Certificate No:
TAS00003TK

TYPE APPROVAL CERTIFICATE

This is to certify:

That the MOB/tender boat winch

with type designation(s)
CW2500

Issued to
Cramm Yachting Systems B.V.
Leuwarden, Friesland, **Netherlands**

is found to comply with
Red Ensign Group Yacht Code – Part A, January 2019 Edition
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 and for DNV product certification

Issued at **Hamburg** on **2023-09-27**
This Certificate is valid until **2028-09-26**.
DNV local unit: **Netherlands VMC**

Approval Engineer: **Frank Poetsch**

for **DNV**

Jörg Kallies
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

MOB/tender boat winches CW2500; sub-types STL0178, STL0179, STL0181 and STL0182

Application/Limitation

Winches for MOB/tender boat launching appliances for yachts > and < 500GT with Flag of Red Ensign Group and CISR manned tender boat (MTB) policy acceptance.

This certificate does not cover winches for launching appliances according to SOLAS/LSA-Code.

The hydraulic installation of the MOB/tender boat winch is not part of this certificate and is subject to acceptance by the vessel´s Classification Society respectively Flag State Administration.

1. Working conditions

Winch type CW2500	STL0178	STL0179	STL0181	STL0182
Max. line pull	2600kg	2600kg	2600kg	2600kg
Hydr. motor	80cc	100cc	80cc	100cc
Pressure, hoisting, bar	195	160	195	160
Pressure, lowering, bar	70			
Q, hoisting, l/min	40	75	40	75
Q, lowering, l/min	65	75	65	75
Speed, hoisting, m/min	22	34	22	34
Speed, lowering, m/min	38,5	35,5	38,5	35,5
Rope – ø, mm	10 – 14 (steel galv., max. grade 1960N/mm², rotation resistant)			
Layer, max.	2			
Safety windings, min.	3			
Drum – ø, mm	345			
Drum width, mm	140	140	210	210
Gear box	RRTD 1000DB, i=23,72 (brake 390 Nm)			
Hydr. motor	OMSS 80	OMSS 100	OMSS 80	OMSS 100
Power supply: main source, emergency source of power or manual power (hand pump).				
Ropes shall be case by case approved with the corresponding launching appliance.				
Winch supporting structure -different from this TA- shall be case by case approved with the corresponding launching appliance.				

2. Material/ workmanship requirements:
- Acc. to DNV-ST-0377, Section 3 and 11
- Welding by qualified personnel according to DNV approved WPS.

3. Comments:
- The winches shall be protected permanently against corrosion.
- Screws shall be secured against unscrewing (e.g. by tightening torque, liquid thread locker).
- The hydraulic system shall be air vented before initial use and after each maintenance. The air venting procedure shall be in accordance with the makers instructions.

4. Product certification:
To obtain DNV Product Certificates, each winch shall be subject to
- DNV manufacturing survey
- Testing in presence of DNV analogues to MSC.81(70) as amended, Part 2, Section 6.1

Type Approval documentation

Tests carried out

FAT; Factory Acceptance Test, winch type CW2500, date 2023-07-21, No., DNV: witnessed 2023-07-28

Marking of product

The system is to be marked with the name of manufacturer and type designation.

Periodical assessment

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