

IWAKI
ELECTROMAGNETIC
METERING
PUMPS

EWN-WCL



An electromagnetic metering pump featuring a residual chlorine meter

The IWAKI EWN-WCL electromagnetic pump is a pump incorporating a controller so as to control the residual chlorine automatically. There is no need to prepare a separate pump controller, but you can organize the residual chlorine control system by merely connecting the dedicated sensor to the pump. You can reduce the initial investment for facility introduction and compactify your facilities.

Main use: Warm-bathing facilities, pool

Measurement unit (sensor, flow cell)

Stable measurement is possible via mechanical cleaning with beads and automatic electrolytic cleaning. An inline-type flow cell is adopted to enable measurement with a small volume of test water.



Display unit for the residual chlorine meter

The operating conditions can be checked on the specially developed large LCD, with backlight. An easy-to-use key switch is adopted to enable superior operability.

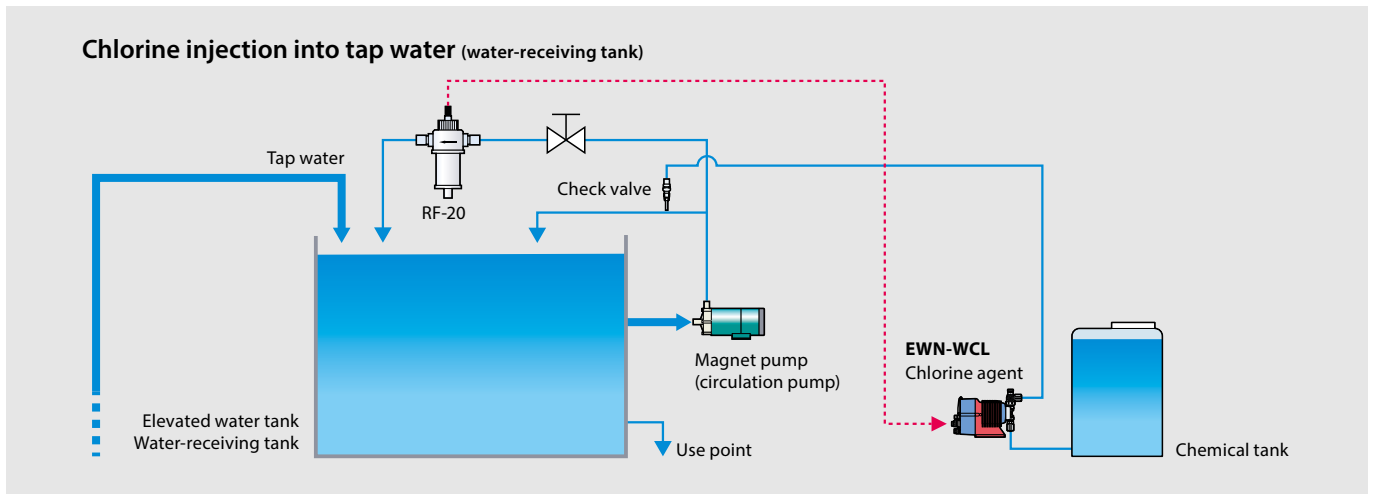
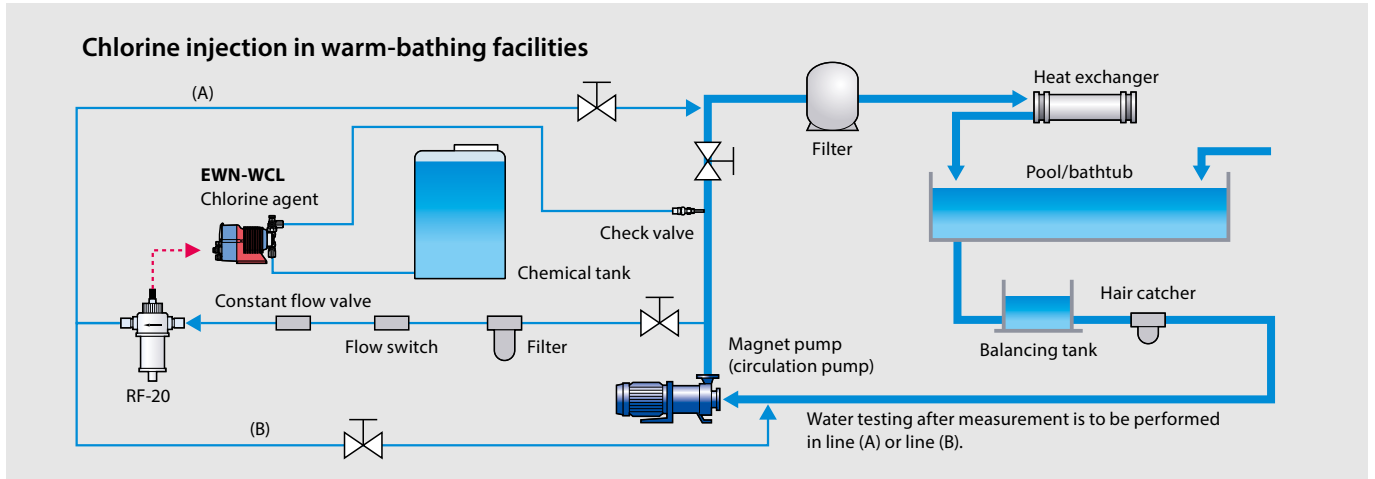


Pump body

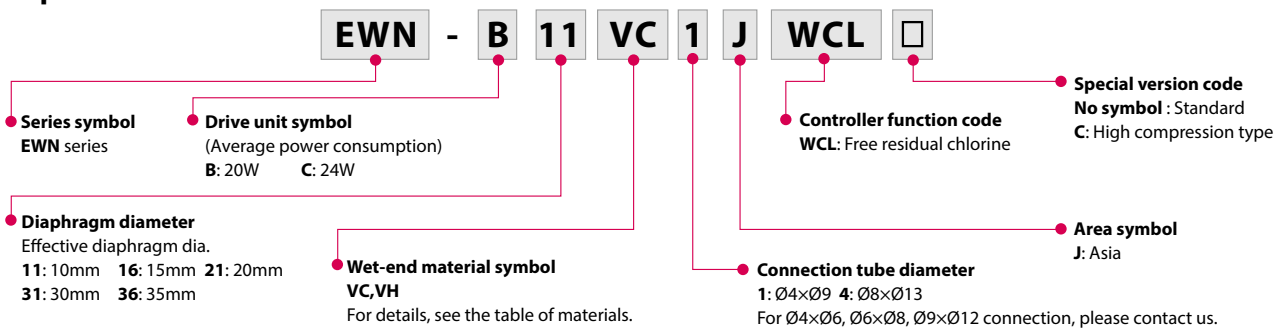
Seal portions have been reduced owing to integral molding with waterproof and dustproof specifications (IP65 equivalent). Considering various usage conditions, we have adopted a resin cover for the controller unit and waterproof capability for each connecting terminal.



Application examples

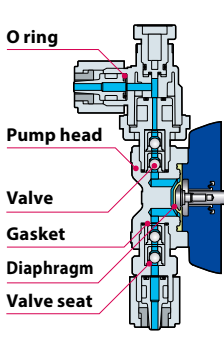


Pump identification

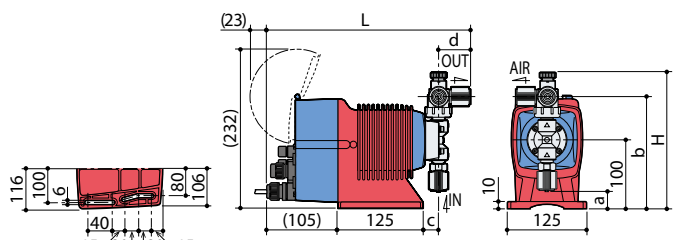


Wet end materials

Material symbol	VC	VH
Pump head	PVC	
Valve	Ceramic	Hastelloy C276
Valve seat	FKM	EPDM
Diaphragm	PTFE+EPDM	
Gasket	PTFE	
O ring	FKM	EPDM



Dimensions in mm



Model	H	L	a	b	c	d
EWN-B/C11,16,21	(199)	(292)	(24)	(164)	(23)	(47)
EWN-B/C31	(211)	(295)	(6)	(176)	(25)	(48)
EWN-C36	(211)	(294)	(7)	(176)	(24)	(48)

Specifications

Pump

Type	Standard type							
Material	VC, VH							
Model	B11	B16	B21	B31	C16	C21	C31	C36
Max. pressure MPa	1.0	0.7	0.4	0.2	1.0	0.7	0.35	0.2
Max. capacity mL/min	38	65	100	200	80	130	270	420
Connection mm	Ø4×Ø9		Ø8×Ø13		Ø4×Ø9		Ø8×Ø13	
Power voltage	100 - 240VAC 50/60Hz							
Air vent valve	Provided							
Average current	0.8A/20W				1.2A/24W			
Mass kg	2.5				3.5			
Standard accessories	CAN-1		CAN-2-L		CAN-1		CAN-2	CAN-2-L
Check valve								
Braided hose	Ø4×Ø9 or Ø8×Ø13 PVC 3m							

- The performance is based on pumping clean water at ambient temperature at rated voltage.
- Each discharge capacity shown above is at maximum discharge pressure (stroke length 100%, stroke rate 360%) and increases as a discharge pressure reduces.
- 0.13MPa or more discharge pressure is needed to prevent over feeding (0.05MPa or more for the EWN-B31 and C36).
- If the discharge pressure is at or below the required MPa, install a check valve or back pressure valve.
- Operating condition: Liquid temperature range 0 - 40 °C, Ambient temperature range 0 - 40 °C
- Please contact us for non-standard connections.

Controller

Measured element	Free residual chlorine (tap water level equivalent, sodium hypochlorite only)	
Measuring principle	Polarographic	
Measuring method	Beads cleaning, minute solid precious metal three-electrode method	
Test water	pH range: pH6.0 to 8.0, Electric conductivity range: 10mS/m or more, Temperature range: 0 - 45°C	
Control function	Function	AUTO/MANUAL
	Control method	Proportional control
	Setting method	6 keypads Start/Stop, Up, Down, SET, CAL, ESC
Display	LCD	Backlit LCD 4x2 characters Measured value, Set value, Error indication
	LED	Red/Orange 1xLED Green/Orange 1xLED Red 2xLED
	STOP/PreSTOP	Red/Orange 1xLED (Red: Stop input Orange: PreSTOP input)
	Output(alarm)behavior	(The output turns on along with output setting.)
Input	Sensor input range	0.00 - 3.00 mg/L, Automatic temperature compensation
	STOP/PreSTOP ^{Note1}	Red LED lights and the pump stops at contact input. / Orange LED lights at contact input
	AUX ^{Note2}	The pump runs at 360spm when the non voltage contact is on
	Interlock	The pump stops
Output	Output1 ^{Note3}	The non voltage contact is on (Mechanical relay) AC250V3A 1. Upper limit output 2. Lower limit output 3. Select of all functions ^{Note4} (Select one function)
	Output2 ^{Note3}	The non voltage contact is on (Photo MOS relay) AC/DC 24V 0.1A 1. Upper limit output 2. Lower limit output 3. Select of all functions ^{Note4} 4. spm synchronous output (Select one function)
Calibration	0 point calibration span calibration	
Function	Measured value shift, Selection of automatic/manual temperature compensation, Key lock (with PIN number), Error indication	
Power voltage	100 - 240VAC 50/60Hz	

Note1: When using the STOP/PreSTOP signal, you will need to purchase the STOP signal cable separately.

Note2: When using AUX/Interlock as the input signal, you will need to purchase the external input signal cable separately.

Note3: When using output signal, you will need to purchase the output signal cable separately.

Note4: For batch output, select enable/disable for Sensor Failure, STOP, PreSTOP, Interlock, and the AUX outputs respectively (all outputs can also be selected).

• Note that the connecting parts of the input signal and output signal, excluding the sensor input signal, are of a DIN connector-type connection.

Residual chlorine sensor

Model	RS-20L-D
Temperature compensation range	0 to 99.9°C (Pt1000Ω)
Installation method	Attached to the flow cell (RF-20 type)
Electrode cleaning method	Machine-polishing washing with beads and electrolytic cleaning
Cable connection	By attaching and detaching connectors
Cable length	5m

Flow cell

Model	RF-20
Inspection flow rate	1.1 to 1.5L/min
Withstand pressure	0.5MPa
Wet end materials	PVC, PE, FKM, alumina ceramics, PMMA
Connection port diameter	Test water inlet: R1/2; test water outlet: R1/2

Part names for the wiring section

External input terminal

Interlock/AUX

STOP input terminal

STOP/Pre-STOP

Output terminal

Alarm/synchronization output

Sensor input section

Power supply



IWAKI CO., LTD. 6-6 Kanda-Sudacho 2-chome Chiyoda-ku Tokyo 101-8558 Japan TEL : (81)3 3254 2935 FAX : 3 3252 8892

IWAKI has global net work. Please find your distributor location at

www.iwakipumps.jp

European office	: IWAKI Europe GmbH	TEL: (49)2154 9254 0	FAX: 2154 9254 48
Germany	: IWAKI Europe GmbH	TEL: (49)2154 9254 50	FAX: 2154 9254 55
Holland	: IWAKI Europe GmbH (Netherlands Branch)	TEL: (31)74 2420011	FAX: (49)2154 925448
Italy	: IWAKI Europe GmbH (Italy Branch)	TEL: (39)0444 371115	FAX: 0444 335350
Spain	: IWAKI Europe GmbH (Spain Branch)	TEL: (34)93 37 70 198	FAX: 93 47 40 991
Belgium	: IWAKI Belgium N.V.	TEL: (32)13 67 02 00	FAX: 13 67 20 30
Denmark	: IWAKI Nordic A/S	TEL: (45)48 24 2345	FAX: 48 24 2346
Finland	: IWAKI Suomi Oy	TEL: (358)9 2745810	FAX: 9 2742715
France	: IWAKI France S.A.	TEL: (33)1 69 63 33 70	FAX: 1 64 49 92 73
Norway	: IWAKI Norge AS	TEL: (47)23 38 49 00	FAX: 23 38 49 01
Sweden	: IWAKI Sverige AB	TEL: (46)8 511 72900	FAX: 8 511 72922
U.K.	: IWAKI Pumps (UK) Ltd.	TEL: (44)1743 231363	FAX: 1743 366507

U.S.A.	: IWAKI America Inc.	TEL: (1)508 429 1440	FAX: 508 429 1386
Argentina	: IWAKI America Inc. (Argentina Branch)	TEL: (54)11 4745 4116	
Brasil	: IWAKI Do Brasil Comercio De Bombas Hidraulicas LDA.	TEL: (55)19 3244 5900	FAX: 19 3244 5900
Indonesia	: IWAKI Singapore Pte Ltd.	TEL: (65)6316 2028	FAX: 6316 3221
Singapore	: IWAKI Singapore (Indonesia Office)	TEL: (62)21 6906606	FAX: 21 6906612
Malaysia	: IWAKI Sdn. Bhd.	TEL: (60)3 7803 8807	FAX: 3 7803 4800
Australia	: IWAKI Pumps Australia Pty Ltd.	TEL: (61)2 9899 2411	FAX: 2 9899 2421
Hong Kong	: IWAKI Pumps Co., Ltd.	TEL: (852)2607 1168	FAX: 2607 1000
China	: GFTZ IWAKI Engineering & Trading Co., Ltd.	TEL: (86)20 84350603	FAX: 20 84359181
	: IWAKI Pumps (Shanghai) Co., Ltd.	TEL: (86)21 6272 7502	FAX: 21 6272 6929
Korea	: IWAKI Korea Co., Ltd.	TEL: (82)2 2630 4800	FAX: 2 2630 4801
Taiwan	: IWAKI Pumps Taiwan Co., Ltd.	TEL: (886)2 8227 6900	FAX: 2 8227 6818
Thailand	: IWAKI (Thailand) Co., Ltd.	TEL: (66)2 322 2471	FAX: 2 322 2477

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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