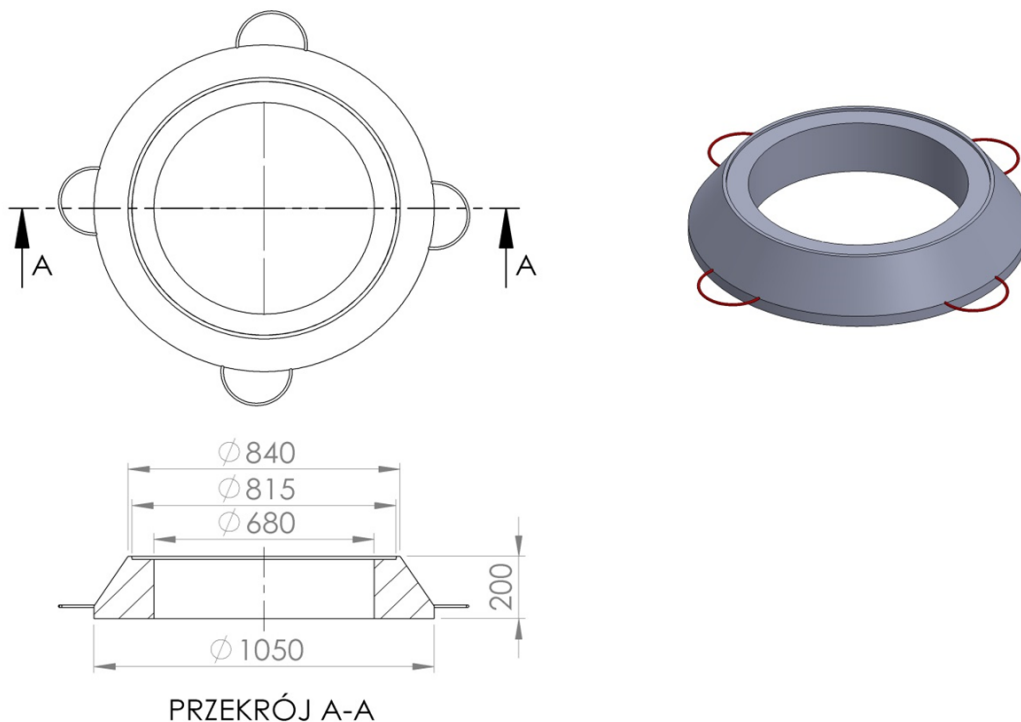


T3/680 relief cone
Intended for:

- 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 DN / ID 600 against damage both in the vertical and horizontal plane.
- Finials of inspection chambers DN / ID 600 DN , manholes DN800, DN 1000, with a reduction cap / reducer with an external diameter DN / OD up to a maximum of 675mm and a minimum height of 450 mm.
- Direct structural support:
 - manholes with the outer diameter of the body frame up to max.800 mm in class A15 ÷ D400,
 - compensating rings of TVR T system from group T1R/625
 - leading rings for self-leveling manholes of the TVR T system from the TXS group with an internal diameter of the leading ring at least 675mm

T3/680 relief cone for plastic chambers


Index	DN(mm)	DZ(mm)	H(mm)	Weight(kg)	Class
T3/680	680	1050	200	76,7	D400

The universal relief cone is an element for the construction of near-surface finials of plastic inspection and manhole wells DN/ID 600 and DN/OD max 640mm in class D400. The T3/680 relief cone enables full relief / protection of the shaft of the rising pipe of the plastic chamber against traffic loads. It provides direct support for manholes acc. to DIN 19584 (BEGU type), self-leveling manholes with the outer diameter of the leading pipe 665 ÷ 675 (KZO DN600, Viatop Niveau) , compensation and leading rings .

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:

- Tegra 1250 Wavin manholes
- Manholes DN 1000 PP Romold

Technical parameters of T3 / 680 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	5027cm ²	
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 $\leq 95\%$, vehicle load (class D) $\geq 98\%$ on the Proctor scale.
- in order to maintain proper compaction, it is recommended to stabilize the ground with cement and the use of impenetrable clay or clay barriers
- 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 /680 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 / reducer and 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
- a gasket (with a lubricant) should be installed on the shaft of the plastic well from the outside
- 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 top edge of the cone
- 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 , elastomeric gaskets should be used. Between the horizontal surfaces of the equalizing rings, the upper surface of the relief cone and the manhole cover , 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 manhole with the TVR T system compensation rings placed on the T3 / 680 relief cone (with a minimum ring height of 40 mm and an internal diameter of not less than 625 mm)
- 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
- around the finial of the plastic manhole, up to up to the foot of the manhole 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 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

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