



VACUUM GENERATOR, VACUUM PAD SERIES
真空發生器・真空吸盤系列

NEW



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真空發生器注意事項 Vacuum Ejector General Precautions

- 確認空壓源壓力能供給【3.5~5kgf/cm²】以上之壓力以求能達到最高真空度。
In order to achieve the highest vacuum degree, make sure the pressure level over【3.5~5kgf/cm²】can be supplied by sir compressor
- 真空發生器之空氣消費量在【9.7~385NI/min】
Compressed air consumption of Vacuum Ejector【9.7~385NI/min】
在同時使用多個發生器時，須確認空壓機之能量。【1馬力≐80NI/min】
When use more Vacuum Ejector, please check compressor energy【1HP≐80NI/min】
- 最好提供真空發生器專用配管迴路，以避免其它空壓機器動作時，產生壓降。
The recommended system is one vacuum pad per Vacuum Ejector, in order to avoid the pressure being reduced during the operations of other air compressors
- 真空發生器之配管中，請勿使用潤滑油裝置。【給油器請勿使用】
Never use lubricant in the pipes of Vacuum Ejector
- 迴路中，請確實保持水份、雜質之乾淨，以確保迴路之真空度。
Please keep the water and impurities clean in the circuit to ensure the vacuum degree
- 過濾器、調壓閥於選用時，請注意供給流量是否充足。
Use filter、Regulator, please check supply air flow is sufficient
- 真空迴路中，發生器應儘量靠近吸盤。
In Vacuum Circuit, Vacuum Ejector has to be placed near the pad

真空發生器噴嘴直徑與吸盤直徑/個數關係表 Vacuum Ejector Nozzle Diameter and pad Diamter/Number List

型式/吸盤	1個	2個	3個	4個
05	φ 2 ~ 20	φ 2 ~ 8	φ 2 ~ 5	φ 2 ~ 3.5
10	φ 25 ~ 80	φ 10 ~ 50	φ 6 ~ 30	φ 5 ~ 20
15	φ 95 ~ 200	φ 60 ~ 120	φ 35 ~ 80	φ 25 ~ 60
20		φ 120 ~ 150	φ 95 ~ 200	φ 80 ~ 200



真空發生器 vacuum ejectors

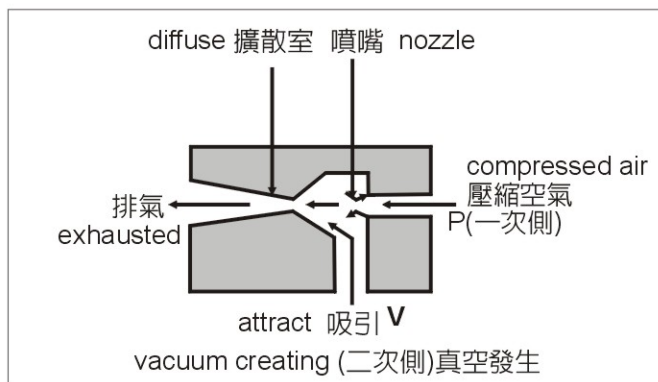
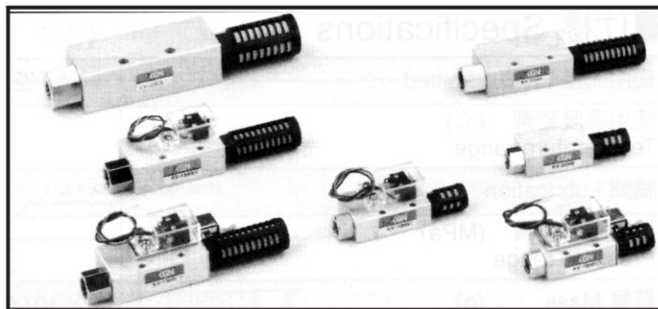
KV系列

原理 Principle

- 由空氣壓縮機產生之壓縮空氣經噴、擴散室排放出去，在設計上噴嘴與擴散室之間有一間隙空氣會由此間隙經擴散室一起被排放出去而產生吸引作用(文氏管原理)。
- Compressed air enters the ejector through Compressed air supply port P, passes through the nozzle and diffuser at high speed and sucks air out of the vacuum, generating port V, thus creating a vacuum in the sealed chamber to which V is connected.

特性 Feature

- 小型、量輕、價廉、控制容易、無噪音。
- 應答性高、鋁合金本體經處理堅固耐用。
- 比一般真空泵浦故障率低、易保養。
- Small size, light weight, easy control, low noise
- Quick response, excellent durability
- Easy maintenance



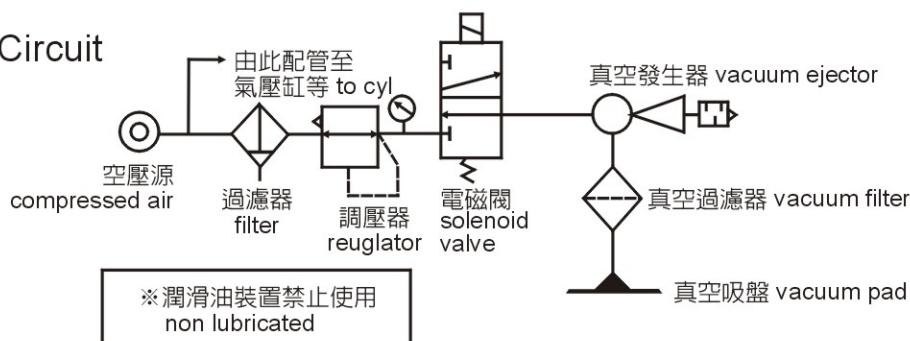
型式注文方法 Order Codes

KV- ① ② ③ ④			
KV- 			
① 噴嘴徑mm Nozzle dia 05 ϕ 0.5 10 ϕ 1.0 15 ϕ 1.5 20 ϕ 2.0 25 ϕ 2.5 * 30 ϕ 3.0 *		④ 真空switch Vacuum Switch 無印 blank 真空 Switch無 without vacuum switch C 設定值固定式 Setting value fixed CK 設定值調整式 Setting value adjustable	
② 到達真空度:kPa[mmHg] Ultimate vacuum H -86.7[-650] L -57.2[-430]		③ 供給空氣壓力:MPa[kgf/cm²G] Supply air pressure S 0.5[5] R 0.35[3.5]	

* 受註生產 order made

●真空發生器配管 Vacuum Pipes

●基本迴路 Standard Circuit



■仕様 Specifications

使用流体 Fluid admitted	空気 (非腐蝕, 不燃性氣體) Air (non-corrosive gas)		
使用温度範囲 (°C) Temperature range	0~+60		
給油 Lubrication	不要 Not possible		
使用圧力範囲 (Mpa) Pressure range	0.1~0.6 [1.0~6kgf/cm ² G]		
質量 Mass (g)	KV-05・10	KV-15	KV-20
標準型 Standard/ C TYPE / CK TYPE	80/100/120	140/160/190	350/370/460

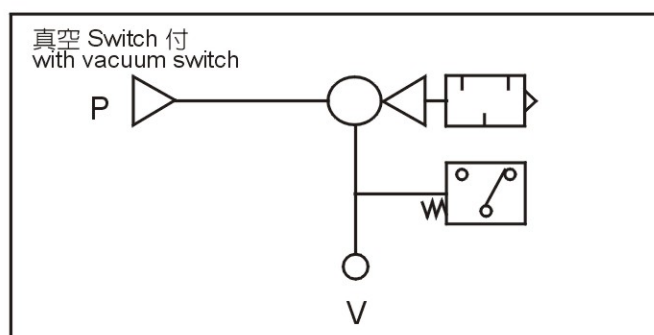
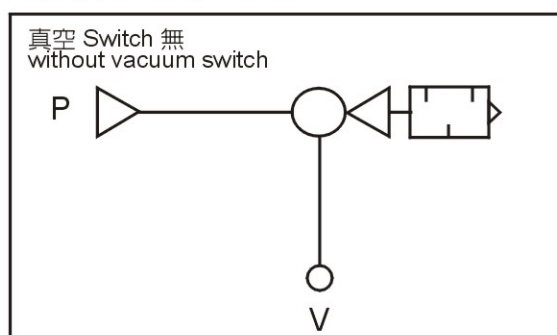
■真空 Switch(機械式) Vacuum Switch (piston type)

	C-TYPE (設定値固定) (Setting value fixed)	C-TYPE (設定値固定) (Setting value fixed)
設定範囲 (kPa) Setting range	-39.9 [-300mmHg]	-20.0~-53.2 [-150~-400mmHg]
出荷時設定値 (kPa) EX/Factory setting range	-39.9 [-300mmHg]	-46.6 [-350mmHg]
動作精度 Accuracy (kPa)	±5.3 [±40mmHg]	
應差 Hysteresis (kPa)	4.0~13.3 [30~100mmHg]	
電気定格 (抵抗負荷時) Electrical ratings	AC125V : 5A AC250V : 3A DC24V : 0.2A	
使用温度範囲 (°C) Temperature range	0~+60	

■真空 Switch(機械式) Vacuum Switch (piston type)

項目 Item	喷嘴径 Nozzle diameter	排気量 Exhausted	到達真空度 Ultimate vacuum	空気消費量 Air consumption	供給空気圧力 Air pressure
型式 Model	mm	l/min(ANR)	-kPa [-mmHg]	l/min(ANR)	MPa [kgf/cm ² G]
KV-05HS	0.5	6	86.7 [650]	13	0.5 [5]
KV-05LS	0.5	9	57.2 [430]	13	0.5 [5]
KV-10HS	1.0	27	86.7 [650]	44	0.5 [5]
KV-10LS	1.0	36	57.2 [430]	44	0.5 [5]
KV-15HS	1.5	63	86.7 [650]	100	0.5 [5]
KV-15LS	1.5	95	57.2 [430]	100	0.5 [5]
KV-20HS	2.0	110	86.7 [650]	180	0.5 [5]
KV-20LS	2.0	165	57.2 [430]	180	0.5 [5]
KV-10HR	1.0	25	86.7 [650]	44	0.35 [3.5]
KV-10LR	1.0	32	57.2 [430]	44	0.35 [3.5]
KV-15HR	1.5	54	86.7 [650]	100	0.35 [3.5]
KV-15LR	1.5	86	57.2 [430]	100	0.35 [3.5]
KV-20HR	2.0	88	86.7 [650]	180	0.35 [3.5]
KV-20LR	2.0	150	57.2 [430]	180	0.35 [3.5]

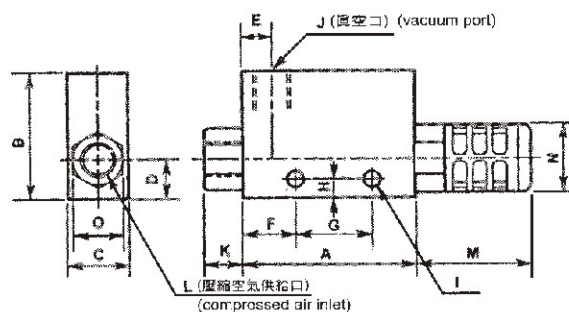
■回路図 Symbols



P : 壓縮空気供給口
compressed air inlet

V : 真空口
vacuum port

標準型 Standard

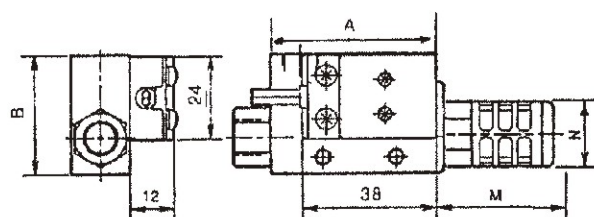


型 式 Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	消音器 Muffler
KV-05	45	28	16	10	13	12	20	3.5	2-φ 4.2	Rc1/8	10	Rc1/8	26	φ 16	14	Rc1/8
KV-10	45	28	16	10	13	12	20	3.5	2-φ 4.2	Rc1/8	10	Rc1/8	26	φ 16	14	Rc1/8
KV-15	60	32	20	11	15	21	25	3.5	2-φ 4.5	Rc1/4	15	Rc1/4	52.5	φ 20	17	Rc1/4
KV-20	95	42	30	15	22	30	32	7	2-φ 6.5	Rc1/4	20	Rc1/4	56	φ 28	24	Rc1/2

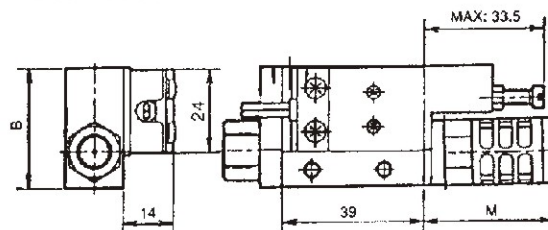
※ NPT Size order made

*縮小率 1/2

C TYPE



CK TYPE



	KV-05	KV-10	KV-15	KV-20
A	50	50	60	95
B	32	32	32	42

吸 盤 Vacuum Pads

■型式注文方法 Order Codes

●吸盤附金具型式

Vacuum pads(with fixtures)

KF□□-□-□-□

① ② ③ ④ ⑤

●吸盤

Rubber Pads(without fixtures)

KFG-□-□

③ ⑤

① 真空取出口 Vacuum port

T	直 Vertical	Y	横 Horizontal
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② 固定軸形式 Rod model

K	固定式 Standard stem	S	彈簧式 with spring
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③ 吸盤直徑 (φ mm)

Pad diameter

2	3.5	5	8	10
15	20	25	30	35
40	50	60	80	95

④ 彈簧行程 (mm) (限彈簧式)

Spring stroke (with spring)

2.5	3	4	5	6
10	15	20	25	30
50	70	-	-	-

⑤ 吸盤材質 Pad material

N	NBR (一般橡膠)
*U	Urethan (氨基甲酸乙脂)
S	Silicon (矽膠)
*SE	Conductive Silicon (導電矽膠)
*F	FKM (氟)

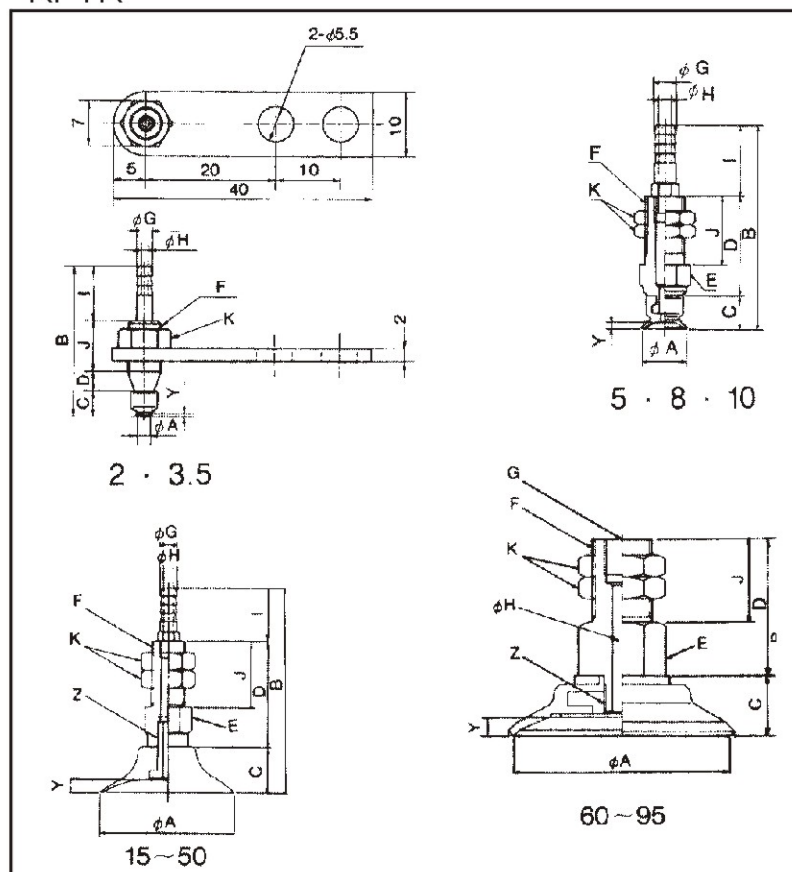
●*受注生産 order made

●導電性材質吸盤受注生産

Conductive material pad order made

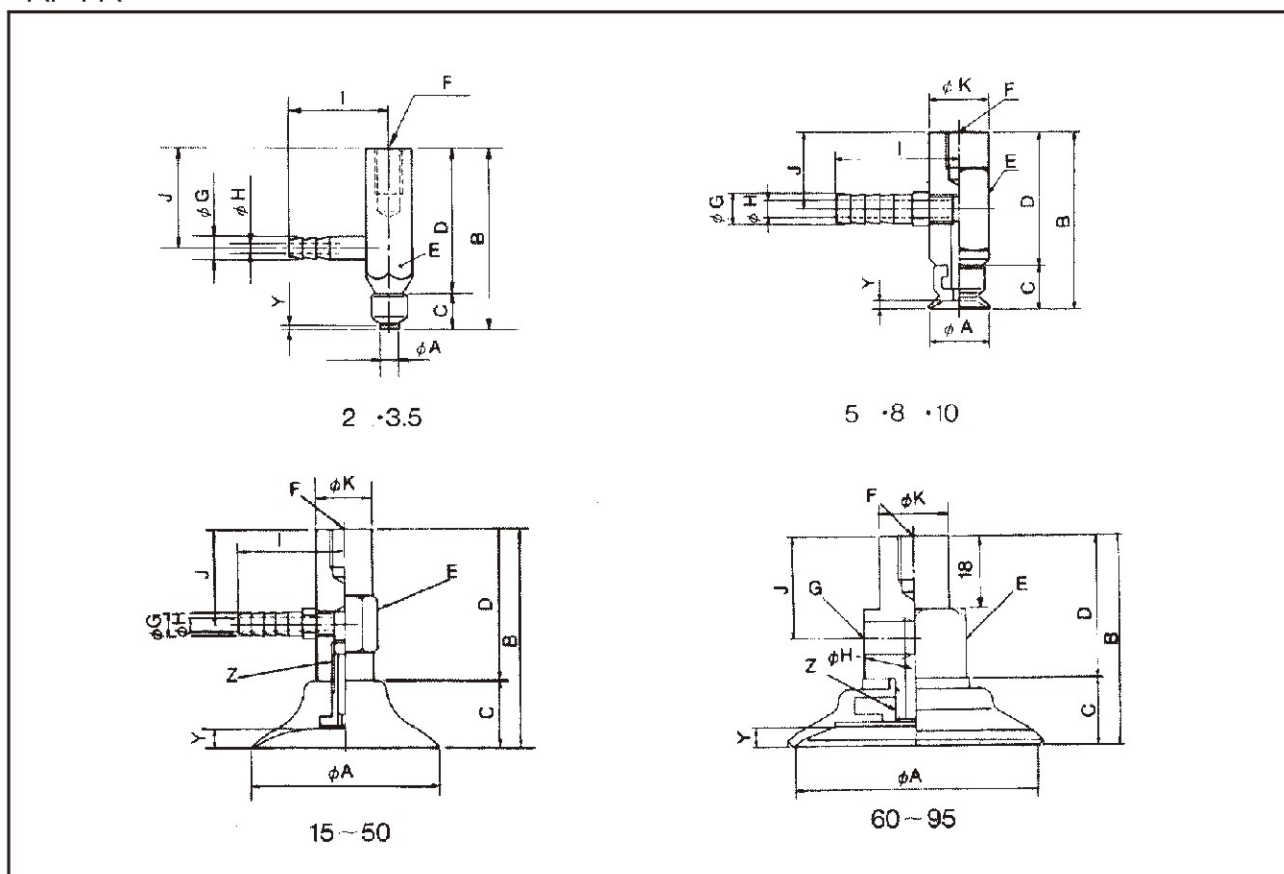


KFTK



(mm)

KFTK	A	B	C	D	E	F	G	H	I	J	K	Y	Z	重量(g) msss
KFTK-2	2	23.5	4	3		M5×P0.5	φ2.8	1.2	8.5	8	7H	0.5		8
KFTK-3.5	3.5	23.5	4	3		M5×P0.5	φ2.8	1.2	8.5	8	7H	0.5		8
KFTK-5	5	30.5	6.5	14		M9×P1	5	2.5	10	12	12H	0.8		11
KFTK-8	8	31	7	14		M9×P1	5	2.5	10	12	12H	1.2		11
KFTK-10	10	46	7.5	22.5	10H	M9×P1	5	3	16	15.5	12H	1.5	M5	15
KFTK-15	15	46	8	22	10H	M8	5	3	16	15	10H	1.9	M5	20
KFTK-20	20	48	10	22	10H	M8	5	3	16	15	10H	2.3	M6	20
KFTK-25	25	62	14	32	14H	M10	5	3	16	20	14H	3.0	M6	40
KFTK-30	30	60	12	32	14H	M10	5	3	16	20	14H	2.0	M6	40
KFTK-35	35	62	14	32	14H	M10	5	3	16	20	14H	3.0	M6	40
KFTK-40	40	62	14	32	14H	M10	5	3	16	20	14H	3.5	M6	40
KFTK-50	50	63	15	32	14H	M10	5	3	16	20	14H	4.0	M8	50
KFTK-60	60	58.5	18.5	40	21H	M16×P1.5	Rc1/8	5		23	21H	5.0	M10×P1.25	130
KFTK-80	80	60.5	20.5	40	21H	M16×P1.5	Rc1/8	5		23	21H	6.0	M10×P1.25	170
KFTK-95	93	61	21	40	21H	M16×P1.5	Rc1/8	5		23	21H	6.0	M10×P1.25	220

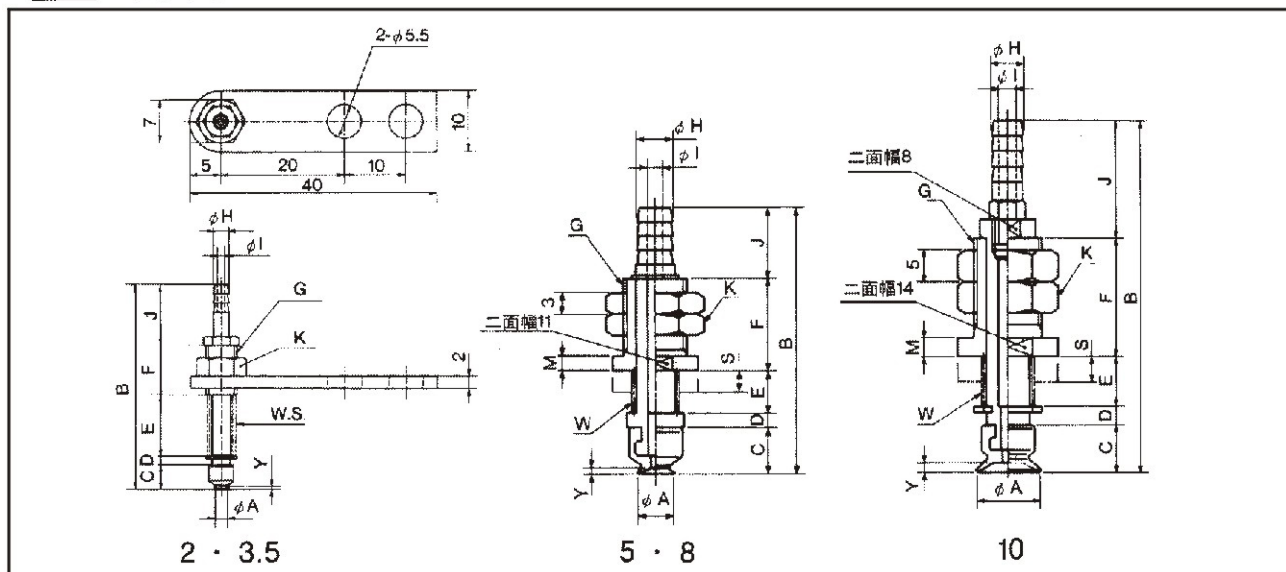


(mm)														重量(g) msss
KFYK	A	B	C	D	E	F	G	H	I	J	K	Y	Z	
KFYK-2	2	20	4	16	5H	M3 深5	φ 2.8	1.2	11	11		0.5		3
KFYK-3.5	3.5	20	4	16	5H	M3 深5	φ 2.8	1.2	11	11		0.5		3
KFYK-5	5	29	6.5	22.5	10H	M4 深6	5	3	21	13	10	0.8		16
KFYK-8	8	29.5	7	22.5	10H	M4 深6	5	3	21	13	10	1.2		16
KFYK-10	10	30	7.5	22.5	10H	M4 深6	5	3	21	13	10	1.5		16
KFYK-15	15	30	8	22	10H	M4 深6	5	3	21	14	10	1.9	M5	20
KFYK-20	20	32	10	22	10H	M4 深6	5	3	21	14	10	2.3	M5	20
KFYK-25	25	46	14	32	14H	M6 深8	5	3	23	20	12	3.0	M6	40
KFYK-30	30	44	12	32	14H	M6 深8	5	3	23	20	12	2.0	M6	40
KFYK-35	35	46	14	32	14H	M6 深8	5	3	23	20	12	3.0	M6	40
KFYK-40	40	46	14	32	14H	M6 深8	5	3	23	20	12	3.5	M6	50
KFYK-50	50	47	15	32	14H	M6 深8	5	3	23	20	12	4.0	M8	55
KFYK-60	60	58.5	18.5	40	21H	M8 深11	Rc1/8	5		28	17	5.0	M10×P1.25	120
KFYK-80	80	60.5	20.5	40	21H	M8 深11	Rc1/8	5		28	17	6.0	M10×P1.25	160
KFYK-95	93	61	21	40	21H	M8 深11	Rc1/8	5		28	17	6.0	M10×P1.25	210

· "E"尺寸欄的H為六角形的對邊尺寸
H of the "E" is diagonal of hexagon.

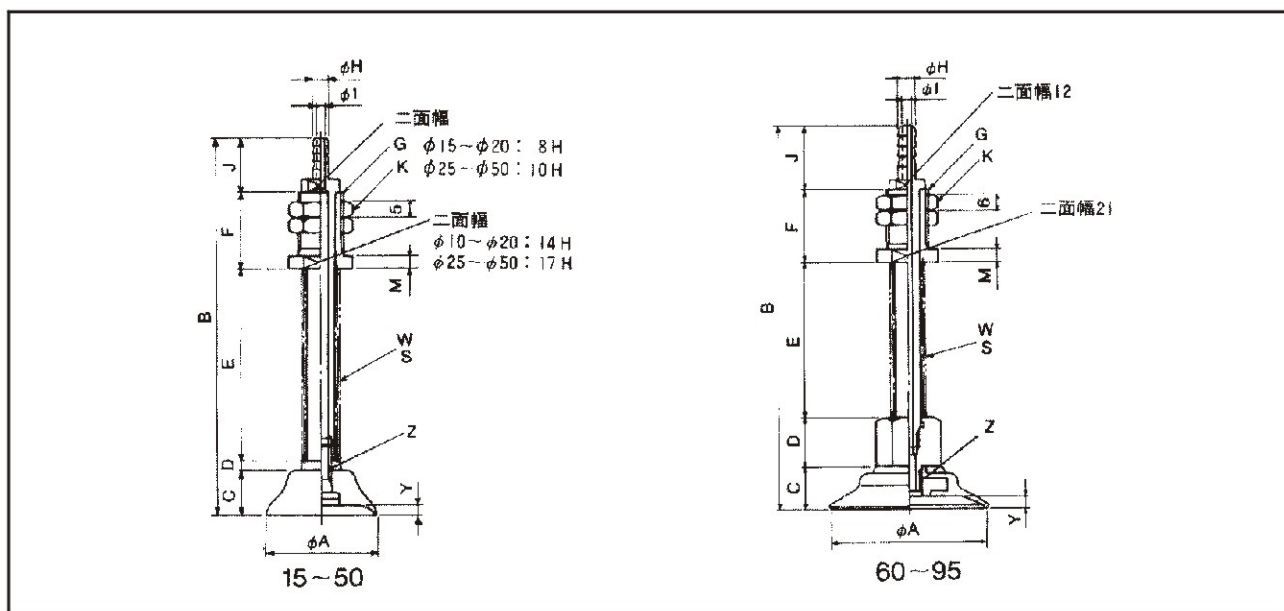


KFTS



(mm)

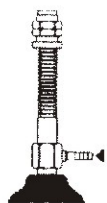
KFTS	A	B	C	D	E	F	G	H	I	J	K	M	W(N)	S	Y	Z	重量(g) msss
KFTS-2-2.5	2	28.5	4	1.4	5.1	8	M5×P0.5	φ2.8	1.2	10	7H		0.78	2.5	0.5		8
KFTS-2-5	2	33.5	4	1.4	10.1	8	M5×P0.5	φ2.8	1.2	10	7H		0.78	5	0.5		8
KFTS-3.5-2.5	3.5	28.5	4	1.4	5.1	8	M5×P0.5	φ2.8	1.2	10	7H		0.78	2.5	0.5		8
KFTS-3.5-5	3.5	33.5	4	1.4	10.1	8	M5×P0.5	φ2.8	1.2	10	7H		0.78	5	0.5		8
KFTS-5-3	5	37.5	6.5	2	6	13	M9×P1	5	2.2	10	12H	2	0.98	3	0.8		13
KFTS-5-10	5	51.5	6.5	2	20	13	M9×P1	5	2.2	10	12H	2	0.98	10	0.8		16
KFTS-5-15	5	61.5	6.5	2	30	13	M9×P1	5	2.2	10	12H	2	0.98	15	0.8		17
KFTS-5-25	5	81.5	6.5	2	50	13	M9×P1	5	2.2	10	12H	2	0.98	25	0.8		21
KFTS-8-3	8	38	7	2	6	13	M9×P1	5	2.2	10	12H	2	0.98	3	1.2		13
KFTS-8-10	8	52	7	2	20	13	M9×P1	5	2.2	10	12H	2	0.98	10	1.2		16
KFTS-8-15	8	62	7	2	30	13	M9×P1	5	2.2	10	12H	2	0.98	15	1.2		17
KFTS-8-25	8	82	7	2	50	13	M9×P1	5	2.2	10	12H	2	0.98	25	1.2		21
KFTS-10-4	10	56.5	7.5	3	8	19	M11×P1	5	3	19	14H	3	2.94	4	1.5		26
KFTS-10-10	10	68.5	7.5	3	20	19	M11×P1	5	3	19	14H	3	2.94	10	1.5		31
KFTS-10-20	10	88.5	7.5	3	40	19	M11×P1	5	3	19	14H	3	2.94	20	1.5		34
KFTS-10-30	10	108.5	7.5	3	60	19	M11×P1	5	3	19	14H	3	2.94	30	1.5		41
KFTS-15-4	15	54	8	3	8	19	M11×P1	5	3	16	14H	3	2.94	4	1.9	M5	28
KFTS-15-10	15	66	8	3	20	19	M11×P1	5	3	16	14H	3	2.94	10	1.9	M5	31
KFTS-15-20	15	86	8	3	40	19	M11×P1	5	3	16	14H	3	2.94	20	1.9	M5	36
KFTS-15-30	15	106	8	3	60	19	M11×P1	5	3	16	14H	3	2.94	30	1.9	M5	42
KFTS-20-4	20	56	10	3	8	19	M11×P1	5	3	16	14H	3	2.94	4	2.3	M5	28
KFTS-20-10	20	68	10	3	20	19	M11×P1	5	3	16	14H	3	2.94	10	2.3	M5	33
KFTS-20-20	20	88	10	3	40	19	M11×P1	5	3	16	14H	3	2.94	20	2.3	M5	38
KFTS-20-30	20	108	10	3	60	19	M11×P1	5	3	16	14H	3	2.94	30	2.3	M5	43
KFTS-25-6	25	71	14	3	13	24	M14×P1.5	5	3	17	17H	4	3.92	6	3.0	M6	55
KFTS-25-15	25	88	14	3	30	24	M14×P1.5	5	3	17	17H	4	3.92	15	3.0	M6	60
KFTS-25-30	25	118	14	3	60	24	M14×P1.5	5	3	17	17H	4	3.92	30	3.0	M6	73
KFTS-25-50	25	158	14	3	100	24	M14×P1.5	5	3	17	17H	4	3.92	50	3.0	M6	89
KFTS-30-6	30	69	12	3	13	24	M14×P1.5	5	3	17	17H	4	3.92	6	2.0	M6	55
KFTS-30-15	30	86	12	3	30	24	M14×P1.5	5	3	17	17H	4	3.92	15	2.0	M6	61
KFTS-30-30	30	116	12	3	60	24	M14×P1.5	5	3	17	17H	4	3.92	30	2.0	M6	73
KFTS-30-50	30	156	12	3	100	24	M14×P1.5	5	3	17	17H	4	3.92	50	2.0	M6	90
KFTS-35-6	35	71	14	3	13	24	M14×P1.5	5	3	17	17H	4	8.8	6	3.0	M6	55
KFTS-35-15	35	88	14	3	30	24	M14×P1.5	5	3	17	17H	4	8.8	15	3.0	M6	64
KFTS-35-30	35	118	14	3	60	24	M14×P1.5	5	3	17	17H	4	8.8	30	3.0	M6	76
KFTS-35-50	35	158	14	3	100	24	M14×P1.5	5	3	17	17H	4	8.8	50	3.0	M6	93



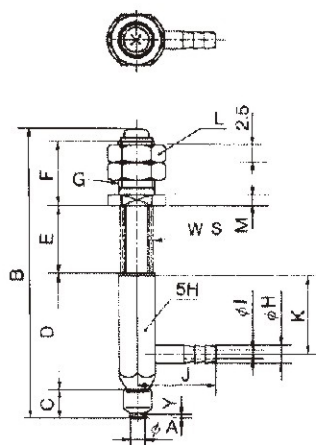
(mm)

KFTS	A	B	C	D	E	F	G	H	I	J	K	M	W(N)	S	Y	Z	重量(g) msss
KFTS-40-6	40	71	14	3	13	24	M14×P1.5	5	3	17	17H	4	8.8	6	3.5	M6	55
KFTS-40-15	40	88	14	3	30	24	M14×P1.5	5	3	17	17H	4	8.8	15	3.5	M6	66
KFTS-40-30	40	118	14	3	60	24	M14×P1.5	5	3	17	17H	4	8.8	30	3.5	M6	79
KFTS-40-50	40	158	14	3	100	24	M14×P1.5	5	3	17	17H	4	8.8	50	3.5	M6	95
KFTS-50-6	50	72	15	3	13	24	M14×P1.5	5	3	17	17H	4	8.8	6	4.0	M6	85
KFTS-50-15	50	89	15	3	30	24	M14×P1.5	5	3	17	17H	4	8.8	15	4.0	M6	75
KFTS-50-30	50	119	15	3	60	24	M14×P1.5	5	3	17	17H	4	8.8	30	4.0	M6	87
KFTS-50-50	50	159	15	3	100	24	M14×P1.5	5	3	17	17H	4	8.8	50	4.0	M6	103
KFTS-60-10	60	110.5	18.5	19	20	28	M16×P1.5	7	4.5	25	21H	5	9.8	10	5.0	M10×P1.25	172
KFTS-60-30	60	150.5	18.5	19	60	28	M16×P1.5	7	4.5	25	21H	5	9.8	30	5.0	M10×P1.25	196
KFTS-60-50	60	190.5	18.5	19	100	28	M16×P1.5	7	4.5	25	21H	5	9.8	50	5.0	M10×P1.25	214
KFTS-60-70	60	230.5	18.5	19	140	28	M16×P1.5	7	4.5	25	21H	5	9.8	70	5.0	M10×P1.25	238
KFTS-80-10	80	112.5	20.5	19	20	28	M16×P1.5	7	4.5	25	21H	5	9.8	10	6.0	M10×P1.25	208
KFTS-80-30	80	152.5	20.5	19	60	28	M16×P1.5	7	4.5	25	21H	5	9.8	30	6.0	M10×P1.25	233
KFTS-80-50	80	192.5	20.5	19	100	28	M16×P1.5	7	4.5	25	21H	5	9.8	50	6.0	M10×P1.25	250
KFTS-80-70	80	233.5	20.5	19	140	28	M16×P1.5	7	4.5	25	21H	5	9.8	70	6.0	M10×P1.25	275
KFTS-95-10	93	113	21	19	20	28	M16×P1.5	7	4.5	25	21H	5	9.8	10	6.0	M10×P1.25	241
KFTS-95-30	93	153	21	19	60	28	M16×P1.5	7	4.5	25	21H	5	9.8	30	6.0	M10×P1.25	265
KFTS-95-50	93	193	21	19	100	28	M16×P1.5	7	4.5	25	21H	5	9.8	50	6.0	M10×P1.25	283
KFTS-95-70	93	233	21	19	140	28	M16×P1.5	7	4.5	25	21H	5	9.7	70	6.0	M10×P1.25	307

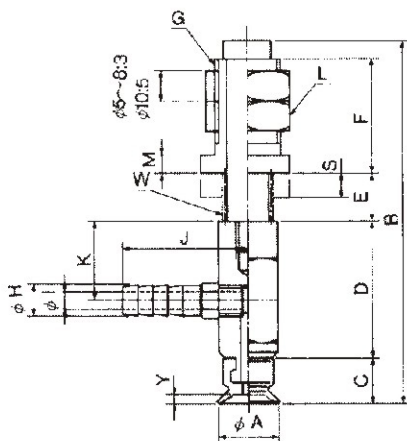
・表記"W"為行程1/2時，彈簧緩衝器之荷重。"S"為彈簧緩衝器之行程。
W : Spring load at midstroke S : Spring stroke



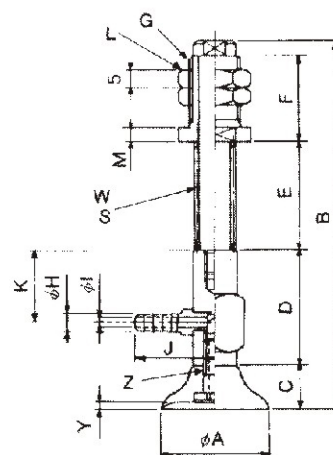
KFYS



2 · 3.5



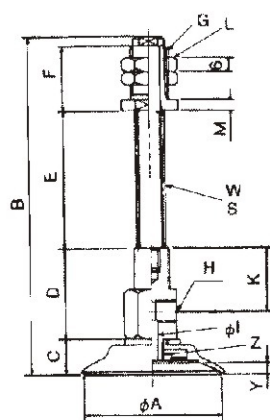
5 · 8 · 10



15 ~ 50

(mm)

KFYS	A	B	C	D	E	F	G	H	I	J	K	L	M	W(N)	S	Y	Z	重量(g) mass
KFYS-2-2.5	2	35.7	4	16.4	4.5	9	M5	φ2.8	1.2	11	11	7H	1.5	0.78	2.5	0.5		6
KFYS-2-5	2	40.7	4	16.4	9.5	9	M5	φ2.8	1.2	11	11	7H	1.5	0.78	5	0.5		7
KFYS-3.5-2.5	3.5	35.7	4	16.4	4.5	9	M5	φ2.8	1.2	11	11	7H	1.5	0.78	2.5	0.5		6
KFYS-3.5-5	3.5	40.7	4	16.4	9.5	9	M5	φ2.8	1.2	11	11	7H	1.5	0.78	5	0.5		7
KFYS-5-3	5	51	6.5	22.5	6	13	M9×P1	5	3	21	13	12H	2	0.98	3	0.8		28
KFYS-5-10	5	65	6.5	22.5	20	13	M9×P1	5	3	21	13	12H	2	0.98	10	0.8		31
KFYS-5-15	5	75	6.5	22.5	30	13	M9×P1	5	3	21	13	12H	2	0.98	15	0.8		33
KFYS-5-25	5	95	6.5	22.5	50	13	M9×P1	5	3	21	13	12H	2	0.98	25	0.8		38
KFYS-8-3	8	51.5	7	22.5	6	13	M9×P1	5	3	21	13	12H	2	0.98	3	1.2		28
KFYS-8-10	8	65.5	7	22.5	20	13	M9×P1	5	3	21	13	12H	2	0.98	10	1.2		31
KFYS-8-15	8	75.5	7	22.5	30	13	M9×P1	5	3	21	13	12H	2	0.98	15	1.2		33
KFYS-8-25	8	95.5	7	22.5	50	13	M9×P1	5	3	21	13	12H	2	0.98	25	1.2		38
KFYS-10-4	10	60	7.5	22.5	8	19	M11×P1	5	3	21	13	14H	3	2.94	4	1.5		43
KFYS-10-10	10	72	7.5	22.5	20	19	M11×P1	5	3	21	13	14H	3	2.94	10	1.5		48
KFYS-10-20	10	92	7.5	22.5	40	19	M11×P1	5	3	21	13	14H	3	2.94	20	1.5		55
KFYS-10-30	10	112	7.5	22.5	60	19	M11×P1	5	3	21	13	14H	3	2.94	30	1.5		62
KFYS-15-4	15	60	8	22	8	19	M11×P1	5	3	21	14	14H	3	2.94	4	1.9	M5	44
KFYS-15-10	15	72	8	22	20	19	M11×P1	5	3	21	14	14H	3	2.94	10	1.9	M5	48
KFYS-15-20	15	92	8	22	40	19	M11×P1	5	3	21	14	14H	3	2.94	20	1.9	M5	55
KFYS-15-30	15	112	8	22	60	19	M11×P1	5	3	21	14	14H	3	2.94	30	1.9	M5	63
KFYS-20-4	20	62	10	22	8	19	M11×P1	5	3	21	14	14H	3	2.94	4	2.3	M5	48
KFYS-20-10	20	74	10	22	20	19	M11×P1	5	3	21	14	14H	3	2.94	10	2.3	M5	80
KFYS-20-20	20	94	10	22	40	19	M11×P1	5	3	21	14	14H	3	2.94	20	2.3	M5	57
KFYS-20-30	20	114	10	22	60	19	M11×P1	5	3	21	14	14H	3	2.94	30	2.3	M5	64
KFYS-25-6	25	87	14	32	13	24	M14×P1.5	5	3	23	20	17H	4	3.92	6	3.0	M6	93
KFYS-25-15	25	104	14	32	30	24	M14×P1.5	5	3	23	20	17H	4	3.92	15	3.0	M6	102
KFYS-25-30	25	134	14	32	60	24	M14×P1.5	5	3	23	20	17H	4	3.92	30	3.0	M6	120
KFYS-25-50	25	174	14	32	100	24	M14×P1.5	5	3	23	20	17H	4	3.92	50	3.0	M6	143
KFYS-30-6	30	85	12	32	13	24	M14×P1.5	5	3	23	20	17H	4	3.92	6	2.0	M6	93
KFYS-30-15	30	102	12	32	30	24	M14×P1.5	5	3	23	20	17H	4	3.92	15	2.0	M6	103
KFYS-30-30	30	132	12	32	60	24	M14×P1.5	5	3	23	20	17H	4	3.92	30	2.0	M6	120
KFYS-30-50	30	172	12	32	100	24	M14×P1.5	5	3	23	20	17H	4	3.92	50	2.0	M6	145
KFYS-35-6	35	87	14	32	13	24	M14×P1.5	5	3	23	20	17H	4	8.8	6	3.0	M6	96
KFYS-35-15	35	104	14	32	30	24	M14×P1.5	5	3	23	20	17H	4	8.8	15	3.0	M6	105
KFYS-35-30	35	134	14	32	60	24	M14×P1.5	5	3	23	20	17H	4	8.8	30	3.0	M6	123
KFYS-35-50	35	174	14	32	100	24	M14×P1.5	5	3	23	20	17H	4	8.8	50	3.0	M6	147



60 ~ 95

(mm)

KFYS	A	B	C	D	E	F	G	H	I	J	K	L	M	W(N)	S	Y	Z	重量(g) mass
KFYS-40-6	40	87	14	32	13	24	M14×1.5	5	3	23	20	17H	4	8.8	6	3.5	M6	99
KFYS-40-15	40	104	14	32	30	24	M14×1.5	5	3	23	20	17H	4	8.8	15	3.5	M6	108
KFYS-40-30	40	134	14	32	60	24	M14×1.5	5	3	23	20	17H	4	8.8	30	3.5	M6	126
KFYS-40-50	40	174	14	32	100	24	M14×1.5	5	3	23	20	17H	4	8.8	50	3.5	M6	149
KFYS-50-6	50	88	15	32	13	24	M14×1.5	5	3	23	20	17H	4	8.8	6	4.0	M8	103
KFYS-50-15	50	105	15	32	30	24	M14×1.5	5	3	23	20	17H	4	8.8	15	4.0	M8	112
KFYS-50-30	50	135	15	32	60	24	M14×1.5	5	3	23	20	17H	4	8.8	30	4.0	M8	130
KFYS-50-50	50	175	15	32	100	24	M14×1.5	5	3	23	20	17H	4	8.8	50	4.0	M8	154
KFYS-60-10	60	110.5	18.5	40	20	28	M16×1.5	Rc1/8	5		28	21H	5	9.8	10	5.0	M10×P1.25	211
KFYS-60-30	60	150.5	18.5	40	60	28	M16×1.5	Rc1/8	5		28	21H	5	9.8	30	5.0	M10×P1.25	187
KFYS-60-50	60	190.5	18.5	40	100	28	M16×1.5	Rc1/8	5		28	21H	5	9.8	50	5.0	M10×P1.25	217
KFYS-60-70	60	230.5	18.5	40	140	28	M16×1.5	Rc1/8	5		28	21H	5	9.8	70	5.0	M10×P1.25	247
KFYS-80-10	80	112.5	20.5	40	20	28	M16×1.5	Rc1/8	5		28	21H	5	9.8	10	6.0	M10×P1.25	248
KFYS-80-30	80	152.5	20.5	40	60	28	M16×1.5	Rc1/8	5		28	21H	5	9.8	30	6.0	M10×P1.25	223
KFYS-80-50	80	192.5	20.5	40	100	28	M16×1.5	Rc1/8	5		28	21H	5	9.8	50	6.0	M10×P1.25	253
KFYS-80-70	80	232.5	20.5	40	140	28	M16×1.5	Rc1/8	5		28	21H	5	9.8	70	6.0	M10×P1.25	283
KFYS-95-10	93	113	21	40	20	28	M16×1.5	Rc1/8	5		28	21H	5	9.8	10	6.0	M10×P1.25	280
KFYS-95-30	93	153	21	40	60	28	M16×1.5	Rc1/8	5		28	21H	5	9.8	30	6.0	M10×P1.25	255
KFYS-95-50	93	193	21	40	100	28	M16×1.5	Rc1/8	5		28	21H	5	9.8	50	6.0	M10×P1.25	286
KFYS-95-70	93	233	21	40	140	28	M16×1.5	Rc1/8	5		28	21H	5	9.8	70	6.0	M10×P1.25	315

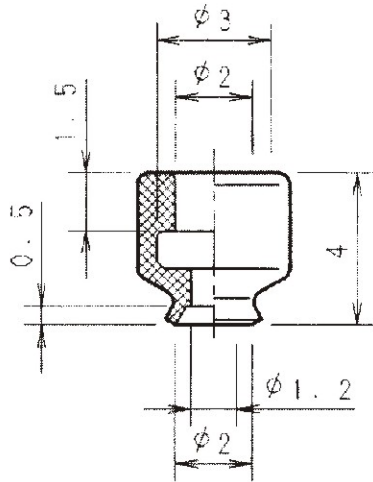
・表記"W"為行程1/2時，彈簧緩衝器之荷重。"S"為彈簧緩衝器之行程。

W : Spring load at midstroke S : Spring stroke

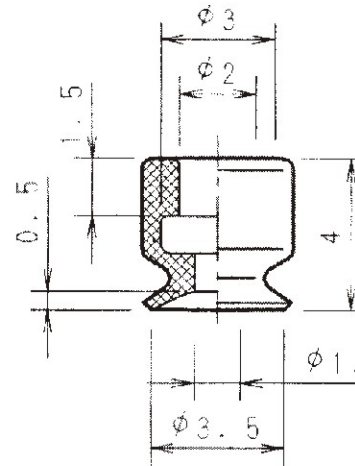
VACUUM PAD KFG

Unit : mm

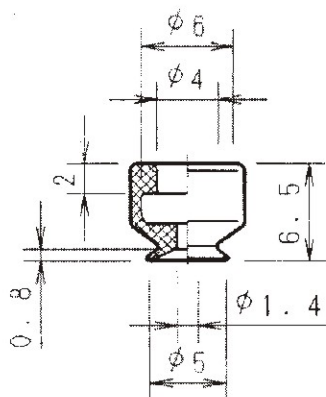
KFG-2 (縮小率 5/1)



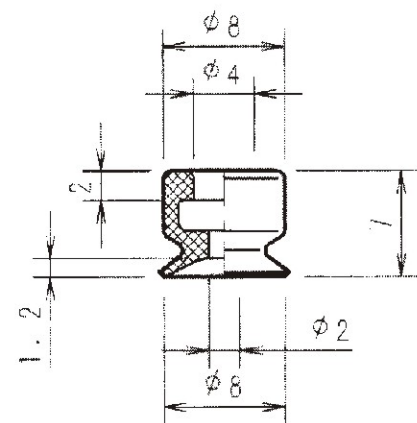
KFG-3.5 (縮小率 5/1)



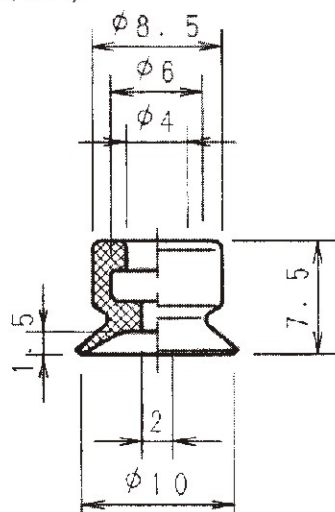
KFG-5 (縮小率 2/1)



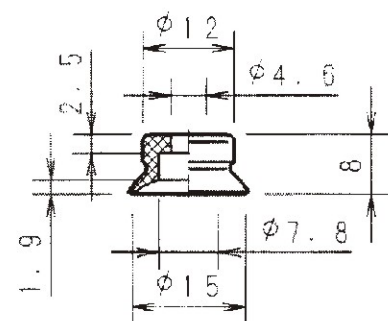
KFG-8 (縮小率 2/1)



KFG-10 (縮小率 2/1)



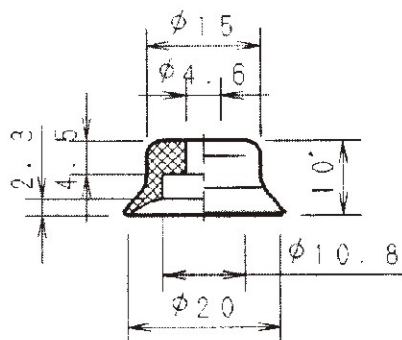
KFG-15 (縮小率 1/1)



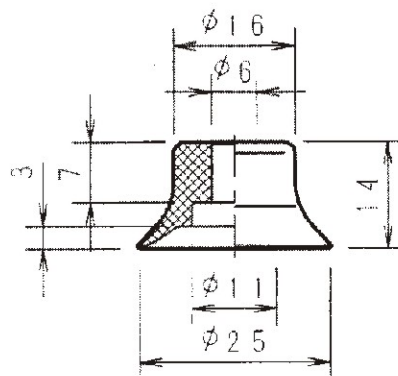
VACUUM PAD KFG

Unit : mm

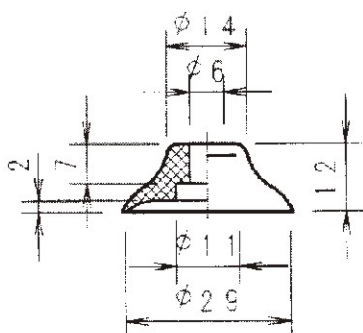
KFG-20 (縮小率 1/1)



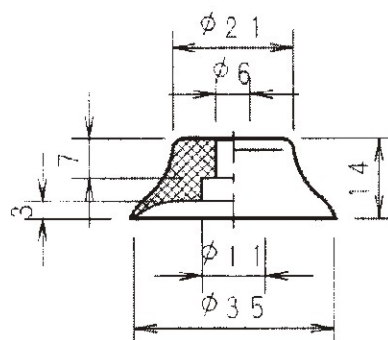
KFG-25 (縮小率 1/1)



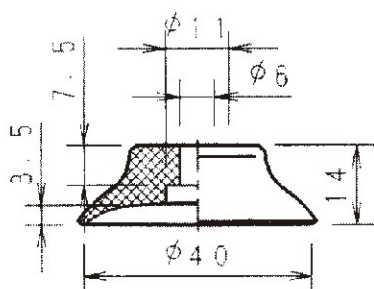
KFG-30 (縮小率 3/4)



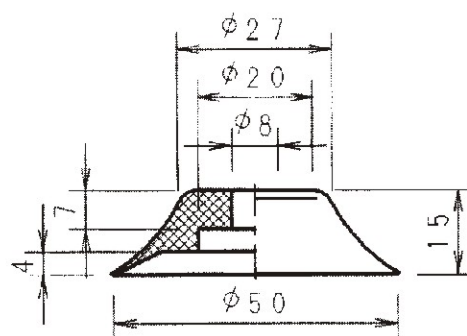
KFG-35 (縮小率 3/4)



KFG-40 (縮小率 3/4)



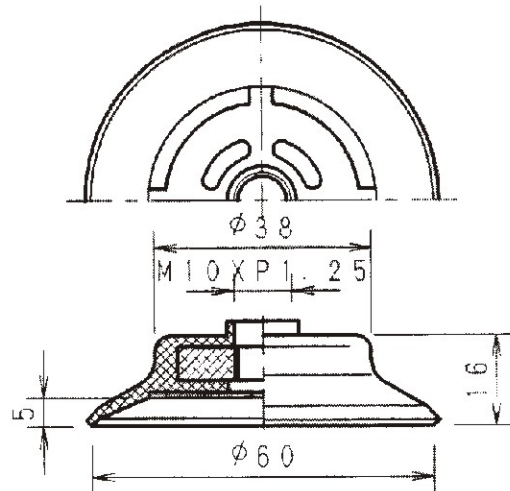
KFG-50 (縮小率 3/4)



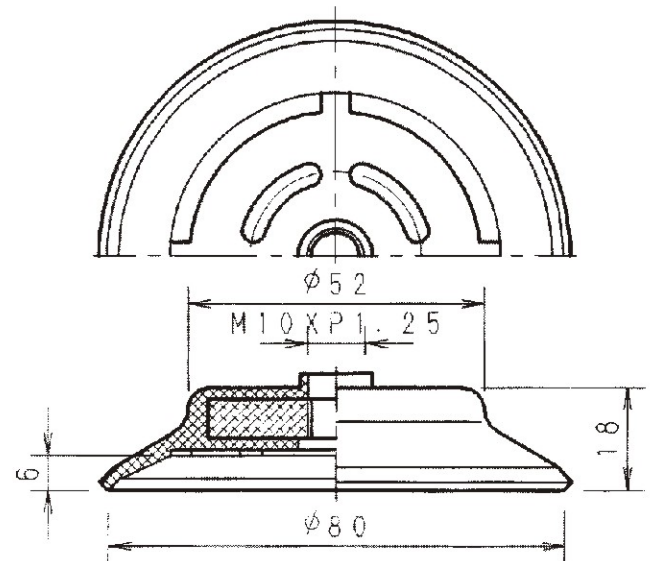
VACUUM PAD KFG

Unit : mm

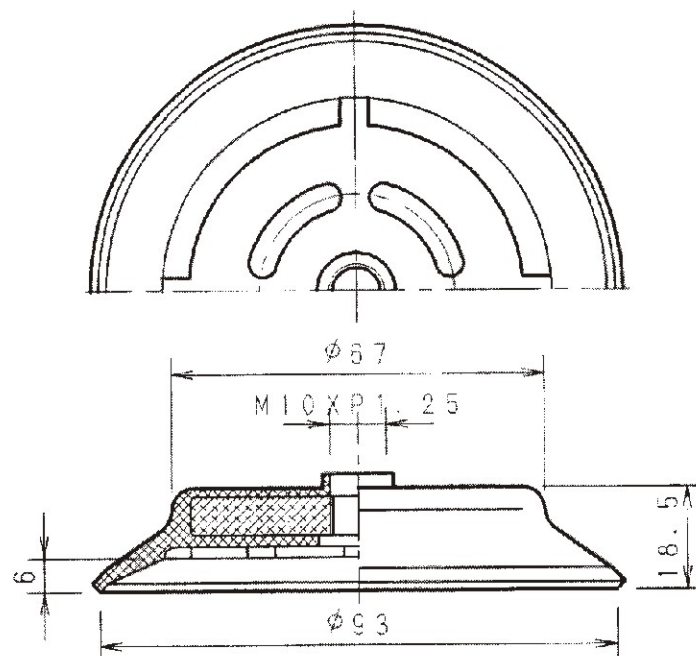
KFG-60 (縮小率 3/4)



KFG-80 (縮小率 3/4)



KFG-95 (縮小率 3/4)



■換算表 Conversion table

1in Hg = 25.4mmHg	1mmHg = 0.03937 inHg
1OZ = 28.35 g	1g = 0.03527 OZ
1psi = 0.07kgf/cm ²	1kgf/cm ² = 14.22psi
1scfm = 28.32 l/min (ANR)	1l/min(ANR) = 35.31X10 ⁻³ scfm
1kpa = 7.5mmHg	1mmHg = 0.133kpa
Fahrenheit = 9/5 C+32	Centigradet=5/9 (F-32)

■真空到達時間 Vacuum response time

$$t = \left(\frac{V}{C} \right)^{\frac{1}{\alpha}}$$

t(s) : 真空到達時間 response time

V(1) : 真空系内容積 total volume of air to be evacuated

C(1), α(1) : 真空度係數，見附表 ejector coefficient, see table

■係數表 Coefficient table

型式 Model	真空度係數 coefficient C for vacuum degree						α
	-39.9kpa [-300mmHg]	-46.6kpa [-350mmHg]	-53.2kpa [-400mmHg]	-66.5kpa [-500mmHg]	-79.8kpa [-600mmHg]	-86.5kpa [-650mmHg]	
05HS	0.19		0.12	0.08	0.05	0.03	1.02
10HS	0.83		0.50	0.33	0.20	0.12	1.09
15HS	2.20		1.40	0.83	0.48	0.32	1.09
20HS	3.80		2.30	1.45	0.86	0.62	1.09
05LS	0.26	0.18	0.11				1.06
10LS	0.90	0.60	0.25				1.09
15LS	2.30	1.60	0.74				1.09
20LS	3.60	2.40	1.00				1.09
10HR	0.82		0.46	0.26	0.13	0.08	1.06
15HR	1.75		1.10	0.65	0.39	0.24	1.06
20HR	2.85		1.75	1.00	0.58	0.37	1.17
10LR	0.82	0.52	0.27				1.17
15LR	2.30	1.50	0.76				1.17
20LR	3.50	2.40	1.20				1.17

技術資料 TECHNOLOGY DATA

■ 吊上能力計算式(kpa表示) Calculating lift capacity

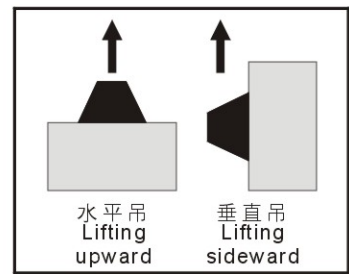
$$W = \frac{P \times C}{101} \times f \times (10.13)$$

W : 吊上能力(N) Lift capacity
P : 真空度(kpa) Degree of vacuum
C : 吸盤的吸著面積 (cm²) Area of pad surface
f : 安全係數(1/安全率) Safety factor

■ 吊上能力計算式(mmHg表示) Calculating lift capacity

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

W : 吊上能力(kgf) Lift capacity
P : 真空度(mmHg) Degree of vacuum
C : 吸盤的吸著面積(cm²) Area of pad surface
f : 安全係數 : (1/安全率) Safety factor



- 安全係數(1/安全率), 水平向上吊設定在4以上, 垂直向上吊設定8以上, 請配合使用條件, 正確的計算。
- 往上吊後移動時, 因為加速度造成荷重的關係, 需充分的考慮安全率。
- Safety factor, Lifting upward × 4, Lifting sideways × 8.
- Lifting upward and move should be greater than the values listed above.

- 吸著狀態中的吸盤面面積, 請把吸盤徑加10%。
- 工作若為傾斜狀態, 則會有一邊的吸著力較低, 請注意工作之重心位置。
- When a pad applies suction to a workpiece its diameter increases approximately 10%.
- If workpiece is incline please consider workpiece center of gravity.

● 圓形吸盤理論吊上能力表 Round Pads Theoretical Lift Capacity

f=1 N[kgf]

吸盤徑(φ) pad dia	2	3.5	5	8	10	15	20	25	30	35	40	50	60	80	95
吸著面積(cm ²) pad area	0.031	0.096	0.196	0.502	0.785	1.767	3.141	4.908	7.068	9.621	12.56	19.63	28.27	50.26	70.88
-93.3kpa [-700mmHg]	0.293 [0.029]	0.900 [0.091]	1.837 [0.186]	4.703 [0.478]	7.349 [0.747]	16.35 [1.681]	29.39 [2.989]	45.93 [4.670]	66.14 [6.725]	90.03 [9.153]	117.5 [11.95]	183.7 [18.68]	264.5 [26.90]	470.3 [47.82]	663.2 [67.44]
-80.8kpa [-600mmHg]	0.254 [0.025]	0.779 [0.078]	1.591 [0.160]	4.073 [0.409]	6.364 [0.640]	14.32 [1.441]	25.45 [2.562]	39.78 [4.003]	57.28 [5.764]	77.96 [7.846]	101.8 [10.24]	159.1 [16.01]	229.1 [23.05]	407.3 [40.99]	574.4 [57.80]
-66.7kpa [-500mmHg]	0.210 [0.021]	0.648 [0.065]	1.313 [0.133]	3.362 [0.341]	5.254 [0.533]	11.82 [1.200]	21.01 [2.135]	32.83 [3.336]	47.28 [4.803]	64.36 [6.358]	84.06 [8.540]	131.3 [13.34]	189.1 [19.21]	336.2 [34.16]	474.1 [48.17]
-53.4kpa [-400mmHg]	0.168 [0.017]	0.515 [0.052]	1.051 [0.106]	2.692 [0.273]	4.206 [0.427]	9.464 [0.960]	16.82 [1.708]	26.29 [2.668]	37.85 [3.843]	51.52 [5.230]	67.30 [6.832]	105.1 [10.67]	151.4 [15.37]	269.2 [27.32]	379.6 [38.53]
-40.0kpa [-300mmHg]	0.126 [0.012]	0.385 [0.039]	0.787 [0.080]	2.016 [0.204]	3.150 [0.320]	7.089 [0.720]	12.60 [1.281]	19.69 [2.001]	28.35 [2.882]	38.59 [3.923]	50.41 [5.124]	78.77 [8.006]	113.4 [11.52]	201.6 [20.49]	284.3 [28.90]

● 吸盤材質特性分類表 Pad materials and their propertiest capacity

代 號	材 質	顏 色	使 用 溫 度	硬 度 HS	抗 拉 強 度	延 展 性	耐 油 性 (機 械 油)	耐 油 性 (苯 油)	耐 臭 氧 性	耐 藥 品 性	耐 磨 耗 性	耐 張 裂 性	電 氣 絕 緣 性	金 屬 接 著 性	耐 瓦 斯 透 過	耐 日 光 性
N	NBR	黑 Black	-26~120℃	50°~90°	◎	◎	◎	△	○	◎	○	○	○	○	○	×
S	Silicon	乳白 White	-60~250℃	54°~80°	△	○	△	△	○	◎	×	×	◎	×	△	◎
U	Urethan	綠 Green	-20~75℃	50°~80°	◎	◎	◎	○	◎	◎	◎	◎	◎	△	◎	◎
F	FPM	藍 Blue	-10~230℃	58°~90°	◎	○	◎	◎	◎	◎	○	○	◎	△	○	◎

NBR : 一般橡膠材質
Silicon : 矽膠材質
Urethan : 氨基甲酸乙脂材質
FPM : 氟素材質

◎ : 最適用
○ : 條件下使用可
△ : 不適宜
× : 使用不可

Excellent
Acceptable in some cases
Substandard
Unacceptable