



Certificate No:
TAM000019X

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Air/Exhaust Blower

with type designation(s)
EGR11.1 / EGR12.1 / EGR14.1

Issued to

Howden Turbowerke GmbH
Coswig, Germany

is found to comply with

DNV rules for classification – Ships Pt.4 Ch.3 Rotating machinery – drivers

Application :

Products approved by this certificate are accepted for installation on all vessels classed by DNV.

Max. working press.: 5.5 bar

Operating media Exhaust Gas

Issued at **Hamburg** on **2022-09-12**

This Certificate is valid until **2027-09-11**.

for **DNV**

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

Approval Engineer: **Christian Kaemmer**

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.



Form code: TA 251

Revision: 2021-03

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Product description

Direct-drive, one-stage centrifugal fan for Exhaust Gas Recirculation system driven by an asynchronous motor equipped with grease lubricated bearings. The unit can be operated with or without Variable Frequency Drive (VFD).
EGR-Blower = Exhaust Gas Recirculation Blower.

Technical Specification:

Inlet conditions / Type	EGR 11.1	EGR 12.1	EGR 14.1
Designation	Centrifugal fan		
Medium	Exhaust Gas		
Design Temperature [°C]	70°C		
Design Pressure [bar]	5.5		
Revolution [rpm]	3550	3550	3550
Design Volume Flow [m³/s]	1,96	2,15	2,58
Motor Shaft Power [kW]	160	160	200
Rated Voltage [V]	440		

Application/Limitation

This Type Approval Certificate relates EGR blower-units for 2-stroke engines.
Sealing system functionality and safety alarm is to be tested on board but not part of this Type Approval.

Type Approval documentation

Tests carried out

Marking of product

The products to be marked with manufacturer's name or trademark.

Periodical assessment

For retention of the Type Approval, a DNV Surveyor shall perform periodical assessment to verify that the conditions for the Type Approval are complied with. Refer to the Class Programme DNV-CP-0338, Sec.4.

To check the validity of this certificate, please look it up in <https://approvalfinder.dnv.com>