



Certificate No:
TAS00003F1

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Launching appliances for work boats and tender boats

with type designation(s)
HMD G120/130 (280 or 315mm) MK3 & HMW 120/130 MK3

Issued to

MacGregor Norway AS
Arendal, Norway

is found to comply with

DNV standard DNV-ST-0498 – Launching appliances for work boats and tender boats

Application :

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

Issued at **Høvik** on **2022-12-01**

This Certificate is valid until **2027-11-30** .

DNV local unit: **West Norway CMC**

for **DNV**

Approval Engineer: **Paulo Correia**

.....
Per Esvall
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.



Form code: TA 281

Revision: 2021-10

www.dnv.com

Page 1 of 3

Product description

Single point Workboat Davit in two variations:

- HMD G120 MK3 with HMW 120 MK3 – MWL 12 000kg
- HMD G130 MK3 with HMW 130 MK3 – MWL 13 000kg
- Launching operation up to sea state 4 (WMO, significant wave height of 2.5m)
- Utilizing painters with vessel max headway speed of 5 knots
- Fatigue limit maximum 20 000 cycles
- Max Trim = 10 and List = 20
- Wire rope diameter 28mm
- Max number of layers on winch drum 3

Above mentioned variations can be delivered with two engine options 280mm or 315mm.

It is end user responsibility to ensure that the above limitation as well as limitations listed in the User Manual and Technical specifications are not exceeded.

Application/Limitation

- Falls, suspension chains, links and blocks used in the launching equipment, shall have a safety factor 6 against material ultimate strength. Wire falls to be certified according to Table 2-2.
- Hydraulic cylinders and shock absorber shall be delivered with DNV product certificate as per specific structural requirements in DNV-ST-0498.
- Connection to hull structure is not included in this verification.
- Work boats fitted with offload release mechanisms shall be fitted with an interlock system that ensures simultaneous release of the lifting mechanism. Ref. 7.3.3.4
- Flexible hoses, accumulators are to be delivered with 3.1 level documentation (type approval certificate issued by DNV is recommended).

Type Approval documentation

<u>Drawing No.</u>	<u>Rev</u>	<u>Title(s)</u>
	1	G120/130 MK3 (280mm) Drawing Binder (168 pages)
	1	G120/130 MK3 (280mm) Drawing list
	0	HMW 120/130 MK3 (280mm) Drawing list
G120/130-L-XA-001/2/3	0	Hydraulic drawings complete
	1	DNV-ST-0498 - Prototype test
G120_130-x-R-VA-016	2	Test Procedure – FAT
	0	FMECA
	0	FMEA
SPxxxx-x-R-XD-001	6	General Arrangement
SP2843-1-Z-MA-001	3	Typical user manual
HMW_120_130_MK3-N-RA-001	1	Structural Design Report 13T Davit Winch
HMD_G120_130_MK3-N-RA-001	2	Structural design report HMD G120/130 MK3 Davit
	1	HMD G130 MK3 (315M) Drawing Binder (202 pages)
	0	HMD G120-G130 (315M) Structural design report
	C	HMD G120-G130 MK3 (315M) Drawing list
TAS000004U	5	Dana Brevini Power – PWD/CTU/CTD Transmission gears and brakes

Tests carried out

Prototype tested in accordance with DNV-ST-0498 Appendix B.

<u>Description</u>	<u>Report</u>	<u>Date(s)</u>	<u>Witnessed by</u>
SPxxxx-x-R-XD-001Rev.6	Appendix B	2022-10-28	DNV Tianjin, China

Marking of product

Marking of Safe working load (SWL), Type designation and serial number shall be implemented in accordance with the DNV-ST-0498:

- Type designation, manufacturer name and serial number
- Safe Working Load, SWL

Certificate Retention Survey

For retention of the Type Approval, a DNV GL 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 DNVGL-CP-0338.

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