

# FLO-TEK®

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## MANHOLE AND INSPECTION CHAMBERS

**Flo-Tek manhole/inspection chambers are made of virgin UV stabilised polyethylene (PE) material and are intended for use in underground drainage and sewerage systems. The specially designed external ribs give additional strength to the product and at the same time act as an uplift prevention system against a high water table.**

The manholes are designed according to the Standard **ISO 13272: 2011** and chamber size optimised as per EN 476. PE manholes have a proven 20 year track record in Europe and other countries and have many advantages over conventional concrete manholes having been installed in extremely challenging site conditions such as areas with a high water table. Flo-Tek chambers are suitable for installations inside and outside roadways.

### Product Benefits:

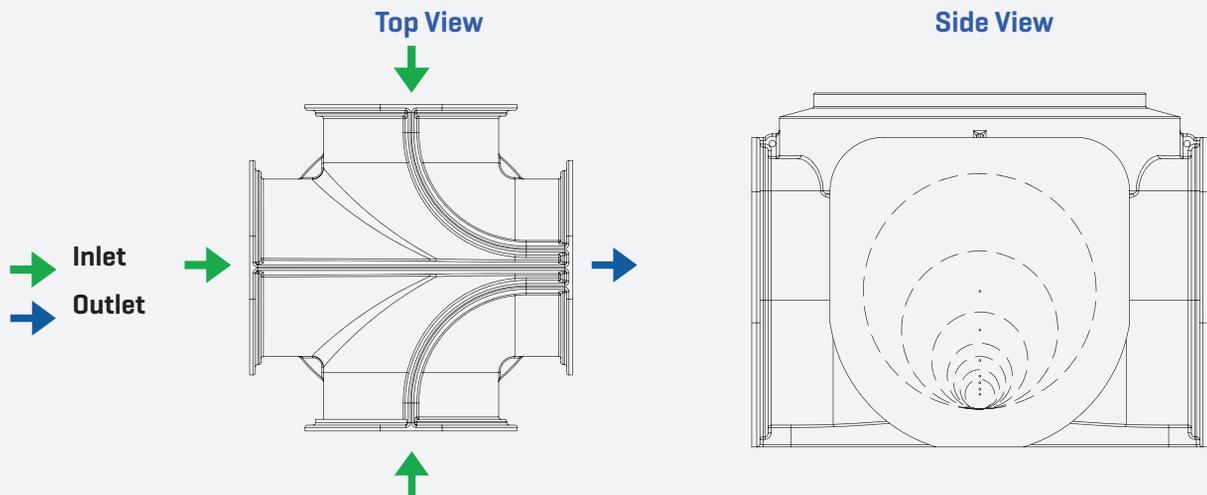
- ◆ Extreme durability with life expectancy well over 50 years in challenging site conditions ranging from industrial waste, acidic conditions, heavy vehicular loads and high water tables.
- ◆ Fast, easy and safe installations.
- ◆ Corrosion resistant.
- ◆ Maintenance free.
- ◆ High quality according to **ISO 13272: 2011**
- ◆ Environmentally friendly - watertight thus preventing pollution.
- ◆ European quality accessories - watertight rubber seals as per EN 681-1.
- ◆ Stable, corrosion resistant in-built steps made of high quality PE.
- ◆ Reduced operating costs due to hydraulically optimized channels and sealing system and minimum blockages.

Manhole/inspection chambers are an essential part of any sewerage pipeline system and are typically required whenever there is a change in direction, diameter or significant change in gradient of the sewerage pipeline. They are also required in domestic, commercial and municipal sewerage networks.

## Flo-Tek Manhole Chamber Dimensions

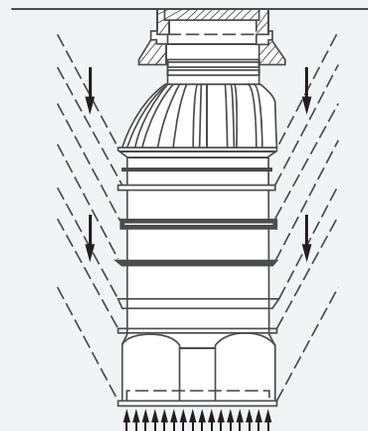
DIAMETER MM	HEIGHT RANGE MM	INLET DN MM	OUTLET DN MM	COVER MM	PERSONNEL ENTRY
1000	1750 - 6000	Up to 715	Up to 715	600	Yes

- ◆ DN1000 has 3 inlets and 1 outlet facility.
- ◆ The main channel has a gradient of 1-2 % to allow all inlets to drain towards the outlet as part of the gravity sewage network.
- ◆ Steps are inbuilt

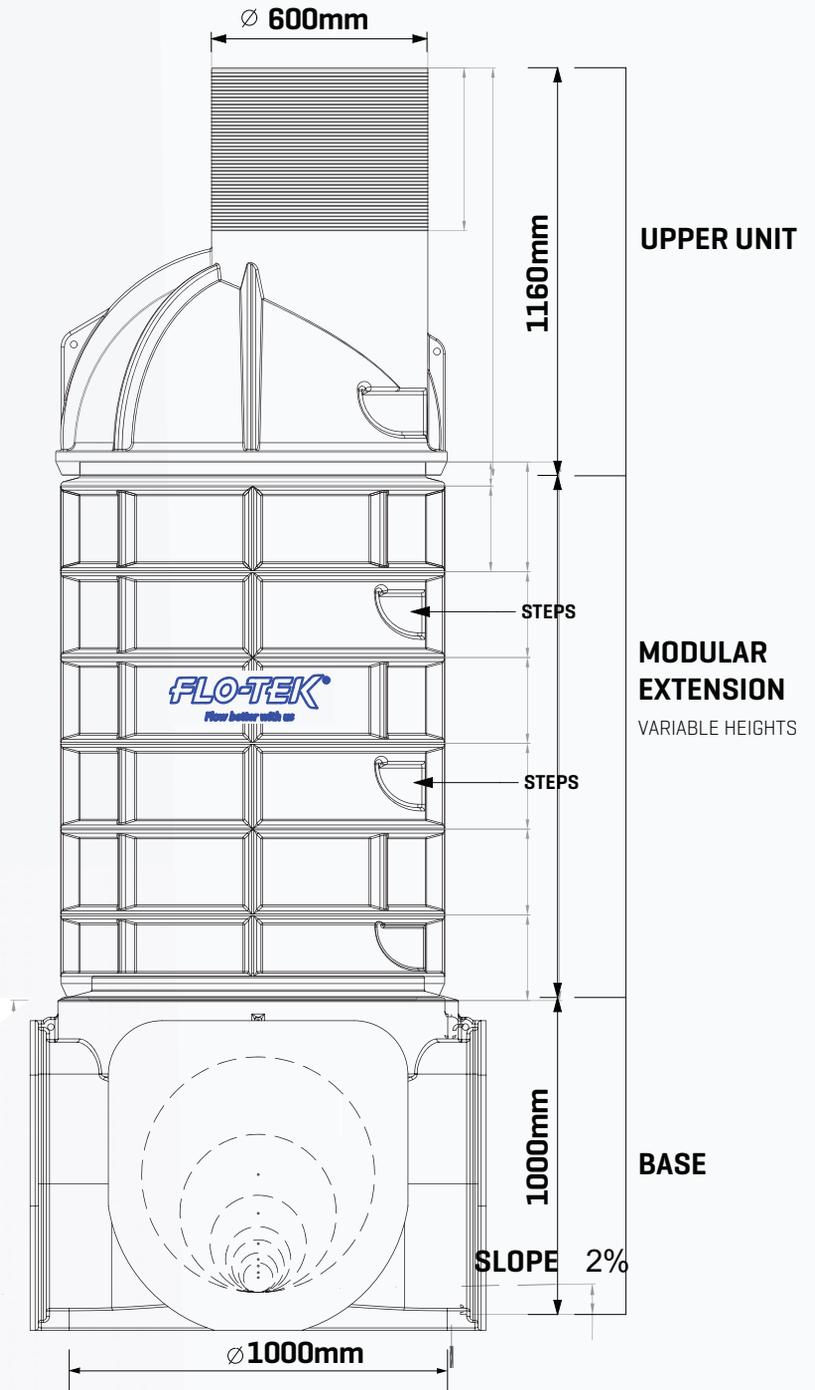


### UPLIFT PREVENTION

The strategically designed ribs on the Flo-Tek chambers interlock with the soil to prevent uplift. DN1000 Flo-Tek chambers have a safety factor well over 1.8 against buoyancy caused by a high water table.



# Flo-Tek Manhole Chamber



## Flo-Tek Manhole Chamber

SIZE (mm)   DIA X HEIGHT	COMBINATION OF COMPONENTS	Weight (kg)
Manhole Chamber 1000 X 1750	1 X 1000 [B]+ 1x 750 [UU]	106,00
Manhole Chamber 1000 X 2000	1 X 1000 [B]+ 1 X 1000 [UU]	115,00
Manhole Chamber 1000 X 2250	1 X 1000[B] + 1x 250 [E] + 1 X 1000 [UU]	122,00
Manhole Chamber 1000 X 2500	1 X 1000[B] + 1x 500 [E] + 1 X 1000 [UU]	135,00
Manhole Chamber 1000 X 2750	1 X 1000[B] + 1x 750 [E] + 1 X 1000 [UU]	148,00
Manhole Chamber 1000 X 3000	1 X 1000[B] + 1x 1000 [E] + 1 X 1000 [UU]	160,00
Manhole Chamber 1000 X 3250	1 X 1000[B] + 1x 1250 [E] + 1 X 1000 [UU]	173,00
Manhole Chamber 1000 X 3500	1 X 1000[B] + 1x 1500 [E] + 1 X 1000 [UU]	185,00
Manhole Chamber 1000 X 3750	1 X 1000[B] + 1x 1500 [E] + 1 X 250 [E] + 1 X 1000 [UU]	197,00
Manhole Chamber 1000 X 4000	1 X 1000[B] + 1x 1500 [E] + 1 X 500 [E] + 1 X 1000 [UU]	210,00
Manhole Chamber 1000 X 4250	1 X 1000[B] + 1x 1500 [E] + 1 X 750 [E] + 1 X 1000 [UU]	223,00
Manhole Chamber 1000 X 4500	1 X 1000[B] + 1x 1500 [E] + 1 X 1000 [E] + 1 X 1000 [UU]	235,00
Manhole Chamber 1000 X 4750	1 X 1000[B] + 1x 1500 [E] + 1 X 1250 [E] + 1 X 1000 [UU]	247,00
Manhole Chamber 1000 X 5000	1 X 1000[B] + 2 X 1500 [E] + 1 X 1000 [UU]	260,00

Abbreviations: B = BASE | E = EXTENSION | UU = UPPER UNIT

## Flo-Tek Inspection Chamber

**FLO-TEK** Inspection Chambers are manufactured with different sizes and characteristics. Chambers are available as multi-piece or single-piece units. DN500, DN600, DN800 have 5 inlets and multi-dimensional outlets. In addition, inlets may be connected on the body of the chamber for an extremely flexible and easy installation. The connections can be sealed watertight with gaskets or PE welding. Light weight but strong, does not require heavy construction equipment, can be carried manually, reducing time and installation costs.

### Features:

- Made of 100% virgin poly ethylene material
- Light weight
- Leak proof
- Quick installation
- Maintenance free
- Impact resistance

## Flo-Tek Inspection Chamber Dimensions

DIAMETER MM	HEIGHT RANGE MM	INLET DN MM	OUTLET DN MM	COVER MM	PERSONNEL ENTRY
500	350 - 1250	110 / 160	110 / 160	500	No
600	350 - 1250	110 / 160	110 / 160	600	No
800	1050 - 1250	110 / 160	110 / 160	600	Yes

## Flo-Tek Inspection Chamber Product List

Product	Diameter (mm)	Height (mm)	Weight (kg)	Thickness (mm)
	500	500	7.50	6
	500	750	10.00	6
	500	1000	13.00	6
	500	1250	16.00	6
	500	1500	21.00	6

Product	Diameter (mm)	Height (mm)	Weight (kg)	Thickness (mm)
	600	500	10.00	6
	600	750	13.00	6
	600	1000	16.00	6
	600	1250	19.00	6
	600	1500	22.00	6

## Connection Chambers (Electrical/Water Meter/Telecom)



**FLO-TEK** Connection Chambers are manufactured with different sizes and characteristics. Chambers are available as multi-piece or single-piece units. Inlet and outlet connections of desired number can be made with a simple drill at desired diameter and height. The connections can be sealed watertight with gaskets or PE welding. Light weight but strong, does not require heavy construction equipment, can be carried manually, reducing time and installation costs.

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**Features:**

- Connection Chambers DN 500, DN 600 and DN 800 available with height range of 500 mm to 1500 mm.
- Made of 100% virgin poly ethylene material
- Light weight
- Leak proof
- Quick installation
- Maintenance free
- Impact resistance

## Installation Overview

**Important:** Consult Flo-Tek for installations in areas with a high water table. All instructions from the engineer and local regulations must be respected. An overview of the installation procedure is illustrated below. Please consult Flo-Tek for detailed instructions. Sand or non-cohesive selected material of size less than 16 mm without any sharp objects / rocks should be used as back-fill material.

### Fast, easy and safe installation in 5 simple steps:

#### 1. EXCAVATE

- Excavate 600 mm wider and 150 mm deeper than the chamber.
- A base layer of 150 mm should be filled and compacted to 93% MOD AASHTO.
- Place the chamber on the 150 mm compacted layer.
- Check the levelling to ensure chamber is horizontally aligned.



#### 2. CONNECT INLET

- To connect inlet pipe(s), drill a hole of appropriate diameter with a cup saw on the pre-marked inlet position(s), insert the Flo-Tek inlet rubber seal and push the pipe into the seal for a watertight connection. Soapy water may be used as lubricant. There is no need for any greasy or sticky material.
- Flo-Tek seals provide water tight connections and allow for maximum 5° movements in all directions.
- Should site constraints prevent connection of the inlet at the pre-marked location, the inlet may be connected anywhere on the body of the chamber. However, direction of the inlet/outlet in benching should be taken into consideration for proper flow.



#### 3. CONNECT OUTLET

- Connect the outlet pipe by making an appropriate hole at a pre-marked area of the chamber.
- Use the Flo-Tek rubber seal for a watertight connection with the PVC outlet pipe. There is no need to use silicone or glue.



#### 4. BACKFILL AND COMPACT

- Check the level of the chamber and ensure horizontal alignment
- Back-fill material should be placed under the manhole in order to fill the gap between the manhole and the compacted layer. Use a hand stamper.
- Back fill around the manhole in layers of 300 mm and compact to 93% MOD AASHTO [cohesive soil] with a mechanical vibrating stamper [50kg].



#### 5. ADJUST HEIGHT AND INSTALL COVER

- The height of the chamber can be adjusted on site by cutting the upper 'chimney' of the chamber.
- Flo-Tek Polyethylene [PE] lockable covers can be used for installation in the garden or non-traffic areas.
- For installation in traffic areas, a concrete load bearing ring around the neck of the chamber should be used. On this ring an appropriate class C/D lockable cover with frame should be installed. Flo-Tek can provide more load details on the bearing ring.



# Manhole Installation



## OUR NETWORK

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