KEMPION

ISO9001 CE GOOD DESIGN

Solenoid
Metering Pumps

For Chemical Dosing by Electronic Control

SP-B Basic & Manual

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SP

GOOD DESIGN

Effective Solution

SOLENOID METERING PUMPS

■ 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
- Easy & Safe Air Vent Valve

Prevent Gas Lock Phenomenon
Support priming

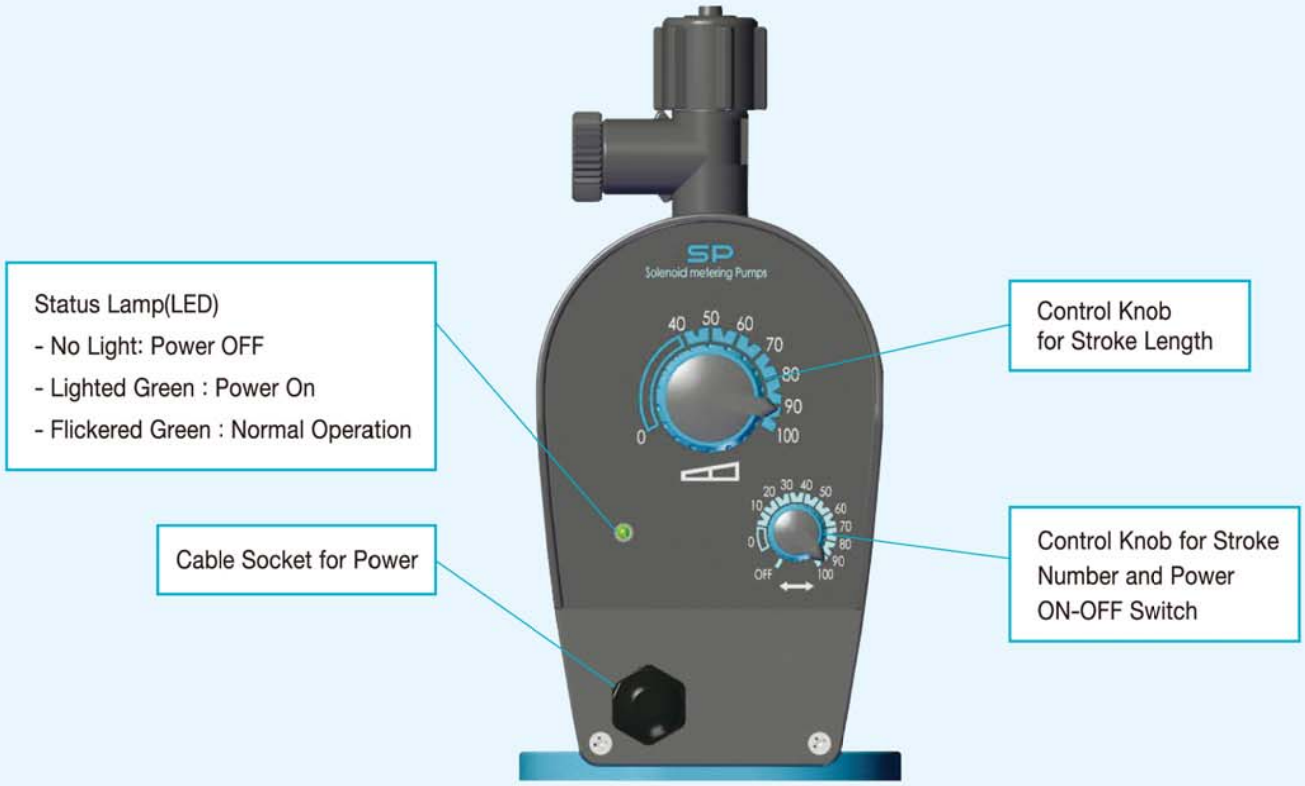
- Relief Valve (Option)

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

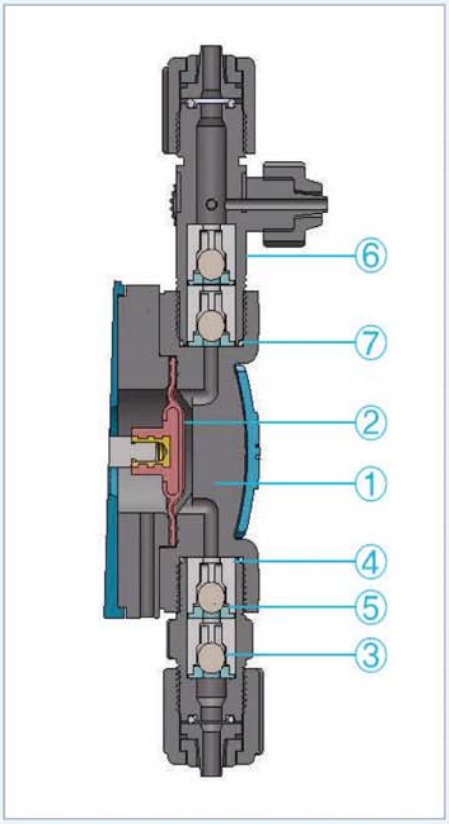
■ Applications

- 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, wast water treatment fields, & etc.

■ Control Panel



■ Liquid End Material



Part Name \ Type		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)	PTFE
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

■ Model Code

SP	-	B	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	B: Basic & Manual
③ Nominal Capacity	30: 30mL/min (In case of 30H, "H" means High Pressure Type)
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: Ø4×Ø6 2: Ø4×Ø9(Braided PVC) 3: Ø6×Ø8 4: Ø6×Ø11(Braided PVC) 5: Ø5×Ø8
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:Boiler + Relief Valve ※ In case of Boiler type, discharge hose is nylon and the body of Anti-siphon Check Valve is PPS. ※ In case of SP-200, Relief Valve can not be used.
⑧ Control Specification	1: Manual
⑨ Power Supply	1: AC220V (198~242V) 2: AC240V (216~264V) 3: AC115V (104~127V) ※ Common data:1 Phase 50/60Hz
⑩ Power Cord	0: 2m of power cord without Plug 1: 2m of power cord & Plug

■ Specifications (I)

Spec. \ Model		SP–B30	SP–B50	SP–B70	SP–B100	SP–B200
Max. Capacity (mL/min)		25	55	70	135	240
Max. Discharge Pressure (bar)		14	8	6	3.5	2
Stroke Rate (SPM)		240				
Stroke Length (mm)		1.0 (40~100%)				
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 (mPa·s)	Standard	50		70		
	High Viscosity	300		700	600	400
Weight (kg)	PP Material	1.9			2	
	PVDF Material	2			2.1	
Operation Temperature		Ambient Temperature 0~40℃ Liquid Temperature 0~50℃				

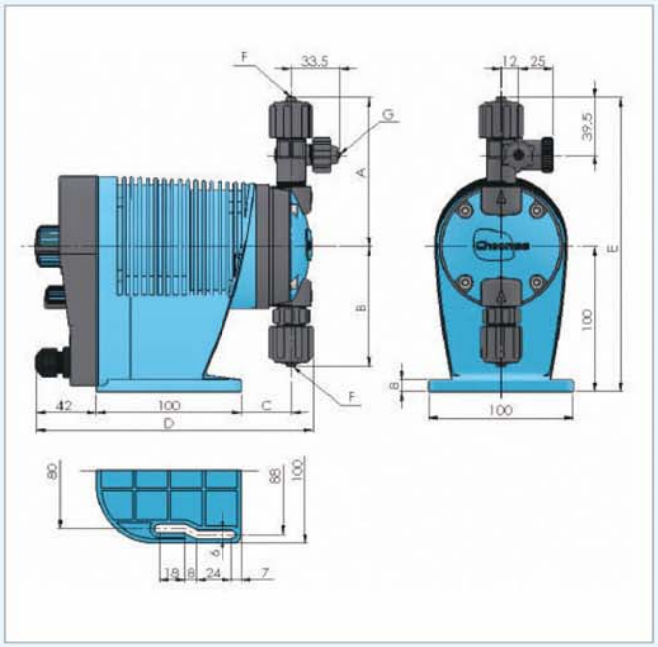
Electrical Data	Average Power Consumption (W)	Rated Current (A)	Protection Class	Insulation Class
	15	0.4 / 0.7 (115V)	IP65	F

Note1) Repeatability is ±2%F.S.(Full Scale) and noise is within 70dB.
Note2) Setting pressure of Relief Valve is ±10% of max. discharge pressure.
Note3) Specifications can be changed for improvement without prior notice.

■ Specifications (II)

Spec. \ Model		SP-B30H	SP-B50H	SP-B70H	SP-B100H
Max. Capacity (mL/min)		30	55	75	130
Max. Discharge Pressure (bar)		16	12	8	5
Stroke Rate (SPM)		240			
Stroke Length (mm)		1.0 (40~100%)			
Hose	Suction · Discharge	Ø4×Ø6, Ø4×Ø9		Ø6×Ø8, Ø6×Ø11, Ø5×Ø8	
	Air Vent	Ø4×Ø6			
Self-priming (m)		1	1.5		
Viscosity Limit (mPa·s)	Standard	50		70	
	High Viscosity	300		700	600
Weight (kg)	PP Material	2.4			2.5
	PVDF Material	2.5			2.6
Operation Temperature		Ambient Temperature 0~40℃ Liquid Temperature 0~50℃			
Electrical Data		Average Power Consumption (W)	Rated Current (A)	Protection Class	Insulation Class
		17	0.5 / 0.8 (115V)	IP65	F

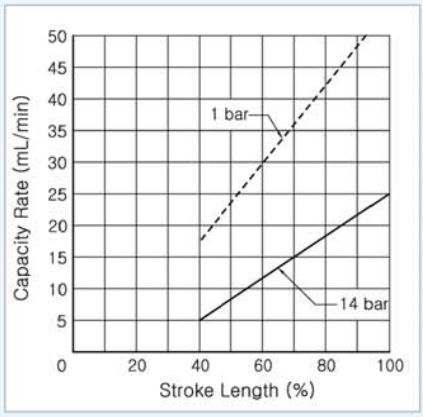
■ Dimension



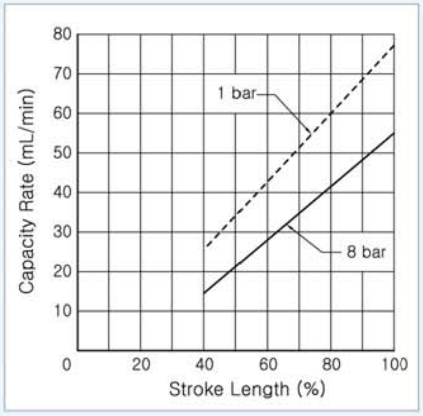
Dimension \ Model	SP-B30 SP-B30H	SP-B50 SP-B50H	SP-B70 SP-B70H	SP-B100 SP-B100H	SP-B200
A	96.5	99	101	102.5	107.5
B	76.5	79	81	82.5	87.5
C	33.5	33.5	33.5	35	35
D	190.5	190.5	190.5	192	192
E	196.5	199	201	202.5	207.5
F	Ø4×Ø6, Ø4×Ø9		Ø6×Ø8, Ø6×Ø11, Ø5×Ø8		
G	Ø4×Ø6				

■ Performance Curve

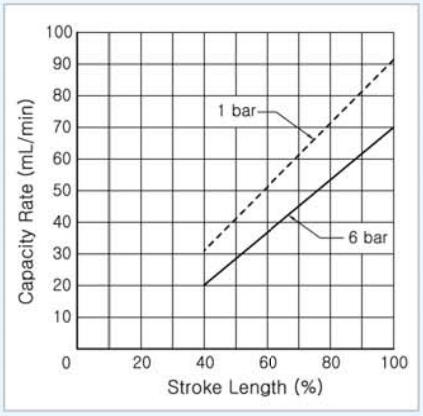
● SP-B30



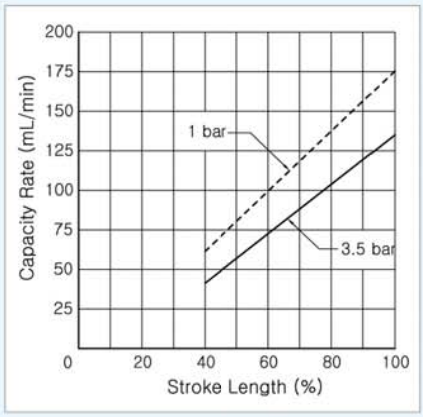
● SP-B50



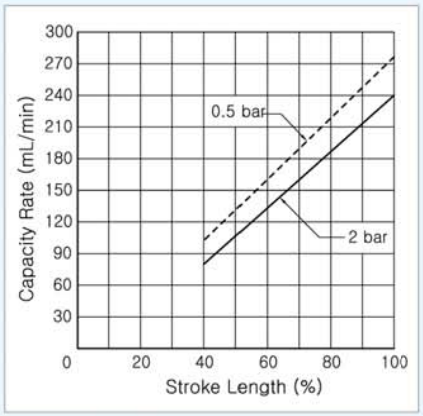
● SP-B70



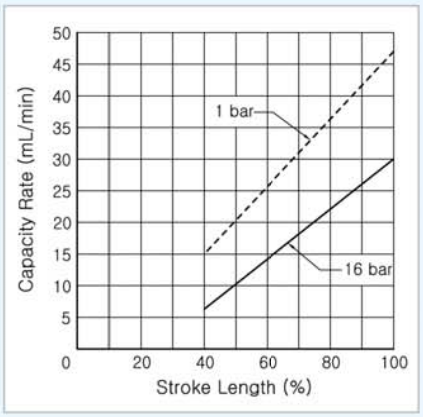
● SP-B100



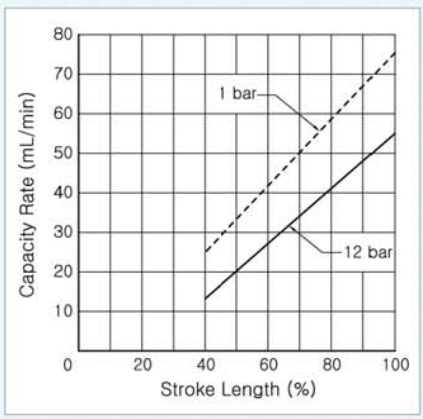
● SP-B200



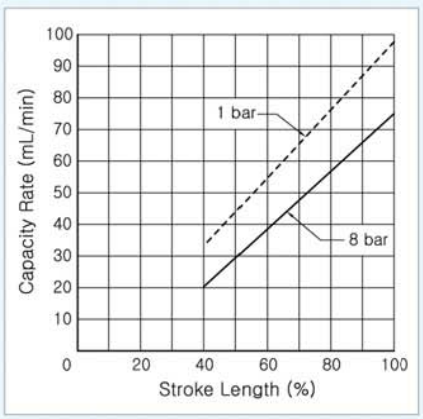
● SP-B30H



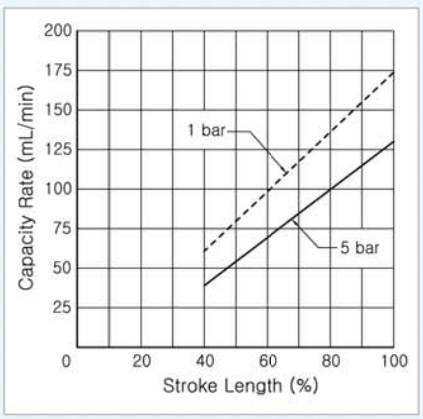
● SP-B50H



● SP-B70H



● SP-B100H



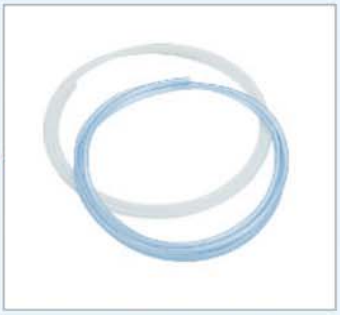
Note) Performance curves can be somewhat different accordance with application of job site.

■ Accessories

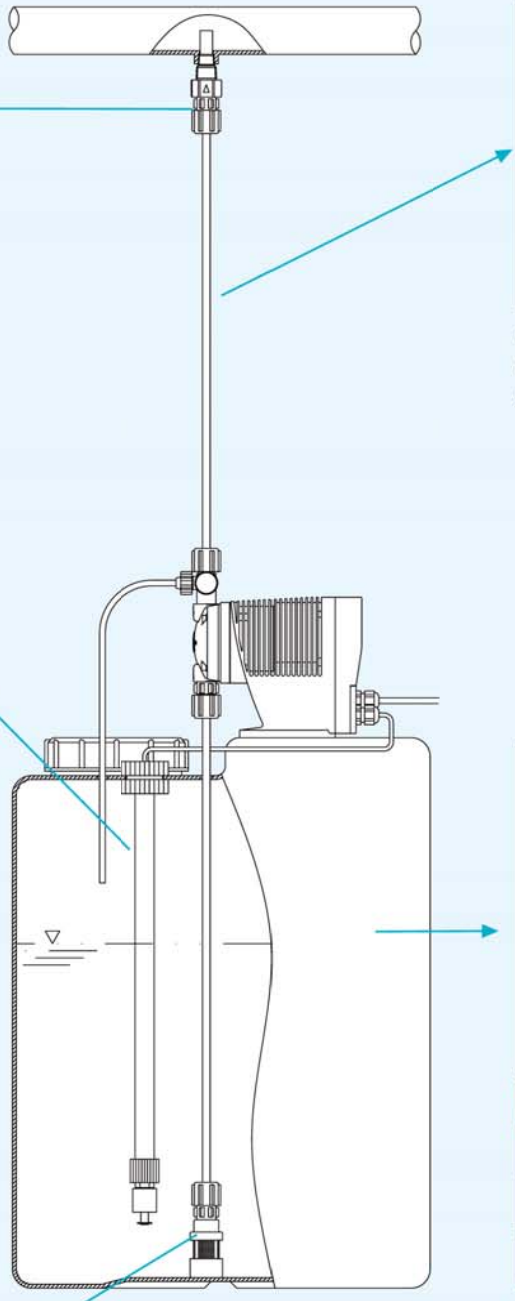
● Anti-siphon Check Valve

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

● Hose



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



● Level Switch (Option)

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

● 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

● Strainer Foot Valve

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

Solenoid Metering Pumps SP

CSCE - J2 - 06

2017. 09

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