

KEMPION

ISO9001



Solenoid Metering Pumps

For Chemical Dosing by Electronic Control

SP-C Common Display



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Combine Technology & Design

SOLENOID METERING PUMPS SP



■ Features

- Easy and precise flow control with LCD display
- 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
 - Ratio Control by input signal of 4 ~ 20mA
 - Alarm for Low Level & Signal Error
 - Remote START & 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

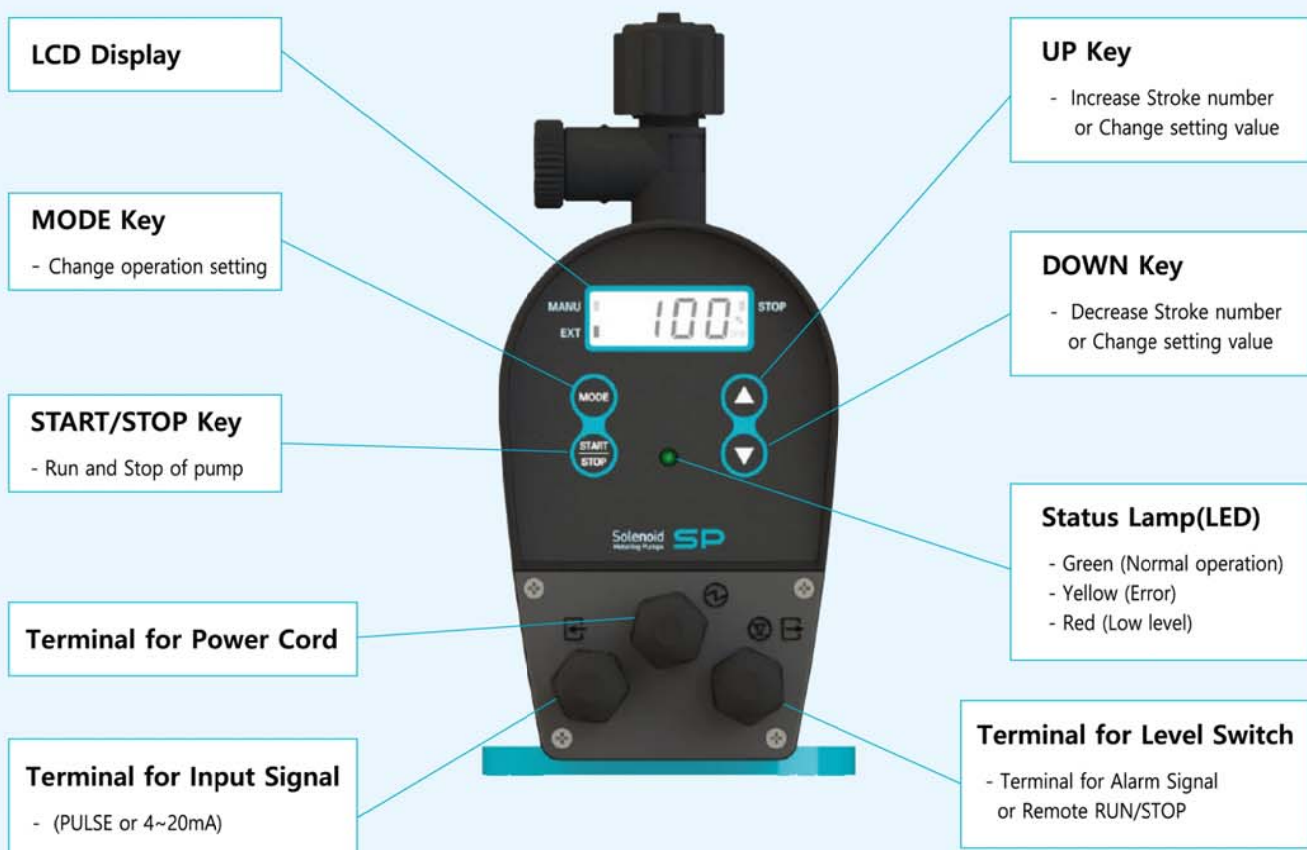
■ Applications

- 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 - Manual



■ Control Panel - Auto



■ Model Code

SP	-	C	30	-	P	F	C	-	1	W	S	-	1	1	0
①		②	③		④-A	④-B	④-C		⑤	⑥	⑦		⑧	⑨	⑩

① Series Name	SP Series				
② Control Panel Type	C : Common Display				
③ Nominal Capacity	30 : 30mL/min				
④ Liquid End Material	A - Pump Head	P : PP	F : PVDF		
	B - Ball Seat	F : FKM	E : EPDM	V : FKM (ETP)	T : PTFE
	C - Check Ball	C : CERAMIC	S : SS316		
⑤ Hose Standard	1 : $\varnothing 4 \times \varnothing 6$ 2 : $\varnothing 4 \times \varnothing 9$ (Braided PVC) 3 : $\varnothing 6 \times \varnothing 8$ 4 : $\varnothing 6 \times \varnothing 11$ (Braided PVC) 5 : $\varnothing 5 \times \varnothing 8$				
⑥ Valve Structure	W : Standard (0~70mPa·s) V : High Viscosity (70~700mPa·s)				
	※ In case of the valve for high viscosity, spring is installed in the valve.				
⑦ General Specification	S : Standard	B : Boiler	F : Relief Valve	G : B + F	
	※ In case of Boiler type, discharge hose is nylon and the body of Anti-siphon Check Valve is PPS.				
	※ Relief Valve is not applied to SP-C200.				
⑧ Control Specification	1 : Manual		3 : PULSE (or 4~20mA) + Add. Func.(1)		
	4 : PULSE (or 4~20mA) + Add. Func.(2)				
	※ Add. Func.(1) : Input of Level Switch (or remote START/STOP)				
	※ Add. Func.(2) : Input of Level Switch, Remote START/STOP, & Output of Alarm				
⑨ Power Supply	1 : AC220 (198~242V)		2 : AC240V (216~264V)		
⑩ Power Cord	0 : 2m of power cord without Plug		1 : 2m of power cord & Plug (Korean standard)		

■ Specifications

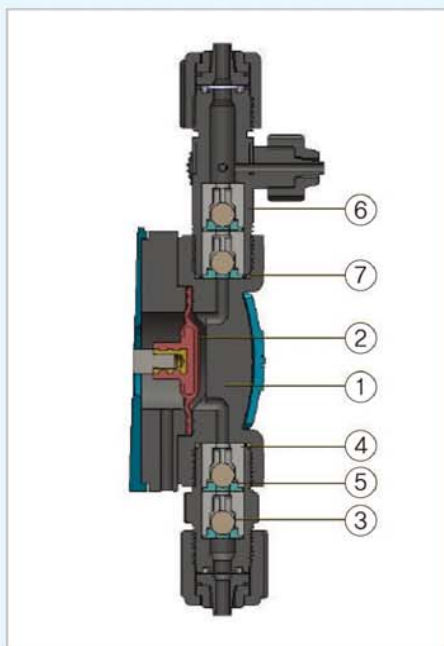
Model		SP-C30	SP-C50	SP-C70	SP-C100	SP-C200
Spec.						
Max. Capacity (mL/min)		25	55	75	140	200
Max. Discharge Pressure (bar)		16	12	9	5.5	3
Stroke Rate (SPM)		1~240				
Hose	Suction Discharge	Ø4×Ø6, Ø4×Ø9		Ø6×Ø8, Ø6×Ø11, Ø5×Ø8		
	Air Vent	Ø4×Ø6				
Self-priming (m)		1		1.5		2
Viscosity Limit (mPas)	Standard	50		70		
	High Viscosity	300		700	600	400
Weight (kg)	PP Material	2	2.4			
	PVDF Material	2.1	2.4		2.5	
Operation Temperature		Ambient Temperature 0~40℃			Liquid Temperature 0~50℃	
Electrical Data	Average Power Consumption(W)	15W	17W			
	Rated Current(A)	0.4	0.5			
	Protection & Insulation Class	IP65 F				

Note1) Repeatability is within $\pm 2\%$ FS and noise is within 70dB.

Note2) Setting pressure of Relief Valve is $\pm 10\%$ of max. discharge pressure.

Note3) Specifications can be changed for improvement without prior notice.

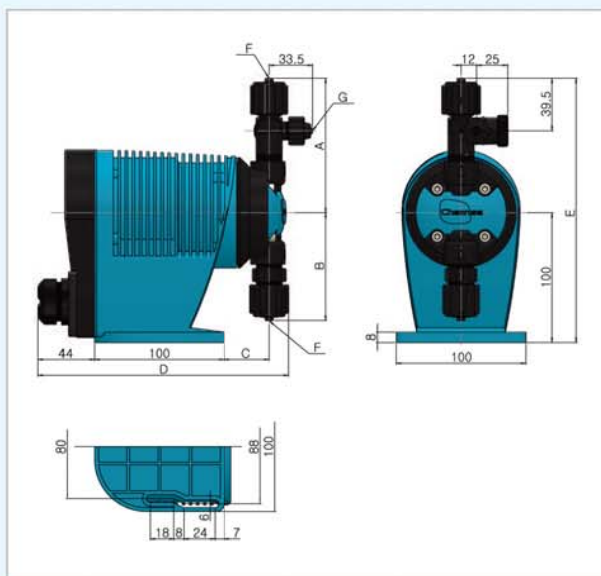
■ Liquid End Material



Type Part		PFC	PFS	PEC	FVC	FTC
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)	PTEE
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

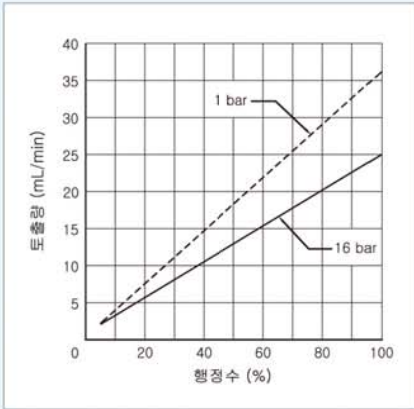
■ Dimension



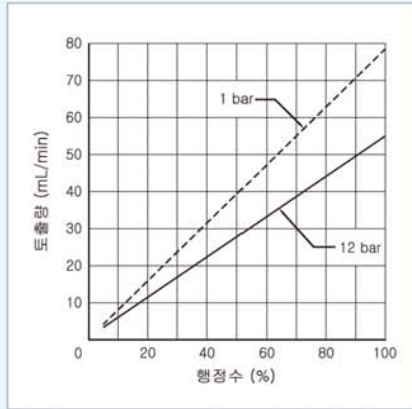
Model Dim.	SP-C30	SP-C50	SP-C70	SP-C100	SP-C200
A	96,5	99	101	102,5	107,5
B	76,5	79	81	82,5	87,5
C	33,5	33,5	33,5	35	35
D	192,5	192,5	192,5	194	194
E	196,5	199	201	202,5	207,5
F	Ø4×Ø6, Ø4×Ø9		Ø6×Ø8, Ø6×Ø11, Ø5×Ø8		
G	Ø4×Ø6				

■ Performance Curve

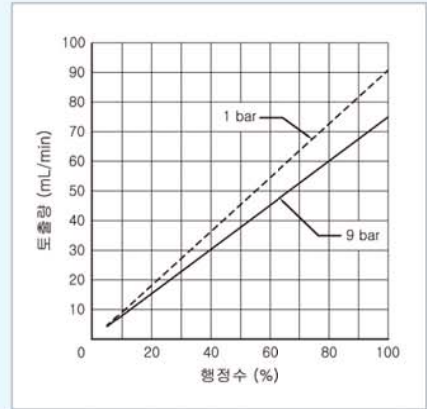
● SP-C30



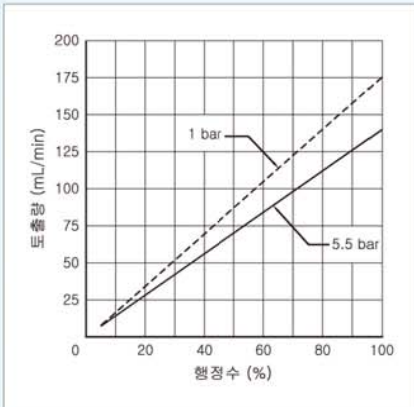
● SP-C50



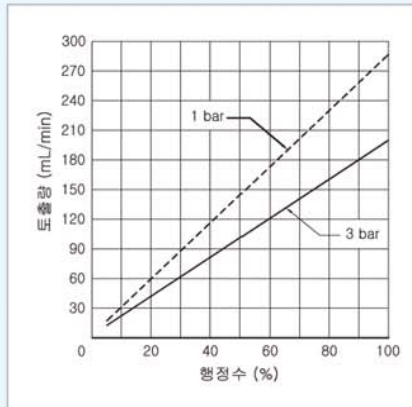
● SP-C70



● SP-C100



● SP-C200



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



SP-C