



Products and Applications

ONE STOP SLURRY SOLUTION

www.dualvalves.com



About Us

We have over 35 years experience in valves

- We have been manufacturing valves for over 35 years.
- We are the market leader in abrasion resistant valves.
- Our commitment to providing a total solution to our valued customers has led us to introduce new **abrasion resistant products**, including our **Pinch valves and Patented Dual Pivot Gate Valves**.
- We produce valves for mining, sands, steel, power, chemical and paper industries world wide and has exported valves to more then **50 countries**.



Countries Exported To

- Germany
- Canada
- Russia
- Iran
- USA
- Chile
- Peru
- Brazil
- Ghana
- Zambia
- Namibia
- Zimbabwe
- Botswana
- Mali
- Madagascar
- Kenya
- DRC
- Tanzania
- Mozambique
- Dubai
- Australia
- Laos
- Mongolia
- China
- Turkey
- Poland
- Argentina



History of Valves

- 1900 – 1950 – Valve design and requirements driven by steam and later the invention of high octane fuel.
- 1950 – 2000 – Advancing digital technology, emerging nuclear market drives Smart Valves and new designs
- 2000 onwards valves have taken a huge leap in online control and longer lasting designs



What is a valve?

A device that regulates the flow of gases, liquids or loose materials through an aperture, such as a pipe, by opening and closing or obstructing a port, pipeline or passageway.

How do valves regulate flow?

- Isolates Flow: on/off applications
- Controls Flow: volume functions
- Checks flow: directional functions



Valve Functions in a Pipeline

- **Isolation Valve** – Designed for use in the open or closed position i.e. On/Off
- **Regulating Valve** – Designed to restrict flow normally operates in the mid-position.
- **Control Valve** – Regulating a flow or process pressure. The position is constantly changing to achieve a certain objective.
- **Safety Valve** – Opens automatically without any assistance other than the force of the line product to prevent a pre-determined safe pressure being exceeded and close when normal operating pressure is achieved.
- **Check Valve** – Automatically opens and closes to allow flow in one direction only. (Non-return/Reflux Valves)
- **Diverting/Mixing** – Also known as multi port or three way valves

Functions

Valves are categorized by how they move and function

Linear



Movement of the plug is perpendicular to the seat

Rotary



Movement of the plug is 90Deg to the seat

Functions

Valves are categorized by how they move and function



Pinch



Diaphragm



Wedge Gate



Pivot Gate



Ball



Butterfly



Plug



RSV Valve



Our Production Range

Pinch Valves



DPVE (Dual Pinch Valve Enclosed)

The Dual Enclosed Pinch Valve consists of a tough, but flexible full bore sleeve, which forms part of the pipeline. The valve is closed mechanically via the movement of the Pinch bars located on opposite sides of the sleeve.

The Core of the Dual Pinch Valve is the sleeve, which is reinforced with high-strength fabric.

The Valve is well suited for on/off applications as well as throttling control applications where scale build up is a problem.



DPVO (Dual Pinch Valve Open Type)

The Dual Enclosed Pinch Valve consists of a tough, but flexible full bore sleeve, which forms part of the pipeline. The valve is closed mechanically via the movement of the Pinch bars located on opposite sides of the sleeve.

The Core of the Dual Pinch Valve is the sleeve, which is reinforced with high-strength fabric.

The Valve is well suited for on/off applications as well as throttling control applications where scale build up is a problem.



DSPV (Dual Single Pinch Valve)

The Dual Enclosed Pinch Valve consists of a tough, but flexible full bore sleeve, which forms part of the pipeline. The valve is closed mechanically via the movement of a pinch gate located above the sleeve.

The Core of the Dual Pinch Valve is the sleeve, which is reinforced with high-strength fabric.

The Valve is well suited for on/off applications as well as throttling control applications where scale build up is a problem.



DSTPV (Dual Straight Through Pinch Valve)

The Dual Enclosed Pinch Valve consists of a tough, but flexible full bore sleeve, which forms part of the pipeline. The valve is closed mechanically via the movement of a pinch gate located above the sleeve.

The Core of the Dual Pinch Valve is the sleeve, which is reinforced with high-strength fabric.

The Valve is well suited for on/off applications as well as throttling control applications where scale build up is a problem.



DPPV (Dual Pneumatic Pinch Valve)

The Dual Enclosed Pinch Valve consists of a tough, but flexible full bore sleeve, in an enclosed body.

Actuated by means of Air or hydraulic fluid, the valve body acts as the actuator.

When the media is introduced, the sleeve is compressed forming a complete and affective seal.



DPPV-L (Dual Pneumatic Pinch Valve Large)

The Dual Enclosed Pinch Valve consists of a tough, but flexible full bore sleeve, in an enclosed body.

Actuated by means of Air or hydraulic fluid, the valve body acts as the actuator.

When the media is introduced, the sleeve is compressed forming a complete and affective seal.





Our Production Range

Non-Return Check Valves



DFV (Dual Flow Valve)

The Dual Valve operates on the discharge side of the pump. As the flow through the pipeline starts and stops, the ball automatically rises or falls, opening and closing the valve.

The handwheel is there to lock the ball into position. The handwheel can be used to isolate, but with back pressure.

The Dual Valve can work in both the horizontal and vertical position.



DFFV (Dual Free Flow Valve)

The Dual Valve operates on the discharge side of the pump. As the flow through the pipeline starts and stops, the ball automatically rises or falls, opening and closing the valve.

This occurs without noticeable shock or hammer, regardless of line pressure or the speed of closure.



DSFFV (Dual Slimline Free Flow Valve)

The Dual Slimline Valves heart is the reinforced Urethane or Rubber ball. The Unique design of the valves allows free movement of the ball.

The Ball lifts completely out of the flow without 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 drop-less sealing.



DSSSCV (Dual Slurry Swing Check Valve)

The Dual Slurry Swing check valve operates on the discharge side of the pump as the flow through pipeline starts or stops.

The disc automatically rises or falls, opening or 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 application in liquid-solid and gas-solid pneumatic conveying services where long valve and low maintenance are desired.



DSCV (Dual Swing Check Valve)

The Dual Swing Check valves body is designed to swing out of line of the 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 valve can operated both horizontally and vertically.

As an optional extra, an extended hinge pin permits the fitting of an outside lever and weight to effect closure immediately.



DSFV (Dual Flo-Stop Valve)

The Dual 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 positively and locates in the stainless-steel seat due to its own weight and back pressure of the medium.

The higher the pressure the better the secondary rubber seat will seal the valve.



DDV (Dual DASHLEY Valve)

The Dual DASHLEY Valve operates on the discharge side of the 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.



DDNRV (Dual Double Non-Return Valve)

The Dual DASHLEY Valve operates on the discharge side of the 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.



DPV (Dual Pump Protection Valve)

The Dual 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.



DDCV (Dual Diaphragm Check Valve)

The Dual 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.

The incorporation of a natural rubber disc results in positive closure, thus elimination of water hammer and negligible maintenance.



DICV (Dual Inline Check Valve)

The Dual In-Line check valve is designed to handle abrasive slurries, sewage, sludge and other difficult materials.

The In-Line check valves 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.



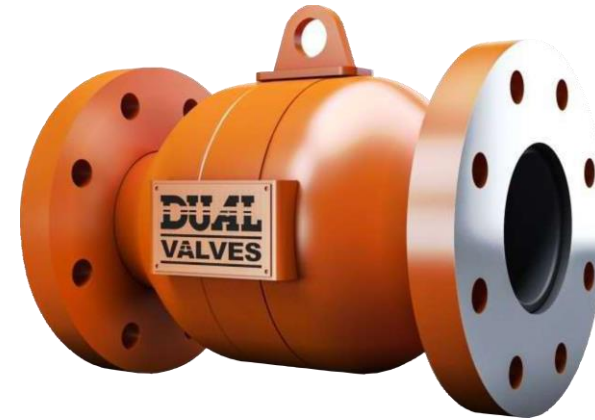
DDWV (Dual Dewatering Inline Check Valve)

Duals 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.



DFFCV (Dual Flapper Flex Swing Check Valve)

The Dual Flapper Flex Swing Check Valve 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 on flow reduction.

The valve be installed in both horizontal and vertical positions.





Our Production Range

Gate Valves



DPWGV (Dual Pivot Wafer Gate Valve)

Dual's Pivot Wafer Gate Valve is built with a steel body and features a heavy-duty stainless-steel gate. Removable sleeves on either side of the gate provides a bi-directional bubble tight seal, with no metal parts in contact with the flowing slurry, when open.

When the Dual Pivot Wafer Gate Valve closes, the gate valve moves through the Dual Ring Sleeves from the side, eliminating the damage caused to the sleeves by the traditional Knife Gate Blade, pushing from the top.



DPFGV (Dual Pivot Flanged Gate Valve)

Dual's Pivot Flanged Gate Valve is built with a steel body and features a heavy-duty Stainless-Steel gate. Removable sleeves on either side of the gate provide a bi-directional bubble tight seal, with no metal parts in contact with the slurry.

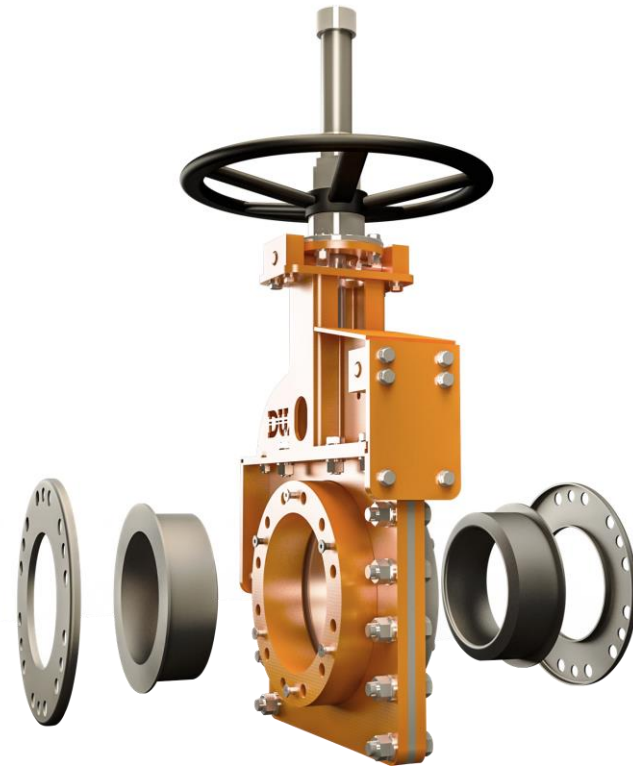
The Dual Pivot gate valve provides faster operation and occupies less vertical space within the process pipeline.



DPHPGV (Dual Pivot High Pressure Gate Valve)

Dual's Pivot High Pressure Gate Valve is built with a Steel body and features a heavy-duty Stainless Steel gate. Removable sleeves on either side of the gate provide a bi-directional bubble tight seal, with no metal parts in contact with the flowing slurry in open position.

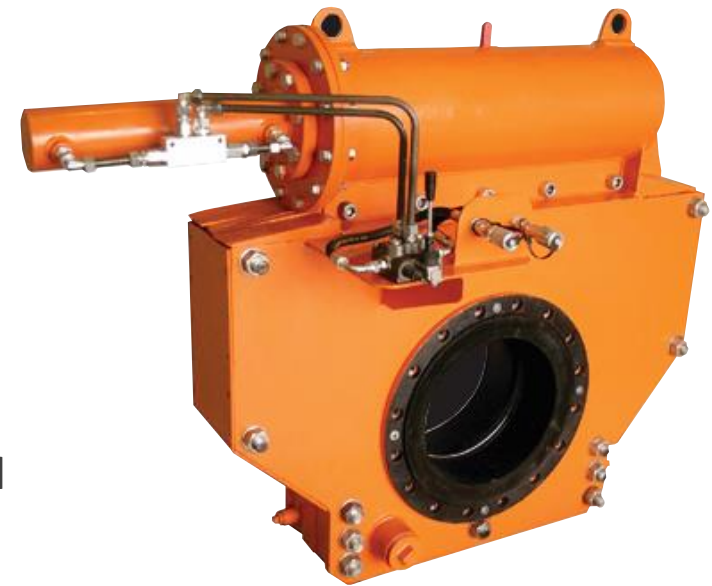
As the Dual Pivot High Pressure Gate Valve rotates on the pivot point and the gate moves through the Dual Ring sleeves from the side eliminating the damage caused to the sleeves by the traditional Gate Blade.



DCFPG (Dual Compact Flanged Ported Gate Valve)

Dual's Compact Flanged Ported Gate Valve has a Stainless Steel gate machined with a round orifice hole, in line with seat ID when the valve is in the open position. When the valve is closed the ported gate will move sideways sealing the valve. Due to the seal being constantly engaged against the gate, stroking the valve closed, forces the gate progressively between the two matching sleeve ends until it reaches the fully closed position - at which point the sleeves each butt up tightly against either side of the gate, effectively sealing and completely containing the line pressure.

Build up of material to prevent full gate travel is eliminated as there are no areas for such material to accumulate. Any material discharged between the sleeves during stroking open or closed is collected within the containment area of the valve body and drained via the multiple flushing ports in the body. The Ported Gate Valve can be used as a man-safe line blanking valve.



DSGV (Dual Slide Gate Valve)

Dual's Slide Gate Valve is built with a steel body and features a heavy duty steel blade, ideal for handling flow in a bulk material handling system.

The outlet port opening is larger than the inlet, therefore ensuring that the material does not stop the gate from closing.



DOPGV (Dual O-Port Gate Valve)

Dual's O-Port Gate Valve has a Stainless-Steel gate machined with a round orifice port, in line with the seat ID when the is on the open position.

When the valve is closed the ported gate will move downwards sealing the port.

Due to the sealing being constantly engaged against the gate, stroking the valve closed forces the gate progressively between the two matching sleeve ends until it reaches the fully closed position, at which point the sleeves each butt up tightly against either side of the gate.



DRDV (Dual Rotary Disc Gate Valve)

Dual's Rotary Disc Valve is a unique rotating gate valve designed specifically for heavy abrasive and corrosive slurries.

The patented design allows the valve to cycle in heavy slurries without sticking.



SABS

Design Institute
AWARDS 2000



DRDSV (Dual Rotary Disc Sleeve Gate Valve)

Dual's Rotary Disc Sleeve Valve is a unique rotating gate valve designed specifically for heavy abrasive and corrosive slurries.

The Patented design allows the valve to cycle in heavy slurries without jamming and has a ring seat sleeve that can be replaced when worn.

The valve can be used to control and throttle the flow. Zero discharge to atmosphere.



DRDWSV (Dual Rotary Disc Wafer Sleeve Gate Valve)

Dual's Rotary Disc Wafer Sleeve Valve is a unique rotating gate valve designed specifically for heavy abrasive and corrosive slurries.

The Patented design allows the valve to cycle in heavy slurries without jamming and has a ring seat sleeve that can be replaced when worn.

The valve can be used to control and throttle the flow. There is zero discharge to the atmosphere.



DDGV (Dual Diverter Gate Valve)

Dual's Diverter Gate Valve has a Stainless-Steel gate machined with a round orifice port, in line with seat ID when the valve is in the open position.

When the valve is closed the ported gate will move sideways sealing the one port and opening the other. Due to the seal being constantly engaged against the gate, stroking the valve closed forces the gate progressively between the two matching sleeve ends until it reaches the fully closed position - at which point the sleeves each butt up tightly against either side of the gate, effectively sealing and completely containing the line pressure. Build up of material to prevent full gate travel is eliminated as there are no areas for such material to accumulate. Any material discharged between the sleeves during stroking open or closed is collected within the containment area of the valve body and drained via the multiple flushing ports in the body. The Ported Gate Valve can be used as a man-safe line blanking valve.



DWTDV (Dual Weir Type Diaphragm Valve)

Dual manufactures a full range of diaphragm valves. Both WO (Weir Orifice) and SO (Straight Orifice) type.

The SO valve can safely handle a line pressure of up to 1600kPa (16 Bar) and they are tested to 2500kPa (25 Bar).

All bodies and Bonnets are made from high grade Sg42 Cast Iron and are suitable for lining and various rubber, urethane, ceramic, Halar and Fluoropolymers like PTFE and ECTFE.



DSTPV (Dual Straight Through Pinch Valve)

Dual's Straight-Through Pinch Valve consists of a tough, but flexible full bore sleeve, which forms part of the pipeline. The valve is closed mechanically via movement of a pinch valve gate located above the sleeve.

The core of the Dual Straight-Through Pinch Valve is the sleeve. The valves are well suited for on/off and throttling control applications involving slurries, powders, liquids, granulated materials and applications where scale build is a problem.





Our Production Range

Air Release Valves



DSARV (Dual Slurry Air Release Valve)

Dual's Air Vacuum Release and Vacuum Breaker's function is to automatically exhaust large volumes of air from the system when it is being filled and to allow air to re-enter the pipeline when being emptied. The orifice size is generally the same size as the valve inlet and outlet.

In operation, when the system is filled, the fluid lifts the ball until it closes the orifice. The orifice will remain closed until the system is emptied. Air may enter the valve and displace the fluid while the system is in operation, however, internal pressure will continue to hold the valve closed. The valve will not re-open until the system pressure drops to near atmospheric pressure and the ball is no longer buoyant.



DARV (Dual Air Release Valve)



Dual's Air Release Valve offers a tri-functional air valve that not only breaks vacuum, but also reduces surge on pipeline filling and releases air under operating conditions.

Dual's vacuum break valves should be located on the apex of a pipeline to allow air to enter if the pipe ruptures or a scour valve is opened.





Thank You.

-  Dual Products International
-  011 422 4326 / 7
-  sales@dualvalves.com
-  www.dualvalves.com

