



Certificate No:
TAP00002K5

TYPE APPROVAL CERTIFICATE

This is to certify:

That the **Butterfly Valves**

with type designation(s)
SPV, VSS HT, MTV HT

Issued to

AB Somas Ventiler
Säffle, Värmlands Län, Sweden

is found to comply with

DNV rules for classification – Ships Pt.4 Ch.6 Piping systems
DNV rules for classification – Ships Pt.6 Ch.7 Sec.7 Emission reduction system for NOx or SOx – ER
DNV class programme DNV-CP-0186 – Type approval – Valves

Application :

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

Type:	Temperature range:	Max. working press.:	Sizes:
SPV	0 to 525°C (see page 2)	PN10	DN80 to DN1200 (see page 2)
VSS HT	0 to 675°C (see page 2)	PN10 or PN25 (see page 2)	DN400 to DN1200 (see page 2)
MTV HT	0 to 675°C (see page 2)	PN25	DN80 to DN350 (see page 2)

Issued at **Høvik** on **2023-09-15**

This Certificate is valid until **2028-09-14**.

for **DNV**

DNV local station: **Sweden CMC**

Approval Engineer: **Maheshraja Venkatesan**

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Zeinab Sharifi
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

2-way butterfly damper assembly for installation within SCR and exhaust gas systems designed according to EN 12516-1/-2. The dampers are of wafer butterfly valve design, with additional mounted actuator – performing self-cleaning function using mechanical scraping rings of proven design.

For mounting purpose into an exhaust gas duct, all exhaust gas dampers are designed with a flange connection according to the applicable PN rating as per EN 1092-1.

Material of construction:

Part	Material grade		
	SPV	VSS HT	MTV HT
Body	ASTM A487-CA6NM	ASTM A351 Gr. CF8M/ EN 10213 1.4408/ EN 10213 1.4552	ASTM A351 Gr. CF8M/ EN 10213 1.4408/ EN 10213 1.4552
Cover plate	ASTM A487-CA6NM	1.4408 EN 10213	1.4408 EN 10213
Stuffing box	Graphite	Graphite	Graphite
Seat	1.4000 EN 10088-3	EN 10297 1.4835	EN 10297 1.4835
Disc	ASTM A487-CA6NM	ASTM A351 Gr. CF8M/ EN 10213 1.4408/ EN 10213 1.4552	ASTM A351 Gr. CF8M/ EN 10213 1.4408/ EN 10213 1.4552
Upper and lower shaft	1.4923 EN 10302	EN 10297 1.4835	EN 10297 1.4835
Bottom cover	1.4301 EN 10088-2	-	ASTM A351 Gr. CF8M
Gasket	Graphite	Graphite	Graphite

Application/Limitation

Valves covered by this certificate are approved for use in SCR and exhaust gas systems onboard ships.

Sizes and Pressure ratings

Model	Pressure-Temperature ratings as per EN 12516-1	Sizes covered
SPV	PN10	DN80, 100, 125, 150, 200, 250, 300, 350, 400, 450, 500, 600, 700, 800, 900, 1000, 1200
VSS HT	PN25	DN350, 400, 450, 500, 600, 700, 800
VSS HT	PN10	DN900, 1000, 1200
MTV HT	PN25	DN80, 100, 125, 150, 200, 250, 300, 350

Maximum shut-off pressure for SCR systems will be 3.5 bar(g).

At elevated temperatures, the maximum pressures are to be reduced according to following in line with EN 12516-1 with the following maximum temperature limits:

1.4408	: 0°C to +675°C
CF8M	: 0°C to +675°C
CA6NM/ 1.4552	: 0°C to +600°C
1.4301	: 0°C to +600°C

Exhaust dampers shall be fitted with a permanently connected soot cleaning arrangement for contact surfaces, or equivalent arrangements maintaining the valve operability.

Materials and material protection chosen for the specific system shall be suitable for the intended medium and environmental conditions.

The approval does not include actuator and/or other equipment for remote control of the valves.

Type Approval documentation

Production Testing and Certification

Each damper shall be subjected to functional, visual & dimensional as well as leakage testing as per the test plan ITP 62007 MAN-SCR.

Certification for the actual intended application shall follow the latest applicable edition of the Rules (as mentioned on the front page of this certificate).

Tests carried out

Pressure test, seat tightness test, functional test, self-cleaning test (with bitumen and melted sugar)



Job Id: **262.1-037641-1**
Certificate No: **TAP00002K5**

Marking of product

For traceability to this type approval the valves are to be marked as a minimum with:

- manufacturer's name or trademark
- valve type designation
- size
- maximum design pressure and temperature

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 approval are complied with. Reference is made to DNV-CP-0338.