







## About the Company

Founded in January 2010, Bray has, in a remarkably short period of time, established an enviable, global reputation in the mining, power generation and waste water industries for their SLURRYTUFF™ valves.

Suited to operate in abrasive, corrosive and high pressure applications the SLURRYTUFF™ range of valves are installed in service severe environments in over 37 countries around the world - including Australia, England, USA, Canada, Africa, Chile, Egypt, and Peru.

From mining and mineral processing, slurry and tailings transport, mine dewatering, power generation and cement plants, SLURRYTUFF™ valves excel in some of the toughest environments imaginable.

Today SLURRYTUFF™ valves are globally recognised as providing the highest level of quality and reliability, the lowest cost of ownership and the greatest return on investment.

The success of SLURRYTUFF™ valves essentially flows from UVE's unwavering focus on three core differentiators: innovative design and engineering, excellence in manufacturing and outstanding customer service.

Quality is our priority. With manufacturing facilities in Australia and America, UVE are ISO 9001 certified and employ rigorous quality management systems. More importantly, our quality starts with superior design, internal teamwork and a work culture that supports and enables continuous improvement. Partnerships with suppliers and sub-contractors who subscribe to similar standards of excellence, efficiency and professionalism are also a critical part of the quality equation.

UVE client service is responsive and knowledgeable. We offer close client communication together with an understanding of most industrial applications that allow us to provide the best quality solutions for your particular environment.

When you invest in a SLURRYTUFF™ valve from UVE we promise:

- Service: At the highest level
- Quality: Guarantees of the highest quality engineering
- Growth: Long term relationships with our customers
- Innovation: We continually develop new and more reliable products as well as improve our manufacturing methods and approaches







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# EZI-VAC

Air Release/Vacuum  
Break Valve  
(EV)/(EVTA)



EV 150 - ANSI 300  
CHILE



EV 150 - ANSI 150 MEXICO

## General description

Bray range includes the **EZI-VAC Air Release and Vacuum Break Valve**.

Our EZI-VAC KINETIC Single and Double Orifice Air Release and Vacuum Break Valve is a reliable investment for exhausting or venting air in pipelines. All EZI VAC Valves are designed to allow the discharge of large amounts of air from the pipeline, while it is being filled. These valves are designed specifically for media with un-dissolved solids, including slurry and mine dewatering. The large port design prevents clogging whilst the HI-WEAR seat and float design offers a large sealing area.

In the case of column separation, where large volumes of air should be introduced to the system to prevent water hammer, the floats respond virtually instantaneously. These valves are constructed as full bore with high discharge and intake capabilities. An Anti-Surge Float option is available to limit discharge rates to reduced differential pressure. The addition of the EZI-VAC Triple Action (EVTA) internal float design allows venting of entrapped air that is released from the media whilst under pressure.

EZI-VAC Valves are long lasting and maintenance free.

The valve is available in different materials of manufacture-basic being Carbon steel and options of 304/316Stainless steel or Duplex, Super Duplex and Hastelloy . Internal lining includes Natural and Butyl Rubber or Urethane. Our valves can be custom designed to suit your requirements.



Optional materials of construction and lining

## Features

- Suitable for extreme conditions
- Specifically designed for slurry, dirty water and applications that produce heavy scale such as salts
- Simple construction allows for ease of maintenance
- Self-operating – no actuator required
- Full bore design to prevent clogging
- CWP of 20, 50 and 100 bar
- Coating suitable for highly aggressive environments
- Inner lining: Natural rubber as standard, Urethane or EPDM options available on request
- Optional drain/flush point in body
- Optional Bird screen
- Available in Carbon steel 316/304, Stainless or Duplex stainless steel, Super duplex and Hastelloy
- Design prevents lifting of primary float while acting as a vacuum breaker
- Exhausts large volumes of air from pipeline being filled and allows air to re-enter pipeline upon emptying
- Up to 80°C standard operating temperature
- Rotating float design – no blockage or leakage
- Fabricated design allows for in line repairs
- HI-WEAR primary seal allows drip tight sealing under all conditions
- Primary and secondary float is manufactured from HDPE (EVTA – Ezi-Vac Triple Action) - Replaceable
- Primary float available in HDPE or custom float to suit application (EV) - Replaceable
- HDPE Locating Seat - Replaceable
- M.D.M.T -29°C
- Manufactured in Australia



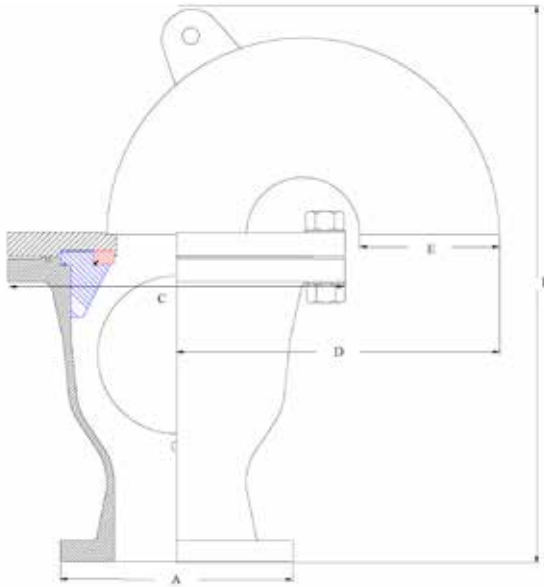
EVTA 400 NON SLAM TRIPLE ACTION





Dimensions & Weight

Longlastingandmaintenance free



| ANSI 150    |     |     |     |     |     |      |      |      |
|-------------|-----|-----|-----|-----|-----|------|------|------|
| 1960 kPa    |     |     |     |     |     |      |      |      |
| Bore        | 50  | 80  | 100 | 150 | 200 | 250  | 300  | 400  |
| A           | 152 | 190 | 228 | 280 | 343 | 406  | 483  | 598  |
| B           | 375 | 490 | 541 | 685 | 882 | 1125 | 1280 | 1343 |
| C           | 228 | 254 | 279 | 343 | 482 | 598  | 745  | 813  |
| D           | 182 | 273 | 362 | 540 | 720 | 517  | 610  | 813  |
| E           | 60  | 89  | 114 | 168 | 220 | 273  | 324  | 406  |
| Weight (KG) | 23  | 32  | 42  | 115 | 168 | 278  | 330  | 410  |

| ANSI 300    |     |     |     |     |     |      |      |      |
|-------------|-----|-----|-----|-----|-----|------|------|------|
| 5100 kPa    |     |     |     |     |     |      |      |      |
| Bore        | 50  | 80  | 100 | 150 | 200 | 250  | 300  | 400  |
| A           | 165 | 210 | 254 | 317 | 381 | 445  | 521  | 650  |
| B           | 375 | 490 | 541 | 685 | 882 | 1125 | 1280 | 1343 |
| C           | 254 | 280 | 317 | 381 | 520 | 650  | 712  | 914  |
| D           | 182 | 273 | 326 | 540 | 720 | 517  | 610  | 813  |
| E           | 60  | 89  | 114 | 168 | 168 | 273  | 324  | 406  |
| Weight (KG) | 30  | 41  | 56  | 135 | 196 | 340  | 520  | 830  |

Applications

- Waterlines
- Slurry pipelines
- High pressure pipelines
- Pipelines with scale

Standard

- ASME B16.34
- ASME B16.5
- ASME B31.3



Data Sheet

|                         |  |
|-------------------------|--|
| <b>Purpose:</b>         | Air release vacuum break   |
| <b>Applications:</b>    | Slurries, chemical, sand, pulp and dewatering  |
| <b>Type:</b>            | <ul style="list-style-type: none"><li>• Soft seated KINETIC Single Orifice Air Release and Vacuum Break Valve</li><li>• Release under pressure</li><li>• Vertical pattern</li><li>• Full bore design</li></ul> |
| <b>Sizes Available:</b> | DN25 – DN400   |
| <b>Figure:</b>          | EV25 – EV400<br>EVTA 100 – EVTA 400  |
| <b>Rating:</b>          | ANSI B16.5 class 150, 300, 600 @ 35°C nominal  |
| <b>Connection:</b>      | Flanged ANSI B16.5 RF class 150, 300, 600 (Or as required)   |
| <b>Body:</b>            | Fabricated Carbon steel or cast ASTM A216, Stainless, Duplex steel   |
| <b>Outlet Cover:</b>    | Carbon steel standard – stainless steel option   |
| <b>Float:</b>           | High density Polyethylene or Urethane coated aluminium   |
| <b>Seal:</b>            | Chutex wear resistant natural rubber standard. Other options on request  |
| <b>Gasket:</b>          | BS-N90 Shore 0 ring between body and outlet flange for high pressure seal  |
| <b>Fasteners:</b>       | Class 8.8 galvanised carbon steel. Stainless option as required  |
| <b>Lining:</b>          | Natural rubber. Nitrile, Urethane and Bromobutyl option  |
| <b>Finish:</b>          | Grit blast 2.5 and 2 part Interzone 954 epoxy paint  |
| <b>Testing:</b>         | AS4037-1999 and EN 12266 PT 1 & 2 or AP1598 as specified   |
| <b>Standard:</b>        | ASME B16.34 ASME B16.5 ASME B31.3  |
| <b>Approvals:</b>       | Canadian C.R.N   |
| <b>Option:</b>          | Non slam/ Bird screen/ Flush port/Secondary Release  |
| <b>Name Plate:</b>      | Stainless Steel GR 304   |
| <b>Manufacturer:</b>    | Bray   |



# MAXI-CHECK H

High Wear Ball Check Valve  
(MCH)



MAXI-Check H High Wear Ball Check Valve (MCH)

MAXI-Check H High Wear Ball Check Valve (MCH)





MCH 050 - ANSI 300  
CEMENT PLANT SOUTH AUSTRALIA

## General description

Bray range includes the **MAXI-Check H - High Wear Ball Check Valves**. These valves are specifically designed for high wear applications such as slurry, ash disposal and mine-dewatering. The large port design prevents clogging while the HI-WEAR seat offers a large sealing area. The Valve is normally located on pump discharge.

In a static situation the ball is held in the seat by back pressure. When the pump starts and the pressure equalises the ball moves off the seat and into the tower.

The ball is free to move and rotate on the media as it flows through the valve and therefore the ball will not attract scale build up. As the pump/media stops flowing, the ball falls into the seat and is once again held in the closed position by the back pressure. Wear on the ball is minimal. The seat is designed with minimum exposure to the media.

Applications up to 35 Bar use a Urethane coated ball, for abrasion resistance.

High pressure applications, usually de-watering, use a hollow ball manufactured from stainless steel or silica bronze to withstand the mechanical forces. The robust construction ensures years of continuous and reliable use.

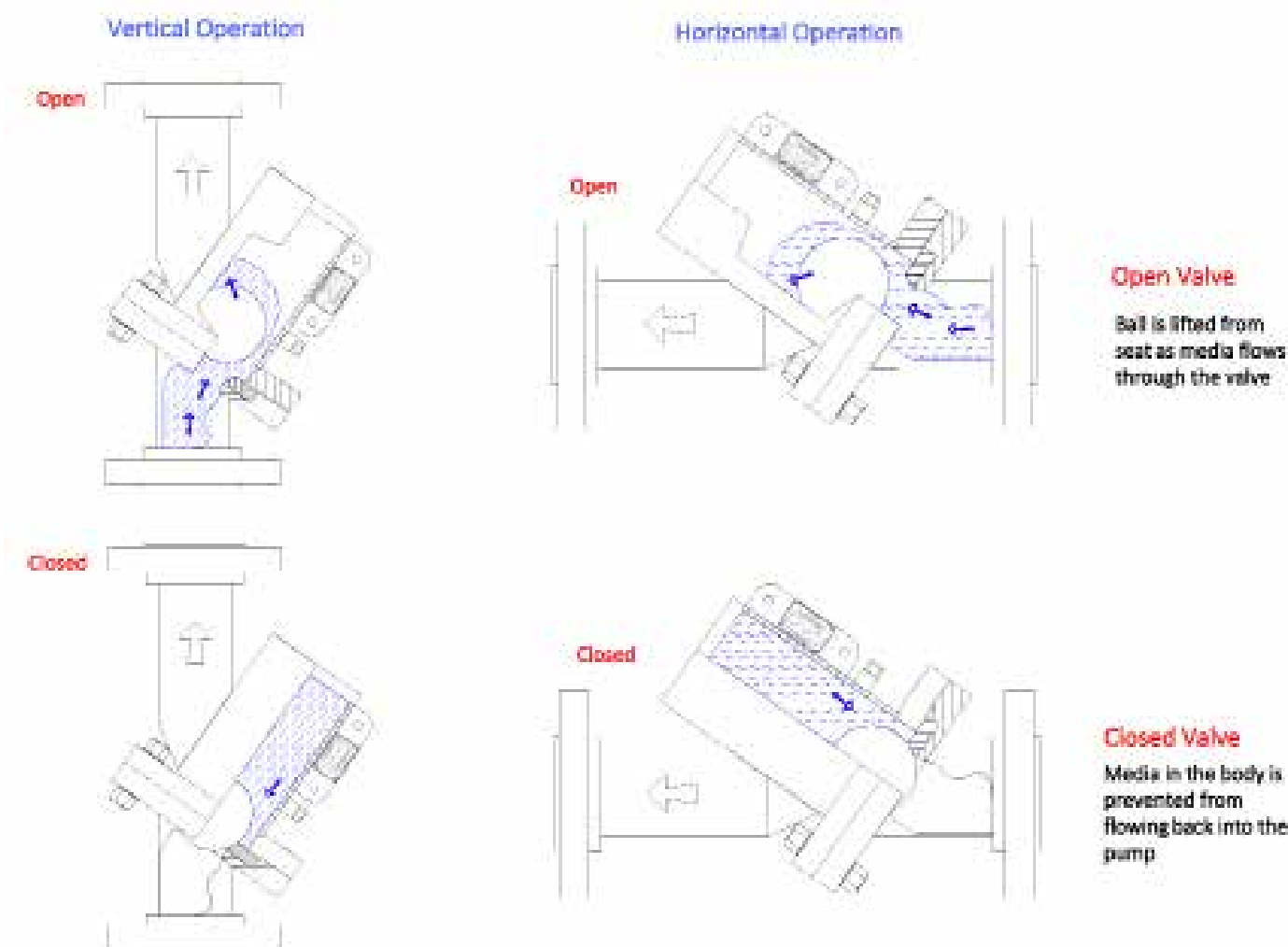


- ✓ Replaceable: Seal
- ✓ Replaceable: Ball
- ✓ Replaceable: Seat - 304 Stainless Steel standard (Other materials available on request)

## Features

- Simple construction allows for ease of maintenance
- Suitable for horizontal and vertical operation
- Available in Carbon/Stainless and Duplex Stainless Steel
- HI-WEAR Primary seal allows for drip tight sealing under all conditions
- Full bore design with very low pressure losses
- External coating suitable for aggressive environment
- Ball continuously moves - preventing scale build up
- Stainless steel manufacturers label
- Lifting lug for ease of installation
- Pressure ratings ANSI 150, ANSI 300, ANSI 600 and ANSI 900 (20 to 150 Bar)
- Flanged DIN, ANSI or as requested
- Available lined/unlined with hot vulcanized natural rubber (other linings available on request)
- Reduces water hammer by approximately 95%
- Finish is abrasive clean to 2.5 and painted with 2 Part Interzone 954 epoxy paint
- High tensile galvanised fasteners, Stainless Steel on request
- Long lasting due to low internal turbulence
- Manufactured in Australia

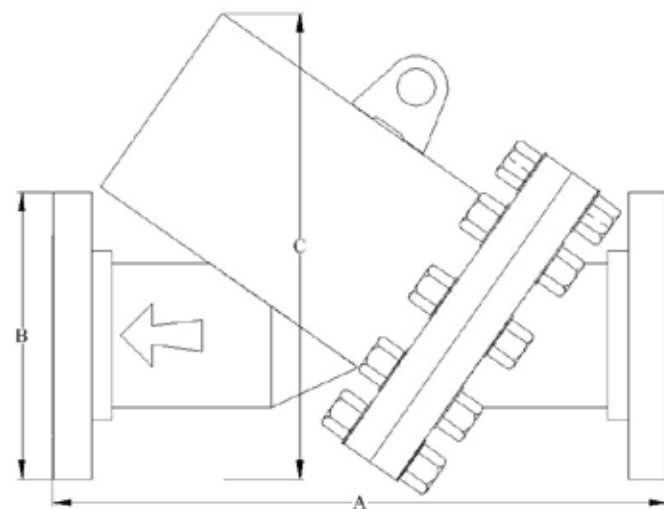
## Operational Diagram







## Dimensions & Weight



! Full bore design with very low pressure losses

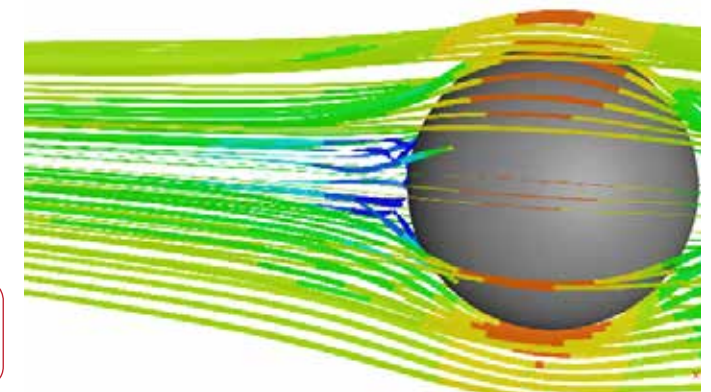
| ASME                                    |     |     |     |     |      |      |      |      |      |      |      |     |
|---|-----|-----|-----|-----|------|------|------|------|------|------|------|-----|
| ANSI Class 300 (Other sizes on request) |     |     |     |     |      |      |      |      |      |      |      |     |
| Bore                                    | 80  | 100 | 150 | 200 | 250  | 300  | 350  | 400  | 450  | 500  | 600  | 750 |
| A                                       | 490 | 490 | 780 | 930 | 1070 | 1120 | 1460 | 1680 | 1680 | 1680 | 1680 |     |
| B                                       | 209 | 254 | 318 | 381 | 444  | 520  | 584  | 648  | 711  | 775  | 915  |     |
| C                                       | 330 | 370 | 580 | 650 | 700  | 840  | 910  | 990  | 990  | 1020 | 1100 |     |
| Weight (KG)                             | 42  | 48  | 95  | 190 | 300  | 370  | 440  | 500  | 790  | 870  | 985  |     |

## Applications

- Slurries/Tailings
- Mine de-watering
- Pulp & paper
- Cement
- Power generation ash disposal
- Sand and mineral processing
- Environmental and effluent

## Standard

- ASME B16.34
- ASME B16.5
- ASME B31.3



! The ball is free to move and rotate on the media as it flows through the valve - hence no scale build up

## Data Sheet

|                         |   |
|-------------------------|---|
| <b>Purpose:</b>         | Non return ball check, high wear application                                    |
| <b>Applications:</b>    | Slurries, Chemicals, Sands, Pulp, Dewatering and Ash Disposal                   |
| <b>Type:</b>            | Resilient seated ball check valve (High Wear)                                   |
| <b>Sizes available:</b> | DN50-DN750  |
| <b>Figure:</b>          | MCH50-MCH750  |
| <b>Rating:</b>          | ANSI B16.5 class 150, 300, 600 and 900 @ 65° nominal                            |
| <b>Connection:</b>      | Flanged ANSI B16.5 RF class 150, 300, 600 & 900 (certified) or as required      |
| <b>Body:</b>            | Carbon Steel standard, Stainless Steel option                                   |
| <b>Ball:</b>            | Stainless Steel/ Silica Bronze/ Aluminium Urethane Coated                       |
| <b>Seat:</b>            | 304 SS machined to suit ball (Seat is replaceable)                              |
| <b>Seal:</b>            | Moulded rubber (40 Shore hardness) when required (Seal is replaceable)          |
| <b>Gasket:</b>          | O Ring used between flanges for hi pressure seal                                |
| <b>Fasteners:</b>       | Class 8.8 galvanised Carbon Steel. Hi-Tensile and Stainless options as required |
| <b>Lining:</b>          | Natural rubber as standard. Nitrile and Bromobutyl option                       |
| <b>Finish:</b>          | Grit blast 2.5 and 2 part Interzone 954 epoxy paint                             |
| <b>Testing:</b>         | AS4037-1999 and EN 12266 PT 1&2 or API598 as specified                          |
| <b>Standard:</b>        | ASME B16.34-2009 ASME B16.5 ASME B31.3-2002                                     |
| <b>Manufacturer:</b>    | Bray  |



# MAXI-CHECK I

Dual Function Ball Check  
Isolation Valve  
(MCI)







MCI 450 - ANSI 300  
QUEENSLAND AUSTRALIA

## General description

Bray range includes the **MAXI-Check I – Dual Function Ball Check/Isolation Valves**. The valves are specifically designed for high wear applications such as slurry, ash disposal and mine-dewatering. The large port design prevents clogging while the HI-WEAR seat offers a large sealing area. The Valve is normally located on pump discharge. In a static situation the ball is held in the seat by back pressure.

When the pump starts and the pressure equalises the ball moves off the seat and into the tower. The ball is free to move and rotate on the media as it flows through the valve and therefore the ball will not attract scale build up. As the pump/media stops flowing, the ball falls into the seat and is once again held in the closed position by the back pressure. The hand wheel can then be wound to the closed position where the ball is mechanically held in the seat to create an isolation valve. Wear on the ball is minimal. The seat is designed with minimum exposure to the media.

The hand wheel (actuation) and spindle provide a mechanical isolation when the system is not operational. The cup at the end of the spindle locates over the ball and forces the ball into the seat. Applications up to 35 Bar use a Urethane coated ball, for abrasion resistance.

High pressure applications (usually de-watering) use a hollow ball manufactured from stainless steel or silica bronze to withstand the mechanical forces. The robust construction ensures years of continuous and reliable use.



MCI 250 - ANSI 150

- ✓ Replaceable: Seal
- ✓ Replaceable: Ball
- ✓ Replaceable: Seat - 304 Stainless Steel standard  
(Other materials available on request)

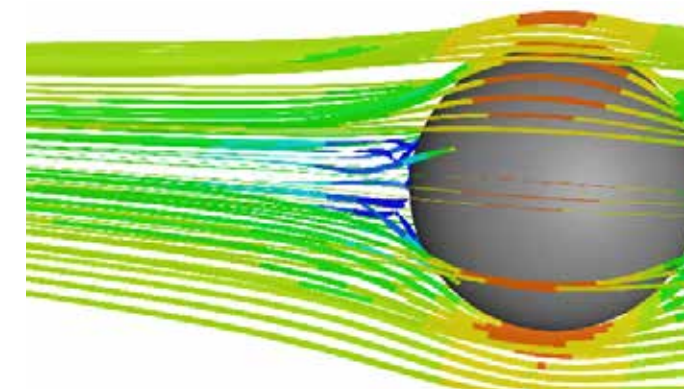
## Features

- Simple construction allows for ease of maintenance
- Suitable for horizontal and vertical operation
- Available in Carbon/Stainless and Duplex Stainless Steel
- HI-WEAR Primary seal allows for drip tight sealing under all conditions
- Full bore design with very low pressure losses
- External coating suitable for aggressive environment
- Ball continuously moves - preventing scale build up
- Spindle is 304 SS as standard with open/close indicators. Limit switch pack is an option
- Stainless steel manufacturers label
- Lifting lug for ease of installation
- Pressure ratings ANSI 150, ANSI 300, ANSI 600 and ANSI 900 (20 to 150 Bar)
- Flanged DIN, ANSI or as requested
- Available lined/unlined with hot vulcanized natural rubber (other linings available on request)
- Reduces water hammer by approximately 95%
- Finish is abrasive clean to 2.5 and painted with 2 Part Interzone 954 epoxy paint
- High tensile galvanised fasteners, Stainless Steel on request
- Long lasting due to low internal turbulence
- Manufactured in Australia

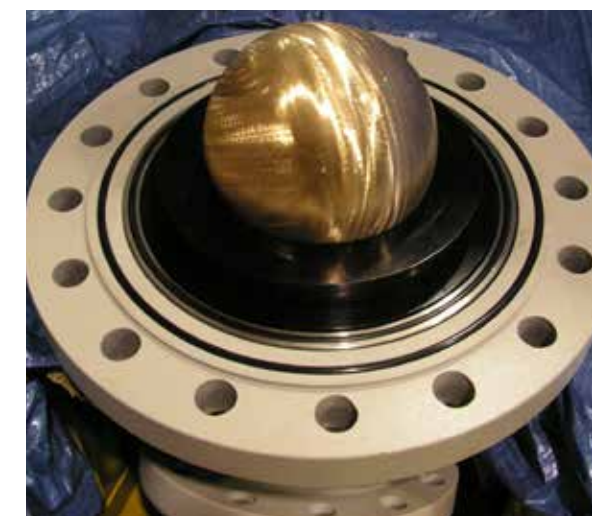
## Actuation

- Hand-wheel
- Bevel Gear Box
- Pneumatic
- Hydraulic
- Electric

! The ball is free to move and rotate on the media as it flows through the valve - hence no scale build up



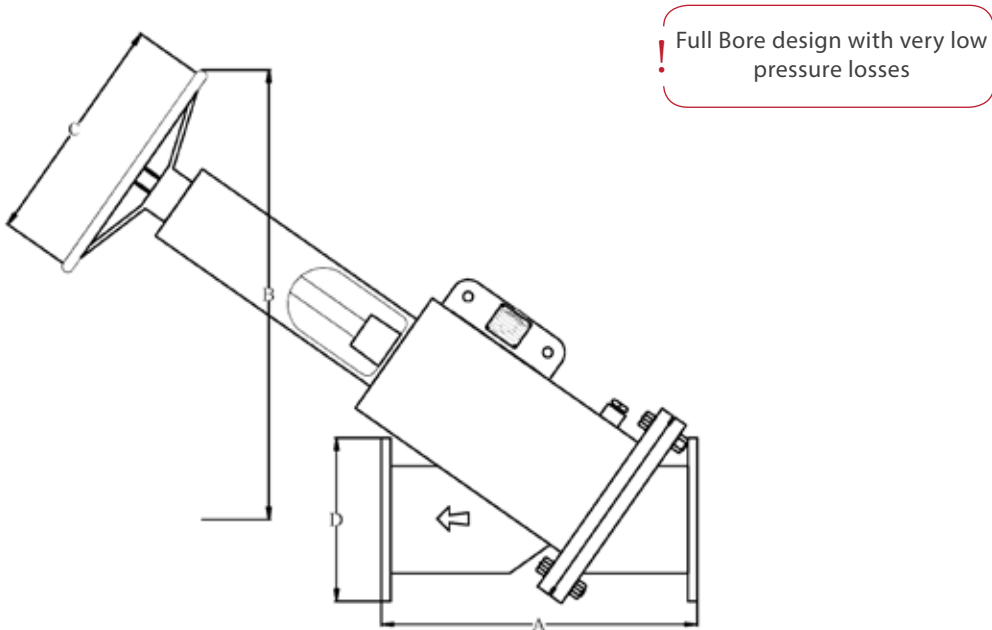
## Replaceable Seat, Ball & Seal







### Dimensions & Weight



| ANSI class 150 (Other sizes on request) |     |     |     |      |      |      |      |      |      |      |      |      |
|---|-----|-----|-----|------|------|------|------|------|------|------|------|------|
| Bore                                    | 80  | 100 | 150 | 200  | 250  | 300  | 350  | 400  | 450  | 500  | 600  | 750  |
| A                                       | 500 | 640 | 780 | 930  | 1070 | 1120 | 1460 | 1680 | 1680 | 1680 | 1880 | 2500 |
| B                                       | 420 | 590 | 780 | 1020 | 1220 | 1220 | 1420 | 1560 | 1662 | 1900 | 1900 | 2060 |
| C                                       | 300 | 300 | 300 | 500  | 500  | 500  | 500  | 500  | 600  | 600  | 600  | 600  |
| D                                       | 190 | 230 | 280 | 343  | 406  | 482  | 533  | 597  | 635  | 698  | 812  | 985  |
| Weight(KG)                              | 83  | 110 | 310 | 390  | 475  | 525  | 590  | 710  | 1020 | 1495 | 1995 | 3800 |



### Applications

- Slurries/Tailings
- Mine or pit de-watering
- Pulp and paper
- Cement
- Power generation ash disposal
- Sand and mineral processing
- Environmental and effluent

### Standard

- ASME B16.34
- ASME B16.5
- ASME B31.3



### Data Sheet

|                         |   |
|-------------------------|---|
| <b>Purpose:</b>         | Non return ball check, high wear application  |
| <b>Applications:</b>    | Slurries, Chemicals, Sands, Pulp, Dewatering and Ash Disposal   |
| <b>Type:</b>            | Combination Ball Check and Isolation Valve <ul style="list-style-type: none"> <li>Urethane ball for low pressure and</li> <li>Metal seated ball for high pressures</li> </ul> |
| <b>Sizes available:</b> | DN50-DN750  |
| <b>Figure:</b>          | MCI 50 to MCI 750   |
| <b>Rating:</b>          | ANSI B16.5 class 150. 300, 600 and 900 @ 65° nominal  |
| <b>Connection:</b>      | Flanged ANSI B16.5 RF class 150, 300, 600 & 900 (certified) or as required  |
| <b>Body:</b>            | Carbon Steel standard, Stainless Steel option   |
| <b>Ball:</b>            | Stainless Steel/ Silica Bronze/ Urethane Coated Aluminium core (hollow)   |
| <b>Seat:</b>            | 304 SS machined to suit ball (seat is replaceable)  |
| <b>Seal:</b>            | Moulded rubber (40 Shore hardness) when required (Seal is replaceable)  |
| <b>Gasket:</b>          | O Ring used between flanges for high pressure seal  |
| <b>Fasteners:</b>       | Class 8.8 galvanised Carbon Steel. Hi-Tensile and Stainless options as required   |
| <b>Lining:</b>          | Natural rubber as standard. Nitrile and Bromobutyl option   |
| <b>Finish:</b>          | Grit blast 2.5 and 2 part Interzone 954 epoxy paint   |
| <b>Testing:</b>         | AS4037-1999 and EN 12266 PT 1&2 or API598 as specified  |
| <b>Standard:</b>        | ASME B16.34-2009 ASME B16.5 ASME B31.3-2002   |
| <b>Actuation:</b>       | Hand wheel actuated up to DN450<br>Bevel gearbox DN500-DN750 and higher   |
| <b>Option:</b>          | Electric, pneumatic or hydraulic actuators as required. Proximity switches are optional   |
| <b>Manufacturer:</b>    | Bray  |



# MAXI-CHECK L

Low Wear Ball Check Valve  
(MCL)



MAXI Check L Low Wear Ball Check Valve (MCL)

MAXI Check L Low Wear Ball Check Valve (MCL)





## General description

Bray range includes the **MAXI-Check L - Soft Seated Ball Check Valves. (For Low Abrasion Applications)**

The weight of the ball, compared to the flap of an equivalent swing check valve plus the flow around the ball, means that there is considerably lower pressure loss through the valve. Such savings in pressure drop are reflected in measurable annual power savings, particularly in 24 x 7 pipeline pumping scenarios.

The large port design prevents clogging while the urethane coated ball is free to move and rotate with the media as it flows through the valve. This continuous movement prevents scale build up on the ball and within the ball bonnet, which can be inspected through the bonnet blanking flange. The seat is integral to the one piece body.

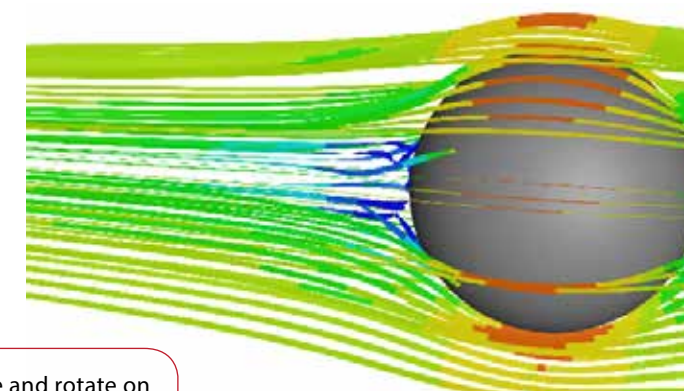
The valves are fabricated which allows flexibility of manufacturing to suit clients requirements. Standard face to face measurements are according to AS4794-2001 paragraph 3.2.2 FIG. 3.1 or DIN 3202-F6. The MCL is a direct replacement for Swing-Check valves.



MCL 300 - ANSI 150

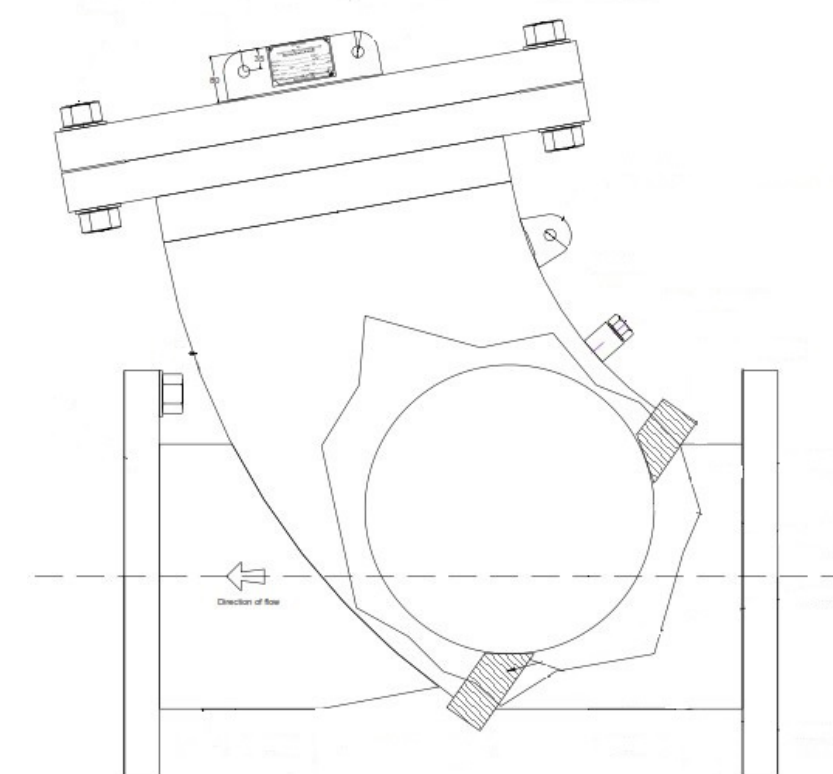
## Features

- Simple construction allows for ease of maintenance
- Flanged either Table D or E, PN10, PN16 (EN or AS) or ANSI 150/300
- Ball has an aluminium core and is Urethane coated
- Available lined or unlined with hot vulcanized natural rubber (other linings available on request - EPDM)
- Finish is abrasive clean to 2.5 and painted with 2 Part Interzone 954 epoxy paint
- Continues work pressure 10-35 Bar
- Coating suitable for highly aggressive environments
- Drain/Flush point in body
- Suitable for horizontal and vertical operation
- Very low water hammer characteristics
- Low friction loss
- Body available in Carbon, Stainless/Duplex Stainless Steel
- Manufactured in Australia



! The ball is free to move and rotate on the media as it flows through the valve - hence no scale build up

## Ball Placement







MCL 450 - ANSI 300

Applications

- Back flow prevention in mine de-watering
- Chemical
- Power generation ash water return
- Pulp and Paper
- Mineral process plant water
- Sewage piping systems
- Waterlines
- Environmental and effluent

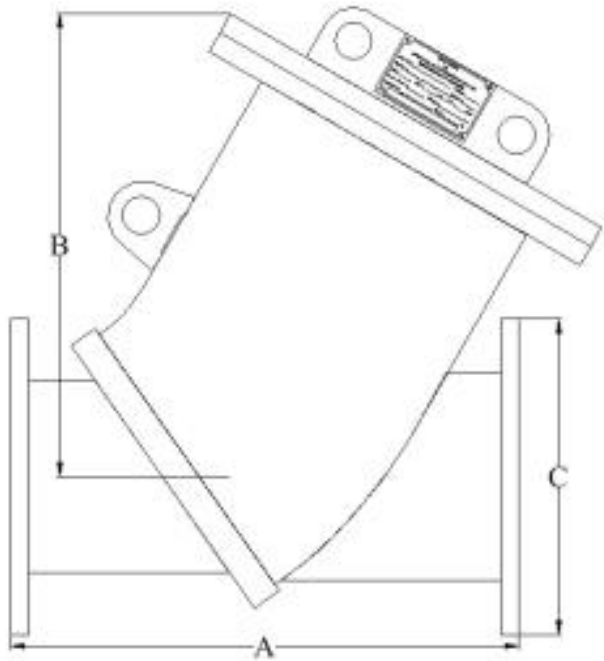
Standard

- ASME B16.34
- ASME B16.5
- ASME B31.3



Dimensions & Weight

! The large port design prevents clogging



| AS3578-1993 TD, E ANSI150 PN16 |     |     |     |     |     |     |     |     |     |     |     |      |      |
|--------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|
| Bore                           | 80  | 100 | 150 | 200 | 225 | 250 | 300 | 350 | 375 | 400 | 450 | 500  | 600  |
| A                              | 260 | 330 | 410 | 540 | 610 | 640 | 700 | 800 | 820 | 920 | 970 | 1070 | 1220 |
| B                              | 275 | 305 | 353 | 495 | 550 | 575 | 650 | 705 | 768 | 795 | 860 | 975  | 1152 |
| C                              | 185 | 215 | 280 | 335 | 370 | 405 | 455 | 525 | 550 | 580 | 640 | 705  | 825  |
| Weight(KG)                     | 50  | 55  | 67  | 130 | 155 | 175 | 210 | 265 | 315 | 355 | 425 | 490  | 575  |

Data Sheet

|                        |  |
|------------------------|--|
| <b>Purpose:</b>        | Non return ball check  |
| <b>Applications:</b>   | Chemical, sewerage, pulp, food and dewatering  |
| <b>Type:</b>           | Soft seated ball check valve-low pressure up to 30 Bar   |
| <b>Size available:</b> | DN80 – DN600   |
| <b>Figure:</b>         | MCL80 to MCL600  |
| <b>Rating:</b>         | Max work pressure: 30 Bar  |
| <b>Connection:</b>     | Flanged either Table D, E, PN10, PN16 (EN or AS) or ANSI150/300                                  |
| <b>Body:</b>           | Fabricated carbon steel  |
| <b>Ball:</b>           | Metal core urethane coated   |
| <b>Seat:</b>           | Carbon steel seat is integral to the body  |
| <b>Gasket:</b>         | 90 shore O ring used between flanges for seal  |
| <b>Fasteners:</b>      | Class 8.8 galvanised carbon steel. Stainless options as required                                 |
| <b>Lining:</b>         | Hot vulcanised natural rubber standard   |
| <b>Finish:</b>         | Abrasive clean to 2.5 and painted with Interzone 954, a 2 part epoxy suited to harsh environment |
| <b>Testing:</b>        | AS4037-1999 and EN 12266 PT 1&2 or API598 as specified   |
| <b>Standard:</b>       | ASME B16.34 ASME B16.5 ASME B31.3  |
| <b>Manufacturer:</b>   | Bray   |



# PENTA-WEDGE

Slurry Gate Valve  
(PW)



PW 200 - ANSI 150  
ELECTRIC ACTUATOR  
PERU





## General description

Bray range includes the **PENTA-WEDGE Slurry Gate Valve**. The PENTA-WEDGE circular gate is mounted and fixed on a wedge assembly which is suspended on the end of the spindle. There is no contact with the body when it is open, hence there is no locking up. The PENTA-WEDGE slurry valve is designed specifically for slurries, ash disposal, abrasive media and any application where heavy scale build-up is prominent. As the valve opens it scrapes the face of the gate which is Urethane coated and through this action any scale build up is removed.

The discharge section of the body has a cut-out in the lower area and during closure the flow is directed into this section causing a flushing action to remove any deposits. This prevents the gate from fouling on build up.

The PENTA-WEDGE Slurry Gate Valve is rated to a maximum CWP of 150 bar (ANSI class 900) and is suited to applications in mining, mineral processing, power generation, pit de-watering as well as pulp and paper.

## Actuation

- Hand-wheel
- Bevel Gear Box
- Pneumatic
- Hydraulic
- Electric

WEAR over circumference of disc

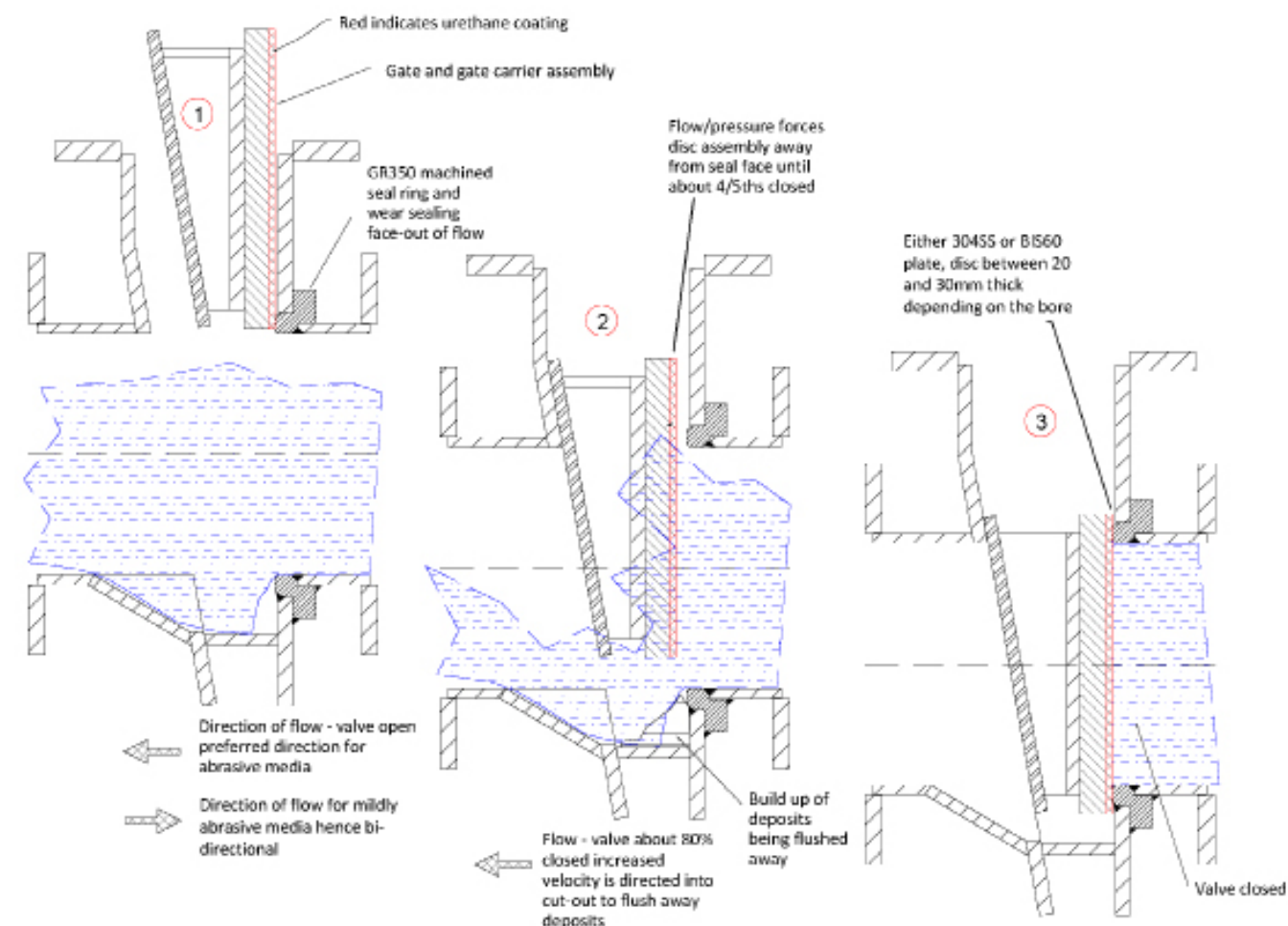


## Features

- Full bore design
- Simple construction allows for easy maintenance
- Up to CWP of 150 bar (ANSI class 900) (Other sizes upon request)
- Coating suitable for highly aggressive environments.
- High abrasive applications
- Face to face to ASME B16.10 or as required
- Fabricated from GR460R boiler plate, 304, 306 Stainless Steel or UNS S31803/S32750 super duplex on request
- Body cut-away behind disc to clear debris.
- Positive seal wedge design
- Flexibility on materials of construction.
- Actuation options include hand-wheel, bevel gearbox, pneumatic, hydraulic and electric.
- Designed for operation in the full-open or full-closed position and is not designed for throttle applications
- Designed for highly abrasive slurries – up to m/s media velocity
- No high velocity edge effect - Wear edge is the whole circumference of the gate
- High strength gate. Does not need high tensile or exotic steel
- NOT a push through gate design - Eliminates sticking, clogging or seal replacement
- Low spindle force required to drive gate
- Bi-directional drip tight sealing for plant raw water return.
- Uni-directional for highly abrasive media – Drip tight seal class VI
- Flushing port 'vortex' for removing media build up in valve
- Manufactured in Australia

No contact with the body  
- hence no locking up

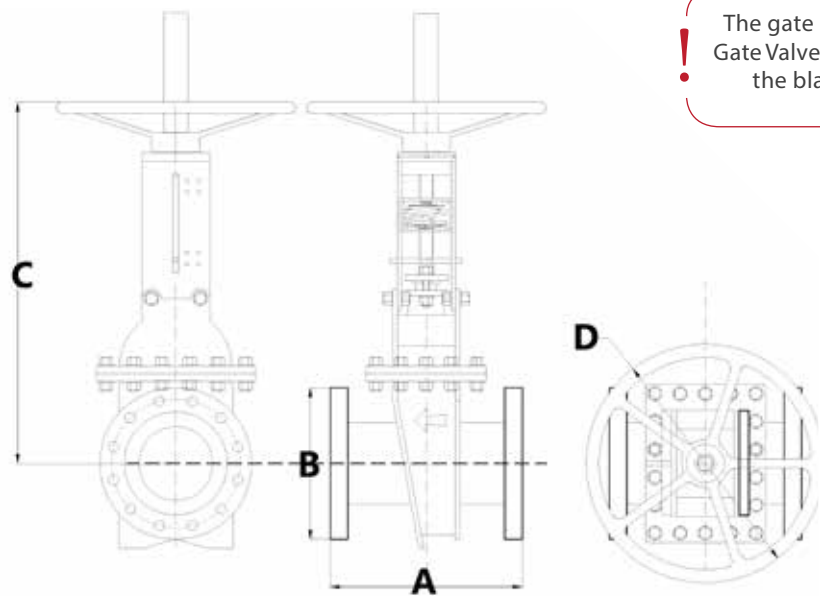
## Operational Diagram







Dimensions & Weight



! The gate of the Penta-Wedge Slurry Gate Valve is up to 3 times thicker than the blade in a knife gate valve

| ASME B16.10-2000 Table 1 Column 7       |     |     |     |      |      |      |      |      |      |      |
|---|-----|-----|-----|------|------|------|------|------|------|------|
| ANSI Class 150 (Other sizes on request) |     |     |     |      |      |      |      |      |      |      |
| Bore                                    | 100 | 150 | 200 | 250  | 300  | 350  | 400  | 450  | 500  | 600  |
| A                                       | 229 | 267 | 292 | 330  | 356  | 381  | 406  | 432  | 457  | 508  |
| B                                       | 229 | 280 | 343 | 406  | 482  | 533  | 597  | 635  | 698  | 813  |
| C                                       | 595 | 777 | 975 | 1160 | 1390 | 1555 | 1810 | 2103 | 2300 | 2600 |
| D                                       | 300 | 300 | 500 | 500  | 500  | 700  | 500  | 500  | 500  | 500  |
| Actuation                               | HW  | HW  | HW  | HW   | HW   | HW   | BG   | BG   | BG   | BG   |
| Weight (KG)                             | 47  | 80  | 129 | 192  | 287  | 410  | 465  | 720  | 1170 | 1466 |

| ASME B16.10-2000 Table 2 Column 10      |     |     |     |      |      |      |      |      |      |      |
|---|-----|-----|-----|------|------|------|------|------|------|------|
| ANSI Class 300 (Other sizes on request) |     |     |     |      |      |      |      |      |      |      |
| Bore                                    | 100 | 150 | 200 | 250  | 300  | 350  | 400  | 450  | 500  | 600  |
| A                                       | 305 | 403 | 502 | 568  | 648  | 762  | 838  | 914  | 991  | 1433 |
| B                                       | 254 | 317 | 381 | 444  | 520  | 584  | 647  | 711  | 774  | 914  |
| C                                       | 595 | 777 | 975 | 1160 | 1390 | 1555 | 1810 | 2103 | 2300 | 2600 |
| D                                       | 300 | 300 | 500 | 500  | 500  | 700  | 500  | 500  | 500  | 500  |
| Actuation                               | HW  | HW  | HW  | HW   | HW   | HW   | BG   | BG   | BG   | BG   |
| Weight (KG)                             |     | 115 | 185 | 210  |      |      | 571  | 765  |      |      |

Applications

- Slurries/Tailings
- Mine or pit de-watering
- Pulp and paper
- Cement
- Power generation ash disposal
- Sand and mineral processing
- Environmental and effluent

Standard

- ASME B16.34
- ASME B16.10
- ASME B16.5
- ASME B31.3



PW300 - ANSI600 - GEARBOX  
WEST AUSTRALIA

Data Sheet

|                        |   |
|------------------------|---|
| <b>Purpose:</b>        | Isolation - Open/Closed   |
| <b>Applications:</b>   | Slurries, sewage ,sands ,pulp and de-watering abrasive applications   |
| <b>Type:</b>           | Disc on wedge assembly suspended on spindle   |
| <b>Size available:</b> | 100NB - 600NB (larger sizes on request)   |
| <b>Figure:</b>         | PW100 - PW600   |
| <b>Rating:</b>         | From 100kPa to 15 000kPa @ 65°C   |
| <b>Connection:</b>     | Flanged ANSI B16.5 Class 150, 300, 600 or 900 (certified) or as required  |
| <b>Body:</b>           | GR 460R boiler plate and ASTM A106 pipe to suit as standard (other on request)  |
| <b>Packing:</b>        | Oxidised Acrlic & Kevlar blended fibre, PTFE dispersion mineral lubricant   |
| <b>Stem:</b>           | AISI 304 Stainless Steel as standars (other on request)   |
| <b>Disc:</b>           | Polyurethane lined steel disc   |
| <b>Dimensions:</b>     | ASME B16.10 table 1, 2 & 3 or on customer request   |
| <b>Testing:</b>        | AS4037 and EN 12266 PT 1&2 or API598 as specified   |
| <b>Finish:</b>         | Grit blast 2.5 and 2 part Interzone 954 epoxy paint   |
| <b>Standard:</b>       | ASME B16.34 ASME B16.5 ASME B31.3 ASME B16.10   |
| <b>Actuation:</b>      | DN100-DN300 Hand Wheel, DN300-DN700 Gearox 4:1 ratio, subject to pressure. Hydraulic, pneumatic or electric actuators are an option as required |
| <b>Manufacturer:</b>   | Bray  |



# TISO-CHECK

Automatic Changeover Ball  
Check Valve  
(TC)







## General description

Bray range includes the **TISO Valve - Twin Inlet-Single Outlet Valve**. This valve is a 'Tech-Taylor™' style ball check valve used to isolate pumps mounted in parallel.

TISO style valves are popular in mineral processing cyclone circuits. Standby pumps are often used in critical areas of processing plant. It is common to have two pumps discharge into a common line.

The TISO valve performs these functions automatically, without any external power requirement. The TISO valve is designed for the maximum abrasion resistance making it a trouble-free addition to the piping system.

The body of the TISO valve replaces the 'Y' fitting and its automatic ball action replaces the shut-off valves.

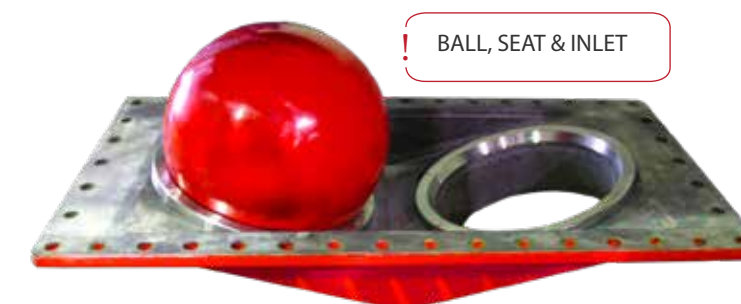


TC 500 - ANSI 150

- ✓ Replaceable: Ball is aluminium core and urethane coated which offers excellent abrasion resistance
- ✓ Replaceable: Stainless Steel seats
- ✓ Replaceable: Rubber lined ball guides - On valves NB100mm and above\*

## Features

- Efficient pump change over
- Automatic activation
- Simplicity of operation
- Excellent abrasion resistance
- Available in 2"(50mm) through to 24"(600mm) with 10/16/20/25 BAR ratings
- Up to 50 BAR pressure ratings available on request
- Body and guides are lined with hot vulcanized natural rubber. Other linings available on request
- Can be supplied with flange or Victaulic™ fittings
- Cost effective and self-operating
- Minimal pressure drop
- Self-operating – no actuator required
- Heavy duty carbon steel construction – grade 350
- Finish is abrasive clean to 2.5 and painted with Interzone 954, a 2 part epoxy suited to harsh environment
- Manufactured and tested in accordance with AS4037 and ASME B16.34-2009
- Manufactured in Australia

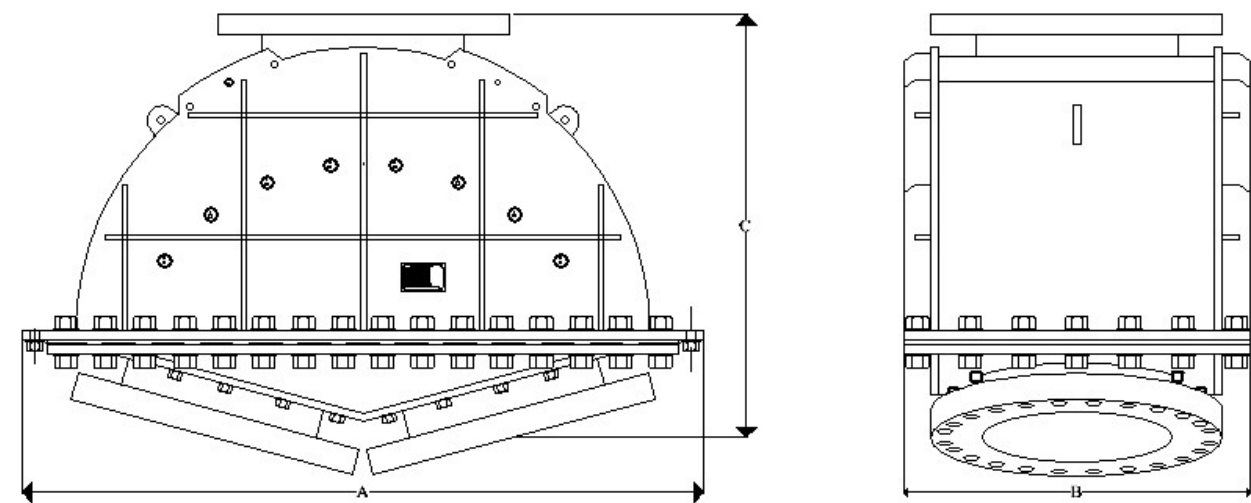


Designed for maximum abrasion resistance therefore it is trouble free





Dimensions & Weight



| Figure      | TC100-10 | TC150-10 | TC200-10 | TC250-10 | TC300-10 |
|-------------|----------|----------|----------|----------|----------|
| Size        | 100NB    | 150NB    | 200NB    | 250NB    | 300NB    |
| A-mm        | 495      | 635      | 823      | 883      | 1062     |
| B-mm        | 259      | 350      | 427      | 489      | 572      |
| C-mm        | 356      | 427      | 518      | 577      | 680      |
| Weight (KG) | 45       | 90       | 149      | 285      | 320      |

| Figure      | TC350-10 | TC400-10 | TC450-10 | TC500-10 | TC600-10 |
|-------------|----------|----------|----------|----------|----------|
| Size        | 350NB    | 400NB    | 450NB    | 500NB    | 600NB    |
| A-mm        | 1115     | 1257     | 1407     | 1536     | 1806     |
| B-mm        | 604      | 673      | 757      | 866      | 985      |
| C-mm        | 726      | 828      | 935      | 1000     | 1168     |
| Weight (KG) | 395      | 510      | 805      | 1050     | 1250     |

Replaceable ball for fast and efficient maintenance



Data Sheet

|                        |   |
|------------------------|---|
| <b>Purpose:</b>        | Automatic change over ball valve                                  |
| <b>Applications:</b>   | Cyclone feed pumps, Standby pumps circuits                        |
| <b>Type:</b>           | Soft seated ball check valve                                      |
| <b>Size available:</b> | DN100 – DN600   |
| <b>Figure:</b>         | TC0100 – TC600  |
| <b>Rating:</b>         | ANSI B16.5 class 150 @65° C nominal 10 BAR CWP                    |
| <b>Connection:</b>     | Flanged either Table D, E, PN10, PN16 (EN or AS) or ANSI150       |
| <b>Body:</b>           | G350 carbon steel   |
| <b>Ball:</b>           | Aluminium core Urethane coated                                    |
| <b>Seat:</b>           | Replaceable AISI 304 stainless steel                              |
| <b>Fasteners:</b>      | Class 8.8 galvanised carbon steel. Stainless options as required  |
| <b>Lining:</b>         | Natural rubber as standard. Nitrile ceramic and Bromobutyl option |
| <b>Finish:</b>         | Grit blast 2.5 and 2 part Interzone 954 epoxy paint               |
| <b>Testing:</b>        | AS4037 and EN 12266 PT 1&2 or API598 as specified                 |
| <b>Option:</b>         | Stainless steel construction                                      |
| <b>Name Plate:</b>     | 304 Stainless Steel   |
| <b>Manufacturer:</b>   | Bray  |









THE HIGH PERFORMANCE COMPANY

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