

psPipe – A WORLD FIRST

... another innovation in rainwater systems by Fast Flow



After years of experience in designing and installing siphonic rainwater systems, Fast Flow has developed and manufactured the first and most advanced pipe system suitable for conveying rainwater from roofs safely to its discharge point.

For over 20 years Fast Flow has installed pipes made from many different materials namely, uPVC, HDPE, Cast Iron, Stainless Steel, Galvanised Iron and Ductile Iron. The difficulty faced by all specialists in this field is the fact that most generic pipe systems are not manufactured specifically to deal with the forces and negative pressures generated inside a siphonic hydraulic pressurised system.

Fast Flow took the initiative to develop its psPipe system based on the dimensional properties of JIS uPVC pipe standard. But that is where the comparison stops. psPipe and psFittings are individually designed to withstand negative pressure to (0.9Bar) and are tested to absolute vacuum. In contrast, generic pipe systems such as JIS 'AE' & 'AW' are not required to be tested for negative pressure. For many years, Fast Flow used JIS 'AE' but whilst the pipes were rated up to 6Bar positive pressure the fittings are only tested for 3.5bar.

With the advent of psPipe our entire system is currently rated to 6Bar thus allowing our designers to take full advantage of the higher pressures allowed in our systems. Currently Fast Flow designs are carried out based on using psPipe specification and this allows us to specify and use even smaller pipe systems than our competitors.

Environmental: Whilst authorities all around Asia have not legislated the omission of lead from uPVC production they do favour it. Fast Flow took the bold initiative to go 'Lead Free' and follow European and US standards.

psPipe sets new and higher standards in its manufacturing process. Fast Flow has carefully chosen chemical content that gives psPipe far greater uv stabilisation for external use and is superior to other uPVC pipe systems such as JIS.

Whilst global standards do not recommend the use of recycled material in uPVC siphonic rainwater systems, Fast Flow does not permit any recycled material except for the reuse of its own reprocessed material.

Fast Flow's choice of uPVC material for its default pipe system was due to it being the most economic and reliable pipe conveyance system for rainwater management. The installation of uPVC pipe systems in buildings is understood and used more than any other pipe materials in the construction industry.

Comparison Between Fast Flow psPipe & Other PVC Pipe Systems in a Siphonic & Pressurised Application

Pipe Specification Requirements for Siphonic Rainwater Systems		Fast Flow psPipe	JIS K (6741) AE & AW	SS213
Characteristics	Remarks			
UV Stability - PVC	When uPVC pipes are used for external applications with exposure to uv radiation, a uv inhibitor is needed.	psPipe contains a UV inhibitor - TiO2 with min 2%	Not Specified	SS213 contains a UV inhibitor - TiO2 with min 2%
Lead content	The use of 'lead' in pvc production is progressively being discontinued globally & reduce uncertainty over its contribution to general toxicity. Europe, US & Australia are 'pbFree'.	Lead Free	Contains Min. lead. See WHO guidelines	Not Controlled
Recycled Material	The control of recycled content gives an added assurance of performance & quality.	Not allowed Except re-process material during production	Allowed	Allowed
Pressure Rating for Pipes	The pipes pressure rating is crucial for the safe performance of Siphonic & Pressurised Systems.			Non-Pressure Not Suitable
Working +ve Working -ve		6.0 Bar -0.9 bar (vacuum test)	AE 5.9Bar / AW 10Bar Not specified nor tested	N/A N/A
Pressure Rating for Fittings	The fittings pressure ratings are crucial for the safe performance of Siphonic & Pressurised Systems .			Non-Pressure Not Suitable
Working +ve Working -ve		6.0 Bar -0.9 bar (vacuum test)	3.5 Bar Not specified nor tested	N/A N/A
Application		Specifically developed for use in all Siphonic, Pressurised and conventional gravity drainage systems.	Convey general fluid flow AE - Lower pressure fluids AW - Higher pressure fluids	Gravity only soil waste system & Vent application