Catalog for naval industry



Cofi Srl - **Sede legale:** Via Gramsci, 71/3 - 16038 Santa Margherita Ligure (GE)
Uffici: Via Fratelli Arpe, 49- 16038 Santa Margherita Ligure (GE) - **Tel:** 0185284180 **email:** cofi@cofi.it **pec:** cofi@mypec.eu
CAP. SOCIALE € 1.000.000,00 I.V. – Codice Fiscale, Iscrizione Registro Imprese di Genova e P.IVA 01019170990 – C.C.I.A.A. 334433

2983 - DOSSIER - NAVALE - Rev.:0 - 21/12/2023

Catalog for naval industry

Submarines **6**
Fastening belt **7**
Introduction 7
Gallery 7
Drawing 120069 - Fastening belt 8
. . . . . **9**
Universal metal compensator joints **10**
Introduction 10
Gallery 10
Drawing 040832 - Metallic compensator with three spherical tie rods 11
Surface ships **12**
Ship structure expansion joints **13**
Introduction 13
Gallery 13
Drawing 040016 Rev.1 - Ship structure expansion joint 14
Watertight passage, rubber reducer with flame protection **15**
Introduction 15
Gallery 15
Drawing 040160 Rev.3 - Reducer watertight passage 16
Watertight passage, removable stainless steel gearboxes **17**
Introduction 17
Gallery 17
Drawing 040503 Rev.3 - Metallic joint for removable watertight passage 18
Bare joint **19**
Introduction 19
Gallery 19
Drawing 040161 Rev.3 - Characteristics of the COFLEX® compensator joint 20
Joint with flame protection **21**
Introduction 21
Gallery 21
Drawing 040363 - Thermal insulation effectiveness of Coflex® CF casing 22
Joints for combustion air passage **23**
Introduction 23
Gallery 23
Drawing 040261- Compensator joint DN500 24
Highly flexible rubber compensator joints **25**
Introduction 25
Gallery 25
Disegno 040305 Rev.2 - Giunto compensatore a 4 onde con elevati spostamenti 28

Catalog for naval industry

Self-stable COFLEX® K joints . . . 29
Introduction . . . 29
Gallery . . . 29
Drawing 040397 - COFLEX® K joint mounted Dog-Leg . . . 30
Drawing 040612 - COFLEX® K joint RINA fire tests . . . 31
Textile compensator joints . . . 32
Introduction . . . 32
Gallery . . . 32
Compensating joints for ventilation systems . . . 34
Introduction . . . 34
Gallery . . . 34
Drawing 040455 Rev.1 - Joint for cooling air . . . 35
Metallic compensator joint for exhaust gases . . . 36
Introduction . . . 36
Gallery . . . 36
Drawing 040481 - Metallic joints for exhaust gas pipes . . . 37
Rectangular and round metal joint . . . 38
Introduction . . . 38
Gallery . . . 38
Drawing 091227 - Rectangular compensator joint . . . 39
Non-magnetic endoskeleton . . . 40
Introduction . . . 40
Drawing 120071 - Non-magnetic endoskeleton for flameproof cap support . . . 40
Anti-vibration supports . . . 41
Introduction . . . 41
Our products dedicated to Wartsila T46 engines . . . 41
Gallery . . . 43
Drawing 040340 - Anti-vibration . . . 44
Metallic anti-shock vibration dampers . . . 45
Introduction . . . 45
Gallery . . . 45
Fire resistant hoses . . . 46
Introduction . . . 46
Gallery . . . 46
Metallic hoses . . . 47
Introduction . . . 47
Gallery . . . 47
Drawing 040210 - Flexible metal hose . . . 48
Flexible hoses with COFLEX® SILK anti-whipping system . . . 49

Catalog for naval industry

Introduction . . . 49
Gallery . . . 49
Dog-Leg type flexible hoses . . . 50
Introduction . . . 50
Gallery . . . 50
Customized Dog-Leg system for Polar Ship . . . 52
Introduction . . . 52
Gallery . . . 52
Drawing 040698 Rev.1 - Planning design propulsion truster system . . . 53
Kerosene refueling hoses . . . 54
Introduction . . . 54
Gallery . . . 54
Probe-flex . . . 55
Introduction . . . 55
Gallery . . . 55
Installations . . . 56
Introduction . . . 56
Gallery . . . 56
Foam seals for tailgates . . . 57
Introduction . . . 57
Gallery . . . 57
Drawing 060105 Rev.1 - Door seal . . . 58
Drawing 060109 Rev.1 - Gasket . . . 59
Dynamic seal for NBC seal between flight deck and hangar on Cavour aircraft carrier . . . 60
Introduction . . . 60
Gallery . . . 60
Packed gaskets in COFITAN90 and canvas rubber . . . 61
Introduction . . . 61
Gallery . . . 61
Drawing 040245 - Gasket pack for GR stabilizing fins. 3RR . . . 62
Rollers for inserting shaft lines inside the ship hull . . . 63
Introduction . . . 63
Gallery . . . 63
Drawing 070663 - Roller for sliding axes . . . 64
Drawing 040577 - Roller for inserting center lines . . . 65
Swivel joints for high pressures, in line and at 90° . . . 66
Introduction . . . 66
Gallery . . . 66
Drawing 040829 - Swivel joints DN ¼" - 2.½" . . . 67

Catalog for naval industry

Pneumatic seals/actuators 68
Introduction 68
Gallery 68
Drawing 040655 - PNEUMOSTOP gasket for ship shaft lines with fittings 69
Drawing 070822 - Inflatable pneumatic seal with regulating piston 70

Catalog for naval industry

Submarines

Submarines



Catalog for naval industry

Fastening belt

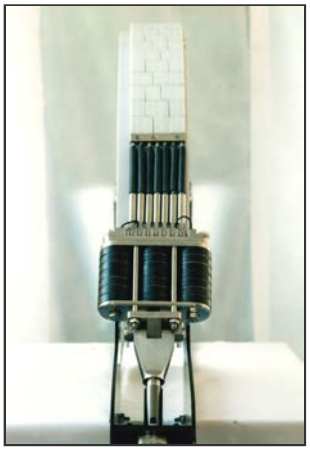
Introduction

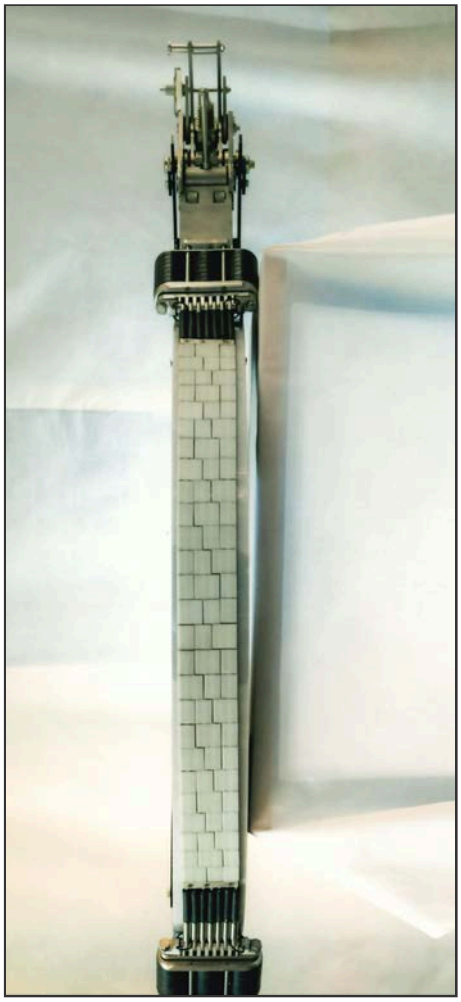
The ball-type restraint belt fastening system is composed of two hooking elements, joined by hinges, to two spring devices subsequently fixed to the ends of the belt.

The belt and fastening system together constitutes an element suitable for blocking the ball, for balancing the traction forces and the relative tightening torques, which are part of the rescue system (SLS) inside some submarines, allowing the personnel on board to abandon the submarine in case of emergency.

Gallery







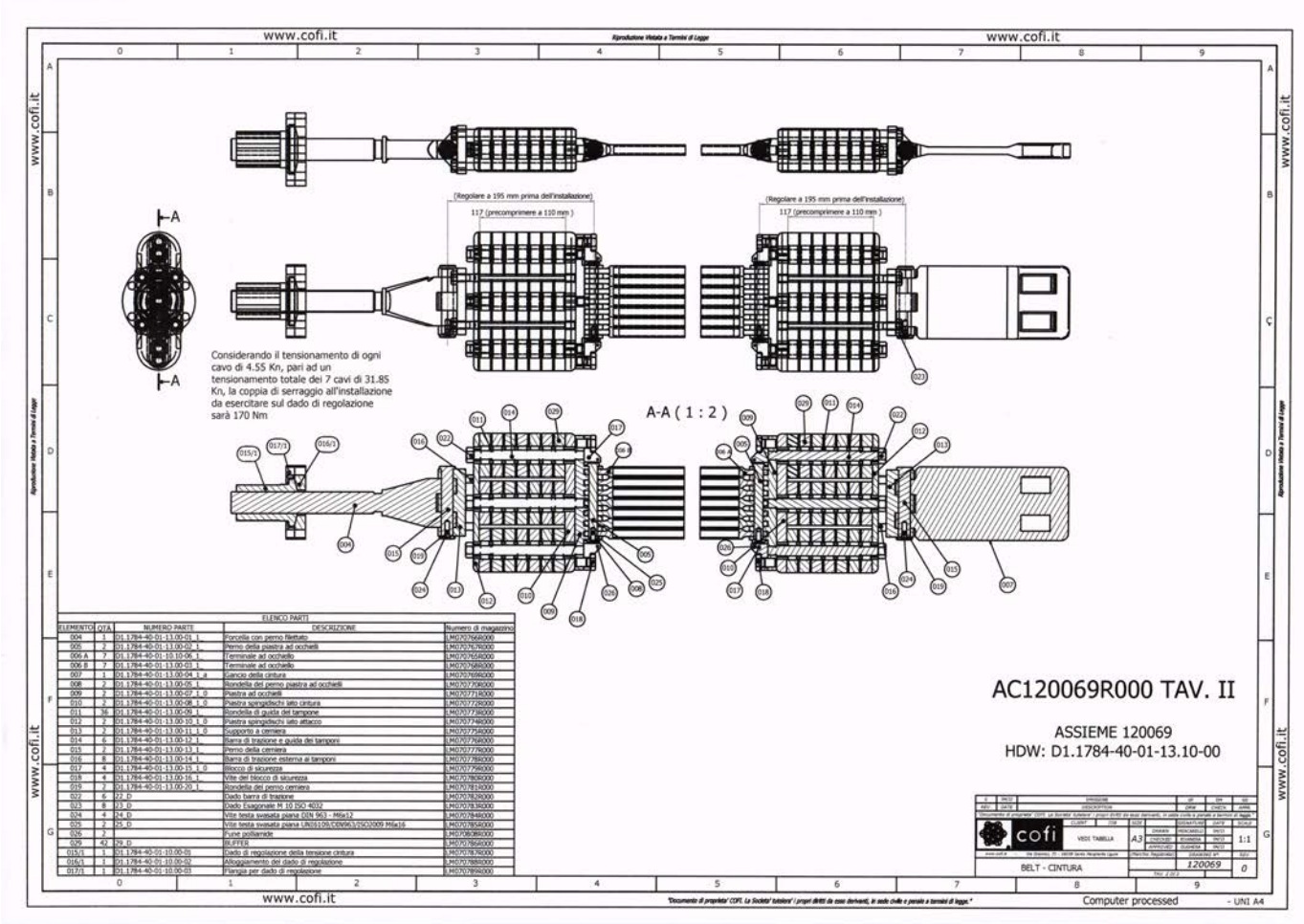




Catalog for naval industry

Submarines > Fastening belt

Drawing 120069 - Fastening belt



Catalog for naval industry

Submarines >



Catalog for naval industry

Universal metal compensator joints

Introduction

Universal joints are suitable for joining pipes of similar or different materials, within the pipe external diameter tolerance.

They are joint systems composed of a central sleeve, flanged ends, grooved gaskets, nuts and bolts.

Universal joints are suitable for use in drinking water, sea water, and can be used in water distribution networks, sewerage, irrigation, fire protection and in many industrial sectors.

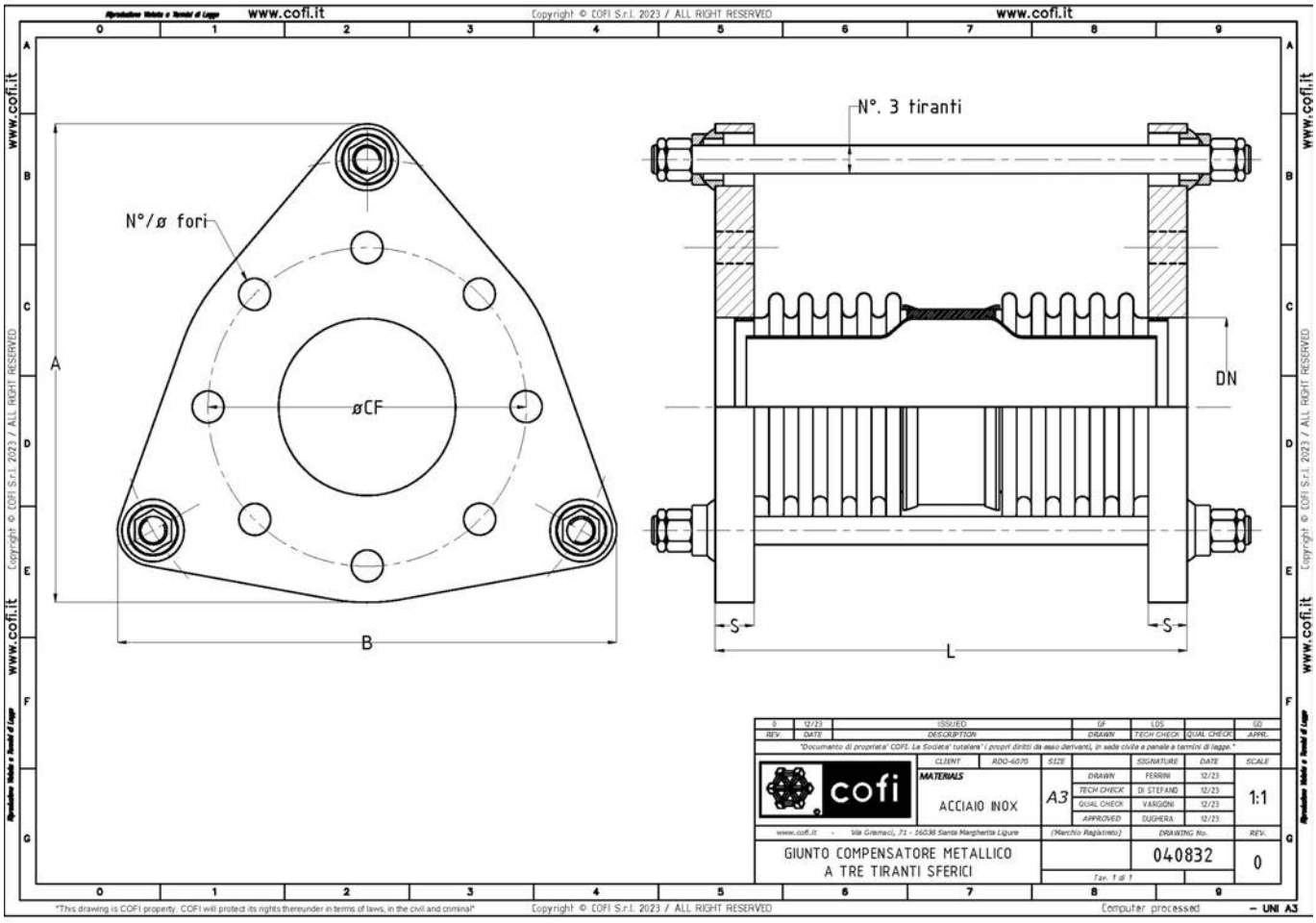
Gallery



Catalog for naval industry

Submarines > Universal metal compensator joints

Drawing 040832 - Metallic compensator with three spherical tie rods



Catalog for naval industry

Surface ships



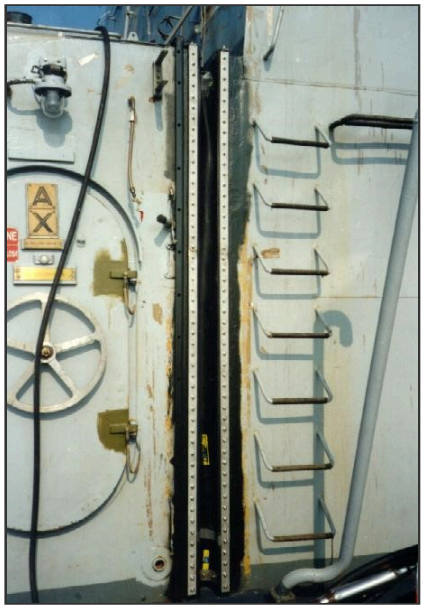
Catalog for naval industry

Ship structure expansion joints

Introduction

The expansion joints for ship structures are made of various types of rubber, depending on the specific application and with various geometric figures, also available in fire-resistant material with RINA certification.

Gallery



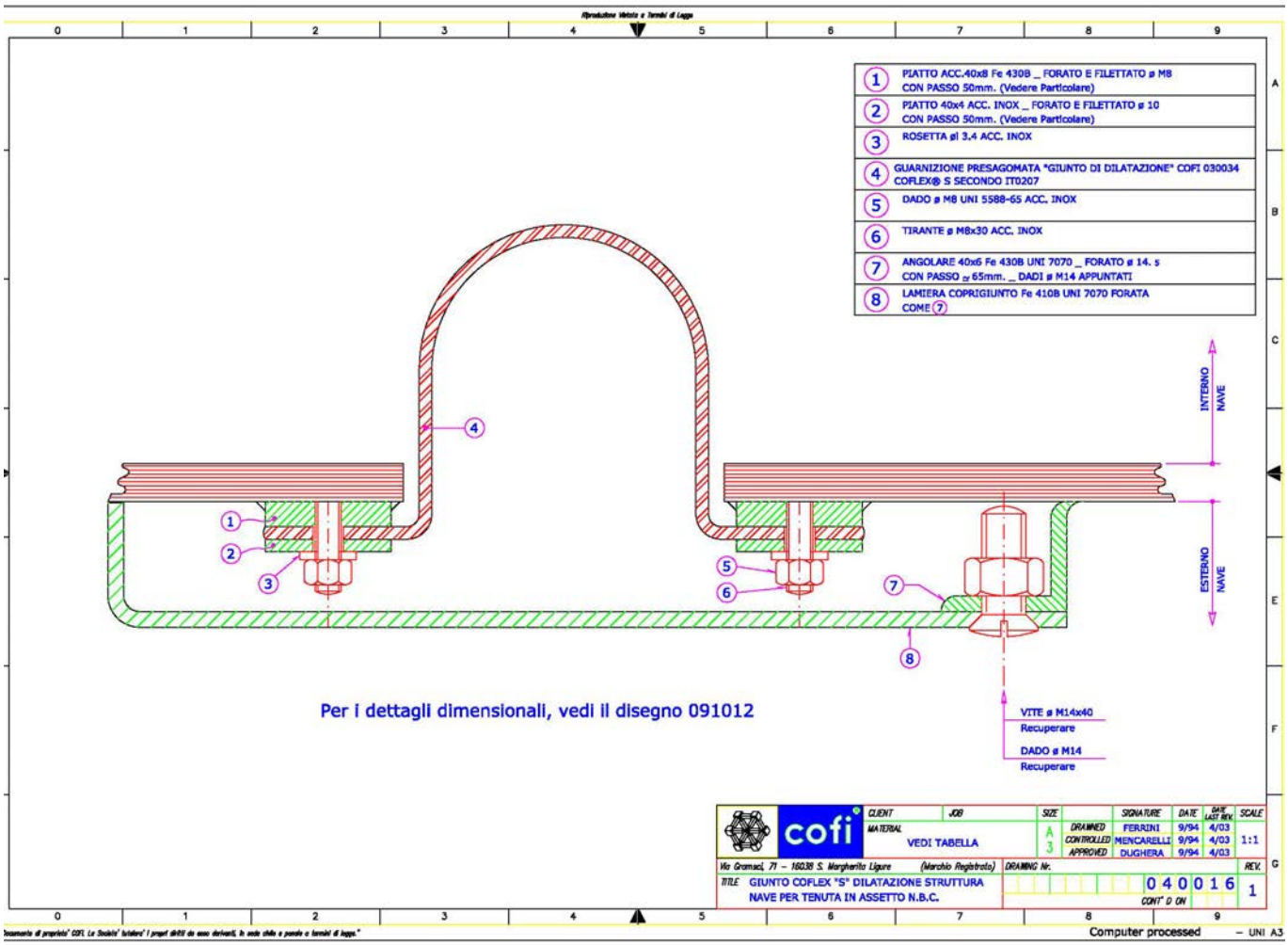




Catalog for naval industry

Surface ships > Ship structure expansion joints

Drawing 040016 Rev.1 - Ship structure expansion joint



Catalog for naval industry

Watertight passage, rubber reducer with flame protection

Introduction

The bulkhead watertight passage system consists of a connection between class A0 bulkheads and a flanged reducer, using a rubber compensator installed between the bulkhead and the reducer equipped with flame-retardant protection caps.

Gallery









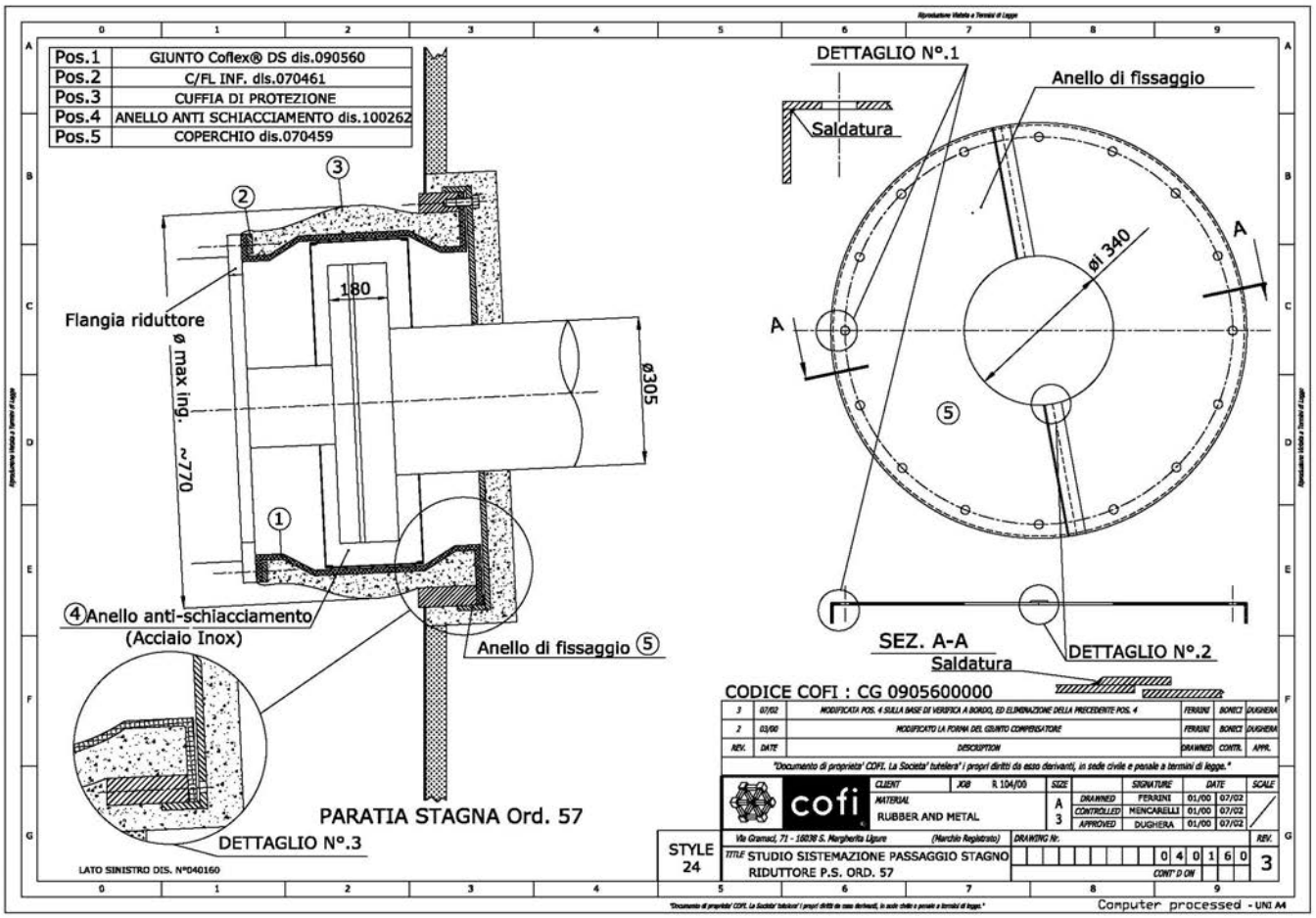




Catalog for naval industry

Surface ships > Watertight passage, rubber reducer with flame protection

Drawing 040160 Rev.3 - Reducer watertight passage



Catalog for naval industry

Watertight passage, removable stainless steel gearboxes

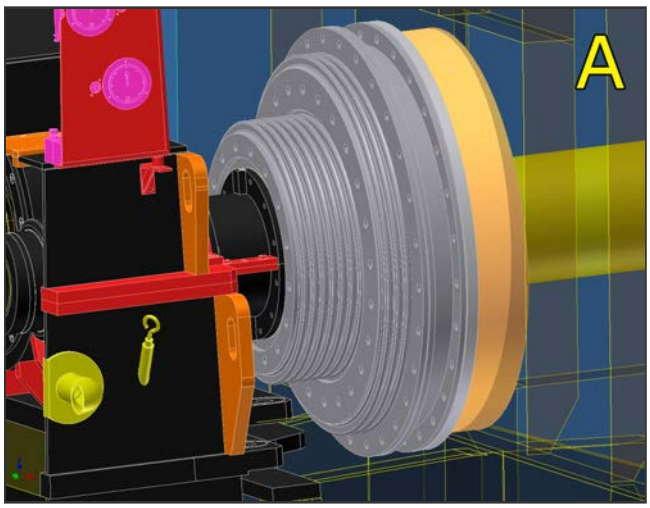
Introduction

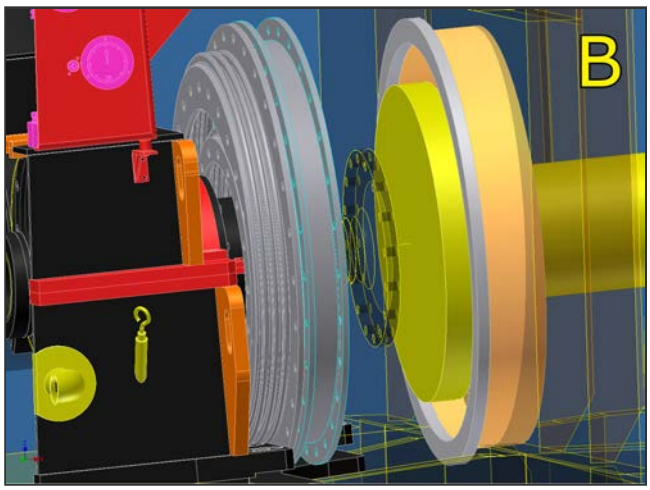
The Cofi bulkhead passage system model COFLEX® DMT (Double Metallic Telescopic), is a system made up of a series of components designed to allow the passage of a transmission axis inside the system, equipped with a 5 meter watertight seal of swing, class A0 fire resistant and tested by the Italian Naval Register.

It is a connection between class A0 bulkheads and flanged reducer using a system of compensators between motor and reducer.

In the two images below you can see a fully assembled telescopic joint (image A), and a completely dismantled telescopic joint to leave room for internal maintenance (image B).

Gallery

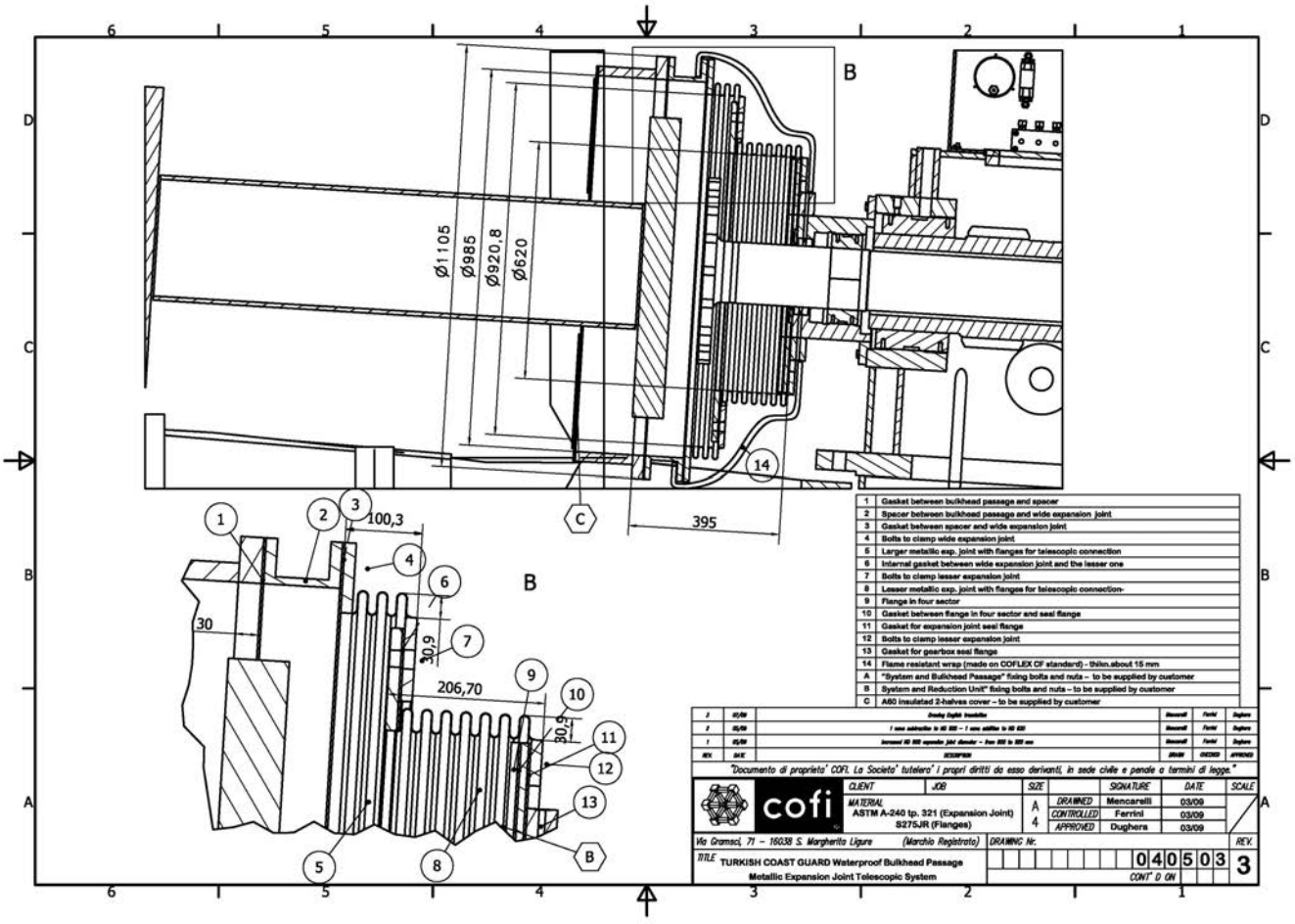




Catalog for naval industry

Surface ships > Watertight passage, removable stainless steel gearboxes

Drawing 040503 Rev.3 - Metallic joint for removable watertight passage



Catalog for naval industry

Bare joint

Introduction

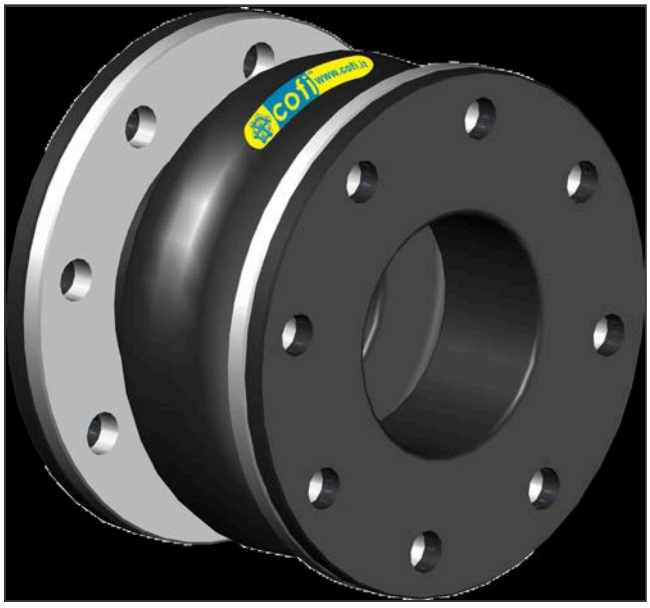
The joint is made up of an internal rubber layer, a textile armor and an external cover.

The internal layer is waterproof and resistant to the conveyed fluids and the external layer protects the textile structure from atmospheric agents or from anything present in the environment surrounding the compensator.

The textile reinforcement serves to provide the joint with the necessary resistance to the operating pressure of the system and varies as the maximum operating pressure varies.

The joints allow, depending on the type and size, four types of compensation: compression, elongation, lateral and angular.

Gallery

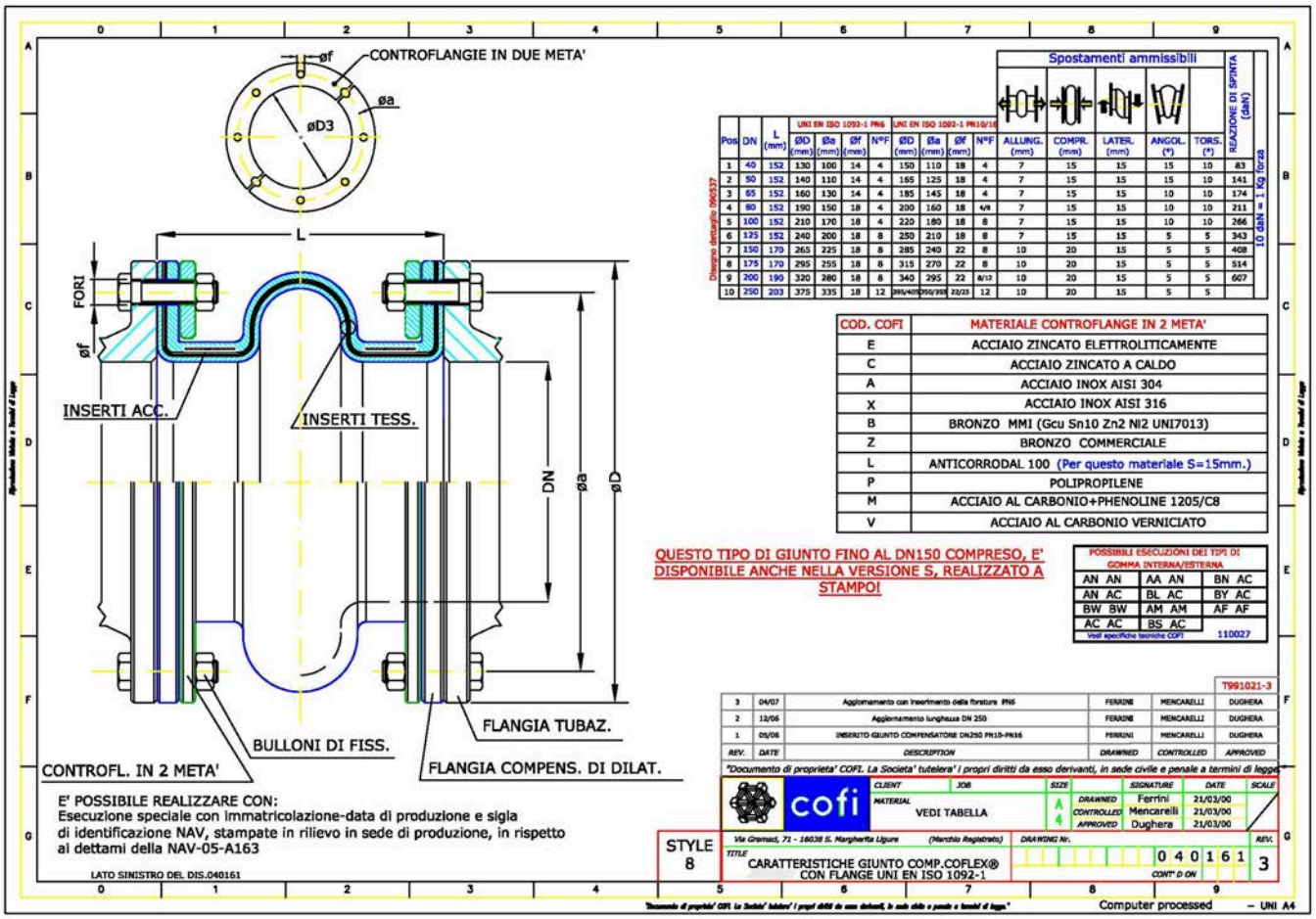




Catalog for naval industry

Surface ships > Bare joint

Drawing 040161 Rev.3 - Characteristics of the COFLEX® compensator joint



Pos.	DN	L (mm)	UNI EN ISO 1092-1 PN6 ØD (mm)	Øa (mm)	Øf (mm)	N°F	UNI EN ISO 1092-1 PN10/16 ØD (mm)	Øa (mm)	Øf (mm)	N°F	ALLUNG. (mm)	COMPR. (mm)	LATER. (mm)	ANGOL. (°)	TORS. (°)	REAZIONE DI SPINTA (daN)
1	40	152	130	100	14	4	150	110	18	4	7	15	15	15	10	83
2	50	152	140	110	14	4	165	125	18	4	7	15	15	15	10	141
3	65	152	160	130	14	4	185	145	18	4	7	15	15	10	10	174
4	80	152	190	150	18	4	200	160	18	4/8	7	15	15	10	10	211
5	100	152	210	170	18	4	220	180	18	8	7	15	15	10	10	266
6	125	152	240	200	18	8	250	210	18	8	7	15	15	5	5	343
7	150	170	265	225	18	8	285	240	22	8	10	20	15	5	5	408
8	175	170	295	255	18	8	315	270	22	8	10	20	15	5	5	514
9	200	190	320	280	18	8	340	295	22	8/12	10	20	15	5	5	607
10	250	203	375	335	18	12	395/405	350/355	22/25	12	10	20	15	5	5	

10 daN = 1 Kg forza

Disegno dettaglio 060537

COD. COFI	MATERIALE CONTROFLANGE IN 2 META'
E	ACCIAIO ZINCATO ELETTROLITICAMENTE
C	ACCIAIO ZINCATO A CALDO
A	ACCIAIO INOX AISI 304
X	ACCIAIO INOX AISI 316
B	BRONZO MM1 (Gcu Sn10 Zn2 Ni2 UNI7013)
Z	BRONZO COMMERCIALE
L	ANTICORRODAL 100 (Per questo materiale S=15mm.)
P	POLIPROPILENE
M	ACCIAIO AL CARBONIO+PHENOLINE 1205/C8
V	ACCIAIO AL CARBONIO VERNICIATO

POSSIBILI ESECUZIONI DEI TIPI DI GOMMA INTERNA/ESTERNA

AN AN	AA AN	BN AC
AN AC	BL AC	BY AC
BW BW	AM AM	AF AF
AC AC	BS AC	

Vedi specifiche tecniche COFI 110027

T991021-3

REV.	DATE	DESCRIPTION	DRAWNED	CONTROLLED	APPROVED
3	04/07	Aggiornamento con inserimento della forature PN6	FERRINI	MENCARELLI	DUGHERA
2	12/06	Aggiornamento lunghezza DN 250	FERRINI	MENCARELLI	DUGHERA
1	05/06	INSERITO GIUNTO COMPENSATORE DN250 PN10-PN16	FERRINI	MENCARELLI	DUGHERA

"Documento di proprieta' COFI. La Societa' tutelera' i propri diritti da esso derivanti, in sede civile e penale a termini di legge"

CLIENT	JOB	SIZE		SIGNATURE	DATE	SCALE
MATERIAL: VEDI TABELLA		A4	DRAWNED	Ferrini	21/03/00	
			CONTROLLED	Mencarelli	21/03/00	
			APPROVED	Dughera	21/03/00	

cofi — Via Gramsci, 71 - 16038 S. Margherita Ligure (Marchio Registrato)

DRAWING Nr. 040161 REV. 3

CONT' D ON

Catalog for naval industry

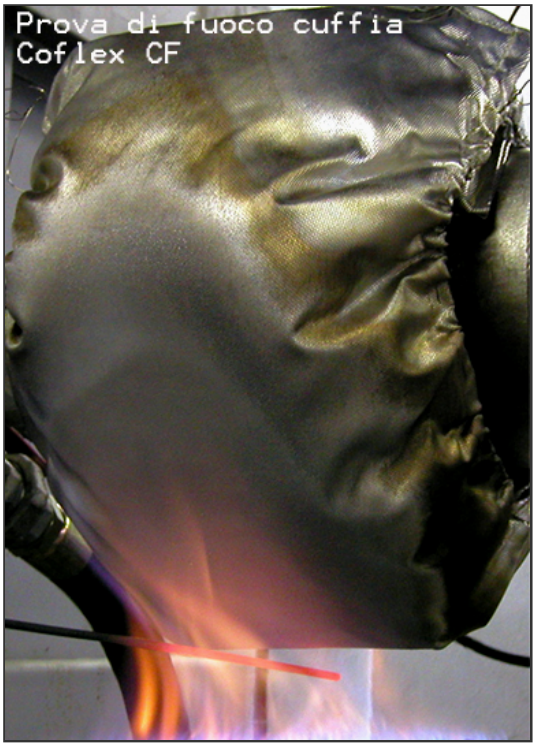
Joint with flame protection

Introduction

Rubber expansion joints that are highly stressed from a mechanical and thermal point of view are provided with various types of heat protection depending on the type of joint.

Gallery

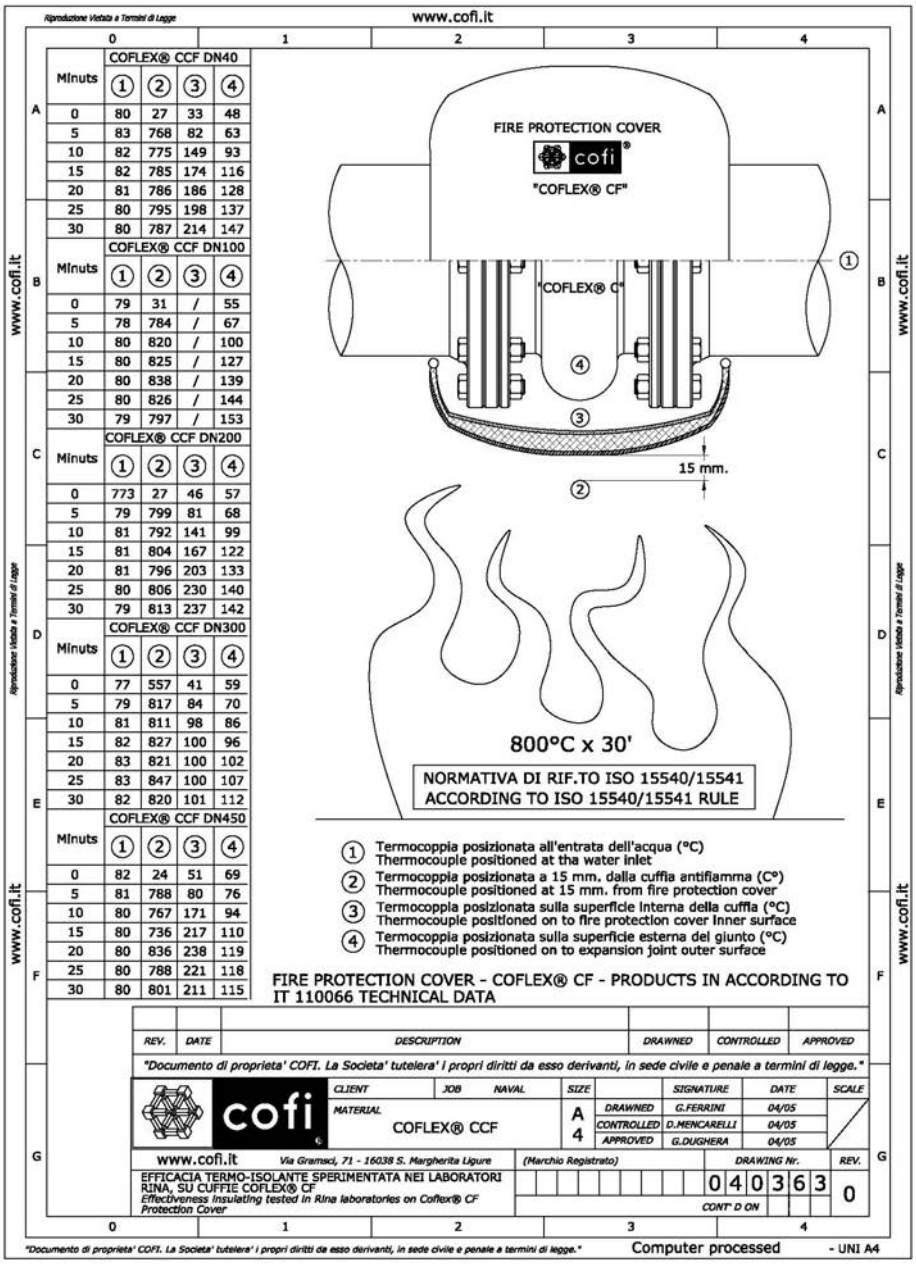




Catalog for naval industry

Surface ships > Joint with flame protection

Drawing 040363 - Thermal insulation effectiveness of Coflex® CF casing



Minuts	①	②	③	④
COFLEX® CCF DN40				
0	80	27	33	48
5	83	768	82	63
10	82	775	149	93
15	82	785	174	116
20	81	786	186	128
25	80	795	198	137
30	80	787	214	147
COFLEX® CCF DN100				
0	79	31	/	55
5	78	784	/	67
10	80	820	/	100
15	80	825	/	127
20	80	838	/	139
25	80	826	/	144
30	79	797	/	153
COFLEX® CCF DN200				
0	773	27	46	57
5	79	799	81	68
10	81	792	141	99
15	81	804	167	122
20	81	796	203	133
25	80	806	230	140
30	79	813	237	142
COFLEX® CCF DN300				
0	77	557	41	59
5	79	817	84	70
10	81	811	98	86
15	82	827	100	96
20	83	821	100	102
25	83	847	100	107
30	82	820	101	112
COFLEX® CCF DN450				
0	82	24	51	69
5	81	788	80	76
10	80	767	171	94
15	80	736	217	110
20	80	836	238	119
25	80	788	221	118
30	80	801	211	115

REV.	DATE	DESCRIPTION	DRAWNED	CONTROLLED	APPROVED

CLIENT	JOB	NAVAL	SIZE		SIGNATURE	DATE	SCALE
MATERIAL: COFLEX® CCF			A4	DRAWNED	G.FERRINI	04/05	
				CONTROLLED	D.MENCARELLI	04/05	
				APPROVED	G.DUGHERA	04/05	

www.cofi.it Via Gramsci, 71 - 16038 S. Margherita Ligure (Marchio Registrato) DRAWING Nr. 040363 REV. 0
CONT' D ON

Catalog for naval industry

Joints for combustion air passage

Introduction

The compensator joints for the passage of incoming combustion air to the turbo blowers of diesel engines have the function of cutting the transmission of engine vibrations to the supply pipes, also used to cut vibrations along all the combustion air pipes that cross the ship.

Gallery

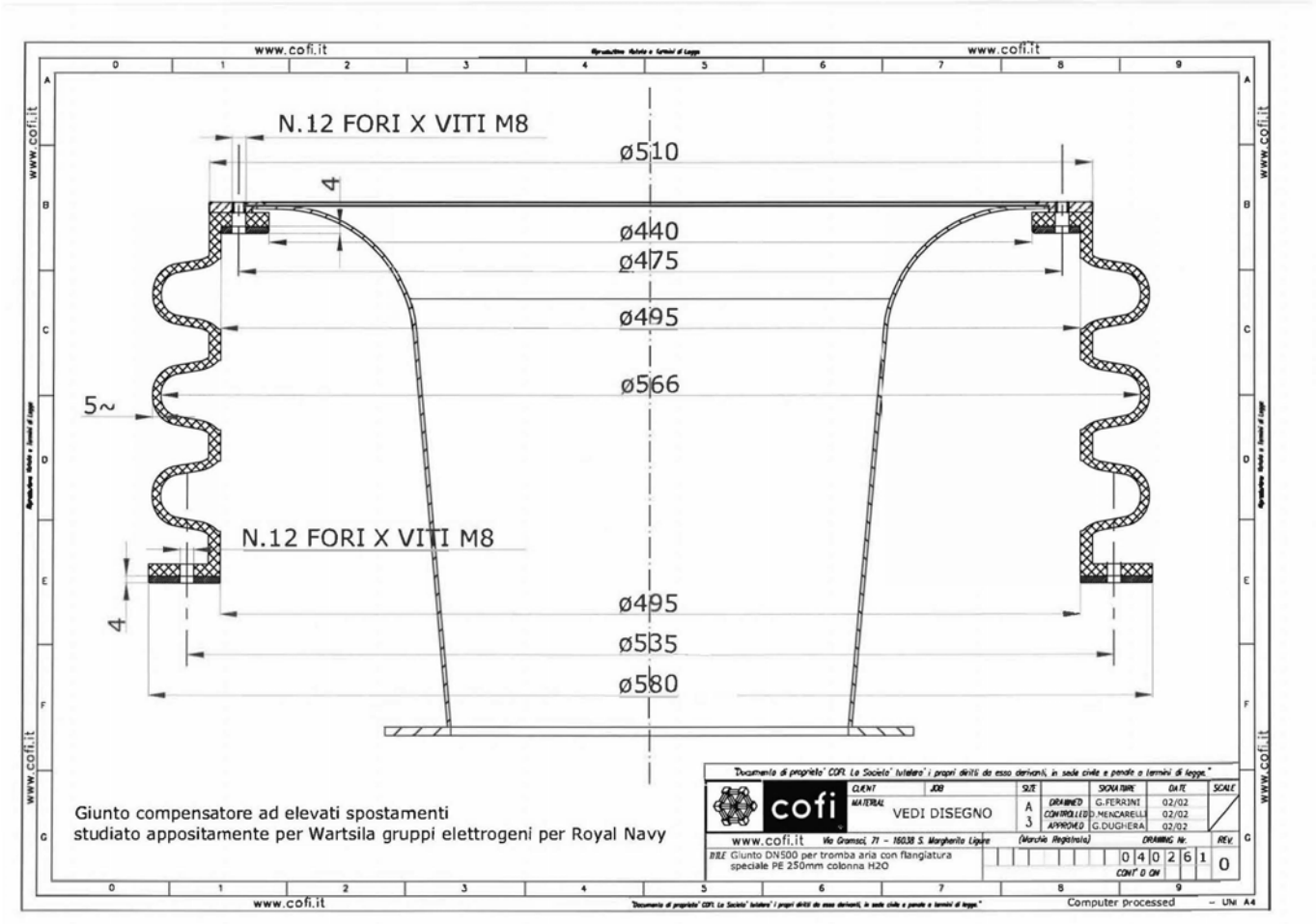




Catalog for naval industry

Surface ships > Joints for combustion air passage

Drawing 040261- Compensator joint DN500



Catalog for naval industry

Highly flexible rubber compensator joints

Introduction

Compensating joint in reinforced synthetic rubber, with unique compensation and lightness characteristics: over 110 mm of misalignment at high speed obtained by accelerating the connection flanges in shear up to 150-200G, in accordance with the MIL-S901D standard.

Its elasticity and resistance allows it to withstand large deformations without suffering damage and to continue to perform its function in the most severe misalignment conditions.

The rubber flanges integral with the body provide high mechanical resistance, together with absolute hydraulic sealing (flange slippage phenomena are not possible), even in extreme compensation conditions.

This joint resists fire at a temperature of 800°C for 30 minutes if equipped with our fire protection cap.

The joints can be supplied in a non-magnetic version and with the relevant FEM card (finite element method).

Gallery



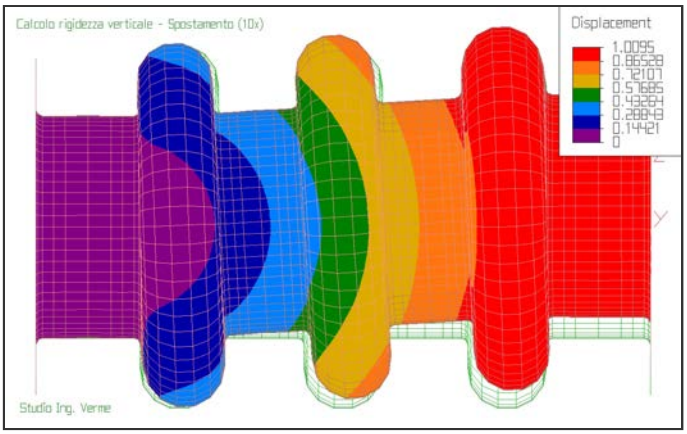


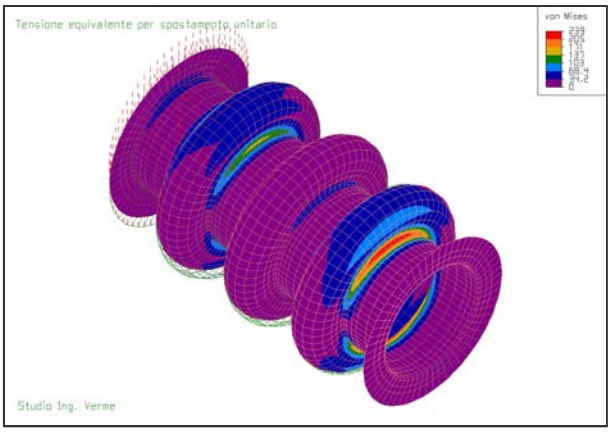
Catalog for naval industry

Surface ships > Highly flexible rubber compensator joints



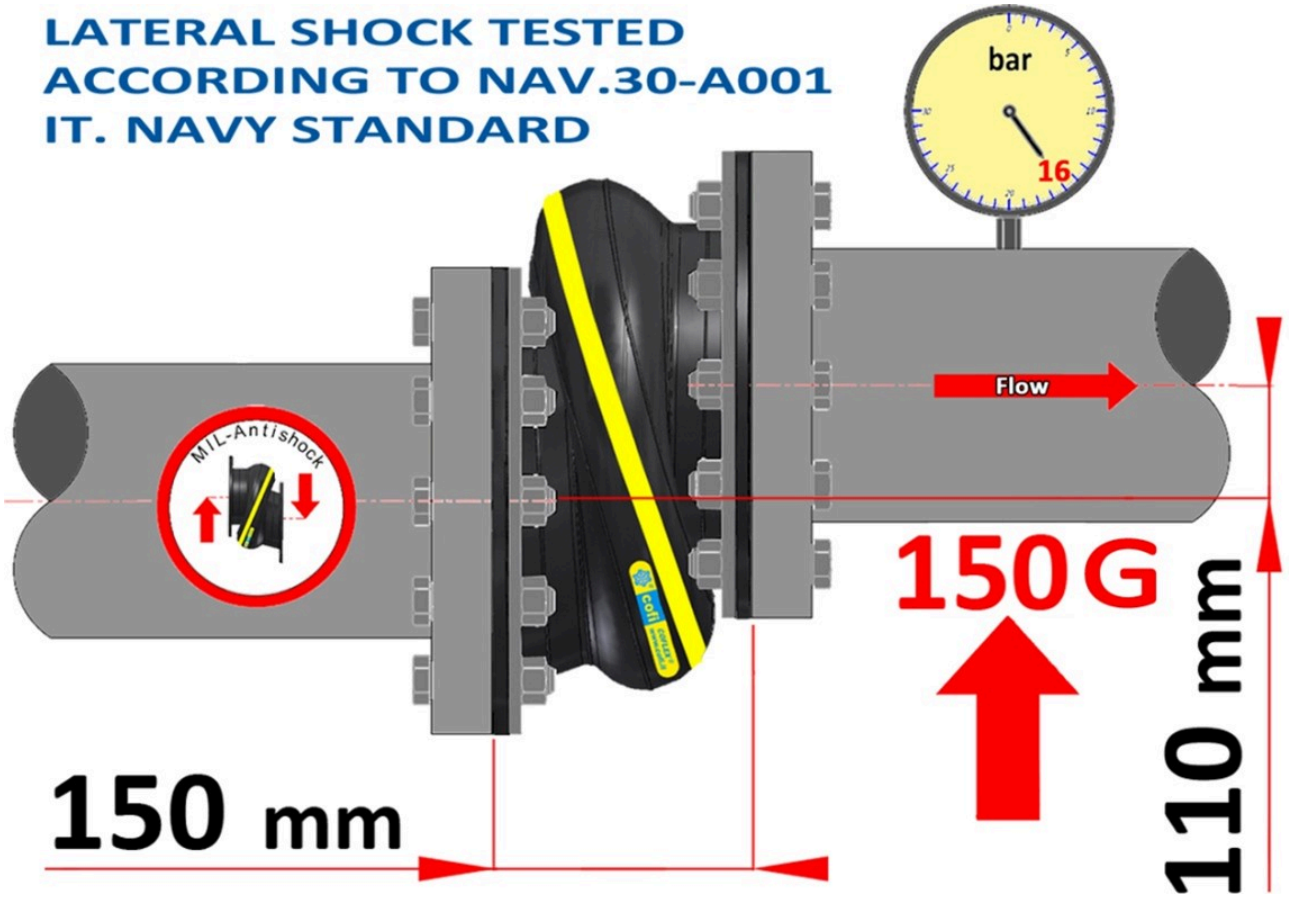






Catalog for naval industry

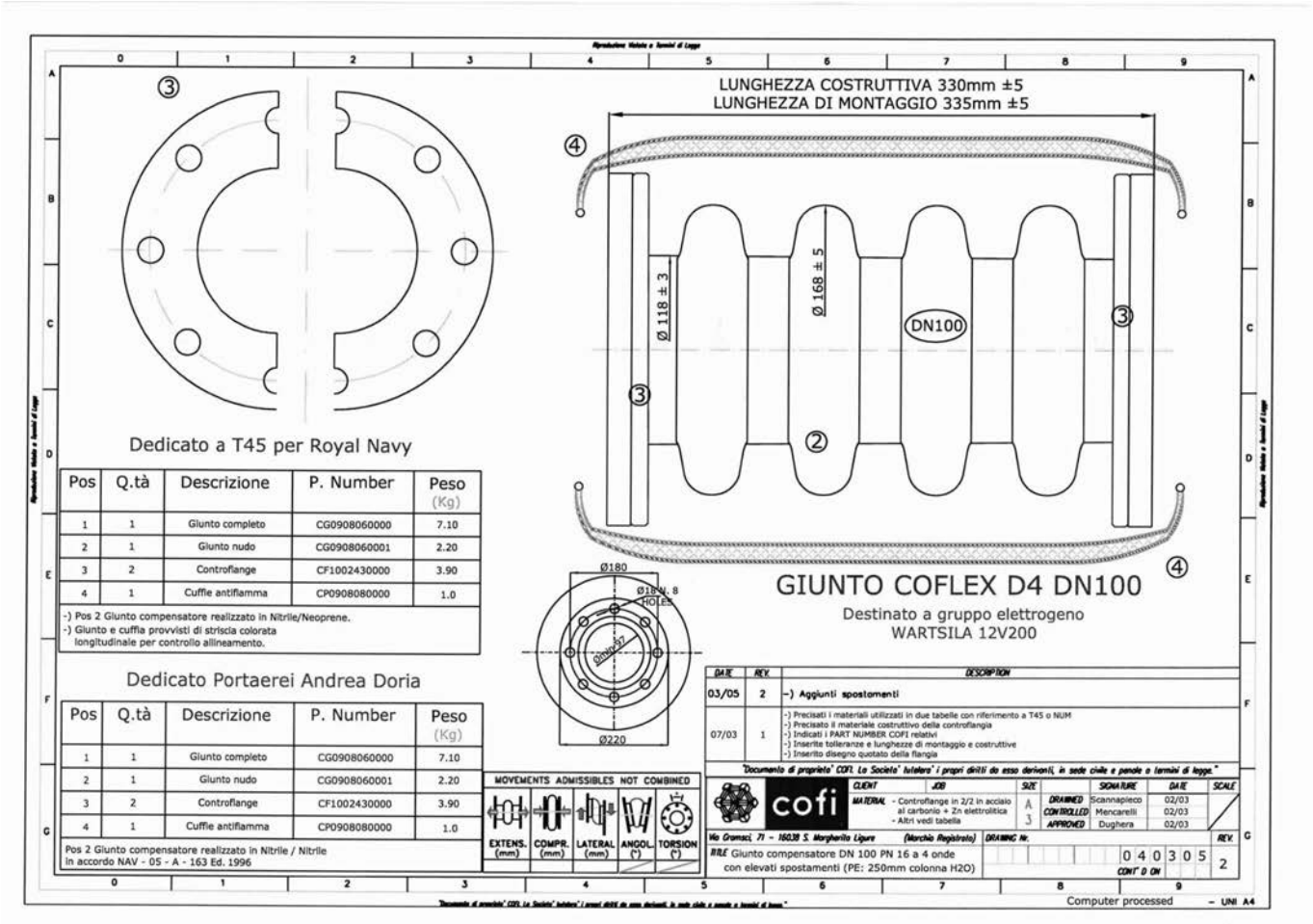
Surface ships > Highly flexible rubber compensator joints



Catalog for naval industry

Surface ships > Highly flexible rubber compensator joints

Disegno 040305 Rev.2 - Giunto compensatore a 4 onde con elevati spostamenti



Pos	Q.tà	Descrizione	P. Number	Peso (Kg)
1	1	Giunto completo	CG0908060000	7.10
2	1	Giunto nudo	CG0908060001	2.20
3	2	Controflange	CF1002430000	3.90
4	1	Cuffie antifiamma	CP0908080000	1.0

-) Pos 2 Giunto compensatore realizzato in Nitrile/Neoprene.
-) Giunto e cuffia provvisti di striscia colorata longitudinale per controllo allineamento.

Pos	Q.tà	Descrizione	P. Number	Peso (Kg)
1	1	Giunto completo	CG0908060000	7.10
2	1	Giunto nudo	CG0908060001	2.20
3	2	Controflange	CF1002430000	3.90
4	1	Cuffie antifiamma	CP0908080000	1.0

DATE	REV.	DESCRIPTION
03/05	2	-) Aggiunti spostamenti
07/03	1	-) Precisati i materiali utilizzati in due tabelle con riferimento a T45 o NUM -) Precisato il materiale costruttivo della controflangia -) Indicati i PART NUMBER COFI relativi -) Inserite tolleranze e lunghezze di montaggio e costruttive -) Inserito disegno quotato della flangia

"Documento di proprietà' COFI. La Società' tutelera' i propri diritti da esso derivanti, in sede civile e penale a termini di legge."

CLIENT	JOB	SIZE		SIGNATURE / DATE / SCALE
MATERIAL - Controflange in 2/2 in acciaio al carbonio + Zn elettrolitica - Altri vedi tabella		A3	DRAWNED	Scannapieco 02/03
			CONTROLLED	Mencarelli 02/03
			APPROVED	Dughera 02/03

Via Gramsci, 71 - 16038 S. Margherita Ligure (Marchio Registrato) DRAWING Nr. 040305 REV. 2

Catalog for naval industry

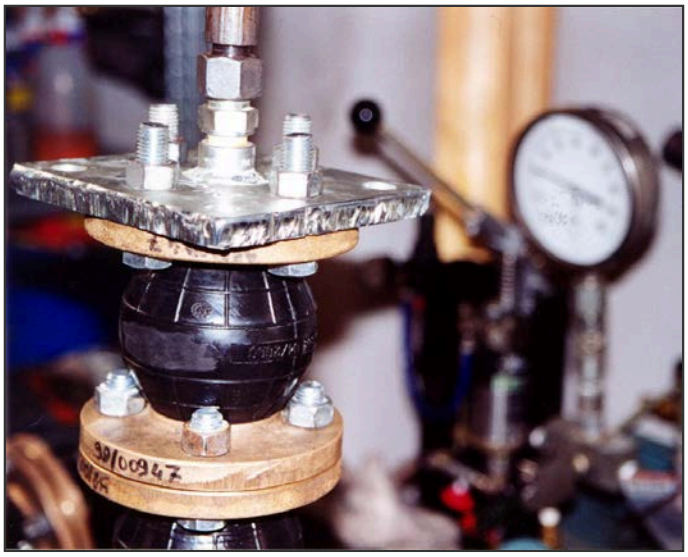
Self-stable COFLEX® K joints

Introduction

The term "self-stable" indicates the behavior of the compensator joint such that, subjected to internal pressure, its structure reacts to the hydrostatic thrust, reaching a defined and stable length without the use of extension stroke limiter systems, reducing the pushes on the pipes.

Our COFLEX® K couplings are RINA approved and can also be supplied in a non-magnetic version and with flame protection.

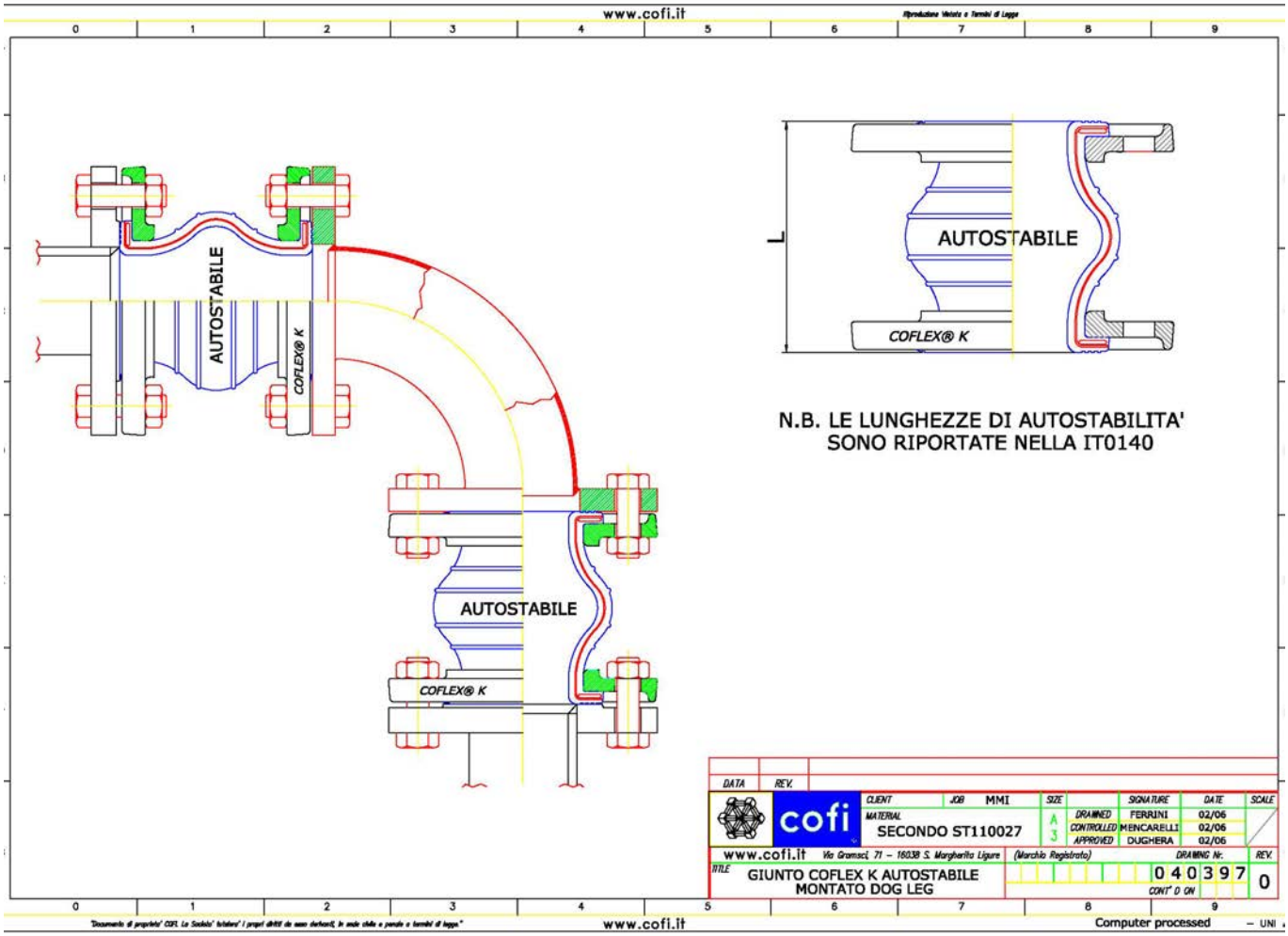
Gallery



Catalog for naval industry

Surface ships > Self-stable COFLEX® K joints

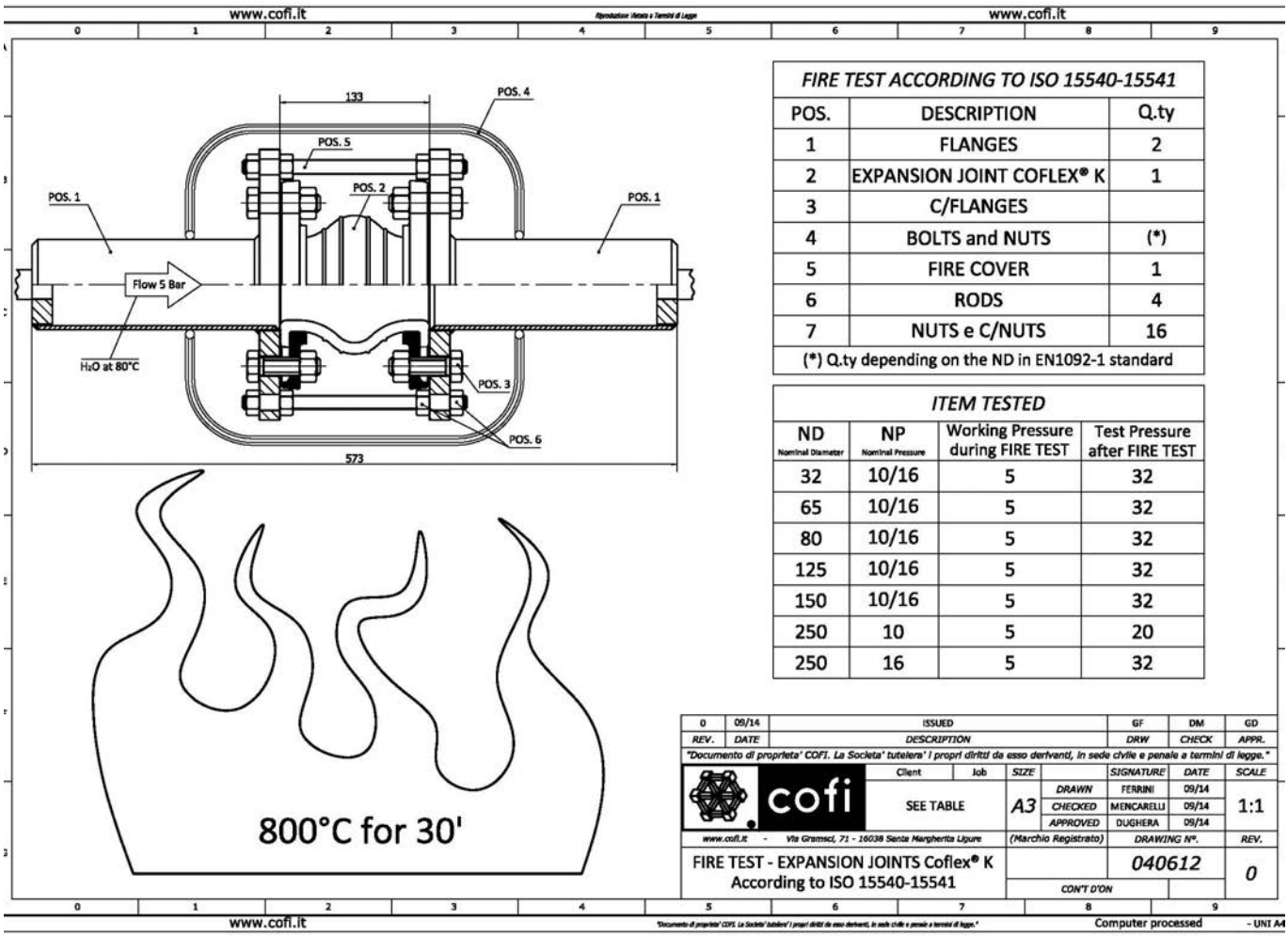
Drawing 040397 - COFLEX® K joint mounted Dog-Leg



Catalog for naval industry

Surface ships > Self-stable COFLEX® K joints

Drawing 040612 - COFLEX® K joint RINA fire tests



FIRE TEST ACCORDING TO ISO 15540-15541		
POS.	DESCRIPTION	Q.ty
1	FLANGES	2
2	EXPANSION JOINT COFLEX® K	1
3	C/FLANGES	
4	BOLTS and NUTS	(*)
5	FIRE COVER	1
6	RODS	4
7	NUTS e C/NUTS	16
(*) Q.ty depending on the ND in EN1092-1 standard		

ITEM TESTED			
ND Nominal Diameter	NP Nominal Pressure	Working Pressure during FIRE TEST	Test Pressure after FIRE TEST
32	10/16	5	32
65	10/16	5	32
80	10/16	5	32
125	10/16	5	32
150	10/16	5	32
250	10	5	20
250	16	5	32

REV.	DATE	DESCRIPTION	DRW	CHECK	APPR.
0	09/14	ISSUED	GF	DM	GD

"Documento di proprieta' COFI. La Societa' tutelera' i propri diritti da esso derivanti, in sede civile e penale a termini di legge."

Client	Job	SIZE		SIGNATURE	DATE	SCALE
SEE TABLE		A3	DRAWN	FERRINI	09/14	1:1
			CHECKED	MENCARELLI	09/14	
			APPROVED	DUGHERA	09/14	

www.cofi.it - Via Gramsci, 71 - 16038 Santa Margherita Ligure (Marchio Registrato)

FIRE TEST - EXPANSION JOINTS Coflex® K
According to ISO 15540-15541

DRAWING N°. 040612 REV. 0

CON'T D'ON

Computer processed - UNI A4

Catalog for naval industry

Textile compensator joints

Introduction

COFLEX® T textile expansion compensators are components used in most industrial systems, finding their ideal application in ducts and ducts subject to thermal expansion, vibrations, torsions and misalignments. The COFLEX® T compensator joints, thanks to their multilayer textile structure, allow high flexibility with absorption in various directions and combinations.

COFLEX® T joints are designed according to individual needs and are used for fluids that can reach up to 1300 °C.

In order to carry out a correct design, the Cofi technical office needs the following basic data:

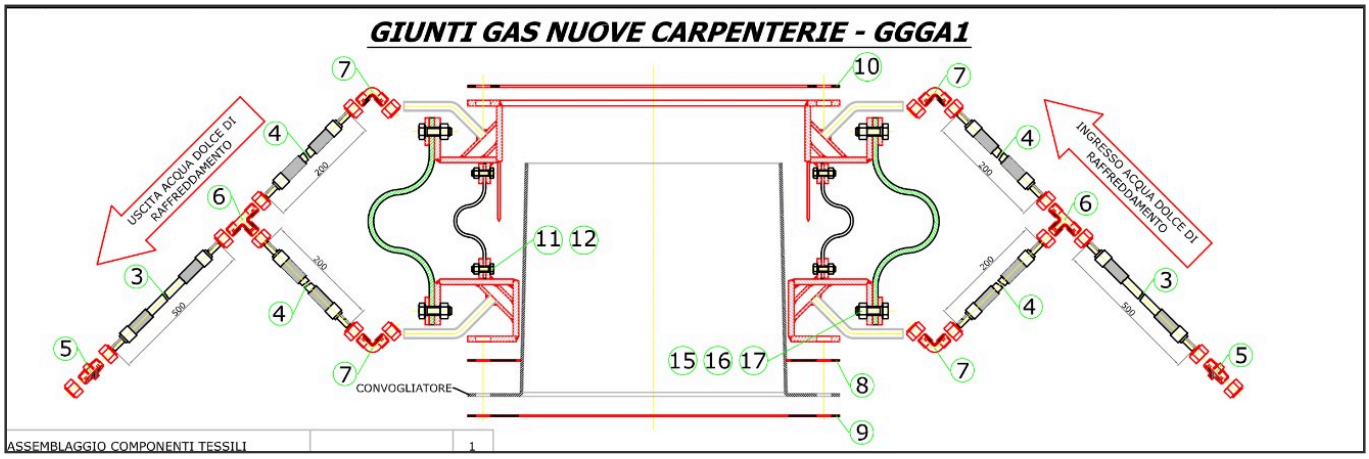
- design and operating temperatures of the system;
- design and operating pressures of the system;
- composition of the gas;
- movements of the ducts (axial, lateral, angular, torsional);
- speed of the gas;
- contents of dust, ash, etc.;
- special installation needs.

Gallery



Catalog for naval industry

Surface ships > Textile compensator joints





COFLEX® T compensator joint Model GGGA1 for anti-shock exhaust gases on military naval engines, fluid temperature 450/500°C, external temperature 60°C.

Catalog for naval industry

Compensating joints for ventilation systems

Introduction

Our EPDM rubber compensator joints, with textile reinforcement and AISI 304 carpentry find ideal application in ventilation system ducts.

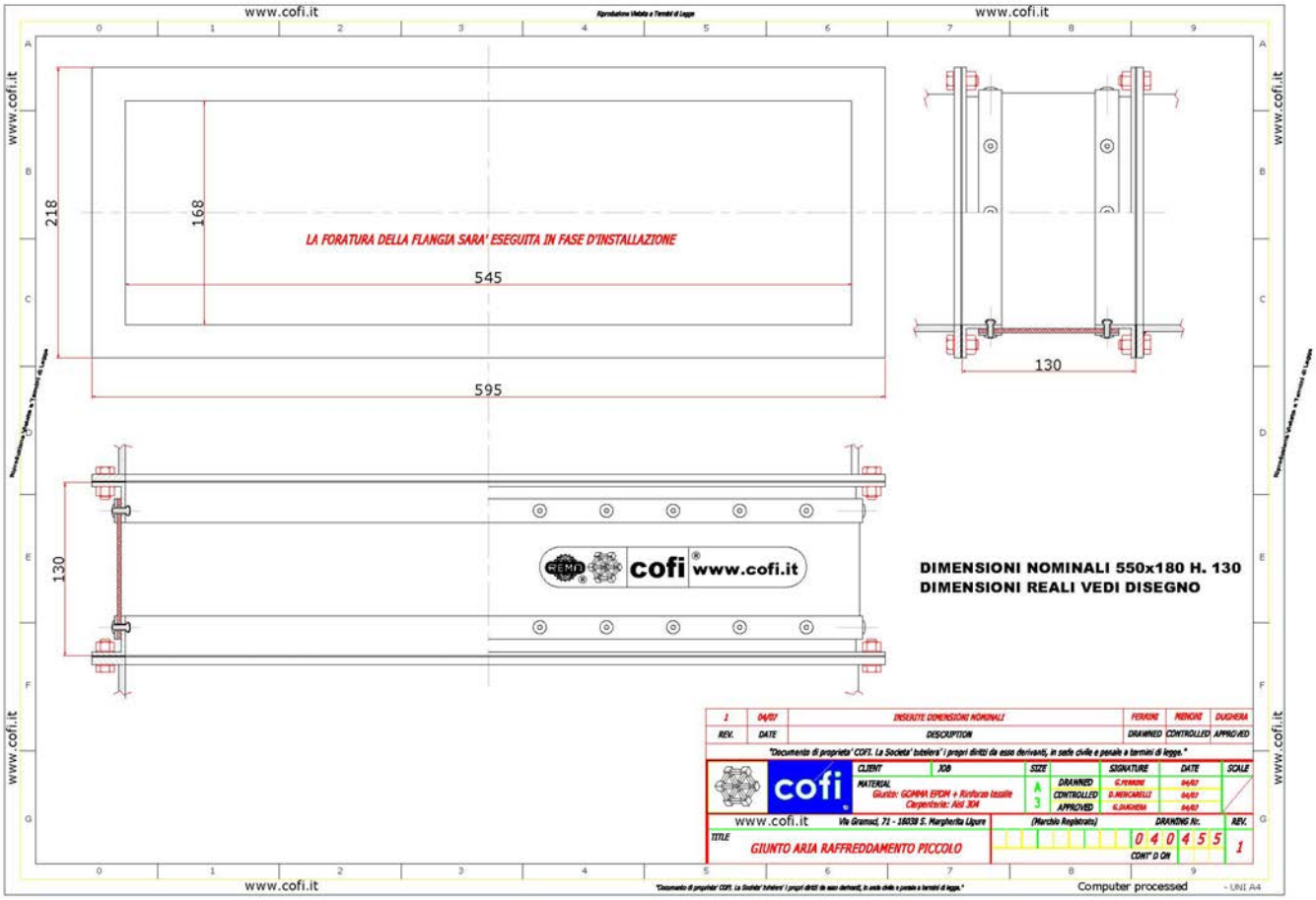
Gallery



Catalog for naval industry

Surface ships > Compensating joints for ventilation systems

Drawing 040455 Rev.1 - Joint for cooling air



Catalog for naval industry

Metallic compensator joint for exhaust gases

Introduction

This type of compensator joint has been designed in various models for use on naval units for the passage of fumes and exhaust gases from diesel propulsion engines mounted on elastic anti-shock supports, in order to reduce the noise transmitted to the ship structure.

For this purpose, the joint is able to withstand the continuous vibrations of the engine, the strong stresses of starting and stopping the same and the movements induced by the ship with its motion, in addition to any shock due to events linked to the type of vessel, providing great reliability and durability.

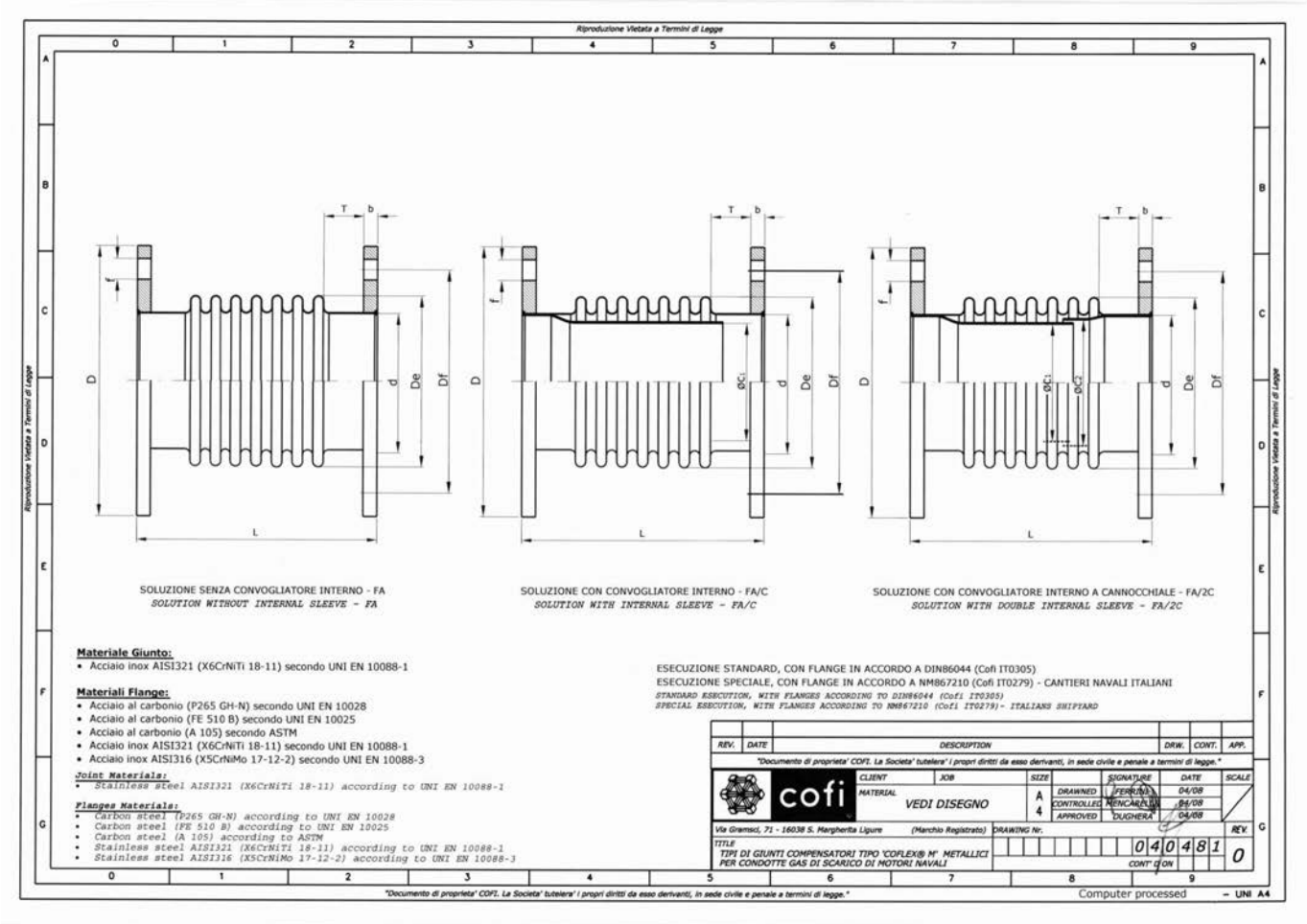
Gallery



Catalog for naval industry

Surface ships > Metallic compensator joint for exhaust gases

Drawing 040481 - Metallic joints for exhaust gas pipes



Catalog for naval industry

Rectangular and round metal joint

Introduction

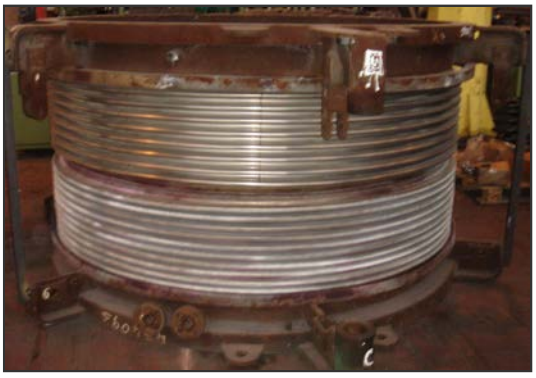
Metallic joints are used when the temperature, pressure and type of gas require absolute sealing safety.

Gallery





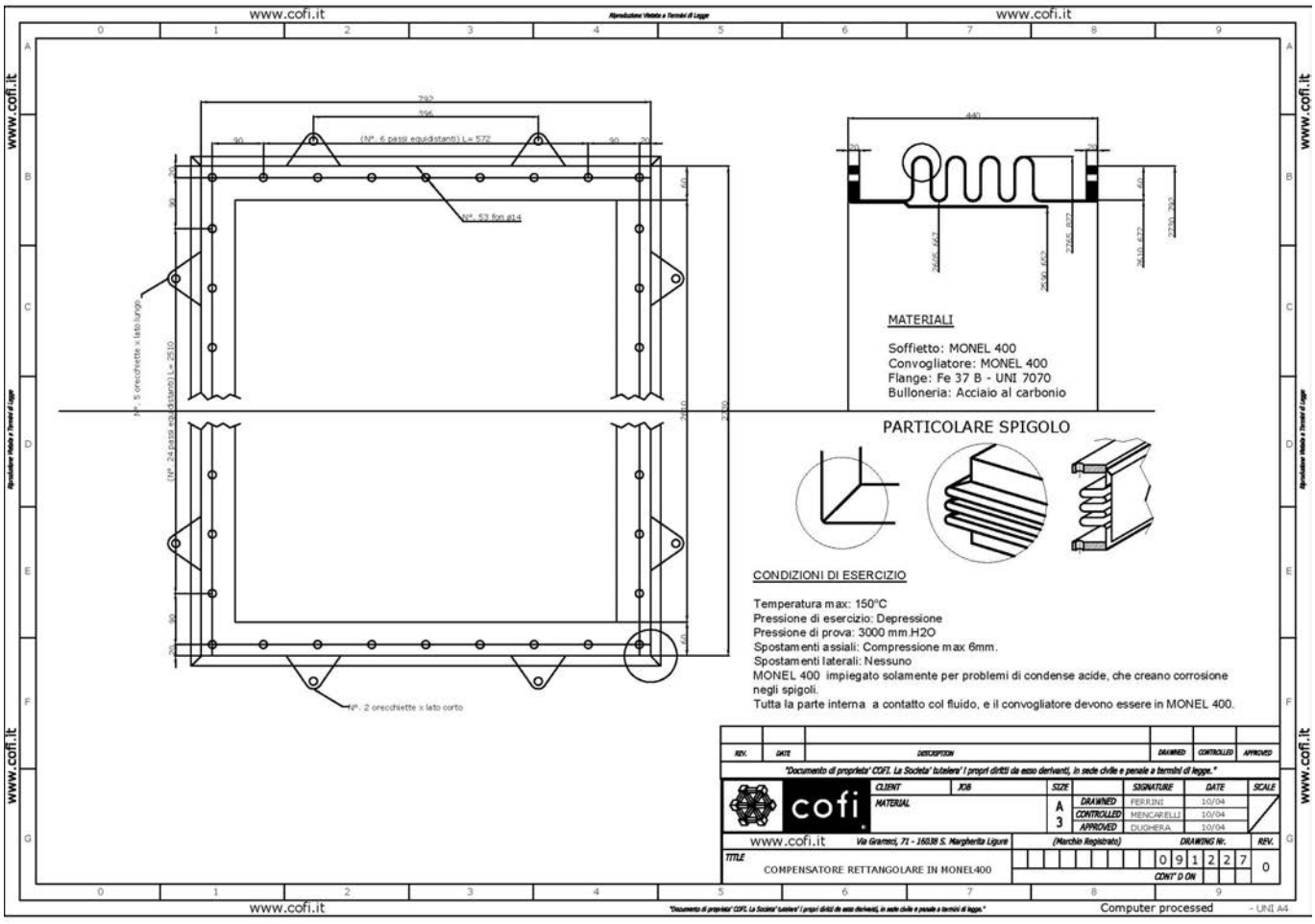




Catalog for naval industry

Surface ships > Rectangular and round metal joint

Drawing 091227 - Rectangular compensator joint



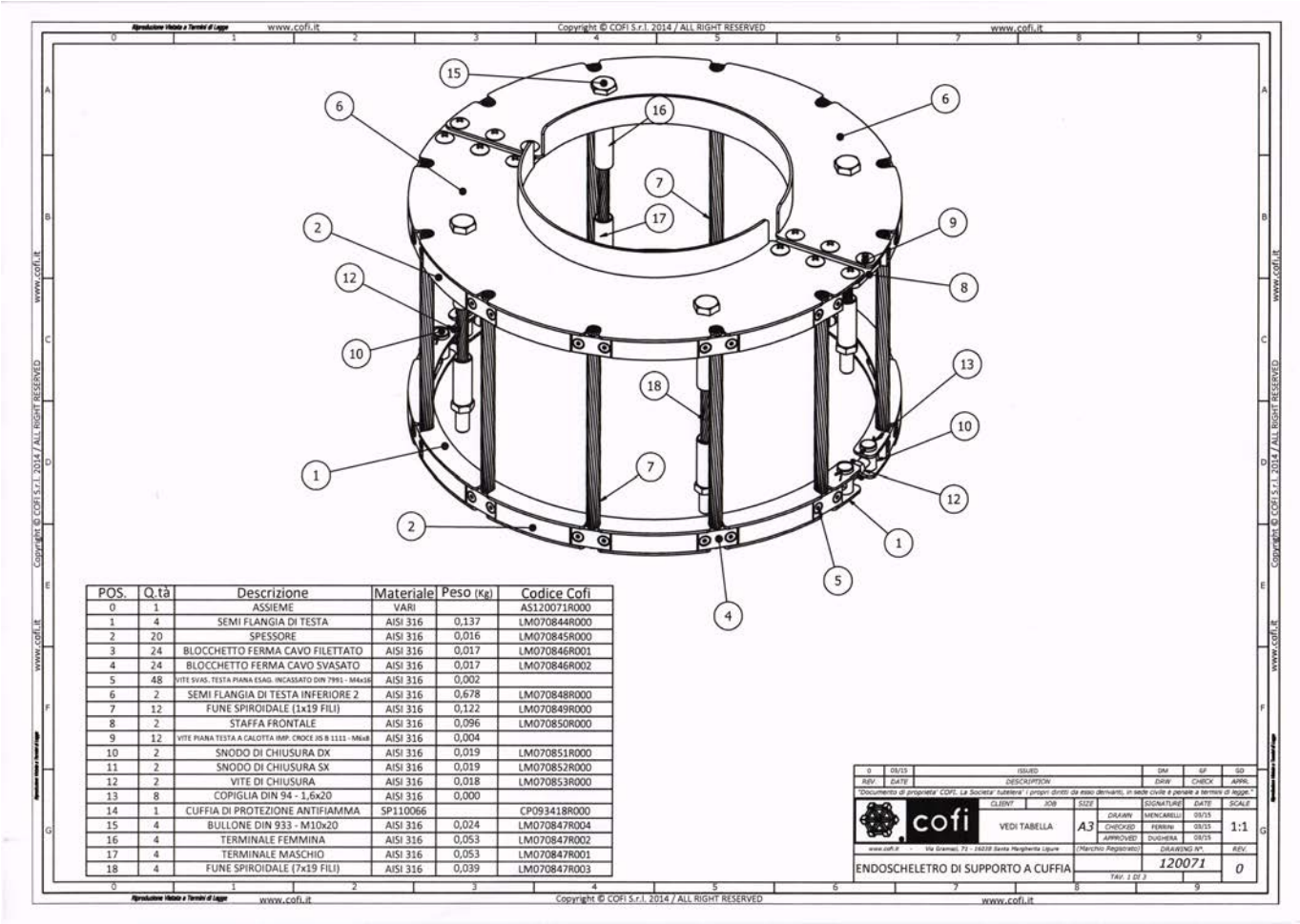
Catalog for naval industry

Non-magnetic endoskeleton

Introduction

The non-magnetic endoskeleton is a structure that supports our flame-retardant cap from the inside. This structure will be supplied assembled in all its components, in order to maintain a certain rigidity, ease of handling and installation on board.

Drawing 120071 - Non-magnetic endoskeleton for flameproof cap support



POS.	Q.tà	Descrizione	Materiale	Peso (Kg)	Codice Cofi
0	1	ASSIEME	VARI		AS120071R000
1	4	SEMI FLANGIA DI TESTA	AISI 316	0,137	LM070844R000
2	20	SPESSORE	AISI 316	0,016	LM070845R000
3	24	BLOCCHETTO FERMA CAVO FILETTATO	AISI 316	0,017	LM070846R001
4	24	BLOCCHETTO FERMA CAVO SVASATO	AISI 316	0,017	LM070846R002
5	48	VITE SVAS. TESTA PIANA ESAG. INCASSATO DIN 7991 - M4x16	AISI 316	0,002	
6	2	SEMI FLANGIA DI TESTA INFERIORE 2	AISI 316	0,678	LM070848R000
7	12	FUNE SPIROIDALE (1x19 FILI)	AISI 316	0,122	LM070849R000
8	2	STAFFA FRONTALE	AISI 316	0,096	LM070850R000
9	12	VITE PIANA TESTA A CALOTTA IMP. CROCE JIS B 1111 - M6x8	AISI 316	0,004	
10	2	SNODO DI CHIUSURA DX	AISI 316	0,019	LM070851R000
11	2	SNODO DI CHIUSURA SX	AISI 316	0,019	LM070852R000
12	2	VITE DI CHIUSURA	AISI 316	0,018	LM070853R000
13	8	COPIGLIA DIN 94 - 1,6x20	AISI 316	0,000	
14	1	CUFFIA DI PROTEZIONE ANTIFIAMMA	SP110066		CP093418R000
15	4	BULLONE DIN 933 - M10x20	AISI 316	0,024	LM070847R004
16	4	TERMINALE FEMMINA	AISI 316	0,053	LM070847R002
17	4	TERMINALE MASCHIO	AISI 316	0,053	LM070847R001
18	4	FUNE SPIROIDALE (7x19 FILI)	AISI 316	0,039	LM070847R003

cofi — VEDI TABELLA — A3 — 1:1
ENDOSCHELETRO DI SUPPORTO A CUFFIA
120071 — 0

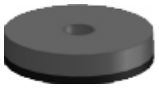
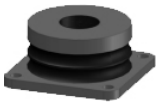
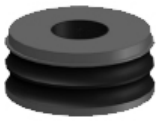
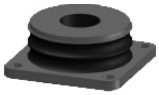
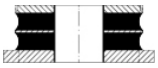
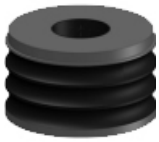
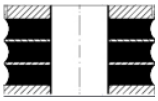
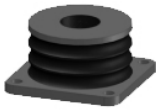
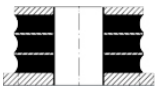
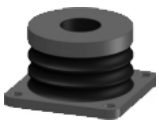
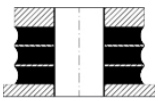
Catalog for naval industry

Anti-vibration supports

Introduction

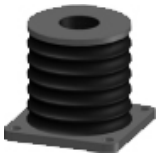
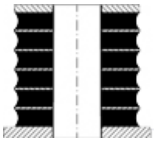
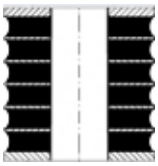
COFI vibration dampers are not simple elements that satisfy assembly and use, but components optimized to offer high absorption of vibrations and sound waves.

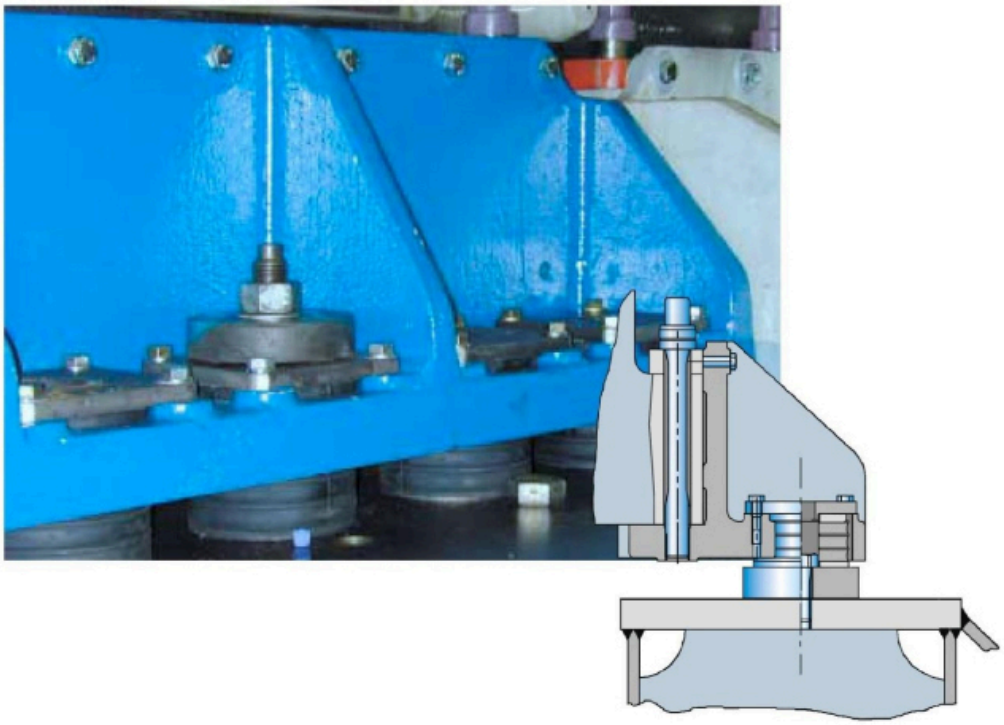
Our products dedicated to Wartsila T46 engines

		Description
		1 rubber element
		2 rubber elements 2x4200
		2 rubber elements
		2 rubber elements 2x4000
		3 rubber elements
		3 rubber elements
		3 rubber elements 3x4200

Catalog for naval industry

Surface ships > Anti-vibration supports

		Description
		6 rubber elements
		6 rubber elements 6x4000



Catalog for naval industry

Surface ships > Anti-vibration supports

Gallery

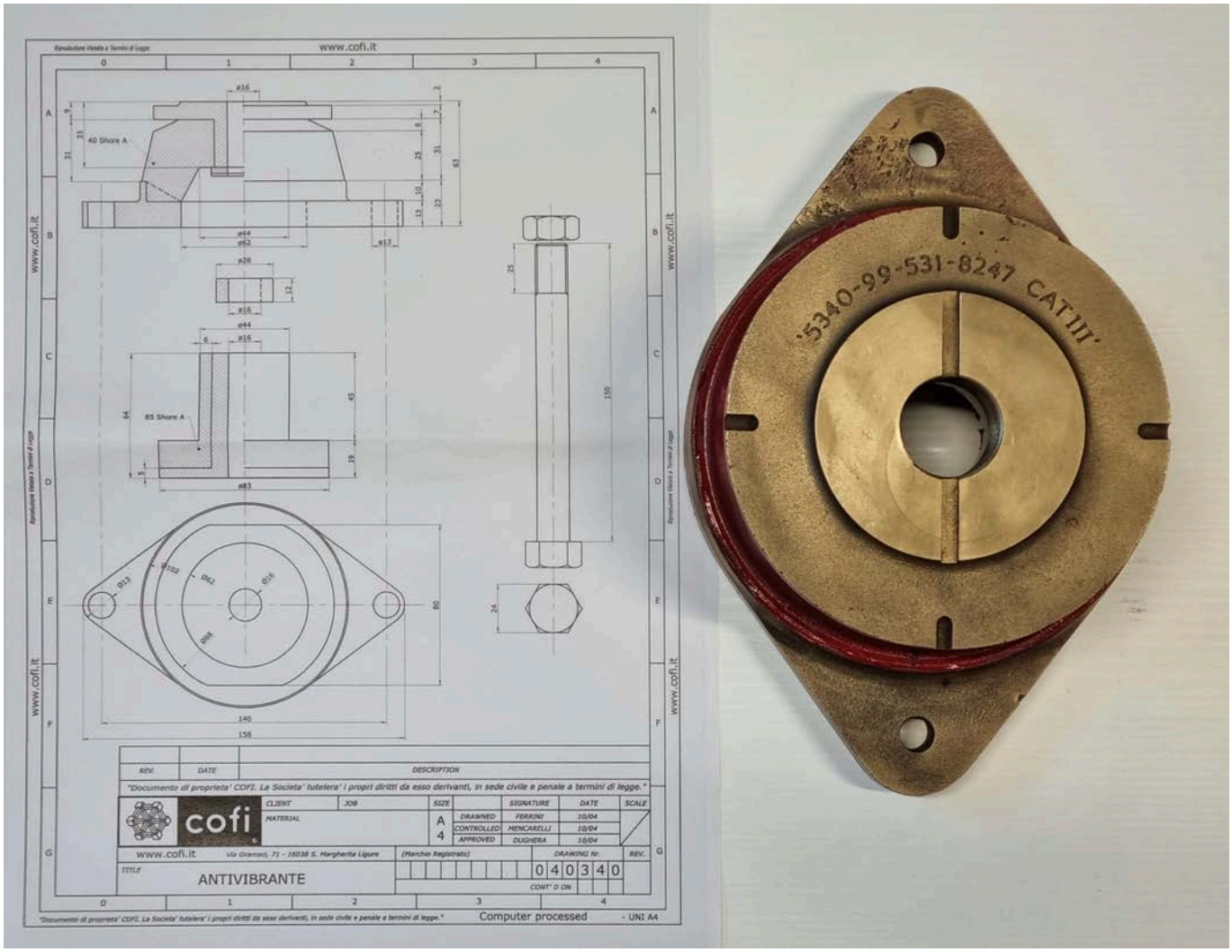




Catalog for naval industry

Surface ships > Anti-vibration supports

Drawing 040340 - Anti-vibration



Catalog for naval industry

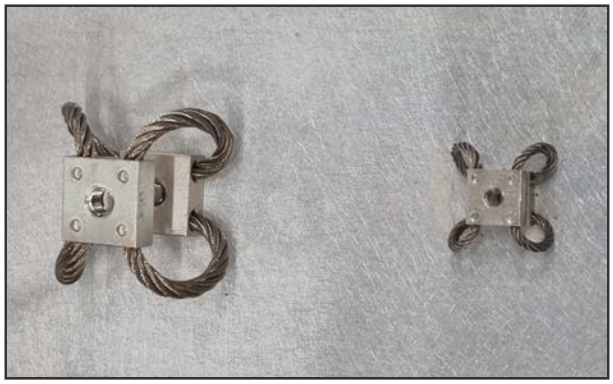
Metallic anti-shock vibration dampers

Introduction

Our range of metal shock mounts can be used: to isolate vibrations (both generated and received), as shock mounts thanks to their high deflection capacity and high damping.

Gallery





Catalog for naval industry

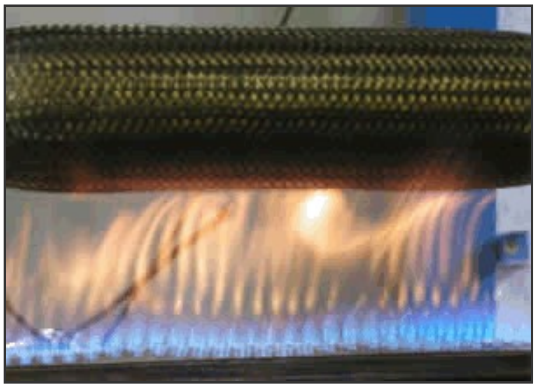
Fire resistant hoses

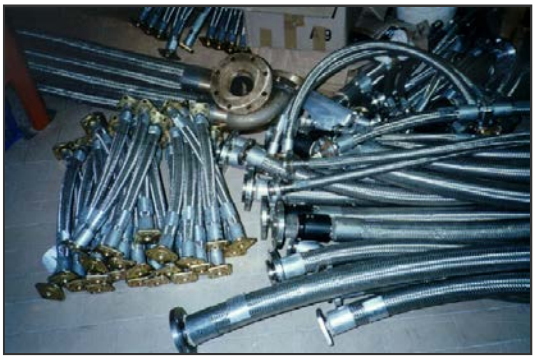
Introduction

Cofi has developed different types of insulation to be applied to flexible pipes. The most effective allow contact with the flame for 30 minutes without causing damage to the hose, RINA certified test.

MED CE

Gallery









Catalog for naval industry

Metallic hoses

Introduction

Our flexible metal hoses are designed and built to absorb the movements of the systems on which they are mounted and compensate for any static and dynamic misalignments.

Gallery

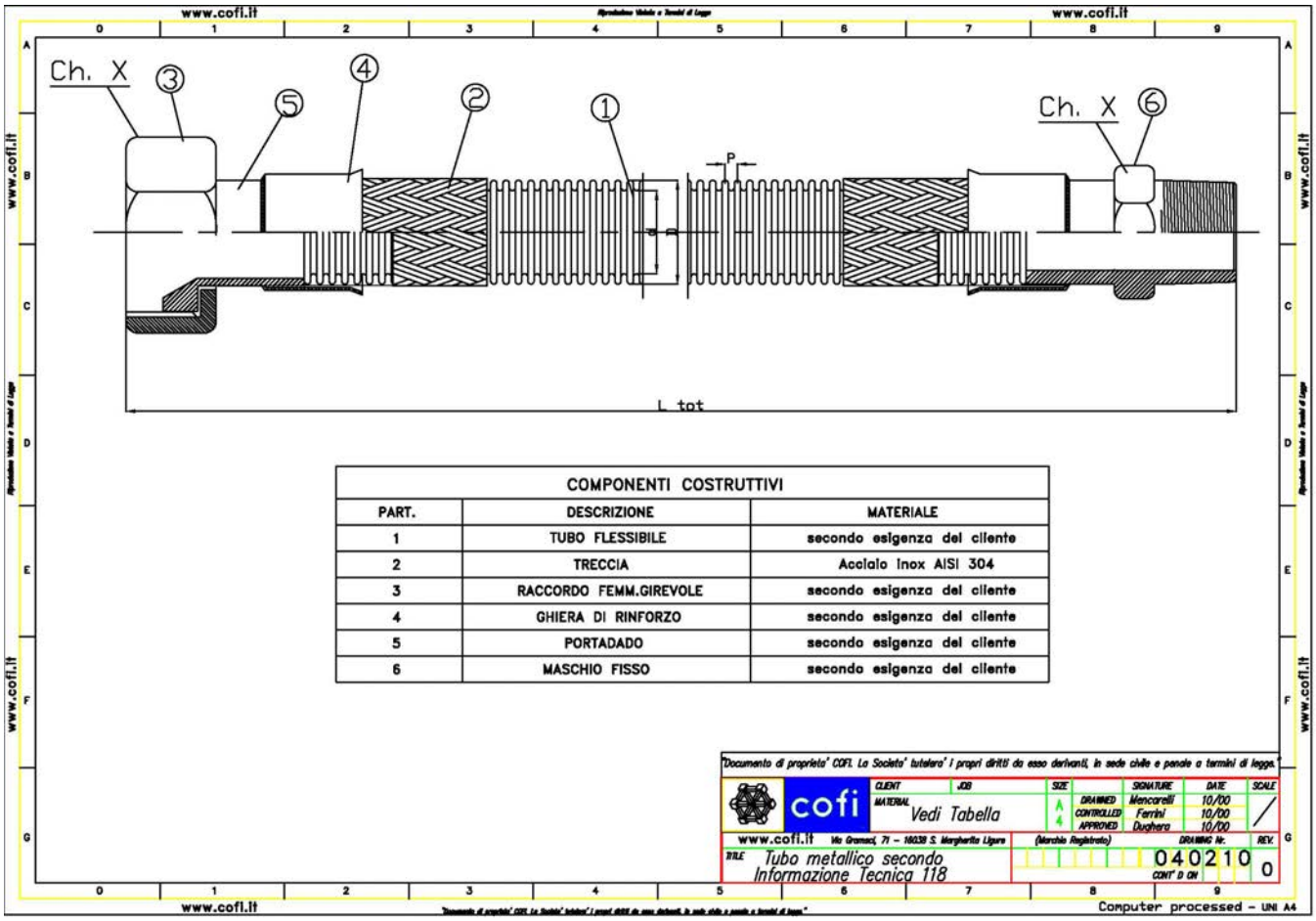




Catalog for naval industry

Surface ships > Metallic hoses

Drawing 040210 - Flexible metal hose



COMPONENTI COSTRUTTIVI		
PART.	DESCRIZIONE	MATERIALE
1	TUBO FLESSIBILE	secondo esigenza del cliente
2	TRECCIA	Acciaio Inox AISI 304
3	RACCORDO FEMM.GIREVOLE	secondo esigenza del cliente
4	GHIERA DI RINFORZO	secondo esigenza del cliente
5	PORTADADO	secondo esigenza del cliente
6	MASCHIO FISSO	secondo esigenza del cliente

"Documento di proprieta' COFI. La Societa' tutelera' i propri diritti da esso derivanti, in sede civile e penale a termini di legge."

cofi — www.cofi.it — Via Gramsci, 71 – 16038 S. Margherita Ligure

CLIENT	JOB	SIZE		SIGNATURE	DATE	SCALE
MATERIAL: Vedi Tabella		A4	DRAWED	Mencarelli	10/00	
			CONTROLLED	Ferrini	10/00	
			APPROVED	Dughera	10/00	

TITLE: Tubo metallico secondo Informazione Tecnica 118

(Marchio Registrato) — DRAWING Nr. 040210 — REV. 0

Computer processed – UNI A4

Catalog for naval industry

Flexible hoses with COFLEX® SILK anti-whipping system

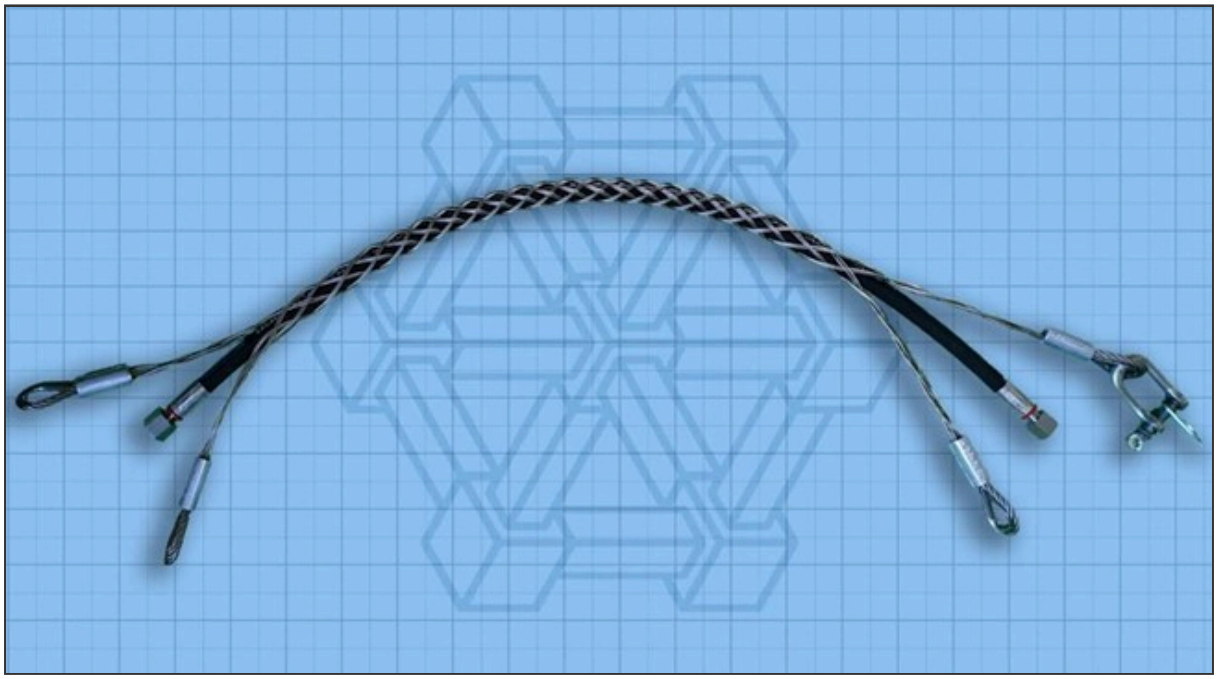
Introduction

The safety socks for COFLEX® SILK for high pressure pipes are designed to guarantee solid anchoring to fixed points upstream and downstream of the pipe, in the event of breakage or slippage of the fitting, and to avoid damage to nearby operators or machinery caused by the 'whip effect.

Each COFLEX® SILK safety sock, as it is appropriately sized for the destination flexible hose, is identified by means of a plate showing Cofi Part Number and customer identification code.

Due to the quality of the materials and its sizing, the sock can be kept in operation, after checking its integrity, with only the scheduled replacement of the hose inside it.

Gallery



Catalog for naval industry

Dog-Leg type flexible hoses

Introduction

The Dog Leg is a special high-tech flexible hose, made with two straight sections of rubber hose connected with a 90° elbow and having flanged ends.

The particular robustness of the straight and curved fittings allows simple maintenance to be carried out during the life of the ship with only the replacement of the rubber part.

Complies with MIL, RINAMIL and MED standards.

Gallery





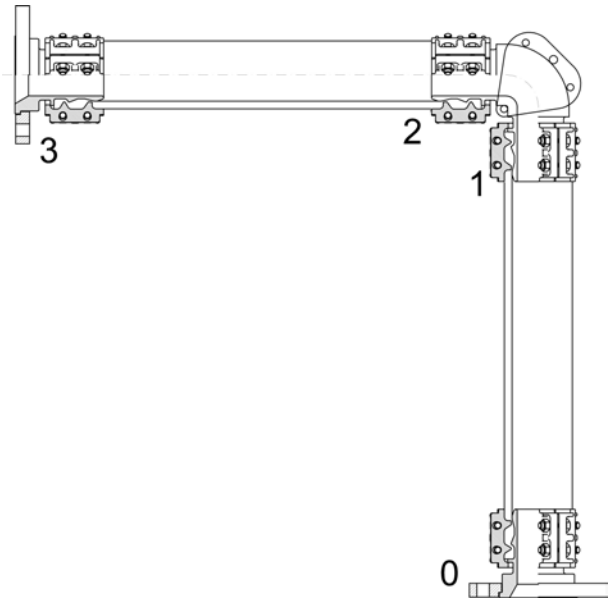


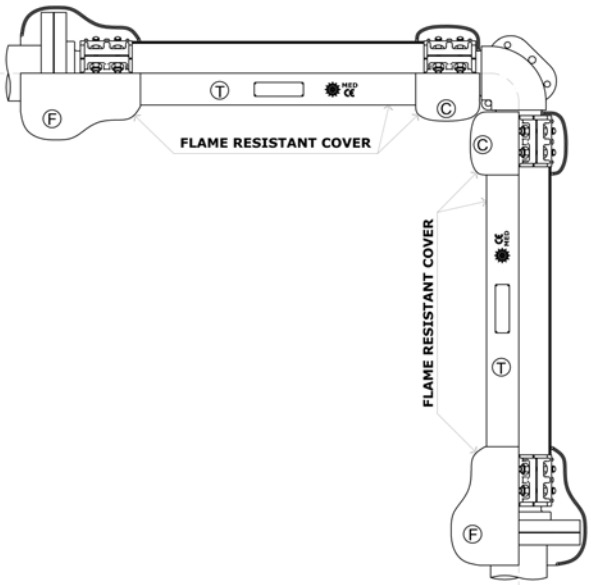
Catalog for naval industry

Surface ships > Dog-Leg type flexible hoses









Catalog for naval industry

Customized Dog-Leg system for Polar Ship

Introduction

Cofi designed and supplied a customized system composed of flexible hoses, fittings and adapters installed in "Dog-Leg", intended for the Nave Polar hydraulic propulsion system as can be seen in image B; image A, however, depicts the pre-existing system.

Gallery

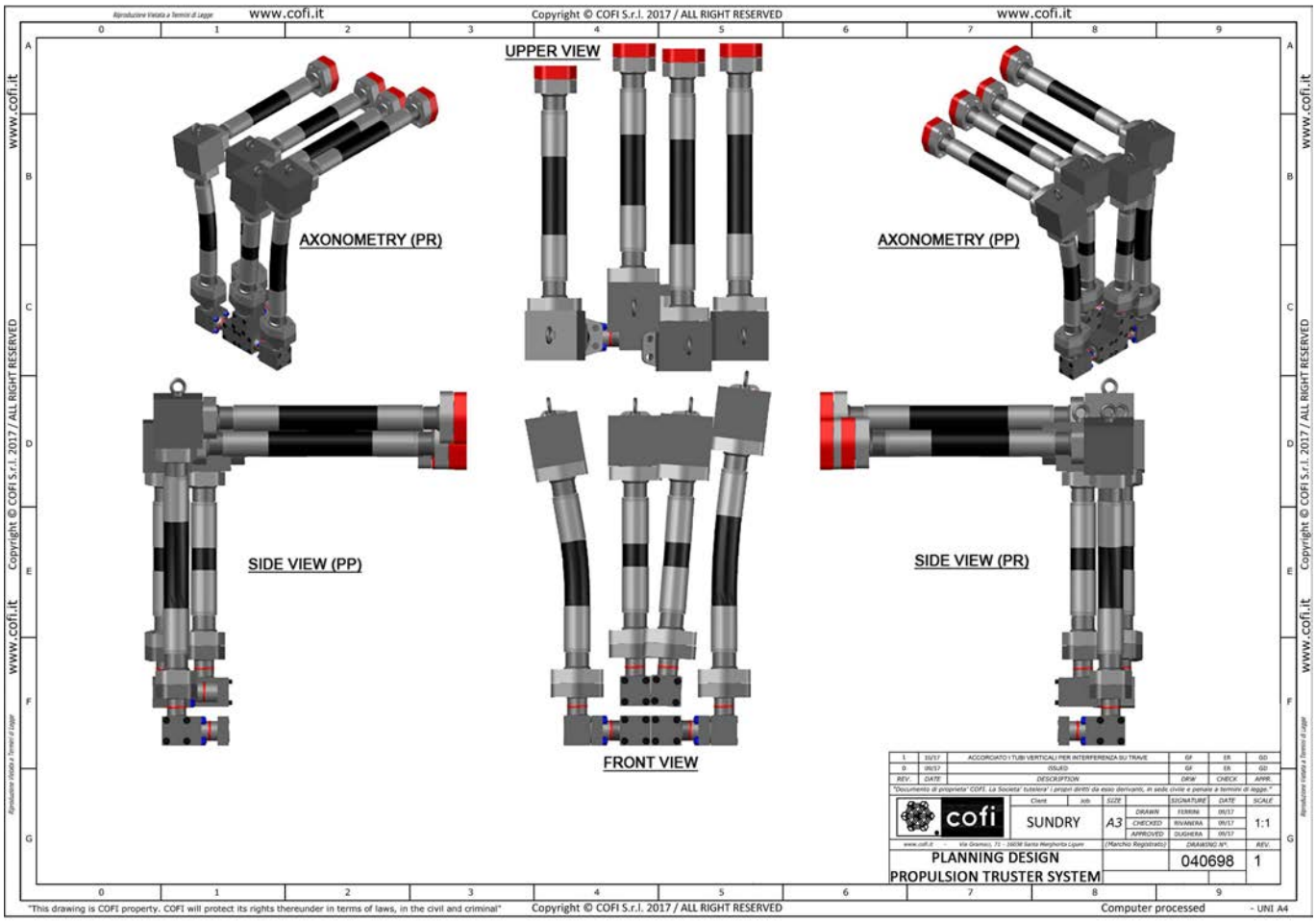




Catalog for naval industry

Surface ships > Customized Dog-Leg system for Polar Ship

Drawing 040698 Rev.1 - Planning design propulsion truster system



Catalog for naval industry

Kerosene refueling hoses

Introduction

Our COFLEX® Avio D and COFLEX® Avio F hoses are hoses specifically designed for the refueling of aircraft:

- COFLEX® Avio F: designed for the delivery of kerosene and hydrocarbons, suitable to be wound on the reels of tankers, built with a black NBR rubber underlayer and reinforced with high-resistance synthetic textiles, copper cables, and covered with black NBR rubber resistant to abrasion, atmospheric agents and contact with hydrocarbons;
- COFLEX® Avio D: designed for delivery and suction of kerosene and hydrocarbons, built with a black NBR rubber underlayer, high-resistance synthetic textile reinforcements, incorporated steel spiral, copper cables and covered with black NBR rubber resistant to abrasion, atmospheric agents and contact with hydrocarbons.

Gallery









Catalog for naval industry

Probe-flex

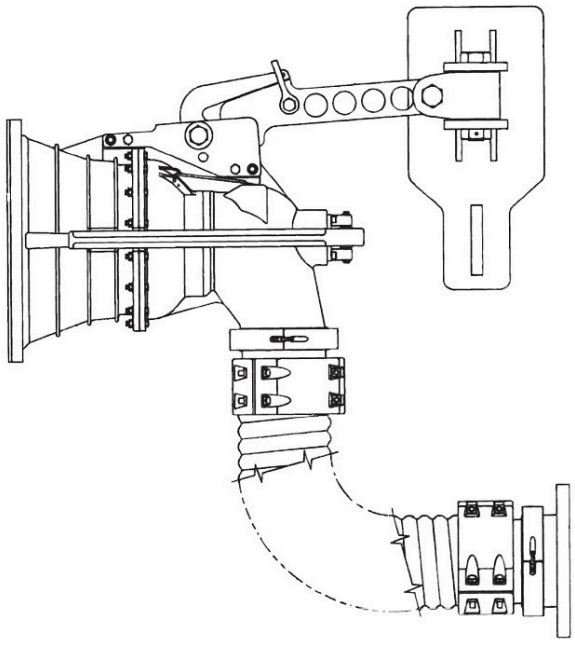
Introduction

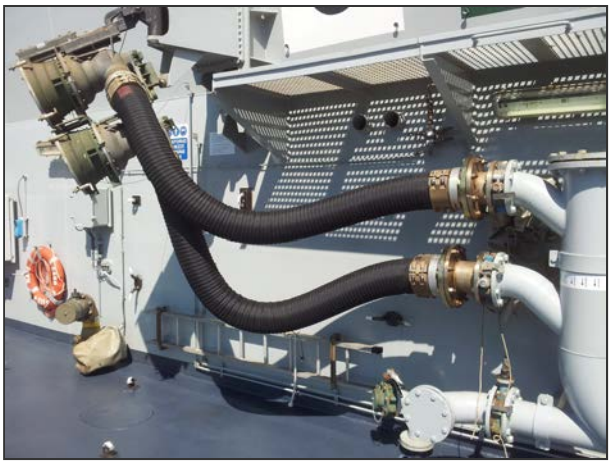
Proble-flex is a compensator tube equipped with a rubber holder in compliance with the MIL 8625 F standard and bronze jaws.

It is used for the loading and unloading of petroleum products on open decks, in positions where fire resistance characteristics are not required.

The Probe Receiver refueling station is installed on military ships, and is used to receive fuel supplies from another ship, also equipped with a refueling system of the same type (which can be single or double), all without never stop or slow down navigation.

Gallery





Catalog for naval industry

Installations

Introduction

Cofi, in addition to supply, is renowned for the vast range of special services such as:

- disassembly, replacement, assembly and refitting of its articles in various industrial fields;
- installation of particular seals such as for aircraft elevators of aircraft carrier units;
- installation of special seals and bellows in standard or particular applications;
- installation of complex flexible systems for particular needs.

Gallery







Foam seals for tailgates

Introduction

Cofi is able to design and create various types of profiles to meet the needs of naval units:

- traditional reinforced profile made with three sides of the profile in compact rubber of adequate thickness and internal foam capable of guaranteeing excellent sealing performance and durability;
- profile in ultra-soft compact rubber which, thanks to the particular formulation, has excellent elasticity and low values of creep, avoiding the problem of surface breakage of the rubber film of the traditional type with thin film;
- profiles in lightweight compact rubber with holes.

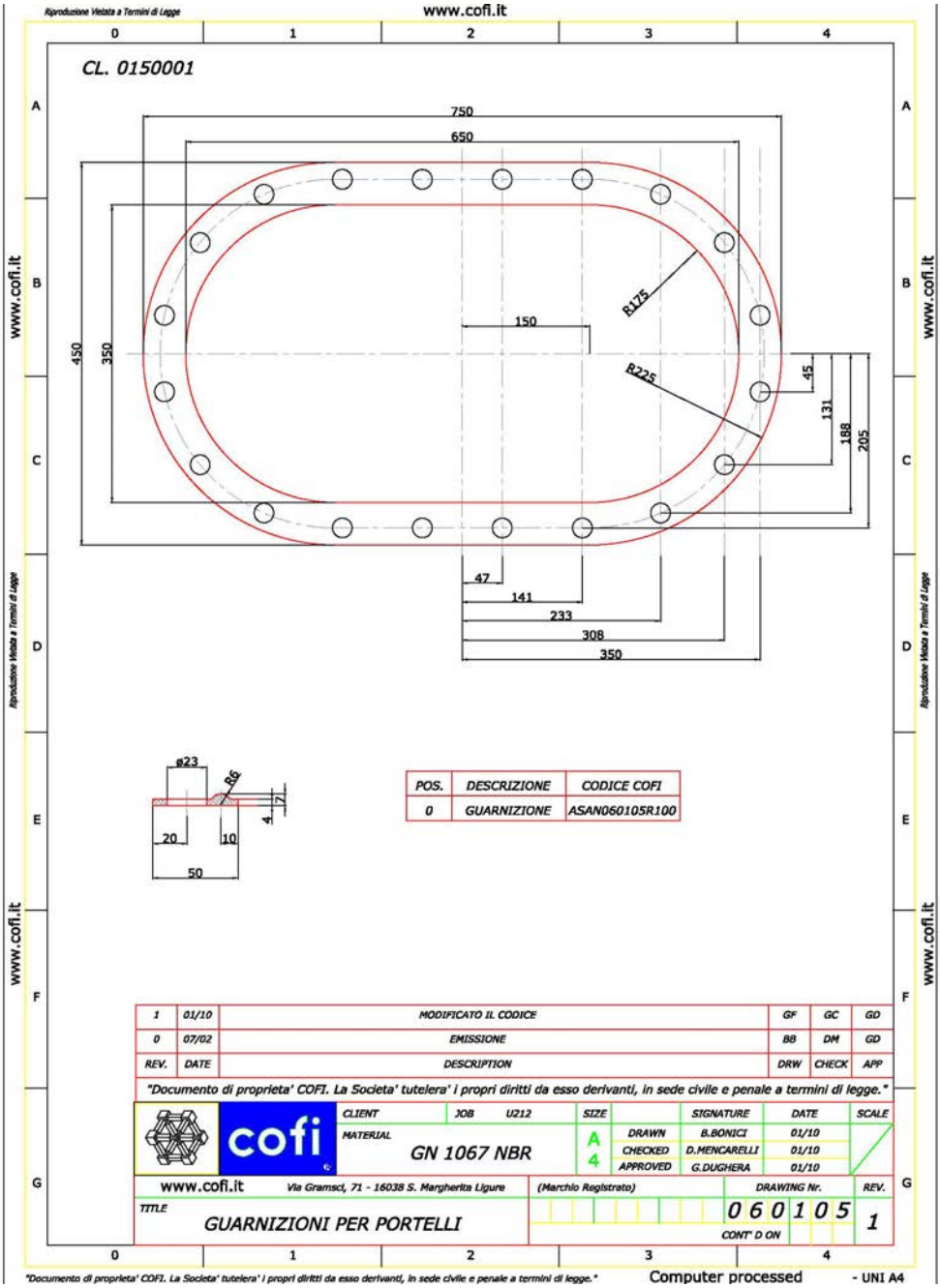
Gallery



Catalog for naval industry

Surface ships > Foam seals for tailgates

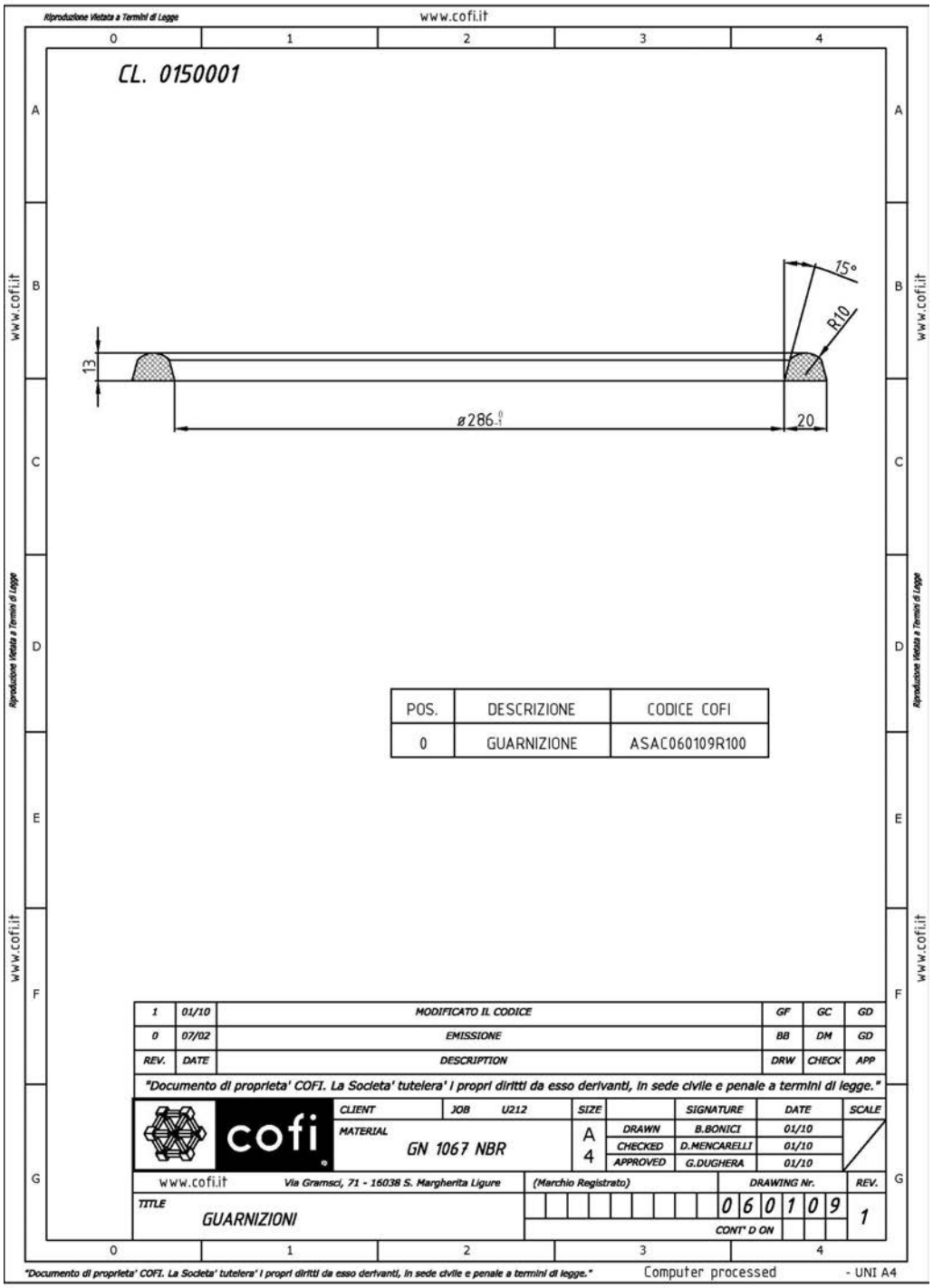
Drawing 060105 Rev.1 - Door seal



Catalog for naval industry

Surface ships > Foam seals for tailgates

Drawing 060109 Rev.1 - Gasket



Catalog for naval industry

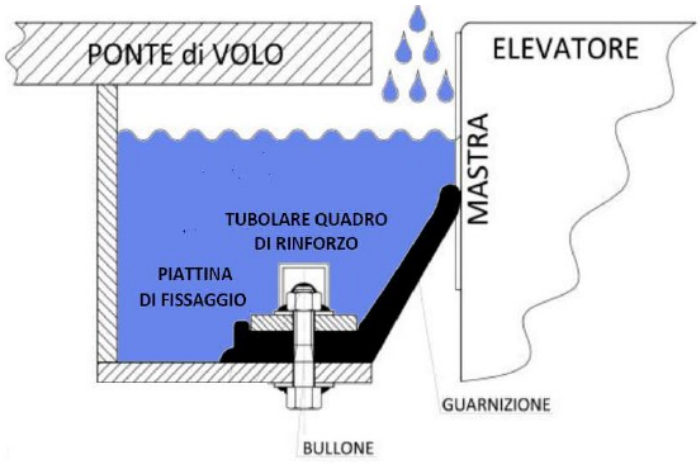
Dynamic seal for NBC seal between flight deck and hangar on Cavour aircraft carrier

Introduction

Cofi has studied, designed, created and installed a dynamic gasket for NBC sealing between the flight deck and hangar on the Cavour aircraft carrier, improving: the resistance, sealing and durability of the gasket without making it too heavy.

Gallery





Catalog for naval industry

Packed gaskets in COFITAN90 and canvas rubber

Introduction

To seal pistons and very slow rotation axles, canvas rubber gaskets were and are still used, today mostly replaced by gaskets made of COFITAN90 synthetic material which is more resistant to abrasion and consequently guarantees a longer life.

Gallery





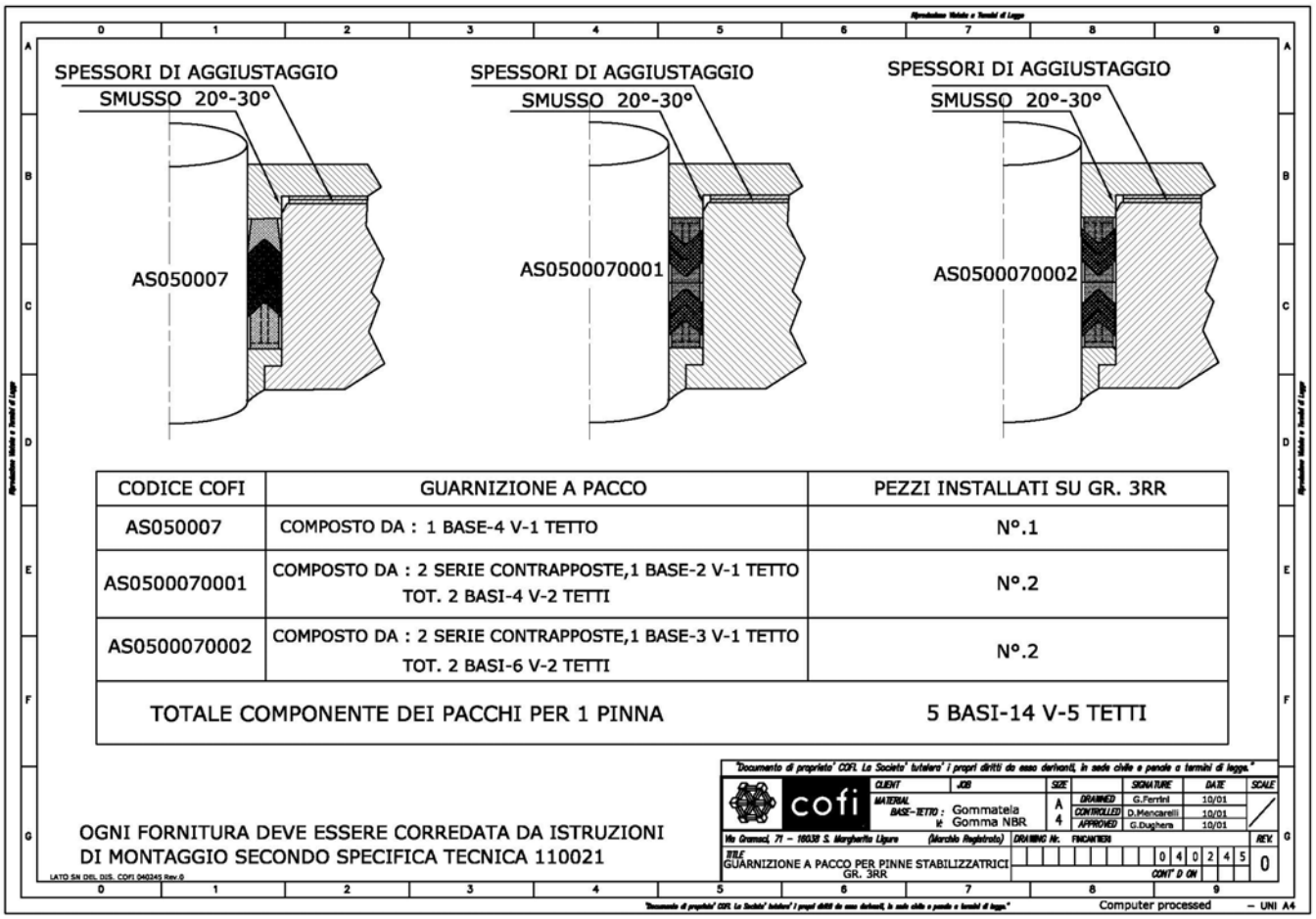
Guarnizione a pacco



Catalog for naval industry

Surface ships > Packed gaskets in COFITAN90 and canvas rubber

Drawing 040245 - Gasket pack for GR stabilizing fins. 3RR



CODICE COFI	GUARNIZIONE A PACCO	PEZZI INSTALLATI SU GR. 3RR
AS050007	COMPOSTO DA : 1 BASE-4 V-1 TETTO	N°.1
AS0500070001	COMPOSTO DA : 2 SERIE CONTRAPPOSTE,1 BASE-2 V-1 TETTO TOT. 2 BASI-4 V-2 TETTI	N°.2
AS0500070002	COMPOSTO DA : 2 SERIE CONTRAPPOSTE,1 BASE-3 V-1 TETTO TOT. 2 BASI-6 V-2 TETTI	N°.2
TOTALE COMPONENTE DEI PACCHI PER 1 PINNA		5 BASI-14 V-5 TETTI

OGNI FORNITURA DEVE ESSERE CORREDATA DA ISTRUZIONI DI MONTAGGIO SECONDO SPECIFICA TECNICA 110021

"Documento di proprieta' COFI. La Societa' tutelera' i propri diritti da esso derivanti, in sede civile e penale a termini di legge."

cofi — MATERIAL BASE-TETTO : Gommatela N. Gomma NBR — SIZE A 4 — DRAWN G.Ferrini 10/01 — CONTROLLED D.Mencarelli 10/01 — APPROVED G.Dughera 19/01

Via Gramsci, 71 – 16038 S. Margherita Ligure (Marchio Registrato) — DRAWING Nr. FINCANTIERI — REV. 0

TITLE: GUARNIZIONE A PACCO PER PINNE STABILIZZATRICI GR. 3RR — 0 4 0 2 4 5 — CONT' D ON

LATO SN DEL DIS. COFI 040245 Rev.0

Computer processed — UNI A4

Catalog for naval industry

Rollers for inserting shaft lines inside the ship hull

Introduction

Cofi designs and manufactures rollers coated in COFITAN90 with high abrasion resistance for the positioning of shafts for the installation of propeller shafts or other mechanical components of considerable weight in variable diameters.

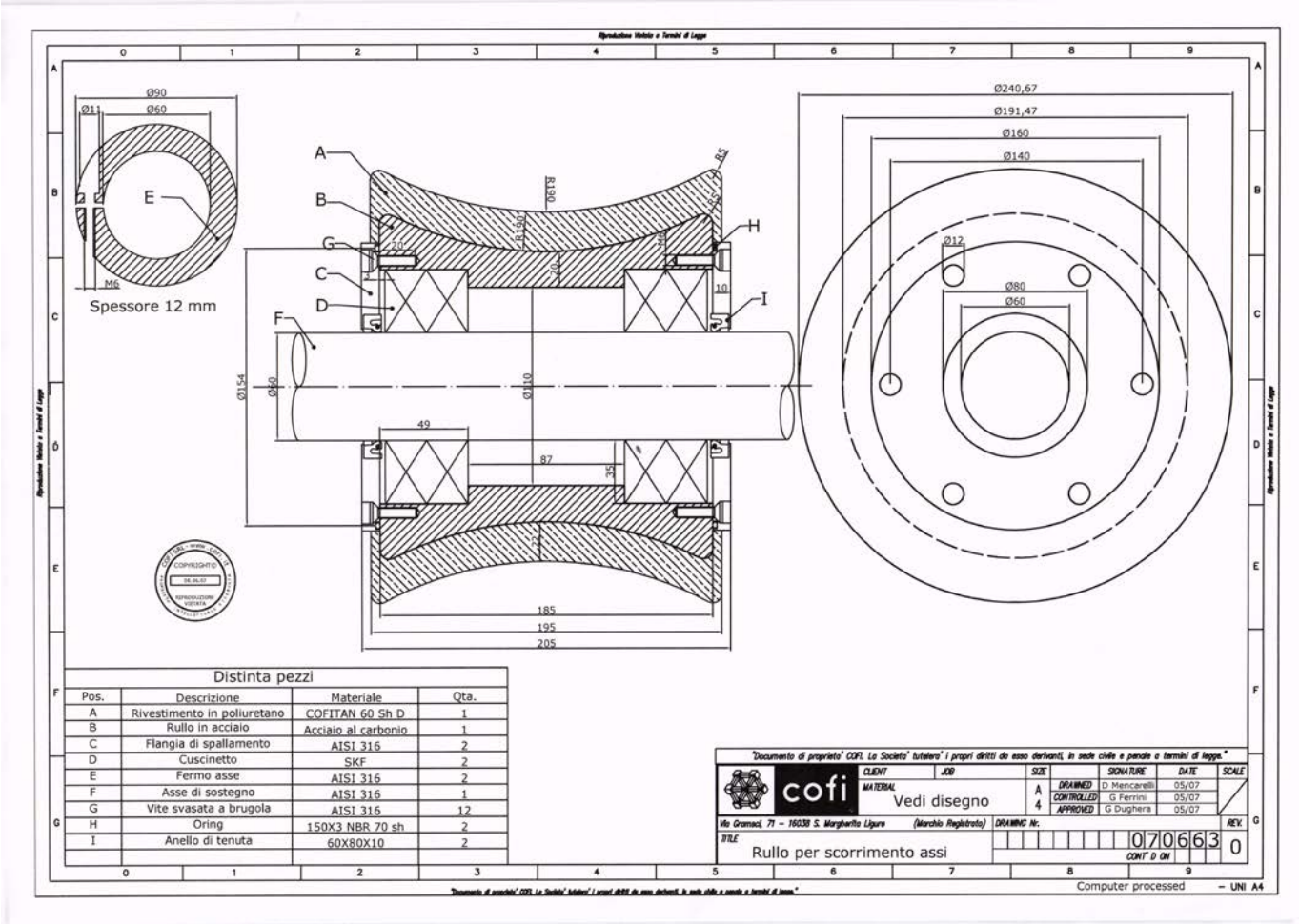
Gallery



Catalog for naval industry

Surface ships > Rollers for inserting shaft lines inside the ship hull

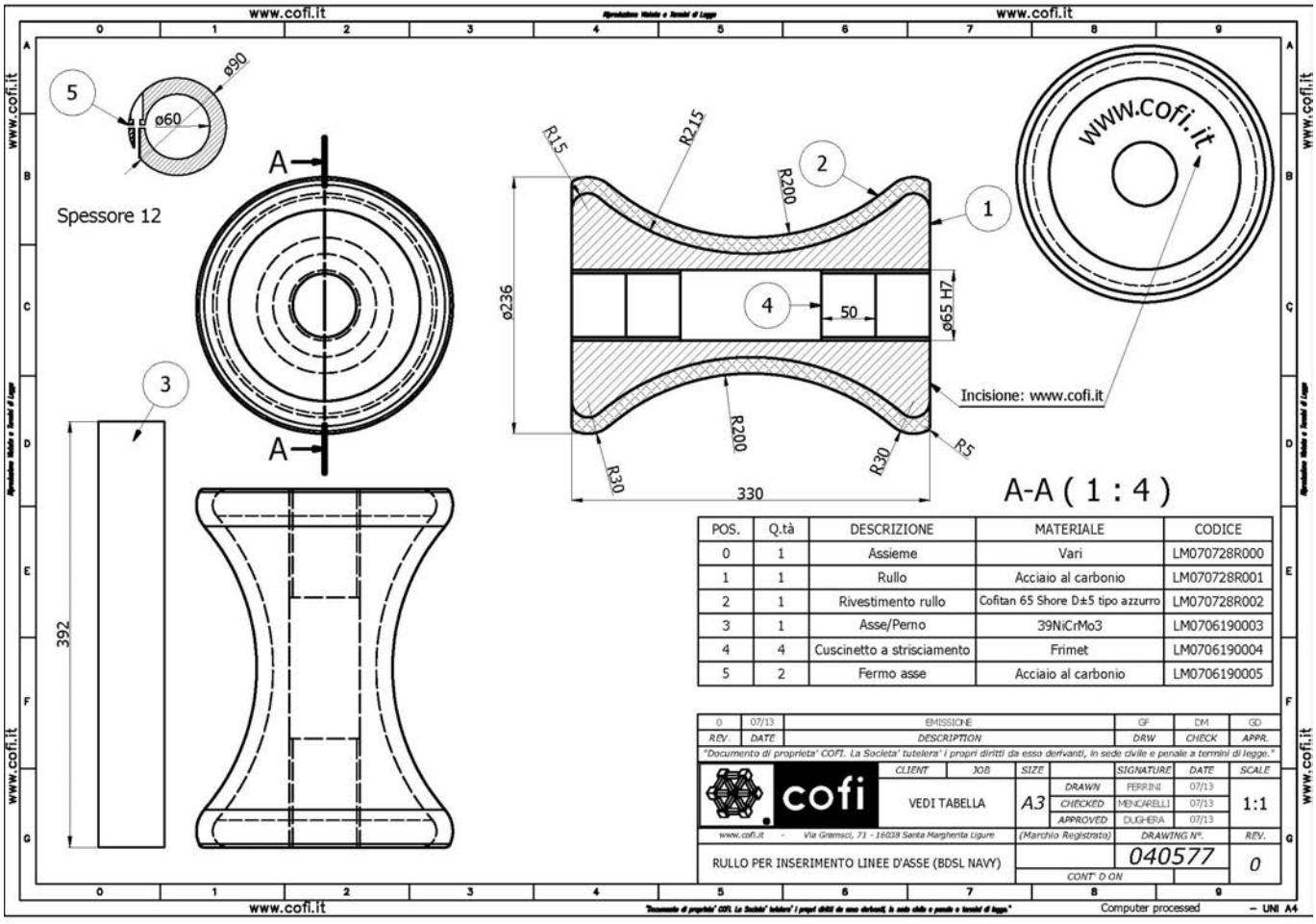
Drawing 070663 - Roller for sliding axes



Catalog for naval industry

Surface ships > Rollers for inserting shaft lines inside the ship hull

Drawing 040577 - Roller for inserting center lines



POS.	Q.tà	DESCRIZIONE	MATERIALE	CODICE
0	1	Assieme	Vari	LM070728R000
1	1	Rullo	Acciaio al carbonio	LM070728R001
2	1	Rivestimento rullo	Cofitan 65 Shore D±5 tipo azzurro	LM070728R002
3	1	Asse/Perno	39NiCrMo3	LM0706190003
4	4	Cuscinetto a strisciamento	Frimet	LM0706190004
5	2	Fermo asse	Acciaio al carbonio	LM0706190005

0	07/13	EMISSIONE		GF	DM	GD	
REV.	DATE	DESCRIPTION		DRW	CHECK	APPR.	
"Documento di proprieta' COFI. La Societa' tutelera' i propri diritti da esso derivanti, in sede civile e penale a termini di legge."							
cofi	CLIENT	JOB	SIZE		SIGNATURE	DATE	SCALE
	VEDI TABELLA		A3	DRAWN	FERRINI	07/13	1:1
				CHECKED	MENCARELLI	07/13	
				APPROVED	DUGHERA	07/13	
www.cofi.it - Via Gramsci, 71 - 16038 Santa Margherita Ligure			(Marchio Registrato)		DRAWING N°.		REV.
RULLO PER INSERIMENTO LINEE D'ASSE (BDSL NAVY)					040577		0
				CONT° D ON			

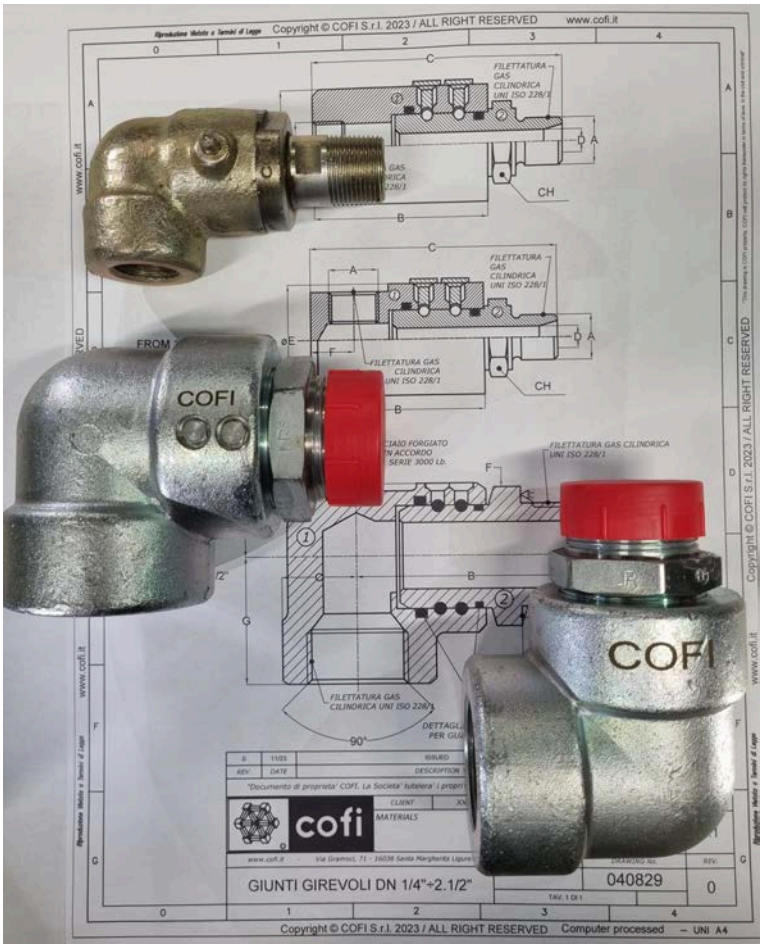
Catalog for naval industry

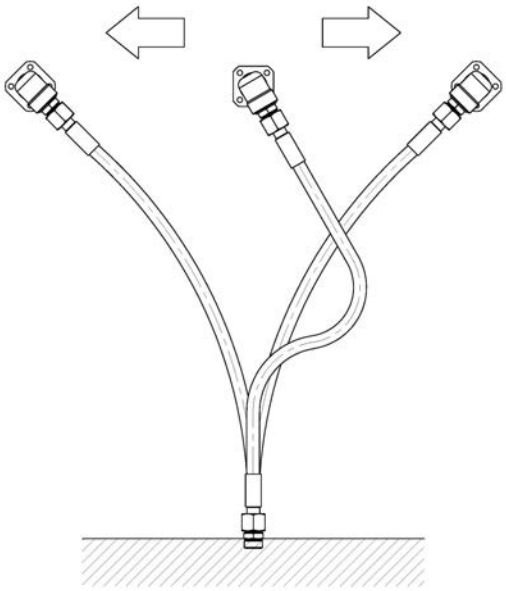
Swivel joints for high pressures, in line and at 90°

Introduction

High-pressure swivel joints are typically mounted between the end of a pipe and a rigid piece of equipment, allowing the end of the pipe to rotate about the axis of the joint. This rotary movement cancels the torsional stresses of the flexible hose, preventing it from being damaged.

Gallery

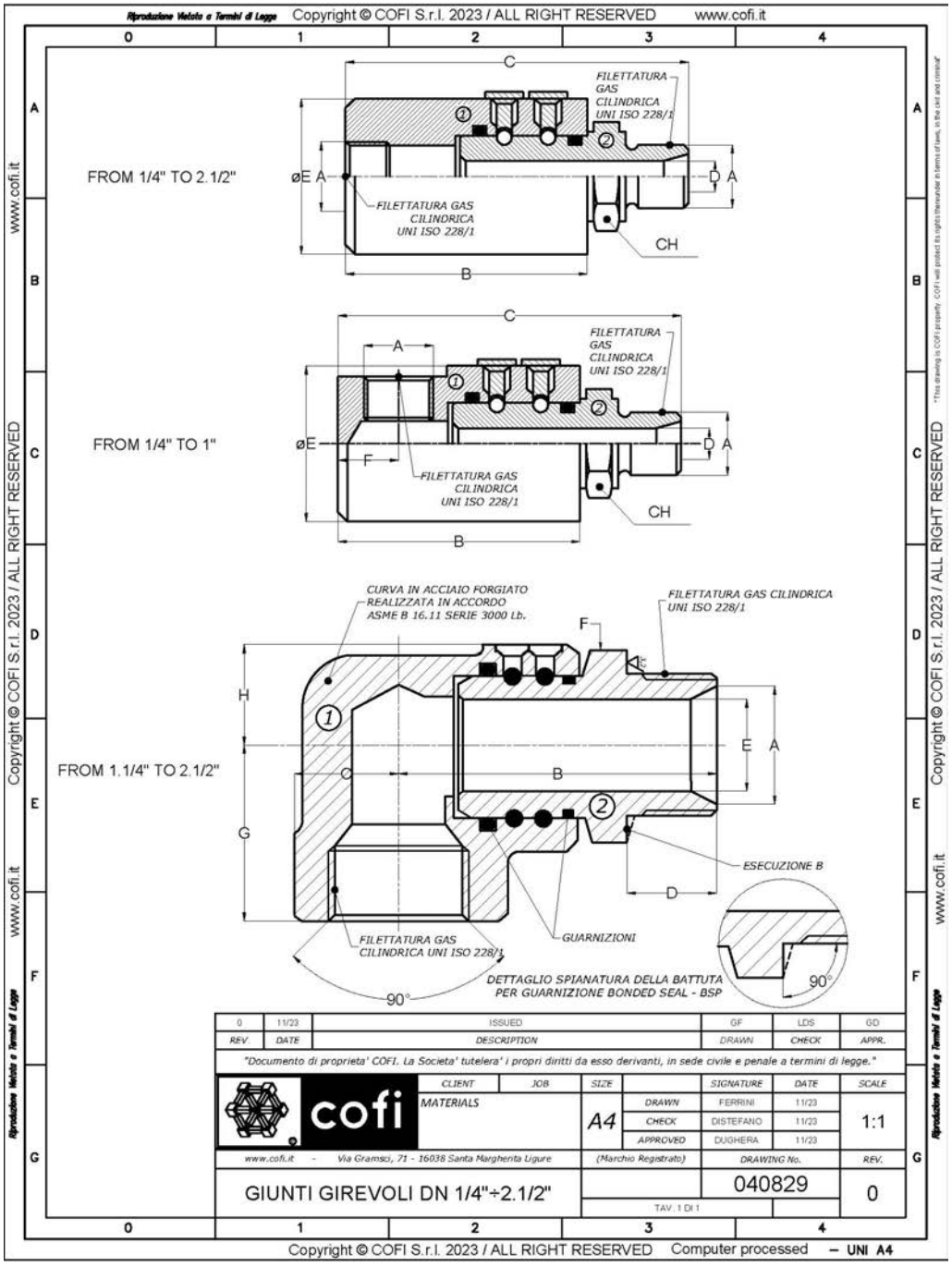




Catalog for naval industry

Surface ships > Swivel joints for high pressures, in line and at 90°

Drawing 040829 - Swivel joints DN ¼" - 2.½"



Catalog for naval industry

Pneumatic seals/actuators

Introduction

An example of a pneumatic seal used to create movement on systems for the passage of food liquids is that of our custom-designed seal.

A photo highlights the moment of the pneumatic testing.

Gallery



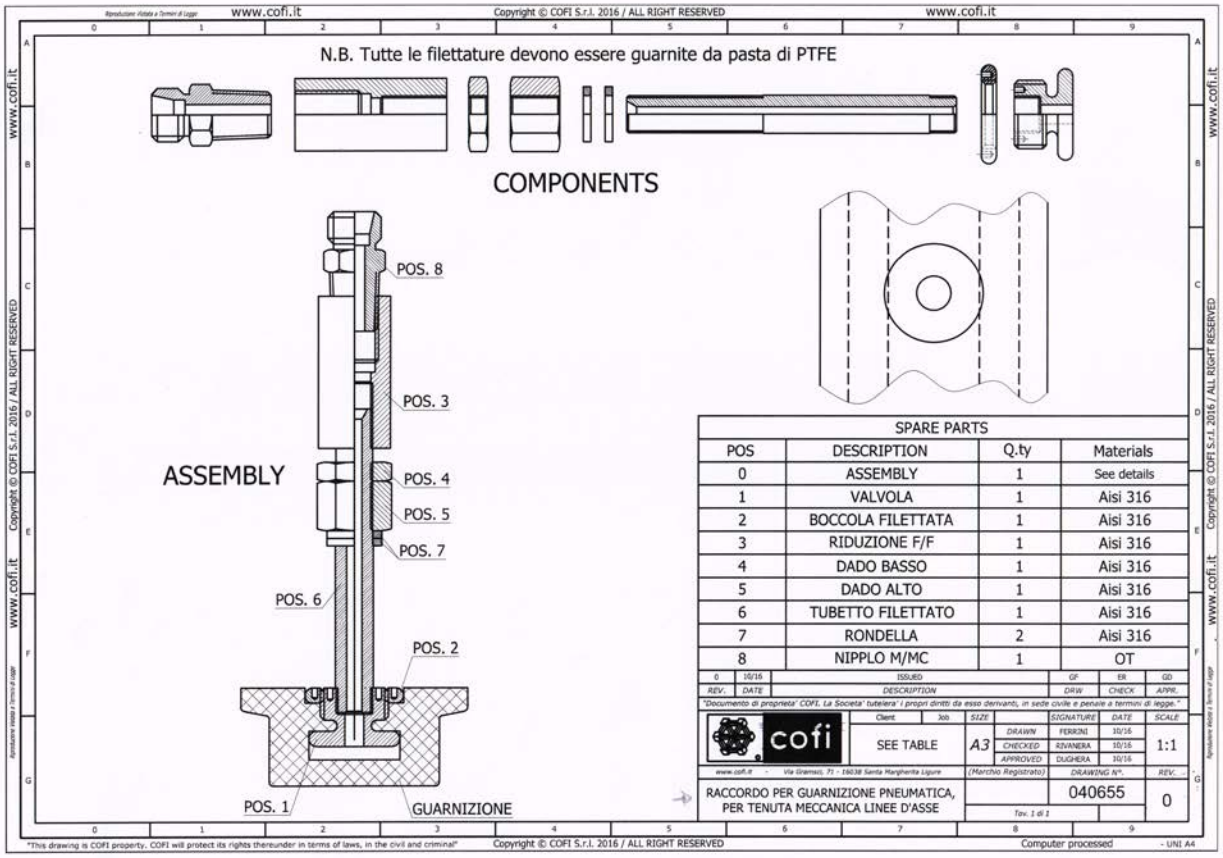




Catalog for naval industry

Surface ships > Pneumatic seals/actuators

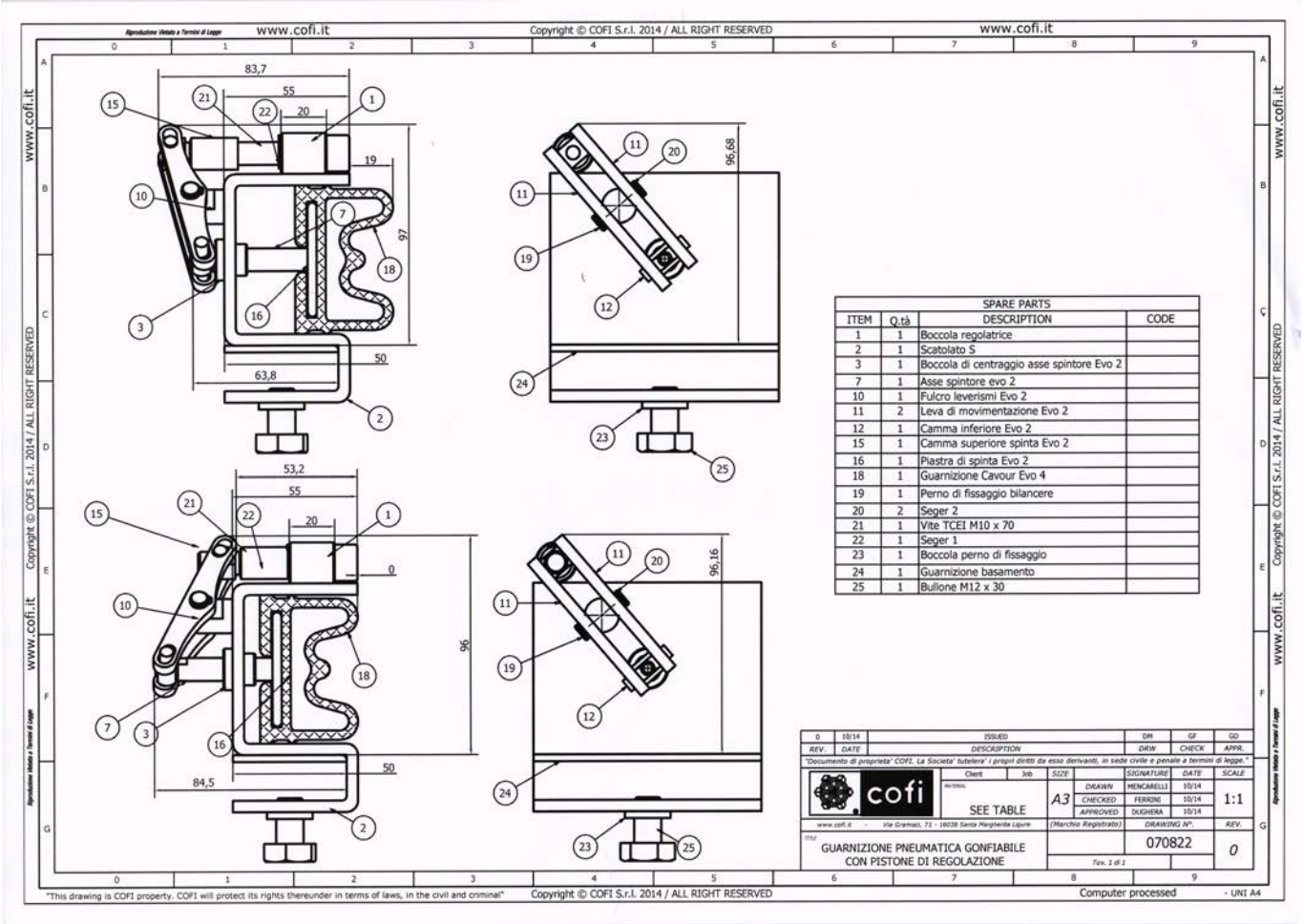
Drawing 040655 - PNEUMOSTOP gasket for ship shaft lines with fittings



Catalog for naval industry

Surface ships > Pneumatic seals/actuators

Drawing 070822 - Inflatable pneumatic seal with regulating piston



Le nostre certificazioni


RINA

CISQ is a member of IQNET

CERTIFICATO N. 3173/00/S
CERTIFICATE No.

COFI SOCIETA' A RESPONSABILITA' LIMITATA

VIA GRAMSCI 71/3 16038 Santa Margherita Ligure (GE) ITALIA
VIA F.LLI ARPE 43-47-49 16038 Santa Margherita Ligure (GE) ITALIA
E CANTIERI OPERATIVI

ISO 9001:2015

PROGETTAZIONE, PRODUZIONE, VENDITA ED INSTALLAZIONE DI ARTICOLI TECNICI E IN PARTICOLARE: ANELLI DI TENUTA CON GUARNIZIONI, GIUNTI COMPENSATORI, TUBI FLESSIBILI IN GOMMA E METALLO, PER IMPIEGHI IN CAMPO INDUSTRIALE, NAVALE E MILITARE.

DESIGN, PRODUCTION, SALE AND INSTALLATION OF TECHNICAL COMPONENTS AND IN PARTICULAR: OIL SEALS AND GASKETS, RUBBER AND METAL EXPANSION JOINTS AND FLEXIBLE PIPES FOR INDUSTRY, NAVAL AND MILITARY USE.

Prima emissione 27.04.2000 — Data decisione di rinnovo 16.11.2022
Data scadenza 16.11.2025 — Data revisione 16.11.2022

Genoa & Milan Management System Certification, Head

RINA Services S.p.A.

IAF ACCREDIA CISQ


RINA

CISQ is a member of IQNET

CERTIFICATO N. EMS-6544/S
CERTIFICATE No.

COFI SOCIETA' A RESPONSABILITA' LIMITATA

VIA GRAMSCI 71/3 16038 Santa Margherita Ligure (GE) ITALIA
VIA F.LLI ARPE 43-47-49 16038 Santa Margherita Ligure (GE) ITALIA
E CANTIERI OPERATIVI

ISO 14001:2015

PROGETTAZIONE, PRODUZIONE, VENDITA ED INSTALLAZIONE DI ARTICOLI TECNICI E IN PARTICOLARE: ANELLI DI TENUTA CON GUARNIZIONI, GIUNTI COMPENSATORI, TUBI FLESSIBILI IN GOMMA E METALLO, PER IMPIEGHI IN CAMPO INDUSTRIALE, NAVALE E MILITARE.

DESIGN, PRODUCTION, SALE AND INSTALLATION OF TECHNICAL COMPONENTS AND IN PARTICULAR: OIL SEALS AND GASKETS, RUBBER AND METAL EXPANSION JOINTS AND FLEXIBLE PIPES FOR INDUSTRY, NAVAL AND MILITARY USE.

Prima emissione 17.11.2016 — Data decisione di rinnovo 16.11.2022
Data scadenza 16.11.2025 — Data revisione 16.11.2022

Jacopo Ferrando
Genoa & Milan Management System Certification, Head

RINA Services S.p.A.

IAF ACCREDIA CISQ


RINA

CISQ is a member of IQNET

CERTIFICATO N. OHS-2843
CERTIFICATE No.

COFI SOCIETA' A RESPONSABILITA' LIMITATA

VIA GRAMSCI 71/3 16038 Santa Margherita Ligure (GE) ITALIA
VIA F.LLI ARPE 43-47-49 16038 Santa Margherita Ligure (GE) ITALIA
E CANTIERI OPERATIVI

ISO 45001:2018

PROGETTAZIONE, PRODUZIONE, VENDITA ED INSTALLAZIONE DI ARTICOLI TECNICI E IN PARTICOLARE: ANELLI DI TENUTA CON GUARNIZIONI, GIUNTI COMPENSATORI, TUBI FLESSIBILI IN GOMMA E METALLO, PER IMPIEGHI IN CAMPO INDUSTRIALE, NAVALE E MILITARE.

DESIGN, PRODUCTION, SALE AND INSTALLATION OF TECHNICAL COMPONENTS AND IN PARTICULAR: OIL SEALS AND GASKETS, RUBBER AND METAL EXPANSION JOINTS AND FLEXIBLE PIPES FOR INDUSTRY, NAVAL AND MILITARY USE.

Prima emissione 17.11.2016 — Data decisione di rinnovo 16.11.2022
Data scadenza 16.11.2025 — Data revisione 16.11.2022

Jacopo Ferrando
Genoa & Milan Management System Certification, Head

RINA Services S.p.A.

IAF ACCREDIA CISQ

La Cofi in cifre



Cofi Srl - **Sede legale:** Via Gramsci, 71/3 - 16038 Santa Margherita Ligure (GE)
Uffici: Via Fratelli Arpe, 49- 16038 Santa Margherita Ligure (GE) - **Tel:** 0185284180 **email:** cofi@cofi.it **pec:** cofi@mypec.eu
CAP. SOCIALE € 1.000.000,00 I.V. – Codice Fiscale, Iscrizione Registro Imprese di Genova e P.IVA 01019170990 – C.C.I.A.A. 334433