

Pneumatic Accessories

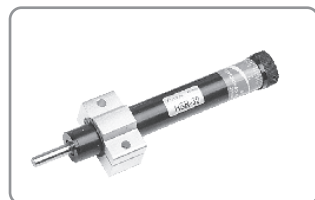
SERIES Products Content



KGT Floating joint P.334



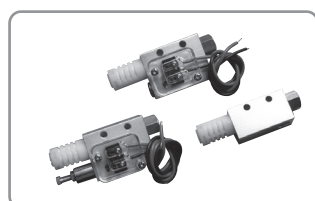
PHS Fish eye joint P.335



HSR Speed Regulator P.336



JAD/ JAC Shock Absorber P.337



VG Vacuum generator P.341



VPA/ B Vacuum suction cup P.347

- Air Preparation (FRL)
- Pneumatic Valves
- Pneumatic Cylinders
- Pneumatic Connectors
- Sensors
- Pneumatic Accessories



JPC Pilot check valve

..... P.358



JQE Quick exhaust valve

..... P.359



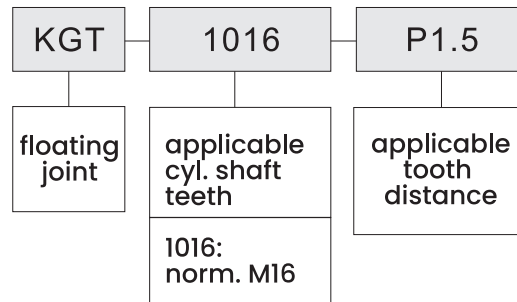
JBV Sliding Pressure relief valve

..... P.360

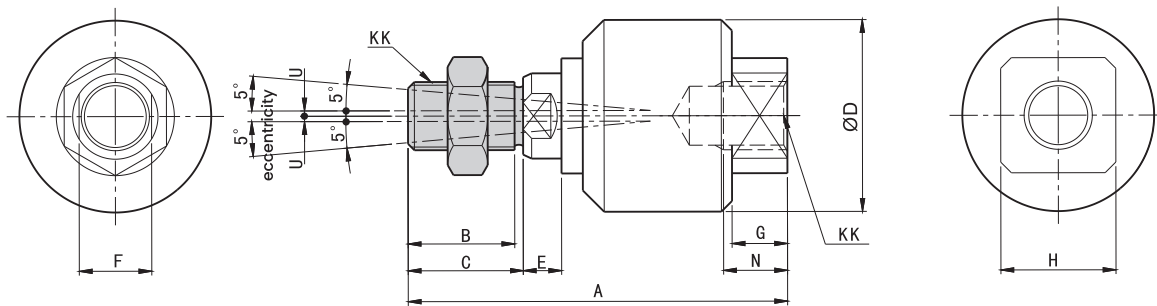
KGT Floating Joint



Order Indication



External Dimensions



norm.	KK	A	B	C	D	E	F	G	H	N	U	weight (g)	bore (mm)	max. destructive power (N)
KGT-1003	M3x0.5	24.5	7	8	12	2	3	3.5	8	7	0.5	10	6	19
KGT-1004	M4x0.7	26	8	9	12	2	4	4	8	7	0.5	10	8 · 10	54
KGT-1005	M5x0.8	38	14	15	18	3	5	5	11	8.5	0.5	20	12 · 16	123
KGT-1006	M6x1.0	38	14	15	18	3	6	5	11	8.5	0.5	20	16 · 20	123
KGT-1008	M8x1.25	50	18	20	24	4	8	7	14	12	0.5	90	20 · 25	1100
KGT-1010	M10x1.25 M10x1.5	61	20	22	26	5	10	7	17	14	0.75	110	25 · 32	2500
KGT-1012	M12x1.5 M12x1.75	58	20	22	28	5	12	8	17	12	0.75	110	32 · 40	4400
KGT-1014	M14x1.5	70	21	24	35	7	14	8	22	17	1	250	40 · 50	6000
KGT-1016	M16x1.5	90	26	28	45	9	16	13	27	23	1.25	500	50 · 63	11000
KGT-1018	M18x1.5	90	26	28	45	9	18	13	27	23	1.25	500	50 · 63	11000
KGT-1020	M20x1.5	103	30	32	50	8	20	16	32	27	2	720	63 · 80	18000
KGT-1022	M22x1.5	103	30	32	50	8	22	16	32	27	2	720	63 · 80	18000
KGT-1024	M24x1.5	125	38	38	61	12	24	19	41	33	2.5	1300	80 · 100	28000
KGT-1026	M26x1.5	125	38	38	61	12	26	19	41	33	2.5	1300	80 · 100	28000
KGT-1027	M27x2.0	154	58	58	63.5	19	30	19	41	33	2.5	1620	125 · 160	28000
KGT-1030	M30x2.0 M30x3.5	154	58	58	63.5	19	30	18	41	33	3	1620	125 · 160	54000
KGT-1036	M36x1.5 M36x2.0	184	75	75	75	20	36	22	50	42	4	2820	160 · 200	71000
KGT-1039	M39x1.5	184	75	75	75	20	36	23	50	42	4	—	160 · 200	71000
KGT-1040	M40x2.0	194	74	74	85	15	45	25	69	40	5	—	200 · 250	—
KGT-1045	M45x1.5 M45x2.0	194	74	74	85	15	45	25	69	40	5	4300	200 · 250	—
KGT-1050	M50x2.0	210	70	70	105	16	53	35	85	55	6	6980	320	—

Air Preparation (FRL)

Pneumatic Valves

Pneumatic Cylinders

Pneumatic Connectors

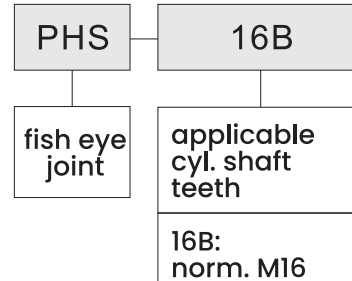
Sensors

Pneumatic Accessories

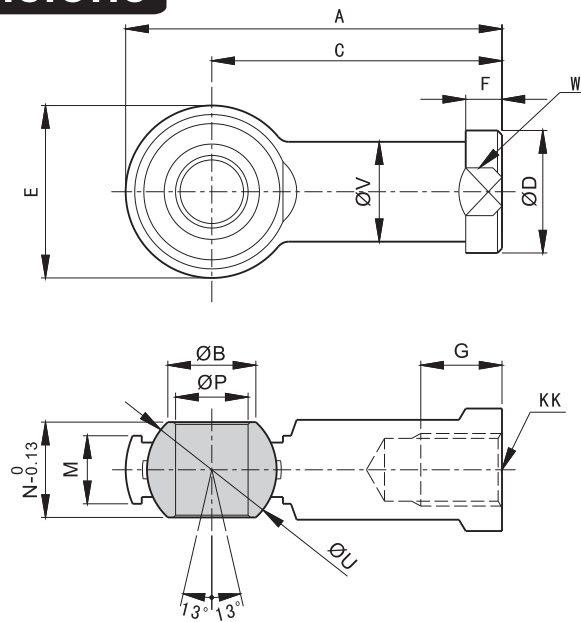
PHS Fish Eye Joint



Order Indication



External Dimensions

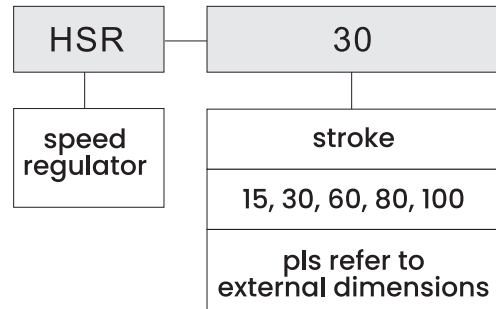


norm.	KK	A	B	C	D	E	F	G	P	M	N	U	V	W	max. static load(kg)		weight(g)
															radial	axial	
PHS-3	M3x0.5	27	5.1	20	8	14	3	6	3	4.5	6	7.9	6.5	7	450	150	10
PHS-4	M4x0.7	32	7.4	24	10	16	3.5	8	4	5.2	7	9.5	8	8	520	200	12
PHS-5	M5x0.8	35	7.7	27	12	16	4	14	5	7	8	11.1	9	9	620	230	18
PHS-6	M6x1.0	39	9	30	13	18	5	14	6	7	9	12.7	10	11	690	270	26
PHS-8	M8x1.25	47	10.4	36	16	22	5	17	8	9	12	15.9	12.5	14	990	430	45
PHS-10B	M10x1.25	57	12.9	43	19	26	6.5	21	10	10.5	14	19.1	15	17	1340	630	76
PHS-12B	M12x1.25	66	15.4	50	22	30	6.5	24	12	12	16	22.2	17.5	19	1650	800	114
PHS-14B	M14x1.5	75	16.9	57	25	34	8	27	14	13.5	19	25.4	20	22	2090	1070	158
PHS-16B	M16x1.5	83	19.4	64	27	38	8	33	16	15	21	28.6	22	22	2470	1290	200
PHS-18	M18x1.5	92	21.9	71	31	42	10	36	18	16.8	23	31.8	25	27	2990	1620	288
PHS-20	M20x1.5	100	24.4	77	37	46	10	40	20	18	25	34.9	27.5	30	3460	1890	372
PHS-22	M22x1.5	109	25.8	84	37	50	12	43	22	20	28	38.1	30	32	4070	2290	475
PHS-24B	M24x2.0	122	29.6	94	42	56	12	48	25	22	31	42.9	33.5	36	4950	2830	673
PHS-30B	M30x2.0	143	34.8	110	50	67	15	56	30	26	37	50.8	40	41	3770	3960	1050

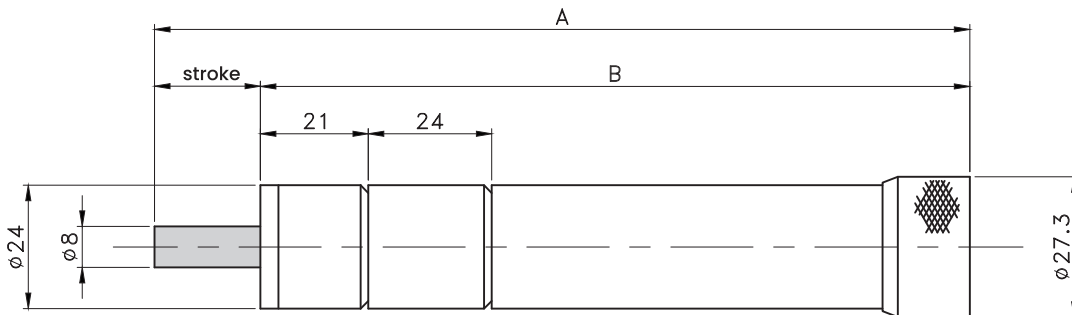
HSR Speed Regulator



Order Indication



External Dimensions



series	HSR-15	HSR-30	HSR-60	HSR-80	HSR-100
A (mm)	153	203	282.5	351	390
B (mm)	138	173	222.5	271	290
max.stroke (mm)	15	30	60	80	100
temperature (°C)	0 ~ 0				
load (kg)	15 ~ 350				
working speed (mm/s)	0.5 ~ 30				
weight (g)	470	495	615	690	765

Air Preparation (FRL)

Pneumatic Valves

Pneumatic Cylinders

Pneumatic Connectors

Sensors

Pneumatic Accessories

Shock Absorber



- 2 type of shock absorber: (1) speed adjustable (JAD)
(2) speed non-adjustable (JAC)
- Absorb impact energy and reduce mechanical vibration
- Reduce the noise caused by impact
- Increase production energy
- Extend mechanical life
- Small size and easy to install

Feature

- JAC cushion speed non-adjustable (automatic compensation type)

series	cushion length (mm)	fix tooth bore	max. absorb (Nm)	max. absorb per/hours (Nm/hr)	max. absorb impact (kg)	max. impact speed (m/s)	temperature (°C)	weight (g)	norm. positioning nut
JAC-0806	6	M8x1.0	2	8800	0.5~6	0.5~2	0~60	11	SC8
JAC-1008	8	M10x1.0	4	15200	2~9	0.8~3	0~60	20	SC10
JAC-1210	10	M12x1.0	5	17640	5~30	0.8~3	0~60	31.5	SC12
JAC-1412	12	M14x1.5	15	30000	8~100	0.8~3	0~60	80	SC14
JAC-1416	16	M14x1.5	20	35000	10~150	0.8~3	0~60	80	SC14
JAC-2020	20	M20x1.5	40	40000	30~700	1~3.5	0~60	215	SC20
JAC-2050	50	M20x1.5	60	60000	60~400	1~3.5	0~60	300	SC20
JAC-2525	25	M25x1.5	80	54000	200~1500	1~4	0~60	330	SC25
JAC-2540	40	M25x1.5	120	75000	300~2000	1~4	0~60	430	SC25
JAC-2580	80	M25x1.5	150	120000	20~200	1~4	0~60	535	SC25
JAC-3660	60	M36x1.5	250	120000	400~2400	1~4	0~60	1030	SC36

- JAD cushion speed adjustable

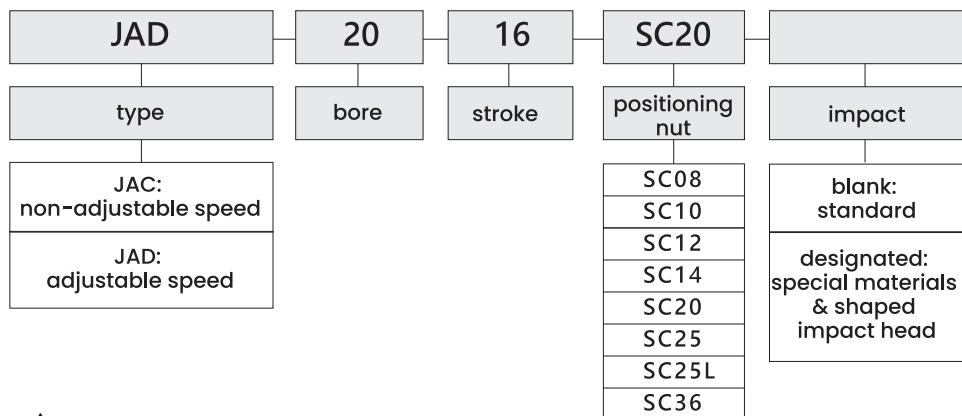
series	cushion length (mm)	fix tooth bore	max. absorb (Nm)	max. absorb per/hours (Nm/hr)	max. absorb impact (kg)	max. impact speed (m/s)	temperature (°C)	weight (g)	norm. positioning nut
JAD-1410	10	M14x1.5	20	25000	80	3	0~60	90	SC14
JAD-1425	25	M14x1.5	28	27500	140	3	0~60	190	SC14
JAD-2016	16	M20x1.5	25	28500	200	3.5	0~60	230	SC20
JAD-2525	25	M25x1.5	85	54000	400	3.5	0~60	350	SC25
JAD-2540	40	M25x1.5	100	80000	700	3.5	0~60	455	SC25
JAD-3625	25	M36x1.5	150	81000	1400	3	0~60	955	SC36
JAD-3650	50	M36x1.5	300	100000	1400	3	0~60	1100	SC36
JAD-4225	25	M42x1.5	260	125000	3000	3.5	0~60	1280	—
JAD-4250	50	M42x1.5	500	150000	4000	4.5	0~60	1490	—
JAD-4275	75	M42x1.5	750	180000	6000	4.5	0~60	1710	—
JAD-64050	50	M64x2.0	1200	150000	12727	1.5	0~60	4115	—
JAD-64100	100	M64x2.0	2400	200000	18181	1.5	0~60	5280	—
JAD-64150	150	M64x2.0	3600	250000	23636	1.5	0~60	6785	—

Selection of absorber & cylinders

		bore:mm											output:kgf	
		10	12	16	20	25	32	40	50	63	80	100	125	
series	bore	10	12	16	20	25	32	40	50	63	80	100	125	
	output	3.9	5.7	10	15.7	24.5	40	62.8	98	155	251	393	613	
non-adjustable speed (JAC)	-0806	●	●											
	-1008	●	●	●										
	-1210		●	●	●									
	-1412			●	●	●								
	-1416			●	●	●								
	-2020				●	●	●							
	-2050								●	●	●			
	-2525					●	●	●						
	-2540							●	●					
	-2580										●	●		
-3660									●	●	●			
adjustable speed (JAD)	-1410			●	●	●								
	-1425					●	●	●						
	-2016				●	●	●							
	-2525					●	●	●						
	-2540							●	●					
	-3625					●	●	●						
	-3650								●	●	●			
	-4225									●	●	●		
	-4250									●	●	●		
	-4275									●	●	●		
	-64050										●	●	●	
	-64100										●	●	●	
	-64150										●	●	●	

- Air Preparation (FRL)
- Pneumatic Valves
- Pneumatic Cylinders
- Pneumatic Connectors
- Sensors
- Pneumatic Accessories

Order Indication



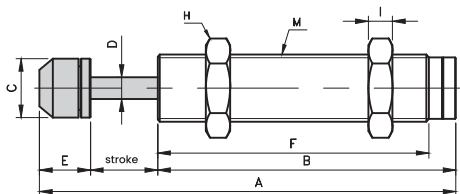
⚠ blank = indicates standard, no need to specify when order

External Dimensions

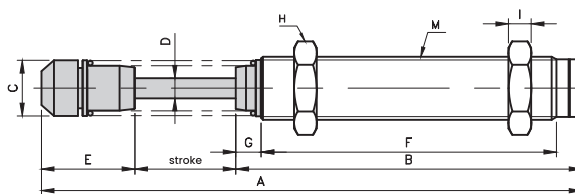
● JAC cushion speed non-adjustable (automatic compensation type)

● JAC0806~JAC2050

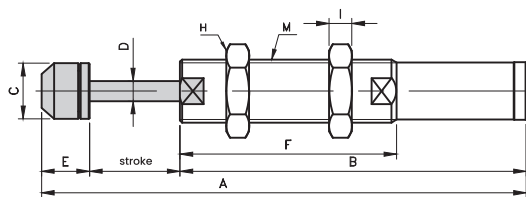
● JAC2525



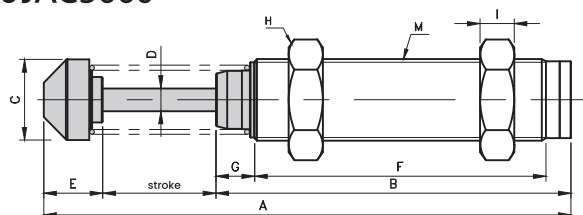
● JAC2540



● JAC2580



● JAC3660



series	stroke	M	A	B	C	D	E	F	M	G	H	I
JAC-0806	6	M8x1.0	50	38	6.6	2.8	6	33	M8x1.0	—	11	3
JAC-1008	8	M10x1.0	57	43	8.6	3	6	37.9	M10x1.0	—	12.7	3
JAC-1210	10	M12x1.0	69.5	50	10.3	3	9.5	45.5	M12x1.0	—	14	4
JAC-1412	12	M14x1.5	98.5	76	12	4	10.5	67	M14x1.5	—	19	5
JAC-1416	16	M14x1.5	121.5	95	12	4	10.5	86	M14x1.5	—	19	5
JAC-2020	20	M 20X1.5	145.8	110	18	6	15.8	101	M 20X1.5	—	26	7
JAC-2050	50	M 20X1.5	232.8	167	17.8	6	15.8	158	M 20X1.5	—	26	7
JAC-2525	25	M 25X1.5	155.5	111	22	8	19.5	101	M 25X1.5	—	32	9
JAC-2540	40	M 25X1.5	213.8	137	22	8	36.8	117	M 25X1.5	10	32	9
JAC-2580	80	M 25X1.5	336.5	237	22	8	19.5	100	M 25X1.5	—	32	9
JAC-3660	60	M 36X1.5	248	162	35.5	10	26	134	M 36X1.5	17	46	15

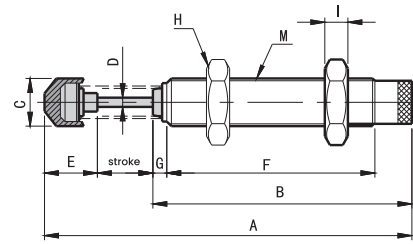
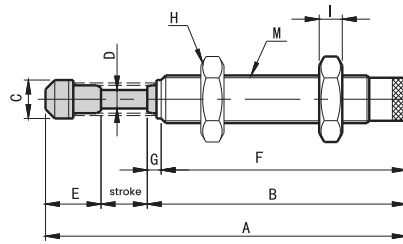
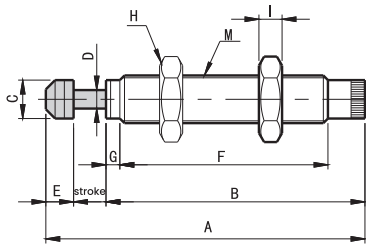
External Dimensions

● JAD cushion speed adjustable

● JAD1410~JAD2525

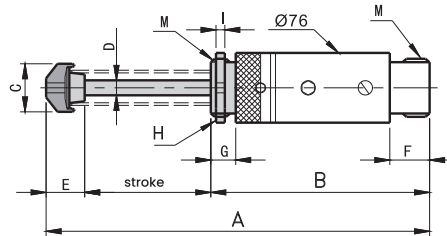
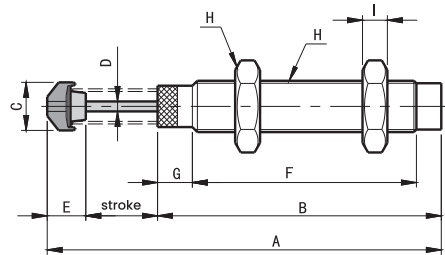
● JAD2540

● JAD3625~JAD3650



● JAD4225~JAD4275

● JAD64050~JAD64150

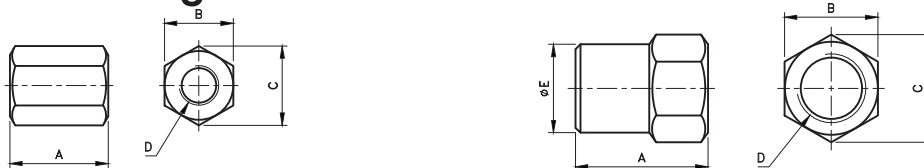


series	stroke	M	A	B	C	D	E	F	M	G	H	I
JAD-1410	10	M14x1.5	109	88.5	12	4	10.5	72.5	M14x1.5	—	19	5
JAD-1425	25	M14x1.5	153.2	117	12	4	11.2	101	M14x1.5	—	19	5
JAD-2016	16	M20x1.5	148.8	117	17.8	6	15.8	101	M20x1.5	—	26	7
JAD-2525	25	M25x1.5	162	117.5	22	8	19.5	101	M25x1.5	—	32	9
JAD-2540	40	M25x1.5	221.3	144.5	22	8	36.8	117	M25x1.5	10	32	9
JAD-3625	25	M36x1.5	184	133	35.5	10	26	103	M36x1.5	10	46	15
JAD-3650	50	M36x1.5	247	171	35.5	10	26	134	M36x1.5	17	46	15
JAD-4225	25	M42x1.5	186.5	127.5	44.5	12	34	88	M42x1.5	28.5	50	15
JAD-4250	50	M42x1.5	241	157	44.5	12	34	117.5	M42x1.5	28.5	50	15
JAD-4275	75	M42x1.5	301.5	187.5	44.5	12	39	148	M42x1.5	28.5	50	15
JAD-64050	50	M64x2.0	247.8	146	59	20	51.8	26	M64x2.0	23	76.2	9.4
JAD-64100	100	M64x2.0	347.8	196	59	20	51.8	26	M64x2.0	23	76.2	9.4
JAD-64150	150	M64x2.0	467.8	256	59	20	61.8	26	M64x2.0	23	76.2	9.4

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External Dimensions

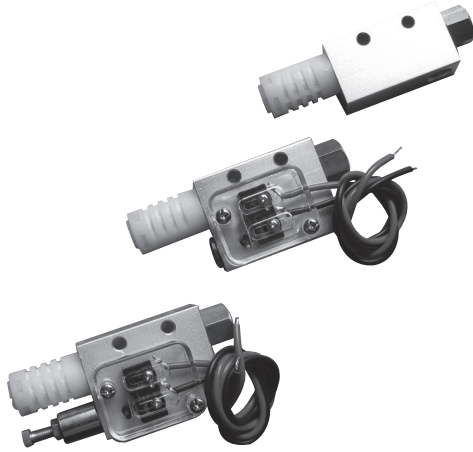
● SC- positioning nut



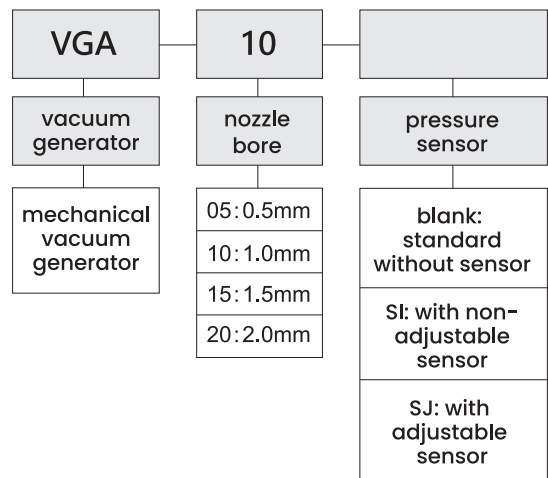
symbol norm	A	B	C	D	E
SC 08	14	11	12.6	M8x1.0	—
SC 10	16	12.7	14.5	M10x1.0	—
SC 12	20	14	16	M12x1.0	—
SC 14	27	19	21.6	M14x1.5	18

symbol norm	A	B	C	D	E
SC 20	35	26	29.7	M20x1.5	25
SC 25	45	32	36.7	M25x1.5	31.5
SC 25L	65	32	36.7	M25x1.5	31.5
SC 36	80	46	53	M36x1.5	45

VGA Mechanical Vacuum Generator



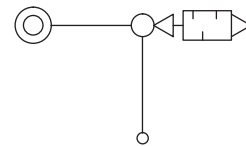
Order Indication



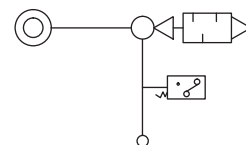
Norm.

item \ series	VGA	VGA-SI	VGA-SJ
fluid	filter compressed air (lubricating oil/ ISO-VG32)		
temperature (°C)	0~60		
lubricating oil (Kgm/cm ²)	—		
working pressure (Kgf/cm ²)	1~6		
setting range (mmHg)	—	-400	-250~-550
factory setting (mmHg)	—	-400	-400
acting accuracy (mmHg)	—	±40	
response difference (mmHg)	—	30~100	
electrical appliances	—	AC125V : 5A · AC250V : 3A	

● VGA diagram



● VGA-SI/SJ diagram

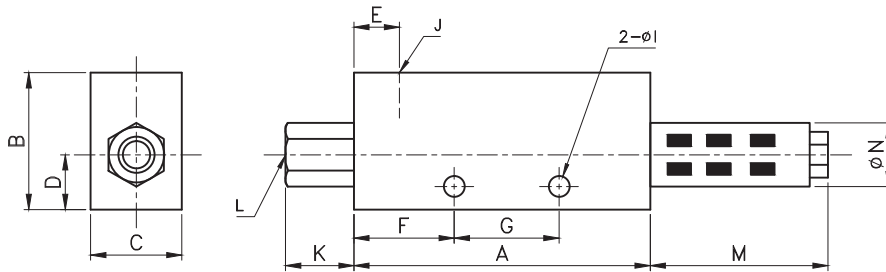


Feature

series \ item	nozzle bore (mm)	exhaust volume (ℓ/min)	vacuum (-mmHg)	air consumption (Nℓ/min)	pressure (Kgf/cm ²)
VGA-05H5	0.5	6	650	13	5.0
VGA-05L5	0.5	9	430	13	5.0
VGA-10H5	1.0	27	690	44	5.0
VGA-10L5	1.0	36	430	44	5.0
VGA-15H5	1.5	63	690	100	5.0
VGA-15L5	1.5	95	430	100	5.0
VGA-20H5	2.0	110	690	180	5.0
VGA-20L5	2.0	165	430	180	5.0
VGA-10H3.5	1.0	25	680	44	3.5
VGA-10L3.5	1.0	32	430	44	3.5
VGA-15H3.5	1.5	54	680	100	3.5
VGA-15L3.5	1.5	86	430	100	3.5
VGA-20H3.5	2.0	88	680	180	3.5
VGA-20L3.5	2.0	150	430	180	3.5

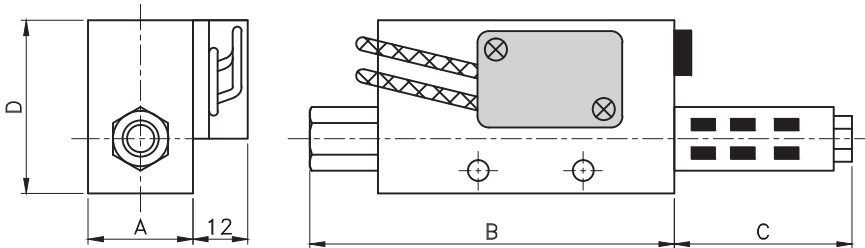
External Dimensions

• VGA-basic



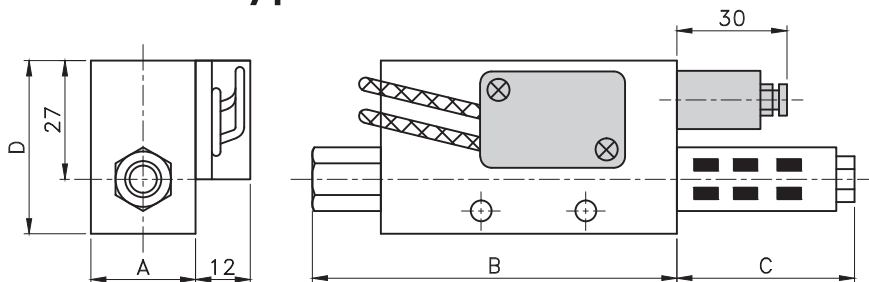
symbol series	A	B	C	D	E	F	G	H	I	J	K	L	M	N
VGA-05	46	26	16	10	8	13	18	4	4.2	PS1/8	10	PS1/8	28	16
VGA-10	46	26	16	10	8	13	18	4	4.2	PS1/8	10	PS1/8	28	16
VGA-15	65	30	20	12	10	22	23	5	4.5	PS1/4	15	PS1/4	39	21
VGA-20	88	38	26	12	13	25	35	6	5.2	PS3/8	20	PS1/4	50	26

• VGA-SI type



symbol series	A	B	C	D
VGA-SI-05	16	56	28	35
VGA-SI-10	16	56	28	35
VGA-SI-15	23	80	39	38
VGA-SI-20	26	108	50	38

• VGA-SJ type



symbol series	A	B	C	D
VGA-SJ-05	16	56	28	35
VGA-SJ-10	16	56	28	35
VGA-SJ-15	23	80	39	38
VGA-SJ-20	26	108	50	38

Air Preparation (FRL)

Pneumatic Valves

Pneumatic Cylinders

Pneumatic Connectors

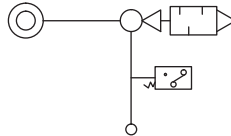
Sensors

Pneumatic Accessories

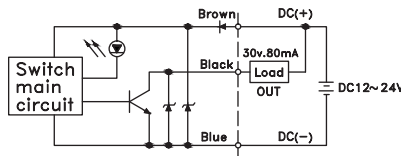
VGU Electronic Vacuum Generator



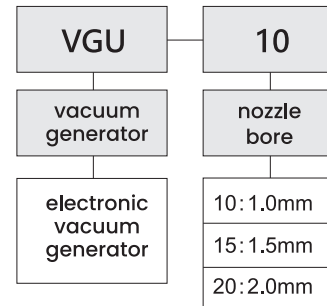
● VGU diagram



● VGU switch diagram



Order Indication



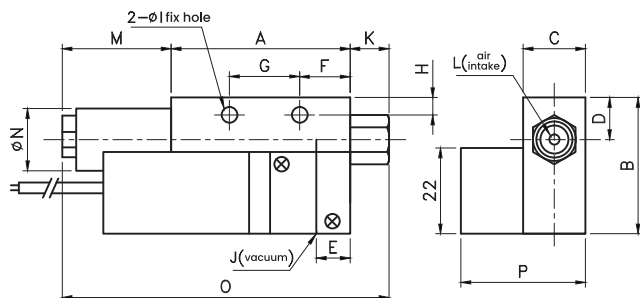
Norm.

fluid	compressed air (ISO-VG32)
temperature (°C)	0~60
lubricating oil (Kgm/cm ²)	-
working pressure (Kgf/cm ²)	1~6
setting range (mmHg)	0~759
pressure resist (Kgf/cm)	5
acting accuracy (mmHg)	±1%FS
response speed	0.05 second
response difference (mmHg)	1-10% (adjustable)
effort	DC~30V:80MA
effort expression	lights up during action

Feature

series	nozzle bore (mm)	exhaust volume (l/min)	vacuum (-mmHg)	air consumption (Nl/min)	pressure (kgf/cm ²)
VGU-10H5	1.0	27	690	44	5.0
VGU-10L5	1.0	36	430	44	5.0
VGU-15H5	1.5	63	690	100	5.0
VGU-15L5	1.5	95	430	100	5.0
VGU-20H5	2.0	110	690	180	5.0
VGU-20L5	2.0	165	430	180	5.0
VGU-10H3.5	1.0	25	680	44	3.5
VGU-10L3.5	1.0	32	430	44	3.5
VGU-15H3.5	1.5	54	680	100	3.5
VGU-15L3.5	1.5	86	430	100	3.5
VGU-20H3.5	2.0	88	680	180	3.5
VGU-20L3.5	2.0	150	430	180	3.5

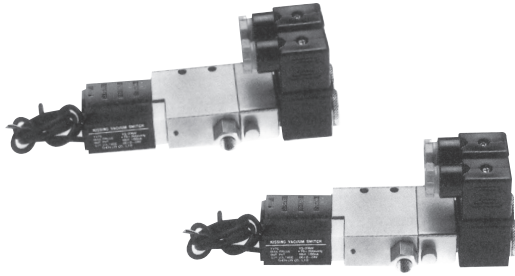
External Dimensions



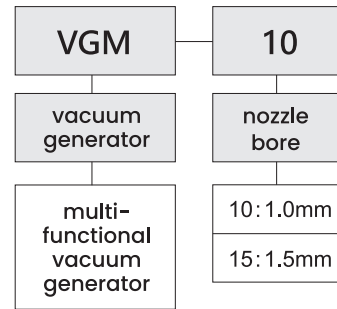
symbol	A	B	C	D	E	F	G	H
series								
VGU-10	46	35	16	10	8	13	18	4
VGU-15	65	30	20	12	10	22	23	5
VGU-20	88	38	26	12	13	25	35	6

symbol	I	J	K	L	M	N	O	P
series								
VGU-10	4.2	1/8	10	1/8	28	16	84	32
VGU-15	4.5	1/4	15	1/4	39	21	119	36
VGU-20	5.2	3/8	20	1/4	50	26	158	42

VGM Multifunctional Vacuum Generator



Order Indication



Norm.

fluid	compressed air (ISO-VG32)		
temperature (°C)	0~60		
lubricating oil (Kgm/cm ²)	-		
control valve	straight		
working pressure (Kgf/cm ²)	1~6		
setting voltage (v)	AC 110	AC 220	DC 24
voltage range	-10%~+15%		
consume electricity (VA)	5VA	5VA	5W
acting accuracy (mmHg)	±1%FS		
response speed	0.05 second		
response difference (mmHg)	1~10% (adjustable)		
effort	DC~30V:80MA		
effort expression	lights up during action		

Feature

series item	nozzle bore (mm)	exhaust volume (l/min)	vacuum (-mmHg)	air consumption (Nl/min)	pressure (Kgf/cm ²)
VGM-10H5	1.0	27	690	44	5.0
VGM-10L5	1.0	36	430	44	5.0
VGM-15H5	1.5	63	690	100	5.0
VGM-15L5	1.5	95	430	100	5.0
VGM-10H3.5	1.0	25	680	44	3.5
VGM-10L3.5	1.0	32	430	44	3.5
VGM-15H3.5	1.5	54	680	100	3.5
VGM-15L3.5	1.5	86	430	100	3.5

Air Preparation (FRL)

Pneumatic Valves

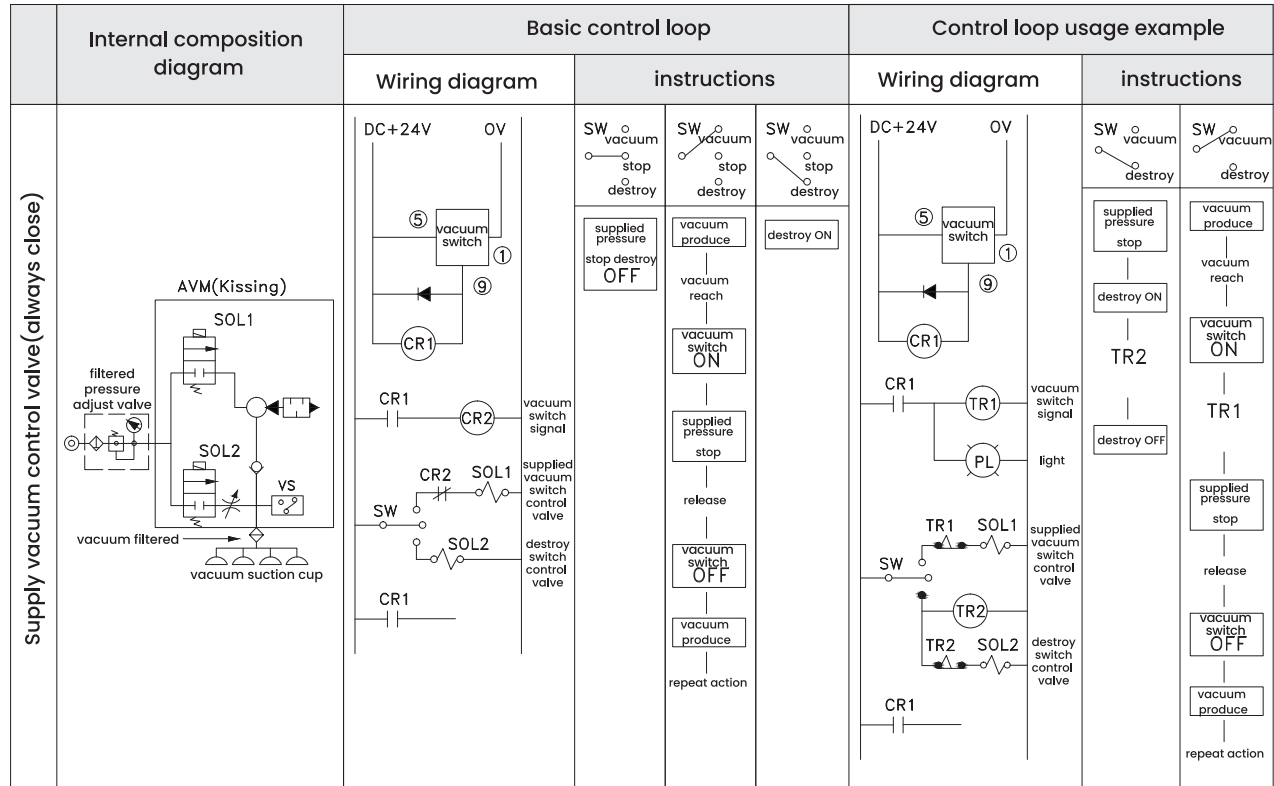
Pneumatic Cylinders

Pneumatic Connectors

Sensors

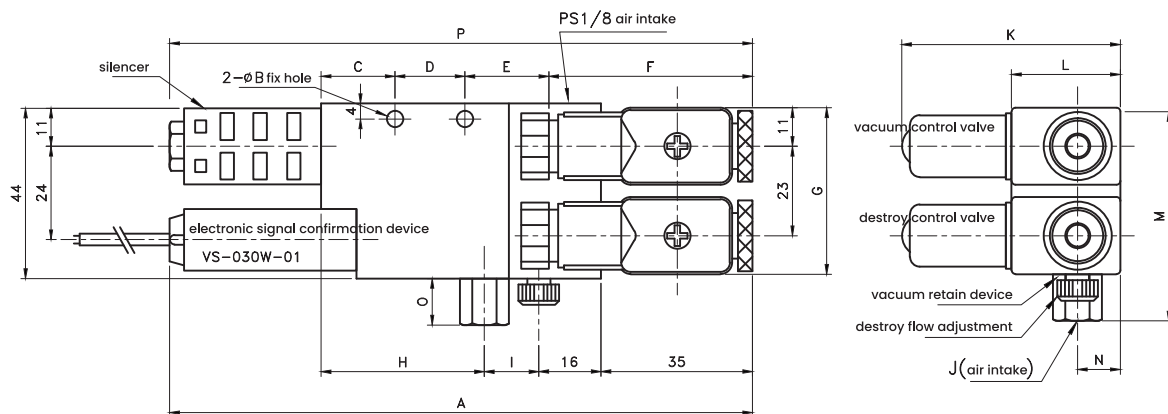
Pneumatic Accessories

● Electronic vacuum switch with control circuit diagram



External Dimensions

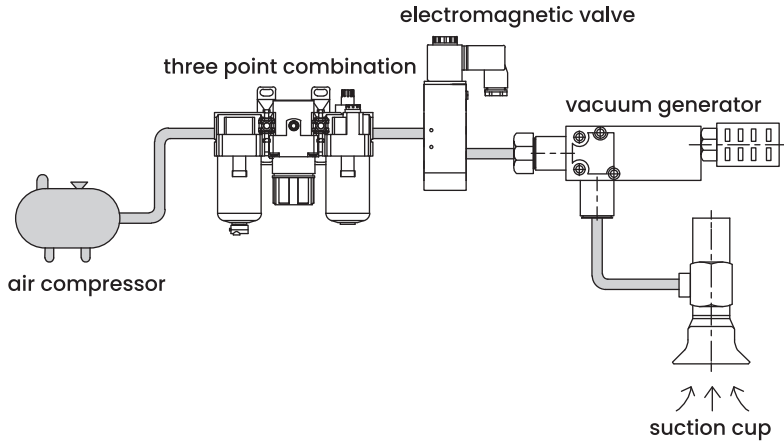
● VGM-10 / 15



symbol	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
series																
VGM-10	165	4.2	19	18	24	50	45	42	14	PS1/8	60	28	57	11	12	150
VGM-15	180	4.2	20	23	31	51	46	55	16	PS1/4	61	29.5	60	12.5	14	165

JFC VGM Multifunctional Vacuum Generator

Vacuum System

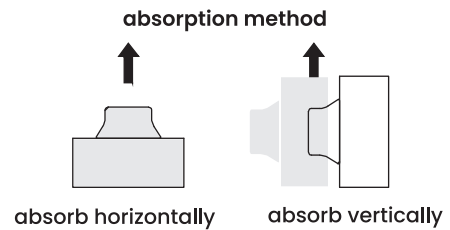


Calculation

$$W = \frac{P \times A}{760} \times f \times (1.0332)$$

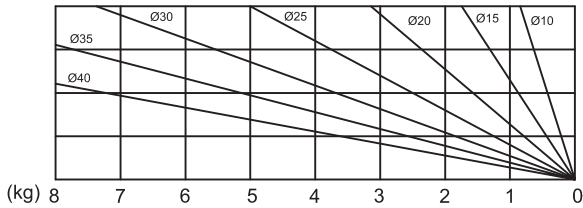
W: Adsorption capacity (kgf)
 P: Vacuum pressure (-mmHg)
 A: Suction cup area (cm²)
 f: Safety factor

note: absorb horizontally, f=4 or more
 absorb vertically, f=6-8 or more

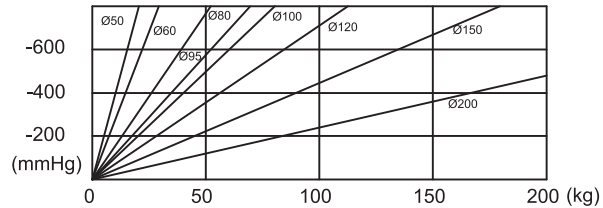


Theoretical Suction Table

● suction cup bore: 10~40mm



● suction cup bore: 50~200mm



Theoretical Suction

● round suction cup

size(Ømm)	2	3.5	5	6	8	10	15	20	25	30	35	40	50	60
adsorption area(cm ²)	0.031	0.096	0.196	0.282	0.502	0.785	1.767	3.141	4.908	7.068	9.621	12.56	19.63	28.27
- 700 mmHg	0.029	0.091	0.186	0.269	0.478	0.747	1.681	2.989	4.670	6.725	9.153	11.95	18.68	26.90
- 600 mmHg	0.025	0.078	0.160	0.230	0.409	0.640	1.441	2.562	4.003	5.764	7.846	10.24	16.01	23.05
- 500 mmHg	0.021	0.065	0.133	0.192	0.341	0.533	1.200	2.135	3.336	4.083	6.538	8.540	13.34	19.21
- 400 mmHg	0.017	0.052	0.106	0.153	0.273	0.427	0.960	1.708	2.668	3.843	5.230	6.832	10.67	15.37
- 300 mmHg	0.012	0.039	0.080	0.115	0.204	0.320	0.720	1.281	2.001	2.882	3.923	5.124	8.006	11.52

size(Ømm)	80	95	100	120	150	200
adsorption area(cm ²)	50.26	70.88	78.53	113	176.7	314.1
- 700 mmHg	47.82	67.44	74.79	107.6	168.1	298.9
- 600 mmHg	40.99	57.80	63.05	92.23	144.1	256.2
- 500 mmHg	34.16	48.17	53.37	76.86	120.0	213.5
- 400 mmHg	27.32	38.53	42.70	61.48	96.07	170.8
- 300 mmHg	20.49	28.90	32.02	46.11	72.05	128.1

Air Preparation (FRL)

Pneumatic Valves

Pneumatic Cylinders

Pneumatic Connectors

Sensors

Pneumatic Accessories

VPA Vacuum Suction Cup



Order Indication

VPA	A	10	N
vacuum suction	pipng	size	material
vacuum suction cup single layer	<p>A: single layer vertical (Ø5~Ø95)</p> <p>B: single layer side (Ø5~Ø200)</p> <p>AS: single layer vertical, spring (Ø5~Ø95)</p> <p>BS: single layer side, spring (Ø5~Ø200)</p>	<p>5 : 5 mm</p> <p>6 : 6 mm</p> <p>8 : 8 mm</p> <p>10 : 10 mm</p> <p>15 : 15 mm</p> <p>20 : 20 mm</p> <p>25 : 25 mm</p> <p>30 : 30 mm</p> <p>35 : 35 mm</p> <p>40 : 40 mm</p> <p>50 : 50 mm</p> <p>60 : 60 mm</p> <p>80 : 80 mm</p> <p>95 : 95 mm</p> <p>100 : 100 mm</p> <p>120 : 120 mm</p> <p>150 : 150 mm</p> <p>200 : 200 mm</p>	<p>N:NBR</p> <p>Si: Silicone</p>

Piping Type

VPA-A Single layer vertical piping	VPA-B Single layer side piping	VPA-AS Single layer vertical piping with spring	VPA-BS Single layer side piping with spring

Material & Feature

item	stretch	ductility	oil resist (gasoline)	oil resist (benzene)	weather resist	ozone resist	heat resist	cold resist	drug resist	wear-resist	acid resist	water resist	electrical insulation	hardness HS
NBR	⊙	⊙	⊙	△	○	○	○	X	⊙	○	○	⊙	○	70±5
Silicone	△	○	△	△	○	○	○	⊙	⊙	X	X	○	⊙	50±5

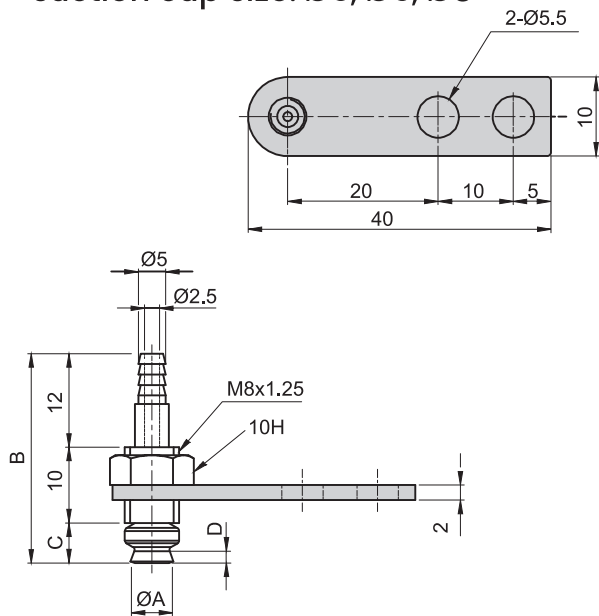
Description: ⊙ suitable; ○ conditionally suitable; △ not suitable; X cannot be used

External Dimensions

• VPA-A

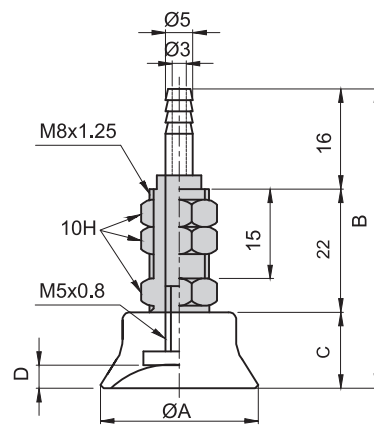
Single layer vertical piping (Ø5~Ø95)

- suction cup size: Ø5, Ø6, Ø8



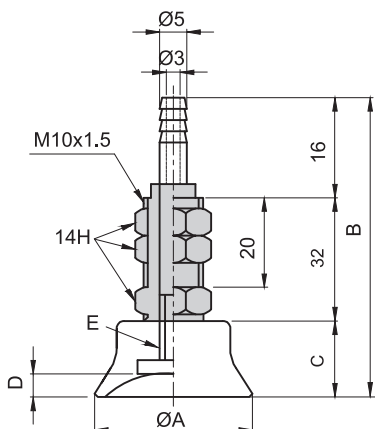
symbol series	A	B	C	D
VPA-A-5	5	28	6	0.9
VPA-A-6	6	28	6	1.0
VPA-A-8	8	27.5	5.5	1.4

- suction cup size: Ø10, Ø15, Ø20



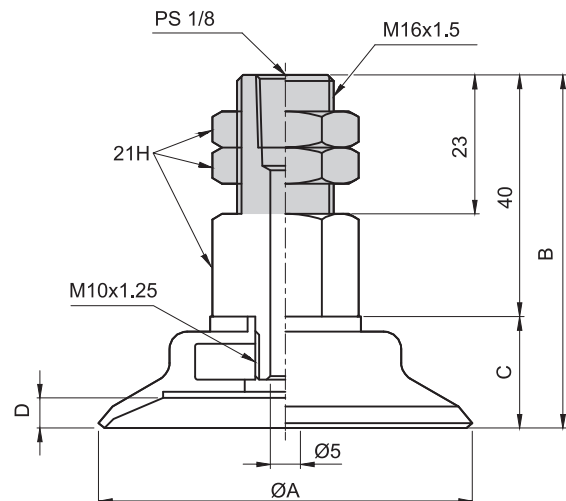
symbol series	A	B	C	D
VPA-A-10	10	46	8	1.3
VPA-A-15	15	46	8	1.9
VPA-A-20	20	48	10	2.3

- suction cup size: Ø25, Ø30, Ø35, Ø40, Ø50



symbol series	A	B	C	D	E
VPA-A-25	25	62	14	3	M6
VPA-A-30	30	60	12	2	M6
VPA-A-35	35	62	14	3	M6
VPA-A-40	40	62	14	3.5	M6
VPA-A-50	50	63	15	4	M8

- suction cup size: Ø60, Ø80, Ø95



symbol series	A	B	C	D
VPA-A-60	60	56.5	16.5	5
VPA-A-80	80	60.5	20.5	6
VPA-A-95	93	61	21	6

Air Preparation (FRL)

Pneumatic Valves

Pneumatic Cylinders

Pneumatic Connectors

Sensors

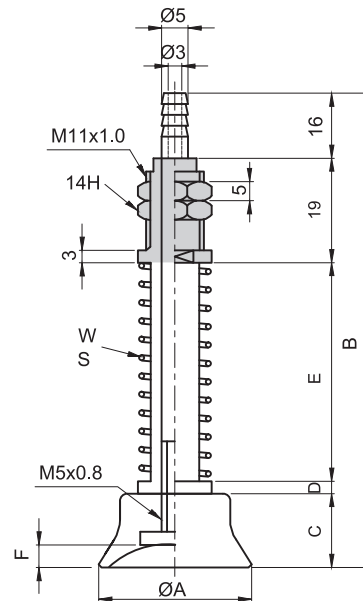
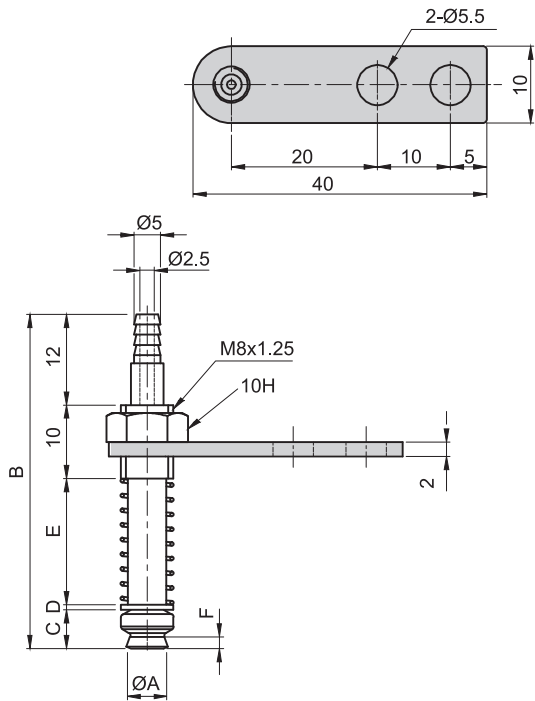
Pneumatic Accessories

External Dimensions

● VPA-AS
Single layer vertical piping with spring (Ø5~Ø95)

● suction cup size: Ø5, Ø6, Ø8

● suction cup size: Ø10, Ø15, Ø20

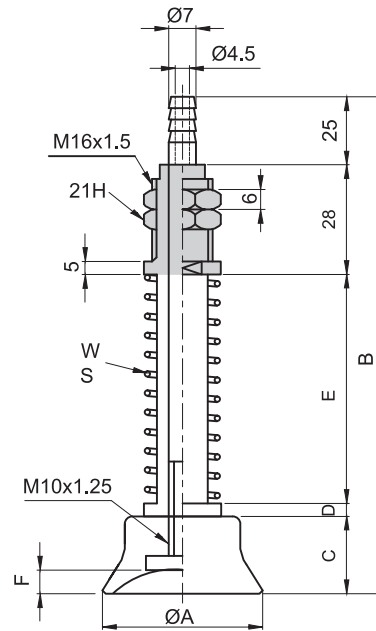
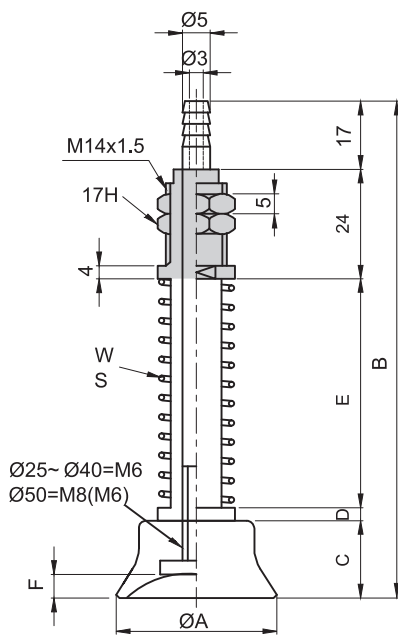


series \ symbol	A	B	C	D	E	F	W (kgf)	S (m/m)
VPA-AS-5-3	5	34.6	4	2.6	6	0.9	0.1	3
VPA-AS-5-10	5	48.6	4	2.6	20	0.9	0.1	10
VPA-AS-5-15	5	58.6	4	2.6	30	0.9	0.1	15
VPA-AS-5-25	5	78.6	4	2.6	50	0.9	0.1	25
VPA-AS-6-3	6	34.6	4	2.6	6	1.0	0.1	3
VPA-AS-6-10	6	48.6	4	2.6	20	1.0	0.1	10
VPA-AS-6-15	6	58.6	4	2.6	30	1.0	0.1	15
VPA-AS-6-25	6	78.6	4	2.6	50	1.0	0.1	25
VPA-AS-8-3	8	34.1	5.5	0.6	6	1.4	0.1	3
VPA-AS-8-10	8	48.1	5.5	0.6	20	1.4	0.1	10
VPA-AS-8-15	8	58.1	5.5	0.6	30	1.4	0.1	15
VPA-AS-8-25	8	78.1	5.5	0.6	50	1.4	0.1	25

series \ symbol	A	B	C	D	E	F	W (kgf)	S (m/m)
VPA-AS-10-4	10	54	8	3	8	1.3	0.3	4
VPA-AS-10-10	10	66	8	3	20	1.3	0.3	10
VPA-AS-10-20	10	86	8	3	40	1.3	0.3	20
VPA-AS-10-30	10	106	8	3	60	1.3	0.3	30
VPA-AS-15-4	15	54	8	3	8	1.9	0.3	4
VPA-AS-15-10	15	66	8	3	20	1.9	0.3	10
VPA-AS-15-20	15	86	8	3	40	1.9	0.3	20
VPA-AS-15-30	15	106	8	3	60	1.9	0.3	30
VPA-AS-20-4	20	56	10	3	8	2.3	0.3	4
VPA-AS-20-10	20	68	10	3	20	2.3	0.3	10
VPA-AS-20-20	20	88	10	3	40	2.3	0.3	20
VPA-AS-20-30	20	108	10	3	60	2.3	0.3	30

External Dimensions

- suction cup size: Ø25, Ø30, Ø35, Ø40, Ø50
- suction cup size: Ø60, Ø80, Ø95



- Air Preparation (FRL)
- Pneumatic Valves
- Pneumatic Cylinders
- Pneumatic Connectors
- Sensors

- Pneumatic Accessories

series	symbol	A	B	C	D	E	F	W (kgf)	S (m/m)
VPA-AS-25-6		25	71	14	3	13	3	0.4	6
VPA-AS-25-15		25	88	14	3	30	3	0.4	15
VPA-AS-25-30		25	118	14	3	60	3	0.4	30
VPA-AS-25-50		25	158	14	3	100	3	0.4	50
VPA-AS-30-6		30	69	12	3	13	2	0.4	6
VPA-AS-30-15		30	86	12	3	30	2	0.4	15
VPA-AS-30-30		30	116	12	3	60	2	0.4	30
VPA-AS-30-50		30	156	12	3	100	2	0.4	50
VPA-AS-35-6		35	71	14	3	13	3	0.9	6
VPA-AS-35-15		35	88	14	3	30	3	0.9	15
VPA-AS-35-30		35	118	14	3	60	3	0.9	30
VPA-AS-35-50		35	158	14	3	100	3	0.9	50
VPA-AS-40-6		40	71	14	3	13	3.5	0.9	6
VPA-AS-40-15		40	88	14	3	30	3.5	0.9	15
VPA-AS-40-30		40	118	14	3	60	3.5	0.9	30
VPA-AS-40-50		40	158	14	3	100	3.5	0.9	50
VPA-AS-50-6		50	89	15	20	13	4	0.9	6
VPA-AS-50-15		50	89	15	3	30	4	0.9	15
VPA-AS-50-30		50	119	15	3	60	4	0.9	30
VPA-AS-50-50		50	159	15	3	100	4	0.9	50

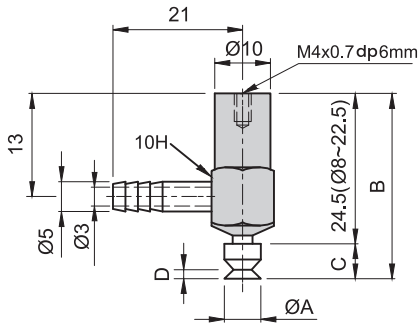
series	symbol	A	B	C	D	E	F	W (kgf)	S (m/m)
VPA-AS-60-10		60	108.5	16.5	19	20	5	1.0	10
VPA-AS-60-30		60	148.5	16.5	19	60	5	1.0	30
VPA-AS-60-50		60	188.5	16.5	19	100	5	1.0	50
VPA-AS-60-70		60	288.5	16.5	19	140	5	1.0	70
VPA-AS-80-10		80	112.5	20.5	19	20	6	1.0	10
VPA-AS-80-30		80	152.5	20.5	19	60	6	1.0	30
VPA-AS-80-50		80	192.5	20.5	19	100	6	1.0	50
VPA-AS-80-70		80	232.5	20.5	19	140	6	1.0	70
VPA-AS-95-10		93	113	21	19	20	6	1.0	10
VPA-AS-95-30		93	153	21	19	60	6	1.0	30
VPA-AS-95-50		93	193	21	19	100	6	1.0	50
VPA-AS-95-70		93	233	21	19	140	6	1.0	70

▲ Note: The mark W represents the spring thrust at 1/2 stroke (kgf), and S represents the cushion stroke (m/m)

External Dimensions

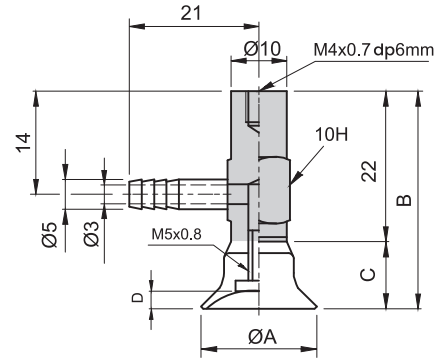
● **VPA-B**
Single layer side piping (Ø5~Ø200)

- suction cup size: Ø5, Ø6, Ø8



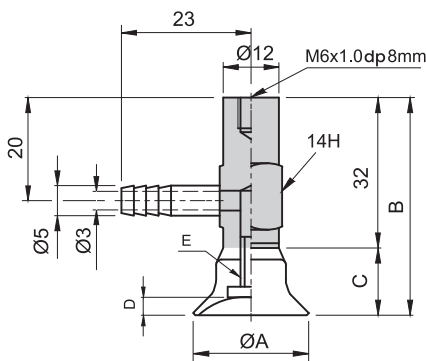
symbol series	A	B	C	D
VPA-B-5	5	28.5	4	0.9
VPA-B-6	6	28.5	4	1.0
VPA-B-8	8	28	5.5	1.4

- suction cup size: Ø10~Ø20



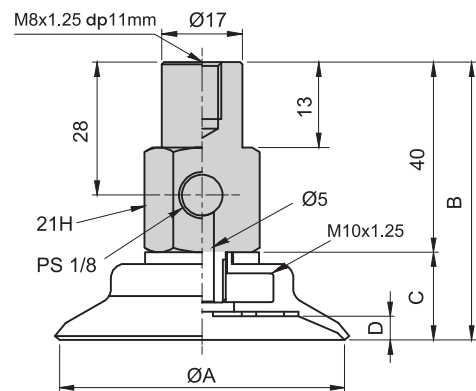
symbol series	A	B	C	D
VPA-B-10	10	30	8	1.3
VPA-B-15	15	30	8	1.9
VPA-B-20	20	32	10	2.3

- suction cup size: Ø25~Ø50



symbol series	A	B	C	D	E
VPA-B-25	25	46	14	3	M6x1.0
VPA-B-30	30	44	12	2	M6x1.0
VPA-B-35	35	46	14	3	M6x1.0
VPA-B-40	40	46	14	3.5	M6x1.0
VPA-B-50	50	47	15	4	M8x1.25

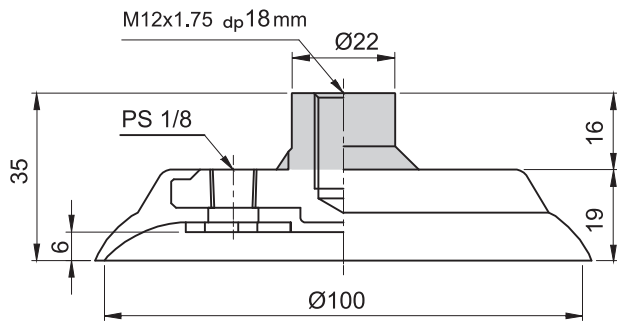
- suction cup size: Ø60~Ø95



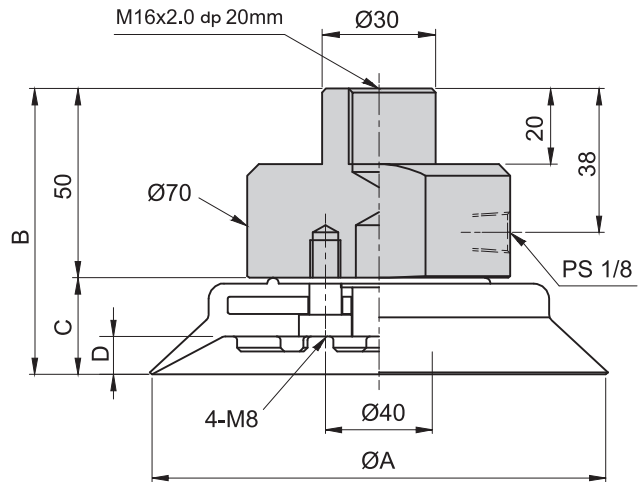
symbol series	A	B	C	D
VPA-B-60	60	56.5	16.5	5
VPA-B-80	80	60.5	20.5	6
VPA-B-95	93	61	21	6

External Dimensions

- suction cup size: $\varnothing 100$



- suction cup size: $\varnothing 120 \sim \varnothing 200$



symbol series	A	B	C	D
VPA-B-120	120	74	24	6
VPA-B-150	150	87.5	37.5	14.5
VPA-B-200	200	87.5	37.5	13

Air Preparation (FRL)

Pneumatic Valves

Pneumatic Cylinders

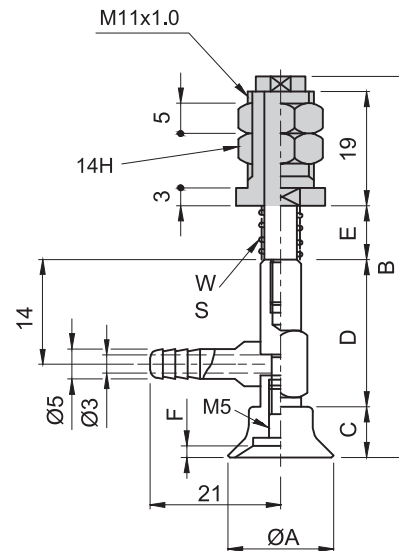
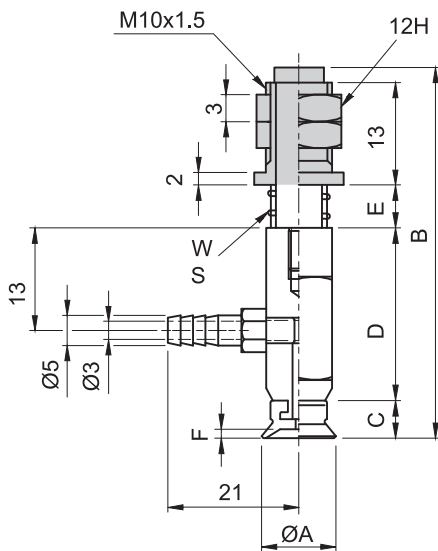
Pneumatic Connectors

Sensors

Pneumatic Accessories

External Dimensions

- VPA-BS
Single layer side piping with spring (Ø5~Ø200)
- suction cup size: Ø5, Ø6, Ø8
- suction cup size: Ø10, Ø15, Ø20

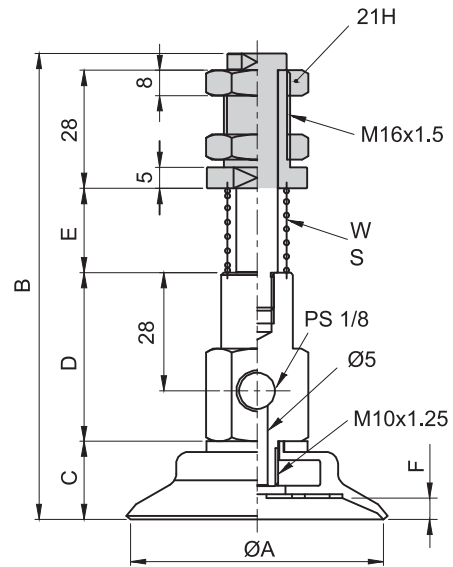
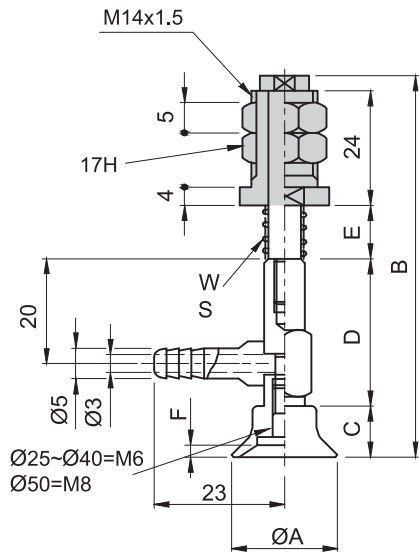


series	symbol	A	B	C	D	E	F	W (kgf)	S (m/m)
VPA-BS-5-3	5	50.5	4	24.5	6	0.9	0.1	3	
VPA-BS-5-10	5	64.5	4	24.5	20	0.9	0.1	10	
VPA-BS-5-15	5	74.5	4	24.5	30	0.9	0.1	15	
VPA-BS-5-25	5	94.5	4	24.5	50	0.9	0.1	25	
VPA-BS-6-3	6	50.5	4	24.5	6	1.0	0.1	3	
VPA-BS-6-10	6	64.5	4	24.5	20	1.0	0.1	10	
VPA-BS-6-15	6	74.5	4	24.5	30	1.0	0.1	15	
VPA-BS-6-25	6	94.5	4	24.5	50	1.0	0.1	25	
VPA-BS-8-3	8	50	5.5	22.5	6	1.4	0.1	3	
VPA-BS-8-10	8	64	5.5	22.5	20	1.4	0.1	10	
VPA-BS-8-15	8	74	5.5	22.5	30	1.4	0.1	15	
VPA-BS-8-25	8	94	5.5	22.5	50	1.4	0.1	25	

series	symbol	A	B	C	D	E	F	W (kgf)	S (m/m)
VPA-BS-10-4	10	60	8	22	8	1.3	0.3	4	
VPA-BS-10-10	10	72	8	22	20	1.3	0.3	10	
VPA-BS-10-20	10	92	8	22	40	1.3	0.3	20	
VPA-BS-10-30	10	112	8	22	60	1.3	0.3	30	
VPA-BS-15-4	15	60	8	22	8	1.9	0.3	4	
VPA-BS-15-10	15	72	8	22	20	1.9	0.3	10	
VPA-BS-15-20	15	92	8	22	40	1.9	0.3	20	
VPA-BS-15-30	15	112	8	22	60	1.9	0.3	30	
VPA-BS-20-4	20	62	10	22	8	2.3	0.3	4	
VPA-BS-20-10	20	74	10	22	20	2.3	0.3	10	
VPA-BS-20-20	20	94	10	22	40	2.3	0.3	20	
VPA-BS-20-30	20	114	10	22	60	2.3	0.3	30	

External Dimensions

- suction cup size: Ø25, Ø30, Ø35, Ø40, Ø50
- suction cup size: Ø60, Ø80, Ø95



symbol series	A	B	C	D	E	F	W (kgf)	S (m/m)
VPA-BS-25-6	25	87	14	32	13	3	0.4	6
VPA-BS-25-15	25	104	14	32	30	3	0.4	15
VPA-BS-25-30	25	134	14	32	60	3	0.4	30
VPA-BS-25-50	25	174	14	32	100	3	0.4	50
VPA-BS-30-6	30	85	12	32	13	2	0.4	6
VPA-BS-30-15	30	102	12	32	30	2	0.4	15
VPA-BS-30-30	30	132	12	32	60	2	0.4	30
VPA-BS-30-50	30	172	12	32	100	2	0.4	50
VPA-BS-35-6	35	87	14	32	13	3	0.9	6
VPA-BS-35-15	35	104	14	32	30	3	0.9	15
VPA-BS-35-30	35	134	14	32	60	3	0.9	30
VPA-BS-35-50	35	174	14	32	100	3	0.9	50
VPA-BS-40-6	40	87	14	32	13	3.5	0.9	6
VPA-BS-40-15	40	104	14	32	30	3.5	0.9	15
VPA-BS-40-30	40	134	14	32	60	3.5	0.9	30
VPA-BS-40-50	40	174	14	32	100	3.5	0.9	50
VPA-BS-50-6	50	88	15	32	13	4	0.9	6
VPA-BS-50-15	50	105	15	32	30	4	0.9	15
VPA-BS-50-30	50	135	15	32	60	4	0.9	30
VPA-BS-50-50	50	175	15	32	100	4	0.9	50

symbol series	A	B	C	D	E	F	W (kgf)	S (m/m)
VPA-BS-60-10	60	109	16.5	40	20	5	1.0	10
VPA-BS-60-30	60	149	16.5	40	60	5	1.0	30
VPA-BS-60-50	60	189	16.5	40	100	5	1.0	50
VPA-BS-60-70	60	289	16.5	40	140	5	1.0	70
VPA-BS-80-10	80	113	20.5	40	20	6	1.0	10
VPA-BS-80-30	80	153	20.5	40	60	6	1.0	30
VPA-BS-80-50	80	193	20.5	40	100	6	1.0	50
VPA-BS-80-70	80	233	20.5	40	140	6	1.0	70
VPA-BS-95-10	93	113	21	40	20	6	1.0	10
VPA-BS-95-30	93	153	21	40	60	6	1.0	30
VPA-BS-95-50	93	193	21	40	100	6	1.0	50
VPA-BS-95-70	93	233	21	40	140	6	1.0	70

Air Preparation (FRL)

Pneumatic Valves

Pneumatic Cylinders

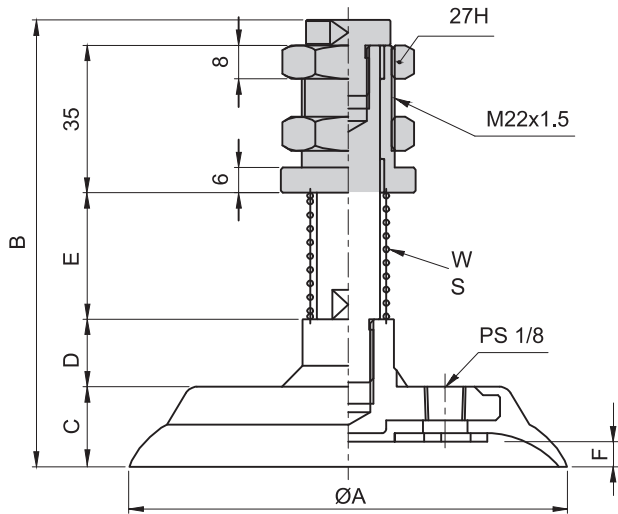
Pneumatic Connectors

Sensors

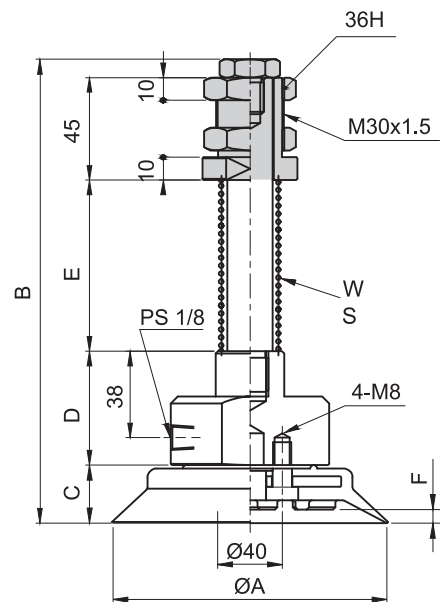
Pneumatic Accessories

External Dimensions

- suction cup size: Ø100



- suction cup size: Ø120, Ø150, Ø200



series	symbol	A	B	C	D	E	F	W (kgf)	S (m/m)
VPA-BS-100-15		100	106	19	16	30	6	1.5	15
VPA-BS-100-30		100	136	19	16	60	6	1.5	30
VPA-BS-100-50		100	176	19	16	100	6	1.5	50
VPA-BS-100-70		100	216	19	16	140	6	1.5	70

series	symbol	A	B	C	D	E	F	W (kgf)	S (m/m)
VPA-BS-120-20		120	204	25.5	50	75	6	1.5	20
VPA-BS-120-100		120	294	25.5	50	165	6	1.5	100
VPA-BS-150-20		150	216	37.5	50	75	14.5	1.5	20
VPA-BS-150-100		150	306	37.5	50	165	14.5	1.5	100
VPA-BS-200-20		200	216	37.5	50	75	13	1.5	20
VPA-BS-200-100		200	306	37.5	50	165	13	1.5	100

▲ Note: The mark W represents the spring thrust at 1/2 stroke (kgf), and S represents the cushion stroke (m/m)

PA Suction Cup

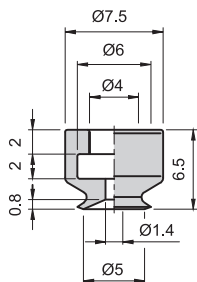


Order Indication

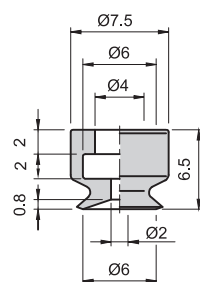
PA	10	1	
suction cup	bore	qty	
single layer suction cup (suit for VPA series)	5 : 5 mm	25 : 25 mm	80 : 80 mm
	6 : 6 mm	30 : 30 mm	95 : 95 mm
	8 : 8 mm	35 : 35 mm	100 : 100 mm
	10 : 10 mm	40 : 40 mm	120 : 120 mm
	15 : 15 mm	50 : 50 mm	150 : 150 mm
	20 : 20 mm	60 : 60 mm	200 : 200 mm

External Dimensions

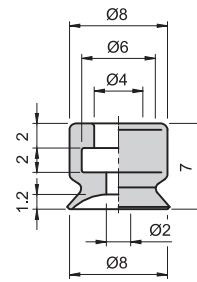
PA-05



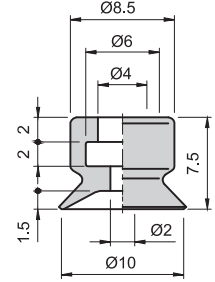
PA-06



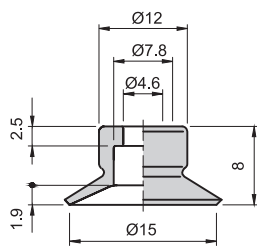
PA-08



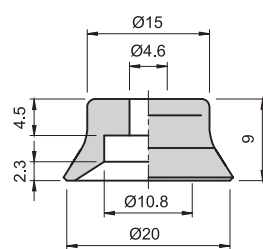
PA-10



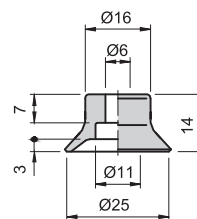
PA-15



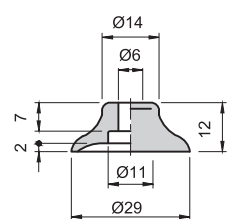
PA-20



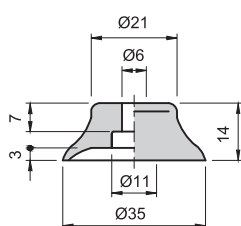
PA-25



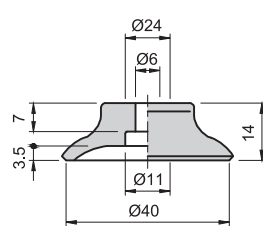
PA-30



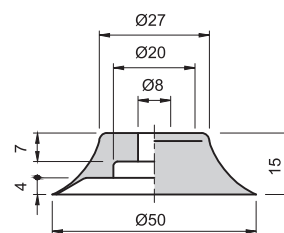
PA-35



PA-40



PA-50



Air Preparation (FRL)

Pneumatic Valves

Pneumatic Cylinders

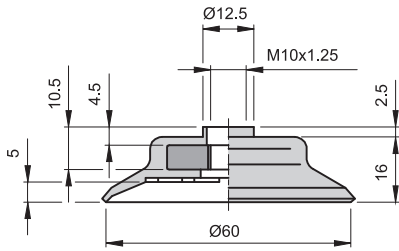
Pneumatic Connectors

Sensors

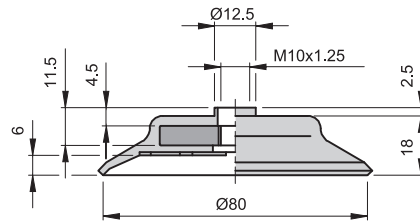
Pneumatic Accessories

External Dimensions

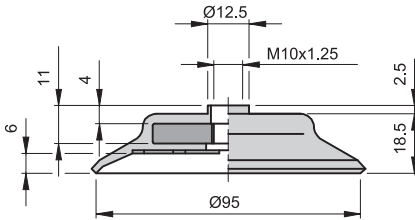
PA-60



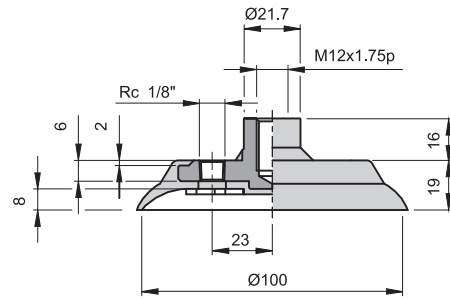
PA-80



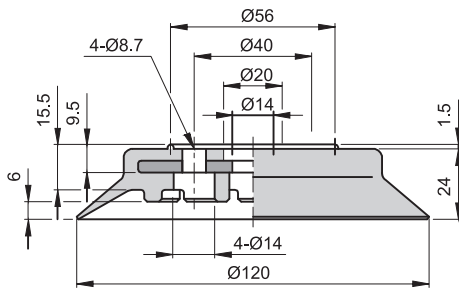
PA-95



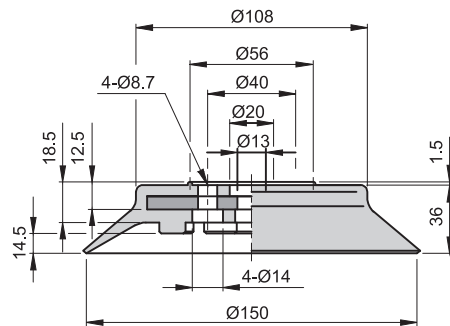
PA-100



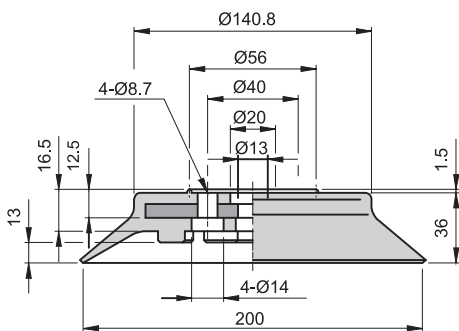
PA-120



PA-150



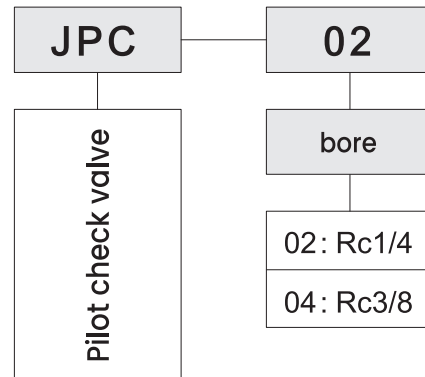
PA-200



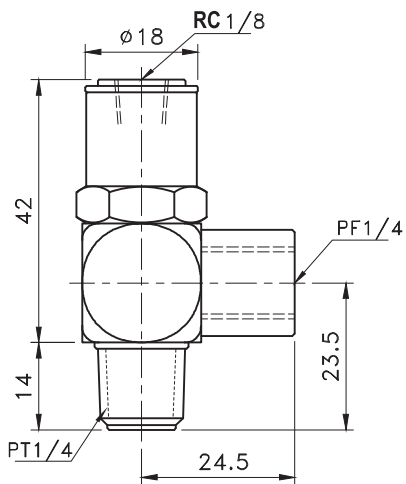
JPC Pilot check valve



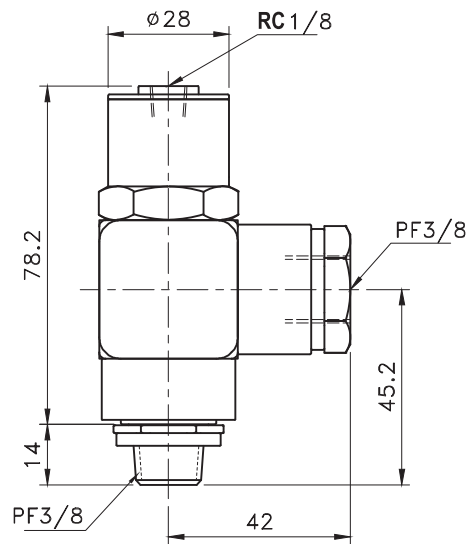
Order Indication



● JPC-02



● JPC-04



Norm.

series	JPC-02	JPC-04
bore (Rc)	1/4	3/8
fluid	compressed air	
pressure (kgf/cm ²)	0.5~9.5	
temperature (°C)	-10~+70	
useful flow area(mm ²)	24	79
operating frequency(time/min)	60	40
weight (g)	100	340

Air Preparation (FRL)

Pneumatic Valves

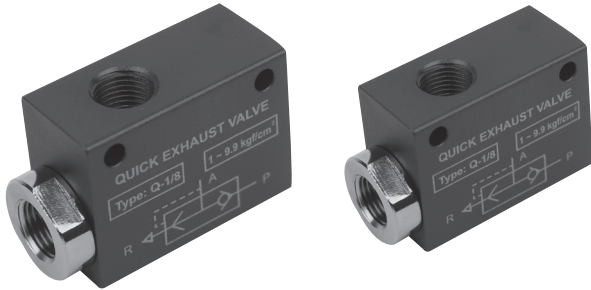
Pneumatic Cylinders

Pneumatic Connectors

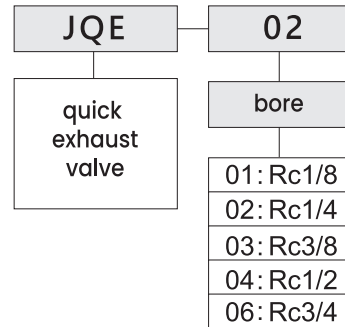
Sensors

Pneumatic Accessories

JQE Quick Exhaust Valve



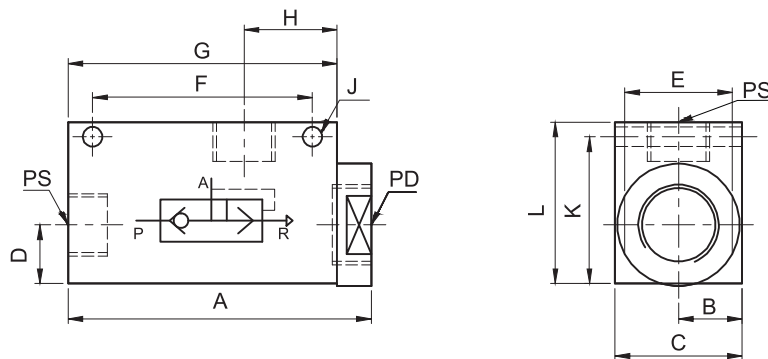
Order Indication



Norm.

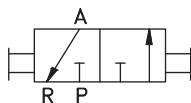
series	JQE-01	JQE-02	JQE-03	JQE-04	JQE-06
bore (Rc)	1/8	1/4	3/8	1/2	3/4
fluid	compressed air				
temperature (°C)	0~60				
pressure (kgf/cm ²)	1~7				
max. flow (l/min)	600	1450	1450	3000	3900
weight (g)	40	100	80	240	230

External Dimensions

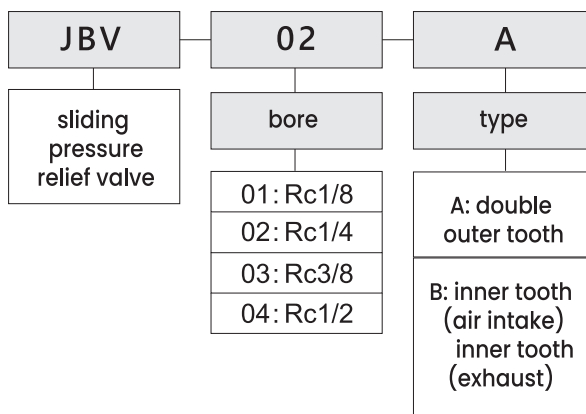


symbol series	A	B	C	D	E	F	G	H	J	K	L	PS	PD
JQE-01	40	8	16	9	14	26	35	12	3.4	22.6	26	1/8"	1/8"
JQE-02	62	13	26	12	22	45	55	19	4	29.5	33.5	1/4"	3/8"
JQE-03	62	13	26	12	22	45	55	19	4	29.5	33.5	3/8"	3/8"
JQE-04	69	20	40	20	36	51	62	20	4	46	50	1/2"	1/2"
JQE-06	69	20	40	20	36	51	62	20	4	46	50	3/4"	3/4"

JBV Sliding Pressure Relief Valve



Order Indication

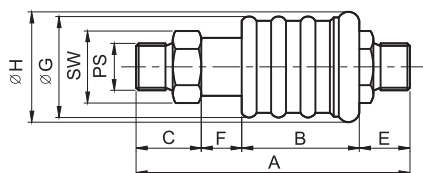


Norm.

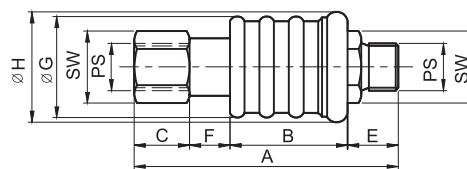
series	JMV-01	JMV-02	JMV-03	JMV-04
bore (Rc)	1/8	1/4	3/8	1/2
switch mode	3 port 2 slot			
fluid	compressed air			
temperature (°C)	0~60			
max. flow(ℓ/min)	530	1000	1100	2500
weight (g)	40	100	120	280

External Dimensions

- A: double outer tooth



- B: inner tooth (air intake/ exhaust)



series	symbol	A	B	C	E	F	G	H	PS	SW
	JBV-01	A	51	25	8.5	9	8.5	21.3	23.8	1/8"
B		59	25	16.5	9	8.5	21.3	23.8	1/8"	14
JBV-02	A	74.6	32	17.5	13.8	11	27.5	30	1/4"	17
	B	71.8	32	15	13.8	11	27.5	30	1/4"	17
JBV-03	A	76	32	18.5	14.5	11	27.5	30	3/8"	19
	B	72.5	32	15	14.5	11	27.5	30	3/8"	19
JBV-04	A	88.5	43.5	17	14	14	40	44.7	1/2"	26

Air Preparation (FRL)

Pneumatic Valves

Pneumatic Cylinders

Pneumatic Connectors

Sensors

Pneumatic Accessories