



# Valves

Handling the world's dry bulk solids®

## VORTEX® QUANTUM® ORIFICE GATE™

The patented Quantum® Series Orifice Gate™ is specifically designed to handle dry bulk solids in gravity flow, dilute phase, or vacuum conveying systems. A full flow orifice provides unrestricted conveying of material with no disk or ledges to impede flow or cause material bridging. The gate seat and live-loaded seals are shielded from blast abrasion by a metal insert, which provides a smooth bore through the valve improving performance and decreasing any pressure drop across the orifice. By design, the valve “self cleans” material from the seat on each stroke of the valve blade, improving overall seat life. The Quantum® Series Orifice Gate™ is designed to eliminate problems, increasing production, while decreasing labour and equipment costs.

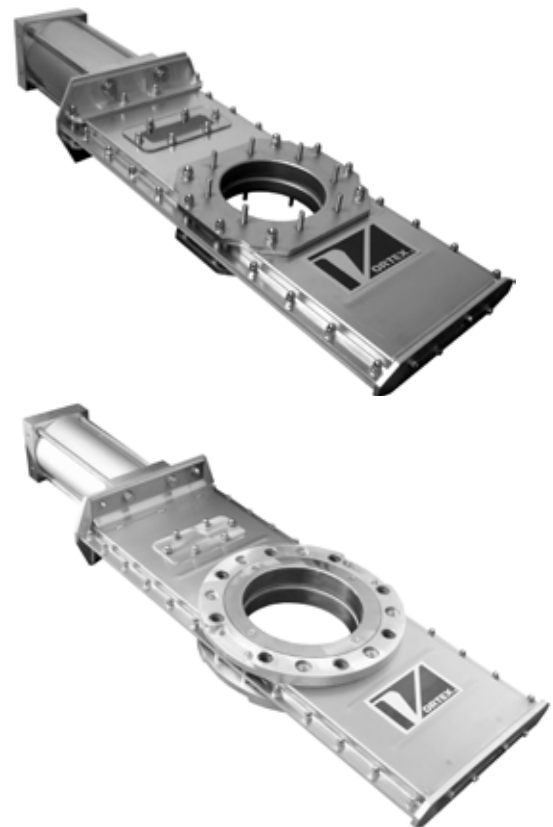
### Vortex® Quantum® Series Orifice Gate™ Features

- Self-Cleaning Action, No Material Build-Up
- Smooth, Unobstructed Bore for Unrestricted Flow of Material
- Seal Protected from Abrasion
- Accurate Metering of Material with Optional Metering Controls
- Easy Installation and Maintenance
- Air Cylinder Model Includes Magnetic Piston



### Valve Specifications

<b>Size/Bore Options</b>	50mm to 350mm Diameters
<b>Media</b>	Powder, Pellets, Granulars
<b>Connection Options</b>	SVC Standard Stud Pattern, ANSI, DIN, JIS, and Custom Flanges available
<b>Media Temperature</b>	Up to 82°C continuous to 121°C intermittent service, Modifications allow up to 204°C continuous to 232°C intermittent service
<b>Media Pressure</b>	Up to 15 psig, -0.1 MPa +0.1 MPa, 1 barg, depending on size
<b>Metal Construction Options</b>	304 or 316L Stainless Steel, Aluminium, and/or Carbon Steel
<b>Seal/Seat Material Options</b>	Nylon, PET, UHMW, Glass Filled Teflon, Rubber, and/or Silicon
<b>Drive/Actuation Options</b>	Double Acting Air Cylinder and Solenoid Operated Air Control Valve, Electric Actuator, Hand Crank, Chain Wheel, Hydraulic
<b>Position Confirmation</b>	Magnetic Reed Switch, Proximity Switch, or Mechanical Switch
<b>Compliance/Approvals</b>	CE, ATEX, FDA
<b>Industry Use</b>	Plastics, Petrochemicals, Chemicals, Foods, Minerals, Textiles, Agriculture



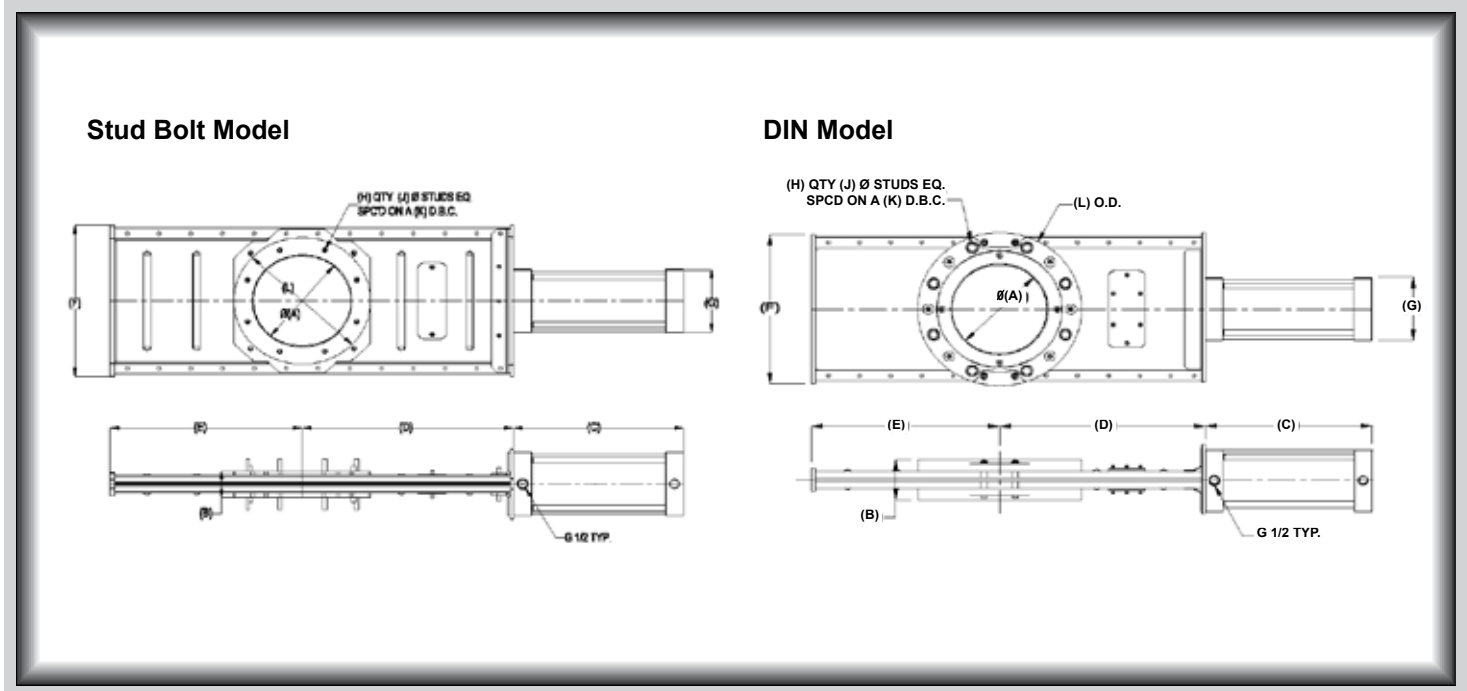
Patent No. 7464913

### Application Specific Modifications

<b>G</b>	Valve constructed of painted mild steel body and mounting flange with 304 or 316L stainless steel material contact.
<b>H</b>	Valve constructed of aluminium body and mounting flange with aluminium and stainless steel material contact.
<b>F</b>	Valve constructed of aluminium body with 304 or 316L stainless steel mounting flange and material contact.
<b>J</b>	Valve constructed of 304 stainless steel body and mounting flange with 304 or 316L stainless steel material contact.
<b>HT3</b>	Modifications are made allowing 121°C continuous to 149°C intermittent service.
<b>HT4</b>	Modifications are made allowing up to 204°C continuous to 232°C intermittent service.
<b>WS1</b>	Slide blade is electro-polished. Polyethylene Terephthalate (PET) pressure plate seals replace Nylon.



## VORTEX® QUANTUM® ORIFICE GATE™ DIMENSIONAL INFORMATION



Stud Bolt Model	A	B	C	D	E	F	G	H	J	K	L	WT (kg)
GRA50-F	44	54	171	191	152	181	86	4	M8 x 1.25 x 29	99	121	8
GRA75-F	70	54	216	227	200	206	105	4	M8 x 1.25 x 29	127	146	12
GRA100-F	95	60	241	276	235	232	130	6	M8 x 1.25 x 25	140	171	15
GRA125-F	124	60	267	319	276	257	130	8	M8 x 1.25 x 25	165	191	17
GRA150-F	149	60	298	357	314	283	140	8	M8 x 1.25 x 25	191	216	20
GRA200-F	200	60	349	434	391	333	140	8	M8 x 1.25 x 25	241	267	25
GRA250-F	251	67	425	511	467	387	165	8	M8 x 1.25 x 29	292	318	41
GRA300-F	302	67	476	588	543	441	165	12	M8 x 1.25 x 29	351	381	49
GRA350-F	352	67	527	675	619	492	165	12	M10 x 1.5 x 29	406	432	64

DIN Bolt Model	A	B	C	D	E	F	G	H	J	K	L	WT (kg)
GRA50-F-DIN	44	86	171	191	152	181	86	4	M16-2.0	125	165	15
GRA80-F-DIN	70	86	216	227	200	206	105	8	M16-2.0	160	200	15
GRA100-F-DIN	95	76	241	276	235	232	130	8	M16-2.0	180	220	17
GRA125-F-DIN	124	89	267	319	276	257	130	8	M16-2.0	210	250	19
GRA150-F-DIN	149	89	298	357	314	283	140	8	M20-2.5	240	285	23
GRA200-F-DIN	200	89	349	434	391	333	140	8	M20-2.5	295	340	28
GRA250-F-DIN	251	111	425	511	467	387	165	12	M20-2.5	350	395	43
GRA300-F-DIN	302	111	476	588	543	441	165	12	M20-2.5	400	445	52
GRA350-F-DIN	352	117	527	675	619	492	165	16	M20-2.5	460	505	66

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

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