Doors Galore

BUILT FOR LIFE

INSTALLER'S INSTRUCTION MANUAL FOR SECTIONAL DOORS

The Doors Galore “BUILT FOR LIFE” promise means that our products are:

Made to the highest technical and design standards
Manufactured from superior material
Made to the highest safety standards
Quality tested to last a lifetime

For over 70 years we have manufactured and distributed:
Industrial, Commercial and Domestic doors for many applications, in both STANDARD and CUSTOM sizes.
A wide variety of SPARES, HARDWARE and AUTOMATION.

Doors Galore
BUILT FOR LIFE

Terms and conditions of warranty for

Garage Door Hardware

1. DEFINITIONS :-

In these terms and conditions:-

1.1 Doors Galore shall mean Doors Galore (Pty) Ltd. or its successors in title or assign .

1.2 The "owner", "purchaser", or "end user" shall mean the individual in whose name the ownership of the equipment is registered in terms of this agreement.

1.3 "Distributor" shall mean the wholesaler or distribution agent appointed by Doors Galore.

1.4 "Dealer" or "Installer" who acts as a re-seller of the equipment and who may also be the installer of the equipment.

2. SCOPE OF SUPPLY:-

This warranty applies only to the garage door hardware. Garage doors "per se", garage door operators and controls, accessories such as door adaptor kits, site work, labour or travelling expenses are not considered as integral to the scope of supply.

3. GENERAL CONDITIONS of WARRANTY

3.1 This warranty covers the "Doors Galore" garage door hardware against faulty or defective materials, components and / or manufacturing workmanship for a period of 12 months from the date of purchase.

3.2 Proof of purchase in the form of an invoice or the serial number of the hardware kit is required .

3.3 Doors Galore undertakes to repair or replace, at it's sole discretion, free of charge, any component of the "Doors Galore" garage door hardware kit, subject to the conditions stated herein. Please note the exclusions to this warranty.

3.4 Incidental and consequential losses. Under no circumstances will Doors Galore accept liability for "incidental" and/ or "consequential" losses, (damages), resulting from the use of the product.

4. PACKING LIST/ DOOR INFORMATION CARD :-

An “Information Card" / Packing List is included in the "Doors Galore" hardware kit. The card should be completed and filed away for future reference. This card may be required in the event of a warranty claim being made. Be sure to record all the information requested.

5. EXCLUSIONS :-

5.1 Doors Galore warrants that all components of the "Doors Galore" garage door hardware kit are free of defect with respect to the quality of the materials and components used as well as the quality of the manufacturing and assembly workmanship.

Components include the:-

Door hinges; Door rollers; Bearings; Lifting and safety cables; Door tracks; Cable drums; Bottom lifting brackets; Pulley wheels; Springs and tip-up door jamb hinges.

5.2 Important Note:-

Due to the nature of it's role, the Bottom Weather Seal is regarded to be a "sacrificial" wearing part and is therefore not covered by this warranty.

6. COMPONENTS COVERED BY THIS WARRANTY :-

Items excluded from this warranty.

Specifically excluded from the scope of this warranty is equipment such as:-

6.1 Door operators, controls and accessories.

6.2 The garage doors "per se".

6.3 Items which are used in conjunction with the door hardware but which are manufactured or supplied by third parties. Such items shall carry the warranties/ guarantees offered by said third parties.

The following components, services and work are also excluded from the Scope of this warranty, whether specifically stated or implied:-

This warranty is invalid for the repair or replacement of Door Operating Equipment and Components which are :-

6.4 not supplied by Doors Galore.

6.5 not specified by Doors Galore. The door hardware, (e.g. springs, track lengths, etc.), are made to suit the information supplied by the door manufacturer / installer. Doors Galore accepts no liability for hardware which does not work properly if the specifications are incorrect.

6.6 damaged by an act of GOD, (e.g. lightning strike, flood, fire, power-surge, etc., etc.)

6.7 damaged due to misuse or abuse of the equipment, as when installing the "standard" door hardware onto non standard size doors or using lighter, less expensive components, on doors which have high duty requirements or are very heavy.

6.8 used for purposes other than that for which it has been designed.

6.9 used on doors which are not properly designed or manufactured.

6.10 damaged due to malicious causes or sabotage.

6.11 damaged due to faulty or incorrect installation techniques and sub-standard workmanship.

6.12 damaged or have their settings disturbed due to tampering with the equipment by unqualified persons.

6.13 damaged due to fair wear and tear which is not attributable to the fault of the company.

7. MAINTENANCE OF THE GARAGE DOOR.

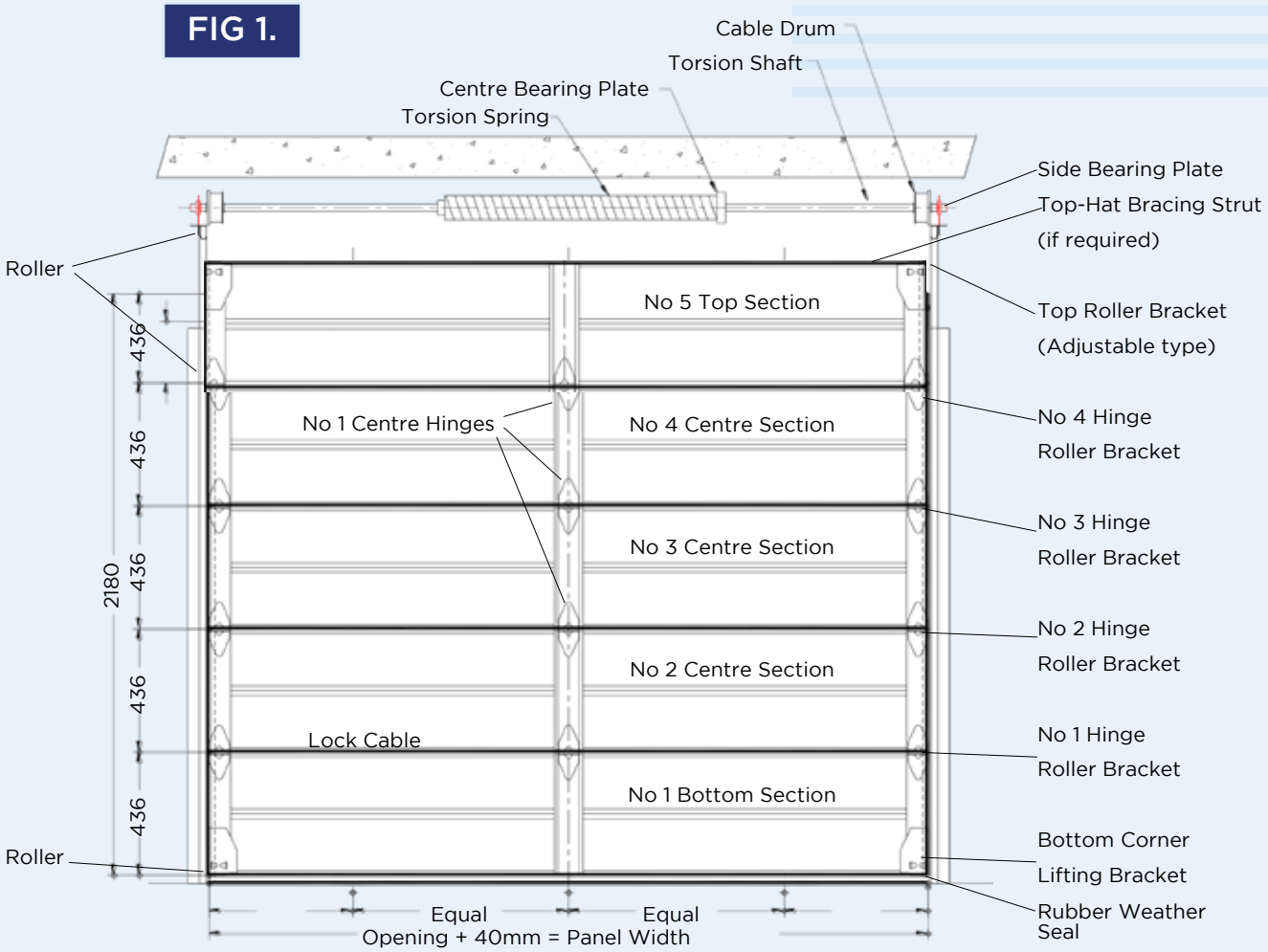
It is, furthermore, a condition of this warranty that the garage door itself be maintained in a serviceable condition in accordance with the door manufacturer's instructions. Proof of service to the doors may be required.

8. COSTS INCURRED FOR SERVICE LABOUR, TRANSPORT/ POSTAGE and TRAVELLING:-

Doors Galore will be liable for the cost of the replacement parts only. That is, the cost of specialised labour and the cost of travelling to and from site and the cost of transport or postage of spare parts are specifically excluded from the scope of this warranty. The faulty component must be returned either to Doors Galore or to one of its authorised distributors.

Section 1:
Sectional Door Terminology

FIG 1.



Sectional Door with Torsion type Spring mounted above the door.

Section 2:
Pre-installtion Preparation

2.1 RECOMMENDED TOOLS

- Hammer
- Spirit level 1 200mm / water level 7-8m
- Measuring tape and marking pen
- Extension lead
- Step ladder
- Speed drill and drill bits
- Impact drill and masonry drill bits
- Hack saw
- Open end, adjustable spanner
- A set of open end spanners
- Socket set and speed brace
- Set square
- Touch up paint
- Wood chisel
- Steel chisel
- Cutting knife
- Wood and steel punch
- Screw driver set
- Pliers
- Tin snips
- 2 x Vice grips
- Felt pen and pencil
- 2 x Winding bars - 10mm O.D. 300mm long
- 2 x Trestle recommended
- 2 x Adjustable track props – Column tripods (Fig 28)

The tools required to successfully complete the installation will depend to some extent on the type of door to be installed, i.e. is the door constructed of Steel, Wood, Aluminium, or other materials?

The more comprehensive the range of tools you have available, the easier the job will be. Shown is the range of hand tools we recommend the professional installer should have.

2.2 JOB PREPARATION

A successful installation begins with the methodical preparation of the job.
Before leaving your premises, check the following:

- The door loaded is the correct one for the job
- Check the job card for details of any special equipment or components you may need, e.g. special tracks, springs, hanger brackets, low headroom equipment, extra lengths of punched angle, sufficient quantities of fasteners, etc.
- All tools are in good working order.
- Battery powered tools are fully charged.
- Kits complete

Remember this: -
Going back to a site to complete an installation costs money. Double check loading.

2.3 INSTALLATION PREPARATION

On receipt of the Garage Door Hardware, inspect the package for any signs of shipping damage. If damage is found, return the hardware, complete with all accessories to your supplier.

2.4 Check the contents of the box against the packing slip to make sure it is complete. Unless otherwise stated, the box contains hardware for a “standard” domestic garage door. If the door or garage structure do not conform to standard specification, special equipment may be required.
Contact your nearest Doors Galore dealer for advice.

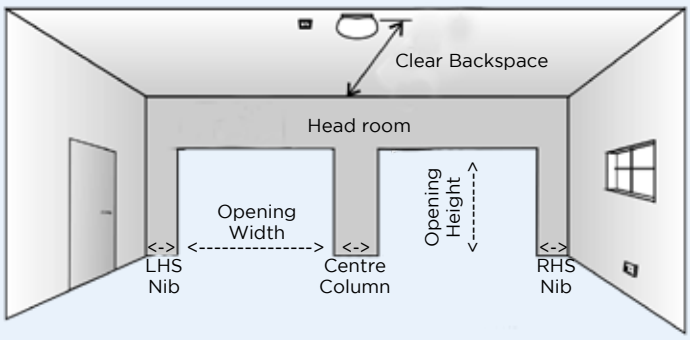
2.5 Ensure that you have the necessary tools to complete the job.

You are now ready to install the garage door.

2.6 ON SITE

Once on site, before off-loading the door, check the dimensions of the garage opening and clearnance. Check squareness of floor level!

IMPORTANT NOTE:-
In this installation manual, it is assumed that you are using a Doors Galore product. Certain items are not supplied in the Basic kits and are optional extras.



TYPICAL GARAGE ARRANGEMENT
(with 2 garage doors)

FIG 5.

Section 2:
Single Sectional Door Hardware Layout

Typical Layout of Hardware for a Standard Single Size Sectional Door

Notes:-

1. Depending on the size of the door, it's mass and construction, the quantity of No. 1 Centre Hinges may differ from the layout shown here. Mullion layout impacts quantity.
2. If the door has more or less than 5 sections, as shown here, the size of the Side Roller Hinge Bracket, (i.e. Hinge number), will vary accordingly. Example, a door with 6 sections will have up to a No. 5 Hinge, a 7 section door up to a No. 6 Hinge and so on, whereas a 4 section door will have up to a No. 3 Hinge only.

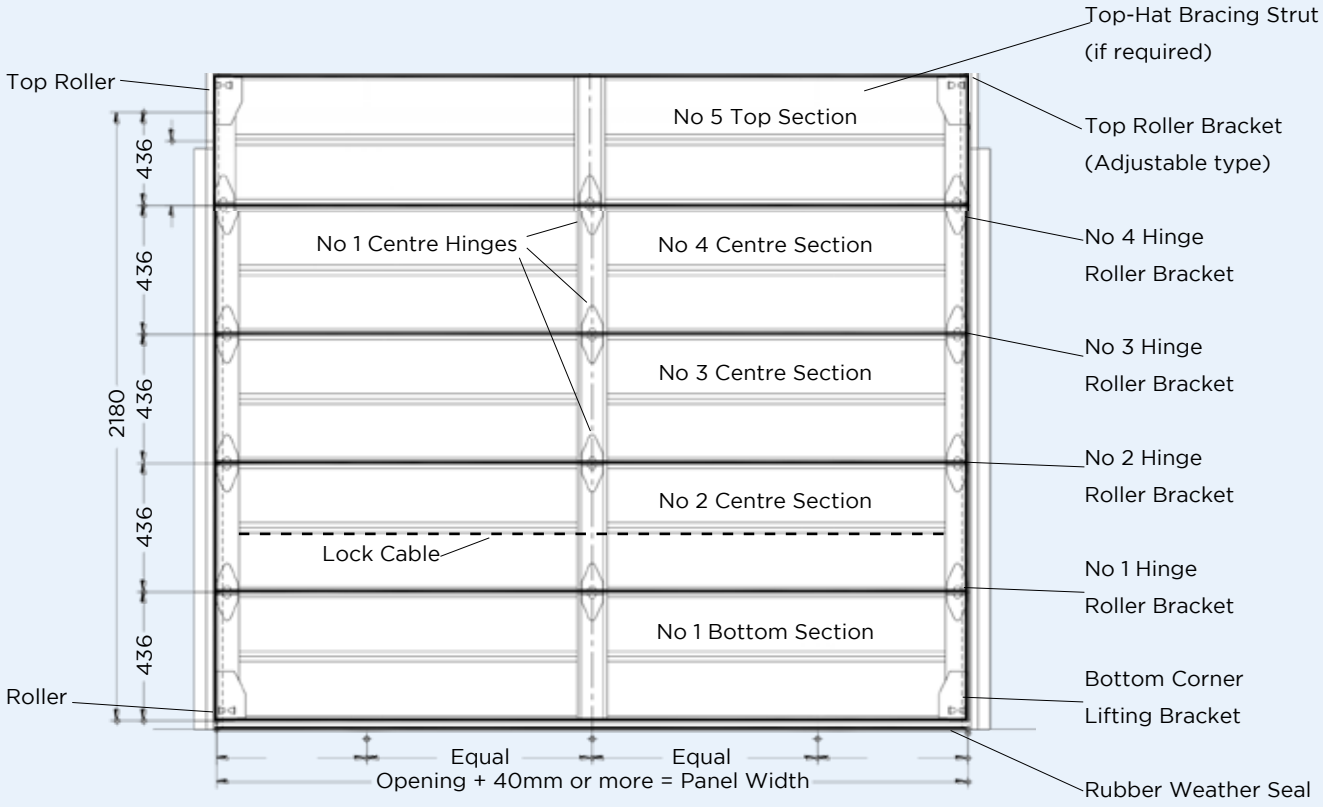


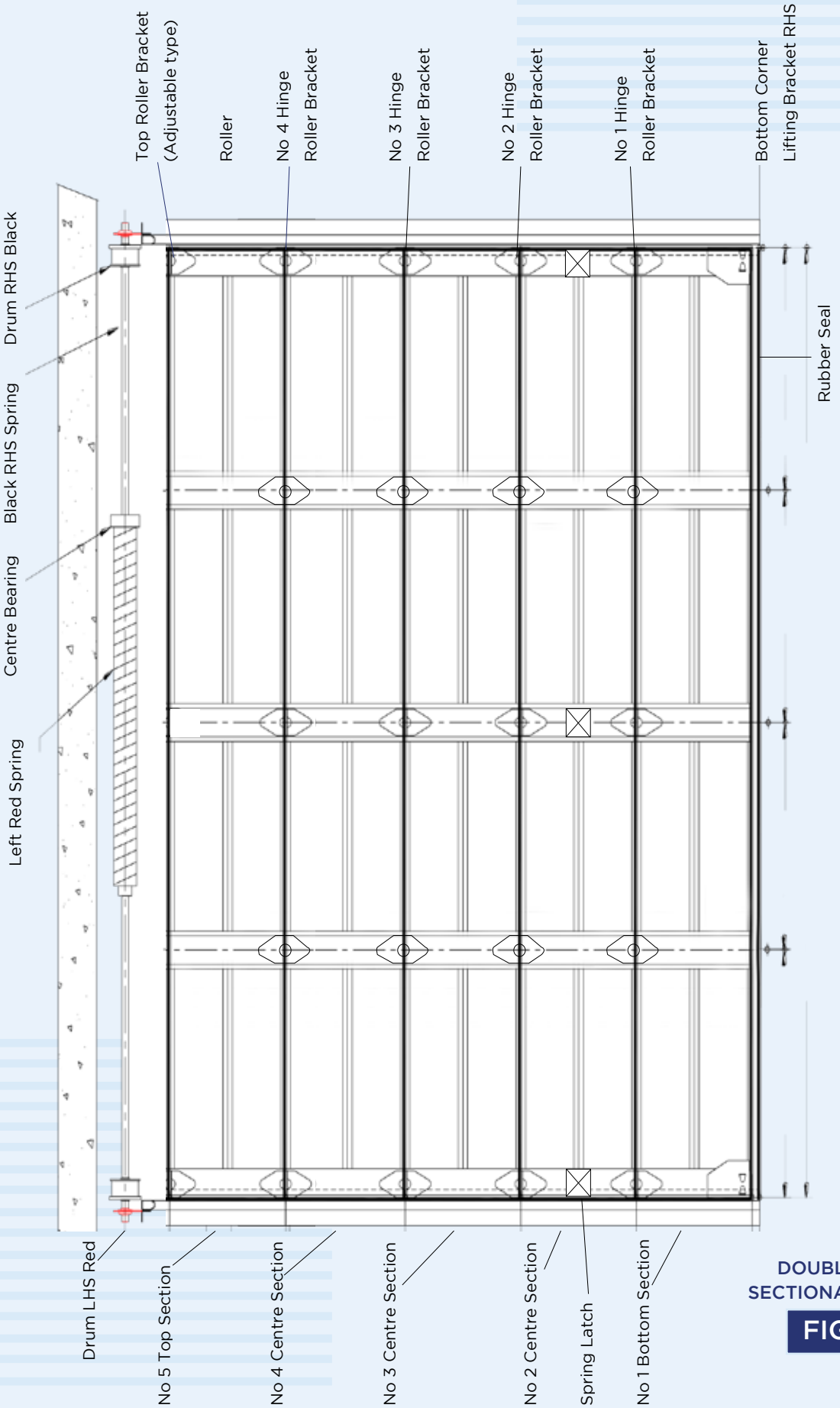
FIG 6.

IMPORTANT NOTES
APPLICABLE TO ALL SECTIONAL DOORS INDUSTRY STANDARDS

The colours red and black are used to denote whether a component is for the left side or for the right side respectively. When applied to items such as Cable Drums, the Winding Cones on Torsion Springs, Flag Header Brackets, in fact any component which is made to be handed, then, when standing inside the garage looking out...
black is on the RHS, and red is on the LHS.

Section 2:

Double Sectional Door Hardware Layout



DOUBLE SIZE SECTIONAL DOORS

FIG 7.

Section 3:
Sectional Door Installation

STEP 1:
Assembling the Vertical Tracks

Fix the Vertical Track - J-Track Mounting Brackets as shown in Fig. No 8.

Note:-

1. The J- brackets that secure vertical tracks to the wall or jam come in varying lengths. Depending on height of your sectional door, DG will supply varying qty's of these brackets. The type of J bracket supplied can be changed on request if the door panels do not have a thickness in the typical door range. What ever the combination, the shortest J brackets will be closest to the bottom / floor and the longest J brackets closest to the top of the vertical tracks since the vertical tracks tilt further away from the wall as these rise. Each bracket has a slotted fine adjustment hole, in order to set the vertical track clearance to suit the relevant door and height.

2. Standard height doors normally have 2 (two) J-Track Brackets per side. The number of Jamb Brackets Track increases with an increase in door height.

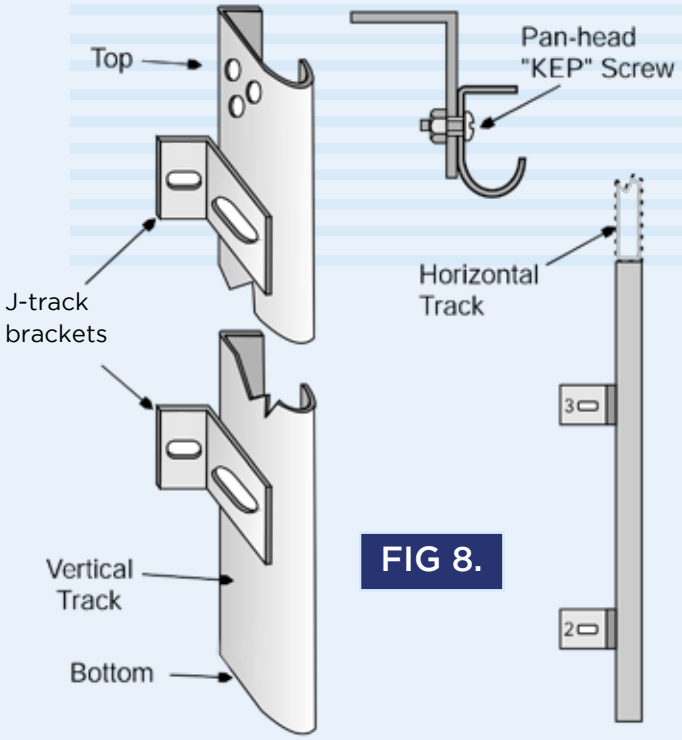


FIG 8.

STEP 2:
Timber Jambs, (Facia Boards) * if required (optional)

Timber Jambs, (Pine, Salinga or Meranti are suitable), and ideally should be 125 - 150mm wide and not less than 25mm thick. Length to suit the size of the door. For a standard height door, (2135mm H), the recommended length is approximately 2500mm - 2700mm.

USEFUL TIP:
Countersink the holes so that the heads of the screws are flush with the timber face. It makes adjustment of the tracks easier at a later stage and prevents panels hooking.

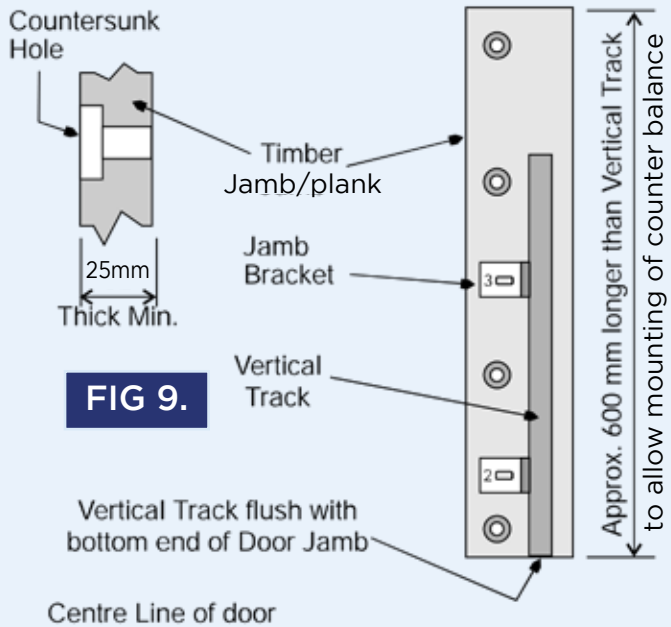


FIG 9.

STEP 3:
Marking out the garage

1. Place the No.1 Bottom Section of the door in the opening and centre it. The door should overlap the Nibs equally at each side. Panel to be level. Shim the panel as required.

2. Mark out the position of the door on the floor.

NOTE:
The J-tracks must overlap the door sections by at least 20mm.
Door panels to be level/plumb. Do not attempt to set door up to follow a skew floor or lintel. It will be problematic. Ensure that the floor is fixed first.

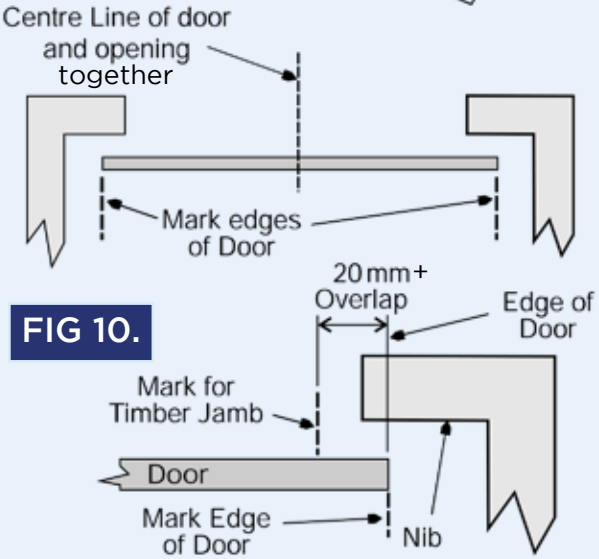


FIG 10.

Section 3 continued

Sectional Door Installation

STEP 4:
Fixing the Timber Jambs

1. Set the Jambs in position up to the marks on the floor. Use a spirit level to set the Jambs vertical, (i.e. plumb).
2. Mark out the positions of the holes for the all fasteners. Drill holes, 10mm x 75mm deep in the wall.
3. Use the M8 x 90mm Hex-head Coach Screws and M8 x 24 dia. Washers to fix the Jambs in place. (Remember to counter sink the coach screws)

NOTE:
Use a minimum of 4 screws for a 2150mm high Jam. The spacing between the screws should not exceed 500mm.

STEP 5:
Setting the levels (Fig.13)

1. Set the bottom section into the opening and centre it.
2. Use a spirit level to set the door section level, Use pieces of packing as required to shim the panel.
3. If the floor is level continue with Step 6.
4. If the floor is not level, proceed to Step 20.

STEP 6:
Attaching the Hinges and other Fittings to the Door Sections

The Door Sections are counted from the bottom up. (See Fig No.6)

1. The Bottom Section is No.1. The next one up is No.2 and so on.
2. Lay out all the fittings. Note that the Hinges are all numbered, e.g. No.1, No.2, No.3 etc. The lower the number the lower down the hinge.
3. Start with No.1 Roller Hinges and Centre Hinges on the No.1 Section as shown. The centre line of the Hinge must line up with the split-line on the back face of the doors.

IMPORTANT NOTES:

a) For the No 1, Hinges, the hinge axis coincides with the roller axis.
b) The No.1 Hinges also serve as Centre Hinges between all sections.
c) The Hinge must be positioned with the number to the bottom, the part of the Hinge with the manufacturer's stamp or the word "Top" must be at the top.

FIG 11.

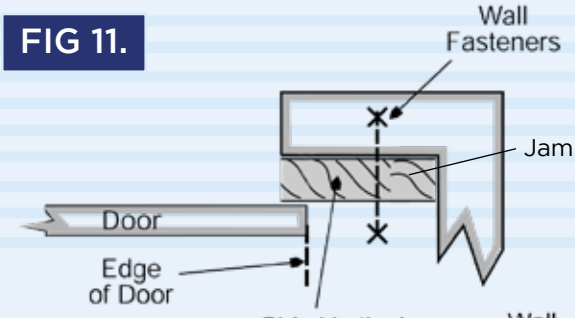


FIG 12.

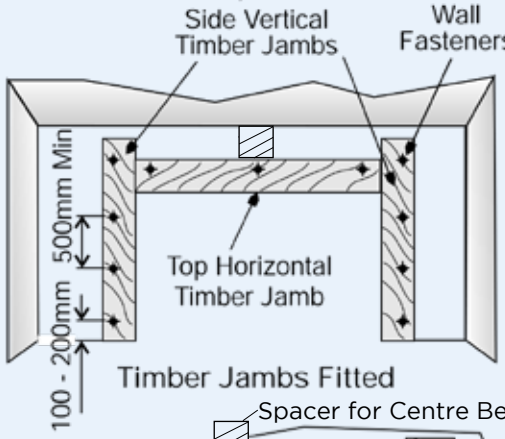
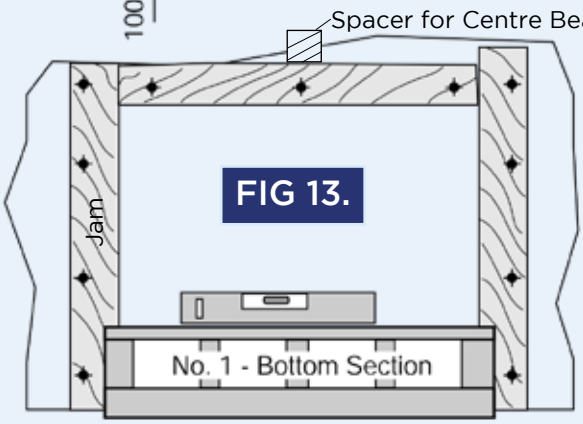
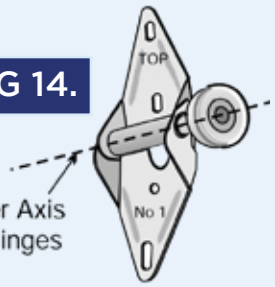


FIG 13.



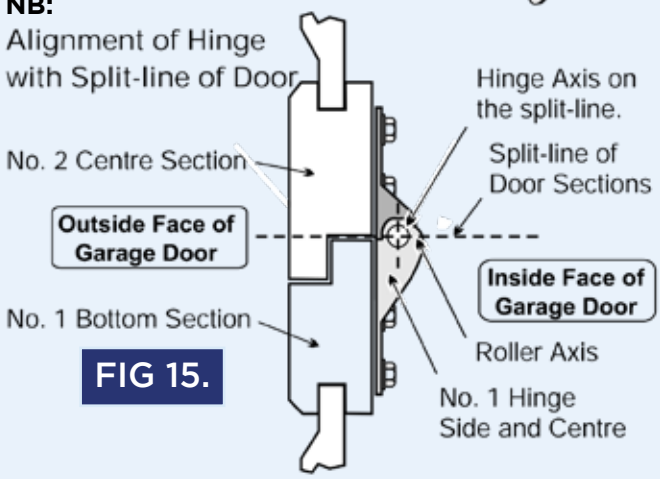
NOTE:
All Centre Hinges are No. 1 type Hinges.

FIG 14.



NB:
Alignment of Hinge with Split-line of Door

FIG 15.



Sectional Door Installation

STEP 7:
Attaching the Bottom Corner Lifting Brackets to the Bottom Section.

1. The Bottom Corner Lifting Bracket are fixed to the No.1 door section. Fix the brackets to the bottom corners as shown in Fig 16.

2. Attach the Lifting Cables, (Wire Ropes), to the Bottom Corner Lifting Brackets.

NOTE:

a) The brackets are handed. The Cable Lug must be at the very bottom of the door (Fig.16).

b) Ensure the Bottom Corner Lifting Brackets are level with each other.

c) It is very important to ensure that the Hinges are properly aligned with the rebated edges of the door sections, i.e. they must not be skew or off-centre.

Do not stack the sections into position in the opening until STEP 13.

Only attached the Hinges and other fittings to the door at this stage.

STEP 8:
No.2 Section - No.2 Hinge and Centre Hinges

1. Fix the No.2 Roller Hinges in place (see Fig.6).

2. Fix the Centre Hinges (same as the No.1 Hinges) to the No.2 Section as shown (Fig.6 & 22).

See Fig.6 for the general layout of all the fittings on the door.

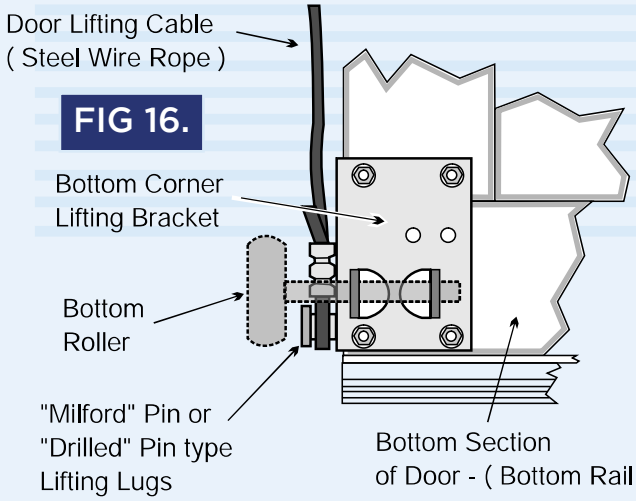


FIG 16.

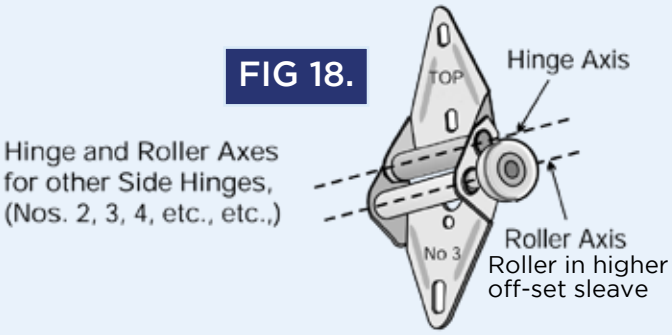


FIG 18.

Alignment of Hinge with Split-line of Door

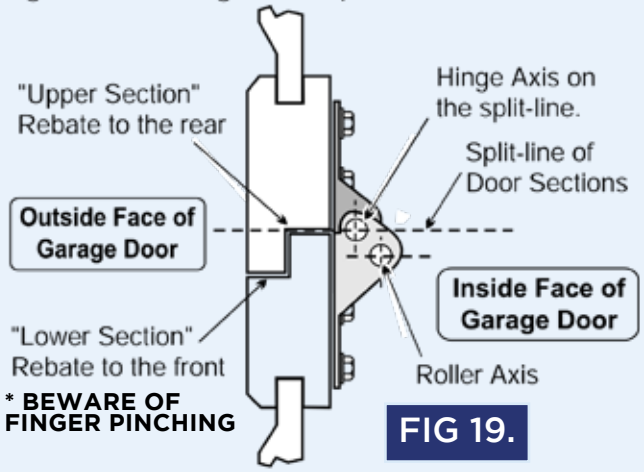


FIG 19.

Sectional Door Installation

STEP 9: OPTIONAL!!
Spring Latches, Inside Swivel Handle and "T" Handle Lock.

1. Spring Latches are normally fitted to the No.2 Section. The latches must engage with the Striker Plates on the Vertical Track.

2. Fit the Inside Swivel Handle to the No.2 Section on the centre line of the door.

3. If an outside "T" Handle Lock is to be fitted, it will also be fitted to the No.2 Section.

4. Fit the Lock Cable as shown.

5. If a "T" Handle lock is required, drill the appropriate size hole through the door. The square shaft of the lock passes through the Swivel Handle.

NOTE:
"T" Handle Locks are fitted to doors which:
a) will not be automated, and...
b) to any automatic garage door, which is installed in a garage, which does not have a secondary access.

STEP 10:
Centre Section Panels (Fig.22).

1. Fit the Hinges to the No.3 Section in the same way as for Section No.2.

2. Repeat the procedure for all the remaining Centre Sections, (i.e. Nos. 4, 5, 6 as required)

STEP 11:
Top Section (Fig.23).

1. Fit the Top-Adjustable Roller Braket 50 - 100mm below the top edge of the door.

NOTE:
It is advisable to fit this bracket only when the Top Section is finally put in place in the opening. It will be easier to determine the best position for the Top Adjustable Roller Bracket, (i.e. when completing Step 15).

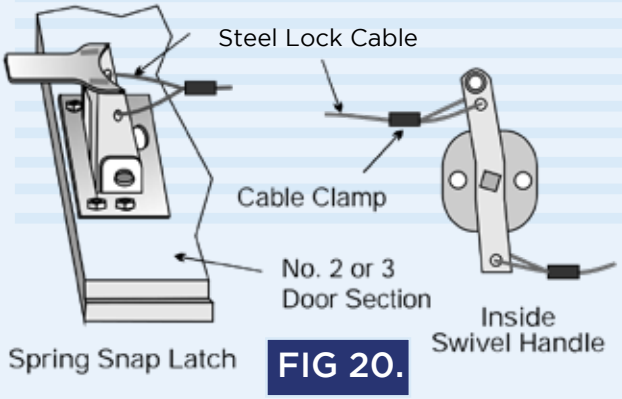


FIG 20.

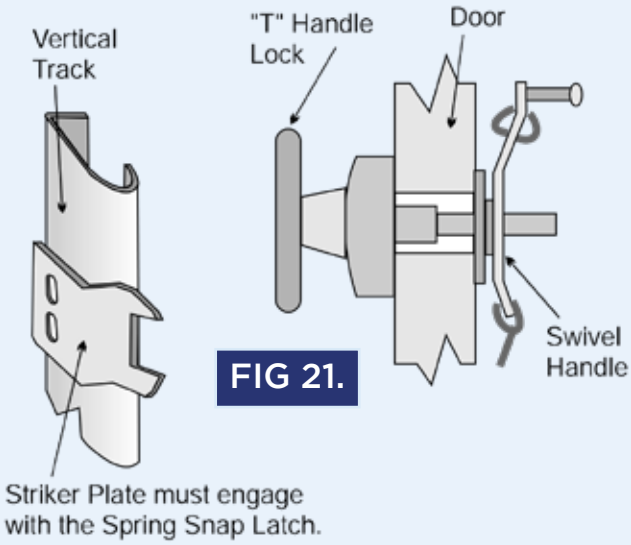


FIG 21.

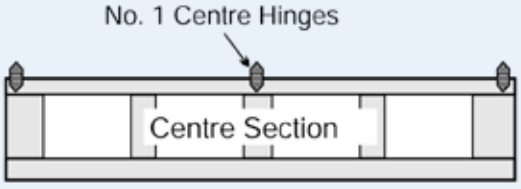


FIG 22.

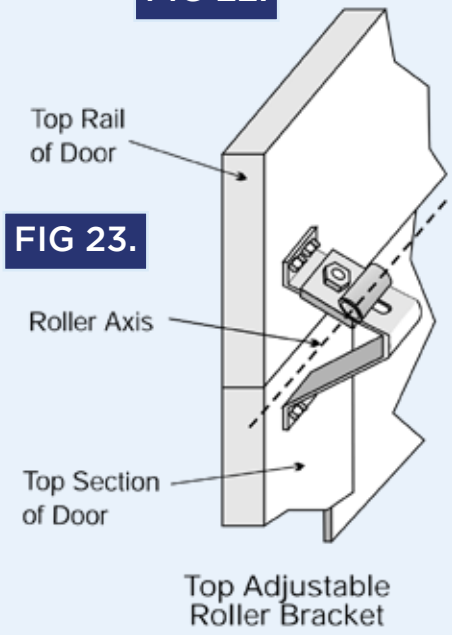


FIG 23.

Sectional Door Installation

STEP 12:
Setting up the Vertical Traks and No.1 Bottom Section. (See Fig. 24 & 25)

1. Place the No.1 Bottom Section in the opening according to the reference marks made previously.
2. Place the Vertical Tracks with the Jamb Brackets attached, adjacent to the section.
3. The edge of the Vertical Track should be 15 - 20mm from the edge of the door. Do not set the track too close to the door as the door must be allowed to “float” to some degree.
4. Make sure that the track is vertical, (use the spirit level or a Plumb Bob) – See notes below.
5. Fix the Vertical Track to the Door Jamb.

NOTE:
a) Make sure that the tops of the Vertical Tracks are at the same level. Not having the tracks accurately aligned is one of the main reasons that many sectional doors do not operate correctly.
b) Do not fit the Horizontal Tracks until STEP 14.
c) The Vertical Tracks, when viewed from the side, are not exactly vertical, i.e. they are not parallel to the wall. The tracks must be inclined at a slight angle away the wall as shown in Fig.26.

STEP 13:
Setting up the Centre Sections. (Fig. 27)

1. Place the No.2 Centre Section in place and fix the Hinges between the 2 sections with the Hinge Fasteners provided.
2. Repeat the procedure with the rest of the Centre Sections, i.e. Nos. 3, 4 etc). Refer to section 6.

Do not fit the Top Section into place yet. This will be done in STEP 15.

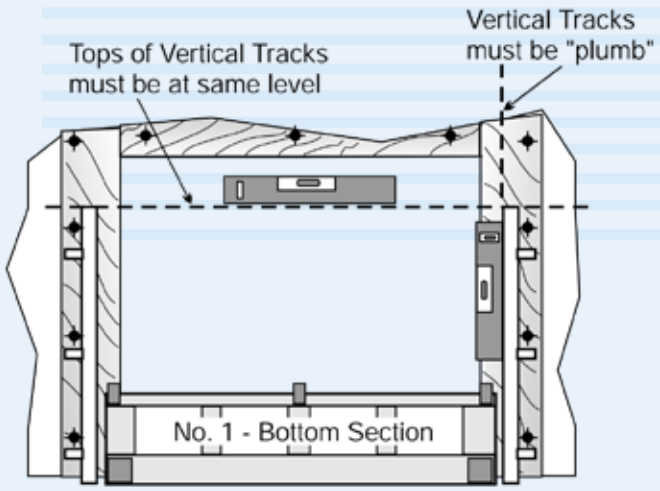


FIG 24.

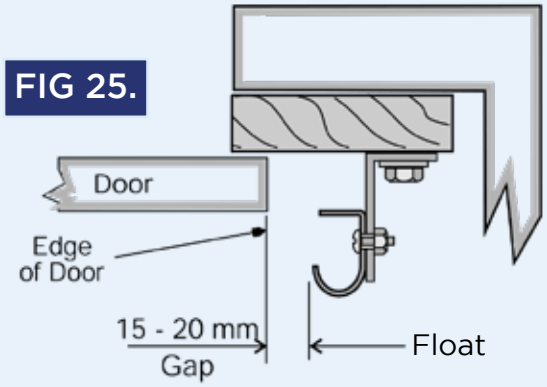
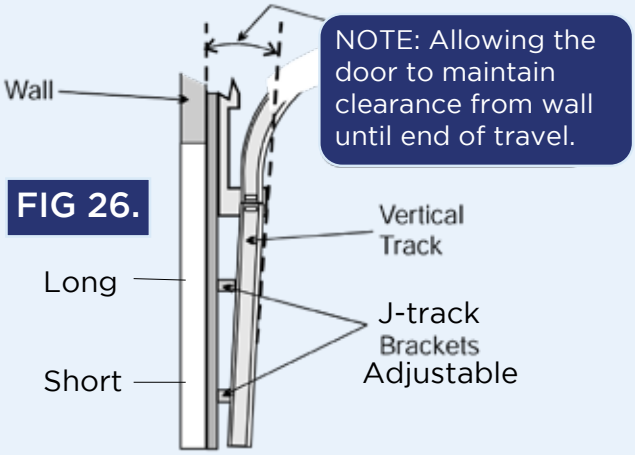


FIG 25.



NOTE: Allowing the door to maintain clearance from wall until end of travel.

FIG 26.

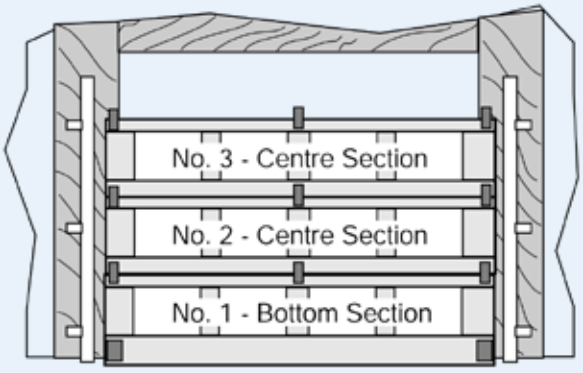


FIG 27.

Sectional Door Installation

STEP 14:
Setting up the Horizontal Tracks. (See Fig. 28)

1. Fit only the one side of the Horizontal Tracks. This will make it easier to set the Top Section in place.

2. Use the Tripods to support the Horizontal Track in place. Fix the curved section of the track to the Flag Header Bracket and join using track angels provided.

3. Fix the Flag Header Bracket to the top of the Vertical Track.

STEP 15:
The Top Section (See Fig.29)

1. Set the Top Section piece in place.

2. Position the Top Adjustable Roller Brackets and fix them in place.

STEP 16:
Aligning the Horizontal Tracks (See Fig.30)

1. Install the remaining Horizontal Track.

2. Make up suitable wall or hanging brackets to support the Horizontal Tracks. Ready-made brackets, such as the one shown in Fig.31, are available ex stock.

NOTE:
When installing the Horizontal Tracks, take care to ensure that...
a) the tracks are at the same height and are level to floor and parallel to each other.
b) the tracks must not converge towards or diverge away from each other.
c) also, the 15 - 20mm gap between the edge of the door and the track is maintained for the Vertical and Horizontal Tracks.

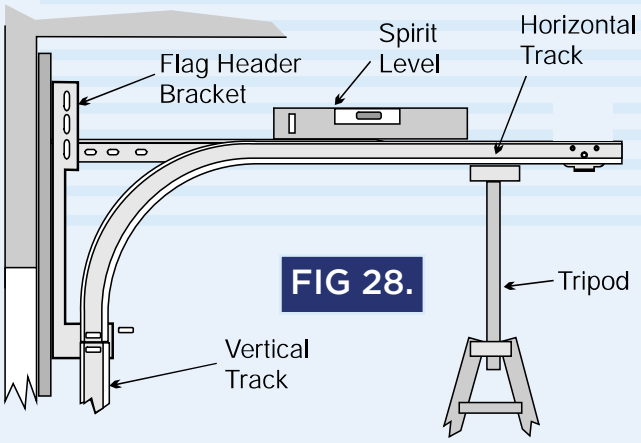


FIG 28.

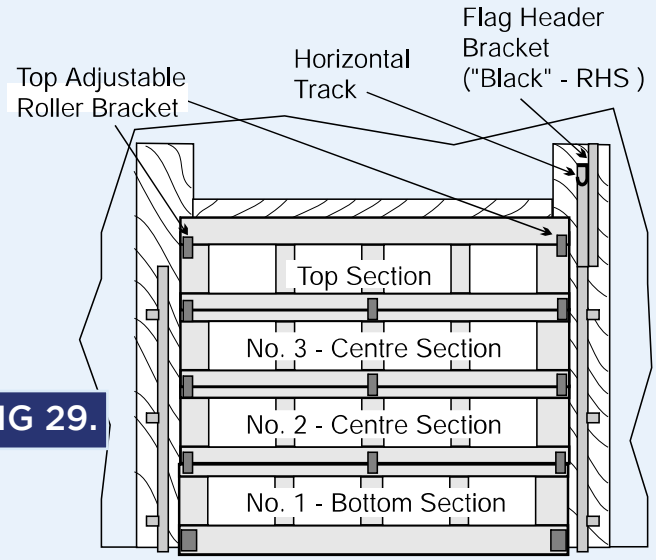


FIG 29.

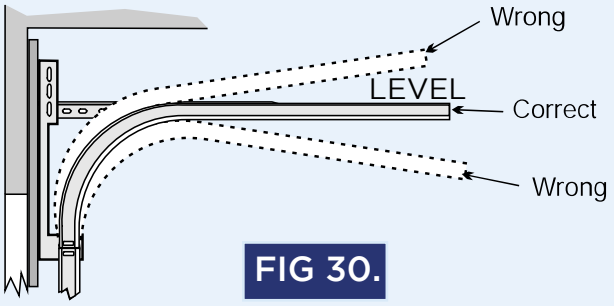
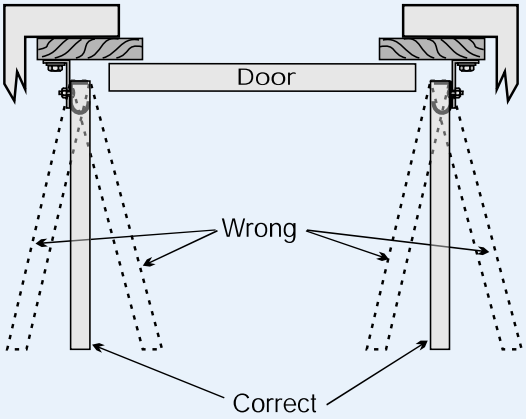


FIG 30.



Sectional Door Installation

STEP 17:
Tension Spring Assembly.
(Figures 32, 33, 34, 35)

WARNING! WARNING! WARNING!
Exercise extreme caution when working with Garage Door Springs. There is a great deal of energy stored in the Spring when it is under tension. Never work on Springs without the proper tools, knowledge and training.

1. Assemble the Pulley with the Fork fitting to the Spring.
2. Pass the “S” Hook through the loop on the Spring.
3. Hook the Chain onto the Spring Anchor Bracket.
4. Weave the Lifting Cable from the Bottom Corner Lifting Bracket up the side of the door and over the Fixed Track Mounted Pulley.

NOTE:
The Lifting Cable passes between the roller and wall and the Vertical Track.

5. Clamp the end of the Lifting Cable to the Flag Header Bracket using the Clamping Strips.
6. Before the Spring can be hooked onto the Spring Anchor Bracket, the door must first be raised to the open position.

SAFETY ESSENTIAL

Secure the door in the open position by placing a “G” Clamp firmly in the Vertical Track under the Door Roller.

WARNING! TENSION SPRINGS
Do not attempt to adjust the Spring tension whilst the door is in the closed position. When the door is closed, the Spring is under maximum tension. Raise the door before making any adjustments to the Springs.

7. Pass the Spring Safety Cable through the Spring. Anchor the Safety Cable to the Spring Anchor Bracket at one end and the Flag Bracket at the other.
8. Tension the Spring by adjusting the length of the Chain and make sure left and right are similar.
9. Check all parts are properly assembled, secure and tightened. Make sure left and right are the same length / equal taught. Remove G clamp while supporting the door and close slowly to check function. Keep by standers away.

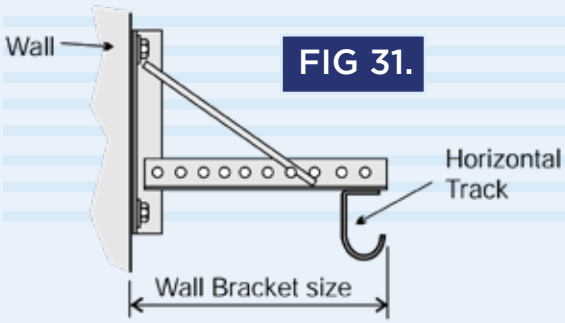


FIG 31.

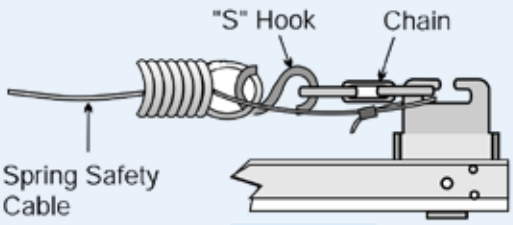


FIG 32.

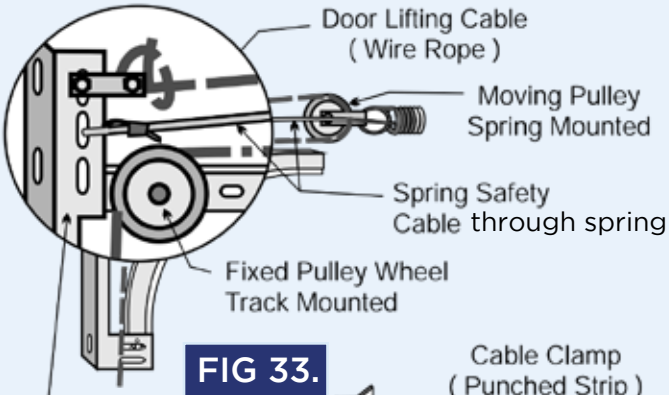
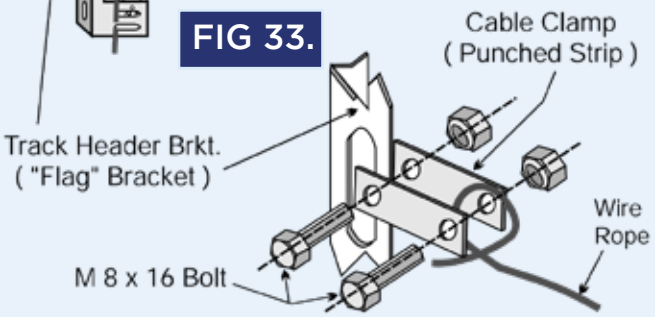


FIG 33.



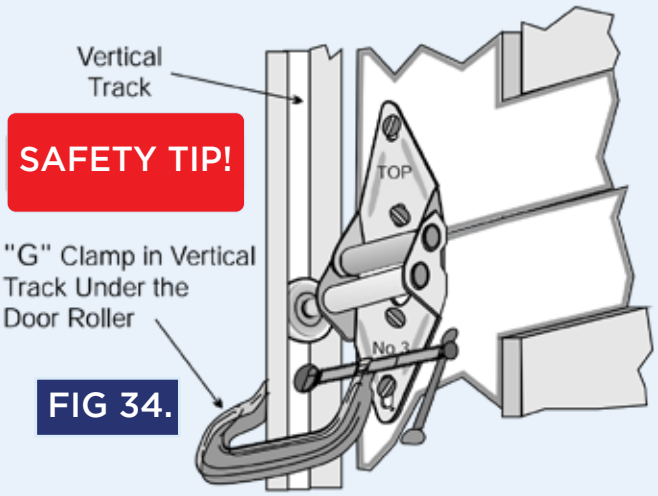


FIG 34.

Sectional Door Installation

STEP 18:
Tension Spring Assembly. See section 4 for Torsion

CAUTION! CAUTION! CAUTION!

Before lifting the garage door, check and re-check the following:

a) All fasteners are secure, especially those that secure the Jambs in the wall and the Track Fasteners.
b) Pay particular attention to Track Hanger Brackets and Spring Anchor Brackets.
c) Make sure the Door Lifting Cables and the Safety cables are secure.

WARNING! WARNING! WARNING!

Never place your fingers between the sections of the door! Serious injuries may be sustained.

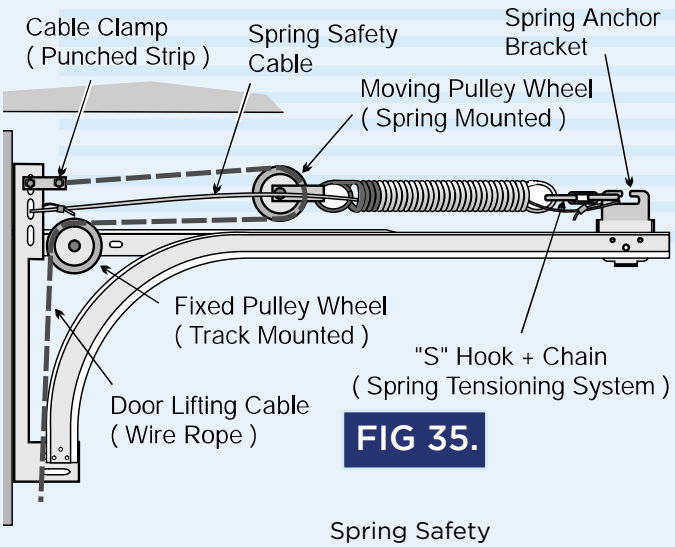


FIG 35.

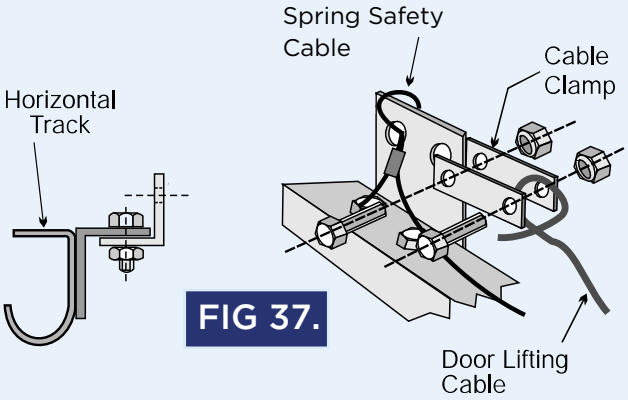


FIG 37.

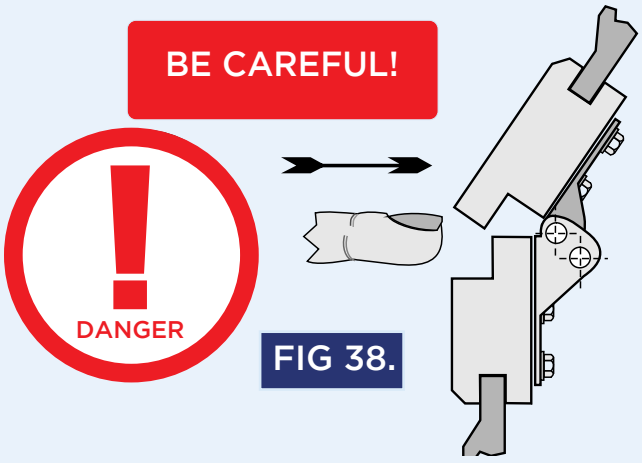


FIG 38.

Sectional Door Installation Garage Floor not Level

NOTE: DOOR MUST BE LEVEL

STEP 18:

Setting up the Vertical Tracks and No.1 Bottom Section

Method 1 (preferred method - See Fig.39)
*** For installations with adequate headroom**

1. Place the No.1 Bottom Section in the opening, according to the reference marks made for the Door Sections and Door Jambs and set to a level position.

2. Start at the side where the floor is highest. Place the Vertical Track with the Jamb Brackets attached adjacent to the section. Follow the steps described previously to level and set the correct clearances for the tracks.

3. Place the opposite side Vertical Track in position using No.1 Bottom Section as a reference to get the correct levels.

NOTE:
a) Make sure that the tops of the Vertical Tracks are at the same level.
b) Bottom Door Stopper. Install a Bottom Door Stopper underneath the Vertical Track on the low floor side to prevent the Bottom Roller from coming out of the track.
c) All other procedures for installing the door are as described previously.

STEP 19:

Setting up the Vertical Tracks and No.1 Bottom Section

Method 2 (alternative method - See Fig.40)
*** Headroom is limited.**

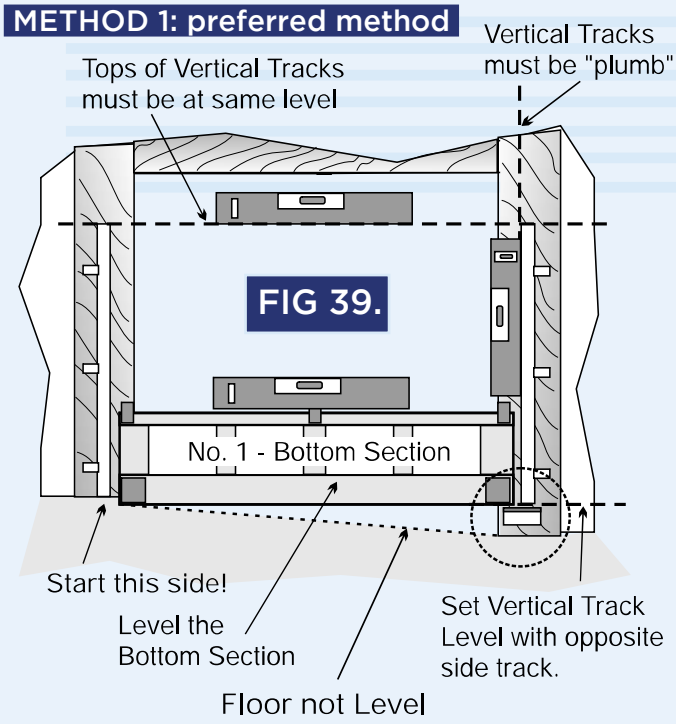
1. With the No.1 Bottom Section in place, measure the maximum gap under the door.

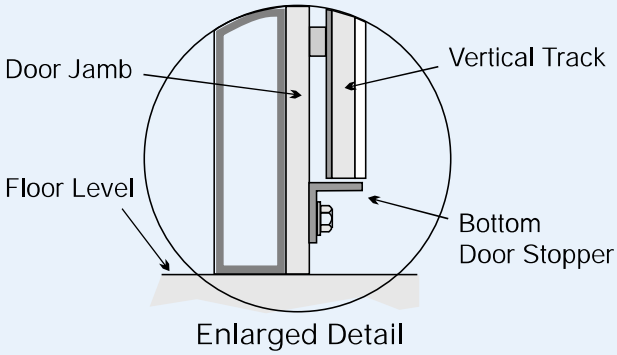
2. Start at the side where the floor is lowest. Place the Vertical Track with the Jamb Brackets attached adjacent to the section. Follow the steps described previously to level and set the correct clearances for the tracks.

3. Cut a length off the opposite side Vertical Track, equal to the gap under the door. Fix the trak in place. Complete the installation of the door.

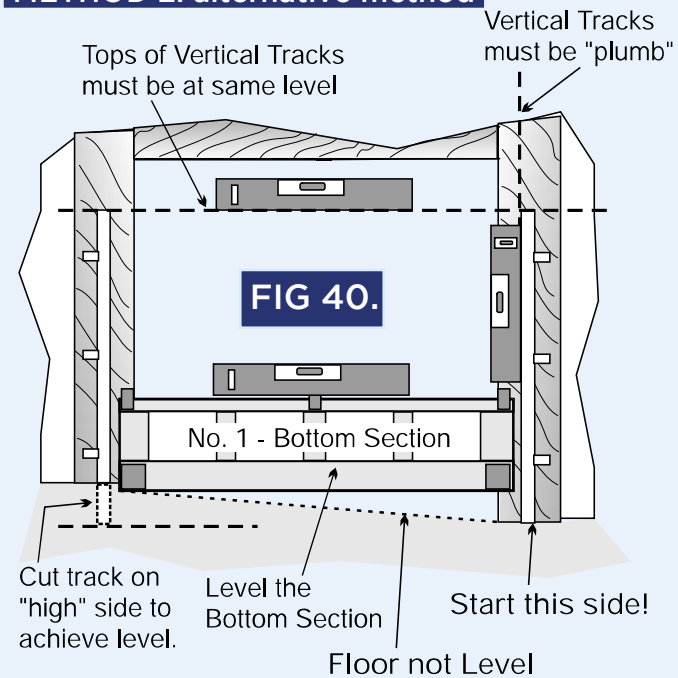
Do not cut more than 50mm off the Vertical Track!

METHOD 1: preferred method





METHOD 2: alternative method



Section 4:

Double Sectional Door Installation

STEP 1:
Double Sectional Door Installation

The assembly of the Double Size Sectional Doors is essentially the same as that for Single Size Doors. The main difference is:

1. There are more components, (hinges etc) to fit to the door.

2. Usually, reinforcing struts, known as Top Hat Bracing Struts (Fig.41), are required to strengthen the door sections, and...

3. The Spring System is usually of the Torsion type. The assembly and installation of the Torsion Spring Systems is very different to the the Tension Spring System.

Follow STEPS 1 to 14 of Section 3 for the procedures relating to attachment of the Hinges and other components to the door sections, assembly and installation of the Tracks, erection of the Jambs, etc.

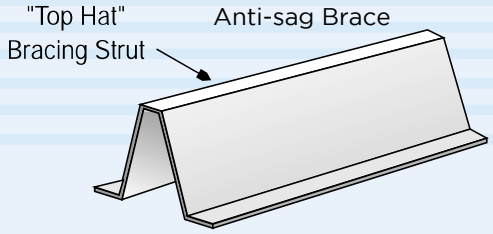


FIG 41.

STEP 2:
Top Hat Bracing Struts (See Fig. 42)

1. Top Hat Bracing Struts are recommended for all door sections 3000mm and longer.

2. Screws securing top hats should not be further than 400mm apart and two screws, one per fitting, per anchor point.

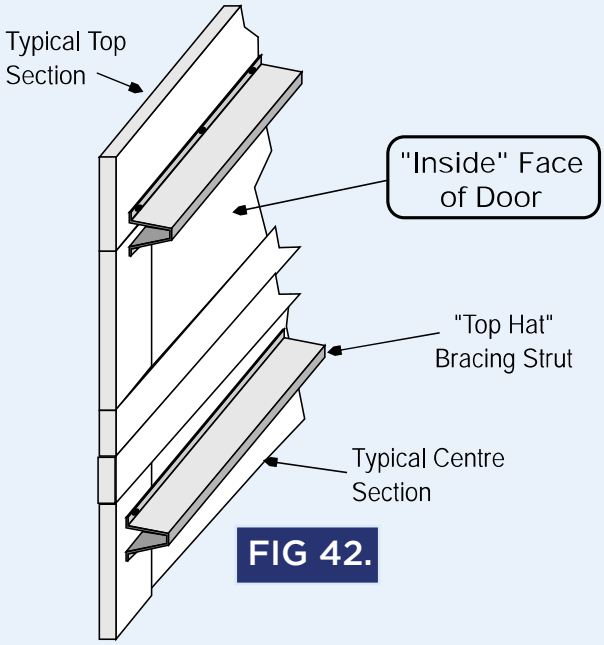


FIG 42.

STEP 3:
Timber Jambs for Torsion Spring Systems (See Figures 43, 44 & 46)

1. A Packing Block for the Centre Bearing is required. This Packing Block must be the same thickness as the Side Jambs. This is to ensure that the Torsion Tube remains straight – Bearing plates aligned.

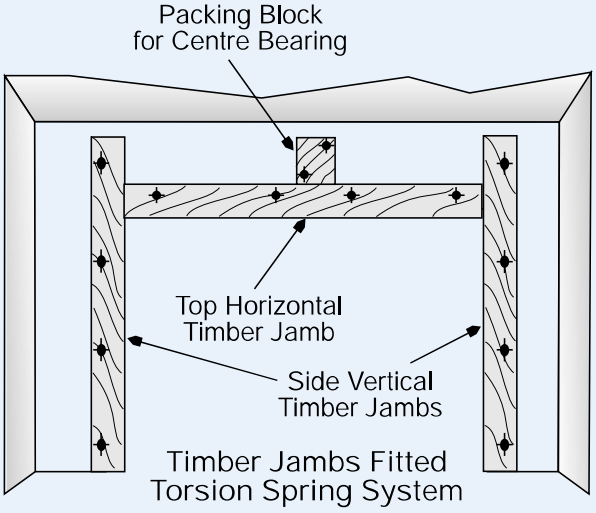


FIG 43.

Section 4 continued

Double Sectional Door Installation

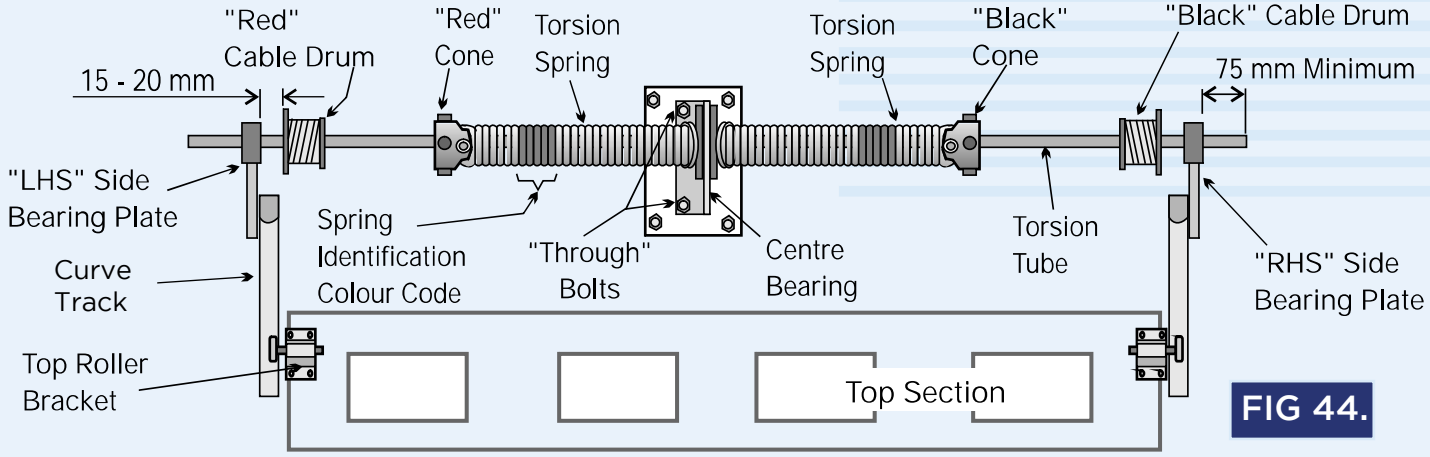


FIG 44.

STEP 4:
Assembling the Torsion Tube

1. Assemble the Torsion Tube on the floor.
2. Slide the Centre Bearing onto the tube up to the middle point.
3. Slide the Torsion Spring onto the tube with the Stationary Cones toward the Centre Bearing.
4. Now, slide the two Cable Drums onto the tube with the Red Drum to the LHS and the Black Drum to the RHS on the Centre Bearing.
5. Finally, slide the two Side Bearings onto the tube.

NOTE:
a) The Red Winding Cone is on the LHS of the Centre Bearing and the Black one to the RHS.
b) The Side Bearings are left and right handed.
c) Do not fix anything in place just yet! You can hand tighten the bolts to prevent slip.

6. Lift the assembly into place.
7. Bolt the Side Bearing to the Horizontal Track Angles as shown.
8. Position the Centre Bearing over the Packing Block.
9. Level the Torsion Tube and mark the positions for the fixing bolts for the Centre Bearing.
10. Drill 10mm hole through the wall and anchor the Centre Bearing with long bolts into the wall.

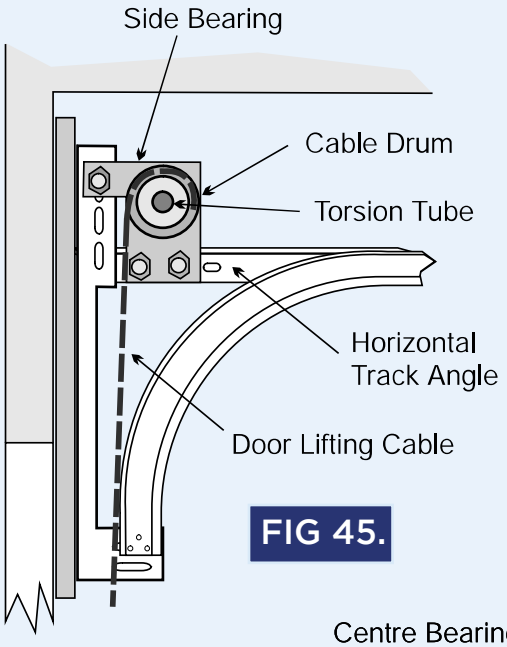


FIG 45.

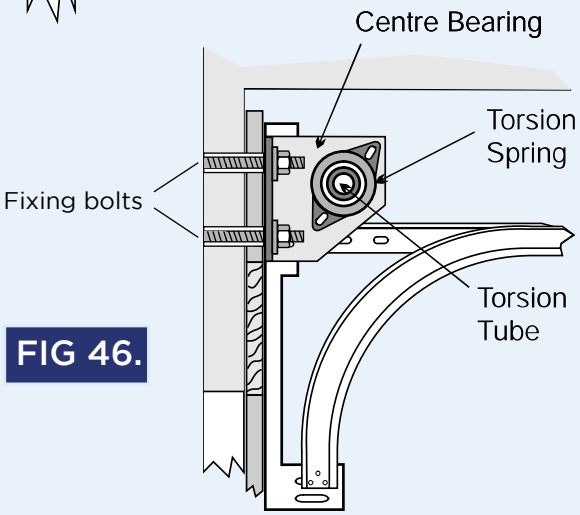


FIG 46.

IMPORTANT NOTES:
It is very important that the Centre Bearing is very secure. The Centre Bearing is restraining the total force being applied by the Springs. If the Centre Bearing should come loose, the repercussions could be disastrous. It is not sufficient to use plastic wall plugs as anchors for the fixing screws. Use only long bolts throught the structure to secure the Centre Bearing.

Section 4 continued

Double Sectional Door Installation

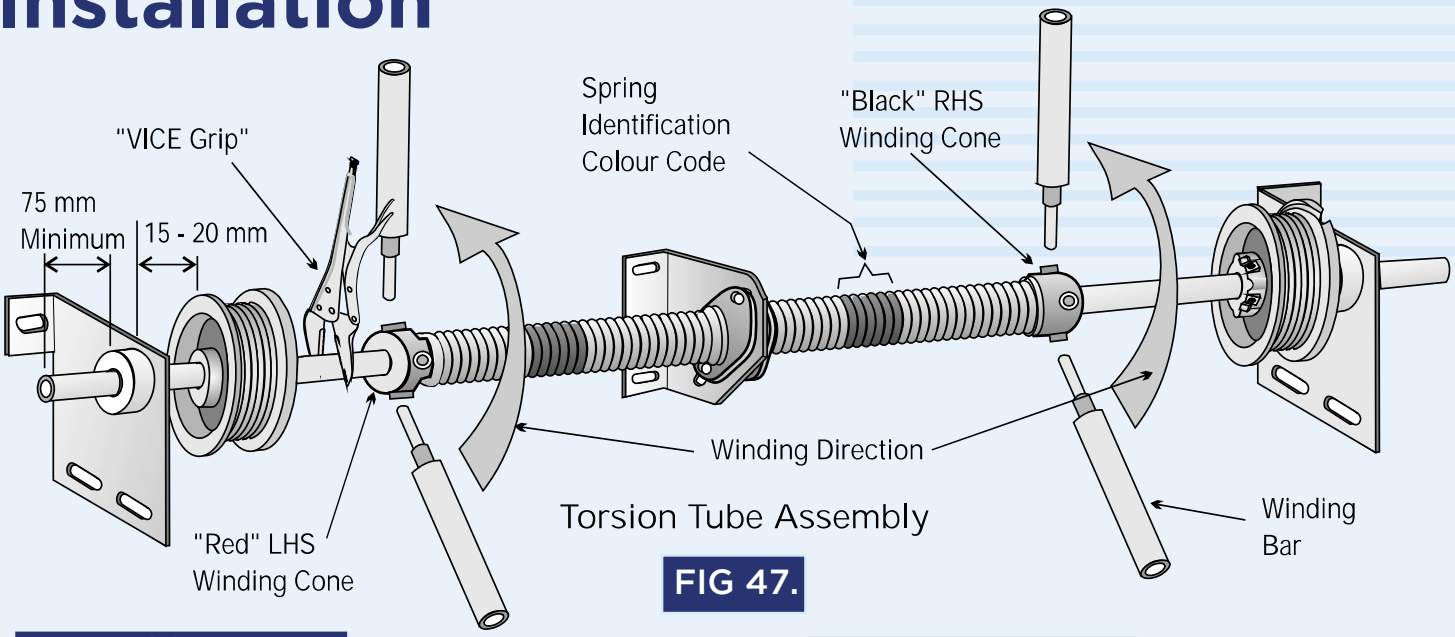


FIG 47.

STEP 4 CONTINUED:

11. Been sure to allow the Torsion Tube to extend at least 75mm beyond the Side Bearings at each end.

12. Attach the door Lifting Cable to the Cable Drums.

13. Start with the LHS Drum. Position the Cable Drum +/- 20mm from the Side Bearing and fasten it to the Torsion Tube using the Square Head Screws provided on the Drum.

14. Rotate the Torsion Tube to take up the slack in the Lifting Cable. Use a pair of Vice Grips to prevent the Torsion Tube from turning.

15. Go to the RHS Drum. Position the Cable Drum +/- 20mm from its Side Bearing. Rotate the drum to take up the slack of the Lifting Cable. Fasten the drum to the Torsion Tube.

NOTE:
It is very important to make sure that the Lifting Cables are of the same length and that both have an equal amount of tension in them when the drums are fixed to the Torsion Tube.

STEP 5:

Winding Up the Torsion Springs

1. Before winding up the Springs, make sure that all bearing plates are secure, especially the Centre Bearing. The ladder used must be strong and stable. Do not use a box or chair to stand on. The stored energy in the spring is great and very serious injuries may be sustained if the incorrect procedures or inferior tools are used.

STEP 5 CONTINUED:

2. It is recommended that the springs be given an initial wind and then unwound to allow the spings to settle in.

3. Lubricate the spring.

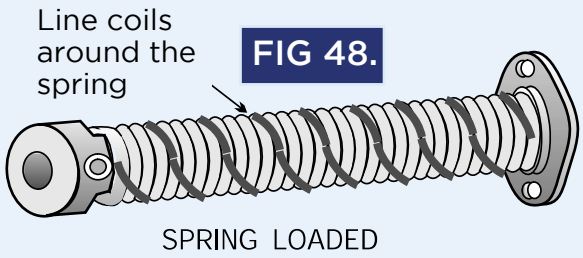


FIG 48.

CAUTION! CAUTION! CAUTION!
Take great care when winding the springs. Use only the correct type and size Winding Bars. Two bars are required. Do not use the screw drivers of other ill-fitting bars. Never stand directly behind or below the bars when winding the springs.

Section 5:

Sectional Door Installation Trouble Shooting Guide

While trouble shooting, do not loosen and adjust any parts without due regard for consequences for weight of door and spring tension that can cause injury or death. To release any component first requires alternative securing support to be in place.

PROBLEM 1:
Door is not well balanced. Door is heavy to lift up on opening and closing position.

SOLUTIONS 1:
Possible causes. Check the following:

1. Springs/ Hardware components may be damaged. Check for stretched or broken springs! As a general rule, springs for domestic doors have a “design life” of 10 000 cycles. This translates to an average lifespan of 4 - 5 years. Replace all damaged components.
2. Spring has not been wound correct number of turns. Check that the correct number of turns have been wound onto the spring (s).
3. Spring is too light for the door. If the number of turns is correct, then check that the correct size spring has been used?
4. Door is wedged. The door may be wedged between the track and the door jambs. The Vertical Track should be inclined at a slight angle away from the wall so as to allow the door to run freely. If the Vertical Track is not sufficiently inclined or, if the track is too close to the jambs (wall), the door could become wedged, (i.e. jammed), thus causing the door to drag and feel heavy. (See Step 12).
5. Tracks are mis-aligned. Check that the Vertical Tracks are plumb (i.e. vertical), and the Horizontal Tracks are at 90 degrees to the wall. The door may be squeezed vertically. Check that the Vertical Tracks are not too close to the edge of the door. There should be 15-20mm of clearance between the door and the Vertical Track (See Step 14 & 16). The door may be squeezed horizontally. Check that Horizontal Tracks are not converging towards each other, also causing the door to be squeezed as it opens. This will also cause the door to feel heavy.
6. Cable Drum may be jammed. Check that the Cable Drums are turning freely.
7. Springs may be binding. Check that the Spring (s) is lubricated. If the coils are binding, a lot of extra drag is imposed creating the impression that the door is heavy.
8. Torsion Tube. The Torsion Tube assembly may be out of level. This will cause extra friction in the system.

"Wedging" of the Door

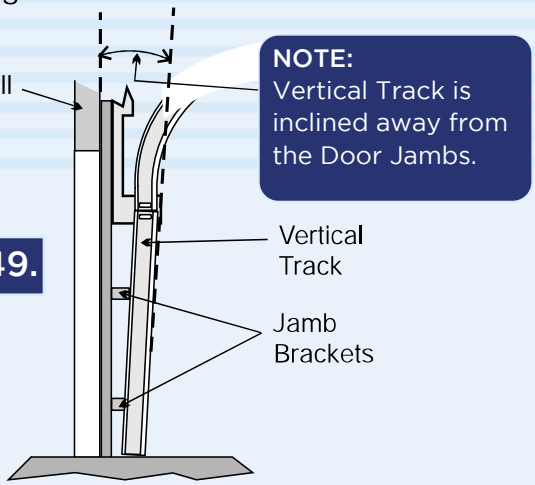


FIG 49.

"Squeezing" the Door Horizontally

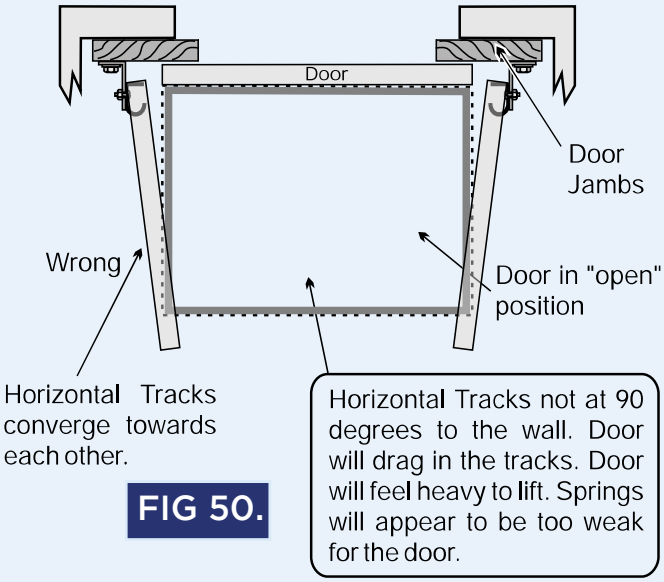


FIG 50.

"Squeezing" the Door Vertically

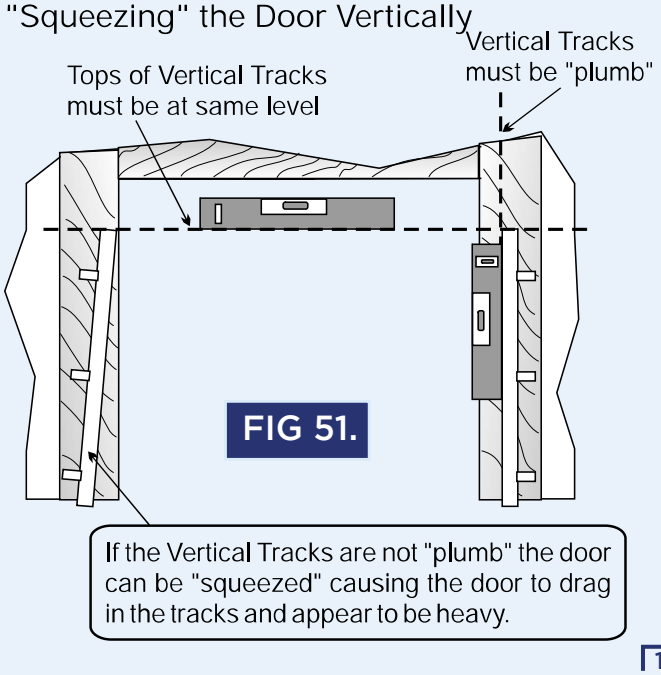


FIG 51.

Section 5 continued

Sectional Door Installation Trouble Shooting Guide

PROBLEM 2:

Door is not well balanced. Door is heavy to lift up from the closed position but gets lighter as the door is raised to the open position.

SOLUTIONS:

Possible causes. Check the following:

1. Repeat all the checks as for PROBLEM 1.
2. Hoizontal Tracks may not be level. The Horizonal Tracks may be inclined downwards. This casues too much weight to transfer to the Horizontal Tracks. If the tracks are declined to a downward angle, the door will tend to run very quickly to the open position. The Spring design for normal, domestic doors assumes that the weight of the door is gradually transferred from the vertical plane to the horizontal.
3. Spring Tension. The springs have been over wound. There are too many turns on the spring. This is an indication that the springs are too light for the door. Heavier springs are needed.

PROBLEM 3:

Door is not well balanced. Door is easy to lift up from the closed position but gets heavier as the door is raised to the open position.

SOLUTIONS:

Possible causes. Check the following:

1. Repeat all the checks as for PROBLEM 1.
2. Horizontal Tracks may not be level. The Horizontal Tracks may be inclined upwards. This causes too much weight to hand in the Lifting Cables. The spring design for normal domestic doors assumes that the weight of the door is gradually transferred from the vertical plane to the horizontal. If the Horizonal Tracks are not level, the weight of the door will continue to remain in the cables giving the impression that the door is heavy.
3. Spring Tension. The springs have been under wound. There are not enough turns on the spring. This is an indication that the springs are too heavy for the door. Lighter springs are needed.

Horizontal Track Mis-aligned - Condition 1

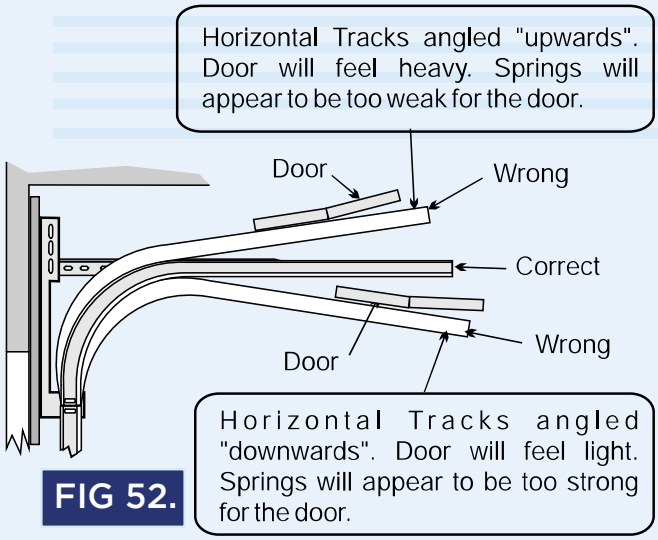


FIG 52.

Horizontal Track Mis-aligned - Condition 2

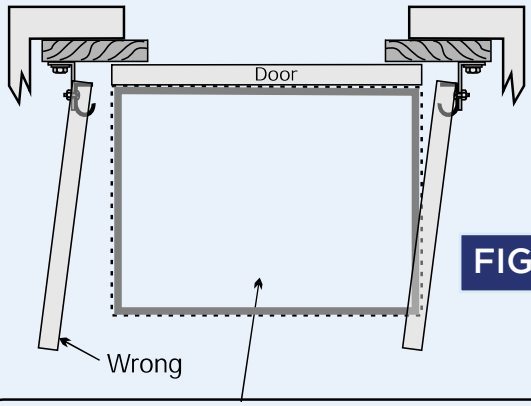


FIG 53.

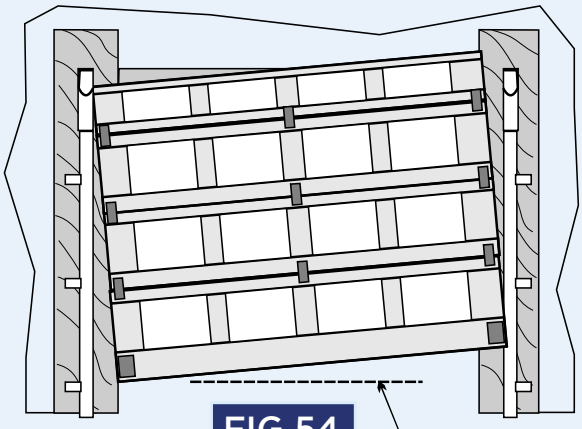


FIG 54.

Section 5 continued

Sectional Door Installation Trouble Shooting Guide

PROBLEM 4:

Door is out of level. Door does not close level. Door is out of level when open.

SOLUTIONS:

Possible causes. Check the following:

1. Vertical Tracks. The tops of the Vertical Tracks are not level.
2. Horizontal Tracks. The Horizontal Tracks are not at 90 degrees, (right angles), to the front wall (door opening).
3. Lifting Cables. The Lifting Cables are not of the same length. Check that the Cable Drums have not moved on the Torsion Tube.
4. Floor Level. The door sections were not levelled at the start of the installation.

PROBLEM 5:

Lifting Cables come off the Cable Drums / Pulley Wheels. As the door is raised, the Lifting Cables become slack and come off the drums / pulleys.

SOLUTIONS:

Possible causes. Check the following:

1. Springs are under wound or are under tensioned. This is an indication that the springs are too heavy for the door. Lighter springs must be used.
2. Door is being lifted too high. Install door stops to prevent the door from being lifted too high.
3. Cable Drums / Pulley Wheels may be damaged. Replace the Cable Drums / Pulley Wheels. Worn drums and pulleys will damage the Lifting Ropes.

PROBLEM 6:

Hinges are binding and making noises. Hinges are tearing off the door.

SOLUTIONS:

Possible causes. Check the following:

1. Track Radius is too small. As the door is raised, the door sections creek and the hinges jam up. This is an indication that the door sections are too side for the size of the track radius being used. Use a larger track radius.
2. Door Sections are deflecting too much. The door frame is too soft. The door sections are not adequately braced and are sagging in the centre. Reduce the sag in the door by fitting Top Hat Bracing Struts across the full width of the door. Each section should be braced.
3. Centre Hinges. There are not enough Centre Hinges fitted to the door.

Section 6:

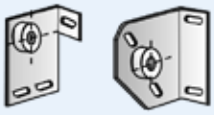
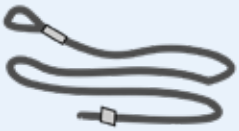
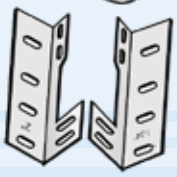
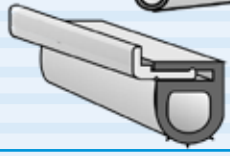
General Servicing

Check the following:

1. Fasteners. Check for loose fasteners. All screws, nuts and bolts etc. must be secure.
2. Damaged components. Replace all damaged components.
3. Replacing Springs. Door springs are designed for a limited life-span. Never replace only one spring in a multi spring system. Always replace all the springs on the door.
4. Lubrication. Lubricate all hinges, bearings and rollers regularly.

Section 7:

Door Hardware Spare Parts

Product Illustration	Description	Stock Code
	Tension Springs Sectional Doors	
	Torsion Springs Sectional Doors	
	Hinges (one duty)	
	Top Roller Bracket	
	Bearing Plates - Side Type Bearing Plates - Centre Type	
	Bottom Corner Lifting Brackets	
	Cable Drums	
	Cables - Lifting and Safety (Wire Ropes)	
	Chain Hooks - “S” & “W” Types	
	Latches, Handles and T-Locks	
	Cable Pulleys	
	Rollers	
	Track Header Brackets (Flag Brackets)	
	Horizontal Tracks + Track Angle	
	Vertical Tracks	
	Top Hat Struts	
	Torsion Tubes	
	Weather Sealers and Retainers	

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