

KEMPION Cheon-sei's new line of metering pumps, which was designed to exceed our high quality specifications to satisfy our customers.

CHEON-SEI METERING PUMPS
KEMPION

ISO 9001



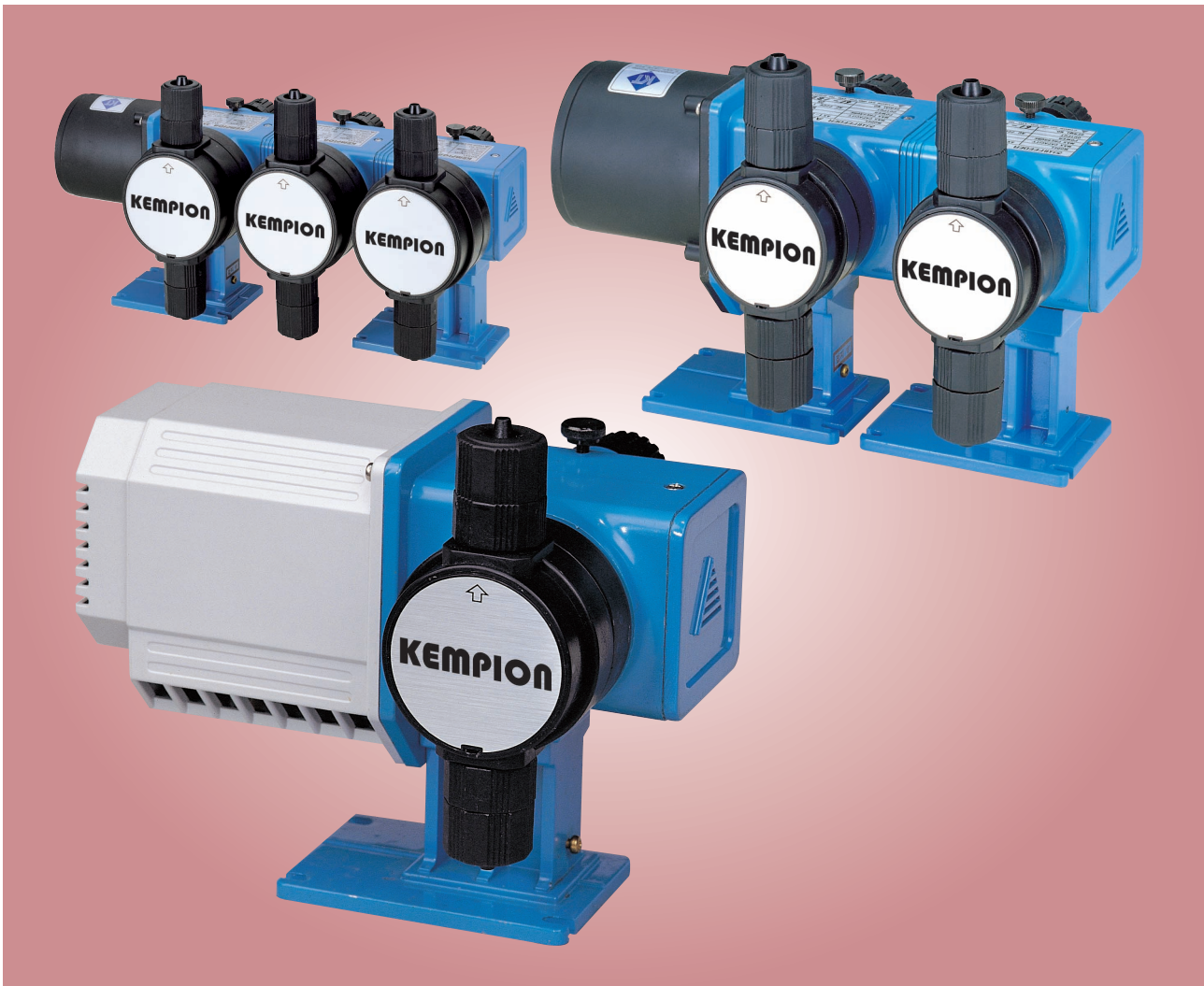
High Quality Metering Pumps that Exceed Customer Satisfaction

KEMPION



Diaphragm Type Metering Pump-AX Series

Small Metering Pumps



 **CHEON-SEI IND. CO.,LTD.**
PUMPLAND DIVISION

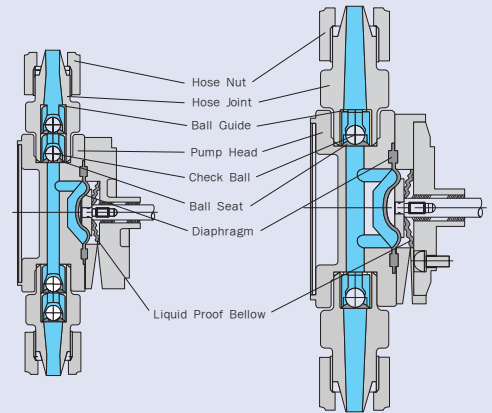


Leak Proof Liquid Ends

- The liquid ends are made of special engineering plastic materials of superior chemical resistance and mechanical rigidity.

PRR : Reinforced polypropylene
 FRR : Fluoro plastic

- The O-ring rimmed diaphragm provides complete sealing.
- The liquid proof bellows isolates driving unit from liquid ends for double protection.



Durable Driving Unit

The frame and planetary gears are precision die-casted with anti-abrasive robust materials for semi-permanent life.

Easy Dial Setting

Volume capacity can be easily adjusted by dial and locked by stop bolt without disturbing pump operation.



Thermally Protected Motor

- The internal temperature switch protects motor from overload.
- Two types of motors available
 - Shaded motor
 - Totally enclosed self cooling motor



SHADED MOTOR



TOTALLY ENCLOSED SELF COOLING MOTOR

Accessories Available

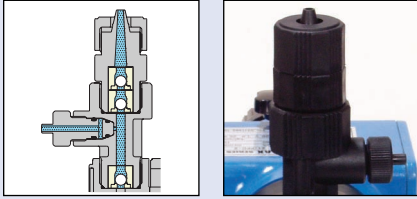
There are additional high performance accessories available convenient applications.

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



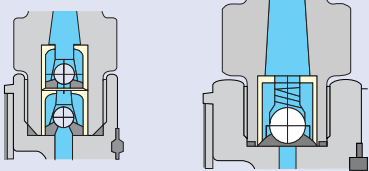
Gas locking prevention

- Liquid end design minimizes dead space
- Air relief valve can be provided for vaporous liquid. (Optional item for AX 21~32)



Precise valve construction

Check valves are of precise dimensions and construction



DOUBLE CHECK TYPE
(For AX-21 • 51 • 12 • 32)

SINGLE INSERT TYPE
(For VISCOUS LIQUID)

Application of multiplex head

- You can use multiplex pump for the injection of different liquid or for the extension of discharge volume.
- Triplex pump of same head can be a pulse-less pump.
- Combination of large and small heads can be a fine discharge control pump.
- Ratio control becomes possible for various chemicals.



TWO LIQUID INJECTION PUMP



PULSE-LESS PUMP

MODEL CODE



1 Series name

AX : KEMPION AX-SERIES

2 Head number

1 : Single 2 : Duplex 3 : Triplex

3 Nominal capacity

[1][2] = 100 ml/min. of capacity
digit of zero(0)

※ For duplex and triplex, this refers to the capacity of each head

4 Liquid end materials

A. pump head

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

B. Ball seat

R : SANTOPRENE® F : FKM T : PTFE
E : EPDM X : Special

C. Check ball

R : H.G.TPE C : Ceramic S : SS304
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.

5 Specification

A. Joint type

H : Hose X : Special

F : Flange

※ Flange is connectable to KS 10K 15A

B. Valve structure

W : Standard (below 50cp)

V : High viscosity (50~1000cp)

C. Other

S : standard A : Air relief valve

B : Boiler C : A + B X : Special

※ For boiler type, siphon check valve for heat-resistance will be provided.

※ For hose type of AX-21, 51 model only, air relief valve is provided as a standard accessory.(except S□□, 6□□ type)

6 Motor

K : Shaded motor(for single head only)

Z : Totally enclosed self cooling motor
(For single and multiplex heads)

※ Standard electricity is AC220~230V 1φ

STANDARD LIQUID END MATERIAL TABLE

	Pump Head	Diaphragm	Check Ball	Ball Seat	Ball Guide	Joint	O-Ring	Hose	Flange
PRR	GFPP	PTFE	H.G.TPE	SANTOPRENE®	GFPP	GFPP	SANTOPRENE®	PVC	GFPP
FRR	PVdF	PTFE	H.G.TPE	SANTOPRENE®	PVdF	PVdF	SANTOPRENE®	PTFE	GFPP
SRR	SS304	PTFE	H.G.TPE	SANTOPRENE®	PVdF	SS304	SANTOPRENE®	PTFE	SSC13
6RR	SS316	PTFE	H.G.TPE	SANTOPRENE®	PVdF	SS316	SANTOPRENE®	PTFE	SSC13

SPECIFICATIONS

Specification		Model					
		AX1-21	AX1-51	AX1-12	AX1-32	AX1-52	AX1-13
Discharge Volume (ml/min)	50Hz	20	40	90	300	460	1040
	60Hz	25	50	110	360	550	1250
Max. Discharge pressure (kgf/cm ²)		15		10	5	3	
Stroke Number(SPM)	50Hz	57		114			
	60Hz	68		136			
Stroke Length(mm)		3			6		
Connection	PVC Hose	HWS	ø 6 × ø 11			ø 12 × ø 18	
		HVS	ø 12 × ø 18				
	PTFE Hose	HWS	ø 10 × ø 12				
		FWS	KS 10K 15A				
Motor	TESC		25				37
	Shaded		6	14			20
Weight(kg) (PRR-HWS-Z)		3.4			3.8		4.1
Operating Temperature		Liquid Temperature: 0 ~ 50°C			Ambient Temperature: 0 ~ 40°C		
Painting		Munsell 0.6PB 4.8/10.6 Mellamin Paint					

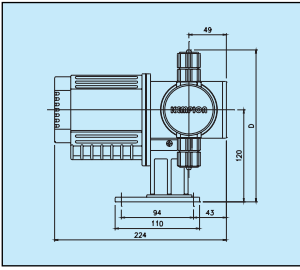
Notes

1. The listed max. capacity is that at max. discharge pressure.
2. This pump is designed for indoor use. Be sure to use a pump cover if installing out doors.
3. Never use this pump to transfer liquids containing slurry.
(In such a case please consult CHEON-SEI.)
4. For any other specifications, please consult CHEON-SEI.
5. Please note that AX-13 model is not available for duplex and triplex head.
6. The above specifications can be changed without prior notice.

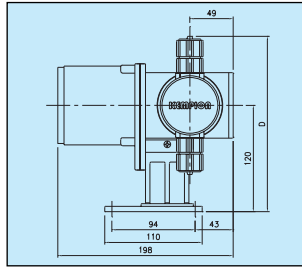
■ Dimensions

(unit : mm)

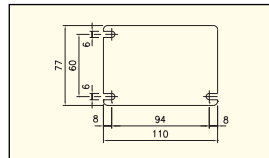
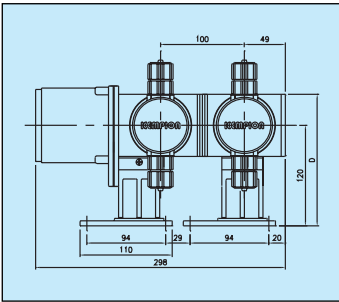
• AX1(SHADED MOTOR)



• AX1(TESC MOTOR)

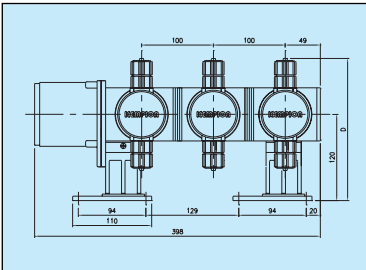


• AX2(TESC MOTOR)

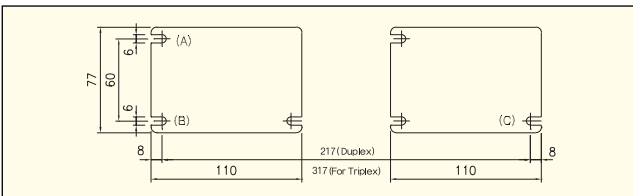
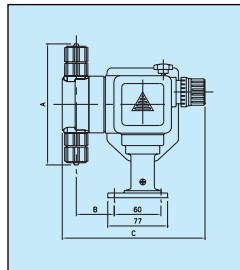


MODEL	DIMENSION	A	B	C	D
AX□-21,51,12		156	49.5	185	198
AX□-32		156	48.5	185	198
AX□-52		198	54.5	193	219
AX□-13		204	54	192	222

• AX3(TESC MOTOR)



• SIDE VIEW(Common)



※Point (A),(B),(C) are to be anchored.

■ Accessories List(Based on single head)

Part Name	Connection	Hose	Flange
Hose		3M	-
Strainer Foot Valve		1SET	-
Anti-Siphon check valve		1SET	-
Mounting Bolts(With nut M5×0.8×20)		3SET	3SET
Hexagonal L-Wrench (M5 Subtense 2.5)		1	1
Instruction Manual		1	1

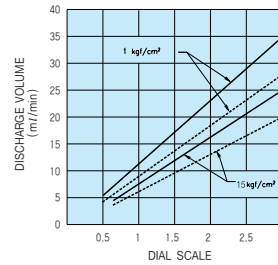
※ In case of Multiplex Head, the above quantity will be multiplied by the head number(except for hose pump, L-Wrench, Manual)

※ For Air Relief Valve type, the hose(0.5M) for Air Relief Valve will be provided.

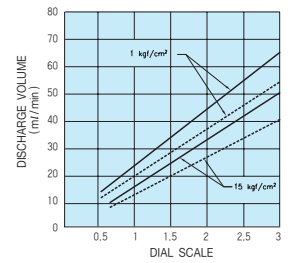
■ Performance curve

— 60Hz ---50Hz CONDITIONS:ROOM TEMP, CLEAN WATER, SUCTION HEAD-1m

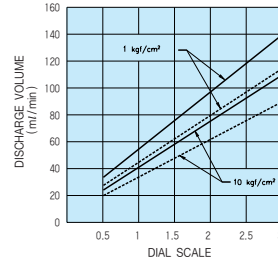
• AX1-21



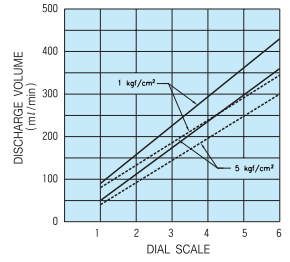
• AX1-51



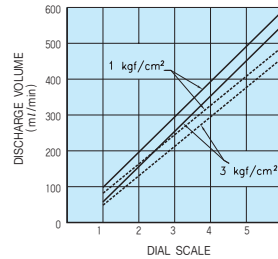
• AX1-12



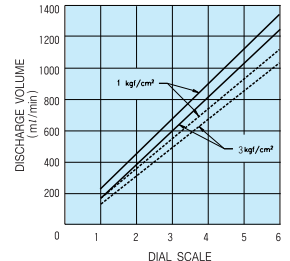
• AX1-32



• AX1-52



• AX1-13



■ When Placing Order

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

1. Specification of liquid

- liquid name
- Ingredients
- Concentration(%) : ▲ Normal ▲ Range of variation
- Temperature(°C) : ▲ Normal ▲ Range of variation
- Viscosity(cp) : ▲ Normal ▲ Range of variation
- Specific gravity

2. Conditions of installation

- Purpose of use
- Requir capacity(ml/min) : ▲ Normal ▲ Maximum
- Suction side piping : ▲ Pipe dia. ▲ Piping length ▲ Height ▲ Other
- Discharge side piping : ▲ Pipe dia. ▲ Piping length ▲ Height ▲ Other
- Power source : ▲ Voltage(V) ▲ Frequency(Hz) ▲ Other
- Ambient temperature(°C) : ▲ Normal ▲ Maximum
- Installation location : ▲ Indoor ▲ Outdoor
- Mounting method
- Operating condition : ▲ Continuous operation ▲ Intermittent operation

3. Other

- Desired delivery date and place
- Any other requirement