

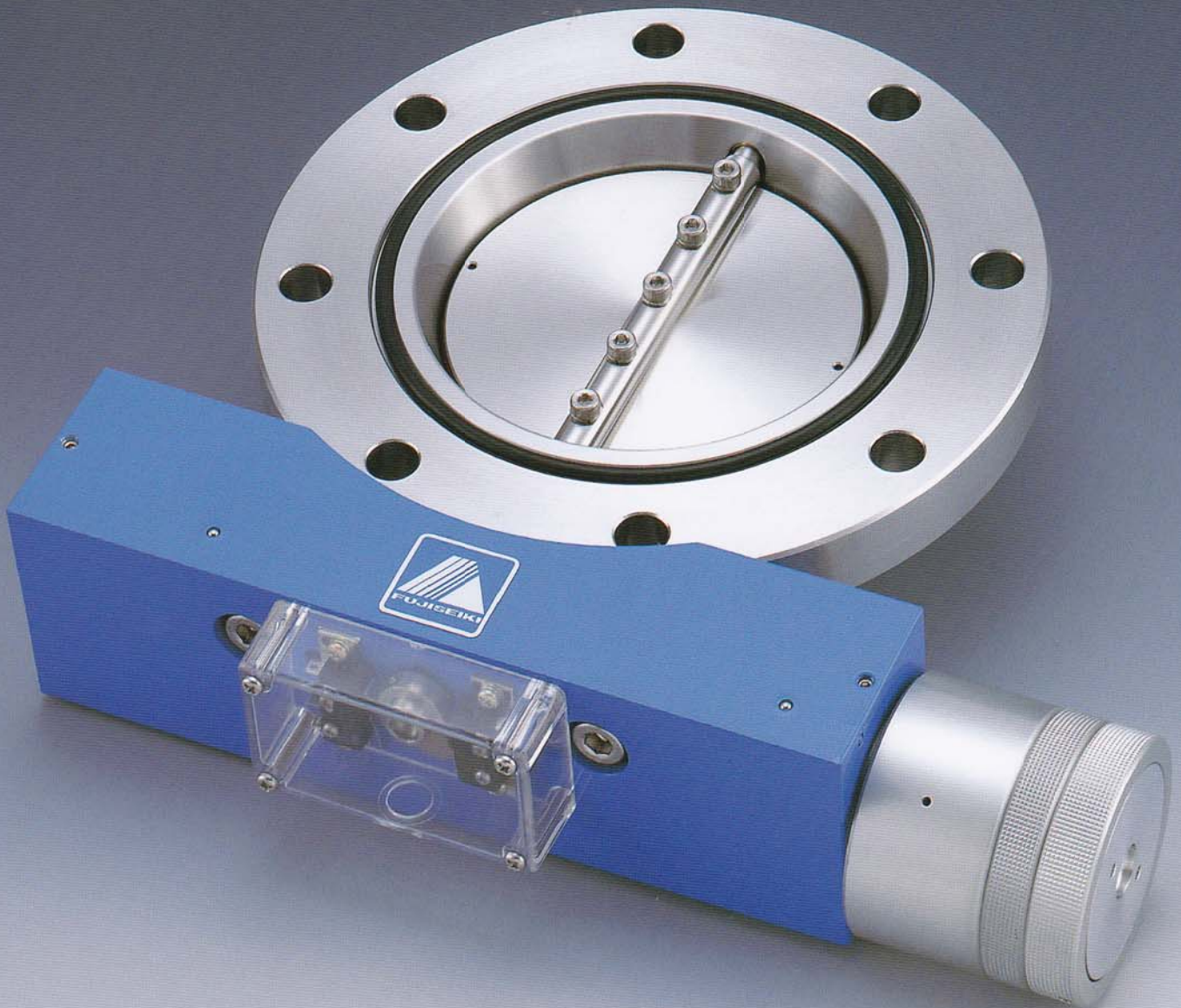


New Product

PATENTED

3-Position Pneumatic Butterfly Valves BV-AXON II Series

Washed cleanly and used for high-vacuum



FUJI Technology
VACUUM SYSTEMS SPECIALIST

Butterfly Valve AXONII Series

High performance

- ◇ 1,000,000 cycles and two years guarantee

Two worth works with one valve

- ◇ It can be operated in the 2 position of the valve opening is 0 degrees to 45 degrees and 90 degrees (fully open), so it is possible for throw exhaust and high speed exhaust at one valve.
- ◆ Fully closed and fully open for air cylinder, and the valve opening degree is a two-step structure of which is provided an air cylinder that can be set to any in the range of 0 to 45 degrees.

Adopt a double cylinder system of patent mechanism (Pneumatic type)

- ◇ By adopting a double air cylinder method, an air thrust doubles during valve fully open, More impact force by the air damper mechanism have been alleviated.
- ◆ Double cylinder system is provided a bypass flow and the assist chamber in the cylinder
- ◇ The bypass flow is connected with the assist chamber from the valve fully open side cylinder chamber
The diameter is reduced enough than the diameter of the air inlet.
- ◆ Piston movement will begin before sufficient air is supplied to assist chamber by this mechanism.
When the valve body is fully opened, the pressure in the assist chamber becomes negative, so assist chamber will alleviate the impact force as air cushion.

Unchanged price, The price that it is easy to adopt

- ◇ New series can be immediately exchange for the old series and the same dimensions.
- ◆ It's the price quite more profitable than the price for 2 valves, so it'll be cost cutting of an exhaust system.

<Basic specification>

STD Flange	JIS·NW·ISO·CF	Diameter	34~391 (mm)
Leak Rate	$< 1 \times 10^{-9} \text{Pam}^3 / \text{s}$	Gas contact material	SUS304
Pressure Range	$10^5 \sim 10^6 \text{Pa}$	Actuating air pressure	0.4~0.6MPa G
Disc seal	Viton O-ring	Shaft seal	Viton O-ring two-tier

- ※ Equipped with micro-switch of the full closed and full open for switching signal as standard.
When an intermediate position signal is required, it can manufacture as an option.
- ※ The following condition is necessary to maintain the performance of this valve.
 - Periodic replacement of the valve disc O-ring
 - Periodic grease up the sealing surface of the valve
- ※ For more diameter 150A is moved to an intermediate position will be operation from the fully open position.
It's also possible to manufacture the way which makes move from full close, so please inquire.
- ※ Other special specification manufacture is also available, Please contact us.
- ※ Subject to change without any notice.



— Vacuous high technology is created —

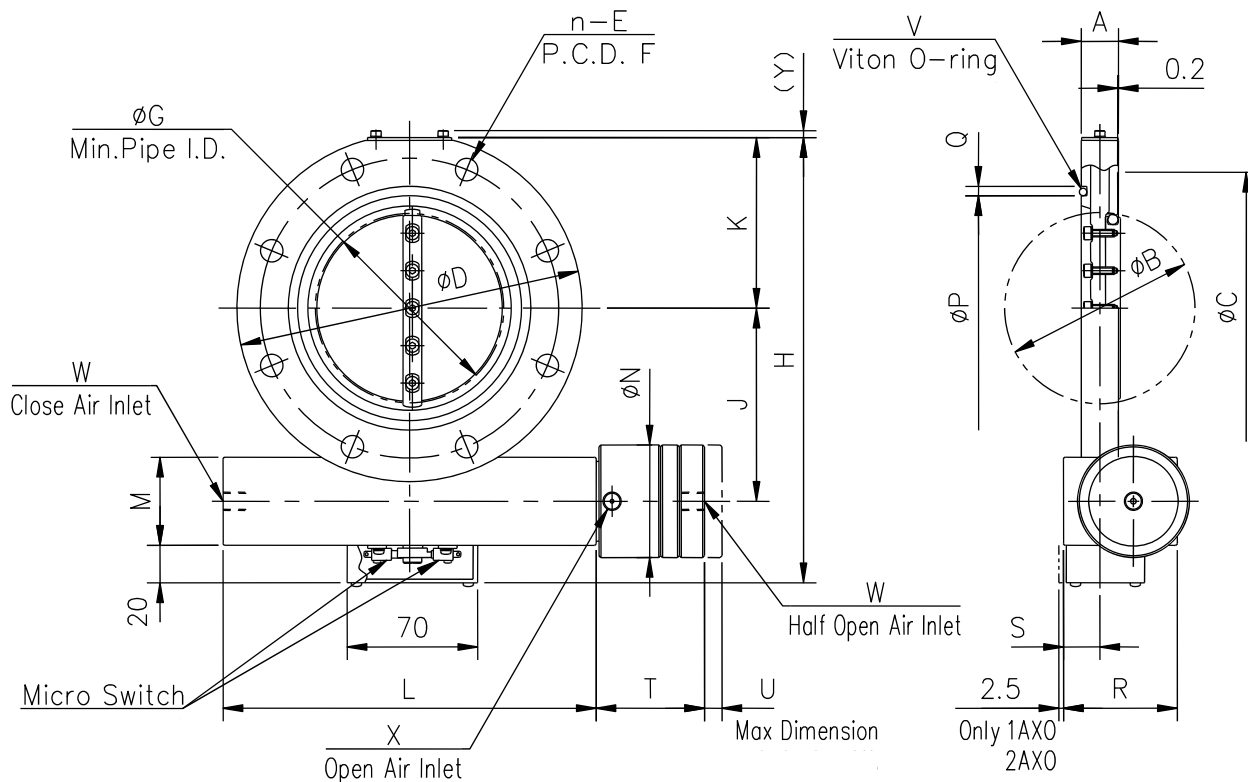
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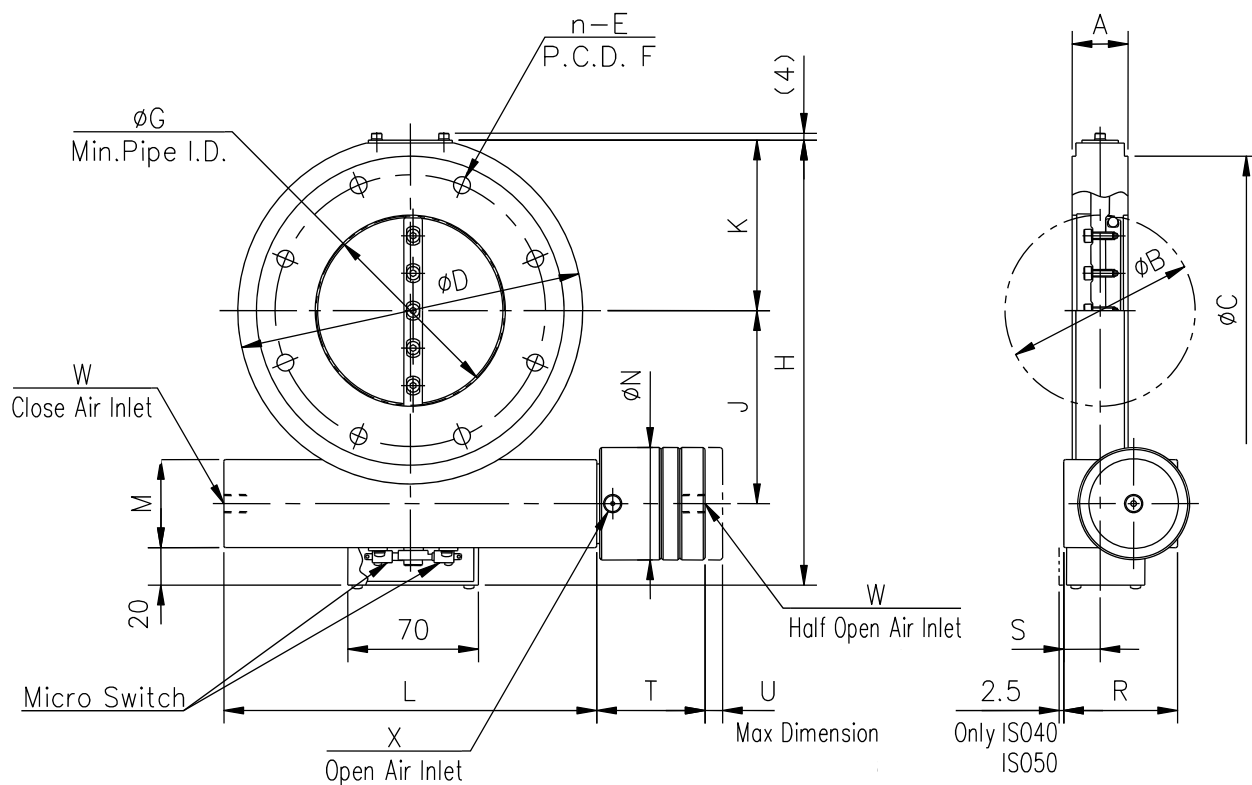
Unit in:mm

Model	BV-1AXON II	BV-2AXON II	BV-2.5AXON II	BV-3AXON II	BV-4AXON II	BV-6AXON II	BV-8AXON II	BV-10AXON II	BV-14AXON II
MOD No.	10205□□	10207□□	10208□□	10209□□	10210□□	10211□□	10212□□	10213□□	10215□□
A	20	20	20	20	20	26	40	40	50
B	34	52	65	80	102	155	208	257	355
C	58	88	105	120	145	190	250	302	402
D	90	120	145	160	185	235	300	350	450
n—E	4- ϕ 10	4- ϕ 10	4- ϕ 12	4- ϕ 12	8- ϕ 12	8- ϕ 12	8- ϕ 15	12- ϕ 15	12- ϕ 15
F	70	100	120	135	160	210	270	320	420
G	32	51	64	79	101	154	206	253	354
H	138	168.5	198	212	237.5	299	380	446	552
J	55	70	83	90.5	103	127.5	165	200	240
K	43	58.5	71.5	78	91	116.5	148.5	173.5	224
L	170	170	200	200	200	270	350	380	584
M	40	40	47	47	47	70	93	105	136
N	60	60	76	76	76	88	130	145	180
P	40	70	85	100	120	175	225	275	380
Q	5	5	5	5	5	5	8	8	8
R	55	55	61	61	61	79	107.5	123.5	185
S	15.5	15.5	19.5	19.5	19.5	22	23	23	37
T	55	55	58	58	58	69	90	100	135
U	9.5	9.5	9.5	9.5	9.5	12.5	23.5	31.5	55
V	V40	V70	V85	V100	V120	V175	V225	V275	V380
W	Rp1/8	Rp1/8	Rp1/8	Rp1/8	Rp1/8	Rc1/4	Rc1/4	Rc1/4	Rc1/4
X	Rc1/8	Rc1/8	Rc1/8	Rc1/8	Rc1/8	Rc1/4	Rc1/4	Rc1/4	Rc1/4
Y	4	4	4	4	4	4	4	4	5

Notel : The above Flanges are accordance with older JIS B2290 Vacuum Flange for Vacuum Equipment (Flange for affiliated book maintenance)

※ To improve this specification may change without notice.

Dimensions of BV-JIS AXON II Series



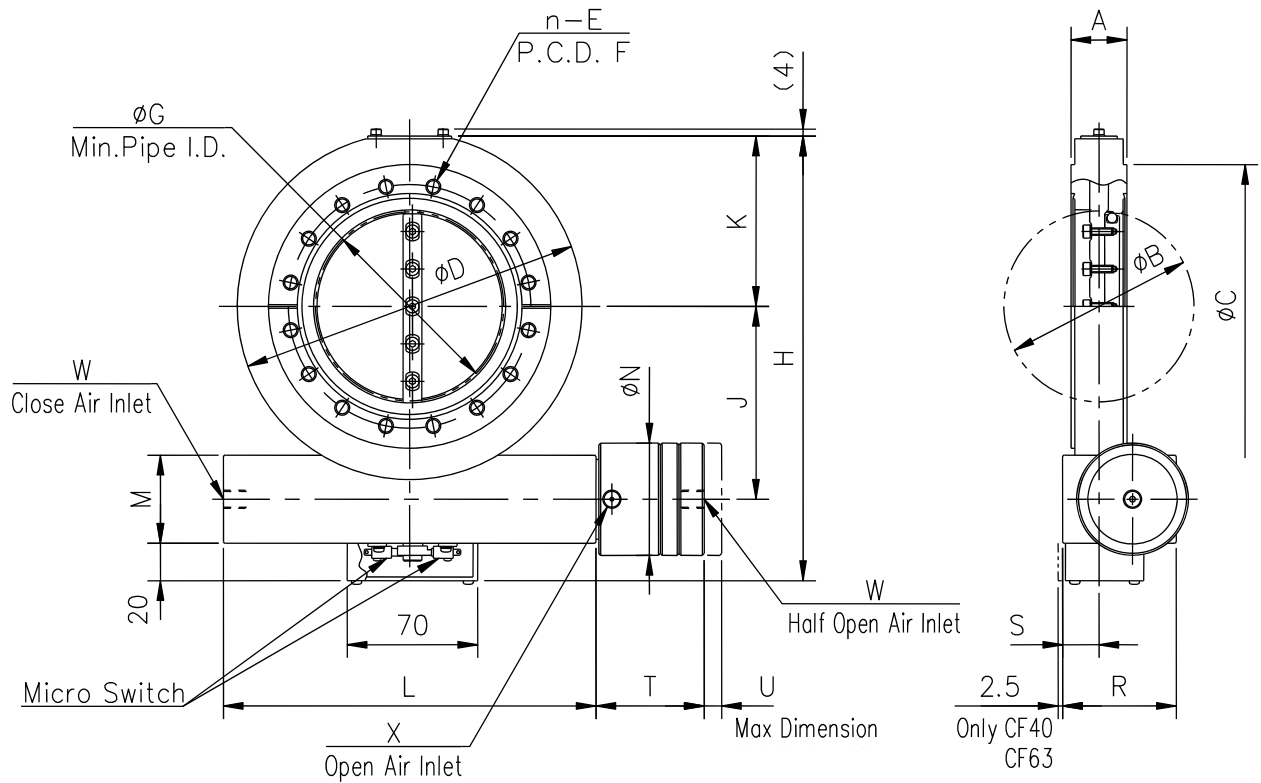
Unit in:mm

Model	BV-ISO40AXON II	BV-ISO50AXON II	BV-ISO63AXON II	BV-ISO80AXON II	BV-ISO100AXON II	BV-ISO160AXON II	BV-ISO200AXON II	BV-ISO250AXON II
MOD No.	10965□□	10966□□	10967□□	10967□□	10968□□	10970□□	10971□□	10972□□
A	30	30	30	30	30	50	50	50
B	34	52	65	80	102	155	208	257
C	100	110	130	145	165	225	285	335
D	120	120	145	160	185	235	300	350
n—E	4- $\phi 9$	4- $\phi 9$	4- $\phi 9$	8- $\phi 9$	8- $\phi 9$	8- $\phi 11$	12- $\phi 11$	12- $\phi 11$
F	80	90	110	125	145	200	260	310
G	20	45	59	74	97	144	199	249
H	168.5	168.5	198	212	237.5	299	380	446
J	70	70	83	90.5	103	127.5	165	200
K	58.5	58.5	71.5	78	91	116.5	148.5	173.5
L	170	170	200	200	200	270	350	380
M	40	40	47	47	47	70	93	105
N	60	60	76	76	76	88	130	145
R	55	55	61	61	61	79	107.5	123.5
S	15.5	15.5	19.5	19.5	19.5	22	23	23
T	55	55	58	58	58	69	90	100
U	9.5	9.5	9.5	9.5	9.5	12.5	23.5	31.5
W	Rp1/8	Rp1/8	Rp1/8	Rp1/8	Rp1/8	Rc1/4	Rc1/4	Rc1/4
X	Rc1/8	Rc1/8	Rc1/8	Rc1/8	Rc1/8	Rc1/4	Rc1/4	Rc1/4

Notel : The above Flanges are accordance with ISO 1609 Vacuum technology Flange

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Dimensions of BV-ISO AXON Series



Unit in:mm

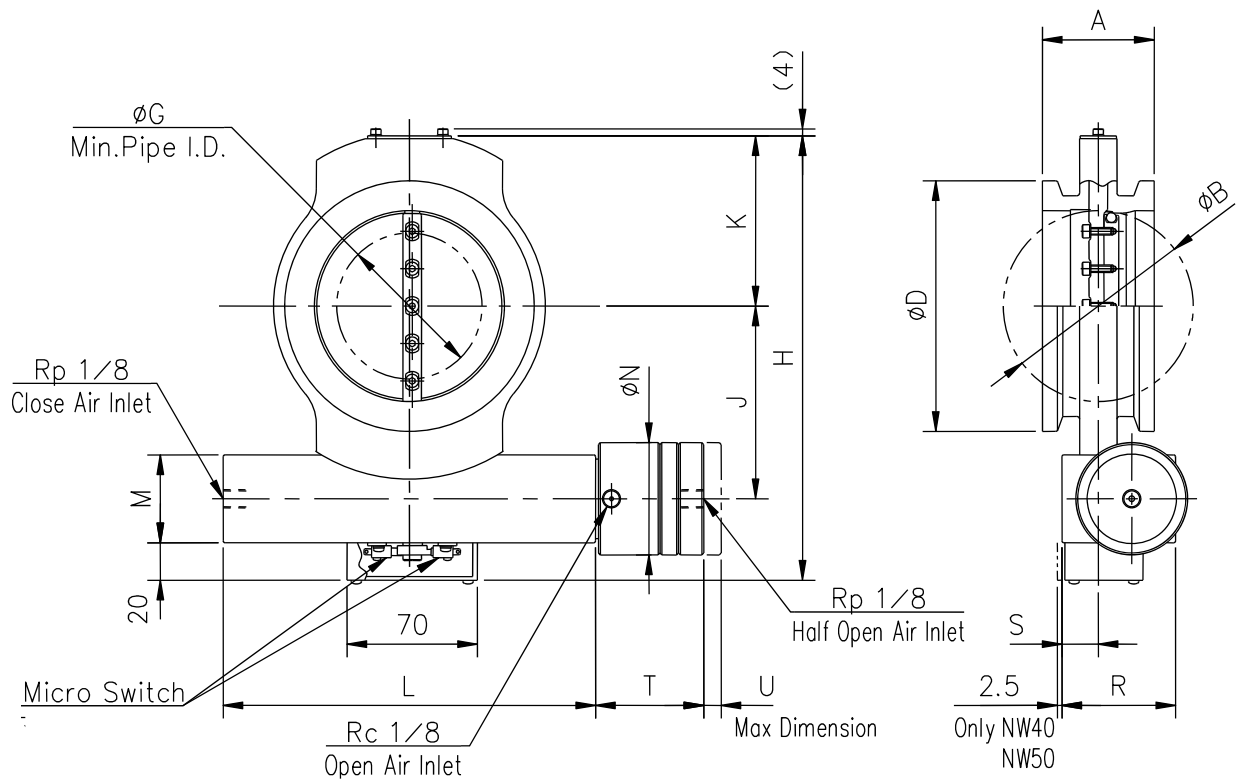
Model	BV- CF40AXON II	BV- CF63AXON II	BV- CF100AXON II	BV- CF160AXON II	BV- CF200AXON II	BV- CF250AXON II
MOD No.	10940□□	10942□□	10944□□	10945□□	10947□□	10948□□
A	30	30	30	50	50	50
B	34	52	102	155	208	257
C	69.4	113.5	151.6	202.4	253.2	305.0
D	90	120	185	235	300	350
n—E	6-M6	8-M8	16-M8	20-M8	24-M8	32-M8
F	58.7	92.1	130.2	181	231.8	284
G	20	45	97	144	199	249
H	138	168.5	237.5	299	380	446
J	55	70	103	127.5	165	200
K	43	58.5	91	116.5	148.5	173.5
L	170	170	200	270	350	380
M	40	40	47	70	93	105
N	60	60	76	88	130	145
R	55	55	61	79	107.5	123.5
S	15.5	15.5	19.5	22	23	23
T	55	55	58	69	90	100
U	9.5	9.5	9.5	12.5	23.5	31.5
W	Rp1/8	Rp1/8	Rp1/8	Rc1/4	Rc1/4	Rc1/4
X	Rc1/8	Rc1/8	Rc1/8	Rc1/4	Rc1/4	Rc1/4

Note1 : The above Flanges are accordance with ISO/TS 3669-2 Vacuum technology-Bakable flanges-Part2:Dimension of knife-edge flanges

Note2 : No Groove for leakage detection no CF 40

※ To improve this specification may change without notice.

Dimensions of BV-CF AXON II Series



Unit in:mm

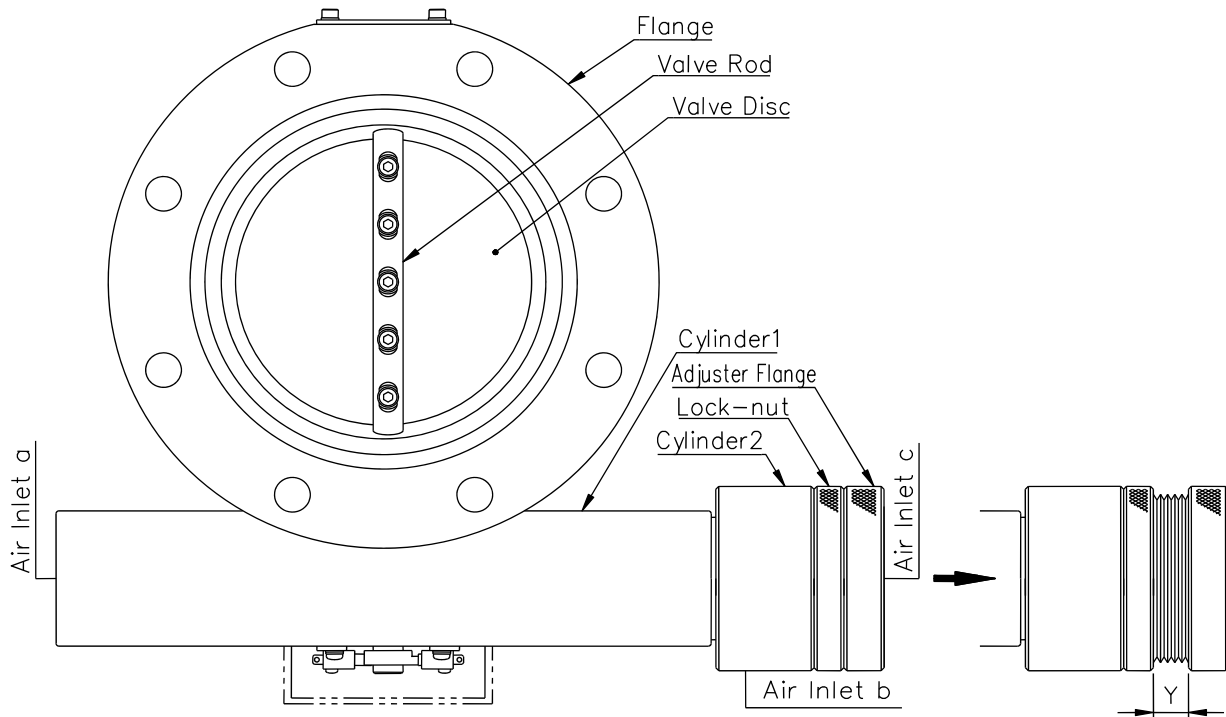
Model	BV-NW40AXON II	BV-NW50AXON II	BV-NW63AXON II	BV-NW80AXON II	BV-NW100AXON II
MOD No.	10224□□	10225□□	10226□□	10227□□	10228□□
A	40	40	40	60	60
B	34	52	65	80	102
D	55	75	87	114	134
G	0	25	56	44	78
H	138	168.5	198	212	237.5
J	55	70	83	90.5	103
K	43	58.5	71.5	78	91
L	170	170	200	200	200
M	40	40	47	47	47
N	60	60	76	76	76
R	55	55	61	61	61
S	15.5	15.5	19.5	19.5	19.5
T	55	55	58	58	58
U	9.5	9.5	9.5	9.5	9.5

Note1 : When installing, use Fuji Technology made Multi-Clump. In case of using other Clumps, there are some cases where installing is impossible owing to their shape.

※ To improve this specification may change without notice.

Dimensions of BV-NW AXON II Series

< Figure of BV-AXON II series >



How to adjust opening angle of Valve Disc

By pulling out the Adjuster Flange from the cylinder 2 as shown above , the opening angle of valve Disc can be set in the range of 45° ~0° .

The relation between Y and the valve opening angle is shown in Table-1. This table was prepared by using calculated values, so it may sometime differ from an actual valve opening angle.

Table- 1

(unit : mm)

Bore \ Angle	45°	30°	15°	5°	0°
Below 100A	0	3.1	6.3	8.4	9.4
150A	0	4.6	8.8	11.6	13.0
200A	0	7.8	15.6	20.9	23.5
250A · 300A	0	10.5	21.0	28.0	31.5
350A	0	18.3	36.7	48.9	55.0

* The valve opening 0° is an adjustment of cylinder 2, and it is unrelated to the switching action of cylinder 1.

* Y denotes the length when Lock-nut was fixed after Adjuster Flange was pulled out.

How to connect air piping

Connect the air pressure of 0.4 ~ 0.6MPa G to Inlet a, b, c.

Table2 shows relationship between the valve state and the combination of whether air is let IN or OUT at each Air Inlet.

Table- 2

Valve state \ Air inlet	Inlet a	Inlet b	Inlet c
Full close	IN	OUT	OUT
Full open	OUT	IN	* Note
Intermediate	IN	OUT	IN

*) IN or Out, Either will do.

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