

Pulsed Blow Valve BNP Series



Are you leaving
on-site costs
unaddressed?

Air reduction rate*1
75%



New

FP Series for Food Manufacturing Process

P4 Series for Rechargeable Battery Manufacturing added

*1 : Reference value based on CKD's test conditions.

Reducing with pulses,

Two convenient types to suit your application

Gun type BNP-G

Easy-to-aim with gun type

Blows air onto the workpiece with pinpoint precision.



Frequency adjustment knob

Easy frequency adjustment with one turn of the knob.



With needle protection cover

Easy-to-grip design

Easy to grip even with small hands ; requires little force, making it easy to handle.

Unit type BNP-U



Frequency adjustment knob

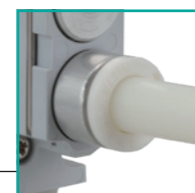
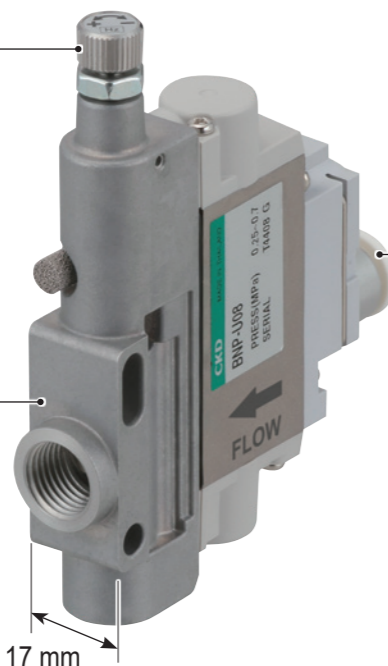
Easy frequency adjustment with one turn of the knob.

Free mounting direction

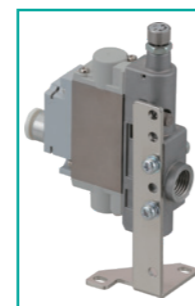
Mountable in any direction, allowing installation in any location.

Low-profile compact design

Low-profile design allows installation in tight spaces.



Push-in fitting on supply side
No power supply required



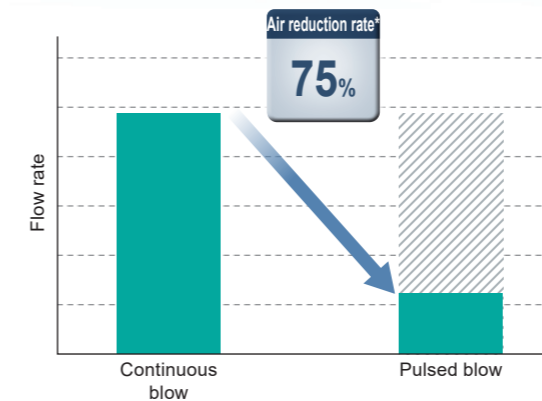
With mounting plate
* Option

17 mm

Contributing to "Eco"

Eco through air reduction

75% reduction vs. continuous blow



Reducing air consumption also reduces power consumption.

| Item | Continuous blow | Pulse blow |
|--|------------------------|---|
| Air consumption per unit (Pressure : 0.5 MPa, Frequency : 10 Hz, Nozzle bore : ø2.5) | 243 L/min | 61 L/min |
| Annual air consumption (Annual operating days : 250 / Operating hours : 8 hrs/day) | 29,160 m ³ | 7,320 m ³ (75% reduction) |
| Annual CO ₂ emissions | 1.75 t-CO ₂ | 0.44 t-CO ₂ |
| Annual electricity consumption | 4,053 kWh | 1,017 kWh |

* Reference value based on CKD's test conditions.

When replaced by one pulse blow unit

1.31 t-CO₂/year Reduction

Reference
CO₂ : emissions per 1 m³ of compressed air : 60 g

Eco through low pressure

Supports energy-saving low-pressure lines from 0.25 MPa operating pressure

Eco through maintenance-free design

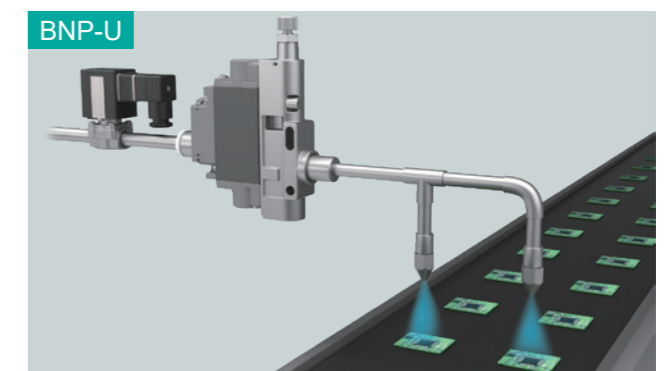
Adopts the main valve section of the reliable, long-life solenoid valve (4G Series).

Application examples

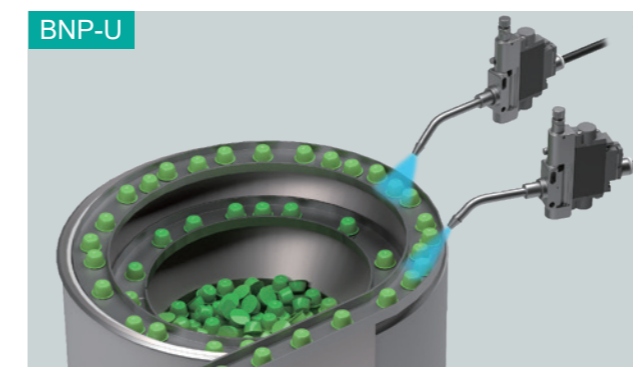
* Image for illustration only.



Dirt removal from small parts



Dirt removal from workpieces on conveyor



Assists parts inside parts feeder

Pulsed Blow Valve
BNP Series

Products for Pulse Blow Valve Food Manufacturing Process

BNP-□-FP1 Series

Adopts food-grade lubricant (NSF-H1). Contributes to "Eco" through safe, secure operation in food manufacturing processes and pulse-based air reduction.

Unit type
BNP-U08-□-FP1



Gun type
BNP-G□-FP1



FP1 Series

Eliminates contamination concerns from lubricants!

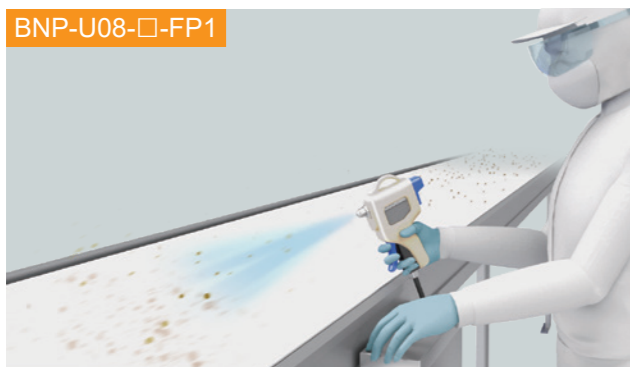
Lubricant



Application examples

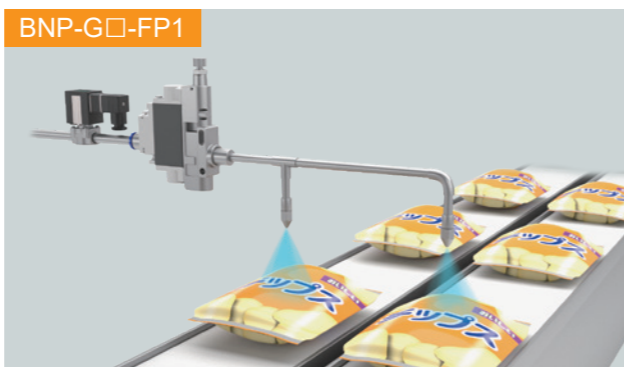
* Image for illustration only.

BNP-U08-□-FP1



Cleaning on conveyor

BNP-G□-FP1



Blow after food packaging

Pulse Blow Valve Rechargeable Battery Manufacturing Process Products

BNP-□-P4 Series

Restricts materials and surface treatments unsuitable for rechargeable battery processes ; usable in dry environments. Contributes to stable rechargeable battery production and "Eco" through pulse-based air reduction.

Unit type
BNP-U08-□-P4



Gun type
BNP-G□-P4



Long-term stable operation in rechargeable battery manufacturing process

Make Progress!!

P4 Series



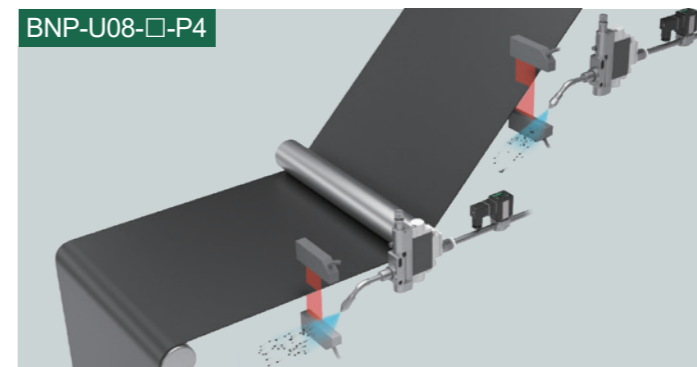
Restricts materials of component parts



Application examples

* Image for illustration only.

BNP-U08-□-P4



Sensor dust removal

Specifications

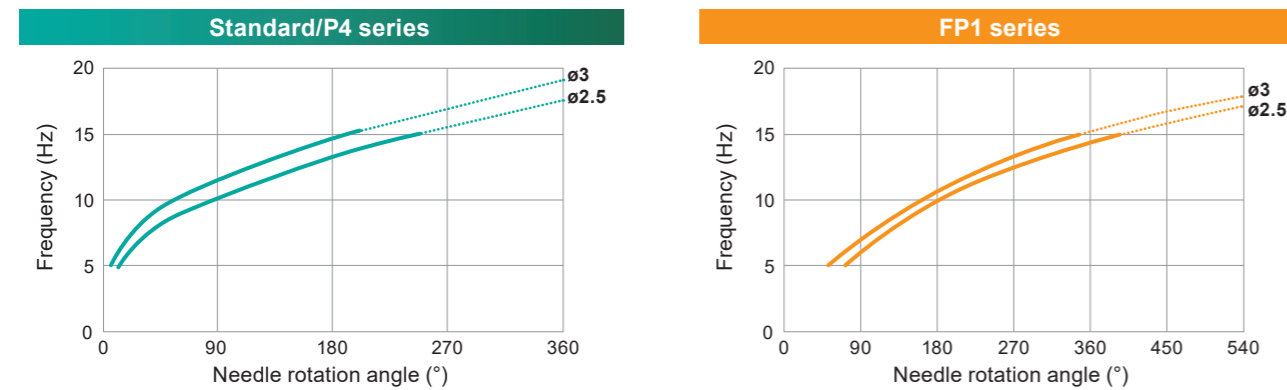
| Item | | BNP-G (Gun type) | BNP-U (Unit type) |
|-----------------------|-------------|------------------------|--------------------|
| Working fluid | | Compressed air *1 | |
| Operating pressure | MPa | 0.25 to 0.7 | |
| Withstand pressure | MPa | 1.05 | |
| Ambient temperature | °C | -5 to 50 (no freezing) | |
| Fluid temperature | °C | 5 to 50 | |
| Pulse frequency range | Hz | 5 to 15 *2 *3 | |
| Port size | Supply port | Rc1/4 | Push-in fitting ø8 |
| | Blow port | With nozzle | Rc1/4 |
| Nozzle bore | mm | 2.5 (recommended) 3.0 | - |
| Weight | g | 250 | 130 |

*1 : Install a dryer, filter, and oil mist filter on the primary side to remove moisture and oil.

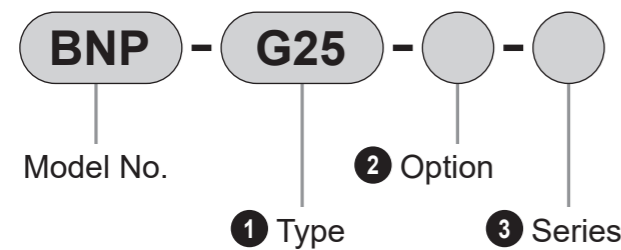
*2 : Pressure : 0.5 MPa, Temperature : Ambient, measured using our test circuit.

*3 : This product does not support continuous blow.

Frequency characteristics vs. needle rotation angle



Model No. Notation



1 Type

| Code | Description |
|------|---------------------------|
| G25 | Gun / Nozzle bore ø2.5 mm |
| G30 | Gun / Nozzle bore ø3.0 mm |
| U08 | Unit / Blow port Rc1/4 |

2 Option

| Code | Description |
|-------|------------------------|
| Blank | None |
| P | With mounting plate *1 |

*1 : Mounting plate is for Unit type (U08) only.

3 Series

| Code | Description |
|-------|---|
| Blank | Standard |
| FP1 | Products for Food Manufacturing Process |
| P4 | Products for Rechargeable Battery Manufacturing |

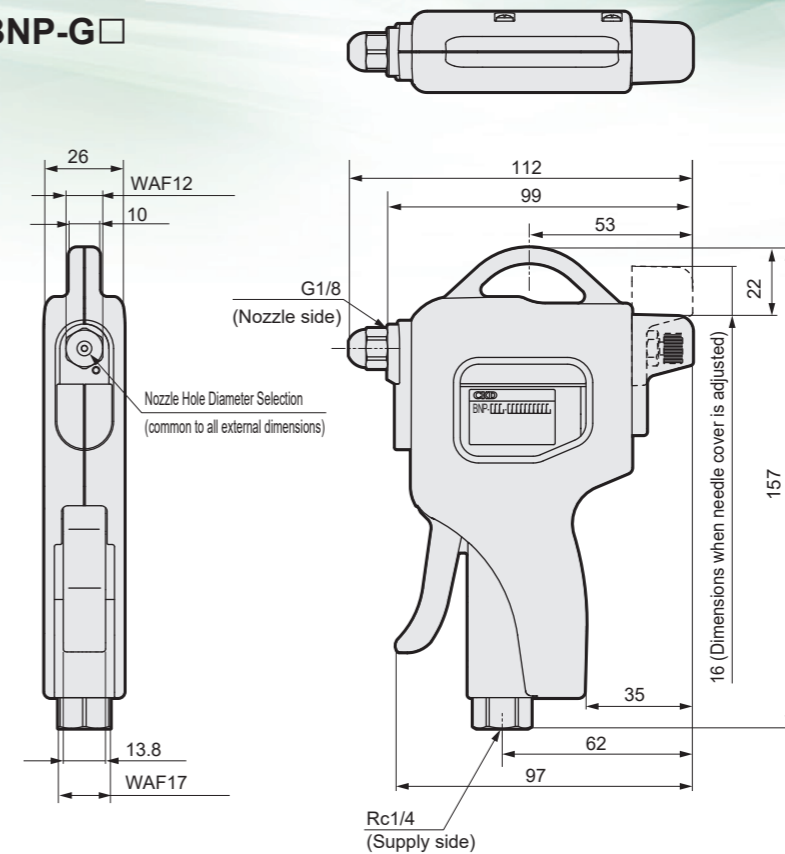
Mounting plate standalone model No.

BNP-MOUNT-PLATE-KIT

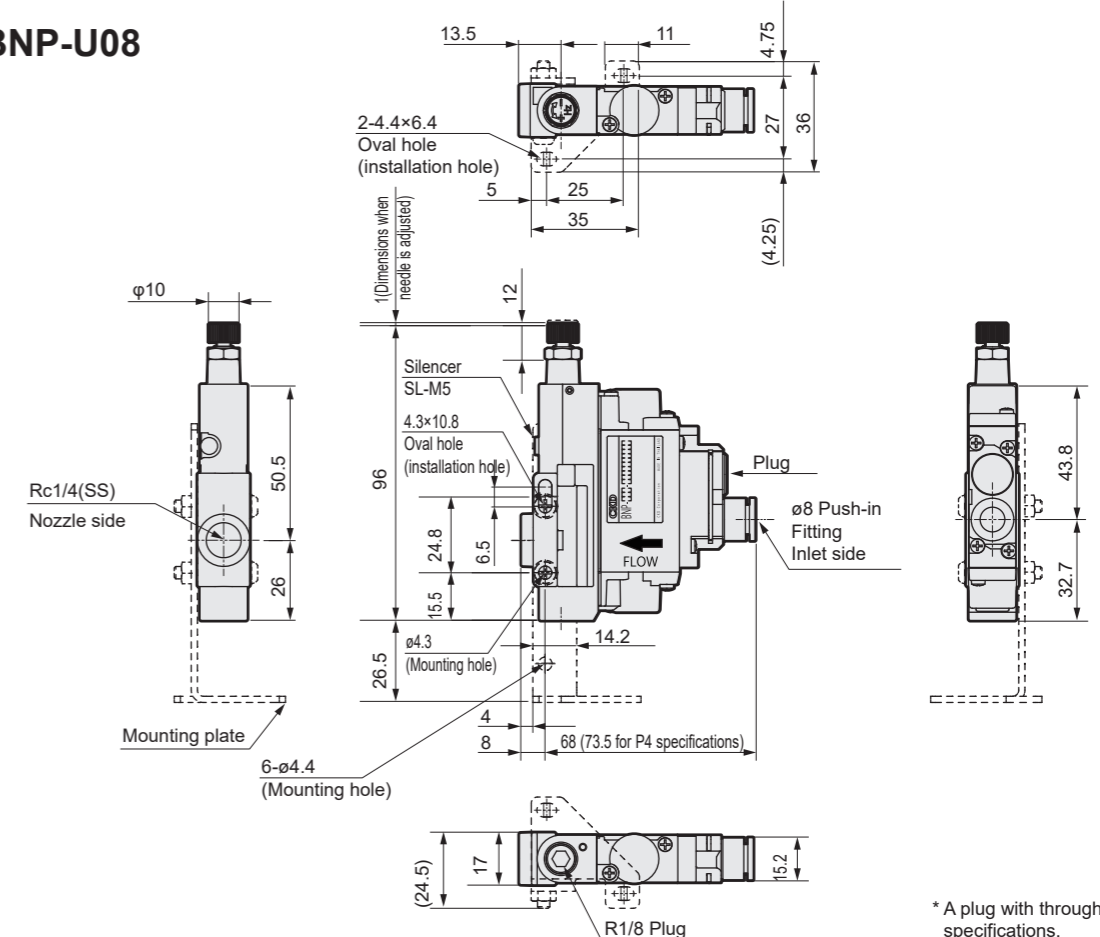
* Mounting plate, 2 mounting screws, 2 flat washers, 2 nuts

Dimensions

•BNP-G□



•BNP-U08



* A plug with through hole for P4 specifications.

Related products

Multifit FFB/FFG Series

Integrates the functions required of a fluid control valve into a single body

- High reliability
High durability, high corrosion resistance, pressure vessel structure, coil burnout prevention
- Easy to select
Compatible with various fluids, wide range of variations
- Easy to use
High installation flexibility, improved maintainability, low-noise structure, low power consumption
- Application-specific series available
FP Series for Food Manufacturing Process,
P4 Series for Rechargeable Battery Manufacturing



Click!



Drain Separator FX Series

99 % water separation efficiency without element

- Optimal centrifugal separation by high-performance louver
Uses high-performance louver with optimal vane shape, number, and height. Centrifugal separation removes moisture without an element
- Lightweight and compact
Compressed air is cooled by aftercooler. Supplies clean air with drain and foreign matter removed
- Continuous use available
FX1004 and FX1011 are modular with FRL 2000/3000/4000 Series ; FX1037 is modular with FRL 6000/8000 Series



Click!



For details, please refer to the CKD Components Site (<https://www.ckd.co.jp/kiki/en/>) → "Model No.".

Precautions for use

Be sure to read before use. Also read the precautions in "Directional Control Valves ①" (No.RJ-011).

- Wear protective eyewear and earplugs, as air blow may cause flying debris to enter the eyes and may cause noise-induced hearing loss.
- Leaving the product in dusty or splash-prone locations may cause malfunction due to internal contamination or silencer clogging.
- Do not apply excessive rotation torque when adjusting the needle.
- After needle adjustment, secure with the nut and close the needle cover (BNP-G only).
- Can be used for dry-state debris removal and workpiece transfer assistance. Confirm removal of moisture and oil before use.
- This product uses a spool valve structure with fluorine grease; oil and wear particles may mix into the blow air.
- Read the instruction manual thoroughly before use.

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