

IWAKI  
ELECTROMAGNETIC  
METERING  
PUMPS

**EH-E**



# High-tech combination of pump technology and electronics technology

Electromagnetic Metering Pump EH Series features not only compact, but also can achieve a maximum flow rate of 1.25 L/min. The EH-E pump's controller includes a microcomputer that enables a single pump to provide not only manual operations, but also automatically controlled operations based on various input signals (current and pulse signals).



## High resolution

The discharge volume is adjusted in terms of stroke length and rate. The stroke length can be adjusted between 20% and 100%, and the stroke rate can be set between 0 and 360 spm, which enables the EH-E pump to provide a wide range of flow rates.

## Microcomputer built-in controller

The controller includes a microcomputer that enables a single pump to operate in four modes (manual / proportional control / pulse control / count control), switching between modes by means of the keys.

## Water- and dust-proof structure

The pump body, aluminium die-cast frame is molded by reinforced plastics (GFRPP), has a water- and dust-proof structure that is immune to liquids and atmosphere corrosion. The water-proof level is IP65.

## 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.



Model for high flow and industrial process

### Functions of the controller

#### Manual mode

Stroke rate can be increased or decreased by 1-spm anywhere within the range 0 to 360 spm, and is able to set either during operation or stop.

#### Proportional control mode

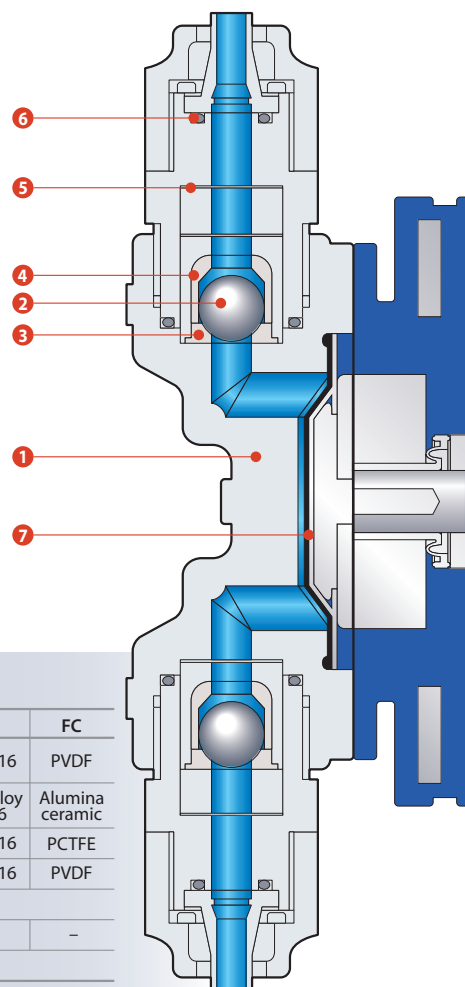
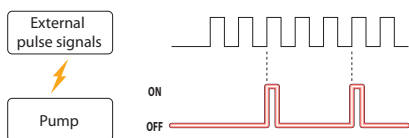
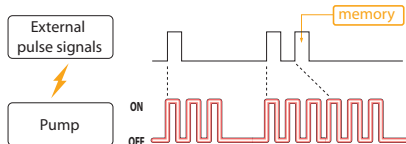
The stroke rate can be proportionally controlled based on external DC0-20mA signals. Select an input signal by means of the keys.

#### Pulse control mode

The EH-E pump performs division control operations in response to external pulse signals. The pump provides one shot per (n) times pulse inputs. Set the number (n) between 1 and 999 by means of the keys.

#### Count-control mode

The EH-E pump performs count-control operations in response to external pulse signals. The pump provides (n) times shots per pulse input. Set the number (n) between 1 and 999 by means of the keys. If next pulse is input before a set number of shots have been completed, the pump is capable of storing that pulse signal (max. 255 pulses). It is selectable to store the pulse input or not.



#### Wet-end part materials

Material symbol	VC	V6	VM(E56)	PC	SH	FC
1 Pump head	PVC	PVC	PVC (machined)	GFRPP	SUS316	PVDF
2 Valve	Alumina ceramic	SUS316	Alumina ceramic	Alumina ceramic	Hastelloy C276	Alumina ceramic
3 Valve seat	FKM	EPDM	FKM	FKM	SUS316	PCTFE
4 Valve guide	PVC	PVC	PVC	GFRPP	SUS316	PVDF
5 Gasket	PTFE					
6 O-ring	FKM	EPDM	FKM	FKM	-	-
7 Diaphragm	PTFE coated EPDM					

Note : Illustration shows EH-E46. EH-E31 & E36 employ 2 stage valve.

### Pump identification

**EH - E 56 VC - 20E P E 5 - □□**

- Series name: EH
- Drive unit symbol: E (48W)
- Diaphragm effective diameter: 56 (31: 30mm, 36: 35mm, 46: 45mm, 56: 55mm)
- Wet-end part material symbol: VC (VC, V6, VM, PC, SH, FC)
- Power-supply voltage symbol: 20E (100: AC100/110/115V single phase, 20E: AC220/230/240V single phase)
- Power code terminal symbol: P (P: With plug, No Symbol: Crimp-style terminal)
- Control unit type: E (E: E type controller)
- Special arrangement code: 5 (Diameter of connecting tube (in mm): 4: 8×13, 5: 9×12, 6: 10×12, 9: Rc 1/4, 11: 10×16, 14: Rc 3/8)

## Specifications of pump

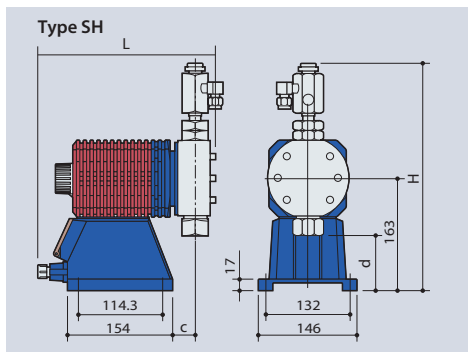
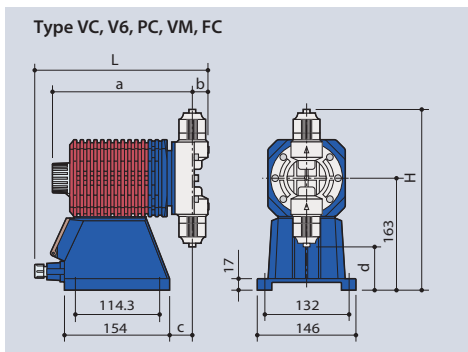
Model		E31	E36	E46	E56
Max.capacity	mL/min	340	520	750	1250
Max.capacity	L/hour	20.4	31.2	45	75
Max. discharge pressure	MPa	1.0	0.7 (SH : 0.6)	0.4	0.2
Power supply	(for both 50/60Hz)	AC100, 110, 115, 220, 230, 240V single phase			
Insulation type, etc.		E type insulation and built-in thermal protector, with a 1.5m or 2.0m power cable			
Stroke rate		0 - 360 spm			
Stroke length		20-100%			
Ambient temperature		0 - 40°C			
Range of liquid temperature		Type VC, V6, VM 0 - 40°C Type PC, SH, FC 0 - 60°C			
Ambient humidity		30 - 85%RH			
Connection for types VC, V6, PC, VM	mm	ø8 X ø13, ø9 X ø12			ø10 X ø16, ø9 X ø12
Connection for type SH		Rc 1/4	Rc 1/4	Rc 3/8	Rc 3/8
Connection for type FC	mm	ø10 X ø12			
Average power consumption		48W			
Average current		AC100/110/115V: 1.8A, AC220/230/240V: 0.8A			

- The max. discharge value in the table above represents the performance measured with clean 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. For E56, it should be 0.05 MPa or higher. 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.

## Specifications of Controller

<b>Display</b>	4 digit, 14 segment, LCD		
<b>Setting method</b>	4 Operating Keys ▲, ▼, EXT, START/STOP		
<b>Control function</b>	<b>Manual</b>	0 - 360spm	
	<b>Proportional to input signal</b>	Input signal : DC4-20mA, 0-20mA, 20-4mA, 20-0mA	
	<b>Count control (1 : n)</b>	No voltage contact, n=1-999, No. of stroke : Fixed at 360 spm, Count memory : Max. 255 pulse input	
	<b>Pulse control (n : 1)</b>	No voltage contact, n=1-999, No. of stroke : Fixed at 360 spm, Count memory	
	<b>STOP input</b>	No voltage contact (Make OFF)	

## Dimensions in mm



Model	L	H	a	b	c	d
EH-E31/36	(243)	(246)	(198)	16.5	(28)/(27)	(78)/(79)
EH-E46	(247)	(255)	(199)	19	(29)	(70)
EH-E56	(259)	(266)	(209)	21.5	(39)	(59)
EH-E56VM	(261)	(266)	(210)	23	(39)	(59)

Model	L	H	c	d
EH-E31	(249)	(300)	(27)	(97)
EH-E36	(249)	(303)	(27)	(94)
EH-E46	(254)	(328)	(27)	(92)
EH-E56	(265)	(331)	(38)	(79)



**LENNTECH**  
WATER TREATMENT SOLUTIONS

info@lennotech.com Tel. +31-152-610-900  
www.lennotech.com Fax. +31-152-616-289

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- ⚠ Legal attention related to export.

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