Certificate No: LR2320910TA
Issue Date: 18/01/2023
Expiry Date: 17/01/2028

Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

Manufacturer	**Stenflex Rudolf Stender GmbH**
Address	Robert-Koch-Str.17, Norderstedt, 22851, Germany
Type	Rubber Compensator
Description	Rubber compensators (bellows) made of rubber quality EPDM/EPDM or NBR/CR (inner / outer core) with synthetic fibre reinforcement, fitted with carbon steel turnable flanges
Trade Name	Type A-1/R-1: universal, Type A-2/A-4/R-2: lateral, Type A-3: angular
Application	Marine and offshore, viz.: Fresh and sea* water lines; ballast lines in Machinery spaces, duct keels and double bottom water ballast tanks; bilge lines inside duct keels only; sanitary discharge and cargo lines (NBR/CR only) inside the cargo oil tanks of tankers. *Where fitted in sea water lines in machinery compartments, guards are to be provided which will effectively enclose, but not interfere with the action of the expansion joint and which will reduce to the minimum practicable any flow of water in the event of failure of the flexible element
Specified Standard	Lloyd's Register Rules and Regulations for the Classification of Ships, 2022

Downloaded Copy

Olaf Schmidt

Lead Specialist to Lloyd's Register EMEA
A member of the Lloyd's Register group

71 Fenchurch Street, London, EC3M 4BS, United Kingdom

Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

Certificate No: LR2320910TA
Issue Date: 18/01/2023
Expiry Date: 17/01/2028

Type Approval Certificate

Ratings

Type	A-1, A-2, A-4	A-3	R-1, R-2
Size	DN 20 - DN 1000	DN 32 - DN 1000	DN 32 - DN 300
MAWP	10 bar at max. service temperature of 80°C 6 bar at max. service temperature of 90°C		
Marking	EPDM/EPDM= orange (not oil resistant) NBR/CR = red		

Other Conditions

The expansion joints are to be installed in well visible and accessible locations and protected against over extension and compression and against mechanical damage. The adjoining pipes are to be suitably aligned, supported, guided and anchored.

The producer's instructions and recommendations are to be considered.

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

Previous Version: 93/20006 (E5)

The Design Appraisal Document HMD 10032-03, Issue No. 4 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

Downloaded Copy

71 Fenchurch Street, London, EC3M 4BS, United Kingdom

Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.