

POLIRAN
General Silent+
Building Drainage System



DIN 4102: B2

17 dB(A)

Soundproof & Economy



German Technology

www.poliran.org

General Silent+ Push-fit system provides three-layer push fit pipe made by the latest Coextrusion technology:

1. External layer

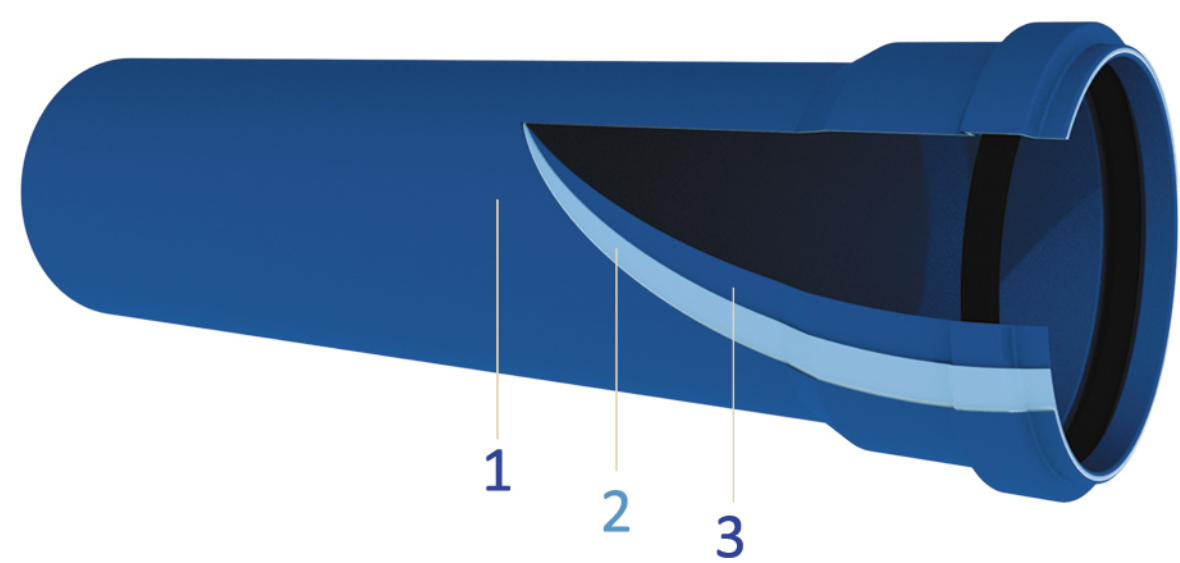
Material: polypropylene
resistant to impact and mechanical damages

2. Middle layer

Material: special mineral reinforced compound called Poliran EC

3. Internal layer

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



Acoustic performance of General Silent+ Push-fit

Sewage flow inside piping system produces noise that is transfered 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 achived by using sound absorbing materials. PGS reduce air-borne noise with its 3-layer pipe structure and sound absorbing compound of a special formula.

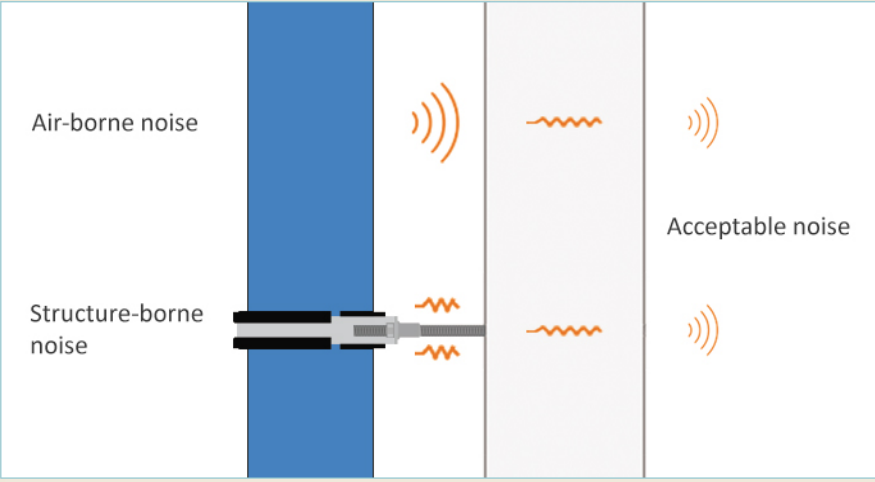
2- structure-borne sound: is the sound that first occures through a solid structure generated from a vibrating source or an impact. The vibrations pass through pipe clamps and to the building’s structure and from there to the adjacent as an air-borne noise. PGS reduces structure-borne noise by using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

General Silent+ Push-fit significantly reduces noise transmission by:

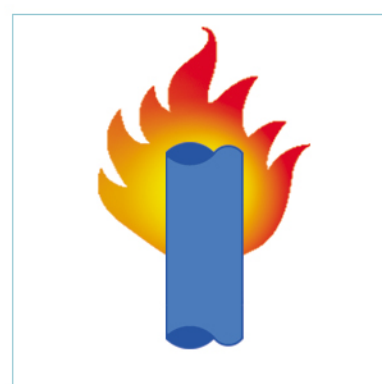
- 1-Consider the right path for perpendicular pipes in sewer system design. Also, insulate ducts in personal areas as like as bedrooms.
- 2- Sewer and vent system design should follow principles and must be done in an engineering way. It also should be of minimum complexity.
- 3- Follow sewer system drawings to have a detailed and accurate installation. Avoide 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

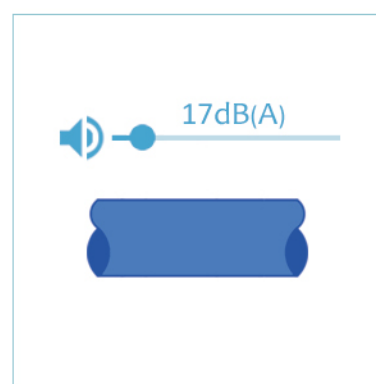
structure-borne noise is Minimized by using POLIRAN RC clamps
air-borne sound is controled due to applying sound absorbant compound in middle layer.
noise transmission in critical points of system is controlled by employing long-neck 45° bend and gated trap.



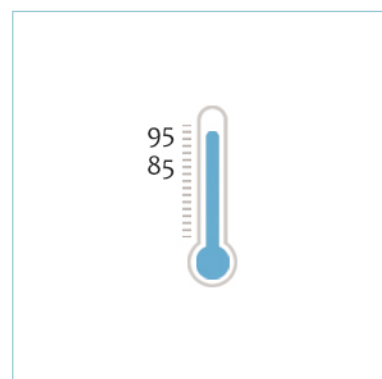
DIN 4109 establishes that the maximum noise level that can be produced by a drainage system inside a building is 30dB. The directive VDI 4100 limits the noise levels in its strictest requirements to 20dB. PGS noise level is even less than the ranges mentioned in popular international standards.



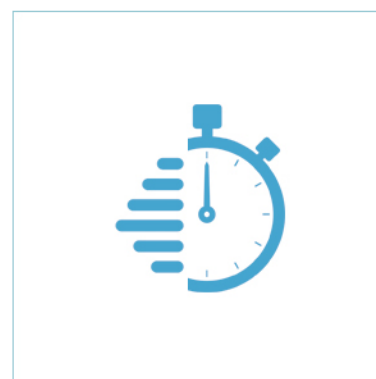
General Silent DWV system
Class B2 as per DIN 4102



Excellent acoustic performance
In conjunction with RC Clamps



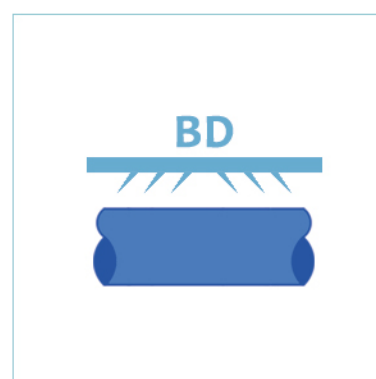
High temperature resistance
Up to 95°C



Faster installation of joints
No need for welding or glue



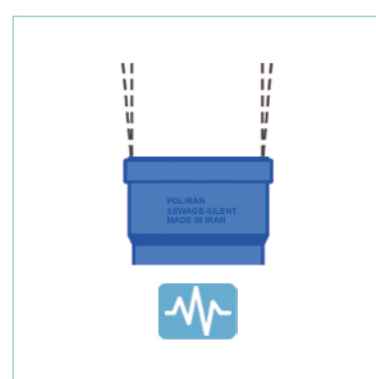
Excellent chemical resistance
As per ISO 10358



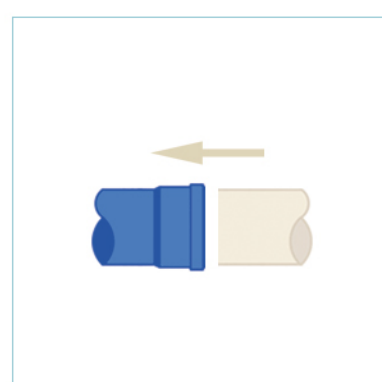
Can be installed underground
High ring stiffness



Easy handling & transportation
Light weight system



Precision of rubber ring joints
Flexible system



Easy Transition to other systems
Various solutions available



Wide range of pipe and fittings
DN 50 to DN 160 mm

General Silent+ Push-fit is Poliran's latest polypropylene push-fit product, designed to meet the requirements of EN 12056 standard for gravity drainage systems inside buildings. Aiming to expand the use of push-fit systems as the most modern and optimized drainage piping solution, this product is engineered and manufactured to deliver high quality while remaining cost-effective for construction projects demanding top-tier materials.

Utilizing a special formulation and advanced materials engineering, this system not only enhances technical and aesthetic characteristics but also increases structural strength and ring stiffness. Furthermore, by securing a BD application certificate, it allows for underground installation.

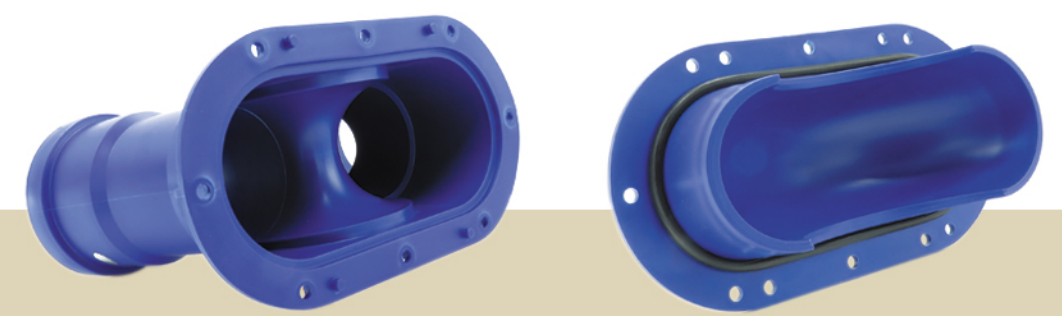
General Silent+ is manufactured in accordance with the European standard EN 1451, with outer diameters ranging from 50 to 160 mm. Connections in this system are established easily using rubber sealing rings, simply by pushing the pipe or fitting into the socket, requiring no solvent cement or welding. The sealing rings used in this system are manufactured by the reputable German company M.O.L., guaranteeing a reliable and long-lasting seal. In addition to increasing installation speed and efficiency, this connection method improves the system's flexibility and preserves seal integrity even during non-destructive earthquakes.

The optimal combination of high-grade raw materials, state-of-the-art precision molds, and modern machinery ensures a premium quality end-product. Just like Protect and Silent 10 systems by Poliran, it offers a reliable and durable solution for building drainage systems.



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

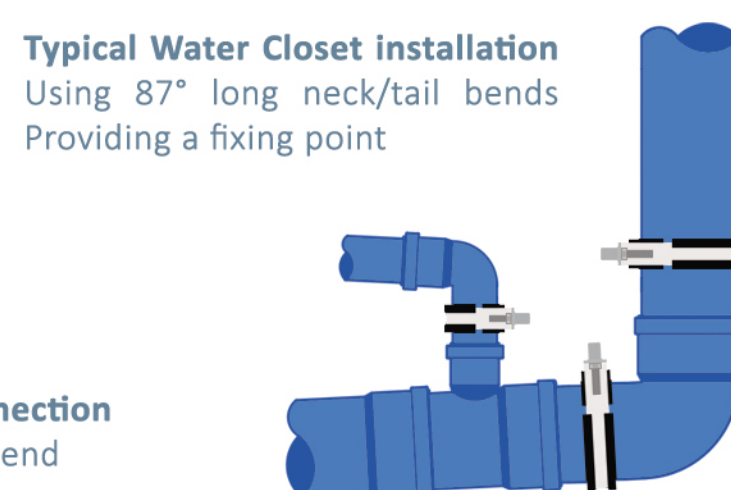
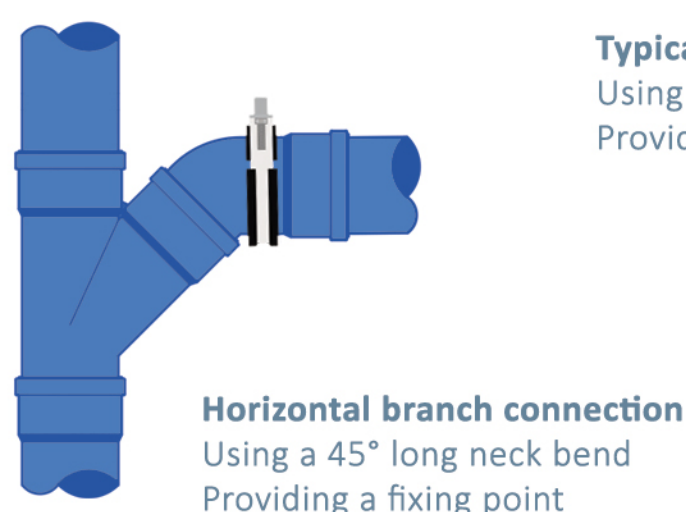
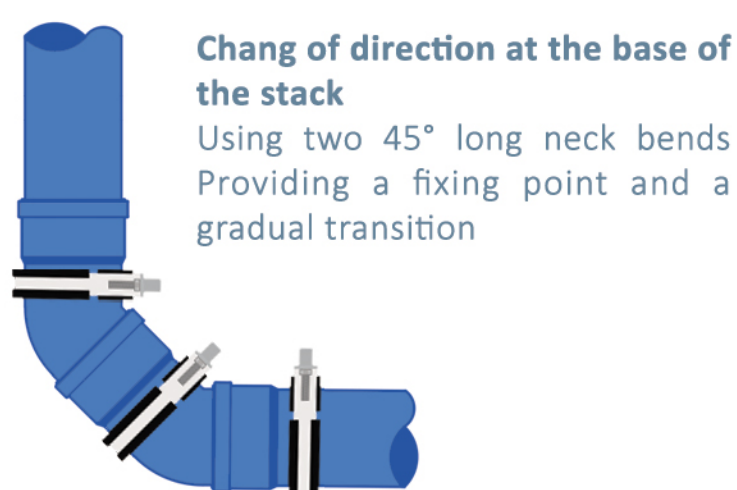


Upper Part

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.



RC clamps are especially designed for the soundproof drainage systems. The body clamp has two unequal semi-circles, 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



Bend - 15°



110

Bend - 30°



50 - 75 - 110

Bend - 45°



50 - 75 - 110 - 125 - 160

Bend - 67°



50 - 110

Bend - 87°



50 - 75 - 110 - 125

Reducer



50/75 - 50/110 - 75/110
110/125 - 125/160

Access Pipe



75 - 110 - 125 - 160

Double Branch - 67°



110

Equal Branch - 45°



50 - 75 - 110 - 125 - 160

Reducing Branch - 45°



75/50 - 110/50 - 110/75
125/110 - 160/110

Equal Branch - 87°



50 - 75 - 110

Reducing Branch - 87°



75/50 - 110/50

Vent Terminator



50 - 63 - 75 - 90 - 110 - 125 - 160

Socket Plug



50 - 75 - 110 - 125 - 160

Sleeve Socket



50 - 75
110 - 125 - 160

Clean-Out



50 - 75 - 110 - 125 - 160

Socketed P-Trap (HDPE)



50 - 75 - 125/110 - 110/110

Riser



125/110 - 75/50

Rubber Connector



50

Tools & Accessories



Pipe Chamfering Tool



Easy Grip



Stopper 75 - 110 - 125

Single Socket Pipe



50 - 75 - 110 - 125 - 160 - 200
30, 50, 100, 200 & 300 cm
Size 200 mm : Protect Type

Double Socket Pipe



50 - 75 - 110 - 125 - 160 - 200
50, 100, 200 & 300 cm
Size 200 mm : Protect Type

Cutting & Chamfering Tool



40-125 40-160

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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POLIRAN Building, No. 17,
Zagros St., Arjantin Sq.,
Tehran, Iran
Postal Code : 1516643311
Tel : +98 21 88648843
export.dep@poliran.org
WhatsApp : +98 912 9465921