Zbridge

Offshore Access Solutions

ZB2W

Bring to Work System

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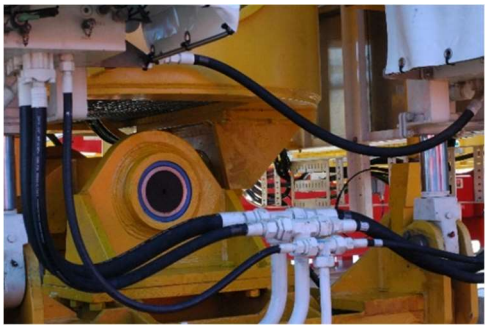
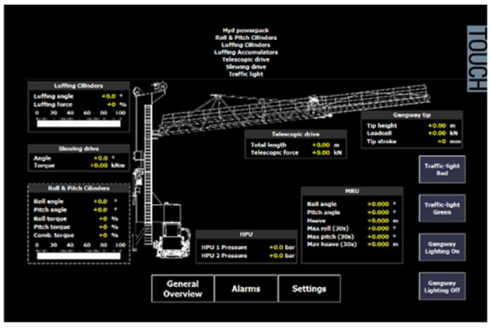
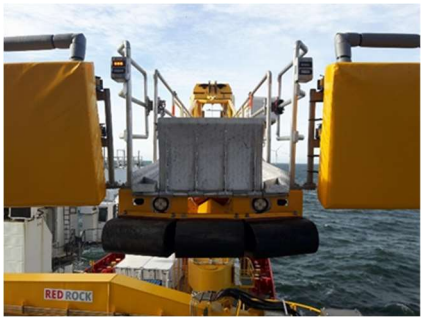
Z-Bridge is proud to present the Bring-to-Work (B2W) system. This system is developed with the objective to continue the improvement of safety and operational efficiency in order to provide our client with a cost efficient access solution and allow the usage of smaller vessels.

The B2W system is designed, constructed and tested in compliance with the Bureau Veritas rules for certification of Offshore Access System, this includes a full system FMEA performed under the supervision of an independent third party. The B2W is the lightest system available in the market able to operate from 7 up to 21 meter above the vessels deck. Weighing only 25 ton the system is suitable to operate from a CTV, mini SOV or an normal SOV / DP vessel.

The B2W system is based on the proven technology of the Z-Bridge W2W system. It includes the patented roll & pitch compensation, control & monitoring software and the special landing head.



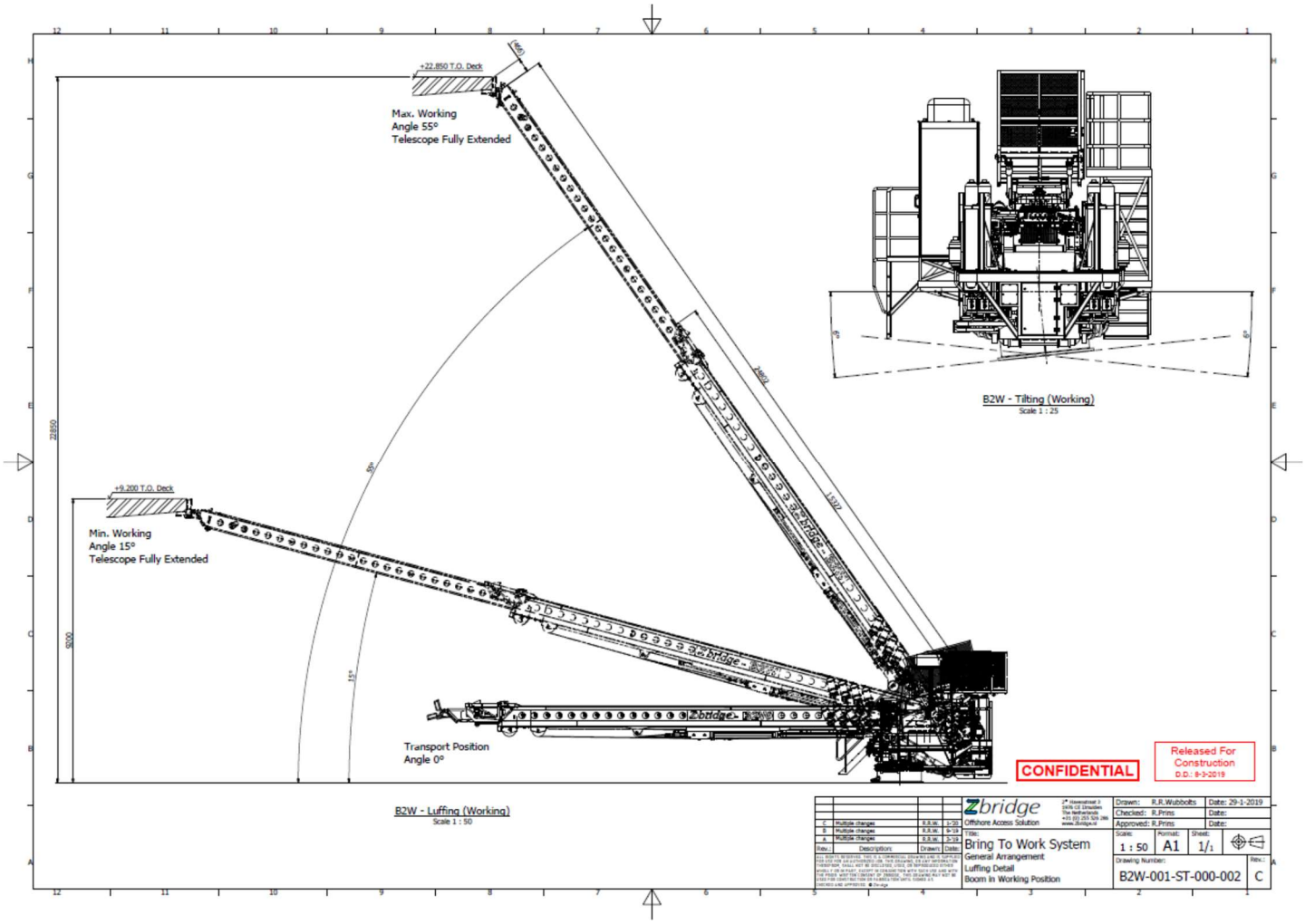




Mobilisation: The B2W system can be mobilized as a modular unit on the deck of any suitable vessel or be mounted on a deck pedestal for a permanent setup. The system is controlled from the deck or from an integrated control unit on the vessels bridge. Being hydraulically driven, the power can come from the vessel or from a separate hydraulic pack.

System: It consists out of the following main components. (1) pedestal with roll compensation and the slewing ring. (2) fixed part of the telescope mast connected with luffing cylinders to the pedestal. (3) telescope part of the mast with the landing head (4) the elevator for transport of personnel and cargo. The B2W compensates all 6 degrees of freedom.

Operation: After starting the system the vessel is positioned near the offshore structure and the telescoping arm is lifted out of the pedestal. The roll & pitch compensation is activated and the arm is slewed towards the docking location. The telescope is extended and the tip is positioned towards the docking location. Next the heave compensation is activated. The telescopic arm the is now fully motion compensated. Guided by the cameras and laser measurement in the telescope tip, the landing head is docked onto the offshore structure. From the moment the motion compensation is activated the motion compensation ability is fully automatically controlled and monitored.



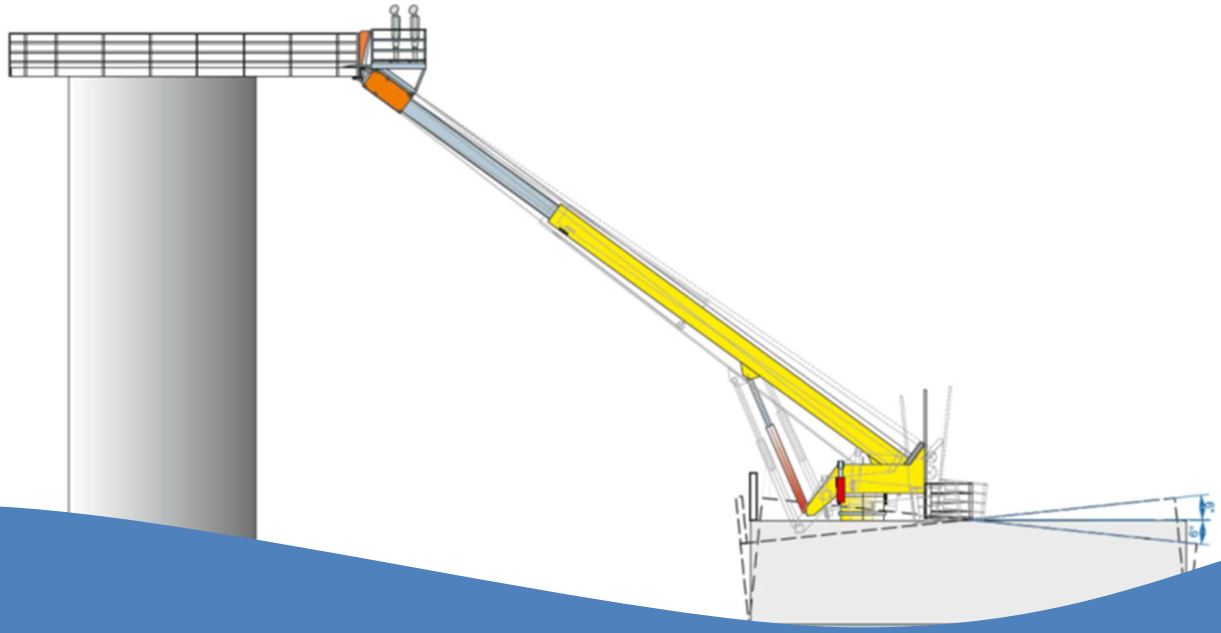
After the docking has been safely conducted the systems allows the elevator to be used. The Elevator is suitable for 6 persons or 1000 Kg cargo. The elevator can be upgraded for special cargo lifts up to 3000 Kg. These lifts can be performed in reduced weather conditions.

The B2W system first establishes a safe connection with the telescopic arm between the vessel and the offshore structure to ensure a guaranteed safe transfer.

The elevator is traveling over the telescopic arm having a separate drive. On the vessels deck the elevator can be accessed from a stair, optional a deck elevator can be added. At the end of the telescope arm the elevator will run to an end stop. After confirmation of the control system that the elevator is positioned correctly, the elevator door can be opened and the offshore structure can be safely accessed. The system is fully redundant as per system FMEA.

Operating window:

Windspeed :	operational	20 m / sec
	stowed (sea fastened)	44 m / sec
Wave frequency :		5 – 15 sec
Pitch :	operational / max	+/- 6 / 8 degrees
Roll :	operational / max	+/- 6 / 8 degrees
Heave :	operational / max	+/- 2,0 / 2,5 meter
Landing height (based on 3 m vessel)	Maximum LAT Minimum LAT	22 meter 10 meter
Min safety distance :	vessel to platform foundation	10m



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Vessels: The B2W system is able to perform crew and cargo transfers from DP vessels, the system can also be used as a 3D compensated crane to hoist up to 3 ton of cargo from the deck to the offshore structure. This will allow our clients to optimize the operation. Also grouting operation can be supported from the B2W system.




The weight of the B2W system allows it to be installed on a Crew Transfer Vessels, this will allow crew transfer from vessels deck to the TP platform while push-on to the TP boat landing. Due to the fact that the B2W system provides access direct to the TP platform while compensating for heave, roll & pitch, the operational limit of the step to the ladder is eliminated. This will increase the operating window and transfer comfort working with a CTV.

Z-Bridge Offshore Access Solutions *is a company, specialized in the design, rental and sales of offshore access systems. The company is providing project support to clients to ensure safe and efficient operations. Z-Bridge is managing the operation of its Bureau Veritas certified W2W system from the IJmuiden head office. The patented system compensates the movement of the vessel for pitch and pitch at the bottom of the Z-Bridge. This eliminates the movement being transferred in the mast, the telescoping speeds remain well below the allowed 1 m/s allowing safe and efficient operation. Current operations have proven workability of the W2W system with 4 meter waves in combination with wind force 7 Beaufort.*

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