

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Reduction Gear for Propulsion**with type designation(s)
HC-168-C and PTO modul HC-02

Issued to

NOGVA MOTORFABRIKK A/S
SØVIK, Norwayis found to comply with
DNV GL rules for classification – Ships**Application :****Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.****Input torque** 1264 Nm (2.00:1), 1173 Nm (2.95:1), 1114 Nm (2.48:1), 907 Nm (4.16:1)
Input speed 3000
Reduction ratio 2.00:1, 2.95:1, 2,48:1, 4.16:1, PTO 1:1Issued at **Høvik** on **2017-06-22**This Certificate is valid until **2022-06-21**.for **DNV GL**DNV GL local station: **Ålesund**Approval Engineer: **Geir Olav Moen**

Oddvar Deinboll
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.



Job Id: **262.1-011964-2**
Certificate No: **TAM00000K7**

Product description

Single stage reduction gear with PTO gear

Application/Limitation

	Ratio	Power kW	RPM	Application factor K
Main gear	2,00 : 1	397	3000	1,25
Main gear	2,48 : 1	397	3000	1,25
Main gear	2,95 : 1	368	3000	1,25
Main gear	4,16 : 1	285	3000	1,25
PTO HC-02	1 : 1	235	3000	1,25

Type Approval documentation

Marking of product

The product is to be marked with the manufacturer's name or trademark and type number identification.

Periodical assessment

For retention of the Type Approval, a DNV GL surveyor shall perform an assessment after 2 years and after 3.5 years to verify that the conditions of the type approval are complied with. A renewal assessment will be performed at renewal of the certificate.

The objective of the Periodical Assessment is to verify that the conditions for the Type Approval are not altered since the Type Approval Certificate was issued.

Other conditions:

The coupling, clutch and alarm/monitoring system are not a part of the type approval.

END OF CERTIFICATE