Pascal

N_2 gas springs

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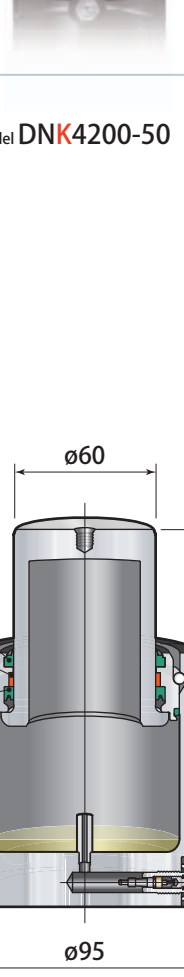
Pascal N_2 gas springs

Pascal is the only company who produces gas springs in Japan

model DNK

Standard model

model DNK4200-50



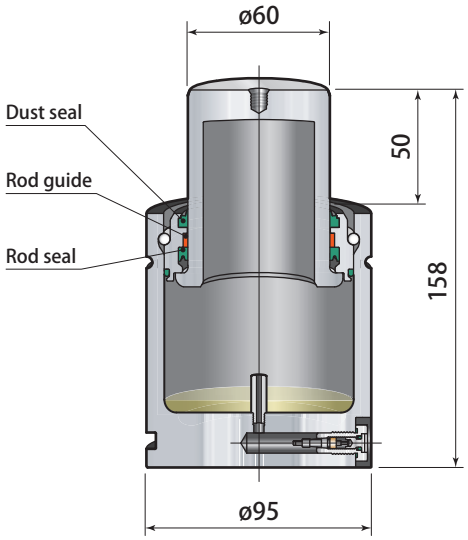
Rod seal Rod guide

Initial force 42.4 kN

model DNR

Compact body

model DNR4200-50



Rod seal Rod guide

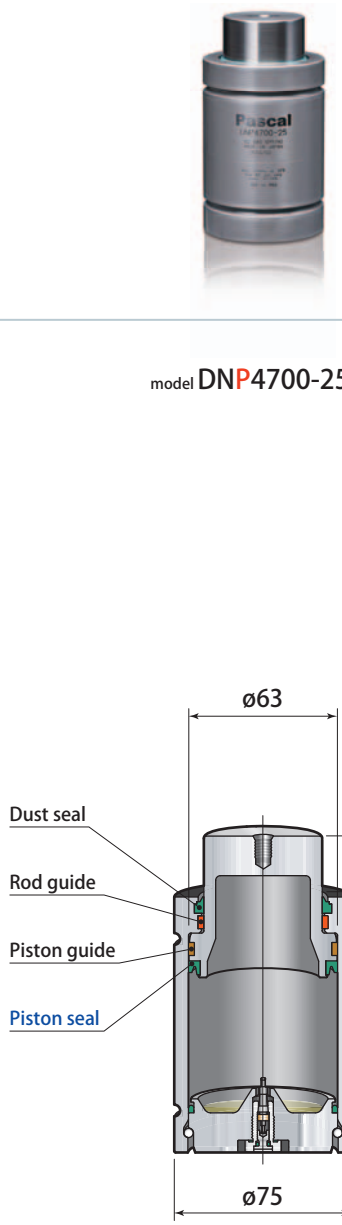
Initial force 42.4 kN

Refer to Page → 7 ~ 8 for the difference between model DNK and DNR.

model DNP

High power, short stroke

model DNP4700-25



Bore seal Piston & Rod guide

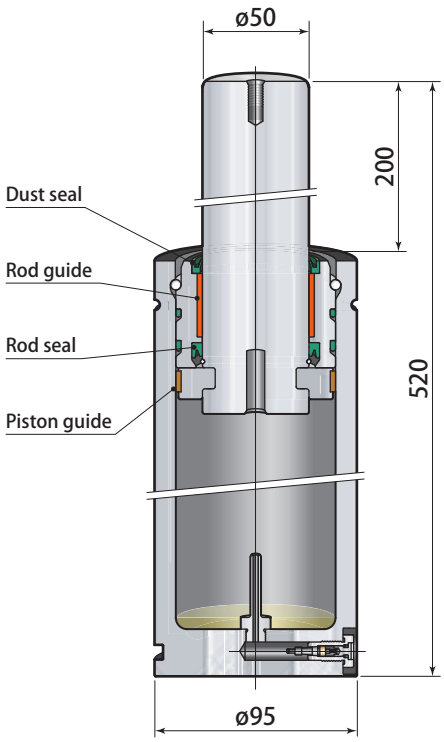
Initial force 46.8 kN

model DNA

Long stroke

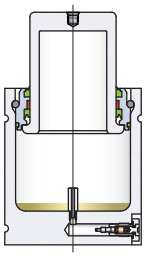
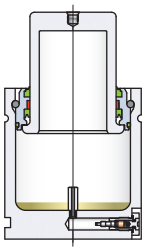
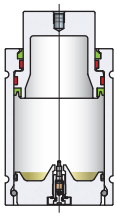
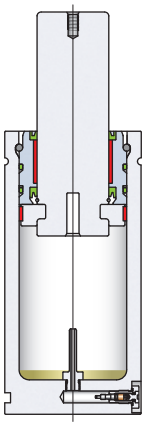
For cam or ejector plate return

model DNA3000-200



Rod seal Piston & Rod guide

Initial force 29.5 kN

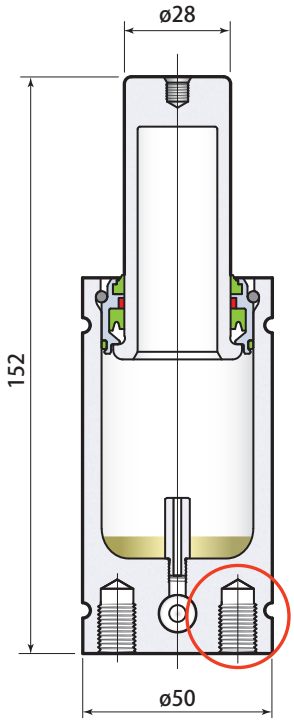
Model , Structure	Size	Cylinder diameter mm	Initial force kN				
				6	10	13	16
model **DNK** Page → 9 Standard model 	0350	32	3.62		60	66	72
	0500	38	4.71		60	66	72
	0750	45	7.36			73	79
	1000	50	9.24			78	84
	1500	63	15.3			78	84
	2400	75	23.9				91
	4200	95	42.4				94
	6600	120	66.3				104
	9500	150	95.4				
model **DNR** Page → 17 Compact body 	0350	32	3.62		50	56	62
	0500	38	4.71		50	56	62
	0750	45	7.36		52	58	64
	1000	50	9.24			64	70
	1500	63	15.3			70	76
	2400	75	23.9				77
	4200	95	42.4				90
	6600	120	66.3				100
	9500	150	95.4				
model **DNP** Page → 27 High power, short stroke 	0420	25	4.71	56	70		91
	1000	38	10.6	61	78		100
	1800	50	18.8	66	80		106
	4700	75	46.8		80		106
	7500	95	75.4		90		116
	11800	120	117.8		100		126
	18300	150	184.1		110		136
model **DNA** Page → 35 Long stroke 	0250	38	2.65				
	0500	45	4.71				
	0750	50	7.36				
	1500	75	15.3				
	3000	95	29.5				
	5000	120	49.8				

Total height mm															Piping port	
Stroke mm															Type	Page
19	25	32	38	40	50	63 *1	75	80	100	125	160	200	250	300		
78	90	104	116		140	166	190	200	240	290					M6	→ 67
78	90	104	116		140	166	190	200	240	290						
85	97	111	123		147	173	197	207	247	297					G1/8	→ 52 ～ 60
90	102	116	128		152	178	202	212	252	302						
90	102	116	128		152	178	202	212	252	302						
97	109	123	135		159	185	209	219	259	309						
100	112	126	138		162	188	212	222	262	312						
110	122	136	148		172	198	222	232	272	322						
116	128	142	154		178	204	228	238	278	328						
68	80	94	106		130	156	180	190	230	280					M6	→ 67
68	80	94	106		130	156	180	190	230	280						
70	82	96	108		132	158	182	192	232	282						
76	88	102	114		138	164	188	198	238	288						
82	94	108	120		144	170	194	204	244	294						
83	95	109	121		145	171	195	205	245	295						
96	108	122	134		158	184	208	218	258	308					G1/8	→ 52 ～ 60
106	118	132	144		168	194	218	228	268	318						
116	128	142	154		178	204	228	238	278	328						
	120														—	
	135	167		195	230											
	135	162		190	220											
	135	167		200	240											
	145															
	155															
	165															
	100				150	177		210	250						G1/8	→ 52 ～ 60
	135				185	212		245	285	335	405					
								255	295	345	415	495	595	695		
											430	510				
											440	520				
											460	540				

＊1: model 63.5mm for model DNA

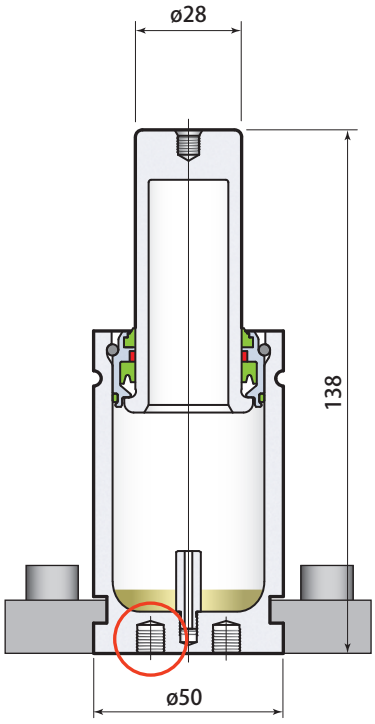
The threaded hole depth is different between model DNK and model DNR.

model **DNK**



model DNK1000-50

model **DNR**



model DNR1000-50

Threaded hole size at the bottom

Model	Type
DNK0350	2-M6 depth11
DNK0500	
DNK0750	2-M8 depth16
DNK1000	2-M10 depth16
DNK1500	2-M8 depth16
	4-M8 depth16
DNK2400	4-M12 depth16
DNK4200	
DNK6600	
DNK9500	

The model to be mounted with flange

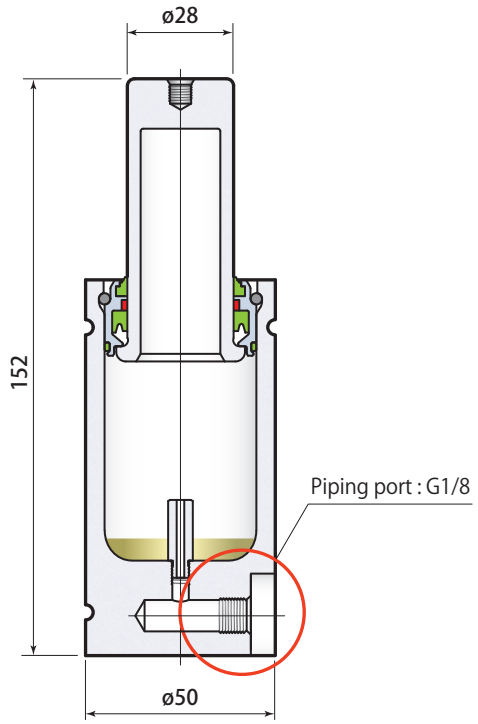
Model	Type
DNR0350	2-M6 depth6
DNR0500	
DNR0750	2-M8 depth6
DNR1000	
DNR1500	
DNR2400	4-M8 depth6

The model to be mounted by screws securely

Model	Type
DNR4200	4-M8 depth13
DNR6600	4-M10 depth13
DNR9500	4-M10 depth16

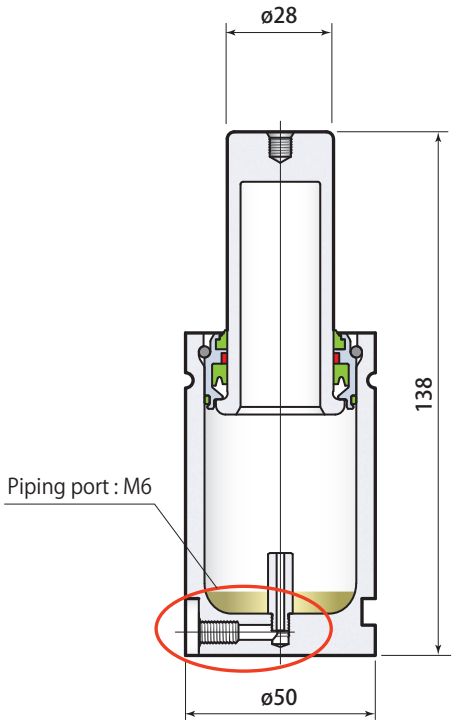
The piping port size is different between model DNK and DNR.

model **DNK**



model DNK1000-50

model **DNR**



model DNR1000-50

Piping port size

Model	Type
DNK0350	M6 Thread
DNK0500	
DNK0750	G1/8 Thread
DNK1000	
DNK1500	
DNK2400	
DNK4200	
DNK6600	
DNK9500	

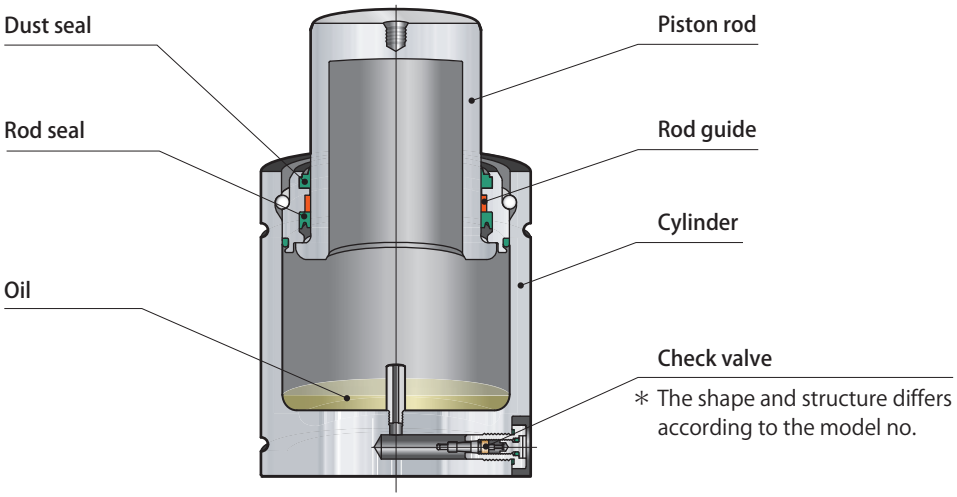
Piping port size

Model	Type
DNR0350	M6 Thread
DNR0500	
DNR0750	
DNR1000	
DNR1500	
DNR2400	
DNR4200	G1/8 Thread
DNR6600	
DNR9500	

- For the model DNR2400 and smaller, any interference section on the die should be removed for an adaptor. due to the thin wall at the bottom.

model DNK


Pascal
DNK6600
Pascal
DNK4200


Dust seal
Rod seal
Oil
Piston rod
Rod guide
Cylinder
Check valve
* The shape and structure differs according to the model no.

Gas spring model

DNK 1500 – 50 FC 15

1 Size
2 Stroke S (mm)
3 Mounting flanges
4 Gas charge pressure (MPa) / way of piping

1 Size

Refer to **Page → 11～12** for details

0350 0500 0750 1000 1500 2400 4200 6600 9500

2 Stroke S

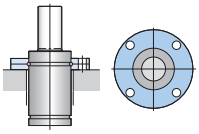
Refer to **Page → 11～12** for details

10 : 10 mm ～ 125 : 125 mm

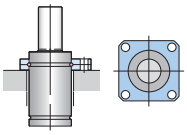
3 Mounting flanges

Refer to **Page → 13～16** for details

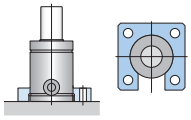
FC : FC flange



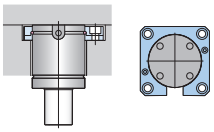
FS : FS flange



BK : BK flange



BL : BL flange



BF : without flange

4 Gas charge pressure (MPa) / way of piping

For self-contained use,Choose and specify one of the recommended gas pressure levels shown above.
(For the charging pressure other than above, specify the pressure to one digit after the decimal point.)

3.4 : 3.4 MPa
〉
15 : 15 MPa

Gas Charging Pressure: 3.4 6.9 10.3 13.7 15 18 *

The gas charging range: 3.4 ～ 15MPa (20℃) ＊ 3.4 ～ 18MPa for DNK0350 only

- T : For charging type, specify "-T". Common to domestic and overseas (outside Japan) use. (Charging pressure is not necessary to specify) Check valve is not mounted at shipment.

- OS : Specify "- OS" in case self-contained gas spring without gas charge.

Model		Stroke S mm	Initial force kN	Full stroke load kN	Compression ratio	Mass kg	L mm	H mm	Dimensions mm
DNK0350-	10	10	3.62	5.86	1.62	0.2	60	50	K = 16 N = 2 D = 32 Z = 12.5 E = 5 P = M6 depth5 J = 1 Piping port= M6
	13	13	3.62	5.71	1.58	0.3	66	53	
	16	16	3.62	5.63	1.56	0.3	72	56	
	19	19	3.62	5.58	1.54	0.3	78	59	
	25	25	3.62	5.52	1.52	0.3	90	65	
	32	32	3.62	5.48	1.51	0.3	104	72	
	38	38	3.62	5.46	1.51	0.3	116	78	
	50	50	3.62	5.43	1.50	0.4	140	90	
	63	63	3.62	5.41	1.49	0.4	166	103	
	75	75	3.62	5.40	1.49	0.4	190	115	
	80	80	3.62	5.40	1.49	0.5	200	120	
	100	100	3.62	5.39	1.49	0.5	240	140	
	125	125	3.62	5.38	1.49	0.6	290	165	
DNK0500-	10	10	4.71	8.00	1.70	0.3	60	50	K = 20 N = 2 D = 38 Z = 12.5 E = 5 P = M6 depth5 J = 1 Piping port= M6
	13	13	4.71	8.03	1.70	0.4	66	53	
	16	16	4.71	7.87	1.67	0.4	72	56	
	19	19	4.71	7.77	1.65	0.4	78	59	
	25	25	4.71	7.65	1.62	0.4	90	65	
	32	32	4.71	7.58	1.61	0.4	104	72	
	38	38	4.71	7.54	1.60	0.5	116	78	
	50	50	4.71	7.49	1.59	0.5	140	90	
	63	63	4.71	7.45	1.58	0.6	166	103	
	75	75	4.71	7.43	1.58	0.6	190	115	
	80	80	4.71	7.43	1.58	0.7	200	120	
	100	100	4.71	7.41	1.57	0.8	240	140	
	125	125	4.71	7.39	1.57	0.9	290	165	
DNK0750-	13	13	7.36	11.5	1.56	0.5	73	60	K = 25 N = 2 D = 45 Z = 15.5 E = 5 P = M6 depth5 J = 1 Piping port= G1/8(BSPP)
	16	16	7.36	11.5	1.56	0.6	79	63	
	19	19	7.36	11.4	1.55	0.6	85	66	
	25	25	7.36	11.4	1.55	0.6	97	72	
	32	32	7.36	11.4	1.55	0.7	111	79	
	38	38	7.36	11.4	1.55	0.7	123	85	
	50	50	7.36	11.3	1.54	0.7	147	97	
	63	63	7.36	11.3	1.54	0.8	173	110	
	75	75	7.36	11.3	1.54	0.9	197	122	
	80	80	7.36	11.3	1.54	0.9	207	127	
	100	100	7.36	11.3	1.54	1.0	247	147	
	125	125	7.36	11.3	1.54	1.1	297	172	
DNK1000-	13	13	9.24	14.2	1.54	0.7	78	65	K = 28 N = 3 D = 50 Z = 15.5 E = 11.4 P = M6 depth5 J = 2 Piping port= G1/8(BSPP)
	16	16	9.24	14.3	1.55	0.7	84	68	
	19	19	9.24	14.4	1.56	0.8	90	71	
	25	25	9.24	14.5	1.57	0.8	102	77	
	32	32	9.24	14.6	1.58	0.9	116	84	
	38	38	9.24	14.7	1.59	0.9	128	90	
	50	50	9.24	14.8	1.60	1.0	152	102	
	63	63	9.24	14.8	1.60	1.1	178	115	
	75	75	9.24	14.9	1.61	1.2	202	127	
	80	80	9.24	14.9	1.61	1.2	212	132	
	100	100	9.24	14.9	1.61	1.4	252	152	
	125	125	9.24	14.9	1.61	1.6	302	177	
DNK1500-	13	13	15.3	23.4	1.53	1.1	78	65	K = 36 N = 3 D = 63 Z = 19 E = 11.4 P = M6 depth5 J = 2 Piping port= G1/8(BSPP)
	16	16	15.3	23.7	1.55	1.2	84	68	
	19	19	15.3	24.0	1.57	1.3	90	71	
	25	25	15.3	24.3	1.59	1.3	102	77	
	32	32	15.3	24.6	1.61	1.4	116	84	
	38	38	15.3	24.7	1.61	1.5	128	90	
	50	50	15.3	24.9	1.63	1.6	152	102	
	63	63	15.3	25.0	1.63	1.8	178	115	
	75	75	15.3	25.1	1.64	1.9	202	127	
	80	80	15.3	25.1	1.64	2.0	212	132	
	100	100	15.3	25.2	1.65	2.2	252	152	
	125	125	15.3	25.3	1.65	2.6	302	177	
DNK2400-	16	16	23.9	34.7	1.45	1.8	91	75	K = 45 N = 3 D = 75 Z = 21 E = 11.4 P = M6 depth5 J = 2.5 Piping port= G1/8(BSPP)
	19	19	23.9	35.2	1.47	1.8	97	78	
	25	25	23.9	36.0	1.51	1.9	109	84	
	32	32	23.9	36.6	1.53	2.0	123	91	
	38	38	23.9	36.9	1.54	2.1	135	97	
	50	50	23.9	37.4	1.56	2.3	159	109	
	63	63	23.9	37.7	1.58	2.5	185	122	
	75	75	23.9	37.9	1.59	2.7	209	134	
	80	80	23.9	38.0	1.59	2.7	219	139	
	100	100	23.9	38.2	1.60	3.0	259	159	
	125	125	23.9	38.4	1.61	3.4	309	184	

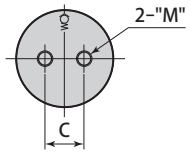
To download CAD data,To get updated information, visit **www.pascaleng.co.jp**

Model		Stroke S mm	Initial force kN	Full stroke load kN	Compression ratio	Mass kg	L mm	H mm	Dimensions mm
DNK4200-	16	16	42.4	62.7	1.48	3.0	94	78	K = 60 N = 3 D = 95 Z = 24 E = 11.4 P = M8 depth6 J = 2.5 Piping port= G1/8(BSPP)
	19	19	42.4	64.0	1.51	3.1	100	81	
	25	25	42.4	65.6	1.55	3.2	112	87	
	32	32	42.4	66.9	1.58	3.4	126	94	
	38	38	42.4	67.7	1.60	3.6	138	100	
	50	50	42.4	68.8	1.62	3.9	162	112	
	63	63	42.4	69.6	1.64	4.2	188	125	
	75	75	42.4	70.1	1.65	4.5	212	137	
	80	80	42.4	70.2	1.66	4.6	222	142	
	100	100	42.4	70.7	1.67	5.1	262	162	
	125	125	42.4	71.2	1.68	5.7	312	187	
DNK6600-	16	16	66.3	92.2	1.39	5.5	104	88	K = 75 N = 3 D = 120 Z = 25.5 E = 11.4 P = M8 depth6 J = 2.5 Piping port= G1/8(BSPP)
	19	19	66.3	94.2	1.42	5.7	110	91	
	25	25	66.3	97.7	1.47	6.0	122	97	
	32	32	66.3	100.3	1.51	6.2	136	104	
	38	38	66.3	102.0	1.54	6.5	148	110	
	50	50	66.3	104.4	1.58	7.0	172	122	
	63	63	66.3	106.1	1.60	7.5	198	135	
	75	75	66.3	107.2	1.62	8.0	222	147	
	80	80	66.3	107.6	1.62	8.2	232	152	
	100	100	66.3	108.9	1.64	9.0	272	172	
	125	125	66.3	109.9	1.66	10.1	322	197	
DNK9500-	19	19	95.4	130.8	1.37	9.6	116	97	K = 90 N = 3 D = 150 Z = 27.5 E = 11.4 P = M8 depth6 J = 2.5 Piping port= G1/8(BSPP)
	25	25	95.4	135.5	1.42	10.0	128	103	
	32	32	95.4	138.9	1.46	10.4	142	110	
	38	38	95.4	141.0	1.48	10.8	154	116	
	50	50	95.4	144.2	1.51	11.5	178	128	
	63	63	95.4	146.5	1.54	12.3	204	141	
	75	75	95.4	148.0	1.55	13.1	228	153	
	80	80	95.4	148.5	1.56	13.4	238	158	
	100	100	95.4	150.1	1.57	14.6	278	178	
	125	125	95.4	151.5	1.59	16.1	328	203	

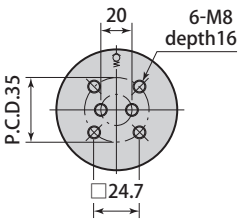
● Showing the figures at initial charging pressure 15MPa at 20℃ .(model DNK0350only 18MPa)

Cylinder base

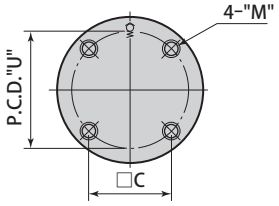
DNK0350～DNK1000



DNK1500



DNK2400～DNK9500



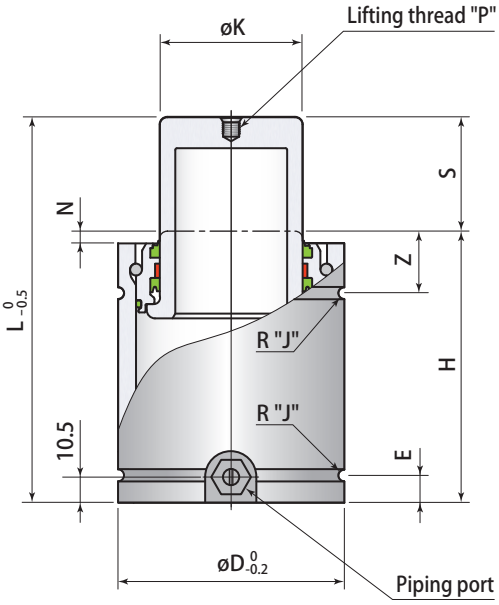
mm

Model	C	M
DNK0350	20	M6 depth11
DNK0500	25	M6 depth11
DNK0750	20	M8 depth16
DNK1000	31.8	M10 depth16

mm

Model	C	U	M
DNK2400	38.1	53.8	M12 depth16
DNK4200	53.9	76.2	M12 depth16
DNK6600	57.1	80.8	M12 depth16
DNK9500	70.7	100	M12 depth16

Dimensions



⚠ Tips for stroke selection

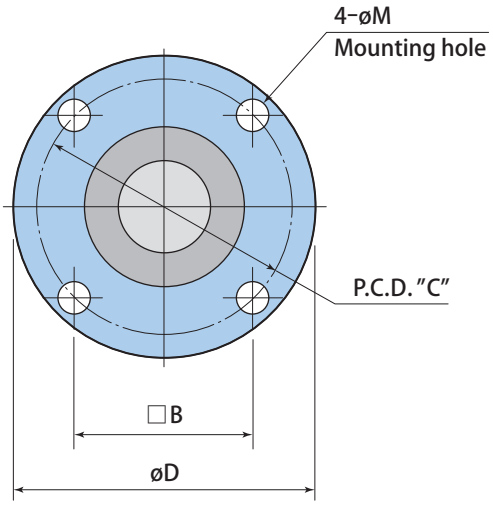
Use gas spring stroke as long as possible to ensure optimal performance of lubrication inside the cylinder.

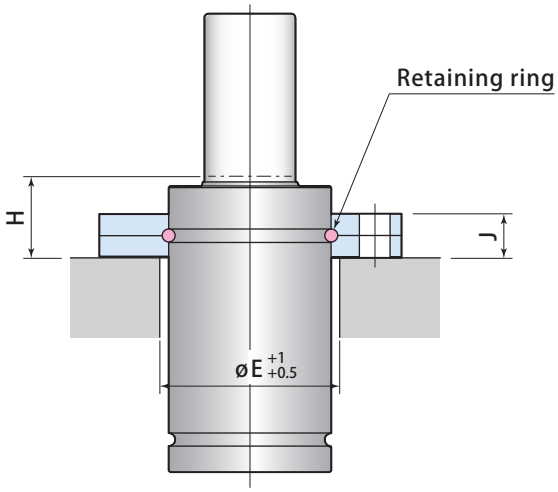
Flange model

DJF 063 – FC

1 Flange size

032 075
038 095
045 120
050 150
063





● FC flanges are designed with sufficient strength to accommodate the loading.
(The flange should support the load by its full mounting face, and should be mounted by 4 screws.)

mm

Gas spring model	Flange model	B	C	D	E	H	J	M	Mass of flange
DNK0350	DJF032-FC	35	49.5	60	32	17	9	6.8	0.13 kg
DNK0500	DJF038-FC	40	56.5	68	38	17	9	6.8	0.17 kg
DNK0750	DJF045-FC	50	70.7	86	45	22	13	9	0.40 kg
DNK1000	DJF050-FC	56.5	80	95	50	22	13	9	0.50 kg
DNK1500	DJF063-FC	73.5	104	122	63	27	16	11	1.03 kg
DNK2400	DJF075-FC	73.5	104	122	75	29	16	11	0.88 kg
DNK4200	DJF095-FC	92	130	150	95	33	18	14	1.44 kg
DNK6600	DJF120-FC	109.5	155	175	120	36	21	14	2.03 kg
DNK9500	DJF150-FC	138	195	220	150	41	27	18	4.13 kg

● Flange mounting screws are not included.

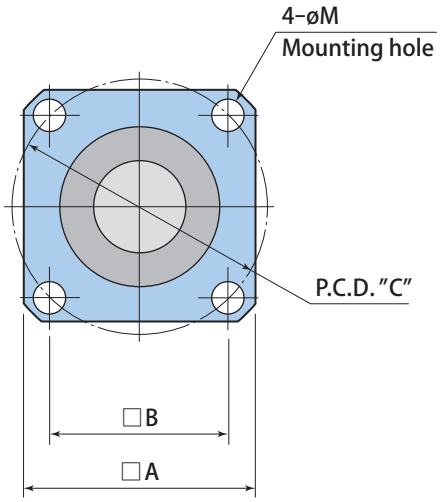
To download CAD data,To get updated information, visit **www.pascaleng.co.jp**

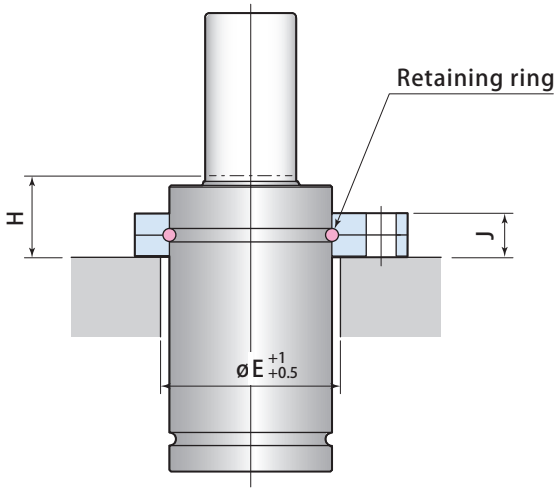
Flange model

DJF 063 – FS

1 Flange size

032 075
038 095
045 120
050 150
063





● FS flanges are designed with sufficient strength to accommodate the loading.
(The flange should support the load by its full mounting face, and should be mounted by 4 screws.)

mm

Gas spring model	Flange model	A	B	C	E	H	J	M	Mass of flange
DNK0350	DJF032-FS	45	35	49.5	32	17	9	6.8	0.10 kg
DNK0500	DJF038-FS	52	40	56.5	38	17	9	6.8	0.12 kg
DNK0750	DJF045-FS	64	50	70.7	45	22	13	9	0.25 kg
DNK1000	DJF050-FS	70	56.5	80	50	22	13	9	0.30 kg
DNK1500	DJF063-FS	90	73.5	104	63	27	16	11	0.60 kg
DNK2400	DJF075-FS	90	73.5	104	75	29	16	11	0.44 kg
DNK4200	DJF095-FS	110	92	130	95	33	18	14	0.65 kg
DNK6600	DJF120-FS	130	109.5	155	120	36	21	14	0.85 kg
DNK9500	DJF150-FS	162	138	195	150	41	27	18	1.60 kg

● Flange mounting screws are not included.

From April 2014, 2-piece structured model BK has been available for sale.
(It is interchangeable with the old model (BU) .)

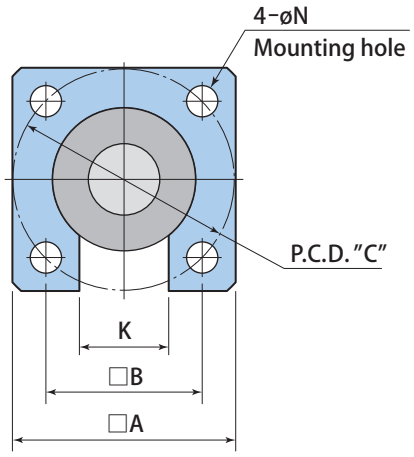
Flange model

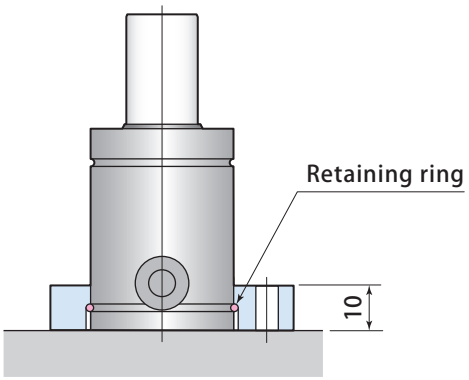
DJF 063 – BK

1 Flange size

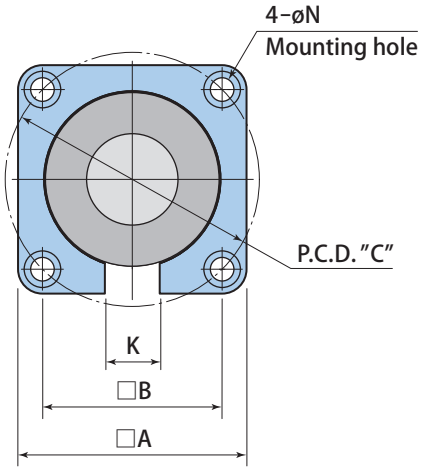
032 075
038 095
045 120
050 150
063

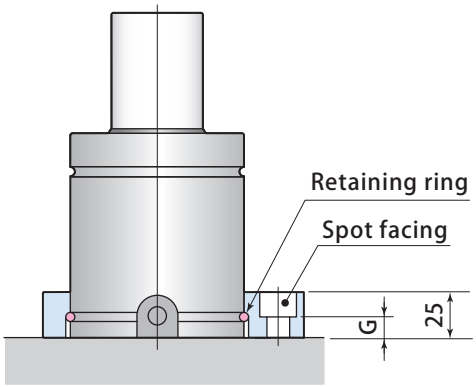
DNK0350
DNK0500
DNK0750





DNK1000 DNK4200
DNK1500 DNK6600
DNK2400 DNK9500





● The cylinder should be backed up fully at the bottom face.

mm

Gas spring model	Flange model	A	B	C	G	K	N	Mass of flange
DNK0350	DJF032-BK	50	35	49.5	—	20	6.8	0.11 kg
DNK0500	DJF038-BK	55	40	56.5	—	25	6.8	0.12 kg
DNK0750	DJF045-BK	70	50	70.7	—	25	9	0.21 kg
DNK1000	DJF050-BK	75	53.9	76.2	14.5	30	11	0.50 kg
DNK1500	DJF063-BK	100	73.5	104	14.5	30	11	1.10 kg
DNK2400	DJF075-BK	100	76.2	107.8	12.5	30	14	0.81 kg
DNK4200	DJF095-BK	125	98.3	139	12.5	30	14	1.40 kg
DNK6600	DJF120-BK	140	114.3	161.6	12.5	30	14	1.40 kg
DNK9500	DJF150-BK	175	139.7	197.6	8.5	30	18	2.10 kg

● Flange mounting screws are not included.

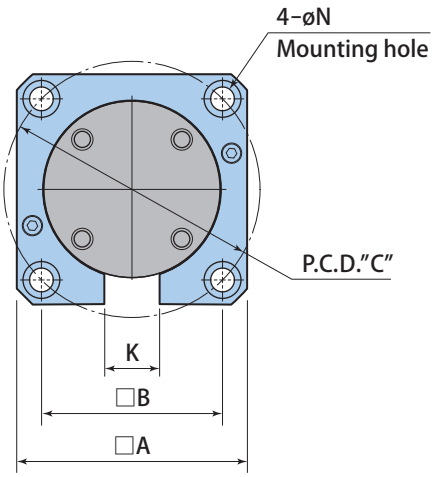
To download CAD data,To get updated information, visit **www.pascaleng.co.jp**

Flange model

DJF 063 – BL

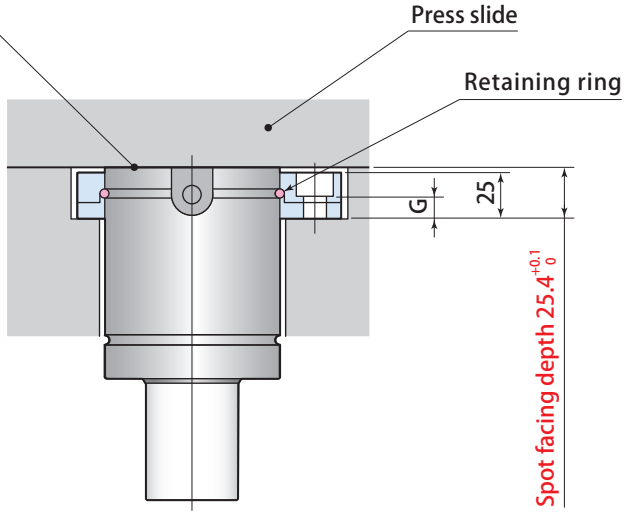
1 Flange size

050	095
063	120
075	150



⚠ Beware of the spot facing space.
The depth to be strictly controlled.

There is a risk of damage or loose screw of the flange in case the gap between press slide and the bottom of gas spring exists.
Model BL is not compatible with other suppliers' flange due to different thickness.



● The cylinder should be backed up fully at the bottom face.

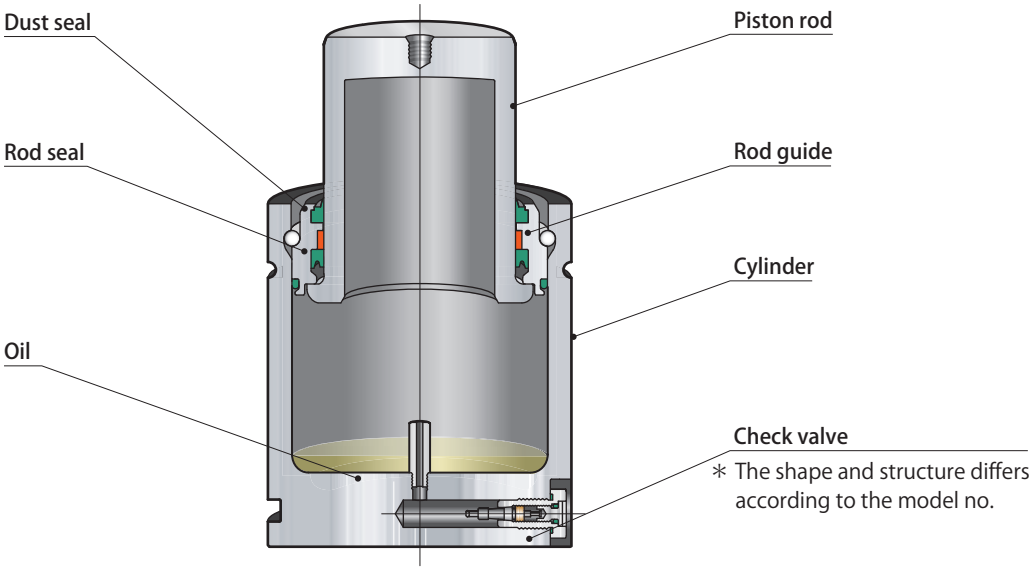
mm

Gas spring model	Flange model	A	B	C	G	K	N	Mass of flange
DNK1000	DJF050-BL	75	53.9	76.2	14.5	30	11	0.50 kg
DNK1500	DJF063-BL	100	73.5	104	14.5	30	11	1.10 kg
DNK2400	DJF075-BL	100	76.2	107.8	12.5	30	14	0.81 kg
DNK4200	DJF095-BL	125	98.3	139	12.5	30	14	1.40 kg
DNK6600	DJF120-BL	140	114.3	161.6	12.5	30	14	1.40 kg
DNK9500	DJF150-BL	175	139.7	197.6	8.5	30	18	2.10 kg

● Flange mounting screws are not included.

model DNR


Pascal
DNR6600
Pascal
DNR4200


Dust seal
Rod seal
Oil
Piston rod
Rod guide
Cylinder
Check valve
* The shape and structure differs according to the model no.

Model designation

DNR 1500 – 50 FC 15

1 Size
2 Stroke S (mm)
3 Mounting flanges
4 Gas charge pressure (MPa) / way of piping

1 Size

Refer to **Page → 19 ~ 20** for details

0350 0500 0750 1000 1500 2400 4200 6600 9500

2 Stroke S

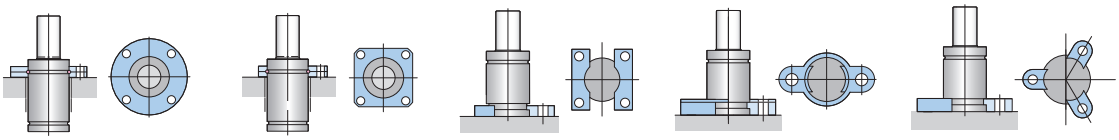
Refer to **Page → 19 ~ 20** for details

10 : 10 mm ~ 125 : 125 mm

3 Mounting flanges

Refer to **Page → 21 ~ 25** for details

FC : FC flange FS : FS flange SC : SC flange KA : KA flange KB : KB flange BF : without flange



4 Gas charge pressure (MPa) / way of piping

For self-contained use,Choose and specify one of the recommended gas pressure levels shown above.
(For the charging pressure other than above, specify the pressure to one digit after the decimal point.)

3.4 : 3.4 MPa
〉
15 : 15 MPa

Gas Charging Pressure: 3.4 6.9 10.3 13.7 15 18 *

The gas charging range: 3.4 ~ 15MPa (20℃) * DNR0350only 3.4 ~ 18MPa

- T : For charging type, specify "-T". common to domestic and overseas (outside Japan) use.
(Charging pressure is not necessary to specify)Check valve is not mounted at shipment.

- OS : Specify "- OS" in case self-contained gas spring without gas charge.

Model		Stroke S mm	Initial force kN	Full stroke load kN	Compression ratio	Mass kg	L mm	H mm	Dimensions mm
DNR0350-	10	10	3.62	5.89	1.63	0.2	50	40	K = 16 T = 6 D = 32 J = 1 B = 27 N = 2 E = 4 Z = 12.5 F = 3.5 P = M6 depth5 Piping port= M6
	13	13	3.62	5.74	1.59	0.2	56	43	
	16	16	3.62	5.65	1.56	0.2	62	46	
	19	19	3.62	5.60	1.55	0.2	68	49	
	25	25	3.62	5.53	1.53	0.2	80	55	
	32	32	3.62	5.49	1.52	0.2	94	62	
	38	38	3.62	5.46	1.51	0.3	106	68	
	50	50	3.62	5.43	1.50	0.3	130	80	
	63	63	3.62	5.42	1.50	0.3	156	93	
	75	75	3.62	5.40	1.49	0.4	180	105	
	80	80	3.62	5.40	1.49	0.4	190	110	
	100	100	3.62	5.39	1.49	0.4	230	130	
	125	125	3.62	5.38	1.49	0.5	280	155	
DNR0500-	10	10	4.71	8.02	1.70	0.3	50	40	K = 20 T = 6 D = 38 J = 1 B = 33 N = 2 E = 4 Z = 12.5 F = 4 P = M6 depth5 Piping port= M6
	13	13	4.71	7.83	1.66	0.3	56	43	
	16	16	4.71	7.72	1.64	0.3	62	46	
	19	19	4.71	7.66	1.63	0.3	68	49	
	25	25	4.71	7.57	1.61	0.3	80	55	
	32	32	4.71	7.52	1.60	0.4	94	62	
	38	38	4.71	7.49	1.59	0.4	106	68	
	50	50	4.71	7.45	1.58	0.4	130	80	
	63	63	4.71	7.42	1.58	0.5	156	93	
	75	75	4.71	7.41	1.57	0.5	180	105	
	80	80	4.71	7.40	1.57	0.6	190	110	
	100	100	4.71	7.39	1.57	0.7	230	130	
	125	125	4.71	7.38	1.57	0.8	280	155	
DNR0750-	10	10	7.36	11.8	1.60	0.4	52	42	K = 25 T = 6 D = 45 J = 1 B = 40 N = 2 E = 4 Z = 15.5 F = 4 P = M6 depth5 Piping port= M6
	13	13	7.36	11.7	1.59	0.4	58	45	
	16	16	7.36	11.6	1.58	0.4	64	48	
	19	19	7.36	11.6	1.58	0.4	70	51	
	25	25	7.36	11.5	1.56	0.4	82	57	
	32	32	7.36	11.4	1.55	0.5	96	64	
	38	38	7.36	11.4	1.55	0.5	108	70	
	50	50	7.36	11.4	1.55	0.6	132	82	
	63	63	7.36	11.4	1.55	0.6	158	95	
	75	75	7.36	11.4	1.55	0.7	182	107	
	80	80	7.36	11.4	1.55	0.7	192	112	
	100	100	7.36	11.3	1.54	0.8	232	132	
	125	125	7.36	11.3	1.54	1.0	282	157	
DNR1000-	13	13	9.24	15.0	1.62	0.5	64	51	K = 28 T = 6 D = 50 J = 2 B = 43 N = 3 E = 8 Z = 15.5 F = 7 P = M6 depth5 Piping port= M6
	16	16	9.24	15.0	1.62	0.5	70	54	
	19	19	9.24	15.0	1.62	0.6	76	57	
	25	25	9.24	15.0	1.62	0.6	88	63	
	32	32	9.24	15.0	1.62	0.7	102	70	
	38	38	9.24	15.0	1.62	0.7	114	76	
	50	50	9.24	15.0	1.62	0.8	138	88	
	63	63	9.24	15.0	1.62	0.9	164	101	
	75	75	9.24	15.0	1.62	1.0	188	113	
	80	80	9.24	15.0	1.62	1.0	198	118	
	100	100	9.24	15.0	1.62	1.2	238	138	
	125	125	9.24	15.0	1.62	1.4	288	163	
DNR1500-	13	13	15.3	23.8	1.56	1.0	70	57	K = 36 T = 6 D = 63 J = 2 B = 56 N = 3 E = 8 Z = 19 F = 7 P = M6 depth5 Piping port= M6
	16	16	15.3	24.1	1.58	1.0	76	60	
	19	19	15.3	24.3	1.59	1.1	82	63	
	25	25	15.3	24.6	1.61	1.1	94	69	
	32	32	15.3	24.8	1.62	1.2	108	76	
	38	38	15.3	24.9	1.63	1.3	120	82	
	50	50	15.3	25.0	1.63	1.5	144	94	
	63	63	15.3	25.1	1.64	1.6	170	107	
	75	75	15.3	25.2	1.65	1.8	194	119	
	80	80	15.3	25.2	1.65	1.8	204	124	
	100	100	15.3	25.3	1.65	2.1	244	144	
	125	125	15.3	25.3	1.65	2.4	294	169	
DNR2400-	16	16	23.9	35.9	1.50	1.4	77	61	K = 45 T = 6 D = 75 J = 2.5 B = 67 N = 3 E = 8 Z = 21 F = 7 P = M6 depth5 Piping port= M6
	19	19	23.9	36.3	1.52	1.4	83	64	
	25	25	23.9	36.9	1.54	1.5	95	70	
	32	32	23.9	37.3	1.56	1.6	109	77	
	38	38	23.9	37.6	1.57	1.7	121	83	
	50	50	23.9	37.9	1.59	1.9	145	95	
	63	63	23.9	38.2	1.60	2.1	171	108	
	75	75	23.9	38.3	1.60	2.3	195	120	
	80	80	23.9	38.4	1.61	2.3	205	125	
	100	100	23.9	38.5	1.61	2.6	245	145	
	125	125	23.9	38.6	1.62	3.0	295	170	

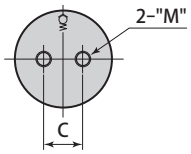
Model		Stroke S mm	Initial force kN	Full stroke load kN	Compression ratio	Mass kg	L mm	H mm	Dimensions mm
DNR4200-	16	16	42.4	62.7	1.48	2.9	90	74	K = 60 T = 10.5 D = 95 J = 2.5 B = 87 N = 3 E = 8 Z = 24 F = 7 P = M8 depth6 Piping port= G1/8(BSPP)
	19	19	42.4	63.8	1.50	2.9	96	77	
	25	25	42.4	65.6	1.55	3.1	108	83	
	32	32	42.4	66.9	1.58	3.3	122	90	
	38	38	42.4	67.7	1.60	3.4	134	96	
	50	50	42.4	68.8	1.62	3.7	158	108	
	63	63	42.4	69.6	1.64	4.0	184	121	
	75	75	42.4	70.1	1.65	4.3	208	133	
	80	80	42.4	70.2	1.66	4.5	218	138	
	100	100	42.4	70.7	1.67	5.0	258	158	
	125	125	42.4	71.2	1.68	5.6	308	183	
DNR6600-	16	16	66.3	92.2	1.39	5.3	100	84	K = 75 T = 10.5 D = 120 J = 2.5 B = 112 N = 3 E = 8 Z = 25.5 F = 7 P = M8 depth6 Piping port= G1/8(BSPP)
	19	19	66.3	94.3	1.42	5.4	106	87	
	25	25	66.3	97.7	1.47	5.5	118	93	
	32	32	66.3	100.3	1.51	5.8	132	100	
	38	38	66.3	102.0	1.54	6.1	144	106	
	50	50	66.3	104.4	1.57	6.6	168	118	
	63	63	66.3	106.1	1.60	7.1	194	131	
	75	75	66.3	107.2	1.62	7.6	218	143	
	80	80	66.3	107.6	1.62	7.8	228	148	
	100	100	66.3	108.9	1.64	8.6	268	168	
	125	125	66.3	109.9	1.66	9.6	318	193	
DNR9500-	19 *	19	95.4	130.8	1.37	9.7	116	97	K = 90 T = 10.5 D = 150 J = 2.5 B = 142 N = 3 E = 8 Z = 27.5 F = 7 P = M8 depth6 Piping port= G1/8(BSPP)
	25 *	25	95.4	135.5	1.42	10.1	128	103	
	32 *	32	95.4	138.9	1.46	10.5	142	110	
	38 *	38	95.4	141.0	1.48	10.9	154	116	
	50 *	50	95.4	144.2	1.51	11.7	178	128	
	63 *	63	95.4	146.5	1.53	12.5	204	141	
	75 *	75	95.4	148.0	1.55	13.2	228	153	
	80 *	80	95.4	148.5	1.56	13.5	238	158	
	100 *	100	95.4	150.1	1.57	14.7	278	178	
	125 *	125	95.4	151.5	1.59	16.3	328	203	

● * made to order

● Showing the figures at initial charging pressure 15MPa at 20℃ .(model DNR0350only 18MPa)

Cylinder base

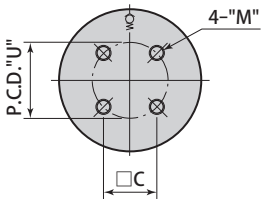
DNR0350～DNR1500



mm

Model	C	M
DNR0350	20	M6 depth6
DNR0500	25	M6 depth6
DNR0750	20	M8 depth6
DNR1000	20	M8 depth6
DNR1500	20	M8 depth6

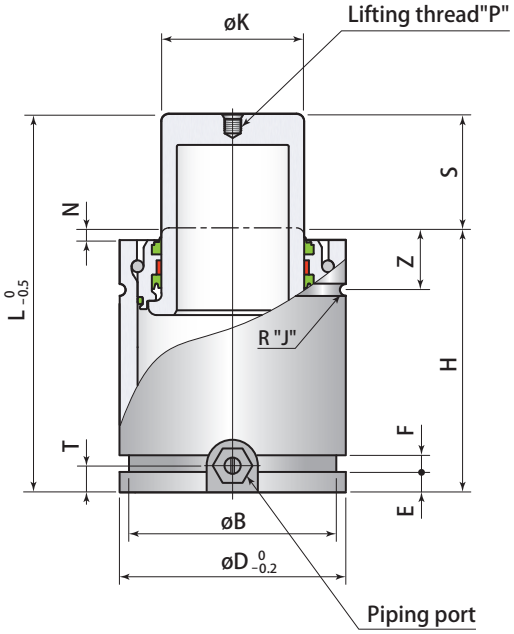
DNR2400～DNR9500



mm

Model	C	U	M
DNR2400	28.3	40	M8 depth6
DNR4200	42.4	60	M8 depth13
DNR6600	56.6	80	M10 depth13
DNR9500	70.7	100	M10 depth16

Dimensions



⚠ Tips for stroke selection

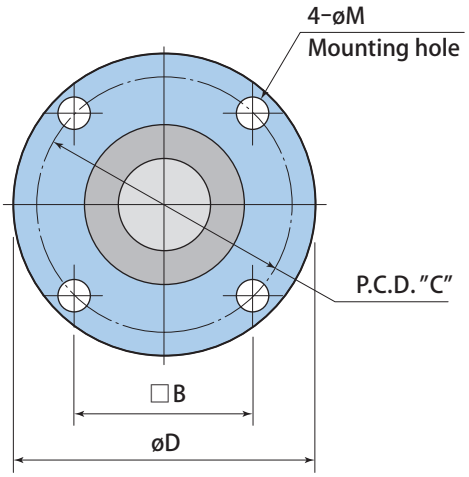
Use gas spring stroke as long as possible to ensure optimal performance of lubrication inside the cylinder.

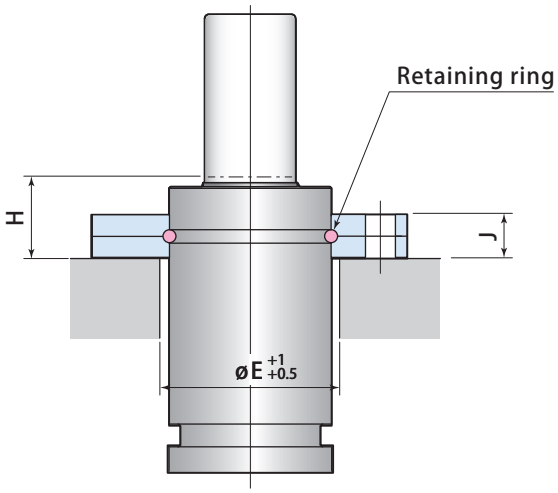
Flange model

DJF 063 – FC

1 Flange size

032 075
038 095
045 120
050 150
063





● FC flanges are designed with sufficient strength to accommodate the loading.
(The flange should support the load by its full mounting face, and should be mounted by 4 screws.)

mm

Gas spring model	Flange model	B	C	D	E	H	J	M	Mass of flange
DNR0350	DJF032-FC	35	49.5	60	32	17	9	6.8	0.13 kg
DNR0500	DJF038-FC	40	56.5	68	38	17	9	6.8	0.17 kg
DNR0750	DJF045-FC	50	70.7	86	45	22	13	9	0.40 kg
DNR1000	DJF050-FC	56.5	80	95	50	22	13	9	0.50 kg
DNR1500	DJF063-FC	73.5	104	122	63	27	16	11	1.03 kg
DNR2400	DJF075-FC	73.5	104	122	75	29	16	11	0.88 kg
DNR4200	DJF095-FC	92	130	150	95	33	18	14	1.44 kg
DNR6600	DJF120-FC	109.5	155	175	120	36	21	14	2.03 kg
DNR9500	DJF150-FC	138	195	220	150	41	27	18	4.13 kg

● Flange mounting screws are not included.

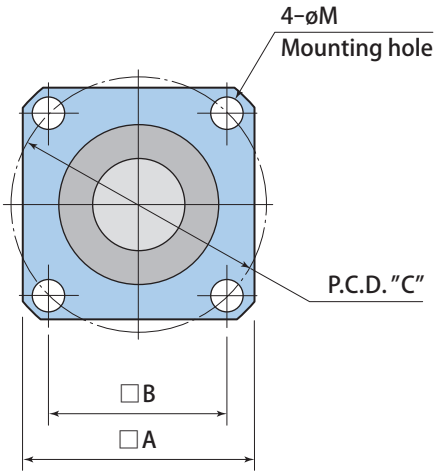
To download CAD data,To get updated information, visit **www.pascaleng.co.jp**

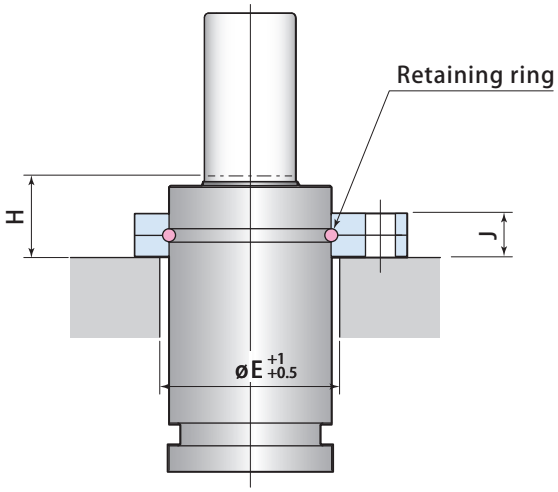
Flange model

DJF 063 – FS

1 Flange size

032 075
038 095
045 120
050 150
063





● FS flanges are designed with sufficient strength to accommodate the loading.
(The flange should support the load by its full mounting face, and should be mounted by 4 screws.)

mm

Gas spring model	Flange model	A	B	C	E	H	J	M	Mass of flange
DNR0350	DJF032-FS	45	35	49.5	32	17	9	6.8	0.10 kg
DNR0500	DJF038-FS	52	40	56.5	38	17	9	6.8	0.12 kg
DNR0750	DJF045-FS	64	50	70.7	45	22	13	9	0.25 kg
DNR1000	DJF050-FS	70	56.5	80	50	22	13	9	0.30 kg
DNR1500	DJF063-FS	90	73.5	104	63	27	16	11	0.60 kg
DNR2400	DJF075-FS	90	73.5	104	75	29	16	11	0.44 kg
DNR4200	DJF095-FS	110	92	130	95	33	18	14	0.65 kg
DNR6600	DJF120-FS	130	109.5	155	120	36	21	14	0.85 kg
DNR9500	DJF150-FS	162	138	195	150	41	27	18	1.60 kg

● Flange mounting screws are not included.

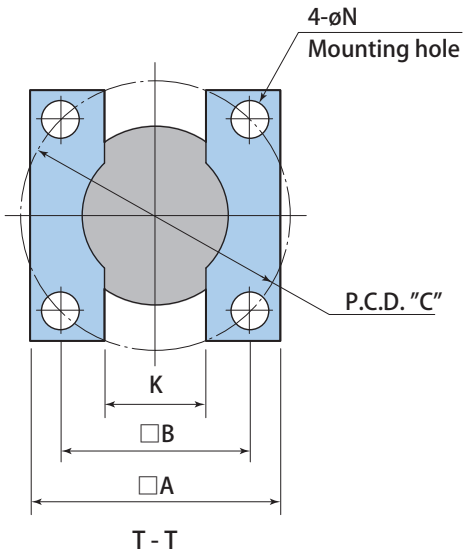
To download CAD data,To get updated information, visit **www.pascaleng.co.jp**

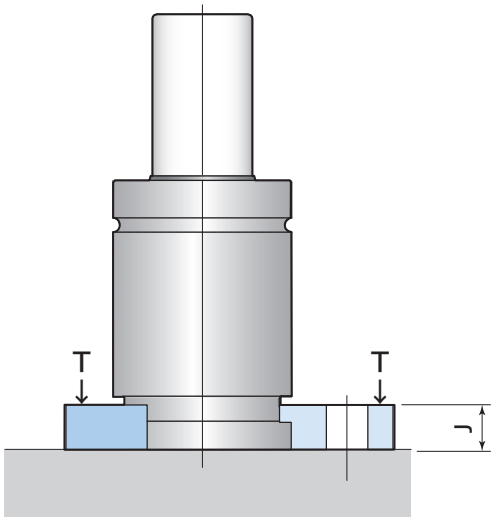
Flange model

DJF 063 – SC

1 Flange size

032 075
038 095
045 120
050 150
063





● The cylinder should be backed up fully at the bottom face.

mm

Gas spring model	Flange model	A	B	C	J	K	N	Mass of flange
DNR0350	DJF032-SC	50	35	49.5	6	18	6.8	0.06 kg
DNR0500	DJF038-SC	55	40	56.5	6	17	6.8	0.07 kg
DNR0750	DJF045-SC	70	50	70.7	6	20	9	0.12 kg
DNR1000	DJF050-SC	75	56.5	80	12	31	9	0.22 kg
DNR1500	DJF063-SC	100	73.5	104	12	36	11	0.46 kg
DNR2400	DJF075-SC	100	73.5	104	12	36	11	0.39 kg
DNR4200	DJF095-SC	120	92	130	12	32	14	0.54 kg
DNR6600	DJF120-SC	140	109.5	155	12	40	14	0.64 kg
DNR9500	DJF150-SC ＊	190	138	195	12	40	18	1.52 kg

● ＊ made to order

● Flange mounting screws are not included.

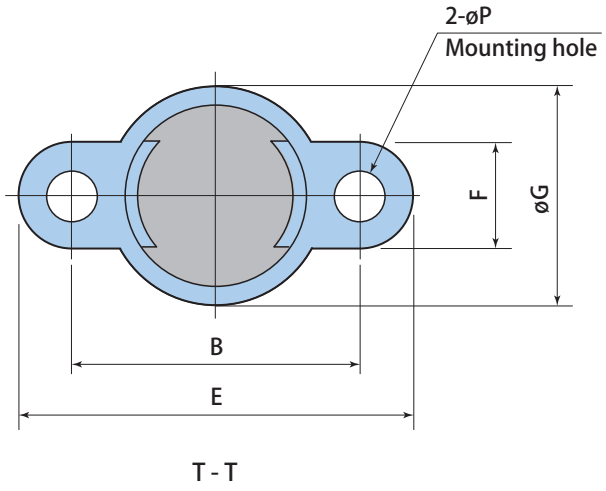
To download CAD data,To get updated information, visit **www.pascaleng.co.jp**

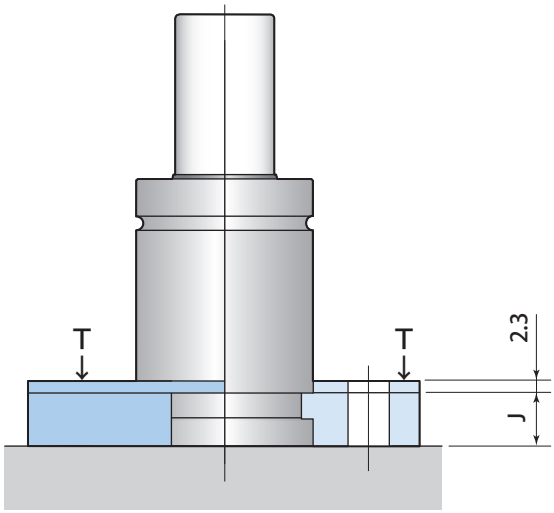
Flange model

DJF 063 – KA

1 Flange size

038 075
045 095
050 120
063 150





- KA flange cannot be used for hose-linked gas spring.
- The cylinder should be backed up fully at the bottom face.

mm

Gas spring model	Flange model	B	E	F	G	J	P	Mass of flange
DNR0500	DJF038-KA	56.5	76.5	20	48	7	6.8	0.06 kg
DNR0750	DJF045-KA	70.7	95.8	25	56	7	9	0.09 kg
DNR1000	DJF050-KA	80	110	30	61	14.2	14	0.20 kg
DNR1500	DJF063-KA	92	122	30	74	14.2	14	0.20 kg
DNR2400	DJF075-KA	104	134	30	86	14.2	14	0.20 kg
DNR4200	DJF095-KA	130	170	40	106	14.2	18	0.34 kg
DNR6600	DJF120-KA	155	205	50	131	14.2	18	0.49 kg
DNR9500	DJF150-KA ＊	195	245	50	170	14.2	22	0.56 kg

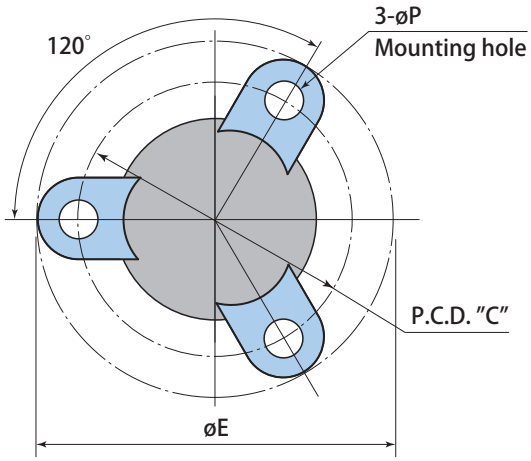
- ＊ made to order
- Flange mounting screws are not included.

Flange model

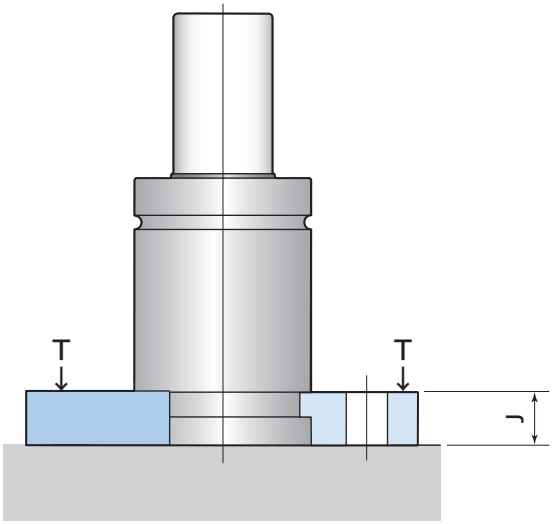
DJF 075 – KB

1 Flange size

075
095
120
150



T - T



● The cylinder should be backed up fully at the bottom face.

mm

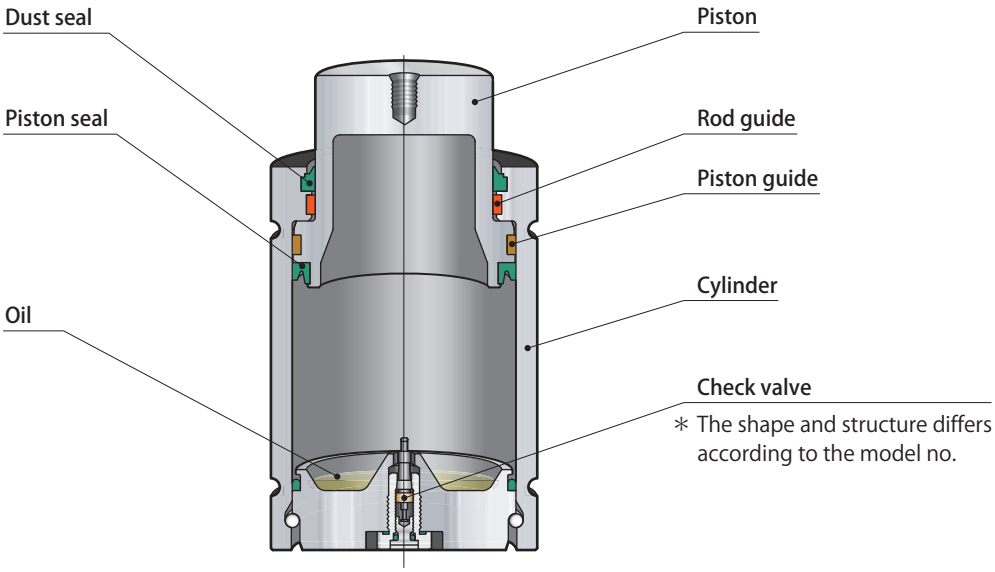
Gas spring model	Flange model	C	E	J	P	Mass of flange
DNR2400	DJF075-KB	104	134	14.2	14	0.24 kg
DNR4200	DJF095-KB	130	170	14.2	18	0.41 kg
DNR6600	DJF120-KB	155	205	14.2	18	0.60 kg
DNR9500	DJF150-KB ＊	195	245	14.2	22	0.64 kg

● ＊ made to order

● Flange mounting screws are not included.

model DNP


PASCAL N2 GAS SPRING
MODEL
DNP11800
Pascal
DNP4700
DNP1800
DNP1000
DNP7500


Dust seal
Piston seal
Oil
Piston
Rod guide
Piston guide
Cylinder
Check valve
* The shape and structure differs according to the model no.

Model designation

DNP 1800 16 BF 15

1 Size
2 Stroke S (mm)
3 Mounting flanges
4 Gas charge pressure (MPa) / way of piping

1 Size

Refer to **Page → 29 ~ 30** for details

0420 1000 1800 4700 7500 11800 18300

2 Stroke S

Refer to **Page → 29 ~ 30** for details

6 : 6 mm ~ 50 : 50 mm (32, 40, 50 DNP1000,1800,4700only)

3 Mounting flanges

Refer to **Page → 31 ~ 34** for details

P : Manifold base FC : FC flange PSC : Manifold base + SC flange BF : without flange

4 Gas charge pressure (MPa) / way of piping

For self-contained use,Choose and specify one of the recommended gas pressure levels shown above.
(For the charging pressure other than above, specify the pressure to one digit after the decimal point.)

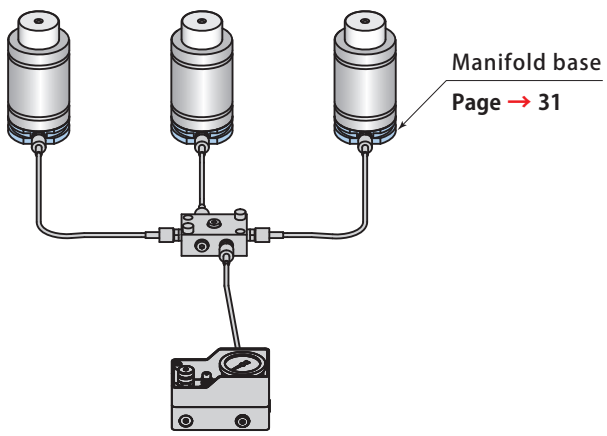
3.4 : 3.4 MPa
⟆
15 : 15 MPa

Gas Charging Pressure: 3.4 6.9 10.3 13.7 15
The gas charging range: 3.4 ~ 15MPa (20℃)

- T : For charging type, specify "-T". common to domestic and overseas (outside Japan) use.(Charging pressure is not necessary to specify) Check valve is not mounted at shipment.
  Piping type is not available on model DNP0420.
- OS : Specify "- OS" in case self-contained gas spring without gas charge.

DNP Piping example

When piping with manifold base and manifold blocks

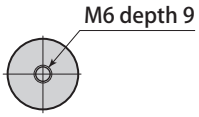


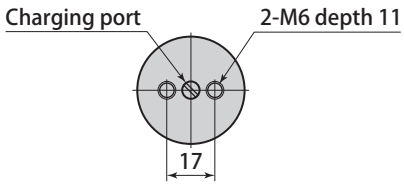
Model		StrokeS mm	Initial force kN	Full stroke load kN	Compression ratio	Mass kg	L mm	H mm	Dimensions mm
DNP0420-	6	6	4.71	8.03	1.70	0.1	56	50	K = 12 D = 25 E = 6.2 J = 1 Z = 11.5
	10	10	4.71	7.86	1.67	0.2	70	60	
	16	16	4.71	7.77	1.65	0.2	91	75	
	25	25	4.71	7.92	1.68	0.2	120	95	
DNP1000-	6	6	10.6	17.8	1.68	0.4	61	55	K = 20 D = 38 E = 10.5 J = 1 Z = 11.5
	10	10	10.6	16.3	1.54	0.4	78	68	
	16	16	10.6	16.1	1.52	0.5	100	84	
	25	25	10.6	15.9	1.50	0.6	135	110	
	32 *	32	10.6	15.4	1.45	0.7	167	135	
	40 *	40	10.6	15.6	1.47	0.8	195	155	
	50 *	50	10.6	15.7	1.48	0.9	230	180	
DNP1800-	6	6	18.8	31.2	1.66	0.7	66	60	K = 30 D = 50 E = 14.5 J = 2 Z = 15.5
	10	10	18.8	30.3	1.61	0.8	80	70	
	16	16	18.8	28.0	1.49	0.9	106	90	
	25	25	18.8	28.8	1.53	1.0	135	110	
	32 *	32	18.8	28.4	1.50	1.2	162	130	
	40 *	40	18.8	28.4	1.50	1.3	190	150	
	50 *	50	18.8	29.0	1.54	1.4	220	170	
DNP4700-	10	10	46.8	76.3	1.63	1.7	80	70	K = 50 C = 28.3 D = 75 U = 40 E = 18 M = M8 depth9.5 J = 2.5 P = M8 depth8 Z = 19
	16	16	46.8	70.0	1.50	2.0	106	90	
	25	25	46.8	71.5	1.53	2.2	135	110	
	32 *	32	46.8	68.5	1.47	2.5	167	135	
	40 *	40	46.8	67.7	1.45	2.8	200	160	
	50 *	50	46.8	67.2	1.44	3.2	240	190	
DNP7500-	10	10	75.4	121.2	1.61	3.2	90	80	K = 55 C = 36.8 D = 95 U = 52 E = 21 M = M8 depth12 J = 2.5 P = M8 depth9 Z = 22
	16	16	75.4	113.0	1.50	3.6	116	100	
	25	25	75.4	116.6	1.55	4.0	145	120	
DNP11800-	10	10	117.8	174.7	1.48	5.8	100	90	K = 70 C = 48.1 D = 120 U = 68 E = 22.5 M = M10 depth13 J = 2.5 P = M8 depth9 Z = 23.5
	16	16	117.8	169.6	1.44	6.4	126	110	
	25	25	117.8	176.8	1.50	7.0	155	130	
DNP18300-	10 *	10	184.1	267.5	1.45	10.3	110	100	K = 90 C = 63.6 D = 150 U = 90 E = 24.5 M = M10 depth15 J = 2.5 P = M8 depth10 Z = 25.5
	16 *	16	184.1	262.2	1.42	11.3	136	120	
	25 *	25	184.1	274.1	1.49	12.4	165	140	

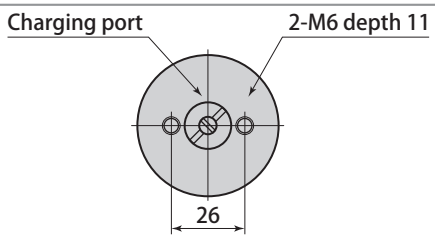
- * made to order
- Showing the figures at initial charging pressure 15MPa at 20℃ .

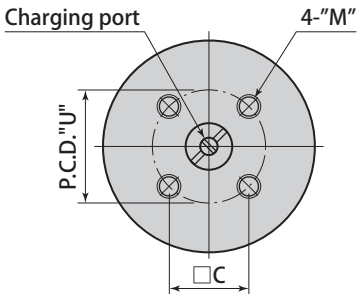
To download CAD data,To get updated information, visit **www.pascaleng.co.jp**

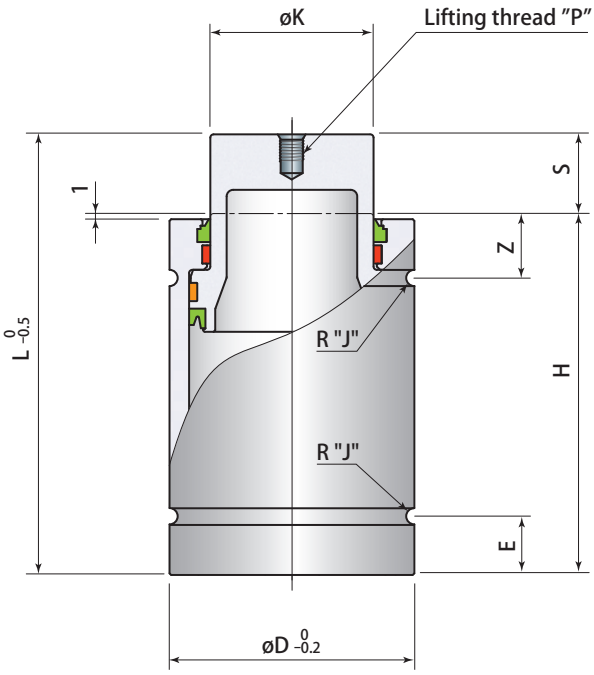
Cylinder base mm	Dimensions mm











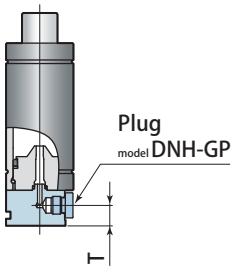
⚠ Tips for stroke selection

Use gas spring stroke as long as possible to ensure optimal performance of lubrication inside the cylinder.

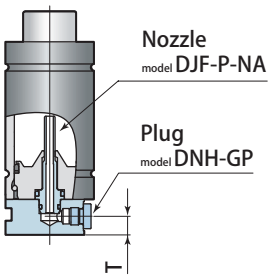
For piping use

Without check valve

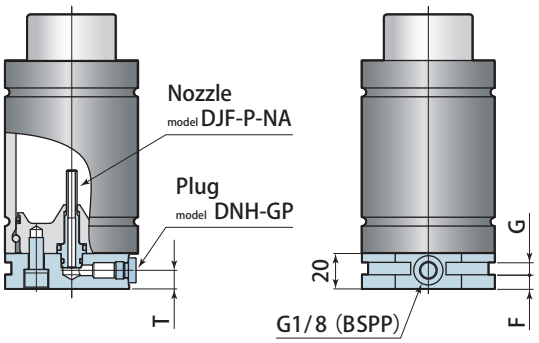
DNP1000



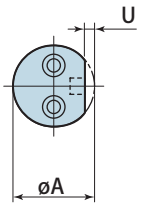
DNP1800



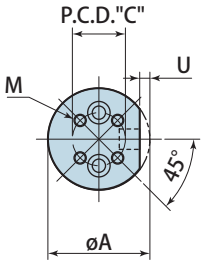
DNP4700 DNP11800
DNP7500 DNP18300



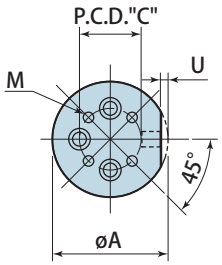
DNP1000



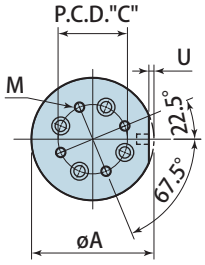
DNP1800



DNP4700
DNP7500



DNP11800
DNP18300



- In case of ordering model DNP□-□P-T with a manifold base, delivery style is like a sketch shown above.
- Be sure to use DNP1000 manifold base when it is used hose link system.
- Model DNP1000 does not have the tapholes at the bottom. Fix it with manifold base. **Page → 34**

mm

Model no for combination of gas spring and manifold base (for piping)	A	C	F	G	T	U	Mounting hole for bolt M	Mass of Manifold base
DNP1000-□P-T	38	-	4	4	11.5	4.5	-	0.16kg
DNP1800-□P-T	50	26	8	7	10.5	5.5	4-M 6depth11	0.26kg
DNP4700-□P-T	75	40	8	7	10.5	5	4-M 8depth13	0.61kg
DNP7500-□P-T	95	52	8	7	10.5	5	4-M 8depth13	1.00kg
DNP11800-□P-T	120	68	8	7	10.5	5	4-M 10depth13	1.70kg
DNP18300-□P-T ＊	150	90	8	7	10.5	6.5	4-M 10depth13	2.60kg

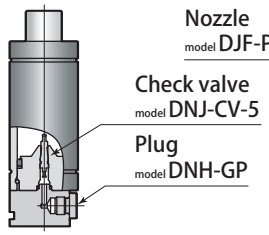
- ＊ made to order

To download CAD data,To get updated information, visit **www.pascaleng.co.jp**

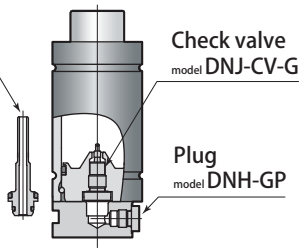
For self-contained use

With check valve

DNP1000

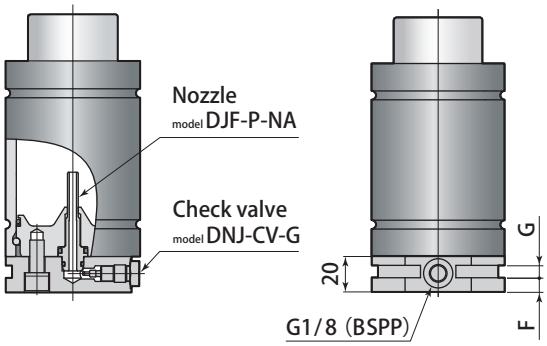


DNP1800

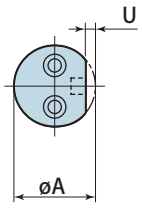


(Nozzle is provided)

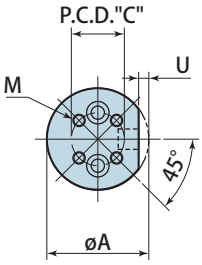
DNP4700 DNP11800
DNP7500 DNP18300



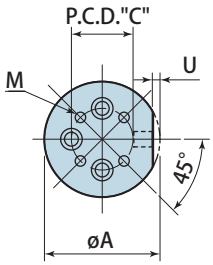
DNP1000



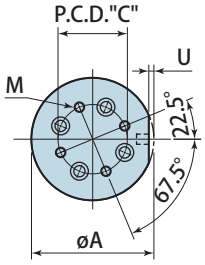
DNP1800



DNP4700
DNP7500



DNP11800
DNP18300



- In case of ordering model DNP□-□P-□with a manifold base, delivery style is like a sketch shown above.
- Model DNP1000 does not have the tapholes at the bottom. Fix it with manifold base. **Page → 34**

mm

Model no for combination of gas spring and manifold base (for self-contained)	A	C	F	G	U	Mounting hole for bolt M	Mass of Manifold base
DNP1000-□P□	38	-	4	4	4.5	-	0.16kg
DNP1800-□P□	50	26	8	7	5.5	4-M 6depth11	0.26kg
DNP4700-□P□	75	40	8	7	5	4-M 8depth13	0.61kg
DNP7500-□P□	95	52	8	7	5	4-M 8depth13	1.00kg
DNP11800-□P□	120	68	8	7	5	4-M 10depth13	1.70kg
DNP18300-□P□ ＊	150	90	8	7	6.5	4-M 10depth13	2.60kg

- ＊ made to order

To download CAD data,To get updated information, visit **www.pascaleng.co.jp**

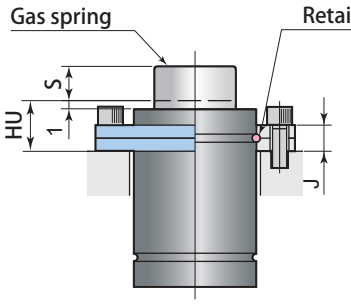
Flange model

DJF 050 – FC

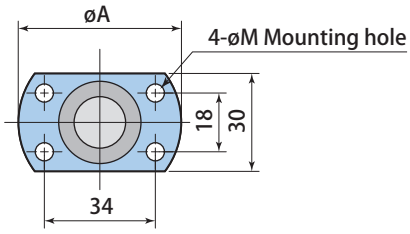
1 Flange size

025 095
038 120
050 150
075

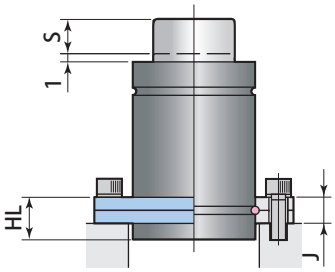
Upper Mount (U)



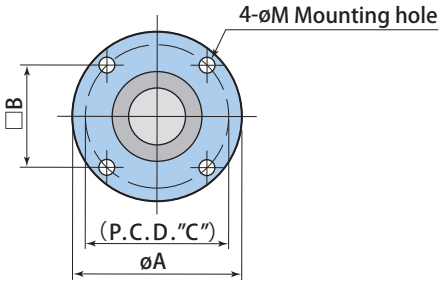
DNP0420 only



Lower Mount (L)



DNP1000 DNP7500
DNP1800 DNP11800
DNP4700 DNP18300



⚠ Caution for mounting

Do not mount the flange so the tensile forces react against the screws.

- FC flange employs enough strength to reecive the load solely but the flange must be bolted 4 places to receive the load full face of the flange.
- Only U type is available for model DJF025-FC

mm

Gas spring model	Flange model	A	B	C	HU	HL	J	M	Mass of flange
DNP0420	DJF025-FC	50	-	-	16	-	9	6.8	0.08 kg
DNP1000	DJF038-FC	68	40	56.5	16	15	9	6.8	0.17 kg
DNP1800	DJF050-FC	95	56.5	80	22	21	13	9	0.50 kg
DNP4700	DJF075-FC	122	73.5	104	27	26	16	11	0.88 kg
DNP7500	DJF095-FC	150	92	130	31	30	18	14	1.44 kg
DNP11800	DJF120-FC	175	109.5	155	34	33	21	14	2.03 kg
DNP18300	DJF150-FC	220	138	195	39	38	27	18	4.13 kg

- Flange mounting screws are not included.

To download CAD data,To get updated information, visit **www.pascaleng.co.jp**

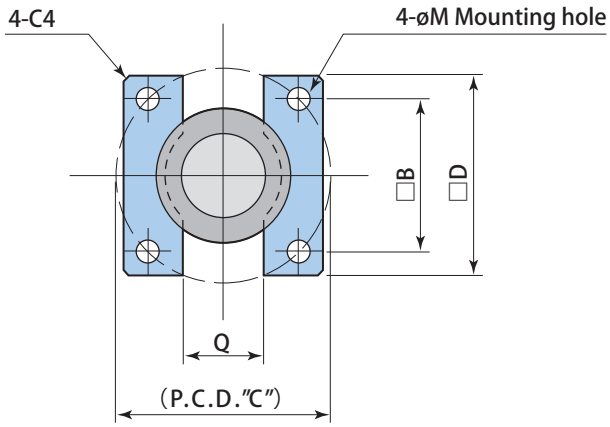
Available for all of size except 0420

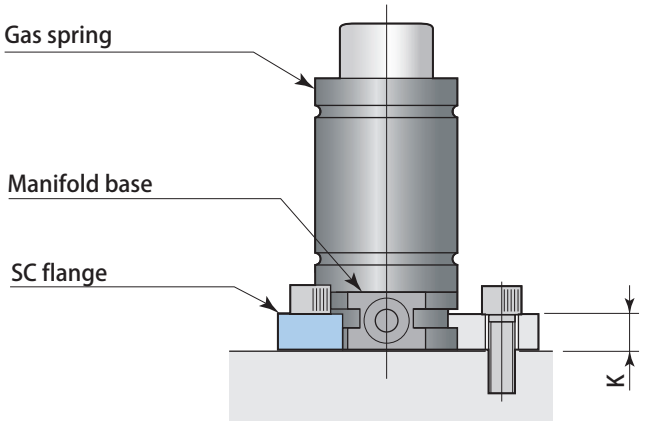
Flange model

DJF 050 – SC

1 Flange size

038 095
050 120
075 150





- Manifold base is needed extra when using SC flanges to mount model DNP. Page → 31 ~ 32
- When ordering DNP□-□PSC, model DNP□-□P being equipped with manifold base and SC flange is shipped together.
- When SC flange is used,avoid any load to mount screws. The load should be received at the bottom face.
- Contact Pascal for th details for selection of hose adaptor when SC flange is selected in piping use.

mm

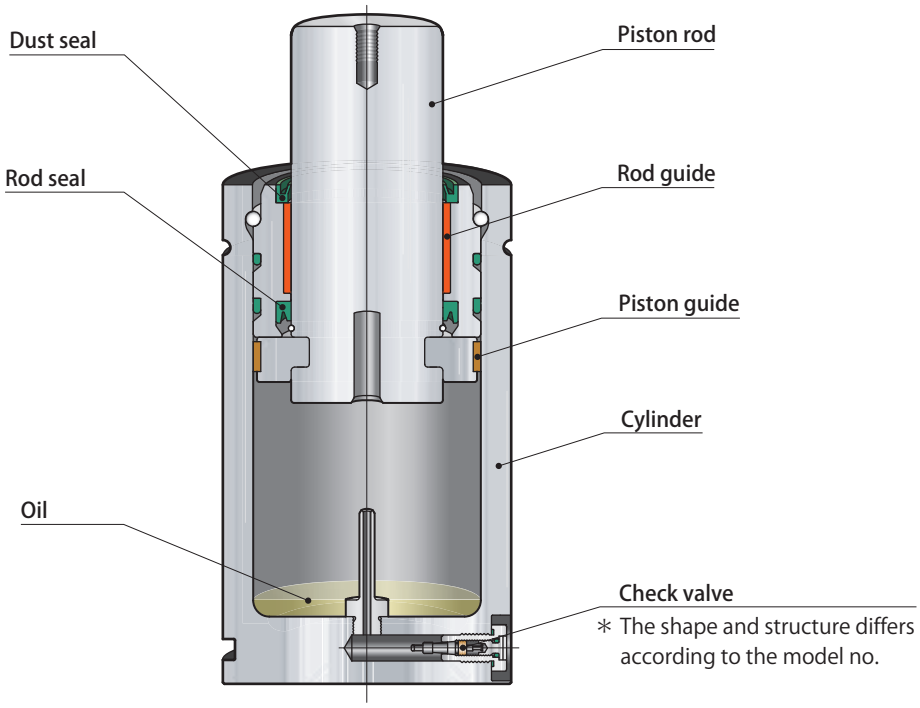
Model no for combination of gas spring, manifold base and SC flage	Flange model	B	C	D	K	M	Q	Mass of flange
DNP1000-□PSC	DJF038-SC	40	56.5	55	6	6.8	17	0.07 kg
DNP1800-□PSC	DJF050-SC	56.5	80	75	12	9	31	0.22 kg
DNP4700-□PSC	DJF075-SC	73.5	104	100	12	11	36	0.39 kg
DNP7500-□PSC	DJF095-SC	92	130	120	12	14	32	0.54 kg
DNP11800-□PSC	DJF120-SC	109.5	155	140	12	14	40	0.64 kg
DNP18300-□PSC ＊	DJF150-SC ＊	138	195	190	12	18	40	1.52 kg

- ＊ made to order
- Flange mounting screws are not included.

To download CAD data,To get updated information, visit **www.pascaleng.co.jp**

model DNA


Pascal
DNA5000
Pascal
DNA7500
Pascal
DNA3000


Dust seal
Rod seal
Oil
Piston rod
Rod guide
Piston guide
Cylinder
Check valve
＊ The shape and structure differs according to the model no.

Gas spring model

DNA 0750 – 200 FC 15

1 Size
2 Stroke S (mm)
3 Mounting flanges
4 Gas charge pressure (MPa) / way of piping

1 Size

Refer to **Page → 37 ~ 38** for details

0250 0500 0750 1500 3000 5000

2 Stroke S

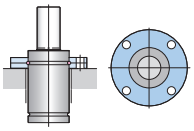
Refer to **Page → 37 ~ 38** for details

25 : 25 mm ~ 300 : 300 mm

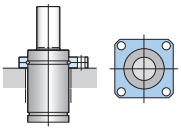
3 Mounting flanges

Refer to **Page → 39 ~ 42** for details

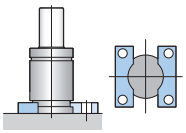
FC : FC flange



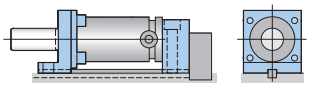
FS : FS flange



SC : CS flange



HA : HA flange



BF : without flange

4 Gas charge pressure (MPa) / way of piping

For self-contained use,Choose and specify one of the recommended gas pressure levels shown above.
(For the charging pressure other than above, specify the pressure to one digit after the decimal point.)

3.4 : 3.4 MPa
〉
15 : 15 MPa

Gas Charging Pressure: 3.4 6.9 10.3 13.7 15

The gas charging range: 3.4 ~ 15MPa (20℃)

- T : For charging type, specify "-T". common to domestic and overseas (outside Japan) use.
(Charging pressure is not necessary to specify)Check valve is not mounted at shipment.

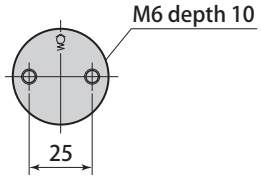
- OS : Specify "- OS" in case self-contained gas spring without gas charge.

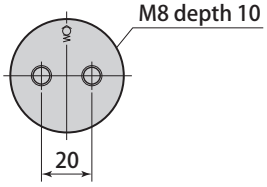
Model		StrokeS mm	Initial force kN	Full stroke load kN	Compression ratio	Mass kg	L mm	H mm	Dimensions mm	
DNA0250-	25	25	2.65	3.52	1.33	0.5	100	75	K = 15	P = M6 depth11
	50	50	2.65	3.53	1.33	0.6	150	100	D = 38	T = 10.5
	63.5	63.5	2.65	3.53	1.33	0.7	177	113.5	B = 33	J = 1
	80	80	2.65	3.53	1.33	0.7	210	130	N = 2	Z = 12.5
	100	100	2.65	3.53	1.33	0.8	250	150	E = 4	
									F = 4	
DNA0500-	25	25	4.71	6.23	1.32	1.1	135	110		
	50	50	4.71	6.54	1.39	1.2	185	135	K = 20	P = M8 depth8
	63.5	63.5	4.71	6.62	1.41	1.4	212	148.5	D = 45	T = 15.5
	80	80	4.71	6.69	1.42	1.5	245	165	B = 40	J = 1
	100	100	4.71	6.74	1.43	1.6	285	185	N = 2	Z = 16.5
	125	125	4.71	6.79	1.44	1.8	335	210	E = 4	
	160	160	4.71	6.82	1.45	2.0	405	245	F = 4	
DNA0750-	80	80	7.36	11.4	1.54	1.9	255	175		
	100	100	7.36	11.5	1.56	2.1	295	195	K = 25	P = M8 depth13
	125	125	7.36	11.6	1.57	2.4	345	220	D = 50	T = 12.5
	160	160	7.36	11.7	1.59	2.7	415	255	B = 43	J = 2
	200	200	7.36	11.8	1.60	3.1	495	295	N = 3	Z = 17.5
	250	250	7.36	11.8	1.61	3.5	595	345	E = 8	
	300	300	7.36	11.9	1.61	4.0	695	395	F = 7	
DNA1500-	160	160	15.3	23.1	1.51	6.4	430	270	K = 36	P = M8 depth13
	200	200	15.3	23.2	1.52	7.2	510	310	D = 75	T = 12
									B = 67	J = 2.5
									N = 3	Z = 21
									E = 8	C = 28.3
									F = 7	U = 40
										M = M8 depth15
DNA3000-	160	160	29.5	48.2	1.64	11.1	440	280	K = 50	P = M8 depth13
	200	200	29.5	49.0	1.66	12.6	520	320	D = 95	T = 12
									B = 87	J = 2.5
									N = 3	Z = 24
									E = 8	C = 42.4
									F = 7	U = 60
										M = M8 depth13
DNA5000-	160	160	49.8	79.4	1.60	18.9	460	300	K = 65	P = M8 depth13
	200	200	49.8	81.4	1.64	21.3	540	340	D = 120	T = 12
									B = 112	J = 2.5
									N = 3	Z = 25.5
									E = 8	C = 56.6
									F = 7	U = 80
										M = M10 depth15

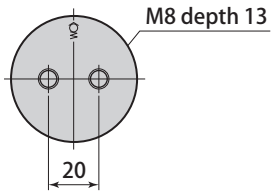
● Showing the figures at initial charging pressure 15MPa at 20℃ .

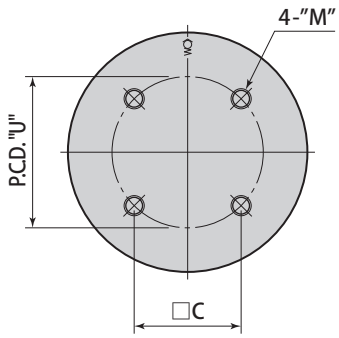
To download CAD data,To get updated information, visit **www.pascaleng.co.jp**

Cylinder base
mm

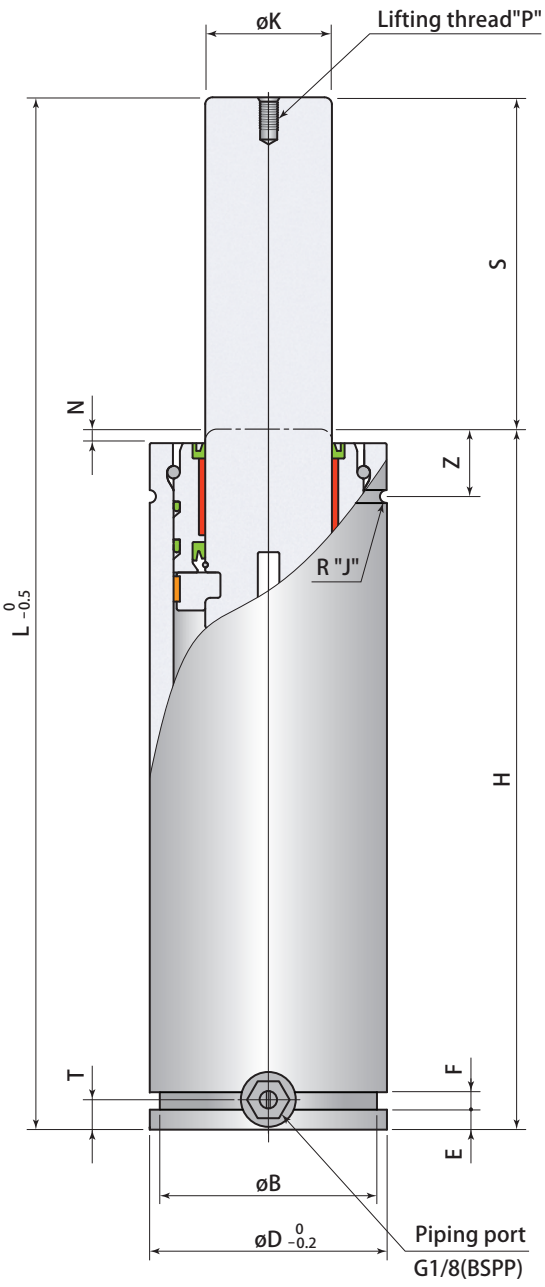








Dimensions
mm



⚠ Tips for stroke selection

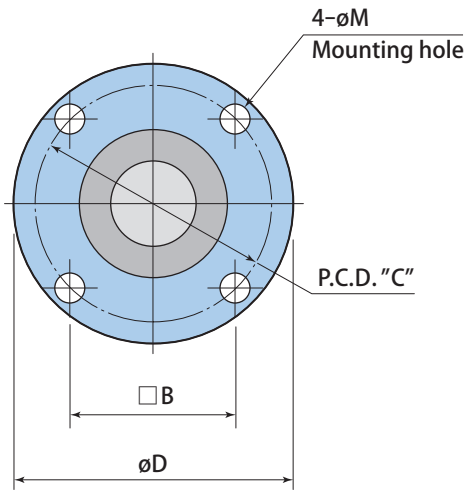
Use gas spring stroke as long as possible to ensure optimal performance of lubrication inside the cylinder.

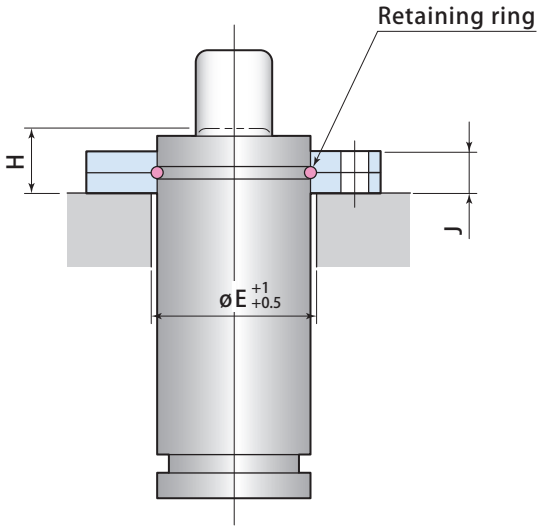
Flange model

DJF 050 – FC

1 Flange size

038 075
045 095
050 120





● FC flanges are designed with sufficient strength to accommodate the loading.
(The flange should support the load by its full mounting face, and should be mounted by 4 screws.)

mm

Gas spring model	Flange model	B	C	D	E	H	J	M	Mass of flange
DNA0250	DJF038-FC	40	56.5	68	38	17	9	6.8	0.17 kg
DNA0500	DJF045-FC	50	70.7	86	45	23	13	9	0.40 kg
DNA0750	DJF050-FC	56.5	80	95	50	24	13	9	0.50 kg
DNA1500	DJF075-FC	73.5	104	122	75	29	16	11	0.88 kg
DNA3000	DJF095-FC	92	130	150	95	33	18	14	1.44 kg
DNA5000	DJF120-FC	109.5	155	175	120	36	21	14	2.03 kg

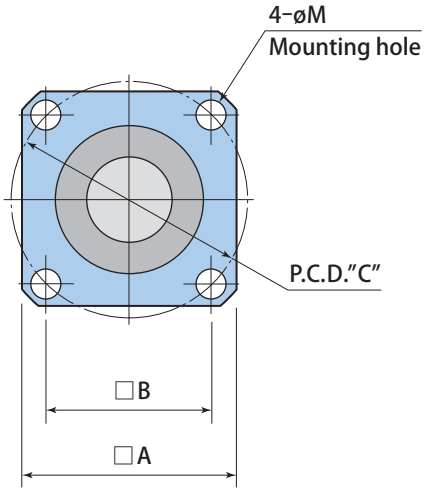
● Flange mounting screws are not included.

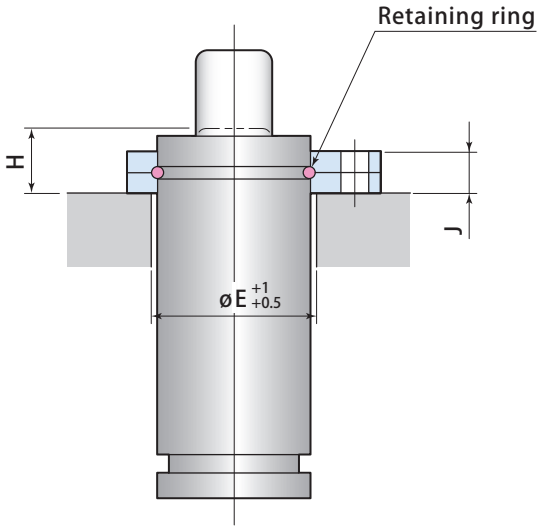
Flange model

DJF 050 – FS

1 Flange size

038 075
045 095
050 120





● FS flanges are designed with sufficient strength to accommodate the loading.
(The flange should support the load by its full mounting face, and should be mounted by 4 screws.)

mm

Gas spring model	Flange model	A	B	C	E	H	J	M	Mass of flange
DNA0250	DJF038-FS	52	40	56.5	38	17	9	6.8	0.12 kg
DNA0500	DJF045-FS	64	50	70.7	45	23	13	9	0.25 kg
DNA0750	DJF050-FS	70	56.5	80	50	24	13	9	0.30 kg
DNA1500	DJF075-FS	90	73.5	104	75	29	16	11	0.44 kg
DNA3000	DJF095-FS	110	92	130	95	33	18	14	0.65 kg
DNA5000	DJF120-FS	130	109.5	155	120	36	21	14	0.85 kg

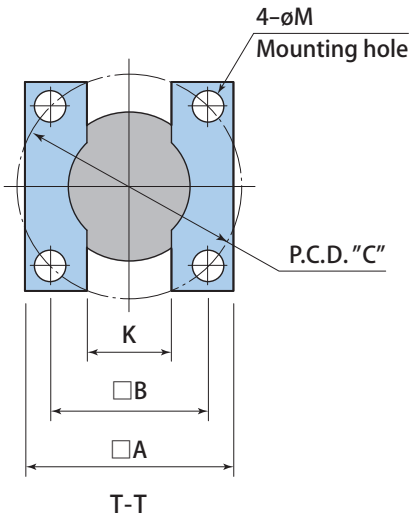
● Flange mounting screws are not included.

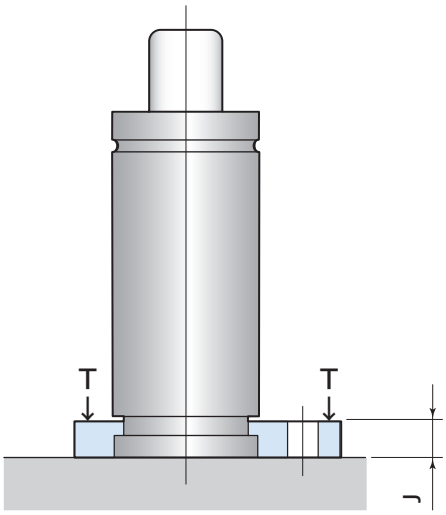
Flange model

DJF 050 – SC

1 Flange size

038 075
045 095
050 120





● The cylinder should be backed up fully at the bottom face.

mm

Gas spring model	Flange model	A	B	C	J	K	M	Mass of flange
DNA0250	DJF038-SC	55	40	56.5	6	17	6.8	0.07 kg
DNA0500	DJF045-SC	70	50	70.7	6	20	9	0.12 kg
DNA0750	DJF050-SC	75	56.5	80	12	31	9	0.22 kg
DNA1500	DJF075-SC	100	73.5	104	12	36	11	0.39 kg
DNA3000	DJF095-SC	120	92	130	12	32	14	0.54 kg
DNA5000	DJF120-SC	140	109.5	155	12	40	14	0.64 kg

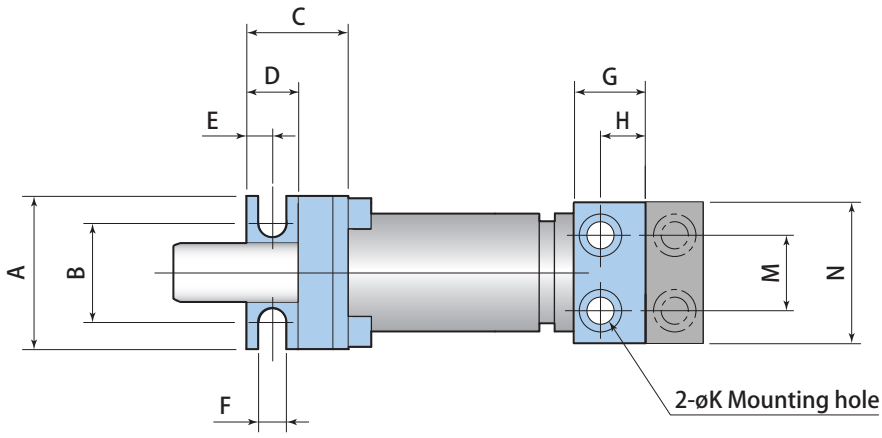
● Flange mounting screws are not included.

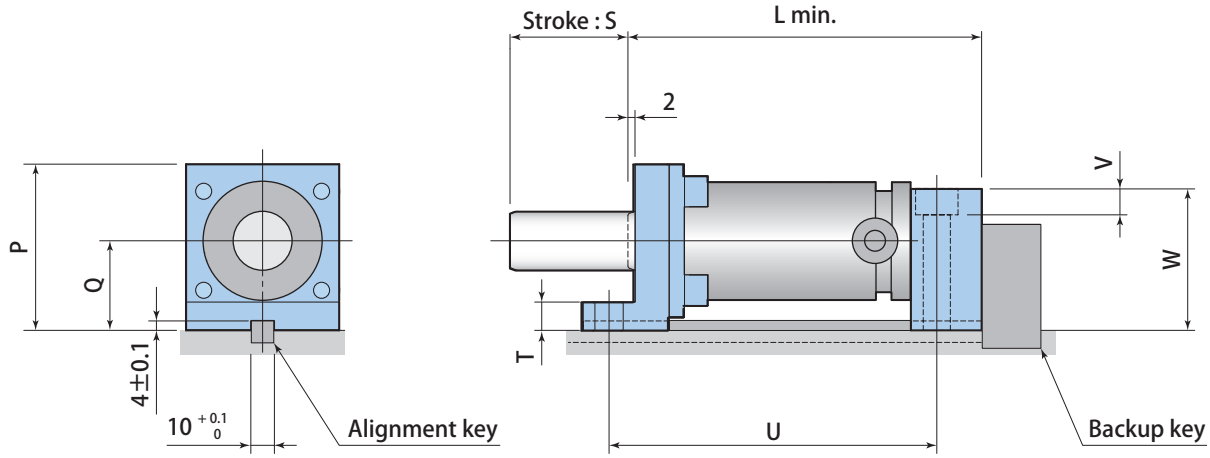
Flange model

DJF 045 – HA

1 Flange size

045





- Use a key groove of the flange when installation to avoid the side-load to the gas spring.
- Install a back up key at the back of flange to prevent the flange mounting screws from damage.

mm

Gas spring model	Flange model	L min.	U	A	B	C	D	E	F	G	H	K	M	N	P	Q	T	V	W	Mass of flange
DNA0500	DJF045-HA	110+S	105+S	60	37	43	22	11	12	25	14	11	32	55	66	36	11	11	60	1.00 kg

- Flange mounting screws are not included.

Storage/Transportation

- Storage
  The gas spring should be stored in dust, sunlight and humid-free area.

- Transportation
  Keep the gas spring in a way that it does not hit other gas spring. The scratches or dents made on the piston rod surface may deteriorate the product's durability. (FIG. 1)

Operation/Mounting

- Do not attempt to dismantle the gas spring. High pressure gas is sealed inside and the parts may pop out dangerously.
- Do not attempt to give additional machining onto the gas spring.
- Do not weld or cut the gas spring. Do not throw gas spring into the fire.
- Do not mount the gas spring by using the tap hole on the tip of piston.
- Do not attempt to lift the whole die assembly by using the tap hole on the tip of piston rod. The tap hole is provided for carrying and mount/dismount a single gas spring. (FIG. 2)
- The piston rod should be loaded to its full surface equally. If not, adjust the location of cushion pin or adaptor plate to achieve it. (FIG. 3)

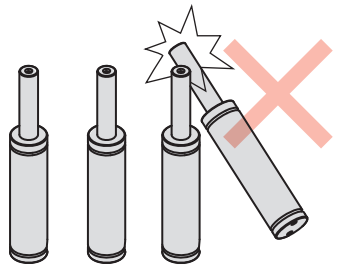


FIG. 1

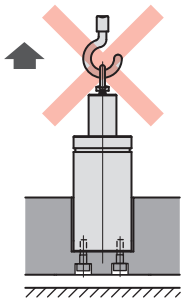


FIG. 2

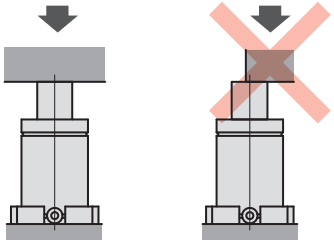


FIG. 3

Operation/Mounting

- The gas spring is securely mounted by the screws from the bottom or by the flanges.

- Do not attempt the grinding or welding operation close to the gas spring. If it is inevitable, cover the gas springto protect them from debris or spatters. (FIG. 4)

- Do not use the gas spring under the high temperature environment. The maximum operating temperature is 70 ℃ .
  If the operational temperature is beyond room temperature (20℃), decrease the charging pressure until it equals to the max. charging pressure (at 20℃). For the details, refer to Instruction Manual.

- Avoid side-load to the piston as much as possible. The side-load significantly shorten the service-life of gas pring, specifically the mounting in lateral. The piston rod tends to lean because of its own weight in case of lateral mount. (FIG. 5)

- Use gas spring within the recommended stroke range. Over stroke may cause the damage.

- Mount the gas spring to die lubricant free area. If the oil wet gas spring strokes, the oil may become the oil film and intrude inside the cylinder. The accumulated draw oil may cause abnormal high pressure in the cylinder. Especially the chlorine and soluble oils must be avoided as they will deteriorate sealing capability of packing and shorter gas spring life. (FIG. 6)

- Never use the gas spring under the condition of piston sudden release. Sudden release is very dangerous andthere is high risk of gas exhaust and serious damage of the cylinder.

- Exhaust the N_2 gas completely before disposal. Refer to **page → 77** for details of gas discharge tolls.

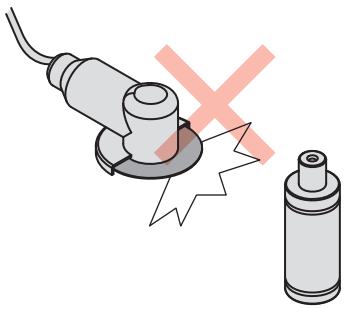


FIG. 4

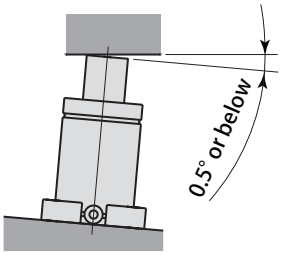


FIG. 5

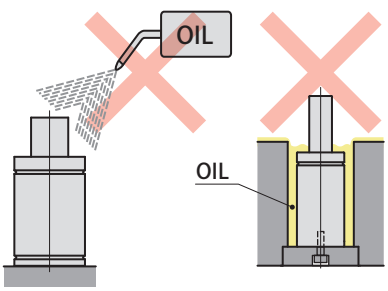
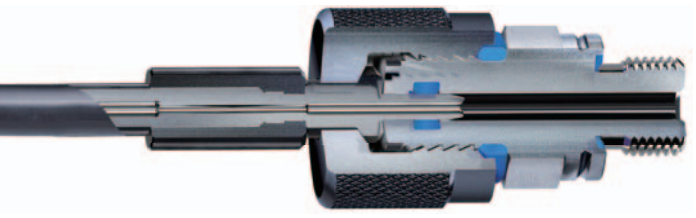
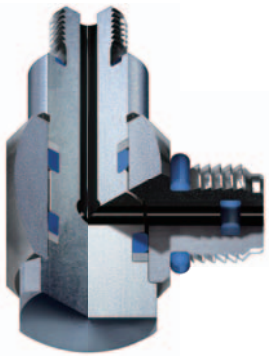
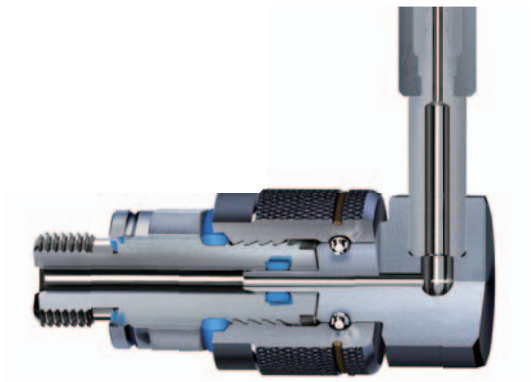


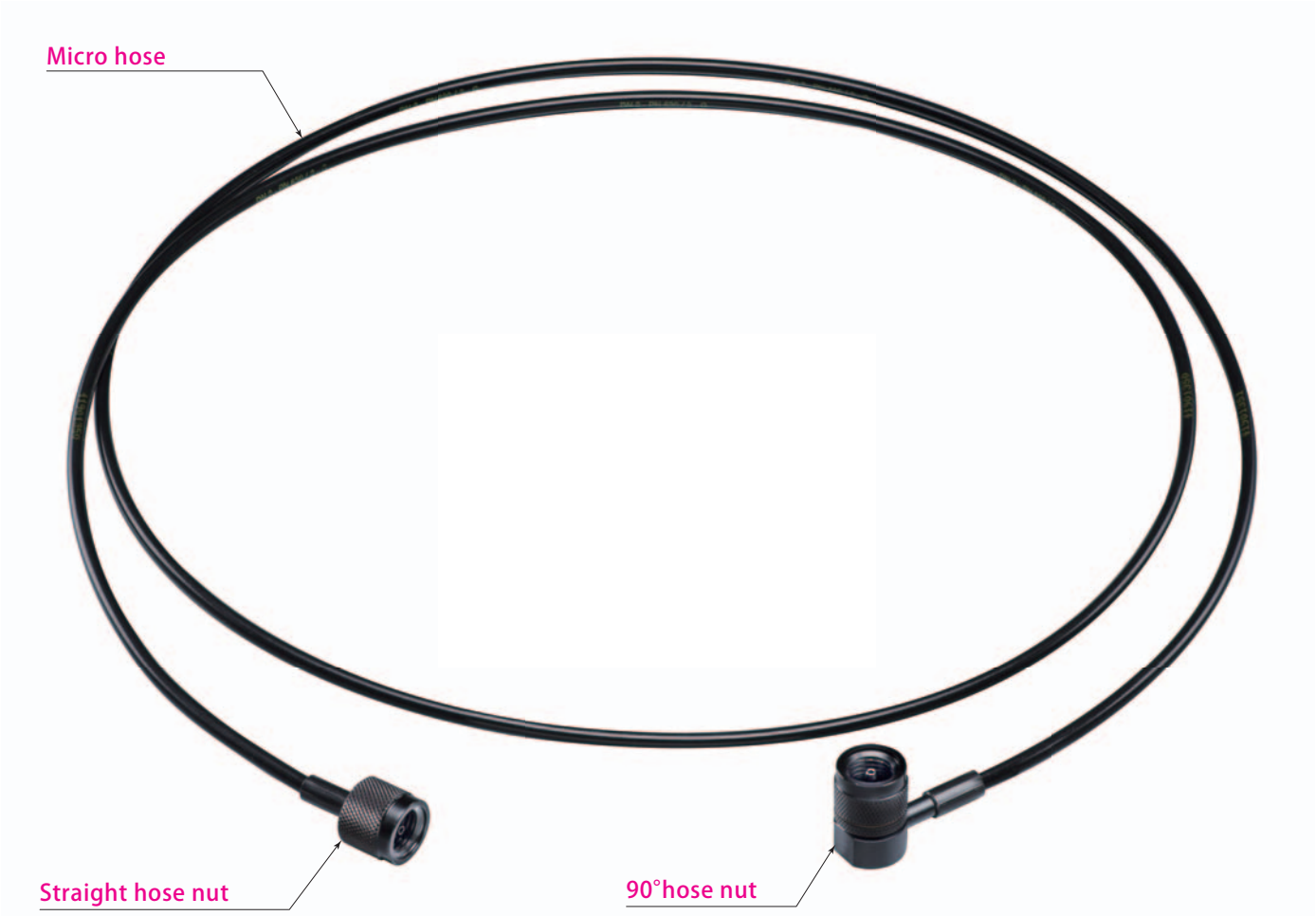
FIG. 6

micro hose system





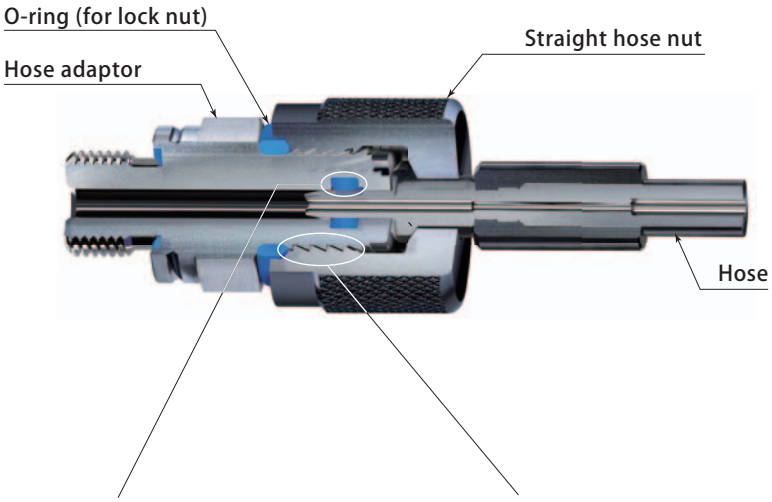




Fluid used	N_2 (Nitrogen) gas
Proof pressure	42MPa(50℃)
Operating temperature	0 ～ 70℃
Inside diameter of hose	ø2mm
Outside diameter of hose	ø5mm
Minimum bending radius	R20mm
Material	Hose core, outer coating ：Polyamide resin
	Reinforcing layer ：Aramid fiber
Proof pressure varies according to the temperature of hose	0℃：51 MPa
	30℃：46 MPa
	50℃：42 MPa
	70℃：38 MPa

- No sealing tape or agent is necessary for a hose adaptor (Gas pressure is sealed by a packing or O-ring).
- For the mount of hose adaptor, be sure to use the tool when tightening.
- Hose should be tightened securely till hose nut surely compresses the lock nut O-ring.

Straight hose nut

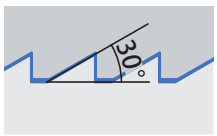


O-ring

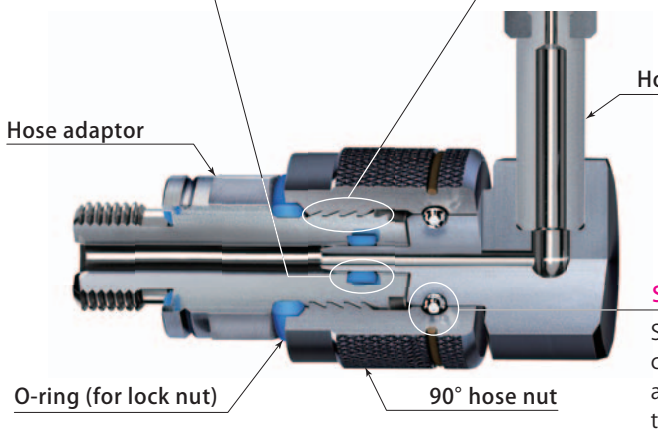
Built-in O-ring can positively seal the fluid and sealing ability can stably maintained regardless of the quality of operater or circumstances. Also sealing performance will not change even after repetitive connection / disconnection work.

Buttress thread

The buttress thread with an unique inclination has a strong resistance against the strong vibration and the nut will not easily loosen even by the vibration of press machine.



90°hose nut

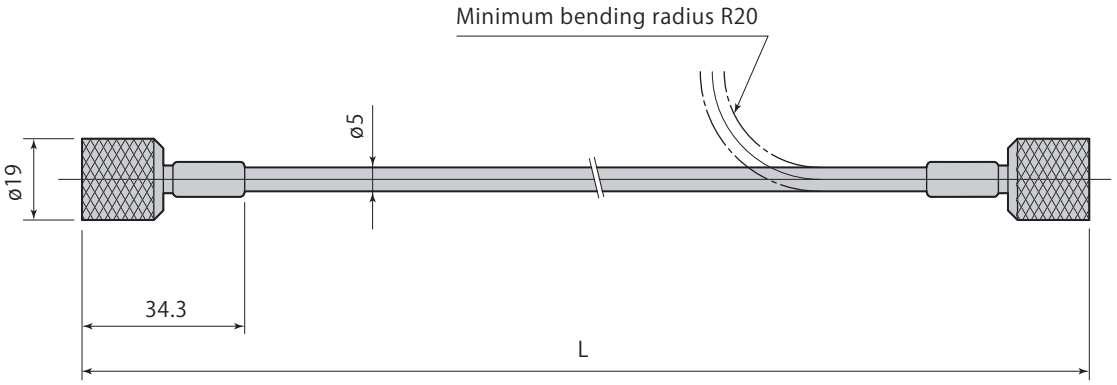


Steel ball

Steel balls in the nut can reduce the friction and enable the nut tighten / loosen smoothly.

Straight & Straight hose

DNH - SS



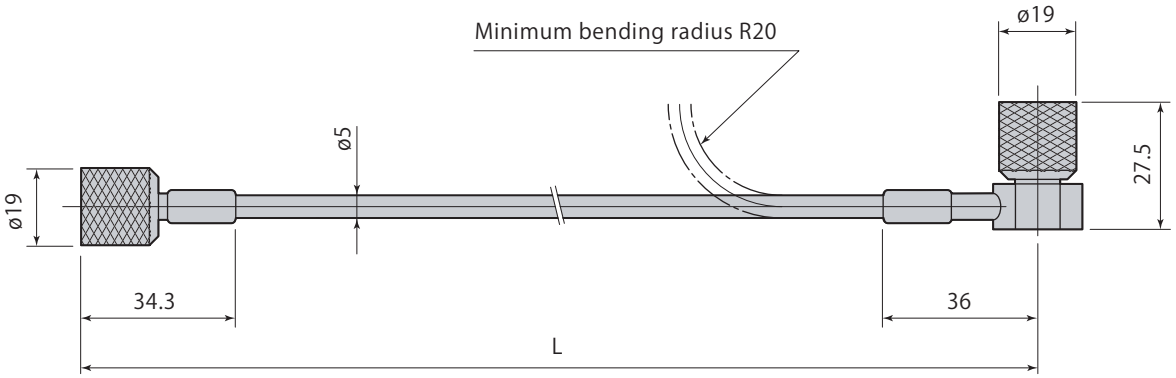
Model	L mm	Mass g
DNH-SS-0150	150	70
DNH-SS-0160	160	
DNH-SS-0170	170	
DNH-SS-0180	180	
DNH-SS-0190	190	
DNH-SS-0200	200	
DNH-SS-0210	210	
DNH-SS-0220	220	
DNH-SS-0230	230	
DNH-SS-0240	240	
DNH-SS-0250	250	
DNH-SS-0260	260	
DNH-SS-0270	270	
DNH-SS-0280	280	
DNH-SS-0290	290	
DNH-SS-0300	300	

Model	L mm	Mass g
DNH-SS-0350	350	70
DNH-SS-0400	400	
DNH-SS-0450	450	
DNH-SS-0500	500	
DNH-SS-0550	550	
DNH-SS-0600	600	
DNH-SS-0650	650	
DNH-SS-0700	700	
DNH-SS-0800	800	80
DNH-SS-0900	900	
DNH-SS-1000	1000	
DNH-SS-1100	1100	
DNH-SS-1300	1300	
DNH-SS-1500	1500	90
DNH-SS-2000	2000	100

Minimum hose length is L=150mm.
Other length is also available (made-to-order).Specify the required length per 10 mm.

Straight & 90° hose

DNH - SE



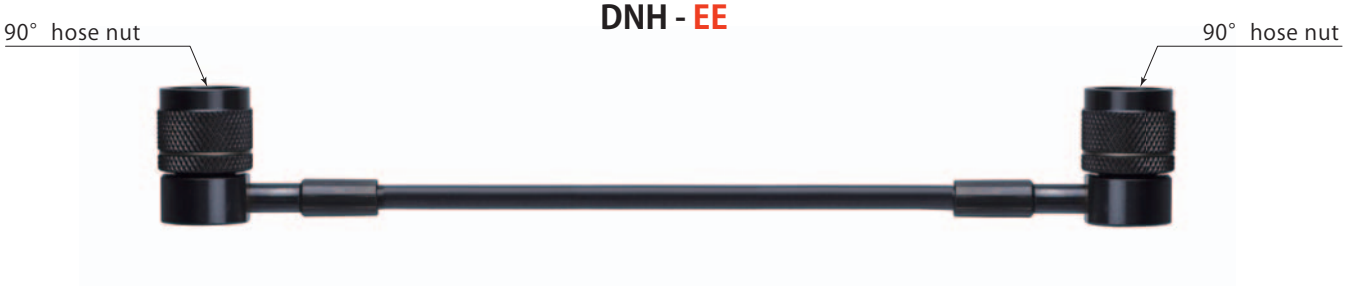
Model	L mm	Mass g
DNH-SE-0150	150	90
DNH-SE-0160	160	
DNH-SE-0170	170	
DNH-SE-0180	180	
DNH-SE-0190	190	
DNH-SE-0200	200	
DNH-SE-0210	210	
DNH-SE-0220	220	
DNH-SE-0230	230	
DNH-SE-0240	240	
DNH-SE-0250	250	
DNH-SE-0260	260	
DNH-SE-0270	270	
DNH-SE-0280	280	
DNH-SE-0290	290	
DNH-SE-0300	300	

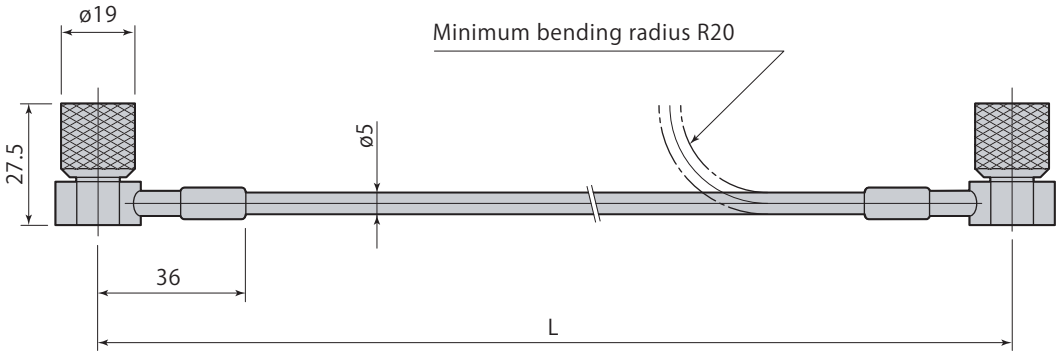
Model	L mm	Mass g
DNH-SE-0350	350	90
DNH-SE-0400	400	
DNH-SE-0450	450	
DNH-SE-0500	500	
DNH-SE-0550	550	
DNH-SE-0600	600	
DNH-SE-0650	650	
DNH-SE-0700	700	
DNH-SE-0800	800	100
DNH-SE-0900	900	
DNH-SE-1000	1000	
DNH-SE-1100	1100	
DNH-SE-1300	1300	
DNH-SE-1500	1500	110
DNH-SE-2000	2000	120

Minimum hose length is L=150mm.
Other length is also available (made-to-order).Specify the required length per 10 mm.

90° & 90° hose

DNH - EE





Model	L mm	Mass g
DNH-EE-0150	150	110
DNH-EE-0160	160	
DNH-EE-0170	170	
DNH-EE-0180	180	
DNH-EE-0190	190	
DNH-EE-0200	200	
DNH-EE-0210	210	
DNH-EE-0220	220	
DNH-EE-0230	230	
DNH-EE-0240	240	
DNH-EE-0250	250	
DNH-EE-0260	260	
DNH-EE-0270	270	
DNH-EE-0280	280	
DNH-EE-0290	290	
DNH-EE-0300	300	

Minimum hose length is L=150mm.
Other length is also available (made-to-order).Specify the required length per 10 mm.

Straight adaptor

DNH - GA

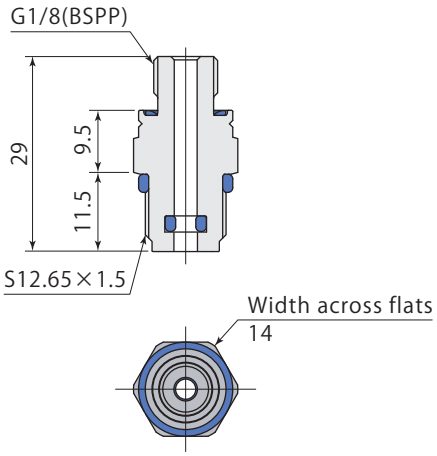
Straight adaptor
Long model

DNH - SJAG

Piping port size	G1/8 (BSPP)

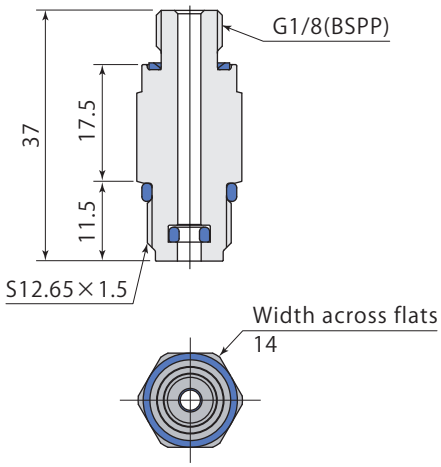
● Check valve not built-in.

Straight adaptor DNH-GA

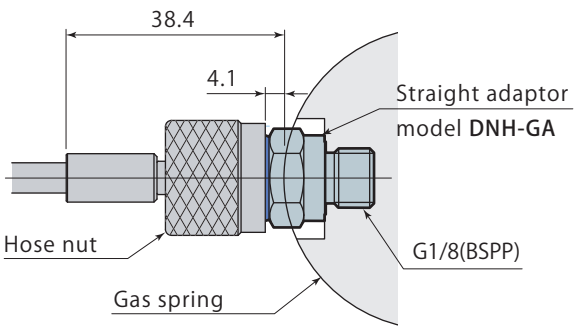


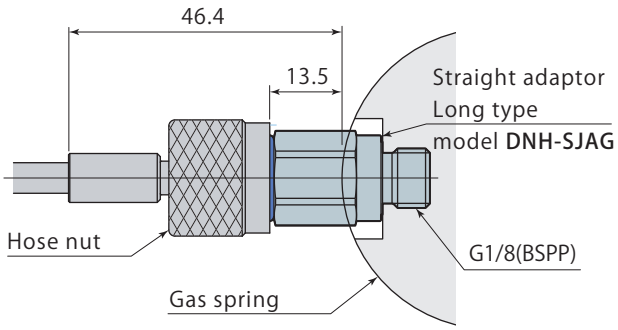
Tool used	Spanner 14mm
Tightening torque	12 N·m
Mass	30 g

Straight adaptor Long model DNH-SJAG



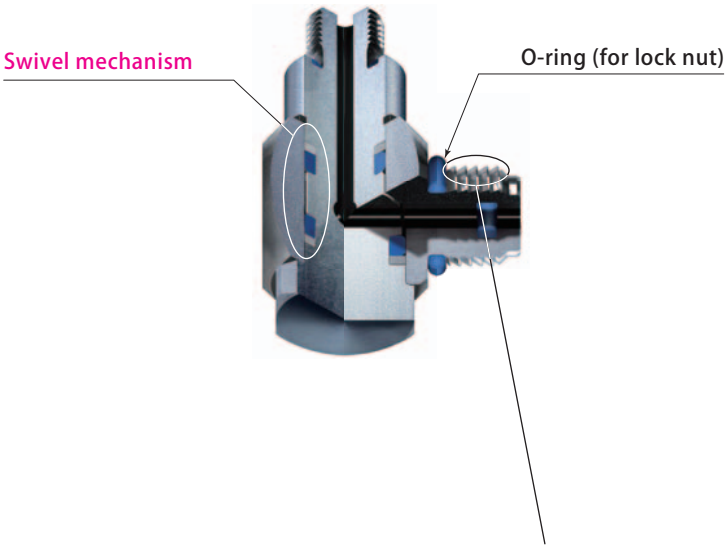
Tool used	Spanner 14mm
Tightening torque	12 N·m
Mass	30 g





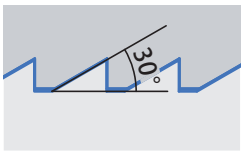
Finger adjustable hose adaptor without applying any excessive force to the hose.

Swivel elbow adaptor

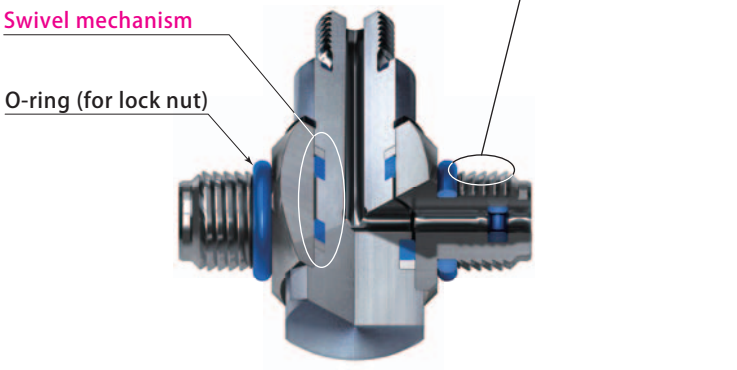


Buttress thread

The buttress thread with an unique inclination has a strong resistance against the strong vibration and the nut will not easily loosen even by the vibration of press machine.



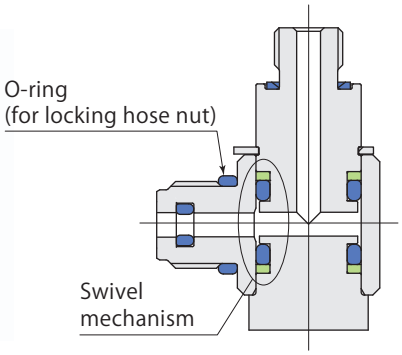
Swivel tee adaptor

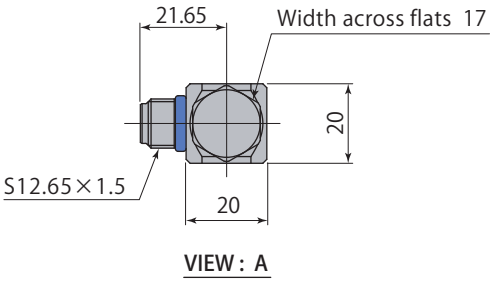


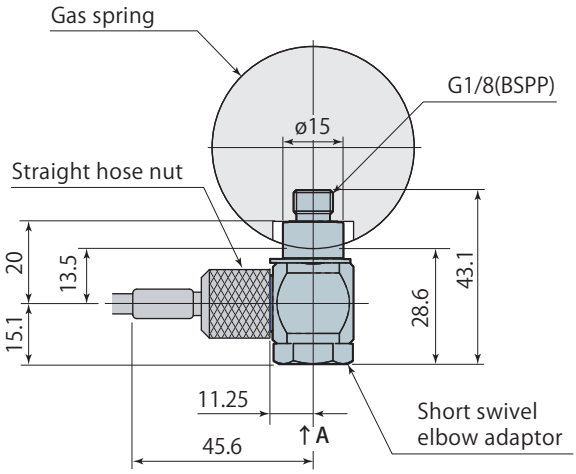
- No sealing tape or agent is necessary for a hose adaptor (Gas pressure is sealed by a packing or O-ring).
- For the mount of hose adaptor, be sure to use the tool when tightening.
- Hose should be tightened securely till hose nut surely compresses the lock nut O-ring.

Short swivel elbow adaptor

DNH - GH





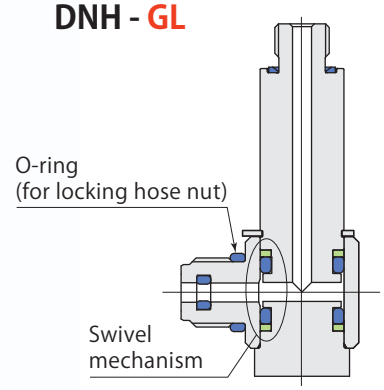


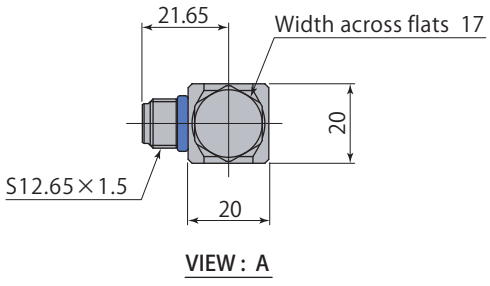
- No check valve inside.
- Choose model DNH-GL when the gas spring is installed with a flange.

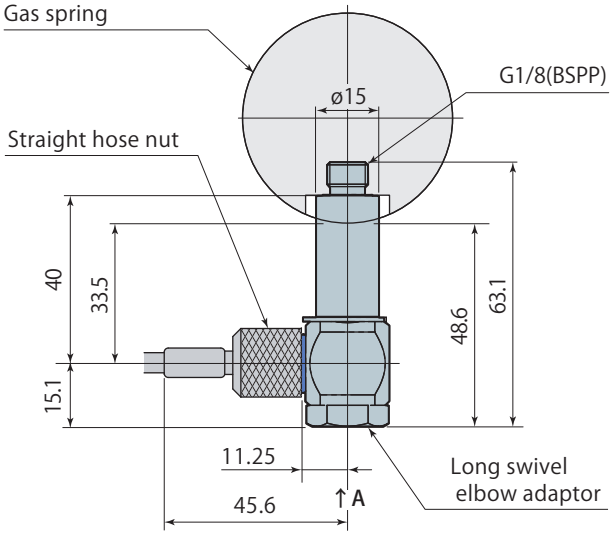
Piping port size	G1/8 (BSPP)
Tool used	Spanner 17mm
Tightening torque	12 N·m
Mass	90 g

Long swivel elbow adaptor

DNH - GL

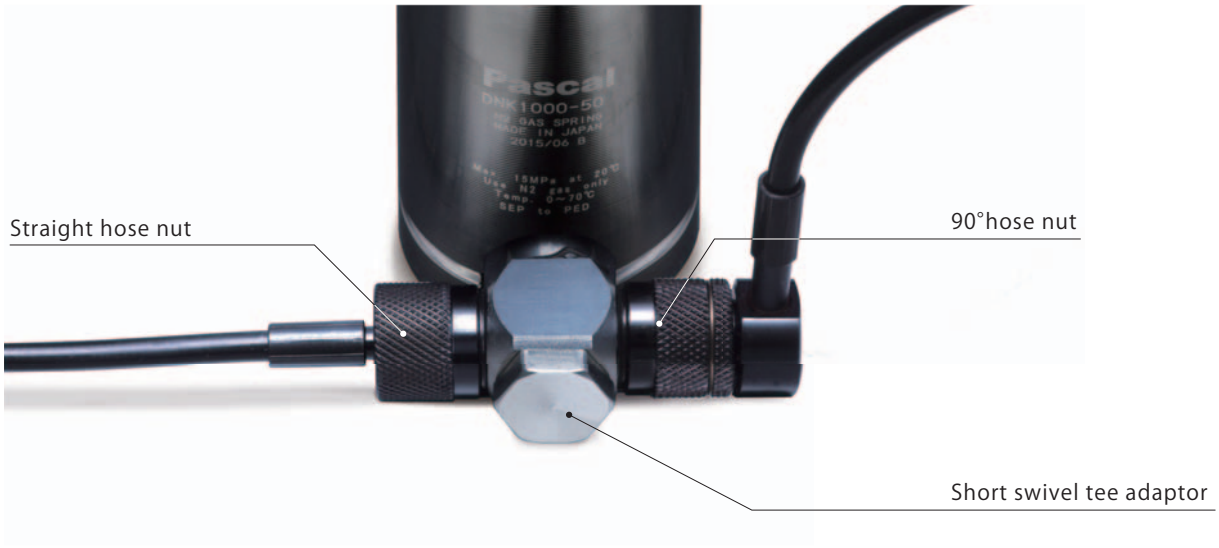






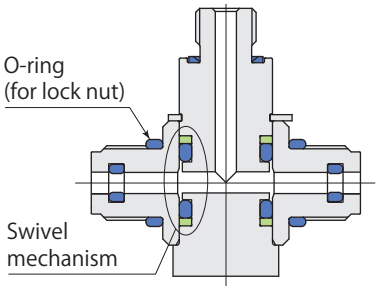
● No check valve inside.

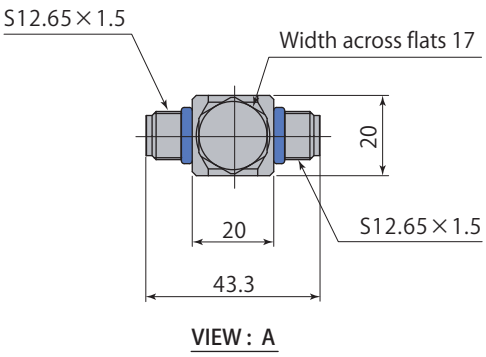
Piping port size	G1/8 (BSPP)
Tool used	Spanner 17mm
Tightening torque	12 N·m
Mass	120 g



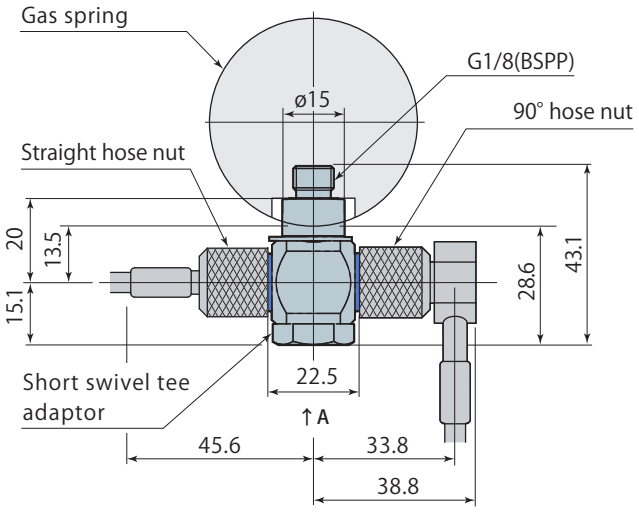
Short swivel tee adaptor

DNH - GC



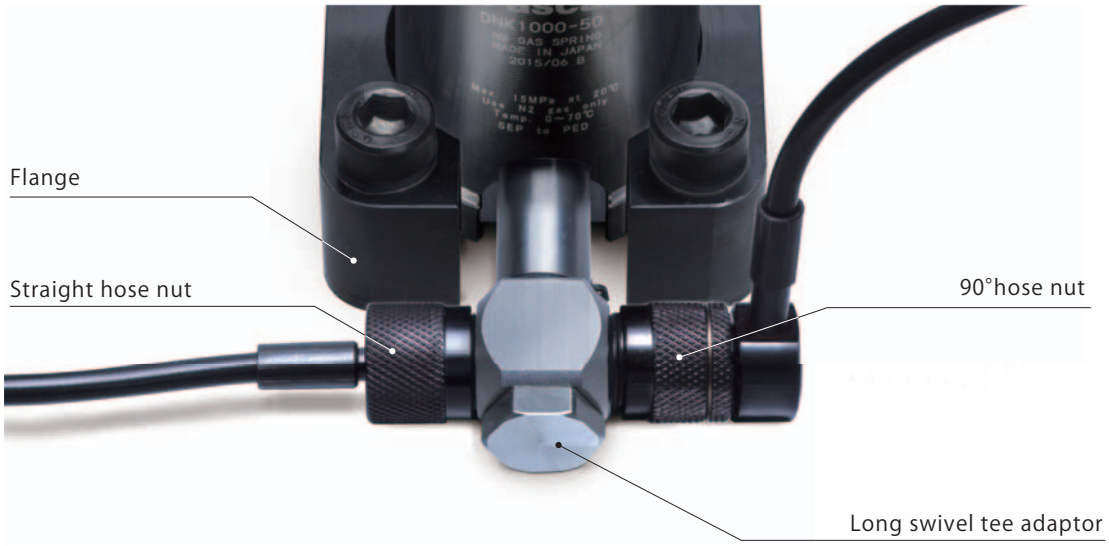


VIEW : A



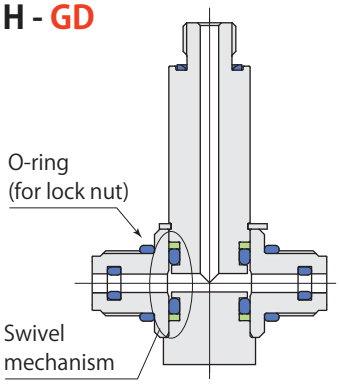
- No check valve inside.
- Choose model DNH-GD when the gas spring is installed with a flange.

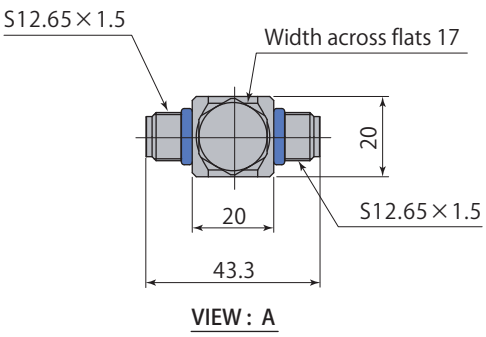
Piping port size	G1/8 (BSPP)
Tool used	Spanner 17mm
Tightening torque	12 N·m
Mass	100 g

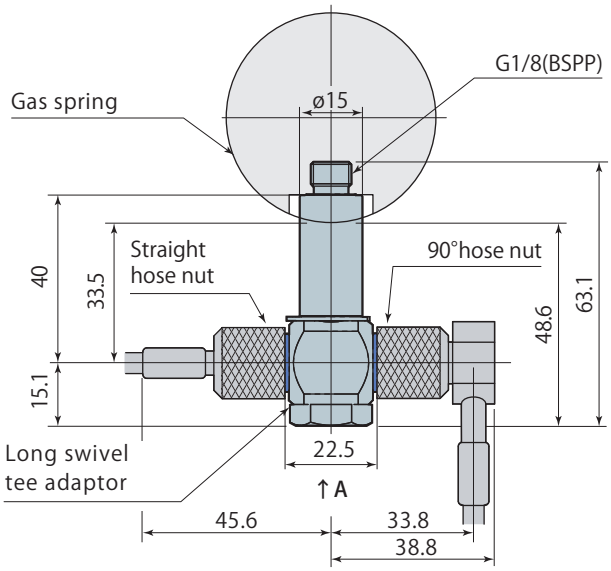


Long swivel tee adaptor

DNH - GD

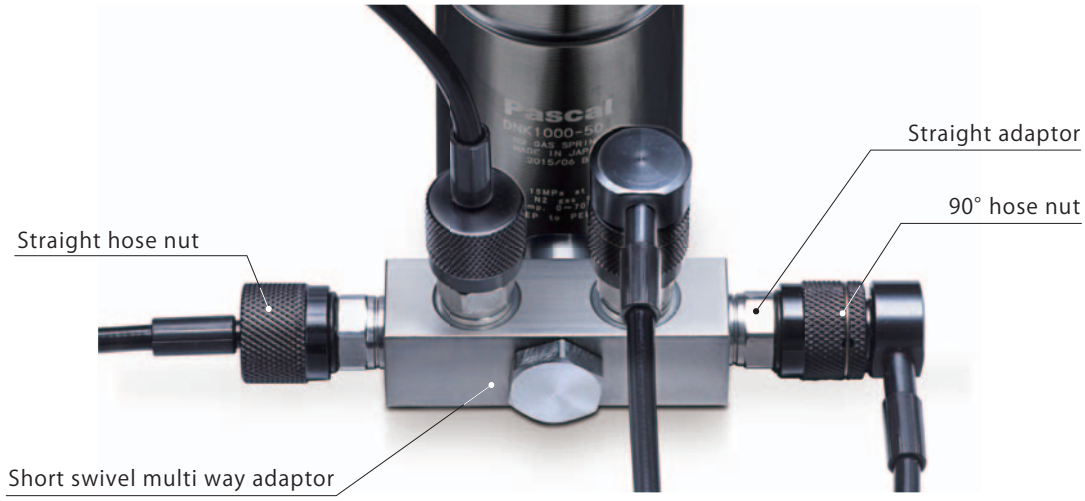






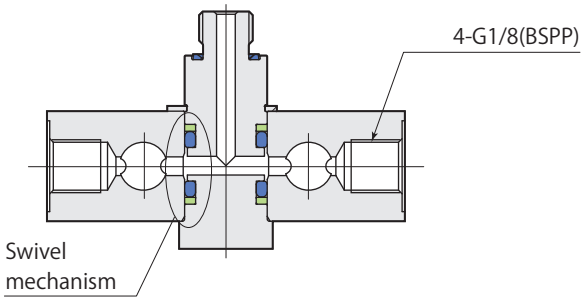
● No check valve inside.

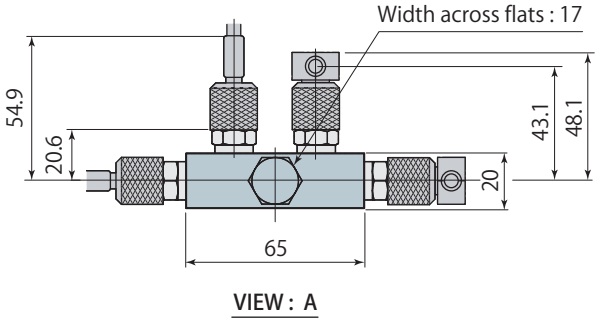
Piping port size	G1/8 (BSPP)
Tool used	Spanner 17mm
Tightening torque	12 N·m
Mass	130 g

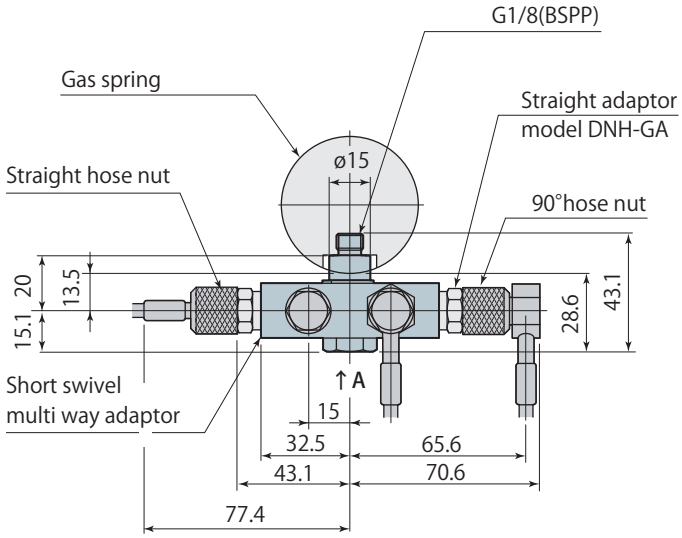


Short swivel multi way adaptor

DNH - GF

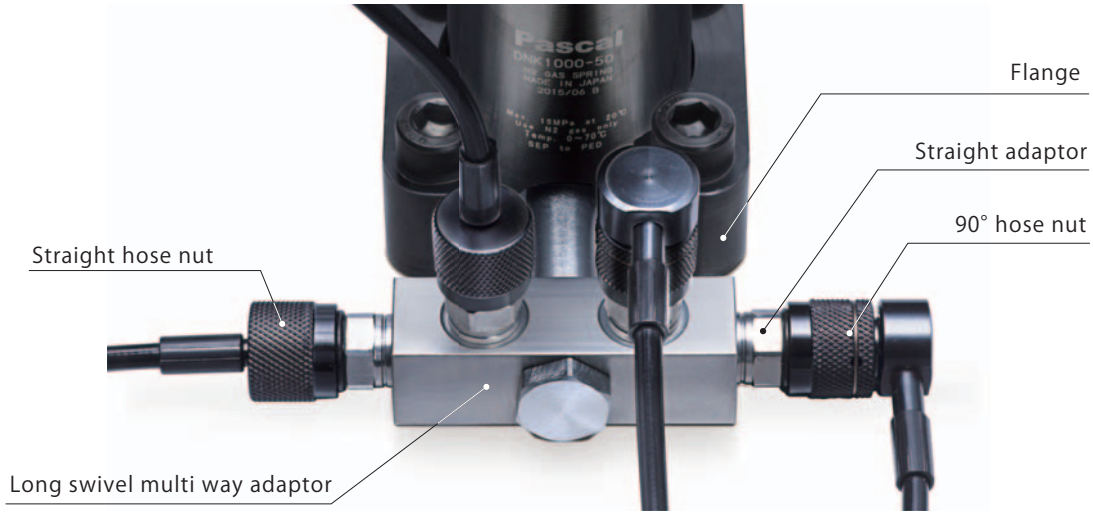






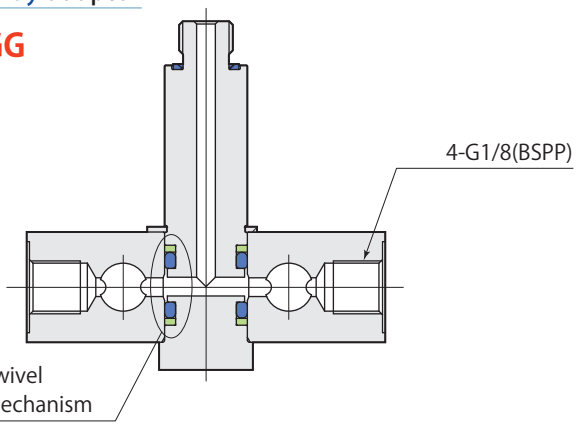
- Mount G-thread straight adaptor. (Refer to **page → 52**)
  Plug the open ports as necessity. (Refer to **page → 68**)
- Choose model DNH-GG when the gas spring is installed with a flange.

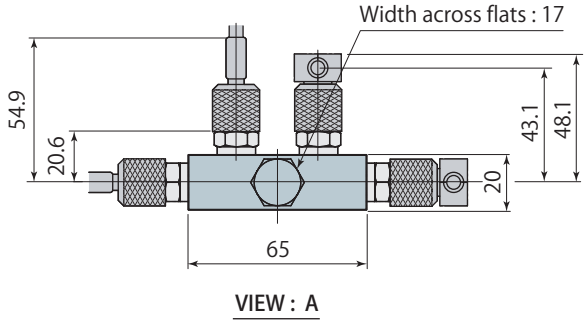
Piping port size	G1/8 (BSPP)
Tool used	Spanner 17mm
Tightening torque	12 N·m
Mass	200 g



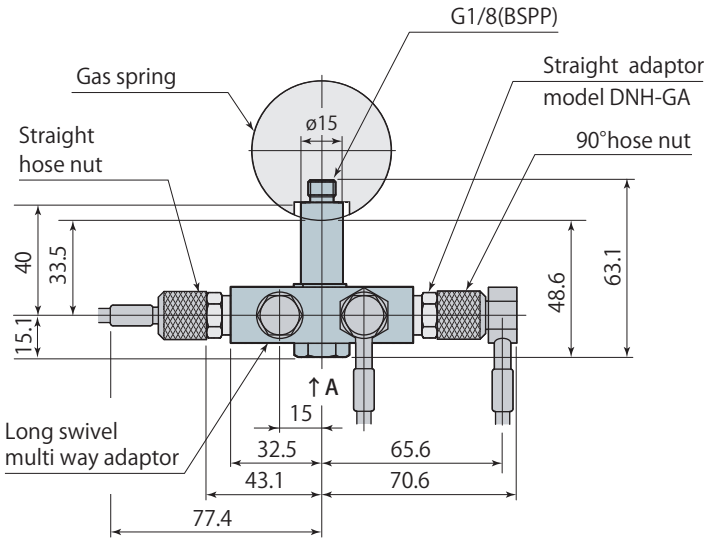
Long swivel multi way adaptor

DNH - GG



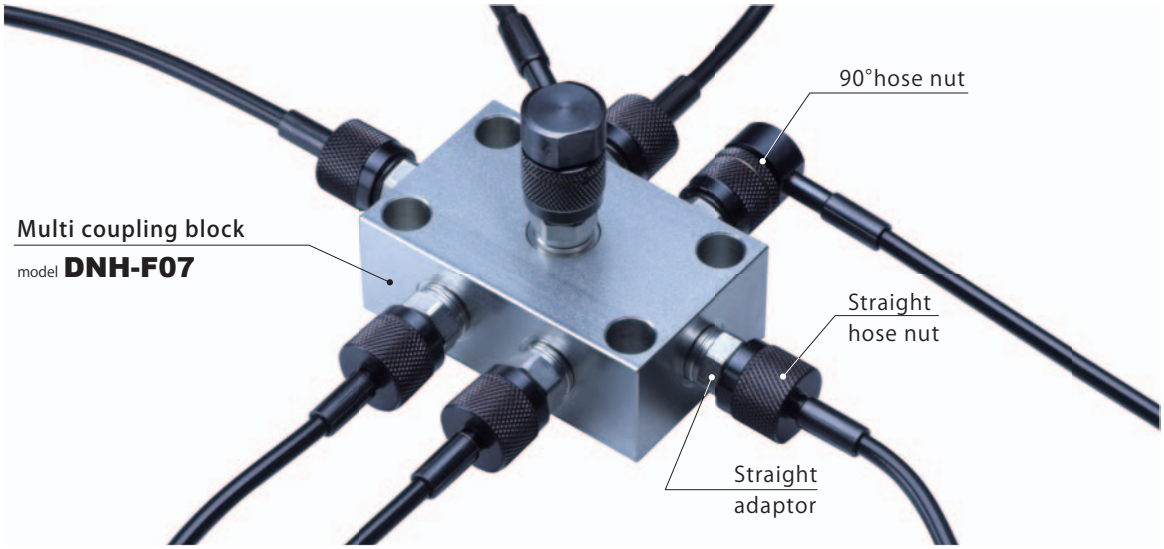


VIEW : A



● Mount G-thread straight adaptor. (Refer to **page → 52**)
Plug the open ports as necessity. (Refer to **page → 68**)

Piping port size	G1/8 (BSPP)
Tool used	Spanner 17mm
Tightening torque	12 N·m
Mass	220 g

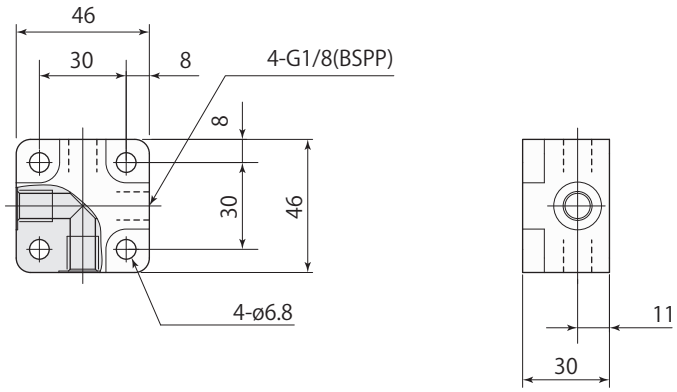


Piping port size	G1/8 (BSPP)

DNH - F04

Number of port : 4

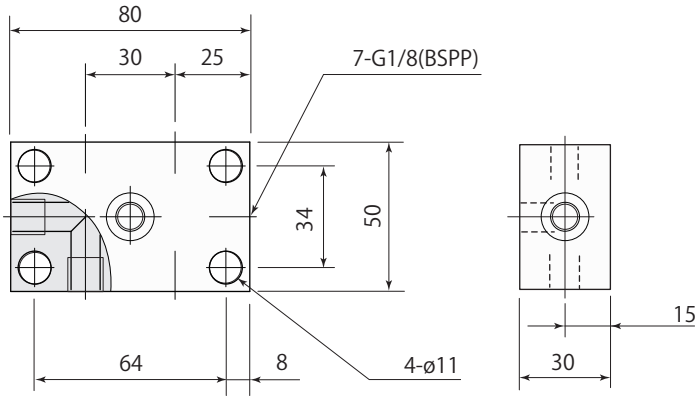
Mass : 400g



DNH - F07

Number of port : 7

Mass : 750g

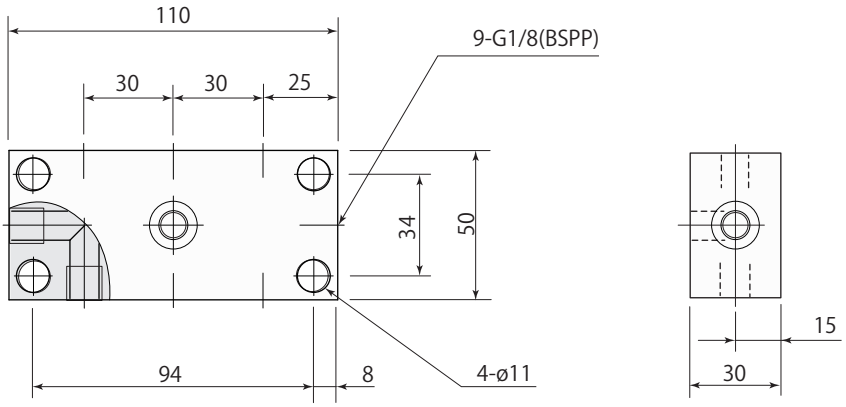


- Mount G-thread type adaptor (Refer to **page → 52 ~ 60**). Plug the open ports as necessity.(Refer to **page → 68**)
- Mounting holes (4 places) are provided on the block however 2- place mount is feasible.

DNH - F09

Number of port : 9

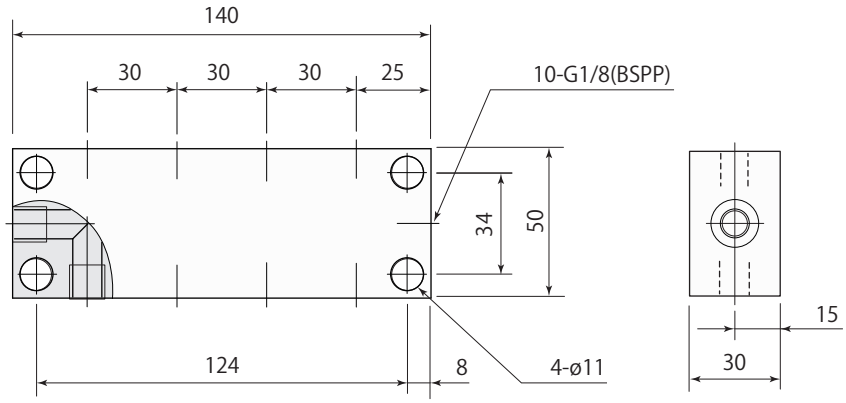
Mass : 1100g



DNH - F10

Number of port : 10

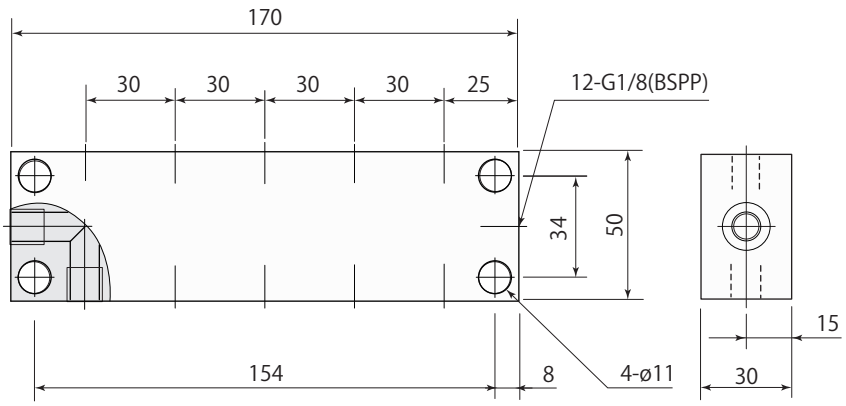
Mass : 1400g



DNH - F12

Number of port : 12

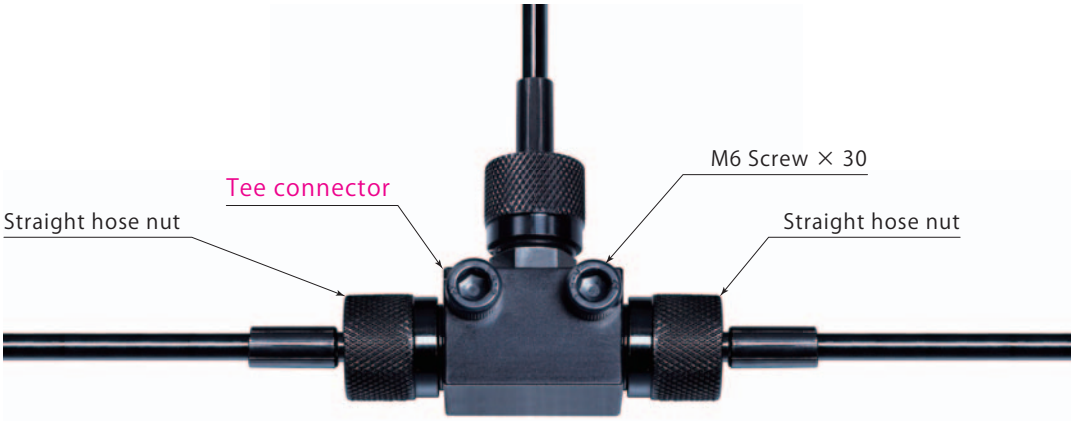
Mass : 1700g



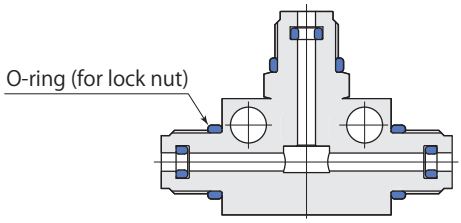
micro hose system

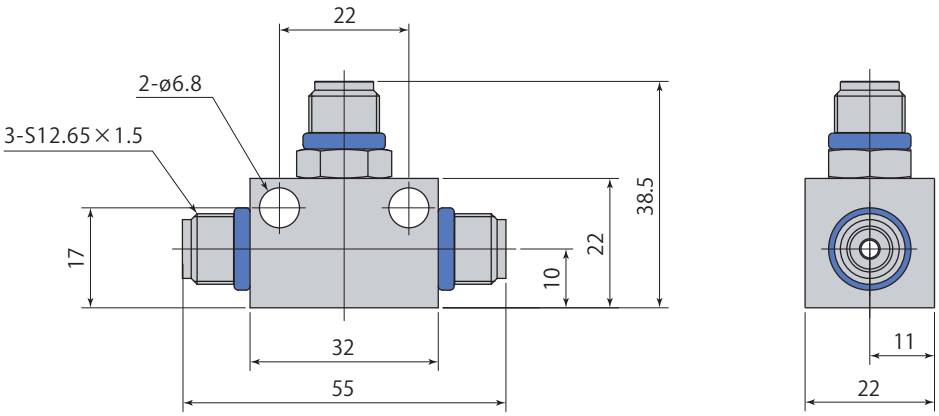
Tee connector

DNH - TC2



It takes up minimum space rather than using a coupling block and needs less parts.



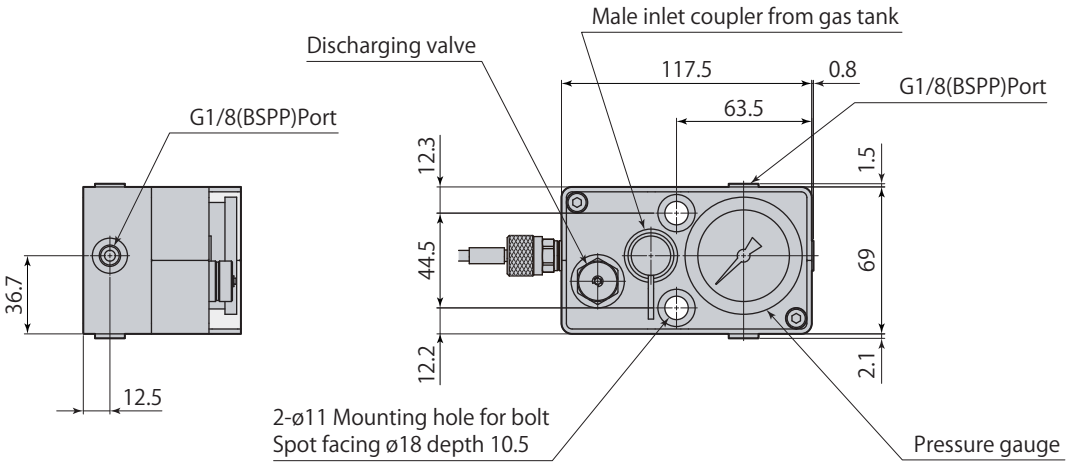


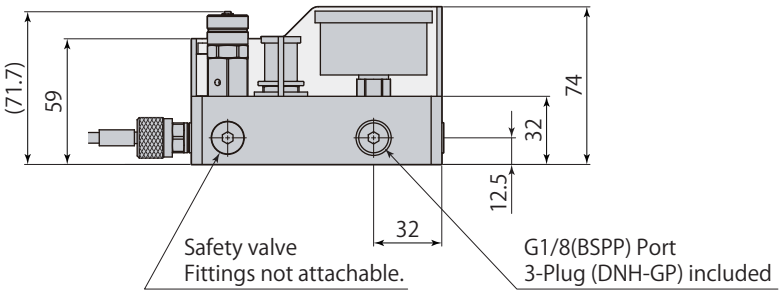
Mass	130 g

- Use M6 screws to bolt when piping.
- Check valve not built-in.

Control panel

DNH - CPA



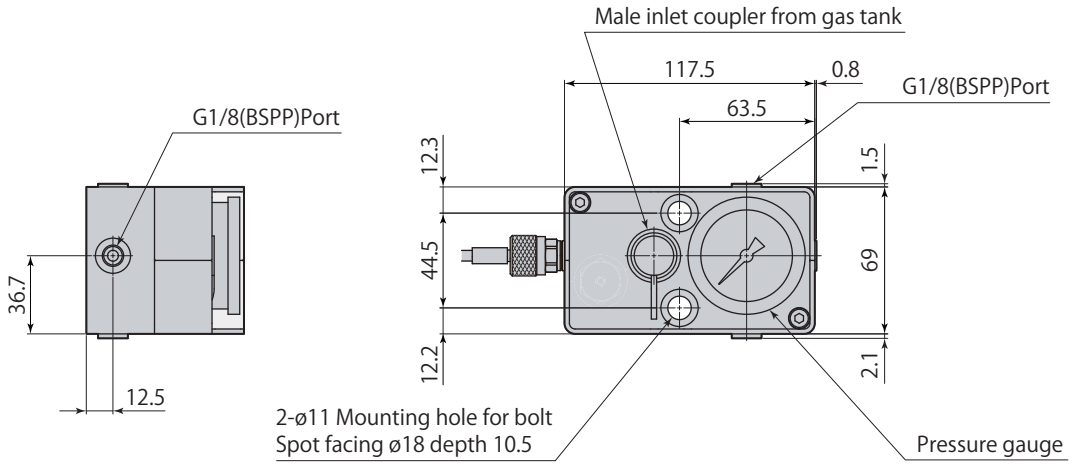


- Mount G-thread type adaptor (Refer to **page → 52〜60)**. Plug the open ports as necessity. (Refer to **page → 68**)

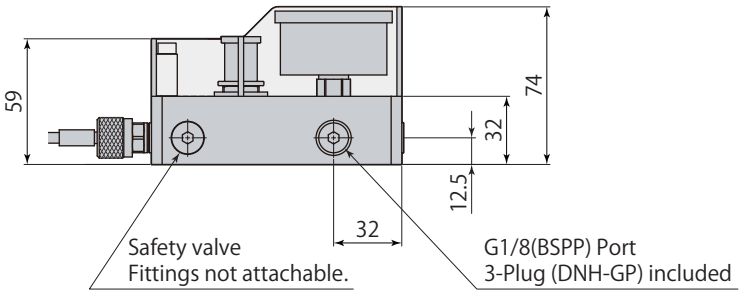
Maximum charging pressure	18 MPa
Operating temperature	0 ～ 70℃
Mass	1550 g

Control panel

DNH - CPB



- This unit does not have a gas bleeding valve. Be sure to check the stop valve on the charging valve DNJ-HDKA6840 (Refer to **page → 76**) is closed, then connect the charging valve to the coupler (male) and loosen the stop valve slowly to discharge the gas.
- Mount G-thread type adaptor (Refer to **pages → 52～60**). Plug the open ports as necessity. (Refer to **page → 68**)



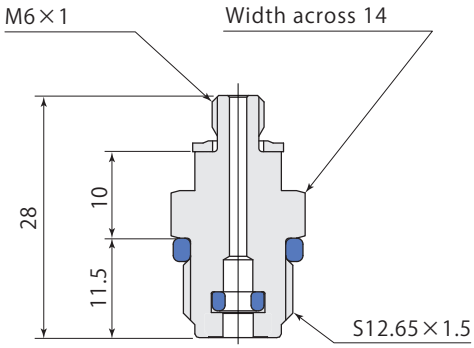
Maximum charging pressure	18 MPa
Operating temperature	0 ～ 70℃
Mass	1500 g

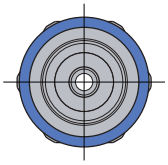
M6 thread type Straight adaptor

DNH - MA

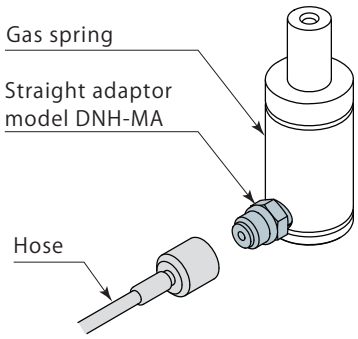
Piping port size	M6 × 1
Tool used	Spanner 14mm
Tightening torque	7 N·m
Mass	20 g

● No check valve inside.



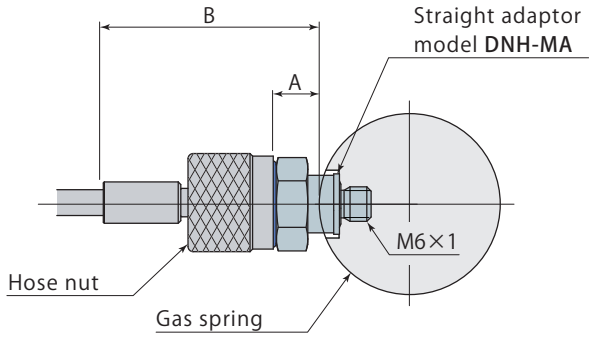


● Used to connect the gas spring with the M6 piping port to the micro hose model DNH-SS, -SE, -EE



Corresponding gas spring model

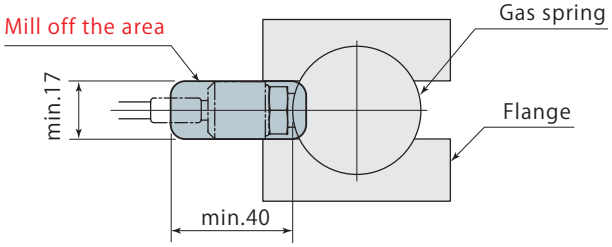
DNK0350・DNK0500
DNR0350 ～ DNR2400

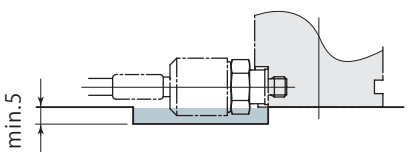


mm

Gas sprring model	A	B
DNK0350・0500	8.6	42.9
DNR0350・0500	8.6	42.9
DNR0750~1500	8.1	42.4
DNR2400	7.1	41.4

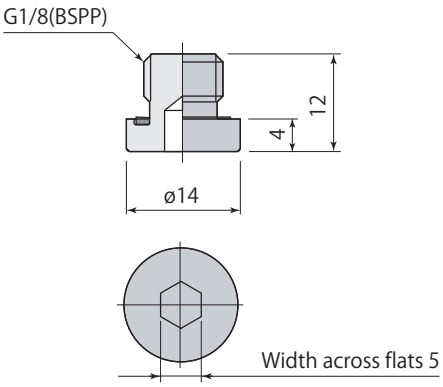
Mill off the blue-colored area as shown below sketch in case of using hose adaptor for model DNR.





Plug

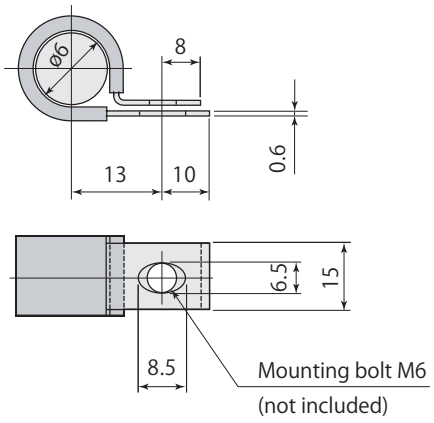
DNH - GP

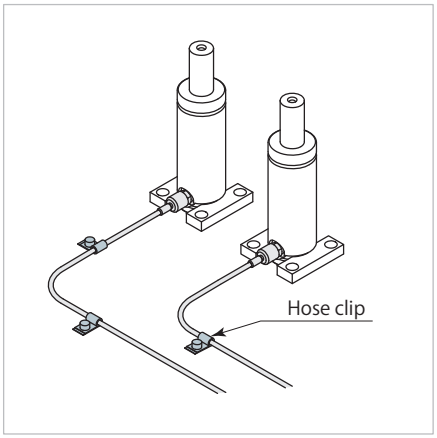


Tool used	Hex wrench 5mm
Tightening torque	12 N·m
Mass	10g

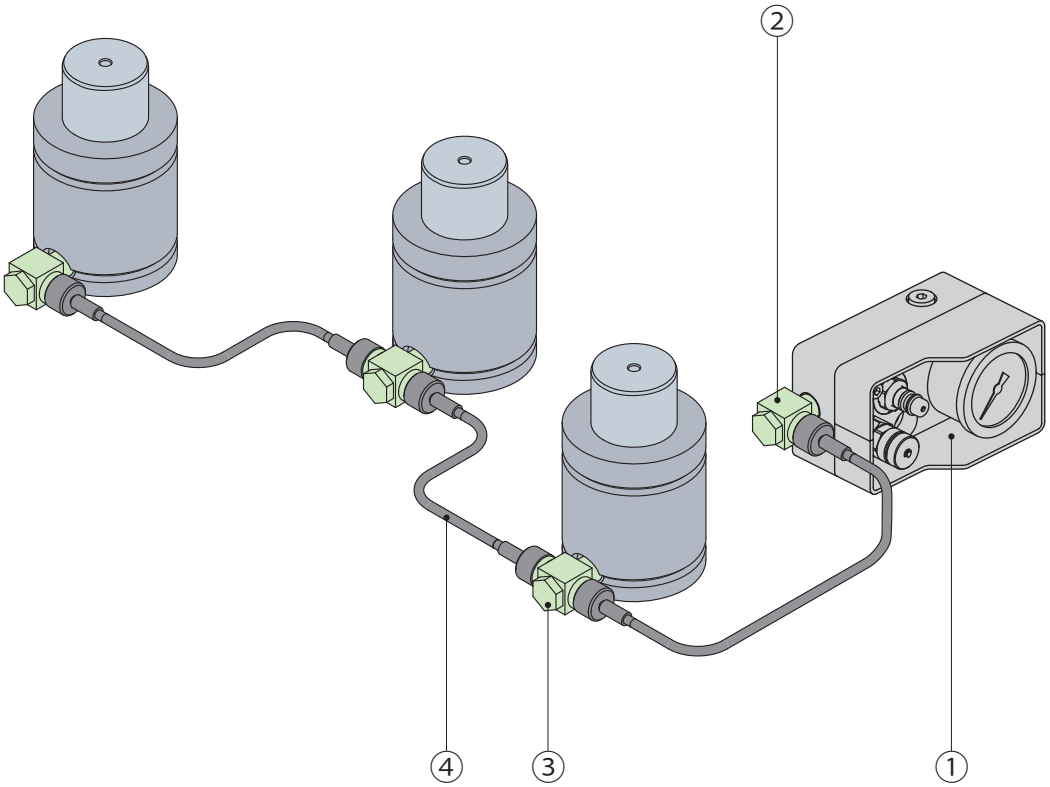
Hose clip

DNH - D6





Mass	5g

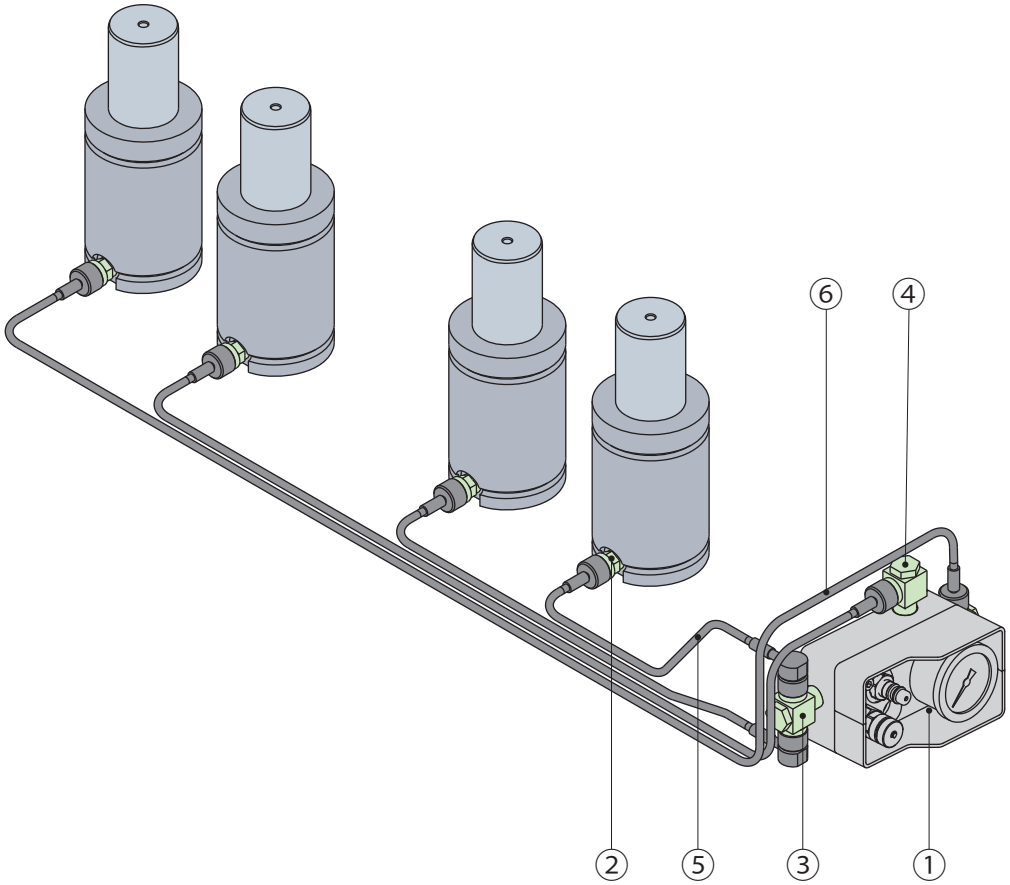


① **Control panel**
DNH-CPA

② **Short swivel elbow adaptor**
DNH-GH

③ **Short swivel tee adaptor**
DNH-GC

④ **Straight & Straight hose**
DNH-SS



① **Control panel**
DNH-CPA

② **Straight adaptor**
DNH-GA

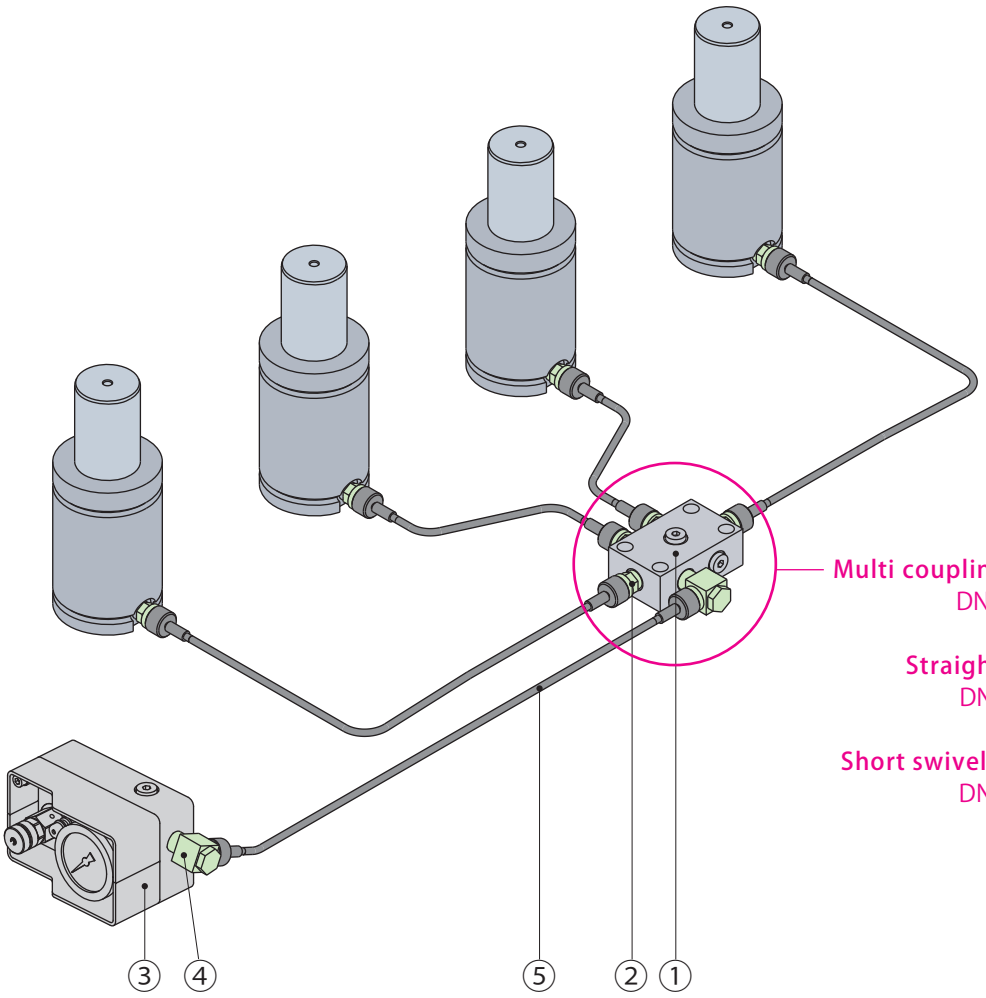
③ **Short swivel tee adaptor**
DNH-GC

④ **Short swivel elbow adaptor**
DNH-GH

⑤ **Straight & 90° hose**
DNH-SE

⑥ **Straight & Straight hose**
DNH-SS

Multi coupling block



Multi coupling block 7 ports
DNH-F07
+
Straight adaptor
DNH-GA
+
Short swivel elbow adaptor
DNH-GH

① **Multi coupling block 7 ports**
DNH-F07

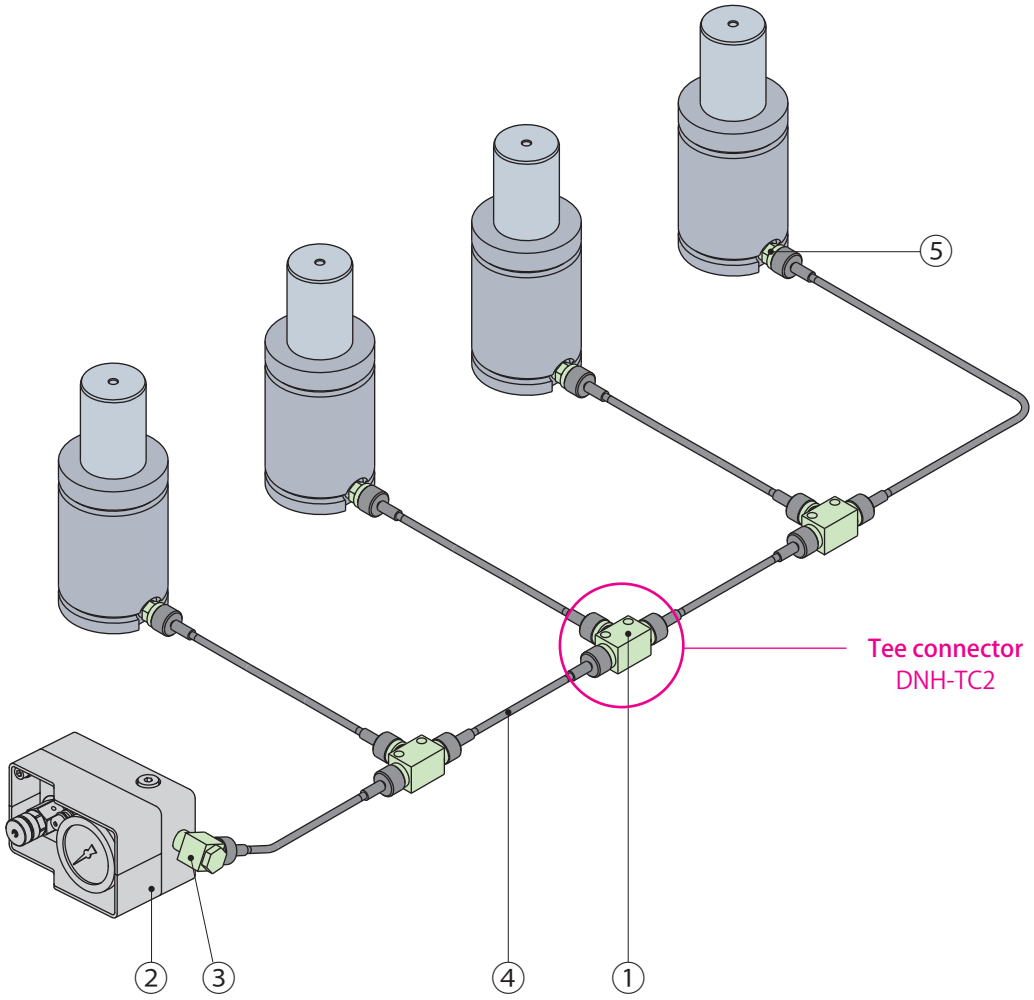
② **Straight adaptor**
DNH-GA

③ **Control panel**
DNH-CPA

④ **Short swivel elbow adaptor**
DNH-GH

⑤ **Straight & Straight hose**
DNH-SS

Tee connector



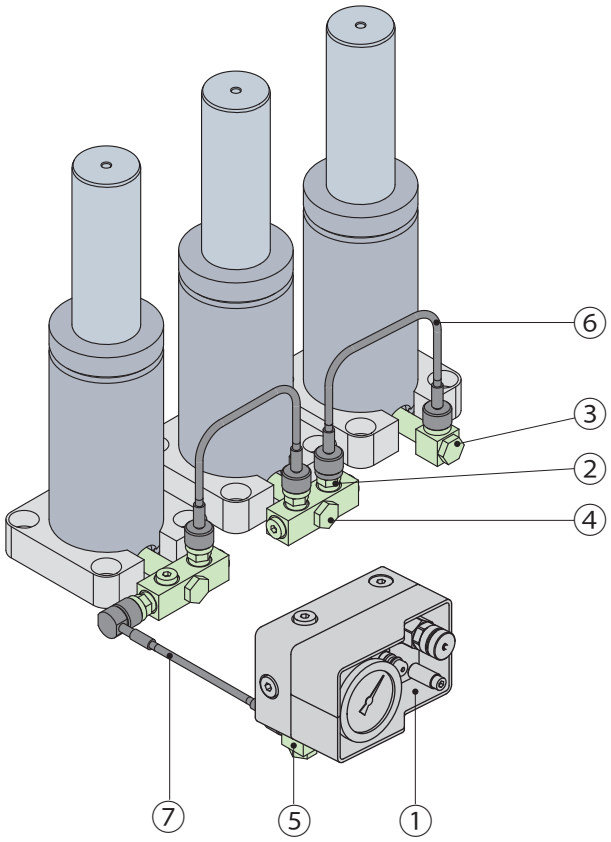
① **Tee connector**
DNH-TC2

② **Control panel**
DNH-CPA

③ **Short swivel elbow adaptor**
DNH-GH

④ **Straight & Straight hose**
DNH-SS

⑤ **Straight adaptor**
DNH-GA



① Control panel
DNH-CPA

② Straight adaptor
DNH-GA

③ Long swivel elbow adaptor
DNH-GL

④ Long swivel multi way adaptor
DNH-GG

② Short swivel elbow adaptor
DNH-GH

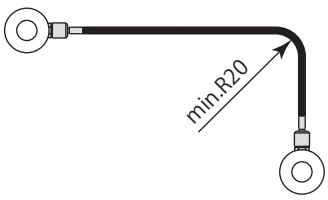
⑤ Straight & Straight hose
DNH-SS

⑥ Straight & 90° hose
DNH-SE

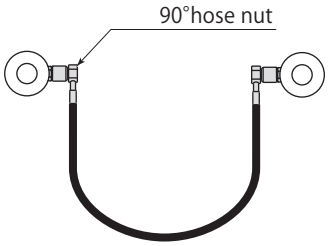
● Hose should have a sufficient length with margin (it is advised to have 10 or 20 % of margin on top of the overall length of piping).

● Carry out the piping installation without twisting hoses.

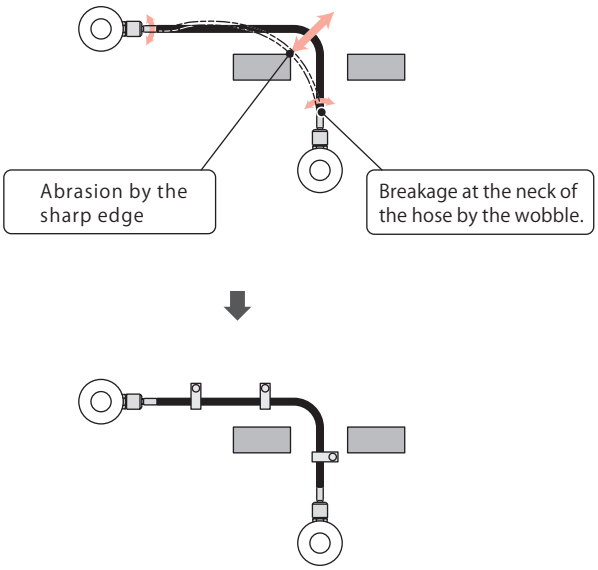
● Piping should not be done with smaller bending radius than the minimum bending radius (R20).



● Choose an adequate hose nut model to avoid bending the hose at sharp angle.

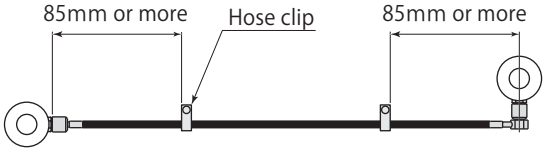


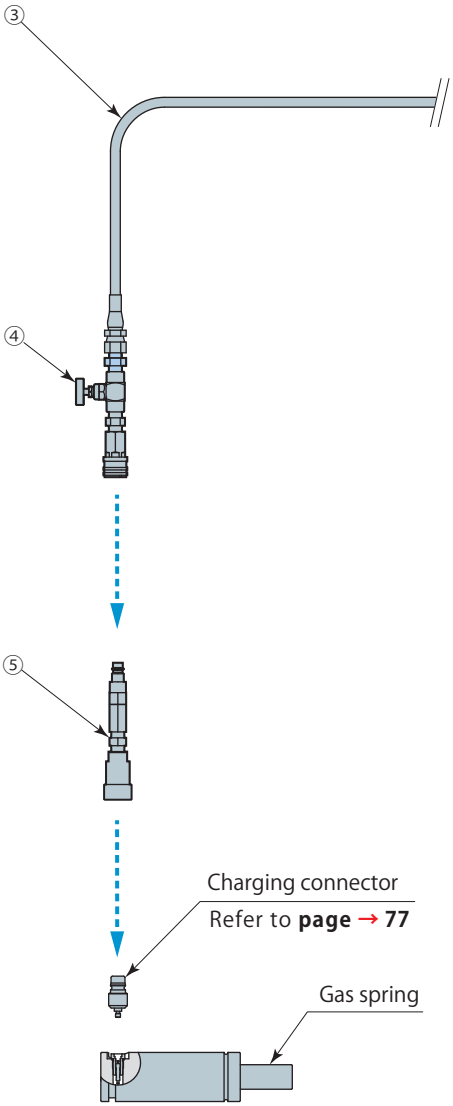
● Be sue to use hose clips to avoid the abrasion by contacting the sharp edges in the die. The hose is wobbled by not only stamping vibration but also thepulse of gas-charge.



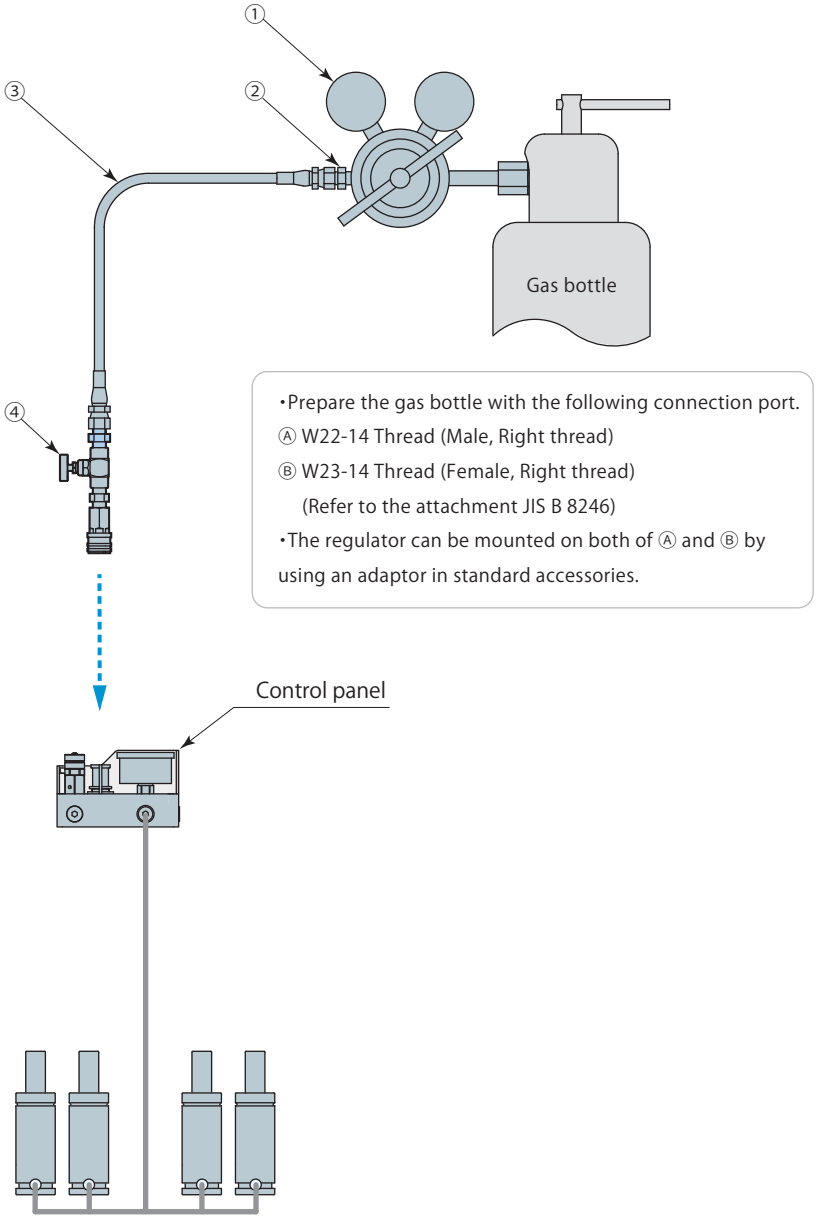
● When using a long hose, use a hose clip to fix the hose at the die side to avoid an effect from vibration.

● Keep the distance from the crimped part when piping the hose with clips.





Charge the gas to an independent gas spring



・Prepare the gas bottle with the following connection port.
Ⓐ W22-14 Thread (Male, Right thread)
Ⓑ W23-14 Thread (Female, Right thread)
(Refer to the attachment JIS B 8246)
・The regulator can be mounted on both of Ⓐ and Ⓑ by using an adaptor in standard accessories.

Charge the gas to a Hose-Linked gas spring system

No.	Name	Model	Remark	Mass g
①	Regulator ＊	3HDKA68601	Adaptor included	3200
②	Hose fitting	3HDKA68602	JIS：A1-6 (JIS B 8363), Thread size：G1/4-R1/4	40
③	High pressure hose	3HDKA68603	Max gas pressure 34MPa, Hose O.D. 10.4mm, Length 3m	400
④	Charging valve	DNJ-HDKA6840	Coupler can be disconnected under pressure.	230
⑤	Adaptor	DNJ-HDKA5470		370

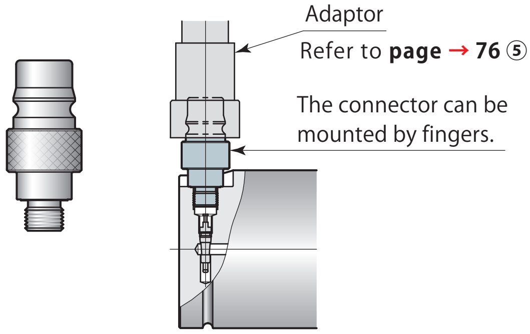
＊ Make sure of thread size of the connection port of the gas bottle in case of using the regulator in overseas countries. It may be different depending upon each country.

Gas charging and discharging kit (Their shape differs depending on the gas spring model.)

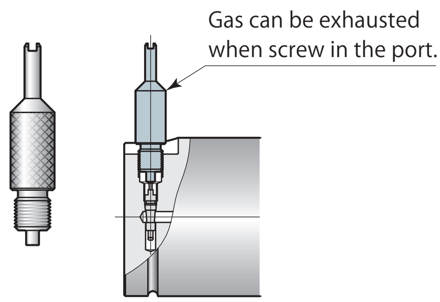
Gas spring model	Charging connector	Discharging tool

DNK1500～9500
DNR4200～9500
DNA1500～5000

model **DNJ-C-CMG**
Mass : 50 g

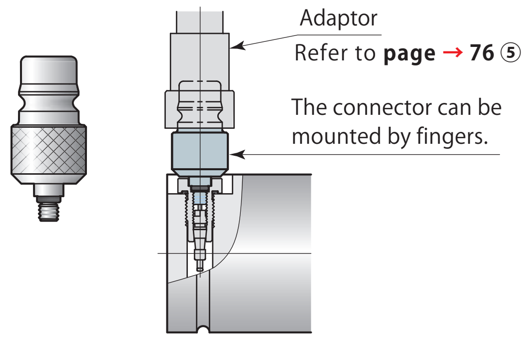


model **DNJ-C-G**
Mass : 30 g

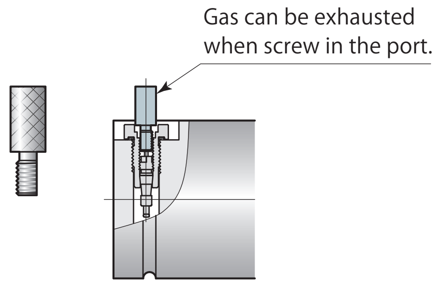


DNK0750 ・ 1000
DNP1000～18300
DNA0250～0750

model **DNJ-C-CM**
Mass : 50 g

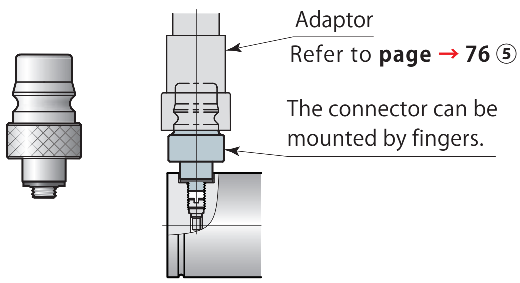


model **DNJ-C-5**
Mass : 10 g

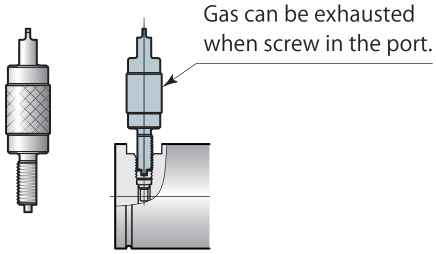


DNK0350 ・ 0500
DNR0350 ～ 2400
DNP0420 ＊

model **DNJ-C-CM6**
Mass : 60 g



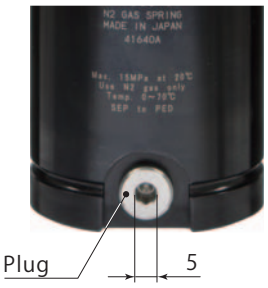
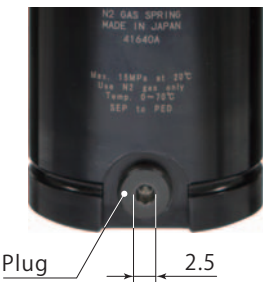
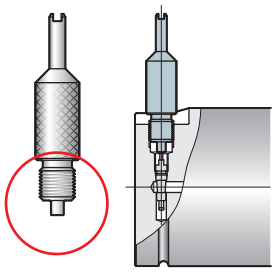
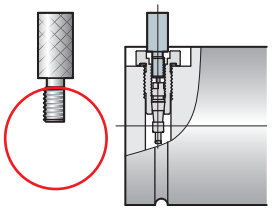
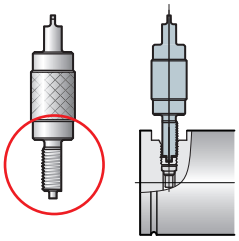
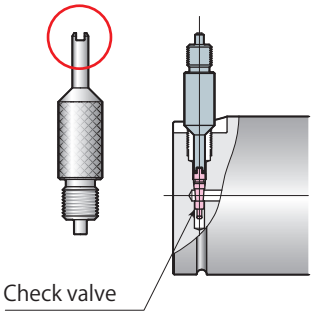
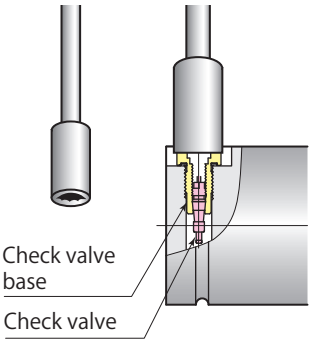
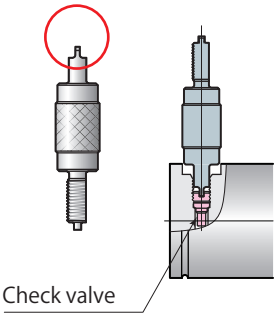
model **DNJ-C-M6**
Mass : 30 g



＊ Gas discharging tool is not available for model DNP0420. In case of disposal, drill a dia 2.5mm hole at the M6 tap at the bottom of the DNP and then discharge N_2 gas completely. Wear safety glasses during discharging job.

How to change the standard body gas spring to piping style (Not covered by warranty)

A check valve with the plug or the valve base must be removed from the body when changing a piping type gas spring.The way of removal of check valve differs according to the shape of the plug.

Check the shape of plug.			
Plug	Round, Silver	Round, Black	Round, Black
Check valve base	—	Hexagonal , Silver	—
Gas discharging tool	model DNJ-C-G	model DNJ-C-5	model DNJ-C-M6
Necessary tool	Allen key wrench (5mm)	Flathead screwdriver, 14mm Socket wrench	Allen key wrench (2.5mm)
1 Remove a plug with the tool.	Allen key wrench (5mm)	Flathead screwdriver	Allen key wrench (2.5mm)
2 Discharge the gas by using the thread side of gas chaging tool.	model DNJ-C-G 	model DNJ-C-5 	model DNJ-C-M6 
3 Remove a check valve/check valve base by using the gas charging tool (the other side of thread) or 14mm socket wrench.	model DNJ-C-G 	14mm Socket wrench 	model DNJ-C-M6 

- When removing the a check valve, be careful not to make any chips and depris intrude into the check valve.
- The above modification shall be performed at customer's own risk.

Gas Charge / Discharge

- Charge Nitrogen (N_2) gas only. Never charge flammable, explosive gas and volatile liquid as they may cause an explosion accident. (FIG. 1)

- The charging pressure should be below the designated pressure in the marking. (FIG. 2)
  Gas charging range : 3.4 MPa ～ 15 MPa (at 20℃).
  3.4 MPa ～ 18 MPa for model DNK0350 and DNR0350 only.

- Continue to charge gas till the sound of gas flow disappear even if the pressure gauge points the set pressure. (FIG. 2)

- Gas charging should be done with the piston rod fully out. If piston rod retracted in the cylinder, start charging as lower pressure as possible (0.5 MPa or lower) then increase the pressure gradually till the piston rod extended out, in order to avoid personal injury and damages of facility and equipments. (FIG. 3)

- Do not charge/discharge gas while the gas spring is under load.

- Exhaust the N_2 gas completely before disposal. Refer to **page → 77** for gas discharging tool.

- Those gas springs for use outside Japan (specified as -OS) are shipped without gas. The user needs to charge gas before use. After charging gas, the charging gas pressure should be recorded on the pressure indication label of each gas spring by a permanent marker.

FIG. 1

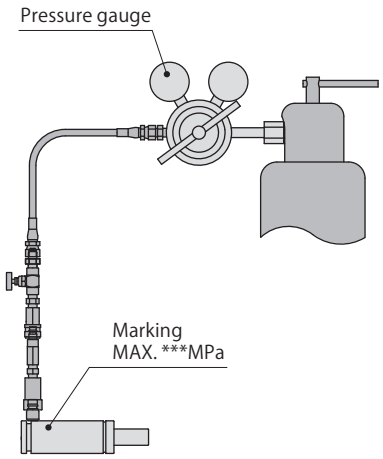


FIG. 2

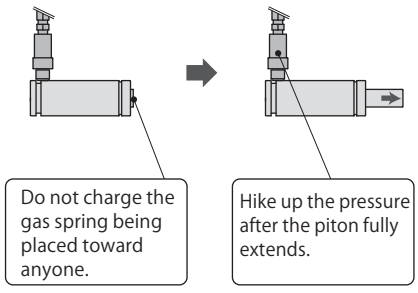
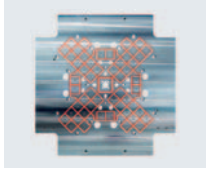


FIG. 3

Pascal all products

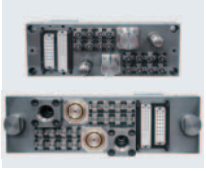
Bumper | Connector | Instrument panel | Door | Wheel | Body

For plastic molding



Mag clamp

Mold die clamping system



Auto coupler

For sheetmetal stamping

Traveling clamp

Stamping die clamp

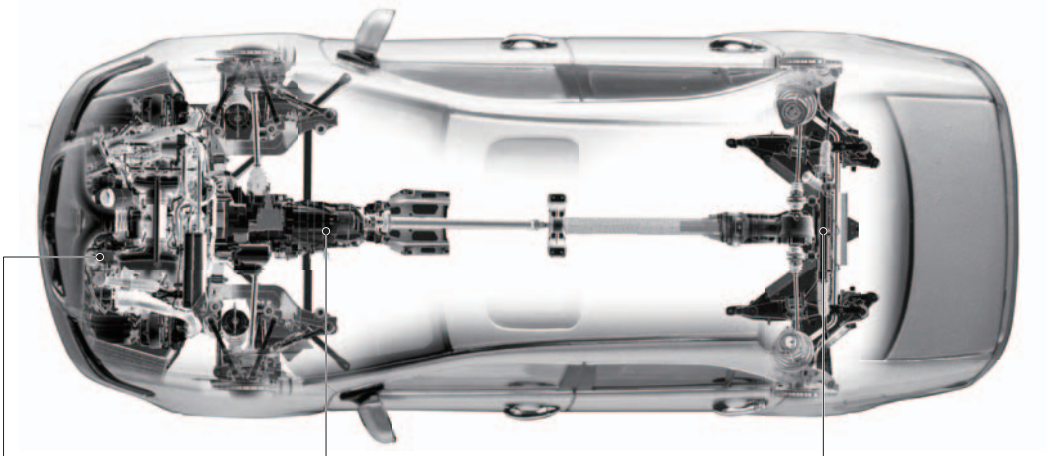
For automotive parts die & mold

N_2 gas springs

Press machine : Body , Roof , Door etc...

Molding machine : Bumper , Instrument panel etc...

Pascal products support
automotive production lines globally.



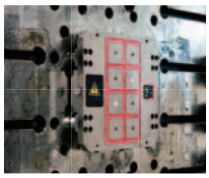
Engine

Transmission

Axle

For die cast machine

Die-clamping system



C-plate mag clamp

For metal cutting work

Work clamp

Pallet clamp

Index table

N_2 gas balancer

DOMESTIC LOCATIONS

JAPAN

Head office / R & D center ····· ◉ Itami, Hyogo

Sales office ····· ● Osaka, Hyogo
● Kumagaya, Saitama,
● Atsugi, Kanagawa
● Nagoya, Aichi
● Yamagata

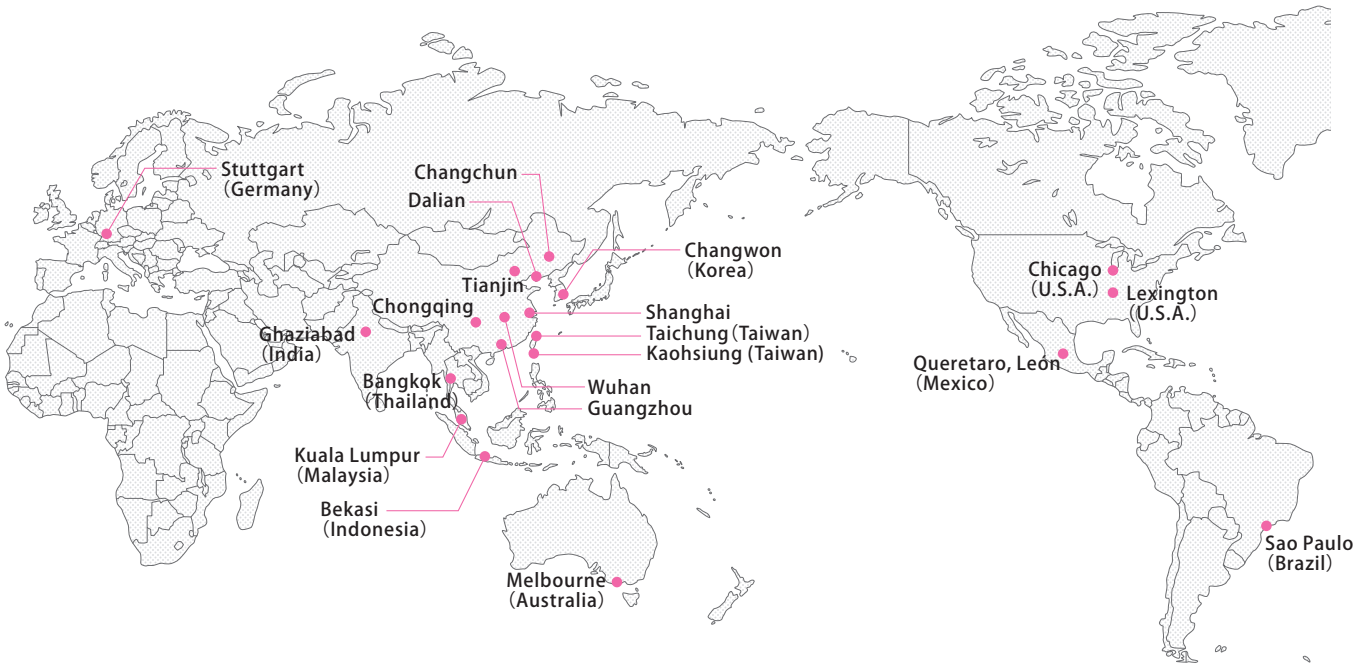
Plant ····· ● Oita
● Yamagata

Head office / R & D center

Oita plant

Yamagata plant

GLOBAL NETWORK



ASIA

- Dalian [China] ● ●
- Shanghai [China] ●
- Changchun [China] ●
- Tianjin [China] ●
- Wuhan [China] ●
- Chongqing [China] ●
- Guangzhou [China] ●
- Taichung [Taiwan] ●
- Kaohsiung [Taiwan] ○
- Bangkok [Thailand] ●
- Changwon [Korea] ●
- Bekasi [Indonesia] ○
- Kuala Lumpur [Malaysia] ○
- Ghaziabad [India] ○
- Melbourne [Australia] ○

AMERICA

- Chicago , Lexington [U.S.A.] ● ○
- Queretaro , León [Mexico] ○
- Sao Paulo [Brazil] ○

EUROPE

- Stuttgart [Germany] ●

● Plant ● Subsidiary ● Sales office ● Liaison office ○ Agent

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