



D3

PTFE BELLOWS

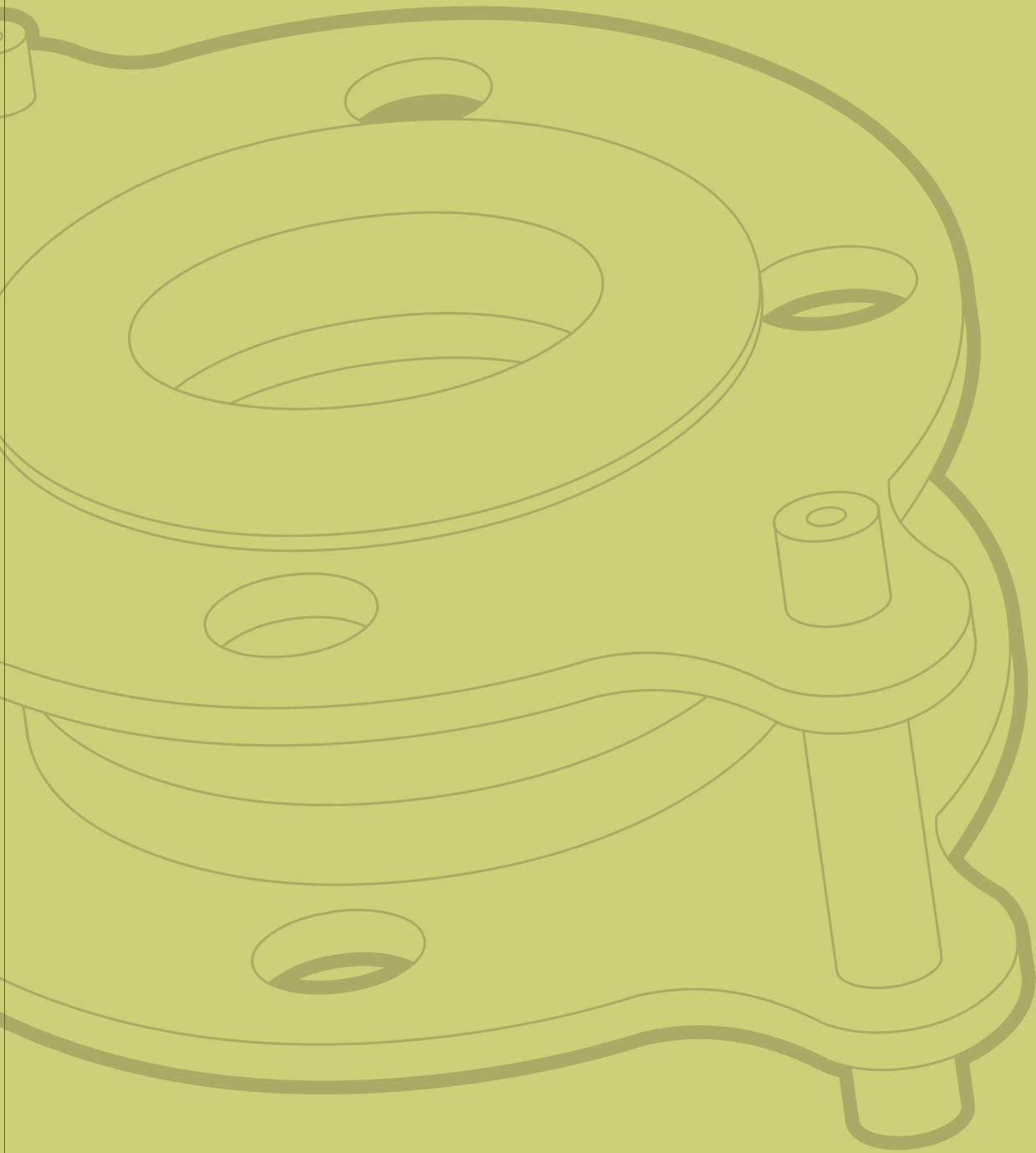
COMPENSATORI DI
DILATAZIONE IN PTFE
PTFE EXPANSION JOINTS



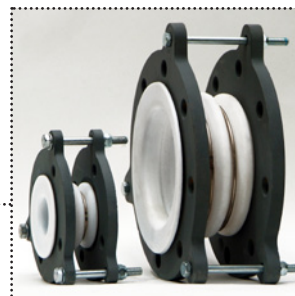


PTFE BELLOWS

COMPENSATORI DI
DILATAZIONE IN PTFE
PTFE EXPANSION JOINTS



D3



PTFE BELLOWS

COMPENSATORI DI DILATAZIONE IN PTFE

Compensatori di dilatazione in PTFE corazzati inox o con anelli di rinforzo anche per vuoto. Completano la gamma i compensatori in inox ed i compensatori in gomma dove c'è dilatazione e vibrazione.

PTFE EXPANSION JOINTS

PTFE expansion joints with stainless steel house or reinforcement rings, suitable also for vacuum. Complete the range expansion joints in steel and expansion joints in rubber where there are dilation and vibration.

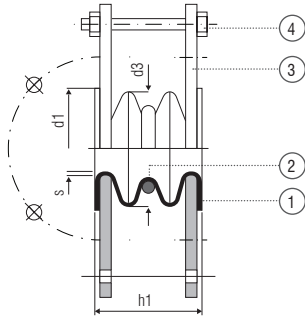
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- D3.12 . Compensatori in PTFE con rivestimento esterno in acciaio inox / PTFE-vacuum expansion joints with stainless steel housing

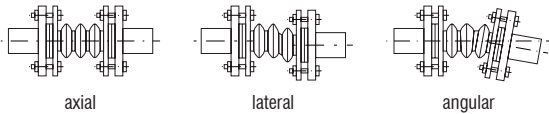


Materiali

- 1.1 PTFE in accordo a ASTM D-4895 / PTFE according to ASTM D-4895
- 2.1 Standard: ANSI 316-1.4571
- 2.2 Opzione Hastelloy C4 / Option Hastelloy C4
- 3.1 RSt 37-2 = 1.0038 zincato/ zinc plated
- 3.2 X6CrNiTi 1810 = 1.454-AISI 321
- 4.1 Standard: DIN 601, vite e dado / Standard: DIN 601, bolt and nut
- 4.2 Opzione: inox/A2 / Option: stainless steel/A2



movements



Compensatori di dilatazione in PTFE con anelli di rinforzo, 2 onde

- Flange libere
- DN 25 - DN 500 - DN 1" - DN 20"
- Flange DIN EN 1092-1, PN 10
- Flange ASME/ANSI B16.5 Classe 150
- Idonei per temperature d'esercizio da -30°C a +230°C

Note

Le dimensioni si intendono indicative. Altri diametri fornibili a richiesta.

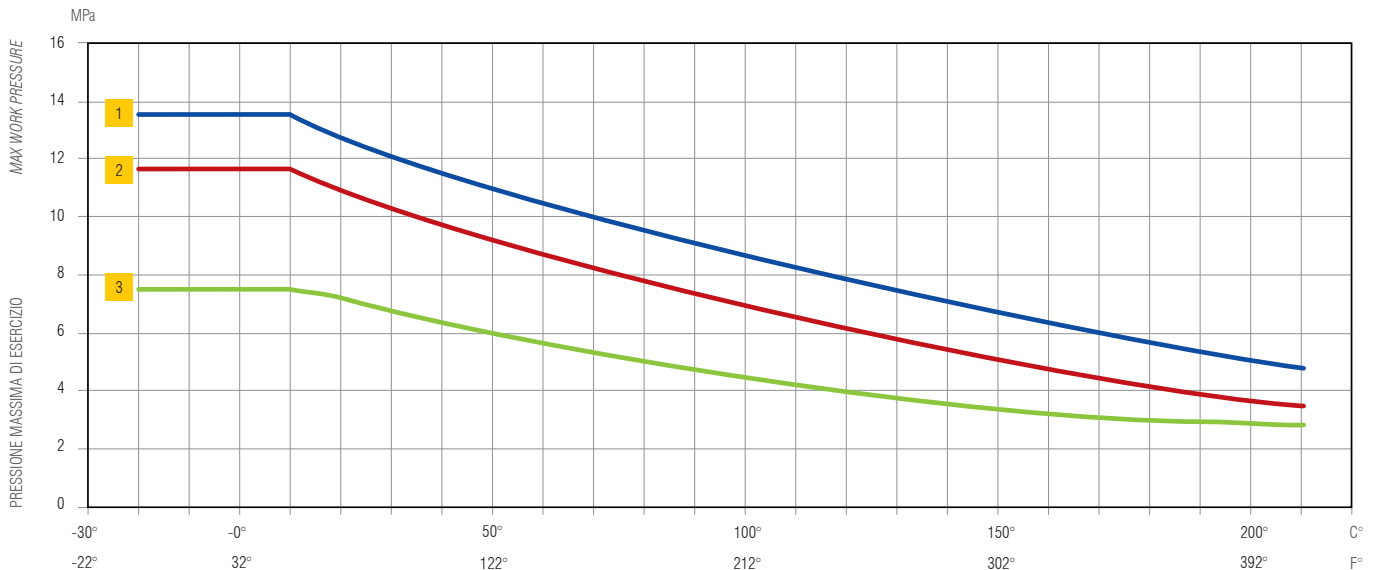
PTFE - expansion joints with reinforcing rings, 2 convolutes

- Loose flanges
- DN 25 - DN 500 - DN 1" - DN 20"
- Flanges acc. to DIN EN 1092, PN 10
- Flanges acc. to ASME/ANSI B16.5 Class 150
- Rated for -30°C/ -20°F to +230°C/ +440°F

Note

Dimensions have to be intended as an example. Other diameters can be supplied on the basis of a specific request of the customer.

Curva pressione / temperatura - modello 2 onde Pressure / temperature - diagram for 2 convolutes



1 DN 025-080 DN 1"-3"

2 DN 080-150 DN 3"-6"

3 DN 200-400 DN 8"-16"

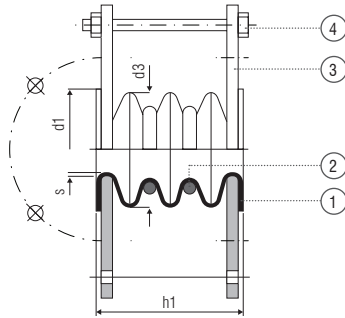
Compensatori di dilatazione in PTFE con anelli di rinforzo, 2 onde / PTFE - expansion joints with reinforcing rings, 2 convolutes

DN	L [mm]	Allugam. compres. assiale <i>Axial extension</i> ± mm	Spostamento laterale max. <i>Lateral shifting</i> ± mm	Deviazione angolare <i>Angular deviation</i> ± <°	Reicedface Drm. <i>Reicedface Drm.</i> d1 [mm]	Spessore PTFE <i>Wallthickness PTFE</i> s [mm]
25	40	6,5	4	4	68	3
1"	40	6,5	4	4	51	3
32	40	6,5	4	4	78	3
1 1/4"	40	6,5	4	4	64	3
40	45	6,5	5	8	88	3
1 1/2"	45	6,5	5	8	73	3
50	45	6,5	6	8	102	3,5
2"	45	6,5	6	8	92	3,5
65	55	7,5	9	10	122	3,5
2 1/2"	55	7,5	9	10	105	3,5
80	60	10	10	10	138	3,5
3"	60	10	10	10	127	3,5
100	70	10	12	20	158	4
4"	70	10	12	20	157	4
125	80	15	14	15	188	4
5"	80	15	14	15	186	4
150	90	15	10	10	212	4,5
6"	90	15	10	10	216	4,5
200	95	15	10	10	268	4,5
8"	95	15	10	10	270	4,5
250	100	18	10	10	320	5
10"	100	18	10	10	324	5
300	110	18	8	8	370	5
12"	110	18	8	8	381	5
350	110	20	5	6	430	5
14"	110	20	5	6	413	5
400	115	20	5	6	482	6
16"	115	20	5	6	470	6
500	120	20	5	6	585	5,5
20"	120	20	5	6	585	5,5

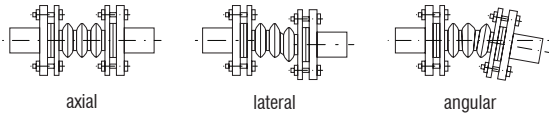


Materiali

- 1.1 PTFE in accordo a ASTM D-4895 / PTFE according to ASTM D-4895
- 2.1 Standard: ANSI 316-1.4571
- 2.2 Opzione Hastelloy C4 / Option Hastelloy C4
- 3.1 RSt 37-2 = 1.0038 zincato/ zinc plated
- 3.2 X6CrNiTi 1810 = 1.454-AISI 321
- 4.1 Standard: DIN 601, vite e dado / Standard: DIN 601, bolt and nut
- 4.2 Opzione: inox/A2 / Option: stainless steel/A2



movements



Compensatori di dilatazione in PTFE con anelli di rinforzo, 3 onde

- Flange libere
- DN 25 - DN 500 - DN 1" - DN 20"
- Flange DIN EN 1092-1, PN 10
- Flange ASME/ANSI B16.5 Classe 150
- Idonei per temperature d'esercizio da -30°C a +230°C

Note

Le dimensioni si intendono indicative. Altri diametri fornibili a richiesta.

PTFE - expansion joints with reinforcing rings, 3 convolutes

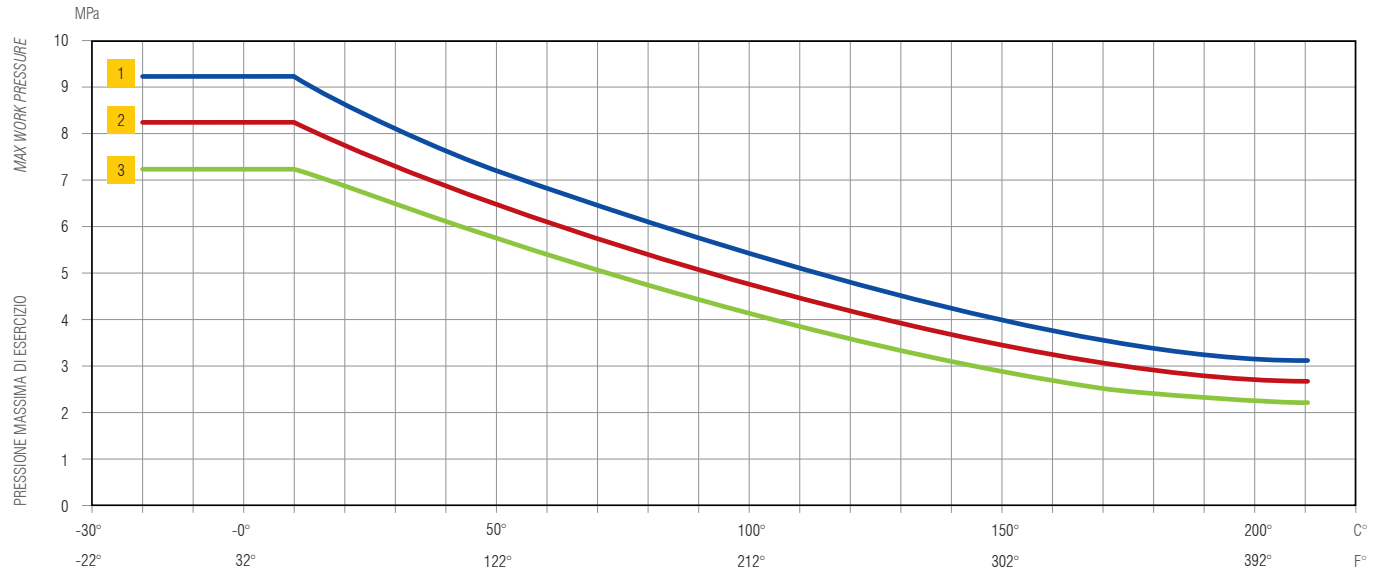
- Loose flanges
- DN 25 - DN 500 - DN 1" - DN 20"
- Flanges acc. to DIN EN 1092, PN 10
- Flanges acc. to ASME/ANSI B16.5 Class 150
- Rated for -30°C/ -20°F to +230°C/ +440°F

Note

Dimensions have to be intended as an example. Other diameters can be supplied on the basis of a specific request of the customer.

Curva pressione / temperatura - modello 3 onde

Pressure / temperature - diagram for 3 convolutes



1 DN 025-050 DN 1"-2"

2 DN 065-150 DN 2 1/2"-6"

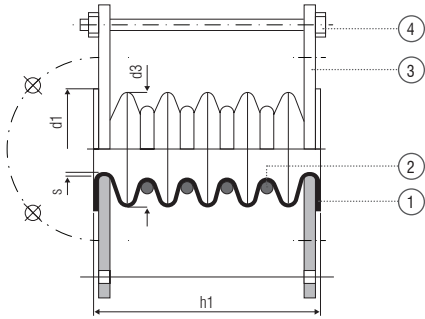
3 DN 200-400 DN 8"-16"

Compensatori di dilatazione in PTFE con anelli di rinforzo, 3 onde / PTFE - expansion joints with reinforcing rings, 3 convolutes

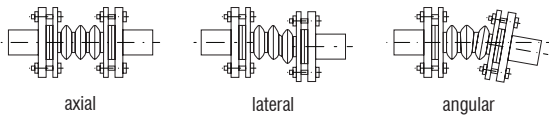
DN	L [mm]	Allugam. compres. assiale <i>Axial extension</i> ± mm	Spostamento laterale max. <i>Lateral shifting</i> ± mm	Deviazione angolare <i>Angular deviation</i> ± <°	Reicedface Drm. <i>Reicedface Drm.</i> d1 [mm]	Spessore PTFE <i>Wallthickness PTFE</i> s [mm]
25	45	12,5	10	18	68	3
1"	45	12,5	10	18	51	3
32	50	12,5	10	20	78	3
1 1/4"	50	12,5	10	20	64	3
40	50	12,5	15	20	88	3
1 1/2"	50	12,5	15	20	73	3
50	70	19	20	25	102	3,5
2"	70	19	20	25	92	3,5
65	80	21	20	30	122	3,5
2 1/2"	80	21	20	30	105	3,5
80	95	25	25	30	138	3,5
3"	95	25	25	30	127	3,5
100	95	25	25	30	158	4
4"	95	25	25	30	157	4
125	100	28,5	25	30	188	4
5"	100	28,5	25	30	186	4
150	120	28,5	20	30	212	4,5
6"	120	28,5	20	30	216	4,5
200	130	28,5	20	20	268	4,5
8"	130	28,5	20	20	270	4,5
250	130	28,5	10	10	320	5
10"	130	28,5	10	10	324	5
300	145	30	8	10	370	5
12"	145	30	8	10	381	5
350	150	30	5	10	430	5
14"	150	30	5	10	413	5
400	155	30	5	10	482	6
16"	155	30	5	10	470	6
500	160	30	5	10	585	5,5
20"	160	30	5	10	585	5,5

Materiali

- 1.1 PTFE in accordo a ASTM D-4895 / *PTFE according to ASTM D-4895*
- 2.1 Standard: ANSI 316-1.4571
- 2.2 Opzione Hastelloy C4 / *Option Hastelloy C4*
- 3.1 RSt 37-2 = 1.0038 zinco/zinc plated
- 3.2 X6CrNiTi 1810 = 1.454-AISI 321
- 4.1 Standard: DIN 601, vite e dado / *Standard: DIN 601, bolt and nut*
- 4.2 Opzione: inox/A2 / *Option: stainless steel/A2*



movements



Compensatori di dilatazione in PTFE con anelli di rinforzo, 5 onde

- Flange libere
- DN 25 - DN 200 - DN 1" - DN 8"
- Flange DIN EN 1092-1, PN 10
- Flange ASME/ANSI B16.5 Classe 150
- Idonei per temperature d'esercizio da -30°C a +230°C

Note

Le dimensioni si intendono indicative. Altri diametri fornibili a richiesta.

PTFE - expansion joints with reinforcing rings, 5 convolutes

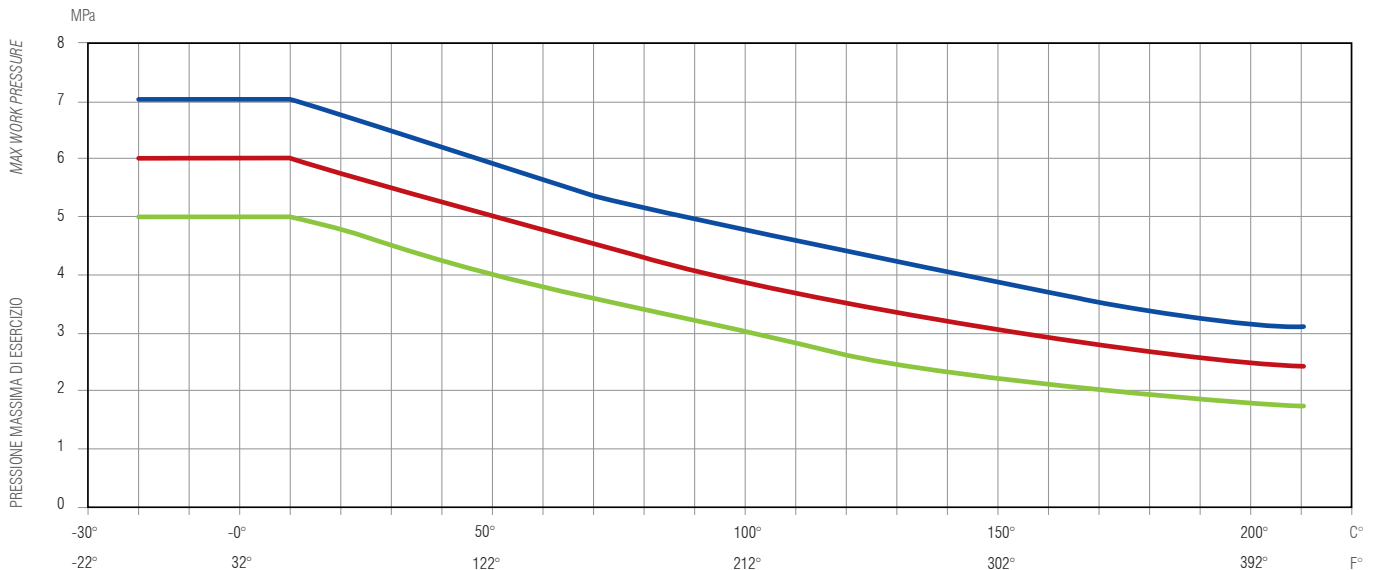
- Loose flanges
- DN 25 - DN 200 - DN 1" - DN 8"
- Flanges acc. to DIN 2501, PN 10
- Flanges acc. to ASME/ANSI B16.5 Class 150
- Rated for -30°C/ -20°F to +230°C/ +440°F

Note

Dimensions have to be intended as an example. Other diameters can be supplied on the basis of a specific request of the customer.

Curva pressione / temperatura - modello 5 onde

Pressure / temperature - diagram for 5 convolutes



1 DN 025-050 DN 1"-2"

2 DN 065-150 DN 2 1/2"-6"

3 DN 200-400 DN 8"-16"

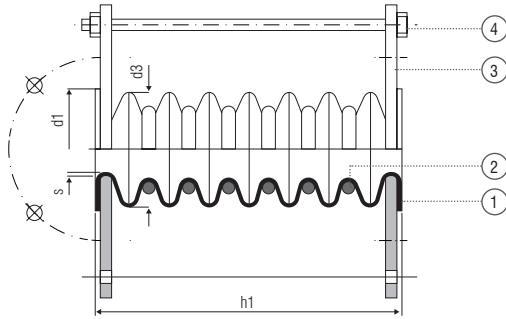
Compensatori di dilatazione in PTFE con anelli di rinforzo, 5 onde / PTFE - expansion joints with reinforcing rings, 5 convolutes

DN	L [mm]	Allugam. compres. assiale <i>Axial extension</i> ± mm	Spostamento laterale max. <i>Lateral shifting</i> ± mm	Deviazione angolare <i>Angular deviation</i> ± <°	Reicedface Drm. <i>Reicedface Drm.</i> d1 [mm]	Spessore PTFE <i>Wallthickness PTFE</i> s [mm]
25	70	15	12	18	68	3
1"	70	15	12	18	51	3
40	75	15	17	20	88	3
1 1/2"	75	15	17	20	73	3
50	100	20	20	25	102	3,5
2"	100	20	20	25	92	3,5
65	110	22	25	30	122	3,5
2 1/2"	110	22	25	30	105	3,5
80	140	27	25	30	138	3,5
3"	140	27	25	30	127	3,5
100	140	27	27	30	158	4
4"	140	27	27	30	157	4
125	175	27	27	30	188	4
5"	175	27	27	30	186	4
200	175	35	20	20	268	4,5
8"	175	35	20	20	270	4,5

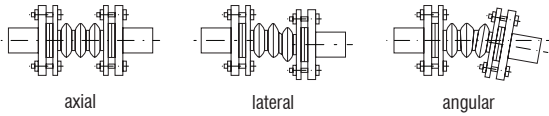


Materiali

- 1.1 PTFE in accordo a ASTM D-4895 / *PTFE according to ASTM D-4895*
- 2.1 Standard: ANSI 316-1.4571
- 2.2 Opzione Hastelloy C4 / *Option Hastelloy C4*
- 3.1 RSt 37-2 = 1.0038 zincato/ *zinc plated*
- 3.2 X6CrNiTi 1810 = 1.454-AISI 321
- 4.1 Standard: DIN 601, vite e dado / *Standard: DIN 601, bolt and nut*
- 4.2 Opzione: inox/A2 / *Option: stainless steel/A2*



movements



Compensatori di dilatazione in PTFE con anelli di rinforzo, 7 onde

- Flange libere
- DN 25 - DN 400 - DN 1" - DN 16"
- Flange DIN EN 1092-1, PN 10
- Flange ASME/ANSI B16.5 Classe 150
- Idonei per temperature d'esercizio da -30°C a +230°C

Note

Le dimensioni si intendono indicative. Altri diametri fornibili a richiesta.

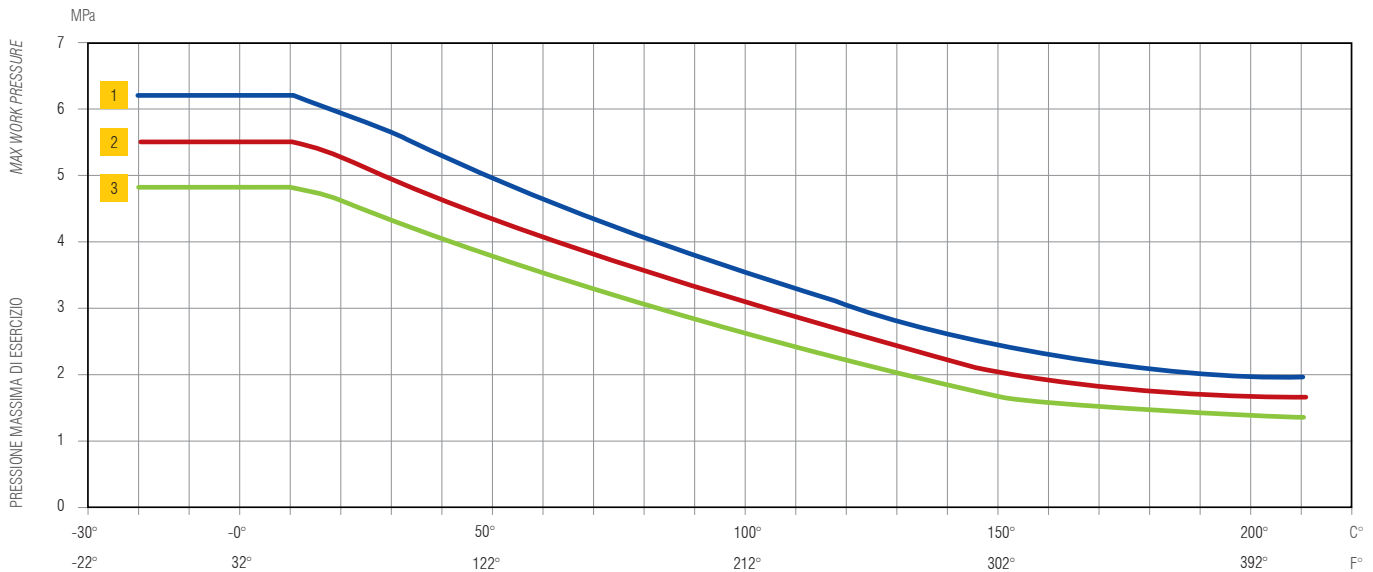
PTFE - expansion joints with reinforcing rings, 7 convolutes

- Loose flanges
- DN 25 - DN 400 - DN 1" - DN 16"
- Flanges acc. to DIN 2501, PN 10
- Flanges acc. to ASME/ANSI B16.5 Class 150
- Rated for -30°C/ -20°F to +230°C/ +440°F

Note

Dimensions have to be intended as an example. Other diameters can be supplied on the basis of a specific request of the customer.

Curva pressione / temperatura - modello 7 onde
Pressure / temperature - diagram for 7 convolutes



1 DN 025-080 DN 1"-3"

2 DN 080-150 DN 3"-6"

3 DN 200-400 DN 8"-16"

Compensatori di dilatazione in PTFE con anelli di rinforzo, 7 onde / PTFE - expansion joints with reinforcing rings, 7 convolutes

DN	L [mm]	Allugam. compres. assiale <i>Axial extension</i> ± mm	Spostamento laterale max. <i>Lateral shifting</i> ± mm	Deviazione angolare <i>Angular deviation</i> ± <°	Reicedface Drm. <i>Reicedface Drm.</i> d1 [mm]	Spessore PTFE <i>Wallthickness PTFE</i> s [mm]
25	100	20	20	20	68	3
1"	100	20	20	20	51	3
32	105	20	25	25	78	3
40	105	20	25	25	88	3
1 1/2"	105	20	25	25	73	3
50	150	20	25	30	102	3,5
2"	150	25	25	30	92	3,5
65	150	25	25	30	122	3,5
2 1/2"	150	25	25	30	105	3,5
80	175	25	30	30	138	3,5
3"	175	30	30	30	127	3,5
100	175	30	35	35	158	4
4"	175	30	35	35	157	4
200	200	40	35	25	268	4,5
8"	200	40	35	25	270	4,5
400	320	40	35	10	482	6,0
16"	320	40	35	10	470	6,0



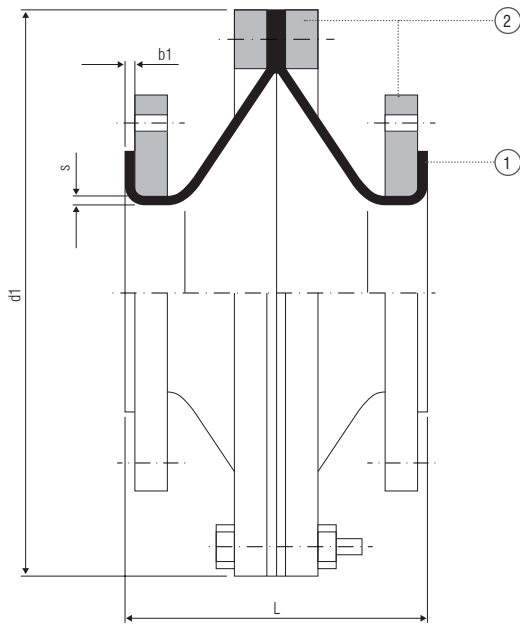
Materiali

1.1 PTFE ASTM D-4895

3.1 RSt 37-2 = 1.0038 zincato / zinc plated

Sabbiato esternamente e rivestito con vernice di fondo epossidica allo zinco

Externally shot blasted - coated with zinc rich epoxy primer



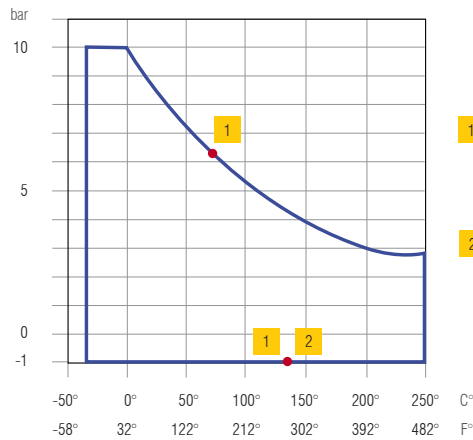
Compensatori di dilatazione in PTFE per vuoto e movimenti assiali

- Flange libere
- DN 100 - DN 1000 - DN 4" - DN 40"
- Flange DIN 2501, PN 10
- Flange ASME/ANSI B16.5 Classe 150
- Idonei per temperature d'esercizio da -30°C a +260°C

PTFE - vacuum expansion joints for axial movement

- Loose flanges
- DN 10 - DN 1000 - DN 4" - DN 40"
- Flanges acc. to DIN 2501, PN 10
- Flanges acc. to ASME/ANSI B16.5 Class 150
- Rated for -30°C/ -20°F to +260°C/ +440°F

Curva pressione / temperatura
pressure / temperature - diagram



- 1** Limite pressione / temperature
Pressure / temperature limit
- 2** Valore effettivo massimo del vuoto - 1 bar
Max. vacuum value 1 bar

DIN	DN	ANSI	D1 mm	L ±10,5% mm	Hub ± mm	s ±10% mm	b1 ±10% MM	Peso / Weight ca. kg
100	4"		285	96	10	4,5	1,5	11
150	6"		350	98	14	4,5	1,75	17
200	8"		410	108	16	5,0	2,0	24
250	10"		465	110	18	5,0	2,2	37
300	12"		520	115	18	5,0	2,4	40
350	14"		590	122	18	5,0	3,75	51
400	16"		670	135	20	6,0	4,0	62
450	18"		695	150	20	6,0	4,0	90
500	20"		770	150	20	6,0	4,5	108
600	24"		890	165	12	6,0	4,5	164
800	32"		-	-	-	-	-	-
1000	40"		1360	210	10	6,0	5,0	320

Materiali

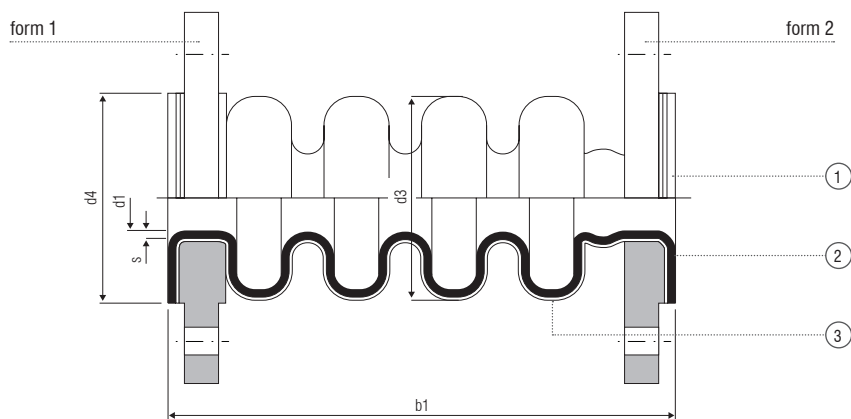
- 1.1 PTFE ASTM D-4895
- 1.2 PTFE come 1.1 antistatico / *PTFE according to 1.1 antistatic*
Resistenza superficiale / *Surface resistance*
10⁶ - 10⁸ (Ω) DIN 53482
Resistenza di volume / *Volume resistivity*
10⁶ - 10⁸ (Ω . cm²) DIN 53482
- 2.1 RSt 37-2 = 1.0038
H II = 1.0425, DIN 17155
- 2.2 X6CrNiTi 1810 = 1.4541- AISI 321
- 3.1 Standard: X10CrNiTi 189 = 1.4541
- 3.2 Esecuzione speciale: Hastelloy C4 / *Special version: Hastelloy C4*

Compensatori di dilatazione in PTFE con rivestimento esterno in acciaio inox

- Flange libere
- DN 32 - DN 600 - DN 1 1/4" - DN 24"
- Flange DIN 2501, PN 10
- Flange ASME/ANSI B16.5 Classe 150
- Idonei per temperature d'esercizio da -30°C a +260°C

PTFE - vacuum expansion joints with stainless steel housing

- Loose flanges
- DN 32 - DN 600 - DN 1 1/4" - DN 24"
- Flanges acc. to DIN 2501, PN 10
- Flanges acc. to ASME/ANSI B16.5 Class 150
- Rated for -30°C/ -20°F to +260°C/ +440°F



DN	L ± 1,5% mm	Allugam. compres. assiale N=10000 <i>Extension compress. ± mm</i>	Sezione di passaggio effettiva <i>Eff. bellows cross-sect. cm²</i>	Resistenza elastica <i>Spring rate N/mm</i>	Esercizio a vuoto <i>Vacuum service</i>		Tipo flangia <i>Flange Type</i>	Soffietto <i>Bellow</i>				Peso <i>Weight</i>
					23°C 10 ⁵ Pa	160°C 10 ⁵ Pa		d4 ± 5% mm	d1 ± 5% mm	d3 ± 5% mm	s ± 10% mm	
32	150	5	16	298	0,15	0,3	1	70	35	60	3,0	4
	229	8		173								
	260	9		149								
1 1/4"	160	4	16	347	0,15	0,3	2	70	35	60	3,0	4
	239	7		189								
	271	8		160								
40	155	6	24	380	0,15	0,3	1	80	44	74	4,0	5
	230	11		228						74		5
	316	14		208						76		6
1 1/2"	162	5	24	457	0,15	0,3	2	80	44	74	4,0	5
	256	11		228						74		5
	323	13		224						76		6

**Compensatori di dilatazione in PTFE con rivestimento esterno in acciaio inox**
PTFE - vacuum expansion joints with stainless steel housing

DN	L±1,5% mm	Allugam. compres. assiale N=10000 <i>Extension compress. ± mm</i>	Sezione di passaggio effettiva <i>Eff. bellows cross-sect. cm²</i>	Resistenza elastica <i>Spring rate N/mm</i>	Esercizio a vuoto <i>Vacuum service</i>		Tipo flangia <i>Flange Type</i>	Soffietto <i>Bellow</i>				Peso <i>Weight</i>	
					23°C 10 ⁵ Pa	160°C 10 ⁵ Pa		d4±5% mm	d1±5% mm	d3±5% mm	s±10% mm		
50	135	6	36	321	0,15	0,3	1	92	56	87	4,0	6	
	207	10		178						87			7
	290	16		189						89			7
2"	147	5	36	401	0,15	0,3	2	92	56	87	4,0	6	
	219	9		200						87			7
	302	15		204						89			7
65	120	6	57	292	0,15	0,3	1	115	72	106	4,0	5	
	195	12		146						106			6
	279	18		148						107			7
2 1/2"	150	6	57	292	0,15	0,3	2	115	72	106	4,0	5	
	225	12		146						106			6
	289	17		162						107			7
80	201	14	75	123	0,15	0,3	1	126	84	120	4,0	7	
	259	18		89						120			8
	378	26		146						121			10
3"	212	12	75	140	0,15	0,3	2	126	84	120	4,0	7	
	290	18		89						120			8
	388	24		155						121			10
100	173	12	119	184	0,15	0,3	1	153	108	149	4,0	10	
	257	20		110						149			12
	349	27		119						149			13
4"	173	12	119	184	0,15	0,3	1	153	108	149	4,0	10	
	257	20		110						149			12
	350	27		119						149			13
125	195	14	179	193	0,25	0,4	1	185	134	178	4,5	11	
	265	21		129						178			12
	352	29		184						179			15
5"	208	12	179	232	0,25	0,4	2	185	134	178	4,5	11	
	279	19		145						178			12
	390	29		184						179			15
150	193	11	250	257	0,25	0,4	2	208	160	208	5,0	15	
	275	20		181						210			17
	387	32		160						210			20
6"	192	11	250	257	0,25	0,4	2	208	160	208	5,0	15	
	273	20		181						210			17
	385	32		160						210			20
200	180	11	412	470	0,35	0,5	2	264	208	265	5	25	
	267	23		235						265			28
	353	34		156						265			30
8"	180	11	412	470	0,35	0,5	2	262	208	265	5	25	
	267	23		235						265			28
	353	34		156						265			30

Compensatori di dilatazione in PTFE con rivestimento esterno in acciaio inox
PTFE - vacuum expansion joints with stainless steel housing

DN	L±1,5% mm	Allugam. compres. assiale N=10000 <i>Extension compress. ± mm</i>	Sezione di passaggio effettiva <i>Eff. bellows cross-sect. cm²</i>	Resistenza elastica <i>Spring rate N/mm</i>	Esercizio a vuoto <i>Vacuum service</i>		Tipo flangia <i>Flange Type</i>	Soffietto <i>Bellow</i>				Peso <i>Weight</i>	
					23°C 10 ⁵ Pa	160°C 10 ⁵ Pa		d4±5% mm	d1±5% mm	d3±5% mm	s±10% mm		
250	188	14	638	422	0,4	0,6	2	325	262	321	5	28	
	249	24		253						321			32
	348	39		178						323			35
10"	192	14	638	422	0,4	0,6	2	325	262	321	5	28	
	253	24		253						321			32
	351	39		178						323			35
300	198	16	898	556	0,5	0,75	2	375	313	376	5,5	34	
	365	44		208								44	
12"	162	16	898	556	0,5	0,75	1	375	313	376	5,5	34	
	329	44		208								44	
350	163	19	1046	484	0,5	0,75	1	420	339	406	6	56	
	334	43		181						406		56	
	523	67		152						408		66	
14"	170	19	1046	484	0,5	0,75	1	420	339	406	6	56	
	341	43		181						406		56	
	532	67		152						408		66	
400	135	10	1357	1379	0,7	0,9	1	475	388	461	6	81	
	321	36		394								86	
	508	62		230								85	
16"	137	10	1357	139	0,7	0,9	1	475	388	461	6	81	
	323	36		394								86	
	510	62		230								85	
450	207	24	1747	596	0,7	0,9	1	530	441	516	6	90	
	317	42		340								105	
	500	66		198								125	
18"	219	24	1747	596	0,7	0,9	1	530	441	516	6	90	
	292	36		397									
	512	66		198									
500	209	24	2160	752	-	-	1	580	493	570	6	85	
	283	36		501								95	
	470	66		273								155	
20"	223	24	2160	752	-	-	1	580	493	570	6	85	
	297	36		501								95	
	484	66		273								155	
600	226	20	3113	886	-	-	2	680	595	678	4,5	100	
	303	34		531								125	
	457	61		295								180	
24"	188	20	3113	886	-	-	1	680	595	678	4,5	100	
	265	34		531								125	
	457	67		295								180	

