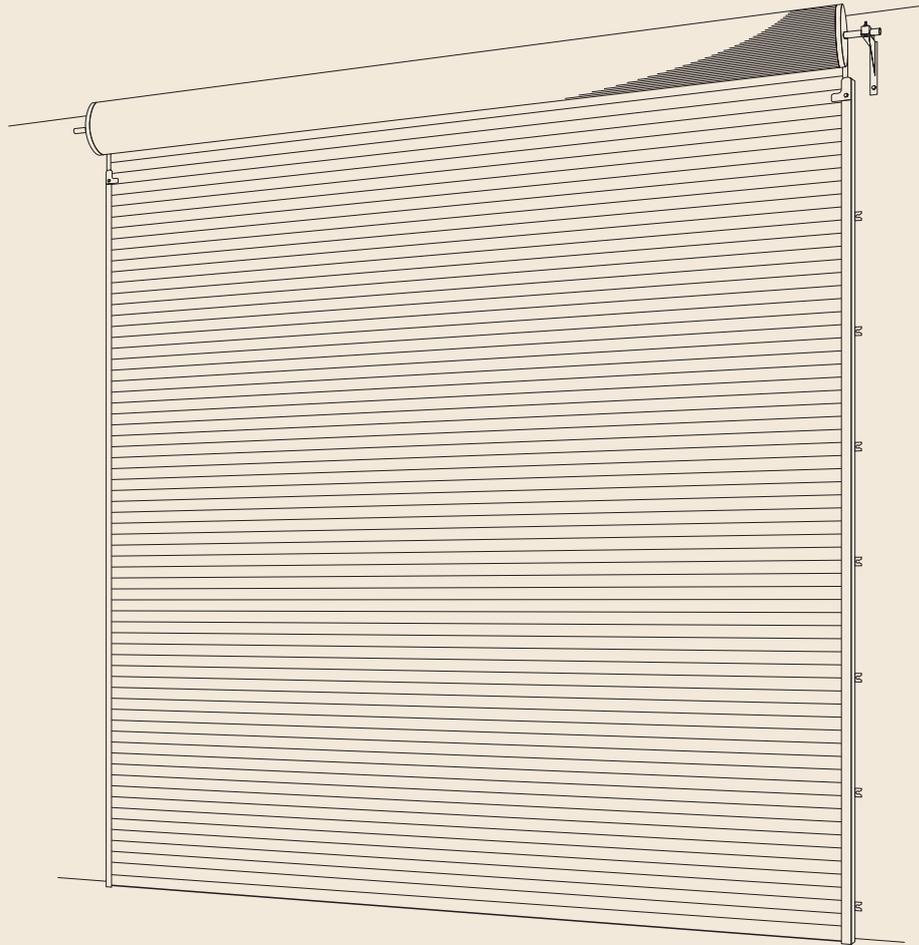




Firmadoor[®]

Maxi Series R3F

INSTALLATION INSTRUCTIONS



DISCLAIMER

**THESE INSTRUCTIONS ARE INTENDED FOR
PROFESSIONAL GARAGE DOOR INSTALLERS**

Note: All references are taken from inside looking out



CONTENTS

1.0	BEFORE YOU START	3
1.1	SAFETY CHECKLIST	3
1.2	FASTENER RECOMMENDATIONS FOR FITTING GARAGE DOORS	4
1.3	TOOLS CHECKLIST	5
1.4	PARTS CHECKLIST	5
1.5	PREPARATION	5
1.6	REQUIREMENTS BEFORE INSTALLATION	6
2.0	INSTALLATION	7
2.1	FIXING REQUIREMENTS	7
2.2	BRACKET FIXING	7
2.3	POSITION DOOR ON BRACKETS	8
2.4	INSTALL GUIDES	8
2.5	SPRING TENSIONING AND BOTTOM RAIL STOPS	9
2.6	LOCKING	10
3.0	AFTER INSTALLATION CARE	11

1.0 BEFORE YOU START

1.1 SAFETY CHECKLIST

The following hazards and hazard controls have been identified for installers during the installation of this door.

Hazard	Control
<ul style="list-style-type: none"> Housekeeping - risk of slip trip or fall Housekeeping - risk of injury to other people or animals in the installers work area 	<ul style="list-style-type: none"> Tidy up site prior to start work as a minimum area should be at least the area of the installation back into the garage and 2 metres in front If the Site housekeeping is deemed to be unsafe do not install the door Keep all people well clear of installers work area with appropriate signage and discussion with owner
<ul style="list-style-type: none"> Manual handling when moving the door from the Trailer or Ute to the installation area - risk of musculoskeletal injury Manual handling when installing Doors & Openers particularly above head height - risk of musculoskeletal injury or twisting Manual handling when installing tracks and torsion bars - risk of musculoskeletal injury Manual Handling when installing the door opener - risk of musculoskeletal injury or twisting 	<ul style="list-style-type: none"> Correct lifting technique for Roller Door Use of 2 person lifts Use of mechanical aids such as lifting stands, forklift, cranes Avoid twisting (Practice correct lifting techniques) Correct use of ladders while installing tracks Use of correct technique of knotted rope installation aids
<ul style="list-style-type: none"> Working at heights and working with ladders, scissor lifts, scaffold - risk of fall from height 	<ul style="list-style-type: none"> Ladder check Ladder placement Do not work off the top rung
<ul style="list-style-type: none"> Sharp edges on Door, tracks or related jewellery - risk of laceration 	<ul style="list-style-type: none"> Wear appropriate PPE (Dyneema cut off Gloves) Follow instruction explicitly particularly for the installation of some parts of the doors as the unrolled cut out edges presents a very sharp edge
<ul style="list-style-type: none"> Pinch points - risk of cut, puncture or crush injury 	<ul style="list-style-type: none"> Wear appropriate PPE and keep hands well clear of pinch points Ensure hands well clear of the panels
<ul style="list-style-type: none"> Use of hand tools - risk of eye injury, laceration cut stab or puncture injuries (Tools checklist) Use of Electric/ Battery or pneumatic tools - noise hazard Use of cutting tools creating sparks - risk of fire 	<ul style="list-style-type: none"> Wear appropriate PPE and utilise operators manual Use appropriate noise/hearing protection in the form of ear plugs or ear muffs Ensure appropriate fire protection available and housekeeping to ensure that flammable liquids or materials are removed from the area of work
<ul style="list-style-type: none"> Tension spring - risk of release of stored energy (various door parts, tools, jewellery striking installer on the head or body) 	<ul style="list-style-type: none"> Ensure door is correctly secured Ensure that pipe wrench is fitted correctly to the axle and if it is gripped onto the axle do not underestimate the tension in the spring when undoing the clamps Ensure the correct length pipe wrench is utilised Ensure correct bolts are tightened or loosened to ensure there is no release or controlled release of energy from the spring through the pipe wrench Keep hands clear of the pipe wrench at all times Keep head clear of the pipe wrench at all times
<ul style="list-style-type: none"> Position the door on the brackets, there is a risk of the door falling from the brackets striking a person 	<ul style="list-style-type: none"> Ensure the door is immediately fastened to the bracket with the "U" Bolt Ensure no-one ever walks under a door sitting on a bracket

1.2 FASTENER RECOMMENDATIONS FOR FITTING GARAGE DOORS

MATERIAL	FASTENER TYPE(S)	DIAMETER OR TYPE		LENGTH OF FASTENER (See Note)
New Solid Brick	Coach Bolts (Hex Lag Screw) - combined with wall plugs	5/16"	X	1½"
		3/8"	X	2"
	Macplugs (wall plugs) to suit above	5/16"	X	50mm
		3/8"	X	60mm
	HLC Sleeve Anchors (Dyna Bolts)	12mm	X	55mm
New Hollow Brick	HRD-VGK or HGK-VGS (Hex Head) Frame Anchors	10mm	X	60mm
New Solid Concrete	Coach Bolts (Hex Lag Screw) - combined with wall plugs	5/16"	X	1½"
		3/8"	X	2"
	Macplugs (wall plugs) to suit above	5/16"	X	50mm
		3/8"	X	60mm
	HLC Sleeve Anchors (Dyna Bolts)	12mm	X	55mm
Aerated Concrete e.g. (HEBEL)	Fischer Nylon Twist Lock Anchor Type GB 14	14mm	X	85mm
Steel Framing e.g. BHP Framing (with rear access)	Hex Head Bolt Zinc Plated, Hexagon Nuts Zinc Plated, Washers Zinc Plated	5/16"	X	1"
		3/8"	X	1"
		10mm	X	25mm
		12mm	X	25mm
Heavy Gauge Steel	Hex Head Tek	14-20	X	22mm
Light Steel Framing e.g. BHP House Framing (no rear access)	Heavy Duty Kap Toggle	10mm	X	100mm
		12mm	X	100mm
	Hex Head Tek	6-10	X	20mm
New Timber	Coach Bolts (Hex Lag Screw)	5/16"	X	1½"
		3/8"	X	2"
	Hex Head Tek	14-10	X	50mm

IMPORTANT NOTES:

- For installation to materials not covered in the above chart, the installer should seek expert advice from a qualified builder.
- Minimum length of fastener does not exclude use of longer lengths. Decision must be made by fitter to ensure adequate strength.
- Recommendations for old materials or materials not in good condition are not included. If in doubt about the strength of the material seek specialist advice.
- Fasteners for sectional door spring brackets and top track brackets in masonry should be at least 5/16" x 2.5" long or metric equivalent.
- HEBEL Fischer type fastener should be installed 150mm from edge of blocks. Minimum overlap of door should be approximately 115mm (S1), 110mm (S3) and 90mm (Panelift). Add 50mm more if mounted on panels instead of blocks.

IMPORTANT INFORMATION ON FASTENERS

Coach bolts/screws supplied with this product are suitable for fastening to timber jambs.

Correct and safe fastening to other materials may require different fasteners.

The installer must select and use fasteners appropriate to the material into which they are being fixed.

1.3 TOOLS CHECKLIST

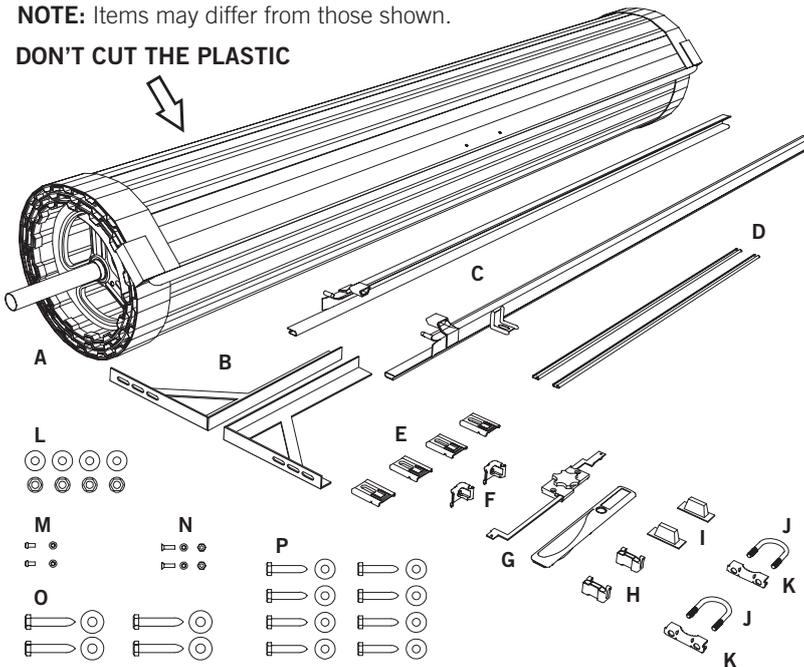
Tools required to install the door. You will also need assistance to help you lift the door up safely and carry out some other steps.

- a power drill & bits
- phillips head screwdriver
- a file
- a socket set
- a hacksaw
- spirit level
- 2 stepladders
- Stanley knife
- adhesive tape
- marking pen
- 450mm (18") pipe wrench
- 400mm softwood chock
- water level (10mm diameter clear tube by 6m long)

1.4 PARTS CHECKLIST

NOTE: Items may differ from those shown.

DON'T CUT THE PLASTIC



- A. 1 - rolled, plastic wrapped door
- B. 2 - style brackets, left and right handed
- C. 2 - door guides, left and right handed
- D. 2 - steel locking bars

1 small parts bag containing:

- E. 4 to 10 - guide clips
- F. 2 - metal stops
- G. 1 - faceplate and lock assembly 2 - keys
- H. 2 - locking bar retainer
- I. 2 - locking bar covers
- J. 2 - "U" bolts
- K. 2 - axle/bracket saddles
- L. 4 - 10mm nuts and washer for "U" bolts
- M. 2 - 7mm x 4mm mushroom head screws
- N. 2 - 4mm x 6mm locking bar screws
- O. 4 - 50mm x 10mm coach screws and washers
- P. 8 to 12 - 40mm x 8mm coach screws and washers

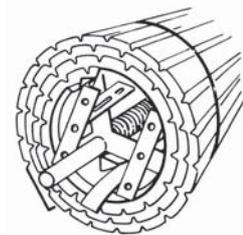
1.5 PREPARATION

DO NOT CUT THE PACKAGING THAT HOLDS THE DOOR IN A ROLL

At a later stage during the installation you will be told just when to cut the packaging.

Remove brackets, guides and bag of small parts from each end of the door roll.

Because B&D Firmadoor Maxi Series R3F doors overlap the opening on each side, the door and opening widths should be measured to determine the amount of door overlap to enable correct positioning of the brackets.



1.6 REQUIREMENTS BEFORE INSTALLATION

DIMENSION PANEL												
Height	Width	A1	A2	B	C1	C2*	D**	E1	E2*	F	G*	Operation
Up to 2100	Up to 5500	135	135	35-70	420	360	240	150	90	270	60	Hand Operated
2101 - 2400	Up to 5500	135	135	35-70	450	420	250	150	120	280	30	Hand Operated
2401 - 2700	Up to 5500	185	135	5-70	450	420	250	150	120	280	30	Hand Operated
2701 - 3000	Up to 5500	185	135	5-70	450	420	250	150	120	280	30	Hand Operated

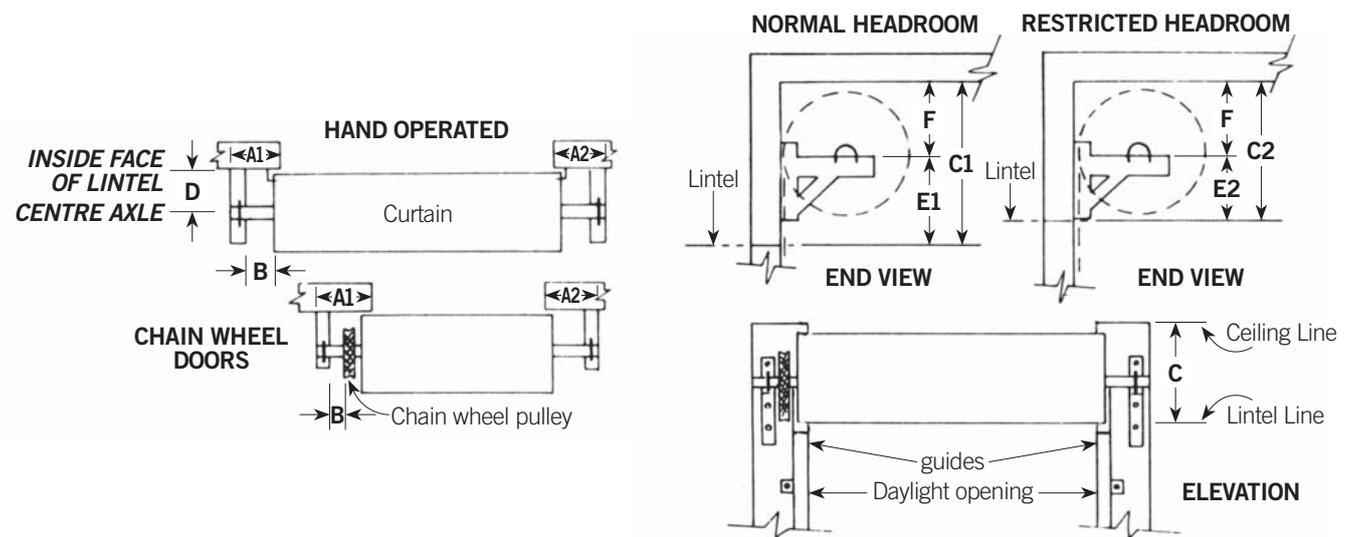
* C2, E2, G Dimensions are for Restricted Headroom Installations Only, (G = Height of guide top above bracket. See Step 4)
 Dimensions are recommended and suit Normal Headroom Installations, top of guide will be 90mm above bracket arm (i.e. G) = 0.
 ** Dimension 'D' is the recommended dimension, however it may be necessary to vary this to suit the specific installation.

All measurements are in millimeters and are minimum unless otherwise shown.
NOTE: It is not recommended that doors fitted in restricted headroom be fitted with openers.

B&D Firmadoor Maxi Series R3F doors are normally installed to operate behind the opening, overlapping as described in the dimension sketch, opposite. Openings should therefore have sufficient return on both sides to accommodate the support brackets and door guides, with necessary working clearances.

The door is supported on brackets above the opening at each end and requires headroom for the door to roll up in (see Dimension Panel). Consequently, piers or door posts must continue up past the top of the opening to provide fixing for the support brackets.

It is preferable that lintels (or 'heads') be built flush with, or slightly forward, to the back of the door posts if possible. This avoids an excessive gap between the door and the lintel, while allowing sufficient working clearance to prevent the door rubbing against the back of the lintel.



DOOR SIZE – Width: The door curtain should be 100mm (see Dimension Panel) wider than the opening. However, a wider than normal door can be fitted by allowing the door to overlap further on each side, providing the additional sideroom is available.

Height: A door can not be installed higher than its maximum size; however, it can be installed in a lower position (providing the door guides are cut to suit – as shown later).

If the opening is too high, the door should be installed at the maximum door height position and the opening reduced or treated as shown in Step 2.2 under the heading “Bracket Fixing”.

WARNING! No guarantee will be given or responsibility accepted by the manufacturers if the door is not installed as instructed. For satisfactory door operation please follow the instruction carefully.



2.0 INSTALLATION

2.1 FIXING REQUIREMENTS

For attachments to good timber work, coach screws are the standard fixings supplied with B&D Firmadoor. When installing onto brickwork special fittings will be required. The following items are recommended and can be obtained from most hardware stores.

It is the installers' responsibility to ensure that the fixing method is sound.

When deciding the fixing method, dynamic loads on door brackets as well as the door weight must be considered.

ALTERNATE METHODS OF ATTACHING BRACKETS AND GUIDES

For Brackets:

Use six 10mm (3/8") bolt size masonry anchors; (dynabolts or similar).

For Guides:

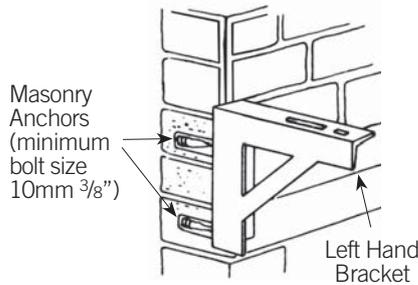
Use the 40mm x 8mm (1 1/2" x 5/16") coach screws supplied, with a good quality plastic masonry plug or suitable masonry anchors.

NOTE TO BUILDERS:

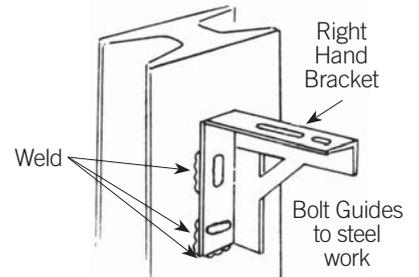
Masonry blockwork should be properly filled and reinforced if brackets are to be mounted directly to blockwork with masonry anchors. Where the blockwork is not solidly filled but structurally sound, long bolts should be passed through the blockwork using suitable steel plates under bolt heads.

Special consideration should be given to brick type and construction of wall, to ensure satisfactory fixing e.g. welding detail if fixed to steel.

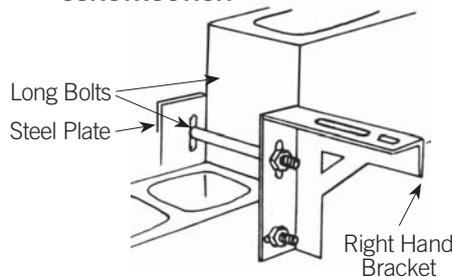
BRICK CONSTRUCTION



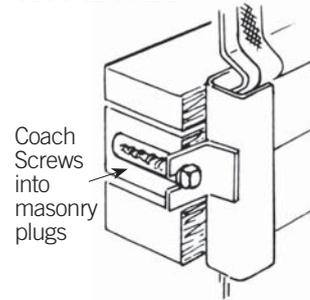
STEEL CONSTRUCTION



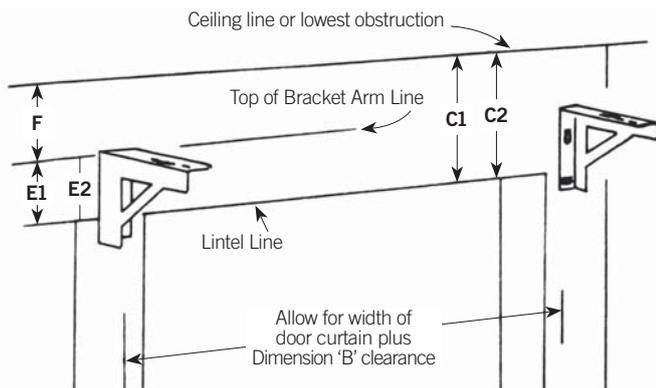
MASONRY BLOCK CONSTRUCTION



SECURE GUIDE



2.2 BRACKET FIXING



Check the opening dimensions to ensure you have the correct door size. Check floor and lintel levels and work from the lowest side or from the side with the least headroom. Mark out first bracket after checking dimension panel for height of brackets above lintel, E1 for normal headroom installation and E2 if headroom is restricted. (If sufficient headroom, measure down from ceiling or obstruction using dimension C1 or C2 and mark a new line and treat as the lintel). Mark out one bracket, drill and fix after allowing sufficient side clearance for door curtain. Using a water level or a straight edge and spirit level, transfer position of top of first bracket arm to opposite side of opening, then mark, drill and fix second bracket. **(NOTE: the brackets must be perfectly level for correct door operation).** Also ensure that the brackets are secure.

NOTE:

1. Where possible, and for best performance, doors should be installed in the normal headroom position. The restricted headroom installation should only be used where headroom is restricted and is not recommended for electrically driven doors.
2. The bottom rail of doors will hang below lintel and reduce walk in height by 85mm.
3. Where insufficient headroom exists and brackets are placed above a marked lintel line it may be necessary to fit a false head or lintel to improve appearance of the installation and to improve cover.



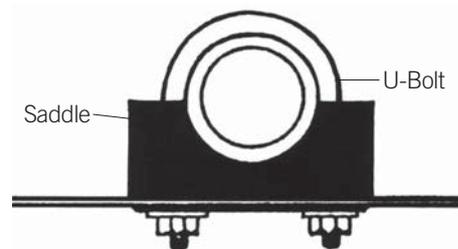
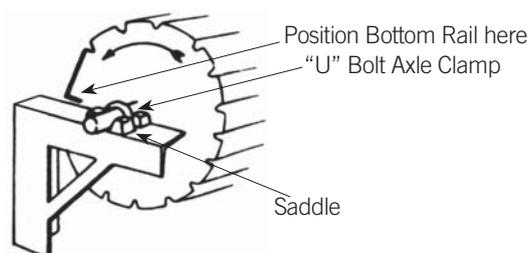
2.3 POSITION DOOR ON BRACKETS

With the door the correct way round (the curtain rolls down the rear of the opening) carefully lift door onto the brackets using block and tackles attached to the door axles, or other suitable lifting equipment – avoid curtain damage.

Rest axle on cast iron saddle. Immediately loosely secure with “U” bolts, nuts and washers, through slots in bracket arm. This eliminates the door falling from the brackets (See sketch).

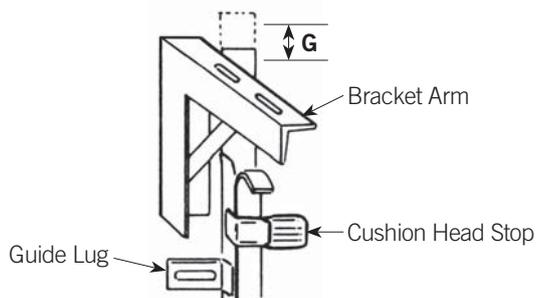
Before tightening “U” bolts, position the door so that it overlaps the opening evenly both sides so that the axle is positioned on the bracket arm slots as far forward as possible, while still allowing the bottom rail to pass the lintel when the door roll is rotated. Rotate both the door and the axle so that the bottom rail is level with the bracket arm. Now tighten the “U” bolts, using washers under nuts, to a torque of 40 newton metres or 30 ft.lb.

WARNING: Axle must be securely clamped otherwise door will lose spring tension.



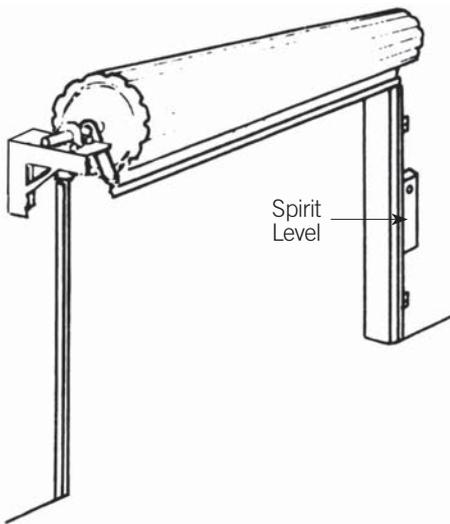
2.4 INSTALL GUIDES

Guides must be correct length. The guide top is to be level with the top of bracket arm for preferred “normal headroom” fixing or above the bracket by dimension G for “restricted headroom” fixing. If guides need to be shortened cut from bottom of guide.



GUIDE LENGTH – PREFERRED HEADROOM	
Top of guides should be level with top of bracket arm for all door heights.	
GUIDE LENGTH – RESTRICTED HEADROOM	
DOOR HEIGHT	DIMENSION G
Up to 2000mm	Max 60mm
2001mm to 3000mm	Max 30mm

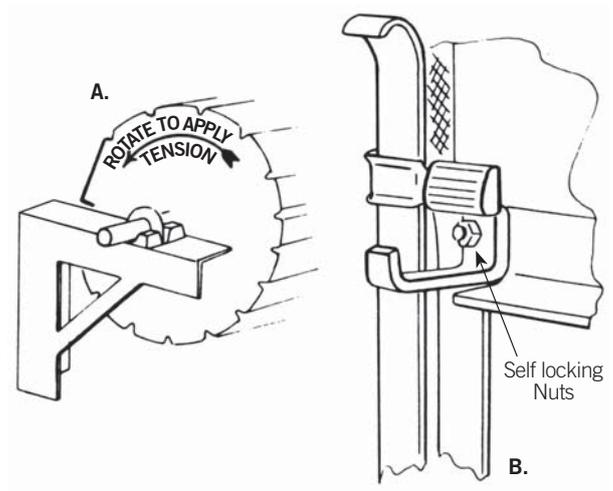
2.5 SPRING TENSIONING AND BOTTOM RAIL STOPS



Position guides true and plumb at each side of the opening. Allowing 3-4mm of working clearance between the door and the inside of each guide, mark, drill and fix both guides. Use the 10mm (5/16") coach screws and washers supplied (with suitable plastic plugs for masonry application or other fixings to ensure satisfactory attachment. (Note: Welding of guides to steelwork is usually not recommended).

Check top of guide lead in to ensure that the door does not make contact when rotated. Damage to Nylon running strips could result. The curtain must feed in smoothly without bumping – adjust lead in as required.

Apply tension to the springs by rotating door approximately two (2) complete turns in a forward direction (see arrow on sketch A) after ensuring axle is securely clamped. The amount of tension required for satisfactory operation may vary with individual doors, depending on size. Final adjustment should be made later.



WARNING

Once the packaging containing the door roll is cut, the door will have a strong tendency to rise and revolve. If uncontrolled, the rapidly unrolling door could cause damage or injury. Therefore, it must be securely held until bottom rail stops are fitted. Chain wheel doors can be held in position by locking the chain in the chain clip attached to the left hand guide.

Hold door firmly and cut the packaging. Feed door down into guides below head stop.

Fit bottom rail stops using self locking nuts provided. Allow door to rise and to rest against head stops. (See sketch B.)

FINAL ADJUSTMENT

Operate door up and down a number of times to check operation. If operation is uneven or not smooth, rectify as below:

Faults

1. Door hard to operate in one direction.
2. Door hard to operate in both directions.
3. Door is stiff to work and rattles over lead in on top of guides.
4. Door is scraping in the guides.

WARNING

Do not grease the guides. Grease will damage the Nylofelt running strips and make doors heavier to operate.

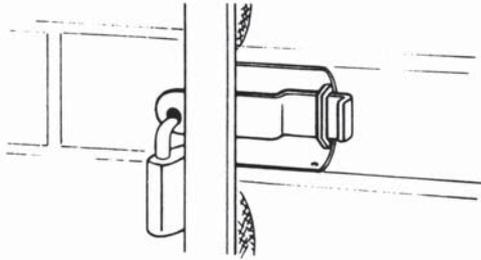
Remedies

1. Adjust spring tension.
2. Check guide clearances (see that door is not jamming). Also check that the inside surfaces of the guides are clean and free of any oil film. Use a spirit cleaner if necessary. Polishing the inside surfaces of the guides improves operation.
3. i) Check that guides are not too long. Move the door closer to the lintel.
 - ii) With the door up and chain secured, loosen one "U" bolt/saddle bolt and push that side of the door towards opening as far as possible without scraping lintel. Tighten the "U" bolt and repeat operation with the other side, ensuring that the axle is still parallel with opening.
 - iii) Pack out top lug of guide.
4. Check that the guides are plumb, the clearances are correct and the door is correctly centred with the opening. Also check that the brackets are level.

2.6 LOCKING

(OPTIONAL) INTERNAL WAIST HIGH SLIDE BOLT

(Left hand side shown – viewed from inside.)

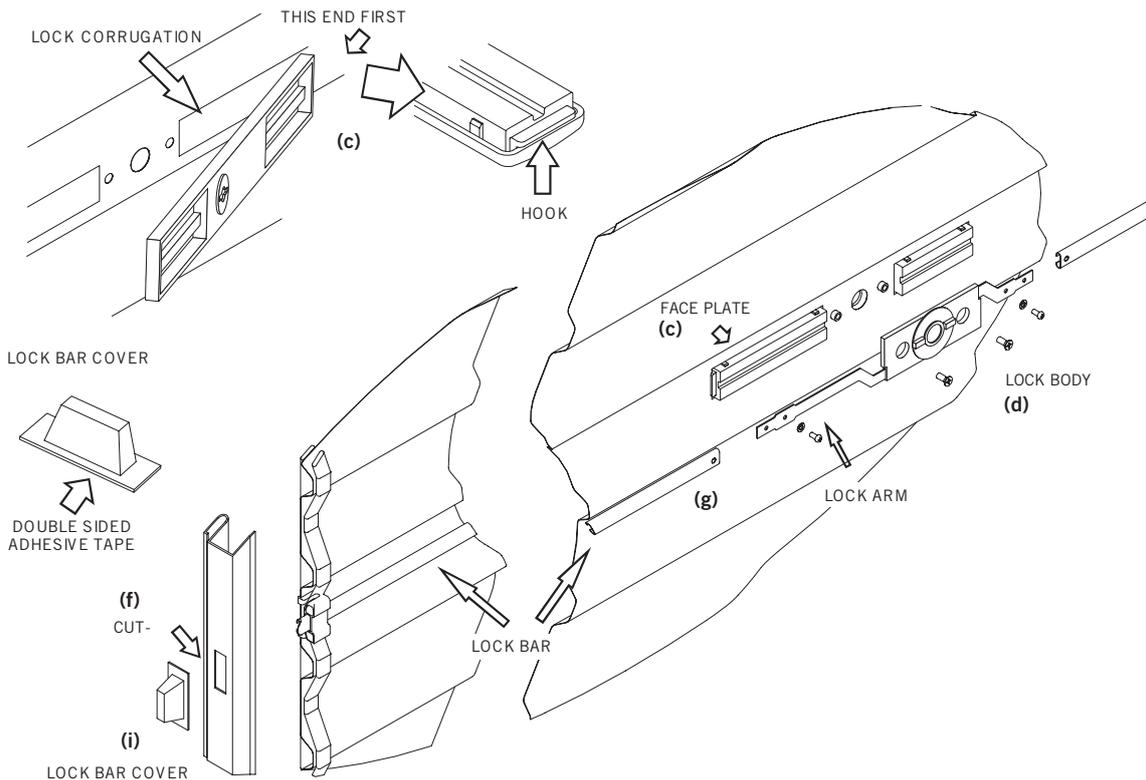


With door fully closed check that bolt slides through guide. Adjust hole if necessary.

CENTRE LIFT LOCK

- Fit faceplate to outside of door. Fit hooks onto edge of aperture then slide faceplate as far to the right as possible. Use adhesive tape to hold in position.
- Attach the lock body to the faceplate from the inside, using the c's'k screws supplied. Do not overtighten the screws.
- Assemble locking bar retaining. (Figure 1)
- Assemble locking bar to retainer and through plastic edge retainer. With door inclosed position, mark position of lock bar on side of guide. Transfer location mark to inside back face of guide and drill a file slot 10mm wide x 25mm long. Equally spaced on centre line of guide. Allow approximately 5mm clearance from top of slot to top of locking bar.
- Slide bars through guide slot, then back onto lock arms. Screw on securely using 4mm x 6mm screws supplied.

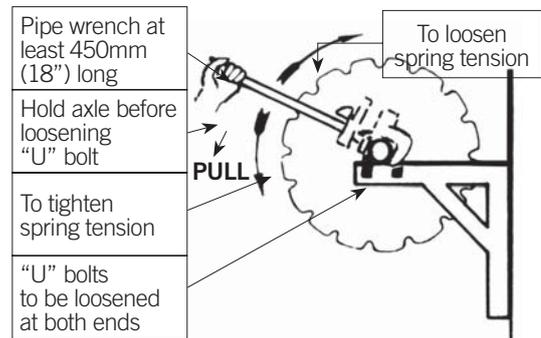
Note: the fitting of the lock bar covers is important to prevent possible finger entrapment - particularly important when the door is fitted with an automatic garage door opener.



ADJUSTING SPRING TENSION IF NECESSARY

Hand Operated and Direct Drive Doors Only

With door in open position (rolled up), tie two ropes right around door approximately 12" from each end. With a person at each end secure a firm hold on axle with stilson or pipe wrench and loosen axle clamp with socket spanner. Axle can then be rotated in required direction (see diagram below) until approximate tension is gained. It is recommended that alteration to spring adjustment be only by small degrees till the best position is found. Axle clamp must then be retightened very tightly to a tension of 40 Newton metres or 30 ft. lbs. Before releasing hold on pipe wrench (stilson). Repeat process if spring still requires further tension.



WARNING: Hold Axle before loosening "U" bolts.

IMPORTANT: Do not attempt to loosen "U" bolts before securing firm hold on Axle with Pipe Wrench (Stilson). Do not use files or similar brittle steel tools such as Tommy Bars.



3.0 AFTER INSTALLATION CARE

GENERAL CARE OF YOUR FIRMADOOR MAXI SERIES R3F DOOR

CLEANING

COLORBOND® & COLOURED STEEL FINISH Your B&D Firmadoor Maxi Series R3F door has been pre-painted with a silicone modified polyester formulation, which is one of the best paint films commercially available today. However, all exposed surfaces require some attention to guard against the premature onset of corrosion and any other harmful atmospheric effects. In our atmosphere there are harmful deposits that gather on the door surface and if not removed regularly, will seriously affect the appearance and life of the door.

Washing of the door with clean water and a cloth every 14 days is recommended – particular care should be taken to clean areas of the door not normally washed by rain.

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.

WARNING! Do not disassemble the lock mechanism and do not allow paint to enter the lock keyway.

REGULAR MAINTENANCE REQUIRED

B&D recommends that you check the operation of your Firmadoor Maxi Series R3F door at least every six months (more regularly in extreme environments or frequent use). The effort required to manually open and to manually close the door should be about the same (if door has an automatic opener, put into manual mode before testing door).

NOTE: do not grease or oil the guides on doors fitted with Nylofelt.

If the door is difficult to operate in either direction (up or down) then check that the inside surfaces of the guides are clean and free of obstructions.

If the door is still difficult to operate, then your door will need a service to adjust the spring tension and possibly other operational parts of the door.

This service should only be carried out by an experienced door technician, using the correct tools.

If you have an automatic opener fitted to your door, it is particularly important that you ensure the optimum operation of the door, otherwise you may reduce the effective life of the opener.

To keep your door running well, it is recommended that your door be serviced, by an experienced door technician, every 12 months (more regularly in extreme environments or frequent use), or earlier if required.

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

The B&D Firmadoor Maxi Series R3F door in residential use is covered by a 12 month warranty for complete door and parts, surface (excludes salt corrosion).

Warranty conditional on proper care as recommended above. Full details of the warranty are available from www.bnd.com.au

B&D Doors Office Locations:

New South Wales:	34 Marigold St, Revesby 2212.	Phone: (02) 9722 5555	South Australia:	23 Frederick Rd, Royal Park 5014.	Phone: (08) 8440 4747
Queensland:	17 Oasis Court, Clontarf 4019.	Phone: (07) 3883 0200	Western Australia:	96 Mulgool Rd, Malaga 6090.	Phone: (08) 9247 8777
Newcastle:	Unit 1/108 Mitchell Rd, Cardiff NSW 2285.	Phone: (02) 4956 8533	International/Export:	34 Marigold St, Revesby 2212.	Phone: +61 (0)2 9722 5555
Victoria:	147-153 Canterbury Rd, Kilsyth 3137.	Phone: (03) 9237 7766			



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