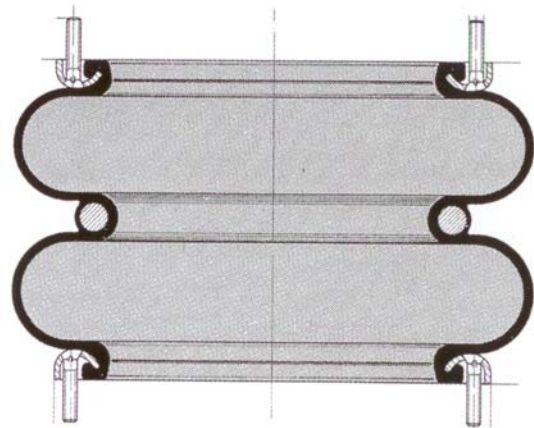
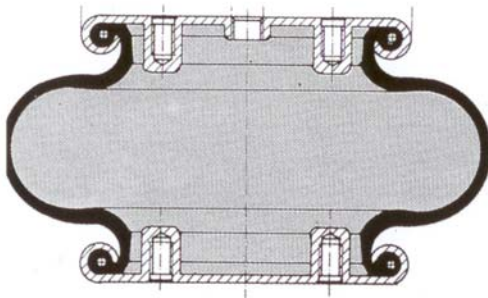
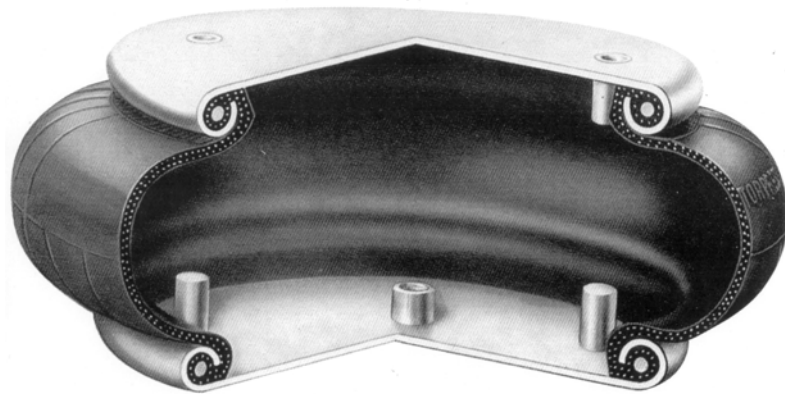
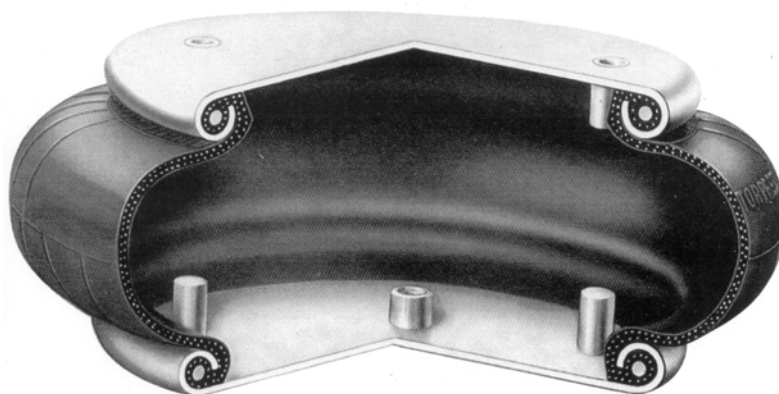
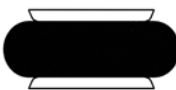




TORPRESS AIRSPRING BELLOWS ACTUATORS





USED AS AIR SUSPENSION

	MODEL	STAN- DARD Code	HIGH- TEMP Code	Connec- tion	Max OD mm	Min. Height mm	Max. Height mm	Static Height mm	Effec. Area cm ²	Cap. daN	Freq. cycle/1'	Stiffness daN/mm
	16	93029	93086	P1	153	46	91	70	86	600	250	21
	131	94047	—	P1	165	50	110	85	95	665	185	14.5
	110	93113	93114	P1	210	51	151	101	180	1260	154	18.8
		88540	93079	F1	210	45	145	95	180	1260	154	18.8
	88820	89023	F1	210	45	145	95	180	1260	154	18.8	
	116	93027	—	P1	231	46	152	100	180	1260	165	20.5
19	94016	95015	P2	325	51	151	127	450	3150	158	41.5	
	94014	—	F2	325	43	143	127	450	3150	158	41.5	
	23 B	202665	—	F1	165	65	205	150	104	728	130	8
	26	84181	89422	F2	220	85	245	165	169	1150	127	12
	20	86600	88538	F2	255	80	265	170	240	1680	115	13.9
	245	93740	202344	F1	270	85	310	185	348	2440	110	18.4
	22	94091	—	P2	325	88	288	183	450	3150	108	23.1
		88544	89425	F2	325	80	280	175	450	3150	108	23.1
	21 BR	89457	—	F2	380	80	290	180	680	4760	106	33.9
	21A BR	97300	—	F2	435	85	315	190	785	5495	98	33.7
	21B BR	92154	—	F2	440	85	385	200	850	6000	100	38
	28 BR	92527	—	F2	445	80	310	185	1015	7105	105	78.6
	28 B	90559	—	F2	485	85	375	250	1015	7105	92	38.5
29	93056	—	P3	570	90	330	195	1930	13510	98	83.8	
	93166	—	F2	570	80	320	185	1930	13510	98	83.8	
	31	95210	—	F2	700	85	700	300	2000	14000	80	58
	325	203332	—	F2	400	80	500	250	757	5299	85	24.4
	322	92615	—	P4	310	133	408	265	450	3150	90	15.7
		89413	—	F2	310	125	400	257	450	3150	90	15.7
	321	88110	—	F2	380	125	400	257	690	4830	84	21.5

Distributor :

CONNECTION DIMENSIONS

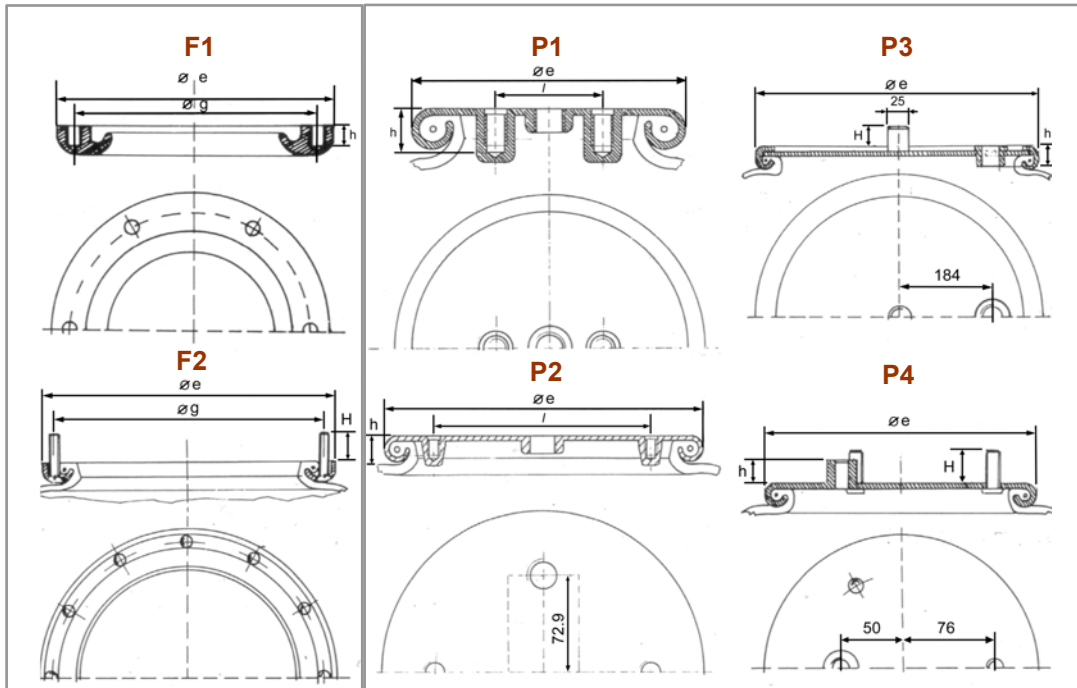
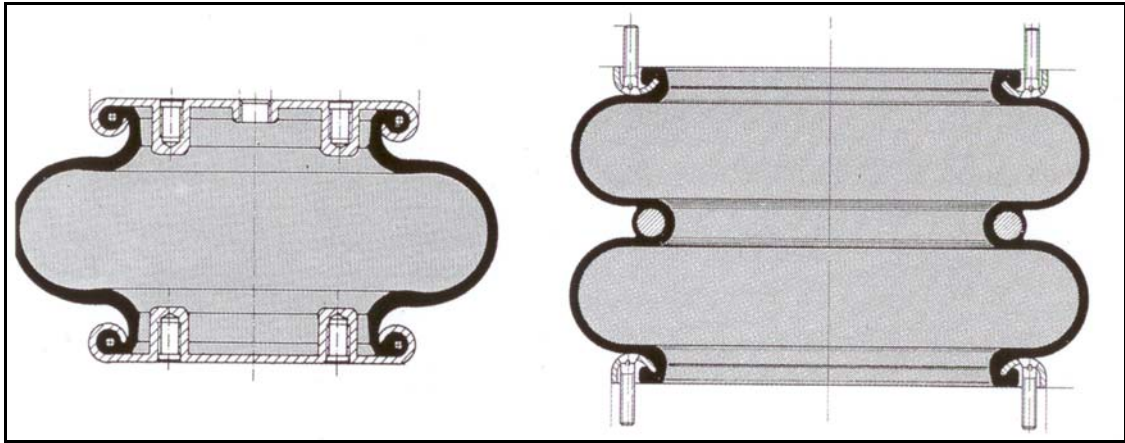


Plate Connection: With this arrangement the actuator can be fixed with bolts and it is ready to be used directly with air inlet through the air hole.

Flange Connection: To secure sealing with this model the two flanges are connected to two plates and bolted down securely with the bolts supplied. One of the two plates must have an air inlet hole

MODEL	STANDARD	HIGH-TEMP Code	Conne- ction	Thread Air Hole	Ø g	Ø e	H	h	l	Connecting bolts or holes	
	Code				mm	mm	mm	mm	mm	No.	Ø
16	93029	93086	P1	1/4" NPT F	—	114.5	—	16	44.5	2	3/8" - 16 UNC
131	94047	—	P1	1/4" NPT F	—	114.5	—	16	44.5	2	3/8" - 16 UNC
110	93113	93114	P1	1/4" NPT F	—	114.5	—	16	44.5	2	3/8" - 16 UNC
	88540	93079	F1	—	118	134	—	10	—	6	M 8 x 1.25
	88820	89023	F1	—	138	155	—	10	—	6	M 8 x 1.25
116	93027	—	P1	1/4" NPT F	—	135	—	16	70	2	3/8" - 16 UNC
19	94016	95015	P2	1/4" NPT F	—	228.6	—	16	157.5	2	3/8" - 16 UNC
	94014	—	F2	—	228.5	247	24	—	—	12	M 8 x 1
23 B	202665	—	F1	—	118	134	—	10	—	6	M 8 x 1.25
26	84181	89422	F2	—	135	155	24	—	—	6	M 8 x 1
20	86600	88538	F2	—	160.3	179	24	—	—	8	M 8 x 1
245	93740	202344	F1	—	145	200	—	10	—	8	M 8 x 1.25
22	94091	—	P2	1/4" NPT F	—	228.6	—	16	157.5	2	3/8" - 16 UNC
	88544	89425	F2	—	228.5	247	24	—	—	12	M 8 x 1
21 BR	89457	—	F2	—	287.3	306	24	—	—	12	M 8 x 1
21A BR	97300	—	F2	—	287.3	306	24	—	—	12	M 8 x 1
21B BR	92154	—	F2	—	287.3	306	24	—	—	12	M 8 x 1
28 BR	92527	—	F2	—	350.8	369.4	24	—	—	18	M 8 x 1
28 B	90559	—	F2	—	350.8	369.4	24	—	—	18	M 8 x 1
29	93056	—	P3	1" NPT F	—	480	21	27	—	1	Ø 25
	93166	—	F2	—	482.6	501.2	24	—	—	24	3/8" - 16 UNF
31	95210	—	F2	—	350.8	369.4	24	—	—	18	M 8 x 1
325	203332	—	F2	—	287.3	306	24	—	—	18	M 8 x 1
322	92615	—	P4	M 14 x 1.5*	—	228.6	26	24	—	3	M 12 x 1.5
	89413	—	F2	—	228.5	247	24	—	—	12	M 8 x 1
321	88110	—	F2	—	287.3	306	24	—	—	12	M 8 x 1



Crimped-On End Plates
Types P1, P2, P3, P4

Bead Ring Flange Connection
Types F1, F2

USED AS AN ACTUATOR

Model	Total Travel	Thrusts		Thrusts in daN Pressures P=0.6 MPa (6 atm) Based On Travel																
		max.	min.	0	20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	
	mm	daN	daN																	
16	45	730	110	730	580	240														
131	60	960	240	960	810	350	240													
110	100	1440	360	1440	1300	1130	880	600	360											
116	106	1470	300	1470	1410	1290	1080	760	330											
19	100	3390	960	3390	3300	3000	2520	1890	960											
23 B	140	1000	290	1000	925	830	735	650	545	425	290									
26	160	1500	420	1500	1420	1250	1130	1000	870	750	580	420								
20	185	2010	300	2010	1930	1810	1660	1530	1650	1140	910	640	360							
245	225	2680	740	2680	2620	2560	2460	2320	2160	1960	1760	1540	1300	1060	810					
22	200	3600	540	3600	3450	3300	3090	2880	2610	2340	2130	1650	1140	540						
21BR	210	5400	910	5400	5106	4920	4620	4350	4050	3750	3360	2850	2220	1440						
21A BR	230	6350	2200	6350	6200	6000	580	5500	4900	4500	4100	3700	3300	2800	2300					
21 B BR	300	6720	1200	6720	6426	6170	5870	5615	5315	5034	4758	4458	4152	3810	3426	3000	2442	1884	1200	
28 BR	230	8100	1100	8100	7740	7380	7020	6600	6180	5760	5280	4680	4020	3180	1980					
28 B	290	8820	1560	8820	8700	8400	8160	7740	7380	6960	6540	6180	5700	5220	4620	3900	3120	2040		
29	240	14220	2940	14220	13680	13140	12660	12180	11700	11160	10500	9540	8340	6840	5040	2940				
31	620	18750	3000	18750	18300	17800	17300	16750	16200	15650	15100	14525	13950	13375	12770	12100	11500	10850	10200	
325	420	6100	2300	6100	5850	5600	5350	5100	4850	4750	4650	4400	4250	4090	3900	3710	3600	3480		
322	275	3540	900	3540	3420	3300	3210	3120	2850	2700	2520	2340	2100	1860	1560	1260	960			
321	275	5200	1920	5200	5100	4800	4050	4620	4440	4290	4050	3840	3600	3300	3000	2640	2250			