

## 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.

<b>Manufacturer</b>	<b>Trelleborg Industrial AVS</b>
<b>Address</b>	1 Hoods Close, Leicester, LE4 2BN, United Kingdom
<b>Type</b>	Engine Mountings
<b>Description</b>	Anti-vibration chocks, anti-shock and vibration mounts
<b>Trade Name</b>	Cushyfloat (including HD, HT) Cushymount (including K, XK) Cushyfoot S,K Sandwich Mount D-, DX- and Super D-series Equipfrequency Mounts
<b>Application</b>	Flexible anti-vibration rubber chocks for diesel engines for main propulsion and auxiliary duty, and as mountings for reduction gearboxes and other auxiliary machinery, in accordance with the limitations in the manufacturers data sheets.
<b>Specified Standard</b>	Rules and Regulations for the Classification of Ships Part 5, Chapter 1. Rules and Regulations for the Classification of Special Service Craft Part 9, Chapter 1



**Maria del Agua Sires**

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

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

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## Type Approval Certificate

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:** 96-00041(E7)-04

The Design Appraisal Document LR21429065DAD and its supplementary Type Approval Terms and Conditions form part of this Certificate.

## LLOYD'S REGISTER TYPE APPROVAL – DESIGN APPRAISAL DOCUMENT

Issued by: *UK&I Technical Support Office*

Issued to: *Trelleborg Industrial AVS*

For: *Anti-vibration chocks, anti-shock and vibration mounts*

The undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register Type Approval System Procedure TA14 Version 04 (September 2020) and this Design Appraisal Document forms part of the Certificate.

### APPROVAL DOCUMENTATION

LR Design Appraisal Document ENG8173129 Issue 4, dated 11 August 2021 and its associated documents

LR Liverpool visit report – Production Quality Assessment Form - PRJ11100343635

ISO 9001 Certificate number 2286, dated 07/10/2019



Maria del Agua Sires  
Senior Specialist, Machinery & Rotating Equipment  
Engineering Systems

### Supplementary Type Approval Terms and Conditions

Type Approval certifies that a representative sample of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein. It does not mean or imply approval for any other use, nor approval of any product(s) designed or manufactured otherwise than in strict conformity with the said representative sample.

Type Approval is based on the understanding that the manufacturer's recommendations and instructions and any relevant requirements of the Rules and Regulations are complied with.

Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations. Lloyd's Register EMEA reserves the right to cancel or withdraw this Type Approval Certificate in accordance with the Lloyd's Register Type Approval System Procedure.







# Design Appraisal Document

Lloyd's Register EMEA  
UK&I Technical Support Office  
Southampton Boldrewood Innovation Campus  
Burgess Road  
Southampton  
SO16 7QF United Kingdom

Date  
11 August 2021

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## MARINE GENERAL DESIGN APPRAISAL ANTI-VIBRATION CHOCKS, ANTI-SHOCK AND ANTI-VIBRATION MOUNTS Trelleborg Industrial AVS

Valid until 10<sup>th</sup> August 2026

1. The Document(s) listed in paragraph 1 of the appendix have been examined for compliance with Part 5, Chapter 8, Section 2 of the Rules and Regulations for the Classification of Ships, July 2021 and are assigned an appraisal status, as indicated, subject to the following conditions and comments.

### 2. Products

Cushyfloat (including HD, HT)
Cushymount (including K, XK)
Cushyfoot S, K
Sandwich Mount
D-, DX- and Super D-series
Equipfrequency Mounts

### 3. Conditions of Approval

- 3.1 Applications of these mounts in LR classed installations are to comply with the remaining requirements of the Rules for Ships, Part 5, Chapter 1, Section 4.3 or the Rules for the Classification of Special Service Craft Part 9, Chapter 1, Section 5.3 so far as applicable. *AQS / Shipyard*
- 3.2 Final approval of LR classed installations is also subject to the mounts being installed under survey and the machinery tested under full working conditions all to the attending surveyor's satisfaction who will ensure that excessive movements do not occur during start up and shut down. *AQS / Shipyard*
- 3.3 All mounts are to be fitted with protective shields and are not to be used where they would be permanently immersed in oil. *AQS / Shipyard*

FINAL ACCEPTANCE OF ACTUAL ITEM(S) DEPEND(S) ON SATISFACTORY SURVEY AND TESTING

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UK&I Technical Support Office  
Southampton Boldrewood Innovation Campus  
Burgess Road  
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SO16 7QF United Kingdom

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- 3.4 Each installation is to be fitted with collision chocks or buffer to ensure that the manufacturers' maximum deflection limits are not exceeded. *AQS / Shipyard*
- 3.5 In marine main or auxiliary propulsion/steering installations, appropriate means are to be provided to accommodate propeller thrust. *AQS / Shipyard*

#### 4. General Comments

4.1 The attending surveyor is to be satisfied by the Firm that the QA procedure in operation ensures the repeatability of the elastic properties of the mounts from batch to batch and that the correct grade of rubber mix is always uniquely identified.



Maria del Agua Sires  
Senior Specialist, Machinery & Rotating Equipment  
Engineering Systems  
T: +44 (0)330 414 0359

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Burgess Road  
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## Appendix

### 1. The documents listed below have been examined

Document No.	Rev.	Title	Status	Date
17/1601/5	5	Mounting – D type	SI	11th January 2012
17/1601/7	1	Mounting – D type	SI	11th January 2012
17/1601/8	3	Mounting – D type	SI	11th January 2012
17/1601/9	2	Mounting – D type	SI	11th January 2012
17/1602	6	Mounting – D type	SI	11th January 2012
17/1602/1	9	Mounting – D type	SI	11th January 2012
17/1602/2	7	Mounting – D type	SI	11th January 2012
17/1603	6	Mounting – D type	SI	11th January 2012
17/1603/1	10	Mounting – D type	SI	11th January 2012
17/1603/2	4	Mounting – D type	SI	11th January 2012
17/1603/3	5	Mounting – D type	SI	11th January 2012
17/1609/1	16	Mounting - Cushyfloat	SI	11th January 2012
17/1609/10	3	Mounting - Cushyfloat	SI	11th January 2012
17/1609/2	8	Mounting - Cushyfloat	SI	11th January 2012
17/1609/3	12	Mounting - Cushyfloat	SI	11th January 2012
17/1609/5	5	Mounting - Cushyfloat	SI	11th January 2012
17/1609/8	6	Mounting - Cushyfloat	SI	11th January 2012
17/1654	9	Mounting - Rectangular	SI	11th January 2012
17/1657/1	11	Mounting - Cushyfloat	SI	11th January 2012
17/1657/2	8	Mounting - Cushyfloat	SI	11th January 2012
17/1657/3	7	Mounting - Cushyfloat	SI	11th January 2012
17/1657/4	4	Mounting - Cushyfloat	SI	11th January 2012
17/1657/5	5	Mounting - Cushyfloat	SI	11th January 2012
17/1661	11	Mounting – Super D	SI	11th January 2012
17/1662	13	Mounting – Super D	SI	11th January 2012
17/1663	16	Mounting – Super D	SI	12th August 2016
17/1663/1	6	Mounting – Super D	SI	11th January 2012
17/1669	3	Metalastik Cushymount	SI	11th January 2012
17/1716	9	Mounting – Rectangular	SI	11th January 2012
17/1732/1	3	Metalastik Cushymount	SI	11th January 2012
17/1734	9	Mounting – Offset Rectangular	SI	11th January 2012

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Document No.	Rev.	Title	Status	Date
17/1736	12	Mounting – Super D	SI	11th January 2012
17/1736/1	4	Mounting – Super D	SI	11th January 2012
17/1737	11	Mounting – Super D	SI	12th August 2016
17/1737/1	1	Mounting – Super D	SI	11th January 2012
17/1738	18	Mounting – Super D	SI	12th August 2016
17/1758	6	Cushymount	SI	11th January 2012
17/1770	3	Metalastik Cushymount	SI	11th January 2012
17/1783	9	Mounting – Rectangular	SI	12th August 2016
17/1790	8	Metalastik 'O' Series Mounting	SI	12th August 2016
17/1841/2	7	Mounting – Cushyfloat	SI	11th January 2012
17/1871	9	Mounting – Super D	SI	11th January 2012
17/1872	9	Mounting – Cushymount – Buffered	SI	11th January 2012
17/1912	8	Mounting – Rectangular	SI	11th January 2012
17/1921	10	Mounting – Cushymount – Buffered	SI	11th January 2012
17/1973	8	Mounting – Rectangular	SI	12th August 2016
17/2092	5	Mounting – Super D	SI	11th January 2012
17/2266	6	Mounting – Super D	SI	11th January 2012
17/2267	3	Mounting – Super D	SI	11th January 2012
17/2310/1	1	Mounting – Cushyfloat	SI	11th January 2012
17/0645	26	Mounting – Cushyfoot S	SI	11th January 2012
17/645/1	3	Metalstik – Cushyfoot S Mounting	SI	11th January 2012
17/1472	6	Equipfrequency Mounting	SI	11th January 2012
17/1472/1	17	Mounting - Equipfrequency	SI	12th August 2016
17/1544	11	Mounting – Equipfrequency	SI	12th August 2016
17/1544/1	6	Mounting – Equipfrequency	SI	11th January 2012
17/2026	3	Mounting – D type	SI	11th January 2012
17/2026/1	3	Mounting – D type	SI	11th January 2012
17/2199	6	Mounting – Super D	SI	11th January 2012
17/2198	5	Mounting – Super D	SI	11th January 2012
17/2357	2	Mounting – Super D	SI	12th August 2016
17/5001	4	Mounting – Super D	SI	10th October 2019
17/5001/1	2	Mounting – Super D	SI	24th February 2014
17/5002	3	Mounting – Super D	SI	24th February 2014

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Document No.	Rev.	Title	Status	Date
17/5002/1	2	Mounting – Super D	SI	24th February 2014

2. The documents listed below have been considered together with the submitted documents in the appraisal

Document No.	Rev.	Title
-	-	Installation Guide for Cushyfloat Anti-Vibration Mounts

3. Documents not mentioned above are not required for appraisal or as supporting documentation and have not been retained.

### Appraisal Status Key

AQS	Details to be submitted by the client to the local surveyor's Office responsible for surveying the building and the arrangements verified in accordance with the Rule/Regulations requirements by the surveyor.
SI	Retained as supporting documentation for information only

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