

# EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:  
**MEDB00000RB**  
Revision No:  
**2**

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV AS under the authority of the Government of Norway.

## This is to certify:

**That the Materials other than steel for pipes conveying oil or fuel oil: flexible pipe assemblies and compensators**

with type designation(s)

**Flexible hose assemblies of non-metallic material: H12, H13, H15, H3000, H4000, H5000, H6000, M2, R4SP, R4SH, RTH1**

Issued to

**RYCO Hydraulics Pty. Ltd.**  
**Derrimut, VIC, Australia**

is found to comply with the requirements in the following Regulations/Standards:

Regulation **(EU) 2020/1170,**

**item No. MED/3.15c. SOLAS 74 as amended, Regulation II-2/4 & X/3 and 2000 HSC Code 7 & 10 and IMO MSC/Circ.1120**

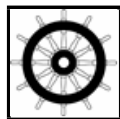
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2023-12-31**.

Issued at **Høvik** on **2021-03-22**

DNV local station:  
**Australia FIS/CMC**

Approval Engineer:  
**Sinisa Sedlan**



Notified Body  
No.: **0575**

for **DNV AS**

.....  
**Roald Vårheim**  
**Head of Notified Body**



The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.

This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV AS of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.

Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



## Product description

10 types of hose assemblies :

- 1) H12 A/D/S :  
Oil resistance synthetic rubber tube. Four alternating layers of spiraled high tensile steel wire reinforcement.  
Type A: Oil and abrasion resistant synthetic cover.  
Type D: Oil and extra abrasion resistant synthetic cover.  
Type S: Synthetic rubber cover sheathed with a layer of extremely abrasion resistant polyethylene  
With T7000 type of coupling
- 2) H13 A/D/S :  
Oil resistance synthetic rubber tube. Four or six alternating layers of spiraled high tensile steel wire reinforcement.  
Type A: Oil and abrasion resistant synthetic cover.  
Type D: Oil and extra abrasion resistant synthetic cover.  
Type S: Synthetic rubber cover sheathed with a layer of extremely abrasion resistant polyethylene  
With T9000 type of coupling
- 3) H15 A/D/S :  
Oil resistance synthetic rubber tube. Four or six alternating layers of spiraled high tensile steel wire reinforcement.  
Type A: Oil and abrasion resistant synthetic cover.  
Type D: Oil and extra abrasion resistant synthetic cover.  
Type S: Synthetic rubber cover sheathed with a layer of extremely abrasion resistant polyethylene  
With 6900N type of coupling
- 4) H3000 A/D/S :  
Oil resistance synthetic rubber tube. Four alternating layers of spiraled high tensile steel wire reinforcement.  
Type A: Oil and abrasion resistant synthetic cover.  
Type D: Oil and extra abrasion resistant synthetic cover.  
Type S: Synthetic rubber cover sheathed with a layer of extremely abrasion resistant polyethylene  
With T7000 type of coupling
- 5) H4000 A/D/S :  
Oil resistance synthetic rubber tube. Four or six alternating layers of spiraled high tensile steel wire reinforcement.  
Type A: Oil and abrasion resistant synthetic cover.  
Type D: Oil and extra abrasion resistant synthetic cover.  
Type S: Synthetic rubber cover sheathed with a layer of extremely abrasion resistant polyethylene  
With T7000 type of coupling
- 6) H5000 A/D/S/C :  
Oil resistance synthetic rubber tube. Four or six alternating layers of spiraled high tensile steel wire reinforcement.  
Type A: Oil and abrasion resistant synthetic cover.  
Type D: Oil and extra abrasion resistant synthetic cover.  
Type S: Synthetic rubber cover sheathed with a layer of extremely abrasion resistant polyethylene  
Type C: Cold resistant synthetic rubber cover  
With T7000 type of coupling
- 7) H6000 A/D/S :  
Oil resistance synthetic rubber tube. Four or six or eight alternating layers of spiraled high tensile steel wire reinforcement.  
Type A: Oil and abrasion resistant synthetic cover.  
Type D: Oil and extra abrasion resistant synthetic cover.  
Type S: Synthetic rubber cover sheathed with a layer of extremely abrasion resistant polyethylene  
With T7000 type of coupling
- 8) M2  
Oil resistance synthetic rubber tube. Two textile braid reinforcement. Oil and abrasion resistant synthetic rubber cover  
With T4000 type of coupling
- 9) R4SPD/R4SHD  
Oil resistance synthetic rubber tube. Four alternating layers of spiralled high tensile steel wire. Oil and abrasion resistant synthetic rubber cover.  
With T7000 type of couplings
- 10) RTH1  
Teflon (PTFE) tube. One braid of high tensile grade 304 stainless steel wire as reinforcement.  
Shall be used with flame protection FS1072  
With 1RT201/2 couplings

## Application/Limitation

Hose assemblies covered by this certificate are tested according to:

- 1) NS-EN ISO 15540: Fire resistance of hose assemblies- Test methods
- 2) NS-EN ISO 15541: Fire resistance of hose assemblies - Requirements for the test bench

Size			Maximum working pressures (bar)										
in	DN	DASH	H12	H13	H15	H3000	H4000	H5000	H6000	M2	R4SPD	R4SHD	RTH1
1/4"	6	-04	-	-	-	-	-	-	-	86	-	-	170
5/16"	8	-05	-	-	-	-	280	-	-	-	-	-	-
3/8"	10	-06	350	-	-	-	280	350	420	-	-	-	165
1/2"	12	-08	350	-	-	-	280	350	420	-	420	-	120
5/8"	16	-10	350	-	-	-	280	350	420	-	380	-	105
3/4"	19	-12	350	350	420	-	280	350	420	52	380	420	85
1"	25	-16	350	350	-	-	280	350	420	-	350	380	55
1 1/4"	31	-20	275	350	420	215	280	350	420	-	-	350	-
1 1/2"	38	-24	255	350	-	215	280	350	420	-	-	300	-
2"	51	-32	210	350	-	215	280	350	420	-	-	-	-

### Type Examination documentation

#### Tests carried out

Fire testing according to ISO 15540 and ISO 15541

#### Marking of product

For traceability to this certificate, each hose is marked with:

- Manufacturer's name/trade mark
- Type designation
- Nominal size
- Working pressure