

Group Doncar, Quebec / Canada



Photo: Matrix Energy

Architectural integration of solar thermal energy systems

Group Doncar

Office building/industrial building with solar collectors integrated in the facade

PROJECT

In one of its more recent solar fresh air heating projects, Matrix Energy Inc. provided a 420 m² of navy blue MatrixAir™ TR (transpired) solar collector integrated into the facade of the new construction equipment maintenance facility and headquarters building of Groupe Doncar, located in Laval, Quebec, Canada. To reduce the natural gas consumption in the construction equipment maintenance facility the engineers specified this MatrixAir™ solar collector to preheat 18200 CFM of incoming fresh air resulting in annual energy savings 275.6 GJ, thereby avoiding CO₂ emissions of 19 tonnes annually.



Photo: Matrix Energy

Key figures

- 420m² solar collector
- Air volume supplied : 18200 CFM
- Energy Savings : 275.6 GJ
- Avoided CO2 emissions : 19 tonnes annually

Solar collector /Heating system

MatrixAir TR (Transpired) solar collector

This transpired, solar fresh air heating system demonstrates operating efficiencies upwards of 70% with payback's within five years on most new buildings. The perforated metal absorber is used to draw in heated fresh air off the surface of south-facing walls, where it is then distributed throughout the building as pre-heated ventilation air.

Photo: Matrix Energy



GALLERY



PHOTOS;

Matrix Energy

- Built/Completion:
2010
- Client:
Group Doncar
- Architect:
Michel Pérusse Architect
- Engineering:
Rochon Consulting
- Address/Location:
Laval, Quebec, Canada
- Type of project:
Commercial building



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