

# EXTERNAL JACKET LIFTING TOOL (EJ-LT)

Lifting jacket foundations with external lugs



## Application

- + Construction of Offshore Wind Farms (OWFs) – Installation of Jacket Foundations

The tool, which can be operated remotely, engages with the external lugs on offshore jacket foundations. It negates the need for human intervention, thus increasing safety and speed of jacket installation.

## BENEFITS

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- The tool design and operation should not require modification to the jacket design
- Capable of lifting a 2000t Jackets
- The design also aims to minimise the height and weight of the tool to maximise operational flexibility with regards to hook height
- The Houlder design concept for this equipment allows for the remote engagement and disengagement of the tool, thus removing the requirement for personnel working at height to install the tool prior to lifting
- No umbilical required

## RELEVANT CODES, STANDARDS & LEGISLATION

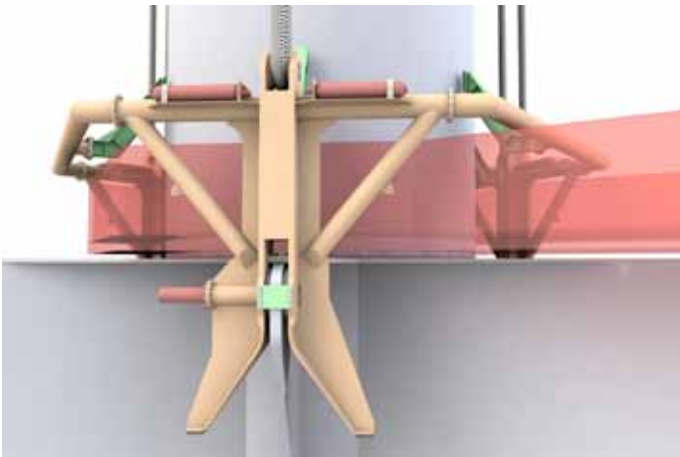
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The tool will comply with the following codes & standards:

- DNVGL-SE-0080 ed. 2015-12, Noble Denton marine services – marine warranty survey
- DNVGL-CG-0127 ed. 2015-10, Finite Element Analysis
- 0001/ND rev.1 2015, General Guidelines for Marine Projects
- 0027/ND rev.6 2015, Guidelines for Marine Lifting and Lowering Operations
- 0030/ND rev.6 2015, Guidelines for Marine Transportations

## SYSTEM SPECIFICATION

- Tool engages/interfaces with the external lugs on a jacket
- Capable of lifting jackets with a maximum weight of 2000t (taking into account the appropriate lifting factors)
- Weight of tool is approximately 40t, not including rigging. The total weight of the entire lifting assembly is estimated at 50t
- Is designed to ensure that the jacket is not overstressed for any temporary load cases throughout its operation (i.e. engagement, lifting etc.) – this is to be confirmed via FEA modelling of the lifting process
- Designed such that it can be remotely operated (wireless electronic control system) for engagement/disengagement to/from the jacket
- Will provide the remote operator with confirmation that the tool is engaged and that the lifting operation is safe to commence
- Tool will use 3 mounted cameras to enable the operator to position the lifting tool into jacket lugs
- Guides and fins enable the system to find its fit on the lugs for engagement of the locking pins, without needing working at height
- Automatically releases at sea after installation
- No umbilical required
- Designed such that it is inherently safe inasmuch that it would not lose the load should power be terminated from the tool or whilst there is any load born by the tool
- Integrated power supply and contains a secondary means of operation should the primary controls and/or power system fail
- Provides sufficient protection on areas that physically interface with the jacket such that the tool will not cause any form of damage which may affect the performance of the jacket





Houlder is an independent, innovative offshore engineering company. We build on 30 years' offshore expertise and work closely with clients to design solutions for their technical challenges. We provide complete EPCI services with special equipment, consultancy, project management and engineering solutions for the offshore wind and wider energy sector.

## CONTACT US

### HOULDER LIMITED

22 Witney Way

Boldon Business Park

Tyne & Wear

NE35 9PE

UK

**T:** +44 (0)191 536 2777

[enquiries@houderltd.com](mailto:enquiries@houderltd.com)

[www.houderltd.com](http://www.houderltd.com)