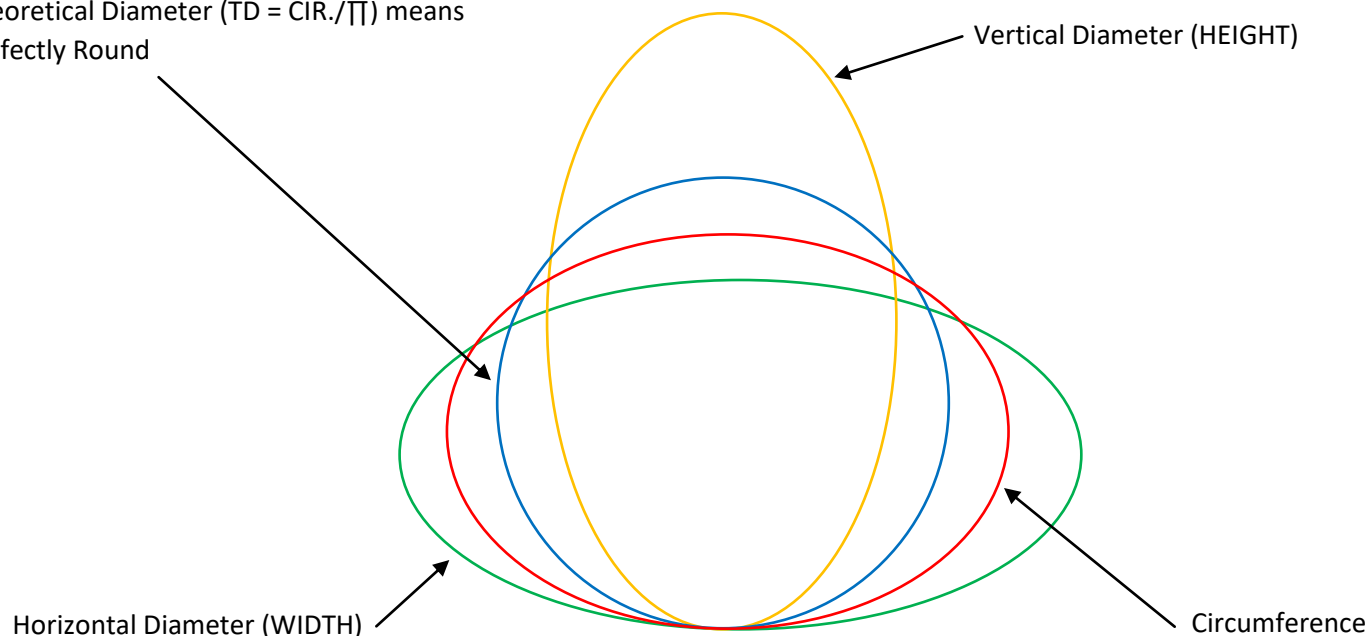


Tech Note - 49

Hydraulically Filled Bags with Self Sealing Ports

Theoretical Diameter ($TD = CIR./\pi$) means
 Perfectly Round



Over the years, there have been much confusion over the issue of Diameter versus Circumference in regards to geotextile tubes. Some individuals, when discussing diameter, mean tube height, while others mean width...while still others use the theoretical diameter.

The difficulty is specifying using diameter is that of confusion. Not only will one party think the designer is talking height and another theoretical, but neither is addressing the stability of the tube.

However, the best method to use in specifying a geotextile tube is circumference (as determined by desired structure height during design), supported by: 1) width to height ratio (>2), 2) percent full ($\leq 80\%$ for coastal) and 3) FS for both the circumferential & axial directions (each ≥ 3). See example below:

Party A: Vertical diameter = 2m, H = 2m, W = 4m, Cir = 10.1m, Stability Ratio = 2:1 **Passes**

Party B: Theoretical diameter = 2m, H = 2m, W = 2m, Cir = 6.3m, Stability Ratio = 1:1 **Fails**