

Electromagnetic metering pumps EH/W type



High-tech combination of pump technology and electronics technology

EH/W type has an integrated controller equipped with the pH control function, ORP control function or conductivity control function and pump. Connecting the electrode directly to the pump, the proportional control can be carried out at the site.



Dual discharge control

The discharge rate is adjusted in two ways: stroke length and stroke rate. The effective adjusting range of the stroke length is 20 - 100 %. The stroke rate can be set at 0 - 360 spm, and can easily cover very minute flow rates.



Note: The setting range of the stroke length depends on the model.

Microcomputer built-in controller

Three types of controller unit includes microcomputer are available, pH proportional control, ORP proportional control and conductivity control.



Chemical resistance features

Materials available for the pump head are PVC, GFRPP (Polypropylene), PVDF (Fluororesin), and SUS (Stainless steel). All other wetted-parts consist of corrosion-proof materials; Hastelloy C276, ceramic, fluoroelastomer, PTFE, etc.

Air vent mechanism

An air vent valve is provided on the small flow models (up to a diaphragm size of B/C20). By turning the knob, the air within the pump chamber can be quickly discharged.



Note: For 30, 35, air vent valve is available as option.

Easy maintenance

The pump consists of only a few unitized components, so not only is operation simple but also periodical maintenance presents no problem.

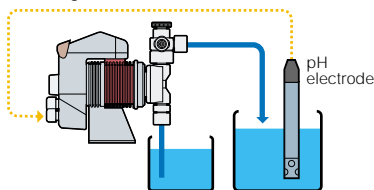
Model for water treatment control

Three types of controller unit

pH proportional control EH/W-PH

By directly connecting the electrode to the pump, pH proportional control can be carried out at the site. When temperature compensating electrode is connected, pump can control pH more accurately.

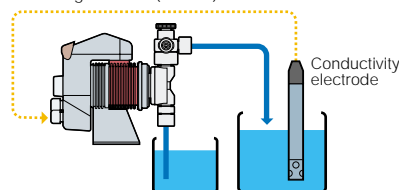
- Setting of SET point
- Setting of PB (Proportional band)
- Stroke length control (Manual)



Conductivity proportional control EH/W-CD

By directly connecting the electrode to the pump, conductivity proportional control can be carried out at the site.

- Setting of SET point
- Setting of PB (Proportional band)
- Stroke length control (Manual)

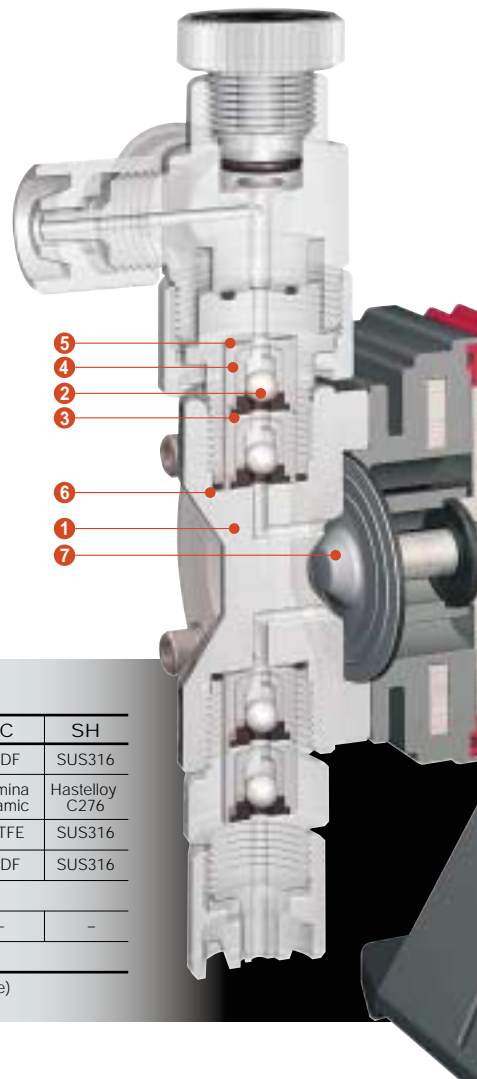
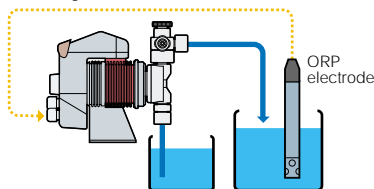


Note: Specific electrode is needed for this model. When you use the electrode made by other manufacture, please contact IWAKI.

ORP proportional control EH/W-OR

By directly connecting the electrode to the pump, ORP proportional control can be carried out at the site.

- Setting of SET point
- Setting of PB (Proportional band)
- Stroke length control (Manual)



Wet end materials

Material symbol	VC	VH	PC	PH	FC	SH
1 Pump head	PVC	PVC	GFRPP	GFRPP	PVDF	SUS316
2 Valve	Alumina ceramic	Hastelloy C276	Alumina ceramic	Hastelloy C276	Alumina ceramic	Hastelloy C276
3 Valve seat	FKM	EPDM	FKM	EPDM	PCTFE	SUS316
4 Valve guide	PVC	PVC	GFRPP	GFRPP	PVDF	SUS316
5 Gasket	PTFE					
6 O-ring	FKM	EPDM	FKM	EPDM	-	-
7 Diaphragm	PTFE coated EPDM					

Note : Illustration shows EH-B10/15/20 and C15/20. (PVC, GFRPP type)

Pump identification

EH - B 20 VC - 20E P W 2 - PH1
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

- | | | | |
|---|---|---|---|
| <p>① Series name</p> <p>② Drive unit symbol
B : 16W C : 24W</p> <p>③ Diaphragm effective diameter
10 : 10mm 15 : 15mm 20 : 20mm
30 : 30mm 35 : 35mm</p> | <p>④ Wet-end part material symbol
VC VH PC PH FC SH
For details, see the table of materials.</p> <p>⑤ Power-supply voltage symbol
100 : AC110/110/115V single phase
20E : AC220/230/240V single phase</p> | <p>⑥ Power code terminal symbol
P : With plug
No symbol : Crimp style terminal</p> <p>⑦ Control unit type
W : Water treatment control model</p> | <p>⑧ Diameter of connecting tube(in mm)
1 : 4 X 9 2 : 4 X 6 3 : 6 X 8 4 : 8 X 13
5 : 9 X 12 6 : 10 X 12 9 : Rc 1/4"</p> <p>⑨ Control unit code <small>Note</small>
PH1, PH2 : pH proportional control type
OR : ORP proportional control type
CD : Conductivity proportional control type</p> |
|---|---|---|---|

Note PH1 : Temperature compensation PT1000, PH2 : Temperature compensation PT100

Specifications of pump

Model			B10	B15	B20	B30	C15	C20	C30	C35	
Capacity	VC, VH, PC, PH	mL/min	38	70	105	230	90	130	270	450	
		mL/shot	0.04 - 0.11	0.04 - 0.19	0.06 - 0.29	0.13 - 0.64	0.05 - 0.25	0.07 - 0.36	0.15 - 0.75	0.25 - 1.25	
	FC, SH	mL/min	38	-	95	-	-	120	260	410	
		mL/shot	0.04 - 0.11	-	0.05 - 0.26	-	-	0.07 - 0.33	0.14 - 0.72	0.23 - 1.14	
Max. discharge pressure		MPa	0.98	0.69	0.39	0.20	0.98	0.69	0.34	0.20	
Stroke length		B10-B30: Max.1mm, C15-C35: Max.1.25mm Effective adjustment range B10: 40-100%, B15-B30: 20-100%, C15-C35: 20-100%									
Stroke rate		0 - 360 spm									
Power supply (for both 50/60Hz)		AC100,110,115V or 220,230,240V single phase									
Insulation type, etc.		E type insulation and built-in thermal protector, with a 1.5m or 2.0m power cable.									
Connection (Applicable tube diameter) mm	VC,VH	4X6, 4X9, 6X8				8X13, 9X12		4X6, 4X9, 6X8		8X13, 9X12	
	PC,PH	4X6, 4X9				8X13, 9X12		4X6, 4X9		8X13, 9X12	
	FC	4X6	-	4X6	-	-	4X6	10X12			
	SH	Rc1/4"	-	Rc1/4"	-	-	Rc1/4"				
Thread connection											

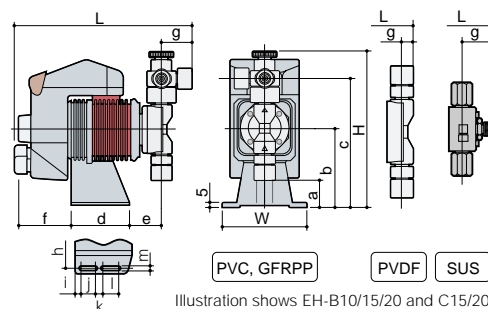
• The max. discharge value in the table above represents the performance measured with pure water under the max. discharge pressure. Actual discharge may increase if operation is conducted at a lower pressure. • Set the discharge pressure at 0.12 MPa or higher to prevent over-feeding trouble. (0.05 MPa or higher in the case of B30 or C35.) If the pressure is to be lower than these levels, make sure to use a check valve or a back pressure valve, which is supplied as an optional item. • PVDF and SUS316 types are not available for EH-B15/30 and C15 types. • Range of liquid temperature VC/VH : 0-40°C, PC/PH/FC/SH : 0-60°C. • Range of the ambient temperature : 0-40°C. • Max. viscosity : Up to 50mPa·s. If the viscosity exceeds 50mPa·s, please contact us.

Specifications of controller

Model		PH	OR	CD
Control Function		AUTO/MAN		AUTO/MAN
Control	Setting	<ul style="list-style-type: none"> AUTO SET : 0 - 14pH PB (Proportional band) : -14 - 14pH MANUAL No. of stroke : 0 - 360spm 	<ul style="list-style-type: none"> AUTO SET : -1999 - +1999mV PB (Proportional band) : -1999 - +1999mV MANUAL No. of stroke : 0 - 360spm 	<ul style="list-style-type: none"> AUTO SET : 0.00 - 9.99mS/cm PB (Proportional band) : -9.99 - 9.99mS/cm MANUAL No. of stroke : 0 - 360spm
	Setting method	4 Operating Keys ▲, ►, Func, START/STOP		
Display		4-digit 14 seg LCD Sampling 0.4sec		
Sensor input signal		0 - 14pH ZERO, SPAN (Thermal compensation)	-1999 - +1999mV ZERO	0.00 - 10.00mS/cm CELL

Dimensions in mm

Model	W	H	L			a	b	c	d	e	f	g			h	i	j	k	l	m
			PVC,GFRPP	PVDF	SUS							PVC,GFRPP	PVDF	SUS						
EH-B10	100	(183)	(206.5)	(183)	(206)	(28)	90	(150)	(67)	24	(63.5)	35	12	34	88	7	16.5	9.5	18	6.2
EH-B15				-	-			-					-							
EH-B20				(183)	(206)			-					-							
EH-B30	(171)	(192.5)	-	-	(9)	(171)	30	16	-	-	-	-	-	-	-	-	-	-	-	-
EH-C15	116	(194)	(229)	-	-	(38)	100	(160)	(97)	20.5	(59.5)	35	-	-	100	7	16	10	46	6.2
EH-C20				(207)	-			-					-							
EH-C30				(230)	-			-					-							
EH-C35				(181)	(215)			(215)					(19)	(181)						



Optional accessory

Check valve

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 or CFRPP.

CS : Made of stainless steel.

Model	Connection		Set pressure MPa	Material			Applicable pump
	Inlet	mm		Outlet	Body	Spring	
CA-1VC (1V)	4x6		0.17 ± 0.04	PVC (CFRPP)	Hastelloy C276	FKM	EH-B10, B15, B20, C15, C20
CA-1VE (1E)	4x9					EPDM	
CA-2VC (2V)	6x8					FKM	EH-C30
CA-2VE (2E)	8x13	R3/8 and R1/2	EPDM				
CA-2VCL (2VL)	9x12		0.05 +0.04 -0.03	PVC (CFRPP)	Hastelloy C276	FKM	EH-B30, C35
CA-2VEL (2EL)	8x13					EPDM	

Note: Please contact us for the specifications of CB and CS type.