



ACTIVE DRAINAGE VENTILATION

Make Buildings Healthier



LEADING THE WAY WITH ACTIVE

Studor offers high-quality solutions for all commercial and residential buildings, eliminating the need for roof penetrations and extensive group vent piping. Providing a range of valves and a complete system to limit pressure fluctuations, guaranteeing the integrity of the traps, Studor will support you with solutions ensuring the elimination of drainage smells with a maintenance-free drainage system.

A traditional passively vented system uses separate vent pipes to attenuate pressures in a drainage system. It requires more pipe material, installation cost and labour than single stack systems.



The drainage codes we use today are primarily based on research that was conducted in the 1950s and 1960s. Since that period there has been only limited research done on tall buildings, whilst buildings have become much higher.



DRAINAGE VENTILATION

Fundamentally, an efficient drainage system design is about managing the mix of air and water. More precisely, it is about managing the air pressure regime within the boundaries. An active ventilated system provides relief at the Point Of Need (PON) by removing or attenuating an incoming pressure transient that, if left, could lead to trap seal depletion.

Studor Active Drainage Ventilation offers:

- A smooth functioning drainage system in any building project
- A scientifically proven solution for total piece of mind
- An in-house hydraulic design support service using StudorCAD
- A warranty on hydraulic system performance
- New building solutions and retrofit existing buildings
- Reassurance that you get the highest quality drainage system for any building



WHERE TO USE ACTIVE VENTILATION

Drainage design and soil & waste within residential, domestic and commercial buildings is of high importance. Studor has an innovative range of products to suit any architectural drainage system, whether for a new or an existing building.

Low-rise buildings

In low-rise buildings (up to 4 levels) the standardised plumbing design has proven to work without using active drainage ventilation. Typical residential roof penetrations, however, can be avoided using a Maxi-Vent; keeping the roof intact and the plumbing system internal for better insulation.



Medium-rise buildings

In medium-rise buildings (4 to 12 levels) traps can be depleted by induced siphonage, a phenomena in which a flush on one level causes negative pressures in the pipe system which acts on traps of other levels. The Mini-Vent placed on each horizontal branch will kill any negative pressure and protect the traps. The Maxi-Vent will avoid a roof penetration.

High-rise buildings

In high-rise buildings (above 12 levels) there will be negative and positive pressures that influence the water seal in the traps. The P.A.P.A. (Positive Air Pressure Attenuator) dampens the positive pressure and used in conjunction with the Mini-Vent and Maxi-Vent offers a complete active drainage ventilation system for high-rise buildings.

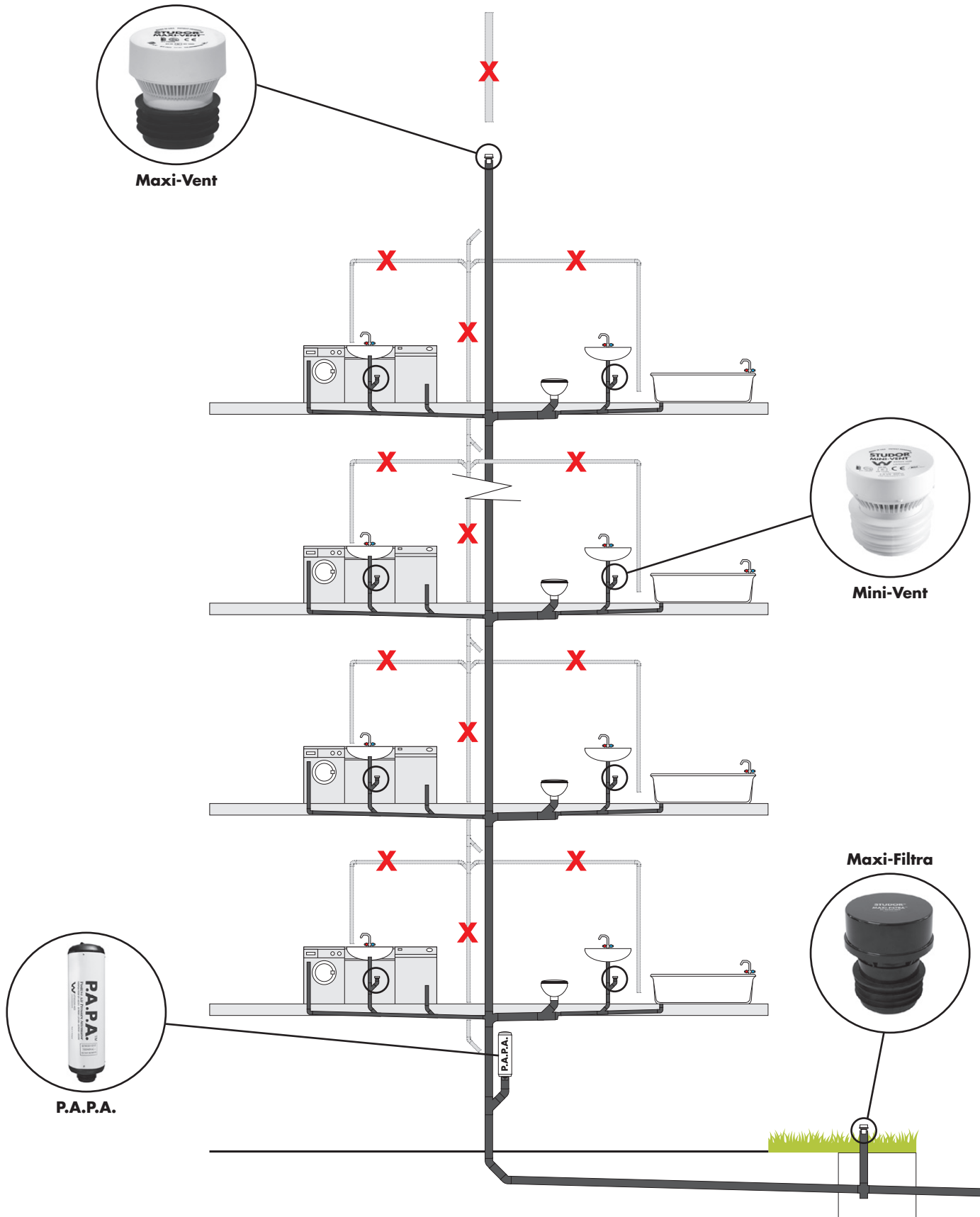


Retro-fit buildings

In existing buildings drainage problems like slow wastewater drainage, gurgling noises, foul odours and trap seal depletion are largely due to negative pressures and can be solved by adding Air Admittance Valves. Retrofitting vertical stacks with P.A.P.A.s. will deal with existing positive pressure problems in high-rise buildings.

UNNECESSARY PIPING

The concept is simple: Studor active drainage ventilation products replace traditional secondary ventilation within drainage systems and will prevent the loss of water seals in traps.





WORLD LEADING AIR ADMITTANCE VALVES

Studor Air Admittance Valves (AAVs) eliminate the need for passive pipe venting and costly roof penetrations with world leading performance by their unique and patented design.

10 reasons why Studor AAVs are world leading:

- + Constant lifetime opening and closing
- + Double screen protection against foreign material or insects
- + Neutralise any internal condensation for constant membrane opening ability
- + Dry membrane for consistent lifetime functioning, not depending on lubrication
- + Full connection flexibility to any type of pipe material
- + 500K cycle endurance testing and KEYMARKED
- + Ideal also as problem solver solution
- + Variety of traps combined with AAVs
- + AAV with flame retardant properties
- + Available world-wide

ACTIVE CARBON TWO-WAY VENT

The Studor Maxi-Filtra is a robust two-way vent that eliminates bad odours with a sturdy filter designed specifically for outdoor drainage applications.

5 reasons why to use a Studor Maxi-Filtra:

- + Very resilient exterior for longevity
- + Can be retrofitted to troubleshoot odours in existing building drainage
- + Push-fit connector requires no specialist installation
- + Easy maintenance by lifting the cap
- + Resistant to extreme temperatures (-20 °C to +60 °C)

SINGLE STACK SYSTEM WITH P.A.P.A.

The single stack system with Studor P.A.P.A.s (Positive Air Pressure Attenuator) and AAVs guarantees a complete and unique drainage and ventilation system solution for medium and high-rise buildings.

In addition to removing the need for traditional ventilation pipes, roof penetrations and back-vents, it provides a better functioning drainage system compared to traditional 2 or 3 pipe systems. It reduces the overall material cost, installation time, installed service space, slab & roof penetrations and passive fire protection measures, allowing you to meet your project targets and sustainability goals.

Top 7 reasons why to use the P.A.P.A. System:

- + Provides the most effective protection against positive pressures in the drainage system
- + Scientifically proven and tested for total peace of mind
- + Minimal required pipe materials and roof penetrations
- + Hydraulic design support using StudorCAD
- + Can be retrofitted to troubleshoot all types of high-rise drainage issues
- + Connects to PVC, PP and PE pipe systems
- + Reduces the need for fire stopping devices



HIGHEST QUALITY PRODUCTS

The Studor products are manufactured and tested to the highest standards in line with all building and planning regulations for drainage systems across different continents.



AS/NZS 4936:2002 - WM-022830
WMTS-483:2017 - WM-022829
WMTS-463:2016 - WM-022831



PMG-1482



011-7B003
011-7B008



Certificate no. 18/5542 18/5543



CE and KEYMARK

The Studor AAVs fall under EN12380 CE regulation, which is basically a self-declaration without a further requirement for independent validation in most cases. The KEYMARK is the European quality mark showing the conformity of products with European Standards, often granted in combination with marks of existing national certification systems. Several of the Studor AAVs have been issued the KEYMARK certificate by DIN CERTCO providing a tested and certified observance of uniform European Quality Standards.

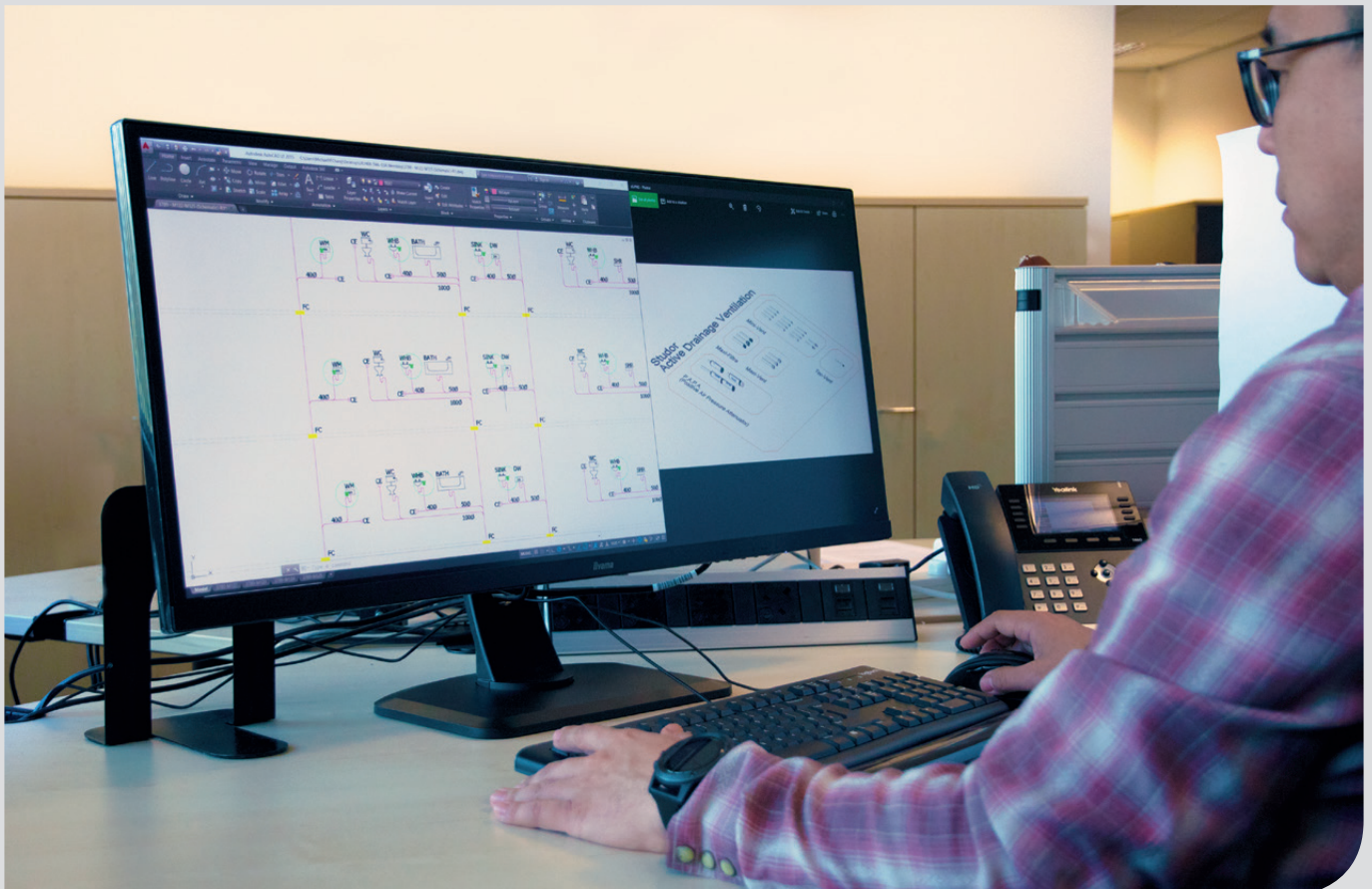
DESIGN SUPPORT SERVICE

Aliaxis Technical Services consists of an expert team with many years of extensive experience in designing drainage systems to worldwide standards. Our expertise and understanding of these standards, including EN 12056-2, AS/NZS 3500.2, IPC and UPC, allows us to provide drainage design advice. We also offer a service for the sign-off of drawings by a Chartered Engineer. To take advantage of our in-house drainage design support please send your drawing to studor.info@alixis.com.

Digital support with StudorCAD and Studor Revit Content Package

The StudorCAD design tool has been developed to work with AutoCAD. It simplifies the design process and provides a one-stop solution for drawing the ventilation system design. Download our StudorCAD application to make it easy to add the Studor products into your AutoCAD drawings.

The Studor Revit Content package is available to be used in Building Information Modeling (BIM). The smart content has integrated intelligence for connections to PE, PP and PVC pipe systems. Create true 'as built' designs with the Studor Revit Content Package, freely available in the latest 4 Revit versions on www.studor.net.

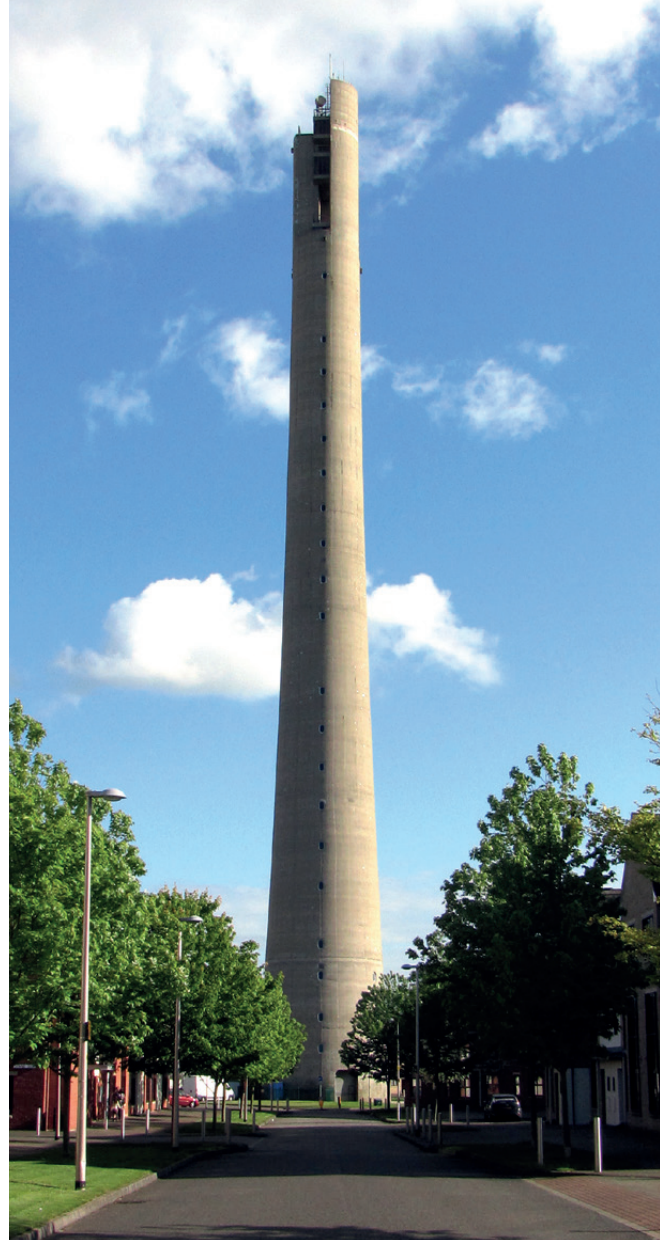


SEEING IS BELIEVING

See how water and air interacts in a true high-rise setting. The 'Seeing is Believing' experience is available in two unique testing facilities located in the UK and the Netherlands. They utilise clear pipe and completely visible products and fittings to demonstrate the occurrences within a real high-rise drainage system and how they are managed by the P.A.P.A. System versus a conventional vent pipe system.

Aliaxis High-rise Research Centre

The Aliaxis High-rise Research Centre is hosted by the National Lift Tower in Northampton (United Kingdom). It is the world's tallest drainage testing installation, comprising a 96 metre soil stack fitted with the P.A.P.A. System (P.A.P.A. and AAVs) for active ventilation. Electronic pressure sensors in the test rig allow readings in the pipework to be recorded and used to objectively analyse the performance of the P.A.P.A. System versus alternative configurations.



Hydro-Dynamics Experience Centre

The state-of-the-art Hydro-Dynamics Experience Centre (HDEC), located in Panningen (Netherlands), combines a testing facility with a customer experience centre, where customers can see precisely how water and air actually flow through our pipe systems. The HDEC is instrumental in testing new solutions and also simulates the performance of systems in specific situations for increasingly complex and/or high-rise buildings.

Heriot-Watt University

Founded in 1821 in Edinburgh, Scotland, and has established a reputation as a leading research-led university and provider of education around the world, with campuses in several locations including Dubai and Malaysia. Heriot-Watt and Studor have collaborated for over 20 years on research and development on a range of innovative new products. The P.A.P.A. (Positive Air Pressure Attenuator) is one of the results of this partnership; many other developments are currently in process, with the potential to revolutionise the high-rise building drainage market.



P.A.P.A.

STUDOR P.A.P.A.



DN	Code
75/110	8F-STU616-WHB

Air Admittance Valves

STUDOR Mini-Vent NPT 1,5" with global connector



DN	Code
32-63	49018

STUDOR Mini-Vent NPT 1,5" with US PVC adaptor



DN	Code
1.5"/2"	49010

STUDOR Maxi-Vent with connector



DN	Code
75/110	49112

STUDOR Tec-Vent NPT 1,5"



DN	Code
40	49029

Maxi-Filtra

STUDOR Maxi-Filtra



DN	Code
75/110	8F-STU019-BLK

STUDOR Maxi-Filtra Cartridge



Code
8F-STU022-YLW

STUDOR Aluminium Cover



Code
99093



Studor is part of a broad portfolio of innovative solutions suitable for high-rise applications, fully backed by expertise, knowledge and support of Aliaxis.

More information? Scan the QR code or go to **www.aliaxis.com/high-rise**



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