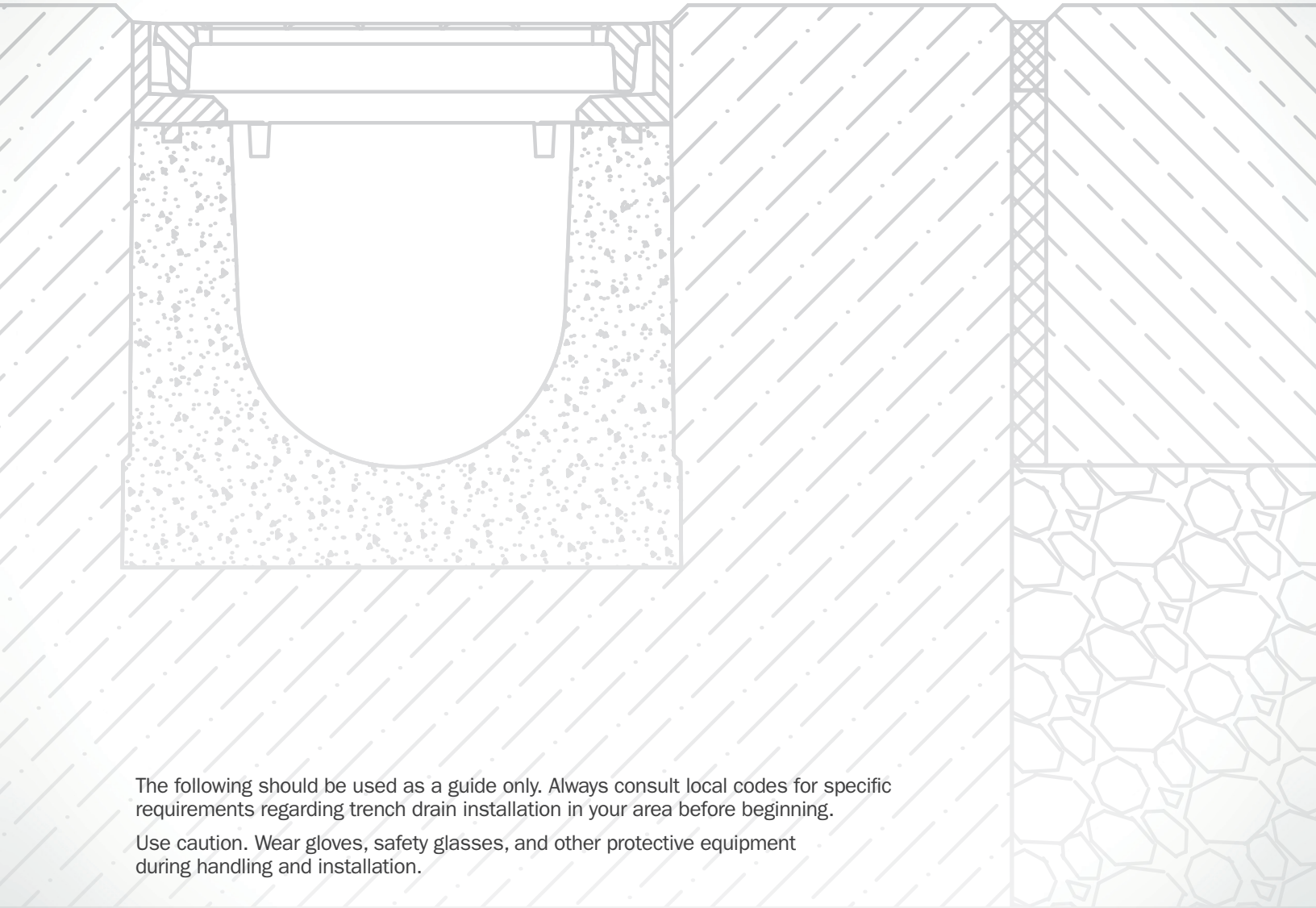
HydroTec™

Installation Guide



The following should be used as a guide only. Always consult local codes for specific requirements regarding trench drain installation in your area before beginning.

Use caution. Wear gloves, safety glasses, and other protective equipment during handling and installation.

Basic Principles of Laying Drainage Channels

The type of drainage channel to be installed depends on the location of the installation, anticipated traffic loads, and the intended surface materials. Traffic loads are organized in classes: A 15 to F 900 by the EN 1433 standard. For Class C and above, grating must be anchored for safety. The foundation of the drainage channel must always be suitable to bear the traffic load.

Any horizontal loads arising from traffic or thermal behavior of the surface layer must be supported by sufficiently dimensioned concrete encasement of the channel sections. Expansion joints that run parallel to the channel must be installed, especially when adjoining concrete surfaces. Installation of the channel should be generally opposite to the direction of flow – starting at the outlet point, and working "upstream".

Finished/settled adjacent surfaces must be approx. 3/16" higher than the top edge of the grate or edge rails.

Where extreme horizontal forces are expected at right angles to the channel, e.g. on railway crossings, ramps or highways, the drainage channels should be secured laterally with reinforced decking concrete.

Load Classes per DIN EN 1433

Class A 15
Test Load: 3,372 Lbs
Walkways, pedestrian/cycle paths

Class B 125
Test Load: 28,101 Lbs
Walkways, light-vehicle parking areas

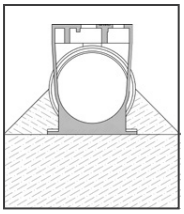
Class C 250
Test Load: 56,202 Lbs
Curb areas, Car and Truck parking

Class D 400
Test Load: 89,924 Lbs
Forklift traffic, road surfaces

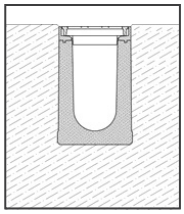
Class E 600
Test Load: 134,885 Lbs
Industrial/military applications, high wheel loads

Class F 900
Test Load: 202,328 Lbs
Airport surfaces, docks, extreme wheel loads

Type I vs. Type M Systems



Type I
Drainage channel does not require a concrete encasement for bearing the loads. Foundations are only required to distribute the exerted vertical and horizontal forces.



Type M
Drainage channel requires a foundation and encasement of concrete that can transfer all vertical and horizontal loads into the foundation after installation

Concrete Encasement: Concrete used for trench drain encasement must be minimum 4,000 PSI compressive strength

Channel Layout

During installation, always layout the channels opposite to the direction of flow - Starting at the outlet, and working "upstream".

When adjacent channels will flow in opposite directions (Fig. B), it may be necessary to join the upstream side of two sections. To avoid a gap between sections, remove the upstream end profile with an angle grinder or use end pieces.

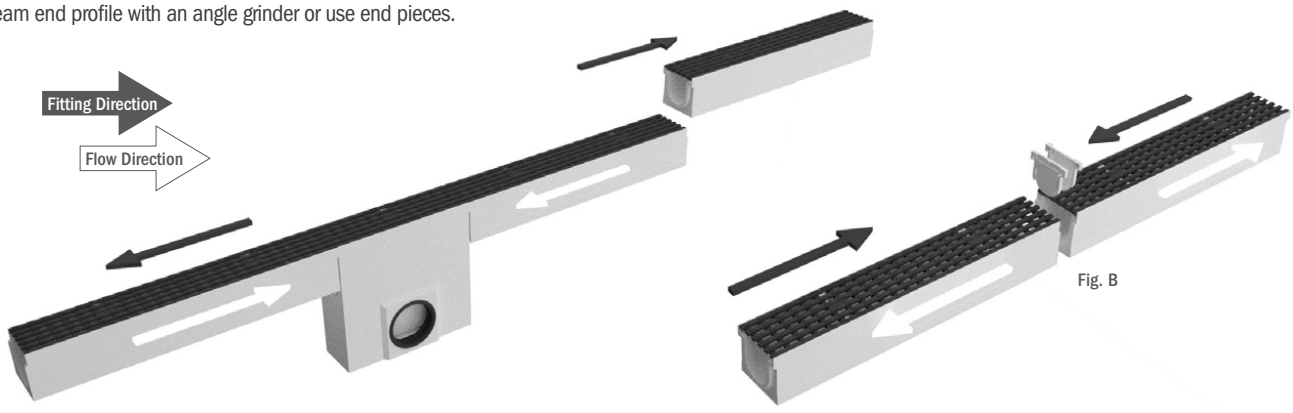


Fig. B

Options for Pipe Connection

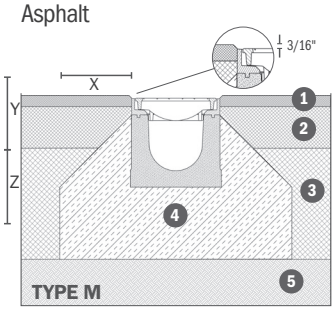
Catch Basins
Drainage from a single channel or two channels can be directed into a catch basin. Galvanized steel debris baskets included.

Bottom Outlets
Connect drain piping to channel sections with bottom outlet openings. Gasket seals for a watertight joint.

Installation Diagrams

HydroTec™ A 15 - C 250

Asphalt

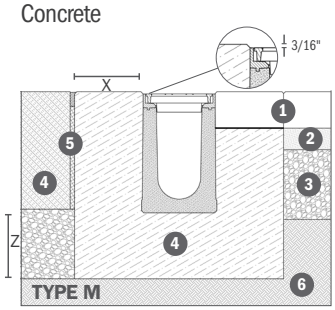


1 Top course | 2 Binder course
3 Load-bearing substructure
4 Concrete
5 Frost-proof, load-bearing substructure

Dimensions - X Y Z (calculated)	
A 15	4" concrete[2]
B 125 / C 250	6" concrete[2]

HydroTec™ A 15 - F 900

Concrete

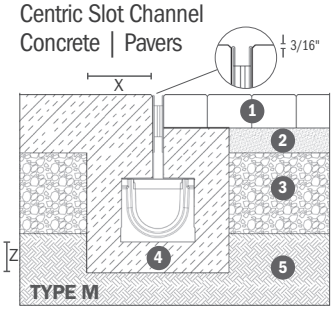


1 Pavers[1] | 2 Paver base
3 Load-bearing substructure
4 Concrete | 5 Expansion joint
6 Frost-proof, load-bearing substructure

Dimensions - X Z (calculated)	
A 15	4" concrete[2]
B 125 / C 250	6" concrete[2]
D 400	8" concrete[2]
E 600 / F 900	10" concrete[2]

HydroTec™ A 15 - C 250

Centric Slot Channel
Concrete | Pavers

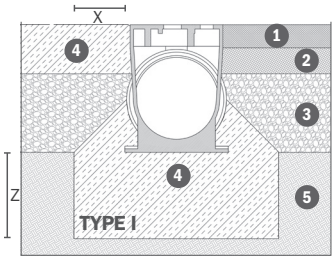


1 Pavers[1] | 2 Paver base
3 Load-bearing substructure
4 Concrete
5 Frost-proof, load-bearing substructure

Dimensions - X Z (calculated)	
A 15	4" concrete[2]
B 125 / C 250	6" concrete[2]

HydroBlock™ D 400 - F 900

Asphalt | Concrete



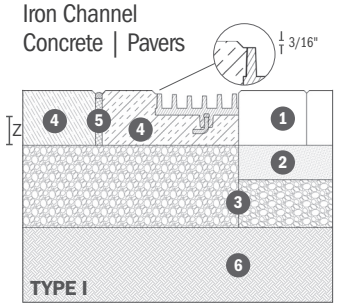
1 Top course | 2 Binder course
3 Load bearing substructure
4 Concrete
5 Frost-proof load-bearing substructure

Dimensions - X (calculated)	
D 400	6" concrete[2]
E 600 / F 900	8" concrete[2]

Dimensions - Z (calculated)	
D 400	8" concrete[2]
E 600 / F 900	10" concrete[2]

HydroLine™ C 250 - F 900

Iron Channel
Concrete | Pavers

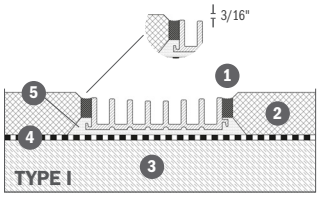


1 Pavers | 2 Paver base
3 Load bearing substructure
4 Concrete | 5 Expansion joint
6 Frost-proof load-bearing substructure

Dimensions - Z (calculated)	
C 250	6" concrete[2]
D 400	8" concrete[2]
E 600 / F 900	10" concrete[2]

HydroLine™ C 250 - F 900

Aluminum Channel
Mastic Asphalt



1 Liquid sealant
2 Mastic asphalt
3 Load bearing substructure
4 Asphalt sheeting (5 mil)
5 Two-Part epoxy adhesive
Note: Concrete according to calculation of the intended load class.

1 Pavers set against the channel body must be bonded to the concrete bed to ensure that dynamic forces do not affect the channel sides. Depending on paver orientation, up to three courses adjacent the channel should be bonded in this manner. Subsequent paver courses can be set on a compacted base according to specifications.
2 4,000 PSI compressive strength

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