



Certificate no.:
TAS00004AC

TYPE APPROVAL CERTIFICATE

This is to certify:

that the **Winch - General Application**

with type designation(s)
Winch SWR30 NK2

issued to

Dinamic Oil S.p.A.
Bomporto, MO, Italy

is found to comply with

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.

Planetary gear units and brakes for slewing and hoist application. Design Temperature, TD, according to above standard -20 degrees Celsius

Issued at **Høvik** on **2024-07-04**

This Certificate is valid until **2029-07-03**.

for **DNV**

DNV local unit: **Italy/Malta CMC**

Approval Engineer: **Peder Bendik Møll**

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.



Form code: TA 251

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Product description

Offshore Winch type SWK30 NK2 including gearbox, multidisc negative primary and backup brakes.

Application/Limitation

The Offshore Winch SWR30 NK2 is approved for the following conditions:

Max static load on Rope, all layers	30000N
Max static load on Rope for personnel lifting	15000N
Dynamic Amplification Factor	1.5
Number of wire layers	3
Wire pitch diameter, outer layer	384mm
Gear ratio, total	20.32
FEM class	M5- L2/T5
Rope diameter	16mm
Minimum design temperature	-20deg

The gearbox is approved for the following conditions:

Stage 1 ratio	4.00
Stage 2 ratio	5.33
Overall ratio	20.332
Service lifetime 6300hrs	
Maximum Static output torque	13622Nm

Load Spectrum Dynamic torque

Load case	Output Torque Nm	Output Speed rpm	Running Life %
I	5650	72	2
II	3390	72	65
III	2825	72	23
IV	2260	72	10

The Primary brake is approved for the following conditions:

Brake torque	666912 Nmm
Number of brake discs	4
Number of brake springs, helix type	14
Maximum allowed backpressure	0bar

The Back-up brake is approved for the following conditions.

Brake torque	5612034 Nmm
Number of brake discs	12
Number of brake springs, disc type	2
Maximum allowed backpressure	0bar

The back-up brake is designed for personnel lifting only and must be disengaged when the winch is in cargo lifting mode.

Note:

1. The gearboxes have been designed in accordance with the recognised standard ISO 6336 and the min safety factors as per DNV-ST-0378.
2. All load-bearing materials are to be delivered with 3.1 certificates, documenting mechanical properties and chemical composition in accordance with the DNVGL-ST-0378 Sec.3.
3. Gear calculations are based on assumption that optimum hardening depths have been achieved according to recognized standards and manufacturer's experience.
4. Bearings lifetime has not been evaluated. It is assumed the bearings are delivered with sufficient capacity documented
5. Brake friction factor has not been evaluated, the value is provided by the manufacturer.
6. Control system is not part of the Type Approval
7. Bolts/screws shall be preloaded according to the manufacturer's recommendations.
8. There shall be always min.4 turns of the wire left on the drum at any conditions.

Type Approval documentation

Certification

In order to obtain a DNV Product Certificate, the winch shall be tested according to the DNV-ST-0378 Table 14-1 and NDT to be carried out according to DNV-ST-0378 Sec.3.

Marking of product

Each Winch is to be marked according to DNV-ST-0378 Sec.14.5

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.