

PULSA Series® 7120

DIAPHRAGM METERING PUMP

Flows to 235 GPH,
Pressures to 3000 PSI

This rugged, leak-free hydraulic diaphragm style metering pump is designed for precise metering and long term dependability. Its time-proven drive and stroke control mechanism combined with a wide variety of wet end head designs deliver superior value for any application.

Key Features

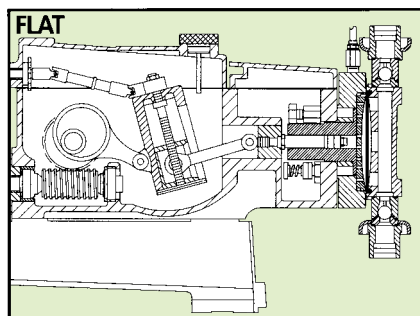
- Full motion stroke length control mechanism gives 0-100% sinusoidal flow output with infinite increments of adjustment.
- Fully sealed drive and control mechanism with diaphragm breather to eliminate atmospheric contamination and assure extended service life.
- Flooded lubrication. No lubricator pumps required.
- Simple in-line componentry easily serviced without major disassembly.
- Built-in hydraulic by-pass valve, make-up valve and bleeder valve for hydraulically-balanced, trouble-free operation.
- Rugged diaphragms constructed of PTFE elastomer or metal with precise hydraulic balance for safe accurate metering.
- A broad selection of economical head, diaphragm and valve designs to handle any liquid metering application.
- Material options to handle any liquid.

Performance And Dependability

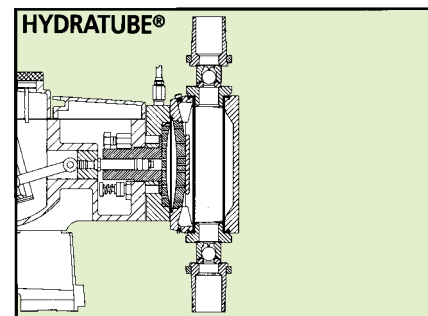
- Metering accuracy with $\pm 1\%$ over a 10:1 flow range.
- Drive components carry a two-year warranty.



Choose The Head Assembly That Meets Your Needs



Flat diaphragm style reagent head assemblies are available with rugged PTFE diaphragms for general application or metal diaphragms for extreme temperature, pressure or liquified gas service. Check valves have O-ring compression type seals and are easily removed for maintenance. (In most instances without disassembly of piping.)



The HYDRATUBE® style, developed in 1967, has a proven track record. Its straight-thru design makes it an excellent choice for high viscosity or slurry products. Optional valve designs are available for slurry service. Standard HYDRATUBES use VITON®, HYPALON® or NORDEL® elastomer. Teflon® PFA HYDRATUBES and/or Teflon® primary diaphragms are optional.



Manufacturers of Quality Pumps,
Controls and Systems.

PULSA® 7120 Diaphragm Metering Pump Performance Specifications

RATED FLOW, GPH (l/hr) AT RATED PRESSURE ⁽¹⁾ AT STROKES PER MINUTE (SPM)				RATED ⁽²⁾ PRESSURE		SEE NOTE ⁽³⁾	PISTON SIZE (inches)	INLET/ OUTLET N.P.T.
70	88	116	140	psig	kg/cm ²			
1.2 (4.5) 2.3 (8.7) 2.9 (10.9)	1.5 (5.6) 2.9 (10.9) 3.6 (13.6)	2.0 (7.5) 3.8 (14.3) 4.8 (18.1)	2.4 (9.0) 4.6 (17.4) 5.7 (21.5)	3000 2000 600	210 140 42	M TM THM	0.37 0.5 0.5	¼ F ½ F ½ F
6.8 (25.7) 7.2 (27.2)	8.2 (31.0) 9.0 (34.0)	11.3 (42.8) 11.9 (45.0)	13.7 (51.9) 14.4 (54.5)	1200 900	84 63	T TM	0.75 0.75	½ F ½ F
13.2 (49.9) 21.4 (91.2) 30.9 (117)	16.7 (63.2) 26.9 (102) 38.8 (147)	21.9 (82.9) 35.5 (134) 51.2 (194)	26.4 (100) 42.8 (162) 61.8 (234)	600 440 300	42 31 21	THM THM TM	1.0 1.25 1.5	½ F ½ F 1 F
30.9 (117) 42.0 (159) 61.9 (234)	38.8 (147) 52.8 (200) 77.8 (294)	51.2 (194) 69.6 (263) 102.6 (388)	61.8 (234) 84.0 (318) 123.8 (468)	250 225 150	17 16 11	THM THM THM	1.5 1.75 2.12	1 F 1 F 1½ M/1 F
94 (356)	118 (447)	156 (590)	189 (715) 235* (889)	100 100	7 7	TH TH	2.62 2.62	2 M 2 M

Notes: 1. Rated flow is based on 60Hz, 1750 RPM motor. Where 50 Hz, 1450 RPM motor is used, multiply rated flow by 0.83.

2. Lower rated pressures are available.

3. T = Teflon® flat style diaphragm; H = HYDRATUBE, tube style diaphragm; M = Metal diaphragm available on most piston sizes with adjusted capacities and pressures.

*175 SPM

Engineering Data

Materials: Standard wet end materials available are 316SS, 20SS and glass-filled PTFE. Standard valve materials available are 316SS, 20SS, Alloy C and alumina. Valve gaskets are PTFE. Custom materials quoted on request. Pump body is cast iron. Cover and coupling guard are cast aluminum. Intermediate fluid in HYDRATUBE® models is a 33% ethylene glycol-water solution. Alternate fluids available. HYDRATUBE® housing is "ductile iron"—a high grade, high strength casting.

Ratings: General fluid temperature limits, 10°F to 180°F (-12.2°C to 82°C). Glass-filled PTFE, 40°F to 150°F (4.4°C to 66°C). Elastomer diaphragm models generally limited to 40°F to 180°F (4.4°C to 82°C). Modified designs to -40°F to 700°F (-40°C to 371°C) are available.

All glass-filled PTFE wet ends limited to 150 psi (11 kg/cm²) rated pressure and rated flow is reduced 5% (10% at 175 spm). Most high pressure ratings have improved capacity at lower operating pressure.

Reduce all rated flows by 5% when using pneumatic stroke length adjustment.

Valves: Single, ball type, inlet and outlet check valves are standard. Double check valves are optional. Ratings of 1000 psi (70 kg/cm²) and above have double check valves as standard design.

Motors: ½ or ¾ HP, 1750 RPM, foot mounted motors are used depending on rated pressure.

Controls

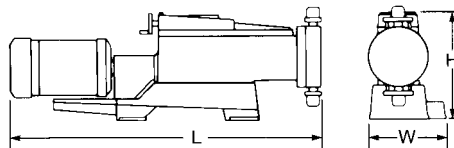


Pneumatic
Stroke
Length
Control

A fully pneumatic operator design for use with a typical 3 to 15 psi (.2 to 1.0 kg/cm²) instrument air signal to produce 0 to 100% flow. Optional pump mounted ratio relay with 0 to 100% settings to bias pump output vs. instrument signal is also available.

Approximate Overall Dimensions

PULSA 7120	L	H	W	Approx. Shipping Wt. Std.
Inches	31"	12"	9"	180 LBS.
Centimeters	78.7	30.5	22.9	82.0 kg



Electric
Stroke
Length
Control

A fully electric PULSAmatic® operator is available for operation with electric instrument signals. This unique operator uses the power of the pump to adjust piston stroke length.

Standard features are:

- Full mechanical handwheel override capability.
- Servo-Amp built into actuator—no separate cabinet required.
- Moisture tight enclosure standard. UL listed explosion-proof enclosure optional.
- Power consumption only 23 Watts Max., approximately 1/5 that of motorized actuators.
- 5 signal ranges standard: 1-5 mA, 4-20 mA, 10-50 mA, 0-10 v or 1000 OHM slide wire.



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