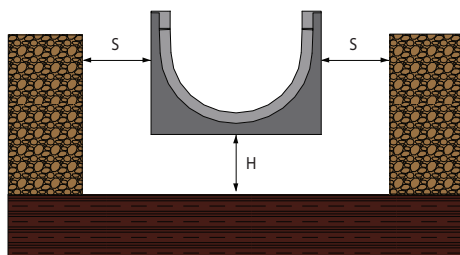


Instructions for the installation



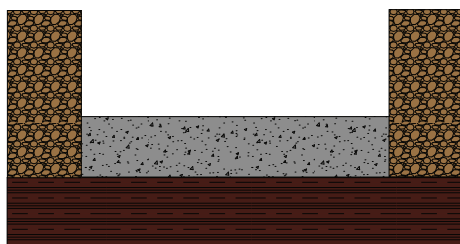
Step 1

Dimensioning of the trench

The excavation to be made for the lying of the Drain System channels must take into account:

- 1) the channel dimension and the discharge outlet pipes;
- 2) adequate space for the foundation H and concrete side flanking S.

The foundation and the flanking dimensions are listed in the table at the bottom of page nr. 2.

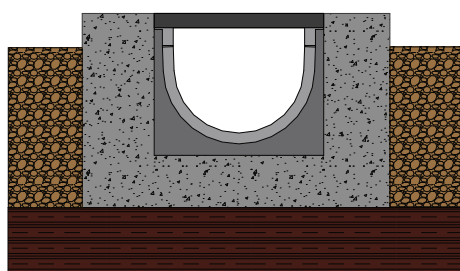


Step 2

Concrete foundation

Lay the concrete foundation H up to the height indicated, arranging, in this phase, eventual inclination in the drain line.

For class of loads E and F, we suggest to strengthen the foundation with reinforcing rods.



Step 3

Channels installation

Lay the channels starting from the flow outlet and block them at the base in order to avoid their floating and their line skew during the concrete cast for the flanking.

Arrange the required discharge outlets and carry out the side flanking up to the maximum height allowed, as shown in the drawings on page 2.

First insert and block the requested gratings: in order to make the layout instruction quicker and to avoid the channels edges shrinkage due to the concrete pressure.

Carry out the concrete flanking with reinforcing rods as well as the concrete foundation (see step 2).

In case it is required a water proofing drainage line, we recommend to use a bituminous silicon sealant; we suggest "Shell Tixophalte". Apply a sealing stripe on each slot between the channels.

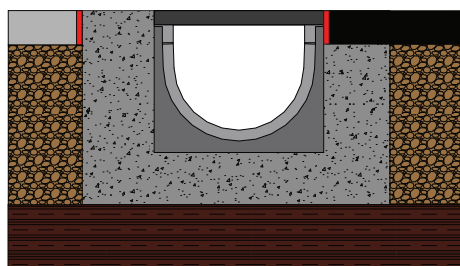
We strongly suggest to apply the stripes of "Shell Tixophalte" in the groove before coupling the channels.

Eventually longer lasting and complete waterproofing performance can be obtained by welding the joints.

To avoid concrete stains on the gratings during the installation, we suggest to protect the

NEW:

The new mufledrain channels can also be joined together with the gratings/covers

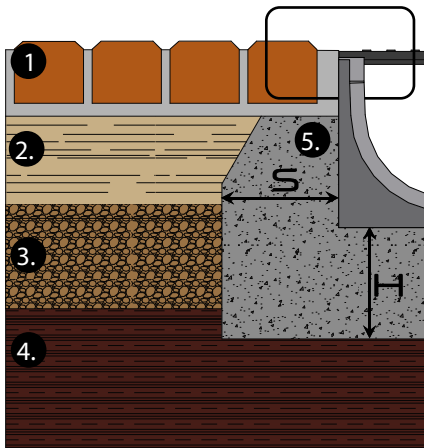


Step 4

Final finishing

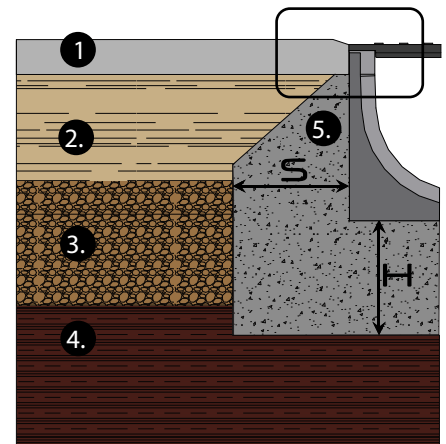
Install the final finishing making sure to bring the upper profile at least 3 mm above the flow of the grating or channel side. Take off the protective film and fix the grating by required means.

Example 1. Flooring (A15-B125)

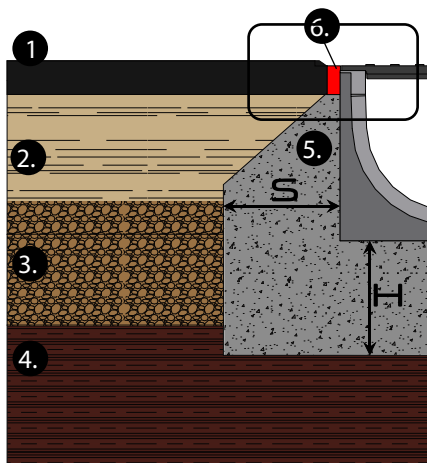


1. Flooring
2. Lower Layer
3. Bearing Layer
4. Subfloor
5. Concrete reinforcement Layer

Example 2. Concrete flooring (A15-B125-C250)

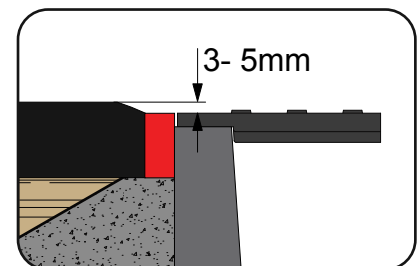


1. Flooring
2. Lower Layer
3. Bearing Layer
4. Subfloor
5. Concrete reinforcement Layer



Example 3. Asphalt (A15-B125-C250)

1. Flooring
2. Lower Layer
3. Bearing Layer
4. Subfloor
5. Concrete reinforcement Layer
6. Bitumen joint



The present data sheet is to be used only as a suggestion for the laying of the Mufle Drain channels. For every installation we recommend you to check the following:

- the load capacity of the foundation
- use concrete with the advised characteristics
- respect the height of the laying bed and the flanking thickness.

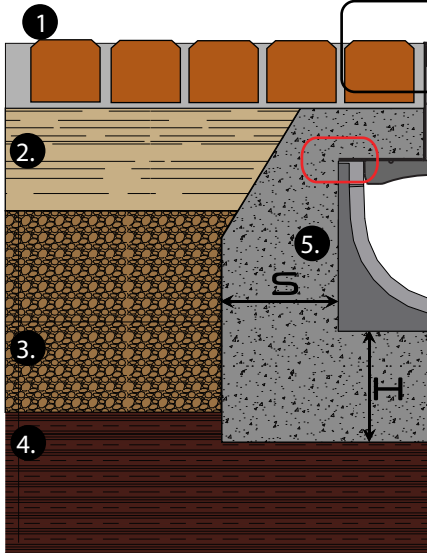
Technical Data

Class of load (EN 1433)	A 15	B 125	C 250
Applicable load (EN 1433)	15 kN	125 kN	250 kN
Minimum height (H) of concrete laying bed	100 mm	100 mm	150 mm
Minimum thickness (S) of the concrete flanking	100 mm	100 mm	150 mm
Class of concrete (resistance to compression EN 206-1)	C 20/25	C 25/30	C 25/30
Class of concrete (resistance to compression EN 206-1) ¹	C 30/37 XF4	C 30/37 XF4	C 30/37 XF4

¹with danger of frost

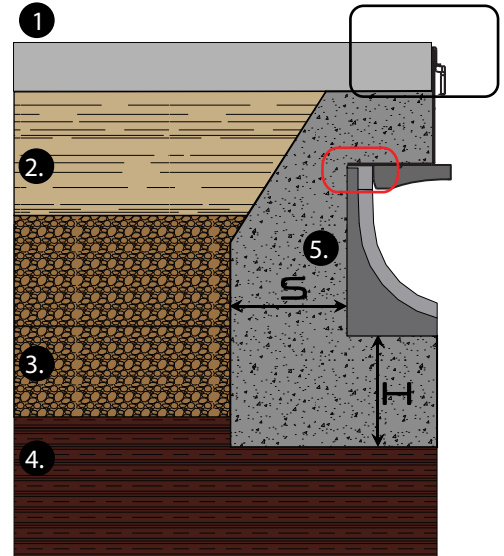
Therefore the concrete with constituency class S4 (EN 206-1)) is recommended and the rock aggregate will have to be made of stones with a maximum diameter of 6/8 mm.

Example 1. Flooring (A15)



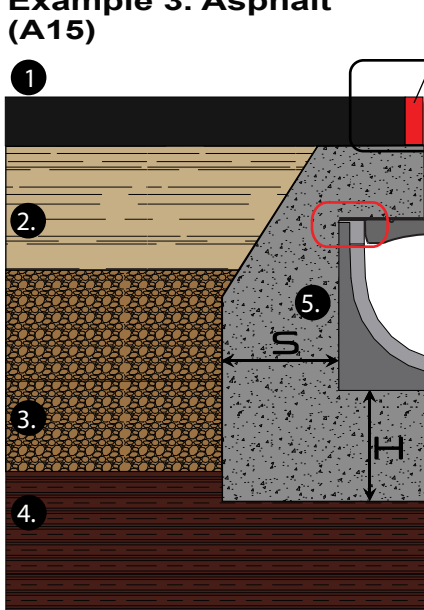
1. Flooring
2. Lower Layer
3. Bearing Layer
4. Subfloor
5. Concrete reinforcement Layer

Example 2. Concrete flooring (A15)



1. Flooring
2. Lower Layer
3. Bearing Layer
4. Subfloor
5. Concrete reinforcement Layer
6. Bitumen joint

Example 3. Asphalt (A15)



1. Flooring
2. Lower Layer
3. Bearing Layer
4. Subfloor
5. Concrete reinforcement Layer
6. Bitumen joint

Warning: prevent concrete from flowing into the channel

The present data sheet is to be used only as a suggestion for the laying of the MufleDrain channels. For every installation we recommend you to check the following:

- the load capacity of the foundation
- use concrete with the advised characteristics
- respect the height of the laying bed and the flanking thickness.

Technical Data

Class of load (EN 1433)	A 15
Applicable load (EN 1433)	15 kN
Minimum height (H) of concrete laying bed	100 mm
Minimum thickness (S) of the concrete flanking	100 mm
Class of concrete (resistance to compression EN 206-1)	C 20/25
Class of concrete (resistance to compression EN 206-1) ¹	C 30/37 XF4

¹with danger of frost

Therefore the concrete with constituency class S4 (EN 206-1) is recommended and the rock aggregate will have to be made of stones with a maximum diameter of 6/8 mm.

The Mufle S.p.A., the right reserves him to vary the contained technical characteristics in the present document without warning, they are to informative title and they are subject to change during the evolution of our products.