

Solutions for a green future

MANHOLE
CD13R02



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The best thermoplastic solutions for infrastructure networks



Politejo Group was founded in 1978, as an industry specialized in the manufacture of thermoplastic solutions and its main activity is the production of pipes and plastic accessories for the water supply, waste water, irrigation, electricity and telecommunications.

Our strategy is based on the constant innovation of products and services, with a skilled team, able to understand the needs associated with the various sectors and present highly reliable solutions, longevity that allow the conservation of water resources and the environment.

The success of Politejo Group is based on the profile of its employees, with a family-oriented management, due to the strategic location of its manufacturing units and their complete solutions.

This profile enabled a notable growth throughout the last 40 years, and currently Politejo Group is present in Angola, Brazil, Spain, Mozambique and Portugal, with a view to expanding to new locations.

MANHOLE



The Ambidur manholes manufactured by the Politejo Group, using the rotomoulding process in accordance with EN 13598-2, are the ideal solution for non-pressure drainage systems, and are mainly used for rainwater collection, domestic wastewater and industrial discharges.

They were developed with the aim of solving serious problems in sanitation works, ensuring 100% water tightness, simple and fast installation, and allowing the reduction of the cost of installation and operation.

This solution endowed with excellent mechanical, chemical and hydraulic properties, through its design allows a hydraulically smooth flow regime, thus resulting in a less need for rehabilitation and repair of the system due to its resistance to corrosion, along with the movement of the fluid with self-cleaning action, preventing fouling.

General features

Material: PE/ PP

Adjustable height: 1300 to 6000 mm

Nominal diameter: 1000 mm

Useful diameter input: 600 mm No. outputs / no. inputs: 1/5, 1/1

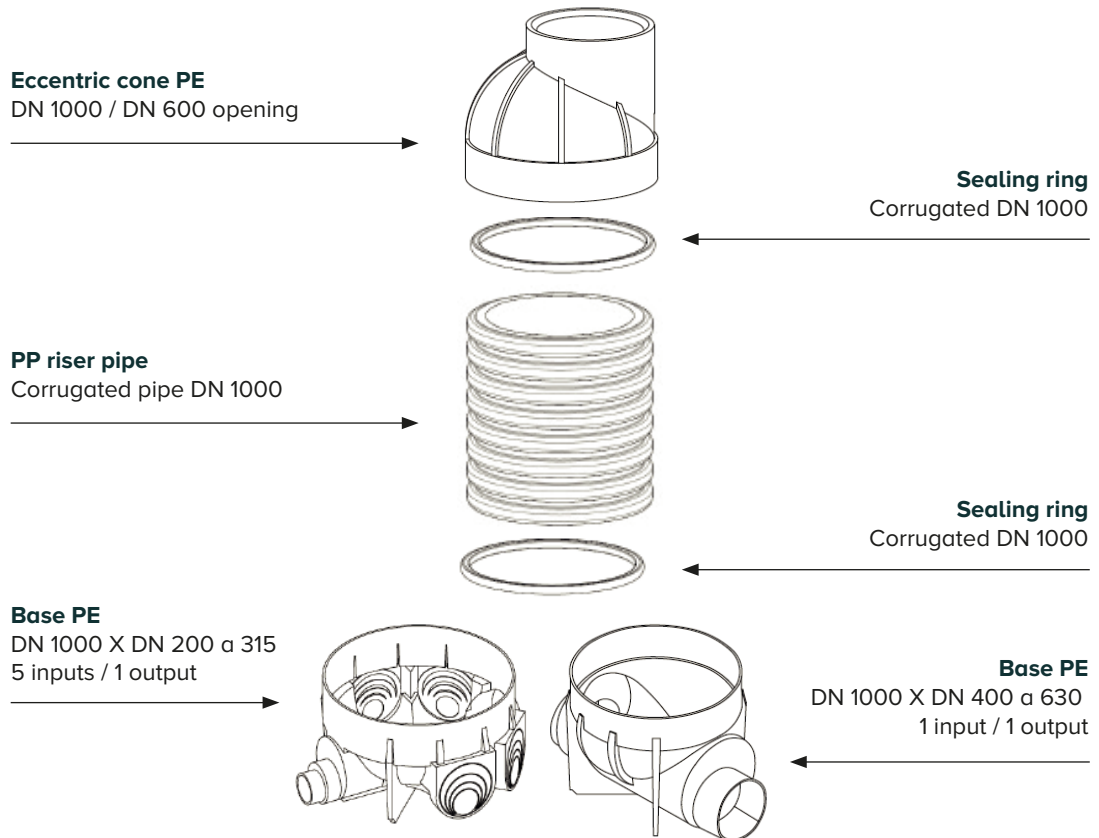
Nominal connection diameter: 160 to 315 mm / 400 to 630 mm

Type of pipe: PP / PVC / HDPE / Other



System components

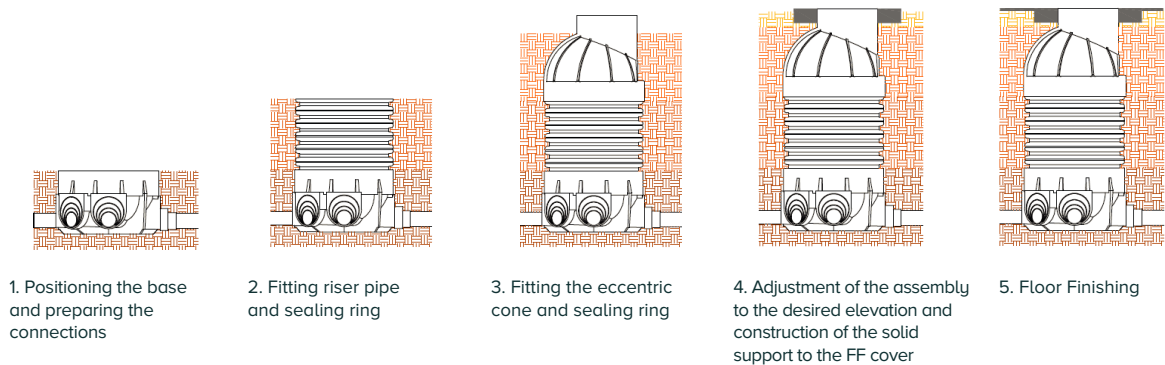
Ambidur manholes consist of the following elements:



Installation

Ambidur manholes are intended for pedestrian or traffic areas, and in accordance with the EN 124 standard it is recommended that class B125 or D400 covers be used respectively. The installation work for Ambidur manholes must comply with the EN 1610 standard. Compatible with all soil types, which should be compacted in layers.

The installation steps are presented:



Main advantages

Time, security and ease of installation

- Reduced installation time;
- Low weight and easy handling;
- Reduction of heavy machinery;
- Reduction of risk for workers;
- Reduction of manpower;
- Ideal for high water levels (up to 5 m from the bottom).

Durability

- Service life in excess of 50 years;
- High flexibility;
- Excellent resistance:
 - Mechanics;
 - Chemistry (PH 2 to 12);
 - Temperature (up to 90°C);
 - Abrasive wear;
 - Corrosion.

Eco-friendly solution

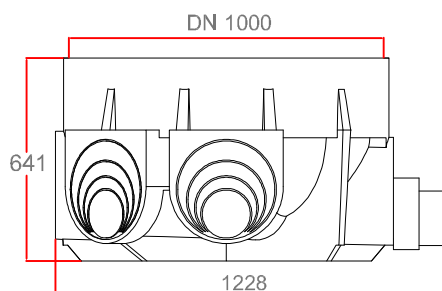
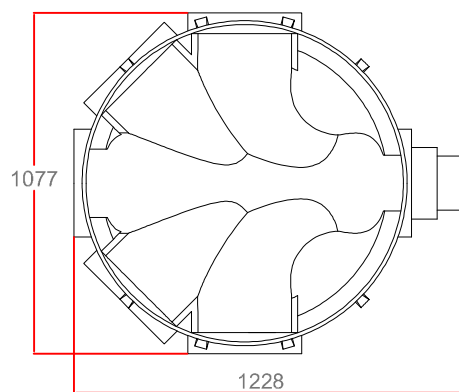
- 100% Watertight - Less volume of water to treat;
- Leak resistant - Prevention of soil and groundwater contamination.



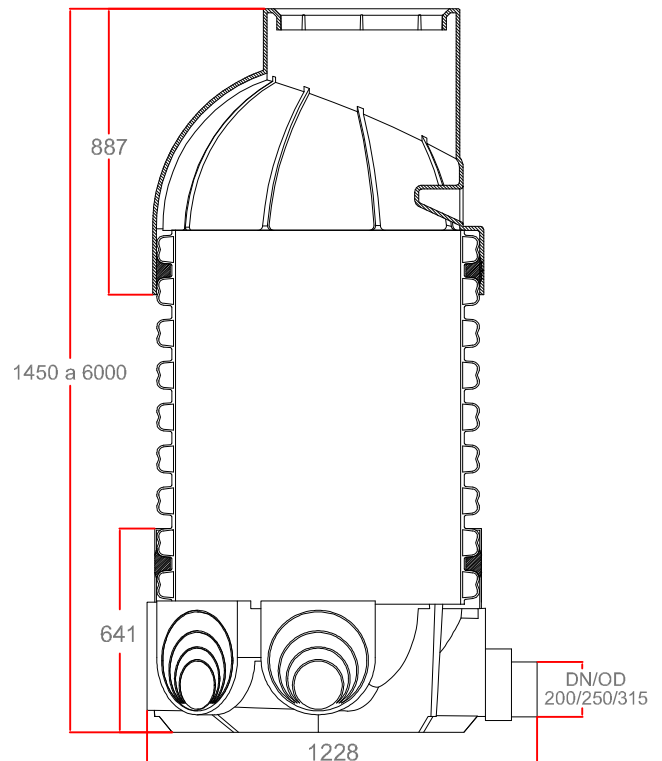
Manhole base DN 1000

System components

Ambidur manholes consist of the following elements:



base view



Cutaway view of the assembly

Manhole cover/lifting tube height

The table below presents the height of the manhole cover based on the length of the lifting tube and the connections to be made.

Tube length [C] mm	Manhole cover height [H]		Tube length [C] mm	Manhole cover height [H]	
	DN 160/ 200/250/315	DN 400/ 500/600		DN 160/ 200/250/315	DN 400/ 500/600
0*	1,15 – 1,50m	1,45 – 1,8m	2720	≈ 3,8m	≈ 4,1m
420	≈ 1,5m	≈ 1,8m	2820	≈ 3,9m	≈ 4,2m
520	≈ 1,6m	≈ 1,9m	2920	≈ 4,0m	≈ 4,3m
620	≈ 1,7m	≈ 2,0m	3020	≈ 4,1m	≈ 4,4m
720	≈ 1,8m	≈ 2,1m	3120	≈ 4,2m	≈ 4,5m
820	≈ 1,9m	≈ 2,2m	3220	≈ 4,3m	≈ 4,6m
920	≈ 2,0m	≈ 2,3m	3320	≈ 4,4m	≈ 4,7m
1020	≈ 2,1m	≈ 2,4m	3420	≈ 4,5m	≈ 4,8m
1120	≈ 2,2m	≈ 2,5m	3520	≈ 4,6m	≈ 4,9m
1220	≈ 2,3m	≈ 2,6m	3620	≈ 4,7m	≈ 5,0m
1320	≈ 2,4m	≈ 2,7m	3720	≈ 4,8m	≈ 5,1
1420	≈ 2,5m	≈ 2,8m	3820	≈ 4,9m	≈ 5,2
1520	≈ 2,6m	≈ 2,9m	3920	≈ 5,0m	≈ 5,3
1620	≈ 2,7m	≈ 3,0m	4020	≈ 5,1m	≈ 5,4
1720	≈ 2,8m	≈ 3,1m	4120	≈ 5,2m	≈ 5,5
1820	≈ 2,9m	≈ 3,2m	4220	≈ 5,3m	≈ 5,6
1920	≈ 3,0m	≈ 3,3m	4320	≈ 5,4m	≈ 5,7
2020	≈ 3,1m	≈ 3,4m	4420	≈ 5,5m	≈ 5,8
2120	≈ 3,2m	≈ 3,5m	4520	≈ 5,6m	≈ 5,9
2220	≈ 3,3m	≈ 3,6m	4620	≈ 5,7m	≈ 6,0m
2320	≈ 3,4m	≈ 3,7m	4720	≈ 5,8m	-
2420	≈ 3,5m	≈ 3,8m	4820	≈ 5,9m	-
2520	≈ 3,6m	≈ 3,9m	4920	≈ 6,0m	-
2620	≈ 3,7m	≈ 4,0m	*soldadura base/cone sem tubo elevação		

Possibility of connection

The possible connection schemes are presented below. This model also allows for the execution of guided drops.



Leak test

Ambidur manholes pass with flying colours the tests defined in the general regulations for public and building systems for the distribution of waste water, approved by Royal Decree no. 23/95 and carried out in accordance with standard EN 1610.

Maintenance and inspection

It is recommended that periodic maintenance and inspections of Ambidur manholes are carried out at floor level, as access to the inside of the manhole is harmful to human health.

It is possible to carry out inspection/maintenance of the boxes using appropriate equipment, such as video inspection systems, mechanical or pressurised water jet systems.

This safeguards the operators' safety and guarantees greater efficiency in the cleaning process.

Marking

Ambidur manholes are marked in accordance with the EN 13598 standard.

- Standard: EN 13598-2
- Manufacturer: Politejo
- Application code: U
- Nominal Diameter: 1000
- Material: PE
- Production information: Production batch
- Maximum permitted depth of the water table in relation to the bottom: 5 m
- Maximum installation depth: 6 m

Ambidur manhole cover vs traditional model

A comparison between Ambidur manholes and traditional concrete models is presented:

Ground movement and vibration

- Flexible to ground movement, ensuring water tightness even in the event of earthquakes;

Resistance

- Chemical resistance to waste water, preventing corrosion of the box;

Watertight

- Watertight throughout its service life;

Assembly

- Reduced weight, easy assembly and execution of the connections ensuring the integrity of the box;

Ground movement and vibration

- When the ground moves, the structural integrity of the connections is put at risk and cracking of the casing / pipe connections may occur.

Resistance

- Corrosive effect of waste water, reducing the life of the box.

Watertight

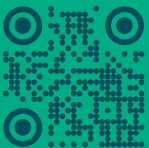
- Possibility of infiltration and soil contamination.

Assembly

- Need for heavy machinery due to the high weight of the traditional boxes (about 2,5 ton for a box 2m high)



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