



PE AND PP
SPIRAL PIPES -
SPIROPIPE

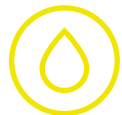


WE ARE

a private company Peštan, leader in the Balkans in the production and distribution of products and solutions from the polymers.

Company was founded in 1989 and has been producing water pipes made of polyethylene.

Over time, we introduced new materials (polypropylene and PVC) and expanded product range. Today, in our offer you may find more than 6500 products, divided into four categories:



**PIPING
SOLUTIONS**



**DRAIN
SOLUTIONS**



**AGRICULTURE
SOLUTIONS**



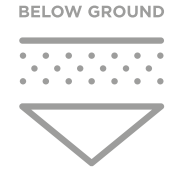
**HOUSEHOLD
SOLUTIONS**



Edition 5



PE AND PP SPIRAL PIPES - SPIROPIPE



For street sewage systems

Spiral corrugated pipes are double-layer corrugated pipes made of high density polyethylene and consist of a smooth inner wall and the outer corrugated spiral wall. The pipe is manufactured by winding of profiled outer layer of high density polyethylene with a corrugated profile on the smooth inner layer which is extruded and welded continuously.

The outer layer consists of a profiled metal strip which is coated with polyethylene, and the inner layer consists of high density polyethylene. The presence of the profiled metal strips in the outer layer significantly improves the strength of the pipe itself. For this reason PEŠTAN spiral corrugated pipes are produced in strength class SN 8 or greater.

PE SPIRAL PIPES - SPIROPIPE

Spiral pipes are two-layer corrugated pipes made of high-density polyethylene and consist of an inner smooth wall and external corrugated spiral wall. The tube is produced by winding profiled outer layer reinforcement of high-density polyethylene with corrugated profile on a smooth inner layer that is extruded and welded in continuity.

The outer layer consists of smaller ribs high-intensity hose coated with polyethylene, and the inner layer consists of high-density polyethylene. Presence of profiled hose in the outer layer significantly improves the strength of the pipe itself. Production technology makes possible different steps (profiles) during the winding of the profiled outer layer, which provides different pipe stiffness.

For this reason, PEŠTAN spiral corrugated pipes can be produced in different classes of stiffness.



CONSTITUTIVE PROPERTY OF MATERIALS

- Resistance of crack

High stress crack resistance, even at low temperatures, which is a feature of this materials, guarantees compactness and the stiffness of products that are fully made out of the best quality materials. Reference procedure for the determination of impact resistance is a EN 744.

- Better hydraulic characteristics

Inner diameter and hydraulic characteristics of Peštan PE and PP SPIRAL SPIROPIPE remain the same over the time, regardless of the type of profile, thanks to the strong reduced roughness and low adhesion of the inner pipe walls. The nominal diameter corresponds to the effective inner diameter of the pipe, with tolerances allowed according to reference standards.

- UV resistance

Black polyethylene pipes are resistant to atmospheric effects and UV radiation, thanks to the addition of soot which is equally scattered on a polymeric basis. So such tubes can be used and stored outdoors, for an appropriate period of time, without damaging the material.

Blue pipes are partially resistant to UV radiation and they can be stored outdoors, but in limited period of time (up to 6 months).

- Physical properties of materials PE

- The density 959 gr/cm³, according to ISO 1183
- Modulus of stretching 1050 MPa, according to ISO 527
- MRS Classification 10 MPa, according to ISO12162
- Impact strength to Sharpie 23 MPa, according to ISO 179
- Vicat softening temperature 71 °C, according to ISO 306
- Coefficient of linear thermal elongation of 0.13 mm/m °C

- Physical properties of materials PP

- The density 900 gr/cm³, according to ISO 1183
- Modulus of stretching 1300 MPa, according to ISO 527
- Tensile load 28 MPa, according to ISO 527
- Impact strength to Sharpie 70 kJ/m², according to ISO 179

- Chemical resistance of materials

Peštan PE SPIRAL SPIROPIPE pipes are resistant to salty water, alcohol, acids, alkalines, sulfates, aggressive gases and all kinds of detergents. On the other hand, can not be used for the transport of water which contains high percentage of benzene, benzine (petrol) or acetone.

- Temperature resistance of materials

PE SPIRAL SPIROPIPE pipes are resistant to temperatures up to 60 degrees short-term and 40 degrees long-term.

Polypropylene has high temperature resistance, therefore the pipes made of this material also have heightened temperature load resistance. PP SPIRAL SPIROPIPE pipes are resistant to temperatures up to 95 degrees short-term and 60 degrees long-term.

PROGRAM

- Production program Peštan PE SPIRAL pipes SPIROPIPE for large sewer systems or non-critical transport of water includes pipes made of the highest quality polyethylene PE 100 with profiled ones with reinforcement in the ribs, in diameters of Ø300 up to Ø1200, and in the coming period will begin with the production of pipes in diameters to Ø3000.

Nominal and inner pipe diameter

DN (mm)	DN/ID (mm)
300	300
400	400
500	500
600	600
700	700

DN (mm)	DN/ID (mm)
800	800
900	900
1000	1000
1100	1100
1200	1200



Also, these pipes are produced in standard length of 6 m. They can also be produced in other lengths according to project specification.

- Peštan SPIRAL pipes SPIROPIPE are produced in more variants of strength (resistance) to the external load (depending on the step of the profiled outer layer of reinforcement, as well as on diameter):

SN 2 KN/m² **SN 8 KN/m²** **SN 16 KN/m²**
SN 4 KN/m² **SN 12.5 KN/m²**

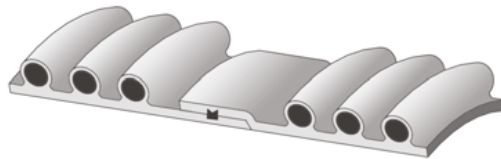
TECHICAL

- Application and installation

Inner diameter and hydraulic characteristics of Pešťan SPIRAL SPIROPIPE pipes remain the same over the time, regardless of the type of profile, thanks to the strong reduced roughness and low adhesion of the inner pipe walls. The nominal diameter corresponds to the effective inner diameter of the pipe, with tolerances allowed according to reference standards.

- Connection of the PE SPIRAL pipes

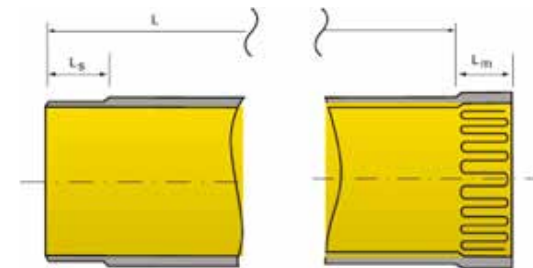
- Pešťan PE SPIRAL pipes SPIROPIPE connected in two ways. The smaller diameters are connected over the header into which the EPDM rubber is mounted.



This type of compound is most widespread due to its own simplicity and speed of performance. At the female's end of pipe, the rubber was inserted during the production and it is homogeneously coupled with a muff. The male and female parts of the compound are performed in accordance with the parameters by the EN standard 13476.

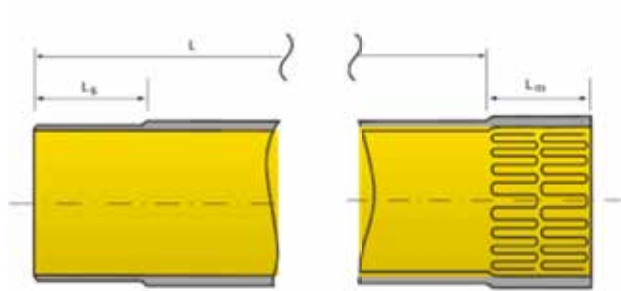
The rubber is made in accordance with EN 681-1.

The larger diameters are connected either with the rubber band or electrofusion welding.



TECHICAL

Peštan PE SPIRAL SPIROPIPE pipes are produced with extended socket into which it is possible to insert two electrodes for electrofusion welding that provides additional security and an increase of system resistance to internal pressure (up to 3 bar).

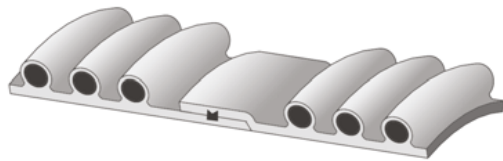


CONNECTION OF THE PE SPIROPIPE (DN)	
MUF AND RUBBER	ELECTROFUSION
300	300
400	400
500	500
600	600
700	700
800	800
900	900
1000	1000
1100	1100
1200	1200

CONNECTION OF THE PE SPIROPIPE (DN)	
MUF AND RUBBER	ELECTROFUSION
	1400
	1600
	1800
	2000
	2500
	3000

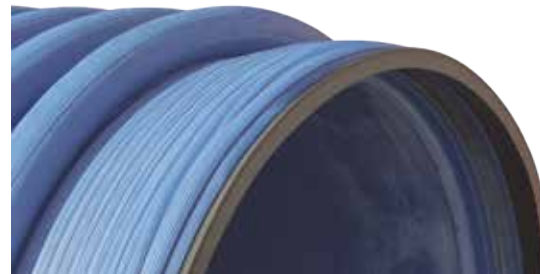
TECHICAL

- Peštan PP SPIRAL pipes SPIROPIPE are connected over the header into which the EPDM rubber is mouthed.



This type of connection is most widespread due to its own simplicity and speed of performance. At the female's end of pipe, the rubber was inserted during the production and it is homogeneously coupled with a muff. The male and female parts of the connection are performed in accordance with the parameters by the EN standard 13476.

The rubber is made in accordance with EN 681-1.



CONNECTION OF THE PP SPIROPIPE (DN)	
MUF AND RUBBER	ELECTROFUSION
300	
400	
500	
600	
700	
800	
900	
1000	
1100	
1200	

Standards that correspond with PE and PP SPIRAL SPIROPIPE pipe system

PE and PP SPIRAL SPIROPIPE pipe system is produced and corresponds the requirements of the standard SRPS EN 13476-3: 2008 "Plastics piping systems mass for underground drainage and sewage without pressure - Piping systems with stainless steel polyvinyl chloride (U-PVC), polypropylene (PP) and polyethylene (PE) - Part 3: Specifications of pipes and fittings with smooth inner and molded outer surface and system, type B" and DIN 16961.

It is applicable with existing standards and regulations for the design of sewerage systems: "SRPS EN 752:2008 - Drain and sewer systems outside buildings", and also with the standard for the installation of pipelines SRPS EN 1610: 2006 Design and testing of lines and channels for wastewater.

TECHICAL

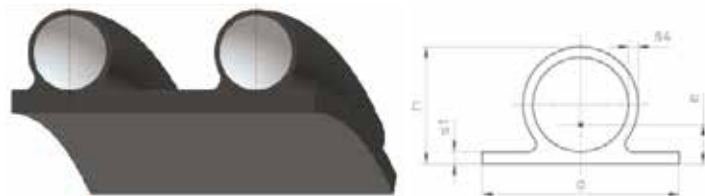
- Types of profiles

Peštan currently offers three basic pipe profile products to its customers:

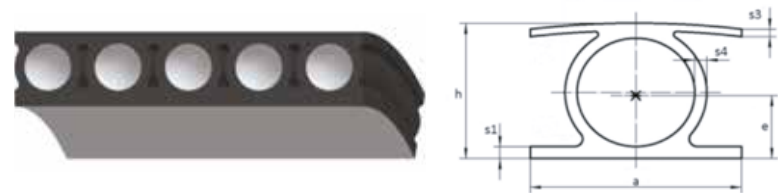
1. Peštan Spiro PR
2. Peštan Spiro CPR
3. Peštan Spiro OP

Depending on the needs of the project and the desired stiffness, these three profiles can be further modified by adding more levels of reinforcement and modification of diameter of the tube. The goal is to complete the optimization of the pipes for the project needs, with full quality guarantee.

- PR profil



- CPR profil



- OP profil



ADVANTAGES OF PEŠTAN PE SPIRAL SPIROPIPE PIPES

- Durability

Reduced investment costs and work life expectancy for at least 50 years reduce costs of use.

- Saving time

Significant time saving can be achieved in pipeline placement due to the length and the low mass of the pipe, as well as due to easy and quick way of mounting and joining.

- Maintenance

Inner smooth sides of the walls, compactness and increased electrical, chemical and biological resistance, significantly reduce the costs of cleaning and maintenance.

- Hydraulics

Due to the improved hydraulic properties, they can be used in smaller diameters than in traditional pipes.

- Waterproof

100% leakproofness of joints: removal of penetration or leakage of fluid, and the penetration of roots due to welded joints.

- Lengths

Standard pipe length of 6m, as well as possibility of production of pipes in lengths according to the specification, significantly reduce the amount of connections.

- Usage

Possibilities of using Peštan SPIRAL SPIROPIPE tubes are numerous. Main application is found in the construction of underground sewers network, but excellent characteristics of this tube materials make it possible to create various systems where fast and easy assembly is required, chemical resistance, as well as the safety of the compounds.

BRAND MANIFESTO

We do not only sell pipes, we combine reliability with quality for the ultimate benefit of our clients.

We do not build short-term client relationships, but long-term and genuine partnerships.

Everything we do, we do with one thing in mind - to create ideas to perfectly match all our client needs and the best way for us to achieve this goal is to constantly educate our clients provide solutions that meet their specific needs and support them throughout the entire process.

Because our success is as big as your trust in us.



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