

**KEMPION**

ISO9001 **CE**



# Solenoid Metering Pumps

For Chemical Dosing by Electronic Control

**SP-A** Automatic or Advanced



[www.cheonsei.co.kr](http://www.cheonsei.co.kr)

## Combine Technology & Design

# SOLENOID METERING PUMPS SP



GOD DESIGN



### ■ Features

- Precise injection and flow control by the dual control of Stroke Length & Stroke Numbers
- The operation status can be checked with Status Lamp (LED)
- Sealing and Accuracy are improved by double check Valve
- Can cope with difficult environments by robust IP65 class and casing material of chemical resistance
- Various auto-control function (Option)
  - Ratio Control by input signal of PULSE
  - Multiplication & Division input signal of PULSE
  - Ratio Control by input signal of 4~20mA
  - Alarm for Low Level & Signal Error
  - Remote Run & Stop
- Easy & Safe Air Vent Valve



- Prevent Gas Lock Phenomenon Support priming

### ● Relief Valve (Option)



- When over pressure, valve is automatically opened and pump & piping can be protected.  
- Function of Air Vent Valve is included

- Prevent damage from overload by built-in Thermal Protection

### ■ Applications

- Used for injection of Boiler Chemical, Chlorine Disinfectants, Food Additives, and used for dosing chemicals in various industrial fields including physico-chemical fields, semiconductor device, water treatment, waste water treatment fields, etc.

■ Control Panel

**Status Lamp (LED)**

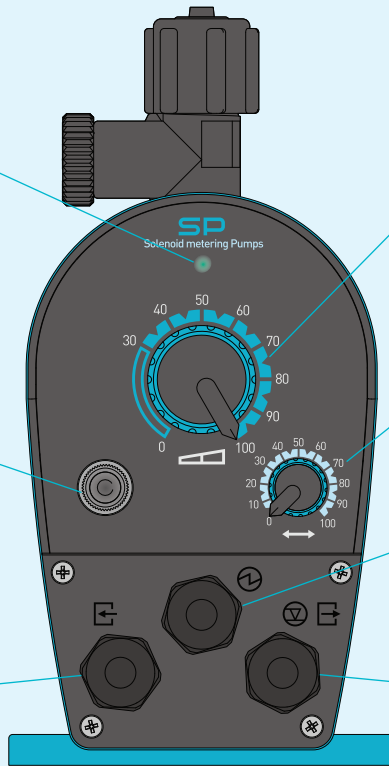
- Green (Normal operation)
- Yellow (Error)
- Red (Low level)

**Toggle Switch**

- Toggle Switch of 2 stages : RUN ⇄ STOP
- Toggle Switch of 3 stages : PULSE ⇄ STOP ⇄ MANUAL
- Toggle Switch of 3 stages : 4~20mA ⇄ STOP ⇄ MANUAL

**Cable Socket for Input Signal**

- Pulse
- 4~20mA



**Manual control knob for stroke length**

**Manual control knob for stroke number**

**Power Cord**

**Cable Socket for Level Switch**

- Cable Socket for Alarm Signal
- Remote RUN/STOP

**Status Lamp (LED)**

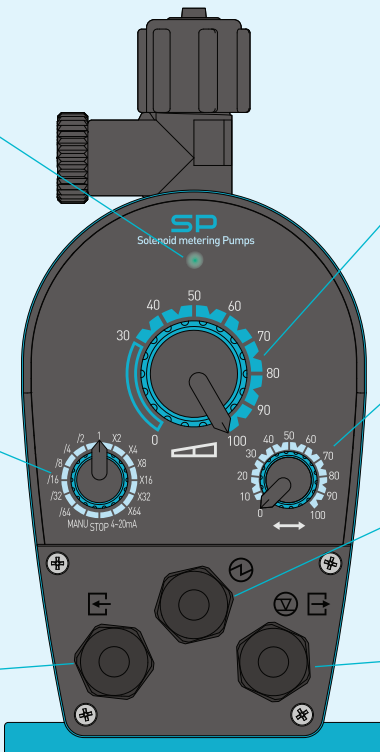
- Green (Normal operation)
- Yellow (Error)
- Red (Low level)

**Rotary Switch**

- 1:1
- 1/□ (DVI)
- 1x□ (MUL) of PULSE
- 4~20mA ⇄ STOP ⇄ MANUAL

**Cable Socket for Input Signal**

- Pulse
- 4~20mA



**Manual control knob for stroke length**

**Manual control knob for stroke number**

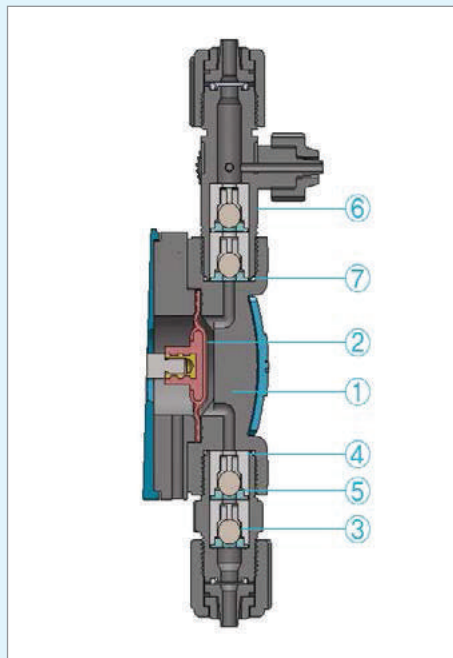
**Power Cord**

**Cable Socket for Level Switch**

- Cable Socket for Alarm Signal
- Remote RUN/STOP



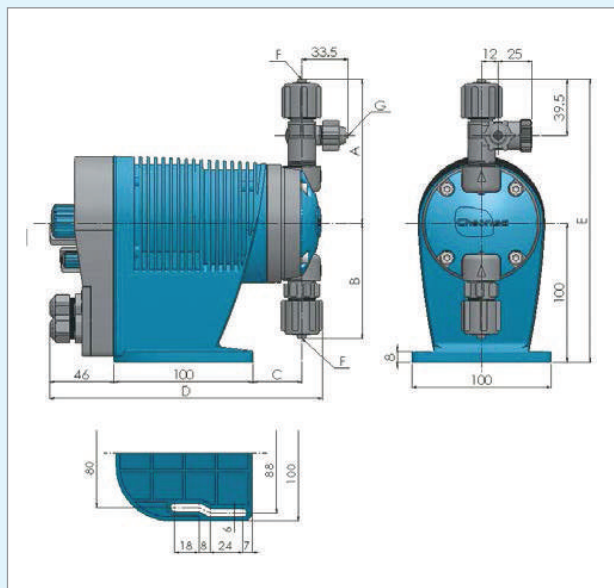
■ Liquid End Material



Type		PFC	PFS	PEC	FVC
Part Name					
① Head			PP		PVDF
② Diaphragm			PTFE		
③ Check Ball		CERAMIC	SS316	CERAMIC	
④ Ball Guide			PP		PVDF
⑤ Ball Seat		FKM		EPDM	FKM (ETP)
⑥ Joint			PP		PVDF
⑦ O-ring		FKM		EPDM	FKM (ETP)
Hose	Standard	Discharge: PE, Suction: Transparent PVC			PTFE
		Braided PVC			
	Boiler	Discharge: NYLON, Suction: Transparent PVC			

- EPDM : Ethylene propylene diene monomer rubber
- FKM : Fluoro rubber
- FKM(ETP) : Fluoro rubber of ETP type
- PE : Polyethylene
- PP : Polypropylene
- PPS : Polyphenylene sulfide
- PTFE : Polytetrafluoroethylene
- PVC : Polyvinyl chloride
- PVDF : Polyvinylidene fluoride

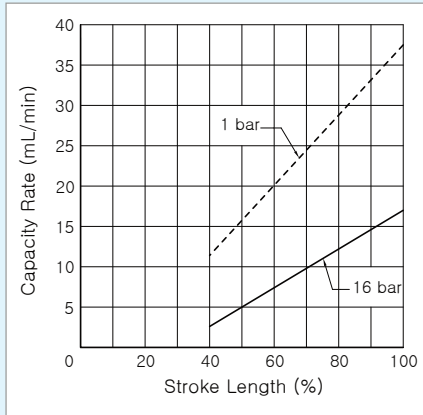
■ Dimension



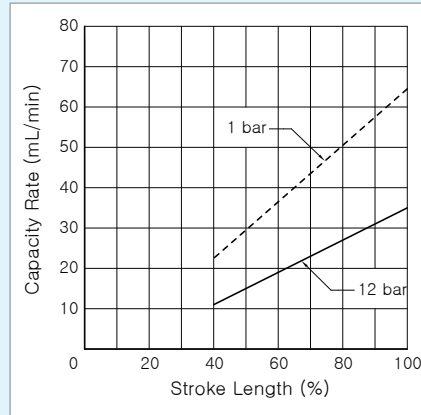
Model	SP-A20	SP-A40	SP-A60	SP-A100	SP-A200
Dim.					
A	96.5	99	101	102.5	107.5
B	76.5	79	81	82.5	87.5
C	33.5	33.5	33.5	35	35
D	194.5	194.5	194.5	196	196
E	196.5	199	201	202.5	207.5
F	Ø4×Ø6, Ø4×Ø9		Ø6×Ø8, Ø6×Ø11, Ø5×Ø8		
G	Ø4×Ø6				

## ■ Performance Curve

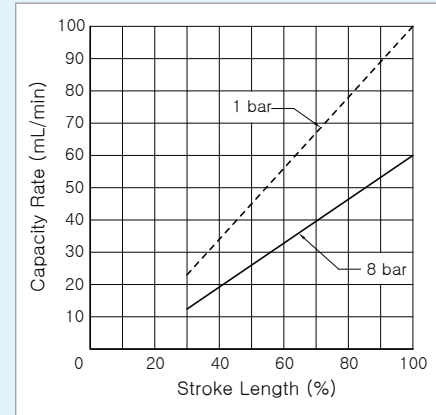
● SP-A20



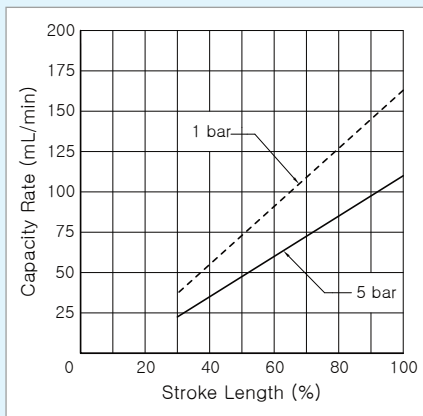
● SP-A40



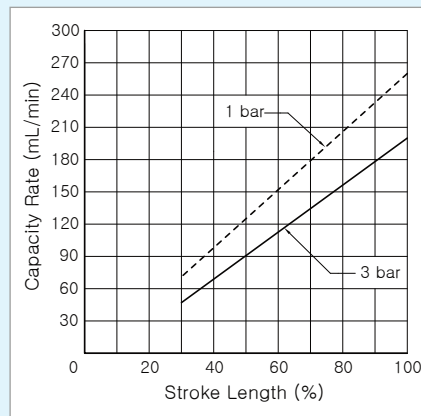
● SP-A60



● SP-A100



● SP-A200



Note) Performance curves can be somewhat different accordance with application of job site.

## ■ When Placing Order

In order to provide the most suitable pump, please provide the following information.

### 1. Specification of Liquid

- (1) Liquid name (2) Ingredients (3) Concentration (4) Viscosity

### 2. Conditions of installation

- (1) Process of use (2) Required discharge volume (3) Power source  
 (4) Installing location & Mounting method (5) Operating condition

### 3. Other

- (1) Desired delivery date and place (2) Any other requirements

■ Accessories

● Anti-siphon Check Valve



It is installed at the end of discharge hose and prevents overfeeding, flowing backward, & siphon phenomenon.

● Level Switch (Option)



When liquid level in tank is low, it generates alarm signal.

● Strainer Foot Valve



It is installed at the end of suction hose and prevents foreign substance & flow backward.

● Hose

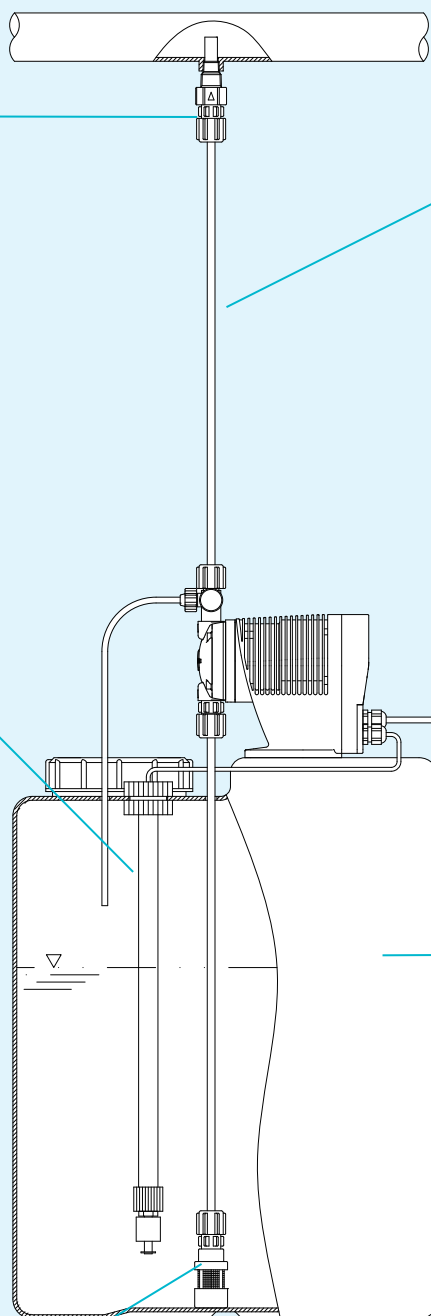


Suction Hose 1m,  
Discharge Hose 2m,  
Air Vent Hose 1m

● Liquid Tank (Option)



Model	Volume(L)	Diameter	Height
SPN-50L	50~65	420	580
SPN-100L	100~120	520	690
EN-200	200	590	860





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