

STUDOR® P.A.P.A.™

Positive Air Pressure Attenuator

Our Credentials

With over thirty years of expertise, **STUDOR®** is the world's only specialist manufacturer of AAVs and the **P.A.P.A.** Our knowledge and experience of manufacturing products to vent drainage systems has ensured that all our specialist products have been developed to meet the full requirements of the demands placed upon them.



Cheung Tin House,
Pak Tin Estate,
Hong Kong

With reduced costs on labour & the elimination of vent pipe & related fittings, Splendor won the contract. Practical installation revealed that installation of sanitary drainage system with STUDOR® air venting technology is quick and easy. Performance of the STUDOR® drainage system is credible. STUDOR® air venting technology simplifies plumbing design installation and improve fluent flow of the system.

Carlos Chan
General Manager
Splendor Water Fittings Ltd

The Testing

The **P.A.P.A.** was first tested in the laboratory of Heriot-Watt over a period of several months. The prototype **P.A.P.A.** units were then installed in several complex multi-storey buildings in Asia and Australia, with the experts being enthusiastic about the results.



Heriot-Watt University, Edinburgh, Scotland



Hei Lai House, Hong Kong

Majestic Court, Happy Valley, Hong Kong

Paradiso is a 50 unit resort development, with penthouse roof decks and underground parking, recently constructed at Marine Parade, Kingscliff.

Our firm was responsible for the design and documentation of the Hydraulic services including sanitary plumbing for this project. In summary, the valves were installed on the vent pipes and no odours or complaints from the management or guests were recorded after their installation. We are very impressed with the performance of the P.A.P.A. valves, and would have no hesitation in recommending them for future projects. Many thanks for all your efforts and advice.

Paul G. Webb
Hydraulic Consultant
Bayside Hydraulic Design Pty. Ltd.

STUDOR® P.A.P.A.™

Positive Air Pressure Attenuator



STUDOR® P.A.P.A.™

Positive Air Pressure Attenuator



The Product

The **STUDOR® P.A.P.A.** - Positive Air Pressure Attenuator - is a revolutionary product developed to protect buildings of 10+ storeys against the unwanted positive pressures (i.e. backpressure/positive transients) generated in the system. When installed in conjunction with a **Maxi-Vent**, the **P.A.P.A.** becomes a positive and negative protection device.

Invented by Professor John A. Swaffield and Dr David Campbell of Heriot-Watt University in Edinburgh (Scotland) and developed over several years in close partnership with **STUDOR®**, this intelligent product allows multi-storey building designers to simplify their design of sanitary waste systems.

The STUDOR® System

The **P.A.P.A.** is the perfect complement to the existing range of **STUDOR®** Air Admittance Valves (AAVs), resulting in the **STUDOR®** System as the building's complete venting solution. The **Mini-Vent** will protect the fixtures on the branch of the system, with the **P.A.P.A.**, together with a **Maxi-Vent**, protecting the stack against positive AND negative pressures. This combination provides a perfect balance in returning the drainage system back to atmospheric pressure without the siphonage of any traps.

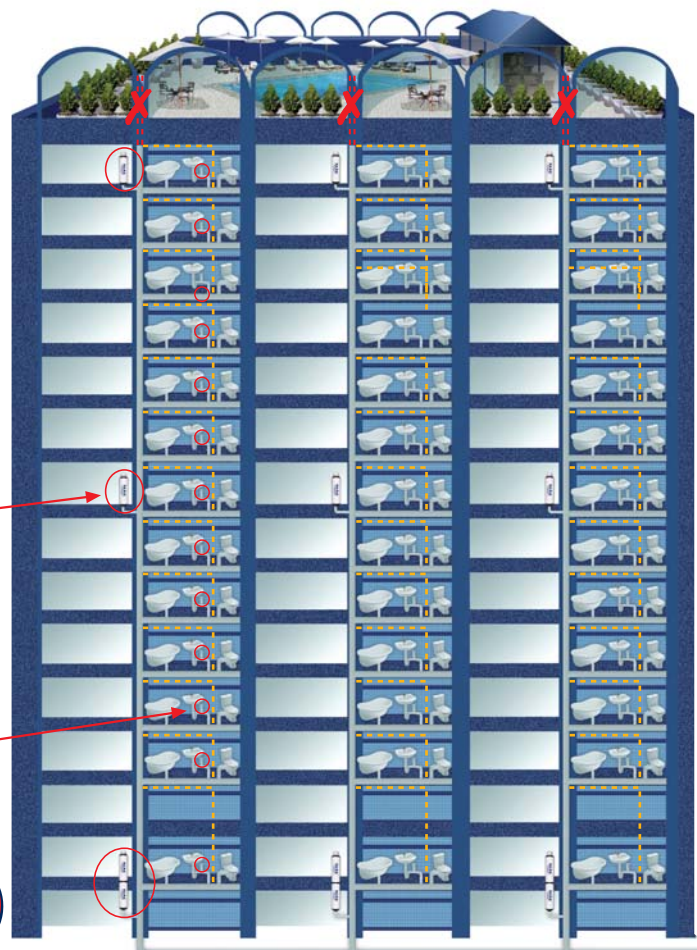
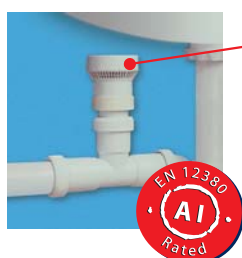
The **Maxi-Vent™**



The **P.A.P.A.™**



The **Mini-Vent™**



X No roof penetrations **----** Unnecessary piping
Refer to local regulations for open vent requirements



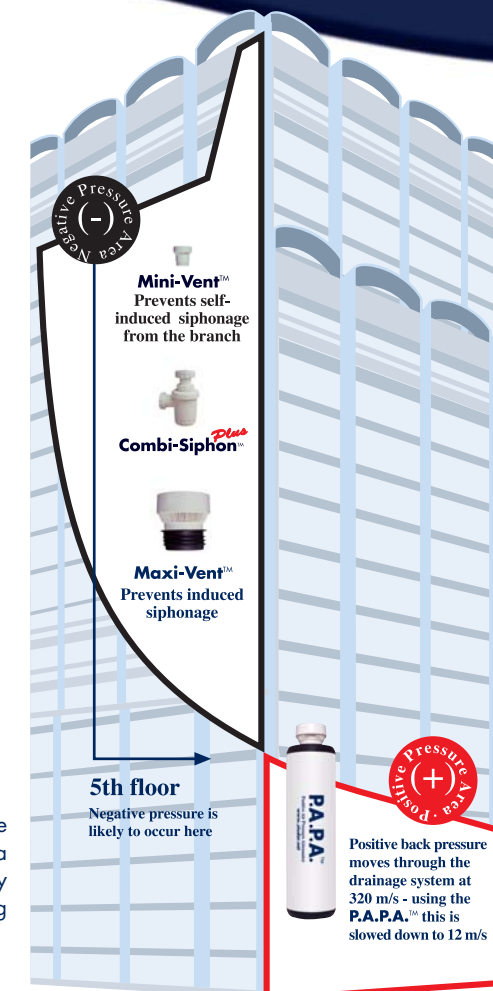
The Advantages

The **STUDOR® P.A.P.A.** as part of the complete **STUDOR®** System:

- Provides complete protection against positive AND negative pressures in the system.
- Replaces extensive vent piping, saving costs in materials and installation.
- Provides greater freedom of design for engineers, architects and design professionals.
- Eliminates the risk of water leakages through roof penetrations – no roof penetrations are required no matter how tall the building.
- Reduces the need for fire stopping devices preventing the "chimney effect" in the pipes, reducing the risk of fire spreading upwards between floors.
- Can be retrofitted into an existing drainage system to solve problems.
- Prevents transmission of odorous sewer gas into the building or surrounding areas.
- Requires no maintenance, as all the **STUDOR®** products are non-mechanical devices.
- Is guaranteed for the lifetime equivalent to that of the drainage system in which it is installed.
- Requires no specialist installation - can be installed by semi-skilled workers.



The Pressure Profile in a Multi-storey Building



The Installation

- The **P.A.P.A.** is suitable for installation in buildings 10+ storeys high.
- When installed with a **Maxi-Vent** fitted on top, the **P.A.P.A.** becomes a positive AND negative protection device.
- The dimensions of a single **P.A.P.A.** (without a **Maxi-Vent** fitted on top) are 750mm high x 200mm wide.
- If a **Maxi-Vent** is not fitted to the **P.A.P.A.**, it does not have to be installed vertically, thereby providing greater freedom of design.
- Each **P.A.P.A.** is capable of dealing with 4 litres of back pressure and may be installed in series (one on top of the other) to a maximum of 4 units (i.e. capable of dealing with a maximum of 16 litres of back pressure).



STUDOR® P.A.P.A.™

Positive Air Pressure Attenuator

