

Installation Guidelines

SDRU-Plus/SDRU16



C. E. Shepherd Company

To insure the most effective drift reduction rates in any cooling tower, certain installation procedures should be followed. The procedures include proper support to minimize deflection of the panels, location of the drift eliminators with regard to the distance from spraying/splashing water, location of the panels and sealing techniques at walls. In addition to these guidelines, excessive average air speeds (above 600 fpm) should be avoided in the cooling tower design.

- **General Guidelines applicable to all cooling tower formats**

- Regardless of the tower type or panel type, all panels should be fit together as close as possible (without crushing the corrugated sheets) and sealed carefully at all structural penetrations and at end or side walls. Maximum gap at walls not to exceed 1/16".
- The optimal location for SDRU placement in either crossflow or counterflow towers includes a 12" minimum space between the inlet face of the SDRU panels and any spraying or splashing water. In counterflow applications, adequate plenum height is necessary to insure that the peak air velocity through the panels does not exceed 20% of the average air velocity. In crossflow towers, care should be taken to insure that the distance between the panels at the top of the tower is not less than the fan diameter.
- For operating temperatures between 115°F and 140°F, support spans should be decreased; consult CE Shepherd Co for additional guidance in these situations. CES PVC SDRU panels should not be used where normal operating temperatures are expected to exceed 140°F. For higher operating temperatures, consult CE Shepherd Company.

- **Counterflow Applications**

- All SDRU panels must be supported properly to insure minimal deflection of the panels under operating conditions. The SDRU panels should be supported by minimum 1.5" wide supports installed no greater than 36" on center. Longer span distances can be achieved by modifying the thickness of the corrugated sheets that make up the panels (consult CE Shepherd Co for additional information).
- SDRU panels may be supported by lateral piping provided the span limits listed above are not exceeded. It should be recognized that this practice will result in higher drift rates than when the panels are supported independently and there is a minimum 12" space between the drift eliminators and the centerline of the lateral piping.
- SDRU panels should be installed perpendicular to their supports.
- During installation of the SDRU panels, workers should avoid walking directly on the SDRU panels. Suitable dunnage such as sheets of plywood that span the panel supports should be employed by workers traversing the panels. On completion of the installation of the tower, adequate signage should be installed warning the operators that the SDRU panels are not designed for operator access and will not support any live loads.

- **Crossflow Applications**

- SDRU panels should be adequately supported at the bottom with a self-draining support and then at maximum 8' vertical intervals with minimum 1.5" width supports at the rear of the panels.
- SDRU panels should be installed on a 10° angle (from vertical) and oriented so that the entrances to the air flow channels are below the exits from the channels.

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