

BRAND INDIA ENGINEERING E-CATALOGUE

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Advance Valves commenced manufacturing Industrial Valves over 25 years ago, in 1986. The Company was promoted and is presently led by Mr. Uma Shanker. Since then Advance Valves has established its position among the top 5 quality manufacturers internationally in its product range. Advance Valves is today considered a pioneer in technology for its Dual Plate Check & Balancing Valves, and even for its Butterfly Valves, especially in the domestic market. Advance Valves has been regularly supplying its products to the Oil and Gas, Refineries and Petrochemical, Power, Water, Fertiliser, Steel, and HVAC sectors. Today, Advance Valves interacts with all the major clients and EPC's both in the domestic markets as well as globally. Advance Valves specializes in the manufacture of Dual Plate Check Valves (as per API 594/API 6D), High Performance Metal Seated and Soft Seated Butterfly Valves (as per API 609) in metallurgies suitable for all petrochemical, sour services, seawater services, power & chemical, mining, power and oxygen sectors, amongst other applications. These include offerings in Aluminum Bronze, Duplex S.S, Titanium, Hastelloy, Alloy 20, Inco Alloy amongst other super alloys. Our Balancing Valves are considered to be a de-facto standard in the Indian HVAC sector.

Products Description

BRAND INDIA ENGINEERING E-CATALOGUE

DUAL PLATE CHECK VALVE

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Technical Details

The salient features include:- 1. Sizes from 2" to 80" diameter. 2. ANSI Class 125 to ANSI Class 2500. 3. API 6A valves ranging from API 5000 to API 10000. 4. Suitable for -196° C (Cryogenic) to 900° C (Fire Safe applications). 5. Soft and Metal Seated. 7. Fugitive Emission Free Retainerless Design. 8. Models: Wafer, Double & Mono Flanged, Lugged & Sold Lugged, Butt Welded & Hub Ended, Extended Flanged Body, Jacketed Bodies, Ring Type Joints (RTJs) 9. Full Cladding. 10. Zero Velocity Non Slamming Characteristics. 12. No Valve - Induced Water Hammer Effect. Design Features The Dual Plate Check Valve is an all purpose non return valve that is much stronger, lighter in weight and smaller in size compared to a conventional swing check valve or lift check valve. The Dual Plate Check Valve design is the outcome of attempts to solve the problems associated with conventional swing check valve and lift check valve. The Dual Plate Check Valve employs two-spring-loaded plates hinged on a central hinge pin. When the flow decreases, the plates close by the action of torsion spring before flow reversal takes place. This design offers the twin advantages of No Water Hammer and Non Slam simultaneously. All features put together make the Dual Plate Check Valve as the most efficient & versatile design. It is also referred to as SILENT CHECK VALVE Dual Plate Check Valve can be classified as Zero Velocity Valve. The design has everything which the other conventional valves miss. It is a valve most efficient in operation irrespective of fluid and service conditions and the easiest to handle and install in any piping system with no constraints. NO WATER HAMMER To eliminate water hammer, a Check Valve should close before the onset of reverse flow. Water hammer is almost non existent in dual plate check valves since closing of the valve does not depend on back pressure and back flow. Each plate being half the size of a swing check disc provides a straight flow path, offering least resistance. Due to spring assisted closing, valve closure starts as soon as flow velocity reduces below the designed minimum velocity and thereafter the closing rate flows the flow velocity reduction pattern. The valve closes as the flow velocity approaches zero and well before the flow reverses. This eliminates water hammer. In the figure the Heavy Disc in Swing Check Valves develops heavy momentum as it swings to the closed position. NO SLAMMING The Dual Plate Check Valve design is classified as "Non-Slam Design". The disc in a swing check valve is hinged at the top. As the flow reduces, the closure of disc is influenced by force of gravity and high inertia of the heavy disc. This momentum can cause severe damage when the disc slams on to the valve seat. To reduce this, one has to go for a balancing weight/dash pot arrangement etc. This makes the valve more expensive and bulky. Furthermore, any counter weight/dash pot arrangement is counterproductive as far as prevention of water hammer is concerned. The two plates in Dual Plate Check Valve are hinged in the center vertically for horizontal installations, altogether eliminating the effect of the gravity. Also the momentum developed as they move to the closed position is only a fraction of what is developed in a swing check valve as the weight of each plate is 1/4th the weight of swing disc and the tip velocity is less than half. Further due to spring assisted closing, the valve closes as the flow velocity approaches zero and before the flow reversal. As it starts closing, the flow as such cushions the plates and seat, hence minimizing slamming. INDEPENDENT PLATE SUSPENSION For valve sizes 450mm (18") NB and above, each plate is supported independent of each other. In any position (Horizontal or Vertical) each plate's weight is directly transferred to the body. LOWER PRESSURE DROP The design of the Dual Plate Check Valve divides the total force in half, since each plate covers only one half the area of a swing check disc. One half the forces on each plate require one-half thickness, hence one-fourth the mass of a swing check disc. F_f (hinge friction) plus F_s (spring force) times 0.75B (force point) minus F (force) times B (width) equals zero for equilibrium. F_f (Friction of Hinge) + F_s (0.75B) - FB = 0 Therefore, $F = 0.75 F_s + F_f$ (Friction of Hinge) B The weight of the plates does not increase the force required to move the plates. Dual Plate Check Valve has much lower pressure drop due to lower force. The best analogy between a swing check valve and Dual plate Check Valve would be a door hinged from the top and a door hinged on its side with an appropriate door closure. The force required for operating the two doors can be just visualized and compared. LOWER WEAR & TEAR OF SEAT FACES The plates are smaller in area and lighter in weight being two in number compared to

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ITC HS Code 848130
Certification Category System Standard
Certification/ Standard ISO
Issuing Agency BUREAU VERITAS
Date of Issue
Date of Expiry
Certificate Image



End Use Sectors

Oil & Gas, Power, Steel & Mining, LNG & Cryogenic, Marine & Water, Chemical &

Product Images



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BUTTERFLY TRIPLE OFFSET VALVE

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Technical Details

The salient features include :-

- 3" to 120"
- High pressure range of ANSI # 300, # 600 & #900
- Suitable for -196° C (Cryogenic) to 900° C (Fire Safe applications)
- Bi-directional performance
- End connections to suit, including Wafer, Lugged, Flanged, Butt Weld, Special design include Jacketed, Zero leakage & bi directional
- Metal to Metal seated, thus intrinsically fire safe
- Standard compliance with API 609, 598, 607, BS 6364 amongst others

1. Design Features 2. Construction Features 3. Installation Dimensions Design Features Advance Valves metal seating high pressure butterfly valves provides a bi-directional bubble tight shut off. This is achieved by introducing state-of-the-art triple eccentric disc geometry. The valve shaft is off-set against the seal, (1st off-set), and against center line of the valve (2nd off-set). The seating edges are machined with a continuously changing slope from an angle alpha on top of the oval seat ring to an angle beta at the opposite side (3rd off-set angular). This geometry ensures that the seat ring stays clear of the seat except at the final shut-off position, resulting in long seat life and operating cycles in excess of 500 000. Construction Features The valve seal, is manufactured from laminated stainless steel with PTFE or grap oil laminate depending on the applications. The seal is held in position by a bolt-on retaining ring and, together with the stainless seat ring, is easily replaceable. A gasket prevents leakage around the seal ring. The metal seating valve can operate within a temperature of -249° C to +600° C. Valve designs for cryogenic applications are available on request. For low temperature applications, the metal seat can be substituted by a PTFE seat. Advance High Pressure Butterfly Valves are manufactured in a wide range of materials to suit most applications. For low temperature applications, the metal seat can be substituted by a PTFE seat. Advance High Pressure Butterfly Valves are manufactured in a wide range of materials to suit most applications. Installation Dimensions DIMENSION TABLE UNDER UPDATION TO COVER THE COMPLETE RANGE COVERING UPTO 2200 MM AND PRESSURE Class ANSI #900.

ITC HS Code	848180
Certification Category	Product Standard
Certification/ Standard	API
Issuing Agency	API
Date of Issue	14-12-2015
Date of Expiry	14-09-2017

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energy **API** E-CATALOGUE

Certificate Image

May 16, 2017
142 A & B, Noida Special Economic Zone
Phase II, Noida
Gautam Buddha Nagar, Uttar Pradesh 201305
India

Facility ID #: 609-0072
Automatic Notification - Extension Letter

RE: Certifications 609-0072

API has extended the expiration dates of your certification(s) to September 14, 2017. You can verify the status of your API certification(s) on the API Composite List by using the following URL: http://compositelist.api.org/CompositeList.aspx?ID=Facility_609072

If you have an API Q1 ISO 9001 or ISO 14001 Certificate of Registration, this extension does not include those certifications since API's accreditation requirements do not allow the extension of registrations beyond their expiration date.


If you have not yet submitted your renewal documentation, please do so as soon as possible. If you have submitted renewal documentation and your audit has not been scheduled and/or performed, an API auditor will contact you shortly.

If your audit has already been performed, this letter does not extend or otherwise change your due date for submitting corrective actions to any nonconformities. Furthermore, any decision on certification resulting from a review of your audit invalidates this extension, unless otherwise specified.

The extension of your certification is contingent upon the payment of any outstanding balances. API may withdraw this extension at its discretion for any unpaid, overdue balances. Any outstanding balances must be paid in order to avoid suspension or cancellation of your certification. API will not review the audit or responses of facilities with outstanding balances.

API values to complete renewal/recertification prior to a certificate's expiration. However, just as the demand for oil and natural gas has increased over the last several years, so has the demand for monogrammed equipment and API certifications. While this demand has increased API's processing times, API is continuously working to improve these processing times in the future.

Sincerely,


Lisa Salley
Vice President, API Global Industry Services



End Use Sectors

Oil & Gas, Power, Steel & Mining, Petrochemical, Pulp & Paper, Food & Beverage, Marine & Water, Chemical & Pharmaceutical

Product Images



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BUTTERFLY DOUBLE OFFSET VALVE

Technical Details

Advance Butterfly Valve has, over a period of years, established a reputation for manufacturing high technology valves. Our range of double offset butterfly valves are manufactured in sizes from 80mm to 3000mm and pressure from 10 Bar (class 125) to 20 Bar (class 150). The valves are available in wafer, lugged and double flanged configurations. A wide variety of drilling can be accommodated to meet most European, American and Asian specifications. Our design procedure include finite element stress analysis to ensure material suitability and strength. The salient features include:-

- 3" to 120"
- Upto ANSI # 150
- From – 50° to 205° C
- End connections to suit, including Wafer, Lugged, Flanged, Zero leakage & bi directional
- EPDM, Buna N, Viton sealing
- Standard compliance with 609 & 598 among others

Construction Features Advance Valves is the leader in manufacturing of high performance valves, offering a comprehensive range of elastomers, PTFE and metal seating valves. Double Eccentric - Butterfly valves are manufactured in sizes from 3" to 120". It is available in wafer, lug-type and fully flanged configurations. Flange drilling can accommodate BS 4504, DIN 2631/2/3/4 as well as ANSI B 16, 5, API 605 and AWWA C207. Elastomer-seal valves operate on the double off-set principle and are pressure rated up to 25 Bar.

ITC HS Code

848180

Certification Category

Product Standard

Certification/ Standard

POD FROM BHEL, INDIA

Issuing Agency

BHEL

Date of Issue

22-07-2006

Date of Expiry

01-06-2017

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Technical Details

Advance Butterfly Valve are designed & manufactured to have optimum mix of structural stability, flow efficiency & effective seating coupled with advantage of light weight, compact design and ease of operation. Only a quarter turn is needed to fully open or close the valves. The salient features include:-

- Fit n Forget' Butterfly Valve – internally molded liner • 2" to 24" • Upto ANSI # 150 • From – 50° to 205° C • End connection in Wafer, Lugged & Flanged Models • Lining and metallurgy to suit a wide variety of applications, including sea water & water desalination plants • Seal type (EPDM, Buna N, Viton) • Standard compliance with API 609 & 598 Design Features

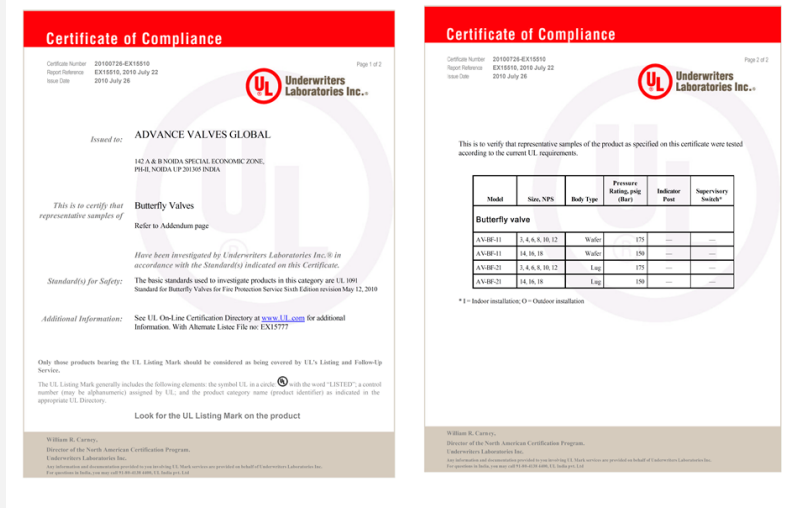
The valves are designed and manufactured to have optimal mix of structural stability, flow efficiency and effective seating coupled with advantage of light weight, compact design and ease of operation. The valves are provided with integrally moulded elastomer body liner for perfect seating and complete isolation of body material from fluid media. No gaskets are required as the body liner effects a perfect seal between the valve body and the mating pipe flanges. The valves are designed using Finite Element Methods. Advance Butterfly Valves conform to BS: 5155, IS: 13095 and also API 609. It also generally complies with AWWA C-504, International standard ISO 10631 and draft European standard pr EN 593. Construction Features Body is one piece design. Top Flange is designed to mount required Valve Operator. Body Liner is integrally moulded and bonded to the body. It provides the seating to valve disc, primary seal to the stem and 'gasket' joint with mating pipe flanges. Integrally moulded liner resists any stretching or distortion of the liner which is a common problem of loosely fitted liner leading to frequent replacements. Valve Disc material covers wide range of applications. It is optimally designed to have an ideal combination of strength and flow efficiency. Stem For optimal combination of flow efficiency and structural stability, Valves upto 200mm (8") have two piece stem. For sizes 250mm (10") to 600mm (24") N.B. stem is in single piece construction which ensures better distribution of weight of the disc. The stem drives the disc through taper pin(s) to eliminate any backlash between Stem & Disc. The material of construction for stem has been standardised as High Tensile Stainless steel (AISI 410). Stem Seal Arrangement Primary Sealing is provided by preloaded contact between flat seat surface and rounded polished disc hub area. Secondary Sealing is provided by the interference fit between stem and stem hole in seat at all positions. Even a tertiary sealing has been provided by fitting moulded O-ring between stem and bush supported by atmospheric sealing with O-rings. Thus Advance Butterfly Valves provide perfect sealing needing no other gland packing End Connections Wafer type flanges are as per BS 4504 PN 10 & 16, BS 1560 classes 125 & 150, ANSI B 16.5 Class 150, ANSI B 16.1 Class 125, BS 10 Table D, E & F and Indian Standard IS 6392 Table 10 to 20. Lug type valves are supplied to suit customer's specifications. Facilities Technology Advantages Rubber technology is fully developed in-house with facilities to mould, process all elastomers including mixing, vulcanizing and metal to elastomers bonding. The integral liner concept is a fail-safe design. Tests Offered Extensive in-house testing facilities are available to fully ensure quality at all stages. These include:

- Elastomer Test for Tension, Compression set, Hardness, Specific Gravity, Adhesion & Abrasion Resistance.
- Dye Penetrant Test
- Tests of Actuators (both electric & pneumatic type)
- Hydrostatic Pressure Testing for shell & seat
- Pneumatic Testing for seat
- Valve operating torque test.

Facilities for Pressure Drop test and Life cycle test exist for valid for upto 500 mm (20") NB. Apart from above, other NDT processes including MPI & Ultrasonic Test and tests for chemical & physical properties including special tests e.g. low temperature impact Test, Inter-granular Corrosion Test etc. are also offered to meet customer's requirement through independent Approved Inspection and Test Laboratories. Valve Testing: (Hydrostatic) Each valve is hydrostatically tested for seat & shell tests as per applicable standards. Additional tests as required can be carried out as per customer's specification and requirement.

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Certification Category System Standard
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Sectors of Interest	Oil & Gas, Power, Steel & Mining, LNG & Cryogenic, Marine & Water, Chemical & Fertilizer, HVAC
Is OEM Supplier?	Indigenous
Is After Sales Service Provider?	No
Importance of niche products	DUAL PLATE CHECK VALVE • Metal to metal, Soft seating (resilient seals) & Dual Seating • Fugitive emission free design, • Completely Rubber Lined & Exotic Cladded Valves available; • Cryogenic to Fire Safe Applications; • Independent Plate Suspension; • Wide Selection of Metallurgy. BUTTERFLY TRIPLE OFFSET VALVE • Three offsets give tight sealing in a metal to metal configuration • Fire safe metal to metal seated – API 607 certified • Fugitive Emission free certified as per ISO 15848 from –196 deg C to +450 deg C • Zero Leakage, Low Emission; • One Piece Stem.
Potential market of niche products	Oil & Gas, Power, Steel & Mining, LNG & Cryogenic, Marine & Water, Chemical & Fertilizer, HVAC
Product Supply Record	1. RAPID- MALAYSIA 2. UMM LULU-UAE 3. BAB HABSHAN-UAE 4. BAB COMPRESSION-UAE 5. AGFA-UAE
Patented Technologies	1. Patent of Manual Balancing Valve (Patent Registration No- US 9512925 B2, Dec 6th, 2006)
Awards/Accolades	1. FLUOR APPRECIATION AWARD 2. CERTIFICATE OF EXCELLENCE From IES 3. HVAC & R EXCELLENCE AWARD From Bry-Ali. 4. Udyog Ratna Award 5. IFSY AWARD 6. VENTCONF AWARD 7. API MEET APPRECIATION AWARD 8. APPRECIATION AWARD FROM SKEC 9. RACON APPRECIATION AWARD 10. We do have so many Approvals from different End Users all over the globe.