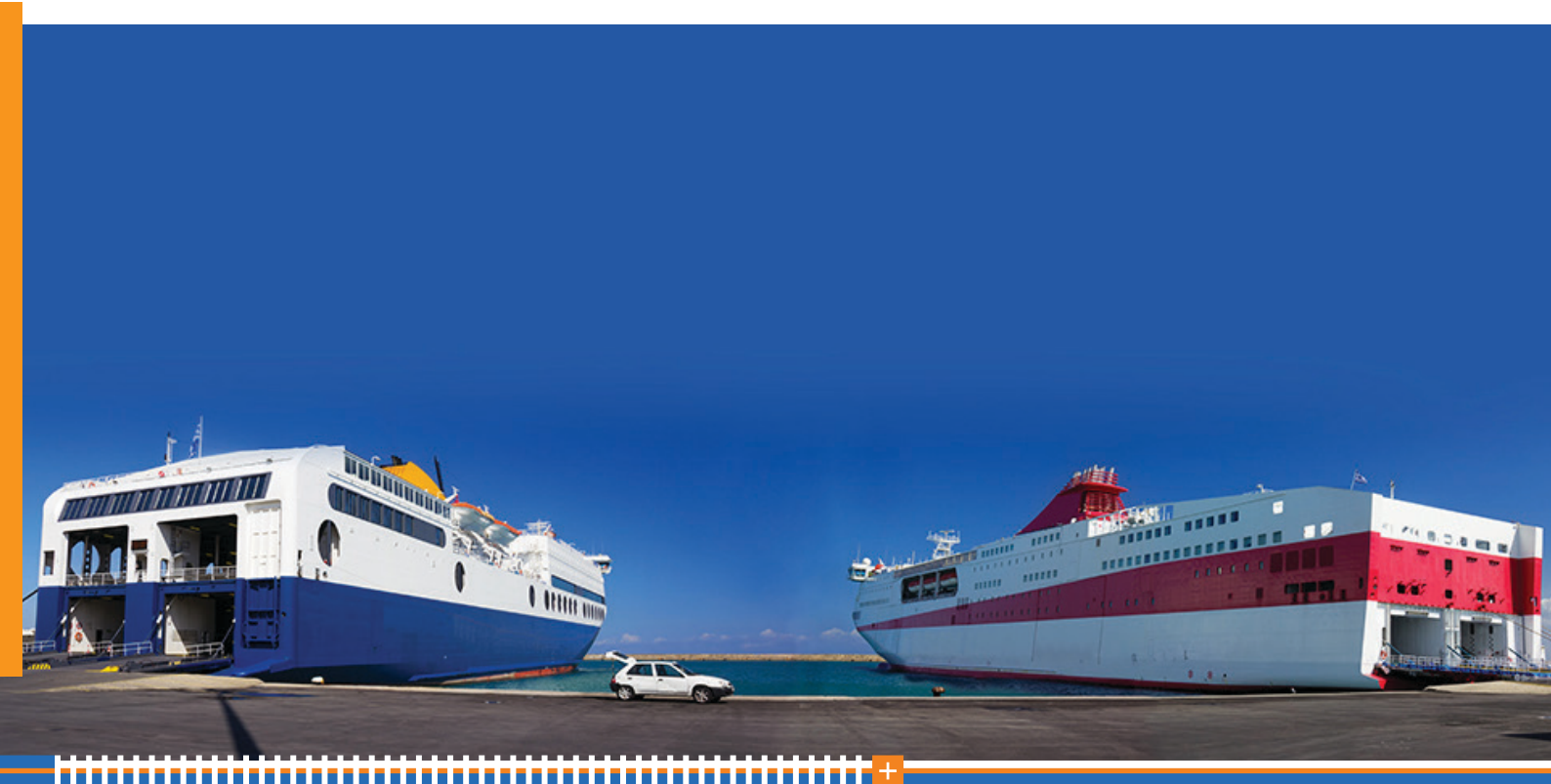


# RoRo, RoPax.

North Sea Handling is an international company focusing on providing the maritime industry with market-leading solutions within equipment for cargo/passenger access and energy efficiency. Innovation and long-term-philosophy are keywords in our everyday work.



NORTH SEA HANDLING



## Car Deck Ramp

To be able to access and exit a liftable/hoistable car deck which can attend different positions, a car deck ramp is necessary which can travel along with the car deck.

To maximize the cargo stowage volume for different cargo and let the cargo be hoisted and stowed on the car deck ramp is another essential feature which makes the car deck ramp an essential feature.

## Side Shell Door

There can be several of shell openings in a ship, serving different purposes but where each opening might pose a threat to the water integrity.

## Stern Ramp/Door

In open position when the ship is in harbor, the stern ramp is the basic feature to allow loading and unloading of cargo. In addition to all heavy loads the ramp is exposed to, it must be built to handle different ship motions such as heel and trim. Quay heights and tidal differences are other variables which the stern ramp must be built to handle.

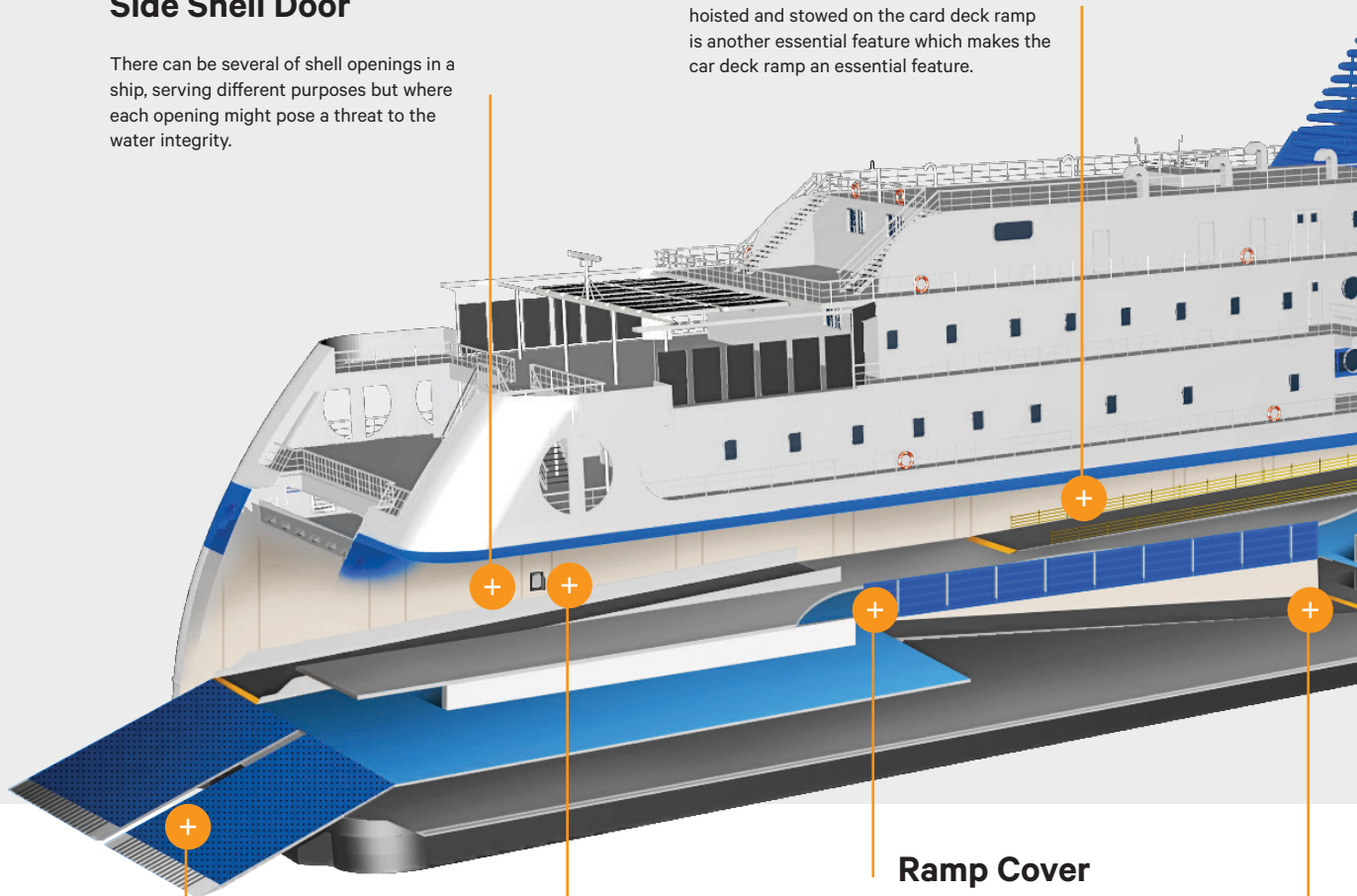
In closed/stowed position when the ship is sailing, the stern ramp acts as a watertight door forming a barrier between the outside and the inside of the ship.

## Passenger Gangway

For passengers to access and exit the ship in a safe way, gangways are an important feature. To have a gangway arrangement which takes up small amount of space, is stowable and easy to deploy are other important aspects.

## Ramp Cover

To maximize the cargo stowage volume for different cargo and at the same time secure the ships water integrity and fire zones, ramp covers are essential equipment.



## Internal Cargo Elevator

To be able to handle cargo between decks inside the ship, internal cargo elevators are an alternative. The cargo elevator can either be a stand-alone unit only acting as an elevator or it can form a watertight barrier when in stowed position fulfilling both the purpose as an elevator as a watertight hatch cover.

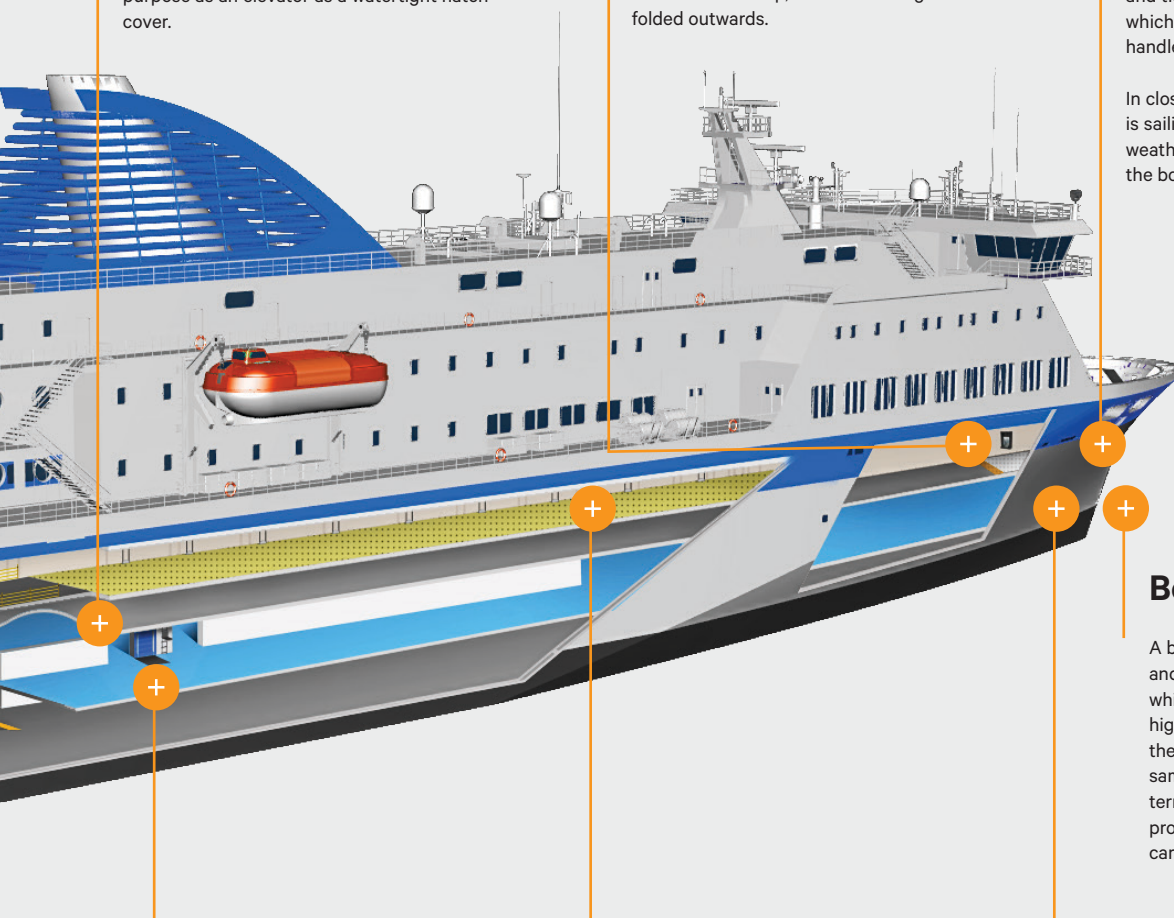
## Mooring/Observation Platform

For the crew to have a good overview of the surrounding's when going into port, observation platforms can be a good alternative. They are often located very forward in the ship, are bottom hinged and folded outwards.

## Bow Ramp

In open position when the ship is in harbor, the bow ramp is the basic feature to allow loading and unloading of cargo. In addition to all heavy loads the ramp is exposed to, it must be built to handle different ship motions such as heel and trim. Quay heights and tidal differences are other variables which the stern ramp must be built to handle.

In closed/stowed position when the ship is sailing, the bow ramp may act as a watertight door forming a barrier between the bow door and the inside of the ship.



## Bow Door

A bow door is a complex type of equipment and constantly exposed to external forces which is designed and built to withstand high slamming forces generated from among the toughest sea conditions there is. At the same time, it is a vital type of equipment in terms of cargo access and must always work properly to assure loading and unloading of cargo.

## Hatch Cover

There can be several of deck openings in a ship, serving different purposes but where each opening might pose a threat to the water and fire integrity.

## Liftable/Hoistable Car Deck

To assure flexibility and at the same time maximize the cargo stowage volume for different cargo, liftable/hoistable card decks is an alternative.

A hoistable car deck is being operated with aid of its own lifting device (hydraulic cylinder or an electrical jigger winch arrangement) which can be mounted in the car deck itself or in the hull depending on situation. It can stop and be secured in different positions to allow necessary clear height.

A liftable car deck is being operated with an external lifting device (deck lifter) but can as the hoistable car deck stop and be secured in different positions to allow necessary clear height.

## Internal Tilttable/Hoistable Ramp

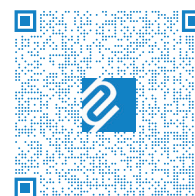
To be able to access and exit different decks, an internal tilttable/hoistable ramp can be used.

To maximize the cargo stowage volume for different cargo and let the cargo be hoisted and stowed on the ramp is another essential feature which makes the internal tilttable/hoistable ramp an essential feature.

At the same time the ramp can be used to secure the ships water integrity and fire zones when in closed/stowed position contributing to a multifunction type of equipment.

## Bow Inner Door

As complementary equipment to a possible bow ramp forming a watertight barrier, a bow inner door may be installed in the collision bulkhead. Same as the bow door, this is a vital type of equipment which must not fail and where special SOLAS requirements must be followed.



SCAN ME





NORTH SEA HANDLING



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