

# Reaching ultra-high performance: response

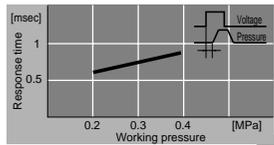
High frequency 2 port valve for compressed air, high frequency valve PJ Series - New high-performance ejector valve incorporating CKD original actuator structure and special resin materials having outstanding wearing resistance.

This, high frequency valve PJ series, is a 2 port solenoid valve that blows compressed air in combination with a pulse generating circuit. By incorporating a revolutionary and unique actuator structure and special resin material having high endurance and low wearing for the movable parts, etc., the performance is dramatically increased.

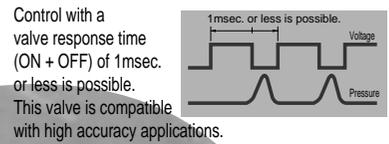
The large flow rate even with the thin 11 mm width, and a life more than one billion cycles are achieved at the maximum frequency of 1000Hz.

This ideal ejector valve meets customers' requirements for transfer and sorting devices at a high level.

**Jr.** Ultra-quick response: 1 msec. or less



**Jr.** Ultra response frequency: 1000Hz\*



\* Response frequency 1000Hz: Performance with 0.6 msec ON and 0.4 msec OFF voltage waveform at 0.2 MPa supply pressure.

## PULSEJET Jr.

Revolutionary actuator structure  
PAT.P

11 mm width slim size

Resin body with outstanding wearing resistance  
Special resin for eliminating wearing incorporated PAT.P

The tube mounting is a push-in joint.  
Easy exchangeable push in joint.

IN and OUT port with push-in joint

**Jr.** Long life: 1 billion cycles over

CKD original actuator structure and high-endurance, low-wear special resin for movable parts, etc., enable stable operation for more than one billion cycles.

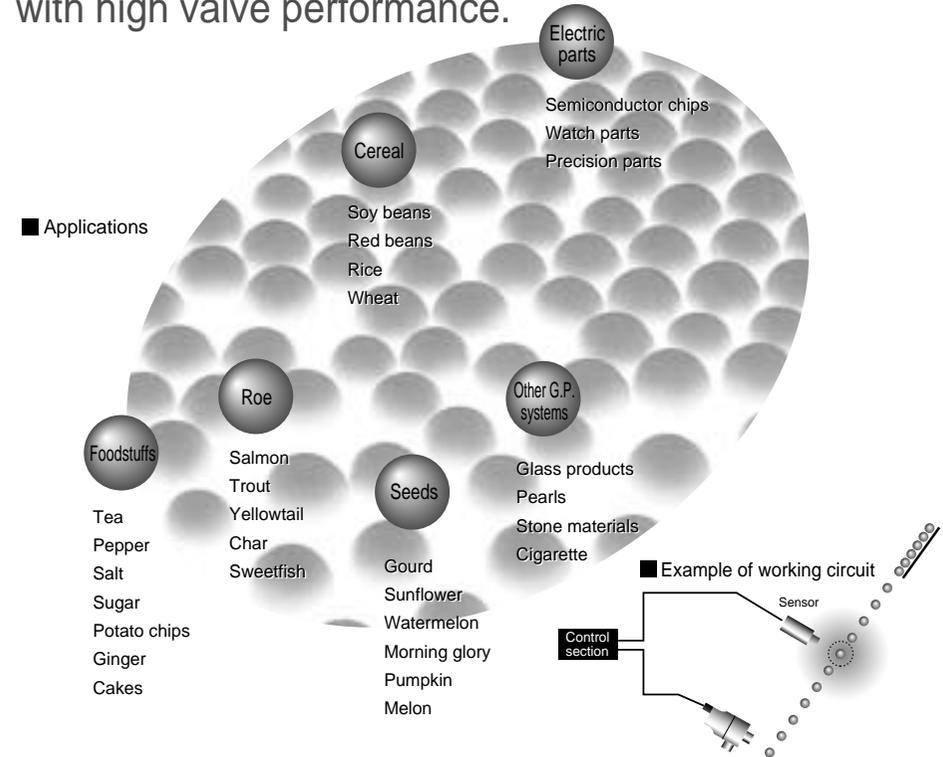
**Jr.** Ultra thin and large flow rate:

11mm wide,  
Flow characteristics C  
0.34 [dm<sup>3</sup>/(s·bar)]

\* Effective sectional area S and sonic conductance C are converted as  $S \cong 5.0 \times C$ .

# frequency 1000Hz\*, operation life 1 billion cycles

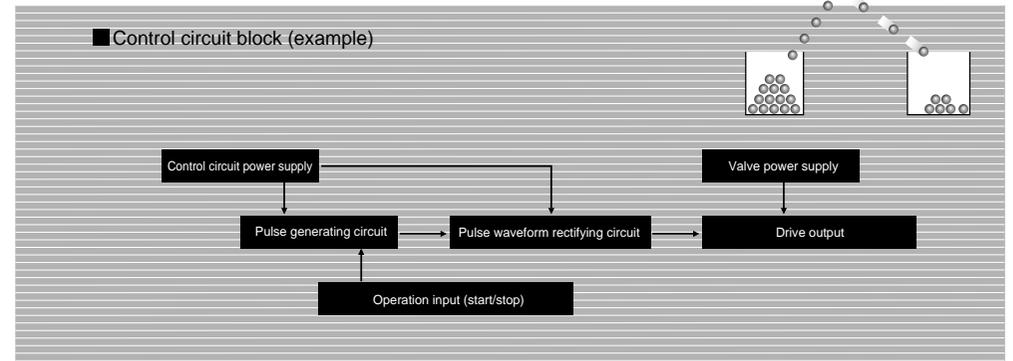
Enabling advanced and detailed sorting with high valve performance.



■ Applications

■ Example of working circuit

■ Control circuit block (example)

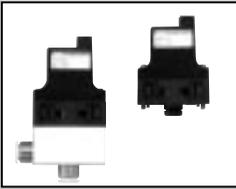


HNB/G  
USB/G  
FAB/G  
FGB/G  
FVB  
FWB/G  
FHB  
FLB  
AB  
AG  
AP/AD  
APK/  
ADK  
For  
dry air  
Explosion  
proof  
HVB/  
HVL  
SAB/  
SVB  
NP/NAP/  
NVP  
CHB/G  
MXB/G  
Other G.P.  
systems  
PD/FAD/  
PJ  
CVE/  
CVSE  
CPE/  
CPD  
Medical  
analysis  
Custom  
order

Air blow fluid control components

# Discontinue

High performance direct acting 2 port solenoid valve for compressed air



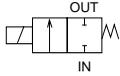
## PJ Series

- NC (normally closed) type
- Connection:  $\phi$  6 push-in joint



### JIS symbol

- NC (normally closed) type



### Specifications

Descriptions	PJ/GPJ
Working fluid	Compressed air
Working pressure range MPa	0.2 to 0.4
Fluid temperature °C	-10 to 40
Ambient temperature °C	-10 to 40
Valve seat leakage NI/min	1.5 or less (0.2MPa)
Mounting attitude	Free
Response time msec	1 or less
Work frequency Hz	200 or less (where following recommended voltage waveform.)
C[dm <sup>3</sup> /(s · bar)]	0.34
b	0.60
Electrical specifications	
Rated voltage	48 VDC short time rated
Recommended voltage waveform (*1)	<p>1msec 4 msec and over</p>
Coil resistance	20 $\Omega$ (20°C)
Heat proof class	H or equivalent

\*1: Voltage waveform is restricted by cycle rate etc. Consult with CKD when using other than above specifications.

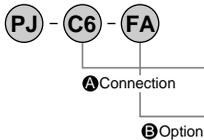
\*2: Effective sectional area S and sonic conductance C are converted as  $S \approx 5.0 \times C$ .

### PLC adaptor electric specifications

Descriptions	Descriptions	
Input	Rated voltage V	12-24 DC $\pm$ 10%
	Consumption current A	0.01 or less
	Contact type	NPN, PNP open collector
Continuous work frequency Hz	50 or less (ON: 1 msec, OFF: 19 msec. and over)	
Rated solenoid valve power supply	48 DC $\pm$ 5% ripple (P-P) 10% or less 3A and over	
Ambient temperature °C	-10 to 40	
Valve response time ms	1 or less	

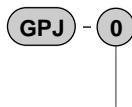
### How to order

- Discrete



Symbol	Descriptions
<b>A</b>	Connection
<b>C6</b>	$\phi$ 6 push-in joint
<b>B</b>	Option
<b>Blank</b>	No option
<b>FA</b>	PLC adaptor

- Actuator

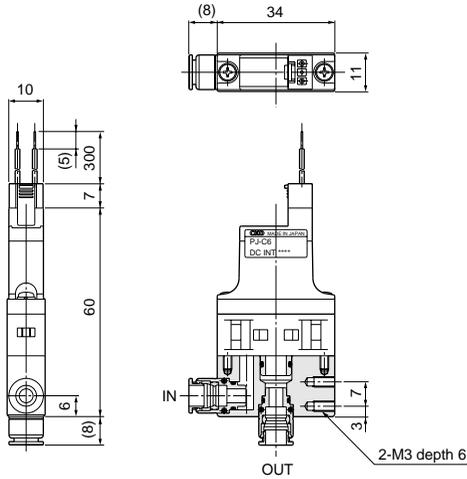


Actuator only

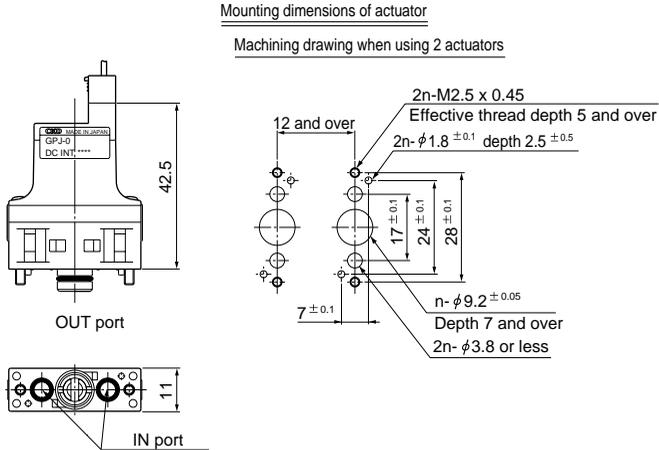
Note: In addition to discrete valve and actuator, manifold is available.

Dimensions  (Page 698)

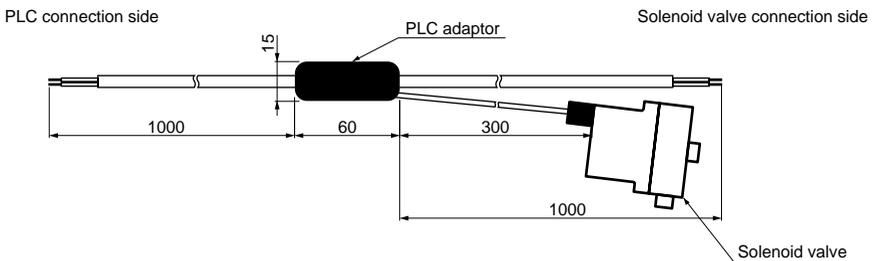
- PJ-C6 (discrete/  $\phi$  6 push-in joint)



- GPJ-0 (actuator)



- PJ-C6-FA (PLC adaptor)



HNB/G
USB/G
FAB/G
FGB/G
FVB
FWB/G
FHB
FLB
AB
AG
AP/AD
APK/ADK
For dry air
Explosion proof
HVB/HVL
SAB/SVB
NP/NAP/NVP
CHB/G
MXB/G
Other G.P. systems
<b>PD/FAD/PJ</b>
CVE/CVSE
CPE/CPD
Medical analysis
Custom order

Air blow fluid control components