

INSTALLATION GUIDE

Door systems

Last updated 9 July 2024

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GENERAL NOTES

Caution

These instructions are intended for qualified and experienced installers only. This applies especially to roller door installation, where the potential energy stored in roller door springs can cause injury or damage if the proper precautions are not taken.

This guide may not fully detail specific procedures or precautions commonly used by qualified technicians. No liability is taken for injury, damage, or misadventure encountered as a result of unsafe or incorrect procedures followed by untrained installers.

Nomenclature

Fixing and fasteners

This document refers to both fixings and fasteners. For the sake of clarity, a fastener is a noun describing a specific implement used to secure or join two objects together (for example, screws, rivets, and tappets). Fixing is either used as a verb (for example, use a hex-head screw to fix the channel to the partition wall) or to describe a system of multiple fasteners that secure multiple components in place.

Patents

Patent Pending No 2016903460 applies to the Roller Door Adjuster described in this manual.

PROJECT COMMENCEMENT

This guide is to be read and adhered to in conjunction with Storco's Main Contract, Subcontractor Articles of Agreement, and/or Storco Terms and Conditions of Trade.

Storco will provide

- Architectural unit layouts – marked final version
  - Dimensions
  - Highlighted plans
- Project Schedule
- Project Team Contact Details
- Hire equipment requirements
- Detailed scope of works
- Safe Work Method Statement (SWMS) (to be reviewed and signed by all installer's personnel)
- Inspection Test Plan (ITP's) – To be filled out by installer as requested by Storco

Installer to provide

- All items within the payment register with each invoice
- Test and Tag register
- Calibration Register for all laser tools
- Contractor Certificates
  - First Aid Certificate
  - Asbestos Certificate (ACT work only)
- Contractor Licenses
  - High risk work card
  - White cards
  - Hire equipment licensing

Standard working hours

Subject to local council restrictions

- Monday to Friday 7:00am to 5:00pm
- Sat - 8:00 am to 4:00 pm

Standard work attire expected

- Enclosed shoes
- Safety helmet
- Hi-vis clothing (no competitor-branded items)
- General Personal Protective Equipment (PPE) related to the task at hand

Tools required

- TrakFast gas gun
- Cordless drill, variable speed

- Spirit level, 1200mm
- Tin snips
- Shear Drill attachment
- Laser Level
- Circular saw, cold cut blade
  - Tape measure 8m and 50m (laser level is useful but optional)
- Ladders
- Chalk line (do not use oxide)
- Hex and Phillips drill bits
- Angle grinder, 100mm and 230mm

Fasteners used

The following fasteners will be supplied by Storco.

NUMBER	FASTENER TYPE	WHERE USED
1	Screw, button head tek 8×16mm	Miscellaneous
2	Screw, hex head 10-16×16mm tek class 3, surf mist	Corridor walls
3	Screw, hex head 10-16×16mm tek class 3, zinc	Internal walls
4	Screw, hex head 10-16×25mm tek class 3, zinc	Corridor headers
5	Screw, hex head 12-11×25mm tek type 17 class 3	Channel to timber floor
6	Screw, needle point timber 8×15mm	Buffer rail
7	Screw, needle point timber 8×32mm	Buffer rail
8	Pins and gas, blue	Channel to concrete floor
9	Tappets, 6.5×25mm mushroom head, nylon anchor	Instead of pins and gas
10	Rivet, AS 6-4 dome	Aluminium buffer rail Swing Door Latches
11	Rivet, AS 6-4 countersunk	Swing door hinges
12	Mesh clips, copper saddles	Mesh
13	Rivet, AS 4-3 dome, surf mist	Gutters and downpipes Lighting tracks and flashings
14	Screw, hex head 12-14×20mm class 4 plain, zinc	Roller door mounting brackets
15	Screw, 8-18×20mm countersunk self-embedding, galvanised	Roller Door Handles

CONSTRUCTION OF UNITS

Step 9: Door installation

> Doors are easily damaged and expensive to replace. Doors should be the last thing to be installed. Installers are not to remove the protective plastic from the face of the door until after the latch is fixed to prevent damage.

Swing doors

All swing doors would normally be swung between 10-20mm off the floor when fitting to the opening (Maximum Gap of 10mm between top of the door and notched header).

Door operation should be in accordance with drawing provided, and should be hinged accordingly.

Hinges are to be fitted into the pre-punched holes (fastener #11).

Ensure accurate alignment when drilling the bolt hole in the door jamb. The hole should not be more than 15mm in diameter. If the hole is too close to the front of the jamb the door will be loose in the locked position, if too far back the latch will be too hard to operate.

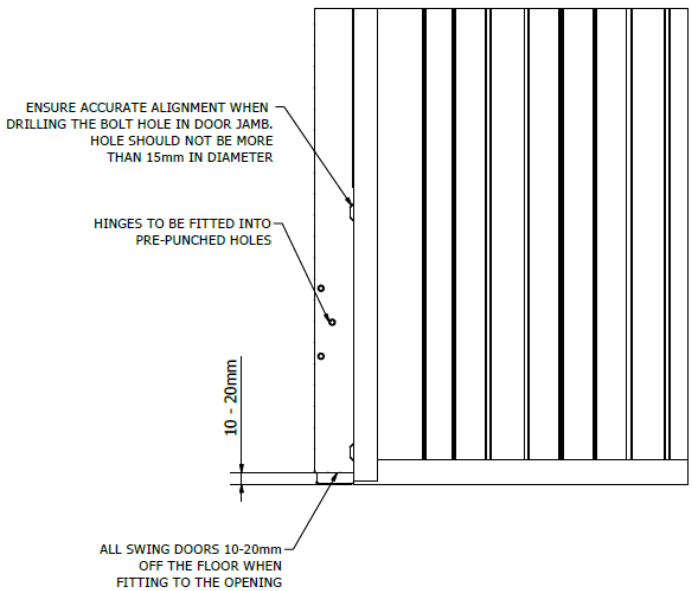


***Photo 1**: Swing door 10-20mm gap off floor*

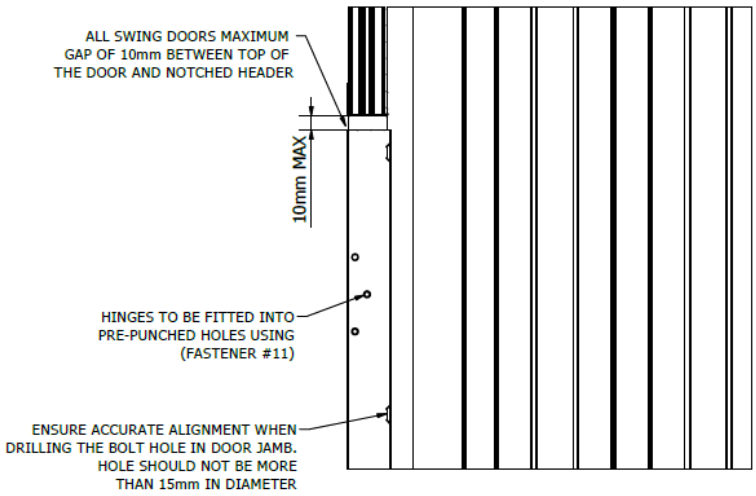


***Photo 2**: Swing door 10mm gap between top of door and notched header*

Swing door latch installation

Slide the latch handle open and closed to ensure it operates smoothly.

Slide the handle to the unlocked position. Place the rear of the latch into the hinge side of the cut out in the door at approximately 45° (figure 2). The two tabs slide in behind the door panel. Slide the latch back towards the hinge side approximately 20mm.

Depress the latch into the cut out. Keep the handle in the unlocked position so the lock bolt clears the cut out in the door panel. When the latch is flat against the door and both the V-points are behind the face of the door panel pull the latch forward until it clicks. Make sure both V-points go behind the door panel. If they don't you will need to review the door and the door frame to identify the reason why and remedy it.

Insert 2x Rivets, AS 6-4 dome (fastener #10) to secure the latch.

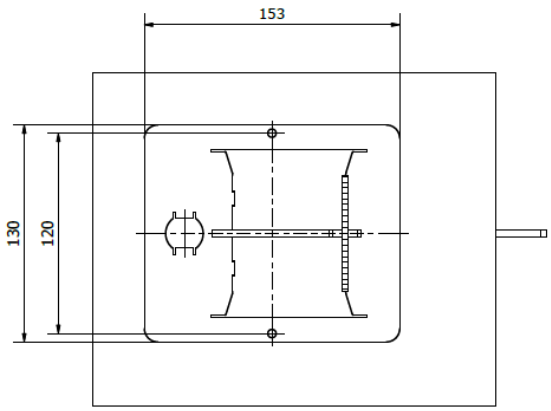


***Photo 3**: Swing door latch*

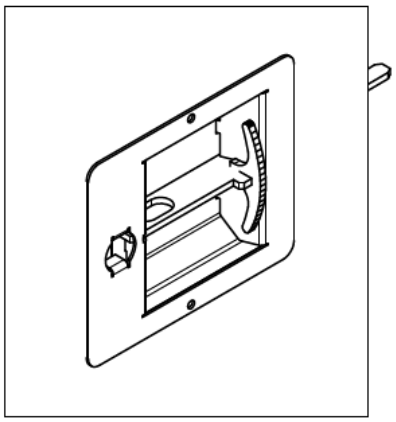


***Photo 4**: Swing door latch iso view*

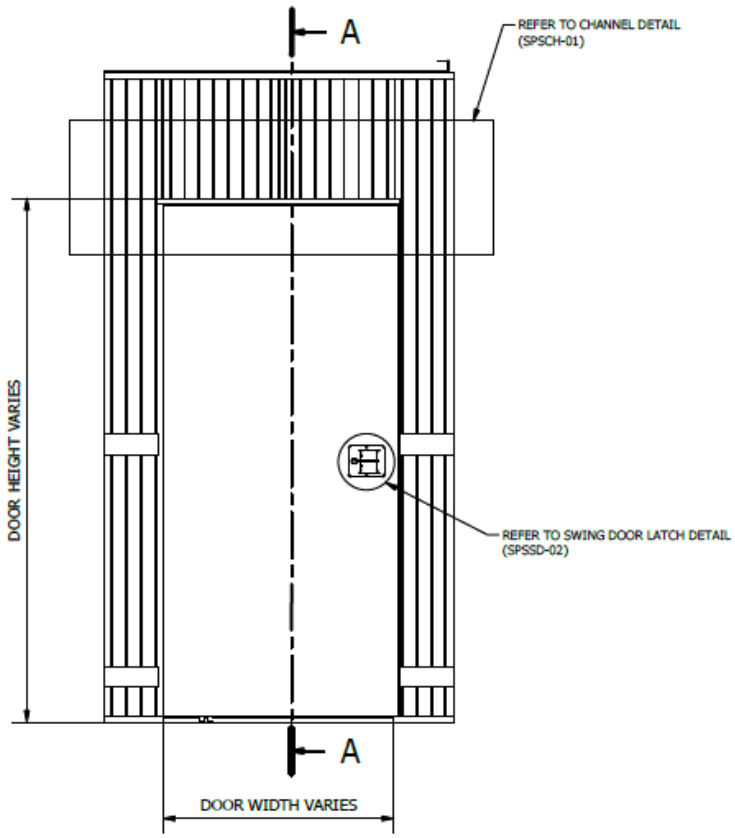


***Photo 5**: Swing door assembly*

Roller Doors

These instructions are intended for experienced roller door technicians. Procedures and precautions usually known by such technicians may not be included or fully described in these instructions.

Only experienced roller door technicians should attempt to install a roller door. It is a requirement that the technicians understand this, carry out appropriate risk assessments, and take all necessary precautions to ensure the safety of themselves and others. It is also a requirement they are aware of the dangers from stored energy in the roller door spring(s).

Refer to the Storco Specification panel supplied to confirm the roller door D-handle location.

Only roller doors 2,400mm and above high will require rope pulls installed unless otherwise noted on the building specification panel.

Preliminary information

All hand indications are viewed from inside the storage unit looking out into the corridor/external space.

Refer to detail view: inside looking out below.

Bring the roller door, guide rails, mounting brackets, and fixings to exact location of installation. Do not cut straps or wrapping holding the door. Check all parts for damage.

Check the following:

- Headroom and side room are sufficient.
- The width of the door curtain exceeds the opening width by at least 50mm.
- Sides and top of opening are vertical and horizontal. If not, the dimensions in table (diagram A) may need slight adjustment.
- The guide rails against the opening sides may need some adjustment. If shortening is needed, trim from the bottom of the rail. When rails are then fixed, the tops of the LH and RH rails must be at the same level.

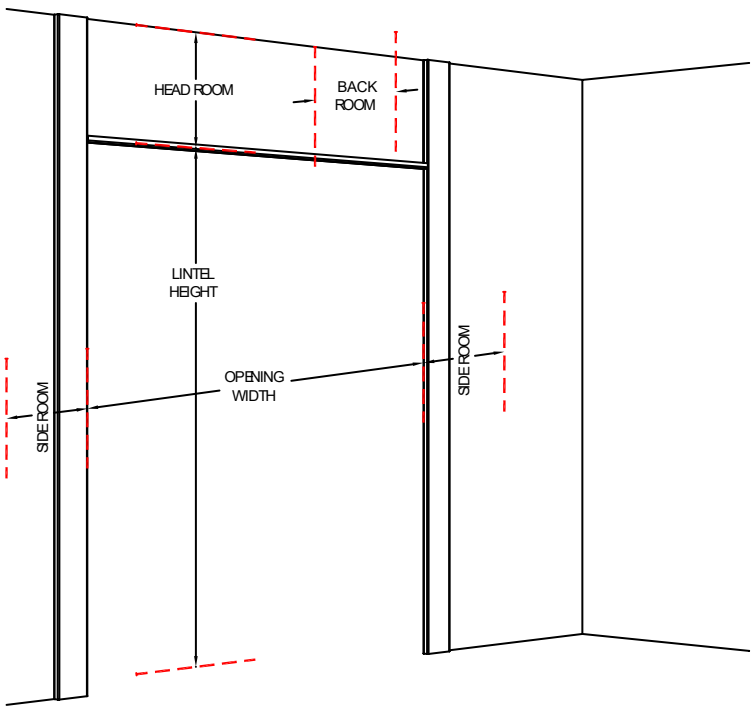


***Photo 6**: Roller door space viewed from inside storage unit.*

Fixing and adjusting

Roller Door Guides

Fix the LH rail first (fastener #14), vertical and as close as practical to the LH edge of the opening.

Measure the curtain width (G' in photo 7) and fix (fastener #14) the RH and LH guide rails vertical and positioned as in see photo 7.

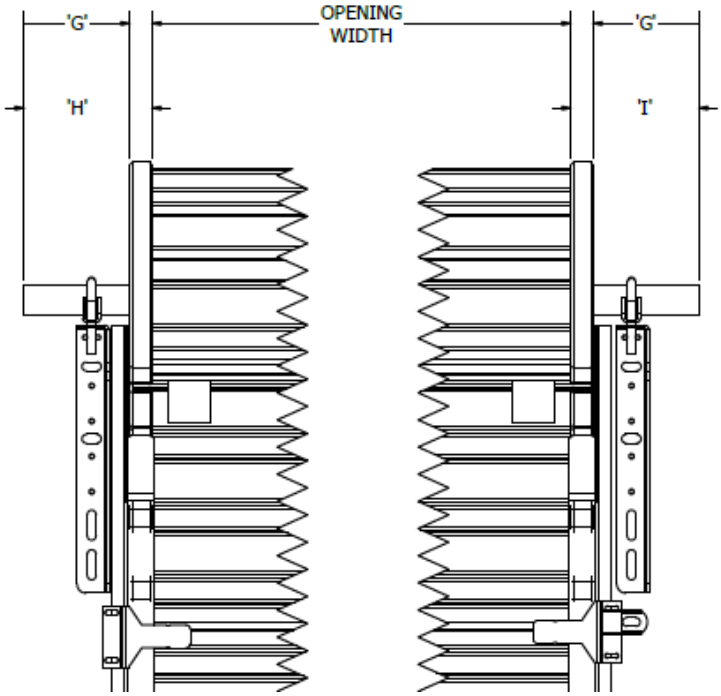


***Photo 7**: Bracket and guide rail detail.*

See Photo 8 for alternate material fixing of the guide rails, and photos 9 and 10 for details.

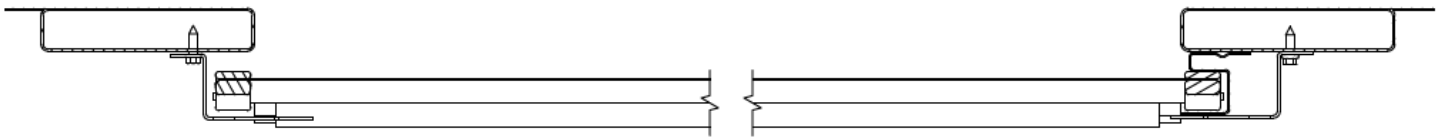


***Photo 8**: Alternate material guide rail fixing positions.*

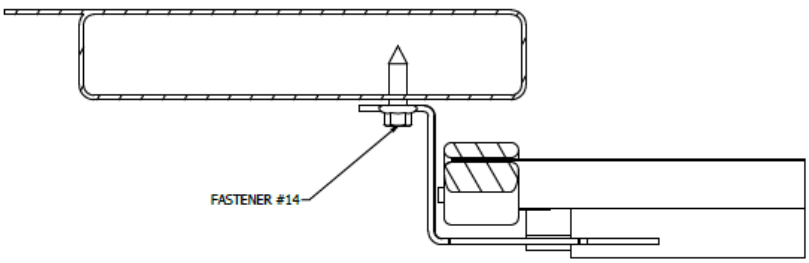
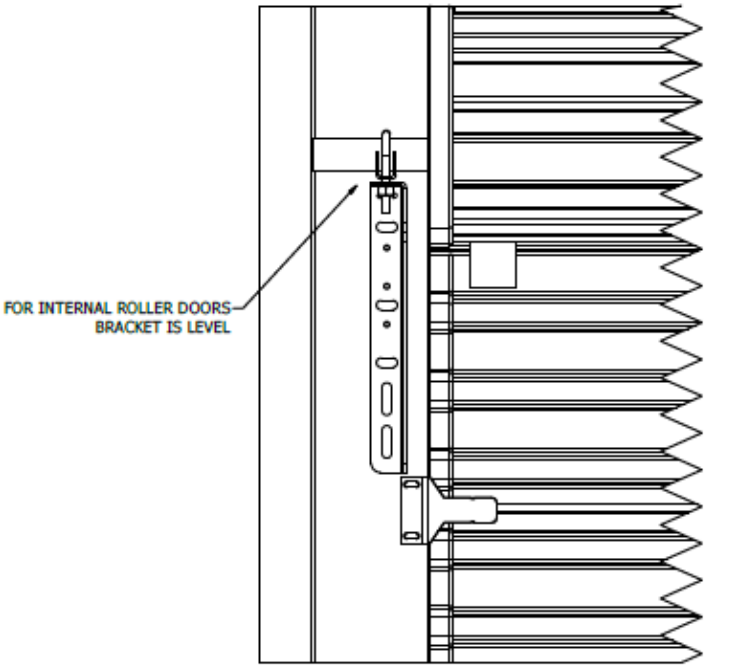


***Photo 9**: Alternate material guide rail fixing position detail.*

Roller Door Brackets

Fix the mounting brackets outside the rails, tops level with the tops of the guide rails. This bracket must be fixed with a minimum of four zinc screws per bracket (fastener #14) please refer to Photo 9 **("1 screw to be added to Photo 9 to be in accordance with our specs").**

All roller door guides to have four screws minimum in each guide please refer to Photo 9 **("1 screw to be added to Photo 6 to be in accordance with our specs" – Same on Photo 11)**.



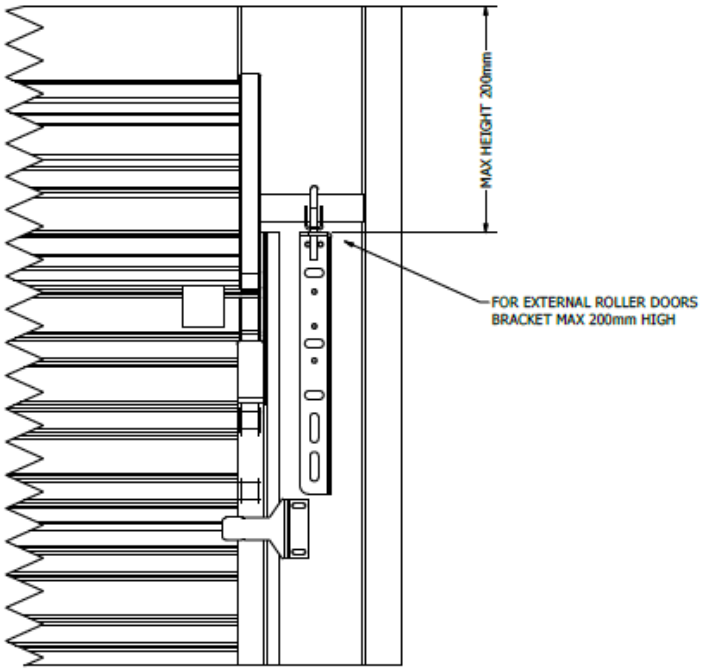


***Photo 10**: For internal doors the bracket is level.*

***Photo 11**: For external doors the bracket can be max 200mm high.*

For fixing into steel: Two screws (A+B) must be fitted into the top holes and there must also be a screw in the hole immediately below this hole (D). The remaining screw can be fixed into the remaining holes (E+G) at equal distance apart.

For fixing into concrete: Fitted by the three elongated holes C, F, H.

Refer to Photo 11 for bracket fixing guide.

All doors to have a maximum 100mm gap between fascia and door. Refer to Photo 12.

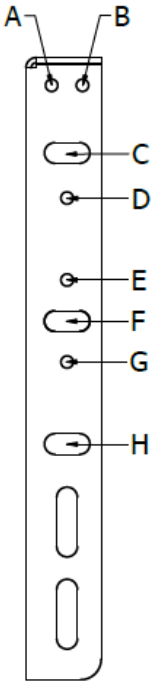


Photo 12: *Bracket dimension guide.*

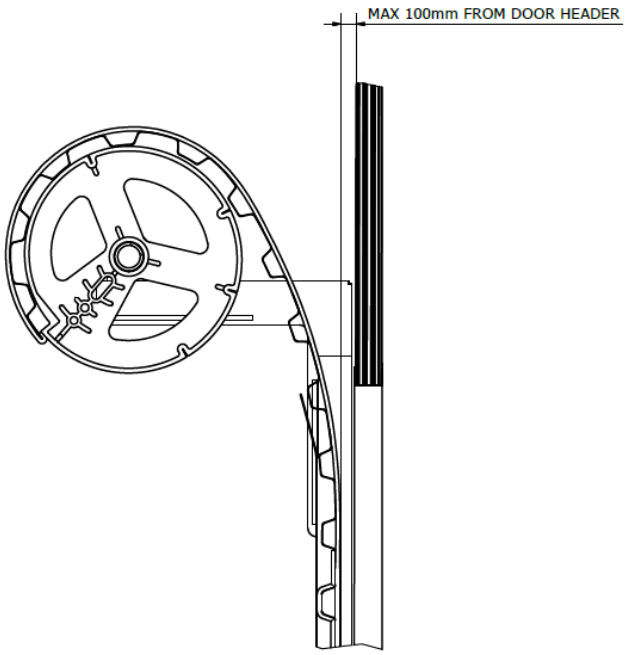


Photo 13: *All doors to have a max 100mm gap between fascia and door.*

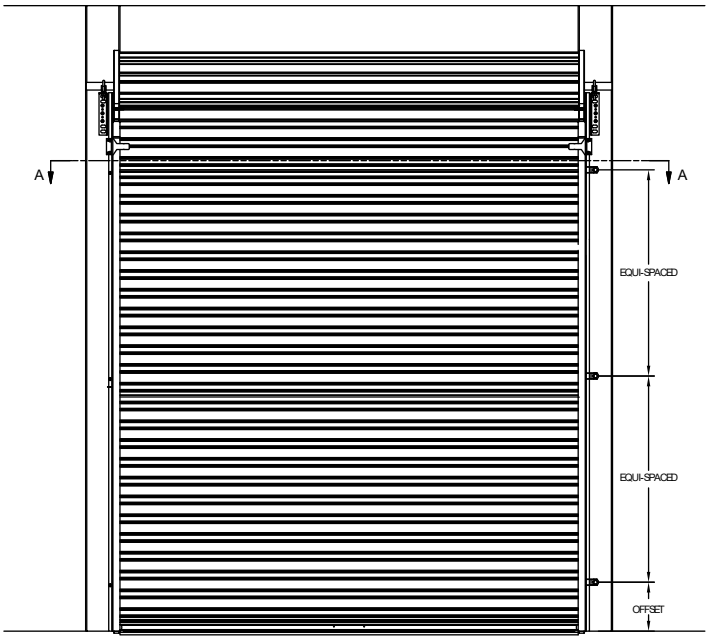


Photo 14*: Roller door dimensions.*

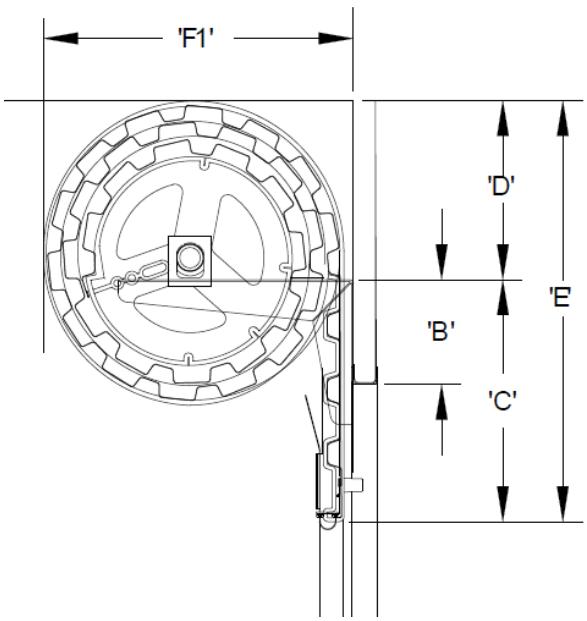


Photo 15*: Roller door inside guide rail spacing.*

When referring to the above labelling details, please ensure labelling is cross referenced with the relevant tables providing the measurements in millimetres.

DOOR HEIGHT (MM)	A	B	C	D	E	F	G	H	I
Equal to or lower than 2200mm	100	140	270	540	D+C	305	20	150	150
Between 2200mm - 2500mm	100	140	270	570	D+C	320	20	150	150

Table 1: *Roller door dimensions*

Lift the roller door onto the mounting brackets. Fix and adjust in the usual manner.

Centralizing axle when door is installed.

If the door rolls up unevenly with the **RHS** higher than the LHS (Photo 16) the axle needs to move to **RHS** 20-40mm

If the door rolls up unevenly with the **LHS** higher than the RHS (Photo 16) the axle needs to move to **LHS** 20-40mm

Procedure: Requires 2 people to do this task

1. With a person at each end of the door hold the axle firmly with pipe wrench or similar
2. Loosen the U-bolts whilst maintaining a strong grip on the pipe wrench.
3. Move the axle left or right.
4. Retighten U-bolts and test.
5. Repeat if necessary.

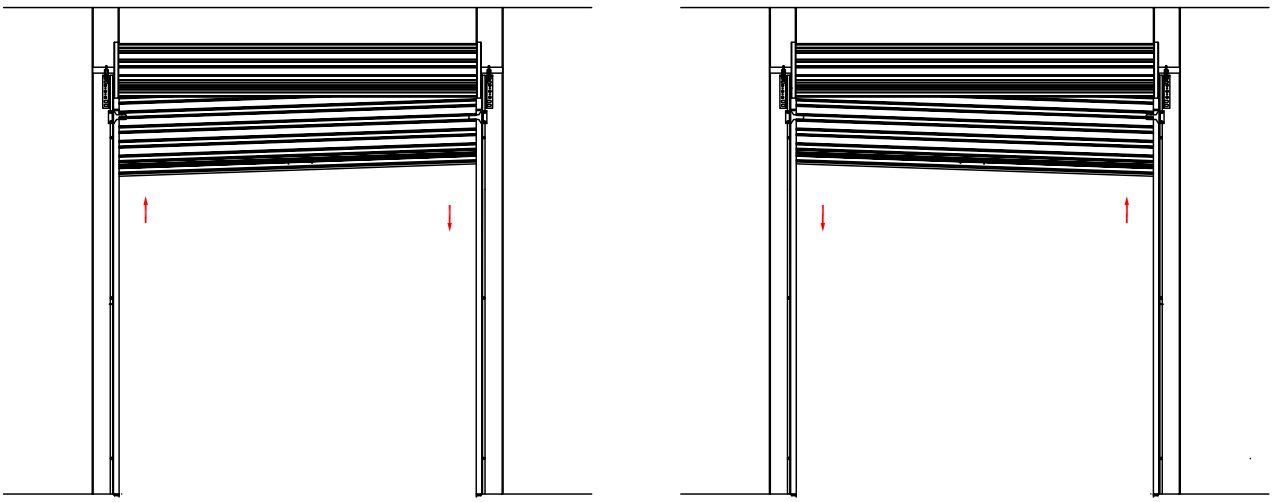


Photo 16*: Roller door levelling detail.*

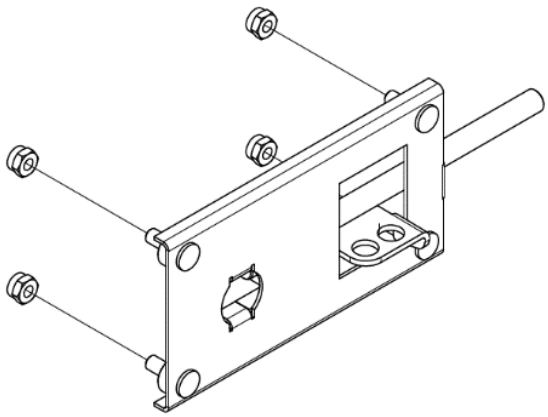


***Photo 17**: Latch assembly detail, front.*

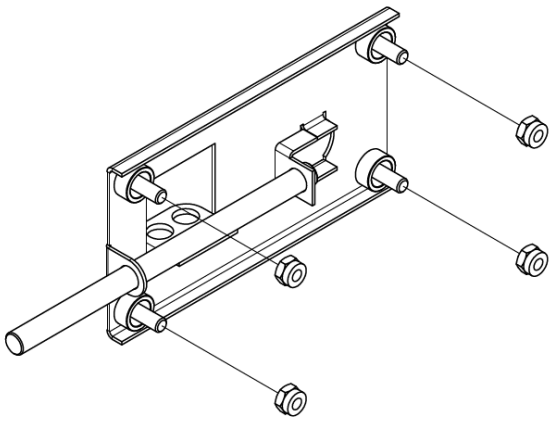


***Photo 18**: Latch assembly detail, back.*

Roller Door Stop Brackets

Position the stop brackets as shown in the stop bracket detail below. When the door is rolled up, the bottom of the curtain should be 100-105mm below the header (‘A’ in Photo 13).

The Stainless Sentry latch in the above latch assembly detail is fitted to the pre-drilled holes in the roller door using the nuts and spacers supplied. The spacers go between the latch body and the face of the roller door.

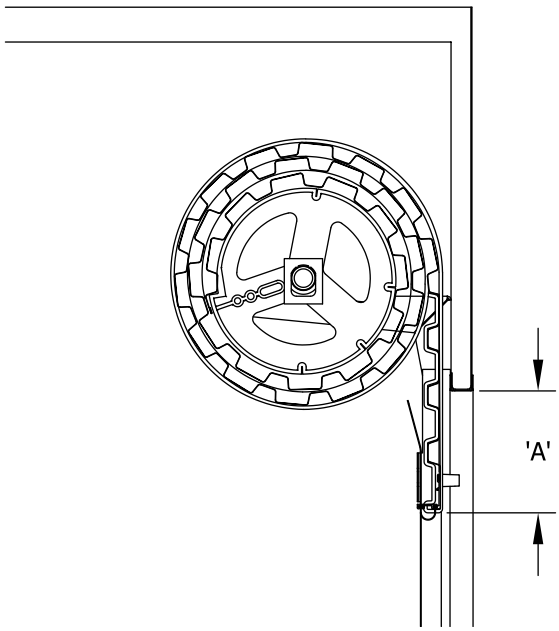


***Photo 19**: Curtain bottom detail.*

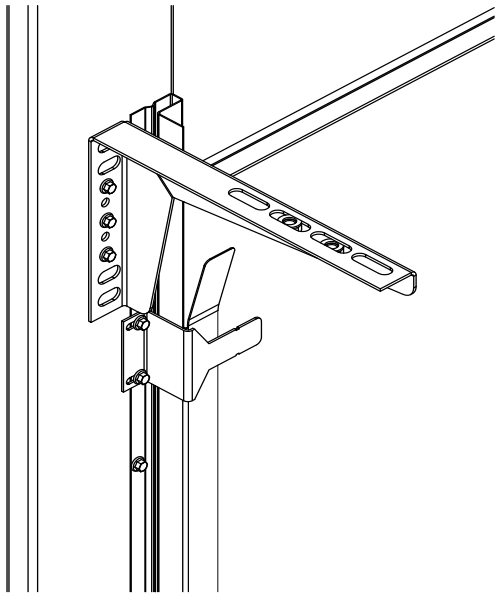


***Photo 20**: Stock bracket detail*

Roller door with Storco roller door adjuster

Preliminary information

Refer to the table above for main dimensions for Storco standard roller doors. Note that the dimensions may vary for other brands of roller doors.

Bring the roller door, guide rails, mounting brackets, roller door adjuster kit, and fixings to site. Do not cut straps or wrapping holding the door. Check the roller door adjuster kit includes all the required parts. Check all parts for damage.

Check the pawl on the roller door adjuster kit base plate assembly moves freely up and down. The pawl must fall down under its own weight. This is important for safe operation of the roller door adjuster.

Check headroom and side room are sufficient.

Check the width of the door curtain exceeds the opening width by at least 50mm.

Check sides and top of opening are vertical/horizontal. If not, the dimensions in the table may need slight adjustment.

Check the guide rails against the opening sides. If shortening is needed, trim off the bottom of the rail. When rails are fixed, the tops of the LH and RH rails must be at the same level.

Fixing

Fix the LH rail first: vertical and as close as practicable to the LH edge of the opening (fastener #14).

Measure the curtain width and mount the RH guide rail vertical and positioned as per the table.

Fix the mounting brackets outside the rails, tops level with the tops of the guide rails. This bracket must be fixed with a minimum of four zinc screws per bracket (fastener #14).

> One screw must be fitted into the top elongated hole and there must also be a screw in the hole immediately below this elongated hole. The remaining two screws can be fixed into the remaining holes at equal distance apart.

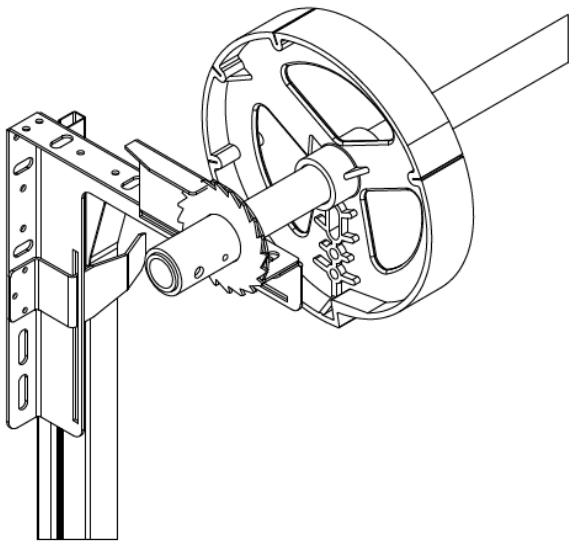


***Photo 21**: Left hand bracket, roller door adjuster components to roller shaft assembly*

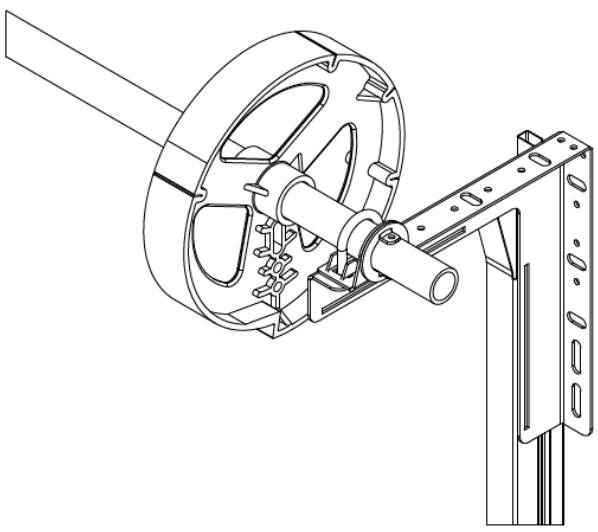


***Photo 22**: Right hand bracket, roller door components assembly*

Fit the roller door adjuster components to the roller shaft (Photo 21).

Lift the roller with roller door adjuster components onto the mounting brackets. Position the components. Take precautions to ensure the roller door does not fall off the brackets.

Adjust the roller door to the correct distance from the wall and line it up with the guide rails.

Check the RH bracket is in position (photo 22) and lock to mounting bracket with two bolts and washers on top and flange nuts under.

Check LH assembly is in position (photo 21) and aligned so the ratchet wheel fits snugly against the baseplate and the awl drops easily into the teeth. Lock in place with two bolts and washers on top and flange nuts under.

Complete the roller door adjuster installation and adjust as needed.

Screw ratchet wheel to the shaft with three to four tek screws through holes near the wheel. Check pawl fits snugly into the teeth, and if lifted, falls back easily under its own weight. If not, adjust.

Lift the pawl, rotate the roller door so bottom rail is away from the wall, release the pawl.

Rotate the roller door to give approximately 1½ turns pre-set, cut straps and wraps. Feed curtain into the guide rails.

Position the stop brackets. When the door is up, the bottom of the curtain should be 100-105mm below the header.

Fit the retainer to the RH shaft. Fix to shaft with two tek screws.

Check operation is smooth and unimpeded at all positions. Re-adjust if necessary. Raise door fully before adjusting spring tension. Fit spanner. Hold pawl up if reducing tension.

All roller door guides to have four screws minimum in each guide.

Fitting Storco roller door adjuster to an existing roller door

Preliminary information

Check the roller door adjuster kit includes all the required parts. Check all parts for damage.

Check the Pawl on the roller door adjuster base plate assembly moves freely up and down. The pawl must fall down under its own weight. This is important for safe operation of the adjuster.

Check there is sufficient clearance at LH end of shaft to fit the roller door adjuster.

Raise door fully before installing the roller door adjuster. Mark the shaft positions on the mounting brackets each end.

Always install the “DANGER” sticker to the mullion on the tensioner side of the door. Where a tensioner is not installed install this sticker on the RH side of the door.

LH end of shaft

Check the RH U-bolt is locked up tightly. Then remove the LH U-bolt. Undo nuts cautiously and check the RH U-bolt will hold the tension.

Fit the roller door adjuster components to the roller shaft (photo 21).

Adjust roller door shaft to its original position. Position the roller door adjuster components. Align roller door adjuster baseplate so ratchet wheel fits snugly against it. Lock in place with two bolts and washers on top and flange nuts under.

Screw ratchet wheel to shaft with three to four Tek screws through holes near wheel. Check pawl fits snugly into teeth, and if lifted falls back easily under its own weight. If not adjust.

RH end and adjust

Remove the RH U-bolt. Undo nuts cautiously and check the pawl takes up the spring tension.

Fit RH bracket (photo 22) and adjust to position. Adjust shaft to original position and lock bracket to mounting bracket with two bolts and washers on top and flange nuts under.

Check operation is smooth and unimpeded at all positions. Adjust spring tension if necessary, using a spanner. Raise door fully before adjusting tension. Hold pawl up to reduce tension.

Fit the retainer to the RH shaft. Fix to shaft with two tek screws (photo 22).