

Finger Sheild

Fitting Instructions



HEALTH AND SAFETY AT WORK ACT 1974

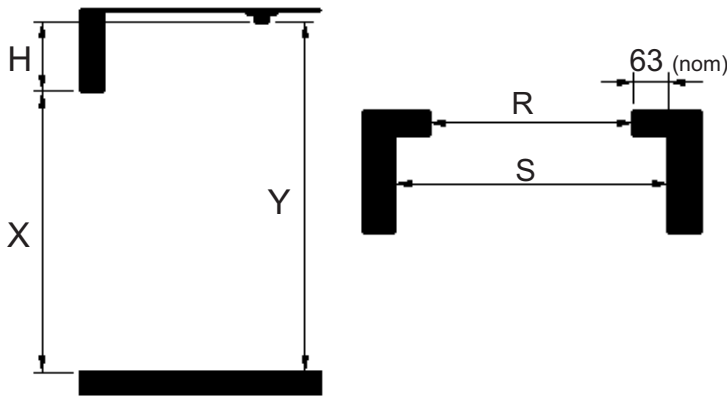
Users are reminded of their obligation to ensure that all persons involved in handling, installing, disposing of this product are made aware of these notes and that

sufficient information is passed to your customer to comply with the Act. In particular, note that under no circumstances should the vehicle in which the shutter is fitted be driven or be in motion at all when the shutter is in the open position.

1 MEASURE DOOR OPENING

A Whiting Dry Freight door can be identified as usually having a two-spring balancer, 2" diameter (nominal) rollers, and steel end hinges with removable covers.

Check sizes on delivery note with your ordering information
Orders are processed using these 5 critical measurements:



Dimension X: Sill to header, vertical distance between underside of header and sill (surface on which door is resting when closed)
The shutter will accommodate some variation in height, please call if you are unsure. It is recommended that 3 measurements are taken along length (*ie at ends and in the centre*)

Dimension H: Header Depth, from under roof stick to underside of header.

Dimension Y: Interior height, from floor to under roof stick at wall

Dimension R: Aperture Width from pillar to pillar) (The shutter will accommodate a divination of $\pm 3\text{mm}$) It is recommended that 3 measurements are taken along length. (*ie at ends and in the centre*)

Dimension S: Width over channels, this is the finished dimension between vertical track assembly mounting surfaces
Note: the standard post width is 63mm.

It is important to understand each step in the installation procedure before attempting to install the door.

2 TOOLS REQUIRED

- Safety Glasses
- Step Ladders (x2)
- Welder
- Saw or cutting torch
- Light
- Locking Pliers
- Tape Measure
- 9.5 x 300mm Winding Bars
- Rivet Tool (*track fixing if required*)
- Drill & drill bits (*track fixing if required*)
- 10mm & 13mm Spanners
- Hammer
- Approx 101 x 101 steel shim
- Square
- Scribing Tool
- Sealant

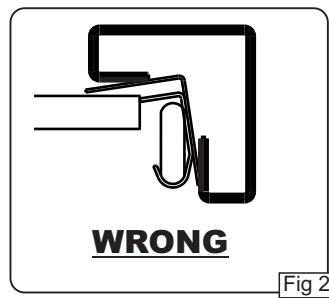
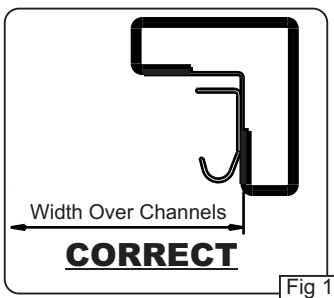
3 CHECK COMPONENTS

The component parts should be checked to make sure you have all the necessary items and are familiar with them.

For a complete new installation, you should have (standard packaging):
bundle - containing the door, cables, hardware box, and side seals,
Balancer spring assembly,
Set of vertical tracks,
Set of horizontal tracks.

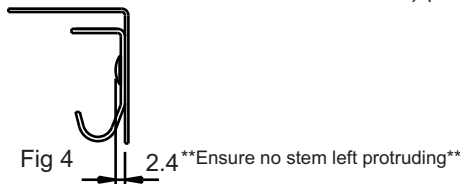
4 INSTALL VERTICAL TRACK & MOUNTING ANGLE

Temporarily secure track so that they are square against the sidewall and post. (See Figures 1 and 2)



- Check that they are parallel with each other by taking measurements at top, bottom and middle. (See Figure 3)
- Allow no more than 3mm difference.
- Shim accordingly, if necessary. Do not force.
- Secure in place by welding, riveting or bolting.

(Caution: be very careful when putting anything into the tracks. Fasteners should be chosen that have a low head profile. They must be installed squarely - never at an angle. A protruding head will interfere with roller travel, causing the door to work hard. Such an installation will cause a door to develop hardware and maintenance trouble later on.) (See Figure 4)



- Secure vertical track to post and sidewall.
- Use sealant along seam between mounting angle and post, and around floor to track

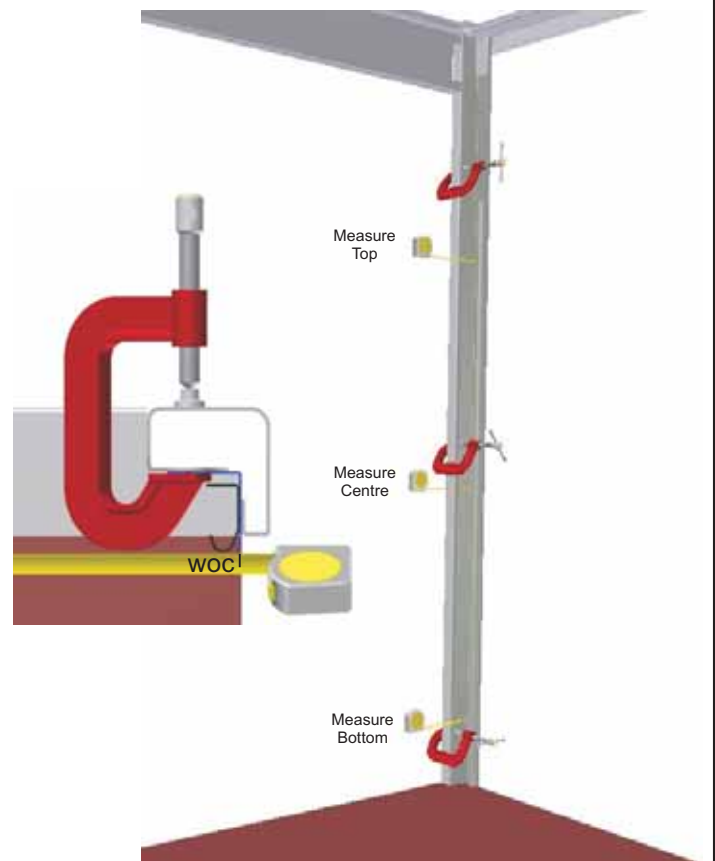


Fig 3

5 HORIZONTAL TRACKS (One Piece)

It is very important to maintain whatever track spacing on the vertical is, onto the horizontal as well (See Figure 5).

In order to do this, place a shim of proper thickness between track and mounting angle in the vertical, and allow it to extend past the end of the vertical track by approx. 250mm. (See Figure 6)

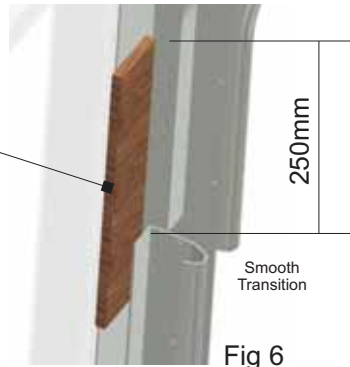


Fig 6

Align horizontal tracks with vertical. Make sure they do not overlap, this provides a smooth transition for rollers. (See Figure 7)

Check that top of track is parallel with roof along its length.

Secure in place with rivets, bolts or weld in a minimum of 4 places, holes are provided for attachment at 100mm spacing. A variety of clips or shims can be used to ease attachment.

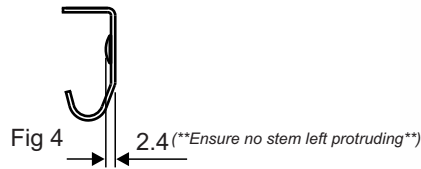


Fig 4

Make sure distance between tracks is maintained throughout, especially in the radius. This could be an area where door clearance is tight.



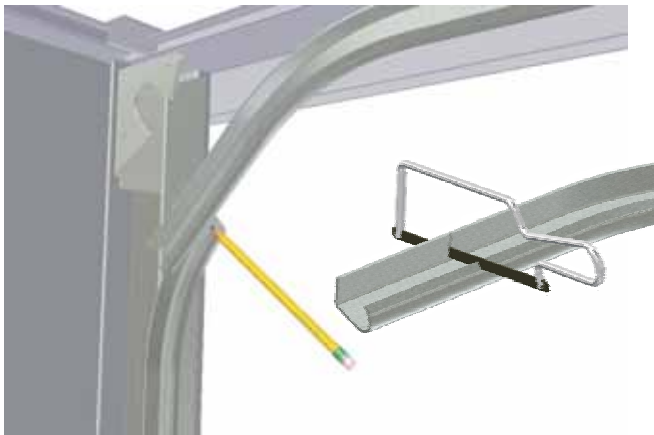
Fig 5



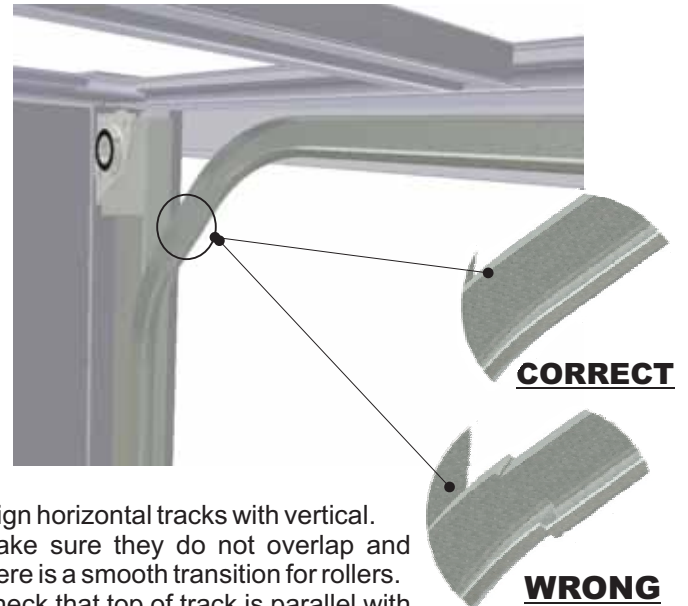
Fig 7

5a HORIZONTAL TRACKS (Two Piece)

It is very important to maintain whatever track spacing on the vertical is, onto the horizontal as well.



Align Horizontal track at the desired position below the roof panel, mark the 45 degree leg to align with the existing vertical leg cut to length at a 45 degree angle.



Align horizontal tracks with vertical. Make sure they do not overlap and there is a smooth transition for rollers. Check that top of track is parallel with roof along its length.

Secure in place with rivets in a minimum of 5 places, holes are provided for attachment at 100mm spacing. A variety of clips or shims can be used to ease attachment.

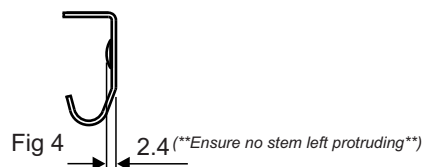


Fig 4

Make sure distance between tracks is maintained throughout, **especially in the radius**, this could be an area where door clearance is tight.

6 CENTER BRACKET & BALANCER INSTALLATION

Remove bracket from balancer assembly

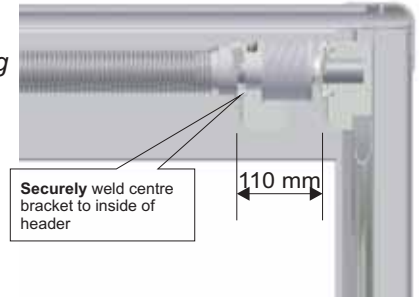
Align 'centre' bracket with outer brackets and position 110mm (*min depending on spring length*) from near side bracket.

It is important that all 3 balancer bracket are aligned and flush with each other.

Weld or bolt bracket on inside of header or a suitable plate fixed to header.

! CAUTION

This bracket takes the full load of the spring torque and must be securely fixed and tested.



A) Mount balancer to brackets by removing the nearside bearing plate from the mounting bracket (*retain fixings*) . Leave the bearing assemblies on the balancer shaft in the relevant positions.

B) Loosen set screws on both cable drums.

C) Slide balancer shaft through offside bearing plate.

D) Align the spring anchor casting and nearside bearing plates to the relevant mounting brackets and secure in place using fixings previously removed .



Note. For reference mount the **red painted end** of balancer drum into **nearside** bracket



Fully Secure **all** bearing fixings and torque to 6N/m.

7 FIT SHUTTER

a.) Place a locking pliers firmly in the horizontal track (both sides) just before the radius, about 400mm from the header. This will keep the door from closing once it is rolled into the track.



b.) Using 2 people, carry the lower half of the door into the unit, face up, with break joint first, bottom of door nearest rear.

c.) Tip door slightly to pass by the frame.

d.) Lower one edge only, resting it on the floor; install rollers & spacer washers* into roller holders on end hinges and bottom roller bracket (3 people).

e.) Bring door back to level and lift opposite side and repeat.

f.) Move door section to the front of unit, by sliding it along the floor on the rollers of one edge.

HINT: keep door against sidewall, and slide down wall, to keep rollers from falling out

* **Special spacer washers should be placed on roller shafts at first joint (second roller) from bottom, and top of door.**

Depending upon the amount of side movement, 3 or 4 spacer washers (total of 16) should be installed. These washers are very important, as they accurately position the door, keeping it from binding on the track, help cables wind on the drum, provide for correct side seal and lock operation.



8 FIT SHUTTER (Continued)

- g.) Place 2 stepladders at end on horizontal track.
 h.) Position 2 people at bottom seal (both sides) and 1 person in centre of break joint.
 i.) Keeping door flat, raise section and insert rollers into track.



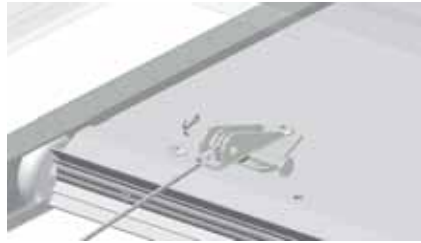
- j.) Push door down track until the locking pliers stop it.
 k.) Repeat procedure with top section *.
 l.) Push down track and mate with previously installed sections
 m.) Install rubber track stops, bolts and nuts.
 n.) Lightly tap knurl pins with a hammer to join panels together.
DO NOT USE more force than necessary as damage to panel may occur



9 CONNECT CABLES TO SHUTTER



Starting on the left hand side (Nearside).
 Insert the thimble end of the cable into anchor bracket on front of shutter.



Retain in place with cotter pin



Retain cotter pin with split pin



Repeat for other cable

10 FIT CABLES TO BALANCER



Slacken off cable drum set screws.
 Insert nipple end of cable into slot on drum.
 Wind cable on to drum following grooves until cable is taut.

****It is important that end of cable is inserted fully into notch. If this is not done properly, it could interfere with drum movement.****



With cable taut.
 Push cable drum up to bearing.
 Secure in place with set screws.
****Ensure drum is securely fixed as this will take the balancer tension & weight of shutter****
 Shaft must extend completely through bearings, an equal amount on each side, the shaft ends should not be in contact with the side walls



Before winding cable onto other drum.
 Place a pair of mole grips onto balancer shaft to prevent cable from unwinding.
 Repeat on other drum.

TORQUE SETTINGS
 Balancer set screws
 20N/m (Mild Steel Shaft)
 27 N/m (Stainless steel Shaft)

11 PRE-TENSION BALANCER



Slacken the two square head bolts in spring torque casting.



Using the holes in spring torque casting & two tommy bars in a upwards direction add 3 to 4 turns.
Now pull and stretch the spring by minimum of 101mm (4")
(to allow for spring expansion during operation)



While holding the tension with a tommy bar.

Re-tighten the two set screws in spring torque casting and remove the mole grip clamps on shaft.

Carefully remove tommy bar

Shutter is now pre-tensioned.

Remove the two clamps from the horizontal tracks to allow the shutter to enter the radius.

Be aware the shutter will rebound down to normal open position.

Pull shutter into vertical tracks all the way down to the sill (as the shutter is pull closed tension is added to the balancer)

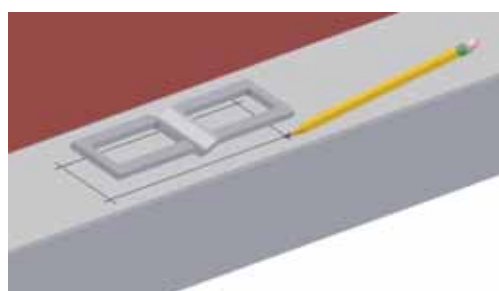
12 FIT LATCH PLATE

Note: Latch plate is attached to the sill, usually by welding. They vary in type, style, material size and location, depending upon the type of lock, thickness of door, and part number of side seals. If you are not using a latch plate supplied by Whiting Door Manufacturing, make sure it is of

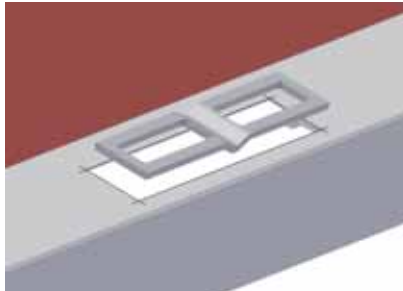
equal thickness and strength.

Latch plate position can be supplied prior to delivery to enable the rear frame to be prepared for fitment.

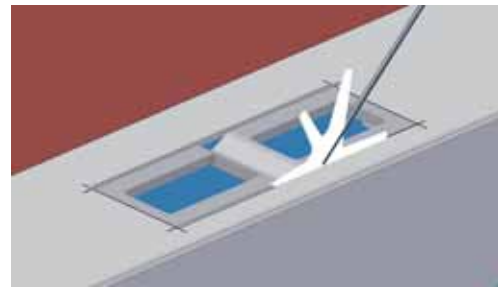
Mark sill using latch plate as template.
Check location by lowering door and comparing with lock.



Cut sill if necessary.
Position evenly flush with top of sill (**very important**).



Weld in place.
Allow sill to cool, close door.
Check lock operation.



13 TOP PANEL ADJUSTMENT

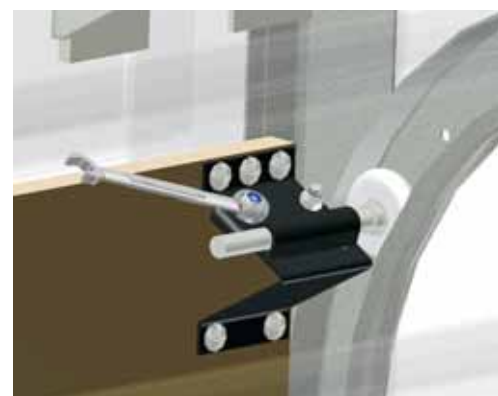
Bring a light in and close the door



Insert roller into track.
Align roller holder over roller shaft & coach bolts.
Secure loosely in place with M6 nuts



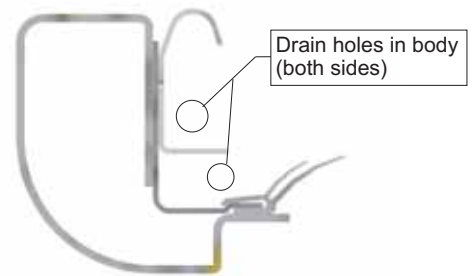
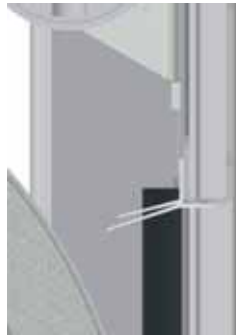
Adjust.
(Moving bracket down will bring top seal closer to header. It will also seal against side seals better. Adjusting it down too far may also cause it to hit the balancer when door is opened).



Tighten nuts

Repeat on opposite side.

14 TOP & SIDE SEAL FITTING



Top seal, can be fitted to either the underside of header or to the top of the door.

Recommendations:

HEADER < 200mm Fit to underside of header.

HEADER > 200mm Fit to either.

Side seals (x2) clipped full on to mounting angle joggle profile

TESTING AND FINE TUNING

Final Check List

- Lock operation
- Balancer adjustment
- Top panel adjustment
- Cables move unobstructed
- Door centred in opening and there is an appropriate number of spacer washer used.**
- Door operates freely and does not rub against the tracks at any point.**

With the door nearly closed, release it and allow the shutter to open. A properly adjusted balancer will cause the door to slowly open, neither fly open, nor dropping shut

****Remember, a new spring will lose a small amount of tension once it is used for a while.****

- Side, top and bottom seals function properly
- Cosmetics
- Check **ALL** fixings are secure and have the correct torque setting

Torque Settings

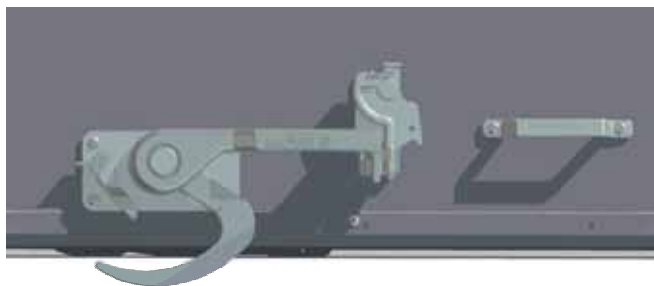
M6 = 6N/m

M8 = 10N/m

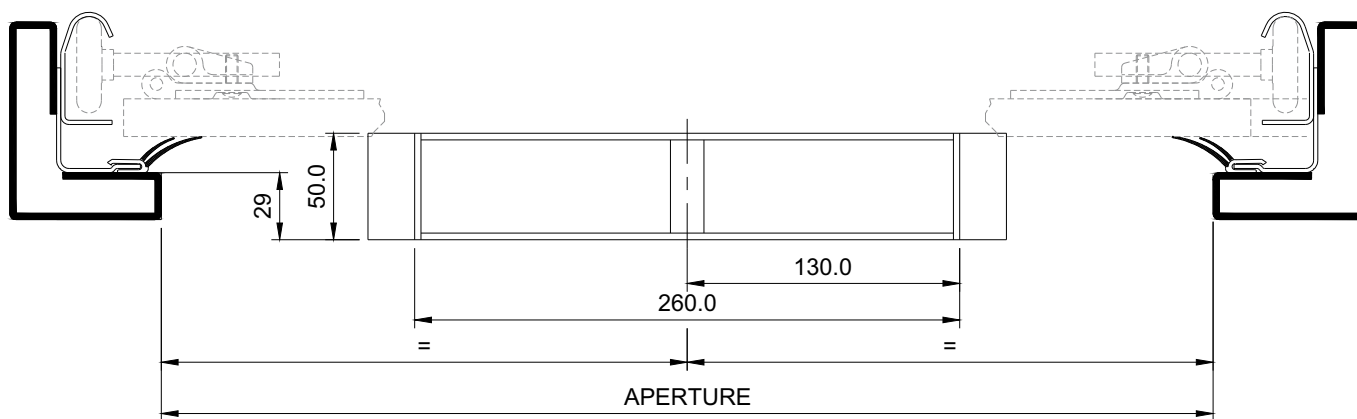
Balancer set screws = 20N/m (*Mild Steel Shaft*)
27 N/m (*Stainless steel Shaft*)

LATCH PLATE POSITIONS

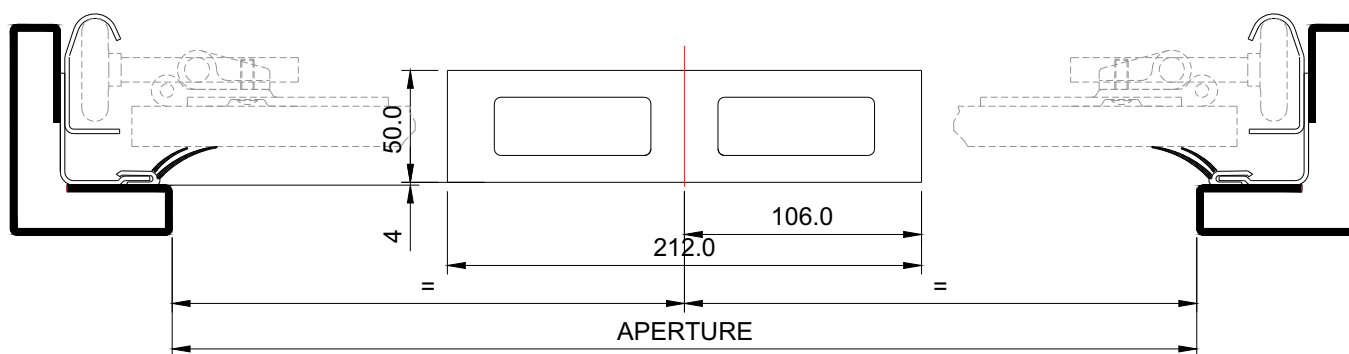
The Finger Shield Shutter has various lock options, please find the appropriate lock for the latch plate fitting details below:



MAXI LOCK



70 TYPE LOCK





**STAND CLEAR OF
OPENING WHEN DOOR IS
MOVING**

**Leave the copy of
maintenance/fitting
instructions provided in the
cab of the vehicle together
with the remainder of the
vehicle documentation or in
the case of a semi-trailer
together with any
documentation relating to the
trailer.**

WARNING



**DO NOT USE PULL
STRAP TO LEAVE
VEHICLE**

ALWAYS CLOSE AND LOCK THE DOOR BEFORE DRIVING VEHICLE
DO NOT MOVE VEHICLE WITH DOOR IN THE UNDER ROOF POSITION.

IMPORTANT MAINTENANCE INFORMATION

The following should be read and included in the Maintenance Schedule

This door is constructed of high quality components intended to provide years of continued service. When in operation it is a large moving object, therefore, to ensure safe, reliable and continued operation, the following cautionary directions and periodic maintenance instructions must be observed.

1. While door is moving do not stand within opening or walk through doorway.
2. Operate door only when correctly adjusted and free from obstructions.
3. High-pressure cleaners or solvents can damage the door.
4. If door becomes difficult to operate or completely inoperative, it must be repaired immediately by an approved agent. Particular care should be given to the counter balance and cables. Repair and adjustment can be **hazardous** and should only be performed by an **approved agent**
5. **Daily:** - A general visual inspection of the shutter should be carried out with specific attention to the cable along the full length.
6. Replace any frayed or otherwise damaged cables.
7. Ensure regular checks and maintenance on items shown below **Every 6-8 weeks)**
 - All nuts, bolts, screws and rivets to be checked for tightness.
 - Check all rollers operate smoothly, replace worn or damaged rollers.
 - Replace frayed or worn Pull Straps. **DO NOT** attach anything to the Pull Strap.
 - Where the lock mechanism is fitted or controlled by a **keyed cylinder** lubricate the cylinder **ONLY** with manufacturer's recommended lubricant.
 - Other parts of the lock mechanism can be lubricated with light oil.
 - Tracks must be clear of grease and dirt.
 - Check roller shutter operation, lubricate roller shafts, bearings, hinges, tracks and spring with light oil **(not grease)** the use of aerosol sprays is not recommended as this may wash away the lubricant packed in the roller bearings.
 - Check door panels (inside and out) for gouges or paint chips, and repaint as needed.
 - If you repaint, check and if necessary re-adjust tension on lifting mechanism to restore ease of operation.

Use only genuine JR Mobile spare parts; the use of any other manufactured parts or not following the above will invalidate the warranty. In the unlikely event of an operational or warranty concern please contact

Customer Services **T: 029 2085 7630**
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J R Industries Ltd

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