DNV·GL

Certificate No:
TAS00001Z8

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Winch - General Application

with type designation(s)
M521XL

Issued to
Forum U.S. Inc, dba DYNACON
Bryan, TX, USA

is found to comply with
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 **2019-04-15**
This Certificate is valid until **2024-04-14**.
DNV GL local station: **Houston**

Approval Engineer: **Ronald Quiballo**

for **DNV GL**

Christian Nilsen
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

- Model 521XL ROV Winch with Overhead Right Angle Levelwind
- Model 521XL Winch with O&K F260 gearbox

Application/Limitation

This Type Approval is a renewal of certificate S-8608 Rev. 0, issued 2014-10-03.

521XL ROV Winch with Overhead Right Angle Levelwind :

Design Parameters	Value	(equivalent)
Safe Working Load		
- (10 Wire Layers on 74" Core)	: 31,000 lbf	: 14,061 kgf
- (10 Wire Layers on 74" Core)	: 26,460 lbf	: 12,002 kgf
- (10 Wire Layers on 70" Core)	: 26,460 lbf	: 12,002 kgf
MGW (Lifting of Winch)	: 76,900 lbs	: 34,881 kg
MGW (Lifting of Winch and OHRALW)	: 87,500 lbs	: 39,689 kg
MGW (Lifting of Winch and OHRALW)	: 93,000 lbs	: 42,184 kg
Minimum Design Temperature[1]	: -4 °F	: -20 °C
- Number of Wire Layers (10)	: 1.30 – 1.57 in	: 33 – 40 mm wire size
- Number of Wire Layers (9)	: 1.61 – 1.73 in	: 41 – 44 mm wire size
- Number of Wire Layers (8)	: 1.77 – 1.85 in	: 45 – 47 mm wire size
- Number of Wire Layers (7)	: 1.89 – 1.93 in	: 48 – 49 mm wire size
Service Application	: ROV Lifting	

1- Reference temperature for material testing

521XL Winch with O&K F260 gearbox[2]:

Design Parameter	Value	(equivalent)
Minimum Design Temperature	:-20°C	: -4°F
Safe Working Load (lifting w/ padeyes)	: 40,823 kg	: 90,000 lbs
Safe Working Load (operational)	: 13,000 kg	: 28,660 lbs
Safe Working Load (@bare drum)	: 17,500 kg	: 38,581 lbs
Minimum Cable Diameter	: 41 mm	: 1.614 in
Minimum Sling Angle (with vertical)	: 30°	
Service Application	: ROV Lifting	

2- Reference DVR-P452.0-J-9611 Rev. 0, issued 2014-10-03.

Type Approval documentation

Tests carried out

Marking of product

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

1. "NV TAS00001Z8"
2. Serial Number
3. Manufacturer's name and trademark
4. Safe Operating Loads.

Periodical assessment

In order to maintain the validity of the type approval certificate, periodical assessments should be carried out according to DNVGL-CP-0388 at 2 and 3.5 year intervals. Periodical assessment will, when possible, be harmonised with other surveys and audits carried out.

Comments

1. Braking systems should meet all requirements specified in DNVGL-ST-0378 2016 Section 5.2.3.
2. Loose gear is not part of the scope of this TAC but should be supplied with CG-3's including relevant test and design documentations.
3. This TAC does not cover wire rope.
4. Upon loss of power or in an emergency, both the emergency stop and manual brake shall be activated.
5. Bolts and nuts to be delivered with 2.2 test reports for primary and secondary connections.

END OF CERTIFICATE