



TYPE APPROVAL CERTIFICATE

Certificate no.:
TAS0000258
Revision No:
3

This is to certify:
that the

with type designation(s)
H02, H03, H04, H07, H12

issued to
Bryne Winch Solution AS
Nærbø, Norway

is found to comply with
DNV-OS-E101 – Drilling facilities, Edition July 2024
DNV standard DNV-ST-0378 – Offshore and platform lifting appliances
DNV standard DNV-ST-0377 – Standard for shipboard lifting appliances

Application:

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

Issued at **Høvik** on **2025-10-24**

This Certificate is valid until **2030-10-23**.

for **DNV**

DNV local unit: **Stavanger**

Approval Engineer: **Andreas Sigvardsson**

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 USD 300 000.



Product description

- This type approval certificate is based on previous certificate S-8722
- Hydraulic winches with built-in 2 stage planetary gear (H02 one stage) and hydraulic brake (fail-safe).
- The submitted calculations are based on a design dynamic factor ψ_0 of 1.25. For design dynamic factor above this, the utilisation of the winch shall be specially considered.
- A design pressure of 280 MPa and a design temperature T_D of -20°C have been applied.
- The approval of the winches is based on the following safe working load (SWL) and nominal drum torque, corresponding to the maximum of load spectrum L4 according to F.E.M. 1.001 3rd edition. Acceptable number of drum cycles is listed below the load:

H02					
Wire diameter	11 mm				
Drum diameter	208 mm				
Total gear ratio	5.5				
Safe Working Load	2000 kg	1710 kg	1005 kg	745 kg	695 kg
Drum torque [Nm]	2550	2180	1280	950	885
Acceptable number of drum cycles for above torque	$5 \cdot 10^4$	$1 \cdot 10^5$	$1 \cdot 10^6$	$1 \cdot 10^7$	$1 \cdot 10^8$

H03						
Wire diameter	14 mm					
Drum diameter	238 mm					
Total gear ratio	41.25					
Safe Working Load	3000 kg	2770 kg	1635 kg	975 kg	730 kg	680 kg
Drum torque [Nm]	4470	4130	2435	1450	1090	1010
Acceptable number of drum cycles for above torque	$7.5 \cdot 10^3$	$1 \cdot 10^4$	$1 \cdot 10^5$	$1 \cdot 10^6$	$1 \cdot 10^7$	$1 \cdot 10^8$

H04					
Wire diameter	14 mm				
Drum diameter	238 mm				
Total gear ratio	56.35				
Safe Working Load	4000 kg	2995 kg	2280 kg	1810 kg	1690 kg
Drum torque [Nm]	5960	4460	3400	2700	2520
Acceptable number of drum cycles for above torque	$3 \cdot 10^4$	$1 \cdot 10^5$	$1 \cdot 10^6$	$1 \cdot 10^7$	$1 \cdot 10^8$

H07					
Wire diameter	20 mm				
Drum diameter	342 mm				
Total gear ratio	76.5				
Safe Working Load	7000 kg	4315 kg	3510 kg	3035 kg	2820 kg
Drum torque [Nm]	14970	9230	7500	6490	6030
Acceptable number of drum cycles for above torque	$1 \cdot 10^4$	$1 \cdot 10^5$	$1 \cdot 10^6$	$1 \cdot 10^7$	$1 \cdot 10^8$

H12					
Wire diameter	24 mm				
Drum diameter	408 mm				
Total gear ratio	65				
Safe Working Load	12000 kg	10000 kg	7200 kg	5580 kg	5190 kg
Drum torque [Nm]	30650	25560	18390	14250	13250
Acceptable number of drum cycles for above torque	$4.5 \cdot 10^4$	$1 \cdot 10^5$	$1 \cdot 10^6$	$1 \cdot 10^7$	$1 \cdot 10^8$

- The winches are approved for maximum 3 layers of wire. When the hook is in its lowest position it is to be at least 3 turns of wire left on the drum.

- Support of winch in ship structure or other structure shall be verified by separate approval.

Application/Limitation

1. The winches are accepted for use in platform cranes as defined in the above Rules. Control systems and safety functions have not been evaluated.
2. The winches are not intended for personnel lifting.
3. Materials are to be delivered with 3.1 certificates.
4. Material Charpy values are to be tested at -20°C and conform to requirements given in DNV-OS-E101 Ch.2 Sec.2 Table 1.
5. All load-transmitting bolts are assumed pre-stressed according to a procedure acceptable to the attending surveyor and to at least 70% of the yield stress of the bolt material.
6. The strength, function and support of possible sprag clutches are not covered by our approval but assumed to be according to the guidelines of the sprag clutch manufacturer.
7. Our gear calculations are based on that optimum hardening depths have been achieved according to recognised standards and manufacturer's experience. Material fatigue values based on 90% reliability of survival have been applied according to the requirements for lifting appliances in our rules. Load distribution factors as stated by the manufacturer have been used and we have not considered these.
8. For Ex components with EX certificates with certificate number that is ending with a "U" or "X" where measures to obtain compliance with the special conditions given in the certificate are required, shall be documented and demonstrated to local DNV surveyor.
9. EX documentation for this system is assumed to be submitted in a common complete package to the yard. EX documentation is also to be provided and presented to the DNV surveyor at site. It is assumed that the electrical equipment installed is certified for the relevant/correct zone.
10. Radio remote control is not included in the approval and need to be delivered with DNV Product certificate.

Type Approval documentation

The documentation was approved 2009-11-29, 2013-01-16**, 2014-04-04* and 2015-05-21***

H02:

H03:

H04:

H07:

H12:

Testing to be carried out on each individual product

In order to obtain a DNV Product Certificate, testing is to be carried out in accordance to DNV-OS-E101 Ch.2 sec.8 and DNV-ST-0378 Table 14-1.

Marking of product

The winches are to be marked with the manufacturer's name or trademark, type designation and serial number.

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.

END OF THE CERTIFICATE