

# LIQUA-FLUSH MARKETING POTENTIAL

by ZYCAD®





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<u>Contact</u> <u>sales@zycad.com</u>



**MARKET POTENTIAL** 

#### Introducing: LIQUA-FLUSH™

ZYCAD's new **patented** LIQUA-FLUSH<sup>TM</sup> automatic toilet cleaning system precisely dispenses liquid toilet sanitizing solution into a standard toilet's water-tank and/or toilet-bowl after each flush. It consists of a liquid dispensing assembly with a disposable cartridge element that contains sanitizing solution. This system can be offered in a number of different chassis configurations, including a compact embodiment that clips onto the inside rim of a standard toilet tank, as shown here:



#### **Background of Toilet Sanitizers**

Toilet bowl sanitation has been a problem since the invention of the flush toilet. Toilets may contain microscopic organisms that can thrive and propagate to contaminate the toilet and bathroom. These germs can leave smelly, hard to clean deposits in the toilet bowl.

Early attempts at toilet sanitation relied upon manual methods of cleaning. It is a laborious chore, requiring frequent cleaning sessions and an expenditure of a substantial amount of time and labor. This gave rise to the advent of the automatic toilet bowl cleaning device. Currently, there are many of such automatic toilet bowl cleaning devices have proved to be lacking in many respects.

One common method is to utilize dry chemical, water-soluble tablets of cleaner. These dry tablets are generally submerged in the toilet tank so that the tablets slowly dissolve in the tank water, thereby releasing a cleaning or disinfectant agent. The cleaning agent is then released into the toilet bowl when the toilet is flushed. The basic problem with these devices is that there is no control over the rate of chemical discharge. The dry chemical tablet will disintegrate and dissolve away relatively quickly at a set rate, which can result in far more of the product being consumed than needed for each flush cycle. Accordingly, it is necessary

to replace the cleaning agent tablet frequently, resulting in an increased effort to keep the toilet clean. This is both costly and wasteful.

Another common method of toilet bowl sanitation utilizes a housing arrangement for a dry chemical tablet of cleaner. The housing partially isolates the tablet from the water supply to help slow the disintegration of the dry chemical in order to promote a more consistent delivery of the chemical treatment into the water for each flush. However, these passive devices still rely on a fixed dissolution rate. This results in an inconsistent delivery of the chemical for each flush.

#### The Toilet Sanitizer Market is a VERY BIG Business

A number of large companies sell many millions of toilet sanitizers each year in the United States alone, such as Willert Home Products, Reckitt Benckiser, WD-40, S.C. Johnson and Clorox. Their products, such as *Ty-D-Bol*®, *Bowl Fresh*®, *Lysol*®, *X-14*®, *2000 Flushes, Vanish*® *Scrubbing Bubbles*® and *Clorox*® *Blue* can be found just about everywhere. Other popular brands include *Iron Out*®, *Never Scrub*® and *Blu-Boy*. Many large supermarkets, such as Safeway, carry their own private label offerings as well. (See the attached list of toilet sanitizer products).

Although popular in sales, everyone knows these traditional solid tablet "in-tank" sanitizers are rather inefficient devices. Product waste can be *visually* noticed every time a very dark blue bowl of water is flushed away, where far more of the product was obviously used than necessary. Consumers also see the times when only light blue water appears in the bowl (after some frequent flushing) that indicates a lighter than required sanitizing dose was released. This uneven dosage is simply the nature of a product that constantly and passively dissolves away inside of the tank water. Consequently, it can only irregularly sanitize the toilet bowl and waste much of the product in the process. Consumers still use them because they have no alternatives. Certainly, there is room for improvement!

#### The LIQUI-FLUSH<sup>™</sup> System is a Next Generation Product

ZYCAD's new LIQUA-FLUSH<sup>TM</sup> cartridge-based liquid dispensing system was designed as a nextgeneration product to offer superior performance over the solid sanitizers. The LIQUA-FLUSH<sup>TM</sup> system automatically and consistently dispenses any desired amount of liquid sanitizer after each flush without any waste. This efficient device will instantly attract savvy consumers, whom are constantly looking for new and reliable home disinfecting and sanitizing products. Once they try the LIQUA-FLUSH<sup>TM</sup> product, they will be forever hooked! Why would they go back to old technology? It is not likely! Consequently, it can be easily predicted that the LIQUA-FLUSH<sup>TM</sup> product sales will grow and eventually displace the solid tablets.

The LIQUA-FLUSH<sup>™</sup> system has the mass-market sex appeal that would be required for a large company to be interested in spending millions to promote it. This will be valid if it could seize even a small segment of the BIG toilet sanitizer market. This opportunity will be easily achieved because the LIQUA-FLUSH<sup>™</sup> system was designed to be sold everywhere and used by everyone! The dispenser is a <u>compact</u>, <u>universal</u> and <u>inexpensive</u> device:

- **Compact Chassis:** The LIQUA-FLUSH<sup>TM</sup> system chassis very compact so that it can be offered for sale at even the smallest of stores due to its tiny need for shelf space.
- Universal Fit: The LIQUA-FLUSH<sup>TM</sup> system is a single, one-size-fits-all dispensing product that can fit virtually any existing toilet. It simply clips onto the back inside edge of a standard toilet tank's rim. The shape of the tank therefore makes no difference, so it will work with almost any toilet.
- **Inexpensive Hardware**: The LIQUA-FLUSH<sup>TM</sup> system can be very economically constructed. Mass-production would allow the dispenser assembly to be sold for an estimated retail price of around \$10-15. That includes a cartridge valued at about \$4.

#### More Product Options: Air-Freshener Cartridges

A dual-cartridge LIQUA-FLUSH<sup>TM</sup> system was also developed, where a second smaller cartridge can dispense a drop of fragrance into the toilet bowl after each flush and/or for a timed interval. This second cartridge format provides the introduction yet another new product idea that could be quite lucrative and could help enhance the overall sales potential of the LIQUA-FLUSH<sup>TM</sup> product line.



#### **A Marketing Strategy**

It can be appreciated that repetitive sales from the disposable cartridges would generate the real long-term profit from the LIQUA-FLUSH<sup>TM</sup> system. Consequently, it may well be advantageous to practically "give away" the dispenser at cost to help produce a demand for the consumable cartridges, similar to the approach used by the computer ink-printer industry.

#### **A Great Opportunity**

The LIQUA-FLUSH<sup>TM</sup> system's disposable cartridges will provide the public with great utility and convenience, resulting in a steady demand from repetitive buying. This unique invention could become a great success and could very well dominate the toilet sanitizer market. Supplying these consumables could prove to be a very profitable exploration of a new market. The old solid tablet sanitizer sales will no doubt erode and eventually become obsolete, just like the powered form of sanitizers.

ZYCAD's LIQUA-FLUSH<sup>TM</sup> system is now patented! This is a great opportunity for a progressive company to produce an *exclusive* hit new product! ZYCAD is already actively seeking partners to manufacture and distribute the LIQUA-FLUSH<sup>TM</sup> product.

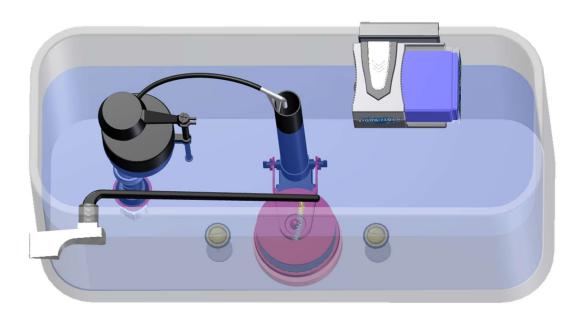
#### **Contact ZYCAD**

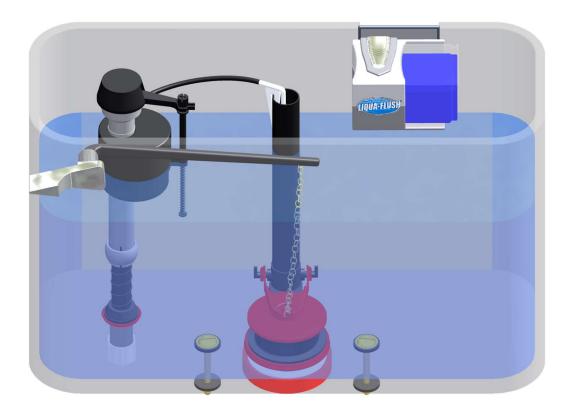
If your company is interested in licensing, purchasing, manufacturing or distributing any of ZYCAD's products, please contact ZYCAD by email at <u>sales@zycad.com</u>. For more information on this or other ZYCAD products, please visit <u>www.zycad.com</u>.





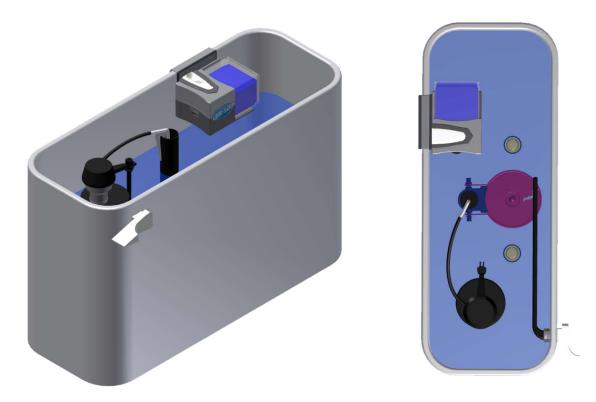


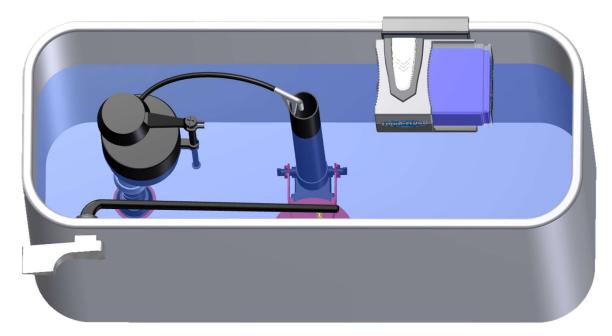






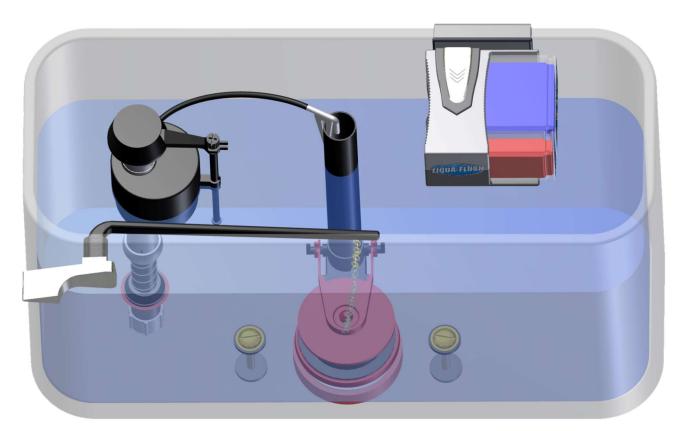








## **DUAL-CARTRIDGE VERSION**

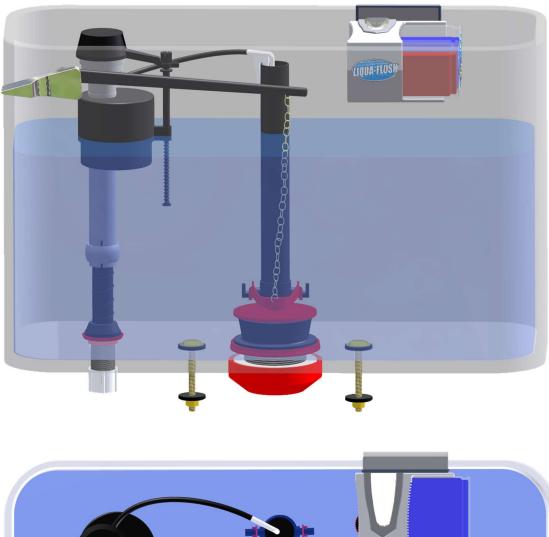


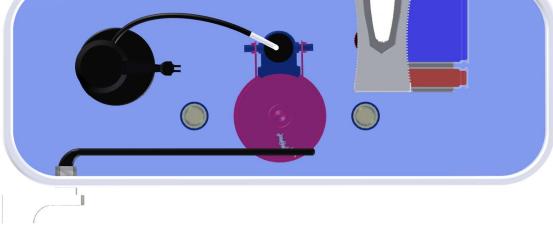


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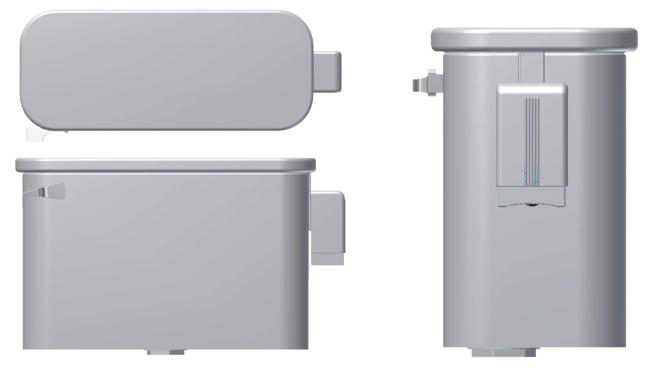






## LIQUA-FLUSH™ FOR BALL FLOAT & PRESSURE ASSIST TANKS









## LIQUA-FLUSH™ FOR COMMERCIAL TOILETS









## LIQUA-FLUSH<sup>™</sup> FOR URINALS





## TOILET SANITIZER PRODUCTS MARKET SURVEY

Alen-Festival The Betty Mills Company Big D Blue Cross Laboratories Blue Ribbon Products Church & Dwight Clorox **Continental Commercial Products** Dollar Days International Dollar General Fluidmaster Fresh Products HouseChem Motsenbocker NeverScrub Personal Care Qinggin Reckitt Benckiser Sano SC Johnson Summit Walter Drake WD-40 Whink Willert Home Products WMBarr

<i>Ty-D-Bol</i> ® Air Freshener & Bowl Cleaner - Blue	Willert Home Products	www.willert.com	\$2.99	Paral Mar Aber Mar Mar Mar
<i>Ty-D-Bol</i> ® Air Freshener & Bowl Cleaner - Blue	Willert Home Products	www.willert.com	\$2.99	
<i>Ty-D-Bol</i> ® Air Freshener & Bowl Cleaner - Blue	Willert Home Products	www.willert.com	\$2.99	
<i>Ty-D-Bol</i> ® Air Freshener & Bowl Cleaner - Blue plus Bleach	Willert Home Products	www.willert.com	\$2.99	
<i>Ty-D-Bol</i> ® Air Freshener & Bowl Cleaner - Blue plus Bleach	Willert Home Products	www.willert.com	\$1.99	

Bowl Fresh®	Willert Home	www.willert.com	\$2.05	- Stillers
Automatic Toilet Bowl Cleaner - Lavender	Products	www.wmert.com	\$2.03	
<i>Bowl Fresh</i> ® Automatic Toilet Bowl Cleaner - Orange	Willert Home Products	www.willert.com	\$2.05	
<b>Bowl Fresh®</b> Bleach Tabs Automatic Toilet Bowl Cleaner	Willert Home Products	www.willert.com	\$2.99	Transformer Bonn Freshi Statistics Bonn Freshi Statistics Sta
<b>Bowl Fresh®</b> Blue Tabs Automatic Toilet Bowl Cleaner	Willert Home Products	www.willert.com	\$2.99	Bowl Fresh.
<i>Bowl Fresh</i> ® Blue Tabs Automatic Toilet Bowl Cleaner	Willert Home Products	www.willert.com	\$0.99	

<b>Bowl Fresh</b> ® Blue Tabs Automatic Toilet Bowl Cleaner – twin pack	Willert Home Products	www.willert.com	\$2.49	And the second sec
<b>Bowl Fresh</b> ® Blue Tabs Automatic Toilet Bowl Cleaner	Willert Home Products	www.willert.com	\$3.19	
<b>Bowl Fresh®</b> Blue Tabs Automatic Toilet Bowl Cleaner – with Borax - 4 pack	Willert Home Products	www.willert.com	\$3.79	Running and a second seco
<b>Bowl Fresh®</b> Blue Tabs Automatic Toilet Bowl Cleaner – 4 pack	Willert Home Products	www.willert.com	\$3.79	
<b>Bowl Fresh</b> ® In Tank Jar Automatic Toilet Bowl Cleaner – 4 pack	Willert Home Products	www.willert.com	\$3.29	Arcente toor and a comparison of the comparison
<b>Bowl Fresh®</b> Plus Toilet Deodorizer & Cleaner Over the Rim	Willert Home Products	www.willert.com	\$3.90	Autors of Autors and A

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<i>AirBoss</i> Hanging Deodorizer	Willert Home Products	www.willert.com	\$1.99	arboss
<b>Bowl Fresh®</b> Ultra Toilet Bowl Cleaner Plus Deodorizer Over the Rim – Citrus, Pine, Lavender, Bleach	Willert Home Products	www.willert.com	\$1.99	
<i>Bowl Fresh</i> ® Gel Toilet Deodorizer Over the Rim	Willert Home Products	www.willert.com	\$1.99	
<i>Bowl Fresh</i> ® Toilet Deodorizer & Cleaner Over the Rim	Willert Home Products	www.willert.com	\$4.59	Anvitrest Bowlfrest
<i>Bowl Fresh</i> ® Ultra Toilet Bowl Cleaner – Lavender Scented	Willert Home Products	<u>www.willert.com</u>	\$2.06	
<i>Bowl Fresh</i> ® Ultra Toilet Bowl Cleaner – Pine Scented	Willert Home Products	<u>www.willert.com</u>	\$1.82	The second

Festival Toilet Bowl Cleaner and Deodorizer – Caribbean Breeze	Festival (Cadierno Corp.)	www.alenamericas.com	\$3.99	Testival 126 0Z (BT)
Festival Toilet Bowl Deodorizer – Lemon	Festival – Brand of Alen	www.alenamericas.com	\$3.99	THE REPORT OF THE
4 Month In-Tank Toilet Bowl Cleaner	Walter Drake	www.wdrake.com	\$9.99	A Decidence No Secubine
<i>X-14</i> ® Automatic Toilet Bowl Cleaner - Blue plus Fragrance	X-14 is a member of the <u>WD-40 Company</u> brand family.	www.wd40.com www.x14brand.com	\$1.99	Tolet Bowl Cleaner Profest Bowl Cleaner Profest Bowl Cleaner Profest Bowl Cleaner Profest Cleaner Profest Cleaner
X-14® Anti-Bacterial Toilet Bowl Cleaner with Bleach	X-14 is a member of the <u>WD-40 Company</u> brand family.	www.wd40.com www.x14brand.com	\$1.99	Toilet Bow Cleaner

<b>2000 Flushes</b> Blue Plus Bleach Automatic Toilet Bowl Cleaner	2000 Flushes is a member of the <u>WD-40</u> <u>Company</u> brand family.	www.wd40.com www.x14brand.com	\$3.99	
<b>2000 Flushes</b> Bleach Automatic Toilet Bowl Cleaner	2000 Flushes is a member of the <u>WD-40</u> <u>Company</u> brand family.	www.wd40.com www.x14brand.com	\$3.99	
2000 Flushes Blue plus Detergents Automatic Toilet Bowl Cleaner	2000 Flushes is a member of the <u>WD-40</u> <u>Company</u> brand family.	www.wd40.com www.x14brand.com	\$3.79	
<i>Lysol</i> ® Cling gel 2 in 1 Continuous Bowl Cleaner - Spring Waterfall Scent	Lysol a Reckitt Benckiser Company	www.rb.com www.lysol.com	\$1.82	
<i>Lysol</i> ® No Mess Automatic Toilet Bowl Cleaner – Spring Waterfall Scent	Lysol a Reckitt Benckiser Company	www.rb.com www.lysol.com	\$4.99	Province Anternation Contracti
<i>Lysol</i> ® No Mess Automatic Toilet Bowl Cleaner – Lavender Scent	Lysol a Reckitt Benckiser Company	www.rb.com www.lysol.com	\$4.99	Contraction of the second seco

<i>Lysol</i> ® No Mess Automatic Toilet Bowl Cleaner – Citrus Scent	Lysol a Reckitt Benckiser Company	www.rb.com www.lysol.com	\$4.99	Terrererererererererererererererererere
<i>Crystal Blue</i> Automatic Bowl Cleaner	Continental Commercial Products Company	www.continentalcommercialpro ducts.com	\$3.99	Crystal BLUE Bowt Cleaner - Creater - Creater
<i>Kleen Bowl</i> Automatic Bowl Cleaner	Continental Commercial Products Company	www.continentalcommercialpro ducts.com	\$3.99	Kiccor Book Michael Mi
Sanobon Shiny Blue Perfumed Soap and Toilet Bowl Deodorizer – Blue	Sano	www.sanoenglish.com	\$3.75	A B B B C C C C C C C C C C C C C C C C
Sanobon Shiny Blue Apple Soap and Toilet Bowl Deodorizer	Sano	www.sanoenglish.com	\$3.75	
<i>Sano Blue</i> Toilet Cleaner	Sano	www.sanoenglish.com	\$3.99	

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<i>Aqua Blue</i> Toilet Cleaner for the Toilet Tank	Sano	www.sanoenglish.com	\$3.99	פען אקן ה בלי אקן ה בלי
Sanobon Gel Toilet Cleaner	Sano	www.sanoenglish.com	\$2.99	
Toilet Bowl Cleaner	Duette-HouseChem, Inc.	www.housechem.com	\$0.99	Recease of the second s
<i>Royal Flush</i> Bowl Cleaner – Concentrated Blue	Blue Cross Laboratories, Inc.	www.bc-labs.com	\$2.99	
<i>Royal Flush</i> Automatic Bowl Cleaner	Blue Cross Laboratories, Inc.	www.bc-labs.com	\$3.99	ROYAL FLUSH BURGERARE BURG
<i>Blue Too</i> Bowl Cleaner – Plastic Jar	Blue Cross Laboratories, Inc.	www.bc-labs.com	\$3.99	HUE TOO

<i>Tab-Blu</i> Automatic Toilet Bowl Cleaner	Blue Cross Laboratories, Inc.	www.bc-labs.com	\$1.69	
<i>Big D Blu</i> Toilet Bowl Cleaner	Big D Industries, Inc.	www.bigdind.com	\$3.99	BIG DBLU PILET BOUL CLEANER LICANS AND DE DODORIZES TOLETS PRODUCT NO. 468 MTWT. 907. (2009)
In-Tank Automatic Toilet Bowl Cleaner	Big D Industries, Inc.	www.bigdind.com	\$2.99	
<i>Clorox</i> ® Automatic Toilet Bowl Cleaner – Blue	Clorox®	www.clorox.com www.thecloroxcompany.com	\$3.14	Contract of the second se
<i>Clorox</i> ® Automatic Toilet Bowl Cleaner with Teflon Surface Protector	Clorox®	www.clorox.com www.thecloroxcompany.com	\$3.14	

<i>Clorox</i> ® Automatic Toilet Bowl Cleaner – Bleach & Blue	Clorox®	www.clorox.com www.thecloroxcompany.com	\$3.61	
<i>Clorox</i> ® Automatic Toilet Bowl Cleaner – with Bleach	Clorox®	www.clorox.com www.thecloroxcompany.com	\$5.49	Arribeite reiter Bewertenen Biegentur Biegentur
<b>Rust Guard</b> Bowl Cleaner	Whink	www.whink.com	\$5.54	
Goof Off Rust Stain Toilet Tabs	Goof Off is a W.M. Barr & Company	www.wmbarr.com/ www.goofoffstainremover.com	\$2.69	
<i>Toilet Duck</i> Auto Blue Cleanser Plus Fragrance	S C Johnson	www.scjohnson.com	\$3.99	

<i>Scrubbing</i> <i>Bubbles</i> ® <i>Vanish</i> ® Continuous Clean Drop-Ins	Scrubbing Bubbles® an SC Johnson Company	www.scjohnson.com www.scrubbingbubbles.com	\$3.99	Visite Scrubbing Public Propins
<i>Scrubbing</i> <i>Bubbles</i> ® Toilet Cleaning Gel	Scrubbing Bubbles® an SC Johnson Company	www.scjohnson.com www.scrubbingbubbles.com	\$5.69	Standard Francisco
Scrubbing Bubbles® Continuous Clean 3 in 1 Cleaner	Scrubbing Bubbles® an SC Johnson Company	www.scjohnson.com www.scrubbingbubbles.com	\$2.99	Statuting Buddee
<i>Kaboom Scrub</i> <i>Free</i> Toilet Cleaning System	Kaboom a Church & Dwight Company	www.kaboomkaboom.com www.churchdwight.com	\$12.79	Tolet Cleaning System Tolet Cleaning System Construction of the system Cons
<i>Kaboom Scrub</i> <i>Free</i> Refill (2 Pack)	Kaboom a Church & Dwight Company	www.kaboomkaboom.com www.churchdwight.com	\$11.69	Ministration of the second sec
Bowlblock Toilet Bowl Cleaner - Cherry	Hospeco a Betty Mills Company	www.hospeco.com www.bettymills.com	\$2.99	

Hosepeco Health Gards Rim Cages Toilet Bowl Cleaner – Blue Mint	Hospeco a Betty Mills Company	www.hospeco.com www.bettymills.com	\$2.99	
Hosepeco Health Gards Rim Cages Toilet Bowl Cleaner – Green Apple	Hospeco a Betty Mills Company	www.hospeco.com www.bettymills.com	\$2.99	
Hospeco Health Gards ABC In Tank Automatic Bowl Cleaner	Hospeco a Betty Mills Company	www.hospeco.com www.bettymills.com	\$3.99	
Bowl Block Toilet Bowl Cleaner	Krystal Deodorant & Restroom Products a Betty Mills Company	www.hospeco.com www.bettymills.com	\$1.99	
Krystal In-Tank Automatic Bowl Cleaner Canister	Krystal Deodorant & Restroom Products a Betty Mills Company	www.hospeco.com www.bettymills.com	\$3.99	AUTOMATIC BOWL CLEANER WE SOT
Iron Out®	Summit Brands	www.summitbrands.com	\$5.75	COMPART COM

<i>Flush n' Sparkle</i> Toilet Bowl Cleaning system - Blue	Fluidmaster	www.fluidmaster.com	\$10.79	Pludmaster Pludmaster
<i>Flush n' Sparkle</i> Toilet Bowl Cleaning system Refill Cartridges – Blue (2 pack)	Fluidmaster	www.fluidmaster.com	\$13.55	Reducin Spankle Reducin Spankle Reducin Spankle Reducinges Reducinges
<i>Flush n' Sparkle</i> Toilet Bowl Cleaning system - Bleach	Fluidmaster	www.fluidmaster.com	\$11.00	NEW Classic - Classics Classics Philadenes
<i>Flush n' Sparkle</i> Toilet Bowl Cleaning system Refill Cartridges - Bleach	Fluidmaster	www.fluidmaster.com	\$13.55	NEW: Philamoster Phulhiti Spankle Prenii Cartridges PLEACH Wassanacou
<i>Never Scrub</i> ® Automatic Toilet Cleaning System	Never Srub	www.buyneverscrub.com	\$7.99	

<i>Never Scrub</i> ® Automatic Toilet Cleaning Refill Cartridges	Never Srub	www.buyneverscrub.com	\$6.95	Караланананананананананананананананананан
PowerHouse Fresh Bowl Automatic Toilet Bowl Cleaner	PowerHouse by Personal Care Products	www.personalcareproducts.org	\$2.95	Bans & Inselant Fresh Bowl Automatic for the Front Cleaner
PowerHouse Fresh Bowl Bleach Automatic Bowl Cleaner	PowerHouse by Personal Care Products	www.personalcareproducts.org	\$2.99	Bleach Automatic Bowl Cleaner Bleaches with Every Flush
PowerHouse Automatic Bowl Cleaner – Blue & Bleach Tabs	PowerHouse by Personal Care Products	www.personalcareproducts.org	\$2.99	The second secon
PowerHouse Automatic Bowl Cleaner – Blue & Bleach Tabs	PowerHouse by Personal Care Products	www.personalcareproducts.org	\$2.99	AS MANY BOWL CLANERS RESILENCE
<i>120 Day</i> Automatic Bowl Cleaner	Blue Ribbon Products	www.blueribboninc.com	\$3.99	And the second s

<i>Mr Bloo</i> Toilet	Motsenbocker	www.liftoffinc.com/	\$1.99	
Mr Bloo Tollet Bowl Cleaner and Air Freshener	WOISCHOOCKEI	www.mtommc.com/	φ1.77	
<i>Ultra Big Blue</i> Enzymatic Automatic Bowl Cleaner	Fresh Products	www.personalcareproducts.org	\$3.99	ULT RADIE BIG BLUE Termatic Automatic Bowl Chart Termatic Automatic Bowl Chart
<i>Big Blue</i> Automatic Bowl Cleaner	Fresh Products	www.personalcareproducts.org	\$3.99	BIG BLUE
<b>Blue-Touch</b> Automatic Toilet Bowl Cleaner	DDI – Dollar Days International, Inc.	www.dollardays.com/	\$6.95	SPACE Blue-Touch Control and desare
<i>Blue-Touch</i> Toilet Bowl Cleaner & Air Deodorizer	DDI – Dollar Days International, Inc.	www.dollardays.com/	\$2.99	
Dollar General Automatic Bowl Cleaner	Dollar General	www.dollargeneral.com	\$1.00	

Auto Toilet Bowl Cleaner – 5 Disc	Qinggin		\$1.99	
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