

HDPE OD CORRUGATED DRAINAGE PIPES

Technical Data Sheet

APPLICATION

Considering the need for soil water drainage, Peštan has included corrugated polyethylene drainage OD (HDPE OD) pipes in its production program for the removal of excess water from the soil, available in a wide range of diameters in accordance with the DIN 4262/1 standard. Thanks to their high hydraulic capacity and broad diameter range, these pipes are fully capable of meeting any requirement.

CHARACTERISTICS AND TECHNICAL DATA

- Material: HDPE
- Standard: DIN 4262/1
- Density: > 0.945 kg/m³
- Dispensing index: MFI 190 °C/5 Kg 0.35-1.3 gr/10'
- Elasticity modulus: >800 MPa
- Coefficient of linear thermal expansion: 0.17 mm / m°K
- Thermal conductivity coefficient: at 23 °C ~ 0.36-0.5 W/mk
- Surface electrical resistance: > 1013Ω
- The connection method is via a socket without an eraser
- Laying and use of HDPE pipeline is from -40 °C to +60 °C.
- Ring strength SN = 4 kN/m² (EN ISO 9969)
- The standard color is BLACK

PRODUCT DESCRIPTION

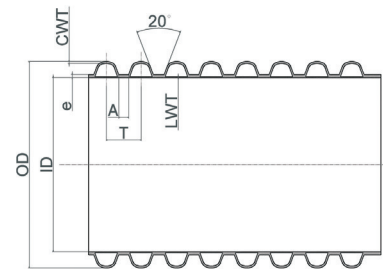
Peštan polyethylene corrugated drainage pipes are made from standard HDPE corrugated pipes. After production, the pipes are perforated in a subsequent process in accordance with DIN 4262/1. HDPE pipes are lighter than PVC pipes intended for the same purpose, which allows for easier handling and installation. They offer excellent chemical resistance to aggressive environments and surrounding

soil. The smooth inner surface has a low friction coefficient, providing good hydraulic performance. The pipes also have excellent abrasion resistance and outstanding mechanical and physical properties. They are UV resistant and can be stored outdoors for up to one year; beyond that, they should be protected. Care should be taken during transport and installation to avoid dragging the pipes over sharp edges, as sharp surfaces may damage the pipe, although they are highly resistant to impacts from blunt objects.

TECHNICAL DESCRIPTION

Double-layer corrugated drainage pipes made of HDPE (polyethylene), with a black outer layer and a white inner layer, defined by the external diameter DN/OD, featuring an extruded welded rigid coupling, ring stiffness of SN 4 kN/m², manufactured in accordance with EN 13476-3. The pipes must be perforated in accordance with DIN 4262 with the required perforation angle of 120° (240°; 360°), fully compliant with the designed diameters and the given specification. The drainage pipes shall be of the "Peštan" type from Arandelovac or other pipes with equivalent characteristics.

The pipes must be carefully laid on a previously prepared sand bedding. During the laying and assembly process, a geotextile filter layer must be installed. It is essential to ensure the pipes are placed at the designed slope, without horizontal or vertical bends. The slope must be checked using geodetic instruments in the presence of the Supervising Authority. All work shall be carried out in full accordance with the technical regulations for the specified pipe type, i.e., in compliance with EN 1610, following the manufacturer's instructions and the requirements of the Supervising Authority.



PRODUCT CODE 220°	PRODUCT CODE 150°	OUTER DIAMETER (MM)	INNER DIAMETER (MM)	STANDARD SLOT (MM)	WATER INLET AREA (CM ² /M)	STANDARD LENGTH (M)
10800100	10800200	Ø75	Ø62	1 - 1,4	>50	6
10800101	10800201	Ø90	Ø75	1 - 1,4	>50	6
10800102	10800202	Ø110	Ø92	1 - 1,4	>50	6
10800103	10800203	Ø125	Ø108	1 - 1,4	>50	6
10800104	10800204	Ø160	Ø138	1 - 1,4	>50	6
10800105	10800205	Ø200	Ø176	1 - 1,4	>50	6
00000000	00000000	Ø250	Ø222	1 - 1,4	>50	6
00000000	00000000	Ø315	Ø278	1 - 1,4	>50	6
00000000	00000000	Ø400	Ø348	1 - 1,4	>50	6
00000000	00000000	Ø500	Ø432	1 - 1,4	>50	6

TYPES OF HDPE OD DRAINAGE PIPES

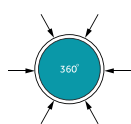
Double-layer corrugated HDPE OD pipes are always classified by their external diameter DN/OD (the nominal diameter refers to the outside diameter). They are manufactured with an integrated socket. Available in a range from Ø75 to Ø500, with ring stiffness classes SN4 and SN8.

There are three types of polyethylene drainage pipes defined by their external diameter – OD pipes:

- **KD** – rigid drainage pipes (fully perforated)
- **KDK** – rigid drainage-sewer pipes (partially perforated)
- **FDK** – flexible drainage pipes (fully perforated)

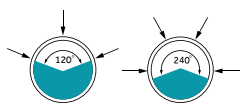
KD – RIGID DRAINAGE PIPES (FULLY PERFORATED)

The function of KD pipes is to provide optimal drainage of the subgrade and anti-frost layer. This applies both during construction and after completion of the site, allowing water to enter and be transported to the main discharge point. The couplings are sand-tight. There is no need to install a rubber gasket. The standard includes 6 slots evenly distributed over the full circumference at 60° intervals.



KDK – RIGID DRAINAGE-SEWER PIPES (PARTIALLY PERFORATED)

Partially perforated KDK rigid drainage-sewer pipes represent an ideal combination of a perforated and collector pipe. When required, they must be capable of collecting and transporting any surface water found at short or long distances. Due to their water transport function, the couplings are watertight and sand-tight. The rubber gasket is inserted into the third groove of the corrugated pipe, and the socket is slid over the lubricated gasket. The pipes must be professionally installed in accordance with the pipeline installation guidelines provided in EN 1610 and DIN 4033.



The slots on both types of pipes are positioned between the pipe ribs, symmetrically around the circumference along the entire length of the pipe, which allows unobstructed water access to the openings. During the construction of drainage pipelines, it is recommended that the pipe be laid not only in a gravel filter layer but also in an additional protective filter layer made of geotextile. This prevents soil washout and potential clogging of the pipe openings with debris, thereby maintaining the efficiency of the pipeline system.

FDK – FLEXIBLE DRAINAGE PIPES (FULLY PERFORATED)

These pipes are very lightweight, highly flexible, UV resistant, sturdy, and economical, despite being easy to install. The inner surface of the pipe is smooth due to a special manufacturing process, while the outer surface is ribbed. They are joined using a coupling that is sand-tight. The operating temperature ranges from -40 °C to +60 °C. They are made from HDPE/LDPE materials. The slots provide more than 50 cm²/m of water entry surface. The slots are symmetrically placed in each rib channel of the pipe. These pipes can be laid faster and with better quality using machinery. During installation, the pipes can be wrapped with filter material. The purpose of the filter is to increase permeability and prevent rapid clogging of the pipe. The number of slots for water entry can be chosen. Standard colors are BLACK and YELLOW-BLACK. Other colors are available upon customer request. The pipes are packed and delivered in coils of 50 meters in length.



Technical Assistance

Our technical and engineering team is supported and advised by European institutes. For more information about products please contact PEŠTAN technical support or regional salesman.



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