

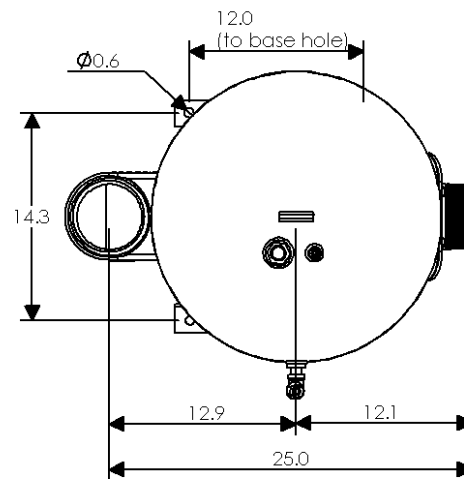
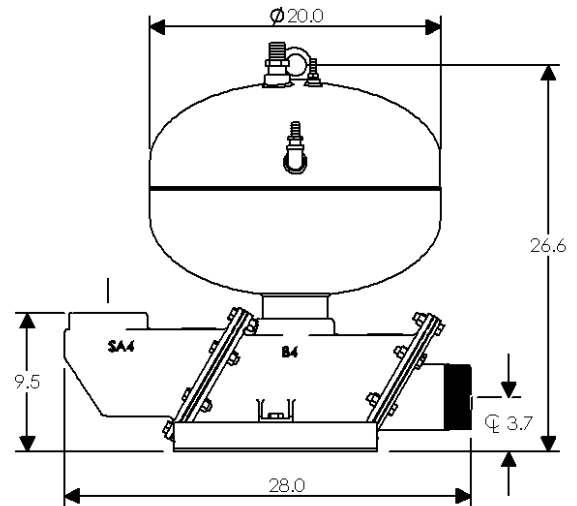
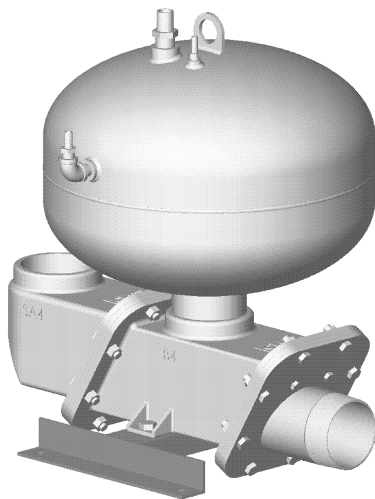
PITBULL MODELS C4C & C4S CONDENSATE RETURN PUMPS

The models C4C (steel) and C4S (316SS) are condensate return pumps designed for direct connection to a flash tank/receiver and may also be used for submersed high temperature sump applications.

There are no floats, over-center devices, valve mechanisms, switches or probes inside the pump. Instead the C4C/C4S is operated remotely and automatically by the innovative, all-pneumatic AP200C control panel. Two heavy-duty, 316SS swing check valve flappers are the only wetted, moving components.

In addition, the C4C/C4S has a 3.75" diameter solids capacity. This makes it capable of handling sewage, trash, stringy and/or sticky materials under high temperature sump conditions.

The pump comes complete with the AP200C control panel and 15' of epdm airlines to allow for location of the panel within a 15' radius of the pump.



Dimensions in inches

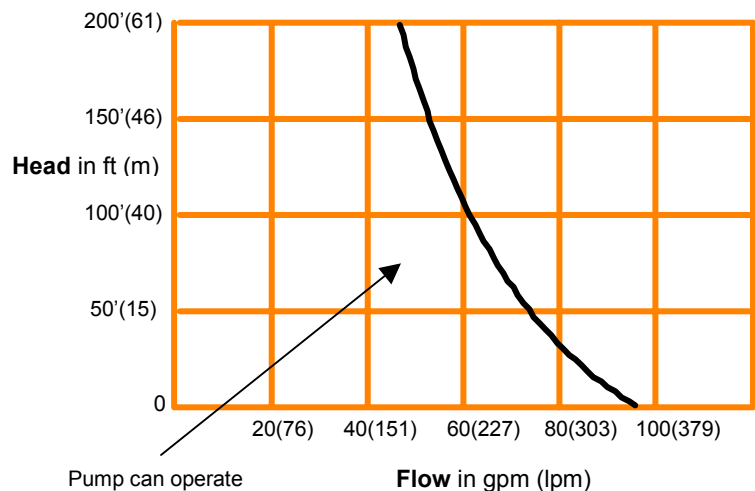
SPECIFICATIONS

- } Weight: 154-lbs/70 kg
- } Piping: 4 inch NPT
- } Control panel: AP200C (pneumatic)
- } Volume: 13.5 gal/51 liters
- } Maximum discharge head: 100 psi/6.9 Bar
- } Maximum solid: 3.75-inch/95mm diameter
- } Lowest flooded operating level
 - 20 inches/51mm (above pump base)
- } Pump construction: carbon steel or 316SS
 - Valve flapper/hardware: 316SS
 - Valve seats and hoses: epdm
 - AP200C enclosure and exhaust valve: 304SS

REQUIREMENTS

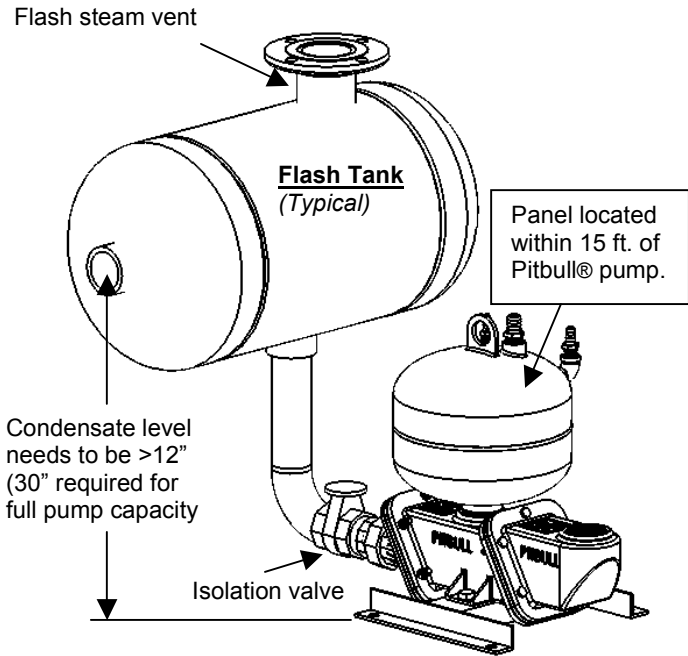
- } Compressed air or dry gas, >40 psi/2.8 Bar
- } 1/2" NPT air supply inlet

MAXIMUM FLOW CURVE



Pump can operate anywhere left of the curve.

APPLICATION BASICS



The condensate must have a vented flash tank or receiver (generally already in place) to release any flashing steam prior to the Pitbull® pump.

Note that the vent to atmosphere on the flash tank should be fairly large to insure the flash tank does not pressurize and push un-flashed condensate into the pump (a rough rule of thumb; vent size equal or larger than pump size for low pressure steam/condensate). Higher-pressure condensate holds much more flash steam and needs a larger vent.

The height of liquid in the flash tank will determine how fast the Pitbull® can refill/cycle. Use the 'Lowest Operating Level' data from the front page to determine the minimum elevation of the condensate level needed to cycle the pump. Full pumping capacity is reached with the condensate level about 1.5 feet above the lowest operating level.

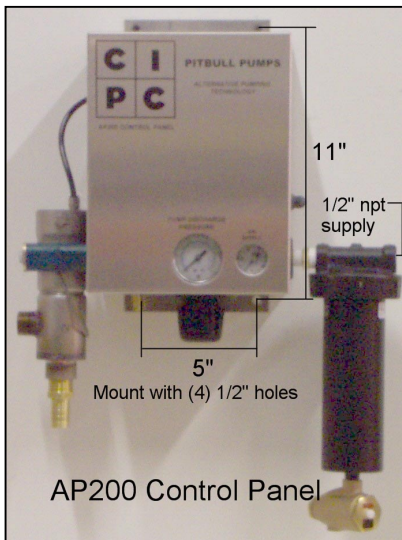
The exhaust of the Pitbull® can be connected to the flash tank vent, or just allowed to blow downward towards the floor.

AIR CONSUMPTION in SCFM

Head Flow	10 ft	20 ft	40 ft	60 ft	80 ft	100 ft	140 ft	180 ft	220 ft
10 gpm	2	2.4	3.2	4.1	4.9	5.8	7.5	9.3	11
20 gpm	3.8	4.7	6.4	8.1	9.9	11.6	15.1	18.5	22
30 gpm	5.7	7	9.6	12.2	14.8	17.4	22.6	27.8	33
40 gpm	7.6	9.4	12.8	16.3	19.7	23.2	30.1	37.1	44
60 gpm	11.4	14	19.2	24.4	29.6	34.8	45.2	55.6	66
80 gpm	15.2	18.7	25.6	32.6	39.5	46.4	60.3	74.1	88
100 gpm	19	23.4	32	40.7	49.4	58	75.3	92.7	110
140 gpm	26.6	32.7	44.8	57	69.1	81.2	105.5	129.7	154

Example: 60 gpm @ 20 ft TDH requires 14 SCFM

Conversion factors: 10 gpm = 5010 lbs/hr = 38 lpm of condensate.



COMMONLY ASKED INSTALLATION/APPLICATION QUESTIONS

How is the pump controlled?

On/Off should be controlled by opening or closing the liquid supply or vent path. Without liquid the pump will not cycle (do not cut off the air supply, the pump will fill and not be able to pressurize).

Can the flow rate be controlled?

Yes, three different ways.

- 1) Throttle the inflow to slow the cycle rate.
- 2) Throttle the exhaust to slow the fill rate.
- 3) Adjust the air pressure to control the discharge flow rate.

Can the piping be reduced?

Yes, but try to avoid dropping more than one pipe size. Smaller piping causes higher head and line velocities as well as slowing the maximum cycle (flow) rate.

Should isolation valves be used before and after the pump?

Definitely-YES.

Can the Pitbull® be supplied with pressurized (not flashed) condensate and exhaust into a pressurized tank or pipe?

No, this should be avoided.