

SAFEWAY

MOTION COMPENSATED GANGWAYS

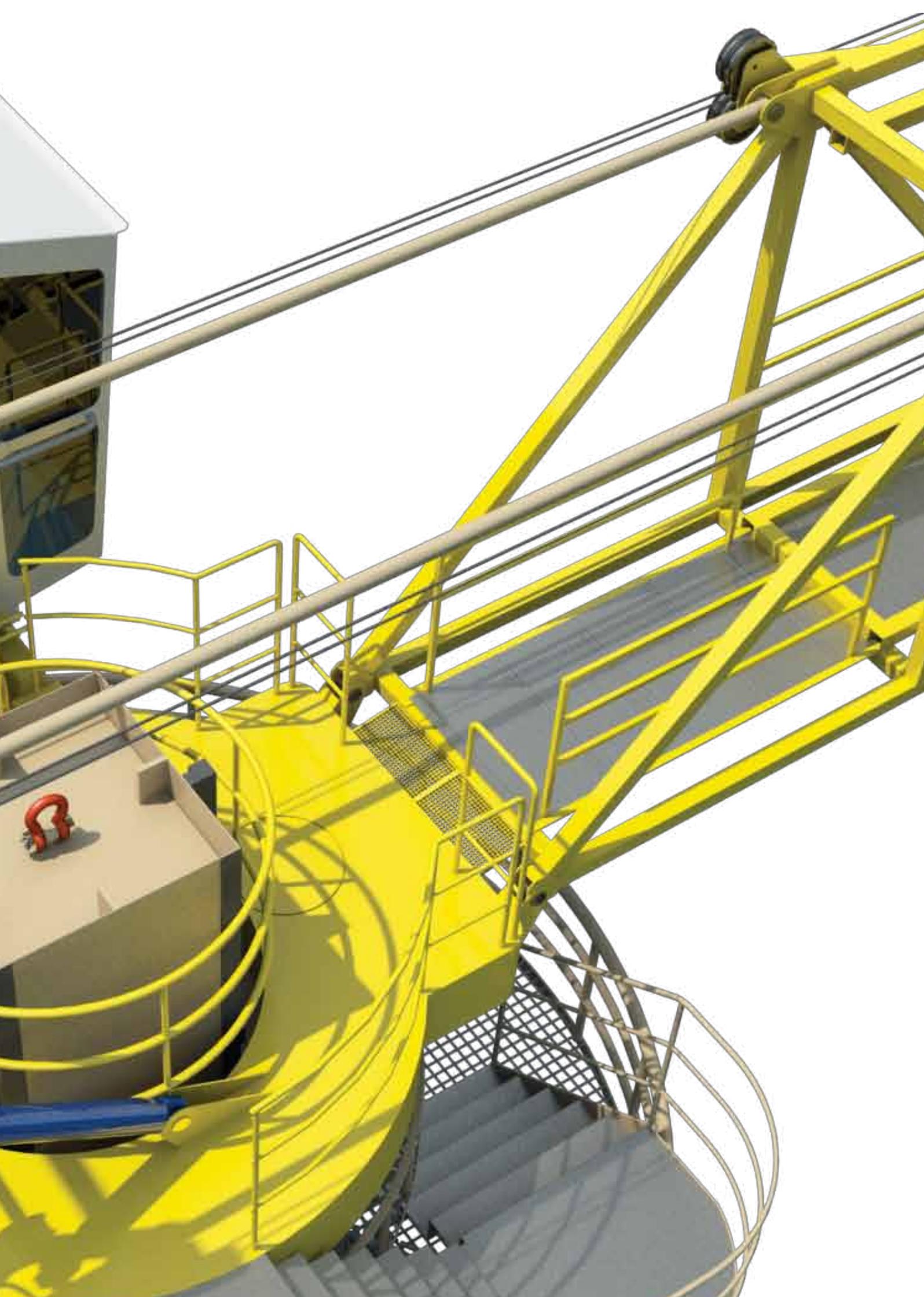


SMART INNOVATIVE SOLUTIONS



- ENHANCED SAFETY
- INCREASED EFFICIENCY
- IMPROVED WORKABILITY





Safeway redefines the state of affairs in offshore access solutions. Highly innovative, based on proven technology and extensively tested, this motion compensated gangway system allows access to a broad range of offshore installations. Safeway offers efficient and reliable solutions for the renewable, oil and gas and maritime industry.

ENHANCED SAFETY

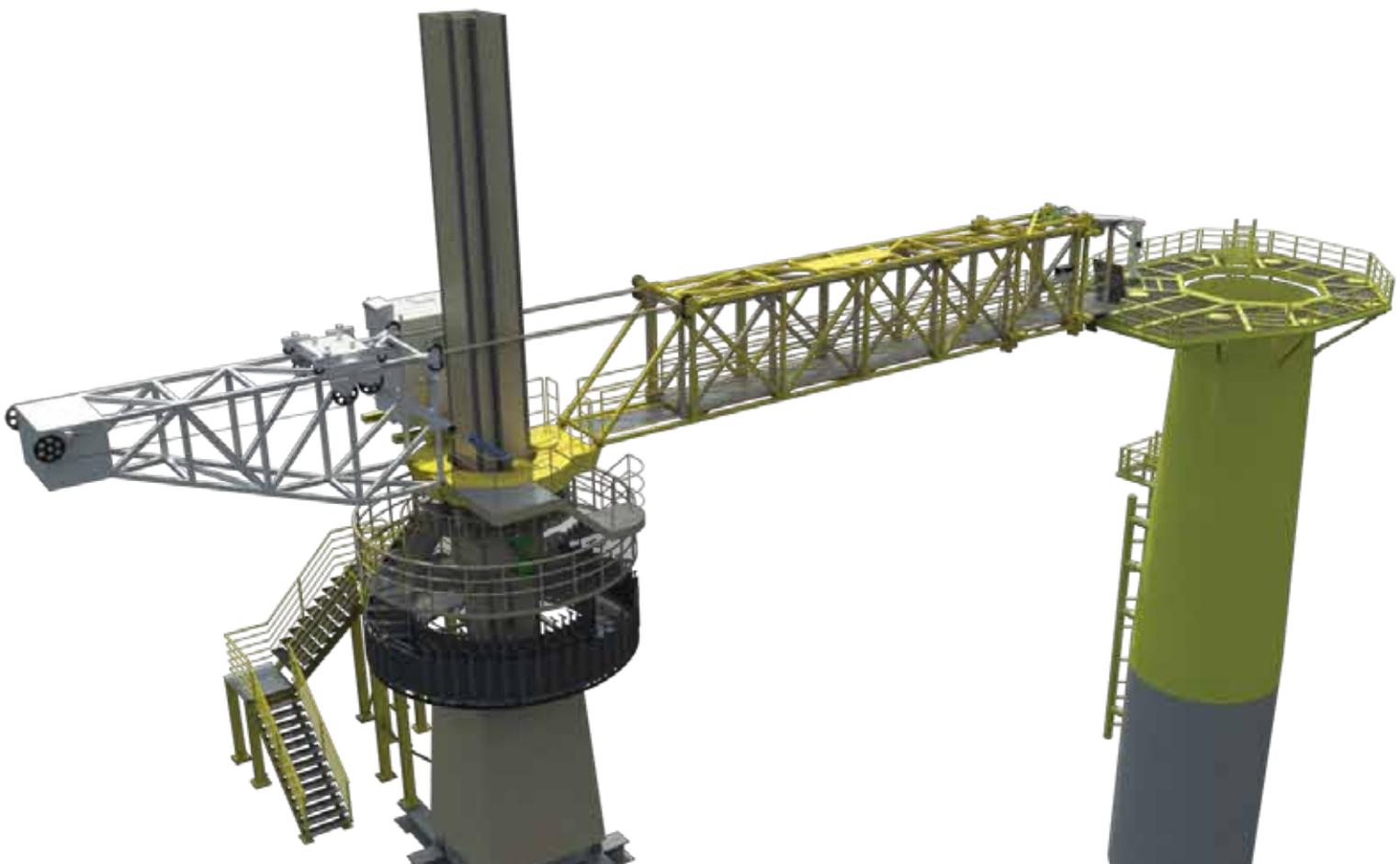
Thanks to several smart innovations, Safeway offers substantial safety improvements for offshore workers. Next to a full redundancy, the 10-metre vertical height adjustment of the bridge assures nearly horizontal passage under all circumstances.

INCREASED EFFICIENCY

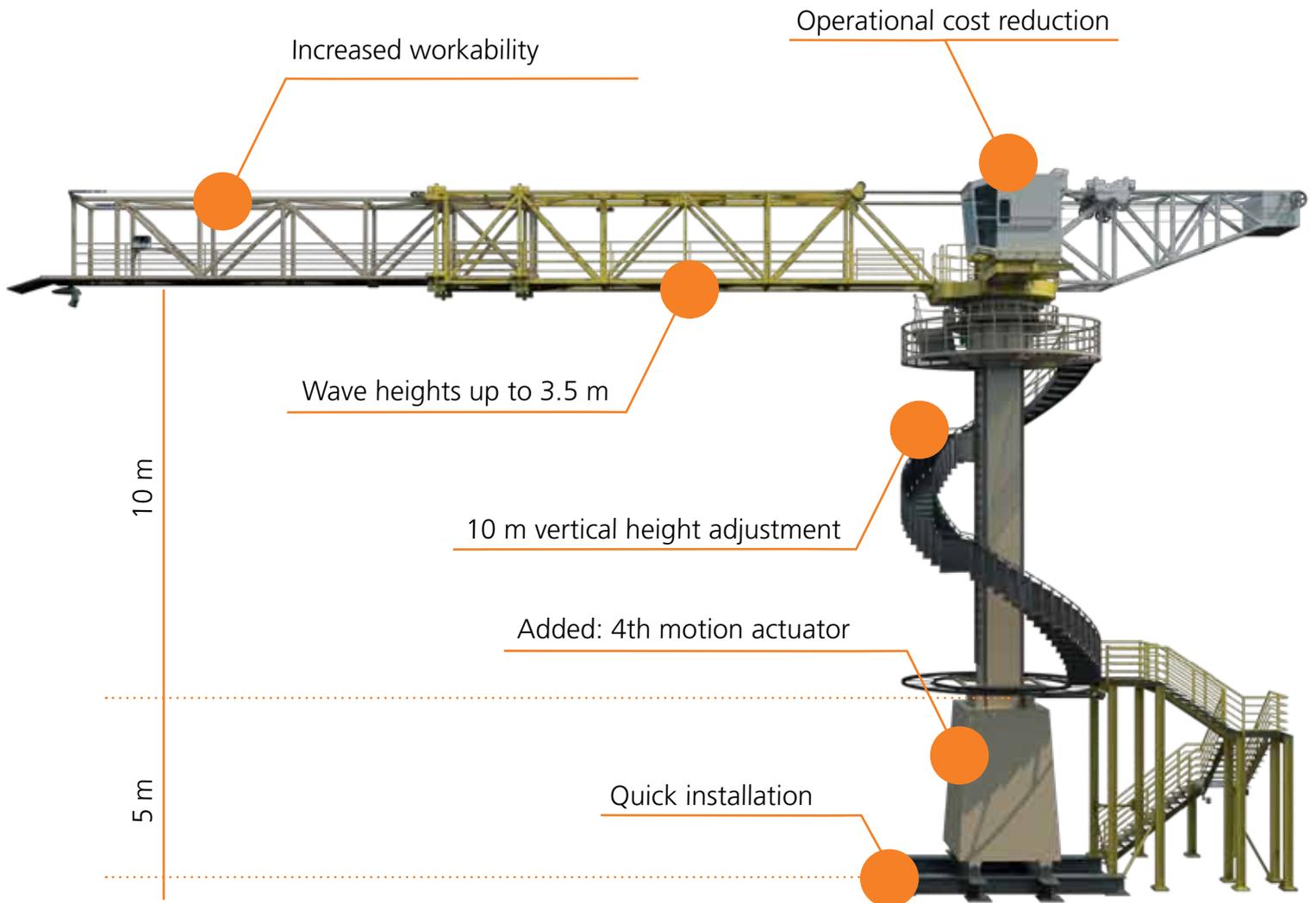
Once connected Safeway operates in a passive, free moving state. This results in a considerable reduction of fuel consumption and greenhouse emissions. In terms of operation Safeway also offers significant efficiency benefits, as a single operator -either supplied or trained by Safeway- is able to execute both gangway bridge and maintenance operations.

IMPROVED WORKABILITY

In addition to slewing, luffing and telescoping, Safeway introduces a fourth motion actuator, an independent roll compensation at the bottom of the pedestal. With vessel rolling being the biggest constraint for conventional gangways, this innovation provides a spectacular improvement of the workability whilst maintaining similar safety margins. The 10-metre elevation capacity of the gangway bridge increases the amount of installations suitable to land on ranging from small unmanned installations in the southern North Sea, up to the large offshore production units in the northern part.



- PURCHASE
- RENTAL



4TH MOTION ACTUATOR

Dedicated cylinders positioned in the pedestal keeps the mast upright under all conditions. For this feature the mast is supported by a hinged foundation.

HEIGHT ADJUSTMENT

A rack at the mast and pinions integrated in the slewing platform makes it possible to elevate the bridge upwards in a stroke of maximum 10 meters.

3.5-METRE WAVE HEIGHTS

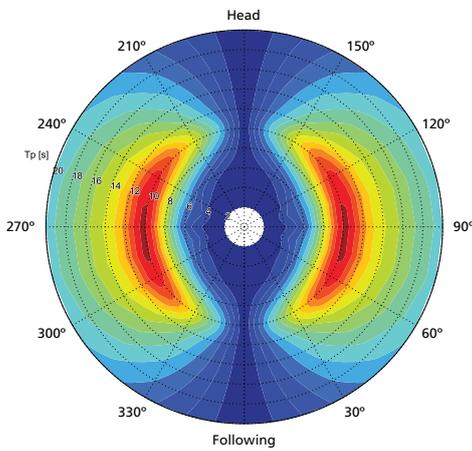
The design parameters of the Safeway system are based on the motions of a standard 75-metre long Platform Supply Vessel hull, operating in 3.5-metre significant wave heights with the gangway bridge positioned at any location on the ship's deck.

MAXIMUM HANDS-ON-TOOL TIME

Considering the available wave scatter diagrams for central North Sea locations, Safeway offers a nearly year-round workability for the average Platform Supply Vessel in the market.

COST REDUCTION

Safeway was also designed with a focus on reducing operator costs. The free float mode with unpowered slewing, luffing and telescoping actuators saves both fuel and maintenance cost. The gangway follows the ship motions, while the system closely monitors the actual operational conditions. The high redundancy of the hydraulic power pack and condition based monitoring allows for just a single, well-trained operator saving cost and on-board accommodation.



ROLL MOTION ANALYSIS

Speed = 0.0kn
Wave height = Hs 3.5 m



SAFETY

Safeway sets a new standard by creating the highest possible safety level for motion compensated gangway systems. A single-component technical failure will never cause hazardous situations, as the system is 100% redundant. Moreover the mechanically balanced gangway does not impose high loads on the receiving platform. Operating Safeway does not require an external power source or accumulators. The system's high workability limits are a guarantee for maximum safety, even in extreme weather conditions.

MADE IN HOLLAND

Safeway is developed in the Netherlands by Van Aalst Group. Safeway BV is a company within the Van Aalst Group of Companies, developing and supplying cargo handling systems for more than 850 vessels worldwide. With Safeway, Van Aalst adds a best-in-class personnel transfer solution to its already versatile portfolio.

IN-HOUSE DESIGN

Safeway's design team features a select group of top-notch mechanical, maritime, hydraulic and control designers, experienced in the walk-to-work market. MARIN, the Dutch maritime research centre, was consulted to provide input on vessel motions based on a virtual ship workability exercise. Their in-house SHIPMO program was used for the calculations.

LINKING HYDRAULICS WITH MECHANICS

The Safeway motion compensated gangway system is designed and classed under Bureau Veritas Rules. During the design process the hydraulic actuators, the HPU layout, the design of the bridge control system and the structural steel parts were all tested in a hydraulic-mechanical simulation, providing the certainty that Safeway will meet the targeted high performance criteria.

SYSTEM PERFORMANCE

Geometry

Footprint pedestal:.....	approx. 3.5m x 3.5m
Footprint HPU:.....	approx. 3.2m x 1.6m
Min/max bridge length:.....	18.5m / 28.5m
Pedestal height above deck:.....	5m
Highest operational bridge elevation:.....	18.5m (Above deck)
Lowest operational bridge elevation:.....	1.5m (Above deck)
Pedestal extension (dummy piece):.....	5.0m

Weights

Weight (incl. HPU):.....	approx. 25mt
Weight HPU:.....	approx. 6mt
Weight pedestal extension:	approx. 8mt

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