BASTION
BUILDING MATERIALS

INSULATED SECTIONAL GARAGE DOOR

2180mm (h) x 2550mm (w)

Opening Size: 2140mm (h) x 2500mm (w) – suits single car garage

Disclaimer This product should be installed by a competent person or suitably qualified installer

Insulated Sectional Garage Door Assembly and Installation Instructions

CONTENTS

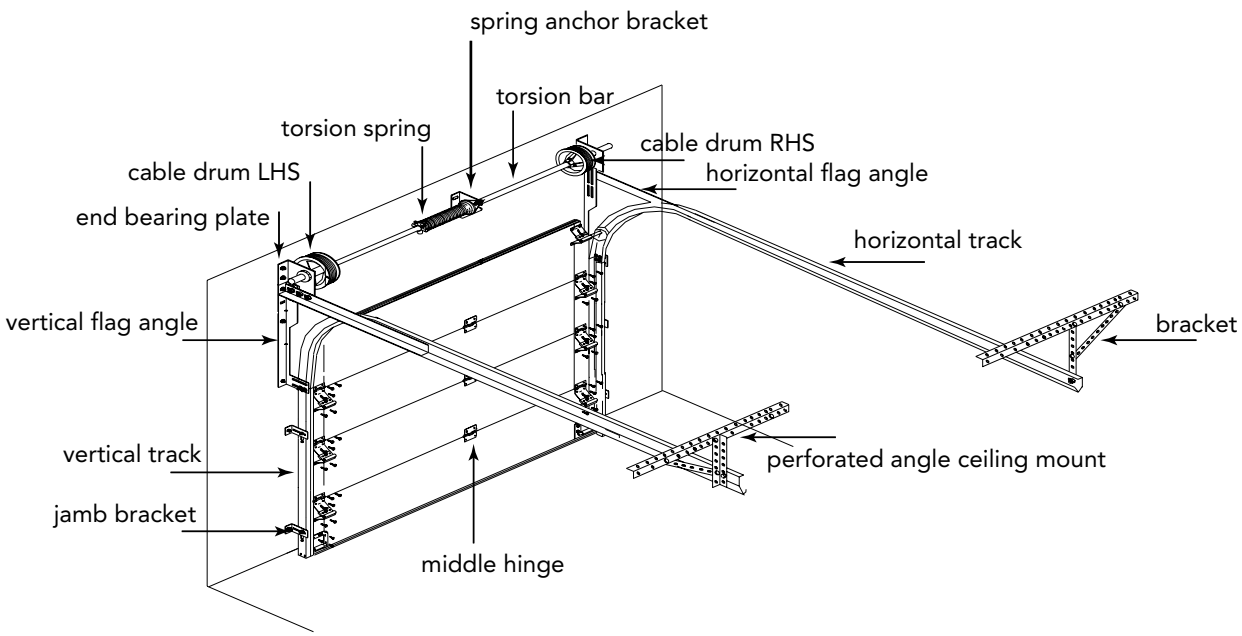
Insulated Sectional Garage Door Assembly and Installation Instructions

1.0 BEFORE YOU START

Along with reading these Assembly and Installation Instructions it is recommended you watch the 'How to Install a Sectional Garage Door' video on your smartphone, or computer.

Or go to
http://www.youtube.com/watch?v=DmICnaoHg4A&feature=youtu.be
or search – "Bastion Garage Doors" on YouTube.

Component Locations



NOTE: All references to 'left hand side' or 'right hand side' from the perspective drawing or throughout this instruction are shown from **Inside the Garage looking Outside**.

1.1 SAFETY NOTICE

To ensure your personal safety and eliminate unnecessary damage to your door please read the following instructions carefully before attempting to install your door.

- Housekeeping – tidy up site prior to commencing work
- Keep all children well clear of installers work area
- All Sectional Panels have been factory fitted with a removable protective film to prevented minor marks. If you intend to paint your door please ensure you fully remove this before applying any paint and before assembling your door. If you are maintaining the factory colour, keep the protective film during assembly and installation however your film should be removed soon after completion.
- Wear appropriate PPE (Personal Protective Equipment) to avoid risk of injury
- Elements of this Assembly and Installation process require the use of a 2 person lift.
- Use the correct ladder when working at heights to avoid the risk
- Spring Tensioning – Ensure you ONLY use the supplied Winding Bars when attempting this step.
- Ensure Winding Bars are placed appropriately in the torsion spring socket
- Ensure correct bolts are tightened or loosened (with vice grip) to ensure there is no release or controlled release of energy from the spring either through the torsion bar or the winding bar.
- Keep hands clear of torsion plug at all times
- Keep head clear of the Winding Bar at all times
- If you have any question about any of the procedures, please contact Hartman Pacific.

Please keep this manual after your installation in order to make any periodic safety checks and routine maintenance as required.

1.2 REQUIREMENTS FOR INSTALLATION

STRUCTURAL SUITABILITY – Before commencing installation of your new Bastion Single Car Insulated Sectional Garage Door you must ensure the structure is strong enough to support the door. If you are unsure, consult a suitably qualified builder or structural engineer.

1.3 FIXING RECOMMENDATIONS

Your Garage Sectional Door can be installed on various building materials including Solid or Hollow Brick Work, Timber Framing, Concrete inc. HEBEL and Steel Framing. A few common structures and fastening methods are listed below.

- New Timber – Coach Bolts (Hex Lag Screws) 5/16 x 2" (M8 x 50)
- Brick (Solid or Hollow) – Sleeve Anchors (Dyna Bolts or similar) M12 x 65mm

Important Note: The Installer must select and use fasteners appropriate to the material into which they are being fixed and that these fixings are installed in accordance with the fastening manufactures recommendations.

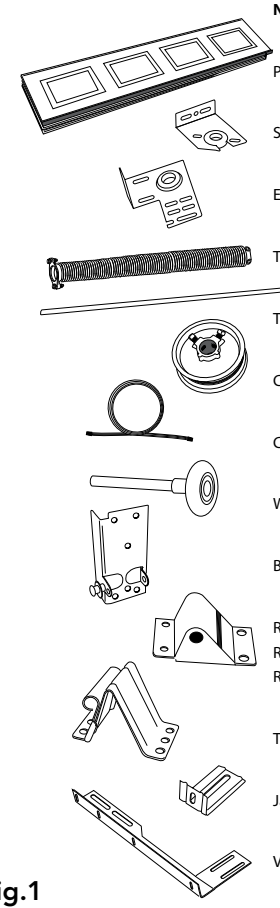
1.4 TOOLS CHECKLIST

- Hammer
- Spirit level 1200mm
- Measuring tape
- Extension lead
- Step ladder
- Electric impact drill and Masonry Bits Ø6, Ø8 and Ø10
- Screw driver set
- Set square
- Vice grips x 1
- Mobile wrench 8'' 1 set
- Open end adjustable spanner
- Socket set 11mm, 13mm, and 14mm
- Pliers
- Rectangular wooden block – approx. 3 x 700mm long
- Felt tip pen and pencil
- Carpet / felt optional

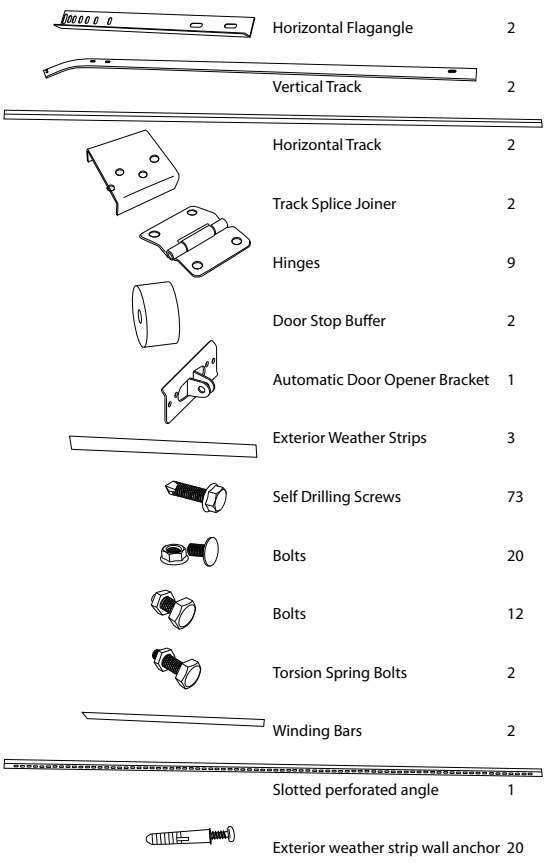
1.5 PARTS CHECKLIST

When receiving your door please ensure you have correctly selected the appropriate cartons and familiarise yourself with the hardware contents

- Carton 1 – Panels x 4
- Carton 2 – Hardware Kit includes the following:
  – Torsional Bar – 1 x Spring
  – Winding Bars x 2 – Ø 12mm x 450mm rolled steel
  – 2 pairs of vertical tracks and 2 pairs of horizontal tracks
  – Various parts as shown below



NAME	QTY	SPECIFICATION
Panels	4	
Spring Anchor Bracket	1	
End Bearing Plate	2	LH/RH
Torsion Spring	1	
Torsion Bar	1	
Cable Drum	2	Red / Black
Counterbalance Lifting Cable	2	
Wheel Axles	10	
Bottom Hangers	2	LH/RH
Roller Drum Brackets #1	2	
Roller Drum Brackets #2	2	
Roller Drum Brackets #3	2	
Top Brackets	2	
Jamb Brackets	4	
Vertical Flagangle	2	LH/RH



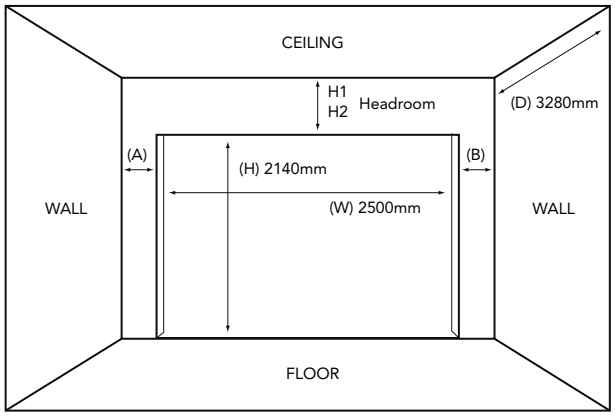
NAME	QTY	SPECIFICATION
Horizontal Flagangle	2	
Vertical Track	2	
Horizontal Track	2	
Track Splice Joiner	2	
Hinges	9	
Door Stop Buffer	2	
Automatic Door Opener Bracket	1	
Exterior Weather Strips	3	
Self Drilling Screws	73	ST6.3x19mm
Bolts	20	M6x12mm
Bolts	12	M8x20mm
Torsion Spring Bolts	2	M8x35mm
Winding Bars	2	
Slotted perforated angle	1	2.0m
Exterior weather strip wall anchor	20	ST4.8 x 25mm

Fig.1

NOTE: ALL Panels are identical with the exception of Panel 1 which has an incorporated lower weather seal.

1.6 OPENING REQUIREMENTS

Your Garage Door is designed to be mounted behind (or inside) your opening therefore you will need the measure and check the following.



Minimum Door Opening Requirements:
H1 = 320mm Normal Headroom – (no Automatic Opener installed)
H2 = 350mm (Automatic Motor installed)
A / B = Sideroom 150mm

Fig.2

2.0 INSTALLATION

2.1 ASSEMBLE BOTTOM PANEL / PANEL 1

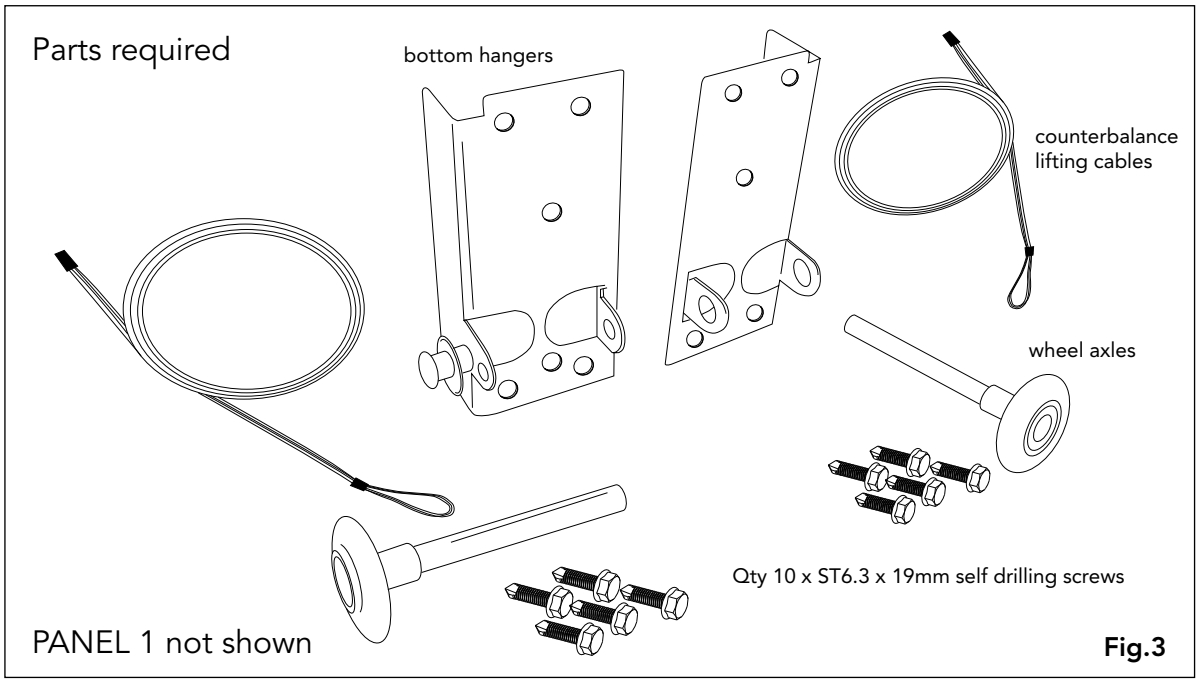


Fig.3

Note: Prepare three rectangular wooden blocks of approx. 700mm long before assembling.

All screw locations are marked to assist with installation – please ensure you follow this guide.

First, using felt, carpet or other soft material, cover the wooden blocks to ensure you do not scratch or damaging the door section. Then, lay the door panel face side down towards the floor.

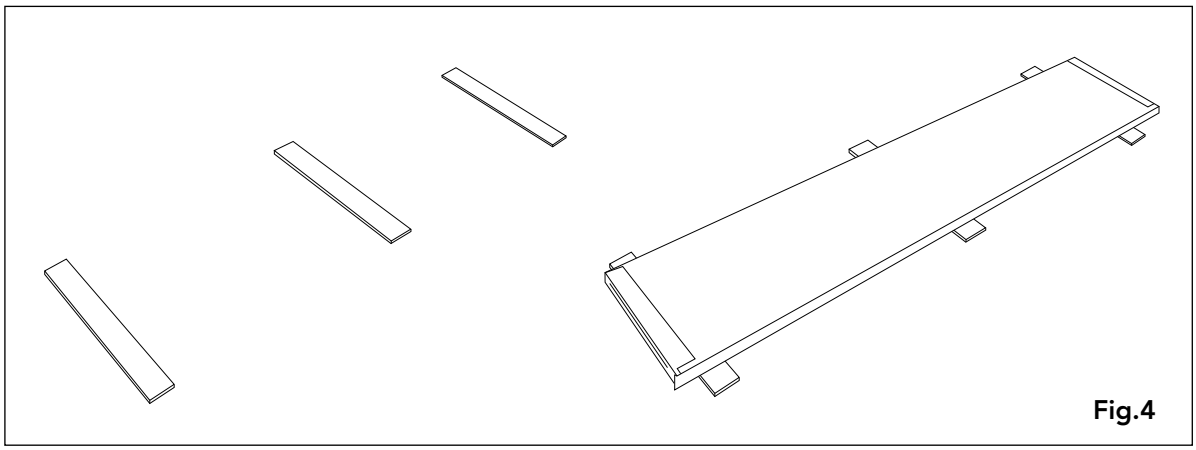


Fig.4

Attaching Bottom Hangers to Panel 1

Secure the right bottom hanging bracket with not less than five self-drilling screws. Hook the counterbalance lifting cable over the inside rivet cylinder on the bottom jamb brackets and insert wheel axle.

Repeat process for LH side.

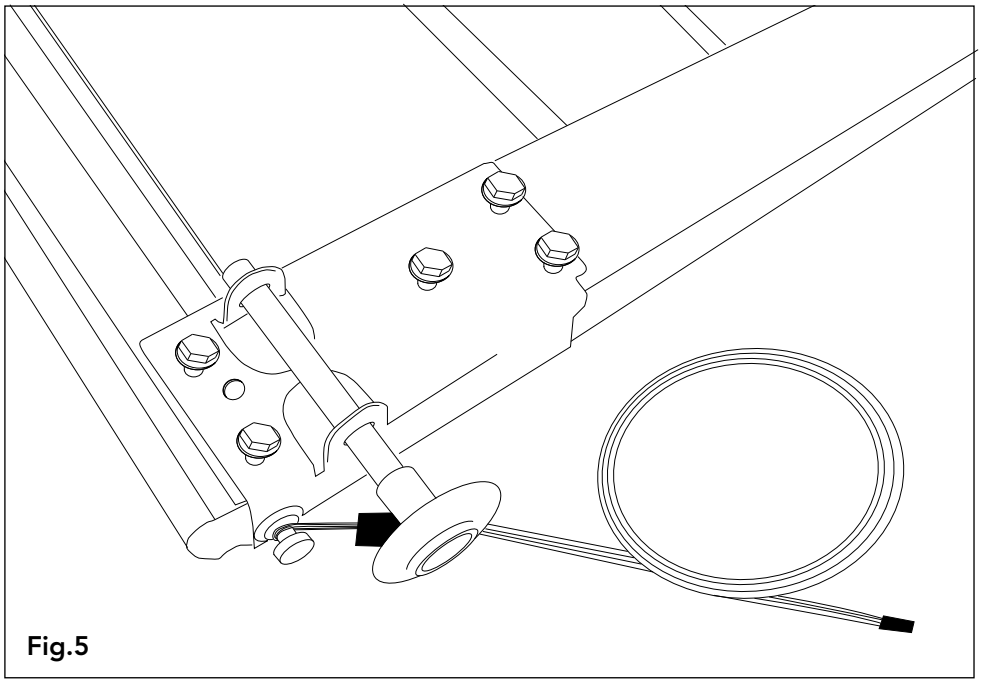


Fig.5

Install Roller Drum Bracket and Hinge

Please ensure you select the correct roller drum bracket to suit each panel.

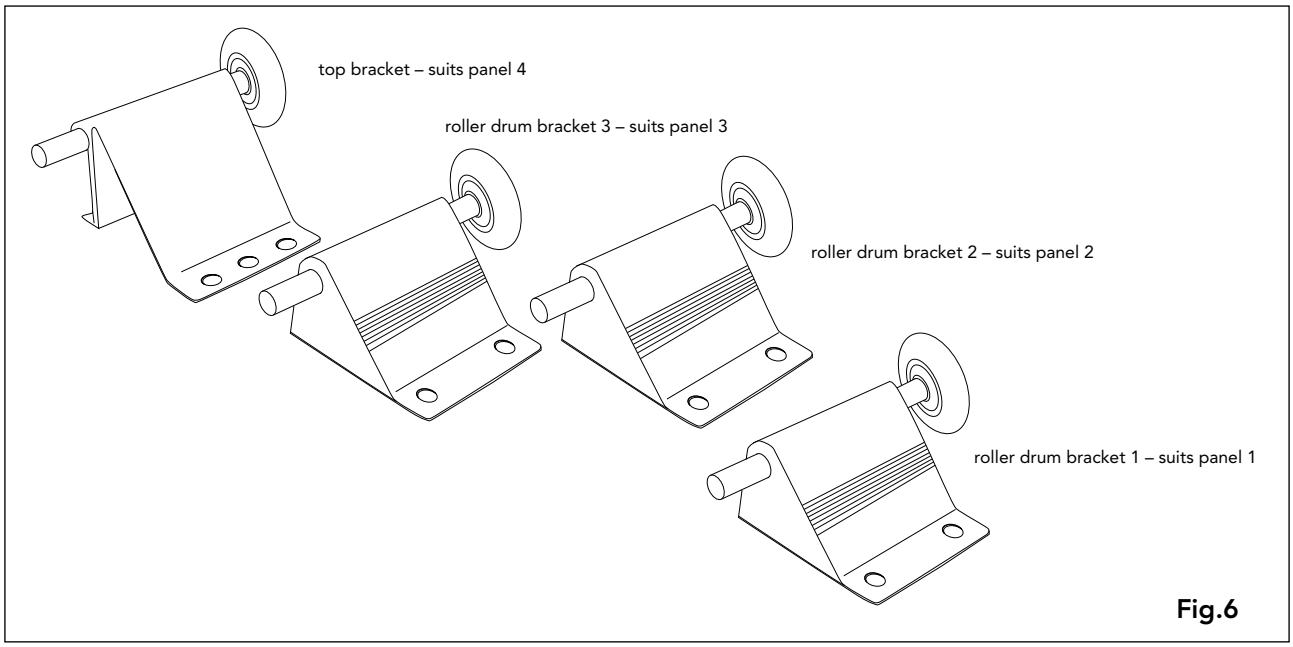


Fig.6

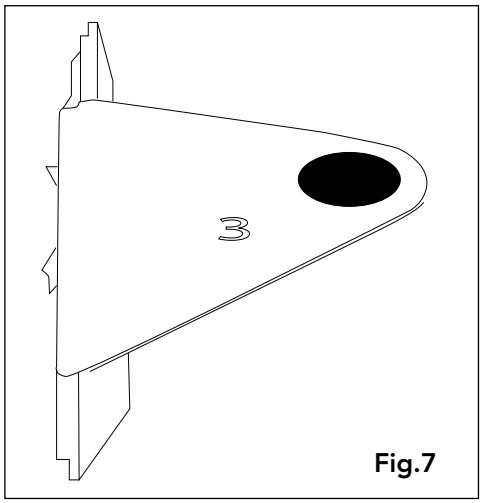


Fig.7

Each roller drum bracket is marked with a number for easy selection – please ensure you select the correct bracket.

Parts Required for Panel 1 installation

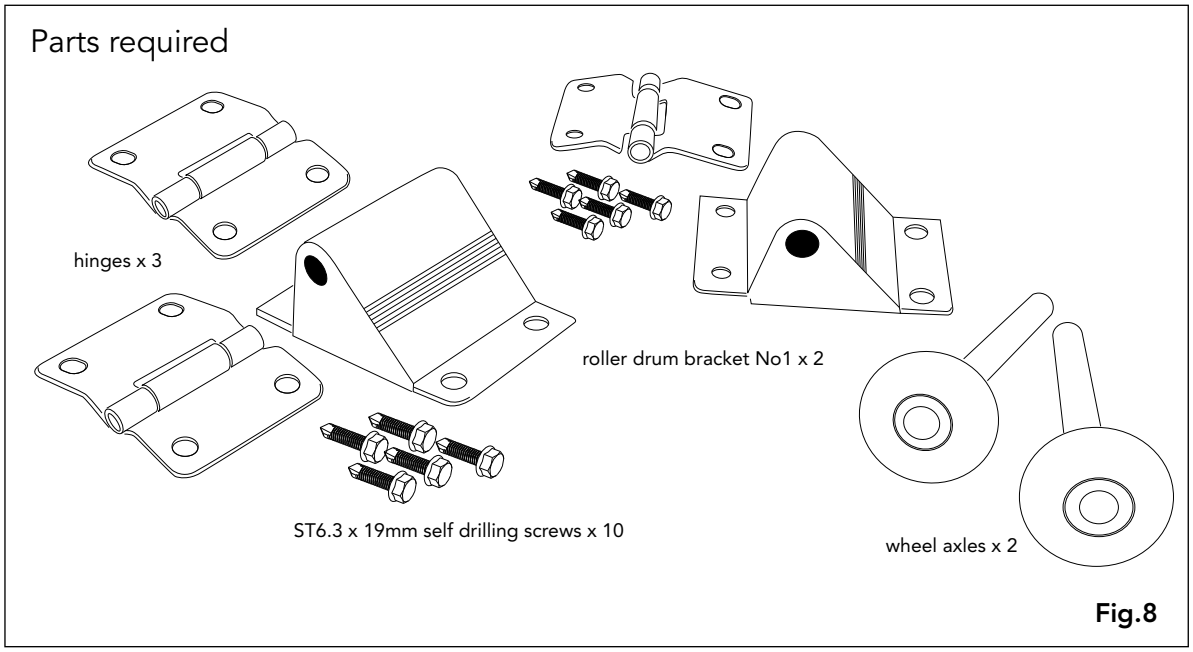


Fig.8

Note: Ensure you position the hinge as shown below for correct operation. Do not attach yet – move to next step.

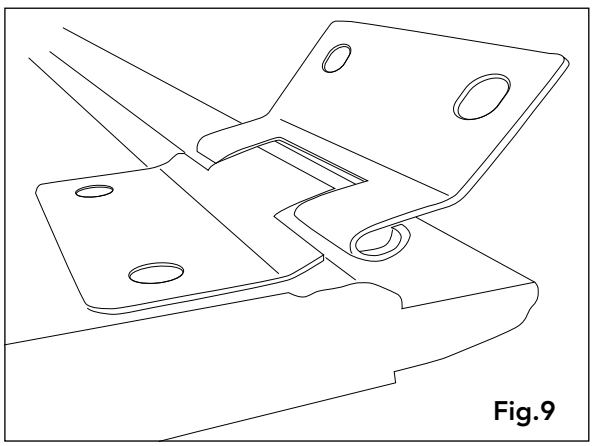


Fig.9

WRONG ✗

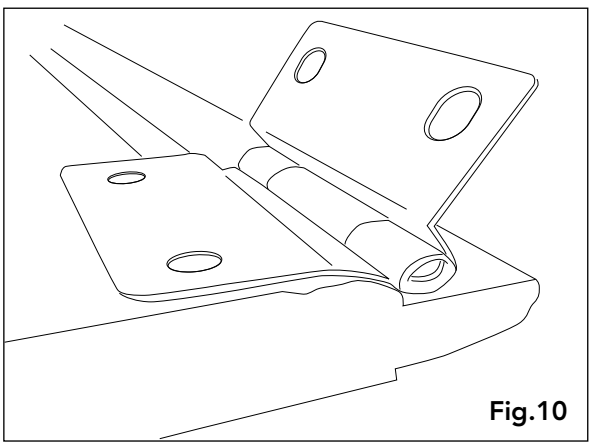


Fig.10

RIGHT ✓

Roller Drum Bracket and Hinge installation

Locate the hinge as shown in Fig.11 but do not secure as the Roller Drum Bracket No1 is installed above this hinge as shown in Fig.12.

Secure the Roller Drum Bracket and Hinge with 4 x ST6.3x19mm Self Drilling Screws.

Repeat this process for the Left Hand Side of panel.

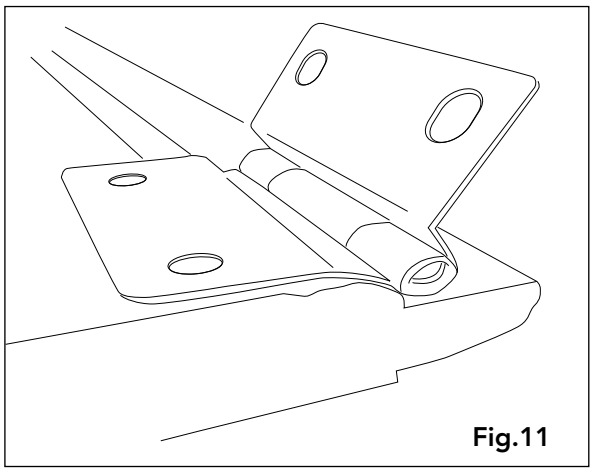


Fig.11

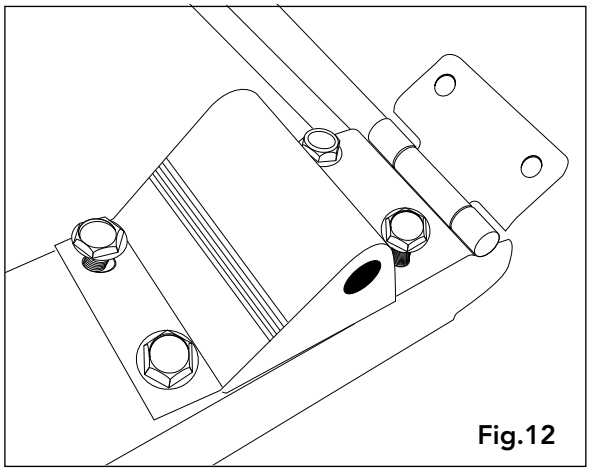


Fig.12

Assembling the middle hinge

Install the middle hinge to Panel 1 using 2 x ST6.3x19mm Self Drilling Screws into the upper middle of Panel 1.

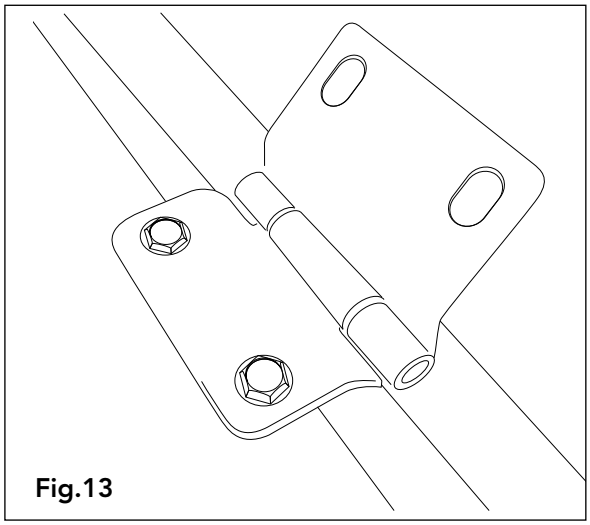


Fig.13

Once Panel 1 is complete move this to one side and ensure it does not topple over to prevent marking the surface.

2.2 ASSEMBLE PANELS TWO AND THREE

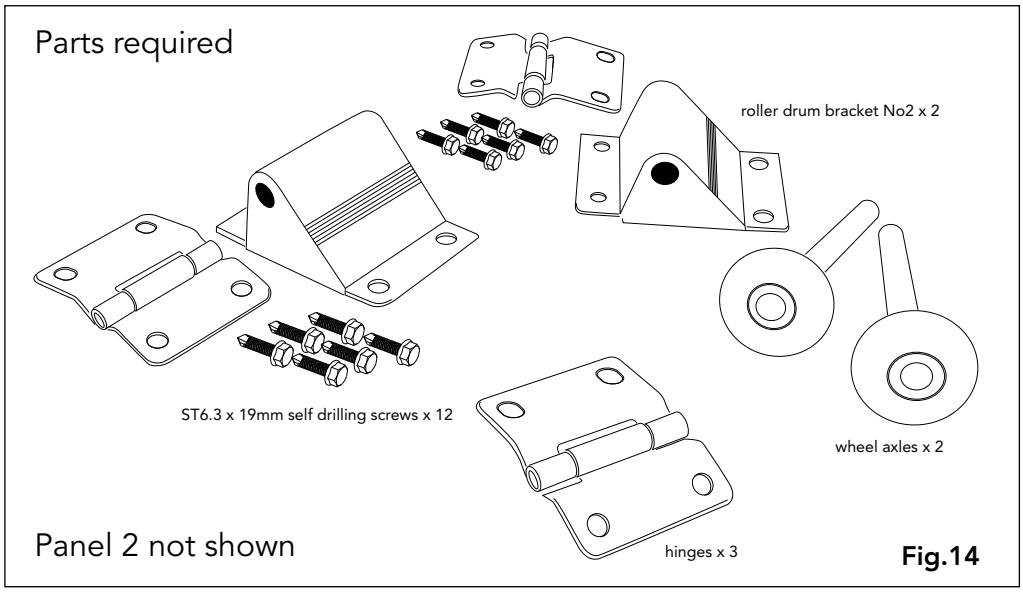


Fig.14

As per Panel 1 lay Panel 2 door face side down towards the floor above the wooden blocks. Next, assemble the roller drum bracket 2, wheel axle and middle hinge as shown in Fig.12 and Fig.13.

Repeat process for Panel 3. Ensure you use Roller Drum Bracket No3.

Once Panel 2 and 3 are complete move to one side and ensure it does not topple over to prevent marking the surface.

Assemble Panel 4

As per Panel 1, 2 and 3 lay Panel 4 door face side towards the floor above the wooden blocks. Next, attach the Top Bracket.

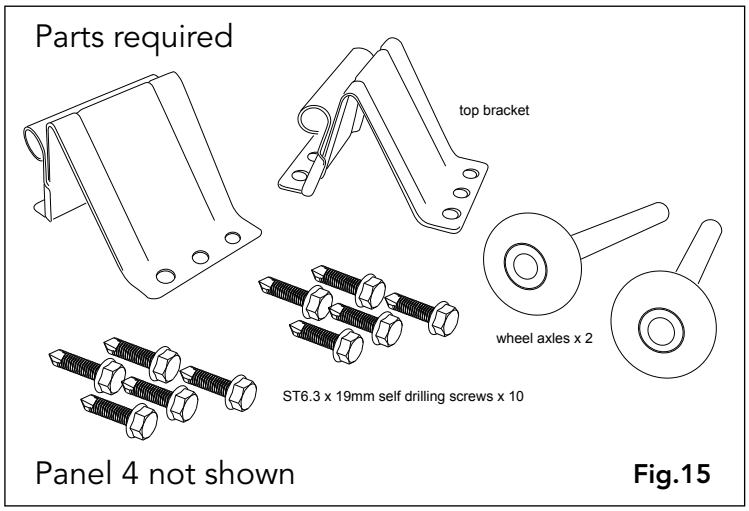


Fig.15

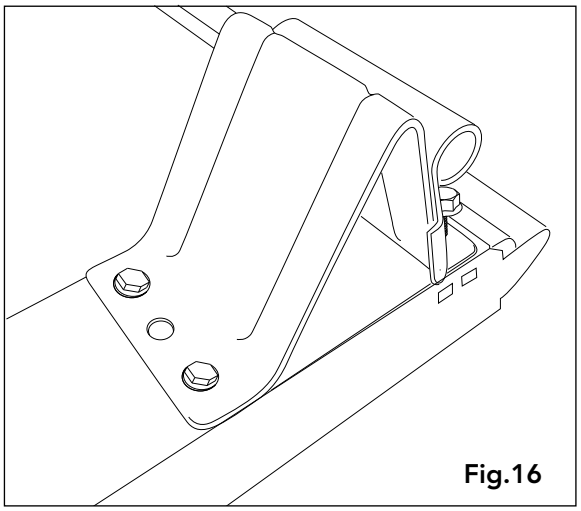


Fig.16

Secure the Top Bracket with 5 x ST6.3 self drilling screws. Remove the wheel carriage by loosening the bolt. You will reattach this when you assemble the whole door. Secure the LHS top bracket without removing the wheel carriage and insert the wheel axle.

Once Panel 4 is complete move this to one side and ensure it does not topple over to prevent marking the surface.

2.3 VERTICAL TRACK ASSEMBLY

Vertical Track Components:

Lay out the vertical track, vertical flag angle and jamb wall brackets as shown below on the floor in advance.

Note: Don't fully fasten the bolts.

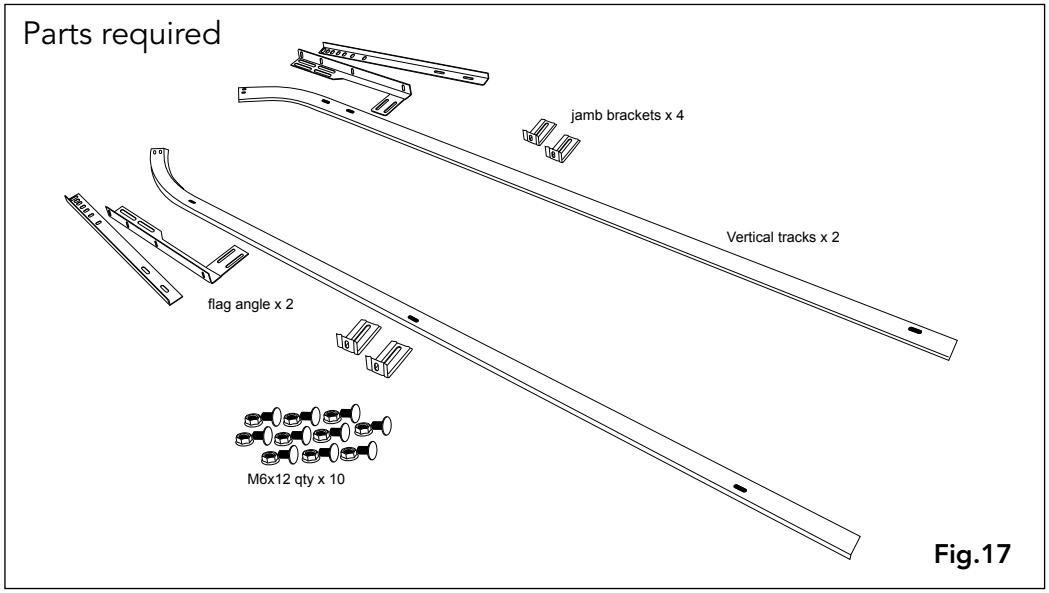


Fig.17

Vertical Track Assembly:

Loosely attach the vertical flag angle and jamb wall brackets to the vertical track as shown in Fig.18 and Fig.19 with M6x12 Bolts. Ensure that all bolt heads are facing outside the track to prevent your wheel axles fouling the movement of your door.

Attach Flag Angle

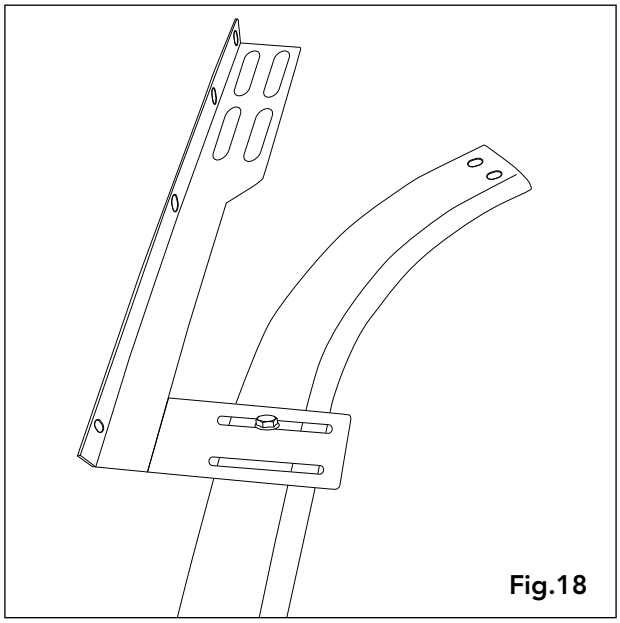


Fig.18

Attach Jamb Bracket

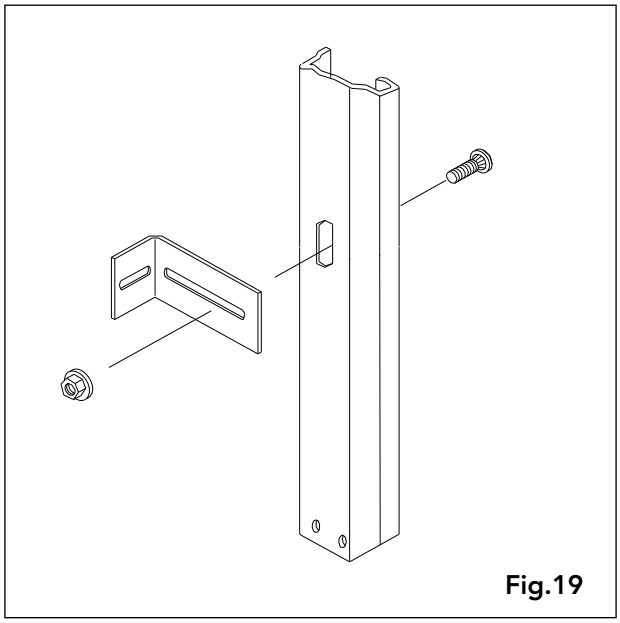


Fig.19

2.4 PREPARE BOTTOM PANEL 1 FOR INSTALLATION

Move Panel 1 to the door opening with the design facing outside and hinges facing the inside of your garage.

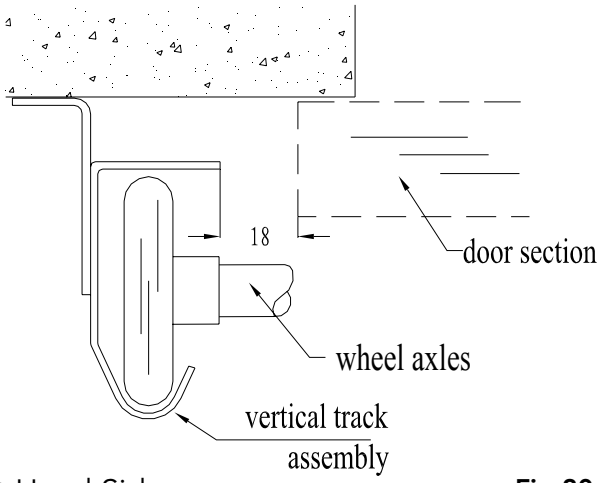
Stand the door panel upright central to the opening and ensure it is level by placing a spirit level on the top edge of the door panel. If the panel is not horizontal it is important to use a suitable packer underneath the door to ensure it is level.

2.5 VERTICAL TRACK INSTALLATION

With Panel 1 now prepared and in position slide both vertical tracks over the wheel axles. Check that there is approximately 18mm clearance between the door panel and the wheel axle.

Check that your vertical tracks are level and that the top of both flag angles are horizontal to each other. Once you are satisfied secure your vertical tracks to your wall.

All the above fasteners must be fully tightened.



Left Hand Side

Fig.20

Important – Do not place the track too tightly against the wheel axles as this will cause binding and will affect the operation of your door.

Assembling the whole door sections

Install the remaining door panels as Fig.21 and install Panels 2 and 3.

Before securing each panel to another ensure that they are vertically aligned to the panel below. If required gently tap the side. Once satisfied with the alignment secure each hinge to the above panel with 2 x ST6.3x19mm screws.

Install Panel 4 by inserting the side with the wheel axle and carriage secured. Once Panel 4 is resting above Panel 3 reattach the wheel carriage and insert wheel axle into the vertical track.

Finally secure each middle hinge to the above panel with 2 x ST6.3x19mm screws.

Note: Panel 4 requires no middle hinge.

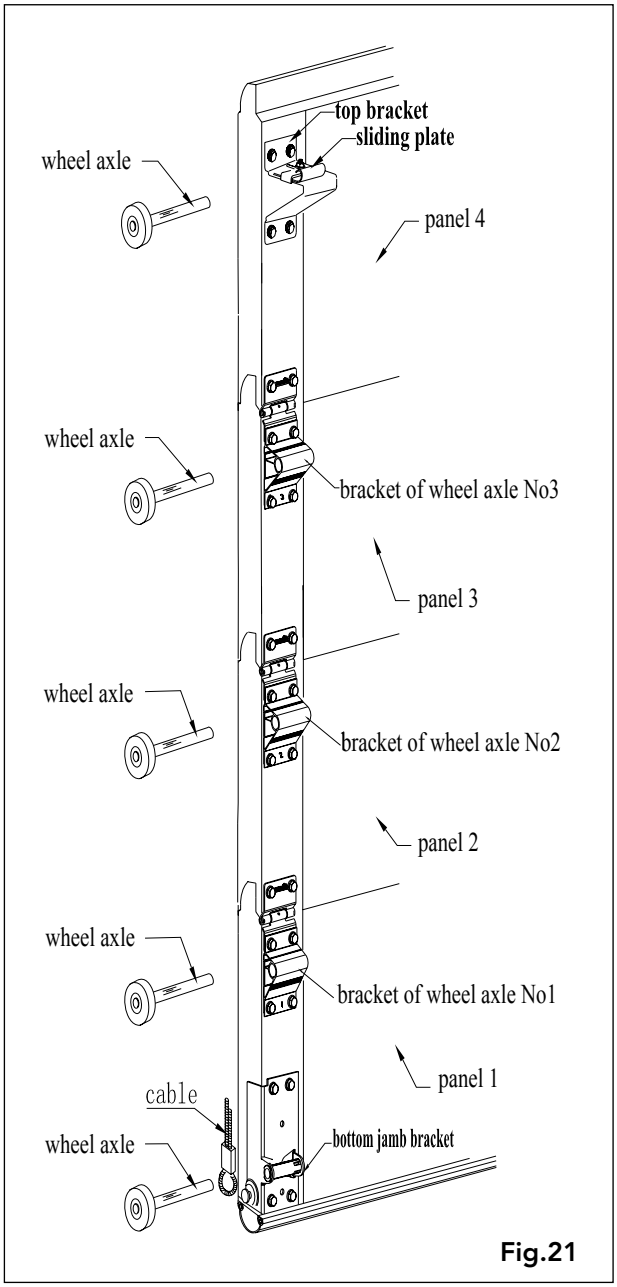


Fig.21

2.6 HORIZONTAL TRACK INSTALLATION

Loosely attach the horizontal track angle to the vertical track angle with M8x20 bolts as shown in Fig.22.

Repeat for right hand side.

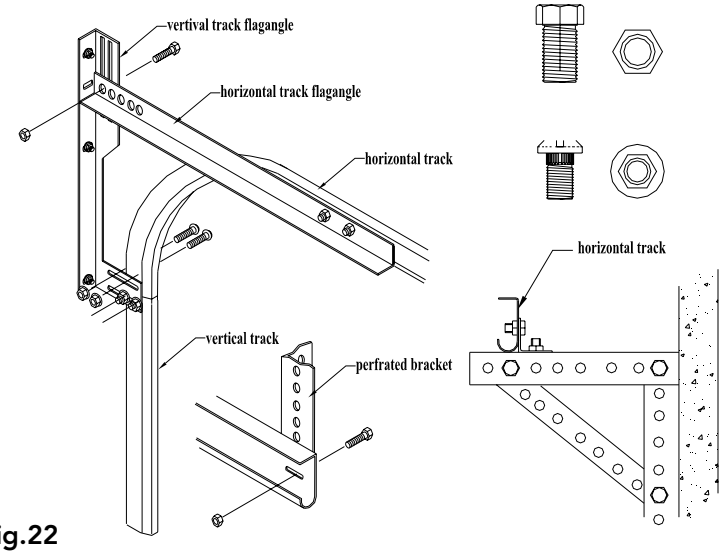


Fig.22

Using the splice joiner bracket connect the Vertical Track to the Horizontal Track as shown.

Secure the horizontal track to the horizontal flag angle with 2 x M6x12 bolts.

With the supplied perforated angle secure your horizontal track to the ceiling or wall.

The location of this perforated angle brace is generally secured approximately at 1650mm from the door opening. Due to the variance in installation requirements of this within a garage these final angles cannot be factory created.

Make sure that the track is level and square with the opening. Fully tighten all track fasteners.

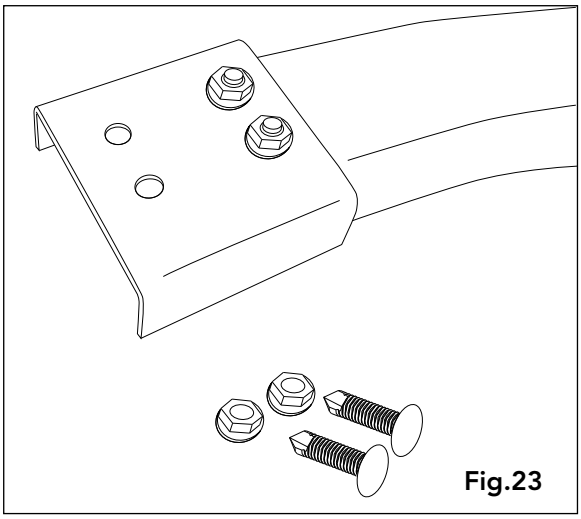


Fig.23

Note: Your horizontal tracks and attached perforated angle will support your door when opened ensure you select the correct fasteners to attach these perforated angles to your wall or ceiling.

An example of the angle bracket is shown on page 3 and Fig.22.

2.7 ATTACH DOOR STOP BUFFER

As shown in Fig.24, the buffer must be installed at the end of horizontal track to prevent your door over extending.

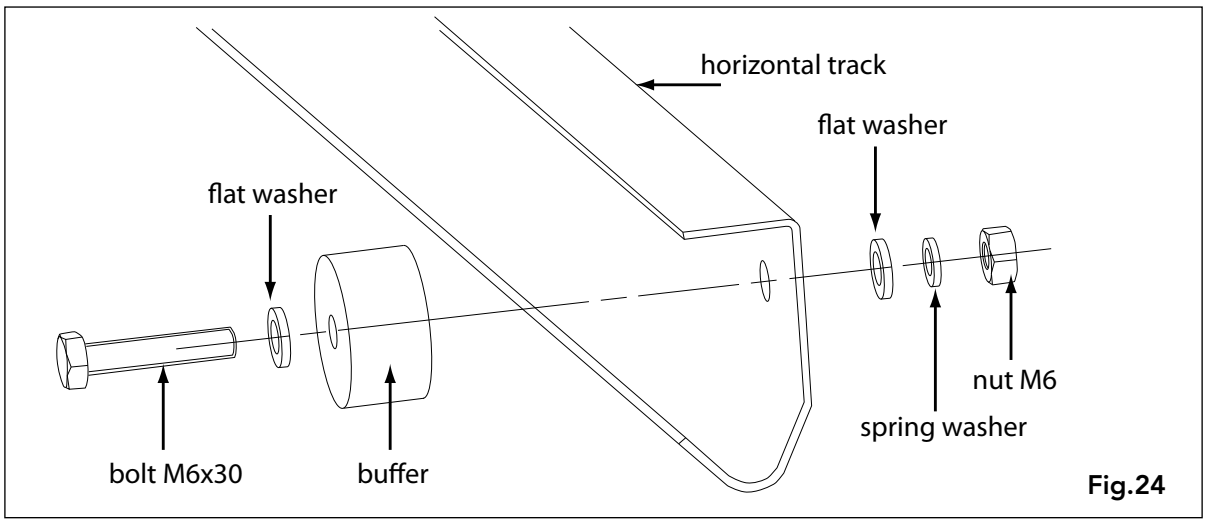


Fig.24

2.8 TORSIONAL SPRING AND COUNTERBALANCE SYSTEM

ATTENTION INSTALLERS!

Springs and Drums are colour coded based on winding direction to match International Standards.

The supplied torsion spring is **Right Hand Wound (RHW)** meaning that the spring is located to the **Left Hand Side of the Spring Anchor Bracket**.

If your torsion spring was Left Hand Wound (LHW) it would need to be mounted on the right side as shown in the How to Install Video.

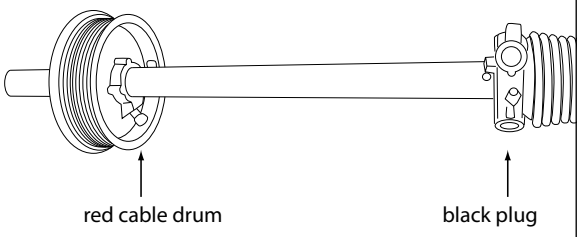
Below is a guide to identify your spring.

LEFT HAND SIDE

These springs are **Right Hand Wound** and can be easily identified by the direction of the curled fingers of the **Right** hand when the thumb is pointing up, matching the same direction of the spring end. The plugs in these springs are painted **Black** and go on the left hand side of the door.

NOTE: **Red** Cable Drum mounted on the Left Side.

Left Hand Side

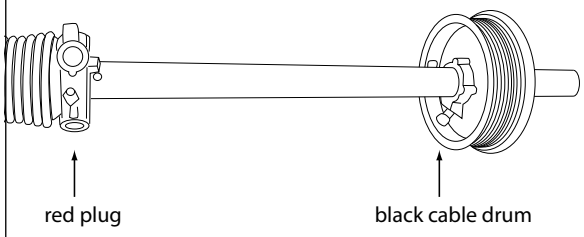


RIGHT HAND SIDE

These springs are **Left Hand Wound** and can be easily identified by the direction of the curled fingers of the **Left** hand when the thumb is pointing up, matching the same direction of the spring end. The plugs in these springs are painted **Red** and go on the right hand side of the door.

NOTE: **Black** Cable Drum mounted on the Right Side.

Right Hand Side



INSIDE GARAGE LOOKING OUTSIDE

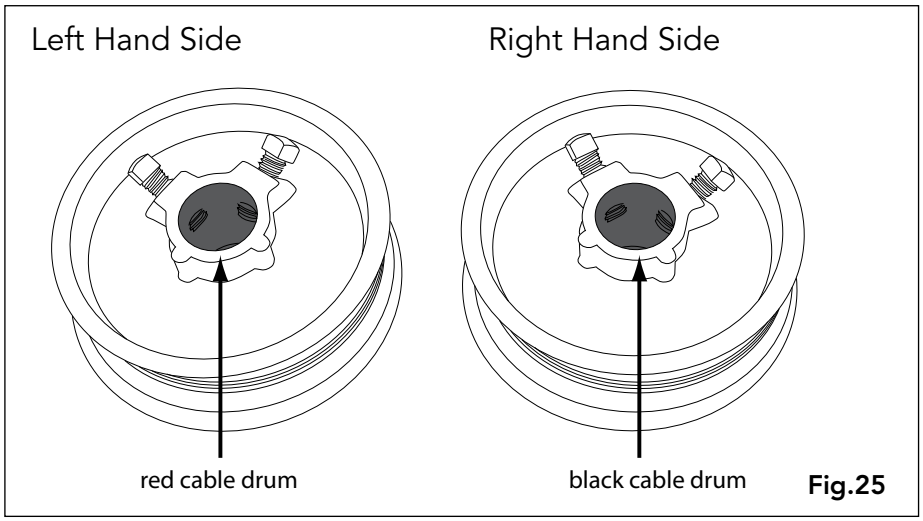


Fig.25

Assembling the torsion bar and components:

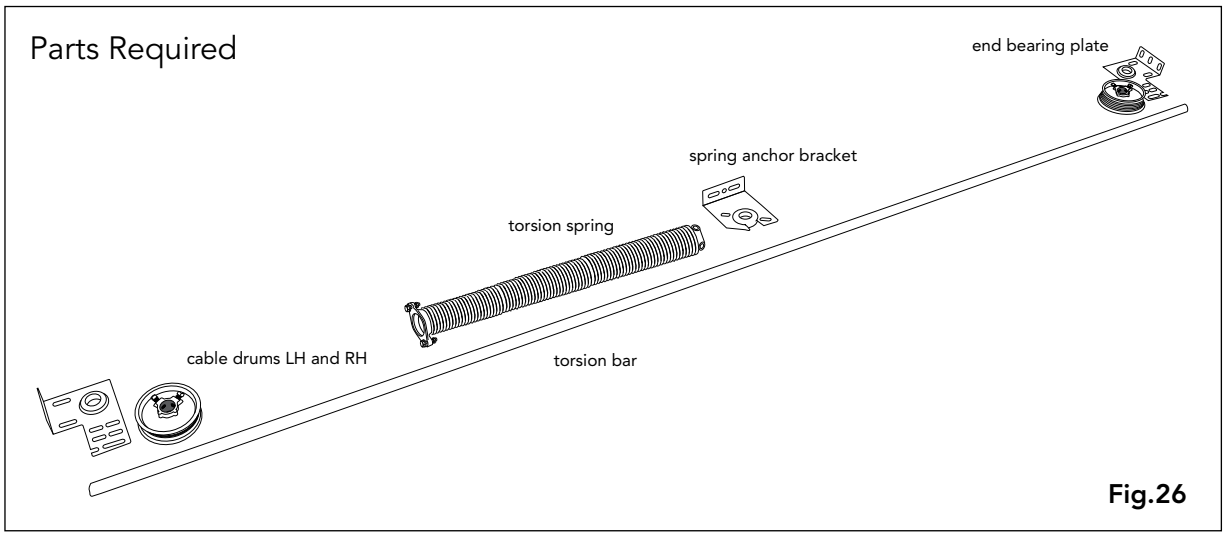


Fig.26

Place the torsion bar on the floor and position the parts in order as shown above.

Slide all the components onto the torsion bar ensuring Cable Drums are fitted in accordance with colour coding. Red = LH side / Black = RH side.

Place the Spring Anchor Bracket onto the torsion bar approximately half way. The 45° cut off corner should face the floor when mounted to the wall.

Ensure that the Spring Anchor bracket allows for a positive engagement to the torsion spring. If not push out the bearing case from the spring anchor bracket and reverse.

Secure the Torsion Spring to the Spring Anchor Bracket with 2 x M8x35 bolts.

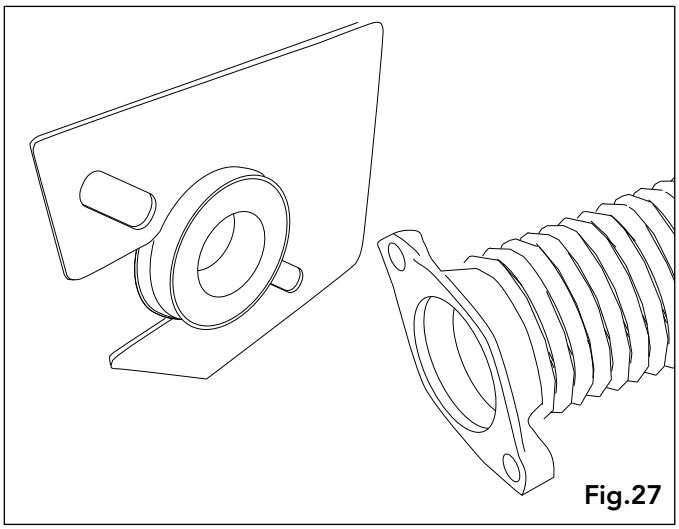


Fig.27

2.9 TORSION BAR INSTALLATION

As illustrated in Fig.28 secure the end bearing plate bracket using the correct fasteners to your wall and to the horizontal flagangle with the supplied M8x20 bolts. Lift the entire torsion bar counter balance system up and into the bearing plate.

Attach the remaining end bearing plate.

Secure the spring anchor bracket to your wall with the correct fasteners.

Note: All bolts must be fully tightened as shown in Fig.29.

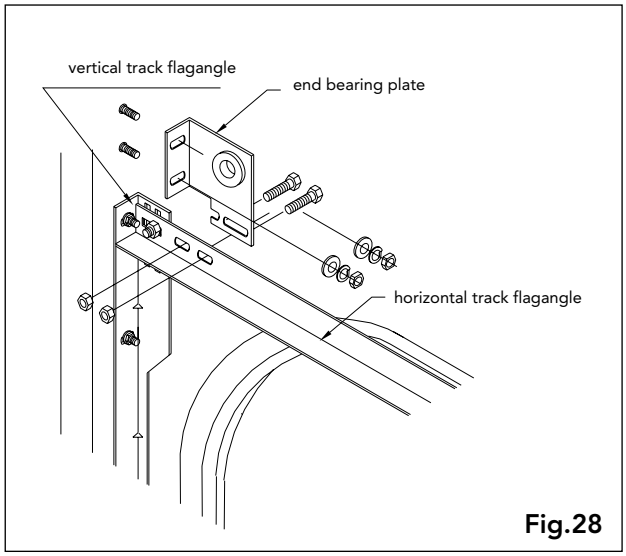


Fig.28

Lift your counter balance cable from Panel 1 to the cable drum and insert the cable end through the location groove of the drum.

Wind the cable around the drum and when the cable is taut securely fasten the cable drum with the grub screws.

Your cable should be taut.

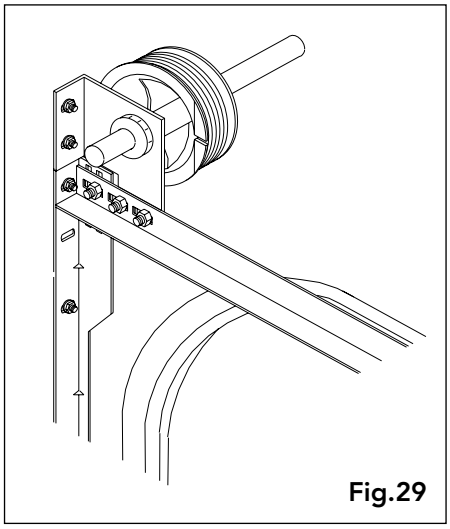


Fig.29

2.10 ADDING TENSION TO THE SPRING

IMPORTANT: THIS PART REQUIRES CAREFUL ATTENTION TO AVOID PERSONAL INJURY.

If you have not already viewed the installation video Bastion Doors recommends you watch this process to understand the safety aspects of winding the spring.

Secure the torsion bar to prevent any rotation as shown with a Vice Grip.

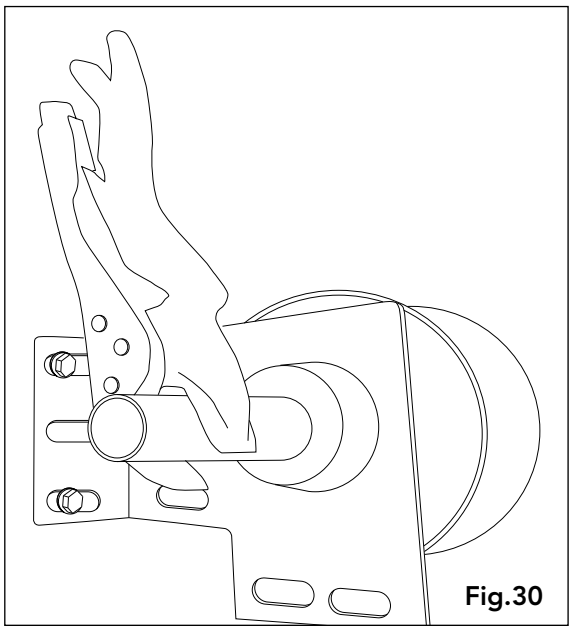


Fig.30

WARNING: Always ensure that your body and face are to side of the winding bars and not directly in front when winding the torsion spring.

Use an appropriate ladder to ascend to the correct working height.

Insert two supplied winding steel bars into the holes of the torsion spring winding cone brackets and wind the springs in counter clockwise direction or up and over towards the direction of the ceiling.

Note: wind the spring 2 ~ 3 turns first, then make the complete turns as recommended in table 1.

Table 1

Recommended spring turns	
Door height (mm)	Recommended turns
2100mm	7 full revolutions or 28 quarter turns (approx)

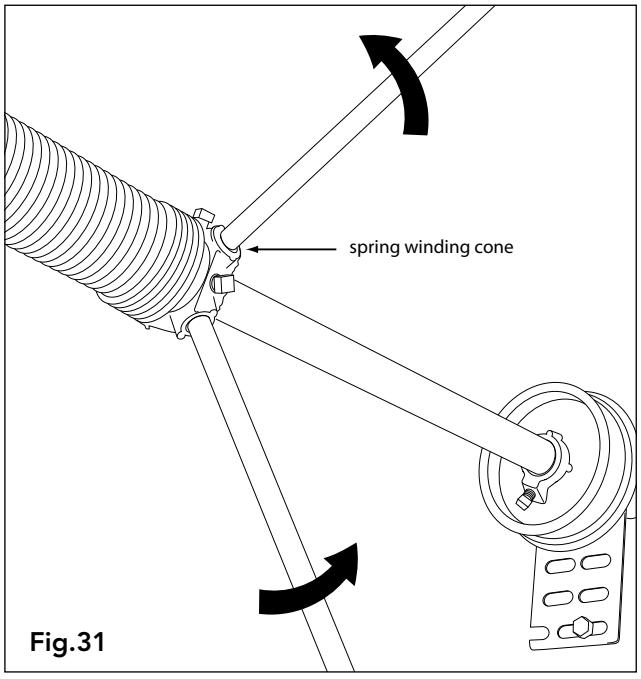


Fig.31

Once you have completed the amount of turns required, remove one winding bar, ensuring to keep a tight grip on the second bar. Use an open ended spanner to securely fasten the grub screws.

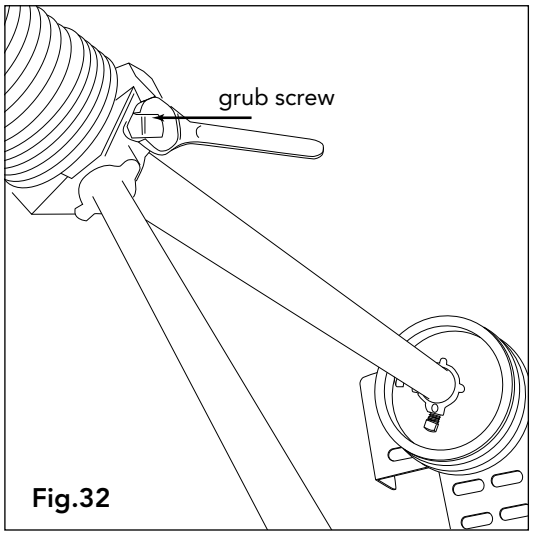


Fig.32

Double check the grub screws are properly tightened before removing the Vice Grip restraint on the torsion bar.

Congratulations you have installed your Bastion Insulated Sectional Garage Door. If installing an automatic opener refer to the manufactures instructions.

2.11 FINAL ADJUSTMENT

Test the balance of the door. Put the door into the open position and view along the horizontal tracks. Check for clearance in the vertical track. If you find that the door is binding, open out the horizontal tracks to create the correct tolerance.

Once satisfied that the operation of the door is opening and closing smoothly and without excessive force check that all the nuts and bolts are tight.

If your spring is over tensioned (door will not close) reduce spring tension by 1/4 increments.

If your spring is under tensioned (door is heavy) increase spring tension by 1/4 increments.

Check all nut and bolts including wall fasteners are secured.

It is recommended that you oil the full length of your spring to prevent noise and reduce friction. 'TAL5' or similar rich lubricant in a pressure spray can is acceptable.

3.0 OPTIONAL COMPONENTS

3.1 MANUAL LOCK KIT

Manual lock is used when the garage door is driven without power. Locate the manual lock on the middle of the door body. Use the electric drill to make a Ø12 through hole and a Ø10 through hole in the door according to the assembling hole in the lock core fasten plate. Secure the striking flake to the vertical track and make sure that the two striking flakes are at the same level. Fasten the spring bolt to the door end (on the door block plate) with even clearance between the spring bolt and the striking flake, keep the spring bolt to be at the same level with the lock core. Locate the inside handle to the lock core shaft with the jump ring flake. Finally thread the cable end without sealing plate through the Ø4 small hole in the inside handle and then through the lock's Ø7 hole with a opening notch. Make the cable taut, attach the end with the sealing plate to the inside handle and press the other cable end tightly with M6 bolt. Make sure the lock easily opens and closes by regulating the cable length.

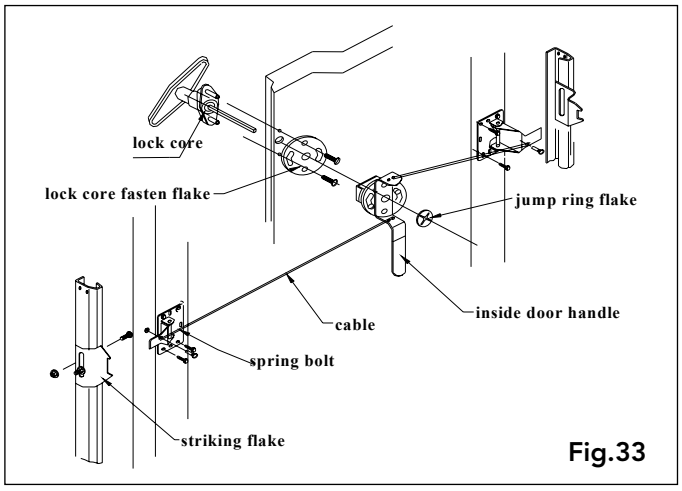


Fig.33

3.2 INSTALLATION OF AUTOMATIC DOOR OPENER BRACKET

If the door is to be used with an Automatic Garage Door Opener please attach the supplied door bracket to the to the upper middle of Panel 4 panel. See Fig.34.

Attention: the screws must be installed to the reinforced steel sheet which is inside the panel.

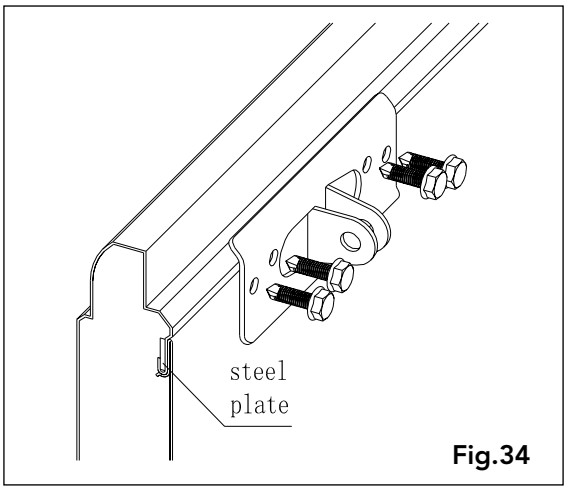


Fig.34

3.3 INSTALLATION OF EXTERIOR WEATHER SEALS

After installing your door you can attach the supplied 'Weather Seals' to improve the overall performance of your Garage Door insulation ability.

According to the door width and opening, cut the seals to suit both the height and width of your opening. Cut the side and top sealing strip with a 45 degree seam angle.

Remove the strip cover and secure the body to the door opening with the ST4.8 x 25mm nylon wall anchor suitable for brick.

If your wall type is timber or other please select the correct fastener.

Repeat this for the other side and top.

Once all installed reattach the cover strips.

If required you might need to adjust your jamb bracket offset to ensure the door and seal fit closely.

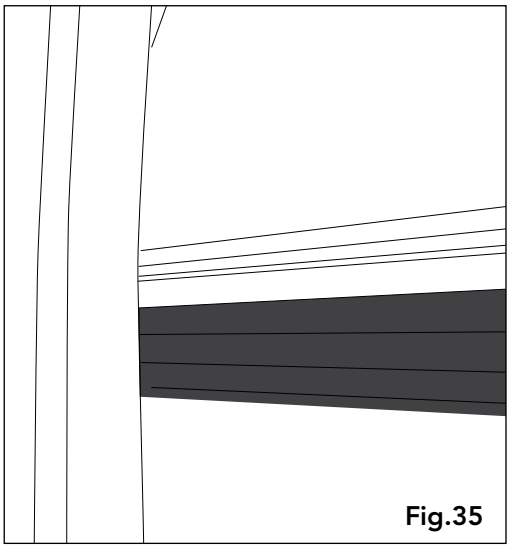


Fig.35

Inside

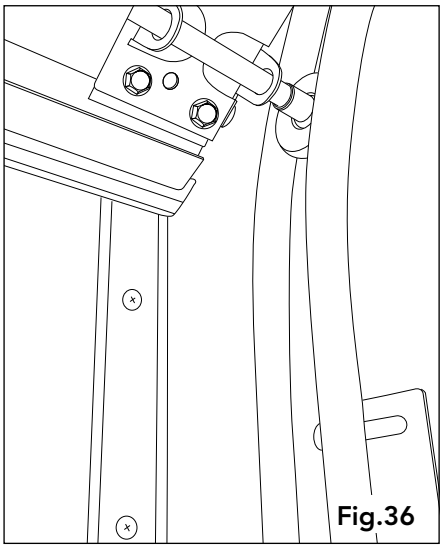


Fig.36

Outside

4.0 TROUBLESHOOTING

Open and close the door manually once a month to check the balance system.

Fault appearance / possible reason

Louder noise as door moving

- Hardware is not fully tightened
  The pulling bar of the driver is not aligned with the door centre
- The two side tracks are not parallel to each other
  Didn't lubricate the hinges and the winding drum
  Fully tighten them
- Adjust the bar to align it with the door centre line
- Adjust horizontal, vertical tracks to keep them parallel to each other
- Lubricate the hinges and the winding drum

The door slanting as it moves

- The cable tightness of the two sides of the door is not the same
- Readjust the winding drum.

5.0 AFTER INSTALLATION CARE

REGULAR MAINTENANCE REQUIRED

Bastion Doors recommends you check the operation of Sectional Panel Door at least every six month whether it be operated manually or with an automatic opener.

If you encounter a problem or require assistance Bastion Doors recommends you contact an experienced door technician.

LOCK

Your lock does not require special maintenance, however if the keyway becomes stiff, the application of powdered graphite is recommended – do not grease or oil the lock.

When opening the door, always remember to make sure the key is drawn from the lock – if this is not done, the lock mechanism could be damaged and the key could become bent or broken.

HINGES

If the hinges squeak during operation then the hinges haven't been greased or the grease has dried up. Please apply some grease to the shaft to minimise this.

CABLE

Check the cables regularly for corrosion, fraying or tangling, if any of these are evident please contact Hartman Pacific on 1300 362 363.

SPRING TENSION

It is natural for springs to lose tension over time. When spring tension is adjusted or when your door is first installed it is usual to apply a little more tension than is required for balanced operation, to allow for the normal "settling in" of the springs.

WARRANTY

Your Bastion Sectional Garage Door is intended for Residential applications only. Under Australian and New Zealand Laws, we guarantee this product is of acceptable quality and is fit for purpose.