

POLIRAN

General Silent Push-Fit Building Drainage System

DIN 4102: B2

17 dB(A)

Soundproof & Economy



German Technology

www.poliran.org

POLIRAN General Silent "PGS" system provides three-layer push fit pipe made by the latest Coextrusion technology:

1. External layer

Material: polypropylene

resistant to impact and mechanical damages

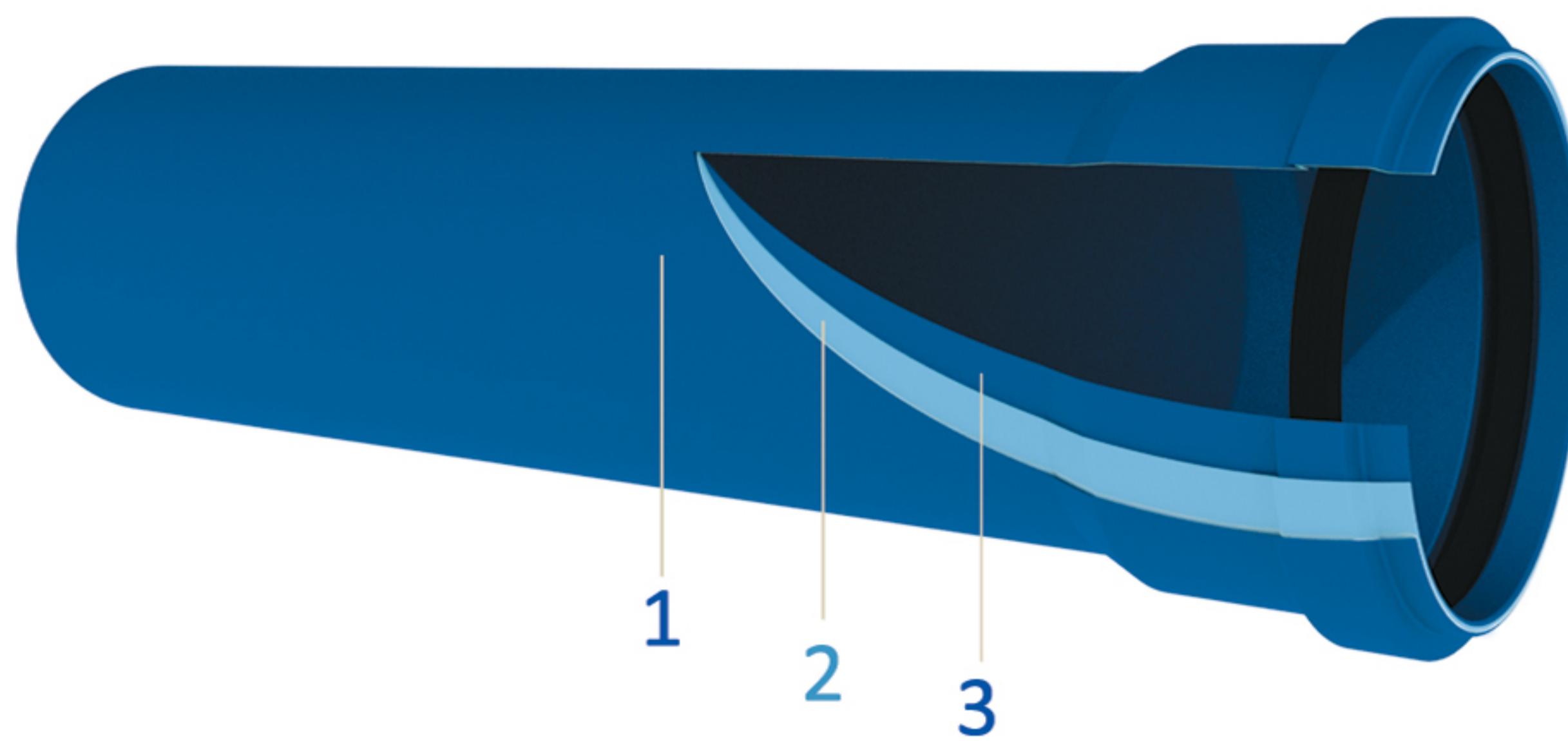
2. Middle layer

Material: special mineral reinforced compound called Poliran EC

3. Internal layer

Material: polypropylene

internal layer provides an extremely smooth surface, with the least chance of clogging and blockage. It is also resistant against heat and chemicals



Acoustic performance of Poliran General Silent

Sewage flow inside piping system produces noise that is transferred to building environment in two ways:

1-airborne sound: this is the sound that travels through the air into the room. Limiting the propagation of this sound is achieved by using sound absorbing materials. PGS reduce air-borne noise with its 3-layer pipe structure and sound absorbing compound of a special formula.

2- structure-borne sound: is the sound that first occurs through a solid structure generated from a vibrating source or an impact. The vibrations pass through pipe clamps and to the building's structure and from there to the adjacent as an air-borne noise. PGS reduces structure-borne noise by using poliran RC clamps; a special pipe clamp with rubber linings to uncouple vibrations from the piping system.

PGS significantly reduces noise transmission by:

1-Consider the right path for perpendicular pipes in sewer system design. Also, insulate ducts in personal areas as like as bedrooms.

2- Sewer and vent system design should follow principles and must be done in an engineering way. It also should be of minimum complexity.

3- Follow sewer system drawings to have a detailed and accurate installation. Avoid installing perpendicular pipe inside walls. Its better to use ducts for them.

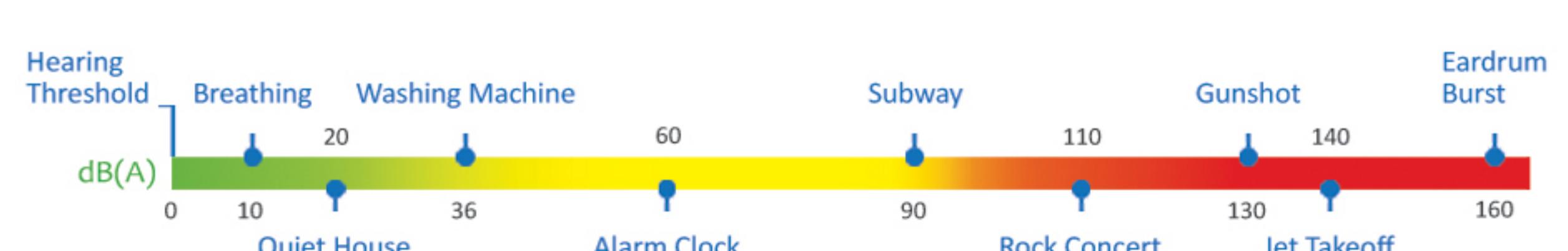
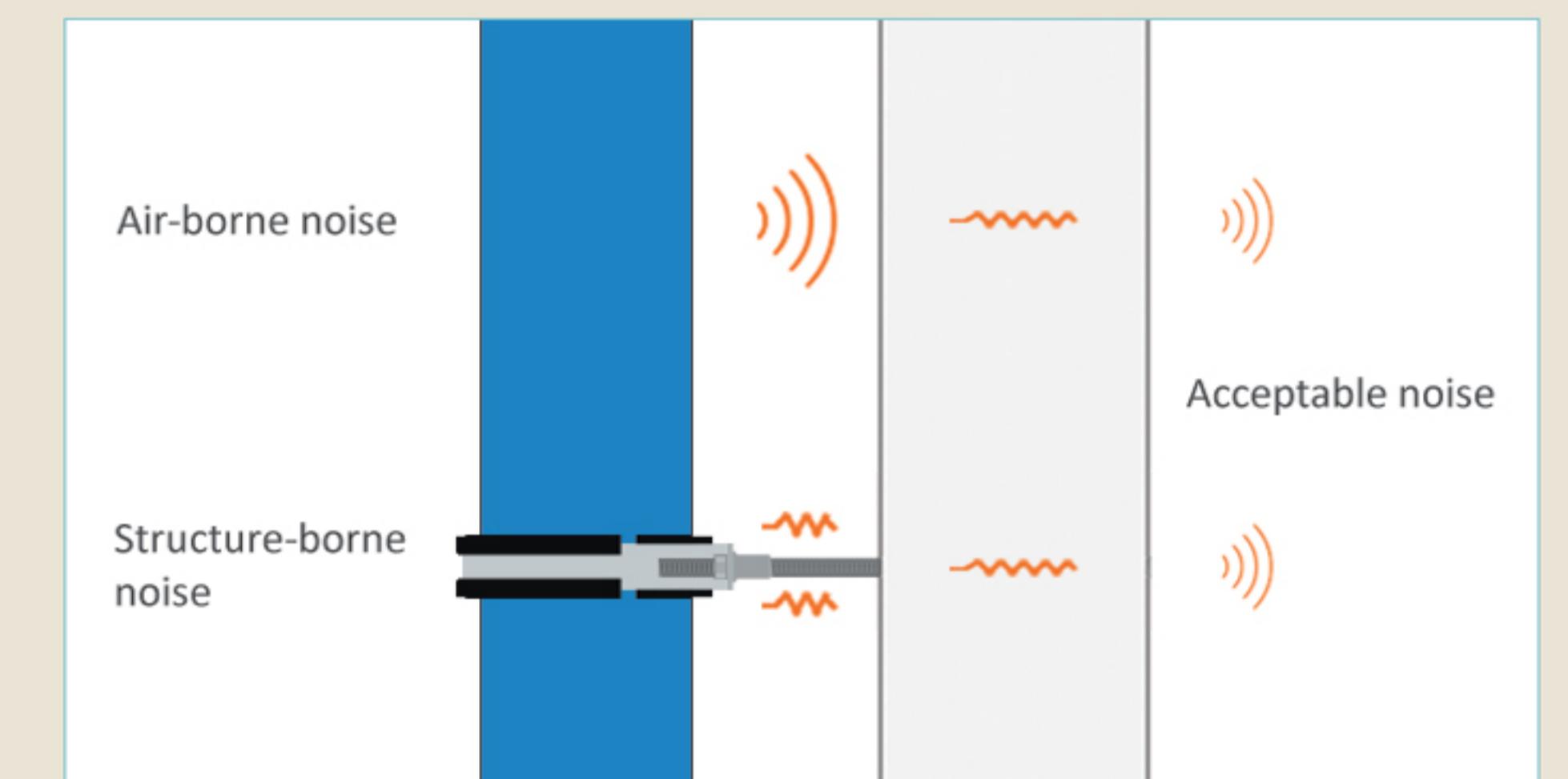
4-Choose an appropriate and sound proof drainage system.

5-Use vibration damping and sound proof pipe clamps to fix the drainage system.

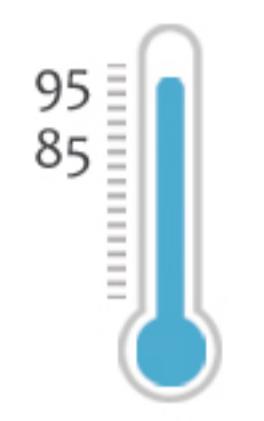
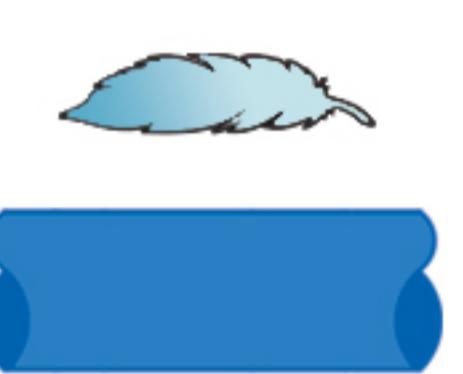
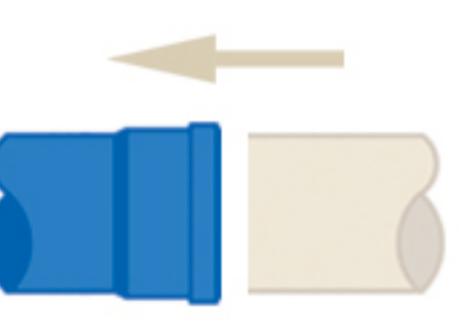
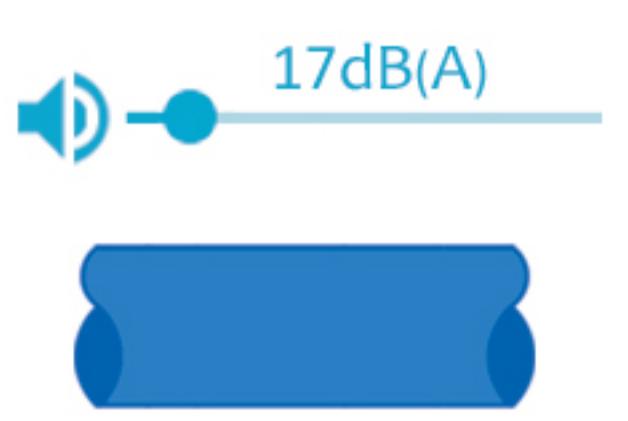
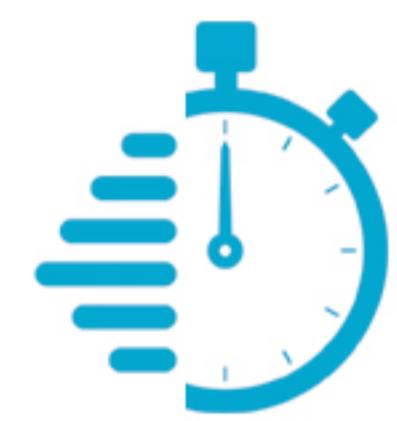
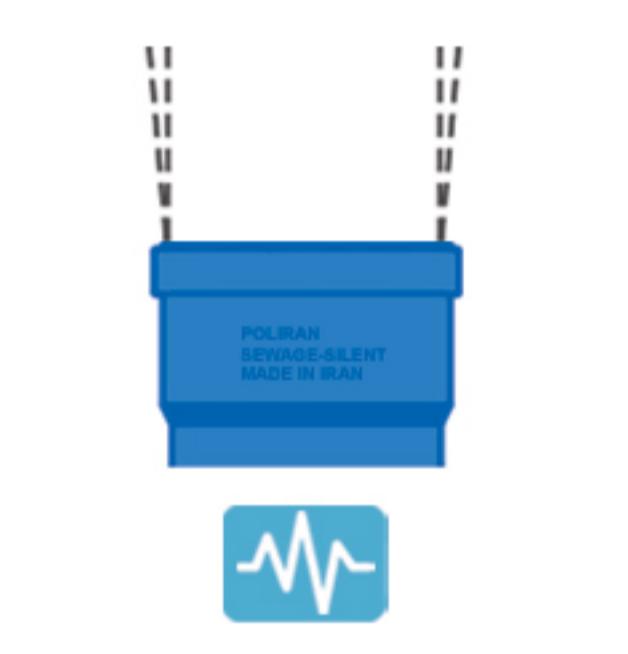
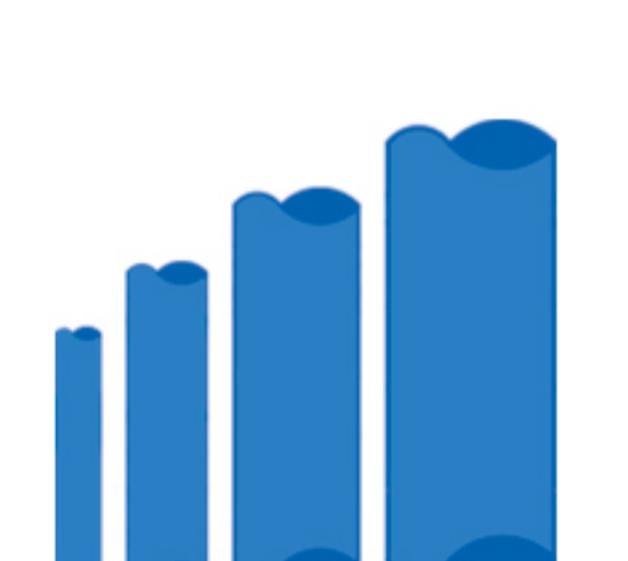
Advantages

structure-borne noise is minimized by using POLIRAN RC clamps air-borne sound is controlled due to applying sound absorbant compound in middle layer.

noise transmission in critical points of system is controlled by employing long-neck 45° bend and gated trap.



DIN 4109 establishes that the maximum noise level that can be produced by a drainage system inside a building is 30dB. The directive VDI 4100 limits the noise levels in its strictest requirements to 20dB. PGS noise level is even less than the ranges mentioned in popular international standards.

	General Silent DWV system Class B2 as per DIN 4102
	High temperature resistance Up to 95°C
	Excellent chemical resistance As per ISO 10358
	Easy handling & transportation Light weight system
	Easy Transition to other systems Various solutions available
	Excellent acoustic performance In conjunction with RC Clamps
	Faster installation of joints No need for welding or glue
	Double socket pipes available Minimum pipe wastage
	Precision of rubber ring joints Flexible system
	Wide range of pipe and fittings DN 50 to DN 160 mm

POLIRAN General Silent "PGS"

General Silent Push-fit is a sound proof and economy building drainage system, born through precision engineering and extensive research, that's fully manufactured and certified in accordance with the European standard "EN 1451". to meet all system requirements PGS comes in a wide range of size from 50 to 160 mm. PGS pipe and fittings are High temperature and Excellent chemical resistance. Their extremely smooth internal surface prevents any blockage. Jointing pipes and fittings in this system doesn't require welding or glue. All joints are sealed by lip seal rings which increase flexibility of the system even in the case of ground movement and earthquake.

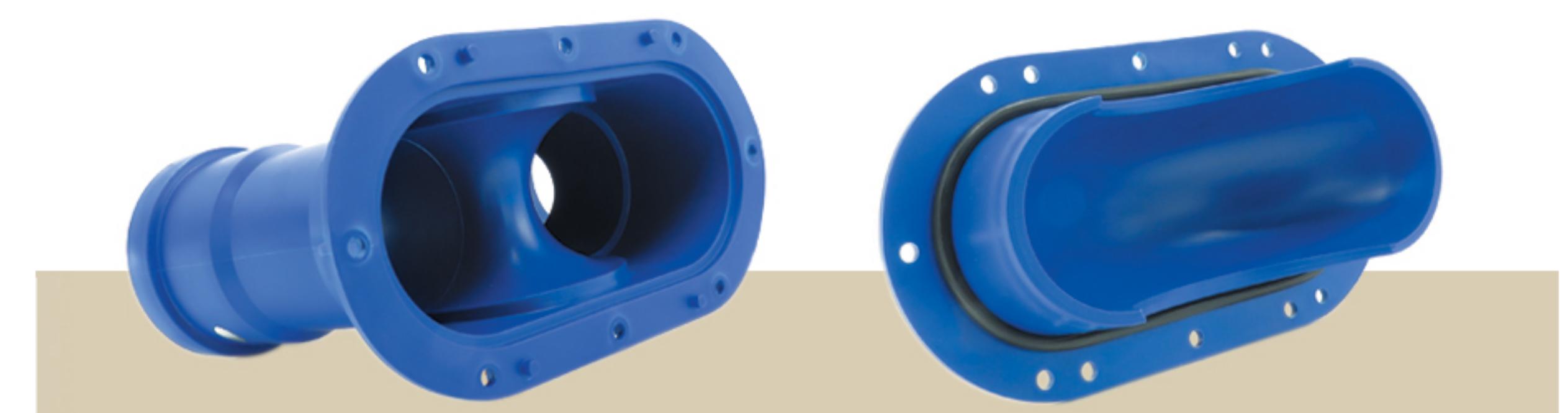
The fire behaviour of the system is classified as B2 in accordance with DIN 4102. The acoustic performance of system is certified to be 17 dB (A).

The lip seal rings applied in this system are from M.O.L, Germany and in accordance with EN 681-1, ensuring a durable sealing effect and longer life span for elasticity. By combining these products with RC clamps, you can create a truly flexible and affordable semi Silent plumbing system.



Poliran Gated Trap, designed and patented by Poliran's R&D team, is an innovative two-piece trap reg No.69338. It provides an adequate water seal to prevent back passage of sewage gases and easy access to remove clogging and any inspection .

- Perfect and permanent water tightness
- Smooth Internal surface, preventing scale deformation and blockage. Ensures an unobstructed flow
- Uniform cross section along the water passage
- Adequate water seal equal to trap diameter
- Thoughtfully designed to avoid push-fit seals from being always submerged in water
- Trap's outlet angle of 87° make the installation easier with no need for an additional bend
- Safe and secure fastening by installing a pipe clamp under inlet Fittings

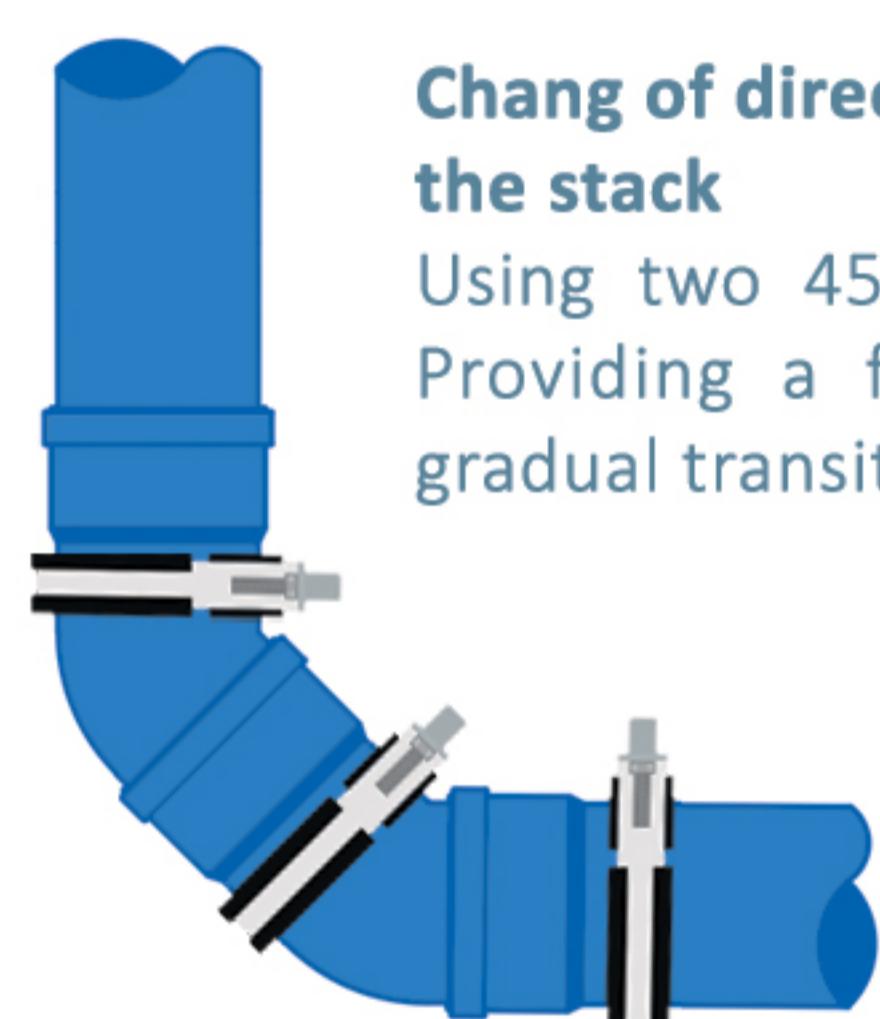


Upper Part

Lower Part

Special Fittings

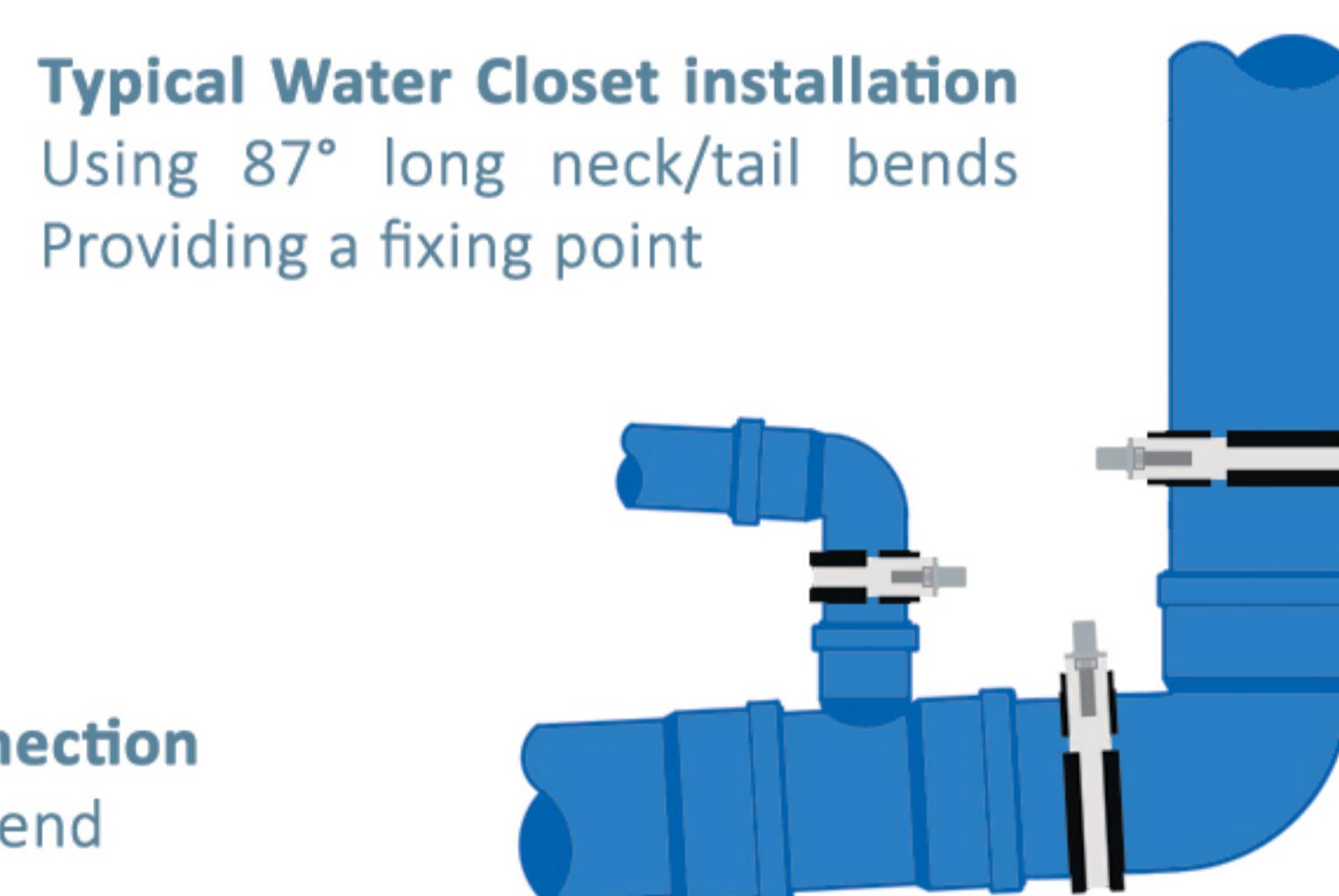
Poliran's R&D department always cares the comments of plumbing operators about difficulties of drainage system installation. One of common problems, especially if a water tightness test has to be conducted, is fixing the fittings more stable at some of critical points of piping pass where a change in flow direction occurs. To address this problem, special fittings has been designed with capability of installing fixing point without imposing pressure on the socket. Otherwise, the socket gets out of roundness and it will disrupt sealing of system.



Change of direction at the base of the stack
Using two 45° long neck bends
Providing a fixing point and a gradual transition



Horizontal branch connection
Using a 45° long neck bend
Providing a fixing point



Typical Water Closet installation
Using 87° long neck/tail bends
Providing a fixing point



50 - 75 - 110 - 125



110

Poliran RC clamps are especially designed for the sound-proof drainage systems. The body clamp has two unequal semicircles, covered with rubber inlays which helps pipes and fittings to provide a stable grip that limits transmission of vibration caused by sewage flow to building structure and internal environment.

- Made of electrogalvanized steel. For more corrosion protection zinc flake coating is available upon request
- Specially designed linings made of rubber
- Excellent strength characteristics with a 3-piece structure
- Suitable for soundproofing other metal or plastic systems
- Simple and fast installation
- Available in 4 different types, from DN50 to DN160 mm
- In accordance with the requirements of DIN 4109 & VDI 4100
- Tested by the renowned Fraunhofer institute of Germany



Stand Pipe Clamp



Screw Clamp



Weldable Clamp



Adjustable Clamp



About Us

Founded in 1971, Poliran is a leading manufacturer of plastic pipe systems, providing precisely engineered solutions for pipes and fittings used in water conveyance, irrigation and building drainage systems.

Deep attention to quality requirements and continuous improvement of products, as well as using best raw materials and updated machinery and technologies in all of our four manufacturing sites has defined Poliran as an Industry pioneer in this field. To achieve our goals in terms of quality, we have adopted ISO 9001 Quality Management System.

Thanks to the teams of experienced engineers and experts, capable of dealing with the most complex system requirements, with many decades of technical assurance, guiding as a leading benchmark; Poliran is a preferred supplier to many international and prestigious organizations.

With more than 1000 committed employees, 100 influential branches, 30 overseas agents and more than 600 active resellers, Poliran takes advantage of 4 fully equipped advanced research labs through which the company designs, tests and develops its products in more than 17 categories.



Milad Tower - Tehran

Some of our projects:



Tali Park - Tehran



Iran Mall - Tehran



Nasim City - Baghdad



Moderna Complex - Tehran



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