May 15, 2014

The Revit product family for the Marley® Quadraflow® cooling tower ("QF") provides the basic geometry and typical pipe connections for each unit size of the product line. The product family is compatible with Revit version 2012 and later, and may be downloaded at http://spxcooling.com/revit

Inlet Connections

The inlet connection(s) for all Quadraflow models is a hole and grommet in the top deck sized to accept insertion of an appropriately sized inlet pipe. The quantity and size of inlet connections varies depending on model size. 21000 and 22000 models have one 8" inlet per cell, located on any of the four corners. 23000 models whose design flow is 2025 gpm per cell or less may use a single 10" inlet. Above 2025 gpm per cell, two 8" inlets are required, located 180 degrees apart. 24000 models use two 10" inlets per cell, located 180 degrees apart. Locating an inlet riser directly behind the motor is allowed, but not recommended due to restrictions placed on motor access and removal.

Outlet Connections

21000, 22000 and 23000 models use a bottom sump outlet. 24000 models use a side sump outlet. Outlet connection size defaults to a commonly used pipe diameter for the unit size selected. Actual outlet size may vary depending on the design flow rate and outlet location, and should be confirmed in the quotation.

Multiple Cells

Multiple instances of the Quadraflow product family may be inserted into the Revit project for installations having multiple cells. Two cell installations may be installed using either a square pattern or a diamond pattern. Multi-cell installations of more than two cells are typically installed using a diamond pattern – if a square pattern is used for more than two cells, the cell spacing required is greater than the spacing shown below.

Standard center-to-center cell spacings are listed by model size in the table below.

Center-to-Center Cell Spacing		
Unit Size	Square Layout	Diamond Layout
21120	192.125" (4880mm)	181.750" (4616mm)
21220	198.125" (5032mm)	181.750" (4616mm)
21320	203.125" (5159mm)	181.750" (4616mm)
22120	219.625" (5578mm)	205.125" (5210mm)
22220	225.625" (5731mm)	205.125" (5210mm)
23120	258.125" (6556mm)	230.875" (5864mm)
23220	263.125" (6683mm)	230.875" (5864mm)
24120	345.000" (8763mm)	341.625" (8677mm)
24220	362.000" (9195mm)	341.625" (8677mm)

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Clearances
Sufficient clearance should be provided to allow safe access to the tower and its components. Additionally, clearance must be provided at the air inlets and air discharge for adequate air flow. The clearance requirements vary by application, but the air inlet clearance can be approximated as 6 ft., and the air discharge clearance should be at least three fan diameters. Also note that vertical enclosures around the cooling tower should not rise above the fan discharge, otherwise air recirculation may impact performance.

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