

Twin glider doors

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Twin glider doors are very special types of doors that open either horizontally or vertically by means of a mounted track. They are popular for their ability to save space. As a matter of fact, these doors can be designed in different styles to suit the users' needs. The styles used include the doors composed of two or more components which move close to each other and the partition style doors that collapse when opened.

Moreover, these types of doors are able to connect only to a single track at the bottom or at the top of the doors. Some twin glided doors have both tracks to enhance stability and security of the door. These doors have become useful in every sector of the economy. The transport sector has embraced the installation of twin glider doors to curb frequent accidents caused by most buses. Technology has facilitated this move through the invention of different twin glider doors.

These doors function due to numerous mechanisms, the hinges becoming the most commonly used. The opening and the closing utilizes this pivot system mechanism to efficiently open and close the door. The roller system, with the support of the hidden fixing plates, facilitates the door's gliding motion. On this occasion, the opening door moves on top of the closing door. Similarly, the opening door moves behind the closing door during the closing session. It is worth noting that the pivot's position, from where the force is applied, determines the impact on the door.

When the opening/closing point of the door is far away from the pivot, the force required to open or close the door is slight. Conversely, when the end of opening and closing is next to the pivot the force needed is much greater.

The first door panel is moved by inserting the rotating pins in the provided holes on the doorframe. Furthermore, the opening and closing are done smoothly by the presence of magnetic sealing and the slim aluminum frame that insulates air pressure and reduces friction which normally produces noise. This can be done especially when installing the door.

Many home industries have opted for the use of twin glider doors because of their numerous advantages. Thus, such doors are marketable in today's business. Firstly, the twin glider doors are easy to remove because of their ability to fall off the tracks. This enables the closet to be kept open all the time. Secondly, they are efficient and occupy minimum space, unlike other doors that require much room. Thirdly, they are quite convenient to use as in the case of the partition styles.

They occupy almost no space when opened and can enable the user to view the whole closet or room without entering it. Another benefit of twin glider doors comes from the glass material used. This makes the door transparent that enables an individual to view things clearly both from inside and outside. They are also energy efficient because they allow more air to come in compared to the swinging doors. To sum it all up, twin glider doors contribute towards the conservation of natural resources.

This is because they are made of glass, metal and vinyl unlike the other doors' types that are made of wood which involves cutting down trees. The door is easy to close and open since one can use either of the door's sides. It guarantees a high level of comfort to the users since it is power operated.

Disadvantages Despite the various merits that make the production of the

twin glider doors a thriving process, there remain some drawbacks that hinder the continuous popularity of these devices. Firstly, they can cause injuries and damages when they come off the tracks. Secondly, they can be quite frustrating due to the tendency of gliding against each other as they move inwards and outwards.

They can be confusing to children and the aged people. Twin glider doors are very expensive to buy and to maintain. The continuous use of glass materials increases the maintenance cost in case of breakages. The installation itself is costly because it requires the services of skilled personnel who are very expensive to hire. Lastly, a person is denied the access to the closet at a full glance because the doors slide behind each other closing one end of the closet. The fact that it is power operated is a demerit in itself.

This is basically because of the electricity fluctuations. In other words, if the power goes out, one may be forced to operate the door manually. This can prove to be a great challenge to many people who do not know the principle of operation. Nevertheless, these potential drawbacks can be reduced if proper precautions are put into consideration. Factors to Consider The cost of the materials to be used in designing the twin glider doors should be relatively cheap.

The glass material chosen should be of high quality in order to increase the doors' reliability. Accidents and injuries emanating from the closing and opening processes can be prevented by proper installation. Experts should be employed to fix the panels that will facilitate smooth opening and closing. Good selection of materials, used in making the door, should be done

appropriately to enhance the door's durability. It is advisable to use both wood and glass or vinyl and steel for a strong door.

The emergence of new technology has aided in the production of twin glider doors that are cost effective and that can serve different purposes.

Anaesthetic considerations have been put in place especially in bus and coach industries. Currently, most buses have twin glider doors that open and close automatically. Gliding Principle Twin glider doors are designed with pivots and bi-fold hinges that are loaded with an in-built suspension system that reduces friction and allows smooth opening and closing of the door. The doors slide behind each other closing one end of the closet.

Components of a Twin Glider Door Glide roller system Slim line aluminum frame Door width to enable easy access Slim magnetic sealing for complete watertight confidence Hidden fixings and chrome plates 10mm tempered safety glass Grip handles to compliment the style of the door Some bus coaches have pneumatic units which include single or double cylinder assemblies, ports and buttons These components enable a twin glider door to open and close both inwards and outwards. It also has panel leaves that perform many functions. The door is designed to slide by means of a mechanism located in the upper edge of the leaf and the upper jump of the door frame. A latch on the upper edge of this leaf ensures that the door is closed without using a lock. Thus, the door is kept closed and does not sag while in this position. This feature has been employed in constructing cars' doors in large cities in order to prevent parking problems.

The doors are designed to fold beneath the car for the passenger or the driver to alight or to board it. Such a design is aimed at reducing the space in which the door could swing wide open. These features aim at reducing the amount of energy required for opening and closing the door. This is made possible by the pivot system and the availability of tracks for gliding. The door's closing and opening processes depend on the force applied. This may be powered by electricity, a spring or by an individual.

In this case, the pivot system door is automated by the cables connected to the engines. The glider roller system (65c) forms a key part in the operation of the door. The opening and the closing of the door depends on the locking and opening levers. Furthermore, there is a pair of cables that direct the closing and opening motions. These cables are connected to the door through a linkage. It is the linkage that transmits power generated to move the gliding door by a latch operation.

When the door is closed the outer surface of the bus becomes smooth and when the door is open it projects from the surface of the vehicle. Both the opening and the closing cables are pulled on the gliding side of the door. The opening cable connects the linkage to an open lever, furnished in the door lock. Similarly, the closing cable is linked to a locking lever. The lever is forced to rotate and move to a latch position. Opening the Door In order to open the door, force is applied to the opening cable causing the door lock to open.

When a force is applied to the door, the hinge pushes the first door panel and the second door panel to fold in different directions. The slider moves at

an inclined angle towards the fixing rotating pin on the first door panel. The slider does not rotate itself but the fixed bar on the second door panel pivots and, thus, the door is opened. The angle of inclination shifts and the rotary damper changes its direction too. When the user leaves the twin glider door, both the first and the second door panels move back to their initial positions and take a plane form.

This movement restores the power of the hinges and the angle is changed in the opposite direction. To avoid a banging sound while opening the door, a damping force is triggered on the rotary damper which ensures smooth movement. The rotary damper has an insulator containing oil that reduces friction between the doors. The door's opening direction may be determined during the installation stage. Furthermore, the person should be careful when opening the door in order to prevent accidents.

Closing the Door For the door to be opened, equal force is exerted on the closing cable causing the locking lever to shift from a half-latch position to a locking position, hence shutting the door. When a person tries to close the door by force, the damper receives an extra load and exerts a lot of pressure. The rotor moves in the opposite direction causing the hole, meant for the rotating pins, to close. As a result, a damping force is released increasing the pressure in the damping chamber. A bypass is provided in the damper in order to reduce the pressure produced. However, when the pressure exceeds the maximum level, the valve is opened to remove the excessive pressure exerted.

Moreover, the strength of the damper can be increased by reinforcing a spring force for the door to be able to resist pressure. Finally the first and the second panels are pressed to each other and they become flat. The movement of the door towards the doorframe enhances stability and security of the closet.