

Type Approval Certificate Extension

This is to certify that Certificate No. 08/10096(E1) for the undernoted products is extended and renumbered as shown.

This certificate is issued to:

PRODUCER	RYCO Hydraulics
PLACE OF PRODUCTION	RYCO Hydraulics Pty. Ltd. 19 Whitehall Street, Footscray, Victoria 3011 Australia RYCO Hydraulics Sdn. Bhd. Plot 207, Kuala Ketil Industrial Estate, 09300 Kuala Ketil, Kedah Darulaman, Malaysia RYCO Hydraulics (Dalian) Ltd. 38 Ying Ri Road, Ying Cheng Zi Industrial Zone, Gan Jing Zi District, Dalian 116036 China
DESCRIPTION	Flexible Hoses of Non-Metallic Material with Permanently Fitted Couplings, Designations: Suction SR, Defiant SRF, Textile M2
TYPE	SAE 100R4, SAE 100R3
APPLICATION	For use on ships and offshore installations classed with Lloyd's Register, as short lengths in systems of fresh and seawater, petroleum and water based hydraulics.
DESIGN CODE STANDARD	Part 5, Chapter 12 of Lloyd's Register's Rules and Regulations for the Classification of Ships (July, 2013) Part 5, Chapter 10 of Lloyd's Register's Rules and Regulations for the Classification of Mobile Offshore Units (September 1996 plus Notices Nos. 1, 2, 3, 4, 5 & 6 as applicable) Fire Resistant Testing according to ISO 15540/15541
RATINGS	Sizes: DN 6 to DN 76 Maximum Working Pressure: 3.9 to 88 bar (see below) Service Temperature: -40°C to +100°C (see below)
Certificate No.	08/10096(E2)
Issue Date	01 October 2013
Expiry Date	30 September 2018
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N. Nagamune
Yokohama Technical Support Office
Lloyd's Register Group Limited

Lloyd's Register Group Limited, registered office:
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RATINGS (Continued)

Coupling Material: Carbon Steel AISI/SAE 12L14 (Standard),
Stainless Steel (Option)
Electroplated Fe/Zn12c acc. to AS1789

OTHER CONDITIONS

The hoses may be used for the following working conditions

SUCTION SR	DN (mm)	Max. Pressure (bar)
SR12	19	21
SR16	25	17
SR40	63	4.3
SR48	76	3.9
Temperature Range: -40°C to +100°C		

DEFIANT SRF	DN (mm)	Max. Pressure (bar)
SRF12	19	21
SRF16	25	17
SRF20	31	14
SRF24	38	10
SRF32	51	7
Temperature Range: -40°C to +100°C		

TEXTILE M2	DN (mm)	Max. Pressure (bar)
M24	6	88
M26	10	79
M28	12	70
M212	19	52
Temperature Range: -40°C to +100°C		

In the case of seawater systems, where failure of the hoses could give rise to the danger of flooding, the hoses are to be suitably enclosed.

Hose clamps are to be restricted to the engine cooling water system, where the hose consists of a short straight length joining two metal pipes, between two fixed points.

Carbon steel couplings are to be normalised for temperatures below -10°C.

In all cases the hoses are to be installed in accordance with the manufacturer's instructions and tested to the satisfaction of the attending surveyor.

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"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 Group Limited of any modification or changes to the equipment in order to obtain a valid certificate."

The attached Design Appraisal Document No. 08/10096(E2) and its supplementary Type Approval Terms and Conditions form part of this Certificate.

All other details remain as the previous Certificate No. 08/10096(E1) to which this extension should be attached.

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