



# SEWAGE MANHOLES

## DN 1000

### external sewage systems

#### MATERIAL

- polyethylene (PE)

#### WELL TYPES

- **reinforced** (including the reinforced elements – WZ)
- **standard** (made of standard elements – ST)
- **optimal** (combination of standard and reinforced elements)

The selection of the well type is based on the design requirements

#### PURPOSE

- for sewage:
  - **gravity** (sanitary and rainwater)
  - **pressure**
  - with flat bottom for water installations
- used as: inspection, expanding, sump wells, waste pumping stations

Wells are used both on surfaces without high loads and road lanes.

#### VALUES

- low weight of elements
- high mechanical strength
- construction stiffness
- resistance to chemical corrosion
- very high resistance to aggressive sewage, aggressive or contaminated ground water and contaminated soil
- 100% tightness, non-toxic for the environment, do not emit any substances during the operation
- highest resistance to abrasion (many times higher than the resistance of concrete, GRP, PVC)
- low investment cost
- easy and quick assembly, especially in hard terrain conditions
- possibility of making narrow trenches with dimensions adapted to the wells
- possibility of assembling the wells without the use of heavy equipment, which lowers the investment cost





The well elements are ribbed, which increases their rigidity and counteracts the buoyancy in unstable soils and soils with high level of ground water. Wells have polyethylene or stainless steel steps. The wells may be monolithic (individual elements are welded together) or with elements connected with gaskets.

The maximum foundation depth of the well is 6 m, while the constructions with foundation depth over 5.3 m require contact with the manufacturer.

Depending on the design and operation requirements the wells should be equipped with a proper type of cover and crown. For the wells located in green areas Ø 624 polyethylene covers produced by Elplast+.

WZ elements have thicker walls than the ST elements, and thus better strength parameters.

In the case of wells meeting the requirements of PN-EN 13598-2 standard, the elements can be connected by extrusion welding or with rubber gaskets.

The well wall thickness can be adapted individually by the guidelines of the system user or designer, depending on the ground conditions (production on special request).

### CONSTRUCTION

- base - sump with profiled ducts for the connection of inlet and outlet pipes
- turret that ensures proper height of the well
- cone used to connect with well crown elements (with a load distribution ring) with a concrete plate with cast-iron manhole or PE cover
- base with a flat bottom for pumping station tanks
- connecting gaskets for the well elements
- inlet gasket to connect the pipe with a sump

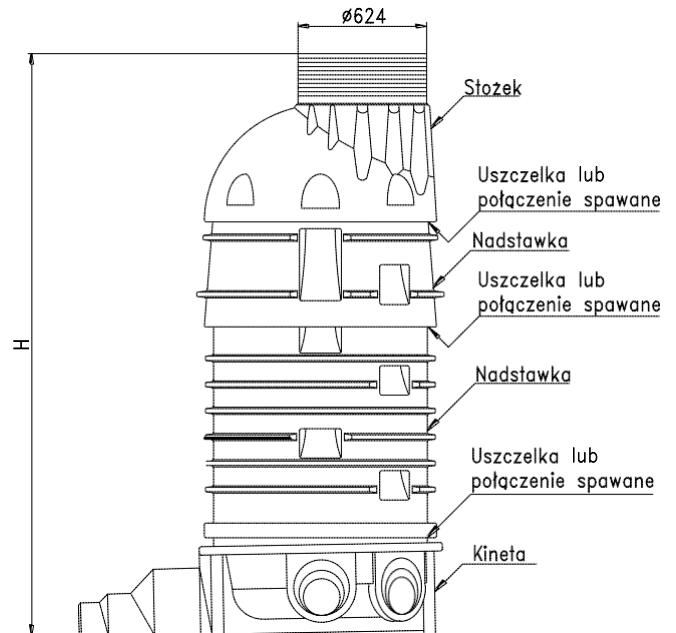


TABLE 1 DN 1000 sewer well elements

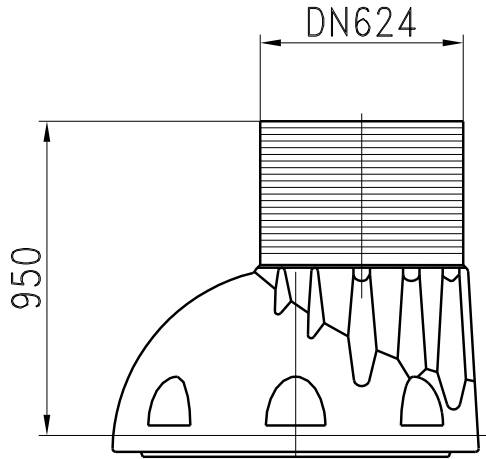
ELEMENT	MARKING	DESC RIPTI	HEIGHT H [MM]	VERSION
Cone	Sms 1000/750	eccentric cone with 2 plastic or stainless steel steps	750	ST WZ
	Sms 1000/950	eccentric cone with 2 plastic or stainless steel steps	950	ST WZ
Turret	Ns 1000/500	with 2 plastic or SN steps	500	ST WZ
	Ns 1000/1000	with 4 plastic or SN steps	1000	ST WZ
Base - sump	5Pk 250/1000/500	5 inlets, diameter Ø 250	500	ST WZ
	5Pk 250/1000/700	5 inlets, diameter Ø250, 1 SN or plastic step	700	ST WZ
	5Pk 315/1000/500	5 inlets, diameter Ø 315	500	ST WZ
	5Pk 315/1000/700	5 inlets, diameter Ø315, 1 SN or plastic step	700	ST WZ
	3Pks 500/1000/700	3 inlets, diameter Ø 500, 1 plastic step	700	WZ
	03Pk 250/1000/500	corner with "0" level, 3 inlets – side inlets offset by an angle of 90 and 45, diameter Ø 250	500	WZ
	03Pks 250/1000/700	corner with "0" level, 3 inlets – side inlets offset by an angle of 90 and 45, diameter Ø 250, 1 plastic step	700	WZ
	05Pk 315/1000/500	corner with "0" level, 5 inlets, diameter Ø 315; enlarged anti-flotation ring and steel reinforcement	500	WZ
	05Pk 315/1000/700	corner with "0" level, 5 inlets, diameter Ø 315; enlarged anti-flotation ring and steel reinforcement	700	WZ
	Base with flat bottom	Pps 1000/1050	4 plastic or SN steps	1050
Pps 1000/550		4 plastic or SN steps	550	WZ

ST - standard  
WZ - reinforced

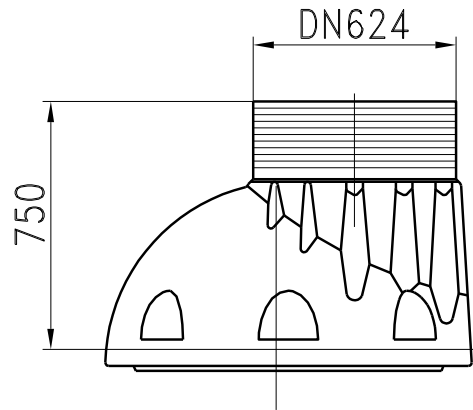


Ø 1000 WELL ELEMENTS – DRAWINGS:

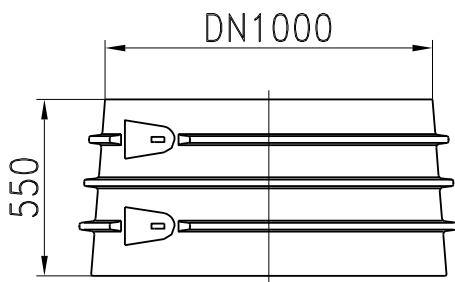
Stożek mlmośrodowy DN1000/950



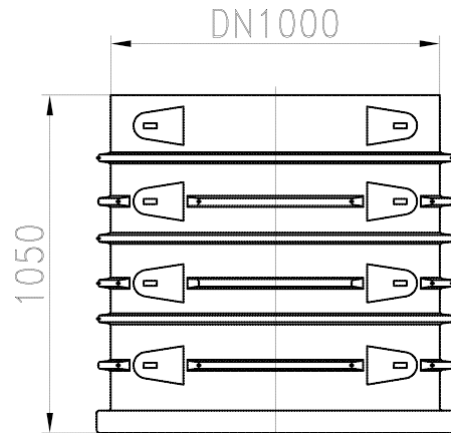
Stożek mlmośrodowy DN1000 /750



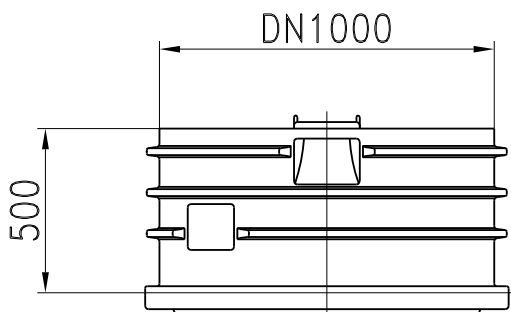
Podstawa z dnem płaskim  
DN1000/550



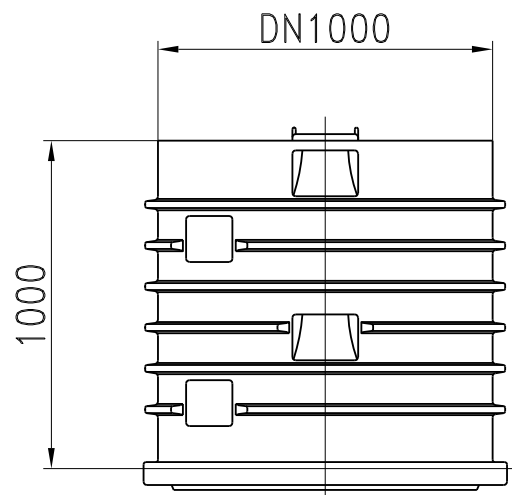
Podstawa z dnem płaskim  
DN800/1050



Nadstawka DN1000/500



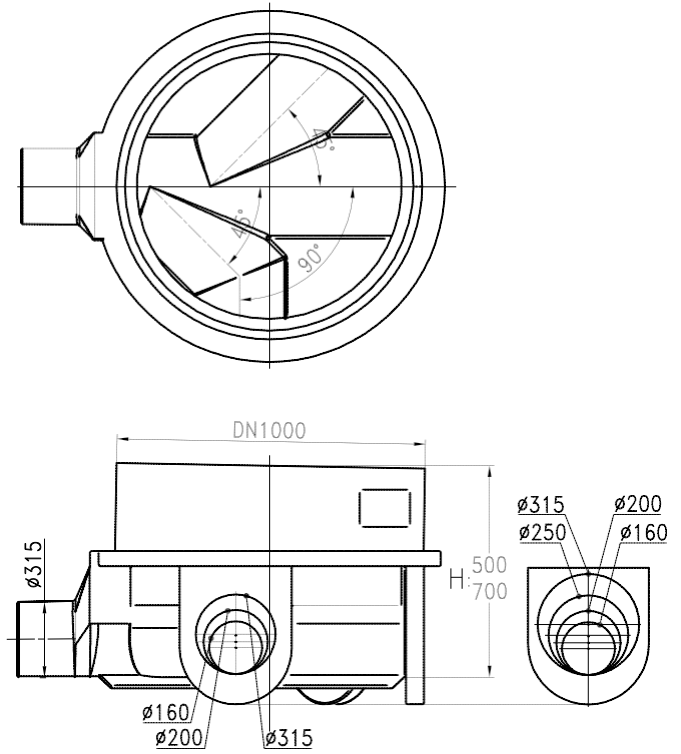
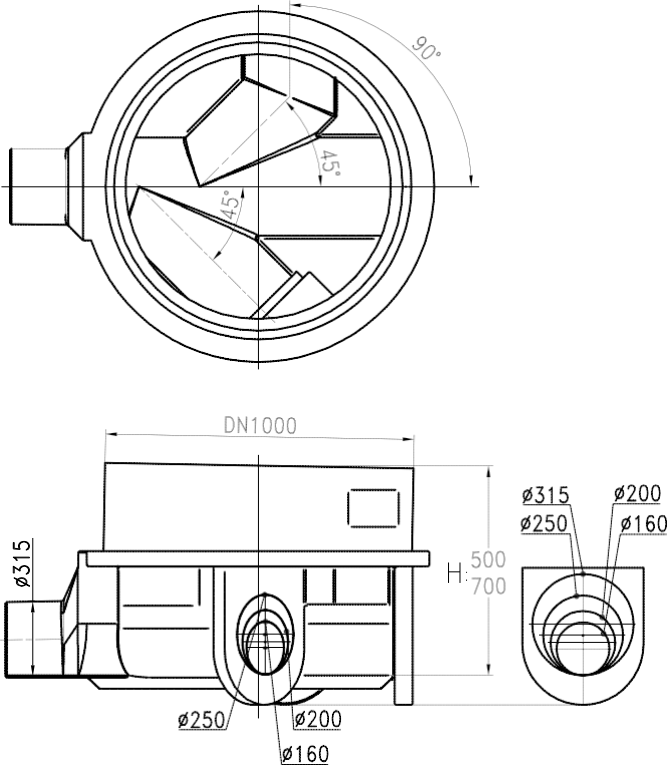
Nadstawka DN1000/1000





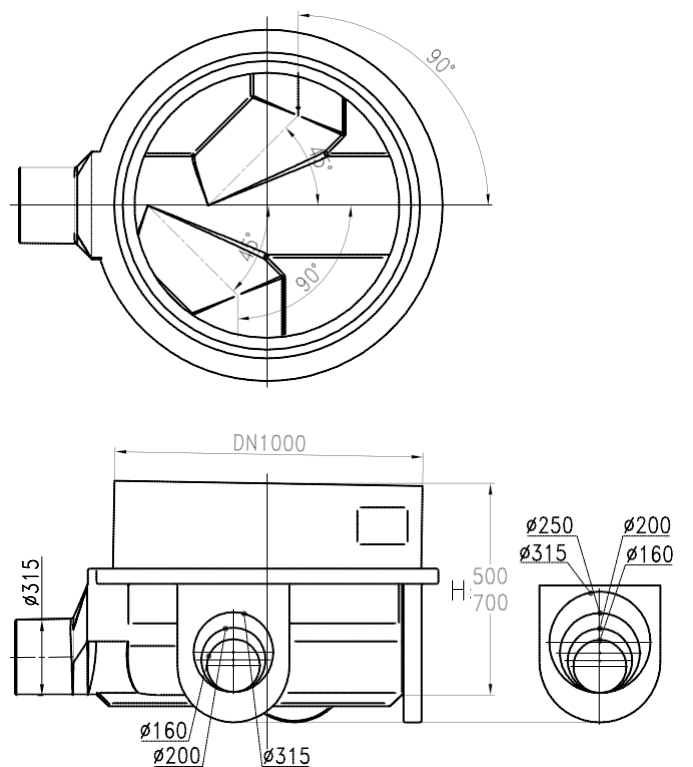
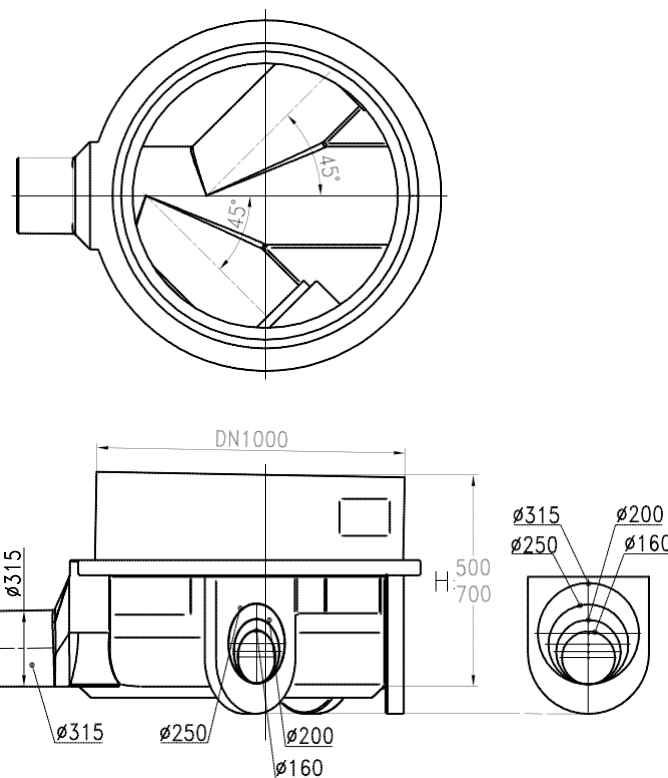
3-y wlotowa podstawa - klneta  
DN1000 03Pk Ø315 - L45°/P90°

3-y wlotowa podstawa - klneta  
DN1000 03Pk Ø315- L90°/P45°



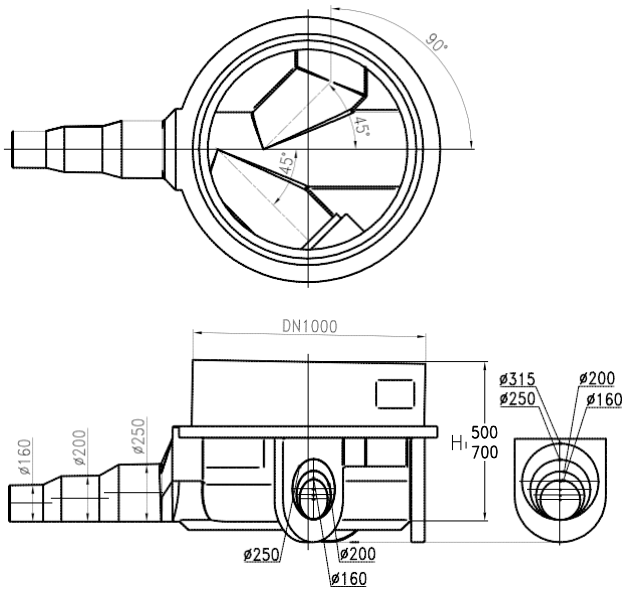
3-y wlotowa podstawa - klneta  
DN1000 03Pk Ø315 - L/P45°

3-y wlotowa podstawa - klneta  
DN1000 03Pk Ø315 - L/P90°

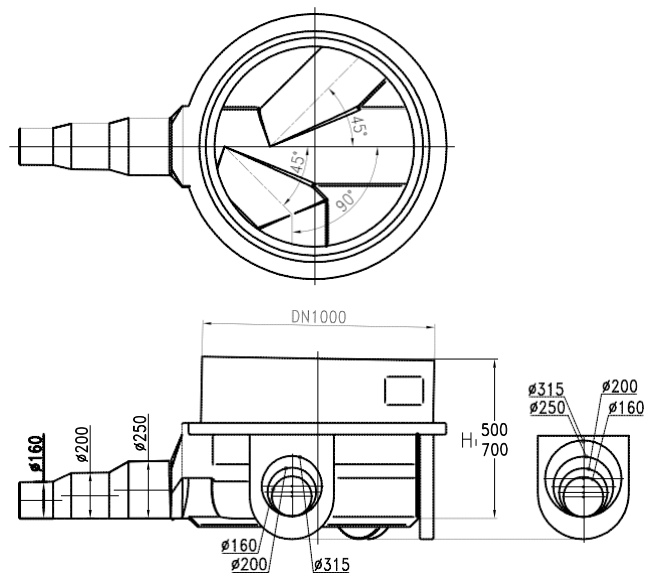




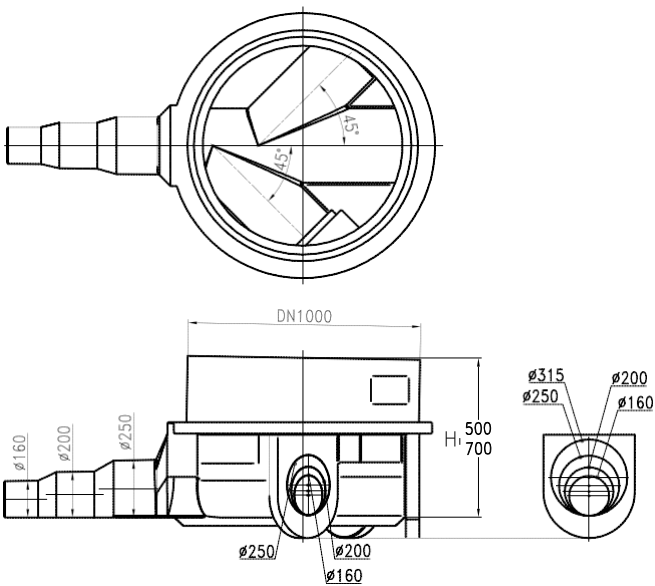
3-y wlotowa podstawa - klmeta  
DN1000 03Pk Ø250 - L45°/P90°



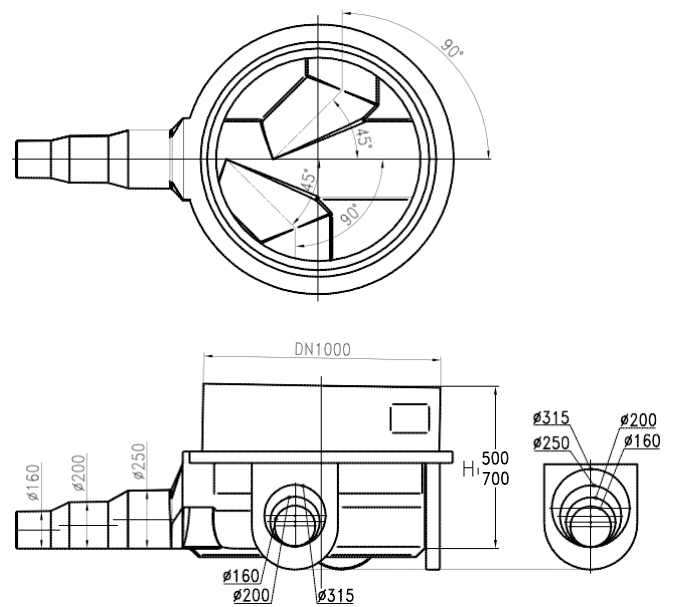
3-y wlotowa podstawa - klmeta  
DN1000 03Pk Ø250- L90°/P45°



D3-y wlotowa podstawa -  
klmetaDN1000 03Pk Ø250 - L/P45°

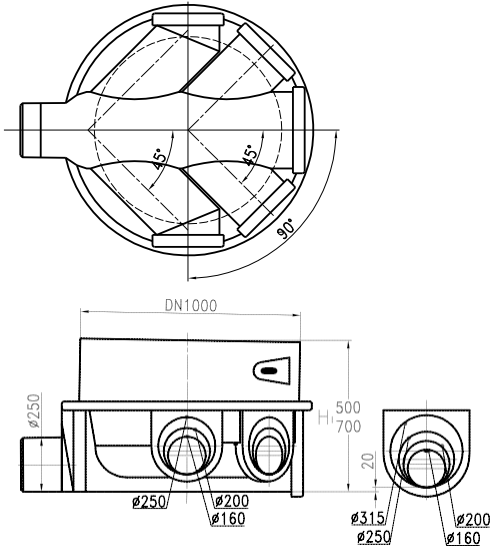


3-y wlotowa podstawa - klmeta  
DN1000 03Pk Ø250 - L/P90°

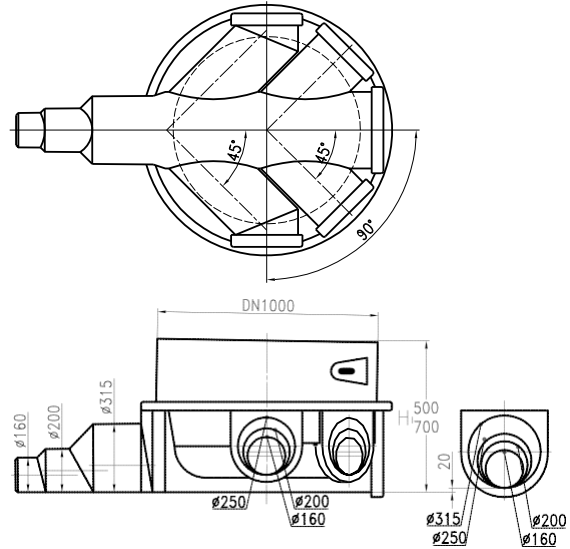




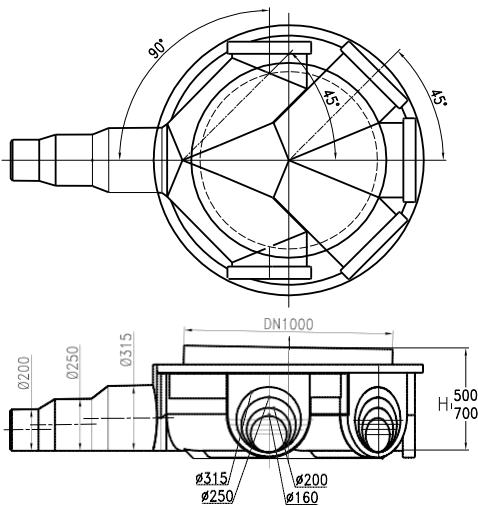
5-cio wlotowa podstawa - kineta  
DN1000 Ø250



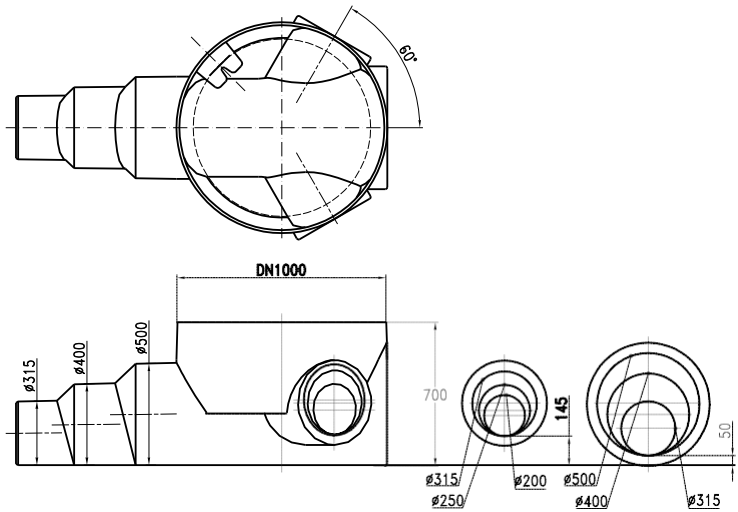
5-cio wlotowa podstawa - kineta  
DN1000 Ø315



5-cio wlotowa podstawa - kineta  
DN1000 Ø5Pk



3-y wlotowa podstawa - kineta  
DN1000 Ø500



## APPENDICES:

- Technical brochure EL-06
- Technical approval IBDiM AT /2007-02-2237
- Declaration of conformity no. 12 (complete wells)
- Declaration of conformity no. 13 (well elements)
- Declaration of conformity no. 12a (wells conformable with PN-EN 13598-2 standard)
- GiG opinion that allows for the use of wells at the mining areas of damage
- CSK price list