Certificate No:
**TAS00003KN**

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Gangway**

with type designation(s)
**30m V1 Uptime gangway**

Issued to
## Uptime International AS
**Avaldsnes**, **Norway**

is found to comply with
**DNV standard DNV-ST-0358 – Offshore gangways**
**DNV standard DNV-ST-0378 – Offshore and platform lifting appliances**

## Application :

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.**

Issued at **Høvik** on **2022-11-09**
This Certificate is valid until **2027-11-08**.
DNV local unit: **West Norway CMC**

Approval Engineer: **Ole Osuldsen**

for **DNV**

**Per Esvall**
**Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

## Product description

Product: 30m telescopic Offshore gangway with additional crane functionality
Designation: Uptime 30.0m V1

## Application/Limitation

Categorization: TYPE 2 Offshore gangway with motion compensating system

| | | |
|---|---|---|
| **Operational** | | |
| Configuration | | supported at both ends (bumper/constant push mode, see #1) |
| Live Load (LL) | | 450 kg (3 persons) or<br>850kg cargo + 1 person (total 1000kg) |
| Maximum operational length** | | 28.8 m |
| Minimum operational length** | | 19 m |
| Bumper/push force setting @ tip | | 15 kN |
| Wind speed (at gangway location) | | 25 m/s |
| Gangway Operating angle (from horizontal)*** | | +/-20° |
| Vessel accelerations**** | Vertical (in addition to gravity) | ±0.35 g |
| | Longitudinal | 0.35 g |
| | Transverse | 0.35 g |
| **Parked / Transit / Survival** | | |
| Configuration | | Bridge supported by a support structure |
| Live Load (LL) | | - |
| Maximum Length** | | 19.0 m |
| Wind speed (at gangway location) | | 51.5 m/s |
| Gangway Operating angle | | - |
| Vessel accelerations**** | Vertical (in addition to gravity) | ±1.0 g |
| | Longitudinal | 0.7 g |
| | Transverse | 0.3 g |

*) manually controlled trolley, load including trolley self-weight and cargo. It is the end user's responsibility to assess and accept the trolley suitability for the intended application considering the operational safety aspects (e.g. ability of trolley operator to evacuate the gangway during an emergency case, hazards related to emergency procedures - e.g. emergency disconnection, etc.)
**) measured from the centre of the baseframe to outmost part of the gangway tip, excluding safety length = 1.2m.
***) excluding safety angle = +/-5 deg (from horizontal)
****) relative to the vessel axis

Categorization: Offshore crane, motion compensated, not intended for personnel lifting.

Operating mode: Motion compensated offshore lifts from floating-to-fixed units
Safe Working Load (SWL): 1000 kg
Maximum residual (uncompensated) boom tip velocity (Vt): 0.4 m/s
Minimum luffing angle (from horizontal): 20 deg
Static heel/trim: 5°/2°
Sidelead/Offlead angle (from vertical): 10 deg
See also *Approval limitation #2*

Winch and block self-weight: 212 kg

Design temperature: -20°C

Self-weight of components: see “COG positions” 2010004-UI-4020-N-XD-100-0015 Rev 01

Usage: ref 2120007-UI-4020-N-SA-003-0001 Rev 01 Sec 9.6

The operational limitations defined above have been provided by Uptime International AS, data and procedures adopted for estimating which have not formed part of this review. It is the end user's responsibility to ensure that these are never exceeded during service.

It has been confirmed by the designer that the flow of people will be continuously monitored and regulated throughout the period in which the gangway is in operational / working condition, thus preventing the load on the gangway to exceed the above defined LL at any given time.

The control and monitoring system is not covered by this Type approval certificate.

The Type Approval is not covering any mechanical, electrical or hydraulic components which, for certification, shall be provided with certificates as per DNV-ST-0358 tables 2-2 and sec 5.14, 5.15 and 5.17 and DNV-ST-0378 table 2-3.

## Approval limitations

1. The gangway structure has been evaluated for a static configuration (operational mode) where the gangway is in connected/push mode, as defined in the Technical specification, ref. doc no. 2120007-UI-4020-N-SA-003-0001 Rev 01, under the following limitations:
   - the gangway shall always be supported in axial (X-axis) direction (i.e. operate in bumper mode).
   - During personnel transfer operations. the gangway tip position relative to transverse (Y-axis) and vertical (Z-axis) directions will be ensured through an active motion compensation system
   - During transit/survival/parked position, the gangway will be supported by a Bridge support structure/cradle. The bridge support structure and its foundation (underdeck strength) are not part of the Type approval.
2. For the crane mode, the type approval is not covering the derating.
   The motion compensated crane capacity is not associated with a specific significant wave height (Hs), but with a maximum residual boom tip velocity (Vt), i.e. the remaining boom tip velocity that is not compensated by the motion compensation system. Derating curves and Motion compensating system accuracy limiting curve shall be drawn for each mobilization/new onboard installation. See also *Certification.*

## Type Approval documentation

## Certification

This Type Approval covers design(s) only, i.e. the Type Approval is not valid for the final product, but may be used as basis for obtaining a product certificate.

If a DNV Product Certificate is required, the following shall apply:

- The control system (i.e. electrical, hydraulic, and control and monitoring systems) shall be covered by a DNV Type approval or Case-by-case approval
- The manufacturing survey shall be followed-up by a DNV Surveyor
- Each gangway shall be tested in accordance with DNV-ST-0358 Section 7, DNV-ST-0378 Section 14 and DNV approved test procedures in the presence of a DNV Surveyor.
- The gangway enhanced slip resistant features/treads suitability @ min/max gangway operating angles shall be assessed, tested and approved by the attending DNVGL surveyor.
- Motion compensating system performance:
  - Gangway mode – accuracy as per DNV-ST-0358 Sec 5.11.2
  - Crane mode:
    - no less than 86% accuracy i.e. 14% deviation from nominal position) for both upper and lower limits of the operating Hs range;
    - The maximum continuous operating time for the MC system (i.e. maximum duration of 1 operation with MC active before loss of performance)
    - Any performance degradation in case of swinging load; it shall be proven that for the recommended range of rigging lengths the MC system will not cause swinging loads

## Marking of product

Each gangway shall be marked in accordance with DNV-ST-0358 Section 7.4 and DNV-ST-0378 Section 14.

## Periodical assessment

For retention of the Type Approval, a DNV Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the approval are complied with. Reference is made to DNV-CP-0338.

This certificate is only valid if required periodical assessments are carried out with satisfactory results. To check the validity of this certificate, please look it up in https://approvalfinder.dnv.com.

***End of certificate***