



The Ton

The fundamental unit of volume for cargos and freight and for ship construction is the **ton**: a measure of volume in the same way that a displacement ton measures volume on ocean-going ships.

The Ton

The ton is a standard unit of volume commonly used throughout the Imperium. It has applications in starship design, in cargo and freight measurement, and in size designations.

In classic shipbuilding, a ton is the volume of 1000 kilograms of water. A ship with a displacement of 1 ton afloat in water displaces one ton of water.

THE BASIS OF THE TON

A ton is the volume of 1000 kilograms of liquid hydrogen, and is approximately equal to 13.5 cubic meters. While a cube of this volume is approximately 2.4 meters on a side, the ton is more typically shown as a rectangular volume 3 meters high, 3 meters long, and 1.5 meters wide.

Subunits of the Ton. There are instances when volumes less than a ton are more conveniently used (when discussing objects, vehicles, or small craft, for example, and expressing volume in decimal tons is inartful).

SUBUNITS OF THE TON

| Unit | Tons | Comment |
|-----------|---------|---------------|
| Ton | 1.00 | Standard Ton |
| Ton* | 1.037 | Regency Ton |
| Square | 0.5 | half-ton |
| Cube | 0.25 | quarter-ton |
| Roup | 0.10 | tenth-ton |
| Lan | 0.01 | hundredth ton |
| Emthree* | 0.075 | cubic meters |
| Cyard* | 0.05 | cubic yard |
| Cuft* | 0.002 | cubic foot |
| Liter | 0.00007 | |
| Kiloliter | 0.075 | |

*Archaic or little used.

For example, the smallest available G-Drive is 0.25 tons. It is commonly labeled as a 1-cube drive. A quarter-ton Cube is typically 1.5 meters on a side.

The fusion plant for a grav tank is 0.4 tons. It is commonly labeled a 4-Roup fusion plant, or more rarely a 40-Lan fusion plant. A tenth-ton Roup is a cube slightly more than a meter (1.1 meters) on a side.

A person (a human) probably has a volume of a half-Lan. A hundredth-ton Lan is typically a cube about a half meter (0.502 meters) on a side.

Or, a ton is about 13,500 liters, a Lan is 135 liters. A half-Lan person has a volume $(135 / 2) = 68$ liters. Since a person is mostly water, the weight of a person and 68 liters should be roughly equivalent. A liter of water is 1 kilogram. A half-Lan person should be about 68 kilos = 150 pounds. QED.

TON EQUIVALENTS

| Units | Per Ton |
|--------------|---------|
| Cubic Feet | 500 |
| Cubic Yards | 18 |
| Kiloliters | 13.5 |
| Cubic Meters | 13.5 |

TON DENSITIES

| Tons | Material | kg |
|------|-----------------|---------|
| 1 | Liquid Hydrogen | 1,000 |
| 1 | Wood | 6,750 |
| 1 | Plastic | 12,000 |
| 1 | Water | 13,500 |
| 1 | Magnesium | 25,000 |
| 1 | Aluminum | 35,000 |
| 1 | Titanium | 60,000 |
| 1 | Steel | 100,000 |



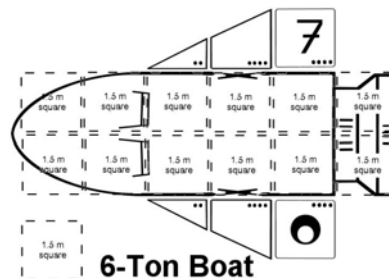
CARGO POD

A three-ton cargo pod measuring 3 meters wide by 3 meters high by 4.5 meters long.

For scale comparison, a half-Lan person (actually closer to a Lan with the vacc suit).

Tightly packed, that cargo container could hold 300 vacc suits or 600 human bodies.

| | |
|--------------------|------|
| Cubic Meters | 13.5 |
| Std Grid Squares | 2 |
| Short Grid Squares | 4 |
| Tall Grid Squares | 1 |



6-Ton Boat

A six-ton small craft showing 1.5 meter deck squares.

THE REGENCY TON

The values used for the ton in **Traveller: The New Era** varied slightly from traditional values. Historians call this value the Regency Ton.

One Ton= 14 cubic meters.

Deck Square= 2 meters by 2 meters

Deck Height= 3.5 meters.

Dimensions= 2m x 2m x 3.5 m

