

Metering Pump Series GM/GB

Main Technical Characteristics

- Flowrate up to 1800L/H
- Pressure up to 12 bar
- Suction lift: up to 3 m water
- Maximum suction pressure: 2 bar
- Accuracy: $\pm 2\%$ of rated flow from 10% to 100% stroke
- Maximum temperature of pumped liquid: 40°C

Features & Benefits

Liquid End

- Mechanical actuated diaphragm design
- Eliminate contour plates, easy for material pass
- PVC, PVDF & 316SS liquid end material
- High viscosity, slurry application
- Self-cleaning suction/discharge check valve

Drive End

- Variable eccentric drive mechanism for smooth sinusoidal flow
- Rugged construction designed to withstand tough environments
- Hard-wearing ball bearings to make pump work more stably
- Oil bath lubrication for all of drive components
- Lockable micrometer stroke, adjustment can be adjusted while pump is running or stopped



Automatic Capacity Control Options

Electrical capacity controller: *Accept external control signal to adjust the stroke length*

- Power supply: 220V-50Hz, single phase
- Input signal: 4-20mA analog signal
- Output signal: 4-20mA/1-5V analog signal for record display and control system

Varipulse® controller: *ON/OFF control the three phase motor to adjust the flowrate*

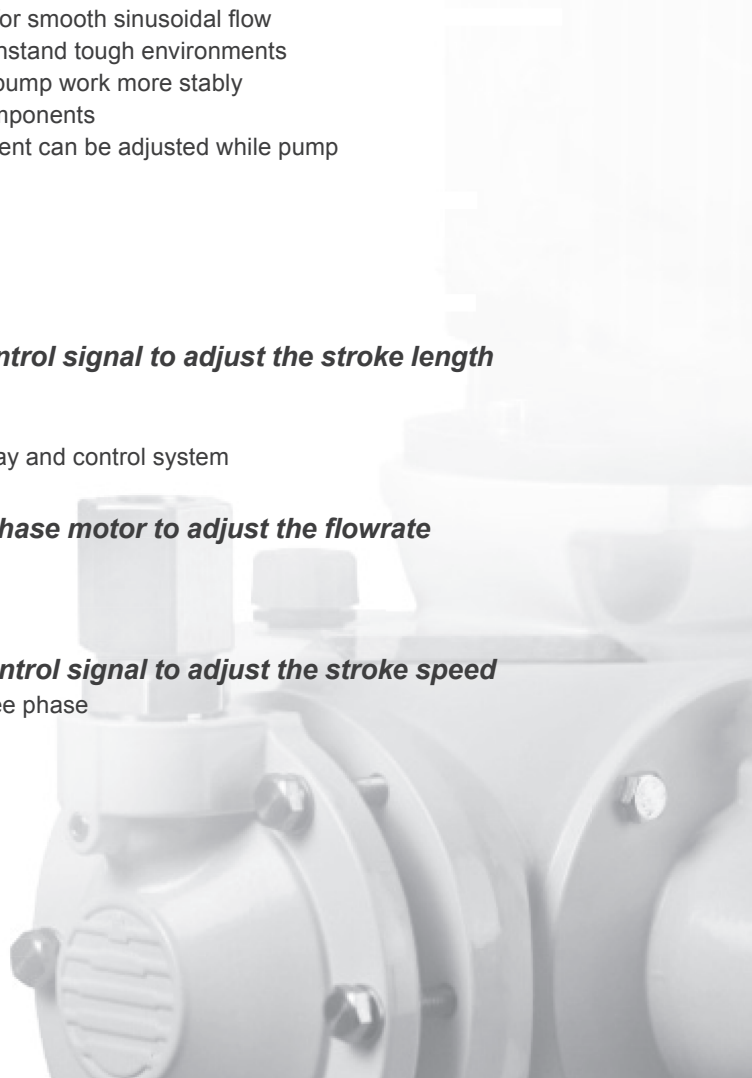
- Power supply: 200-240V/50/60Hz, single phase
- Input signal: 4-20mA analog signal / pulse signal / manual

Variable frequency controller: *Accept external control signal to adjust the stroke speed*

- Power supply: 220V-50Hz, single phase / 380V-50Hz, three phase
- Input signal: 4-20mA analog signal

Applications

Municipal, industrial water and wastewater, swimming pools and other water treatment process



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Options

- Double diaphragm
Double diaphragm with pressure gauge & switch
- Stroke counter transducer
PNP output / NPN output / relay output



GM with E-STROKE
electrical capacity
controller

Material of liquid end

GM0002~GM0050

Liquid end	Head	Valve body	Valve seat	Ball	Diaphragm	Seal	Connectors
PVC	PVC	PVDF	PVDF	Ceramis	PTFE	Viton	PVC
PVDF	PVDF	PVDF	PVDF	Ceramis	PTFE	PTFE	PVDF
316SS	316SS	316SS	316SS	316SS	PTFE	Viton	316SS

GM0090~GM0500

Liquid end	Head	Valve body	Valve seat	Ball	Diaphragm	Seal	Connectors
PVC	PVC	PVC	PVC	Glass	PTFE	Viton	PVC
PVDF	PVDF	PVDF	PVDF	Ceramis	PTFE	PTFE	PVDF
316SS	316SS	316SS	316SS	316SS	PTFE	Viton	316SS

GB0080~GB1500

Liquid end	Head	Valve body	Valve seat	Ball	Diaphragm	Seal	Connectors
PVC	PVC	PVC	PVC	Ceramis	PTFE	Viton	PVC
PVDF	PVDF	PVDF	PVDF	Ceramis	PTFE	PTFE	PVDF
316SS	316SS	316SS	316SS	316SS	PTFE	Viton	316SS

GB1800

Liquid end	Head	Valve body	Valve plate	Spring	Diaphragm	Seal	Connectors
PVC	PVC	PVC	PVC	NS333; Hastelloy C	PTFE	Viton	PVC
PVDF	PVDF	PVDF	PVDF	NS333; Hastelloy C	PTFE	PTFE	PVDF
316SS	316SS	316SS	316SS	NS333; Hastelloy C	PTFE	Viton	316SS

Accessories

- System accessories: filter, calibration column, pulsation dampener, safety valve and back pressure valve
- Safety valve is the necessary option.
- GM002~GM0050 PVC/PVDF liquid end, pumps supplied with injection nozzle, foot valve, 6m hose, except for viscosity liquid end)

Standard motor characteristics

- Power supply: 380V-50Hz, three phase/220V-50Hz, single phase
- Enclosure of protection: IP55
- Insulation: class F
- Other motor options: Explosion proof motor, 60Hz motor
- All motors comply with the International Electrotechnical Association IEC standard or the National Electrical Commission NEC standards

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G Series Product Code Selection

Code	Series	Capacity	Liquid end	Connection	Mortor	Control	Base plate	Option

Series

Code	Description
GM	GM Series MAD Metering Pump

Code	Description
GB	GB Series MAD Metering Pump

Capacity

Code	LPH@Pmax	SPM	Pmax(bar)	Motor Power
GM0002	2.25	36	12	0.25kW ⁽¹⁾
GM0005	4.5	72		
GM0010	9	144		
GM0025	25	72	10	
GM0050	50	144	7	
GM0090	85	72		
GM0120	115	72		
GM0170	170	144		
GM0240	235	144	5	
GM0330	315	144		
GM0400	400	144		
GM0500	500	180		

Code	LPH@Pmax	SPM	Pmax(bar)	Motor Power
GB0080	82	36	10	0.55kW 0.75kW ⁽¹⁾
GB0180	167	72		
GB0250	237	102		
GB0350	334	144		
GB0450	416	180		
GB0500	464	144	7	0.75kW
GB0600	583	180		
GB0700	656	102	3.5	
GB1000	946	144		
GB1200	1200	180		
GB1500	1500	180	3	0.75kW
GB1800	1800	206		

1. The power could match both constant & variable speed application, but 5-50Hz variable speed motor is not included as default configuration.
2. Do not use with 60Hz motors.

Liquid End

Code	Description
P	PVC Liquid End
S	316 Liquid End
T	PVDF Liquid End
F	PVC Liquid End(Used for sodium hypochlorite)
B	Black PP liquid end(Used for GM only)

Code	Description
V	High Viscosity (Used for PVC LE)
K	Slurry(GM2#3/4#; 316SS LE; GB: PVC LE)End)
M	Mix(GM:PVC LE)
Z	Special material liquid end.(Consult with factory)

Connection

Code	Description	GM0002-0050				GM0090-0500				GB0080-0450				GB0500-0600				GB0700-1200				GB1500-1800		
		PVC	PVDF	PP	316	PVC	PVDF	PP	316	PVC	PVDF	316	PVC	PVDF	316	PVC	PVDF	316	PVC	PVDF	316	PVC	PVDF	316
	Suction(S)/Discharge(D)	S/D	S/D	S/D	S/D	S/D	S/D	S/D	S/D	S/D	S/D	S/D	S/D	S/D	S/D	S	D	S	D	S	D	S/D	S/D	S/D
P	NPT	-----	-----	1/4"M	1/2"F	1/2"F	1/2"F	1/2"F	1/2"F	1/2"F	1/2"F	1/2"F	1/2"F	1/2"F	1/2"F	1"	1"	1"	1-1/2"F	1"	1-1/2"F	1"	1-1/2"F	1-1/2"M
Q	Pipe	DN15	-----	-----	-----	DN15	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
R	Hose pipe 6X12	6x12	6x12 ⁽²⁾	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
L ⁽¹⁾	PE pipe	3/8"x1/2"	3/8"x1/2" ⁽²⁾	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
H	GM pipe High viscosity application	15x23 9x12	-----	-----	-----	DN15	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
X	Others	Consult with factory, and describe the requirements in purchase order																						

Note:Standard configuration is bold letter marked in shadom. For V/ K/ M/ F liquid end, connection depend on material L.E.

(*) The standard material of hose pipe is PVC for code R, consult factory for PVDF pipe if required.

(1) The Max.work pressure for PE pipe is 10 bar.

(2) The standard material of pipe is PE for code L, consult factory for PVDF pipe if required.

Motor

Code	Description(GM)	Description(GB)
1	250W, IEC71,4P,3-50-220/380V,IP55/F/TEFC	550W, IEC71,4P,3-50-220/380V,IP55/F/TEFC
2	Without motor, but NEMA56C connection and standard test	Without motor, but NEMA56C connection and standard test
3	250W, IEC71,4P,3-50-380V,IP55/F/TEFC,ExdIIBT4	550W, IEC80,4P,3-50-220/380V,IP55/F/TEFC,ExdIIBT4
4	370W, IEC71,4P,3-50-220/380V,IP55/F/TEFC	750W, IEC80,4P,3-50-220/380V,IP55/F/TEFC
5	250W, IEC71,4P,1-50-220V,IP55/F/TEFC	750W, IEC80,4P,3-50-220/380V,IP55/F/TEFC,ExdIIBT4
6	250W, IEC71,4P,3-50-200/400V,3-60-230/460V,IP55/F/TEFC	550W, IEC71,4P,3-50-200/400V,3-60-230/460V,IP55/F/TEFC
7	370W, IEC71,4P,3-50-200/400V,3-60-230/460V,IP55/F/TEFC	750W, IEC80,4P,3-50-200/400V,3-60-230/460V,IP55/F/TEFC
8	-----	550W, IEC80,4P,3-50-220/380V,IP55/F/TEFC
9(5)	Without motor, but with IEC71 connection and standard test	Without motor, but with IEC71 connection and standard test
9(8)	-----	Without motor, but with IEC80 connection and standard test
9	Others, Consult with Factory	Others, Consult with Factory

Note: Single phase motor can't be used with Varipulse® controller.

Base Plate

Code	Description	Remark
N	N/A	Standard Configuration
Y	YES ⁽²⁾	-----

Capacity Control

Code	Description(GM)	Description(GB)	Remark
M	Manual Adjustment	Manual Adjustment	Standard Configuration
N	MRIS E-STROKE, E-STROKE, 4-20mA, 220VAC-1Ph	MRIS E-STROKE, E-STROKE, 4-20mA, 220VAC-1Ph	-----
A	MRIS E-STROKE, E-STROKE, 4-20mA, 115VAC-1Ph	MRIS E-STROKE, E-STROKE, 4-20mA, 115VAC-1Ph	-----
U	MRE STEGMANN, 4-20mA, 220VAC-1Ph	MRA ECC, 4-20mA, 220VAC-1Ph	-----
G	MRE STEGMANN, 4-20mA, 115VAC-1Ph	MRA ECC, 4-20mA, 115VAC-1Ph	-----
E	-----	MRA ECC, 4-20mA, 220VAC-1Ph, Ex. Proof	Used for GB
K	-----	MRA ECC, 4-20mA, 115VAC-2Ph, Ex. Proof	Used for GB
F	Frequency Inverter, 3PH, AC, 0.75KW/380V-480V	Frequency Inverter, 3PH, AC, 0.75KW/380V-480V	-----
T	Varipulse® Controller and E-STROKE ECC	-----	Used for GM
P	Varipulse® Controller (220VAC-1Ph-50Hz)	-----	Used for GM

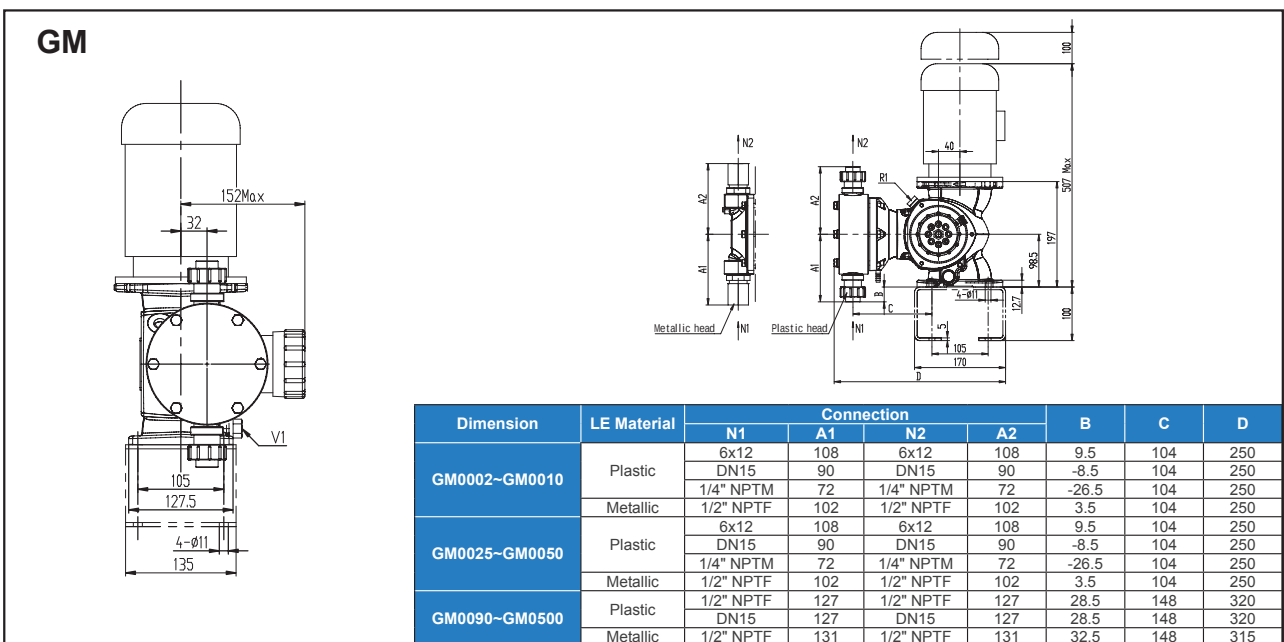
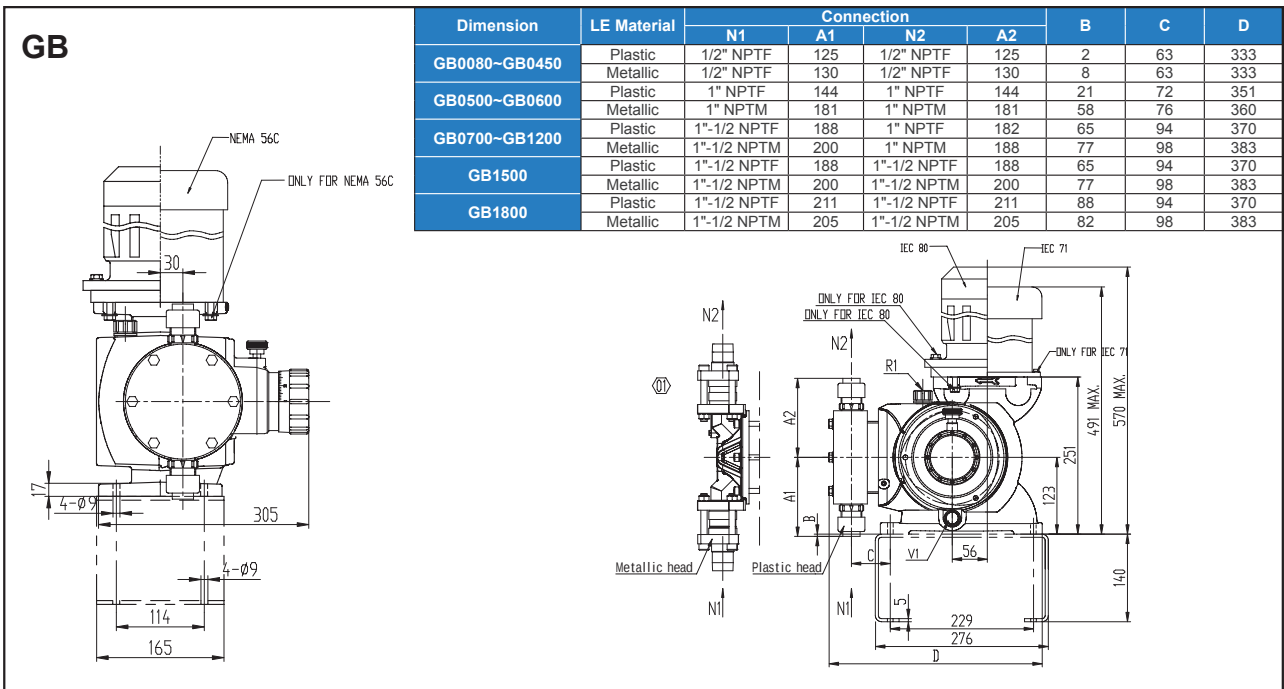
Option

Code	Description	Remark
N	N/A	-----
A	Stroke Counter transducer	-----
B	Double Diaphragm With Pressure Gauge	-----
C	Double Diaphragm With Pressure Switch (With Baseplate)(*)	With base plate
D	Double Diaphragm With Pressure Gauge & Switch(With baseplate)(*)	With base plate
X	Others, Consult with factory.	Describe the requirements in purchase order

(2). Code C or D has included base plate in the structure, please choose code "N" for the Base Plate in such a application.

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GA Drawing



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