

METAL BELLOW EXPANSION JOINTS

MBJ-10/MBJ-30

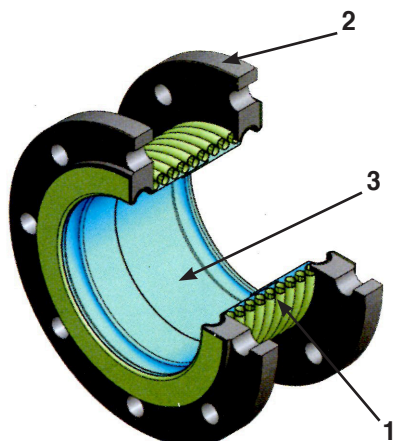


Metal bellow expansion joints, axial compensation, design according to EJMA, rating up to PN 63, flanged ends or B.W. ends.

Available versions

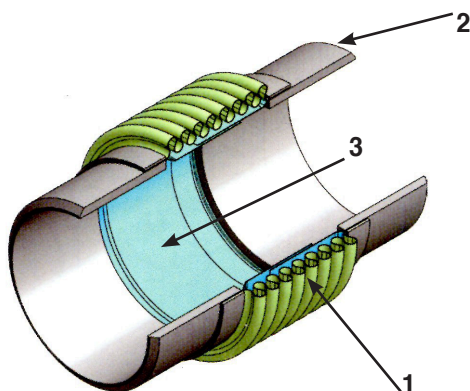
- MBJ-10: flanged ends
- MBJ-30: B.W. ends

MBJ-10



N°	ITEM	MATERIAL	STANDARD
1	BELLOW	STAINLESS STEEL	AISI 321
2	FLANGE	CARBON STEEL	S235JR
3	INNER SLEEVE	STAINLESS STEEL	AISI 321

MBJ-30



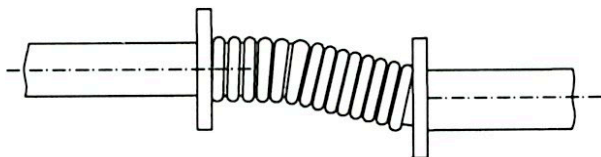
N°	ITEM	MATERIAL	STANDARD
1	BELLOW	STAINLESS STEEL	AISI 321
2	B.W. ENDS	CARBON STEEL	S235JR
3	INNER SLEEVE	STAINLESS STEEL	AISI 321

METAL BELLOW EXPANSION JOINTS

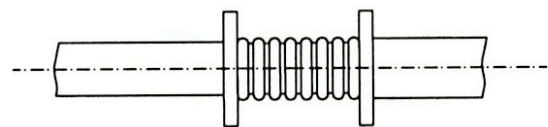
MBJ-10/MBJ-30

TECHNICAL DETAILS

- Stainless steel bellow (standard AISI 321, AISI 304-316 as option, other materials on request).
- Carbon steel flanged ends (MBJ-10 series), (standard ST 37.2, S235JR, other materials on request).
- Carbon steel B.W. ends (MBJ-30 series), (standard S235JR, P235TR1, other materials on request).
- Stainless steel inner sleeve (standard AISI 321, AISI 304-316 as option, other materials on request). Expansion joints without inner sleeve on request.
- Design according to EJMA calculations.
- Construction design according to EN 14917.
- Welding procedures according to: WPS EN ISO 15609-1, WPQR EN ISO 15614-1.
- Suitable for different kind of medium: liquids, steam, gas.
- Rating up to PN 63 (standard PN 16 is available in stock).
- Suitable for PN 10-16 flanges (standard) but also PN 25-40-63 or ANSI 150-300 (on request).
- Sizes from DN 25 (1") to DN 2600 (104"), standard sizes in stock from DN 25 to DN 300.
- Working temperature: -10°C / +550°C.
- Hydrostatic test for the body: 1,5 times of nominal pressure.
- Only axial compensation.



WRONG



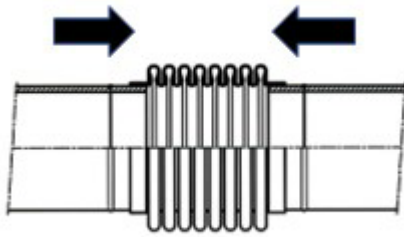
RIGHT

METAL BELLOW EXPANSION JOINTS

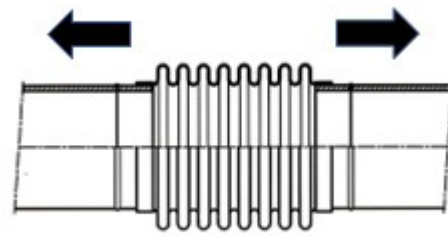
MBJ-10/MBJ-30

TECHNICAL DETAILS

- Standard total run are: 30mm = -20mm of compression / +10mm of elongation (always available in stock) or 60mm = -40mm of compression / +20mm of elongation (only on request); other type of run on request.



COMPRESSION



ELONGATION

- The reduction factor is used to define the working pressure (PS) where temperatures exceed 20°C. Check the table below. The calculated pressure is lower than the nominal pressure of the standard item. The right calculation is: $PS \leq PN \times Kp$

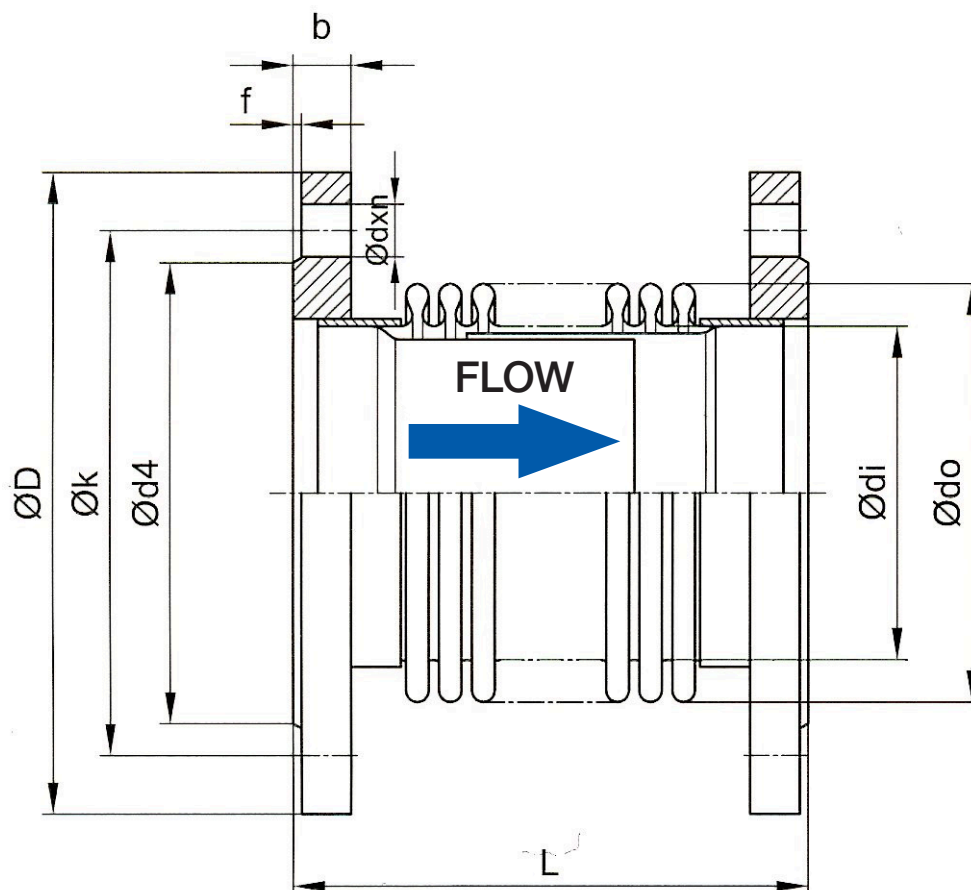
NOMINAL PRESSURE REDUCTION FACTOR			
TEMPERATURE °C	Kp	TEMPERATURE °C	Kp
20	1.00	350	0.64
100	0.85	400	0.63
150	0.81	450	0.62
200	0.77	500	0.60
250	0.71	550	0.59
300	0.68	600	0.57

METAL BELLOW EXPANSION JOINTS

MBJ-10/MBJ-30

DIMENSIONS

MBJ-10
Total run 30 mm



DIMENSIONS (mm)											
DN	L	ØD	Øk	Ød4	f	b	Ødxn	Ødi	Ødo	Effective Bellow area (cm ²)	Axial Spring rate (N/mm)
25	110	115	85	68	2	16	Ø14x4	38	48.2	14.58	82.1
32	115	140	100	78	2	18	Ø18x4	42.4	55.0	18.62	49.7
40	120	150	110	88	3	18	Ø18x4	48.3	61.0	23.44	60.8
50	110	165	125	102	3	20	Ø18x4	60.3	76.0	36.46	104.5
65	110	185	145	122	3	20	Ø18x4	76.1	95.0	57.45	87.8
80	110	200	160	138	3	20	Ø18x8	88.9	111.0	78.42	178.9
100	115	220	180	158	3	22	Ø18x8	114.3	140.0	137.09	252.2
125	130	250	210	188	3	22	Ø18x8	139.7	164.0	181.01	320.0
150	145	285	240	212	3	24	Ø23x8	168.3	200.0	266.20	196.4
200	140	340	295	268	3	26	Ø23x12	219.3	250.0	431.86	694.2
250	150	405	355	320	3	29	Ø27x12	273.0	323.0	697.11	590.0
300	150	460	410	378	4	32	Ø27x12	323.9	380.0	972.37	496.8

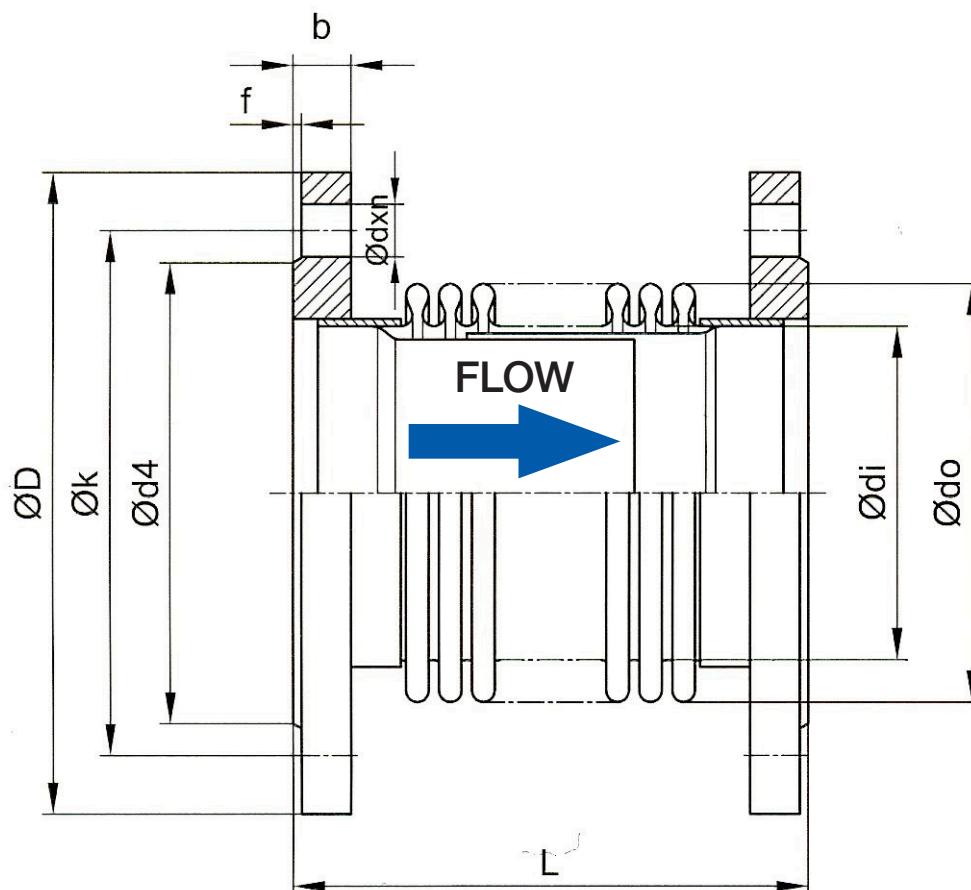
Other dimensions please contact our office.

METAL BELLOW EXPANSION JOINTS

MBJ-10/MBJ-30

DIMENSIONS

MBJ-10
Total run 60 mm



DIMENSIONS (mm)

DN	L	ØD	Øk	Ød4	f	b	Ødxn	Ødi	Ødo	Effective Bellow area (cm ²)	Axial Spring rate (N/mm)
50	190	165	125	102	3	20	Ø18x4	60.3	76.0	36.46	55.7
65	195	185	145	122	3	20	Ø18x4	76.1	95.0	57.45	43.9
80	190	200	160	138	3	20	Ø18x8	88.9	111.0	78.42	89.4
100	200	220	180	158	3	22	Ø18x8	114.3	140.0	137.09	126.1
125	210	250	210	188	3	22	Ø18x8	139.7	164.0	181.01	160.0
150	245	285	240	212	3	24	Ø23x8	168.3	200.0	266.20	98.2
200	245	340	295	268	3	26	Ø23x12	219.3	250.0	431.86	347.1
250	250	405	355	320	3	29	Ø27x12	273.0	323.0	697.11	295.0
300	250	460	410	378	4	32	Ø27x12	323.9	380.0	972.37	248.4

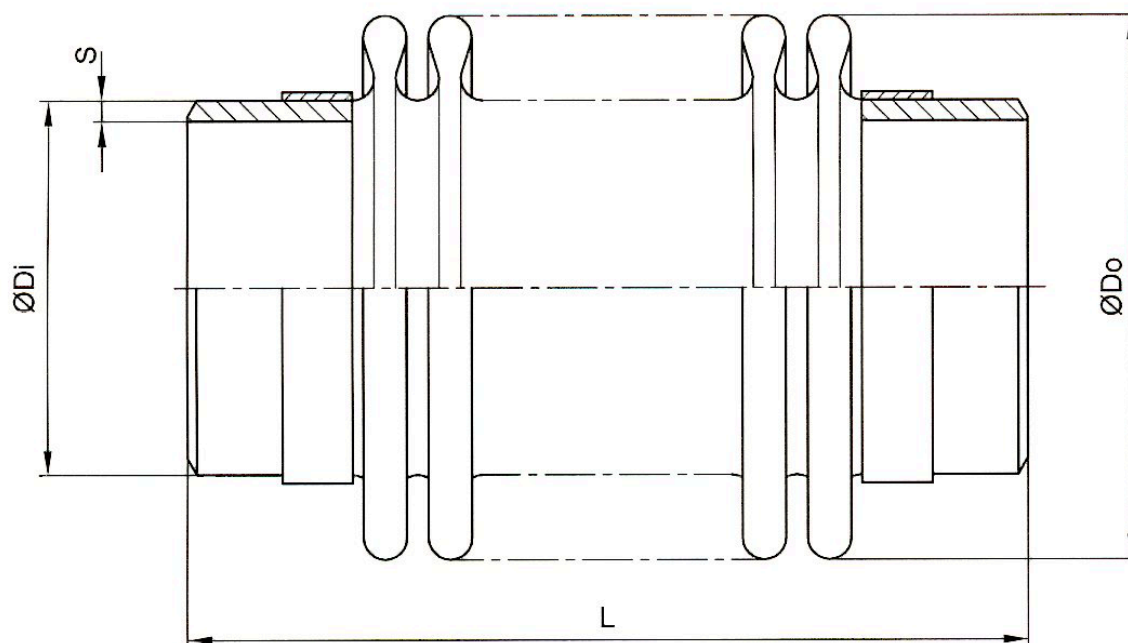
Other dimensions please contact our office.

METAL BELLOW EXPANSION JOINTS

MBJ-10/MBJ-30

DIMENSIONS

MBJ-30
Total run 30 mm



DIMENSIONS (mm)						
DN	L	S	Ødi	Ødo	Effective Bellow area (cm ²)	Axial Spring rate (N/mm)
25	210	2.6	38	48.8	14.58	82.1
32	215	2.6	42.4	55.6	18.62	49.7
40	220	2.6	48.3	61.5	23.44	60.8
50	210	2.9	60.3	76.9	36.46	104.5
65	210	2.9	76.1	95.9	57.45	87.8
80	215	3.2	88.9	112.1	78.42	178.9
100	215	3.6	114.3	140.9	137.09	252.2
125	220	4.0	139.7	165.7	181.01	320.0
150	245	4.5	168.3	201.1	266.20	196.4
200	235	6.3	219.3	252.3	431.86	694.2
250	240	6.3	273.0	325.8	697.11	590.0
300	250	7.1	323.9	382.9	972.37	496.8

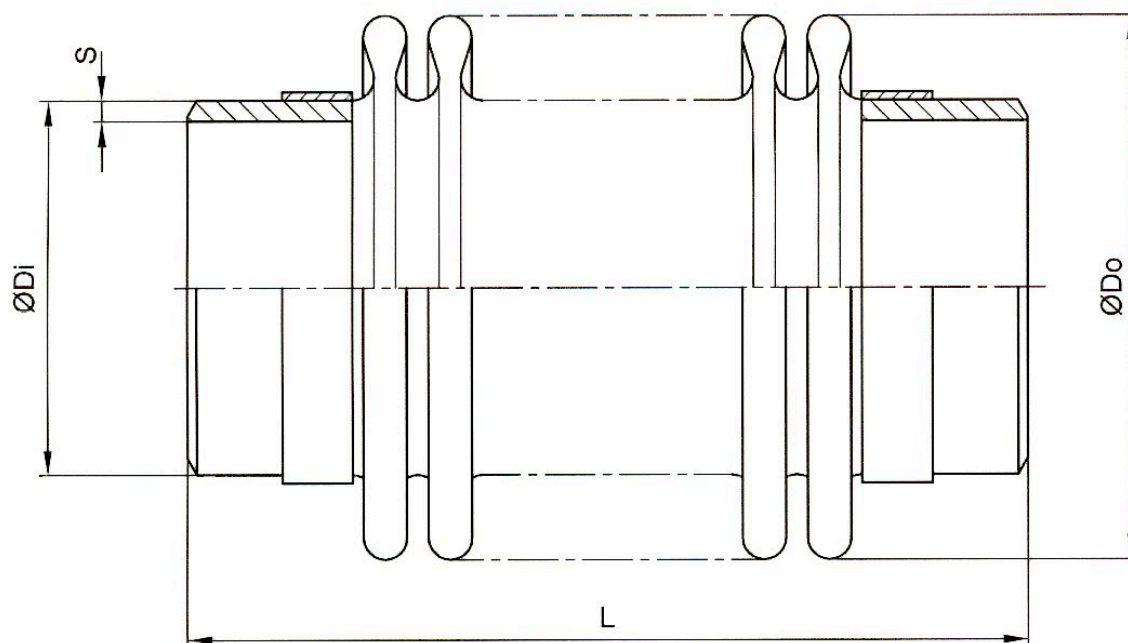
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METAL BELLOW EXPANSION JOINTS

MBJ-10/MBJ-30

DIMENSIONS

MBJ-30
Total run 60 mm



DIMENSIONS (mm)						
DN	L	S	Ødi	Ødo	Effective Bellow area (cm ²)	Axial Spring rate (N/mm)
50	290	2.9	60.3	76.9	36.46	104.5
65	285	2.9	76.1	95.9	57.45	87.8
80	300	3.2	88.9	112.1	78.42	178.9
100	300	3.6	114.3	140.9	137.09	252.2
125	310	4.0	139.7	165.7	181.01	320.0
150	345	4.5	168.3	201.1	266.20	196.4
200	340	6.3	219.3	252.3	431.86	694.2
250	340	6.3	273.0	325.8	697.11	590.0
300	340	7.1	323.9	382.9	972.37	496.8

Other dimensions please contact our office.