



Type Approval Certificate Extension

This is to certify that **Certificate No.13/10069(E1)** for the undernoted product(s) has/have been extended and renumbered in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

This certificate is issued to:

PRODUCER RYCO Hydraulics.

PLACE OF PRODUCTION RYCO Hydraulics Pty. Ltd.
99 Calarco Drive, Derrimut, Victoria, 3026 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:
C6000, H3000, H4000, H5000, H6000, T3000, T3600, T4000, T5000, T6000

TYPE Isobaric Hose

APPLICATION For use on ships and offshore installations classed with Lloyd's Register, as short lengths in systems of hydraulic oil.

STANDARD Part 5, Chapter 12 of Lloyd's Register's Rules and Regulations for the Classification of Ships (July, 2013)

Certificate No. 13/10069 (E2)

Issue Date 27 June 2019

Expiry Date 26 June 2024

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Chng Teck Wee
South Asia Technical Support Office
Lloyd's Register Singapore Pte. Ltd.

Lloyd's Register Asia
2 Science Park Drive, #02-05/06 Ascent, Singapore 118222

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 51

Maximum Working Pressure: 215 to 420 bar (see below)

Service Temperature: -40°C to +121°C (see below)

Coupling Material: Carbon Steel AISI/
Stainless Steel (Option)

Electroplated Fe/Zn12c acc. to AS1789

OTHER CONDITIONS

The hoses may be used for the following working conditions

C6000	DN (mm)	Max. Pressure (bar)
C6012D/S	19	420
C6016D/S	25	420
C6020D/S	31	420
Temperature Range: -40°C to +121°C		

H3000	DN (mm)	Max. Pressure (bar)
H3020D/S	31	215
H3024D/S	38	215
H3032D/S	51	215
Temperature Range: -40°C to +121°C		

H4000	DN (mm)	Max. Pressure (bar)
H4006D/S/C	10	280
H4008D/S/C	12	280
H4010D/S/C	16	280
H4012D/S/C	19	280
H4016D/S/C	25	280

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Chng Teck Wee
21 January 2022
Marine and Offshore
South Asia Technical Support Office
Engineering System
Lloyd's Register Singapore Pte. Ltd.
L9032.2016.09

Chng Teck Wee
South Asia Technical Support Office
Lloyd's Register Singapore Pte. Ltd.

Lloyd's Register Asia
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H4020D/S/C	31	280
H4024D/S/C	38	280
H4032D/S/C	51	280
Temperature Range: -40°C to +121°C		

H5000	DN (mm)	Max. Pressure (bar)
H5006D/S/C	10	350
H5008D/S/C	12	350
H5010D/S/C	16	350
H5012D/S/C	19	350
H5016D/S/C	25	350
H5020D/S/C	31	350
H5024D/S/C	38	350
H5032D/S/C	51	350
Temperature Range: -40°C to +121°C		

H6000	DN (mm)	Max. Pressure (bar)
H6006D/S/C	10	420
H6008D/S/C	12	420
H6010D/S/C	16	420
H6012D/S/C	19	420
H6016D/S/C	25	420
H6020D/S/C	31	420
H6024D/S/C	38	420
H6032D/S/C	51	420
Temperature Range: -40°C to +121°C		

T3000	DN (mm)	Max. Pressure (bar)
T3004D/S/C	6	245
T3005D/S/C	8	245

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T3006D/S/C	10	215
T3008D/S/C	12	215
T3010D/S/C	16	215
T3012D/S/C	19	215
T3016D/S/C	25	215
Temperature Range: -40°C to +100°C		

T3600	DN (mm)	Max. Pressure (bar)
T3604D/S/C	6	250
T3605D/S/C	8	250
T3606D/S/C	10	250
T3608D/S/C	12	250
T3610D/S/C	16	250
T3612D/S/C	19	250
T3616D/S/C	25	250
Temperature Range: -40°C to +100°C		

T4000	DN (mm)	Max. Pressure (bar)
T4004D/S/C	6	280
T4005D/S/C	8	280
T4006D/S/C	10	280
T4008D/S/C	12	280
T4010D/S/C	16	280
T4012D/S/C	19	280
T4016D/S/C	25	280
Temperature Range: -40°C to +100°C		

T5000	DN (mm)	Max. Pressure (bar)
T5004D/S/C	6	350
T5005D/S/C	8	350

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T5006D/S/C	10	350
T5008D/S/C	12	350
Temperature Range: -40°C to +100°C		

T6000	DN (mm)	Max. Pressure (bar)
T6004D/S/C	6	420
T6005D/S/C	8	420
T6006D/S/C	10	420
T6008D/S/C	12	420
Temperature Range: -40°C to +100°C		

Where synthetic rubber hoses are used for oil fuel supply to burners, the hoses are to have external wire braid protection in addition to the integral wire braid.

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.

"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 Singapore Pte. Ltd. of any modification or changes to the equipment in order to obtain a valid certificate."

The Design Appraisal Document No. 13/10069(E2) and its supplementary Type Approval Terms and Conditions form part of this Certificate.

All other details remain as the previous **Certificate No. 13/10069(E1)** to which this extension should be attached.

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