

SANECOR

Instructions for installing SANECOR® manholes

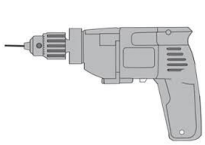




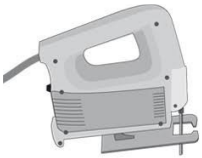

Large-diameter prefabricated welded manholes

MOLECOR
Smart water

1. TOOLS NEEDED



Drill



Jigsaw



Drill milling cutter
(Ø: 160, 200 and 250 mm)



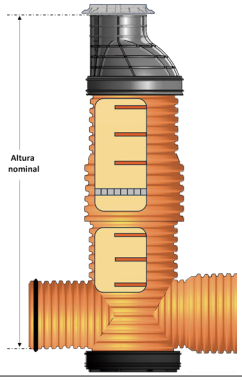
Ø10 mm drill bit



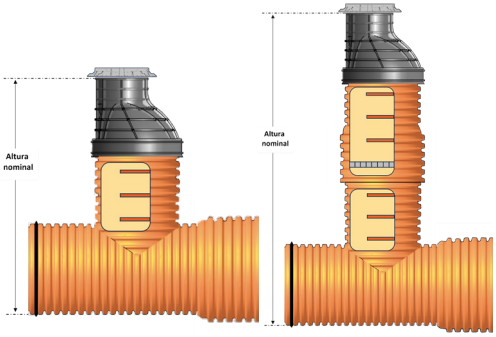
Bimetallic saw ≥ 150 mm

2. MANHOLE ELEMENTS AND DIMENSIONS

Manhole Ø (mm)	Manifold 1 Ø (mm)	Manifold 2 Ø (mm)
1,000	1,000	800
1,000	800	800
1,200	1,200	800
1,200	1,000	1,000
1,200	1,000	800
1,200	800	800



Manhole Ø (mm)	Manifold 1 Ø (mm)	Manifold 2 Ø (mm)
1,000	1,000	1,000
1,000	1,200	1,200
1,200	1,200	1,200

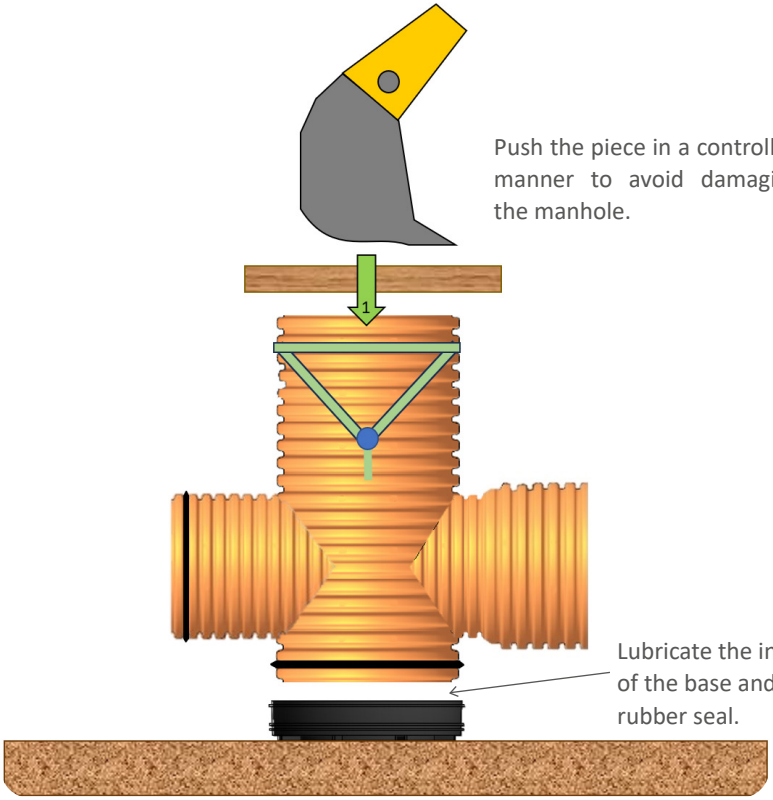


3. INSTALLING THE WELDED MANHOLE WITH SOLID BASE

Below are the steps to follow to correctly install the large-diameter prefabricated manholes from SANECOR®.

3.1) Positioning the solid base:

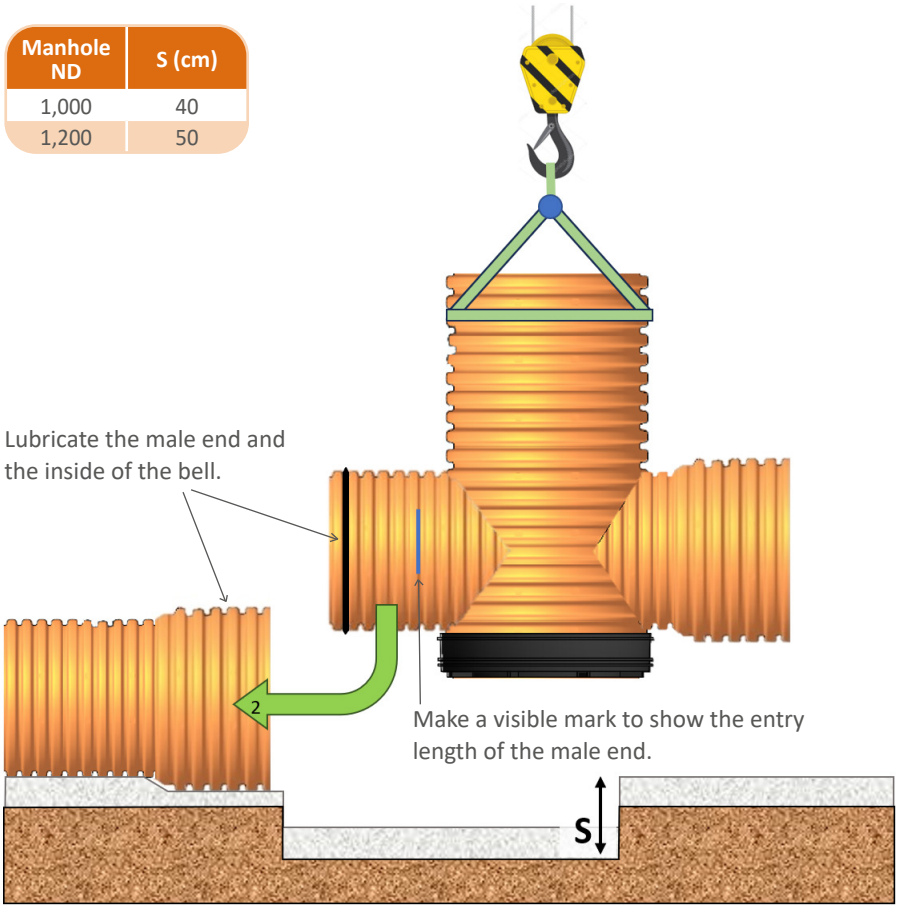
First attach the solid base to the bottom of the manhole body to ensure a watertight seal. The rubber seal must first be placed in the last valley of the body before beginning assembly. Place the base on a flat and firm surface. Lubricate the inside of the base and the area of the body next to the rubber seal to be assembled. Using mechanical equipment and slings, position the manhole vertically onto the base and press it down using the bucket of the backhoe, with the help of a wooden bar, as shown in the diagram below.



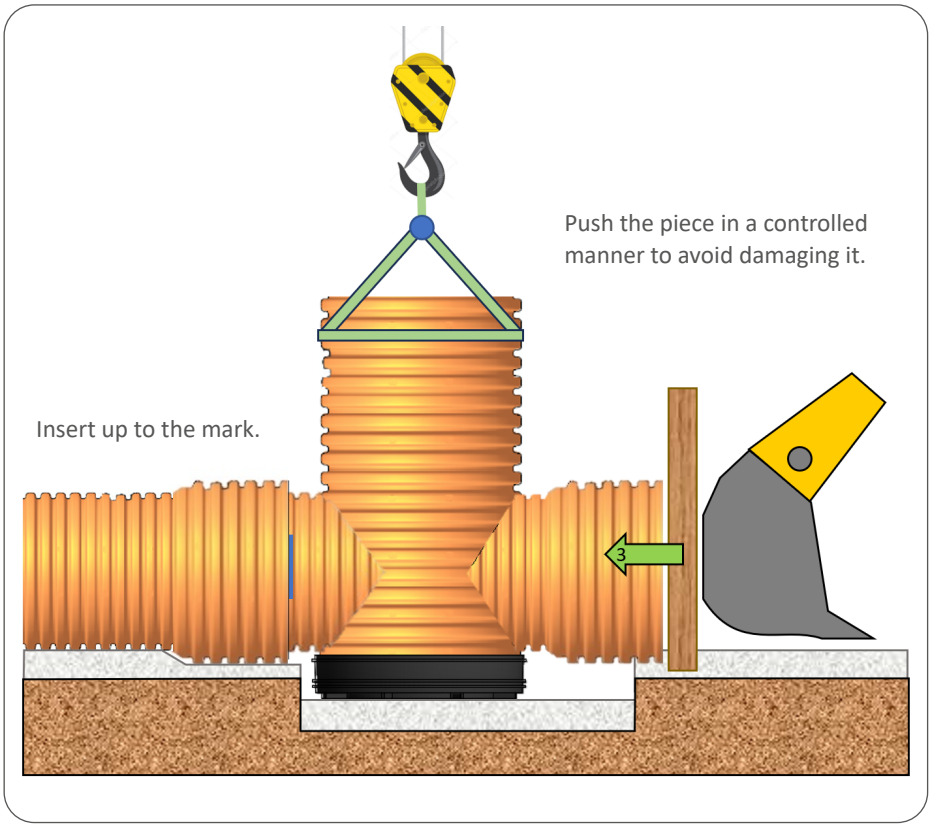
3.2) Connecting the manhole to the SANECOR® manifold:

1) The SANECOR® prefabricated manhole is installed in the same way as any other SANECOR® pipe. The manhole should be handled using mechanical equipment and nylon slings, ensuring that the manhole and operators are protected at all times. Excavate further to the "S" depth to house the bottom of the manhole. Lay down a 10 cm base of 8/12 gravel as a support bed, unless the ground is unstable and a concrete base is required. Both the male and female ends should be lubricated to enable assembly.

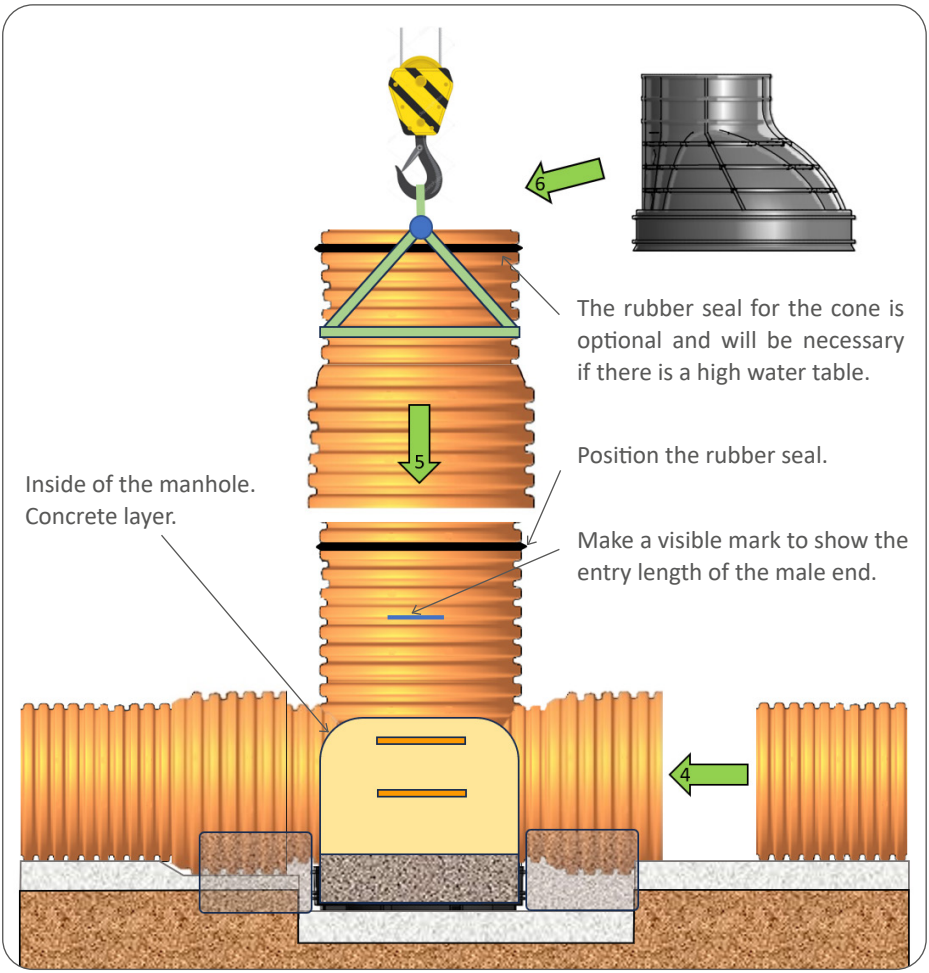
Manhole ND	S (cm)
1,000	40
1,200	50



2) Before connecting, make a mark on the male end of the manhole to indicate the penetration level in the socket of the previous pipe. Then place the end on the socket of the previous pipe and place the manhole onto the support bed. Once in position, without releasing the slings, it must be pushed in a controlled manner. To complete the connection, use a backhoe to push the piece, using a wooden bar to avoid damaging the end of it, as shown in the following image. Make sure that the manhole is level before completing the process. Once the lower body is fully installed, the slings can be released and the laying of new pipes can continue.



3) Once the lower body of the manhole is fully installed, the other elements can then be installed as well. Apply a layer of concrete inside the manhole on site to allow water to flow between the inlet and outlet manifolds. Apply a layer of concrete around the outside of the manhole up to 120° to the welded connections. For manholes of >3 m in height, place a lengthening modulus at the top to reach the total height of the manhole. Finally, position the reducer cone. Both the modulus and the reducer cone should be inserted using the bucket of the backhoe and a wooden bar.

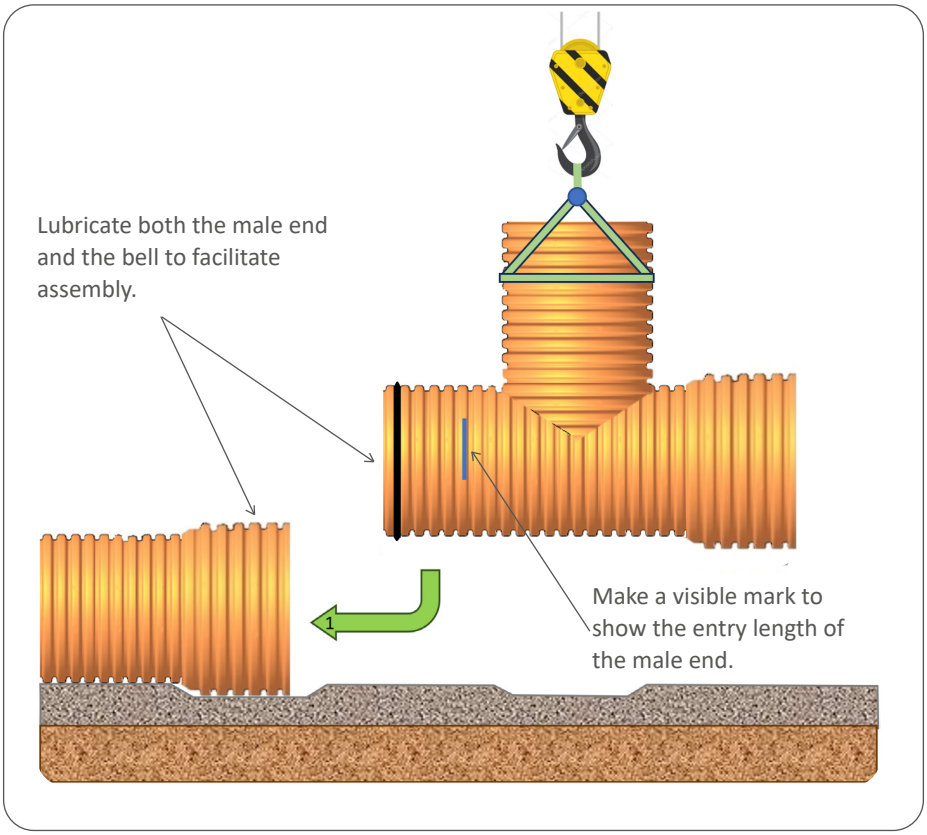


4. INSTALLING THE WELDED MANHOLE ONTO A TEE PIPE

Below are the steps to follow to correctly install the large-diameter prefabricated tee manholes from SANECOR®.

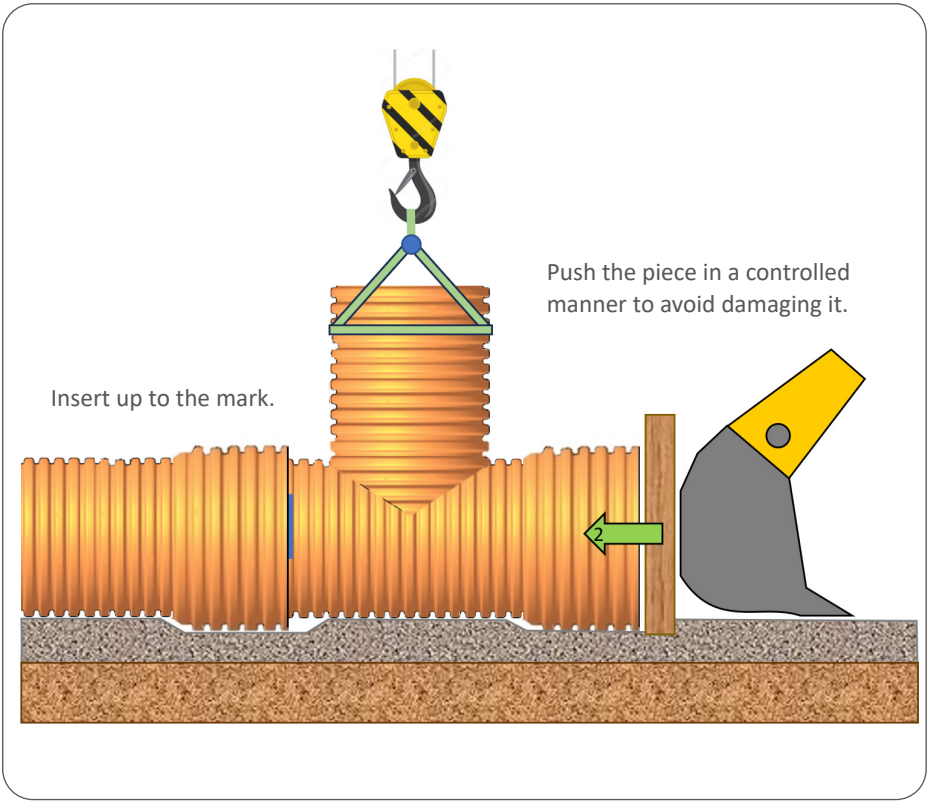
4.1) Installing the SANECOR® Tee pipe:

The SANECOR® Tee pipe is installed in the same way as any other SANECOR® pipe. The SANECOR® Tee pipe should be handled with mechanical equipment and nylon slings, to ensure stability for the tee pipe and for the operators. Once we have the exact location where the manhole will be placed, the inlet manifold and the 8/12 mm gravel support bed must be laid out as shown in the following diagram. Make a small pit where the socket will be placed to obtain a greater outer diameter than the rest of the pipe. Both the male and female ends should be lubricated to enable assembly.



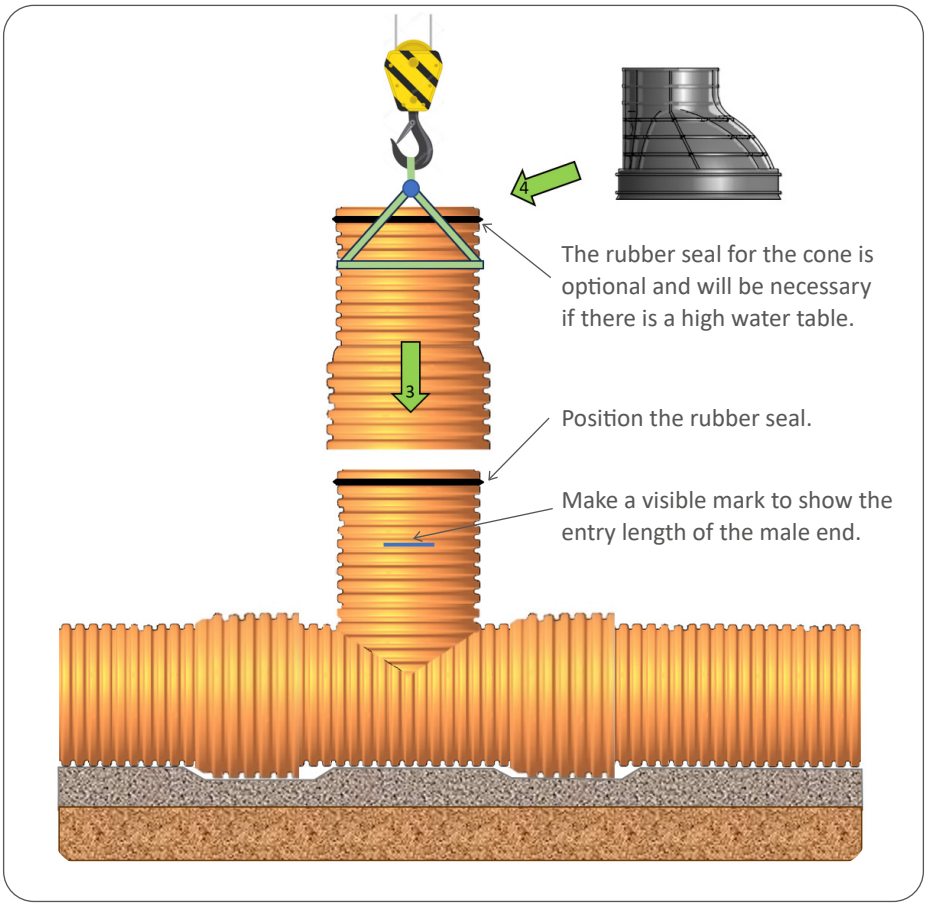
4.2) Installing the Tee pipe:

Before installing, make a mark on the male end of the Tee pipe to indicate the penetration level in the socket of the previous pipe. Next, lubricate the two ends being assembled before the SANECOR® Tee pipe is pushed into the socket of the previous pipe and placed on the support bed. Once in position, without releasing the slings, it must be pushed in a controlled manner. Only if necessary, a backhoe can be used to push the piece, using a wooden bar to avoid damaging the end of it, as shown in the following image. Make sure that the Tee pipe is level before completing the process. Once the SANECOR® Tee pipe is fully installed, the slings can be released and the laying of new pipes can continue.



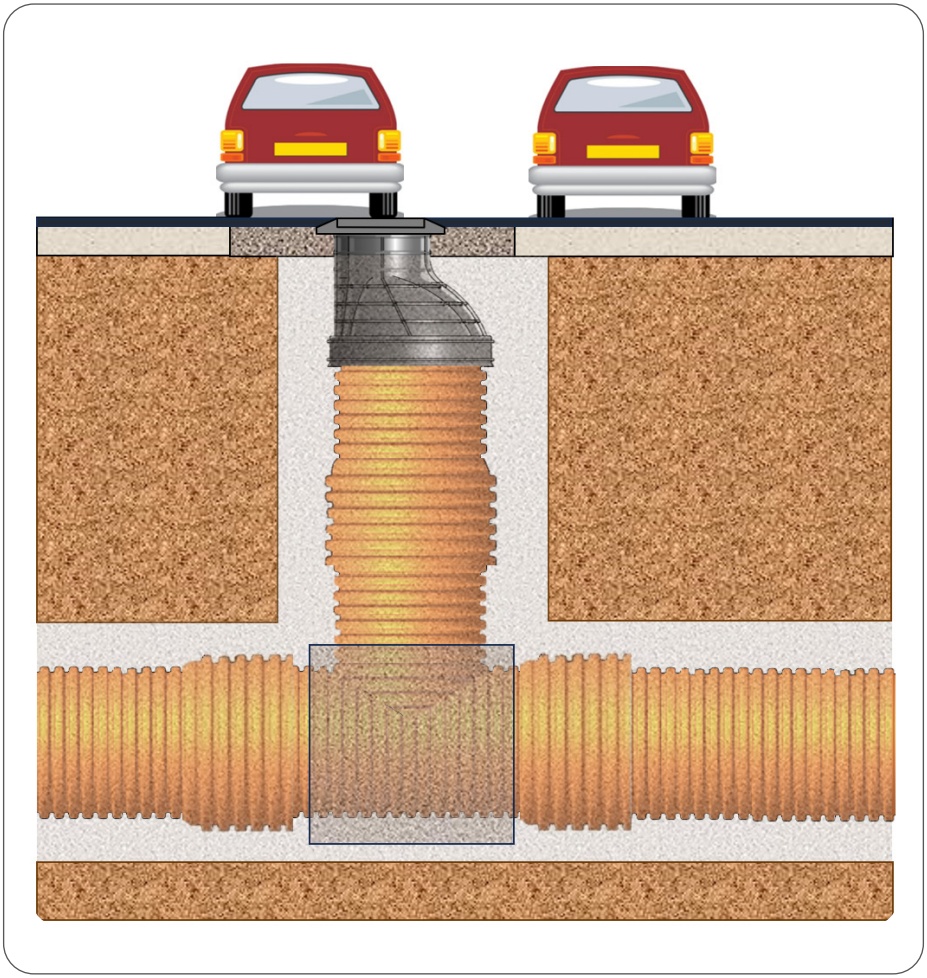
4.3) Lengthening the body of the manhole (only for manholes of > 3 m in height):

As with the Tee pipe, the manhole should be lengthened while secured with slings, handled with the utmost care. The manhole body must be sized to reach the desired elevation. Rubber seals should be used at the ends of the manhole segment. Next, lubricate and align the body with the branch socket. Then position the body and press it down in a controlled manner with a backhoe, placing a wooden bar in a similar way as in the previous section. Finally, position the reducer cone at the top of the well, pushing it into place mechanically.



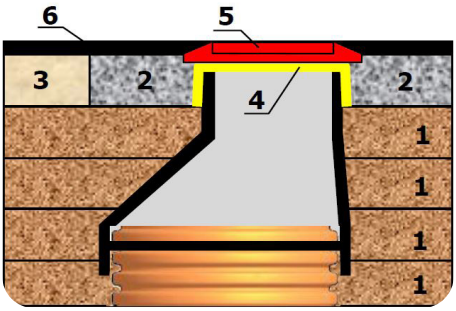
4.4) Backfilling the SANECOR® Manhole:

Once the entire manhole installation process has been completed, the manhole must be backfilled in the same way as the manifold envelope. Beforehand, a concrete cube should be cast on site around the Tee pipe. To backfill the rest of the manhole, use gravel with a grain size of 8/12 to ensure optimal backfilling with the best possible compactness. The width of the pit to house the manhole should be at least Ø + 40 cm on each side.



4.5) Crowning and upper termination:

On the top of the manhole, install a load distribution concrete slab to prevent vertical loads from traffic affecting the manhole. The upper neck of the cone can be trimmed to adjust the height of the manhole.



1) Gravel or compacted backfilling at 95% NP.
2) Concrete slab.
3) Firm base layer.
4) Spacer between cone and concrete (polystyrene, geotextile, etc.).
5) Cast iron frame and lid.
6) Top layer.

MANHOLE ND	Thickness (cm)	Slab selection (m)	
		WITH TRAFFIC	WITHOUT TRAFFIC
1,000	20	1.70 X 1.70	1.50 X 1.50
1,200	20	2.00 X 2.00	1.80 X 1.80

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AENOR GESTIÓN DE LA CALIDAD ISO 9001 ER-0440/1996

AENOR GESTIÓN AMBIENTAL ISO 14001 GA-2001/0255

IQNET RECOGNIZED CERTIFICATION

AENOR TUBOS PLÁSTICOS 001/007322 UNE-EN 13476-1 UNE-EN 13476-3

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