APLAST

PE SEWER INSPECTION CHAMBERS

1. ABOUT

Aplast d.o.o. is a specialist in the development and production of a wide range of polymer products using the rotational moulding (rotomoulding) process. With more than 120 employees, we follow the principles of technological innovation, build our own brand, and enjoy a strong reputation in both domestic and international markets. In our operations, we use the most advanced rotational moulding technology, ensuring minimal environmental impact.

High-quality production and solutions

Our main focus is solutions for underground infrastructure, primarily for sewage and water systems. We provide efficient and environmentally friendly products for water transport, collection and treatment, systems for underground storage and waste separation, as well as components for floating pipelines. In addition, we offer specialized solutions for the demanding automotive industry.

Customer focus and global presence

More than half of our revenue is generated through exports to **30 countries** worldwide, with the share of exports having almost doubled in recent years. We attribute the loyalty of our partners to the continuous development of high-quality products that meet the most stringent safety and efficiency requirements. This is what ensures the recognition of the Aplast brand in an increasingly competitive global market.

In-house development and development partnerships

Our products are the result of our in-house development department, which integrates expert knowledge from initial concept and design through to final execution. As a reliable development partner, we support customers in the development of dedicated tools and ensure the serial production of specific products. Our commitment to excellence is confirmed by the **ISO 9001** quality management system and the **ISO 14001** environmental management system certifications.

2. PE SEWER INSPECTION CHAMBERS

INTENDED USE

Polyethylene shafts are intended for the inspection of sanitary or stormwater sewer networks, and may also be used for the inspection of process wastewater systems in industrial facilities. In addition to inspection, they serve for the connection of two or more pipes, ventilation, changes in direction, adjustment of gradients, as well as maintenance and cleaning of the sewer system.

ADVANTAGES

- Long service life of the material.
- Water tightness.
- Easy transport.
- Simple manual or mechanical handling.
- Fast and simple installation.
- Quick and simple adjustment of installation height.
- Fast and simple execution of manhole connections.
- Easy addition of new extra connections.

All manholes in the catalogue are manufactured in accordance with the **SIST EN 13598 standard**.

2.1.TYPES OF PE SEWER INSPECTION CHAMBERS

2.1.1. 6G SEWER INSPECTION CHAMBERS

PROPERTIES

- Single-layer spherical base.
- The integrated channel matches the diameter of the connecting pipe.
- Installation depth of shafts up to 4 m* in areas with high groundwater (up to max. 2 m).
- Possibility of manufacturing additional connections on the shafts.
- Option to create connections directly into the shaft body on-site using inlet seals up to DN 200.
- Channel slope from 5° to 10°.

6G chamberk

6G chamber at a 45° angle

TECHNICAL DATA

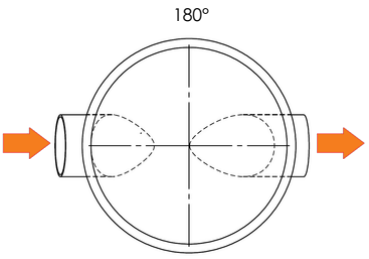
standard bottom and body diametres [DN = ID]:	625	800	1000
Standard trough dimensions DN:	up to 250	up to 315	up to 315
Bottom height [mm]:	455	530	550
Chamber height [mm]:	from 500 to 4000*		
Allowed height of the effects of underground water upon the bottom:	2 m		
Chamber body circumferential stiffness:	SN 2 (rotomoulded), MIN standard requirements SN 4 (ribbed pipe) SN 8 (ribbed pipe) SN 10 (ribbed pipe for ID 800 and 1000 mm) PE, PP ribbed**		
Possible connection pipes:	YES		
Possibility of an extension/lowering of the chamber cone revision opening:	max. 250 mm		
Possibility of the assembly of additional connections:	YES		
Double bottom:	NO		
Possibility of a PE or INOX ladder:	YES DN/ID 800 and 1000		
Possibility of the AQUAstop anti-flooding-anti odour insert:	YES In revision opening DN/ID 625		

*If required, chambers can be produced for greater installation depths.
**Other pipe types available upon request.

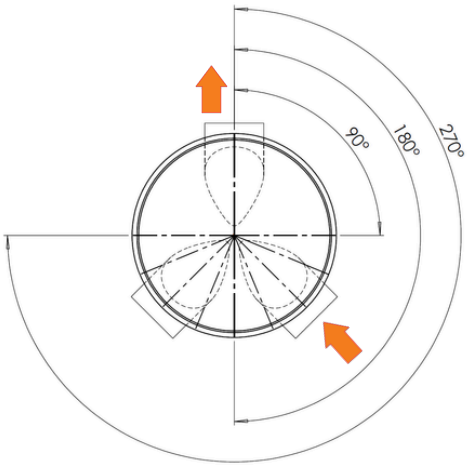
CHAMBER TROUGHS

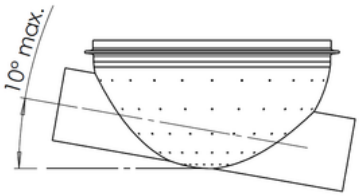
Basic trough types:

Type: : 1/1 (180°)



Type: : 90° ÷ 270°





Standard inlet-outlet connections per trough type:

IINLET / OUTLET	DN 625		DN 800			DN 1000		
	200	250	200	250	300	200	250	300
200	●							
250	●	●	●	●		●	●	
300	●	●	●	●	●	●	●	●
400			●	●	●	●	●	●

2.1.2. 5G sewer inspection chambers double bottom

PROPERTIES

- **Double base wall construction:** The chambers are designed with an outer base wall and an inner channel wall, ensuring exceptional structural strength..
- **Deformation resistance:** The outer wall effectively protects the internal channel from deformation caused by external loads.
- **Optional concrete filling:** On request (in accordance with project requirements and stability calculations considering groundwater influence), the space between the two walls can be partially filled with concrete.
- **High groundwater resistance:** Suitable for installation at depths up to 6 m*, including areas with high groundwater levels (up to max. 5 m).
- **Easy installation:** The flat base provides excellent stability during placement in the excavation pit and enables simple bedding and backfilling with granular material.
- **Flexible connection configuration:** Inlet connection layouts are fully adaptable to project requirements; additional connections can also be integrated.
- **On-site modification:** Additional connections can be installed directly on site into the chamber body using sealing systems, up to DN 200.
- **Hydraulic efficiency:** The internal channel is completely smooth and dimensionally adapted to inlet and outlet connections, ensuring optimal flow characteristics.
- **Structural stiffness options:** The chamber body can be manufactured from rotomoulded elements (SN2) or ribbed PE pipes (SN4, SN8 or SN10), depending on project requirements.

TECHNICAL DATA

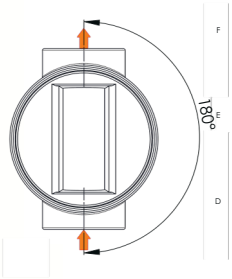
Standard bottom and body diametres [DN = ID]:	625	800	1000
Standard trough dimensions DN:	160 to 300	200 to 400	200 to 400
Bottom height [mm]:	500		
Chamber height [mm]:	500 to 6000*		
Allowed height of the effects of underground water upon the bottom:	5 m		
Chamber body circumferential stiffness:	SN 2 (rotomoulded), min. standard requirements SN 4 (ribbed pipe) SN 8 (ribbed pipe) SN10 (ribbed pipe for ID 800 and ID 1000 mm)		
Possible connection pipes:	PE (ribbed and smooth), PP (ribbed and smooth), PVC, AB, GRP, etc.		
Possibility of an extension/lowering of the chamber cone revision opening:	YES max. 250 mm		
Possible assembly of additional connections:	YES		
Double bottom:	YES		
Possibility of a PE or INOX ladder:	YES DN/ID 800 and 1000		
Possibility of the AQUAstop anti-flooding-anti odour insert:	YES In revision opening DN/ID 625.		

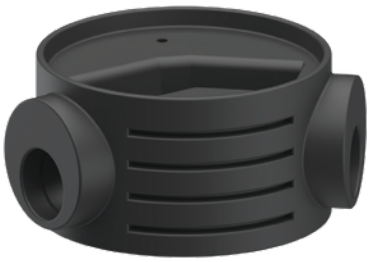
*If required, chambers can be produced for greater installation depths.

CHAMBER TROUGHS

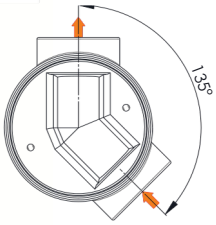
Basic trough types:

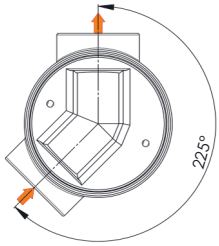
Type: 1/1 (180°)



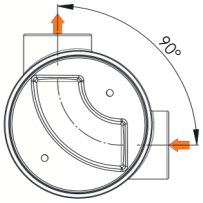


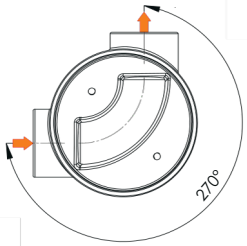
Type: 45°





Type: 90°





Standard inlet-outlet connections per trough type:

Troughs-DN / Troughs-Type	DN 625				DN 800				DN 1000			
	160	200	250	300	200	250	300	400	200	250	300	400
90⁰		●	●			●	●				●	●
135⁰	●	●	●	●	●	●	●	●	●	●	●	●
180⁰	●	●	●	●	●	●	●	●	●	●	●	●
225⁰	●	●	●	●	●	●	●	●	●	●	●	●
270⁰		●	●			●	●				●	●

2.1.3. 4G sewer inspection chambers

PROPERTIES

- IIntegrated moulding of the basic inlet-outlet connections for ribbed pipes.**
- Single bottom with reinforcement ribs.
- Basic troughs: flat (180°) or tilted (45°).
- Trough height equals the MAX connection pipe dimension.
- Installation depth of the chambers up to 4 m* in areas with high groundwater (up to a MAX of 2 m).
- Possibility of additional connections to the chambers.
- Possibility of an assembly of the connections into the chamber body in the field by means of inlet gaskets in dimensions up to DN 200.

4G chamber with a flat trough

4G chamber with a tilted trough (45°)

TECHNICAL DATA

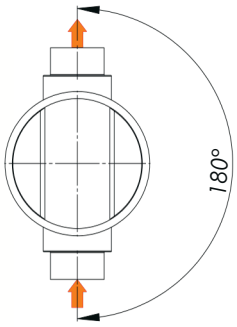
Standard bottom and body diametres [DN = ID]:	625	800	1000
Standard trough dimensions DN:	300	400	400
Bottom height [mm]:	500		
Chamber height [mm]:	od 500 do 4000*		
Allowed height of the effects of underground water upon the bottom:	2 m		
Chamber body circumferential stiffness:	SN 2 (rotomoulded), min standard requirements SN 4 (ribbed pipe) SN 8 (ribbed pipe) SN10 (ribbed pipe for ID 800 and ID 1000 mm)		
Possible connection pipes:	PE, PP ribbed pipes**		
Possibility of an extension/lowering of the chamber cone revision opening:	YES max. 250 mm		
Possibility of the assembly of additional connections:	YES		
Double bottom:	NO		
Possibility of a PE or INOX ladder:	YES DN/ID 800 in 1000		
Possibility of the AQUAstop anti-flooding-anti odour insert:	YES In revision opening DN/ID 625.		

*If required, chambers can be produced for greater installation depths.
**Other pipe possibilities by request.

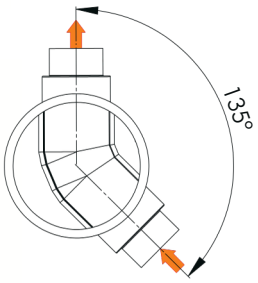
CHAMBER TROUGHS

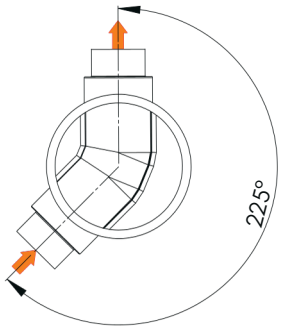
Basic trough types:

Type: 1/1 (180°)



Type: 45°





Standard inlet-outlet connections for **both** trough types:

	DN 625			DN 800				DN 1000			
Inlet / Outlet	200	250	300	200	250	300	400	200	250	300	400
200	●										
250	●	●		●	●			●	●		
300	●	●	●	●	●	●		●	●	●	
400				●	●	●	●	●	●	●	●

2.1.4. 3G 3G sewer inspection chambers

PROPERTIES

- Height up to 2 m.
- Integrated moulding of the basic inlet-outlet connections for smooth pipes.**
- Single bottom with reinforcement ribs.
- Basic troughs: 1/1 (180°) or 3/1 (135°, 180° and 225°).
- Smooth pipe connections are made through an inlet gasket for the inlet pipe, and a pipe collar for the outlet pipe.
- Trough height equals the MAX connection pipe dimension.
- Installation depth of the chambers up to 4 m* in areas with high groundwater (up to a MAX of 2 m).
- Possibility of additional connections to the chambers.
- Possibility of an assembly of the connections into the chamber body in the field by means of inlet gaskets in dimensions up to DN 200.

3G chamber with a 1/1 trough

3G chamber with a 3/1 trough

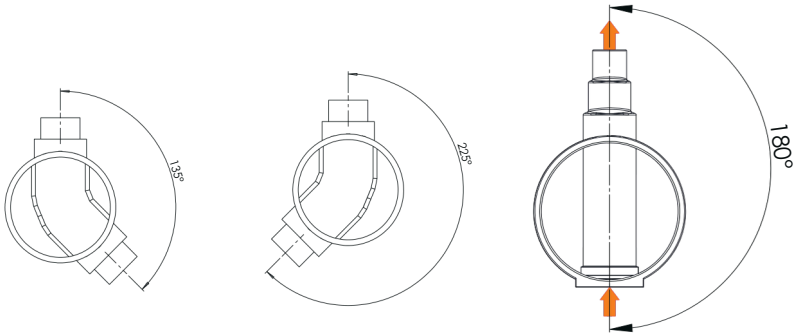
TECHNICAL DATA

Standard bottom and body diametres [DN = ID]:	625		800		1000	
Trough types:	1/1	3/1	1/1	3/1	1/1	3/1
Standard trough dimensions DN:	315	250	400	315	400	
Bottom height [mm]:	500					
Chamber height [mm]:	od 500 do 4000*					
Allowed height of the effects of underground water	2 m					
Chamber body circumferential stiffness:	SN 2 (rotomoulded), min. standard requirements SN 4 (ribbed pipe) SN 8 (ribbed pipe) SN10 (ribbed pipe for ID 800 and ID 1000 mm)					
Possible connection pipes:	PVC, PE, PP (smooth) **					
Possibility of an extension/lowering of the chamber cone revision opening:	YES max. 250 mm					
Possibility of the assembly of additional connections:	YES					
Double bottom:	NO					
Possibility of a PE or INOX ladder:	YES DN/ID 800 and 1000					
Possibility of the AQUAstop anti- flooding-anti odour insert:	YES In revision opening DN/ID 625.					

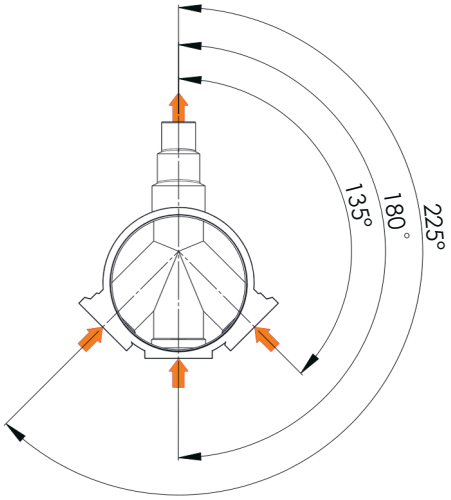
*If required, chambers can be produced for greater installation depths.
**Other pipe possibilities by request (for ribbed pipes with PE transition components).

CHAMBER TROUGHS

Basic trough types:
Type: 1/1 (135°, 180°, 225°)



Type: 3/1 (135°, 180°, 225°)



Standard inlet-outlet connections for **1/1 trough** types:

	DN 625				DN 800					DN 1000				
Vtok / I ztok	160	200	250	315	160	200	250	315	400	160	200	250	315	400
200	●	●												
250	●	●	●		●	●	●			●	●	●		
315	●	●	●	●	●	●	●	●		●	●	●	●	
400					●	●	●	●	●	●	●	●	●	●

Standard inlet-outlet connections for **3/1 trough** types:

	DN 625			DN 800				DN 1000				
Vtok / I ztok	160	200	250	160	200	250	315	160	200	250	315	400
160	●											
200	●	●		●	●							
250	●	●	●	●	●	●		●	●	●		
315				●	●	●	●	●	●	●	●	
400								●	●	●	●	●

2.1.4.1. 3G-S sewer inspection chambers

PROPERTIES

- Integrated moulding of basic inlet and outlet connections for smooth pipes.** Single-layer base with reinforcing ribs.
- Basic troughs: 1/1 (180°).
- Connection of smooth pipes at the chamber inlet is carried out using an inlet sealing gasket, while the outlet is connected using a pipe socket.
- Trough height equals the MAX connection pipe dimension.
- Installation depth of the chambers up to 4 m* in areas with high groundwater (up to max. 2 m).
- Possibility of additional connections on the chamber.
- On-site installation of connections into the chamber body using inlet sealing gaskets up to DN 200.

3G-S sewer inspection chambers with new chamber troughs DN 250.

TECHNICAL DATA

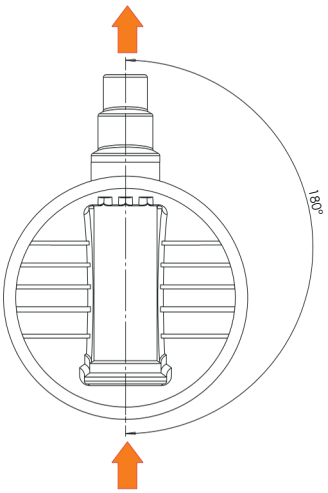
Standard bottom and body diametres [DN = ID]:	800	1000
Type of chamber troughs	1/1	1/1
Standard trough dimensions DN:	250	250
Bottom height [mm]:	500	
Chamber height [mm]:	500 to 4000*	
Allowed height of the effects of underground water upon the bottom:	2 m	
Chamber body circumferential stiffness:	SN 2 (rotomoulded), min. standard requirements SN 4 (ribbed pipe) SN 8 (ribbed pipe) SN10 (ribbed pipe for ID 800 and ID 1000 mm)	
Possible connection pipes:	PVC, PE, PP smooth**	
Possibility of an extension/lowering of the chamber cone revision opening:	YES max. 250	
Possibility of the assembly of additional connections:	YES	
Double bottom:	NO	
Possibility of a PE or INOX ladder:	YES	
Possibility of the AQUAstop anti-flooding-anti odour insert:	YES In revision opening DN/ID 625.	

*If required, chambers can be produced for greater installation depths.
**Other pipe types available upon request (for ribbed pipes with PE transition fittings).

CHAMBER TROUGHS

Basic trough types:

Type: 1/1 (180°)



Standard inlet-outlet connections per trough type:

	DN 800			DN 1000		
Inlet / Outlet	160	200	250	160	200	250
160	●			●		
200	●	●		●	●	
250	●	●	●	●	●	●

2.1.5. L, XL, 2XL, 3XL sewer inspection chambers for high flow rates

PROPERTIES

- For the connection of all types of pipes.
- Single bottom with reinforcement ribs.
- Basic trough: 1/1 (180°).
- Trough height equals the MAX connection pipe dimension.
- Installation depth of the chambers up to 4 m* in areas with high groundwater (up to a MAX of 2m).
- Possibility of additional connections to the chambers.
- Possibility of an assembly of the connections into the chamber body in the field by means of inlet gaskets in dimensions up to DN 200.

L

XL

2XL

3XL

TECHNICAL DATA

Standard bottom and body diametres [DN = ID]:	800	1000			
Trough types:	L	XL	2XL	3XL	
Standard trough dimensions DN:	500, 600	600	800	1000	
Standard chamber body diameters [DN = ID]:	800	1000		1000	1200
Bottom height [mm]:	750	750	1000	1250	
Chamber height [mm]:	750 to 4000*				
Allowed height of the effects of underground water upon the bottom:	2 m				
Chamber body circumferential stiffness:	SN 2 (rotomoulded), min standard requirements SN 4 (ribbed pipe) SN 8 (ribbed pipe) SN 10 (ribbed pipe)				
Possible connection pipes:	PE (ribbed and smooth), PP (ribbed and smooth), PVC, AB, GRP, etc.				
Possibility of an extension/lowering of the chamber cone revision opening:	YES max. 250 mm				
Possibility of the assembly of additional connections:	YES				
Double bottom:	NO				
Possibility of a PE or INOX ladder:	YES				
Possibility of the AQUAstop anti-flooding-anti odour insert:	YES In revision opening DN/ID 625.				

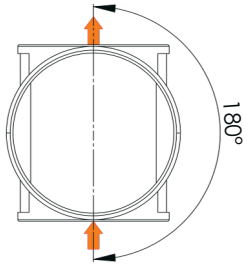
*If required, chambers can be produced for greater installation depths.

CHAMBER TROUGHS

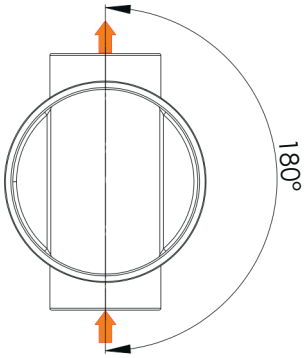
Basic trough types:

Type: 1/1 (180°)

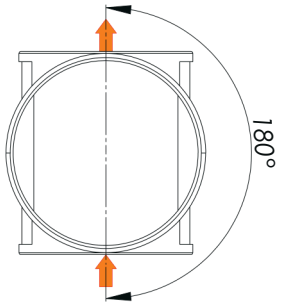
L



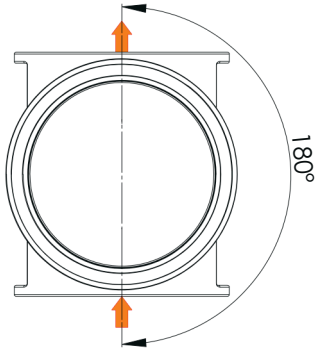
XL



2XL



3XL



Standard inlet-outlet connections:

	DN 800		DN 1000			
Trough type	L		XL		2XL	3XL
Inlet / Otlet	500	600	500	600	800	1000
500	●		●			
600	●	●	●	●		
800					●	
1000						●

2.1.6. Collection sewer inspection chambers

PROPERTIES

- For the installation in steep slopes.
- The construction of the collection sewer inspection chambers slows down the speed of wastewater.
- They are used to reduce the number of chambers and minimise the installation depth of the sludge system.
- Single spherical bottom.
- The standard tilting of the inlet and outlet connection is 10°.
- Possibility of all types of connection pipes.
- Installation depth of the chambers up to 4 m* in areas with high groundwater (up to a MAX of 3 m).
- Possibility of additional connections to the chambers.
- Possibility of an assembly of the connections into the chamber body in the field by means of inlet gaskets in dimensions up to DN 200.

Collection sewer inspection chamber

TECHNICAL DATA

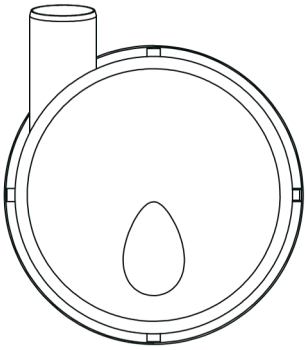
Standard bottom and body diametres [DN = ID]:	800	1000
Bottom height [mm]:	500	
Chamber height [mm]:	od 1000 do 4000*	
The standard height between the inlet and outlet [mm]:	500	
Allowed height of the effects of underground water upon the bottom:	3 m	
Chamber body circumferential stiffness:	SN 2 (rotomoulded), min standard requirements	
Possible connection pipes:	PE (ribbed and smooth), PP (ribbed and smooth), PVC, AB, GRP, etc..	
Possibility of an extension/lowering of the chamber cone revision opening:	YES max. 250 mm	
Possibility of the assembly of additional connections:	YES	
Double bottom:	NO	
Possibility of a PE or INOX ladder:	YES	
Possibility of the AQUAstop anti-flooding-anti odour insert:	YES In revision opening DN/ID 625.	

*If required, chambers can be produced for greater installation depths.

CHAMBER TROUGHS

Basic trough types:

Type: flat (180°)



Standard inlet-outlet connections:

Outlet \ Inlet	DN 800			DN 1000		
	160	200	250	200	250	315
160	●					
200	●	●		●		
250	●	●	●	●	●	
315						●

2.1.7. Domestic sewer inspection chambers

PROPERTIES

- Integrated moulding of the basic inlet-outlet connections for smooth pipes.**
- Single bottom.
- Basic troughs: 1/1 (180°) or 3/1 (135°, 180° and 225°).
- **Smooth pipe** connections are made through an inlet gasket for the 3/1 trough, and an USU sleeve for the flat trough.
- Trough height equals the max connection pipe dimension.
- Installation depth of the chambers up to 2 m.*
- Possibility of additional connections to the chambers.
- Possibility of an assembly of the connections into the chamber body in the field by means of inlet gaskets in dimensions up to DN 200.

1/1 flat trough domestic sewer inspection chamberr

3/1 trough domestic sewer inspection chamber

TECHNICAL DATA

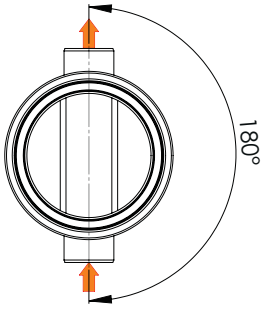
Standard bottom and body diametres [DN = ID]:	400	500	625	600
Trough type:	1/1	1/1	1/1	3/1
Standard trough dimensions DN:	110,160	160, 200	200	250
Chamber body circumferential stiffness:	SN 2 (rotomoulded), min standard requirements, SN 4, SN 8			SN 4
Bottom height [mm]:	500			320
Chamber height [mm]:	500 to 2000*			
Allowed height of the effects of underground water upon the bottom:	2 m			
Possible connection pipes:	PVC, PE, PP smooth**			
Possibility of an extension/lowering:	YES			
Possibility of the assembly of additional connections:	YES			
Double bottom:	NO			

*If required, chambers can be produced for greater installation depths.
** Other pipe possibilities by request (for ribbed pipes with PE transition components).

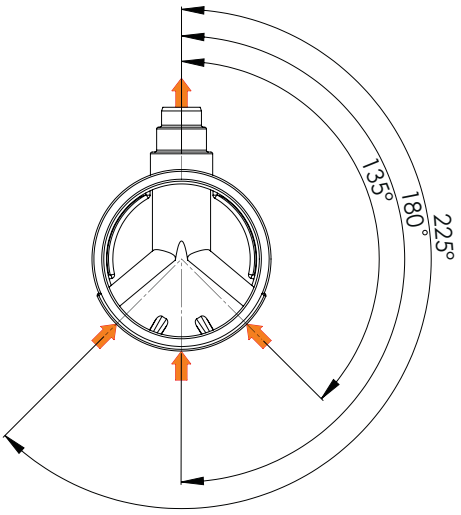
CHAMBER TROUGHS

Basic trough types:

Type: 1/1 (180°)



Type: 3/1 (135°, 180° and 225°)



Standard inlet-outlet connections for **1/1 trough types**:

Inlet/Outlet	DN 400	DN 500	DN 625
110	●		
160	●	●	●
200		●	●

Standard inlet-outlet connections for **3/1 trough types**:

	DN 600		
Vtok / I ztok	160	200	250
160	●		
200	●	●	
250		●	●

2.1.8. Sand traps

PROPERTIES

- Single bottom with reinforcement ribs.
- Installation depth of the chambers up to 4 m* (up to a MAX of 2 m).
- Possibility of additional connections to the sand traps.
- Possibility of an assembly of the connections into the chamber body in the field by means of inlet gaskets in dimensions up to DN 200.

Sand traps:

DN 400

DN 500

DN 625

DN 800

DN 1000

TECHNICAL DATA

Standard bottom and body diametres [DN = ID]:	400	500	625	800	1000
Sand trap height [mm]:	500 to 2000*		od 500 To 4000*		
Possibility of an extension/lowering of the revision opening:	YES		YES max. 250 mm		
Allowed height of the effects of underground water upon the bottom:	2 m				
Chamber body circumferential stiffness:	SN 2 (rotomoulded), min standard requirements				
Possible connection pipes:	PE (ribbed and smooth), PP (ribbed and smooth), PVC, AB, GRP, etc.				
Possibility of the assembly of additional connections:	YES				
Double bottom:	NO				
Possibility of a PE or INOX ladder:	YES DN/ID 800 in 1000				
Possibility of the AQUAstop anti-flooding-anti odour insert:	NO		YES In revision opening DN/ID 625.		

*If required, sand traps can be produced for greater installation depths.

2.2. SEWER INSPECTION CHAMBER – CHAMBER BODY

Rotomoulded elements or PE ribbed pipes can be used for all types of chambers. The choice is based on the requirements of the project for the circumferential stiffness (SN 2, SN 4, SN 8 or SN 10).

VRSTA TELESA:	OBODNA TOGOST:
ROTOMOULDED	SN 2 (minimal standard requirements)
PE ribbed pipe	SN 4
	SN 8
	SN 10

PROPERTIES – ROTOMOULDED CHAMBER BODIES:

- Connections assembled through inlet gaskets up to DN 200.
- Optional welded connections.
- Heightening available through the use of gaskets.
- Bottom and cone assembly through the use of gaskets or welding.

PROPERTIES – ROTOMOULDED CHAMBER BODIES:

- Connections assembled through inlet gaskets up to DN 200.
- Optional welded connections.
- Bottom and cone assembly through the use of welding.

2.3. SEWER INSPECTION CHAMBER – CHAMBER CONE

Chambers with the diametre DN 800 and DN 1000 are assembled with a cone with a DN 625 revision opening.

Types of cones:

Centric 800/625 h=500

Centric 1000/625 h=750

Excentric 1000/625 h=750
(enables a shift of the revision opening)

	DN 800/625 h=500	DN 1000/625 h=750	
Height	500	750	750
Type	CENTRIC		EXCENTRIC

PROPERTIES:

- Possibility of lowering up to 250 mm.
- Possibility of extension up to a MAX of 250 mm with a DN 625 rotomoulded ring (gasket assembly).
- Assembly of the cone to the bottom or body through the use of gaskets or welding.

2.4. EXAMPLES OF SEWER INSPECTION CHAMBERS ASSEMBLY COMBINATIONS

2.4.1. Sewer inspection chambers with groundwater level up to 2 m

3G with integrated connections for smooth pipes (circumferential stiffness SN 2)

3G with integrated connections for smooth pipes (circumferential stiffness SN 4, SN 8) (ribbed pipe for ID 800 and ID 1000 mm)

4G with integrated connections for ribbed pipes (circumferential stiffness SN 2)

4G with integrated connections for ribbed pipes (circumferential stiffness SN 4, SN 8) (ribbed pipe for ID 800 and ID 1000 mm)

2.4.2.Sewer inspection chambers with groundwater level up to 3 m

Collection sewer inspection chamber with integrated connections for smooth pipes (circumferential stiffness SN 2)

2.4.3. Sewer inspection chambers with groundwater level up to 5 m

5G with integrated connections for smooth pipes (circumferential stiffness SN 2)

5G with integrated connections for smooth pipes (circumferential stiffness SN 4, SN 8) (ribbed pipe for ID 800 and ID 1000 mm)