

List of components





Welded Bellows

Material 316L

Material AM350

Noncircular membrane bellows (special shapes)

Technical Manual

Bellows movements (axial, lateral, angular)

Construction of the bellows:
rotations points Angular

Premachining of the end piece N-15000

Standard End Pieces

End piece Type H, one-part

End piece Typ H, two-part

Standard CF Flanges

CF flange, fixed

CF flange, rotating

Standard ISO Flanges

ISO-KF flanges (DIN 28403)

ISO-K flanges (DIN 28404)

Issue 1009. Technical specifications subject to change.

Material 316L

For higher operating temperatures | up to 500.000 load alternation | not magnetic | extremely corrosion-resistant

Analysis

Metal	Fe	C	Si	Mn	P	S	Cr	Mo	Ni	N
[%]	Res.Bal.	≤0.03	≤1.0	≤2.0	≤0.045	≤0.03	16.0–18.0	2.0–3.0	10.0–14.0	

Characteristics

Rp 0.2 [N/mm ²]	Rm [N/mm ²]	E-Module [N/mm ²]	Density [kg/dm ³]	Temp. [°C]	Permeab. [μ]
300	600	200 000	8.0	-250/+350	1.003–1.005

Types

	Inside diameter	Outside diameter	Compressed bellows length	Free bellows length	Axial stroke	Welding lip grp.	Wall thickness of membranes	Profile width	Effective area	Spring constant (axial direction)	Bending angle	Bending radius	Status
DN	ID	OD	lc	lf	z	Gr.	t	b	EA	SRCz	phi	R	
	4,8	12,7	0,27	0,53	0,36	1	0,08	4,00	0,70	80,00	1,62	15,90	new
	6	13	0,27	0,50	0,32	1	0,08	3,50	0,80	105,00	1,41	17,50	new
	8	16	0,27	0,65	0,48	1	0,08	4,00	1,30	60,00	1,72	17,00	
	8,6	16,2	0,20	0,55	0,55	1	0,05	3,80	1,30	25,00	1,95	14,00	new
10	9	20	0,35	0,80	0,60	1	0,08	5,50	1,90	55,00	1,72	21,70	rev.
	9	31,5	0,36	1,35	1,18	3	0,10	11,00	4,30	55,00	2,15	25,30	rev.
	13	26	0,32	0,90	0,80	3	0,08	6,50	3,40	55,00	1,76	23,40	
16	16	31,5	0,45	1,20	1,15	3	0,13	7,75	5,00	95,00	2,09	28,10	
	16	35	0,43	1,15	1,35	3	0,13	9,50	5,90	49,00	2,21	28,70	
	18,5	31,5	0,37	0,90	0,85	3	0,10	6,50	5,30	95,00	1,55	29,50	
	19	37	0,40	1,60	1,55	3	0,13	9,00	6,90	70,00	2,40	28,10	
	21	41	0,50	1,85	1,90	3	0,13	10,00	8,40	75,00	2,66	31,30	
	21	49	0,55	2,30	2,10	3	0,15	14,00	11,30	65,00	2,46	37,30	
	21	39	0,43	1,10	1,40	3	0,13	9,00	7,80	49,00	2,06	31,50	
	21,1	34,9	0,35	1,05	1,10	3	0,10	6,90	6,60	75,00	1,81	28,60	
	24	35	0,33	0,70	0,70	3	0,10	5,50	7,20	82,00	1,15	34,00	
	26	41	0,44	1,25	1,40	3	0,13	7,50	9,40	135,00	1,96	33,40	
25	26	46	0,45	1,80	1,90	3	0,13	10,00	11,10	75,00	2,37	33,90	
	31	51	0,50	1,80	1,90	4	0,13	10,00	14,20	65,00	2,13	38,90	
	35	48	0,33	0,90	0,80	1	0,10	6,50	14,00	90,00	0,95	43,80	
	36	56	0,50	1,80	2,00	4	0,13	10,00	17,60	65,00	2,05	42,00	
	36	72	0,75	2,50	3,43	4	0,20	18,00	25,80	90,00	2,73	51,70	
	38	51	0,40	1,00	1,00	2	0,10	6,50	16,10	110,00	1,12	45,90	
40	39	59	0,50	2,00	2,00	4	0,13	10,00	19,90	65,00	1,94	44,30	
	46	71	0,50	2,30	2,40	4	0,13	12,50	28,50	60,00	1,94	50,30	
	46	62,5	0,50	1,45	1,50	3	0,13	8,30	24,00	130,00	1,38	52,10	rev.
	46	88	0,70	3,30	3,00	4	0,20	21,00	39,20	96,00	1,95	64,50	new
50	51	76	0,50	2,40	2,60	4	0,15	12,50	33,30	85,00	1,96	52,60	
	52	62	0,33	0,85	0,60	1	0,10	5,00	26,10	120,00	0,55	65,10	
	52	95	0,75	3,60	3,40	4	0,20	21,50	46,70	75,00	2,05	68,50	
	60	88	0,55	2,70	2,80	5	0,15	14,00	45,10	80,00	1,82	61,30	rev.

For sizes above ID 65 see separate sheet.

Sizes, technical data, materials

All stated values are referring to following operating conditions:

Differential pressure Pi = 0, Pa = 1bar
 Operating temperature OT = room temperature
 Baking temperature HT = 80°C
 Number of cycles Nz = 10.000 cycles

For other operating conditions please use our "Checklist for bellows inquiries".
 Our design department will calculate your bellows design.

Do you have an application with other sizes?
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Issue 0407. Technical specifications are subject to change.

Material 316L

For higher operating temperatures | up to 500.000 load alternation | not magnetic | extremely corrosion-resistant

Analysis

Metal	Fe	C	Si	Mn	P	S	Cr	Mo	Ni	N
[%]	Res.Bal.	≤0.03	≤1.0	≤2.0	≤0.045	≤0.03	16.0–18.0	2.0–3.0	10.0–14.0	

Characteristics

Rp 0.2 [N/mm ²]	Rm [N/mm ²]	E-Module [N/mm ²]	Density [kg/dm ³]	Temp. [°C]	Permeab. [μ]
300	600	200 000	8.0	-250/+350	1.003–1.005

Types

	Inside diameter	Outside diameter	Compressed bellows length	Free bellows length	Axial stroke	Welding lip grp.	Wall thickness of membranes	Profile width	Effective area	Spring constant (axial direction)	Bending angle	Bending radius	Status
DN	ID	OD	lc	lf	z	Gr.	t	b	EA	SRCz	phi	R	
63	65	90	0,50	2,40	2,80	4	0,15	12,50	49,00	95,00	1,78	61,10	
	70	94	0,55	2,35	2,65	4	0,15	12,00	54,70	95,00	1,62	66,50	
	75	100	0,60	2,40	2,90	4	0,15	12,50	62,20	95,00	1,66	70,70	
	77,5	120	0,75	3,50	3,60	5	0,20	21,25	81,20	85,00	1,72	85,00	
	80	108	0,55	2,25	2,50	5	0,15	14,00	71,90	80,00	1,33	77,80	rev.
	82	125	0,75	3,70	3,80	5	0,20	22,00	88,90	80,00	1,74	87,20	rev.
	90	120	0,60	2,80	2,80	5	0,15	15,00	89,50	70,00	1,34	85,70	
	90	110	0,50	1,45	1,40	5	0,15	10,00	80,40	145,00	0,73	94,30	
	90,5	135	0,70	4,20	4,20	5	0,20	22,25	105,10	80,00	1,78	90,00	
	92	149	0,85	4,75	4,60	6	0,25	29,00	122,00	95,00	1,77	102,00	new
100	102	132	0,60	2,60	3,10	5	0,15	15,00	110,70	75,00	1,35	91,60	
	102,5	150	0,90	4,40	4,60	5	0,25	23,75	131,40	135,00	1,76	104,40	
	110	160	0,80	4,25	3,00	5	0,20	25,00	150,00	40,00	1,07	122,70	
	115	145	0,55	2,50	3,10	5	0,15	15,00	136,30	75,00	1,22	98,20	new
	127	157	0,70	2,60	3,20	5	0,20	15,00	162,30	100,00	1,17	112,80	
160	150	185	0,75	2,60	3,40	5	0,20	17,50	225,70	140,00	1,05	133,30	
	156	186	0,75	2,60	3,30	5	0,20	15,00	234,50	200,00	1,02	135,30	
	160	210	2,00	4,20	2,50	5	0,25	25,00	277,40	200,00	0,68	273,00	
	173	203	0,65	2,50	3,20	5	0,15	15,00	283,10	100,00	0,90	142,70	
	180	209	0,65	2,15	3,10	5	0,15	14,50	302,80	95,00	0,85	148,30	
	180	215	0,75	2,80	3,40	5	0,20	17,50	312,90	148,00	0,91	154,90	
200	200	235	0,75	3,00	3,50	5	0,20	17,50	379,00	160,00	0,85	167,90	
	230	265	0,70	2,80	3,50	5	0,20	17,50	490,00	160,00	0,76	185,50	
250	250	285	0,80	3,20	3,20	5	0,20	17,50	572,00	200,00	0,64	213,80	
	280	330	0,90	3,30	3,50	5	0,20	25,00	745,40	150,00	0,61	249,90	
320	300	340	0,80	3,20	3,60	5	0,20	20,00	818,20	200,00	0,61	245,60	
	360	440	2,00	7,50	6,00	6	0,30	40,00	1.286,20	150,00	0,78	366,70	new
400	400	480	1,45	5,00	4,50	6	0,40	40,00	1.553,60	350,00	0,54	394,70	

For sizes up to ID 60 see separate sheet.

Sizes, technical data, materials

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Differential pressure Pi = 0, Pa = 1 bar
 Operating temperature OT = room temperature
 Baking temperature HT = 80°C
 Number of cycles Nz = 10.000 cycles

For other operating conditions please use our "Checklist for bellows inquiries".
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Do you have an application with other sizes?
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Issue 0407. Technical specifications are subject to change.

Material AM350

Smallest installation dimension | up to 10 million load alternation | slightly magnetic | corrosion-resistant

Analysis

Metal	Fe	C	Si	Mn	P	S	Cr	Mo	Ni	N
[%]	Rest	0,07–0,11	≤0,5	0,5–1,25	≤0,04	≤0,03	16,0–17,0	2,5–3,25	4,0–5,0	0,07–0,13

Characteristics

Rp 0.2 [N/mm ²]	Rm [N/mm ²]	E-Module [N/mm ²]	Density [kg/dm ³]	Temp. [°C]	Permeab. [μ]
500	1150	200 000	8.0	+20/+200	10–15

Types

DN	Inside diameter	Outside diameter	Compressed bellows length	Free bellows length	Axial stroke	Welding lip grp.	Wall thickness of membranes	Profile width	Effective area	Spring constant (axial direction)	Bending angle	Bending radius	Status
DN	ID	OD	lc	lf	z	Gr.	t	b	EA	SRcz	phi	R	
	6	13	0,30	0,65	0,50	1	0,06	3,50	0,80	75,00	2,20	14,30	
	8,6	16,2	0,27	0,75	0,65	1	0,06	3,80	1,30	34,00	2,30	14,80	New
10	9	19,05	0,27	1,05	1,00	1	0,06	5,00	1,80	37,00	3,01	14,70	New
	9	20	0,32	1,10	1,15	1	0,08	5,50	1,90	65,00	3,29	15,60	
	9	31,5	0,40	1,75	1,80	3	0,10	11,00	4,30	60,00	3,27	22,80	
	9,4	23	0,27	1,35	1,40	1	0,06	6,80	2,50	25,00	3,49	15,90	
	13	26	0,32	1,35	1,60	3	0,08	6,50	3,40	52,00	3,53	18,20	
16	16	31,5	0,45	1,65	1,70	3	0,10	7,75	5,00	60,00	3,09	24,10	
	19	37	0,45	1,90	2,15	3	0,10	9,00	6,90	52,00	3,33	26,20	
	21	41	0,50	2,40	2,60	3	0,10	10,00	8,40	52,00	3,63	28,40	
	21	49	0,50	3,10	3,50	3	0,13	14,00	11,30	52,00	4,09	31,50	
	23	43	0,45	2,40	2,65	3	0,10	10,00	9,50	47,00	3,53	28,80	
	26	41	0,40	1,70	1,90	3	0,10	7,50	9,40	90,00	2,66	29,10	
25	26	46	0,45	2,25	2,60	3	0,10	10,00	11,10	65,00	3,24	31,00	Rev.
	31	51	0,50	2,40	2,80	4	0,10	10,00	14,20	45,00	3,15	34,60	
	36	56	0,50	2,50	3,00	4	0,10	10,00	17,60	40,00	3,07	37,30	
40	38	51	0,40	1,50	1,85	2	0,10	6,50	16,10	100,00	2,08	36,50	
	39	59	0,50	2,50	3,00	4	0,10	10,00	19,90	40,00	2,91	39,30	
	46	62,5	0,40	1,75	2,25	3	0,10	8,30	24,00	90,00	2,06	42,40	New
	46	71	0,50	2,85	3,60	4	0,13	12,50	28,50	60,00	2,91	45,40	
50	46	88	0,65	4,00	4,00	5	0,15	21,00	39,20	65,00	2,60	58,30	New
	51	76	0,50	2,95	3,80	4	0,13	12,50	33,30	65,00	2,86	48,00	
	63,5	77	0,35	1,40	2,00	3	0,10	6,80	39,60	120,00	1,49	52,00	
	65	90	0,60	2,80	3,80	4	0,13	12,50	49,00	65,00	2,42	59,20	
	71,4	84,1	0,37	1,25	1,75	3	0,10	6,30	48,40	155,00	1,19	59,80	
	75	100	0,60	2,90	4,10	4	0,13	12,50	62,20	65,00	2,35	64,60	
	80	108	0,60	2,70	3,60	5	0,15	14,00	71,90	77,00	1,91	72,00	New
	90	120	0,60	3,00	4,20	5	0,13	15,00	89,50	55,00	2,01	77,10	
90,5	135	0,85	4,90	5,20	5	0,20	22,25	105,10	80,00	2,21	89,60		

Sizes, technical data, materials

All stated values are referring to following operating conditions:

Differential pressure $P_i = 0, P_a = 1 \text{ bar}$
 Operating temperature $OT = \text{room temperature}$
 Baking temperature $HT = 80^\circ\text{C}$
 Number of cycles $N_z = 10.000 \text{ cycles}$

For other operating conditions please use our "Checklist for bellows inquiries".
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Issue 0108. Technical specifications are subject to change.

Material AM350

Smallest installation dimension | up to 10 million load alternation | slightly magnetic | corrosion-resistant

Analysis

Metal	Fe	C	Si	Mn	P	S	Cr	Mo	Ni	N
[%]	Rest	0,07–0,11	≤0,5	0,5–1,25	≤0,04	≤0,03	16,0–17,0	2,5–3,25	4,0–5,0	0,07–0,13

Characteristics

Rp 0.2 [N/mm ²]	Rm [N/mm ²]	E-Module [N/mm ²]	Density [kg/dm ³]	Temp. [°C]	Permeab. [μ]
500	1150	200 000	8.0	+20/+200	10–15

Types

DN	Inside diameter	Outside diameter	Compressed bellows length	Free bellows length	Axial stroke	Welding lip grp.	Wall thickness of membranes	Profile width	Effective area	Spring constant (axial direction)	Bending angle	Bending radius	Status
ID	OD	lc	lf	z	Gr.	t	b	EA	SRCz	phi	R		
100	102	132	0,70	3,00	4,40	5	0,15	15,00	110,70	80,00	1,91	87,00	
	102,5	150	0,85	5,10	6,00	5	0,20	23,75	131,40	90,00	2,29	96,30	
	115	145	0,70	2,85	3,50	5	0,15	15,00	136,30	80,00	1,38	101,50	
	127	157	0,75	2,95	4,20	5	0,15	15,00	162,30	85,00	1,53	106,50	
160	150	185	0,90	3,20	4,00	5	0,20	18,00	225,70	166,00	1,24	134,10	
	160	185	0,65	2,65	3,80	4	0,13	13,00	238,10	87,00	1,18	124,10	New
	160	210	1,10	5,15	5,80	6	0,25	25,00	277,40	120,00	1,58	144,80	New
	180	215	0,70	3,85	4,10	5	0,15	17,50	312,90	80,00	1,09	144,20	
200	200	235	0,70	3,20	4,30	5	0,15	17,50	379,00	74,00	1,05	155,80	
	250	285	0,70	3,20	4,20	5	0,15	17,50	572,00	74,00	0,84	190,00	
250	270	310	0,80	3,30	4,00	5	0,20	20,00	672,60	140,00	0,74	217,00	
	320	300	0,80	3,50	4,60	5	0,2	20,00	818,2	90	0,78	229,1	

Sizes, technical data, materials

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 Number of cycles $N_z = 10.000 \text{ cycles}$

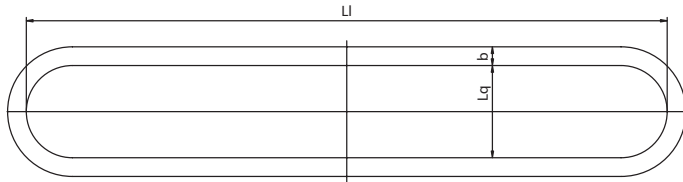
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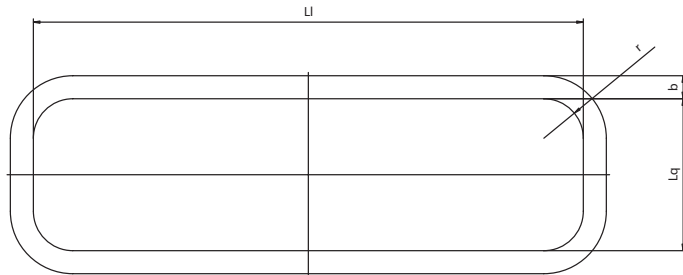
Noncircular membrane bellows (special shapes)

Racetrack profile



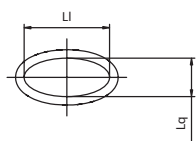
Type	Length (lengthwise) Ll	Length (crossways) Lq	Profile width b	Material
150-80-RS	150	80	9	316L
210-30-RS	210	30	15	316L
240-120-RS	240	120	15	316L
292-38-RS	292	38	12,5	AM350
959-138-RZ	959	138	28	316L

Rectangle profile



Type	Length (lengthwise) Ll	Length (crossways) Lq	Profile width b	Corner radius r	Material
300-190	300	190	19,5	20	316L
836-231	836	231	35	60	316L

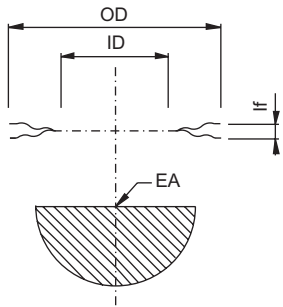
Elliptical profile



Type	Length (lengthwise) Ll	Length (crossways) Lq	Profile width b	Material
127-57,2	127	57,16	12,7	316L

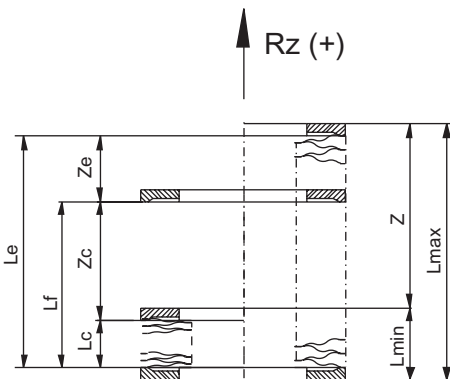
Bellows movements (axial, lateral, angular) / Abbreviations

General



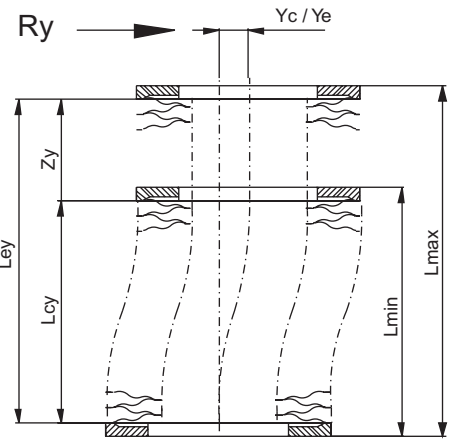
- ID Inside diameter [mm]
- OD Outside diameter [mm]
- n Number of convolutions [pairs of membranes]
- t Wall thickness of membranes [mm]
- EA Effekive area [cm²]
- G Weight of edge welded bellow [g]
- lc Compressed length per convolution [mm]
- lf Free length per convolution [mm]
- le Extended length per convolution [mm]
- z Axial stroke per convolution [mm]

Axial stroke



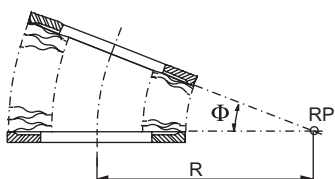
- Lf Free bellows length [mm]
- Lc Compressed bellows length [mm]
- Le Extended bellows length [mm]
- Z Axial stroke of edge welded bellows [mm]
- Zc Compression stroke of edge welded bellows [mm]
- Ze Extension stroke of edge welded bellows [mm]
- SRCz Spring constant per convolution in axial direction [N/mm]
- SRz Spring rate of edge welded bellows in axial direction [N/mm]
- Fsrz Tensile force of edge welded bellows in axial direction [N]
- Fzpc Compressive force in axial direction [N]
- Rz Resulting axial force [N]
- Lmin Minimum installed length from flange to flange [mm]
- Lmax Maximum installed length from flange to flange [mm]

Lateral stroke



- Lcy Minimum installed length for a given lateral stroke [mm]
- Ley Maximum installed length for a given lateral stroke [mm]
- Zy Axial stroke of edge welded bellows for lateral offset [mm]
- Yc Lateral stroke of edge welded bellows at Lcy [mm]
- Ye Lateral stroke of edge welded bellows at Ley [mm]
- SRCy Spring constant per convolution in lateral direction [N/mm]
- SRy Spring rate of edge welded bellows in lateral direction [N/mm]
- Fsry Tensile force of edge welded bellows in lateral direction [N]
- Fyp Compressive force in lateral direction [N]
- Ry Resulting lateral force [N]
- Lmin Minimum installed length from flange to flange [mm]
- Lmax Maximum installed length from flange to flange [mm]

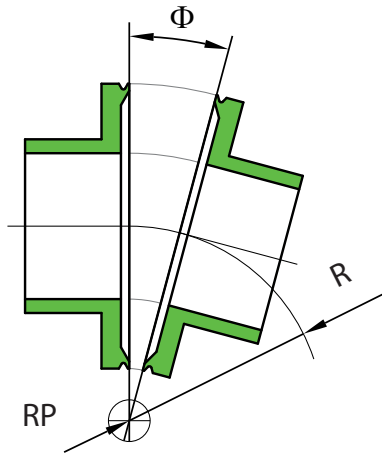
Angular stroke



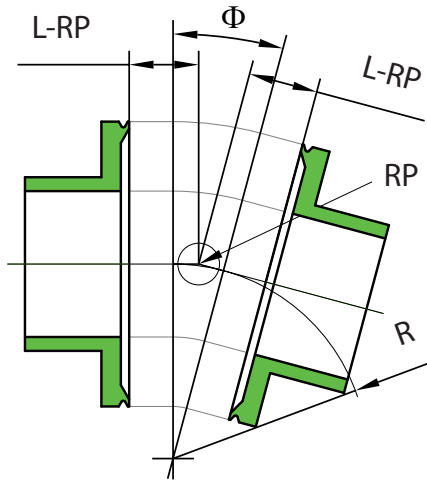
- RP Rotation point of angular movement
- R Bending radius [mm]
- Phi Bending angle of edge welded bellows [°]

Construction of the bellows: rotations points Angular

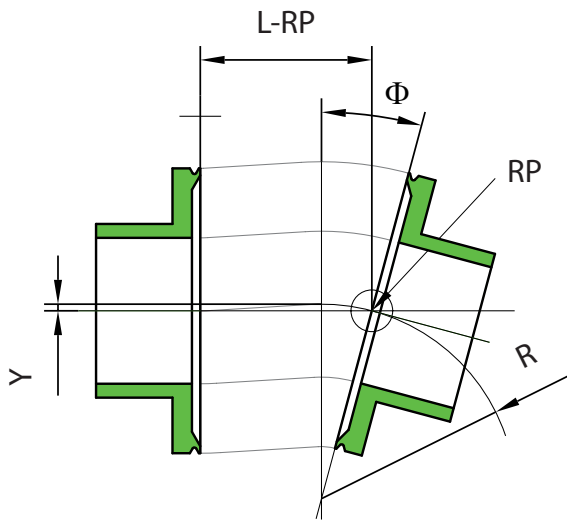
in bellows radius



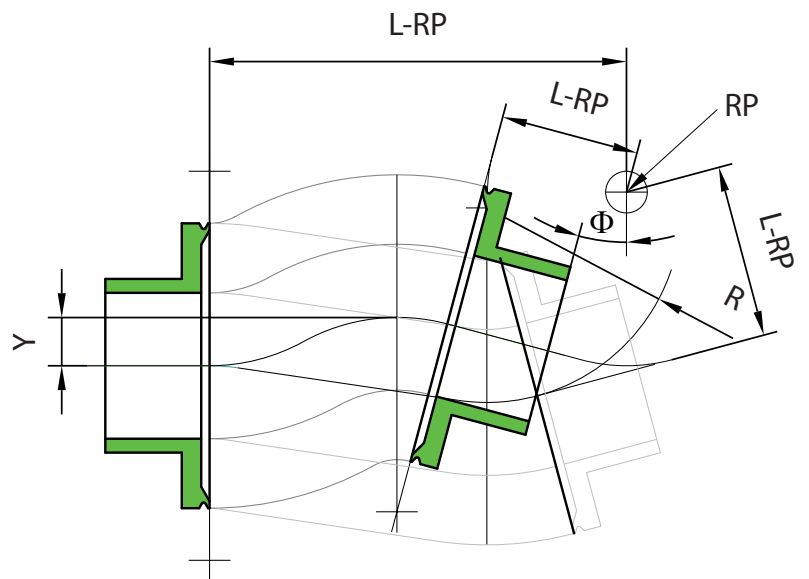
middle of the bellows



middle of end piece



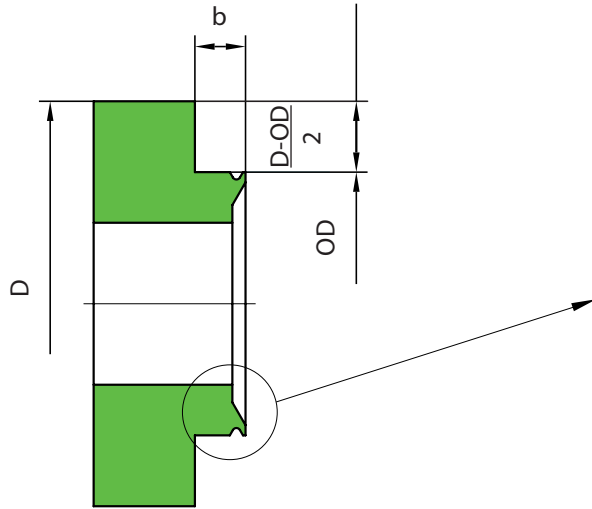
outside of the bellows



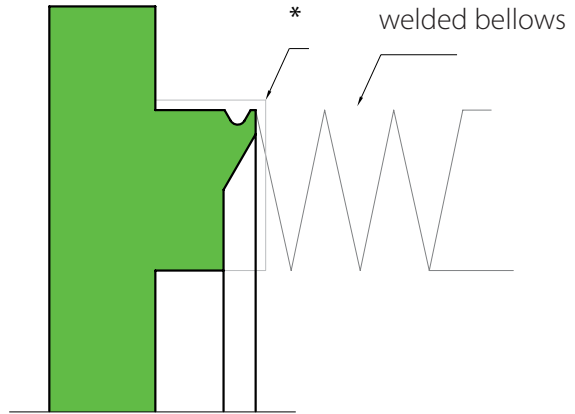
- RP= rotations point
- R= radius (Technical Manual)
- Y= lateral movement
- L-RP= displacement from end piece to RP

Premachining of the end piece N-15000

minimum lip distance



customer endpiece

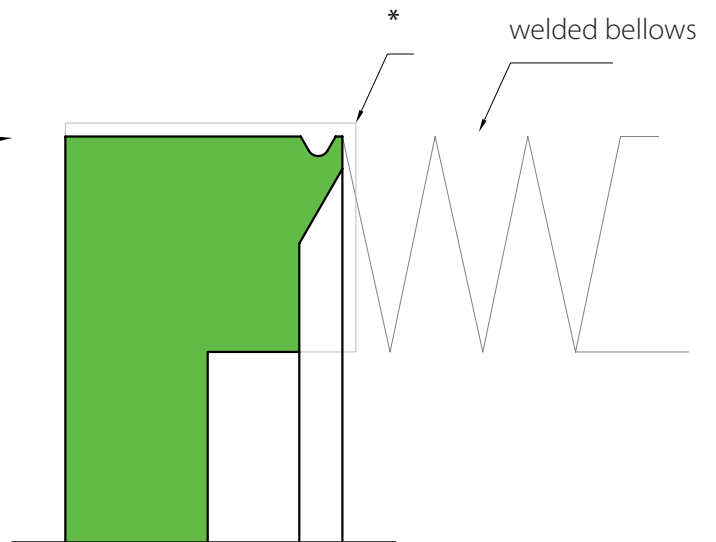
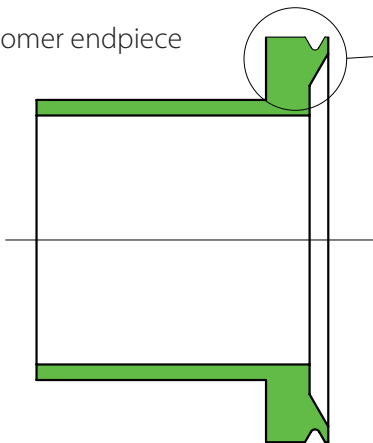


$$\frac{D-OD}{2} < 15 \Rightarrow b \geq 3$$

$$\frac{D-OD}{2} \geq 15 \text{ and } < 60 \Rightarrow b \geq 5$$

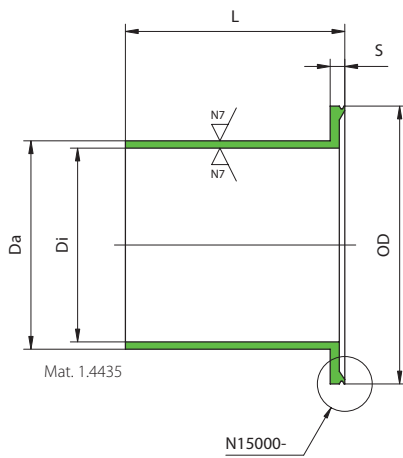
$$\frac{D-OD}{2} > 60 \Rightarrow b \geq 7$$

customer endpiece



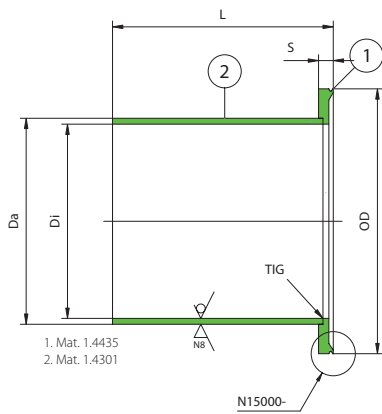
* Premachining the end pieces like drawing with $0.5 \begin{smallmatrix} +0.2 \\ 0 \end{smallmatrix}$ mm overmeasure.

End piece Type H, one-part



DN	ID	OD	Di	Da	S	L
DN10	6	13	6,0	8,0	4,0	25,0
	9	20	10,0	12,0	4,0	25,0
DN16	13	26	16,0	18,0	4,0	32,0
	16	31,5	16,0	18,0	4,0	32,0
	16	31,5	16,0	18,0	4,0	15,2
	19	37	21,0	25,0	4,0	32,0
	21	41	21,0	25,0	4,0	32,0
DN25	21	49	21,0	25,0	4,0	32,0
	26	46	31,0	34,0	4,0	40,0
	31	51	31,0	34,0	4,0	40,0
DN40	36	56	38,0	41,3	4,0	50,5
	39	59	38,0	41,3	4,0	50,5
	39	59	38,0	41,3	4,0	24,2
DN50	46	71	46,0	50,0	4,0	60,0
	51	76	53,0	57,0	4,0	60,0
DN63	65	90	66,0	70,0	5,0	75,0
	75	100	72,1	76,1	5,0	75,0
	90	120	90,0	95,0	5,0	75,0
DN100	102	132	104,0	108,0	5,0	75,0
	127	157	134,5	139,7	5,0	91,0
DN160	150	185	150,0	156,0	5,0	91,0
	180	215	175,0	179,0	6,0	91,0
DN200	200	235	200,0	206,0	6,0	91,0
DN250	250	285	250,0	256,0	6,0	91,0
DN320	300	340	300,0	306,0	6,0	91,0

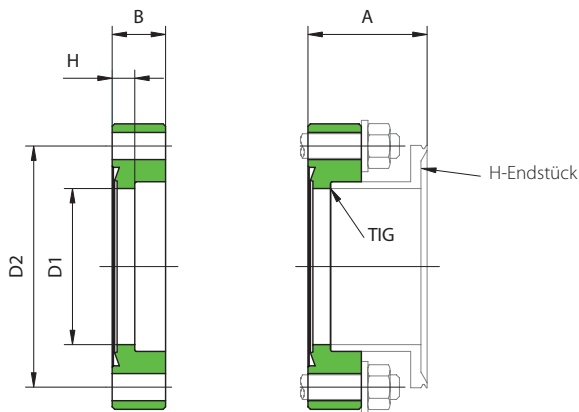
End piece Typ H, two-part



End pieces type H can be delivered in different lengths with end piece type R (1) and a pipe (2).

All dimensions are stated in metrical values [mm].
Other sizes, shapes and materials are available upon request.

CF flange, fixed

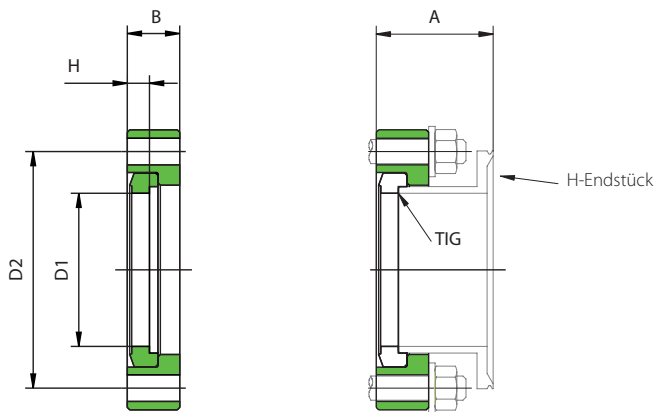


Mat. 1.4306

DN	D1	D2	B	H	A*	ID/OD
CF16 F	16,0	27,0	7,6	4,8	20,0	16/31.5
CF40 F	38,0	58,7	12,7	4,8	29,0	39/59
CF63 F	66,0	92,1	17,4	8,0	36,0	65/90
CF100 F	104,0	130,3	19,9	9,5	41,0	102/132
CF160 F	150,0	181,0	22,3	9,5	43,0	150/185
CF200 F	200,0	231,8	24,6	9,5	50,5	200/235
CF250 F	250,0	284,0	27,3	13,0	51,0	250/285

*: A is minimum dimension with bolted joint.

CF flange, rotating



Mat. 1.4306

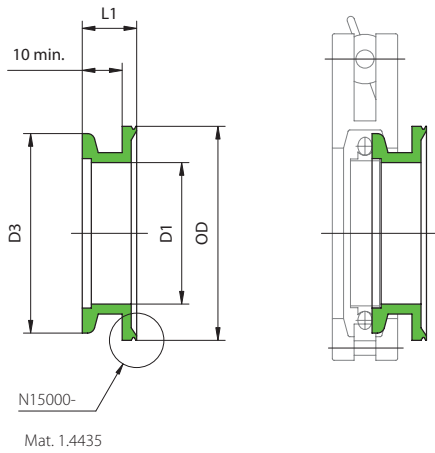
DN	D1	D2	B	H	A*	ID/OD
CF16 R	16,0	27,0	7,6	4,8	20,0	16/31.5
CF40 R	38,0	58,7	12,7	4,8	29,0	39/59
CF63 R	66,0	92,1	17,4	8,0	36,0	65/90
CF100 R	104,0	130,3	19,9	9,5	41,0	102/132
CF160 R	150,0	181,0	22,3	9,5	43,0	150/185
CF200 R	200,0	231,8	24,6	9,5	50,5	200/235
CF250 R	250,0	284,0	27,3	13,0	51,0	250/285

*: A is minimum dimension with bolted joint.

All dimensions are stated in metrical values [mm].

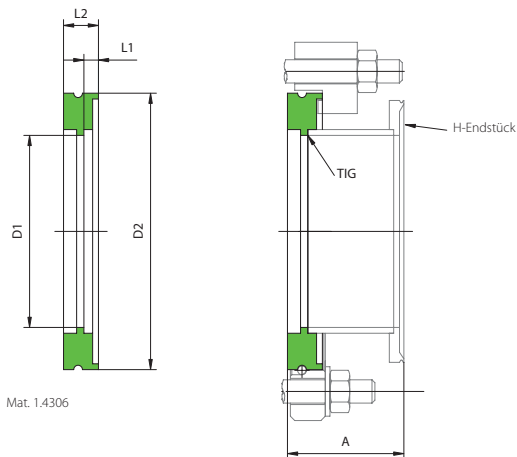
In addition, all CF flanges can be delivered with threaded bolt holes and for lower permeabilities with material 1.4429 upon request. Other sizes, shapes and materials are available upon request.

ISO-KF flanges (DIN 28403)



	D1	D3	OD	L1
DN10	10,0	30,0	20,0	14,0
DN16	16,0	30,0	31,5	14,0
DN25	25,0	40,0	46,0	14,0
DN40	39,0	55,0	59,0	15,0
DN50	50,0	75,0	76,0	18,5

ISO-K flanges (DIN 28404)



	D1	D2	L1	L2	A*	ID/OD
DN 63	66,0	95,0	5,0	12,0	40,0	65/90
DN100	102,0	130,0	5,0	12,0	40,0	102/132
DN160	150,0	180,0	5,0	12,0	44,0	150/185
DN200	200,0	240,0	5,0	12,0	44,0	200/235
DN250	250,0	290,0	5,0	12,0	44,0	250/285

* A is minimum dimension with bolted joint.

All dimensions are stated in metrical values [mm].
Other sizes, shapes and materials are available upon request.

Issue 0706. Technical specifications subject to change.

COMVAT AG

**Scharastrasse 1
CH-9469 Haag / Switzerland**

Phone +41 81 771 60 62
Fax +41 81 771 10 49
Mail comvat@vat.ch
Web www.comvat.com

BENELUX

VAT Contact Office
Zuiderstraat 30
3434 BH Nieuwegein
Netherlands

Phone +31 30 601 8251
Fax +31 30 601 8252
Mail benelux@vatvalve.com

USA

VAT Inc.
500 West Cummings Park
Suites 5450-5650
Woburn, MA 01801

Phone +1 781 935 1446
Fax +1 781 935 3940
Mail us@vatvalve.com

More information can be found on www.comvat.com