- Autoclave when laminating safety glass with PVB interlayer film
- Purpose: Dissolves the residuary air inside the PVB film
- Allows PVB film flows and combine with the glass
- Obtain required performance and transparency
- Basic condition and requirement:
- Temperature and pressure can get increased simultaneously, but the pressure can not get increased to quickly.
- Pre-laminated Glass's constant temperature: 135-145°C
- Pre-laminated Glass's pressure under constant temperature: 12-14 bar
- Time for constant temperature and pressure: at least 20 minutes
- Temperature for releasing pressure: under 50°C



- Autoclave's working principle when laminating safety glass with Polyvinyl Butyral PVB film:
- PVB film:
- Shapeless polymer
- Appears adhesive under low temperature
- Appears flowable under high temperature
- Temperature: enable the PVB film to flow and get shaped permanently
- Pressure: enhance the adhesion between PVB film and glass
- Time: allows PVB film to become flowable
- Notes: the thicker the glass, the longer time for the autoclave's cycle.

- Common problems for autoclave when laminating safety glass with Polyvinyl Butyral PVB film
- Pressure get increase too quickly: the PVB film stays cool inside the autoclave; and it will cause the air running through if the glass edge was not sealed well or hot bending did not go well.
- Pressure get increase too slowly: the air rest inside the PVB film will get expanding if the temperature increases too fast, and becomes bubbles that will rift the glass edge.

- The time for constant temperature and pressure is too short:
- The PVB film does not flow completely, and so it can not got contact with the glass completely
- The adhesion becomes worse;
- The glass clearness will get reduced consequently
- The temperature is too high when releasing pressure:
- The PVB film is still too hot and soft at the meantime;
- The high pressure air get together inside the glass edge, and get saturation;
- If the pressure reduce too suddenly, the air under high pressure will get expanded inside the soft film and becomes bubbles;
- The air under high pressure will diffuse from the glass center to the glass edge and later becomes bubbles because the pressure in the edge is lower.





