

GLIDEROL® Series B Roller Doors

Application:

GLIDEROL Series B Roller Doors are designed for Industrial door openings. Available in both manually and electrically operated models, these doors are suitable for openings up to **6 m wide x 5m high** is a single panel. For wider openings or if desired, a series of smaller width doors can be fitted, linked by removable centre mullions.

The door is substantially lighter than conventional roller shutters, achieved through the use of continuous sheet curtain material and nylon components. Superb counter-balance, coupled with a 1 to 4 planetary gearing system enables the door to be manually operable with much less effort. Operation speed is more than 10 times faster than conventional systems.

In electrically operated models, the door is powered by the Industrial GLIDERMATIC, a purpose-built patented motor operator which drives the door directly. The system has excellent features and is a most efficient and cost effective motor operator available for industrial doors.



GLIDEROL Series B Roller Doors can be manually operated even from the outside.



Ventilated slots can also be incorporated

TECHNICAL DATA

(A) DRUM ASSEMBLY

(1) Drumwheels

The drumwheels are moulded from glass reinforced Nylon-6 engineering plastics. Essential property of this material is that it is light, hard and strong enough to serve its purpose and yet capable of taking the pressured effects of pneumatic riveting as it is not brittle and does not expand when tested in temperature of up to 60°C. Also, moulding process ensures size and shape consistency.

(2) Springs

Suitably graded, oil-tempered, custom-designed steel torsion springs. Number and size of springs used are charted according to door size and designed to counter-balance increasing or reducing curtain weight with corresponding amount of torsion.

(3) Torque-tube Design

The springs are secured to the axle on one end and the drumwheels on the other. The top sheet of the curtain is then fully wrapped and secured around the drumwheels to form a “laterally corrugated cylinder”. This cylinder, with spring torsion applied, behaves like a torque-tube capable of operating the door effortlessly. Amount of torsion can be fine-tuned by adjusting axle position even after installation.

(B) DOOR CURTAIN

(1) Material

0.5 mm thick Lysaght’s Colorbond steel, profile-rollformed into 600 mm wide panels. Lysaght’s Colorbond steel is a patented steel coating system consisting of Zinalume (45% alum/ 55% zinc alloy continuous hot-dipped galvanising) and finished with oven-baked silicone modified polyester coating.

(2) Joining of Panels

Curtain panels of required lengths are joined to the required height by means of a point-pressure lock-seaming process to form a continuous sheet. These joints are permanent and cannot be unlocked without damage. They are also rigid and do not have a “hinging” action.

(3) Strength of Curtain

As with steel roofing sheets, remarkable strength is achieved through effective design of corrugations. The “I” value (moment of inertia) of the curtain exceeds 30,000 mm⁴ on both surfaces.

(4) Wind-loading Capacity

A 3-metre wide door is calculated to be able to withstand wind speeds of up to 42 m/ sec with acceptable deflection. Where higher wind-loading capability is required, the curtain’s capacity can be greatly enhanced with the incorporation of wind-lock clips and guides.

(5) Edge Treatment

Self-lubricating seamless braided nylon Polyglide running the whole height of the curtain prevents metal-to-metal contact with the guides and effectively eases sliding friction. For doors exceeding 3750 mm width, a tension strip is added to both edges to prevent stretching of curtain corrugations.

(C) BRACKETS

Wall brackets are fabricated from 50 x 50 x 6 thk mild steel angles with slots designed to receive the appropriate axle clamps. Both ends of the axle are mounted on purpose-made steel or cast-iron saddles and clamped into position by 'U' bolts.

(D) DOOR GUIDES

Proprietary extruded aluminium profiled guide sections which are strong and neat in appearance. Guide-type selection according to application.

(E) BOTTOM-RAIL

Full length of proprietary extruded heavy-duty aluminium section lock-seamed onto the bottom of the door curtain. Bottom-rail also features two slots to retain a seamless PVC finned weatherseal for keeping out of weather and dirt.

(F) LOCKS

Proprietary waist-high lock with bars locking into door guides. Lock has finger-grip recesses for lifting or closing door. Locksets are secured from inside and do not have fasteners visible from the outside. Dual-mode operation permits option of lock operation from inside without the use of key. Doors exceeding 3.5 m width are fitted with two locksets, one on each side of the door.

Alternatively, doors can be fitted with a padbolt lockable slide-bolt installed at the ends of the bottom-rail OR in the case of manually-operated doors, a chain locking cleat can be installed at waist level beside the guide on the chain end. This is an extremely effective locking method as it prevents the handchain from moving and hence, the door.

(G) DOOR OPERATION

(1) Manual Operation

Standard operation is by means of a chain-operated planetary gearing system consisting of 4 Nos intermediate gears linking the chainwheel to the ring gear attached to the drum assembly. The mechanical advantage resulting from this gear reduction system greatly reduces the force required to operate a large door from one end. All components of the planetary gearing are moulded from nylon and do not require periodic greasing. The chain operation speed is more than that of conventional shutter systems and requires much less effort.



Industrial Glidermatic



Chain-operated Planetary Gearings

(2) Electric Operation

(a) Drive Unit

Patented GLIDERMATIC motor operator specially developed for Roller Doors with most components in Nylon-6 engineering plastics. The drive power is provided by 24V D.C. motors with synchronised gear reduction. The whole unit is compact enough to fit neatly inside the door roll and drives the door directly. Conversions to manual mode can be conveniently effected at ground level by means of a lever actuator. A nylon chainwheel is incorporated for manual chain operation. An important feature is that the chainwheel does not turn when the door is electrically operated.

(b) Control Box

Compact sized control box with electronic PCB and built-in transformer. It is linked to the drive unit via a pre-wired link cord with snap-on connector. An automatic over-load device ensures durability of motors.

(c) Safety Device

Built-in electronic device sensitive to any point of bottom-rail. When a closing door is obstructed, it will automatically stop.

(d) Speed of Travel – Average 170 mm/sec.

(e) Power Supply Requirement

A 230V 1 Ph 13 amp power socket is required for each motor. Automatic back-up power pack is available as an option.

(f) Mode of Operation

Standard operation is by “Up”, “Down” and “Stop” push button controls provided on the control box, with a choice if hands-on or hands-off operation. Being electronically controlled, the GLIDERMATIC is very versatile and adaptable to a wide range of operation modes and configurations.

(H) MAINTENANCE

Virtually maintenance-free with no periodic greasing required. As no lubricants are used, the guides are always clean and dry.



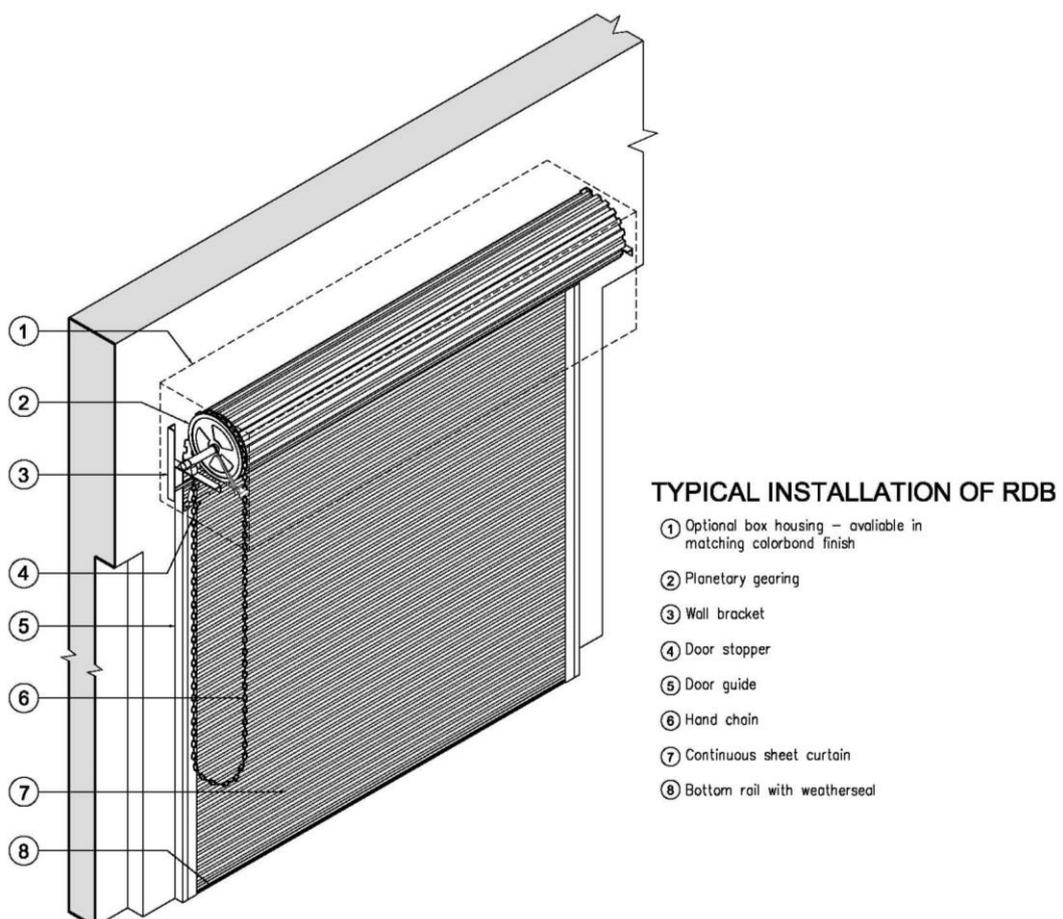
SPECIFICATION

The GLIDEROL Series B door is architecturally specified as a manually operated Roller Door constructed of Colorbond Zincalume steel curtain material permanently lock-seamed to form a continuous curtain with the edges treated with heavy-duty self-lubricating seamless braided nylon Polyglide to prevent metal-to-metal contact. The drum assembly shall consist of suitably graded oil-tempered torsion springs secured to drumwheels moulded from engineering plastics. The curtain top shall be fully secured and wrapped around the drum assembly to form a cylindrical torque tube. The bottom-rail shall be an extruded aluminium section lock-seamed onto the bottom of the curtain with the base of the rail containing two slots to retain a seamless finned PVC weatherseal. Locks shall be a dual mode wait-high lock with finger-grip recesses. The door shall be chain-operated by means of a proprietary planetary gearing system with all components moulded from engineering plastics and is durable and maintenance-free. Operation must be rapid and requires minimal effort.

Electrically operated doors shall be as above described but containing a proprietary motor operator installed within the door roll. The control box shall feature push-button controls and a built-in auto-stop safety device. The system must be convertible to manual chainwheel operation and have remote control and power back-up capabilities.

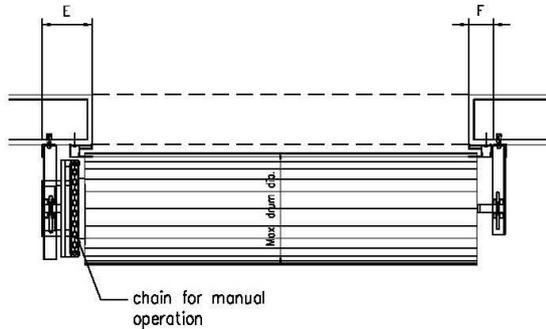
Note:- Any desired special operating requirements should be specifically stated. A manufacturer's warranty certificate with the desired warranty period should be obtained.

TYPICAL INSTALLATION

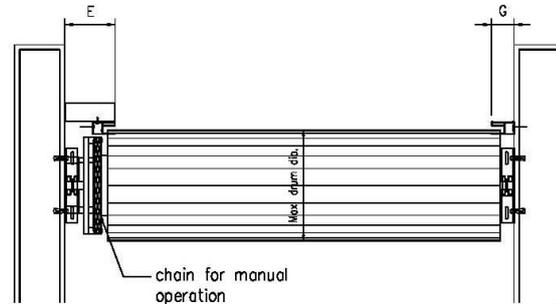


TYPICAL FIXING DETAILS

MANUAL MODEL

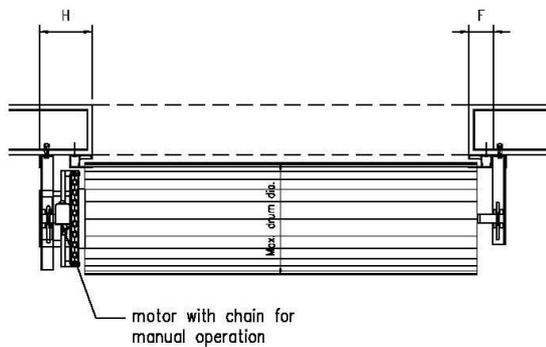


FIXING BEHIND WALLS

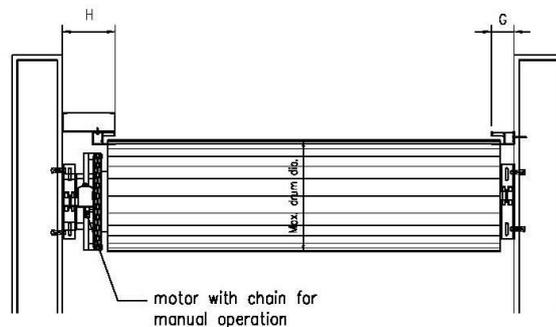


FIXING BETWEEN WALLS

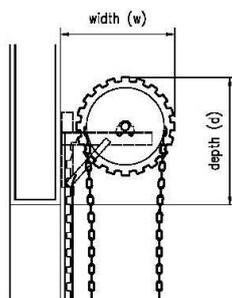
AUTOMATIC MODEL



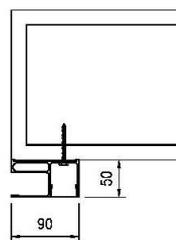
FIXING BEHIND WALLS



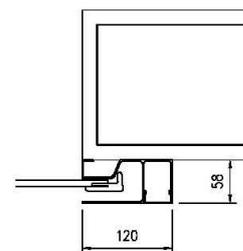
FIXING BETWEEN WALLS



SECTION (HEADROOM)



(FIXING BEHIND WALLS)
GUIDE DETAIL - TYPE RDB



(FIXING BEHIND WALLS)
WIND GUIDE DETAIL - TYPE RDB

MINIMUM SIDEROOM AND HEADROOM REQUIREMENT (in millimeters)

DOOR HEIGHT (UP TO)	MAX. DRUM DIA	E	F	G	H	HEADROOM	
						w	d
3340	480	200	100	90	210	500	530
3920	500	200	100	90	210	520	550
4400	520	200	100	90	210	540	580
5080	540	200	100	90	210	560	600

We reserve the right to improve or alter details without notice