

General Description

The Model 1730 metering pump is a hydraulically actuated tubular diaphragm design, utilizing a pre-stressed diaphragm and vertical plunger configuration. The memory of the pre-stressed diaphragm returns to its exact reference position on every suction stroke giving the pump exceptional accuracy, outstanding lift capabilities and minimal NPSH requirements. The ability of the diaphragm to withstand higher vacuum prevents premature diaphragm failure. The unique hydraulic system provides the industry with the simplest and most reliable actuated design for metering pumps.

Performance

The Model 1730 is available in four different plunger diameter sizes offering maximum capacities from 1.5 gph at a maximum pressure of 3000 psig to 220 gph at a maximum pressure of 150 psig. All models may be duplexed.

The stroking length can be manually adjusted from 0-100% by using the micrometer control to raise or lower the internal rate setter slide. The adjustment is independent of any internal resistance or pressure, thus allowing effortless manual control. The pump is available in five stroking speeds. Repetitive accuracy is +/-1%.

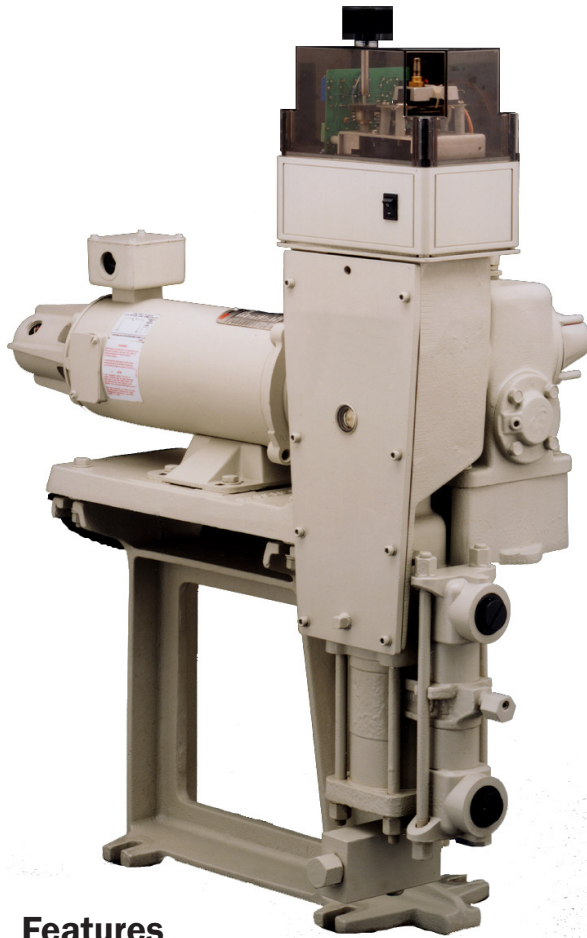
The hydraulic system is open to atmosphere on every stroke for the venting of air and refill of oil by gravity. Mechanical vent or refill valves are not required. This design means less maintenance, longer life and lower cost.

Materials of Construction

The Model 1730 can be supplied with Polypropylene, Ductile Iron, Alloy 20 and 316 Stainless Steel wetted ends. All diaphragms and seals are available in Nitrile, Hypalon® or Viton® suited for the most severe chemical duty applications. Check valves are single ball type for easy maintenance. Reversible seats provide long life and reduce replacement costs. Special H₂SO₄ and H₂O₂ compatible wetted ends are also available.

Applications

- High pressure applications
- Slurry service
- Potable water treatment
- Wastewater treatment
- Industrial chemical feed



Features

- A micrometer stroke length adjustment allows effortless capacity control of 0-100%
- Pre-stressed tubular diaphragm withstands higher vacuum for longer life
- Maximum operating pressure up to 3000 psig
- Power supply: 120 VAC single phase or 230/460 VAC 3-phase TE or XP motor
- Built-in hydraulic pressure relief valve
- Unique hydraulic vent and refill design
- Single ball cartridge type check valves
- Long term reliability and accuracy
- Tungsten Carbide check valves

Options

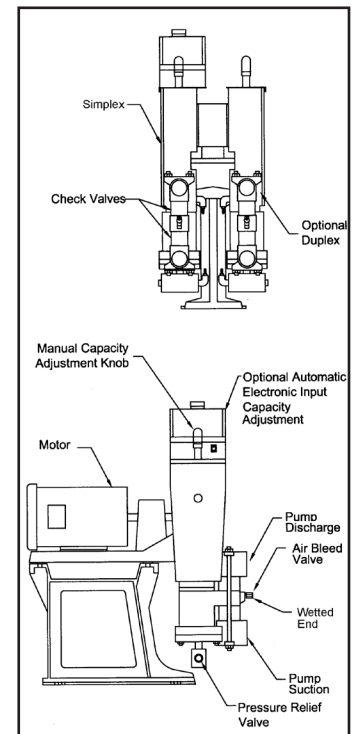
- Electronic or pneumatic capacity control
- Double ball checks for higher pressures
- Back pressure valve for low discharge pressure
- Automatic AC or DC motor speed control by analog input signal
- Leak detection system
- Slurry service

Technical Data

Capacity (gph)	Max. Pressure (psig)*	Model	Plunger Diameter	Suction + Discharge NPT	Materials Code	Speed (SPM)	Motor (Hp)	
1.5	3000	1731-1_-9019	1/2"	Metal 1/2" PP 1" Socket	2, 3, 5 or 8*	30	3/4	
1.6	2000	1731-1_-9017				30	1/2	
1.7	1400	1731-1_-9016				30	1/3	
2.2	3000	1731-1_-9211				44	1	
2.3	2850	1731-1_-9219				44	3/4	
2.5	1750	1731-1_-9217				44	1/2	
2.6	1200	1731-1_-9216				44	1/3	
3.0	3000	1731-1_-9311				58	1	
3.3	2850	1731-1_-9319				58	3/4	
3.6	1750	1731-1_-9317				58	1/2	
3.75	1200	1731-1_-9316				58	1/3	
4.6	3000	1731-1_-9411				88	1	
5.0	2550	1731-1_-9419				88	3/4	
5.5	1550	1731-1_-9417				88	1/2	
5.7	950	1731-1_-9416				88	1/3	
6.0	3000	1731-1_-9611				116	1	
6.6	2200	1731-1_-9619				116	3/4	
7.25	1500	1731-1_-9617				116	1/2	
7.8	950	1731-1_-9616				116	1/3	
10	3000	1731-1_-9811				192	1	
11	2200	1731-1_-9819	192	3/4				
12	1500	1731-1_-9817	192	1/2				
13	950	1731-1_-9816	192	1/3				
23.0	750	1731-2_-9411	1"	Metal 1" PP 1" Socket	88	1		
23.0	650	1731-2_-9419			88	3/4		
24.0	450	1731-2_-9417			88	1/2		
24.0	280	1731-2_-9416			88	1/3		
30.0	750	1731-2_-9611			116	1		
32.5	550	1731-2_-9619			116	3/4		
33.0	400	1731-2_-9617			116	1/2		
50.0	750	1731-2_-9811			192	1		
51.0	550	1731-2_-9819			192	3/4		
53.0	400	1731-2_-9817			192	1/2		
53.5	250	1731-2_-9816			192	1/3		
59.0	200	1731-6_-9411			1-1/2"	Metal 1-1/2" PP 1-1/4" Socket	88	1
77.0	100	1731-6_-9619					116	3/4
120.0	300	1731-6_-9812					192	1-1/2
124.0	200	1731-6_-9811					192	1
128.0	100	1731-6_-9819	192	3/4				
101	150	1731-4_-9411	2"	Metal 2" PP 2" Socket	88	1		
133	150	1731-4_-9611			116	1		
200	150	1731-4_-9911			175	1		
220.0	150	1731-4_-9811			192	1		

Temperature of Process Fluid

Material	Temperature Range
Hypalon®	32-150°F
Viton®	32-180°F
Polypropylene	32-120°F



*Polypropylene is available as a head/check material for 1/2", 1", 1-1/2" plunger diameters up to 125 psig, 2" up to 75 psig.
* Weight including motor: Simplex = 175 lbs, Duplex = 200 lbs.