

PULSAFEEDER[®] ENGINEERED PRODUCTS



Flow: up to 845 gph (3,200 lph)



Pressure: up to 175 psi (12 bar)



Temperature: from 32 to 113°F (0-45°C)



Accuracy: +/- 2% of Set Point



PULSA[®] **GLM**

MECHANICAL DIAPHRAGM METERING PUMP

PULSA.COM/PULSAGLM

MECHANICAL DIAPHR

PULSAFEEDER EXPERTISE

For over 70 years, Pulsafeeder, Inc. continues to be a proven leader in diaphragm and dosing metering technologies. With extensive experience in providing fluid handling solutions, our pumps and systems are designed to handle your toughest applications. Known for their rugged construction and dependable performance, our products are of the highest level of manufacturing excellence and quality control.

PULSA® GLM SERIES PUMPS

Our Pulsa GLM series is a mechanically actuated diaphragm metering pump, designed to be reliable, robust, efficient, and compact. It features an industrial design to work in just about any application or environment. If you are looking for a high value chemical transfer or dosing metering pump with low cost of ownership, GLM is an outstanding choice. This latest pump series from Pulsafeeder can handle a wide range of flows, pressures and process chemicals.

MATERIALS OF CONSTRUCTION

Wet End Materials: Polypropylene, PVDF, 316 Stainless Steel

Diaphragms: Composite PTFE, solid PTFE

Check Valves: Ceramic or Stainless Steel

Housing: Aluminum

Head Adaptors: Polypropylene or ETFE Coated Cast Iron

Lubrication: Oil bath

Hardware: Stainless Steel

Coating: Epoxy paint



GLM1-2



GLM3-4



GLM5-6







GLM7

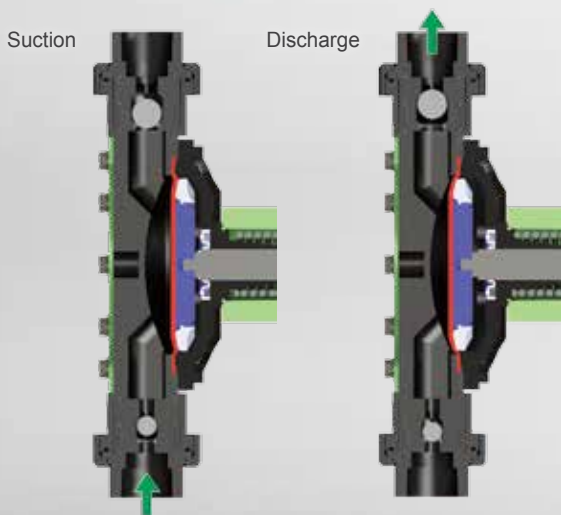
Design Feature	Customer Benefit	Savings
Robust design; > 20,000 hours of run life	Long pump life, low cost of ownership	\$\$\$\$\$
Auto stroke lock and adjustment	Accurate chemical dosing	\$\$\$\$
Leak free wet end with secondary sealing	Safety, no clean up or environmental risks	
Toolless valve and connection options	Fast and easy installation and servicing	\$\$\$
Multiple KOPkit® service options	Proper level of maintenance with minimized cost	
Epoxy paint and ETFE coated heads	Chemical resistant and protected from the environment	
NEMA Type 4X, IP 56 gearbox with upper bearing and seal	Sealed and protected from the environment	
Oil sight glass	Quick maintenance checks	\$\$
Never-seize coupling	Allows for quick and easy removal of motor	

AGM METERING PUMP

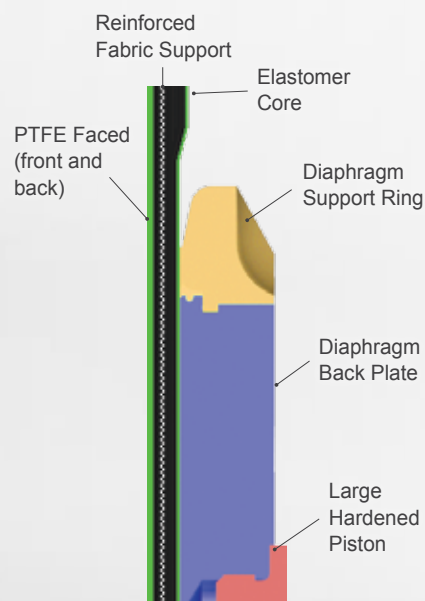
PRODUCT SPECIFICATIONS

 Max Flow: up to 845 gph (3,200 lph)	 Pressure: up to 175 psi (12 bar)	 Temperature: from 32 to 113°F (0 - 45°C)	 Accuracy: +/- 2% of Set Point
Min Flows: 0.0264 gph (0.10 lph)	Max Suction Pressure: up to 170 psi (11.7 bar)	Ambient Temperature Range: from 32 to 113°F (0-45°C)	NEMA Type 4X: IP 56: outdoor rated (motor not included)
Stroke Adjustment: 0-100%, resolution 1.0%	Suction Lift: 10 ft (3 m)	Modular Connections: Tube, Threaded, Flanged	NEMA Type 7 Class 1: Div 1 Groups C&D
Auto-locking Stroke Adjustment	Standard Viscosity: up to 1,000 cPs		

DIAPHRAGM TECHNOLOGY



A diaphragm reciprocates at a preset stroke length, displacing an exact volume of process fluid. Diaphragm retraction causes the product to enter through the suction check valve. Diaphragm advancement causes the discharge of an equal amount of the product through the discharge check valve.



MARKETS & TYPICAL APPLICATIONS

Markets

- Water Treatment - Power
- Water Treatment - Municipal
- Wastewater Treatment
- Chemical Processing
- Oil & Gas
- Petrochemical

Typical Applications

- Acids
- Caustics
- Polymers
- Bleaches
- pH Control
- Solvents
- Dyes/Inks
- Catalysts
- Cleaning Agents

FEATURES & BENEFITS



GEARBOX

- Compact and lightweight - saves space and easy to handle
- Completely non-vented gearbox design prevents condensation and ingress of contaminants
- NEMA Type 4X, IP 56, NEMA Type 7
- Oversized bearings for long life and reliability
- Robust industrial hex-head SS hardware for proper torques and standardized fittings
- Shielded bearings for added protection



MOUNTING FEET

- Flat and solid uniform mounting feet - extend outside of the gearbox for stability
- Oversized, slotted mounting holes to accommodate various fasteners
- Balanced center of gravity - pump with motor will not tip over prior to installation or maneuvering



DRIVE

- Upper worm bearing (sealed) - extends gear and motor life, reduces noise, and maximizes pump efficiencies by ensuring full torque output
- Motor flange drain path redirects liquids away from seal and eliminates pooling/resting on seal or motor shaft connection
- Patent pending non-metallic never-seize motor coupling prevents sticking or “welding” of worm shaft to motor shaft and allows for quieter long-term operation without coupling wear or knocking sounds
- Highly efficient, heavy-duty drive train maximizes uptime and reduces total cost of ownership



OIL LUBRICATION

- Oil bath for normal or explosion proof areas - lubricates all internal moving parts to extend Pump life
- Easy and accessible oil fill location - obstruction free and visible



WET END & CONNECTIONS

- Standard materials: PVDF, PP, and 316SS
- Stainless Steel hardware for added chemical resistance
- Modular connections (Tube, NPT, ISO/BSPT)
- 4 bolt tiebar (316SS)
- Factory engineered options: flanged and 4 bolt tiebar plastic connections





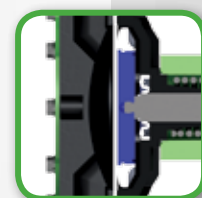
LEAK FREE HEAD

- Secure diaphragm sealing technology provides leak free service and chemical containment
- Secondary O-ring seal offers worry free valve sealing and eliminates chemical spray
- Large valve “pocket” and interface distributes the loading so it is not affected by pipe stress
- Retention plate ensures pressure containment (hydrostatic and creep elimination), allows for proper head bolt torque without loosening over time
- Increased reagent head bolts (quantities 8-12) to ensure bolt torques are evenly distributed across the retention plates and reagent head to maximize diaphragm sealing



DIAPHRAGM

- Flat mechanically actuated diaphragm delivers reliable pumping action and long life
- Double sided PTFE coated composite diaphragms maximizes chemical resistance and diaphragm lubrication
- Multiple diaphragm sealing beads prevent leakage in industrial applications
- Composite diaphragms



CHECK VALVES

- Patent pending spherical uniform velocity valving, limited turbulence, superior solids handling, and auto-flushing; flow is routed evenly without cavitation concerns
- Three piece self contained replacement assemblies
- O-ring valve seat (soft seat) for less noise and better solids/slurry handling



STROKE CONTROL

- 10:1 turndown standard
- 0-100% stroke range (while on or off) - one complete revolution
- Auto-lock stroke position, drift free - maintaining proper flow
- Large, easy to grip knob with intuitive pictures and user friendly instructions



SERVICING

- Toolless valve removal for simple servicing
- Multiple KOPkit® options for simple, extended and long-life servicing or prevention preferences
- Easy oil fill and drain
- Oil sight glass for fast inspection of oil and operation
- Ease of maintenance - common hardware, no special tools required
- Never-seize, non-metallic motor coupling for fast disconnect

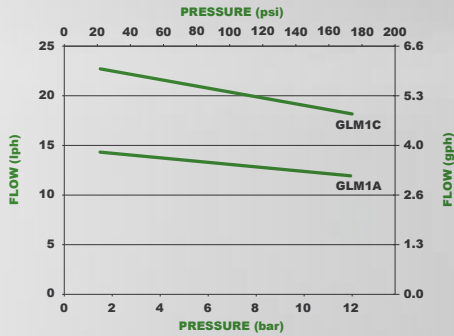


FLOW & PRESSURE

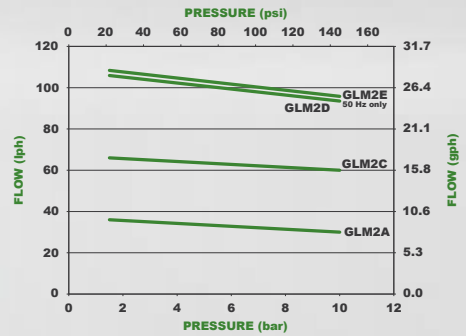
FLOW CURVES

60 Hz speeds and flows are shown

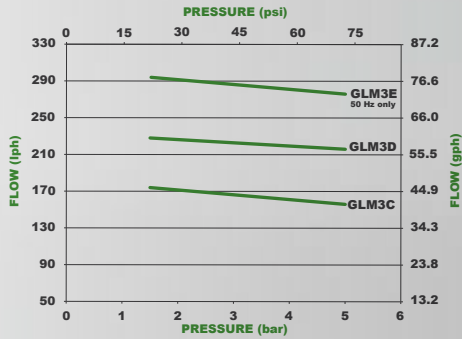
GLM1



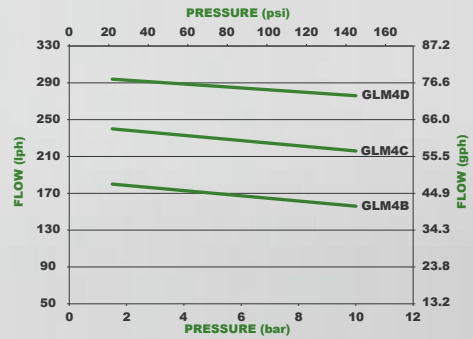
GLM2



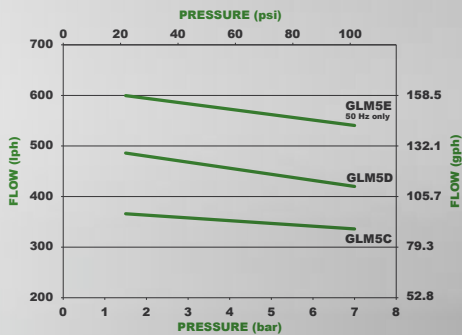
GLM3



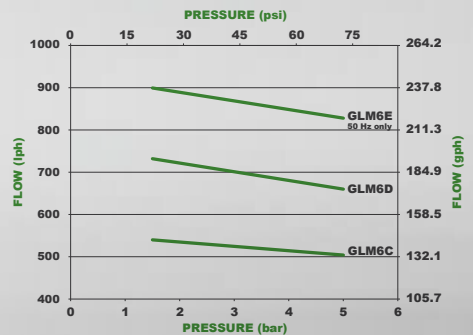
GLM4



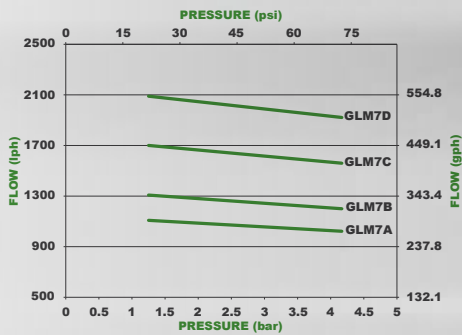
GLM5



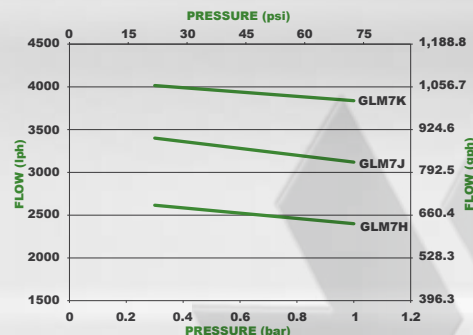
GLM6



GLM7 SIMPLEX

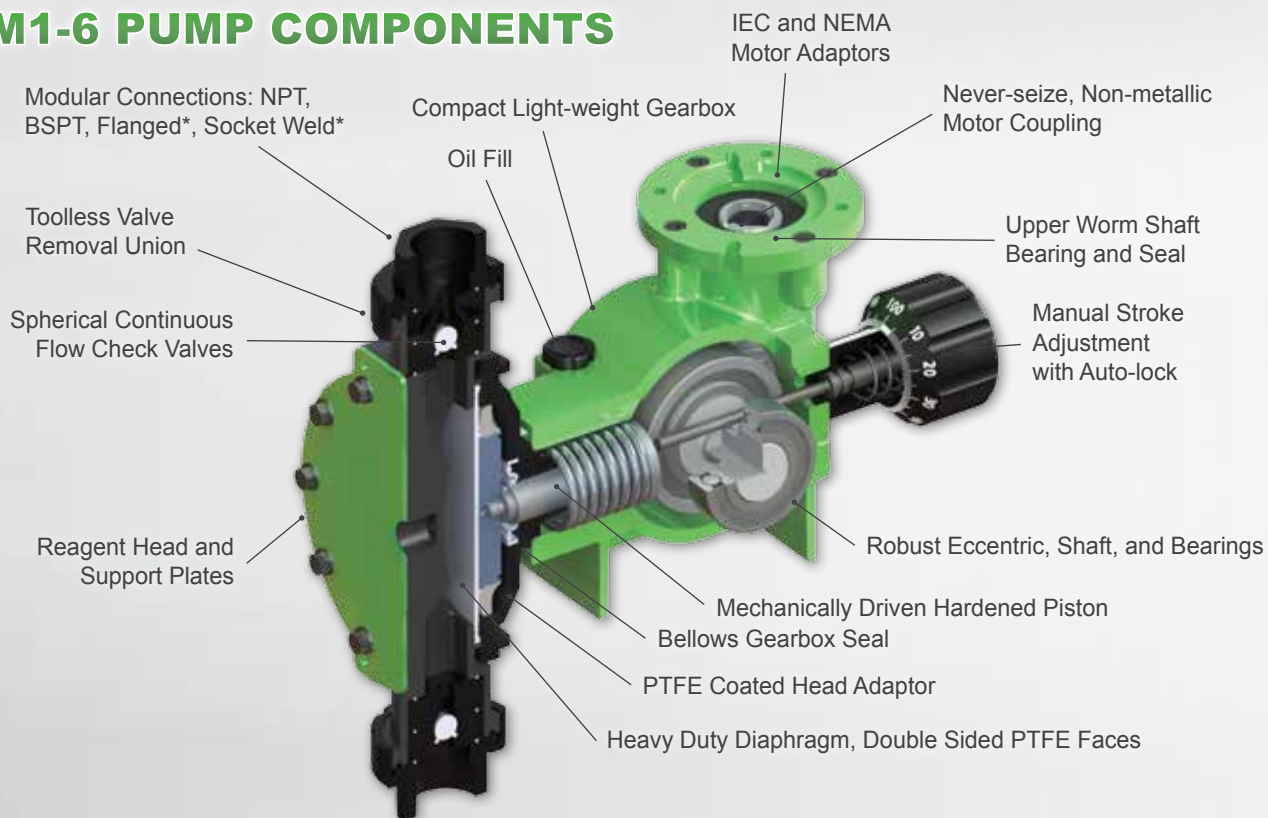


GLM7 DUPLEX

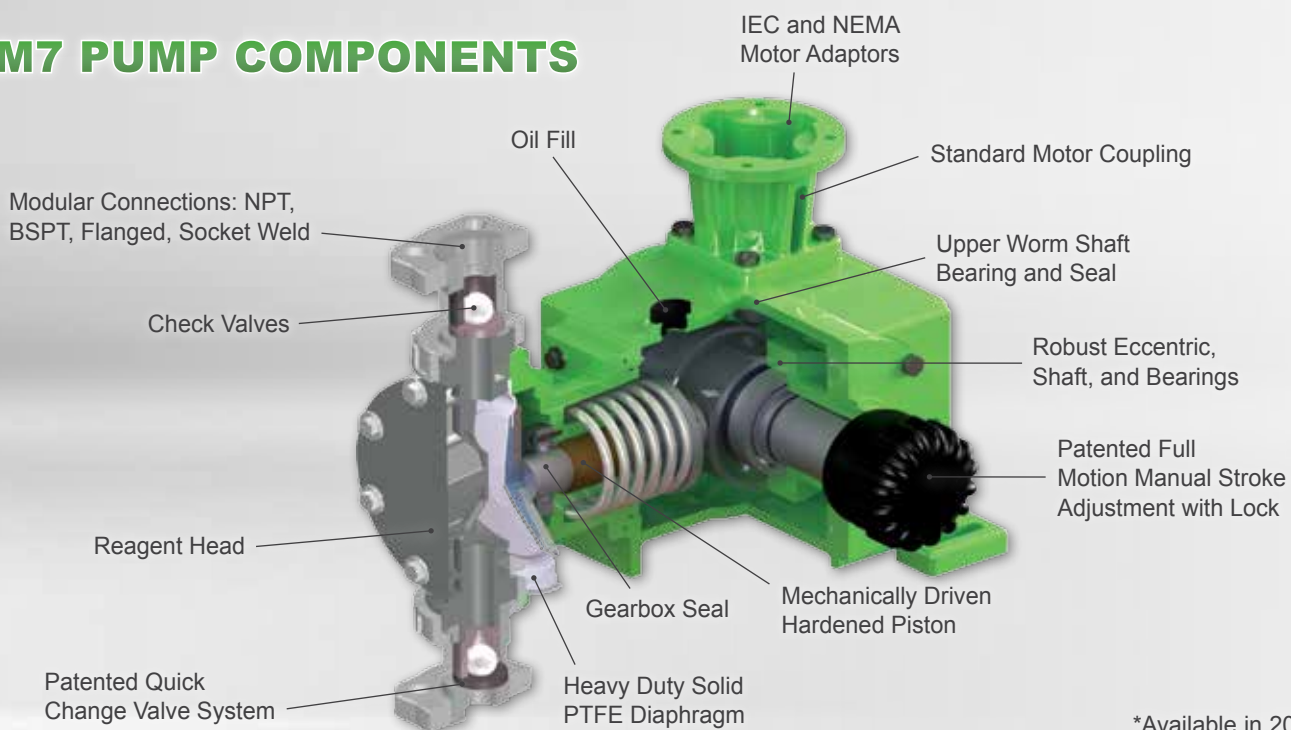


RATING

GLM1-6 PUMP COMPONENTS



GLM7 PUMP COMPONENTS



*Available in 2015.

PERFORMANCE & D

MODEL TABLE — FLOW & PRESSURE RATINGS

MODEL	60 Hz				50 Hz				HP (kW) Required	Connection Size
	Pressure (psi)	Flow (gph)	Flow (lph)	SPM	Pressure (psi)	Flow (gph)	Flow (lph)	SPM		
GLM1A	174	3.17	12	88	12	2.64	10	73	0.33 (0.25)	1/2" FNPT or FBSP or 3/8" x 1/2" Tube (plastic)
GLM1C		4.76	18	140		3.96	15	116		
GLM2A	145	7.93	30	88	10	6.60	25	73		
GLM2C		15.85	60	140		13.21	50	116		
GLM2D		24.73	94	184		20.61	78	153		
GLM2E	NA	NA	NA	NA		21.13	80	187		
GLM3C	73	41.21	156	140	5	34.34	130	116	1 (.075)	1" FNPT or FBSP
GLM3D		57.06	216	184		47.55	180	153		
GLM3E	NA	NA	NA	NA		60.76	230	187		
GLM4B	145	41.21	156	117	10	34.34	130	97		
GLM4C		57.06	216	140		47.55	180	116		
GLM4D		72.91	276	184		60.76	230	153		
GLM5C	102	88.76	336	140	7	73.97	280	116		
GLM5D		110.95	420	184		92.46	350	153		
GLM5E	NA	NA	NA	NA		118.88	450	187		
GLM6C	73	133.14	504	140	5	110.95	420	116	1.5" FNPT or FBSP	
GLM6D		174.35	660	184		145.29	550	153		
GLM6E	NA	NA	NA	NA		182.28	690	187		
GLM7A	73	269.46	1020	114	5	224.55	850	95	1.5 (1.1)	
GLM7B		317.01	1200	133		264.17	1000	111		
GLM7C		412.11	1560	169		343.42	1300	141		
GLM7D	NA	NA	NA	NA		422.68	1600	175	1.5" FNPT or 1.5" ANSI Flange	
GLM7H	73	634.01	2400	133	528.34	2000	111			
GLM7J		824.22	3120	169	686.85	2600	141			
GLM7K	NA	NA	NA	NA		845.00	3199	175		

*Flow and pressure ratings based on water-like viscosity.

GLM1-7 PUMP MODEL CONFIGURATION

GLM1-7 PUMP MODEL CONFIGURATION				Required Code	
Pump Selection	List \$ Adder	Code	Choice And Description	GLM	_ _ _ _ _
PUMP SIZE (Determined from chart) Position 1-5	See chart	See chart	See chart		
Motor Frame Selection Position 6	Standard -	A	NEMA 56C		
	Non-deduct	B	IEC 71B14		
	(based on kW)	D	NEMA 143/5TC (GLM7 only)		
Wet End Materials Position 7	See chart	A	316/PTFE-316SS liquid end - PTFE diaphragm and PTFE O-rings - 316SS ball valves		
		F	PVDF/Viton - PVDF liquid end - PTFE Diaphragm and Viton O-rings - Ceramic ball valves		
		P	PP/Viton - PP liquid end - PTFE diaphragm and Viton O-rings - ceramic ball valves		
Connections Position 8		P	NPT		
		B	BSP		
		T	3/8" tube connection, Plastic only (GLM1 & 2)		

GLM1-7 KOPkit® CONFIGURATION

GLM1-7 KOPkit® CONFIGURATION				Required Code	
KOPkit® Selection	List \$ Adder	Code	Choice and Description	KM	_ _ X
PUMP SIZE (Determined from chart) Position 1-3	None	1	For All GLM1 Models		
		2	For All GLM2 Models		
		3	For All GLM3 Models		
		4	For All GLM4 Models		
		5	For All GLM5 Models		
		6	For All GLM6 Models		
		7	For All GLM7 Models		
WET END MATERIALS Position 4	None	A	316SS/PTFE O-rings		
		F	PVDF/Viton® O-rings		
		P	PP/Viton® O-rings		

WET END MATERIALS

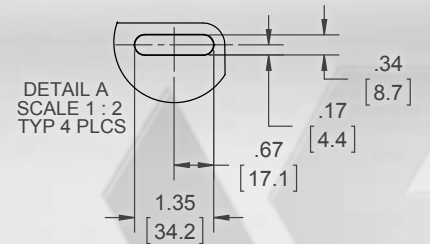
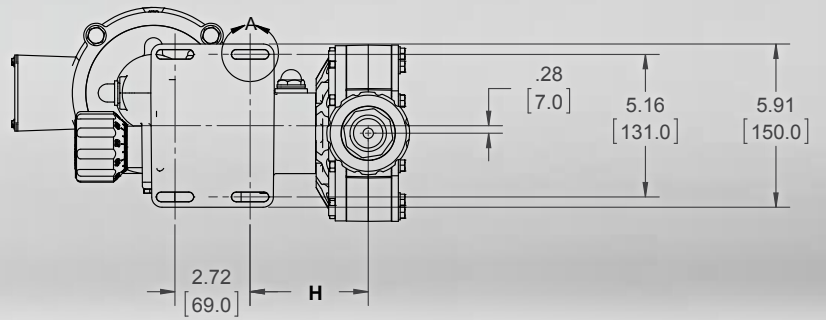
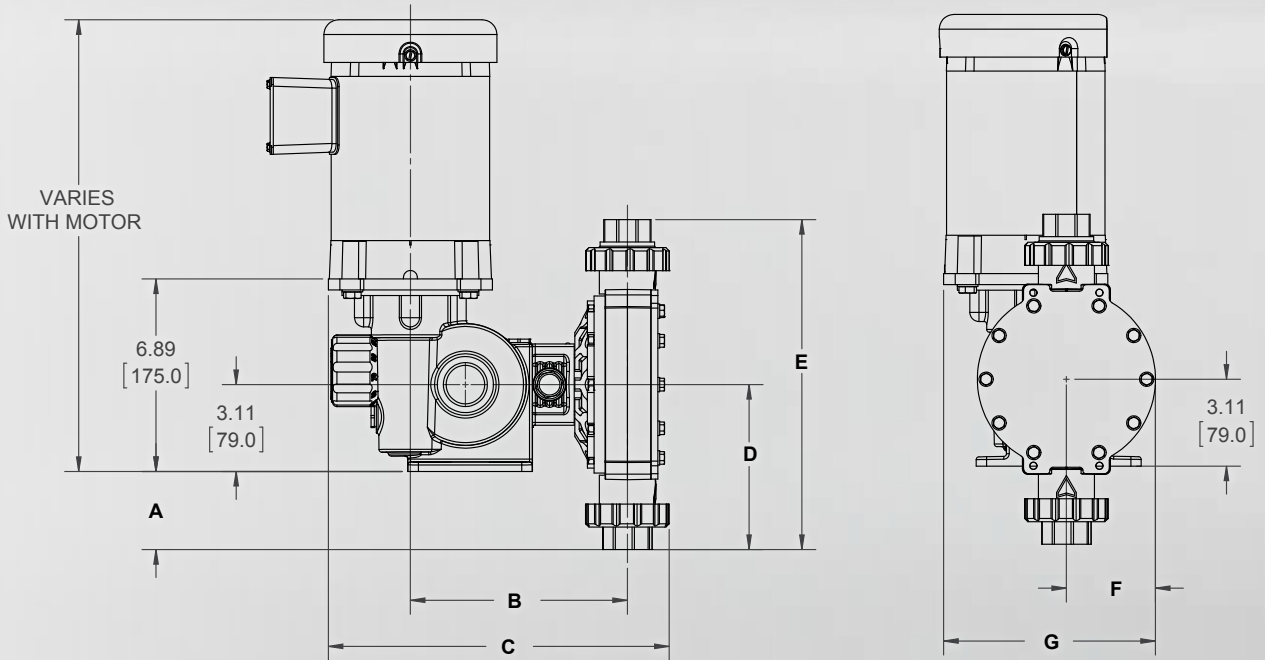
Wet End	Model	Head	Diaphragm	Guide	Seat	Valve Cap	Balls	O-rings	O-ring Seat
PVDF	GLM1-7	PVDF	PTFE	PVDF	PVDF	PVDF	Ceramic	Viton®	Viton®
PP		PP		PVDF	PVDF	PP			
SS		SS		SS	SS	SS	SS	SS	PTFE

* Viton® is a registered trademark of DuPont Performance Elastomers.

D I M E N S I O N A L

DIMENSIONAL DRAWINGS - GLM1-6

See Table Below



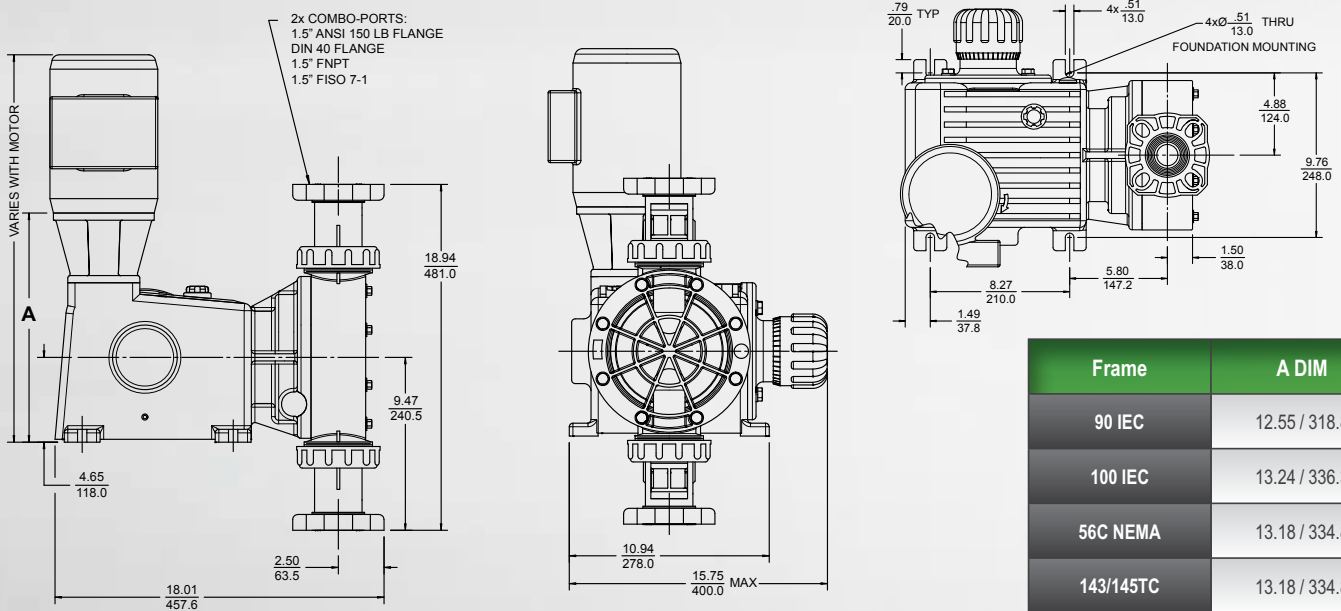
Model	GLM1-2	GLM3-4	GLM5-6
A	.95 / 24.0	2.80 / 71.0	3.68 / 93.5
B	7.43 / 188.6	7.77 / 197.3	7.91 / 200.8
C	11.31 / 287.2	12.20 / 309.9	12.59 / 319.9
D	4.06 / 103.0	5.91 / 150.0	6.79 / 172.5
E	8.11 / 206.1	11.81 / 300.1	13.58 / 344.9
F	2.75 / 69.8	3.75 / 95.2	4.00 / 101.6
G	7.23 / 183.6	8.30 / 210.9	8.55 / 217.2
H	3.95 / 100.4	4.27 / 108.6	4.41 / 112.1

All measurements are in inches/millimeters.

Largest measurements shown. Size may vary depending on material. All measurements are for reference only. Subject to change.

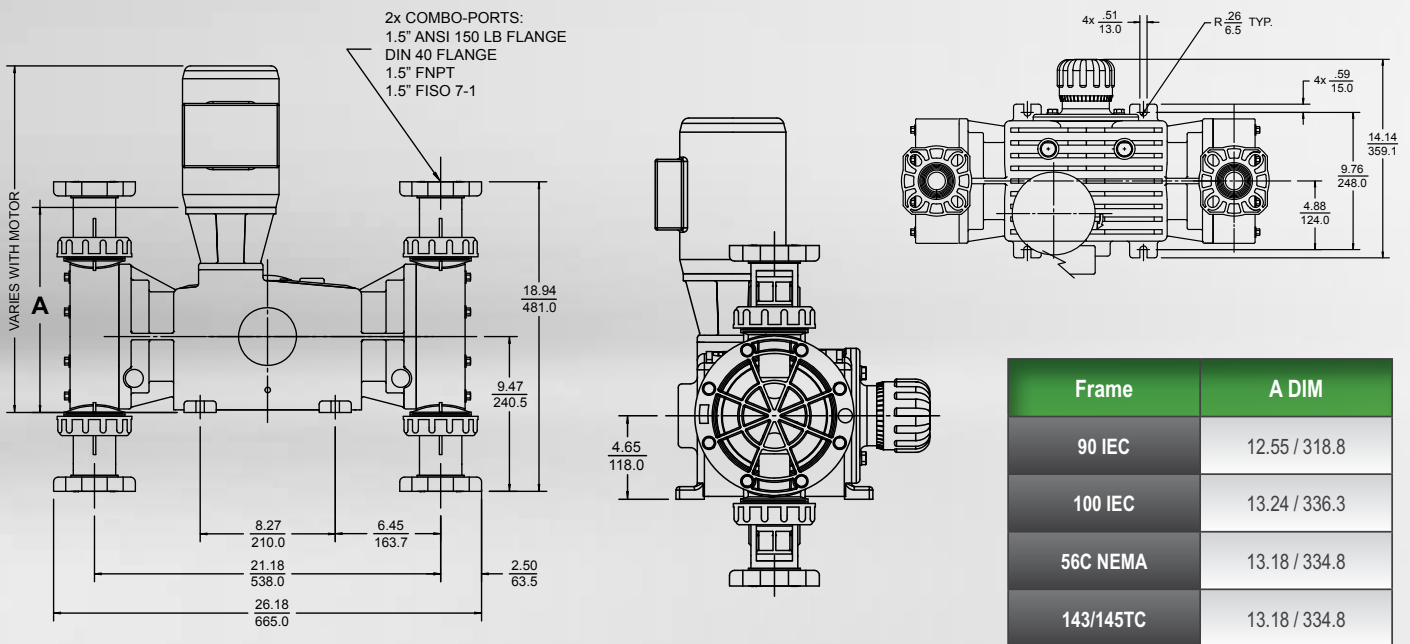
DRAWINGS

DIMENSIONAL DRAWINGS - GLM7 SIMPLEX



All measurements are in inches/millimeters.
Reinforcement plate not shown.

DIMENSIONAL DRAWINGS - GLM7 DUPLEX



All measurements are in inches/millimeters.
Reinforcement plate not shown.



PARTS, KITS, & ACCESSORIES



Spare Parts related to your pump are available. If you need to replace a diaphragm, reagent head, or a valve assembly, we have it.



Pulsation Dampeners improve pump efficiency by removing pulsations and smoothing pipe flows.



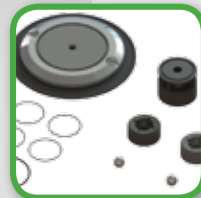
Pressure Relief Valves prevent an over pressurization situation from damaging your pump or system.



Back Pressure Valves provide positive back pressure for systems with less than the minimum required pressure difference between the discharge and suction side of the metering pump. They assure optimum performance.



PULSALube[®] is the only oil Pulsafeeder recommends for use in our pumps. PULSALube is a superior blend of oils designed to provide optimal lubrication and extend equipment life. It maintains your pump warranty.



We offer KOPkit[®] (Keep on Pumping kits) designed to guard against unnecessary downtime and assure the highest level of efficient and uninterrupted service from your GLM pump. In the event of a breakdown, one kit will put you back in business fast!

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