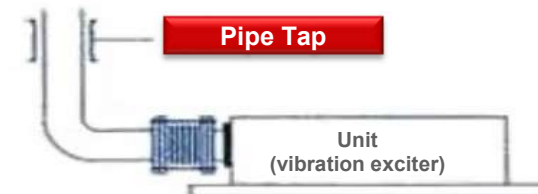
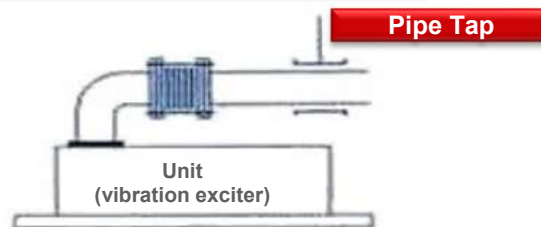


Typ WAS.850 / WAS.855

Structure/Design:	Reaction free vibration damper with loose flanges according to EN 1092-1 in stainless steel (V2A) Multi-layer bellows with draft limiter and damping elements made of EPDM or stainless steel		
Material:	Flange	St-37, Carbon steel galvanised	conditionally for outdoor use!
	Bellows	1.4404 (V4A)	
	Tie Rods	St-37, Carbon steel galvanised	
	Buffer	to 90°C EPDM, > 90°C V2A	
Nominal Pressure	PN6 / PN10 / PN 16		
Temperature:	20° C & 1.00E+07 Cycles		
	Max. Operating temperature	450°C Taking into account the temperature reduction fact Kp	
	Use metal pads at temperatures>90°C		
Handling / assembly:	These components are only to be used with the corresponding distances between the fixed / guide points.		
	For the correct dimensioning of these points, the lateral spring constant Cy is given in the tables		

Without Reaction Forces

Applications:	Pumps, compressors, motors, house installations, heating, Gas, water and sewage systems, air conditioning systems, heat recovery systems
Norms & Standards:	EJMA , EN1092-1 , EN 13480-3 , EN 1333



Execution:

Fig. 1: Oval flange

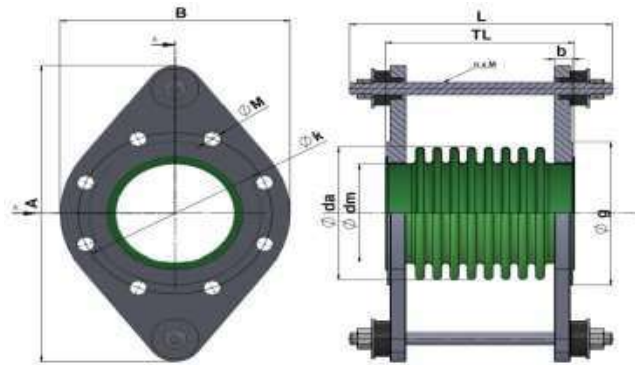


Fig. 2: Triangular flange

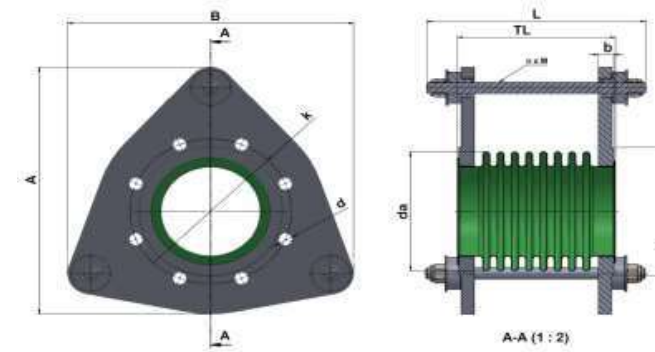


Fig. 3: Square flange

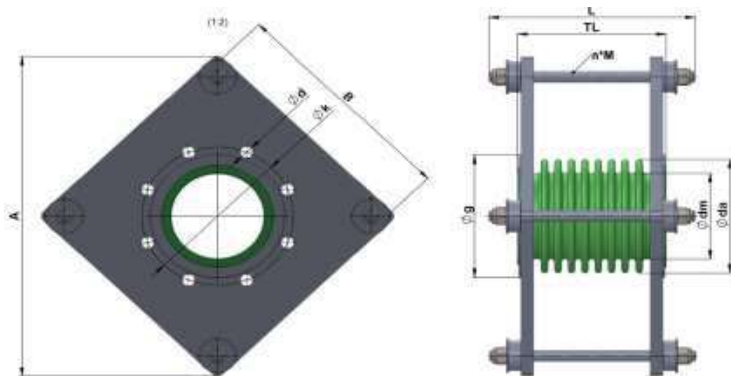
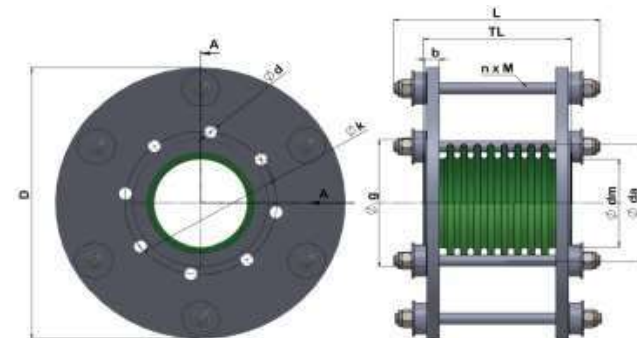


Fig. 4: Round flange



Dimension Tables:

			Bellows				Flange							Tie Rods			
Item number	DN	Longueur de construction	Amplitude	Inside-Ø +/-0.5	Outside-Ø +/-0.6	Lateral Spring rate +/-30%	Ø d'étanchéité +/-0.6	largest flange dimensions	Width	Thickness	Bolt circle-Ø	Number	Hole-Ø oder Thread	Number x Thread	Total length approx.	Weight	Execution acc. to Fig.
		TL	±Δlat	di	da	Cy	g	A	B	b	k	n	d	n x M	L		
		mm	mm	mm	mm	N/mm	mm	mm	mm	mm	mm	mm	(-)	mm	(-)	mm	

WAS.850		Bebop PN6															
WAS.850.032.6.ZU	32	130	0.6	38.0	48.0	20	80	260	130	12	100	4	14	2 x 12	230	2.2	1
WAS.850.040.6.ZU	40	130	0.6	48.3	62.0	20	80	260	130	12	100	4	14	2 x 12	230	3.6	1
WAS.850.050.6.ZU	50	130	0.3	60.3	76.0	40	90	270	140	12	110	4	14	2 x 12	230	4.8	1
WAS.850.065.6.ZU	65	130	0.3	76.1	95.0	55	110	290	160	12	130	4	14	2 x 12	230	6.1	1
WAS.850.080.6.ZU	80	130	0.3	88.9	111.0	90	126	320	190	14	150	4	18	2 x 12	230	7.5	1
WAS.850.100.6.ZU	100	130	0.3	114.3	140.0	110	148	340	210	14	170	4	18	2 x 12	230	10	1
WAS.850.125.6.ZU	125	130	0.2	139.7	164.0	205	178	370	240	16	200	8	18	2 x 12	230	12.1	1
WAS.850.150.6.ZU	150	130	0.2	168.3	200.0	536	202	395	265	18	225	8	18	2 x 16	230	13.3	1
WAS.850.200.6.ZU	200	130	0.2	219.1	250.0	1399	258	450	320	20	280	8	M16	2 x 16	230	15.9	1
WAS.850.250.6.ZU	250	130	0.1	273.0	323.0	2795	312	454	445	22	335	12	M16	3 x 16	230	25.5	2
WAS.850.300.6.ZU	300	130	0.1	323.9	380.0	3290	365	510	510	22	395	12	M20	3 x 16	230	33.5	2

WAS.855				Bebop PN10													
DN40 to DN150 see PN16																	
WAS.855.200.ZU.10	200	130	0.2	219.1	250.0	5566	268	424	410	25	295	8	22	3 x 16	230	28	2
WAS.855.250.ZU.10	250	130	0.1	273.0	323.0	14990	320	395	395	25	350	12	M20	4 x 16	230	40	3
WAS.855.300.ZU.10	300	130	0.1	323.9	380.0	22270	370	585	585	26	400	12	M20	6 x 16	230	81	4
WAS.855.350.ZU.10	350	200	0.1	355.6	392.0	3046	400	635	635	26	460	16	M22	6 x 16	290	96	4
WAS.855.400.ZU.10	400	200	0.1	406.0	462.0	3889	453	695	695	26	515	16	M26	8 x 16	290	112	4
WAS.855.450.ZU.10	450	200	0.1	457.0	517.0	6144	508	745	745	26	565	20	M26	10x 16	290	126	4
WAS.855.500.ZU.10	500	200	0.1	508.0	592.0	7765	558	800	800	26	650	20	M26	12x 16	290	142	4



			Bellows				Flange							Tie Rods			
Item number	DN	Longueur de construction	Amplitude	Inside-Ø +/-0.5	Outside- Ø +/-0.6	Lateral Spring rate +/-30%	Ø d 'étanchéité +/-0.6	largest flange dimensions	Width	Thickness	Bolt circle-Ø	Number	Hole-Ø oder Thread	Number x Thread	Total length approx.	Weight	Execution acc. to Fig.
		TL	±Δlat	di	da	Cy	g	A	B	b	k	n	d	n x M	L		
		mm	mm	mm	mm	N/mm	mm	mm	mm	mm	mm	(-)	mm	(-)	mm	kg	
WAS.855			Bebop PN16														
WAS.855.025.ZU	25	130	0.6	38.0	48.8	32.2	78	270	140	16	100	4	18	2 x 12	230	4.7	1
WAS.855.032.ZU	32	130	0.6	42.4	55.0	21.4	78	270	140	16	100	4	18	2 x 12	230	4.3	1
WAS.855.040.ZU	40	130	0.6	48.3	61.0	33.3	88	280	150	18	110	4	18	2 x 12	230	4.6	1
WAS.855.050.ZU	50	130	0.3	60.3	76.0	40.3	102	295	165	18	125	4	18	2 x 12	230	5.9	1
WAS.855.065.ZU	65	130	0.3	76.1	95.0	53.9	122	315	185	18	145	8	18	2 x 12	230	7.1	1
WAS.855.080.ZU	80	130	0.3	88.9	111.0	127	138	330	200	20	160	8	18	2 x 12	230	8.6	1
WAS.855.100.ZU	100	130	0.3	114.3	140.0	235	158	350	220	20	180	8	18	2 x 16	230	11.2	1
WAS.855.125.ZU	125	130	0.2	139.7	164.0	574	188	380	250	22	210	8	18	2 x 16	230	14.1	1
WAS.855.150.ZU	150	130	0.2	168.3	200.0	973	212	353	372	22	240	8	22	3 x 16	230	19.7	2
WAS.855.200.ZU	200	130	0.2	219.1	250.0	3870	268	350	350	24	295	12	22	4 x 16	230	40	3
WAS.855.250.ZU	250	130	0.1	273.0	323.0	14990	320	540	540	26	355	12	M24	6 x 16	230	73	4
WAS.855.300.ZU	300	130	0.1	329.9	380.0	22270	378	598	598	30	410	12	M24	6 x 16	230	96.0	4
WAS.855.350.ZU	350	200	0.1	355.6	392.0	10051	400	635	635	30	470	16	M22	6 x 16	290	121	4
WAS.855.400.ZU	400	200	0.1	406.0	462.0	11300	453	695	695	30	525	16	M26	8 x 16	290	149	4
WAS.855.450.ZU	450	200	0.1	457.0	517.0	14100	508	745	745	30	565	20	M26	10x 16	290	171	4
WAS.855.500.ZU	500	200	0.1	508.0	592.0	21216	585	834	834	33	650	20	M26	12x 16	290	213	4



Pressure Loss / Druckverlust

Pressure loss in mbar at m³/h volume flow (water 20°C)

Druckverlust in mbar bei m³/h Volumenstrom (Wasser 20°C)

Volume Flow	0.5 m³/h	1 m³/h	5 m³/h	10 m³/h	20 m³/h	30 m³/h	50 m³/h	100 m³/h
WAS.855.032.ZU		0.04	0.90	3.60	14.53	32.70	90.80	363.00
WAS.855.040.ZU		0.03	0.82	3.27	13.00	29.40	81.70	326.00
WAS.855.050.ZU		0.01	0.15	0.62	2.50	5.60	15.40	61.70
WAS.855.065.ZU			0.04	0.17	0.70	1.54	4.30	17.00
WAS.855.080.ZU			0.02	0.09	0.35	0.80	2.20	8.75
WAS.855.100.ZU				0.02	0.09	0.19	0.54	2.17
WAS.855.125.ZU				0.01	0.03	0.07	0.18	0.74
WAS.855.150.ZU					0.01	0.03	0.07	0.30
WAS.855.200.ZU						0.01	0.02	0.07
WAS.855.250.ZU							0.01	0.02
WAS.855.300.ZU								0.00

IMPORTANT: The average flow velocity is from 0.5 to 2 m/s

WICHTIG: Die durchschnittliche Strömungsgeschwindigkeit ist von 0.5 bis 2 m/s

Pressure loss for WAS.850 / WAS.855 in mbar

