

Marley supply the Connecto Trade range of surface water channels and pits designed for New Zealand conditions with the following features:

- › Side bracing and anti-floatation feet give good anchoring in concrete to help achieve straight installations
- › Patented support bracket strengthens and holds channels together minimising external warping
- › Bottom outlet allows connection to both 90 and 100mm DWV pipe
- › Female connectors allow channel to be connected to other components and offcuts cut at designated cut positions
- › Channel is clearly marked with "Cut here" guides to allow channel to be cut at 100mm increments
- › Outlets can be solvent cemented
- › Channel 130 Pit with integral channel connectors to create T, X, or straight line junctions
- › Plastic grates can be easily removed for cleaning and maintenance

## Material Specifications

### Channel, Plastic Grates and Pit Bases:

- › RUPP064 DuraProp B Black 100% Recycled Polypropylene, (Recycled Polypropylene, 15% Talc, 2% Carbon for UV stabilization) Injection Moulding Grade

### Outlet Connectors:

- › Outlets, (Bottom and End Outlets) ABS for solvent weld connection to PVC pipe

### Metal Grates:

- › Stainless Steel (316)
- › Galvanized Steel
- › Aluminium
- › Cast Iron

## Product Codes

### Channels

PART CODE	PRODUCT DESCRIPTION	COMPATIBLE PROFILE
CT80P1	Connecto Trade 80 Channel & Pedestrian Grate 1m	Shallow 80mm
CT1301	Connecto Trade 130 Channel only 1m	Deep 130mm
CT130S1	Connecto Trade 130 Channel & Standard Grate 1m	Deep 130mm
CT130S3	Connecto Trade 130 Channel & Standard Grate 3m	Deep 130mm
CT130P1	Connecto Trade 130 Channel & Pedestrian Grate 1m	Deep 130mm
CT130P3	Connecto Trade 130 Channel & Pedestrian Grate 3m	Deep 130mm
CT130SS1	Connecto Trade 130 Channel & Stainless Steel Grate 1m	Deep 130mm
CT130SS3	Connecto Trade 130 Channel & Stainless Steel Grate 3m	Deep 130mm
CT130G1	Connecto Trade 130 Channel & Galvanised Grate 1m	Deep 130mm
CT130G3	Connecto Trade 130 Channel & Galvanised Grate 3m	Deep 130mm

### Corners

PART CODE	PRODUCT DESCRIPTION	COMPATIBLE PROFILE
CT130CS	Connecto Trade 130 Corner & Standard Grate	Deep 130mm
CT130CP	Connecto Trade 130 Corner & Pedestrian Grate	Deep 130mm
CT130CSS	Connecto Trade 130 Corner & Stainless steel Grate	Deep 130mm
CT130CG	Connecto Trade 130 Corner & Galvanised Grate	Deep 130mm

## Accessories

PART CODE	PRODUCT DESCRIPTION	COMPATIBLE PROFILE
CT80A	Connecto Trade 80 Channel Adaptor	Shallow 80mm
CT80EC	Connecto Trade 80 Channel End Cap	Shallow 80mm
CT130A	Connecto Trade130 Channel Adaptor	Deep 130mm
CT130EC	Connecto Trade 130 Channel End Cap	Deep 130mm
CT130EO	Connecto Trade 130 Channel End Outlet	Deep 130mm
CT130LG	Connecto Trade 130 Channel Leaf Guard	Deep 130mm
CTBO	Connecto Trade Bottom Outlet	Fits 80 & 130mm Channel
CTSB	Connecto Trade Support Bracket	Fits 80 & 130mm Channel

## Grates

PART CODE	PRODUCT DESCRIPTION	COMPATIBLE PROFILE
CTGS	Connecto Trade Grate 1m – Standard	Fits 80 & 130mm Channel
CTGP	Connecto Trade Grate 1m – Pedestrian	Fits 80 & 130mm Channel
CTGSS	Connecto Trade Grate1m – Stainless Steel	Fits 80 & 130mm Channel
CTGG	Connecto Trade Grate 1m – Galvanised	Fits 80 & 130mm Channel

## Pits

PART CODE	PRODUCT DESCRIPTION	COMPATIBLE PROFILE
CT130CPB	Connecto Trade 130 Channel Pit Base Only	Deep 130mm
CT130CPP	Connecto Trade 130 Channel Pit & Plastic Grate	Deep 130mm
CT130CPA	Connecto Trade 130 Channel Pit & Aluminium Grate	Deep 130mm
CTP250B	Connecto Trade Pit 250mm Base only	
CTP250P	Connecto Trade Pit 250mm & Plastic Grate	
CTP250A	Connecto Trade Pit 250mm & Aluminium Grate	
CTP350B	Connecto Trade Pit 350mm Base Only	
CTP350A	Connecto Trade Pit 350mm & Aluminium Grate	
CTG250P	Connecto Trade Grate 250mm Square – Plastic	
CTG250A	Connecto Trade Grate 250mm Square – Aluminium	
CTG350A	Connecto Trade Grate 350mm Square - Aluminium	

## Garage Pack

PART CODE	PRODUCT DESCRIPTION	COMPATIBLE PROFILE
CT130S4GP	Connecto Trade 130 Channel & Standard Grate 4m Garage Pack	Deep 130mm
CT80P3GP	Connecto Trade 80 Channel & Pedestrian Grate 3m Garage Pack	Shallow 80mm

## Product Intended Use

Interlocking modular surface drainage for the removal of surface water in residential or commercial applications. The system has two channel depth options:

- › 80mm shallow channel designed for straight line drainage with bottom outlets only suitable for both 90 and 100mm DWV pipe connections
- › 130mm deep channel has end and bottom outlet options available for 90 and 100mm DWV pipes and can connect to corners and pits for directional changes

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## Manufacturing Standards

AS3996 – Access Covers and Grates

There are no set standards available for the manufacture of plastic channels.

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## On Product Identifiers

Channel – Trademark logo embossed onto sides of Channel

Pit Bases – Trademark logo embossed onto side of Pit Base

Plastic Grates – Product Name

Accessories – Product Name and Code

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## Relevant New Zealand Building Code Clauses

E1 Surface Water

E2 External Moisture

The two above clauses in the New Zealand Building Code are dedicated to moving rainwater away from buildings into safe areas and while there are no specific recommendations in relation to Surface Water Channels other than Threshold Drains for decks in E2 it is important to capture and move rainwater that falls around a building to prevent the water from pooling and possibly undermining the foundations of the building. Captured water in a Surface Water Channel can be redirected via the required sumps such as a Type 1 Surface Water Sump into the drain.

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## Design

Connecto Trade channel and accessory range has been designed to remove rainwater quickly and safely from areas where there is the potential for pooling and/or flooding. The radiused design at the base of the channel increases the velocity of the water to essentially self-clean the channel. Silt pits should be installed to collect any debris and reduce the velocity of the water prior to entering the stormwater drain.

Connect Trade channels are moulded in 1m lengths that can be joined with a patented internal support bracket that joins and straightens the lengths. The channels have 6 cut graduations along each 1m length that are designed when cut correctly to match the normal end connection allowing the female connectors to be used when connecting corners and/or the Pit with built in channel connectors. CT130CPB, this negates the use of silicon sealant to hold the parts together. Integral to the design and to aid lockdown when concrete is poured the outside of the channel is crosshatched, additionally the feet of the channel are surrounded by voids that allow the concrete to flow over them and under the channel securing the channel firmly preventing floatation.

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## Installation

Prior to installation the designer must choose the correct style of grate for the expected traffic

### Connecto Trade grates have the following slot openings:

- › Standard Grate Plastic – 12.87mm
- › Pedestrian Grate Plastic – 4.67mm
- › Galvanised Grate – 9.07mm
- › Stainless steel Grate – 9.07mm

### Connecto Trade Pits have the following slot openings:

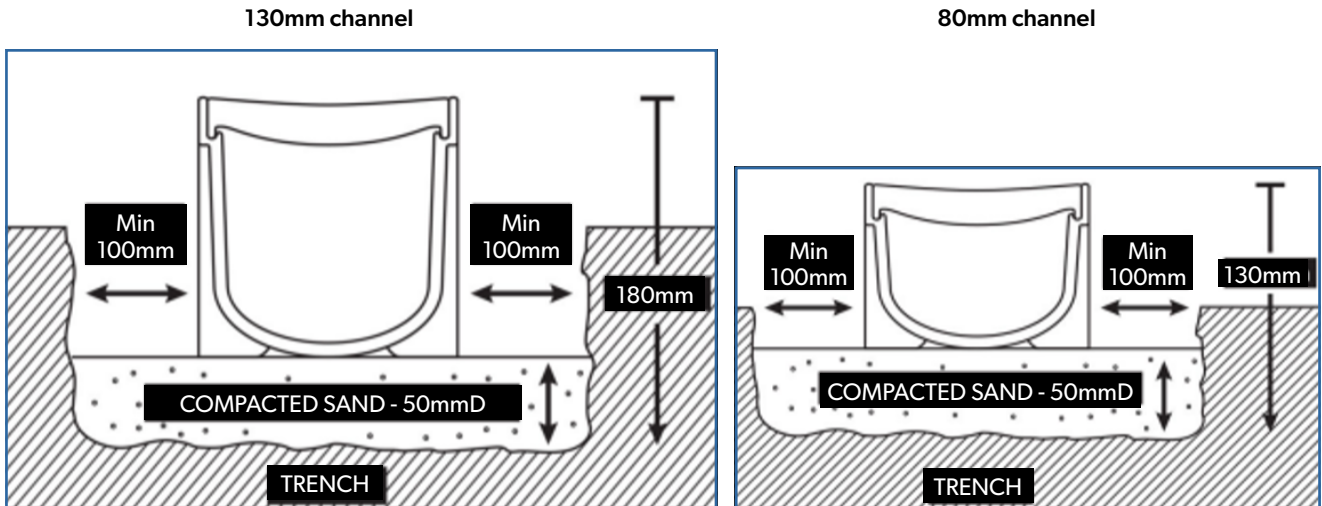
- › 250mm Plastic Grate – 11mm
- › 250mm Aluminium Grate – 11mm
- › 250mm Cast Iron Grate – 12.8 mm
- › 350mm Aluminium Grate - 10.5mm

## Preparation

The area where the surface water channel is to be installed should be carefully prepared and set out to suit the type of surface that will be installed. This can be either, concrete, tarmac, or paving stones. It is important that the finished surface should be 3 – 5mm above the finished channel and grate height to ensure proper run off into the channel. Additionally, there should be a minimum gradient of 5mm/1m length in the direction of the intended flow. There are two channel options in the Connecto Trade® range, 80mm or 130mm depth, and dependent on which channel is being used determines the depth of the required trench. If the installation of the stormwater pipes is being installed into the base of the channel, ensure you have enough pipe proud of the trench to connect into the channel bottom outlet. Once the area where the surface water drainage is to be situated has been determined cut a trench to suit the channel. Both the channels 80mm and 130mm are the same width and therefore should have the same allowance for the trench (330mm wide).

### Step 1 - Preparing the Trench

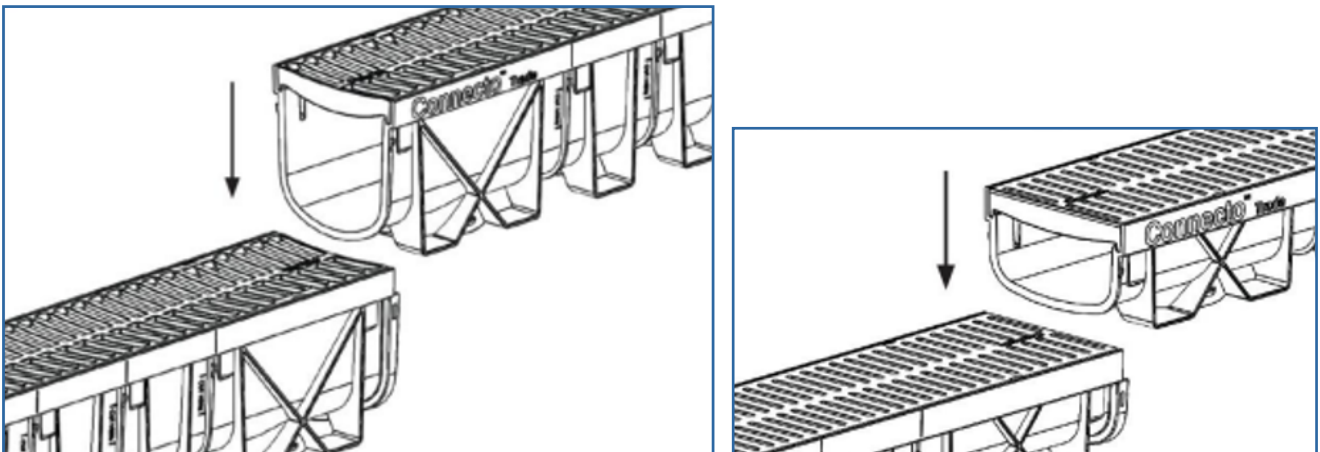
The depth of the trench is dependent on the type of surface required but allowance should always be made for a compacted bed of sand 50mm deep as per the below diagrams.



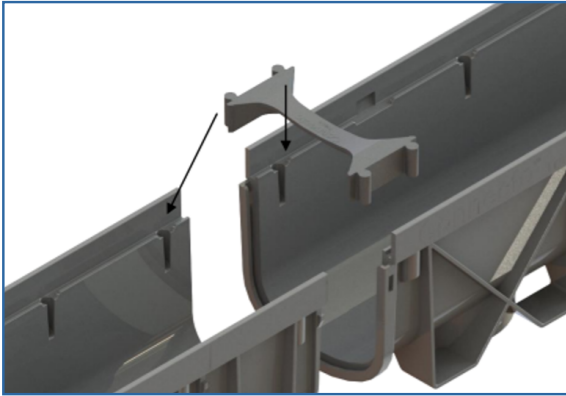
It is important to set the correct gradient of 5mm/1m when levelling the compacted sand in the trench to allow a good flow away from the area. The trench depth should allow for the finished surface required and any installation requirements needed.

### Step 2 - Assembling the Channel

When assembling the Connecto Trade® channel no silicone is required, each channel slots directly into the other using the male and female ends.



Additionally, the channel patented support bracket can be used to ensure that channel alignment is maintained. These support brackets span the two joining channels even if one channel has been cut.



Support bracket

### Step 3 - Assembling the Channel

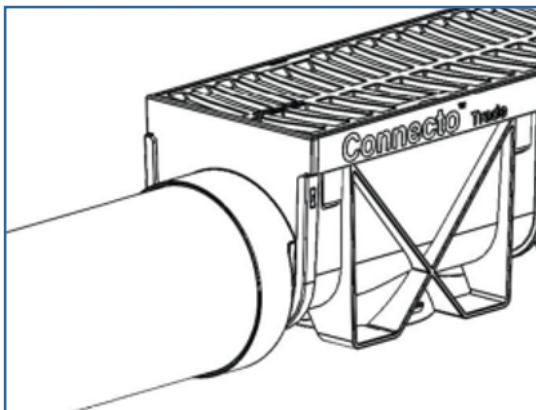
If there is a need to cut a length of channel, there are marked areas along the length showing where to cut and maintain the option of trouble free connection to other components of the system. A hacksaw or drop saw can be used for cutting the channel and grate. Note there are indicators showing where to cut, take care when cutting and trim the edges carefully.



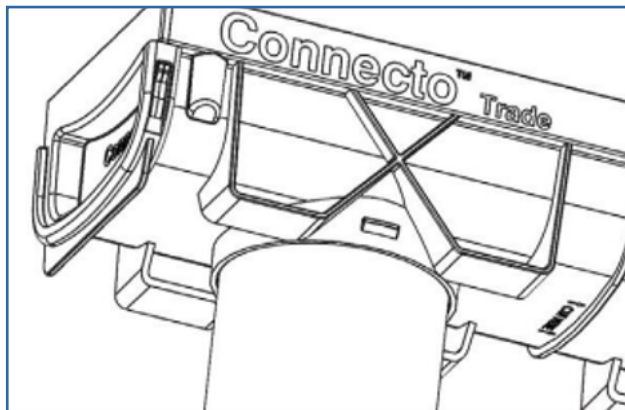
Be sure to retain the male nodules during cutting, this will allow you to use the channel adaptors to connect other components without the need for silicone.

When fitting the outlet pipes standard PVC glue (solvent weld) can be used to ensure a good seal for both the end and bottom outlets, all outlets will accept 90mm or 100mm PVC pipe.

130mm channel



130mm channel OR 80mm channel



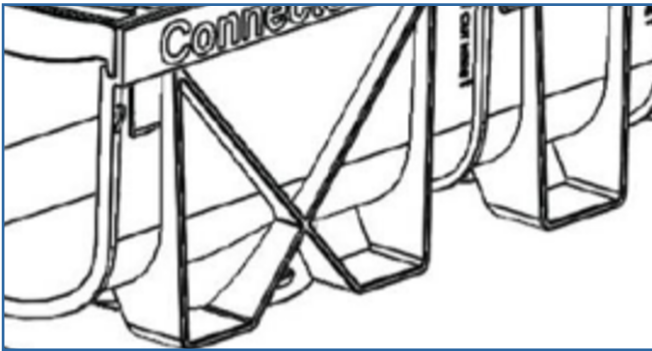
Before fitting a bottom outlet drill out using a 90mm hole saw, clip the bottom outlet fitting onto the underside of the channel, the pipe and outlet can then be prepared with primer and glued into place. A leaf guard is available that can be installed above a bottom outlet (when used with the 130mm channel only).

#### Step 4 - Positioning and Installing the Channel

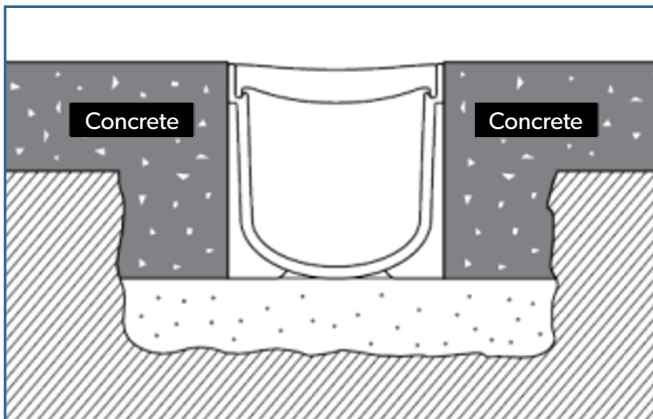
To assist the positioning of the channel small amounts of concrete can be used at the joints between the channel sections, these will help to prevent the channels from being pushed sideways when the main pour of concrete occurs. Leave these to dry enough so that they are firm, and the channel cannot be moved accidentally.

**IMPORTANT:** Before pouring concrete always ensure that the grate is in place and protected from concrete splash.

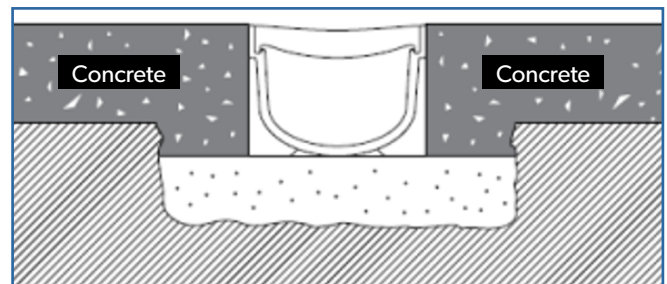
Dependent on the finished surface requirements pour the concrete around the channel base ensuring that the concrete enters the open feet of the channel to prevent floatation if the channel has not been pre-set with concrete pads/haunches.



130mm channel



80mm channel



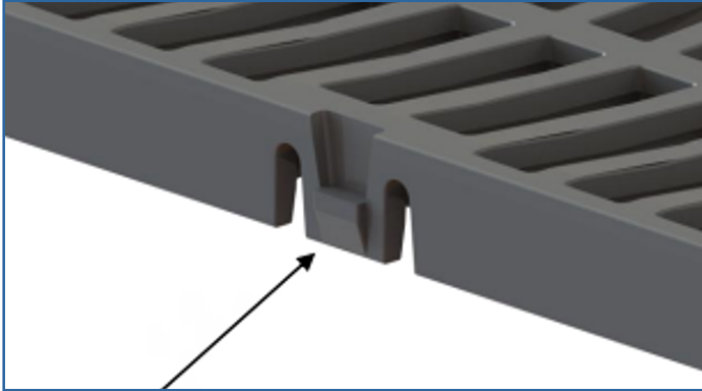
The finished surface must be 3 – 5mm above the edge of the channel and grate to allow correct flow into the channel. Allow the correct amount of time for the concrete to set before allowing traffic to drive over the channel (approximately 3 days). If the finished surface is required to be tarmac, it is advised that a coldmix asphalt be used up to the edges of the channel to prevent damage. Ensure the coldmix asphalt is well compacted to ensure that it can withstand the weight of a car passing over the channel.

#### Trafficable Areas

To ensure that the channel is able to accept the weight of a car always ensure that the channel is set in a base of concrete to prevent the channel from 'sinking', Connecto Trade® grates have all been tested to ensure they can withstand a 5 tonne vehicle (Tare weight).

## Maintenance

Removing Grates for Maintenance - To remove the grates for cleaning and maintenance a flat blade screwdriver will be required, the release catch built into the side of the grate is designed so that the grate flexes away from the channel for easy removal. On each 1m length of channel there are 6 slots, each of these must be released to allow the grate to be freed.



Insert the flat blade screwdriver and push the locking tag inwards to release the locking tag. Do not pull the grate out of the channel without first releasing the locking tags as above. When inserting the grate back into the channel push down firmly over each locking tag until you hear it click into place.

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### Importer/Distributor

#### Marley New Zealand Limited

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- › 0800 627 539
- › [info@marley.co.nz](mailto:info@marley.co.nz)
- › [www.marley.co.nz](http://www.marley.co.nz)
- › NZBN: 9429038863431

### Manufacturer Plastic Components

- › **Philmac**
- › 47-59 Deeds Road, North Plympton, South Australia 5037, Aus.
- › 1800 755 899
- › [philmac@philmac.com.au](mailto:philmac@philmac.com.au)
- › [www.philmac.com.au](http://www.philmac.com.au)

### Manufacturer Metallic Grates

- › **SYI Foundry**
- › Motianshi, No.51, Binhe West Road, Taiyuan, Shanxi, China 030027
- › 0086 351 2027764
- › [www.syifoundry.com](http://www.syifoundry.com)

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### Limitations on Use

Connecto Trade is not suitable as a Level Threshold Drain.

Connecto Trade 80 is designed as a straight line drainage system only with bottom exits for 90 or 100mm DWV.

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### Warnings and/or Bans

Connecto Trade is not subject to warnings and/or bans to their installation or use from any council or local authority within New Zealand that Marley has been made aware of.