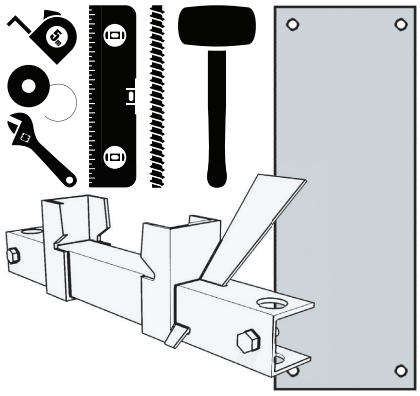
ACO Drain

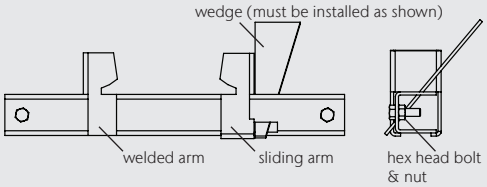
Installation Device Guide

Tools

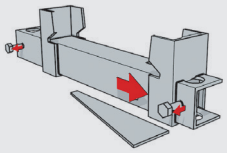
- Hammer
- Spirit level
- Tape measure
- String & (4) pegs
- 5/16" socket wrench or crescent wrench
- Ø 5/8" reinforcing bars. Lengths to be determined by installer. Bar lengths will vary depending on soil type and height of channel above the trench depth. # of reinforcing bars = 2 per channel + 2 for the end of the system.
- 3.60 ft (1.10 m) plank to assist with leveling
- Installation devices = 1 per channel + 1 for the end of the system. E.g. 10 channels require 10 devices + 1 device for a total of 11 devices. See example in Step 2.



Installation Device Setup



1. Loosen both screws to allow the device to be positioned over the reinforcing bars.
2. Push the adjustable clamp to the outside to allow the channels to be installed.
3. Wedge is fitted during final stage of installation.



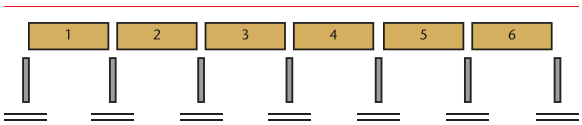
Installation

Step 1

Create the required width template using plywood or 2x4's or similarly suitable rigid material. Diagrams can be printed from http://www.acodrain.us/technical.html

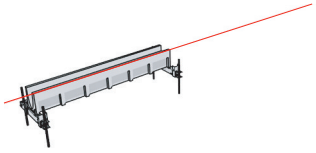
Step 2

Set out the top string line for the top edge of the channel run and lay the required channels in sequence along the string line. Also lay out 2 reinforcing bars and 1 installation device at the location of each channel joint.



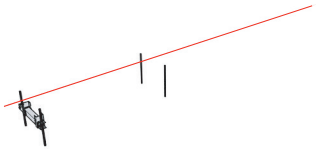
Step 3

Set the first channel without using the template to allow for flexibility. Note: The first channel to be set up must be at the outlet/deep end of the run. The fixed side of the installation device must be on the same side of the channel as the string line. Ensure the reinforcing bars are adequately pushed into the ground so they do not fall over once the channel is removed and do not sit higher than the top of the channel. A cordless hammer drill can assist with driving in the rebar. When measuring the height of the channels in relation to the install devices, measuring from the flat ends (where the channel is supported by the install device) is very important.



Step 4

Once the first channel is set, leveled and straightness is achieved, remove the channel and leave the first installation device in place. Remove the second device, but leave the reinforcing bars in place.

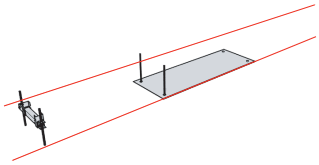


Step 5

Position the template over the second row of reinforcing bars.

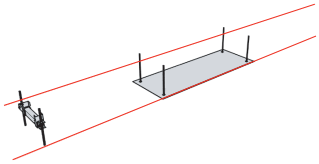
Step 6

Set up the second string line up against the template edge ensuring that both string lines are parallel. The second string line should be just above the ground level to keep the template straight when moving from one channel to the next. The string line should also be on the same side of the channel as the top string line.



Step 7

Hammer in the next/third row of re-bar through the empty template holes. Drive the reinforcing bars into a sufficient depth, but not too low to stop the use of the Installation Device.



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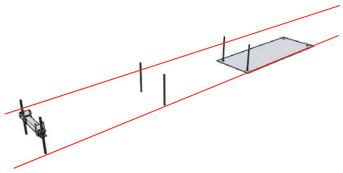
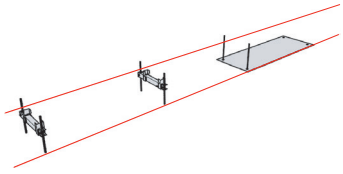
Step 8

Remove the template and reposition the template again on the last two reinforcing bars that were just installed.



Step 9

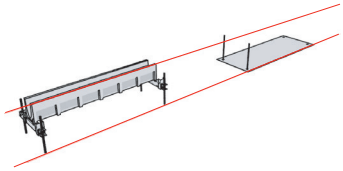
Re-attach the second installation device to the second row of reinforcing bars.



Step 10

Replace the first channel WITHOUT securing it and ensure the channel is level with the top string line and is level across the width of the channel. If it's too high, tap down the reinforcing bars. If it's too low, undo the screws and lift the installation device up.

Once the first channel has been replaced, DO NOT lock the adjustable side of the clamp with the wedge yet. This allows some movement of the channel when placing the next channel in line. Do not place the channel all the way to the fixed side of the clamp where it will sit in the locked position. This allows for easier installation of channels.



Note: Always allow two sets of reinforcing bars to be installed before placing channels. This allows the template to be removed and placed into the next position for setting the reinforcing bars.

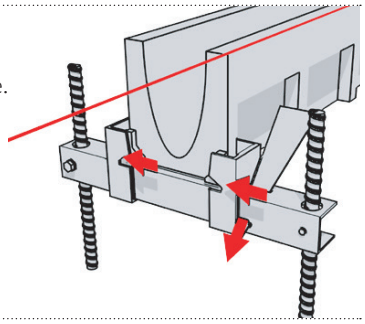
Step 11

Continue to install devices and repeat process of setting the channels.

Step 12

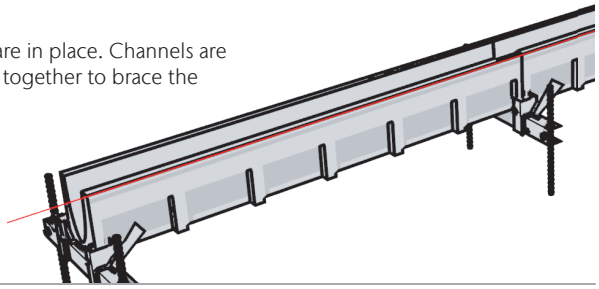
After the next/fourth channel is set, the first channel can be locked into position using the wedges for the install device. The wedge can be pushed in by hand. **Do not strike the wedge with a hammer.**

Note: Ensure the reinforcing bars are installed at least 2 rows ahead prior to installing channels.



Step 13

Continue to follow steps 7 to 13 until the trench run is complete and ensure all the wedges are in place. Channels are now set up for a single concrete pour operation. The installation device clamps the channels together to brace the channels in place and prevent movement during the concrete pour.



ACO Systems, Ltd.

2910 Brighton Rd., Oakville, ON L6H 5S3 | Toll Free: 877-226-4255 | info@acocan.ca | www.acocan.ca

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