

# UNIQUELY Fast Flow!

'*UNIQUELY Fast Flow!*' is a statement that CEO of Fast Flow, Colin Thoms believes he has a right to claim for its innovation and technological contribution to the management of rainwater systems in buildings. Before 1968, all the world had was conventional gravity systems for nearly 2,000 years.

But in 1968, Olavi Ebeling (Finland) invented the first siphonic system. In 1972 Olavi was joined by Per Sommerhein (Sweden) and together they co-developed the technology becoming known as UV-System (*UV means "full bore flow"*).

The benefits of using siphonic rainwater systems are numerous and go way beyond the commercial value. Fast Flow Siphonic solutions have laid the path for major architectural innovations, examples of which dominate the Asian skyline such as the Esplanade and Marina Bay Sands in Singapore to the Bird's Nest in Beijing. The technology has given engineers and constructors a means to solve major technical challenges and achieve more cost-efficient design and build solutions.

## BUT...

Fast Flow's growth and presence in Singapore, Malaysia, Thailand, China and Australia, from the early 2,000's; clearly identified that the high-rise "Wind-Driven-Rain" requirements were a major issue and the conventional gravity systems were clumsy and expensive.

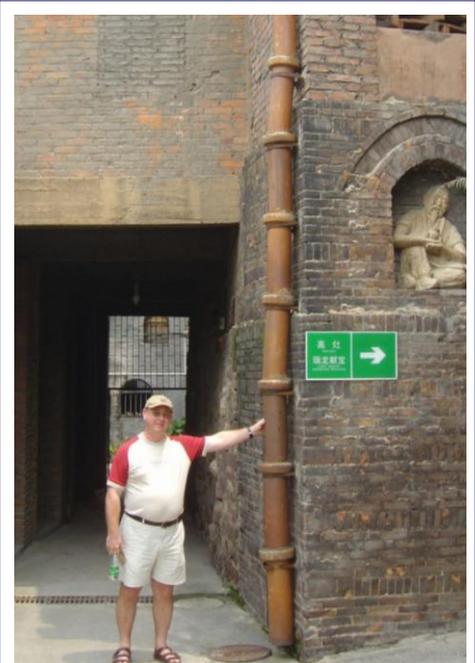
*"A Siphonic system cannot solve every rainwater management challenge in buildings. It is not suitable for handling 'Wind-Driven-Rain' rainwater drainage."*

In 2006, Fast Flow was growing more and more and also aware that its operations was entirely involved in the business of total rainwater solutions and not just providing a singular siphonic option. It had clearly outgrown UV-System and decided to chart its own destiny in all aspects of rainwater software and hardware development. By 2007, after a year of R&D and laboratory testing; Fast Flow made its second and most significant contribution to GLOBAL rainwater management in buildings, "The Pressurised System".

The key element of the Fast Flow Pressurised System is the psVent™; a unique anti-backflow device. This device allows Fast Flow to reduce vertical drainage system diameters which service "Wind-Driven-Rain" spaces without fear of balcony flooding.

*"Can you imagine a psVent™ installed into a 75mm pipe can increase its capacity from 5l/s to 20l/s. Four times, **Uniquely!** Fast Flow and so **impressive!**"*

But the good news didn't stop there. In more complex situations where there is a need for horizontal pipework at transfer levels for example, Fast Flow only needs to use 100-150mm size pipes, whereas conventional gravity solutions need much larger diameters of 150-300mm. Another major differentiator, is that Fast Flow's Pressurised System runs without gradient. Conventional gravity solutions DO NOT!



Colin recalls his meeting with Per Sommerhein in 1994.

*"I met up with Per in the UK and secured the exclusive rights to use UV-System in many parts of Asia. I also remember being advised by Per that the system was currently only used on low-rise buildings and there was little exposure to high-rise. Fast Flow was born in 1995 but by the end of the decade Fast Flow had taken siphonic into major high-rise. This was Fast Flow's first major contribution in changing rainwater management globally."*

*"I must confess I really didn't fully comprehend how significant our Fast Flow Pressurised System was at the time. Our R&D team of Goh Chun Hee, Gilbert Ang and Yap Kern Ling were ecstatic when we were granted a Technology Patent in 2008."*

On Vertical Pipework, Fast Flow Pressurised System has 4 times the discharge capacity of a conventional Gravity Pipe of similar size.

On Horizontal Pipework, a conventional Gravity System is around 2.8 times larger than Fast Flow Pressurised System for similar Discharge Capacity.

Fast Flow - Technical Solutions Capabilities							
RAINWATER CATCHMENT TYPE	"Open to Sky" Spaces					Combined "Open to Sky" & "Wind-Driven-Rain"	"Wind-Driven-Rain" Spaces
SYSTEMS	Siphonic Systems					Hybrid Solutions	Pressurised Systems
BUILDING TYPE & MARKET SEGMENT	Big Roof Buildings	High Rise	Large Mixed Development	Landscape Roof	Residential Housing	High Rise & Large Mixed Development	High Rise Condo:- Balconies, Planters, Ledges, Link Corridors. Elevated Car Parks
FAST FLOW CAPABILITY	FULL CAPABILITY					UNIQUE TO FAST FLOW	UNIQUE TO FAST FLOW
OTHER SYSTEMS CAPABILITY	ALL COMPETITORS	SOME COMPETITORS	LIMITED COMPETITORS	FEW COMPETITORS	VERY FEW COMPETITORS	NO COMPETITORS	NO COMPETITORS

### Some worrying trends!

The use of psVent™ is an exercise in engineering and that should be no different when designing conventional gravity systems for the same purpose. Regrettably there is clear evidence, that systems are being put forward that are not correctly engineered, and these could have major repercussions.

We are seeing systems being put forward which are 'passing off' on the use of name "Pressurised System" (a Fast Flow proprietary solution) which are technically not able to perform.

**"Customers and Clients BEWARE of copycat solutions that have not been proved or tested for purpose!"**

### Hybrid Solutions

Hybrid Solutions are where Fast Flow use a Fast Flow Siphonic System and Fast Flow Pressurised Systems together in one overall System. Because Fast Flow 'Hybrid Solutions' is also 'Uniquely Fast Flow'.

