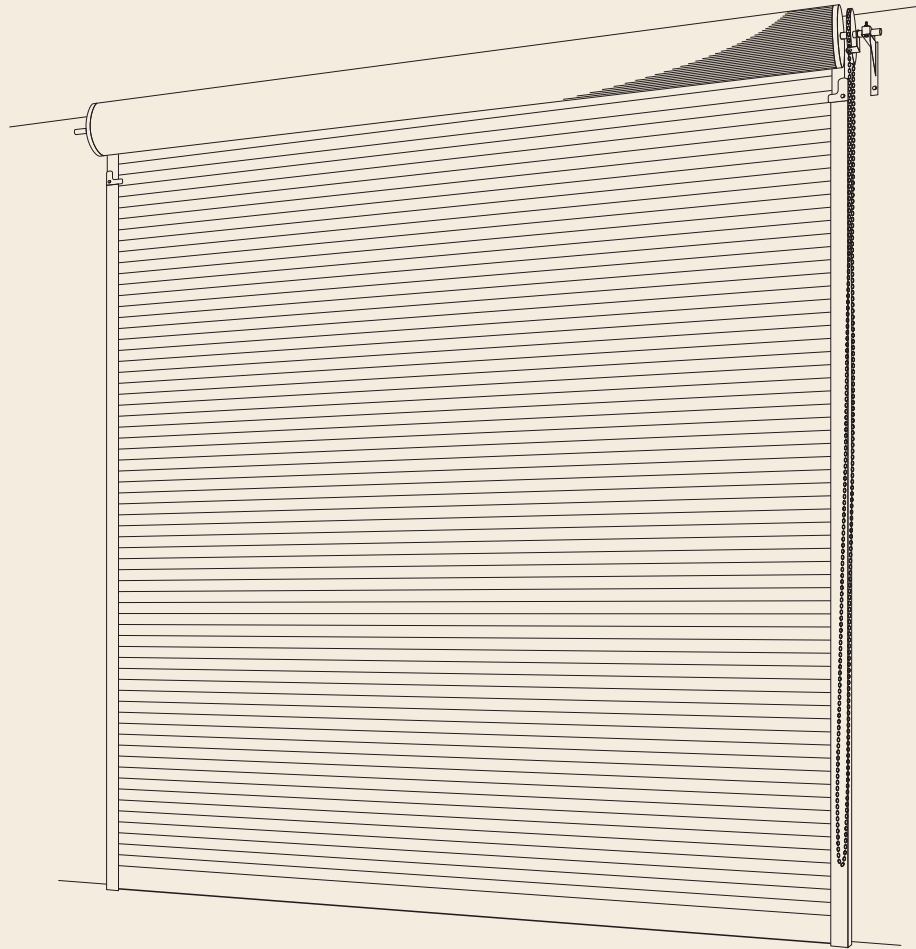




Roll-A-Door®

Series 2 Industrial Doors

WINDRATED INSTALLATION INSTRUCTIONS



DISCLAIMER

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

Note: All references are taken from inside looking out



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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

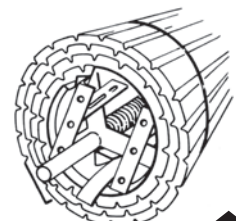
1.2 PREPARATION

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 Roll-A-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.



1.3 FASTENER RECOMMENDATIONS FOR FITTING GARAGE DOORS

MATERIAL	FASTENER TYPE(S)	DIAMETER OR TYPE		LENGTH OF FASTENER (See Note)
New Solid Brick	Anchor Screws or Equivalent	M10	X	100mm
New Solid Concrete	Anchor Screws or Equivalent	M10	X	100mm
	HLC Sleeve Anchors (Dyna Bolts)	M10	X	100mm
Steel Framing e.g. BHP Framing (with rear access)	Hex Head Bolt Zinc Plated, Hexagon Nuts Zinc Plated, Washers Zinc Plated	10mm	X	To Suit
		12mm	X	To Suit
Heavy Gauge Steel	Hex Head Tek	14-20	X	22mm
Timber (guides only)	Hex Head Tek	Type 17: 14-20	X	50mm

IMPORTANT NOTES:

1. For installation to materials not covered in the above chart, the installer should seek expert advice from a qualified builder.
2. Minimum length of fastener does not exclude use of longer lengths. Decision must be made by fitter to ensure adequate strength.
3. 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.

IMPORTANT INFORMATION ON FASTENERS

Coach bolts/screws supplied with this product are NOT suitable for fastening to timber jambs.
The installer must select and use fasteners appropriate to the material into which they are being fixed.
REFER TO DRAWINGS 2289 - S04E, S05E, S06E, S07E, S08E

1.4 REQUIREMENTS BEFORE INSTALLATION

B&D Roll-A-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 if fitting to steel or 180mm if fitting to masonry. 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.

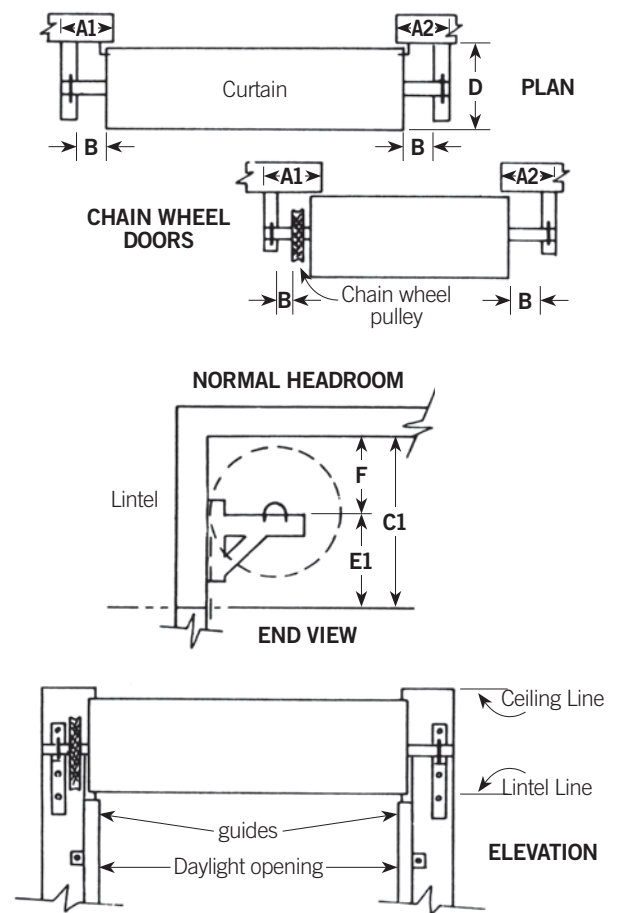
Height: A door can not be installed higher than its maximum size; however, it can be installed in a lower position (providing the door guides are cut to suit – as shown later).

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 2.6 under the heading "Bracket Fixing".

NOTE: If the chain mechanism is fitted to the R/h side A1&A2 detail is reversed and 40mm must be added to the A1 measurement.

NOTE: If curtain overlap is greater than 100mm, sideroom should be adjusted.

NOTE: Hand operated doors up to 2400mm high, the bottom rail will hang 65mm below lintel. For doors over 2400mm high bottom rail will be level with lintel.



DIMENSION PANEL									
HEIGHT	WIDTH	A1	A2	B	C1	D	E1	F	Operation
Up to 2400	Up to 5500	175	175	35	540	555	245	295	Hand Operated
Up to 2400	Over 5500	175	175	35	540	555	245	295	Hand Operated
2401-3000	Up to 5500	175	175	35	620	565	310	310	Direct Drive
3001-3300	Up to 5500	230	175	35	620	565	310	310	Planetary Gearing
3001-3300	Over 5500	230	175	35	620	565	310	310	Planetary Gearing
3601-4200	Up to 5500	230	175	35	620	565	310	310	Planetary Gearing
4201-5100	Up to 5500	230	175	35	635	615	310	325	Planetary Gearing

Dimension columns A1 & A2 are minimum measurements for fixing to steel. An additional 80mm must be added if fixing to masonry. Dimensions are recommended and suit Normal Headroom Installations, top of guide will be level with top of bracket arm.

All measurements are in millimeters and are minimum unless otherwise shown.

NOTE: It is not recommended that doors are fitted in restricted headroom position when wind locked guides or openers are fitted.

2.0 INSTALLATION

2.1 S04E

NOTES:

DESIGN CRITERIA

(REFER ALSO TO NOTES COVERING BASIS OF DRAWINGS & LIMITATIONS)

REGION C

TERRAIN CATEGORY 2 (AS/NZS 1170.2:2011)

DOOR HEIGHT 5.1m MAX

INTERNAL PRESSURE COEFFICIENTS, C_{pi} = (-0.3 - 0.6)

BUILDING IMPORTANCE = LEVEL 2

REGION WINDSPEED V_R = 69.3m/s

ULTIMATE DESIGN WIND PRESSURE = 3.05kPa

FOR A MAXIMUM ALLOWABLE SPAN OF 5.5m

DOOR LOCATED IN REGION C (IC)

FOR THE ABOVE DESIGN CRITERIA, PROVIDE CLIPS AT EVERY FLAT AS SHOWN ON PART PLAN - CURTAIN AND WINDCLIPS.

LIMITATIONS

(REFER ALSO TO NOTES COVERING BASIS OF DRAWINGS AND DESIGN CRITERIA)

- STEEL ABUTMENT POSTS TO BE 2.4mm (MIN.) WITH A MINIMUM STRESS GRADE OF G250.
- CHARACTERISTIC UNCONFINED COMPRESSIVE STRENGTH OF BLOCK WALL UNIT F_c = 15 MPa (MIN.)
- CORE FILLING OF BLOCKWALL F_c = 15 MPa (MIN.)
- ALL DOOR COMPONENTS TO BE IN ACCORDANCE WITH STANDARD B&D SERIES 2 ROLL-A-DOOR MANUFACTURING.
- DOOR INSTALLATION TO BE IN ACCORDANCE WITH STANDARD B&D SERIES 2 ROLL-A-DOOR INSTALLATION GUIDELINES.
- CLASS 4 FINISH REQUIRED TO ALL TEK SCREW FIXINGS.
- MECHANICAL BOLTS OR ANKASCREW FIXINGS TO BE GALVANISED.

NOTES COVERING BASIS OF DRAWINGS

- TEST REPORT NO. TS895 (CYCLONE TESTING STATION, SCHOOL OF ENGINEERING AND PHYSICAL SCIENCES, JAMES COOK UNIVERSITY).
- PRINCIPLES OF MECHANICS.
- AS/NZS 1170.2:2011 (STRUCTURAL DESIGN ACTIONS - WIND ACTIONS).
- REFER TO DESIGN CRITERIA & LIMITATIONS.
- THIS DRAWING IS VALID FOR A PERIOD OF 3 YEARS FROM DATE OF DRAWING.
- AS/ANZ 4505:2012 (GARAGE DOORS AND OTHER LARGE ACCESS DOORS)

THIS DRAWING IS VALID UNTIL 30th JUNE, 2016

DOOR DRUM SUPPORT BRACKETS.
INSTALL TO B&D STANDARD
INSTALLATION PROCEDURES.

SERIES 2 ROLL-A-DOOR, DOOR
GUIDES REFER TO SECTION
2/505 PLAN DETAIL

CURTAIN HEIGHT
5100 MAXIMUM

SERIES 2 ROLL-A-DOOR

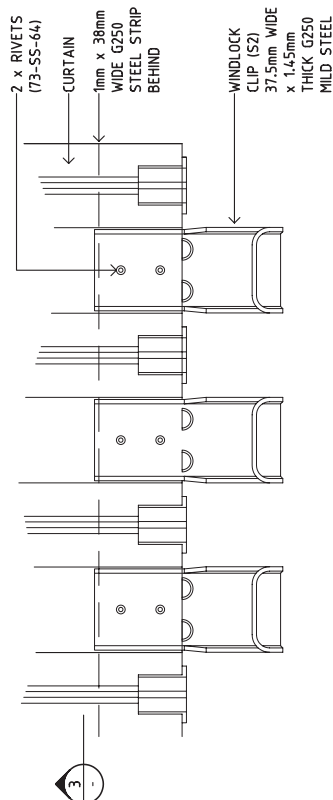
CURTAIN WIDTH - VARIES (REFER TO TABLES) (L)

SERIES 2 ROLL-A-DOOR ELEVATION - TYPICAL

SCALE 1:50

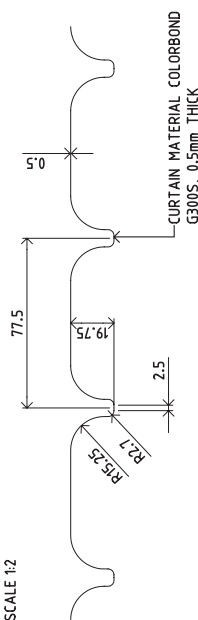
NOTE:

- CURTAIN HEIGHT = OPENING HEIGHT
- OPENING WIDTH = CURTAIN WIDTH - CURTAIN OVERLAP (REFER SECTION 4 ON DRAWINGS S05 AND S08)



CURTAIN MATERIAL AND WIND-LOCK CLIPS - PART PLAN

AS VIEWED FROM BACK FACE
SCALE 1:2



SECTION 3
SCALE = 1:2

ISSUE	DATE	AMENDMENTS
A	22.04.13	ISSUED FOR DISCUSSION
B	29.04.13	ISSUED FOR DISCUSSION
C	02.05.13	ISSUED FOR CONSTRUCTION
D	13.05.13	ISSUED FOR CONSTRUCTION
E	13.05.13	ISSUED FOR CONSTRUCTION

CLIENT

B&D AUSTRALIA PTY LTD

PROJECT

B&D SERIES 2 ROLL-A-DOOR FOR
USE IN ALL WIND REGIONS

DRAWING
SERIES 2 ROLL-A-DOOR, ELEVATION
PART PLAN, SECTION AND NOTES

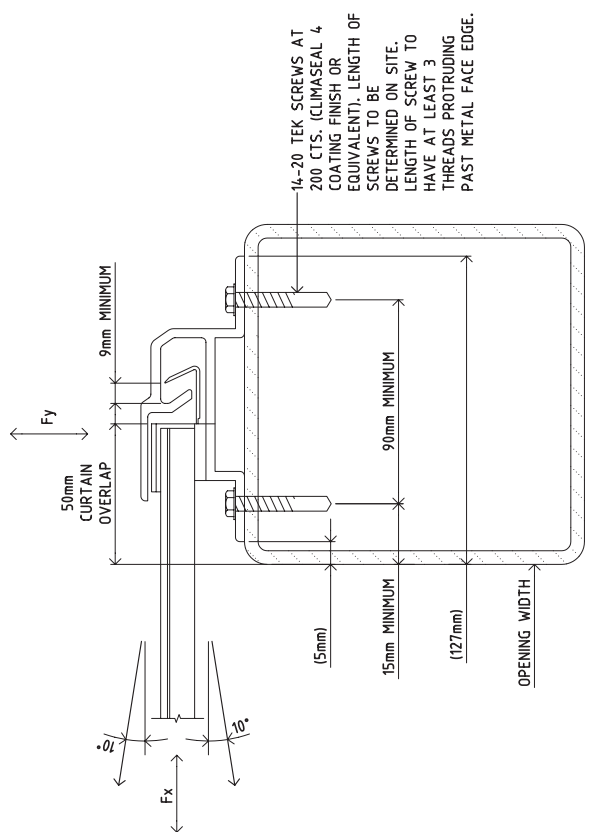
James Ellis & Associates

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SCALE
DESIGNED J.E.
DRAWN AAB
CHECKED
APPROVED
DATE April 2013

DRAWING No.
S04 E
PROJECT No.
2289

2.2 S05E



SECTION 4 PLAN
SCALE = 1:2

GUIDE SUPPORTED BY REINFORCED CONCRETE
CORE FILLED MASONRY UNITS FOR A DOOR
SPAN OF 5500mm IN REGION C TC2 FOR A
DESIGN WIND PRESSURE OF 3.05 kPa

SECTION 4 PLAN
SCALE = 1:2

GUIDE SUPPORTED BY STEEL FRAME
FOR A DOOR SPAN OF 5500mm IN
REGION C TC2 FOR A DESIGN WIND
PRESSURE OF 3.05 kPa

THIS DRAWING IS VALID UNTIL 30th JUNE, 2016

ISSUE		DATE	AMENDMENTS
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B		29.04.13	ISSUED FOR DISCUSSION
C		02.05.13	ISSUED FOR CONSTRUCTION
D		13.05.13	ISSUED FOR CONSTRUCTION
E		13.05.13	ISSUED FOR CONSTRUCTION

CLIENT		B&D AUSTRALIA PTY LTD
PROJECT		B&D SERIES 2 ROLL-A-DOOR FOR USE IN ALL WIND REGIONS

DRAWING	SERIES 2 ROLL-A-DOOR SUPPORT SECTION DETAILS		
DESIGNED	J.E.		
DRAWN	AAB		
CHECKED & APPROVED			
DATE			April 2013

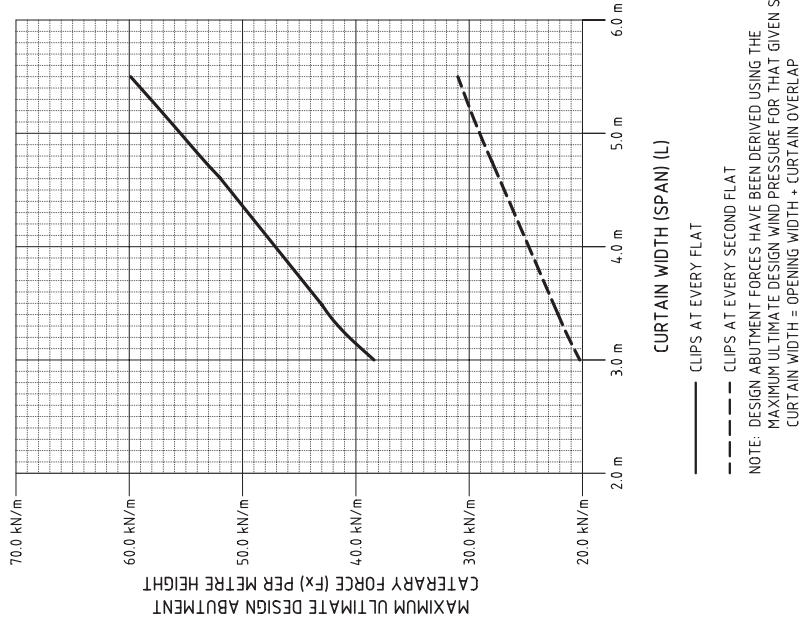
DRAWING No.	S05 E
PROJECT No.	2289

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2.3 S06E

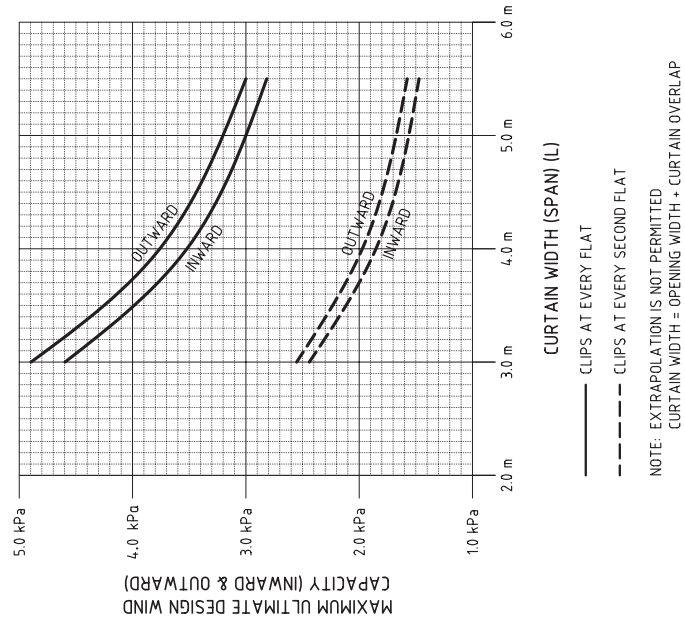
FIGURE (B)
ULTIMATE DESIGN CATENARY
FORCE FOR A GIVEN SPAN



NOTE: $F_y = \frac{W_f}{Z}$
WHERE
 F_y = MAXIMUM OUT OF PLANE ULTIMATE DESIGN ABUTMENT FORCE (PER METRE HEIGHT)
 W = ULTIMATE DESIGN WIND PRESSURE (kPa)
 L = CURTAIN WIDTH (SPAN) (m)

THIS DRAWING IS VALID UNTIL 30th JUNE, 2016

FIGURE (A)
ULTIMATE DESIGN WIND
CAPACITY FOR A GIVEN SPAN



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D	13.05.13	ISSUED FOR CONSTRUCTION
E	13.05.13	ISSUED FOR CONSTRUCTION

CLIENT	
B&D AUSTRALIA PTY LTD	
PROJECT	
B&D SERIES 2 ROLL-A-DOOR FOR USE IN ALL WIND REGIONS	

DRAWING	
SERIES 2 ROLL-A-DOOR DESIGN GRAPHS	
DESIGNED	J.E.
DRAWN	AAB
CHECKED & APPROVED	
DATE	April 2013

DRAWING No.	
S06 E	
PROJECT No.	
2289	

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2.4 S07E

TABLE 1

QUICK REFERENCE GUIDE ON MAXIMUM ALLOWABLE SPANS FOR BUILDERS AND BUILDING CERTIFIERS

REGION	TERRAIN CATEGORY	UP TO 5.1m HIGH	
		CLIPS AT EVERY FLAT	CLIPS AT EVERY SECOND FLAT
A	2	5.5m	5.5m
	2.5	5.5m	5.5m
	3	5.5m	5.5m
B	2	5.5m	3.9m
	2.5	5.5m	4.35m
	3	5.5m	5.0m
C	2	5.5m	N/A
	2.5	5.5m	N/A
D	2	3.0m	N/A
	2.5	3.35m	N/A

NOTE:

- FOR WIND REGIONS A & B, INTERNAL PRESSURE COEFFICIENTS (C_{pi}) OF -0.3 & +0.2 WERE ADOPTED.
- FOR WIND REGIONS C & D, INTERNAL PRESSURE COEFFICIENTS (C_{pi}) OF -0.3 & +0.6 WERE ADOPTED.
- MAXIMUM ALLOWABLE SPANS = CURTAIN WIDTH.
- CURTAIN WIDTH = OPENING WIDTH + CURTAIN OVERLAP (REFER DRAWING S05 AND S08).

TABLE 2

QUICK REFERENCE GUIDE ON FASTENING SPECIFICATIONS ONTO BLOCKWORK ABUTMENTS FOR BUILDERS AND BUILDING CERTIFIERS

FASTENING SPECIFICATION ONTO BLOCKWORK ABUTMENTS		
SPAN	CLIPS AT EVERY FLAT	CLIPS AT EVERY SECOND FLAT
3000-3499mm	M10 GAL ANKASCREW AT 350 CTS.	M10 GAL ANKASCREW AT 400 CTS.
3500-3999mm	M10 GAL ANKASCREW AT 300 CTS.	M10 GAL ANKASCREW AT 400 CTS.
4000-4499mm	M10 GAL ANKASCREW AT 300 CTS.	M10 GAL ANKASCREW AT 400 CTS.
4500-4999mm	M10 GAL ANKASCREW AT 250 CTS.	M10 GAL ANKASCREW AT 400 CTS.
5000-5500mm	M10 GAL ANKASCREW AT 250 CTS.	M10 GAL ANKASCREW AT 400 CTS.

NOTE:

- SPAN = CURTAIN WIDTH
- CURTAIN WIDTH = OPENING WIDTH + CURTAIN OVERLAP (REFER TO DRAWING DRAWING S05 AND S08)

TABLE 3

QUICK REFERENCE GUIDE ON FASTENING SPECIFICATIONS ONTO STEEL ABUTMENTS FOR BUILDERS AND BUILDING CERTIFIERS

FASTENING SPECIFICATION ONTO 2.4mm (MINIMUM) THICK G250 STEEL ABUTMENTS		
SPAN	CLIPS AT EVERY FLAT	CLIPS AT EVERY SECOND FLAT
3000-3499mm	14-20 TEK SCREWS AT 300 CTS.	14-20 TEK SCREWS AT 400 CTS.
3500-3999mm	14-20 TEK SCREWS AT 250 CTS.	14-20 TEK SCREWS AT 400 CTS.
4000-4499mm	14-20 TEK SCREWS AT 250 CTS.	14-20 TEK SCREWS AT 400 CTS.
4500-4999mm	14-20 TEK SCREWS AT 200 CTS.	14-20 TEK SCREWS AT 400 CTS.
5000-5500mm	14-20 TEK SCREWS AT 200 CTS.	14-20 TEK SCREWS AT 400 CTS.

NOTE:

- SPAN = CURTAIN WIDTH
- CURTAIN WIDTH = OPENING WIDTH + CURTAIN OVERLAP (REFER TO DRAWING S05 AND S08)

THIS DRAWING IS VALID UNTIL 30th JUNE, 2016

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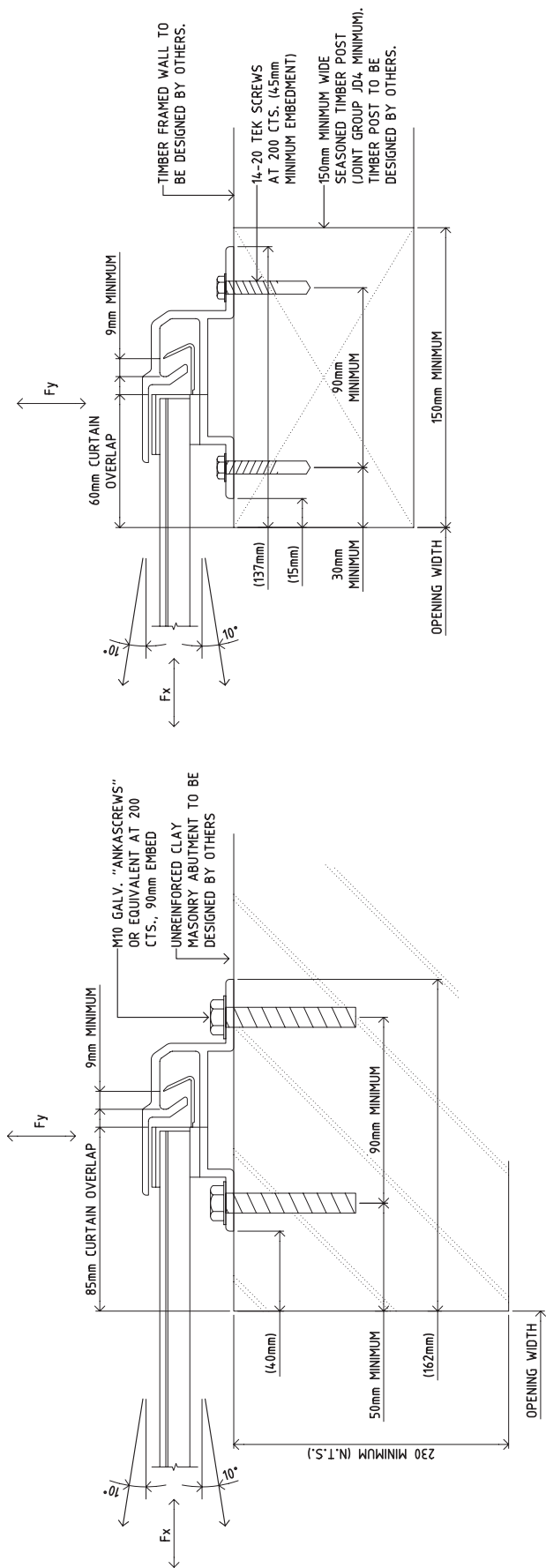
CLIENT		B&D AUSTRALIA PTY LTD
PROJECT		B&D SERIES 2 ROLL-A-DOOR FOR USE IN ALL WIND REGIONS

DRAWING		SERIES 2 ROLL-A-DOOR SPAN AND FASTENING SPECIFICATION TABLES
DESIGNED		J.E.
DRAWN		AAB
CHECKED & APPROVED		
DATE		April 2013

DRAWING No.		S07 E
PROJECT No.		2289

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2.5 S08E



SECTION 4 PLAN
SCALE = 1:2
GUIDE SUPPORTED BY TIMBER
FRAMED WALLS FOR A DOOR SPAN
OF 5500mm IN REGION A TC2 FOR A
DESIGN WIND PRESSURE OF 1.18 kPa

SECTION 4 PLAN
SCALE = 1:2
GUIDE SUPPORTED BY UNREINFORCED
CLAY MASONRY WALLS FOR A DOOR
SPAN OF 5500mm IN REGION A TC2 FOR
A DESIGN WIND PRESSURE OF 1.18 kPa

THIS DRAWING IS VALID UNTIL 30th JUNE, 2016

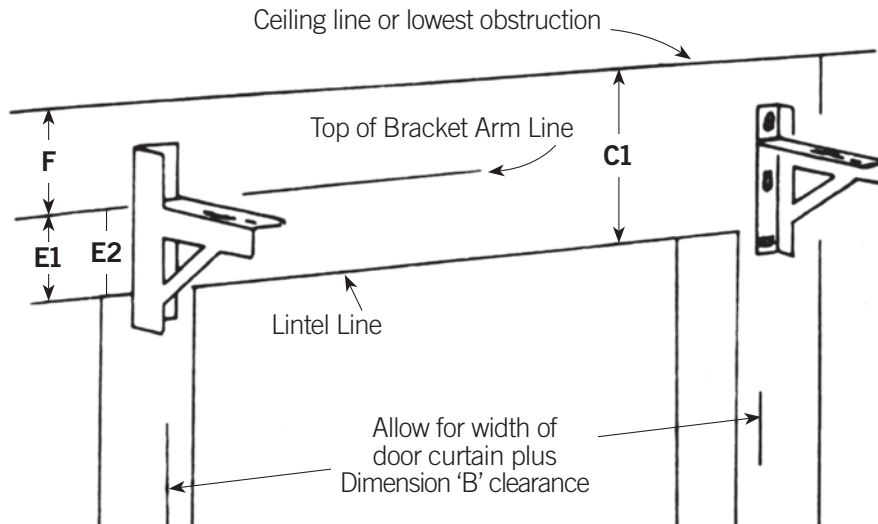
AMENDMENTS		CLIENT B&D AUSTRALIA PTY LTD	PROJECT B&D SERIES 2 ROLL-A-DOOR FOR USE IN ALL WIND REGIONS	DRAWING SERIES 2 ROLL-A-DOOR SUPPORT SECTION DETAILS	SCALE	DESIGNED J.E.	DRAWN AAB	CHECKED BY DATE		DRAWING No.
ISSUE	DATE									S08 E
A	13.05.13									
E	13.05.13									
				James Ellis & Associates	Consulting Structural Engineers					
				PO Box 56, Hurstville Park, NSW 2193. james@jamesellisengineers.com.au Ph: 8764 1035 Fax: 8764 1035 Mobile: 0405 149 834						



2.6 BRACKET FIXING

NOTE TO BUILDERS:

Masonry blockwork should be properly filled and reinforced if brackets are to be mounted directly to blockwork with masonry anchors. Special consideration should be given to brick type and construction of wall, to ensure satisfactory fixing e.g. welding detail if fixed to steel.



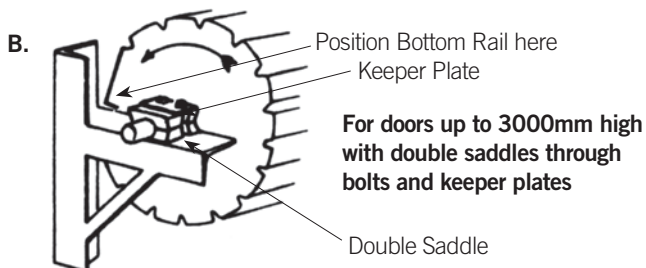
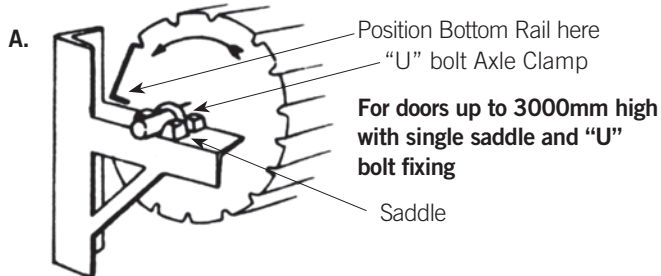
Check the opening dimensions to ensure you have the correct door size. Check floor and lintel levels and work from the lowest side or from the side with the least headroom. Mark out first bracket after checking dimension panel for height of brackets above lintel, E1 for normal headroom installation. (If insufficient headroom, measure down from ceiling or obstruction using dimension C1 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 and the correct fixings have been used. REFER TO THE SEPARATE B&D FASTENER RECOMMENDATION PAGE.

NOTE:

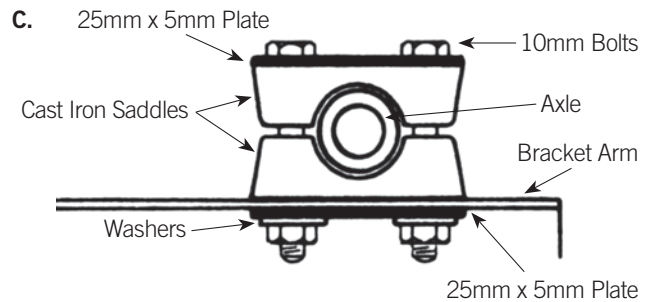
1. The bottom rail of doors below 2400mm high will hang below lintel and reduce walk in height by 65mm. For doors above 2400mm high, the bottom rail will be flush with the lintel.

2.7 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.



For doors up to 3000mm high, rest the axle on two cast iron saddles. Immediately loosely secure with "U" bolts, nuts and washers, through slots in bracket arm. This eliminates the door falling from the brackets (See sketch A). (See sketch below) If chain gear is fitted, ensure that the chain is placed around the chain wheel and hangs down freely.



For doors over 3000mm high, rest axle between two cast iron saddles. Immediately fit the 25mm x 5mm spacer plates and loosely secure with bolts, nuts and washers, through slots in bracket arm. This eliminates the door falling from the brackets (See sketch B&C). If chain gear is fitted, ensure that the chain is placed around the chain wheel and hangs down freely.

Before tightening "U" bolts or saddle bolts, position the door curtain this is crucial to overlap the curtain equally each side.

1. So that it overlaps the opening evenly both sides.
2. 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. (See sketch B)
3. Rotate both the door and the axle so that the bottom rail is level with the bracket arm. (See sketch B) Now tighten the "U" bolts or saddle bolts, using washers under nuts, to a torque of 40 newton metres or 30 ft.lb.

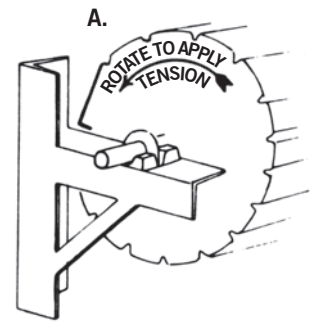
WARNING: Axle must be securely clamped otherwise door will lose spring tension.

2.8 SPRING TENSIONING BOTTOM RAIL STOPS

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.



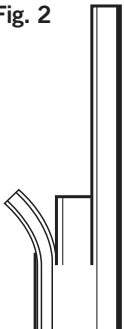
2.9 GUIDE INSTALLATION

The guide must be the correct length and level with the top of the bracket arm for recommended fixing. (Fig. 1)

Cut from the bottom of the guides if they require shortening.

Reshape guide lead in (See Fig. 2).

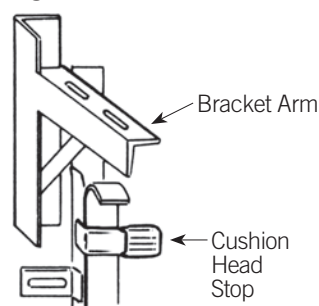
Fig. 2



Position the guides true and plumb at each side of the opening, allow 3-4mm of working clearance between the roller and the inside of each guide.

Clamp or temporarily fit each guide in place (do not fully secure at this stage).

Fig. 1

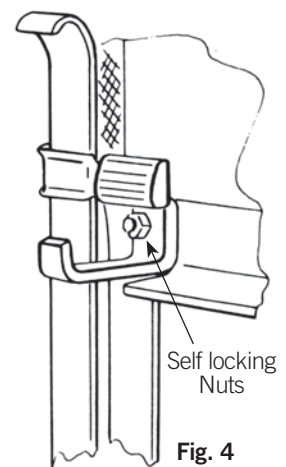


Fit bottom rail stops using self locking nuts provided. Allow door to rise and to rest against head stops. (See Fig. 4.)

After operating the door several times to ensure 3-4mm clearance is correct and the wind clips enter correctly without catching.

When satisfied fully fit the guides after referencing fixing type and centres from drawings S05-6-7-8E on page 7, 8, 9 and 10. **NOTE:** These instructions must be adhered to.

Lightly grease the guides on the surface that the nylon clips will contact.



FINAL ADJUSTMENT

Operate door up and down a number of times to check operation.

If operation is uneven or not smooth, rectify as below: –

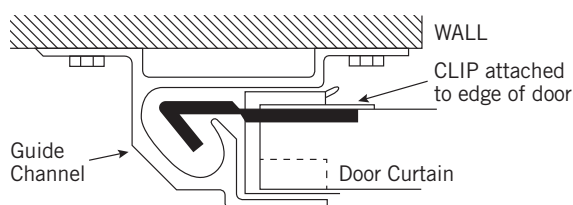
Faults

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.

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.
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.

Fig. 3



2.10 LOCKING

Fig. 1

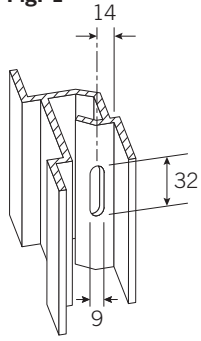


Fig. 1 indicates the position and hole size for the internal waist high locking or the centre lift lock hole.

Fig. 2 is additional to Fig. 1 if a padlock is required to be used.

Fig. 2

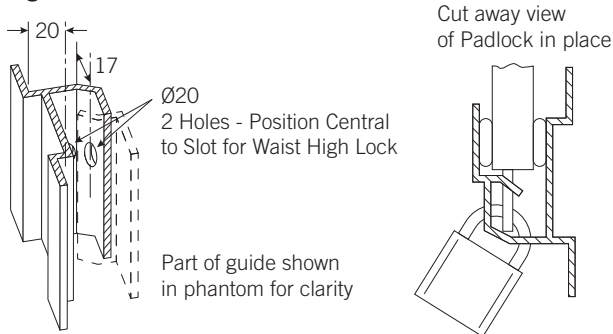
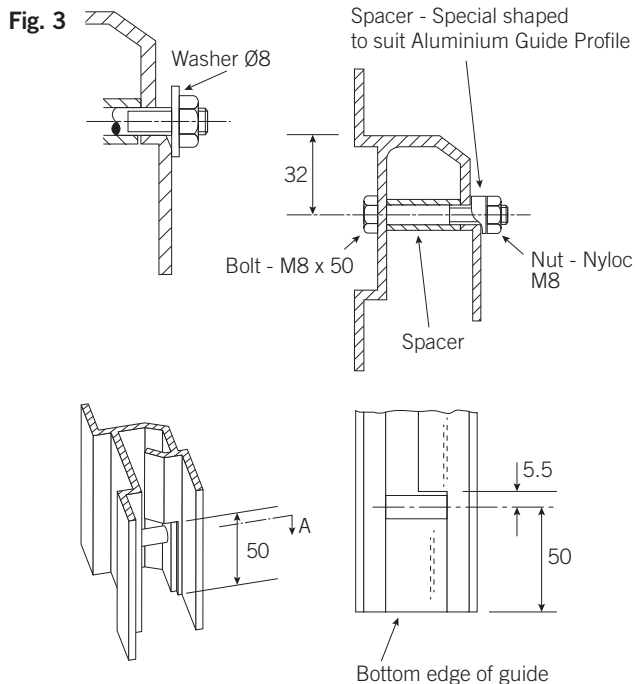
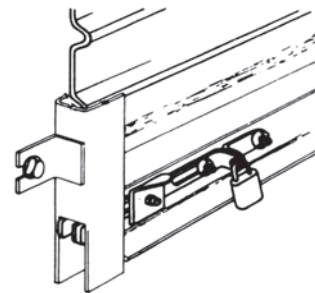
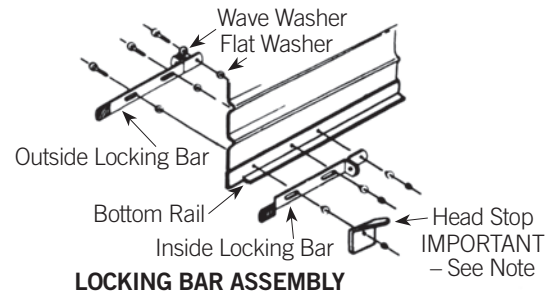


Fig. 3 bottom rail shoot bolt locking.



METHOD OF FITTING OPTIONAL PADBOLT TYPE LOCKING

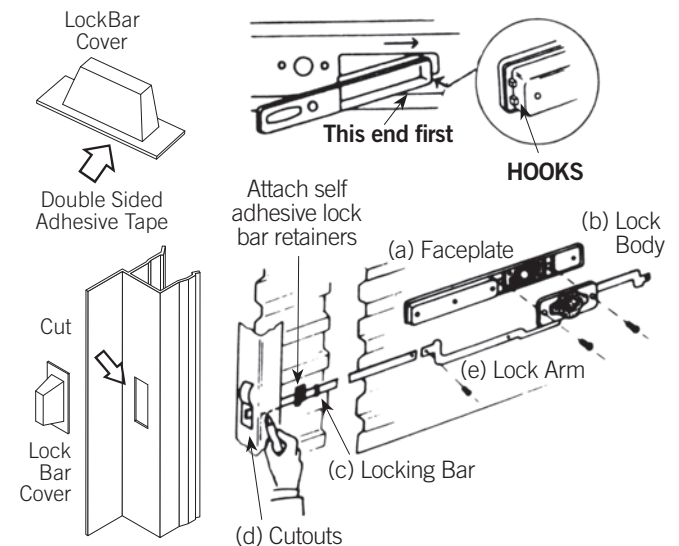


IMPORTANT

Head-stop must be secured to slide bolt as shown in drawing before door is operated. Failure to do so will result in unrolling of door causing damage.

CENTRE LIFT LOCK

- Undo screws to separate lock from faceplate.
- Fit faceplate to outside of door. Fit hooks onto curtain edge, 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 mounting screws and washers. Do not over-tighten the screws.
- With the door in the closed position make the lock hole position in the side guides.
- Drill and file out a rectangular slot on longer than 25mm and no wider than 10mm. Ensure top of the slot remains in line with top of locking bar.
- Slide bars through guide slot, then back, onto lock arms. Screw on securely using 4mm x 6mm screws supplied.
- Fitting the lock hole cover requires the surface to be clean and dry. Peel the lining from the lock hole cover and position over the hole taking care that the movement of the lock bar is not impaired.



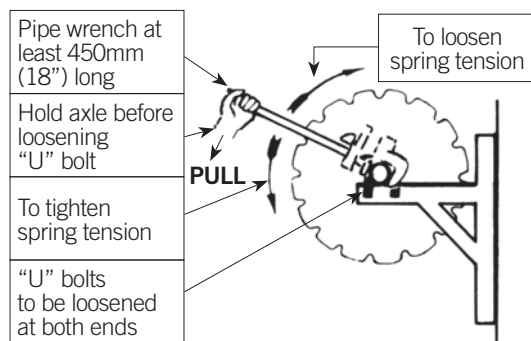
SELF ADHESIVE LOCK BAR RETAINERS

Position as indicated and clean the surface before proceeding.

1. Peel back and stick in position.
2. For additional strength drill 2 x $\frac{1}{8}$ holes from inside using retainer as a template.
3. Fit 2 x $\frac{1}{8}$ pop rivets to each retainer from the face of the door.

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 clamps must then be re-tightened 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 filters or similar brittle steel tools such as Tommy Bars.

Doors with Planetary Geared Chain Wheel Only

If the door tension needs adjusting and the door is fitted with Planetary Gearing then follow the steps below:

1. Ensure that the door is in the OPEN position
2. Secure a rope around the centre of the door roll and use vice grips to clamp the guides just under the bottom rail of the door to prevent the door from closing suddenly during the re-tensioning process.
3. Secure both chains in the chain clip.
4. Carefully loosen the axle clamps
5. Adjusting Tension
 - a. To increase spring tension, carefully pull down on the rear chain, Lock the chain in the chain clip.
 - b. To reduce spring tension, hold the rear chain firmly, carefully release chain from the chain clips and allow the rear chain to move upwards, take care that the full tension is not removed from the springs. Lock the chain in the chain clip.

NOTE: As a safety precaution to protect both the door and the installer, lock a section of the chain in the chain clip so that the chain is restricted to short movements.

6. When the tension is correct, secure the chain in the chain clip and re-tighten the axle clamps to the correct tension.
7. The correct adjustment will only be found by trial and error, adjustments should be restricted to approximately one revolution of the chain wheel.

3.0 AFTER INSTALLATION CARE

GENERAL CARE OF YOUR SERIES 2 INDUSTRIAL DOOR

CLEANING

COLORBOND® & COLOURED STEEL FINISH Your B&D Series 2 Industrial 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 Series 2 Industrial 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 Series 2 Industrial 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

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Newcastle:	Unit 1/108 Mitchell Rd, Cardiff NSW 2285.	Phone: (02) 4956 8533
Victoria:	147-153 Canterbury Rd, Kilsyth 3137.	Phone: (03) 9237 7766

South Australia:	23 Frederick Rd, Royal Park 5014.	Phone: (08) 8440 4747
Western Australia:	96 Mulgool Rd, Malaga 6090.	Phone: (08) 9247 8777
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