

TECHNICAL DATA

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INSTALLATION AND MAINTENANCE PROCEDURES FOR INDUSTRIAL AND COMMERCIAL SLIDING DOOR GEAR

The installation procedures for industrial and commercial sliding door gear will require a minimum compliment of equipment to ensure that correct installation is achieved without danger to either the installer or the end user. It is felt that the following list constitutes the basic requirements.

Extending ladder

(Possibly 2 with scaffold board clips)

Portable scaffolding, and scaffold boards

(Both these should be capable of reaching to 6m high)

Power drill

(Up to 25mm if possible)

Percussion drill

(For holes up to 35mm dia.)

Selection of spanners

(AF and metric)

Selection of screwdrivers

(Both slotted and cross head)

Extension leads

Steel measuring tape

Plumb line

Chalked string

Hammer

Chisels

Mallet

Brace

Auger bits

Assorted wood & masonry drill bits

Trestles

When using ladders, scaffolding, electrical tools, etc. The usual safety precautions should be observed and in certain instances hard hats and safety glasses worn.

1. General installation instructions

The following instructions relate to the installation of industrial and commercial sliding door gear in straight sliding, folding or round-the-corner applications. Refer to standard catalogue drawings, where appropriate, for details of each type of gear, and for special applications, details will be provided individually for guidance. UNDER NO CIRCUMSTANCES MUST ANY COMPONENT AS SUPPLIED, BE ALTERED, MODIFIED, FITTED IN PART ONLY, OMITTED OR USED WITH ANY OTHER NON-APPROVED DOOR GEAR SYSTEM.

1.1. General details common to all gears

1.1.1. The top track, or top guide track in the case of bottom rolling doors, should be installed in a straight and

level condition, with joints butting tightly together within the confines of a lock-joint bracket, and the ends butting against the blanked end of a closed end bracket. The lock-joint screws (where provided) should be tightened on to either side of the butted joint without deforming the track, and locked with the lock nut.

1.1.2. The track brackets should be fixed securely to a straight and level lintel with fixing bolts of the appropriate size for the fixing holes provided, and of a type to suit the site conditions. Suitable timber packing pieces may be used to obtain correct wall clearances, and to assist in overcoming irregular surfaces. (See chart 1.4.5. for exact details for Cornaway doors). Bolt lengths must take these packing pieces into consideration.

1.1.3. The centres of the brackets should conform to the recommendations laid down on the chart 1.1.3 for each type of gear shown and lengths of track provided. Maximum bracket centres should never exceed those stated and individual track lengths should be divided up equally to achieve this. The end pitches which include closed end brackets should be reduced by 12mm for 7 tracks, 16mm for 2 track, 20mm for 1, 3 and 8 tracks, and 25mm for 4 and 10 tracks to allow for the track end extending beyond the centre of the bracket. Any one length of track must always have a minimum of three brackets supporting it.

Chart 1.1.3 Maximum bracket centres

GEAR	MAXIMUM BRACKET CENTRES
Straightaway 100, 216, 320, 325, 720, 865, 880 Cornaway 210, 310 Foldaside 210, 310 Foldaside 240, 340 Centafold 250, 350	900mm
Straightaway 430, 438, 884, Foldaside 410	800mm

1.1.4. All hangers for top hung doors must be fitted in the approved manner for each type, using all the appropriate fasteners supplied, ensuring that all nuts, bolts and screws are tight and secure. Hanger trolleys must be fitted in line and be free to run along

the whole length of track without impediment once they are secured to the doors.

- 1.1.5. All top guides for bottom rolling doors must be fitted in the approved manner for each type, using all the appropriate fasteners supplied, ensuring that all nuts, bolts and screws are tight and secure. Guides should be fitted in line and be able to traverse the whole length of track without impediment, and those with wheels should be seen to revolve.
- 1.1.6. Floor channels and floor tracks should be fitted straight, level and plumb under the top track unless stated otherwise. Joint clips, where provided, must be used at all joints to ensure uninterrupted continuity of surface. Lugs for concrete, where supplied loose; must be firmly attached with bolts and nuts before setting.
- 1.1.7. Bottom guides for top hung doors, must be fitted in the approved manner for each type, using all the appropriate fasteners supplied, ensuring that all nuts, bolts and screws are tight and secure. Bottom guides must be fitted in line and free to traverse the whole length of the floor channel without impediment.
- 1.1.8. Bottom roller for bottom rolling doors, must be fitted in the approved manner for each type, using all the appropriate fasteners supplied, ensuring that all nuts, bolts and screws are tight and secure. Bottom rollers must be in line and capable of running freely along the whole length of the bottom track must be capable of supporting the weight of the doors, and be firmly bedded to prevent deflection under load.
- 1.1.9. In all systems where the door(s) are free to move between the extremities of the track, re: straight sliding, round-the-corner and certain folding installations where suites of doors are not hinged to jambs, independent door stops must be fitted to act against the edge of the door(s) and not against any fitment, unless the fitment has been specifically designed for the purpose. At the same time no hanger or guide must be allowed to strike the door(s). The ideal position for a door stop is at mid-height of the door, for doors up to approximately 4m high. Taller doors and heavy bottom rolling installations should have door stops fitted at top and bottom of door.
- 1.1.10. All door hangers have provision for vertical adjustment which must be used to ensure that correct working clearances are obtained along the whole door width and travel. Locking nuts must be correctly tightened or locking tab washers properly engaged after adjustment.
- 1.1.11. All furniture, i.e. handles locks, etc. should be fitted in appropriate places according to the type of door and leaf combination. Handles are best placed

approximately 1.0m to 1.2m (39" to 48") up from floor level for ideal use.

1.2. Details peculiar to straight sliding doors

- 1.2.1. To avoid trapping fingers in handles when operating, doors should be stopped such that the final 75mm (3") containing the handle, still projects beyond the jamb.
- 1.2.2. Adequate working clearances must be allowed for the door to slide over the face of a wall or adjacent door on multiple parallel tracks. The higher the doors, the more clearance should be allowed.
- 1.2.3. Ideally, door widths should not exceed two thirds of the height.
- 1.2.4. If there is more than one door on a single track, adjacent hangers must be positioned such that the wheels cannot clash inside the track.

1.3. Details peculiar to folding doors

- 1.3.1. The hinge pins of all fittings on each joint must be plumb with other to allow free folding movement
- 1.3.2. Door sizes must be calculated exactly in accordance with formula laid down on the appropriate catalogue page. End folding doors must not exceed 800mm wide for Foldaside 240 and 210, or 900mm wide for all other types of Foldaside, but centre folding doors may be up to 1.2m wide. (See chart 1.3.2) swing doors on Foldaside 240 and 210 installations must not exceed 700mm or 800mm wide for most other Foldaside gears. On Centafold 250 swing doors must not exceed 700mm, on Centafold 350 and 644mm, 800mm. (see chart 1.3.2) always use holdback catches with swing doors on suites. Do not hinge swing doors to loose folding suites.

Chart 1.3.2 **Folding door sizes**

Gear	Max. No. of doors hinged together	Max. Width of doors without a swinger	Max. Width of doors with a swinger on suite
Foldaside 210, 240	8	800mm	700mm
Foldaside 310, 340, 640	8	900mm	800mm
Foldaside 410	6	900mm	Swinger on jamb
Centafold 250	7.5	1200mm	700mm
Centafold 350, 644	7.5	1200mm	800mm
Foldaside 642	3	900mm	800mm

1.3.3. Loose folding suites must always consist of the recommended number of leaves with fittings positioned in accordance with details on chart 1.3.3.

Chart 1.3.3 Loose folding suites

Gear	Door arrangement
Foldaside 210, 310	4, 6 or 8 leaves only. No swing leaves fitting on alternate joints
Foldaside 410	4 or 6 leaves only. No swing leaves fitting on alternate joints.
Centafold 250, 350, 644	5 or 7 leaves only. No swing leaves fitting on alternate doors

1.3.4. All folding installations should have extra track brackets fitted to the end(s) of the track where the doors fold.

1.3.5. Arrangements of doors should not allow for wheels of adjacent hangers to clash inside the track.

1.3.6. The floor area in the immediate vicinity of folding doors must not contain high spots that could affect the folding action.

1.4. Details peculiar to Cornaway doors

1.4.1. All hinge pins of fittings on each joint must be plumb with each other to allow free movement.

1.4.2. Door widths must not exceed 1m (39") and a maximum of 5 doors should be hinged in any one suite for Cornaway 210 and 310

1.4.3. On Cornaway 210 and 310, swing doors may be hung on suites but must not exceed 700mm for Cornaway 210 or 900mm wide for 310. Guide roller bolts must be fitted to swing doors and used during

Chart 1.4.3 Cornaway door sizes

Gear	Max. No. of doors hinged together	Max. Width of doors without a swinger	Max. Width of doors with a swinger on suite
Cornaway 210	5	1000mm	700mm
Cornaway 310	5	1000mm	900mm

1.4.4. Top track and floor channels must always be plumb and level with each other especially at the corner curve, and the correct number of track brackets must be used and adequately supported on the top track curve. The joint between the curved track and the adjacent straight tracks must allow uninterrupted passage of the hangers.

1.4.5. The correct position of tracks across the opening and along the side-wall depends on the use of appropriate timber wall bearers which must be in accordance with details on chart 1.4.5 in order that the door may traverse the corner curves without fouling walls and piers.

Chart 1.4.5 Cornaway doors – timber bearers

Gear	Position	Size of timber bearers for top track		
		Door thickness 38mm	Door thickness 44mm	Door thickness 57mm
Cornaway 210	Opening	94 x 38mm	94 x 44mm	-
	Sidewall	94 x 44mm	94 x 57mm	-
Cornaway 310	Opening	-	119 x 44mm	119 x 57mm
	Sidewall	-	119 x 57mm	119 x 69mm

1.4.6. Arrangements of doors must not allow the wheels of end hangers to clash inside the track.

2. Maintenance instructions

2.1. General maintenance common to all gears

2.1.1. Top tracks should be inspected to see if the track has moved at all, and if butted joints are tight. Bracket fixing devices should be checked to see that they are tight and sound. Check for damage and for signs of advanced corrosion. Replace if in doubt.

2.1.2. The top track and brackets can be painted with an approved painting system after correct preparation to remove rust, scale, dirt, grease and flaking paint. The inside running tread of the track may be lightly greased. Hangers should have unimpeded travel along the whole length of the track.

2.1.3. Door hangers are supplied greased for life.

- 2.1.4. All hangers have facilities for vertical adjustment, which should be used to maintain correct clearance at floor level. Lock nuts on vertical adjustment
- 2.1.5. All floor channels and bottom tracks should be cleared of debris regularly to allow unimpeded travel of the guides or bottom rollers.
- 2.1.6. Bottom rollers that are provided with grease nipples should be regularly greased.
- 2.1.7. All fittings to doors should be inspected for loose fasteners, damage or signs of corrosion, and should be treated or replaced accordingly.
- 2.1.8. Door stops, when fitted should be firmly fixed as intended to prevent hangers and guides from striking ends of tracks. Re-fix if fasteners have loosened.

2.2. Instructions peculiar to folding and Cornaway doors

- 2.2.1. Ensure that all hinge points receive a regular light greasing or spray lubricant to maintain easy action.
- 2.2.2. Check that swing doors have been operated in the approved manner and not caused damage or excess wear to hinges, hangers, guides or tracks. If swing doors are attached to folding suites, ensure that a correct holdback catch is fitted and can operate in the approved manner. Swing doors on Cornaway suites must have an effective guide roller bolt.
- 2.2.3. Locks and bolts may possibly require a light lubrication periodically to maintain effortless operation

NOTE:

**STATED CARRYING CAPACITIES MUST NOT BE EXCEEDED
– for full details refer to our technical literature –**