

HIGH-EFFICIENCY URINALS (HEUs) U.S. and CANADA

What is a High-Efficiency Urinal?

The High Efficiency Urinal (HEU) has been a part of the North American plumbing fixture marketplace for over 15 years. This long history includes both flushing and non-water urinals. It is only within the past 5 years, however, that the water utility and plumbing industries determined that it was necessary to adopt a definition of an HEU in order to avoid confusion with specifiers, water utilities, and the green building industry.

The HEU is defined as a fixture that flushes at 0.5-gpf/1.9-lpf or less, a threshold that is 50 percent of the current U.S. national standard (maximum) mandated by the U.S. Energy Policy Act in 1992. This 50 percent threshold serves as a metric for water authorities and municipalities designing more aggressive commercial plumbing fixture retrofit programs and, in many cases, establishes an additional performance tier for their financial incentives (e.g., rebate and voucher programs). Furthermore, it also serves as a “guidepost” for the various green building programs being developed and used in North America.

Fixtures currently considered as qualifying for the HEU designation fall into several different design and flush volume categories. The tables below are organized by those categories and reflect the latest information obtained from the manufacturers. The flush volumes shown in the tables are as certified and/or as reported by the manufacturer. We make no guarantee that the listed fixtures do, in fact, perform at the flush volumes noted or certified. It is the responsibility of the reader to verify this information.

Performance testing protocols (such as MaP) have not yet been developed for urinal fixtures and, as such, we urge readers to seek out performance and maintenance information from other sources. In addition, we strongly urge readers to perform a full life cycle cost analysis of purchase, installation, and maintenance before making a purchase decision. When authoritative performance testing protocols are developed and fixtures are tested, the results will be made available.

Flushing Urinal Fixtures (0.5-gallons per flush – 1.9 litres per flush)

Manufacturer	Model Name	Model Number	Material	Activating Sensor
American Standard	Selectronic Innsbrook	6520	Vitreous China	Integral
	Allbrook Flowise 0.5	6550.005 (top spud)	Vitreous China	No
	Washbrook Flowise 0.5	6515.005 (back spud)	Vitreous China	No
	Washbrook Flowise 0.5	6590.005 (top spud)	Vitreous China	No
http://www.americanstandard-us.com/products/Products.aspx?area=commercial&cat=10&col=&kw=&opt1=&opt2=&opt3=&opt4=&opt5=&opt6=				
Kohler	Bardon	K-4915	Vitreous China	Integral
	Bardon	K-4960-ET (top spud)	Vitreous China	No
	Bardon	K-4960-ER (rear spud)	Vitreous China	No
	Dexter	K-5016-ER (rear spud)	Vitreous China	No
	Dexter	K-5016-ET (top spud)	Vitreous China	No
	Darfield	K-5024-T (top spud)	Vitreous China	No
http://www.us.kohler.com/onlinecatalog/product_result.jsp?module=Commercial%20Urinals&category=30&subcategory=24				
Toto	None	UT104E (top spud)	Vitreous China	
	None	UT104EV (back spud)	Vitreous China	
	None	UT447E (top spud)	Vitreous China	
	None	UT447EV (back spud)	Vitreous China	
http://www.totousa.com/prodcatalog.asp?cid=18				

Flushing Urinal Fixture (3/4-pint per flush – 0.35 litres per flush)

Manufacturer	Model Name	Model Number	Material	Activating Sensor
Mister Miser	Mister Miser Residential Urinal	None	Plastic	None – mechanical activation
http://www.mistermiser.net				

Flushing Urinal Fixtures (1-pint per flush – 0.5 litres per flush)

Manufacturer	Model Name	Model Number	Material	Activating Sensor
American Standard	Washbrook Flowise 0.125	6515.125 (back spud)	Vitreous China	No
	Washbrook Flowise 0.125	6590.125 (top spud)	Vitreous China	No
Caroma	Cube 3 Ultra	678650 (back spud)	Vitreous China	Integral (in trapway)
Sloan Valve	None	WEUS 1000.1001-0.13 (top spud)	Vitreous China	No (manual)
	None	WEUS 1000.1301-0.13-ES-S (top spud)	Vitreous China	Integral
	None	WEUS 1000.1302-0.13 HWS (top spud)	Vitreous China	Integral
	None	WEUS 1000.1402-0.13-SMO (top spud)	Vitreous China	Integral
	None	WEUS 1000.1403-0.13-Smooth (top spud)	Vitreous China	Integral
http://www.sloanvalve.com/				
Zurn	EcoVantage	Z5798 (top spud)	Vitreous China	Integral
	EcoVantage	Z5799 (back spud)	Vitreous China	Integral
	EcoVantage	Z5738 (top spud)	Vitreous China	Integral
	EcoVantage	Z5758 (top spud)	Vitreous China	Integral
	EcoVantage	Z5759 (back spud)	Vitreous China	Integral
	Full Stall Pint	Z5792 (top spud)	Vitreous China	Integral
	Nano Pint	Z5708 (top spud)	Vitreous China	Integral
http://www.zurn.com/pages/catalog.asp?ProductGroupID=150&OperationID=19				

Flushing Urinal Fixture (1 quart per flush – 0.9 litres per flush)

Manufacturer	Model Name	Model Number	Material	Activating Sensor
Sloan Valve	None	WEUS 1002.1001-0.25 (top spud)	Vitreous China	No (manual)
	None	WEUS 1002.1201-0.25-Solis (top spud)	Vitreous China	Integral
	None	WEUS 1002.1301-0.25-ES-S (top spud)	Vitreous China	Integral
	None	WEUS 1002.1302-0.25 HWS (top spud)	Vitreous China	Integral
	None	WEUS 1002.1401-0.25 G2 (top spud)	Vitreous China	Integral
	None	WEUS 1002.1402-0.25-SMO (top spud)	Vitreous China	Integral
	None	WEUS 1002.1403-0.25-Smooth (top spud)	Vitreous China	Integral
http://www.sloanvalve.com/				
Vitra	EverGreen	5321-XXX-0198 (top spud)	Vitreous China	No (manual available)
	EverGreen	5321-XXX-0199 (rear spud)	Vitreous China	No (manual available)
http://depo.vitra.com.tr/VCT/CANLI/06/PDF/VUSA_5231_T.PDF				

Non-Water Urinal Fixtures¹

Manufacturer	Model Name	Model Number	Trap Design ²	Material
Acorn	None	None	Self sealing waste valve (duckbill) ²	Stainless steel
Caroma	H2 Zero	678500	Self sealing waste valve ² supplemented with liquid seal	Vitreous China
Duravit	McDry	084436	Liquid seal	Vitreous China
http://www.duravit.com/duravit/html/default/useo-6q3rty.com.html?category=urinals&product=084436&nodeId=93992				
Ecotech Water (Technical Concepts)	Eco Urinal	ETEUI100	Self sealing waste valve ²	Vitreous China
	Eco Urinal	751220	Liquid seal	Vitreous China
http://www.ecotechwater.com/pdf/EcoUrinal.pdf				
Falcon	WaterFree	F-1000	Liquid seal	Vitreous China
	WaterFree	F-2000	Liquid seal	Vitreous China
	WaterFree	F-4000	Liquid seal	Vitreous China
	WaterFree	F-5000	Liquid seal	Vitreous China
	WaterFree	F-9000SS	Liquid seal	Stainless Steel
http://www.falconwaterfree.com/products/us.htm				
Kohler	Steward	K-4917	Liquid seal	Vitreous China
	Steward	K-4918	Liquid seal	Vitreous China
	Steward	K-4919	Liquid seal	Vitreous China
http://search.us.kohler.com/?q=steward				
Sloan	WaterFree	WES-1000	Liquid seal	Vitreous China
	WaterFree	WES-2000	Liquid seal	Vitreous China
	WaterFree	WES-4000	Liquid seal	Vitreous China
	WaterFree	WES-5000	Liquid seal	Vitreous China
http://www.sloanvalve.com/products_ENU_HTML.htm				

Non-Water Urinal Fixtures¹ (continued)

Manufacturer	Model Name	Model Number	Trap Design ²	Material
Waterless	Baja	2005	Liquid seal	Composite
	Kalahari	2003	Liquid seal	Composite
	Kalahari	2003B (bottom drain)	Liquid seal	Composite
	Sonora	2004	Liquid seal	Composite
	Sonora	2004B (bottom drain)	Liquid seal	Composite
	Yukon	2101	Liquid seal	Vitreous China
	Sierra	2102	Liquid seal	Vitreous China
	Borrogo	2103	Liquid seal	Vitreous China
	Del Mar	2901 (shipboard)	Liquid seal	Composite
	Del Casa	2902 (home or space saving)	Liquid seal	Composite
Santa Fe	2903	Liquid seal	Composite	
http://www.waterless.com/				
Zero Flush	None	ZF-101	Liquid seal	Vitreous China
	None	ZF-201	Liquid seal	Vitreous China
	None	ZF-301	Liquid seal	Stainless Steel
	None	ZF-401	Liquid seal	Vitreous China
	None	ZF-501	Liquid seal	Vitreous China
http://www.zeroflush.com/				
Zurn	Ecovantage	Z5795	Liquid seal	Vitreous China
	Ecovantage	Z5796	Liquid seal	Vitreous China
http://www.zurn.com/pages/catalog.asp?ProductGroupID=150&OperationID=19				

NOTES:

1 – Some North American jurisdictions and some plumbing code provisions do not permit the installation non-water urinals, even though those non-water urinals with a liquid seal are covered within two ANSI standards: ASME A112.19.19-2006 for vitreous china non-water urinal fixtures and IAPMO Z124.9-2004 for plastic urinal fixtures.

2 – Some jurisdictions do not allow the installation of urinals with self-sealing waterless waste valves (non-liquid or mechanical seals, sometimes termed “duckbills”). These urinals are listed by IAPMO as qualifying to “IAPMO Guide Criteria for Waterless Urinals, IGC 161-2006a” but may not be permitted by local codes and/or national standards.

It is very important that the specifier, designer, and/or purchaser first check with the local jurisdictional authority to determine if and where such fixtures are permitted.

General Notes for High-Efficiency Urinals:

(a) All flushing HEUs must meet the very same waste removal performance requirements as all other flushing urinals sold in North America. All urinals, regardless of flush volume, may experience problems when installed in commercial building locations with degraded, aging, or poorly installed drainline systems, e.g., insufficient drainline slope, pre-existing buildup of solids, etc. In most cases, additional sources of wastewater upstream of the urinal fixture may help to reduce or prevent solids build-up in the drainline.

(b) The information contained herein was gathered from sources deemed reliable and is believed to be correct at the time of publication. However, the authors cannot guarantee that all of the information is either correct or current. The authors take no responsibility for the subsequent communication or use of the information presented herein. Therefore, readers are strongly encouraged to perform their own research into HEUs before making specifying or purchasing decisions.

For further information on High-Efficiency Urinals, contact either:

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