



## INSTALLATION GUIDE RESIDENTIAL GARAGE DOOR

This guide describes the steps to follow for the installation of a door in sections and the hardware that is required for its installation. This document will be essential to guide you through this process. You must remember that the garage door must be properly installed to assure you a fault-free, secure and durable service. Even so, do not hesitate to contact one of our professional installers or our distributors for more information. This guide is property of Garex and no reproduction is allowed without a written consent from Garex.

### GENERAL INSTRUCTIONS

This guide will identify the right as well as the left from the inside view of the garage.

Marks are made on the doors at the emplacements where the hinges must be installed. They also indicate the emplacements of the steel anchorage plates used for the installation of the central hinges, the handles, the electric door opener in the top panel, as well as the steel reinforcement for the central lock in the “bar-lock” panel (second from the bottom).

The following pieces must be identified and separated; they will be installed on the right or left side of the door. These pieces can be interchanged:

- The corner supports for the inferior panels

- The vertical and horizontal rails (the horizontal rails are those with the curve)
- The enrolment drums in the case of torsion springs

## THE STEPS TO FOLLOW FOR THE INSTALLATION

- Step 1 PREPARATION OF THE OPENING
  - Step 2 PREPARATION OF THE PANNELS
  - Step 3 INSTALLATION OF THE VERTICAL RAILS
  - Step 4 INSTALLATION OF THE HORIZONTAL RAILS
  - Step 5 INSTALLATION OF THE TORSION SPRINGS OF THE EXTENSION SPRISNGS AND THE CABLES
  - Step 6 INSTALLATION OF THE WEATHERSTRIPES
  - Step 7 INSTALLATION OF THE SIDE LOCK
  - Step 8 LOCATION OF THE PLATES
- INSTALLATION OF LOW HEAD ROOM HARDWARE
- MAINTENCE GUIDE
- GAREX WARANTY

## DETAILED DESCRIPTION OF EACH STEP

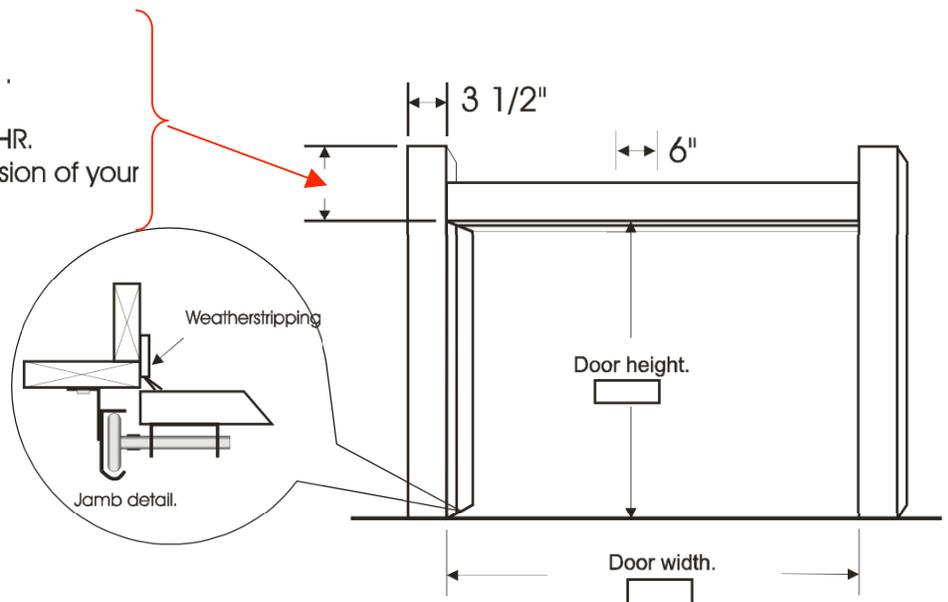
# STEP 1: PREPARATION OF THE OPENING

Verify that the dimensions of your door corresponds to the opening and that the raising (legs) are at level and perpendicular (at 90°) to the superior lintel (crossing in 2"x4") (fig.1)

Verify that the clearance available on top of the lintel and behind the door is sufficient for the operation the door must make in the chosen option.

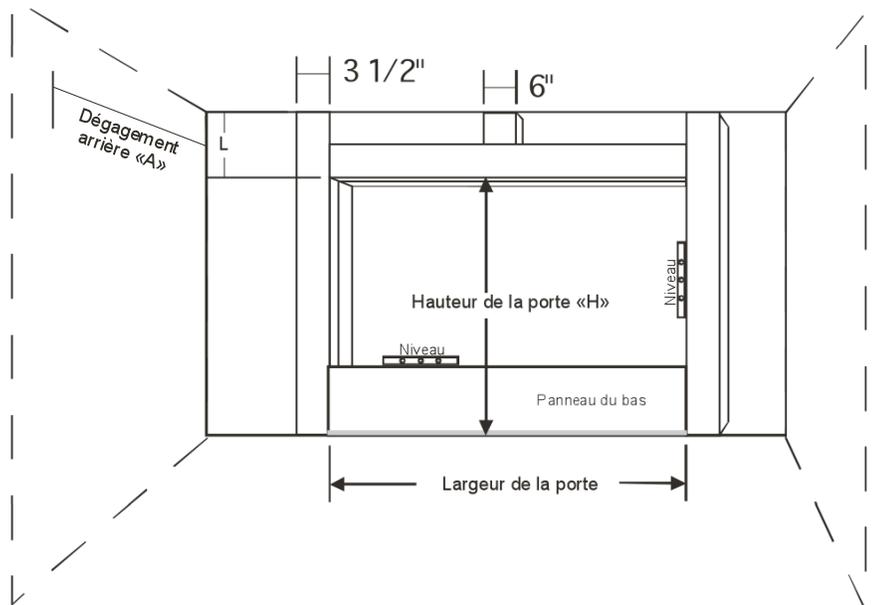
**Figure 1: How to prepare the frame for residential garage doors:**

4" headroom for extension LHR .  
 5" headroom for rear torsion LHR .  
 8½" headroom for extension .  
 8½" headroom for front torsion LHR.  
 10", 12" or 15" headroom with torsion of your choice.



**Figure 2: Global view of the required clearances**

Dégagement	Rayon			
	LHR	10"	12"	15"
<b>Ferronnerie résidentielle</b>				
2" extension	4"	8½"	10"	n/d
2" torsion arrière	5"	n/d	n/d	n/d
2" torsion avant	8½"	10"	12"	15"
<b>Ferronnerie commerciale</b>				
2" torsion arrière	5"	n/d	n/d	n/d
2" torsion avant	8½"	n/d	12"	15"
<b>Ferronnerie industrielle</b>				
3" torsion arrière	10"	n/d	n/d	n/d
3" torsion avant	12"	n/d	n/d	16"
3" de plus de 18' de haut et/ou 1000 lbs et plus				18"



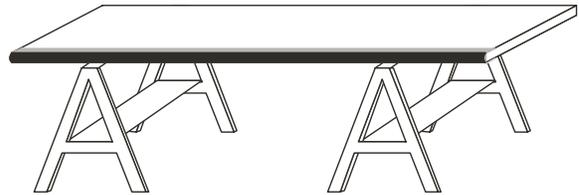


## STEP 2: PREPARATION OF THE PANELS

The panels are identified as follows:

Bottom:	1 <sup>st</sup> panel on the bottom (inferior),
Bar-lock:	2 <sup>nd</sup> panel from the bottom,
Inter:	3 <sup>rd</sup> panel and the ones that follow,
Top:	last one on top.

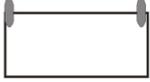
Place the panel identified “bottom” on two trestles the exterior face towards the ground. The marks along the panels (interior side) indicate the emplacement where the plates have been installed to allow the installation of the hinges.



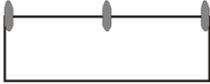
Refer to the following chart to locate them with precision based of the width of the panel.

**Figure 3: Location of the anchorage plates for the hinges.**

Jusqu'à 4'-11"



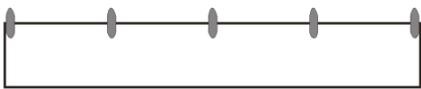
De 5'-0" jusqu'à 9'-6"



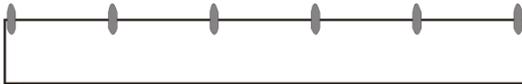
De 9'-7" jusqu'à 12'-11"



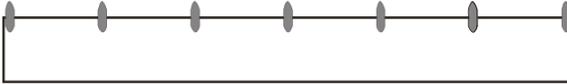
De 13'-0" jusqu'à 16'-11"



De 17'-0" jusqu'à 20'-11"



De 21'-0" jusqu'à 24'-8"



De 24'-9" jusqu'à 28'-0"



Use wood screws for the end hinges and for the bottom supports. Use the tek screws for the center hinges, the handles as well as the electrical operator if needed.

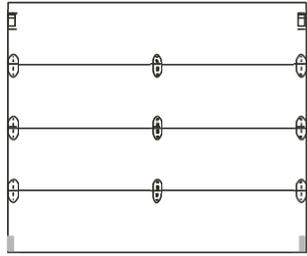


Wood screws



Tek screws

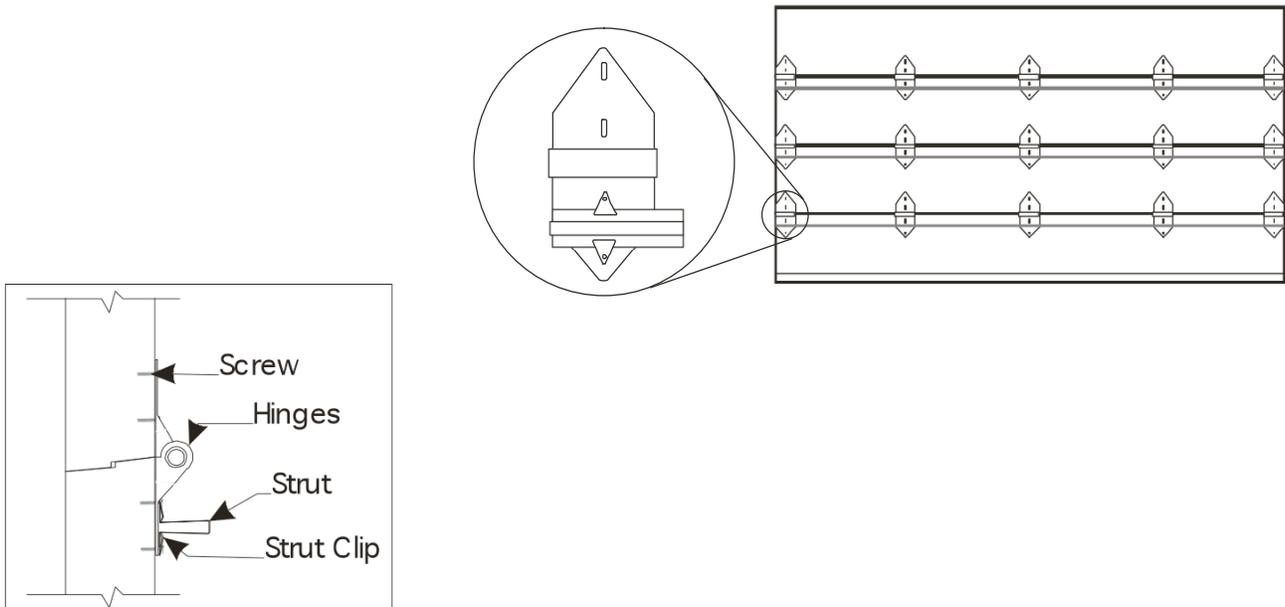
Screw in place the bottom supports on the bottom of the panel making sure to place it at the limit of the bottom molding (where the weather strip starts). Then, screw the hinges that are identified by numbers. It is important to associate the correct hinge with the intended panel and to screw it the way illustrated below.



At the center of the panel, it is always the number 1 hinges. On the sides, the hinges start by the number 1 between the bottom panel and the bar-lock panel, the number 2 hinges between the bar-lock and the intermediate and so it continues till the top panel. Once these are installed, install the rollers into the hole of the hinge furthest of the door.

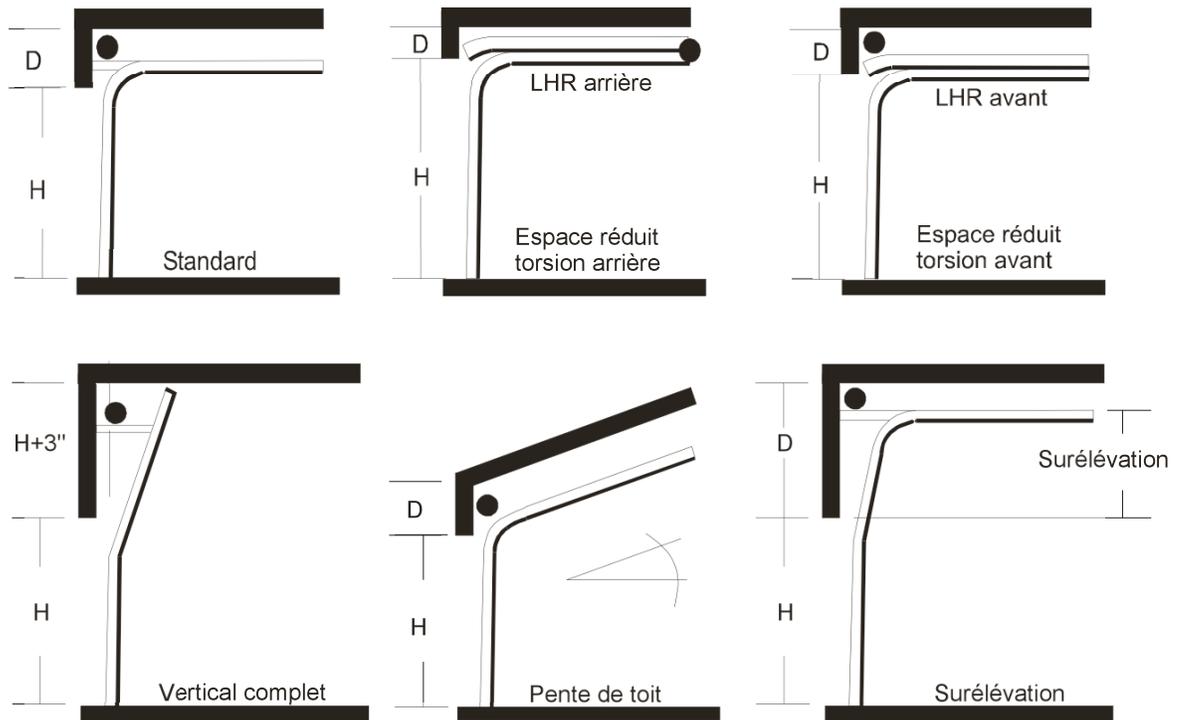
### Reinforcement struts

If installing reinforcement struts, refer to the illustration for the set up, because these must be installed at the same time as the hinges.



## STEP 3 : INSTALLATION OF THE VERTICAL RAILS

Verifying the hardware is important; we suggest that you take a moment to consider the sketches below.

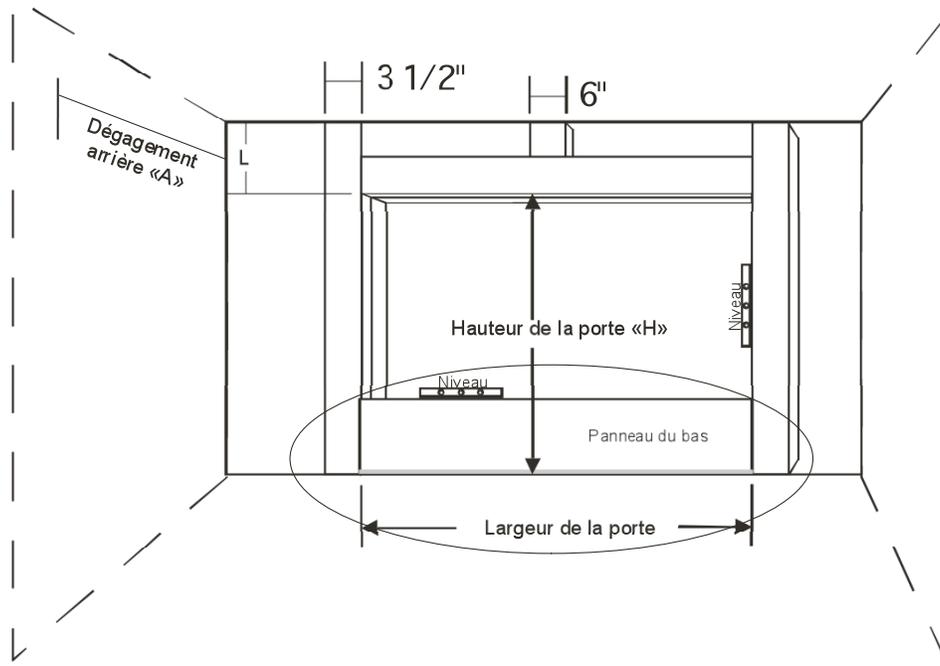


H= Height of the door

D= Headroom

## Starting the installation

Place the bottom panel at the center of the opening and adjust it so that it is at level. If needed, place a shim to put the panel at level, place also a shim the same thickness under the rail corresponding to that side of the panel. Then, attach the cables to the bottom bracket and insert the four (4) rollers into the hinges and the bottom bracket.

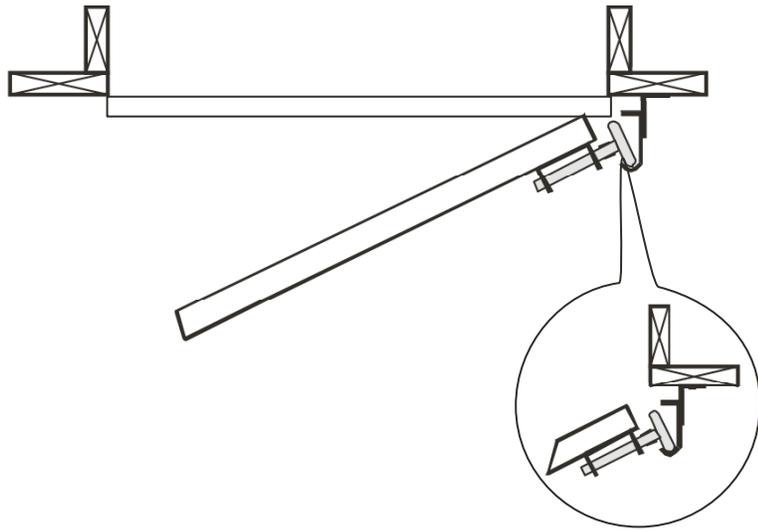


While holding the panel in place, screw the right rail on the leg leaving half an inch ( $\frac{1}{2}$ " ) between the rail and the side of the panel. Verify that the rail is at level. For the left rail, the other panels must be in place before installing it.

### Installing the other panels

Insert the roller into the right hinge of the second panel. Raise and insert the section into the right rail and then deposit it onto the first panel. Join the two sections with the hinges.

Repeat the same procedure for the other panels at the exception of the last panel, which is the top panel, and install it only after having installed the left rail as well as the horizontal rails.

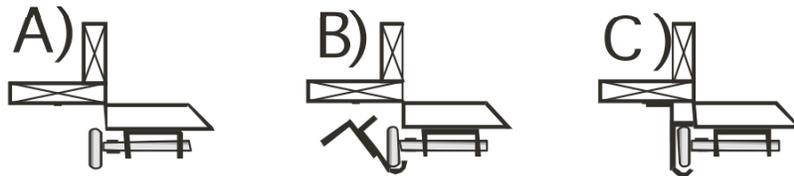


## Installation of the left rail

On the left side, place the rollers into the hinges on each of the panels. Insert the left rail into the rollers at 45 degrees as illustrated below.



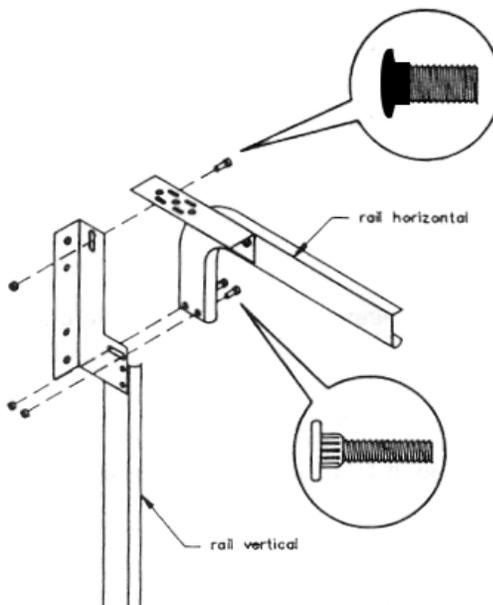
Then, rotate the rail so that it is possible to install it to the leg by following the steps described below:



Verify that the superior extremities of the rails are at the same level. After verifications and adjustments, the following step is to definitely fix the rails in place, respecting the distance of half an inch ( $\frac{1}{2}$ " ) on the bottom and of half an inch ( $\frac{1}{2}$ " ) on the top, between the panels and the rails. Make sure that the rails are at level.

## STEP 4 : INSTALLING THE HORIZONTAL RAILS

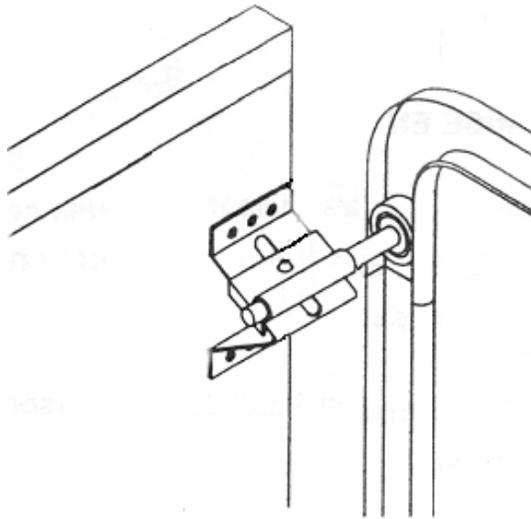
Fix the steel angle of the horizontal rail and the curved part of the rail to the superior support of the vertical rail using screws and nuts. Note that the screws for the curved part have flat heads.



Temporarily attach the horizontal rails to the ceiling.

### Installing the top panel

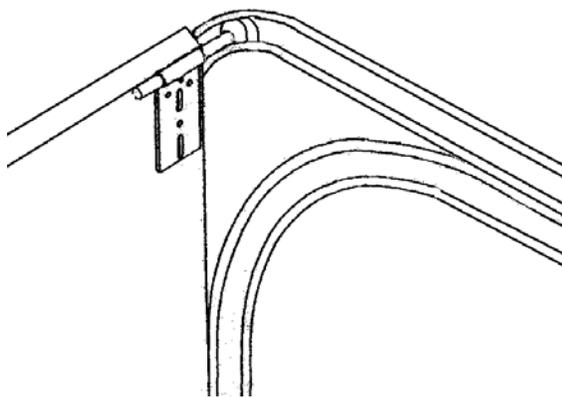
Insert the two last rollers into the superior bracket and engage into the rails. For every kind of elevation, except for low headroom elevations, fix the top bracket at three and a half inches (3 ½") under the top panel.



### **Installation of the top panel (continues)**

With the adjustment screw on the top bracket, verify that the top panel is aligned with the other panels. There must be no angles towards the interior or the exterior, which is why the top brackets must be adjusted so that the top panel forms a straight line with the other panels.

For low headroom elevations, fix the top brackets to the superior limit of the panel making sure that the top panel is straight with the rest of the panels. There must be no angles towards the interior or the exterior that is why the top supports must be adjusted so that the top panels forms a straight line with the rest of the panels, without forgetting that there are no adjustments on these kinds of brackets.



The rollers on the top bracket will insert into the top rail (low headroom hardware have two horizontal rails on top of one another.)

### **Solidification of the horizontal rails**

Install the rear supports to the rails and verify that the distance between the rails is the same at

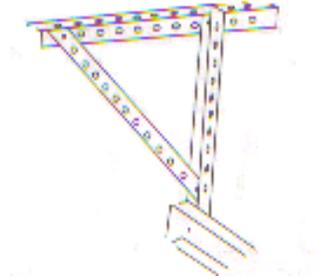
all the levels. The horizontal rails must have a small pitch of an eighth of an inch (1/8") to a foot (1') towards the top.

A good way to solidify the horizontal rails is to open the door half way up, at this point screw the rails to the ceiling using the angle bars that should be installed at a ninety degrees (90°) angle forming a triangle to assure that everything is strong and without movement.

### Perforated angle



### Assembly exemple



## STEP 5 : INSTALLATION OF THE TORSION SPRINGS OR THE EXTENSION SPRINGS AND CABLES

### ADVISORY CAUTION :

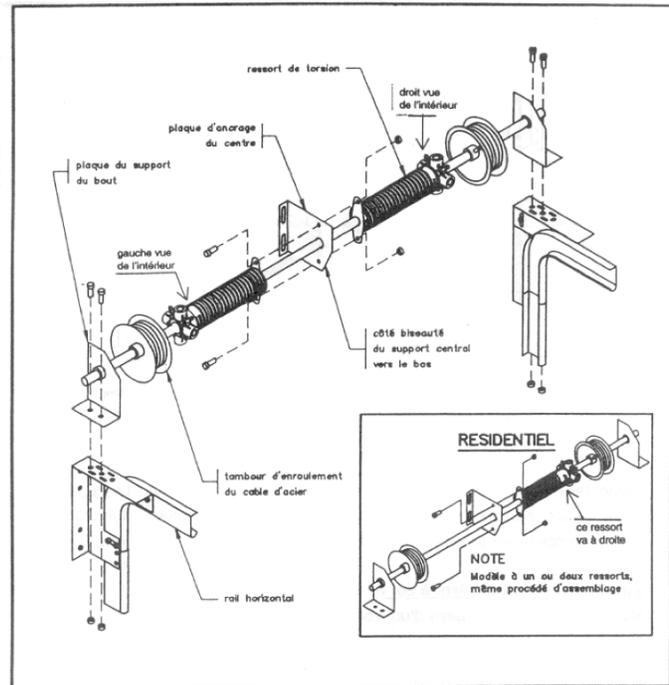
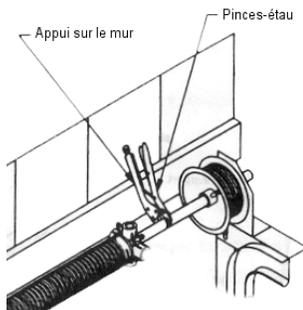
Always use pliers (vice-grips) to block the door and enable it to move because a movement of the door could cause serious injuries. During the installation of the torsion springs the door must be blocked in a closed position.

### Installation of the torsion springs and cables

On top, in the center of the lintel, a wooden block must be placed and screwed tightly in place on the wall, it is used as the anchor base. Assemble the drums, the support plates, as well as the shaft

with the spring(s). The drum on the right side is indicated by a RH or is the painted black. The left drum is identified LH or is painted red. Bolt the top ending plate to the steel angles of the horizontal rails and anchor the center plates on the anchor block (the bevelled side towards the ground). Verify that the spring shaft is at level.

Block the shaft with pliers taking a support against the wall.



For every type of elevation except for low head room elevations, the cable is already installed to the bottom plates since the beginning of the installation, the next step is to pass the cable between the rails and the wall (behind the rollers) and tie it to the drums that enroll the cables. Tie the end of the cable with a bushing in the emplacement on the drum.

To have an identical tension on the two cables, the shaft being blocked with the pliers against the wall, by hand turn the drums until there is a tension on the cables and block it with pressure screws installed on the drums.

### **Cranking the springs.**

**Be extremely careful during this step.**

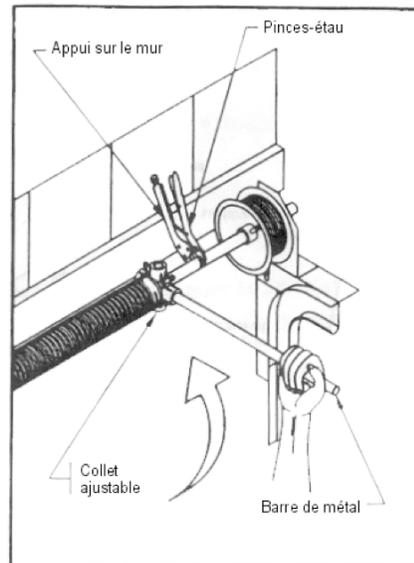
**The next step consists of cranking the springs. This requires a particular attention because serious injuries may occur.**

Leaving the pliers on the shaft against the wall, untighten the screws on the cone, for tightening using metal bars of half an inch (1/2") of diameter by eighteen inches (18") long. (These are not included).

Crank the spring by turning the clamping cone towards the ceiling. The number of complete turns to do is indicated on the tag on the spring.

#### **Be extremely careful during this step**

**Never remove a bar from a hole before placing a bar in the next hole or without blocking the spring by the tightening cone.**

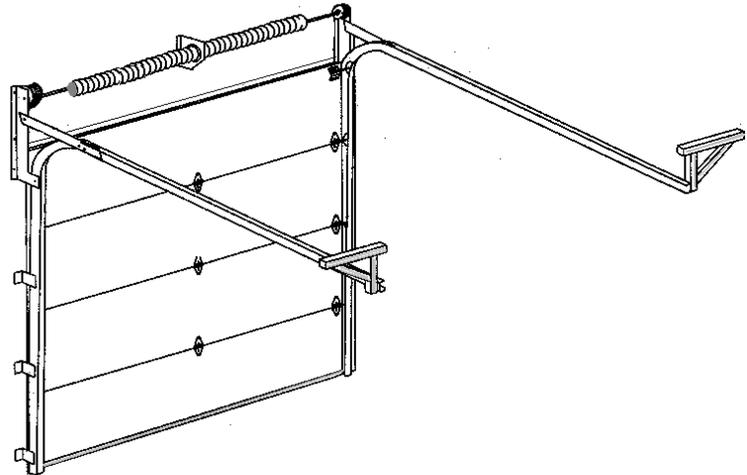


**Do not forget to block the clamping cone on the shaft before removing the steel bar when the cranking will be done.**

Once the screws are tightly screwed, remove the bars and the pliers.

Next, verify if the door is balanced. If the door opens as soon as it is released or if it closes itself rapidly hitting the floor, the springs have to be adjusted. Proceed by reducing the number of turns, if the door is too light or by increasing the number of turns, if the door is too heavy. Before proceeding to the adjustments, close the door and lock it. Block the shaft with pliers and place a metal bar in the hole of the cranking cone. HOLD TIGHTLY and loosen the screws of the cone.

It is possible to readjust the spring of more or less half a turn if necessary. However, if the door has more than one spring, we suggest that you follow the number indicated on the springs and proceed to the adjustment of only one spring.



View of the installation from the interior.

## Installation of the extension springs and the cables

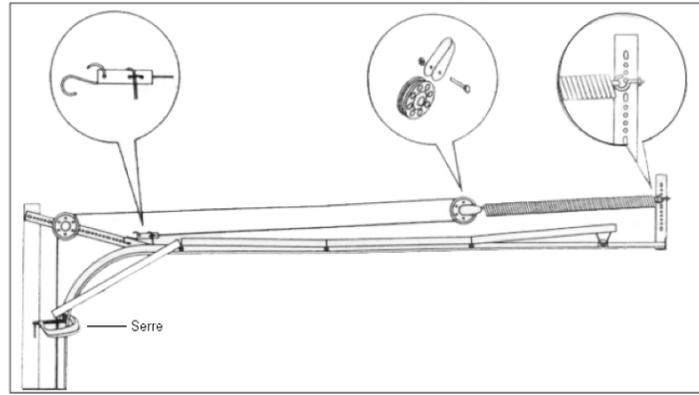
Lift the door to the maximum and block it in this position with pliers.

Install the pulleys at the steel angles of the horizontal rails and the bolts on the rear bracket of the rail.

Fix on the ends of the spring where the bolt is and the other on the other end; install the pulley with the “U” and the bolt. The bolt is the wheel shaft of the pulley. Tie the steel cable to the bottom support and pass the other extremity over the pulley and fix it to the top of the vertical rail,

the “S” hook to the steel angle of the horizontal rail. Repeat this operation for the other side.

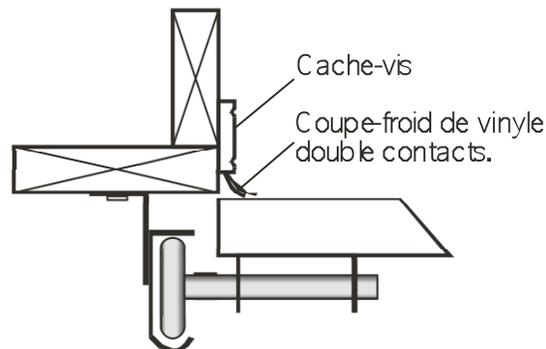
Remove the pliers and verify the functioning of the door. Some tension adjustments are maybe necessary, so raise the door to the maximum and block. Move the “S” hook to modify the tension according to the modifications desired.



Do not forget to pass a safety cable inside the spring.

## STEP 6 : Installation of the weather strips

Place the edge of the weather strip at about half an inch ( $\frac{1}{2}$ " ) from the door, so that the two lips of the weather strip are against the door. Screw and place the screw cover. It is important to use all the holes available to screw in the weather strip to make sure that it does not deform itself with time.



## STEP 7 : INSTALLATION OF THE SIDE LOCK



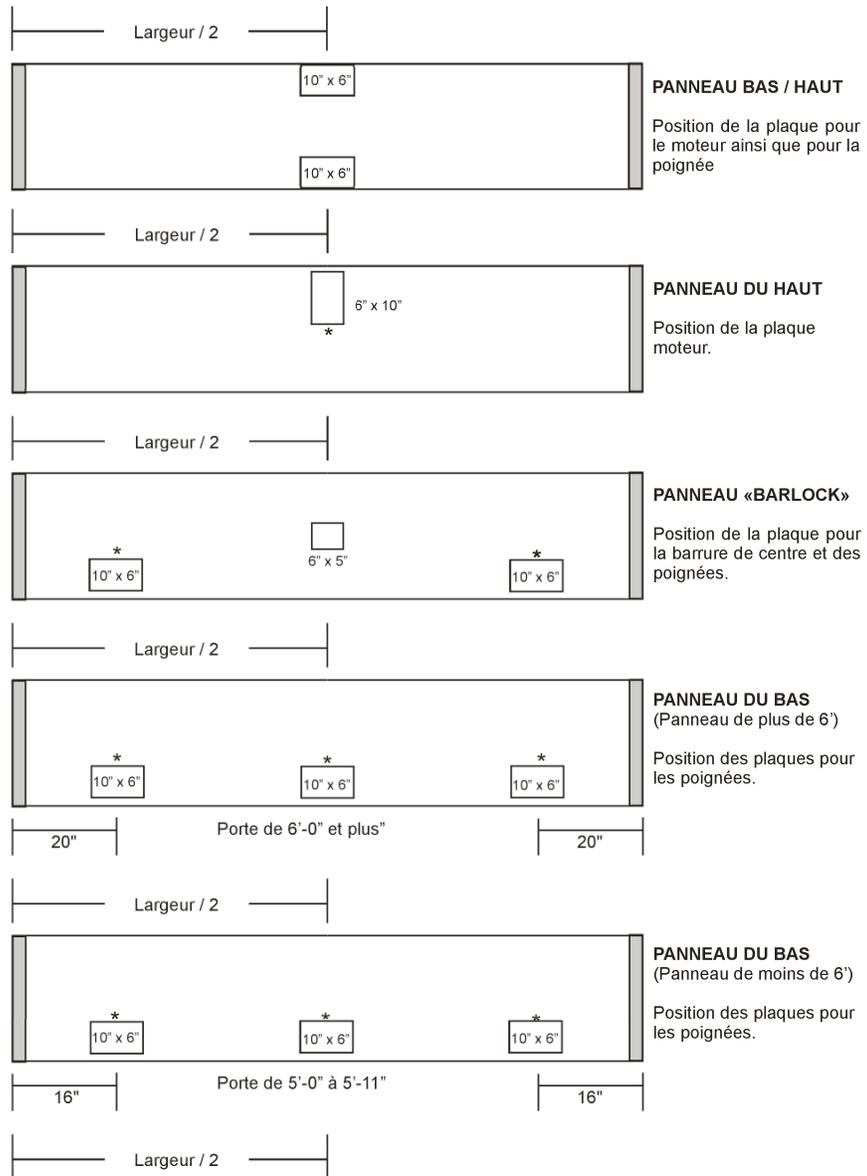
Place the box at the extremity of the panel so that the lock can move freely in the hole intended for this use on the vertical rail.

Fix the box at the end of the door with wood screws.

**N.B. FOR AN ELECTRICAL DOOR OPENER, IT IS USELESS, AND EVEN DANGEROUSE, TO USE WHICHEVER LOCKING SYSTEM.**

# STEP 8 : ANCHORAGE PLATES LOCATION

To install the handles and/or the electrical operator refer to the illustration below to identify with exactitude the emplacement of the anchorage plates.

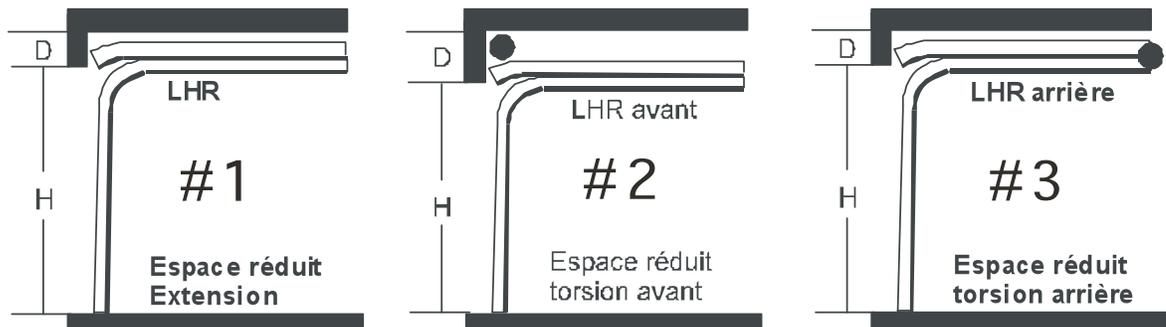


# INSTALLATION OF LOW HEADROOM HARDWARE

Choosing low headroom hardware means that there is limited space available on top of the door. It is then very important to do a proper installation to avoid any problems in its operation.

The first part of the installation which includes the vertical and horizontal rails as well as the panels is identical to the standard elevation except for the installation of the top bracket as mentioned at page 15.

There are three types of movement available to work this kind of system.



1) Extension (See page 21)

The installation of this type of extension movement is done the same way as the standard elevation illustrated on page 21.

2) Front torsion (See page 18)

The cable being already installed to the bottom bracket (specific to this type of elevation and which surpasses the rail) since the beginning of the installation, what is left to do is pass the cable at the exterior of the rails and pass it into the pulley if necessary which will be installed near the radius and connect the enrolment drums of the cables.

So that there is an identical tension on the two cables, while the shaft is being blocked with pliers taking support on the wall, turn the drums manually until a tension is obtained on the cables and block them with the pressure screws installed for this use on the drums. Repeat the operations for the other side.

3) Rear torsion

The springs as well as the drums are situated at the back of the rails. The drums are at the exterior of the rails and the cable passes in the pulley longing the rails on the exterior side.

It is important to remember that the drums will have to be reversed compared to a standard elevation. Being placed behind the springs looking towards the door (inside), the right drum will have to be installed on the left and the left drum will have to be

installed on the right side.

## Maintenance Guide

### The Door

- 1) Clean the door at least once a year with mild soap and a car brush.
- 2) Avoid using cleaners too strong that could spoil the paint.
- 3) It is recommended to put car wax once a year to give a lust to the garage door and facilitate the upkeep.

### The weather stripes of the sides and between the panels

- 1) Clean them with mild soap to preserve their appearance and to keep their flexibility.
- 2) Apply lubricant with a silicone base to them twice a year.
- 3) It is very important not to use a lubricant with a petroleum base.

### The Hardware

- 1) Lubricate twice a year every piece mobile as the rollers, the hinges, the pulleys, the springs and the lock with oil (ex. 10W30).
- 2) Verify the resistance of the hinges, the rollers, the bolts and the rails supports at least once a year.
- 3) If an anomaly is noticed, immediately communicate with a specialist in the upkeep of garage doors.



# GARANTIE GAREX

PORTES GAREX GUARANTEES ALL IT'S PRODUCTS THAT IT HAS BUILT AGAINST ALL CONSTRUCTION DEFECTS DUE TO MATERIALS OR LABOUR FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF PURCHASE FROM ONE OF ITS AUTHORIZED DEALERS.

MOREOVER, PORTES GAREX OFFERS ADDITIONAL GUARANTEES IN THE FOLLOWING INSTANCES:

- WARRANTY AGAINST PERFORATION

PORTES GAREX GUARANTEES ITS PANELS AGAINST PERFORATION DUE TO RUST OCCURRING FROM NORMAL HANDLING IN NORMAL CONDITIONS. ALUMINIUM PANELS HOLD A LIFETIME WARRANTY AND STEEL PANELS ARE GUARANTEED FOR A PERIOD OF TWENTY-FIVE (25) YEARS.

- WARRANTY ON RESIDENTIAL DOORS.

PORTES GAREX GUARANTEES IT'S ALUMINIUM OF LIGHT COLORS DOORS FOR A PERIOD OF FIVE (5) YEARS AGAINST DELAMINATING AND DARK COLOR ALUMINIUM DOORS AND STEEL DOORS FOR A PERIOD OF ONE (1) YEAR AGAINST DELAMINATING. THE GUARANTEE IS EFFECTIVE FROM THE DATE OF PURCHASE FROM ONE OF THE AUTHORIZED DEALERS

- WARRANTY ON HARDWARE

PORTES GAREX GUARANTEES IT'S HARDWARE FOR RESIDENTIAL GARAGE DOORS FOR A PERIOD OF TWO (2) YEARS. THE WARRANTY TAKES EFFECT ON THE DATE OF PURCHASE FROM PORTES GAREX OR ONE OF ITS AUTHORIZED DEALERS.

- WARRANTY ON PAINT.

PORTES GAREX GUARANTEES THE ORIGINAL PAINT ON ITS ALUMINIUM DOORS FOR A PERIOD OF FIVE (5) YEARS AND GUARANTEES THE PAINT ON IT'S STEEL DOORS FOR A PERIOD OF ONE (1) YEAR. THE WARRANTY COVERS CRACKING AND PEELING.

WARRANTY LIMITATION:

THE WARRANTY SHALL BE FULLY APPLICABLE FOR THE FIRST YEAR AND SHALL DECREASE PROPORTIONALLY FOR THE DURATION OF ITS APPLICABILITY. THE VALUE OF THE WARRANTY IS FIGURED ON THE BASE PRICE OF THE DEALER. THE WARRANTY IS IN EFFECT AS LONG AS THE ORIGINAL BUYER IS OWNER OF THE HOUSE WHERE THE DOOR WAS INSTALLED AND HAS THE ORIGINAL INVOICE.

THE WARRANTY DOES NOT APPLY IF:

- A) THE PRODUCT HAS BEEN MODIFIED BY OR FOR THE CLIENT;
- B) THE INSTALLATION OF THE PRODUCT WAS INADEQUATE;
- C) THE MAINTENANCE AND CLEANING WERE NOT DONE ACCORDING TO STATE OF THE ART STANDARDS.

THE WARRANTY EXCLUDES:

- A) ALL SHIPPING COSTS FOR THE REPLACEMENT PRODUCT;
- B) ALL INSTALLATION AND LABOUR COSTS LINKED TO THE REPLACEMENT PRODUCT;
- C) ALL COSTS RELATIVE TO OPERATING LOSS AND DAMAGES TO GOODS, INVENTORY AND EQUIPMENT DUE TO DEFECTS OF GAREX PRODUCTS;
- D) ANY LIABILITY DUE TO CHANGES OF MODELS, MATERIALS, STANDARD COLORS, ETC.

PORTES GAREX RESERVES THE RIGHT TO SUPPLY A PRODUCT OF SIMILAR QUALITY BUT DIFFERENT COLOR, WHERE THE PRODUCT TO BE REPLACED HAS FADE OR TO CORRECT A PROBLEM ASSOCIATED TO THE COLOR.

THE REPLACED PRODUCT OR COMPONENT REMAINS THE EXCLUSIVE PROPERTY OF PORTES GAREX AND MUST BE RETURNED TO ITS MAIN PLACE OF BUSINESS, AT THE CUSTOMER'S EXPENSE.

- A) WHEN PURCHASING A PORTES GAREX PRODUCT, THE BUYER ACCEPTS THIS WARRANTY AND ACKNOWLEDGES IT AS THE SOLE OFFICIAL WARRANTY, THEREBY EXCLUDING ALL OTHER REPRESENTATIONS, WARRANTIES OR CONDITIONS, FORMAL OR IMPLIED, GIVEN BY ANYBODY, EXCEPT IN WRITING BY AN AUTHORIZED DEALER OF PORTES GAREX.
- B) ALL CLAIMS MUST BE SUBMITTED IN WRITING TO THE MANUFACTURER WITHIN THIRTY (30) DAYS OF THE DISCOVERY OF THE ALLEGED DEFECT, AND RECEIVED BY PORTES GAREX WITHIN THE PERIOD OF WARRANTY; OTHERWISE THE WARRANTY SHALL NOT BE HONOURED.
- C) THE USER OF PORTES GAREX PRODUCTS AGREES TO CARRY OUT THE YEARLY MAINTENANCE RECOMMENDED AND STIPULATED BY PORTES GAREX IN IT'S INSTALLATION AND MAINTENANCE GUIDE.

# GAREX DOORS

This guide contains the steps necessary for the installation and the upkeep of the garage door. However, if during the installation of the door you have any questions, feel free to contact us at the address below or we recommend that you contact a professional installer. This way the installation will be completely safe that will guaranty an optimal functioning of your Garex door.

Contact us for more information about the distributor closest to you or visit our web site: [www.portesgarex.com](http://www.portesgarex.com)

Adresse : **Portes Garex**  
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Web site: [www.portesgarex.com](http://www.portesgarex.com)