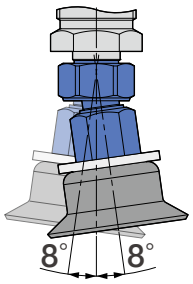
PISCO® Hot NEWS

No, NP 67-01

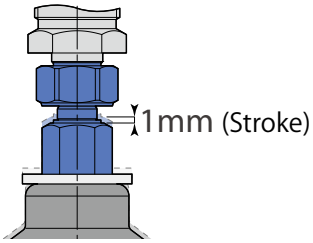
Suitable for lifting workpieces with sloping and curved surfaces

Flexible Swing Joint for vacuum pads

- Vacuum pad conforms to the angled surface of workpiece for stable suctioning.

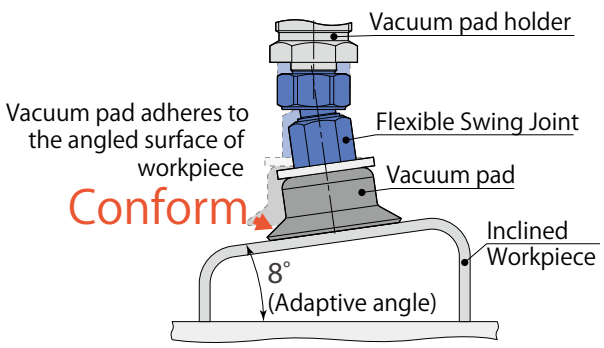


- 1mm stroke cushions the impact of contacting the workpiece.

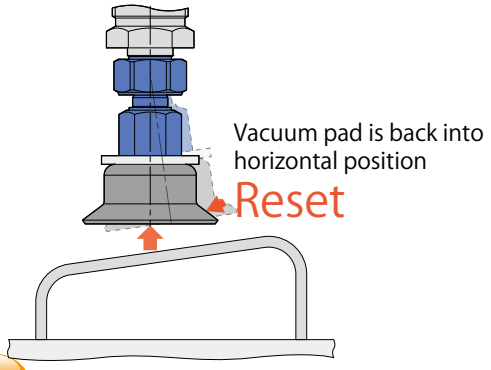


- Internal spring resets Vacuum pad to horizontal position. Orientation of the Vacuum pad stays the same with the workpiece surface during lifting.

■During lifting



■After discharging



Model Designation (Example)

CFH ① M4 ② −FM4 ③ ④

① . Flexible Swing Joint

④ . -S3 specification

Code	No code	−S3
Type	Standard	Metal parts: No copper based metallic material is used Sealing parts : FKM or NHBR

③ . Female thread port size

Code		−FM4	−FM5	−FM6
Size		M4×0.7	M5×0.8	M6×1
Connection type		Screw type (connection with screw)		
Connection configuration code		−M4	—	−M6
Pad size (mm), type code	ø4	L	—	—
	ø6	L, LB	—	—
	ø8	L, LB	—	—
	ø10	R, L, LB, K, B, W, F, FH	—	S
	ø15	R, A, L, LB, B, F, FH	—	S
	ø20	—	—	R, A, L, LB, K, B, W, F, FH, S
	ø25	—	—	R, A, B, F, FH, S
	ø30	—	—	R, A, L, K, B, W, F, FH, S
	ø35	—	—	S
	ø40	—	—	R, A, L, K, B, W
	ø50	—	—	R, A, K, B, W, S
	2×4	—	—	E
	3.5×7	—	—	E
	4×10	—	—	E
	4×20	—	—	E
	4×30	—	—	E
	5×10	—	—	E
	5×20	—	—	E
	5×30	—	—	E
	6×10	—	—	E
	6×20	—	—	E
	6×30	—	—	E
	8×20	—	—	E
	8×30	—	—	E

* The details of Vacuum pad type codes are as follows.
R: Standard General, A: Standard Deep, L: Soft, LB: Soft bellows,
K: Skidproof, B: Bellows, W: Multi-bellows, F: Flat,
FH: Flat large suction flow, S: Sponge, E: Oval

② . Male thread port size

Code	M4	M5	M6
Size	M4×0.7	M5×0.8	M6×1
Connection type	Screw type (Connection with screw)		
Connection configuration code	−M4	—	−M6

⚠ Safety instructions

⚠ Caution 1. Depending on usage, the inside of Flexible Swing Joint may wear out due to its structure. When using the product in clean-room, make sure in advance that dust emission from the abrasion does not affect the product and production line.

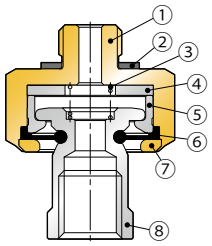
2. There is no anti-rotation structure between this product and the vacuum pad. Please note that this product is not suitable for rotary transport.
3. Special stainless steel used in this product is not intended for rust prevention. Rust may occur depending on the operating environment.
4. When attaching the product on the actual equipment or pad holder, be sure to tighten the thread according to the torque in the following table with appropriate tools and that there is no looseness.

Thread size	Tightening torque (N·m)
M4×0.7	0.7~0.8
M5×0.8	1~1.5
M6×1	1.5~2.0

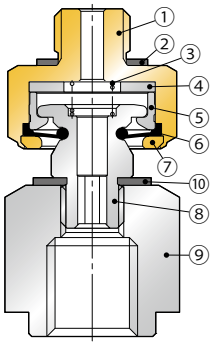
Specifications

Fluid medium	Air
Operating vacuum pressure (kPa)	**0 to -100**
Operating temp. range (°C)	**0 to 60** (No freezing)

Structure



CFH□-FM4 (-S3) or
CFH□-FM5 (-S3)



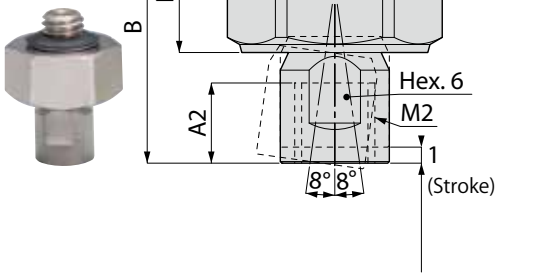
CFH□-FM6 (-S3)

No.	Parts	Material/ Treatment	
		Standard specification	-S3 specification
①	Metallic body	Brass (Electroless nickel-plated)	Special stainless steel (Austenitic or Ferritic) *1
②	Gasket	SPCC + NBR (Pad connection config. code: -M4)	SUS316 + FKM
		SUS304 + NBR (Pad connection config. code: -M5)	
		SUS304 + NBR (Pad connection config. code: -M6)	
③	Spring	SUS304	
④	Spacer	SUS304 + Nitriding	
⑤	Weight block (Retainer)	Special stainless steel *1 + Nitriding	
⑥	Diaphragm	FKM	
⑦	Plate	Brass (Electroless nickel-plated)	Special stainless steel (Austenitic or Ferritic) *1
⑧	Pad Guide *2	Special stainless steel *1 + Nitriding	
⑨	Screw adapter	Brass (Electroless nickel-plated)	Special stainless steel (Austenitic or Ferritic) *1
⑩	Gasket	SPCC + NBR	SUS316 + FKM

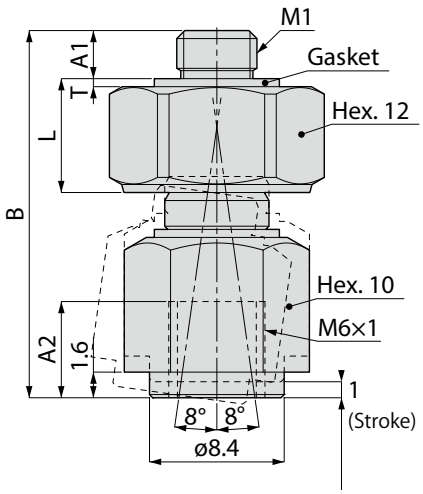
*1 Anti-corrosivity is equivalent to SUS303.
*2 A pad guide for M4 or M5 connection type is female threaded for a vacuum pad with mounting screw connection.

Exterior dimensional drawings

CFH 2 3 4



CFH 2 -FM6 4



Unit: mm

Model code	M1	M2	A1	A2	B	L	T	Weight (g)	Price (¥) 4 : No code	Price (¥) 4 : -S3	Connection config. code
CFHM4-FM4 4	M4×0.7	M4×0.7	2.9[3]	4	16	7.2[7.1]	0.6[0.5]	6.1	2,100	3,100	−M4
CFHM4-FM5 4		M5×0.8		5	17				2,100	3,100	—
CFHM5-FM4 4	M5×0.8	M4×0.7	3	4	16	7.1	0.5	6.1	2,100	3,100	−M4
CFHM5-FM5 4		M5×0.8		5	17				2,100	3,100	—
CFHM5-FM6 4		M6×1		6	22.9			12	2,600	3,600	−M6
CFHM6-FM5 4	M6×1	M5×0.8	4	5	18	7.1	0.5	6.4	2,100	3,100	—
CFHM6-FM6 4		M6×1		6	23.9			12	2,600	3,600	−M6

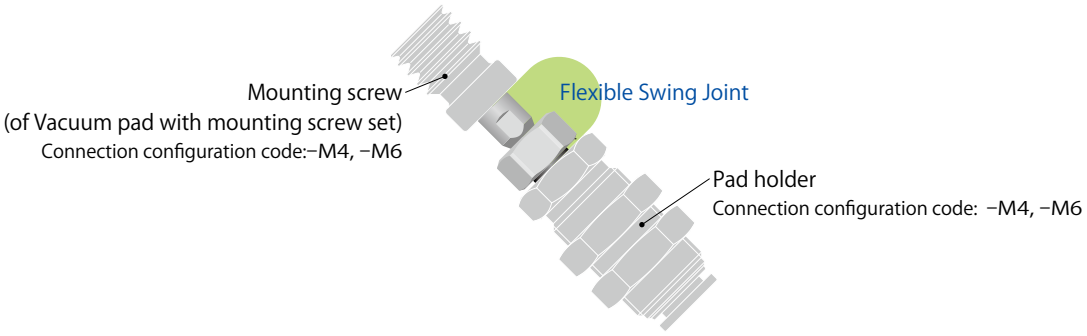
* The dimensions in the brackets [ ] are for -S3 specification.

Applicable vacuum pad types and sizes

Pad type / Flexible Swing Joint model code	Standard		Soft	Soft Bellows	Skidproof	Bellows	Multi-bellows
	General	Deep					
							
	Pad dia./size (mm)						
CFHM4–FM4	ø10, ø15	ø15	ø4~ø15	ø6~ø15	ø10	ø10, ø15	ø10
CFHM6–FM6	ø20~ø50		ø20~ø40	ø20	ø20~ø50	ø20~ø50	ø20~ø50

Pad type / Flexible Swing Joint model code	Flat	Flat large suction flow	Sponge	Oval
				
	Pad dia./size (mm)			
CFHM4–FM4	ø10, ø15		—	—
CFHM6–FM6	ø20~ø30		ø10~ø50	2×4~8×30

* The vacuum pads with mounting screw with M4 or M6 connection configuration code can be installed.



Applicable vacuum pad holder types

Pad holder type								
Miniature		VPMA	VPMB	—	VPMC	VPMD	—	—
Standard		VPA	VPB	—	VPC	VPD	—	VPF
		—	VPHE	VPHEW	VPHC	VPHD	VPHDW	—
No cover (Outer spring)		—	—	—	VPOC	VPOD	—	—
Low dust emission		—	—	—	VPLFC	—	—	—
Port position		Fixed type: Top	Fixed type: Side	Fixed type: Both sides	Spring type: Top	Spring type: Side	Spring type: Both sides	Spring type: Direct mount
Connection type: Screw								
Connection config. code	–M4	○	○	○	○	○	○	○
	–M6	○	○	○	○	○	○	○

* Pad holders with connection configuration codes in the above list can be installed.

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