

TYPE APPROVAL CERTIFICATE

Certificate No:
TAP00001KZ
Revision No:
1

This is to certify:**That the Tank Washing Machine**

with type designation(s)
VP-MINOR, portable and fixed type, dual nozzle

Issued to

**Victor Marine Ltd.
Chesterfield, United Kingdom**

is found to comply with
MARPOL 73/78 Annex 1, Reg. 13 B (2) and IMO Revised Spec. Res. A. 446 (XI) 4.2
DNV GL rules for classification – Ships

Application :**The VP-MINOR, dual nozzle type made of stainless steel or bronze is approved as portable tank washing machine and for deck or submerged installation.****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Design: Nozzle sizes: **7, 8, 9, 10 and 11 mm**
Performance data: See page 2

Issued at **Høvik** on **2020-12-22**for **DNV GL**This Certificate is valid until **2023-11-06**.DNV GL local station: **London**Approval Engineer: **Marius Mørner**

Dalibor Bukarica
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 GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") 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.



Job Id: **262.1-008984-6**
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Product description

VP-Minor, portable or fixed type dual nozzle tank washing machine, made from stainless steel or bronze materials.

Application/Limitation

The VP-Minor, dual nozzle type is approved as portable tank washing machine and for deck or fixed installation.

This Type Approval is based on examination of drawings and tests carried out.

Drawings showing number, location and supporting arrangement of the tank washing machines are to be submitted for each installation. Different extension pipe lengths may apply.

Performance data based on testing according to DNV GL Class Programme CP-0211, item 3.2:

Type VP Minor:

Nozzle diameter [mm]	Pressure [bar]	Flow [m³/h]	Max. effective jetlength achieved [m]
Ø7	6	7.3	9.1
	8	8.0	10.5
	10	8.5	11.0
Ø8	6	10.0	9.5
	8	11.3	10.8
	10	12.2	12.0
Ø9	6	10.4	10.6
	8	11.6	11.3
	10	12.6	12.5
Ø10	6	13.0	11.6
	8	14.2	13.0
	10	16.0	14.8
Ø11	6	15.0	14.0
	8	16.2	15.0
	10	17.7	16.0

Jet length is defined as the horizontal distance from the nozzle at which the dynamic pressure of the water jet corresponds to 700 mm water head or above.


Type Approval documentation

Drwg. No.	Rev.
VP.0220-GA	2003-01-23
VP.0220-100P	2002-04-19
VP.0220-230	1992-02-25
VP.0220-231	1991-07-25
VP.0220-232	1991-07-25
0220-100	2002-06-12
0250-001 (3 pages)	Rev.F / 2018-10-23
0250-002 (3 pages)	Rev.C / 2018-10-23

Calculations of Natural Frequencies, Jan. 1987

Installation, Operating and Maintenance Manual, Tank Washing Machine, VP MINOR – Mk3, Stainless Steel;

Installation, Operating and Maintenance Manual, Tank Washing Machine, VP MINOR – Mk3, Bronze



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Tests carried out

Performance test carried out in September 2010, witnessed by a representant from the society.

Marking of product

For identification to this certificate the products are to be marked with:

- Manufacturers name or trade mark.
- Type designation.
- Additional marking at manufacturers' option.

No DNV GL product certificate is required.

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.