

CHECK VALVES



BASIC DESIGN : BS 1868 / ASME B16.34

FACE-TO-FACE : ASME B16.10

FLANGES : UP TO 24" ASME B16.5
FROM 26" ASME B16.47

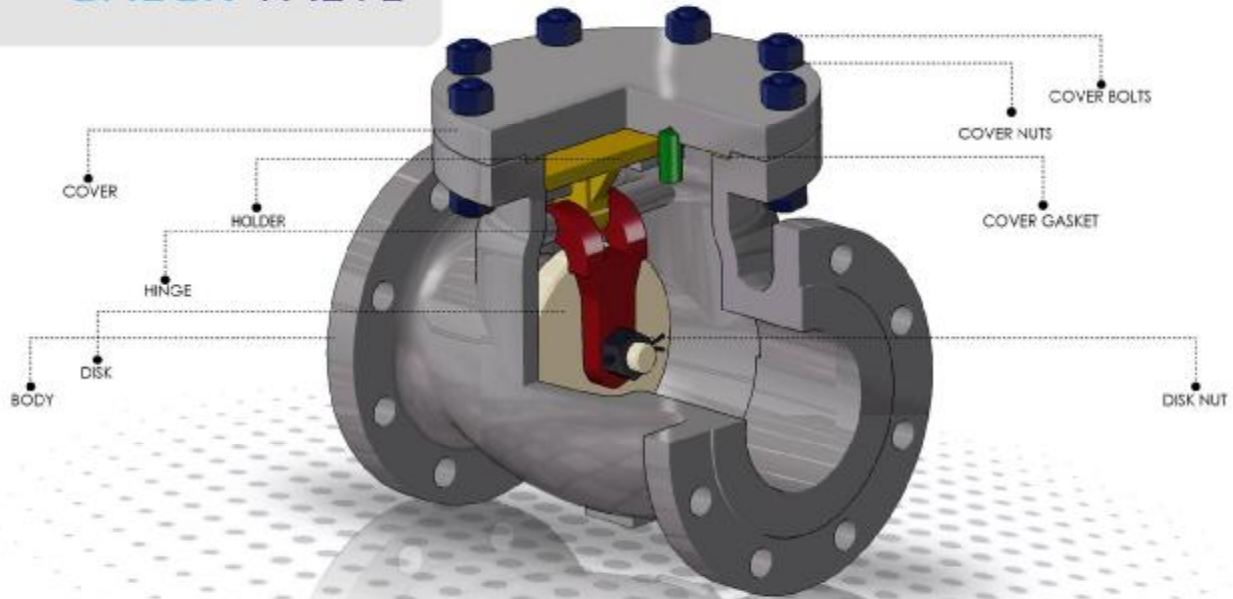
BUTTWELD ENDS : ASME B16.25

MARKING : MSS-SP-25

INSPECTION AND TESTING : API 598



CHECK VALVE



| | WCB | LCB | WCB | WCB | CS | CF8 | CF8M |
|------------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| BODY | A216 GR.WCB | A352 GR.LCB | A217 GR.WC9 | A217 GR.WC9 | A217 GR.C5 | A351 GR.CF8 | A351 GR.CF8M |
| COVER | A216 GR.WCB | A352 GR.LCB | A217 GR.WC9 | A217 GR.WC9 | A217 GR.C5 | A351 GR.CF8 | A351 GR.CF8M |
| COVER BOLTS | A193 GR.B7 | ASTM A320 GR.L7 | ASTM A193 GR.B16 | ASTM A193 GR.B16 | ASTM A193 GR.B16 | ASTM A193 GR.B8 | ASTM A193 GR.B8 |
| COVER NUTS | A194 GR.2H | ASTM A194 GR.4 | ASTM A194 GR.4 | ASTM A194 GR.4 | ASTM A194 GR.4 | ASTM A194 GR.3 | ASTM A194 GR.3 |
| COVER GASKET CLASS 150 | SOFT STEEL | TYPE 304 SS | TYPE 304 SS | TYPE 304 SS | TYPE 304 SS | TYPE 316 SS | TYPE 316 SS |
| COVER GASKET CLASS 300 & 600 | SPIRAL 316 SS+GRAPHITE | SPIRAL 316 SS+GRAPHITE | SPIRAL 316 SS+GRAPHITE | SPIRAL 316 SS+GRAPHITE | SPIRAL 316 SS+GRAPHITE | SPIRAL 316 SS+GRAPHITE | SPIRAL 316 SS+GRAPHITE |
| COVER GASKET CLASS 900 & UP | STEEL RING | 304 SS RING | 304 SS RING | 304 SS RING | 304 SS RING | 316 SS RING | 316 SS RING |
| HINGE | A216 GR.WCB | A352 GR.LCB | A217 GR.WC9 | A217 GR.WC9 | A217 GR.C5 | A351 GR.CF8 | A351 GR.CF8M |
| DISK NUT | A194 GR.2H | ASTM A194 GR.4 | ASTM A194 GR.4 | ASTM A194 GR.4 | ASTM A194 GR.4 | ASTM A194 GR.3 | ASTM A194 GR.3 |
| HOLDER | A216 GR.WCB | A352 GR.LCB | A217 GR.WC9 | A217 GR.WC9 | A217 GR.C5 | A351 GR.CF8 | A351 GR.CF8M |

| TRIM NUMBER | SEAT RING SURFACE | DISK SURFACE | PIN |
|-------------|-------------------|--------------|----------|
| 1 | F6 | F6 | F6 |
| 2 | F304 | F304 | F304 |
| 5 | STELLITED | STELLITED | F6 |
| 8 | STELLITED | F6 | F6 |
| 9 | MONEL | MONEL | MONEL |
| 10 | F316 | F316 | F316 |
| 12 | STELLITED | F316 | F316 |
| 13 | ALLOY 20 | ALLOY 20 | ALLOY 20 |

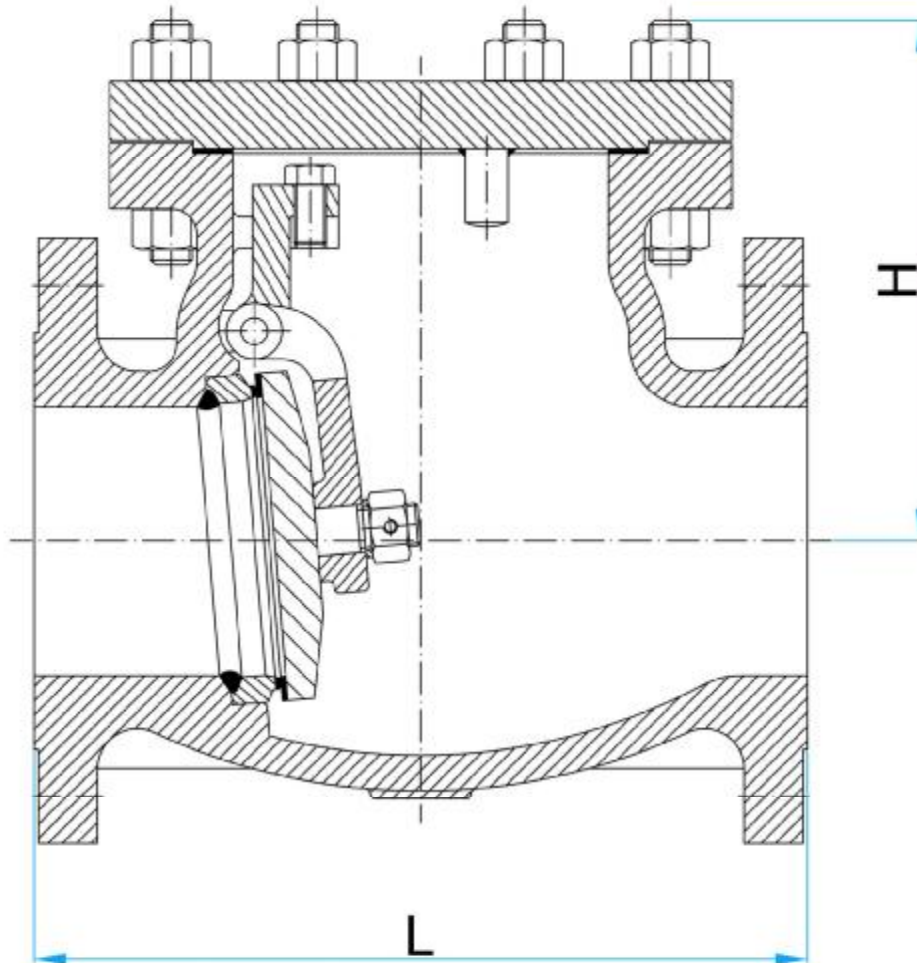
CHECK VALVES ASME CLASS 150

FEATURES :

- HEAVY DUTY BODY
- FULL PORT DESIGN
- END CONNECTION : RAISED FACE , BUTTWELD , RING TYPE JOINT
- BOLTED COVER
- SWING TYPE MECHANISM
- SUITABLE FOR INSTALLING IN HORIZONTAL AND VERTICAL POSITIONS
- INTERNAL / EXTERNAL HINGE PIN
- ANTI ROTATION DISK
- MALE AND FEMALE COVER JOINT
- CORRUGATED METAL COVER GASKET
- HEAVY SERIES HEX NUTS
- WELDED SEATRING
- LAPPED SEATS TO MIRROR FINISH
- EASY MAINTENANCE
- SPECIAL FEATURES ACCORDING TO CUSTOMERS REQUIREMENTS

| | | | |
|--|-------------|-----------------------|-------------|
| TEST PRESSURE TO API 598 (CHECK VALVES ASME CLASS 150) | | | |
| HYDROSTATIC SHELL TEST | | HYDROSTATIC SEAT TEST | |
| 30 [BAR] | 435 [PSI G] | 23 [BAR] | 335 [PSI G] |

CHECK VALVES ASME CLASS 150



| | | | | | | | | | | | | | | | | | | | |
|-----------------|-----|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|
| DN (mm) | 50 | 65 | 80 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600 | 700 | 750 | 800 | 900 | 1050 | 1200 |
| NPS (inch) | 2 | 2 1/2 | 3 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 24 | 28 | 30 | 32 | 36 | 42 | 48 |
| L (RF, BW) (mm) | 203 | 216 | 241 | 292 | 356 | 495 | 622 | 699 | 787 | 864 | 978 | 978 | 1295 | 1448 | 1524 | 1727 | 1965 | 2261 | 2566 |
| H (mm) | 170 | 182 | 186 | 214 | 260 | 300 | 348 | 400 | 452 | 481 | 539 | 600 | 682 | 940 | 985 | 1260 | 1380 | 1470 | 1645 |
| WEIG HT (KG) | 15 | 26 | 27 | 42 | 75 | 124 | 200 | 310 | 428 | 555 | 775 | 835 | 1300 | 1650 | 2000 | 2450 | 3150 | 5000 | 6700 |

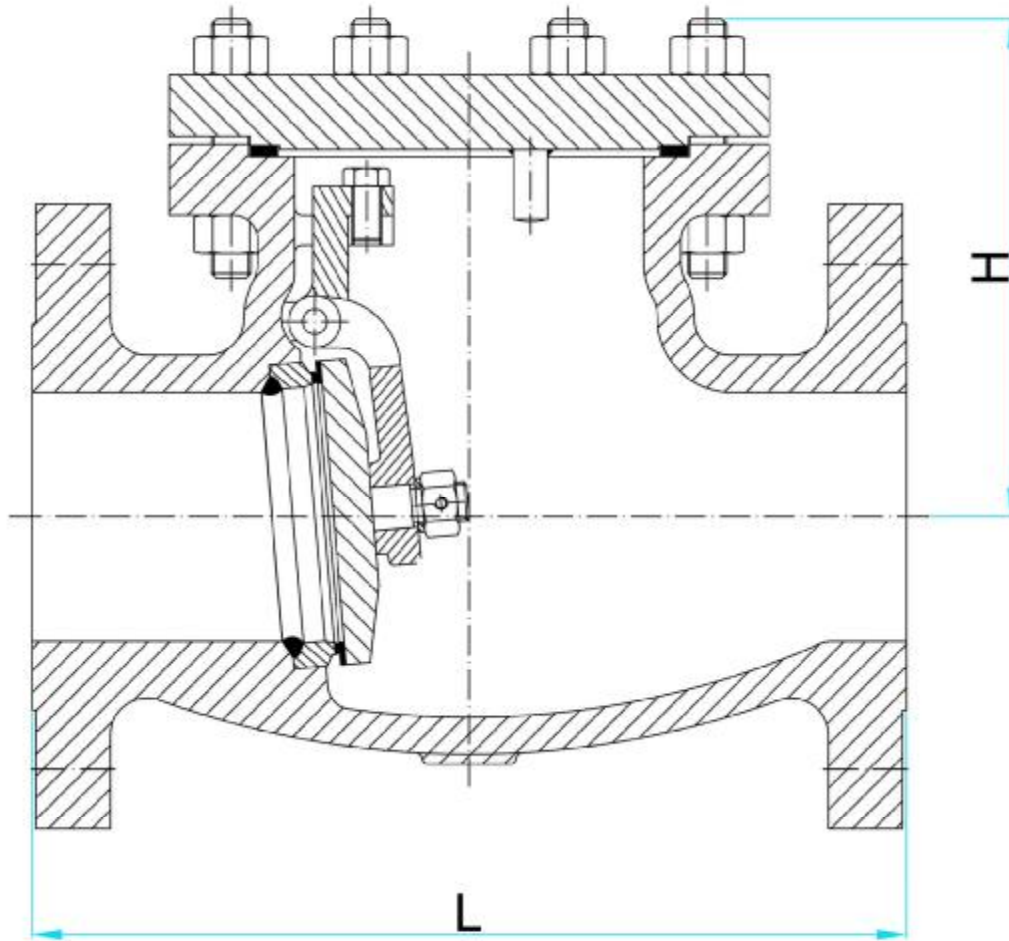
CHECK VALVES ASME CLASS 300

FEATURES :

- HEAVY DUTY BODY
- FULL PORT DESIGN
- END CONNECTION : RAISED FACE , BUTTWELD , RING TYPE JOINT
- BOLTED COVER
- SWING TYPE MECHANISM
- SUITABLE FOR INSTALLING IN HORIZONTAL AND VERTICAL POSITIONS
- INTERNAL / EXTERNAL HINGE PIN
- ANTI ROTATION DISK
- MALE AND FEMALE COVER JOINT
- SPIRAL WOUND GRAPHITIC COVER GASKET
- HEAVY SERIES HEX NUTS
- WELDED SEATRING
- LAPPED SEATS TO MIRROR FINISH
- EASY MAINTENANCE
- SPECIAL FEATURES ACCORDING TO CUSTOMERS REQUIREMENTS

| TEST PRESSURE TO API 598 (CHECK VALVES ASME CLASS 300) | | | |
|--|-------------|-----------------------|------------|
| HYDROSTATIC SHELL TEST | | HYDROSTATIC SEAT TEST | |
| 78 [BAR] | 1130 [PSIG] | 58 [BAR] | 840 [PSIG] |

CHECK VALVES ASME CLASS 300



| | | | | | | | | | | | | | | | | |
|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|
| DN (mm) | 50 | 65 | 80 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600 | 700 | 750 | 800 |
| NPS (inches) | 2 | 2½ | 3 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 24 | 28 | 30 | 32 |
| L (RF, BW) (mm) | 267 | 292 | 318 | 356 | 445 | 533 | 622 | 711 | 838 | 864 | 978 | 1016 | 1346 | 1499 | 1549 | 1727 |
| H (mm) | 172 | 186 | 215 | 237 | 300 | 341 | 350 | 418 | 480 | 522 | 600 | 669 | 750 | 1177 | 1250 | 1300 |
| WEIGHT (KG) | 21 | 30 | 39 | 70 | 125 | 190 | 290 | 450 | 700 | 774 | 1000 | 1273 | 1650 | 2650 | 3700 | 3900 |

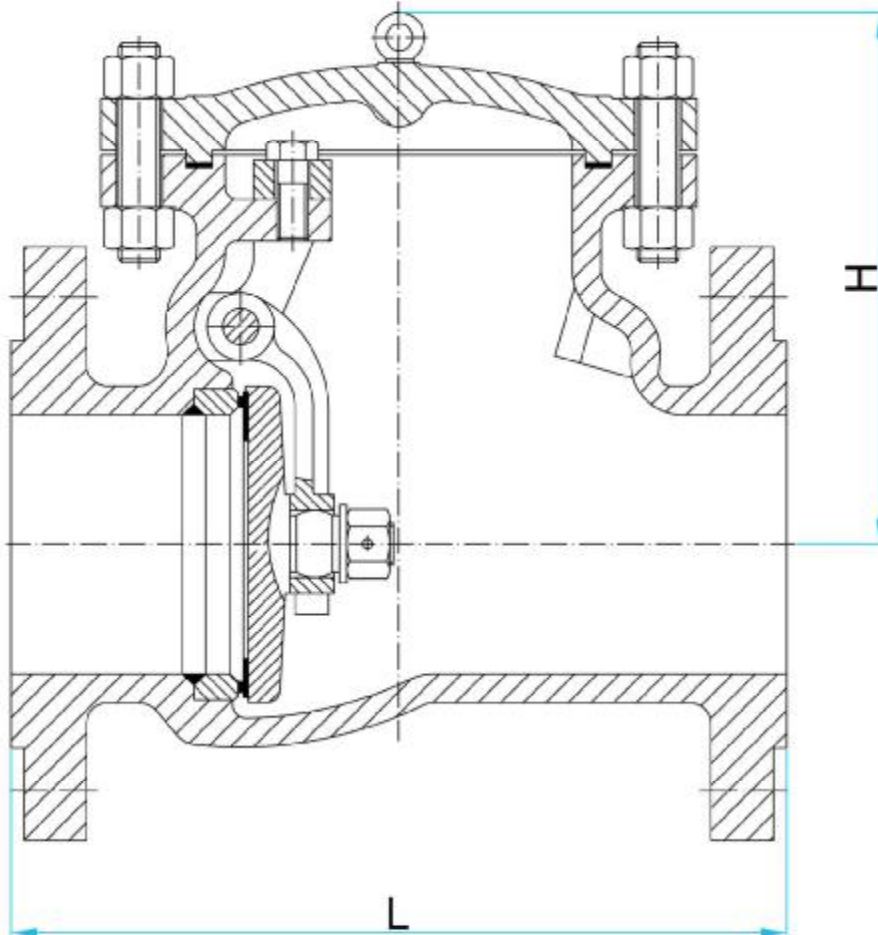
CHECK VALVES ASME CLASS 600

FEATURES :

- HEAVY DUTY BODY
- FULL PORT DESIGN
- END CONNECTION : RAISED FACE , BUTTWELD , RING TYPE JOINT
- BOLTED COVER
- SWING TYPE MECHANISM
- SUITABLE FOR INSTALLING IN HORIZONTAL AND VERTICAL POSITIONS
- INTERNAL / EXTERNAL HINGE PIN
- ANTI ROTATION DISK
- MALE AND FEMALE COVER JOINT
- SPIRAL WOUND GRAPHITIC COVER GASKET
- HEAVY SERIES HEX NUTS
- WELDED SEATRING
- LAPPED SEATS TO MIRROR FINISH
- EASY MAINTENANCE
- SPECIAL FEATURES ACCORDING TO CUSTOMERS REQUIREMENTS

| | | | |
|--|-------------|-----------------------|-------------|
| TEST PRESSURE TO API 598 (CHECK VALVES ASME CLASS 600) | | | |
| HYDROSTATIC SHELL TEST | | HYDROSTATIC SEAT TEST | |
| 153 [BAR] | 2220 [PSIG] | 116 [BAR] | 1680 [PSIG] |

CHECK VALVES ASME CLASS 600



| | | | | | | | | | | | | | |
|-----------------|-----|-------|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|
| DN (mm) | 50 | 65 | 80 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600 |
| NPS (inch) | 2 | 2 1/2 | 3 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 24 |
| L (RF, BW) (mm) | 292 | 330 | 356 | 432 | 559 | 660 | 787 | 838 | 889 | 991 | 1092 | 1194 | 1397 |
| L (RTJ) (mm) | 295 | 333 | 359 | 435 | 562 | 664 | 791 | 841 | 892 | 994 | 1095 | 1200 | 1407 |
| H (mm) | 177 | 200 | 232 | 294 | 358 | 400 | 461 | 520 | 562 | 650 | 728 | 800 | 900 |
| WEIG HT (KG) | 28 | 38 | 52 | 87 | 224 | 354 | 626 | 790 | 892 | 1200 | 1600 | 2420 | 3150 |

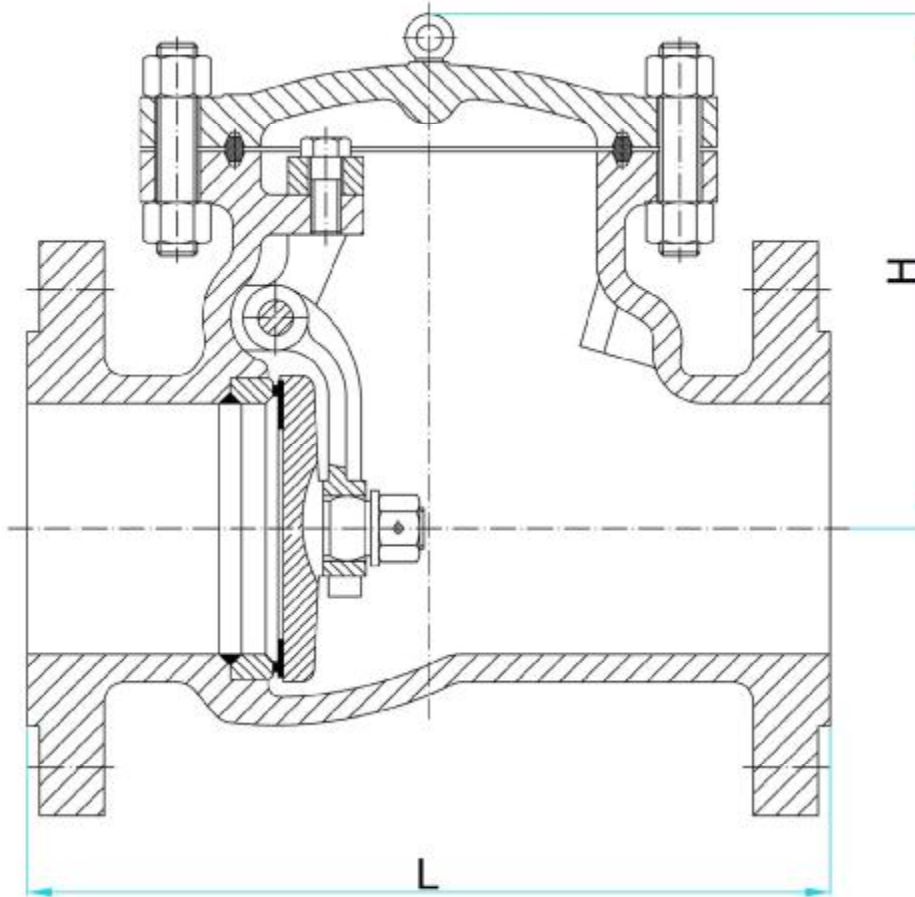
CHECK VALVES ASME CLASS 900

FEATURES :

- HEAVY DUTY BODY
- FULL PORT DESIGN
- END CONNECTION : RAISED FACE , BUTTWELD , RING TYPE JOINT
- BOLTED COVER
- SWING TYPE MECHANISM
- SUITABLE FOR INSTALLING IN HORIZONTAL AND VERTICAL POSITIONS
- INTERNAL / EXTERNAL HINGE PIN
- ANTI ROTATION DISK
- RING JOINT COVER GASKET
- HEAVY SERIES HEX NUTS
- WELDED SEATRING
- LAPPED SEATS TO MIRROR FINISH
- EASY MAINTENANCE
- SPECIAL FEATURES ACCORDING TO CUSTOMERS REQUIREMENTS

| TEST PRESSURE TO API 598 (CHECK VALVES ASME CLASS 900) | | | |
|--|-------------|-----------------------|-------------|
| HYDROSTATIC SHELL TEST | | HYDROSTATIC SEAT TEST | |
| 229 [BAR] | 3320 [PSIG] | 170 [BAR] | 2465 [PSIG] |

CHECK VALVES ASME CLASS 900



| | | | | | | | | | | |
|-----------------|-----|-------|-----|-----|-----|-----|-----|------|------|------|
| DN (mm) | 50 | 65 | 80 | 100 | 150 | 200 | 250 | 300 | 350 | 400 |
| NPS (inchi) | 2 | 2 1/2 | 3 | 4 | 6 | 8 | 10 | 12 | 14 | 16 |
| L (RF, BW) (mm) | 368 | 419 | 381 | 457 | 610 | 737 | 838 | 965 | 1029 | 1130 |
| L (RTJ) (mm) | 371 | 422 | 80 | 100 | 150 | 200 | 250 | 300 | 350 | 1140 |
| H (mm) | 252 | 270 | 228 | 312 | 360 | 432 | 480 | 561 | 632 | 700 |
| WEIG HT (KG) | 69 | 93 | 85 | 145 | 310 | 500 | 772 | 1060 | 1380 | 1810 |

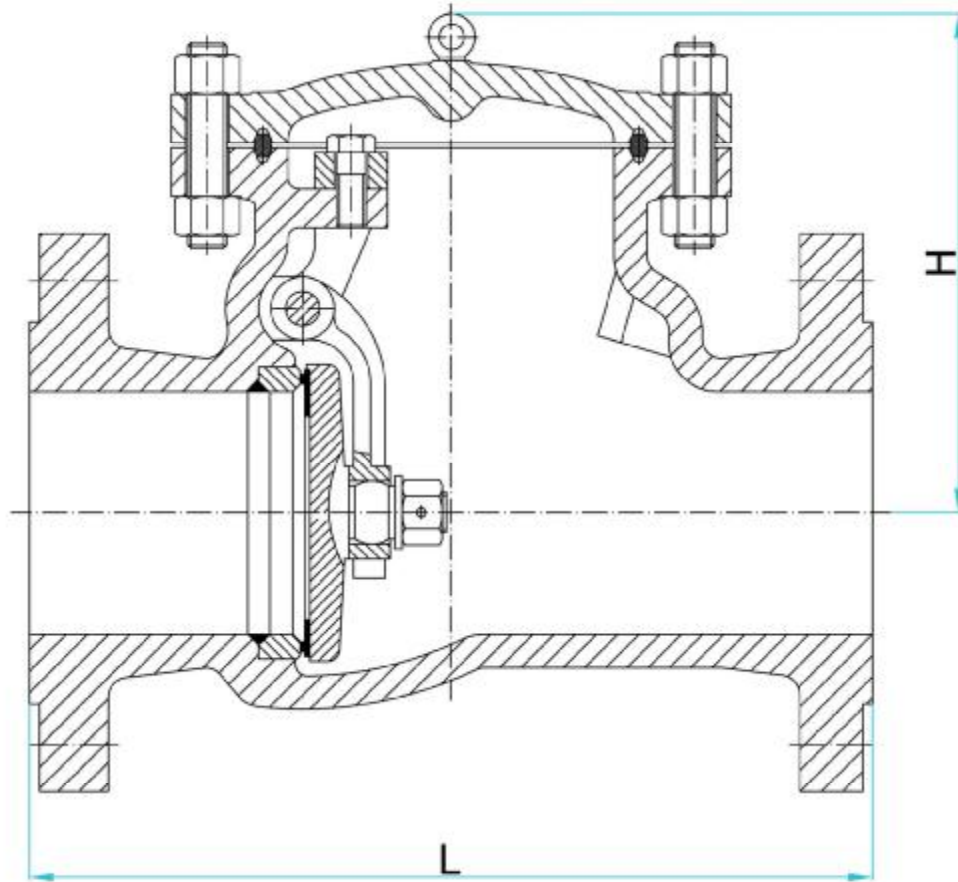
CHECK VALVES ASME CLASS 1500

FEATURES :

- HEAVY DUTY BODY
- FULL PORT DESIGN
- END CONNECTION : RAISED FACE , BUTTWELD , RING TYPE JOINT
- BOLTED COVER
- SWING TYPE MECHANISM
- SUITABLE FOR INSTALLING IN HORIZONTAL AND VERTICAL POSITIONS
- INTERNAL / EXTERNAL HINGE PIN
- ANTI ROTATION DISK
- RING JOINT COVER GASKET
- HEAVY SERIES HEX NUTS
- WELDED SEATRING
- LAPPED SEATS TO MIRROR FINISH
- EASY MAINTENANCE
- SPECIAL FEATURES ACCORDING TO CUSTOMERS REQUIREMENTS

| | | | |
|---|-------------|-----------------------|-------------|
| TEST PRESSURE TO API 598 (CHECK VALVES ASME CLASS 1500) | | | |
| HYDROSTATIC SHELL TEST | | HYDROSTATIC SEAT TEST | |
| 380 [BAR] | 5500 [PSIG] | 280 [BAR] | 4060 [PSIG] |

CHECK VALVES ASME CLASS 1500



| | | | | | | | | |
|-----------------|-----|-------|-----|-----|-----|-----|------|------|
| DN (mm) | 50 | 65 | 80 | 100 | 150 | 200 | 250 | 300 |
| NPS (inchi) | 2 | 2 1/2 | 3 | 4 | 6 | 8 | 10 | 12 |
| L (RF, BW) (mm) | 368 | 419 | 470 | 546 | 705 | 832 | 991 | 1130 |
| L (RTJ) (mm) | 371 | 422 | 473 | 549 | 711 | 841 | 1000 | 1146 |
| H (mm) | 252 | 270 | 300 | 332 | 448 | 500 | 561 | 650 |
| WEIG HT (KG) | 69 | 93 | 120 | 235 | 540 | 945 | 1275 | 1870 |

ACCESSORIES :

| ACCESSORY TYPE | GATE VALVE | GLOBE VALVE | CHECK VALVE |
|---------------------------|------------|-------------|-------------|
| LOCKING DEVICE | ✓ | ✓ | — |
| GEAR ACTUATOR | ✓ | ✓ | — |
| ELECTRICAL MOTOR ACTUATOR | ✓ | ✓ | — |
| CHAINWHEEL | ✓ | — | — |
| EXTENDED STEM | ✓ | ✓ | — |
| FLOORSTAND | ✓ | ✓ | — |
| POSITION INDICATOR | ✓ | — | — |
| LIMIT SWITCH | ✓ | — | — |
| OUTSIDE LEVER AND WEIGHT | — | — | ✓ |
| BY-PASS | ✓ | — | — |
| TAPS AND DRAINS | ✓ | ✓ | ✓ |

NACE VALVES :

| PART NAME | ASTM SPECIFICATION | NACE HARDNESS | REMARK |
|-----------------------|---------------------------------|---------------|---------------------|
| BODY / BONNET / COVER | A216 GR.WCB | ≤22 HRC | — |
| HINGE / HOLDER | A216 GR.WCB OR A105 | ≤22 HRC | — |
| STEM | A276 TYPE 410 | ≤22 HRC | DOUBLE TEMPERED |
| BACK SEAT BUSHING | A276 TYPE 410 | ≤22 HRC | DOUBLE TEMPERED |
| HINGE PIN | A276 TYPE 410 | ≤22 HRC | DOUBLE TEMPERED |
| WEDGE / DISK | A276 TYPE 410 OR 13%Cr. OVERLAY | ≤22 HRC | DOUBLE TEMPERED |
| SEAT RING | 13%Cr. OVERLAY | ≤22 HRC | DOUBLE TEMPERED |
| BONNET STUD BOLTS | A193 GR.B7M | ≤22 HRC | ONLY WHEN SPECIFIED |
| BONNET HEX NUTS | A194 GR.2HM | ≤22 HRC | ONLY WHEN SPECIFIED |

FICO

VALVES

