



GLIDEROL®

GLIDEROL IFS-2G

Fire Insulated Roller Shutter

In a fire situation, a deployed fire shutter can turn red-hot when subjected to the full force of the flames and intense heat can radiate from the shutter curtain. This radiated heat is capable of igniting combustible materials that may be stored on the other side, thereby allowing the fire to spread. The solution to this is the use of **Fire Insulated Shutters**.

Most fire codes require fire shutters in compartment walls to be insulated. In premises where highly combustible materials are stored, the fire shutters should also be insulated. The objective is to effectively prevent the spread of fire through heat radiation.

The **IFS-2G** offers the following features:-

- Symmetrical design, provides fire insulation for fire attacks from any direction
- Steel slats on both exposed curtain surfaces
- Impact resistant - can double-up as a security shutter
- Suitable as an external shutter, with PVC bottom weather seal
- Durable – built for daily usage
- Rigid curtain – can accommodate air pressure differentials generated by mechanical vents
- Self-supporting design – steel guide posts transfer shutter weight to the floor
- Do not need additional builders' work like structural lintels, guide encasements, etc
- Can be configured to meet any regulator-prescribed closing speed where required.

Tested to **BS EN 1634-1**, we offer a range of fire insulation values:

IFS-2G 30 offers **120 minutes of integrity with 30 minutes of fire insulation;**

IFS-2G 60 offers **240 minutes of integrity with 60 minutes of fire insulation;**

IFS-2G 120 offers **240 minutes of integrity with 120 minutes of fire insulation;**

IFS-2G 240 offers **240 minutes of integrity with 240 minutes of fire insulation;**

Note: This design is the subject of our International Patent Application No.: PCT/SG2019/050050

Test Photos



During Test



After Test – Furnace Side

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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.

The entire drum assembly is enclosed by a housing consisting of 1.0mm thk galvanized steel sheet cladding secured over an insulation layer of fire boards.

The IFS-2G incorporates a self-supporting structure in the form of a 'goal-post' made up of steel 'C' channels. The entire shutter box and barrel assembly rests on this structure, thereby transferring the bulk of the weight to the floor. The head plate is then anchored to the wall to secure the shutter vertically.

DOOR CURTAIN

Model IFS-2G 240 has two layers of steel curtains rolled unto two separate barrels, with an air-gap in between. All the other models are single-layer designs.

Each layer of curtain consists of two walls of steel interlocking slats that are attached to a single barrel such that they roll and unroll as one. The slats of each layer are faced away from each other, with the concave faces forming the exposed surfaces of the curtain layer.

Door Curtain Material

Slats

The slats are specially-designed interlocking profiles that are roll-formed from galvanised steel material of various thicknesses.

Insulation

The internal surfaces of the slats are lined with an insulation blanket comprising of mineral wool and fire-resistant fabric. The blanket is securely attached to the slats without puncturing the insulation materials with fasteners.

End Clips

Custom-shaped steel end-clips are secured to the ends of the slat to prevent lateral movements.

Bottom rail

The bottom rail is formed by 2 lengths of 50mm x 50mm x 3.0mm thick steel angles secured back-to-back through a medium of fire boards. A PVC weather seal covers over the fire boards and seals against the floor when the shutter is fully closed.

DOOR GUIDES

The door guides are a pair of modules formed by fire boards built around the steel 'C' channel vertical guide posts. The back of the guide module is finished with galvanized steel cladding

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 operation shall automatically stop at the desired upper and lower limits via adjustable limit switches.

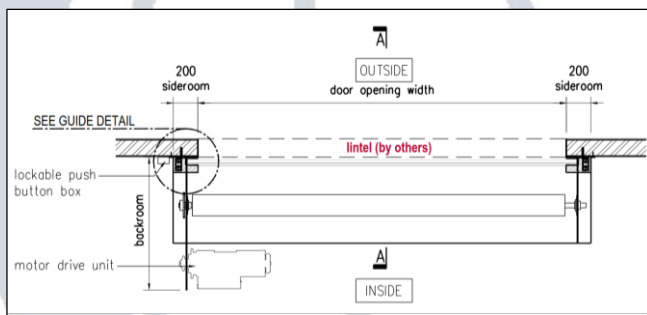
For safety reasons, the 'DOWN' button shall require the operator to push and hold when closing the shutter. This is to ensure the closing operation is being supervised. Upon sighting an obstruction, the operator will automatically release the push button by reflex. This action will instantly stop the downward travel of the shutter and prevent accidents.

Power supply requirement: 3 Phase 415V x 20amp isolator to be provided for each motor.

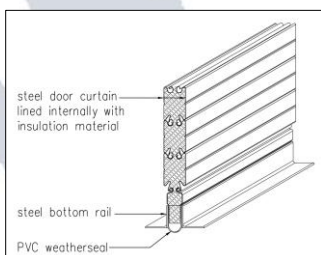
Fire Activation Modes

The motor operator has a versatile control adaptability that can enable it to respond to a wide range of activation modes, including Fire Alarm signal, smoke or heat detectors, fusible links etc.

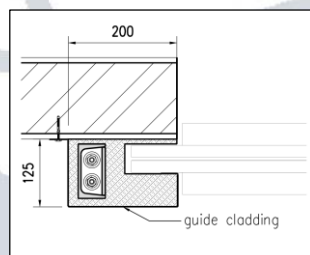
In certain situations, a fail-safe operating configuration may be required. This is available as an option.



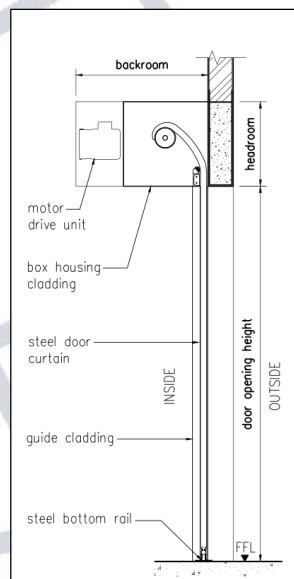
TYPICAL PLAN OF INSULATED FIRE SHUTTER



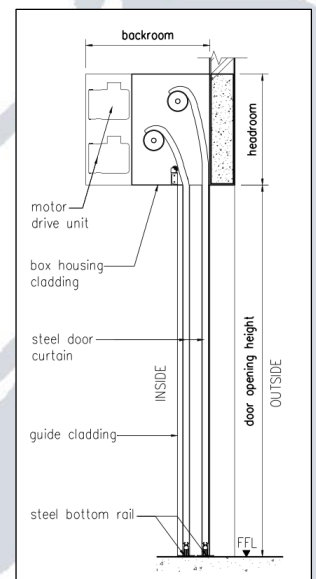
ISOMETRIC VIEW OF DOOR CURTAIN



DOOR GUIDE DETAIL



SECTION FOR MODEL IFS-2G 30, 60 & 120



SECTION FOR MODEL IFS-2G 240