



Marine & Offshore

Certificate number: 13481/E0 BV

File number: ACM 171/0902/001

Product code: 00201

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

SKF B.V.

Houten - NETHERLANDS

for the type of product

STEEL CHOCKS

SM, SM LP and SM E, SM ELP type

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 is a renewal of certificate N° 13481/D1 BV expiring on 27/05/2023

This certificate will expire on: 27 May 2028

For Bureau Veritas Marine & Offshore,

At BV GRONINGEN, on 27 Mar 2023,

Olaf RUITER

This certificate was created electronically and is valid without signature



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

SKF Vibracon ® SM - LP Readjustable Chocking Elements

SM, SM LP and SM E, SM ELP type

Dimensions	Machine load (kN)	Design load (kN)		Dimensions	Machine load (kN)	Design load (kN)
SM 16 LP	15	90		SM 16 ELP	25	140
SM 20 LP	25	140		SM 20 ELP	35	200
SM 24 LP	35	200		SM 24 ELP	60	325
SM 30 LP	62	325		SM 30 ELP	90	475
SM 36 LP	90	475		SM 36 ELP	120	650
SM 42 LP	120	675		SM 42 ELP	160	850
SM 48 LP	160	850		SM 12 E	15	90
SM 56 LP	225	1150		SM 16 E	25	140
SM 12	8	48		SM 20 E	35	200
SM 16	15	90		SM 24 E	60	325
SM 20	25	140		SM 30 E	90	475
SM 24	35	200		SM 36 E	120	650
SM 30	60	325		SM 42 E	160	850
SM 36	90	475		SM 48 E	200	1150
SM 42	120	675		SM 56 E	260	1500
SM 48	160	850		SM 64 E	380	2000
SM 56	225	1150				
SM 64	300	1500				

2. DOCUMENTS AND DRAWINGS:

Reviewed drawings for each dimension:

- SKF VIBRACON SM **XX** Low Profile TOP PLATE N° 1400-0**XX**-1-
- SKF VIBRACON SM **XX** Low Profile CENTER PLATE N° 1400-0**XX**-2-
- SKF VIBRACON SM **XX** Low Profile BASE PLATE N° 1400-0**XX**-3-
- SKF VIBRACON SM **XX** Low Profile GENERAL N° 1400-0**XX**-4-
- SKF VIBRACON SM**XX**CS TOP PLATE N° 1000-0**XX**-1-**Y** Rev.**Z**
- SKF VIBRACON SM**XX**CS CENTER PLATE N° 1000-0**XX**-2-**Y** Rev.**Z**
- SKF VIBRACON SM**XX**CS BASE PLATE N° 1000-0**XX**-3-**Y** Rev.**Z**
- SKF VIBRACON SM**XX**CS ASSEMBLY N° 1000-0**XX**-4-**Y** Rev.**Z**
- 20220220 BV Checklist - Appendix 1 - Calculations
- 20220220 BV Checklist - Appendix 2 - Product brochure
- 20220220 BV Checklist - Appendix 3 - Instruction For Use - Leaflet
- 20220220 BV Checklist - Appendix 4 - Instruction For Use - Poster
- 20220220 BV Checklist - Appendix 5 - SKF Vibracon SM E-CS
- 20220220 BV Checklist - Appendix 6 - SKF Vibracon SM E-CSTR
- 20220220 BV Checklist - Appendix 7 - SKF Vibracon SM E-SS
- 20220220 BV Checklist - Appendix 8 - SKF Vibracon SM ELP-ASTR
- 20220220 BV Checklist - Appendix 9 - SKF Vibracon SM E design table
- 20220220 BV Checklist - Appendix 10 - SKF Vibracon SM ELP design table
- 20220220 BV Checklist - Appendix 11 - Test plan 50 % adjusted - Stiffness
- 20220220 BV Checklist - Appendix 12 - Test plan 100 % adjusted - Stiffness - Ultimate load
- 20220220 BV Checklist - Appendix 13 - SKF Vibracon E & ELP qualification test report

20220220 BV Checklist - Appendix 14 - SKF Vibracon E & ELP qualification test report 50%
20220220 BV Checklist - Appendix 15 - SKF Vibracon E & ELP qualification test report 100%
DIN 1.1191 / DIN 1.0570 / DIN 1.0577 / DIN 1.1201 (SM -CS, SM -CSTR, SM E-CS, SM E-CSTR),
DIN 1.4404 (SM -SS, SM E-SS), DIN 1.7225 – 42CrMo4+QT (SM LP-ASTR, SM ELP-ASTR), 3.1.
Other materials on request to be submitted for each application

3. TEST REPORTS:

- 3.1 - Qualification tests of SKF Vibracon® SM - Readjustable Chocking Elements dated 10/09/1998.
3.2 - Tests of SKF Vibracon® SM - LP Elements dated July 2, 2003.

4. APPLICATION / LIMITATION:

4.1 - Application / Limitation of use:

Chocking of internal combustion engine, reduction and step up gear boxes, gas and steam turbines, generators, pumps and bearings

4.2 - On board installation & Maintenance requirements:

The devices are to be fitted according to the supplier's instructions.

Particulars and supporting calculations note must be submitted to the Society for each application.

5. PRODUCTION SURVEY REQUIREMENTS:

- 5.1 - The **SKF Vibracon® SM, SM LP and SM E, SM ELP** type are to be supplied by **SKF B.V.** 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 NR320.
5.3 - BV product certificate is required.
5.4 - Inspection on board ships by the Society Surveyor.
5.5 - For information, **SKF Maintenance Products** has declared to Bureau Veritas the following production site:

SKF B.V.
Meidoornkade 14
3992 AE Houten
NETHERLANDS

6. MARKING OF PRODUCT:

SKF Vibracon® SM, SM LP and SM E, SM ELP Elements should be marked as per Manufacturer's instructions:

- Serial number
- Size
- Bureau Veritas' Marks

7. OTHERS:

- 7.1 - It is **SKF B.V.**'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.
7.2 - This TAC supersedes the Certificate 13481/D1 BV and 06593/E0 respectively issued on 31/08/2022 and on 09/04/2018 by the Society.

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