PRODUCT TECHNICAL SHEET

T3/425 relief cone

Intended for:

- Transfer of traffic loads from vehicle traffic acting on the finials of manholes beyond the core of the plastic well onto the structural layers of ground or road substructure.
- Protection of the shaft of the plastic inspection or rainwater chamber DN / ID 425 against damage both in the vertical and horizontal plane. (for shaft pipes DN / OD max 490 mm)
- Direct structural support:

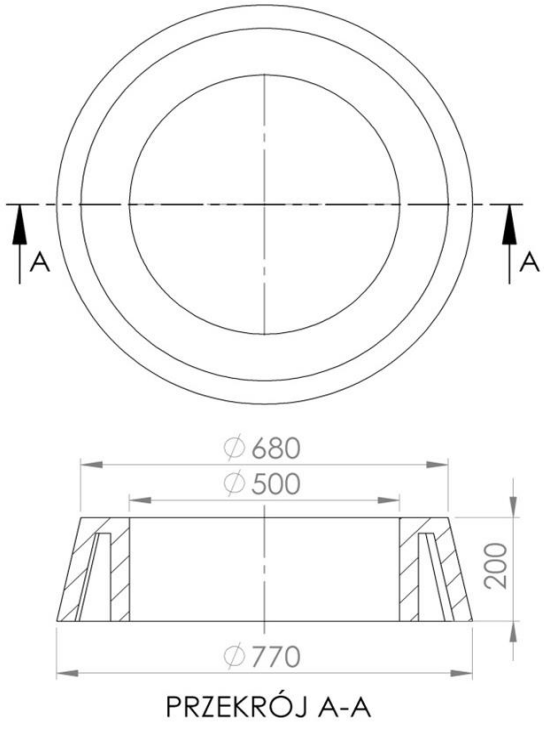
  - traditional manholes with the outer diameter of the body frame up to max. 680 mm in class A15 ÷ D400,

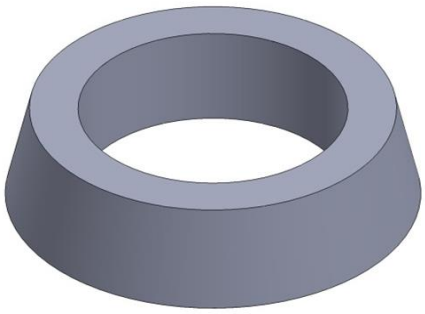
  - supporting adapters TXP and compensating rings of TVR T system from group **T1/435** to relieve the manhole shaft pipe DN / ID425 topped with a telescopic manhole DN 425

  - adapters for the street drains of the TVRT type system TX/4052/10a ,TX/4052/10AP, TX/765/395/80P, TX/765/410/80,TX/650/395 supporting road flanges, sewage drains type 400x600, curb-road street drains, drains 500x500 i 300x300 (in the areas of groups 1 ÷ 3 according to PN-EN 124-1 2015)

  - plastic protective covers T4/425

T3 / 425 relief cone for plastic chambers





Index	DN(mm)	DZ(mm)	H(mm)	Weight(kg)	Class
T3/425/D400	500	680/770	200	44	D400

3.Application

The T3 /425 relief cone enables full relief / protection of the shaft of the rising pipe of the plastic inspection, rainwater chamber against traffic loads. It provides direct support for traditional manholes with an external diameter of the manhole collar max.680mm, adapters for telescopic manhole TXP/ 425, compensation rings T1 and T2/500 as well as T4 protecting covers . Together with the T1 / 425/100 ring, it forms a set for relieving the shaft pipe DN / ID 425 topped with a telescopic manhole 425 based on the road structure.

For use in communication engineering in accordance with the above-mentioned purpose in the field of public roads without limits, internal roads,and railway engineering structures without limits. In the traffic areas of groups 1-4, in class D400 according to PN-EN 124-1: 2015-07. It meets the conditions of suitability for use specified in PN-EN 14802: 2005

Used in:

• 425 Wavin inspection chambers

Technical parameters of T3 / 425 relief cone

Compressive strength. Class	400kN D400	PN-EN 124-1 07-2015
Tensile strength	3Mpa	PN-EN ISO 527-1:2012
Degree of resistance to frost in water	F150(-2%)	PB IBDIM PB/TB-1/23
Degree of frost resistance in 2% NaCl	F50(-2%)	PB IBDIM PB/TWm-36/98
Absorptivity	<0,2%	PN-EN ISO 62:2008
Mechanical loss	0,33 tg	
Hardness according to Schore	>46	PN-EN ISO 868:2005
Product dimensional tolerance	± 5mm in diameter, ± 3mm in height	
Support surface	1625 cm²	
Thermal resistance	-30°C do +60°C	In continuous work conditions.
Short-term thermal resistance 170°C	2h	In the conditions of installation in the bituminous surface
PVC / PE material	80%	PN-EN 15346 2009

Product reference documents:
National Technical Assessment No. IBDiM-KOT-2017/0047 3rd edition
National Declaration of Performance No. 05 / EW / 22
Code CN 39259090

General assembly instructions:

- around the shaft pipe, (reducer) of the well cone (at the distance from the edge of the well ≥ 30 cm)) make the thickening of the substructure for the finial in accordance with the rules resulting from ground conditions, compaction index, road structure type and traffic load category based on PN-ENV 1046 standard.
- Conduct compaction by hand, in layers, every 15 cm or with light mechanical equipment, in layers, every 30 cm along the entire height of the well, evenly around the circumference and obtain the degree of ground compaction in accordance with the design, requirements of the manhole assembly instructions:
- in areas with no traffic, the degree of density should be at least 92% on the Proctor scale, in pedestrian traffic routes (class A), the degree of density ≤95%, vehicle load (class D) ≥98% on the Proctor scale.
- in order to maintain proper compaction, it is recommended to stabilize the ground with cement
- the ground under the relieving cone should be flat and free from point loads, consisting of gravel, sand, dry concrete (chippings, etc. are not allowed.)
- Before starting the assembly works of the T3 /425 relieving cone, check whether all the elements of the near-surface finial of the plastic manhole are structurally suited to the intended use:
- whether the manhole has been properly adjusted to the ordinate, e.g. by cutting the shaft pipes
- is there a sufficient height between the top of the shaft pipe of well and the top of the relief cone of the chamber, at least 4 cm
- whether the compaction of the foundation around the well is correct and adequate for the location of the relief cone foundation.
- whether the appropriate height is maintained to the surface ordinate to allow for the installation of a manhole or adapters with sewage sticks
- a gasket (with a lubricant) should be installed on the shaft of the plastic well from the outside
- we place the relief cone centrally over the well opening without disturbing the substructure / compacted substrate, leaving a free space of about 3-4 cm between the top of the shaft pipe and the upper edge of the cone (supporting or a reduction adapter)
- the finial of the well should be made in a tight manner, polymer bonding masses should be used between all the components of the finial, i.e. relief cone, shaft pipe, telescopic pipe of manhole , elastomeric gaskets should be used. Between the horizontal surfaces of the equalizing / reducing rings, the upper surface of the relief cone and the manhole cover or sewage drain, apply polymer bonding-sealing masses.
- in case of a change in the ordinate of the surface, it is possible to perform (additional) adjustment of the traditional manhole or drain with the TVR T system compensation rings (T1 or T2 / 500) placed on the T3 / 425 relief cone
- Place the compensation rings centrally over the manhole, one on top of the other, pressing firmly until the required adjustment height is achieved.
- **Place the manhole centrally over the manhole opening and anchor with screws to the relief cone or compensation rings** (Sewer drains are set centrally to the adapter drain opening)

T3 / 425 relief cone with TXP / 425 adapter for direct support of DN 425 telescopic manholes

- The T3 / 425 relief cone with the TXP / 425 adapter is an element directly supporting the DN 425 telescopic manhole (minimum outer diameter of the body's flange 560mm), mounted on the adapter (for use in paving stones as well as in bituminous surfaces,
- Place the telescopic pipe of the manhole in the shaft pipe DN / OD 425 sheltered with a cone relieving manhole , the manhole is placed on the adapter .
- **In case of changing the grade line of the bituminous surface , the cone remains in the place of its earlier installation. The manhole is pulled up, the space between the manhole and the adapter is filled with bituminous mass and the manhole is pressed into the surface**

In traffic areas

- around the finial of the plastic manhole, up to 1/3 of the height of the manhole or the drain , make a road surface foundation based on breakstone (approx. 65-70%) and quick-setting cement masses (approx. 30-35%) or B35 concrete or asphalt mass / hot asphalt concrete
- reconstruction of the road surface around the near-surface finial and the manhole/ drain is made in layers with appropriate compaction of each hot applied bitumen layer to the level of the pavement ordinate
- commissioning should take into account the necessary time of complete cooling of the bituminous mass, allowing it

to be put into service

In green areas
the relief cone with the protective cover should be raised above the ground level to protect against the inflow of surface water (at least 5-8 cm above the ground)

Notes on installation conditions

During height adjustment of sewage wells with the use of plastic elements of the TVR T System, it is forbidden to:

- installation and assembly of relief cones on an unprepared, uncompressed substructure around the manhole. Without providing full permanent support for the relief cone.
- use of ground materials for compaction of the substructure that do not comply with the recommendations of the manufacturer of manholes and materials other than those approved for use in road construction described in PN-S 02205, height adjustment, overlapping, placing point destructive elements under the cones
- laying the surface without making the correct foundation, filling and compacting the space around the finial and the manhole