

Uniclass | EPIC
JR12:L731/L71121/L2123 | J3413:X721
CI/SIB
(52.5) | (H1)
June 2015

Wavin QuickStream Siphonic Roof Drainage



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Wavin QuickStream



Plumbing engineers, architects, building owners and contractors are increasingly realising the many benefits of using siphonic roof drainage. For non-residential projects siphonic drainage has already become the norm for draining large and sometimes complex roof areas. Traditional gravity drainage is now the exception.

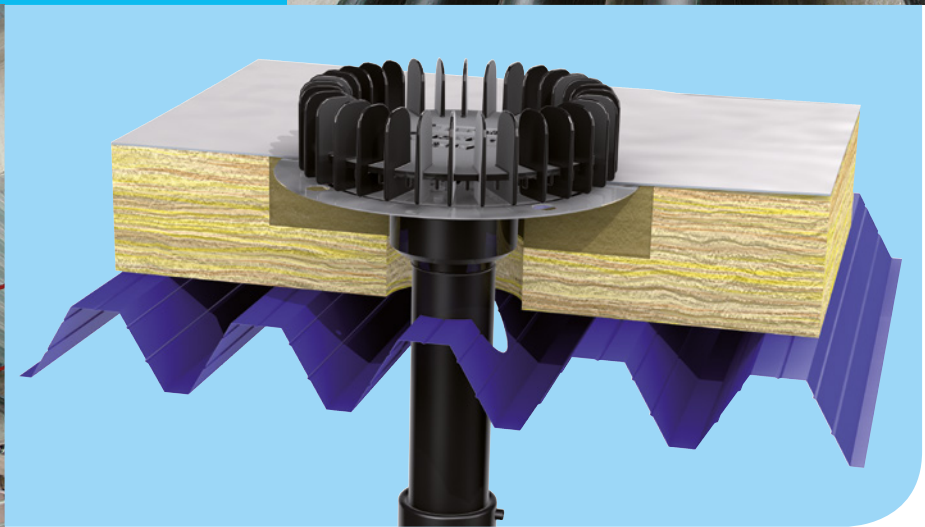
A lot can be said about the theory behind siphonic drainage, but this brochure will focus on the many benefits the system will bring to your project. Not only will a siphonic system quickly and efficiently discharge rainwater (even at peak rainfall conditions), it also allows you to save on build costs and free up space inside the building.

Siphonic Roof Drainage QuickStream

Siphonic Drainage Solutions

Wavin has been on the front line of siphonic drainage solutions ever since the Wavin QuickStream system was introduced in 1982.

Wavin QuickStream systems have now been successfully installed in more than 20 countries worldwide.



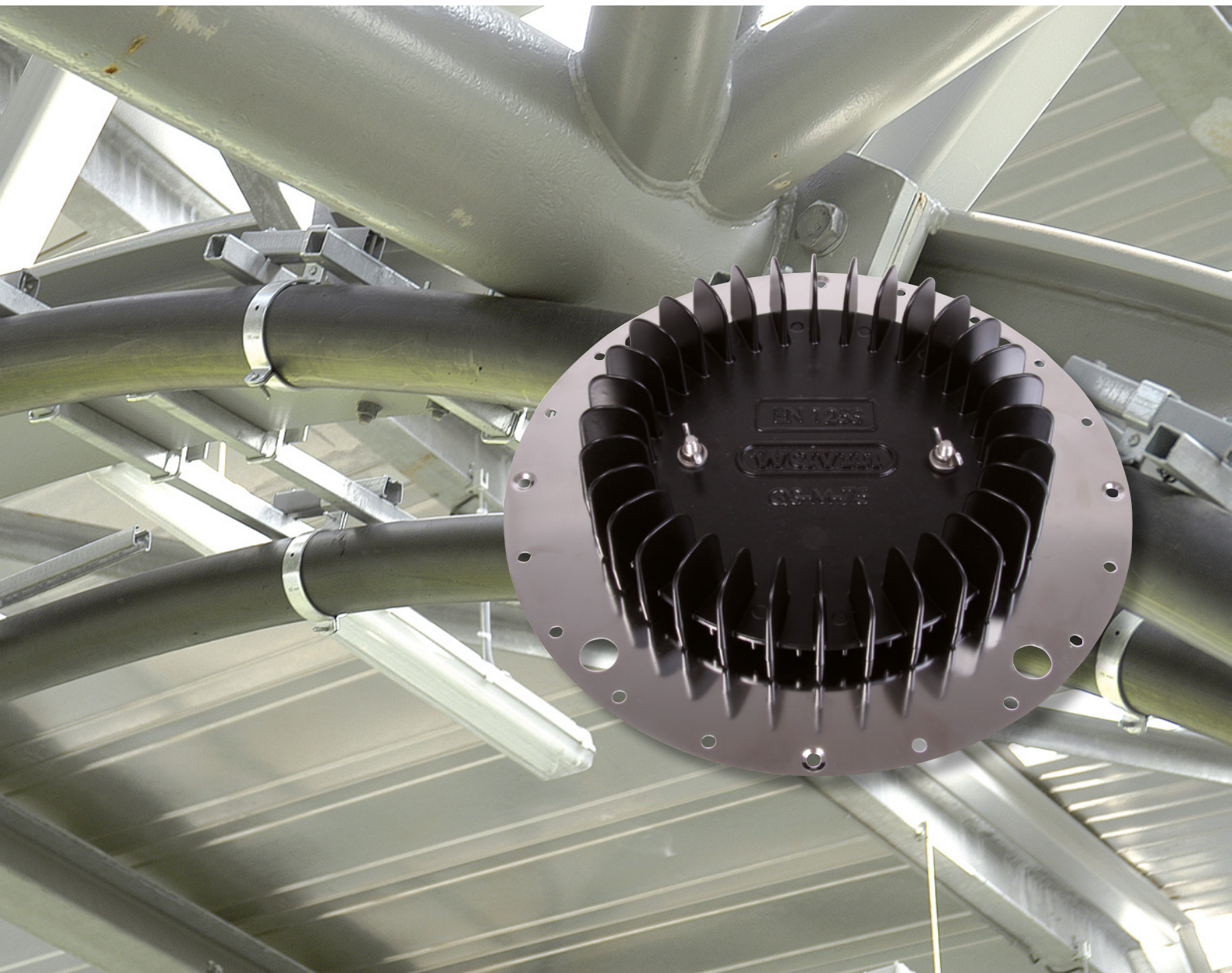
Advantages of siphonic drainage explained

Siphonic drainage systems offer clear advantages over traditional gravity drainage. Pipe sizes are smaller as water is being channelled through the pipes without air. Smaller pipe sizes and the reduced number of roof outlets, lower the installation costs and the overall building cost. Plus a reduction in downpipes results in no or limited pipe trenching next to the building, delivering considerable savings in ground works, and improved health and safety with regards to building access during construction.

As the lateral pipe work of a siphonic drainage system is installed without a gradient, the available space in the building is optimised and internal pipe work is no obstruction. Therefore siphonic drainage is, for example, the preferred choice for inner city multi-storey parking garages.



The Special Benefits of QuickStream



Not every siphonic system offers you the same benefits. Wavin QuickStream builds on over 30 years of experience in the calculation and design of siphonic systems, together with on-site installation support. The Wavin team will work with you to overcome on-site challenges and technical queries.

Wavin recognise that every element of the siphonic system and design must work together effectively to deliver an efficiently designed system, which will keep your building safe in a storm.

As well as a proven track record with over 30 years experience, Wavin QuickStream also offers:

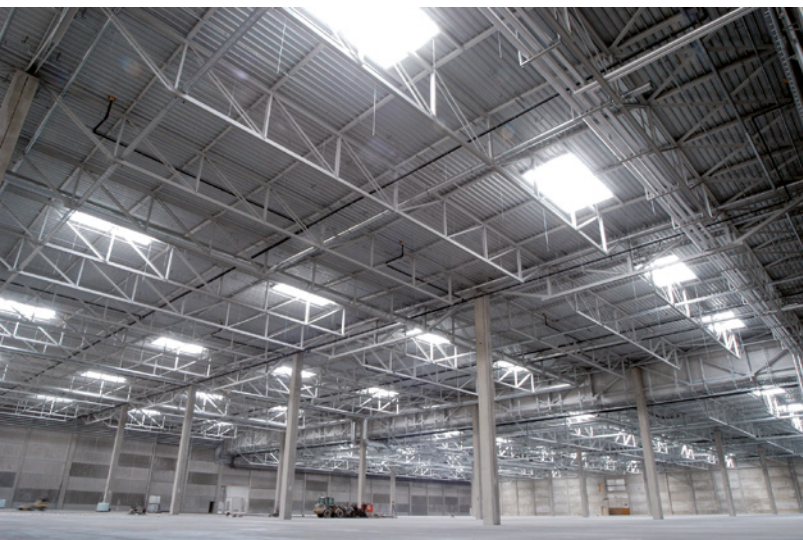
- ⦿ Market leading, tried and tested, design software with the highest level of security and safety checks in the industry
- ⦿ An easy to install and maintain range of third party approved, sea water resistant, metal roof outlets catering for most roof constructions
- ⦿ A simple, safe, easy to install, third party approved bracketing system, specifically designed to handle the challenges of a siphonic roof drainage system
- ⦿ A 10 year system guarantee

Designing QuickStream

The efficient performance of a siphonic roof drainage system is achieved by a combination of the system balance between roof outlets, correct levels of negative pressure, flow velocities in the system, flow velocities at discharge, and the priming of the system. It is therefore essential to use an established and proven analytical design program for system design.

Every QuickStream project is designed using specially designed AutoCad compatible software, which automatically makes compulsory checks on the above mentioned system elements: system balancing, cavitation, velocity and priming of the downpipes (see explanation right)

System Element	Check done by Wavin
System balancing	energy losses of all roof outlets are the same
Cavitation	negative pressure in the system is not too high
Priming of downpipe	downpipes need to be fully filled with water
Velocity	minimum speed to ensure cleansing of horizontal pipework



Only once all checks have concluded positively, and minimum design requirements are met, can outputs be printed from the software, ensuring the QuickStream system performance in practice.

Roof Outlets QuickStream

QS-M-75 Range

<p>QS-M75-400 outlet-membrane</p>	<p>QS-M75-260 gutter</p>	<p>QS-M75-260 membrane, gravel</p>	<p>QS-M75-400 bitumen</p>
			
<p>QS-M75-260 bitumen, gravel</p>	<p>QS-M75-260 membrane</p>	<p>QS-M75-260 bitumen</p>	
			

The Wavin range of metal roof outlets are easy to install and maintain, with only 2 screws per outlet and no special tools required. The “260” outlets have a high nominal maximum flow rate; the “400” outlets have the same flow rate for a lower water level on the roof. This means fewer of the “400” outlets are needed to drain the same volume of water (approx 30% less for a given water level). The roof outlets are sea water resistant (Test

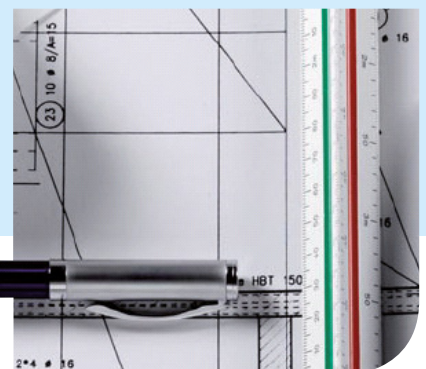
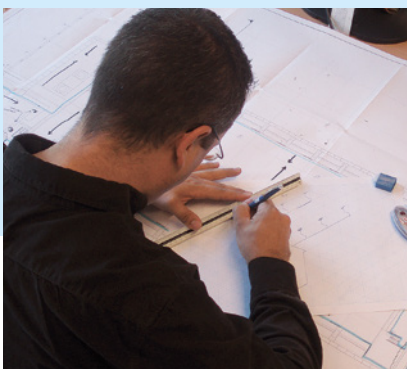
report available) and the hydraulic performance of the outlets has been independently tested and validated at LGA in Germany.

Technical (Installation) Support

Wavin designs and calculates all QuickStream systems using the most advanced software in the business. Output drawings are in AutoCad allowing easy incorporation into the AutoCad drawings of the building, and optimum communication between the building designer and Wavin.

The software also generates a 3-D system layout, which enables an easy and foolproof system installation.

You can rely on Wavin for local and on-site technical support throughout the project.



Bracketing System QuickStream

The Wavin dedicated bracketing system is simple to use: in 3 easy steps the horizontal pipe work is installed in the easiest and safest way.

This bracketing system is designed for safe and quick installation by minimising loose parts and required tools, and offers the following benefits:

- Easy connection at height – clamp is designed to hold pipe in place for easy, quick and safe installation

- Clamps are delivered in one piece – quick assembly and no loose parts to fall from height to the building floor
- All pipe is maintained at the same level ensuring no sloping of pipe work
- The bespoke suspension system can incorporate a 30°C temperature variation
 - 100m of pipe will elongate or shorten 60cm when the temperature changes 30°C
- Third party approved
 - independently tested by Bosch Engineering

Step 1



Step 2



Step 3



Wavin Stormwater Management Solutions

Wavin QuickStream is an integral part of Wavin Stormwater Management Solutions, which offers a specialist focus for the most efficient capture, transportation, cleaning, infiltration, attenuation and re-use of stormwater at source. This combination of specialist expertise and technology from Wavin is specifically focused on achieving the optimum solution for each project requiring effective and sustainable management of stormwater.

Wavin's unique expertise in stormwater management combines focused stormwater systems with proven project management skills to offer sustainable, customised, end-to-end solutions that deliver guaranteed performance and optimised customer value.



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PT Wavin Indonesia
Internet www.wavin.com/en-id
E-mail: Indonesia@wavin.com
Phone +6221 2971 5887

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