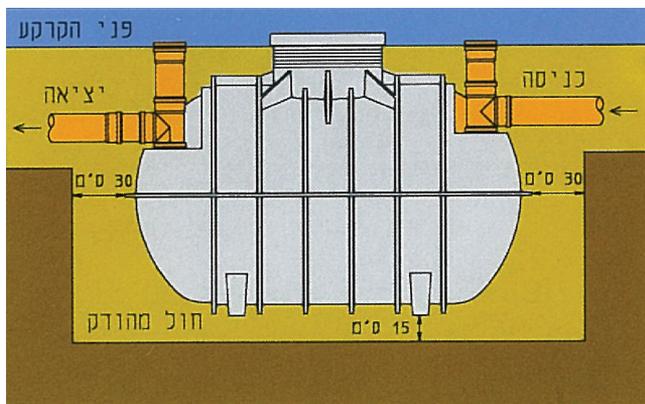


Instructions for placing septic tanks / fat separators



Instructions for placing septic tanks / fat separators

1. Dig a trench approximately 15 cm deeper and 30 cm wider than the septic tank sizes. Drawing 17.
2. Put some 15 cm of soil at the bottom of the trench level and compact thoroughly.
3. Place the septic tank, connect the pipes and place the tank cover.
4. Cover the space created between the septic tank and the trench wall with soil and wet and compact in layers of approximately 30 cm. Make sure that the soil backfill will be carried out up to the septic trench ceiling surface, in order to create an upper weight on the tank.
5. The tank must be filled with water at the same time of backfilling and compacting the soil, in order to balance pressures when compacting.
6. When ordering the septic tank, make sure to specify the inlet / outlet diameter.
7. In the event that the inlet / outlet pipe is deeper than 20 cm, 60 cm diameter elevations must be installed on the tank opening, according to the required depth. Elevations for the cleaning openings must be carried out by adding a PVC pipe of appropriate diameter and length.
8. The septic tank can be installed on –or– underground. It is a must to specify the installation status before ordering, contact the factory to obtain a suitable solution – for different explanations.
9. In the event that the volume of the tank / separator is bigger than 6000 liters, unloading and burying by a crane and straps is required.

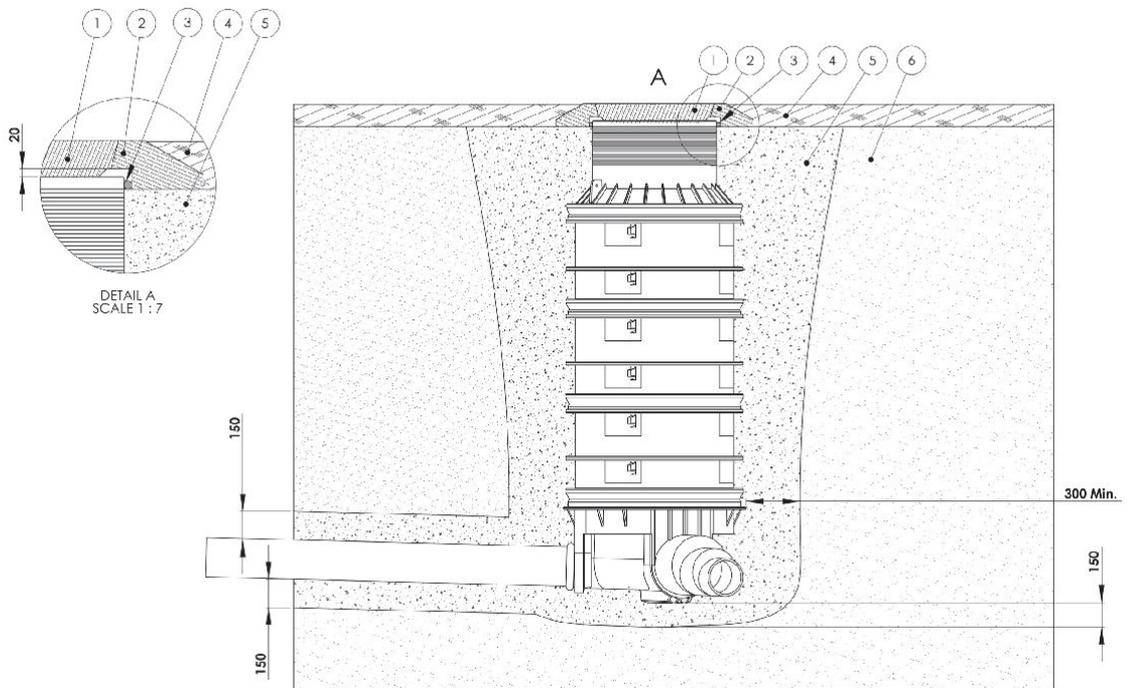
Note:

- 1) For underground installation in areas where overhead load is applied and / or underground water exist in the trench – contact the Company to obtain detailed instructions.
- 2) For installations of more than maximum depth of over 80 cm from the *I.L* of the inlet pipe to ground surface - contact the Company to obtain detailed instructions.



Instructions for placing inspection chambers

Installation drawing



Text for installation drawing

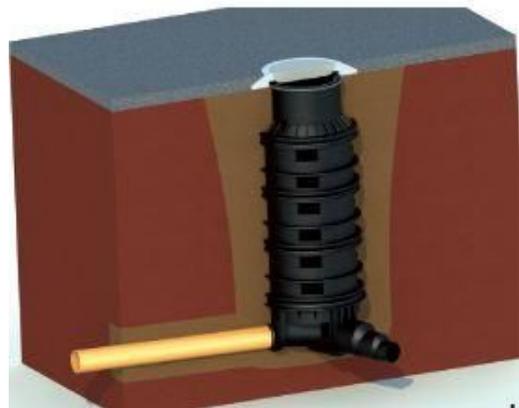
- .Cast cover / composite material (1)
- Concrete ring / composite material (2)
- .EPDM foam rubber gasket – 20 mm diameter (3)
- .Asphalt / concrete paving (4)

- 5) **Filler material:** (2 options)
- A. Dry / wet C.L.S.M mixture
- B. Granulate filler material up to 4.75 mm grain size.
- (Quantity of the fines will not Exceed 5%)
- Surrounding soil (6)

Design

* These instructions are based on the Israeli Standard I.S 13598-3

1. Designer or customer for whom this is the first time of using Hofit manholes are recommended to contact the factory for obtaining information and training.
2. The height difference between the manhole inlets and outlet must be considered in designing and calculating the slope of the sewage line in which Hofit manholes are combined.
3. Installation in areas where underground water exist in the trench, requires contacting the Company for obtaining detailed guidelines.
4. Hofit manholes are intended for installation in D400 upper loads or more.



Instructions for placing inspection chambers

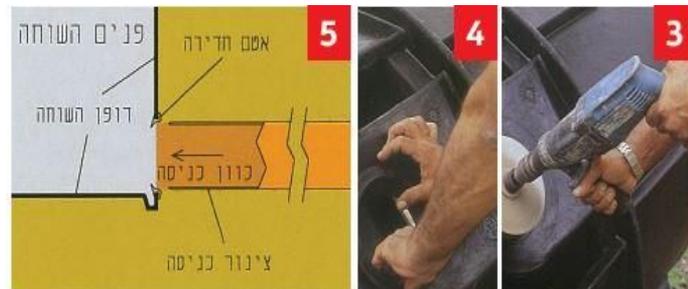
Trench

1. Add to the trench size approximately 15 cm in depth and 30 cm over the diameter of the manhole. Picture 1.
2. Backfill the bottom of the trench with standard filler material to a height of 15 cm
3. Place the manhole in the trench, to determine the place and diameter of the pipe inlet openings and to determine the final height of the manhole as required. Picture 2. (Can be carried out only by measuring)



Openings cutting

1. Cutting pipes inlets to the determined diameters and locations is made by a cup round drill. Picture 3.
- There is a precise marking on the manhole for cutting, and the cutting center for the cup drill.
2. Cutting an unmarked opening will be made according to the openings cutting table.
 3. After cutting install the gaskets. See picture 4 and picture 5.



Piping installation

The manholes enable connecting to a variety of piping types: PVC, PE, corrugated pipes, clay pipe, .concrete pipe, etc



Openings cutting table for piping (PVC) inlet mm.

Pipe diameter	630	500	450	400	355	315	250	200	160	125	110	90	75	63	50	40	32	25
Cut diameter	650	520	470	420	375	335	265	215	175	138	124	103	85	73	60	48	40	32

Height adjustment



1. Cut the internal ring at the manhole's

upper section in order to enable connecting the elevations to one another and install a gasket.

2. Cut the manhole's top neck to the required Height. The cut is made along the marked cut lines. Pictures 6 and picture 7.

3. Note! Calculating overall height =

manhole height + cover height !



Instructions for placing inspection chambers

Placing the manhole

1. Place the manhole in the required depth and connect the inlet and outlet pipes. Insert the inlet pipe at least 5 cm into the manhole. For convenience of inserting the pipe apply a lubricating paste to the pipe edge. Picture 8 and picture 9.

Place the manhole on the readymade soil bed and care for backfilling the spaces created in the bottom of the trench.

2. Level the manhole at its top. Leveling at the top of the manhole produces a slope of approximately 1.5 % to the channels on the bottom of the chamber.

Note: there is approximately a 7° rotation in the pipe entrance into the manhole opening.



Connecting the elevation / top element according to the required height

1. Insert the inter-element gasket (supplied by the factory) around the upper edge of the base or the elevation. See drawing 10 and picture 11

2. Place the next element in its place while applying vertical force downward. Using a lubricating paste will help the act of inserting the element on the gasket. Make sure to keep level for every element attached. See picture 12 and picture 13.

All the manhole elements must be connected, including the cover, before backfilling the trench.

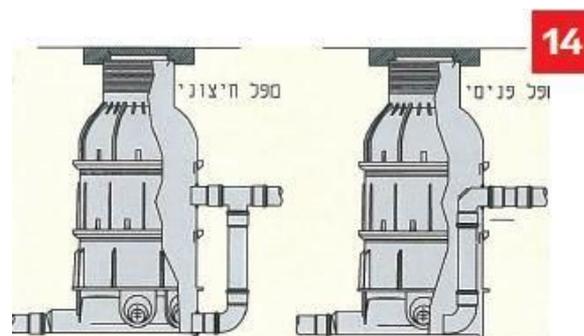
3. In manholes with ladders, make sure to place the elements such that the ladders will be placed gradually one on the top of another at both sides of the manhole exit.

Drops

1. For carrying out drops see drawing 14.

2. Mark the drop opening according to the pipe diameter and in the right position (see the openings cutting table).

3. Compacting the soil around the manhole has great importance.





Instructions for placing inspection chambers

Backfilling and compacting

1. Backfill the space formed between the manhole and the trench wall with material confirmed to standard, the backfilling will be carried out in circular motion around the trench circumference.

Picture 15

The filler material certified by standard is:

A. CLSM* mixture: dry / wet.

B. Granulate filler material: (sea sand / quarry material) of 4.75 mm maximal grain size, the quantity of fines will not be bigger than 5%.

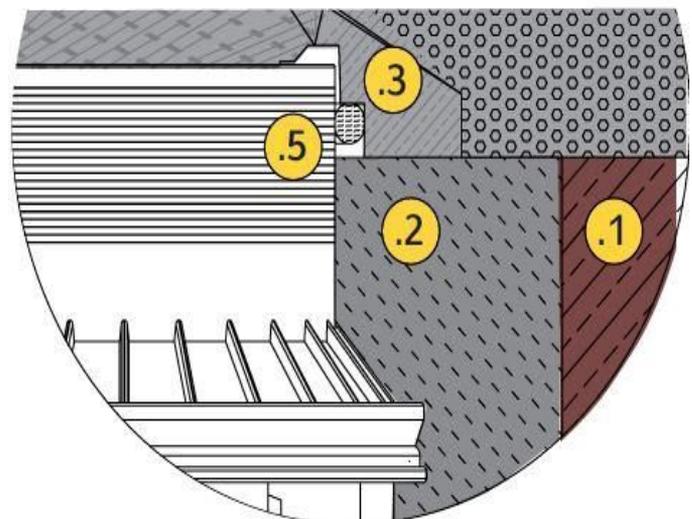
*The use of CLSM should be made in 30 cm layers when each layer is irrigated with water until completely wet

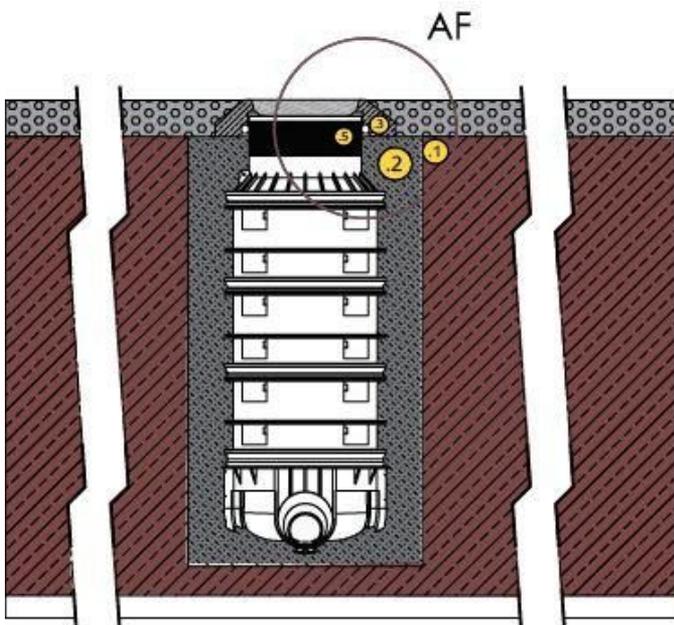
2) Backfilling the filler material is made up to about 5 cm from the manhole neck top, at which stage a final compacting of the entire area around the manhole up to the trench wall is carried out.

3) At this stage the contractor may choose either to place a prefabricated standard ceiling or to self-cast a standard ceiling according to the maximal upper load that is defined in the infrastructure design.

4) In the event that development works are carried out at site, the manhole must be marked in an observable manner until the end of the development works, to obtain heavy loud machinery from driving above it.

5) By the end of the development works and when the height of the final surface is determined, the adjustment of the manhole neck level can be made by cutting. Picture 16





Instructions for placing inspection chambers

Cover / manhole ceiling

The Cover / manhole ceiling drawing 16 should be adjusted to the maximal load that is defined in the engineering plans.

Planning the cover / ceilings sizes as derivative of the load level:

A50 low load: yards, loans, walkways

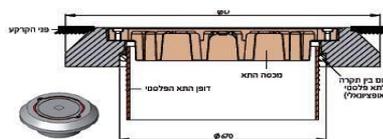
B125 medium load: light vehicles parking lots, traffic and industry surfaces

C250 heavy load: road shoulder / drainage ditches

D400 high load: roads center

E600 aircraft landing tarmacs

1. The sizes of the concrete ceiling placed on the manhole neck is derived from the installation standard (20NCM²) (see attached table according to loads)



Method of placing the ceiling

2. There should be no contact between the manhole neck and the ceiling, and a minimal 20 mm clearance should be maintained from the neck top to the ceiling bottom.

3. There should be no contact between the neck wall and the ceiling, a 5 mm clearance should be maintained.

4. There is an option to acquire a prefabricated ceiling or cast a reinforced

Ground level

Plastic chamber wall

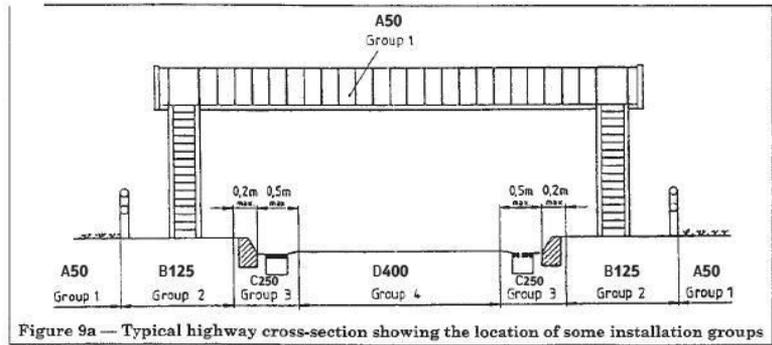
Chamber cover

Gasket between ceiling and plastic chamber (optional)

ceiling on the surface according to manufacturer instructions.

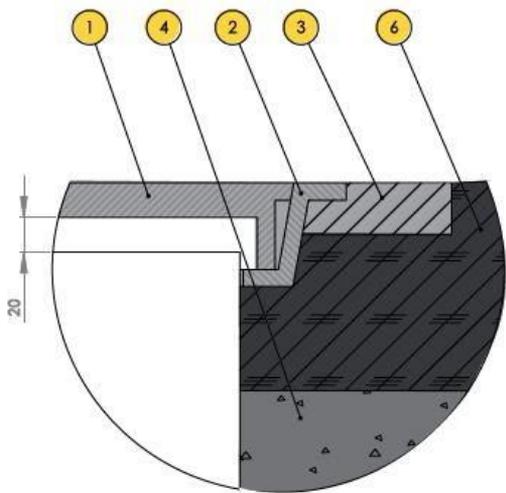
Ceiling diameter required in variable loads
(60 cm diameter chambers)

Model	Ceiling diameter
A	880
B	880
D	1040
E	1190

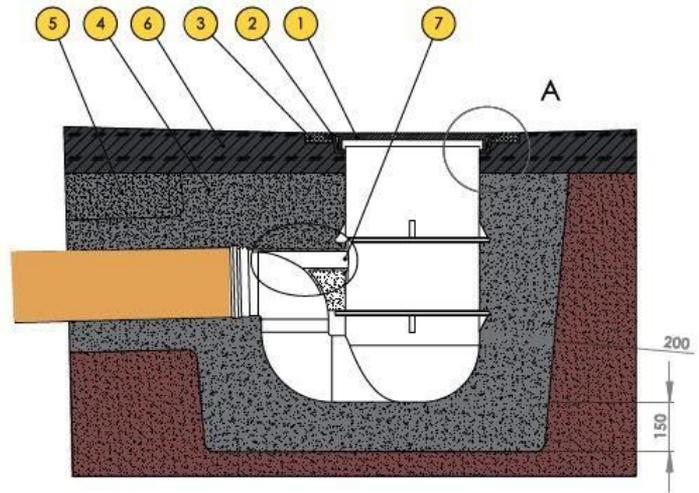


Instructions for placing inspection chambers

Instruction for placing a gully trap in road



DETAIL A
SCALE 1:2



Text for gully trap installation in road drawing

- 1) Cast steel plug / receptor diameter 400.
- 2) Cast ring.
- 3) Concrete cast.
- 4) Asphalt / concrete paving.
- 5) **Filler material:** (2 options)
 - A. Dry / wet C.L.S.M mixture
 - B. Granulate filler material up to 4.75 mm grain size.

(Quantity of the fines will not be bigger than 5%)

6) Surrounding soil.

7) Rubber plug for cleaning and opening clogging

Advantages

1. Piping connection to gully at variable angles (up to 210 degrees)
2. Quick installation speed
3. Cleaning capability and quick operation speed.

