

IBC/IBD/IBE

Bellows Valves
Large-size Straight Type

The IBC/IBD/IBE series, like the SBB series, consist of larger pipe size bellows valves that, while having a compact design, high Cv value, and high durability, are premised on use in supply lines.

Features

- KITZ SCT's Y shape structure yields higher Cv than conventional S shape structure.
- The inner surfaces of the IBC/IBD valves are uniformly polished whole-surface cylindrical grinding.
- Because of their screw-sleeve structure with built-in bearing, the IBE valves require less torque on the handle for easy operation.
- Adopted a seat structure to reduce gas pooling and particle shedding.
- By setting the air supply inlet on the top of the actuator, there is no concern over piping direction.
- Realization of more compact design through positioning the actuator on the side.
- Purge port options available for the Inlet, Outlet, or Both.

Specifications

| Model | | IBC | | | IBD | | | IBE | | | | | |
|----------------------------|-------------------------------|---|--------------------|--------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|----------------------|-----------------------|--|
| Model (size) | | 32A | 40A | 50A | 65A | 80A | 100A | 125A | 150A | 200A | 250A | 300A | |
| Cv | | 21.0 | 30.0 | 51.0 | 89.0 | 127.0 | 205.0 | 329.0 | 473.0 | 1117.0 | 1739.0 | 2608.0 | |
| Wetted Area Volume | | 368cm ³ | 440cm ³ | 980cm ³ | 1710cm ³ | 2910cm ³ | 5890cm ³ | 11310cm ³ | 19290cm ³ | 45700cm ³ | 71100cm ³ | 131260cm ³ | |
| Maximum Operating Pressure | | Butt Weld, OPEN State 142psig(0.98MPa (G)) | | | | | | | | | | | |
| Fluid Temperature | Manual | -10~100°C | | | | | | | | | | | |
| | Pneumatic | -10°C~80°C | | | - | | | | | | | | |
| Atmospheric Temperature | | -10°C~60°C | | | | | | | | | | | |
| Leak Rates | Across the Seat He Leak Rates | ≤ 1×10 ⁻¹⁰ Pa·m ³ /sec | | | | | | | | | | | |
| | Inboard He Leak Rates | ≤ 1×10 ⁻¹⁰ Pa·m ³ /sec | | | | | | | | | | | |
| Actuation Pressure | | 0.5~0.7MPa (G) | | | - | | | | | | | | |
| Cycle Life | | 10,000 cycles (N2 charged, In-house Test) | | | | | | | | | | | |

* Test Condition / Seat material : PCTFE Gas : N2 Pressure : 0.98MPa

Product Grade

| Specifications | | IBC Series | | IBD Series | | IBE Series | | |
|-------------------|-----------------|---------------------------------|--------------------------|-------------------------------|--------------------------|---|---------------------------|-----------------|
| Grade | | STD | EP (electro polished) | STD | EP (electro polished) | STD | EP (electro polished) | |
| Material | | SCS16A | | | | SCS16A (125A~150A) SUS316L (200A~300A) | | |
| Surface Roughness | Body Inner Only | Rz 6.0 μm | Rz 0.7 μm | Rz 6.0 μm | Rz 0.7 μm | Rz 6.0 μm (125A~150A) | Rz 12.0 μm (200A~300A) | ≤ Rz 0.7 μm |
| | | Ra1.6μm/63μin | | Ra1.6μm/63μin | | Ra1.6μm/63μin | Ra3.2μm/126μin | |
| | | After welding, No Bead Cut | Ra0.13μm/5μin | After Welding, No Bead Cut | Ra0.13μm/5μin | After Welding, No Bead Cut | | ≤ Ra0.13μm/5μin |
| Cleaning | | Degreasing + Precision Cleaning | | | | | | |
| Packaging | | Single Bagged Package | Double Bagged Package | Single Bagged Package | Double Bagged Package | Single Bagged Package | Double Bagged Package | |

Precautions

- IBC/IBD/IBE Series cannot be used with reactive or corrosive gases, nor with any liquids.
- These valves are designed to be used under atmospheric pressure. Usage such as under vacuum vessels is not guaranteed.



Product Code Table

| Model | Size | Operation Method | Valve Shape | Connection Method | Bonnet Gasket material | Disk Material | Purge Port | Grade + Body Material | |
|-----------------------------|------|--------------------|-------------|-------------------|-------------------------------|---------------|------------|--|--|
| IBC | 32 | M | Y3 | W | C | T | IP | EP-316L | |
| IBC-type bellows Seal valve | | 32: 32A 40: 40A | Manual | Y-type Mold | W: Butt Weld RF: RF Flange | C: PCTFE | PTFE | Not Displayed: Without Purge Port IP: 1st OP: 2nd PP: Both | STD-316L : Mechanical polish + SUS316L EP-316L : Electro polish + SUS316L |

*1 Please ask to the sales representative about handle color.
*2 Inch size butt weld also available.

IBC 32A-40A Dimensions

Unit: inch (mm)

| Model | Type | Connection | L | E | H | A | D | d | t |
|-------|--------------|---------------|------------------|----------------|-----------------|-----------------|----------------|----------------|----------------|
| | IBC32MY3-WCT | 32A Butt Weld | 10.63 (270.0) | 2.17 (55.0) | 7.87 (200.0) | 4.72 (120.0) | 1.68 (42.7) | 1.55 (39.4) | 0.06 (1.65) |
| | IBC40MY3-WCT | 40A Butt Weld | 10.63 (270.0) | 2.17 (55.0) | 7.87 (200.0) | 4.72 (120.0) | 1.91 (48.6) | 1.78 (45.3) | 0.06 (1.65) |

Product Code Table

| | | | | | | | | |
|---------------------|-------------------|-----------------------|--------------------------|------------------------|------------------------------------|---------------------------|-------------------------|---|
| Model IBD | Size 50 | Operation M | Valve Shape Y3 | Connection W | Bonnet Gasket Material C | Disk Material T | Purge Port IP | Grade + Body Material EP-316L |
|---------------------|-------------------|-----------------------|--------------------------|------------------------|------------------------------------|---------------------------|-------------------------|---|

IBD-type bellows Seal valve
 50:50A
 65:65A
 80:80A
 100:100A
 M: Manual
 Y-type Mold
 W:Butt Weld
 RF:RF Flange
 C:PC TFE
 PTFE
 Not Displayed:
 Without Purge Port
 IP:1st OP:2nd
 PP:Both
 STD-316L : Mechanical Polish + SUS316L
 EP-316L : Electro Polish + SUS316L

Dimensions

| Model | Type | Connection | L | E | H | A | D | d | t |
|-------|---------------|----------------|------------------|----------------|------------------|-----------------|-----------------|-----------------|----------------|
| | IBD50MY3-WCT | 50A Butt Weld | 13.39 (340.0) | 2.36 (60.0) | 10.47 (266.0) | 5.51 (140.0) | 2.38 (60.5) | 2.25 (57.2) | 0.06 (1.65) |
| | IBD65MY3-WCT | 65A Butt Weld | 14.96 (380.0) | 2.36 (60.0) | 11.69 (297.0) | 6.30 (160.0) | 3.00 (76.3) | 2.84 (72.1) | 0.08 (2.10) |
| | IBD80MY3-WCT | 80A Butt Weld | 16.54 (420.0) | 2.36 (60.0) | 14.80 (376.0) | 7.87 (200.0) | 3.51 (89.1) | 3.34 (84.9) | 0.08 (2.10) |
| | IBD100MY3-WCT | 100A Butt Weld | 20.47 (520.0) | 3.15 (80.0) | 16.18 (411.0) | 8.86 (225.0) | 4.50 (114.3) | 4.33 (110.1) | 0.08 (2.10) |

Product Code Table

| | | | | | | | | |
|---------------------|--------------------|------------------------------|--------------------------|-------------------------------|------------------------------------|---------------------------|-------------------------|---|
| Model IBE | Size 125 | Operation Method M | Valve Shape Y3 | Connection Method W | Bonnet Gasket Material C | Disk Material T | Purge Port IP | Grade + Body Material EP-316L |
|---------------------|--------------------|------------------------------|--------------------------|-------------------------------|------------------------------------|---------------------------|-------------------------|---|

IBE-type bellows Seal valve
 125:125A
 150:150A
 M: Manual
 Y-type Mold
 W: Butt Weld
 RF: RF Flange
 C: PCTFE
 PTFE
 Not Displayed:
 Without Purge Port
 IP: 1st OP: 2nd
 PP: Both
 STD-316L : Mechanical Polish + SUS316L
 EP-316L : Electro Polish + SUS316L

Dimensions

| Model | Type | Connection | L | E | H | A | D | d | t |
|-------|---------------|----------------|------------------|-----------------|------------------|------------------|-----------------|-----------------|---------------|
| | IBE125MY3-WCT | 125A Butt Weld | 24.41 (620.0) | 3.94 (100.0) | 23.39 (594.0) | 11.81 (300.0) | 5.50 (139.8) | 5.28 (134.2) | 0.11 (2.8) |
| | IBE150MY3-WCT | 150A Butt Weld | 28.35 (720.0) | 4.33 (110.0) | 26.89 (683.0) | 13.78 (350.0) | 6.50 (165.2) | 6.28 (159.6) | 0.11 (2.8) |

Product Code Table

| | | | | | | | | |
|---------------------|--------------------|-----------------------|--------------------------|------------------------|------------------------------------|---------------------------|-------------------------|---|
| Model IBE | Size 200 | Operation M | Valve Shape Y2 | Connection W | Bonnet Gasket Material C | Disk Material T | Purge Port IP | Grade + Body Material EP-316L |
|---------------------|--------------------|-----------------------|--------------------------|------------------------|------------------------------------|---------------------------|-------------------------|---|

IBE-type bellows Seal valve
 200:200A
 250:250A
 300:300A
 M: Manual
 Y-type Steel Pipe Weld
 W: Butt Weld
 RF: RF Flange
 C: PCTFE
 PTFE
 Not Displayed:
 Without Purge Port
 IP: 1st OP: 2nd
 PP: Both
 STD-316L : Mechanical Polish + SUS316L
 EP-316L : Electro Polish + SUS316L

IBE 200A-250A-300A Dimensions

| Model | Type | Connection Joint | L | E | H | A | D | d | t |
|-------|---------------|------------------|-------------------|-----------------|-------------------|------------------|------------------|------------------|---------------|
| | IBE200MY2-WCT | 200A Butt Weld | 35.43 (900.0) | 4.33 (110.0) | 36.51 (927.3) | 15.75 (400.0) | 8.52 (216.3) | 8.20 (208.3) | 0.16 (4.0) |
| | IBE250MY2-WCT | 250A Butt Weld | 43.31 (1100.0) | 5.31 (135.0) | 42.09 (1069.0) | 17.72 (450.0) | 10.53 (267.4) | 10.21 (259.4) | 0.16 (4.0) |
| | IBE300MY2-WCT | 300A Butt Weld | 52.76 (1340.0) | 6.93 (176.0) | 49.65 (1261.0) | 19.69 (500.0) | 12.54 (318.5) | 12.19 (309.5) | 0.18 (4.5) |



Product Code Table

| | | | | | | | | |
|---------------------|-------------------|-----------------------|--------------------------|------------------------|-----------------------------|---------------------------|-------------------------|---|
| Model IBD | Size 32 | Operation C | Valve Shape Y3 | Connection W | Gasket Material C | Disk Material T | Purge Port IP | Grade + Body Material EP-316L |
|---------------------|-------------------|-----------------------|--------------------------|------------------------|-----------------------------|---------------------------|-------------------------|---|

IBC-type bellows Seal valve
 32:32A
 40:40A
 C: Normally Closed
 Y-type Mold
 W:Butt Weld
 RF:RF Flange
 C:PCTFE
 PTFE
 Not Displayed:
 Without Purge Port
 IP:Inlet OP:Outlet
 PP:Both
 STD-316L : Mechanical Polish + SUS316L
 EP-316L : Electro Polish + SUS316L

Dimensions

| Model | Type | Connection | L | E | H | A | D | P | d | t |
|-------|--------------|---------------|------------------|----------------|------------------|-----------------|----------------|-------|----------------|----------------|
| | IBC32CY3-WCT | 32A Butt Weld | 10.63 (270.0) | 2.17 (55.0) | 11.46 (291.0) | 3.94 (100.0) | 1.68 (42.7) | Rc1/4 | 1.55 (39.4) | 0.06 (1.65) |
| | IBC40CY3-WCT | 40A Butt Weld | 10.63 (270.0) | 2.17 (55.0) | 11.46 (291.0) | 3.94 (100.0) | 1.91 (48.6) | Rc1/4 | 1.78 (45.3) | 0.06 (1.65) |

Product Code Table

| | | | | | | | | |
|---------------------|-------------------|-----------------------|--------------------------|------------------------|-----------------------------|---------------------------|-------------------------|---|
| Model IBD | Size 50 | Operation C | Valve Shape Y3 | Connection W | Gasket Material C | Disk Material T | Purge Port IP | Grade + Body Material EP-316L |
|---------------------|-------------------|-----------------------|--------------------------|------------------------|-----------------------------|---------------------------|-------------------------|---|

IBC-type bellows Seal valve
 50:50A
 C: Normally Closed
 Y-type Mold
 W:Butt Weld
 RF:RF Flange
 C:PCTFE
 PTFE
 Not Displayed:
 Without Purge Port
 IP:Inlet OP:Outlet
 PP:Both
 STD-316L : Mechanical Polish + SUS316L
 EP-316L : Electro Polish + SUS316L

Dimensions

| Model | Type | Connection | L | E | H | A | D | P | d | t |
|-------|--------------|---------------|------------------|----------------|------------------|-----------------|----------------|-------|----------------|----------------|
| | IBD50CY3-WCT | 50A Butt Weld | 13.39 (340.0) | 2.36 (60.0) | 16.65 (423.0) | 4.96 (126.0) | 2.38 (60.5) | Rc1/4 | 2.25 (57.2) | 0.06 (1.65) |