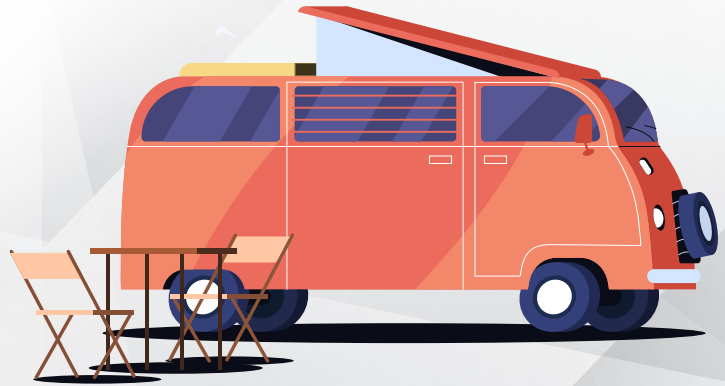


Design & development of Vertical Weatherstile Kit used with Curtain Wall



The Client & Industry

The client is Global Leading French Glass manufacturer.

Project Scope

To develop concepts and detail design of Vertical Weatherstile Kit used with newly fabricated single and double doors of a curtain wall tempered glass.

Inputs

Initial Concept Sketches / 3D CAD model / 2D manufacturable drawings / 2 Units of First batch for Testing / 3D printed prototype / Python OpenCV Algorithm for facial landmark detection

Business Value Delivered

- Generated 3 concepts and one was implemented for ease of assembly, e-drawings, and Detail Design 3D models in Inventor / STEP format
- Developed concepts and detailed design: Inventor 3D models, manufacturing drawings, BOM
- Validated engineering: FEA Analysis Report (Load Condition, Clamps Deformation, Stress and Contact Stickiness)

Our Solutions

- Developed concepts to protect glass vertical edges and hold weather-strip that closes gap between door/ curtainwall glass and side jamb/ wall assembly to overcome the existing issues in safety clamping and ensure easy of assembly
- Simplified the design for supporting safety clamping and bolting for easy assembly
- Manual physical testing and validation for slippage
- Manual calculation for
 - Selection of bolt size and subsequently the clamping force (Torque)
 - Alternate material (Clamp – Die Casting and bolts from aluminum alloys 6061-T6 American Stds)