

# SILENTFIT™

Low Noise  
SWR Piping Systems



A DRAINAGE SYSTEM  
THAT QUIETLY DOES  
ITS JOB.



## ▶ INTRODUCTION

The 21st century has seen the peak of technological progress, but it hasn't come at an easy price. Most of our big cities face constant noise pollution: the average noise levels in Mumbai are between 70-80 dB (which is similar to a plane flying 1000 feet over an individual, or a freight train passing by at 15 metres). In such a situation, today's urban dwellers are seeking an escape from loud noise.

Safety, reliability and cost effectiveness are the key components that drive plumbing design. Considering these factors, PVC material has been already established in the plumbing sector as a substitute for metal and cement. We all are already using PVC SWR Pipes & Fittings for drainage system. But what if this battle against noise is lost in one's drainage system? An average water pipe creates at least 55-60 dB of noise when water rushes through it, and in many cases, much more. And more often than not, the problem with noisy, clattering, clanging water pipes is impossible to correct or very expensive, even if it is feasible.

SILENTFIT piping system offered by PRINCE PIPING SYSTEMS is the latest technological innovation in noise insulated drainage system. It is specially designed to reduce the noise associated with evacuation/discharge of drainage water through sanitary pipes.

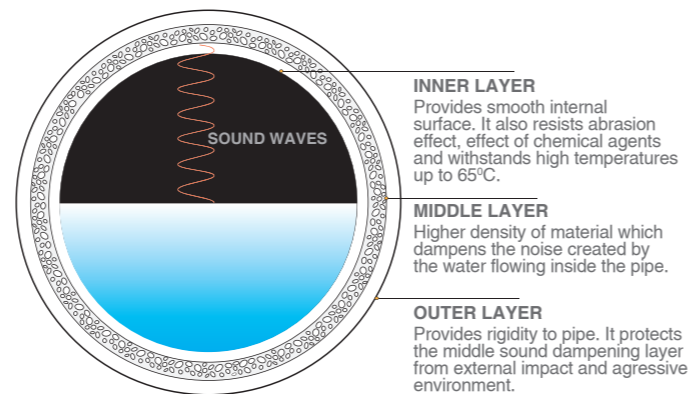
SILENTFIT piping systems guarantee a noise level that is below 25dB when measured at discharge flow rate at 2 lps. The sound level is tested at Fraunhofer Institute for Construction Physics in Germany.

## ▶ COMMON NOISES & THEIR INTENSITY

Application Area	Intensity (dB)
Conference Halls	30 dB
Silent environment	25 dB
<b>Silentfit Pipes</b>	<b>21 dB</b>
Watch tick tack	10 dB
Hospitals	35 dB
Class Rooms	45 dB
Living Rooms	60 dB
Average Water Pipes	55 - 60 dB
Streets	75 dB
Factories	80 dB
Motorcycle	110 dB
Motor Drill	120 dB
Ear Tolerance limit	140 dB

## ▶ HOW SILENTFIT PIPES WORK

SILENTFIT Piping Systems are basically three-layer pipes in which the outer and inner layers are made up of UPVC material, while the intermediate layer is made of specially formulated PVC material that serves as a noise insulator, providing silent operation when water flows through them.



## ▶ APPLICATIONS

Soil & waste water drainage pipelines inside & outside building for:

a) Residential, b) Commercial, c) Hospitals, d) Schools & e) Hotels

## ▶ CERTIFICATIONS

Product certifications:

- ▶ **Pipes:**
  - ▶ Noise behaviour test report in accordance with standard DIN 4109, VDI -4100 & EN 14366 issued by the Fraunhofer Institute
  - ▶ Fire reaction report for soundproof PVC-U parts classified as B-s1, d0 issued by the AFITI LICOF Fire Research and Test Centre.
  - ▶ NFMe fire safety Brand Certificate for PVC-U accessories and structured pipes in accordance with regulation NF 513 issued by the National Laboratory for Metrology and Testing (Laboratorio Nacional de Metrología y Ensayo, LNE).
- ▶ **Fittings:**
  - ▶ Noise behaviour test report in accordance with Standard UNE-EN 14366 issued by the FRAUNHOFER INSTITUTE.
  - ▶ Fire reaction report for soundproofed PVC-U parts classified as B-s1, d0 issued by the AFITI LICOF Fire Research and Test Centre.

SILENTFIT fittings manufactured by M/s. Adequa, Uralita, Spain. These fittings are specially designed and made up of specially formulated compound that significantly attenuates the noise level caused by the drainage water flowing through the piping installation.

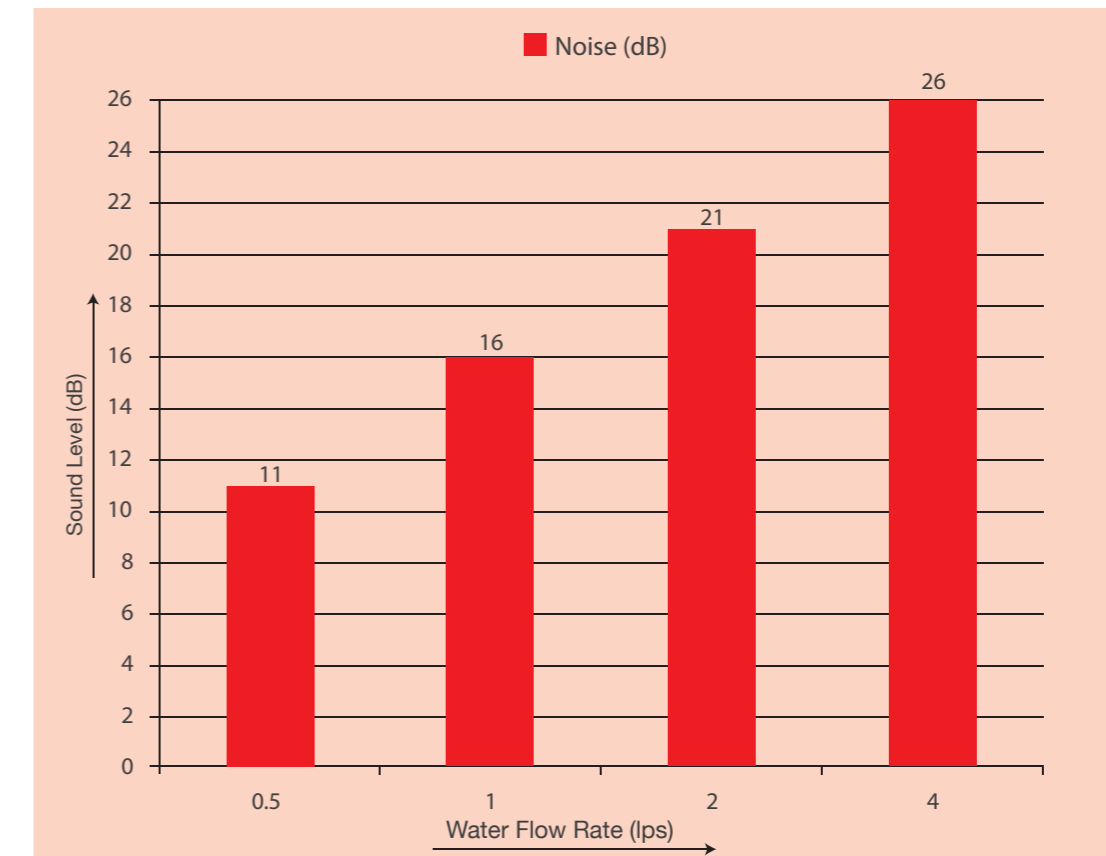
For jointing purpose, the fittings are provided with special rubber sealing rings, fitted in the grooved sockets of the fittings for sizes 75mm to 160mm while solvent cement type sockets are provided for 40mm & 50mm sizes.

PRINCE PIPING SYSTEM also offer special pipe clamps having sound absorbing rubber lining which dampen the noise transmitted from pipeline to building structure

## ▶ ADVANTAGES OF SILENFIT SYSTEM

- ▶ Silent operation.
- ▶ Compatible with other drainage products
- ▶ Sockets with rubber sealing rings allow for thermal expansions & contractions of pipeline.
- ▶ The jointing and installation procedures are similar to regular UPVC Sewage (SWR) piping system.
- ▶ The basic polymer used in pipes & fittings is PVC, which is self-extinguishing material and hence does not support fire.
- ▶ Rubber sealing rings ensure firm insertion joints, zero leakage and prevent noise transmission.
- ▶ Long life.

Sound level of the Silentfit Piping Systems as per VDI 4100:



DIMENSIONS FOR SILENFIT PIPES.

Pipe Size (mm.)	Nominal Outside Diameter (mm.)	Mean Outside Diameter (mm.)		Wall Thickness (mm.)	
		Minimum	Maximum	Minimum	Maximum
40	40.0	40.00	40.20	3.20	3.40
50	50.0	50.00	50.20	3.20	3.40
75	75.0	75.00	75.30	3.20	3.50
110	110.0	110.00	110.30	3.40	3.80
160	160.0	160.00	160.40	4.20	4.60

# ▶ QUALITY ASSURANCE TESTS

ACCEPTANCE TESTS – Test carried out on samples taken from a control unit for the purpose of acceptance of the same.

- 1) Visual inspection.
- 2) Dimensions.
- 3) Reversion test.
- 4) Stress relief test.
- 5) Impact strength.
- 6) Tensile strength.
- 7) Axial shrinkage.
- 8) Water tightness to joint.
- 9) Resistance to dichloromethane.

TYPE TESTS – Test carried out to establish the suitability of product for long term performance capability.

- 1) Vicat softening temperature.
- 2) Effect of sun light
- 3) Resistance to sulfuric acid.

<b>RUBBER RING FITTING</b> (Adequa, Uralita, SPAIN)	<b>COUPLER</b>  75mm, 110mm	<b>BEND 87.5°</b>  75mm, 110mm, 160mm	<b>BEND WITH DOOR</b>  110mm	
	<b>SINGLE TEE</b>  75mm, 110mm, 160mm	<b>DOUBLE TEE</b>  110mm	<b>SINGLE Y</b>  75mm, 110mm, 160mm	<b>DOUBLE Y</b>  75mm, 110mm
	<b>BEND 45°</b>  75mm, 110mm	<b>CLEANSING PIPE</b>  75mm, 110mm, 160mm	<b>SOCKET PLUG</b>  75mm, 110mm	<b>REDUCER</b>  110 X 75mm

Solvent joint fittings of 40 mm & 50 mm are available