BARDEX® TRANSFER & SUPPORT SYSTEMS

A guide to finding the perfect pairings to your OmniLift®, OmniDock™, OmniCrane or other heavy lifting application

Our technology adapts to new challenges beyond moving frigates and submarines – from unmanned / autonomous vessels to entire assembled wind turbines – we have a system to future-proof your yard and the ever-changing technologies it'll support.

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BARDEX®
Raising the Bar Together.

TRANSFER SYSTEMS

Transfer mechanisms for moving vessels and other assets around a shipyard or port fall into two main categories: SPMT and Rail-Based Transfer. Bardex designs both types of systems, and we manufacture rail-based transfer systems. SPMT devices are commercially available from several global providers.

SPMT Systems

SPMT systems are the preferred transfer mechanism for yards with irregular geometry. These units are routinely used in complicated heavy load moving applications due to their high capacity and maneuverability. Geology is a consideration; these transporters produce high wheel loads and require a high-capacity drive surface. Facilities located on reclaimed areas or soft ground conditions can require expensive remediation to create the necessary capacity. SPMT devices are complicated machines and require a substantial amount of regular maintenance. The initial purchase cost of SPMT systems is greater than equivalent capacity rail-based systems.

Rail-Based Systems

Bardex designs and manufactures two types of rail-based transfer systems: towed carriages and self-propelled Hydraulic Transporters commonly referred to as "Bogies." Rail-based systems work well at facilities with good geometry where intersections are at right angles. They also provide an advantage in locations with soft ground conditions. The ship loading occurs along the rail system allowing for a cost-efficient foundation design. Vessel support is provided only where required rather than to the entire facility.

Carriage Based Systems

Carriage based systems are an excellent choice for high volume facilities. Carriages are inexpensive to fabricate and maintain. They have the lowest height and require the least amount of steel. Carriages can operate on single rails rather than rail pairs, reducing the CAPEX and OPEX cost of the refit yard. Carriages can be towed using conventional wheeled or tracked heavy equipment. Lateral or change of direction has historically been accomplished by means of a lateral transfer pit or by creating a two level yard. Side transfer capability can be built into the carriages without the need for either feature using the Bardex proprietary modular carriage design.

Bogie Systems

Bogie systems offer ease of operation and efficient use of yard space. They do not require lateral transfer pits or split-level yards to effect a change of travel direction. These devices require fewer personnel to assemble and operate. Bogies have a lower initial purchase cost and maintenance cost when compared to SPMT devices. These systems are fully remote operations.

SHIP SUPPORT SYSTEMS

Bardex designs and manufactures three types of ship support systems: trestles, cradles, and carriages.

Trestles

Trestles are individual structures consisting of one tapered plate girder. Trestles are compatible with SPMT or Rail Based Bogie transfer system equipment. These are most commonly used for submarine docking. Trestles are very flexible and can support a variety of vessels and blocking arrangements.

Cradles

Cradles are a welded assembly consisting of two (or more) trestles with interconnecting steel to support additional keel and bilge blocking. Cradles are compatible with SPMT or Rail-Based Bogie transfer systems. Cradles are flexible and accommodate a wide variety of vessels and blocking arrangements. Fewer cradle assemblies are required, and this design is more efficient in the use of steel material.

Carriages

Carriages are an efficient, low height version of a cradle. These devices operate exclusively on rails. They are towed rather than lifted and transferred. For yards with adequate space and appropriate geometry, carriage systems usually have the lowest cost of ownership. Bardex carriage systems are highly modular and can accommodate a wide variety of vessels.