



TYPE APPROVAL CERTIFICATE

Certificate No:
TAA00000AW
Revision No:
1

This is to certify:

That the Hands Free Voice Talk Back System and Public Address System

with type designation(s)
CTB-100V

Issued to
ZENITEL NORWAY AS AVD HORTEN
HORTEN, Norway

is found to comply with
DNV GL rules for classification – Ships, offshore units, and high speed and light craft
IMO Res. A.694(17) General requirements for shipborne radio equipment forming part of the global maritime distress and safety system (GMDSS) and for electronic navigational aids

Application :

See page 2

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

Issued at **Høvik** on **2021-05-18**

for **DNV**

This Certificate is valid until **2026-05-17**.

DNV local station: **Sandefjord**

Approval Engineer: **Steinar Kristensen**

Marta Alonso Pontes
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

CTB-100V is a Hands-Free Voice Talk Back System and Public Address System consisting of the following modules ¹⁾:

| Module | Article no | Location |
|--------------------------------------|---------------|-----------|
| Centrals | CU-100 | Protected |
| | CU-200 | Protected |
| Operator Panels | CTB10 | Protected |
| | CTB-10W/V01 | Protected |
| | CTB-20 | Protected |
| | CTB-20W/V01 | Protected |
| Talk Back Substations | STB-1 | Protected |
| | STB-2 | Exposed |
| | STB-3 | Exposed |
| | STB-5 | Protected |
| | STB-6 | Protected |
| | STB-6GN | Protected |
| | H-112M | Exposed |
| PA power Amplifiers | AW8121- 120W | Protected |
| | AW8241 - 240W | Protected |
| | P8501-500W | Protected |
| Emergency PA Call station | VMT-603 | Protected |
| | VMP-603 | Protected |
| Talk Back and General PA microphones | MB-30G | Protected |
| | P66 | Protected |
| | P66/10 | Protected |
| Power Supply unit | SPS-4 | Protected |

¹⁾ Actual installation may vary based on requirements for individual installations. Only modules listed in certificate are approved for installation.

Application/Limitation

The scope of this approval is limited to any of the following functions:

- Two-way voice communication onboard small vessels not requiring more than 3 extensions and not requiring simultaneous calls between substations.
- Hands-free two-way voice communication system as required by DNVGL Rules, provided that approved substations with hands-free All Call are fitted at all required locations and that the system is not connected to the vessel's PA system.
- Emergency PA.
- The system can be for the purpose of either Emergency PA system or Hands-free two-way voice communication system, and not as a combined system.
- The system cannot be used as PA system for passenger vessels.

Type Approval documentation

| DNV No. | Document ID | Rev. | Description |
|---------|---|------------|--|
| 1 | DANAK-197395 | 2004-05-12 | Report: Delta, Type Approval testing of Talk Back and PA/GA Systems performed for Zenitel Norway ASA (Marine), Environmental Test report according to IEC60945 |
| 2 | Tb_CTb-DNV Type Approval Performance Test Rev 10_2_06 | 10_2_06 | Report: DNV, Performance test for CTB for DNV Type Approval" |
| 3 | A100K10864 | | Manual: Vingtor, Installation & User Manual, Command Talk Back System CTB-100V |
| 6 | DANAK-19/17422 | A | Report: DELTA, Test for Marine Type Approval of STB-2, STB-3, HE-112M and SB-4 |

Tests carried out

- Environmental testing: IEC 60945 (2002) incl. Corr.1 (2008)
- Performance tests: Functional tests according to DNV Type Approval program 848.22

Marking of product

The name and contact address of the manufacturer and type designation of the product shall be affixed to the equipment in a clearly visible location. In addition the equipment shall be marked with serial number, safe distance to magnetic compass, power consumption and/or supply voltage and reference to the Type Approval certificate number.

Periodical assessment

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

The scope of the periodical/renewal assessment is to verify that the production quality conditions stipulated for the type approval are complied with and that no alterations are made to the product design or its components and/or materials without appraisal by the Society.

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://www.dnv.com/maritime/approval-finder.html>