STR

POLYFLOW

PE Inspection & Manhole Chambers

STR is one stop shop for quality PE products:

- Sewerage inspection/manholes chambers.
- Gully traps.
- Grease traps for individual and industrial use.
- Water tank 500L, 750L, 1000L, 1500L and 2000L.
- Septic tanks.
- Multi-use, flat base chambers for pumps, valves, electrical and other connections.

Advanced technical support is available for all products from our technical support team and specialist sales.

STR PE Chambers are made of 100% virgin UV stabilised polyethylene (PE) material and are intended for use in underground drainage and sewerage systems. Innovative industrial strength design based on almost 20 years of German/European experience incorporates carefully designed ribs to provide extra strength to the product and at the same time act as an uplift prevention system against ground water.

STR PE Chambers have been installed in extremely challenging site conditions such as high ground water level and are suitable for both on-road and off-road installations.

Benefits:

- Prefabricated system complete with benching, shaft, and accessories.
- Fast, Easy, Flexible and Safe installation in hours with leak proof pipe connections in minutes.
- Completely water tight with no infiltration or ex-filtration.
- Ultra durable and resistant to corrosion.
- Can be very easily installed in heavy traffic or water logged areas.
- High quality as per latest European Standard EN 13598 leading to consistent quality for entire project.
- Maintenance Free.
- Reduced Operating Cost - minimal blockages due to hydraulically optimized channels, no infiltration.
- Environmentally Friendly - watertight preventing pollution / low carbon footprint.
- Top quality accessories - watertight rubber seals for pipe connection (EN 681-1); corrosion resistant steps.

PE Chambers are an essential part of any sewerage pipeline and are typically required whenever there is a change in direction, diameter or significant change in gradient of the sewerage pipeline. PE Chambers are required in domestic, commercial and municipal sewerage networks.

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STR MARKETING LTÉE

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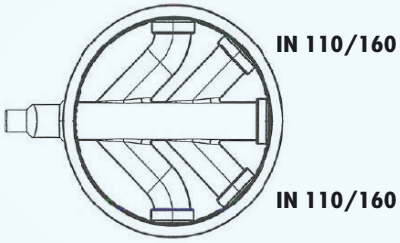
TABLE 1: DIAMETER 500/600mm

Option 1: 5 inlets (2- 45deg / 2- 90 deg / 1-180 deg) base for pipe up to DN 160mm

TYPE	Product Code	INT DIA	H mm	Inlet / Oulet
Inspection Chamber 500mm 5B				
IC	5B50C.16.11/50	DN 500	500	110 / 160
LID	POLY-LID 500	DN 500	30	
Inspection Chamber 600mm 5B				
IC	5B60C.16.11/50	DN 600	500	110 /160
IC	5B60C.16.11/75	DN 600	750	110 / 160
IC	5B60C.16.11/100	DN 600	1000	110 /160
IC	5B60C.16.11/125	DN 600	1250	110 / 160
IC	5B60C.16.11/150	DN 600	1500	110 /160
LID	POLY-LID 600	DN 600	30	
ES *	Sel-ES-60	DN 600		Element Seal
ADP * TH	Poly-ADP- 60-25	DN 600	250	
L- LID *TH	POLY-LID 600-Lock	DN 600	30	

Base Benching Design:

OPTION 5B: INLET - UP TO DN 160 mm



NB: Upper heights allowable as per BS EN 13598-2

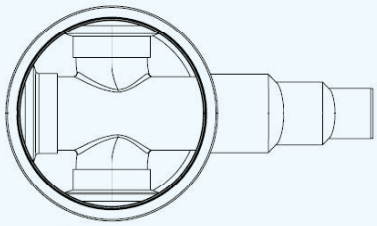
TABLE 2: Inspection Chambers - DIA. 500/600mm
Manhole Chamber - DIA. 800/1000/1200mm

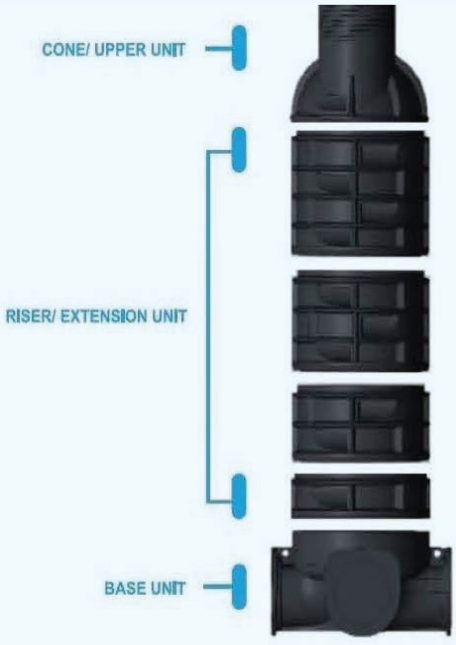
Option 2: 3 inlets (2-90deg/1-180 deg)

TYPE	Product Code	INT DIA	H mm	Inlet / Oulet
Inspection Chamber 500mm 3B				
IC	3B50C.16.11/50	DN 500	500	110 / 160
IC	3B50C.16.11/75	DN 500	750	110 / 160
Inspection Chamber 600mm 3B				
IC	3B60C.16.11/50	DN 600	500	110 / 160 /315
Ext	PE Ext MD 6025	DN 600	250	
LID	POLY-LID 600	DN 600	30	
ES *	Sel-ES-60	DN 600		Element Seal
ADP *TH	Poly-ADP- 60-25	DN 600	250	
L- LID *TH	POLY-LID 600-Lock	DN 600	30	
Manhole Chamber 800mm 3B				
MC	3B80C.450 to110	DN 800	650	110 to 450
UC	PE CON 800	DN 800/600	950	
Ext	PE Ext MD 8025	DN 800	250	
ES	Sel-ES-80	DN 800		Element Seal
Manhole Chamber 1000mm 3B				
MC	3B100C.400 to110	DN 1000	1025	110 to 400
UC	PE CON 1000	DN 1000/600	1150	
Ext	PE Ext MD 10025	DN 1000	250	
ES	Sel-ES-100	DN 1000		Element Seal
Manhole Chamber 1200mm 3B				
MC	3B120C.500 to110	DN 1200	800	110 to 500
UC	PE CON 1200	DN 1200/600	1150	
Ext	PE Ext MD 12050	DN 1200	500	
Ext	PE Ext MD 120100	DN 1200	1000	
ES	Sel-ES-100	DN 1200		Element Seal

OPTION 3B: INLET / OUTLET

- Inspection Chambers -110/160/315mm
- Manhole Chambers -110-500mm

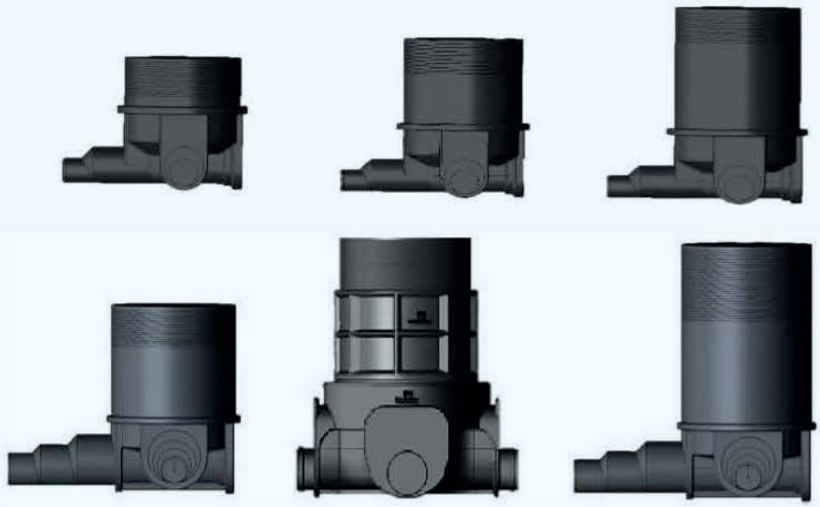




IC: Inspection Chamber
MC: Manhole Chamber
ADP-TH: Adaptor Threaded
LD-TH: Lid Threaded
UC: Upper Cone
Ext: Extension

Manhole Chambers

Inspection Chambers

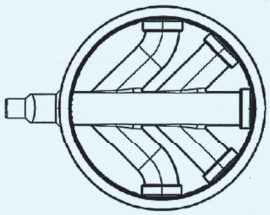


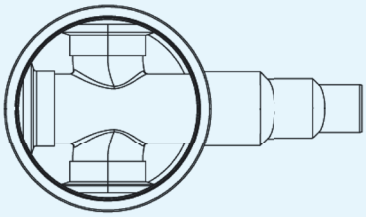
DN600 - Height/Depth 500/750/1250/1500mm

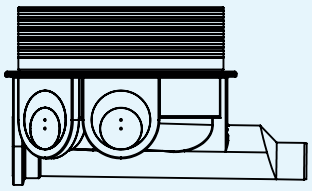
PE chambers - innovative design for strength and ease & flexibility of installation

- **Base Benching** - all chambers come with integrated benching with various options from single to multiple inlets. The main channel has built in gradient of 1-2% to allow all inlets to drain towards outlet as part of gravity drainage system.
- **Inlet Pipe Connections** - inlet pipes can be connected in minutes by drilling and placing EN 681-1 elastomer seal of appropriate diameter and pushing the inlet pipe for fast, easy and leak proof connection. This elegant method with elastomer seal remains watertight even if the pipe moves in any direction by up to 5°. Further, the system allows for the flexibility of connecting inlet pipes anywhere on the body of the chamber while installing or at a later time with same methodology.
- **Outlet** - unique multidimensional design with built in eccentric reducers to connect to various diameter pipes. This makes on-site installation very easy and avoids the need for extra fitting/joints.
- **Height Adjustment** - all chambers allow very simple method for height adjustment on site (see installation overview)

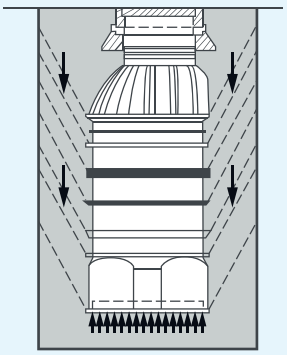
Base Benching Design:







Uplift Prevention - Installation in Water logged areas



The strategically designed ribs on chambers interlock with the soil to prevent uplift. Engineering calculations show that PE chambers have a safety factor well over 1.8 against buoyancy caused by existing groundwater.

Installation Procedure Overview

Important: Consult STR for installations where water level is high. All instructions from the Engineer and local regulations must be respected. Following is an overview of installation procedure please consult STR for detailed instructions.

Rock sand or non cohesive selected material of size less than 16mm without any sharp objects/rocks should be used as back filling material.

Fast, easy and safe installation in 5 simple steps:

A - Excavate

1- Excavate 60 cm wider and 15cm deeper than the chamber.
2- A base layer of 15 cm should be filled and compacted to 95%
3- Place the chamber on the compacted layer of 15cm
4- Check the levelling to ensure chamber is horizontally aligned

B - Connect Inlet

1- To connect inlet pipe(s) drill hole of appropriate diameter with a cup saw on pre-marked inlet positions, insert EN 681-1 inlet rubber seal, push the pipe into the seal for a watertight connection. Soap water may be used as lubricant. There is no need for any glue, silicon.
2- Seals provide watertight connection and allow for 5° movement in all directions
3- If due to site constraint you cannot connect the inlet at the pre-marked location then you may connect the inlet anywhere on the body of the chamber however direction of the inlet/outlet in benching should be taken into consideration for proper flow.

C - Connect Outlet

1- Connect the outlet pipe by slipping the socket of the pipe onto the outlet spigot of the chamber. If required smaller unnecessary spigot may be cut off at right angle with a saw.
2- If outlet pipe is PVC then use RRJ socket for watertight connection. Do not use glue or silicone.

D - Backfill and Compact

1- Check levelling of chamber and ensure horizontal alignment
2- Back filling material should be inserted under the manhole in order to fill-in the gap between the manhole and the compacted layer. Use hand stamper.
3- Back fill around the manhole in layers of 30 cm and compact to 95% with a mechanical vibrating stamper (50 Kg).
4- Continue to fill-in and compact in layers up to ground/cover level.

E - Adjust Height and Install Cover

1- The height of the chamber can be adjusted on site by cutting the upper edge of the chamber.
2- PE covers can be used for installation in the garden or non-traffic areas
3- For installation in traffic areas, a concrete load bearing ring around the neck of the chamber should be used. On this ring appropriate class C/D cover with frame should be installed. STR can provide more details on load bearing ring and installation. Site Engineer should be consulted.