

May 2007

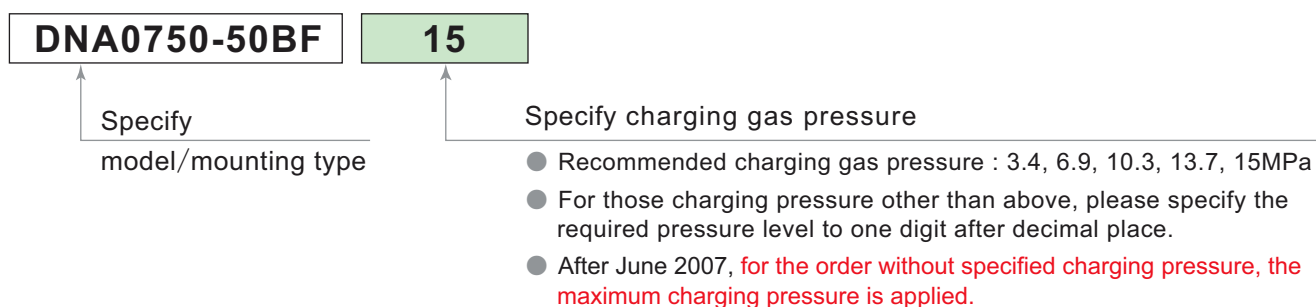
Change of gas charging pressure

We are pleased to inform you that we have increased the maximum charging pressure for the below mentioned model of Pascal gas spring. When you make an order, please refer to the below notes to specify the type of the gas spring and the gas pressure level to charge.

1. The maximum charging pressure of model **DNA**, **DNB**, **DNP** are increased.

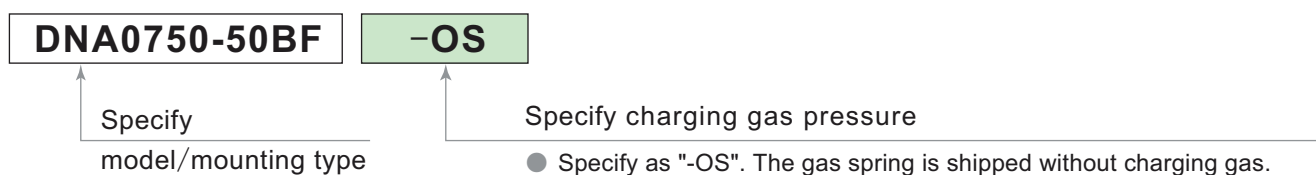
- To increase the cushion force of the gas spring, the maximum charging pressure is increased from current 13.7MPa (20°C) to 15MPa(20°C). Accordingly, the marking on the cylinder is changed to [MAX .15MPa at 20°C].
- For the initial force, full stroke force and the performance diagram after the improvement, refer to the other pages of this leaflet.
- Reference : When charging the gas pressure of 13.7MPa at 20°C, it will become 14.7MPa at 35°C.
When charging the gas pressure of 15MPa at 20°C, it will become 16.1MPa at 35°C
- Implementation date : From the shipment of June 2007.

2. **[Remarks]** Please specify the charging pressure when you making an order.

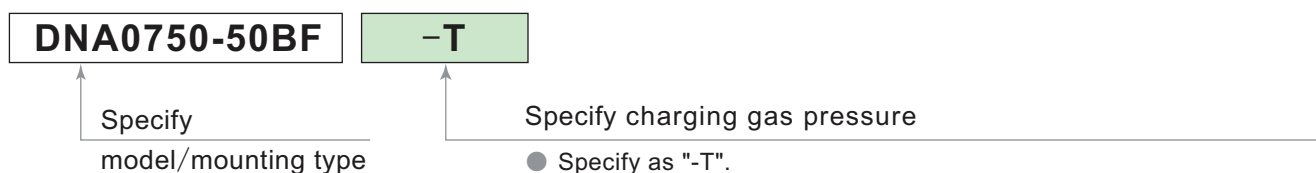


3. For use outside Japan

- For self-contained use, please specify as below. Please note that those gas springs to go outside Japan are shipped without charging gas as it is prohibited by law.



- For hose link system application, please specify as below.



Pascal
corporation

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Pamphlet PA-219E(A) REV.0 2007.05

Specifications / Dimensions

Model (: made to order)	Stroke S mm	1 Initial force kN	1 Full stroke force kN	Compression ratio	Mass kg	L mm	H mm	Common dimensions for all strokes mm
DNA0250 -	10 ☉	10	2.65	3.91	1.47	0.4	70	K = 15 D = 38 B = 33 E = 2 F = 4 G = 4 P = M6 depth 11 T = 10.5 J = 1 Z = 12.5 U = 360
	12.7 ☉	12.7	2.65	3.80	1.43	0.4	75.4	
	16 ☉	16	2.65	3.73	1.41	0.5	82	
	25 ☉	25	2.65	3.65	1.38	0.5	100	
	38.1 ☉	38.1	2.65	3.61	1.36	0.6	126.2	
	50 ☉	50	2.65	3.59	1.35	0.6	150	
	63.5 ☉	63.5	2.65	3.58	1.35	0.7	177	
	80 ☉	80	2.65	3.57	1.35	0.7	210	
	100 ☉	100	2.65	3.56	1.34	0.8	250	
DNA0500 -	10 ☉	10	4.71	6.09	1.29	0.9	105	K = 20 D = 45 B = 40 E = 2 F = 4 G = 4 P = M8 depth 8 T = 15.5 J = 1 Z = 16.5 U = 500
	12.7 ☉	12.7	4.71	6.22	1.32	1.0	110.4	
	16 ☉	16	4.71	6.34	1.34	1.0	117	
	25 ☉	25	4.71	6.52	1.38	1.1	135	
	38.1 ☉	38.1	4.71	6.66	1.41	1.1	161.2	
	50 ☉	50	4.71	6.73	1.43	1.2	185	
	63.5 ☉	63.5	4.71	6.78	1.44	1.4	212	
	80 ☉	80	4.71	6.82	1.45	1.5	245	
	100 ☉	100	4.71	6.86	1.46	1.6	285	
	125 ☉	125	4.71	6.88	1.46	1.8	335	
	160 ☉	160	4.71	6.91	1.47	2.0	405	
DNA0750 -	12.7	12.7	7.36	10.3	1.40	1.3	120.4	K = 25 D = 50 B = 43 E = 3 F = 8 G = 7 P = M8 depth 13 T = 12.5 J = 2 Z = 17.5 U = 500
	25	25	7.36	11.0	1.49	1.4	145	
	38.1	38.1	7.36	11.3	1.53	1.5	171.2	
	50	50	7.36	11.5	1.56	1.7	195	
	63.5	63.5	7.36	11.6	1.57	1.8	222	
	80	80	7.36	11.7	1.59	1.9	255	
	100	100	7.36	11.7	1.60	2.1	295	
	125	125	7.36	11.8	1.60	2.4	345	
	160	160	7.36	11.9	1.61	2.7	415	
	200	200	7.36	11.9	1.62	3.1	495	
	250	250	7.36	11.9	1.62	3.5	595	
300	300	7.36	12.0	1.63	4.0	695		
DNA1500 -	10	10	15.3	19.1	1.25	3.3	130	K = 36 D = 75 B = 67 E = 3 F = 8 G = 7 P = M8 depth 13 T = 12 J = 2.5 Z = 21 U = 800
	25	25	15.3	21.0	1.38	3.6	160	
	38.1	38.1	15.3	21.7	1.42	3.9	186.2	
	50	50	15.3	22.2	1.45	4.1	210	
	63.5	63.5	15.3	22.5	1.47	4.4	237	
	80	80	15.3	22.7	1.49	4.7	270	
	100	100	15.3	22.9	1.50	5.1	310	
	125	125	15.3	23.1	1.51	5.6	360	
	160	160	15.3	23.2	1.52	6.4	430	
	200 ☉	200	15.3	23.4	1.53	7.2	510	
	250 ☉	250	15.3	23.5	1.54	8.3	610	
300 ☉	300	15.3	23.5	1.54	9.3	710		
DNA3000 -	10	10	29.5	34.5	1.17	5.6	140	K = 50 D = 95 B = 87 E = 3 F = 8 G = 7 P = M8 depth 13 T = 12 J = 2.5 Z = 24 U = 1000
	25	25	29.5	39.0	1.32	6.2	170	
	38.1	38.1	29.5	41.4	1.41	6.7	196.2	
	50	50	29.5	43.0	1.46	7.2	220	
	63.5	63.5	29.5	44.3	1.51	7.6	247	
	80	80	29.5	45.6	1.55	8.2	280	
	100	100	29.5	46.7	1.58	8.9	320	
	125	125	29.5	47.6	1.62	9.9	370	
	160	160	29.5	48.6	1.65	11.1	440	
	200 ☉	200	29.5	49.3	1.68	12.6	520	
	250 ☉	250	29.5	50.0	1.70	14.4	620	
300 ☉	300	29.5	50.4	1.71	16.3	720		

1: Figures at initial charging pressure 15MPa (20).

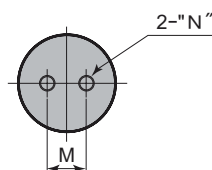
Model (:made to order)	Stroke S mm	1 Initial force kN	1 Full stroke force kN	Compre- ssion Ratio	Mass kg	L mm	H mm	Common dimensions for all strokes mm
DNA5000 - 10	10	49.8	55.1	1.11	9.8	160	150	K = 65 P = M8 depth 13 D = 120 T = 12 B = 112 J = 2.5 E = 3 Z = 25.5 F = 8 U = 1250 G = 7
25	25	49.8	61.1	1.23	10.7	190	165	
38.1	38.1	49.8	64.9	1.30	11.5	216.2	178.1	
50	50	49.8	67.7	1.36	12.2	240	190	
63.5	63.5	49.8	70.3	1.41	13.0	267	203.5	
80	80	49.8	72.8	1.46	14.0	300	220	
100	100	49.8	75.3	1.51	15.2	340	240	
125	125	49.8	77.6	1.56	16.7	390	265	
160	160	49.8	80.0	1.61	18.9	460	300	
200	200	49.8	82.0	1.65	21.3	540	340	
250 ⊙	250	49.8	83.8	1.68	24.2	640	390	
300 ⊙	300	49.8	85.1	1.71	27.2	740	440	

DNA7500 - 25 ⊙	25	75.4	102.9	1.37	20.5	205	180	K = 80 P = M8 depth 13 D = 150 T = 12 B = 141 J = 2.5 E = 3 Z = 27.5 F = 8 U = 1500 G = 7
38.1 ⊙	38.1	75.4	109.3	1.45	21.8	231.2	193.1	
50 ⊙	50	75.4	113.2	1.50	22.8	255	205	
63.5 ⊙	63.5	75.4	116.5	1.54	24.0	282	218.5	
80 ⊙	80	75.4	119.4	1.58	25.4	315	235	
100 ⊙	100	75.4	121.9	1.62	27.3	355	255	
125 ⊙	125	75.4	124.1	1.65	29.6	405	280	
160 ⊙	160	75.4	126.3	1.67	32.7	475	315	
200 ⊙	200	75.4	127.9	1.70	36.4	555	355	
250 ⊙	250	75.4	129.3	1.71	41.0	655	405	
300 ⊙	300	75.4	130.3	1.73	45.5	755	455	

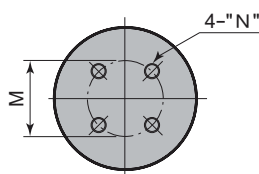
1: Figures at initial charging pressure 15MPa (20).

Cylinder base dimensions

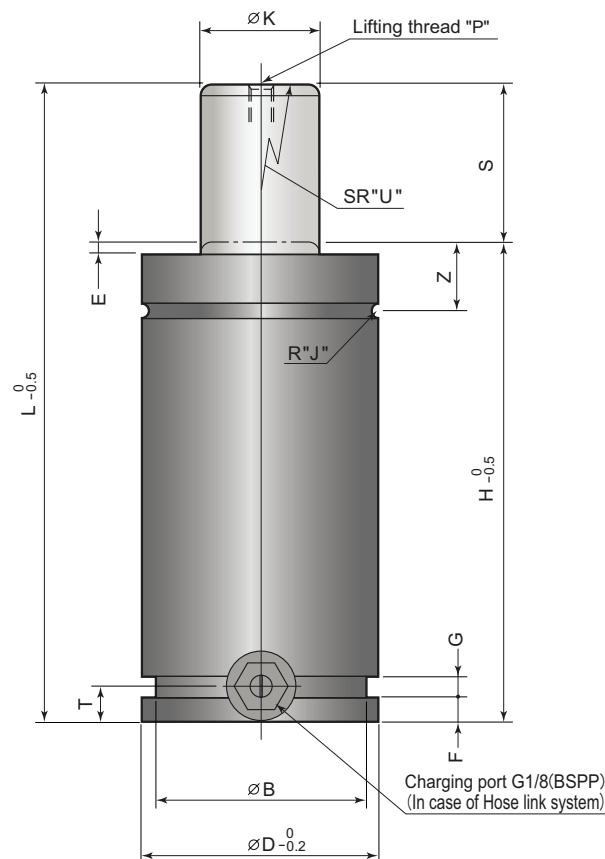
DNA0250~DNA0750



DNA1500~DNA7500

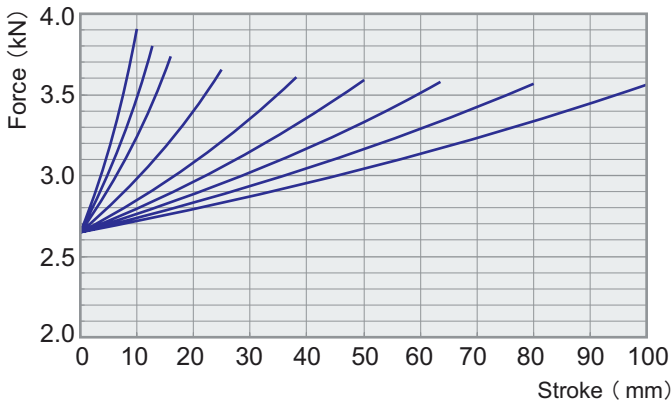


Model	M	N	Model	M	N
DNA0250	25	M6 depth 10	DNA1500	40	M8 depth 15
DNA0500	20	M8 depth 10	DNA3000	60	M8 depth 13
DNA0750	20	M8 depth 10	DNA5000	80	M10 depth 15
			DNA7500	100	M10 depth 18

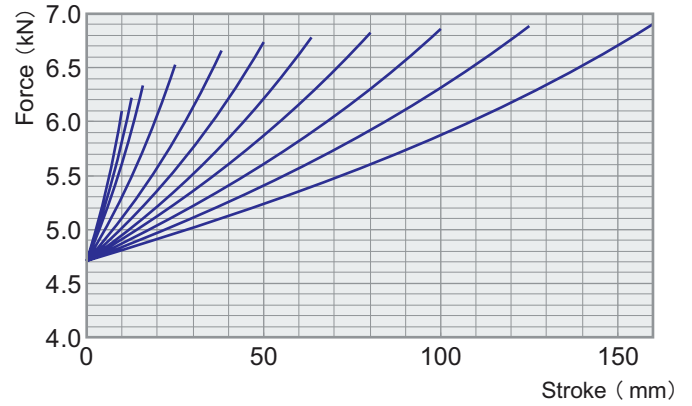


Outline drawing for 2D/3D CAD can be downloaded from our URL <http://www.pascaleng.co.jp>

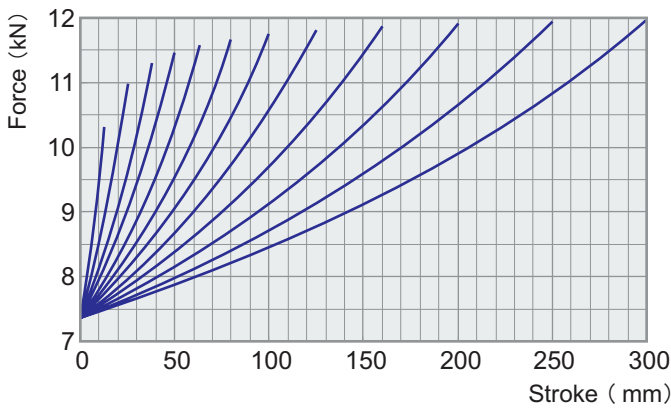
DNA0250



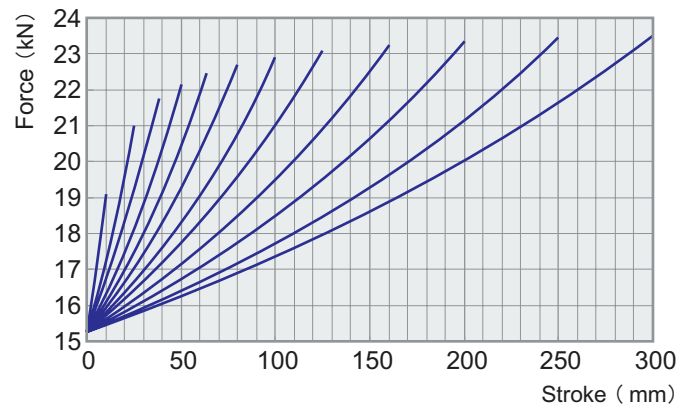
DNA0500



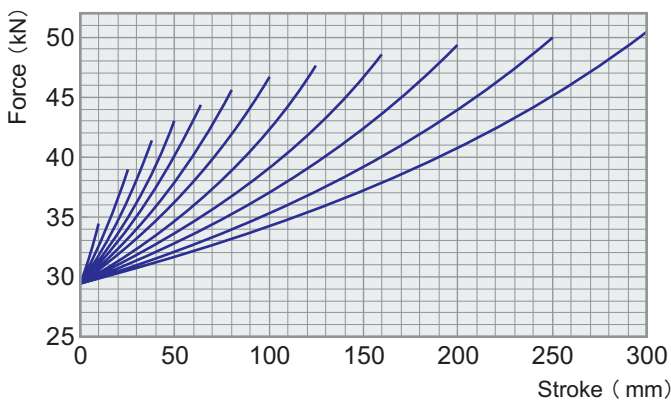
DNA0750



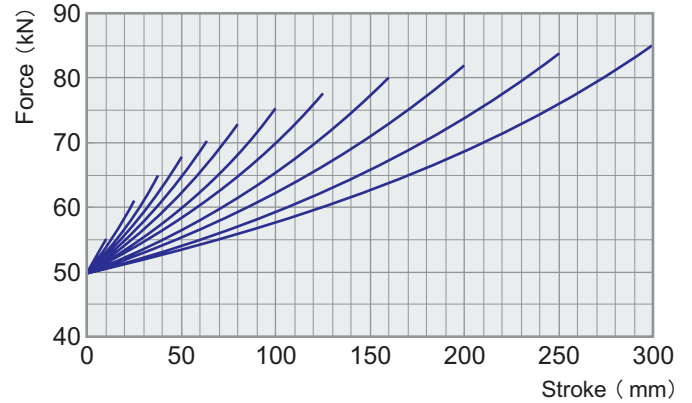
DNA1500



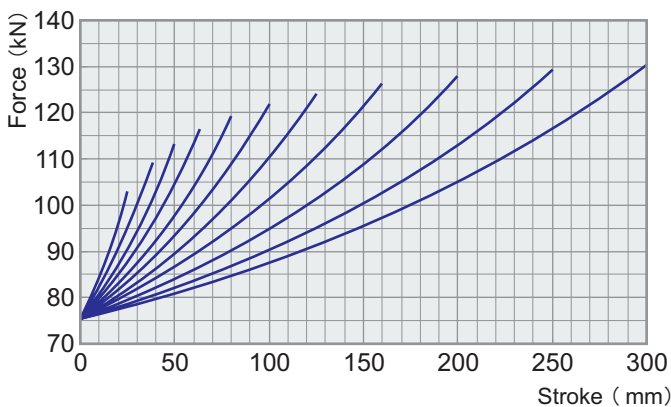
DNA3000



DNA5000



DNA7500



Force Variation of Different Charging Pressure

Above drawings are showing cushion forces F_0 by applying the maximum charging pressure of 15MPa. When applying a charging pressure less than 15MPa, use following formula to adjust the cushion force F_1 . (Min. charging pressure : 3.4MPa)

$$F_1 = F_0 \times \frac{\text{Charging pressure (MPa)}}{15}$$