TOUGH LIGHT

(Double Deck)

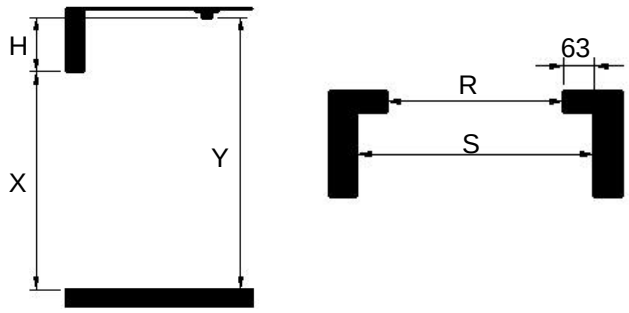
Fitting Instructions

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 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.

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 ±3mm)

Dimension S: Width over channels, this is the finished dimension between vertical track assembly mounting surfaces
It is recommended that 3 measurements are taken along length. *(ie at ends and in the centre)*

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
- 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)*

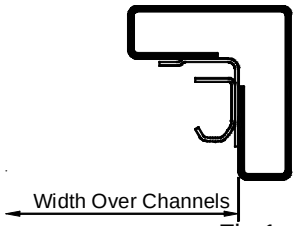


Fig 1
CORRECT

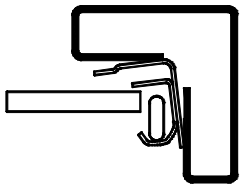


Fig 2
WRONG

- 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

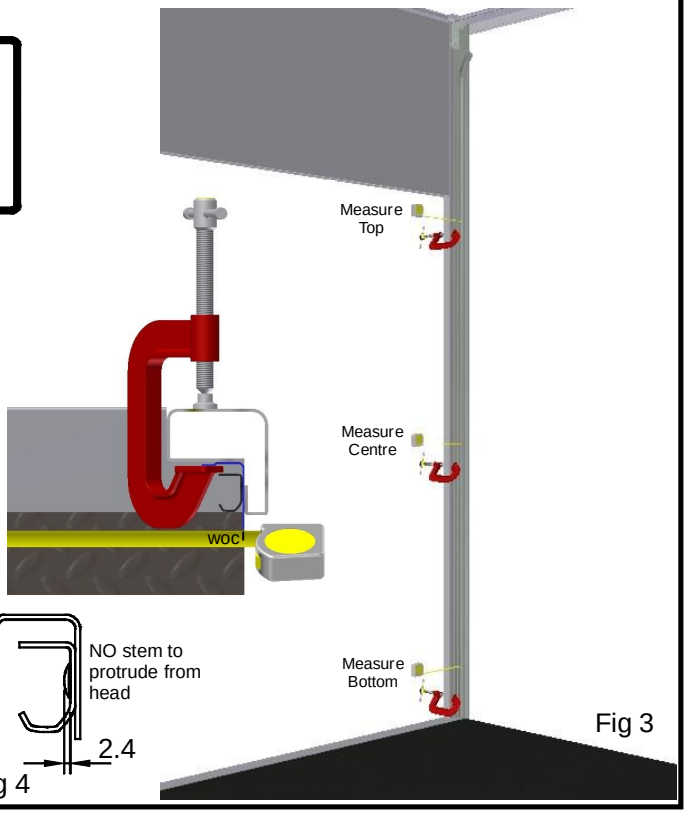
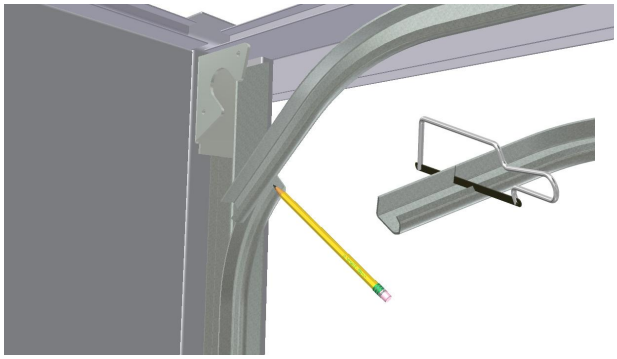


Fig 3

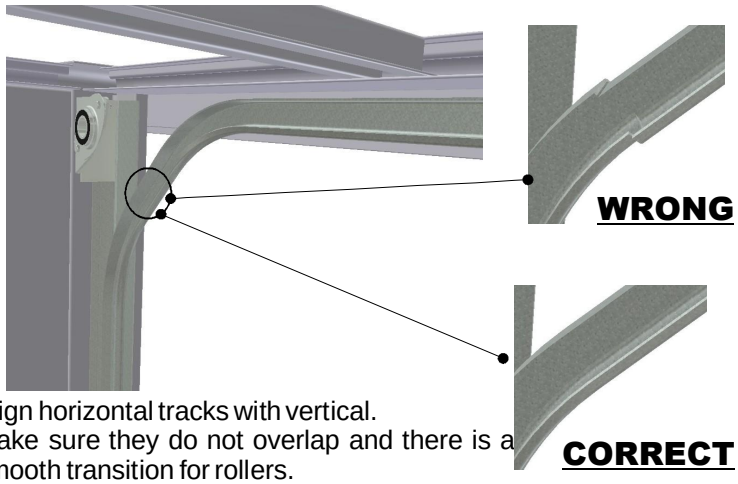
Fig 4

5 HORIZONTAL TRACKS

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.



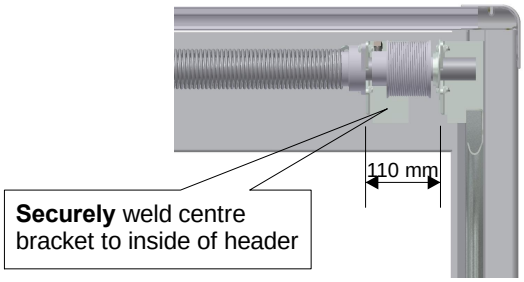
Align horizontal tracks with vertical.
Make sure they do not overlap and there is a smooth transition for rollers.
Check that top of track is parallel with roof along its length.

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.

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

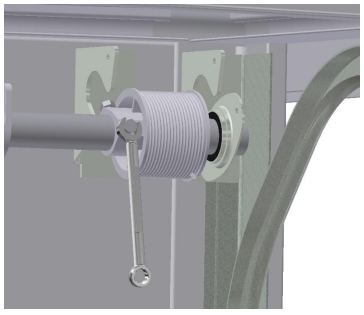
Align ócentreô bracket with outer brackets and position 110mm *(min depending on spring length)* from near side bracket.
It is important that all 3 balancer bracket are aligned and flush with each other.
Weld or bolt bracket on inside of header or a suitable plate fixed to header.



! CAUTION

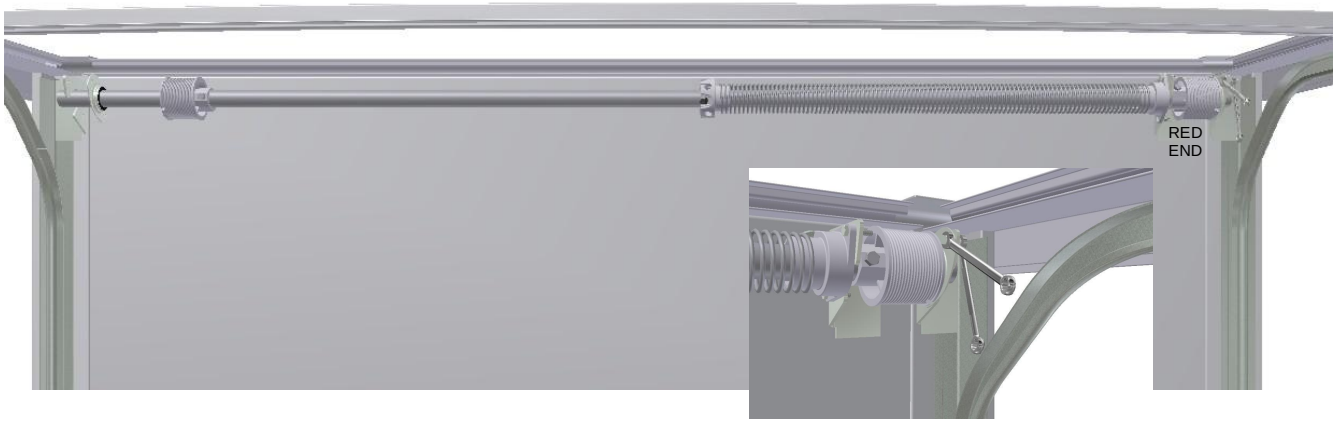
This bracket takes the full load of the spring torque and must be securely fixed and tested.

A) Mount Balancer to brackets by removing the bearing plate to bracket fixings on the 'centre' bracket and nearside bracket *(retain fixings)* . Leave the bearing assemblies on the balancer shaft in the relevant positions. Loosen set screws on both cable drums.



B) Slide balancer shaft through off side bracket align the 'centre' and nearside bearing plate to the 'centre' and nearside balancer brackets and secure using fixings removed previously.

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



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

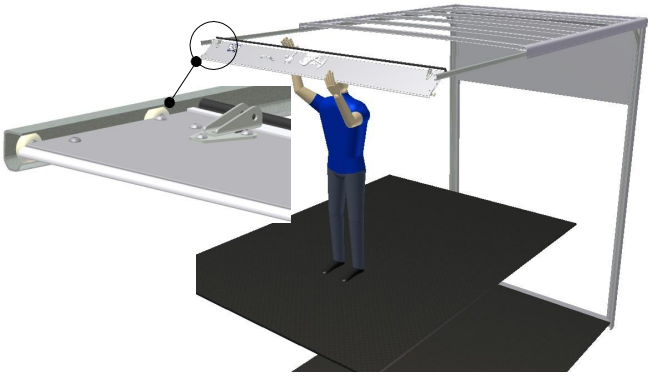
7 FIT SHUTTER

***** Special spacer washers should be placed on roller shafts at first joint (second roller) from bottom, and top of door.***
These washers are very important, as they accurately position the door centrally, keeping it from binding on the track, help cables wind on the drum, provide for correct side seal and lock operation. **

Depending upon the amount of side movement, spacer washers *(as required)* should be installed.
Washer should centralize shutter restricting side to side movement to a max 5mm total.
NOTE: This centralization must be checked through complete shutter open and close cycle when fully installed and spacer washers adjusted if and where necessary
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.
There should also be a **single spacer washer** on all other roller shafts prior to assembly to shutter.

Working at a safe and comfortable height.

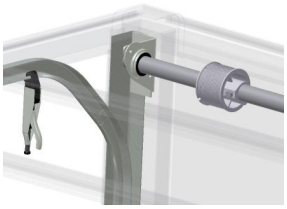
Place rollers into bottom panel holders ensuring the correct amount of spacer washers are used.
With the lock uppermost and the bottom seal towards the header (rear of unit),
Align and slide panel rollers into the ends of the horizontal tracks.



This section can be rolled along the complete track assembly keeping it perpendicular to check the track spaceing throughout.
There should only be a minimal amount of lateral movement in the panel.

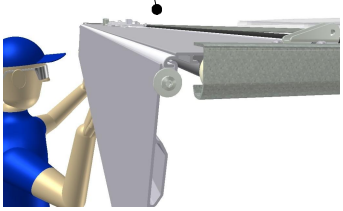
Return bottom panel to the ends of the horizontal track.

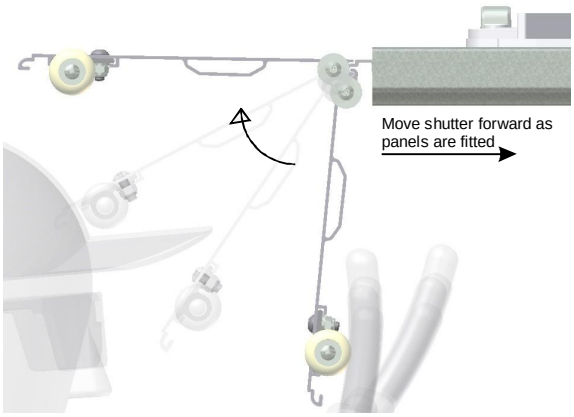
Securely place grips on the horizontal track approx 400mm from the header.



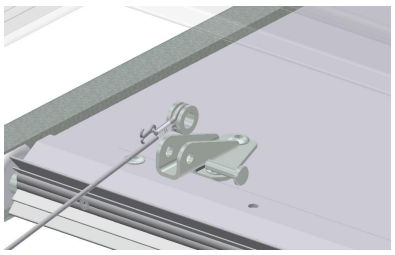
Place a single spacer washer and rollers in an inter panel, check inter seal is in place and engage the joint, rotate up and position rollers in the end of the track by pushing assembly further along the horizontal track.

Repeat for all the inter panels ï remembering to place **additional** spacer washers on the **first joint down** from the top panel.

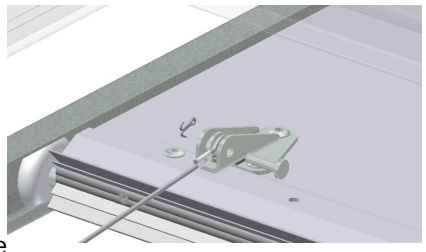




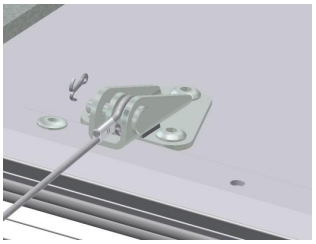
8 FIT CABLES

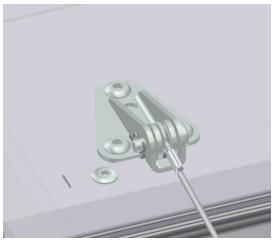


Starting on the left hand side (Nearside).
Insert the thimble end of the cable into anchor bracket on front of shutter.



Retain in place with cotter pin

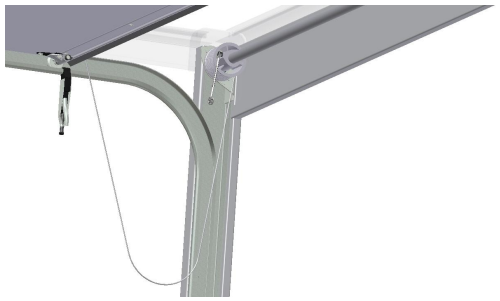




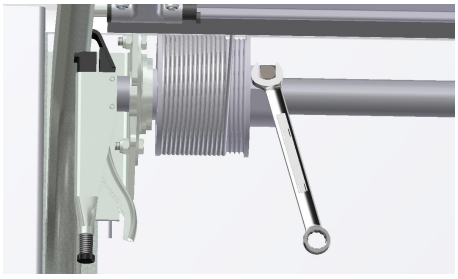
Retain cotter pin with split pin

Repeat for other cable

9 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.

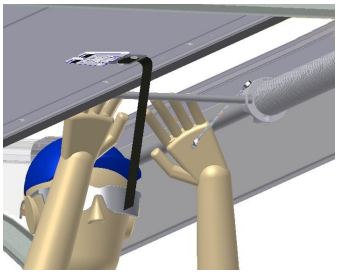


With cable taut.
Push cable drum up to bearing.
Secure in place with set screws.
*****Ensure drum is securely fixed as this will take the balancer tension & weight of shutter*****
Shaft must extend completely through bearings, an equal amount on each side, the shaft ends should not be in contact with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

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

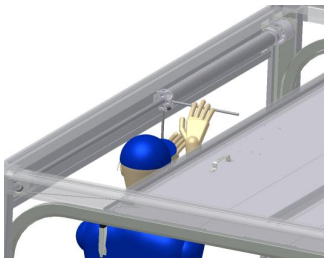
10 PRE-TENSION BALANCER

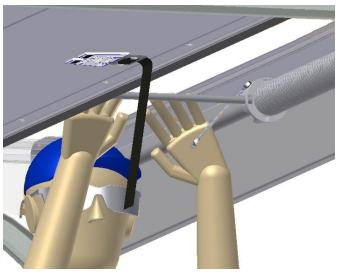


Slacken the two square head bolts in spring torque casting.

Shutter is now pre-tensioned.

Using the holes in spring torque casting & two tommy bars in a upwards direction add 6 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

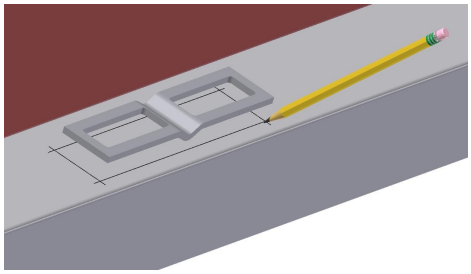
Remove the two clamps from the horizontal tracks to allow the shutter to enter the radius.
Be aware the shutter will rebound down to normal open position.

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

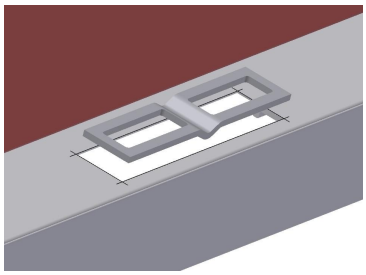
11 FIT LATCH PLATE

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, 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.

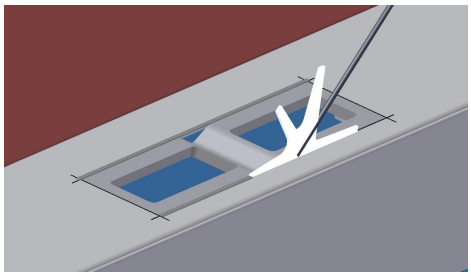
Mark sill using latch plate as template.
Check location by lowering door and comparing with lock.



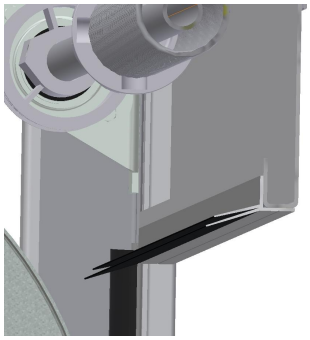
Cut sill if necessary.
Position evenly flush with top surface of sill **(very important).**

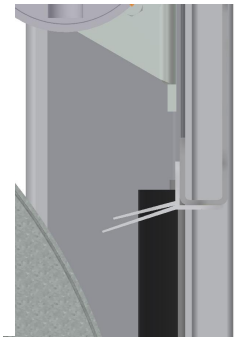


Weld
Allow sill to cool, close door.
Check lock operation.

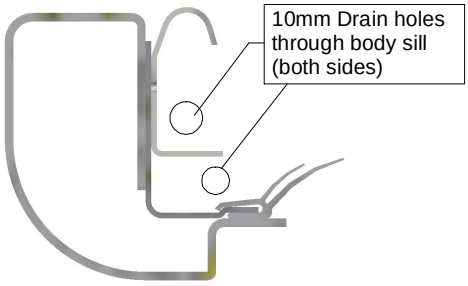


12 SEALING





Top seal, fitted to underside of header



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

13 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

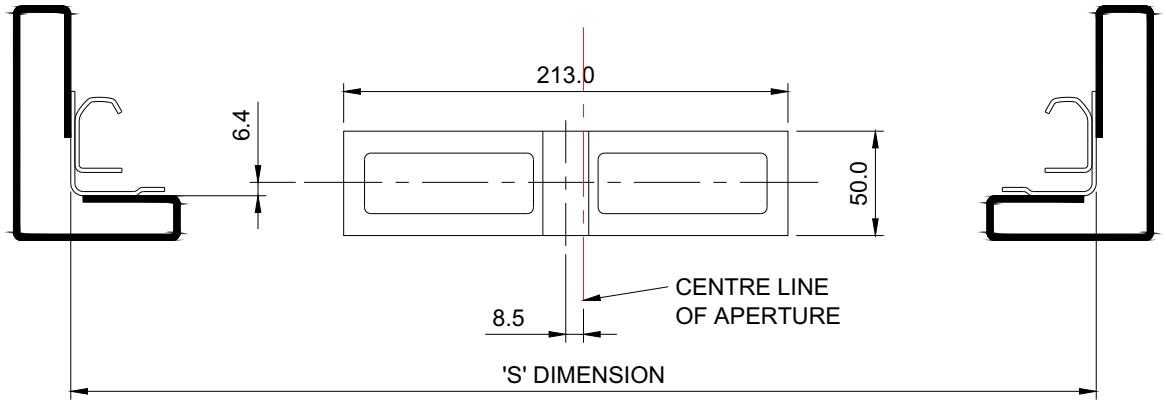
Torque Settings

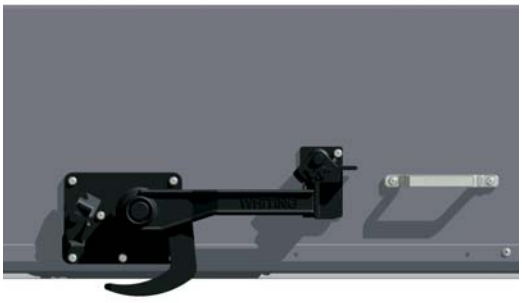
M6 = 6N/m
M8 = 10N/m
Balancer set screws = 20N/m *(Mild Steel Shaft)*
27 N/m *(Stainless steel Shaft)*

LATCH PLATE POSITIONS

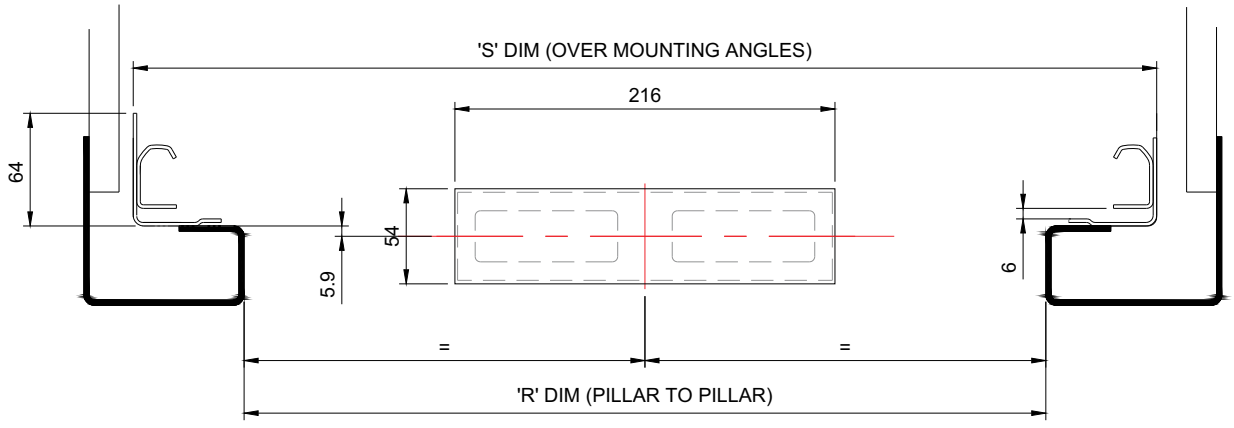
The Tough Light shutter has various lock options, please find the appropriate lock for the latch plate fitting details below:

MINI MAXI LOCK





77 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 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 manufacturers 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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