

This article is also available for viewing online at <http://kb.eng-software.com/questions/258/>

Modeling a Cooling Tower

A cooling tower can be modeled in PIPE-FLO and Flow of Fluids software by using a tank.

A typical cooling tower is shown in Figure 1 below:

Cooling Tower

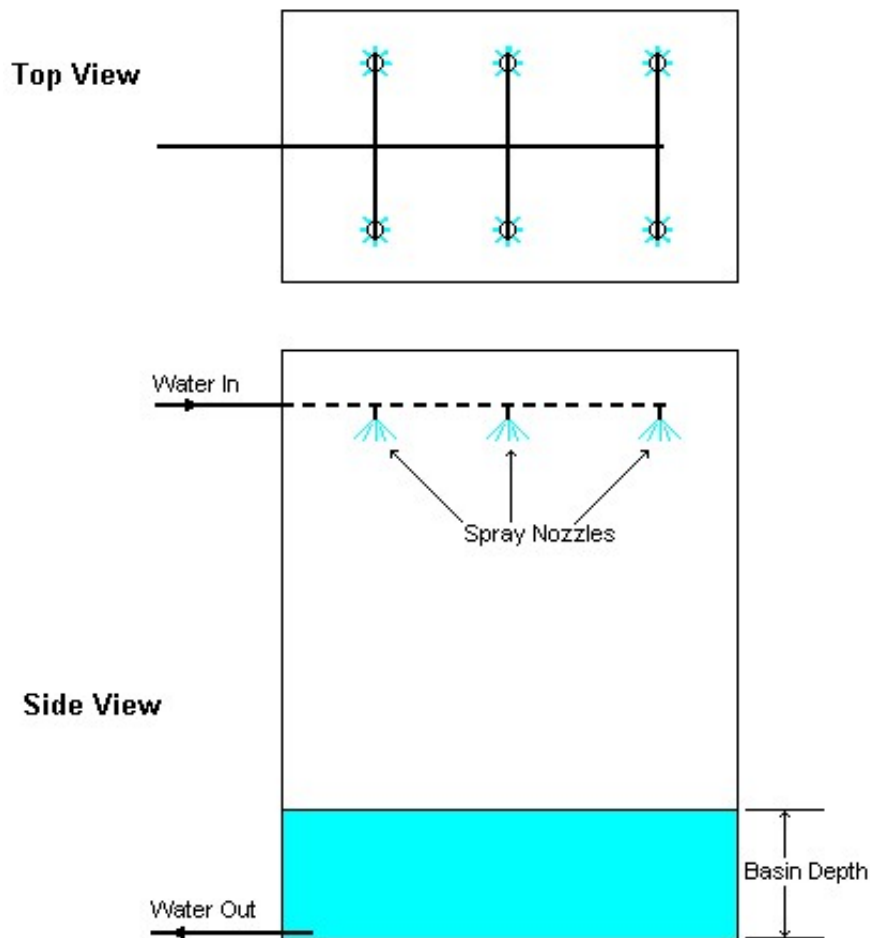


Figure 1: Typical Cooling Tower

Below in Figure 2 is a schematic that shows how the cooling tower can be modeled in PIPE-FLO or Flow of Fluids.

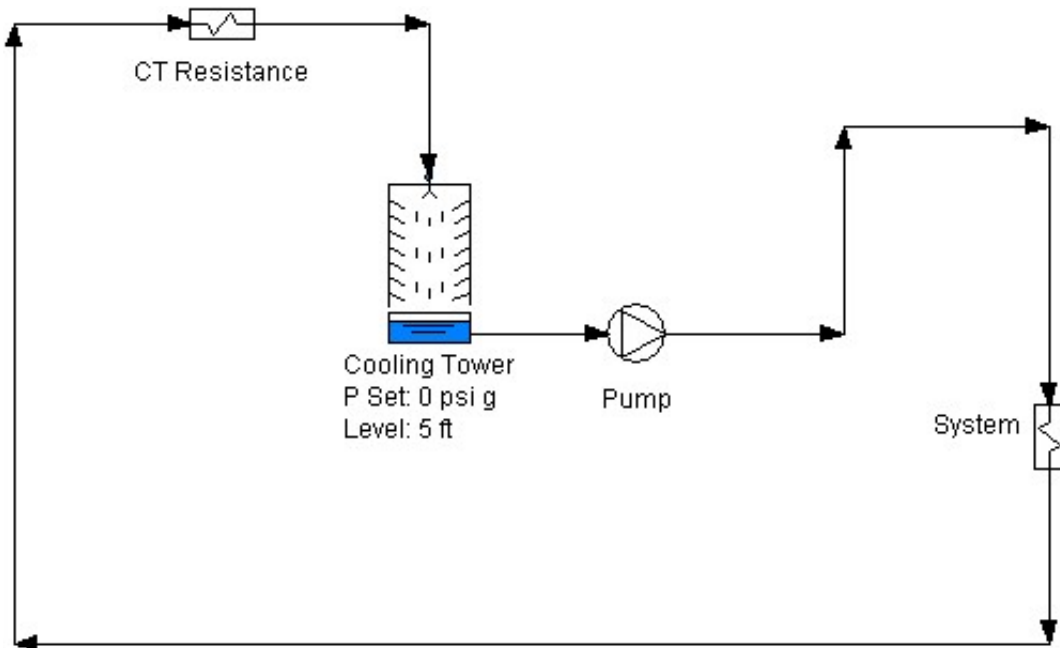


Figure 2: Cooling Tower modeled in PIPE-FLO

The cooling tower itself should be modeled as a tank. The "Bottom elevation" of the tank should be set to the elevation of the bottom of the basin of the cooling tower. The "Pressure" of the tank should be set to 0.0 psig because the cooling tower is open to atmosphere. The "Liquid level" of the tank should be set to the basin depth (5' in the model shown above). Figure 3 below shows the "Tank" screen of the tank dialog box.

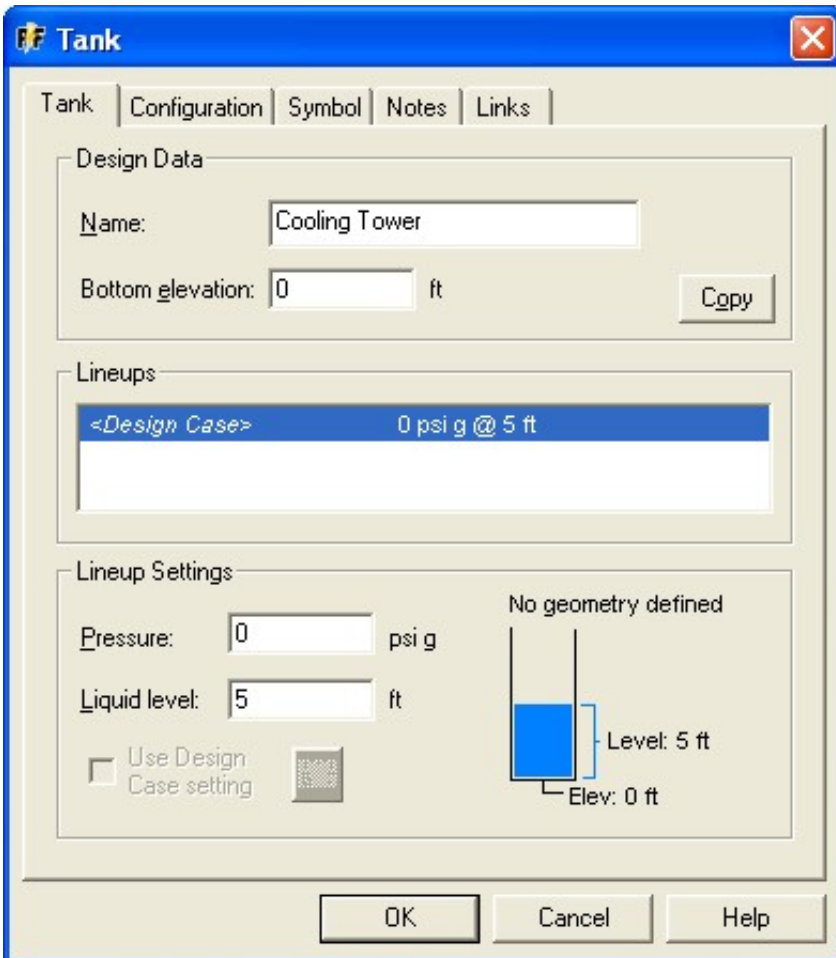


Figure 3: Tank dialog box

When you click on the "Configuration" tab of the tank dialog box, you must be sure to specify the penetration "Height" of the return sprayers (20' in the model shown above). Figure 4 below shows the "Configuration" screen of the tank dialog box.

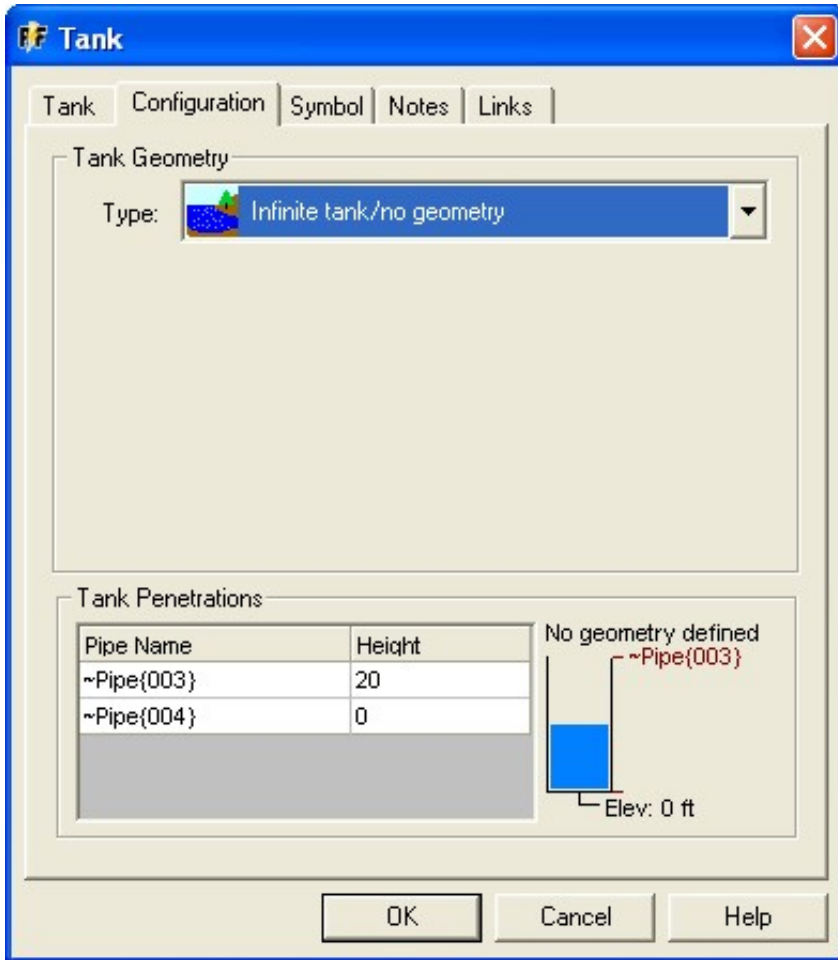


Figure 4: Tank configuration