

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: EZ, EWN, EK, EHE, and EHF. 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

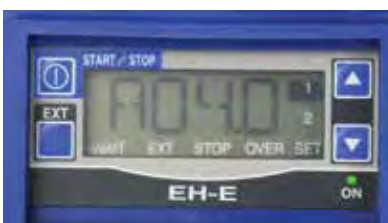
The EHE series does its work extremely well. Hydraulic output is maximized by its economical use of electricity via excellent heat rejection, valves that positively and consistently seat and unique front-and-back support of the armature.

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 $\pm 10\%$ | 1.8 Amp Max. |
| 230 VAC $\pm 10\%$ | 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.

Safety Certifications

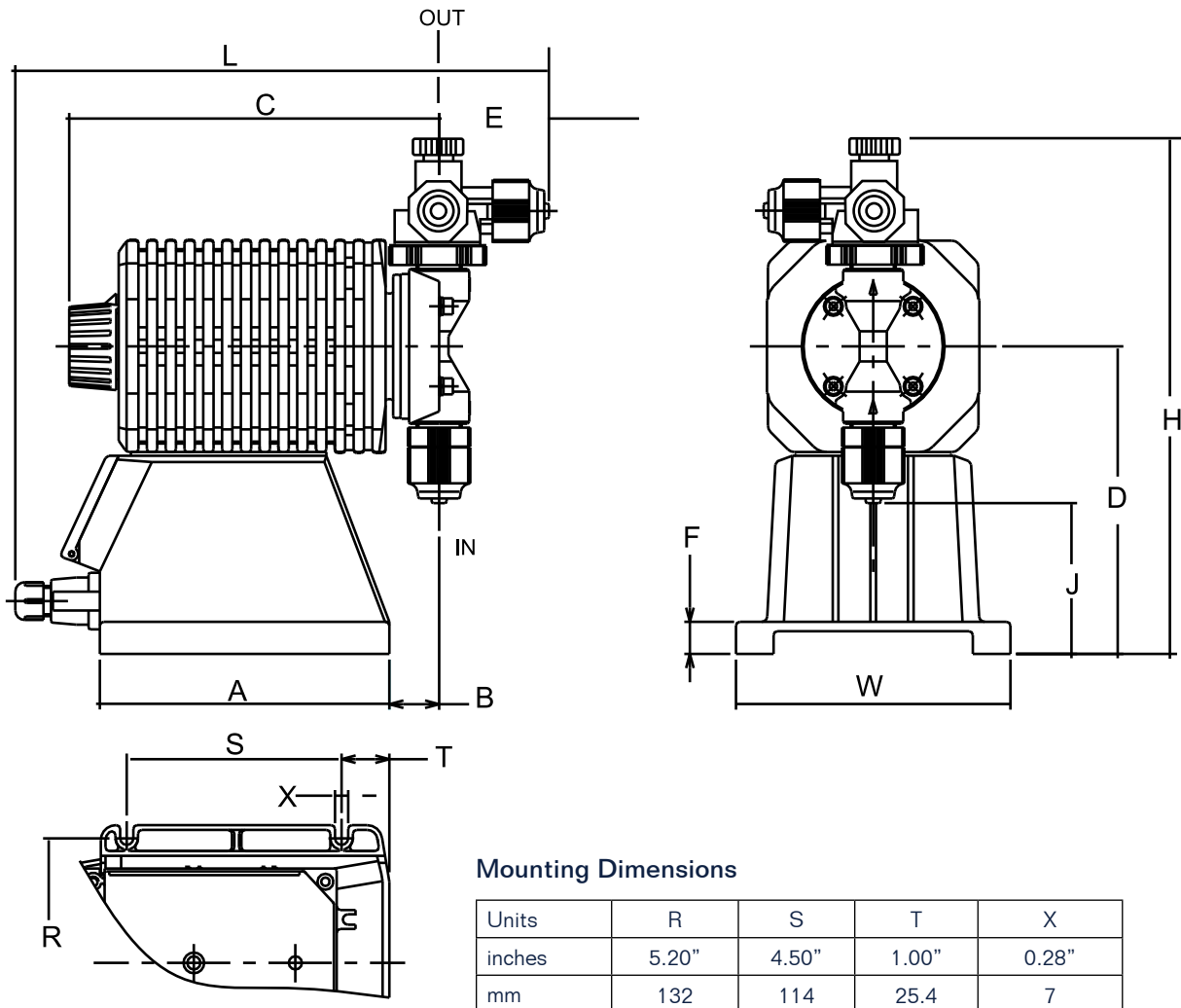
The EHE metering pumps* are WQA tested and certified to NSF/ANSI Standard 50 and Standard 61.

* See www.wqa.org for specific chemicals and certification parameters.

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



Dimensions (EHE56 referenced)



| 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 |

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 = Standard 1/2" tube connection. No accessory valve.

V = Standard 1/2" tube connection with back pressure/anti-syphon valve, except on FC models.

T = 3/4" NPT (male) pipe thread connection (no MAVV)

P = 3/4" NPT (male) connection with back pressure/anti-syphon valve (no MAVV)

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

All pumps also include a manual air vent valve with the exception of FC 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 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 |
| E35-HV | 4.0 | 252 | 1.05 | 50 | 0.35 | 200.0 |

Liquid End Materials

| Liquid End | Pump Head & Fittings | Diaphragm | Valve Balls | Valve Seat | Valve Seals | Gasket | Tubing |
|------------|----------------------|--------------------------|-------------|------------|-------------|--------|--------|
| HV | PVC | PTFE (bonded to EPDM) | CE/HC | PCTFE | FKM | PTFE | N/A |
| FC | PVDF | | CE | PCTFE | PTFE | | PE |
| 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

