

carport KCR-series

Assembling manual

Thank you very much for choosing our company's products.

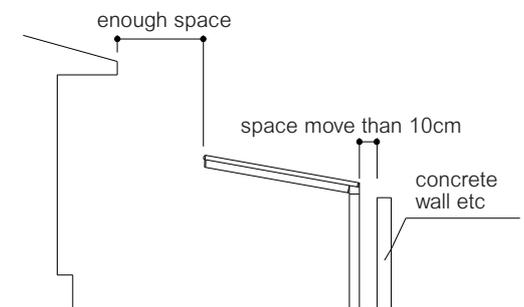
Please be sure to thoroughly read these instructions for assembly in order to properly and smoothly assemble or attach this product.

Construction shall be implemented by professionals. Problems may occur if the product is installed by someone without the proper knowledge.

Notice Please be sure to return the instruction manual in its original package to the owner after explaining product operation procedures, maintenance and inspection methods.

Precautions during installation

- The carport is a simple garage. Do not change or remodel it for storage, recreational or residential purposes.
- This product is for general areas. It has a snow accumulation strength of 600N/m^2 (61.2kg/m^2), which corresponds to 20cm of snowfall. Do not install in heavy snow area.
- Do not install it in the place where snow slides down from the building roof directly. When installing it besides concrete wall, etc., leave a 10 cm or larger gap between the post and the wall due to not clash each other during strong wind.
- Be sure to provide extra support post (optional) when installing it in strong wind area.
- When installing it with side panel, be sure to set up support post.
- When installing it with side panel, recommending to installing its front frame face to the building due to reduce the wind effect.
- Positioning the posts so that they do not affect underground objects (water supply, drain pipes, etc.).
- When moving the posts, please follow the company specifications.



Precautions during construction

- Follow the instructions and be sure that all the specified screws and bolts for assembly are tightened securely.
- Do not use anything other than the specified parts or optional parts.
- The foundation should comply with or exceed dimension specifications.
- Allow sufficient curing time for the concrete (4 to 7 days) and do not place heavy objects on it or subject it to vibrations during the curing period.
- Be sure to keep the note below to prevent aluminum materials corrode.
 - (1) Do not use sea sand for the foundation since it contains salt and may cause corrosion. Do not use a cement enhancer, water-reducing agent or cryoprotectant. They may cause the posts to corrode.
 - (2) Immediately wipe off any mortar or stains from the surface of aluminum parts since they may cause corrosion.
 - (3) Do not let aluminum parts come in contact with other metals such as copper or iron. Provide insulation with vinyl tape, by painting, etc., if necessary. Otherwise the product may corrode.
 - (4) Be sure to provide gravel for the foundation to allow drainage, insert water drainage holes ($\phi 5$) at the base of the posts and foundation. Failure to do so may lead to water accumulation inside the posts and damage them if the water freezes and expands inside.
- Be sure to put the sealant glue as the following.
 - (1) Wipe off any stains from the sealing part.
 - (2) Be sure to apply a sealant, as specified.
 - (3) After putting the sealant glue on the hole made in its all wall body, fully tighten the screw.
 - (4) Seal completely deep enough and finish the surface with a pallet.
- After construction, check the products to see if the bolts, screws, nuts, etc. loosen or any dangerous places exist.
- Be sure to check if the product has scratches, dents or dint.
- Be sure to explain product operation procedures, maintenance and inspection methods to the owner.

Necessary Tools and Materials For Installation

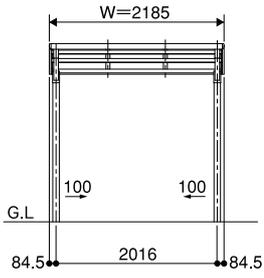
- Electric drill, Drill
- Ratchet wrench, Adjustable end wrench
- Electric Screwdriver
- Measure, Level, Plumb bob, Cutter, Pillar, Plastic hammer
- Foundation materials (Cement, Aggregate, etc.)
- Sealant, Caulk gun, pallet
- Cropper or Saw
- Please prepare tools and materials as needed

Dimension, position of posts and base dimension

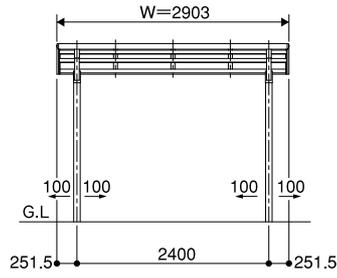
Dimension, position of post

length dimension (W) and post standard position (post could be changed as the dimension of ← →)

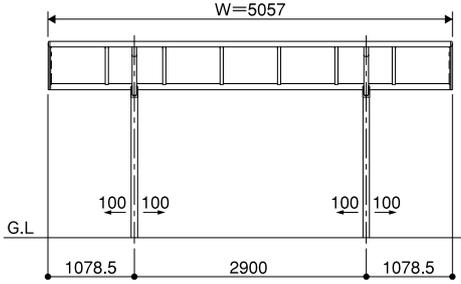
● Length 22 size



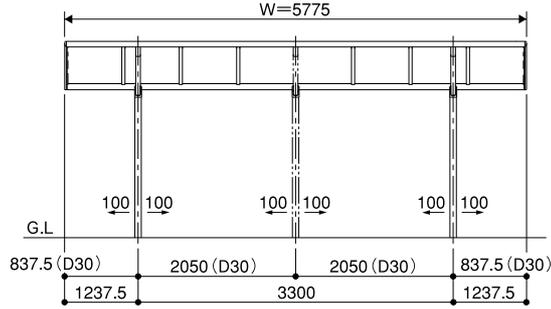
● Length 29 size



● Length 51 size

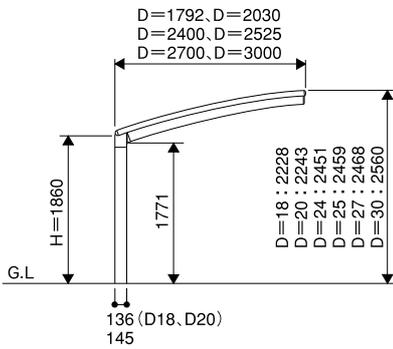


● Length 58 size

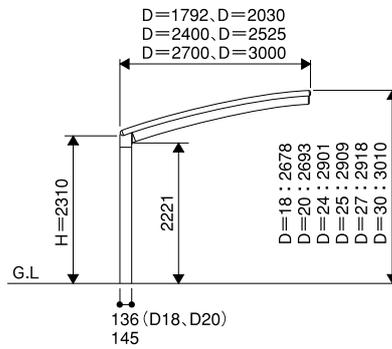


depth dimension (D), height dimension (H) (depth 18 · 20 · 24 · 25 · 27 · 30 size)

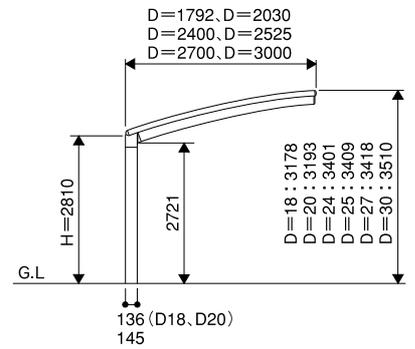
standard post



long post

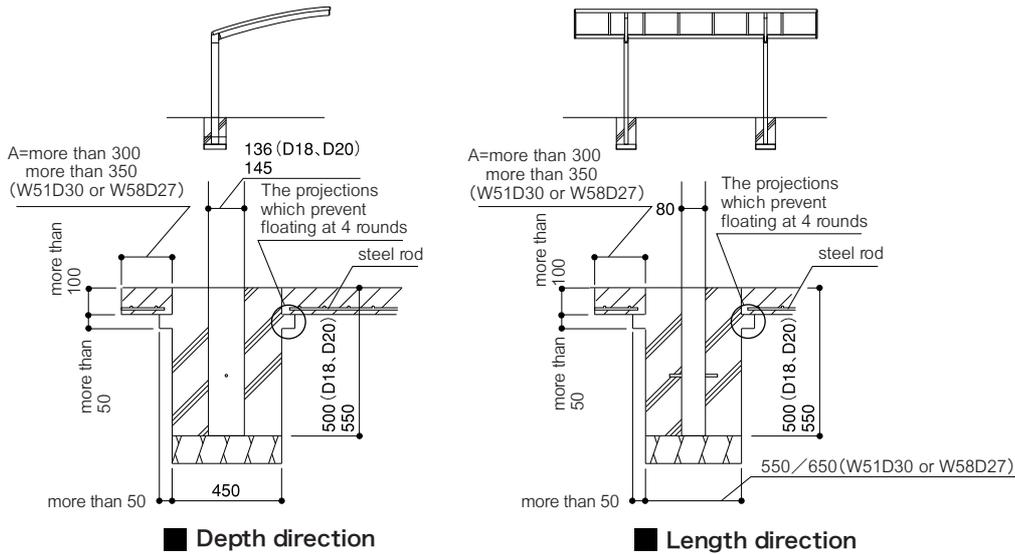


extra long post



■ Base dimension

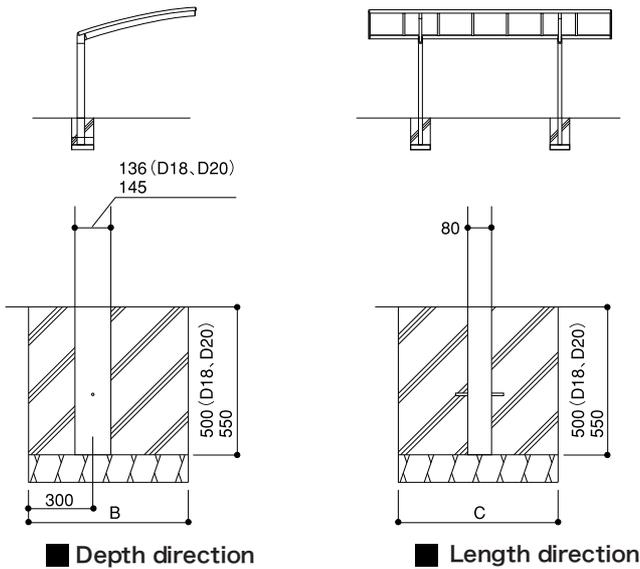
① In case of concrete floor



Remarks: In case of using standard size in concrete floor, please install under below condition

- ① Thickness of concrete floor is more than 100mm.
- ② Steel rod and welding wire net are arranged in concrete floor.
- ③ Dimension of projection which prevents floating at 4 rounds is more than 50mm × 50mm
- ④ Distance (A) from outside edge of base to around concrete floor is more than 300mm or (350mm)

② In case of no concrete floor or no correspond to above condition



■ In case of 100KN/m² Endurance strength of ground

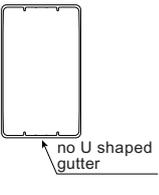
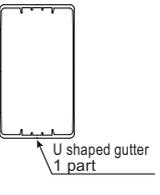
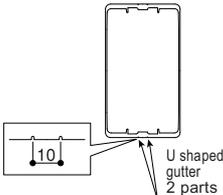
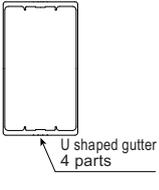
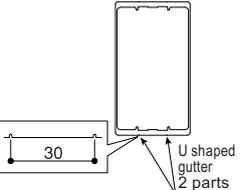
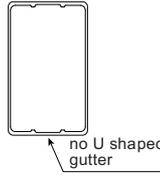
	D18•20•24•25 5127•5830	5130 5827
B	1100	1250
C	850	850

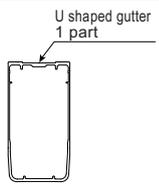
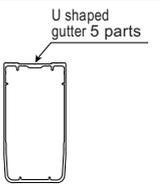
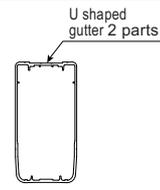
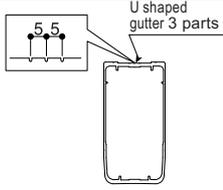
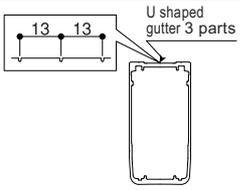
■ In case of 50KN/m² Endurance strength of ground

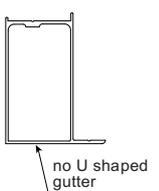
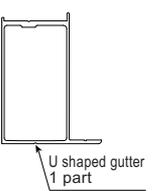
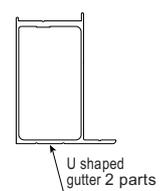
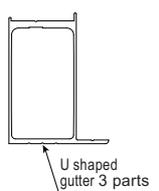
	D18•20•24•25 5127•5830	5130 5827
B	1250	1350
C	1000	1000

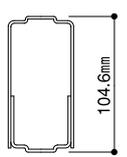
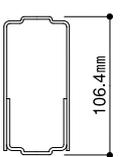
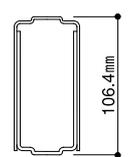
Post · beam · main frame list

● Please be noted post, beam, main frame and corner bracket are different according to the size of body.

post type	①	②	③
section	 no U shaped gutter	 U shaped gutter 1 part	 U shaped gutter 2 parts
Parts ID	KCWH-19A-2 KCWH-23A-2	KCRH-19C-2	KCRH-19D-2 KCRH-23D-2 KCRH-19D-3 KCRH-23D-3
post type	④	⑤	⑥
section	 U shaped gutter 4 parts	 U shaped gutter 2 parts	 no U shaped gutter
Parts ID	KCRH-19F-2 KCRH-28F-1	KCRH-23G-2	KCWH-28E-1

beam type	①	②	③	④	⑤
section	 U shaped gutter 1 part	 U shaped gutter 5 parts	 U shaped gutter 2 parts	 U shaped gutter 3 parts	 U shaped gutter 3 parts
Parts ID	KCRT-2218 KCRT-2220 KCRT-2918 KCRT-2920 KCRT-5118	KCRT-5120	KCRT-5124	KCRT-5125 KCRT-5127 KCRT-5824 KCRT-5825 KCRT-5830	KCRT-5130 KCRT-5827

main frame type	①	②	③	④
section	 no U shaped gutter	 U shaped gutter 1 part	 U shaped gutter 2 parts	 U shaped gutter 3 parts
Parts ID	KCRY-W22A-2 KCRY-W51A-3 KCRY-W51A-4	KCRY-W51B-2 KCRY-W51B-3 KCRY-W58B-4	KCRY-W29C-2	KCRY-W58D-3

corner parts type	①	②	③
section	 104.6mm There is a label 「コーナー金具(小)」 "corner parts (small)" on the side frame	 106.4mm There is a label 「コーナー金具(中)」 "corner parts (middle)" on the side frame	 106.4mm There is a label 「コーナー金具(大)」 "corner parts (large)" on the side frame
Parts ID	KCW-CB-2	KCR-CBA-2 KCR-CBA-3	KCR-CBC-2

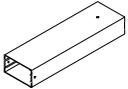
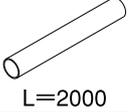
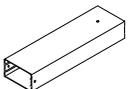
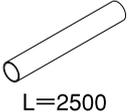
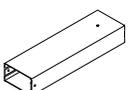
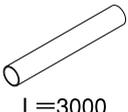
Parts instruction guide

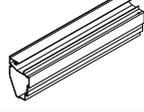
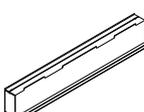
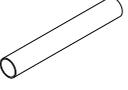
Type		component parts						
body size		post			beam	main frame	bracket	
Depth D	Length W	standard post	long post	extra long post				
18	22	①	①	⑥	①	①	①	
	29					③		
	51					②		
20	22					①		
	29					③		
	51					②		
24	51	②	④	③	①	②		
	58	④						
25	51	③		③	④		②	②
	58						④	
27	51						④	
	58	①						
30	51	③	④	④	②	②		
	58				④			

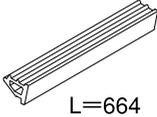
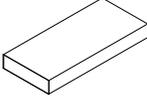
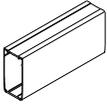
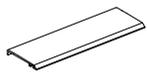
Parts contents

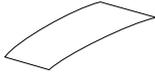
- Please open the captioned carton and check all contents in advance.
- Please check the parts defective or any damage.
- We packed some extra screw in the parts box. (x) number is necessary Q'ty for installation.

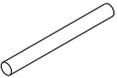
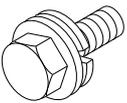
When △mark is P, it is the polycarbonate panel.
 When △mark is MP, it is the polycarbonate mat panel.
 When △mark is CP, it is the heat protection polycarbonate panel.
 When △mark is F, it is the FRP panel.
 When △mark is CF, it is the heat protection FRP panel.

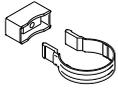
Parts ID	content			
	name	shape	quantity	
post set (standard post) KCRH-19C-2 KCRH-19D-2 KCRH-19D-3 KCRH-19F-2 KCWH-19A-2	post		KCRH-19○-2 KCWH-19A-2	2
			KCRH-19D-3	3
	round gutter GA4923	 L=2000	1	
	instruction manual		1	
post set (long post) KCRH-23D-2 KCRH-23D-3 KCRH-23G-2 KCWH-23A-2	post		KCRH-23○-2 KCWH-23A-2	2
			KCRH-23D-3	3
	round gutter GA4923	 L=2500	1	
	instruction manual		1	
post set (extra long post) KCRH-28F-1 KCWH-28E-1	post		1	
	round gutter GA4923	 L=3000	1	

Parts ID	content			
	name	shape	quantity	
post set (extra long post) KCRH-28F-1 KCWH-28E-1	instruction manual		1	
	length set		1	
KCRY-W22A-2 KCRY-W29C-2 KCRY-W51B-2 KCRY-W51A-3 KCRY-W51B-3 KCRY-W51A-4 KCRY-W58D-3 KCRY-W58B-4	front frame			
KCRY-W22A-2 KCRY-W29C-2 KCRY-W51B-2 KCRY-W51A-3 KCRY-W51B-3 KCRY-W51A-4 KCRY-W58D-3 KCRY-W58B-4	main frame		KCRY-W22A-2	2
			KCRY-W29C-2	
			KCRY-W51B-2	
			KCRY-W51A-3	3
			KCRY-W51B-3	
			KCRY-W58D-3	4
			KCRY-W51A-4	
KCRY-W58B-4				
KCRY-W22A-2 KCRY-W29C-2 KCRY-W51○ KCRY-W58D-3 KCRY-W58B-4	round gutter GA4923		KCRY-W22A-2	1 L=500
			KCRY-W29C-2	1 L=400
			KCRY-W51○	1 L=600
			KCRY-W58D-3	1 L=800
			KCRY-W58B-4	1 L=300

Parts ID	content						
	name	shape	quantity				
length set KCRY-W22A-2 KCRY-W29C-2 KCRY-W51B-2 KCRY-W51A-3 KCRY-W51B-3 KCRY-W51A-4 KCRY-W58D-3 KCRY-W58B-4	rubber channel GB2444	 L=664	KCRY-W22A-2	3			
			KCRY-W29C-2	4			
			KCRY-W51B-2	7			
			KCRY-W58B-4	8			
	roof panel cushion GB4084		KCRY-W22A-2	6			
			KCRY-W29C-2	8			
			KCRY-W51B-2	14			
			KCRY-W51A-3	21			
			KCRY-W51B-3	21			
			KCRY-W51A-4	28			
			KCRY-W58D-3	24			
			KCRY-W58B-4	32			
			beam depth set KCRT-2218 KCRT-2220 KCRT-2918 KCRT-2920 KCRT-5118 KCRT-5120 KCRT-5124 KCRT-5125 KCRT-5127 KCRT-5130 KCRT-5824 KCRT-5825 KCRT-5827 KCRT-5830	beam		KCRT-2200	2
						KCRT-2900	
KCRT-5100							
KCRT-5800							
side frame		2					
		roof rafter			KCRT-2200	2	
KCRT-2900	3						
KCRT-5100	6						
roof retainer		KCRT-5800		7			
		KCRT-2200		2			
		KCRT-2900		3			
end roof retainer		KCRT-5100		6			
		KCRT-5800		7			
small truss screw 4×10×7 ES0243		KCRT-2218	24 (22)				
		KCRT-2220	28 (26)				
		KCRT-2918	35 (33)				
		KCRT-2920	41 (39)				
		KCRT-5118	69 (66)				
		KCRT-5120	82 (78)				
		KCRT-5124	95 (90)				
		KCRT-5125	101 (96)				
		KCRT-5127	107 (102)				
		KCRT-5130	113 (108)				
		KCRT-5824	110 (105)				
		KCRT-5825	118 (112)				
KCRT-5827	125 (119)						
KCRT-5830	132 (126)						

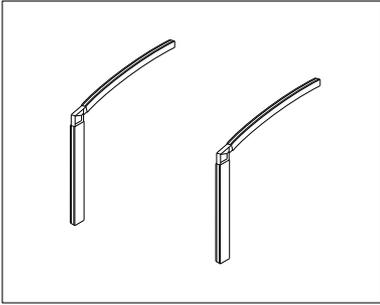
Parts ID	content					
	name	shape	quantity			
beam depth set KCRT-2218 KCRT-2220 KCRT-2918 KCRT-2920 KCRT-5118 KCRT-5120 KCRT-5124 KCRT-5125 KCRT-5127 KCRT-5130 KCRT-5824 KCRT-5825 KCRT-5827 KCRT-5830	small truss screw 5×14×10		KCRT-0018	9 (8)		
			KCRT-0020			
			KCRT-0024	13 (12)		
			KCRT-0025			
			KCRT-0027			
			KCRT-5130	18 (16)		
			KCRT-5830	26 (24)		
			drilling screw 4×10×8		KCRT-2218	46 (44)
					KCRT-2220	50 (48)
	KCRT-2918					
	KCRT-2920	55 (52)				
	KCRT-5118	63 (60)				
	KCRT-5120	67 (64)				
	KCRT-5124	80 (76)				
	KCRT-5125	82 (78)				
	KCRT-5127	84 (80)				
	KCRT-5130	95 (90)				
	KCRT-5824	85 (81)				
	KCRT-5825	87 (83)				
KCRT-5827	89 (85)					
KCRT-5830	101 (96)					
corner parts set KCR-CBA-2 KCR-CBA-3 KCR-CBC-2 KCW-CB-2	bracket GA7209 (S) GA7207 (M) GA8836 (L)		KCR-CB0-2 KCW-CB-2	2		
			KCR-CBA-3	3		
roof panel set KCRY-△18-3 KCRY-△20-3 KCRY-△24-3 KCRY-△25-3 KCRY-△27-3 KCRY-△30-3 KCRY-△18-4 KCRY-△20-4 KCRY-△24-4 KCRY-△25-4 KCRY-△27-4 KCRY-△30-4	roof panel GA5762 (polycarbonate SI) GB4612 (polycarbonate :AO,BR) GB4575 (heat protection polycarbonate) GA8667 (FRP) GB0709 (heat protection FRP)		KCRY-△00-3	3		
			KCRY-△00-4	4		

Parts ID	content			
	name	shape	quantity	
parts box KCRBK-A KCRB-A KCRB-B	anchor rod GA0073		KCRBK-A KCRB-A	2
			KCRB-B	3
	beam cap GA4925		KCRBK-A KCRB-A	2
			KCRB-B	3
	corner cap GA5983		KCRBK-A	Right Left each 2 pcs
	corner cap GA4926		KCRB-A	Right Left each 2 pcs
			KCRB-B	Right Left each 3 pcs
	corner cap GA5123		KCRB-A	Right Left each 2 pcs
			KCRB-B	Right Left each 3 pcs
	tapping screw (flat-head) 5×45×10			KCRBK-A KCRB-A
		KCRB-B		6
	hexagon bolt (with washer, spring washer) M8×25 ES0249		KCRBK-A KCRB-A	16
			KCRB-B	24
	front frame, gutter attachment bracket GB1734		KCRBK-A KCRB-A	4
			KCRB-B	6
	small truss screw 5×14×10		KCRBK-A KCRB-A	9 (8)
			KCRB-B	13 (12)
	front frame corner cap GB3020		Right Left each 1 pc	
gutter corner cap GB3021		Right Left each 1 pc		
seal φ 14 GA0150		KCRBK-A	12	
		KCRB-A	20	
		KCRB-B	30	

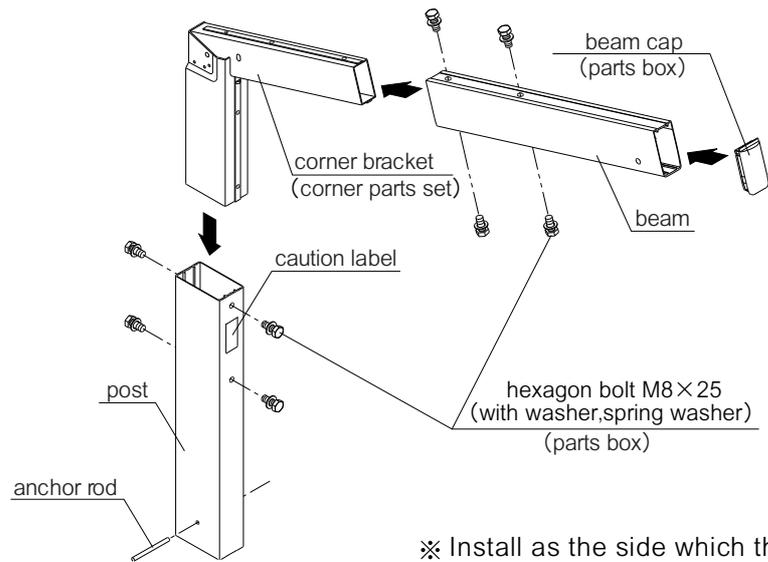
Parts ID	content		
	name	shape	quantity
parts box KCRBK-A KCRB-A KCRB-B	gutter attachment GA4929		1
	gasket GA4930		1
	elbow GA4932		2
	drain elbow GA6461		1
	saddle GA4933		3
	drilling screw 4×19×8		3
	glue GA4934		1
	caution label GL-Z20C		1
	snow label HY0048		1
	assembling manual HZ0882		1
	register label HY0087		1

Installation procedure

1 Installation of post and beam

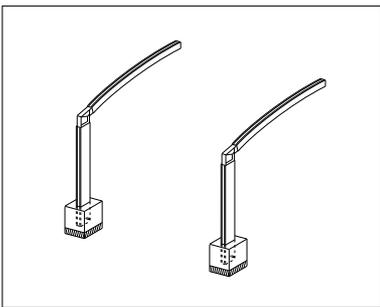


- Connect between post and beam with corner bracket and fix with hexagon bolt M8×25

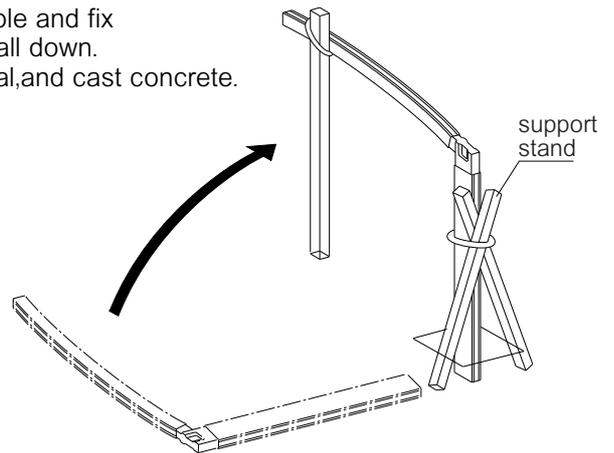


※ Install as the side which the caution label is attached comes inside

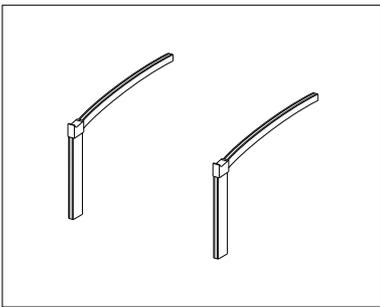
2 Installation to base hole



- ① Insert post into the base hole and fix with support stand not to fall down.
- ② Check if it is flat and vertical, and cast concrete.

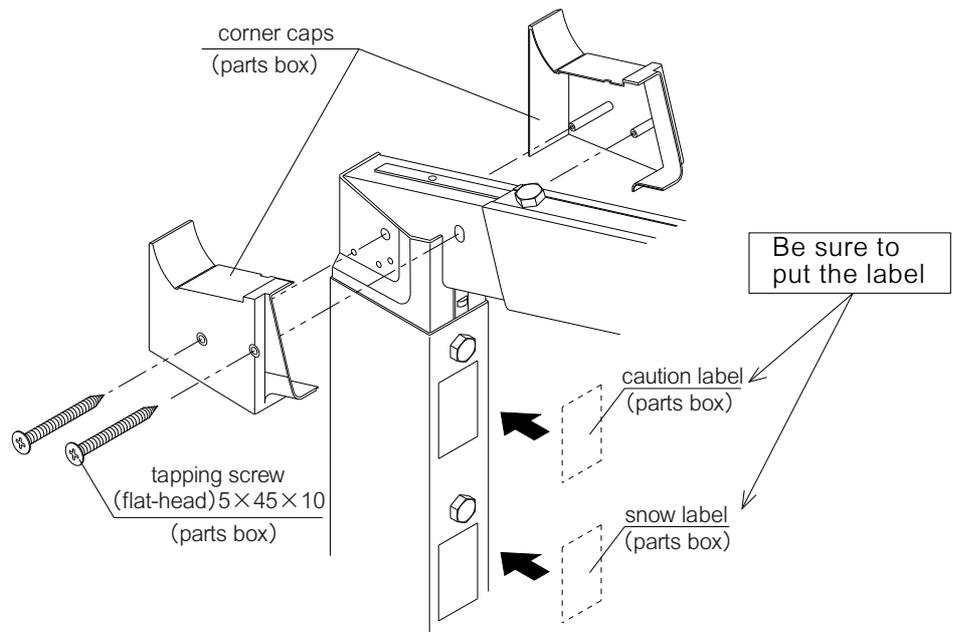


3 Install corner caps

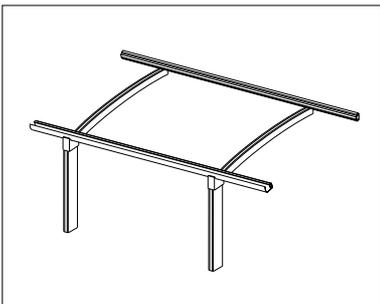


- Attach the corner cap on the corner bracket

※ In case of installing the hanging, put the labels at the position not to lap over it.

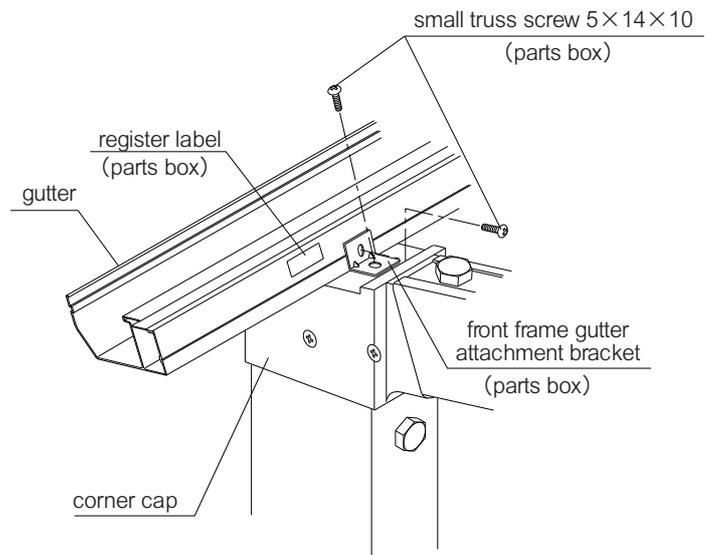


4 Installation of gutter and front frame



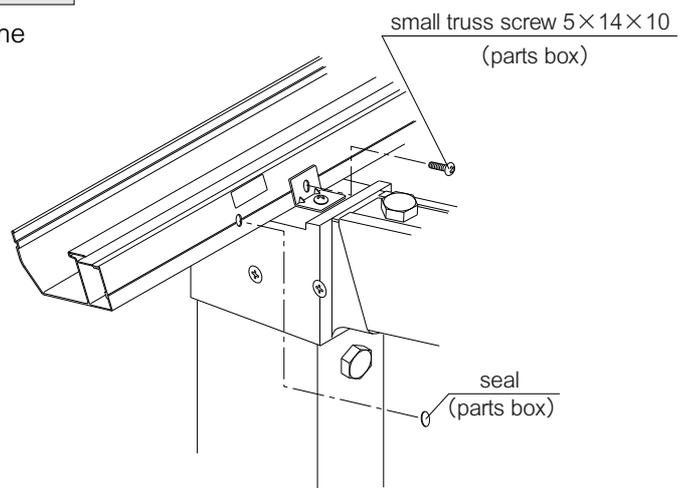
Installation of gutter

- Screw the front frame gutter attachment bracket to the corner bracket and fix the gutter using the guide hole. And put the register label on the gutter.



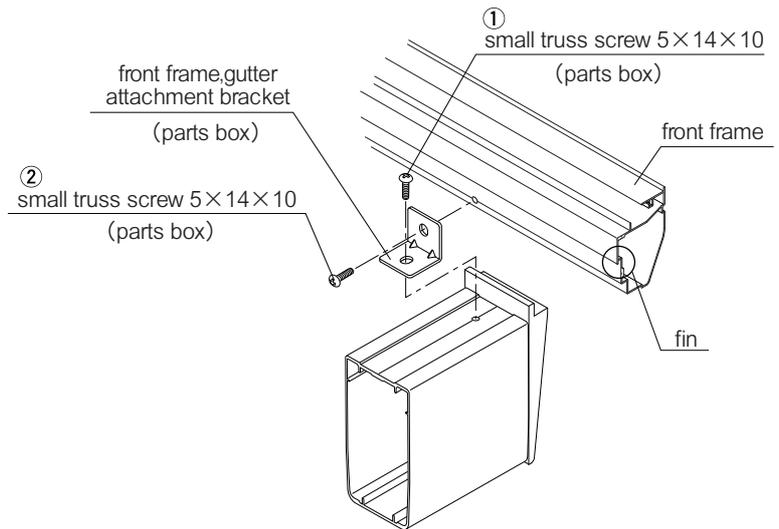
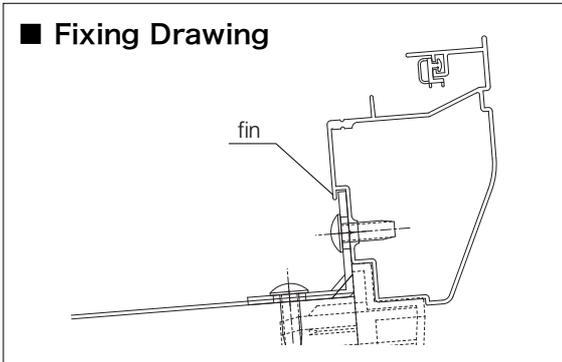
Installation of gutter in case post is moved

- ① According to the post position, puncture the $\phi 4.5$ hole on the gutter and screw it.
- ② Put the seal on the unnecessary hole.



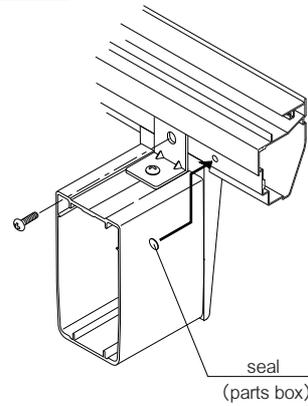
Installation of front frame

- ①Screw the front frame, gutter attachment bracket on the beam.
- ②Set the front frame on the beam and fix with drilling screw.

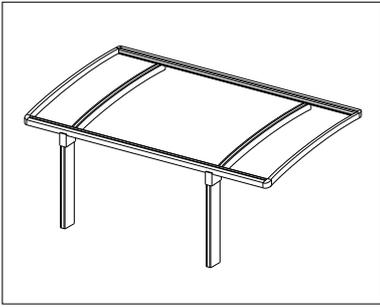


Installation of front frame in case post is moved

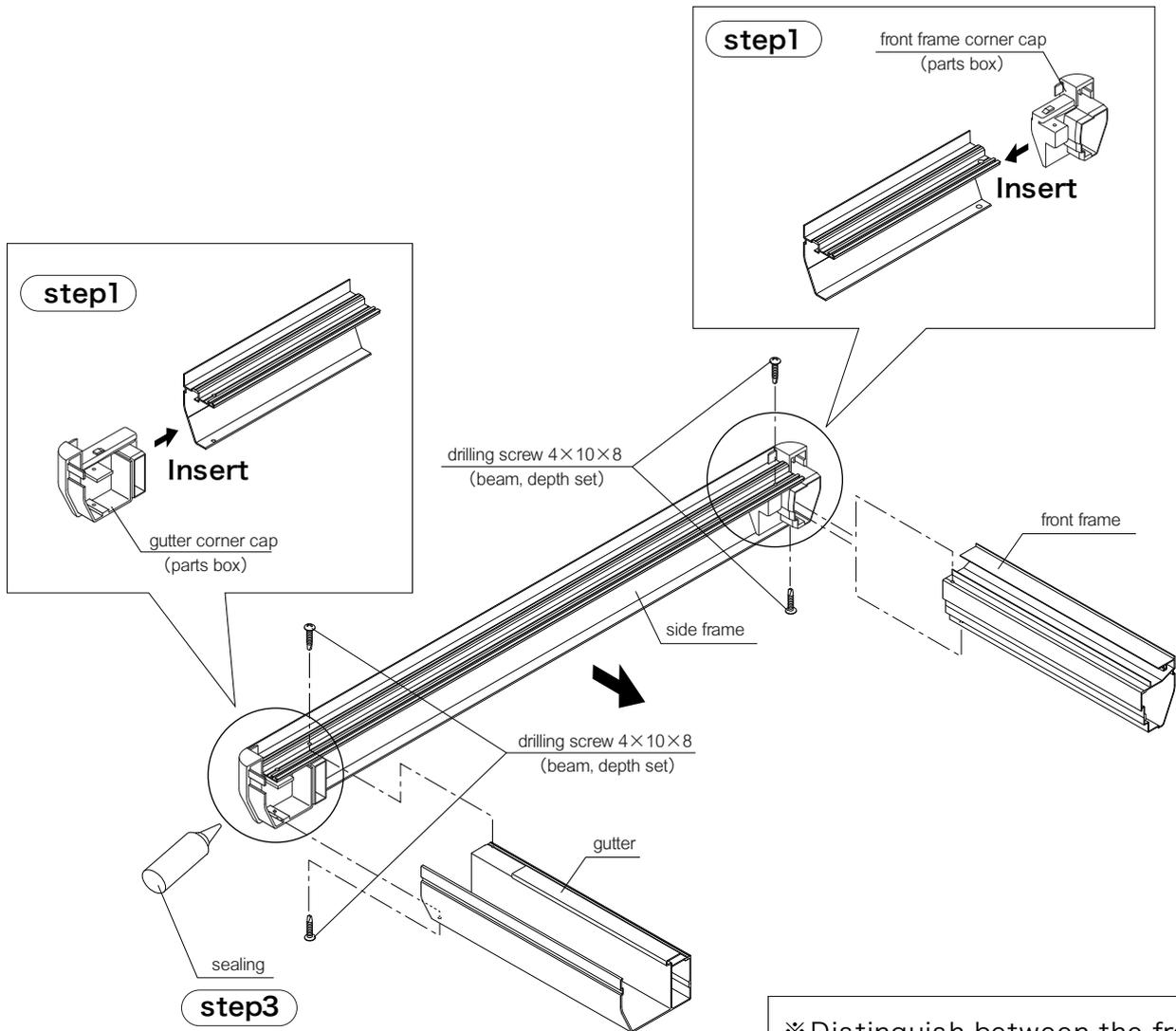
- ①According to the post position, puncture the $\phi 4.5$ hole on the front frame and screw it.
- ②Put the seal on the unnecessary hole.



5 Installation of side frame

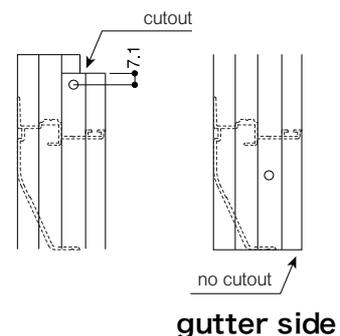


- step1** Attach the gutter corner cap and front frame corner cap on the side frame.
 ※ If it is difficult to insert the caps, please use a hammer with cushion wood appropriately.
- step2** Attach the front frame and gutter on the cap attached on the side frame.
- step3** After attaching in step2, do sealing work at the connecting part of the gutter as shown in the detailed figure of gutter sealing part.



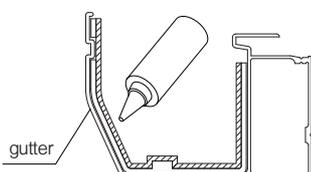
※ Distinguish between the front frame side and gutter side of the side frame if there is cutout or not and with the hole pitch. Find the front frame side and gutter side with the below picture.

front frame side



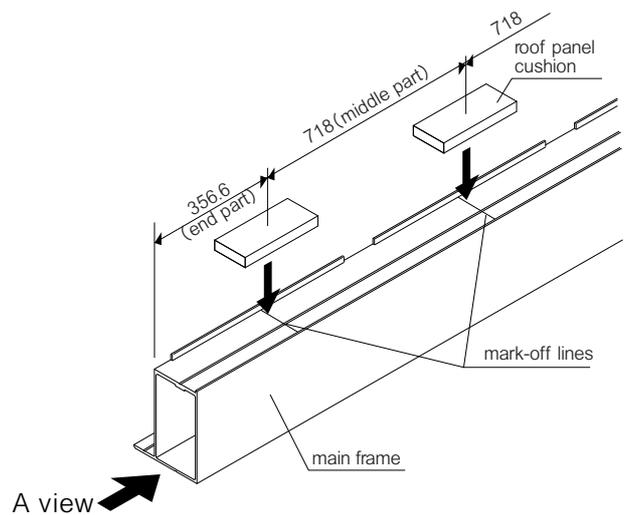
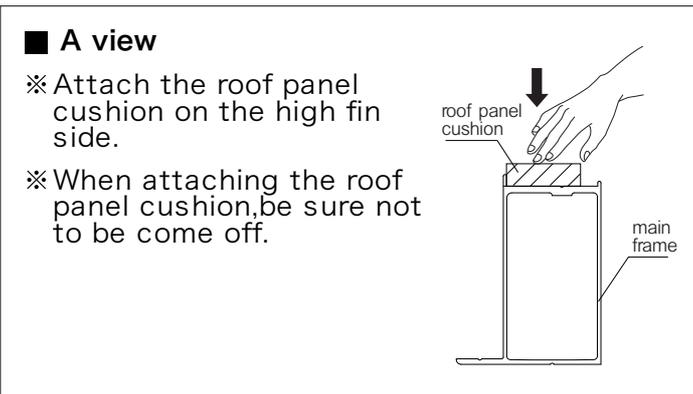
■ Detailed figure of the gutter sealing part

indicates the sealing part

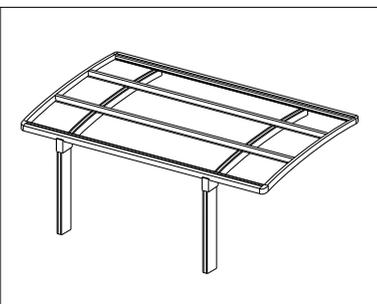


6 Installation of roof panel cushion

- Attach the roof panel cushions on the mark-off lines of top side of all the main frame material

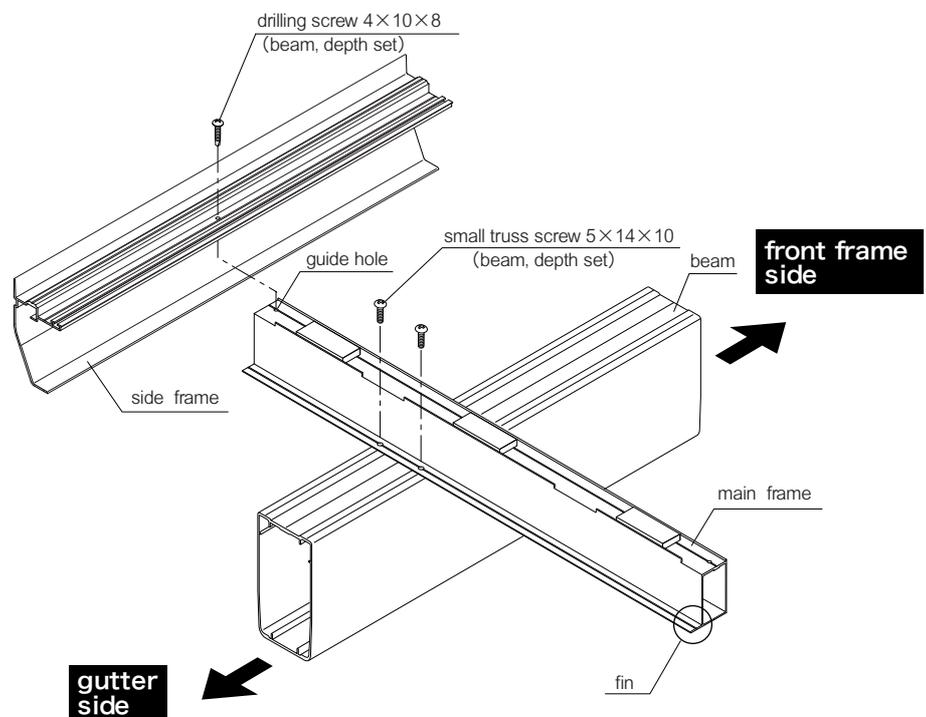


7 Installation of main frame



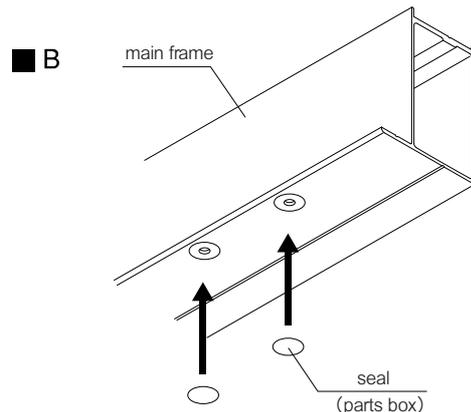
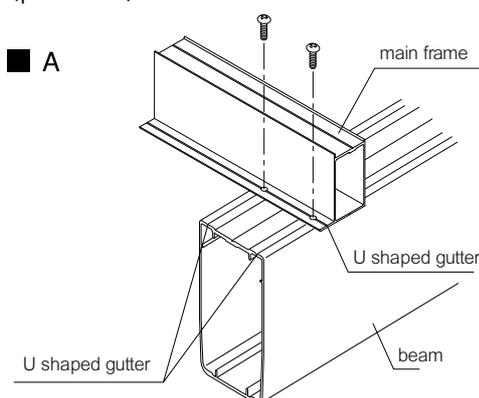
- Put the fin of the main frame into the side frame toward the gutter side and screw on beam using guide hole.

- ※ Be sure to install the main frame with the fin of it faced to the gutter.

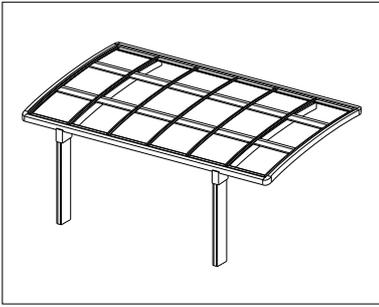


Installation of main frame in case post is moved

- See the Ushaped gutter of the beam and make the $\phi 5.2$ hole on the main frame and screw it on the body (picture A).
- In case of installing the main frame other than post standard position, put the seal on the unnecessary hole (picture B).



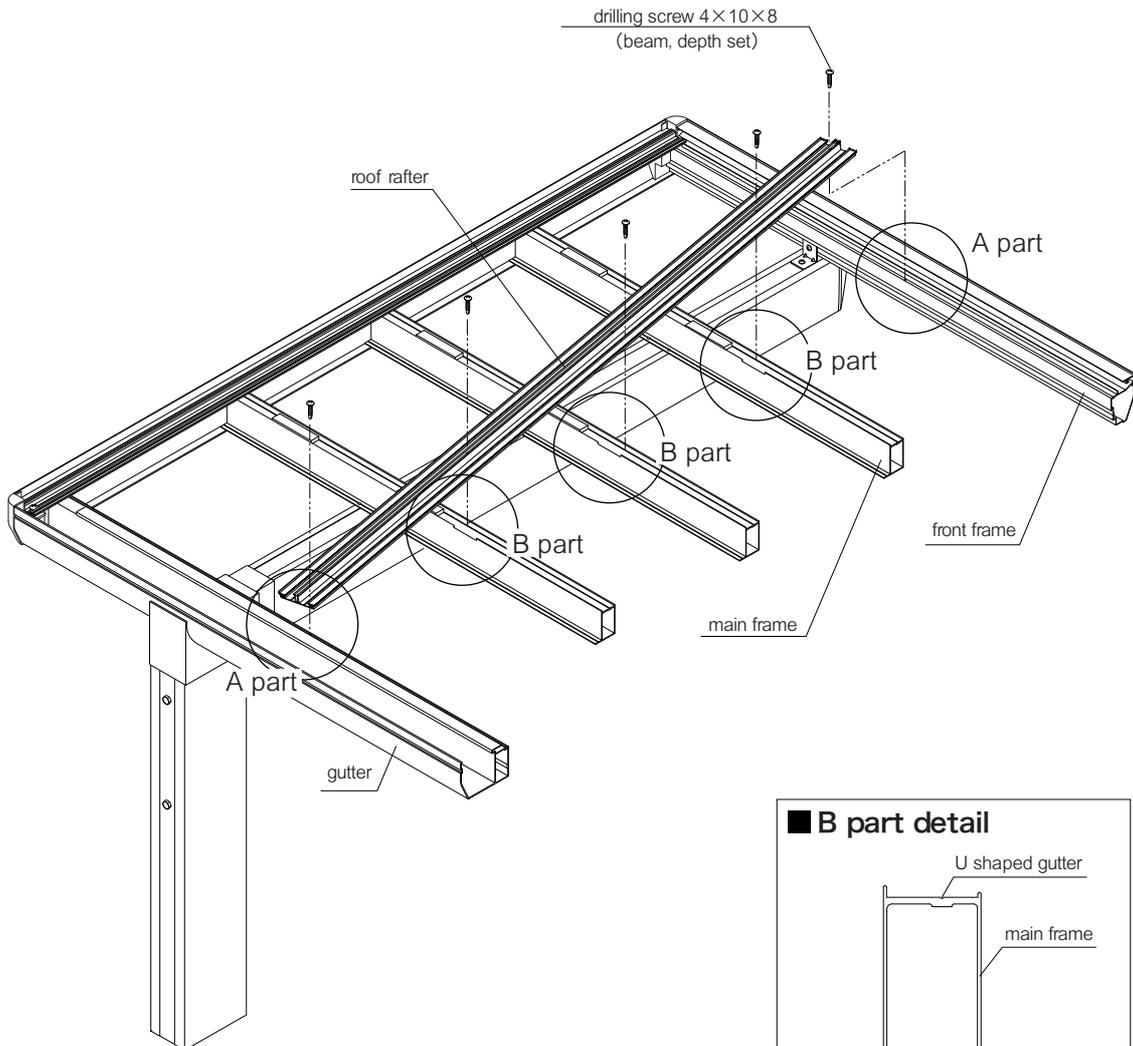
8 Installation of roof rafter



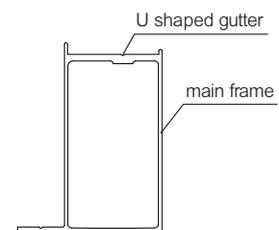
Any direction is possible to be installed

- ① Screw the roof rafter on the gutter
- ② Screw it on the front frame
- ③ Screw it on the main frame

- ※ ● For A part (①・②), screw using the guide hole.
● For B part (③), see U shaped gutter of the main frame and screw it.



■ B part detail

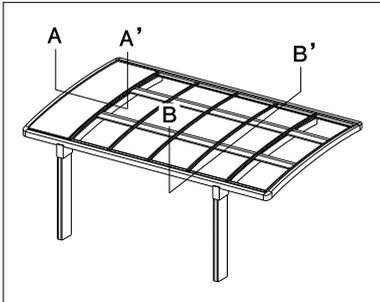


9 Installation of panel

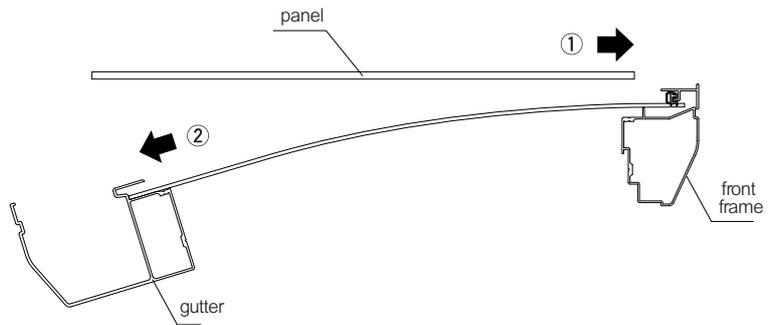
Before installing panel

※ Check post interval, flat, and diagonal dimension of roof
(Regarding M-connect type, adjust after connected)

※ In case diagonal dimension of roof does not come out, loose the screw which fix front frame, gutter, main frame and beam and adjust them.



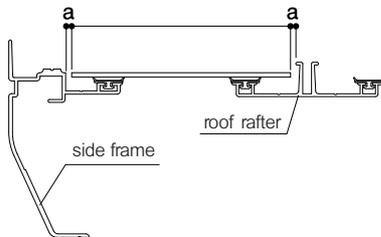
● Insert the panel into the front frame and then into the gutter



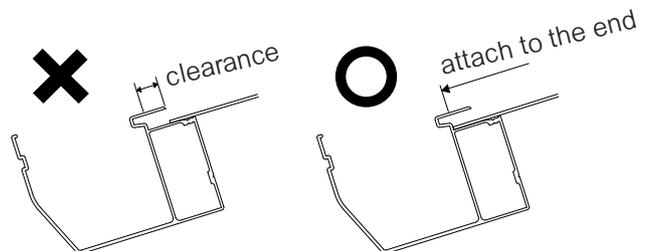
※ When using the polycarbonate mat (SI) and FRP panel, attach the unevenness side down.
Otherwise the panel color is changed by sunlight.

※ When installing panel, please be noted as below

■ A-A' cross-section

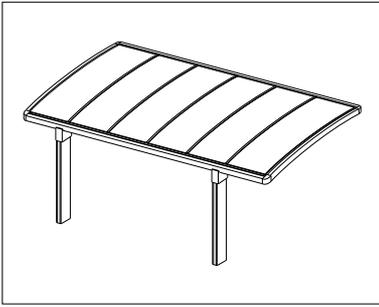


■ B-B' cross-section



※ Sort the panel equally

10 Installation of roof retainer

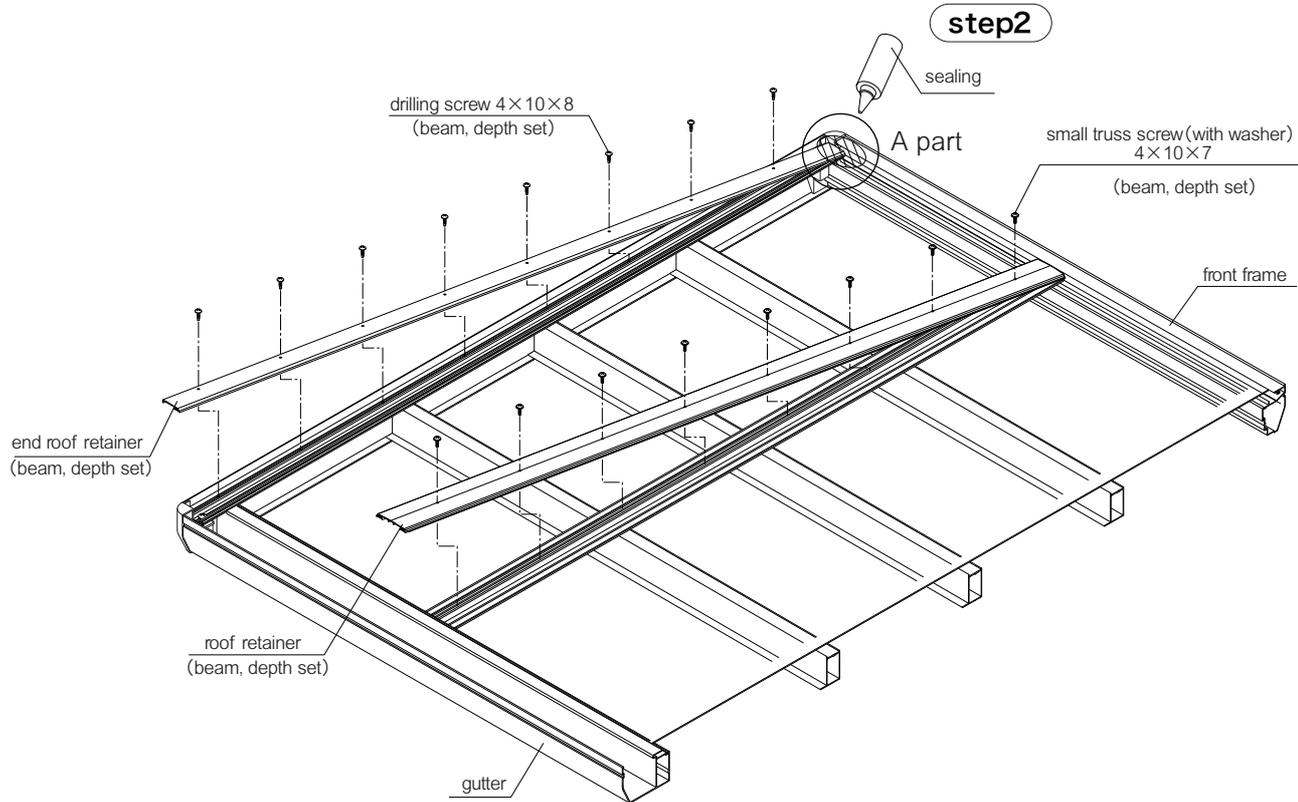
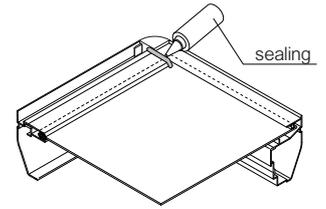


- Put the roof retainer into the front frame and screw it.

step1 Screw the end roof retainer to the U-shaped gutter of the side frame.

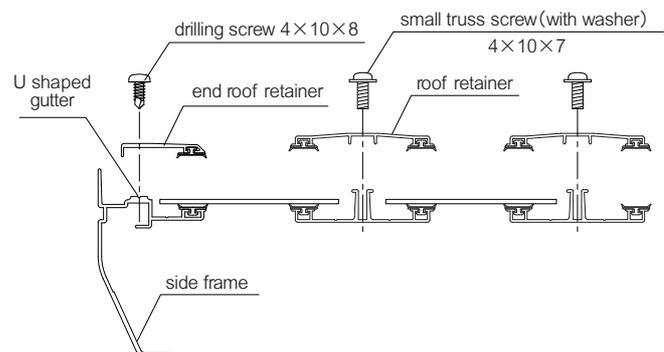
step2 Do sealing work at the insert part of the end roof retainer.

■ A part detail



Remark

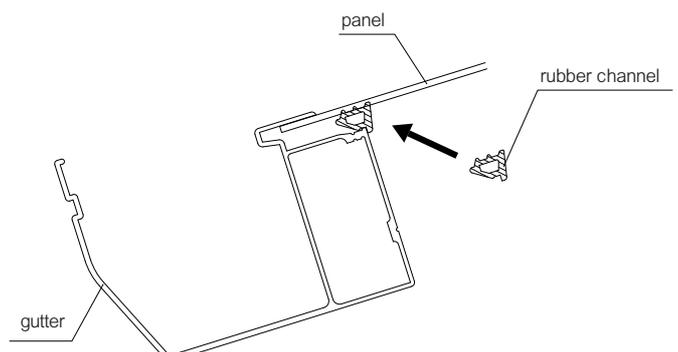
- If the screw of installing the roof retainer (middle part) is tightened too much, the screw will run idle. (tightening torque less than 15kgf.cm)
- If the screw head leans when installing the roof retainer, it will cause water leakage (water will enter from the screw head clearance), so install it not to make clearance.



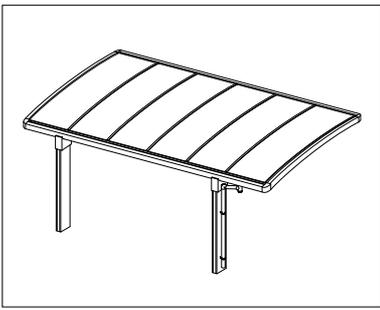
11 Insert rubber channel

- Insert the rubber channel.

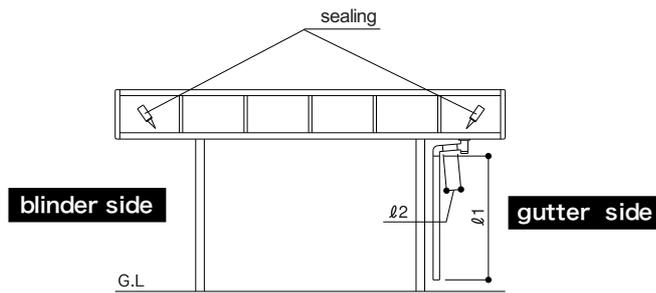
※ In case the length of the rubber channel is long, cut it with proper length.



12 Installation of rain gutter



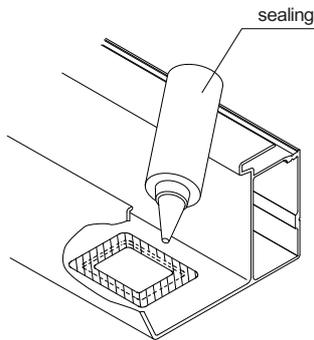
- The length of the round gutter is different according to the post position. Cut to the proper length onsite.



- l_2 at the standard post position
- W 22 type: $l_2=300$
- W 29 type: $l_2=133$
- W 51 type: $l_2=423$
- W 58 type: $l_2=583$
- W 58 type: $l_2=182$ (only D30)

blinder side

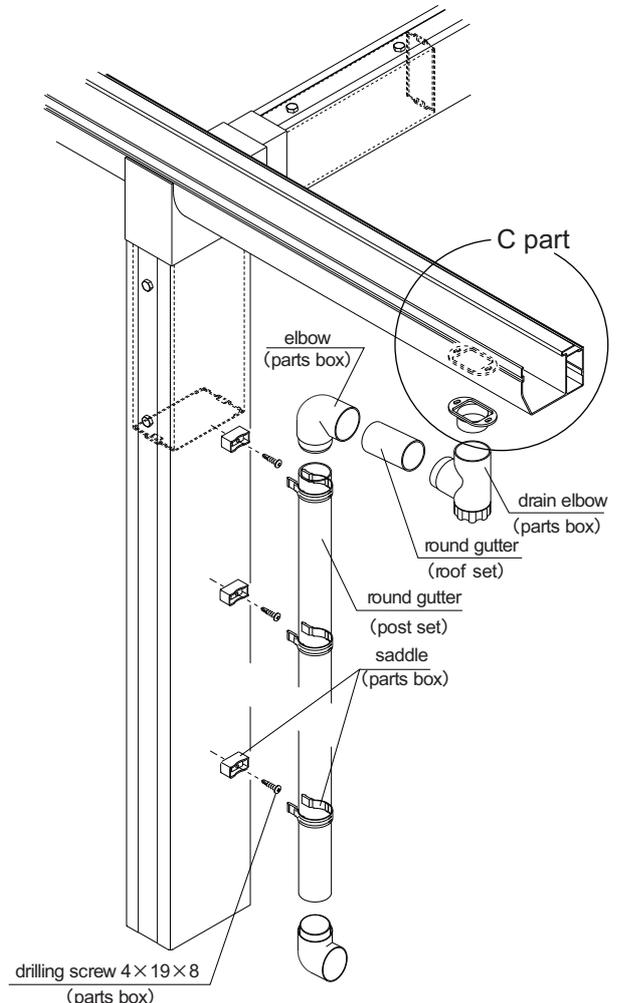
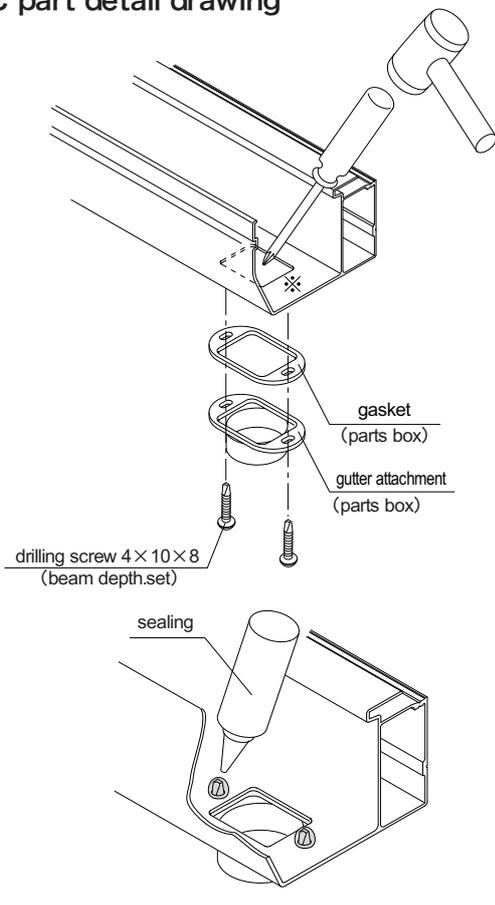
- Do sealing work all around



gutter side

- ① Crush with wood hammer and driver only at the place for installing gasket.
 - ② Screw the gasket on the gutter and do sealing work at the screw part.
 - ③ Use the glue for rain gutter parts.
- ※ In case it could not crush, use electric drill.
 - ※ There is the corner bracket inside the top of the post. When installing the saddle at the place, make a hole ($\phi 3.5$) with drill first, and screw it.

■ C part detail drawing

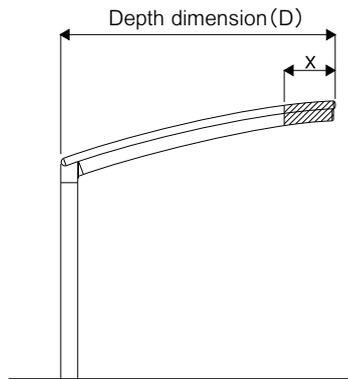


➔ **Remark** Be sure to do sealing work around screws in order to prevent danger when cleaning as well as for water proof.

13 Cutting procedures of depth direction

- In case of cutting depth direction, be sure to cut from the front frame side.
According to the cutting length of the roof, cut and process each materials and panels.
Be noticed the direction of the materials.

- Cutting the beams
- Cutting the side frames
- Cutting the roof rafters
- Cutting the roof retainers
- Cutting the end roof retainers
- Cutting the roof panels



cut range

X=less than 300mm

※ D18 is not available

Cutting dimension fomula

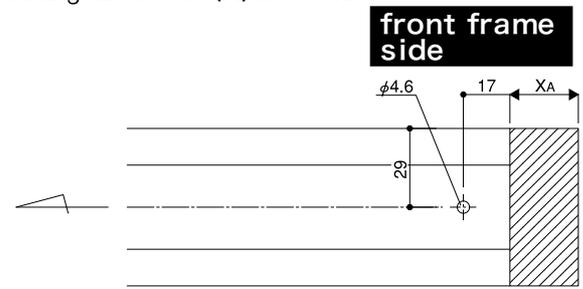
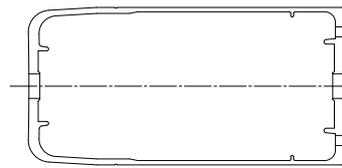
※1 $X_A = X$

※2 $X_A = \frac{X}{100} \times 101$

1. Beam processing

- The below indicates the cutting dimension (X_A) in case that the roof cutting dimension (X) is 100mm.

Roof cutting dimension 100mm	
Depth	Cutting dimension (mm)
18	not available
20	$X_A = 100$ ※1
24	
25	
27	
30	

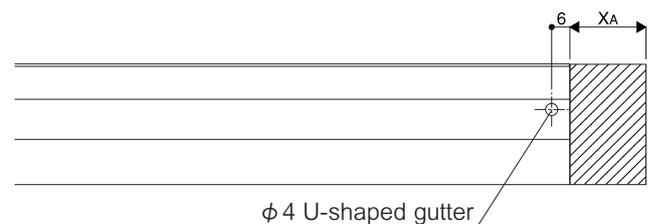
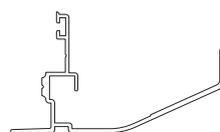
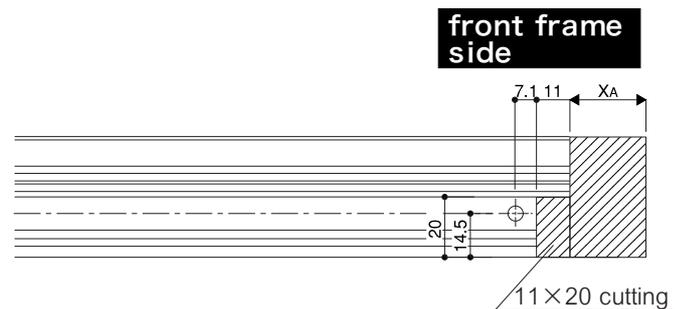
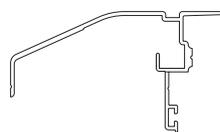


※ Decide the cutting dimension (X_A) by the cutting dimension fomula.

2. Side frame processing

- The below indicates the cutting dimension (X_A) in case that the roof cutting dimension (X) is 100mm.

Roof cutting dimension 100mm	
Depth	Cutting dimension (mm)
18	not available
20	$X_A = 101$ ※2
24	
25	$X_A = 100$ ※1
27	
30	

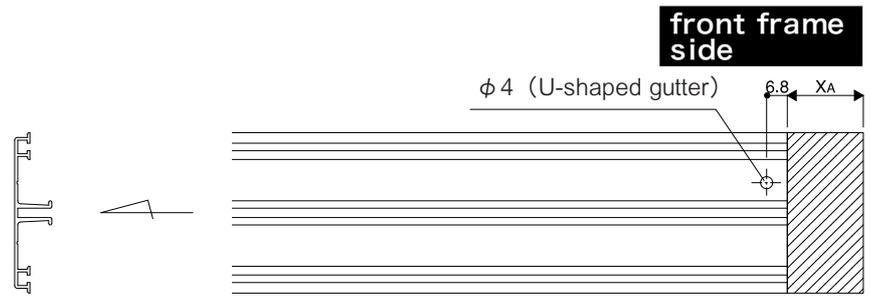


※ Decide the cutting dimension (X_A) by the cutting dimension fomula.

3. Roof rafter processing

- The below indicates the cutting dimension (XA) in case that the roof cutting dimension (X) is 100mm.

Roof cutting dimension 100mm	
Depth	Cutting dimension (mm)
18	not available
20	XA=101 ※2
24	
25	XA=100 ※1
27	
30	

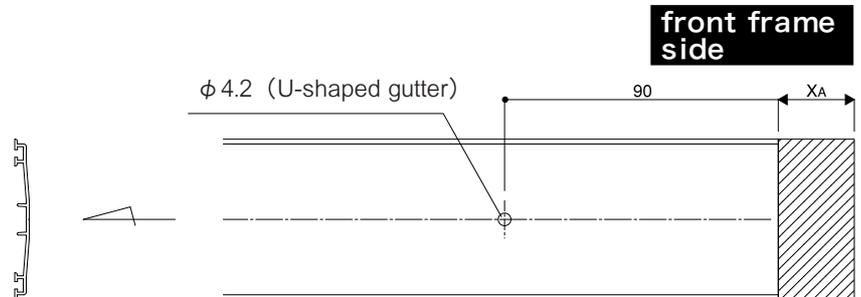


※ Decide the cutting dimension (XA) by the cutting dimension formula.

4. Roof retainer processing

- The below indicates the cutting dimension (XA) in case that the roof cutting dimension (X) is 100mm.

Roof cutting dimension 100mm	
Depth	Cutting dimension (mm)
18	not available
20	XA=101 ※2
24	
25	XA=100 ※1
27	
30	

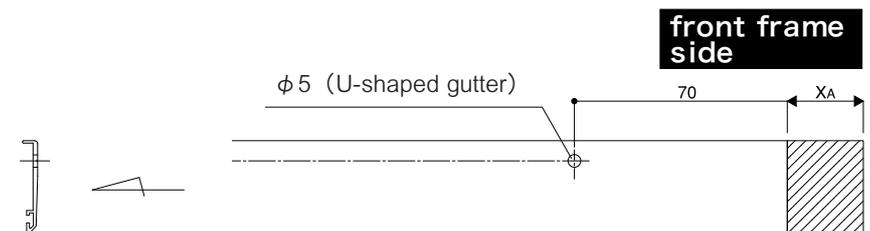


※ Decide the cutting dimension (XA) by the cutting dimension formula.

5. End roof retainer processing

- The below indicates the cutting dimension (XA) in case that the roof cutting dimension (X) is 100mm.

Roof cutting dimension 100mm	
Depth	Cutting dimension (mm)
18	not available
20	XA=101 ※2
24	
25	XA=100 ※1
27	
30	

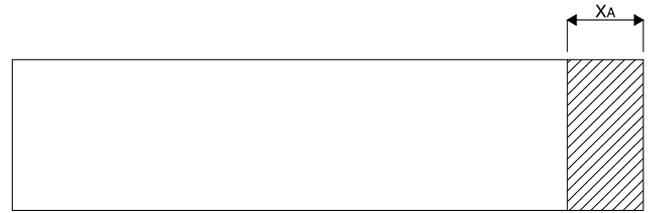


※ Decide the cutting dimension (XA) by the cutting dimension formula.

6.Roof panel cutting

- The below indicates the cutting dimension (X_A) in case that the roof cutting dimension (X) is 100mm.

Roof cutting dimension 100mm	
Depth	Cutting dimension(mm)
18	not available
20	$X_A=101$ ※
24	
25	$X_A=100$ ※
27	
30	



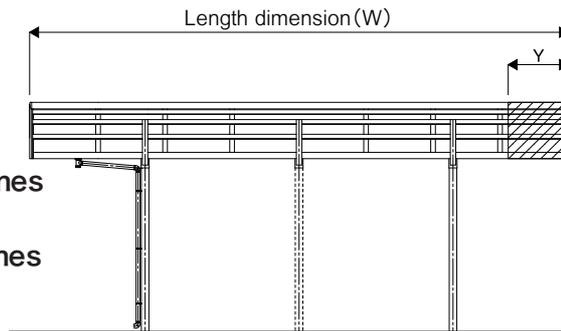
※ Decide the cutting dimension (X_A) by the cutting dimension formula.

After processing install the body according to the manual of **1** ~ **12** .

14 Cutting procedures of Length direction

- The panel span is 718mm. In case of cutting length direction, cutting length of the roof(Y) in multiples of 718mm is recommended.
Cut the materials from opposite side of the round gutter installation.

1. Cutting of the front frames
2. Cutting of the gutter
3. Cutting of the main frames
4. Cutting of the panels



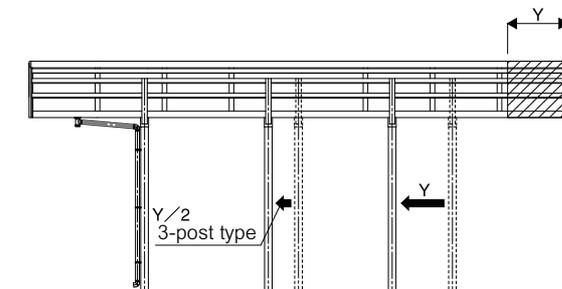
Cut range

$$Y = 718 \times n + B$$

(n=number of panel pitch)

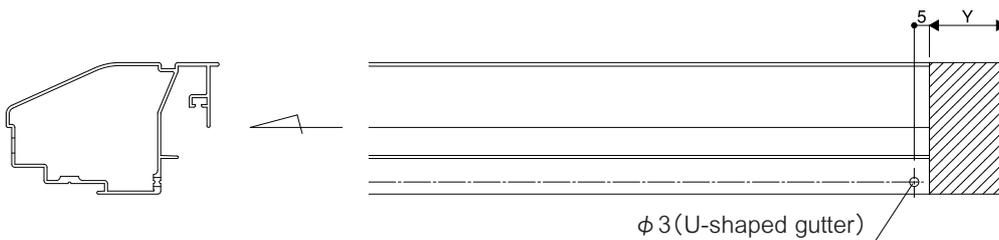
- In case of $n = 0$
 $B \leq 650$
- ※ It can't be cut from 465mm to 535mm for installing gasket.
- In case of $n \geq 1$
 $16 \leq B \leq 650$

- ※ Move the post as the same length as the cutting length of the roof (Y) .
Move the center post in case of 3-post type.



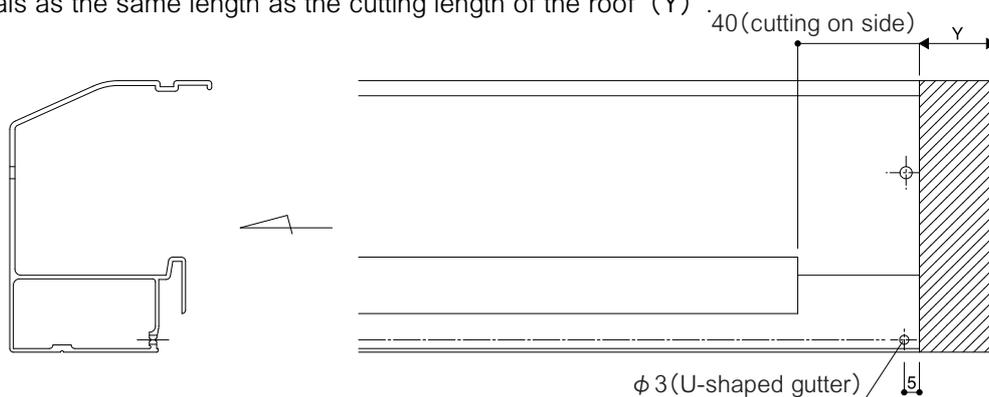
1. Front frame processing

- Cut the materials as the same length as the cutting length of the roof (Y) .



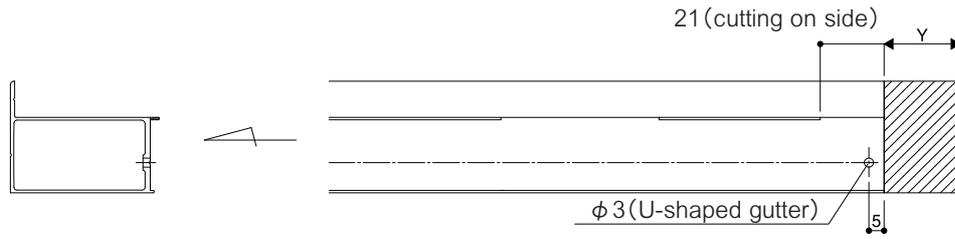
2. Gutter processing

- Cut the materials as the same length as the cutting length of the roof (Y) .

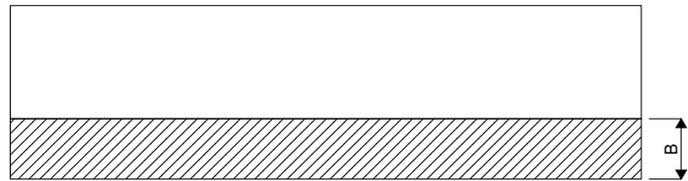


3.Main frame processing

- Cut the materials as the same length as the cutting length of the roof (Y) .



4.Roof panel processing



After processing install the body according to the manual of **1** ~ **12** .

