Certificate no.:
TAP0000369

TYPE APPROVAL CERTIFICATE

This is to certify:

that the High Velocity Vent Valve

with type designation(s)
High Velocity Vent Valve

issued to
Qingdao Exsafe Valve Co., Ltd.
Qingdao, Shandong Province, China

is found to comply with
DNV rules for classification – Ships Pt.5 Ch.5 Oil tankers
DNV rules for classification – Ships Pt.5 Ch.6 Chemical tankers

Application:

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

Issued at **Hamburg** on **2026-04-22**

This Certificate is valid until **2031-04-21**.
DNV local unit: **Qingdao NB & CMC**

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

for **DNV**

Digitally Signed By:
Sven Klinger
Location: DNV Hamburg, Germany

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 USD 300 000.

Product description

High Velocity Vent Valve models: EM-50A, 65A, 80A, 100A, 125A, 150A, 200A, 250A, 300A is a specialised safety valve used primarily on tankers (e.g. oil or chemical tankers). It automatically regulates the pressure in the cargo tanks during loading, unloading or in the event of temperature fluctuations.

Specification:
Flow velocity: shall not be less than 30 m/s.
Temperature Range: 15°C ~ 40°C
Gas Groups according to IEC/ISO 80079-49: Classification IIA & IIB

Model	Set Opening Pressure (kPa)		Rated Working Pressure (kPa)		Rate Flow (m³/h)		MESG (mm)	Permissible Ice Thickness （mm）
	Pressure Valve	Vacuum Valve	Pressure Valve	Vacuum Valve	Pressure Valve	Vacuum Valve		
EM-50A	13～21	-3.5～-7	21.0	-7.0	700	600	≥0.65	20
EM-65A	13～21	-3.5～-7	21.0	-7.0	800	600	≥0.65	20
EM-80A	13～21	-3.5～-7	21.0	-7.0	1250	800	≥0.65	20
EM-100A	13～21	-3.5～-7	21.0	-7.0	2400	900	≥0.65	20
EM-125A	13～21	-3.5～-7	21.0	-7.0	3750	1500	≥0.65	20
EM-150A	13～21	-3.5～-7	21.0	-7.0	5000	1900	≥0.65	20
EM-200A	13～21	-3.5～-7	21.0	-7.0	15600	2700	≥0.65	20
EM-250A	13～21	-3.5～-7	21.0	-7.0	20710	6950	≥0.65	20
EM-300A	13～21	-3.5～-7	21.0	-7.0	64200	13800	≥0.65	20

The maximum pipe length acc. to ISO 15364:2021:
EM50 - EM150 ≤ 291m;
EM200 ≤ 44m;
EM250 - EM300 ≤ 5m

Materials:

Component Name	Material	Material	Material	Material
Valve body	FCD400-15	SUS304	SUS316L	SC450
Valve cover				
P-valve flange	SS400			-
P-valve disc	SUS316	-	-	
P-valve seat				
Flame arrester screen				
Valve stem	SUS304	SUS316	SUS316L	
Valve stem lifting disc				
Counterweigh				
V-valve seat	SUS316	-	-	
V-valve disc				
Vent cover flame arrester screen	SUS316L			

Application/Limitation

Atmospheric deflagration and endurance burning proof High Velocity Vent Valve in cargo tank venting system on tankers for products of explosion group IIA & IIB (MESG 0.65mm and greater).

High Velocity Vent Valve are not approved for cryogenic service conditions and installation on cargo tanks of liquefied gas tankers.

Installation on board of vessels with class notation of “Tanker for oil” or “Tanker for oil Products” is to comply with DNV-RU-SHIP Pt.5 Ch.5 Sec.5.

Installation on board of vessels with class notation of “Tanker for Chemicals” is to comply with DNV-RU-SHIP Pt.5 Ch.6 Sec.9.

Gas outlets and air inlets for cargo tanks shall have flame arresting elements tested and approved according to IMO MSC/Circ.677 as amended by MSC/Circ.1009.

For the corresponding application and appropriate installation shall be in accordance with the instructions of the manufacturer.

Type Approval documentation

Type Approval Application dated 2026-02-09
Type Approval Assessment Report dated 2026-03-21
Drawings No.: EM-00
Test report EX202507-1 V.A2 darted 2025-07-17
Type Approval test report No. Ex2026.01-01 dated 2026-1-12 Model EM250A/-300A
Ex.202603 Model EM150A/300A dated 2026-03-09
Test Report EM-100A - Entrusted test
Material Certificate No. EX2602
Calibration: ISQT-No. ISQT251102891-C dated 2025-11-07
ISO 9001:2015: No. 00524Q4178R0S valid until 2027-08-28
Training evidence
Test report Mode: EM-150A (Entrusted test) 2026-03-10
High velocity vent valve test report acc. to ISO 15364:2021 item 7.2.2
List of testing Personal
Sample of declaration certificate (ITP)
Production and Quality control flow
List of testing equipment
Organization Chart
Company Introduction
Materials of main components
Test report – EM-80A (Entrusted test) No.: 202619000189, 202619000190

Tests carried out

IMO MSC.1/Circ.677 - Revised standards for the design, testing and locating of devices to prevent the passage of flames into cargo tanks in tankers as amended by MSC/Circ.1009;
ISO 15364:2021 - Ships and marine technology Pressure-vacuum valves for cargo tanks and devices to prevent the passage of flames into cargo tanks;
ISO80079-49:2024 - Explosive Atmospheres Part 49 – Flame arresters – Performance requirements, test methods and limits for use

Marking of product

Each High Velocity Vent Valve Model: EM-50A, 65A, 80A, 100A, 125A, 150A, 200A, 250A, 300A are to be provided with a name plate with at least following minimum data:



型号/Type:
试验报告/Report.No.:
设定压力/Setting:
系列号/Serial.No:
防爆组别/Explosion Group:
标准/Standards:IMO MSC. 1/Circ.677/Rev.1
ISO80079-49:2024 , ISO 15364:2021
证书号/Cert.No. :
进气管径/Inlet Size:
最大管长/Max Pipe Length:
制造日期/Date of Manufacture:

Production Place

Qingdao Exsafe Valve Co., Ltd.
Qingda Industrial Park Jishongtan Street Chengyang District Qingdao City Shandong province China

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

End of certificate