# DOWNSPO





# CITY SHEET METAL CO. LTD.

Gutters not only protect your home from needless water damage to the foundation, but also keep the inside of your home dry. The roof area collects large amounts of water, that is concentrated in a narrow strip around your home, affecting the foundation and walls.

## SELECTING GUTTER MATERIALS

ALUMINUM GUTTERS and downspouts are literally maintenance free for many years of dependable service. Unlike many plastic materials, aluminum is impervious to ultraviolet rays, heat, and does not dry out, crack or peel in extreme weather changes. Aluminum has the added advantage of being corrosion resistant, and is lighter in weight than galvanized or pre-painted steel. It is also easy to cut and bend when necessary, and presents a beautifully finished appearance to your home.

PRE-PAINTED STEEL GUTTERS and downspouts are also maintenance free for many years and will not crack or peel in extreme weather changes. It is a heavier material than aluminum and only comes in two colours.

GALVANIZED GUTTERS and downspouts provide and economical solution to protecting your home from water runoff. Galvanized gutter can be maintained to last many years through a program of normal maintenance, and is specially coated with zinc to withstand the weather.



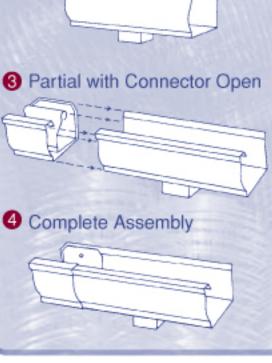
SCALE DRAWINGS SHOW ACCURATE COMPARISON OF WATER CARRYING CAPACITY OF 4" AND 5°TROUGHS



5''

#### QUICK-PIC **GUTTER PARTS** GUIDE Description Part Needed Amount Α K Style Gutter 10" & 20" ft. length Square Corrugated Rain Down Spout Available 10' length Outside Mitre С For outside turn in gutter Inside Mitre For inside turn in gutter K Slip Joint Connector Ε Used to connect joints of gutter K End Cap (Right) K End Cap (Left) Used at ends of gutter run K Centre Drop Used where downspout connects Rectangular Elbows Style A for diverting down spout in or out from wall Rectangular Elbow I Style B for diverting downspout to left or right Flip-Up Hinge for extension pipes Spike & Ferrule к to hold gutter to eave of roof Hidden Hanger L to hold gutter to eave of roof Clincher Band or Pipe Strap used to hold down spout securely to wall Ν Wire Leaf Strainer of gutter system 0 Silicone (tube) for sealing joints Hinged Gutter Guard to keep leaves out







- - white wedgewood blue

  - brown colonial red - cream - sandalwood
  - green slate grey - black - dover grey
- Two colours in steel: white
  - brown
- Three installation alternatives:
  - spike and ferrule hidden hangers
  - fascia brackets
- Quality Sealant: CSL (variety of colours)

# **INSTALLATION GUIDE**

## General Information

- a.) When installing eavestrough, you have to remember to slope the eavestrough slightly towards the outlet, so that the water will flow away freely.
- b.) Centre drops for downspouts are usually placed near the end of the trough or at the centre of a long run. One downspout will carry water away efficiently from 40 ft. of trough. (i.e.: One down spout per 40 ft. of trough) Do not install centre drops over doors, windows, or any other obstructions.

### 2.) Preparation:

Remove all old trough fittings. Replace fascia boards if necessary. Measuring Home For Gutters:

## 3.) On a piece of paper sketch outline and dimensions of roof. Determine where you want your

centre drops and footage of eavestrough you will need.

#### 4.) Assembly Assemble as much as possible while eavestrough is still on ground. Such as centre

drops, connectors and end caps. a.) Centre Drop/Eavestrough:

#### Is attached to the eavestrough with a slip joint connector. Spread the connector apart and spread silicone on the inside of the connector. Slip the centre drop in between the

connector. The inside of the connector slips under the lip of the centre drop. Now slide eavestrough in the other side of the connector. Press together and wipe excess silicone immediately. Then fold outside of connector neatly over the top lip of trough and centre drop. For extra holding power, apply sheet metal screws or pop rivets to the bottom of connector. Put a bead of silicone all along inside seams for extra protection against water leakage. b.) End Caps: Apply silicone in the groove along the inside of the end cap. Press onto eavestrough, making sure that it fits snugly. Wipe off excess silicone. With pair of pliers clamp the edges down

flush with the eavestrough. Seal endcaps with silicone along the inside seams.

5.)

If you need to go around an outside corner or inside corner, attach an outside mitre or an inside mitre whichever is applicable. Mitres are attached in the same manner as the centre drop. Methods of Installation

#### a.) Spike & Ferrule Method: With a chalk line, mark where the top edge of your trough should go. Make sure that you

slope it slightly towards the centre drop. If your centre drop is at the end, you would lower it by 1 inch at the end provided that your trough is at least 40 ft. long, less if shorter. If your centre drop is located in the centre, you have to slope both sides to the middle where the centre drop is located. b.) To determine where to place your spikes, you have to know where your roof studs are. To do this you lift the shingles and with a chalk, mark the location of each stud, usually every

- 24" or 16". In which case you would put your spikes every 24" or 32". c.) Drive spike through the front face of trough at the top, through ferrule (which is placed horizontally inside the trough) and through the back of the trough into the fascia board and stud. Do not drive spike in all the way, leave one inch extruded until such time as you have
- tested the slope of the trough with a level or with water and are satisfied that everything is done properly. Then you go along and drive the spikes in the rest of the way. Do not drive them in too far, only until the head fits snugly against the trough. This allows for trough expansion and avoids the possibility of the trough buckling. d.) Hidden Hanger Method: Place the hanger inside the trough. The hanger slips underneath the front lip and over the back edge of the trough. Space the hangers 24" apart. Follow

## instructions 5(b).

When you have done that, lift the trough to the desired position and screw to the fascia board with 1 1/2" screws. Do not screw in all the way until you have tested for slope, as described in 5(b). It is a good idea to use eavestrough flashing when using hangers.

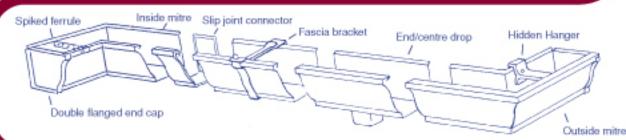
The flashing slips underneath the shingles and over the eavestrough to eliminate the gap between the trough and fascia. e.) Fascia Brackets: Fascia brackets are screwed onto the board every 24", before you put the trough up. The trough then fits inside the bracket, and the top of the bracket snaps into place over

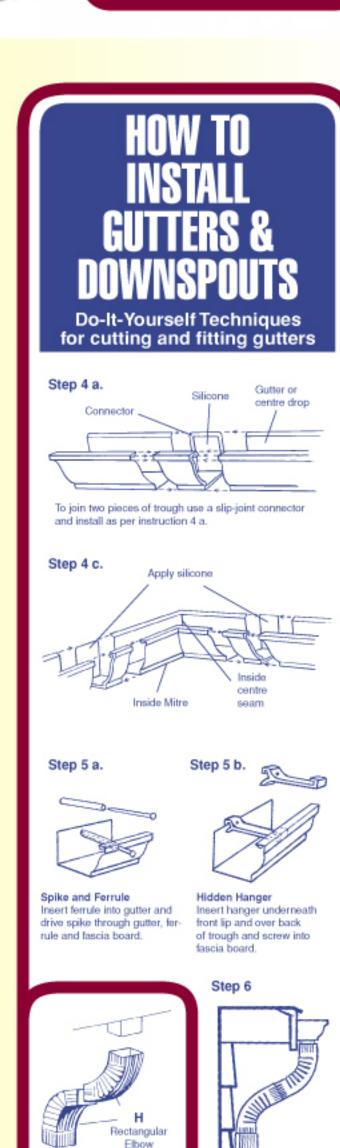
## the top of the eavestrough.

6.)

Downpipe If you want the downpipe to go straight down from the centre drop, attach an "A" elbow (which slips over outlet) with open end facing wall. Now attach another "A" elbow with open end facing down. You may need an extension in between the two elbows, depending on the distance between the outlet and the wall. Cut a piece of downpipe to the desired length and attach between the two elbows. If you have trouble fitting the extension into the elbow,

you can make the end smaller by applying a pair of needle nose pliers to each corner and giving it an inward twist. Attach downpipes to second elbow and strap to wall with pipe straps and screws. Attach elbow at the bottom end of pipe to lead water away from house. To lead the pipe along side the building, you will need a "B" elbow.





Style A

В

Rectangular

Corrugated Rain Down Sprout

Clincher Band

or Pipe Strap

Rectangular

Elbow Style B

Square Corrugate

Rain Down

Sprout

Style A or B

Elbow

Insert a piece of

Pipe strap

Bend around pipe and fasten to wall with screws

(2 straps per 10 ft. pipe)

downpipe if necessary.