

## Electromagnetic metering pumps EW series



# Electromagnetic metering pumps with high resistance to external liquids

IP65



Conventional electromagnetic metering pumps generally suffer from low resistance to exposure of external liquids. With improved sealing of not only the control unit but also the pump unit, a remarkable improvement to this exposure has been achieved in the EW series. With its tough construction and high tolerance to external liquids, the EW series can be widely used in applications ranging from incorporation into various devices to utilization as standard equipment in water treatment facilities.

#### **Waterproof structure (IP65)**

With the aim of improving resistance to exposure to liquid, the controller unit is installed on the back of the pump and membrane switches have been adopted for the control panel protected with a cover as standard equipment. A rubber gasket is provided between the pump head and the bracket to prevent water from entering from the periphery of the pump head.

#### **High resolution**

For discharge flow adjustment, a dual control system which controls the length of stroke and the number of strokes employed. Since stroke by stroke adjustment is possible, the discharge rate can be controlled in a wide range from a minimal flow rate to its maximum discharge.

#### **Multifunctional controller**

The controller includes a CPU and is equipped with double-level stop function and external control function. The display for the number of strokes utilizes a high temperature type LCD which provides extra resistance to the direct rays of the sun.

#### **High compression ratio**

The compression rate is raised by reducing the dead volume of the pump head and increasing the length of stroke, aiming at higher self-priming capability and more effective venting.



EW-08

# High-tech combination of pump technology and electronics technology



## Pump unit

### Pump head

Four types, PVC, GFRPP, PVDF and Stainless steel 316 are available.



PVC type

GFRPP type

PVDF type

SUS316 type

### Diaphragm

A flat diaphragm with less dead volume. Made of EPDM covered by fluororesin, it is highly corrosion resistant and remarkably durable.



### Valve

A dual stage valve system is used to improve the checking ability. There are two types of valve assemblies, i.e., for acid liquid and for alkaline liquid.

### Air vent valve

The smaller flow rate types (to the EW-20) have air vent valves as standard equipment. Air in the pump chamber can be easily released simply by turning knob.



Note: For SUS316 type, airvent valve is available for all pump sizes.

## Drive unit

### Solenoid

A coil and a thermal protector, insert-molded from resin, ensure superior insulation. For convenience in recycling, the resin portion and the metal portion are constructed to be easily separable.

### Pump body

The body is in PPE which offers good resistance to deterioration from ultra-violet rays and also provides strong resistance to chemical exposure. A rubber gasket is inserted between the bracket and the pump head to prevent liquid from entering into the drive portion.

## Controller unit

### Controller

A CPU is mounted to raise the resolution and promote functional diversity.

### Control panel

An LCD suitable for use under high temperatures is weather-tight and easy for the operator to see. To protect the controller portion from liquid, membrane switches are used.

### Stroke length adjusting dial

The large control dial is easy to operate. Dual control of the number of strokes as well as the length of stroke allows a wide range of discharge adjustment.

### Controller cover

All models have controller covers as standard equipment.

### Connector

A connector which meets DIN standards is employed for the connection with external cord.





**Accessories**

**Check valve CA /CB / CS**

This has the function of a non-return valve and prevents siphon and overfeed.

**CA** : Available in PVC and CFRPP.

**CB** : In-line type to be connected in the middle of a hose; made of PVC.

**CS** : Made of stainless steel for SH type.



**Specifications**

Model	Connection		Set pressure MPa	Material			Applicable pump
	Inlet mm	Outlet mm		Body	Spring	O-ring	
<b>CA-1VC (1V)</b>	4x6, 5x8 6x8, 6x12	R3/8 and R1/2	0.17 ± 0.04	PVC (CFRPP)	Hastelloy C276	FKM	EW-B08, F10, F15, F20, G20
<b>CA-1VE (1E)</b>						EPDM	
<b>CA-2VC (2V)</b>	9x12	R3/8 and R1/2	0.17 ± 0.04	PVC (CFRPP)	Hastelloy C276	FKM	EW-G30
<b>CA-2VE (2E)</b>						EPDM	
<b>CA-2VCL (2VL)</b>	9x12	R3/8 and R1/2	0.05 ± 0.04 0.03	PVC (CFRPP)	Hastelloy C276	FKM	EW-F30, G35, G45
<b>CA-2VEL (2EL)</b>						EPDM	
<b>CB-1VC (1V)</b>	4x6, 5x8 6x8, 6x12	4x6, 5x8 6x8, 6x12	0.17 ± 0.04	PVC (CFRPP)	Hastelloy C276	FKM	EW-B08, F10, F15, F20, G20
<b>CB-1VE (1E)</b>						EPDM	
<b>CB-2VC (2V)</b>	9x12	9x12	0.17 ± 0.04	PVC (CFRPP)	Hastelloy C276	FKM	EW-G30
<b>CB-2VE (2E)</b>						EPDM	
<b>CB-2VCL (2VL)</b>	9x12	9x12	0.05 ± 0.04 0.03	PVC (CFRPP)	Hastelloy C276	FKM	EW-F30, G35, G45
<b>CB-2VEL (2EL)</b>						EPDM	
<b>CS-1S</b>	Rc1/4	Rc1/4	0.2 ± 0.03	SUS316	Hastelloy C276	-	EW-B08, F10, F15, G20, G30
<b>CS-1SL</b>			0.05 ± 0.03				EW-G35, G45

**Siphon preventing val**

Made of PVC or GFRPP consi of non-metalic parts.



**Specifications**

Model	Connection		Set pressure MPa	Material		Applicable pump
	Inlet mm	Outlet		Body	O-ring	
Note <b>BVC-1□□</b>	4x6 6x8 9x12	R3/8 or R1/2	0.2 or 0.05	PVC	FKM or EPDM	All models

Note : Different models are available. Please contact for particulars.

**Air vent valve AV**

This is for EW-F30, G30, G35 and G45.



**Specifications**

Model	Tube connection	Material	Applicable pump
<b>AV-LVC-5</b>	9x12mm	PVC, FKM	EW-F30, G30, G35, G45-VC
<b>AV-LVH-5</b>		PVC, EPDM	EW-F30, G30, G35, G45-VH
<b>AV-LPC-5</b>		GFRPP, FKM	EW-F30, G30, G35, G45-PC
<b>AV-LPH-5</b>		GFRPP, EPDM	EW-F30, G30, G35, G45-PH

**Foot valve FS / FSP / FSTC**

This foot valve with a strainer is made of PVC or GFRPP.



**Specifications**

Model	Tube connection	Material	Applicable pump
<b>FSV</b>	4x6mm 6x8mm 9x12mm	PVC / FKM / Alumina ceramic	All models
<b>FSE</b>		PVC / EPDM / HastelloyC276	
<b>FSPV</b>		GFRPP / FKM / Alumina ceramic	
<b>FSPE</b>		GFRPP / EPDM / HastelloyC276	
<b>FSTC</b>		PVDF / FKM / Alumina ceramic	

**Chemical tank EXDT**

This is a polyethylene round tank.



Capacity : 35, 60, 100, 200 or 300L

**Priming set EHPS**

Made of PVC furnished with a level sensor and foot valve.



**Specifications**

Model	Tube connection	Total length
<b>EHPS(A)46</b>	4x6mm	720mm
<b>EHPSA912</b>	9x12mm	720mm

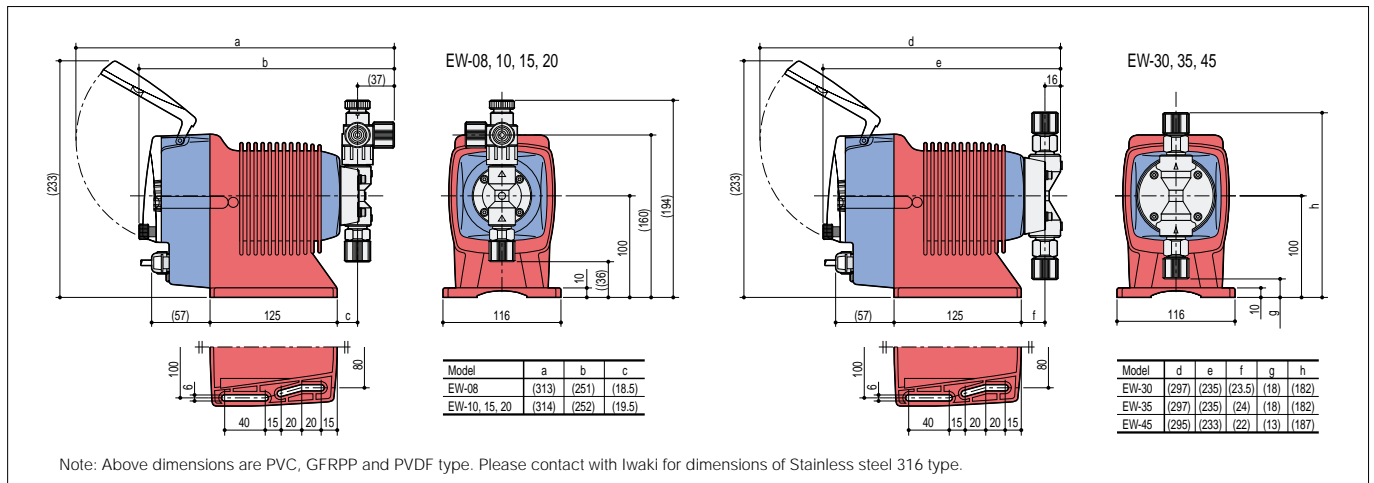
**Pulse oscillating flow meter CWC**



**Specifications**

Model	Connection	Max. capacity	Range of pulse
<b>CWC-00025</b>	3/4"	5m³/h	1xOutput pulse against 0.25L
			1xOutput pulse against 0.50L
			1xOutput pulse against 1.00L
<b>CWC-00060</b>	1"	12m³/h	1xOutput pulse against 0.25L
			1xOutput pulse against 0.50L
			1xOutput pulse against 1.00L
<b>CWC-00100</b>	1 1/2"	20m³/h	1xOutput pulse against 0.25L
			1xOutput pulse against 0.50L
			1xOutput pulse against 1.00L

Dimensions in mm



EW-HV models

HV type handles high viscosity application.

The EW-HV models are specially designed for accurate feeding of high viscous chemicals. Specially contoured fluid path in pump chamber, spring-loaded stainless steel valve balls and special shape of valve seat achieve to handle high viscous chemical.

Specifications

- Max. discharge capacity: 7.44L/hr (124mL/min)
- Max. discharge pressure: 0.35 MPa
- Max. stroke rate: 240 spm
- Main materials: GFRPP, EPDM, SUS316

Note: Above discharge capacity is the value when handling clear water. When handling actual viscous liquid, discharge capacity is increased. When is required larger volume than EW-HV type, EH-E35 with HV type pump head is available. For details, please contact us.



EW-HV models

HV type handles high viscosity application.

The EW-T models are tube diaphragm type electromagnetic metering pumps. As they are designed not to allow liquid to stay easily in their pump chambers, they are suitable for handling slurry liquid.

Specifications(C12T / C14T)

- Max. discharge capacity: 8.4L/hr (140mL/min) / 15.6L/hr (260mL/min)
- Max. discharge pressure: 0.35 MPa / 0.2 MPa
- Max. stroke rate: 240 spm / 240 spm
- Main materials: GFRPP, EPDM, HasteloyC276

Note: For details, please contact us.



These models are not available from stock. They can be supplied on special orders. Please contact us for details.

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Caution for safety use: Before use of pump, read instruction manual carefully to use the product correctly. Actual pumps may differ from the photos. Specifications and dimensions are subject to change without prior notice. For further details please contact us.