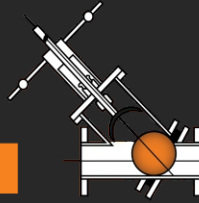




# DUAL



ONE STOP SLURRY SOLUTION



## GATE VALVES





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# DUAL PIVOT WAFER GATE VALVE (DPWGV)

**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 to the sleeves.



## FEATURES

- 360 PSI / 25 Bar.
- Double seat design for heavy duty slurry service.
- Ease of replacement of seat liners.
- When open, the gate is fully pivoted out of the slurry flow.
- No metal parts in contact with the flowing slurry.
- Bubble tight shutoff.
- No clogged bonnet to impede flow.
- External epoxy coated.
- Easily adapted to suit most actuators.
- Low maintenance requirements.
- Suitable for wet or dry service.
- Bi-directional flow.
- Gate guard.
- Rotary style movement of the gate.
- No gland to maintain.

- Wide range of elastomers available.
- Light weight for easier handling.
- No seat cavity where solids can collect and prevent full gate closure.
- Suitable for wet or dry service.
- Flush ports.
- Dual sleeve isolation.
- Face to face MSS-SP-81.

## PRODUCT SPECIFICATION

<b>BODY:</b>	Wafer pattern Cast SG Iron, Fabricated Steel, Epoxy Coated.
<b>ELASTOMER SLEEVES:</b>	Gum Rubber (standard), Nitrile, Vitron, EPDM, Chlorobutyl or Urethane.
<b>PRESSURE RATING:</b>	DN 50 to DN 600 rated to 360 PSI (25 Bar). DN 650 to DN 1500 rated to 150 PSI (10 Bar).
<b>GATE MATERIAL:</b>	316 Stainless Steel standard - 316L, 317L, 17-4PH, Alloy 20, SAF 2205 S/S with optional wear coatings.
<b>DRILLING PATTERNS:</b>	DN 50 to DN 1500 drilled and tapped ASME B16.5, DIN, SABS & BS Optional.
<b>MATERIAL CERTIFICATION:</b>	Certified chemical and physical test reports can be supplied.



DPWGV

## STANDARD FEATURES - VALVE BODY

- Protective bellows.
- Limit switch brackets.
- Open/closed indicator.
- Lubrication ports on both sides of the valve body.
- Splash guard with flush ports.
- Open/closed lockout.
- Adaptable tower design can be field modified to take air cylinder, gearbox or hydraulic actuators.

## 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.
- Water and waste water.

## DIMENSIONS AND WEIGHTS

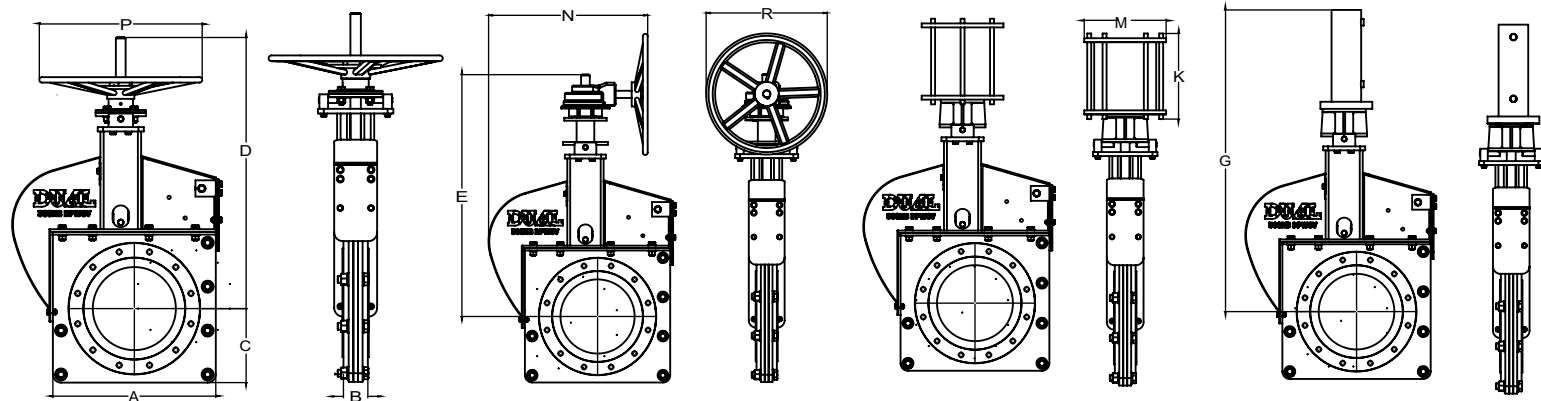
## HOW THE RUBBER SLEEVES WORK

Matching rubber ring sleeves with stiffener rings are placed in the valve housing to seal against the gate when the valve is closed and seal against each other when the valve is open. This tight seal contains the high internal line pressure. Double seated design provides bi-directional flow and shut off.



## ACCESSORIES

- Limit switches.
- PTFE coating of gate.
- Various gate materials optional.
- Gate safety guards.



VALVE SIZE	AØ	F/F		HW D	BG E	AC F	HYC G	HØ	JØ	K	HW M	HW/BG ØN	VALVE WEIGHT (kg)			
		B	C										HW	BG	AC	HYC
80	191	175	320	481	544	545	624	62	72	403	176	300	30	58	39	58
100	229	175	340	553	593	609	702	85	99	429	232	300	40	65	60	65
150	280	178	405	712	809	679	864	137	148	455	262	500	50	80	85	85
200	343	185	460	836	379	890	974	175	197	483	340	500	65	97	916	96
250	407	226	515	985	1083	1029	1124	231	249	595	430	500	90	125	141	100
300	483	258	565	1206	1206	1156	1350	274	293	648	430	600	170	194	304	165
350	536	258	625	1355	1355	1358	1469	318	337	671	430	600	200	204	327	188
400	591	280	685	1453	1453	1529	1628	356	375	703	480	700	240	260	512	250
450	639	312	735	1693	1693	1718	1747	378	426	771	480	700	260	397	604	431
500	693	359	790	1828	1828	1867	1891	421	470	795	600	700	330	479	763	545
600	813	372	900	2190	2190	2236	2277	539	585	883	600	700	480	490	993	636
650	870	373	950	-	-	-	2495	597	636	-	600	-	-	-	-	773
750	1010	397	1000	-	-	-	2750	680	737	-	600	-	-	-	-	976
900	1180	469	1235	-	-	-	3320	810	890	-	600	-	-	-	-	1588
1000	1360	534	1350	-	-	-	4400	972	1041	-	700	-	-	-	-	2359
1200	1520	534	1575	-	-	-	4500	1120	1315	-	700	-	-	-	-	3162
1400	1720	534	1800	-	-	-	4655	1244	1525	-	700	-	-	-	-	3755
1500	1855	534	2000	-	-	-	4780	1455	1525	-	800	-	-	-	-	4500

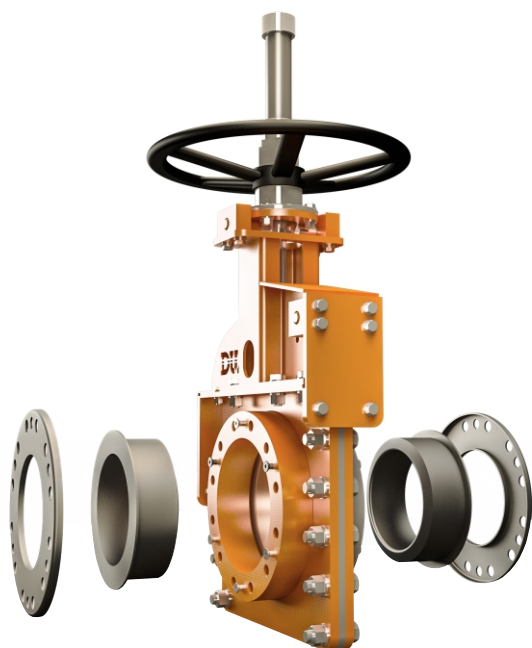
Contact Dual Valves for larger sizes. Dimensions are for guidance only - detailed dimension drawings available on request. All dimensions are in millimeters, unless stated.



# DUAL PIVOT FLANGED GATE VALVE (DPFGV)

**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.

- Packingless design.
- Rotary style movement of the gate.
- Flush ports.
- Light weight for easier handling.
- No seat cavity where solids can collect and prevent full gate closure.



## FEATURES

- 360 PSI / 25 Bar (Higher pressures on request).
- Double seat design for heavy duty slurry service.
- Ease of replacement of sleeves.
- When open, the gate is fully pivoted out of the slurry flow.
- Gate guard.
- Bubble tight shutoff, zero downstream leakage.
- No clogged bonnet to impede flow.
- External epoxy coated.
- Easily adapted to suit most actuators.
- Low maintenance requirements.
- Suitable for wet or dry service.
- Bi-directional flow.

## PRODUCT SPECIFICATION

<b>BODY:</b>	Flanged Pattern, Fabricated Steel, Epoxy coated.
<b>ELASTOMER SLEEVES:</b>	Gum Rubber (standard), Nitrile, Vitron, EPDM, Chlorobutyl or Urethane.
<b>RETAINER FLANGES:</b>	Rubber covered Carbon Steel flanges (80mm through to 1500mm).
<b>PRESSURE RATING:</b>	DN 80 to DN 600 rated to 360 PSI / (25 Bar) using 316SS Blade, DN 650 to DN 1500- 150 PSI (10 Bar).
<b>GATE MATERIAL:</b>	316 Stainless Steel standard - 316L, 317L, 17-4PH, Alloy 20, SAF 2205 S/S with optional wear coatings.
<b>DRILLING PATTERNS:</b>	DN 80 to DN 250 drilled and tapped ASME B16.5, BS, DIN, SABS. DN 300 to DN 1500 flanges are slotted.
<b>MATERIAL CERTIFICATION:</b>	Certified chemical and physical test reports can be supplied.



DPFGV



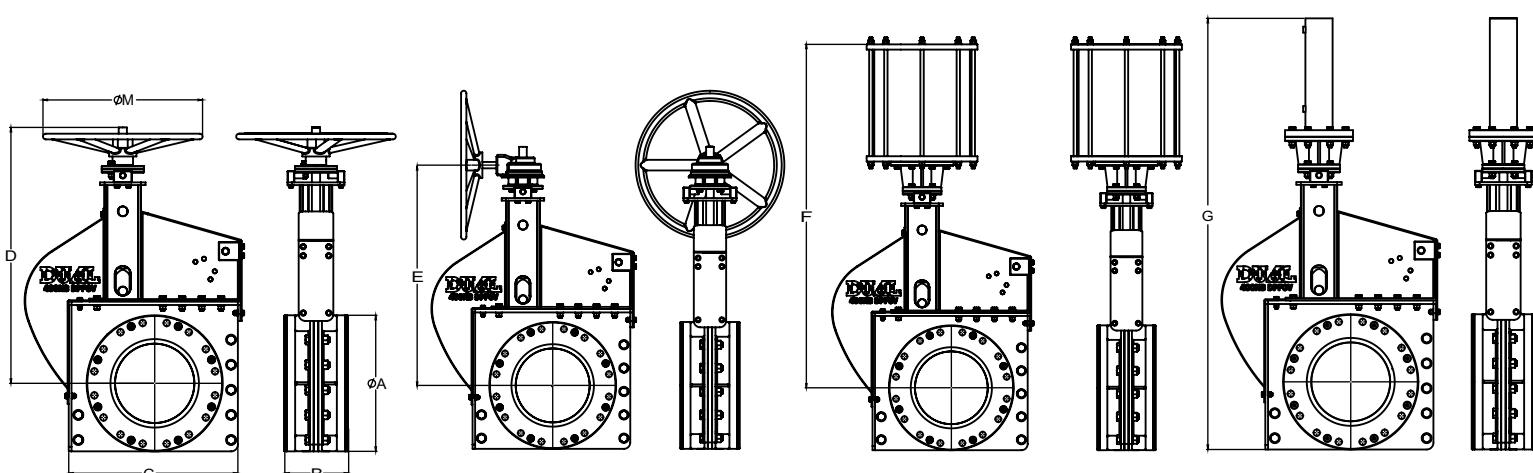
## STANDARD FEATURES - VALVE BODY

- Splash guard with flush ports.
- Protective bellows.
- Open/closed lock out.
- Lubrication ports on both sides of the valve body.
- Limit switch brackets.
- Adaptable tower design can be field modified to take air cylinder, gearbox, hydraulic or electric actuators.

## APPLICATIONS

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

## DIMENSIONS AND WEIGHTS

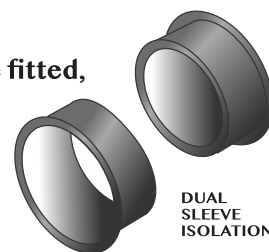


## HOW THE RUBBER SLEEVES WORK

Matching rubber ring sleeves with stiffener rings are placed in the valve housing to seal against the gate when the valve is closed and seal against each other when the valve is open. This tight seal contains the high internal line pressure. Double seated design provides bi-directional flow and shut off.

## ACTUATORS

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



DUAL SLEEVE ISOLATION

## ACCESSORIES

- Limit switches.
- PTFE coating of gate.
- Various blade materials optional.
- Gate safety guards.

VALVE SIZE	AØ	F/F		HW D	BG E	AC F	HYC G	HØ	JØ	K	HW M	HW/BG ØN	VALVE WEIGHT (kg)			
		B	C										HW	BG	AC	HYC
80	191	175	320	481	544	545	624	62	72	403	176	300	30	58	39	58
100	229	175	340	553	593	609	702	85	99	429	232	300	40	65	60	65
150	280	178	405	712	809	679	864	137	148	455	262	500	50	80	85	85
200	343	185	460	836	379	890	974	175	197	483	340	500	65	97	916	96
250	407	226	515	985	1083	1029	1124	231	249	595	430	500	90	125	141	100
300	483	258	565	1206	1206	1156	1350	274	293	648	430	600	170	194	304	165
350	536	258	625	1355	1355	1358	1469	318	337	671	430	600	200	204	327	188
400	591	280	685	1453	1453	1529	1628	356	375	703	480	700	240	260	512	250
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500	693	359	790	1828	1828	1867	1891	421	470	795	600	700	330	479	763	545
600	813	372	900	2190	2190	2236	2277	539	585	883	600	700	480	490	993	636
650	870	373	950	-	-	-	2495	597	636	-	600	-	-	-	-	773
750	1010	397	1000	-	-	-	2750	680	737	-	600	-	-	-	-	976
900	1180	469	1235	-	-	-	3320	810	890	-	600	-	-	-	-	1588
1000	1360	534	1350	-	-	-	4400	972	1041	-	700	-	-	-	-	2359
1200	1520	534	1575	-	-	-	4500	1120	1315	-	700	-	-	-	-	3162
1400	1720	534	1800	-	-	-	4655	1244	1525	-	700	-	-	-	-	3755
1500	1855	534	2000	-	-	-	4780	1455	1525	-	800	-	-	-	-	4500

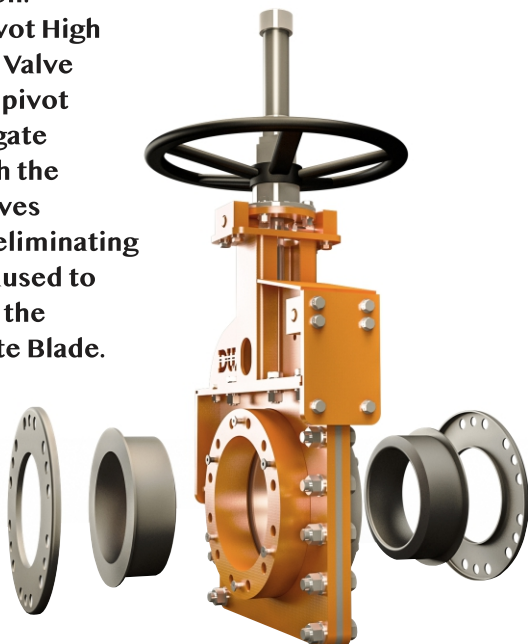
Contact Dual Valves for larger sizes. Dimensions are for guidance only - detailed dimension drawings available on request. All dimensions are in millimeters, unless stated.



# DUAL PIVOT HIGH PRESSURE GATE VALVE (DPHPGV)

**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.



## FEATURES

- 740 PSI / 50 Bar (Higher pressures on request).
- Double seat design for heavy duty slurry service.
- Ease of replacement of sleeves.
- When open, the gate is fully pivoted out of the slurry flow.
- Gate guard.
- Bubble tight shutoff, zero downstream leakage.
- No clogged bonnet to impede flow.
- External epoxy coated.
- Easily adapted to suit most actuators.
- Low maintenance requirements.
- Suitable for wet or dry service.
- Bi-directional flow.

- Packingless design.
- Long lasting lubrication.
- Rotary style movement of the gate.
- Flush ports.
- Light weight for easier handling.
- No seat cavity where solids can collect and prevent full gate closure.
- No gland to maintain.
- Wide range of elastomers available.

## PRODUCT SPECIFICATION

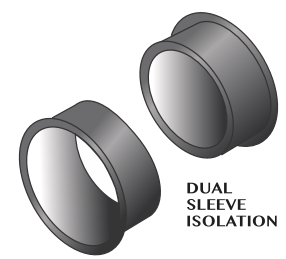
<b>BODY:</b>	Flanged Pattern, Fabricated Steel, Epoxy coated.
<b>ELASTOMER SLEEVES:</b>	Gum Rubber (standard), Nitrile, Vitron, EPDM, Chlorobutyl or Urethane.
<b>RETAINER FLANGES:</b>	Rubber covered Carbon Steel flanges (80mm through to 900mm).
<b>PRESSURE RATING:</b>	DN 80 to DN 900 rated to 740 PSI / 50 Bar using 316SS Gate.
<b>GATE MATERIAL:</b>	316 Stainless Steel standard - 316L, 317L, 17-4PH, Alloy 20, SAF 2205 S/S with optional wear coatings.
<b>DRILLING PATTERNS:</b>	DN 80 to DN 250 drilled and tapped ASME B16.5, BS, DIN, SABS. DN 300 to DN 900 flanges are slotted.
<b>MATERIAL CERTIFICATION:</b>	Certified chemical and physical test reports can be supplied.



DPHPGV

## STANDARD FEATURES - VALVE BODY

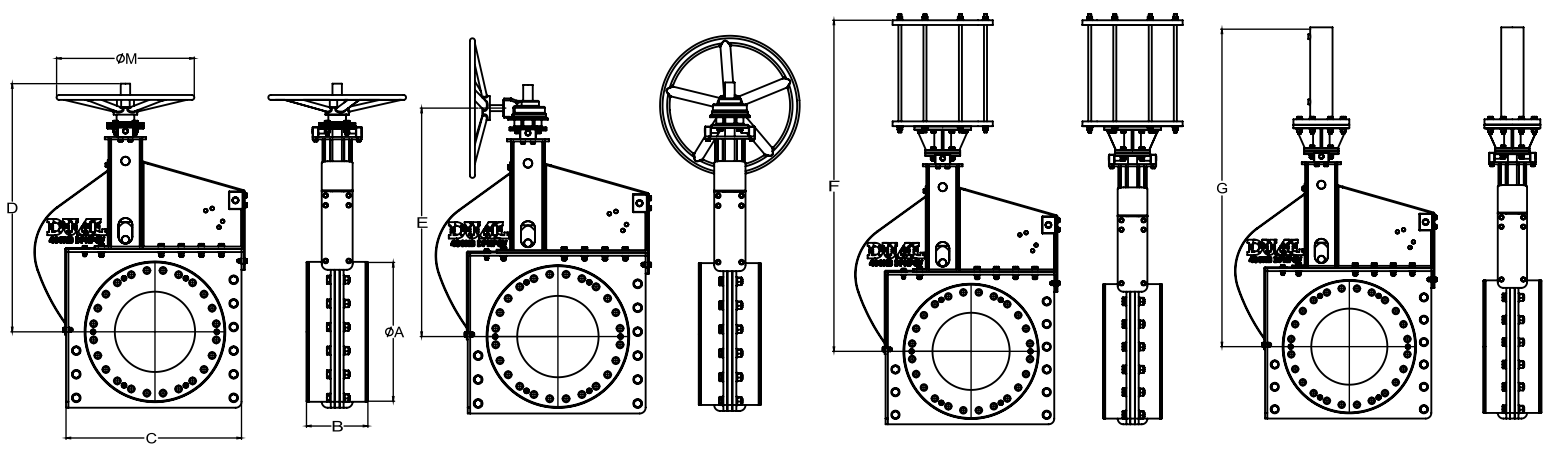
- Splash guard with flush ports.
- Protective bellows.
- Open/closed lock out.
- Lubrication ports on both sides of the valve body.
- Limit switch brackets.
- Adaptable tower design can be field modified to take air cylinder, gearbox, hydraulic or electric actuators.



## APPLICATIONS

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

## DIMENSIONS AND WEIGHTS



VALVE SIZES	AØ	F/F B	C	HW D	BG E	AC F	HYC G	HØ	JØ	K	HW M	HW/BG ØN	HW	WEIGHT (kg)		
														BG	AC	HYC
80	191	175	320	481	544	545	624	62	72	403	176	300	30	58	39	58
100	229	175	340	553	593	609	702	85	99	429	232	300	40	65	60	65
150	280	178	405	712	809	679	864	137	148	455	262	500	50	80	85	85
200	343	185	460	836	379	890	974	175	197	483	340	500	65	97	916	96
250	407	226	515	985	1083	1029	1124	231	249	595	430	500	90	125	141	100
300	483	258	565	1206	1206	1156	1350	274	293	648	430	600	170	194	304	165
350	536	258	625	1355	1355	1358	1469	318	337	671	430	600	200	204	327	188
400	591	280	685	1453	1453	1529	1628	356	375	703	480	700	240	260	512	250
450	639	312	735	1693	1693	1718	1747	378	426	771	480	700	260	397	604	431
500	693	359	790	1828	1828	1867	1891	421	470	795	600	700	330	479	763	545
600	813	372	900	2190	2190	2236	2277	539	585	883	600	700	480	490	993	636
650	870	373	950	-	-	-	2495	597	636	-	600	-	-	-	-	773
750	1010	397	1000	-	-	-	2750	680	737	-	600	-	-	-	-	976
900	1180	469	1235	-	-	-	3320	810	890	-	600	-	-	-	-	1588

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 SLIDE GATE (DSGV)

**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.



- No clogged bonnet to impede flow.
- Valve type: square/rectangular.
- Easily adapted to suit most actuators.
- Low maintenance requirements.
- Metal to metal seating.
- Self-cleaning slide guides.
- Air purge ports.
- No gland to maintain.
- Lifting lugs.
- Light weight for easier handling.
- No seat cavity where solids can collect and prevent full gate closure.
- Suitable for dry service.
- Self-cleaning blade.
- Pneumatic or handwheel options.

## PRODUCT SPECIFICATION

<b>BODY FRAME:</b>	Fabricated Carbon Steel, 304 SS or Aluminium.
<b>WIPER:</b>	Urethane.
<b>SEATS:</b>	Metal to metal.
<b>SPINDLE:</b>	304 Stainless Steel.
<b>GATE GUIDES:</b>	Metal, Urethane, PTFE or Nylon.
<b>PACKING:</b>	Braided rope in Graphite or Standard Rubber Steel or Stainless Steel.
<b>GATE MATERIAL:</b>	316, 317L, 17-4PH, Alloy 20, SAF 2205 with optional wear coatings.
<b>FLANGED COVER:</b>	Pattern available (square or round) Clear Polycarbonate.
<b>TEMPERATURE RATING:</b>	200°C

## FEATURES

- Protective blade cover.
- Large outlet port to eliminate material build up.
- When open, the knife-gate is fully withdrawn from the flow.
- No metal parts in contact with the flowing material.
- Dust tight seal.

## PNEUMATIC OPERATED

### VALVE BODY - STANDARD FEATURES

- Protective bellows.
- Heavy duty tower frame with limit or proximity switch brackets.
- Cover plate to protect blade.
- Open/closed lockout brackets standard, ready for optional factory supplied lockout pins.
- Adaptable from (yoke) design can be field modified to take air cylinder, pneumatic or hydraulic actuators.
- Stem cover.



## SQUARE: PNEUMATIC OPERATED

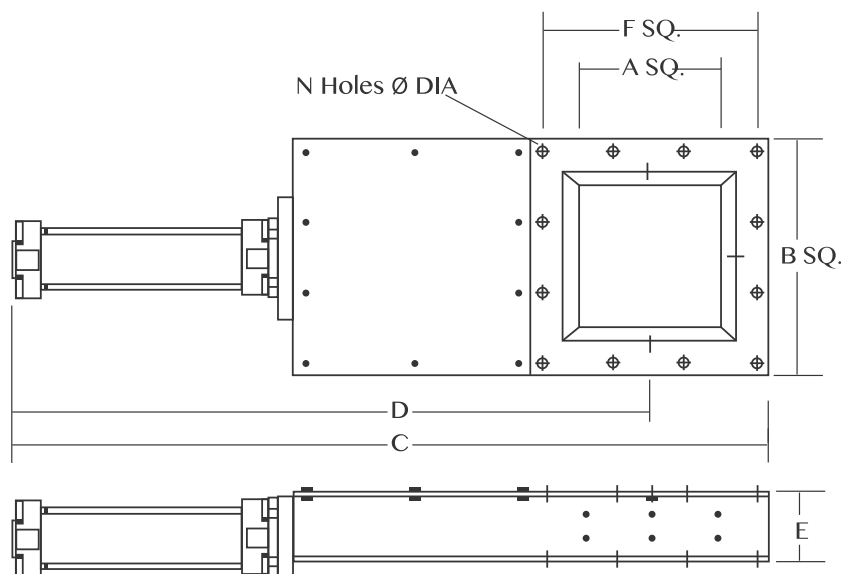


### ACTUATORS

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

### ACCESSORIES

- Bulk material handling of all types.
- Boiler ash.
- Dry powder.
- Limestone powder.
- Pulverised coal.



### DIMENSIONS AND WEIGHTS

VALVE SIZE (mm)										VALVE WEIGHT (kg)
	A	B	C	D	E	F	N	H	DIA	
150	165	250	815	690	100	2 X 105 = 210	8	125	10	40
200	215	300	970	825	100	3 X 90 = 270	12	175	12	50
250	270	355	1125	950	100	3 X 105 = 315	12	230	12	60
300	320	405	1280	1080	100	3 X 125 = 375	12	280	14	70
350	355	440	1440	1220	100	3 X 135 = 405	12	320	14	90
400	400	510	1615	1360	110	3 X 155 = 465	12	365	14	120
500	500	610	1910	1610	110	3 X 155 = 568	12	465	14	140

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 O-PORT GATE VALVE (DOPGV)

**DUAL's** O-Port 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 downwards sealing the port. 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.



## FEATURES

- 300 PSI / 25 Bar.
- Double seat design for heavy duty slurry service.
- Ease of replacement of seat ring sleeves.
- Quick installation.
- Self cleaning.
- Bubble tight shutoff.
- No clogged bonnet to impede flow.
- External epoxy coated.
- Easily adapted to suit most actuators.
- Low maintenance requirements.
- Suitable for wet or dry service.
- Bi-directional flow.
- Open/closed indicator sleeve.
- Wide range of elastomers available.
- Light weight for easier handling.
- No seat cavity where solids can collect and prevent full gate closure.
- Lock out feature.

## PRODUCT SPECIFICATION

<b>BODY:</b>	Wafer pattern Cast SG Iron, Fabricated Steel, Epoxy Coated.
<b>ELASTOMER SLEEVES:</b>	Gum Rubber (standard), Nitrile, Vitron, EPDM, Chlorobutyl or Urethane.
<b>PRESSURE RATING:</b>	DN 50 to DN 600 rated to 360 PSI (25 Bar). DN 650 to DN 1500 rated to 150 PSI (10 Bar).
<b>GATE MATERIAL:</b>	316 Stainless Steel standard - 316L, 317L, 17-4PH, Alloy 20, SAF 2205 S/S with optional wear coatings.
<b>DRILLING PATTERNS:</b>	DN 50 to DN 1500 drilled and tapped ASME B16.5, DIN, SABS & BS Optional.
<b>MATERIAL CERTIFICATION:</b>	Certified chemical and physical test reports can be supplied.

DOPGV



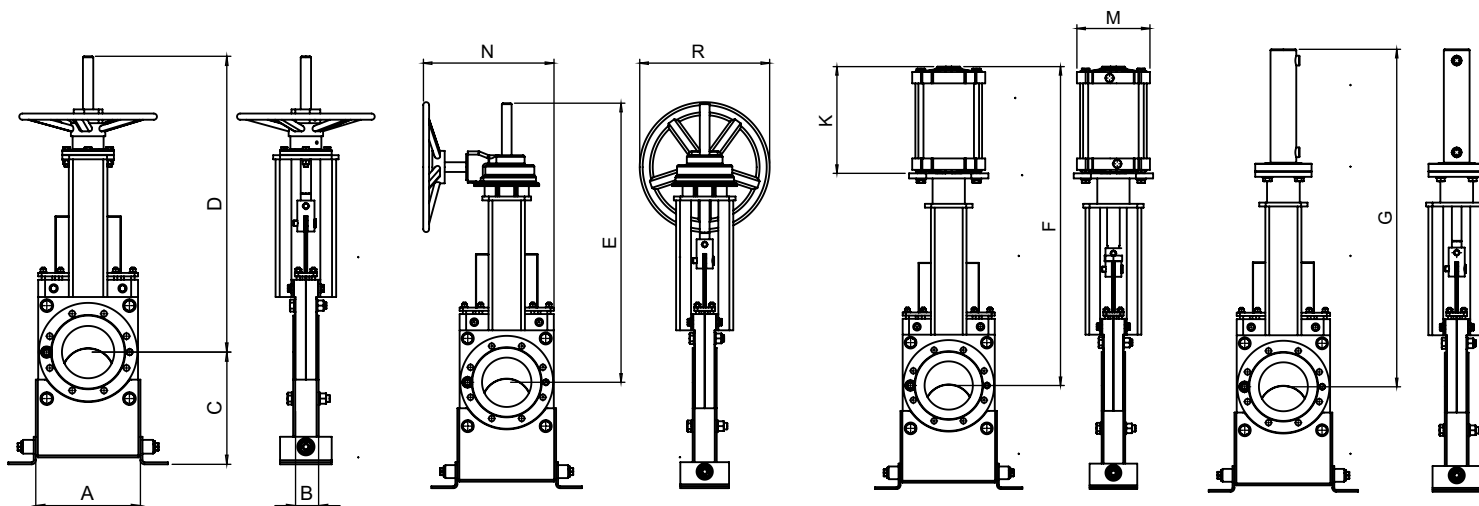
## STANDARD FEATURES - VALVE BODY

- Protective bellows.
- Heavy duty tower frame with limit switch brackets.
- Self adjusting gland seal.
- Lubrication ports on both sides of the valve body.
- Splash guard with flush ports.
- Open/closed lockout brackets standard, ready for optional factory supplied lockout pins.
- Adaptable frame (yoke) design can be field modified to take air cylinder, gearbox or hydraulic actuators.
- Stem cover.

## APPLICATIONS

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

## DIMENSIONS AND WEIGHTS



VALVE SIZE															VALVE WEIGHT (kg)			
	A	B	C	D	E	F	G	H	J	K	M	N	PØ	RØ	HW	BG	AC	HYC
50	175	54	102	487	563	540	560	47	51	191	133.4	384	300	300	20	30	35	30
80	203	58	124	568	611	627	640	71	76	222	162.3	400	300	300	25	35	40	40
100	244	58	139	621	639	667	693	97	102	267	175.5	422	300	300	35	45	50	55
150	279	64	146	748	838	803	825	147	152	320	231.9	449	500	500	40	50	65	60
200	343	76	179	888	924	939	962	196	203	375	261.9	478	500	500	65	75	90	75
250	416	76	209	1043	1125	1115	1138	247	254	444	339.9	604	500	500	90	100	150	100
300	483	83	248	1207	1207	1273	1290	299	304	518	341.6	740	600	600	170	180	230	150
350	535	83	274	1340	1340	1369	1372	329	337	573	374.7	765	600	600	200	210	300	170
400	603	96	302	1435	1435	1500	1504	381	387	622	374.7	790	700	700	240	250	340	240
450	648	96	324	1680	1680	1728	1740	432	440	669	431.8	790	700	700	260	270	390	285
500	711	121	368	1823	1823	1878	1882	483	489	712	479.6	790	700	700	330	340	530	340
600	838	121	419	2162	2162	2216	2235	589	600	889	479.6	878	700	700	480	490	720	520
650	934	125	445	-	-	-	2494	597	624	934	500	-	-	-	-	-	993	773
750	1054	125	515	-	-	-	2748	679	737	1054	550	-	-	-	-	-	976	976
900	1226	130	600	-	-	-	3320	810	890	1226	550	-	-	-	-	-	1588	1588
1000	1435	130	690	-	-	-	3898	972	1044	1435	700	-	-	-	-	-	2359	2359
1200	1600	160	770	-	-	-	4312	1117	1160	1600	700	-	-	-	-	-	3162	3162
1400	1710	228	860	-	-	-	4655	1244	1320	1710	700	-	-	-	-	-	3755	3755
1500	1955	228	980	-	-	-	4780	1455	1525	1850	700	-	-	-	-	-	4000	4500

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

## HOW THE RUBBER SLEEVES WORK

Matching rubber ring sleeves with stiffener rings are placed in the valve housing to seal against the gate. This tight seal contains the high internal line pressure. Double seated design provides bi-directional flow and shut off.



## ACCESSORIES

- Limit switches.
- PTFE coating of gate.
- Various gate materials optional.
- Gate safety guards.

## ACTUATORS

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



# DUAL ROTARY DISC VALVE (DRDV)

**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.



## FEATURES

- No blocking or leakage.
- Disc can be replaced in situ.
- No sticking (due to no guides).
- Long wear life (due to rotating gate/disc).
- Self clearing gate action.
- Seals in both directions.
- Wedge for positive seal.
- Cutaway to clean seating area.
- Fabricated valves can be repaired in line.
- Seal out of flow when in open position.
- Rising and non-rising spindle.
- Back seat to re-pack gland packing under pressure.

## PRODUCT SPECIFICATION

<b>VALVE BODY:</b>	Fabricated Carbon Steel for valves larger than 300mm, Cast SG Iron, High Chrome or Stainless Steel.
<b>MATERIAL:</b>	Gate material can be Carbon Steel, Abrasion Resistant AR Steel, Cast High Chrome or Stainless Steel.
<b>THICKNESS:</b>	Gate to have a minimum safety factor of 2:1 based on yield strength of material.
<b>SHAPE:</b>	Gate radius to be set for minimum valve height in chest area. Gate is round with Metal, Rubber or Urethane seal.
<b>THRUST BEARINGS:</b>	To reduce operating torque.
<b>MATERIAL CERTIFICATION:</b>	All wetted parts have certified chemical and physical test reports.
<b>TESTING:</b>	All valves are tested per SABS specifications certified.
<b>PRESSURE RATING:</b>	10 Bar to 100 Bar (150 PSI to 1500 PSI)
<b>FLANGES:</b>	Flanges comply with AS, ANSI, DIN, BS and SABS.
<b>FACE-TO-FACE:</b>	To suit customer specification.
<b>LIFTING LUGS:</b>	Valves have lifting lugs/holes sized and located for safe hoisting of valve assembly.
<b>BODY LINING:</b>	Rubber, Urethane or Ceramic.

## VALVE OPERATION

As the handwheel is opening or closed, the disc rotates. This happens due to pressure pushing against the disc, causing the disc to touch the valve body and rotate. As the valve is cycled, the disc rotates 100mm, seating in a different position each time. The valve body has a cutaway behind the disc clearing debris away and thus, ensuring the disc closes and seals.

## ASH APPLICATION (FABRICATED VALVES)



## APPLICATIONS

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

## ACCESSORIES

- Dust covers and PVC bellows to protect spindle.
- Flushing ports.

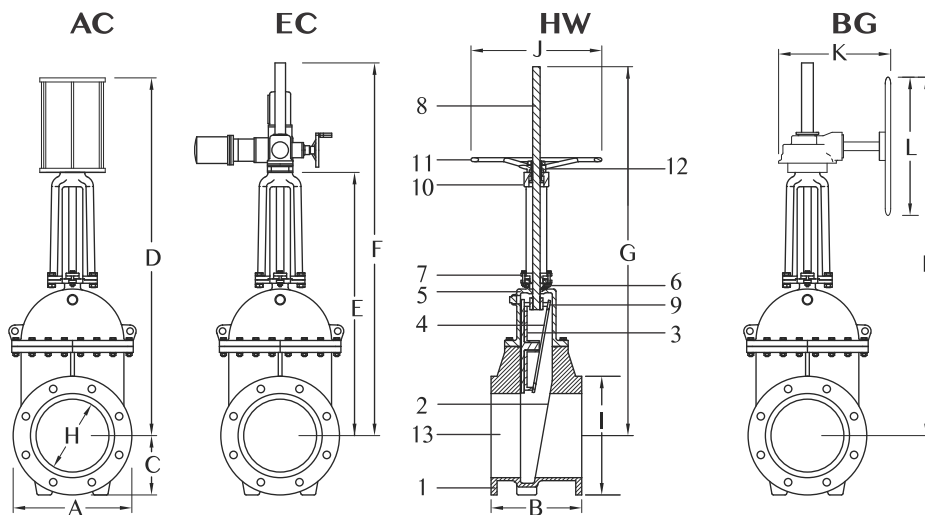
## VALVE FLEXIBILITY

The very nature of fabricating the large valves allows a maximum of flexibility in customizing to meet specific needs, materials, pressure rating configuration. The body is made of Carbon Steel and can be made out of different materials to suit the customer. The bonnet houses the rotating disc and seals around the spindle.

## ACTUATORS

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

## DIMENSIONS AND SPECIFICATIONS



	PART	DESCRIPTION
1	Body	Carbon, Cast SG Iron, Steel/Stainless Steel
2	Body Seat	Abrasion Resistant AR Steel, Urethane, Rubber
3	Disc	Stainless Steel or Other
4	Wedges	Mild Steel/Stainless Steel, Cast SG Iron
5	Bonnet	Mild Steel/Stainless Steel, Cast SG Iron
6	Packing	Graphite in Rope
7	Gland	S.S./Carbon Steel, Cast SG Iron
8	Spindle	Stainless Steel
9	Yoke Assembly	Mild Steel/Stainless Steel
10	Spindle Nut	Bronze
11	Handwheel	Cast SG Iron/Stainless Steel
12	Handwheel Nut	Carbon Steel/Stainless Steel
13	Body Lining	Rubber, Urethane or Ceramic

VALVE SIZE	A	B	C	AC D	EC E	BG F	HW G	H	I	J	K	L	WEIGHT (kg)
50	170	216	85	559	300	370	550	50	170	300	350	300	50
80	200	229	100	659	370	440	542	80	200	300	350	300	80
100	220	254	110	710	380	470	695	100	220	400	350	400	90
150	285	280	142	1003	610	661	900	150	285	500	350	400	90
200	340	317	170	1224	770	845	1104	200	340	500	350	400	100
250	405	356	202	1411	905	1014	1360	250	405	500	350	400	250
300	460	380	230	1615	1012	1120	1560	300	460	500	350	400	300
350	520	470	260	1745	1140	1230	1840	350	520	600	350	500	450
400	580	470	290	2016	1280	1355	1940	400	580	600	350	500	500
450	640	485	320	2300	1487	1600	2180	450	640	700	500	500	600
500	720	510	360	2579	1690	1706	2350	500	720	700	500	500	720
600	840	600	450	2750	1785	1885	2800	600	840	700	500	500	900

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





# DUAL ROTARY DISC SLEEVE VALVE (DRDSV)

**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.



## FEATURES

- No pressure drop.
- No blockage or leakage.
- Disc can be replaced in situ.
- Low torque due to no gate guides.
- Long wear life (due to rotating gate/disc).
- Self cleaning gate action.
- Seals in both directions.
- Wedge for position seal.
- Cutaway to clean seating area.
- Fabricated valves can be repaired in line.
- Sleeve out of flow when in open position.
- Rising and non-rising spindle.
- Back seat to re-pack gland packing under pressure.
- Replaceable ring sleeve seat.
- Light weight.
- Spindle dust cover.
- Flush port.

## PRODUCT SPECIFICATION

<b>VALVE BODY:</b>	Fabricated Carbon Steel, Cast SG Iron, High Chrome or Stainless Steel.
<b>GATE MATERIAL:</b>	Gate material can be Carbon Steel, Abrasion Resistant Steel, Cast High Chrome or Stainless Steel.
<b>THICKNESS:</b>	Gate to have a minimum safety factor of 2:1 based on yield strength of material.
<b>SHAPE:</b>	Gate radius to be set for minimum valve height in chest area. Gate is Metal, Rubber or Urethane coated.
<b>REPLACEABLE RING SLEEVE:</b>	Rubber or Urethane.
<b>THRUST BEARINGS:</b>	To reduce operating torque (handwheel type).
<b>MATERIAL CERTIFICATION:</b>	All wetted parts have certified chemical and physical test reports.
<b>TESTING:</b>	All valves are tested per SABS specifications certified.
<b>PRESSURE RATING:</b>	10 Bar to 100 Bar (150 PSI to 1500 PSI).
<b>FLANGES:</b>	Flanges comply with AS, ANSI, DIN, BS and SABS.
<b>FACE-TO-FACE:</b>	To suit customer specification.
<b>BODY LINING:</b>	Rubber, Urethane or Ceramic.

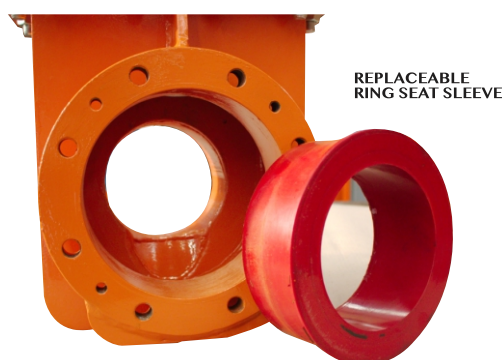
## VALVE OPERATION

As the handwheel is opening or closed, the disc rotates. This happens due to pressure pushing against the disc, causing the disc to touch the valve sleeve and rotate. As the valve is cycled, the disc rotates 100mm, seating in a different position each time. The valve body has a cutaway behind the disc clearing debris away and thus, ensuring the disc closes and seals.

DRDSV

## HOW THE SEAT SLEEVE WORKS

The ring seat sleeve with stiffener ring is placed in the valve housing to seal against the gate when the valve is in its closed position. When the valve is in the open position, the seat is out of the slurry flow, prolonging the life of the valve. The ring sleeve and gate are replaceable.



REPLACEABLE RING SEAT SLEEVE

## ACTUATORS

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

## DIMENSIONS AND SPECIFICATIONS

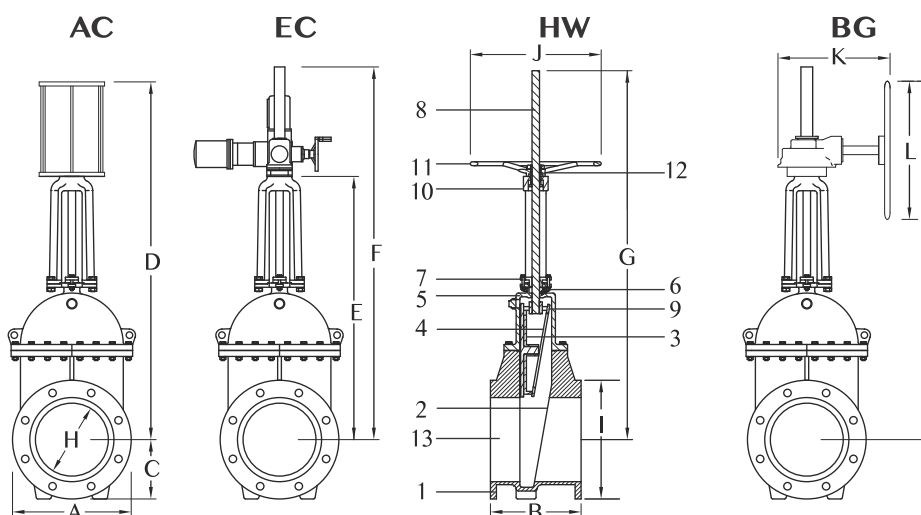
## APPLICATIONS

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

## ACCESSORIES

- Limit switches.
- Positioners.
- Deflection Cone.

	PART	DESCRIPTION
1	Body	Carbon, Cast SG Iron, Steel/Stainless Steel
2	Seat Sleeve	Rubber or Urethane
3	Disc	Stainless Steel or Other
4	Wedges	Mild Steel/Stainless Steel, Cast SG Iron
5	Bonnet	Mild Steel/Stainless Steel, Cast SG Iron
6	Packing	Graphite in Rope
7	Gland	S.S./Carbon Steel, Cast SG Iron
8	Spindle	Stainless Steel
9	Yoke Assembly	Mild Steel/Stainless Steel
10	Spindle Nut	Bronze
11	Handwheel	Cast SG Iron/Stainless Steel
12	Handwheel Nut	Carbon Steel/Stainless Steel
13	Body Lining	Rubber, Urethane or Ceramic



VALVE IN FULLY OPEN POSITION

VALVE SIZE	A	F/F B	C	AC D	EC E	BG F	HW G	H	I	J	K	L	WEIGHT (kg)
50 / 2"	170	216	85	559	300	370	550	50	170	300	350	300	50
80 / 3"	200	229	100	659	370	440	542	80	200	300	350	300	80
100 / 4"	220	254	110	710	380	470	695	100	220	400	350	400	90
150 / 6"	285	280	142	1003	610	661	900	150	285	500	350	400	90
200 / 8"	340	317	170	1224	770	845	1104	200	340	500	350	400	100
250 / 10"	405	356	202	1411	905	1014	1360	250	405	500	350	400	250
300 / 12"	460	380	230	1615	1012	1120	1560	300	460	500	350	400	300
350 / 14"	520	470	260	1745	1140	1230	1840	350	520	600	350	500	450
400 / 16"	580	470	290	2016	1280	1355	1940	400	580	600	350	500	500
450 / 18"	640	485	320	2300	1487	1600	2180	450	640	700	500	500	600
500 / 20"	720	510	360	2579	1690	1706	2350	500	720	700	500	500	720
600 / 24"	840	600	450	2750	1785	1885	2800	600	840	700	500	500	900

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 ROTARY DISC WAFER SLEEVE GATE VALVE (DRDWSGV)

**DUAL's** Rotary Disc Wafer Sleeve Valve is a unique rotating disc 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.

## ALL VALVES ARE HYDROSTATICALLY TESTED BEFORE SHIPMENT

- Back seat to re-pack gland packing under pressure.
- Replaceable ring sleeve seat.
- Light weight.
- Spindle dust cover.
- Flush port.
- Zero discharge to atmosphere.
- Suitable for dead-end-service.

## PRODUCT SPECIFICATION

<b>BODY:</b>	Wafer pattern Cast SG Iron, Stainless Steel or Fabricated Steel with Epoxy coating.
<b>ELASTOMER RING SLEEVE:</b>	Gum Rubber (standard), Nitrile, Vitron, EPDM, Chlorobutyl or Urethane. Metal seat is available.
<b>PRESSURE RATING:</b>	DN 50 to DN 600 rated to 240 PSI (16 Bar). DN 650 to DN 1500 rated 150 PSI (10 Bar).
<b>GATE MATERIAL:</b>	316 Stainless Steel standard - 316L, 317L, 17-4PH, Alloy 20, SAF 2205 S/S with optional wear coatings.
<b>GATE SURFACE COATING:</b>	SSEC Coating Available.
<b>DRILLING PATTERNS:</b>	DN 50 to DN 1500 drilled and tapped ASME B16.5, DIN, SABS & BS Optional.
<b>MATERIAL CERTIFICATION:</b>	Certified chemical and physical test reports can be supplied.
<b>BODY LINING:</b>	Rubber, Urethane or Ceramic.



## FEATURES

- No pressure drop.
- No blockage or leakage.
- Disc can be replaced in situ.
- Low torque.
- Long wear life (due to rotating gate/disc).
- Self cleaning gate action.
- Seals in both directions.
- Wedge for position seal.
- Cutaway to clean seating area.
- Fabricated valves can be repaired in line.
- Sleeve out of flow when in open position.
- Deflection cone reduces seat wear.

## VALVE OPERATION

As the handwheel is opening or closed, the disc rotates. This happens due to pressure pushing against the disc, causing the disc to touch the valve sleeve and rotate. As the valve is cycled, the disc rotates 100mm, seating in a different position each time. The valve body has a cutaway behind the disc clearing debris away and thus, ensuring the disc closes and seals.

## STANDARD FEATURES - VALVE BODY

- Protective bellows.
- Heavy duty tower frame with limit switch brackets.
- Open/closed lockout brackets standard, ready for optional factory supplied lockout pins.
- Stem cover.

## 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.
- Water purification waste water.

## HOW THE SEAT SLEEVE WORKS

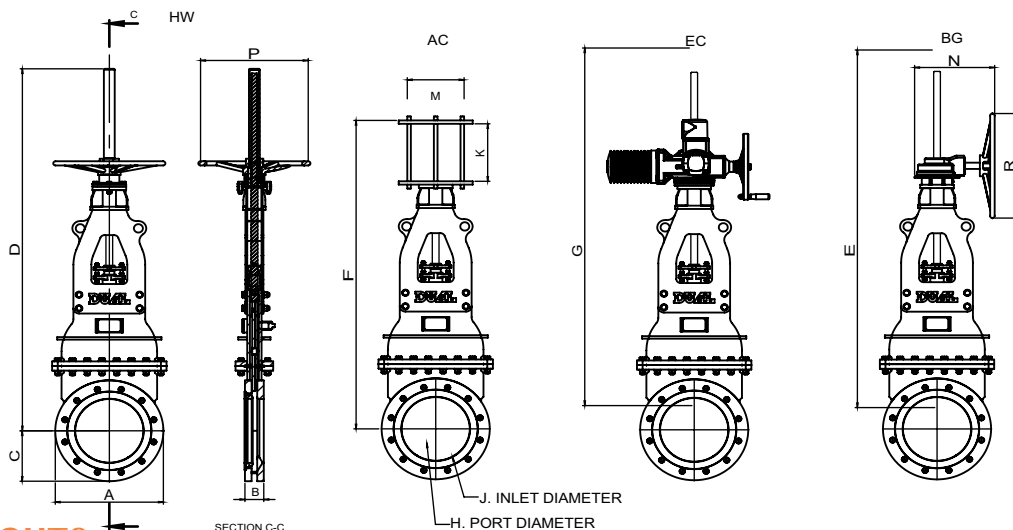
The ring seat sleeve with stiffener ring is placed in the valve housing to seal against the gate when the valve is in its closed position. When the valve is in the open position, the seat is out of the slurry flow, prolonging the life of the valve. The ring sleeve and gate are replaceable.



## ACCESSORIES

- Limit switches.
- PTFE coating of gate.
- Various gate materials optional.
- Gate safety guards.
- Deflection cone.

ITEM NO.	DESCRIPTION
1	300NB DRDWSV LOWER BODY ASSEMBLY
2	300NB DRDWSV BONNET ASSEMBLY
3	300NB DRDWSV TOWER ASSEMBLY
4	300NB DRDWSV TOWER SPACER BUSH
5	300NB DRDWSV GLAND
6	300NB DRDWSV SPINDLE ASSEMBLY
7	300NB DRDWSV CARRIER ASSEMBLY
8	300NB DRDWSV DISC ASSEMBLY
9	HANDWHEEL ASSEMBLY
10	300NB DRDWSV SPINDLE COVER
11	300NB DRDWSV SLEEVE ASSEMBLY
12	FASTENER
13	FASTENER
14	FASTENER
15	FASTENER
16	FASTENER
17	FASTENER
18	FASTENER
19	FASTENER



## DIMENSIONS AND WEIGHTS

VALVE SIZE	VALVE WEIGHT (kg)																	
	A	B	C	D	E	F	G	H	J	K	M	N	PØ	RØ	HW	BG	AC	HYC
50	175	54	102	487	563	540	560	47	51	191	133.4	384	300	300	20	30	35	30
80	203	58	124	568	611	627	640	71	76	222	162.3	400	300	300	25	35	40	40
100	244	58	139	621	639	667	693	97	102	267	175.5	422	300	300	35	45	50	55
150	279	64	146	748	838	803	825	147	152	320	231.9	449	500	500	40	50	65	60
200	343	76	179	888	924	939	962	196	203	375	261.9	478	500	500	65	75	90	75
250	416	76	209	1043	1125	1115	1138	247	254	444	339.9	604	500	500	90	100	150	100
300	483	83	248	1207	1207	1273	1290	299	304	518	341.6	740	600	600	170	180	230	150
350	535	83	274	1340	1340	1369	1372	329	337	573	374.7	765	600	600	200	210	300	170
400	603	96	302	1435	1435	1500	1504	381	387	622	374.7	790	700	700	240	250	340	240
450	648	96	324	1680	1680	1728	1740	432	440	669	431.8	790	700	700	260	270	390	285
500	711	121	368	1823	1823	1878	1882	483	489	712	479.6	790	700	700	330	340	530	340
600	838	121	419	2162	2162	2216	2235	589	600	889	479.6	878	700	700	480	490	720	520
650	934	125	445	-	-	-	2494	597	624	934	500	-	-	-	-	-	993	773
750	1054	125	515	-	-	-	2748	679	737	1054	550	-	-	-	-	-	976	976
900	1226	130	600	-	-	-	3320	810	890	1226	550	-	-	-	-	-	1588	1588
1000	1435	130	690	-	-	-	3898	972	1044	1435	700	-	-	-	-	-	2359	2359
1200	1600	160	770	-	-	-	4312	1117	1160	1600	700	-	-	-	-	-	3162	3165
1400	1710	228	860	-	-	-	4655	1244	1320	1710	700	-	-	-	-	-	3755	3755
1500	1955	228	980	-	-	-	4780	1455	1525	1850	700	-	-	-	-	-	4000	4500

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 RESILIENT SEAL VALVE (DRSV)

**DUAL's** Resilient Seal Valve is specifically for heavy abrasive and corrosive slurries. The gate is completely rubber or urethane coated which ensures drop-tightness from zero to maximum working pressure, even under most adverse working conditions. The Gate is designed for maximum distortion of the Resilient Seal, equal distribution of sealing pressure in all directions with a capacity to accept foreign material and still seal tight.



## FEATURES

- Guides support the gate in all positions.
- Replaceable spindle nut in gate (Non rising type).
- Fully encapsulated elastomer gate.
- No blocking or leakage.
- Complies to SANS 664 and 665.
- Valve body can be lined.
- Gate can be replaced in situ.
- Self clearing gate action.
- Seals in both directions.
- Wedge for positive seal.
- Light weight.
- Gate out of flow in open position.
- Rising and non-rising spindle.
- Back seal permits replacement of gland packing under pressure.

## PRODUCT SPECIFICATION

<b>VALVE BODY:</b>	Cast SG Iron, Epoxy coated.
<b>GATE MATERIAL:</b>	Ductile Iron fully gate encapsulated with 70 shore rubber or urethane.
<b>PRESSURE RATING:</b>	PN 6 tp PN 25. For higher pressure, contact Dual.
<b>SIZE:</b>	DN 50 to DN 600.
<b>TYPE:</b>	Flanged, socketed and plain end.
<b>THRUST BEARINGS:</b>	To reduce operating torque.
<b>MATERIAL CERTIFICATION:</b>	All wetted parts have certified chemical and physical test reports.
<b>TESTING:</b>	All valves are tested per SABS specifications certified.
<b>FLANGES:</b>	Flanges comply with AS, ANSI, DIN, BS and SABS.
<b>FACE-TO-FACE:</b>	To SANS 664.
<b>TEMPERATURE:</b>	-20±°C to 100±°C
<b>BODY LINING:</b>	Rubber, Urethane or Ceramic.

## ACTUATORS

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



## APPLICATIONS

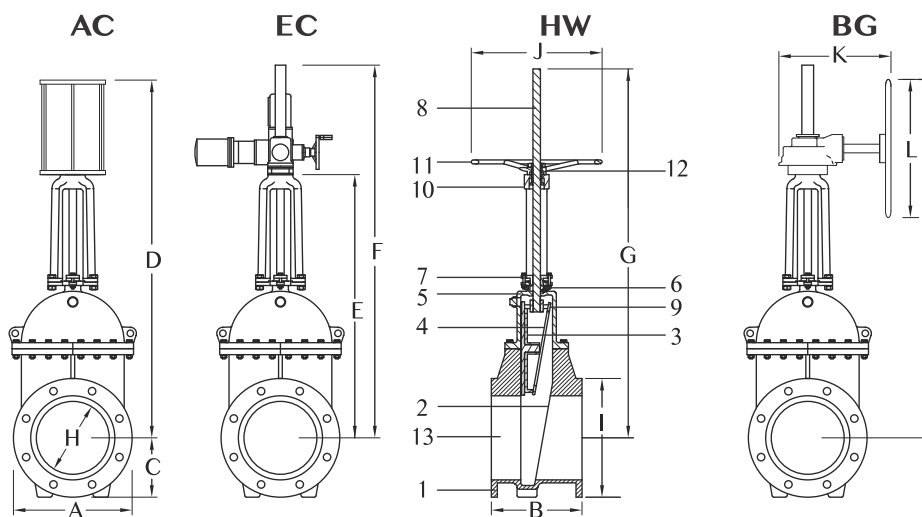
- Mining and mineral processing.
- Power generation.
- Sand and gravel.
- Chemical and soda ash.
- Pulp and paper.
- Environmental and effluent.
- Water.

## ACCESSORIES

- Dust covers and PVC bellows to protect spindle.
- Flushing ports.

	PART	DESCRIPTION
1	Body	Carbon, Cast SG Iron, Steel/Stainless Steel
2	Body Seat	Abrasion Resistant AR Steel, Urethane, Rubber
3	Disc	Stainless Steel or Other
4	Wedges	Mild Steel/Stainless Steel, Cast SG Iron
5	Bonnet	Mild Steel/Stainless Steel, Cast SG Iron
6	Packing	Graphite in Rope
7	Gland	S.S./Carbon Steel, Cast SG Iron
8	Spindle	Stainless Steel
9	Yoke Assembly	Mild Steel/Stainless Steel
10	Spindle Nut	Bronze
11	Handwheel	Cast SG Iron/Stainless Steel
12	Handwheel Nut	Carbon Steel/Stainless Steel
13	Body Lining	Rubber, Urethane or Ceramic

## DIMENSIONS AND SPECIFICATIONS



VALVE IN FULLY OPEN POSITION

VALVE SIZE	SABS 664			AC	EC	BG	HW	H	I	J	K	L	WEIGHT (kg)
	A	B	C	D	E	F	G						
50	170	216	85	559	300	370	550	50	170	300	350	300	50
80	200	229	100	659	370	440	542	80	200	300	350	300	80
100	220	254	110	710	380	470	695	100	220	400	350	400	90
150	285	280	142	1003	610	661	900	150	285	500	350	400	90
200	340	317	170	1224	770	845	1104	200	340	500	350	400	100
250	405	356	202	1411	905	1014	1360	250	405	500	350	400	250
300	460	380	230	1615	1012	1120	1560	300	460	500	350	400	300
350	520	470	260	1745	1140	1230	1840	350	520	600	350	500	450
400	580	470	290	2016	1280	1355	1940	400	580	600	350	500	500
450	640	485	320	2300	1487	1600	2180	450	640	700	500	500	600
500	720	510	360	2579	1690	1706	2350	500	720	700	500	500	720
600	840	600	450	2750	1785	1885	2800	600	840	700	500	500	900

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





# DUAL WEDGE GATE VALVE (DWGV)

**DUAL's** Wedge Gate Valve is a medium duty general purpose Wedge Gate Valve and is highly suitable for various applications in mining, general industry, agriculture, fishing industry and for general marine applications. The Dual Wedge Gate Valve is ideal for use in controlling a wide variety of liquids and fluids. Trouble-free performance in continuous use applications ensures minimum maintenance and downtime.



## FEATURES

- Valve body can be lined.
- Seals in both directions.
- No blocking or leakage.
- Wedge can be replaced in situ (replaceable seat).
- Metal seated gate valve.
- Epoxy coated.
- Seats hydraulic pressed into the wedge.
- Seat ring out of flow when in open position.
- Rising and non-rising spindle.
- Back seat to re-pack gland packing under pressure.
- Closing direction: clockwise or anti-clockwise.
- Full bore.
- Wedge for position seal.

## PRODUCT SPECIFICATION

<b>VALVE BODY:</b>	Cast SG Iron or High Chrome.
<b>SIZE:</b>	DN 50 - DN 600.
<b>MANUFACTURING STANDARDS:</b>	SABS 664, SABS 665.
<b>SPINDLE:</b>	304 Stainless Steel.
<b>THRUST BEARINGS:</b>	To reduce operating torque .
<b>MATERIAL CERTIFICATION:</b>	All wetted parts have certified chemical and physical test reports.
<b>TESTING:</b>	All valves are tested per SABS specifications certified.
<b>PRESSURE RATING:</b>	PN 16, PN 25, PN 40 and PN 60.
<b>FLANGES:</b>	Flanges comply with AS, ANSI, DIN, BS and SABS.
<b>LIFTING LUGS:</b>	Valves have lifting lugs/ holes sized and located for safe hoisting of valve assembly.
<b>BODY LINING (OPTIONAL):</b>	Rubber, Urethane or Ceramic.



RISING SPINDLE  
OR NON RISING  
SPINDLE TYPES

DWGV

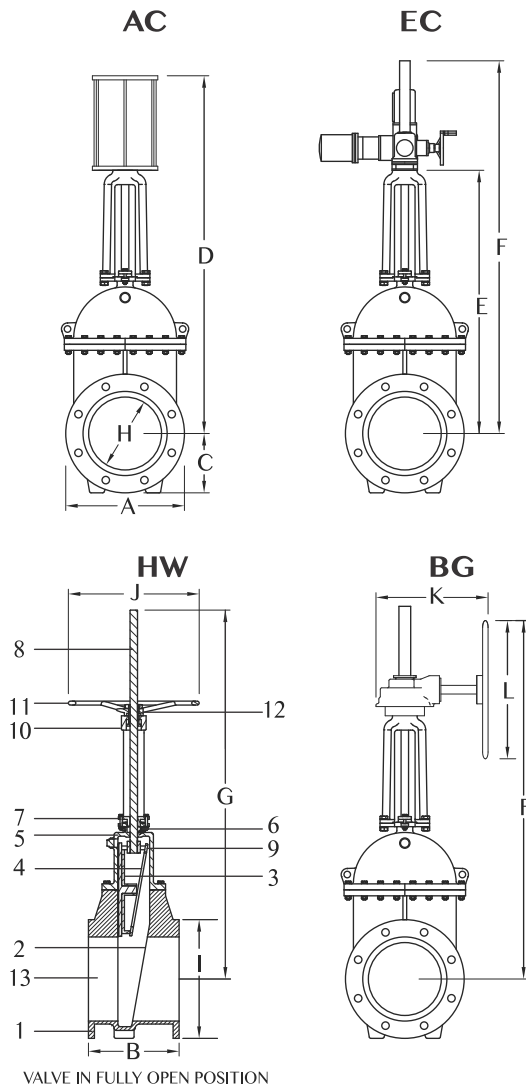
## ACTUATORS

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.
- Water purification.

## DIMENSIONS AND WEIGHTS



## ACCESSORIES

- Dust covers and PVC bellows to protect spindle.
- Flushing ports.

	PART	DESCRIPTION
1	Body	Cast SG Iron
2	Body Seat	Hydraulically pressed into wedge
3	Wedge Seat	Brass
4	Wedges	Cast SG Iron
5	Bonnet	Cast SG Iron
6	Packing	Graphite in Rope
7	Gland	Cast SG Iron
8	Spindle	Stainless Steel
9	Yoke Assembly	Mild Steel
10	Spindle Nut	Bronze
11	Handwheel	Cast SG Iron
12	Handwheel Nut	Carbon Steel
13	Body Lining	Rubber, Urethane or Ceramic

VALVE SIZE	A	F/F B	C	AC D	EC E	BG F	HW G	H	I	J	K	L	WEIGHT (kg)
50	170	216	85	559	300	370	550	50	170	300	350	300	50
80	200	229	100	659	370	440	542	80	200	300	350	300	80
100	220	254	110	710	380	470	695	100	220	400	350	400	90
150	285	280	142	1003	610	661	900	150	285	500	350	400	90
200	340	317	170	1224	770	845	1104	200	340	500	350	400	100
250	405	356	202	1411	905	1014	1360	250	405	500	350	400	250
300	460	380	230	1615	1012	1120	1560	300	460	500	350	400	300
350	520	470	260	1745	1140	1230	1840	350	520	600	350	500	450
400	580	470	290	2016	1280	1355	1940	400	580	600	350	500	500
450	640	485	320	2300	1487	1600	2180	450	640	700	500	500	600
500	720	510	360	2579	1690	1706	2350	500	720	700	500	500	720
600	840	600	450	2750	1785	1885	2800	600	840	700	500	500	900

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







# DUAL DIVERTER GATE VALVE (DDGV)

**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.



## FEATURES

- 300 Psi (21 Bar).
- Double seat design for heavy duty slurry service.
- Ease of replacement of elastomer sleeves.
- Material construction options available.
- Quick installation.
- Self cleaning.
- Bubble tight shutoff, zero downstream leakage.

- No clogged bonnet to impede flow.
- External epoxy coated.
- Low maintenance requirements.
- As the valve strokes, the seats will clean the gate of material.
- Compact design and light weight.
- Bi-directional flow.
- Packingless design.
- The gate can be coated to eliminate scale build-up.
- No seat cavity where solids can collect and prevent full gate closure.
- Open/close indicator.
- Lifting lugs.
- Lock out feature.

## PRODUCT SPECIFICATION

<b>BODY:</b>	Flanged or Wafer Pattern Steel, Epoxy coated.
<b>ELASTOMER SLEEVES:</b>	Gum Rubber (standard), Nitrile, Vitron, EPDM, Chlorobutyl or Urethane.
<b>RETAINER FLANGES:</b>	Rubber covered Carbon Steel flanges (80mm through to 600mm).
<b>PRESSURE RATING:</b>	DN 80 to DN 600 rated to 300 PSI / (21 Bar) using 316SS gate.
<b>GATE MATERIAL:</b>	316 Stainless Steel standard - 316L, 317L, 17-4PH, Alloy 20, SAF 2205 S/S with optional wear coatings.
<b>DRILLING PATTERNS:</b>	DN 80 to DN 250 drilled and tapped ASME B16.5, BS, DIN, SABS. DN 300 to DN 1500 flanges are slotted.
<b>MATERIAL CERTIFICATION:</b>	Certified chemical and physical test reports can be supplied.
<b>RATING TEMPERATURE:</b>	90°C Maximum.

## ACTUATORS

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

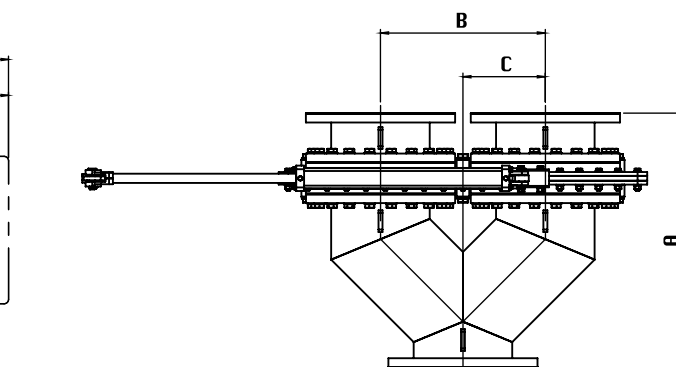
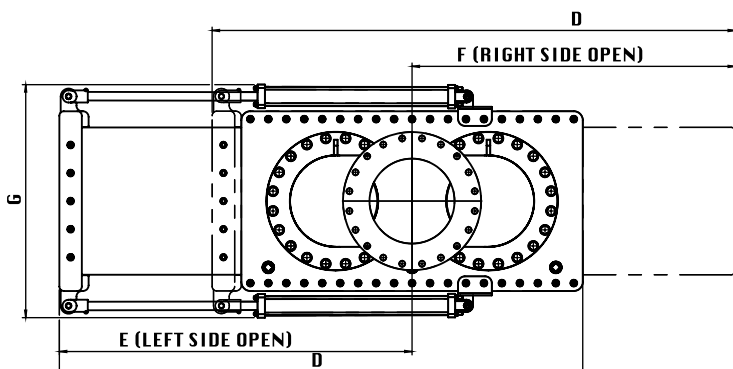
## STANDARD FEATURES - VALVE BODY

- Flush ports on both sides of the valve body.
- Protective spindle cover.
- Drain ports.
- Lubrication ports on both sides of the valve body.
- Adaptable (yoke) design can be field modified to take air cylinder, gearbox or hydraulic actuators.
- Lock out, ready for factory supplied lock out pin.

## APPLICATIONS

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

## DIMENSIONS AND WEIGHTS



VALVE SIZE (mm)	VALVE WEIGHT (kg)														
	A0	B	C	HW	BG	AC	HYC	H0	J0	HW	HW/BG	HW	BG	AC	HYC
80	650	230	115	825	565	490	400	62	72	300	300	50	60	70	70
100	700	270	135	955	610	535	435	85	99	300	300	60	90	100	100
150	800	330	165	1120	780	705	510	137	148	500	500	70	100	120	120
200	850	390	195	1345	845	770	620	175	197	500	500	100	130	150	150
250	900	460	230	1570	1055	980	650	231	249	500	500	110	140	180	180
300	950	520	260	1765	1180	1105	780	274	293	600	600	160	190	220	220
350	1000	590	295	1995	1330	1255	910	318	337	600	600	250	280	310	310
400	1050	680	340	2330	1570	1440	1040	356	375	700	700	420	450	490	490
450	1210	750	375	2430	1640	1540	1090	378	426	700	700	490	510	550	550
500	1315	850	425	2915	1965	1800	1300	421	470	700	700	520	550	590	590
600	1575	1020	510	3495	2355	2160	1560	539	585	700	700	600	620	690	690

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

## HOW THE RUBBER SLEEVES WORK

Matching rubber ring sleeves with stiffener J-rings are placed in the valve housing to seal against the gate when the valve is closed and seal against each other when the valve is open. This tight seal contains the high internal line pressure. Double seated design provides bi-directional flow and shut off.

## ACCESSORIES

- Limit switches.
- PTFE coating of gate.
- Various gate materials optional.



# DUAL COMPACT FLANGED PORTED GATE VALVE (DCFPG)

**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.

- No clogging bonnet to impede flow.
- External epoxy coated.
- Low maintenance requirements.
- O-Ring style gate protects the seat face in the open position.
- As the valve strokes, the seats will clean the gate of material.
- Suitable for wet or dry service.
- Bi-directional flow.
- Packingless design.
- The gate can be coated to eliminate scale build-up.
- Light weight for easier handling.
- No seat cavity where solids can collect and prevent full gate closure.
- Open/closed indicator.
- Lifting lugs.
- Lock out feature.

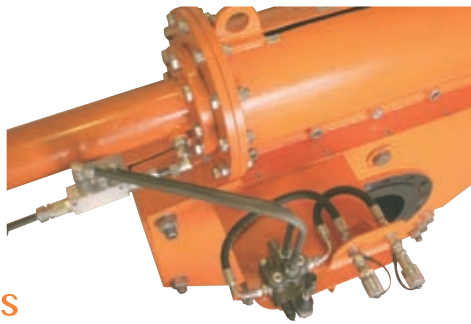


## FEATURES

- 300 PSI (21 Bar).
- Double seat design for heavy duty slurry service.
- Ease of replacement of elastomer sleeves.
- Compact body occupies lower installation footprint.
- Quick installation.
- Self cleaning.
- Bubble tight shutoff, zero downstream leakage.

## PRODUCT SPECIFICATION

<b>BODY:</b>	Flanged Pattern, Cast SG Iron, GR 42 (SABS), Stainless Steel or Fabricated Steel, Epoxy Coated.
<b>ELASTOMER SLEEVES:</b>	Gum Rubber (standard), Nitrile, Vitron, EPDM, Chlorobutyl or Urethane.
<b>RETAINER FLANGES:</b>	Rubber covered Carbon Steel flanges (80mm through to 600mm).
<b>PRESSURE RATING:</b>	DN 80 to DN 600 rated to 300 PSI / 21 Bar using 316SS Gate.
<b>GATE MATERIAL:</b>	316 Stainless Steel standard - 316L, 317L, 17-4PH, Alloy 20, SAF 2205 S/S with optional wear coatings.
<b>DRILLING PATTERNS:</b>	DN 80 to DN 250 drilled and tapped ASME B16.5, DIN, SABS and BS. DN 300 to DN 900 flanges are slotted.
<b>CERTIFICATION TEMPERATURE RATING:</b>	Certified chemical and physical test reports can be supplied. 90°C Maximum.



## HOW THE RUBBER SLEEVES WORK

Matching rubber ring sleeves with stiffener J-Rings are placed in the valve housing to seal against the gate when the valve is in the closed position and seal against the O-Port gate when the valve is in the open position. This tight seal contains the high internal line pressure. Double seated design provides bi-directional flow and shut off.

## ACTUATORS

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

## STANDARD FEATURES - VALVE BODY

- Flush ports on both sides of the valve body.
- Protective spindle cover.
- Drain ports.
- Lubrication ports on both sides of the valve body.
- Adaptable (yoke) design can be filed modified to take air cylinder, gearbox, or hydraulic actuators.
- Lock out, ready for factory supplied lock out pin.

## APPLICATIONS

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

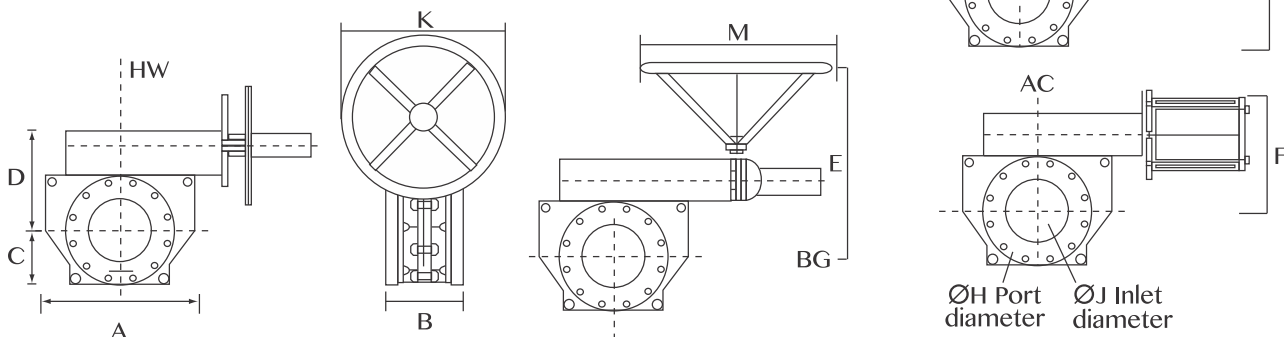
## ACCESSORIES

- Limit switches.
- PTFE coating of gate.
- Various gate materials optional.

## INSTALLATION



## DIMENSIONS AND WEIGHTS



VALVE SIZE (mm)	DIMENSIONS (mm)												VALVE WEIGHT (kg)			
	A0	B	C	D	E	F	G	H0	J0	K0	M0	HW	BG	AC	HYC	
80	365	175	124	363	463	363	250	62	72	300	300	50	60	70	70	
100	400	175	139	428	528	428	400	85	99	300	300	60	90	100	100	
150	490	178	146	525	628	525	500	137	148	500	500	70	100	120	120	
200	640	185	179	640	740	640	600	175	197	500	500	100	130	150	150	
250	769	226	209	752	852	752	700	231	249	500	500	110	140	180	180	
300	891	258	248	890	990	890	810	274	293	600	600	160	190	220	220	
350	986	258	274	980	1080	980	910	318	337	600	600	250	280	310	310	
400	1220	280	305	1100	1200	1100	1000	356	375	700	700	420	450	490	490	
450	1294	312	324	1200	1300	1200	1050	378	426	700	700	490	510	550	550	
500	1422	359	368	1325	1450	1325	1200	421	470	700	700	520	550	590	590	
600	1676	372	419	1500	1600	1500	1400	539	585	700	700	600	620	690	690	

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

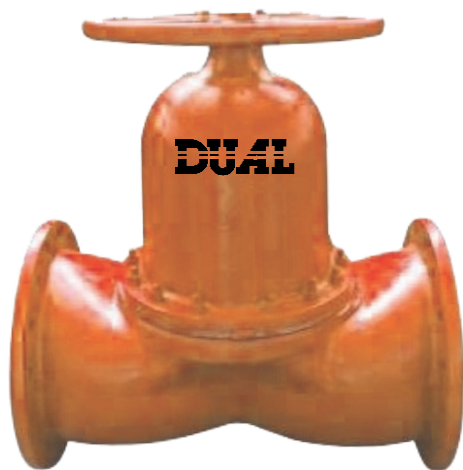






# DUAL WEIR TYPE (WO-TYPE) DIAPHRAGM VALVE (DWTDV)

**DUAL** manufacture 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.



- No glands which require adjustment.
- Pneumatic or hydraulic medium can be used to operate the valve.
- Ideal for remote operations.

## PRODUCT SPECIFICATION

<b>BODY:</b>	Cast Aluminium, Cast Sg42 and Cast Iron.
<b>DIAPHRAGM:</b>	Gum Rubber, Red Rubber, EPDM, Butyl, Chlorobutyl, Neoprene, Polyurethane, Vitron and Hypalon.
<b>PRESSURE RATING:</b>	16 Bar (for higher pressure consult factory).
<b>SIZE RANGE:</b>	50mm - 350mm.
<b>THRUST BEARINGS:</b>	To reduce operating torque (handwheel type).
<b>FLANGED:</b>	Drilled to SABS, ANSI, BS or DIN.
<b>VALVE INTERVALS:</b>	Spindle, Spindle nut, Compressor, Diaphragm.
<b>BODY LININGS:</b>	EPDM, Butyl, Neoprene, ECTFE, Halar or Polyurethane.
<b>MATERIAL CERTIFICATION:</b>	Certified chemical and physical test reports can be supplied.
<b>TEMPERATURE:</b>	-50°C to +140°C

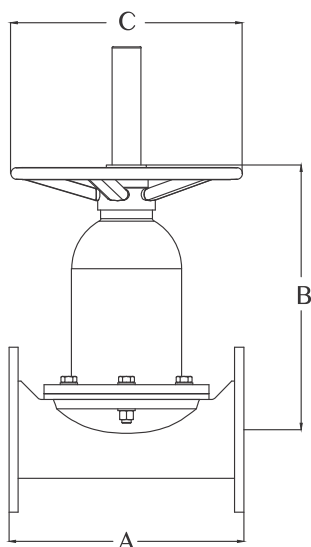
## FEATURES

- Valve can be installed in any position.
- Housing acts as a built in indicator.
- Long operating life.
- Full bore, low friction loss.
- 100% drip tight closure even with solids in the medium.
- Light weight.
- Seals in both directions.
- High flexible diaphragm design reducing closing forces, improves recovery to full open position.
- Enclosed body protects diaphragm from the environment and contaminants in the event of diaphragm failure.
- Fast and easy diaphragm change.
- Single wearing part.

DWTDV

## HOW THE VALVE OPERATES

The valve cycles downwards, the pinch mechanism will start to compress the soft rubber diaphragm from the top of the valve only, therefore achieving a 100% drip tight closure, with solids in the medium.



## APPLICATIONS

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

## ACTUATORS

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

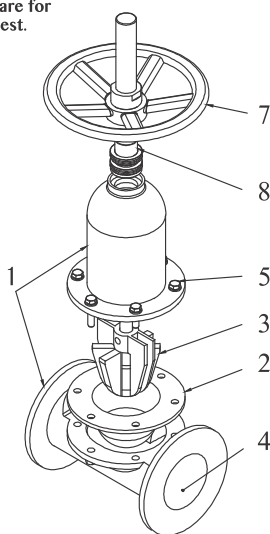
## DIMENSIONS AND WEIGHTS

VALVE SIZE (mm)	F/F		WEIGHT (kg)		
	A	B	C	STEEL	ALUMINIUM
25	127	121	80	5	2
35	146	121	80	6	2
40	159	121	80	10	3
50	191	181	300	12	4
65	216	200	300	20	8
80	254	245	300	30	10
100	305	267	400	35	12
125	356	305	400	50	15
150	406	375	400	70	20
200	521	410	500	100	30
250	635	559	500	185	40
300	749	635	600	200	60
350	980	663	600	450	100

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

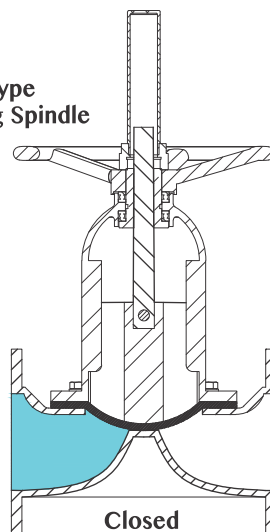
## VALVE DIAPHRAGM

GRADE	MATERIAL
NA	Natural Rubber
Ni	Nitrile Rubber
BY	Butyl
NE	Neoprene
HY	Hypalon
V	Viton
PU	Polyurethane

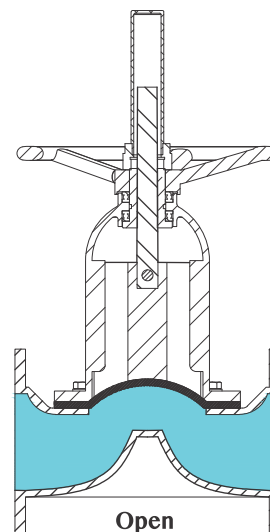


PART	DESCRIPTION	
1	Body/Bonnet	Cast Aluminium or SG Iron
2	Diaphragm	Rubber or Urethane
3	Air Connection	Steel Ball Valve
4	Valve Body Lining	Rubber, Urethane, Halar or Ceramic
5	Bolts and Nuts	Cadmium Plated Steel
6	Paint	Epoxy Powder coated , Rilsan Lined or Painted to Custom spec
7	Hand wheel	Cast SG Iron
8	Rev Nut	Brass

WO Type Rising Spindle

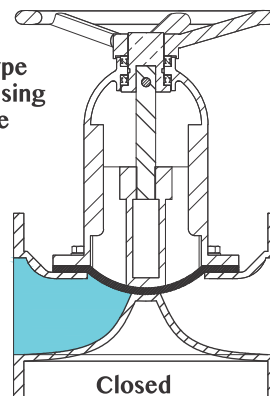


Closed

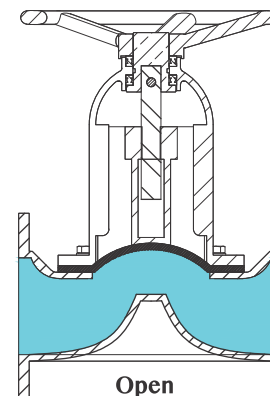


Open

WO Type Non Rising Spindle



Closed



Open



# DUAL STRAIGHT THROUGH DIAPHRAGM VALVE (DSTDV)

**DUAL's** Straight-Through Diaphragm Valve consists of the valve body and a diaphragm. The valve is closed mechanically via movement of a compressor gate which is located above the diaphragm. The valves are well suited for on/off throttling control applications involving slurries, powders, liquids, granulated materials and applications where scale build is a problem.

- Fast and easy diaphragm change.
- Single wearing part.
- Replaceable Urethane diaphragm and body lining.
- No glands which require regular adjustment.
- Flexible reinforced diaphragm.
- Open/closed indicator (non-rising spindle).

## PRODUCT SPECIFICATION



<b>BODY:</b>	Cast Aluminium, Cast SG Iron.
<b>ELASTOMER DIAPHRAGM:</b>	Gum Rubber, Red Rubber, EPDM, Butyl, Chlorobutyl, Neoprene, Polyurethane, Vitron and Hypalon.
<b>SIZE RANGE:</b>	50mm - 350mm.
<b>PRESSURE RATING:</b>	16 Bar (for higher pressure consult factory).
<b>THRUST BEARINGS:</b>	To reduce operating torque (handwheel type).
<b>THREADED BODY:</b>	25mm to 80mm.
<b>FLANGED BODY:</b>	Drilled to SABS, ANSI, BS or DIN.
<b>VALVE INTERVALS:</b>	304 Stainless Steel spindles, Rubber diaphragm.
<b>BODY LINING:</b>	As per Elastomer diaphragm.
<b>MATERIAL CERTIFICATION:</b>	Certified chemical and physical test reports can be supplied.
<b>VALVE TYPE:</b>	Rising and non rising spindle.
<b>TEMPERATURE:</b>	-50°C to +140°C

## FEATURES

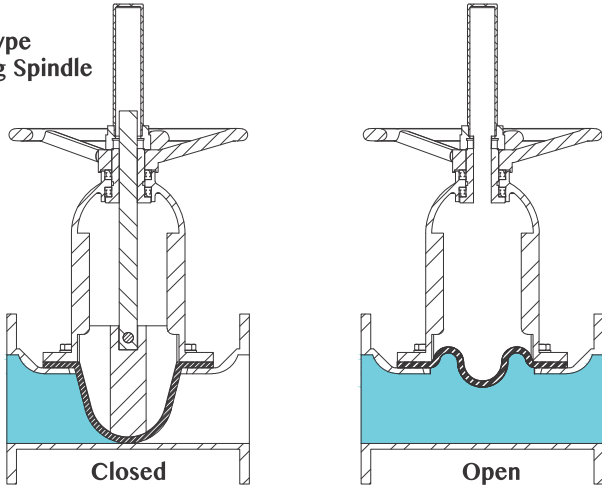
- 240 PSI (16 Bar).
- Thrust bearing for ease of opening and closing (handwheel type).
- Long operating life.
- Full bore, low friction loss.
- 100% drip tight closure even with solids in the medium.
- Light weight.
- Seals in both directions.
- All types of actuators can be fitted.
- Visible spindle indicator.

DSTDV

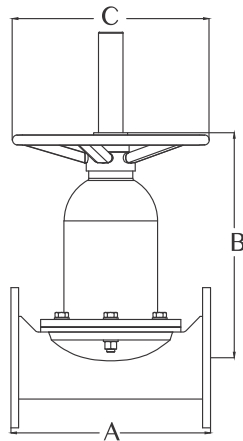
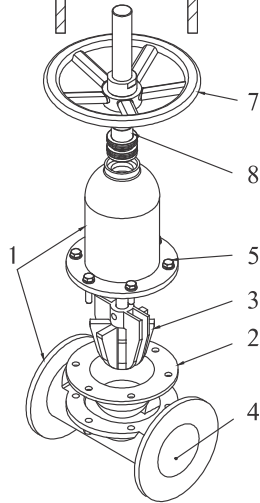
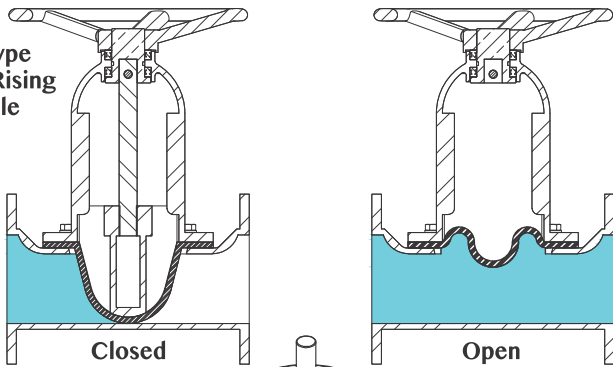
## HOW THE VALVE OPERATES

As the valve cycles downwards, the compressor will start to compress the soft rubber diaphragm, from the top of the valve only, therefore achieving a 100% drip tight closure, even with solids in the medium.

SO Type  
Rising Spindle



SO Type  
Non Rising  
Spindle



PART	DESCRIPTION
1	Body/Bonnet Cast Aluminium or SG Iron
2	Diaphragm Rubber or Urethane
3	Air Connection Steel Ball Valve
4	Valve Body Lining Rubber, Urethane, Halar or Ceramic
5	Bolts and Nuts Cadmium Plated Steel
6	Paint Epoxy Powder coated, Rilsan Lined or Painted to Custom spec
7	Hand wheel Cast SG Iron
8	Rev Nut Brass

## APPLICATIONS

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

## VALVE WORKS ON TAILINGS DAM



## ACTUATORS

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

## DIAPHRAGM MATERIAL

Dual offers the following alternative diaphragm materials, providing chemical and abrasive resistance to most media such as;

- Polurethane.
- Natural Red Rubber.
- Natural Black Rubber.
- Neoprene Rubber.
- Nitrile Rubber.
- EPDM Rubber.
- Hypalon.

## DIMENSIONS AND SPECIFICATIONS

NOMINAL BORE (mm)	A	B	C	WEIGHT (kg)
25	127	121	100	5
32	146	121	100	10
40	159	121	100	12
50	191	181	100	15
65	216	200	100	20
80	254	245	300	30
100	305	267	300	40
125	356	305	300	50
150	400	375	500	70
200	521	410	500	120
250	635	559	500	170
300	749	635	600	420
350	980	664	600	500

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







# DUAL RING SLEEVES (DRS)

**DUAL's** Ring Sleeves have an integrally moulded encapsulated internal J-Ring and is designed to maintain the roundness and support the sleeve under high pressure conditions. The sleeves are available for flanged and wafer type valves.



## FEATURES

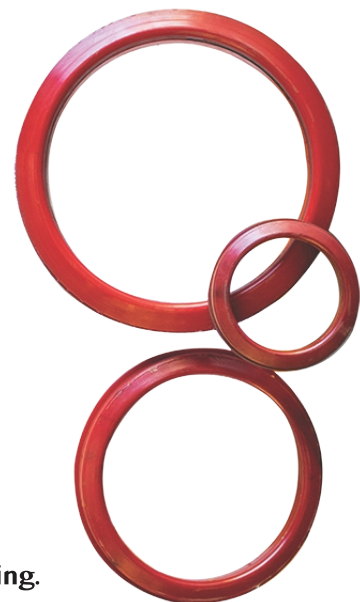
- Excellent wear resistance.
- High corrosive resistance.
- Sleeves act as a pressure vessel.
- High tensile strength.
- Reduces process downtime.
- Long operating lifetime.
- Full bore, low friction loss.
- Easy installation.
- J-Ring prevents over compression.
- Light weight.
- Flexible.
- Replaceable.
- Trouble free operation.
- Steel reinforced J-Ring for higher pressures.
- Tear abrasion and resistance to heat build-up.
- Chemical resistance.
- Custom sleeve designs.

## PRODUCT SPECIFICATION

<b>ELASTOMER SLEEVE MATERIAL:</b>	Gum Black and Red Rubber, EPDM, Butyl, Chlorobutyl, Neoprene, Vitron, Hypalon or Urethane.
<b>SIZE RANGE:</b>	50mm - 1500mm / 1/2" - 60".
<b>PRESSURE RATING:</b>	From vacuum to 80 Bar.
<b>INTERNAL J-RING:</b>	Carbon or Stainless Steel.
<b>SLEEVE INTERNALS:</b>	Resistant to wear and chemicals.
<b>MATERIAL CERTIFICATION:</b>	Certified chemical and physical test reports can be supplied.
<b>TEMPERATURE:</b>	-50°C to +120°C



RUBBER FLANGED RING SLEEVE



WAFER RING SLEEVE

## APPLICATIONS

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

## HOW THE DUAL RING SLEEVE WORKS IN A VALVE

When the gate is open, matching elastomer sleeves seal against each other under a high compression load, creating the valve pressure vessel and provides an unobstructed port, protecting metal parts from the flowing slurry.

As the gate strokes to close, the gate creates a gap between the facings sleeves, allowing any media that could potentially clog or jam the valve to be purged out from between the sleeves and potentially expelled outside the valve housing. When closed, the sleeves seal against the gate face, isolating upstream from downstream providing positive sealing action.

The sleeve has an integrally moulded encapsulated internal J-Ring designed to maintain the roundness of the sleeves, resisting heavy shearing forces during actuation while retaining the internal line pressure.

## GLOBAL LEADER IN SLURRY TECHNOLOGY

Dual Valves is a global leader in slurry valve technology, manufacturing field proven, heavy duty, trouble-free slurry valves for abrasive, corrosive and coarse slurries. Dual's range of valves feature elastomer sleeves offering the ultimate protection against heavy slurries. Our slurry valves provide both high performance and long life wear in the toughest of environments.

## DUAL RING SLEEVE MATERIAL OPTIONS

RUBBER QUALITY	APPLICATION EXAMPLES	TEMPERATURE RANGE	TYPICAL MEDIA
<b>NBR</b> Nitrile Rubber	Oils, fats and hydrocarbon	-30°C to +100°C	Oils, fats, fuels, hydrocarbon, lubricants
<b>NR</b> Natural Rubber	High wear applications	-50°C to +75°C	Abrasive materials, diluted acids, alkali and chemicals
<b>HNBR</b> Hydrogenated Nitrile	High temperature applications	-30°C to +160°C	Oils, fats, fuels, hydrocarbon, lubricants
<b>NRF</b> Natural Rubber Foodstuff Quality White Inner Lining	Foodstuff applications. Fulfils FDA (Food and Drug Administration requirements)	-40°C to +75°C	Media used in food and other CIP (clean-in-place) processes, alcohol
<b>NBRF</b> Nitrile Rubber White Inner Lining	Applications involving fatty foodstuff Fulfils FDA (Food and Drug Administration requirements)	-30°C to +100°C	Vegetable and animal oils and fats
<b>EPDM/B</b> Ethylene Propylene Rubber	Pulp and paper industry's green liquor application	-40°C to +100°C	Green liquor, alkaline and extraneous matter in green liquor processes
<b>CR</b> Chloroprene Rubber	Special- purpose chemical applications • Resilient to ozone and adverse weather	-40°C to +100°C	Chemical, acids, several solvents, aliphatic oils, fats and lubricants
<b>FPM</b> Flurorine Rubber (Viton®)	Special- purpose chemical applications • Resilient to ozone and adverse weather	-20°C to +120°C	Chemicals, aliphatic oils, aromatic and halogenated hydrocarbon
<b>CSM</b> Chloro-Sulphate-Ethylene Rubber (Hypalon®)	Special- purpose chemical applications • Resilient to ozone and averse weather	-40°C to +100°C	Chemicals, acids, several solvents, aliphatic oils, fats and lubricants
<b>IIR</b> Chloro-Butyl Rubber	Special- purpose chemical applications • Impermeable to gas	-40°C to +100°C	Concertrated and acidic chemicals, vegetable oils
<b>PU</b> Polyurethane Lined Sleeve	Abrasive medium applications	-10°C to +80°C	Abrasive materials, diluted chemicals, hydrocarbon oils and lubricants

## DUAL RANGE OF VALVES THAT USE RING SLEEVES

- Dual Pivot Wafer Gate Valve (DPWGV)
- Dual Pivot Flanged Gate Valve (DPFGV)
- Dual Pivot High Pressure Gate Valve (DPHPGV)
- Dual Compact O-Port Gate Valve (DCOPGV)
- Dual Double Non-Return Valve (DDNRV)
- Dual Dashley Double Ball Check Valve (DDV)
- Dual Rotary Disc Sleeve Valve (DRDSV)
- Dual Rotary Disc Sleeve Wafer Gate Valve (DRDSWGV)
- Dual Slurry Swing Check Valve (DSSCV)



DPWGV



DPFGV



DPHPGV



DCOPGV



DDNRV



DDV





# DUAL VALVE DIAPHRAGMS (DVD)

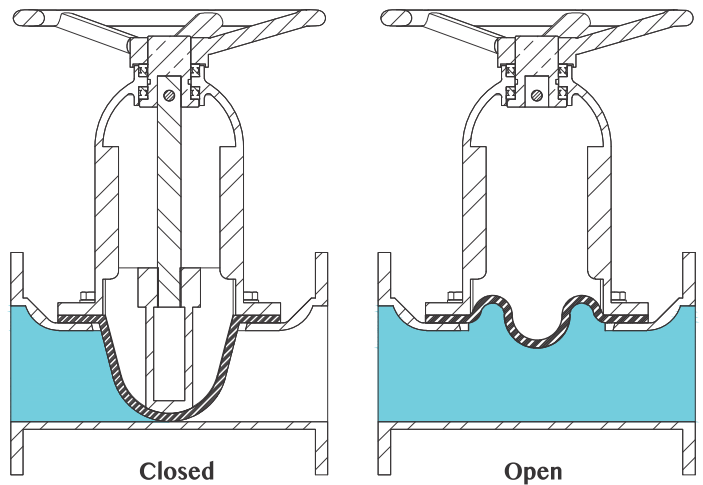
**DUAL** manufactures a comprehensive range of flexible diaphragms for type WO and SO valves. All diaphragms are manufactured to the highest international quality standards. Dual Diaphragms are manufactured in South Africa, using our own techniques and expertise.

The Diaphragms are moulded with reinforced flexible materials and are manufactured of natural and synthetic rubber compounds in sizes varying from 15mm to 350mm.



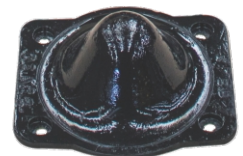
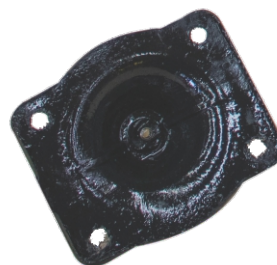
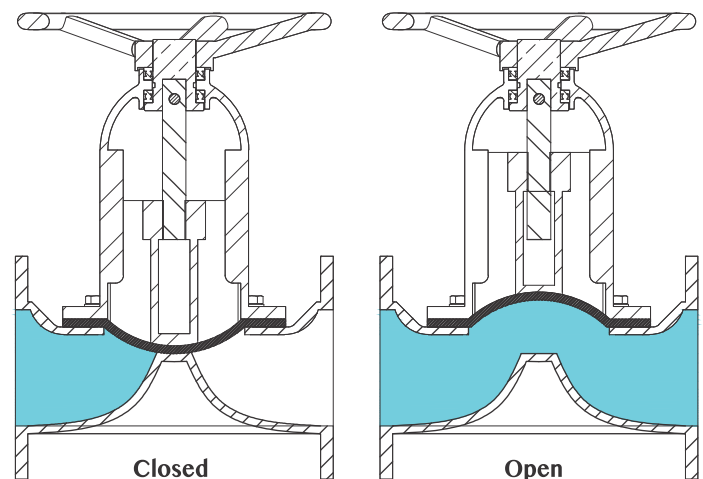
## STRAIGHT ORIFICE TYPE

SO Type Non Rising Spindle



## WEIR ORIFICE TYPE

WO Type Non Rising Spindle



DVD

## GRADES AND APPLICATIONS

GRADE	MATERIAL	SERVICE
NA NAX	Natural Rubber Reinforced Natural Rubber	Abrasive powders, slurries, water purification, inorganic soils, clean compressed air etc. Temperature: -35°C to +80°C Type: WO and SO Diaphragms
NI	Nitrile Rubber	Mineral, animal and vegetable oils, fats, Paraffin, Kerosene and fuel oils. Temperature: -10°C to +100°C Type: WO and SO Diaphragms
BY	Butyl Rubber	Severe acid and Alkali conditions, Sulphuric acid (up to 80% concentration at ambient temperatures), hot water services and applications including sterilisation Temperature: -25°C to +120°C Type: WO and SO Diaphragms
NE	Neoprene Rubber	Compressed air, most gases, animal and vegetable fatty oils and greases. Temperature: -5°C to +120°C Type: WO and SO Diaphragms
HY	Hypalon Rubber	Good acid-ozone resistance plus certain Chlorine services. Temperature: -10°C to +100°C Type: WO and SO Diaphragms
PB	Polytetrafluoroethylene/Butyl	Highest chemical resistance to all fluids, except Alkali metals, suitable to Chlorine. Temperature: -??°C to +??°C Type: WO Diaphragms only
JUM	Natural Gum Rubber	Abrasive powders, slurries under harsh conditions. Capable of higher pressures. Temperature: -35°C to +80°C Type: WO and SO Diaphragms
VITON	Viton Rubber	Abrasive powders, slurries under harsh conditions. Capable of higher pressures. Temperature: -10°C to +200°C Type: WO and SO Diaphragms







# DUAL ROTARY DISC FLANGED SLEEVE VALVE (DRDFS)

**DUAL's** Rotary Disc Flanged 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 sticking 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.



## FEATURES

- Spindle bellows and dust cover.
- Full port design.
- Zero discharge and zero leakage.
- Long wear life (due to rotating gate/disc).
- Self clearing gate action.
- Seals in both directions.
- Wedge for position seal.
- Cut away to clean seating area. (zero pocket).
- Rising spindle.
- Back seat to re-pack gland packing under pressure.
- Replaceable ring sleeve seat and gate.
- Light weight.
- Suitable for dead end service.
- Live load packing gland.
- Easily adapted to suit most actuators.
- Bubble tight shutoff.
- Lock out.

## PRODUCT SPECIFICATION

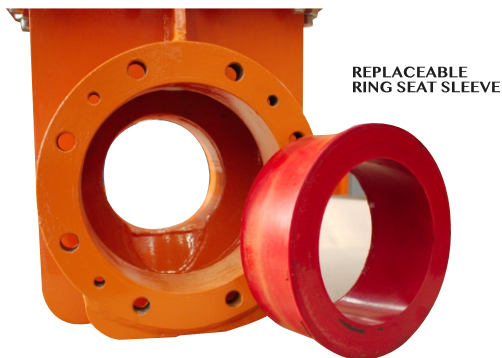
<b>VALVE BODY:</b>	Fabricated Carbon Steel or Stainless Steel.
<b>GATE MATERIAL:</b>	Gate material can be Carbon Steel, Abrasion Resistant Steel or Stainless Steel.
<b>GLAND:</b>	PTFE - Graphite Packing.
<b>DISC SHAPE:</b>	Gate radius to be set for minimum valve height in chest area.
<b>REPLACEABLE RING SLEEVE:</b>	Rubber or Urethane.
<b>THRUST BEARINGS:</b>	To reduce operating torque (handwheel type).
<b>MATERIAL CERTIFICATION:</b>	All wetted parts have certified chemical and physical test reports.
<b>TESTING:</b>	All valves are tested per SABS, ANSI and DIN specifications certified.
<b>PRESSURE RATING:</b>	10 Bar to 51 Bar (150 PSI to 740 PSI).
<b>FLANGES:</b>	Flanges comply with AS, ANSI, DIN, BS and SABS.
<b>BODY LINING:</b>	Rubber, Urethane or Ceramic.

## VALVE OPERATION

As the handwheel is opened or closed, the disc rotates. This happens due to pressure pushing against the disc, causing the disc to touch the valve sleeve and rotate. As the valve is cycled, the disc rotates 100mm, seating in a different position each time. The valve body has a cutaway behind the disc clearing debris away and thus, ensuring the disc closes and seals.

## HOW THE SEAT SLEEVE WORKS

The ring seat sleeve with stiffener ring is placed in the valve housing to seal against the gate when the valve is in its closed position. When the valve is in the open position, the gate is out of the slurry flow, prolonging the life of the valve. The ring sleeve and gate are replaceable.



## ACTUATORS

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

## APPLICATIONS

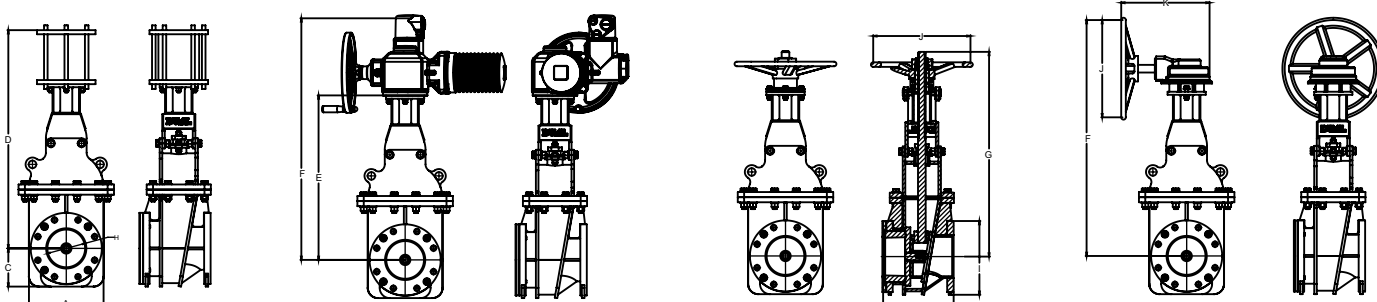
- Mining and mineral processing.
- Power generation.
- Sand and gravel.
- Chemical and soda ash.
- Pulp and paper.
- Environmental and effluent.
- Water purification waste water.

## ACCESSORIES

- Limit switches.
- Positioners.
- Deflector Cone.
- PTFE gate coating.

PART	DESCRIPTION
1	Body Carbon, Steel/Stainless Steel
2	Seat Sleeve Rubber or Urethane
3	Disc Stainless Steel or Other
4	Wedges 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 Cast SG Iron
12	Handwheel Nut Carbon Steel/Stainless Steel
13	Body Lining Rubber, Urethane or Ceramic

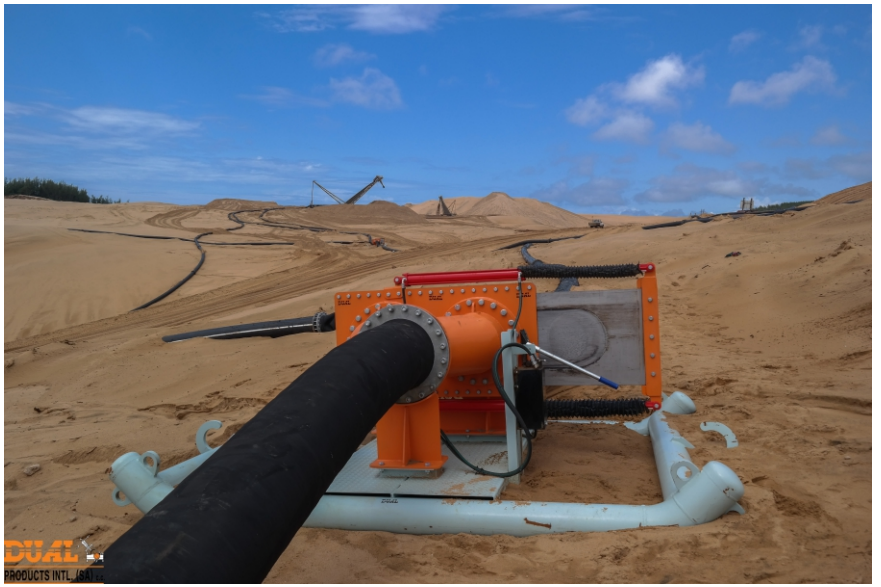
## DIMENSIONS AND SPECIFICATIONS



VALVE SIZE	AØ	B	C	HW D	BG E	AC F	HYC G	HØ	JØ	K	HW M	HW/BG ØN	VALVE WEIGHT (kg)			
													HW	BG	AC	HYC
80	191	175	226	481	544	545	624	62	72	403	176	300	23	58	39	23
100	229	175	280	553	593	609	702	85	99	429	232	300	30	65	60	35
150	280	178	331	712	809	676	864	137	148	455	262	500	45	80	85	45
200	343	185	383	836	379	890	974	175	197	483	340	500	64	97	96	64
250	407	226	421	985	1083	1029	1124	231	249	595	430	500	90	125	141	80
300	483	258	534	1206	1206	1156	1350	274	293	648	430	600	170	194	304	164
350	536	258	578	1355	1355	1358	1469	318	337	671	430	600	200	204	327	188
400	591	280	616	1453	1453	1529	1628	356	375	703	480	700	240	260	512	250
450	639	312	674	1693	1693	1718	1747	378	426	771	480	700	260	397	604	431
500	693	359	721	1828	1828	1867	1891	421	470	795	600	700	330	479	763	545
600	813	372	859	2190	2190	2236	2277	539	585	883	600	700	480	490	993	636
650	870	373	934	-	-	2495	2495	597	636	-	600	-	-	-	993	773
750	1010	397	1054	-	-	2148	2750	680	737	-	600	-	-	-	976	976
900	1180	469	1226	-	-	3318	3320	810	890	-	600	-	-	-	1588	1588
1000	1360	534	1436	-	-	4400	4400	972	1041	-	700	-	-	-	2359	2359
1200	1520	534	1540	-	-	4500	4500	1120	1315	-	700	-	-	-	3162	3162
1400	1720	534	1710	-	-	4655	4655	1244	1525	-	700	-	-	-	3755	3755
1500	1855	534	1955	-	-	4750	4780	1455	1525	-	800	-	-	-	4000	4500

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

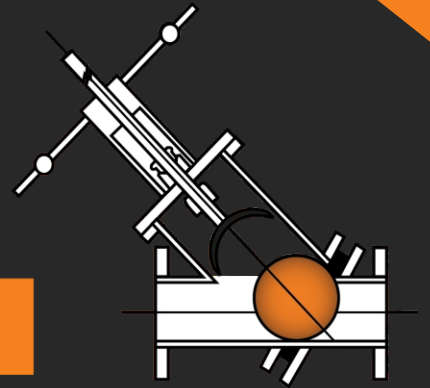








# DUAL



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