

Syncrolift®

Shiplift and transfer systems

Syncrolift® shiplifts can reduce dry-docking times by up to 50 per cent

Over 230 installations in 69 countries

Over 45 years experience

Lift and transfer of vessels 100 tons to over 100,000 tons DWT

Patented ATLAS Control System

Single and Dual Level transfer

All Syncrolifts are designed and built to customer specification

In addition to ship lifts, Syncrolift® technology is used in other applications:

- **Linkspans and ferry ramps**
- **Caisson shiplifts for the rapid construction and launch of concrete caissons**
- **Bargelift, alternative to a traditional lock and dam on inland waterways**



US Coast Guard vessel on a Syncrolift® Shiplift and Transfer System at Seward, Alaska

Rolls-Royce Marine Electrical Systems is the world leader in the design and manufacture of Syncrolift® shiplifts and transfer systems for the marine industry. Syncrolift® has been the preferred choice and world market leader since the development of modern shiplift technology. The establishment of the Rolls-Royce Marine Electrical Systems Centre of Excellence (incorporating Syncrolift® technology) ensures that the Syncrolift® tradition, reputation and quality is maintained. With over 230 installations in 69 countries Syncrolift® has the experience and resources to assist customers anywhere in the world.

Syncrolifts are custom designed to accommodate a wide range of shipbuilding and ship repair activities. From patrol boats to nuclear submarines, the Navies of 38 nations rely on Syncrolift® to deploy and maintain their fleets. Hundreds of commercial repair and shipbuilding

companies throughout the world depend on the proven reliability of Syncrolift® for ship repairs, conversion projects and launching new vessels.

Syncrolift® systems consist of:

- Two rows of Syncrolift® hoists running the length of the piers
- Wire rope
- Wood-decked steel platform
- Docking cradles for transfers
- Syncrolift® ATLAS control system

ATLAS

All Syncrolifts are controlled using patented ATLAS (Advanced Technology Loading Articulated Shiplifts control system), which protects both the vessel and the shiplift. Operators see real-time information on the performance of the hoists, platform, wire ropes, and weight distribution of the vessel, so situations are identified before problems can occur.

Fact Sheet

Articulated platform

The Syncrolift® articulated platform design ensures that ship loads are determinately distributed to respective hoists. This enables the dock master to accurately monitor and control the loads being applied to the ship's hull during docking.

Synchronized hoists

In order to safely operate any shiplift, all lifting points must be perfectly synchronized. Syncrolift® Hoists are driven by AC synchronous induction motors so they will operate at the specified speed, regardless of load, behaving as if they are mechanically coupled together. Syncrolift® hoists are offered in a wide range of lifting capacities, speeds and vertical travel to suit each customer's requirements.

Syncrolift transfer systems

Almost every modern Syncrolift® in service supports an adjacent multi-berth facility. More berths mean more earning power; and dry berths can be added for a fraction of the cost of an additional docking facility. In theory, there are no limits to how many transfer berths one Syncrolift® can support. The only constraint is a function of the size of the ships to be docked and the total available space. One existing installation currently supports a facility with 40 adjacent repair berths. This installation frequently docks or undocks more than one vessel

per hour and has docked over 2,000 vessels in one year. As the transfer system becomes an integral part of the shipyard's operations, there is no "standard design" that is suitable for all locations. Each shipyard has its own unique environment, layout, and operating requirements and the transfer system is designed to meet all the different requirements.

Caisson lifts

The Syncrolift® caisson lift and transfer system transforms a single shore berth into a multiple-berth construction site. Now several caissons can be under construction at the same time using efficient production line processes and quality control methods, and then transferred to the shoreside berth only for testing and launch. Customers using Syncrolift® caisson lifts have achieved productivity gains of 300%. Syncrolift® caisson lifts are also recyclable - after use as a caisson lift, the unit can be reconfigured as a standard shiplift or relocated for continued work as a caisson lift.

Ramps for ferries

Syncrolift® technology is also used in passenger ferry and cargo ship ramps. In areas where very high tides make loading and unloading difficult, a Syncrolift® ramp with its precise control mechanism is an ideal solution.

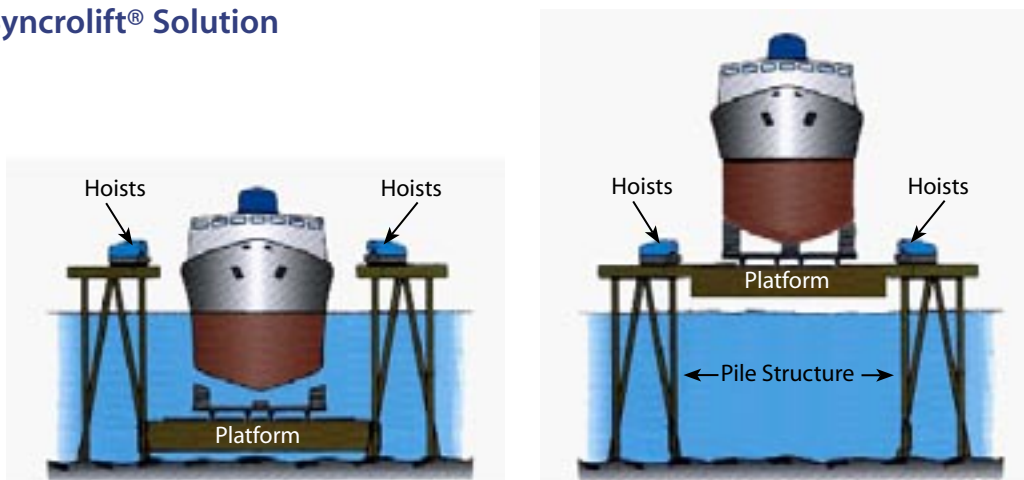
Bargelift

Developed as an alternative to conventional locking systems, the Syncrolift® system, called Bargelift, uses hoists and power to lift and lower vessels rather than water. A natural extension of Syncrolift® shiplift technology, the Bargelift uses a lifting chamber instead of a platform. A vessel (or towboat and barges), sails into the chamber, and is lifted or lowered while afloat - rather than being removed from the water. By keeping the vessels afloat, the Bargelift is able to match or exceed the throughput capacity of a lock system.

Through-life support

Rolls-Royce offer a worldwide through-life support service for all our systems. Each support package is tailored to meet the needs of each customer and with our experienced team of engineers we can guarantee excellent service and support from the project's conception through to completion.

The Syncrolift® Solution



Rolls-Royce®

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