



# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAM000019Z**  
Revision No:  
**2**

## This is to certify:

That the **Air/Exhaust Blower**

with type designation(s)

**Centrifugal Fans Types, HRZ-HQZ, LRZ-LQZ, PRZ-PQZ, RNN-RNZ-RSZ, SRZ-SQZ, TRZ, MRZ-MQZ**

Issued to

**Witt & Sohn AG**  
**Pinneberg, Germany**

is found to comply with

**DNV rules for classification – Ships Pt.5 Ch.7 Liquefied gas tankers**

## Application :

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

**Operating media Clean air**

Issued at **Hamburg** on **2023-07-13**

This Certificate is valid until **2027-07-26**.

for **DNV**

DNV local unit: **Hamburg – CMC North/East**

Approval Engineer: **Ana Cristina Do Carmo Insfran**

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**Sven Klinger**  
**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

### Centrifugal Fans

Types: HRZ-HQZ, LRZ-LQZ, PRZ-PQZ, RNN-RNZ-RSZ, SRZ-SQZ, TRZ, MRZ-MQZ

Design:	Centrifugal type
Medium:	Clean air
Installation:	In dry rooms (inlet air temp. between 0 and +45°C)
Inlet size:	63 - 1800
Casing thickness:	3,0 up to 12mm
Impeller types:	Impeller made DC01, S235JR, EN AW-ALMg3, 1.4571, 1.4301
Drive type:	Direct drive, frequency drive, belt drive
Motor frame size:	63 up to 450
Casing material	DC01, S235JR, EN AW-ALMg3, 1.4571, 1.4301

For explosion protection of electrical motors please see Application / Limitation below. Motor standard to be IEC 60034ff.

## Application/Limitation

Note: Electrical motors shall be explosion proof in line with the applicable rules and standards and acc. to the requirements of the respective project.

All details about electrical explosion protection mentioned in this certificate are for information only. For relevant binding information the corresponding Certificate of Conformity with regard to electrical explosion protection, issued by a recognized Certification Body, shall be observed.

Application in hazardous areas are to be approved in each case in line with the Rules for Classification. Details mentioned in the Ex-Certification/ Special conditions for safe use acc. to a valid Ex-Certificate issued by a notified / recognised Certification Body are to be observed.

For seagoing vessels, all combinations of drive are applicable for shipbuilding Zone 1 and Zone 2.

In case the fans fall within the validity of Directive 2014/34/EU - ATEX (not on seagoing vessels and mobile offshore units) the Conformity Assessment Procedure as described in in the ATEX documents must be followed:

For equipment of group II category 2- the motors must have an "EU Type Examination" and "Conformity of Type" or "Product AQ" must be assured, while for fans there must be provided "Internal Control of Production" and "Communicate a Technical Documentation to a Notified Body" (for Witt & Sohn AG, Reg.no: PTB 03 ATEX D076).

For equipment of group II category 3- there must be "Internal Control of Production". The documents of Conformity (IEC Declaration of Conformity) as per ATEX must be provided and fans and motors must be marked with CE and ATEX supplementary marking as per ATEX, showing, amongst others, the identification number of the Notified Body, where applicable.

## Type Approval documentation

### Tests carried out

## Marking of product

Maker - Type – Size – Capacity - Serial No.

## Periodical assessment

For retention of the Type Approval, a DNV Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the Type Approval are complied with. Refer to DNV-CP-0338, Sec.4.

The 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