

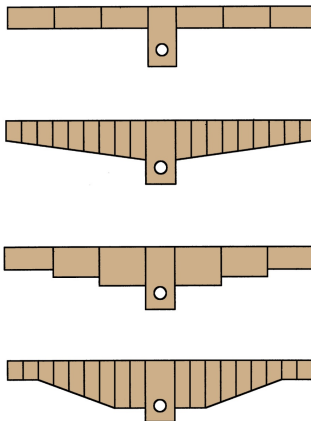
T1500 - INSTALLATION GUIDE

GETTING STARTED

A) MODULAR RANGE

The MIFAB[®] T1500 FILCOTEN[®] is a full range of modular channels and grating made of environmentally harmless Filcoten fibre reinforced concrete. If installed according to the installation specifications, the Filcoten range will withstand loads up to Load Class E rating.

Slope system



B) HEALTH AND SAFETY

Filcoten is free of synthetic resins, curing agents, heavy metals and VOC.

The main hazards are:

- Inhalation of dust from cutting, grinding or drilling

Required protection:

- Eye protection
- Breathing protection
- Gloves

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INSTALLATION

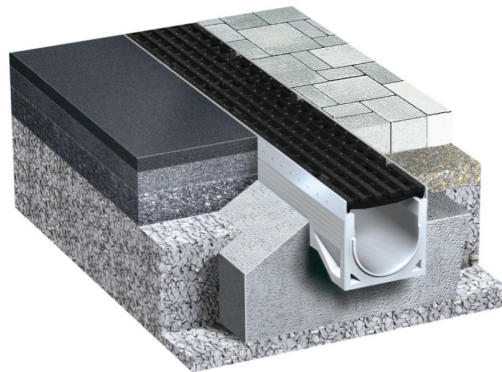
The installation sections have to be considered as general guidelines. Depending on the site conditions, the dimensions of the surrounding concrete can increase. Professional engineering advice is recommended.

Before starting the installation, check:

- Concrete channel bodies
- Correct gratings
- Correct accessories

Concrete specifications:

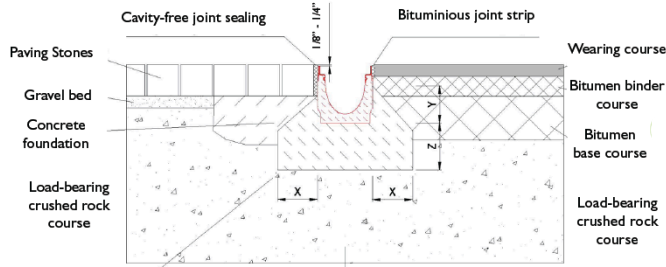
- Minimum grade 4000PSI compressive strength concrete
- Concrete must be vibrated during pour
- Re-enforcing steel may be required depending on load requirement or due to poor site conditions



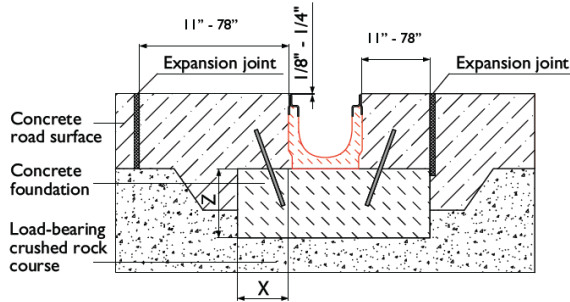
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INSTALLATION CONTINUED- Installation sections

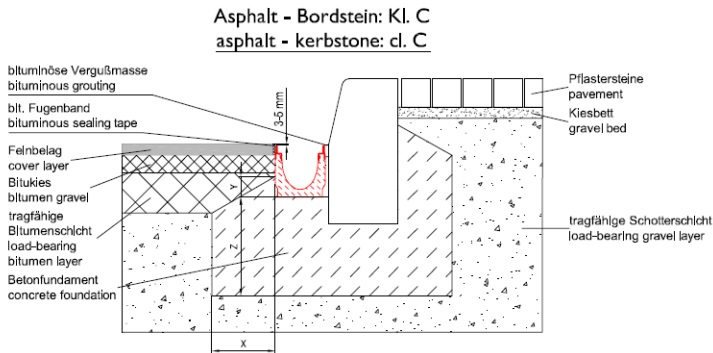
- Paving blocks / Asphalt load class A-C



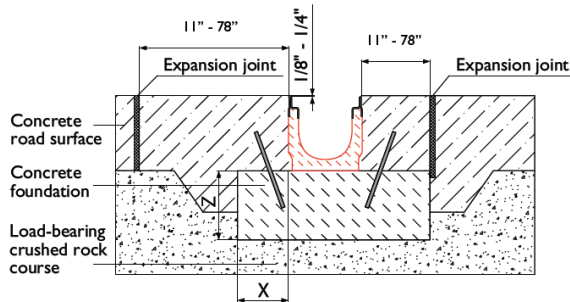
- Asphalt – Concrete installation



- Asphalt / Kerbstont load class A-C



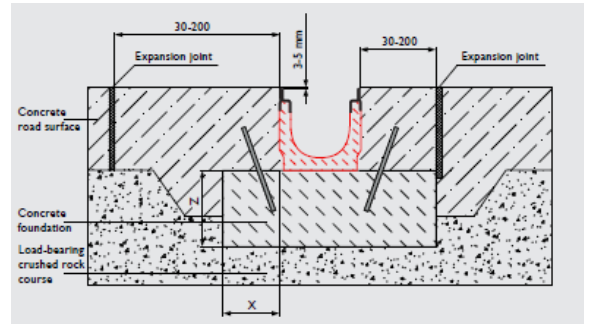
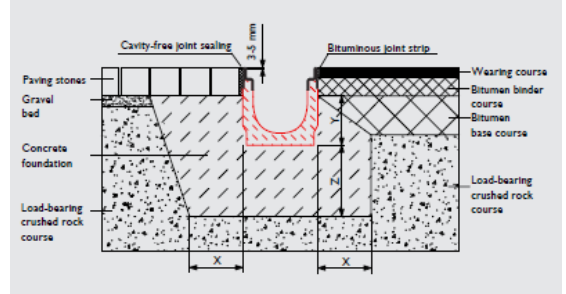
- Concrete slab installation



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EXCAVATION

- 1) Excavate the trench with minimum 4 inches or the slab thickness of encasement concrete is required under and beside the trench. Refer to the installation table.
- 2) Excavate the trench depending on the type of slope system, either inbuilt slope or neutral system.
- 3) Use string line or laser for alignment
- 4) Start trench drain installation from deepest point (outlet or catch basin)
- 5) **IMPORTANT:** In concrete slab pavement installation, make sure to include expansion control joints. See illustration.



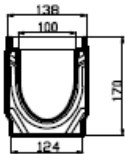
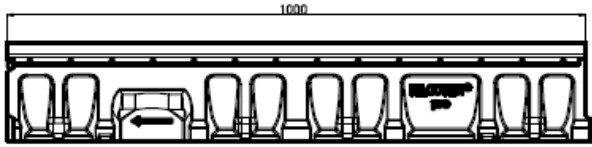
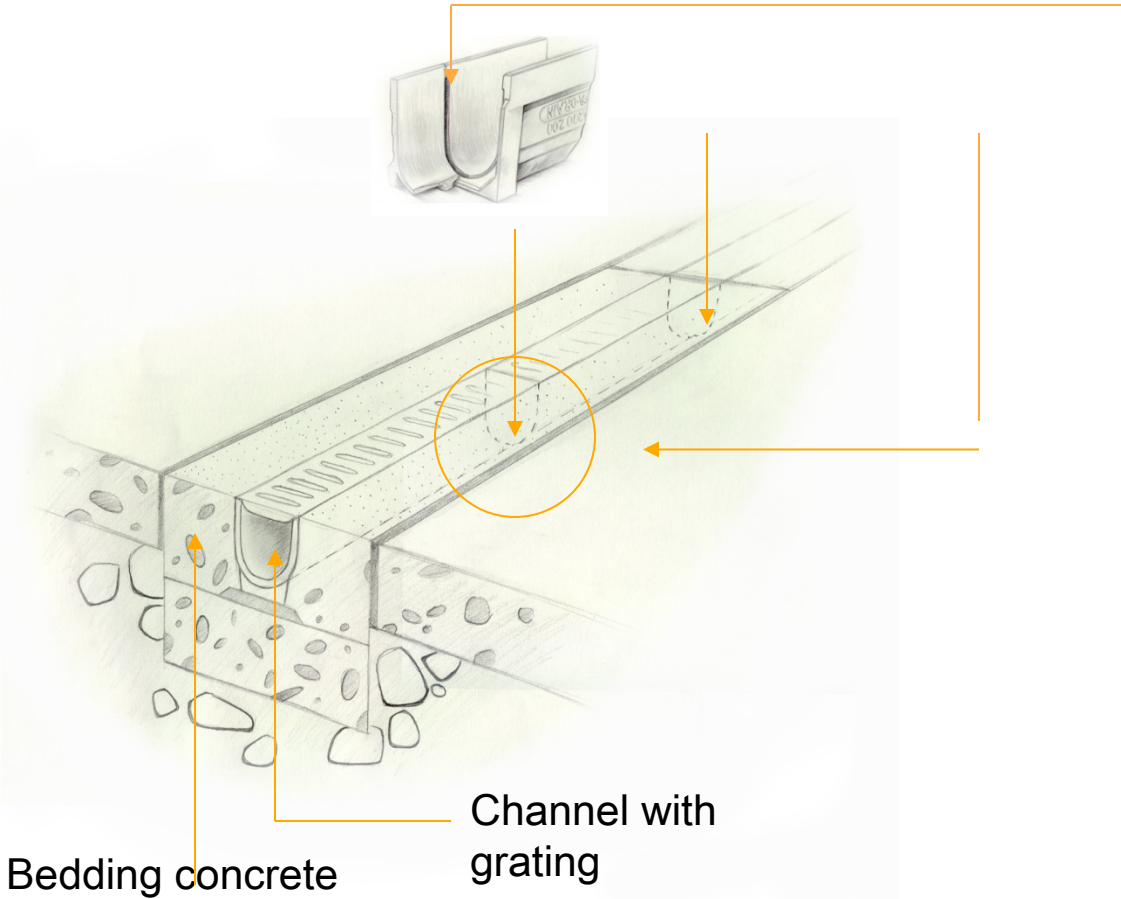
Load class (DIN 19580)	A 3,372 lbs. per foot	B 28,100 lbs. per foot	C 56,200 lbs. per foot	D 89,920 lbs. per foot	E 134,800 lbs. per foot
Foundation - concrete grade according to Ö-Norm B4710-1 - as per EN197-1*	C16/20	C20/25	C20/25	C25/30	C25/30
X	≥ 3.1"	≥ 3.9"	≥ 6.0"	≥ 6.0"	≥ 6.0"
Y	min. channel height -5 cm			Total height of channel element	
Z	≥ 3.1"	≥ 3.9"	≥ 6.0"	≥ 6.0"	≥ 7.8"
Reinforcement bar / armouring	Not required				DN 3.1" every 7.8"

*Concrete grade is a minimum requirement and must be adapted to local requirements.

EXPANSION JOINTS AND SEALANT

SEALANT JOINT

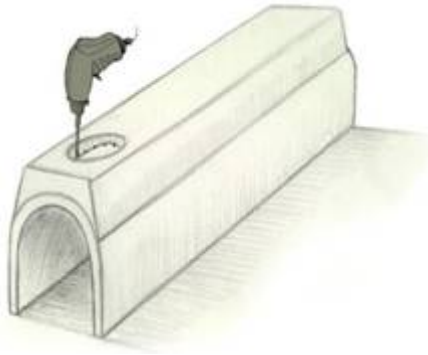
Use adequate sealant material depending on the type of drained liquids



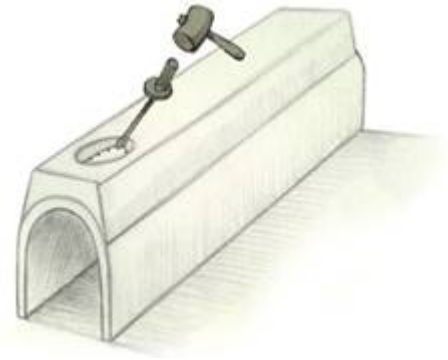
ON-SITE PERFORATIONS

ATTENTION

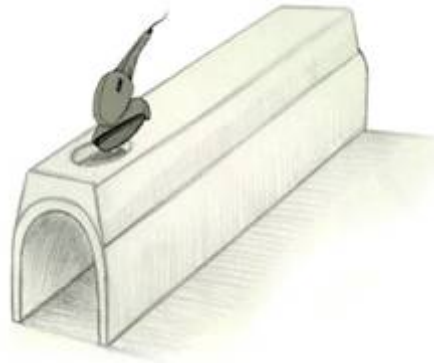
Use protective glasses and respiratory protection when cutting and drilling FILCOTEN channels



1 : Drill holes every 1/8"



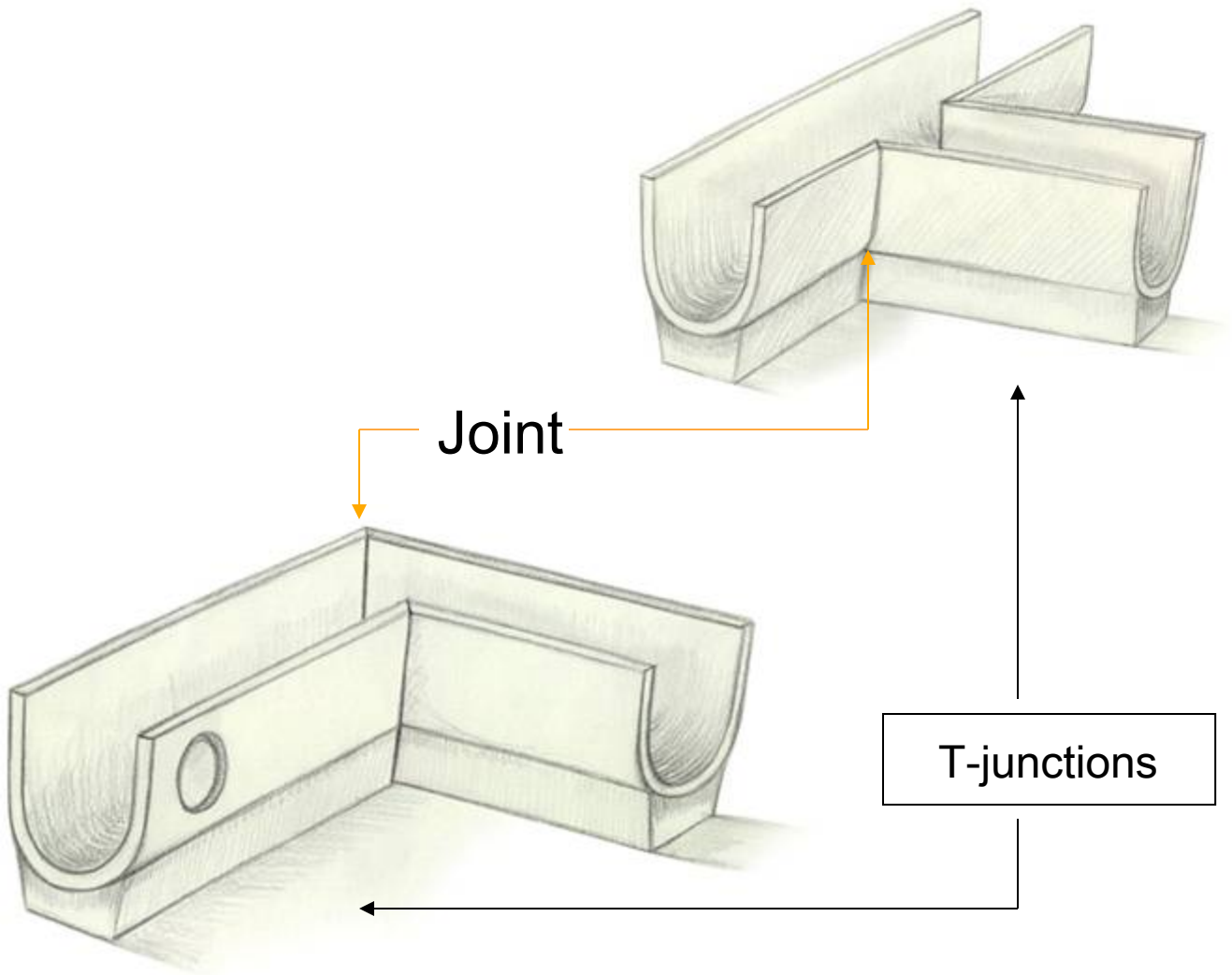
2 : Embrittle periphery.



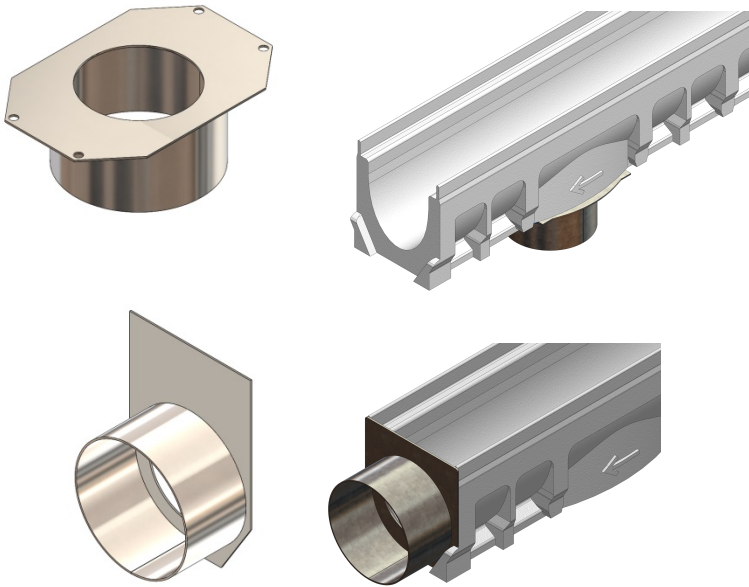
3 : Improve periphery if needed.

MITER AND T-JUNCTIONS

Filcoten channels should be cut with diamond disc saws. For 90° angle, miter cuts of 45° are required. Use standard construction glue to connect junctions

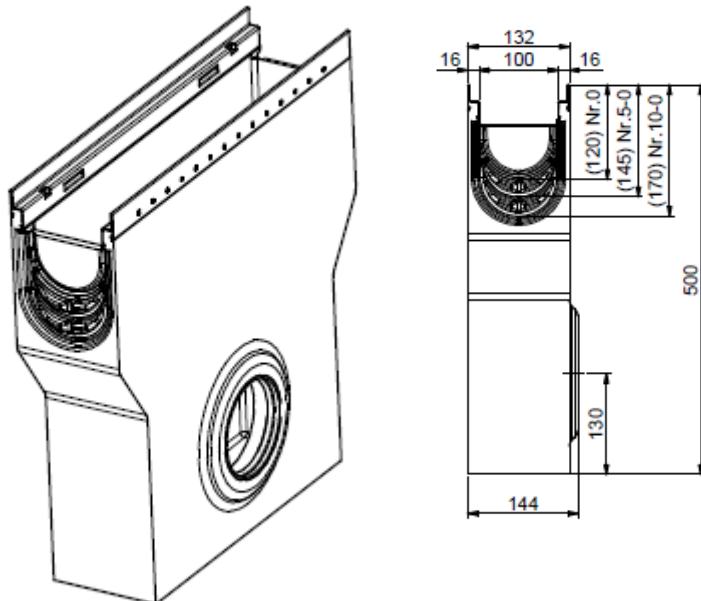


PIPE CONNECTIONS



Use vertical or horizontal no-hub pipe connector. Seal pipe with sealant.

Catch basins are equipped with a pre-fabricated 4" outlet and rubber seal.

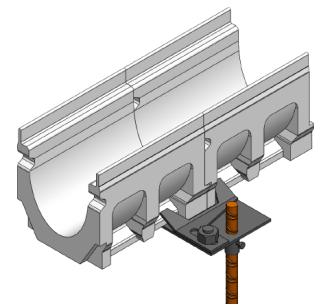
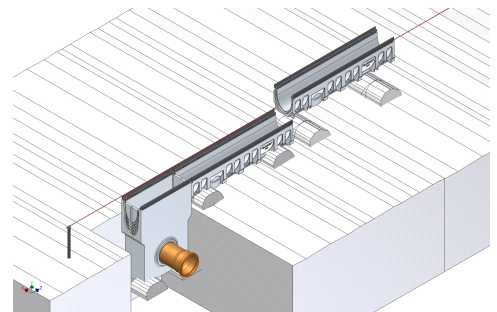
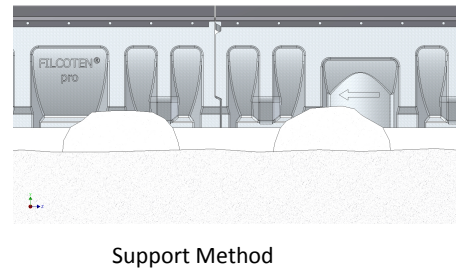
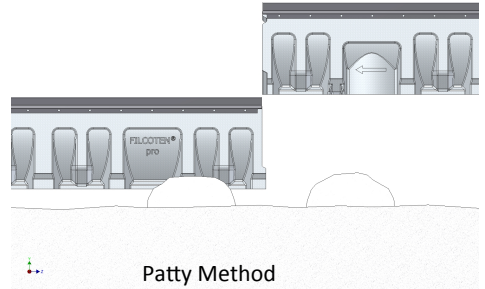


Knock out for channel connection

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INSTALLATION CHANNELS

- Start with outlet section. Align channels with string-line or laser at top edge of the required channel height.
- Channels are typically installed with
 - a. Patty Method
 - b. Support Method
- a. Patty Method
 - i. Start with outlet section or catch basin on concrete bed. Connect and seal outlet pipe. Align to required height.
 - ii. Space a few low slump concrete patties along the trench to position the channel. Make sure that the patties are not in the joint area in order to avoid getting material trapped between the joints.
- The MIFAB T1500 channel rebar support makes height adjustment and positioning easy.
 - I. Use 4" or 5" rebar. Drive three pair of rebar, aligned, in the ground spaced in order to position 2 units of 39.37" (1m) each. Adjust support plate to right height.
 - II. Place channel on the support and fix channel with clamps.
 - III. Make fine adjustment of height.
 - IV. Repeat procedure.
 - V. Control alignment and channel height.



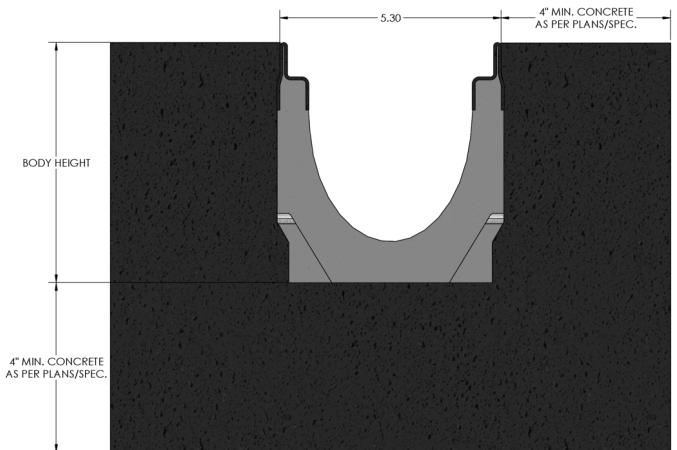
Rebar Support

CONCRETE POUR

- Positioning the channel for concrete pour**
 Channels need to be installed with inserted gratings or pour planks in order to avoid deformation of the channel walls due to the side pressure of the concrete pour. Gratings should be protected with masking tape or wrapped with plastic. Gratings or planks should be installed to bridge the joints for alignment.
- Concrete pour**
 Concrete should have compressive strength of minimum 4000psi. Concrete should be poured evenly and vibrated to assure an even distribution. In case of horizontal outlet make sure to have sufficient cover over the outlet pipe.



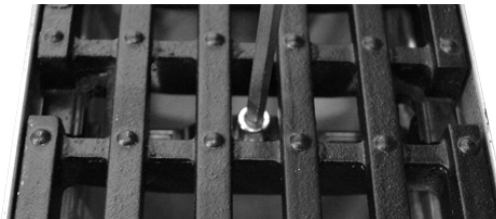
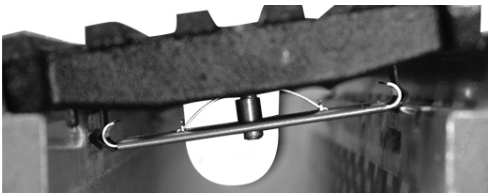
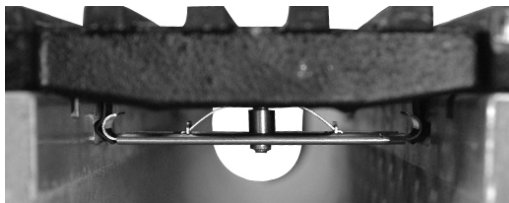
T1500 with optional pour plank



GRATE INSTALLATION AND ANTI-VANDALISM LOCKING

The T1500 Filcoten gratings are equipped with a four point snap-on self locking device.

In addition the anti-vandalism grating lock is available. (See anti-vandalism installation instructions)



FINAL INSPECTION



- Remove protective wrapping or masking tape and remove debris.
- Position gratings if they were used to bridge the joints for alignment. Make sure that gratings are snapped in.
- Insert sediment bucket in catch basins
- Make sure that outlets are free of debris and check drainage capacity by flushing channels.