



PEŠTAN
mi gradimo poverenje

BETTO

Ø 1000

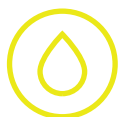
CONCRETE MANHOLES

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.

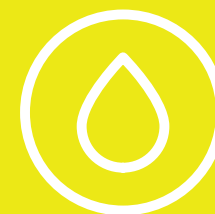
Over time, we introduced new materials (polypropylene and PVC) and expanded product range. Today, in our offer you may find more than 8.500 products, divided into two categories:



**PIPING
SOLUTIONS**

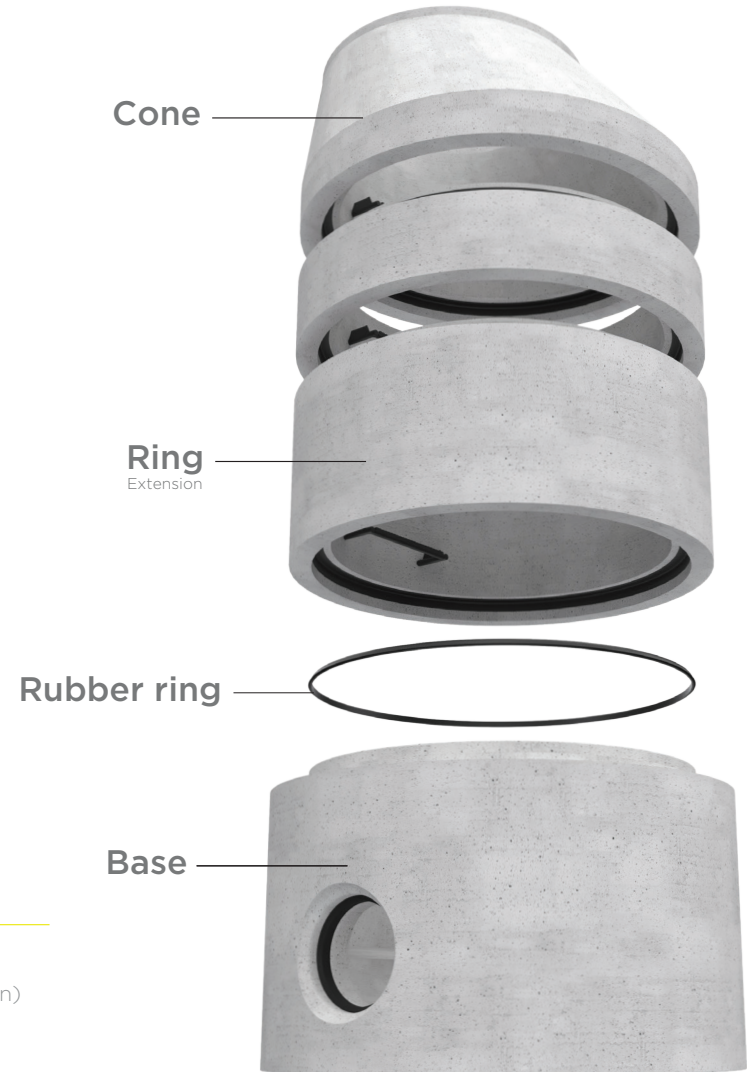


**BATHROOM
SOLUTIONS**



CONCRETE MANHOLES

Prestressed concrete manhole is produced from the best quality concrete by high strength method vibro pressing and SCC method (Self Compacting Concrete). The concrete manhole is used for implementation of fecal and storm sewerage. They are used in infrastructural construction of industrial areas, but also in communal construction in settlements. All manholes are produced by project plans. Concrete manholes are according to requirements of project composed of different assembly elements, and different shape of the entrance and exit openings.



ELEMENTS

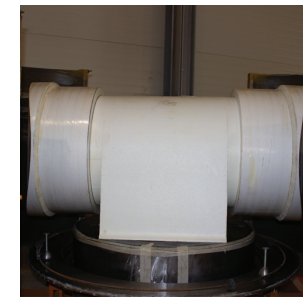
The elements used to complete the manhole are the manhole base, the extension (extension) and the conical end.

PRODUCTION PROCESS

By improving the technology and using a special smart solution for the individual shaping of the kinete and pipe connection during the production of concrete bases, it is possible to respond to the requirements of the most complex projects. Due to the individual approach in the production process of concrete bases, we can produce a configuration of connectors and kinets at the request of the investor or customer



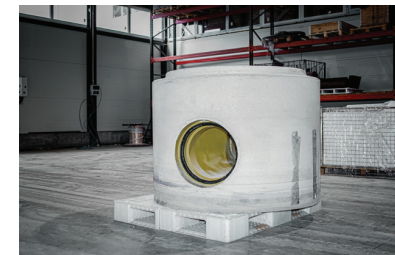
Production of kinete models and connections to base are being done on CNC machines by production of negative body by cutting custom extruded polystyrene which enables the modeling of concrete bases. Slow and undesirable retention of waste water in the channel kinetes are avoided by constant drop in the entire course of the channel, including the connection of the pipe and the manhole kinet



Production process of concrete manholes is completely aligned with EN 1917 - European standard for concrete manholes. They are produced by vibro-pressing of high quality concrete C30/37. Brand of concrete from which elements of manholes are produced is MB40.

- In production we use CEM1 52.5R without additives with latent hydraulic properties.
- We use economic separated aggregates without admixtures, stone filler.
- We use additives to improve the compactness of concrete.
- Aerant to increase resistance to the effects of atmospheric influences.
- Chemical additive to reduce water absorption.

After the steel formwork is filled and the concrete hardens, the concrete base the shaft is removed from the formwork and prepared for transport to the construction site. The most modern concrete technology contributes to a long life elements. Signs of aging and wear of elements are reduced to a minimum.



TYPES OF BASES

We produce 3 main types of bases:

1. FLAT BOTTOM BASE WITH RUBBER RING **BETO**

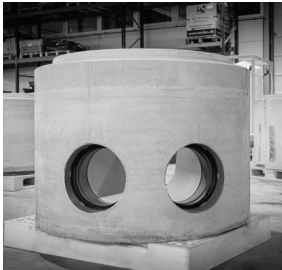


Wall thickness of the base is 150mm-230mm depending on the dimensions of input and output connector.

Hight of the base 500mm-1000mm

We produce concrete manholes in dimension of 1000mm

2.KINET BOTTOM BASTE AND RUBBER RING **BETO PLUS**



3. LINER BASE **BETO PRO**



For easier handling and manipulation on the construction site, we install in bases special handles for hanging and carrying the base



There are several types of kinete:

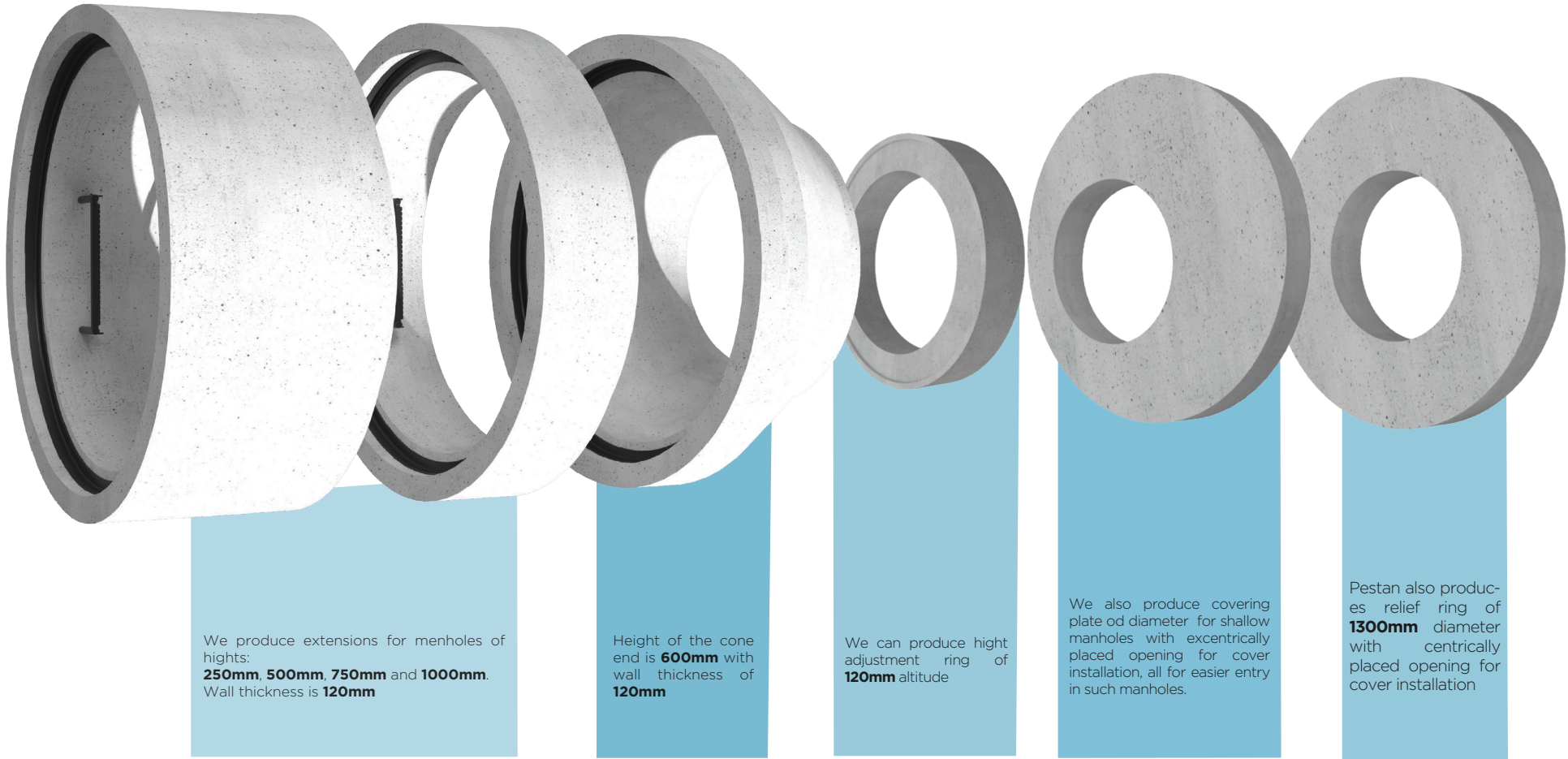
- **TRANSITORY**
- **COLLECTIVE**
- **KINETA ON REQUEST IN ACCORDANCE WITH TECHNICAL POSSIBILITIES**

Pass-through bases are made in vibro-pressed concrete technology for connections up to Ø250. Collector bases and Pass-through bases with connections from Ø315 to Ø630 are made using the SCC method (casting method).

TECHNICAL DATA

| DESCRIPTION (DN 1000) | MM |
|---|------------|
| Internal diameter of base | 1000 |
| Base height | 500 - 1000 |
| Wall thickness for connections up to DN 315 | 150 |
| Wall thickness for connections up to DN 400 | 170 |
| Wall thickness for connections up to DN 500 | 190 |
| Wall thickness for connections up to DN 630 | 230 |
| Dimension of pipe connections for smooth pipes | 110 - 630 |
| Dimensions of pipe connections for ribbed pipes | 160 - 400 |
| Wall thickness of extensions and tapered end | 120 |
| The height of the tapered end | 600 |

CONCRETE MANHOLE ELEMENTS



We produce extensions for manholes of heights: **250mm, 500mm, 750mm** and **1000mm**. Wall thickness is **120mm**

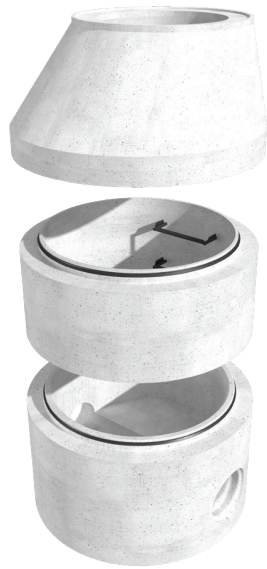
Height of the cone end is **600mm** with wall thickness of **120mm**

We can produce high adjustment ring of **120mm** altitude

We also produce covering plate of diameter for shallow manholes with excentrically placed opening for cover installation, all for easier entry in such manholes.

Pestan also produces relief ring of **1300mm** diameter with centrally placed opening for cover installation

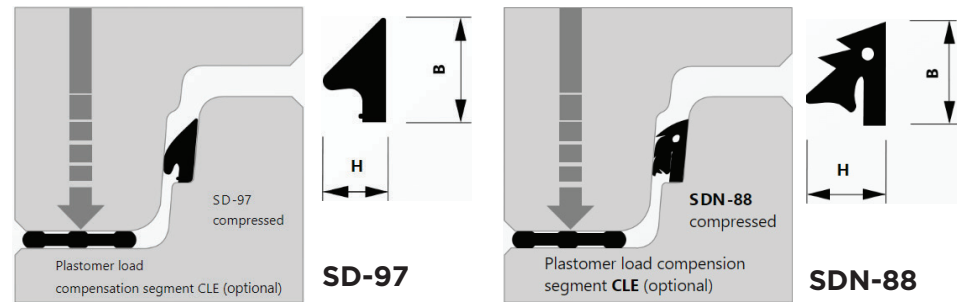
RUBBER SEALS



All concrete manholes are equipped with rubber seals and are watertight.

Sealing between concrete elements it is achieved by subsequent mounting rubber bands on the upper part of the base or extensions.

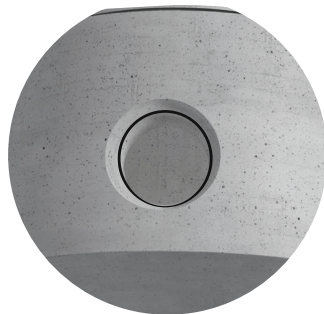
Connection pieces can be used (transition pieces) for pipes with integrated rubber bands (corrugated-ribbed pipes).



subsequent mounting of rubber bands on the upper part of the base or extensions.

All fittings are used with integrated rubber rings. These integrated seals are poured together with the kinet and thus form a solid connection. Such joints are used for joints with smooth pipes (PVC, PP STRONG, PEHD, ...)

Connection pieces (transition pieces) can be used for pipes with integrated rubber bands (corrugated-ribbed pipes).



Integrated rubber rings



Direct smooth pipe connection



Reducer connection



Corrugated pipe connection

CLIMBING FRAMES

Climbing frames in manholes are made of solid steel, covered with non-slip material with a layer of polyethylene, completely and permanently protected from corrosion, as per EN 13101. Climbers are cast in the production process ensuring greater safety and less assembly time on the construction site.



ELEMENTS OF REVISION WINDOW

Base of revision window with connectors for pipes with integrated rubber bends

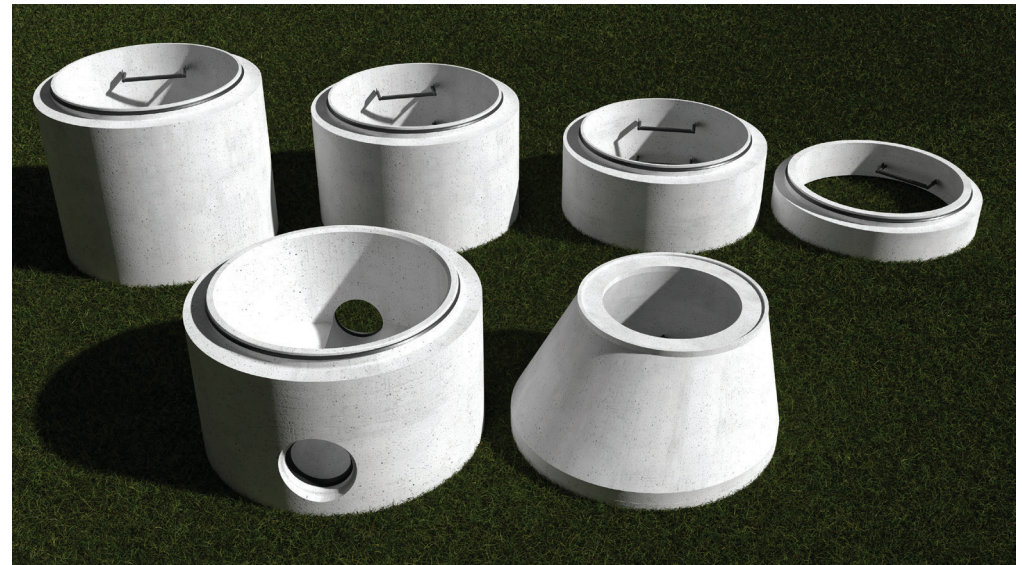
Extension of revision window

Height adjustment ring

Cone - final element of the inspection window with an integrated seal for waterproofing

Climbing frames covered with non-slip material

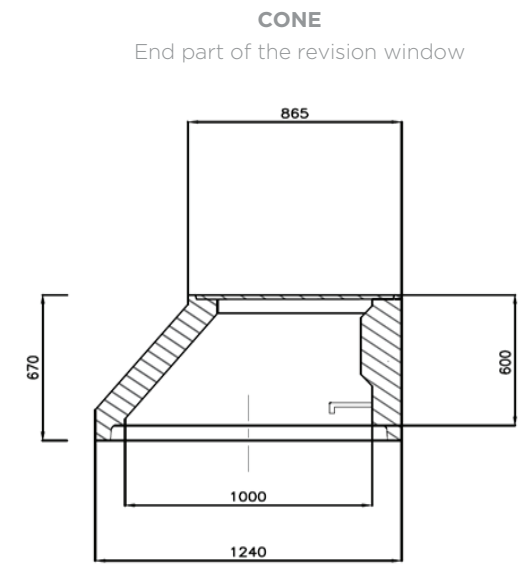
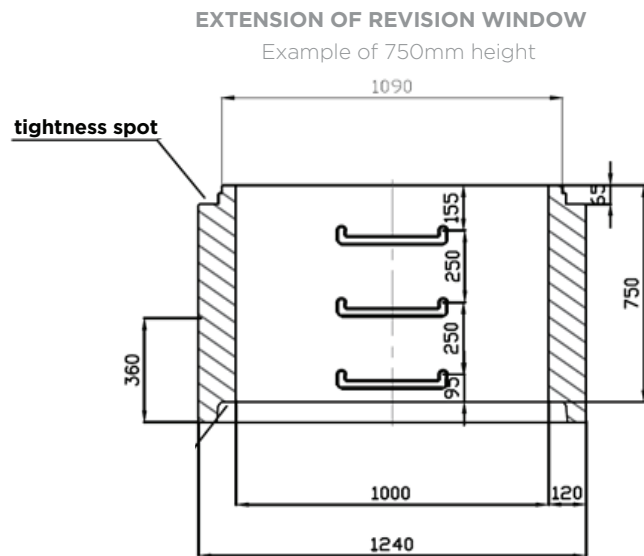
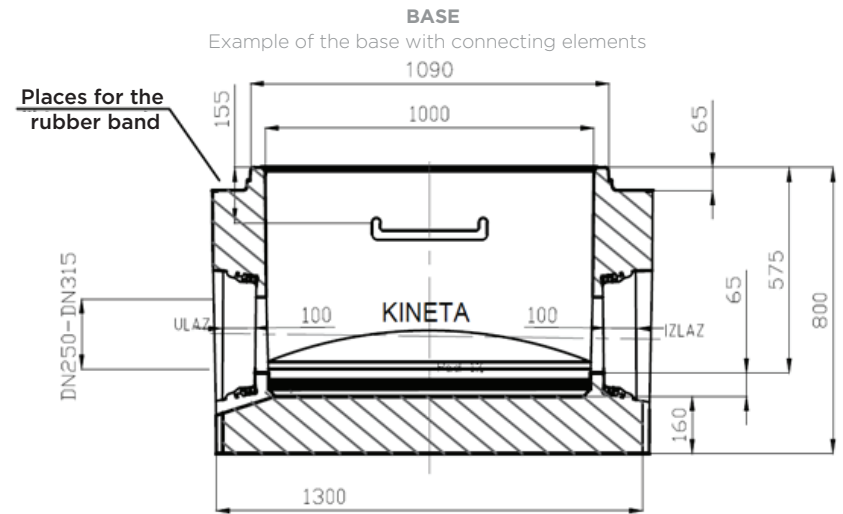
Rubber seals for waterproofing



Particular attention must be paid to the mutual joining of elements if you want to make the joints waterproof.

All elements are connected exclusively and strictly vertically one on top of the other, during which it is necessary to keep a strict account so that it does not come to mutual bending of the elements.

In this way, it is achieved that the rubber which is subsequently mounted on the upper surface of the lower element, and before lowering the upper element, fill its own role completely and achieve a 100% of watertight joint.



Assembly of elements of the inspection window:

The base of the inspection opening is placed on a concrete base or a base made of stone aggregate. Construction of the base, assembly and backfilling of pipes and shafts is prescribed according to standards EN 1610 and EN1917.

The quality of the substrate is the responsibility of the contractor and must be in accordance with the conditions prescribed in the project. The project defines: the width of the construction pit, the slope excavation slopes, stabilization of the substrate and the type of material used for it, backfilling of the construction pit, layer materials and degree of backfilling compaction.

Extensions and/or a conical element are placed on the base of the inspection window.

During the assembly of the elements of the shaft, the contractor is obliged to use the appropriate equipment in order to avoid possible damage to the elements and enable the appropriate the quality of the fit in the elements, taking into account the integrated rubber seals.

All elements must be cleaned of dirt with special attention in the part where the sealing rubber is located, both between the elements of the shaft and in the place where connect the pipes.

TRANSPORT

The following recommendations should be followed during transport and manipulation:

- Transport the elements according to their dimensions and weight.
- It is recommended to lay the elements on wooden pallets to reduce the risk of damage.
- When laying the elements in the construction pit, use adequate tools and machines for transferring and positioning the elements.
- Use the highest precautions at all times to avoid injury to workers.

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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