

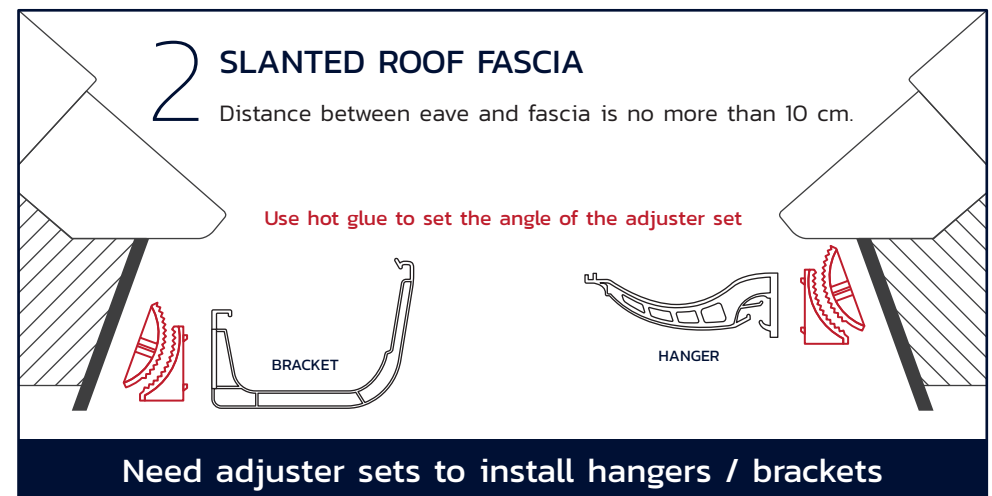
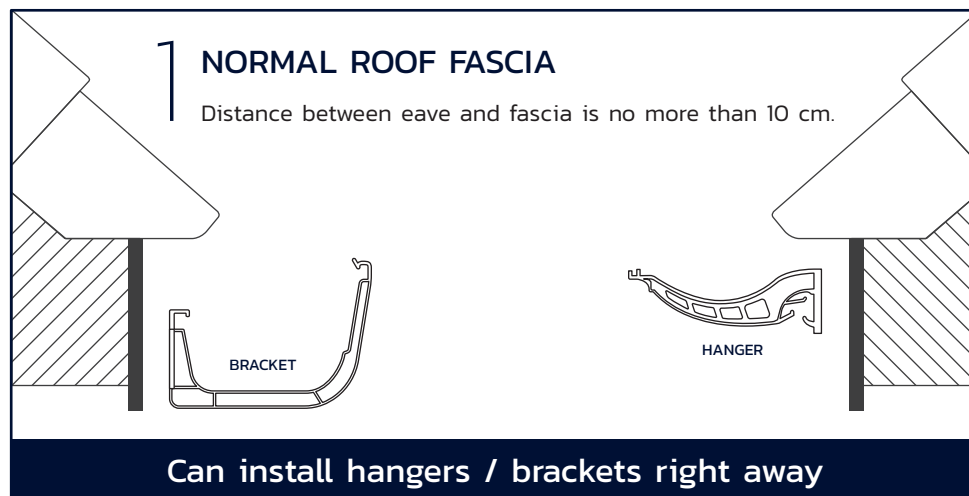
VG iR-uPVC RAIN GUTTER

VG INSTALLATION GUIDE

TOOLS & EQUIPMENT FOR VG RAIN GUTTER INSTALLATION

- Hammer Drill / Masonry Drill (8 mm.)
- Angle Grinder / Grinding Wheel and Cutting Disc
- Pan Head Self Tapping Screws (8 x 1½" and 8 x 2½")
- Silicone (for Rain Gutters), Solvent Cement (for Pipes), and Hot Glue (for Adjuster Sets)
- Plastic Anchor (for Concrete Wall Attaching)
- Tape Measure
- Spirit Level / Level Pipe (15-30 m.)
- Chalk Line
- Rubber Hammer
- Ladder or Scaffolding

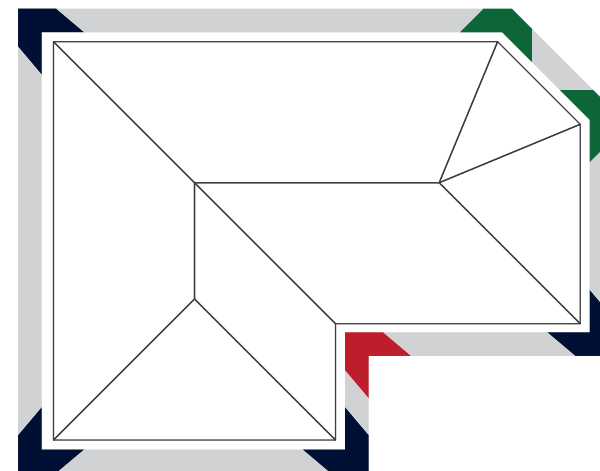
SITE EXAMINATION & CALCULATION OF MATERIAL REQUIREMENTS BEFORE THE INSTALLATION



1

VG RAIN GUTTERS, CONNECTORS, AND CORNERS

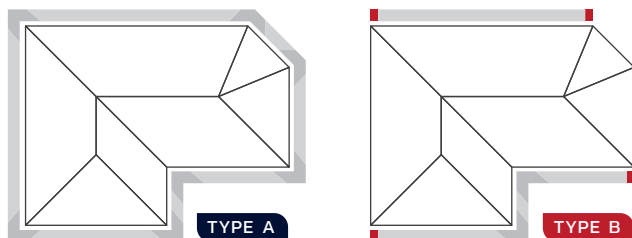
- To calculate the number of required rain gutters: Divide the total length of the roof by the length of a single VG rain gutter.
- To calculate the number of required connectors: Subtract one from the total number of VG rain gutters.
- To calculate the number of required corners: Count the number of 90° inside corners, 90° outside corners and 135° outside corners.



2

END CAPS

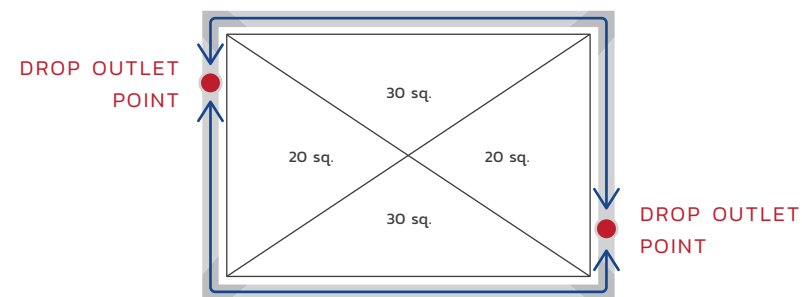
- **TYPE A** End caps are not required if the entire roof is installed with VG rain gutters.
- **TYPE B** End caps are required to close off the two ends of rain gutters if the roof is partially installed with VG rain gutters.



3

DROP OUTLETS

- Roof area is used in calculating the number of drop outlets needed. Every 50 sq. m of the roof needs at least 1 drop outlet.



4 PIPES AND PIPE CLAMPS

- To calculate the number of required pipes: Multiply the number of drop outlets with the height of the house in meters, then divide it by the length of a single VG pipe.
- To calculate the number of required pipe clamps: Divide the total length of pipes in meters by 1.5.

HOW TO CALCULATE PIPE LENGTH

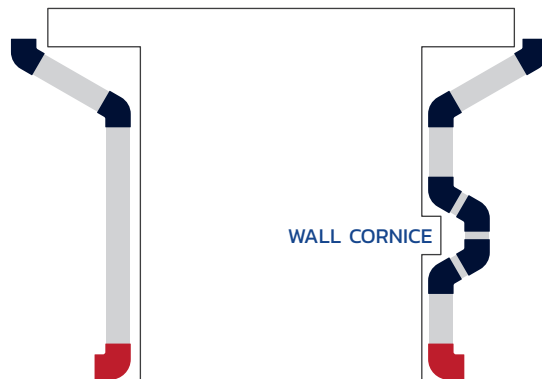
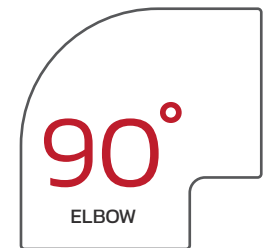
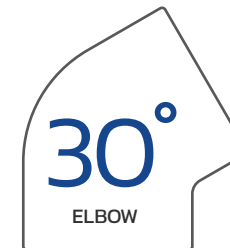
- First floor height: 4.5 m.
- Second floor: Add 3.5 m.

EXAMPLE OF PIPE LENGTH

- First floor roof = 4.5 m.
- Second floor roof = 8 m.
- Third floor roof = 11.5 m.

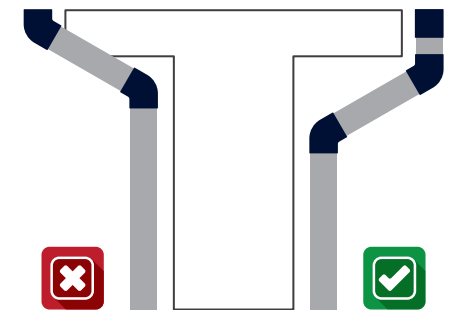
5 PIPE ELBOWS AND PIPE CONNECTORS

- To calculate the number of required pipe elbows: Generally one downspout spot needs one 90° pipe elbow and two 30° elbows, or three 30° elbows.
- Each wall cornice requires four extra 30° elbows.
- To calculate the number of required pipe couplings: Subtract the total number of pipes with one.



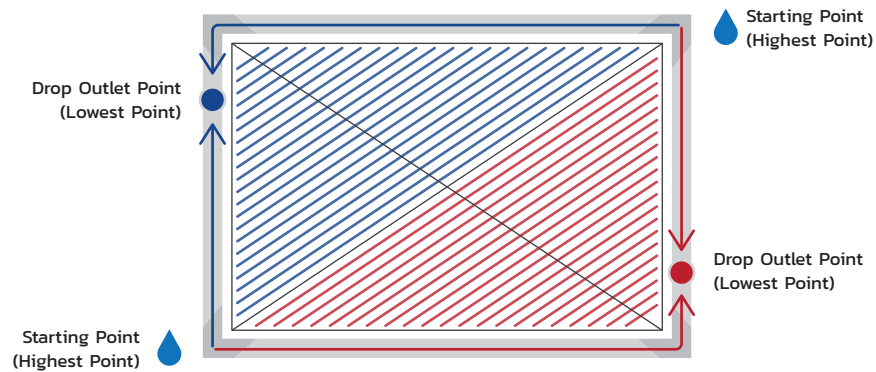
USE A PIPE CONNECTOR AS AN EXTENSION

In the case where 30° elbow can not be installed from the drop outlet because the fascia is longer than usual, a pipe coupling can be used as an extension before connecting with 30° elbow.



INSTALLATION STEPS

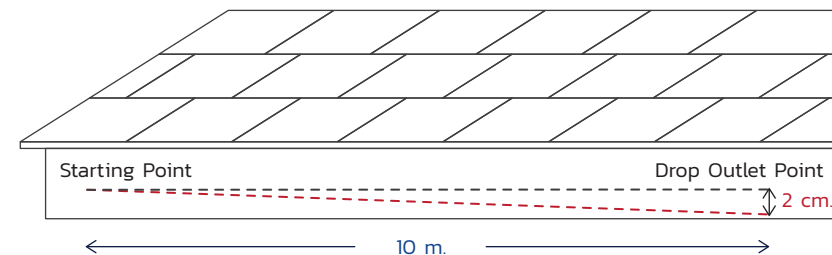
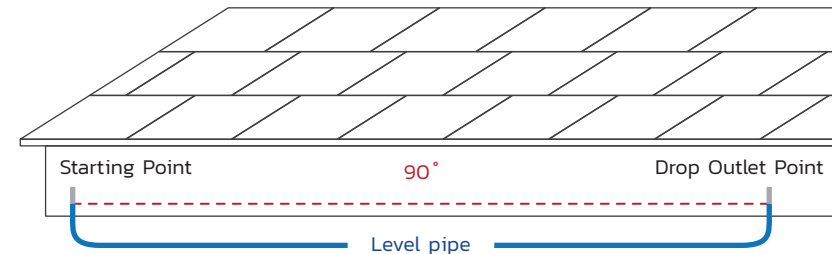
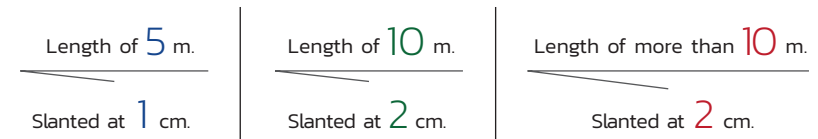
1 LOCATE DOWNSPOUT POINT AND STARTING POINT



Use ladder or scaffolding depending on the roof height.

2 LOCATE THE FIRST HANGER AT ONE END OF A ROOF SIDE. MAKE SURE IT IS NOT TOO HIGH OR TOO LOW ON THE FASCIA

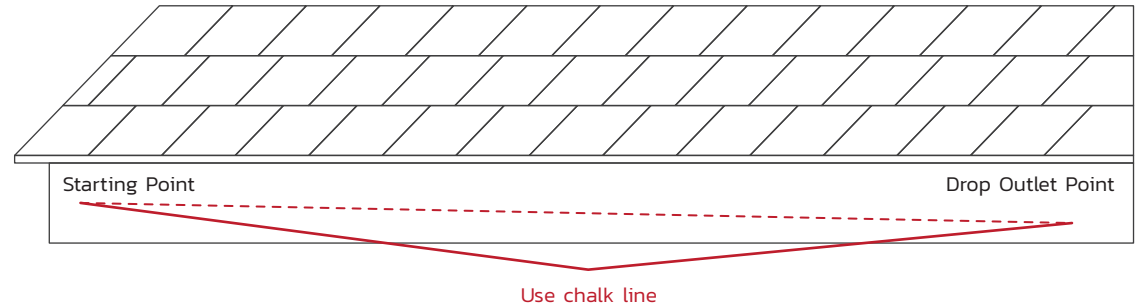
- Use spirit level or level pipe to set slope at zero first, then adjust the slope according to the roof length to increase water flow.
- The length of 10 m. should have a slope of no more than 2 cm.



3 USE CHALK LINE BEFORE INSTALLING HANGERS / BRACKETS

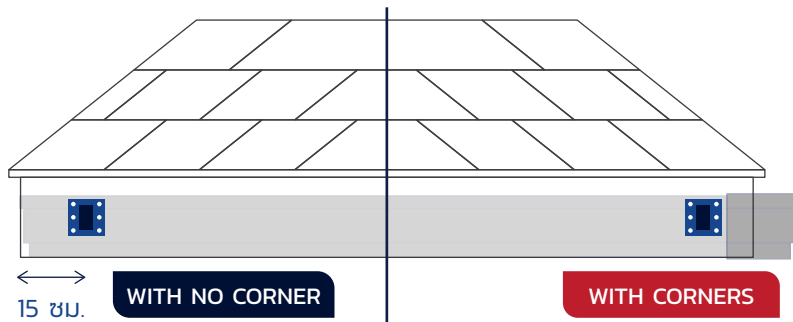
- Use chalk line to create a slope line from one end down towards another end where a drop outlet will be installed.
- Attach hangers or brackets along the slope line created by the chalk line.

The warranty will not apply to cases that did not measure and create the slope line during installation process. For instance, chalk line was not being used and hangers were not installed in accordance to the chalk line.



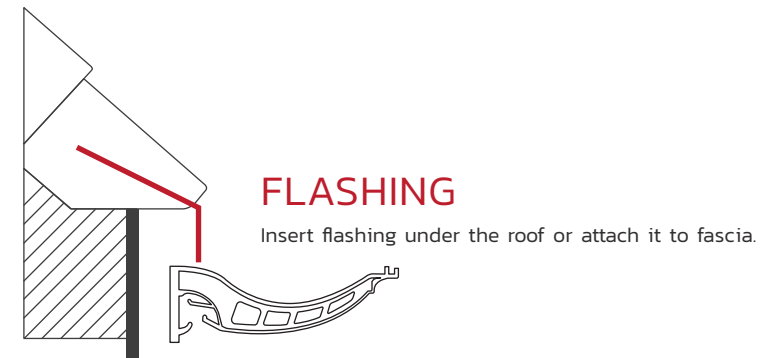
4 HANGERS / BRACKETS

- **WITH NO CORNER** Leave 15 cm. space for the first hanger / bracket.
- **WITH CORNERS** Install hangers as close as possible to each corner.



5 FLASHING

- Install flashing or use oil based paint to reduce water stains on the fascia.

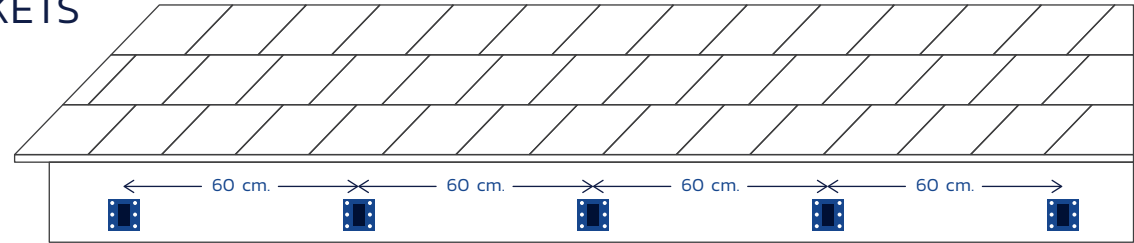


DISTANCE BETWEEN HANGERS / BRACKETS

6

- Install a hanger for at least every **60** centimeters.

The warranty will not apply if hangers were installed further than 60 centimeters.



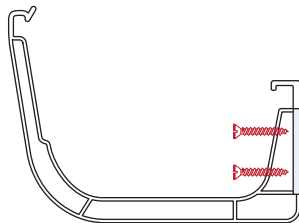
ATTACH HANGERS / BRACKETS USING SCREWS WHERE INDICATED

7

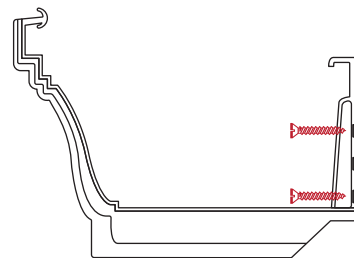
Pan head self tapping screws
8 x 1½ Inches
for normal fascia

Pan head self tapping screws
8 x 2½ Inches
for slanted fascia

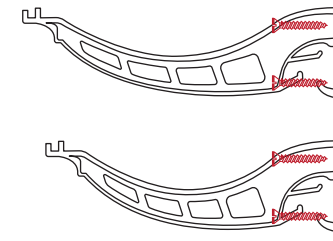
EZY BRACKET



FIRST R2 BRACKET



FIRST R2 AND PRIMO HANGER

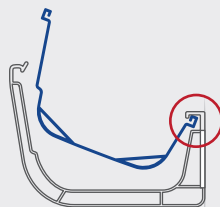


Hangers / Brackets can not be interchangeably used across series.

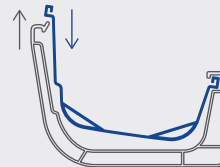


HOW TO INSERT RAIN GUTTERS ON HANGERS / BRACKETS

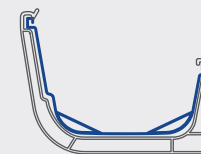
EZY BRACKET



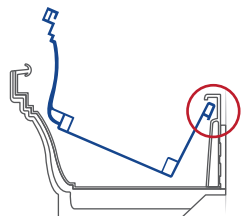
Insert VG rain gutter using its lower end inside the bracket lock



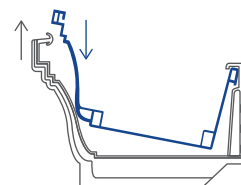
Push the head of the bracket upward / Push VG rain gutter downward



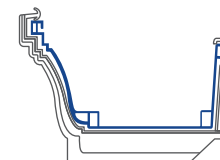
FIRST R2 BRACKET



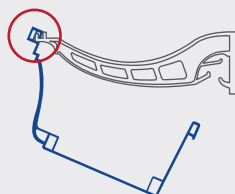
Insert VG rain gutter using its lower end inside the bracket lock



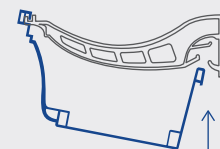
Push the head of the bracket upward / Push VG rain gutter downward



FIRST R2 HANGER



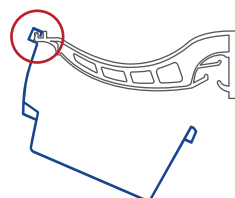
Insert VG rain gutter using its higher end on the hanger lock



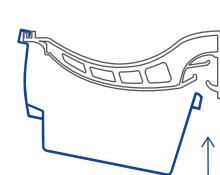
Push the rain gutter upward



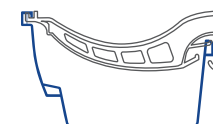
PRIMO HANGER



Insert VG rain gutter using its higher end on the hanger lock

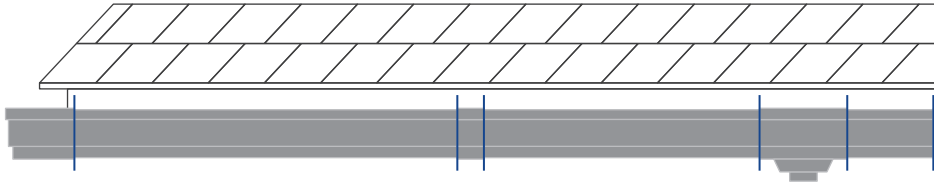


Push the rain gutter upward

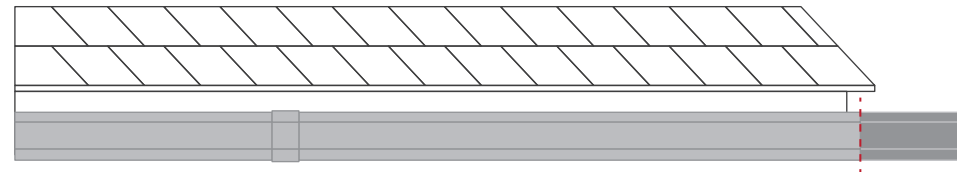


ASSEMBLE VG RAIN GUTTER AND ITS ACCESSORIES

8



Make sure there are no gaps between each joint.
Rubber hammer can be used to make sure that each joint is fully adjoined.

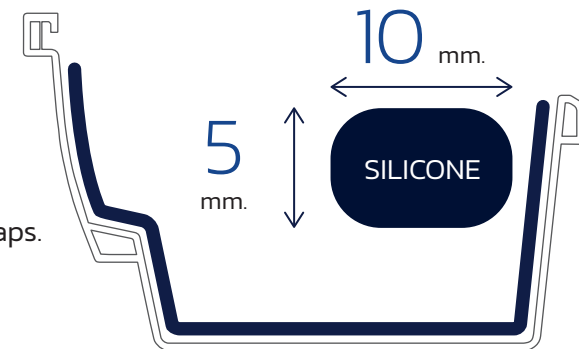


Use angle grinder to cut VG rain gutter and make it fits with the roof length if needed.

USE SILICONE SEALANT ON EVERY JOINT

9

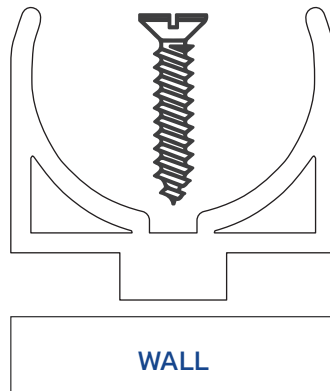
- Silicone sealant is required for every type of joint: connectors, drop outlets, corners and end caps.
- Sealing areas need to be at least 5 mm. thick and 10 mm. in width to prevent water leakage.



10

PIPE CLAMPS

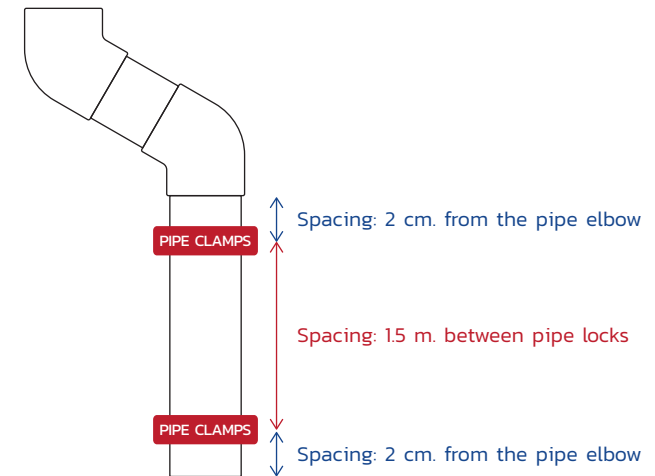
- Drill a hole using masonry drill (8 mm.). Insert a plastic anchor and attach the pipe lock to the drilled hole with a self tapping screw.
- Install a pipe lock for every 1.5-2 m.



11

PIPES AND PIPE ACCESSORIES

- Put pipes and pipe accessories together.
- Assemble pipes with pipe accessories by applying solvent cement between joints.



12

TEST WATER LEAKAGE

- Water leakage can be tested after letting silicone sealant dry for 3 hours.
- Silicone sealant is completely dried after 24 hours.

