QÍLEE

α-Dose Series MAD Metering Pump

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Technical Specification

.Flow rate: 2~5000 L/h

.Max.discharge pressure: 10 Bar

.Turndown Ratio: 10:1

.Stability accuracy: ±2%

.Max. suction lift head: 3m

.Max. suction pressure: 2 Bar

.Max. liquid temperature: 45℃

.Max. viscosity: up to 1200cP

Liquid End Features

. LE material: PVC; PVDF; 316SS

. Diaphragm material: PTFE

. Ball check material: Glass; Ceramic; 316SS

. Special designed valve seat to ensure
no leakage wether the pump running
or stopping

. Variety of critical applications of pump head
configuration:
high viscosity, pulp, concentrated
sulfuric acid, sodium hypochlorite, etc

. Self-cleaning check valve structure

Drive Unit Features

. Variable eccentric adjustment stroke length to smooth pulsation impact of flow rate.

. Robust structure design suitable for pulse impact and harsh operating conditions

. Sliding bearing and high intensity wearable worm gear ensure stable long-term operation.

Adjustment Options

Manual Adjustment: wethwer the pump running or stopped

. Minimum adjustment scale is 1%

Electric Stroke Controlller: external control signal adjust stroke length

. Power Supply：220V-50Hz, 1 phase

. Input Signal：4-20mA

. Output Signal：4-20mA/1-5V feedback signal.

Frequency Inverter: external control signal, adjust stroke speed

. 220V-50Hz, 1phase /380V-50Hz, 3phase

. Input Signal：4-20mA

α-Dose series metering pumps' code and performance

Frame | Capacity | Liquid End | Connection

Frame

Code	Description
MB	MB α-Dose series , MB frame
MC	MC α-Dose series , MC frame

Capacity

Code	Description				
	Real Q LPH@P_{max}	Speed SPM	Pressure P_{max}(bar)	Motor Power kW	Connections
MB0002	2.4	37	10	0.25[1)]	PVC: 1/2" NPT M PVDF: 1/2" NPT M 316SS: 1/2" NPT F
MB0005	4.7	75			
MB0010	9.5	149			
MB0025	26	75			
MB0050	52	149			
MB0090	90	75	7	0.25 0.37[1)]	PVC: 1/2" NPT F PVDF: 1/2" NPT F 316SS: 1/2" NPT F
MB0125	126	75			
MB0180	178	149			
MB0250	252	149			
MB0330	330	149	5	0.37[1)]	
MB0420	420	149			
MB0500	510	180			
MC0180	170	73	10	0.55 0.75[1)]	PVC: 1/2" NPT F PVDF: 1/2" NPT F 316SS: 1/2" NPT F
MC0260	260	111			
MC0350	340	146			
MC0450	430	183			
MC0500	477	146	7	0.75 1.1[1)]	PVC/PVDF: 1" NPT F 316SS: 1" NPT M
MC0600	600	183			
MC0750	738	111	3.5		PVC/PVDF/316SS Suc: 1-1/2" NPT Dis: 1" NPT
MC1000	965	146			
MC1200	1214	183			
MC1400	1310	146	3		PVC/PVDF: 1-1/2" NPT F 316SS: 1-1/2" NPT M
MC1800	1780	183			
MC2500DX [2)]	2428	183	3.5	1.1	Please Consult factory
MC3600TX [2)]	3642	183		1.5	
MC5000TX [2)]	5000	183	3	2.2	

1), This power could be used for both constant and varied frequency, but for 5-50Hz varied frequency, please use speed variable motor.

2), DX is duplex pump, TX is triplex pump.

Liquid End

Code	Description
P	PVC LE
S	316 LE
F	PVDF LE
V	High Viscosity (PVC LE)
X	Others consult factory

Connection

Code	Description
N	Standard
X	Special consult factory

Main materials of liquid end

· MB0002-MB0050

Liquid End	Head	Valve	Vlave seat	Ball	Diaphragm	Seal ring	Connection
PVC	PVC	PVC	AFLAS	Ceramic	PTFE	Viton	PVC
PVDF	PVDF	PVDF	PVDF	Ceramic	PTFE	Viton	PVDF
316SS	316SS	316SS	316SS	316SS	PTFE	Viton	316SS

· MB0090-MB0500

Liquid End	Head	Valve	Vlave seat	Ball	Diaphragm	Seal ring	Connection
PVC	PVC	PVC	PE	Glass	PTFE	Viton	PVC
PVDF	PVDF	PVDF	PVDF	Ceramic	PTFE	Viton	PVDF
316SS	316SS	316SS	316SS	316SS	PTFE	Viton	316SS

· MC0180-MC1800

Liquid End	Head	Valve	Vlave seat	Ball	Diaphragm	Seal ring	Connection
PVC	PVC	PVC	PVC	Ceramic	PTFE	Viton	PVC
PVDF	PVDF	PVDF	PDVF	Ceramic	PTFE	Viton	PVDF
316SS	316SS	316SS	316SS	316SS	PTFE	Viton	316SS

Accessories

Pressure relief valve, back pressure valve, dampener and strainer are available, Relief valve is necessary.

Standard motor performance

Power: 380V-50Hz-3ph/220V-50Hz-1ph

Protection: IP55 Isolation: F

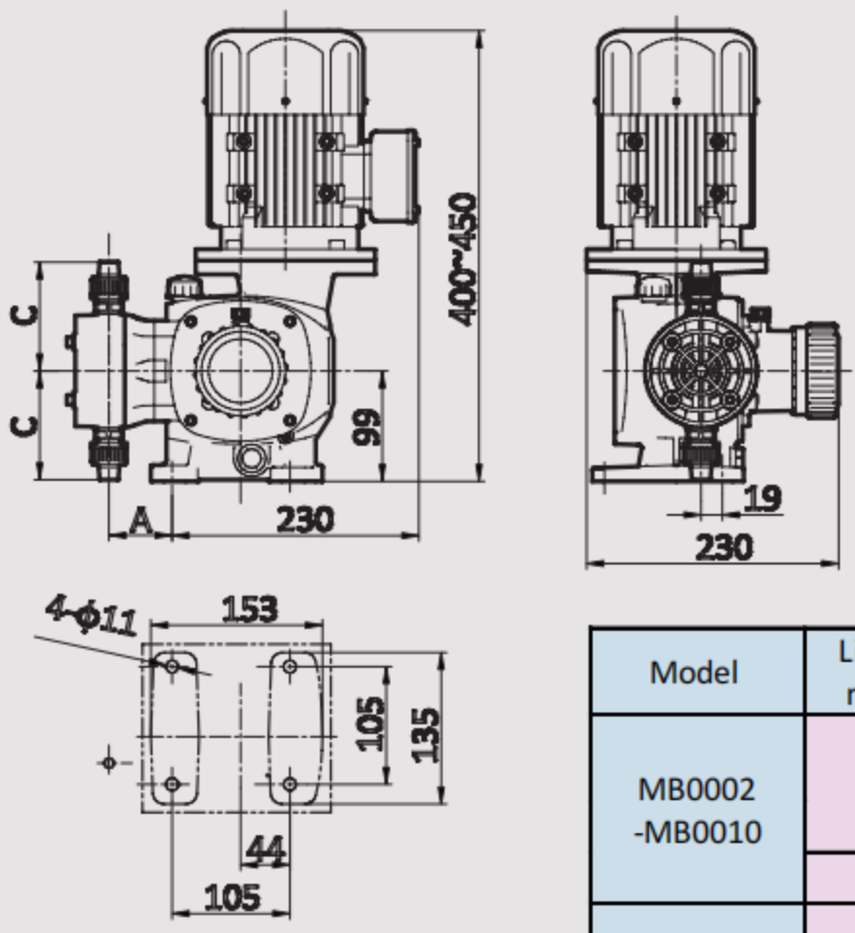
Special IEC motors are available.

Standard Configuration Table

	MB0002~0050			MB0090~0500			MC0180~0450		
	PVC	PVDF	316SS	PVC	PVDF	316SS	PVC	PVDF	316SS
6x12 tube									
1/2" NPT M									
1/2" NPT F									
	MC0500~0600			MC0750~1200			MC1400~1800		
	PVC	PVDF	316SS	PVC	PVDF	316SS	PVC	PVDF	316SS
1" NPT M						D[1)]			
1" NPT F				D[1)]	D[1)]				
1-1/2" NPT M						S[1)]			
1-1/2" NPT F				S[1)]	S[1)]				

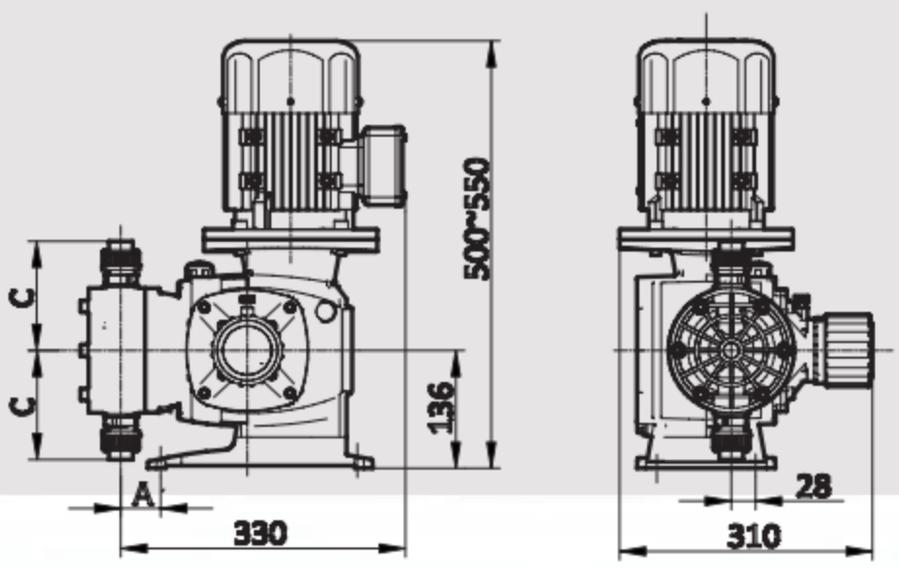
1), S: for suction, D: for discharge.

α-Dose Series MAD metering pump outline drawing



MB frame merering pump

Model	Liquid End materials	Suc. & Dis. Connections	C	A
MB0002 -MB0010	Plastic	1/2" NPTM	90 *(PVC)* 72 *(PVDF)*	56
		6x12	108	56
	Metal	1/2" NPTF	102	56
MB0016 -MB0050	Plastic	1/2" NPTM	90 *(PVC)* 72 *(PVDF)*	56
		6x12	108	56
	Metal	1/2" NPTF	102	56
MB0090 -MB0500	Plastic	1/2" NPTF	127	105
		DN15	127	105
	Metal	1/2" NPTF	131	105



MC frame merering pump

Model	Liquid End materials	Suc. & Dis. Connections	C	A
MC0180 -MC0450	Plastic	1/2" NPTF	125	93
	Metal	1/2" NPTF	130	93
MC0500 -MC0600	Plastic	1" NPTF	144	102
	Metal	1" NPTM	181	106
MC0750 -MC1200	Plastic	*Suction:* 1-1/2" *Discharge:* 1" NPTF	188	124
	Metal	*Suction:* 1-1/2" *Discharge:* 1" NPTM	200	128
MC1400 -MC1800	Plastic	1-1/2" NPTF	210	124
	Metal	1-1/2" NPTM	205	128

Spare Parts & Accessories

Spare Part Kits includes all easy-damaged parts, it can help users to shorten the equipment maintenance time to fasten the speed to resume the production. If the repair kits are used to do preventive maintenance, a long-term stable operation can be ensured.

Back Pressure Valve can prevent siphon and buid up back pressure between the outlet and inlet of metering pump to ensure the dosing accuracy. Normally the factory setting pressure is 2 Bar.

Safety Valves can avoid damage of equipment or pipeline due to system over pressur. Once the valve is closed or pipeline is blocked, the system would be over pressure.

Pulsation Dampeners is a system accessory matched with the reciprocating pump. It can reduce the impact from the pulsating flow to the pipeline system, and the influence of flow pulsation change on the chemical reaction. By installing pulsation dampeners in the pipeline of a metering pump export, the pulsating changes can be controlled in 5% or less.

Calibration Columns is used for flow calibration of metering pump, thus obtains with the flow/stroke relationship corresponding to the actual system and actual process fluid. The calibration column volume is no less than the 30 seconds rated flow of the metering pump.

Y- Strainer is installed on the metering pump inlet line. It is used for filtering process fluid to prevent impurities and particles into the metering pump, guaranteeing the accuracy of metering pump and keeping normal operation.

Package

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