

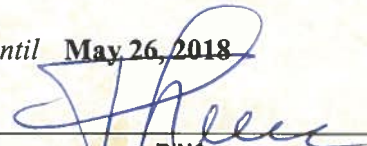


**TYPE APPROVAL CERTIFICATE**  
No. MAC030813CS/004

**This is to certify that the product identified below is in compliance with the regulations herewith specified.**

<i>Description</i>	<b>Non metallic flexible hoses</b>
<i>Type</i>	<b>FLEXOR 12; DUNLOP HIFLEX 712L</b>
<i>Applicant</i>	<b>ALFAGOMMA HYDRAULIC SPA VIA ENRICO MATTEI 6 64020 CASTELNUOVO VOMANO (TE) ITALY</b>
<i>Manufacturer</i>	<b>ALFAGOMMA HYDRAULIC SPA</b>
<i>Place of manufacture</i>	<b>VIA ENRICO MATTEI 6 64020 CASTELNUOVO VOMANO (TE) ITALY</b>
<i>Reference standards</i>	<b>Part C, Chapter 1, Section 10 of RINA Rules</b>

Issued in **Genova** on **May 27, 2013**. This Certificate is valid until ~~May 26, 2018~~

  
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RINA  
**Francesco Sciacca**

This certificate consists of this page and 1 enclosure



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**FLEXOR 12**

**DUNLOP HIFLEX 712L**

**Reference documents**

Alfagomma catalogue 2011-2012

Alfagomma data sheet edition 7 dated 30/04/1999

Hose Fitting Combination dated 26/07/2000 and 24/05/2013

Hose fitting combination:

DN			Ferrule			Insert	
mm	inch	dash	Carbon steel		Stainless steel	Carb. steel	Stainl. steel
			AG branding	DH branding	AG branding	AG branding	AG branding
10	3/8	6	H1100204-06	D440000-06	H3100204-06	H12-06	H32-06
12	1/2	8	H1100204-08	D440000-08	H3100204-08	H12-08	H32-08
16	5/8	10	H1100204-10	D330000-10	H3100204-10	H12-10	H32-10
19	3/4	12	H1100204-12	D330000-12	H3100204-12	H12-12	H32-12
25	1	16	H1100204-16	D330000-16	H3100204-16	H12-16	H32-16
31	1 1/4	20	H1100204-20	D330000-20	H3100204-20	H12-20	H32-20
38	1 1/2	24	H1100204-24	D330000-24	H3100204-24	H12-24	H32-24
51	2	32	H1100204-32	D330000-32	H3100204-32	H12-32	H32-32

**Applicable specifications**

*Alfagomma type designation:*

R12 acc. R12 - EN 856 and SAE 100 R12 SAE J517

*Dunlop Hiflex type designation:*

712L acc.R12 - EN 856 and SAE 100 R12 SAE J517

**Materials/Components**

- Inner tube: oil resistant synthetic chloroprene rubber
- Reinforcement: four layers of high tensile steel wire wrapped in alternating directions
- Cover: chloroprene rubber, weather, oil and abrasion resistant
- Couplings: Carbon steel (9SMnPb28 UNI 4838) or  
Stainless steel (XCrNi1810 UNI 6901)



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**FLEXOR 12**

**DUNLOP HIFLEX 712L**

**Technical characteristics**

Temperatures range: -40 °C / +120 °C

Maximum working pressure according to the following table:

DN			Max. Working Pressure
mm	inch	dash	bar
10	3/8	6	276
12	1/2	8	276
16	5/8	10	276
19	3/4	12	276
25	1	16	276
31	1 1/4	20	207
38	1 1/2	24	172
51	2	32	172

Places of manufacture:

Hoses:

ALFAGOMMA HYDRAULIC SPA - Via E. Mattei, 6 - 64020 Castelnuovo Vomano (TE)

Manufacturing plants:

64020 Castelnuovo Vomano (TE) - Via E. Mattei, 6

87050 Figline V. (CS) - Area Industriale Piano Lago

Couplings:

ALFATECHNOLOGY SRL - Via Torri Bianche, 1 - 20059 Vimercate (MI)

Manufacturing plants:

20040 Bellusco (MI) - Via dell'Industria, 12

87050 Mangone (CS) - Area Industriale Piano Lago

**Fields of application**

Hydraulic systems with hydraulic fluid having a flash point higher than 150 °C (closed cup test)

Pneumatic systems

Compressed air systems

Fresh water systems

Sanitary systems



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**FLEXOR 12**  
**DUNLOP HIFLEX 712L**

**Remarks**

The installation on board is to be carried out by qualified personnel in accordance with the manufacturer's instructions.

The flexible hoses are to be installed in order to satisfy the requirements of para. 5.9.3 of Part C, Chapter 1, Section 10 of RINA Rules.

Hoses assemblies with Carbon steel couplings are not to be used at temperatures below -10°C, unless the material is normalized.

The acceptance of the a.m. products on board ship classed with RINA is subject to the satisfactory outcome of testing as per RINA Rules.

The product (hose and fittings) is to be marked, for traceability, with the following data: nominal diameter, design conditions, Manufacturer's name or trademark, designation type reference.

This certificate cancels and replaces the previous one No. MAC014207CS/004 dated 30 November 2007.

**Genova May 27, 2013**

