



MODEL F3C

CLASS: Sludge and slurry handling

CONSTRUCTION: Carbon Steel

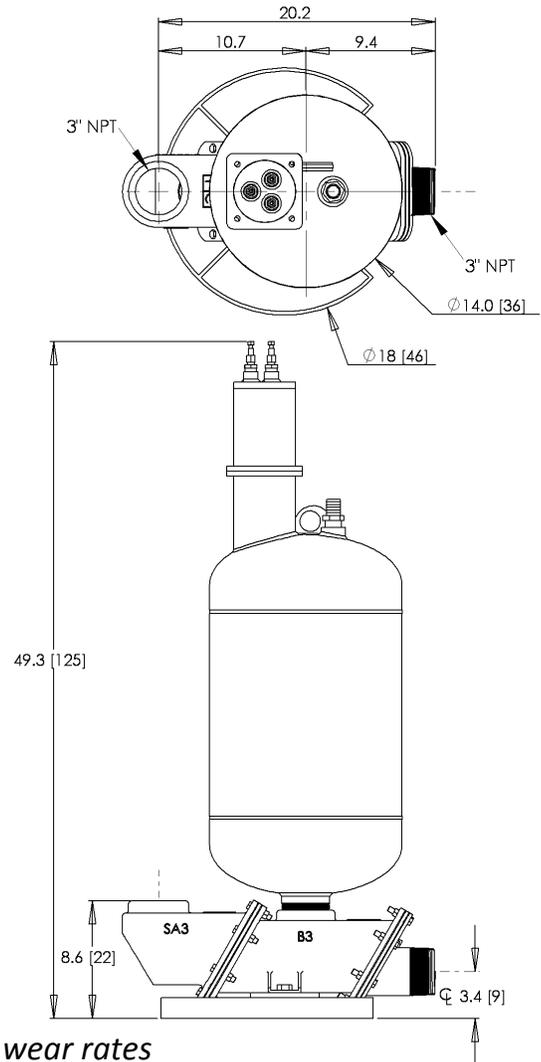
CAPACITY: 0-84 gpm [318 lpm]

DISCHARGE PRESSURE: 0-125 psi [8.6 Bar]

MAX SOLID: 3" [7.6 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

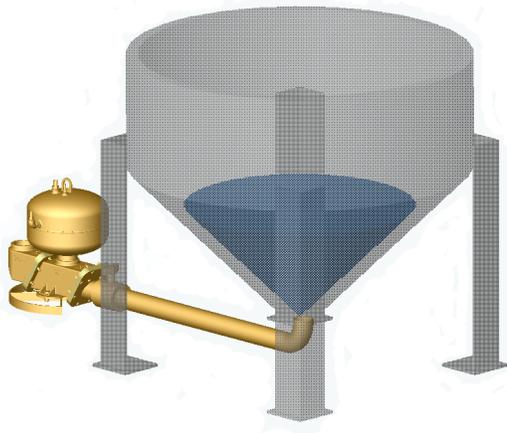
APPLICATION EXAMPLES

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, TiO₂ transfer and de-watering, diatomaceous earth, coal fines, mill scale, hot slurries. Fluid must be water-based/conductive.

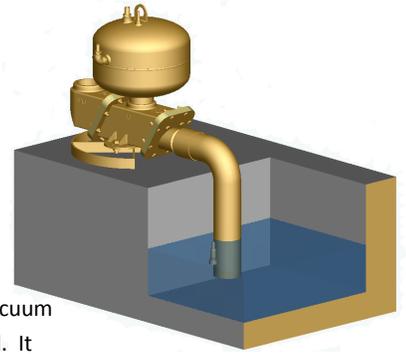
QUICK SPECS

- Weight: 143 lbs [65 kg]
- Stroke Volume: 14 gal [53 l]
- Operating Levels: 'Gravity' - 30" [76 cm]
Optional Suction Lift: 'Flow Induced' - 120"[3 m] maximum 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 30" above grade). No compressed air is required for the fill stroke.



F3 flow induction (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 max.

*see note below chart for additional air consumption

Part# **F3C / - / - -**

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

- DP310G3 = electro-pneumatic, dual probe, gravity fed.
- DP310F3 = electro-pneumatic, dual probe, flow induced.

Example:

F3C/N/DP310G3 = 3" steel filter press feed pump with nitrile seats, DP310G3 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	11	22	33	44	55	anywhere in shaded area.				
200 ft 61.0	10	20	30	41	51	Air consumption: pick				
180 ft 54.9	9	19	28	37	46	closest cell to your flow &				
160 ft 48.8	8	17	25	34	42	pressure				
140 ft 42.7	8	15	23	30	38	40	47	53	60	67
120 ft 36.6	7	13	20	27	33	35	41	46	52	58
100 ft 30.5	6	12	17	23	29	30	35	39	44	49
80 ft 24.4	5	10	15	20	25	24	28	33	37	41
60 ft 18.3	4	8	12	16	20	19	22	26	29	32
40 ft 12.2	3	6	10	13	16	14	16	19	21	23
20 ft 6.1	2	5	7	9	12	11	13	15	17	19
10 ft 3.0	2	4	6	8	10	11	13	15	17	19
GPM	10	20	30	40	50	60	70	80	90	100
lpm	38	76	114	151	189	227	265	303	341	379

DP310G3 Panel



Example 1 (gravity fill): 60 gpm @ 20 ft TDH requires 14 SCFM

*Note for flow induction: add 0.36 x gpm to the air consumption.

Example 2 (flow induced): 60 gpm @ 20 ft using suction lift. Since 60 gpm at 20 ft uses 14 scfm (from chart), then add 0.36 scfm per gpm to the consumption; in this case 60 x 0.36 scfm or 21.4 scfm. The total consumption is 14 + 21.4 = 35.4 scfm.