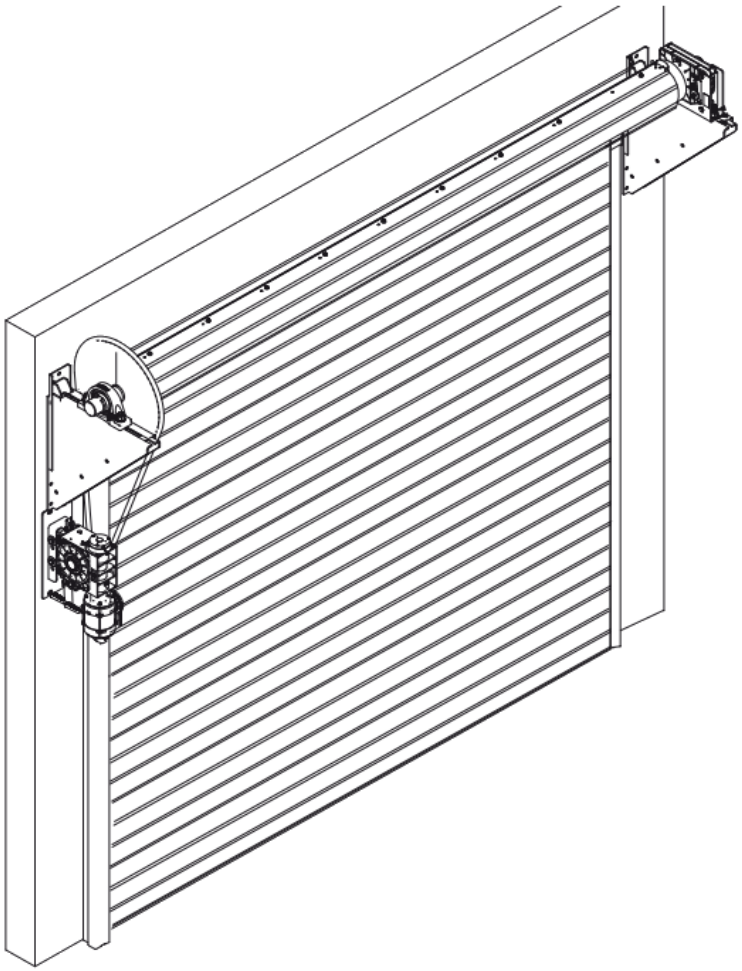
# b d 12-100 Series Roll A Shutter Instruction Manual



b&d® Roll-A-Shutter®

**Direct Lift 6, 8, 10 & 12/100 Series**
**installation instructions**



**DOC# 165031_01**

**RELEASED: 28/11/23**

These instructions are intended for professional garage door installers. All references are taken from inside looking out.

Contents



## before you start

### 1.1 installation safety warnings

This B&D Roll-A-Shutter is designed and tested to provide security, attractive appearance and smooth , low effort operation provided it is installed and operated in strict accordance with the following safety warnings.
Failure to comply with the following instructions may result in death, serious personal injury or property damage.
**NOTE:** No guarantee will be given or responsibility accepted by the manufacturers if the door is not installed as instructed.

| | |
|---|---|
| **WARNING!**<br>Crush injury from unsecure d door | • Place a 2 metre exclusion zone around area under the garage opening while inst alling shutter. If sufficient area is not available DO NOT install shutter.<br>• Do not move under a shutter while it is on the lifting device.<br>• Follow the installation instructions.<br>• Fit lifting device snugly under shutter before lifting.<br>• Ensure lifting device is on flat ground.<br>• Ensure the drum is immediately fastened to the bracket with bearings provided.<br>• Ensure no-one walks under a shutter sitting on brackets. |
| Tension Springs | • Ensure door is correctly secured at all times when making adjustments.<br>• Ensure the correct length pipe wrench is utilised.<br>• 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.<br>• Ensure correct bolts are tightened or loosened to ensure there is no release or c ontrolled release of energy from the spring through the pipe wrench.<br>• Keep head clear of the pipe wrench at all times. |
| **ELECTROCUTION!** | • Check risk assessment for any highlighted electrical power concerns.<br>• Ensure power source is isolated prior to commencement of job.<br>• Turn off electricity to site when necessary.<br>• Wear rubber soled footwear. |
| **LACERATION:** | • Wear appropriate PPE (Dyneema cut off gloves) and keep hands well clear of pi nch points.<br>• Follow instructions explicitly, particularly for the installation of some parts of the d oors, as the unrolled cut out edges presents a very sharp edge. |
| **CAUTION:**<br>Muscular strain | • Practice correct lifting techniques when required to lift the door.<br>• Use mechanical aids such as lifting devices, forklift and cranes where possible.<br>• Avoid twisting.<br>• Use correct technique of knotted rope installation aids. |
| Fall from ladder | • Ensure ladder is the correct type for job.<br>• Ensure ladder is on flat firm ground that will take the weight without the legs sink ing.<br>• Ensure user has 3 points of contact while on ladder. |
| Hand Tools | • Wear appropriate PPE and utilise operators manual of all tools.<br>• Use appropriate noise/hearing protection in the form of ear plugs or ear muffs.<br>• Ensure appropriate fire protection available and housekeeping to ensure that fla mmable liquids or materials are removed from the area of work. |
| Entanglement | • Keep hands and loose clothing clear of moving door and guides at all times. |
| **TWO PERSON LIFT:** | • When a mechanical aid is not used this product requires a two person lift to raise onto the brackets. Use proper techniques and equipment to lift the door from the t railer and up onto brackets. |

**1.2 substrate fastener recommendations**

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

**WARNING!** Refer to the weight label on the packaging or the B&D Product Guide to ensure the selected fastener is appropriate.

**important notes**

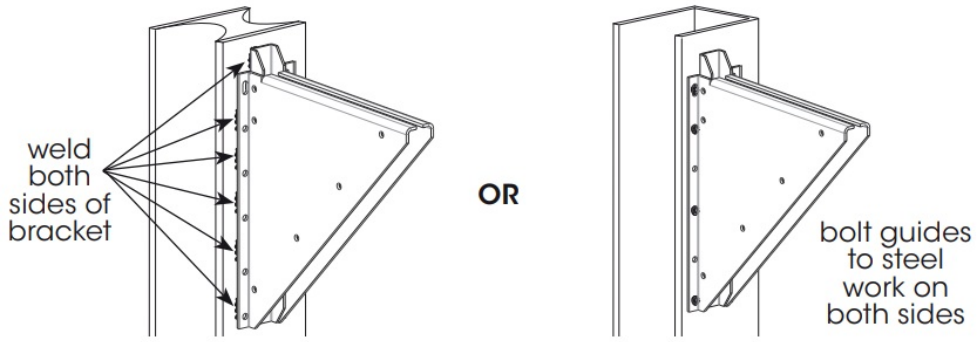
a) For installation to materials not covered in the chart, the installer should seek expert advice from a qualified builder.

b) Minimum length of fastener does not exclude use of longer lengths. Decision must be made by fitter to ensure

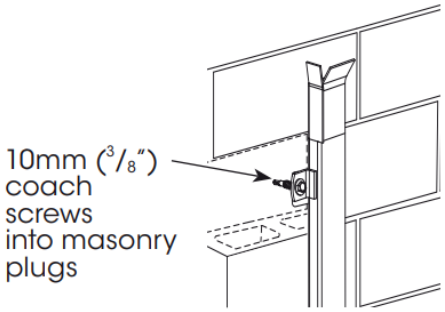
adequate strength.
c) Recommendations for old materials or materials not in good condition are not included. If in doubt about the strength of the material seek specialist advice.
d) Fasteners for brackets in masonry should be at least 5/16” x 2.5” long or metric equivalent.

| material | fastener type(s) | diameter or type | | length of fastener (see note) | BKT | GUIDE |
|---|---|---|---|---|---|---|
| **New Hollow Brick (core filled)** | HRD-VGK or HGK-VGS (Hex Head) Frame Anchors | 10mm | x | 60mm | • | • |
| | Screw masonary (flange hex head) | 8mm | x | 75mm | • | • |
| | Screw masonary (flange hex head) | 10mm | x | 75mm | • | • |
| **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 | • | |
| | Screw masonary (flange hex head) | 8mm | x | 75mm | • | • |
| | Screw masonary (flange hex head) | 10mm | x | 75mm | • | • |
| **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 | • | • |

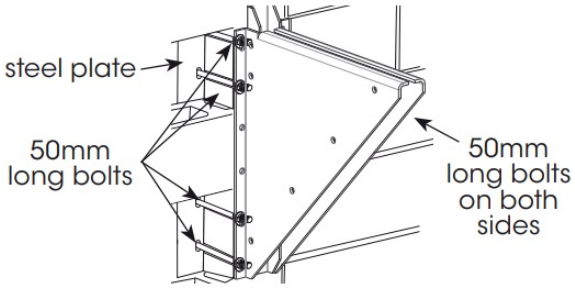
**STEEL CONSTRUCTION**




**SECURE GUIDE**




**MASONRY BLOCK CONSTRUCTION**




**WARNING!** 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.

### 1.3 preparation

**WARNING!** If you need to remove an old shutter prior to installing a B&D shutter ensure to:

- Roll the curtain up and secure curtain around the middle.
- Use correct lifting techniques and machinery.
- Fit machinery snugly under shutter before loosening the brackets or locating U bolts.
- Slowly undo bolts to release the spring tension and the shutter from the brackets.
- Slowly lift the shutter from the brackets keeping it balanced as it is lowered to the ground.

### 1.4 before installation

#### 1.4.1 requirements

mounting – The shutter is designed to be mounted behind the opening.
obstructions – Ensure that the surface where the shutter will be fitted is flush and smooth, and the area behind the opening is free from any protrusions.
structural suitability – Ensure the opening is strong enough to support the shutter. If unsure, consult a builder.
level and plumb – The shutter must be installed in an absolutely level position, if opening is not level and square, appearance and/or sideroom requirementswill be affected. The floor should be level or recessed across the opening to avoid gaps.

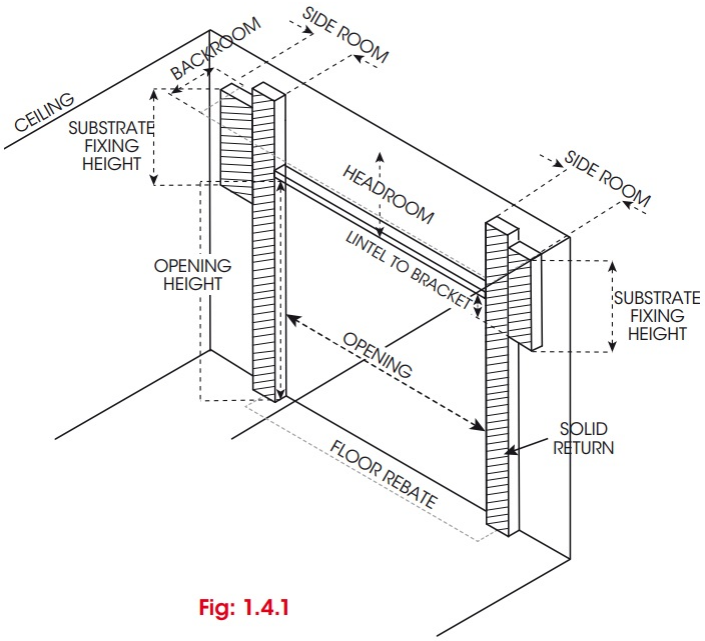



Fig: 1.4.1

**1.4.2 measurements**

opening width – Check the width of the curtain with the width of the opening and ensure that when the fixing holes in the curtain are lined up with the fixing studs on the drum, the curtain overlaps on each side of the opening by 70mm, therefore shutter curtain, including clips should be 140mm wider. (Fig 1.4.1) Position the drum in front of the opening so that the drum tube (excluding the gear wheel) is exactly in the centre of the opening.

opening height – The shutter opening height indicates the distance between the ground and rubber seal at the bottom of the shutter, with shutter fully open.

headroom – A minimum headroom is required for all shutters. Refer to Fig 1.4.2- 1.4.5 for measurements. If the shutter is installed lower into the opening, additional loss of shutter opening height will result.

backroom – A minimum backroom is required for all shutters. Refer to Fig Fig 1.4.2- 1.4.5 for measurements. Extra room would be required for installing large shutters.

side room – The minimum required sideroom for shutters is dependent on the drive mechanism installed and whether the shutter has windlock guides. The measurement must extend beyond the top of the opening to provide fixing for the support brackets. Refer to Fig Fig 1.4.2- 1.4.5 for measurements.

**1.4.3 parts checklist**

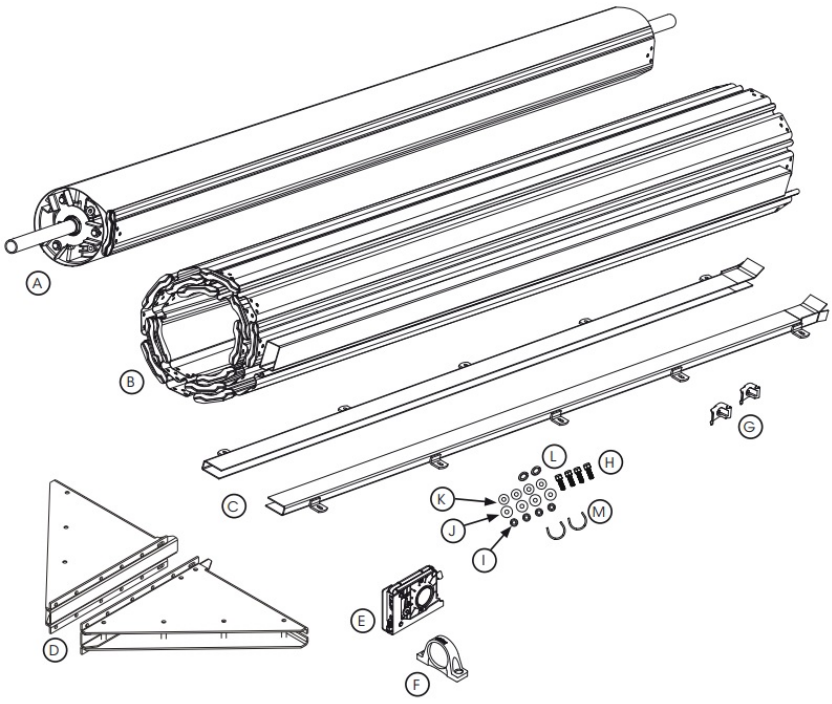



Fig: 1.4.2

| ROLL-A-SHUTTER | | RAS |
|---|---|---|
| **ITEM** | **DESCRIPTION** | **QTY** |
| A | STEEL DRUM | 1 |
| B | STEEL CURTAIN WITH CLIPS | 1 |
| C | SHUTTER GUIDES LEFT AND RIGHT HANDED | 2 |
| D | BRACKETS | 2 |
| E | SAFETY BRAKE | 1 |
| F | PILLOW BEARING 80MM | 1 |
| **SMALL PARTS BAG CONTAINING** | | |
| G | BOTTOM RAIL STOPS AND SCREWS | 2 |
| H | BOLT M22X2.5X90 HEX-HD GRADE 8 | 4 |
| I | NUT M22X2.5 GRADE 8 ZNPI | 4 |
| J | WASHER MUDGUARD M22X44X3.2XAP | 4 |
| K | WASHER FLAT M22X44X3.5 ZNPI | 4 |
| L | WASHER SPRING M22 | 2 |
| M | SHAFT COLLARS (DIRECTLIFT) | 2 |

### 1.4.3 measurements direct lift / direct drive

installation requirements Steel Direct Lift / Direct Drive

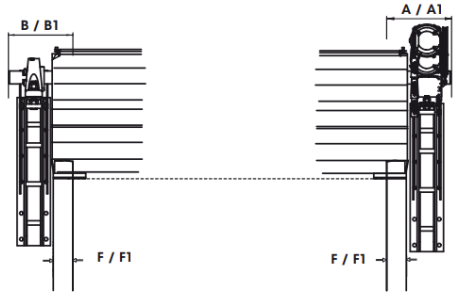



Fig: 1.4.2

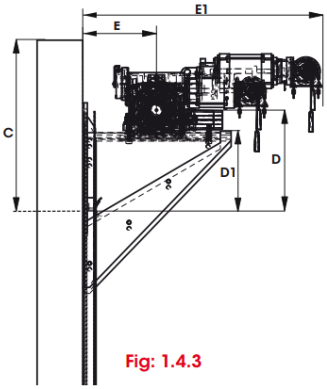



Fig: 1.4.3

**dimension table**

| Door Model Code | Door height (mm) | Door width (mm) | Drum Size (mm) | Minimum Sideroom Opener End | | Minimum Sideroom Plain End | | Recommended Headroom | Axle to Lintel | Lintel to Bracket | Recommended Backroom | | Width of Guide | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | W/L | Non W/L | W/L | Non W/L | | | | Axle to Wall | Opener | W/L | Non W/L |
| | | | | A | A1 | B | B1 | C | D | D1 | E | E1 | F | F1 |
| RAS 6/100 | up to 3000 | up to 4200 | 219 | 315 | 295 | 315 | 295 | 636 | 418 | Measurement determined by size of spindle. Refer to Installing first bracket in installation manual. | 248 | 1040 | 90 | 77 |
| | 3001 - 3900 | up to 6000 | | | | | | 650 | 425 | | 255 | | | |
| | 3901 - 5100 | up to 5700 | | | | | | 694 | 447 | | 277 | | | |
| | 5101 - 6000 | up to 6000 | | | | | | 730 | 465 | | 295 | | | |
| RAS 8/100 | up to 3000 | up to 4200 | 219 | | | | | 636 | 418 | | 248 | | | |
| | 3001 - 3900 | up to 6000 | | | | | | 650 | 425 | | 255 | | | |
| | 3901 - 5100 | up to 5700 | | | | | | 694 | 447 | | 277 | | | |
| | 5101 - 6000 | up to 6000 | | | | | | 730 | 465 | | 295 | | | |
| RAS 10/100 | up to 3000 | up to 4200 | 219 | | | | | 600 | 400 | | 230 | | | |
| | 3001 - 3900 | up to 6000 | | | | | | 650 | 425 | | 255 | | | |
| | 3901 - 5100 | up to 5700 | | | | | | 700 | 450 | | 280 | | | |
| | 5101 - 6000 | up to 6000 | | | | | | 730 | 465 | | 295 | | | |
| **RAS 12/100** | up to 3000 | up to 4200 | 273 | | | | | 610 | 405 | | 235 | | | |
| | 3001 - 3900 | up to 6000 | | | | | | 708 | 454 | | 284 | | | |
| | 3901 - 5100 | up to 5700 | 324 | | | | | 760 | 480 | | 310 | | | |
| | 5101 - 6000 | up to 6000 | | | | | | 790 | 495 | | 325 | | | |

### 1.4.4 measurements direct lift / chain drive

installation requirements Steel Direct Lift / Chain Drive

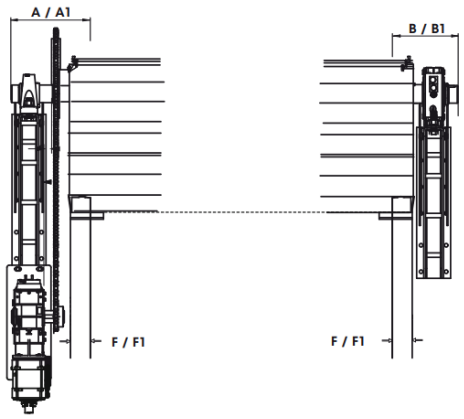



Fig: 1.4.4

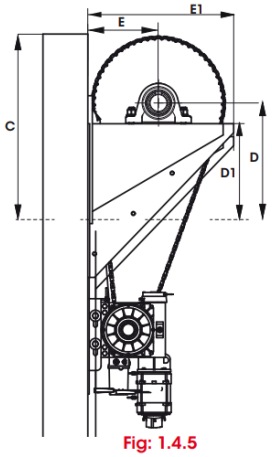



Fig: 1.4.5

**dimension table**

| Door Model Code | Door height (mm) | Door width (mm) | Drum Size (mm) | Minimum Sideroom Opener End | | Minimum Sideroom Plain End | | Recommended Headroom | Axle to Lintel | Lintel to Bracket | Recommended Backroom | | Width of Guide | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | W/L | Non W/L | W/L | Non W/L | Bundle to lintel | | | Axle to Wall | Bundle | W/L | Non W/L |
| | | | | A | A1 | B | B1 | C | D | D1 | E | E1 | F | F1 |
| RAS 6/100 | up to 3000 | up to 9000 | 219 | 353 | 337 | 331 | 305 | 636 | 418 | Measurement determined by size of bearing and safety break. Refer to Installing first bracket in installation manual. | 248 | 436 | 90 | 77 |
| | 3001 - 3900 | up to 8500 | | | | | | 650 | 425 | | 255 | 450 | | |
| | 3901 - 5100 | up to 8000 | | | | | | 694 | 447 | | 277 | 494 | | |
| | 5101 - 6500 | up to 7500 | | | | | | 730 | 465 | | 295 | 530 | | |
| | 6501 - 6800 | 5405- 7000 | | | | | | 810 | 505 | | 335 | 610 | | |
| RAS 8/100 | up to 3000 | up to 9000 | 219 | | | | | 636 | 418 | | 248 | 436 | | |
| | 3001 - 3900 | up to 8500 | | | | | | 650 | 425 | | 255 | 450 | | |
| | 3901 - 5100 | up to 8000 | | | | | | 694 | 447 | | 277 | 494 | | |
| | 5101 - 6500 | up to 7500 | | | | | | 730 | 465 | | 295 | 530 | | |
| | 6501 - 6800 | 5405- 7000 | | | | | | 810 | 505 | | 335 | 610 | | |
| RAS 10/100 | up to 3000 | up to 12000 | 219 | | | | | 660 | 430 | | 260 | 460 | | |
| | 3001 - 4200 | | | | | | | 710 | 455 | | 285 | 510 | | |
| | 4201 - 5400 | | | | | | | 760 | 480 | | 310 | 560 | | |
| | 5401 - 6500 | | | | | | | 790 | 495 | | 325 | 590 | | |
| | 6501 - 9000 | | 273 | | | | | 830 | 515 | | 345 | 630 | | |
| | 9001 - 10000 | | | | | | | 870 | 535 | | 365 | 670 | | |
| **RAS 12/100** | up to 3000 | up to 12000 | 273 | | | | | 670 | 435 | | 265 | 470 | | |
| | 3001 - 4200 | | | | | | | 768 | 484 | | 314 | 568 | | |
| | 4201 - 5400 | | 324 | | | | | 820 | 510 | | 340 | 620 | | |
| | 5401 - 6500 | | | | | | | 850 | 525 | | 355 | 650 | | |
| | 6501 - 7500 | | | | | | | 860 | 530 | | 360 | 660 | | |
| | 7501 - 9000 | | | | | | | 900 | 550 | | 380 | 700 | | |
| | 9001 - 10000 | | | | | | | 910 | 555 | | 385 | 710 | | |

### 1.5 tools and equipment

The following tools are needed to install Roll-A-Shutter® 6, 8, 10 & 12/100 Series.

| | | |
|---|---|---|
| • personal safety equipment<br>• comprehensive tool kit<br>• selected electric tools<br>• magnetic drill press | • electric welder<br>• lifting straps<br>• heavy duty rope<br>• scissor lift | • forklift<br>• crane<br>• chain blocks<br>• spring tensioning bars |

### 1.6 specifications

| Desciption | **Type Name** | **Industrial Steel Slat Type Shutter** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | **6/100** | | **8/100** | | **10/100** | | **12/100** | |
| Model code | | **RAS** | | **RAS** | | **RAS** | | **RAS** | |
| | | Min | Max | Min | Max | Min | Max | Min | Max |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Max Door Height | | 900 | 6000 | 900 | 6000 | 900 | 10000 | 900 | 10000 |
| Max Door Width | | 900 | 7000 | 900 | 7000 | 900 | 12000 | 900 | 12000 |
| **SHUTTER** | | | | | | | | | |
| Slat thickness | | 0.6mm | | 0.8mm | | 1.0mm | | 1.0mm | |
| Minimum shutter overlap each side | | 70mm | | 70mm | | 70mm | | 70mm | |
| Axle overlap on each side | | 350mm | | 350mm | | 350mm | | 350mm | |
| Drum Type | with chain OR opener | 168mm | | 168mm | | 168mm | | 168mm | |
| Operation | Chain geared (below 2 5sqm) | • | | • | | • | | • | |
| | optional motor | • | | • | | • | | included | |
| Bottom Rails | Aluminium T section | • | | • | | • | | • | |
| | Weatherseal | included | | included | | included | | included | |
| | Box section | optional | | optional | | standard<br>< 7000m(W) | | standard<br>< 7000m(W) | |
| **SLAT CONFIGURATION** | | | | | | | | | |
| Solid | | • | | • | | • | | • | |
| Slotted 19 x 101mm (13%) | | • | | • | | • | | | |
| Slotted 32mm Round (14.5%) | | • | | • | | • | | | |
| **GUIDES** | | | | | | | | | |
| Steel Channel, Galvanised 2.0mm ste el, depth 77mm | | • | | • | | • | | • | |
| LOCKS | | | | | | | | | |
| External Bottom rail | | Shoot Bolt | | Shoot Bolt | | Shoot Bolt | | Shoot Bolt | |
| Internal & External slide bolts | | • | | • | | | | | |
| **Optional Extras** | | | | | | | | | |
| Door Opener | | Axess Pro | | Axess Pro | | Axess Pro or G FA | | Axess Pro or G FA | |
| Fixed or independent tapers | | 10mm | 160m m | 10mm | 160m m | 10mm | 160m m | 10mm | 160m m |
| High Wind Option | | • | | • | | • | | • | |
| Mullions | | • | | • | | • | | • | |

**1.7 mounting weights**

Due to the considerable variation in door weights, weights shown are intended to be used for guidance only and not taken as exact figures. Intermediate sizes can be approximated from the sizes listed.

**WARNING!** Weight information supplied is for installer to utilize correct lifting equipment. Failure to used correct equipment may result in death or damage to proper t y.

**all weight shown in kilograms**

### 6/100

| height | width | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2500 | | 3000 | | 4000 | | 5000 | | 7000 | | 9000 | |
| | CW | DW | CW | DW | CW | DW | CW | DW | CW | DW | CW | DW |
| 2500 | 78 | 70.5 | 89.9 | 119 | 119.7 | 187 | 149.6 | 240.1 | 209.3 | 336 | 268.9 | 442 |
| 3000 | 85.6 | 107.5 | 120 | 94.2 | 137.1 | 187 | 171.2 | 240.1 | 239.6 | 336 | 307.9 | 442 |
| 4000 | 107.3 | 107.5 | 140 | 94.2 | 171.7 | 187 | 214.5 | 210 | 300.2 | 336 | | |
| 5000 | 128.9 | 107.5 | 154.8 | 119 | 272.0 | 148.1 | 340 | 208.6 | 475.8 | 260.7 | | |
| 6000 | 150.6 | 107.5 | 180.8 | 119 | 317.8 | 148.1 | 397.2 | 208.6 | 555.9 | 260.7 | | |
| 6800 | | | | | | | | | 620 | 240.7 | | |

### 8/100

| height | width | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2500 | | 3000 | | 4000 | | 5000 | | 7000 | | 9000 | |
| | CW | DW | CW | DW | CW | DW | CW | DW | CW | DW | CW | DW |
| 2500 | 113.1 | 86.7 | 167.9 | 72.6 | 181 | 138.8 | 226.2 | 173.4 | 329.4 | 264.7 | 423.4 | 354.5 |
| 3000 | 129.5 | 86.7 | 183.1 | 93.3 | 207.3 | 138.8 | 259 | 173.4 | 377.4 | 264.7 | 485.1 | 354.5 |
| 4000 | 162.4 | 86.7 | 213.9 | 129 | 259.9 | 138.8 | 324.8 | 173.4 | 473.2 | 264.7 | | |
| 5000 | 195.3 | 86.7 | 257.2 | 129 | 312.5 | 138.8 | 390.6 | 173.4 | 569.1 | 234.7 | | |
| 6000 | 228.2 | 86.7 | 300.5 | 129 | 365.1 | 138.8 | 456.3 | 173.4 | 664.9 | 234.7 | | |
| 6800 | | | | | | | | | 741.6 | 234.7 | | |

### 10/100

| height | width | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2500 | | 3000 | | 4500 | | 7000 | | 8500 | | 10000 | |
| | CW | DW | CW | DW | CW | DW | CW | DW | CW | DW | CW | DW |
| 2500 | 139.8 | 70.3 | 167.9 | 76.2 | 251.4 | 128.2 | 463.1 | 183.2 | 562.1 | 227.6 | 661.4 | 261.5 |
| 3000 | 152.5 | 73.1 | 183.1 | 96.9 | 255.6 | 198.5 | 470.7 | 301.2 | 571.3 | 362.5 | 672.2 | 348.8 |
| 4000 | 166.6 | 154.2 | 213.9 | 119 | 320.5 | 198.5 | 590.4 | 301.2 | 716.7 | 362.5 | 843.3 | 348.8 |
| 5000 | 200.4 | 154.2 | 257.2 | 119 | 402.4 | 153 | 685 | 215.4 | 831.6 | 247.3 | 978.5 | 319.2 |
| 6000 | 234.1 | 154.2 | 300.5 | 119 | 470.2 | 153 | 800.5 | 215.4 | 979.1 | 247.3 | 1150 | 319.2 |
| 6800 | | | | | | | 892.9 | 215.4 | 1084 | 247.3 | 1275 | 319.2 |

### 12/100

| height | width | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2500 | | 4000 | | 6000 | | 8000 | | 10000 | | 12000 | |
| | CW | DW | CW | DW | CW | DW | CW | DW | CW | DW | CW | DW |
| 2500 | 148.6 | 132.5 | 237.9 | 212 | 356.6 | 318 | 475.3 | 424 | 594.1 | 530 | 712.8 | 636 |
| 4000 | 213.6 | 132.5 | 341.8 | 212 | 512.5 | 318 | 683.2 | 424 | 853.9 | 530 | 1024 | 636 |
| 6000 | 300.2 | 132.5 | 480.3 | 212 | 720.3 | 318 | 960.3 | 424 | 1200 | 530 | 1440 | 636 |
| 8000 | 386.8 | 132.5 | 618.9 | 212 | 928.2 | 318 | 1237.4 | 424 | 1546.7 | 530 | 1856 | 636 |
| 10000 | 473.4 | 132.5 | 757.5 | 212 | 1136 | 318 | 1514.5 | 424 | 1892.1 | 530 | | |

| | |
|---|---|
| CW | CURTAIN WEIGHT |
| DW | DRUM WEIGHT |

## installation

**2.1 install first bracket**
**dimension table**

| | B&D Model | plain end | | D | D1 | D2 |
|---|---|---|---|---|---|---|
| | | B | B1 | | | |
| | | W/L | non W/L | | | |
| Direct Drive | RS0654 | 295 | 295 | Refer to 1.4.3 & 1.4.4 for measurement | See formula below | 42 |
| | RS0655 | | | | | 49 |
| | RS0656 | | | | | 49 |
| | RS0657 | | | | | 60 |
| Chain Drive | RS0650 | 331 | 305 | | | 95 |
| | RS0651 | | | | | 118 |
| | RS0652 | | | | | 118 |
| | RS0653 | | | | | 145 |
| **bracket height position ( D1 = D – D2 )** | | | | | | |

**Fig: 2.1.1**

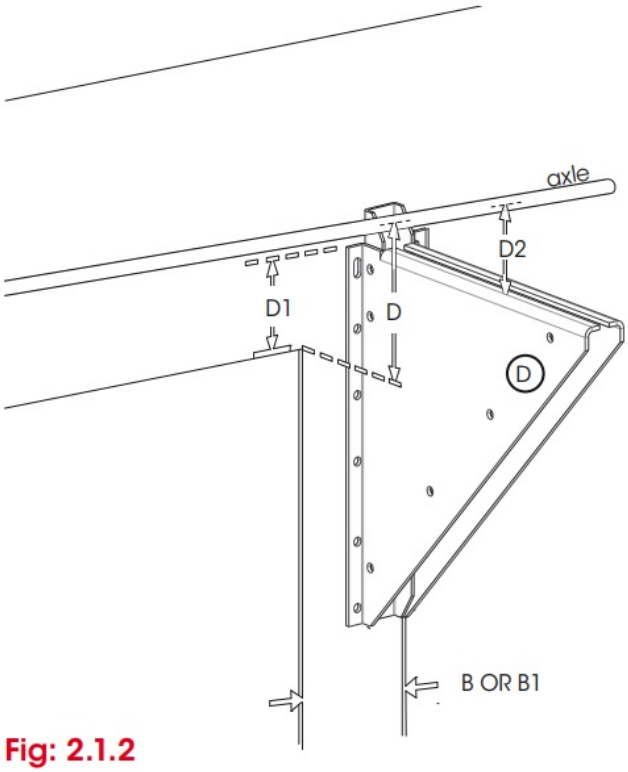



**Fig: 2.1.2**

a) Look at the safety brakes **E** supplied with the shutter and match the B&D model number to the above diagrams F i g 2.1.1 and 2.1.2 for bracket height and sideroom position for the plain end bracket.
b) Mark 6 hole positions using slots of the bracket **D**.
c) Drill holes, then attach bracket using suitable fasteners as per 1.2 substrate fastener recommendations.

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

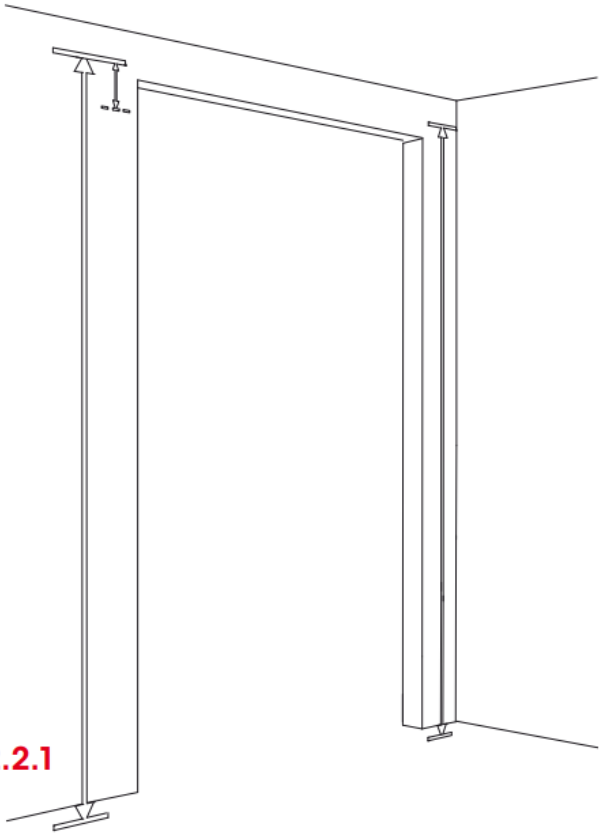


Fig: 2.2.1

**dimension table**

| | B&D Model | opener end | | | D2 |
|---|---|---|---|---|---|
| | | A | A1 | | |
| | | W/L | non W/L | | |
| Direct Drive | RS0654 | 295 | 295 | for bracket position see formula belo w | 120 |
| | RS0655 | | | | 120 |
| | RS0656 | | | | 120 |
| | RS0657 | | | | 135 |
| Chain Drive | RS0650 | 353 | 337 | | 115 |
| | RS0651 | | | | 180 |
| | RS0652 | | | | 190 |
| | RS0653 | | | | 190 |
| **bracket position = Axle level – D2** | | | | | |

**CAUTION:** The axle must be perfectly level for the shutter to operate.
a) Using a laser level or water level, mark the position on the wall for the centre of the axle (Fig 2.2.1).
b) Re-check levels, determine opener end bracket position as per calculation above, then drill and affix with fasteners as with first bracket.

**2.2 position the drum assembly on brackets**
**2.2.1 direct drive position**

**TWO PERSON:** this product requires two persons to secure onto the brackets. Use proper techniques and equipment to raise the drum up and onto the brackets. Refer to weights table in section 1.7 for equipment lifting

capacity.

| **dimension table** | | | | |
|---|---|---|---|---|
| | | **height (mm)** | **width (mm)** | **E** |
| Direct Drive | RAS 10/100 | up to 3000 | up to 4200 | 230 |
| | | 3001 – 3900 | up to 6000 | 255 |
| | | 3901 – 5100 | up to 5700 | 280 |
| | | 5101 – 6000 | up to 6000 | 295 |
| | **RAS 12/100** | up to 3000 | up to 4200 | 235 |
| | | 3001 – 3900 | up to 6000 | 284 |
| | | 3901 – 5100 | up to 5700 | 310 |
| | | 5101 – 6000 | up to 6000 | 325 |

a) With the drum the correct way around (curtain rolls down rear of the opening) remove the slat mounted to the drum, keeping the slat, nuts and bolts to the side.
b) Carefully lift the drum up and over the brackets **D** using suitable lifting equipment – to avoid damaging the drum.
c) Before lowering onto the brackets slide the bearing **F** and drive unit onto the ends, make sure they are correctly orientated.
d) Position onto the brackets as per fig 2.2.1 and 2.2.2 using measurement E from the dimension table, slide the axle through and fit shaft collars **M**.
When satisfied the shaft collars can be tack welded in place.
e) Secure bearing and drive unit in place with Hex Head Bolts **H** , spring washers **L**, flat washers **K** and M22 nuts **I** as shown. Tighten the nuts on the bearings evenly to a torque of 40Nm or 30 **ft.lb.**

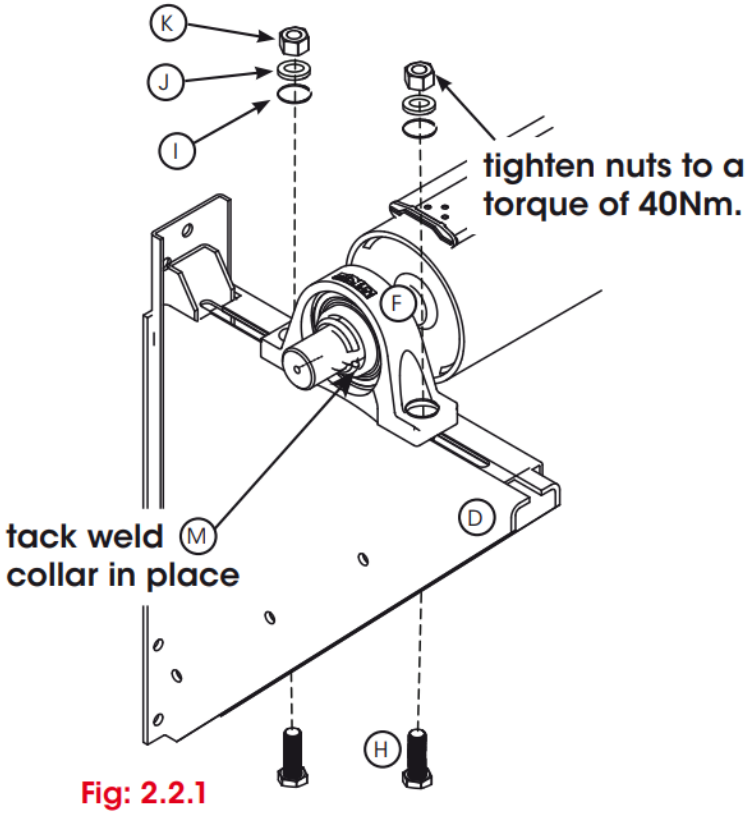


Fig: 2.2.1

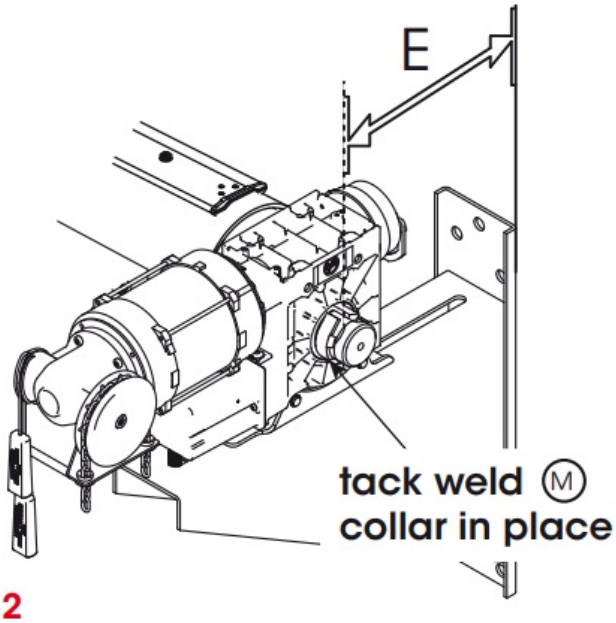



Fig: 2.2.2

**2.2.2 chain drive position**

**TWO PERSON:** this product requires two persons to secure onto the brackets. Use proper techniques and equipment to raise the drum up and onto the brackets. Refer to weights table in section 1.7 for equipment lifting capacity.

| **dimension table** | | | | |
|---|---|---|---|---|
| | | **height (mm)** | **width (mm)** | **E** |
| Chain Drive | RAS 10/100 | up to 3000 | up to 12000 | 260 |
| | | 3001 – 4200 | | 285 |
| | | 4201 – 5400 | | 310 |
| | | 5401 – 6500 | | 325 |
| | | 6501 – 9000 | | 345 |
| | | 9001 – 10000 | | 365 |
| | **RAS 12/100** | up to 3000 | up to 12000 | 265 |
| | | 3001 – 4200 | | 314 |
| | | 4201 – 5400 | | 340 |
| | | 5401 – 6500 | | 355 |
| | | 6501 – 7500 | | 360 |
| | | 7501 – 9000 | | 380 |
| | | 9001 – 10000 | | 385 |

a) With the drum the correct way around (curtain rolls down rear of the opening) remove the slat mounted to the drum, keeping the slat, nuts and bolts to the side.
b) Carefully lift the drum up and over the brackets using suitable lifting equipment – to avoid damaging the drum.
c) Before lowering onto the brackets slide the small chain sprocket, bearings **F** and safety brake **E** onto the ends, make sure they are correctly orientated.
d) Fit the opener plate and opener as shown in Fig 2.2.3 using suitable fasteners as per 1.2 substrate fastener

recommendations.

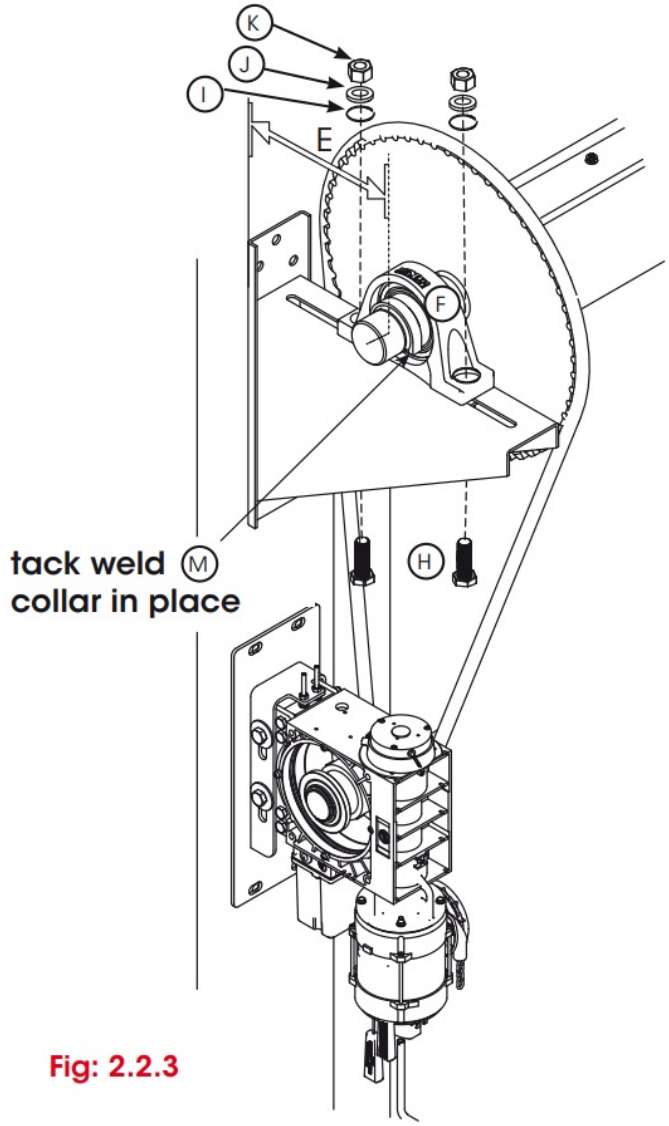



Fig: 2.2.3

e) Position the drum onto the brackets as per fig 2.2.3 and 2.2.4 using measurement E from the dimension table, when satisfied the shaft collars **M** can be tack welded in place.

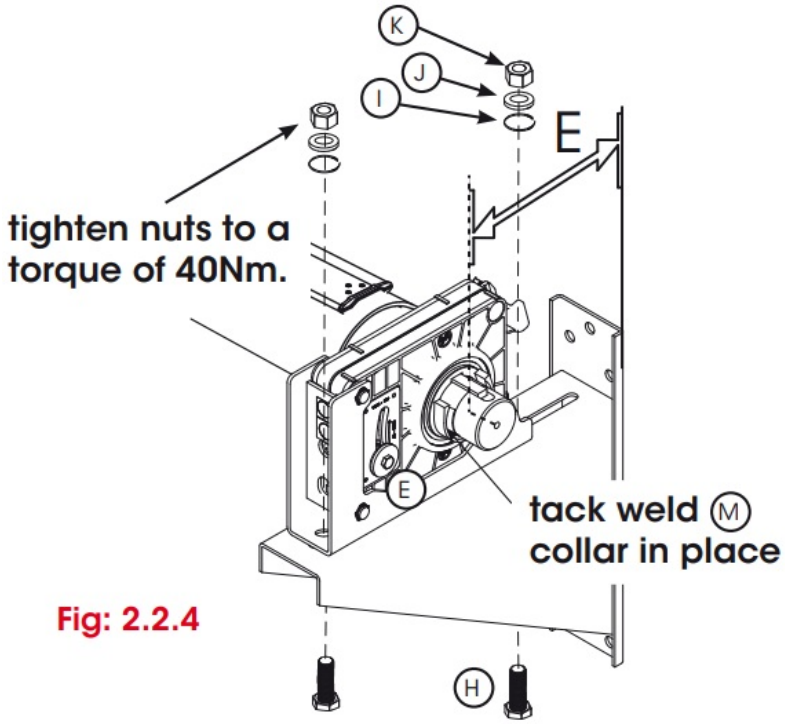



Fig: 2.2.4

f) Secure bearing and safety brake in place with Hex Head Bolts **H**, spring washers **L**, flat washers **K** and M22 nuts **I** as shown. Tighten the nuts on the bearings evenly to a torque of 40Nm or 30 ft.lb.
g) Fit the manual chain to the chain wheel. Align the sprockets of the opener and small chain sprocket and tighten.

h) Tension the drive chain and ensure the sprocket grub screws are tightened.
i) The safety brake must be connected to the opener via a 2core wire (not supplied) to ensure the safety brake operation is active.

⚠ **WARNING!** The 2core wire MUST be secured away from any moving parts.

**2.3 preparing and fitting the curtain**

a) The curtain can now be prepared; make sure it is off the ground so that lifting slings or fork lift tines can be fitted under it.
b) Make sure that it is the correct way around with the curtain rolling away from the forklift and the top end slat of the curtain is on the top of the roll.
c) Remove the packaging and strapping around the curtain.
d) Using a screwdriver twist the end clip on the top slat so that the slat previously removed can be slid into the top slat. When fully inserted twist the end clip back into position.
e) The bundle of curtain now needs to be secured in a roll as it was in the original packaging, this should be done about a metre from each end using the appropriate ropes wound around 2-3 times.
**NOTE:** For shutters wider than 5 metres an additional centre rope should be used.

⚠ **WARNING!** The lifting slings MUST be able to lift the full curtain weight. Refer to curtain weight table in section 1.7.

**2.4 fitting the curtain to the drum**

⚠ **WARNING!** This step requires proper techniques and equipment to raise the curtain up to the drum. Refer to weights table in section 1.7 for equipment lifting capacity. Failure to have appropriate equipment and an exclusion zone can cause death or damage to property.
a) Lift the curtain into position using a overhead crane or forklift. Ensure adequate protection is placed around the curtain to avoid damage.
**NOTE:** If using the crane method and a spreader bar is not available ensure the straps are placed as wide apart as possible.
b) Carefully lift to within 300mm under the drum, Figure 2.4.1, by means of two other lengths of heavy gauge rope sling the curtain roll up to the drum as shown in the illustration. Make sure the end of the curtain is on top of the roll and able to be raised up.
c) When you are sure the curtain is held securely by several wraps of heavy rope release the lifting straps or forklift slowly allowing the wraps of rope to take the weight of the curtain.
d) Switch power on to the opener and operate opener to rotate the drum and unroll the curtain sufficiently to allow the fixing slat to be passed up between the lintel and the drum. Rotate the drum and curtain until the fixing studs on the drum and the curtain fixing slat can be aligned.
Secure the hauling chain (if installed) and fix the curtain to the drum with the studs nuts and washers provided.
e) Release the hauling chain, operate opener to rotate the drum to roll the curtain fully onto the drum, make sure the bottom rail is at about 5 e hauling chain to prevent the drum from turning and tighten the rope slings.
f) The assembly is now ready for the guides to be installed.

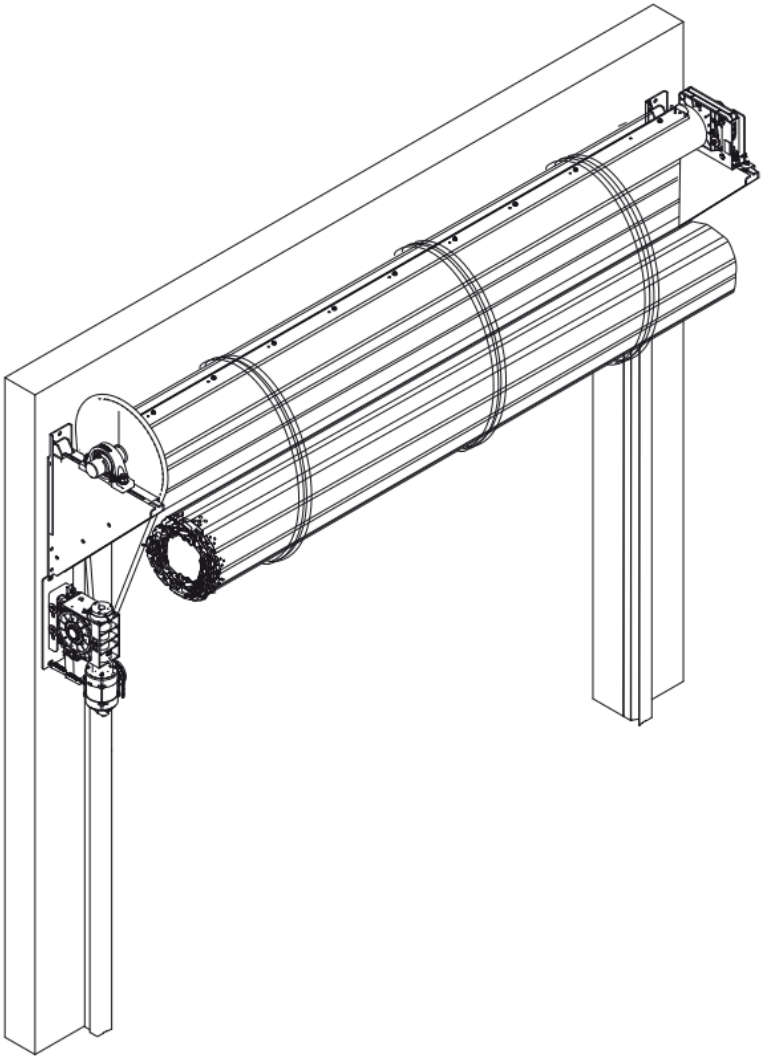


Fig: 2.4.1 Chain drive product shown

**2.5 install the guides**

**2.5.1 positioning the guides**

Guides must be correct length. The guide stop should be level with the bottom of the lintel for aluminum bottom rail installation. Guides can be shortened by cutting the bottom of guide.

a) Position guides **C** true and plumb at each side of the opening. Allow 3-5 mm of working clearance between the shutter and the inside of each guide as per Fig 2.5.1. For Windlock setup refer to Fig 2.5.2.

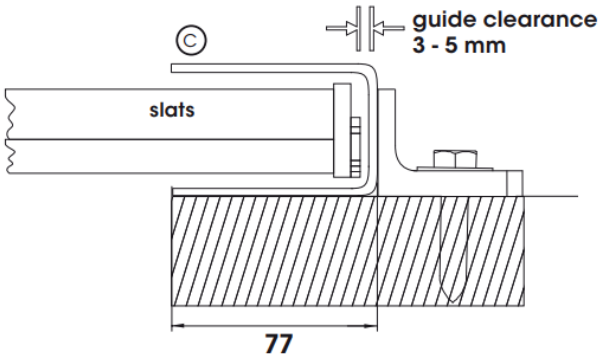



Fig: 2.5.1 (standard guide)

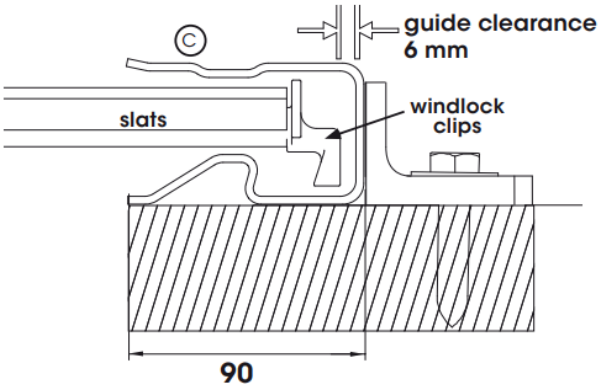



Fig: 2.5.2 (windlock guide)

b) Using the guides brackets as a template (Fig 2.5.3) mark out and drill holes in the wall to match the spacing of the fixing bolt holes in the guides bracket.

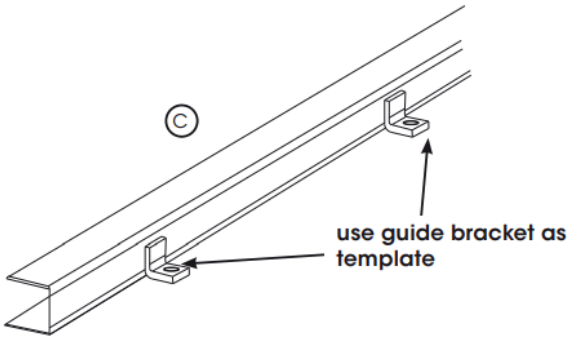



Fig: 2.5.3

c) Mark, drill holes and loosely fix the first guide. Select the appropriate fixing as per Section 1.2.
d) Using a laser level, transfer position of top of first guide arm to opposite side of opening, then mark, drill and fix second guide. Ensure that the guides are secure.
e) Apply general purpose grease to the internal surface of the guide to safeguard smooth operation.

**CAUTION:** The guides must be perfectly level for correct shutter operation.

**WARNING!** All High Wind installations must adhere to fixing types and centres as referenced in the B&D High Wind Drawings.

If securing to uneven blockwork, packers may be required behind clips, to prevent them twisting out of square; also ensure that clips are positioned on secure blocks, not mortar.

**2.5.2 install the bottom rail stop**

a) Carefully remove the rope slings holding the curtain, disengage opener and lower bottom rail into the guides.

**WARNING!** When the bands holding the shutter curtain rolled up are removed, there will be a strong tendency to rise and revolve. If uncontrolled, the rapidly unrolling shutter could cause damage or injury.
b) Fit bottom rail stops **G** using self locking nuts provided. Allow the door to rise and rest against the head stop (Fig 2.5.4)

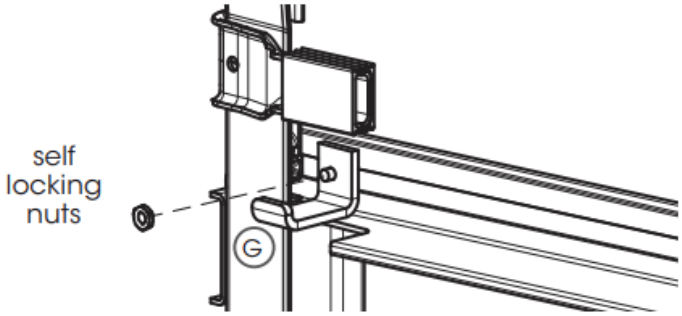



Fig: 2.5.4

**after installation care**

**general care of your Roll-A-Shutter®**

Your B&D Roll-A-Shutter® has been manufactured from galvanised or powder coated steel, 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.

**Note:** Be aware of electric shock.

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

**regular maintenance required**

B&D recommends that you check the operation of your Roll-A-Shutter ® 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: The door guide grease should be cleaned out and replaced least annually or more frequently in extreme conditions.

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.

WARNING: The springs on the door are under extreme tension. On NO account should they be adjusted by an inexperienced person. B&D recommends regular servicing and safety checks be carried out at least annually, more frequently in extreme conditions or in high use environments.

**warranty**

B&D Roll-A-Shutter®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 **bnd.com.au**

**b&d doors office locations**

| | | |
|---|---|---|
| Head Office | 6-8 Fiveways Blvd, Keysborough 3073 | Phone (03) 9791 2000 |
| New South Wales | 34 Marigold St, Revesby 2212 | Phone (02) 9722 5555 |
| Queensland | 17 Oasis Court, Clontarf 4019 | Phone (07) 3883 0200 |
| Victoria | 147-153 Canterbury Rd, Kilsyth 313 7 | Phone (03) 9237 7766 |
| South Australia | 23 Frederick Rd, Royal Park 5014 | Phone (08) 8440 4747 |
| Western Australia | 96 Mulgul Rd, Malaga 6090 | Phone (08) 9247 8777 |
| International/Export | 34 Marigold St, Revesby 2212 | Phone +61 (0)2 9722 5555 |

**your representative is……..**

## Documents / Resources

| | |
|---|---|
|  | b d 12-100 Series Roll A Shutter [pdf] Instruction Manual<br>12-100 Series Roll A Shutter, 12-100 Series, Roll A Shutter, A Shutter, Shutter |

## References

- B&D Garage Doors - Safe and Secure Australian Garage Doors - B&D Australia
- B&D Garage Doors - Safe and Secure Australian Garage Doors - B&D Australia
- User Manual