Marine & Offshore

Certificate number: 04592/G0 BV
File number: ACM 145/0113/001, 002
Product code: 2232I

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

ZETKAMA Sp. z o.o.

SCINAWKA SREDNIA - POLAND

for the type of product

PRESSURE RELIEF VALVES, SPRING LOADED

Safety Valves models 240, 270, 600, 630, 650, 670, 673, 674, 775 & 781

Requirements:
- BUREAU VERITAS Rules for the Classification of Steel Ships

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 18 Jul 2030

For Bureau Veritas Marine & Offshore,
At BV KATOWICE, on 18 Jul 2025,
Wojciech Lubojanski

This certificate was created electronically and is valid without signature

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION

Safety Valves models 240, 270, 600, 630, 650, 670, 673, 674, 775 & 781

1.1 - Ratings

Model	Sizes (inlet x outlet) DN	Orifice areas (mm2)	Opening pressure* (barg)	Temperature range* (°C)	End connection	Coefficient of discharge
630	20 x 32 to 400 x 500	201 to 61575	Min 0.25 / Max 95	-55 / +400	Flanged	as per manufacturer catalogue (according to ISO 4126)
240	15 x 15 to 200 x 200	113 to 9503	Min 0.2 / Max 40	-55 / +400	Flanged	
781	10 x 15 to 25 x 25	78.5 to 314	Min 0.3 / Max 16	-10 / +200	Threaded	
775	20 x 32 / 25 x 40 / 32 x 50	201 to 491	Min 1.5 / Max 16	-10 / +200	Threaded	
600	25 x 50 to 200 x 250	113 to 18146	Min 0.4 / Max 102.1	-55 / +538**	Flanged	
674	20 x 32 to 100 x 150	201 to 4657	Min 18 / Max 95	-40 / +400	Butt welded/Flanged (Inlet/Outlet) Threaded / Flanged (Inlet/Outlet)	
670	20 x 32 to 50 x 80	201 to 1257	Min 30 / Max 95	-40 / +400	Flanged	
673	20 x 32 to 100 x 150	201 to 4657	Min 18 / Max 95	-40 / +400	Butt welded	
650	20 x 32 to 50 x 80	201 to 1257	Min 0.45 / Max 95	-55 / +400	Threaded	
270	20 x 20 to 50 x 50	113 to 804	Min 0.45 / Max 40	-40 / +400	Threaded	

**Depending on material used.*

***538°C only for Strain-hardened steel, 400°C for other material*

1.2 - Materials

Part	Material
Body, Bonnet, Cap	Cast iron EN GJL 250 PN EN 1561 / Nodular cast iron EN-GJS-400-18 PN EN 1653 / Nodular cast iron EN-GJS-400-15 PN EN 1653 / Cast steel GP240GH / Stainless Steel GX5CrNi19-10 / CuZn39Pb1AlC PN EN 1982 / SA-216 Grade WCB / SA-217 Grade WC6 / SA-351 Grade CF8M
Stem	Stainless steel X17CrNi 16-2 / X6CrNiTi18-10 / X20Cr13
Disc	Stainless steel X39CrMo 17-1 / X6CrNiTi18-10 / X6CrNiTi18-10/EPDM / X6CrNiTi18-10/NBR / X17CrNi16-2
Seat/Nozzle	Stainless steel X39CrMo 17-1 / X6CrNiTi18-10 / 13CrMo4-5 / C22 / P355N / X39CrMo17-1 / X17CrNi16-2 / X6CrNiMoTi17-12-2 / SA351 Grade CF8M / SA-479 Grade 316L stellited
Spring	Spring steel SL, SM, SH - EN 10270-1 / 51CrV4 - EN 10089 / X10CrNi18-8 EN 10270-3 / FDSiCr / INCONEL

When other choices of materials are used per manufacturer's instructions, the BV agreement will be obtained.

2. DOCUMENTS AND DRAWINGS

2.1 - Model 240 & 270:

- Drawing N° 3-01-02352-00 Rev.0 dated 31/03/2017: *Model 240C E*

- Drawing N° L-2042 Rev. 0 dated 27/11/2021: *Model 240A C EXECUTION 01, 02, 05, 07*

- Drawing N° L-2043 Rev. 0 dated 27/11/2021: *Model 240F E EXECUTION 01, 02, 05, 07 & Model 240R E EXCECUTION 01, 02*

- Drawing N° 3-01-02981-00 Rev. A dated 27/11/2021: *Model 240A C, 240C E, 240F E, 240R E, 270F E, 270R E EXECUTION 51, 52, 55, 57*

- EU-Type examination certificate N° 0343/ROT/PED/PRJ11100349250/1 issued on 01/03/2022

2.2 - Model 630:

- Drawing N° L-2044 Rev. 0 dated 27/11/2021: *Model 630A C EXECUTION 01, 02, 03, 04, 05, 06, 07, 08*

- Drawing N° L-2038 Rev. 0 dated 27/11/2021: *Model 630F E EXECUTION 01, 02, 03, 04, 05, 06, 07, 08 & Model 630R E EXECUTION 01, 02, 03, 04*

- Drawing N° 3-01-1022-00 Rev. 0 dated 27/11/2021: *Model 630C E EXECUTION 01, 02, 03, 04, 05, 06, 07, 08*

- Drawing N° L-2129 Rev. 0 dated 27/11/2021: Model 630F F EXECUTION 01, 02, 03, 04 05, 06, 07, 08

- Drawing N° L-2128 Rev. 0 dated 28/11/2021: *Model 630F G EXECUTION 01, 02, 03, 04, 05, 06, 07, 08*

- Drawing N° L-1067b Rev. 0 dated 27/11/2021: *Model 630F E EXECUTION 014*

- Drawing N° L-1067 Rev. 0 dated 27/11/2021: *Model 630A C EXECUTION 014*

- Drawing N° 3-01-02715-00 Rev. 0 dated 28/11/2021: *Model 630A C, 630C E, 630F E, 630RE EXECUTION 51, 52, 55, 57 DN20-40*

- Drawing N° 3-01-02484-00 Rev. 0 dated 27/11/2021: *Model 630A C, 630C E, 630F E, 630RE EXECUTION 53, 54, 56, 58 DN40-50*

- Drawing N° 3-01-02277-00 Rev. 0 dated 27/11/2021: *Model 630A C, 630C E, 630F E, 630RE EXECUTION 53, 54, 56, 58 DN20-32*

- EU-Type examination certificate N° 0343/ROT/PED/PRJ11100349250/1 issued on 01/03/2022

2.3 - Model 775:

- Drawing N° 3-01-02296-00 Rev.0 dated 31/03/2017: *Model 775B C EXECUTION 01, 02, 03, 04, 05, 06, 07, 08*

- EU-Type examination certificate N° 0343/ROT/PED/PRJ11100349250/1 issued on 01/03/2022

2.4 - Model 781:

- Drawing N° 3-01-00462-00 Rev.1 dated 24/01/2017: *Model 781 EXECUTION 01, 02, 03, 04, 05, 06, 07, 08*

- EU-Type examination certificate N° 0343/ROT/PED/PRJ11100349250/1 issued on 01/03/2022

2.5 - Model 600:

- Drawing N° 00037235 Rev. A dated 05/12/2023

- EU-Type examination certificate N° 0343/KAT/PED/KAT2300140/1 issued on 20/04/2024 *WITHOUT BELLOWS*

- EU-Type examination certificate N° 0343/KAT/PED/KAT2300140/2 issued on 20/02/2024 *WITH BELLOWS*

2.6 - Model 673 & 674:

- Drawing N° 3-01-03652-00 Rev. A dated 27/11/2021: *Model 673F F, 673F G, 674F F, 674F G EXECUTION 01, 02, 03, 04, 05, 06, 07, 08*

- EU-Type examination certificate N° 0343/ROT/PED/PRJ11100349250/1 issued on 01/03/2022

2.7 - Model 650 & 670:

- Drawing N° 3-01-03651-00 dated 28/11/2021: Model 650F F, 650F G, 670F F, 670F G, 650F E, 650R E EXECUTION 01, 02, 03, 04 05, 06, 07, 08

- EU-Type examination certificate N° 0343/ROT/PED/PRJ11100349250/1 issued on 01/03/2022

2.8 - Nozzle strength calculations N°4L6#300-600 Rev. B dated 02/04/2025

2.9 - Bonnet strength calculations N° B Rev. A dated 22/09/2023

No departure from the above documents shall be made without the prior consent of the Society. The manufacturer must inform the Society of any modification or changes to these documents and drawings.

3. TEST REPORTS

Not required.

4. APPLICATION / LIMITATION

4.1 - May be used as a safety relief valve for:

- Steam, gases and liquids

4.2 - The pressure relief/safety valves may be installed on systems of Class I, Class II and Class III pressure piping according to the relevant requirements stated in *NR 467, Pt C, Ch 1, Sec 10*.

4.3 - The safety valve body, disc and seat should be suitable for the intended service. In particular the nature of materials, joints included, is to be selected according to the fluid to be conveyed and the temperature.

4.4 - When the design temperature exceeds 400°C, alloy steels are to be used. Other cast steel material used for pressure relief/safety valve body/housing is subject of special consideration by the Society according to *NR 467, Pt C, Ch 1, Sec 3, [2.2.1]*.

4.5 - The maximum steam production is to be in accordance with the manufacturer's specifications. The C-factor for full lift safety valve will comply with *NR 467, Pt C, Ch1, Sec 3 [3.2.2] of Bureau Veritas Rules*.

4.6 - The valves are to be installed according to the manufacturer's instructions and Society's Rule requirements.

4.7 - The use of stainless steel and grey cast iron is restricted as per Bureau Veritas Rules.

4.8 - Grey cast iron is not to be used for safety valves which are subject to dynamic loads.

4.9- The applications of threaded ends are restricted according to *NR 467, Pt C, Ch 1, Sec 10, Table 15*.

5. PRODUCTION SURVEY REQUIREMENTS

5.1 - The products are to be supplied by **Zetkama Sp. z o.o.** in compliance with the type and the requirements described in this certificate.

5.2 - This type of product is within the category IBV of Bureau Veritas Rule Note *NR 320*.

5.3 - Bureau Veritas product certificate is required.

5.4 - Bureau Veritas Certificates are required for materials of valve housings for Class I (DN≥50) and Class II (DN≥100). Materials of valve housings for Class I (DN<50) and Class II (DN<100) and for other parts of Class I and Class II are to be with Work's certificates.

5.5 - Each safety valve is to be hydraulically pressure tested to 1.5 times the design pressure.

5.6 - For information, **Zetkama Sp. z o.o.** has declared to Bureau Veritas the following production site:

Zetkama Sp. z o.o.:
ul Swobodna 9,
41-200 Sosnowiec,
POLAND

6. MARKING OF PRODUCT

Each safety valve shall be marked with at least:

- Manufacturer's name or logo
- Type designation
- Setting pressure
- Bureau Veritas Mark

7. OTHERS

It is **Zetkama Sp. z o.o.**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

This certificate supersedes the Type Approval Certificates N° 04592/F0 BV issued by the Society.

***** END OF CERTIFICATE *****