

How to order

FPV – M5

Attachment screw (fitting side)

M5	M5 × 0.8
M6	M6 × 1.0
R1	R1/8
R2	R1/4
R3	R3/8
G1	G1/8
G2	G1/4
G3	G3/8
N1	1/8–27 NPT
N2	1/4–18 NPT
N3	3/8–18 NPT

Applicable pads and fittings

Reference	Applicable pad		
	Pad series		Setting screw
FPV–M5	PF10 ~ 20	PD4 ~ 20	TN–PF–15–M5
	PC15 ~ 20	PA10 ~ 20A	TN–PF–20–M5
	PJ10 ~ 25	PA10 ~ 20B	TN–PC–10–M5
	PB20		TN–PS–10–M5
FPV–M6	PF10 ~ 20	PD4 ~ 20	TN–PF–25–M6
	PC15 ~ 20	PA10 ~ 20A	TN–PF–50–M6
	PJ10 ~ 25	PA10 ~ 20B	TN–PC–30–M6
	PB20		TN–PA–30–M6
FPV–R1	PF15 ~ 50		
FPV–R2	PJ15 ~ 50		
FPV–R3			

Specifications

Description		Unit	FPV-M5	FPV-M6	FPV-R1 (FPV-G1) (FPV-N1)	FPV-R2 (FPV-G2) (FPV-N2)	FPV-R3 (FPV-G3) (FPV-N3)
Fluid			Non-lubricated air / non-corrosive gas				
Operating pressure range			-100kPa ~ 0.6MPa				
Min. operating vacuum (air) flow		ℓ /min(ANR)	10		15		
Ambient temperature		℃	0 ~ 60				
Filtration rate		μm	25				
Port size	Pad size		M5	M6	Rc1/8	Rc1/4	Rc3/8
	Fitting size		M5	M6	R1/8	R1/4	R3/8
Mass		g	6.5	7	12	16	24

Note 1) Minimum operating vacuum (air) flow is the value required at CONVUM ejector side (vacuum source).

Note 2) Check screws details at drawing section.

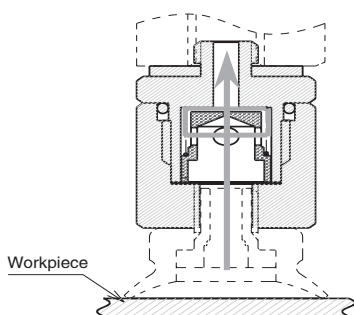
Note 3) Specifications are same for G and N threaded FPV check valves.

Operating principle

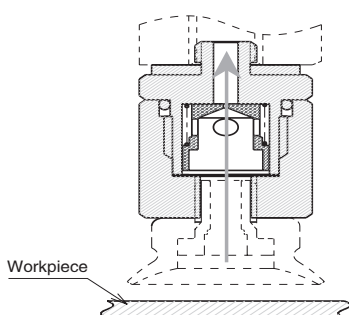
When contact with workpiece

When no contact with workpiece

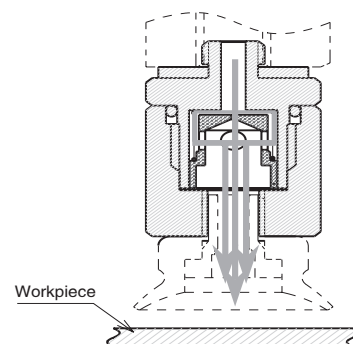
When releasing workpiece



When suction pad grips the workpiece, the valve inside the circuit is pushed down by the spring and the air flow path is released between the valve and the body.



When there is no suction or when the work has been released from the pad, air flows from pad side and push up the valve. It closes the air flow path and prevent vacuum drop from ejector side. The central fine orifice let keep sucking air a little.



When releasing the working with a blow-off, compressed air flows from the ejector side through the check valve circuit and push down the valve releasing the air flow path. It decreases the vacuum level and the work can be released.