

Hull Shapes

by Keith Edwards

The most important part of a boat is its hull. When a boat is built, the hull is made first and then everything else is added to it. The shape and type of a boat's hull determine how the boat handles in different water conditions. Use the information below to choose the kind of boat that best matches your kind of boating.

There are two basic types of hulls:

Displacement hull. This type of hull is rounded and plows the water out of its way as it moves along.

Advantage: Provides a stable, smooth ride by plowing through waves.

Disadvantages: Uses more fuel to plow water out of its way, and is slow.

Example: Sailboat.

Planing hull: This type of hull is either flat-bottomed or V-shaped in front and flatter toward the back. It is designed to lift the front part of the boat out of the water as it speeds up, letting the boat skim across the water.

Advantages: Uses less fuel and goes faster because it rides on top of the water instead of plowing through it.

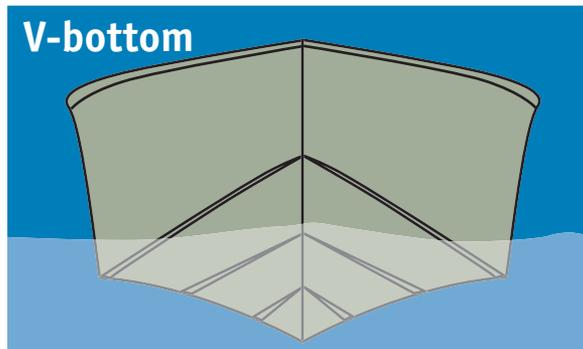
Disadvantage: Rougher, more unstable ride because it bounces on top of waves.

Example: Ski boat.

Most boats are combinations of planing and displacement hulls. At slower speeds or in larger waves, the boat plows through the water, allowing a smoother ride. At higher speeds or on smooth water, the boat planes, or skims, on top of the water. Catamarans, pontoon boats and cathedral-hulled boats are multiple-hulled craft. A cathedral-hulled boat has great stability but provides a rough ride in large waves. □

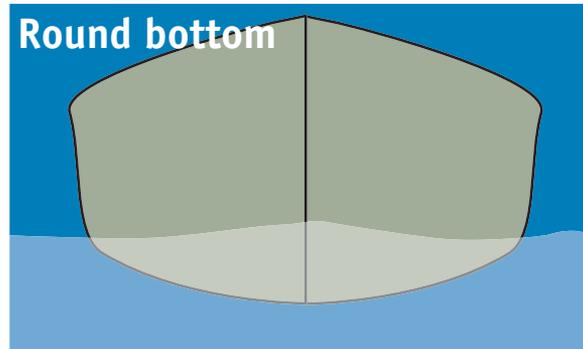
Three Basic Hull Shapes

V-bottom



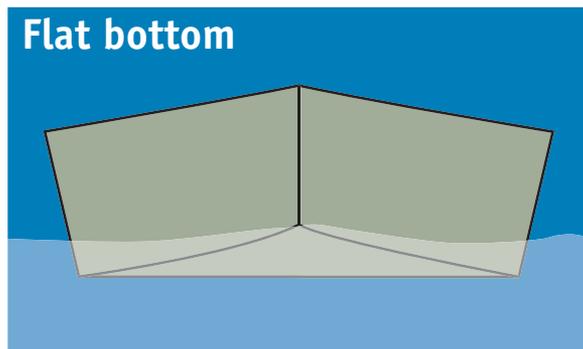
V-BOTTOM: Used on boats operated in wavy water, or on boats that go farther offshore. The V-bottom slices through waves, creating a more stable ride. V-bottomed boats go faster than round-bottomed boats.

Round bottom



ROUND BOTTOM: A displacement-hulled boat. Its round shape gives a soft ride, but rocks back and forth more than a flat-bottomed boat.

Flat bottom



FLAT BOTTOM: A planing-hulled boat that is flat from front to back and rides on top of the water.