

## Container Handler

Used Container Handler Santa Maria - Container handlers, also known as cargo ships and container ships transport their load in a large intermodal container. Containerization is the shipping method that utilizes commercial freight transport to carry seagoing cargo in non-bulk sizes. Container ship capacity is measured in units that are equal to 20' equivalent loads. Typical loads range with a mixture of 20-foot and 40-foot containers. Approximately ninety percent of non-bulk cargo across the globe is transported by container ships. As one of the largest commercial sea-worthy vessels, container ships are the main rival of oil tankers among the largest ships on the ocean. There are two main categories for dry cargo which are break-bulk and bulk cargo. Coal and grain are considered to be bulk cargo items. They are typically transported in their raw form within the hull of the ship, free from packages in immense volume. Manufactured goods that are in packages comprise the majority of break-bulk cargo. Before containerization was invented in the 50s, break-bulk items were loaded, secured and unlashd one item at a time. Once cargo began being grouped into containers, between 1000 to 3000 cubic feet of cargo can be moved simultaneously after each container has been secured with standardization. Break-bulk cargo shipping has greatly increased overall efficiency. Costs have been reduced to around 35% and shipping time has been reduced by 84%! Approximately 90% of non-bulk items were shipped in containers in 2001. The initial container ships in the 1940s were designed from tankers that were converted post-WWII. Container ships do not rely on individual hatches, holds and dividers that are part of regular cargo ships. The typical container ship's hull is a basically a large warehouse that is divided by vertical guide rails into cells. These cells have been designed to transport the cargo in containers. The majority of shipping containers are built from steel although extra items including wood, fiberglass and plywood are utilized. Designed to be completely transferred to and from trains, semi-trailers, trucks, coastal carriers and more, there is a variety of container types that are categorized by their function and size. Containerization has revolutionized the shipping industry; however, it did not start out in the easiest fashion. Railway companies, ports and shippers were initially concerned about the extensive costs associated with building the railway infrastructure and ports required to accommodate container ships, along with moving the containers via road and rail. Numerous trade unions were concerned that containers would affect port jobs and manual labor associated with cargo handling for dock and port workers. There was a decade of legal battles prior to the container ships starting international service. By 1966, after the first container liner service began from Rotterdam, Netherlands to the USA, cargo shipping was transformed. Container ships only take a few hours to be loaded and unloaded, compared to the days a traditional cargo vessel required. Shipping times have been shortened in between ports extensively along with labor finances. It only takes 3 weeks to have materials delivered from Europe to India as opposed to the months it used to require. Generally, there is less damage to materials thanks to less frequent handling. Securing loads properly also helps with less cargo shifting during transport. Containers are sealed prior to shipping and opened only once they arrive at their destination, resulting in less theft and disruption. There has been greater international trade growth due to the reduced shipping expenses and travel time delivered by container ships. Cargo that was previously shipped in bags, bales, cartons, barrels or crates now arrives in sealed containers from the factory. There is a product code on the contents utilized by scanning machines and computers to trace. Technology has made this tracking system accurate and exact to enable a two week voyage to be timed for arrival within an accuracy rate of under fifteen minutes. Manufacturing times and delivery have been greatly enhanced with these advancements. Raw materials show up in sealed containers from factories in under an hour prior to being used in the manufacturing industry; resulting in fewer inventory expenses and greater accuracy. Shipping companies provide boxes to the exporters for loading merchandise into. Items are delivered into the docks by road or rail or a combination to be loaded onto cargo ships. Containerization has streamlined the process of loading by reducing the number of workers and hours

it takes to fit cargo into their holds. The ship relies on cranes either on the pier or installed on board to organize the containers accurately. Once the hull has been completely loaded, more containers can be secured onto the deck. The key design element for container ships has been efficiency. Break-bulk ships may carry containers. Designated cargo hold on container ships have been built to increase efficiency during loading and unloading to ensure safe travel. There is a sophisticated hatch design to allow openings from the main deck to reach the cargo hold locations. A raised steel apparatus called the hatch coaming surrounds these openings that are found along the cargo hold breadth. The hatch coamings have hatch covers located on them. Tarps and wooden boards held down the battens and secured the hatches until the 1950s. Nowadays, solid metal plates comprise the hatch covers and cranes lift them onboard and off of the ship. Some hatch models utilize articulated mechanisms and hydraulic rams to facilitate opening and closing. Another important cargo ship design feature is cell guides. Attached to the cargo hold in the ship, cell guides are vertical pieces of metal that help organize the cargo. They work by guiding containers into particular rows while loading and help to support items during travel. The container ship design relies on cell guides so much that organizations as the United Nations Conference on Trade and Development use them to differentiate between regular break-bulk cargo ships and container ships. To showcase a container's position on the ship, there is a cargo plan system that use three dimensions. The initial coordinate starts at the beginning of the ship and increases aft. The second coordinate is the tier. The first tier begins in the lower portion of the cargo holds with the second tier found on top of the first tier and continuing in that fashion. The third coordinate is found in the third row. Rows found on the port side of the ship exhibit even numbers and those located on the starboard side are given odd numbers. The cargo situated near the centerline showcases lower numbers and as the cargo increases further from the center, the numbers get higher. Container handlers carry 20, 40 and 45 foot containers. The largest size fits only above deck while the 40 foot size makes up for the majority of the load or approximately ninety percent of the container shipping. Container shipping is responsible for moving approximately ninety percent of the freight across the globe, while roughly eighty percent of global freight moves with 40 foot containers.