DNV·GL

Certificate No:
**TAD000011K**

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Hoisting, Rotation and Pipehandling Equipment**

with type designation(s)
**R5 Series Utility Winch R5P-XXAK/MK, and Personnel Winch R5P-MLXXAK**

Issued to
## Ram Winch and Hoist LTD
**Houston, TX, USA**

is found to comply with
**DNVGL-OS-E101 – Drilling facilities, Edition January 2018**
**DNV GL standard DNVGL-ST-0378 – Standard for offshore and platform lifting appliances**

## Application :

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

Issued at **Houston** on **2019-01-22**
This Certificate is valid until **2024-01-21**.
DNV GL local station: **Certification & Inspection Services**

Approval Engineer: **Bo Cui**

for **DNV GL**

**Nilsen Christian**
**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.


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## Product description

The Ram R5 Series of winches is designed to be powered by a pneumatic motor and can be configured in 6 different drum lengths ranging from 12 in. in length to 36 in. The utility winch series can be configured in two brake combinations of automatic disk brake with automatic band brake or manual band brake.

| | |
|---|---|
| Design temperature | -4°F |
| Safe working load for utility winch (R5P-XXAK/MK) | 5 metric tons force (11000 lbf) |
| Safe working load for personnel lifting (R5P-MLXXAK series) | 2.5 metric tons force (5500 lbf) |
| Applied wire rope diameter | 3/4” |
| Max wire rope layers on drum | 7 |
| Service application | General hoisting and lifting personnel |

## Type Approval documentation

## Tests carried out

- Testing of welding and NDT should following the requirement in part 3 in section 8, chapter 2 of DNVGL-OS-E101.
- Charpy testing of the materials shall be carried out at or below min design temperature, ref. DNVGL-OS-E101 Ch.2 Sec.2 §2.
- Each product shall be overload tested (at 1.25×SWL) in accordance to DNVGL-OS-E101 Ch.2 Sec.8 §3.4.
- Functional testing shall be carried out, ref. DNVGL-OS-E101 Ch.2 Sec.8 §3.5.
- Hydraulic system shall be pressure tested, ref. DNVGL-OS-E101 Ch.2 Sec.8 §3.3.

- Qualification of welding procedures and qualification of welders shall be in accordance to DNVGL-OS-E101 Ch.2 Sec.8 §2.
- Non-destructive evaluation shall be carried out in accordance to DNVGL-OS-E101 Ch.2 Sec.8 §3.1.
- Type test was carried out reference to test report TA-50017 Rev. 0 witnessed 11-30-2018.

## Conditions and comments

- The winch shall not be used as man-riding winch designed to lift one person in a riding belt.
- The winch shall be incorporated in a lifting system with provisions for emergency lowering, upper and lower hook stops, and regulators or other means to prevent load exceeding SWL.
- All materials are to be delivered with 3.1 certificates (EN 10204:2004), documenting mechanical properties and chemical composition in accordance with Sec. 2, Chap. 2, DNVGL-OS-E101.
- The frame intended for lifting is not covered by this approval.
- Testing and inspection of the winch and control system components shall be carried out according to approved FAT procedure and witnessed by DNV GL surveyor.
- Each product is to be surveyed during fabrication in accordance with the requirements for equipment of Category I as defined in DNV GL's Offshore Standard DNVGL-OS-E101, followed by issuance of Product Certificate.
- Fabrication records are to be maintained in accordance with DNVGL-OS-E101 Ch.3 Sec.3 §2.

## Marking of product

For traceability to this Type Approval Certificate the products are as a minimum to be marked as follows:

1. "NV TAD000011K"
2. Serial Number
3. Manufacturer's name and trademark
4. Safe Operating Loads

## Periodical assessment

For retention of the Type Approval Certificate, DNVGL's surveyor shall perform periodical assemssement every second year in accordance with DNVGL's Offshore Standard DNVGL-OS-E101 and standard for offshore and platform lifting appliances DNVGL-ST-0378.

END OF CERTIFICATE