



## MODEL F2S

CLASS: Corrosive sludge and slurry handling

CONSTRUCTION: 316 Stainless Steel

CAPACITY: 0-50 gpm [191 lpm]

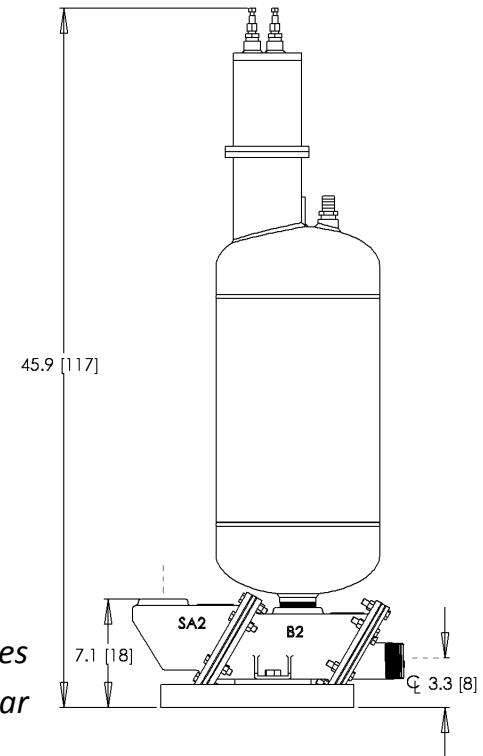
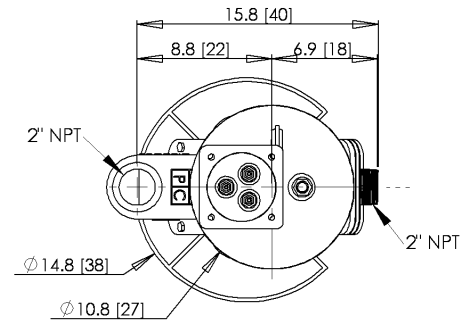
DISCHARGE PRESSURE: 0-125 psi [8.6 Bar]

MAX SOLID: 2" [5.1 cm]

### CONFIGURATION OPTIONS

- ELECTRO-PNEUMATIC CONTROL (for non-explosion proof environments)
- GRAVITY FILLED
- FLOW INDUCED (vacuum assisted fill)
- HIGH TEMPERATURE (212F/100C)

*Large stroke volume = low cycle and wear rates*  
*Low internal velocities = low erosive wear*



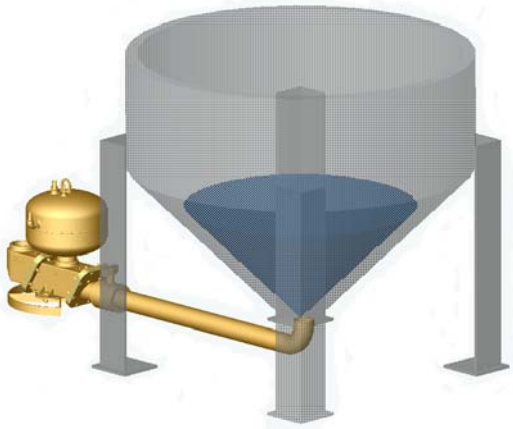
### APPLICATION EXAMPLES

Clarifier sludge transfer, sludge de-watering feed to plate and frame filter press, belt filter press, rotary drum filter, muds, BOF sludge, municipal primary and secondary sludge, sand, silt, stone cutting run-off, TiO<sub>2</sub> transfer and de-watering, diatomaceous earth, coal fines, mill scale, hot slurries. \*Note, requires water-based fluids.

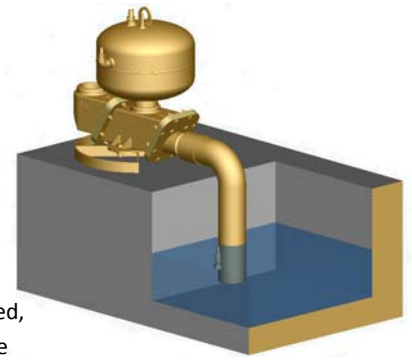
### QUICK SPECS

- Weight: 109 lbs [49 kg]
- Stroke Volume: 7.7 gal [29 l]
- Operating Levels: 'Gravity' - 27" [69 cm]  
 Optional Suction Lift: 'Flow Induced' - 120"[3 m] maximum suction lift  
 (see reverse side for explanation)
- Panel Required: DP310

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



**Gravity operation** (left) requires an operating level equal to or above the top of the pump (appr 27" above grade).  
No compressed air is required for the fill stroke.



**F2 flow inducement** (right) uses an air powered, vacuum generator on the exhaust valve of the control panel. It applies vacuum to the pump during the fill stroke to pull fluid up into the pump. 10 ft of lift is the recommended maximum.

\*see note below chart for additional air consumption

Part# **F2S / / - - -**

**SEAT MATERIAL**  
N = nitrile (standard)  
V = viton  
T = teflon  
UHD = hard urethane  
E = epdm  
K = kynar

**To specify a pump select a control panel (required) and seat option. Nitrile (std) 15 ft airlines are provided.**

**PANEL OPTIONS**

DP310G2 = electro-pneumatic, dual probe, gravity fed.  
DP310F2 = electro-pneumatic, dual probe, flow induced.

**Example:**

F2S/N/DP310G2 = 2" 316SS filter press feed pump with nitrile seats, DP310G2 control panel.

**Panel Requirements:** Compressed air or dry gas, unlubricated, recommended 80 psi delivered through 3/4" pipe or equal and 110 vac (<1 A) power.

**Valve seat selection:**

- Nitrile - good all-purpose elastomer. Medium chemical, oil and solvent resistance, used up to 150°F.
- 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.
- Hard Urethane - high durometer with good abrasion resistance with mild chemical resistance, used up to 150°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 meters	Operating Flow Capacity:																
220 ft	67.1	5.5	11.0	16.5	22.0	27.5	33.0	38.5	anywhere in shaded area.								
200 ft	61.0	5.1	10.1	15.2	20.3	25.3	30.4	35.4	Air consumption: pick closest								
180 ft	54.9	4.6	9.3	13.9	18.5	23.2	27.8	32.4	cell to your flow & pressure								
160 ft	48.8	4.2	8.4	12.6	16.8	21.0	25.2	29.4	30.1	33.9	37.7	41.4	45.2				
140 ft	42.7	3.8	7.5	11.3	15.1	18.8	22.6	26.4	26.7	30.0	33.3	36.7	40.0				
120 ft	36.6	3.3	6.7	10.0	13.3	16.7	20.0	23.3	23.2	26.1	29.0	31.9	34.8				
100 ft	30.5	2.9	5.8	8.7	11.6	14.5	17.4	20.3	22.2	24.7	27.1	29.6					
80 ft	24.4	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	18.3	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	12.2	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	6.1	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	3.0	1.0	1.9	2.9	3.8	4.8	5.7	6.7	7.6	8.6	9.5	10.5	11.4				
<b>GPM</b>		<b>5</b>	<b>10</b>	<b>15</b>	<b>20</b>	<b>25</b>	<b>30</b>	<b>35</b>	<b>40</b>	<b>45</b>	<b>50</b>	<b>55</b>	<b>60</b>				
lpm		19	38	57	76	95	114	132	151	170	189	208	227				

DP310G2 Panel



Example 1 (gravity fill): 40 gpm @ 20 ft TDH requires 9.3 SCFM

\*Note for flow inducement: add 0.45 x gpm to the air consumption.

Example 2 (flow induced): 40 gpm @ 20 ft using suction lift. Since 40 gpm at 20 ft uses 9.3 scfm (from chart), then add 0.45 scfm per gpm to the consumption; in this case 40 x 0.45scfm or 18 scfm. The total consumption is 9.3 + 18 = 27.3 scfm.