

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

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 GL AS under the authority of the Government of the Kingdom of Norway.

This is to certify:

That the Materials other than steel for pipes conveying oil or fuel oil

with type designation(s)

G1, G2, CM2T, M3K, M4K, M5K, M6K, EFG3K, EFG4K, EFG5K, EFG6K

Issued to

**DISTRIBUIDORA INTERNACIONAL CARMEN, S.A -DICSA-
Zaragoza Zaragoza, Spain**

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

Regulation **(EU) 2015/559,**

**Annex A.1, item No. A.1/3.15c and Annex B, Module B in the Directive; SOLAS 74 as amended,
Regulation II-2/4.2.2.5.1, II-2/4.2.2.5.6 & X/3 and 2000 HSC Code 7.5.4.**

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

This Certificate is valid until **2022-02-16**.

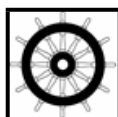
Issued at **Høvik** on **2017-02-17**

DNV GL local station:

Barcelona

Approval Engineer:

Adel Samiei



Notified Body
No.: **0575**

for **DNV GL AS**

Vidar Dolonen
Head of Notified Body



Product description

11 types of hoses assemblies :

1. G1 : 1-Wire Braid Hose

Tube: Black, oil resistant, synthetic rubber (Nitrile - Type C)

Reinforcement: One braid of high-tensile steel wire

Cover: Black, oil and abrasion resistant, synthetic rubber (Nitrile/PVC - Type C2)

End fittings (Ferrule): ZPF2212

2. G2: 2-Wire Braid Hose

Tube: Black, oil resistant, synthetic rubber (Nitrile - Type C)

Reinforcement: Two braids of high-tensile steel wire

Cover: Black, oil and abrasion resistant, synthetic rubber (Modified Nitrile -Type C2)

End fittings (Ferrule): ZPF2212 (DN6, 10, 12, 16, 19, 25) – ZAC68010 (DN31, 38, 51)

3. CM2T® MegaFlex® 2-Wire Braid Hose

Tube: Black, oil resistant, synthetic rubber (Nitrile - Type C)

Reinforcement: Two braids of high-tensile steel wire

Cover: Black, oil, abrasion and weather resistant, synthetic rubber (Modified Nitrile - Type C2), with color coded layline. Also available with unique abrasion resistant MegaTuff® or XtraTuff™ cover

End fittings (Ferrule): ZPF2212

4. M3K: Mega3000® Hose

Tube: Black, oil resistant, synthetic rubber (Nitrile - Type C)

Reinforcement: Braided, high-tensile steel wire. -4, -5, -6 and -8 sizes are one braid; -10, -12 and -16 sizes are two braid.

Cover: Black, oil, abrasion and weather resistant, synthetic rubber (Nitrile/PVC - Type C2), with color coded layline. Also available with unique abrasion resistant MegaTuff® or XtraTuff™ cover

End fittings (Ferrule): ZSC2112 (DN6, 10, 12) – ZPF2212 (DN16, 19, 25)

5. M4K: Mega4000™ Hose

Tube: Black, oil resistant, synthetic rubber (Nitrile - Type C)

Reinforcement: Two braids of high-tensile steel wire

Cover: Black, oil, abrasion and weather resistant, synthetic rubber (Modified Nitrile - Type C2), with color coded layline. Also available with unique abrasion resistant MegaTuff® or XtraTuff™ cover

End fittings (Ferrule): ZPF2212

6. M5K: Mega5000™ Hose

Tube: Black, oil resistant, synthetic rubber (Nitrile - Type C)

Reinforcement: Two braids of high-tensile steel wire

Cover: Black, oil, abrasion and weather resistant, synthetic rubber (Nitrile/PVC - Type C2) (4, 5, 6), Polychloroprene - Type A (8) with color coded layline. Also available with unique abrasion resistant MegaTuff® or XtraTuff™ cover

End fittings (Ferrule): ZPF2212

7. M6K: Mega6000™ Hose

Tube: Black, oil resistant, synthetic rubber (Nitrile - Type C)

Reinforcement: Two braids of high-tensile steel wire

Cover: Black, oil, abrasion and weather resistant, synthetic rubber (Nitrile/PVC - Type C2), with color coded layline. Also available with unique abrasion resistant MegaTuff® or XtraTuff™ cover.

End fittings (Ferrule): ZPF2212

8. EFG3K: Spiral Wire Hose

Tube: Black, oil resistant, synthetic rubber (Nitrile - Type C)

Reinforcement: Four alternating layers of spiraled, high-tensile steel wire

Cover: Black, oil resistant, synthetic rubber (Polychloroprene - Type A), with color coded layline. Also available with unique abrasion resistant MegaTuff® or XtraTuff™ cover.

End fittings (Ferrule): ZPF1224

9. EFG4K Spiral Wire Hose

Tube: Black, oil resistant, synthetic rubber (Nitrile - Type C)
Reinforcement: Four alternating layers of spiraled, high-tensile steel wire
Cover: Black, oil resistant, synthetic rubber (Polychloroprene - Type A), with color coded layline. Also available with unique abrasion resistant MegaTuff® or XtraTuff™ cover
End fittings (Ferrule): ZPF1224 (DN16, 19) – ZAC68010 (DN25, 31)

10. EFG5k: Spiral Wire Hose

Tube: Black, oil resistant, synthetic rubber (Nitrile - Type C)
Reinforcement: Four (six for -20, -24 and -32) alternating layers of spiraled, high-tensile steel
Cover: Black, oil resistant, synthetic rubber (Polychloroprene - Type A), with color coded layline. Also available with unique abrasion resistant MegaTuff® or XtraTuff™ cover.
End fittings (Ferrule): ZAC68010 (DN12, 16) - ZA6101 (DN19, 25) – Z6101 (DN31, 38, 51)

11. EFG6K Spiral Wire Hose

Tube: Black, oil resistant, synthetic rubber (Nitrile - Type C)
Reinforcement: Four (six for -20, -24 and -32) alternating layers of spiraled, high-tensile steel
Cover: Black, oil resistant, synthetic rubber (Polychloroprene - Type A). Color coded layline. Also available with unique abrasion resistant MegaTuff® or XtraTuff™ cover.
End fittings (Ferrule): ZPF1224 (DN10, 12, 16) - ZA6101 (DN19, 25) – Z6101 (DN31, 38, 51)
Fittings material: AISI 316L

Hoses are made by Gates Hydraulics.

Fittings are made by Distribuidora Internacional Carmen, S.A –DICSA, Spain.

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

Hose assemblies are suitable for use with petroleum base hydraulic fluids and water base hydraulic fluids.

The hoses may be used with the following maximum working pressure:

Hose Type	DN6	DN10	DN12	DN16	DN19	DN25	DN31	DN38	DN51
	-4	-6	-8	-10	-12	-16	-20	-24	-32
G1	225	180	160	130	105	88	63	50	40
G2	400	330	275	250	215	165	125	90	80
CM2T	400	330	275	250	215	165	-	-	-
M3K	210	210	210	210	210	210	-	-	-
M4K	280	280	280	280	280	280	-	-	-
M5K	350	350	350	-	-	-	-	-	-
M6K	420	-	-	-	-	-	-	-	-
EFG3K	-	-	-	-	-	-	210	210	210
EFG4K	-	-	-	280	280	280	280	-	-
EFG5K	-	-	350	350	350	350	350	350	350
EFG6K	-	420	420	420	420	420	420	420	420

Type Examination documentation

Tests carried out

Fire test according to ISO 15540 and ISO 15541

Marking of product

As a minimum, the final products (hoses with couplings) are to be marked with:

- Manufacturers name or trademark
- Manufacturer's address



Job Id: **344.1-006472-1**
Certificate No: **MEDB0000252**

- Specification or hose name
- Hose size (inside diameter in inches)
- Data code (quarterly and daily production code)