

Technical Datasheet

LoowattZen

The Loowatt Zen is a waterless, portable toilet system with an electric push button flush. Our patented technology is versatile, easy to service, and kind to the environment.

Product Features

- No mains water connection, sewerage connection or pump trucks required
- Flexible installation allows the Zen to fit a wide range of temporary or permanent settings
- Push button flush for efficient waste removal
- Extraction system adaptor integrated to reduces odours from bowl
- Waste is sealed and removed with each flush removing germs and bacteria
- Easy to service manually
- Regular household D-shaped toilet seat included
- Large object protection included: restricts the flushing of heavy objects

Operational Overview

The Loowatt Zen replaces the traditional water flush with a compostable polymer Liner. The Liner is inserted into the toilet covering the bowl, and captures any solid or liquid waste. When the Flush Button is pushed, the Liner and waste are drawn through the Electric Flush Module (EFM) into the Barrel below. Simultaneously, fresh Liner material is pulled into the Bowl, guaranteeing a clean and hygienic experience with every use.

Loowatt's Sealed Flush Technology maintains a hygienic barrier between the user and the captured waste at all times; once the waste is flushed, it can't be seen or smelt again. Once the end of the Liner is reached, the toilet is serviced by sealing and removing the Barrel which will be sent to waste processing.



Model Range

The Loowatt Zen	P-21
The Loowatt Zen+	P-22

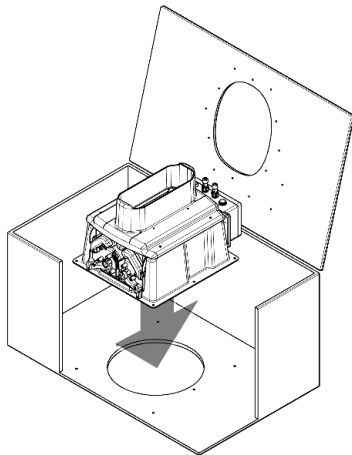
Feature

Feature	Loowatt Zen	Loowatt Zen+
Waterless low-odour waste capture	✓	✓
Large Object Protection	✓	✓
Electric Flush Button	✓	✓
Off-grid Operation	✓	✓
Safe and Easy Manual Servicing	✓	✓
Remaining Liner Tracker		✓
End-of-Liner auto-stop		✓
Front and rear status panels		✓
Remote status monitoring*		✓
Servicer SMS/Push Notifications*		✓

*Requires Zen+ Connect WebApp Subscription

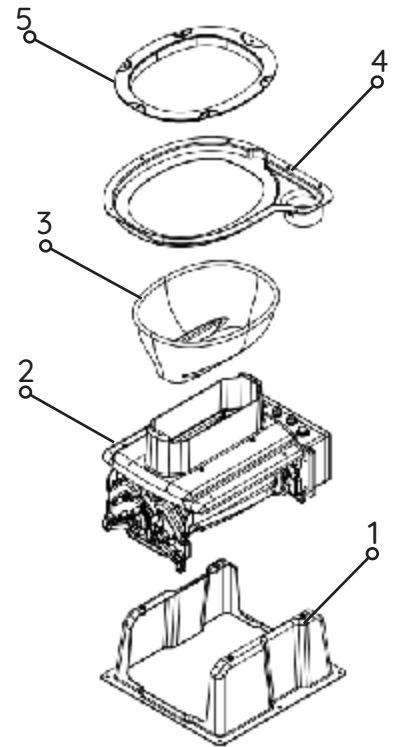
Zen Toilet Installation

The Zen toilet must be installed within a supporting structure. Typically, this will be a bench with a hinged lid made from materials suitable for wet environments and sufficiently strong to support the user. A shaped hole must be cut in the bench above the toilet Bowl (templates available in various formats).

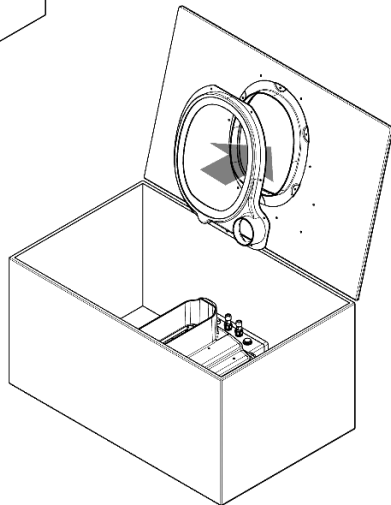


The Zen toilet is secured to the bench in two halves: The Base Frame (1) and Electric Flush Module (EFM, 2) are fixed to the floor.

The waste Barrel must be positioned underneath the EFM, below a hole in the floor. The required height of the raised floor is dependent on the size of Barrel used (see Barrel sizing). Regular access is required for replacement of the Barrel during servicing.

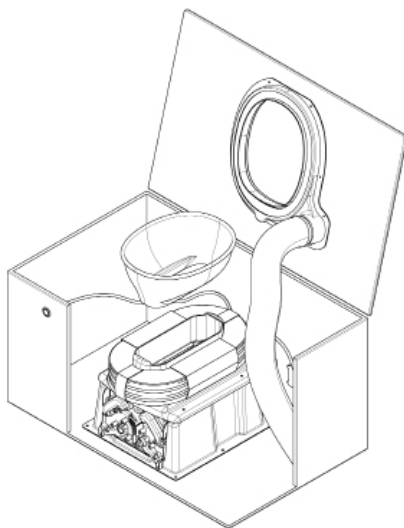


The Bowl Vent (4) and Bowl Lip (5) are fixed to the underside of the lid. In most cases this would be achieved using mechanical fasteners.



Barrel

Waste Barrels are available in three different sizes depending on use case. The Barrel sits beneath the toilet floor and requires between 250 and 620mm of sub-floor height, depending on size. Contact Loowatt to discuss your installation.

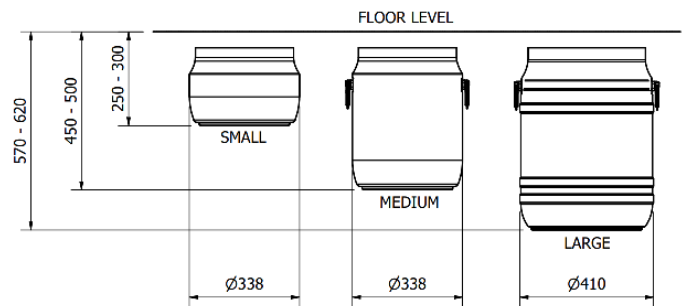


The Bowl (3) is simply placed onto the EFM. Opening the hinged lid gives access to remove the Bowl, which is necessary to install new Liners. Closing the hinged lid engages the Bowl Lip with the Bowl to prevent urine from escaping the system.

A 100mm flexible ducting connection on the Bowl Vent (4) allows for odour extraction from the Bowl when in use. An electric fan or passive extraction system should be included in the installation to achieve the best odour control.

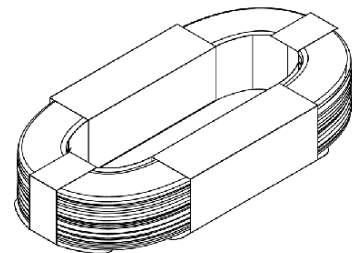
The Push Button Flush must be mounted in a wall or panel (hole diameter: 22mm, max thickness 12mm) and connected to the rear of the EFM (cable length 1200mm).

The EFM must be powered by connecting a 12V DC supply to the terminal located within the IP68 Junction Box provided (cable length EFM to Junction Box: 500mm). A power adapter for 100-250V AC is also available. The Junction box can be mounted to the structure with self-tapping screws.



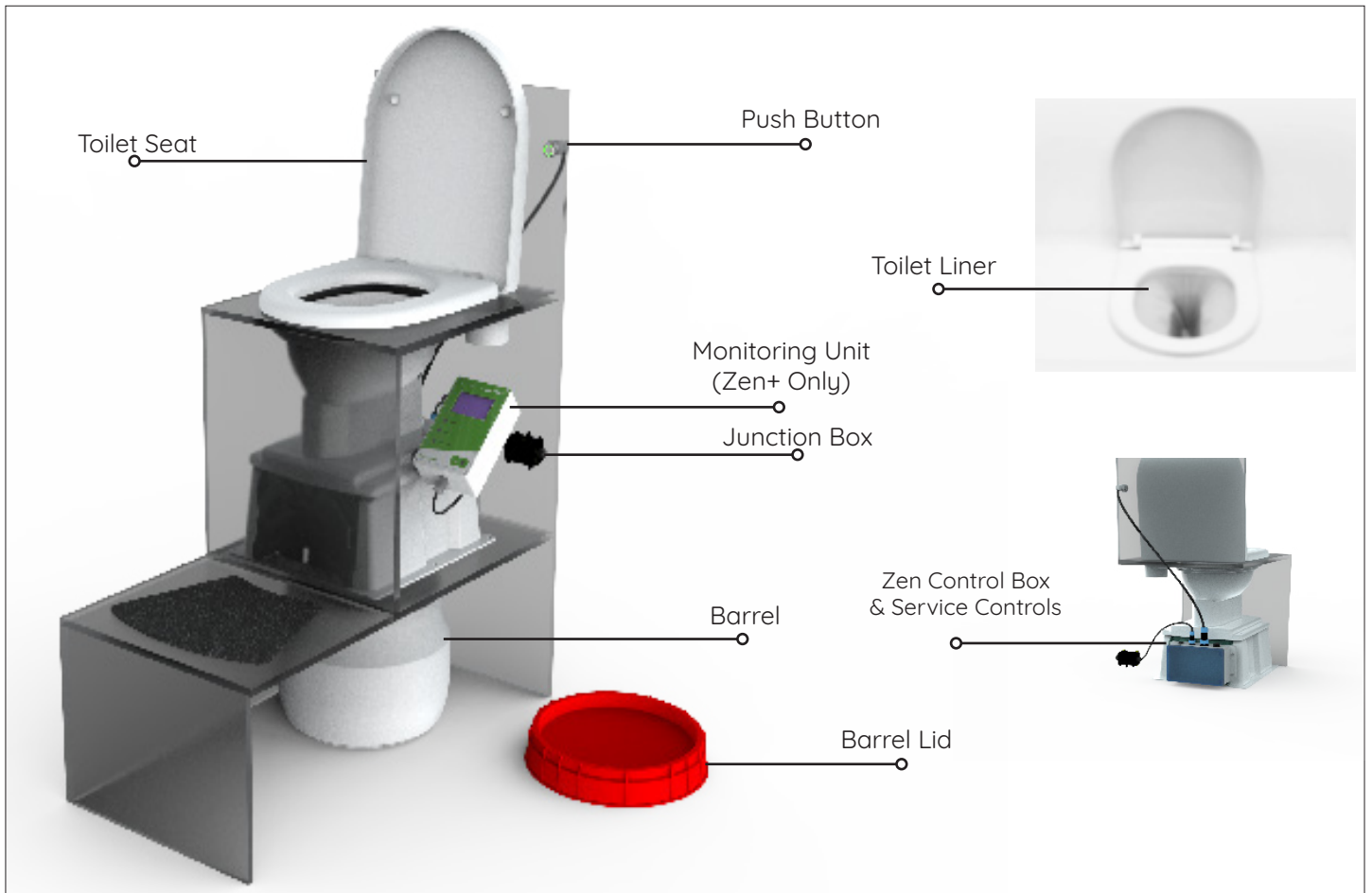
Refill

A Refill consists of one or more Liners within packaging slips. Various sizes are available to suit different use cases. Contact Loowatt to discuss your installation.

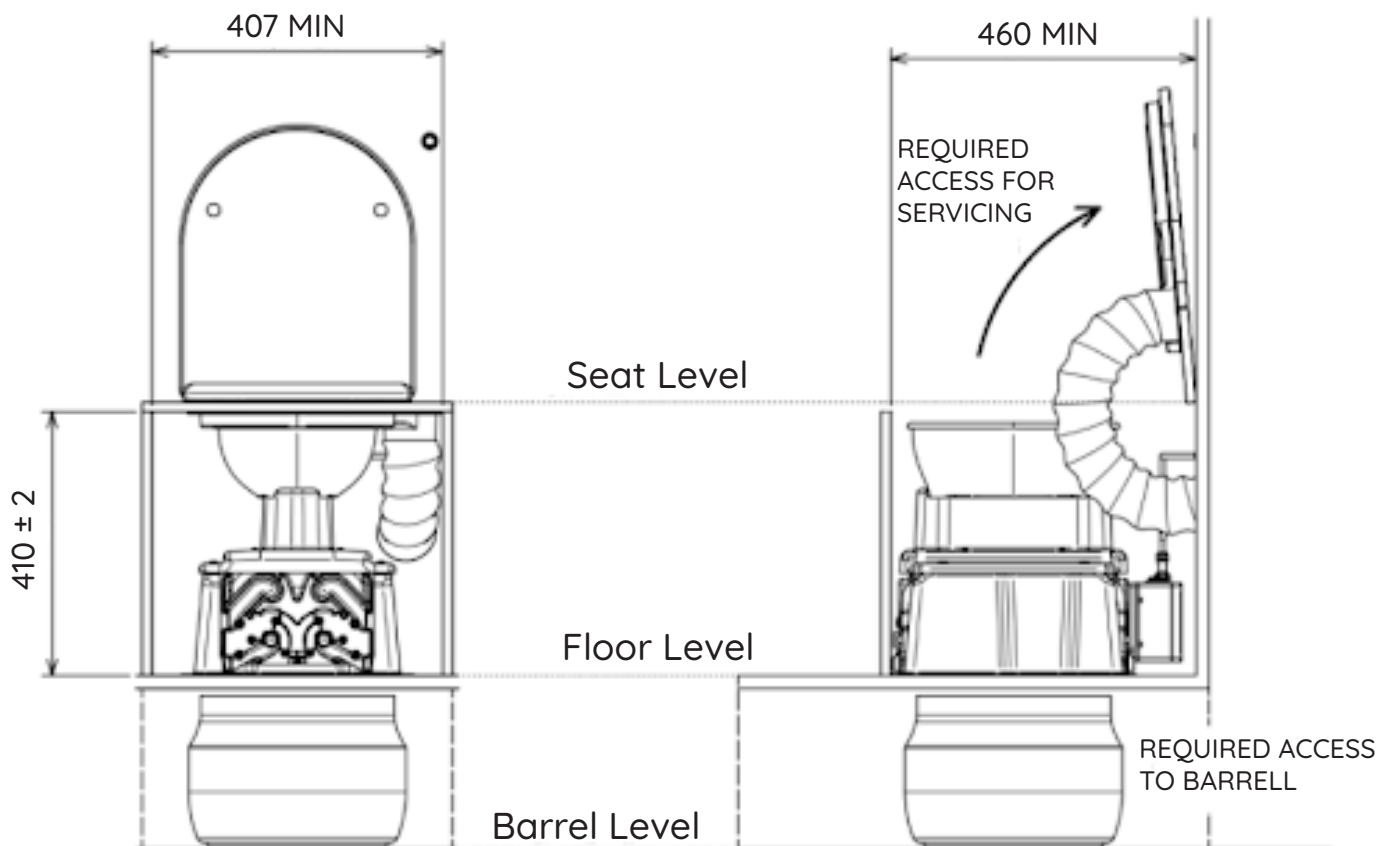


The Liner material is a bio-plastic which is suitable for industrial composting (to EN 13432).

Zen Toilet Installation Overview



Zen Toilet Installation Dimensions



Loowatt Zen Range Product Specifications		
Zen Product	Zen (P-21)	Zen+ (P-22)
Envelop Dimensions (mm)	L452 x W405 x H410	L452 x W523 x H410
Product Weight	7.2Kg	9.2Kg
Power Supply	12V (DC)	12V (DC)
Flushing/Standby Current	6A/0.2A	6.5A/0.3A
Maximum Current	12.5A	15A
Recommended Fuse Size	20A	25A
Maximum Cable Length from Battery to Junction Box at 16AWG	4m	4m
Ducting Adaptor (Outer Diameter)	Ø80mm	Ø80mm
CE and UKCA Compliant	✓	✓
Ingress Protection	IPX5	

The Zen+ Connect Web App

The Zen+ can be connected to a Cellular Gateway to bring web connectivity to any off grid setting.

The Zen+ Connect Web App is a subscription service that allows for remote monitoring of multiple Zen+ toilets across sites. The simple interface can be accessed on any web browser and the automated SMS/Push Notification service can direct staff on the ground with improved efficiency.



System Additions	Included	Description
Odour Extraction	Yes	1 metre flexible hose to connect to Ø80 - 100mm ducting.
	No	Extractor fan or passive ventilation is required (minimum 50cfm). Carbon filter is required if extracting to a populated area.
Toilet Seat	Yes	W350 x D430 x H50mm White D-shaped Standard Thermoplastic seat.
Cellular Gateway	Optional Extra	Powerful Cellular/WiFi Router. Connects up to 20 Zen+ toilets to the Zen+ Connect WebApp.

<h1>Loowatt</h1> <p>The Future of off-grid Sanitation Loowatt's waterless toilet and waste management system combines luxury and sustainability for permanent or portable installation.</p>	<p>Loowatt Limited Unit 20, Newington Industrial Estate, 87 Crampton St, Elephant and Castle, London, SE17 3AZ United Kingdom</p> <p>Tel. +44 (0)20 7703 6041 Website: www.loowatt.com Email: contact@loowatt.com</p>
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