



Technical Catalogue



GMS Series

Mechanical Diaphragm Metering Pump

GMS, GBS series mechanical diaphragm metering pump



GMS series mechanical diaphragm metering pump



GBS series mechanical diaphragm metering pump

Main performance parameters

Maximum flow rate: 2040L/h

Maximum discharge pressure: 12bar

Adjustment range: 30%-100%, steady-state accuracy $\pm 1\%$

The suction lifting height can reach up to 3m water column

Maximum ambient temperature: $+40^{\circ}\text{C}$

Maximum inlet pressure: 2bar

Main features

Driver end.

Variable eccentric mechanism is adjusted to ensure a gentle change in flow pulsation.

The enhanced structure design is suitable for the operating environment of the division.

Wear-resistant ball bearings make the work more stable.

Oil bath lubrication, long working life of drive components.

The suction lifting height can reach up to 3m water column

The flow rate can be adjusted during shutdown or operation, and the adjustment method can be manual, electric or frequency conversion.

Hydraulic end.

The diaphragm is mechanically driven, and there is no diaphragm guard plate on the material side to facilitate the passage of the material.

PVC, PVDF, 316SS, high viscosity, slurry and other pump head materials are suitable for conveying various materials.

Self-cleaning check valve structure, easy to maintain.

Control mode

Electric stroke controller, accepts external control signals and adjusts the stroke length

Power supply: 220V/single phase, 50Hz

Input signal: 4-20mA analog signal

Output signal: 4-20mA/1-5V analog signal, for recording display and control system use

External control signals can be received by installing a frequency conversion controller to adjust the stroke speed

Power supply: 380V/three-phase, 220V/single-phase, 50Hz

Input signal: 4-20mA analog signal

Switch controller, control the three-phase motor in the "on/off" mode, "adjust the output flow"

Main application

Environmental protection, petrochemical industry, chemical industry, petroleum refining, electric power, metallurgy, medicine, food, water treatment and other fields.

Attachment Annex

Optional accessories such as: filter, correction column, pulsation damper, safety valve and back pressure valve, etc., including safety valve is required.

GMS0002-GMS0050 series PVC hydraulic end metering pump, in addition to the high viscosity pump head, with the metering pump Provide injection valve, bottom valve, counterweight and 6m hose.

Motor performance parameters

Power supply: 380V/three-phase, 220V/single-phase, 50Hz

Insulation grade: F grade

Protection class: IP55

All motors comply with the IEC standard of the International Electrotechnical Association or the NEC standard of the National Electrical Commission of the United States.

Options available

Double diaphragm pump head

Stroke count sensor

Double diaphragm rupture pressure gauge detection and pressure switch detection

PNP output/NPN output/relay output

Material of main components of liquids end

GMS002-GMS0500						
Hydraulic end	Valve body	Valve seat	Valve ball	Diaphragm	Seal diagram	Connect
PVC	PVC	PVDF	Oxidation error	PTFE	FPM/EPDM*/Oxygen-coat*	PVC
PVDF	PVDF	PVDF	Oxidation error	PTFE	FPM/EPDM*/Oxygen-coat*	PVDF
316SS	316SS	316SS	316SS	PTFE	FPM/EPDM*/Oxygen-coat*	316SS

*Optional item

GBS0080-GBS1200						
Hydraulic end	Valve body	Valve seat	Valve ball	Diaphragm	Seal diagram	Connect
PVC	PVC	PVDF	氧化锆	PTFE	FPM/EPDM*/Oxygen-coat*	PVC
PVDF	PVDF	PVDF	氧化锆	PTFE	FPM/EPDM*/Oxygen-coat*	PVDF
316SS	316SS	316SS	316SS	PTFE	FPM/4F/EPDM*/Oxygen-coat*	316SS

*Optional item

GBS1500-GBS2000							
Hydraulic end	Valve body	Valve seat	Valve ball	Spring	Diaphragm	Seal diagram	Connect
PVC	PVC	PVC	PVDF	PVC	HastelloyC-276	PTFE	FPM/EPDM*
PVDF	PVDF	PVDF	PVDF	PVDF	HastelloyC-276	PTFE	FPM/EPDM*
316SS	316SS	316SS	316SS	316SS	HastelloyC-276	PTFE	4F

*Optional item

GMS, GBS Series mechanical diaphragm metering pumps

series flow rate hydraulic end interface motor adjust base option

Series

Encoding	Desc	Encoding	Desc
GMS	GMS series mechanical diaphragm metering pump	GBS	GBS series mechanical diaphragm metering pump

Flow

Encoding	Maxium flow rate (L/h)	Maximum pressure (bar)	Number of stroke (min3)	Motor power (kW)
GMS0002	2.25	12	36	0.25
GMS0005	4.5		36	
GMS0010	9		36	
GMS0025	25		72	
GMS0050	50	10	144	0.37
GMS0090	85	7	72	
GMS0120	115		72	
GMS0170	170		144	
GMS0240	235	5	144	0.37
GMS0330	315		144	
GMS0400	400		144	
GMS0500	500		180	
GBS0080	82	10	36	0.55
GBS0180	167		72	
GBS0250	237		102	
GBS0350	334		144	
GBS0450	416	7	180	0.75
GBS0500	464		144	
GBS0600	583		180	
GBS0700	656		102	
GBS1000	946	3.5	144	0.75
GBS1200	1200	3	180	
GBS1500	1500		180	
GBS1800	1800		206	
GBS2000	2040		206	

this power is used for three-phase constant speed motors power is used for single-phase, explosion proof, frequency-conversion motors this power is used for three-phase constant-speed, explosion-proof motor

this power is used for single-phase, frequency-conversion motors

Liquid end

Encoding	Description	Encoding	Description
P	PVC hydraulic end	V	High viscosity application: PVC hydraulic end
S	316 hydraulic end	K	Wrong material application: GMS0025-0500 316 hydraulic end; GBS PVC hydraulic end
T	PVDF hydraulic end	M	Mixture application: GMS: PVDF hydraulic terminal
F	Sodium hypoxite application: PVC hydraulic end	Z	For special material hydraulic ends, please consult the factory and specify when ordering

■ GMS, GBS series: EPDM material O-shaped garden

Connector

Encoding	Description	GMS0002-0050			GMS0090-0500			GMS0080-0450			GMS0500-1200			GMS1500-2000		
		PVC	PVDF	316	PVC	PVDF	316	PVC	PVDF	316	PVC	PVDF	316	PVC	PVDF	316
P	NPT threaded interface	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"F	1"F	1"M	1-1/2"F	1-1/2"F	1-1/2"M
Q	Inner nozzle hard tube intubation interface	DN15	-----	-----	DN15	-----	-----	DN15	-----	-----	DN25	-----	-----	DN40	-----	-----
R	Hose interface	6x12	6.35x9.52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
H	GMS hose 12x18 for high viscosity applications	12x18	-----	-----	20x28	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
X	Special interface	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Note: The parameter part of the red text is the standard configuration, high viscosity pump head V, complex material head K, mixture pump head M, if there is no special option, the interface will be selected according to the material of the hydraulic end.

■ PVC hose us 6 meters long/root; 1 hose is configured by default at the factory injection

■ Bottom valves, counterweight and tetraoxygen hose are not configured at the factory. Please order additional and inquire with the factory.

Motor

	GMS	GBS
1	0.25kW, IEC71, three-phase 380V, 50Hz, 1440rpm, IP55/F	0.55kW, IEC80, three-phase 380V, 50Hz, 1440rpm, IP55/F
2	-----	-----
3	0.37kW, IEC71, three-phase explosion-proof 380V, 50Hz, 1440rpm, IP55/F	0.55kW, IEC80, three-phase explosion-proof 380V, 50Hz, 1440rpm, IP55/F, dIIBT4
4	0.37kW, IEC71, three-phase 380V, 50Hz, 1440rpm, IP55/F	0.75kW, IEC80, three-phase 380V, 50Hz, 1440rpm, IP55/F
5	0.25kW, IEC71, single-phase 220V, 50Hz, 1440rpm, IP55/F	0.75kW, IEC80, three-phase explosion-proof 380V, 50Hz, 1440rpm, IP55/F, dIIBT4
6	0.25kW, IEC71, three-phase frequency conversion 380V, 50Hz, 1440rpm, IP55/F, IC416	0.55kW, IEC80, single-phase 220V, 50Hz, 1440rpm, IP55/F
7	0.37kW, IEC71, three-phase frequency conversion 380V, 50Hz, 1440rpm, IP55/F, IC416	0.75kW, IEC80, single-phase 220V, 50Hz, 1440rpm, IP55/F
8	-----	-----
9(5)	The pump not equipped with a motor at the factory, and the IEC71 interface is retained.	The pump is not equipped with a motor at the factory, and the IEC71 interface is retained.
9(6)	0.37kW, IEC71, single-phase 220V, 50Hz, 1440rpm, IP55/F	-----
9(8)	-----	The pump is not equipped with a motor at the factory, and the IEC80 interface is retained.
9	For other motors, please consult the factory	For other motors, please consult the factory

Note: Single-phase motor cannot be used at the same time as switch controllers.

Regulate

Encoding	Describe GMS	Describe GBS	Remarks
M	Manual stroke adjustment	Manual stroke adjustment	Standard configuration
N	Electric stroke adjustment, 4-20mA, 1PH-50Hz-220V	Electric stroke adjustment, 4-20mA, 1PH-50Hz-220V	-----
E	-----	Electric stroke adjustment, 4-20mA, 1PH-50Hz-220V, Ex.Proof	-----
F	Frequency conversion control	Frequency conversion control	-----

Pedestal

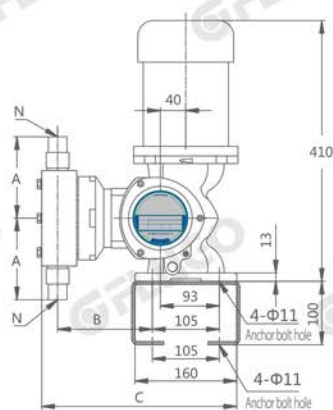
Encoding	Describe GMS	Describe GBS	Remarks
N	No base	No base	Standard configuration
Y	Has a base	Has a base	-----

Option

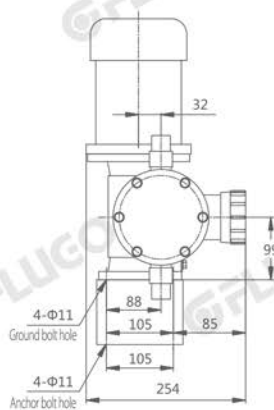
Encoding	Describe GMS	Describe GBS	Remarks
N	No option	No option	-----
B	Diaphragm rupture detection and pressure gauge	Diaphragm rupture detection and pressure gauge	-----
C	Diaphragm rupture detection and pressure gauge, pressure switch	Diaphragm rupture detection and pressure gauge, pressure switch	With non-explosion-proof pressure switch and pressure gauge, including base
D	Diaphragm rupture detection and pressure gauge, explosion-proof pressure switch	Diaphragm rupture detection and pressure gauge, explosion-proof pressure switch	Explosion-proof pressure switch and pressure gauge, including base
X	For others, please consult the factory	For others, please consult the factory	Please specify the special configuration in the contract

■ When the GMS and GBS series choose a double diaphragm with pressure switch, the default is to have a base, and the option for the base part should be "Y"

GMS Series Dimensions

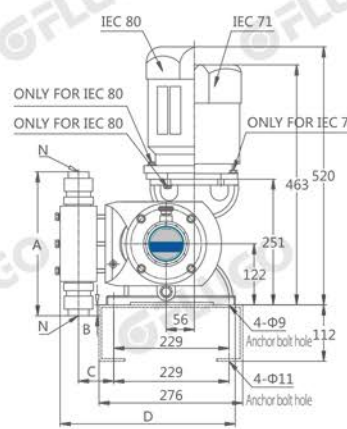


GMS series size chart (including base)

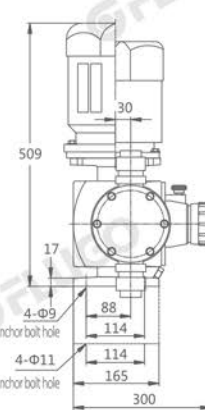


GMS series size chart (including base)

GBS Series Dimensions



GBS series size chart (including base)



GBS series size chart (including base)

GMS series installation dimensions

GMS002-GMS0050					GMS0090-GMS0500				
Pump head material	Interface code	A(mm)	B(mm)	C(mm)	Pump head material	Interface code	A(mm)	B(mm)	C(mm)
PVC	R	100	102	250	PVC	P	127	150	307
PVDF	P	100			PVDF	P	131		
316	P	101			316	P	131		

GBS series installation dimensions

Model	GBS0080-0450		GBS0500-0600		GBS0700-1200		GBS1500-2000	
Size	Plastic	Metal	Plastic	Metal	Hope	Metal	Plastic	Metal
A	256	264	286	348	362	423	419	458
B	6	10	21	52	59	89.5	87.5	107
C	71	65	71	79	96	100	96	100
D	350	332	350	350	373	370	373	370
N	1/2" F NPT	1/2" F NPT	1" F NPT	1" M NPT	1" F NPT	1" M NPT	1-1/2" F NPT	1-1/2" M NPT
	DN15 (PVC pump head only)	-----	DN25 (PVC pump head only)	-----	DN25 (PVC pump head only)	-----	DN40 (PVC pump head only)	-----



Mechanical Diaphragm Metering Pump

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