

Attraction Name: **HUMAN SANDBAG**

- Concept by: Val H. Usle, Kimble Creek Consulting, LLC
- Note: This pitch involves a theoretical conversion of Viking Norsafe's off-the-shelf Freefall Lifeboat from its conventional purposes of merchant ship and oil rig evacuation to a ride for an LBE Project. No representation is made that the vendor's proprietary system would meet the requirements of an attraction nor that the vendor would consider such repurposing.

I was a...

**HUMAN
SANDBAG**

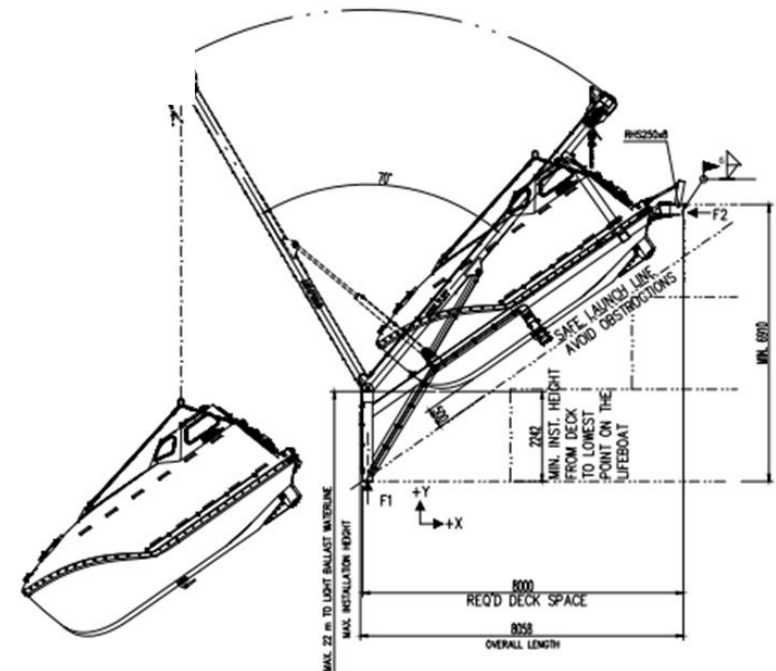
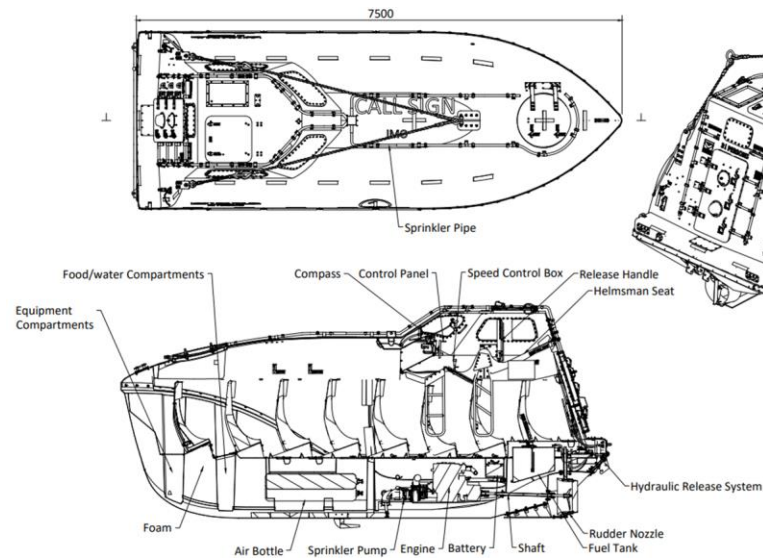


Storytelling

- Richness in Story Telling
 - Like a Zip Line or Bungee jump attraction, this ride system is a canvas that lends itself to many different story overlays. From an 'Abandon Ship Drill' to acting as 'Human Sandbags' for a vessel designed to take daredevil tourists over Niagra Falls – several stories can leverage the system.
- Emotional Resonance
 - Marrying simulated danger with happy endings is the currency of many theme park rides. This ride system presents mental and visceral challenges that come with falling backwards from a great height while sealed in a vessel.
 - This experience is not just for those who volunteer to be Human Sandbags. Cameras in the vessel provide a live feed to shore-based monitors where potential passengers and concerned observers can see the expressions of the passengers from the time they step aboard to when they reappear on the surface.

Executability

- Applies a new application to Viking Norsafe's Freefall Lifeboat.
 - Leverages KIS philosophy – Keep It Simple.
 - This escape vehicle has been successfully tested from a 40 meter height. The LBE application would consider drops in the 10 to 15 meter range.

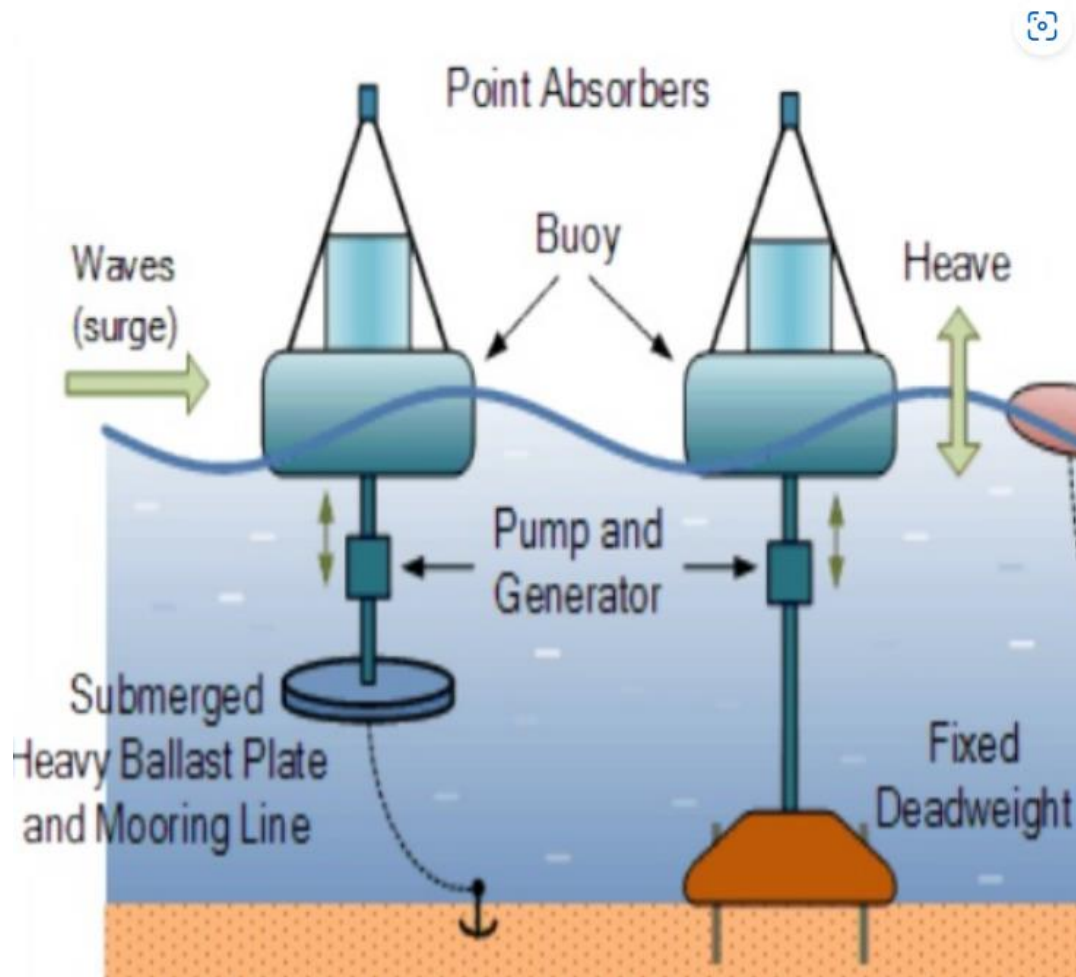


Design-Innovation

- System scales with additional Vessels, Ramp/Davits.
- When employing more than one Lifeboat, Ramp/Davit drop heights can vary between 10 meters to 15 meters.



Sustainability

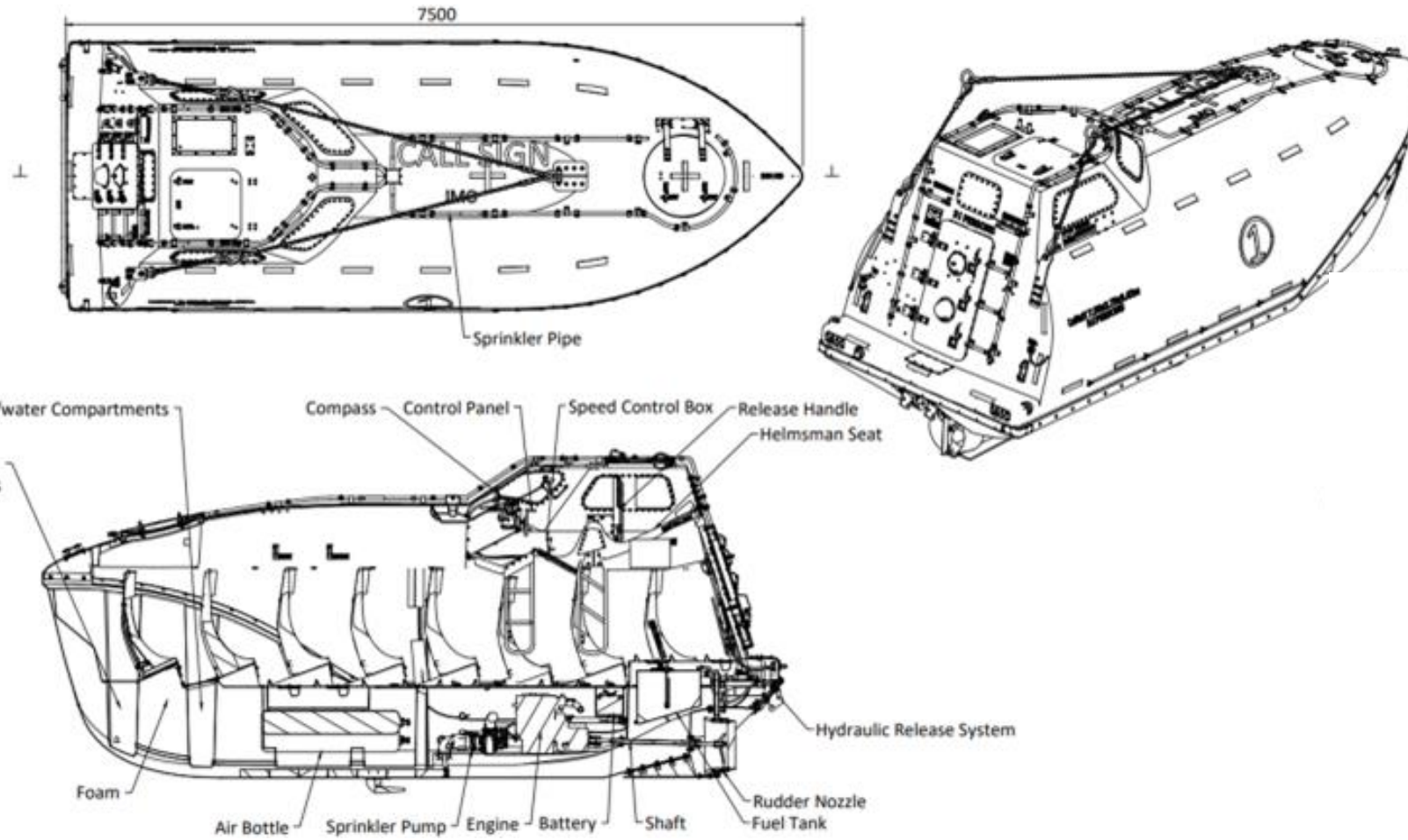


- Wave Energy Conversion Buoy
 - Captures wave energy released by Lifeboats striking the water to offset the energy used by the davits.



It begins...

They've watched from the sidelines and have mustered the courage to volunteer to be 'human sandbags' in a test of the latest version of Viking Norsafe's GES-25.



The GES-25 Freefall Lifeboat was designed for 32 souls, but this ‘test’ version only holds 20 passengers in backwards facing seats. This provides everyone with more elbow room.



20 passengers and 1 pilot board the vessel at sea level and after a safety briefing, the cabin door is shut.



**With everything
in order:**

- a davit extends,
- a harness is lowered and attached by shore crew,
- and the craft is raised to its launch ramp 10 meters above the water.



With a bump and a clank the vessel nests into the ramp. The lack of portholes is made up by monitors on the backs of seats. Viewing options include a bow camera as well as several from the shoreline that can track the vehicle's drop.



A shore-based horn blows and the vessel is released. Gravity takes over as the Lifeboat accelerates down a short ramp.



The extra G's that come with collision with the water are felt by everyone as the vehicle disappears below the waves.



The flat screens in front of passengers provide a collage of views from shoreline cameras that capture the vehicle in its freefall, its disappearance into the water, and bobbing back to the surface.

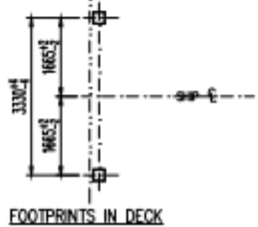
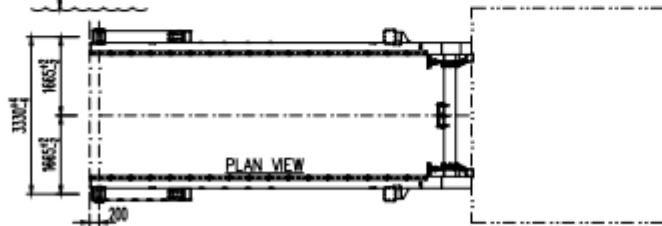
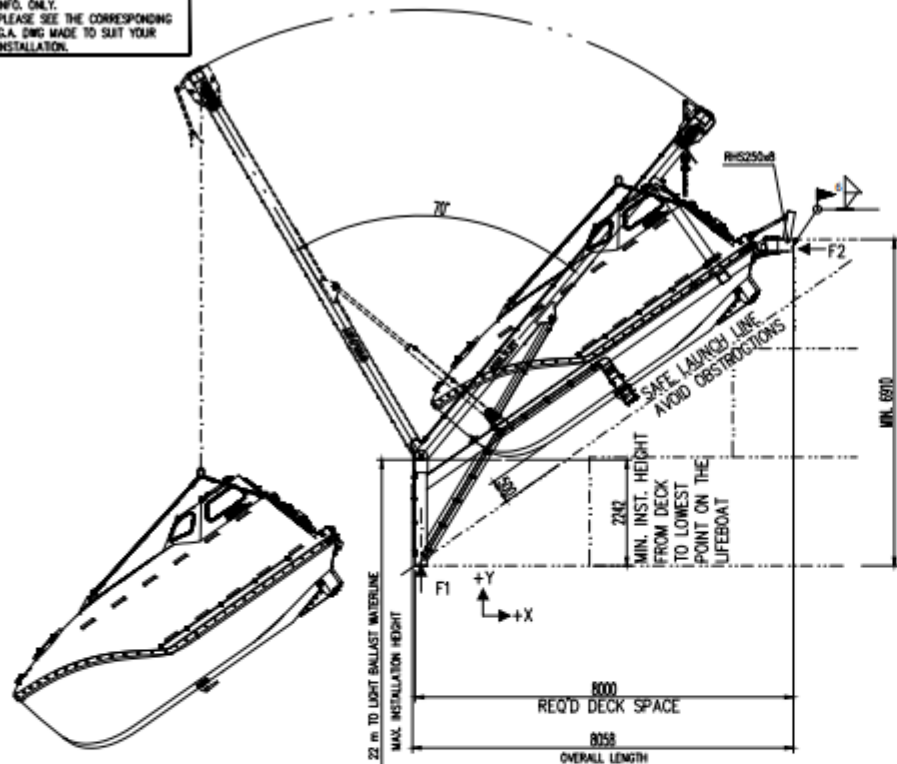


As the craft stabilizes the Pilot comes over the intercom and announces that the craft is shipshape and thanks everyone for assisting in the test.

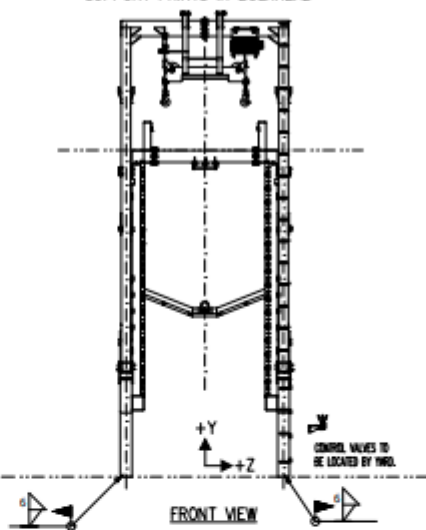


**The Pilot
activates the
engine and
reverses course
back toward
the
Load/Unload
dock.**

THIS DWG. IS FOR GENERAL INFO. ONLY. PLEASE SEE THE CORRESPONDING G.A. DWG MADE TO SUIT YOUR INSTALLATION.

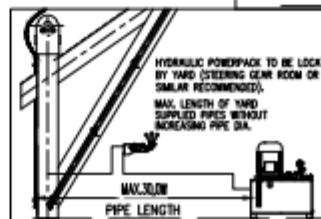


SUPPORT PRINTS IN BULKHEAD



CLEAR OPENING

SECTION THROUGH SKIDWAY



HD-25 Davit for GES-25 Free Fall Lifeboat:

| | |
|----------------------------|--|
| SWL Lowering | 7200 kg |
| Hoisting speed | 5 m/min |
| Lowering speed | 5 m/min |
| Total davit weight | 6500 kg |
| Design specification | 20° list / 10° trim |
| Primary means of launching | Free fall 20° list, 10° trim simultaneously |
| Secondary launching | Lowering by winch (5° list / 2° trim) EL. Power must be available |
| Max. inst. height | 22 m |

NOTES:

- Access platforms, handrails, doubler plates etc. :Yard supply.
- Location of hydraulic power unit to be decided by yard. (Under-deck installation IP55).
- Hydraulic piping between hydraulic power unit, davit and control valve to be yard supply.
- All electric wiring by yard.
- All field welds to be performed acc. to approved WPS. (Yard responsible)
All field welding is subject to class approval prior to start welding.
- All field welds shown to be welded by yard during installation.

FORCES IN DECK (POINT LOAD EACH SIDE):

| | Horizontal FORCE X kN | Vertical FORCE Y kN | Horizontal FORCE Z kN | MOM X kNm | MOM Y kNm | MOM Z kNm |
|----|--------------------------|------------------------|--------------------------|--------------|--------------|--------------|
| F1 | ±93 | ±96 | ±26 | ±43 | ±11 | ±20 |
| F2 | ±106 | ±72 | ±11 | ±10 | ±13 | ±29 |

Reaction forces:

Reaction forces as joint loads side, marked with nodes on deck interface.

For orientation of forces see legend with marked XYZ vectors. All forces are point loads, nominal forces without any factors.

| REV | DESCRIPTION | BY | CHECK | APPRO | DATE |
|-----|-----------------------|------|-------|-------|------------|
| 1 | Released for approval | JODI | CEZH | WAGU | 26.08.2019 |

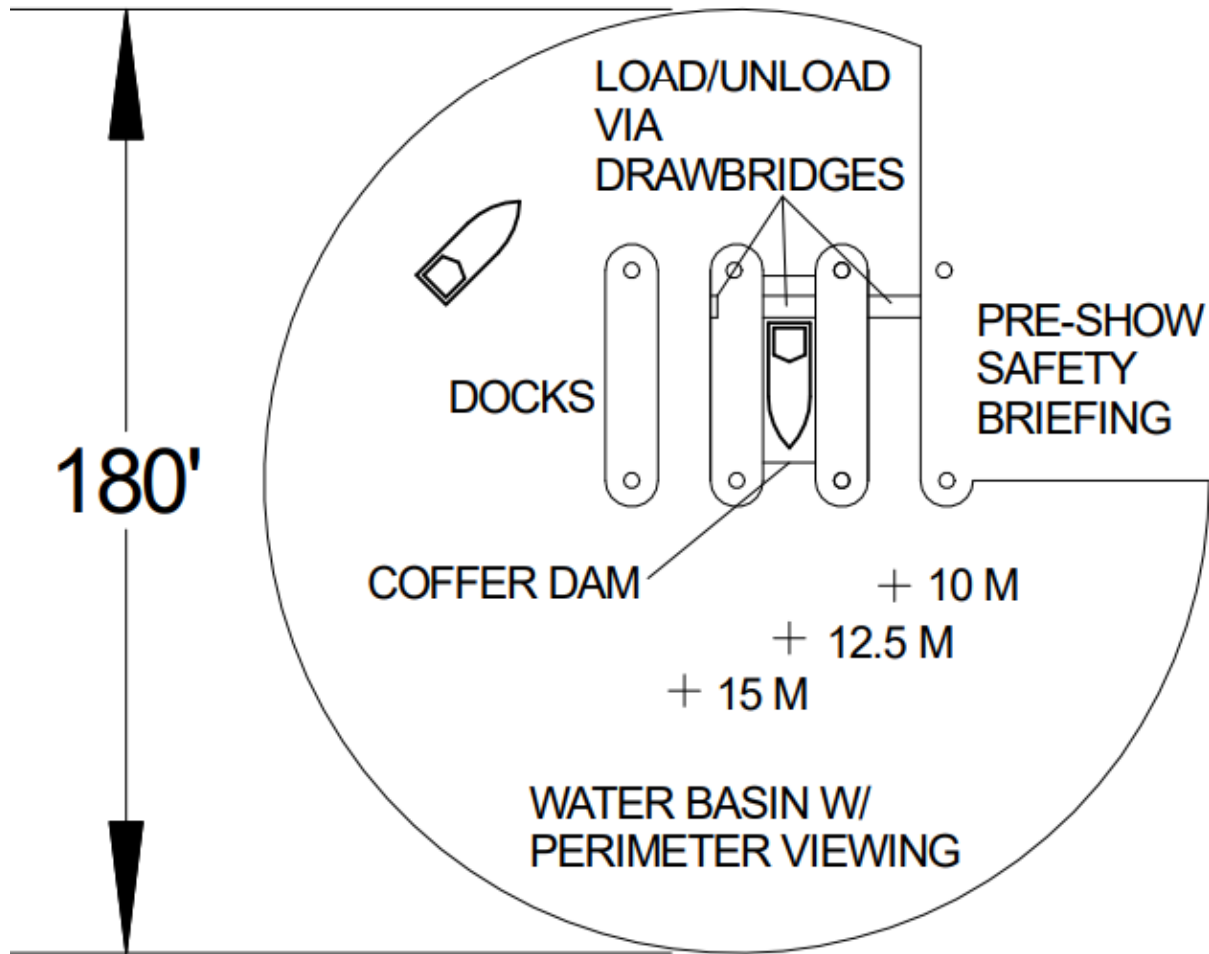
REVISION HISTORY

| | | |
|--|---|-------------------------------------|
| | VIKING NORSAFE Life Saving Equipment Norway AS P.O. Box 115 Tel: +47 37 65 85 00 4612 Farnvik Fax: +47 37 65 85 01 NORWAY 2617 Service: +47 37 65 63 33 E-mail: Viking.NorSAFE@vikingsle.com | |
| | Drawn by: JODI Check by: JETA Appr. by: WAGU | Initial release date: 19.10.2015 |

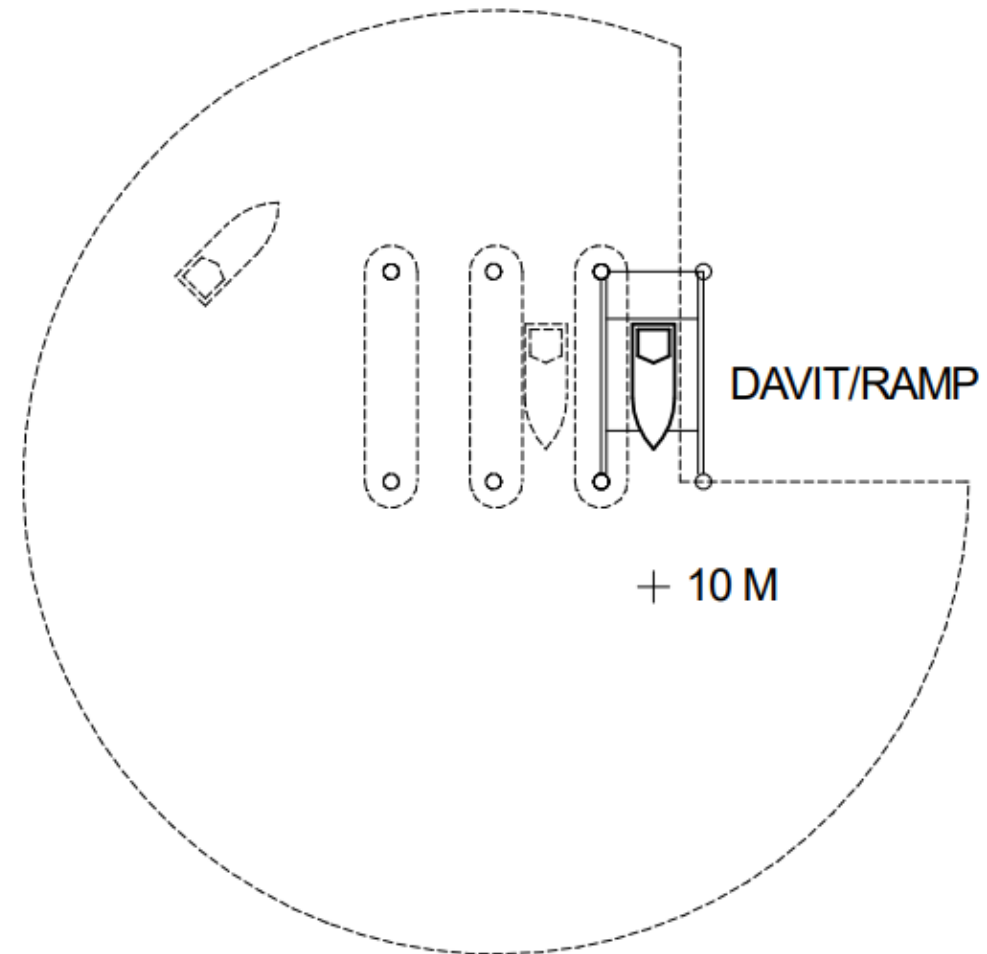
HD-25 DAVIT FOR GES-25
(INI WINCH/HYD FF)

| | | | |
|-----------------------------|--|-------------------|--|
| Drawing type: GA | References: ISO 2768-mK ISO 1302-BF | Scale: 1:100 | Sheet size: A3 |
| Drawing Number: G-501053 | Revision: 1 | Sheet No.: 1/1 | Material Number: Weight: Project/Job Number: |

Ramp and Davit System



LOWER LEVEL



**10 M LEVEL
12.5M & 15 M SIMILAR**