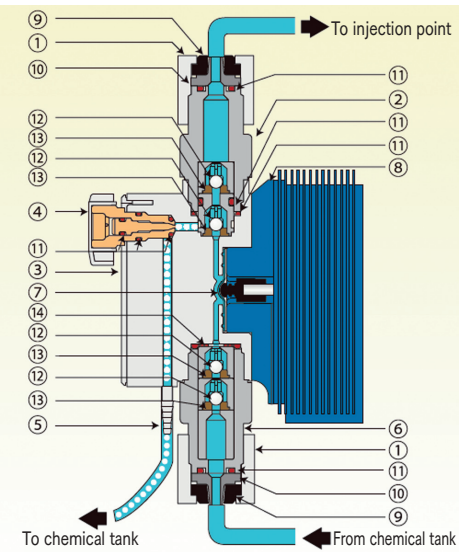
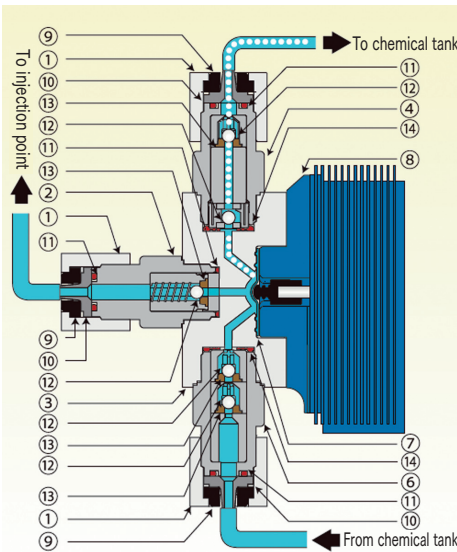


Liquid end parts sectional drawing.

Standard type(MP-L30P)

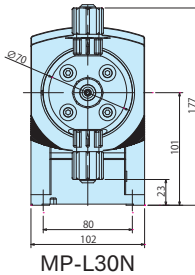
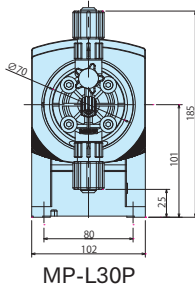
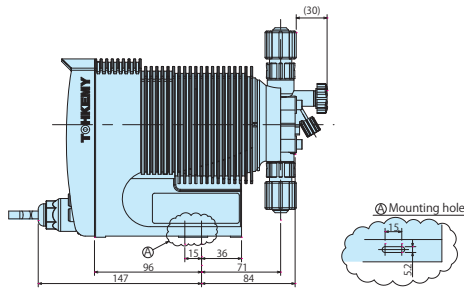


Non-gas lock type(MP-L30N)



P/N	Name
①	Union nut
②	Discharge valve
③	Pump head
④	Air extract valve
⑤	Air extract nozzle
⑥	Suction valve
⑦	Diaphragm
⑧	Back plate
⑨	Grip ring
⑩	Hose nozzle
⑪	O-ring
⑫	Valve ball
⑬	Valve seat
⑭	Gasket

Dimensions



Model Code

Example MP-L 30P - V4

①: Model

Code	Specifications
30P	Standard type PVDF/PTFE
30N	Non-gas lock type Acryl/PVC/PTFE

②: Hose specification

Code	Specifications
P4	φ4×φ6mm Polyethylene hose
V4	φ4×φ9mm Tetron braided soft PVC hose

Standard accessories

- Power cable 2m
- Hose 3m
- Check valve
- Foot valve
- M4 mounting bolt, nut x 2
- Instruction manual

Optional accessories

- Control cable 2-core•5-core(2m,5m,10m)
- Spring check valve (PVC)
- Anti-siphonage valve (PVC)



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Electromagnetic diaphragm metering pump

- For injection chemical for water treatment agents, acids and alkalis
- For chemical injection in physics and chemistry and medical fields
- Small water-supply system and chlorine sterilization for swimming pools
- For boiler chemicals
- For nutrient and disinfectant for hydroponics and stock-raising sites



Model: MP-L30P

Model: MP-L30N

MP-L series

Features

Applicable for high discharge pressure

Max. discharge pressure is 1.6MPa. It enables a continuous injection to injection point at 1.0MPa (back pressure).

Compatible with various control signals

It is compatible with “contact signal (pulse) input” and “analog signal (0/4~20mA) input” to enable automatic operation mode, and various operation modes with remote ON/OFF, batch operation and special operation function.

※Optional control cable is necessary.

MP-L30P(Standard type)

Main liquid end parts: PVDF

High corrosion resistance resin PVDF (polyvinylidene difluoride) is adopted to main liquid end parts which is high resistance against not only general chemicals but also acids and alkalis.

Manual air extract function is standard equipment

Air in liquid end parts is easily extracted by rotating the air extract valve even while pump operation.

MP-L30N (Non-gas lock type)

The most suitable for injection of bubble generating chemicals such as Sodium hypochlorite etc.

Reliable air extract function

Quantitative injection without gas-lock by air extract function in liquid end parts working automatically even for chemicals from which bubble tend to be generated.

Acrylic pump head: liquid moving in the pump head is visible.

The generation of the gas lock (air lock) and discharge status can be checked from outside.

Common specifications

- Manual operation, various control operation function
 - Stroke number adjustment : 0 to 180spm (stroke number/min.)
 - Stroke length adjustment : 0 to 100%
 - Power source : AC 100 to 230V (+/-10%) 50/60 Hz
- ※The recommended stroke length adjustment - MP-L30P: 30% or more / MP-L30N: 50% or more

Model・specifications

Model	Normal discharge pressure		Max. discharge pressure		Stroke number [spm]	Protection structure	Power consumption	Max. current value	Operating ambient temperature	Weight
	Discharge rate [ml/min]	Discharge pressure [MPa]	Discharge rate [ml/min]	Discharge pressure [MPa]						
MP-L30P	41	0.8	35	1.6	0~180	IP65	17W	3.6A	-10~45℃	Approx. 2.9kg
MP-L30N	29	0.8	23	1.6						

Liquid end parts specifications (materials and applicable solutions example)

	MP-L30P Standard type			MP-L30N Non-gas lock type
Applicable solutions example	Ferric chloride・PAC Aluminum sulfate・Sodium hypochlorite・Ferric chlorite	Hydrochloric acid・Dilute sulfuric acid・Nitric acid・Other strong acid	Sodium hydroxide	Bubble generating solutions such as sodium hypochlorite etc.
Pump head	PVDF			Acryl
Valve	PVDF			PVC
Valve seat	PVDF			Special fluoro rubber
Check ball	Ceramic			Ceramic
Valve spring	-			Hastelloy C
Gasket	PTFE			Special fluoro rubber
O-ring	PTFE			Special fluoro rubber
Diaphragm	Liquid end surface PTFE (Back surface EPDM)			Liquid end surface PTFE (Back surface EPDM)
Hose spec.	φ 4 x 9 Tetron braided soft PVC hose, or φ 4 x 6mm PE hose			

※Please feel free to contact us if you have any inquiries of hose selection.

Control operation functions

Manual operation mode

ON/OFF or stroke number (0 to 180spm) setting with operation bottom of pump body. By mean of control cable, it is externally operatable by ON/OFF signal from outside without pump power off.

Digital input (pulse) operation mode

Pump stroke number is controlled automatically and be linked with outside pulse signal. Automatic pump stroke control by interlocking with external pulse signal in combination with pulse generating flowmeter etc. One (1) pump stroke with one (1) pulse signal (synchronous) in normal setting. Multiplying・Dividing mode are also available.

Multiplying setting : When pump stroke number is increased against pulse input numbers.

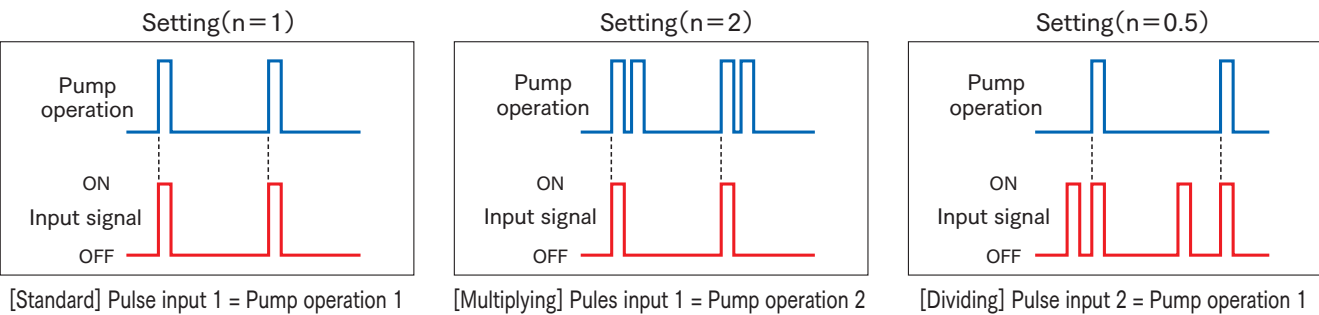
Memory function to store input pulse signals to pump operating (ON/OFF setting available)

Division setting : When pump stroke number is decreased against pulse input numbers.

※Setting range of the input pulse number (n: 0.01 to 99.99)

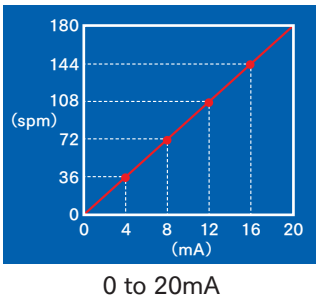
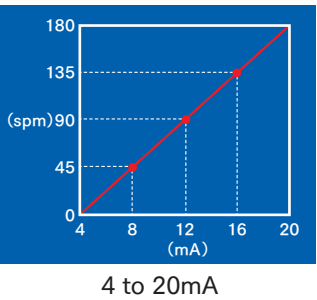


Setting example:

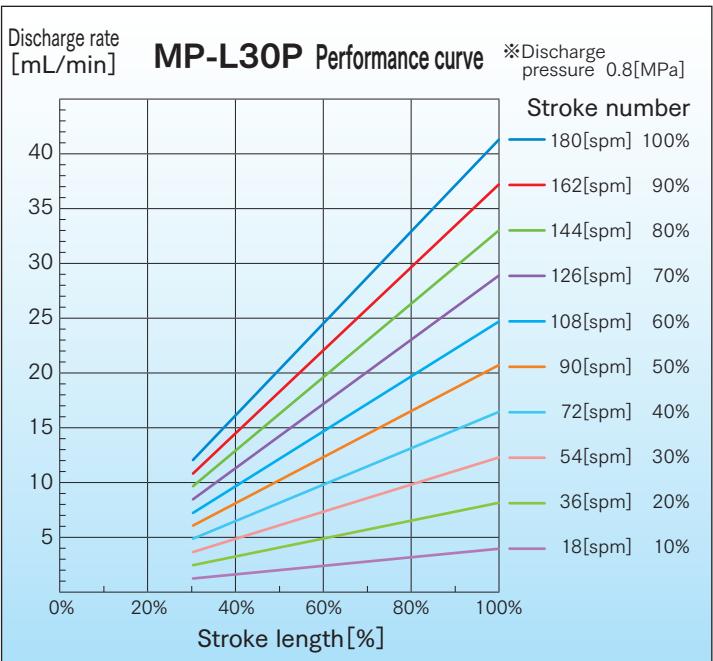


Analogue input operation mode

Proportional control of stroke numbers in interlocking with analogue signal (0/4 to 20mA) from outside.



Performance curve



Expected performance

Left chart shows the discharge rate at 0.8 [MPa] of pump discharge pressure. Discharge rate is adjusted to a required volume with 0 to 180[spm] and stroke length: 0(30) to 100[%]. Attention: Accuracy decrease or gas lock may cause in range of stroke length close to 0%. Please use at the below recommended stroke length or more. MP-L30P: 30% or more (MP-L30N: 50% or more)

Correction of discharge rate by discharge pressure

•Correction factor of the actual discharge pressure is read from correction factor graph. Example: 0.4[MPa]=1.2 When discharge pressure is 0.4[MPa], discharge rate is approx.1.2 times from the left chart.

