

Smoke & Fire Curtain

Single & Multi Barrel



INSTRUCTION MANUAL

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General

This manual has been generated for proper operation, installation and maintenance of fire and smoke curtains by trained, experienced specialist and or specialist with knowledge of installation of electrical devices.

Instruction manual to be read carefully and follow the prescribed sequence for installation. Operating manual to be retained in custody for later use /maintenance. Incorrect usage or improper operation of the assembly can cause the loss of system functions and result in damage to property and /or persons.

Product description

The Fire curtain consists of PU coated textile glass fabric, which rolled up over a hollow steel pipe in a compact head box which normally not visible. The fire curtains work according to fail-safe principle. In case of failure of all energy sources or fault or disconnection through alarm panel, the curtain descends in a controlled manner within maximum of 45 sec. into the fire alarm position. Curtain will be retract to its original position when the energy source restored or by the alarm reset.

System fulfils highest safety requirements through controlled descending over power failure and alarm activation. The weight on bottom bar provide the necessary energy for unwinding by gravitational force. The winding up takes place through 24 VDC tubular motor with planetary gear having various gear ratio to meet the lifting weight of various curtain sizes.



INFORMATION

This information provides you with additional tips!



ATTENTIONS

A warning draws your attention to potential dangers for the product.



DANGER

This warning draws your attention to possible risks to your life or health!

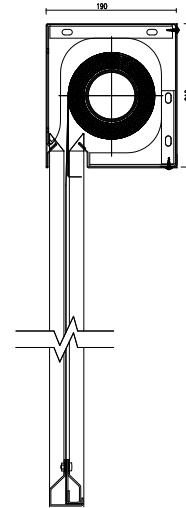
General

Specification

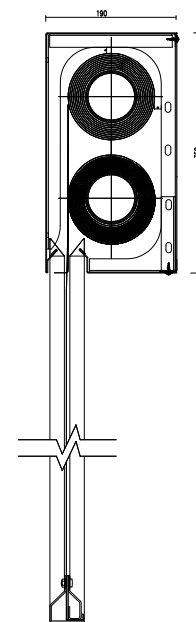
Fabric	PU-coated glass fabric, 690 g/m ² , color grey, Non - Flammable according to DIN 4102-1, A2
Unwind	Controlled Gravity Descend
Windup	24 VDC motor integrated with planetary gear
Installation	Ceiling or wall mounted
System dimensions	System width ≤ 25000 mm Unwinding length ≤ 12000 mm
Head box	GI Sheet 1.2 mm powder-coated
End section	GI Sheet 2.5 mm powder-coated
Classification/ Standard	UL10D
Side guides (SFS)	Steel 2.5 mm powder-coated, dimensions (W x D) 50 x 100 mm. The curtain material will be delivered with a restrain system. In this way, it prevents the curtain material being pulled out sideways from the tracks in case of deflection by pressurization (e.g. excess pressure by fire.)

Safety Regulations

Single Barrel system - Smoke and Fire Curtain

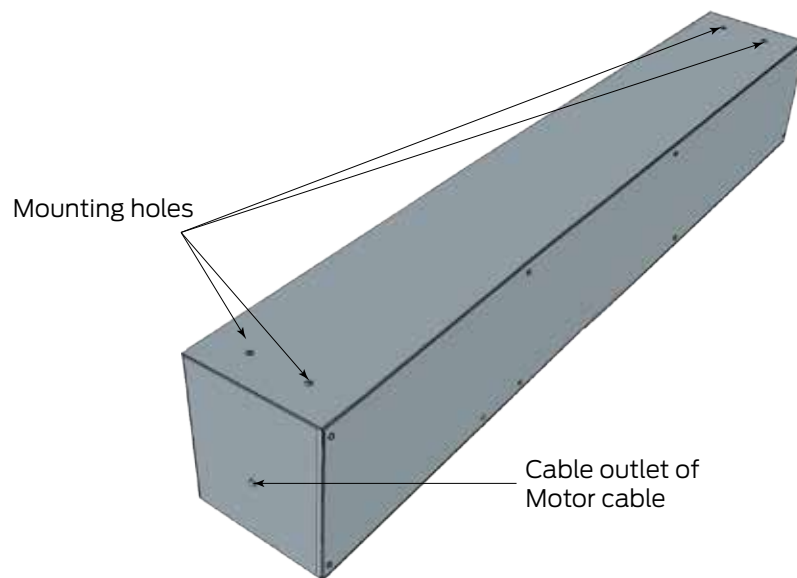


Multi Barrel system - Smoke and Fire Curtain

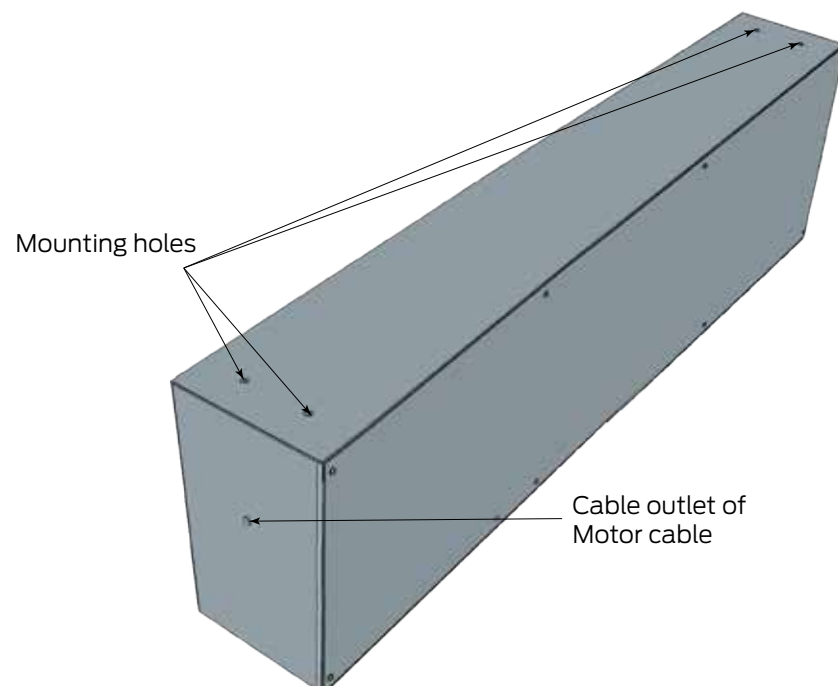


Figures

Box system “Single Barrel“

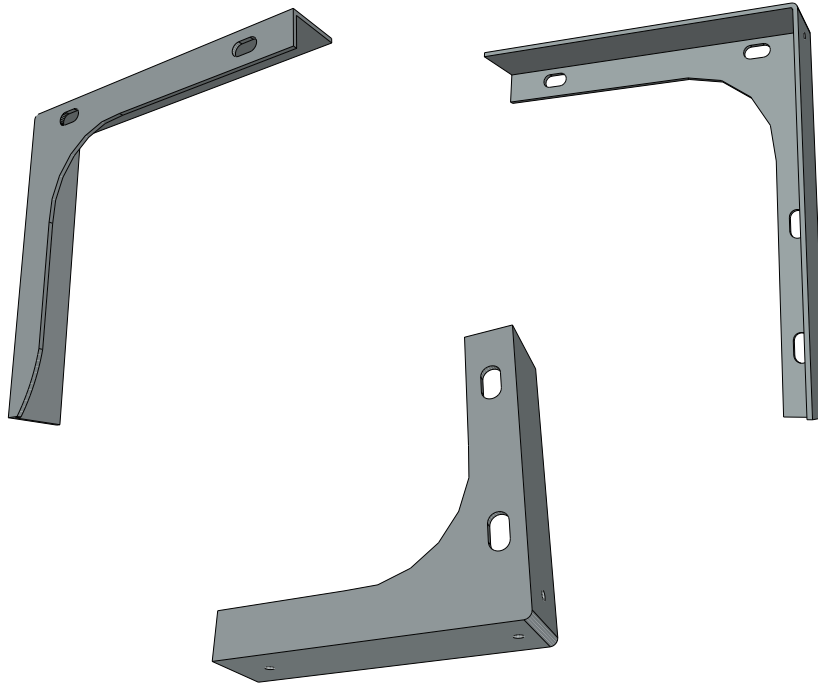


Box system “Double Barrel“

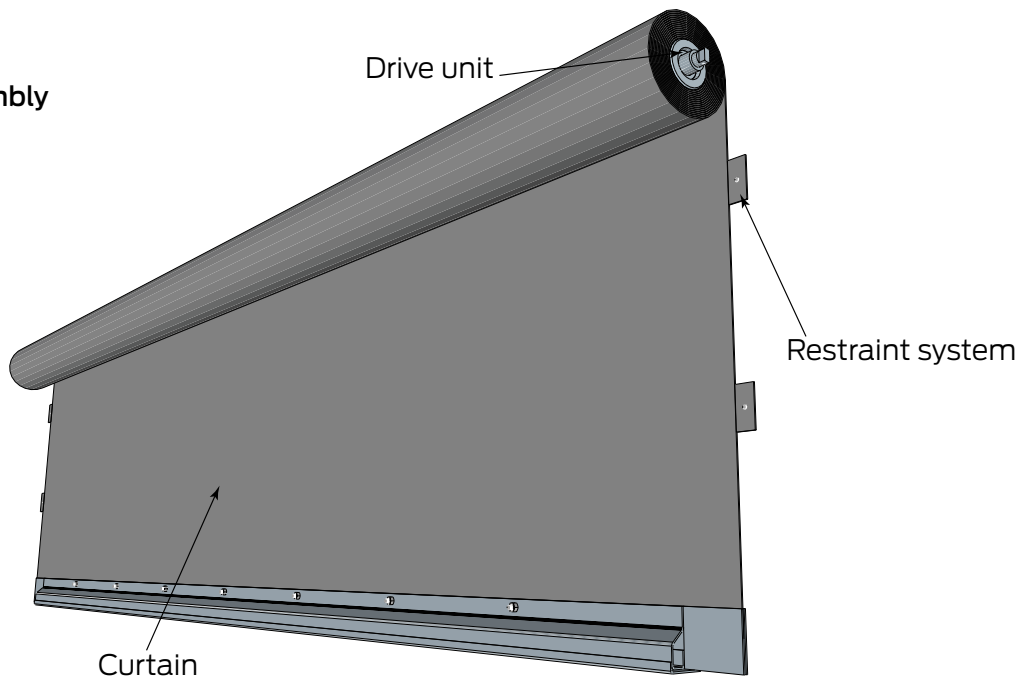


Figures

Reinforce Brackets

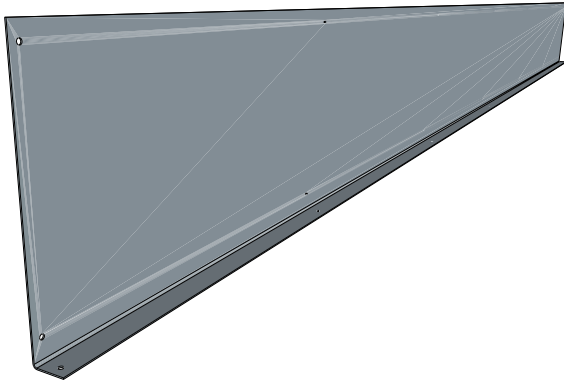


Roller Assembly

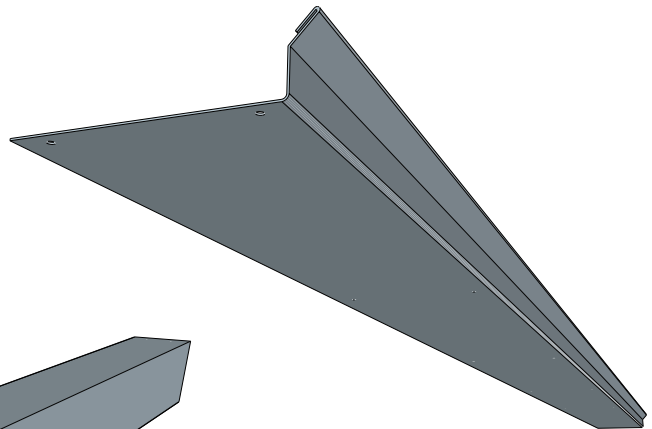


Figures

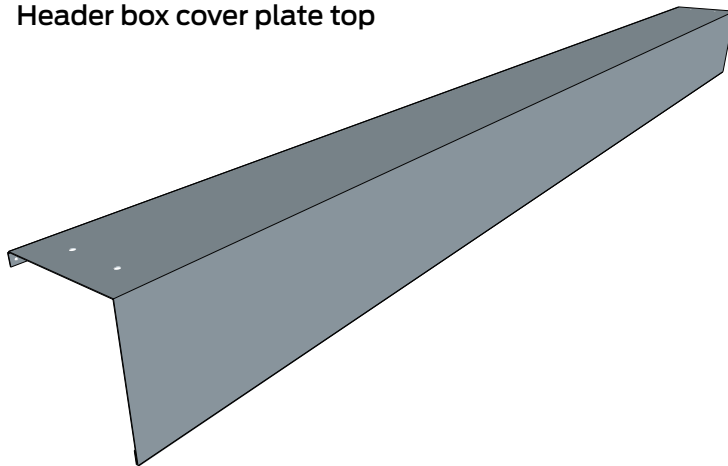
Header box cover plate side



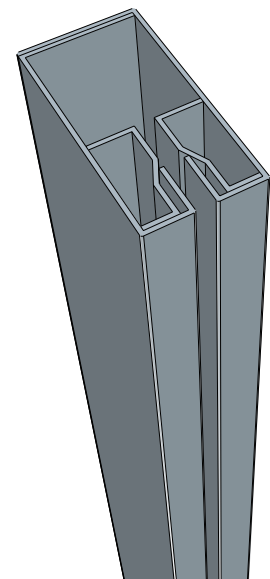
Header box cover plate bottom



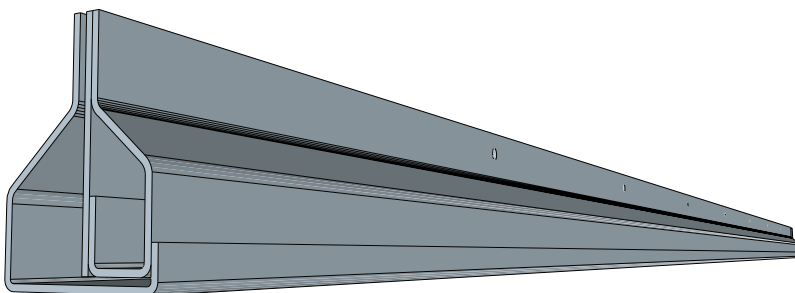
Header box cover plate top



Side guide rails (2 pieces)



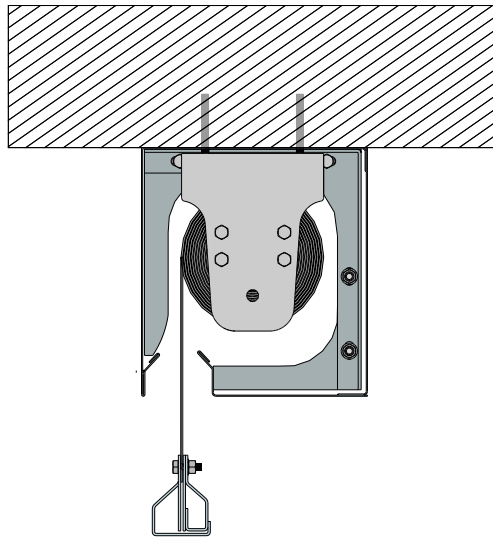
Bottom Bar



Installation

Installation variants

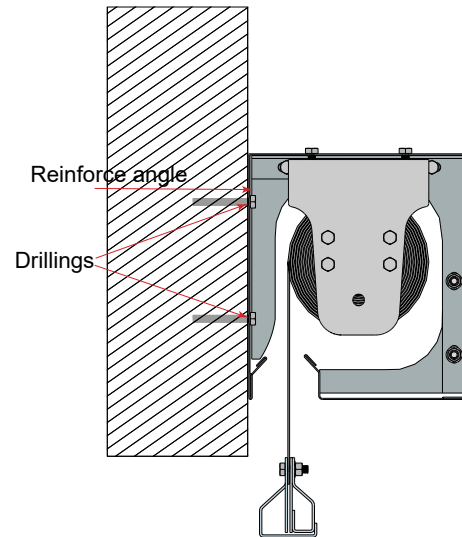
Fixing to the ceiling



Direct fixing to the ceiling

Holes are provided on the upper side of the head box for direct fixing to a ceiling.

Fixing to the wall



Fixing directly to the wall

For this purpose appropriate holes are to be drilled into the head box. Please make sure that the drillings are at the same position as the reinforce angles. Number and distance of the drilling must correspond to the top drilling

The holes on the upper side must be closed in a proper way.

Install head box

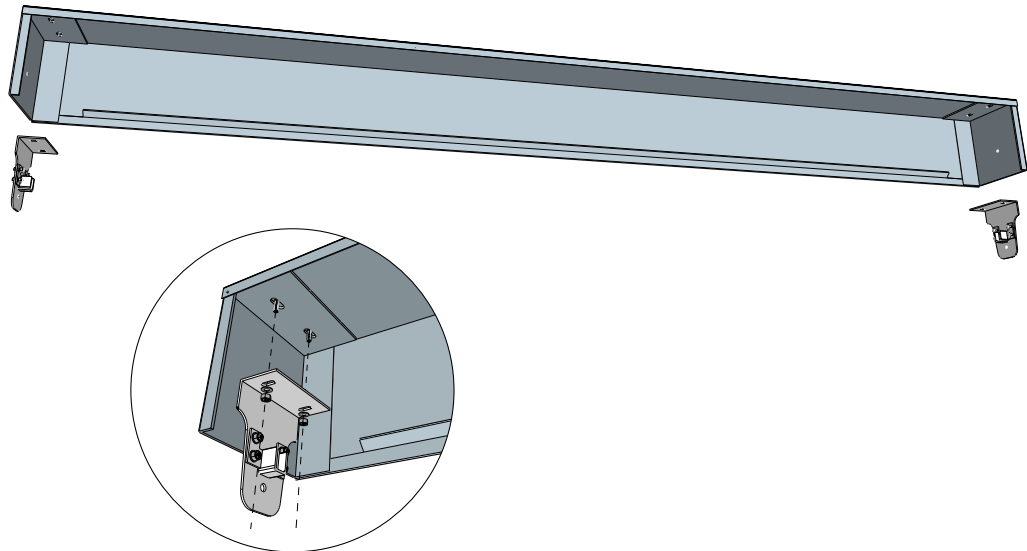
The head box is installed without roller assembly for now. Depending on the design (single piece or double piece) this can consist of several parts. Box connector, support bracket and associated screws are enclosed with the Fire curtain.

! **ATTENTIONS** *The making of the fixing holes in the supporting structure must be carried out with greatest caution as otherwise a proper functioning of the curtain is not ensured.*

The complete box system must be mounted horizontally and in an alignment. Crookedly mounted boxes or box parts lead to faults and damages to the curtain material.

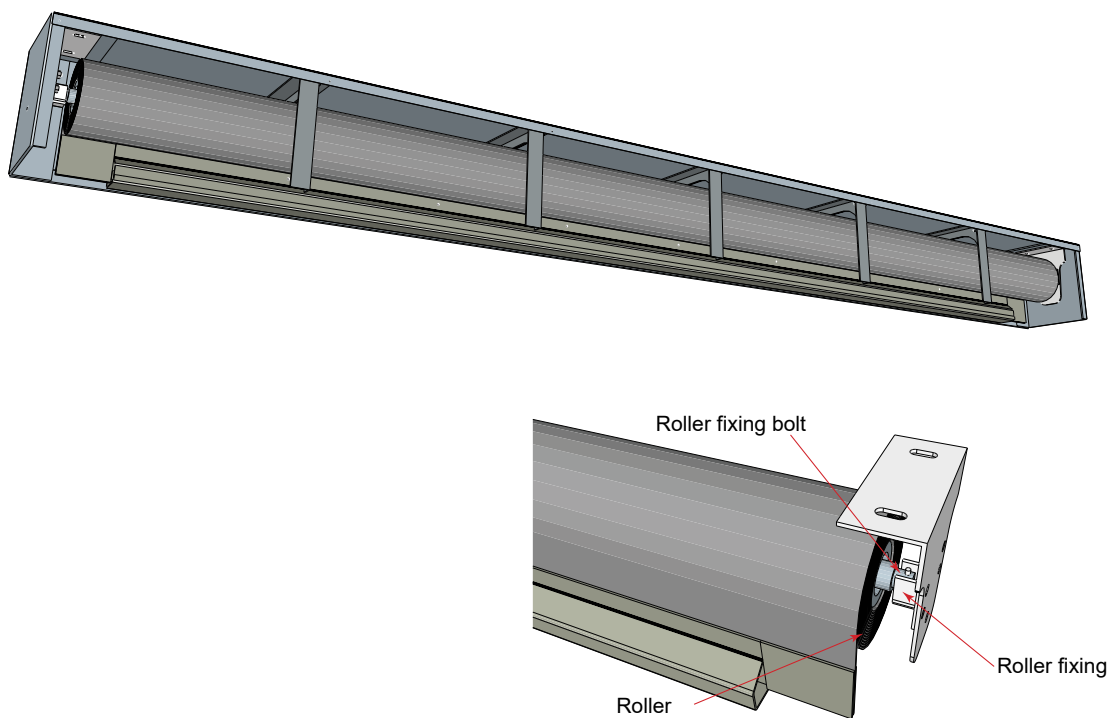
Installation

Installing the roller support bracket



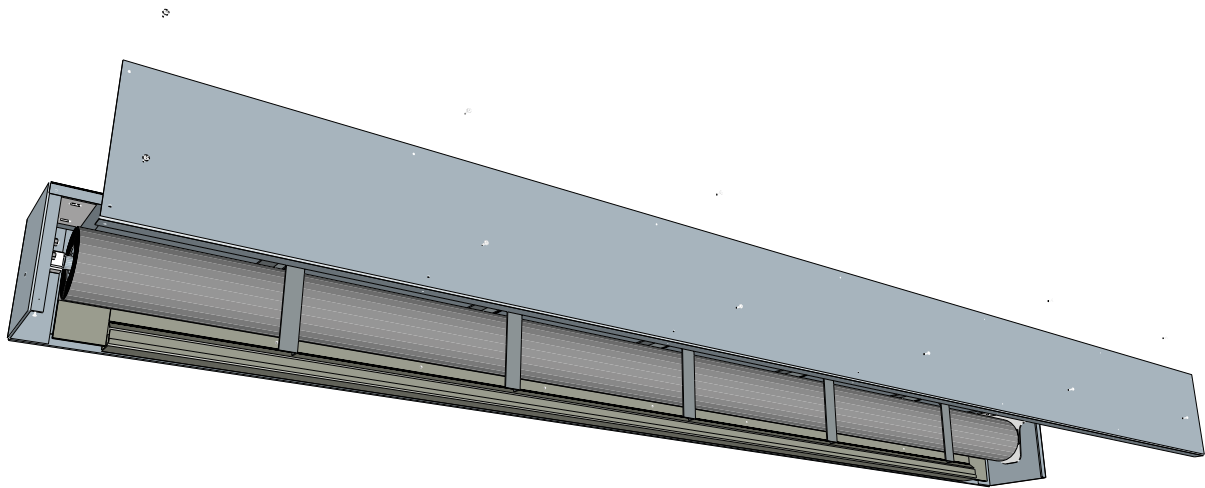
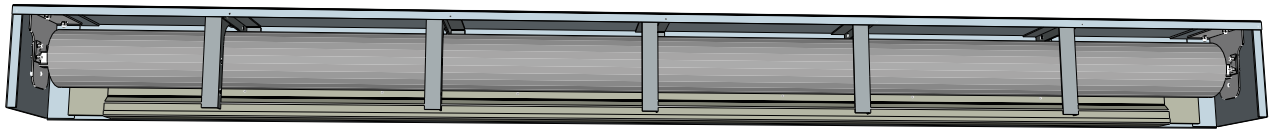
Installing roller assembly

Insert roller assembly into the head box with the help of two people or suitable lifting devices. Please ensure that the fabric is fixed with a strip or else. The fabric must not drop during installation.

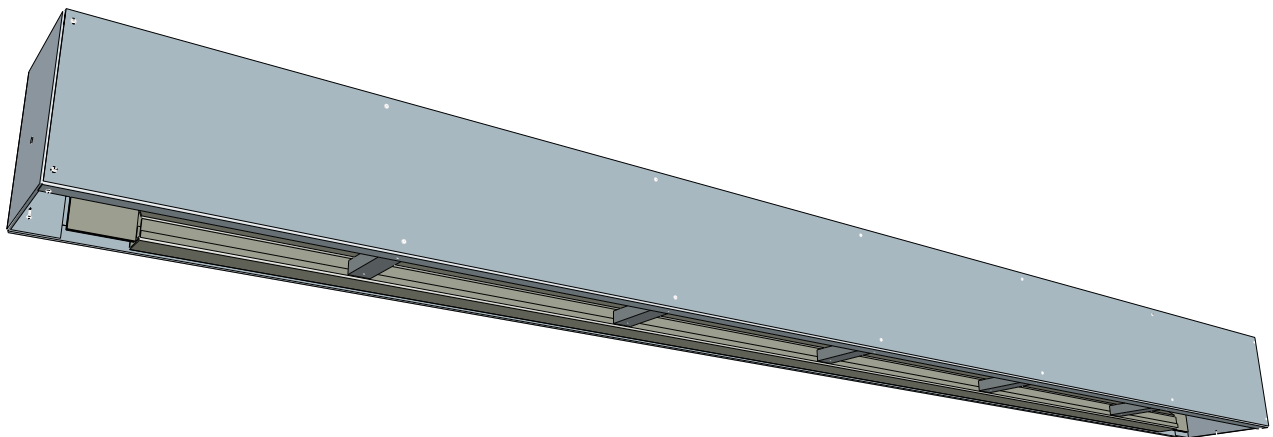


Installation

Install head box cover plates



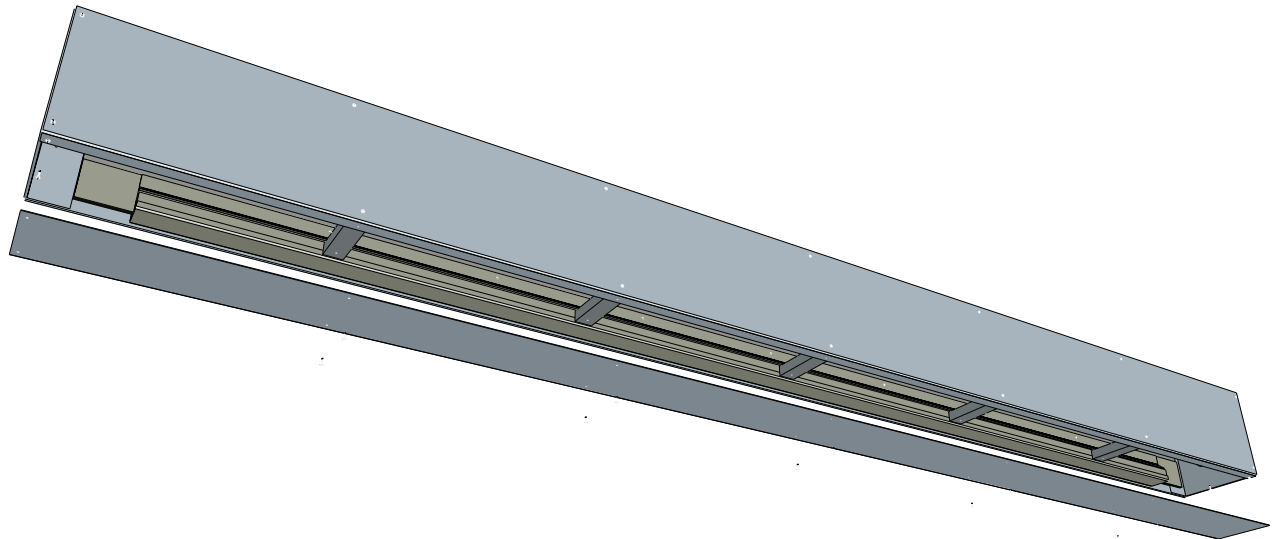
Head box front cover plates fixed with self tapping screws



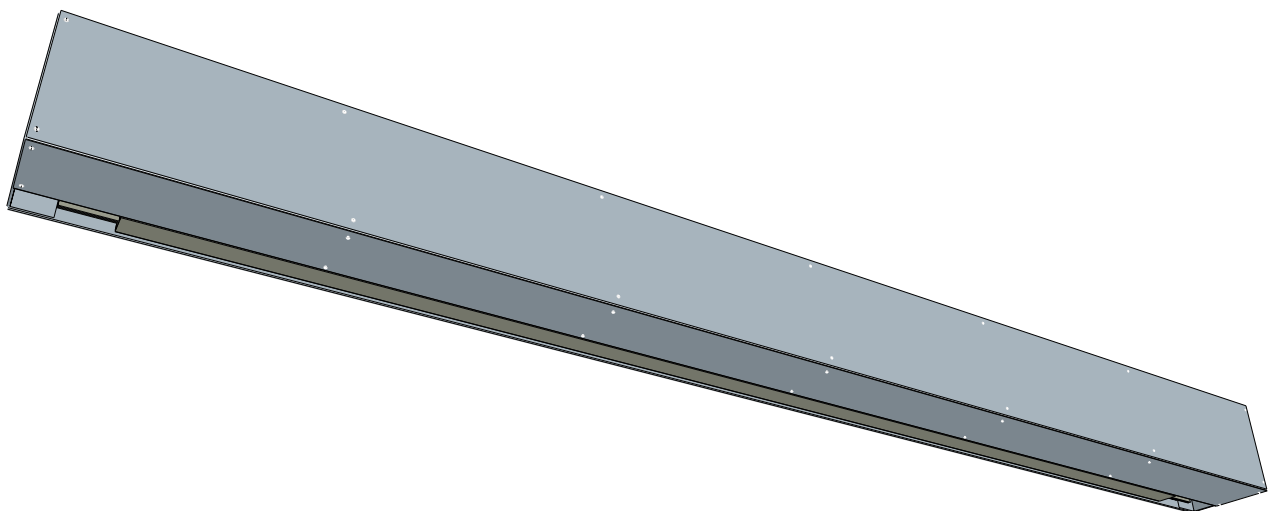
! **ATTENTIONS** After installation of the head box the area below the removeable plate must be free accessible. If the head box is installed above a suspended ceiling a constant possibility for access to the wall is to be ensured.

Installation

Install head box cover plates



Head box bottom cover plates fixed with self tapping screws

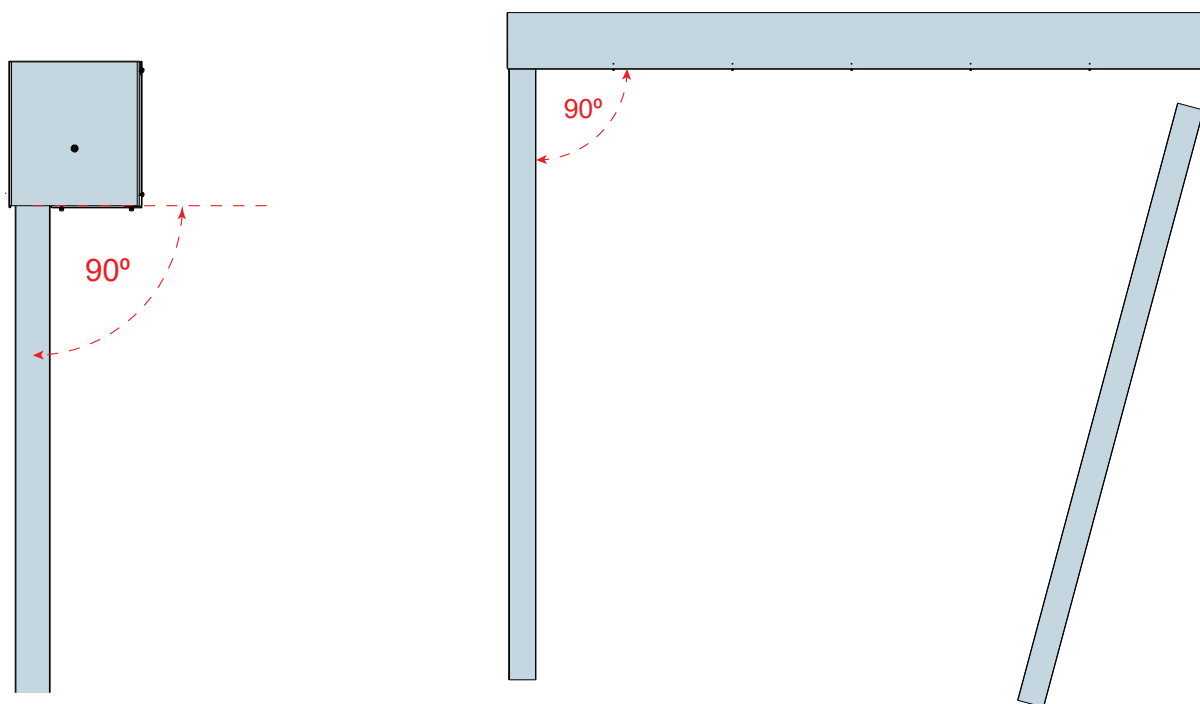
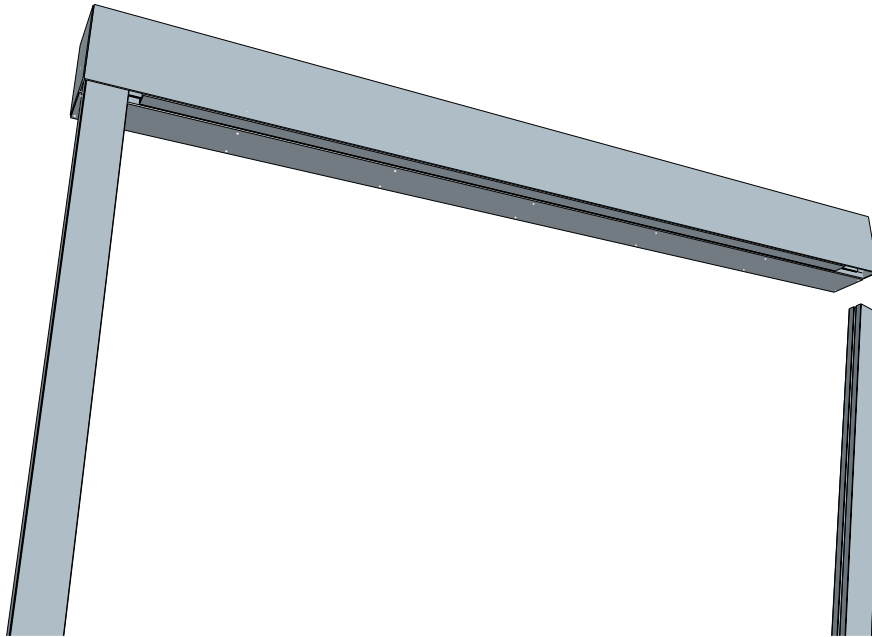


! **ATTENTIONS** After installation of the head box the area below the removeable plate must be free accessible. If the head box is installed above a suspended ceiling a constant possibility for access to the wall is to be ensured.

Installation

Set the side guides

Align the side guides. The side guides must be lined up flush and at right angle with the edge of the head box and likewise flush and at right angle with the outer ends of the head box.

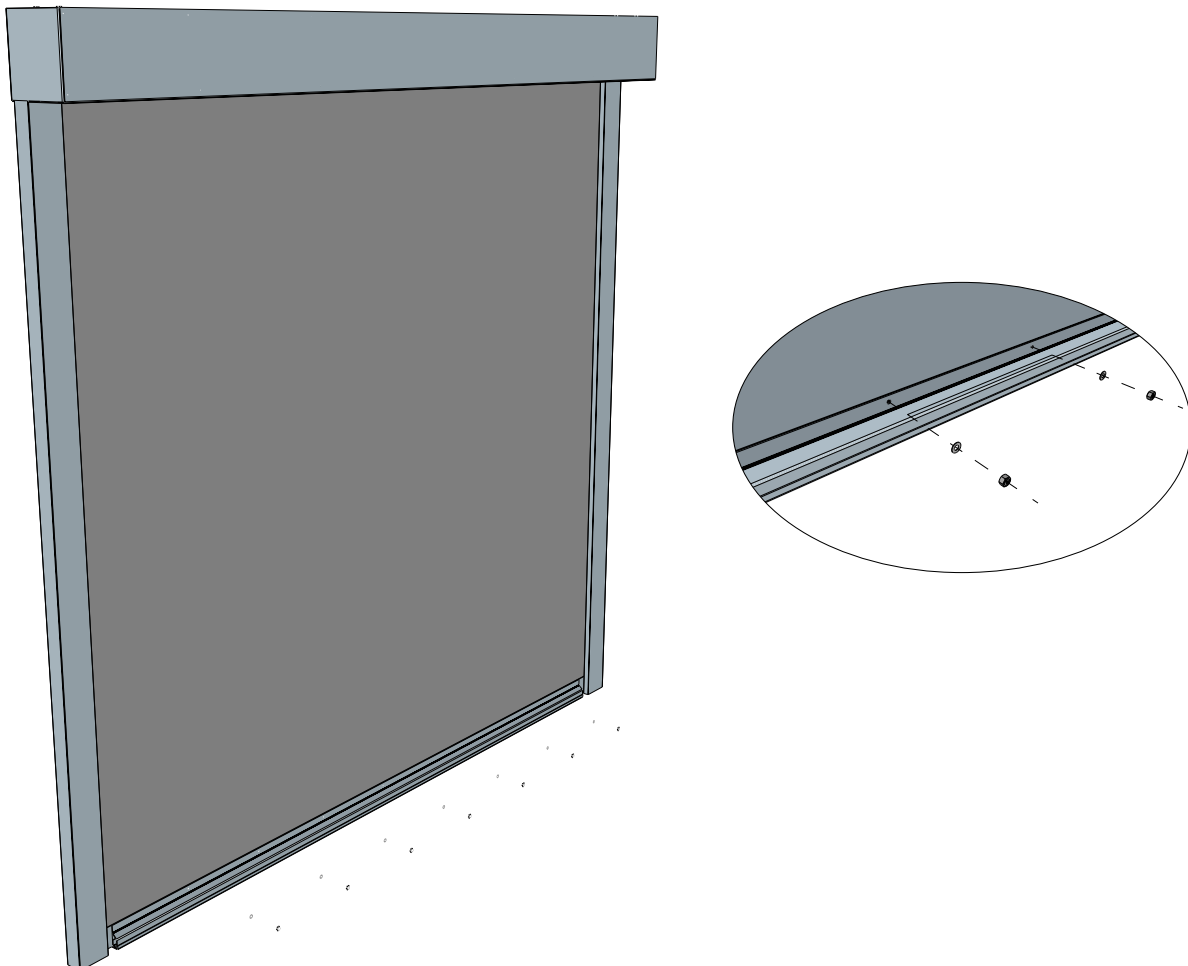


Align side guides

Installation

Installing bottom bar

- If necessary adjust the bottom bar again. The bottom bar should have the same distance to both side guides and lock up shortly with the housing box.
- The fixing of the bottom bar takes place at the already existing drill holes. (The curtain material must be preforated at this place)
- Fix the bottom bar with the provided nut bolts (provided in the delivery contents) at the already existing holes. The bolts have to be placed into all existing holes.



i **INFO** Please check before attaching the rivets that the bottom bar is lined up precisely with the head box.

Start up

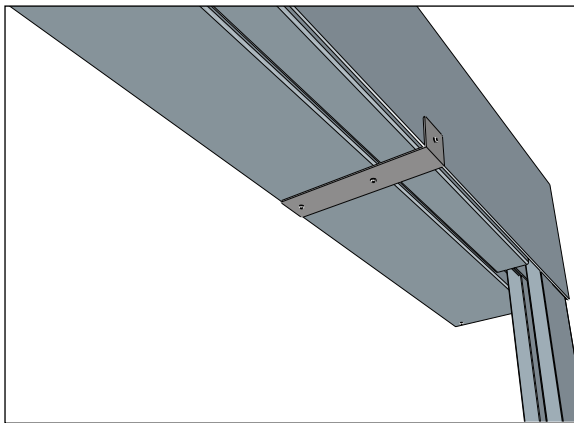
Start the initial operation (according to the installation manual of the control panel / control unit).

Attach installation retainer

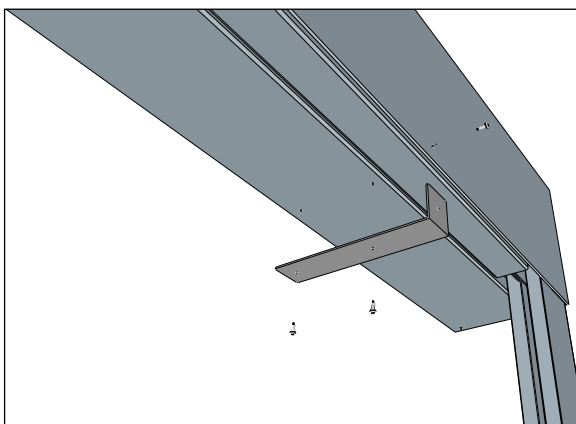
! **ATTENTIONS** *Until the final putting into operation the curtain has to be secured by the installation retainer. Because the curtain unwinds automatically when power line is switched off, it could be damaged.*

✦ Attach the enclosed installation retainer as shown.

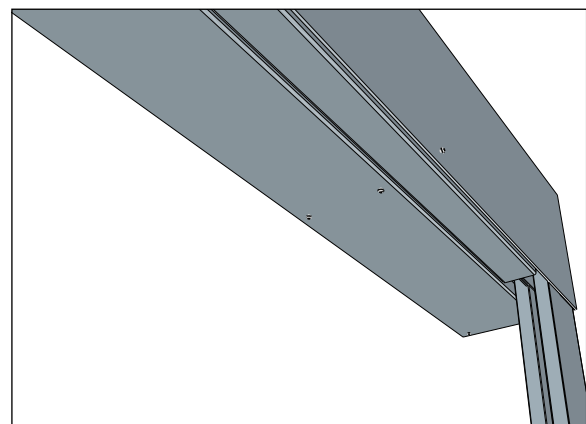
Installation retainer



Installation retainer (schema)



Remove retainer L bracket from the hood cover which installed by screws to close the curtain.



Reinstall retainer bracket screws back to the hood cover to avoid smoke leakage.

! **ATTENTIONS** *The installation retainer must be removed before the final putting into operation of the system.*

Air Leakage Data for smoke and fire curtain

Curtain Model: NFC-SB100S

Pressure (in. of WC)	Air Temp, °F	Leakage (cfm/sq ft)	Closing Force, lb	Artificial Bottom Seal
0.050	Ambient	1.26	N/A	No
0.100	Ambient	2.00	N/A	No
0.200	Ambient	2.87	N/A	No
0.300	Ambient	3.97	N/A	No
0.050	400	0.53	N/A	No
0.100	400	0.86	N/A	No
0.200	400	1.33	N/A	No
0.300	400	2.01	N/A	No
0.050	Ambient	1.08	N/A	Yes
0.100	Ambient	1.67	N/A	Yes
0.200	Ambient	2.48	N/A	Yes
0.300	Ambient	3.16	N/A	Yes
0.050	400	0.54	N/A	Yes
0.100	400	0.83	N/A	Yes
0.200	400	1.42	N/A	Yes
0.300	400	1.74	N/A	Yes

Curtain Model: NFC-MB100S

Pressure (in. of WC)	Air Temp, °F	Leakage (cfm/sq ft)	Closing Force, lb	Artificial Bottom Seal
0.050	Ambient	2.86	N/A	No
0.100	Ambient	4.92	N/A	No
0.200	Ambient	-	N/A	No
0.300	Ambient	-	N/A	No
0.050	400	1.55	N/A	No
0.100	400	2.19	N/A	No
0.200	400	-	N/A	No
0.300	400	-	N/A	No
0.050	Ambient	2.79	N/A	Yes
0.100	Ambient	3.96	N/A	Yes
0.200	Ambient	5.31	N/A	Yes
0.300	Ambient	6.75	N/A	Yes
0.050	400	1.21	N/A	Yes
0.100	400	1.92	N/A	Yes
0.200	400	3.07	N/A	Yes
0.300	400	3.79	N/A	Yes

Care and Maintenance

The fire curtain and if required the hold-on device must be kept workable all the time. It must be checked at least once a month in personal responsibility of the owner or his trained staff.


Functional check

The functioning of the system must be checked regularly by the operator. In case of a possible defect, the manufacturing company is to be notified immediately. Damaged parts are to be replaced immediately.

The functioning of the fire curtain should be checked monthly. For this purpose the following steps are necessary:

- Make sure that the unwind area is always free from obstructions.
- Let the curtain unwind via service button or manual trigger button.
- Carry out a visual inspection of the attachments and material.
- Let the curtain wind up again (via reset button of the manual trigger button or service button) .
- Check if the curtain winds up properly and remains in this position.

Maintenance

 **DANGER** *Fire protection equipments serve to protect human lives and must therefore be regularly - at least once a year - by a specialist company authorized by the manufacturer.*

The maintenance is done according to a maintenance checklist specified by the manufacturer.

The annual maintenance for defect free roll-down and working of the fire curtain in combination with the hold on device must be done by specialist.

Clean curtain material

 **ATTENTIONS** *The curtain material is recommended to clean by a hand blower. No water or chemical recommended for cleaning of the fabrics as the coating may get affected.*

Care and Maintenance

Maintenance check list

No.	Check points	Test o.k.	Notes
1.0	Optical inspection		
1.1	Check the fire curtain for damaging, contamination, oxidation	<input type="checkbox"/> yes <input type="checkbox"/> no	
2.0	Electrical inspection		
2.1	Check, if the electrical supply lines are connected properly and fixed well at the actuator	<input type="checkbox"/> yes <input type="checkbox"/> no	
2.2	Check, if the wiring to the controller has been laid according to the wiring diagram.	<input type="checkbox"/> yes <input type="checkbox"/> no	
3.0	Functional inspection		
3.1	Attention! Check the operating voltage (according to manufacturer's instructions).	<input type="checkbox"/> yes <input type="checkbox"/> no	
3.2	Let the fire curtain move in its alarm position and check if the curtain descends completely. Ensure that the roll-off area is free of obstacles.	<input type="checkbox"/> yes <input type="checkbox"/> no	
3.3	Reset the curtain, Ensure that the curtain moves duly in its end position.	<input type="checkbox"/> yes <input type="checkbox"/> no	
4.0	Inspection of the mechanical parts		
4.1	Check the fastening of the head box and of the side guides	<input type="checkbox"/> yes <input type="checkbox"/> no	
4.2	Check the bearing of roller assembly.	<input type="checkbox"/> yes <input type="checkbox"/> no	

Tools required

Tools and instruments recommended for installation

It is imperative that the following tools / equipment are the minimal requirement and are ready at the site well in prior to the installation for which the quantity of each set depends upon the number of personnel involved in installation.

It is always important that spare / additional tools are always available at the site in order to ensure the availability of tools / equipment in case of failure of existing tools / equipment, in order to avoid any delay in installation.

- Drilling Machine - 110V / 220V (as per site requirement)
- Concrete Drill Bits - 9.5 mm & 10 mm (for anchor bolt fixing)
- Concrete Drill Bits - Various sizes
- Carpenter / Spirit level (size - 1 meter) / Spirit level
- Builder's Square
- Plumb Line
- Flat screw driver - Head size - 15 mm (for anchor bolt fixing)
- Flat screw driver - Head size - Various
- Flat screw driver - Head size - 6 mm
- Star screw driver - Head size - Various
- Flat head metal hammer - Size - Medium
- Flat head plastic hammer - Size - Medium
- Measurement tape - 5 meter
- Cold chisel - Size - Medium
- Grinding machine and grinding wheel

Tools required

HILTI DRILLING MACHINE –
HEAVY DUTY



DRILLING MACHINE – WITH
REVERSE ACTION



DRILLING MACHINE – WITH REVERSE
ACTION & INBUILT BATTERY



CONCRETE DRILL BITS



SPRITI LEVEL / CARPENTAR'S LEVEL



STEEL/IRON HEAD HAMMER



PLASTIC HEAD HAMMER

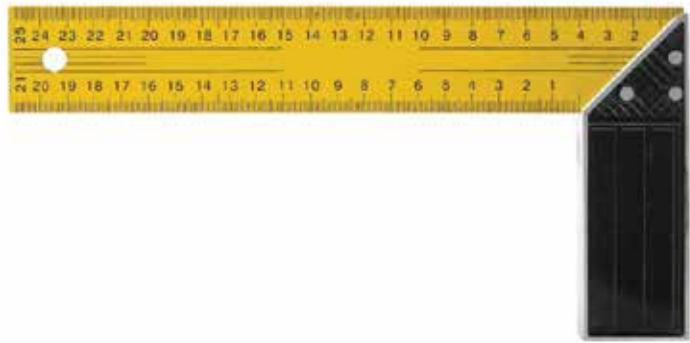


Tools required

PLUMB LINE



CARPENTAR'S LEVEL



MEASUREMENT TAPE



SCREW DRIVER – FLAT AND STAR TYPE



Tools required

GRINDING MACHINE



GRINDING WHEEL



COLD CHISEL

