

Sloan Valve Company Product LEED® Qualification Guide

The Leadership in Energy and Environmental Design (LEED®) Green Building Rating System represents the U.S. Green Building Council's effort to provide a national standard for what constitutes a "green building." Through its use as a design guideline and third-party certification tool, it aims to improve occupant well-being, environmental performance and economic returns of buildings using established innovative practices, standards and technologies.

The following document refers to the points (credits) for LEED NC v2.2 only. Additional LEED points may be available in various other LEED documents such as LEED for Schools, LEED for Retail, LEED-EB or LEED CI.

Numerous Sloan Valve Company products can help earn credits for LEED certification.



SLOAN VALVE COMPANY

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(800.982.5839)

www.sloanvalve.com

Qualification for LEED Credit WE 2 Innovative Wastewater Technology

Intent

Reduce generation of wastewater and potable water demand, while increasing the local aquifer recharge.

Requirements

OPTION 1

Reduce potable water use for building sewage conveyance by 50% through the use of water-conserving fixtures (water closets, urinals) or non-potable water (captured rainwater, recycled greywater, and on-site or municipally treated wastewater).

OR

OPTION 2

Treat 50% of wastewater on-site to tertiary standards. Treated water must be infiltrated or used on-site.

Sloan

This often is the most challenging credit in the Water Efficiency section of LEED. Sloan Valve Company's high-efficiency fixtures such as waterfree urinals drastically reduce wastewater volumes, improving the likelihood of achieving this credit. For applicable products, see product pages.

Using Sloan Valve's products can contribute up to 1 point toward LEED Certification.

Qualification for LEED Credits WE 3.1 and WE 3.2 Water Use Reduction

Credit 3.1 – Water Use Reduction: 20%

Intent

Maximize water efficiency within buildings to reduce the burden on municipal water supply and wastewater systems.

Requirements

Employ strategies that in aggregate use 20% less water than the water use baseline calculated for the building (not including irrigation) after meeting the Energy Policy Act of 1992 fixture performance requirements. Calculations are based on estimated occupant usage and shall include only the following fixtures (as applicable to the building): water closets, urinals, lavatory faucets, showers and kitchen sinks.

Credit 3.2 – Water Use Reduction: 30%

Intent

Maximize water efficiency within buildings to reduce the burden on municipal water supply and wastewater systems.

Requirements

Employ strategies that in aggregate use 30% less water than the water use baseline calculated for the building (not including irrigation) after meeting the Energy Policy Act of 1992 fixture performance requirements. Calculations are based on estimated occupant usage and shall include only the following fixtures (as applicable to the building): water closets, urinals, lavatory faucets, showers and kitchen sinks.

Sloan

Using Sloan Valve Company water-efficient products that surpass the baseline fixture performance requirements as stated by the Energy Policy Act of 1992 would contribute to this credit as long as the building as a whole reduces water consumption below the baseline by 20% (Credit 3.1) or 30% (Credit 3.2). For example, the EPA requires 1.6 gpf toilets. In order to achieve this credit, consider using Sloan HET Flushometers, which use 1.28 gpf or less. Another option is Sloan urinals, which use less than the 1.0 gpf baseline set by the EPA. For applicable products, see product pages.

Note: Based on USGBC LEED-NC v2.2 document.

Using Sloan Valve's products can contribute up to 2 points toward LEED Certification.

Qualification for LEED Credits MR 4.1 and MR 4.2 – Recycled Content

Credit 4.1 – Recycled Content: 10% (Post Consumer + ½ Post Industrial)

Intent

Increase demand for building products that incorporate recycled content materials, thereby reducing the impact resulting from extraction and processing of virgin materials.

Requirements

Use materials with recycled content such that the sum of post-consumer recycled content plus one-half of the pre-consumer content constitutes at least 10% (based on cost) of the total value of the materials in the project.

The recycled content value of a material assembly shall be determined by weight. The recycled fraction of the assembly is then multiplied by the cost of assembly to determine the recycled content value.

Mechanical, electrical and plumbing components and specialty items such as elevators shall not be included in this calculation. Only include materials permanently installed in the project. Furniture may be included, providing it is included consistently in MR Credits 3–7.

Recycled content shall be defined in accordance with the International Organization of Standards document, ISO 14021—Environmental labels and declarations—Self-declared environmental claims (Type II environmental labeling).

Post-consumer material is defined as waste material generated by households or by commercial, industrial and institutional facilities in their role as end-users of the product, which can no longer be used for its intended purpose.

Pre-consumer material is defined as material diverted from the waste stream during the manufacturing process. Excluded is reutilization of materials such as rework, regrind or scrap generated in a process and capable of being reclaimed within the same process that generated it.

Credit 4.2 – Recycled Content: 20% (Post Consumer + ½ Post Industrial)

Intent

Increase demand for building products that incorporate recycled content materials, thereby reducing the impact resulting from extraction and processing of virgin materials.

Requirements

Use materials with recycled content such that the sum of post-consumer recycled content plus one-half of the pre-consumer content constitutes an additional 10% beyond MR Credit 4.1 (total of 20%, based on cost) of the total value of the materials in the project.

The recycled content value of a material assembly shall be determined by weight. The recycled fraction of the assembly is then multiplied by the cost of assembly to determine the recycled content value.

Mechanical, electrical and plumbing components and specialty items such as elevators shall not be included in this calculation. Only include materials permanently installed in the project. Furniture may be included, providing it is included consistently in MR Credits 3–7.

Recycled content shall be defined in accordance with the International Organization of Standards document, ISO 14021—Environmental labels and declarations—Self-declared environmental claims (Type II environmental labeling).

Post-consumer material is defined as waste material generated by households or by commercial, industrial and institutional facilities in their role as end-users of the product, which can no longer be used for its intended purpose.

Pre-consumer material is defined as material diverted from the waste stream during the manufacturing process. Excluded is reutilization of materials such as rework, regrind or scrap generated in a process and capable of being reclaimed within the same process that generated it.

Sloan

While plumbing and mechanical equipment does not contribute to these credits, Sloan Valve Company follows the intent of these credits by utilizing recycled and reclaimed materials in the manufacture of our valves. The brass used in our products had a life as something else before becoming a water-saving device, such as a car part or boat propeller. Sloan uses reclaimed brass as a way to preserve the environment by reducing or eliminating the need to mine virgin material from the earth.

Credit Interpretation Rulings (CIRs) regarding MR credits may affect the calculations such that Sloan products would count for credit. Please check the latest CIRs on the USGBC website, www.usgbc.org.

Qualification for LEED Credits MR 5.1 and MR 5.2 – Local/Regional Materials

Credit 5.1 – Regional Materials: 10% Extracted, Processed & Manufactured Regionally

Intent

Increase demand for building materials and products that are extracted and manufactured within the region, thereby supporting the use of indigenous resources and reducing the environmental impacts resulting from transportation.

Requirements

Use building materials or products that have been extracted, harvested or recovered, as well as manufactured, within 500 miles of the project site for a minimum of 10% (based on cost) of the total materials value. If only a fraction of a product or material is extracted/harvested/recovered and manufactured locally, then only that percentage (by weight) shall contribute to the regional value.

Mechanical, electrical and plumbing components and specialty items such as elevators and equipment shall not be included in this calculation. Only include materials permanently installed in the project. Furniture may be included, providing it is included consistently in MR Credits 3–7.

Credit 5.2 – Regional Materials: 20% Extracted, Processed & Manufactured Regionally

Intent

Increase demand for building materials and products that are extracted and manufactured within the region, thereby supporting the use of indigenous resources and reducing the environmental impacts resulting from transportation.

Requirements

Use building materials or products that have been extracted, harvested or recovered, as well as manufactured, within 500 miles of the project site for an additional 10% beyond MR Credit 5.1 (total of 20%, based on cost) of the total materials value. If only a fraction of the material is extracted/harvested/recovered and manufactured locally, then only that percentage (by weight) shall contribute to the regional value.

Sloan

Although plumbing components cannot be included in the scope of these credits, Sloan Valve Company follows the intent of credit MR 5.1 and MR 5.2. Sloan Valve meets the intent of these credits by utilizing locally reclaimed and recycled materials in producing our valves. Sloan uses reclaimed brass as a way to preserve the environment by reducing or eliminating the need to mine virgin material from the earth. Sloan valves are locally manufactured thereby reducing the environmental impacts resulting from transportation.

Credit Interpretation Rulings (CIRs) regarding MR credits may affect the calculations such that Sloan products would count for credit. Please check the latest CIRs on the USGBC website, www.usgbc.org.

ID Credit 1–1.4: Innovation in Design

Intent

To provide design teams and their projects the opportunity to be awarded points for exceptional performance above the requirements set by the LEED for New Construction Green Building Rating System and/or innovative performance in Green Building categories not specifically addressed by the LEED for New Construction Green Building Rating System.

Requirements

Credit 1.1 (1 point) In writing, identify the intent of the proposed innovation credit, the proposed requirement for compliance, the proposed submittals to demonstrate compliance, and the design approach (strategies) that might be used to meet the requirements.

Credit 1.2 (1 point) same as Credit 1.1

Credit 1.3 (1 point) same as Credit 1.1

Credit 1.4 (1 point) same as Credit 1.1

Sloan

Exceptional performance above the requirements or innovative strategies set by LEED-NC v2 allow for design opportunities in energy performance and water efficiency. For example, a CIR ruling of 5/5/2003 states:

Exemplary performance is an established method by which Innovation Credits are awarded. On incremental credits (EA Credit 1, WE Credit 3, etc.) exemplary performance is considered the next threshold of achievement. For WE Credit 3, the exemplary performance threshold is 40% less water than the water use baseline calculated for the building. Provided the water use baseline is acceptable, this strategy appears likely to achieve an exemplary performance Innovation Credit. The project applicant should note that exemplary performance Innovation Credits are awarded because the project has reached the next LEED threshold, not for use of a specific technology.

Sloan water-efficient product can contribute to this credit. For applicable products, see product pages.

PRODUCTS

SLOAN SENSOR FAUCETS

Sensor faucets save water! In addition, increase hygiene and enhance the restroom image.

SOLIS™ EAF-275 solar-powered faucet transforms light into power. Optimal performance is achieved in any type of light. SOLIS conserves water with its standard 0.5-gpm spray head while utilizing renewable energy.

LINO™ electronic hand washing faucets operate by means of a dual infrared sensor and microprocessor-based logic. The modular design incorporates all of the operating components of the faucet, including the sensor, solenoid and circuitry, above the sink within a die-cast metal spout with an 0.5 gpm/1.9 Lpm aerator spray head.

Optima Plus® ERF Series electronic faucets integrate Passive IR and Active IR to enhance detection AND power management. Battery life: The Power Management System increases battery life to an unprecedented six years!

Optima Plus® ETF-80 electronic faucet operates by means of an infrared sensor. Once the user enters the sensor's effective range, the solenoid activates the water flow. Tempered water flows from the faucet until hands are moved away. The faucet then automatically shuts off. The ETF-80 conserves water with its standard 0.5-gpm spray head.

Optima Plus® EBF-85 battery-powered, electronic faucet operates by means of an adaptive infrared sensor that is linked to the faucet by a fiber optic cable. Once the user's hands enter the sensor's effective range, the solenoid activates the water flow. Tempered water flows from the faucet until hands are moved away. The faucet then automatically shuts off. The EBF-85 conserves water with its standard 0.5-gpm spray head.



SOLIS™ EAF-275



LINO™



Optima Plus® ERF Series



Optima Plus® ETF-80



Optima Plus® EBF-85

PRODUCTS

Optima® ETF-600 electronic faucet operates by means of an infrared sensor. Once the user's hands enter the sensor's effective range, the solenoid activates the water flow. Tempered water flows from the faucet until hands are moved away. The faucet then automatically shuts off. The ETF-600 conserves water with its standard 0.5-gpm spray head.

Optima Plus® EBF-650 battery-powered faucet operates by means of an infrared sensor. Once the user's hands enter the sensor's effective range, the solenoid activates the water flow. Tempered water flows from the faucet until hands are moved away. The faucet then automatically shuts off. The EBF-650 conserves water with its standard 0.5-gpm spray head.

Optima® i.q.™ EAF-100 electronic faucet operates by means of a dual infrared sensor and microprocessor-based logic that utilizes self-adapting technology to ensure superior performance. The modular design incorporates all of the operating components of the faucet, including the sensor, solenoid and circuitry, above the sink within a die-cast metal spout. A water-saving 0.5 gpm/1.9 Lpm spray head is available as an option.

Optima® i.q.™ EAF-150 battery-powered faucet operates by means of a dual infrared sensor and microprocessor-based logic that utilizes self-adapting technology to ensure superior performance. The modular design incorporates all of the operating components of the faucet, including the sensor, solenoid, circuitry and battery, above the sink within a die-cast metal spout. A water-saving 0.5 gpm/1.9 Lpm spray head is available as an option.

2.0 GPM SHOWERHEAD

2.0 gpm **Act-O-Matic®** showerhead features unique Self-Cleaning action that eliminates clogging particles after each use. Fingertip Control allows users to adjust Act-O-Matic to a water flow that meets their individual comfort needs. The Sloan Act-O-Matic showerhead delivers an invigorating "cone-within-a-cone" spray that has become synonymous with luxury. The Act-O-Matic is crafted for performance, quality and durability.



Optima® ETF-600

Optima Plus® EBF-650



Optima® i.q.™ EAF-100

Optima® i.q.™ EAF-150



Act-O-Matic®

PRODUCTS

WATERFREE URINALS

Sloan Waterfree Urinals provide 100% water savings, are easy to install and create a more hygienic, odor-free restroom.

WES-5000 Waterfree Urinal has a compact design that makes it ideal for new construction or in areas where space is at a premium. This new urinal utilizes the same time-tested Waterfree Technology that has saved millions of gallons of water across the country and around the world. No expensive sealants or unrealistic bi-monthly maintenance.

WES-4000, a new compact, wall-hung Waterfree Urinal, utilizes the same time-tested Waterfree Technology that has saved millions of gallons of water across the country and around the world.

WES-2000 Waterfree Urinal eliminates water and sewer costs from urinals; reduces maintenance and repair bills; and creates hygienic, odor-free restrooms.

WES-1000 Waterfree Urinal eliminates water and sewer costs from urinals; reduces maintenance and repair bills; and creates hygienic, odor-free restrooms.



WES-5000



WES-4000



WES-2000



WES-1000

PRODUCTS



High-Efficiency Urinals are defined by the CUWCC, in cooperation with water authorities and local agencies, as fixtures that have an average flush volume lower than the mandated 1.0 gallon per flush and zero water consumption urinals.

0.5 GPF SENSOR FLUSHOMETERS

G2 Optima Plus® 0.5 gpf, the industry's most advanced battery-operated urinal Flushometer with a high-tech look, features Sloan's latching Solenoid Operator and a new sensor that is NEMA 6 compliant against moisture to eliminate most detection errors and field adjustments.

ES-S 0.5 gpf Optima® urinal Flushometer operates automatically and ensures access and ease of use. By eliminating the need for manual valve operation, the spread of disease is greatly reduced and the valves are less susceptible to the abuses of user operation.

Optima® SMOOTH™ 0.5 gpf urinal Flushometers provide the ultimate in sanitary protection and automatic operation. There is no need for AC hookups or wall alterations. The Flushometer operates by means of a battery-powered infrared sensor. State-of-the-art technology enables activation of a manual override without "double flushing" occurring as the user departs (locks out sensor for approximately 10 seconds).

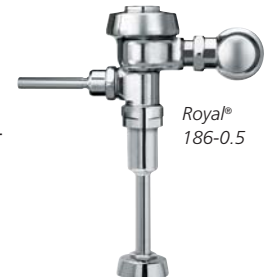
Note: Flow cycles are as low as 1.2 gpf/4.5 Lpf for water closet models and 0.5 gpf/1.9 Lpf for urinal models.

The 0.5 gpf **Side Mount Operator** urinal valve maximizes fixture performance and minimizes water usage. Flushometers operate automatically and ensure access and ease of use. By eliminating the need for manual operation, the spread of disease is greatly reduced and the valves are less susceptible to the abuses of user operation.

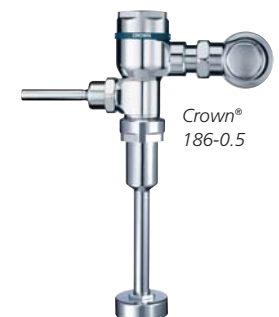


0.5 GPF MANUAL FLUSHOMETERS

The 0.5 gpf/1.9 Lpf ultra low-flow **Royal®** urinal Flushometer, with its patented Dual Filtered Fixed By-Pass Diaphragm, accurately meters water for today's water-conscious consumer. The 0.5 gpf urinal valve maximizes fixture performance and minimizes water usage.



The 0.5 gpf/1.9 Lpf ultra low-flow **Crown®** urinal Flushometer provides outstanding water saving capabilities by precisely metering every flush. Crown Flushometers engineered for today's low-consumption environments, features a unique cover design that isolates the threads from the water source, protecting the threads from harsh water conditions and ensuring uninterrupted performance.



The 0.5 gpf/1.9 Lpf ultra low-flow **Crown® II** urinal Flushometer is designed to ensure accuracy without the opportunity to modify the valve for high water usage. The valve is designed so it cannot deliver a flush in excess of the ultra low flow consumption mandate.



PRODUCTS



The HET is defined as a fixture that flushes at 20 percent below the 1.6 gpf/6.0 Lpf maximum or less, equating to a maximum of 1.28 gpf/4.8 Lpf.

SENSOR FLUSHOMETER

SLOAN ECOS™ Dual-Flush Electronic Flushometer is a battery-powered Flushometer with buttons that can be pressed for either a full flush (1.6 gpf) or reduced flush (1.1 gpf). If a user does not push the button, the unit will choose a flush cycle based on how long the user is in range.

G2 Optima Plus® 1.25 gpf, the industry's most advanced battery-operated Flushometer with a high-tech look, features Sloan's latching Solenoid Operator and a new sensor that is NEMA 6 compliant against moisture to eliminate most detection errors and field adjustments.

Optima® SMOOTH™ Royal® 1.28 gpf Flushometers provide the ultimate in sanitary protection and automatic operation. State-of-the-art technology enables activation of a manual override without "double flushing" occurring as the user departs (locks out sensor for approximately 10 seconds).

Note: Flow cycles are as low as 1.2 gpf/4.5 Lpf for water closet models and 0.5 gpf/1.9 Lpf for urinal models.

Optima® SMO Royal® 1.28gpf flow-consumption, battery-powered urinal Flushometer maximizes fixture performance and minimizes water usage. Flushometers operate automatically and provide easy access and ease of use. By eliminating the need for manual operation, the spread of disease is greatly reduced and the valves are less susceptible to the abuses of user operation.

Optima® ES-S Royal® 1.28gpf ESS low-consumption, sensor-activated urinal Flushometer maximizes fixture performance and minimizes water usage. The Flushometer operates by means of an infrared sensor that adapts to its surrounding. User makes no physical contact with the Flushometer surface.

**ELECTRONIC
DUAL FLUSH**



SLOAN
ECOS™



G2 Optima
Plus®
1.25 gpf



SMOOTH
Royal®
1.28 gpf



SMO
Royal®
1.28

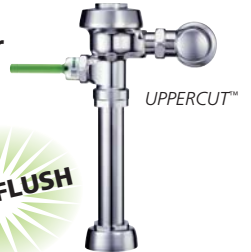


ES-S
Royal®
186-0.5

MANUAL

Uppercut™ Dual-Flush Flushometer

is the first commercial Flushometer to reduce water volume by approximately 30% (on the Up flush). The Dual-Flush handle is also available as a retrofit to convert most existing manual valves.



UPPERCUT™

DUAL FLUSH

The 1.28 gpf/4.8 Lpf low-consumption **Royal®** Flushometer, with its patented Dual Filtered Fixed By-Pass Diaphragm, accurately meters water for today's water-conscious consumer. The 1.28 gpf/4.8 Lpf valve maximizes fixture performance and minimizes water usage.



Royal®
1.28 gpf

The 1.28 gpf/4.8 Lpf low-consumption **Crown®** piston Flushometer provides outstanding water saving capabilities by precisely metering every flush. Crown Flushometers engineered for today's low-consumption environments, features a unique cover design that isolates the threads from the water source, protecting the threads from harsh water conditions and ensuring uninterrupted performance.



Crown®
1.28 gpf

The 1.28 gpf/4.8 Lpf low-consumption **Crown® II** piston Flushometer is designed to ensure accuracy without the opportunity to modify the valve for high water usage. The valve is designed so it cannot deliver a flush in excess of the low-flow consumption setting.



Crown® II
1.28 gpf

PRODUCTS

FLUSHMATE® PRESSURE-ASSIST OPERATING SYSTEM

FLUSHMATE® III uses less than 1.6 gallons (6 liters) per flush without sacrificing performance (saves up to 20% more water than conventional 1.6 gpf technologies).

FLUSHMATE® IV uses less than 1.0 gallon (4 liters) per flush without sacrificing performance (saves up to 45% more water than conventional 1.6 gpf technologies).

For a complete list of *FLUSHMATE®* fixture manufacturers go to <http://flushmate.com/Model2005/default.asp>.



FLUSHMATE® III



FLUSHMATE® IV

1.0
GALLON

XLERATOR® DRYER

Ultra-fast drying **XLerator®** Hand Dryers completely dry hands in 10-15 seconds. Water droplets are first blown from hands with a strong controlled air blast. Residual moisture is then evaporated with a warm stream of air up to 135°F/57°C. GreenSpec® approved.



XLerator®

EASY RETROFIT KITS

Quickest, easiest way to conserve.

The **0.5 GPF INSIDE PARTS KIT** converts Sloan manual Flushometers to an ultra-low water-efficient unit.

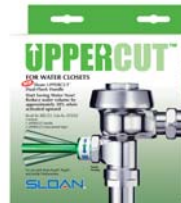
The **UPPERCUT™ WES-212** water-efficient tune-up kit includes a dual-flush handle. The dual-flush retrofit handle is for exposed, low consumption and water saver water closet Flushometers.

The **UPPERCUT™ WES-213** water-efficient tune-up kit includes a dual-flush handle and a diaphragm kit. The dual-flush retrofit handle and dual filtered 1.6 gpf/6.0 Lpf diaphragm kit is for exposed water closet Flushometers.

The **WES-150** Waterfree Urinal cartridge is installed at the base of the urinal. The replaceable liquid-sealed cartridge filters waste so liquids enter the drain and sediments are collected for disposal when the cartridge is replaced after 6,000 to 7,000 uses. Waste passes through a trap and flows around a Patented Baffle to prevent the loss of Sealant. A Discharge Tube in the housing directs the flow of waste into the building drain system. The Cartridge is designed as a replaceable component once depleted.



A-1043-A



WES-212



WES-213



WES-150

RETRO
FITS

	Model/Description	Manual	Electronic	Material Reuse/ Reclaimed	Savings Estimate
Waterfree Urinals	WES-1000				100%
	WES-2000				100%
	WES-4000				100%
	WES-5000				100%
HEU	G2 Optima Plus® 186.05 Flushometer		X	X	50%
	Royal® 186.05 Optima® Flushometers				
	SMOOTH™		X	X	50%
	SMO		X	X	50%
	ES-S		X	X	50%
	Crown® 186.05 Optima Flushometers				
	SMOOTH™		X	X	50%
	SMO		X	X	50%
	ES-S		X	X	50%
	Royal® 186.05 Flushometer	X		X	50%
Crown® 186.05 Flushometer	X		X	50%	
HET	G2 Optima Plus® 8111 Flushometer		X	X	20%
	Royal® 111-1.28 Optima® Flushometers				
	SMOOTH™		X	X	20%
	SMO		X	X	20%
	ES-S		X	X	20%
	Crown® 111-1.28 Optima Flushometers				
	SMOOTH™		X	X	20%
	SMO		X	X	20%
	ES-S		X	X	20%
	Royal® 111-1.28 Flushometer	X		X	20%
	Crown® 111-1.28 Flushometer	X		X	20%
	UPPERCUT™ Dual-Flush	X		X	21%
	FLUSHMATE® IV	X		X	38%
WATER EFFICIENT					
Parts	1.28 diaphragm closet (Royal®)	X	X		20%
	0.5 diaphragm kit urinal	X	X		50%
Faucets	SOLIS™		X	X	80%
Showerhead	Act-O-Matic®	X		X	20%
Hand dryer	XLerator®		X	X	
Sloan Monitored Systems			X	X	
RETROFITS					
UPPERCUT™		X		X	21%
SMOOTH™			X	X	20-50%
SMO			X	X	20-50%
ES-S			X	X	20-50%
G2 Optima Plus®			X	X	20-50%

Sloan uses high-quality, semi-red brass reclaimed through scrap and other secondary material sources.