

 **PEŠTAN**
we build trust

MANHOLES

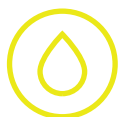


WE ARE

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.

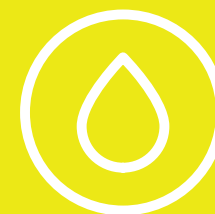
Over time, we introduced new materials (polypropylene and PVC) and expanded product range. Today, in our offer you may find more than 8.500 products, divided into two categories:



**PIPING
SOLUTIONS**

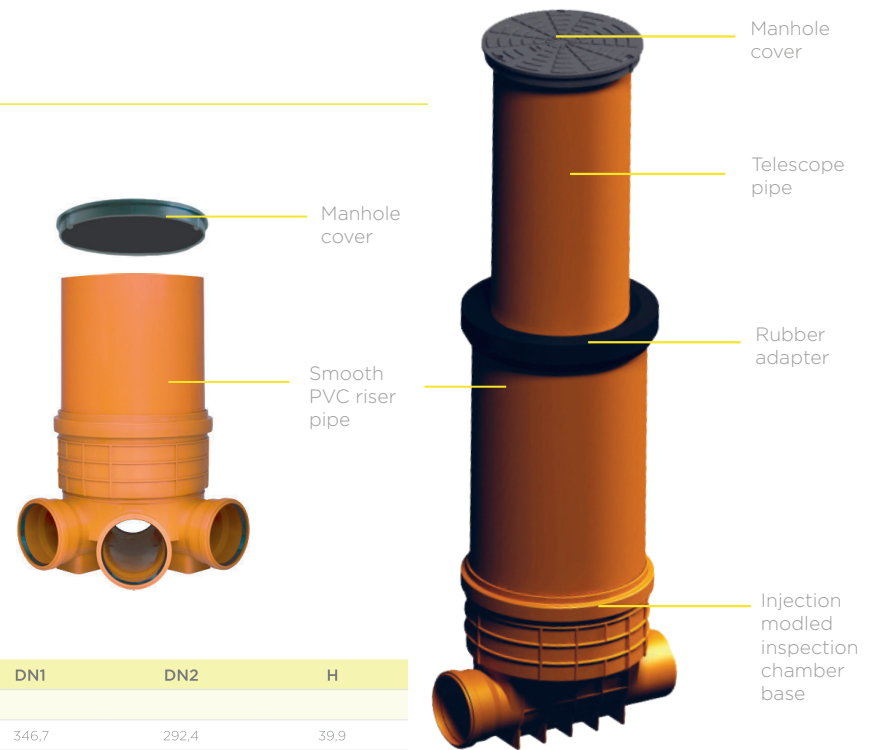


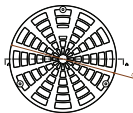

**BATHROOM
SOLUTIONS**




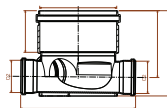
DRAIN MANHOLES Ø315 AND Ø400

Manholes with gutter on bottom are being manufactured from polypropylene (manhole bottom). Manhole body as well as telescopic extension are made from PVC or PP strong pipe, being connected with rubber seal for telescopic connection which enables absolute waterproofing.

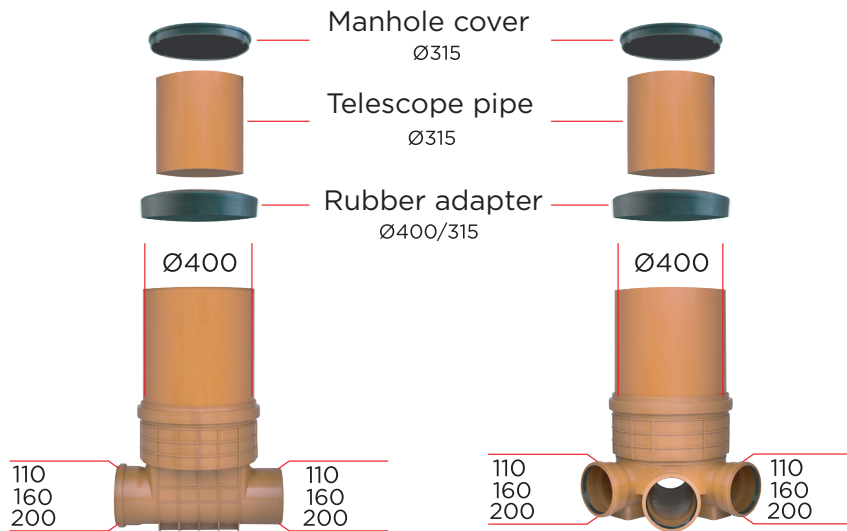
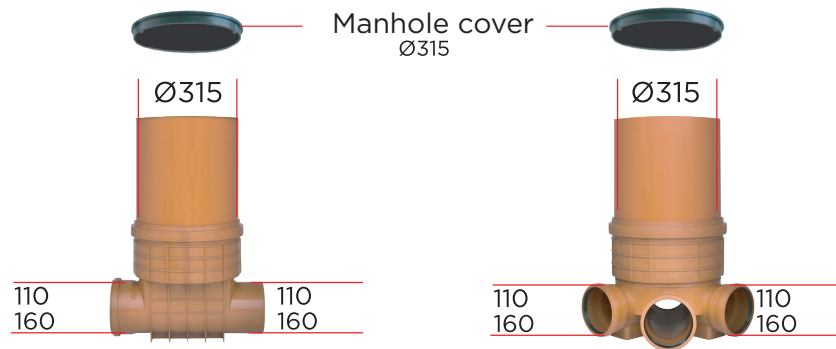


NAME	PICTURE	CODE	DN	DN1	DN2	H
DRAIN MANHOLES LINEAR TRAY						
		10204560	315	346,7	292,4	39,9
		10204561	400	413	370	49

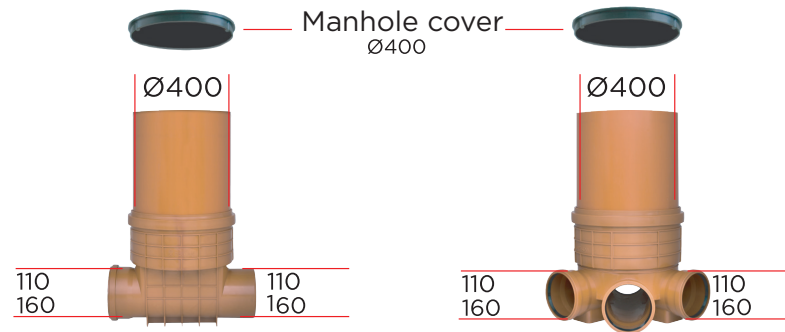
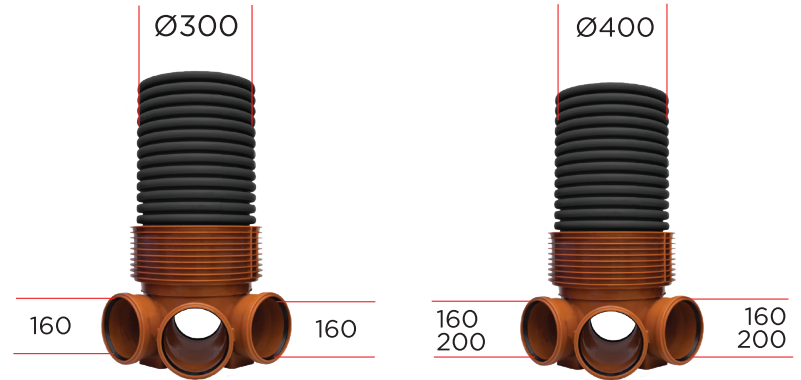
NAME	PICTURE	CODE	(D/D1)	H	H1	H2	L
DRAIN MANHOLES							
		10799298	315/110	330	295	140	435
		10799224	315/160	384	281	190	479
		10799230	400/110	360	289	226	562
		10799220	400/160	420	315	207	554
		10799221	400/200	470	340	207	586

DRAIN MANHOLES							
		10799229	315/110	356	278	201	444
		10799225	315/160	395	309	185	490
		10799231	400/110	401	306	226	534
		10799222	400/160	420	319	207	559
		10799223	400/200	470	344	207	584

EXTENSION WITH PVC OR PP SMOOTH PIPE



EXTENSION WITH PP CORRUGATED PIPE

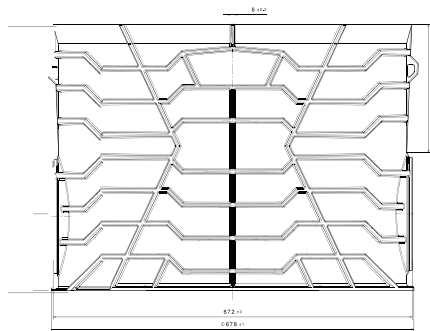


DRAIN MANHOLE Ø630

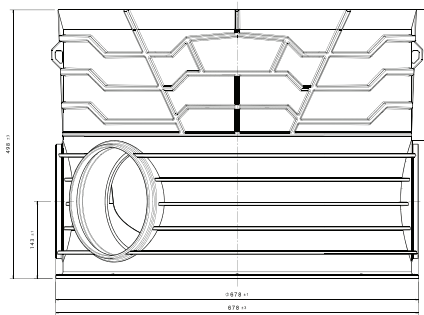
PRODUCT AVAILABILITY / OPTIONS

Available two types :
Straight through manhole
Collective manhole

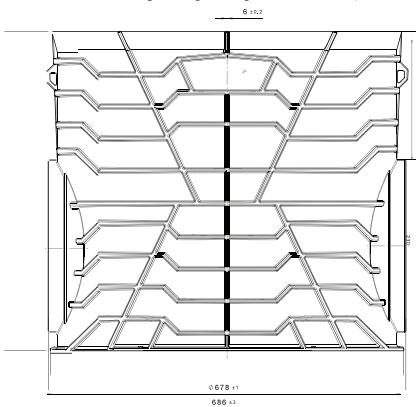
Drain manhole bottom available for connection on pipelines with DN 315 and DN 200. In cases where connections to other diameters are required, reduction fittings from Pestan standard portfolio may be used. If required, there is possibility of connecting drain manhole with pipeline that is projected for corrugated pipes. For this purpose any of transition items from Pestan portfolio may be used.



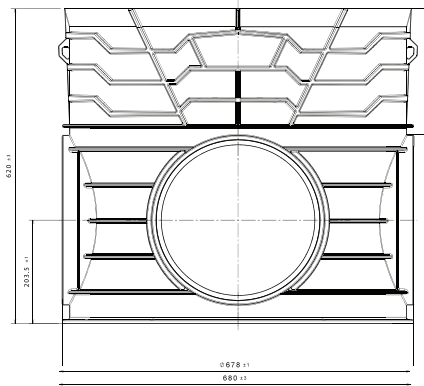
Technical drawing of straight through drain manhole 630/200



Technical drawing of straight through drain manhole 630/200



Technical drawing of straight through drain manhole 630/315

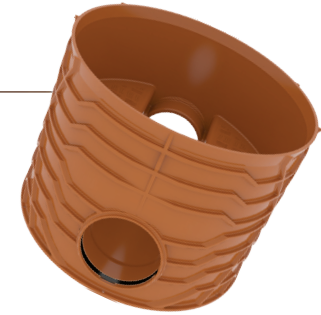


Technical drawing of straight through drain manhole 630/315

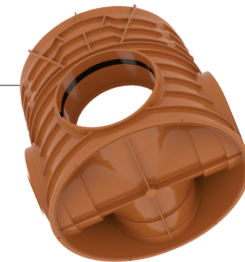
**Straight through
 drain manhole**
 Ø630/Ø315



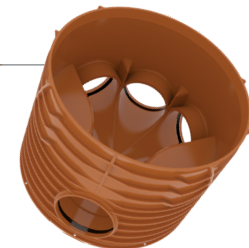
**Straight through
 drain manhole**
 Ø630/Ø200



**Collective drain
 manhole**
 Ø630/Ø315



**Collective drain
 manhole**
 Ø630/Ø200



DRAIN MANHOLE Ø630

Beside visual effect, reinforcement ribs are designed to provide better strength. Hooks for hanging / descending manhole to the hole / channel are designed to provide reliability as being reinforced from upper side where cord or rope should hang, so these hooks without problems can resist manhole weight while descending.

Top point of the manhole bottom is adjusted for corrugated pipe DN 630 OD to which is being connected by rubber seals. Grip, on certain models where technically was possible to be designed, serves for better support, in case maintenance repairman is going down to the manhole, Grip prevents from shoes slipping.

On the bottom of each manhole there is possibility of placing stopple, exclusively on client's demand. Ribs on lower side of drain manhole serve as structural reinforcement from soil from all directions, as well as reinforcement for repairmen in charge for pipeline maintenance who will descend to the manhole.

PURPOSE

Pestan darain manhole is intended to be used for collecting all kind of waste water in storm water systems as well as junction for house connections. It is possible to use drain manhole as revision manhole also, which is very important when constructing house connections and connecting multiple objects before connecting to main pipeline.



NAME	PICTURE	CODE	(D1/D2)	H	H1	L	
STRAIGHT THROUGH DRAIN MANHOLE							
			10799233	630/200	498	355	678
			10799234	630/315	620	416	686
COLLECTIVE DRAIN MANHOLE							
			10799235	630/200	498	355	678
			10799236	630/315	620	416	680
COLLECTIVE DRAIN MANHOLE							
			10799235	630/200	498	355	678

DRAIN MANHOLE CONNECTION TO DIFFERENT TYPES OF PIPELINES



Connection directly with smooth pipe.



Connection by reducer.



Connection with corrugated pipe.

Relief ring for manholes DN 630 enables their assembly in areas with bigger static load.



(relief ring for manholes DN 630)

Extension
Ø600 ID



EXTRUSION CONNECTION

Relief ring



Extension
Ø630 OD



RUBBER BAND CONNECTION

Manhole is available in diameters Ø630/315 and Ø630/200. If it needs to be connected to other diameters of the pipeline, reduction pieces can be used Pešťan's standard production assortment.

REDUCED PIECES FOR SMOOTH PIPES			
Ø315/Ø250	Ø200/Ø160	Ø200/Ø125	Ø200/Ø110

If necessary it is possible connecting the drain manhole with the pipeline that is designed of corrugated pipes. For this need it is possible to use some of the transitional pieces from the Pešťan production assortment.

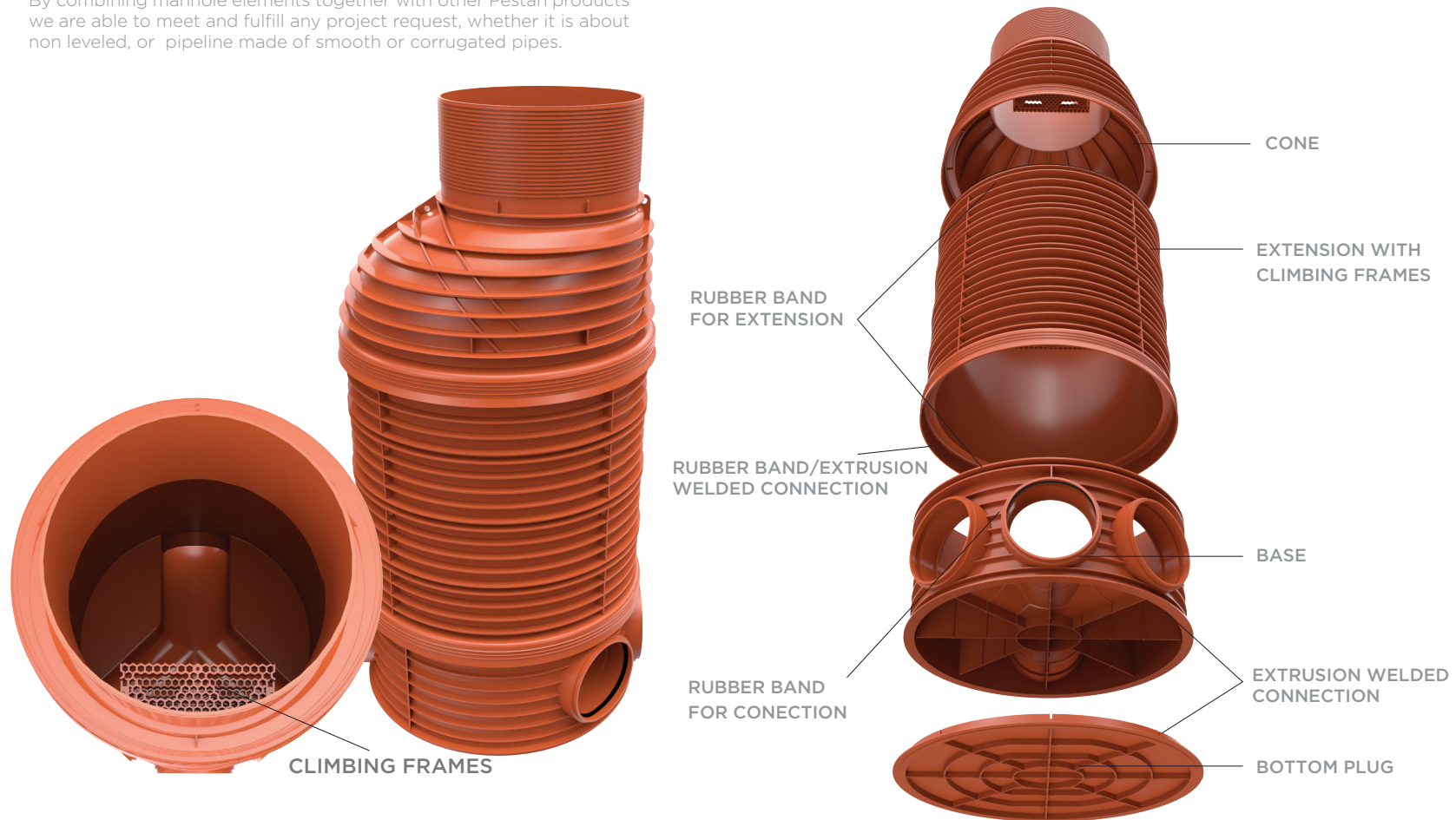
TRANSITIONAL PIECES FROM SMOOTH TO CORRUGATED PIPE			
Ø300/Ø315	Ø250/Ø250	Ø200/Ø200	Ø140/Ø160

IMPRUVA INJECTION MOLDED DRAIN MANHOLE Ø1000

In order to meet all trends of modern construction Pestan company, beside existing one, has expanded it's product portfolio with new product - polypropylene injected drain manhole with DN 1000. Application of these manholes is in all kinds of systems for collection of waste and storm water. Pestan manholes are manufactured by injection molding process from polypropylene of the highest quality as per European Norm for manhole manufacturing - EN 13598. By combining manhole elements together with other Pestan products we are able to meet and fulfill any project request, whether it is about non leveled, or pipeline made of smooth or corrugated pipes.

ELEMENTS

Drain manhole consists of few elements, which assembled together makes an integral product. Items that manhole consists of are: base, bottom plug, extension with climbing frames, cone.

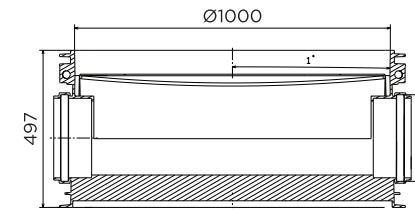
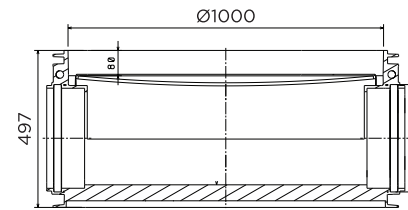
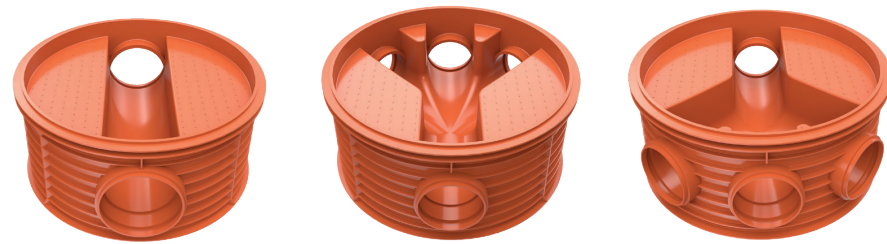


MANHOLE BASES

Manhole bases as monolithic forms are injected with already formed gutter and preinstalled rubber seal with highest quality of EPDM which guarantees waterproofing of the connection of manhole base and extension or cone. In each connection on manhole is installed EPDM rubber as well.

In standard offer are bases with inlets DN 250 and 300 and outlets DN 250 and 300 under different angles for Pestan PVC smooth or corrugated pipes. Transition to Pestan corrugated ID pipes is possible with Pestan transition item from smooth to corrugated pipes. As per project demand, connections of bigger diameters intended for pipelines made of smooth or corrugated pipes DN 400, 500 600 and 630 is also possible.

Bottom plug is injected element from polypropylene intended to be positioned below the base when necessary to have closed or doubled bottom. Assembly is optional.



BASE	DN250	DN315	Number of inlets	Inlet angle
	✓	✓	1	180°
	✓	✓	3	135° 180° 225°
	✓	✓	2	225°
	✓	✓	2	135°

EXTENSIONS

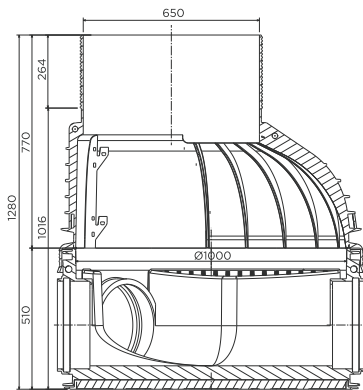
Extension with climbing steps is injection molding part of the manhole with different optional height; by adding these parts to the base appropriate manhole height is achieved.

Pestan produces extensions in heights 250, 500, 750, 1000mm and enables adjusting manhole height to each project. In extensions themselves are preinstalled climbing steps on 250mm height from each other, by this easier entering and manhole leaving is achieved while intervention. Climbing steps are made of polypropylene by injection molding method as per EN 14396 and EN 13101.

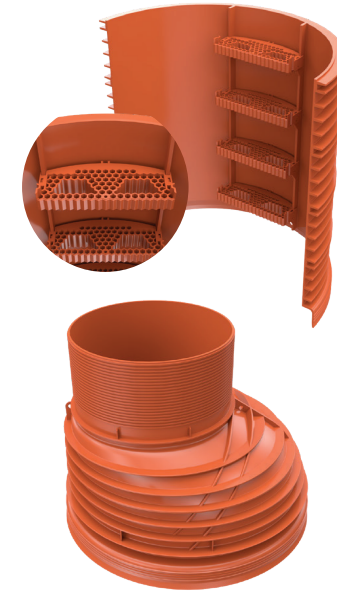
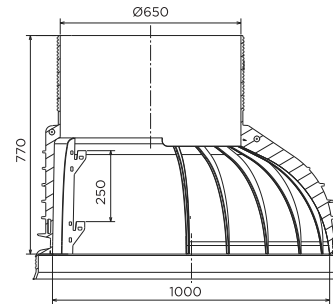
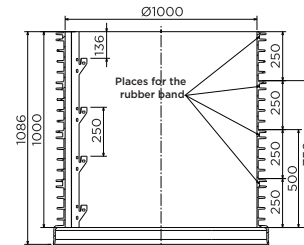
Cone

Cone ending is injecting molded element which, by its adding on the manhole base and connection - makes manhole itself as complete product. Ending cone element are parts for closing which decrease upper manhole diameter enabling assembly of different types of covers.

Beside advantage of manhole height adjustment Pestan manhole are known for their lightness which makes manipulation on the spot easier, as well as simple way of connection to pipeline. Material used for manufacturing guarantees consistency and extraordinary chemical resistance.



minimum height manhole



MANHOLE HEIGHT

Pestan injected manholes are with adjustable height and in this way can meet any project demand. Minimal manhole height in combination of manhole base and cone that is cut to the minimum is 1016 mm for manholes with connectors DN 250 and 315. Maximal manhole height is limited to 6 m and is achieved by adding extensions.

CONNECTING

Element connecting is performed by pre-installed seals made of highest quality EPDM rubber for waterproofing guarantee. Except this, connection by extrusion welding of elements to each other is also possible and in this way unbeakable connection is made.

ADDITIONAL CONNECTORS

If required and predicted by project there is possibility for connection of non leveled pipelines by combination of cutting manhole body together with injecting welding of connector itself for manhole body.

DRAIN MANHOLES

Peštan company has included DRAIN MANHOLES in its product range.

- Drain manholes Ø400 ID
- Drain (revision) manholes Ø500 ID
- Drain (revision) manholes Ø600 ID

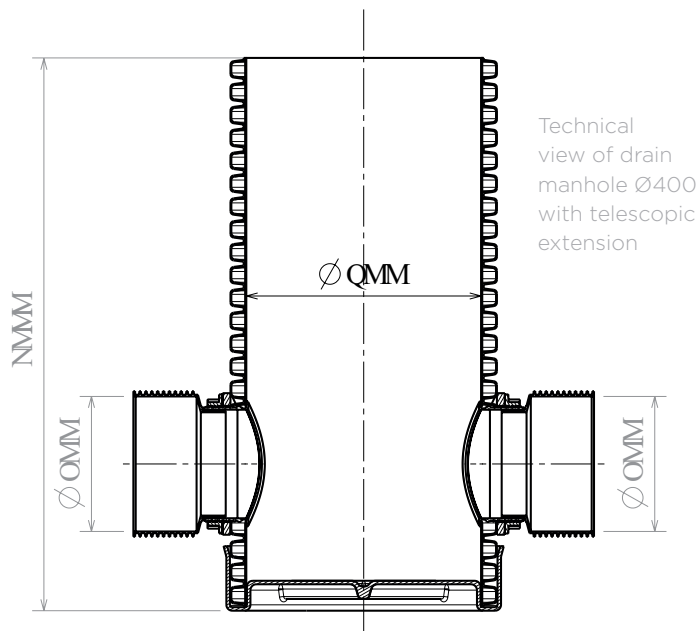
*ID - Inner diameter

PURPOSE

These products are mainly designed to collect rainwater in the rainwater sewage systems for individual home installations and also in systems of civil engineering (collecting rain water from and near the roads, etc) In addition it is possible to use drain manholes Ø600 (sometimes Ø500

too) as revision as well which is particularly important during installation of home sewer and connection of multiple objects before joining the main line etc. With this, relevant joining standards are met, with additional reductions in joining costs

and installation time, while corrections of the mistakes on terrain (such as axel and angle issues as well as height of connecting lines) are facilitated by its flexibility.



MANHOLES WITH SLUDGE TRAP

Peštan produces manholes with sludge trap as a integral part of the collector in gravity sewer systems, waste water systems, storm water or combined. These manholes are made of polypropylene.

Manholes are made of monolithic structures composed of a flat bottom, manhole body (PP corrugated pipe) and connections as specified by projects. The elements of each manhole are welded to each other by extrusion welded.

Manholes are made by order or project specification.

Dimensions

DN 800 mm

Material

Polypropylene

Standards

SRPS EN 13589

Fields of application

Gravity sewer systems
Waste water systems, storm water and combined
Various industrial application.



DESCRIPTION

Peštan produces manholes with sludge trap as a integral part of the collector in gravity sewer systems, waste water systems, storm water or combined.

They are used as revision manholes, cascading manholes, manholes with sludge trap or manholes for sewer flushing.

Manholes are made of monolithic structures composed of a flat bottom, manhole body (PP corrugated pipe) and connections as specified by projects.

The elements of each manhole are welded to each other by extrusion welded.

Advantages

- Long durability
- Water tightness
- Resistance to aggressive chemicals
- Easy handling
- Quick installation
- Easy height adjustment

CONSTRUCTION

Construction of drain manholes is usually performed with the Sedimentation, and in this system the height of sedimentation can be modified and adapted to specific customer requirements. Manhole height can be easily adjusted on the ground and by reducing the vertical which is always PP double layer corrugated pipe SN 8 it can be fully adapted to the situation before setting of cover grids.

Construction consists of:

- Drain bottom
- PP corrugated pipe SN 8 vertical
- Appropriate number of SAG's used to form one output and one or more inputs.

Using SAG's enables the various versions of connecting smooth or corrugated pipe diameters in the 140 ID corr. 160 OD corr. 160 SW, and also

ID 200 corr. and 200 SW. It is possible to form the manhole on the spot, which is a huge advantage because the drilling and installation of SAG's can be performed at the site of installation with simultaneous correction of alignment errors and regular deviations from the projected documents. Due to the extremely high ring stiffness of used PP corr. pipes, recommended height of manhole can range up to 5 m.

The table below contains the basic data related to drain manholes:

	DRAIN MANHOLE 400 MM	DRAIN REVISION MANHOLE 500MM	DRAIN REVISION MANHOLE 600 MM
Minimal angle between the terminal	60	45	45
Maximal height of the manhole - h	5000	5000	5000
Minimal height to the port axis - h1	260	300	310
Maximal number of input ports	2	3	4

The seal between the vertical and manhole bottom is achieved by using common rubber ring which is used for PP corrugated pipes which allows sealing up to 0.5 bar and 5 m height of the water column which defined maximum height of the manhole.

Drain manhole is supplied as a telescopic too. In this version base is upgraded with coupling ring and PVC Ø315 OD.

This is a very popular and sought option for designers and contractors because this structure results in greater depth of installation with a

flexible coupling ring connection and in case of heavy loads due to increased surface pressure or increased construction depth, transmission of loads based on the manhole is prevented. Building the concrete ring around the PVC pipe is required.

DELIVERY

At the request of the customer, manhole can be supplied in kit-form which is particularly popular with final customers because of lower prices and a relatively simple and rapid preparation of manholes users, which leaves them with possibility of corrections and changes.

These products can be delivered and fully assembled on the basis of data obtained from our customers. This can significantly speed up the delivery of the alignment setting but reduces the possibility of correcting possible deviations on terrain.

BRAND MANIFESTO

We are not oriented just to production, 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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