

MatrixAir™ BP

Solar Air Heating System

What is MatrixAir™ BP?

A façade or wall mounted fresh air solar heating system designed for new building applications.

Components of the MatrixAir™ BP system:

- 1 MatrixAir™ Backpass cladding
- 2 Top flashing and plenum
- 3 Sectional plate (not shown)
- 4 Footer assembly

Interior wall elements (by others)

- Semi-rigid glass fibre or foam insulation
- Z-bar sub-girt
- U-channel sub-girt
- Interior liner sheet
- Structural wall support

How the MatrixAir™ BP system works:

MatrixAir™ BP system benefits:

- Superior energy output than conventional glazed or unglazed backpass collectors
- Frameless cavity and interlocking channel design eases installation time considerably.
- Adaptable to a wide range of building sizes and styles.
- Narrow cavity depth and wall or roof integrated plenum options provide architectural flexibility.
- Heavy 22 gauge steel channels provide superior resistance to dents and allow continuous profile length of up to 30 ft (9.1 m).

The MatrixAir™ Backpass system is comprised of a series of vertical individual air channels, known as modules, each measuring about one foot in width and a plenum located along the top of the collector's channels. A sectional plate within the plenum converts these channels into series of unique collector areas for maximum heat gain and optimal air flow. As the air moves at high velocity through the series of channels behind the exterior cladding heat is removed from the back of the absorber plate and enters the plenum located at the top of the collector. Looking from the outside the wall appears to be uniform exterior metal cladding belying the numerous, independently-optimized solar modules within!

MatrixAir™ backpass collector has demonstrated a 60% operating efficiency with significantly higher energy output and temperature gains exceeding 23°C over ambient temperatures. Our backpass solar air heater is designed to provide a nominal flow of 75 CFM per foot (or 120 l/s per meter) of collector width of preheated ventilation or make-up air.



Patent pending.