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HIGH-EFFICIENCY URINALS (HEUs) U.S. and CANADA August 2010



What is a High-Efficiency Urinal?

The High Efficiency Urinal (HEU) has been a part of the North American plumbing fixture marketplace for close to 20 years. This long history includes both flushing and non-water urinals. It is only within the past 10 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 and other sources. The flush volumes shown in the tables are as certified and/or as reported by the manufacturer. 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.

Pages 1-3 identify water-using HEU fixtures. Included in these listings is a column that identifies those that have been certified to the U.S. EPA's WaterSense specification for high-efficiency flushing urinals. **Page 4** shows the flush valves that have also been certified to WaterSense. Information about the WaterSense labeling program for high-efficiency flushing urinals may be found at: <http://www.epa.gov/watersense/products/urinals.html> The WaterSense urinal specification may be found at: http://www.epa.gov/watersense/docs/urinal_finalspec508.pdf The EPA's listing of WaterSense-certified flushing urinals may be searched here: http://www.epa.gov/watersense/product_search.html

Page 5 lists the non-water urinals available in the marketplace.

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

Manufacturer	Model Name	Model Number	Mat'l	WaterSense compliant urinal?	Integral Flush Valve Sensor?
American Standard	Selectronic Innsbrook	6520.001	VC	No	Yes (battery)
	Selectronic Innsbrook	6520.003	VC	No	Yes (hard wired AC)
	Allbrook Flowise 0.5	6550.005 (top spud)	VC	Yes	No
	Washbrook Flowise 0.5	6515.005 (back spud)	VC	Yes	No
	Washbrook Flowise 0.5	6590.005 (top spud)	VC	Yes	No
	None	D7120.XX	VC	Yes	
	None	D7399.XX	VC	Yes	
www.americanstandard-us.com/bathroom-products/urinals/					
Contrac	Calder	4810BEX (top spud)	VC	Yes	No
	Calder	4810BEY (back spud)	VC	Yes	No
	Carlton	4810BFX (top spud)	VC	Yes	No
	Carlo	4810BHx (top spud)	VC	Yes	No
	Carlo	4810BHx (back spud)	VC	Yes	No
Crane	Eco Richland	7120 (top spud)	VC	Yes	
	Eco Crawford	7399	VC	Yes	
www.cranep plumbing.com/searchResults.aspx?d=4&t=30					
Duravit	Architec	081836	VC	Yes	No
	Architec	082036	VC	Yes	No
	Caro	083630	VC	F/V - Yes	Yes
	Philippe Starck 1	083432	VC	F/V - Yes	Yes
	Philippe Starck 1	083532	VC	F/V - Yes	Yes
	Vero	280132	VC	F/V - Yes	Yes
	Vero	280032	VC	F/V - Yes	Yes
www.duravit.us/products/series/architec-useo6ptmab.html					



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

Manufacturer	Model Name	Model Number	Mat'l	WaterSense compliant urinal?	Integral Flush Valve Sensor?
Foremost	None	C4810BEX (top spud)	VC	Yes	No
	None	C4810BEY (back spud)	VC	Yes	No
	None	C4810BFX (top spud)	VC	Yes	No
	None	C4810BHX (top spud)	VC	Yes	No
	None	C4810BHY (back spud)	VC	Yes	No
	Rondo	UR-490-Y	VC	Yes	No
www.foremostgroups.com/K&B/index.html					
Kohler	Bardon	K-4915	VC	No	Yes
	Bardon	K-4960-ET (top spud)	VC	No	No
	Bardon	K-4960-ER (rear spud)	VC	No	No
	Dexter	K-5016-ER (rear spud)	VC	No	No
	Dexter	K-5016-ET (top spud)	VC	No	No
	Darfield	K-5024-T (top spud)	VC	No	No
www.us.kohler.com/onlinecatalog/product_result.jsp?module=Commercial%20Urinals&category=30&subcategory=24					
ProFlo (by Ferguson)	None	PF1805 (top spud, wash out)	VC	No	No
	None	PF1815 (top spud, siphon jet)	VC	No	No
	None	PF1825 (top spud, wash out)	VC	No	No
http://www.proflo.com/proflo/showRecordList.do?Ntt=Urinal					
Sanitarios Lamasa (Vortens)	Austral Zero5	3601 (top spud)	VC	Yes	No
	Verona Zero5	3621 (top spud)	VC	Yes	No
www.vortens.com/productlist.php?cat=22					
Sloan Valve	Efficiency Series	SU-1005A (top spud)	VC	Yes	No
	Efficiency Series	SU-1015A (rear spud)	VC	Yes	No
	Efficiency Series	WEUS 1005.1001-0.5*	VC	No	No (manual)
	Efficiency Series	WEUS 1005.1201-0.5 SOLIS*	VC	No	Yes (electronic sensor)
	Efficiency Series	WEUS 1005.1401-0.5 ECOS*	VC	No	Yes (electronic sensor)
	www.sloanvalve.com/ *-urinal fixture coupled with flush valve				
Toto	None	UT104E (top spud)	VC	No	No
	None	UT104EV (rear spud)	VC	No	No
	None	UT447E (top spud)	VC	No	No
	None	UT447EV (rear spud)	VC	No	No
www.totousa.com/prodcatalog.asp?cid=18					
Zurn	EcoVantage	Z5751.196 (top spud)	VC	No	No (manual)
	EcoVantage	Z5751.219 (top spud)	VC	No	No (manual)
	EcoVantage	Z5751.201 (top spud)	VC	No	Yes
	EcoVantage	Z5751.245 (top spud)	VC	No	Yes
	EcoVantage	Z5752.245 (rear spud)	VC	No	Yes
	EcoVantage	Z5752.245 (rear spud)	VC	No	Yes
www.zurn.com/pages/catalog.asp?ProductGroupID=150&OperationID=19					

Flushing Urinal Fixture (0.25 gallons per flush – 0.9 litres per flush)

Mfr.	Model Name	Model Number	Mat'l	WaterSense compliant urinal?	Integral Flush Valve Sensor?
Sloan Valve	Efficiency Series	WEUS 1002.1001-0.25 (top spud)	VC	No	No (manual)
	Efficiency Series	WEUS 1002.1201-0.25 SOLIS (top spud)	VC	No	Yes
	Efficiency Series	WEUS 1002.1301-0.25 ESS (top spud)	VC	No	Yes
	Efficiency Series	WEUS 1002.1302-0.25 HWS (top spud)	VC	No	Yes
	Efficiency Series	WEUS 1002.1401-0.25 ECOS (top spud)	VC	No	Yes
	Efficiency Series	WEUS 1002.1402-0.25 SMO (top spud)	VC	No	Yes
	Efficiency Series	WEUS 1002.1403-0.25-SMOOTH (top spud)	VC	No	Yes
	Efficiency Series	SU-1002A (top spud)	VC	Yes	No
	Efficiency Series	SU-1012A (rear spud)	VC	Yes	No
*-urinal fixture with flush valve www.sloanvalve.com/					
Vitra	EverGreen	5321-XXX-0198 (top spud)	VC	No	No (manual available)
	EverGreen	5321-XXX-0199 (rear spud)	VC	No	No (manual available)
depo.vitra.com.tr/VCT/CANLI/06/PDF/VUSA_5231_T.PDF					



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

Manufacturer	Model Name	Model Number	Mat'l	WaterSense compliant urinal?	Integral Flush Valve Sensor?
American Standard	Washbrook Flowise 0.125	6515.125 (back spud)	VC	Yes	No
	Washbrook Flowise 0.125 (with valve)	6590.525 (back spud)	VC	No	Yes (battery)
	Washbrook Flowise 0.125	6590.125 (top spud)	VC	Yes	No
Caroma	Cube 3 Ultra	678650 (rear spud)	VC	No	Yes (in trapway)
Kohler	Bardon	K-4904-ER (rear spud)	VC	No	No
	Bardon	K-4904-ET (top spud)	VC	No	No
search.us.kohler.com/?q=K-4904&x=14&y=3					
Sloan Valve	Efficiency Series	WEUS 1010.1011-0.13 (rear spud)*	VC	No	No (manual)
	Efficiency Series	WEUS 1000.1001-0.13 (top spud)*	VC	No	No (manual)
	Efficiency Series	WEUS 1010.1311-0.13 ESS (top spud)*	VC	No	Yes
	Efficiency Series	WEUS 1000.1201-0.13 SOLIS (top spud)*	VC	No	Yes
	Efficiency Series	WEUS 1000.1301-0.13 ESS (top spud)*	VC	No	Yes
	Efficiency Series	WEUS 1000.1302-0.13 HWS (top spud)*	VC	No	Yes
	Efficiency Series	WEUS 1000.1303-0.13 ESS OR (top spud)*	VC	No	Yes
	Efficiency Series	WEUS 1000.1401-0.13 ECOS (top spud)*	VC	No	Yes
	Efficiency Series	WEUS 1000.1411-0.13 HW ECOS C (top spud)*	VC	No	Yes
	Efficiency Series	WEUS 1000.1402-0.13 SMO (top spud)*	VC	No	Yes
	Efficiency Series	WEUS 1000.1403-0.13 SMOOTH (top spud)*	VC	No	Yes
	Efficiency Series	SU-1000A (top spud)	VC	Yes	No
Efficiency Series	SU-1010A (rear spud)	VC	Yes	No	
www.sloanvalve.com/					
		*-urinal fixture coupled with flush valve			
Zurn	The Pint	Z5798.205 (top spud)	VC	F/V Yes (fixture certified with 5 different certified Zurn flush valves – see page 4)	Yes
	The Pint	Z5798.206 (top spud)	VC		Yes
	The Pint	Z5798.207 (top spud)	VC		No (manual)
	The Pint	Z5798.235 (top spud)	VC		Yes
	The Pint	Z5798.234 (top spud)	VC		Yes
	The Pint	Z5799 (rear spud)	VC	F/V - Yes	Yes
	Small Pint	Z5738.205 (top spud)	VC	F/V Yes (fixture certified with 5 different certified Zurn flush valves – see page 4)	Yes
	Small Pint	Z5738.206 (top spud)	VC		Yes
	Small Pint	Z5738.207 (top spud)	VC		No (manual)
	Small Pint	Z5738.235 (top spud)	VC		Yes
	Small Pint	Z5738.234 (top spud)	VC		Yes
	Retrofit Pint	Z5758.205 (top spud)	VC	F/V Yes (fixture certified with 5 different certified Zurn flush valves – see page 4)	Yes
	Retrofit Pint	Z5758.206 (top spud)	VC		Yes
	Retrofit Pint	Z5758.207 (top spud)	VC		No (manual)
	Retrofit Pint	Z5758.235 (top spud)	VC		Yes
	Retrofit Pint	Z5758.234 (top spud)	VC		Yes
	Retrofit Pint	Z5759 (rear spud)	VC	F/V - Yes	Yes
	Full Stall Pint	Z5792.205 (top spud)	VC	No	Yes
	Full Stall Pint	Z5792.206 (top spud)	VC	No	Yes
	Full Stall Pint	Z5792.207 (top spud)	VC	No	No (manual)
	Full Stall Pint	Z5792.235 (top spud)	VC	No	Yes
	Full Stall Pint	Z5792.234 (top spud)	VC	No	Yes
	Nano Pint	Z5708.205 (top spud)	VC	F/V Yes (fixture certified with 5 different certified Zurn flush valves – see page 4)	Yes
	Nano Pint	Z5708.206 (top spud)	VC		Yes
Nano Pint	Z5708.207 (top spud)	VC	No (manual)		
Nano Pint	Z5708.235 (top spud)	VC	Yes		
Nano Pint	Z5708.234 (top spud)	VC	Yes		
www.zurn.com/pages/catalog.asp?ProductGroupID=150&OperationID=19					



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WaterSense-Compliant Flushometer Valves (for urinals)

Manufacturer	Model Name	Model Number	Flush Volume
American Standard	Selectronic	6061.201	0.125 gpf – 0.5 Lpf
	Selectronic	6061.301	0.125 gpf – 0.5 Lpf
	Selectronic	6061.401	0.125 gpf – 0.5 Lpf
	Selectronic	6061.501	0.125 gpf – 0.5 Lpf
	Selectronic	6062.201	0.125 gpf – 0.5 Lpf
	Selectronic	6062.301	0.125 gpf – 0.5 Lpf
	Selectronic	6062.401	0.125 gpf – 0.5 Lpf
	Selectronic	6062.501	0.125 gpf – 0.5 Lpf
	Selectronic	6063.013	0.125 gpf – 0.5 Lpf
	Selectronic	6063.201	0.125 gpf – 0.5 Lpf
	Selectronic	6063.301	0.125 gpf – 0.5 Lpf
	Selectronic	6063.401	0.125 gpf – 0.5 Lpf
	Selectronic	6063.501	0.125 gpf – 0.5 Lpf
	Selectronic	6063.513	0.125 gpf – 0.5 Lpf
	Selectronic	6061.205	0.5 gpf – 1.9 Lpf
	Selectronic	6061.305	0.5 gpf – 1.9 Lpf
	Selectronic	6061.405	0.5 gpf – 1.9 Lpf
	Selectronic	6061.505	0.5 gpf – 1.9 Lpf
	Selectronic	6062.205	0.5 gpf – 1.9 Lpf
	Selectronic	6062.305	0.5 gpf – 1.9 Lpf
	Selectronic	6062.405	0.5 gpf – 1.9 Lpf
	Selectronic	6062.505	0.5 gpf – 1.9 Lpf
	Selectronic	6063.051	0.5 gpf – 1.9 Lpf
	Selectronic	6063.205	0.5 gpf – 1.9 Lpf
	Selectronic	6063.305	0.5 gpf – 1.9 Lpf
Selectronic	6063.405	0.5 gpf – 1.9 Lpf	
Selectronic	6063.515	0.5 gpf – 1.9 Lpf	
Selectronic	7093.051	0.5 gpf – 1.9 Lpf	
http://www.americanstandard-us.com/searchResults.aspx?d=1&t=29&a=263			
Crane	None	6113.051	0.5 gpf – 1.9 Lpf
http://www.cranepumbing.com/searchResults.aspx?d=4&t=30			
Zurn	AquaVantage	Z6003AV-ULF	0.125 gpf – 0.5 Lpf
	AquaVantage	ZER6003AV-ULF	0.125 gpf – 0.5 Lpf
	AquaSense	ZEMS6003AV-ULF	0.125 gpf – 0.5 Lpf
	AquaSense	ZEMS6003AV-ULF-IS	0.125 gpf – 0.5 Lpf
	AquaVantage	ZEG6003AV	0.125 gpf – 0.5 Lpf
	EcoVantage	ZEG6003EV	0.125 gpf – 0.5 Lpf
http://www.zurn.com/pages/catalog.asp?ProductGroupID=184&ProductName=Z6003AV%2DULF#p5202			



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Non-Water Urinal Fixtures¹

Manufacturer	Model Name	Model Number	Trap Design ²	Material
Acorn	None	None	Self sealing waste valve (duckbill) ²	SS
American Standard	FloWise Flush Free	6150.100	Liquid seal	VC
	FloWise Flush Free	6154.100	Liquid seal	VC
	FloWise Flush Free	6155.100	Liquid seal	VC
http://www.americanstandard-us.com/bathroom-products/urinals/				
Caroma	H2 Zero	678500	Self sealing waste valve ² supplemented with liquid seal	VC
Duravit	Dry Urinal	084436	Liquid seal	VC
www.duravit.com/duravit/html/default/useo-6q3rty.com.html?category=urinals&product=084436&nodid=93992				
Ecotech Water	Eco Urinal	ETEU100	Self sealing waste valve ²	VC
	Eco Urinal	751220	Liquid seal	VC
www.ecotechwater.com/pdf/EcoUrinal.pdf				
Falcon	WaterFree	F-1000	Liquid seal	VC
	WaterFree	F-2000	Liquid seal	VC
	WaterFree	F-4000	Liquid seal	VC
	WaterFree	F-5000	Liquid seal	VC
	WaterFree	F-7000	Liquid seal	VC
	WaterFree	F-9000SS	Liquid seal	SS
www.falconwaterfree.com/products/us.htm				
Kohler	Steward	K-4917	Liquid seal	VC
	Steward	K-4918	Liquid seal	VC
	Steward	K-4919	Liquid seal	VC
search.us.kohler.com/?q=steward				
Sloan	WaterFree	WES-1000	Liquid seal	VC
	WaterFree	WES-2000	Liquid seal	VC
	WaterFree	WES-4000	Liquid seal	VC
	WaterFree	WES-5000	Liquid seal	VC
www.sloanvalve.com/products_ENU_HTML.htm				
Waterless	Anza	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	VC
	Sierra	2102	Liquid seal	VC
	Borrego	2103	Liquid seal	VC
	Baja	2104	Liquid seal	VC
	Del Mar	2901 (shipboard)	Liquid seal	Composite
	Del Casa	2902 (home or space saving)	Liquid seal	Composite
	Santa Fe	2903	Liquid seal	Composite
	www.waterless.com/			
Zero Flush	None	ZF-101	Liquid seal	VC
	None	ZF-201	Liquid seal	VC
	None	ZF-301	Liquid seal	SS
	None	ZF-401	Liquid seal	VC
	None	ZF-501	Liquid seal	VC
	None	ZFT-0405 (trough urinal)	Liquid seal	SS
www.zeroflush.com/				
Zurn	Ecovantage	Z5795	Liquid seal	VC
	Ecovantage	Z5796	Liquid seal	VC
www.zurn.com/pages/catalog.asp?ProductGroupID=150&OperationID=19				



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NOTES

Material Key:

VC – Vitreous China
SS – Stainless Steel

Notes on WaterSense Certification:

1 - The flushing urinal fixtures noted as WaterSense compliant have been fully certified by an independent, accredited laboratory as meeting the specification's requirements. However, in some cases, the necessary certification paperwork has not yet been submitted to the WaterSense program and, as a result, these fixtures may not yet appear on the WaterSense website.

2 - IMPORTANT: The FIXTURE listings shown as WaterSense-compliant in the tables are for the certified urinal fixture ONLY. Except where noted as a fixture/valve ("F/V") combination, flush valves tested with the certified urinal fixtures are NOT included as WaterSense certified. Instead, flush valves are separately tested and certified to the requirements within the WaterSense specification and are listed separately on page 4.

Notes on Non-Water Urinals:

1 - Some North American jurisdictions and some plumbing code provisions do not permit the installation of 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 are not responsible 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.

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