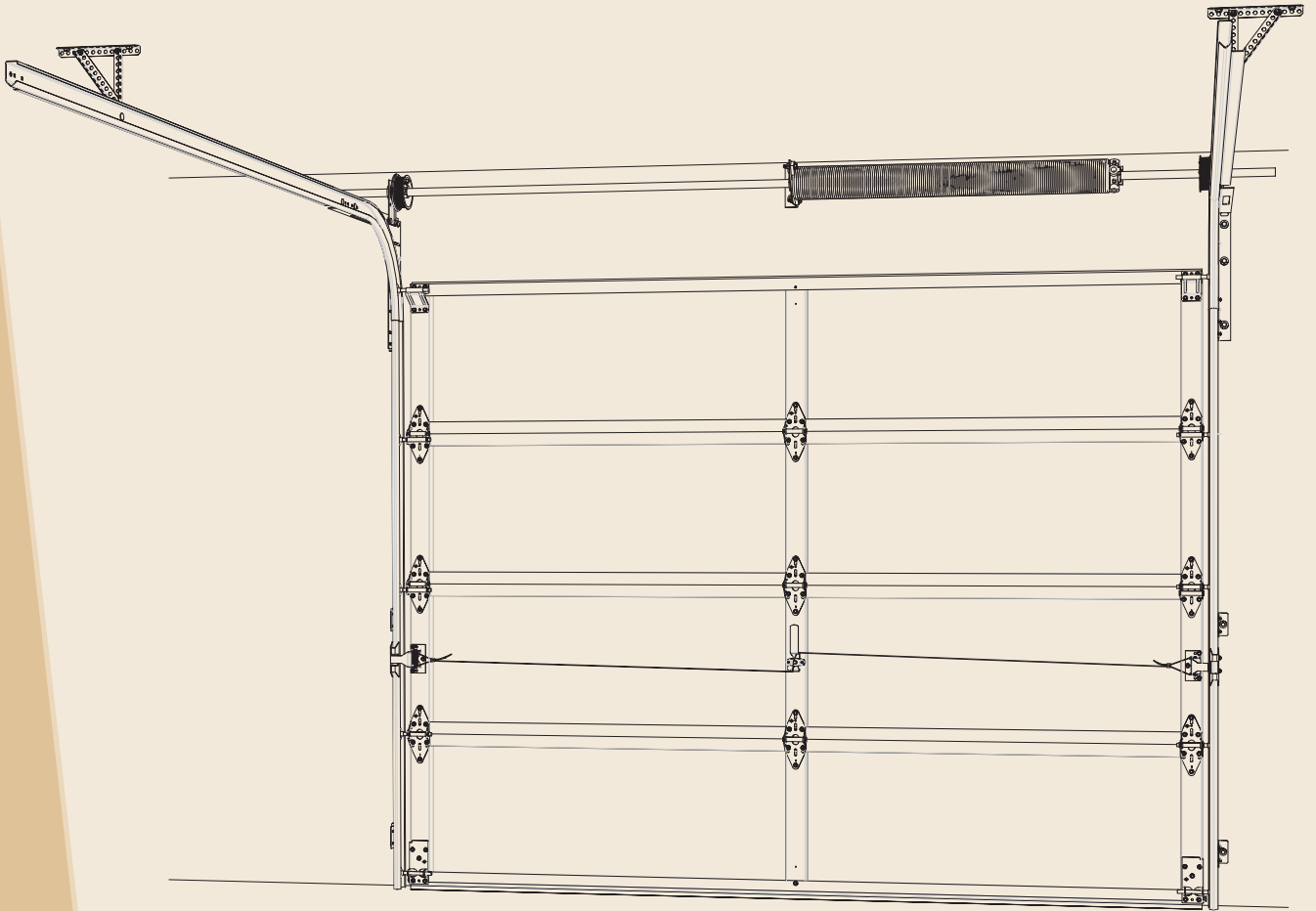




Cedarpanel™

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 	<ul style="list-style-type: none"> Pack sizes Use of 2 person lifts Use of mechanical aids Avoid twisting (Practice correct lifting techniques) Correct use of ladders while installing tracks
<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 windows in some panel 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 (striking installer on the head or body) 	<ul style="list-style-type: none"> Ensure correctly fitting winding bar is used Ensure the correct length winding bar is utilised Ensure winding bar is placed appropriately in the torsion socket plug Ensure correct bolts are tightened or loosened (or clamp pliers) to ensure there is no release or controlled release of energy from the spring either through the torsion bar or the winding bar Keep hands clear of the torsion plug at all times Keep head clear of the tensioning bar at all times

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.

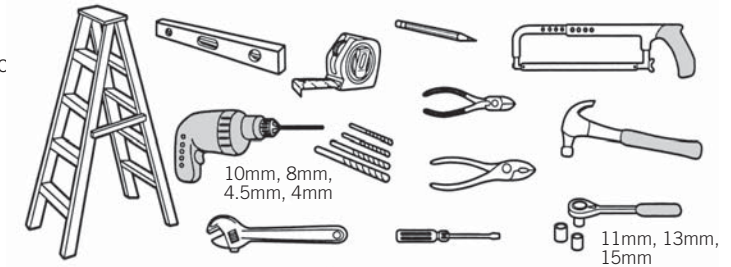
The installer must select and use fasteners appropriate to the material into which they are being fixed.

1.3 TOOLS CHECKLIST

The following tools are needed to install sectional overhead doors.

- Hammer
- Spirit level 1200mm/water level 7-8 metres (clear hose)
- Measuring tape
- Extension lead
- Step ladder
- Speed drill and drill bits (6mm)
- Impact drill and masonry bits (10mm)
- Hack saw
- Open end adjustable spanner
- A set of open end spanners socket set and speed brace
- Set square
- Wood chisel
- Steel chisel
- Cutting knife
- Wood and steel punch
- Screw driver set

- Pliers
- Tin snips
- 2 vice grips
- Felt tip pen & pencil
- 2 winding bars OT 2457 or OT 2458



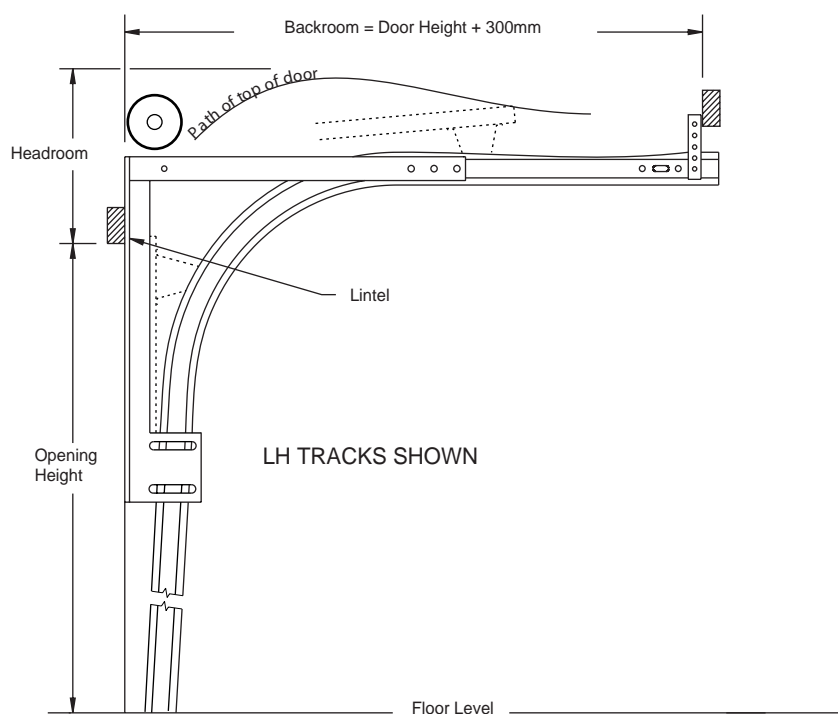
1.4 INSTALLATION CHECKLIST

1. Determine the opening height and width (check opening for square).
2. Determine distance from the bottom of the lintel to the ceiling (headroom). Minimum headroom required for standard hardware is 280mm. Be sure that this headroom clearance is consistent across the opening and to the rear of the opening (see Figure 1.5.1).
3. Determine the sideroom clearance available (distance from the side wall to the inside face of the jamb). Note track brackets can be reversed to reduce the sideroom required. However, at least 100mm of sideroom must exist above the door lintel to prevent the horizontal track from fouling the side wall.
4. For a weatherseal, Sectional Doors are typically 40mm-60mm wider than the opening and overlap each jamb by half this amount. Sectional Doors are at least 20mm higher than the opening for the same reason.
5. Determine that the backroom clearance (the distance from the door opening back along the ceiling) is sufficient to ensure that no overhead obstructions will hinder the smooth operation of the door.
6. For safe and proper installation and operation of your door these instructions must be followed in sequence. It is assumed that anyone attempting installation has sufficient mechanical knowledge and ability to install a garage door. If in any doubt please contact a recognised B&D® dealer.
7. Overhead Sectional Doors must be installed onto a proper frame. Do not install the door hardware directly onto drywall cladding, as this will eventually crumble causing the hardware to loosen away from the wall.
8. Move all tools and door parts inside the garage before commencing installation especially if no egress door exists.
9. **SAFETY CAUTION:** The torsion springs are under severe tension; do not loosen outer bearing brackets or torsion springs without releasing spring tension.

1.5 CHECKING MEASUREMENTS

SECTIONAL DOOR HEADROOM REQUIREMENTS			
	HEADROOM		SELF CLOSING TOP PANEL
	Manual	Opener	
Standard equipment	280	320	✓
O & E kit	–	200	motor closing
Twin track front mount low headroom	200	250	✓
Rear mount low headroom	150	200	✓
Rear super low headroom	–	100	motor closing

FIGURE 1.5.1 HEADROOM & BACKROOM REQUIREMENTS



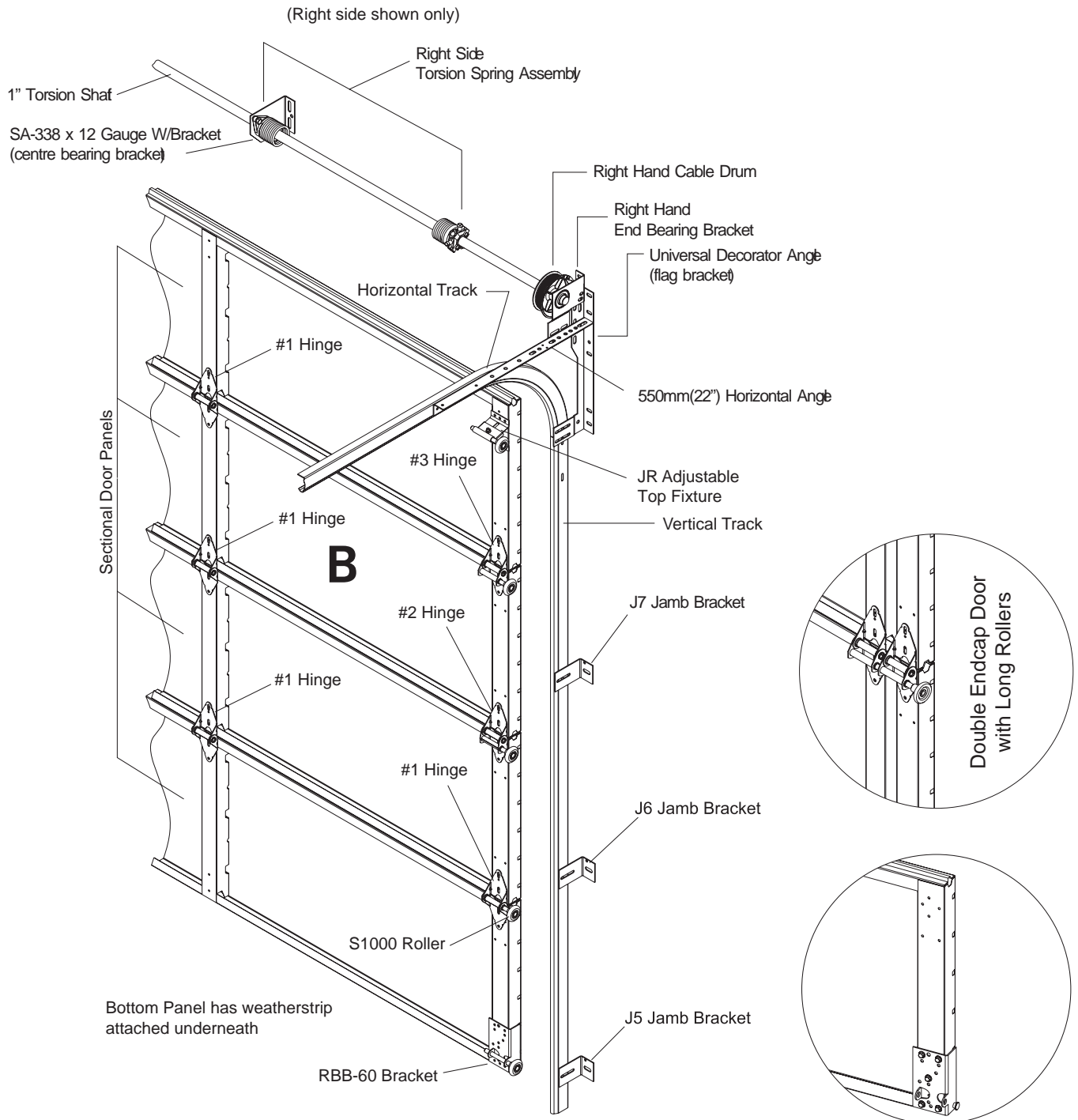
NOTES:

1. Headroom shown above is indicative only. Some installations may require less headroom.
2. Double track system accommodates use of opposite hand end bearing and flag brackets to standard installation.

2.0 INSTALLATION

2.1 HINGE, HANGER & BRACKET CONFIGURATION

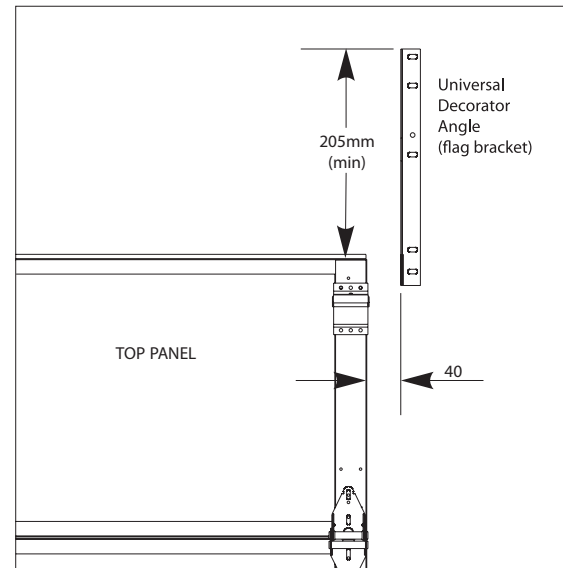
FIGURE 2.1.1 STANDARD SECTIONAL DOOR COMPONENTS



2.2 INSTALLATION INSTRUCTIONS

- Step 1 Fix the mohair strip (option) around the opening edges using a staple gun or contact adhesive.
- Step 2 Fit the right and left hand RBB-60 brackets to the lower corners of the bottom panel (the one with the weather strip) using 5 self drilling metal tek screws for each bracket (see Figure 2.1.1).
- Step 3 Fix the lower leaves (lower hinge leaves are numbered) of the #1 hinges at the top of the bottom door panel using 2 self drilling metal tek screws per leaf. **NOTE:** When installing hinges, make sure the hinge number is always on the lower leaf.
- Step 4 Centralise the bottom panel in the door opening so that it overlaps evenly on each side.
- Step 5 Level the top of this panel with a spirit level. Shim the panel off the floor to achieve level if necessary.
- Step 6 Temporarily secure the bottom panel in position using large nails at the outside edges. This prevents the panel from falling until the track is installed. (Right side shown only)
- Step 7 Fix the bottom leaves of #2 hinges to each top corner of another panel and fix #1 hinge(s) to the inter-Right Side mediate position at the top.
- Step 8 Centralise this panel on top of the bottom panel. Hold in position with nails and fix the top leaves of the SA-338 x 12 Gauge W/Bracket lower panel's hinges to it. (centre bearing bracket)
- Step 9 Repeat steps 6 & 7 for the third panel. Use two #3 hinges for this. Centralise on previous two panels Right Hand and after positioning with nails secure the previous panels hinges to the lower edge. Continue with any End Bearing Bracket further panels in the same way. The top panel needs the adjustable top fixture brackets attached instead of hinges.
- Step 10 Fix the decorator angles (flag brackets) to the lintel in the position shown in Figure 2.2.1. The "flag" on the decorator Universal angle should be at the bottom. Care should be taken to Decorator use the correct hand for each side of the opening (Refer 205mm (flag bracket) to main diagram).
- Step 11 Insert a S1000 roller into top & bottom brackets and all outside hinges. Attach the steel cables to the RBB-60 bottom brackets and thread cables up behind the rollers to the top of the door.
- Step 12 Cut the vertical tracks to the following measurement. Measure from the floor to a centre point between the slots on the "flag" of the decorator and subtract 5mm. Be sure there are holes at the **TOP** of each track when they are cut. You will be making one left and one right hand track with these cuts.
- Step 13 Loosely attach the jamb brackets to each vertical track using the slots provided. Attach with the small carriage bolts with the dome head inside the track.

FIGURE 2.2.1 FLAG BRACKET LOCATION

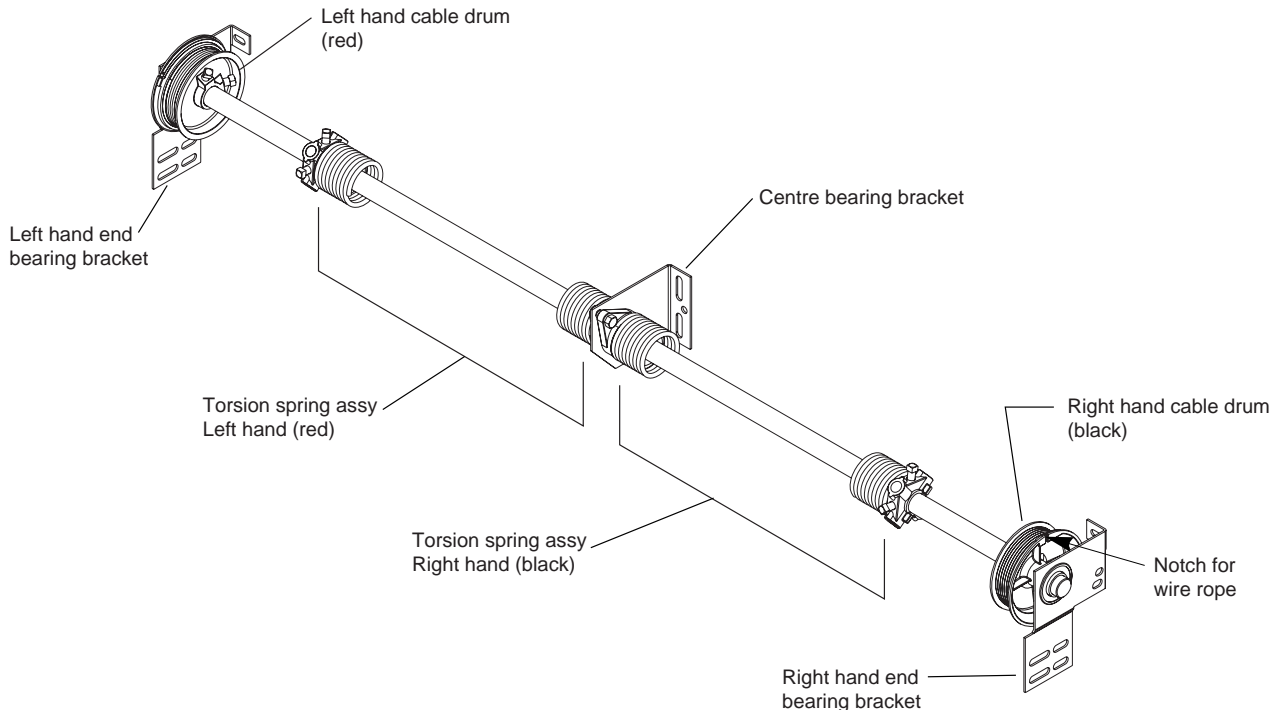


- Step 14 Position the vertical tracks over the rollers and rotate into position with the jamb brackets against jamb.
- Step 15 Attach the top of each vertical track to the bottom slot in the "flag" of the decorator angle with the dome head of the small carriage bolts to the inside. Adjust tracks so door sits against back of jambs and tighten carriage bolts. Vertically level the track and fasten the jamb brackets to the jamb with the 14 x 50 wood tek screws provided.
- Step 16 Attaching the horizontal track. If working alone, use a ladder or rope tied to a rafter to hold up the back of the horizontal track. Fasten the curved end to the "flag" of the decorator angle with the dome head of the small carriage bolts to the inside of the track. Loosely fasten the horizontal angles to each horizontal track. Approximately level each track then attach the horizontal angle to the decorator angle with the small carriage bolts. Using perforated angle, loosely hang the horizontal track. Do not brace as yet. Adjust the top fixture bracket so the S1000 roller sits snugly in the track.
- Step 17 Locate the centre bearing bracket, the left (red) and right (black) cable drums, left and right end bearing brackets, spring(s) with attached fittings and the torsion shaft. Facing the inside of the garage opening, assemble these parts on the floor as in Fig 2.2.2. Note the "red" cable drum is located to the left, "black" to the right.
- Step 18 With the aid of an assistant, raise the assembly to rest the ends of the shaft on top of the horizontal angles.
- Step 19 Attach each end bearing plate to a horizontal angle with 3 large carriage bolts. A 14 x 50 tek wood screw can also be used to fix each end bearing plate to the lintel.

Step 20 Using a level as a guide, position the centre bearing bracket to ensure sufficient sideroom for the spring(s) with the torsion shaft level. **It is vital that this plate is very securely anchored to the lintel with the 14 x 50 tek screws as the full torsion of the springs is held by this bearing bracket.**

Step 21 Attach the left hand and right hand torsion springs to the appropriate sides of the centre bearing bracket using the two M8 x 40 bolts, nuts and washers provided. Slide the respective cable drums against the end bearing brackets but do not yet tighten until instructed.

FIGURE 2.2.2 TORSION BAR ASSEMBLY



Step 22 Thread the cables up the side of the door, between the roller shafts and the jambs. Secure the ends of the cable in the notch on the high spiral rim of the cable drums shown above. Firmly attach a pair of vice grips to the torsion shaft in the position shown in lower sketch with the vice grips securely wedged against the lintel. **VERY IMPORTANT!!**

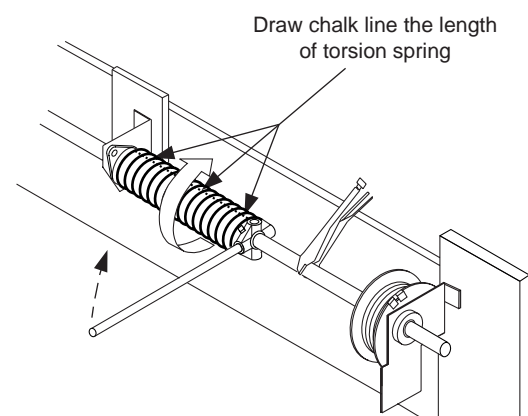
Step 25 Carefully release the vice grips and raise & lower the door to check operating ease. The door should come to a gentle stop at the floor. If the door comes down hard the spring tension will need to be increased by a 1/4 to 1/2 a turn. If the door tends to lift off the floor decrease the spring tension by 1/4 to 1/2 a turn. If two springs, adjust both by the same amount.

Step 23 Turn the left hand cable drum by hand until the cable is taut and sitting in the correct grooves on the drum. Secure the cable drum to the shaft by tightening the set screws. Leave approximately 3mm between the drum and the end bearing plate. Repeat the procedure for the other side ensuring that cables have an equal tension. **DO NOT REMOVE THE VICE GRIPS!!**

Step 26 Adjust the top fixture to ensure the top panel is resting face to face with the jamb. Recheck all fastenings and hardware to be sure they are tight. Brace the horizontal track parallel to door with door in open position. Check that the cables do not rub and the torsion spring rollers do not bind in the track when the door is operated. Lubricate all moving parts except nylon rollers and running surface of the track.

Step 24 Draw a line across the face of the spring with chalk to assist with counting spring revolutions when tensioning the spring(s). Use two winding bars (12 x 500mm). Insert one bar in the winding cone, in the hole closest and rotate the spring 1/4 turn in a counter clockwise direction as shown in sketch below. Hold in this position while inserting the second bar and repeat the procedure. The required number of turns to tension the spring(s) is indicated on the packing list and spring label. After winding the spring retain the winding bar in the spring cone and securely tighten the set screws. Then remove the winding bar. Repeat for other spring if door requires two springs.

FIGURE 2.2.3 FLAG BRACKET LOCATION



2.3 ALTERNATE SETUPS FOR LOW HEADROOM SECTIONAL DOOR MOUNTING

SECTIONAL DOOR HEADROOM REQUIREMENTS			
	HEADROOM		SELF CLOSING TOP PANEL
	Manual	Opener	
Standard equipment	280	320	✓
O & E kit	–	200	motor closing
Twin track front mount low headroom	200	250	✓
Rear mount low headroom	150	200	✓
Rear super low headroom	–	100	motor closing

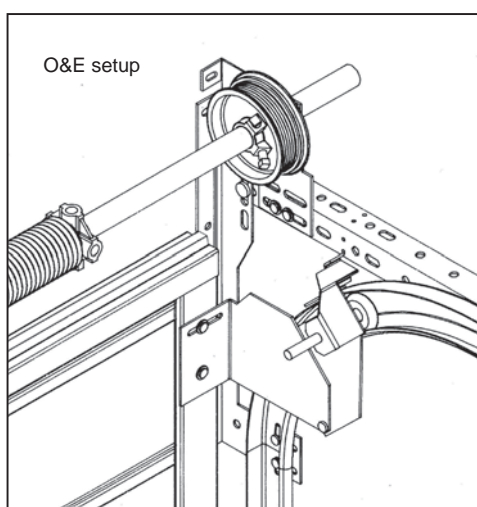
The table above demonstrates the headroom required for various low headroom options.

NOTES:

1. Headroom shown above is indicative only. Some installations may require less headroom.
2. Double track system accommodates use of opposite hand end bearing and flag brackets to standard installation.

FIGURE 2.2.2 O&E SETUP

The O&E kit can be retrofitted to an existing installation. However it is only suitable for doors fitted with an opener.



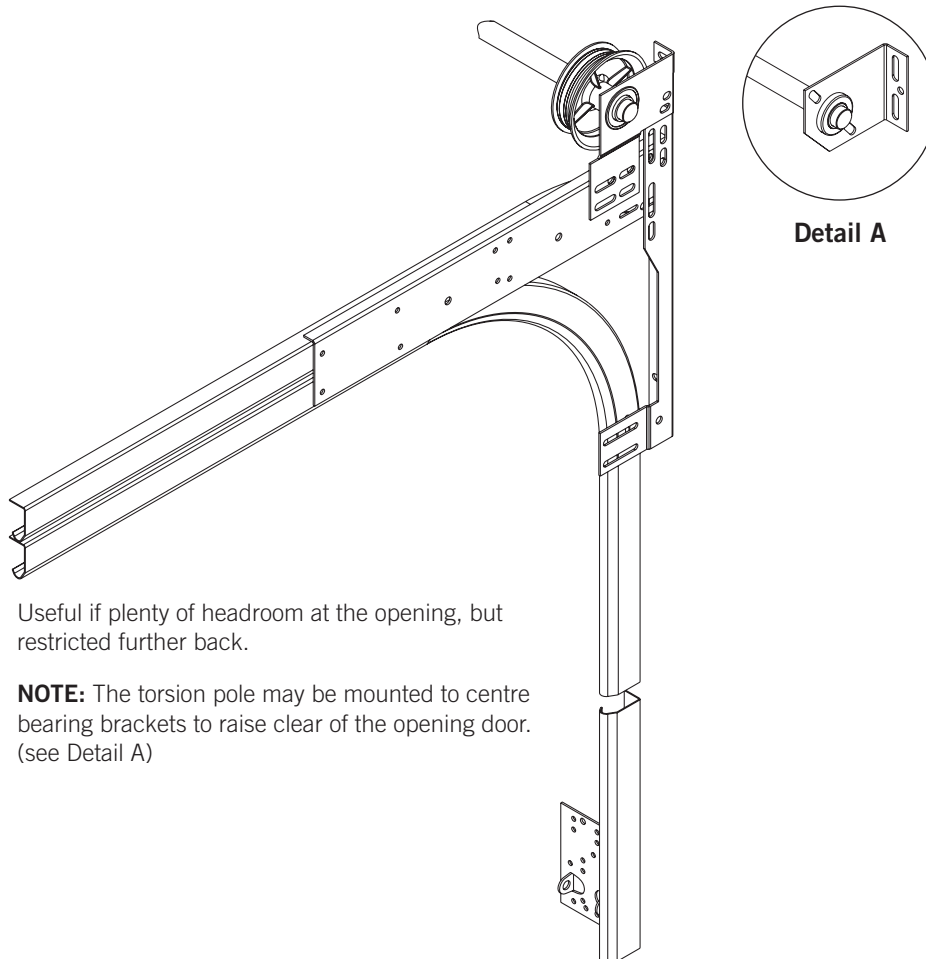
O&E setup only: Better if door is heavy at bottom. e.g. If two springs, take ½ turn off 1 spring. Always ensure that cables are taut when door is open.

2.4 TWIN TRACK ARRANGEMENTS - FRONT MOUNT

The Rear mount Low Headroom Kit can accommodate the pulley sheave bracket in either of two positions. The rear position is relative to the original pulley sheave bracket position and allows the bottom door panel to completely clear the door opening. However, the wire rope will extend well beyond the vertical track and could form a hazard.

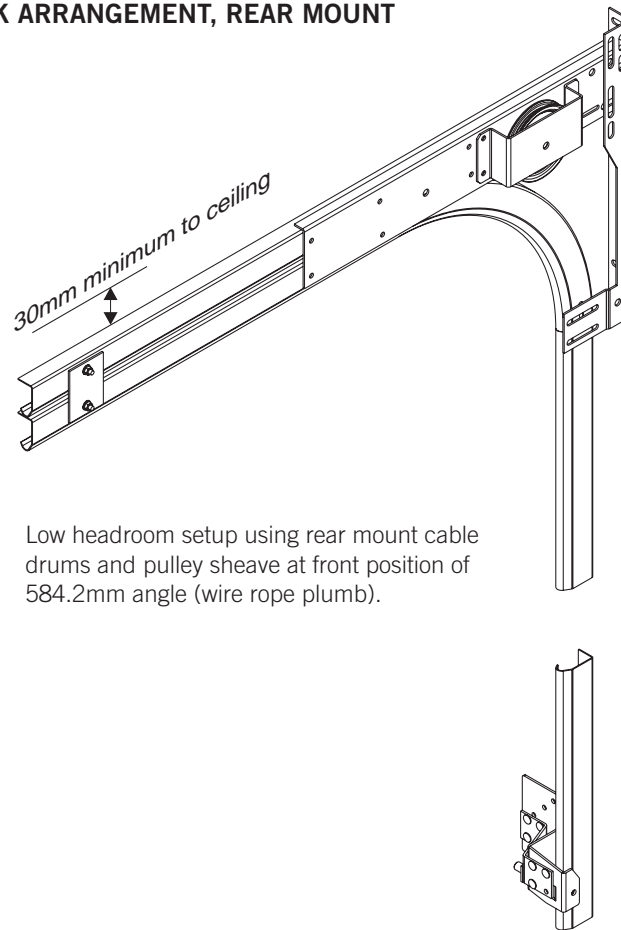
In the front mounted position the pulley sheave bracket would allow the wire rope to be plumb but would not allow the bottom door panel to clear the door opening unless an operator was fitted. Be warned: If the door is drawn past the pulley sheave by the operator, it will close rapidly if the operator is disconnected. Recommend assembly of low headroom kits on floor prior to erection.

FIGURE 2.4.1 TWIN TRACK FRONT MOUNT LOW HEADROOM SETUP



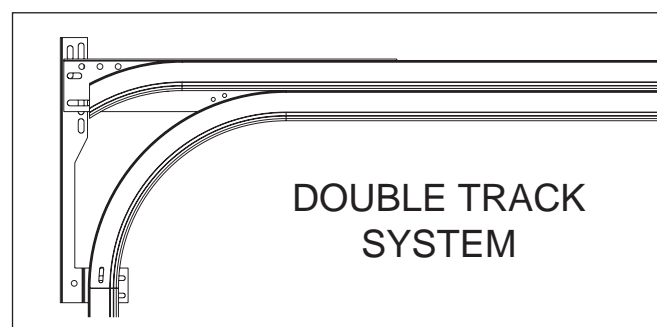
2.5 DOUBLE TRACK ARRANGEMENT - REAR MOUNT

FIGURE 2.5.1 DOUBLE TRACK ARRANGEMENT, REAR MOUNT



2.6 DOUBLE TRACK SYSTEM

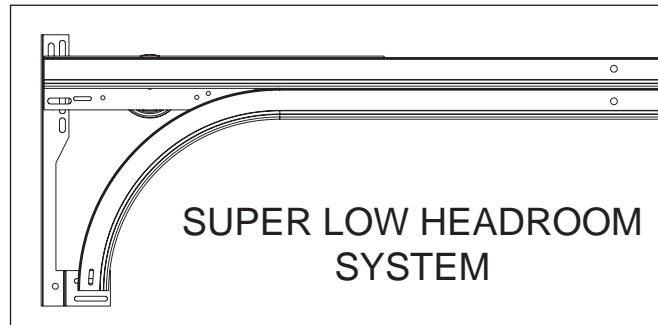
FIGURE 2.6.1 DOUBLE TRACK SYSTEM



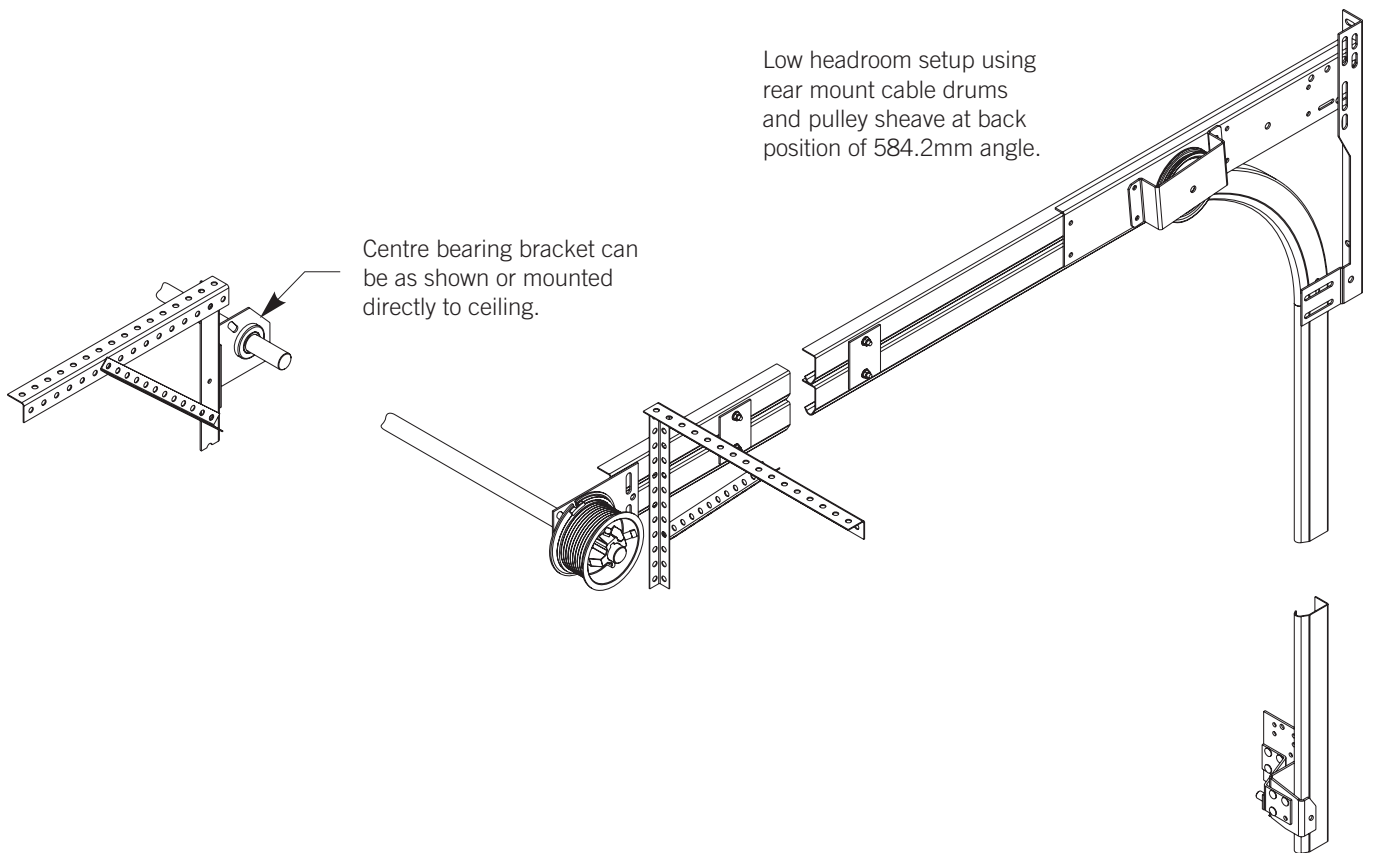
Double track system is suitable for both manual and automatic operation. This is the recommended system to use.

2.7 SUPER LOW HEADROOM SYSTEM

FIGURE 2.7.1 SUPER LOW HEADROOM SYSTEM



Super Low Headroom System is only suitable with use of an opener.



3.0 TROUBLESHOOTING

LIFTING CABLES LOOSE WHEN DOOR IS OPENED

- Cable drums have slipped
- Diagonals out of square
- Check length of lifting cables

TORSION BAR MOVING

- Cable drums not adjusted correctly
- Springs not adjusted correctly
- Shaft collar not fitted (single spring)
- Check end bearing brackets are square and vertical

DOOR WILL NOT HOLD UP IN OPEN POSITION

- Adjust tension on door
- Incorrect springs
- Panel reinforcing fitted incorrectly

DOOR NOT LEVEL

- Check water level marks are correct
- Lifting cable not equally taut

DOOR MOVING TO ONE SIDE

- Clearances incorrect
- Cable drum not hard up against end bearing brackets

DOOR PANELS JAMMING/RUBBING ON TRACKS

- Incorrect clearance between wheel and vertical track
- Door out of level
- Cable drum not lined up correctly
- Vertical tracks not parallel
- Lifting cables slipping

DOOR HARD TO LIFT

- Incorrect tension on springs
- Spring may have slipped on set screws
- Wrong spring
- Check all panel reinforcing on door panel

If all points have been checked please seek manufacturer for service.

COMMON SPRING PROBLEMS

SYMPTOM	CAUSE	SOLUTION
Door raises from the floor and hangs down in opening	Cable length too long with cable not on high portion of drum	Shorten cable length until the cable rolls onto the flat portion of the drum when the door starts into the horizontal position
	Springs may be too strong (too short) Wrong cable drums for springs (too small)	Replace spring Replace cable drums
Door lifts from the floor and runs away at the top	Door is over tensioned. Too many turns on spring or wrong spring	Ensure that the correct spring is supplied (if not replace) and that it has the correct number of turns applied
	Wrong cable drums for spring, (too small)	Replace cable drums
Door falls to the floor and hangs down in the opening	Door is under tensioned too few turns on spring or wrong springs	Ensure that the correct spring is supplied (if not replace) and that it has the correct number of turns have been applied
	Wrong cable drums for springs (too large)	Replace cable drums
Door falls to the floor and runs away at the top	Lifting cable may be too short for high lift cable drum or vertical lift drum and is sitting too high on the spiral portion of the drum	Increase the cable length to bring the cable down lower on the spiral
	Torsion springs too long	Shorten springs
Door balances at the floor but runs up or down in between	Cables in wrong position on spiral of the drums	Adjust cable length
Poor balance throughout	Winding spring in wrong direction	Wind in correct direction
	Door weight incorrect	Supply correct springs
	Springs binding	Fit torsion bar collar Lubricate springs
	Door not level	Cable lengths are equal Equal turns on both springs Level door during installation

4.0 AFTER INSTALLATION CARE

GENERAL CARE OF YOUR CEDARPANEL™

CLEANING

Your B&D Cedarpanel™ frame is made from galvanised steel and are hence resistant to corrosion, however in our atmosphere there are harmful deposits that gather on the door frame and if not removed regularly, will seriously affect the appearance.

HINGES

If the hinges and hangers squeak and squeal during operation then the hinges haven't been greased or the grease has dried up. Please apply some grease into the hangers and hinges.

REGULAR MAINTENANCE REQUIRED

B&D recommends that you check the operation of your Cedarpanel™ 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). 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.

As the door comes fitted with an automatic opener, 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 Cedarpanel™ has a 12 month domestic use warranty on the structural integrity, conditional on proper care, maintenance and servicing, as recommended on www.bnd.com.au. Due to timber being a natural product, we are not able to warrant the timber for the final look or quality of the finish.

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
Queensland:	17 Oasis Court, Clontarf 4019.	Phone: (07) 3883 0200
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
International/Export:	34 Marigold St, Revesby 2212.	Phone: +61 (0)2 9722 5555



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