



BECKER 320 INFILTRATION TUNNEL

Modules of the Becker 320 Infiltration Tunnels with the Technical Approval

Volume of a single module: 320 liters.

Size: 1205 x 800 x 630 mm.

Weight: 9,50 kg.

The strength of the tunnels allows them to be used also under the lorry parking spaces for vehicles up to 30 tones.

Technical description:

Becker 320 Infiltration Tunnels with front plates are wrapped in a filtering geo-textile and their purpose is to infiltrate and store the rainwater coming from the roofs of the buildings and hardened areas such as terraces, car parks, streets and roads. The rainwater is first directed to the filters, which sort out impurities. Then, via the sewage pipes the water falls into the infiltration tunnels wrapped in the geo-textile. The drainage system used is made out of PVC-U fittings and pipes, which are compliant with the PN-EN 1401-1:2009 norm, or out of polypropylene fittings and pipes (PP) which are made in accordance with PN-EN 1852-1:1999 norm (+ PN-EN 1852-1:1999/A1:2002).

The connections are sealed with elastomer gasket rings.

The modules of infiltration tunnels may be interconnected (vertically and horizontally) - the size of the system depends on the surface of water collection.

The infiltration tunnels are placed on gravel bedding in an excavation.

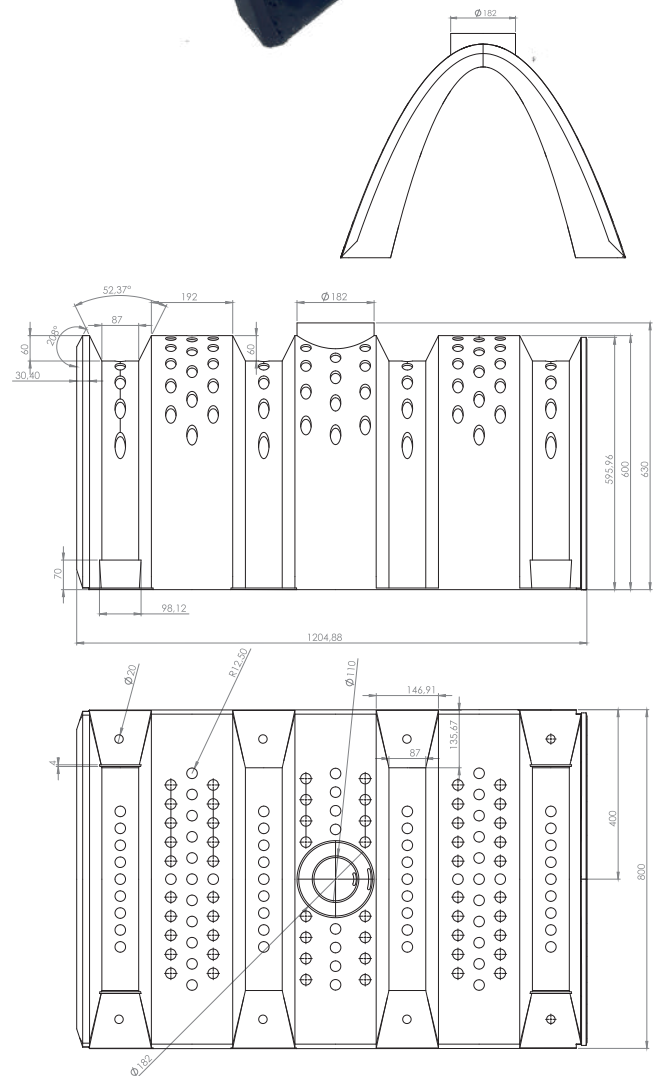
Top connections: DN 100 (or: DN 150; DN 200; DN 300);

Bottom connections: DN 100;

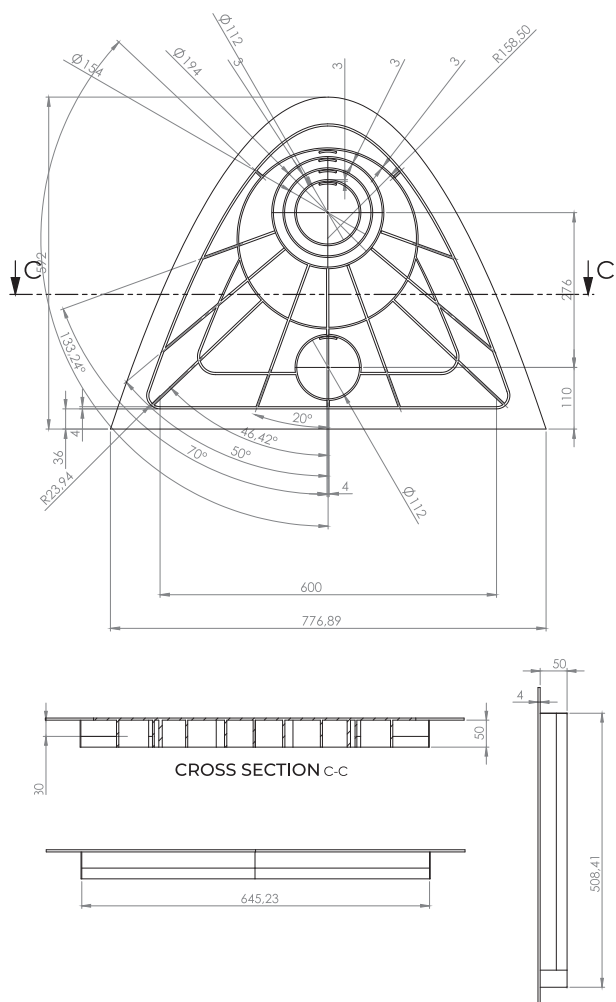
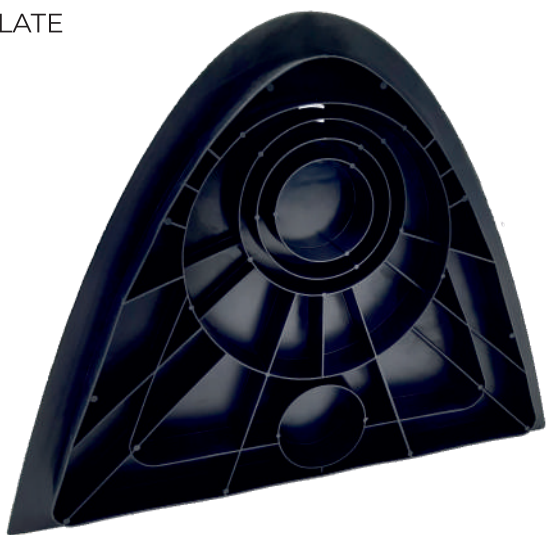
Inspection - hole: DN 100 or DN 200,

Becker 320 infiltration tunnels are a registered industrial design no. 002347658; they are injection molded out of a mixture of recycled polypropylene and polyethylene PP/PE black.

TUNNEL MODULE





FRONT PLATE



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PURPOSE, SCOPE AND CONDITIONS OF USE:

The purpose of the Becker tunnel includes: retention and gravitational infiltration of the rainwater coming from the rooftops and hardened areas. The tunnels may also be used with biological sewage treatment plants. - The tunnels should be founded in a light and water conductive grounds.

When founding Becker 320 tunnels, the following conditions must be met:

- The bottom of the excavation should be leveled off and covered with a 10 cm layer of 8/16 mm gravel,
- The tunnels should be placed on the layer of gravel and connected with each other by their overlapping edges. Then they should be wrapped in the geo-textile cover, with a 30 cm overlap,
- the bottom surface of the tunnels should be placed at least 1,0 m above the groundwater level,
- the rainwater pipes should be placed with a proper slope,
- the top ends of the rainwater sewage system and filters should be compliant with the PN-EN 124:2000 norm,
- the distance between the tunnels and a building with a non-isolated basement should be at least 6,0 m,
- to drain an area of 100 m² during a 150 l/s/ha rainfall at least 3-7 tunnels are needed - it depends on the soil water conductivity factor.

Conditions of using the Becker 320 Infiltration Tunnels:

Load:

maximum load of the lorry traffic for vehicles up to 30 tons.

Minimum thickness of ground topping layer:

- 25 cm under the pedestrian traffic
- 75 cm under the passenger cars traffic
- 150 cm when under 30 t lorries.

Maximum depth of foundation (measured from the bottom of the tunnel):

- 250 cm

When constructing a Becker infiltration system you have to take into account the requirements of the following norms:

- PN-B-10736:1999 Excavation Works - Open excavations for the water pipelines and sewage pipelines - Technical Conditions;
- PN-EN 1295-1:2002 Static calculations for ground pipelines at a variety of load conditions - Part 1: General requirements;
- PN-EN 1610:2002 Structure and functioning of the sewage systems.