

Vessel Gross Tonnage Calculator

<https://www.delawarebusinessincorporators.com/pages/vessel-gross-tonnage-calculator>

How to calculate gross tonnage of recreational vessels?

The internal volume of a water-going vessel has what is called gross tonnage.

Volume is measured from keel to funnel and from bow to stern. Crew spaces and other parts of the vessel that do not hold cargo are deducted from the measurement.

Since most vessels have an asymmetrical shape it can be difficult to determine the actual gross tonnage.

A simplified set of small boat gross tonnage formulas is set forth by the U.S. Coast Guard, which are based on three measurements: Length (L), breadth (B), and depth (D). Under this system, the means of estimating gross tonnage is as follows:

- For a boat with a simple sailing hull: Gross Tonnage = $(.5 \times L \times B \times D)$ divided by 100.
- For a sailing boat with keel: Gross Tonnage = $(.375 \times L \times B \times D)$ divided by 100.
- For power boats: Gross Tonnage = $(.67 \times L \times B \times D)$ divided by 100.

How do I determine NET tonnage?

Net tonnage is 90% of gross tonnage for sailboats and 80% of gross tonnage for power boats. Our calculator will calculate gross tonnage and net tonnage. The US Coast Guard requires that all commercial vessels of 5 net tons or more be documented. Many recreational small boat owners wish to have their vessel measure over 5 net tons and thus be eligible for documentation as a "vessel of the United States."

When is it acceptable to use the Simplified Measurement System?

A vessel is eligible to be measured under the Simplified Measurement System if it is either: 1) under 79 feet in length; or 2) a non-self-propelled or recreational vessel. Recreational small boat owners may document their vessels with the US Coast Guard as long as their vessels are 5 net tons or more.

What is the history of gross tonnage as a measurement standard?

In the early days of shipping, vessels were valued and rated based on the maximum amount of cargo that could be held inside a vessel.

Each nook and cranny was filled with all types of good including, tools, cookware, machinery, spices, lumber, decorative goods, and cloth. To maximize the vessel's profit, each boat's value depended on how much the vessel could transport.

Tonnage was originally used to describe a physical space occupied by 100 cubic feet of ballast water. The amount of water was equal to about 2.8 tons. Even though a ton is a weight measurement and not volume, in maritime shipping tonnage came to refer to the volume or space available to hold marketable cargo.

In addition, the word "tun" was originally a size of a cask used to ship wine from Spain or Portugal to England. In 1347 a tax of 3 shillings per tun was imposed and this was called "tonnage."

A ship's size became known by the number of casks it could carry, and the word tonnage started being used to describe a ship's size.

Are there are documents available that could help me determine the exact gross tonnage of my vessel?

The US Coast Guard has a very detailed [document](#) that is available for download: [Simplified Measurement Tonnage Guide \(2009\)](#). This guide is in PDF format. You'll need the Adobe Reader to download this file.