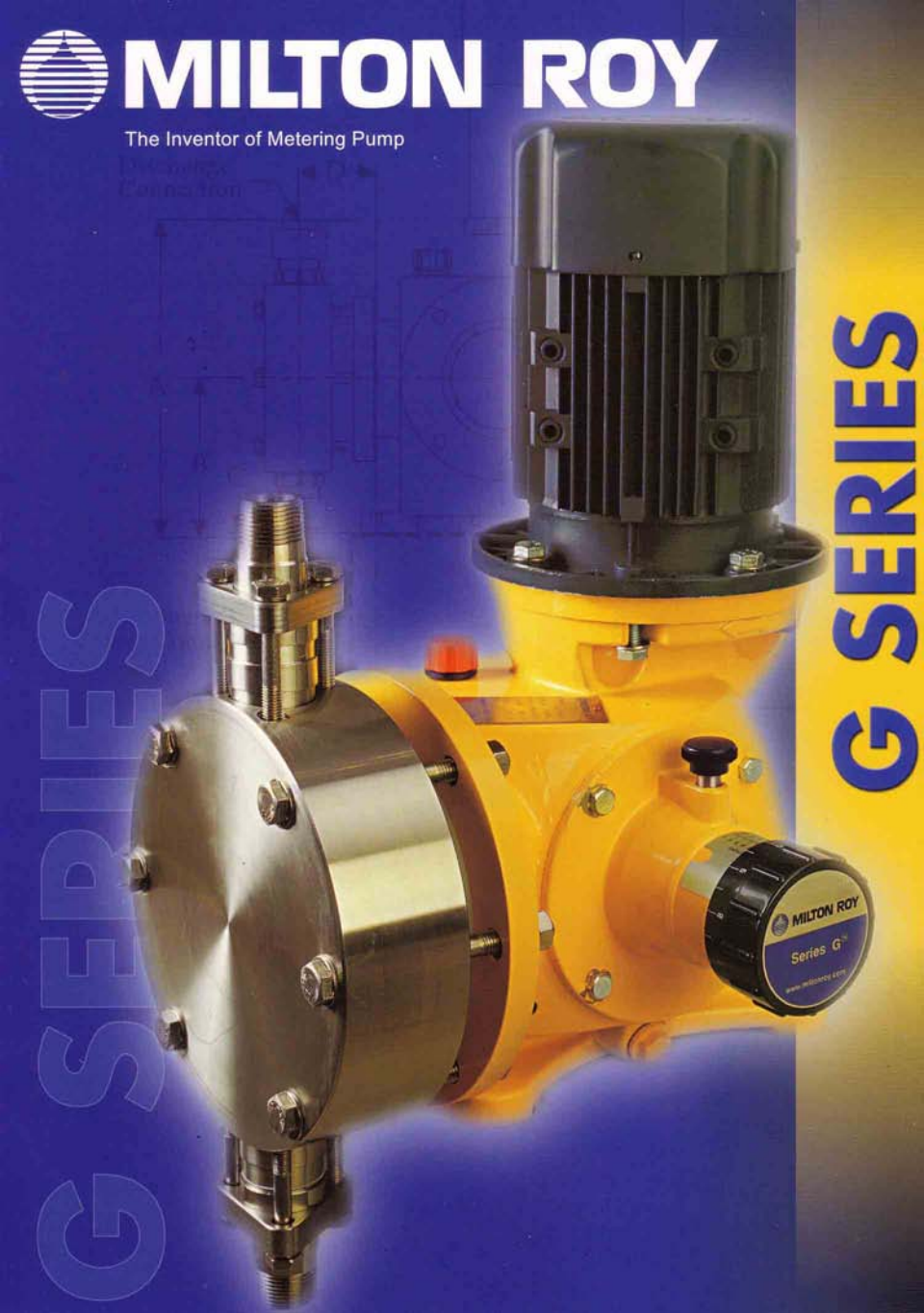
MILTON ROY

The Inventor of Metering Pump



G SERIES

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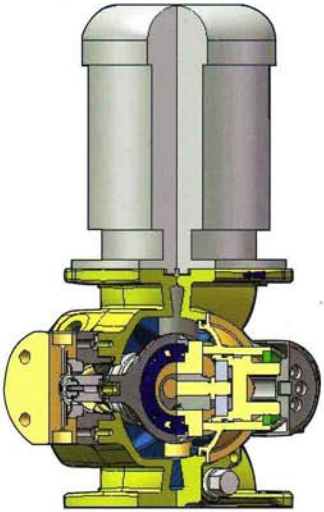
The G Series of metering pumps offer traditional Milton Roy reliability with outstanding value for applications up to 175 psi (12 Bar).

Milton Roy has combined its heavy-duty industrial drive technology with state of the art design and manufacturing processes in creating the G Series metering pump. This family of Mechanically Actuated Diaphragm metering pumps is designed for durability and cost effectiveness.



MATERIAL OF CONSTRUCTION

• GM**0002**~GM**0050**

Liquid End	Liquid End Body	Valve Body	Seat	Ball	Diaphragm	Seal	Connection
PVC	PVC	PVDF	PVDF	Ceramic	PTFE	Viton	PVC
PVDF	PVDF	PVDF	PVDF	Ceramic	PTFE	PTFE	PVDF
316 SS	316 SS	316 SS	316 SS	316 SS	PTFE	Viton	316 SS

• GM**0090**~GM**0500**

Liquid End	Liquid End Body	Valve Body	Seat	Ball	Diaphragm	Seal	Connection
PVC	PVC	PVC	PVC	Glass	PTFE	Viton	PVC
PVDF	PVDF	PVDF	PVDF	Ceramic	PTFE	PTFE	PVDF
316 SS	316 SS	316 SS	316 SS	316 SS	PTFE	Viton	316 SS

• GB**0080**~GB**1500**

Liquid End	Liquid End Body	Valve Body	Seat	Ball	Diaphragm	Seal	Connection
PVC	PVC	PVC	PVC	Ceramic	PTFE	Viton	PVC
PVDF	PVDF	PVDF	PVDF	Ceramic	PTFE	PTFE	PVDF
316 SS	316 SS	316 SS	316 SS	316 SS	PTFE	Viton/PTFE	316 SS

• GB**1800**

Liquid End	Liquid End Body	Valve Body	Valve Stopper	Ball	Diaphragm	Seal	Connection
PVC	PVC	PVC/PVC	PVC/PVC	hastelloy C	PTFE	Viton	PVC
PVDF	PVDF	PVDF/PVDF	PVDF/PVDF	hastelloy C	PTFE	PTFE	PVDF
316 SS	316 SS	316 SS/316 SS	316 SS/316 SS	hastelloy C	PTFE	Viton	316 SS

ACCESSORIES
For GM0002~GM0050 (PVC & PVPF liquid end), pumps are supplied with 1 injection nozzle, 1 foot valve + 1 weight and 1 reinforced PVC hose (6m)

STANDARD MOTOR DATA
Supply : 380V, 50 Hz, 3 phase or 220V, 50Hz, 1 phase
Enclosure : IP55
Insulation : Class F
Note : IEC/Nema explosion proof motor and other non-standard motor are available

PRODUCT CODE

Series	Capacity	Liquid End	Connection	Motor	Capacity Control	Base	Option
Code							

Series

Code	Description
GM	GM Series MAD Metering Pump

Code	Description
GB	GB Series MAD Metering Pump

Capacity

Code	LE Type	LPH@P_{max} 50HZ	LPH@P_{max} 60HZ	SPM 50HZ	SPM 60HZ	Pmax bar	Power
GM0002	1#	2.25	2.7	36	43	12	250W[1]
GM0005		4.5	5.4	72	86		
GM0010		9	10.5	144	173		
GM0025	2#	25	30	72	86		
GM0050		50	60	144	173	10	
GM0090	3#	85	100	72	86	7	
GM0120		115	140	72	86		
GM0170		170	200	144	173		
GM0240		235	280	144	173		
GM0330	4#	315	370	144	173	5	250W 370W[1]
GM0400		400	480	144	173		
GM0500		500	520	180	187		

Code	LE Type	LPH@P_{max} 50HZ	LPH@P_{max} 60HZ	SPM 50HZ	SPM 60HZ	Pmax bar	Power
GB0080	40#	82	98	36	43	10	550W 750W[1]
GB0180		167	200	72	86		
GB0250		237	284	102	120		
GB0350		334	400	144	173		
GB0450		416	455[1]	180	198		
GB0500	60#	464	556	144	173	7	
GB0600		583	640[1]	180	198		
GB0700		656	787	102	120	3.5	
GB1000		946	1136	144	173		
GB1200	80#	1200	1300[2]	180	198	3	750W
GB1500		1500	1650[2]	180	198		
GB1800		1800	1730[2]	206	198		

(1)Used for both constant & varible speed application.Use frequency conversion motor(5-50Hz). (2)The gear/worm is different from that of 50Hz.

Liquid End

Code	Description
P	PVC Liquid End
S	316 Liquid End
T	PVDF Liquid End
F	PVC Liquid End, used for Sodium Hypochlorite*

Code	Description
V	High Viscidity(PVC LE)
K	Slurry(GM0002~0010:N/A; GM0025~0500:316 Material; GB:PVC)
M	Mix (PVC LE ;GM only)
Z	Special material liquid end (Consult with factory. Describe in Purchase Order.)

* GM0002~0050,EPDM O-ring; GM0090~0500, PTFE encapulated O-ring.

Connection

Code	Description	GM0002~0010 PVC	GM0002~0010 PVDF	GM0002~0010 316	GM0025~0050 PVC	GM0025~0050 PVDF	GM0025~0050 316	GM0090~0500 PVC	GM0090~0500 PVDF	GM0090~0500 316	GB0080~0450 PVC	GB0080~0450 PVDF	GB0080~0450 316	GB0500~1200 PVC	GB0500~1200 PVDF	GB0500~1200 316	GB1500~1800 PVC	GB1500~1800 PVDF	GB1500~1800 316
P	NPT	1/4"M	1/4"M	1/2"F	1/2"M	1/2"M	1/2"F	1/2"F	1/2"F	1/2"F	1/2"F	1/2"F	1/2"F	1"F	1"F	1"M	1-1/2"F	1-1/2"F	1-1/2"M
Q	Pipe	-----	-----	-----	-----	-----	-----	DN15	-----	-----	DN15	-----	-----	DN25	-----	-----	-----	-----	-----
R	Hose Pipe 6X12	6X12	6X8[2]	-----	6X12	6X12[2]	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
H	GM Hose Pipe High Viscosity Application	15X23 9X12	-----	-----	15X23 9X12	-----	-----	DN15	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
X	Others, Consult with Factory	Describe in Purchase Order																	

Note: Standard configuration is marked in shadow.PVC is the standard material for hose pipe.
(2)The standard material of hose pipe is PVC. Please consult factoryfor PVDF Pipe.

Motor

Code	Description (GM)	Description (GB)
1	250W,IEC71,1440rpm,3-50-220/380V,IP55/F/TEFC	550W,IEC71,1440rpm,3-50-220/380V,IP55/F/TEFC
2	1/3hp,NEMA56C,1440rpm,3-50-220/380V,NEMA3/TEFC	1hp,NEMA56C,1440rpm,3-50-220/380V,NEMA3/TEFC
3	250W,IEC71,1440rpm,3-50-380V,IP55/F/TEFC/Ex-dIIBT4	550W,IEC80,1440rpm,3-50-220/380V,IP55/F/TEFC/Ex-dIIBT4
4	370W,IEC71,1440rpm,3-50-220/380V,IP55/F/TEFC	750W,IEC80,1440rpm,3-50-220/380V,IP55/F/TEFC
5	-----	750W,IEC80,1440rpm,3-50-220/380,IP55/F/TEFC/Ex-dIIBT4
6	250W,IEC71,4P,3-50-200/400,3-60-230/460,IP55/F/TEFC	550W,IEC71,4P,3-50-200/400V,3-60-230/460,IP55/F/TEFC
7	370W,IEC71,4P,3-50-220/380,3-60-230/460,IP55/F/TEFC	750W,IEC80,4P,3-50-200/400,3-60-230/460,IP55/F/TEFC
8	-----	550W,IEC80,1440rpm,3-50-220/380V,IP55/F/TEFC
9(1)	370W,IEC71,4P,3-50-220/380V,IP55/F/TEFC/Ex-dIIBT4	550W,IEC80,4P,3-50-200/400V,3-60-230/460,IP55/F/TEFC/Ex-dIIBT4
9(2)	-----	750W,IEC80,4P,3-50-200/400,3-60-230/460,IP55/F/TEFC/Ex-dIIBT4
9(3)	250W,IEC71,4P,3-50-380V,3-60-230/460, IP55/F/TEFC/Ex-dIIBT4	-----
9(4)	370W,IEC71,4P,3-50-220/380V,3-60-230/460, IP55/F/TEFC/Ex-dIIBT4	-----
9(5)	Without motor,but with IEC71 connection	Without motor,but with IEC71 connection
9(6)	370W,IEC71,4P,1-50-220V,IP55/F/TEFC	-----
9(7)	370W,IEC71,4P,1-60-230V,IP55/F/TEFC	-----
9(8)	-----	Without motor,but with IEC80 connection
9	Others, Please consult factory	Others, Please consult factory

Single-ph motor can't be used with motor on/off controller.

Capacity Control

Code	Description (GM)	Description (GB)	Remark
M	Manual Adjustment	Manual Adjustment	Standard Configuration
N	ECC, 4-20mA, 230V AC-1Ph	ECC, 4-20mA , 230V AC-1Ph	Electronic stroke control
E	----------	ECC,4-20mA 230VAC-1Ph, Ex. Proof	
F	Variable frequency control, 4-20mA	Variable frequency control, 4-20mA	Select variable speed motor
T	Varipulse and ECC	----------	Used for all GM pumps
P	Varipulse (1ph-50Hz-220V)	----------	Used for all GM pumps

Base Plate

Code	Description(GM)	Description(GB)	Remark
N	N/A	N/A	Standard Configuration
Y	YES	YES	

Option

Code	Description (GM)	Description (GB)	Remark
N	N/A	N/A	Standard Configuration
A	Stroke Counter	Stroke Counter	
B	Double Diaphragm With Pressure Gauge	Double Diaphragm With Pressure Gauge	Include pressure gauge
C[3]	Double Diaphragm With Pressure Switch	Double Diaphragm With Pressure Switch	Include Non-exproof Pressure Switch
D[3]	Double Diaphragm With Pressure Gauge&Switch	Double Diaphragm With Pressure Gauge&Switch	Include Non-exproof Pressure G/Sw
X	Others, Please Consult Factory	Others,Consult with factory.	Describe Special Config in Order

(3) Base plate included for code C and D

Technical Specifications

- Mechanically actuated PTFE diaphragm
- Flow rates up to 1800 LPH, pressure up to 12 bar
- Adjustment of flowrate from 0% ~ 100% while running or stopped
- Accuracy +/-2% of 100% rated flow
- Maximum temperature of pumped fluid : 40 °C
- Maximum suction lift up to 3 m water, max. suction pressure 2 bar

Features & Benefits

- Mechanical actuated diagragm design eliminates contour plates
- Variable eccentric drive mechanism for smooth sinusoidal flow
- Rugged construction designed to withstand tough environments
- Oil bath lubrication for all of drive components
- Lockable micrometer stroke, adjustment can be adjusted while pump is running or stopped
- PVC, PVDF & 316SS liquid end material
- Self- cleaning suction/discharge check valve
- Simplified service-easy access to the main components, large opening and few assemblies

Automatic Capacity Control Options

- Electronic Capacity Control : Automatic stroke adjustment by 4 - 20mA analog signal
  Power Supply : 220V, 50/60Hz, 1 phase
- Variable speed : Automatic speed variation by 4-20mA analog signal
  Power Supply : 200V - 240V, 50/60Hz, 1 phase or 380 - 480V, 50/60Hz, 3 phase
- Varipulse Control : Proportional control by 4-20mA analog signal /pulse or manual selection
  Power Supply : 220V - 50/60Hz, 1 phase (3 phase optional)

Other Options

- Double diaphragm
- Stroke Counter
- Material for special applications

GM pump with electronic capacity control

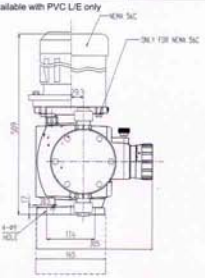
GM pump with varipulse control

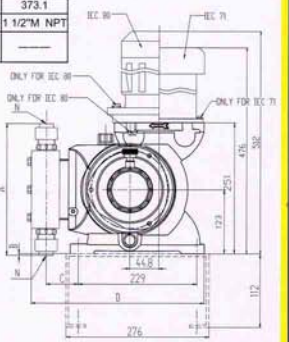
PUMP OUTLINE DRAWING

Model / Dimension	GB40(80-450)		GB60(500-600)		GB80(700-1200)		GB80(1500)		GB80(1800)	
	Plastic	Metalic	Plastic	Metalic	Plastic	Metalic	Plastic	Metalic	Plastic	Metalic
A	237	260	286	338	362	414	374	446	420	458
B	5	4	19	46	59	85	64	100	87	102
C	60.3	60.3	71.4	76.2	96.4	100	96.4	100	96.4	100
D	333	333	351.2	348	373.1	373.1	373.1	373.1	373.1	373.1
N	1/2"F NPT	1/2"F NPT	1"F NPT	1"M NPT	1 1/2"F NPT	1 1/2"M NPT	1 1/2"F NPT	1 1/2"M NPT	1 1/2"F NPT	1 1/2"M NPT
	DN15*	———	DN15*	———	DN15*	———	———	———	———	———

*Optional, available with PVC L/E only

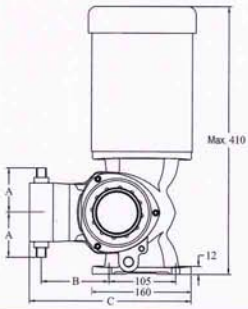
GB Series

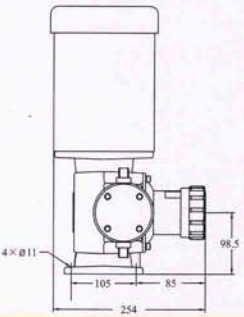




L/E Material	GM0002~GM0050				GM0090~GM0500			
	Conn.Code	A	B	C	Conn.Code	A	B	C
PVC	P	108	116	250	Q	127	159	322
PVDF	P	108			N	131		
316	N	102			N	131		

GM Series





Weight

Pump with motor		Metal LE		Plastic LE	
		Net WT (kgs)	Gross WT (kgs)	Net WT (kgs)	Gross WT (kgs)
GM	2-10	22	25	19	22
	25-50	23	26	20	23
	90-500	25	28	21	24
	Add Ecc	+5			
	without 0.25 motor	-6			
	without 0.37 motor	-7			
GB	80-450	42	47	39	43
	500-1200	45	50	41	45
	1500-1800	48	53	44	48
	without 0.55 motor	-8			
	without 0.75 motor	-10			

Shipping Dimensions

GM	460 x 360 x 555 (mm)
GB	610 x 410 x 700 (mm)

G SERIES, DEPENDABLE AND VERSATILE

The G Series of pumps has proven its exceptional value over years of solid performance in a wide range of applications and industries. Water treatment chemicals, process additives, acids, out-gassing fluids, slurries, and many more applications are all handled with ease by this robust metering pump design. Your local representative can assist you in applying the G Series metering pump to your process.

MILTON ROY

Milton Roy Asia Pacific Company (Singapore)
23 Tagore Lane #03-06
Tagore 23 Warehouse Complex
Singapore 787601
Tel : (65) 6242 9182 Fax : (65) 6243 4249
Email : mrapsing@miltonroy.com.sg

Thailand
1858/63-74 Nation Tower, 14th Floor
Room A, Bangna-Trad Road, K.M. 4.5
Bangna, Bangkok 10260, Thailand
Tel : 662-7514777 Ext.3200 Fax : 662-7514720

Korea
Suite 1417, Sungji Hytz Building III,
#642-6, Yeoksam-dong, Kangnam-gu,
Seoul, Korea.
Tel : 82-02-557-1110 Fax : 82-02-557-1115

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ACCESSORIES

Pulsation Dampeners
Minimize pressure and flow surges in the pump discharge. When applied to pump inlet, more favorable NPSH conditions result.

Calibration Columns
Allow periodic verification of pump performance during routine checks or after system maintenance.

Safety Valves
Protect pump and piping from overpressure.

Back Pressure Valves
Provide smooth, artificial pressure in pump discharge line for atmospheric or low pressure systems to ensure pumping accuracy.