

Claims

1. The invention operates by moving the panels manually between the rails and opening at a predetermined point by rotating through 90 degrees to stack and occupy the minimum space. The various components, both in the rails and profile, ensure a safe and secure operation.
2. The Stop (Fig.13) in the Upper Rail (Fig.23) is positioned at a calculated distance from the end of the rail.
3. The Turning Mechanism (Fig.22 & 23) is located adjacent to the Stop; this determines the spacing required for the rotation of the panels on the access created by the Top Flag (Fig.9 & 10) and the Bottom Flag Bush (Fig.14 & 15).
4. To guarantee that the panels remain contained inside the rails HGT (Fig. 24 & 25) and HGP (Fig. 26 & 27) are deployed in the rail and profile to interact and support the panel as it initiates its rotation.
5. The HGT is positioned at a predetermined distance from the Stop with the HGP located in the Upper Profile which is adjustable to allow one HGT to service two HGPs i.e. panels. The leading edge of the HGT is always angled towards the Turning Mechanism end of the Top Rail. This angle is designed to mimic the arc of the panel as it rotates on its axis accepting the HGP which holds the panel until the Turning Mechanism is connected.
6. The Top Flag locates in the Turning Mechanism and from a rotation of 5 degrees holds the panel securely throughout its rotation.
7. This combination of the Turning Mechanism, Top Flag, HGT and HGP is unique and allows for the first time a system to operate without any aid or guide external to the rail.
8. The panels are aligned by the deployment of the Top Guide Bush (Fig.16 & 17) and Bottom Guide (Fig.18 & 19) positioned towards the opposite end of the panel to the two Flags and the HG System.
9. The Top Guide is designed to locate the leading end of the panel as it moves along the rail and exits through a slot in the rail when the panel rotates to its stacking position.
10. The Bottom Guide is unique in the Frameless Glazing Industry in that it does not require an opening slot in the rail to exit. This allows the system to be totally recessed in the floor.

11. The movements and displacement of each panel is manually carried out by a person. The rotation and displacement of each panel will allow for easy cleaning of both faces.
12. The strips on which each panel rests and moves along the rails are made of PTFE, since this material allows an easy movement of the panels with no mechanical properties resistant to abrasion and wear.
13. These PTFE strips are placed in the Lower Rail, the behaviour of the PTFE in touch with a hard painted surface allows for the simple and easy movement of the system.