Dual Plate Check Valves
API 594

DUAL PLATE WAFER CHECK VALVES API 594 - p. 84
Class ASME 150 (PN 20) • 300 (PN 50) • 600 (PN 100)
900 (PN 150) • 1500 (PN 250) • 2500 (PN 420)

DUAL PLATE LUG CHECK VALVES API 594 - p. 88
Class ASME 150 (PN 20) • 300 (PN 50) • 600 (PN 100)
900 (PN 150) • 1500 (PN 250) • 2500 (PN 420)

DOUBLE FLANGED CHECK VALVES API 594 - p. 92
Class ASME 150 (PN 20) • 300 (PN 50) • 600 (PN 100)
900 (PN 150) • 1500 (PN 250) • 2500 (PN 420)

SPECIAL FEATURES - p. 95
INSTALLATION RECOMMENDATION - p. 96
Dual Plate Check Valves

RETAINERLESS DESIGN ACCORDING TO API 594
The body is realized in cast or forged steel, carefully designed in order to minimize the pressure drop. The basic dimensions, wall thickness, face to face and flanges, comply with the relevant API and ASME standards. Two guides are incorporated to ensure correct alignment of the hinge pin. The integral seat is part of trim Special attention is given to the seating surface which is ground and lapped, for a perfectly tight seal. The total absence of through-body drills (retainerless design) avoids any possible accidental leakage from the system.

The disc is in cast or forged steel. The attachment to the hinge pin allows the rotation and a small translation along the flow. The seating surface is ground and lapped. An integral over-travel stop for the discs is incorporated.

Torsion spring, available in various material, according to the desired service.

The hinge pin is part of the trim, in forged stainless steel and is machined from ground bar. The hinge pin is held in position in the body with two supports. The pin can be easily removed for valve maintenance. For correct valve functioning it shall be always installed in vertical position, when used in horizontal pipeline.

The stop pin is part of the trim. It is machined from ground bar in forged stainless steel. It is held in position parallel to the hinge pin on the same support. It has a double function: it stops the disc and retains the spring’s trust. The pin can be easily removed for maintenance of the valve.
Dual Plate Wafer Check Valves
RETAINERLESS DESIGN ACCORDING TO API 594
### Class ASME 150 (PN 20)
**FIGURE NUMBERS - CLASS ASME 250 - ALL SIZES**

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Dual Plate Wafer Check Valves

Dual Plate Check Valves API 594

Dual Plate Check Valves API 594

Dual Plate Check Valves API 594
Class ASME 600 (PN 100)

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Class ASME 900 (PN 150)

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**CD_W 1500: RF - RAISED FACE ● RJ - RING JOINT**

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For size and pressure classes non mentioned in the above tables please contact ORION.

N.B. All dimension are given in millimeters, weight are expressed in Kg. and are not including the operator.

Dimensions and weight may change from above values without notice.
Dual Plate Lug Check Valves

RETAILERLESS DESIGN ACCORDING TO API 594

Only as Example: For Installation Recommendation, please refer to page 96.
**Class ASME 150 (PN 20)**

**FIGURE NUMBERS - CLASS ASME 250 - ALL SIZES**

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**FIGURE NUMBERS - CLASS ASME 300 - ALL SIZES**

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**Dual Plate Check Valves API 594**

**Dual Plate Lug Check Valves**
Class ASME 600 (PN 100)

FIGURE NUMBERS - CLASS ASME 600 - ALL SIZES

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Class ASME 900 (PN 150)

FIGURE NUMBERS - CLASS ASME 900 - ALL SIZES

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<td>461</td>
<td>545</td>
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<tr>
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<td>102</td>
<td>159</td>
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<td>292</td>
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<tr>
<td>C</td>
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**Approximate WEIGHT (Kg)**

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**Approximate WEIGHT (Kg)**

| SIZE | 766 | 1.162 | 1.343 | 2.036 |
### Class ASME 1500 (PN 250)

**FIGURE NUMBERS - CLASS ASME 1500 - ALL SIZES**

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**Approximate WEIGHT (Kg)**

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<td>435</td>
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**Approximate WEIGHT (Kg)**

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**CD_L 1500: RF - RAISED FACE • RJ - RING JOINT**

For size and pressure classes non mentioned in the above tables please contact ORION.

N.B. All dimension are given in millimeters, weight are expressed in Kg. and are not including the operator.

Dimensions and weight may change from above values without notice.
Double Flanged Check Valves

ORION STEEL VALVES

Double Flanged Check Valves
RETAINERLESS DESIGN ACCORDING TO API 594

Only as Example: For Installation Recommendation, please refer to page 96.
### Class ASME 150 (PN 20)

**Figure Numbers - Class ASME 150 - All Sizes**

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Approximate Weight (Kg)

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### Class ASME 300 (PN 50)

**Figure Numbers - Class ASME 300 - All Sizes**

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Approximate Weight (Kg)

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### Approximate Weight (Kg)

- A: 1.471
- B: 2.180
- C: 3.125
- D: 3.598

---

**Double Flanged Check Valves**

**Dual Plate Check Valves API 594**

- **Size:** 10" - 36"
- **A:** 405 - 1,170
- **B:** 146 - 305
- **C:** 270 - 740

---

**Dual Plate Check Valves API 594**

- **Size:** 48" - 60"
- **A:** 1.465 - 1.810
- **B:** 629 - 826
- **C:** 1.192 - 660

---

**Approximate Weight (Kg):**

- A: 3.078
- B: 4.202
- C: 4.764
### Class ASME 600 (PN 100)

**FIGURE NUMBERS - CLASS ASME 600 - ALL SIZES**

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<td>740</td>
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**Approximate WEIGHT (Kg)**

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### Class ASME 900 (PN 150)

**FIGURE NUMBERS - CLASS ASME 900 - ALL SIZES**

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**Approximate WEIGHT (Kg)**

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For size and pressure classes non mentioned in the above tables please contact ORION.

N.B. All dimension are given in millimeters, weight are expressed in Kg. and are not including the operator.

Dimensions and weight may change from above values without notice.
ORION is able to provide more valve preparations not listed in this catalogue as butt weld ends, hub ends or compact flange connections. Please contact ORION Sales Department for technical details as weight or end to end dimension.

**Special Features**

**SOFT SEATING**
- This feature is applicable on all body material
- Renewable seat is an option on all designs to enhance the material selection on trim components

1. Optional renewable seat zero leakage
2. Standard integral seat zero leakage
The best working position for a dual plate check valve is on horizontal pipeline, with the hinge pin installed vertically. The valve can be used on vertical flowlines as well, provided the flow direction is upward. For the vertical downward stream installation, please explicitly ask for a special spring to be installed while ordering, in order to compensate the gravity effect on the plates.

EACH ORION DUAL PLATE CHECK VALVE HAS A FLOW INDICATION ARROW EMBOSSED ON THE BODY. FOR THE CORRECT INSTALLATION OF THIS VALVE, MAKE SURE THAT IT IS MATCHING THE FLOW DIRECTION.