Pipe sizing. What is ID and OD?

This information tells you how to determine the correct size diameter of your pipe or piling. We came up with this tutorial because we have a lot of confusion about pipe and tubing measurements which lead to problems in ordering the wrong size hardware from us. To start, here's a quick review of two geometry definitions from your 8th grade math class:

![Diagram of circle with diameter and circumference labels.]

Now that we've re-incarnated your beginnings as a teenager, why are both the diameter and circumference useful to know? Easy, you can measure the diameter of a circle (or in our case piling) when you can get to it. (like when its laying on the ground prior to construction) But if the piling is already installed, and the top of it is 20 ft in the air and the bottom is under 20 ft of water, you can measure the circumference to determine the diameter.

To figure out your piling diameter by measuring the circumference do the following:
Step 1: Measure

Step 2: Take your measurement and divide by 3.14. Ours would look like this:

\[
\frac{9.5541}{3.14} \approx 30
\]

Answer: The diameter of a circle with a circumference of 30 is 9.5541 or about 9-9/16".

Now let's look at some the most common types of pipe or piling materials you can purchase and how they are classified.

- **Wood Piling**: Classified by Outside Diameter.
- **Steel Tubing**: Classified by Outside Diameter.
- **Steel Pipe**: Classified by Inside Diameter.

Wood is easy; it only has one measurement to know. The diameter:

\[\text{Ø10" [Ø10.000"]}\]

This shows a wood piling with a diameter of 10".
It gets a little trickier when you go to buy pipe or tubing. The easiest way to figure out what you need from us is to do the same circumference trick above. But just to show you, here is what’s tricky: PIPE is purchased and classified by the inner diameter and it’s “schedule” (SCH). TUBING goes by outside diameter and “gauge” (GA). Below are two examples. The first is 2-1/2” tubing, the second is 2-1/2” pipe.

2-1/2” Ø
11 GA. TUBING

2-1/2” Ø
SCH 40 PIPE

See the difference? Even though they both say 2-1/2” The pipe is actually bigger.

So why does all this matter? You need to be sure what diameter piling you have because if it’s larger or smaller than what you think it is, you won’t be happy with the performance of our pile guides and pipe holders.

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