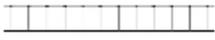


# INSTALLATION GUIDE

## Installation Guidelines for Multiwall Sheet

### Standard thickness and weights

| Product   | Thickness (mm) | Weight (kg/m <sup>2</sup> ) |
|---|----------------|-----------------------------|
|  | 4              | 0.9                         |
|   | 6              | 1.3                         |
|   | 8              | 1.5                         |
|   | 10             | 1.7                         |

### Positioning the Sheets

- Lotus Multiwall sheets should be installed with the rib channels sloping downwards. That orientation will reduce accumulation of dirt inside the sheet and ease gravity drainage of condensation moisture.
- Sheets should be installed with the adjoining edges connected by a glazing profile suited to the glazing system.
- For sheets installed in the flat, horizontal position, (roofs, overhead skylights), a minimum slope of 5 percent is imperative, with 10 percent and above preferable. Steeper slopes offer better rainwater drainage and self-cleaning, and lessen the risk of water and dirt infiltration through the connectors and fastening screws. They also help to diminish the visual effect of sheet deflection caused by loading.

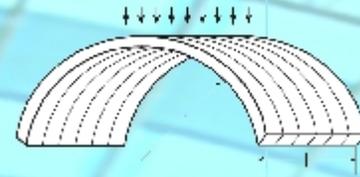


Figure 1 a

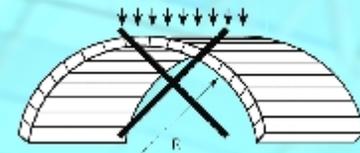


Figure 1 b

### Arching Radius

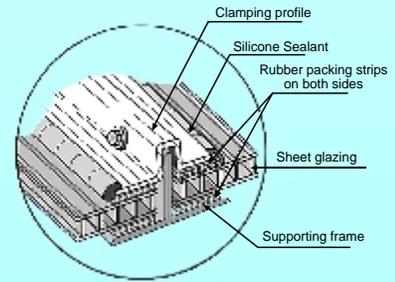
Lotus Multiwall sheets may be cold bent, or curved up to their permitted radius, using polycarbonate's natural properties, without need of a thermal process. Curving Lotus sheet beyond this permitted radius induces undue stresses and strains in the glazing sheet, causing premature failure.

### Permissible Cold Bending Radii for Arched Glazing

| Product   | Thickness (mm) | Permissible cold bending radius (ft) |
|-----------|----------------|--------------------------------------|
| Twin Wall | 4              | 2                                    |
|           | 6              | 3                                    |
|           | 8              | 4                                    |
|           | 10             | 5                                    |

**a) Four Sides Clamped Flat Glazing**

This method utilizes comparatively small, separate glazing elements, cut from larger sheets, Lotus Multiwall sheet is put inside a four-sided frame or supporting structures, and clamped on all sides. Clamping is done by plastic, wood or metal clamping profiles, with or without rubber sealing strips, and fastened by nails, screws or bolts to the supporting frame. The frame itself can be made of wood or metal, according to the design.

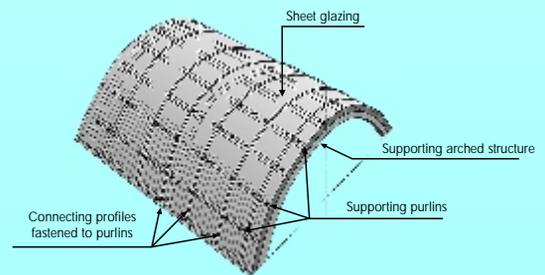


**b) Two-Sided Clamped Arched Glazing**

Lotus Multiwall sheets can be curved into arches within the permitted radius with no damaging effect to mechanical performance. Moreover, internal stresses induced by curving give it extra strength and rigidity in both directions, like pre-stressed concrete elements.

**c) Mid-Sheet Fasteners :**

- Fastening is usually done by screws, inserted along the supporting internal purlins, spaced about 500mm (20in.) apart.
- Along the edge purlin, the fastening screws should be inserted about 300 mm (12 in.) apart.
- A hole must be pre-drilled into each screw location. The diameter of that hole should be 2 mm larger than that of the screw, to allow for thermal expansion movements. In case of dark colored sheets predrill even larger holes, and use wider fastener washers.
- Use of self-tapping or self-drilling screws is recommended. In case of wooden structures, suitable wood-screws should be used. All the screws should be corrosion resistant, with at least heavy-duty hot-dipped galvanized finish, or stainless steel (if used in an extremely corrosive environment). The screws should be 6 mm (1/4 in.) diameter, with length according to sheet thickness, type of washer and type of supporting structure.



**d) Recommended Spans between Support Purlins- Flat / Slightly Curved Roofing/Glazing :**

| Product   | Thickness (mm) | Distance (center-to-center) between Supporting Purlins mm |
|-----------|----------------|---|
|           | 4              | 600   |
|           | 6              | 900   |
| Twin Wall | 8              | 1,150   |
|           | 10             | 1,250   |
|           |                |   |