BRIDGE

Bring-to-Work system

Right-sizing Offshore Access

Safe and efficient Personnel transfer and Cargo Hoisting in one solution

The Bring-to-Work (B2W) system

This system is developed by Z-Bridge, with the objective to continue the improvement of safety and operational efficiency in offshore access and cargo transfer. Our mission is to provide our clients with the opportunity to save considerable costs by using smaller vessels while maintaining equal workability.

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 FMECA, performed under the supervision of an independent third party. The B2W is the lightest system available in the market that provides direct access to height; able to operate from 6 up to 22 meter above the vessels deck. Weighing only 27.5 mT, the system is suitable to operate from a mini SOV or a normal SOV / DP2 vessel. The B2W system can also be used as a fully motion compensated crane.

The Bring-to-Work system consists of the following main components:

- Base frame, with tilting compensation and the slewing ring;
- Main boom, with luffing cylinders to the pedestal;
- Telescopic boom, with the landing head for personnel or cargo transfer.
- An additional hoisting jib can be mounted to increase reach.

Mobilisation

The B2W system can be mobilized as a modular unit on the deck of any suitable vessel or be mounted on a pedestal for a permanent setup. The system can be transported by road transport and hoisted with an 150mT mobile crane.

Being hydraulically driven, the power can be supplied by an integrated unit in the vessel or from a separate HPU, possibly mounted under the boom. This makes the complete footprint of the system on deck only 4.3m x 18m.

Operation

The vessel is positioned near the offshore structure, in such heading that the roll motion is minimized.

Personnel transfer

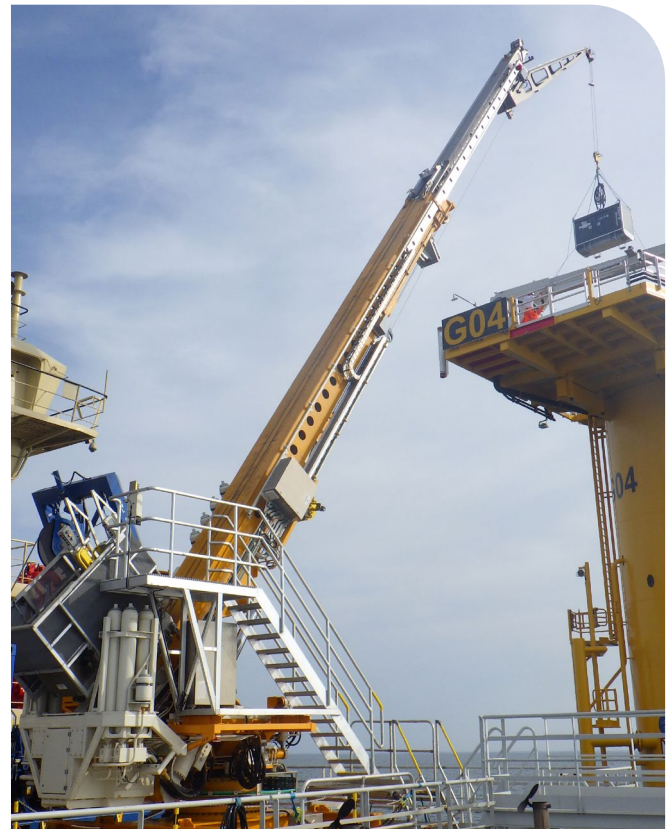
The boom is lifted out of the pedestal, slewed towards the offshore structure and the motion compensation is activated - keeping the tip stationary. The tip is pointed towards the landing spot and the telescopic part is extended until a safe connection is made. “Free run” is automatically activated, maintaining a constant push-on force to the landing beam. Next 6 persons enter the trolley, which travels over the boom. When the trolley arrives at the tip the transferees can disembark on to the offshore structure. The Return trip is equal in opposite direction. This process takes around 2 minutes.

Cargo Transfer

The trolley can also be used to transport cargo weighting up to 1000 kg.

Hoisting Mode

The reach of the crane functionality can be extended with an optional jib. This can be installed within 8 minutes. The boom is lifted out of the boomrest and the telescopic boom half-way extended. The hook is positioned over the load on deck and the load is hooked on. The load is hoisted up and the motion compensation directly engaged – the tip is now stationary, as well as the load. The boom is slewed towards the offshore structure and the load positioned over the lay-down area. The load is laid down and un-hooked. Hoisting back to the vessel is done in opposite operation.



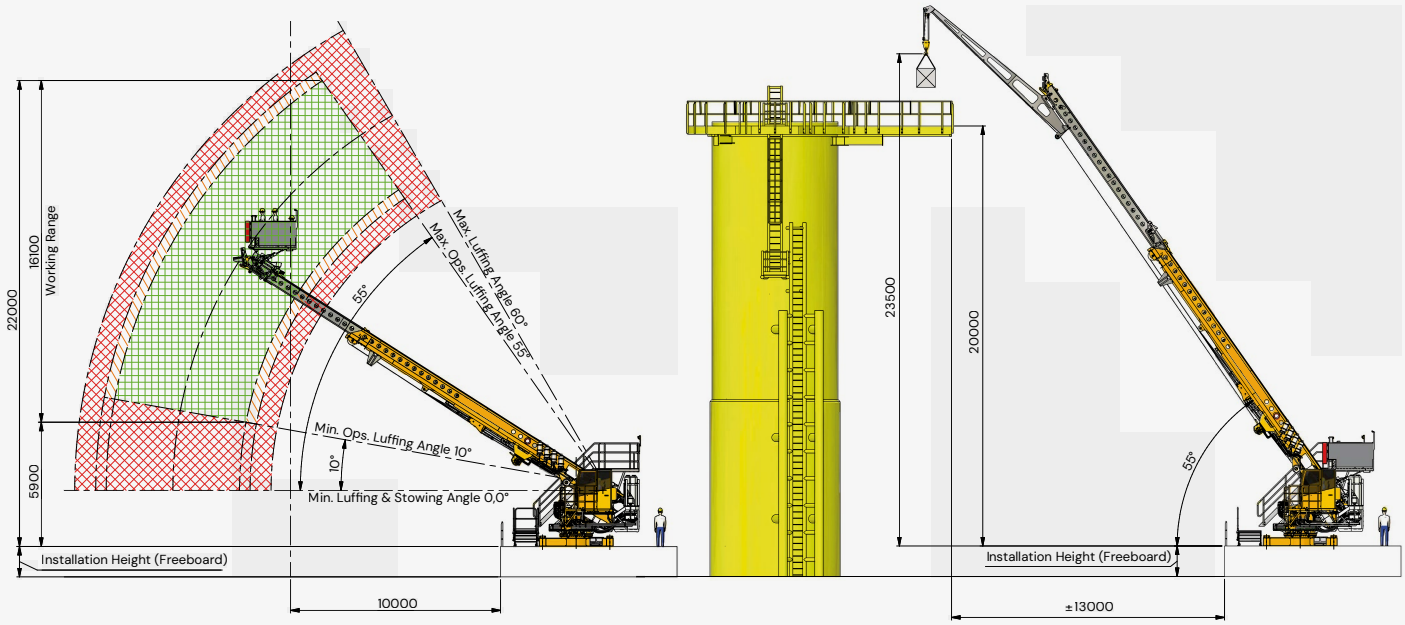
Vessels

The Bring-to-Work system allows it to be installed on smaller vessels. This makes it extremely suitable for the so called mini SOV's. The possibility to right-size the vessel for the project scope will allow our clients to perform any project scope with a fit for purpose project set-up as well as having the highest flexibility on landing heights. The seamless combination of personnel/cargo transfer and hoisting makes the Bring-to-Work system a unique asset, adding critical value to the entire operation.

Benefits of the Bring-to-Work system:

- Small footprint,
- Flexible landing height,
- Able to reach height without substructures
- Personnel and cargo transfer in the trolley and a hoisting function in one solution.

Applicable for larger vessels as CSOV's and Heavy Lift Vessels. Deck space is always a challenge on these vessels. With the B2W system no large substructures are required to reach height and any tidal difference can easily be covered.



Windspeed	operational	20 m/sec
	stowed (sea fastened)	44 m/sec
Temperature	ambient min/max	- 20/+40 °C
Wave frequency		6 – 15 sec
Pitch	Operational /Maximum	+/- 6 / 8 degrees
Roll	Operational /Maximum	+/- 6 / 8 degrees
Heave	Operational /Maximum	2,0 m / 2,2 m
Landing height	Max landing height above deck Min landing height above deck	22,0 m 6,0 m
Minimum safety distance	vessel to offshore structure	10 m distance
Safety margin telescoping	both sides of telescope stroke	1 m
Transfer capacity	Persons in trolley Cargo in trolley Hoisting	Up to 6 Pax 1000 Kg 1,2 ton SWL

Bring-to-Work Key features:

- Safe and efficient Personnel transfer and Cargo Hoisting in one solution
- No climbing, Transferring teams of 6 persons or 1000 kg cargo per transit
- Shortening visit times
- Direct access from deck +22,0m
- High vertical landing range, no in-project adaptations needed
- Light weight, low COG, Small footprint
- Safe and efficient medivac in trolley
- 1,2 ton SWL Hoist with 8 m jib extension
- Fits on all vessels from mini SOV to HLV and all in between.

Cost efficient, possibly reducing major cost drivers:

- Personnel or Cargo transfer & Hoisting in one solution
- Right-size operations with smaller vessels
- Reduce fuel consumption and CO_2 emission
- Save time by personnel and cargo transfer in 1 operation
- Quick & easy mobilization around the world

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SAFETY SYSTEM CERTIFICATION DNV ISO 45001
ENVIRONMENTAL SYSTEM CERTIFICATION DNV ISO 14001
QUALITY SYSTEM CERTIFICATION DNV ISO 9001