



Electromagnetic Metering Pumps

EWP



The Heart of Industry



INNOVATION PROGRESS

The EWP series offers high resolution chemical delivery with high turndown capability in a more durable enclosure. The newly designed backlit LCD on the controller enhances visibility and simplifies operation. The new Standard model features dual rotary knobs for easy adjustment and control.

By incorporating key insights into our development process, we have provided superior operation and performance unmatched by the competition.



One Pump. Two control options.

EWP-R Standard Type

Advanced Features and Enhanced Controls

Introducing a new backlit LCD for improved clarity and effortless operation.

The large status LED bar, featuring up to 5 vibrant colors, offers a clear visual indication of your operating conditions. Its high-visibility design ensures the pump status is easily visible from a distance or in low-light environments.



EWP-L

Simple Function Type

Simple and Intuitive Control Options for Easy Operation

The intuitive speed and stroke length adjustment knobs allow for precise pump output control, while external analog or pulse control is standard across all models. With an IP66-rated housing, it's built to withstand extreme conditions, offering excellent value for its feature set.

Optional wall-mount/base and control covers are also available.



Wide Selection of



PVDF

PVDF has some of the best chemical resistance across a wide range of chemistries while exhibiting excellent mechanical strength for a fluoropolymer.



GFRPP

GFRPP is a composite material that combines the chemical resistant properties of polypropylene with the strength and heat resistance of glass fiber to create a strong, impact resistant and versatile material.

Wet End Materials

PVC

PVC is chemically resistant, flame retardant, and durable, allowing it to be used in a wide range of industrial processes.



SUS316

SUS316 Stainless Steel has excellent pitting and corrosion resistance. It is resistant to many solvents where polymer materials are not as well as many harsh environments in contact with chlorides.



Detailed specifications on
Page 8

Flexible Installation

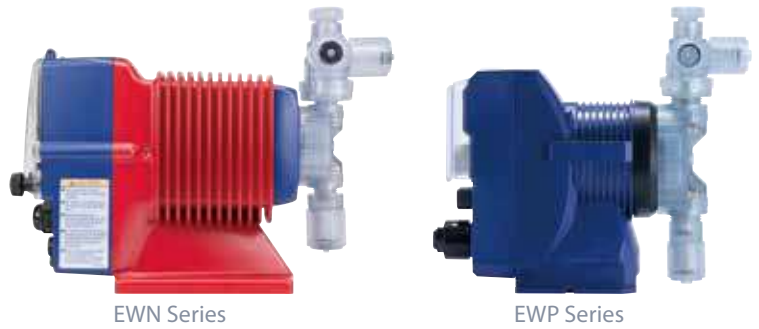
The EWP Pumps have been designed to be installed into a variety of locations using an easy-to-install mounting base. The same mounting base can be used to wall mount the pump without any extra parts required. Using the base, no tools are needed to remove the pump. With the same pump footprint dimensions, replacement of existing Iwaki electromagnetic metering pump^{Note} is easy.

Note: EHN, EJ, ES, EZ and EWN models.
• The EWP-SH type is heavy, so a cannot be mounted on a wall.



Compact Size

The EWP Series requires less space for the same performance. A volume savings of approximately 22% (compared with the EWN pumps) enable smaller cabinets or space required for better efficiency.



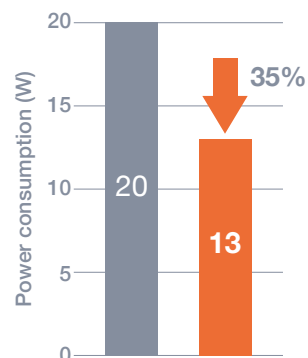
Waterproof and Dustproof Enclosures

The EWP Series pumps are designed to be sealed and rated to an IP66 protection class (water and dust-proof) even without the display chemical splash guard.



Energy Savings

New drive and control unit design technology has reduced energy consumption by approximately 35% as compared to an EWN-B11 pump. Substantial savings are realized over lifetime pump operation.



Model Identification

EWP	-	038B	VC	02	N	-	EU	R
1		2	3	4	5		6	7
1 Pump series EWP Series		2 Capacity & Pump unit 038B : 38 mL/min, Pump unit B 080C : 80 mL/min, Pump unit C 130D : 130 mL/min, Pump unit D 270E : 270 mL/min, Pump unit E ^{*1} 410F : 410 mL/min, Pump unit F ^{*2} 420F : 420 mL/min, Pump unit F	3 Wet end materials VC, VS, VE, PC, PS, PE, TC, FC, SH	4 Connection 01 : Ø4 × Ø9 mm 02 : Ø4 × Ø6 mm 03 : Ø6 × Ø8 mm 04 : Ø8 × Ø13 mm 05 : Ø9 × Ø12 mm 06 : Ø10 × Ø12 mm 07 : Ø1/4" × Ø3/8" 08 : Ø3/8" × Ø1/2" 09 : Rc1/4" 10 : NPT1/4" 18 : Ø6 × Ø11 mm 23 : Ø6 × Ø12 mm 24 : Ø5 × Ø8 mm	5 Special options N : Standard	6 Area JA : Asia EU : Europe US : USA 115 V AC UH : USA 230 V AC AU : Australia	7 Controller L : Simple function type R : Standard type	

*1: TC/FC/SH only.

*2: VC/VH/VE/PC/PH/PE only.

Wet End Materials

Material code	VC	VS	VE	PC	PS	PE	TC	FC	SH
Pump head	PVC			GFRPP			PVDF		SUS316
Valve	CE	SUS316 equivalent	CE	CE	SUS316 equivalent	CE	CE	CE	HASTELLOY® C-276 equivalent
Valve seat	FKM	EPDM	EPDM	FKM	EPDM	EPDM	FKM	PCTFE	SUS316
O-ring	FKM	EPDM	EPDM	FKM	EPDM	EPDM	FKM	—	—
Diaphragm	PTFE (Bonded to EPDM)								
Gasket	PTFE								

Pump Specifications

(VC/VS/VE/PC/PS/PE)

Model	Discharge capacity mL/min	Max. discharge pressure MPa	Liquid temperature range °C	Power consumption W	Current A	Mass kg
EWP-038B	38	1.0	0–40 (VC/VS/VE) 0–60 (PC/PS/PE)	13	0.8	2.3
EWP-080C	80	1.0		23	1.1	
EWP-130D	130	0.7				
EWP-270E	270	0.35				
EWP-420F	420	0.2				

(TC/FC/SH)

Model	Discharge capacity mL/min	Max. discharge pressure MPa	Liquid temperature range °C	Power consumption W	Current A	Mass kg
EWP-038B	38	1.0	0–60	13	0.8	2.3 (TC/FC) 3.6 (SH)
EWP-080C	80	1.0		23	1.1	
EWP-130D	130	0.7				
EWP-270E	270	0.35				
EWP-410F	410	0.2				

Controller Specifications

Controller type		EWP-R	EWP-L	
Operation mode	MAN	0.1–100% stroke rate ^{Note1} (1–360 spm)	0–100% stroke rate ^{Note6} (Max. 360 spm)	
	EXT	ANA.P (Analogue preset)	4–20, 0–20, 2 0–4, 20–0 mA (Proportional operation with stroke rate)	4–20 mA in proportion to 0–360 spm
		ANA.V (Analogue variable)	2 points setting (proportional operation with flow rate or stroke rate) Setting range: 0.0–20.0 mA, 0–Max. flow rate or 0.0–100 % stroke rate	–
		PLS.V (Pulse variable)	2 points setting (proportional operation with flow rate or stroke rate) Setting range: 0–500 Hz, 0–Max. flow rate or 0.0–100.0 % stroke rate	–
		DIV (Dividing)	/1–9999	0–6 Hz in synchronous with 0–360 spm
		MULTI (Multiply)	×1–9999	
		BATCH (Batch operation)	0.1 mL–99.9999 L, 0.0001–26.4199 G	–
	INT.B (Interval batch operation)	Day: 0–9, Hour: 0–23, Minute: 0–59 Flow rate: 0.1 mL–99.9999 L, 0.0001–26.4199 G	–	
Operational panel	LCD	14seg 5digits, 7seg 4digits, backlight LCD		
	Status LED	White	Lights when the pump is in the wait state or menu mode.	
		Green	Blinks synchronously with stroke when the pump is running.	
		Orange	Blinks synchronously with stroke when the Pre-STOP signal is input.	
		Purple	Lights when the STOP signal is input.	
		Red	Lights when the Interlock signal is input.	
	LED	–	Green LED : Blinks synchronously with stroke when the pump is running. Red LED : Lights when a STOP signal is input.	
	Keypad	Start/Stop, Menu, Escape, Enter, ▲(Up), ▼(Down) 6 Keys in total.		
Dial	–	Simple function dial (Stroke rate, PLS/ANA mode selector)		
Control functions	STOP/Pre-Stop	Pump keeps running during Pre-STOP signal input. Pump stops when STOP signal input. ^{Note2}		
	PRIME	Max. spm operation while holding down the START/STOP key.		
	Keypad lock	PIN number entry disables the function.		
	Interlock	Pump stops at contact input.		
	AUX	Pump runs at the preset AUX speed.		
	Buffer memory	MULTI/DIV: Excess pulse signal can be stored up to 65535 shots. ON/OFF is selectable. BATCH: Accumulates the flow volume up to 99.9999 L. ON/OFF is selectable.		
	Current value indication	An input current is displayed during operation in the ANA.V/ANA.P mode.		
Other features	Calibration	Automatically calculates the output capacity per shot and displays the flow rate.		
	Maximum flow rate setting	Stroke rate: 0.1–100.0%, 1–360 spm		
	AUX flow rate setting	Stroke rate: 0.1–100.0%, 1–360 spm		
	Anti-Chattering	The pulse recognition time for pump not to be adversely affected by chattering or noise is selectable.		
	Logic	“Normally Open” or “Normally Closed” is selectable for input and output signal.		
	Units	mL/m, L/h and GPH each can be enabled or disabled.		
	Data Logging	Total flow volume, Total shots, OUT1 ON times, Total power-on time, Total operation time, Software version		
Input	Pulse ^{Note3}	Dry contact or open collector. ^{Note4}		
	Analogue	0–20 mADC (Input resistance 220 Ω)		
	STOP/Pre-stop (Level sensor)	Dry contact or open collector ^{Note4} , 2-steps contact		
	AUX	–		
	Interlock	Dry contact or open collector ^{Note4}		
Output	OUT 1	Open collector (Photo coupler) 24 VDC, 30 mA Enable or disable the alarms of spm (Synchronous with stroke), STATE (Outputs while running), STOP, Pre-STOP, I.LOCK (Interlock), B.COMP (Batch complete)		
	Auxiliary DC power	12 VDC, 30 mA		
Power Voltage		100–240 VAC 50/60 Hz ^{Note5}	100 240 VAC 50/60 Hz ^{Note5}	

Note1: In the digital control with a preset divisor or multiplier, the pump does not run over the MAN speed (manual stroke rate) at any pulse rate. In other words, even when the calculation result between the set value of digital control and an incoming signal frequency happens to exceed the MAN speed of 200 spm, for example, the pump does not run over that speed.

Note2: Choose whether the pump should be in the STOP/Pre-STOP state when the switch is either open or closed.

Note3: The default value of maximum frequency is 100 Hz (Duty cycle: 50 %). The maximum frequency varies depending on the set value of the anti-chattering threshold. The pulse up to 500 Hz can be inputted only when the 500 Hz range is selected in the PLS.V mode.

Note4: The maximum applied voltage to the contact is 5 VDC at 2.3 mA. The minimum application load of the relay or switch should be 1 mA or below.

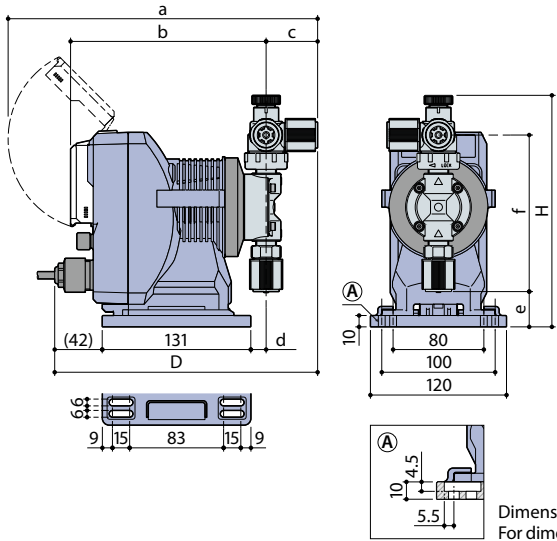
Note5: Observe the specified power voltage range or failure may result. The allowable power voltage range is 90–264 VAC.

Note6: Use the stroke rate adjusting dial to change the operation functions. Dial scale is approximate for reference only.

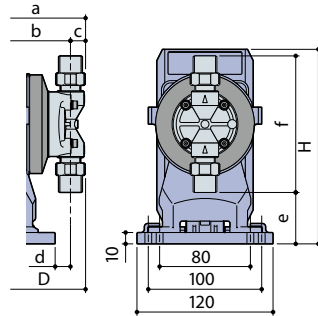
Dimensions in mm

EWP-R

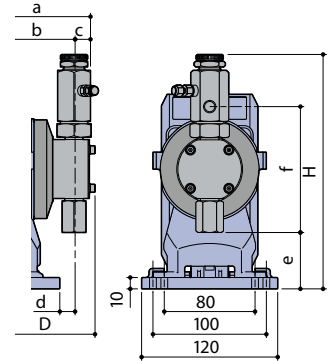
(VC/VS/VE/PC/PS/PE/TC)



(FC)



(SH)



- Illustration shows 038B, 080C, 130D
- The EWP-SH type is heavy, so a cannot be mounted on a wall.
- Do not mount the pump in an area with mechanical vibration. Ensure that the pump base does not experience vibration while it is being transported.

Dimensions with base attached.
For dimensions without base, refer to EWP-L.

(VC/VS/VE/PC/PS/PE/TC)

Model	(H)	(D)	(a)	(b)	(c)	(d)	(e)	(f)
EWP-038B								
EWP-080C	204	233	274	172	47	13	31	138
EWP-130D								
EWP-270E	217							166
EWP-420F	216	235	276	174	47	15	16	165

(FC)

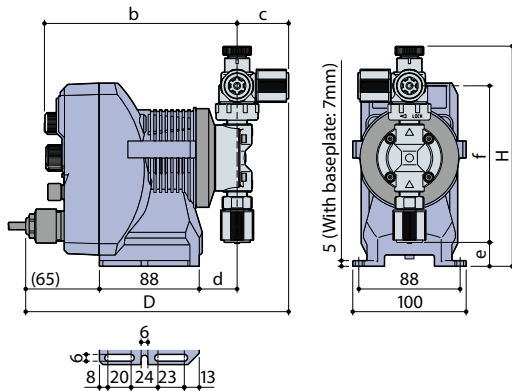
Model	(H)	(D)	(a)	(b)	(c)	(d)	(e)	(f)
EWP-038B								
EWP-080C	172	199	240	172	13	13	45	121
EWP-130D								
EWP-270E	183	204	245	174	16	15	29	154
EWP-410F								

(SH)

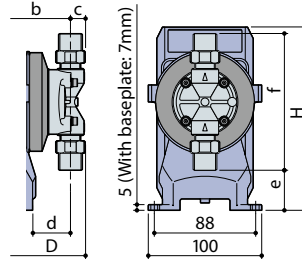
Model	(H)	(D)	(a)	(b)	(c)	(d)	(e)	(f)
EWP-038B								
EWP-080C	207	204	241	171	15	12	50	111
EWP-130D								
EWP-270E	219	205					40	133
EWP-410F	221	207	243	173	15	14	37	138

EWP-L

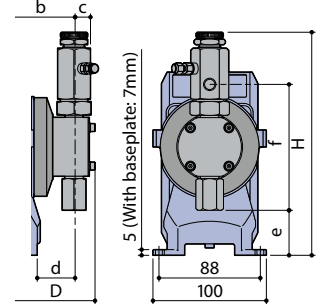
(VC/VS/VE/PC/PS/PE/TC)



(FC)



(SH)



- Illustration shows 038B, 080C, 130D
- The EWP-SH type is heavy, so a base plate is used. With baseplate: 7mm

(VC/VS/VE/PC/PS/PE/TC)

Model	(H)	(D)	(a)	(b)	(c)	(d)	(e)	(f)
EWP-038B								
EWP-080C	194	233		170	47	33	20	139
EWP-130D								
EWP-270E	207			172	47	35	4	168
EWP-420F	206	235		171	47	5	5	166

(FC)

Model	(H)	(D)	(a)	(b)	(c)	(d)	(e)	(f)
EWP-038B								
EWP-080C	162	199		170	13	33	35	121
EWP-130D								
EWP-270E	173	204		172	16	35	19	154
EWP-410F				171				


(SH)


Model	(H)	(D)	(a)	(b)	(c)	(d)	(e)	(f)
EWP-038B								
EWP-080C	197	204		170	15	32	40	111
EWP-130D								
EWP-270E	209	205					30	133
EWP-410F	211	207		170	15	34	27	138

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() Country codes

 **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.

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