DNV·GL

Certificate No:
**TAM00000ZU**

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Explosion relief valve for engine intake manifold and exhaust line**

with type designation(s)
**EVDM-98, EVDM-122, EVDM-173, EVDM-224, EVDM-266**
**EVDD-173, EVDD-320, EVDD-420, EVDD-565, EVDD-735**

Issued to
**Prosave Co.,Ltd.**
**Gimhae-si, Gyeongsangnam-do, Republic of Korea**

is found to comply with
**DNV GL rules for classification – Ships**

## Application :

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

Issued at **Hamburg** on **2018-11-06**
This Certificate is valid until **2023-11-05**.
DNV GL local station: **Gimhae Station**

Approval Engineer: **Sven Neddenien**

for **DNV GL**

**Burkhard Lilienthal**
**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.


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## Product description
Explosion relief valve with flame arrestor

## Application/Limitation
Quick acting and self-closing explosion relief valve with flame arrestor to pressure relief an intake or exhaust manifold of a gas or dual fuel engine in the event of an internal explosion and to prevent passage of flames.
The installation orientation is vertical or horizontal.

| Valve type | Free relief area ($cm^2$) | Opening pressure (bar) | Application |
|---|---|---|---|
| EVDM-98 | 58 | adjusted according to application | intake or exhaust manifold |
| EVDM-122 | 95 | adjusted according to application | intake or exhaust manifold |
| EVDM-173 | 201 | adjusted according to application | intake or exhaust manifold |
| EVDM-224 | 346 | adjusted according to application | intake or exhaust manifold |
| EVDM-266 | 499 | adjusted according to application | intake or exhaust manifold |
| EVDD-173 | 201 | adjusted according to application | exhaust manifold |
| EVDD-320 | 732 | adjusted according to application | exhaust manifold |
| EVDD-420 | 1260 | adjusted according to application | exhaust manifold |
| EVDD-565 | 2300 | adjusted according to application | exhaust manifold |
| EVDD-735 | 3905 | adjusted according to application | exhaust manifold |

## Type Approval documentation

## Tests carried out
Test reports issued by Physical Technical Testing Institute, Ostrava-Radvanice, National Authoity no. 210, EU Notified Body no. 1026:
- 18.0176-88, Explosion venting device for manifold, EVDM-173, EVDD-173
All tests have been performed in accordance with a test program proposed by Prosave and approved by DNV GL.

## Marking of product
The product to be marked with manufacturer’s name or trademark, type designation, size and month / year of manufacture.

## 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 objective of the Periodical Assessment is to verify that the conditions for the Type Approval are not altered since the Type Approval certificate was issued.
In case where the Type Approved product is manufactured at other companies, the Periodical Assessment shall verify that the Type Approval applicant has a quality control system for consistent production at their licensees/subcontractors. Furthermore, a Periodical Assessment shall be carried out randomly at these companies.

## Other conditions

The complete flame arrestor has to be replaced after an explosion of the intake or the exhaust manifold.

END OF CERTIFICATE