MODEL C3S

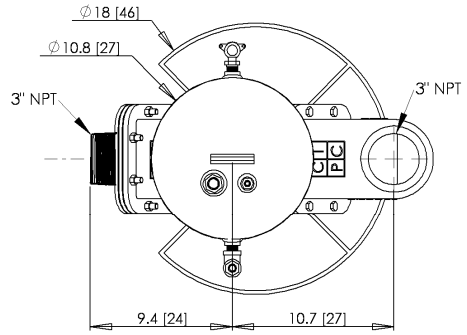
CLASS: Hot Condensate Return

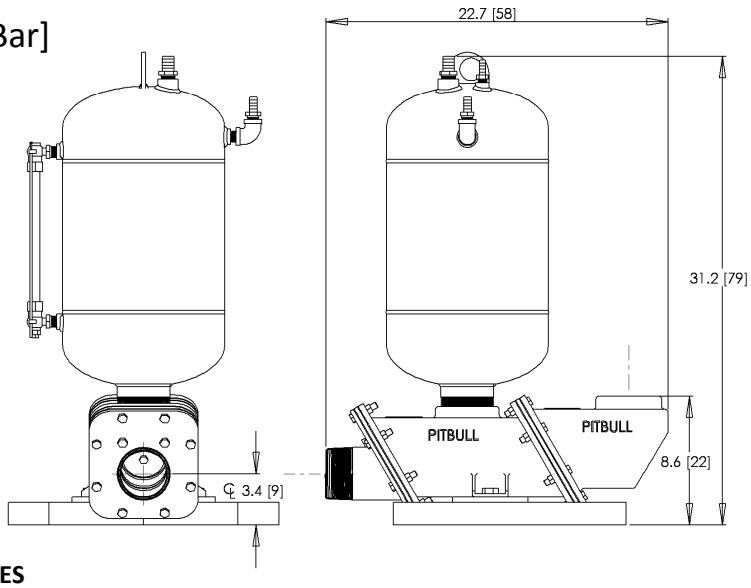
CONSTRUCTION: 304SS Chamber, 316SS Base

CAPACITY: 0-45 gpm [22,500 lbs/hr]

DISCHARGE PRESSURE: 0-100 psi [6.9 Bar]

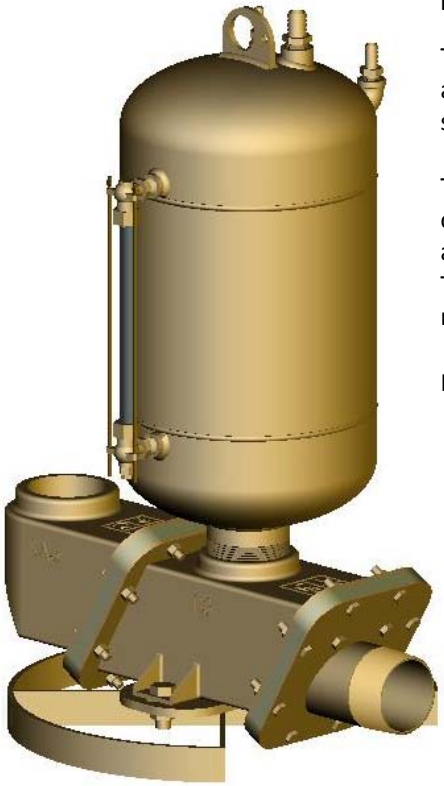
MAX SOLID: 3” [7.6 cm]





CONFIGURATION OPTIONS

- ALL-PNEUMATIC CONTROL (XP/explosion-proof and remote locations)
- GRAVITY FILLED
- HIGH TEMPERATURE (212F/100C)
- INCLUDES BRASS SIGHT GLASS



KEY FEATURES

The model C3S is a condensate return pump designed for direct connection to a flash tank/receiver and may also be used for submersed high temperature sump applications.

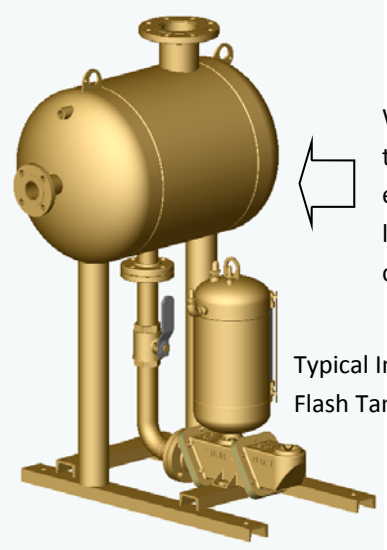
There are no floats, over-center devices, valve mechanisms, springs, switches or probes inside the pump to service. Instead the C3S is operated remotely and automatically by the patented, all-pneumatic AP212C control panel.
Two heavy-duty, 316SS swing check valve flappers are the only wetted, moving components.

In addition, the C3S has a 3” diameter solids capacity so it is not limited to

QUICK SPECS

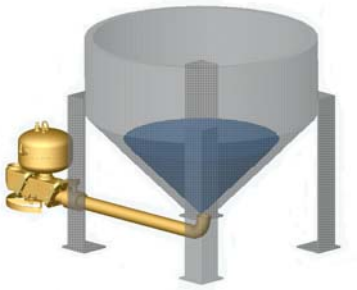
- Weight: 115 lbs [52 kg]
- Stroke Volume: 5.5 gal [21 l]
- Operating Levels: ‘Gravity’ - 25” [64 cm] *(see reverse side for explanation)*
- Panel Required: AP212C

See reverse side for Specification Details, Flow Curve and Air Consumption



Typical Installation with Flash Tank Receiver

When pumping hot condensate the C3S pump requires that the condensate flash to atmospheric pressure before entering the pump. Shown is a typical flash tank with a large vent to release flash and enough height for condensate to drain into the pump by gravity.



Gravity operation requires an operating level equal to the top of the pump, approximately 25" above grade (surface the pump is on). The above sketch shows a liquid level high enough to cycle the pump.

Part# C3S/_ / AP212C3

PANEL

SEAT MATERIAL

E = epdm (standard on C2C)

V = viton

T'= teflon

K = kynar

Panel Requirements: Compressed air or dry gas, unlubricated, recommended 80 psi delivered through 3/4" pipe or equal.

Example:

C3S/E/AP212C3 = 3" stainless steel condensate pump with epdm seats, AP212C3 control panel.

Valve seat selection:

- Viton - excellent resistance to oxidizers and solvents. Medium strength, used up to 250°F.
- Teflon - excellent chemical resistance to acids, bases and solvents. Lower cycle life, non-elastomeric, used up to 300°F.
- EPDM - good heat and acid/base resistance but poor hydrocarbon resistance, used up to 300°F.
- PVDF (kynar) - excellent chemical resistance, toughness and resistance to cold flow (thermoplastic). Good cycle life and can be used up to 250°F.

MAXIMUM FLOW CURVE

with air consumption in SCFM (gravity mode)

HEAD	GPM	5	10	15	20	25	30	35	40	45	50	55	60
	lbs/hr	2502	5004	7506	10008	12510	15012	17514	20016	22518	25020	27522	30024
220 ft		5.5	11.0	16.5	22.0	27.5	33.0						
200 ft		5.1	10.1	15.2	20.3	25.3	30.4						
180 ft		4.6	9.3	13.9	18.5	23.2	27.8						
160 ft		4.2	8.4	12.6	16.8	21.0	25.2						
140 ft		3.8	7.5	11.3	15.1	18.8	22.6						
120 ft		3.3	6.7	10.0	13.3	16.7	20.0	23.3	26.7	30.0	33.3	36.7	40.0
100 ft		2.9	5.8	8.7	11.6	14.5	17.4	20.3	23.2	26.1	29.0	31.9	34.8
80 ft		2.5	4.9	7.4	9.9	12.3	14.8	17.3	19.7	22.2	24.7	27.1	29.6
60 ft		2.0	4.1	6.1	8.1	10.2	12.2	14.2	16.3	18.3	20.3	22.4	24.4
40 ft		1.6	3.2	4.8	6.4	8.0	9.6	11.2	12.8	14.4	16.0	17.6	19.2
20 ft		1.2	2.3	3.5	4.7	5.8	7.0	8.2	9.3	10.5	11.7	12.8	14.0
10 ft		1.0	1.9	2.9	3.8	4.8	5.7	6.7	7.6	8.6	9.5	10.5	11.4

Operating Flow Capacity:
anywhere *in shaded area.*
Air consumption: *pick closest cell to your flow & pressure match*

AP200C Panel

Example (gravity fill): 40 gpm @ 20 ft TDH requires 9.3 SCFM