

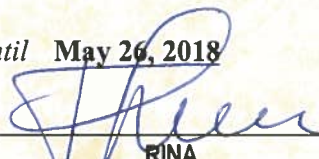


TYPE APPROVAL CERTIFICATE
No. MAC030813CS/005

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

<i>Description</i>	Non metallic flexible hoses
<i>Type</i>	Flexor 4SH; DUNLOP HIFLEX 790L / 790G
<i>Applicant</i>	ALFAGOMMA HYDRAULIC SPA VIA ENRICO MATTEI 6 64020 CASTELNUOVO VOMANO (TE) ITALY
<i>Manufacturer</i>	ALFAGOMMA HYDRAULIC SPA
<i>Place of manufacture</i>	VIA ENRICO MATTEI 6 64020 CASTELNUOVO VOMANO (TE) ITALY
<i>Reference standards</i>	Part C, Chapter 1, Section 10 of RINA Rules

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



RINA
Francesco Sciacca

This certificate consists of this page and 1 enclosure

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Flexor 4SH

DUNLOP HIFLEX 790L / 790G

Reference documents

Alfagomma catalogue 2011-2012

Alfagomma data sheet edition 9 dated 13/12/1999

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
19	3/4	12	H1400200-12	D190000-12	H3400200-12	H14-12	H34-12
25	1	16	H1400200-16	D190000-16	H3400200-16	H14-16	H34-16
31	1 1/4	20	H1400200-20	D190000-20	H3400200-20	H14-20	H34-20
38	1 1/2	24	H1400200-24	D190000-24	H3400200-24	H14-24	H34-24
51	2	32	H1400200-32	D190000-32	H3400200-32	H14-32	H34-32

Applicable specifications:

Alfagomma type designation:
4SH according to EN 856

Dunlop Hiflex type designation:
790L, 790G acc. 4SH EN 856

Materials/Components

Inner tube: oil resistant synthetic chloroprene rubber

Reinforcement: four layers of high tensile spiral 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 4SH

DUNLOP HIFLEX 790L / 790G

Technical characteristics

Temperatures range: -40 °C / +100 °C (continuous operation)

Maximum working pressure according to the following table:

DN			Max. Working Pressure
mm	inch	dash	bar
19	3/4	12	420
25	1	16	380
31	1 1/4	20	325
38	1 1/2	24	290
51	2	32	250

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 4SH
DUNLOP HIFLEX 790L / 790G

Remarks

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

The flexible hoses are to be installed in order to satisfy the requirements of para. 5.9.3 of Part C, Chapter 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/005 dated 30 November 2007.

Genova May 27, 2013



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