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SM Transparency Catalog 🕨 TOTO Showroom 🏲 Standard EcoPower® 0.35 GPM Faucet

TOTO_®

Standard EcoPower[®] Faucet 0.35 GPM **TEL103 Series***

TEL103-D20E - 20 second-cycle on-demand (0.12 gpc)

Ideal for high-traffic commercial spaces, the TOTO Standard EcoPower sensor faucets provide an elegant water conservation solution for LEED option. Powered by water, EcoPower's turbine creates an electrical current that is stored in rechargeable cells to power the Smart Sensor System of the faucet.

* TEL103-D10E, 10 second cycle is not available for purchase





Performance Dashboard

Features & functionality

Hydropower self generating system

No minimum daily usage requirement

Micro-sensor positioned underneath the spout head for accurate hand detection ensuring smooth and consistent water distribution

Durable chrome plated spout body

Single-hole mount

Kit includes spout body, controller box, and mounting hardware - less supply lines

Equipped with 0.35gpm flow control

Mixing valve options available

Visit TOTO for more product specifications: **TEL103** Series

See ecomedes for water & energy calculations

CSI MasterFormat[™] #22 42 39 Check specs sheet for this product For spec help call (888) 295-8134



ECO-POWER® SELF-SUSTAINING FAUCETS 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



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 recyclable at the end of service

Certifications, rating systems & disclosures:

30% below the LEED V4's baseline with its 0.35gpm

Contributes to earning credits in LEED®

CALGreen[®] compliant

Declare[™] Label

See LCA results & interpretation

See material health results & interpretation



SM Transparency Report™+ Material Health Overview™

VERIFICATION	LCA
3rd party reviewed	SE NSE
Transparer	ncy Report
Verified	SE NSE
Material Health	Evaluation
Self-declared	<

Validity: 10/16/2017 - 10/16/2022 TOT - 10/16/2017 - 028

The LCA and Report are independently reviewed and verified to the SM Transparency Report Framework and ISO 14025.

NSF International P.O Box 130140 789 N.Dixboro Road Ann Arbor, MI 48105, USA www.nsf.org +1 734 769 8010



The material health evaluation is self-declared and done in accordance with the Manufacturers Guide to Declare.

International Living Future Institute 501 East Madison St. Seattle, WA 98122 www.living-future.org 206 223 2028



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SM Transparency Catalog TOTO Showroom
Standard EcoPower[®] 0.35 GPM Faucet



LCA results & interpretation

Standard EcoPower[®] 0.35 GPM Faucet TEL103 Series

Life cycle assessment

laterial health

Scope and summary

 \bigcirc Cradle to gate \bigcirc Cradle to gate with options \heartsuit Cradle to grave

Functional unit

Reference service life: 3 years. One faucet in an average U.S. commercial environment for 3 years. The period of 3 years is modeled as the period of application based on the average technical lifespan for commercial applications. The economical lifespan of commercial applications can be longer or shorter due to aesthetic replacements or more intense use. The implication is that the LCA model assumes that the application ends at year 3 and that the materials will be treated in an end-of-life scenario.

Data reporting period: 2016

Default use phase scenario

* TEL103-D10E: 3 years of service in an average U.S. commercial environment with 0.06 gallon/use and 90 uses/day resulting in 4,212 gallons of water.

TEL103-D20E: 3 years of service in an average U.S. commercial environment with 0.12 gallon/use and 90 uses/day resulting in 8,424 gallons of water.

* Not available for purchase

Material composition greater than 1% by weight

ΡΔΡΤ	MATERIAL	AVG. % WT.
		Avg. % w1.
Spout body	Brass (C36000)	
Packaging	Cardboard	12.4%
Controller box cover	ABS	12.0%
Spout mounting bracket	Stainless steel, SUS303	7.4%
Spout mounting nut	Brass	5.9%
Spout mounting rod	Stainless steel, SUS304	5.6%
Hose	PVC	5.6%
Controller adapter	Brass, Pb free	4.9%
Controller mounting bracket	Stainless steel, SUS303	2.5%
Generator coil	Copper	2.1%
Connector	Polypropylene	2.0%
Nozzle base	Polyacetal	1.9%
Spout aerator gasket	NBR	1.9%
Spout nozzle key	Brass	1.9%
Hose clip	Steel	1.9%
Board	Electronics	1.3%
Generator coil cover	Brass	1.3%
Generator base	PPO	1.1%
Solenoid coil	Copper	1.1%
Controller cover	ABS	1.0%
	Other	11.4%

What's causing the greatest impacts

All life cycle stages

The production stage is dominating the results for most impact

categories. The production stage has the most significant contributions to eutrophication (mostly from emissions from copper mining and the printed wiring board), non-carcinogens (emissions from the production of copper and zinc) and ecotoxicity (mostly from disposal of steel slags and bottom ashes from coal fired power plants, and barium emissions to water from the extraction process of natural gas). The use phase is relevant to most impact categories, especially fossil fuel depletion, ozone depletion, and global warming. The use stage impact is mostly due to the embedded energy arising from acquisition, treatment and distribution of the water used during the use of the product.

The recovery stage includes recycling processes and benefits by preventing the need to produce primary materials. Recycling is a relevant factor for some of the impact categories, offsetting a portion of the impacts caused by production. Additionally, the delivery of the product to the construction/installation site, the construction/installation processes, the processes for dismantling the product and final waste treatment during the end of life stage do not have a significant impact.

Production stage

Brass parts and the printed wiring board, along with the brass turning process have significant contributions to the impact categories. Stainless steel materials and the turning steel process are relevant to the carcinogenics category. The electroplating process along with injection molding are major contributors to the ozone depletion category. Additionally, polishing has a somewhat significant processing contribution to the results. Transport via oceanic freighter appears as a relevant contributor to the fossil fuel depletion and smog categories.

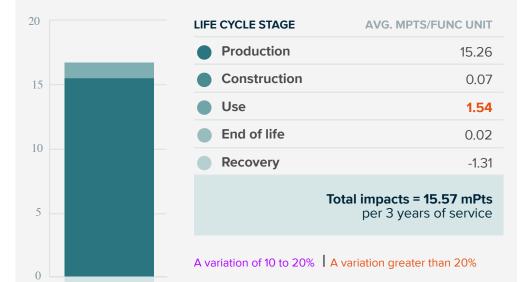
Sensitivity analysis

Because the assembly parts are identical between the two faucets, deviations in the LCA results are a result of the difference in the use phase of the two products. The 20-second cycle uses more water per cycle than the 10-second cycle version of the two faucets.

Multi-product weighted average

Results represent the weighted average using production volumes for the products covered. Variations of specific products for differences of 10-20% against the average are indicated in purple; differences greater than 20% are indicated in red. A difference greater than 10% is considered significant.

Total impacts by life cycle stages [mPts/func unit]



TOTO **PeoplePlanetWater**, programs improving environmental performance

- TOTO's EcoPower[®] products are powered by the force of running water.
- The electronic and mechanical components are programmed and designed to allow water flow and accurate flush volume only when needed.
- Water consumption is reduced in the use phase due to superior flushing performance.

See how we make it greener

LCA results

LIFE CYCLE STAGE	PRODUCTION	CONSTRUCTION	USE	END OF LIFE	RECOVERY
Information modules: Included Excluded *Installation and deconstruction/demolition are mostly manual. The sanitary fittings should not need repair, maintenance or	A1 Raw Materials	A4 Transportation/ Delivery	B1 Use	C1 Deconstruction/ Demolition	D Reuse, recovery and/or recycling
	A2 Transportation	A5 Construction/ Installation	B2 Maintenance	C2 Transportation	
replacement during the modeled life time.	A3 Manufacturing		B3 Repair	C3 Waste processing	
Reuse and energy recovery are not modeled for sanitary fittings.			B4 Replacement	C4 Disposal	
			B5 Refurbishment		
			B6 Operational energy use		
			B7 Operational water use		

SM 2013 Learn about SM Single Score results

Impacts per 3 years of service	15.26 mPts	0.07 mPts	1.54 mPts	0.02 mPts	-1.31 mPts
Materials or processes contributing >20% to total impacts in each life cycle stage	Brass parts together with the printed wiring board in addition to manufacturing processes such as brass turning.	Transportation of the product to the installation site or consumer and disposal of packaging.	Volume of water use during the operation of the product and the embedded energy use in the water used.	Transport to waste processing, waste processing and disposal of material flows transported to a landfill.	Plastic and metal components' recycling processes.

TRACI v2.1 results per one faucet

A variation of 10 to 20% | A variation greater than 20%

LIFE CYCLE STAGE			PRODUCTION	CONSTRUCTION	USE	END OF LIFE	RECOVERY
Ecological damage							
Impact Category	Unit						
Acidification	kg SO₂ eq	?	8.40E-01	7.04E-03	1.11E-01	-1.01E-02	-1.68E-02
Eutrophication	kg N eq	?	4.56E-01	6.89E-04	1.23E-02	-3.55E-03	-5.14E-03
Global warming (Embodied carbon)	kg CO₂ eq	?	6.45E+01	7.85E-01	2.14E+01	-8.85E-01	-1.81E+00
Ozone depletion	kg CFC-11 eq	?	4.17E-06	1.72E-09	9.68E-07	-3.49E-08	-9.39E-08
Human health damage							
Impact Category	Unit						
Carcinogenics	CTU _h	?	2.88E-06	8.88E-09	4.39E-07	-1.84E-07	-4.31E-07
Non-carcinogenics	CTU _h	?	8.77E-05	8.30E-08	1.81E-06	-4.58E-06	-5.78E-06
Respiratory effects	kg PM _{2.5} eq	?	1.02E-01	1.25E-04	7.51E-03	-1.83E-03	-3.39E-03
Smog	kg O₃ eq	?	6.26E+00	2.25E-01	1.02E+00	-1.05E-01	-1.95E-01
Additional environmental information							
Impact Category	Unit						
Ecotoxicity	CTU _e	?	2.37E+02	1.57E+00	7.37E+00	-7.32E+00	-1.12E+01
Fossil fuel depletion	MJ surplus	?	4.11E+01	1.13E+00	1.29E+01	-9.67E-01	-1.94E+00

References

LCA Background Report

TOTO Sanitary Fittings Products LCA Background Report (public version), September 2017

SM Transparency Report Framework

Part A: LCA Calculation Rules and Background Report Requirements v2017 (compliant with ISO14040-44 and ISO14025)Part B: Product Group Definition – Commercial Lavatory Faucets

Transparency Reports[™] / environmental product declarations 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. TRs/EPDs of products that conform to the same PCR and include the same life cycle stages, but are made by different manufacturers, may not sufficiently align to support direct comparisons. They therefore, cannot be used as comparative assertions unless the conditions defined in ISO 14025 Section 6.7.2. 'Requirements for Comparability' are satisfied.

Rating systems

The intent is to reward project teams for selecting products from manufacturers who have verified improved life-cycle environmental performance.

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

Building product disclosure and optimization

Environmental product declarations

\bigcirc Industry-wide (generic) EPD	1/2 product
Product-specific Type III EPD	1 product

Green Globes for New Construction and Sustainable Interiors Materials and resources

VC 3.5.1.2 Path B: Prescriptive Path for Building Core and Shell

C 3.5.2.2 and SI 4.1.2 Path B: Prescriptive Path for Interior Fit-outs

Collaborative for High Performance Schools National Criteria MW 7.1 – Environmental Product Declarations

Third-party certified type III EPD

2 points

SM Transparency Report™+ Material Health Overview™

VERIFICATION	LCA
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Transparen	cy Report
Verified	
Material Health E	valuation
Self-declared	S
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LCA & material health results & interpretation

Standard EcoPower[®] 0.35 GPM Faucet TEL103 Series

Life cycle assessment

Material health

Evaluation program: 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 (ILFI).

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 then 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

Inventory threshold: 100 ppm

Declaration status:

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 ?
 LBC Compliant ?
- 😑 Declared 🕐

Click the label to see the full declaration.





How this rating was achieved

Declare level

'Declared' is awarded to products when all the ingredients name and CAS numbers have been disclosed. 100% disclosure qualifies the product for the LEED v4 building product disclosure and optimization - material ingredients credit option 1.

What's in the product and why

The spout body is plated with chrome (Hexavalent Chromium VI).

Chromium material is used as a decorative finish in applications where corrosion-resistance and durability are required. During the chrome plating process health hazards have been identified and are managed. Process controls are used to protect the environment and the production workers wear personal protection equipment. After the plating process the chrome surface is inert and does not pose any health risks. The spout in its final form does not represent any hazards to the user.

The TOTO facility in which the faucet 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 faucets. 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

Standard EcoPower® EcoPower® Faucet 103 Series

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

S 1. Reporting 🔘 2. Optimization 🔵 3. Supply chain optimization

Living Building Challenge 3.0 Materials petals imperatives

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

WELL Building Standard[®] Air and Mind Features

Air 26. Enhanced Material Safety

Mind 97. Material Transparency 🔘 Mind 98. Organizational Transparency

Collaborative for High Performance Schools National Criteria MW 10.1 – Building Product Health Related Information Reporting

Product Health Related Information Report

1 point

1 product each

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See LCA results by life cycle stage

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How we make it greener

Standard EcoPower[®] 0.35 GPM Faucet TEL103 Series

Collapse all





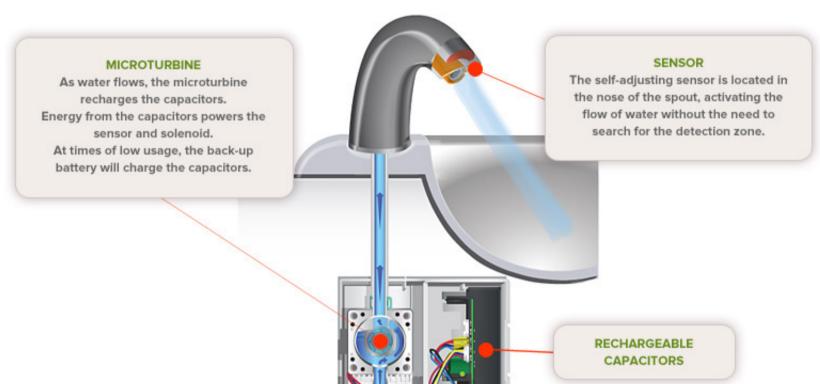


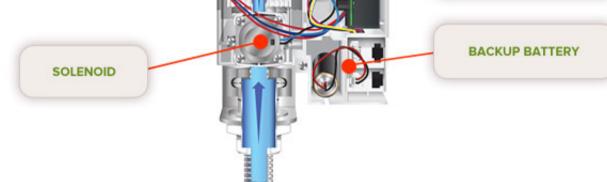
TOTO participates in the UPS Carbon Neutral program. TOTO is a certified SmartWay partner.

USE



TOTO's Standard EcoPower® Faucets 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:

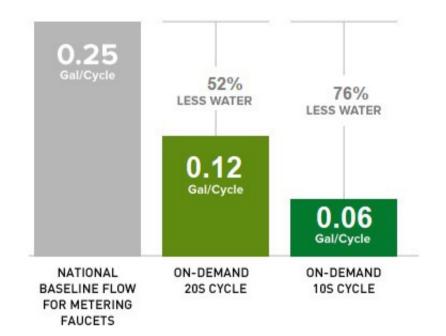
Located in the nose of the faucet, the EcoPower sensor ensures that water flows only when needed. The detection zone is right where you need it, eliminating the need to search with your hands to activate the flow of water. For on-demand versions, the sensor will stop the flow of water upon removal of the hands from the sensing zone, preventing wasted water.

MICROTURBINE:

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

SOLENOID:

The solenoid mechanism, a water-saving technology, maintains consistent flow rate under a range of supply pressures.



Using the same proven engineering as our legendary EcoPower TEL3/5G series, the low flow TEL103 series reinforces TOTO's performance reputation while offering additional water savings of 52% and 76%, respectively.







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

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