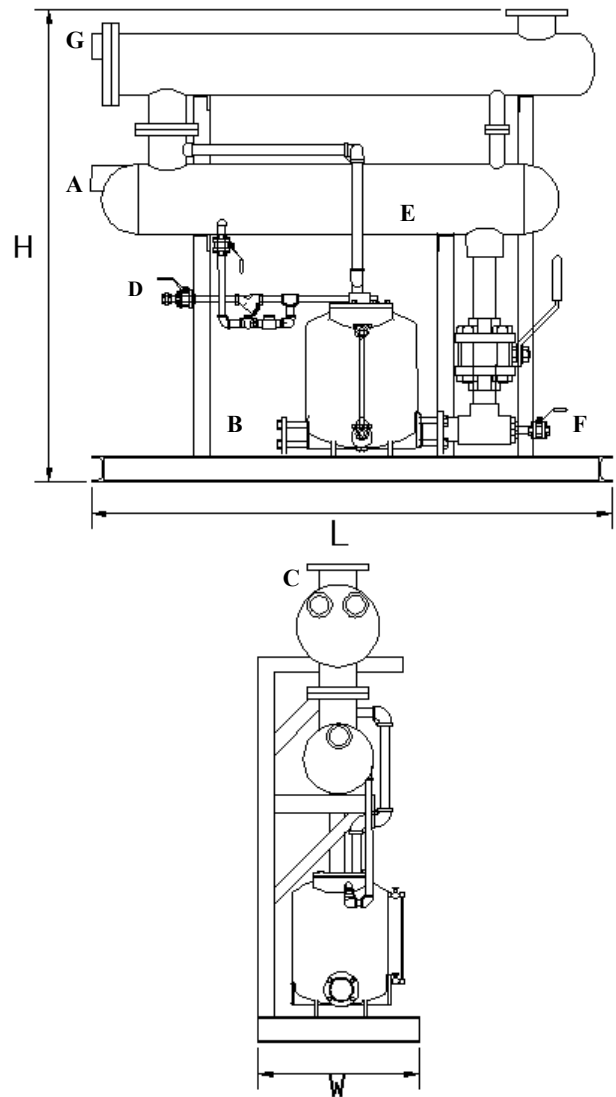
The Model VCP-3C, Vented Condensate Pump Package with Flash Steam Heat Recovery, is a manufactured, ready-to-install system featuring significant energy savings. Flash Steam is released when trapped Condensate and is discharged to atmospheric pressure. The heat available in the Flash Steam is transferred to Make-up Water, or another fluid medium, where heat is required. The result is substantial savings in energy costs at attractive pay-back periods. Also, designed for efficient pumping of condensate, VCP-3C utilizes steam power in lieu of electric motors, eliminating the need for wiring motors, starters, and controls. The steam-powered pump package is capable of operation in flammable environments. Operating by steam pressure versus electric power, reduces pumping costs. The pump employs a float operated snap-acting mechanism with no external seals or packing, which eliminates seal maintenance, which is required on conventional pumps. All internal pump components and mechanism are constructed of Stainless Steel.

### MODEL VCP-3C SAVINGS

System Steam Pressure (psig)	Energy Savings (MM Btu/yr.)	Potential Savings (\$/yr.)	Makeup Water side Flow rate (gpm)
125	17,847.38	<b>89,236.90</b>	53.1
100	15,171.58	<b>75,857.88</b>	45.1
80	13,270.16	<b>66,350.79</b>	39.5
60	10,836.84	<b>54,184.20</b>	32.2
40	8,173.10	<b>40,865.48</b>	24.3
30	6,789.73	<b>33,948.64</b>	20.2
20	4,830.95	<b>24,154.75</b>	14.4
15	3,731.78	<b>18,658.92</b>	11.1
10	2,551.95	<b>12,759.77</b>	7.6
5	789.54	<b>3,947.71</b>	2.3

#### NOTES:

- Savings are based on max. potential savings at max. pump capacity on 8400 hr./yr. of continuous operation
- Steam costs at \$5.00/MM Btu
- Savings assume no back pressure on Vented Flash Steam.
- Water side flow rate based on a 80°F temperature change from 60°F to 140°F.
- Savings based on approx. calculations.



#### Legend:

Approximate Dimensions: 72"H x 66"L x 26"W

- A. Condensate Inlet 3" NPT
- B. Condensate Discharge 2" NPT
- C. Vent 4" FLG
- D. Steam Inlet 1/2" NPT
- E. Receiver Tank 12"x48"
- F. Drain 1/2" NPT
- G. Make-up Water Inlet/Outlet 2" NPT

**EnviroSep** • Fluid & Heat Recovery Systems

A Division of TMT, Inc.

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## CONDITIONS OF OPERATION

Max. Allowable Pressure / Temperature:	125 psig / 450 °F
Discharge rate per cycle:	7.1 gal.
Max. instantaneous discharge rate:	90 gpm
Min. Motive Pressure:	5 psig
Steam Consumption:	3 lbs. per 1000 lbs. of liquid pumped
Compressed Air Consumption:	100 SCF per 1000 lbs. of liquid pumped

## MODEL VCP-3C CAPACITIES

Steam Pressure (psig)	Discharge Head (psig)	Flow Rate (lbs. / hr.)
125	15	14,800
125	40	12,200
125	60	10,400
125	80	8,000
125	100	6,300
125	115	5,100
100	15	14,000
100	40	10,900
100	60	8,200
100	80	6,700
75	15	13,900
75	40	9,600
75	60	6,200
50	10	12,800
50	25	9,800
50	40	5,500
25	5	12,900
25	10	10,400
25	15	8,000
10	2	10,800
10	5	7,000
5	2	5,700

Regardless of system size, temperature, pressure, fluid medium, or available floor space, **EnviroSep** can service all specialized needs.

## STANDARD CONSTRUCTION

- Fabricated Angle Iron Frame
- Fabricated Steel Tank
- Bronze Ball Valves
- Stainless Steel Thermodynamic Steam Trap
- Cast Iron Pump with Gauge Glass, and Stainless Steel internal components and Check Valves
- Hydrostatically Tested
- High Temperature Industrial Enamel Paint

## PACKAGE OPTIONS

- Additional / Oversized Condensate Inlet connection(s)
- Oversized Condensate Receiver
- Oversized Atmospheric Vent(s)
- Overflow Connections
- Carbon Steel 3-piece Ball Valves
- Forged Steel Gate Valves
- Digital Cycle Counter to monitor pumping cycles
- Low-profile design for height restricted applications
- Re-circulating Pump
- Pressure / Temperature Relief Valve
- All Welded piping
- Fabricated Square Tubing Frame
- Flash Steam Heat Recovery System only without Condensate Inlet for Flash Recovery from existing Atmospheric Tanks.

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