

MOTORISED CARPARK TILT DOOR

PRECINCT

APPENDIX 19

19



SUPPLY & INSTALLED WARRANTY

Project: 601 VICTORIA ST - ABBOTSFORD

Principal: PROBUILD CONST (AUST) PTY LTD

Door Reference / Numbers :

2 X MOTORISED ALUMINIUM SERIES 3 ROLLER SHUTTER

1 X FALSE CURTAIN ALUMINIUM SERIES 3 ROLLER SHUTTER

1 X SINGLE LEAF RECESS

MIRAGE INDUSTRIES WARRANTY

The door is warranted from Date of Practical Completion for a period of FIVE (5) year.

Materials

Mirage Industries will repair or replace any parts or materials, that is proven to be, or becomes faulty during the Warranty period.

Workmanship

Mirage Industries will rectify any parts, or material that is proven to be, faulty due to manufacturing or Installation Workmanship.

Warranty Service

The warranty allows for all works to be carried out during Normal Working Hours (ie. 8:00am 4:00pm).

- Any service other than for the work as specified above will be charged at Mirage Industries current "Service Rates".
- Where repairs have been made or attempted to be made by others, the manufacturer may decline responsibility.

MIRAGE INDUSTRIES WARRANTY EXCLUSIONS

The warranty excludes misuse, fair wear and tear.

The warranty excludes corrosion, change of colour, cracking or peeling of any protective coating (i.e. powdercoat finishes).

The warranty excludes adjusting and resetting of limit switches after initial commissioning.

Motorisation

Door drive units and accessories are covered to a maximum of one year, provided manufacturers wiring diagram is adhered to. Adjustments to the limit switches after commissioning are excluded from this warranty.

Maintenance

The warranty is only valid if Mirage or an approved contractor carries out preventative maintenance at least once per annum. This maintenance schedule shall commence 12 months after practical completion of the project. It is the purchasers responsibility to contact Mirage to initiate the service. This will be charged at current Mirage service rates per service not including parts. Warranty items will not incur any charges.

DATED: 13/08/13

SIGNED: 

NAME PRINTED: JUAN MARINO
ON BEHALF OF MIRAGE INDUSTRIES P/L

MIRAGE INDUSTRIES PTY LTD
8 WALKER STREET, BRAESIDE VIC 3195
PO BOX 149, BRAESIDE VIC 3195
TEL: 03 9587 1999 FAX: 03 9587 2546
A.B.N. 62 004 474 462

OPERATING & MAINTENANCE MANUAL

FOR

ITEM 6 - *MIRAGE ALUMINIUM
ROLLER SHUTTER
SERIES 3*

PART A - MANUAL OPERATION

Project:

601 VICTORIA ST -
ABBOTSFORD

Client:

PROBUILD CONST (AUST)
PTY LTD

Contents

Mirage Aluminium Roller Shutter Series 3

General Description	3
Manual Operation.....	4
Maintenance & Lubrication Schedules	4
List of Equipment.....	4
Shutter Slat	4

General Description

The curtain of the **Mirage Series 3 Extruded Aluminium Shutter** is specially designed to span the largest opening and still offer a high standard of security . A single shutter may span widths up to 9 metres wide when used internally, or up to 6 metres wide when used externally. The combination of the slat's profile, its thickness and its material has produced an endurable, reliable and practical product. If vision or ventilation is required, slat can be pierced with slots of size 191 mm wide x 74 mm high. Further more, slots may be covered with 2.0 mm thick clear acrylic to prevent the passage of dust and to give additional security.

The Mirage Series 3 Extruded Aluminium Shutter is spring balanced. The weights of the curtain and the bottom rail of the curtain are balanced by suitable helical torsion spring(s). A robust steel drum holds the spring(s) captively inside with one end of the spring(s) is fixed to stationary shaft while the other end is connected to the drum itself. The drum's outside diameter and thickness have been selected to minimise the curtain-drum deflection over the span of the opening width.

Slats and the bottom rail are inter-connected. This curtain assembly is fixed to the drum whose rotation induces tension or un-tension the spring(s) depending on the direction of rotation. The spring(s) is under tension when the roller shutter is partly or fully closed and vice versa when the roller shutter is partly or fully open.

Heavy duty extruded aluminium sections on both sides of the opening are known as door guides. Sides of the curtain assembly slide up and down inside guide via nylon end-clips whose friction and wear characteristics ensure smooth, quiet operation and endurance.

Suitable spring(s) enables the roller shutter to be hand operated hand-chain operated or electric power operated; depending on the opening size, hand operation is also possible.

Operation

- ◆ **To Open** Unlock the locking bolts at bottom rail. Using pull rod provided, open the door at reasonably speed.
- ◆ **To Close** Using pull rod provided, close the door at reasonably speed. Lock the locking bolts.

Maintenance & Lubrication Schedules

The Mirage Series 3 Extruded Aluminium Shutter is a user low maintenance product when correctly installed.

When closing the roller shutter, make sure internal areas at bottom of the guides are clear this will ensure the door can be locked properly.

Spray or apply a thin layer of silicon lubrication to the inside of roller shutter guides every six (6) months.

Important: Do not use grease or oil for roller shutter guides.

The aluminium slats can be washed with mild soap and dry with a soft cloth.

List of Equipment

Shutter Slat

1. Extruded aluminium 1.5 mm (nominal thickness) joining slats.
2. Solid nylon end clips on end of every second slat.

OPERATING & MAINTENANCE MANUAL

FOR

ITEM 18 – *SERIES 1000 SINGLE LEAF
DOOR*

PART C- MOTORISED OPERATION

Project:

601 VICTORIA ST -
ABBOTSFORD

Client:

PROBUILD CONST (AUST)
PTY LTD

Contents

General Description	2
Operation.....	3
Electrical Operation.....	3
Manual Operation.....	3
To Re-instate Electrical Operation	4
Maintenance & Lubrication Schedules	5
Every Three (3) Months	5
1.A Grease gun lubricate (Multipurpose grease) - if nipples provided.	5
1.B Oil can lubricate (SAE 30 Grade Oil)	5
2. Grease lubricate - Hand apply.....	5
Every Twelve (12) Months.....	6
Adjustments	7
List of Equipment.....	9
Drive Unit.....	9

General Description

The door frame is made from cold-formed hollow steel sections. Each door comprises of one single panel and counter-weighted each side by wire ropes attached to trunnions welded into the door frame.

The panel is guided vertically on each side by rollers attached to the above trunnions and movement of the door assembly is controlled by link arms attached to the top of the guide tracks and the upper panel at each side.

The supporting wire ropes are continuous and pass over steel pulley assemblies at the top of the guides to a pulley assembly attached to the top of a mild steel counter-weight behind the guides. The difference in roller travel of the upper and lower guide rollers being taken up by the counter-weight pulley.

At all times the door leaf is in near perfect balance, enabling the door to be easily manually operated and balanced in all positions.

Power operation of the door is achieved by driving the door each side with a cam and cam follower roller. These cam followers are driven by a roller chain drive in each guide track by an overhead shaft. The action initially causes the lower panel to rotate and then lift.

The Motor/Gearbox drive unit is a close coupled motorised worm drive gearbox. The electrical motor has a built-in clutch system whose function is to limit the driving effort transmitted to the door. While on the gear-box, limitswitches are built-in to sense the door position and control the door operation.

Operation

Electrical Operation

- ◆ **To Open** Press the **Up** button momentarily and release - the door will operate to the fully open position and stop.
- ◆ **To Close** Press the **Down** button and maintain pressure until the door is fully closed.
- ◆ **To Stop** Press the **Stop** button and release.
- ◆ **To Reset** Should an overload occur the thermal overload will operate to stop the door. To reset (after cooling down) press the **Stop** button fully.

Note: Each Mirage door is supplied with a reversing contactor complete with operating buttons. The overload is provided to protect the motor and wiring - it is not a safety device.

Manual Operation

In case of power failure or mechanical breakdown the doors can be operated manually as follows:

1. Switch off the isolating switch of the drive unit.
2. Locate the cam pin and roller assemblies on each side of the door approximately 450 mm above ground level.
3. Remove the cam pin assemblies at each side of the door.

Note: Cam pin assemblies are to be re-fitted in their original position.

4. **To open** Push the bottom of the doors towards the outside of the building, and once partially open push upwards to open.
5. **To close** Pull the bottom edge of the door downwards and when near fully closed finally push the bottom of the door towards the inside of the building and fully close.

To Re-instate Electrical Operation

With the door in the closed position reverse the procedure outlined above in steps 1-3 ensuring the cam pin assemblies are located in their original positions and engaged correctly in the door cam.

Note: It may be necessary to "take up" operating side clearance in the doors by pushing to the opposite side when fitting cam pin assemblies.

Operate the door under power to ensure correct operation.

Maintenance & Lubrication Schedules

Every Three (3) Months

1.A Grease gun lubricate (Multipurpose grease) - if nipples provided

- ◆ **Guide roller assemblies** Located at $\frac{1}{2}$ door height on each side of the door (2 locations per door). Ensure grease penetrates into the door roller.
- ◆ **Door cam rollers** Located 450 mm above ground level at each side of the door. Grease nipples are located in the ends of the cam pins (2 locations per door).

OR

1.B Oil can lubricate (SAE 30 Grade Oil)

- ◆ **Guide roller assemblies** Located at $\frac{1}{2}$ door height on each side of the door (2 locations per door). Apply oil to the roller and wire rope thimbles.
- ◆ **Door cam roller** Located 450 mm above ground level at each side of the door.
- ◆ **Door hinge line** By applying to each hinge and allowing to penetrate to hinge pin.
- ◆ **Link arms** Located in the top $\frac{1}{4}$ at each side of the door. Apply oil to the upper and lower pivot bolts (4 locations per door).
- ◆ **Drive chain** Apply oil to the roller chain located in the guide track assembly at each side of the door.
- ◆ **Motor drive chain** Apply oil to the drive chain located at the Motor-Gearbox assembly.

2. Grease lubricate - Hand apply

- ◆ **Wire ropes** located each side of the door in the guide tracks and pulley area above of the door.

Remove the counter-weight casing where possible and using a gloved hand apply grease lightly to the support cables ensuring the cables are lubricated their entire length.

Remove excess grease with a cloth.

Every Twelve (12) Months

In addition to the regular 3 monthly program.

Remove the counter-weight casing where possible and wash down the wire ropes to remove excess grease and wipe clean. Inspect the entire length of the cables for broken strands, paying particular attention to the cable terminating ferrules and pulley contact areas.

An effective way to achieve this is to carefully pass an unglove hand over the cable.

Note: A small number of broken wire is normal for wire cables but should the number of wires exceed ten (10) over a length of 100 mm or any three (3) adjacent wires be broken - specialist advice should be obtained. At no time should a complete strand, that is 19 wires, be broken.

Visually examine all moving parts including hinge line and link arms whilst door is stationary and during operation Investigate any excessive movement.

Visually examine installation for corrosion and treat as required.

Adjustments

Carry out following adjustments only as required should faulty operation occur.

◆ **Torque limiting safety clutch**

1. Switch off the isolating switch of the drive unit.
2. Locate a self-locking nut at rear of the motor.
3. Hold the chain wheel and turn nut clockwise to increase drive torque.
4. Switch on isolating switch and test door for operation if clutch slips during motor operation repeat steps 1-4.
5. Continue above procedure until door operate without clutch slipping.

◆ **Limit switch**

1. Switch off the isolating switch of the drive unit.
2. Locate the limit switch mounted on side of the gearbox, opposite side of the output shaft.
3. Remove cover and determine upper and lower micro-switches.
4. Adjust switches by turning the cams.
5. Test door for operation.

◆ **Drive chain between Gearbox & Overhead Shaft**

1. Partially open the door and stop.
2. Switch off the isolating switch of the drive unit.
3. Locate the drive chain between the gearbox and the overhead drive shaft.
4. Check that the drive chain is not under tension and check for excessive slackness. The chain should be able to move approximately 6 mm at mid span.
5. Adjust by slotted mountings in the drive unit base plate.

◆ **Drive chains at Guide tracks (both sides of door)**

1. Check that the drive chains are not under tension and check for excessive slackness as follows:

Grip one link of roller chain with pliers and rotate link about its roller. Link should be able to rotate minimum of 45° and maximum of 90° .

Note:

Long vertical chains cannot be checked by mid span movement method mentioned above.

2. Locate the adjustment bolt at the lower end of the guide track and adjust the idler sprocket to achieve this.

Should roller chain be replaced or become dislodged on the upper shaft drive sprocket. It must be replaced so that the drive pins on each side of the door are at the same level.

A convenient way to achieve this is to measure between the drive pin and the door hinge gap. Obtain the same measurement both sides. This operation may be carried out with both drive chains fully slackened.