



GLIDEROL®



Gliderol® Heavy-duty Roller Shutters

Opening doors around the world®

The **GLIDEROL range of Heavy-duty Roller Shutters** are designed to close large openings of up to 12m wide x 7m high in a single span. For door openings exceeding this size, we can build them as a special model under our 'Giant' series. These will be designed according to client's requirements and wind load conditions.

Apart from the usual scrolling slats, we also have a self-locking high-security design and a unique rolled-up louvred door design. These two designs were granted patents in many countries, including US Patent nos. 7,370,862 B2 and 7,770,623 B2.

All our models can be fitted with a fall arrester device where required. This fail-safe mechanical device is fitted to the drive shaft to immediately arrest the shaft as soon as it rotates at a higher rate than normal. It is a safety device that will eliminate the possibility of the door curtain free-falling in the event of a drive-chain or motor failure.

Where a pass door is required to facilitate convenient personal access, an integral pass door system can be incorporated. This 'door-within-door' design offers excellent security and convenience and is more user-friendly than the conventional 'hole-in-the-curtain' method. The lever-actuated locking device ensures that the pass door is accurately positioned to receive the shutter curtain every time.



Louvred Shutter with Integrated Passdoor
(US Patent No. 7,770,623 B2)



Close-up view of Louvred Shutter
(in closed position)



Steel
Roller
Shutter



Steel Roller Shutter with
Integrated Passdoor



Insulated Aluminium
Shutter



Aluminium Roller Shutter



Panorama Vision Shutter
with Explosion-proof
motor & fittings
(EXD Class 1 Zone 1)



Steel
Perforated
Shutter



Panorama Vision Aluminium Shutter

High Security Shutter
for Issuing Counter



Self-locking High Security Shutter installed at a Prison Complex
(US Patent No. 7,370,862 B2)



HEAVY-DUTY STEEL ROLLER SHUTTERS

GLIDEROL Heavy Duty Steel Roller Shutters are available in two types of slats:-

- (a) **Plain Slats** — Roll-formed in 1.0 mm or 1.2 mm thick galvanized steel. They can be in pre-painted Colorbond finish (standard colors), powder coated, or Pvf2 coated finish.
- (b) **Alfresco Slats** — Roll-formed from 1.0mm or 1.2mm thick galvanized steel with the concave surface pre-punched with 3.3mm diameter perforations. For use where some vision and ventilation is required. Recommended to be in either powder coated or Pvf2 coated finish.

TECHNICAL DATA

Drum Assembly

The barrel assembly consists of an extremely rigid steel tube sheathed over a pair of drive shaft assemblies fitted to heavy duty bearing sets and supported at both ends by steel head plates. The drive shaft is a solid polished-steel round bar incorporating key ways to accept the drive sprocket. Corresponding to the size of the shutter, the head plates are either 6mm or 8mm thick with shafts of either 38mm or 50mm diameter.

Door Curtain

Material

The door curtain is made up of sturdily designed galvanized steel scroll-profiled interlocking slats, 75mm high x 1.0mm or 1.2mm thick. These slats are also available with 3mm diameter perforations pre-punched on the concave surface.

End Clips

Steel end clips are secured to alternate slats to prevent lateral movements.

Wind-lock Clips

Where specified for external doors, steel wind-lock clips may be provided at about 4-slat intervals to improve the wind load capability of the shutter.

Bottom rail

The bottom rail is an inverted 'T' formed by 2 lengths of 50mm x 50mm steel angle iron secured back-to-back through a scrolled bottom slat. For wider doors where further rigidity is needed, a double-walled extruded aluminium profiled bottom rail of overall 20mm thick is available.

Bottom Seal

The bottom rail is fitted with a finned PVC bottom seal that will seal against the floor when the door is fully closed. An astragal tube weather seal is available as an option where a safety edge or tighter weather sealing is required.

Safety Edge

A pneumatic bottom safety edge is available as an option. This consists of a pneumatic switch fitted to the bottom rail, connected to the astragal weather seal and wired to the motor controls. Both ends of the weather seal is capped, such that it forms an air tube. Whenever the closing door is obstructed, the astragal tube will be compressed, forcing out a tiny gust of air to activate the pneumatic switch. The switch will in turn activate the motor operator to instantly stop the downward travel of the shutter.

Door Guides

Roll-formed galvanized steel guide channel; of overall size 65mm x 75mm deep. The channels are secured to a continuous length of wall angle size 50mm x 50mm, spanning the entire height of the shutter and bolted to the walls of the door opening.

For shutters with safety edge, the guides shall be a heavy-duty extruded aluminium guide channel of overall size 90mm x 100 mm deep. It has a built-in cavity to accommodate and conceal the cable chain of the safety edge system, thus eliminating the need for an exposed trailing spiral cable that may pose a safety hazard. Rubber seals are fitted to the lips of the guides to prevent metal-to-metal contact, thus ensuring a smooth and quiet operation. It also features a removable guide cover to facilitate easy maintenance.

DOOR OPERATION

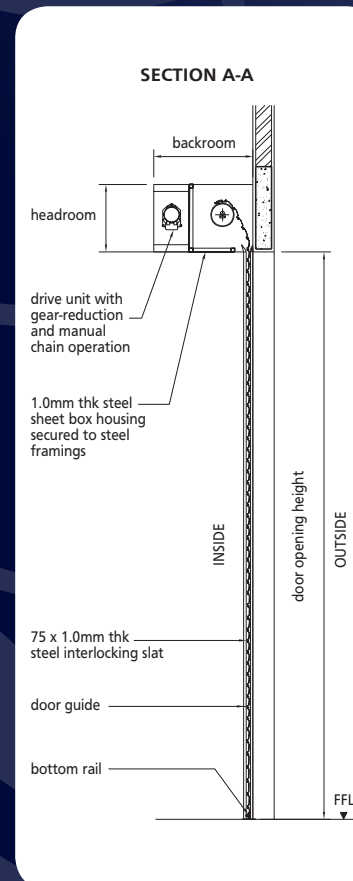
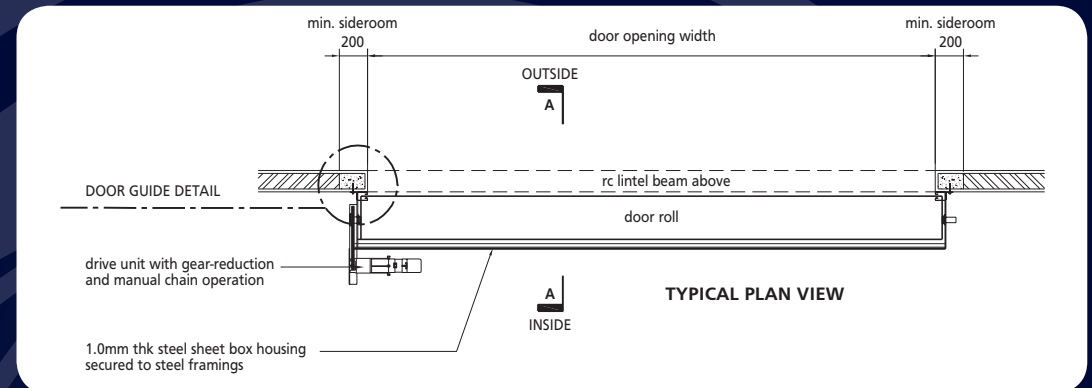
Motor Drive

The drive unit consists of a suitably-sized linear drive motor operator mounted parallel to and behind the door roll. It has an integrated gearbox and a chain-operated sheave wheel for manual operation in case of power failure. The control box is lockable, housing a set of push buttons for 'Up', 'Down' and 'Stop' operations. The door travel shall automatically stop at the desired upper and lower limits via adjustable limit switches.

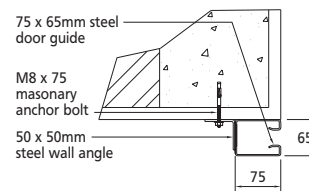
For shutters without a safety edge, the 'Down' button shall require the operator to push and hold when closing the shutter. This is to ensure the closing operation is being supervised. Upon sighting an obstruction, the operator will automatically release the button by reflex. This will instantly stop the downward travel of the shutter and prevent accidents.

Power supply shall be either Single Phase 230V x 15amp or a 3 Phase 415V x 20amp, depending on the size of the shutter.

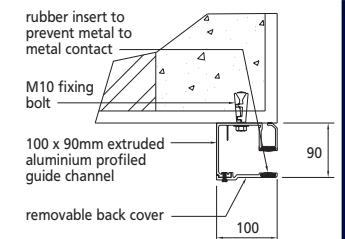
TYPICAL DETAILS



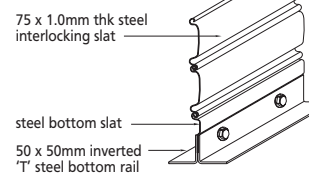
STEEL DOOR GUIDE DETAIL



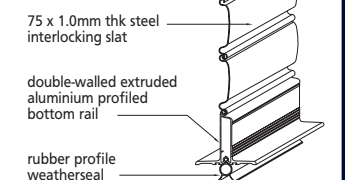
ALUMINIUM DOOR GUIDE DETAIL



ISOMETRIC VIEW OF DOOR CURTAIN WITH STEEL BOTTOM RAIL



ISOMETRIC VIEW OF DOOR CURTAIN WITH ALUMINIUM BOTTOM RAIL



HEAVY-DUTY ALUMINIUM ROLLER SHUTTERS

GLIDEROL Heavy Duty Aluminum Roller Shutters are available in three curtain designs:-

- (a) **Panorama Plain** — 100 x 1.6mm or 2.0mm thick extruded aluminum interlocking slats.
- (b) **Panorama Ventilated** — slats punched with 250mm x 50mm slots spaced at 50mm apart. For use where ventilation is required, or to achieve a lattice grille effect.
- (c) **Panorama Vision** — Similar to Panorama Ventilated but with a clear acrylic or polycarbonate insert to achieve the classy 'glazed' effect.

All 3 types of slats can be mixed and matched to form a shutter curtain. They are available in Powder Coated, Pvf2 Coated or just mill finish. Doors up to 6.0m wide can also have slats in natural anodized finish.

TECHNICAL DATA

Drum Assembly

The barrel assembly consists of an extremely rigid steel tube sheathed over a pair of drive shaft assemblies fitted to heavy duty bearing sets and supported at both ends by steel head plates. The drive shaft is a solid polished-steel round bar incorporating key ways to accept the drive sprocket. Corresponding to the size of the shutter, the head plates are either 6mm or 8mm thick with shafts of either 38mm or 50mm diameter.

Door Curtain

Material

The door curtain is made up of sturdily designed extruded aluminum flat-faced interlocking slats, 100mm high x 1.6mm or 2.0mm thick. These slats are also available with ventilation slots, with or without clear acrylic or polycarbonate inserts.

End Clips

Nylon end clips are secured to alternate slats to prevent lateral movements.

Wind-lock Clips

Where specified for external doors, steel wind-lock clips may be provided at about 4-slat intervals to improve the wind load capability of the shutter.

Bottom rail

The bottom rail is a single length inverted 'T' double-walled extruded aluminum profile of overall 20mm thick, with the base containing a slot to retain the bottom seal.

Bottom Seal

The bottom rail is fitted with a finned PVC bottom seal that will seal against the floor when the door is fully closed. An astragal tube weather seal is available as an option where a safety edge or tighter weather sealing is required.

Safety Edge

A pneumatic bottom safety edge is available as an option. This consists of a pneumatic switch fitted to the bottom rail, connected to the astragal weather seal and wired to the motor controls. Both ends of the weather seal is capped, such that it forms an air tube. Whenever the closing door is obstructed, the astragal tube will be compressed, forcing out a tiny gust of air to activate the pneumatic switch. The switch will in turn activate the motor operator to instantly stop the downward travel of the shutter.

Door Guides

The guides shall be a heavy-duty extruded aluminum guide channel of overall size 90mm x 100 mm deep. It has a built-in cavity to accommodate and conceal the cable chain of the safety edge system, thus eliminating the need for an exposed trailing spiral cable that may pose a safety hazard. Rubber seals are fitted to the lips of the guides to prevent metal-to-metal contact, thus ensuring a smooth and quiet operation. It also features a removable guide cover to facilitate easy maintenance.

DOOR OPERATION

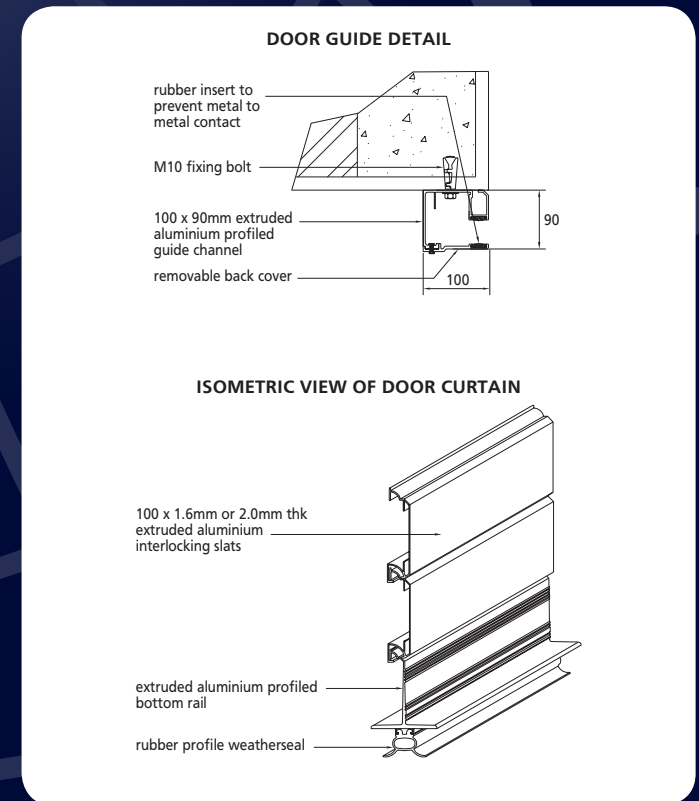
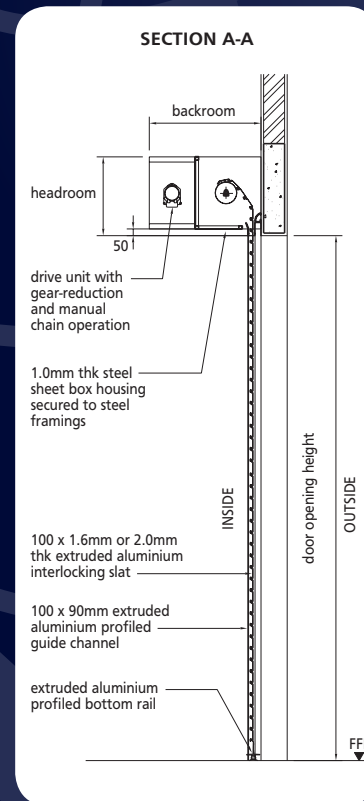
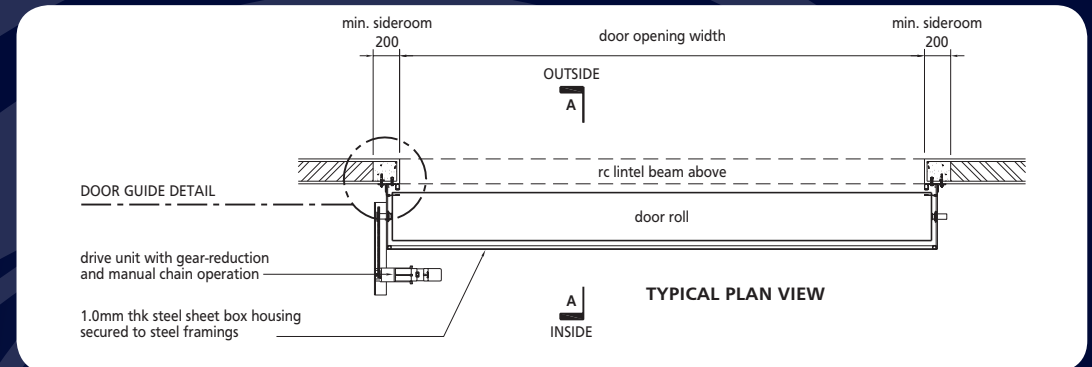
Motor Drive

The drive unit consists of a suitably-sized linear drive motor operator mounted parallel to and behind the door roll. It has an integrated gearbox and a chain-operated sheave wheel for manual operation in case of power failure. The control box is lockable, housing a set of push buttons for 'Up', 'Down' and 'Stop' operations. The door travel shall automatically stop at the desired upper and lower limits via adjustable limit switches.

For shutters without a safety edge, the 'Down' button shall require the operator to push and hold when closing the shutter. This is to ensure the closing operation is being supervised. Upon sighting an obstruction, the operator will automatically release the button by reflex. This will instantly stop the downward travel of the shutter and prevent accidents.

Power supply shall be either Single Phase 230V x 15amp or a 3 Phase 415V x 20amp, depending on the size of the shutter.

TYPICAL DETAILS



HEAVY-DUTY INSULATED ROLLER SHUTTERS

GLIDEROL Heavy Duty Insulated Roller Shutters are available in either steel or aluminum curtains.

- (a) **Steel Insulated Shutters** – 80mm x 20mm thick double-walled steel roll-formed cavity slats with ceramic fibre insulation infill.
U Value: 3.25 W/m²°C (calculated on the insulated portion of the slats)
- (b) **Aluminum Insulated Shutters** – 100 x 23mm thick double-walled extruded aluminum cavity slats with expanded polystyrene or ceramic fibre insulation infill.
U Value: 2.95 W/m²°C (calculated on the insulated portion of the slats)

Steel Insulated Shutters are available in Galvanized, Colorbond (standard colors), Powder coated or Pvf2 coated finish.

Aluminum Insulated Shutters are available in mill, Powder coated or Pvf2 coated finish. In addition, Aluminum Insulated Shutters of up to 6.0m wide can also have slats in natural anodized finish.

TECHNICAL DATA

Drum Assembly

The barrel assembly consists of an extremely rigid steel tube sheathed over a pair of drive shaft assemblies fitted to heavy duty bearing sets and supported at both ends by steel head plates. The drive shaft is a solid polished-steel round bar incorporating key ways to accept the drive sprocket. Corresponding to the size of the shutter, the head plates are either 6mm or 8mm thick with shafts of either 38mm or 50mm diameter.

Door Curtain

Material

For Steel Insulated Shutters, the door curtain consists of 80mm x 20mm thick double-walled steel roll-formed cavity slats. The cavity is filled with high purity ceramic fibre blanket insulation material.

For Aluminum Insulated Shutters, the curtain is made up of 100mm x 23mm thick sturdily designed double-walled extruded aluminum flat-faced interlocking slats. The cavity is filled with expanded polystyrene insulation material.

End Clips

For Steel Insulated Shutters - custom profiled steel end clips are secured to every slat at each end.

For Aluminum Insulated Shutters – Nylon end clips are secured to alternate slats.

Wind-lock Clips

Where specified for external doors, steel wind-lock clips may be provided at about

4-slat intervals to improve the wind load capability of the shutter.

Bottom rail

The bottom rail is a single length inverted 'T' double-walled extruded aluminum profile of overall 20mm thick, with the base containing a slot to retain the bottom seal.

Bottom Seal

The bottom rail is fitted with a finned PVC bottom seal that will seal against the floor when the door is fully closed. An astragal tube weather seal is available as an option where a safety edge or tighter weather sealing is required.

Safety Edge

A pneumatic bottom safety edge is available as an option. This consists of a pneumatic switch fitted to the bottom rail, connected to the astragal weather seal and wired to the motor controls. Both ends of the weather seal is capped, such that it forms an air tube. Whenever the closing door is obstructed, the astragal tube will be compressed, forcing out a tiny gust of air to activate the pneumatic switch. The switch will in turn activate the motor operator to instantly stop the downward travel of the shutter.

Door Guides

The guides shall be a heavy-duty extruded aluminum guide channel of overall size 90mm x 100 mm deep. It has a built-in cavity to accommodate and conceal the cable chain of the safety edge system, thus

eliminating the need for an exposed trailing spiral cable that may pose a safety hazard. Rubber seals are fitted to the lips of the guides to seal against the curtain when the shutter is closed. The seals will also prevent metal-to-metal contact, thus ensuring a smooth and quiet operation. The back of the guide channel is removable for easy maintenance.

DOOR OPERATION

Motor Drive

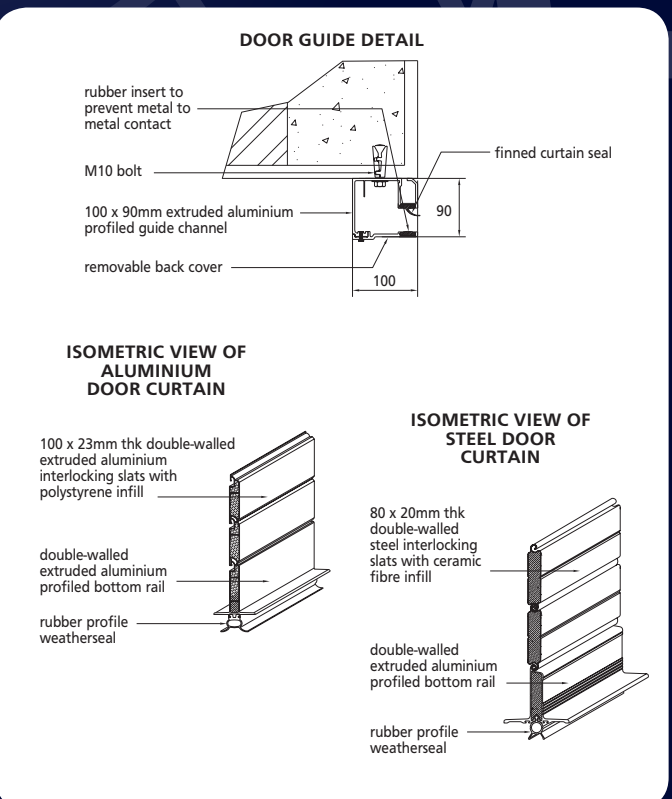
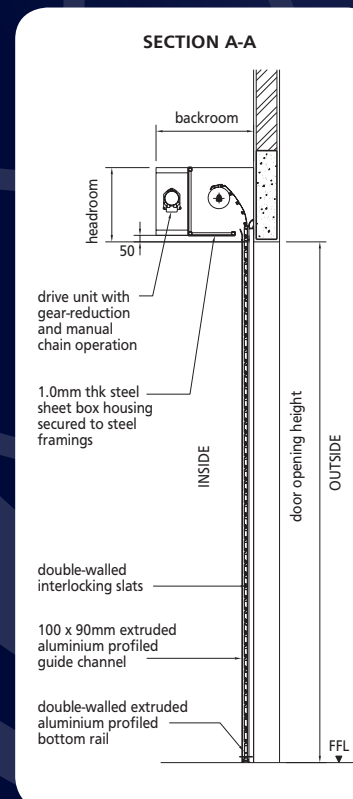
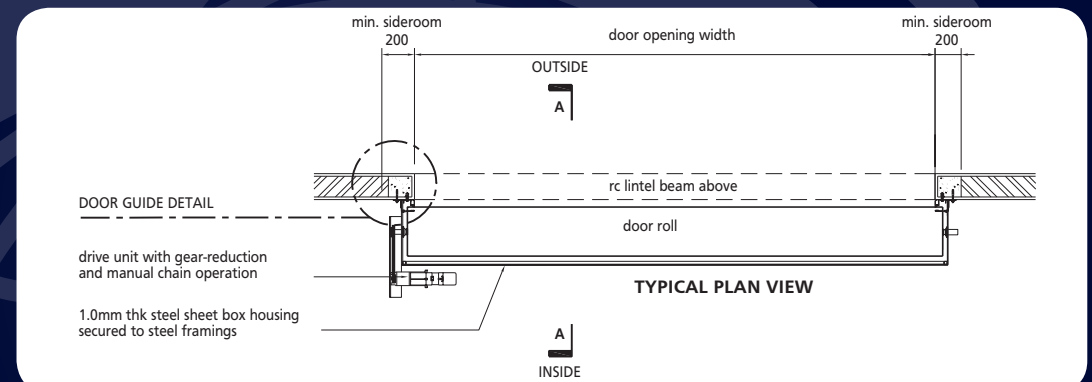
The drive unit consists of a suitably-sized linear drive motor operator mounted parallel to and behind the door roll. It has an integrated gearbox and a chain-operated sheave wheel for manual operation in case of power failure. The control box is lock-

able, housing a set of push buttons for 'Up', 'Down' and 'Stop' operations. The door travel shall automatically stop at the desired upper and lower limits via adjustable limit switches.

For shutters without a safety edge, the 'Down' button shall require the operator to push and hold when closing the shutter. This is to ensure the closing operation is being supervised. Upon sighting an obstruction, the operator will automatically release the button by reflex. This will instantly stop the downward travel of the shutter and prevent accidents.

Power supply shall be either Single Phase 230V x 15amp or a 3 Phase 415V x 20amp, depending on the size of the shutter.

TYPICAL DETAILS



GIANT SERIES — EXTRA-LARGE HEAVY-DUTY STEEL ROLLER SHUTTERS

GLIDEROL 'GIANT' series are extra-large Heavy Duty Steel Roller Shutters for door openings exceeding our standard W 12m x Ht 7m. They are custom-designed to tailor to our client's specific requirements and wind load conditions.

Available in two types of slats:-

- (a) **Single-skin Slats for narrow but high doors** — Roll-formed in 1.0 mm or 1.2 mm thick galvanized steel. They can be in pre-painted Colorbond finish (standard colors), Powder coated, or Pvf2 coated finish.
- (b) **Double-skin cavity Slats for wider doors** — 80mm x 20mm thick double-walled steel roll-formed cavity slats for greater resistance to wind pressure. Insulation infill is optional. They can be in pre-painted Colorbond finish (standard colors), Powder coated, or Pvf2 coated finish.

TECHNICAL DATA

Drum Assembly

The barrel assembly employs a dual-barrel system.

The main barrel consists of an extremely rigid steel tube sheathed over a pair of drive shaft assemblies fitted to heavy duty bearing sets and supported at both ends by steel head plates. The drive shaft is a solid polished-steel round bar incorporating key ways to accept the drive sprocket. The head plates are 8mm thick with shafts of 50mm diameter.

The secondary barrel is located at the front of the main barrel, feeding the door curtain vertically into the guide channels. At the same time, it alleviates the horizontal deflection of the door curtain and significantly improves the wind load capability of the shutter by stiffening the top portion of the door.

Fall Arrestor

The drive shaft is fitted with a Fall Arrestor device that will immediately arrest the shaft as soon as the shaft rotates at a higher speed than normal. This is a safety feature that will eliminate the possibility of the curtain free-falling in the event of a motor failure.

Door Curtain

Material

The door curtain is made up of sturdily designed galvanized steel scroll-profiled interlocking slats, 75mm high x 1.0mm or 1.2mm thick. For wider doors, 80mm x 20mm thk double skin cavity slats are used for extra rigidity.

End Clips

Steel end clips are secured to alternate slats to prevent lateral movements. Cavity slats

are fitted with profiled steel end clips at each end of every slat.

Wind-lock Clips

Steel wind-lock clips are provided at about 4-slat intervals as a standard fitting.

Bottom rail

The bottom rail is a single length inverted 'T' double-walled extruded aluminum profile of overall 20mm thick, with the base containing a slot to retain the bottom seal.

Bottom Seal

The bottom rail is fitted with a finned PVC bottom seal that will seal against the floor when the door is fully closed. An astragal tube weather seal is available as an option where a safety edge or tighter weather sealing is required.

Safety Edge

A pneumatic bottom safety edge is available as an option. This consists of a pneumatic switch fitted to the bottom rail, connected to the astragal weather seal and wired to the motor controls. Both ends of the weather seal is capped, such that it forms an air tube. Whenever the closing door is obstructed, the astragal tube will be compressed, forcing out a tiny gust of air to activate the pneumatic switch. The switch will in turn activate the motor operator to instantly stop the downward travel of the shutter.

Door Guides

The guides shall be a heavy-duty extruded aluminum guide channel of overall size 90mm x 100 mm deep, incorporating the wind-lock feature. It has a built-in cavity to

accommodate and conceal the cable chain of the safety edge system, thus eliminating the need for an exposed trailing spiral cable that may pose a safety hazard. Rubber seals are fitted to the lips of the guides to prevent metal-to-metal contact, thus ensuring a smooth and quiet operation. It also features a removable guide cover to facilitate easy maintenance.

DOOR OPERATION

Motor Drive

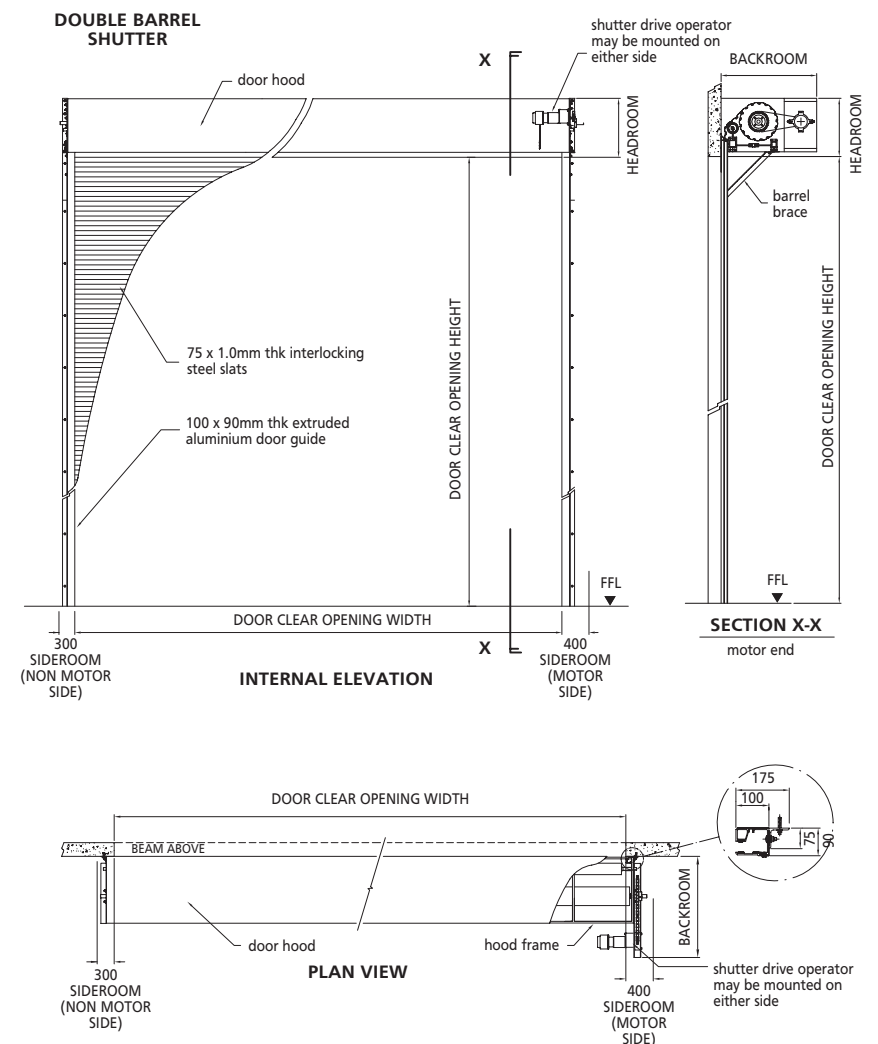
The drive unit consists of a suitably-sized linear drive motor operator mounted parallel to and behind the door roll. It has an integrated gearbox and a chain-operated sheave wheel for manual operation in case of power failure. The control box is lock-

able, housing a set of push buttons for 'Up', 'Down' and 'Stop' operations. The door travel shall automatically stop at the desired upper and lower limits via adjustable limit switches.

For shutters without a safety edge, the 'Down' button shall require the operator to push and hold when closing the shutter. This is to ensure the closing operation is being supervised. Upon sighting an obstruction, the operator will automatically release the button by reflex. This will instantly stop the downward travel of the shutter and prevent accidents.

Power supply shall be either Single Phase 230V x 15amp or a 3 Phase 415V x 20amp, depending on the size of the shutter.

TYPICAL DETAILS



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GLIDEROL®

Gliderol® Heavy-duty Shutter

The Company reserves the right to make changes or improvements to the products or accessories without notice and without incurring any obligation to make similar changes or improvements to goods previously ordered.

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