

Marley Akavent

REDUCED VELOCITY DWV STACK SYSTEM



Rendezvous Hotel, Christchurch

Plumbing Solutions



SAVE SPACE AND TIME ON YOUR NEXT MULTI-STOREY COMMERCIAL PROJECT

Akavent Reduced Velocity DWV Stack System

Marley Akavent Reduced Velocity DWV Stack System comprises 110mm and 160mm high-density HDPE plastic fittings that eliminate the relief venting requirements of traditional drainage systems.

The Akavent system is part of Marley's HDPE plastic drainage range and is specifically designed for multi-storey building applications.

Marley Akavent Reduced Velocity DWV Stack System has been supplied in NZ since 2003 and is operational in the 15-storey Flynn Apartments building in Brisbane, the Museum Art Hotel Wellington and the 80-storey Q1 Tower at Surfers Paradise on the Gold Coast.



Q1 Tower, Surfers Paradise, Gold Coast

MARLEY AKAVENT SYSTEM

-  Slows the downward flow of water to prevent the formation of hydraulic plugs.
-  Prevents waste water from branch lines mixing with other waste water until below the junction point.
-  Has only one outlet pipe, replacing the need for a conventional two-pipe fully-vented or a fully ventilated modified stack system for multi-storey buildings.
-  Provides significant cost savings through reduced pipe work and associated construction increasing flexibility for architects and designers of multi-storey buildings.
-  Australian and New Zealand standards compliant in accordance with AS/NZS3500 for multi-storey sewer drainage

DISTINCTIVE FEATURES

- ▶ A single pipe stack, eliminating all additional pipe work required for relief venting
- ▶ Increased design flexibility with longer unvented branch drains, to a maximum of up to 10 metres
- ▶ Space-saving through the elimination of bulkheads
- ▶ Installation and construction cost savings through the elimination of venting pipe work
- ▶ Long-life HDPE construction, offering an environmentally friendly system with superior strength and durability.

SELECT

DESIGN

INSTALL WITH CONFIDENCE

MARLEY AKAVENT

The Marley Akavent system is based on the principle invented in the early 50's in Switzerland. By studying hydraulic and pneumatic characteristics of intermittent flows and simulations it was concluded that controlling the flow made a separate venting system redundant.

The Marley Akavent system is the ideal DWV system for high-rise buildings.

CONNECTION OPTIONS

- ▶ Ø 110mm
- ▶ Ø 75mm

Waste stack remains in one line.

Compatible with Marley HDPE Drainage system pipes and fittings.



Bend to limit the speed of dropping water.

ELEMENTS OF THE SYSTEM

The Marley Akavent system consists of prefabricated assemblies in the form of:

1. A stack made of standard Marley Akavent pipe and fittings sized by fixture unit load.
2. Marley Akavent Aerators are required at each floor when horizontal branches enter the stack as follows:
 - a. 100mm Soil branch
 - b. 100mm Waste branch
 - c. Waste branch less than 100mm
3. A de-aerator assembly at the bottom of the stack to make a transition to the general sewerage drain possible.
4. Relief vent where the stack is offset over distance greater than 45°.

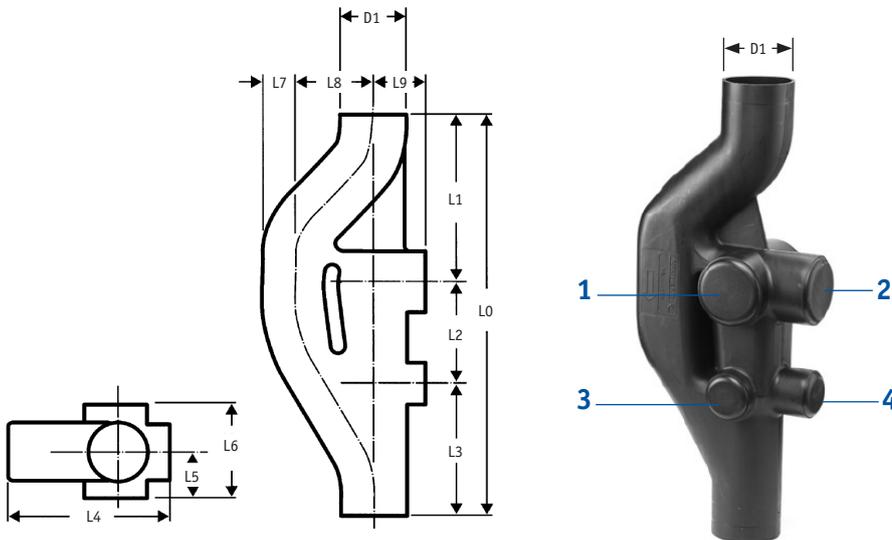
Marley Akavent systems have no height limitation, and sizing is determined solely on the number and type of fixtures connected.

THE STACK

In a Marley Akavent system the formation of a solid "hydraulic plug" is eliminated allowing greater flow of air. Because of this airway there is a balance between the pressures in the stack. The water will cling to the wall and go downward in a swirling motion leaving the open airway in the centre of the pipe.

If the water flow wasn't controlled by the aerators it would increase in speed until sufficient air resistance would spread the water and form a complete blockage of the tube (terminal velocity). This can cause significant positive and negative pressures ahead and behind the flow. This siphonage and/or blowback can cause trap seal failures.

AKAVENT DIMENSIONS



D1	Art. Nr	1/2	3/4	L0	L1	L2	L3	L4	L5	L6	L7	L8	L9
110	A601117	max Ø 110mm	max Ø 75mm	750	320	170	260	275	90	180	55	130	90
160	A601617	max Ø 110mm	max Ø 75mm	715	320	160	235	310	100	200	75	125	110

For more detailed technical information to assist with specification please contact Marley.

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