

# Metering Pumps



## EHE-Series

The EHE is the workhorse of the E-Series metering pumps. EHE Series pumps have outputs up to 20 GPH (75 l/h) and pressure capabilities to 150 PSI (10 bar). Combining the EHE performance with a turndown ratio of 1800:1 yields one of the most versatile pumps in the water treatment industry today.

Superior mechanical design and quality manufacturing merge to create a pump better than the sum of its parts.

The versatile control features enable the EHE to be integrated into virtually any chemical feed application. The 360 stroke-per-minute operation results in high resolution chemical feed and long service life. EHE pumps prime in seconds and hold prime reliably.



### Summary of Key Benefits

- **High Speed Performance**  
E-Series pumps operate at 360 strokes-per-minute, providing high resolution chemical feed. Most competitive products operate at slower speeds, resulting in slug feeding, accelerated diaphragm wear and poor feed control.
- **Engineered Longevity**  
All E-Series pumps feature dual bearing support. The armature and shaft are supported with a bearing on each end, which ensures proper axial movement, enabling the E-Series to operate at 360 SPM while extending the life of the diaphragm.
- **Superior Check Valve Performance**  
Dual Check Valve Assemblies in both suction and discharge fittings feature precision ball guides and tapered seats. Precise machining and molding of parts limit valve ball travel, ensuring that balls fully seat and seal with every stroke. This superior check valve design guarantees fast priming and reliable performance.
- **High Compression Ratio**  
The compression ratio of a metering pump is important because it affects the pump's ability to prime and vent. The compression ratio is raised when you reduce the dead volume of the pump head during operation. All E-Series pumps feature a very high compression ratio that ensures proper feed especially with off-gassing products (i.e. Sodium Hypochlorite).

**W A L C H E M**

IWAKI America Inc.

# Specifications

Walchem and Iwaki have over 100 years of combined pump experience. This partnership has led to the design of the most innovative and comprehensive metering pump product line in the world, the E-Series Metering Pumps. E-Series features five great series: EJ, EZ, EWN, EK, and EHE. The wide range of capabilities within the E-Series ensures that there's a model to fit any water treatment, food & beverage, agriculture, water conditioning, car wash, or other industrial chemical feed application.



## Powerful

A pump's maximum pressure rating times its maximum output at that pressure gives a relative measure of the pump's hydraulic output power, a "power index." The EHE36, with an output of 8.5 GPH at 105 PSI, yields a power index of 892.5. No other electronic metering pump in this range even comes close!

## Efficient

The EHE series does its work extremely well. Hydraulic output is maximized by its economical use of electricity via excellent heat rejection, valves that positively and consistently seat and unique front-and-back support of the armature.

## Durable

Superior magnetic, electronic, thermal and hydraulic designs have been achieved in the EHE metering pump. The result is a pump that will perform longer at maximum duty than any other comparable pump.

## Microprocessor-based Control Circuitry

- » Allows operator adjustment of pump speed and external input settings via 4-button keypad.
- » Often used in flow proportional systems, such as with a flowmeter contactor. One input pulse can produce 1 to 999 pump strokes.
- » Pump can be set to divide (accumulate) pulses by a factor of 1 to 999.
- » Programmable 4-20mA input allows for user defined speed control band; user sets minimum and maximum pump speeds.



# Dimensions

## Electrical Specifications

50/60 Hz, single phase	48 Watt Avg
115 VAC ±10%	1.8 Amp Max.
230 VAC ±10%	0.8 Amp Max.

## Shipping Weight

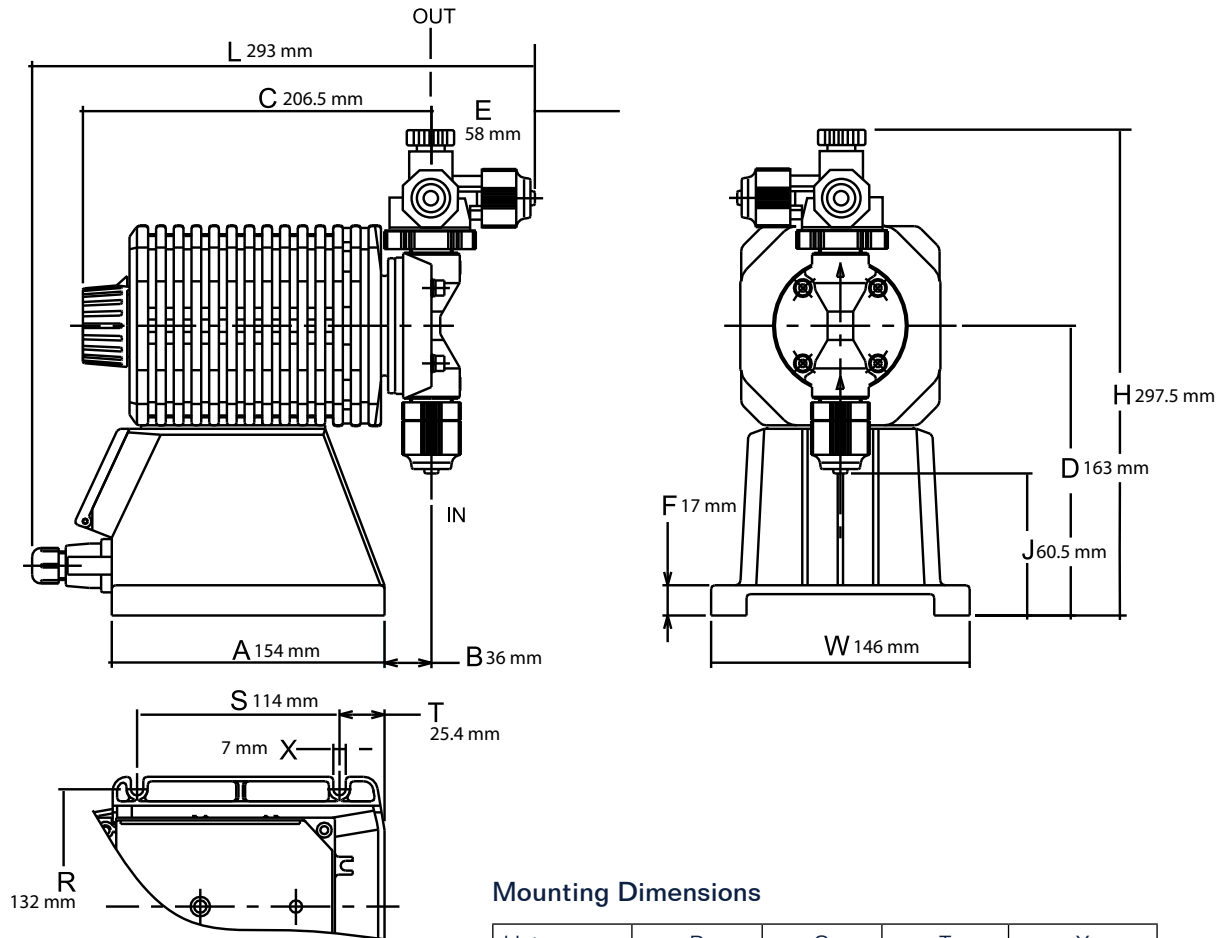
23 lbs. (10.5 kg approximate)

## Operating Conditions

Ambient Temperature:	32 to 122°F (0 to 50°C)
Relative Humidity:	30% to 90% non-condensing
Liquid Temperature:	32 to 104°F (0 to 40°C) for PVC based Liquid Ends 32 to 140°F (0 to 60°C) for PP or PVDF based Liquid Ends

Pumps should always be shielded from direct exposure to the elements.

## Dimensions (EHE56 referenced)



### Mounting Dimensions

Units	R	S	T	X
inches	5.20"	4.50"	1.00"	0.28"
mm	132	114	25.4	7

Units	A	B	C	D	E	F	H	J	L	W
inches	6.06	1.42	8.13	6.42	2.28	0.67	11.71	2.38	11.54	5.75
mm	154	36	206.5	163	58	17	297.5	60.5	293	146

## Safety Certifications

The EHE metering pumps\* are WQA tested and certified to NSF/ANSI/CAN Standard 61.

\* See [www.wqa.org](http://www.wqa.org) for specific chemicals and certification parameters.



The EHE metering pumps are tested by Intertek to UL and CSA standards.



**Intertek**

# Ordering Information

EH — E36 — E — 1 — PC — V  
 Pump series Capacity/Pressure Control Module Voltage Liquid End Options

## PUMP SERIES

EH = Microprocessor control for all EHE models. Features manual speed control from 1 to 360 spm in 1 spm increments. External control from pulse signal with internal multiply and divide or from analog 4-20 mA signal.

## CAPACITY/PRESSURE RATING

See chart on this page

## CONTROL MODULE

E = For use on all EHE models, features external pulse capability. (pulse divide, pulse multiply, analog)

## VOLTAGE

1 = 115VAC, 50/60 Hz  
 2 = 230VAC, 50/60 Hz

## LIQUID END

See chart on this page

## OPTIONS

Blank = 1/2" O.D. tube connection and standard accessories. (HV is 1/2" O.D. discharge x 1/2" I.D. suction)

V = Standard 1/2" tube connections with back pressure/anti-syphon valve added. (Not available on FC models)

T = 3/4" NPT (male) pipe thread connection. (1/2" MNPT on HV pumps). No MAVV.

P = 3/4" NPT (male) connection (1/2" MNPT on HV pumps) with back pressure/anti-syphon valve. (No MAVV.)

Note: NPT piping connection material of construction will be the same as the liquid end.

All pumps include a manual air vent valve with the exception of FC/HV liquid ends and options P and T.

All pumps include one foot valve, one injection valve, 20 feet of polyethylene tubing and one ceramic weight with the exception of HV models (tubing only) and options P and T.

## Capacity/Pressure Rating

Size	Max Output Capacity		Max output per stroke	Max Pressure		Power Index
	GPH	mL/min	mL	PSI	MPa	GPH x PSI
E31	5.5	340	0.94	150	1.0	825.0
E36	8.5	520	1.44	105	0.7	892.5
E46	12.0	750	2.08	60	0.4	720.0
E56	20.0	1250	3.47	30	0.2	600.0
E36-HV	5.2	329	1.37	73	0.5	292.0
E46-HV	8.0	499	2.08	60	0.4	480.0

## Liquid End Materials

Liquid End	Pump Head & Fittings	Diaphragm	Valve Balls	Valve Seat	Valve Seals	Gasket	Tubing
HV	GFRPP	PTFE (bonded to EPDM)	SS/HC	PCTFE	FKM	PTFE	PE
FC	PVDF		CE	PCTFE	PTFE		
PC	GFRPP		CE	FKM	FKM		
PE	GFRPP		CE	EPDM	EPDM		
VC	PVC		CE	FKM	FKM		
VE	PVC		CE	EPDM	EPDM		
VF	PVC		PTFE	EPDM	EPDM		
VM*	M-PVC		CE	FKM	FKM		

\* Note: VM liquid end available on E56 only

CE	Alumina ceramic	EPDM	Ethylene propylene diene monomer
FKM	Fluoroelastomer	GFRPP	Glass fiber reinforced polypropylene
PE	Polyethylene	PTFE	Polytetrafluoroethylene
PCTFE	Polychlorotrifluoroethylene	PVC	Polyvinylchloride (translucent)
PVDF	Polyvinylidene fluoride	HC	Hastelloy C276

## ABOUT US

Walchem integrates its advanced sensing, instrumentation, fluid pumping and communications technologies to deliver reliable and innovative solutions to the global water treatment market. Our in-house engineering is driven by quality, technology and innovation. For more information on the entire Walchem product line, visit: [www.walchem.com](http://www.walchem.com)

