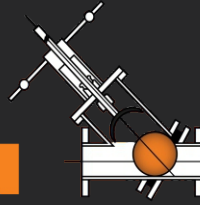




# DUAL



ONE STOP SLURRY SOLUTION



## NON-RETURN CHECK VALVES





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- **Dual Flapper Flex Swinch Check Valve (DFFSCV)**



# DUAL VALVE (DFV)

The **DUAL** Flow Valve operates on the discharge side of the pump. As the flow through the pipeline starts or stops, the ball automatically rises or falls, opening or closing the valve. The handwheel is there to lock the ball in position. The handwheel can be used to isolate, but with back pressure. The Dual Valve can work in the horizontal and vertical position.



- Virtually maintenance free because of simple design.
- Simple manual operation - manual handwheel is standard and automatic actuators are not required (but can be fitted).

## PRODUCT SPECIFICATION

- Valve housing is constructed of high quality Carbon Steel. Stainless Steel is an option.
- Valve housing can be Natural Rubber lined. A range of elastomer grades are available for corrosive duties (Urethane or Ceramic).
- Ball is made of hollow Carbon Steel and is Urethane coated. Other elastomers are also available (Stainless Steel for high pressure).
- The seat is made in Abrasive Resistant AR Steel (500 Brinnell hardness), Urethane or Stainless Steel and is replaceable.
- Flanges comply with AS, ANSI, DIN, SABS or BS.
- The ball locking spindle mechanism is made in Stainless Steel as standard.
- Working pressure standards are 16, 25, 40, 80 and 100 Bar.
- Operating temperature to 80°C. Higher conditions are possible if the valve is constructed from suitable material.

**FLUSHING PORT:** All valves have a minimum of one purge: one in the lower body and one in bonnet area.

**PVC BELLOWS:** Optional.

## MINING APPLICATION



## FEATURES

The Dual Valve is the only proven maintenance and trouble-free slurry valve in the world with all these features.

- Rotating and floating ball - self adjusts to flow.
- Self cleaning due to the freely rotating ball.
- Long ball life due to ball rotation.
- Replaces two valves: check valve and either a gate, knife gate, pinch or diaphragm valve.
- Full port opening. No obstruction to the flow.
- Virtually no pressure drop. Eliminates pipe hammer.
- Long seat life, Seats are out of the flow and can be rotated in line to increase seat life fourfold.
- Easy maintenance. Seat and ball can be inspected or replaced without removing the free flow from the pipeline.
- Indicator to show valve in open or closed position.

## FULLY AUTOMATIC OPERATION

### FULLY OPEN POSITION

With the handwheel wound up, the ball lifts completely out of the flow.

### CLOSED OR REFLUX POSITION

As the flow reduces and the pressure drops, the ball falls and positively locates in the seat.

## ACTUATORS

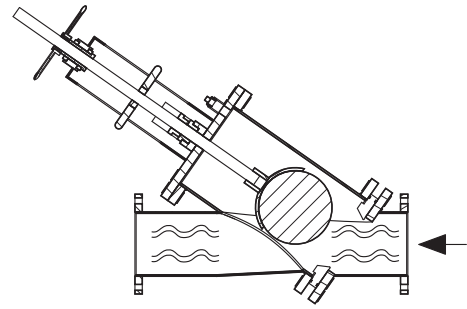
All types of actuators can be fitted, electric, gearbox, hydraulic, pneumatic or handwheel.

## APPLICATIONS

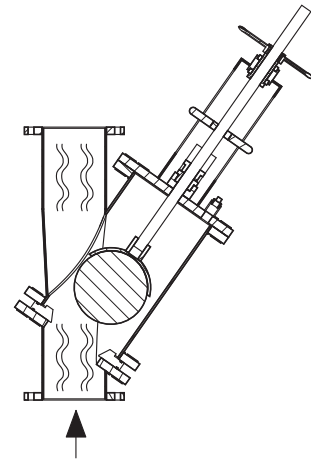
- Mining and mineral processing.
- Power generation.
- Sand and gravel.
- Chemical and soda ash.
- Pulp and paper.
- Environmental and effluent.

|    | PART          | DESCRIPTION                                     |
|----|---------------|---|
| 1  | Body          | Carbon Steel / Stainless Steel                  |
| 2  | Body Seat     | Abrasion Resistant AR Steel, S.S. or Urethane   |
| 3  | Ball          | Solid S.S. or Steel W/Urethane or Viton Coating |
| 4  | Ball Control  | Mild Steel / Stainless Steel                    |
| 5  | Bonnet        | Mild Steel / Stainless Steel                    |
| 6  | Packing       | Graphite in Rope                                |
| 7  | Gland         | S.S./Carbon Steel                               |
| 8  | Spindle       | Stainless Steel                                 |
| 9  | Yoke Assembly | Mild Steel / Stainless Steel                    |
| 10 | Spindle Nut   | Bronze  |
| 11 | Handwheel     | Carbon Steel / Stainless Steel                  |
| 12 | Handwheel Nut | Carbon Steel / Stainless Steel                  |

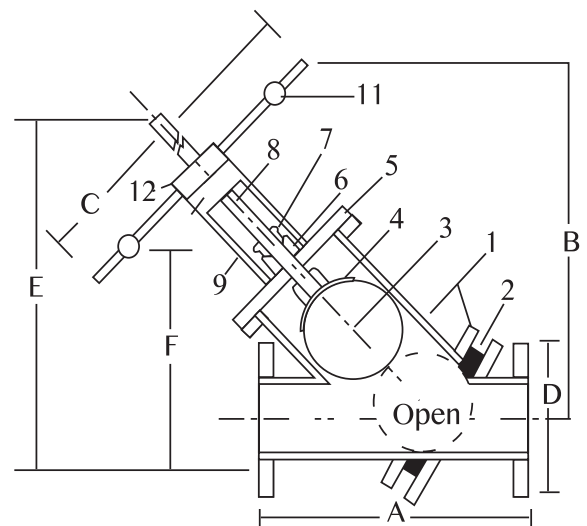
## VALVE ORIENTATION



Horizontal



Vertical



## DIMENSIONS AND WEIGHTS

| SIZE (MM) | F/F A | B    | C    | D   | E    | F    | WEIGHT (KG) |
|-----------|-------|------|------|-----|------|------|-------------|
| 80        | 500   | 420  | 300  | 200 | 390  | 300  | 83          |
| 100       | 640   | 590  | 350  | 235 | 640  | 400  | 120         |
| 150       | 780   | 780  | 740  | 300 | 840  | 440  | 215         |
| 200       | 930   | 1020 | 840  | 350 | 1050 | 560  | 300         |
| 250       | 1070  | 1220 | 840  | 423 | 1170 | 720  | 370         |
| 300       | 1120  | 1220 | 840  | 485 | 1500 | 930  | 440         |
| 350       | 1460  | 1420 | 990  | 555 | 1580 | 930  | 500         |
| 400       | 1680  | 1560 | 990  | 597 | 1900 | 1150 | 760         |
| 450       | 1680  | 1662 | 990  | 635 | 2300 | 2000 | 870         |
| 500       | 1680  | 1900 | 1220 | 698 | 3302 | 2000 | 1500        |
| 600       | 1880  | 1900 | 1220 | 698 | 3302 | 2000 | 2000        |

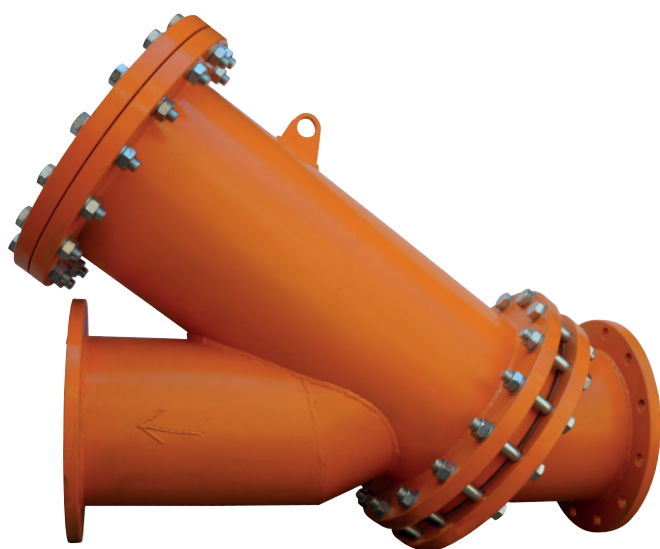
Contact Dual Valves for larger sizes. Dimensions are for guidance only - detailed dimension drawings available on request. All dimensions are in millimeters, unless stated.





# DUAL FREE FLOW SLURRY BALLCHECK VALVE (DFFV)

**DUAL's** Free Flow Valve operates on the discharge side of the pump as the flow through the pipeline starts or stops, the ball automatically rises or falls, opening and closing the valve. This occurs without noticeable shock or hammer, regardless of the line pressure or the speed of closure.



## PRODUCT SPECIFICATION

- Valve housing is constructed of high quality Carbon Steel. Stainless Steel is an option.
- Valve housing can be Natural Rubber lined. A range of elastomer grades are available for corrosive duties (Urethane or Ceramic).
- Ball is made of hollow Carbon Steel and is Urethane coated. Other elastomers are also available (Stainless Steel for high pressure).
- The seat is made in Abrasive Resistant AR Steel (500 Brinnell hardness), Urethane or Stainless Steel and is replaceable.
- Flanges comply with AS, ANSI, DIN, SABS or BS.
- Working pressure standards are 16, 25, 40, 80 and 100 Bar.
- Operating temperature to 80°C. Higher conditions are possible if the valve is constructed from suitable material.
- The Free Flow Valve can work in the horizontal and vertical position.
- Flushing ports are fitted to the upper ball body.

## MINING APPLICATION (1/2"/300mm - 25 Bar)



## FEATURES

- Rotating and floating ball - self adjusts to flow.
- Self cleaning due to the freely rotating ball.
- Long ball life due to ball rotation.
- Full port opening. No obstruction to the flow.
- Virtually no pressure drop. Eliminates pipe hammer.
- Long seat life, Seats are out of the flow and can be rotated in line to increase seat life fourfold.
- Easy maintenance. Seat and ball can be inspected or replaced without removing the free flow from the pipeline.
- Virtually maintenance free because of the simple design.

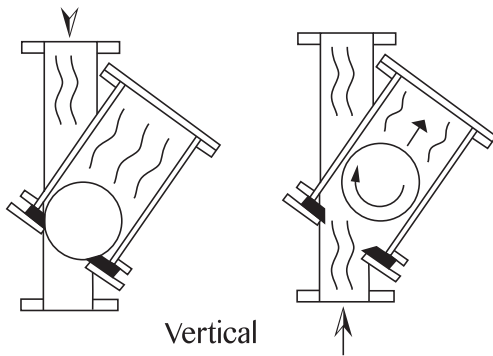
## FULLY AUTOMATIC OPERATION

### CLOSED OR REFLUX POSITION

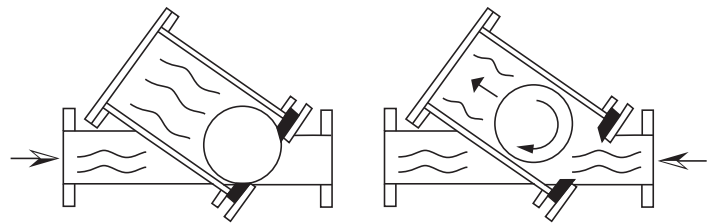
When installed the ball falls automatically into a closed position. this is possible both horizontal and vertical pipes.

### START UP AND CLEANING OF THE BALL CHAMBER

As the pressure on the upstream side of the valve exceeds that of below the valve, the ball rises and starts to turn, cleaning the ball body.



Vertical



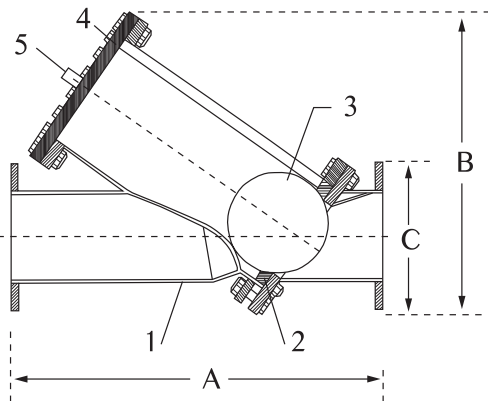
Horizontal

## FREE FLOW VALVES IN THE FACTORY



DDFFV

## DIMENSIONS AND SPECIFICATIONS



| VALVE SIZE (mm) | A    | B    | C   | WEIGHT (kg) |
|-----------------|------|------|-----|-------------|
| 80              | 500  | 300  | 200 | 80          |
| 100             | 640  | 400  | 235 | 120         |
| 150             | 780  | 440  | 300 | 200         |
| 200             | 930  | 560  | 350 | 250         |
| 250             | 1070 | 720  | 423 | 370         |
| 300             | 1120 | 930  | 485 | 440         |
| 350             | 1460 | 930  | 555 | 500         |
| 400             | 1680 | 1150 | 597 | 950         |
| 450             | 1680 | 2000 | 635 | 980         |
| 500             | 1680 | 2000 | 698 | 1200        |
| 600             | 1880 | 2500 | 698 | 1500        |

Dimensions and weights are for guidance only - detailed dimension drawings available on request. All dimensions are in millimeters, unless stated.

## APPLICATIONS

- Mining and mineral processing.
- Power generation.
- Sand and gravel.
- Chemical and soda ash.
- Pulp and paper.
- Environmental and effluent.

|   | PART                    | DESCRIPTION                                     |
|---|-------------------------|---|
| 1 | Body                    | Carbon Steel / Stainless Steel                  |
| 2 | Body Seat (Replaceable) | Abrasion Resistant AR Steel, S.S. or Urethane   |
| 3 | Ball (Replaceable)      | Solid S.S. or Steel w/Urethane or Viton Coating |
| 4 | Cover Plate             | Carbon Steel / Stainless Steel                  |
| 5 | Flushing Port           | Carbon Steel / Stainless Steel                  |





# DUAL SLIMLINE BALL NON-RETURN VALVE (DSFFV)

**DUAL's** Slimline Valve's heart is a reinforced Urethane or Rubber ball. The unique design of the valve allows free movement of the ball. The ball lifts completely out of the flow without any interference. As the pump stops, the ball falls and positively locates the seat due to its own weight and back pressure of the liquid. This results in dropless sealing.



## PRODUCT SPECIFICATION

**SIZE RANGE:** 80mm - 600mm  
larger sizes on request.

**PRESSURE RATING:** See table below

**TYPES:** Ball foot valve.  
Ball non-return valve.

**TEMPERATURE:** -10°C to +80°C

**DISC MATERIAL:** Gum, EPDM, Butyl, Neoprene. 306 Stainless Steel is available for high pressure.

| WORKING PRESSURE    | PN10   | PN16    | PN25   |
|---------------------|--------|---------|--------|
| SHELL TEST PRESSURE | 1.5MPa | 2.4MPa  | 3.7MPa |
| SEAL TEST PRESSURE  | 1.1MPa | 1.76MPa | 2.5MPa |

For higher pressures, please consult the factory.

## CAST STEEL 100mm "CVB SFFV" FOR WATER AND SEWAGE

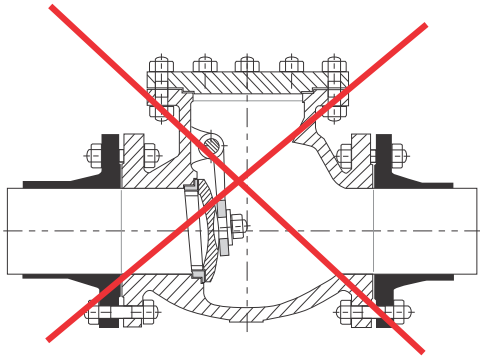


## FEATURES

- Perfect sealing.
- Low head losses.
- Non clogging, self cleaning ball.
- Minimum back pressure for tightness 0.3 to 0.5 Bar.
- Removable bonnet for cleaning or replacing of check disc.
- Maintenance free.
- Full bore.
- Silent, non-slam, reduces pipe hammer.
- Fabricated valves face-to-face can be altered to suit different types of valve face-to-face dimensions.
- Simple construction - one moving part.

DSFFV

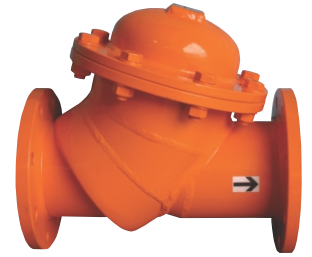
## “SFFV” REPLACE SWING-CHECK VALVES



## INSTALLATION



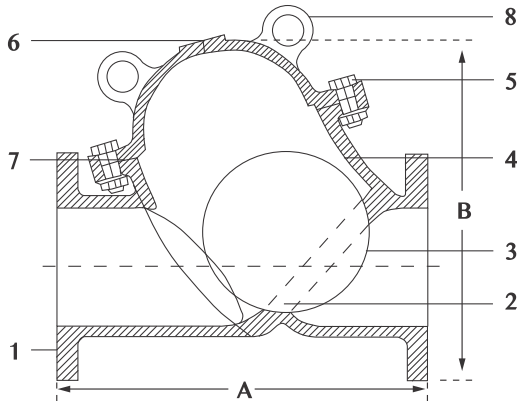
Vertical Installation



Horizontal Installation

DSFFV

## OUTLINE DIMENSIONS & SPECIFICATION

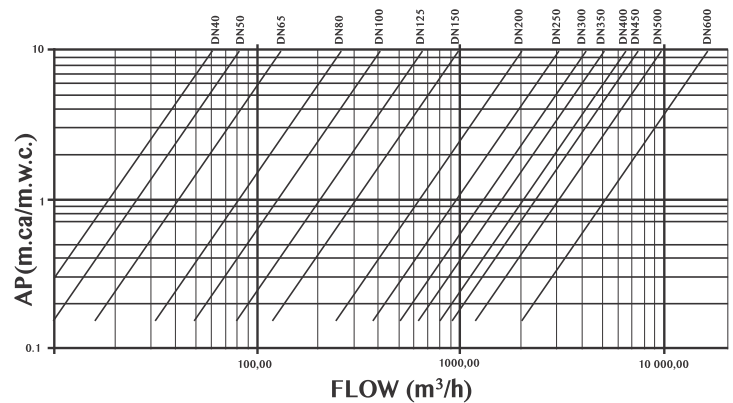


| PART | DESCRIPTION       |
|------|-------------------|
| 1    | Body              |
| 2    | Body Seat         |
| 3    | Ball              |
| 4    | Valve Body Lining |
| 5    | Bolts And Nuts    |
| 6    | Paint             |
| 7    | Body Gasket       |
| 8    | Lifting Lug       |

## CAST STEEL 100mm “CVB SFFV” FOR WATER WORKS



## PRESSURE DROP DIAGRAM



## DIMENSIONS AND WEIGHTS

| Size (mm) | A FACE TO FACE DIMENSIONS |        |           |             | B    | WEIGHT (kg) | KV (m <sup>3</sup> /H) |
|-----------|---------------------------|--------|-----------|-------------|------|-------------|------------------------|
|           | SABS                      | AS4794 | DIN320-F6 | ANSI B16-10 |      |             |                        |
| 50        | 230                       | 200    | 200       | 203         | 250  | 30          | 81                     |
| 80        | 305                       | 260    | 260       | 241         | 300  | 50          | 255                    |
| 100       | 355                       | 330    | 300       | 292         | 330  | 80          | 400                    |
| 125       | 344                       | 344    | 350       | 330         | 350  | 85          | 645                    |
| 150       | 445                       | 410    | 400       | 356         | 400  | 90          | 970                    |
| 200       | 535                       | 540    | 500       | 495         | 500  | 100         | 2000                   |
| 250       | 635                       | 640    | 600       | 622         | 600  | 150         | 3050                   |
| 300       | 760                       | 700    | 700       | 698         | 750  | 300         | 4150                   |
| 350       | 865                       | 830    | 800       | 787         | 900  | 350         | 5150                   |
| 400       | 865                       | 920    | 900       | 914         | 1000 | 500         | 6600                   |
| 450       | 978                       | 978    | 978       | 978         | 1200 | 550         | 8258                   |
| 500       | 1067                      | 1067   | 1067      | 1067        | 1300 | 700         | 11850                  |
| 600       | 1295                      | 1295   | 1295      | 1295        | 1500 | 1100        | 16140                  |







# DUAL SLURRY SWING CHECK VALVE (DSSSCV)

**DUAL's** Slurry Swing Check Valve operates on the discharge side of the pump as the flow through the pipeline starts or stops. The disc automatically rises and falls, opening and closing the valve. This occurs without noticeable shock or hammer, regardless of the line pressure or the speed of closure.

The Dual Slurry Swing Check Valve is particularly well suited for harsh highly abrasive flow control applications in liquid-solid and gas-solid pneumatic conveying services where long valve life and low maintenance are desired. The disc and seat are replaceable.



## FEATURES

- Disc self-adjusts to flow.
- Long operating life due to the disc out of flow.
- Seals in one direction.
- Seals in zero back pressure.
- Virtually no pressure drop.
- Eliminates pipe hammer.
- Long seat life due to seat out of process flow.
- Flush ports.
- Drip-tight shut off.
- Full bore design with low friction loss and high flow capacity.
- Virtually maintenance free due to the simple design.
- Replaceable disc (single wearing part).
- Various lining options.
- Custom bodies for special applications.
- Replaceable disc and seat sleeve.

## PRODUCT SPECIFICATION

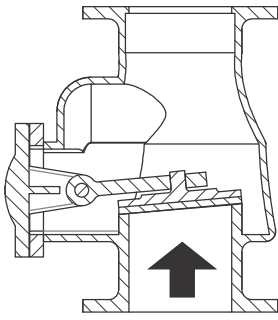
|                                 |   |
|---------------------------------|---|
| <b>BODY:</b>                    | Fabricated Carbon Steel, Cast SG Iron or Aluminium.   |
| <b>REPLACEABLE SEAT SLEEVE:</b> | Rubber or Urethane.   |
| <b>DISC MATERIAL:</b>           | Stainless Steel, Urethane or Rubber coated.   |
| <b>BODY LINING:</b>             | Gum Black, Red Rubber, EPDM, Butyl, Chlorobutyl, Neoprene, Ceramic, Polyurethane, Viton or Hypalon. |
| <b>PRESSURE RATING:</b>         | 16, 25, 40, 60 and 100 Bar.   |
| <b>SIZE RANGE:</b>              | 50mm - 600mm.   |
| <b>DRILLING PATTERNS:</b>       | Drilled to SABS, ANSI, BS or DIN.   |
| <b>TEMPERATURE:</b>             | -50°C to 180°C  |

## 300#/25 BAR SLURRY APPLICATION

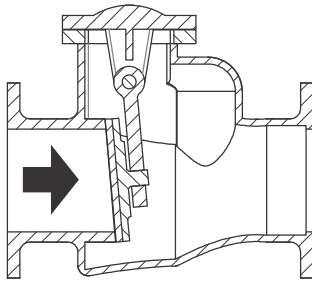


DSSSCV

## INSTALLATION

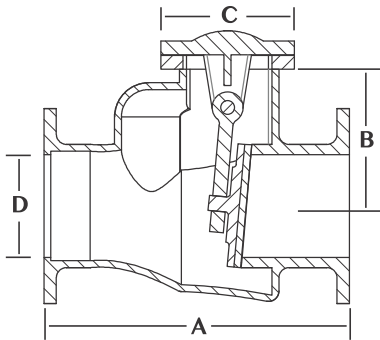


Vertical Installation



Horizontal Installation

## DIMENSIONS AND SPECIFICATIONS



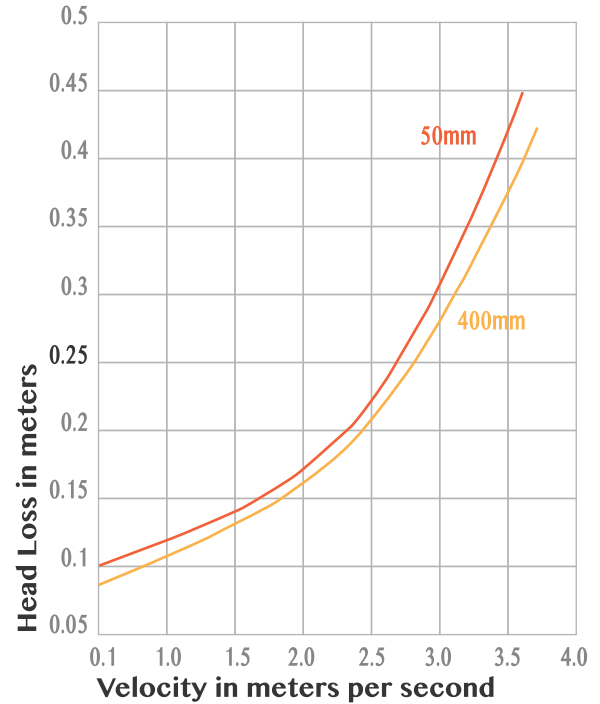
| Size (mm) | F/F A                             | B   | C   | D   | Weight (kg) |
|-----------|-----------------------------------|-----|-----|-----|-------------|
| 50        | 230                               | 135 | 181 | 50  | 20          |
| 80        | 305                               | 176 | 229 | 80  | 40          |
| 100       | 355                               | 196 | 267 | 100 | 50          |
| 150       | 445                               | 246 | 333 | 150 | 100         |
| 200       | 535                               | 310 | 413 | 200 | 150         |
| 250       | 635                               | 366 | 502 | 250 | 250         |
| 300       | 760                               | 402 | 584 | 300 | 350         |
| 350       | 865                               | 485 | 610 | 350 | 590         |
| 400       | 865                               | 560 | 673 | 400 | 750         |
| 450       | Larger sizes available on request |     |     |     |             |
| 500       |                                   |     |     |     |             |
| 600       |                                   |     |     |     |             |

Dimensions and weights are for guidance only - detailed dimension drawings available on request. All dimensions are in millimeters, unless stated.

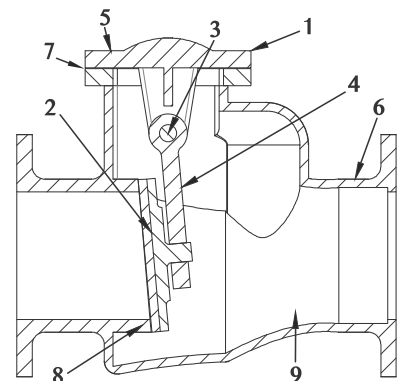
## APPLICATIONS

- Mining and mineral processing.
- Power generation.
- Sand and gravel.
- Chemical and soda ash.
- Pulp and paper.
- Environmental and effluent.
- Water and waste water.

## VALVE HEAD LOSS VALUES



| PART | DESCRIPTION    |
|------|----------------|
| 1    | Body/Cover     |
| 2    | Check disc     |
| 3    | Hinge          |
| 4    | Hinge pin      |
| 5    | Bolts and nuts |
| 6    | Seat sleeve    |
| 7    | Body gasket    |
| 8    | Paint          |
| 9    | Body lining    |





# DUAL SWING CHECK VALVE (DSCV)

**DUAL's** Swing Check Valves embody which is designed to swing out of the line of fluid flow at maximum capacity. The seat is off-set from horizontal and is hinge positioned so that the gravitational action causes the valve to close in proportion to the reduction in fluid flow. The valves can be installed either vertically or horizontally.

As an optional extra, an extended hange pin permits the fitting of an outside lever and weight to effect closure immediately, thereby eliminating slamming. A door position indicator can also be fitted.

Rubber disc valves suitable for pressures up to 1000 kPa are also available.

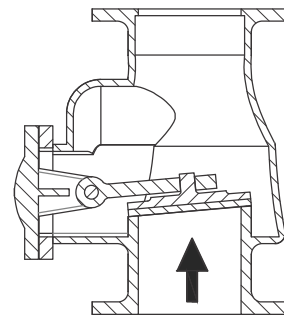


## PRODUCT SPECIFICATION

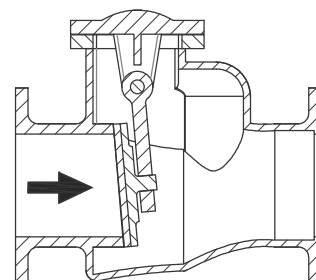
- SIZE RANGE:** 80mm - 400mm (for larger sizes consult factory).
- PRESSURE RATING:** See table below (for higher pressure consult factory).
- TEMPERATURE:** -10°C to +80°C
- DISC MATERIAL:** Stainless Steel, SG42 Cast Iron, Rubber and Urethane lined.

| WORKING PRESSURE    | PN10   | PN16    | PN25   |
|---------------------|--------|---------|--------|
| Shell Test Pressure | 1.5kPa | 2.4kPa  | 3.7kPa |
| Seal Test Pressure  | 1.1kPa | 1.76kPa | 2.5kPa |

## INSTALLATION



Vertical Installation



Horizontal Installation

## FEATURES

- Perfect sealing.
- Low head losses.
- Minimum back pressure for tightness 0.3 to 0.5 Bar.
- Removable bonnet for cleaning or replacing of check disc.
- Maintenance free.
- Full bore.
- Silent, non-slam, reduces pipe hammer.
- Simple construction - one moving part.

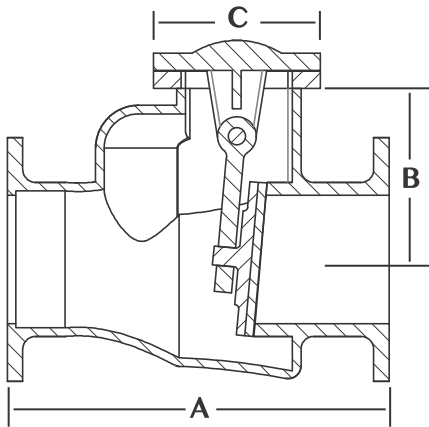
DSCV

## APPLICATIONS

- Mining and mineral processing.
- Power generation.
- Sand and gravel.
- Chemical and soda ash.
- Pulp and paper.
- Environmental and effluent.
- Water and waste water.



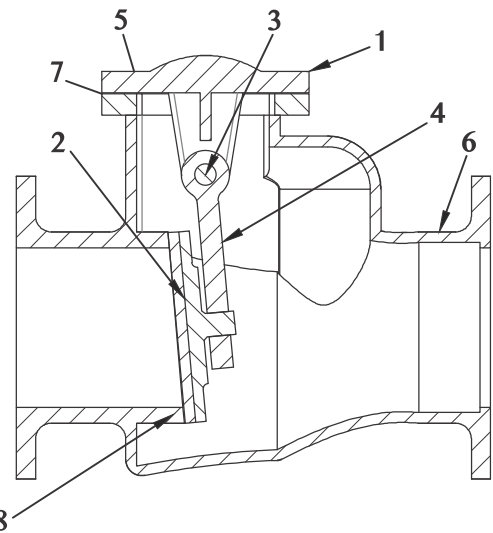
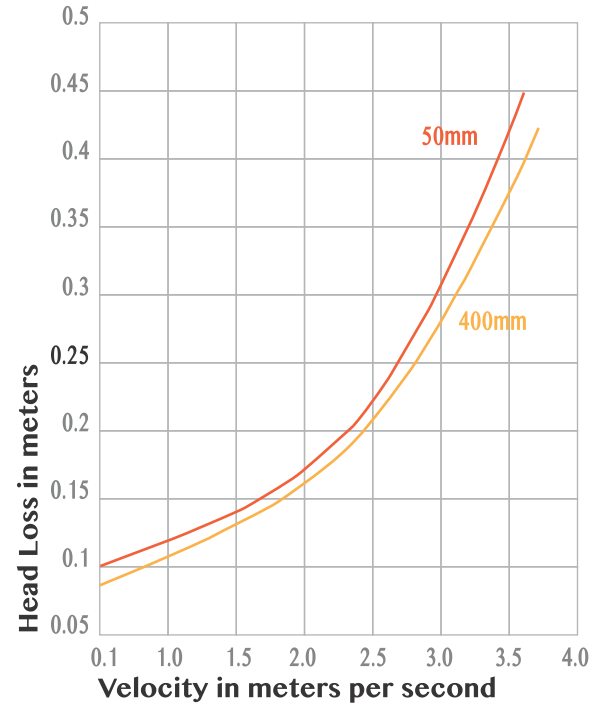
## OUTLINE DIMENSIONS & SPECIFICATIONS



| Size (mm) | F/F A                             | B   | C   | D   | Weight (kg) |
|-----------|-----------------------------------|-----|-----|-----|-------------|
| 50        | 230                               | 135 | 181 | 50  | 20          |
| 80        | 305                               | 176 | 229 | 80  | 40          |
| 100       | 355                               | 196 | 267 | 100 | 50          |
| 150       | 445                               | 246 | 333 | 150 | 100         |
| 200       | 535                               | 310 | 413 | 200 | 150         |
| 250       | 635                               | 366 | 502 | 250 | 250         |
| 300       | 760                               | 402 | 584 | 300 | 350         |
| 350       | 865                               | 485 | 610 | 350 | 590         |
| 400       | 865                               | 560 | 673 | 400 | 750         |
| 450       | Larger sizes available on request |     |     |     |             |
| 500       |                                   |     |     |     |             |
| 600       |                                   |     |     |     |             |

Dimensions and weights are for guidance only - detailed dimension drawings available on request. All dimensions are in millimeters, unless stated.

## VALVE HEAD LOSS VALUES



| PART | DESCRIPTION  |
|------|--|
| 1    | Body/cover<br>Cast SG iron   |
| 2    | Check disc<br>Cast SG iron   |
| 3    | Hinge<br>Cast SG iron  |
| 4    | Hinge pin<br>304 Stainless steel                                     |
| 5    | Bolts and nuts<br>Cadmium plated steel                               |
| 6    | Paint<br>Epoxy powder coated, Rilsan lined or painted to custom spec |
| 7    | Body gasket<br>'O' ring  |
| 8    | Seating<br>Stainless steel; Chrome or Bronze                         |



# DUAL FLO-STOP VALVE (DFSV)

**DUAL's** Flo-stop Valve has a reinforced Stainless Steel ball. The unique design of the valve allows free movement of the ball. The ball lifts out of the liquid without any interference. As the pump stops, the ball falls back and positively locates in the Stainless Steel seat due to its own weight and back pressure of the liquid. The higher the pressure the better the secondary rubber seal will seal.

- Maintenance free.
- Full bore.
- Silent, non-slam, reduces pipe hammer.
- Fabricated valves face-to-face can be altered to suit different types of valve face-to-face dimensions.
- Simple construction - one moving part.

## PRODUCT SPECIFICATION

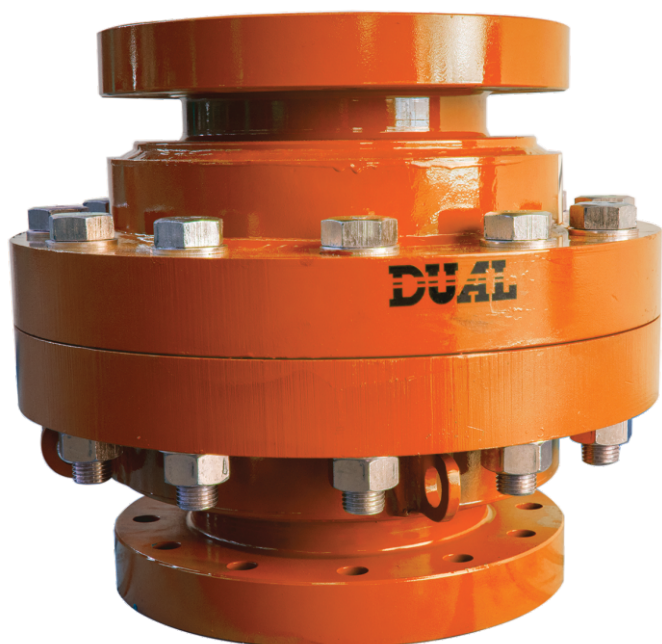
**SIZE RANGE:** 80mm - 500mm.

**PRESSURE RATING:** See table.

**TYPE:** Ball non-return valve.

**OPERATING TEMPERATURE:** -10°C to +80°C

**MEDIUM:** Water.  
Mine water underground.  
Heavy, thick and viscous liquid.



| Working Pressure                                | PN10   | PN16    | PN25   | PN40   | PN60   | PN100   |
|---|--------|---------|--------|--------|--------|---------|
| Shell Test Pressure                             | 1.5MPa | 2.4MPa  | 3.7MPa | 6.0MPa | 9.0MPa | 15.0MPa |
| Seal Test Pressure                              | 1.1MPa | 1.76MPa | 2.5MPa | 4.0MPa | 6.0MPa | 10MPa   |
| For Higher Pressures Please Consult the Factory |        |         |        |        |        |         |

## FEATURES

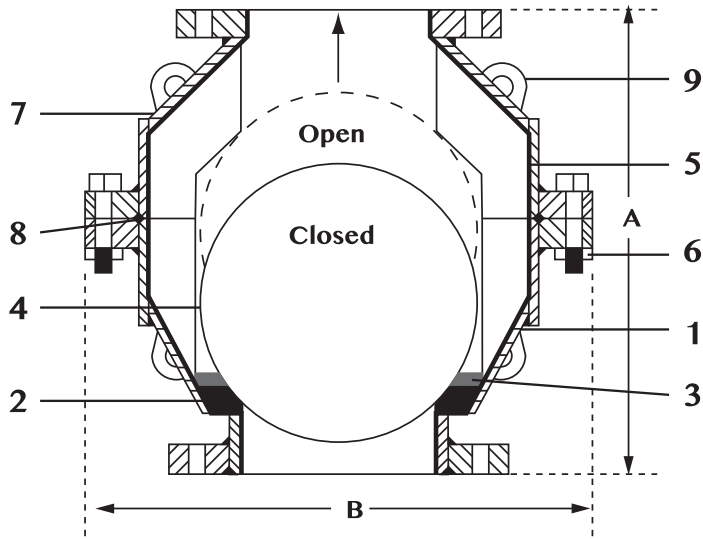
The Flo-Stop is the only proven maintenance and trouble-free dewatering valve on the world, with all these features.

- Perfect sealing.
- Low head losses.
- Non clogging, self cleaning ball.
- Minimum back pressure for tightness: 0.3 to 0.5 bar.
- Secondary seat rubber.



DFSV

## OUTLINE DIMENSIONS & SPECIFICATION



| PART | DESCRIPTION   |
|------|---|
| 1    | Body<br>Carbon Steel/Cast Steel/Stainless Steel             |
| 2    | Body Seat<br>AR Steel, S.S., Urethane or Rubber             |
| 3    | Secondary Seat<br>Linatex Rubber (Skirt)                    |
| 4    | Ball<br>Stainless Steel, Urethane or Rubber                 |
| 5    | Valve Body Lining<br>Rubber, Urethane or Ceramic (Optional) |
| 6    | Bolts and Nuts<br>Cadmium Plated Steel / High Tensile       |
| 7    | Paint<br>Epoxy Powder coated or painted to custom spec.     |
| 8    | Body Gasket<br>'O' Ring                                     |
| 9    | Lifting Lug<br>Carbon Steel/Cast Steel/ Stainless Steel     |

## APPLICATIONS

- Mining and mineral processing.
- Power generation.
- Sand and gravel.
- Chemical and soda ash.
- Pulp and paper.
- Environmental and effluent.
- Water.

| VALVE SIZE (mm) | A    | B    | WEIGHT (kg) |
|-----------------|------|------|-------------|
| 80              | 305  | 320  | 80          |
| 100             | 320  | 390  | 120         |
| 150             | 420  | 490  | 200         |
| 200             | 500  | 690  | 250         |
| 250             | 560  | 790  | 370         |
| 300             | 585  | 850  | 440         |
| 350             | 605  | 900  | 500         |
| 400             | 700  | 950  | 950         |
| 450             | 780  | 1030 | 1000        |
| 500             | 1050 | 1030 | 1100        |

Dimensions and weights are for guidance only - detailed dimension drawings available on request. All dimensions are in millimeters, unless stated.

## INSTALLATION

### Horizontal Installation



### Vertical Installation



# DUAL DASHLEY DOUBLE BALL CHECK VALVE (DDV)

**DUAL's** Dashley Valve operates on the discharge side of two pumps in parallel. Both pumps can run simultaneously or independently. When both or one pump is switched off, the ball will automatically drop back stopping the back flow to the pump.



## PRODUCT SPECIFICATION

- The body is Carbon Steel (fabricated).
- The valve body can be lined in Natural Black Rubber, Neoprene, Hypalon, EPDM, ceramic or Urethane.
- Seats are replaceable and can be made of any material requested by the client.
- Balls are replaceable and are made of Urethane or Rubber.
- Shouldered end connections for victualic couplings (if required).
- Valve flanged to customer specification.
- Flushing port in ball bodies.
- Lifting lugs.
- Balls can be replaced or inspected from top ball cover.
- Different mounting brackets can be fitted to suit application.

**Pressure ratings:** 10, 16, 25 Bar.

## 350mm DASHLEY WITH HANDWHEEL ISOLATION



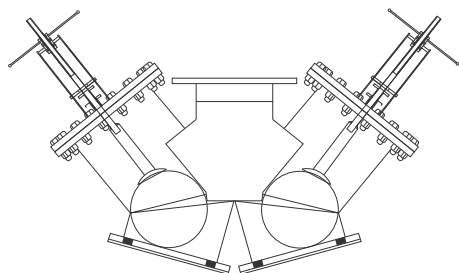
## FEATURES

- As the elastomer covered ball rises or falls it rotates with the flow.
- This ensures that the valve self cleans and permits it to open and close reliably even under severe conditions of slurry build up.
- Minimal pressure drop.
- Optional handwheel for isolation.

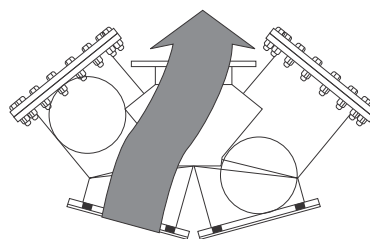
## REPLACEABLE BALLS AND SEALS



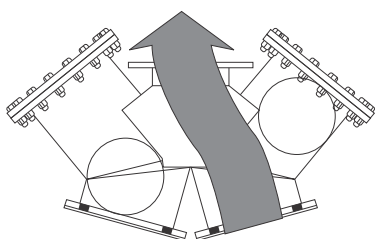
## YOU CAN RUN BOTH PUMPS SIMULTANEOUSLY OR ONE AT A TIME



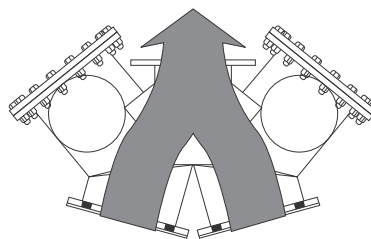
Both Pumps Isolated.  
With Handwheels.  
No Flow.



Flow From Left Pump



Flow From Right Pump



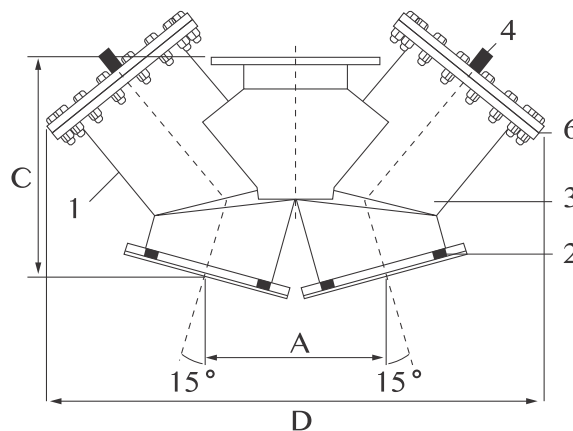
Flow From Both Pumps

### APPLICATIONS

- All slurry applications requiring trouble free pump changeover.
- Particularly suited for mill cyclone feed pumps.

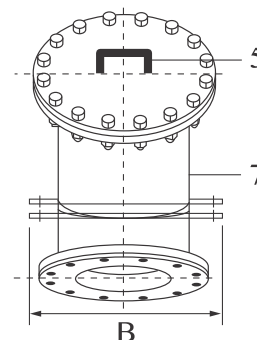
### DIMENSIONS AND WEIGHTS

|   | PART            | DESCRIPTION                  |
|---|-----------------|------------------------------|
| 1 | Body            | Carbon Steel/Stainless Steel |
| 2 | Body Seat       | Urethane or Rubber           |
| 3 | Ball            | Urethane or Rubber           |
| 4 | Flushing Port   | Carbon Steel/Stainless Steel |
| 5 | Lifting Lugs    | Carbon Steel/Stainless Steel |
| 6 | Ball Body Cover | Carbon Steel/Stainless Steel |
| 7 | Body Lining     | Rubber, Urethane or Ceramic  |



| VALVE SIZE |     | A                        |     | B      |     | C      |        | D      |      | WEIGHT |     |
|------------|-----|--------------------------|-----|--------|-----|--------|--------|--------|------|--------|-----|
| INCHES     | mm  | INCHES                   | mm  | INCHES | mm  | INCHES | mm     | INCHES | mm   | LBS.   | kg  |
| 4          | 100 | 9.52                     | 238 | 10.4   | 260 | 14.00  | 355.6  | 27.20  | 680  | 75     | 34  |
| 6          | 150 | 12.00                    | 300 | 14.00  | 350 | 16.75  | 425.5  | 38.40  | 960  | 155    | 70  |
| 8          | 200 | 13.96                    | 349 | 16.96  | 424 | 20.38  | 517.7  | 41.60  | 1040 | 300    | 136 |
| 10         | 250 | 16.56                    | 414 | 19.60  | 490 | 22.69  | 576.3  | 53.60  | 1340 | 500    | 227 |
| 12         | 300 | 19.48                    | 487 | 22.84  | 571 | 26.75  | 679.5  | 61.60  | 1540 | 640    | 291 |
| 14         | 350 | 18.16                    | 454 | 24.16  | 604 | 28.63  | 727.7  | 68.00  | 1700 | 775    | 352 |
| 16         | 400 | 24.68                    | 617 | 26.92  | 673 | 32.63  | 828.8  | 80.00  | 2000 | 1000   | 454 |
| 18         | 450 | 26.16                    | 654 | 30.24  | 756 | 36.75  | 933.5  | 80.00  | 2000 | 1550   | 704 |
| 20         | 500 | 28.68                    | 717 | 34.08  | 852 | 39.44  | 1001.8 | 84.00  | 2100 | 1950   | 885 |
| 24         | 600 | AND ABOVE ON APPLICATION |     |        |     |        |        |        |      |        |     |

Dimensions and weights are for guidance only - detailed dimension drawings available on request.

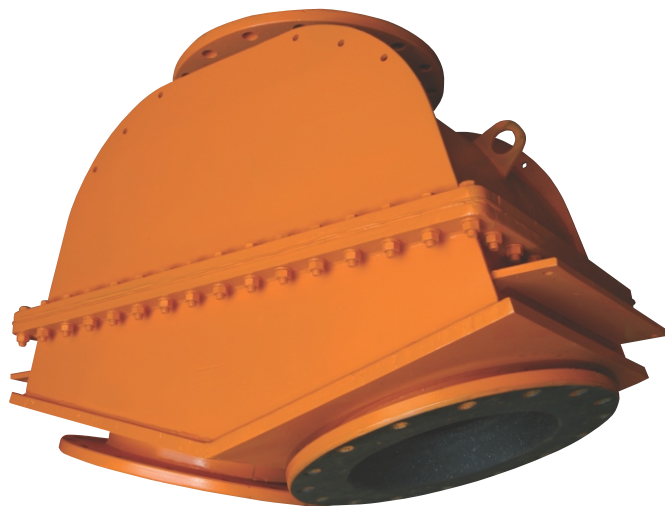






# DUAL DOUBLE NON-RETURN VALVE (DDNRV)

**DUAL's** Double Non-Return Valve operates on the discharge side of two pumps in parallel. Both pumps can run simultaneously or independently. When one pump is switched off, the ball will automatically drop back stopping the back flow to the other pump.



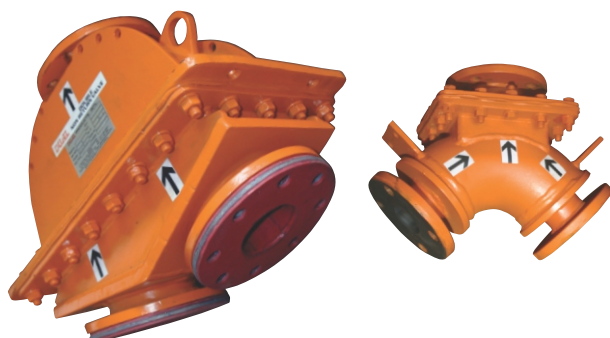
## PRODUCT SPECIFICATION

- BODY:** Carbon Steel (fabricated). The valve body can be lined in Natural Black, Neoprene, Hypalon, EPDM Rubber, Ceramic or Urethane.
- SEATS:** Natural Rubber, Urethane or Stainless Steel (replaceable).
- BALL:** Urethane or Rubber (Ball replaceable).
- SIZE RANGE:** Valve body and face-to-face dimension can be changed to suit existing applications.
- PRESSURE RATING:** 10, 16, 25, 40 and 60 Bar.
- FLANGED CONNECTION:** Shouldered end connections for virtual couplings if required.
- VALVE INTERVALS:** Valve flanged to customer specification. Flushing port in ball body.
- OTHER:** Different mounting brackets can be fitted to suit application.

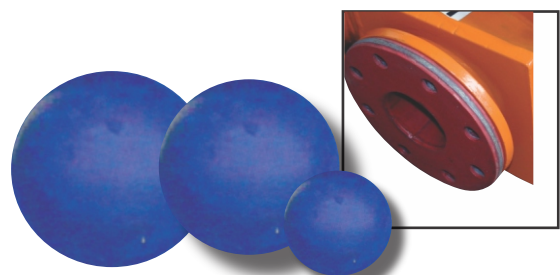
## FEATURES

- Flush ports.
- As the elastomer coated ball moves, it rotate with the flow.
- This ensures that the valve self cleans and permits it to open and close reliably even under severe conditions of slurry build up.
- Minimal pressure drop.
- Replaceable ball and seats.

## FABRICATED VALVES



## REPLACEABLE BALL AND SEATS

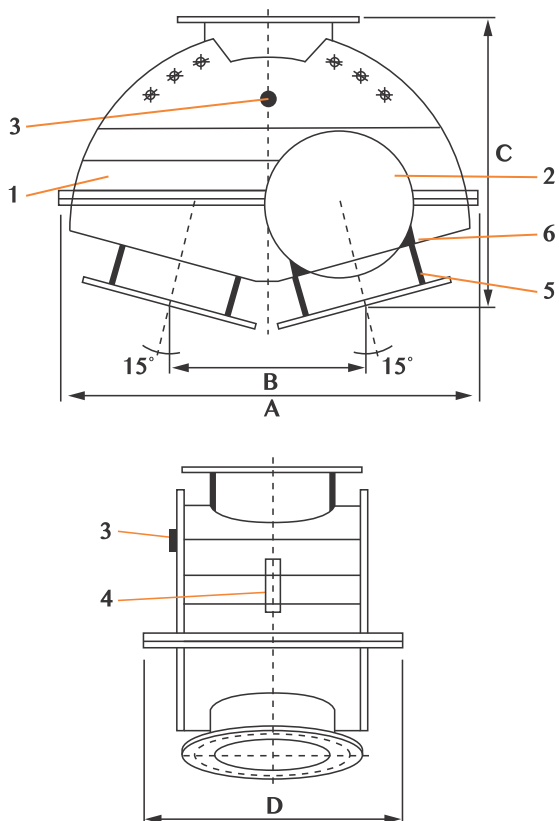


DDNRV

You can run both pumps simultaneously or one at a time.



Flow From Right Pump    Flow From Both Pumps    Flow From Left Pump



### APPLICATIONS

- All slurry applications requiring trouble free pump changeover.
- Particularly suited for mill cyclone feed pumps.

|   | PART          | DESCRIPTION                      |
|---|---------------|----------------------------------|
| 1 | Body          | Carbon Steel / Stainless Steel   |
| 2 | Ball          | Urethane or Rubber (Replaceable) |
| 3 | Flushing Port | Carbon Steel / Stainless Steel   |
| 4 | Lifting Lugs  | Carbon Steel / Stainless Steel   |
| 5 | Body Lining   | *Rubber, Urethane or Ceramic     |
| 6 | Body Seat     | *Rubber, Urethane or Replaceable |

Dimensions and weights are for guidance only - detailed dimension drawings available on request. \* EPDM, Nitrile, Chlorobutyl or Natural Red

| Valve Size |     | A      |      | B      |      | C      |        | D      |      | Weight |      | Ball Size |     |
|------------|-----|--------|------|--------|------|--------|--------|--------|------|--------|------|-----------|-----|
| Inches     | mm  | Inches | mm   | Inches | mm   | Inches | mm     | Inches | mm   | LBS    | KG   | Inches    | mm  |
| 2.5        | 65  | 17.20  | 430  | 11.33  | 288  | 9.70   | 246    | 11.00  | 281  | 105    | 48   | 3.6       | 90  |
| 3          | 80  | 18.40  | 460  | 11.33  | 288  | 9.70   | 246    | 11.00  | 281  | 112    | 51   | 3.6       | 90  |
| 4          | 100 | 19.80  | 495  | 9.60   | 240  | 14.20  | 356    | 10.30  | 259  | 112    | 51   | 6         | 150 |
| 6          | 150 | 25.40  | 635  | 12.00  | 300  | 17.00  | 425    | 13.90  | 349  | 206    | 94   | 8         | 200 |
| 8          | 200 | 32.88  | 822  | 14.00  | 350  | 20.60  | 517    | 17.00  | 425  | 363    | 165  | 10        | 250 |
| 10         | 250 | 35.30  | 883  | 16.60  | 416  | 23.00  | 576    | 19.50  | 489  | 473    | 215  | 12        | 300 |
| 12         | 300 | 42.40  | 1060 | 19.50  | 489  | 27.00  | 679    | 22.80  | 572  | 653    | 297  | 14        | 350 |
| 14         | 350 | 44.50  | 1114 | 21.80  | 546  | 29.00  | 727    | 24.00  | 603  | 847    | 385  | 16        | 400 |
| 16         | 400 | 50.20  | 1257 | 24.30  | 617  | 33.10  | 829    | 26.90  | 673  | 1089   | 495  | 18        | 450 |
| 18         | 450 | 56.20  | 1406 | 26.00  | 651  | 37.30  | 933    | 30.00  | 756  | 1663   | 756  | 20        | 500 |
| 20         | 500 | 61.40  | 1537 | 28.70  | 719  | 40.00  | 1002   | 34.60  | 867  | 2118   | 963  | 24        | 600 |
| 24         | 600 | 72.20  | 1807 | 34.40  | 862  | 46.70  | 1168   | 39.30  | 984  | 2312   | 1051 | 28        | 700 |
| 30         | 750 | 90.00  | 2286 | 47.00  | 1193 | 54.00  | 1371.6 | 61.75  | 1568 | 2850   | 1294 | 36        | 900 |

For Larger Sizes: Contact Dual Products. Dimensions and weights are for guidance only - detailed drawings available on request. All dimensions are in millimeters, unless stated.

# DUAL ABRASIVE RESISTANT BALLS (DARB)

**DUAL** manufactures a comprehensive range of abrasive resistant balls for check valves. All balls are manufactured to the highest international quality standards. Dual balls are manufactured in South Africa, using our own techniques and expertise.

The balls are moulded with reinforced materials and are manufactured in sizes varying from 50mm to 1000mm.



## FEATURES

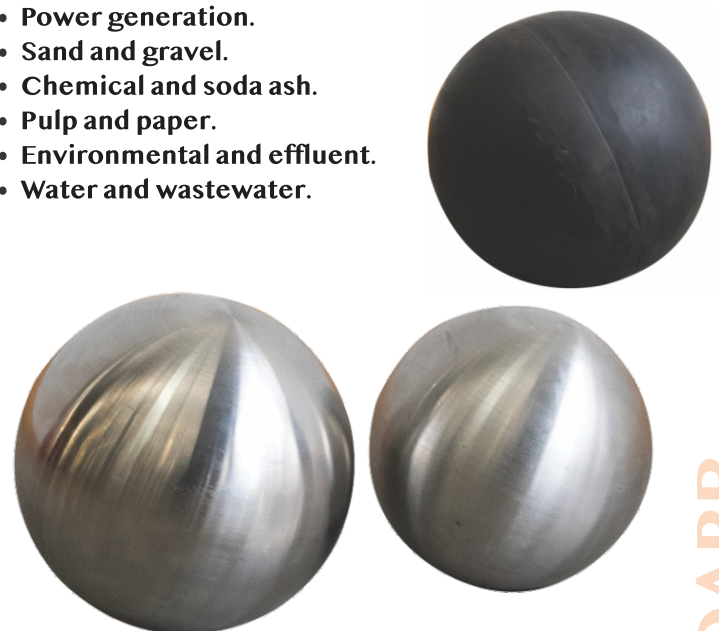
- Excellent wear resistance.
- High corrosive resistance.
- High tensile strength.
- Reduces process downtime.
- Long operating lifetime.
- Easy installation.
- Light weight.
- Replaceable.
- Trouble free operation.
- Tear abrasion and resistance to heat build-up.
- Chemical resistance.

## PRODUCT SPECIFICATION










|                              |  |
|------------------------------|--|
| <b>SIZE RANGE:</b>           | 50mm - 1000mm<br>Larger sizes on request.  |
| <b>PRESSURE RATING:</b>      | 0 to 100 Bar.  |
| <b>TYPES:</b>                | High pressure, floating special weight balls.                                      |
| <b>WORKING TEMPERATURES:</b> | -10°C to +120°C.   |
| <b>BALL MATERIALS:</b>       | Gum, EPDM, Butyl, Nylon, Neoprene, Stainless Steel, Teflon, HDPE, PTFE or Plastic. |
| <b>HARDNESS:</b>             | 75 TO 95A.   |
| <b>COLOUR:</b>               | Natural to all colours.  |
| <b>BALL INSERT:</b>          | Fabricated Steel or Cast Aluminium.  |

## APPLICATIONS

- Mining and mineral processing.
- Power generation.
- Sand and gravel.
- Chemical and soda ash.
- Pulp and paper.
- Environmental and effluent.
- Water and wastewater.



## GRADES AND APPLICATIONS:

| GRADE     | MATERIAL                                    |   | SERVICE  |
|-----------|---|---|--|
| NA<br>NAX | Natural Rubber<br>Reinforced Natural Rubber |    | Abrasive powders, slurries, water purification, inorganic soils, clean compressed air etc.<br>Temperature: -35°C to +80°C  |
| PU        | Polyurethane                                |    | Abrasive slurries<br>Temperature: 0°C to +120°C  |
| BY        | Butyl Rubber                                |    | Severe acid and Alkali conditions, Sulphuric acid (up to 80% concentration at ambient temperatures), hot water services and applications including sterilization<br>Temperature: -25°C to +120°C |
| NE        | Neoprene Rubber                             |   | Compressed air, most gases, animal and vegetable fatty oils and greases.<br>Temperature: -5°C to + 120°C   |
| HY        | Hypalon Rubber                              |  | Good acid-ozone resistance plus certain Chlorine services.<br>Temperature: -10°C to +100°C   |
| PB        | Polytetrafluoroethylene                     |  | Highest chemical resistance to all fluids, except Alkali metals, suitable to Chlorine.<br>Temperature: -35°C to +80°C  |
| JUM       | Natural Gum Rubber                          |  | Abrasive powders, slurries under harsh conditions. Capable of higher pressures.<br>Temperature: -35°C to +80°C   |
| VITON     | Viton Rubber                                |  | Abrasive powders, slurries under harsh conditions. Capable of higher pressures.<br>Temperature: -10°C to +200°C  |
| S/S       | Stainless Steel                             |  | Capable of higher pressures.<br>Temperature: -10°C to +200°C   |
| HPDE      | High-Density Poltethylene                   |   | Floating ball - Air release valve  |



# DUAL PUMP PROTECTION VALVE (DPV)

**DUAL's** Pump Protection Valve has been designed and manufactured to provide protection against excessive fluid temperature rise, within the pump housing. The low friction conditions can cause flashing, cavitation, vibration, bearing failure and damage to mechanical seals and pump housing.

The DPV valve is fitted to the suction side of the pump.

The valve can also be used to control or limit the pressure in a pipeline or vessel.



## FEATURES

- Cost effective.
- Uses no external power.
- Installation simplicity.
- Light weight body.
- Flushing port.
- Flanged connection.
- Long ball life due to ball rotation.
- Full port opening.
- No sticking.

## PRODUCT SPECIFICATION

|                           |  |
|---------------------------|--|
| <b>BODY:</b>              | Carbon Steel, SG Iron or Stainless Steel body type.  |
| <b>BALL:</b>              | Urethane or Stainless Steel.   |
| <b>SIZE RANGE:</b>        | 40mm, 50mm, 80mm & 100mm.  |
| <b>PRESSURE RATING:</b>   | 0 - 100 Bar  |
| <b>FLANGE CONNECTION:</b> | To suit pump and pump line.  |
| <b>VALVE INTERVALS:</b>   | 304 Stainless Steel body seat, Carbon Steel or Stainless Steel ball controller, tensioner and flushing port, helical spring coated spring. |
| <b>TEMPERATURE:</b>       | 80°C   |

## MINING APPLICATION



DPV

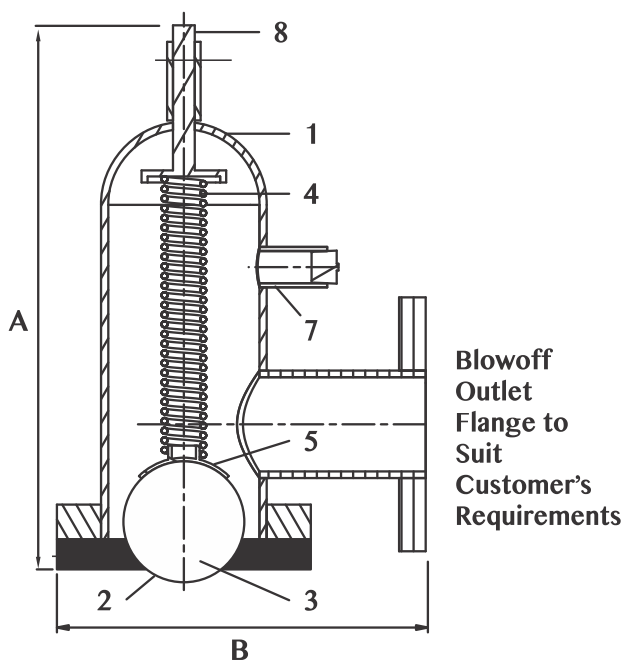
## OPERATION

The Pump Protection Valve uses the simplest design: a Urethane ball and a compressed helical spring to seal the valve. As the pressure in the pump builds up past the manufactures designed pressure rating, the ball is pushed upwards allowing the fluid or stream to discharge through the bypass line of the valve. As pressure decreases back to normal levels, the ball will reseal, hence protecting the pump against damage and an explosion causing bodily harm and even death.

## INSTALLATIONS

- Direct drive centrifugal pumps.
- Slurry pumps.
- Horizontal or vertical pumps.
- Fitted to suction side of the pump.
- Pipe lines.

## DIMENSIONS AND SPECIFICATIONS



Flange drilling to suit  
Customer's requirements

Blowoff  
Outlet  
Flange to  
Suit  
Customer's  
Requirements

## APPLICATIONS

- Mining and mineral processing.
- Power generation.
- Sand and gravel.
- Chemical and soda ash.
- Pulp and paper.
- Environmental and effluent.
- Water.



|   | PART            | DESCRIPTION  |
|---|-----------------|--|
| 1 | Body            | Carbon Steel / SG Iron/ Stainless Steel                                |
| 2 | Body Seat       | 304 Stainless Steel  |
| 3 | Ball            | Urethane/ Stainless Steel  |
| 4 | Spring          | Helical Spring Coated  |
| 5 | Ball Controller | Carbon Steel / Stainless Steel   |
| 6 | Paint           | Epoxy Powder coated/ Rilsan Lined or painted to customer specification |
| 7 | Flushing Port   | Carbon Steel / Stainless Steel   |
| 8 | Tensioner       | Carbon Steel / Stainless Steel   |

| VALVE SIZE (mm) | A   | B   | WEIGHT (kg) |
|-----------------|-----|-----|-------------|
| 40              | 430 | 270 | 20          |
| 50              | 430 | 270 | 20          |
| 80              | 430 | 270 | 300         |
| 100             | 430 | 270 | 400         |

Dimensions and weights are for guidance only - detailed dimension drawings available on request. All dimensions are in millimeters, unless stated.



# DUAL DIAPHRAGM CHECK VALVE (DDCV)

**DUAL's** Diaphragm Check Valve is drip-proof and may be mounted in any position. As there are no moving metal parts, operation is silent. For superior shock resistance, glow plates are Carbon Steel which can be coated for various applications. If required, valves can be manufactured in stainless steel. The incorporation of a natural rubber disc results in positive closure, the elimination of water hammer and negligible maintenance. The rubber disc does not stretch on opening, eliminating tearing. Diameter and port design of the flowplate allows for easy flow.



40 Bar Valve

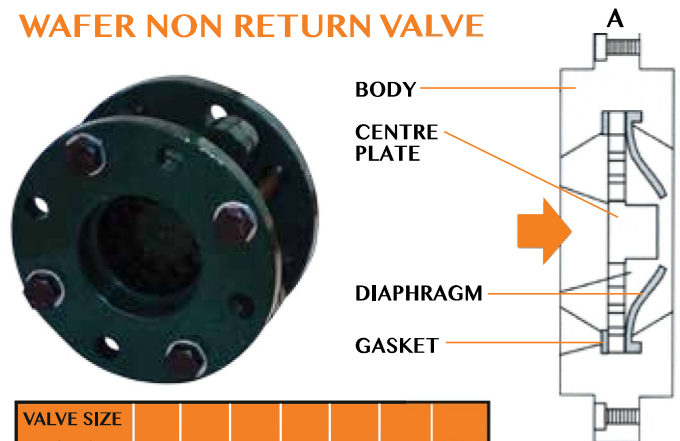
## FEATURES

- Long operating life.
- Perfect sealing.
- No moving mechanical parts.
- Will seal on solids/scale.
- Ease of installation.
- Quick response to reverse flow.
- Maintenance free.
- Light weight construction.
- Silent non-slam, reduces pipe hammer.
- Can be mounted in any position.
- Simple construction- one moving part.

## PRODUCT SPECIFICATION

- BODY SIZE:** 80mm - 400mm
- BODY:** Fabricated Carbon Steel or Stainless Steel
- DIAPHRAGM:** Natural Rubber; EPDM; Butyl
- FLOW RATE:** See pressure drop chart
- WORKING TEMPERATURES:** -20°C to 100°C
- VALVE TYPE:** Flanged, Wafer or Foot Valve
- PRESSURE RATING:** 0 bar to 40 bar, for higher pressures, please consult our factory
- FLANGE DRILLING:** BS4504, BS, ANSI and DIN
- MATERIAL CERTIFICATION:** Certified Chemical and Physical test reports can be supplied

## WAFER NON RETURN VALVE



| VALVE SIZE (mm) | 50  | 80  | 100 | 150 | 200 | 250 | 300 |
|-----------------|-----|-----|-----|-----|-----|-----|-----|
| A (mm)          | 43  | 65  | 64  | 76  | 89  | 114 | 114 |
| B (mm)          | 109 | 144 | 164 | 220 | 275 | 330 | 380 |
| WEIGHT (kg)     | 3   | 6   | 10  | 19  | 35  | 60  | 90  |

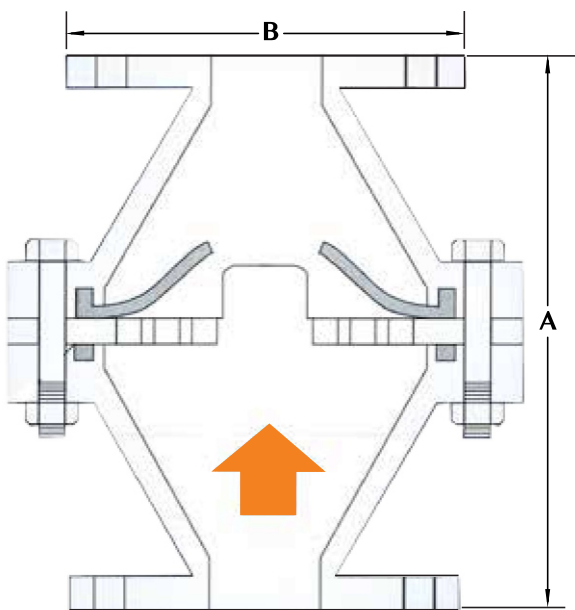
## APPLICATIONS

- Any fluid circuit or system.
- Vacuum systems.
- Pneumatic conveying system.
- Foot valve or pump suction.
- Diffuser valve for air agitation.
- Environmental and effluent.
- Water and waste water.

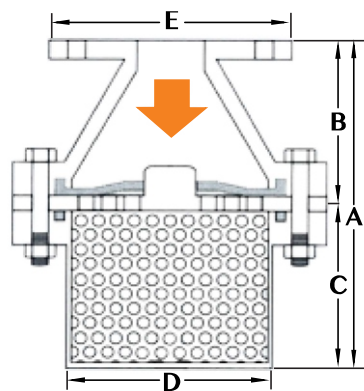
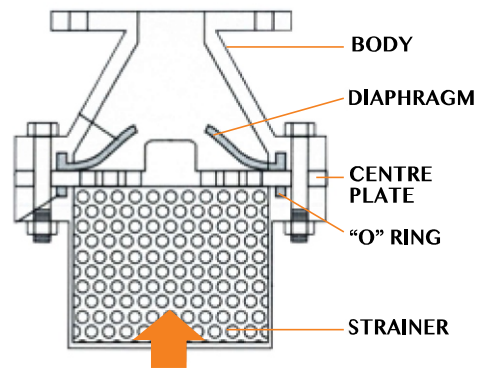
## DIMENSIONS AND WEIGHTS

| VALVE SIZE(mm) | F/F A | B   | WEIGHT (kg) |        |        |
|----------------|-------|-----|-------------|--------|--------|
|                |       |     | 16 BAR      | 25 BAR | 40 BAR |
| 50             | 182   | 224 | 20          | 30     | 50     |
| 80             | 235   | 280 | 31          | 40     | 60     |
| 100            | 280   | 290 | 43          | 50     | 80     |
| 150            | 398   | 306 | 790         | 90     | 110    |
| 200            | 475   | 326 | 110         | 120    | 150    |
| 250            | 525   | 352 | 153         | 170    | 190    |
| 300            | 620   | 440 | 209         | 220    | 240    |
| 350            | 720   | 470 | 280         | 300    | 320    |
| 400            | 790   | 500 | 410         | 450    | 480    |
| 450            | 900   | 584 | 466         | 480    | 500    |
| 500            | 1010  | 612 | 600         | 650    | 700    |
| 600            | 1360  | 820 | 875         | 900    | 950    |

Dimensions are for guidance only - detailed dimension drawings available on request. All dimensions are in millimeters, unless stated.



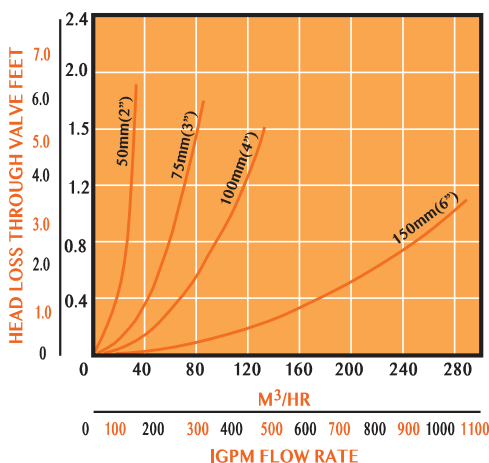
## FOOT VALVE



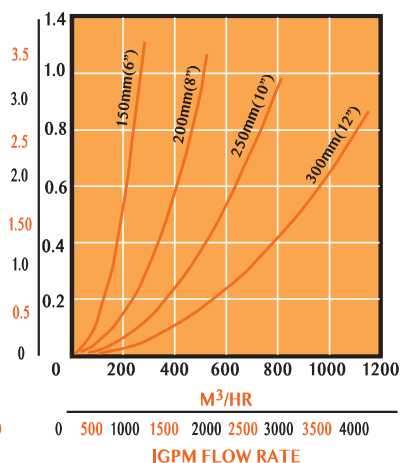
| VALVE SIZE (mm) | 50  | 80  | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500  | 600  |
|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|
| A (mm)          | 224 | 280 | 290 | 306 | 326 | 352 | 440 | 470 | 500 | 584 | 600  | 700  |
| B (mm)          | 118 | 152 | 157 | 169 | 179 | 192 | 236 | 251 | 270 | 312 | 350  | 450  |
| C (mm)          | 106 | 128 | 133 | 137 | 147 | 160 | 204 | 219 | 230 | 272 | 300  | 400  |
| D (mm)          | 110 | 150 | 180 | 300 | 360 | 385 | 495 | 560 | 660 | 760 | 800  | 900  |
| E (mm)          | 182 | 235 | 280 | 398 | 475 | 525 | 620 | 720 | 790 | 900 | 1000 | 1200 |
| WEIGHT (kg)     | 13  | 20  | 27  | 50  | 69  | 96  | 132 | 176 | 258 | 294 | 350  | 400  |

## PRESSURE DROP CHARACTERISTICS

Valves 150mm and under  
CURVE No. 1



Valves 150mm and over  
CURVE No. 2







# DUAL IN-LINE CHECK VALVE (DINCV)

**DUAL's** In-Line Check Valves are designed to handle abrasive slurries, sewage, sludge and other difficult materials. The In-Line Check Valve's fabric-reinforced elastomer sleeve provides thru-flow at minimum pressure drop across the valve at all times. Forward pressure opens the valve automatically and reverse pressure seals the valve. Wear and deterioration caused by continuous operation of abrasive slurries are minimized because of the durable inner rubber check valve. The valve can be mounted in any position. Operation is silent.

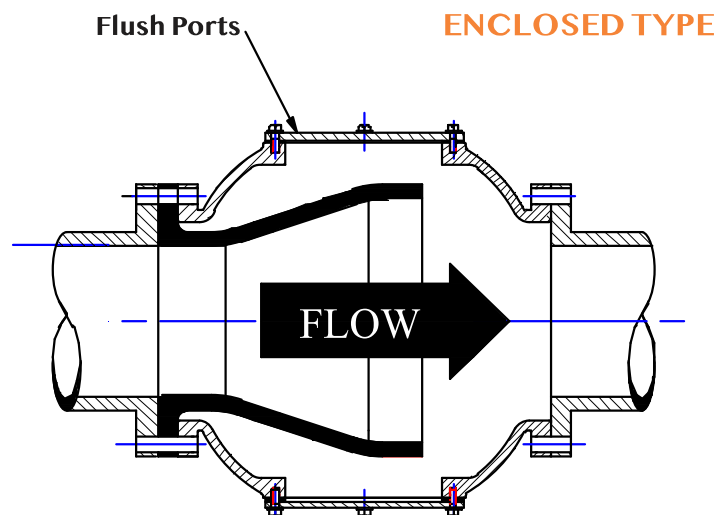


## FEATURES

- Long operating life.
- Perfect sealing.
- No mechanical parts.
- Will seal on solids/scale.
- Ease of installation.
- Quick response to reverse flow.
- Maintenance free.
- Light weight construction.
- Silent non-slam, reduces pipe hammer.
- Can be mounted in any position.
- Simple construction.
- Back-up flange available for open ended pipe applications.

## PRODUCT SPECIFICATION

|                                |  |
|--------------------------------|--|
| <b>BODY SIZE:</b>              | 50mm - 1000mm<br>(for larger sizes consult factory).           |
| <b>BODY:</b>                   | Fabricated Carbon Steel.                                       |
| <b>CHECK VALVE:</b>            | Natural Rubber, EPDM, Butyl, Viton or Neoprene.                |
| <b>DISC MATERIAL:</b>          | Stainless Steel, SG42 Cast Iron, Rubber and Urethane lined.    |
| <b>WORKING TEMPERATURE:</b>    | -20°C to 100°C   |
| <b>VALVE TYPE:</b>             | Enclosed or Slip In-Line.                                      |
| <b>PRESSURE RATING:</b>        | 0 to 40 Bar, for higher pressures, please consult our factory. |
| <b>FLANGE DRILLING:</b>        | BS 4505, BS, ANSI OR DIN.                                      |
| <b>MATERIAL CERTIFICATION:</b> | Certified Chemical and Physical test reports can be supplied.  |



DINCV

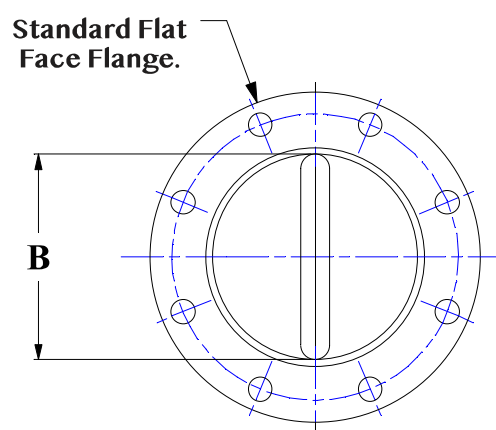
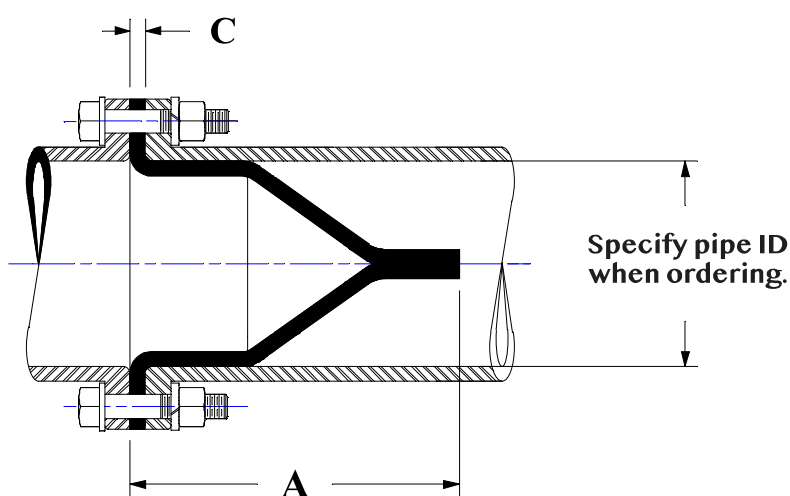
## APPLICATIONS

- Mining and mineral processing.
- Power generation.
- Sand and gravel.
- Chemical and soda ash.
- Pulp and paper.
- Environmental and effluent.
- Water and waste water.
- Sewage.

## MAINTENANCE FREE

The simple maintenance-free elastomer with a flanged connection eliminates the mechanical parts which can wear and jam in conventional check valves. For installation at the end of the pipeline, the valve can be ordered with optional back-up flanges.

## DIMENSIONS & SPECIFICATIONS



## FLANGED CHECK VALVE

| Size (mm) | A    | B   | C  | Weight (kg) |
|-----------|------|-----|----|-------------|
| 50        | 150  | 40  | 10 | 10          |
| 80        | 200  | 70  | 10 | 20          |
| 100       | 250  | 90  | 10 | 25          |
| 150       | 350  | 140 | 10 | 40          |
| 200       | 420  | 190 | 12 | 50          |
| 250       | 500  | 240 | 12 | 60          |
| 300       | 550  | 290 | 20 | 70          |
| 350       | 640  | 340 | 30 | 80          |
| 400       | 750  | 390 | 30 | 90          |
| 450       | 800  | 440 | 40 | 100         |
| 500       | 900  | 490 | 40 | 136         |
| 600       | 1000 | 590 | 40 | 181         |

Dimensions and weights are for guidance only - detailed dimension drawings available on request. All dimensions are in millimeters unless stated. For larger sizes contact Dual.





# DUAL DEWATERING IN LINE BALL CHECK VALVE (DDWV)

**DUAL's** Dewatering in line Ball Check valve should be isolated on the discharge side of the dewatering pump. The unique design of the valve allows free movement of the ball to open and close on reflux. Preventing the pump from turning in the wrong direction. The valve also protects the pipeline from siphoning when the pump is not in operation. There is no pressure drop across the valve.

- Silent, non-slamming.
- Fabricated valves face-to-face can be altered to suit different types of valve face-to-face dimensions.
- Simple construction - one moving part.

## PRODUCT SPECIFICATION

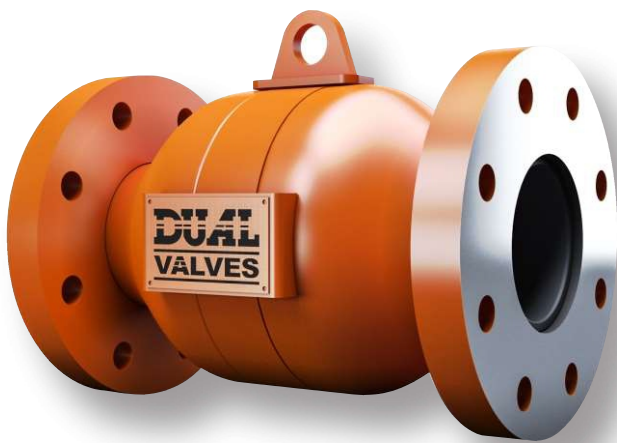
**SIZE RANGE:** 80mm - 500mm

**PRESSURE RATING:** 10 bar - 60 bar.

**TYPE:** Ball Non-return valve.

**OPERATING TEMPERATURE:** -10°C to +80°C

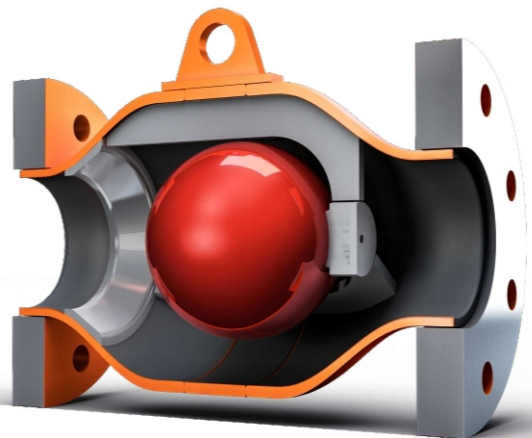
**MEDIUM:** Water.  
Mine water underground.  
Heavy, thick and viscous liquid.



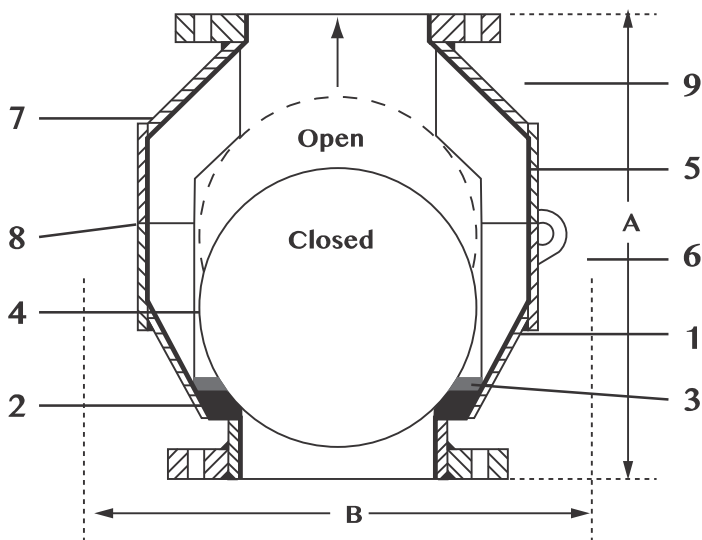
## FEATURES

The Flo-Stop is the only proven maintenance and trouble-free dewatering valve in the world with the following features:

- Perfect sealing.
- Low head losses.
- Non clogging, self cleaning ball.
- Ease of installation.
- can be mounted in any position.
- Prevents siphoning of valve.
- Prevents pump from rotating in the opposite direction.
- No scale build up on seat or ball.
- No pipe hammer.
- Maintenance free.
- Full bore.



## OUTLINE DIMENSIONS & SPECIFICATION



| PART | DESCRIPTION   |
|------|---|
| 1    | Body<br>Carbon Steel/Cast Steel/Stainless Steel             |
| 2    | Body Seat<br>AR Steel , S.S., Urethane or Rubber            |
| 3    | Secondary Seat<br>Linatex Rubber (Skirt)                    |
| 4    | Ball<br>Stainless Steel, Urethane or Rubber                 |
| 5    | Valve Body Lining<br>Rubber, Urethane or Ceramic (Optional) |
| 6    | Bolts and Nuts<br>Cadmium Plated Steel / High Tensile       |
| 7    | Paint<br>Epoxy Powder coated or painted to custom spec.     |
| 8    | Body Gasket<br>'O' Ring                                     |
| 9    | Lifting Lug<br>Carbon Steel/Cast Steel/ Stainless Steel     |

## APPLICATIONS

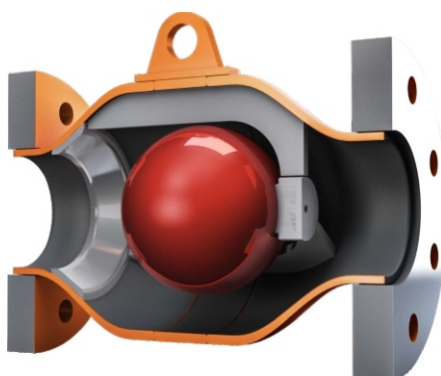
- Mining and mineral processing.
- Power generation.
- Sand and gravel.
- Chemical and soda ash.
- Pulp and paper.
- Environmental and effluent.
- water.
- Pump discharge.

| VALVE SIZE (mm) | A    | B    | WEIGHT (kg) |
|-----------------|------|------|-------------|
| 80              | 305  | 320  | 20          |
| 100             | 320  | 390  | 30          |
| 150             | 420  | 490  | 50          |
| 200             | 500  | 690  | 80          |
| 250             | 560  | 790  | 100         |
| 300             | 585  | 850  | 120         |
| 350             | 605  | 900  | 160         |
| 400             | 700  | 950  | 210         |
| 450             | 780  | 1030 | 350         |
| 500             | 1050 | 1030 | 500         |

Dimensions and weights are for guidance only - detailed dimension drawings available on request. All dimensions are in millimeters, unless stated.

## INSTALLATION:

### Horizontal Installation

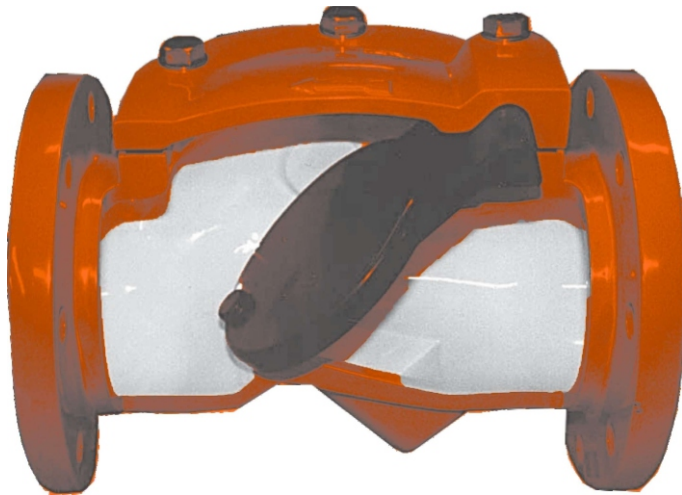


### Vertical Installation



# DUAL FLAPPER FLEX SWING CHECK VALVE (DFFSCV)

**DUAL's** Flapper Flex Swing Check Valves gate is designed to swing out of the line of flow at maximum capacity. The Seat is offset from horizontal and is hinge positioned so that the gravitational action causes the valve to close in proportion to the reduction in flow. The valve can be installed either vertically or horizontally.

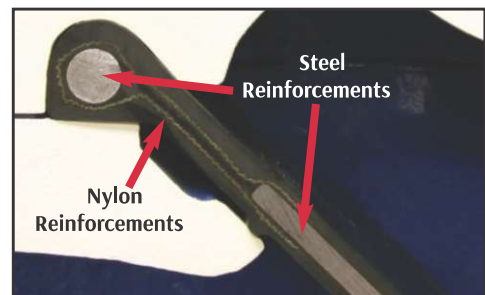


## FEATURES

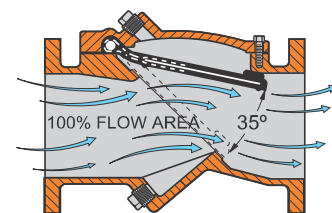
- Non-Clog Design.
- Rubber lined body and seat.
- Non clogging, self cleaning ball.
- Reinforced disc inside the flapper.
- Can be mounted in Horizontal and Vertical.
- Non-Slam closing action - Short 45° stroke.
- Perfect sealing.
- Low head losses.
- Removable bonnet for cleaning or replacing of the flapper check disc.
- Maintenance free.
- Full bore.
- Silent closure, reduces pipe hammer.
- Simple construction - one moving part.

## PRODUCT SPECIFICATION

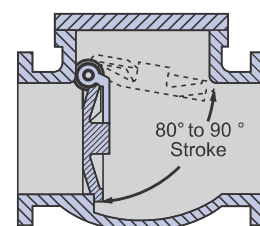
- SIZE RANGE:** 80mm - 600mm  
(For larger sizes contact factory)
- VALVE BODY:** Cast SG Iron, Aluminium or Stainless Steel.
- OPERATING TEMPERATURE:** -10°C to +80°C
- FLAPPER DISC MATERIAL:** Steel construction, coated with Viton, Natural Rubber, Hypalon, EPDM or Urethane.
- VALVE BODY LINING:** Natural Black Rubber.



Reinforced Flapper Disc

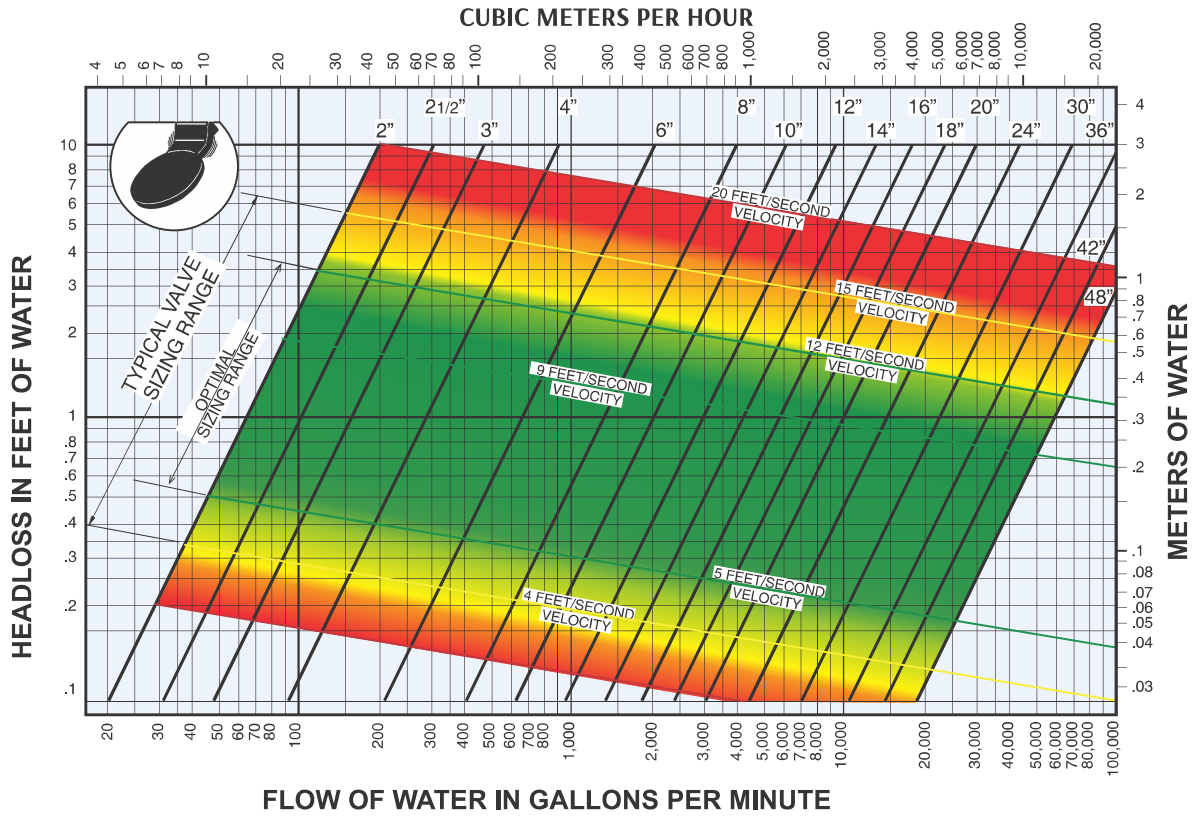


Flapper-Flex Geometry

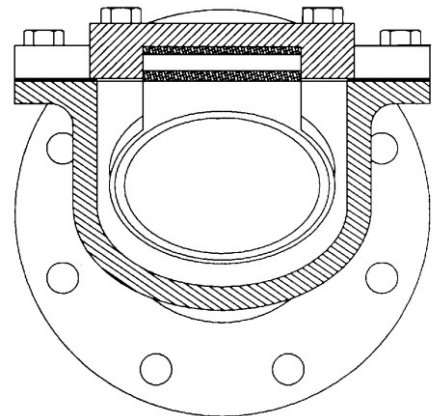
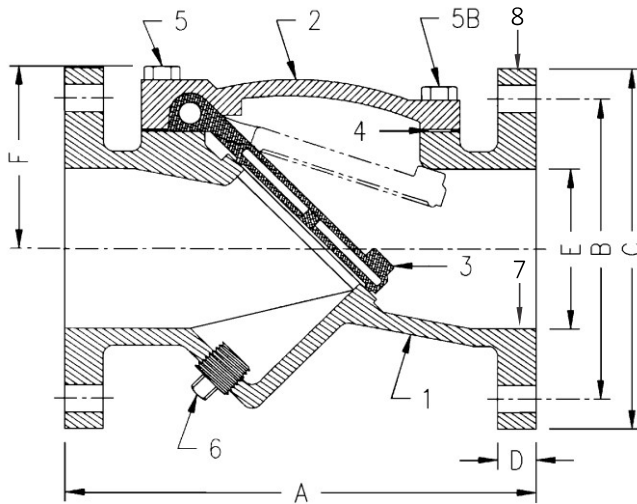


Conventional Geometry

# HEADLOSS CHART



## OUTLINE DIMENSIONS & SPECIFICATION



| PART | DESCRIPTION                         |
|------|-------------------------------------|
| 1    | Body/Cover Cast SG Iron             |
| 2    | Cover Cast SG Iron                  |
| 3    | Disc/Flapper Steel, Rubber & Nylon  |
| 4    | Body Gasket Rubber O ring           |
| 5    | Bolts and Nuts Cadmium plates steel |
| 6    | Plug Cast SG Iron                   |
| 7    | Body Lining Natural Black Rubber    |
| 8    | Paint Fusion bonded Epoxy           |

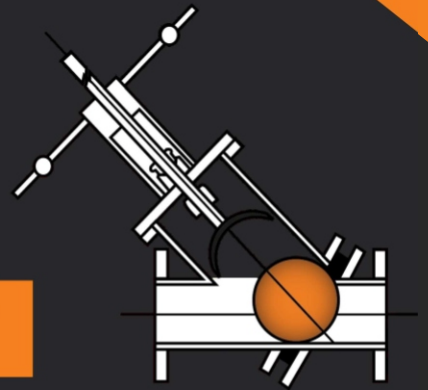
| Valve Size mm | F/F  | A   | B   | C  | D   | E   | F  | No of Bolts | Weight KG |
|---------------|------|-----|-----|----|-----|-----|----|-------------|-----------|
| 50            | 200  | 116 | 150 | 20 | 50  | 82  | 4  | 12          |           |
| 80            | 230  | 150 | 183 | 22 | 80  | 82  | 4  | 17          |           |
| 100           | 275  | 183 | 220 | 23 | 100 | 113 | 4  | 30          |           |
| 150           | 367  | 232 | 269 | 25 | 150 | 144 | 8  | 55          |           |
| 200           | 477  | 286 | 330 | 27 | 200 | 186 | 8  | 99          |           |
| 250           | 600  | 349 | 400 | 29 | 250 | 242 | 8  | 163         |           |
| 300           | 700  | 416 | 465 | 30 | 300 | 289 | 12 | 228         |           |
| 350           | 780  | 440 | 514 | 33 | 350 | 339 | 12 | 308         |           |
| 400           | 800  | 539 | 575 | 35 | 400 | 390 | 12 | 445         |           |
| 450           | 900  | 557 | 612 | 38 | 450 | 419 | 16 | 601         |           |
| 500           | 1000 | 612 | 673 | 41 | 500 | 468 | 20 | 748         |           |
| 600           | 1200 | 722 | 784 | 46 | 600 | 557 | 20 | 963         |           |

Dimensions and weights are for guidance only. Detailed dimension drawings are available on request. All dimensions are in millimeters, unless stated otherwise.





# DUAL



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