

WEP-100V™

Effluent Vacuum System



About

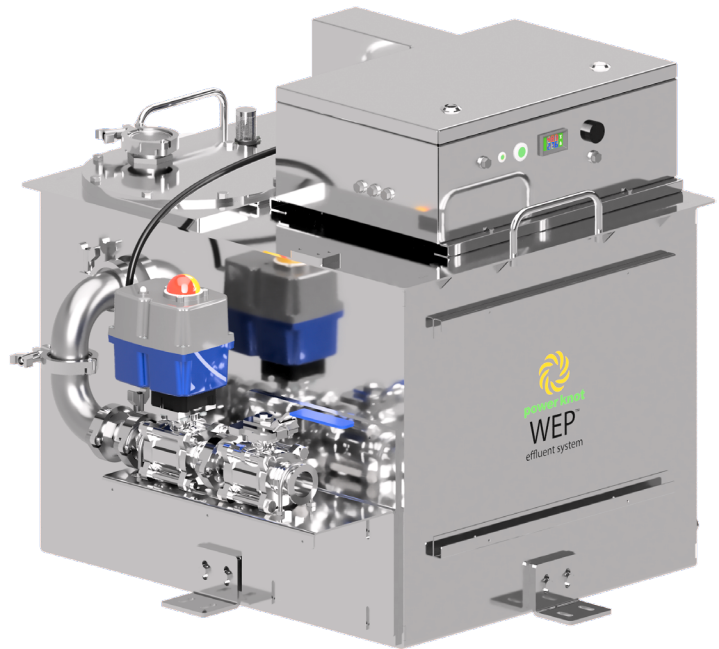
The WEP-100V effluent system is used to feed waste water into a vacuum system such as is common in large hotels or on cruise ships.

This system allows you to install machines that generate waste water in places where vacuum systems are used.

Designed, developed, and manufactured by Power Knot in Silicon Valley, California.

Features

- Fully automatic operation with manual trigger
- High reliability vacuum valve operates at 24 Vdc for enhanced safety
- Integrated electronic control
- Level detectors work with submersible solids to prevent clogging
- Vacuum valve is turned on only when required
- Quiet operation and minimal operating costs
- 3 color LED indicates operational status
- Select between fully automatic or manual operation
- Sanitary fittings for input and KF fittings for output enable easy installation with standard plumbing connections
- Can accept a high flow rate of waste water and can accept an inrush of 75 litre (20 gallon) of waste water in under a second
- Input waste water can be as low as 50 mm (1.9") above the ground
- Tank is directly vented or can be easily piped to the outside
- Relay contacts indicate an alarm to an external system if there is no power, tank full, or a fault
- Waterproof construction ensures easy cleaning
- Electronic control box can be fitted on top or on front of machine
- Electronics are easily accessed for service or replacement
- Easy integration with Power Knot LFC and LCD biodigesters
- Can be integrated with multiple pulpers or biodigesters for automatic discharge



- Supplied brackets permit bolting or welding to floor
- Can handle solids up to 5 mm
- Manual drain allows emptying the tank for decommissioning
- Available with a base to provide gap under the machine for cleaning
- Constructed of stainless steel with an expected life of 15 to 25 years

Benefits

- Eliminates the need for a grade level drain or a drain near the source of the waste water
- Can be situated in kitchens and work areas
- Requires no configuration
- Meets USPH and NSF guidelines
- Manual operation provides familiarity for staff but automatic operation reduces operator intervention
- User is alerted when there is a problem to minimize downtime
- Maintenance is accomplished by existing staff
- Universal ac power input ensures compatibility to operate globally
- Three year warranty¹

¹ Warranty is subject to terms and conditions.

WEP-100V

Description

Tank volume

143 litre (38 gallon) maximum

Construction

All stainless steel (chassis, control box, mounting brackets, and handle)

Operating environment

Indoors or outdoors

Operating temperature

12°C to 40°C (54°F to 104°F)

Operating altitude

1000 m (3300 ft)

Ingress protection

IP54 – splash proof and dust proof

Operating lifetime

Expected to be 15 to 25 years

Moving and positioning

Machine is moved in place using the two handles

Machine can be bolted or welded to the floor using the four supplied L brackets

Optional support permits machine to be rolled in place and then supported with feet to provide 150 mm ground clearance

Floor surface flatness

±1 mm (±0.05") maximum

Weight when empty

60 kg (132 lb)

Maximum weight when full

203 kg (448 lb)

Relay output

2 pin female SD13

Relay is normally closed to indicate to host system that it is ok to send waste

Relay is open to indicate that host system should stop sending water when:

- there is no power to the WEP-100V machine
- tank has more than 117 litre (31 gallon)
- computer system has detected a fault

Water particle size

5 mm (0.2") maximum

Water temperature

4°C to 50°C (39°F to 122°F)

Vacuum flow rate

The flow rate is dependent on many factors including the type of waste and the size and routing of the output pipe, and the pressure of the vacuum.

Typical output can be 3 m³ per hour.

Breathers

The inlet breather is a ½" NPT fitting that allows air to egress when the tank is filling. This fitting can be plumbed by the user elsewhere if desired

The outlet breather is DN50 and fits on the top or rear of the machine. This allows air to ingress when the tank is emptying.

The breathers are fitted with mesh filters.

LEDs

22 mm 3-colors indicates level of water in the tank

12 mm green LED indicates when the vacuum valve is open

Beeper

Audio beeper to indicate error condition

Vacuum operation

In automatic mode, the WEP-100V system will open the vacuum valve once the level of waste water in the tank reaches the low level. It closes the valve once the waste is drained.

In manual mode the user must press a button on the front panel to open the vacuum valve.

AC supply

Universal ac input: 100 V to 260 V, 47 Hz to 63 Hz

Single phase + PE

External circuit breaker: 5 A

Inlet socket: IEC 60320-1 C14, with two 6.3 A, 5x20 mm fuses

AC power cord

Ordered separately to suit destination ac power source. Length: 180 cm (6')

Outlet must be accessible by operator and have a safety disconnect

Maximum power

75 W

Energy per day

1 kWh (maximum)

Warranty

One year on vacuum actuator; three years on all other parts

EU directives

Low Voltage Directive: 2014 / 35 / EU

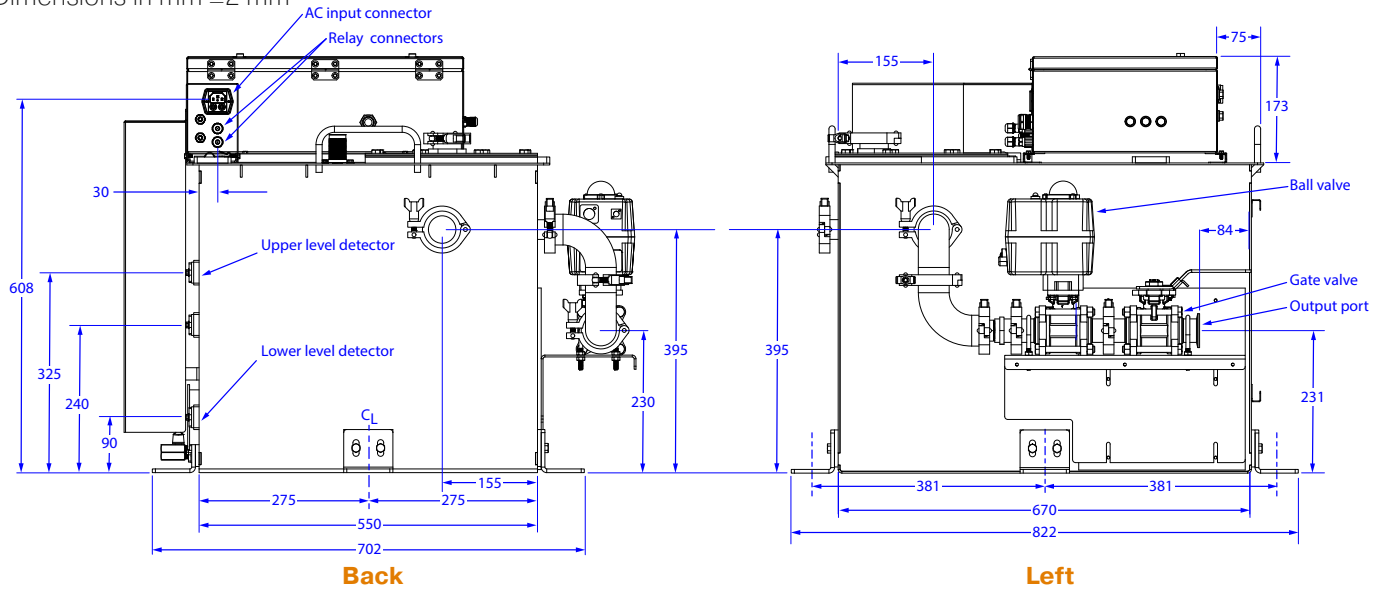
EMC Directive: 2014 / 30 / EU

RoHS Directive: 2011 / 65 / EC

WEEE Directive: 2012 / 19 / EC

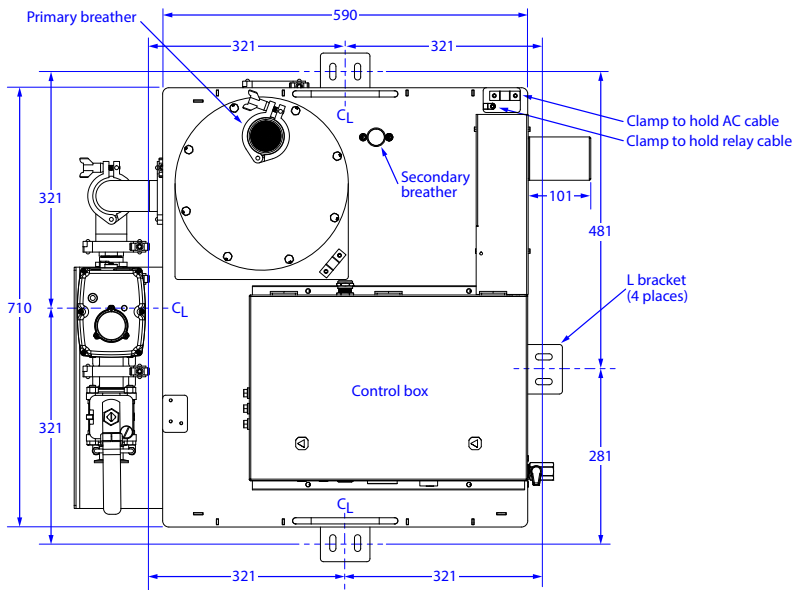
WEP-100V

Dimensions in mm ±2 mm

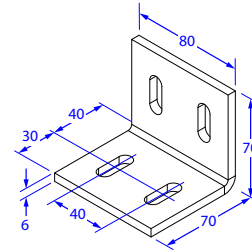


Back

Left

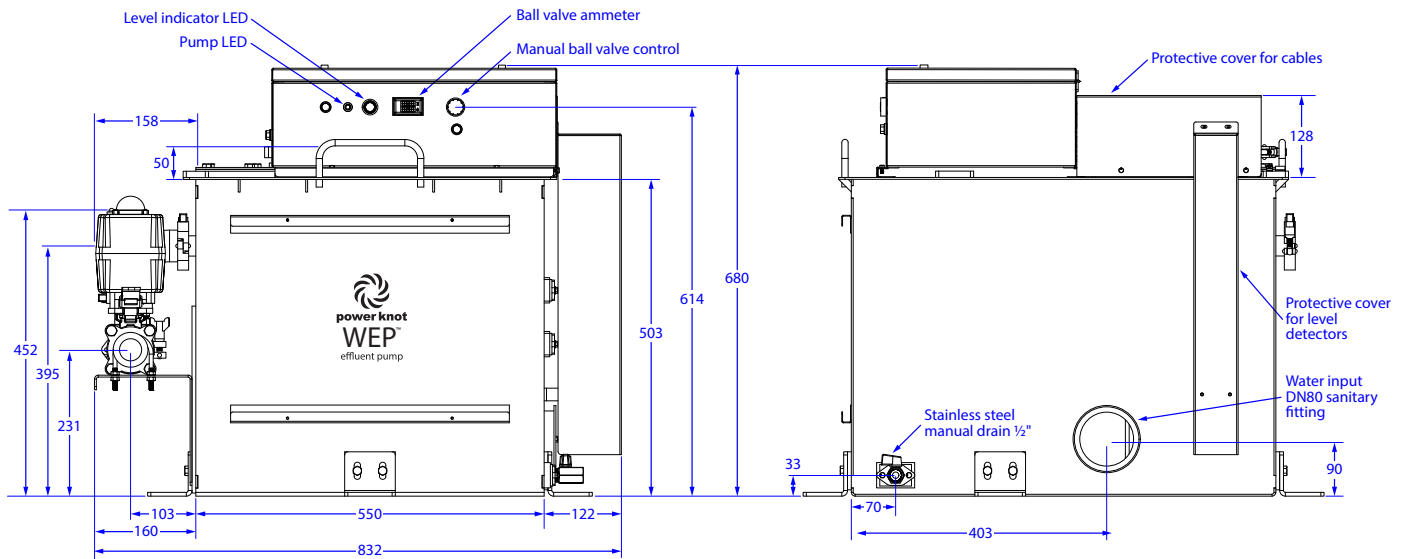


Top



Use M8x10 bolt with flat washer

Detail of L bracket

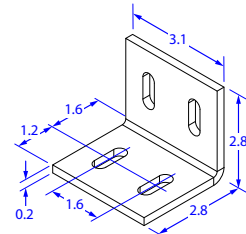
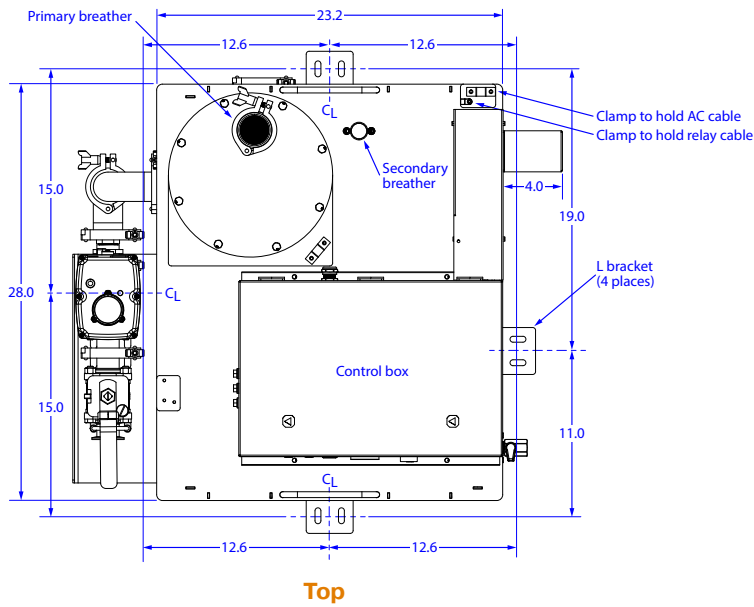
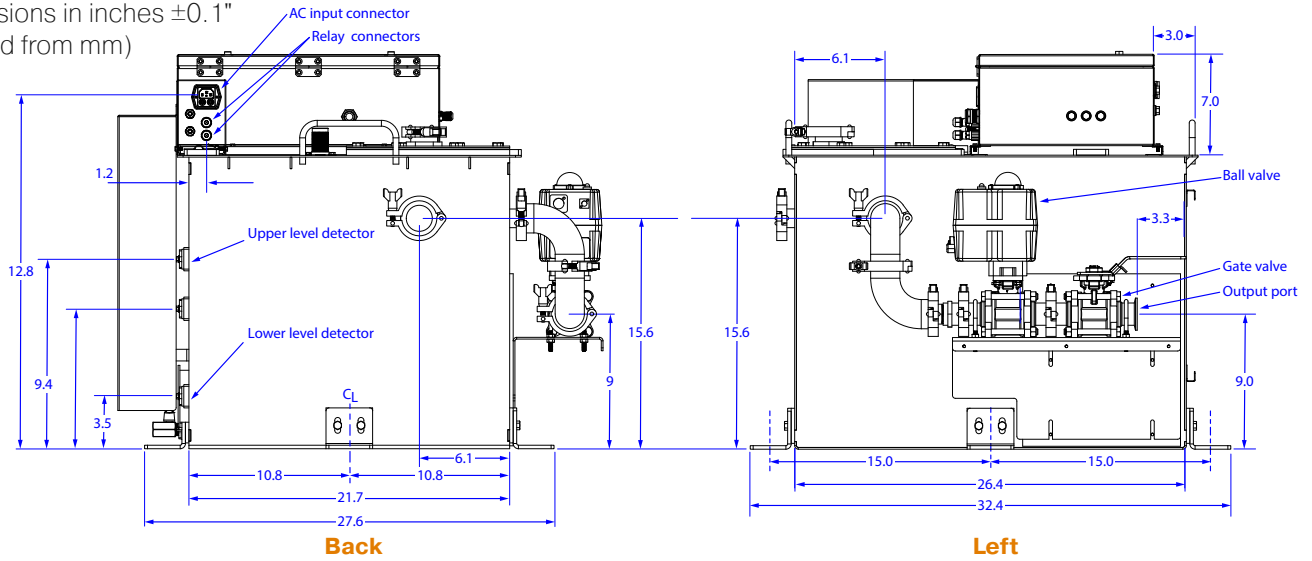


Front

Right

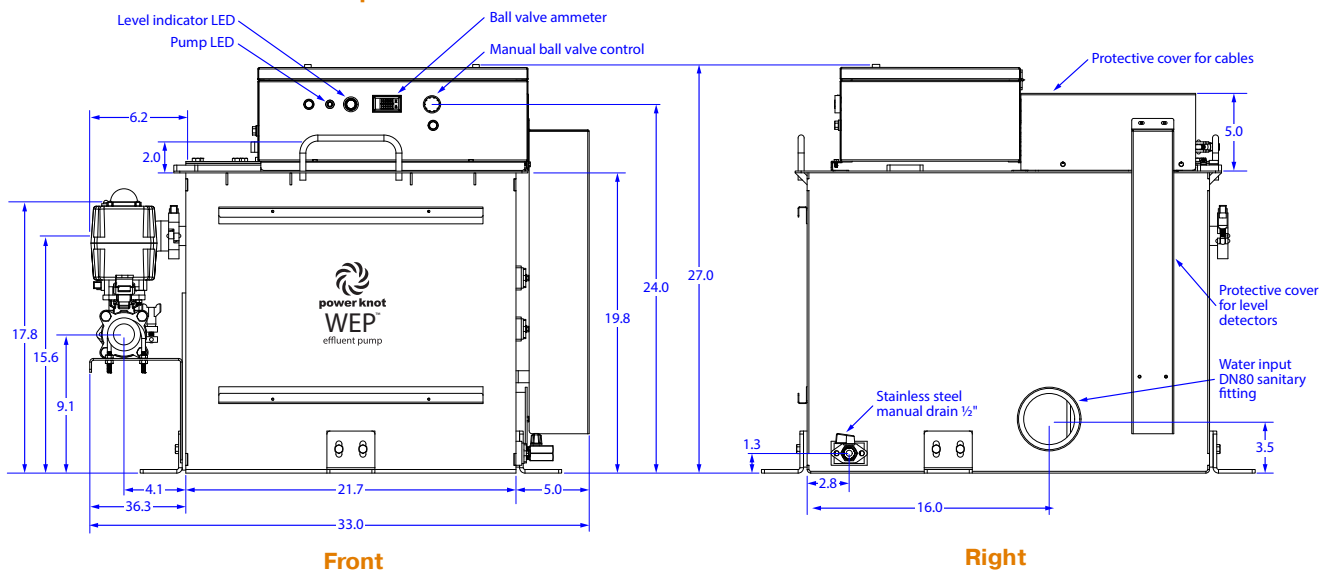
WEP-100V

Dimensions in inches ± 0.1 "
(derived from mm)



Use M8x10 bolt with flat washer

Detail of L bracket



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