



## EcoPower® HE Urinal Flush Valve

TEU1LAR - 0.5gpf

Planet-friendly, superior flushing performance is easy to achieve with the EcoPower High Efficiency Urinal Flushometer Valve. Engineered to require no electricity or routine battery replacement, the EcoPower Flushometer Valve saves energy and water while providing maximum performance in even the most demanding commercial spaces.



### Performance dashboard

#### Features & functionality

- Hydropower self generating flush valve system
- Durable chrome plated body with tamper-proof screws and solid bronze valve body
- Self-cleaning piston valve with 360° filter screen
- Neutral rough-in and adjustable tail piece connection
- True mechanical flush override
- Smart sensor with self-adjusting detection range
- 6-second detection time to prevent ghost flushing

Visit TOTO for more product specifications:

[TEU1LA](#)

MasterFormat® #22 42 43



- ECO-POWER® VALVES**
- Powered by water to create an electrical current that is stored in rechargeable cells to power the Smart Sensor System of the faucet or valve.
  - Reduces electricity use, lower maintenance costs and hands-free, automatic-shut-off functionality.

#### Environment & materials

##### Improved by:

Powered by the sheer force of running water  
See How we make it greener for water savings information

Metal parts and electric components are able to be recycled at the end of service

##### Certifications, rating systems & disclosures:

- WaterSense® certified
- CALGreen® compliant
- Declare™ Label, LBC Compliant
- Contributes to earning credits in LEED®

[See LCA, interpretation & rating systems](#)

[See materials, interpretation & rating systems](#)



Declare.™

## SM Transparency Report (EPD)™ + Material Health Overview™

**EPD** LCA

3rd-party reviewed

Transparency Report (EPD)

3rd-party verified

Validity: 90/01/2024 – 08/31/2029  
TOTO – 20240901 – 007

**MATERIAL HEALTH** Material evaluation

Self-declared

This environmental product declaration (EPD) was externally verified by Jack Geibig (Ecoform) on behalf of NSF according to ISO 14044; ISO 21930:2017; SM Part A: LCA calculation rules and report requirements, 2023; the reference PCR; and ISO 14025:2006.

**Ecoform, LLC**  
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**NSF International**  
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**Certified Environmental Product Declaration**  
www.nsf.org

#### SUMMARY

**Reference PCR**  
SM Part B: Commercial flushometer valves, v3.0

**Regions; system boundaries**  
North America; Cradle-to-grave

**Functional unit**  
One flushometer valve for urinals in an average commercial environment over the estimated service life of the building of the building

**LCIA methodology; LCA software; LCI database**  
TRACI 2.1; SimaPro Analyst 9.5;ecoinvent and USLCI databases

In accordance with ISO 14044 and the referenced PCR, the life cycle assessment was conducted by Sustainable Minds and critically reviewed by Jack Geibig (Ecoform) on behalf of NSF.

**Public LCA**  
LCA background report of TOTO Faucets, Flush Valves, and Residential Toilets, 2024

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Contact us

LCA results & interpretation

EcoPower® HE Urinal Flush Valve

- LCA results & interpretation EPD additional content Material health

Scope and summary

- Cradle to gate Cradle to gate with options Cradle to grave

Functional unit

One flushometer valve for urinals used in an average commercial environment over the estimated service life of the building. The expected service life (ESL) of a building is 75 years, and all use stage activity and impacts are accounted for in that full ESL period. The reference service life (RSL) of the flush valve is 10 years, which is an industry-accepted average lifespan based on the economic lifespan of the product.

Maintenance

Regular cleaning is assumed to use 10mL of a 1% sodium lauryl sulfate (SLS) solution daily in a commercial setting for 75 years, which is the building estimated service life. The use of 10mL/clean over 260days/year for 75 years gives a total of 195L of solution. Using a density of 1.01kg/L for a 1% SLS solution, 195kg of solution will be needed over the course of 75 years. Therefore, 2kg of SLS plus 195kg of water were included in the model.

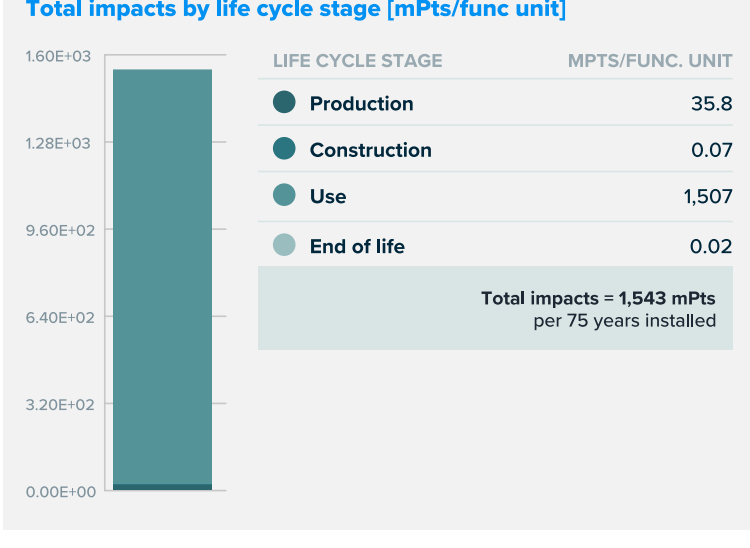
Replacement

At the end of its RSL, the flush valve is assumed to be replaced. Therefore, an additional 6.5 products are included as replacements, with all life cycle modules considered, over the building's ESL of 75 years.

Manufacturing data

Manufacturing data has been collected and compiled for TOTO Vietnam. Data reporting period: 2023.

Table: Material composition by wt%. Columns: Part, Material, Avg. % wt.



LCA results

Table: LCA results by life cycle stage. Columns: Life Cycle Stage, Production, Construction, Use, End of Life. Includes information modules and images for each stage.

SM Single Score

Table: SM Single Score breakdown. Columns: Impacts per flush valve, Materials or processes contributing >20% to total impacts in each life cycle stage.

TRACI v2.1 results per functional unit

Table: TRACI v2.1 results per functional unit. Categories: Ecological damage, Human health damage, Additional environmental information.

References

- LCA Background Report
ISO 14025, "Sustainability in buildings and civil engineering works — Core rules for environmental product declarations of construction products and services"
ISO 21930:2017, "Sustainability in Building Construction — Environmental Declaration of Building Products" serves as the core PCR along with Sustainable Minds Part A.
SM Part A: LCA calculation rules and report requirements, version 2023
SM Part B: Commercial flushometer valves, v3.0

Download PDF SM Transparency Report/EPD

SM Transparency Reports (TR) are ISO 14025 Type III environmental declarations (EPD) that enable purchasers and users to compare the potential environmental performance of products on a life cycle basis. They are designed to present information transparently to make the limitations of comparability more understandable.

Rating systems

- LEED BD+C: New Construction | v4 - LEED v4
LEED BD+C: New Construction | v4.1 - LEED v4.1
Collaborative for High Performance Schools National Criteria
BREEAM New Construction 2018

SM Transparency Report (EPD)™ + Material Health Overview™. Includes EPD status, Material Health, Summary, and TOTO USA contact info.



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evaluation

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## SUMMARY

### Reference PCR

SM Part B: Commercial flushometer valves, v3.0

### Regions; system boundaries

North America; Cradle-to-grave

### Functional unit

One flushometer valve for urinals in an average commercial environment over the estimated service life of the building of the building

### LCIA methodology; LCA software; LCI database

TRACI 2.1; SimaPro Analyst 9.5; ecoinvent and USLCI databases

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## LCA & material health results & interpretation

EcoPower® HE Urinal Flush Valve

LCA results & interpretation

EPD additional content

Material health

### Evaluation programs

#### Declare

**Declare** labels are issued to products disclosing ingredient inventory, sourcing, and end of life options. Declare labels are based on the Manufacturers Guide to Declare, administered by the International Living Future Institute.

#### How it works

Material ingredients are inventoried and screened against the **Living Building Challenge** (LBC) Red List which represents the 'worst in class' materials, chemicals, and elements known to pose serious risks to human health and the greater ecosystem.

The Declare product database and label are used to select products that meet the Living Building Challenge's stringent materials requirements, streamlining the materials specification and certification process.

### Assessment scope and results

#### Declare™

Inventory threshold: 100 ppm

#### Declare level:

The Declare product database and label are used to select products that meet the LBC's stringent materials requirements, streamlining the materials specification and certification process.

- LBC Red List Free <sup>?</sup>
- LBC Red List Approved <sup>?</sup>
- Declared <sup>?</sup>

Click the label to see the full declaration.

● EcoPower® HE Urinal Flush Valve



### What's in this product and why

#### Declare level

'Living Building Challenge Compliant' is achieved when the product contains Red List ingredients that have been given a temporary exception by the Living Building Challenge due to current market limitations.

#### What's in the product and why

The electronics used for flush valve operation include circuit board components. The controller, battery, and sensor allow for a self-powered hydroelectric flush valve system while also maintaining a true mechanical flush override. The electronic components are contained within the flush valve body and do not represent any hazards to the user.

#### The TOTO facility in which the valve is manufactured is ISO 14001 certified.

This means that the facility has implemented an environmental management system as part of TOTO's commitment to the health of the environment.

#### Where it goes at the end of its life

TOTO encourages consumers to recycle their used lavatory and lavatory parts. Contact your local municipality for recycling programs.

#### How we're making it healthier

The EcoPower technology enables the flush valve to operate off the energy grid and requires no routine battery replacement. This technology helps to reduce pollution and hazardous waste, thereby mitigating human health impacts.

[See how we make it greener](#)

### References

#### Declare

TOTO USA, Declare label for EcoPower® Sensor Flushometer Valve for 1.28gpf Toilet or 0.5gpf Urinal

#### Manufacturer's Guide to Declare

A comprehensive guide providing information about the program, the assessment methodology, how to submit material data to obtain a Declare label and how they are used to meet the Health & Happiness and Materials Petals of the Living Building Challenge.

### Rating systems

#### LEED BD+C: New Construction | v4 - LEED v4

Building product disclosure and optimization

#### Material Ingredients

Credit value options 1 product each

1. Reporting  2. Optimization  3. Supply Chain Optimization

#### LEED BD+C: New Construction | v4.1 - LEED v4.1

Materials and resources

#### Material Ingredients

Credit value options 1 product each

1. Reporting  2. Optimization  3. Supply Chain Optimization

#### Living Building Challenge

#### Materials petals imperatives

10. Red List Free  12. Responsible Industry  13. Living Economy Sourcing

#### WELL Building Standard®

#### Air and Mind Features

- X07 Materials Transparency

- X08 Materials Optimization

#### Collaborative for High Performance Schools National

#### Criteria EQ C7.1 Material Health Disclosures

- Performance Approach 2 points

- Prescriptive Approach 2 points

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## How we make it greener

## EcoPower® HE Urinal Flush Valve

Expand all

### CONSTRUCTION

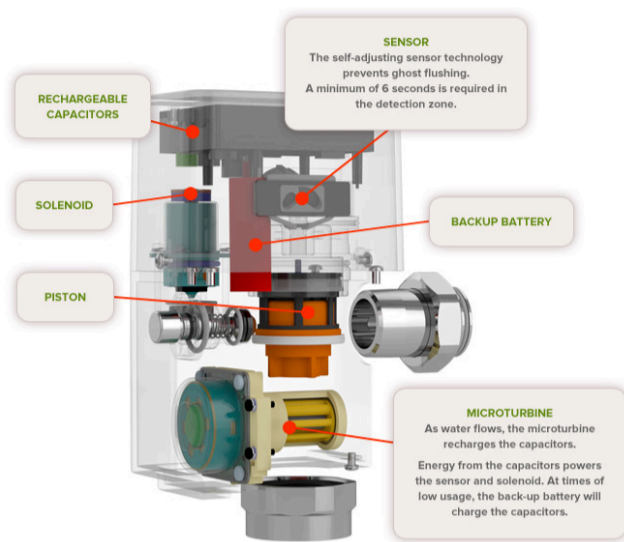


TOTO participates in the UPS Carbon Neutral program. TOTO is a certified SmartWay® Transport Partner.

### USE



TOTO's EcoPower® Urinal Flush Valves feature the highly regarded EcoPower technology. Engineered to reduce environmental impacts, TOTO's EcoPower products offer water and energy savings without sacrificing performance. Below are some of the features of TOTO's EcoPower technology.



#### SENSOR:

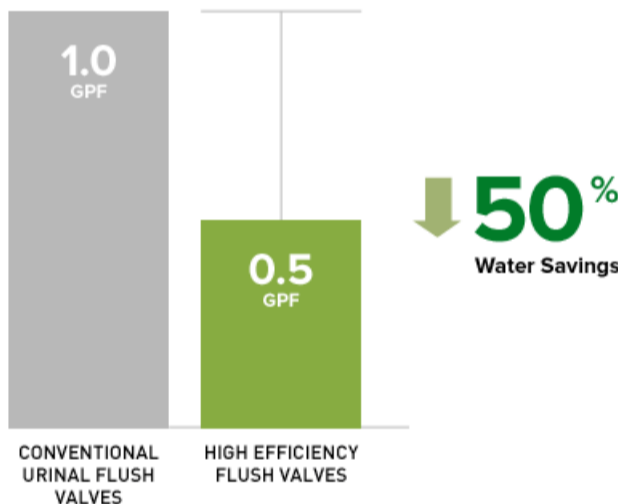
Ensuring that water flows only when needed, the self-adjusting EcoPower sensor eliminates “ghost” flushing that wastes water. A minimum of six seconds presence in front of the sensor is required to receive acknowledgment, preventing excessive flushing.

#### MICROTURBINE:

TOTO's EcoPower technology enables the product to operate 100% off grid. As water flows, the microturbine recharges the capacitor for the sensor and solenoid. Less reliance on the back-up battery results in much less battery waste.

#### SOLENOID AND PISTON:

The piston and solenoid mechanism, a marked improvement over traditional rubber diaphragm type valves, maintains consistent flush volume under a range of supply pressures.



Using our proven engineering, the 0.5 gallon per flush reinforces TOTO's performance reputation while offering additional water savings.



Metal and electronic parts can be recycled at the end of life.

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