

## Types of Ships



### Container ships

or box ships carry containers



### Ferries with passenger facilities



**Tankers** carry liquid cargo', they have a number of pipelines on deck



**LNG** is a kind of tanker and these ships carry dangerous cargo



**LPG** is designed to carry liquid petroleum gas at very low temperatures or high pressure or a combination of both.



**Chemical tankers** are equipped with many tanks (up to 60) each one served with separate pump and pipe they carry various cargoes ranging from olive oil to extremely dangerous acids and poisons(chlorine).



**Bulk** carriers are single deck vessels with holds and hatches. They can have deck cranes or deck hatches only.



**OBO** carriers (ore bulk oil) are bulk carriers and tankers, there are very few remaining.



**Ro- Ro or Vehicle carriers** carry cars and trucks



**General cargo ship or break-bulk carrier** or freighter. They transport cargo in various shapes and sizes. They have double bottom tanks, bulkheads, tweendecks. They can also be reefers for refrigerated cargo. They were replaced by container ships and only very few are still trading.



**Cruise ships** are passenger ships and have a lot of facilities.



**Drill ships** are fitted with a drilling apparatus that can drill the sea floor



**LASH** vessels have a huge crane on the ship. They carried barges and do not exist now.



**Tugs** can be seagoing for salvage, towing, anchor handling. Escort tugs can push or pull a large ship away from a dangerous area.



**Anchor handling tug**



**A VTS** (vessel traffic service) controls the shipping using a shore – radar system.



**A cement carrier carries cement**



**Cable – laying ships place cables at the bottom of the sea.**



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Pipe laying ship. They are similar to cable laying ships



**Dredgers** dig out mud in order to deepen shipping lanes.



Floating cranes. These are the biggest cranes in the world.



**Heavy lift ships** are used for very heavy cargo they are submersible.





Or:  
equipped with very large cranes:



**Pilot ship:** this is a ship where pilots rest between jobs. Pilot ships are used in shipping lanes where the pilotage is several hours and it is not practical for pilots to return to shore after their vessel. Pilots board the vessels using smaller pilot boats.



**Lightships** are used as navigational aids. Nowadays they are not only light emitting but they transmit AIS signal and are also racons,



**Coast Guard**



**Trawler or fishing boat**



**fish processing vessel**



**Cattle ships**



**Sailing/ motor yachts**



**Ice breakers**



**research vessels**



**Diving vessels**



**Barges can be either self propelled or tugged, pushed.**



**Reefer.**

## **Types of ships**

### **Bale and unit cargo**

containers

heavy cargo vessels

multipurpose vessels

cattle ships

### **Refrigerated cargo**

LPG/ LNG carrier

Reefers

Fishing vessels

## **Bulk cargo**

Crude carriers

Product carriers

Chemical tankers

Bulk carriers

## **Ro- Ro**

Ro- Ro

Car and passengers ferries

## **Recreation**

Cruise ships

Sailing and motor yachts

## **Fishing Vessels**

Trawlers and other types

## **Vessels providing services for shipping**

Tugs

icebreakers

Pilot vessels

Coast guard vessels

research vessels

Lightships

## **Salvage**

Tugs

Diving vessels

Barges

## **Construction**

Dredgers

Cable layers

Floating cranes



## **Navy**

Aircraft carriers

Destroyers

Frigates

Submarines

Mine sweepers













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7.7m 豪华帆船 7700 (25) Retro Coastal Sailor









cruisers







Launched in 2006, the [Bourbon Orca](#) was the first vessel to utilize a unique hull shape, designed by Ulstein. It would not be their last.

### **A new Ulstein X-Bow**

The first thing one notices about this vessel is the new shape of its hull. This vessel is equipped with a hull, with an inverted bow. Instead of moving above the level of the sea, it rises toward the back. This concept has been named the Ulstein X-Bow.

The vessel can cut through the waves so that interior noise and vibrations are reduced. The shape of the hull results in a decrease in pitching and, as a result, the bridge is hit with fewer water sprays. All these elements enhance the safety of operations in heavy swells.

“We were truly excited about the design of this vessel and the tank trials showed us that this hull offers exceptional advantages over traditional hulls,” explained Trond Myklebust, Managing Director of [Bourbon Offshore](#) Norway. “In addition to the fact that it reduces fuel consumption, this hull improves onboard comfort, offering the crews greater safety and rest. In choosing this type of vessel, we are setting a radically new standard for the future of offshore supply vessels,” he adds. Because of its shape, the vessel increases its cruising speed in all weather, and achieves substantial fuel savings.

<http://stevesmaritime.com/bulk.html>



# Ship sizes - from 'Handymax' to 'ULCC'

There are many different ship sizes. In order to make life a bit easier I have composed a list of vessel size groups.

**Handy and Handymax:** Traditionally the workhorses of the dry bulk market, the Handy and more recent Handymax types remain popular ships with less than 60,000 dwt. A handymax is typically 150-200 meters (492-656 feet) in length, though certain bulk terminal restrictions such as those in Japan mean that many handymax ships are just under 190 meters in overall length. Modern handymax designs are typically 52,000-58,000 DWT in size, have five cargo holds and four cranes of 30 metric ton lifting capacity.

**Aframax:** Crude and product tankers between 80,000 and 120,000 dwt. This is the largest size defined by the Average Freight Rate Assessment (AFRA) tanker rate system.

**Panamax:** Represents the largest acceptable size to transit the Panama Canal, which can be applied to both freighters and tankers; Size is determined principally by the dimensions of the canal's lock chambers, each of which is 33.53 metres (110 ft) wide by 320.0 metres (1050 ft) long, and 25.9 metres (85 ft) deep. The usable length of each lock chamber is 304.8 metres (1000 ft). The available water depth in the lock chambers varies, but the shallowest depth is at the south sill of the Pedro Miguel Locks, and is 12.55 metres (41.2 ft) at a Miraflores Lake level of 16.61 metres (54 feet 6 in). The height of the Bridge of the Americas at Balboa is the limiting factor on a vessel's overall height.

**Seawaymax:** The term Seawaymax refers to vessels which are the maximum size that can fit through the canal locks of the St Lawrence Seaway. Seawaymax vessels are 740 feet in length, 78 feet wide, (maximum 226 m length, 24 m beam) and have a draft of 26 feet (7.92 m). A number of Lake freighters larger than this size cruise the Great Lakes and cannot pass through to the Atlantic Ocean. The size of the locks limits the size of the ships which can pass and so limits the size of the cargoes they can carry. The record tonnage for one vessel on the Seaway is 28,502 tons of iron ore while the record through the larger locks of the Great Lakes Waterway is 72,351 tons. Most new lake vessels, however, are constructed to the Seawaymax limit to enhance versatility by allowing the possibility of off-Lakes use.

**Suezmax:** This standard, which represents the limitations of the Suez Canal, has evolved. Before 1967, the Suez Canal could only accommodate tanker ships with a maximum of 80,000 dwt. The canal was closed between 1967 and 1975 because of the Israel - Arab conflict. Prior to 1967, a Suezmax was a maximum of 80,000 dwt. Upon reopening in 1975, after many modifications to the locks and canal itself, the maximum was increased to 200,000 dwt.

**Capesize:** Refers to a rather ill-defined standard which have the common characteristic of being incapable of using the Panama or Suez canals, not necessarily because of their tonnage, but because of their size. These ships serve deepwater terminals handling raw materials, such as iron ore and coal. As a result, "Capesize" vessels transit via Cape Horn (South America) or the Cape of Good Hope (South Africa). Their size ranges between 80,000 and 175,000 dwt. Due to their size there are only a comparatively small number of ports around the world with the infrastructure to accommodate such vessel size.

**VLCC:** Very Large Crude Carriers, 150,000 to 320,000 dwt in size. They offer a good flexibility for using terminals since many can accommodate their draft. They are used in ports that have depth limitations, mainly around the Mediterranean, West Africa and the North Sea. They can be ballasted through the Suez Canal.

**ULCC:** Ultra Large Crude Carriers, 320,000 to 550,000 dwt in size. Used for carrying crude oil on long haul routes from the Persian Gulf to Europe, America and East Asia, via the Cape of Good Hope or the Strait of Malacca. The enormous size of these vessels require custom built terminals.

