

Enhancing IAQ and Energy Efficiency with Living Walls

July 14, 2016- Architects and interior designers have long advocated the installation of greenery within indoors environment in order to impart a much-needed sense of nature to enclosed and occupied areas.

In addition to enhancing the aesthetic appeal and natural atmosphere of building interiors, large-scale indoor plant installations can also improve living conditions for human occupants while raising the energy efficiency of facilities themselves.

Living walls are one of the most convenient and effective means of bringing large amounts of greenery to building interiors, while also maximising the benefits associated with the installation of plants indoors.

First developed by French botanist and artist Patrick Blanc over three decades ago, living walls are essentially vertical gardens that provide an upright foundation for the roots of the plants they support.

The chief distinction between the modern living wall and conventional green facades such as ivy walls is that the former consist of containerised plants arranged in multiple layers of vegetation, while the later are host to climbing plant species that spread across the vertical height of the structure, yet are anchored by their roots in a bed of soil at the base.

Because living walls are comprised of containerised plants distributed across the height of the structure, they make use of vertical irrigation systems for the delivery of water and nutritional sustenance.

The most obvious advantage of installing a living wall within an indoor setting is its ability to bring a large amount of greenery to an enclosed space that might otherwise be devoid of organic features.

Living walls can bring other major benefits to building interiors, however, chief amongst them their ability to serve as vertical “biofilters” that can improve air quality and thus enhance environmental conditions for human occupants.

The ability of living walls to improve indoor air quality is particularly relevant given recent studies that show a strong relationship between atmospheric conditions and human cognitive performance.