



ISO 9001  
CE

# CHEONSEI **S**MALL Metering Pumps

MOTOR DRIVEN DIAPHRAGM TYPE

For Chemical Dosing **KS**



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

## ■ Features

### ● Durable Driving Unit

The frame is composed of engineered plastic material. The planetary gears are precision die-casted with robust anti-abrasive materials for semi-permanent life.

### ● Overload Proof Motor

The internal temperature switch protects motor from overload.

### ● Precise Valve Construction

The Check Valve has precise construction and dimensions. If the Check Valve is used additionally by double check ball or spring insert type, the degree of precision will be maximized.

### ● Gas Locking Prevention

Liquid End Design minimizes dead space. Air Relief Valve can be provided for vaporous liquid. (Optional item for KS-51~32)



● **Easy Dial Setting** Volume capacity can be easily adjusted by dial and locked by stop bolt without disturbing pump operating.

### ● Accessories Available

There are additional high performance accessories available convenient applications.

- Anti-siphon check valve
- Foot valve with strainer
- Flange connections, tees and elbows

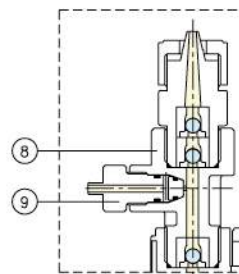
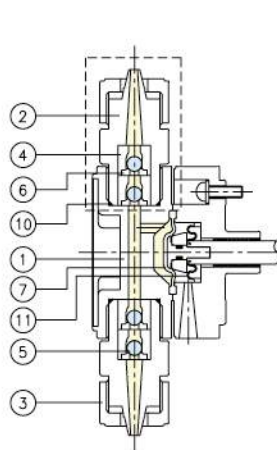


## ■ Applications

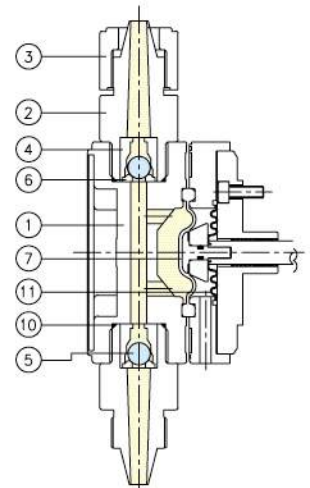
Applications include injection of compounds, chlorine disinfectants and food additives in the scientific, water treatment and wastewater treatment fields.

## ■ Pump Head Structure

- ① Head
- ② Hose joint
- ③ Hose nut
- ④ Ball guide
- ⑤ Check ball
- ⑥ Ball seat
- ⑦ Diaphragm
- ⑧ Air relief joint
- ⑨ Air relief coker
- ⑩ O-ring
- ⑪ Bellows



The dotted line shows the parts in which the Air Relief Valve is attached. (Notice: in case of KS-52, the Air Relief Valve type is not available)



## Model Code



### ① Series Name

KS : KS Series (Small diaphragm type metering pump)

### ② Nominal Capacity

**1** **2** = 100 ml/min(60Hz)

**1** is the figure on the left and **2** is the number of zeros following.

### ③ Liquid End Material

A : Pump head

P:GFPP F:PVdF S:SS304 6:SS316 X:Special

B : Ball seat

R:SANTOPRENE® F:FKM E:EPDM

C : Check ball

R:H.G.TPE C:CERAMIC 6:SS316 X:Special

※ Please note that the combination of liquid-end materials is not unlimited. Refer to the standard liquid-end parts material list table for each model.

※ The diaphragm material is PTFE for all models.

### ④ Specification

A : Joint type

H:Hose X:Special

B : Valve structure

W:Standard (below 50cp:Water-like)

V:High Viscosity (50~1000cp)

C : Others

S:standard A:Air relief valve B:Boiler

C:A+B type F:Relief Valve G:F+B type X:Special

※ Please note that the combination is not unlimited.

Refer to the standard specifications list table for each model.

### ⑤ Power Supply

S : 200~230V 50/60Hz (Standard)

B : 240V 50/60Hz

C : 110V 50/60Hz

X : Special

※ 1 Phase only

## Standard Liquid and Materials

Parts Type	Head	Diaphragm	Check ball	Ball seat	Ball guide	Joint	O-ring	Hose
PRC	GFPP	PTFE	CERAMIC	SANTOPRENE®	GFPP	GFPP	SANTOPRENE®	PVC
PFC	GFPP	PTFE	CERAMIC	FKM	GFPP	GFPP	FKM	PVC
FTC	PVdF	PTFE	CERAMIC	PTFE	PVdF	PVdF	PTFE	PTFE
ST6	SS304	PTFE	SS316	PTFE	PVdF	SS304	PTFE	PTFE
6T6	SS316	PTFE	SS316	PTFE	PVdF	SS316	PTFE	PTFE

## Specifications

Specs.	Model	Model				
		KS-51	KS-12	KS-22	KS-32	KS-52
Max. capacity (mL/min)	50Hz	40	80	200	300	480
	60Hz	50	100	240	360	580
Max. discharge pressure (bar)		15	10	7	5	3
Stroke number (SPM)	50Hz	108				
	60Hz	130				
Stroke length (mm)		3	4	6		
PVC hose	HWS	Ø6×Ø11			Ø12×Ø18	
PTFE hose	HWS	Ø10×Ø12				
PVC hose for high viscosity	HVS	Ø12×Ø18				
PVC hose for air relief valve	HWA	Ø4×Ø6			-	
PTFE hose for air relief valve	HWA	Ø5×Ø7			-	
Operation temperature		Ambient temperature 0~40°C				
		Pumping temperature 0~50°C				
Output (W)		14				
Weight (kg)	P□□ type	2.4			2.7	
	F□□ type	2.6			2.8	
	S□□, 6□□ type	3.1			3.5	

### Notes

- The listed max. capacity is that at max. discharge pressure
- The standard valve structure can only allow the maximum possible viscosities for discharge up to maximum of 50cp
- The motor is not explosion proof, please consider the purpose of use fully before choosing
- This pump is designed for indoor use. Be sure to use a pump cover if installing out door
- Never use this pump to transfer liquids containing slurry (In such a case please consult CHEON-SEI)
- For any other specifications, please consult CHEON-SEI

## Strainer Foot Valve

Parts Type	Main body	Joint	Check ball	Ball seat	Ball guide	Net	O-ring
PRC	GFPP	GFPP	CERAMIC	SANTOPRENE®	GFPP	PP	SANTOPRENE®
PFC	GFPP	GFPP	CERAMIC	FKM	GFPP	PP	FKM
FTC,ST6, 6T6	PVdF	PVdF	CERAMIC	PTFE	PVdF	ETFE	PTFE

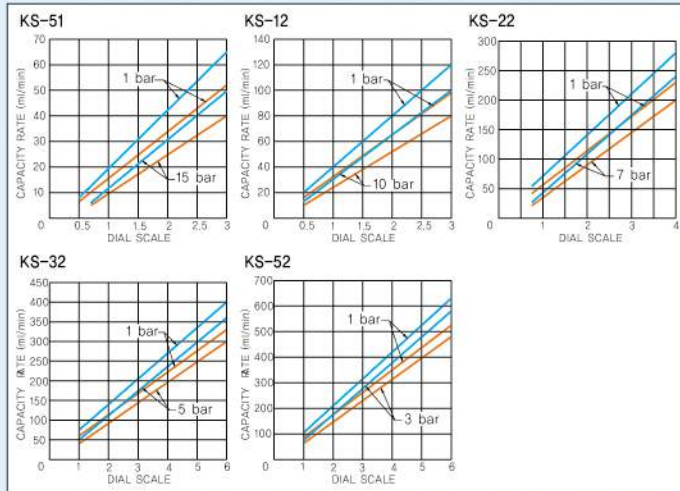
## Anti-Siphon Check Valve

Parts Type	Main body	Joint	Siphon head	Siphon seat	Spring	O-ring
PRC	GFPP	GFPP	SANTOPRENE®	GFPP	HASTELLOY C-276	SANTOPRENE®
PFC	GFPP	GFPP	FKM	GFPP		FKM
FTC,ST6, 6T6	PVdF	PVdF	CERAMIC (Check Ball)	PTFE		-
Boiler	PPS	GFPP	EPDM	PPS		EPDM

## Performance Curve

— 60Hz, — 50Hz

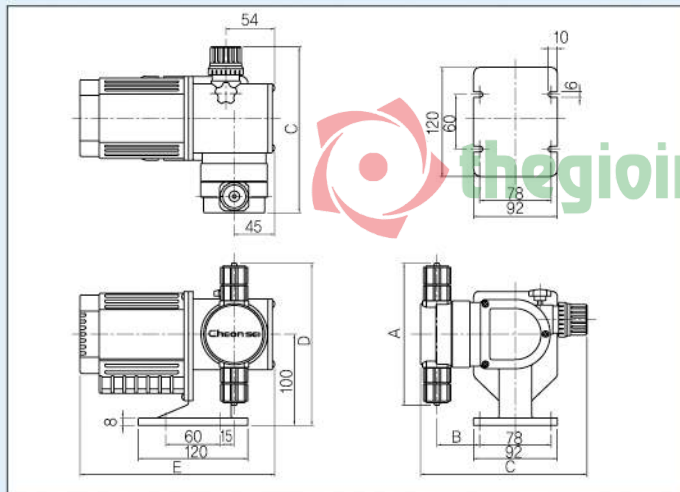
Conditions : Room Temp, Clean Water, Suction Head-1m



※ Concerning the above performance curve, adjustment of capacity rate is necessary to match the actual condition

## Overall Dimensions

(Unit:mm)



Size	A	B	C	D	E
KS-51	156	48	183.5	178	214
KS-12	156	48	183.5	178	214
KS-22	156	48	184	178	214
KS-32	156	48	186.5	178	214
KS-52	198	52.5	192	199	217

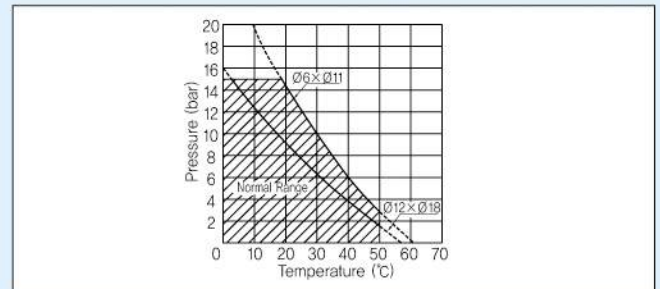
※ Above dimensions show P□□ type.

## Accessories List

Hose	3m
Strainer Foot Valve	1 pc
Anti-Siphon Check Valve	1 pc
Mounting Bolts(With nut M×0.8×20)	4 sets
Hexagonal L-Wrench(M5 Subtense 2,5)	1 pc
Instruction Manual	1 copy

※ Above dimensions show P□□ type

## PVC Hose Temperature-Pressure Curve



※ Thermo-proof hose for high temperature is available upon request

## When Placing Order

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

### (1) Specification of Liquid

- Liquid name
- Concentration(%)
- Viscosity(cp)
- Ingredients
- Temperature(°C)
- Specific gravity

### (2) Conditions of Installation

- Purpose of use
- Required Pressure(bar)
- Discharge side piping
- Ambient temperature(°C)
- Mounting method
- Required capacity(ml/min)
- Suction side piping
- Power source
- Installation location
- Operating time

### (3) Others

- Desired Delivery date and place
- Any other requirement

※ In order to revise products, specification, etc. are subject to change without notice.