



Certificate No:
TAS000033W

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Propeller nozzle

with type designation(s)
Standard Nozzle Type OPTIMA

Issued to

Damen Marine Components Netherlands B.V.
Hardinxveld-Giessendam, Zuid-Holland, Netherlands

is found to comply with
DNV GL rules for classification – Ships

Application :

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

Issued at **Hamburg** on **2021-07-06**

This Certificate is valid until **2026-07-05**.

DNV local station: **France CMC**

for **DNV**

Approval Engineer: **Ansgar Gorissen**

Andree Orth
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 251

Revision: 2021-03

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Product description

Standard propeller nozzle $\varnothing$ 1000mm -2500 mm

Application/Limitation

1. The manufacturer is required to have a DNV-Surveyor witness all important production including welding, NDT, etc. and tests as required.
2. All welding is to be carried out by qualified welders and according to approved welding procedures.
3. Nozzles are approved for a maximum vessel speed of 25 km/h (13.5 kn) and a maximum engine power as specified on the drawing.
4. The alignment of connecting structure to ship's hull must be agreed with the responsible DNV surveyor at the shipyard.

Type Approval documentation

Drawing P0966/1000-2500/Std Standard Nozzle $\varnothing$ 1000-2500 (Sheet 1-3)

Marking of product

- certificate number of corresponding product certificate
- the Society's stamp
- manufacturer's mark

Periodical assessment

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.