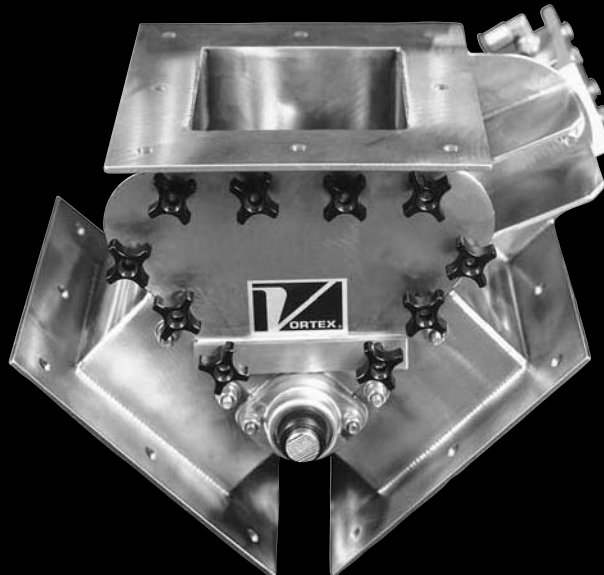
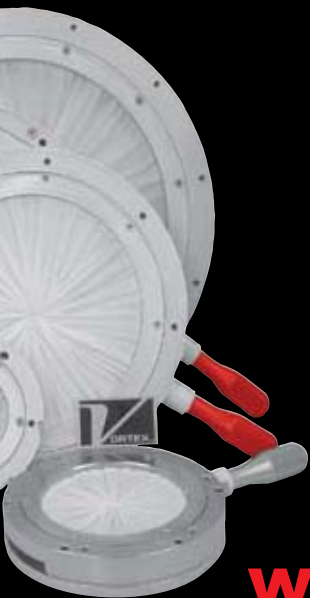
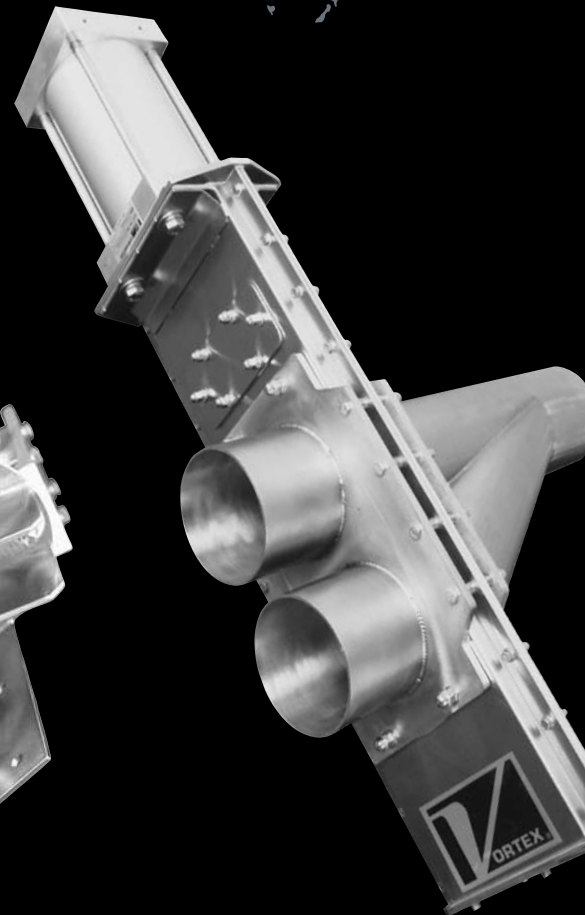




Valves

® Product Catalogue

Handling the world's dry bulk solids®



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Valves

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VORTEX® ABRASIVE DUTY GATE™

The Vortex® Abrasive Duty Gate™ is designed to meet the demanding applications associated with handling material such as sand, gravel, whole grains, and coal. The narrow profile, choice of actuators, and custom rectangular size make this slide gate adaptable to most existing installations. Optional round inlets or outlets flanges and dust return pans are also available. Abrasive Duty Gate™ is designed to eliminate problems, enabling you to meet your objectives by increasing production, while decreasing labour and equipment costs.

Vortex® Abrasive Duty Gate™ Features

- Hardened Steel Rollers with Grease Fittings
- Designed for Tough Abrasive Handling
- Positive Seal of Material
- Seals Protected from Abrasion
- Accurate Metering of Material with Optional Metering Controls
- Easy Installation and Maintenance



Valve Specifications

Size/Bore Options	150mm to 600mm Square, Rectangular, or Round
Media	Abrasives, Granulars
Connection Options	ANSI 150LB, DIN/PN10/PN40, JIS/10K, Custom Flanges Square or Rectangular
Media Temperature	Up to 82°C continuous to 121°C intermittent service, Modifications allow up to 288°C continuous to 316°C intermittent service.
Media Pressure	0 barg, Gravity Flow Only
Metal Construction Options	304 Stainless Steel, Carbon Steel, and/or Abrasion Resistant Carbon Steel
Seal/Seat Material Options	Nylon, PET, Glass Filled Teflon, Carbon Steel
Drive/Actuation Options	Double Acting Air Cylinder and Solenoid Operated Air Control Valve, Electric Actuator, Hydraulic, Hand Wheel, or Chainwheel
Position Confirmation	Magnetic Reed Switch, Proximity Switch, Mechanical Switch
Compliance/Approvals	CE, ATEX
Industry Use	Plastics, Petrochemicals, Chemicals, Minerals, Textiles, Agriculture

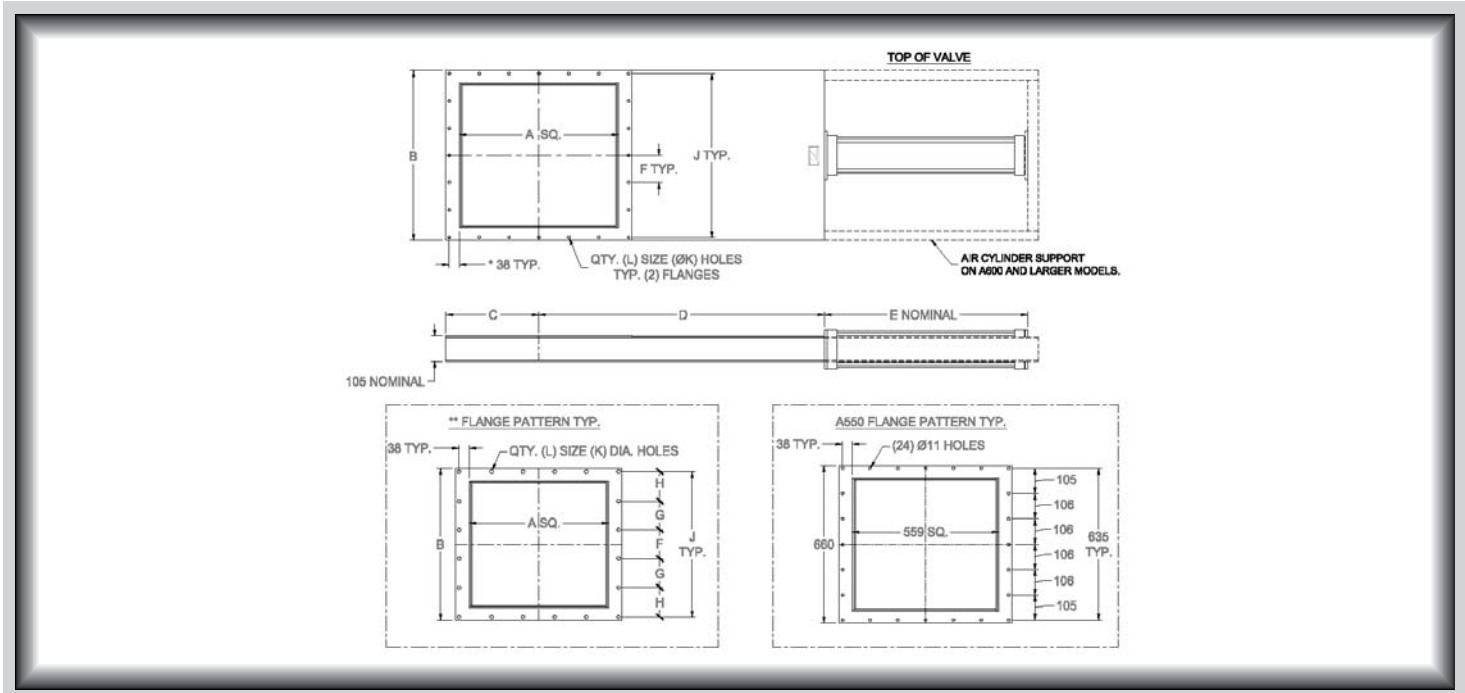


Application Specific Modifications

SC	Slide Blade and frame are 304 stainless steel. Rollers are 440 stainless steel and roller stud bolts are 304 or 18-8 stainless steel.
MG	Air cylinder has a magnetic ring which activates a magnetic reed position indicating switch.
HT3	Modifications are made allowing 121°C continuous to 149°C intermittent service.
HT4	Modifications are made allowing 204°C continuous to 232°C intermittent service.
HT6	Modifications are made allowing 288°C continuous to 316°C intermittent service.
AR	Slide Blade is made of AR plate for handling more abrasive materials.
DS	The dust seal will help to eliminate or reduce dusting to atmosphere. The Enhanced Bonnet Seal option would be preferred for handling rocks with dust present.



VORTEX® ABRASIVE DUTY GATE™ DIMENSIONAL INFORMATION



Model	A	B	C	D	E	F	G	H	J	K	L	WT (kg)
A150	152	254	127	406	279	114	--	--	229	11	8	29
A200	203	305	152	483	330	140	--	--	279	11	8	34
A250	254	356	178	559	381	83	--	--	330	11	16	43
A300	305	406	203	635	432	95	--	--	381	11	16	50
A325**	330	432	216	673	457	133	--	130	394	11	12	59
A350	356	457	229	711	489	108	--	--	432	11	16	68
A375**	381	483	241	749	514	89	89	89	445	11	20	77
A400	406	508	254	787	540	121	--	--	483	11	16	86
A425**	432	533	267	826	565	102	102	95	495	11	20	95
A450	457	559	279	864	591	133	--	--	533	11	16	104
A475**	483	584	292	902	616	111	111	113	559	14	20	113
A500	508	610	305	940	641	146	--	--	584	11	16	122
A525	533	635	318	978	667	121	121	124	610	14	20	132
A550	559	660	330	1016	692	106	--	105	638	11	24	141
A600	610	711	356	1092	816	114	--	--	686	11	24	179

All dimensions are in mm, Information subject to change without notice.

*Typical dimension except for A475, A525, & A550. (Dimension = (J - A) / 2)

**Indicates CEMA standard flange.



Valves

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VORTEX® METERING CONTROLS AND ACCESSORIES

Vortex® offers a variety of controls that allow variable positioning of the gate blade on the opening or closing strokes. Metering controls are an ideal solution for Volume Metering Applications. These assemblies provide more Accurate Batchweights, and Reducing Fill Times. Assemblies can be ordered for the following standard Vortex® Valves: Orifice Gate™, Clear Action Gate™, Roller Gate, Aggregate Gate™, and Gravity Vee Diverter™. Note the Orifice Gate™ must be cycled to the full open position to utilize its self-cleaning feature and avoid packing of material in the seal area.

Vortex® Variable Position Applications

- Batching
- Metering into Screw Conveyors
- Dribble Flow
- Scaling Operations
- Loss in Weight Feeders
- Truck/Rail Loading

Infinite Variable Position

Positions	Infinite Open or Closed
Control Options	Double Acting Air Cylinder with Solenoid Operated Air Control Valve and Fail Safe Close Solenoid
Air Pressure	5.5 barg Constant Air Pressure to Operate Controls
Accuracy	+/- 2% of Total Stroke in Remote Mode or +/- 4% in Manual Mode
Position Confirmation	Input / Output Signal Via Control Panel. Input / Output Signal can be either 4-20mA or 0-10VDC
Compliance/Approvals	NEMA 4, IP65 or ATEX II 3GD with Control Panel Mounted in a Non-Hazardous Environment
System Requirements	PLC with 4-20 mA Input / Output Card or Local Control Only Via Supplied Control Panel



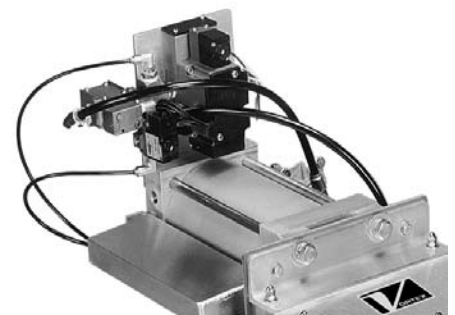
Adjustable Variable Position

Positions	Adjustable Open or Closed Positions for Each Magnetic Reed Switch
Control Options	Double Acting Air Cylinder with Solenoid Operated Air Control Valve and Fail Safe Close Solenoid
Air Pressure	5.5 barg Constant Air Pressure to Operate Controls
Accuracy	+/- 5mm of Set Point
Position Confirmation	Cylinder Mounted Magnetic Reed Switches
Compliance/Approvals	NEMA 4, IP65 or ATEX II 3GD
System Requirements	PLC with Relay Input / Output Card



Variable Position Open (VPO) / Closed (VPC)

Positions	Adjustable Open / Closed Positions for Each Pneumatic Trip Switch
Control Options	Double Acting Air Cylinder with Solenoid Operated Air Control Valve
Air Pressure	5.5 barg Constant Air Pressure to Operate Controls
Accuracy	+/- 2mm of Set Point
Position Confirmation	Cylinder Mounted Magnetic Reed Switches
Compliance/Approvals	NEMA 4, IP65 or Intrinsically Safe
System Requirements	Scale Controller or Relay Logic Circuit





Air Controls	
Valve Configuration	2 Position 4-Way
Compliance/Approvals	IP67, Intrinsically Safe, ATEX Approved - Consult Factory for Specific Rating
Air Pressure	2-10 barg, 5.5 barg Required to Operate Slide Gate
Configuration	Single Coil, Double Coil, Air Pilot
Temperature Range	-5°C to 50°C
Lubrication	Not Required, Medium Range Aniline Oil is Recommended if Used.
Operating Characteristics	*24VDC, 24VAC, 110VAC, 220VAC 50/60 Hz



Magnetic Reed Position Switches	
Function	SPST - Normally Open
Compliance/Approvals	NEMA 6, IP67, *CSA Class I Div 2 Gr. A, CE mark
Temperature Range	-20°C to 80°C
Operating Characteristics	*24-240 VAC 4 Amps max, 5-240 Volts AC/DC 1 Amp max, 5 mA min, 0-120 Volts AC/DC 0.5 amps max



Proximity Switch	
Function	*SPST - NO, SPDT - NO/NC
Compliance/Approvals	*NEMA 3,4X, 6P, IP68, UL Class I Div 1 Gr. A, UL, CSA, CE mark, ATEX Approved - Consult Factory for Specific Rating
Temperature Range	*-25°C to 70°C, -40°C to 105°C
Operating Characteristics	*24-240 VAC/DC 300 mA max 5 mA min, 5-240 Volts AC/DC 2 Amp max
Sensing Range	18mm Barrel 5 mm, 5/8-18 Barrel 2.5mm



Mechanical Switch	
Function	*SPDT - NO/NC, DPDT - 2NO/2NC
Compliance/Approvals	*NEMA 4, 6P, IP67, UL listed Class I Div 1 Gr. B, UL, CSA, CE mark, ATEX Approved - Consult Factory for Specific Rating
Temperature Range	*-30°C to 85°C
Operating Characteristics	*0-600 VAC/DC 10A max
Connection Type	1/2 NPT Conduit



Pre Wire Terminal Box	
Application	Can be Applied to All Slide Gates and Diverter Valves. Pre-wired to All Air Controls and Switches. Can be Used with Metering Control Assemblies.
Compliance/Approvals	*Nema 4, Nema 7/9, ATEX Approved - Consult Factory for Specific Rating
Temperature Range	*-20°C to 70°C
Terminal Box	**Painted Carbon Steel, Fiberglass or similar
Connection Type	1/2 Conduit, Strain Relief Connectors



*Consult factory for specific information and configuration
 **Custom configurations available

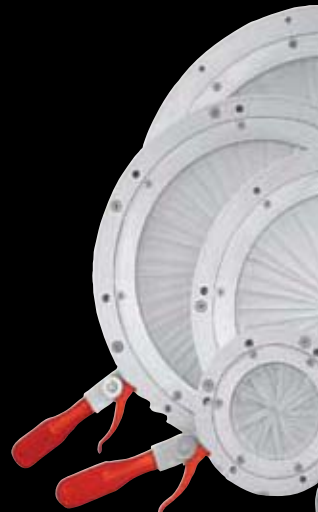
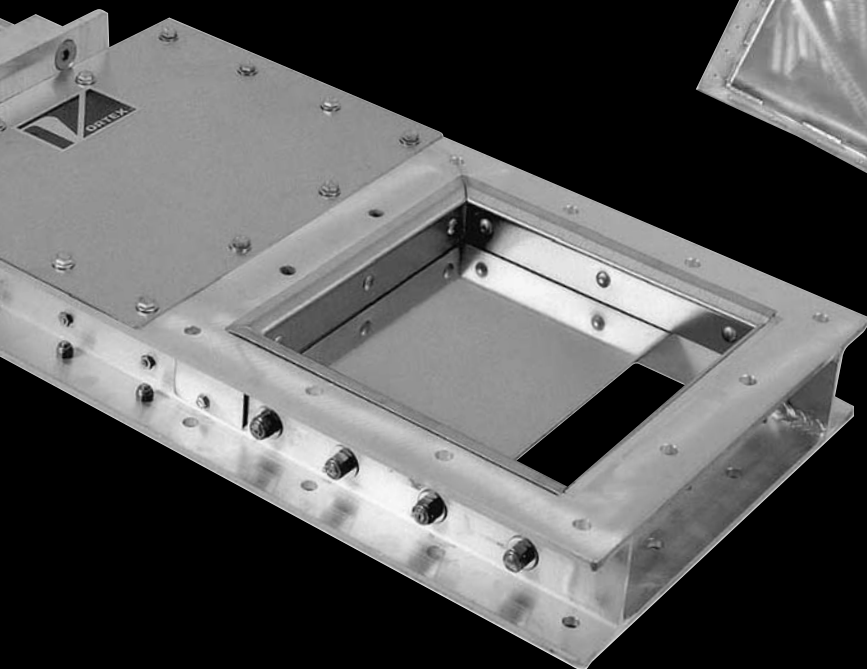
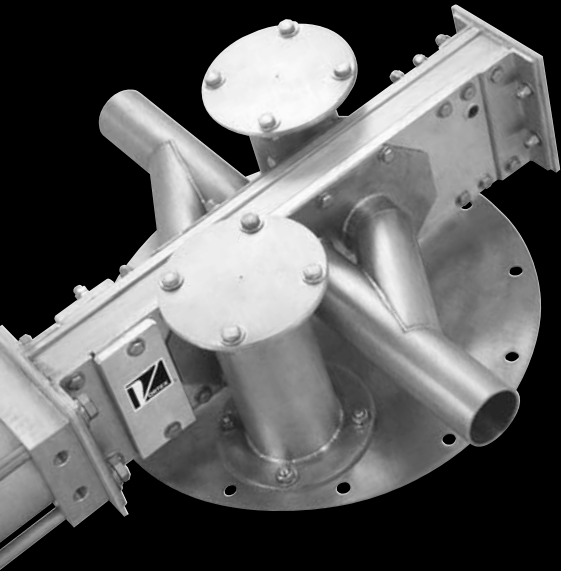


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Slide Gates, Diverter Valves, and Iris Valves



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