



RAILING INSTALLATION GUIDE



PLEASE READ THE INSTALLATION GUIDE CAREFULLY BEFORE DO ANY INSTALLATION.

We suggest you to acquire detailed knowledge of your local laws and regulations before install FORESTAR products. This manual can only offer instructions for correct installation rather than a substitute for laws and professional permission. Installing FORESTAR products shall comply with the relative local laws and regulations. All risk and responsibility that relate to construction shall be borne by users.

SAFETY

Operators should be equipped and apply safety protection equipment, i.e. operators should wear protective gloves, dust mask, long-sleeved clothes/ pants and goggles.

TOOLS

Normal tools for woodworkers are enough, but saw web treated by carbide solution and stainless screws are recommended.

PLANNING

A rational installation plan can enable the FORESTAR products to be installed in a fast and smooth way.

- Please make sure that everything shall comply with the relative local laws and regulations;
- The decking should be installed on a clean, flat and solid ground;
- Arrange the layout before lay the decking so as to make sure the perfect effect;
- We recommend you to make a relative construction drawing so that enhance the precision of the construction.

CONSTRUCTION

FORESTAR products can not be applied alone as bearing structure like girder and pillar, they must be applied together with those structural materials that are in line with requirements.

DRAINAGE & VENTILATION

The enough space between decking and ground is required for adequate drainage, ventilation and dryness, in view of this, FORESTAR decking cannot be directly installed on the ground, but should be installed on the joists. If rain cannot be drained away in time while stay in the gaps that without protection between the decking, then this position would be easily expand after water absorption.

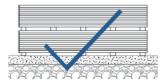
HEAT RESOURCE & FIRE

Sustained high temperature that caused by fire and other heat resource will do harm to FORESTAR decking. Therefore, do not assemble FORESTAR products where are near to heat resource like fireplace. "Coating film glass with low radiation" has the effect of thermal insulation and warm-keeping via the high reflecting towards middle and remote infrared ray, but it can lead to heat reflecting that makes surrounding environment become heat resource after heating. We advise you to consult with your glass supplier about relative suggestions in advance, so as to reduce heat reflection.

STORAGE

FORESTAR products should be piled up tidily on the flat and solid ground after being raised.

Find the correct storage method as shown in the figure 1, jack up the FORESTARA products and put them on the leveled and solid ground. Find the incorrect storage method as shown in the figure 2, the uneven ground would lead to the deformation of FORESTAR products. For the load bearing issue of the base, please consult with the producer who produces adjustable bases.



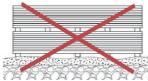
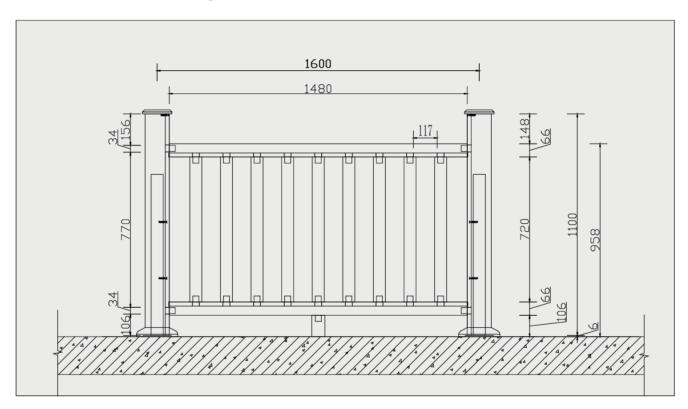


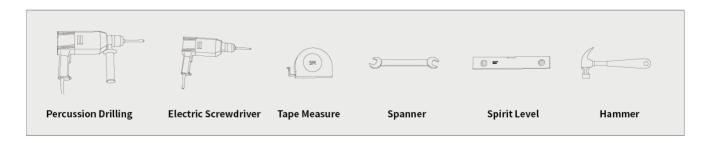
Figure 1

Figure 2

Standard Dimension of Railing

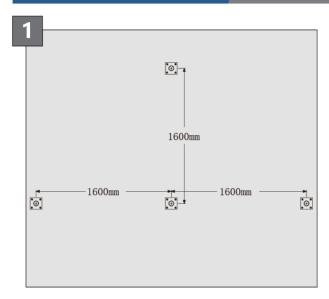


Tools Needed for Installation

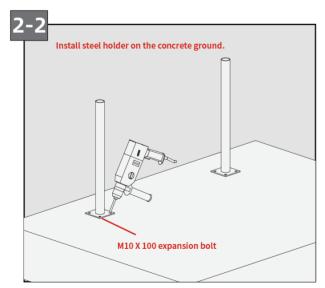


Accessories List of Railing

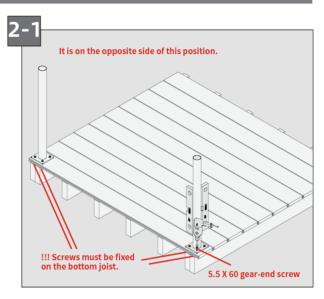
Picture	Material	Length (mm)	ΩТΥ	Picture	Material	Length (mm)	QТΥ
	120x120 post	1100	1	Dannaga	3.9x32 flat-head screw		12
	100x66 top rail or bottom rail	1480	2		5.5x60 rear-end screw		4
	61x45 balustrade	720	9		сар		1
	31x20 groove edge band	106	2		skirting		1
	31x20 groove edge band	117	20		120x120x800 steel holder		1
	31x20 groove edge band	156	2		inner connector		1
	31x20 groove edge band	770	2		groove connector		22
Emmunitum	3.9x60 flat-head screw		4	N .	M10x100 expansion bolt (optional in dimension)		4



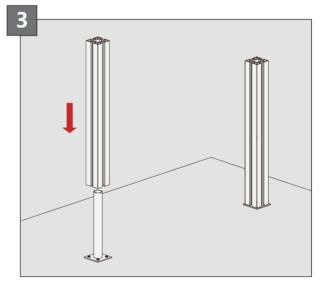
The distance from the middle of one post to the middle of next post is 1600mm, which is the standard installation dimension of railing. Please plan rationally according to the construction site before installation.



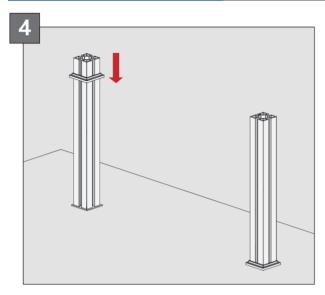
Apply the M14 twist drill to expand holes on the base of steel holder, then use the percussion drilling ($\varphi14$ drill) to drill holes, utilize the expansion bolt (M10 X 100) to fix the base, please note to adjust the verticality of the steel holder by a spirit level before fix the expansion bolt.



Fix the base with 5.5 X 60 gear-end screw, and the screw must be fixed on the bottom joist, wood joist should be added if there's no wood joist in the bottom area; Please note the verticality in two directions.

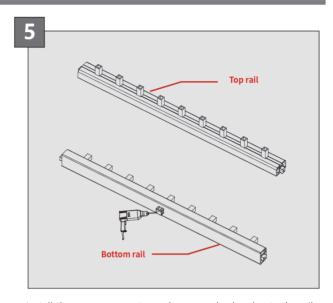


Insert the post after fix the base of steel holder.

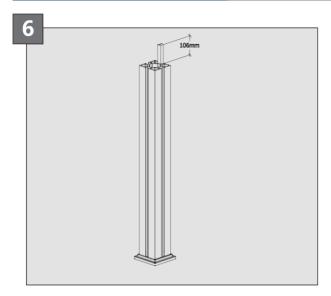


Insert the skirting.

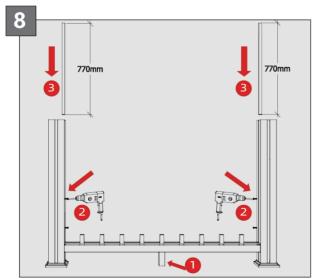
Insert the skirting.



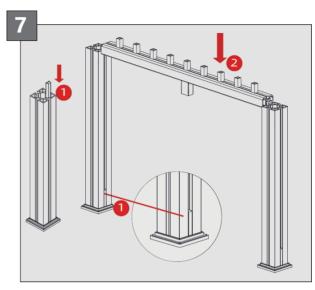
Install the groove connector and groove edge band onto the rails, please attention that it is different from top rail to bottom rail, the bottom one should be installed inner connectors.



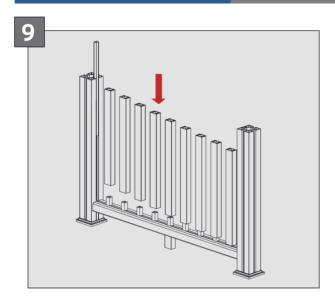
After install the post and skirting, please insert the edge band (theoretical dimension: 106mm) into the groove of the post. (Given the specificity of the site, we reserve the length of edge band as 1050mm, which may need to be cut in line with requirements on the site.)



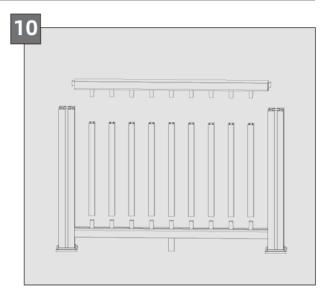
Install the balustrade in the middle of bottom before slide the bottom rail to the right position, then fix the post with screws and insert the edge band (770mm) into the post.



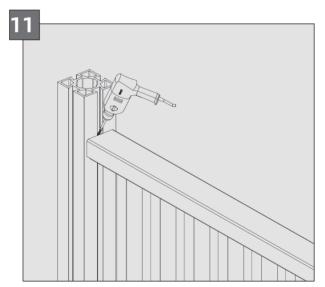
After insert the edge band into the post's groove, please insert the bottom rail between the two posts. $\,$



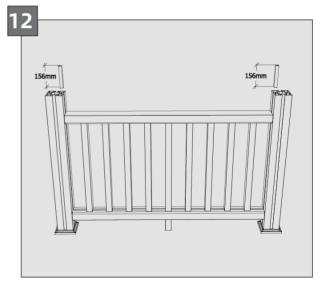
Insert balustrades and groove edge band one by one.



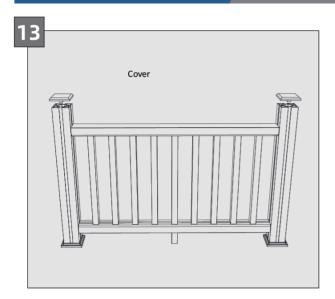
After insert the balustrade into the connector of the bottom rail, then insert the top rail kit into the post's groove and slide it down.



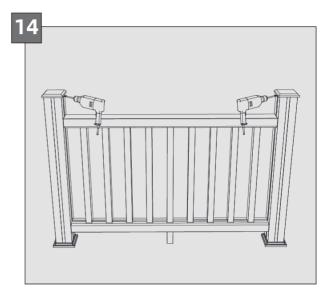
After install the top rail, then use the drill to dig holes and fix screws with the electric screwdriver in the reserved position for screws on the groove's connector.



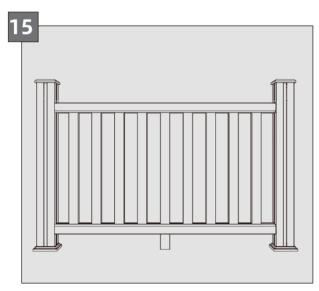
Insert the edge band (theoretical dimension: 156mm) into the groove of the post.



Cover with the cap.



Fix the cap with screws, then complete the installation.



Effect drawing of the completed installation.





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