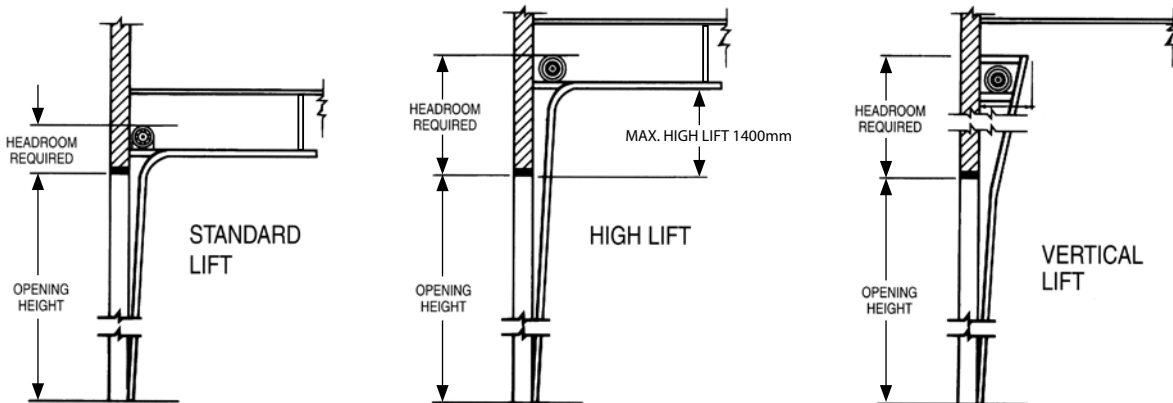


# Tru-Therm™ Sectional Door

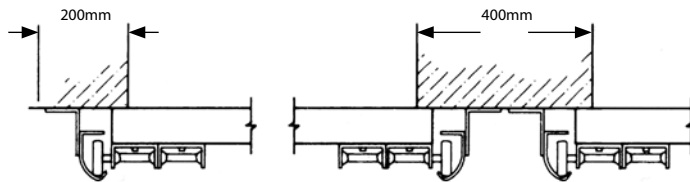
## INSTALLATION & OWNERS MANUAL

Maximum Size: 4860mm H x 5600mm W  
 Power Supply Required: See motor manufacturer's handbook  
 Standard Lift: Sideroom—200mm Headroom—500mm  
 High Lift: Sideroom—200mm Headroom—1700mm  
 Vertical Lift: Sideroom—200mm Headroom—Door Height + 200mm  
 Motor: Sideroom—400mm—on motor side only  
 Warranty: Warranted against defects in workmanship and materials for (1) year from date of dispatch. See page 20 for more details.

### Side Elevation



### Side Room Details



SERIAL NUMBER: W/O	
PACKED BY:	DATE: / /
INSTALLED BY:	DATE: / /

*(Please leave with owners when finished)*

**TBI TRU-BILT®**  
**INDUSTRIES**  
 THE DOCK AND DOOR COMPANY THAT CARES



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## PREFACE

- The installation of Tru-Therm™ Sectional Doors is for experienced installers only and this manual must be followed carefully.
- All warnings and safety precautions must be followed at all times.
- A selection of hand and power tools will be required depending on the type of fixing available.
- A scissor lift or scaffold may also be necessary for safe installation.
- Please don't hesitate to call a qualified door technician at any time for assistance.

## SAFETY WARNING



- All necessary safety precautions must be carried out to ensure a safe working environment for yourself and those around you.
- Precautions must be taken to prevent people from being injured from falling objects.
- All electrical work and connection of the motor and controller must be carried out by a fully qualified electrician.

**Warning:** *Failure to follow precautions in this manual may result in severe personal injury or death.*

# INSTALLATION PRECHECK

## BEFORE STARTING INSTALLATION, READ THE FOLLOWING INSTRUCTIONS

### IMPORTANT SAFETY NOTICE

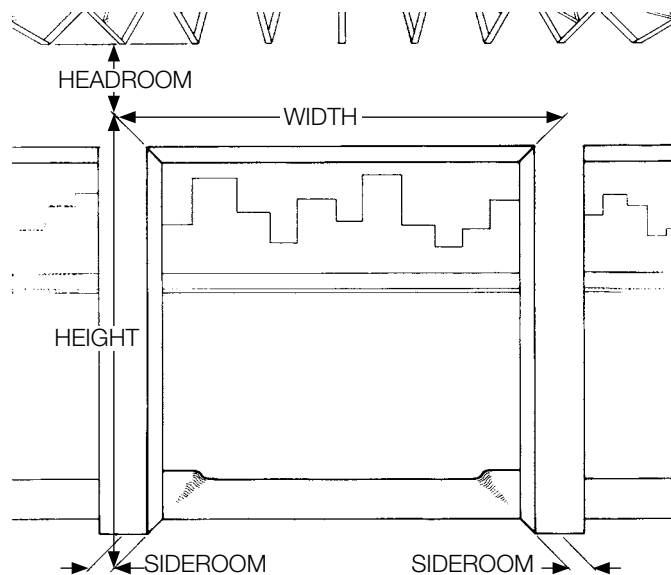
1. Operate door only when properly adjusted and free of obstructions.
2. Door is constantly under extreme spring tension. Repairs and adjustments, especially to cables and spring assembly, can be hazardous and should be performed by qualified door service people only.
3. Do not permit children to play with garage door or electric controls.
4. If door is now, or later becomes, electrically operated, pull down rope **MUST** be removed.
5. Avoid standing in open doorway or walking thru doorway while electrically operated door is moving.
6. Should door become hard to operate or completely inoperative, it is recommended that a qualified door agency be contacted.

The foregoing safety notice has been approved and recommended by the National Association of Garage Door Manufacturers (NAGOM).

- A** Packing slip shows door size. Do you have the right door? Also, check to make sure you have received the correct number of bundles, boxes, etc.
- B** Is the door opening framed to the correct size?
- C** Check Chart No.1, and Figure A below, to determine amount of headroom, sideroom, and back space room required for this particular door. Make sure **NOW** that all of these clearances are available.

**Chart No. 1**

	Headroom	Sideroom	Backspace
Standard Lift Manual	500mm	200mm	Door Height + 460mm
Standard Lift Motor Operated		350mm	
High Lift Manual	1700mm	200mm	Door Height - 740mm
High Lift Motor Operated		350mm	
Verticle Lift Manual	Door Height + 200mm	200mm	Up to 550mm (VL4860)
Verticle Lift Motor Operated		350mm	



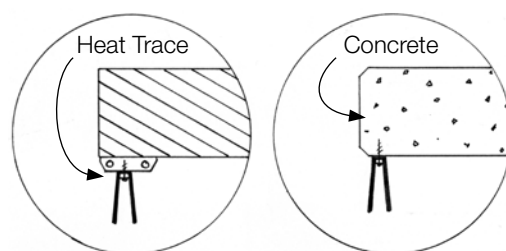
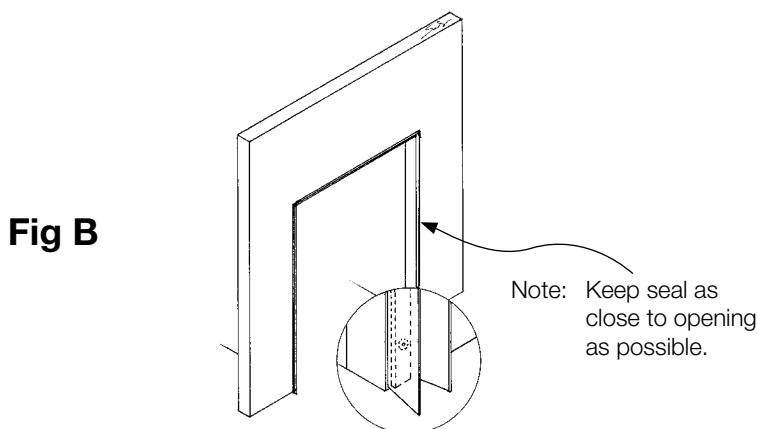
**Fig A**

- D** Suitable spring anchor pads or other anchorage for shaft bearings must be provided. All spring or bearing anchor pads must be flush with and not extend into the room any further than the jambs. Are pads now in place, or can be provided for as you progress?
- E** Jamb must be plumb and solidly attached to the building. Floor must be level, or exact grade line established before you start!

# INSTALLATION INSTRUCTIONS

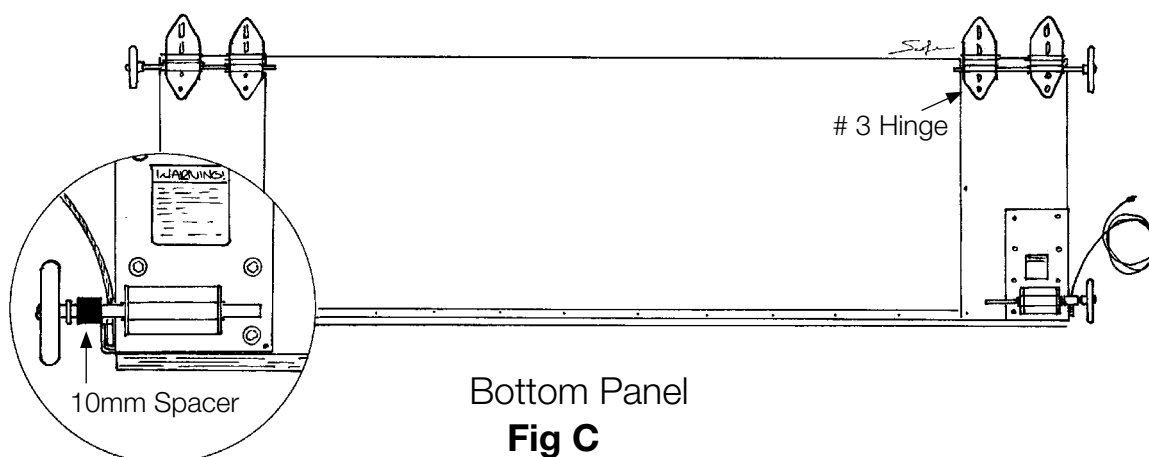
## STEP 1

- The Door Opening seal supplied with your door kit should be fixed to the door opening as shown below in figure B.
- **Extreme Caution** must be taken when attaching the seal on or around an electric heat trace. Door tracks may also need to be packed off the wall.
- It is recommended that the seal is attached in one continuous length and stretched slightly to ensure the best possible seal is obtained.
- The door will overlap the edge of the opening by approximately 50mm each side (unless ordered otherwise).



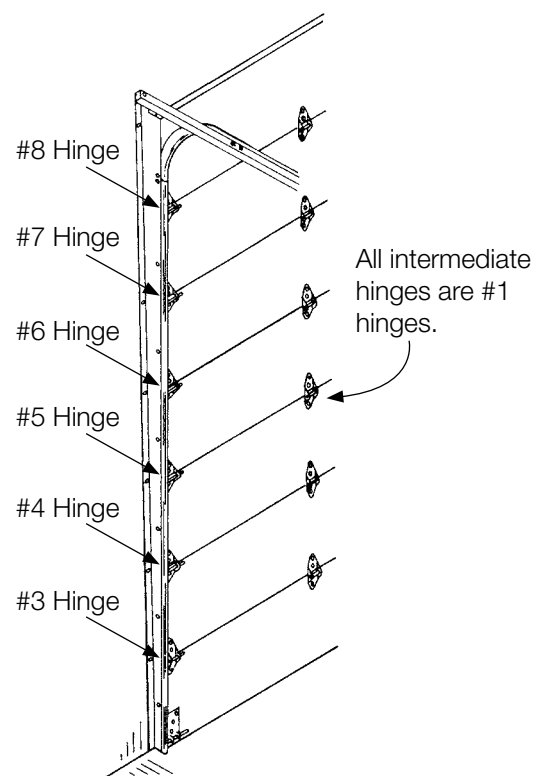
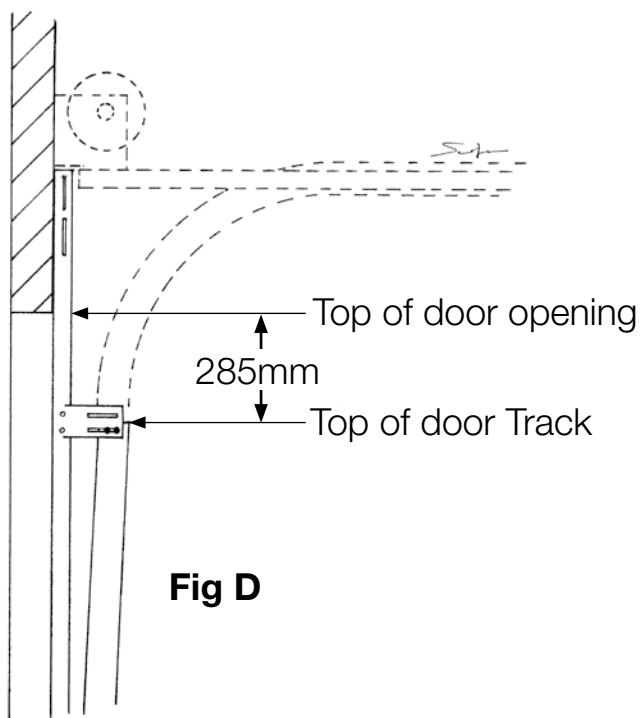
## STEP 2

- Locate the Bottom Door panel with the weather seal.
- Position the left and right bottom brackets and secure the counter balance cables to the brackets. See figure C below.
- The bottom brackets should be attached with 1/4" self tapping tek screws supplied.
- Two rollers with 180mm axles should be fitted to the bottom brackets along with the 10mm axle spacers provided.
- Locate four #3 hinges and attach two on each top corner of the bottom panel. Use 1/4" self tapping tek screws.
- Two rollers with 250mm axles should be fitted to the #3 hinges.



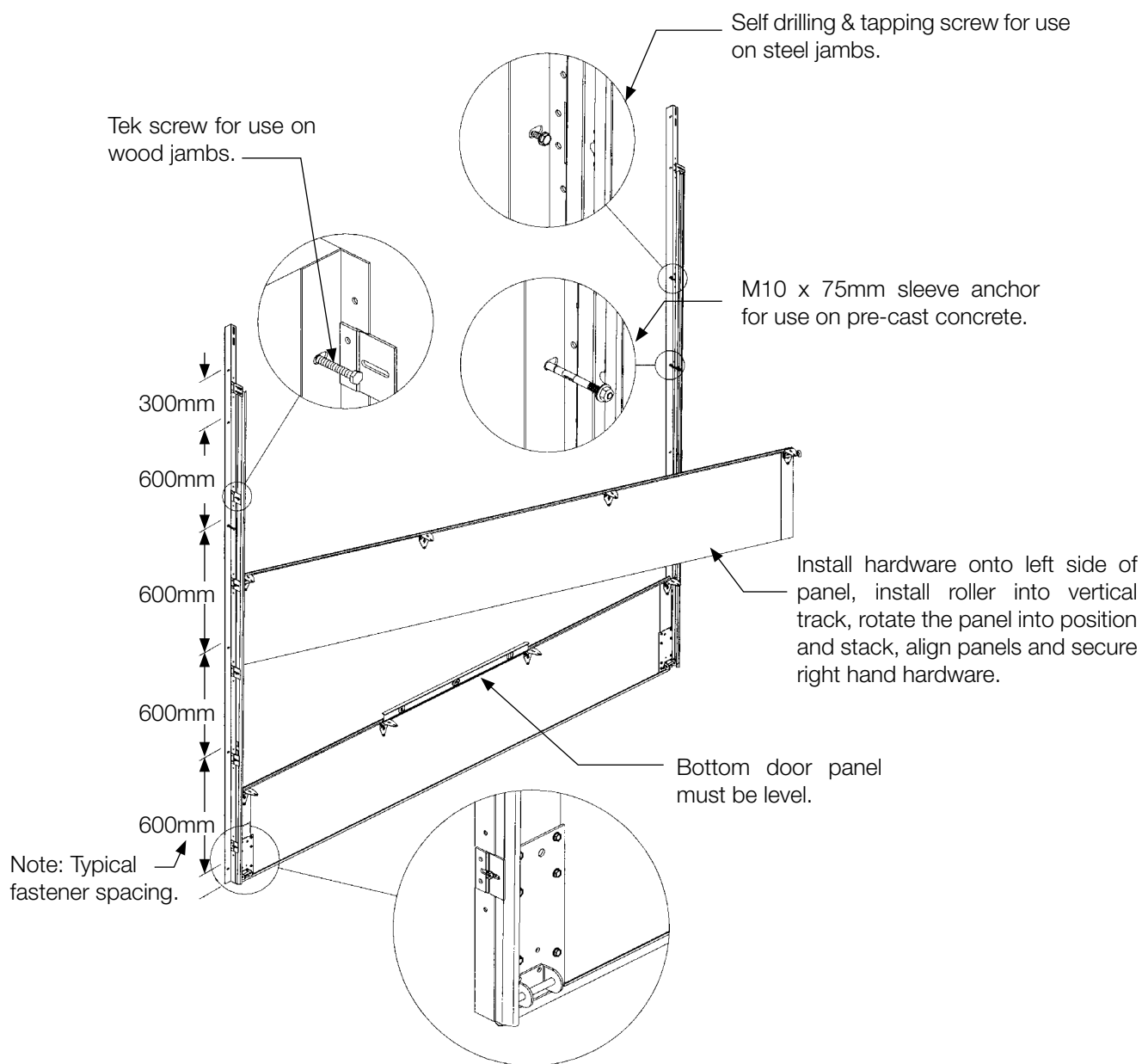
## STEP 3

- Centre and level the Bottom door panel in the opening as shown in figure F, on page 7. The panel will overlap the opening by approximately 50mm.
- Temporarily attach the vertical tracks to the jambs. The bottom wheel should be hard in against the spacer to locate the bottom end of the track.
- It is important that the top of each track is at the same level (shim if necessary) and the top of the track is 285mm below the top of the door opening (trim bottom of track if necessary, **DO NOT CUT THE TOP OF THE TRACK**). See Figure D Below.



# STEP 4

- Install the door panels as shown below in figure F, and ensure the hinges are placed correctly as shown in figure E on page 6.
- The top panel may be installed now or may wait until step 10 (installer preference)



**Fig F**

## STEP 5

- Adjust the vertical tracks so the bottom roller is hard into the Bottom Bracket and slopes to the Left/Right by 15–20mm at the top. This ensures the door is always guided to a central location as it closes.
- The vertical tracks can now be fixed semi-permanently to the wall.

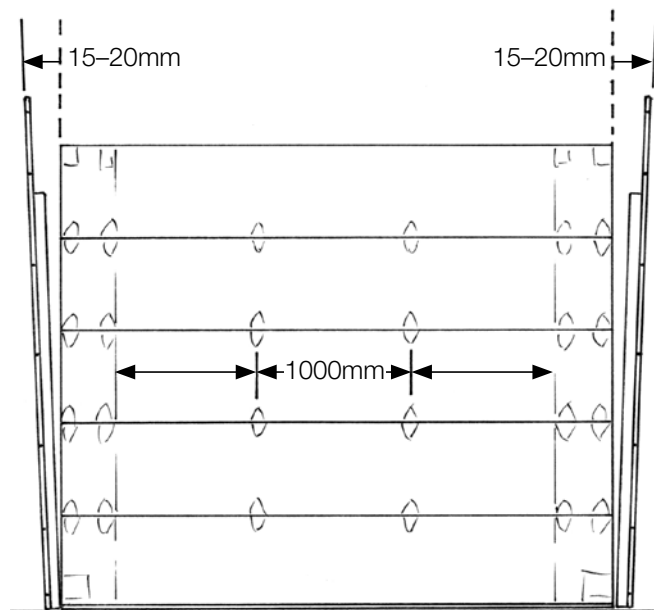


Fig G

## STEP 6

- #1 Hinges should now be fitted to the door with a maximum spacing of 1000mm. See Figure G above. The hinge screws will penetrate the continuous reinforcing strips as shown in figure H below.
- Panel strengthening struts will be supplied with all doors over 3800mm wide. The first strut should be fixed to the bottom panel and the rest spaced evenly there after.

## STEP 7

If Your Door Configuration is to be:

- Standard Lift, Go to Step 7A, Page 9
- High lift, Go to step 7B, Page 10
- Vertical Lift, Go to step 7C, Page 11

WHEN COMPLETED PROCEED TO STEP 8.

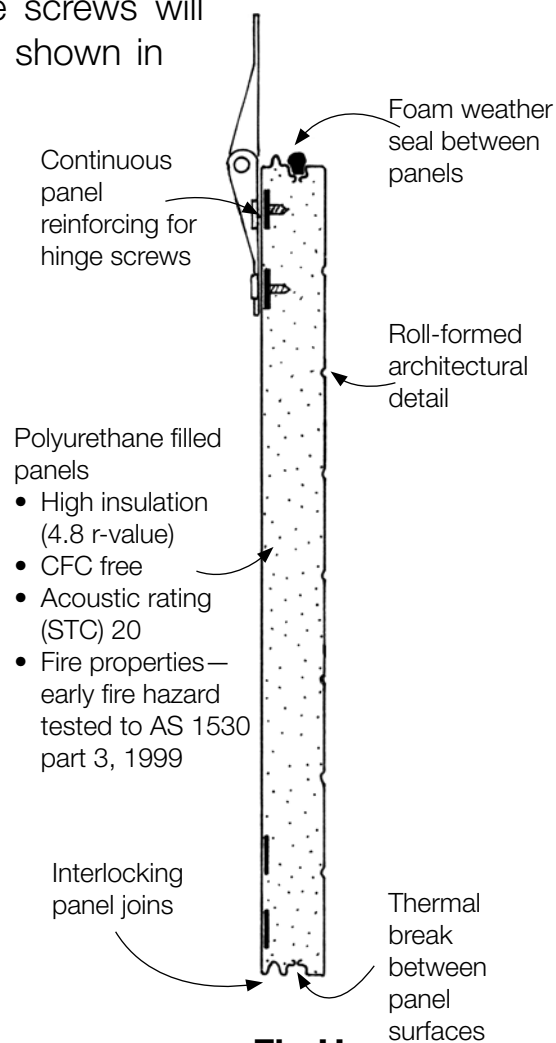


Fig H

# STEP 7A

## STANDARD LIFT TRACKS

- Locate the Left and Right Horizontal tracks and lift into place. Connect the curved end of the track to the top of the vertical track as shown below in figure I. Temporarily support the back end of the track with a track stand or similar.
- The bearing brackets are used to connect the horizontal track angle to the wall angle at the front.
- The horizontal tracks should now be squared exactly off the wall or door panel and fixed to the ceiling as instructed below. If a jack shaft motor is to be fitted to the door later, lift the back of the horizontal track up by 20mm every one metre of track.
- The rear hanger must be located near the buffer springs at the back of the horizontal track. Buffer springs are fitted in step 14, page 17.
- Intermediate hangers for doors over 3000mm high and over 4200mm wide must be positioned halfway between jamb and rear hangers. Doors 4200mm–4800mm high, use two intermediate hangers.
- When you have completed all of the above proceed to step 8 on page 14.

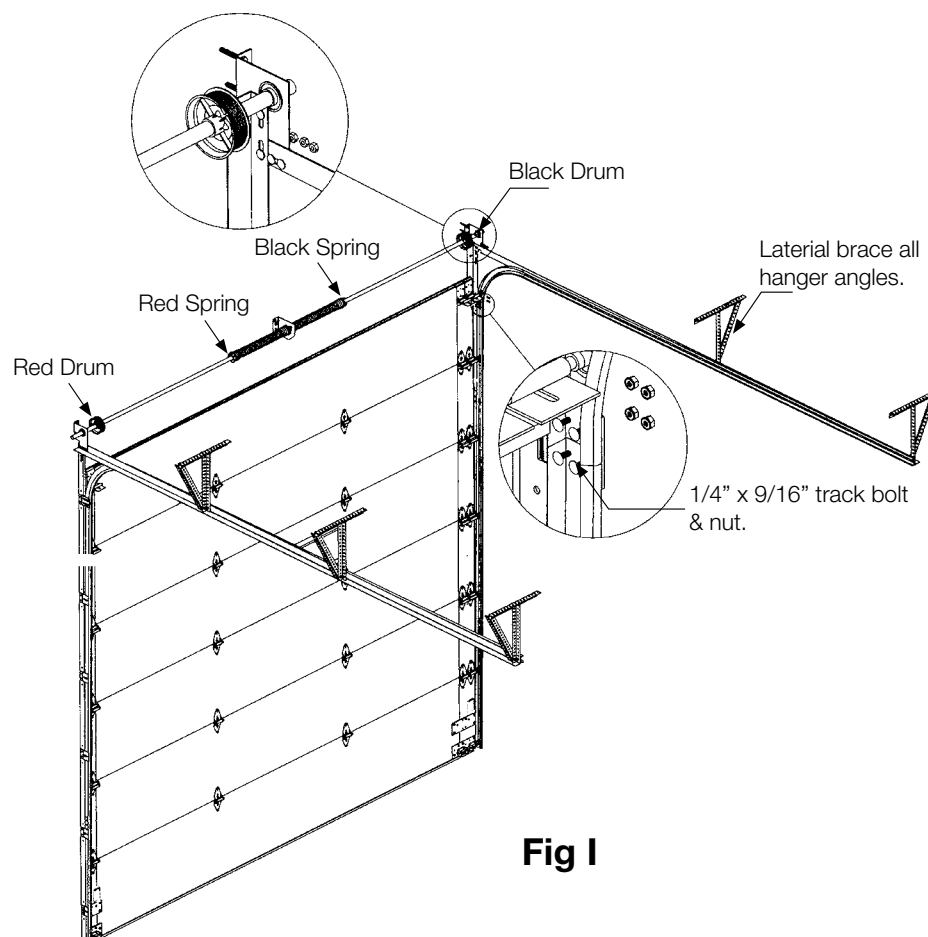


Fig I

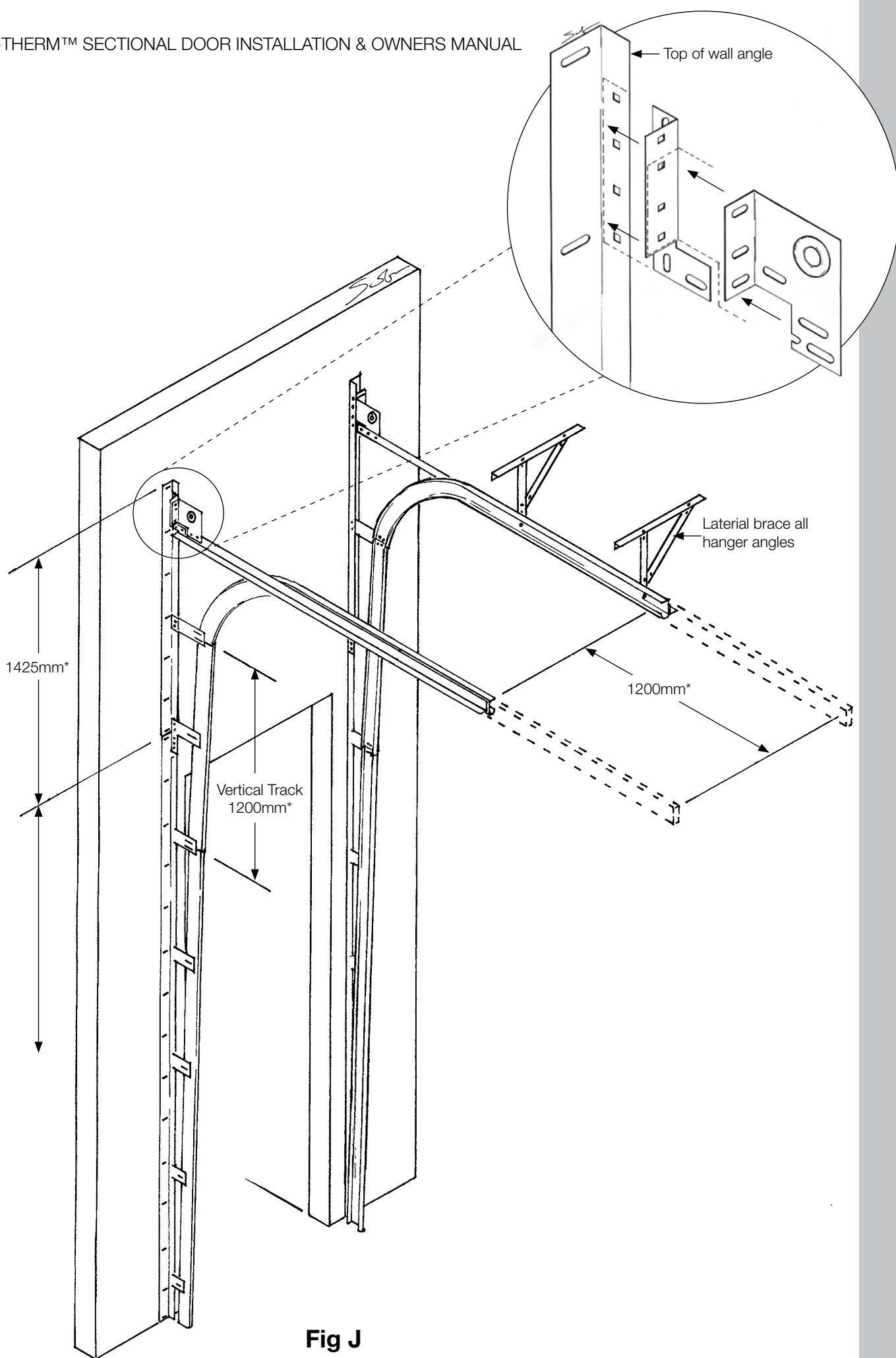
## STEP 7B

### HIGH LIFT TRACKS

- “High Lift” tracks and hardware are designed to raise the horizontal tracks higher off the floor than standard lift tracks, where needed to clear obstructions.

#### HL1400 HIGH-LIFT KIT

- The “HL1400 High-Lift Kit” requires 1700mm\* of headroom and will give the door 1400mm\* of lift. This is measured from the top of the door opening to the underside of the horizontal track.  
**\*Important note:** If 1700mm of headroom is not available or the high lift is to be less than 1400mm, all measurements must be reduced accordingly.
- Locate the high-lift section of wall angle (left and right) in the HL1400 kit and mount to the top of the existing wall angle with brackets and bolts which are also supplied with the HL1400 kit. The top of the high-lift section of wall angle has four square holes and the bottom has two square holes. See figure J to the right.
- The high-lift section of vertical track (1200mm\* long) is to be cut from the back of the horizontal track. See figure J. Deburr the ends and remove the angle from the back of this peice of track by drilling the spot welds.
- The vertical track (1200mm\* long) and horizontal track can now be installed as shown in figure J. The bearing bracket is used to connect the horizontal track angle to the wall angle at the front.
- The horizontal tracks must now be squared exactly off the wall or door panel and fixed to the ceiling with hangers as shown in figure J.
- The rear hanger must be located near the buffer springs at the back of the horizontal track. Buffer springs are fitted in step 14, page 17.
- Intermediate hangers for doors over 3600mm high and 4200mm wide must be positioned halfway between the jamb and rear hangers.
- When you have completed all of the above, proceed to step 8 on page 14.

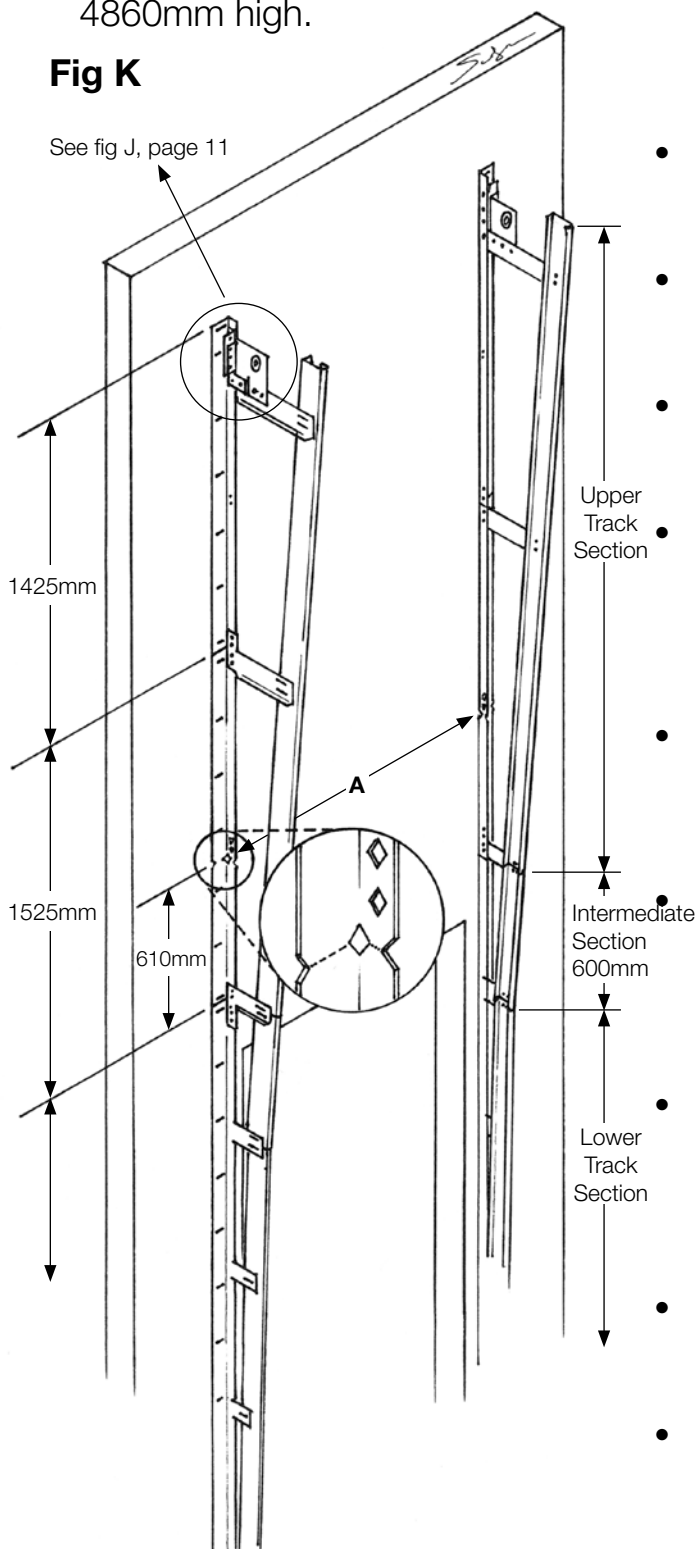


# STEP 7C

## VERTICAL LIFT TRACKS

- “Vertical Lift” tracks and hardware are designed to lift the door up the wall above the door opening as shown below. This is only possible when there is adequate headroom available.
- “Vertical Lift” doors require “door height + 200mm” of headroom. This is measured from the top of the door opening to the top of the vertical track.
- There are two different “vertical lift” kits available from Tru-Bilt. The “VL3030 kit” is for doors up to 3030mm high and the “VL4860 kit” is for doors up to 4860mm high.

**Fig K**

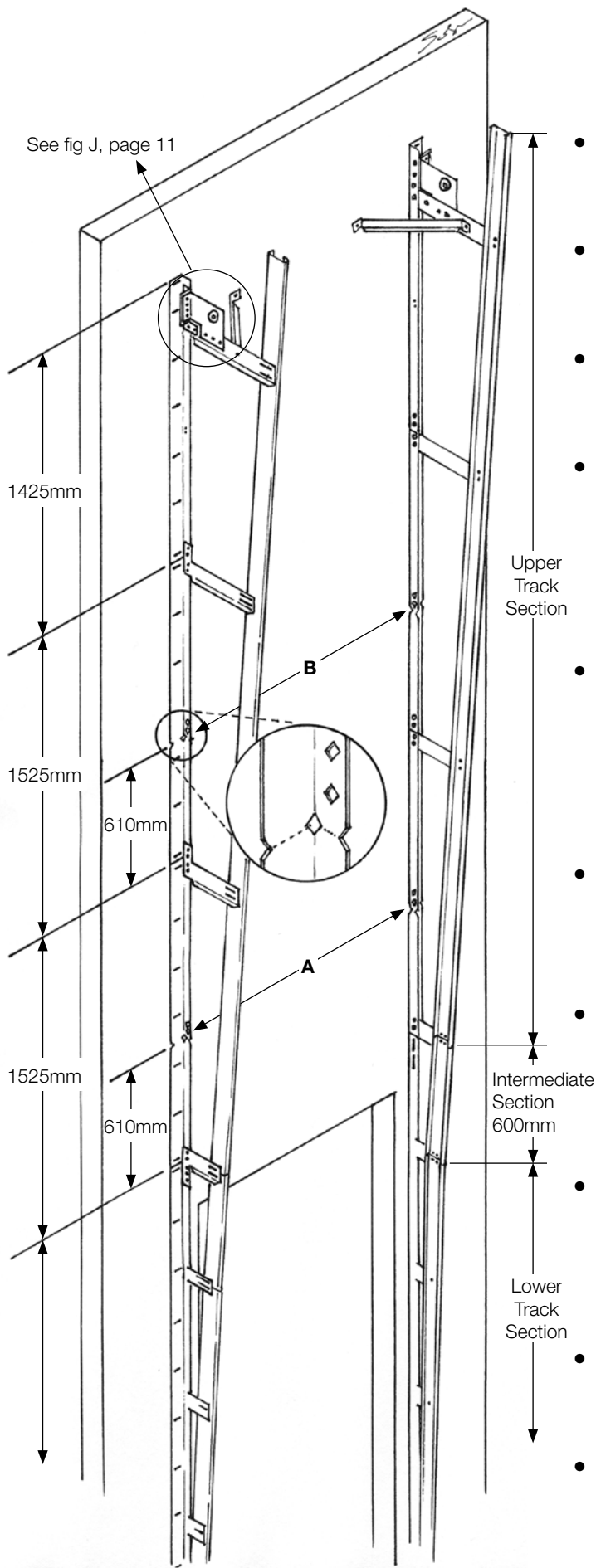


## VL3030

### VERTICAL LIFT KIT

- Locate the four pieces of wall angle from the VL3030 vertical lift kit. Note the lengths and hole positions in figure K.
- Before trimming (if necessary) and permanently mounting the wall angle, ensure the wire ropes will be of sufficient length.
- If the door opening is **3030mm high** or the door is **five full panels** high, assemble the wall angle and tracks as shown in Figure K.
- If the door opening is **2420mm high** or the door is **four full panels** high, the intermediate wall angle (1525mm long) must be reduced in length by 610mm (the height of one full panel) at the cut marks labelled “**A**” in figure K.
- Please note that if the door is a different size to those stated above, the wall angle may have to be trimmed accordingly. Also note the wire rope length.
- Supplied in the VL3030 kit is two pieces of door track at 600mm long. These are the “intermediate sections” of door track that must be mounted directly above and in line with the lower section of door track. See figure K.
- The “upper section” of door track is cut from what is normally the horizontal track for a “standard lift” door. The curve must be cut off, ends deburred and the angle removed from the back of the track by drilling the spot welds.
- This section of door track can now be mounted directly above and in line with the “intermediate section” of door track.
- When you have completed all of the above, proceed to step 8 on page 14.

**Fig L**



## VL4860 VERTICAL LIFT KIT

- Locate the six pieces of wall angle from the VL4860 vertical lift kit. Note the lengths and hole positions in figure L.
- Before trimming (if necessary) and permanently mounting the wall angle, ensure the wire ropes will be of sufficient length.
- If the door opening is **4860mm high** or the door is **eight full panels** high, assemble the wall angle and tracks as shown in figure L.
- If the door opening is **4250mm high** or the door is **seven full panels** high, the lower intermediate wall angles (1525mm long) must be reduced in length by 610mm (the height of one full panel) at the cut marks labelled “A” in figure L.
- If the door opening is **3640mm high** or the door is **six full panels** high, both intermediate wall angles (1525mm long) must be reduced in length by 610mm (the height of one full panel) at the cut marks labelled “A” and “B” in figure L.
- Please note that if the door is a different size to those stated above, the wall angle may have to be trimmed accordingly. Also note the wire rope length.
- Supplied in the VL4860 it is two pieces of door track at 600mm long. These are the “intermediate sections” of door track that are mounted directly above and in line with the lower section of door track. See figure L.
- The “upper section” of door track is cut from what is normally the horizontal track for a “standard lift” door. The curve must be cut off, ends deburred and the angle removed from the back of the track by drilling the spot welds.
- This section of door track can now be mounted directly above and in line with the “intermediate section” of door track.
- When you have completed all of the above, proceed to step 8, on page 14.

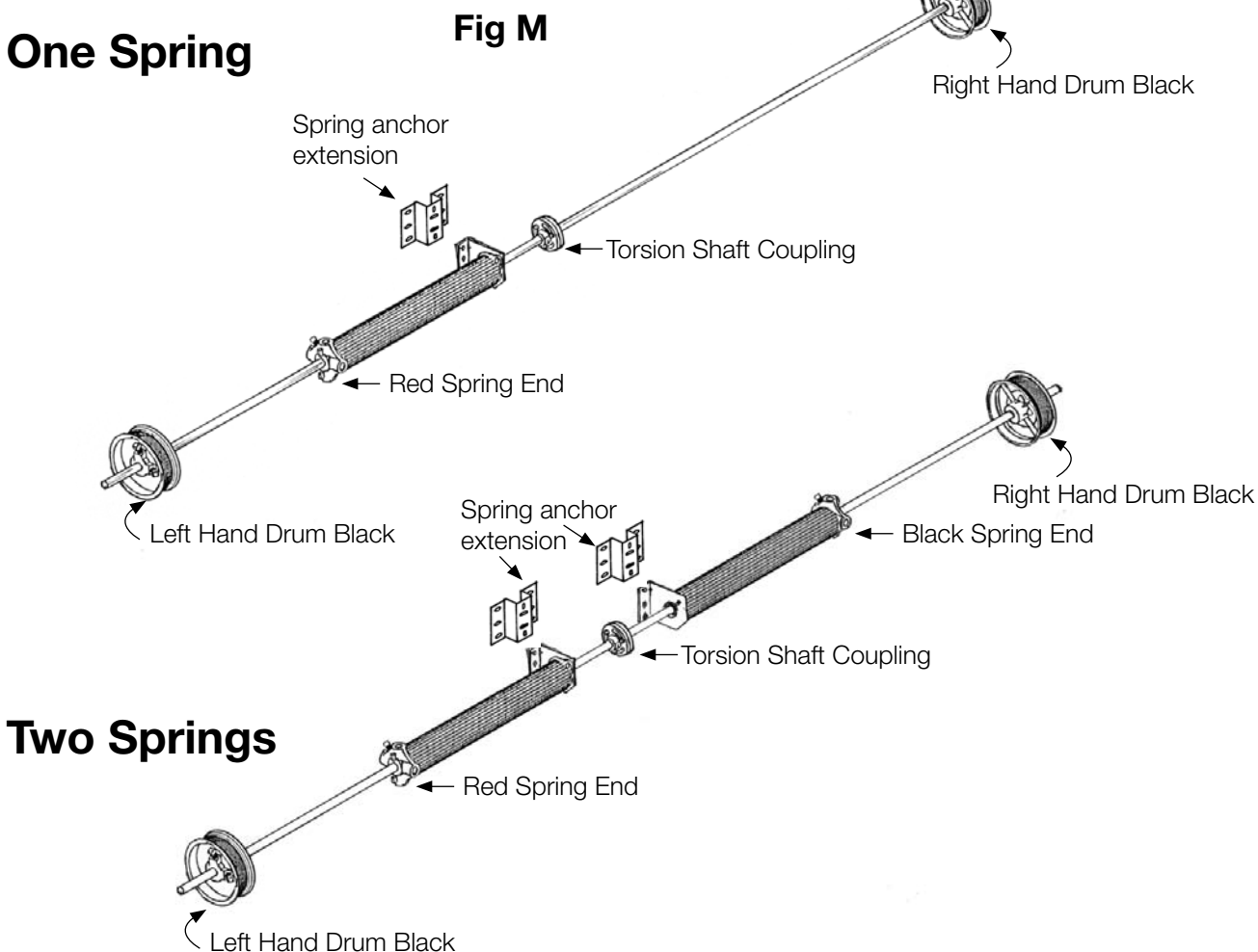
# STEP 8

- Identify the appropriate spring Configuration for your door shown in figure M below.
- It is very important to ensure **RED** Cable Drums and springs are always on the left side of the Door and **BLACK** on the right. See figure M below and also figure I on Page 9.
- The 25.4mmø torsion shaft has to be cut where the torsion shaft coupling is mounted. Mount the coupling and tighten the grub screws into the shaft and keyway only. The connecting bolts will be tightened in step 9.

## IMPORTANT NOTE

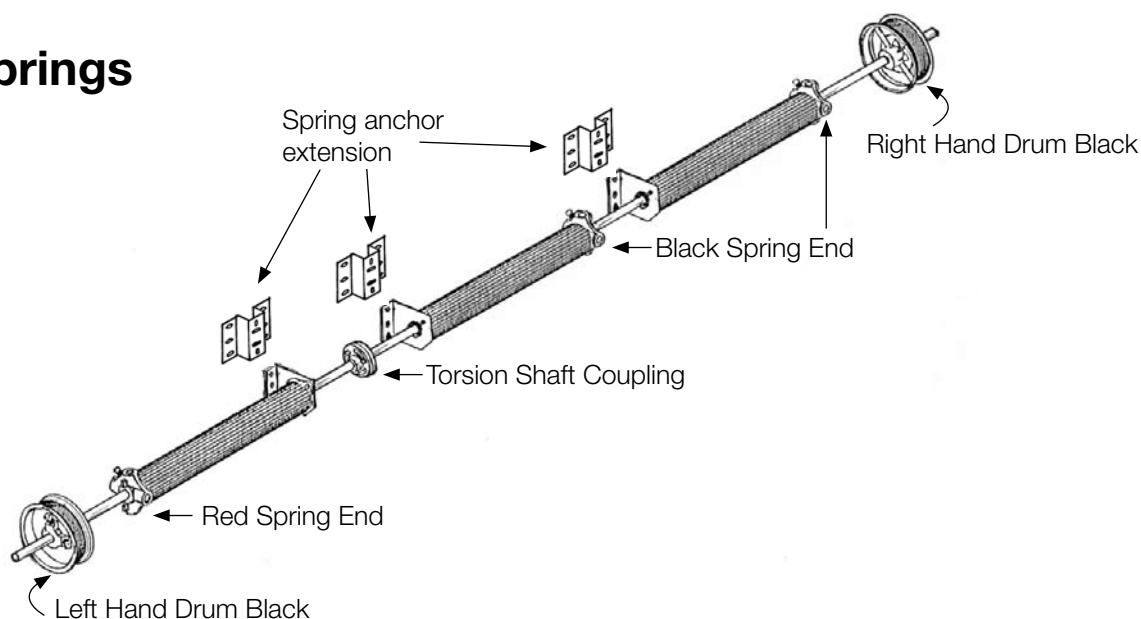
Spring anchor brackets must have extra strong fixing as huge forces are applied when springs are tensioned.

- High Lift and vertical lift doors will require a spring anchor extension bracket and appropriate cable drums. Both of these are supplied with the kit.



**Fig M**

## Three Springs



## STEP 9

- Feed cables (attached to bottom bracket see figure C) up behind the vertical tracks and attach to the drums. Tighten the set screws on one drum, then rotate drum and shaft until cable is tight. Attach vice grip to shaft, with end resting against wall. This will keep cable from unwinding. Now, turn other drum until cable is taut and tighten set screws and also tighten the connecting bolts on the torsion coupling.

## STEP 10

- If you did not mount the top door panel in Step 4, do so now. Also make sure you remembered to attach the panel strengthening struts (if required) in step 6 and anything else, such as door locks, that will add weight to the door.

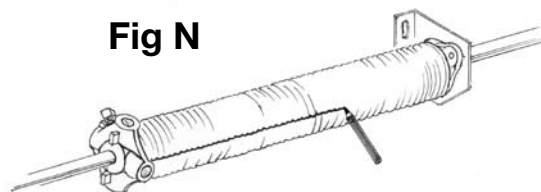
### IMPORTANT NOTE

Ensure all bolts on the torsion shaft coupling and spring anchor brackets are tight and fixings to the wall are strong and secure before tensioning the springs.

# STEP 11

**WARNING**  
**Spring Mechanism under extreme tension. It is recommended that a qualified door agency be contacted for installation or adjustments.**

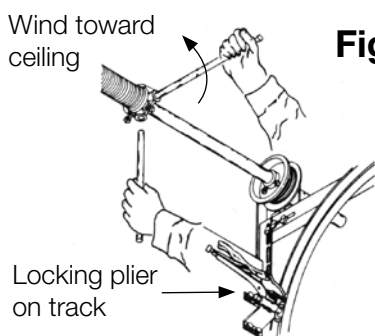
- Before tensioning springs clamp a locking plier on to the door track as shown in figure P. This will prevent the door from opening during tensioning.
- Use a permanent marker to mark a clearly visible, straight line along each spring as shown in figure N. This enables you to count the number of turns when tensioning the springs.
- See figure O below to calculate the approximate number of turns your springs will require. You will need the code number off your cable drums.



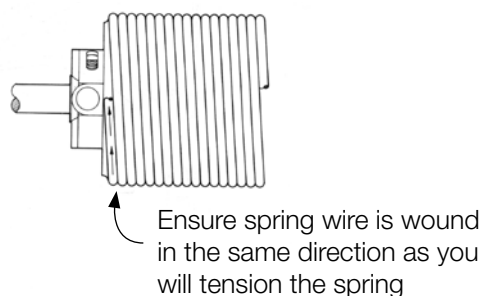
**Fig O**

Door Height	STD Lift Drums			High Lift	Verticle Lift Drums	
	400-8	400-12	5250-18	5250-54	850-11	1100-18
2420mm	8.5-9			10.5-11.5	9.5-10.5	
3030mm		10.5-11		11-12	10.5-11.5	
3640mm		12.5-13		11.5-13		11.5-12.5
4250mm			10.5-11.5	13-14		12.5-13.5
4860mm			12-12.5	14-15		13-14

- Use only good quality, snug fitting, winding rods (NOT screwdrivers, etc.). These can be obtained from the door factory.
- Be sure you are on a secure working platform, and keep slightly to side of winding rods.
- Always wind spring toward ceiling as show in figure P below.
- When proper number of turns is reached, rest winding rod against top of door or header and tighten set screws on winding cone. Do not rest winding rod on your shoulder! Release vice grip from spring shaft.
- If the torsion springs have been stored for a while and have become dry or rusty, add light oil to spring coils for smoother operation and longer life.



**Fig P**



## STEP 12

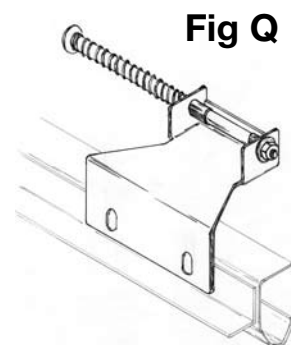
- Release the vice grips from the vertical track and check the door's counterbalance. If door does not balance properly (jump off Floor or Feels Heavy), it will be necessary to remove or add winds to the springs. Do Step 11 in reverse, adjusting 1/4 wind at a time. If door has more than one spring, adjust **ALL** springs the **SAME** amount. If one spring has more winds than another, overstress can occur.

## STEP 13

- Vertical tracks can now receive final adjustment. Run door up and down a few times, checking and (if necessary) adjusting for side clearances between door and track. Permanently tighten bolts or tek screws into jambs. Loosen the track bolts and push in, so the door is compressing the opening seal by approximately 5-10mm. Permanently tighten track bolts. Adjust top roller carriers so that the top panel is seated against the header. Silicon spray may be used to reduce friction against the rubber opening seal. Lubricate track rollers with greaseless lubricant. **DO NOT GREASE INSIDE OF TRACK.**

## STEP 14

- Standard lift and high lift horizontal track hangers and lateral braces, as fitted in step 7 (figure I and J) must be adjusted with door in the open position. Ensure there is even clearance between the track and the door (15–20mm).
- Buffer springs must be fitted to the rear of the horizontal tracks as shown below in figure Q. Ensure the door lifts clear of the opening when against the buffer springs.



## STEP 15 COMPLETION CHECK

- The door should now be complete and ready for years of reliable service.
- It is recommended a final check is carried out to ensure that **all** steps of the installation instructions have been followed carefully as this may affect the manufacturers warranty.
- **Do not** remove or cover any warning stickers or serial number tags.

# OPERATING SAFETY NOTICE



Overhead type doors are heavy. Many of the components are under extreme tension and can exert strong forces. Improper use or maintenance of this door could lead to severe injury or death. However, by adhering to the precautions given below, you should enjoy many years of safe and reliable operations.

1. Operate door **ONLY** when properly adjusted and free of obstructions.
2. Keep door in full view while operating it. Watch the door open or close completely before leaving the area.
3. Should the door become hard to operate or completely inoperative, a qualified door agency should correct the problem to prevent damage to the door or serious personal injury.
4. **DO NOT PERMIT** children to play with the door or the electrical controls. Fatal injury could result, should the child become entrapped between the door and the floor.
5. To prevent serious injury or death, avoid standing in the open doorway or walking through the doorway while the door is moving.
6. **DO NOT** remove cover or paint over any safety warning stickers or labels on door.
7. Door is constantly under **EXTREME SPRING TENSION**. To prevent possible serious injury or death, adjustments, repairs, removal, or installation, **ESPECIALLY** of **SPRING ASSEMBLIES, CABLES, or BOTTOM BRACKETS**, should be performed **ONLY** by qualified door service people.

## **ELECTRIC OPERATION**

If you are among the growing number of people now enjoying the convenience of an electrically operated garage door, you should be aware of a few simple points regarding the continued trouble-free operation of this equipment.

1. Electrically operated doors must be properly counterbalanced, as recommended in the Tru-Therm installation instructions, for smooth easy manual operation before applying the electric opener. The opener is a convenience; if it works hard to open the door, its life expectancy will be reduced. A garage door opener is designed to control the motion of a door already properly counterbalanced.
2. Remove pull down ropes, normally used for manual operation, when the door is electrically operated. Locks should also be removed.
3. When maintenance is required, consult your Owner's Manual prior to attempting repairs. If the problem is not covered in the manual, contact the installing dealer or the manufacturer, giving them the symptom of the problem, and request the best manner in which to proceed.
4. The portable electronic radio transmitters should receive the care shown any similar piece of delicate electronic gear.
5. If for any reason the clutch, safety stop, or reversing device gives indications of being inoperative: 1. Check the Owner's Manual; 2. If simple checks do not resolve the failure, call a qualified door technician.

## **MAINTENANCE & REPAIR**

Like any piece of mechanical equipment, Tru-Therm doors do require some maintenance and periodic service. Unless the user is experienced in the maintenance and repair of Tru-Therm doors, the maximum amount of maintenance undertaken at that level should be the lubrication of moving parts such as hinges, rollers, pulleys, movable lock parts, springs and bearings. As an example, repairing cables and springs should be left to the professionals.

Professional service will ensure a job done correctly, and more important, it will take the personal exposure of danger away from the user.

The best place to obtain knowledgeable and professional service for a Tru-Therm door is from an authorized service agent of Tru-Bilt Industries Ltd. When contacting your authorized service agent of Tru-Bilt Industries Ltd, please quote the serial number from the nameplate on the inside of the door.

To locate your local service agent you can phone Tru-Bilt on +64 3 488 2060.

# TRU-THERM™ WARRANTY

Tru-Bilt Industries Ltd warrants that your Tru-Therm insulated sectional door will be free from defects in materials and workmanship under normal use for a period of **one year** or **10,000 cycles**, whichever comes first from the date of dispatch, provided the purchaser installs, maintains and operates the door in accordance with the owners manual.

If a warranty issue should arise, a 'warranty claim form', available from Tru-Bilt, must be completed along with the serial number from the nameplate on the inside of the Tru-Therm door. Photos are also required to support the claim. Travelling costs and labour are not claimable.

When a warranty claim is 'accepted', Tru-Bilt will repair or replace parts, or complete products, which ever Tru-Bilt Industries Ltd deems suitable.

Tru-Bilt Industries Ltd retains the right to 'reject' any warranty claim for failure or damage caused by improper use or abuse.

## AREA AGENT

### TRU-BILT INDUSTRIES LTD

586 Kaikorai Valley Road, Dunedin, New Zealand  
Phone: +64 3 488 2060, Fax: +64 3 488 2061