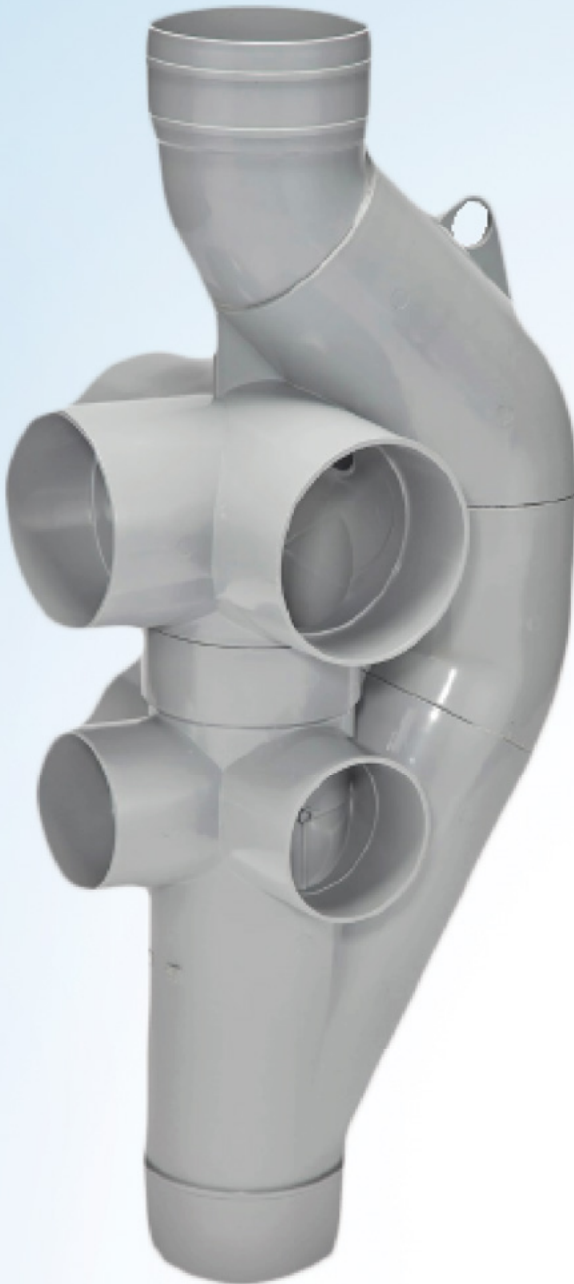


ashirvad

by aliaxis

SINGLE STACK-AERATOR SWR DRAINAGE SYSTEM

- ✓ Specially designed for **multi-storey buildings**.
- ✓ **Allows for a one pipe system**. Eliminates the requirements of traditional three pipes SWR system. A smaller shaft can be designed.
- ✓ Prevents the formation of **hydraulic plugs**.
- ✓ Provides **multiple connection** possibilities with single fitting at any floor level.
- ✓ **Saves cost** through reduce pipe work and associated construction.
- ✓ **Increases flexibility** for architects and designers of multi-storey buildings.
- ✓ Single stack uses **less floor penetrations**.
- ✓ Available in **SWR** and in **Silent SWR**.



Pushfit
SWR SYSTEM

Solfit
SWR SYSTEM



NSF/ANSI 372 or
LEAD FREE Product

Aliaxis

Technology from Aliaxis
Nederland B.V.

WARRANTY APPLICABLE ONLY IF ASHIRVAD PIPES,
FITTINGS & SOLVENT OR LUBRICANT ARE USED.



We innovate to create value

Increasing population and urbanization has brought in an influx of population to the cities in search of better opportunities. This exponential rise in city population over the past two decades has caused a space crunch, to which cities have responded with the fast construction of innovative and space-efficient high-rise buildings. In a high-rise building, a well-designed, low-maintenance drainage system with a water-trap seal that acts as a barrier for the ingress of sewer gases and pathogens, while ensuring quick removal of waste is essential.

However, using a conventional drainage system requires a separate vent to ensure the water trap seal is maintained at all times. However, there are limitations to venting with pipes in the conventional way. This results in the loss of valuable carpet space and it requires more pipes and fittings and involves more installation work so longer execution time.

Ashirvad, an Aliaxis group company, known for its quality and innovation, with over two decades of expertise in plumbing, agriculture, industrial and high-rise solutions. Ashirvad has a pan India presence with over 60,000 Dealers and 1500+ distributors and experts in providing specific solutions that cater to high-rise buildings realized that an optimized drainage system is the need of the hour.

After extensive research and improved understanding, we bring to you a safe, cost-effective drainage system, specifically designed for high-rise buildings that makes high-rise living more feasible, comfortable, green, safe and affordable. Ashirvad brings to you **Ashirvad Stack-aerator v2.0**.

About single Stack-aerator SWR solution

Plumbing regulations always call for the water trap seal on sanitary fixtures to be maintained at all times. This is typically accomplished by introducing atmospheric air into the drainage system via a separate smaller vent pipe going through the roof. But there are limitations to venting with pipes in the conventional way.

Ashirvad has developed an innovative single Stack-aerator v2.0 solution that eliminates the need for a separate waste stack & vent stack, allowing customers to save space, cost and installation time which ensures better system performance.

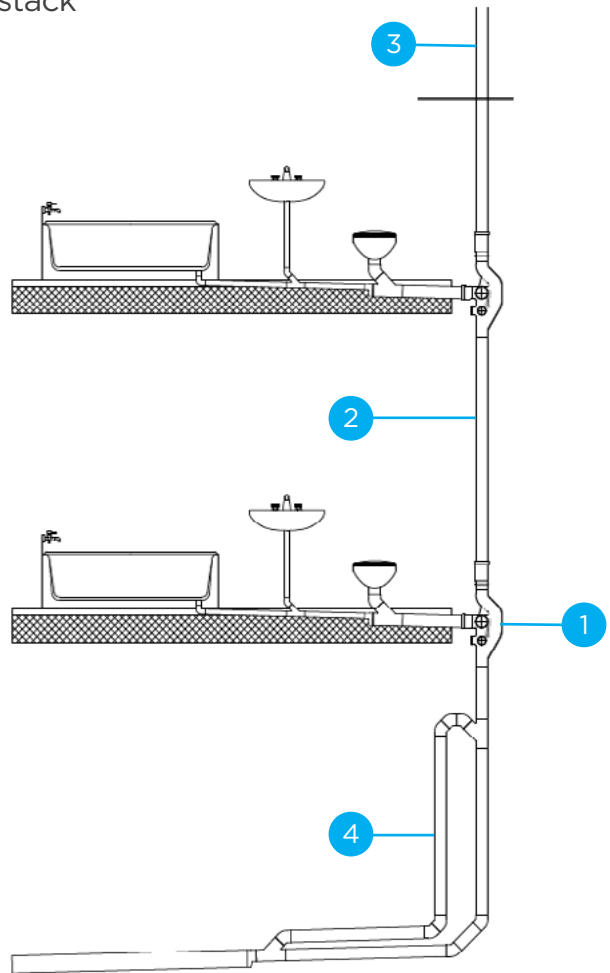
These single stack solutions are especially helpful in solving design challenges for high-rise buildings, green buildings or modular buildings, but they also provide benefits for mid-rise buildings.

Challenges that can be addressed with a single stack solution includes limited vertical shaft space, complex shaft structure, no possible roof penetration, a need for a secondary system for recycled water or other circumstances.

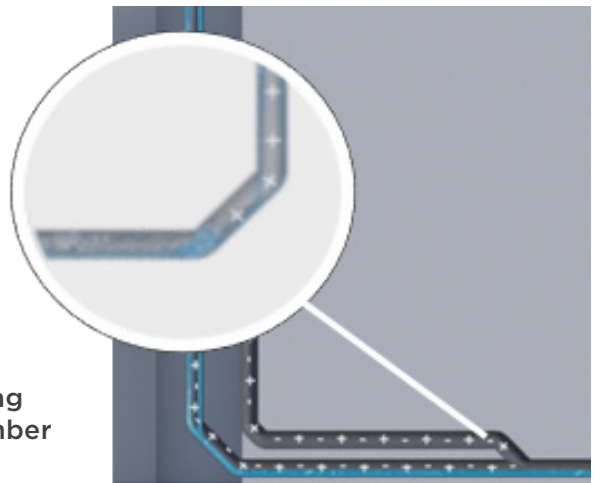
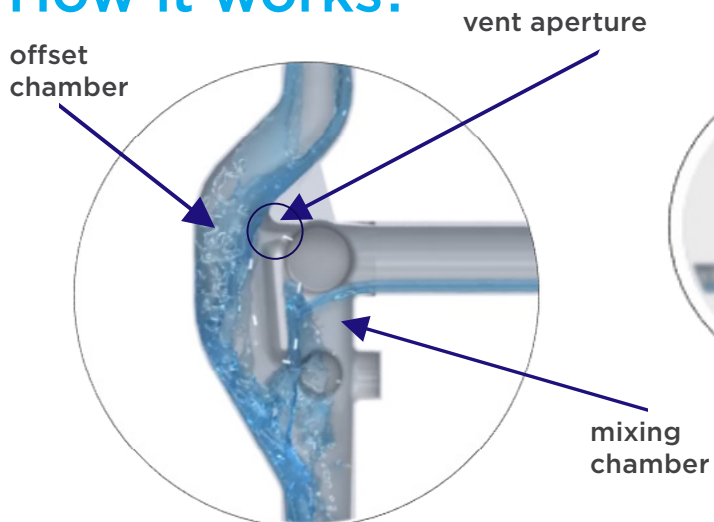


Ashirvad single stack SWR system consists of:

1. Single Stack-aerator v2.0 on each floor
2. A down pipe with standard (Type B) with Ashirvad pipes and fittings
3. A vent pipe through the roof of the same diameter as the down pipe
4. A pressure relief line at the base of the stack



How it works?



Single Stack-aerator drainage system composed of:

- **An offset chamber** where flow from upper floors enters the stack aerator fitting and offsets around the horizontal branch inlet. This chamber has specific angles to ensure performance, by reducing the core flow velocity and breaking up any partial hydraulic plug formation (blockage of core of air), making the flow cling to the interior surface of the pipe and leaving the center area open for air creating annular flow.
- **A mixing chamber** for horizontal flow to prevent horizontal branch discharge from blocking the stack's cross-sectional area and at the same time prevent stack wastewater from entering the horizontal line. The horizontal entry mixes gently with the diverted stack flow and it allows for multiple horizontal connections.
- **The vent aperture** at the top of the mixing chamber, which provides the venting action between the branches and stack. It will allow horizontal lines to be ventilated at peak flow, preventing any blockage.
- **The pressure relief line** will be installed at the base of the stack and wherever the stack requires a horizontal offset. It aims to avoid positive pressure transients created by the transition of vertical flow to horizontal flow, a phenomenon referred to as hydraulic jump.

The venting through the roof will secure ventilation of the system, keeping the pressures (already limited by the stack aerator design and by the pressure relief line) in the boundaries to protect trap seals.

Ashirvad is the first to introduce uPVC Stack-aerator in India.

Technology from  Nederland B.V.

Designing & Installation










Designing:

The Ashirvad Single Stack-aerator SWR system for high-rise does not have any building height restriction. The dimensions are only determined by the number and types of drain fixtures that are connected to it. The Ashirvad single stack-aerator SWR system must be equipped with one single stack SWR uPVC aerator for each floor.

The vertical and horizontal pipes should be designed in accordance with the EN12056-2 standard which includes the dimensioning of pipe diameter and the maximum length of the branch (horizontal) pipes.

You can trust Ashirvad to develop a premium-quality design, based on the best system, to deal with pressure transients and ensure water trap seals protection. We offer extensive expertise in designing piping systems for all types of tall, complex buildings, according to their specific requirements for detailed calculations contact your nearest Ashirvad sales executive.

Our technical team can help you specify the system you need

	DESIGN SERVICES		VALUE ENGINEERING		TECHNICAL ADVICE
	SEMINARS / PRESENTATIONS		MATERIAL TAKE-OFFS		CAD & REVIT FILES
	FIELD AND SITE SUPPORT		SPECIFICATION		TRAINING

Ashirvad advantages

Installation, Field & Site Support

Correct installation is key for a single stack drainage system. We have dedicated on site field support engineers who will assist in:

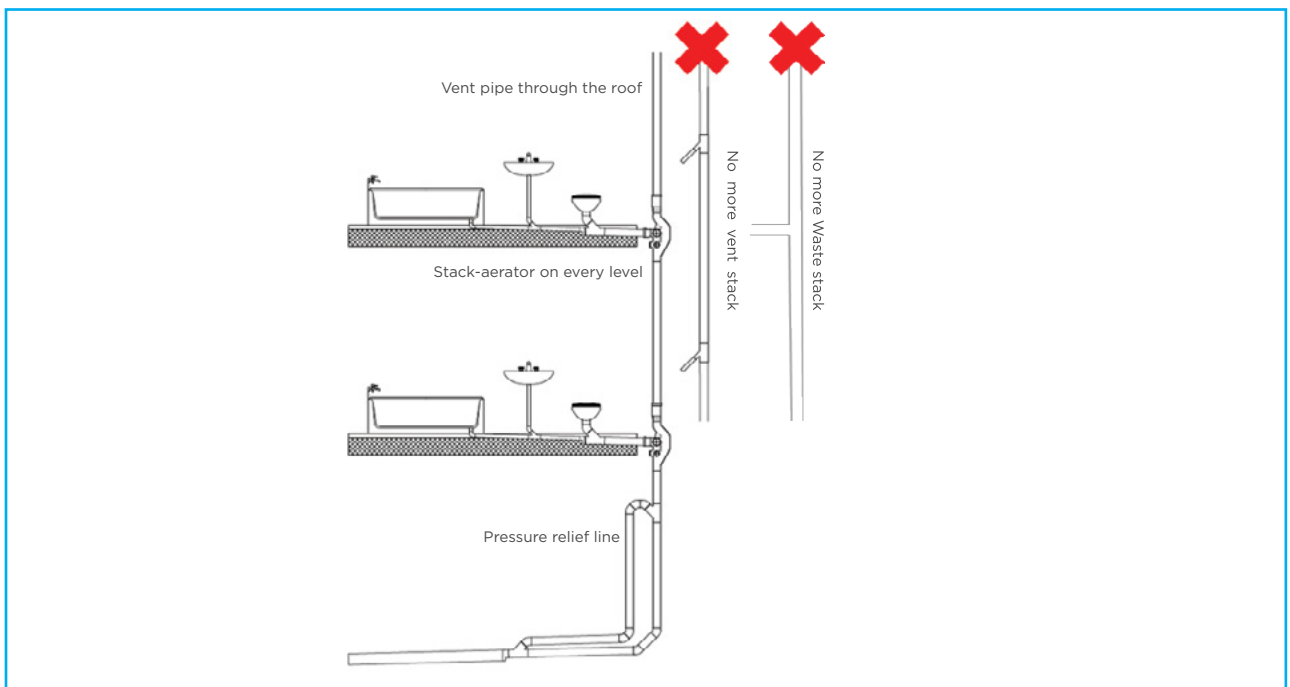
- On site plumbers/contractors training
- Onsite training for Do's and Don'ts of installation
- Drawing and BOQ explanation to the installer team
- Mockup support
- Fortnightly visit for work inspection and reporting

Benefits of Ashirvad SWR Single Stack system with Stack-aerator

- Available in SWR and Low noise SWR for any type of application
- Single stack system with water and air (ventilation) in the same pipe
- Eliminates the waste and vent pipe
- Multiple connections with one stack-aerator
- Installation time is lesser than conventional triple pipe system
- Lower Installation cost with less material
- Ideally suited for any medium and high-rise buildings

Ashirvad Single Stack-aerator v2.0 SWR system capacity

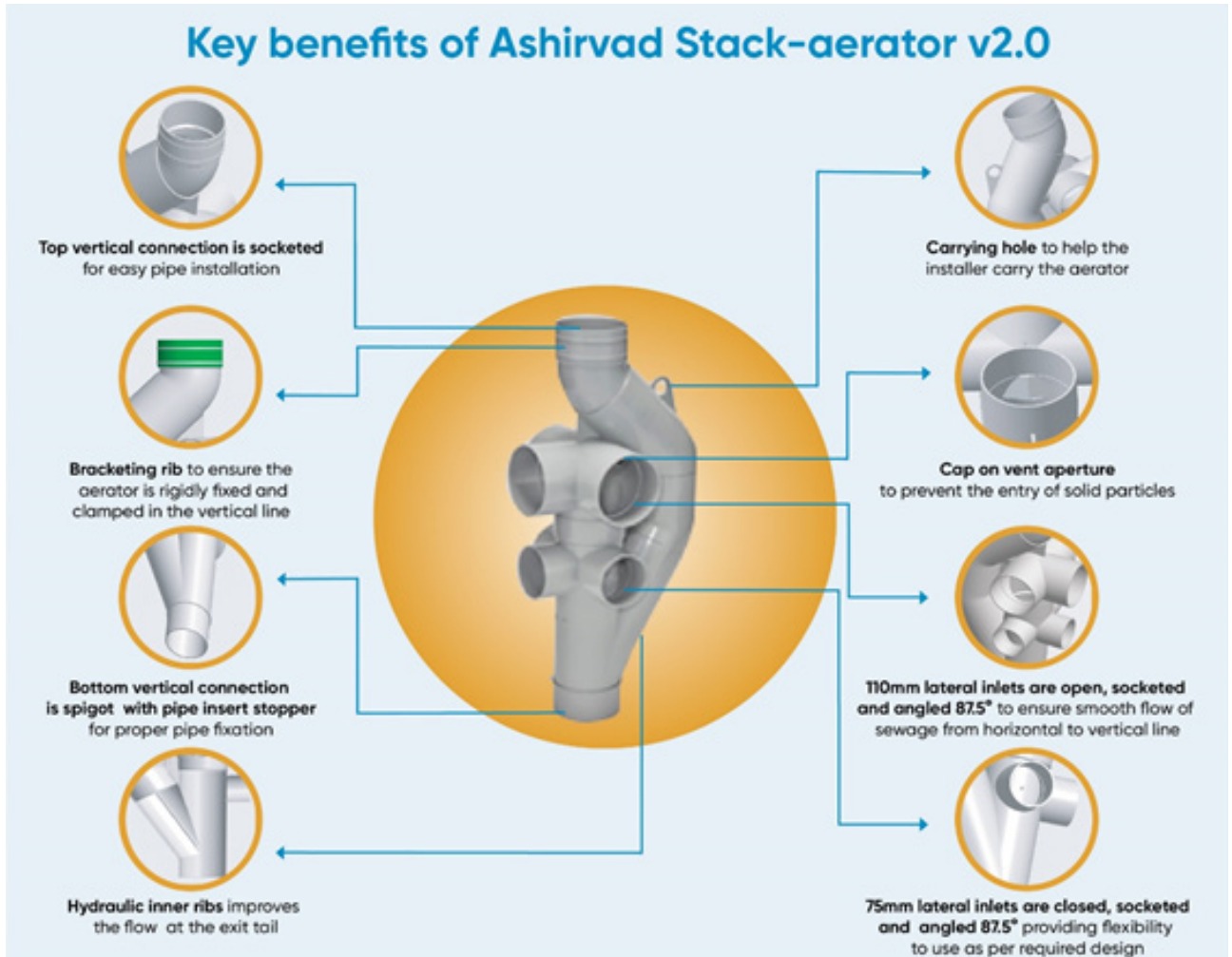
- Ashirvad Single Stack- aerator is specially designed for multi-storey buildings.
- Allows for a one pipe system. Eliminates the waste stack, relief venting stack & other requirements of traditional three pipes SWR system.
- A smaller shaft can be designed.
- Prevents the formation of hydraulic plugs.
- Provides multiple connection possibilities with single fitting at any floor level.
- Provides significant cost savings through reduced pipe work and associated construction.
- Increases flexibility for architects and designers of multi-storey buildings.
- Single stack uses less floor penetrations.
- Available in SWR and in Silent SWR.



Ashirvad Stack-aerator v2.0

We at Ashirvad believe in a culture of innovation and continuous improvement. Taking forward this tradition, we introduce Ashirvad Stack-aerator v2.0.

The new Stack-aerator v2.0 has a higher flowrate of 8.0 l/s (litres/sec) with additional features and benefits.

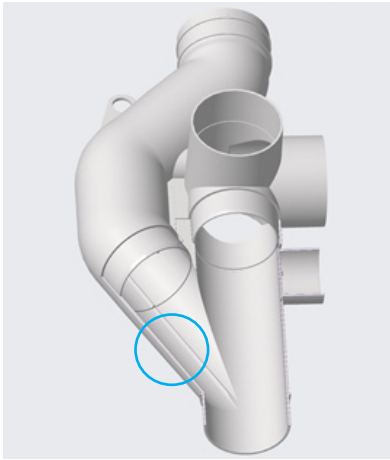


Ashirvad single Stack-aerator variants

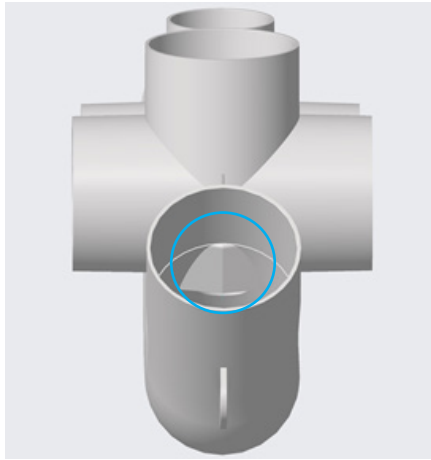
Ashirvad has single stack SWR aerator in 2 variants in SWR and in Silent SWR.

Item code	Size in mm	Product Description	Product	Type
70004167	110	Aerator v2.0	SWR	Solfit Fitting
70004168	110	Dummy cap for Aerator v2.0	SWR	Solfit Fitting
70004169	110	Inspection plug for Aerator v2.0	SWR	Solfit Fitting
70004170	110	Aerator v2.0	Silent	Solfit Fitting
70004171	110	Dummy cap for Aerator v2.0	Silent	Solfit Fitting
70004172	110	Inspection plug for Aerator v2.0	Silent	Solfit Fitting

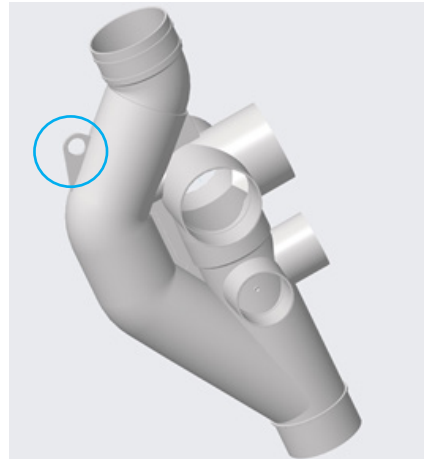
Innovative modifications of Stack-aerator v2.0



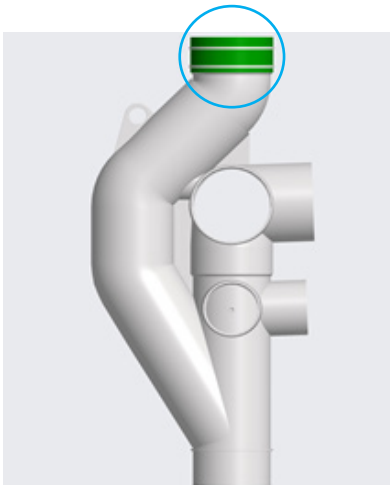
Hydraulic Ribs



Caps on Vent Aperture



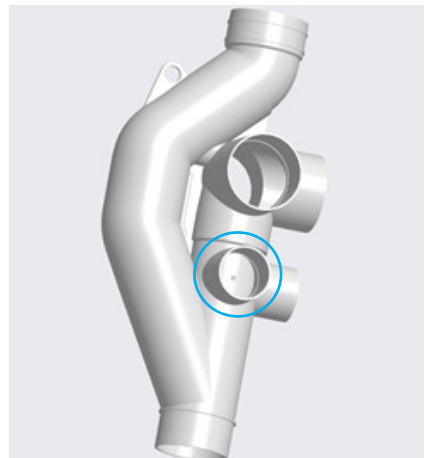
Carrying Hook



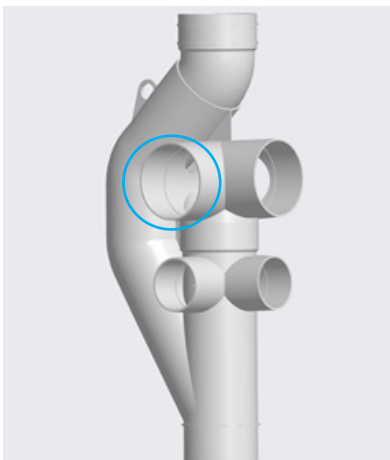
Bracketing Ribs



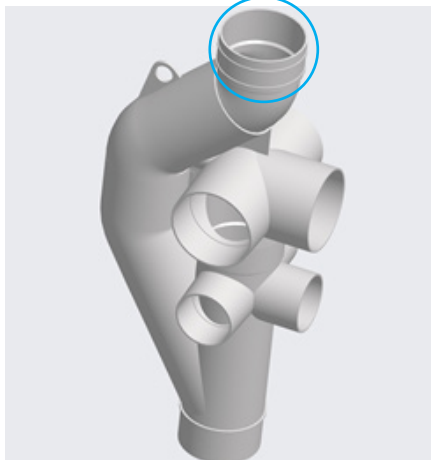
Increased Flow rate



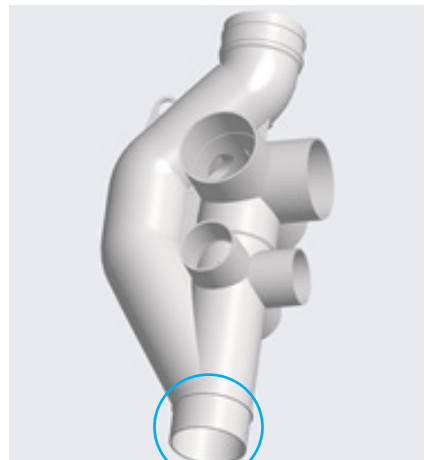
75mm Inlets Factory Closed + Drill Guide Provided



110mm Inlets are socketed and angled 87.5°



Top vertical connection- socket



Bottom vertical connection - spigot

Technical data sheet - Stack-aerator v2.0

Application

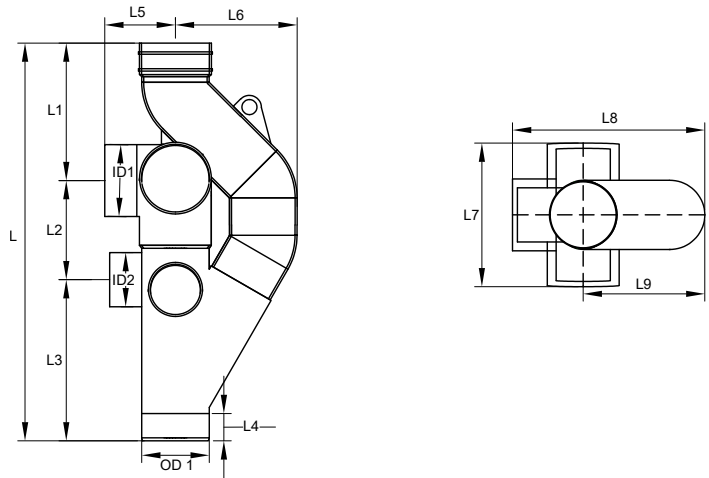
- In house building drainage
- For high - rise buildings more than five floors

Properties

- UV resistant
- Impact resistant
- Chemical resistant
- Factory fitted and tested solfit joints

Scope of Delivery

- Individual packed
- Provided with two 110 mm dummy plugs



Technical data

Maximum discharge flow rate	8.0 l/s (litres/sec)
Material	uPVC

Part number and dimensions

Part no	ID1/OD1 (mm)	ID2 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	L9 (mm)
70004167 / 70004170	110.00	75.00	667.45	248.59	154.57	264.29	56.67	115.01	201.25	226.00	316.25	199.17

R&D and testing facilities

Aliaxis has significant facilities and resources for research, testing and product development. Our facilities are open for our customers to experience our solutions and see first-hand how water flows through our pipe systems.

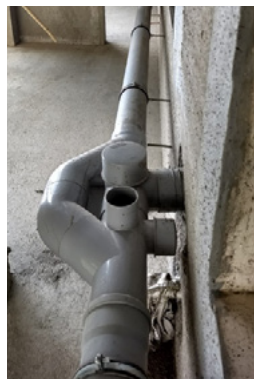
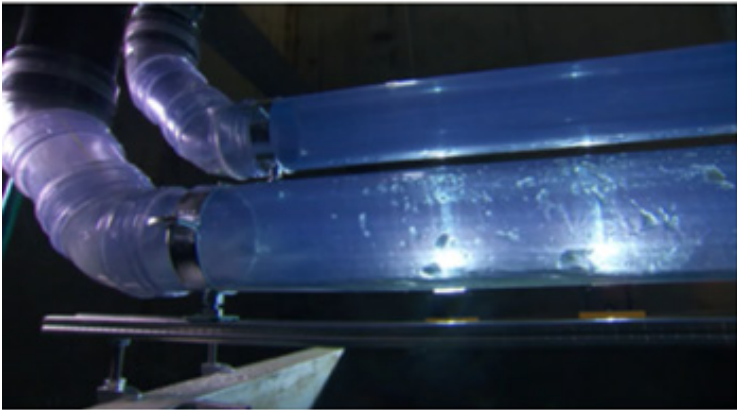
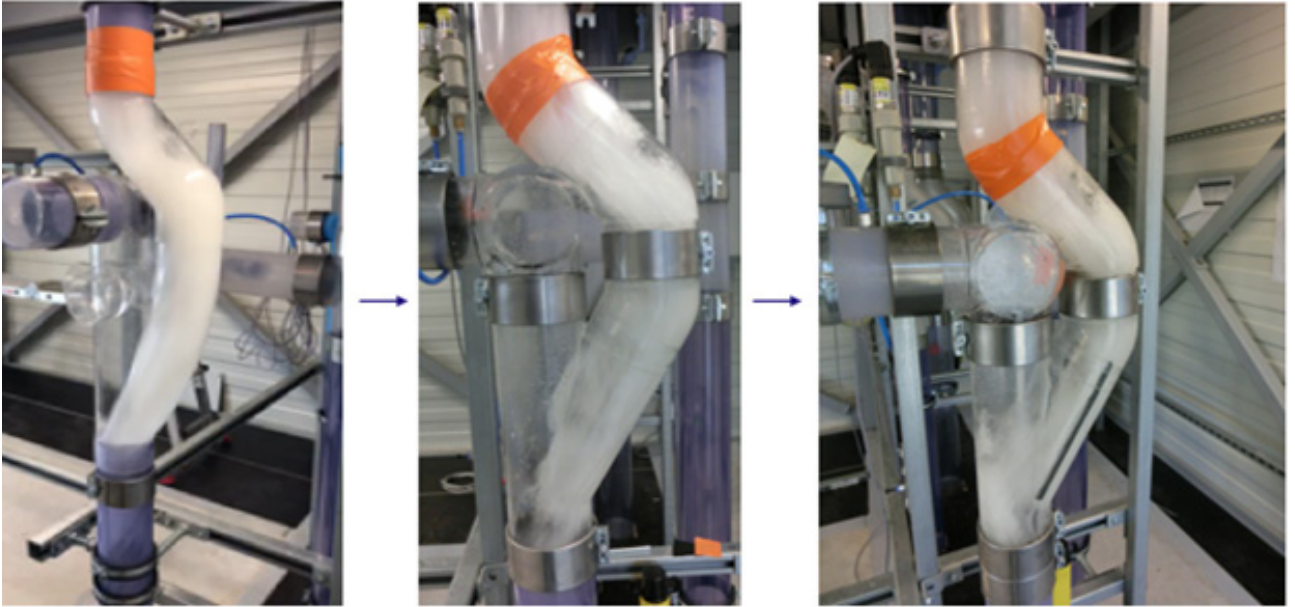
Hydro-Dynamics Experience Centre

In 2017, Aliaxis launched a new facility, the state-of-the-art Hydro-Dynamics Experience Centre (HDEC) in The Netherlands. This new centre replaces the previous testing facility in The Netherlands, and now combines a testing facility with a customer experience centre, where customers can see precisely how water and air actually flow through our pipe systems. 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. The test facilities also play a key role in the development of new products.



Hydro-Dynamics Experience Centre in Netherlands

Seeing is believing



Stack-aerator history

Adaptation in codes

- Australian AS3500.2
- EN12059 in Netherlands, Swiss and Germany
- UIPC -2016 as an alternative method of drainage system

'Proven' Technology

- Stack-aerators have existed **since 50 years**
- First in **cast iron** then **HDPE** now in **uPVC**

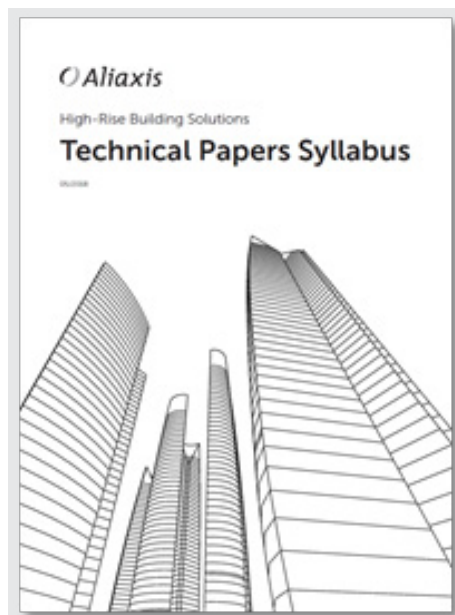


Technical papers syllabus

All papers are freely available at:

high-rise.aliaxis.com/technical-download/

Ashirvad - Aliaxis Technical Services supports any project design or engineering challenge





Ashirvad Pipes Pvt. Ltd.

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For any Service /Customer complaint / Queries -

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