

GAREX

INSTALLATION AND MAINTENANCE GUIDE FOR RESIDENTIAL DOORS

This guide describes the steps to follow for the installation of a garage door (panels, tracks, springs, hardware and weatherstrips). This document will be essential to guide you through this process.

It's highly recommended that you carefully read this manual before you start the installation. You must remember that the garage door must be properly installed to assure you the maximum warranty, secure and durable service.

Know that the installation of a garage door and its components might be **DANGEROUS** and may cause serious injuries.

We highly recommend that you communicate with one of our distributor for more informations so you have the **PEACE OF MIND** that your installation is safe and there for, guarantees an optimal operation of your Garex door. This guide is a property of Garex and no reproduction is allowed without a written consent from Garex.



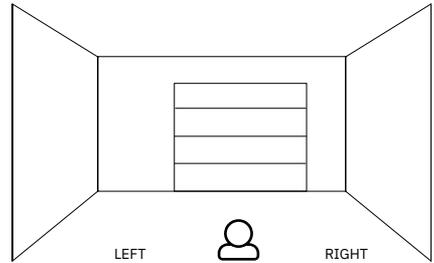
Our complete installation guide can be downloaded for free from the website:
www.portesgarex.com/en/documentation



**IF YOU HAVE ANY QUESTIONS
ABOUT THE INSTALLATION,
PLEASE DO NOT HESITATE TO
CONTACT YOUR DISTRIBUTOR.**

IMPORTANT NOTES

IN THIS GUIDE, THE LEFT AND THE RIGHT WILL ALWAYS BE MENTIONED FROM THE INSIDE VIEW OF THE GARAGE.



Punches on the inside of the door indicate the location of the steel reinforcement plates used to screw in the center hinges.

The following parts must be identified and separated to be installed on the right or left side of the door. The other parts are interchangeable:

- Bottom supports for the bottom panel corners
- Vertical and horizontal tracks (horizontal tracks are those with curves)
- The winding drums in the case of torison spring

Steps for the installation

- Step 1 : Preparing the opening
- Step 2 : Preparation of the panels
- Step 3 : Vertical tracks installation
- Step 4 : Horizontal tracks installation
- Step 5 : Installation of the torsion or extension spring(s) and cables
- Step 6 : Weather seals installation
- Step 7 : Side lock installation

Step 1 - Preparation of the opening

Make sure that the dimensions of your door match those of the opening and that the jams are level and perpendicular at 90° to the top lintel (2" x 6" header).

Also, make sure that the clearance "A" above the opening at the back of the door is available for the door operator depending on the option chosen.

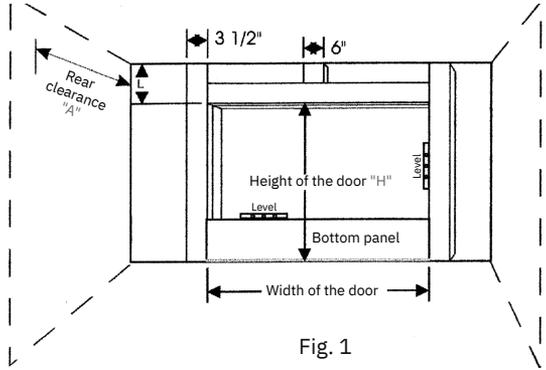


Fig. 1

REQUIRED CLEARANCE	DOOR OPERATION	
	Manual	Door opener
L = Required clearance (radius 10") For extension springs.	9"	11"
	228 mm	280 mm
L = Required clearance (radius 12") For extension springs.	11"	13"
	280 mm	330 mm
L = Required clearance (radius 15") For extension springs.	14"	16"
	356 mm	406 mm
L = Required clearance (radius 20") For extension springs.	19"	21"
	483 mm	533,4 mm
L = Required clearance (radius 10") For torsion springs.	10"	12"
	254 mm	305 mm
L = Required clearance (radius 12") For torsion springs.	12"	14"
	305 mm	355 mm
L = Required clearance(radius 15") For torsion springs.	15"	17"
	381 mm	432 mm
L = Required clearance (radius 20") For torsion springs.	20"	22"
	508 mm	559 mm
L = Rear clearance required for the door.	H+16"	H+40"
	H+305 mm	H+355 mm
L = Height of the door		

Step 2 - Preparation of the panels

The door panels are identified as follow:

- Top : panel no. 4 (The top panel)
- Inter : panel no. 3
- Bar-lock : panel no. 2
- Bottom : panel no. 1 (The bottom panel)

Place the panel labeled "Bottom" on 2 trestles with the outside facing the floor. The punches in the center of the panels (inside) indicate the location of the center hinges, see (Fig. 2). Install the bottom brackets even with the bottom of the P.V.C. moulding at the bottom of the panel.

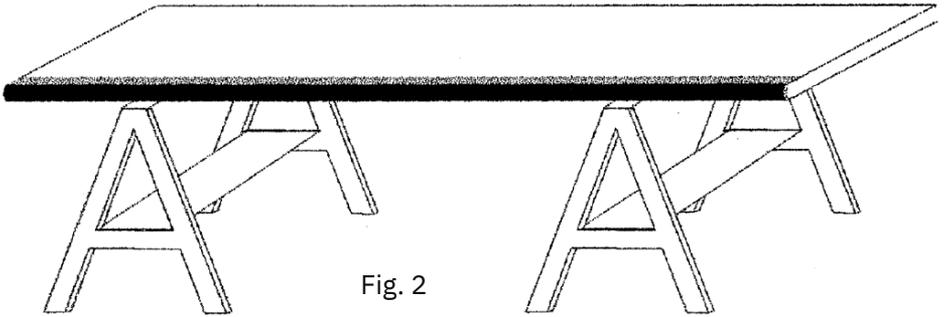
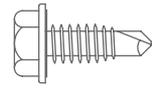
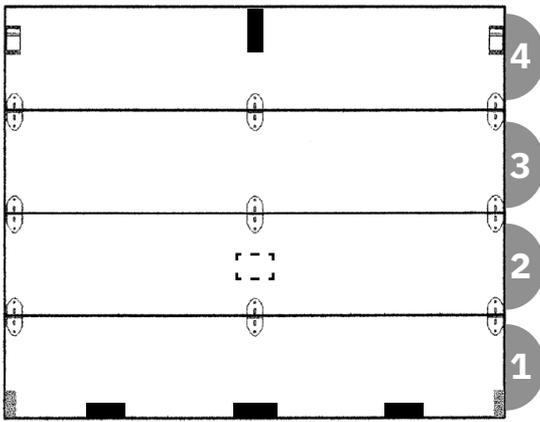


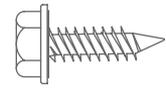
Fig. 2

Screw the corner brackets and the bottom part of the hinges into place. The hinges are identified by numbers. It is important to match the correct hinges to the panels see (Fig. 3). In the center of the panels, they are always hinges no.1. On the sides, the hinges start with no.1 (between the bottom panel and panel no.2), hinges no.2 (between panel no.2 and panel no.3), hinges no.3 (between panel no.3 and top panel). Align the side of the hinges that will receive the rollers with the edge of the door.

Use wood screws for the side hinges and corner brackets, self-drilling screws for the center hinges and lifting handles, see (fig. 3.1)

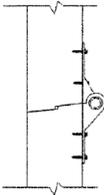


Self tapping screw

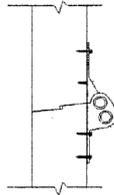


Wood screw

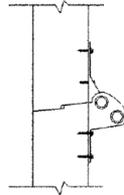
Fig. 3.1



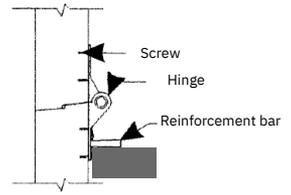
Hinge 1



Hinge 2



Hinge 3



With reinforcement bar

There are no more struts clips supplied. Screw the strut on the hinges with the hinge screws.

To know the hinges location as per panel width and the plate location for operator and handles, check the sheet provided in the box.

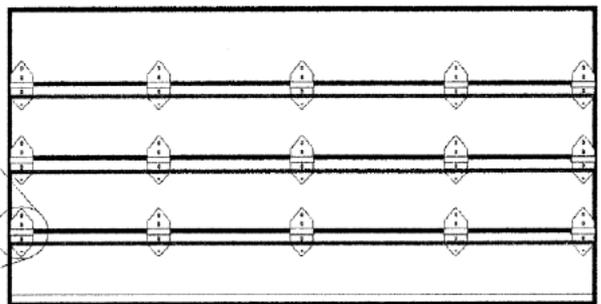
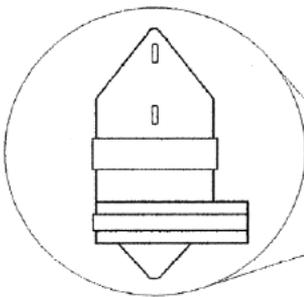


Fig. 3.2

Step 3 - Vertical tracks installation

Place the bottom panel centered with the opening, level it, attach the cables to the corner brackets, and insert the 4 casters into the hinges and corner brackets. Holding the panel in place, attach one of the vertical rails to the wall, **making sure to insert the casters**. Install only one screw (the bottom one) to hold the track, for now this will do. If you had to place a shim to level the panel, you will have to put the same shim under the rail.

Then attach the other rail. Leave a gap of about $\frac{1}{2}$ " minimum between the panel and the rails.

Hinge the panel no.2 by attaching a hinge no.2 to the top right side. Insert the roller into the hinge (in the hole furthest from the door). Lift and insert the panel into the right rail and then place it on the bottom panel (fig. 4). Connect the two panels with the top hinges of panel no.2. Then attach the hinge on the left side of the panel. Do not forget to insert a roller in the hinge.

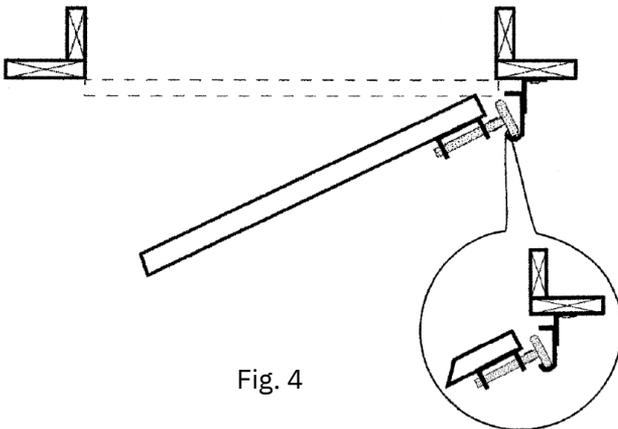


Fig. 4

If there are two holes in the hinge, insert the roller into the hole in the hinge furthest from the door.

Finish screwing in the rails leaving a minimum of $\frac{1}{2}$ " between the top of the 3rd panel and the rail which should be level vertically.

Step 4 - Horizontal tracks installation

Attach the horizontal rail to the vertical rail as shown in Fig. 5.

Temporarily attach the horizontal rails to the ceiling.

Place the top panel on the trestles, outside face down, place the top right side brackets about 3- $\frac{1}{4}$ " from the top of the panel. Insert a roller into the bracket and as you did with the other 3 panels, install the top panel on panel #3.

Connect the two panels with the hinges on the top of panel #3. Put a roller in the top left support.

Adjust the top brackets so that the top panel forms a straight line with the other panels (Fig. 6)

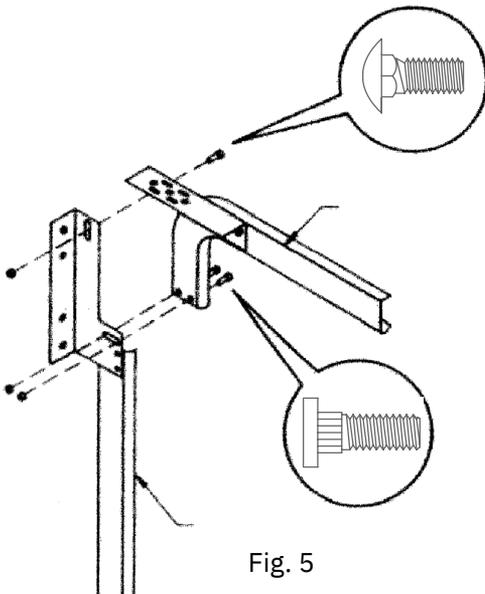
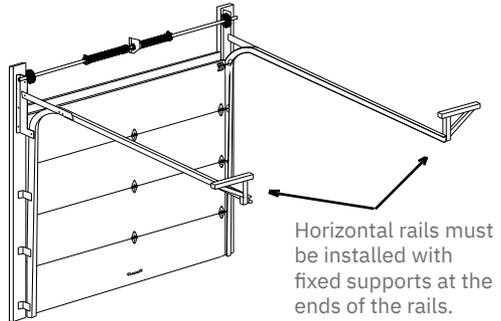


Fig. 5

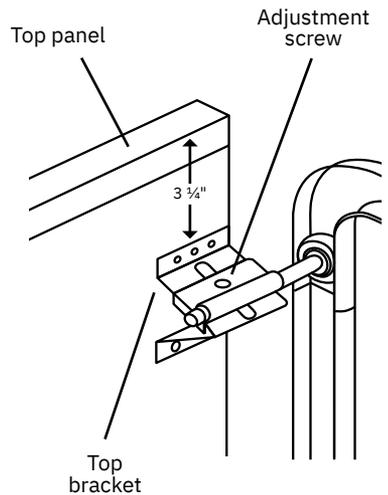


Fig. 6

Step 5 - Installation of the torsion or extension spring(s) and cables

WARNING

Always use clamps or vise-grips to block the door from moving, as sudden release can cause serious injury. When installing torsion springs, the door must be secured in the closed position.

Above the lintel and in the center of the opening, install the wooden block on which the center anchor plate will be screwed (Fig. 7).

THIS BLOCK MUST BE VERY FIRMLY FIXED TO THE WALL.

Assemble the drums, the support plate, the shaft and its spring(s). The right side drum is marked "RH" and colored BLACK, the left side drum is marked "LH" and colored RED (if it has color on it).

Bolt the end brackets to the angle irons of the horizontal rails. Attach the center anchor plate and make sure the shaft (steel tube) is level.

Lock the left drum to the shaft. With the cable attached to the bottom bracket, pass it between the rail and the door (behind the casters) and hook it to the drum. Roll the drum to tighten the cable and block the shaft with the clamps by leaning on the wall. Then attach the other cable, apply the same tension and lock the drum. Screw in the set screws until they touch the shaft and then give it a ½ turn.

Fig. 7.1 shows a spring mounted on the right, it can also have a spring mounted on the left.

With full vertical rise and elevation hardware, **the length of the cables is very important.** Never cut the cables because the door will not be balanced. Pass the cable through hole "A" and then through hole "B", then allow it to exceed by 4", as shown in "C".

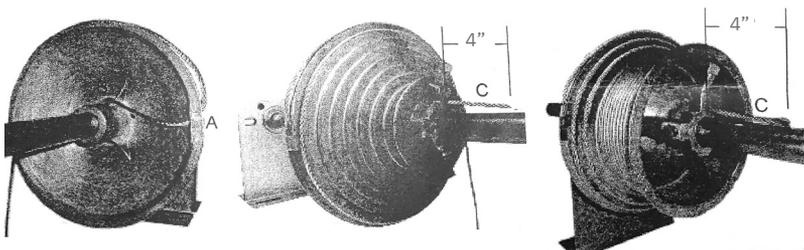
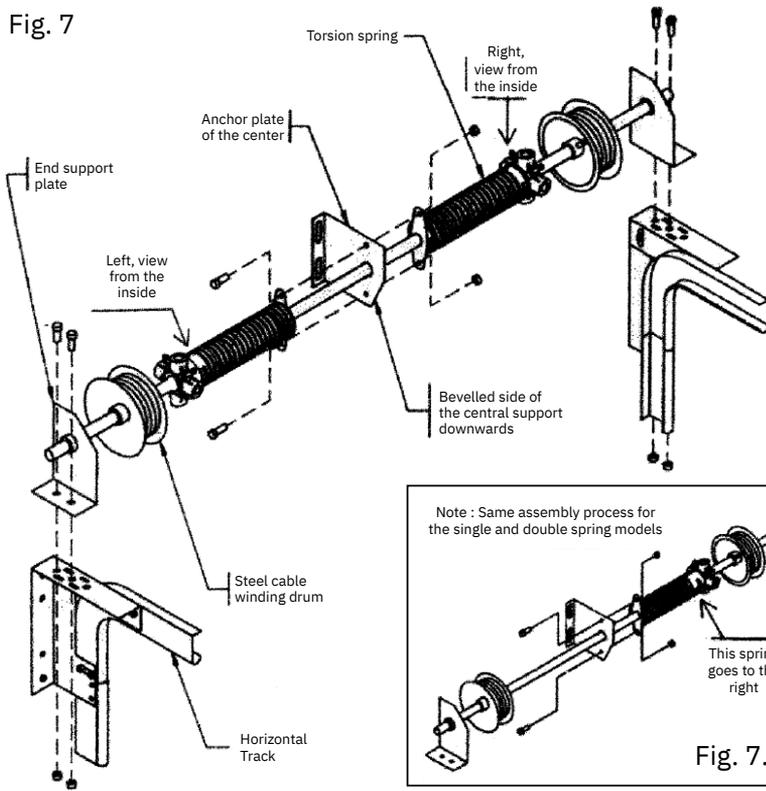


Fig. 7



The next step is to apply tension to the spring(s). This requires special care, as serious injury can occur.

With the clamps in place, loosen the screws on the movable collar, using $\frac{1}{2}$ " diameter metal bars by 18" minimum length. Longer bars may be required. **Metal bars are not included.**

Give tension on the spring(s) as you move up. The number of full turns to be made is indicated on the label glued to the spring.

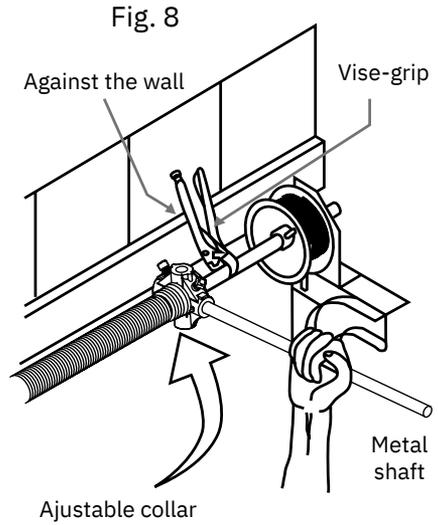
BE EXTREMELY CAREFUL AT THIS STAGE.

Do not forget to lock the movable collar on the shaft before removing the steel bar.

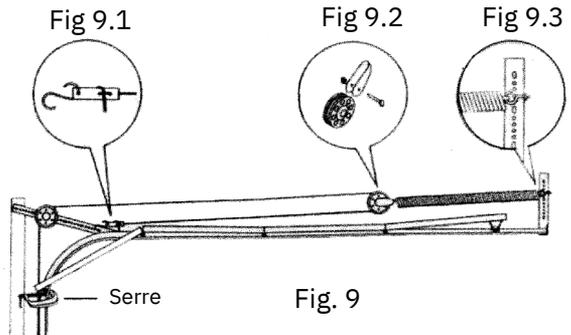
Once the collar is securely locked to the shaft, remove the bar and clamps. Now look if the door is balanced properly. If you gave it the right number of turns, the door should be fine.

You can readjust the spring(s) ($\pm \frac{1}{2}$ tour) if you feel it is necessary. Do not forget to put the vise-grip in place before making the adjustment.

With the horizontal rails hanging from the bottom, open the door to the $\frac{3}{4}$ and check alignment of the rails with the door. They should be parallel to the door, spread or tighten the rails as needed.



EXTENSION SPRINGS AND CABLES INSTALLATION



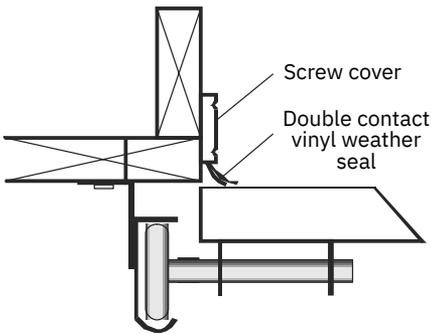
Raise the door to its maximum height and secure it in this position with a clamp or vise-grip. Install the pulleys to the horizontal rail angle irons and lug bolts to the rear horizontal rail bracket (Fig. 9). Attach one end of the spring to the lug bolt (Fig. 9.3) and the other end of the spring to the pulley (Fig. 9.2).

With the cable attached to the bottom bracket, pass it between the rail and the door (behind the rollers), pass it over the pulley attached to the front of the horizontal rail (Fig. 9), then into the spring pulley (from above), then install the three-hole plate as shown in Fig. 9.1. Finally put the "S" hook into the front hole of the three-hole plate and attach it to the angle iron. Repeat this process for the other side.

There should be enough tension on the springs to hold the door in place, but not so much that the door is difficult to lower. Install the safety cables.

At this point you can remove the clamp, the door should work perfectly. The springs may need to be readjusted to balance the door. If you need to put more tension on the springs, lift the door up, install the clamp, unhook the cable, slide the cable through the three-hole plate to shorten it and then re-hook the cable. Both springs must have the same tension.

Step 6 - Weather seals installation



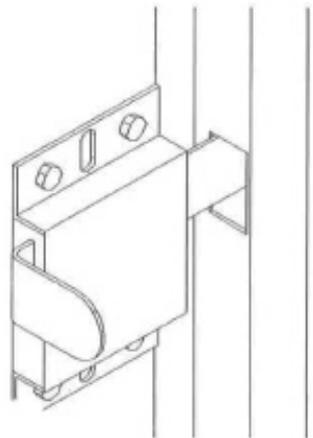
Remove the screw cover, place the base of the weather seal about $\frac{1}{2}$ " of the way up the door so that both lips of the weather seal rest on it. Screw the weather seal onto the frame then replace the screw cover.

Step 7 - Side lock installation

Place the lock housing about $\frac{1}{2}$ " from the door at the end of the panel so that the latch plays freely in the hole provided for this purpose in the vertical rail.

Secure the box in the polymer block at the end of the door with the wood screws provided.

NB. If you are installing an electric door opener, do not install the side lock. It would be disastrous to turn on the electric opener while the door is locked.



Problems and solutions

PROBLEM: The door is very heavy and only goes up by half.

SOLUTION: The torsion spring(s) have been installed on the wrong side or backwards.

PROBLEM: The door opens very quickly and it is difficult to bring it back down.

SOLUTION: Adjust the tension according to the right number of turns.

PROBLEM: The door closes quickly and is difficult to lift.

SOLUTION: Adjust the tension according to the right number of turns.

PROBLEM: The door is working well, but it goes up 2 to 3 inches.

SOLUTION: Adjust the spring tension.

PROBLEM: The door does not close completely at ground level.

SOLUTION: The weather seals are too tight. Detach it and place it a little further from the door (the base weather seals should be approximately $\frac{1}{2}$ inch from the door).

PROBLEM: The door is difficult to open at first.

SOLUTION: The weather seals are too tight. Detach it and place it a little further from the door (the base weather seals should be approximately $\frac{1}{2}$ inch from the door).

PROBLEM: The door is difficult to open at the end.

SOLUTION: The horizontal rails are not perpendicular to the axis of the door. Use a ribbon to measure to verify it. The top panel does not close completely. Adjust the position of the upper supports.

Maintenance guide

The door: Clean your garage door at least once a year with a mild soap and a car brush. Avoid strong cleaners that could damage the paint. It is advisable to give your door a coat of car wax to give it a nice shine.

Frame and inter-panel weather seals: To maintain their appearance and flexibility, wash weather seals with dish soap and lubricate them about twice a year with a silicone-based lubricant. **Never use a petroleum-based lubricant (important).**

Hardware: Lubricate all moving parts such as casters, hinges, pulleys, springs and locks twice a year with Garex garage door lubricant. Check the solidity of hinges, rollers, bolts and rail supports.

Note: If you notice a problem, contact a garage door service and installation specialist immediately.