



WILLIAMS

Rain Gutters
Collection



upvc RAIN GUTTERS & FITTINGS





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About us

OUR COMPANY

Established in 2001, **MIDDY** is a fast-growing manufacturer of rain gutter system products in Malaysia. We are committed to delivering exceptional products and services to exceed our customers' expectations, both locally and globally.



♦ COTTAGE SITE, DENGKIL

“ Responsible Services, Consistent Quality
Reasonable Prices, Continuous Improvements. ”

BRAND MISSION

WHAT'S RAIN GUTTER

MIDDY Rain Gutter System

- ◆ Leads rainwater from roof to the ground level
- ◆ Prevents water damage to the roof and building



MIDDY

YOUR RAIN GUTTER
SPECIALIST

efficient rain
gutters can enhance
your home



◆ PETALING JAYA

WHY CHOOSE **MIDDY**?

- ◆ Improvement and innovation
- ◆ Focusing in user-friendly design
- ◆ Quality Control - Original uPVC raw material
- ◆ Site visit & professional consultation
- ◆ On-time local deliveries & export services

ABOUT OUR **MIDDY** uPVC RAIN GUTTER



ENHANCE
QUALITY



LONGEVITY
& DURABILITY



COST-
EFFECTIVE



ECO-
FRIENDLY



WEATHER
RESISTANCE



RAIN
HARVEST
SYSTEM



“ We create a more
aesthetic home ”

HONORS AND QUALIFICATIONS



No Lesen : PC000047
Licence No :

LESEN PENSIJILAN BARANGAN Product Certification Licence



SIRIM QAS International Sdn. Bhd. dengan ini menganugerahkan kepada
SIRIM QAS International Sdn. Bhd. hereby grants to

MIDDY INDUSTRIES SDN.BHD.
NO.3, JALAN KPK 1/7,
KUNDANG JAYA INDUSTRIAL
48020 RAWANG
SELANGOR, MALAYSIA

Lesen untuk menggunakan Tanda Pensijilan di atas barangan
a licence to use the Certification Mark on

UNPLASTICIZED POLYVINYL CHLORIDE (PVC-U) EAVES GUTTER

Please refer to detail in the SCHEDULE

sebagai mematuhi keperluan
as complying with

BS EN 607 : 2004

Nur Fadhliah binti Muhammad

Nur Fadhliah binti Muhammad
Ketua Pegawai Eksekutif
Chief Executive Officer
SIRIM QAS International Sdn. Bhd.



SIRIM QAS International Sdn. Bhd.
(No. Syarikat: 199601037981(410334-X))

1. Pendaftar: Dato' Hendar
Sekkyen Z, Pdt Surat 7035
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MALAYSIA

Tel : 603-5544 6000
Email : cs@vcoqas@sirim.my

<https://www.sirim-qas.com.my>
<https://www.malaysiacertified.com.my>

Tarikh Mula Pensijilan : 06 January 2012

Certified Since

Sah Sehingga : 06 January 2026

Valid Until

Tarikh Dikeluarkan : 26 November 2024

Issue Date

No Siri : 105133

Serial No

Lesen ini dianugerahkan terbalik kepada syarikat-operat Pensijilan Pensijilan Barangan SIRIM QAS International Sdn. Bhd.
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No Lesen : PC000047
Licence No :

SCHEDULE

MIDDY INDUSTRIES SDN.BHD.



Trade Mark : MIDDY
Model : G100
Type : GREY, BROWN, WHITE, GREEN, BLUE
Size : OPENING WIDTH: 170mm; LENGTH : 2.9m, 4m, 5.8m and 6m

Trade Mark : MIDDY
Model : G380
Type : GREY, BROWN, WHITE, GREEN, BLUE
Size : OPENING WIDTH: 205mm; LENGTH : 2.9m, 4m, 5.8m and 6m

End of page

SIRIM QAS International Sdn. Bhd.
(No. Syarikat: 199601037981(410334-X))

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<https://www.malaysiacertified.com.my>

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Tarikh Dikeluarkan : 26 November 2024

Issue Date

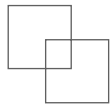
No Siri : 105133

Serial No

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You may contact us for the further assistance.

HONORS



a classic box gutter

G100 SERIES

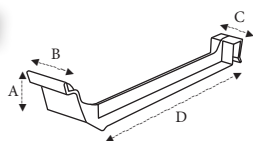
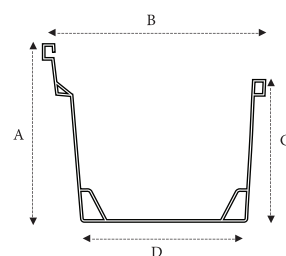
Classic Box UPVC gutter combines classic aesthetics with large capacity, customer-friendly price, durability, strong construction and corrosion resistance. It is a reliable and durable choice for building drainage systems.



INDUSTRIAL DESIGN NO.MY01-00372

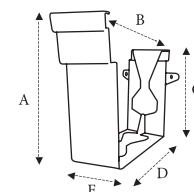
G100 RAIN GUTTER

DIMENSIONS (mm)				LENGTH (m)
A	B	C	D	
150	190	120	140	4 / 5.8



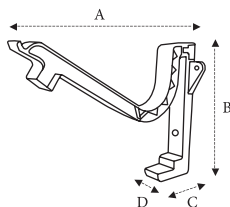
GUTTER STRAP

DIMENSIONS (mm)			
A	B	C	D
41	30	20	190



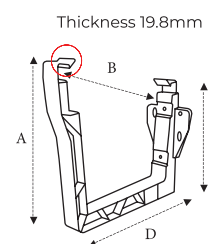
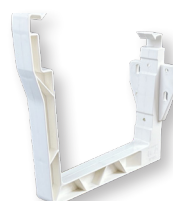
SOCKET

DIMENSIONS (mm)				
A	B	C	D	E
158	190	125	146	59



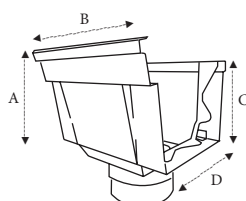
INTERNAL BRACKET

DIMENSIONS (mm)			
A	B	C	D
204	147	50	20



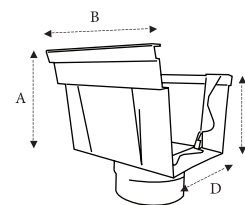
EASY FAST BRACKET

DIMENSIONS (mm)			
A	B	C	D
175	195	150	180



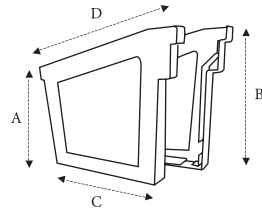
OUTLET FIN 3" AND 4"

DIMENSIONS (mm)				OUTLET SIZE	
A	B	C	D	3"	4"
155	220	125	145	80/ 82	100/ 110



OUTLET FIN V2 3" AND 4"

DIMENSIONS (mm)				OUTLET SIZE	
A	B	C	D	3"	4"
160	185	125	145	80/ 82	100/ 110



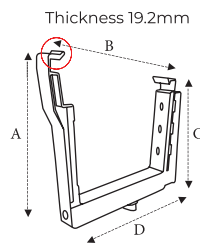
END CAP (RIGHT & LEFT)

DIMENSIONS (mm)			
A	B	C	D
125	155	145	195



What is **GUTTER STRAP** ?

Prevention, Protection, Maintenance
To prevent & protect the shape of gutters from deformation and maintain the qualities of uPVC Rain Gutters.



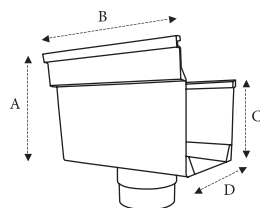
ADJUSTABLE BRACKET

DIMENSIONS (mm)			
A	B	C	D
185	205	153	176



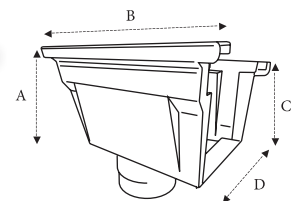
What is **ORIGINAL OUTLET** ?

Original Outlet is recommended as it allows spacing for uPVC Rain Gutter to move along during thermal expansion. No silicone, solvent cement or screw needed simplifies the installation process.



OUTLET FAB

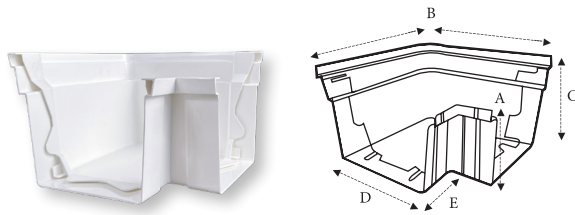
DIMENSIONS (mm)				OUTLET SIZE	
A	B	C	D	3"	4"
155	207	120	140	80/ 82	100/ 110



ORIGINAL OUTLET 4"

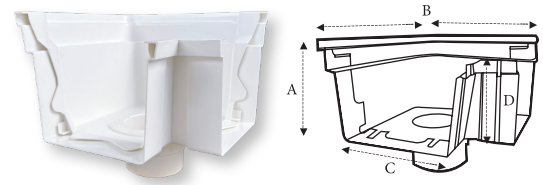
DIMENSIONS (mm)				OUTLET SIZE	
A	B	C	D	3"	4"
160	280	127	155	80/ 82	100/ 110

CORNER SERIES ▼



CORNER OUT

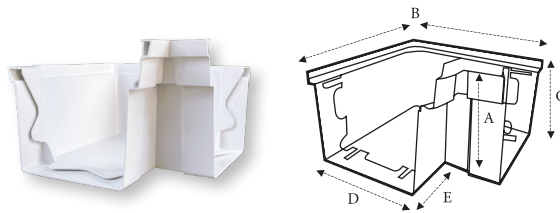
DIMENSIONS (mm)				
A	B	C	D	E
126	240	156	146	61



CORNER OUT C/W OUTLET 3" AND 4"

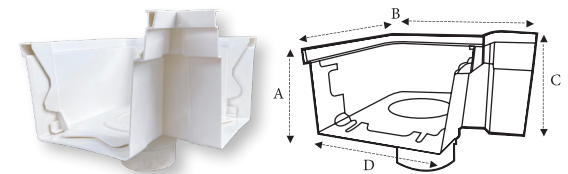
DIMENSIONS (mm)				OUTLET SIZE	
A	B	C	D	3"	4"
157	240	146	126	80/ 82	100/ 110

CORNER SERIES ▼



CORNER IN

DIMENSIONS (mm)				
A	B	C	D	E
157	235	126	146	78

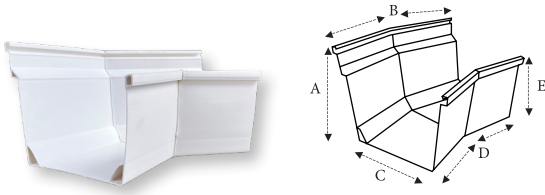


CORNER IN C/W OUTLET 3" AND 4"

DIMENSIONS (mm)				OUTLET SIZE	
A	B	C	D	3"	4"
126	235	157	146	80/ 82	100/ 110

“ **MIDDY** Rain Gutter
Protect your home ”

← MASJID AL-MUJAHIDEEN,
PETALING JAYA



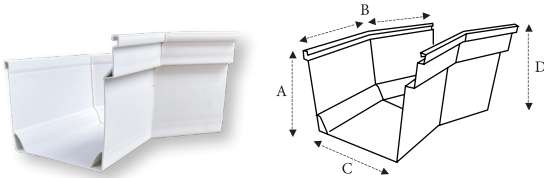
CORNER OUT 45°

DIMENSIONS (mm)				
A	B	C	D	E
155	440	145	320	120



What is **CORNER OUT** ?

Corner Out enables changes in direction at outward turns in gutter system.



CORNER IN 45°

DIMENSIONS (mm)			
A	B	C	D
120	440	145	155



What is **CORNER IN** ?

Corner In is designed to connect uPVC Rain Gutter at angle turning inward.

DESA VILLA MERAB, KAJANG



White
Trendy Design ▶

♦ MASJID AL-MUJAHIDEEN, PETALING JAYA



a classic box

Grey
◀ **Classic Design**

♦ COTTAGE SITE, DENGKIL

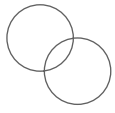


rain gutter

Brown
Elegant Design ▶

♦ RESIDENTIAL AREA, PETALING JAYA





a modern wave gutter

G380 SERIES

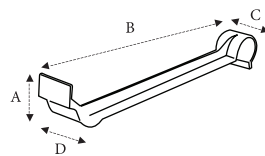
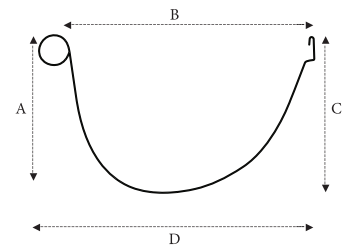
The innovation of minimalist gutter design matches different architectural preferences with efficient water flow, the ability to remove debris and low maintenance with long-lasting performance.



INDUSTRIAL DESIGN NO.MY01-00919-0103

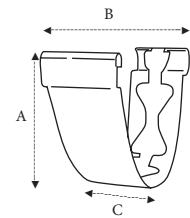
G380 RAIN GUTTER

DIMENSIONS (mm)				LENGTH (m)
A	B	C	D	
120	205	120	180	4 / 5.8



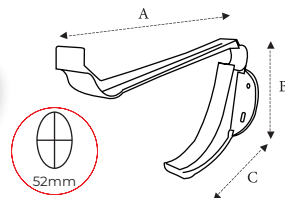
GUTTER STRAP

DIMENSIONS (mm)			
A	B	C	D
36	210	20	29



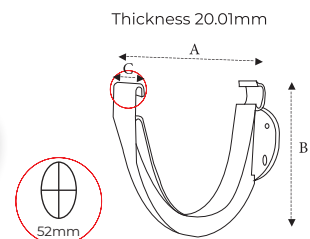
SOCKET

DIMENSIONS (mm)		
A	B	C
125	215	60



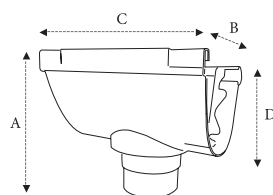
INTERNAL BRACKET

DIMENSIONS (mm)		
A	B	C
220	135	105



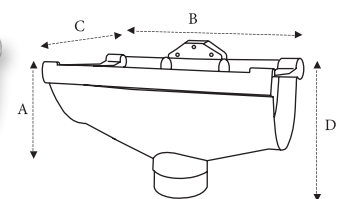
BRACKET

DIMENSIONS (mm)		
A	B	C
223	145	20



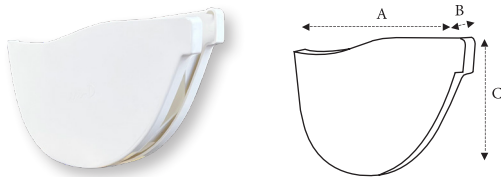
OUTLET FIN 3" AND 4"

DIMENSIONS (mm)				OUTLET SIZE	
A	B	C	D	3"	4"
190	210	210	125	80/ 82	100/ 110



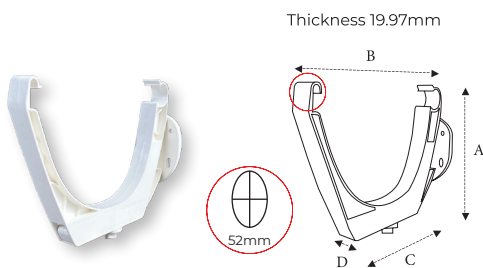
ORIGINAL OUTLET 3" AND 4"

DIMENSIONS (mm)				OUTLET SIZE	
A	B	C	D	3"	4"
125	298	215	210	80/ 82	100/ 110



END CAP (RIGHT & LEFT)

DIMENSIONS (mm)			
A	B	C	
190	12	115	



ADJUSTABLE BRACKET

DIMENSIONS (mm)				
A	B	C	D	
150	225	118	20	

What is **GUTTER STRAP** ?



Prolong, Preserve and Support

To support and preserve the shape of gutters and prolong the life of the gutter system.

What is **BRACKET** ?

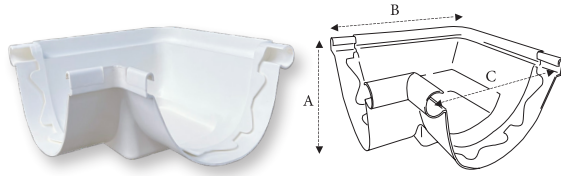


Bracket is essential to provide support for the gutter system. Choosing the correct type of bracket is important for different situations.

What is **ORIGINAL OUTLET** ?

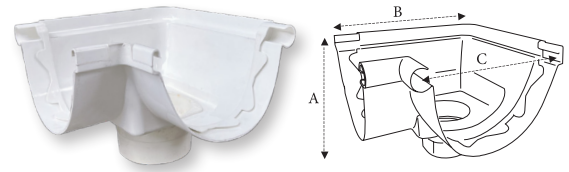


Original Outlet allows flexibility for the gutter's movement during thermal expansion. Original Outlet, with no silicone, solvent cement or screw required, reduces the risk of damage.



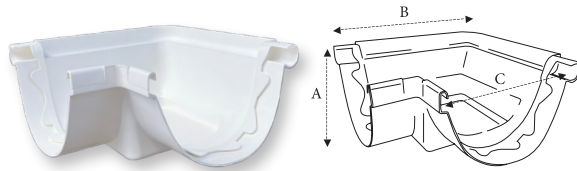
CORNER OUT

DIMENSIONS (mm)		
A	B	C
125	253	210



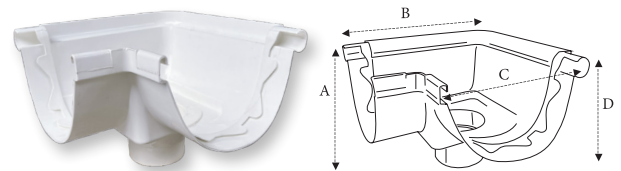
CORNER OUT C/W 3" AND 4"

DIMENSIONS (mm)			OUTLET SIZE	
A	B	C	3"	4"
185	253	210	80/ 82	100/110



CORNER IN

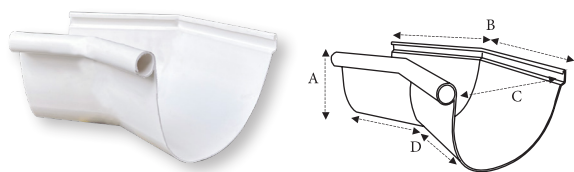
DIMENSIONS (mm)		
A	B	C
130	265	210



CORNER IN C/W OUTLET 3" AND 4"

DIMENSIONS (mm)			OUTLET SIZE	
A	B	C	3"	4"
185	265	210	80/ 82	100/110





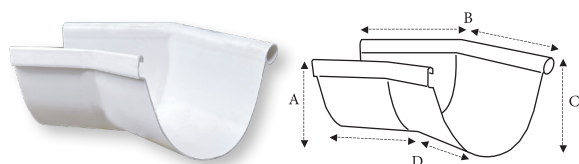
CORNER OUT 45°

DIMENSIONS (mm)			
A	B	C	D
120	345	155	210



What is **CORNER OUT** ?

Corner Out is used to gutters to turn outward away from building.



CORNER IN 45°

DIMENSIONS (mm)			
A	B	C	D
120	350	120	208



What is **CORNER IN** ?

Corner In is designed to smoothly transition the gutters around the inward-facing corner.



G380

White
Trendy Design ▶
♦ SMK DATO'S SAGO



a modern wave
rain gutter

Brown
Elegant Design ▶
♦ JKR, KUALA SELANGOR



TECHNICAL GUIDELINE

Description G100 & G380

1. End Cap (Right)
2. Gutter
3. Internal Bracket
4. Original Outlet
5. Gutter Straps
6. Adjustable Bracket
7. Outlet Fin
8. External Bracket
9. Corner Out with Outlet
10. Corner In
11. Socket
12. Corner 45°



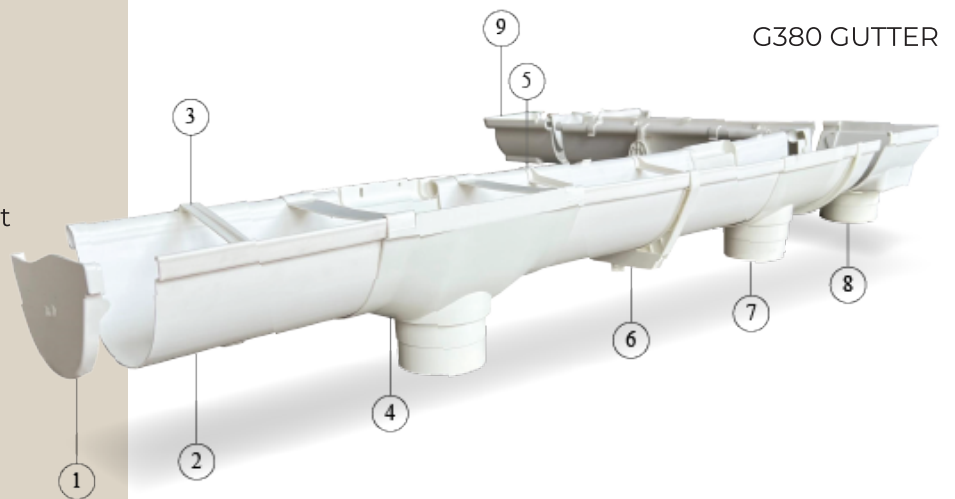
NOTICE :

2.9 meter MIDDY Rain Gutter System :

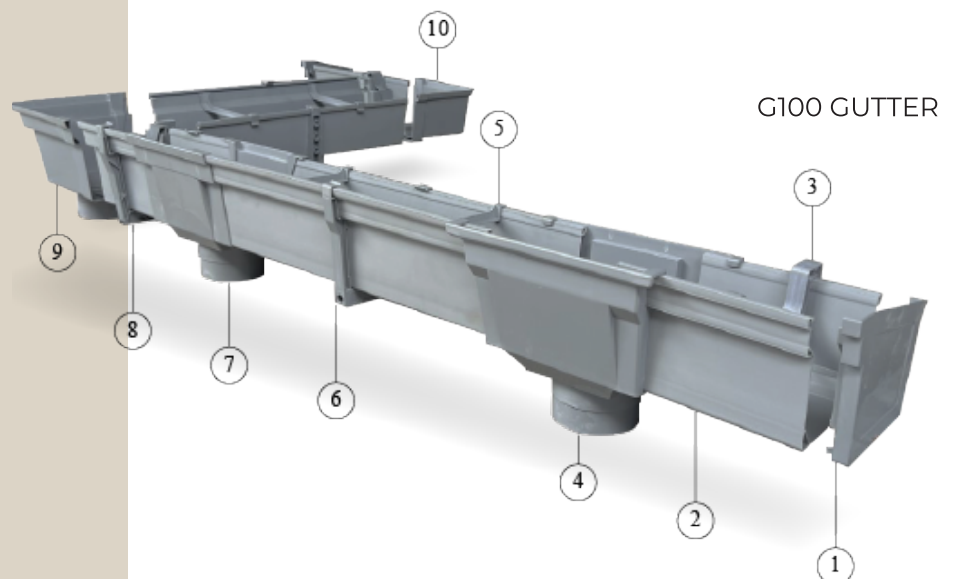
DIY - Friendly installation.

5.8 meter MIDDY Rain Gutter System :

Specialist installation recommended.



G380 GUTTER



G100 GUTTER

PROJECT SPECIFICATIONS

For better maintenance against thermal expansion and contraction,

- ◆ Install brackets along an even fascia board.
- ◆ Every 5.8 meters of uPVC Rain Gutter should be installed with one piece of Original Outlet
- ◆ Both Gutter Straps & Brackets must be installed at 0.6 meters (2feet) intervals.



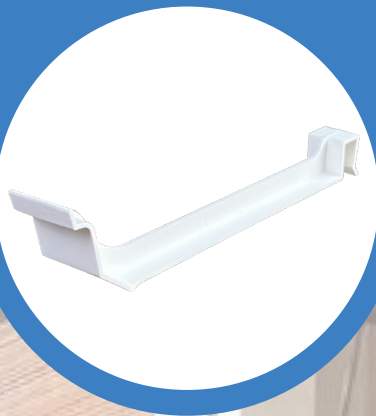
ORIGINAL OUTLET

- ◆ Proper equipment for installation against thermal expansion and contraction.
- ◆ Easy for installation, no silicone, solvent cement or screw required.



GUTTER STRAP

- ◆ The first manufacturer invented Gutter Strap.
- ◆ To protect the shape of uPVC Rain Gutter from deformation.
- ◆ To strengthen the qualities of uPVC Rain Gutter



INTERNAL BRACKET

- ◆ A hidden and modern solution
- ◆ To protect the shape of uPVC Rain Gutter from deformation.



G100 SERIES
WITH HIDDEN --->
INTERNAL BRACKET





ESSENTIAL GUIDE

A gutter system is required to drain the heavy rain which lasts at least two minutes. Intense rainfall can occur in Malaysia. The gutter installer must determine if the gutter system can effectively collect rainwater from the roof size.

The calculation below shows how to determine the volume of rainwater running off a roof.

THE CALCULATION

To calculate the volume of rainwater runoff from a roof, multiply the rainfall intensity by the roof area.

A

Rainfall intensity (m/min)
Use 0.00167 meters per minutes.
This is according to the average rainfall recorded in a day during heavy rainfall season.

X

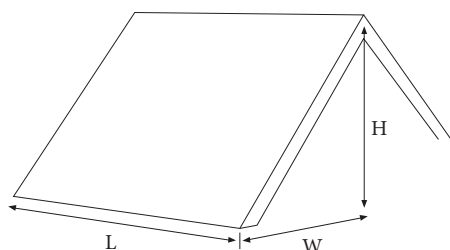
B

The effective roof area (m²)

Volume of rainwater runoff a roof = **A x B**

THE EFFECTIVE ROOF AREA

The Effective Roof Area (ERA) can be determined by using the following calculations:



W = eaves under the ridge

H = vertical height from eaves to ridge

L = length of roof section

1

(Width + Height /2) x Length = Area (W + H/2) x L = A (m²)

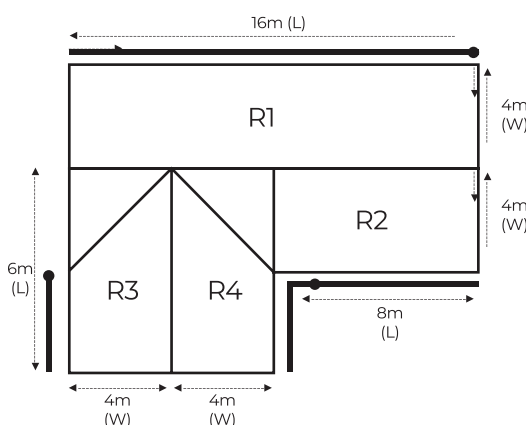
$$R1 = (4m + 2.3m/2) \times 16m = 82.4m^2$$

$$R2 = (4m + 2.3m/2) \times 8m = 41.2m^2$$

$$R3 = (4m + 2.3m/2) \times 6m = 30.9m^2$$

$$R4 = (4m + 2.3m/2) \times 6m = 30.9m^2$$

Assume H=2.3m, Roof Pitch = 30° :



Roof Pitch	Pitch Factor
4.8°	1.003
9.5°	1.014
15°	1.134
17.5°	1.158
20°	1.182
22.5°	1.207
25°	1.233

2

Length x Width x Pitch Factor (refer to table) = Area

$$L \times W \times \text{Pitch} = A (m^2)$$

$$R1 = 16m \times 4m \times 1.288 = 82.4m^2$$

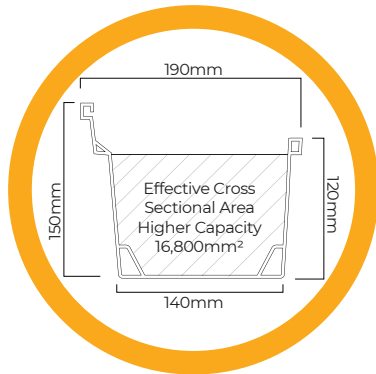
$$R2 = 8m \times 4m \times 1.288 = 41.2m^2$$

$$R3 = 6m \times 4m \times 1.288 = 30.9m^2$$

$$R4 = 6m \times 4m \times 1.288 = 30.9m^2$$

Roof Pitch	Pitch Factor
27°	1.260
30°	1.288
32.5°	1.319
35°	1.350
37.5°	1.384
40°	1.419
42.5°	1.459

Assuming the figure stated for R1, The volume of rainwater runoff = **A x B**
 $R1 = 0.00167\text{m} \times 82.4\text{m}^2 = 0.1376\text{m}^3 / \text{min}$



a Classic box gutter

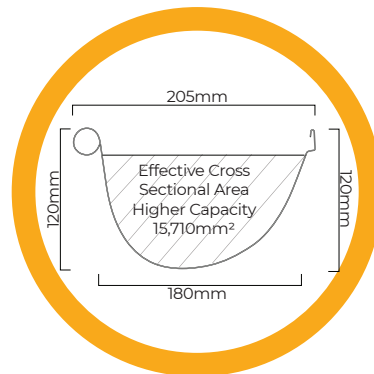
Gutter Profile G100

Assuming that slope = $\frac{1}{4}$ "
 (According to Manning equation)
 G100 Gutter flow rate = $0.636\text{m}^3 / \text{min}$

a Modern wave gutter

Gutter Profile G380

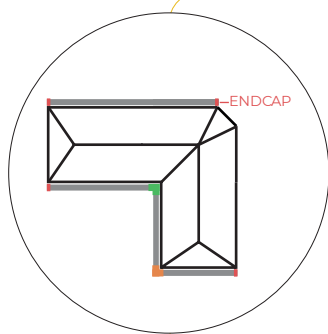
Assuming that slope = $\frac{1}{4}$ "
 (According to Manning equation)
 G380 Gutter flow rate = $0.449\text{m}^3 / \text{min}$



ROOF AREA COVERAGE GUIDE

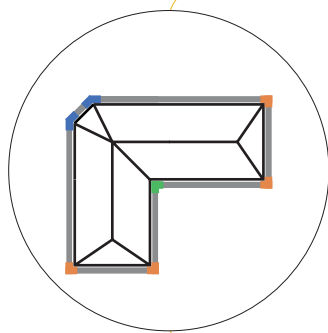


You may choose any of our gutters (which matches the above requirement) as your choice of gutter.



END CAP (L& R)

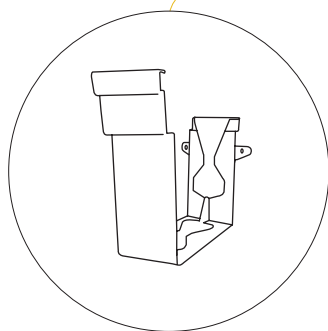
End Cap is required to be placed at the end of Rain Gutters.
If the entire roof is surrounded by Rain Gutters, no end cap is required.



CORNER

Determine the angle of corner and choose the corner correctly with specific degree.

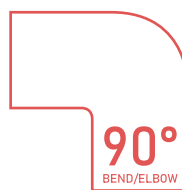
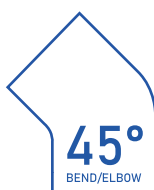
90° Corner Out
 90° Corner In
 45° Corner Out



SOCKET

Socket is only required as a connector under a certain situation.

DOWNPIPE & FITTINGS



DRAIN-DOWNPIPE

measure the entire height of the house, dividing by 5.8 meters to determine the number of pipe needed.

DOWNPIPE SOCKET

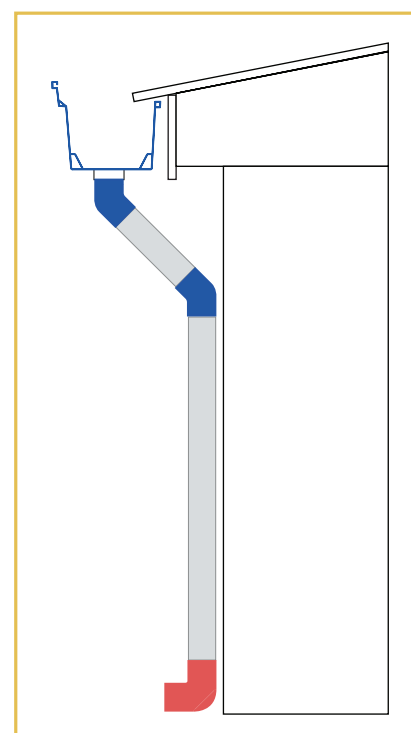
the end of each pipe requires a socket as connector.

ELBOW / BEND

generally each outlet requires two 45° elbows to connect outlet to downpipe, and also one 90° elbow at the bottom of the downpipe to the drain.

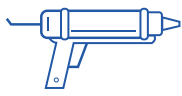
PIPE CLIP

pipe clip could secure and guide the downpipe to the wall



INSTALLATION GUIDE

Tool & Equipment for uPVC Rain Gutter system installation.



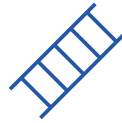
Silicone



Rubber Hammer



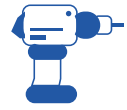
Tape Measure



Ladder



Safety Clothing



Impact Drill



Grinder



Screw



Pipe Level



Spirit Level



String Line



Set Square



Solvent Cement

SITE ANALYSIS & CALCULATION

Proper instruction to install uPVC Rain Gutter system

Normal Fascia Board

Normal Fascia Board

Install Easy Fast Bracket/ Internal Bracket / Bracket

Normal Fascia Board

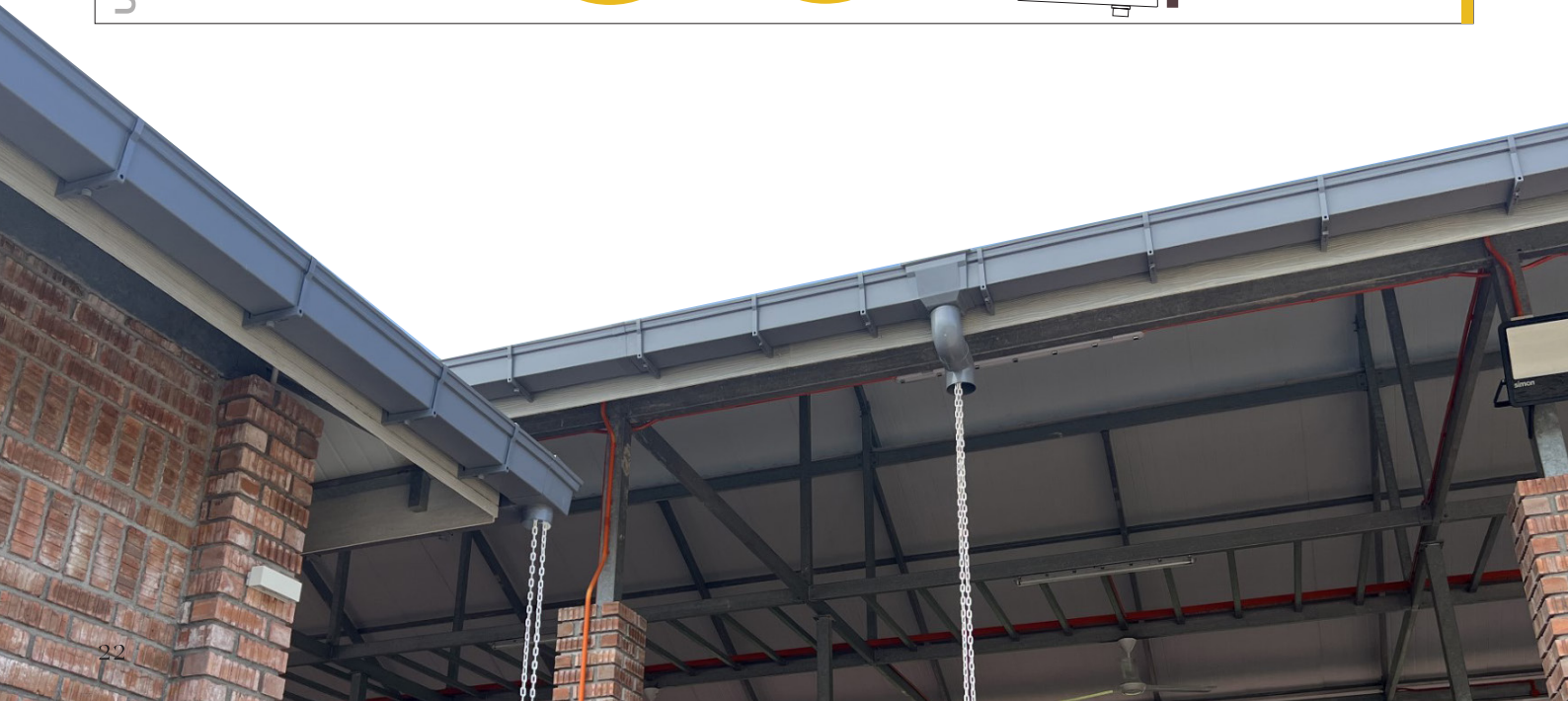
Uneven Fascia Board

Uneven Fascia Board

Install Adjustable Bracket

Uneven Fascia Board

Use string line to install every adjustable bracket in same position then tighten with screw.



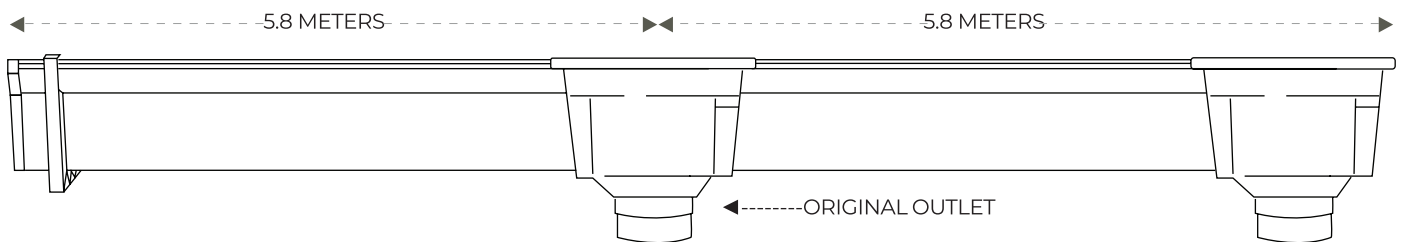


RAIN GUTTER

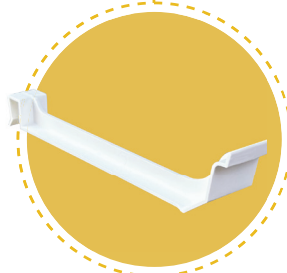
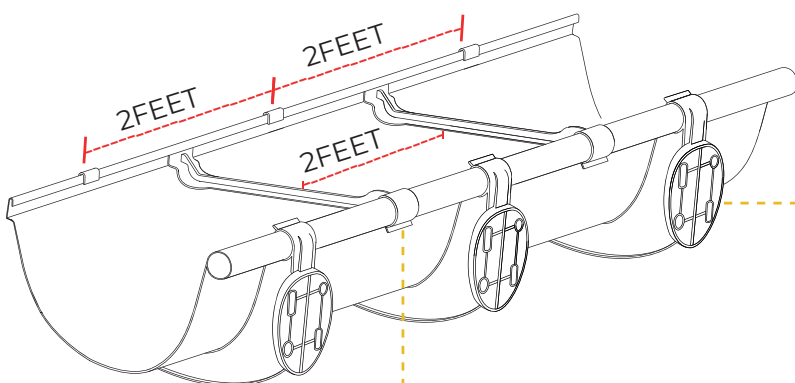
The number of **Rain Gutter** needed is determined by measuring the entire length of the roof, then dividing by 5.8 meters (our standard size).

OUTLET

Outlet is required to drain water into the downpipe. One piece of outlet is needed per 5.8 meters of uPVC Rain Gutter.



BRACKET & GUTTER STRAP



GUTTER STRAP

To maintain the shape and strengthen the uPVC Rain Gutter, Gutter Straps are recommended to install every 0.6 meters (2feet).

BRACKET

Brackets are required to support the Rain Gutters. It is recommended to install at intervals of 0.6 meters (2feet).

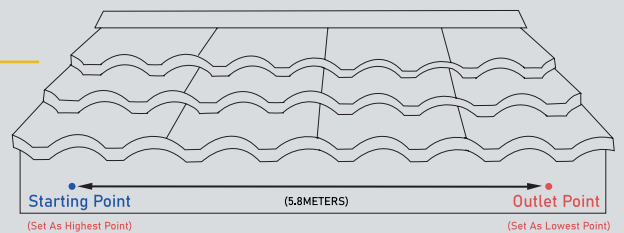


STEP 1



STARTING POINT TO OUTLET

Determine the location of starting point and the outlet point.

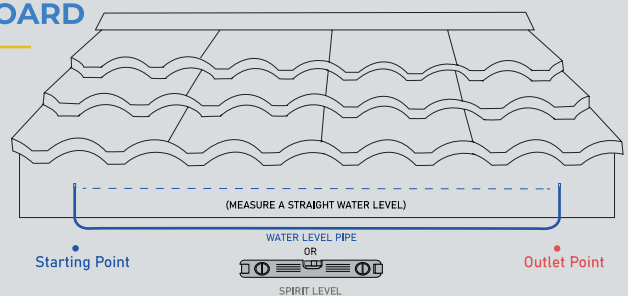


STEP 2



WATER LEVEL ALONG FASCIA BOARD

Use spirit level or level pipe to make sure the water level along fascia board is straight, mark the starting point and outlet point.

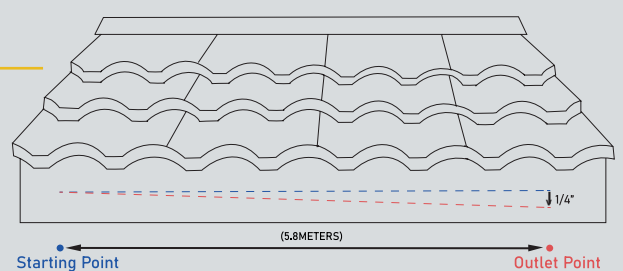


STEP 3



SPEED OF WATERFLOW

To increase the speed of waterflow, mark the lowest point with a 0.64cm (1/4 inch) downward slope from the outlet point, then mark the outlet point as highest point.



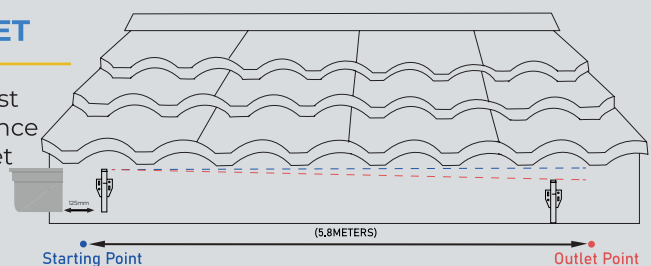


STEP 4



END CAP / CORNER & BRACKET

Install the first bracket near the highest point (starting point), assure the distance between End Cap / Corner and Bracket is $\leq 125\text{mm}$.

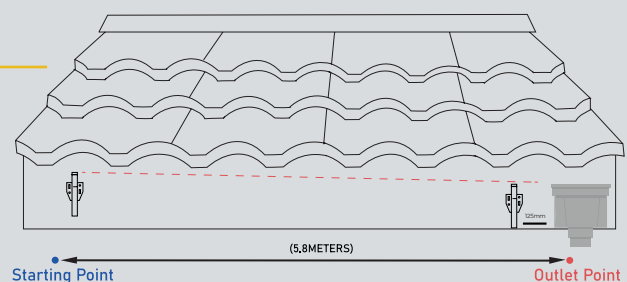


STEP 5



OUTLET & BRACKET

Install the second bracket near the lowest point (outlet point), assure the distance between Outlet and Bracket is $\leq 125\text{mm}$.



* the distance between Bracket and Outlet / End Cap / Corner / Socket must be $\leq 125\text{mm}$ to give a better support for the uPVC Rain Gutters.

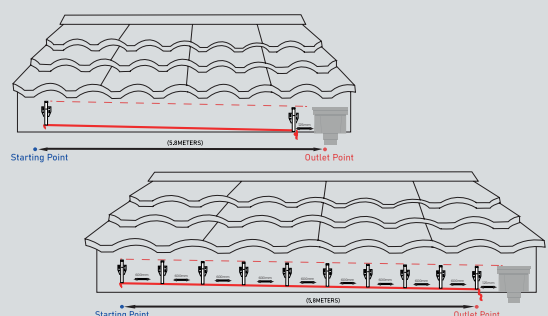
STEP 6



BRACKETS SPACING

Tighten the string line from the first bracket (near starting point) to the second bracket (near outlet point).

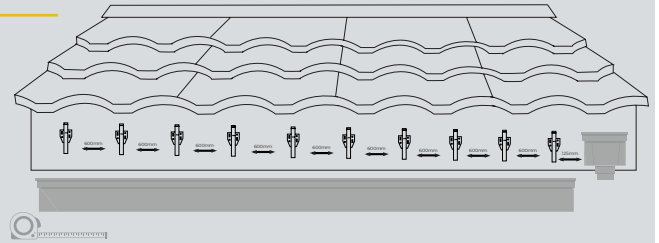
Install brackets at 0.6 meters intervals following the string line to ensure a perfect slope.



STEP 7

GUTTER INSTALLATION WITH FITTINGS

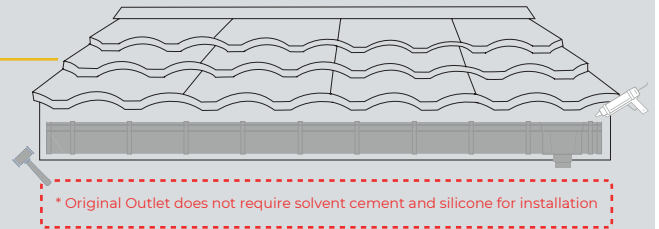
Measure the length of roof, cut the gutters with a grinder or saw. Removes the burrs and leave a smoother edge, then begin the gutter installation with fittings.



STEP 8

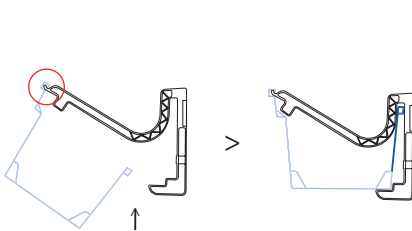
FINAL CHECKING

Make sure there is no gap between each joint. Rubber hammer can be used to make sure that each joint is completely adjoined. Solvent cement and silicon are required for each type of joint : Socket, Outlet Fin, Corner and End Cap

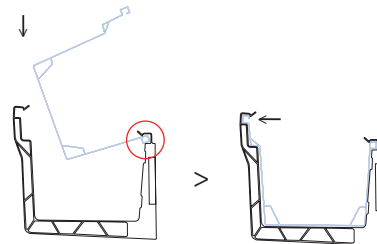


HOW TO *Insert* RAIN GUTTER INTO THE BRACKET

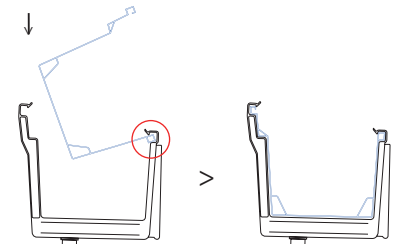
GUTTER G100



G100 INTERNAL BRACKET

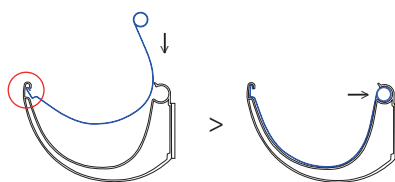


G100 EASY FAST BRACKET

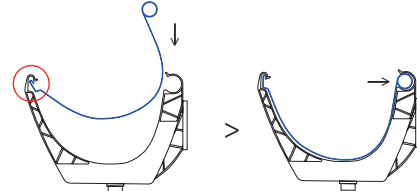


G100 ADJUSTABLE BRACKET

GUTTER G380



G380 BRACKET



G380 ADJUSTABLE BRACKET

STORAGE INSTRUCTIONS

A proper storage is important to guarantee the quality of the uPVC Rain Gutters, and ensure a seamless service to our customers.



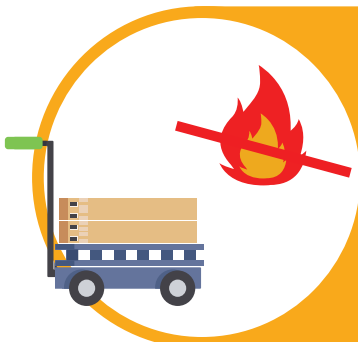
HORIZONTAL PLACEMENT

Load the Rain Gutters horizontally during transportation to distribute the weight evenly and prevent damage.



SHADED STORAGE

To maintain the durability, the uPVC Rain Gutters should be placed on a reasonably flat surface. Store them in a shaded area or cover them with heat-resistant plastic.



AVOID DIRECT HEAT

Avoid storing uPVC Rain Gutters near heat sources or exposing them to direct sunlight as this could damage the uPVC Rain Gutters.



QUALITY ASSURANCE

For best results, please handle the uPVC Rain Gutters according to the instructions in this brochure. Make sure all health and safety procedure guidelines are followed.



uPVC Rain Gutter Systems

Fast • Reliable • Durable

MIDDY

MIDDY INDUSTRIES SDN BHD (549717-T)

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