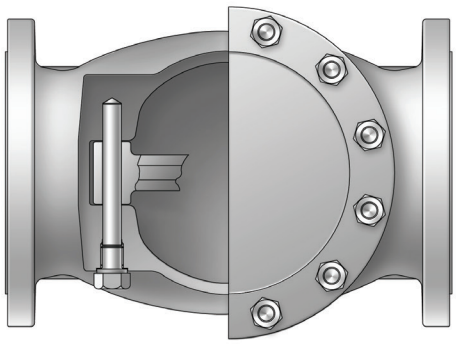
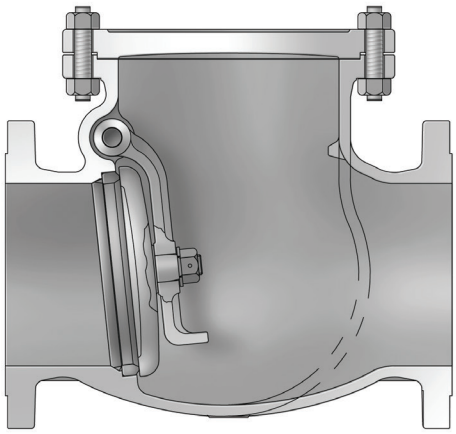
# SWING CHECK VALVE





## FUNCTION

The swing check valve is designed so that it is opened automatically at the forward flow and closed at the reverse flow in horizontal or vertical (upward flow only through valve) piping runs. It has an advantage of low pressure drop and therefore is best suitable for velocity application.

## BODY

The body has a spherical form with large radius, which permits the stress, turbulence and resistance to flow to be kept minimum.

## BODY-COVER JOINT

Body-cover joint of swing check valve is machined as follows:

Class 150 ·····Male and female.
Class 300 and 600 ····· Male and female.
Class 900 higher class ····· Ring type joint.
We can supply any kinds of gasket as required by customer.

## SEAT RING

The seat ring as a welded-in type is designed to prevent any turbulence and damage by corrosion. It is forged or rolled into one piece for all dimensions, heat treated to obtain the desired surface hardness, and cleaned thoroughly before assembling.

## END CONNECTIONS

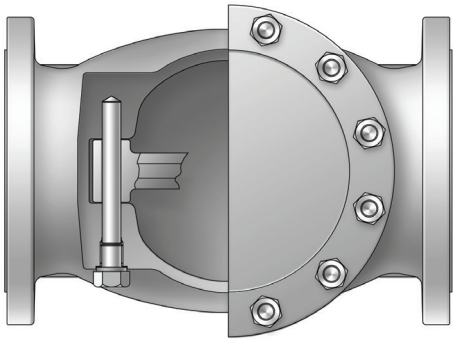
In our standard production of valve, the flange ends (RF) and the face to face dimensinos conform to ANSI B16.5 and ASME B16.10, respectively, and they have a raised face serrated finish type or other finish type as requested.
For butt-welded ends (B.W), of which the end to end dimension conforms to ASME B16.10, customer must specify the schedule type required, pipe class, or bore diameter.
Ring joint flanged ends (R.T.J) conform to ASME B16.5 and the end to end dimension follows ASME B16.10. The other special end connections may be supplied as required by customer.

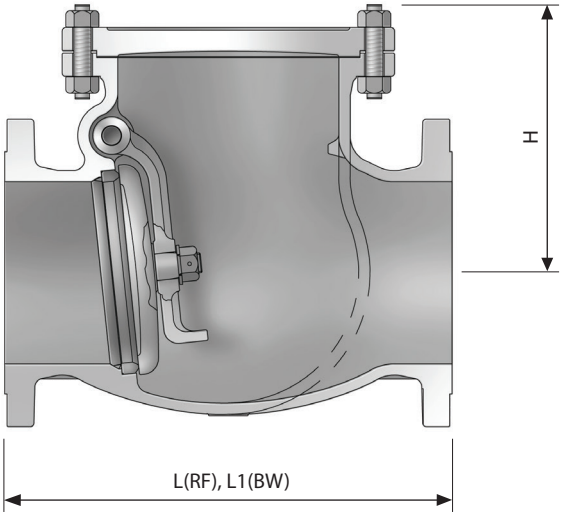
## HINGE ARRANGEMENT

- Body penetration is sealed with blind flange and spiral-wound gasket
- Arm pin is located near the disc center of gravity, minimzing sealing surface radius rotation and thus velocity.

## ARM ARRANGEMENT

- Hydrofoil profile maintains the disc stability while being lifted by a hydrodynamic force at a flow including pulsating.
- Heavy-balanced weight insures that disc goes to seat immediately upon cessation of flow and minimizes water hammer.





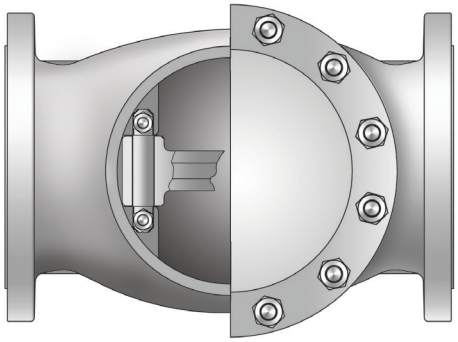

## END CONNECTION

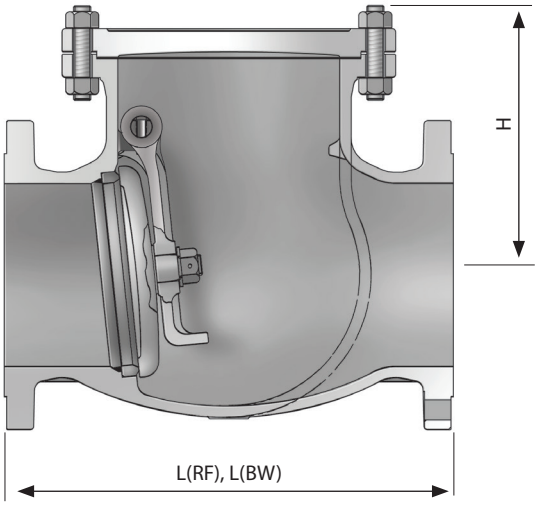
- R.F FLANGED ENDS TO ASME B16.5
- B.W. ENDS TO ASME B16.25
- R.T.J FLANGED ENDS TO ASME B16.5
- SIZE 26" AND LARGER, FLANGED ENDS ACCORDING TO ASME B16.47 SER.A OR SER.B

## STANDARD MATERIAL SPECIFICATIONS

| NO. | PART NAME | MATERIAL | | |
|---|---|---|---|---|
| 1 | BODY | A216 - WCB | A217 - WC6 | A351 - CF8 |
| 2 | BONNET | A216 - WCB | A217 - WC6 | A351 - CF8 |
| 3 | DISC | A217 - CA15+STL | A217 - CA15+STL | A351 - CF8+STL |
| 4 | ARM | A216 - WCB | A216 - WC6 | A351 - CF8 |
| 5 | ROD PIN | A479 - 410 | A479 - 410 | A479 - 304 |
| 6 | BODY SEAT RING | A576 - 1020+STL(S20C) | A182 - F11+STL | A240 - 304+STL |
| 7 | PLUG BOLT | A307 - B | A479 - 304 | A479 - 304 |
| 8 | GASKET | SPIRAL WOUND / GRAPHITE+304+304 | | |
| 9 | PLUG GASKET | SOFT STEEL | 304 S.S | 304 S.S |
| 10 | BONNET BOLT | A193 -B7 | A193 -B16 | A193 - B8 |
| 11 | BONNET NUT | A194 - 2H | A194 - 4 | A194 - 8 |
| 12 | DISC NUT | A194 - 8 | A194 - 8 | A194 - 8 |
| 13 | PIN | 304 S.S | 304 S.S | 304 S.S |
| 14 | WASHER | 304 S.S | 304 S.S | 304 S.S |

# INTERNAL TYPE SW-CH VALVE



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## STANDARD MATERIAL SPECIFICATIONS

| NO. | PART NAME | MATERIAL | | |
|---|---|---|---|---|
| 1 | BODY | A216 - WCB | A217 - WC6 | A351 - CF8 |
| 2 | COVER | A216 - WCB | A217 - WC6 | A351 - CF8 |
| 3 | DISC | A217 - CA15+STL | A217 - CA15+STL | A351 - CF8+STL |
| 4 | ARM | A216 - WCB | A217 - WC6 | A351 - CF8 |
| 5 | ROD PIN | A479 - 410 | A479 - 410 | A479 - 304 |
| 6 | BODY SEAT RING | A576 - 1020+STL | A182 - F11+STL | A240 - 304+STL |
| 7 | INTERNAL BOLT | A193 - B8 | A193 - B8 | A193 - B8 |
| 8 | INTERNAL NUT | A194 - 8 | A194 - 8 | A194 - 8 |
| 9 | WASHER | 316 S.S | 316 S.S | 316 S.S |
| 10 | GASKET | SPIRAL WOUND / GRAPHITE+304+304 | | |
| 11 | BONNET BOLT | A193 - B7 | A193 - B16 | A193 - B8 |
| 12 | BONNET NUT | A194 - 2H | A194 - 4 | A194 - 8 |
| 13 | DISC NUT | A194 - 8 | A194 - 8 | A194 - 8 |
| 14 | PIN | 304 S.S | 304 S.S | 304 S.S |
| 15 | PLAIN WASHER | 304 S.S | 304 S.S | 304 S.S |

# DIMENSION AND WEIGHT

## CLASS 150

UNIT : mm

| SIZE | 2 | 3 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 24 | 26 | 28 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L | 203.2 | 241.3 | 292.1 | 355.6 | 495.3 | 622.3 | 698.5 | 787.4 | 863.6 | 977.9 | 977.9 | 1295.4 | 1295.4 | 1447.8 | 1524 |
| L1 | 203.2 | 241.3 | 292.1 | 355.6 | 495.3 | 622.3 | 698.5 | 787.4 | 863.6 | 977.9 | 977.9 | 1295.4 | - | - | - |
| H | 160 | 190 | 225 | 260 | 320 | 350 | 380 | 405 | 460 | 505 | 570 | 680 | 865 | 918 | 962 |
| WEIGHT(kg) | 16 | 26 | 45 | 78 | 136 | 214 | 319 | 412 | 514 | 749 | 933 | 1346 | 1727 | 1964 | 2247 |

## CLASS 300

UNIT : mm

| SIZE | 2 | 3 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 24 | 26 | 28 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L | 266.7 | 317.5 | 355.6 | 444.5 | 533.4 | 622.3 | 711.2 | 838.2 | 863.6 | 977.9 | 1016.0 | 1346.2 | 1346.2 | 1498.6 | 1593.9 |
| L1 | 266.7 | 317.5 | 355.6 | 444.5 | 533.4 | 622.3 | 711.2 | 838.2 | 863.6 | 977.9 | 1016.0 | 1346.2 | - | - | - |
| H | 160 | 199 | 227 | 278 | 322 | 383 | 435 | 510 | 521 | 572 | 622 | 712 | 979 | 983 | 1115 |
| WEIGHT(kg) | 21 | 42 | 54 | 124 | 222 | 291 | 444 | 632 | 786 | 1058 | 1210 | 1916 | 2000 | 2600 | 3664 |

## CLASS 600

UNIT : mm

| SIZE | 2 | 3 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 24 | 26 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L | 292.1 | 355.6 | 431.8 | 558.8 | 660.4 | 787.4 | 838.2 | 889.0 | 990.6 | 1092.2 | 1193.8 | 1397.0 | - | 1651 |
| L1 | 292.1 | 355.6 | 431.8 | 558.8 | 660.4 | 787.4 | 838.2 | 889.0 | 990.6 | 1092.2 | 1193.8 | 1397.0 | 1448 | - |
| H | 197 | 210 | 256 | 329 | 364 | 464 | 486 | 572 | 660 | 711 | 787 | 864 | 1028 | 1135 |
| WEIGHT(kg) | 31 | 56 | 103 | 204 | 342 | 624 | 776 | 938 | 1250 | 1518 | 2390 | 3686 | 4000 | 5502 |

## CLASS 900

UNIT : mm

| SIZE | 2 | 3 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L | 368.3 | 381.0 | 457.2 | 609.6 | 736.6 | 838.2 | 965.2 | 1028.7 | 1130.3 | 1219.2 | 1320.8 | 1549.4 |
| L1 | 368.3 | 381.0 | 457.2 | 609.6 | 736.6 | 838.2 | 965.2 | 1028.7 | 1130.3 | 1219.2 | 1320.8 | 1549.4 |
| H | 267 | 290 | 306 | 338 | 460 | 500 | 578 | 647 | 710 | 785 | 850 | 1006 |
| WEIGHT(kg) | 68 | 106 | 139 | 294 | 525 | 731 | 1025 | 1444 | 1850 | 2610 | 3407 | 5842 |

## CLASS 1500

UNIT : mm

| SIZE | 2 | 3 | 4 | 6 | 8 | 10 | 12 | 16 |
|---|---|---|---|---|---|---|---|---|
| L | 368.3 | 469.9 | 546.1 | 704.9 | 831.9 | 990.6 | 1130.3 | 1384.3 |
| L1 | 368.3 | 469.9 | 546.1 | 704.9 | 831.9 | 990.6 | 1130.3 | 1384.3 |
| H | 267 | 296 | 355 | 465 | 540 | 657 | 728 | 1116 |
| WEIGHT(kg) | 73 | 125 | 212 | 470 | 825 | 960 | 1510 | 4630 |