

PE pipes for protection

of optical and RTV conductors



Full wall PE pipes for protection of optical and RTV conductors

Full wall PE pipes of small diameter are used for pulling existing or new cable sewers into the pipes, or for laying them directly into the ground. They are intended primarily for the insertion of fiber-optic telecommunication cables, for coaxial and optical cables of the RTV cable distribution system (KRS) and other functional networks. We also use them to pull in classic telecommunication cables of smaller dimensions.

Due to the expansion of needs, especially in the field of telecommunications and cable television, it is necessary to find a solution for the rational replacement of existing obsolete conductors with newer ones. The practice of recent years has shown that data transmission capacity has increased faster than expected. As a result, there have been large investment costs to replace existing lines with new more powerful conductors.

Because the cost of laying protective pipes is low compared to the costs of excavation, replacement, and laying new conductors, it makes sense to consider laying additional empty protective pipes before the construction of roads and larger urban settlements. Full wall PE protection pipes allow later easy and quick installation of conductors. Due to their thick wall, they do not deform.

The inner surface of full-walled PE pipe is smooth or

finely grooved along its entire length. This makes it easier for the conductor to slide in the pipe, as the conductor does not twist in the pipe.

Full-wall PE pipes are used in the construction of residential settlements or industrial facilities, roads and other traffic routes. They offer excellent protection against mechanical and other harmful environmental influences and are suitable for a wide variety of cables, such as:

- telephone cables
- cables for television cable network
- optical cables.

Properties



Pulling conductors into full-walled PE pipes has a number of advantages over conventional cable laying, including:

- enabled flexible design of telecommunication network with optical cables and greater operational reliability
- excellent physical properties such as high circumferential stiffness and impact resistance, which provide greater safety, durability, and lower costs
- finely grooved inner wall for easier sliding and to prevent the conductor from twisting in the pipe
- facilitated transport and storage, the pipes are wound in coils with an inner diameter of 1250 mm, which enables lower connection costs and, due to their flexibility, better adaptation to laying requirements
- standard cable trailers can be used for transport and continuous laying of pipes in the ground
- extraordinary corrosion resistance.

Standard: **STS-06/051, SIST EN 61386**

Materials



The pipes are made of high density polyethylene (PE-HD), which has very good mechanical and chemical properties, is an extremely environmentally friendly material and is in the current time of constant search for economical and long - lasting solutions in the field of cable protection practically irreplaceable.

The pipes are made of PE-HD raw material with the following characteristics:

density	>0,947	g/cm ³
melt index MFI 190/5	0,4 - 1,3	g/10min
modulus of elasticity	≥800	N/mm ²

PE pipes for protection



The pipes are manufactured in accordance with STS-06/051 and also meet the Technical Regulations and Instructions of Telekom Slovenije for the use of telecommunications equipment and materials in the network. Color marking lines are used to identify the purpose of the PE pipe. The marking lines are made by a special coextrusion process so that the marking remains permanent. Telekom Slovenije requires an orange color to mark small diameter PE pipes. Other colors for marking pipes are not excluded from the production program and depend on the wishes of the customer.

Production program



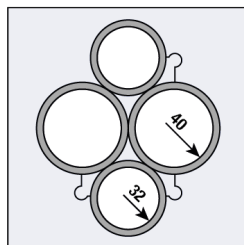
Depending on the method of laying, full wall PE pipes of small diameter are classified as pipes for drawing in the cable sewer, and pipes for laying directly into the ground. The outer side of the pipe is smooth, the inner wall of the pipe is finely grooved along its length.



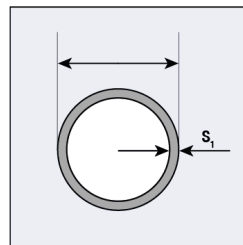
Full-wall PE pipes for retraction in cable ducts

For drawing in the pipes of telephone cable sewers we use full-wall PE pipes of small diameter:

Outer diameter d (mm)	Wall thickness s (mm)
32	2,4
40	3,0



Quartet for to be trapped in empty pipes; consists of four interconnected 2 x 40 mm tubes + 2 x 32 mm.



Single PE pipes with diameters 32, 40 mm.

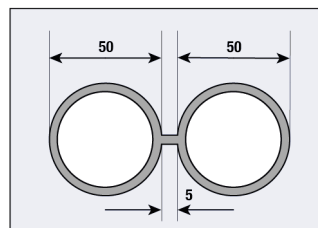
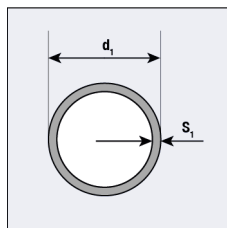


Full wall PE pipes

for laying in the ground

For laying pipes directly into the ground, we use PE pipes of small diameter as follows:

Outer diameter d (mm)	Wall thickness s (mm)
50	3,7
2 x 50	3,7



Pipe Connection



Pipes and fittings are joined quickly and easily by inserting pipes into the fittings. The splicing technology takes minimal time and effort, and ensures that the joints of pipes and fittings do not allow the intrusion of soil parts. Pipe joints with connecting pieces also provide the required

watertightness. Prior to joining pipes and fittings, all contact surfaces must be clean and undamaged. Due to connection with the connecting pieces, there is very little waste of pipes, as practically all lengths are usable.

Marking



All full-wall PE pipes are marked with a permanent inscription printed on the pipe. The standard color of the inscription on the tube is orange, the embossed character size is 4 mm. Other colors of signs are not excluded from the production program and depend on the wishes of the customer and the quantity.

The pipes are marked with the following standard markings:

STIGMA CEVNI SISTEMI d.o.o. TRZIN

- standard name
- pipe type and dimension
- date and time of production
- footage (running meter in reel)

Other signs are not excluded from the labeling and depend on the customer's wishes and quantity. The inscription with markings for twin, triple or quadruple pipes is provided for one pipe. Single pipes are visibly and permanently longitudinally marked with four symmetrically arranged orange (standard color) lines. For twin pipe, two orange stripes are provided on each pipe.

Transport and Storage



Full-walled PE pipes are resistant to wear and impact, enable easy transport and storage procedures, and practically do not require protective measures. The pipes are still sufficiently tough and impact-resistant even at low temperatures (below 0 ° C). Nevertheless, reasonable handling is required.

The pipes are supplied in standard lengths or in lengths according to the customer's wishes. Full-wall PE pipes are supplied on steel cable reels upon request. The inner

diameter of the reel is 1250 mm. The pipes are closed on both sides with protective caps. Each reel supplied is equipped with a data label (manufacturer's name, pipe length in meters, pipe type and dimension, date of manufacture).

The reels can be stacked vertically or horizontally, provided that the pipe does not get deformed.



Stigma cevni sistemi d.o.o.

OIC Trzin, Motnica 8

SI - 1236 Trzin

Phone: 01/562-10-21,

Fax: 01/562-10-27

Email: info@st-cs.si

www.st-cs.si

