

## 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.*

This certificate is issued to:

<b>PRODUCER</b>	Diesse Rubber Hoses SpA
<b>PLACE OF PRODUCTION</b>	Via Provinciale, 8 24040 Filago (BG) Italy
<b>DESCRIPTION</b>	Fire safe flexible hoses made up of synthetic rubber with one or two high tensile braid reinforcement, or four or six spirals, with end fittings.
<b>TYPE</b>	DS 12, DS 13, DS15, DS-4SH, DS-4SP, DS1-T.1SN, DS2-T.2SN, DS1-SC and DS2-SC
<b>APPLICATION</b>	Marine, offshore and industrial use, including the following marine uses; Steering gear systems; Lube and fuel oil systems; Sea water systems; Fresh water systems; Sanitary systems.
<b>SPECIFIED STANDARDS</b>	Lloyd's Register's Rules and Regulations for the Classification of Ships; BS EN 853:1997; BS EN 856:1997; BS EN 857:1997;

<b>Certificate No.</b>	15/00051
<b>Issue Date</b>	08 June 2015
<b>Expiry Date</b>	07 June 2020
<b>Sheet</b>	1 of 3

M.H.M.Rila  
Marine Technology & Engineering Services  
Lloyd's Register EMEA

*Lloyd's Register EMEA  
Southampton Boldrewood Innovation Campus, Burgess Road, Southampton, SO16 7QF*



## RATINGS

### DS-12

Nominal diameter (mm): 10 to 38  
Working pressures (bar): 276 to 172 bar  
Reinforcement: 4 spirals

### DS-13

Nominal diameter (mm): 19 to 51  
Working pressure (bar): 345  
Reinforcement: 4 spirals up to 25mm ND  
6 spirals over 31mm ND

### DS-15

Nominal diameter (mm): 19 to 38  
Working pressure (bar): 420  
Reinforcement: 4 spirals up to 25mm ND  
6 spirals over 31mm ND

### DS-4SH

Nominal diameter (mm): 19 to 51  
Working pressure (bar): 450 to 250  
Reinforcement: 4 spirals

### DS-4SP

Nominal diameter (mm): 6 to 51  
Working pressure (bar): 500 to 165  
Reinforcement: 4 spirals

### DS1-T.1SN

Nominal diameter (mm): 6 to 51  
Working pressure (bar): 225 to 40  
Reinforcement: 1 braid

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**RATINGS (continued)**

**DS2-T.2SN**

Nominal diameter (mm): 6 to 51  
Working pressure (bar): 275 to 100  
Reinforcement: 2 braids

**DS1-SC**

Nominal diameter (mm): 6 to 25  
Working pressure (bar): 275 to 100  
Reinforcement: 1 braid

**DS2-SC**

Nominal diameter (mm): 6 to 25  
Working pressure (bar): 420 to 185  
Reinforcement: 2 braids

**OTHER CONDITIONS**

1. The hoses are to be installed in accordance with the manufacturer's recommendations and instructions.
2. Service length should be as short as practicable.
3. The manufacturer's recommendations on replacement of the hoses after a specified period in service is to be strictly observed.

*"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."*

*The Design Appraisal Document No. 15/00051 and its supplementary Type Approval Terms and Conditions form part of this Certificate.*

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