

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Flexible Mounts for Propulsion or Auxiliary Machinery

with type designation(s)

TSC size T1, T2, T3, T6, T7, T10, T15, T20 and Marine Genflex size B & HD

Issued to

Christie & Grey Limited
Kent, United Kingdom

is found to comply with

DNV GL rules for classification – Ships

DNV GL rules for classification – High speed and light craft

Application :

Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.

Issued at **Høvik** on **2018-01-16**

for **DNV GL**

This Certificate is valid until **2023-01-15**.

DNV GL local station: **Southampton**

Approval Engineer: **Geir Olav Moen**

Oddvar Deinboll
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.



Job Id: **262.1-000755-6**
Certificate No: **TAM00000TA**

Product description

Model TSC : Combined Steel Spring and Rubber Spring Unit Isolators
Model B & HD : Rubber Mountings

Application/Limitation

The isolators are approved for mounting of machinery including diesel engines.

Size of isolators to be chosen according to the following data sheets :

T1 : DS 004 Issue 10
T2 : DS 005 Issue 15
T3 : DS 006 Issue 16
T6 : DS 119 Issue 1
T7 : DS 120 Issue 1
T15 : DS 108 Issue 4
T10,T20 : DS 059 Issue 18
B : DS 063 Issue 7
HD : DS 063 Issue 7

Type Approval documentation

TSC Combined Steel Spring and Rubber Unit Isolators, Sizes T1, T2, T3, T6, T7, T10, T15 & T20 and the following drawings, data sheets and brochures:

| Size | Drawing | Data sheet | Brochure |
|------|------------------------------------|-----------------|------------------|
| T1 | S 048 Issue E | DS 004 Issue 10 | PL057/1-2 Rev. A |
| T2 | S 071 sht. 1 of 3, Issue D | DS 005 Issue 15 | PL057/1-2 Rev. A |
| T3 | S 001 Issue M | DS 006 Issue 16 | PL058/1-2 Rev.A |
| T6 | S 241 Issue A | DS 119 Issue 1 | N/A |
| T7 | S 240 Issue A | DS 120 Issue 1 | N/A |
| T15 | S228 Issue B | DS 108 Issue 4 | PL056 Rev.C |
| T10 | S 090 Issue G | DS 059 Issue 18 | PL059/1-2 Rev.A |
| T20 | S 221 Issue A (adjustable stopper) | DS 059 Issue 18 | PL061/1-2 Rev.A |

Brochure PL002/1- 2 October 2009 Rev.E Genflex Rubber Mountings , Sizes B & HD and the following drawings and data sheets :

| Size | Drawing | Data sheet |
|------|---------------|----------------|
| B | S 139 Issue D | DS 063 Issue 7 |
| HD | S 138 Issue F | DS 063 Issue 7 |

Test carried out

Isolator compression tests for B size 10.104.60, 10.104.70 and for HD size 10.103.60

Marking of product

The product to be marked with manufacturer's name or trademark and type number identification.

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Periodical Assessment

For retention of the Type Approval, a DNV GL surveyor shall perform an assessment after 2 years and after 3.5 years to verify that the conditions of the type approval are complied with. A renewal assessment will be performed at renewal of the certificate.

The objective of the Periodical Assessment is to verify that the conditions for the Type Approval are not altered since the Type Approval Certificate was issued.

In cases where the Type Approved product is manufactured at other companies, the Periodical Assessment shall verify that the Type Approval applicant has a quality control system for consistent production at their licensees/subcontractors. Furthermore Periodical Assessment shall be carried out randomly at these companies.

Other conditions

No product certificate required.

Installation, maintenance and inspection of the mounts to be done according to the makers instructions.

END OF CERTIFICATE