DIFLON

TECHNOLOGY

FLEXILINE

General Catalogue

January 2017

DIFLON
TECHNOLOGY

DIFLON Technology S.r.l.

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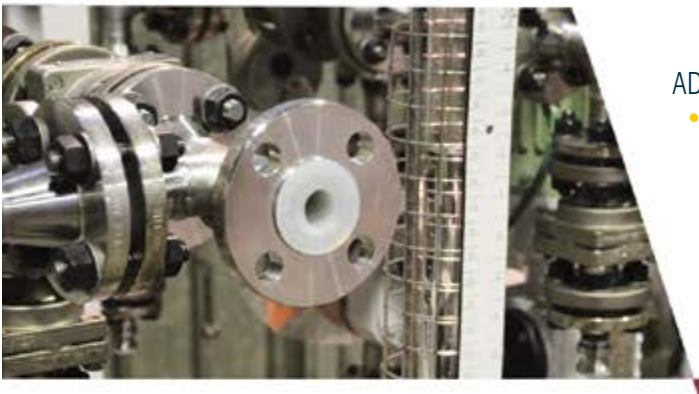
DIFLON
TECHNOLOGY

AT GLANCE

WHY DIFLON ?

The application of products manufactured by Diflon Technology Srl is a strategic choice, responsible and safe, thanks to the technical materials of high quality certified.
The finished products are designed with their own technical offices with cutting-edge tools and manufactured in stablimenti of Diflon production in Italy.
All materials are manufactured in accordance with ISO 9001 certification following the instructions of the Decree 81/08 and in accordance with 97/23/EC (PED).

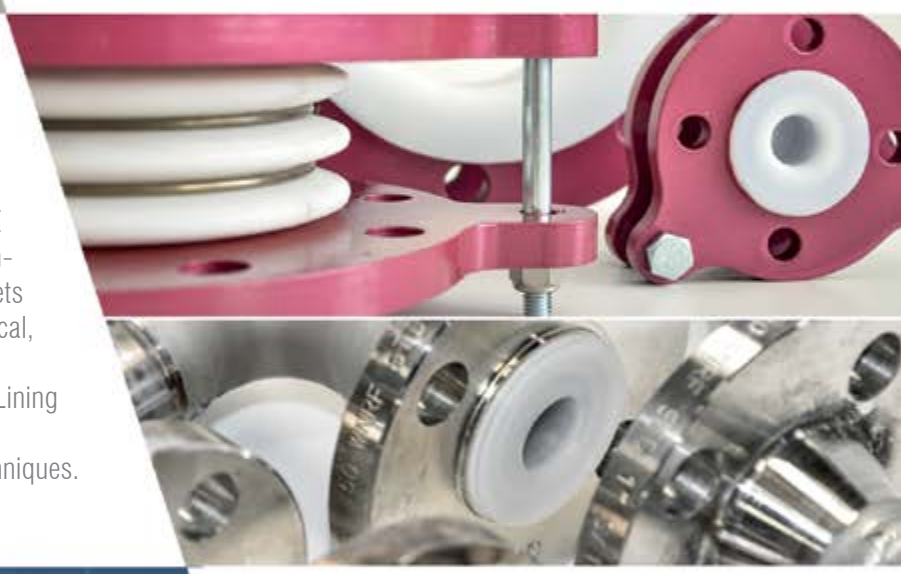


ADDITIONAL SERVICES

- Design and production of special coatings anticorrosion in fluoropolimery
- Supply of valve packages
- Technical consultancy in the choice of materials
- Technical testing and certification standards and on request
- Detailed engineering of sketches, material lists, assembly supervision

SINCE 1969

Since more than 40 years, Diflon Technology srl.
Direct production, in their establishment located in Carobbio degli Angeli (BG) Italy:
• Pipes, fittings, columns and tanks internally lined in PTFE / PFA according to DIN and ANSI standards for corrosion-resistant applications.• Technical hoses, fittings and gaskets used for high-performance applications in the chemical, petrochemical, pharmaceutical, food, industry.
• Universal gaskets Diflex.• PTFE / TFM expansion joints.• Lining in PFA for valves, pomps etc.
All products are made using the most modern production techniques.



STRUCTURE OF PRODUCTION DEPARTMENTS

- Stores finished parts, raw materials
- Automatic CNC Machines
- Cutting and welding departments
- Coating PTFE/PFA pipes, columns and tanks
- Sandblasting
- Painting
- PFA transfer molding
- PTFE molding
- expansion joints Stamping in TFM / PTFE
- pipes and fittings Flexible Manufacturing
- Industrial gaskets
- Flexible hoses and fittings

FLEXILINE Introduction

GENERAL CATALOGUE

The general catalog Flexiline is a general overview of special hoses with high technological content, available connected or in rolls, certified according to all relevant international standards. Special fittings in Stainless Steel PFA lined and standard fittings in SS AISI 304L/316L. Diflex special seals, Viton, Silicon etc ... and accessories in stainless steel.
Testing, certification and traceability according to the needs of our customers.

USING THE PRODUCT

General catalog Flexiline is divided into 4 sections:
C1 Hoses
C2 Fittings
C3 Seals
C4 Accessories

SYMBOLOGY:

By clicking directly on the cover of catalogs you will be immediately directed to the point of interest.

In the pages of catalogs you will find the symbol that brings you back to the index of the section

General Technical Information

SEVIZI DIFLON / DIFLON SERVICE:

By clicking on the symbol on the side of each card gives access to tables of chemical resistance of the materials.

C1

FLEXILINE

HIGH
PERFORMANCE
HOSES

DIFLON

TECHNOLOGY

www.diflon.it

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C1

FLEXILINE

HIGH PERFORMANCE HOSES

HIGH PERFORMANCE HOSES

Hoses lined with PTFE, PFA, UPE and other corrosion resistant materials, suitable for food and pharmaceutical products.

Stainless steel or Rubber external cover.

Flexible silicone hoses for pharmaceutical industry.

Diflon sales program includes the supplyng of hose assembling with correct dimensions stainless steel AISI 316L, Al-Si316L / PFA.

Hoses are compliant with standards EN 12115, FDA21,USP XXXII CLASS VI, ISO 10993, BFR CAT III, DM 21.03.73, ER 1935/2004/CE, JAPAN MHWN 370, EuropeanPharmacopeia 3.1.9 and other Standards Specifications.

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Index Flexible hoses

vista precedente

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QOPPA - PTFE CO - 304 BRAID

Convoluted PTFE Hose With AISI 304 Braid

Use / application

Tube for vacuum and delivery for applications in low and medium low pressure and high temperatures, resistant to almost all chemical products. Where they are required high flexibility and a minimum bend radius. The PTFE used ensures minimal porosity. The main sectors are the ones dedicated chemical, pharmaceutical, petrochemical, paint, steam, glues and adhesives, fuels, mineral oils and general applications with critical conditions.

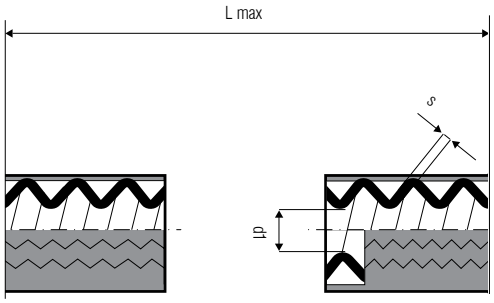


Fig. 1

Description

Tube
Virgin PTFE convoluted hose

Cover
SS AISI 304 external braid

Technical characteristics

Temperature range
-70°C / +260°C

Dimension Table Fig.1

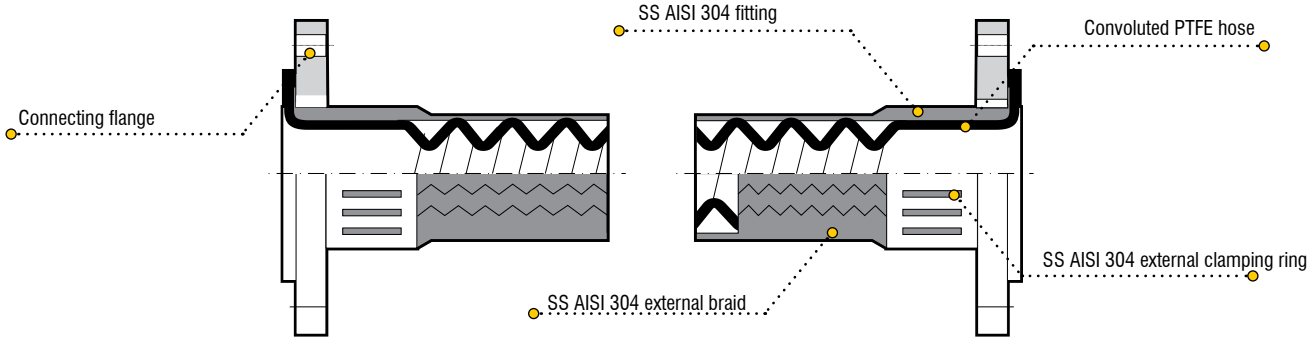
DN		d1 min	d1 max	s±10%	*Minimum bend radius*	*Max. working pressure*	*Burst pressure*	*Admissible vacuum at 20°C/68°F*	L max.	*Weight of hose*
DIN	ANSI	mm	mm	mm	mm	Bar 20°C		mbar 20°C	m	gr/m
-	1/4"	5.5	6.9	0.75	25	35	170	744	20	80
10	3/8"	8.5	10.5	0.65	25	35	170	744	20	123
15	1/2"	11.6	13.6	0.75	25	60	300	887	20	140
-	5/8"	15.1	16.4	0.80	35	55	270	887	20	160
20	3/4"	19.5	20.5	1.00	55	60	290	887	20	390
25	1"	24.5	25.5	1.00	85	40	210	887	20	540
32	1 1/4"	31.5	32.5	1.00	100	40	210	887	20	680
40	1 1/2"	36.5	37.5	1.50	120	35	175	887	20	1110
-	1 3/4"	44.5	45.5	1.50	135	25	135	887	20	1650
50	2"	49.5	50.5	1.65	165	25	135	887	20	1710
65	2 1/2"	62.5	63.5	1.60	230	16	80	887	20	2140
80	3"	73.5	74.5	1.60	260	14	65	887	20	3310
100	4"	94.5	99.5	1.82	300	10	40	887	20	4050

QOPPA - PTFE CO - 304 BRAID

Examples of crimping

PTFE Chemical Transfer Hose SS AISI 304 external braid flanged

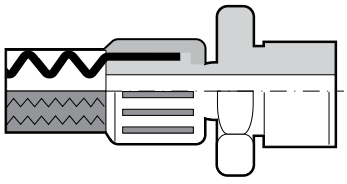
- Loose flanges - Flanges acc. to EN 1092-1, PN 10
- Flanges acc. to ASME/ANSI B16.5 Class 150
- DN 15 - DN 100 - DN 1/2" - DN 4"
- Rated for -70°C +260°C



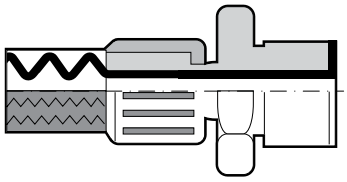
PTFE Chemical Transfer Hose SS AISI 304
Made threaded nozzle

- DN 20 - DN 100 - DN 3/4" - DN 4"

With coated fitting



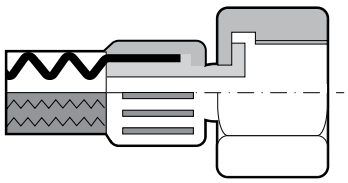
With coated fitting



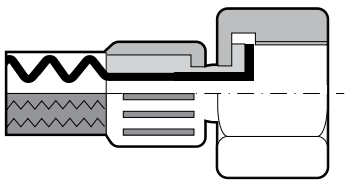
PTFE Chemical Transfer Hose SS AISI 304
With Swivel nut

- DN 20 - DN 100 - DN 3/4" - DN 4"

With coated fitting



With coated fitting



♀ QOPPA - PTFE CO

Convoluted PTFE Hose

PTFE Chemical Transfer Hose No Inox

- Loose flanges
- DN 15 - DN 100 - DN 1/2" - DN 4"
- Flanges acc. to EN 1092-1
- Flanges acc. to ASME/ANSI B16.5 Class 150
- Rated for -30°C/ -20°F to +135°C/ +275°F

Materials

Extruded PTFE according to ASTM D-4895
Extruded PTFE antistatic
Flange material according to the customer's specification.

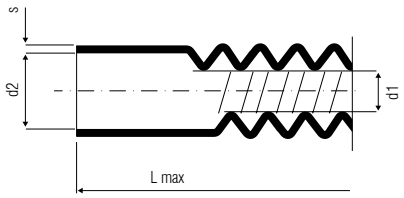


Fig. 1

Straight end

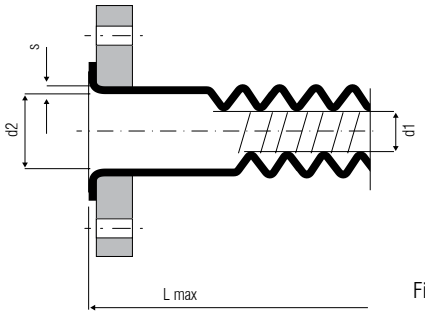


Fig. 2

Flared and flanged end

Lenght tolerance
L ≤ 1000 mm: +/- 5%
L ≥ 1000 mm: +/- 3%

Notes

Dimensions are only an example. Other diameters can be supplied request.

Dimension Table Fig.1 - Fig.2

DN		d1 min	d1 max	s±10%	*Minimum bend radius*	*Max. working pressure*	*Burst pressure*	*Admissible vacuum at 20°C/68°F*	L max.	*Weight of hose*
DIN	ANSI	mm	mm	mm	mm	Bar 20°C		mbar 20°C	m	gr/m
-	1/4"	5.5	6.9	0.75	25	4.0	14.0	744	80	47
10	3/8"	8.5	10.5	0.65	25	4.0	14.0	744	76	58
15	1/2"	11.6	13.6	0.75	25	4.0	14.0	887	74	72
-	5/8"	15.1	16.4	0.80	35	3.0	11.0	887	53	97
20	3/4"	19.5	20.5	1.00	55	3.0	11.0	887	40	142
25	1"	24.5	25.5	1.00	85	3.0	10.0	887	30	194
32	1 1/4"	31.5	32.5	1.00	100	2.5	9.0	887	22	258
40	1 1/2"	36.5	37.5	1.50	120	2.5	9.0	887	50	337
-	1 3/4"	44.5	45.5	1.50	135	2.0	8.0	887	45	455
50	2"	49.5	50.5	1.65	165	2.0	8.0	887	40	522
65	2 1/2"	62.5	63.5	1.60	230	1.5	6.0	887	30	654
80	3"	73.5	74.5	1.60	260	1.3	5.0	887	22	765
100	4"	94.5	99.5	1.82	300	1.0	4.5	887	14	1310

θ THETA - PTFE SW

PTFE Hose With AISI 304 Braid

Use / application

Suction and delivery hose suitable in low and medium pressure applications which require flexibility and a tight bend radius. The choice of the best raw material guarantees minimum porosity. Focused branches are Chemical, petrochemicals, paints, steam, glues and adhesives, fuels, hydraulic oils, and any application under critical usage conditions.

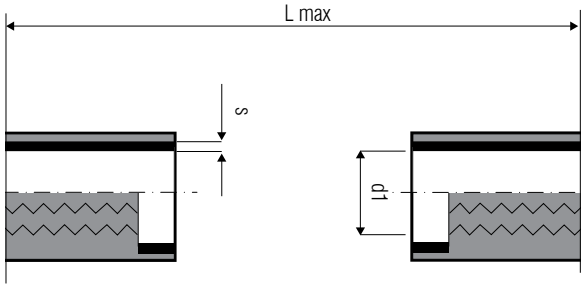


Fig. 1

Description

Tube
Virgin PTFE smooth hose

Cover
SS AISI 304 external wire braid

Option
- Inner core made with conductive PTFE
- Heavy wall hoses
- AISI 316 external wire braid
- Double wire braid
- *Special jacket made by thermoplastics*

Technical characteristics

Temperature range
-70°C / +260°C

Dimension Table Fig.1

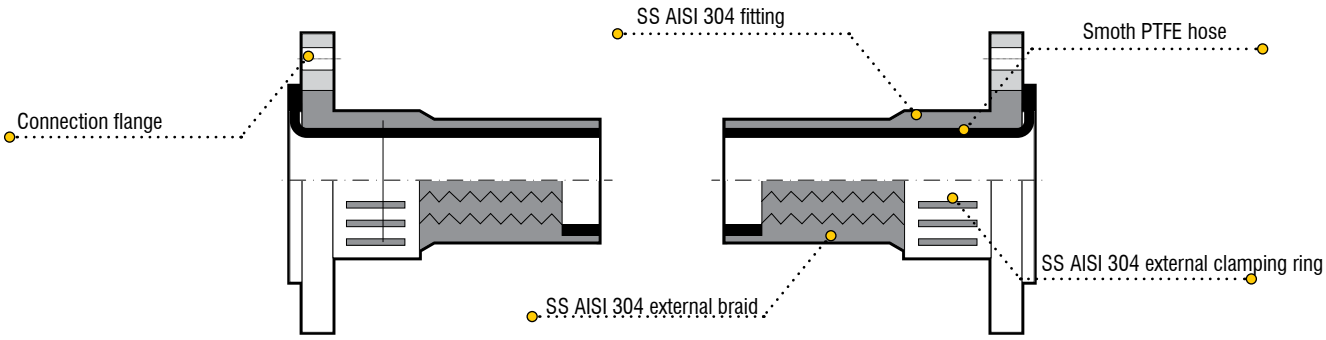
DN		d1 min	d1 max	s±10%	*Minimum bend radius*	*Max. working pressure*	*Burst pressure*	*Admissible vacuum at 20°C/68°F*	*Weight of hose*
DIN	ANSI	mm	mm	mm	mm	Bar 20°C		mbar 20°C	gr/m
-	1/4"	6,45	6,96	1	76	224	672	887	145
10	3/8"	9,93	10,64	1	127	207	621	887	195
15	1/2"	13	13,6	1	140	161	483	887	265
-	5/8"	16,4	17,2	1,2	165	114	345	887	345
20	3/4"	19,3	20,32	1,2	203	103	310	887	420
25	1"	25,6	26,62	1,2	305	80	241	887	540

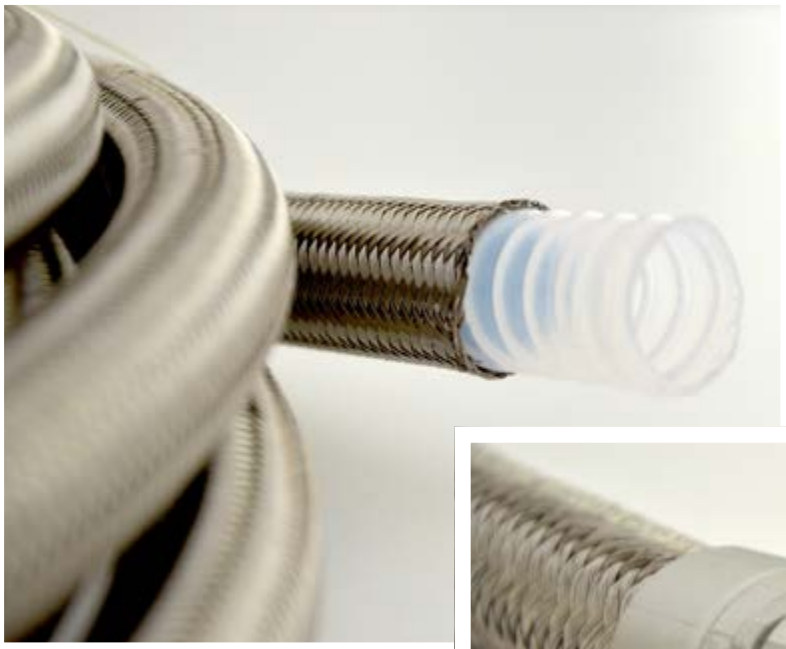
θ THETA - PTFE SW

Examples of crimping

PTFE Chemical Transfer Hose
Type smooth bore

- Loose flanges
- DN 15 - DN 50 - DN 1/2”
- Flanges acc. to EN 1092-1
- Flanges acc. to ASME/ANSI B16.5
- Rated for -40°C/ -40°F to +230°C/ +440°F





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θ THETA - PTFE LAB

PTFE Thin Wall Tubes

PTFE Thin Wall Tubes

Technical specifications

Standard product range consists of a set of thin wall tubes made by using natural PTFE raw material.
Inside diameter: from 1,5 mm to 26 mm.
Wall thickness: from 0,5 mm to 3,0 mm.

Length: based on diameter and wall thickness. For market most requested diameters, standard length coils are supplied: in 25 meters, 50 and 100 meters.

Owing to state of the technology art plants is able to produce, for some diameters, coils with lengths that can vary from 150 to 1,000 meters.

Industrial sectors

- Fluid, gas and other materials transport industry
- Electronic and electrical industry
- Automotive and motorcycle industry
- Semiconductor industry

Upon request DIFLON can produce TWT with custom specifications such as:
diameter and tolerance as requested by the client's drawing, calibrated outside diameter, FDA raw materials, pigmented raw material available in several colours (ROHS free), antistatic and/or special additive fi lled raw materials, different shape sections, hoses cut at specific measure and/or treated as requested by the client's drawing.

Pressure and temperature

Effect of temperature on pressure resistance

T(°C)	P(%)
23°	100
50°	85
100°	65
150°	50
200°	35

Working pressure is 1/3 of the burst pressure.

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θ THETA - PTFE LAB

PTFE - Standard dimensions and property table

ID (mm)	OD (mm)	*Weight* (Kg/m)	*Burst pressure* (MPa a 23°C)	*Radius of curvature* (mm)
1,5	3,2	0,012	110	12,0
1,5	3,5	0,017	125	12,0
2,0	3,0	0,009	70	18,0
2,0	4,0	0,020	110	16,0
2,5	3,5	0,010	55	25,0
2,5	4,0	0,017	80	18,0
2,5	5,0	0,032	110	20,0
3,0	4,0	0,012	50	32,0
3,0	5,0	0,027	85	25,0
3,0	6,0	0,046	110	24,0
4,0	5,0	0,015	40	50,0
4,0	6,0	0,034	70	36,0
4,0	7,0	0,056	90	33,0
4,0	8,0	0,081	110	32,0
4,5	6,5	0,037	60	41,0
5,0	6,0	0,018	30	50,0
5,0	7,0	0,041	60	49,0
5,0	8,0	0,066	80	43,0
5,0	9,0	0,055	95	41,0
6,0	7,0	0,022	25	98,0
6,0	8,0	0,048	50	64,0
6,0	9,0	0,076	70	54,0
6,0	10,0	0,109	85	50,0
6,5	9,5	0,081	65	60,0
7,0	9,0	0,054	40	81,0
7,0	10,0	0,087	60	67,0
7,5	9,5	0,058	40	90,0
8,0	9,0	0,029	20	162,0
8,0	10,0	0,061	40	100,0
8,0	12,0	0,136	70	72,0

ID (mm)	OD (mm)	*Weight* (Kg/m)	*Burst pressure* (MPa a 23°C)	*Radius of curvature* (mm)
9,0	10,0	0,032	15	205,0
9,0	11,0	0,068	35	120,0
9,0	12,0	0,107	50	85,0
10,0	11,0	0,036	15	242,0
10,0	12,0	0,075	30	144,0
10,0	13,0	0,116	45	113,0
10,0	14,0	0,162	55	98,0
11,0	13,0	0,081	30	145,0
12,0	14,0	0,878	25	196,0
13,0	15,0	0,095	25	225,0
14,0	16,0	0,101	20	256,0
15,0	17,0	0,108	20	289,0
15,0	18,0	0,167	30	216,0
16,0	18,0	0,115	20	324,0
16,5	19,5	0,182	30	254,0
17,0	20,0	0,187	25	267,0
18,0	20,0	0,128	15	400,0
18,0	22,0	0,270	30	242,0
19,0	22,0	0,208	20	323,0
20,0	22,0	0,142	15	325,0
20,0	24,0	0,297	25	288,0
21,0	24,0	0,228	20	384,0
22,0	24,0	0,155	15	576,0
24,0	27,0	0,258	20	486,0
24,5	27,0	0,217	15	583,0
25,0	28,0	0,268	15	523,0

Inside diameter tolerance

Diameter (mm)	*Tolerance* (mm)
1,5 < d ≤ 5	± 0,10
5,1 < d ≤ 7	± 0,15
7,1 < d ≤ 10	± 0,20
10,1 < d ≤ 15	± 0,30
15,1 < d ≤ 20	± 0,40
20,1 < d ≤ 30	± 0,60

Maximum excentration tolerance

Wall thickness (mm)	*Maximum excentration tolerance* (mm)
0,5	0,1
1	0,15
1,5	0,17
2	0,2
2,5	0,25
3	0,3

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θ THETA - PFA LAB

PFA Thin Wall Tubes

PFA tubes

Technical specifications

PFA standard tubes are made by using high molecular weight and pure virgin PFA raw material.
Inside diameter: from 2 mm to 26 mm.
No length limit. Packaging in coils or on rolls.

Industrial sectors

- Fluid, gas and other materials transport industry
- Semiconductor industry
- Healthcare industry
- Electronics

Upon request PFA tubes can also be produced with custom specifications such as:
diameter and tolerance as shown by the client's drawing, various shape sections, hoses cut to specific measure and/or treated as shown by the customers drawing.

PFA Tubes – Standard dimensions range table

Inside diameter (mm)	*Thickness* (mm)	*Outside diameter* (mm)	*Tolerance* (mm)	*Weight* (g/m)
1.17	1,00	3.17	±0.10	15.0
2,00	0,50	3,00	±0.10	8.6
2,00	1,00	4,00	±0.10	20.3
2,50	0,75	4,00	±0.10	16.8
4.00	1,00	6.00	±0.10	33.8
4.35	1,00	6.35	±0.10	37.0
6.00	1,00	8.00	±0.10	47.3
6.35	1,57	9.50	±0.10	87.0
8.00	1,00	10.00	±0.10	60.8
10.00	1,00	12.00	±0.10	74.3
9.50	1,60	12.70	±0.10	122.0
12.00	1,00	14.00	±0.10	87.8

θ THETA - PFA LAB

Material specification comparison table

Technical specifications	*Unit of measure*	*Test methods* (ASTM)	PTFE	PFA
Physical				
Specific gravity	gr/cm³	D792	2,16	2,15
Appearance			*Transluced White*	*Transparent*
Water permeability	%	D570	<0,01	<0,03
Mechanical				
Tensile Strength	Kgf/cm²	D638 D1708	250-300	280
Elongation at break	%	D638	250-400	300
Modulus of elasticity	MPa	D747	440 a520	650
Hardness	Shore D	D2240	55-65	60-65
Thermal				
Melting point	°C		+327°	+310°
Maximum operating temperature	°C		+260°	+260°
Minimum operating temperature	°C		-60°	-60°
Electrical				
Dielectric strength	KV/mm	D149	80	80
Dissipation factor			0,0003	0,00075
Chemical				
Chemical resistance			*Excellent*	*Excellent*
Endurance to atmospheric pitting corrosion			*Excellent*	*Excellent*

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Hoses for every need

The DIFLON FLEXILINE high-performance hoses, described on the following pages are normally used in industries.
They are approntabili for any request in many other types for specific uses also unique products such as wines, cheeses, artificial innevamenti etc ...

cosmetics

preserves food

dairy products derivatives

dry transport

drinks

chemistry mining

pharmaceutical

sterile

α ALFA – PTFE

Use / application

Suction and delivery hose designed according to EN 12115 standards for chemicals and solvents, except for chlorine trifluoride, chlorine and fluorine gas, oxygen difluoride, phosgene and molten alkalis (for ex. sodium). Hose resistant to high temperatures, used as connection between pipes and fixed equipments. Designed for the chemical industry, foodstuff, pharmaceutical and cosmetic industry, where a flexible connection is required. The hose is produced with high quality elastomers, with excellent chemical and mechanical properties. Phthalates free tube, tested in compliance with 1907/2006/CE (REACH). Tested in compliance with USP XXXVI class VI, not cytotoxic according to ISO 10993 Section 5:2009. Not intended for use as an implant material. Not suitable for blood or human fluids.

Description

Tube
PTFE (polytetrafluorethylene) white, phthalates free, tested in compliance with 1907/2006/CE (REACH). PTFE is a polymer with excellent resistance to high temperature, mechanical stress and to oxidation. It complies with FDA 21 CFR 177.1550 standards, USP XXXVI class VI, ISO 10993 Sections 5,10,11:2009, EUROPEAN REGLEMENT 1935/2004/CE AND 10/2011/CE, 3A Sanitary Standard Class II

Reinforcement
Synthetic plies, galvanized wire helices, a/s copper wires to discharge static electricity

Cover
Smooth, EPDM, black, conductive, abrasion, ageing and ozone resistant, cloth finish

Sterilization
Refer to guidelines for cleaning and sanitizing on Diflon weBSite

Marking
Red/white/blue transfer tape DIFLON α ALFA - PTFE

Technical characteristics

Temperature range
-40°C / +150°C
(-40°F / +302°F)
The operating temperature of the hose is directly dependent upon the specific fluid been conveyed and the length of time the fluid is in contact with the hose

Vacuum
675 mmHg (26,6 inHg)

Electrical properties
Type Ω according to EN 12115 ($R<10^6$ Ω)

Norm
EN12115
TRbF 131/2

Inside diameter		Outside diameter		Working pressure		Burst pressure		Appr. weight		Bending radius	
mm	in	mm	in	bar	psi	bar	psi	kg/m	IBS/ft	mm	in
13	0.5	25	1	16	250	64	1000	0.54	0.36	90	3.54
19	0,75	31	1,22	16	250	64	1000	0,70	0,47	130	5,12
25	1,00	37	1,46	16	250	64	1000	0,86	0,58	170	6,69
32	1,25	44	1,73	16	250	64	1000	1,18	0,79	215	8,46
38	1,50	51	2,00	16	250	64	1000	1,43	0,96	255	10,04
50	1,97	66	2,60	16	250	64	1000	2,08	1,39	330	12,99
63,5	2,50	79,5	3,13	16	250	64	1000	2,96	1,96	430	16,93
75	2,95	91	3,58	16	250	64	1000	3,43	2,30	510	20,08
100	3,94	116	4,57	16	250	64	1000	4,60	3,08	675	26,57

Data refer to ambient temperature (20°C).

ς STIGMA - PTFE - FC

Use / application

Suction and delivery hose designed according to EN 12115 standards for chemicals and solvents, except for chlorine trifluoride, chlorine and fluorine gas, oxygen difluoride, phosgene and molten alkalis (for ex. sodium). Hose resistant to high temperatures, used as connection between pipes and fixed equipments. Designed for the chemical industry, foodstuff, pharmaceutical and cosmetic industry, where a flexible connection is required. The hose is produced with high quality elastomers, with excellent chemical and mechanical properties. Phthalates free tube, tested in compliance with 1907/2006/CE (REACH).Tested in compliance with USP XXXII class VI, not cytotoxic according to ISO 10993 Section 5:2009. Tested and certified hose by INERIS for use in Atex area (Ex-Zone). Not intended for use as an implant material. Not suitable for blood or human fluids.

Description

Tube
PTFE (polytetrafluorethylene) black, conductive, phthalates free, tested in compliance with 1907/2006/CE (REACH). PTFE is a polymer with excellent resistance to high temperature, mechanical stress and to oxidation. It complies with FDA 21 CFR 177.1550 standards, USP XXXII class VI, ISO 10993 Sections 5,10,11:2009, EUROPEAN REGLEMENT 1935/2004/CE AND 10/2011/CE

Reinforcement
Textile plies, a/s copper wire to discharge static electricity, galvanized wire helices

Cover
Smooth, EPDM, black, conductive, abrasion, ageing and ozone resistant, cloth finish

Sterilization
Refer to guidelines for cleaning and sanitizing on DIFLON weBSite

Marking
Red/white/blue transfer tape DIFLON PTFE FULL CONDUCTIVE - Embossed stripe according to the Norm EN 12115 DIFLON PTFE EN12115:2011 DN SD PN 16 BAR Ω/T Q/Y

Technical characteristics

Temperature range
-40°C / +150°C
(-40°F / +302°F)
The operating temperature of the hose is directly dependent upon the specific fluid been conveyed and the length of time the fluid is in contact with the hose

Vacuum
675 mmHg (26,6 inHg)

Electrical properties
type Ω/T according to EN 12115 ($R<10^6$ Ω, $R<10^9$ Ω through the hose wall)

Norm
EN12115
TRbF 131/2

Inside diameter		Outside diameter		Working pressure		Burst pressure		Appr. weight		Bending radius	
mm	in	mm	in	bar	psi	bar	psi	kg/m	IBS/ft	mm	in
13	0,50	25	1,00	16	250	64	1000	0,54	0,36	90	3,54
19	0,75	31	1,22	16	250	64	1000	0,70	0,47	130	5,12
25	1,00	37	1,46	16	250	64	1000	0,86	0,58	170	6,69
32	1,25	44	1,73	16	250	64	1000	1,18	0,79	215	8,46
38	1,50	51	2,00	16	250	64	1000	1,43	0,96	255	10,04
50	1,97	66	2,60	16	250	64	1000	2,08	1,39	330	12,99
63,5	2,50	79,5	3,13	16	250	64	1000	2,98	1,98	430	16,93
75	2,95	91	3,58	16	250	64	1000	3,43	2,30	510	20,08

Data refer to ambient temperature (20°C).

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ε EPSILON – PTFE

Use / application

Suction and delivery hose for food, cosmetic and pharmaceutical products, chemicals and solvents, except , for chlorine trifluoride, chlorine and fluorine gas, oxygen difluoride, phosgene and molten alkalis (for ex. sodium). Hose resistant to high temperatures, used as connection between pipes and fixed equipments. Designed for the chemical industry, foodstuff, pharmaceutical and cosmetic industry, where a flexible connection is required. The hose is produced with high quality elastomers, with excellent chemical and mechanical properties. Phthalates free tube, tested in compliance with 1907/2006/CE (REACH). Tested in compliance with USP XXXVI class VI, not cytotoxic according to ISO 10993 Section 5:2009. Not intended for use as an implant material. Not suitable for blood or human fluids.

Description

Tube
PTFE (polytetrafluorethylene) white, phthalates free, tested in compliance with 1907/2006/CE (REACH). PTFE is a polymer with excellent resistance to high temperature, mechanical stress and to oxidation. It complies with FDA 21 CFR 177.1550 standards, USP XXXVI class VI, ISO 10993 Sections 5,10,11:2009, EUROPEAN REGLEMENT 1935/2004/CE AND 10/2011/CE, 3A Sanitary Standard Class II

Reinforcement
Synthetic plies, stainless steel wire helices, on request a/s wires to discharge static electricity

Cover
Smooth, silicone, white. Meets FDA CFR 21 PART 177.2600, BfR Recommendation XV, European Reglement 1935/2004/CE. Heat, abrasion, ageing and ozone resistant, glossy cover

Sterilization
Refer to guidelines for cleaning and sanitizing on Diflon weBSite

Marking
Blue transfer tape DIFLON ε EPSILON – PTFE

Technical characteristics

Temperature range
-40°C / +150°C
(-40°F / +302°F)
The operating temperature of the hose is directly dependent upon the specific fluid been conveyed and the length of time the fluid is in contact with the hose

Vacuum
675 mmHg (26,6 inHg)

Norm
ISO 1307 for dimensional tolerances

Inside diameter		Outside diameter		Working pressure		Burst pressure		Appr. weight		Bending radius	
mm	in	mm	in	bar	psi	bar	psi	kg/m	IBS/ft	mm	in
13	0,5	24	0,94	10	150	40	600	0,47	0,31	45	1,77
19	0,75	30	1,18	10	150	40	600	0,61	0,41	70	2,76
25	1,00	36	1,42	10	150	40	600	0,76	0,51	90	3,54
32	1,25	43	1,69	8	120	32	480	0,93	0,62	120	4,72
38	1,50	50	1,97	7	105	28	420	1,26	0,84	140	5,51
50	1,97	62	2,44	7	105	28	420	1,60	1,07	180	7,09
63,5	2,50	79,5	3,13	6	90	24	360	2,69	1,80	320	12,60
75	2,95	91	3,58	5	75	20	300	3,24	2,17	380	14,96
100	3,94	117	4,61	4	60	16	240	5,06	3,39	580	22,84

Data refer to ambient temperature (20°C).

χ CHI - PFA

Use / application

Suction and delivery hose designed according to EN 12115 standards for food, cosmetic and pharmaceutical products, chemicals and solvents, except for chlorine trifluoride, chlorine and fluorine gas, oxygen difluoride, phosgene and molten alkalis (for ex. sodium). Hose resistant to high temperatures, used as connection between pipes and fixed equipments. Designed for the chemical industry, foodstuff, pharmaceutical and cosmetic industry, where a flexible connection is required. The hose is produced with high quality elastomers, with excellent chemical and mechanical properties. Phthalates free tube, tested in compliance with 1907/2006/CE (REACH). Tested in compliance with USP XXXVI class VI, not cytotoxic according to ISO 10993 Section 5:2009. Not intended for use as an implant material. Not suitable for blood or human fluids.

Description

Tube
PFA (perfluoroalkoxy), white, phthalates free, tested in compliance with 1907/2006/CE (REACH). PFA is a polymer with excellent resistance to high temperature, mechanical stress and to oxidation. It complies with FDA 21 CFR 177.1550, USP XXXII class VI, ISO 10993 Sections 5,10,11:2009 and JAPAN Ministry of Health and Welfare Notice No.370,1959 and No.201,2006

Reinforcement
Synthetic plies, a/s wires to discharge static electricity, galvanized wire helices

Cover
Smooth, EPDM, white, abrasion, ageing and ozone resistant, cloth finish

Sterilization
Refer to guidelines for cleaning and sanitizing on Diflon weBSite

Marking
Red/white/blue transfer tape DIFLON χ CHI – PFA, embossed according to norm EN 12115 DIFLON PFA EN12115:2011 DN SD PN 16 BAR M Q/Y

Technical characteristics

Temperature range
-40°C / +150°C
(-40°F / +302°F)

Vacuum
675 mmHg (26,6 inHg)

Norm
EN12115

Electrical properties
Type M according to EN 12115 (R<102 Ω)

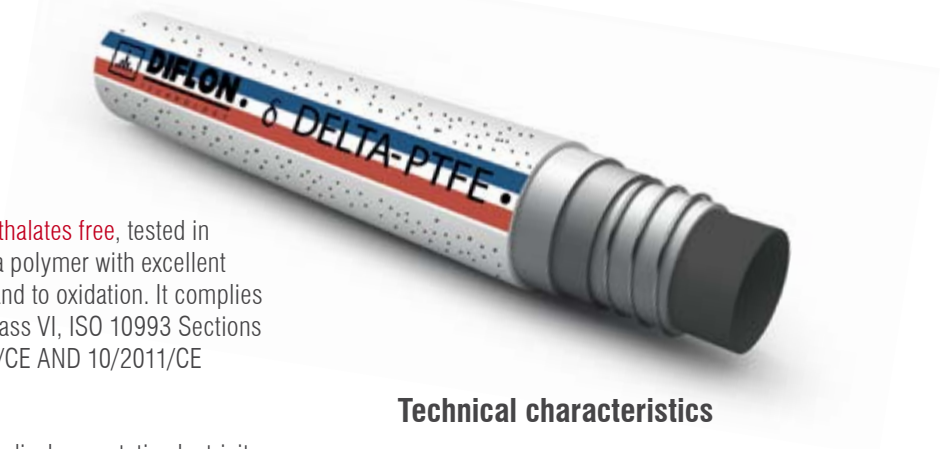
Inside diameter		Outside diameter		Working pressure		Burst pressure		Appr. weight		Bending radius	
mm	in	mm	in	bar	psi	bar	psi	kg/m	IBS/ft	mm	in
13	0,5	25	1,00	16	250	64	1000	0,54	0,38	90	3,54
19	0,75	31	1,22	16	250	64	1000	0,70	0,47	130	5,12
25	1,00	37	1,48	16	250	64	1000	0,88	0,58	170	6,69
32	1,25	44	1,73	16	250	64	1000	1,18	0,79	215	8,46
38	1,50	51	2,00	16	250	64	1000	1,43	0,96	255	10,04
50	1,97	66	2,60	16	250	64	1000	2,08	1,39	330	12,99
63,5	2,50	79,5	3,13	16	250	64	1000	2,96	1,98	430	16,93
75	2,95	91	3,58	16	250	64	1000	3,43	2,30	510	20,08
100	3,94	116	4,57	12	180	48	750	4,60	3,08	675	26,57

Data refer to ambient temperature (20°C).

δ DELTA - PTFE - FC

Use / application

Suction and delivery hose designed according to EN 12115 standards for food, cosmetic and pharmaceutical products, chemicals and solvents, except for chlorine trifluoride, chlorine and fluorine gas, oxygen difluoride, phosgene and molten alkalis (for ex. sodium). Hose resistant to high temperatures, used as connection between pipes and fixed equipments. Designed for the chemical industry, foodstuff, pharmaceutical and cosmetic industry, where a flexible connection is required. The hose is produced with high quality elastomers, with excellent chemical and mechanical properties. Phthalates free tube, tested in compliance with 1907/2006/CE (REACH). Tested in compliance with USP XXXII class VI, not cytotoxic according to ISO 10993 Section 5:2009. Tested and certified hose by INERIS for use in Atex area (ExZone). Not intended for use as an implant material. Not suitable for blood or human fluids.



Description

Tube
PTFE (polytetrafluorethylene) black, conductive, phthalates free, tested in compliance with 1907/2006/CE (REACH). PTFE is a polymer with excellent resistance to high temperature, mechanical stress and to oxidation. It complies with FDA 21 CFR 177.1550 standards, USP XXXII class VI, ISO 10993 Sections 5,10,11:2009, EUROPEAN REGLEMENT 1935/2004/CE AND 10/2011/CE

Reinforcement
synthetic plies, galvanized wire helices, a/s wires to discharge static electricity

Cover
smooth, white with conductive chips, low friction material, non marking when dragged on the floor, oil, chemical, abrasion, ageing and ozone resistant, easy to clean, glossy cover. Meets FDA 21 CFR 177.1520, BFR CAT III, DM 21.03.73 E SEGUENTI, EUROPEAN REGLEMENT 1935/2004/CE

Sterilization
refer to guidelines for cleaning and sanitizing on Diflon weBSite

Marking
red/white/blue transfer tape DIFLON δ DELTA - PTFE - FC, embossed according to norm EN 12115 DIFLON PTFE EN12115:2011 DN SD PN 16 BAR M Q/Y

Technical characteristics

Temperature range
-40°C / +150°C
(-40°F / +302°F)
The operating temperature of the hose is directly dependent upon the specific fluid been conveyed and the length of time the fluid is in contact with the hose

Vacuum
675 mmHg (26,6 inHg)
Electrical properties:
type Ω /T according to EN 12115 ($R<10^6$ Ω, $R<10^9$ Ω through the hose wall)

Norm
EN12115

Inside diameter		Outside diameter		Working pressure		Burst pressure		Appr. weight		Bending radius	
mm	in	mm	in	bar	psi	bar	psi	kg/m	IBS/ft	mm	in
13	0,5	25	1,00	16	250	64	1000	0,54	0,36	90	3,54
19	0,75	31	1,22	16	250	64	1000	0,70	0,47	130	5,12
25	1,00	37	1,48	16	250	64	1000	0,86	0,58	170	6,69
32	1,25	44	1,73	16	250	64	1000	1,17	0,78	220	8,66
38	1,50	51	2,00	16	250	64	1000	1,35	0,90	260	10,24
50	1,97	66	2,60	16	250	64	1000	2,25	1,51	345	13,58
63,5	2,50	79,5	3,13	16	250	64	1000	2,90	1,94	440	17,32
75	2,95	91	3,58	16	250	64	1000	3,88	2,60	520	20,47

Data refer to ambient temperature (20°C).

o OMICRON - VITON

Use / application

Suction and delivery hose designed according to EN 12115 standards for hot oils, chemical and petro-chemical products.

Description

Tube
Viton®, black

Reinforcement
textile plies, a/s copper wire to discharge static electricity, galvanized wire helices

Cover
smooth, CR, black, conductive, abrasion, ageing, ozone and oil resistant, cloth finish

Marking
green/white tape DIFLON o OMICRON - VITON®

Technical characteristics

Temperature range
-25°C / +120°C
(-13°F / +248°F)
The operating temperature of the hose is directly dependent upon the specific fluid been conveyed and the length of time the fluid is in contact with the hose

Vacuum
675 mmHg (26,6 inHg)

Electrical properties
type Ω according to norm EN 12115 ($R<10^6$ Ω)

Norm
EN12115
TRbF 131/2

Inside diameter		Outside diameter		Working pressure		Burst pressure		Appr. weight		Bending radius	
mm	in	mm	in	bar	psi	bar	psi	kg/m	lBS/ft	mm	in
19	0,75	31	1,22	16	250	64	1000	0,81	0,54	125	4,92
25	1,00	37	1,46	16	250	64	1000	1,01	0,68	150	5,91
32	1,25	44	1,73	16	250	64	1000	1,19	0,80	175	6,89
38	1,50	51	2,00	16	250	64	1000	1,48	0,99	225	8,86
50	1,97	66	2,60	16	250	64	1000	2,30	1,54	275	10,83
51	2,00	67	2,64	16	250	64	1000	2,33	1,56	275	10,83
63,5	2,50	79,5	3,13	16	250	64	1000	3,32	2,22	350	13,78
75	2,95	91	3,58	16	250	64	1000	3,83	2,57	400	15,75
76	3,00	92	3,62	16	250	64	1000	3,87	2,59	400	15,75
100	3,94	116	4,57	16	250	64	1000	5,01	3,36	550	21,65
102	4,00	118	4,65	16	250	64	1000	5,05	3,38	550	21,65

Data refer to ambient temperature (20°C).

γ GAMMA - SIL

Use / application

Suction and delivery hose suitable for cosmetic, pharmaceutical and food products. Phthalates free tube, tested in compliance with 1907/2006/CE (REACH). Tested in compliance with USP XXXII class VI, not cytotoxic according to ISO 10993 Section 5:2009. Meets migration test according to BfR Recommendation XV & XXI Cat. 2. Not intended for use as an implant material. Not suitable for blood or human fluids.

Description

Tube
Silicone, translucent, phthalates free, tested in compliance with 1907/2006/CE (REACH). Meets FDA CFR 21 PART 177.2600, USP XXXII class VI requirements, European Pharmacopoeia 3.1.9 Ed. VII 2011, ISO 10993 Sections 5,10,11:2009, BfR Recommendation XV & XXI Cat. 2, European Reglement 1935/2004/CE, DM 21/03/1973 e seguenti, Japan Ministry of Health and Welfare Notice No.370,1959, No.201,2006 and revision 2012, 3A Sanitary Standard Class II.

Reinforcement
High temperature resistant plies stainless steel wire helix

Cover
Smooth, silicone, translucent, heat, ageing, ozone and abrasion resistant, glossy cover

Sterilization
Refer to guidelines for cleaning and sanitizing on Diflon weBSite

Marking
White/blue transfer tape DIFLON γ GAMMA – SIL

Technical characteristics

Temperature range
-60°C / +200°C
(-76°F / +392°F)

Vacuum
675 mmHg (26,6 inHg)

Norm
ISO 1307 for dimensional tolerances

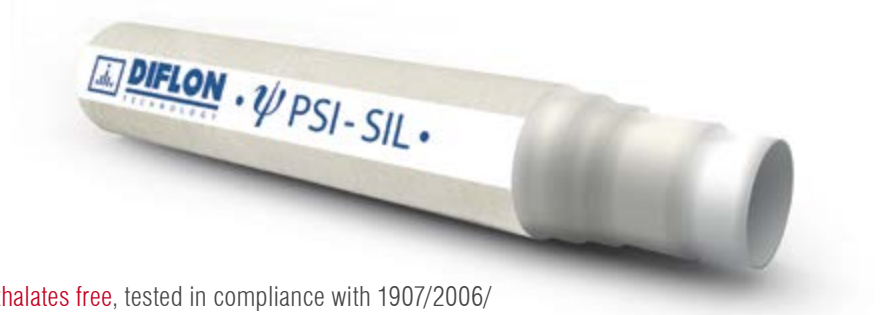
Inside diameter		Outside diameter		Working pressure		Burst pressure		Appr. weight		Bending radius	
mm	in	mm	in	bar	psi	bar	psi	kg/m	IBS/ft	mm	in
13	0,5	24	0,94	15	225	45	675	0,46	0,31	60	2,36
16	0,63	27	1,06	14	210	42	630	0,53	0,36	70	2,76
19	0,75	30	1,18	13	195	39	585	0,60	0,40	80	3,15
25	1,00	36	1,42	10	150	30	450	0,73	0,49	100	3,94
32	1,25	43	1,69	8	120	24	380	0,89	0,60	130	5,12
38	1,50	51	2,00	7	105	21	315	1,21	0,81	155	6,10
51	2,00	64	2,52	6	90	18	270	1,56	1,05	210	8,27
63,5	2,50	78,5	3,09	5	75	15	225	2,32	1,55	260	10,24
76	3,00	91	3,58	4	60	12	180	2,72	1,82	310	12,20
102	4,00	117	4,61	3	45	9	135	3,55	2,38	420	16,54

Data refer to ambient temperature (20°C).

ψ PSI – SIL

Use / application

Delivery hose suitable for cosmetic, pharmaceutical and food products. Phthalates free tube, tested in compliance with 1907/2006/CE (REACH). Tested in compliance with USP XXXII class VI, not cytotoxic according to ISO 10993 Section 5:2009. Meets migration test according to BfR Recommendation XV & XXI Cat. 2. Not intended for use as an implant material. Not suitable for blood or human fluids.



Description

Tube
Silicone, translucent, phthalates free, tested in compliance with 1907/2006/CE (REACH). Meets FDA CFR 21 PART 177.2600, USP XXXII class VI requirements, European Pharmacopoeia 3.1.9 Ed. VII 2011, ISO 10993 Sections 5,10,11:2009, BfR Recommendation XV & XXI Cat. 2, European Reglement 1935/2004/CE, DM 21/03/1973 e seguenti, Japan Ministry of Health and Welfare Notice No.370,1959, No.201,2006 and revision 2012, 3A Sanitary Standard Class II

Reinforcement
High temperature resistant plies

Cover
Smooth, silicone, translucent, heat, ageing, ozone and abrasion resistant, glossy cover

Sterilization
Refer to guidelines for cleaning and sanitizing on Diflon weBSite

Marking
Blue transfer tape DIFLON ψ PSI – SIL to norm EN 12115 DIFLON PFA EN12115:2011 DN SD PN 16 BAR M Q/Y

Technical characteristics

Temperature range
-60°C / +200°C
(-76°F / +392°F)

Norm
ISO 1307 for dimensional tolerances

Inside diameter		Outside diameter		Working pressure		Burst pressure		Appr. weight		Bending radius	
mm	in	mm	in	bar	psi	bar	psi	kg/m	IBS/ft	mm	in
10	0,39	22	0,87	16	250	48	750	0,35	0,23	-	-
13	0,5	24	0,94	15	225	45	675	0,41	0,27	-	-
16	0,63	27	1,06	14	210	42	630	0,48	0,32	-	-
19	0,75	30	1,18	13	195	39	585	0,55	0,37	-	-
25	1,00	36	1,42	10	150	30	450	0,68	0,46	-	-
32	1,25	43	1,69	8	120	24	380	0,83	0,56	-	-
38	1,50	51	2,00	7	105	21	315	0,96	0,64	-	-
51	2,00	64	2,52	6	90	18	270	1,24	0,83	-	-
63,5	2,50	78,5	3,09	5	75	15	225	1,68	1,13	-	-
76	3,00	91	3,58	4	60	12	180	1,98	1,33	-	-
102	4,00	117	4,61	3	45	9	135	2,61	1,75	-	-

Data refer to ambient temperature (20°C).

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ω QMEGA – SIL

Use / application

Suction and delivery hose suitable for cosmetic, pharmaceutical and food products. Phthalates free tube, tested in compliance with 1907/2006/CE (REACH). Tested in compliance with USP XXXII class VI, not cytotoxic according to ISO 10993 Section 5:2009. Not intended for use as an implant material. Not suitable for blood or human fluids.

Description

Tube
Silicone, white, phthalates free, tested in compliance with 1907/2006/CE (REACH). Meets FDA CFR 21 PART 177.2600, USP XXXII class VI requirements, European Pharmacopoeia 3.1.9 Ed. VII 2011, ISO 10993 Sections 5,10,11:2009, BfR Recommendation XV & XXI Cat. 2, European Reglement 1935/2004/CE, DM 21/03/1973 e seguenti, Japan Ministry of Health and Welfare Notice No.370,1959, No.201,2006, 3A Sanitary Standard Class II

Reinforcement
High temperature resistant plies, stainless steel wire helix

Cover
Smooth, silicone, white, heat, ageing, ozone and abrasion resistant, glossy cover

Sterilization
Refer to guidelines for cleaning and sanitizing on Diflon weBSite

Marking
Blue transfer tape DIFLON ω OMEGA – SIL

Technical characteristics

Temperature range
-60°C / +200°C
(-76°F / +392°F)

Vacuum
675 mmHg (26,6 inHg)

Norm
ISO 1307 for dimensional tolerances

Inside diameter		Outside diameter		Working pressure		Burst pressure		Appr. weight		Bending radius	
mm	in	mm	in	bar	psi	bar	psi	kg/m	IBS/ft	mm	in
13	0,5	23	0,91	15	225	45	675	0,38	0,25	60	2,36
16	0,63	26	1,02	14	210	42	630	0,44	0,29	70	2,76
19	0,75	29	1,14	13	195	39	585	0,50	0,34	80	3,15
25	1,00	35	1,38	10	150	30	450	0,61	0,41	100	3,94
32	1,25	42	1,65	8	120	24	380	0,76	0,51	130	5,12
38	1,50	49	1,93	7	105	21	315	1,05	0,70	155	6,10
51	2,00	62	2,44	6	90	18	270	1,36	0,91	210	8,27
63,5	2,50	76,5	3,01	5	75	15	225	2,06	1,38	260	10,24
76	3,00	89	3,50	4	60	12	180	2,42	1,62	310	12,20
102	4,00	115	4,53	3	45	9	135	3,39	2,27	420	16,54

Data refer to ambient temperature (20°C).

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ρ RHO - NBR

Use / application

Suction and delivery hose suitable for fatty and non fatty food products. Phthalates free tube, tested in compliance with 1907/2006/CE (REACH).

Description

Tube
NBR, white, phthalates free, tested in compliance with 1907/2006/CE (REACH). Conforme a FDA 21 CFR 177.2600, BFR RECOMMENDATION XXI CAT 2, DM 21.03.73 E SEGUENTI, EUROPEAN REGLEMENT 1935/2004/CE, JAPAN-MINISTRY OF HEALTH AND WELFARE NOTICE NO.370,1959 AND NO.201,2006, 3A Sanitary Standard Class II. RAL REGISTRATION G-73

Reinforcement
Synthetic plies, , galvanized wire helices

Cover
Smooth, blue, abrasion, ageing, ozone and oil resistant, cloth finish

Sterilization
Refer to guidelines for cleaning and sanitizing on Diflon weBSite

Marking
White transfer tape DIFLON ρ RHO – NBR

Technical characteristics

Temperature range
-25°C / +80°C
(-13°F / +176°F)

Vacuum
675 mmHg (26,6 inHg)

Norm
ISO 1307 for dimensional tolerances

Inside diameter		Outside diameter		Working pressure		Burst pressure		Appr. weight		Bending radius	
mm	in	mm	in	bar	psi	bar	psi	kg/m	IBS/ft	mm	in
19	0,75	31	1,22	10	150	30	450	0,74	0,50	60	2,36
25	1,00	37	1,46	10	150	30	450	0,91	0,61	85	3,35
32	1,25	44	1,73	10	150	30	450	1,12	0,75	115	4,53
38	1,50	51	2,00	10	150	30	450	1,40	0,94	150	5,91
51	2,00	64	2,52	10	150	30	450	1,80	1,21	210	8,27
63,5	2,50	79,5	3,09	10	150	30	450	2,70	1,81	265	10,43
75	2,95	91	3,58	10	150	30	450	3,17	2,12	320	12,60
102	4,00	118	4,65	10	150	30	450	4,42	2,96	430	16,93

Data refer to ambient temperature (20°C).

σ SIGMA - NBR

Use / application

Light and flexible lorry collecting hose suitable for fatty and not fatty food products. Phthalates free tube, tested in compliance with 1907/2006/CE (REACH).

Description

Tube
NBR, translucent, phthalates free, tested in compliance with 1907/2006/CE (REACH). Meets FDA 21 CFR 177.1520, BFR CAT III, DM 21.03.73 E SEGUENTI, KTW AND W270, EUROPEAN REGLEMENT 1935/2004/CE, AND 10/2011/CE, JAPAN-MINISTRY OF HEALTH AND WELFARE NOTICE NO.370,1959 AND NO.201,2006

Reinforcement
Synthetic plies, galvanized wire helices

Cover
Smooth, blue, abrasion, ageing, ozone and oil resistant, cloth finish

Sterilization
Refer to guidelines for cleaning and sanitizing on Diflon weBSite

Marking
White transfer tape DIFLON σ SIGMA – NBR

Technical characteristics

Temperature range
-25°C / +80°C
(-13°F / +176°F)

Vacuum
675 mmHg (26,6 inHg)

Norm
ISO 1307 for dimensional tolerances

Inside diameter		Outside diameter		Working pressure		Burst pressure		Appr. weight		Bending radius	
mm	in	mm	in	bar	psi	bar	psi	kg/m	IBS/ft	mm	in
25	1,00	36	1,42	6	90	18	270	0,86	0,58	75	2,95
32	1,25	43	1,69	6	90	18	270	1,06	0,71	95	3,74
38	1,50	50	1,97	6	90	18	270	1,32	0,88	115	4,53
51	2,00	63	2,48	6	90	18	270	1,71	1,15	150	5,91
63,5	2,50	75,5	2,97	6	90	18	270	2,16	1,45	190	7,48
76	2,95	90	3,54	6	90	18	270	3,14	2,10	230	9,06
102	4,00	116	4,57	6	90	18	270	4,21	2,82	300	11,81

Data refer to ambient temperature (20°C).

β BETA - EPDM

Use / application

Suction and delivery hose designed according to EN 12115 standards for chemical products. Tested and certified hose by INERIS for use in Atex area (Ex-Zone).

Description

Tube
EPDM, black, conductive

Cover
Smooth, EPDM, black, conductive, abrasion, ageing and ozone resistant, cloth finish

Marking
Lilac tape DIFLON β BETA - EPDM embossed according to norm EN 12115 :2011 DN SD PN 16 BAR Ω/T Q/Y

Technical characteristics

Temperature range
-40°C / +120°C
(-40°F / +248°F)

Vacuum
675 mmHg (26,6 inHg)

Electrical properties
Type Ω/T according to norm EN 12115 ($R<10^6$, $R<10^9$ Ω through the hose wall)

Norm
EN12115

Inside diameter		Outside diameter		Working pressure		Burst pressure		Appr. weight		Bending radius	
mm	in	mm	in	bar	psi	bar	psi	kg/m	IBS/ft	mm	in
19	0,75	31	1,22	16	250	64	1000	0,66	0,44	65	2,58
25	1,00	37	1,46	16	250	64	1000	0,81	0,54	90	3,54
32	1,25	44	1,73	16	250	64	1000	0,99	0,66	120	4,72
38	1,50	51	2,00	16	250	64	1000	1,30	0,87	155	6,10
50	1,97	66	2,60	16	250	64	1000	2,13	1,43	215	8,46
51	2,00	67	2,64	16	250	64	1000	2,16	1,45	215	8,46
63,5	2,50	79,5	3,13	16	250	64	1000	2,86	1,92	275	10,83
75	2,95	91	3,58	16	250	64	1000	3,41	2,28	330	12,99
76	3,00	92	3,62	16	250	64	1000	3,45	2,31	330	12,99
100	3,94	116	4,57	16	250	64	1000	4,41	2,95	450	17,72
102	4,00	118	4,65	16	250	64	1000	4,46	2,99	450	17,72

Data refer to ambient temperature (20°C).

μ MI -EPDM

Use / application

Suction and delivery hose suitable for a wide range of food products. Not recommended for fatty food products and oil. Phthalates free tube, tested in compliance with 1907/2006/CE (REACH).

Description

Tube
EPDM, white, phthalates free, tested in compliance with 1907/2006/CE (REACH). Meets FDA 21 CFR 177.2600, BFR RECOMMENDATION XXI CAT 2, DM 21.03.73 AND FOLLOWING, EUROPEAN REGLEMENT 1935/2004/CE, JAPAN-MINISTRY OF HEALTH AND WELFARE NOTICE NO.370,1959 AND NO.201,2006, 3A Sanitary Standard Class II. RAL REGISTRATION G-74

Reinforcement
Synthetic plies, galvanized wire helices

Cover
Smooth, blue, abrasion, ageing, ozone and oil resistant, cloth finish

Sterilization
Refer to guidelines for cleaning and sanitizing on Diflon weBSite

Marking
White transfer tape DIFLON μ MI –EPDM

Technical characteristics

Temperature range
-40°C / +120°C
(-40°F / +248°F)

Vacuum
675 mmHg (26,6 inHg)

Norm
ISO 1307 for dimensional tolerances

Inside diameter		Outside diameter		Working pressure		Burst pressure		Appr. weight		Bending radius	
mm	in	mm	in	bar	psi	bar	psi	kg/m	IBS/ft	mm	in
19	0,75	31	1,22	10	150	30	450	0,70	0,47	60	2,36
25	1,00	37	1,46	10	150	30	450	0,85	0,57	85	3,35
32	1,25	44	1,73	10	150	30	450	1,04	0,70	115	4,53
38	1,50	51	2,00	10	150	30	450	1,31	0,88	150	5,91
51	2,00	64	2,52	10	150	30	450	1,69	1,13	210	8,27
63,5	2,50	79,5	3,09	10	150	30	450	2,55	1,71	265	10,43
75	2,95	91	3,58	10	150	30	450	2,99	2,00	320	12,60
102	4,00	118	4,65	10	150	30	450	4,18	2,80	430	16,93

Data refer to ambient temperature (20°C).

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ν NI - EPDM

Use / application

Suction and delivery hose suitable for beer and a wide range of non fatty food products with an improved resistance to higher pressure. Phthalates free tube, tested in compliance with 1907/2006/CE (REACH).

Description

Tube
EPDM, white, phthalates free, tested in compliance with 1907/2006/CE (REACH). Meets FDA 21 CFR 177.2600, BFR RECOMMENDATION XXI CAT 2, DM 21.03.73 AND FOLLOWING, EUROPEAN REGLEMENT 1935/2004/CE, JAPAN-MINISTRY OF HEALTH AND WELFARE NOTICE NO.370,1959 AND NO.201,2006, 3A Sanitary Standard Class II. RAL REGISTRATION G-74

Reinforcement
Synthetic plies, galvanized wire helices

Cover
Smooth, red, abrasion, ageing and ozone, cloth finish

Sterilization
Refer to guidelines for cleaning and sanitizing on Diflon weBSite

Marking
White transfer tape DIFLON ν NI –EPDM

Technical characteristics

Temperature range
-40°C / +120°C
(-40°F / +248°F)

Vacuum
675 mmHg (26,6 inHg)

Norm
ISO 1307 for dimensional tolerances

Inside diameter		Outside diameter		Working pressure		Burst pressure		Appr. weight		Bending radius	
mm	in	mm	in	bar	psi	bar	psi	kg/m	IBS/ft	mm	in
38	1,5	53	2,09	16	250	48	750	1,48	0,99	155	6,10
50	1,97	66	2,60	16	250	48	750	2,05	1,37	215	8,46
51	2,00	66	2,60	16	250	48	750	1,92	1,29	215	8,46
63,5	2,50	81	3,19	16	250	48	750	2,98	2,00	275	10,83
65	2,56	81	3,19	16	250	48	750	2,84	1,90	275	10,83
75	2,95	94	3,70	16	250	48	750	4,06	2,72	330	12,99
76	3,00	94	3,70	16	250	48	750	3,87	2,59	330	12,99
100	3,94	120	4,72	16	250	48	750	5,38	3,60	450	17,72
102	4,00	120	4,72	16	250	48	750	5,19	3,48	450	17,72

Data refer to ambient temperature (20°C).

ι IOTA – UPE

Use / application

Suction and delivery hose designed according to EN 12115 standards for chemical products.
Phthalates free tube, tested in compliance with 1907/2006/CE (REACH).

Description

Tube
UPE, translucent. Phthalates free, tested in compliance with 1907/2006/CE (REACH). Meets FDA 21 CFR 177.1520, BFR CAT III, DM 21.03.73 AND FOLLOWING, EUROPEAN REGLEMENT 1935/2004/CE AND 10/2011/CE, JAPAN-MINISTRY OF HEALTH AND WELFARE NOTICE NO.370,1959 AND NO.201,2006.

Reinforcement
Textile plies, a/s copper wire to discharge static electricity, galvanized wire helices

Cover
Smooth, EPDM, black, conductive, abrasion, ageing and ozone resistant, cloth finish

Sterilization
consultare le indicazioni per la pulizia e sanificazione sul sito Diflon

Marking
blue/white tape DIFLON ι IOTA UPE embossed according to norm EN 12115
UHMWPE EN12115:2011 DN SD PN 16 BAR Ω Q/Y

Technical characteristics

Temperature range
-35°C / +100°C
(-31°F / +212°F)

Vacuum
675 mmHg (26,6 inHg)

Norm
EN12115, TRbF 131/2

Electrical properties
Type Ω according to norm EN 12115 ($R<10^6$ W)

Inside diameter		Outside diameter		Working pressure		Burst pressure		Appr. weight		Bending radius	
mm	in	mm	in	bar	psi	bar	psi	kg/m	IBS/ft	mm	in
19	0,75	31	1,22	16	250	64	1000	0,75	0,5	115	4,53
25	1,00	37	1,46	16	250	64	1000	0,92	0,62	155	610
32	1,25	44	1,73	16	250	64	1000	1,10	0,74	200	7,87
38	1,50	51	2,00	16	250	64	1000	1,39	0,93	240	9,45
50	1,97	66	2,60	16	250	64	1000	2,30	1,54	330	12,99
51	2,00	67	2,64	16	250	64	1000	2,33	1,56	330	12,99
63,5	2,50	79,5	3,13	16	250	64	1000	3,09	2,07	415	16,34
75	2,95	91	3,58	16	250	64	1000	3,58	2,40	500	19,69
76	3,00	92	3,62	16	250	64	1000	3,62	2,42	500	19,69
100	3,94	116	4,57	16	250	64	1000	4,63	3,10	675	26,57
102	4,00	118	4,65	16	250	64	1000	4,67	3,13	675	26,57

Data refer to ambient temperature (20°C).

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ζ ZETA - UPE FC

Use / application

Suction and delivery hose designed according to EN 12115 standards for chemical products. Phthalates free tube, tested in compliance with 1907/2006/CE (REACH). Tested and certified hose by INERIS for use in Atex area (Ex-Zone).

Description

Tube
UPE, black, conductive, phthalates free, tested in compliance with 1907/2006/CE (REACH). Meets FDA 21 CFR 177.1520, BFR CAT III, DM 21.03.73 AND FOLLOWING, EUROPEAN REGLEMENT 1935/2004/CE and 10/2011/CE

Reinforcement
Textile plies, a/s copper wire to discharge static electricity, galvanized wire helices

Cover
Smooth, EPDM, black, conductive, abrasion, ageing and ozone resistant, cloth finish

Sterilization
Refer to guidelines for cleaning and sanitizing on DIFLON weBSite.

Marking
Blue/white tape DIFLON ζ ZETA - UPE FC embossed according to norm EN 12115

Technical characteristics

Temperature range
-35°C / +100°C
(-31°F / +212°F)

Vacuum
675 mmHg (26,6 inHg)

Norm
EN12115, TRbF 131/2

Electrical properties
Type W/T according to norm EN 12115 ($R<10^6$ W, $R<10^9$ W through the hose wall)

Inside diameter		Outside diameter		Working pressure		Burst pressure		Appr. weight		Bending radius	
mm	in	mm	in	bar	psi	bar	psi	kg/m	lBS/ft	mm	in
19	0,75	31	1,22	16	250	64	1000	0,75	0,5	115	4,53
25	1,00	37	1,46	16	250	64	1000	0,92	0,62	155	610
32	1,25	44	1,73	16	250	64	1000	1,10	0,74	200	7,87
38	1,50	51	2,00	16	250	64	1000	1,39	0,93	240	9,45
50	1,97	66	2,60	16	250	64	1000	2,30	1,54	330	12,99
51	2,00	67	2,64	16	250	64	1000	2,33	1,56	330	12,99
63,5	2,50	79,5	3,13	16	250	64	1000	3,09	2,07	415	16,34
75	2,95	91	3,58	16	250	64	1000	3,58	2,40	500	19,69
76	3,00	92	3,62	16	250	64	1000	3,62	2,42	500	19,69
100	3,94	116	4,57	16	250	64	1000	4,63	3,10	675	26,57
102	4,00	118	4,65	16	250	64	1000	4,67	3,13	675	26,57

Data refer to ambient temperature (20°C).

η ETA - UPE CHIPS *full conductive*

Use / application

Suction and delivery hose designed according to EN 12115 standards for chemical products. Phthalates free tube, tested in compliance with 1907/2006/CE (REACH).

Description

Tube
UPE, white with conductive chips, phthalates free, tested in compliance with 1907/2006/CE (REACH). Meets FDA 21 CFR 177.1520, BFR CAT III, DM 21.03.73 E SEGUENTI, EUROPEAN REGLEMENT 1935/2004/CE

Reinforcement
Textile plies, a/s wire to discharge static electricity, galvanized wire helices

Cover
Smooth, EPDM, black, conductive, abrasion, ageing and ozone resistant, cloth finish

Sterilization
Refer to guidelines for cleaning and sanitizing on DIFLON weBSite

Marking
Blue/white tape DIFLON ETA UPE CHIPS FULL CONDUCTIVE embossed according to norm EN 12115 DIFLON UHMWPE EN12115:2011 DN SD PN 16 BAR Ω/T Q/Y

Technical characteristics

Temperature range
-35°C / +100°C
(-31°F / +212°F)

Vacuum
675 mmHg (26,6 inHg)

Norm
EN12115, TRbF 131/2

Electrical properties
Type /T according to norm EN 12115 ($R<10^{6,}$ Ω, $R<10^{9}$ Ω through the hose wall)

Inside diameter		Outside diameter		Working pressure		Burst pressure		Appr. weight		Bending radius	
mm	in	mm	in	bar	psi	bar	psi	kg/m	lBS/ft	mm	in
19	0,75	31	1,22	16	250	64	1000	0,75	0,5	115	4,53
25	1,00	37	1,46	16	250	64	1000	0,92	0,62	155	6,10
32	1,25	44	1,73	16	250	64	1000	1,10	0,74	200	7,87
38	1,50	51	2,00	16	250	64	1000	1,39	0,93	240	9,45
50	1,97	66	2,60	16	250	64	1000	2,30	1,54	330	12,99
51	2,00	67	2,64	16	250	64	1000	2,33	1,56	330	12,99
63,5	2,50	79,5	3,13	16	250	64	1000	3,09	2,07	415	16,34
75	2,95	91	3,58	16	250	64	1000	3,58	2,40	500	19,69
76	3,00	92	3,62	16	250	64	1000	3,62	2,42	500	19,69
100	3,94	116	4,57	16	250	64	1000	4,63	3,10	675	26,57
102	4,00	118	4,65	16	250	64	1000	4,67	3,13	675	26,57

Data refer to ambient temperature (20°C).

ξXI - UPE

Use / application

Suction and delivery hose suitable for fatty and non fatty food products. Phthalates free tube, tested in compliance with 1907/2006/CE (REACH).

Description

Tube
UPE, translucent, phthalates free, tested in compliance with 1907/2006/CE (REACH). Meets FDA 21 CFR 177.1520, BFR CAT III, DM 21.03.73 AND FOLLOWING, KTW AND W270, EUROPEAN REGLEMENT 1935/2004/CE, AND 10/2011/CE, JAPAN-MINISTRY OF HEALTH AND WELFARE NOTICE NO.370,1959 AND NO.201,2006

Reinforcement
Synthetic plies

Cover
Smooth, blue, abrasion, ageing, ozone and oil resistant, cloth finish

Sterilization
Refer to guidelines for cleaning and sanitizing on Diflon weBSite

Marking
White transfer tape DIFLON ξ XI – UPE

Technical characteristics

Temperature range
-35°C / +55°C
(-31°F / +131°F)

Norm
ISO 1307 for dimensional tolerances KTW class A

Inside diameter		Outside diameter		Working pressure		Burst pressure		Appr. weight		Bending radius	
mm	in	mm	in	bar	psi	bar	psi	kg/m	IBS/ft	mm	in
10	0,39	17,5	0,69	20	300	60	900	0,21	0,14	50	1,97
13	0,50	21,5	0,85	20	300	60	900	0,30	0,20	65	2,56
16	0,63	26	1,02	20	300	60	900	0,43	0,29	80	3,15
19	0,75	29	1,14	20	300	60	900	0,49	0,33	95	3,74
25	1,00	35	1,38	20	300	60	900	0,62	0,42	140	5,51
32	1,25	45	1,77	20	300	60	900	1,06	0,71	190	7,48
38	1,50	52	2,05	20	300	60	900	1,35	0,90	230	9,06
40	1,57	54	2,13	20	300	60	900	1,39	0,93	245	9,65
50	1,97	66	2,60	20	300	60	900	1,94	1,30	310	12,20

Data refer to ambient temperature (20°C).

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κ KAPPA - UPE

Use / application

Light and flexible lorry collecting hose suitable for fatty and not fatty food products. Phthalates free tube, tested in compliance with 1907/2006/CE (REACH) Suction and delivery hose suitable for beer, alcohol concentration up to 96% and a wide range of food products with an improved resistance to higher pressure. Phthalates free tube, tested in compliance with 1907/2006/CE (REACH)..

Description

Tube
UPE, translucent, phthalates free, tested in compliance with 1907/2006/CE (REACH). Meets FDA 21 CFR 177.1520, BFR CAT III, DM 21.03.73 AND FOLLOWING, EUROPEAN REGLEMENT 1935/2004/CE AND 10/2011/CE, JAPAN-MINISTRY OF HEALTH AND WELFARE NOTICE NO.370,1959 AND NO.201,2006

Reinforcement
synthetic plies, galvanized wire helices

Cover
smooth, blue, abrasion, ageing, ozone and oil resistant, cloth finish

Sterilization
refer to guidelines for cleaning and sanitizing on Diflon weBSite

Marking
white transfer tape DIFLON κ KAPPA - UPE

Technical characteristics

Temperature range
35°C / +100°C
(-31°F / +212°F)

Vacuum
675 mmHg (26,6 inHg)

Norm
ISO 1307 for dimensional tolerances

Inside diameter		Outside diameter		Working pressure		Burst pressure		Appr. weight		Bending radius	
mm	in	mm	in	bar	psi	bar	psi	kg/m	IBS/ft	mm	in
38	1,50	51	2,00	16	250	48	750	1,34	0,90	240	9,45
50	1,97	64	2,52	16	250	48	750	1,84	1,23	330	12,99
51	2,00	64	2,52	16	250	48	750	1,72	1,15	330	12,99
63,5	2,50	81	3,19	16	250	48	750	3,06	2,05	415	16,34
76	3,00	93	3,66	16	250	48	750	3,50	2,35	500	19,69
102	4,00	119	4,69	16	250	48	750	4,78	3,20	675	26,57

Data refer to ambient temperature (20°C).

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υ UPSILON - UPE

Use / application

Suction and delivery hose designed according to EN 12115 standards for chemical and pharmaceutical products. Phthalates free tube, tested in compliance with 1907/2006/CE (REACH).

Description

Tube
UPE, white with conductive chips, phthalates free, tested in compliance with 1907/2006/CE (REACH). Meets FDA 21 CFR 177.1520, BFR CAT III, DM 21.03.73 AND FOLLOWING, EUROPEAN REGLEMENT 1935/2004/CE

Reinforcement
textile plies, a/s wire to discharge static electricity, galvanized wire helices

Cover
smooth, EPDM, grey, abrasion, ageing and ozone resistant, cloth finish

Sterilization
refer to guidelines for cleaning and sanitizing on Diflon weBSite

Marking
blue/white tape DIFLON υ UPSILON - UPE embossed according to norm EN 12115 UHMWPE EN12115:2011 DN SD PN 16 BAR Ω Q/Y

Technical characteristics

Temperature range
-35°C / +100°C
(-31°F / +212°F)

Vacuum
675 mmHg (26,6 inHg)

Electrical properties
type Ω according to norm EN 12115 ($R<10^6$ Ω)

Norm
EN12115

Inside diameter		Outside diameter		Working pressure		Burst pressure		Appr. weight		Bending radius	
mm	in	mm	in	bar	psi	bar	psi	kg/m	IBS/ft	mm	in
19	0,75	31	1,22	16	250	64	1000	0,75	0,5	115	4,53
25	1,00	37	1,46	16	250	64	1000	0,92	0,62	155	610
32	1,25	44	1,73	16	250	64	1000	1,10	0,74	200	7,87
38	1,50	51	2,00	16	250	64	1000	1,39	0,93	240	9,45
50	1,97	66	2,60	16	250	64	1000	2,30	1,54	330	12,99
51	2,00	67	2,64	16	250	64	1000	2,33	1,56	330	12,99
63,5	2,50	79,5	3,13	16	250	64	1000	3,09	2,07	415	16,34
75	2,95	91	3,58	16	250	64	1000	3,58	2,40	500	19,69
76	3,00	92	3,62	16	250	64	1000	3,62	2,42	500	19,69
100	3,94	116	4,57	16	250	64	1000	4,63	3,10	675	26,57
102	4,00	118	4,65	16	250	64	1000	4,67	3,13	675	26,57

Data refer to ambient temperature (20°C).

π PI - NR

Use / application

Suction and delivery hose suitable for milk, milk by-products, wine and non fatty food products. Phthalates free tube, tested in compliance with 1907/2006/CE (REACH).

Description

Tube
NR, white, phthalates free, tested in compliance with 1907/2006/CE (REACH). Meets FDA 21 CFR 177.2600, BFR RECOMMENDATION XXI CAT 2, DM 21.03.73 E SEGUENTI, EUROPEAN REGLEMENT 1935/2004/CE, JAPAN-MINISTRY OF HEALTH AND WELFARE NOTICE NO.370,1959 AND NO.201,2006. RAL REGISTRATION G-72

Reinforcement
synthetic plies, galvanized wire helices

Cover
smooth, red, abrasion, ageing and ozone resistant, cloth finish

Sterilization
refer to guidelines for cleaning and sanitizing on Diflon weBSite

Marking
white transfer tape DIFLON π PI - NR

Technical characteristics

Temperature range
-40°C / +80°C
(-40°F / +176°F)

Vacuum
675 mmHg (26,6 inHg)

Norm
ISO 1307 for dimensional tolerances

Inside diameter		Outside diameter		Working pressure		Burst pressure		Appr. weight		Bending radius	
mm	in	mm	in	bar	psi	bar	psi	kg/m	IBS/ft	mm	in
19	0,75	31	1,22	10	150	30	450	0,66	0,44	60	2,36
25	1,00	37	1,46	10	150	30	450	0,81	0,54	85	3,35
32	1,25	44	1,73	10	150	30	450	1,00	0,67	115	4,53
38	1,50	51	2,00	10	150	30	450	1,28	0,86	150	5,91
51	2,00	64	2,52	10	150	30	450	1,66	1,11	210	8,27
63,5	2,50	78,5	3,09	10	150	30	450	2,52	1,69	265	10,43
76	3,00	91	3,58	10	150	30	450	2,97	1,99	320	12,60
102	4,00	118	4,65	10	150	30	450	4,16	2,79	430	16,93

Data refer to ambient temperature (20°C).

Mail: info@diflon.it Phone: (+39) 035 4491137 Sede Legale: Piazza Castello, 26 - 20121Milano (MI), Italia Sede Operativa: Via Sicilia, 8 - 24060, Carobbio degli Angeli (BG), Italia

τ TAU -IIR

Use / application

Premium grade low permeation suction and delivery hose suitable for a wide range of products. Recommended for wine and spirits. Phthalates free tube, tested in compliance with 1907/2006/CE (REACH).

Description

Tube
IIR, white, phthalates free, tested in compliance with 1907/2006/CE (REACH). Meets FDA 21 CFR 177.2600, DM 21.03.73 AND FOLLOWING, EUROPEAN REGLEMENT 1935/2004/CE, JAPAN-MINISTRY OF HEALTH AND WELFARE NOTICE NO.370,1959 AND NO.201,2006, 3A Sanitary Standard Class II

Reinforcement
synthetic plies, galvanized wire helices

Cover
smooth, red, abrasion, ageing and ozone resistant, cloth finish

Sterilization
refer to guidelines for cleaning and sanitizing on Diflon weBSite

Marking
white transfer tape DIFLON τ TAU -IIR

Technical characteristics

Temperature range
-40°C / +120°C
(-40°F / +248°F)

Vacuum
675 mmHg (26,6 inHg)

Norm
ISO 1307 for dimensional tolerances

Inside diameter		Outside diameter		Working pressure		Burst pressure		Appr. weight		Bending radius	
mm	in	mm	in	bar	psi	bar	psi	kg/m	IBS/ft	mm	in
19	0,75	31	1,22	10	150	30	450	0,71	0,48	60	2,36
25	1,00	37	1,46	10	150	30	450	0,87	0,58	85	3,35
32	1,25	44	1,73	10	150	30	450	1,06	0,71	115	4,53
38	1,50	51	2,00	10	150	30	450	1,34	0,90	150	5,91
51	2,00	64	2,52	10	150	30	450	1,72	1,15	210	8,27
63,5	2,50	78,5	3,09	10	150	30	450	2,59	1,74	265	10,43
76	3,00	91	3,58	10	150	30	450	3,04	2,04	320	12,60
102	4,00	118	4,65	10	150	30	450	4,25	2,85	430	16,93

Data refer to ambient temperature (20°C).

F F DIGAMMA - NBR 1

Use / application

Suction and delivery hose designed according to EN 12115 standards for oil and petrol, aromatic content up to 50%. Tested and certified hose by INERIS for use in Atex area (Ex- Zone).

Description

Tube
NBR 1, black, conductive

Reinforcement
Synthetic plies, a/s copper wire to discharge static electricity, galvanized wire helices

Cover
Smooth, CR, black, conductive, abrasion, ageing, ozone and oil resistant, cloth finish

Marking
Yellow tape DIFLON F F DIGAMMA embossed according to norm EN 1211 NBR1

Technical characteristics

Temperature range
-30°C / +100°C
(-22°F/ +212°F)

Vacuum
675 mmHg (26,6 inHg)

Electrical properties
Type Ω/T according to norm EN 12115 ($R<10^6$, $R<10^9$
through the hose wall)

Inside diameter		Outside diameter		Working pressure		Burst pressure		Appr. weight		Bending radius	
mm	in	mm	in	bar	psi	bar	psi	kg/m	IBS/ft	mm	in
19	0,75	31	1,22	16	250	64	1000	0,69	0,46	65	2,56
25	1,00	37	1,46	16	250	64	1000	0,85	0,57	90	3,54
32	1,25	44	1,73	16	250	64	1000	1,06	0,71	120	4,72
38	1,50	51	2,00	16	250	64	1000	1,42	0,95	155	6,10
50	1,97	66	2,60	16	250	64	1000	2,19	1,47	215	8,46
51	2,00	67	2,64	16	250	64	1000	2,22	1,49	215	8,46
63,5	2,50	79,5	3,13	16	250	64	1000	3,05	2,04	275	10,83
75	2,95	91	3,58	16	250	64	1000	3,54	2,37	330	12,99
76	3,00	92	3,62	16	250	64	1000	3,58	2,40	330	12,99
100	3,94	116	4,57	16	250	64	1000	4,58	3,07	450	17,72
102	4,00	118	4,65	16	250	64	1000	4,67	3,13	675	26,57

Data refer to ambient temperature (20°C).

Crimping Example

The phase 1,2,3 exposed as shown in the photos below, represent the construction of a flexible ALFA-type PTFE connected hose with a quick coupling type Camlok and fitting 304 internally lined with PFA.
Pressed with stainless steel ring AISI 304

Guidelines for cleaning and sanitizing hoses

The cleaning and sanitizing advices here below indicated must be considered guidelines only.
It is necessary that all applicable government regulations pertaining to the cleaning and sanitizing of the food hoses and food hoses assemblies be followed and respected. Therefore we declare that governmental regulations supersede the guideline contained herein.
The hoses' life is directly connected to the cleaning and sanitizing process due to the mechanical and chemical stresses which occur during the process itself.
The service period of rubber hoses is dependent on their formulation and the environment of use which in turn is influenced by the product, process temperature, cleaning and bactericidal compounds and time of exposure. Users should frequently check the condition of the rubber hose material product contact surfaces.
Such observations are necessary to determinate the actual sanitary service period of rubber hoses. It is further recommended to replace the rubber hose before surface imperfections or sloughing occurs.
A planned periodic replacement should be established and followed.
Food hose users should be guided by the cleaning and sanitizing procedures of their own specific production field.
For example the wine industry may have different standards than the dairy industry and any standards applicable to a specific industry supersede the guideline below indicated.
The cleaning and sanitizing of food hoses and hose assemblies is intended to remove any food particles or residues such as detergents or disinfectant that could be the source of harmful bacteria microorganism or other sources of contamination.
The effectiveness of the guidelines below indicated depends on the attention and assiduity given by users.

CLEANING AND SANITIZING STEPS

1. FREQUENCY The frequency of the cleaning and sanitizing cycle needs to be programmed in according to the type of food or beverage used and to the contamination risk level. In principle, the cleaning and sanitizing process should be conducted on a frequent basis.

2. WASHING An accurately washing with hot drinking water is the first step in the cleaning process. Hot potable water will facilitate the cleaning, but not eliminating the need nor to clean the pipe with suitable detergents, nor to disinfect it.

The temperature of the hot water and duration of the washing/rinsing cycle will depend upon the characteristic of the material.
The initial washing/rinsing with hot potable water should finish as soon as the conveyance process will be completed. All residual water and any other residue from the initial washing/rinsing cycle must be drained away completely.

3. CLEANING/DISINFECTING The selection of a specific detergent and of a specific disinfectant will depend on the material/products being conveyed.
The recommendation of the manufacturer of the detergent and of the disinfectant should be strictly followed especially regarding concentration levels.
After the cleaning of the hose with detergent followed by the rinse of it with potable water, the hose must be sterilized either with steam or withchemical solution.
Steam is classified as "Physical" disinfectants: its effectiveness in eliminating bacteria and other contaminants varies according to the material and to the procedure employed by the users.

Guidelines for cleaning and sanitizing hoses

Chemical disinfectant such as caustic soda, nitric acid, phosphoric acid, chloroacetic acid or other acids suitable for disinfecting food hoses must be carefully selected to ensure optimal effectiveness while also assuring maximum safety and health.
When selecting a particular disinfectant it is necessary to pay strict attention to concentration levels, temperature, cycle time, etc. The type of product/material being conveyed must be taken into consideration when selecting a specific disinfectant. As soon as the disinfecting treatment with chemical solutions is made, the hose must be carefully rinsed for a sufficiently long time with potable water in order to eliminate any chemical residues from the disinfecting treatment.

4. PROCESS CONTROLS The result of the cleaning and sanitizing process must be regularly checked to ensure that all contamination and residuals have been eliminated. Any non conforming events need to be solved with a corrective action procedure.
The hoses' life is directly connected to the cleaning and sanitizing process due to the mechanical and chemical stresses which occur during the process itself.
The service life of rubber hoses is directly dependent on frequency and time of exposure to PHYSICAL and CHEMICAL disinfectants.
Users should frequently check the condition of the rubber hose material product contact surfaces.
Such oBServations are necessary to determinate the actual sanitary service period of rubber hoses. The present advices are based on tests and on generally available sources, that are believed to be reliable.
However must be considered as indicatives cause they don't take care about all variable that may arise during the utilization.

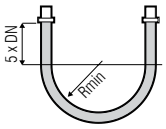
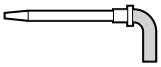
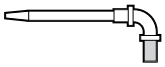
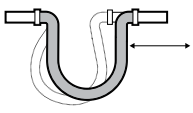
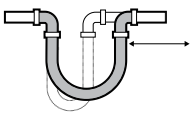
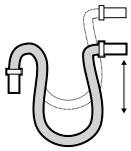
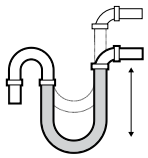
	Medium	*Hose Tube*	*Concetration*	*Temperature*
RINSING	Hot water	NR/NBR/SILICONE/ EPDM/IIR/UPE/PTFE	-	Max 90°C
PHYSICAL DISINFECTANT	Steam	NR/NBR	-	Max 110°C
				Max 10 min
		EPDM/IIR/UPE/PTFE	-	Max 130°C
				Max 30 min
		SILICONE	-	Max 135°C
				Max 18 min
CHEMICAL DISINFECTANT	Acid [i.e. Nitric acid]	NR/NBR/SILICONE	0,1%	Max 65°C
			2%	Max 25°C
		EPDM/IIR/UPE/PTFE	0,1%	Max 85°C
			3%	Max 25°C
	Alkaline solution [i.e. Caustic soda]	NR/NBR/SILICONE	2%	Max 65°C
			4%	Max 25°C
		EPDM/IIR/UPE/PTFE	2%	Max 85°C
			5%	Max 25°C
	Disinfectant [i.e. Peracetic acid]	NR/NBR/SILICONE	1%	1%
		EPDM/IIR/UPE/PTFE		Max 40°C

Installation instruction for hoses

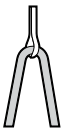
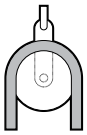
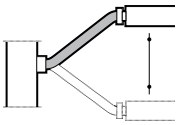
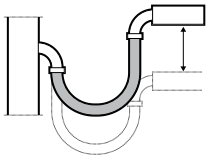
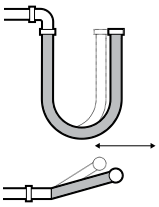
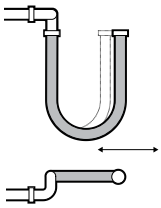
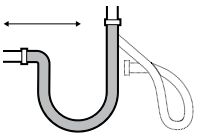
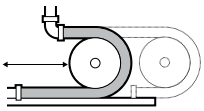
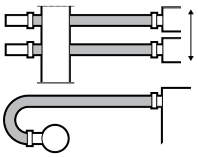
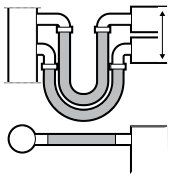
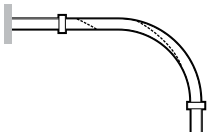
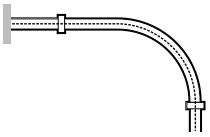
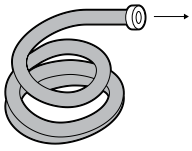
Diflon Lined hoses are high quality products. They are reliable and they have a long life. In order to obtain the best performances, it is important to choice the correct type and install them in right manner. Diflon Flexiline hoses can be used in several fields. In case of particularly critical conditions, please contact our technical service. In normal conditions please apply the following instructions. The sketches show proper application and installation compared to faulty procedures.

Correct choice of length:
The ends of the hose should not be bended or twisted. This so-called neutral portion of the hose ends should have a length of 5 x DN.

Bending radius should not be less than wath indicated in our catalogue. S-bends are to be avoided. Avoid any hose twist. In most cases hose twist can be avoided by adopting opportune solutions during installation. For example, if the hose moves, it should be installed so that the axis of the hose and the direction of the motion are on the same plane. In this case hose twist cannot occur. Ensure strain-free tightening. Use a second wrench on hose socket to prevent strain during final tightening.

Wrong		Right	
Example 1: hose length not sufficient. Bending directly behind the fitting.		Hose is sufficiently long to form a natural bending.	
Example 2: too much bending strain behind fitting.		Using a stiff elbow fitting, strain is eliminated.	
Example 3: S-bend behind fitting.		Use stiff elbow fittings.	
Example 4: see example 3.		See example 3.	

Installation instruction for hoses

Wrong	Right
Esempio 5: il raggio di curva è troppo piccolo. 	Use a pulley of proper diameter. 
Example 6: cyclic flexural strain and too small bending radius behind fittings. 	A rank torsional strain can be avoided with the use of two elbows. 
Example 7: torsional strain caused by misalignment between hose axis and direction of motion. 	No torsional strain due to the use of stiff compound elbows. 
Example 8: detrimental cyclic motion with flexural strain. 	With the help of a live pulley, cyclic motion and torsion ere eliminated. To avoid sagging, a support may be necessary. 
Example 9: torsional strain and too high flexural load on the directly behind the left fitting. 	Hose twist and bends are eliminated with the use of stiff elbows. 
Example 10: The hose twists on tightening. 	Twist is avoided by holding sockets firmly during tightening. 
Example 11: Hose coil should not be unwound by simply pulling it at one end, since this will induce a twist. 	Unwound hose as shown in the sketch.