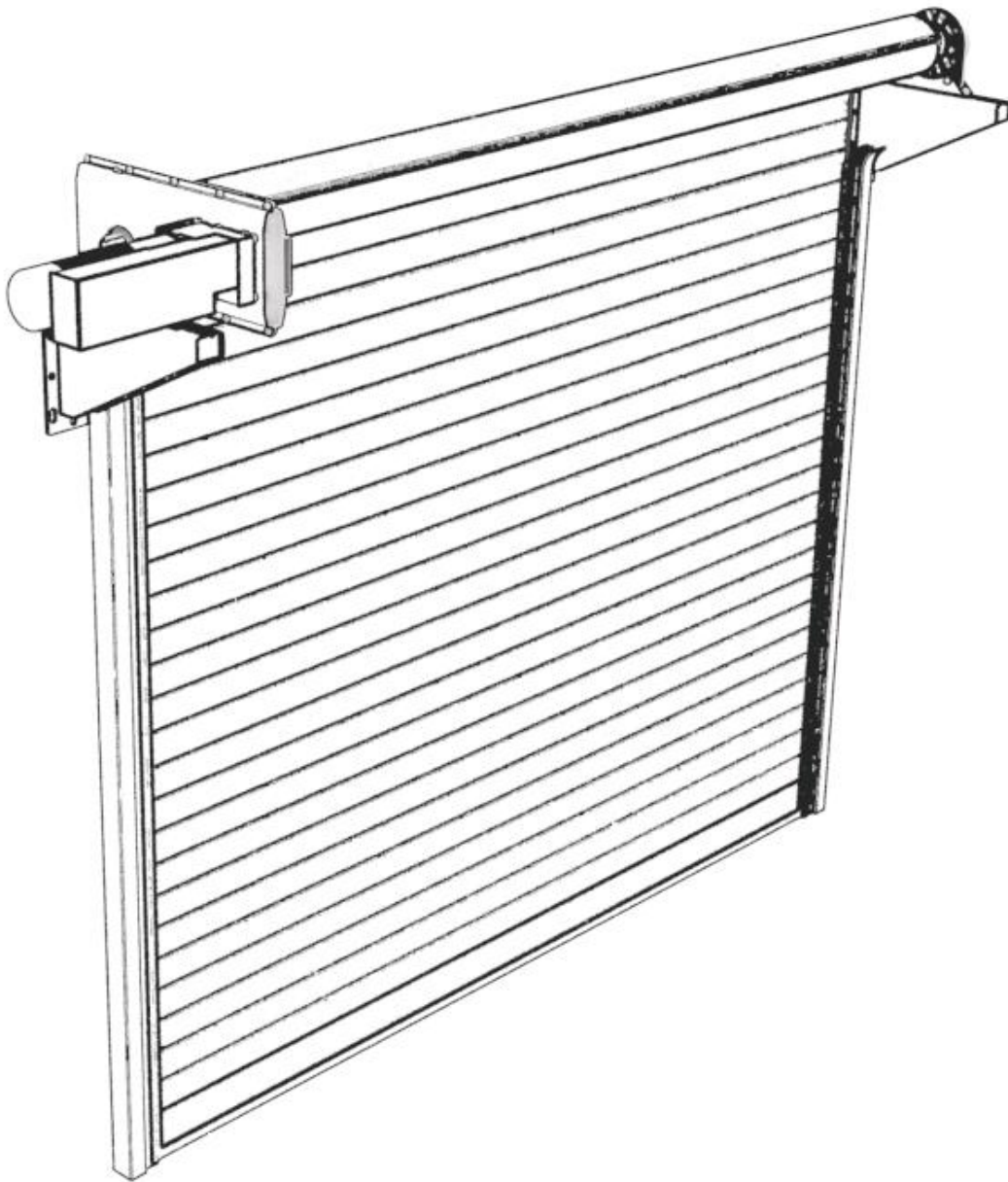


TECNOSERRANDA

**CHIUSURE
METALLICHE PER L'EDILIZIA**

Rolling Shutters - Residential Doors - Industrial Doors - Automations

Industrial Rolling Shutter



**Assembly
Instructions**

Industrial Rolling Shutter
Issued: 17/12/2014

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Choosing a Residential Rolling Shutter:

Important factors for choosing an Industrial Rolling Shutter are:

a) Required Dimensions

b) Frequency of Use: if the shutter is going to be used more than 5 cycles per day (open/close = 1 cycle), choose an Industrial Rolling Shutter.

IRS - Industrial Rolling Shutter



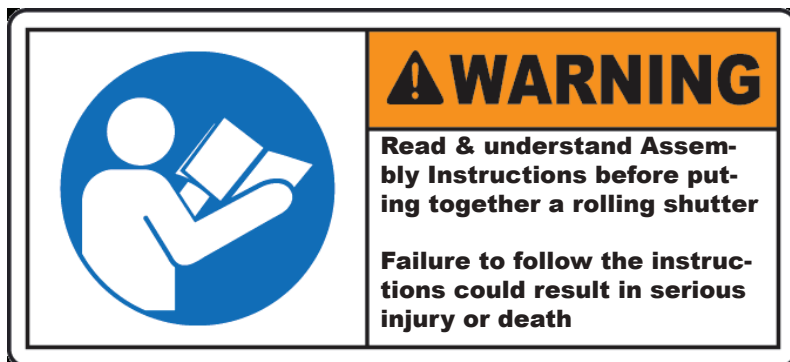
During the assembly make sure to take all safety measures and use the Personal Protective Equipment (PPE).

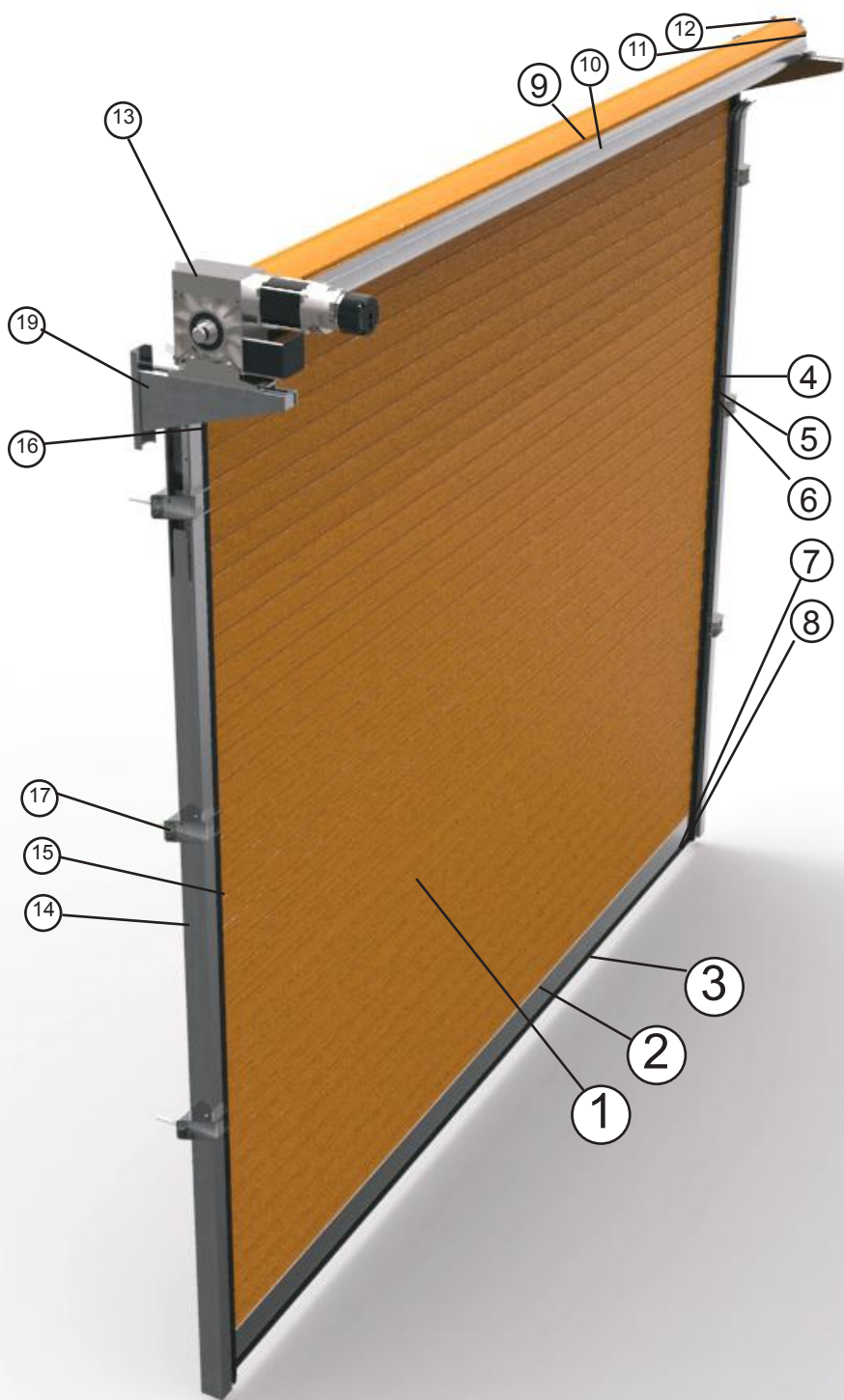
IMPORTANT NOTE

The assembly and installation of all the shutters and garage doors must be done from Tecnoserranda trained and authorized personnel only. For every question or classification please feel free to call Tecnoserranda technical support - Tel: +39030712121 - commerciale@tecnoserranda.com

WARNING

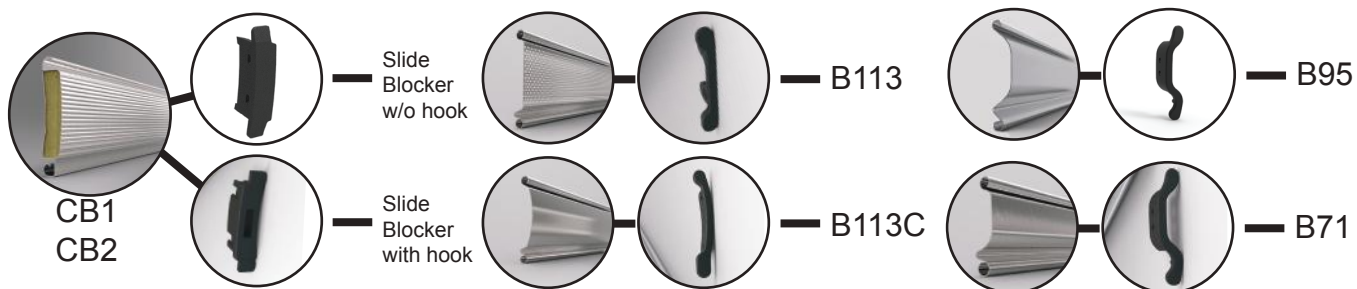
This is an auxiliary guide for Tecnoserranda training and is meant for assisting those who have been trained in assembling Tecnoserranda doors and shutters



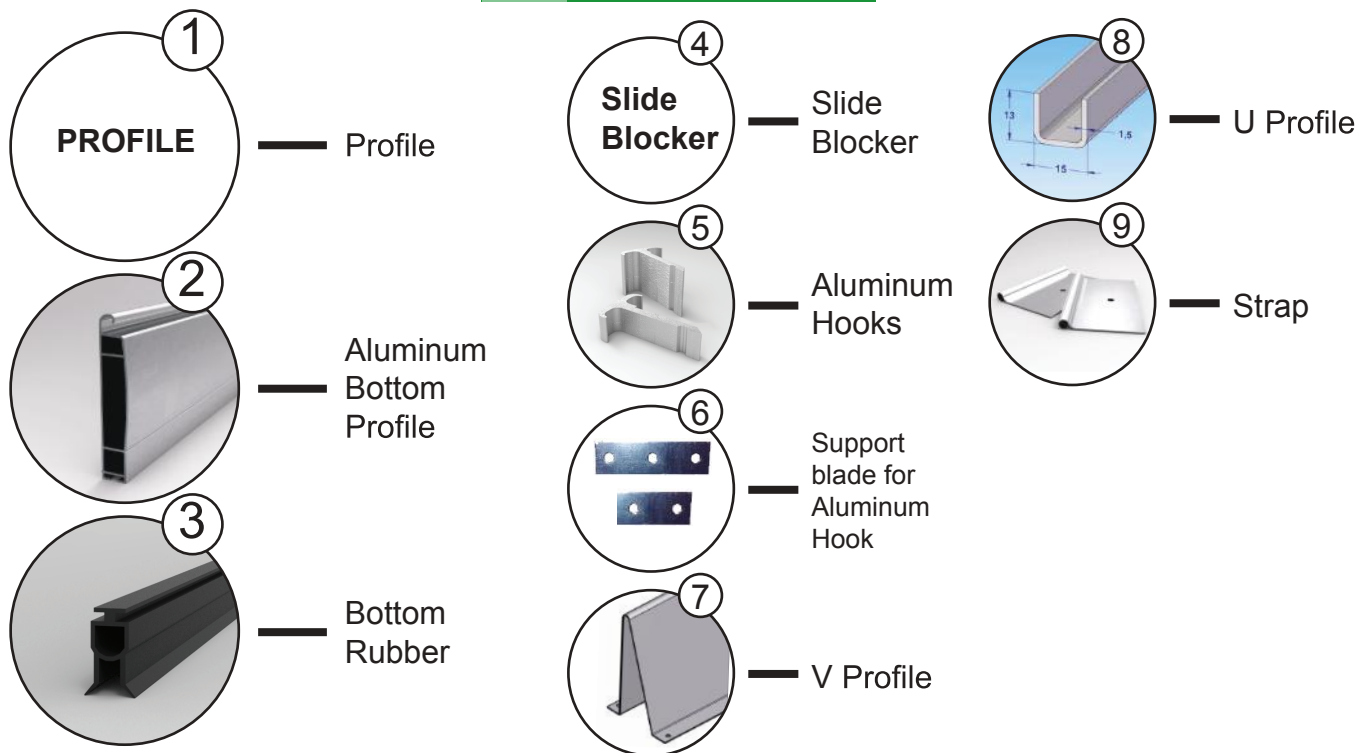


A

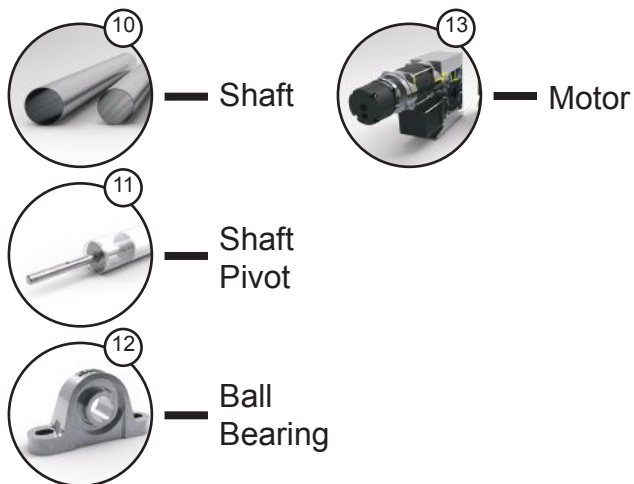
Part List



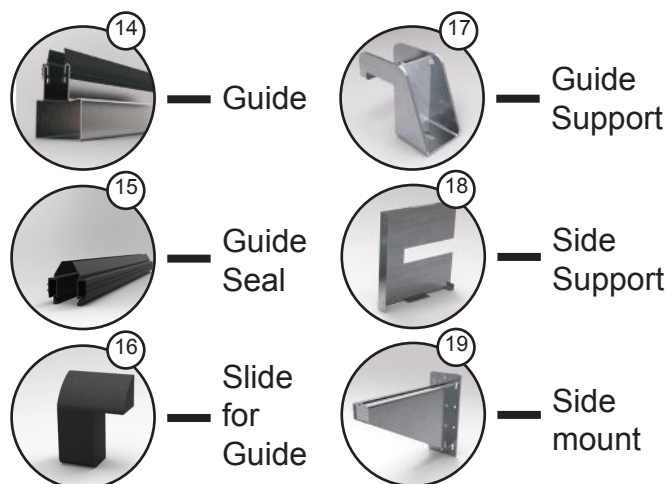
1. Curtain Parts



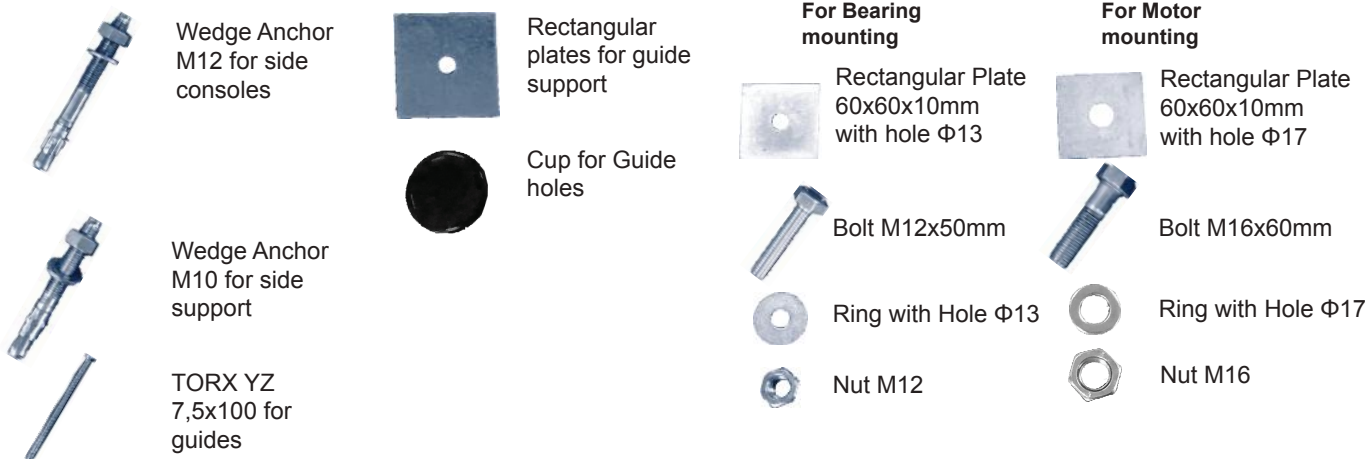
2. Shaft Parts



3. Guide Parts



4. Screws & Nuts





General View

B Shutter Assembly

1. Calculating the number of sheets

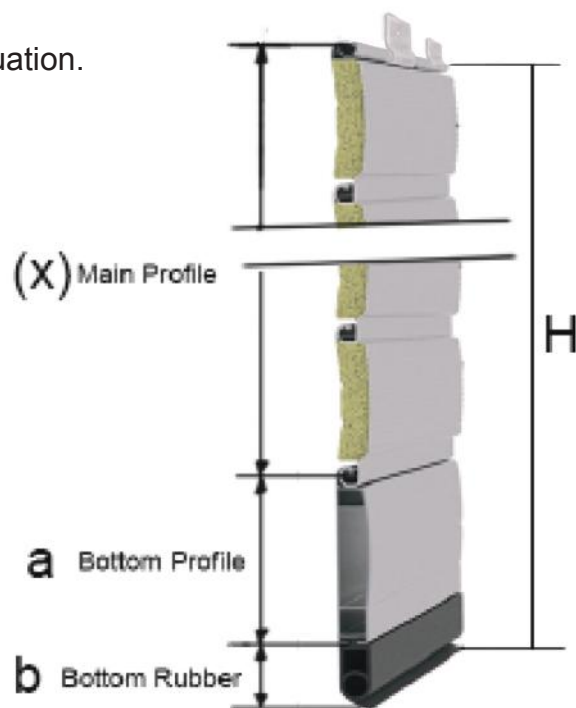
To calculate the quantity of the sheets use the following equation.

$$X = \frac{H - (a+b)}{\text{Profile's Step}}$$

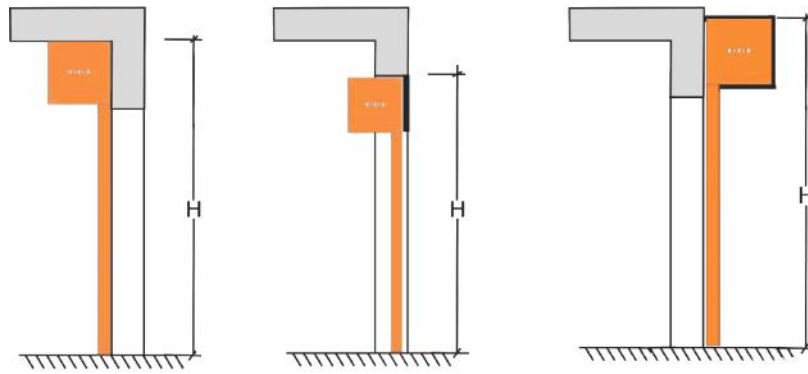
You can find each profile's step in TABLE 1.1

Profile Type	Height	Step
CB1 (Steel)	105 mm	91 mm
CB2 (Aluminum)	105 mm	91 mm
Pastore B113	128,5 mm	113 mm
Pastore Curved B113C	128,5 mm	113 mm
Antintbesta B95	104 mm	95 mm
Antintbesta B71	81 mm	71 mm
Bottom Terminal Profile	114 mm	100 mm
Bottom Rubber	35 mm	30 mm

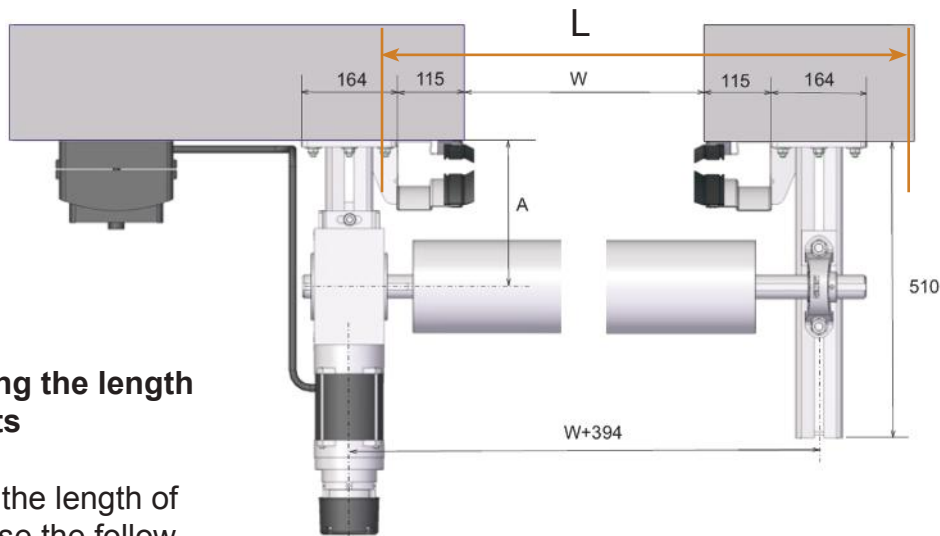
TABLE 1.1 - Profile Step



Curtain's Height



Different types of Installation



Shutter's Length calculation

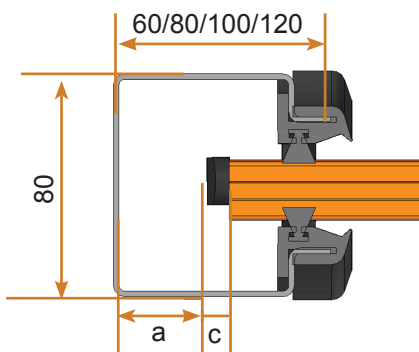
2. Calculating the length of the sheets

To calculate the length of the sheets use the following equation:

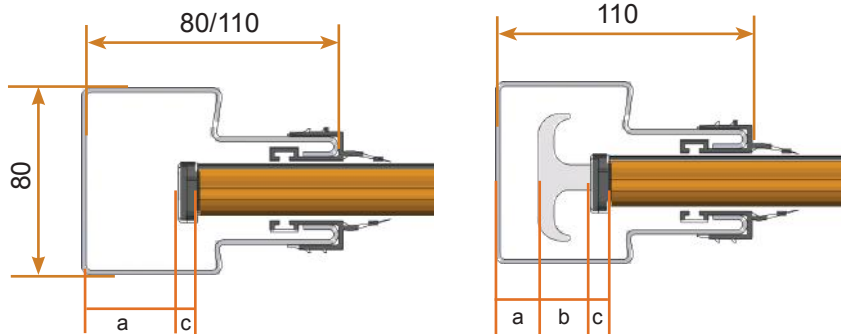
$$L_{\text{sheet}} = L - (a+b+c)*2$$



Guide Omega



Guide Omega with Lip



a = 22,5 mm
b = 22,5 mm

Profile	c
CB1/CB2	6 or 8
B113	6
B113C	6
B95	6
B71	6

TABLE 1.2 - Slide Blocker Width (c)

3. Assembling the shutter

After the sheets are measured and cut, assemble the shutter. Slide the sheets into each other and finish by placing the top and bottom profiles along with the bottom rubber. The straps are placed to the top profile according to the number of spring boxes on the shaft.



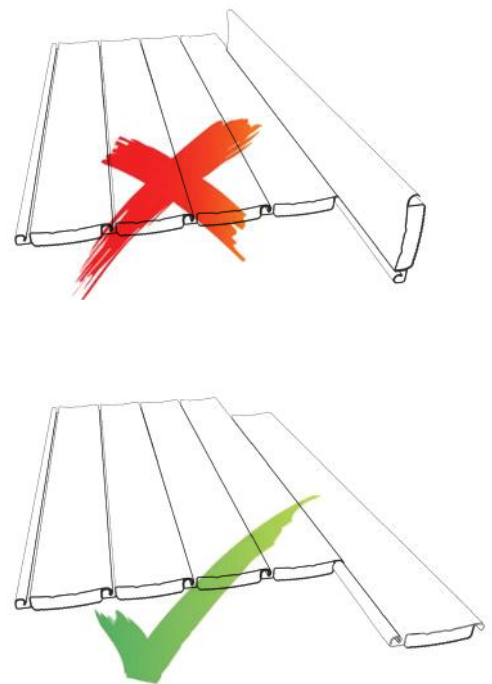
4. Installation of the slide Blockers and Hooks

Assemble the lateral slide blockers and when it is necessary, assemble the aluminum hooks. Use screws or rivets to fix the cap and the hook as required in each case.

Hook Placement Sequence		
Profile	26mm Hook	52mm Hook
Bottom Profile	-	Yes
1 st Sheet	-	-
2 nd Sheet	-	-
3 rd Sheet	-	-
4 th Sheet	-	-
5 th Sheet	-	-
6 th Sheet	Yes	-
7 th Sheet	-	-
8 th Sheet	-	-
9 th Sheet	-	-
10 th Sheet	-	-
11 th Sheet	-	-
12 th Sheet	-	-
13 th Sheet	-	-
14 th Sheet	Yes	-

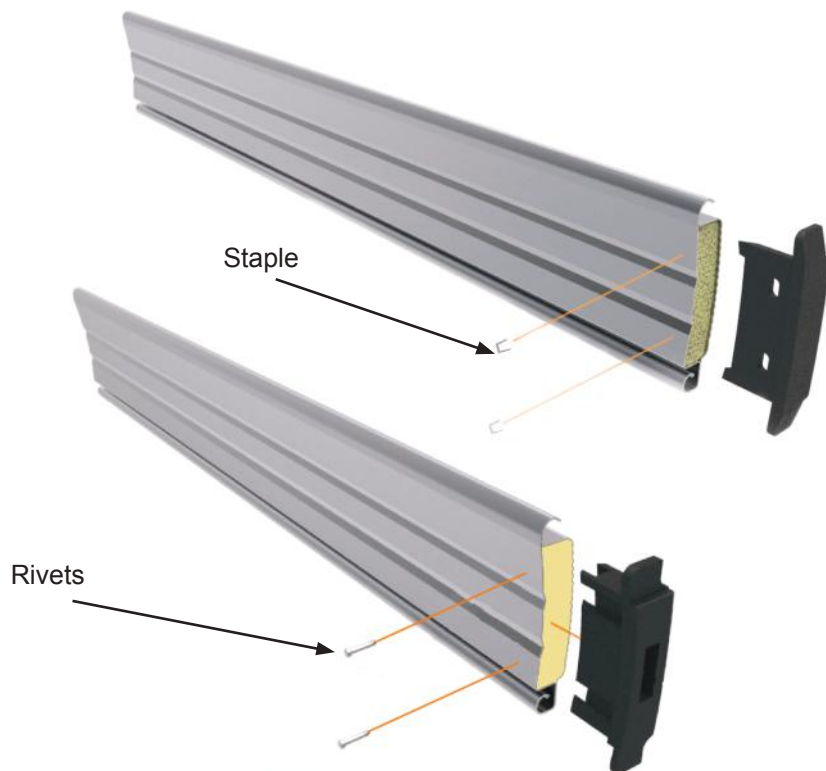
TABLE 1.2 - Hook Placement Sequence

NOTE: Repeat the sequence from the 1st to 14th sheets. Do not put hooks on the top ten sheets of the curtain

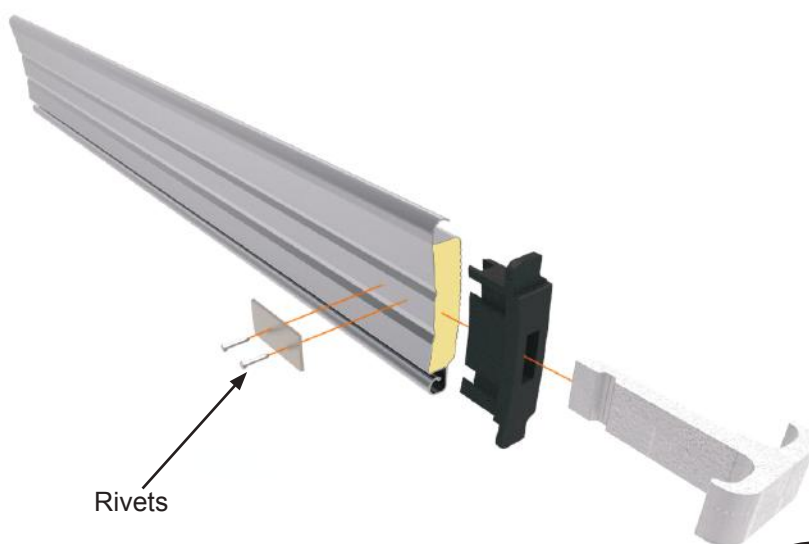


NOTE: When you slide in the sheets be careful not to tilt them too much or you might scrape the paint off.

a. Caps without Hooks



b. Caps with Hooks

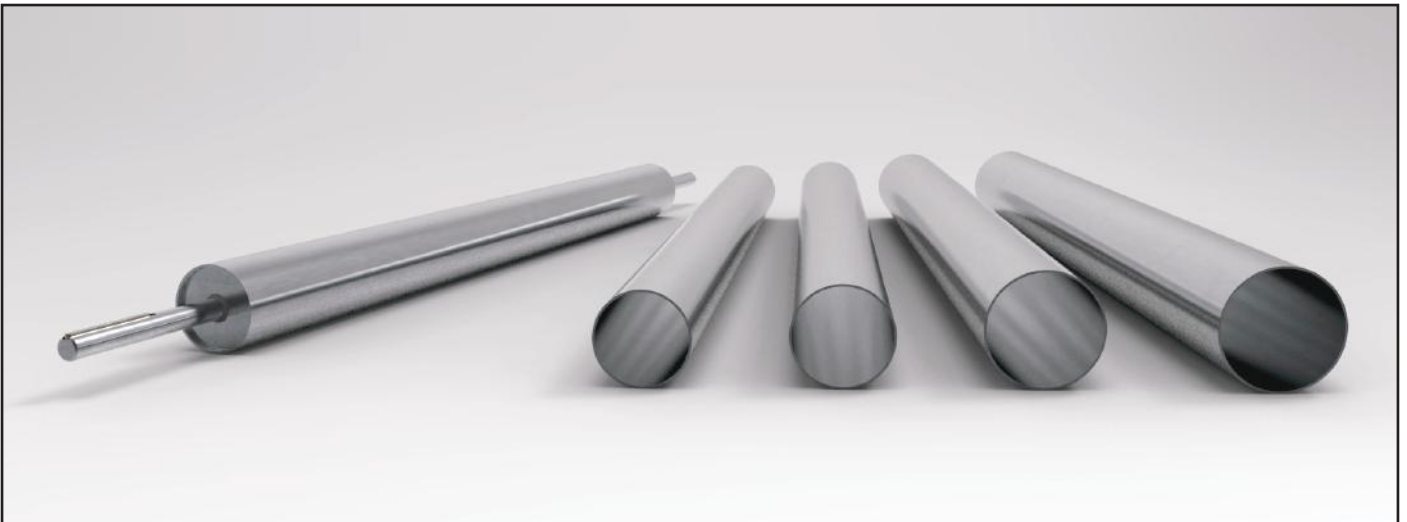


Curtain's length up to 6999mm



Curtain's length higher than 7000mm

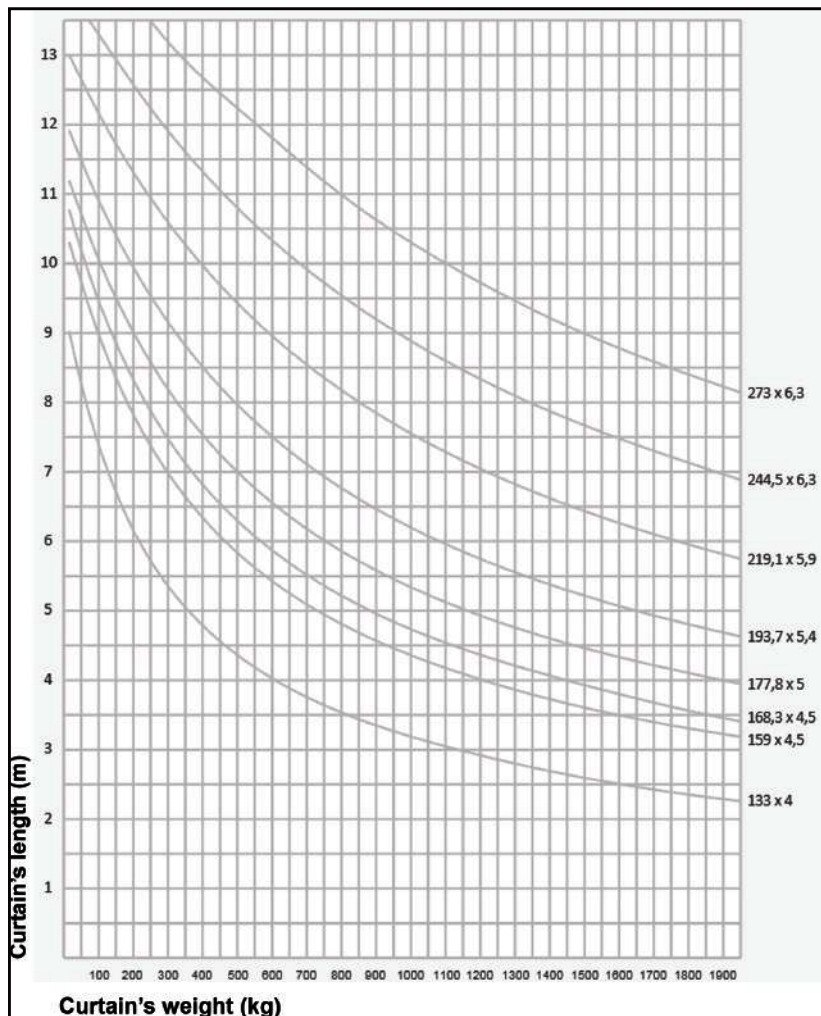




C Shaft Manufacturing and Assembly

1. Shaft selection

Weight the curtain of the shutter. Then select the appropriate shaft diameter using the table below or the software provided.



Shaft selection TABLE

2. Shaft length

Cut the shaft to the appropriate length using the software provided . The shaft's length is generally calculated by the following equation:

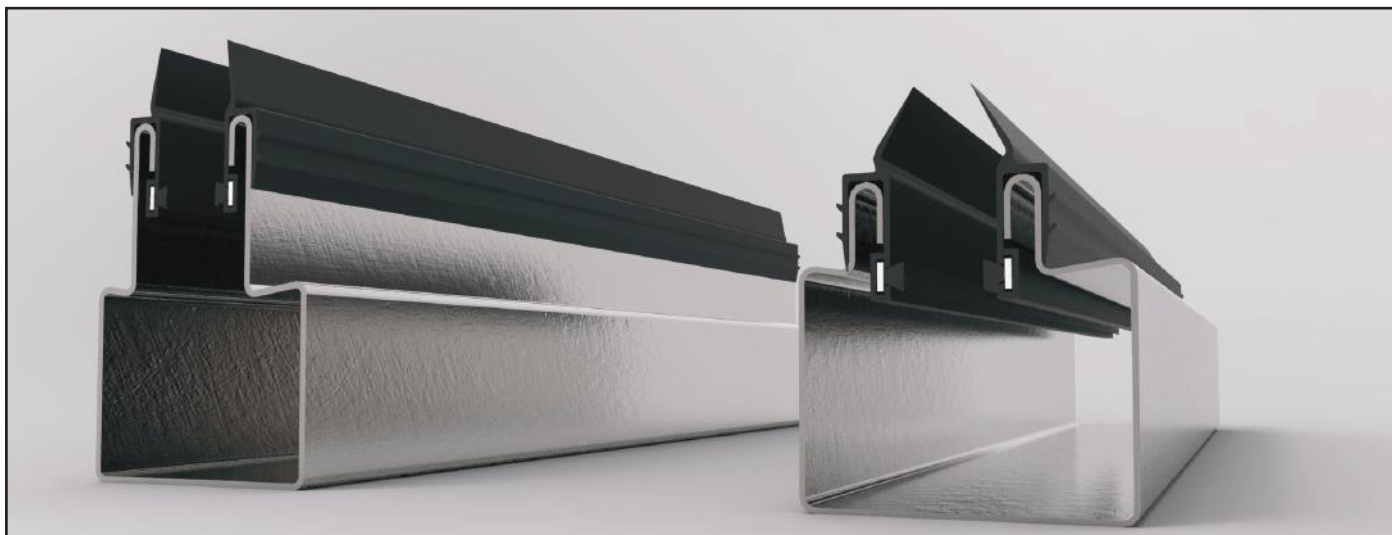
$$L_{\text{shaft}} = L - 75\text{mm}$$

NOTE: You can find L on page 7

3. Prepare and weld the Shaft Pivot

Select the proper Shaft Pivot and weld it on both ends of the shaft. To select the shaft pivot diameter and length use the information in the motor's technical data leaflet.

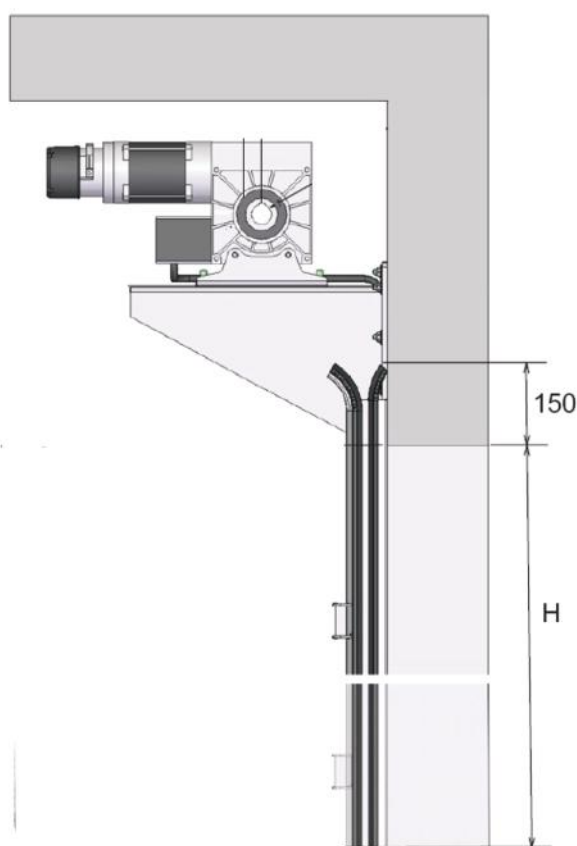




D Guide and Side Support Assembly

1. Select the Guide

First, select the appropriate guide. Take in account the size of the shutter to select the proper type of guide. Cut the guide 150mm longer than the wall opening. You can also use the software provided.



Guide height

2. Place the extras

Place the rubbers and the brushes and the slides on the guides.



Guide Omega 80/100/120mm

Guide Omega with lips 80x80x2mm

Guide Omega with lips 110x80x2mm

Guide Support

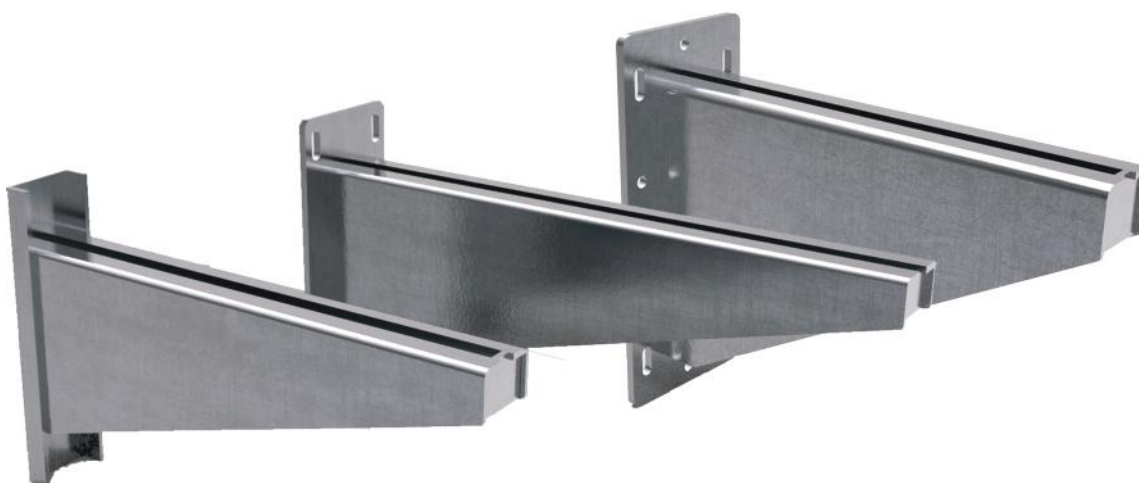
GUIDES TYPE "Ω"			ALUMINUM HOOKS	GUIDE SUPPORTS
Rolling shutter Width	< 4,0 m	GUIDES 80mm	NO	NO
Rolling shutter Width	> 4,0 m < 5,5 m	GUIDES 100mm	NO	NO
Rolling shutter Width	> 5,5 m < 7 m	GUIDES 120mm	NO	NO

GUIDES WITH LIP (NEW TYPE)			ALUMINUM HOOKS	GUIDE SUPPORTS
Rolling shutter Width	< 4,0 m	GUIDES 80mm	NO (OPTIONAL)	NO
Rolling shutter Width	> 4,0 m < 5,5 m	GUIDES 110mm	NO (OPTIONAL)	per 1,00 m
Rolling shutter Width	> 5,5 m < 7 m	GUIDES 110mm	YES	per 0,75 m
Rolling shutter Width	> 7 m < 10 m	GUIDES 110mm	YES	per 0,50 m

Guide Selection - Type, Hooks and Support

3. Select the side mount

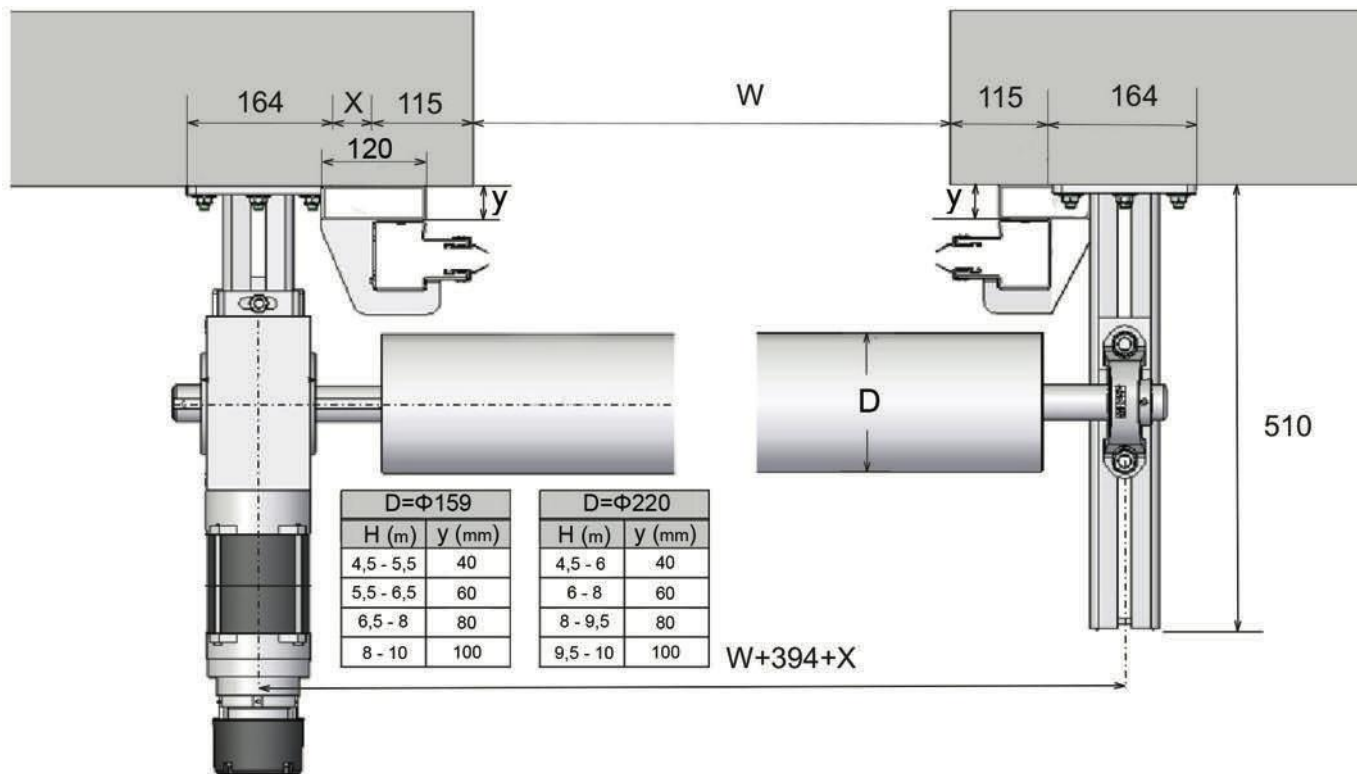
Select the appropriate side mount shelf using the software provided.



The three sizes of the side mounts

4. Hollow tubes

If the shutter is higher than 4,5 meters you must use hollow tube to distance the guide from the walls in order for the shutter to wrap properly. Use the picture and the table below to help you select the proper set of hollow tubes.



Hollow tubes selection table

5. Horizontal brush

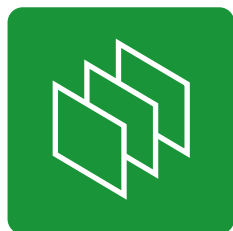
When you use hollow tubes you must place a brush on the top side of the shutter in order to cover the space between the wall and the shutter. Place a horizontal hollow tube (same size as in the sides) on the top side of the opening and fix it on the side tubes. Then screw the brush on top of it so that it covers the free space.



Brush placement







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