



A **valmont**  COMPANY



Variability combined with functional sustainability





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Atmosphere brings a new perspective to sustainable façade systems. Ideally suited to both new construction and retrofit applications, Atmosphere E₂ reduces the impact of solar energy entering the building by up to 78%*, hence reducing the energy consumed by HVAC equipment for comfort control. The visual impact Atmosphere can offer the external face of the building, is unrivalled. Created using a series of perforated elements, each floating beyond the external envelope of the building, Atmosphere offers a light textural element. Design isn't constrained, with a myriad of element profiles available in a kaleidoscope of colours.

The unique cable fixing system means Atmosphere can be tailored and varied within the one façade, changing element profiles, colours and even leaving sections uncovered if the design requires. In addition, the profiles can be tailored to match the requirements of each orientation; North, South, East or West.

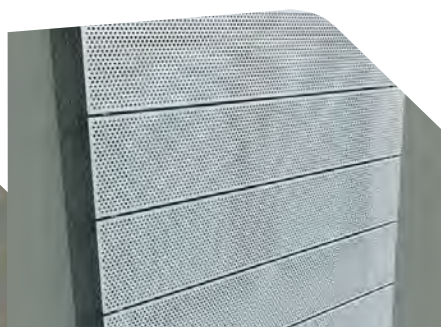
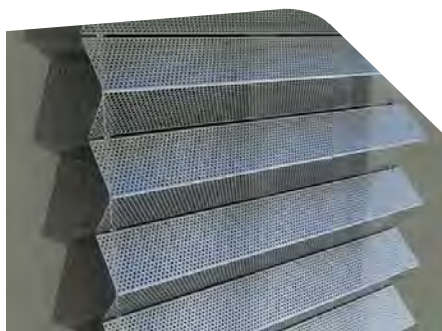
Equally suited to retrofit or new construction, Atmosphere is light and easy to install. Heavy RHS frames, supported at intervals down the buildings height are now only a memory; Atmosphere simply floats. Utilising a tensioned cable system, cables are dropped down the façade under tension with the elements fixed to cables using the patented fixing system.

* Based on the analysis of the E₂ profile for a northern facade of a typical office arrangement with a curtain wall system in Melbourne, Australia. As studied by GHD.

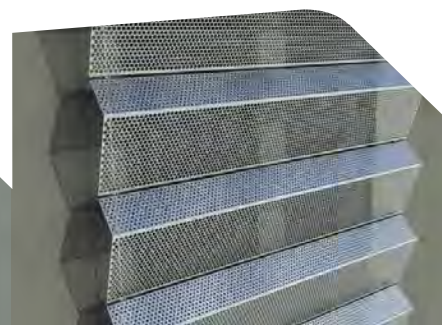
Profile Options:



St Columbus, VIC



A > providing a continuous external face



W > fluid elements with priority given to the inhabitant's vision, where glare is less of a concern

E > symmetric elements, maximizing energy reduction & visibility



Endeavour Hill Leisure Centre, VIC

The Endeavour Hills Leisure Centre project was the use of the Atmosphere system covering the plain external walls of the centre and providing an impressionable façade with minimal impact on the building structure.

In consultation between Locker Group and the Casey Council the introduction of a Pic Perf image on the Atmosphere façade was introduced to reflect the activities that occurred inside the building and to promote its use.

ATMOSPHERE™

Variability

- Several Atmosphere elements are available for immediate specification to maximise airflow, energy reduction or visibility
- Elements can be custom designed to give your project a unique aesthetic. Include Pic-Perf™ panels to brand or add artistic impression.
- Atmosphere's unique cable structure & patented fixing system allows the designer to play; drop different colours into the facade, remove panels to add texture and variation
- Depending on the project brief, maximise the daylight or energy reduction on the building envelope
- Atmosphere E₂ profile maximises energy reduction while still allowing enough daylight into the building
- Atmosphere floats off the building, without a heavy, unsightly support structure

Environmentally Sustainable Design

- Atmosphere E₂ reduces the impact of solar energy entering the building by up to 78%, as studied by GHD*
- Installing Atmosphere E₂ on a typical building in Melbourne has shown energy cost savings of 45%pa. covering heating, cooling & ventilation. Savings are expected to be higher in warmer climates with less reliance on heating during winter.**
- Carbon emission savings have been measured at 44% pa for the same installation.**
- The ability to custom design an Atmosphere element profile means you can achieve the savings of your choice
- Minimise the glazing costs, install standard single glazing, and still maximise energy efficiency

* Based on the analysis of the E₁ profile for a northern facade of a typical office arrangement with a curtain wall system in Melbourne, Australia. As studied by GHD.

** Based on Electricity costs of 19c/kWh & natural gas cost of 0.033c/kWh. Electricity emissions factor of 1.25kg CO₂-e/kWh. Natural gas emissions factor of 0.9 tonnes CO₂-e/TJ.

*** Requires base building to be suitable for loads that will be applied by tensioned cables.



Armadale Council, WA



Armadale Council, WA (inside out)

Retrofit

- Give an outdated facade a fresh face, while providing occupants with enhanced conditions
- Atmosphere reduces solar energy entering the building and hence the requirements for air conditioning, without major structural changes
- Prepare for commercial building disclosure requirements, by improving energy efficiency ratings.
- Atmosphere can be retrofitted to existing building stock while the tenants are still in occupancy***
- No heavy support structure is required
- Easy and fast to install

Fast & Easy Installation

- Minimal installation costs compared to a traditional facade based on tensioned cables & patented fixing clips
- One contact point. Locker will manage the customisation, manufacturing and installation of the system
- Atmosphere cables, clips & elements can be installed quickly without the requirements for a heavy support structure, and without disturbing internal occupants.



Tank Street, QLD (Before)



Scan to view Tank Street installation video.



Tank Street, QLD (After)



Constructability

The design of the tensioned cable support structure provides for superior constructability.

The Atmosphere system is installed in less than half the time of an equivalent facade canvas. Atmosphere elements can be fitted to the cables, utilising the patent protected fixing system, while still on the ground, and then lifted 'in stacks' and attached to the facade. Watch the time lapse video of an installation on YouTube.



Communication

Incorporate an image that portrays the message or vision of your project. Atmosphere can be designed to incorporate Locker Group's popular Pic Perf offering.



Protection from the elements

Atmosphere provides a wind break to either the building envelope or work area due to the unique design of the perforated panels.

Locker Group has installed an Atmosphere 'wall' at its Dandenong head office to protect the team in the despatch area. Even during days of high wind conditions, the Atmosphere wind wall provides protection, absorbing the wind load, as the perforations diffuse the velocity.



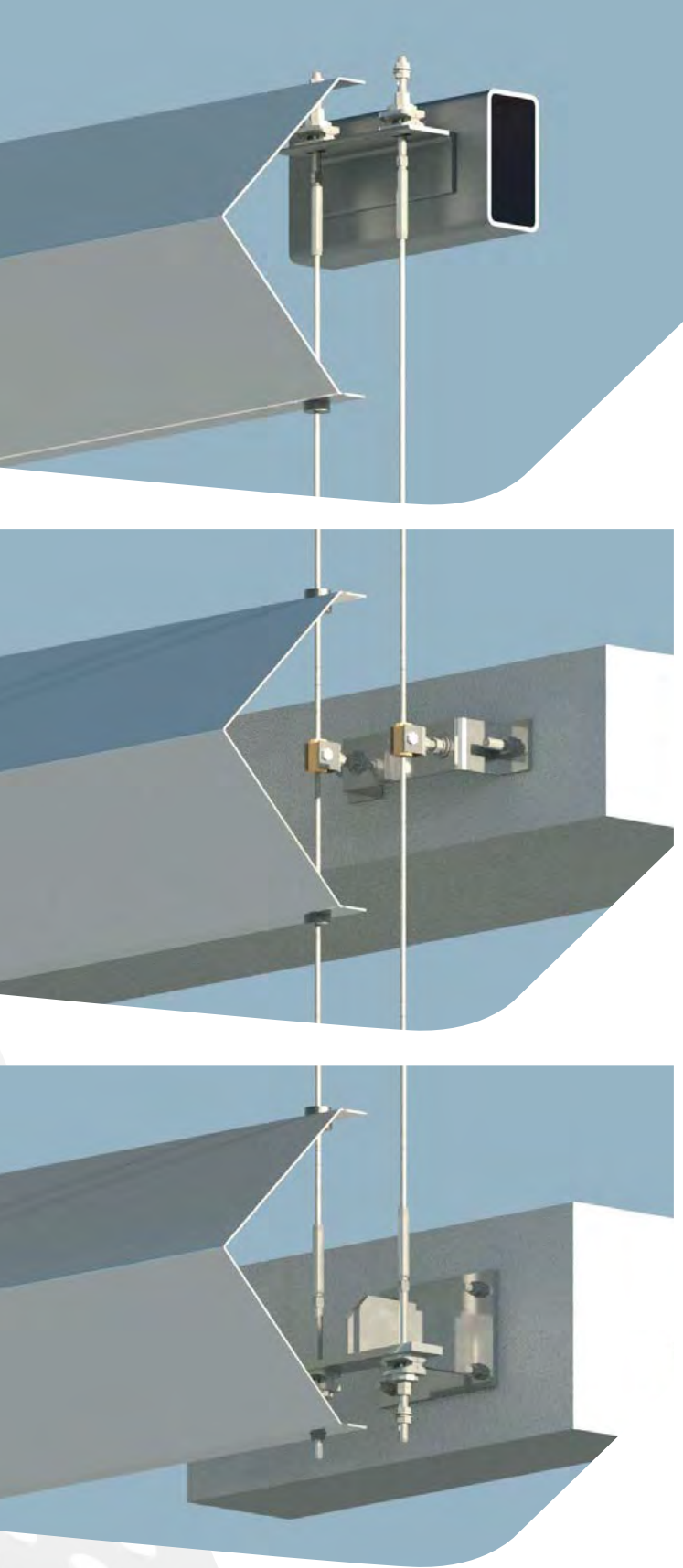


Royal North Shore Hospital, NSW

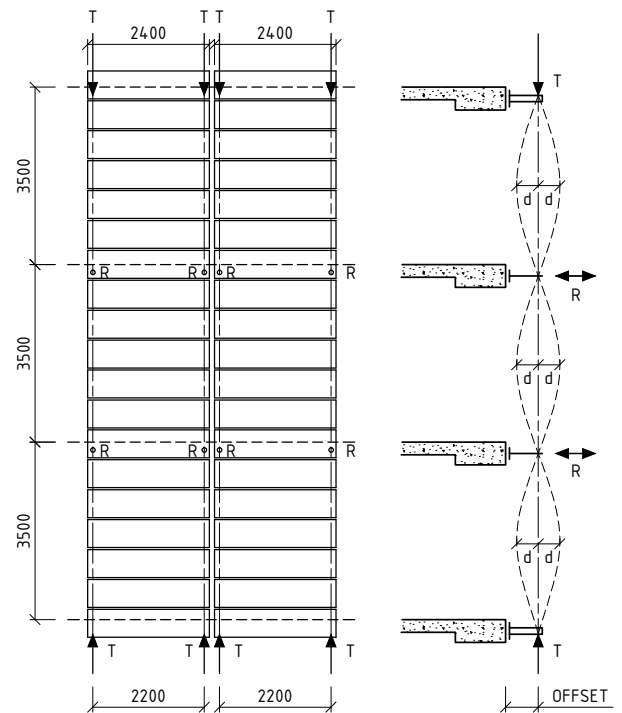
This project was to build a decorative façade and sunscreen that could also act as a pedestrian barrier for the new seven-level, 567-space parking building. In order to achieve greater installation efficiency and a more practical solution, Locker Group re-envisioned a design utilising Atmosphere façade system after being approached by Thiess.

The Atmosphere façade system was chosen based on the simplicity of the fixing system and the resulting reduction of steelwork required. The extensive planning combined with the simplicity of the Atmosphere stages meant the installation of the RNSH façade took just 10 days leading to the project being finished on time and on budget.

Royal North Shore Hospital, NSW



TYPICAL PANEL AND CABLE ARRANGEMENT SHOWING INDICATIVE DESIGN FORCES



END ANCHORAGE DESIGN FORCE 'T', PER CABLE (UDL EQUIVALENT GIVEN IN BRACKETS)

$G = 10\text{kN}$	(8.3 kN/m)
$G + W_s = 20\text{kN} \pm 5^\circ$	$(16.7 \text{ kN/m}) \pm 5^\circ$
$1.2G + W_u = 28\text{kN} \pm 8^\circ$	$(23.3 \text{ kN/m}) \pm 8^\circ$

DEFLECTION $\pm 115\text{mm}$ 'd'
(SERVICEABILITY WIND)

INTERMEDIATE RESTRAINT DESIGN FORCE 'R', PER CABLE (UDL EQUIVALENT GIVEN IN BRACKETS)

$G = 0\text{kN}$	(0 kN/m)
$G + W_s = \pm 2\text{kN}$	$(\pm 1.7 \text{ kN/m})$
$1.2G + W_u = \pm 4\text{kN}$	$(\pm 3.4 \text{ kN/m})$

NOTES:

- DESIGN FORCES ARE INDICATIVE ONLY. CONTACT LOCKER FOR PROJECT SPECIFIC DESIGN FORCES.
- REGION A, TERRAIN CATEGORY 3.
- STIFFNESS OF SUPPORT STRUCTURE NEEDS TO BE CONSIDERED.
- CABLE OFFSET FROM SUPPORT STRUCTURE ALSO NEEDS TO BE CONSIDERED.

G = PERMANENT LOAD
 W_s = SERVICEABILITY WIND LOAD
 W_u = ULTIMATE WIND LOAD

ATMOSPHERE™

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