



LEED – NC
Green Building Rating System
For New Construction &
Major Renovations

Version 2.2

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The Leadership in Energy and Environmental Design (LEED) Green Building Rating System™ is the nationally accepted benchmark for the design, construction, and operation of high performance green buildings. LEED promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health: Sustainable Site development, Water Efficiency, Energy & Atmosphere, Materials & Resources, Indoor Environmental Quality and Innovation & Design Process.

Below are sections where Apollo® Valves can be accepted and used to acquire LEED certification.

Sustainable Site Development

SS Credit 5.2: Site Development: Maximize Open Space

1 Point

Intent:

Provide a high ratio of open space to development footprint to promote biodiversity.

Apollo® offers innovative products that can be installed in varied orientations and patterns to save space in the development footprint (defined as the total area of the building footprint, hardscape, access roads and parking) or to provide vegetated open space within the project boundary.

Applicable Apollo® products include –

- Pressure Reducing Valves – 36, 36H, 36C Series
- Reduced Pressure Principle Devices – 40-200 Series
- Reduced Pressure Detector – 40-700 Series
- Double Check Detector – DCDA 4S Series, 4SG-600 Series
- Dual Check Valves – 40-300 Series, 4N-300 Series
- Vacuum Breakers – 38-100, 38-200, 38-300, 38-400, 38-500 Series



Water Efficiency

WE Credit 1.1: Water Efficient Landscaping: Reduce by 50%

1 Point

Intent:

Limit or eliminate the use of potable water, or other natural surface or subsurface water resources available on or near the project site, for landscape irrigation.

Common practice and analysis shows that 50-psi or lower is a sufficient pressure for most homes and commercial buildings. Apollo® pressure reducing valves can limit the incoming pressure to 50-psi or less to reduce the amount of wastewater returned to the environment.

Applicable Apollo® products include –

- **Irrigation Backflow Preventers – 40-100-T2, 40-100-TC2**
- **Pressure Reducing Valves – 36, 36H, 36C Series**
- **Pilot Operated Automatic Control Valves – A127 Series**

WE Credit 3.1: Water Use Reduction: 20% Reduction

1 Point

Intent:

Maximize water efficiency within buildings to reduce the usage of municipal water and wastewater systems.

Employ strategies that in aggregate use 30% less water than the water use baseline calculated for the building after meeting the Energy Policy Act of 1992 fixture performance requirements. Common practice and analysis shows that 50-psi or lower is a sufficient pressure for most homes and commercial buildings. Apollo® pressure reducing valves can limit the incoming pressure to 50-psi or less to reduce the amount of wastewater returned to the environment.

Applicable Apollo® products include –

- **Pressure Reducing Valves – 36, 36H, 36C Series**
- **Irrigation Backflow Preventers – 40-100-T2, 40-100-TC2**
- **Pilot Operated Automatic Control Valves – A127 Series**



Energy & Atmosphere

EA Credit 1: Optimize Energy Performance

1 point

Intent:

Achieve increasing levels of energy performance above the baseline in the prerequisite standard to reduce environmental and economic impacts associated with excessive energy use. Process energy cost shall be equal to at least 25% of the baseline building performance and is considered to include kitchen and laundry equipment.

Potential Product Application:

Apollo Mixing Valves allow for water heaters to be operated more efficiently by extending the effective hot water system usage and reducing the size/btu requirements needed to provide capacity for peak system demands resulting in lowered utility consumption.

Applicable Apollo® products include –

- Mixing Valves – 34, 34A, 34B, 34C, 34D, 34E, 34HL Series





Materials & Resources

MR Credit 5.1 : Regional Materials > 10% Extracted, Processed & Manufactured
1 Point

MR Credit 5.2 : Regional Materials > 20% Extracted, Processed & Manufactured
1 Point in addition to MR Credit 5.1

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.

Potential Product Application:

Conbraco Industries has manufacturing facilities in the United States thus allowing the product to be within 500 miles of a project site.

Conbraco Manufacturing facilities:

- Pageland SC
- Conway SC

MR Credit 4.1: Recycled Content > 10% (Post-Consumer + 1/2 Pre-Consumer)
1 Point

MR Credit 4.2: Recycled Content > 20% (Post-Consumer + 1/2 Pre-Consumer)
1 Point in addition to MR Credit 4.1

Intent:

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

Potential Product Application:

Conbraco uses material with recycled content such that the sum of post-consumer recycled content plus one-half of the pre-consumer content can constitute at least 10% (Based on cost) of the total value of the materials in the project.

Applicable Apollo® products include –

- Pressure Reducing Valves – 36, 36H, 36C, 36E Series
- Irrigation Backflow Preventers – 40-100-T2, 40-100-TC2
- Reduced Pressure Principle Devices – 40-200 Series
- Reduced Pressure Detector – 40-700 Series
- Double Check Detector – DCDA 4S Series, 4SG-600 Series
- Dual Check Valves – 40-300 Series, 4N-300 Series
- Vacuum Breakers – 38-100, 38-200, 38-300, 38-400, 38-500 Series
- Mixing Valves – 34, 34A, 34B, 34C, 34D, 34HL Series

Post-consumer material – defined as waste material generated 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. It is an end product that has completed its life cycle as a consumer item and would otherwise have been disposed of as a solid waste. Materials include recyclables collected in commercial and residential recycling programs, such as paper, cardboard, aluminum, plastics and metals.

Pre-consumer material – defined as material diverted from the waste stream during the manufacturing process. These materials are generated by manufacturers and processors, and may consist of scrap, trimmings and other by-products that were never used in the consumer market.



MR Credit 3.1: Materials Reuse: 5%

1 Point

MR Credit 3.2: Materials Reuse: 10%

1 Point in addition to MR Credit 3.1

Intent:

Reuse building materials and products in order to reduce demand for virgin materials and to reduce waste, thereby reducing impacts associated with the extraction and processing of virgin resources.

Potential Product Application:

Conbraco products are made of high quality materials that can be reused to extend the life cycle of existing buildings or to reduce environmental impacts of new building construction.

Applicable Apollo® products include –

All Conbraco products adhere to the LEED-NC MR Credit 3.1 & 3.2: Materials Reuse

MR Credit 2.1: Construction Waste Management > Divert 50% from disposal

1 Point

MR Credit 2.2: Construction Waste Management > Divert 75% from disposal

1 Point in addition to MR Credit 2.1

Intent:

Divert construction, demolition and land-clearing debris from disposal in landfills and incinerators.

Redirect recyclable recovered resources back to the manufacturing process. Redirect reusable materials to appropriate sites.

Potential Product Application:

Conbraco products are made of recyclable material or material that can be recycled. Examples include but are not limited to: Domestic Bronze Ingot and Brass Rods, Carbon Steel, Ductile Iron, Plastic, and Stainless Steel.

Conbraco also uses corrugated post-consumer cardboard when shipping products. Corrugated cardboard manufactured from recycled pulp uses around 75% of the energy used in the manufacture of corrugated cardboard made from virgin pulp. Construction sites may eliminate disposal fees by preparing the cardboard for hauler pickups or delivering it (drop-off) to a recycling facility.

Applicable Apollo® products include –

All Conbraco products adhere to the LEED-NC MR Credit 2.1 & 2.2: Construction Waste Management

MR Credit 1.3: Building Reuse: Maintain 50% of Interior Non-Structural Elements

1 Point

Intent:

Extend the life cycle of existing building stock, conserve resources, retain cultural resources, reduce waste and environmental impact of new buildings as they relate to materials manufacturing and transport.

All Apollo® products are made of high quality materials that can be recycled and used again to extend the life cycle of existing buildings or reduce the environmental impact of new building construction.

Applicable Apollo® products include –

- Pressure Reducing Valves
- Relief Valves
- Backflow Prevention
- Ball Valves
- Butterfly Valves
- Check Valves
- Strainers
- Tempering Valves



Indoor Environmental Quality

EQ Credit 4.2: Low Emitting Materials: Paints & Coatings

1 Point

Intent:

Reduce the quantity of indoor air contaminants that are odorous, irritating and or harmful to the comfort and well-being of the installers and occupants of the structure.

Apollo[®] products use an anti-corrosive and anti-rust fused epoxy coating on potable valves.

Applicable Apollo[®] products include –

- **Backflow Prevention – 40-200-TC2, 40-200-T2S, 40-200-T2, 40-200-TCU, 40-200, 40-700, DCDA 4S Series, 4SG-100 Series, 4SG-600 Series**

Innovation & Design Process

ID Credit 1-1.4: Innovation in Design

1-4 Points

Intent:

To provide design teams and projects with the opportunity to be awarded points for exceptional performance above the requirements set by the LEED-NC Green Building Rating System.

Apollo[®] Valves mutual goal of providing safe and comfortable conservative Green Buildings will help all engineers and architects with strategies, submittals, and CAD drawings to help meet the Innovation in Design goals.