Poliner

PRODUCER
OF HIGH QUALITY

CIPP LINERS

www.poliner.eu

IMPLEMENTING NEW TECHNOLOGIES

FOR THE INDUSTRY OF TRENCHLESS PIPELINE REHABILITATION

We pride ourselves on our highly qualified engineers, whose skills and expertise guarantee a high quality of produced liners.

Based on in-house research and development efforts, we implement new technologies in the production of composite materials for trenchless pipeline rehabilitation.

POliner's laboratory carries out tests in determining the flexural properties of materials and establishing proper ring stiffness of different diameter pipeline systems as well as flat samples. We have built up a strong reputation for providing top-quality services and reliable test results.

Our mission is to offer products of superior quality, manufactured in compliance with all health and safety standards in an environmentally friendly way.

TÜV NORD
TÜV NORD Polska Sp. z o.o.
PN-EN ISO 9001
PN-EN ISO 14001 PN-ISO 45001

There is no universal liner that meets all of the criteria and expectations of customers, or one that would be versatile enough to fit all applications. However, we can address the ever-increasing challenges faced by the trenchless rehabilitation industry. POliner delivers of a highest quality tailor-made rehabilitation liners to satisfy every customer. **Share your project with us and we will find the optimal solution for you.**

OVER 15 YEARS OF EXPERIENCE

CIPP fiberglass liners saturated with polyester or vinyl ester resins – made through folding

Advantex® type fiberglass used as the carrier is characterized by high resistance to ageing. During the impregnation process, carefully selected combimats are impregnated with unsaturated polyester or vinyl ester resins. Once they have hardened, the resins used for the manufacturing of liners as a final product have no negative impact on the environment. POliner Glass liners are noted for high mechanical parameters that ensure the liners' long-term durability and strength.

The initiation of the co-polymerization process, depending on the type of product, is carried out by exposing the composite to UV or UV-LED light, or high temperature.

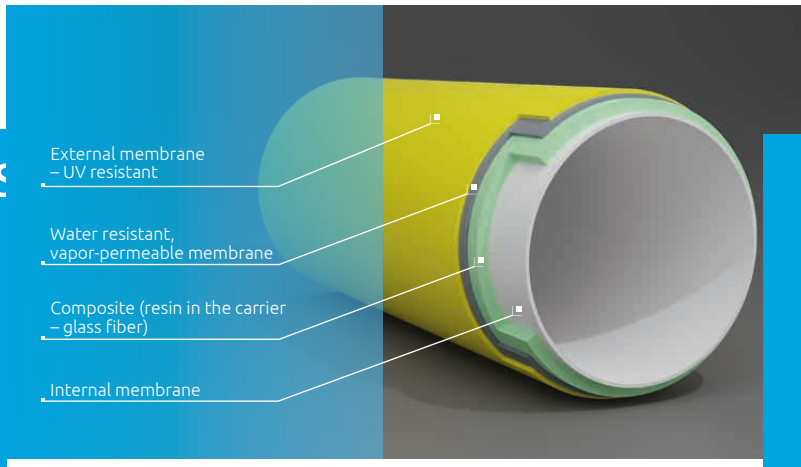
One of the biggest advantages of POliner Glass UV and LED liners is the ability to have complete control over the activities taking place inside the pipe during the liner curing process. This is ensured by cameras mounted on a lamp carriage. If the camera image is a cause of concern one can undertake corrective actions immediately.

Given the diverse range of combimats and resins at our disposal, we create liners perfectly tailored to customer needs.

POliner Glass

Application: non-pressure sewage systems, industrial pipelines

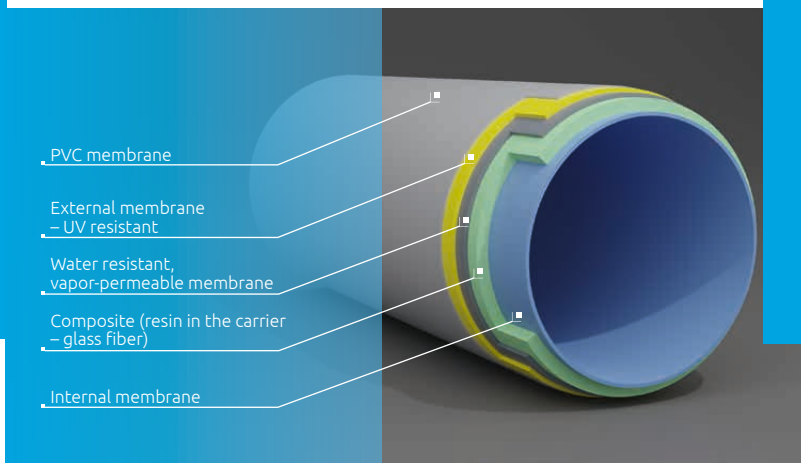
Diameter range: DN150–DN1250
Wall thickness range: 3–20 mm



POliner Intens

Application: pressure and non-pressure sewerage systems, industrial pipelines

Diameter range: DN150–DN1250
Wall thickness range: 3–18 mm



CIPP liner for special applications, dedicated to the rehabilitation of pressure and non-pressure sewerage systems

The glass fiber used as a carrier, thanks to its special design, ensures the transfer of tensional stress caused by the internal pressure in a pipe. The glass fiber is resistant to chemicals and has anti-corrosive properties. A PVC sleeve used as the external membrane allows safe application of the liner even in extreme conditions like the infiltration of sub-surface water or damaged pipe structure.

During the impregnation process, the POliner Intense liner is impregnated with a special vinyl ester resin noted for best strength performance. The liner can be used for the rehabilitation of pipes even in 3rd-grade conditions.

The initiation of the co-polymerization process is carried out by exposing the composite to UV or UV-LED light, or high temperature.

CIPP fiberglass liners saturated with polyester or vinyl ester resins – made through filament winding

Advantex® type fiberglass used as the carrier is characterized by high resistance to aging. The material, impregnated with unsaturated polyester or vinyl ester resin, during the winding process, creates an extremely strong structure. Once they have hardened, the resins used for the manufacturing of liners as a final product have no negative impact on the environment.

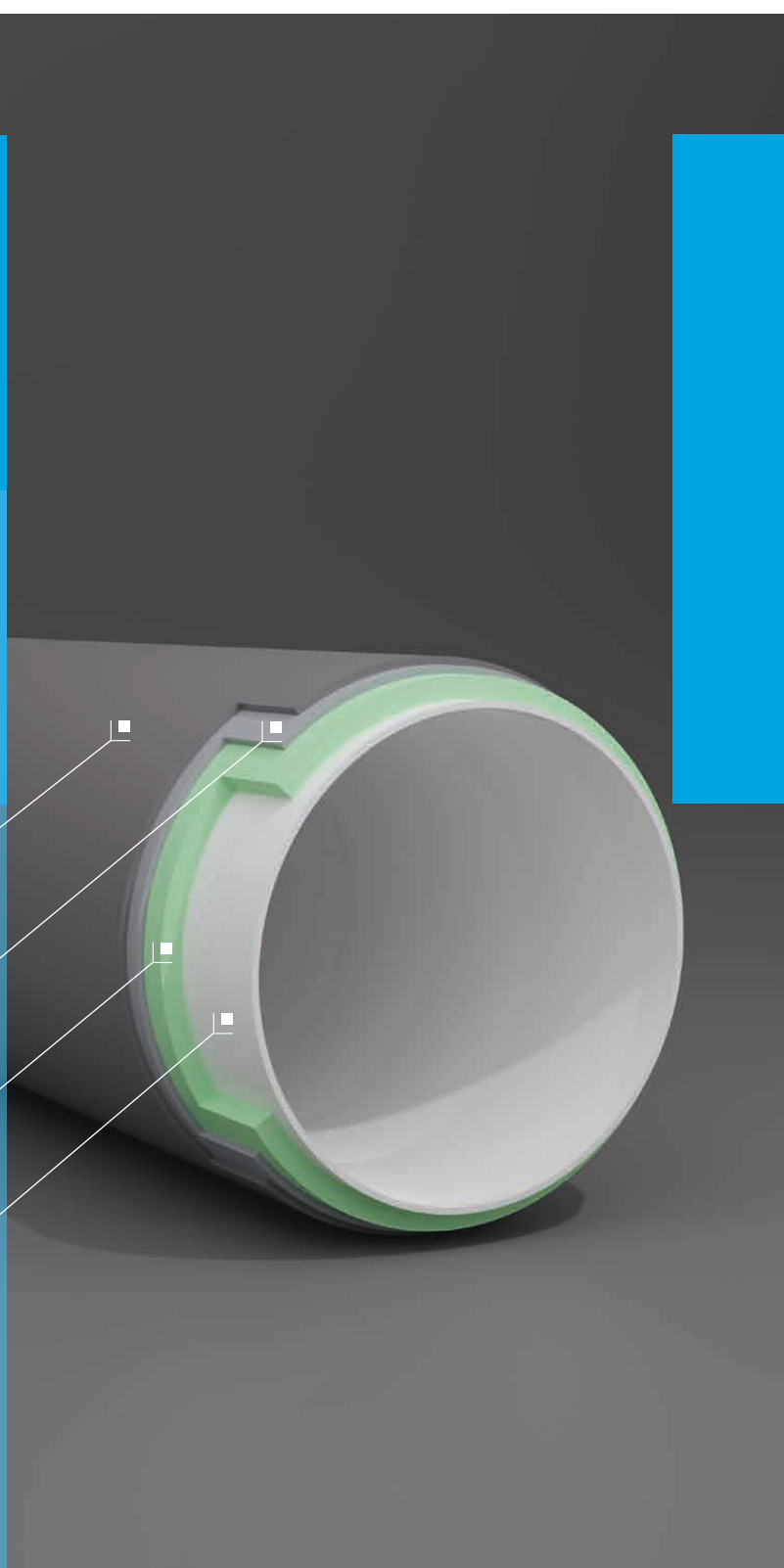
The initiation of the co-polymerization process, depending on the type of product, is carried out by exposing the composite to UV or UV-LED light, or high temperature.

Thanks to their design, POliner Glass Spiral liners are noted for their high resistance to tearing and increased flexibility, which allows use in curves of several degrees.

POliner Glass Spiral

Application: non-pressure sewage systems, industrial pipelines

Diameter range: DN200–DN400
Wall thickness range: 3–6 mm



CIPP liners are made of felt-structure polyester fabric, impregnated with polyester, vinyl ester or epoxy resins, made through folding

The use of felt-structure polyester fabric as the carrier ensures the liner's high flexibility and, in consequence, a perfect fit with the shape of the pipe and ability to accommodate curves. The liner is impregnated with unsaturated polyester, vinyl ester, or epoxy resin. Once they have hardened, the resins used for the manufacturing of liners as a final product have no negative impact on the environment.

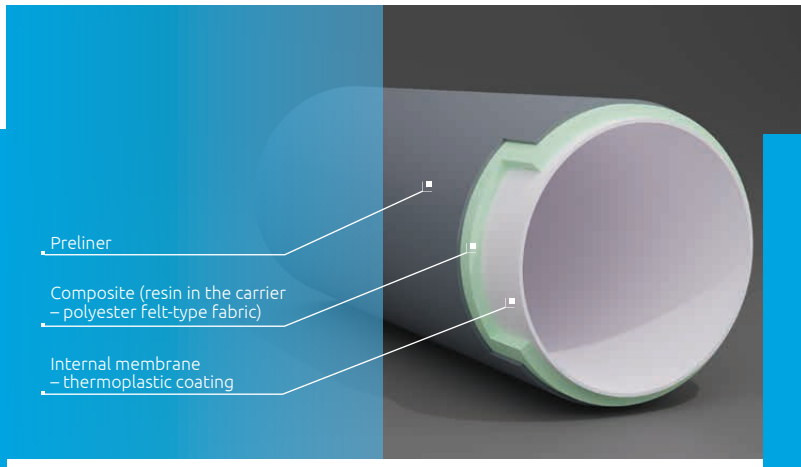
The initiation of the co-polymerization process is carried out thermally.

The advantage of POliner Felt and Felt & Glass liners is the ability to install them inside a pipe using the inversion method, which allows the insertion of a liner also when there is limited access to the pipe in need of rehabilitation. The whole process of inserting and curing the liner can be carried out from only one manhole. Given the specificity and complexity of tasks in the trenchless rehabilitation industry is a significant advantage.

POliner Felt

Application: non-pressure sewage systems, industrial pipelines

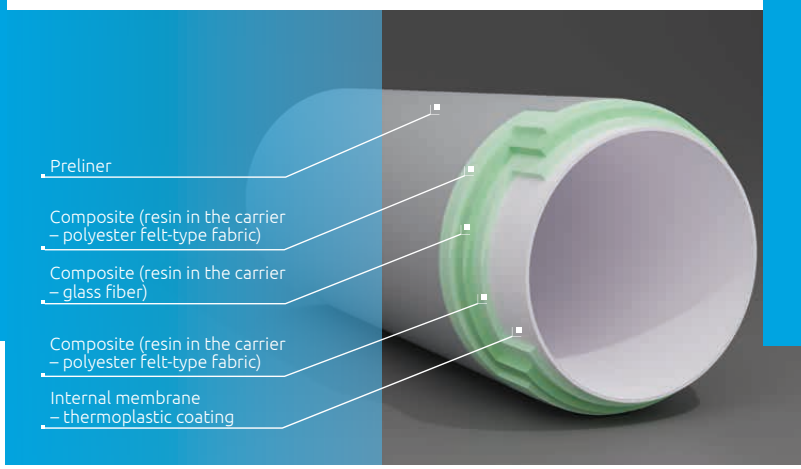
Diameter range: DN150–DN2000
Wall thickness range: 3–60 mm



POliner Felt&Glass

Application: non-pressure sewage systems, industrial pipelines

Diameter range: DN200–DN1200
Wall thickness range: 3–26 mm



The initiation of the co-polymerization process, depending on which resin is used, is carried out by exposing the composite to UV light, or high temperature.

The number of layers of the polyester fabric is chosen depending on strength requirements. For customers who need a product with improved construction performance, we offer a liner with fiber glass added for improved strength – POliner Felt & Glass.

The POliner Hydro series of products are CIPP liners dedicated to trenchless rehabilitation of water supply pipelines

They can also be used in industrial pipelines and pressure sewerage systems. The liners are impregnated with special styrene-free resins – polyester or epoxy depending on customer needs. Our product is certified by the Polish National Institute of Hygiene (PZH), which confirms it can be used for drinking water systems.

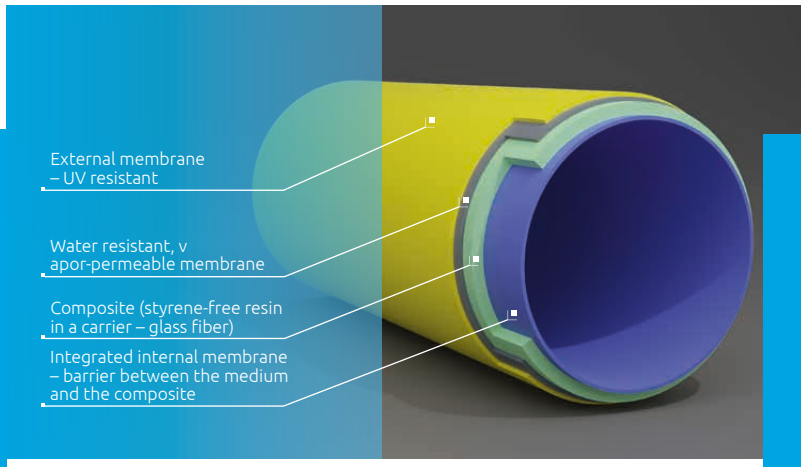
APPLICATION: PRESSURE WATER SUPPLY SYSTEMS, PRESSURE SEWAGE SYSTEMS, INDUSTRIAL PIPELINES

NARODOWY INSTYTUT ZDROWIA PUBLICZNEGO · PIB · PZH
PRODUKT Z ATESTEM

POliner Hydro Glass

Application: pressure water supply systems, pressure sewage systems, industrial pipelines

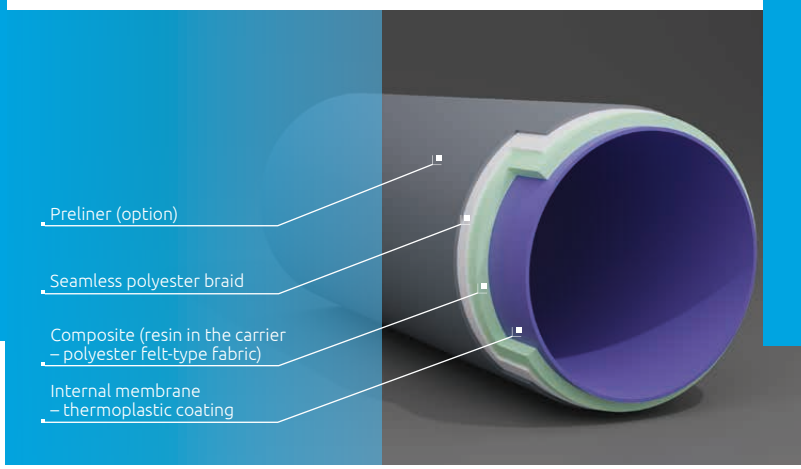
Diameter range: DN150–DN1200
Wall thickness range: 4–12 mm



POliner Hydro Felt

Application: pressure water supply systems, pressure sewage systems, industrial pipelines

Diameter range: DN150–DN1200
Wall thickness range: 4–30 mm



POliner Hydro Glass

A liner made of the highest quality glass fiber has a thin layer of fabric with an integrated internal membrane that serves as a barrier between the transported medium and the composite. The membrane also has a sealing function for the host pipe. The dry liner is impregnated with styrene-free polyester resin which, thanks to its exceptional formula, after curing, does not pose any safety hazard to human health or the environment and can come into contact with drinking water.

The initiation of the co-polymerization process is carried out by exposing the composite to UV or UV-LED light, or high temperature.

POliner Hydro Felt

A CIPP liner is made of felt-structure polyester fabric with a thermoplastic coating which after the inversion process serves as the internal membrane. An additional layer comes from a seamless polyester braid for increased resistance to internal pressure. The liner is impregnated with a styrene-free epoxy resin (at the site of the installation) or a polyester resin.

The initiation of the co-polymerization process is carried out thermally.

CIPP POliner Hydro liners offer higher flexibility after curing (in comparison with liners impregnated with styrene resins). This gives the new liner a better fit to the host pipe and ensures resistance to pressure surges.

Given the diverse range of combimats and resins at our disposal, we produce liners perfectly tailored to customer needs.

POliner Hydro products, depending on their function, are divided into:

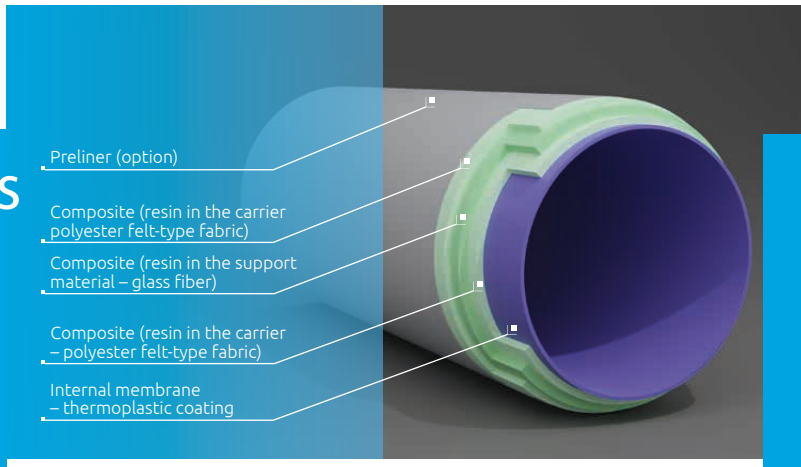
CONSTRUCTION LINERS:
POliner Hydro Glass, POliner Hydro Felt, POliner Hydro Felt & Glass;

SEALING LINERS:
POliner Hydro Seal.

POliner Hydro Felt&Glass

Application: pressure water supply systems, pressure sewage systems, industrial pipelines

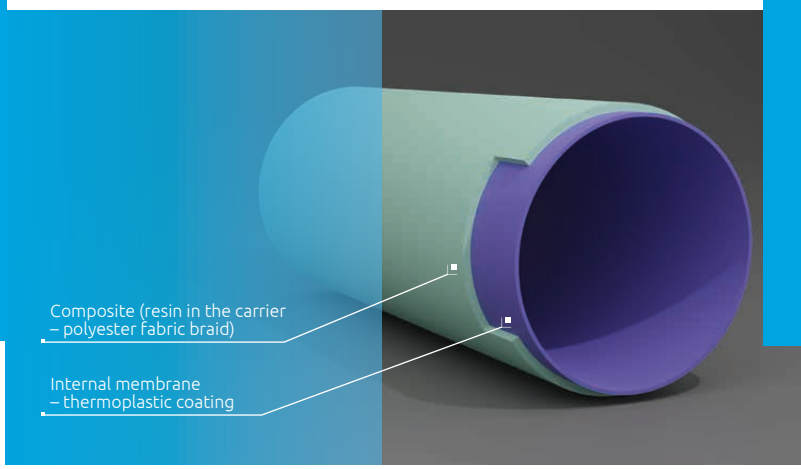
Diameter range: DN300–DN1200
Wall thickness range: 3–24 mm



POliner Hydro Seal

Application: pressure water supply systems, pressure sewage systems, industrial pipelines

Diameter range: DN150–DN400
Wall thickness range: 3–4 mm



POliner Hydro Felt & Glass

A CIPP liner made of felt-structure polyester fabric with added reinforcement made of a layer of high quality fiber glass. The liner has a thermoplastic coating which, after the inversion process, serves as the internal membrane. The liner is impregnated with polyester or epoxy resin (on-site of the installation).

The initiation of the co-polymerization process is carried out thermally.

POliner Hydro Seal

A sealing CIPP liner made of seamless braid polyester fabric with a thermoplastic coating which after the inversion process serves as the internal membrane. The use of such a lining ensures full tightness and improvement of the hydraulic performance of the pipe. The liner is impregnated in styrene-free epoxy resin (on-site of the installation).

The initiation of the co-polymerization process is carried out thermally.

POliner Manhole Panel is a system of GRP panels used to rehabilitate manhole shafts and the inside of inspection chambers in sewerage systems

The GRP panels are made of a fiber-glass reinforced polyester resin laminate. The fiber glass content in the panel ranges from 35% to 60%. The Manhole Panel system is produced as thin-walled tubes, 200–10,000 mm long, with a longitudinal cut, of a wall thickness of 4 mm (+/- 1 mm). They are available as a wound roll or in sheets, cut to any size and shape, which are the perfect choice for rehabilitating chambers. Once installed, the finished product serves as a protective surface.
Diameter range: DN400–DN2000.

APPLICATION: REHABILITATION OF MANHOLE SHAFTS AND THE INSIDE OF INSPECTION CHAMBERS IN SEWAGE SYSTEMS

The panels have a National Technical Assessment issued by the Building Research Institute (ITB) in Warsaw.

The rehabilitation of manholes with the POliner Manhole Panel consists of the insertion of a rolled-up panel through the opening, unfolding it, and affixing it to the surface of the rehabilitated manhole/chamber wall while maintaining an appropriate thickness of the gap, later filled up with injection grout. The joints are glued by laminating the edge with polyester resin.

POliner Manhole Panel

Application: rehabilitation of manhole shafts and the inside of inspection chambers in sewerage systems

Diameter range: DN400–DN2000
Wall thickness range: 4 mm (+/- 1 mm)
Panel length: 200–10,000 mm

Supplementary products

POliner TopHat
Slip films
Denim caps
Brine generators

POliner TopHat

A system of hat profiles cured on site, which is dedicated to the sealing of lateral connections to the main pipeline in gravity sewer systems. The profiles are made of the highest quality felt-structure non-woven polyester fabric. They are available in two versions: 45° or 90° angle between the brim and the lateral.

Denim caps

The denim caps offered by us are produced from tear-resistant, durable cotton fabric. They are designed specifically for use during the installation of CIPP liners. They have a protective function, protecting the liner against possible damage. In intermediate manholes, they support the liner. We offer denim caps without zip and with a zip, with diameters ranging from DN150 to DN1200, of a standard length of L=1.6 m. Other denim protection sizes can be offered on demand.

Slip films

The slip film we offer has a low coefficient of friction, which significantly reduces the forces required when pulling in the liner. For heavy-weight liners, special anti-adhesion agents can be additionally inserted between the slip film and the liner, which reduces the force required to pull in the liner even more.

Brine generators

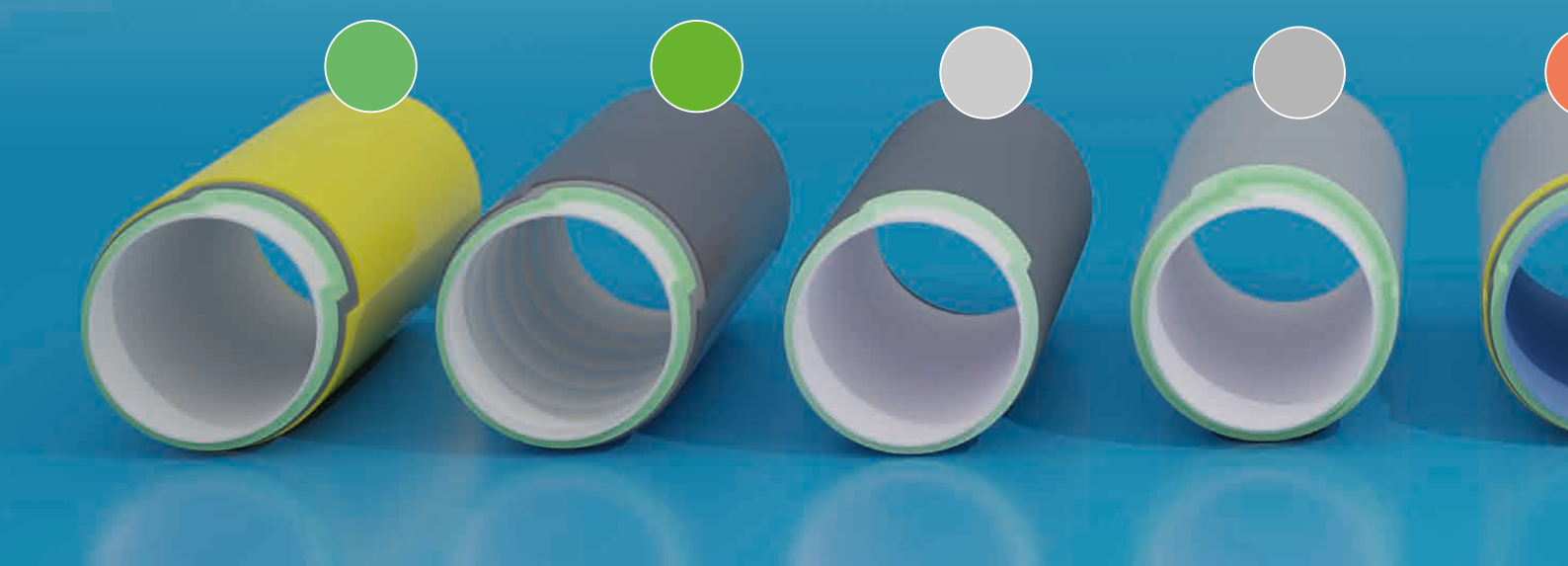
The equipment we produce is a fully automatic unit, with a tank capacity from 6500 dm^3 to 10,000 dm^3. The size of the tank can also be adapted and tailored to individual customer needs.

P – Professional,
O – Optimal,
l – leading,
i – innovative,
n – no-dig,
e – economical,
r – renovation!

PRODUCT SELECTION TABLE

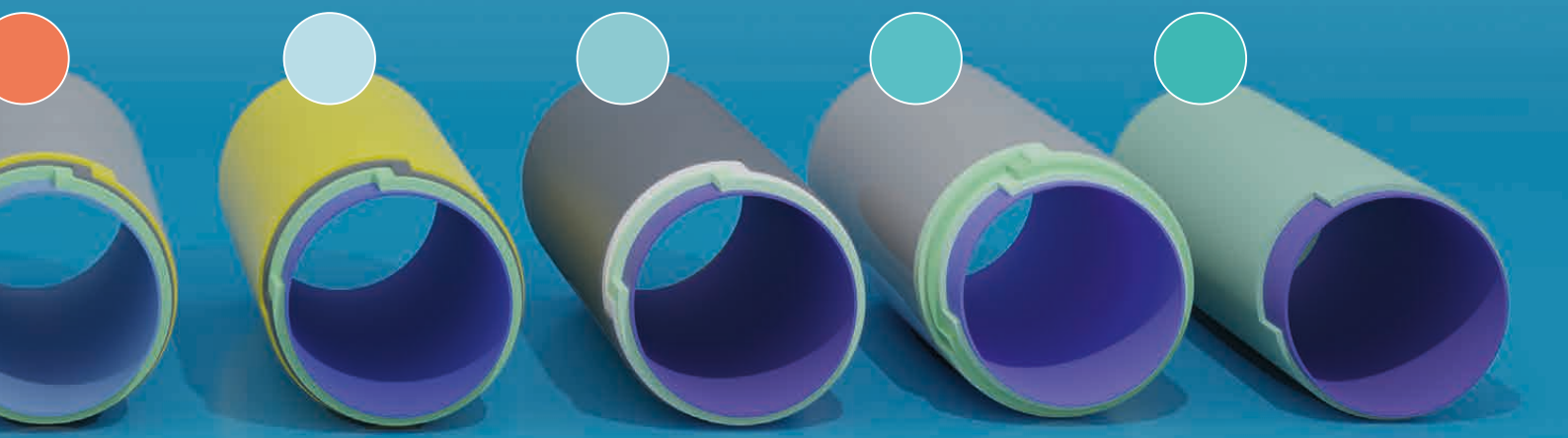
PIPE TYPE	GRAVITY SEWER PIPE			PRESSURE SEWER PIPES			
DIAMETER RANGES / PRODUCT TYPE	DN150–DN400	≥DN400–DN1250	≥DN1250–DN1800	DN150–DN400	≥DN400–DN800	≥DN800–DN1000	
POliner Glass UV	✔	✔					
POliner Glass LED	✔	✔					
POliner Glass Steam	✔	✔					
POliner Glass Spiral	✔ from DN200						
POliner Felt	✔	✔	✔ up to DN2000				
POliner Felt & Glass	✔ from DN200	✔ up to DN1200					
POliner Intense	✔	✔		✔	✔	✔	
POliner Hydro Glass				✔	✔	✔	
POliner Hydro Felt				✔	✔	✔	
POliner Hydro Felt & Glass				✔ from DN300	✔	✔	
POliner Hydro Seal				✔			
POliner Manhole Panel							

POliner offers engineering support in every project stage: design, implementation and operation. We can assist in the process of selecting the appropriate technology and product to ensure that all necessary performance criteria are met and the implementation is successful.



	PRESSURE WATER PIPES				INDUSTRIAL PIPELINES			MANHOLES AND CHAMBERS
≥DN1000–DN1200	DN150–DN400	≥DN400–DN800	≥DN800–DN1000	≥DN1000–DN1200	DN150–DN400	≥DN400–DN1200	≥DN1200–DN1800	DN400–DN2000
					✔	✔	✔ up to DN1250	
					✔	✔	✔ up to DN1250	
					✔	✔	✔ up to DN1250	
					✔ from DN200			
					✔	✔	✔ up to DN2000	
					✔ from DN200	✔		
✔ up to DN1250					✔	✔	✔ up to DN1250	
✔	✔	✔	✔	✔	✔	✔		
✔	✔	✔	✔	✔	✔	✔		
✔	✔ from DN300	✔	✔	✔	✔ from DN300	✔		
	✔				✔			
								✔

We take every effort to ensure that the proposed solution is optimal both in terms of costs and quality. We are happy to join you in projects requiring an innovative approach, new solutions, and opportunities to use our products.



POliner

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