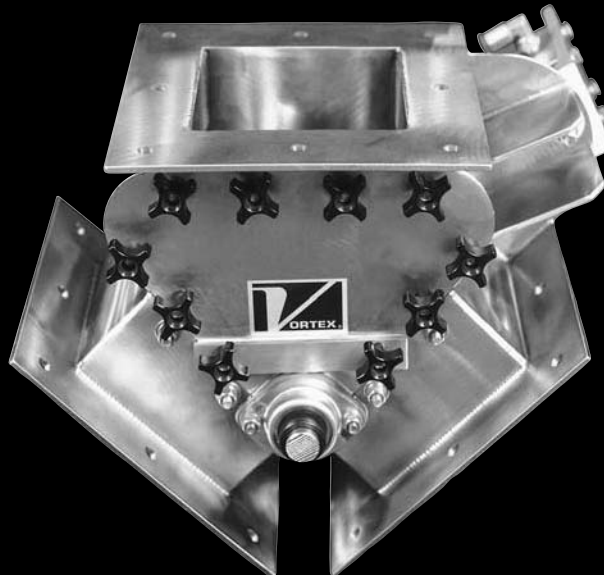
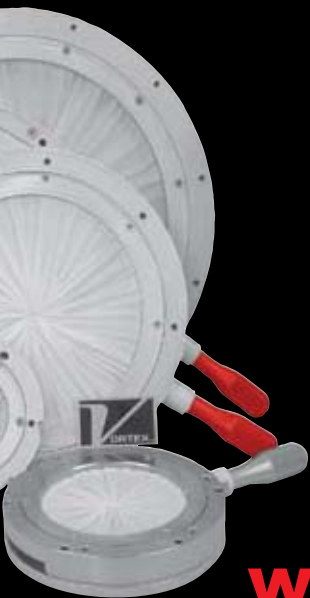
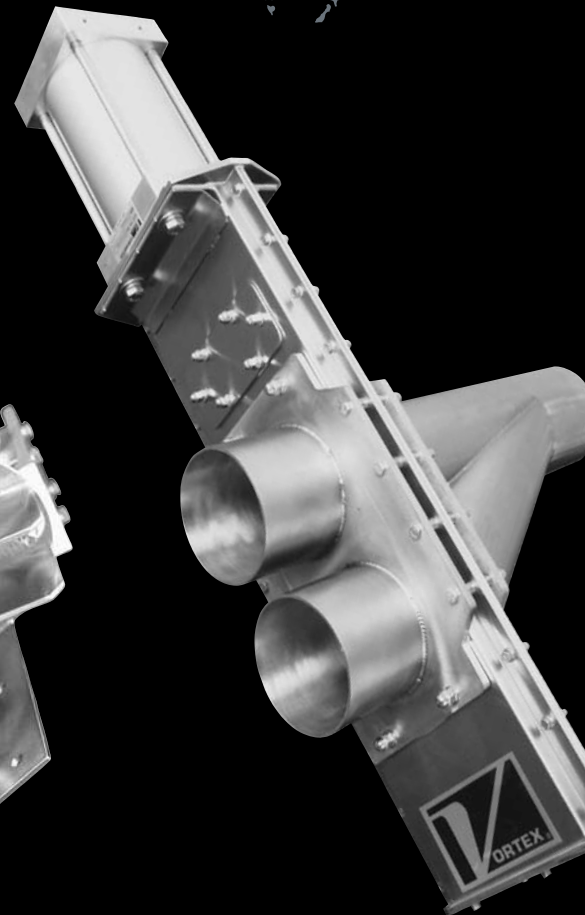




Valves

Product Catalogue

Handling the world's dry bulk solids®



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Pellets



Abrasives

Slide Gates

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Valves

Handling the world's dry bulk solids®

VORTEX® QUANTUM™ ORIFICE GATE™

The patent pending 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, enabling you to meet your objectives by increasing production, while decreasing labour and equipment costs.

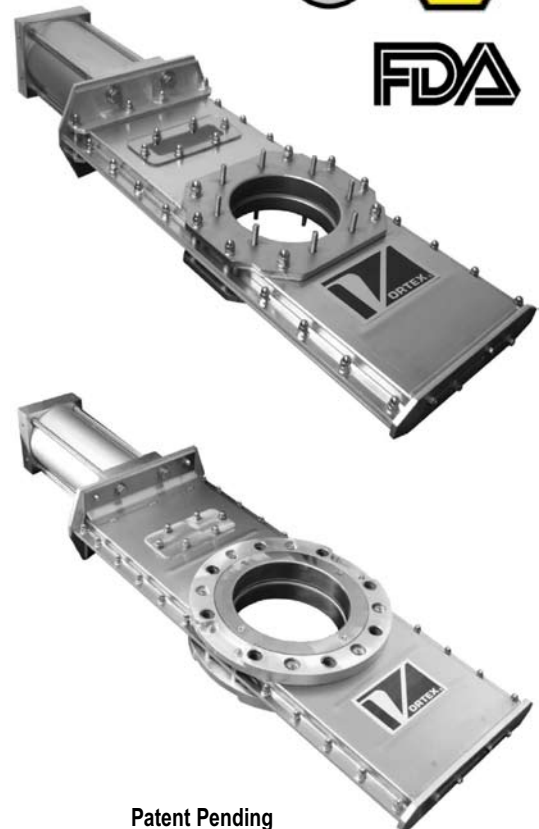
Vortex® Quantum™ Series Orifice Gate™ Features

- 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



Valve Specifications

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



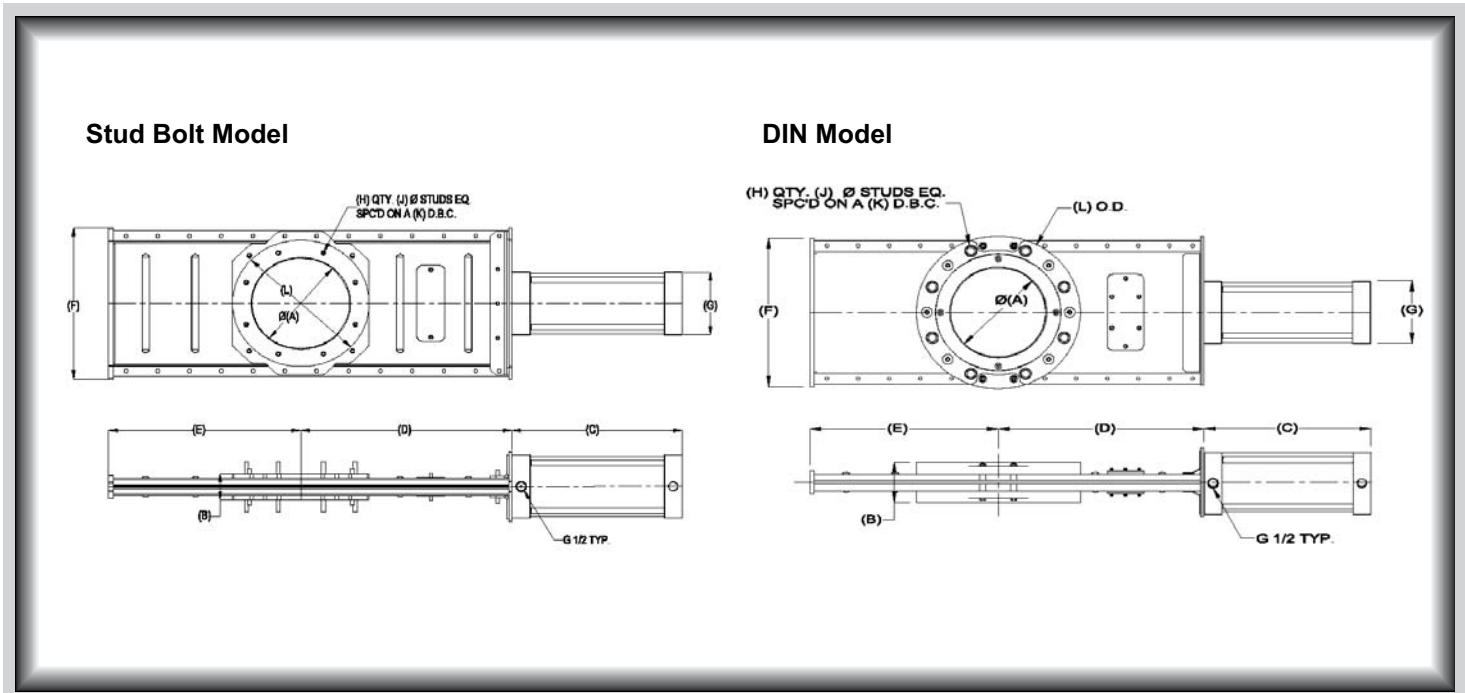
Patent Pending

Application Specific Modifications

| | |
|------------|--|
| G | Valve constructed of painted mild steel body and mounting flange with 304 or 316L stainless steel material contact. |
| H | Valve constructed of aluminium body and mounting flange with aluminium and stainless steel material contact. |
| F | Valve constructed of aluminium body with 304 or 316L stainless steel mounting flange and material contact. |
| J | Valve constructed of 304 stainless steel body and mounting flange with 304 or 316L stainless steel material contact. |
| HT3 | Modifications are made allowing 121°C continuous to 149°C intermittent service. |
| HT4 | Modifications are made allowing up to 204°C continuous to 232°C intermittent service. |
| WS1 | 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 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.



Valves

Handling the world's dry bulk solids®

VORTEX® HDP® SLIDE GATE™

The unique “rising” blade design of the patented Vortex® HDP® Slide Gate sets itself apart from traditional industry slide gates by providing positive material shut-off in applications. The HDP® offers the durability and efficiency required to meet today’s material processing demands. Traditional slide gates or butterfly valves are designed to handle gases and liquids, not dry materials. These valves rely on soft seals susceptible to blast abrasion and material packing, eventually allowing leakage of air and material through the valve or to the atmosphere. This causes the need for frequent valve maintenance, production inefficiencies, and unsanitary plant environments. The Vortex® HDP® Slide Gate is designed to prevent these problems, enabling you to meet your objectives by increasing production, while decreasing labour and equipment costs.

Vortex® HDP® Slide Gate Features

- Designed to Handle Abrasive or Sticky Materials
- Positive Seal of Conveying Air and Fine Powders
- Seals Protected from Abrasion
- Long Service Life
- Easy Installation and Maintenance



Valve Specifications

| | |
|----------------------------|--|
| Size/Bore Options | 100mm to 400mm Diameters |
| Media | Powder, Pellets, Granulars |
| Connection | ANSI, DIN, JIS, Custom Flanges |
| Media Temperature | Up to 121°C continuous to 149°C intermittent service, Modifications allow up to 204°C continuous to 232°C intermittent service |
| Media Pressure | Up to +0.5 MPa, 5 barg, 75 psig, depending on size |
| Metal Construction Options | 304, 316L Stainless Steel, Aluminium, and or Carbon Steel |
| Seal/Seat Material Options | Nylon, PET, UHMW, Glass Filled Teflon, Rubber, and/or Silicon |
| Drive/Actuation Options | Double Acting Air Cylinder and Solenoid Operated Air Control Valve |
| Position Confirmation | Magnetic Reed Switch |
| Compliance/Approvals | CE, ATEX, FDA |
| Industry Use | Plastics, Petrochemicals, Chemicals, Foods, Minerals, Textiles, Agriculture |



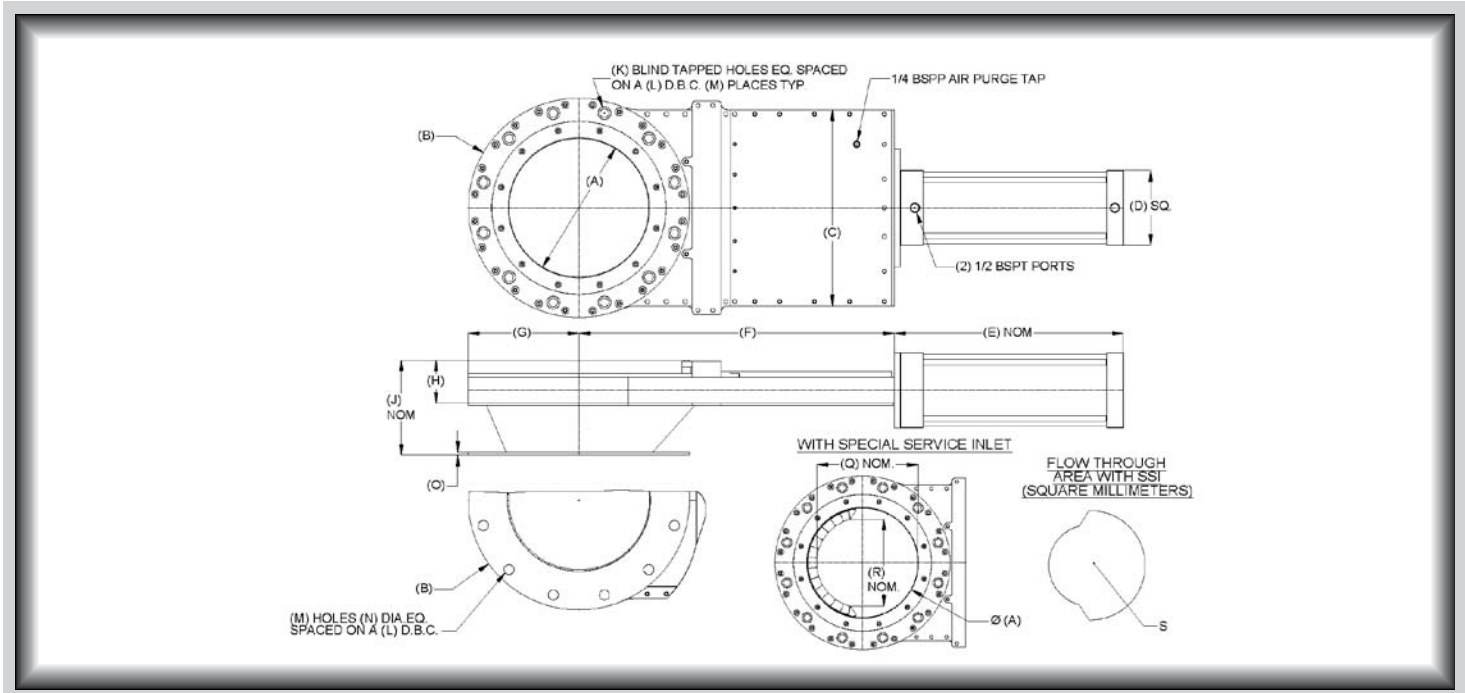
Patent No. 7163191
Patent No. 7163191

Application Specific Modifications

| | |
|-----|--|
| SC | Material contact is 304 Stainless Steel. Replace HR Carbon Steel Insert Flange and Ring, Upper Main Flange, Forward Liner, Forward Bonnet Seal Retainer, and Outlet Return Pan with 304 Stainless Steel. |
| S | Material contact is 316L stainless steel. Replace HR Carbon Steel Insert Flange and Ring, Upper Main Flange, Forward Liner, Forward Bonnet Seal Retainer, and Outlet Return Pan with 316L Stainless Steel. |
| MG | Air cylinder has a magnetic ring, which activates a magnetic reed position indication switch. |
| PET | PET replaces Nylon for the Blade Support Guides. |
| DIN | Replace Inlet ANSI pattern Flange with flange pattern to match DIN mounting pattern. |
| HT4 | Modifications are made allowing 204°C continuous to 232°C intermittent service. |
| SSI | Add welded integral Special Service Inlet to standard Insert Flange and Insert Ring Assembly. |



VORTEX® HDP® SLIDE GATE™ DIMENSIONAL INFORMATION



| Model | A | B | C | D | E | F | G | H | J | K | L | M | N | O | Q | R | S | WT (kg) |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------------|-----|----|----|----|-----|-----|------|---------|
| HDP100 | 100 | 229 | 229 | 130 | 266 | 349 | 114 | 95 | 197 | M16-2.0 x 18 | 180 | 8 | 18 | 6 | 95 | 51 | 195 | 34 |
| HDP150 | 150 | 279 | 279 | 140 | 324 | 422 | 140 | 95 | 197 | M20-2.5 x 25 | 240 | 8 | 22 | 6 | 127 | 98 | 522 | 46 |
| HDP200 | 200 | 343 | 330 | 140 | 362 | 508 | 171 | 95 | 197 | M20-2.5 x 25 | 295 | 8 | 22 | 6 | 178 | 146 | 1010 | 60 |
| HDP250 | 250 | 406 | 381 | 165 | 449 | 603 | 203 | 95 | 197 | M20-2.5 x 25 | 350 | 12 | 22 | 6 | 229 | 197 | 1659 | 80 |
| HDP300 | 300 | 483 | 432 | 165 | 500 | 689 | 241 | 95 | 210 | M20-2.5 x 25 | 400 | 12 | 22 | 6 | 295 | 244 | 2467 | 102 |
| HDP350 | 350 | 533 | 521 | 216 | 557 | 803 | 267 | 117 | 232 | M20-2.5 x 25 | 460 | 16 | 22 | 13 | 333 | 295 | 3410 | 155 |
| HDP400 | 400 | 597 | 572 | 216 | 621 | 918 | 298 | 117 | 232 | M24-3.0 x 32 | 515 | 16 | 26 | 13 | 384 | 343 | 4536 | 193 |

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



Valves

Handling the world's dry bulk solids®

VORTEX® CLEAR ACTION GATE™

The patented Vortex® Clear Action Gate™ is a problem solver specifically designed for demanding dry bulk material applications. Patented design concepts, specialized machining, and materials of construction produce a high quality yet economical valve for use in pneumatic conveying systems up to 15 PSIG (1 Barg). Traditional knife gates or butterfly valves are designed to handle gases and liquids, not dry materials. These valves rely on soft rubber seals, which erode or tear away during use, allowing leakage of air and material through the valve or into the plant's atmosphere. This causes the frequent need for valve maintenance, production inefficiencies, and unsanitary plant environments. The Clear Action Gate™ is designed to eliminate these problems, enabling you to meet your objectives by increasing production, while decreasing labour and equipment costs.

Vortex® Clear Action Gate™ Features

- Self-Cleaning Action on Closure, No Material Build-Up
- Positive Seal Across the Valve to Atmosphere
- Smooth, Unobstructed Bore for Unrestricted Flow of Material
- Seal Protected from Blast Abrasion
- Accurate Metering of Materials with Optional Metering Controls
- Easy Installation and Maintenance



Valve Specifications

| | |
|----------------------------|---|
| Size/Bore Options | 150mm to 400mm Diameters |
| Media | Powder, Pellets, Granulars |
| Connection Options | SVC Standard Stud Pattern, ANSI, DIN, JIS, Custom Flanges Available |
| Media Temperature | Up to 121°F continuous to 149°F intermittent service |
| Media Pressure | Up to 15 psig, -0.1 MPa +0.1 MPa, 1 barg, depending on size |
| Metal Construction Options | 304 or 316L Stainless Steel, or Aluminium |
| Seal/Seat Material Options | Nylon, PET, Natural Rubber, and/or Silicon |
| Drive/Actuation Options | Double Acting Air Cylinder and Solenoid Operated Air Control Valve, Electric Actuator, Hand Crank |
| Position Confirmation | Magnetic Reed Switch, Proximity Switch, or Mechanical Switch |
| Compliance/Approvals | CE, ATEX, FDA |
| Industry Use | Plastics, Petrochemicals, Chemicals, Foods, Minerals, Textiles, Agriculture |



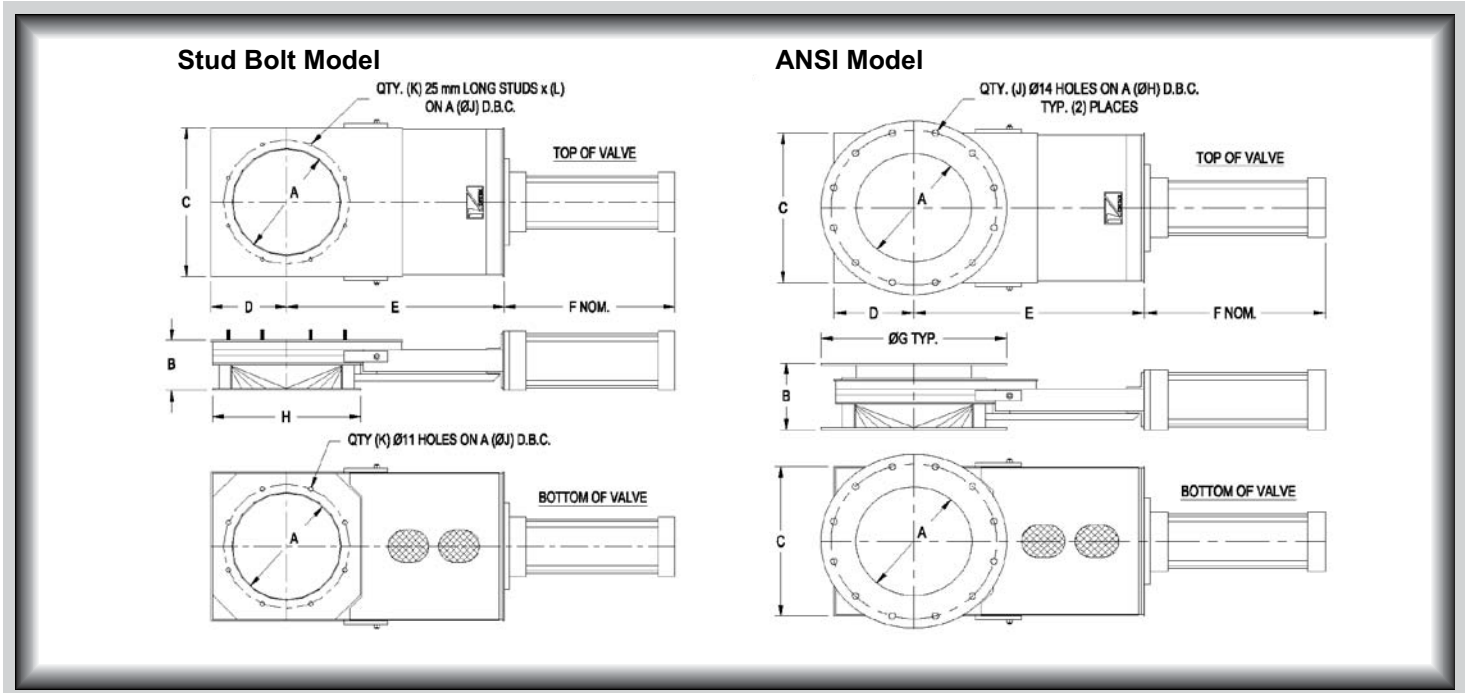
Patent No. 4938250

Application Specific Modifications

| | |
|-----|--|
| S | Material contact is 316L stainless steel. |
| MG | Air cylinder has a magnetic ring which activates a magnetic reed position indicating switch. |
| GP | Internal welds and surfaces are ground and polished. |
| P | The gate inlet and outlet have 7 gauge flanges with bolt pattern to match a #125/150 ANSI bolt pattern |
| WS1 | Gate Slide Blade is electro-polished. Polyethylene Terephthalate (PET) dust seals are used to replace Nylon. |



VORTEX® CLEAR ACTION GATE™ DIMENSIONAL INFORMATION



| Stud Bolt Model | A | B | C | D | E | F | G | H | J | K | L | WT (kg) |
|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----------|---------|
| JA06 | 149 | 95 | 248 | 124 | 352 | 295 | 152 | 241 | 191 | 8 | 5/16 UNC | 25 |
| JA08 | 200 | 95 | 298 | 149 | 429 | 346 | 203 | 292 | 241 | 8 | 5/16 UNC | 30 |
| JA10 | 251 | 117 | 349 | 175 | 505 | 419 | 254 | 343 | 292 | 8 | 5/16 UNC | 34 |
| JA12 | 302 | 137 | 400 | 200 | 581 | 476 | 305 | 394 | 351 | 12 | 5/16 UNC | 41 |
| JA14 | 352 | 149 | 451 | 225 | 657 | 521 | 356 | 445 | 402 | 12 | 3/8 UNC | 59 |
| JA16 | 403 | 162 | 495 | 248 | 737 | 578 | 406 | 495 | 457 | 16 | 3/8 UNC | 75 |

| ANSI Model | A | B | C | D | E | F | G | H | J | WT (kg) |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|----|---------|
| JA06-P | 149 | 133 | 248 | 124 | 352 | 292 | 279 | 241 | 8 | 27 |
| JA08-P | 200 | 133 | 298 | 149 | 429 | 343 | 343 | 298 | 8 | 32 |
| JA10-P | 251 | 156 | 349 | 175 | 505 | 419 | 406 | 362 | 12 | 36 |
| JA12-P | 302 | 162 | 400 | 200 | 581 | 476 | 483 | 432 | 12 | 45 |
| JA14-P | 352 | 184 | 451 | 225 | 657 | 521 | 533 | 476 | 12 | 64 |
| JA16-P | 403 | 200 | 495 | 248 | 737 | 578 | 597 | 540 | 16 | 82 |

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



Valves

Handling the world's dry bulk solids®

VORTEX® QUICK CLEAN ORIFICE GATE™

The Vortex® Quick Clean Orifice Gate™ is a Clean Out of Place gate valve designed for frequent cleaning. The valve features a full-port opening and self-cleaning design. It can be disassembled and assembled in minutes without any tools. The valve can be modified to a USDA Dairy Standard Accepted rating and is an excellent choice for applications requiring daily sanitation of equipment. The Quick Clean Orifice Gate™ is designed to eliminate problems, enabling you to meet your objectives by increasing production, while decreasing labour and equipment costs.

Vortex® Quick Clean Orifice Gate™ Features

- FDA Approved Materials, USDA Dairy Standard Accepted Available
- Positive Seal of Dust and Fine Powders
- Valve Internals Accessed without Tools
- Easy Installation and Maintenance



Valve Specifications

| | |
|----------------------------|---|
| Size/Bore Options | 50mm to 200mm Diameters |
| Media | Powder, Pellets, Granulars |
| Connection | Ferule Connection, and/or Tube Stub |
| Media Temperature | Up to 82°C continuous service, Modifications allow up to 121°C continuous service |
| Media Pressure | 0 barg, Gravity Flow Only |
| Metal Construction Options | 304 or 316L Stainless Steel Valve Body |
| Seal/Seat Material Options | PET, Silicon Sponge, and/or USDA Dairy rated Silicon |
| Drive/Actuation Options | Double Acting Air Cylinder with Solenoid Operated Air Control Valve |
| Position Confirmation | Magnetic Reed Switch |
| Compliance/Approvals | CE, ATEX, FDA, USDA |
| Industry Use | Pharmaceuticals, Pigments, Chemicals, Dairy |



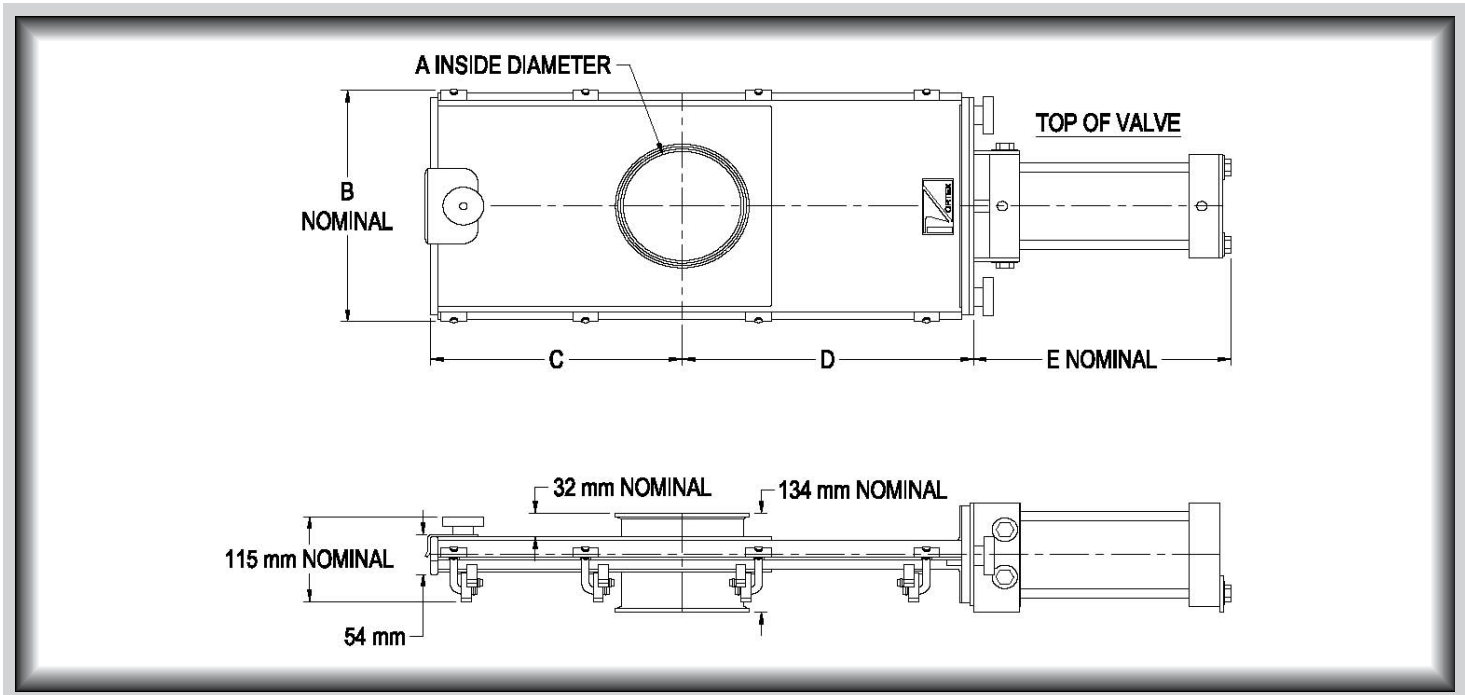
Patent No. 5938175

Application Specific Modifications

| | |
|-----|---|
| S | Material contact is 316L stainless steel. |
| NP | Nickel plated aluminium air cylinder. |
| SAN | USDA Dairy Standard Accepted. |



VORTEX® QUICK CLEAN ORIFICE GATE™ DIMENSIONAL INFORMATION



| Model | Tube Size | A | B | C | D | E | WT (kg) |
|-------|-----------|-----|-----|-----|-----|-----|---------|
| Q02 | 51 | 48 | 203 | 162 | 213 | 213 | 14 |
| Q03 | 76 | 73 | 232 | 200 | 251 | 238 | 18 |
| Q04 | 102 | 98 | 260 | 238 | 289 | 264 | 23 |
| Q05 | 127 | 124 | 286 | 276 | 327 | 295 | 27 |
| Q06 | 152 | 149 | 311 | 314 | 365 | 321 | 36 |
| Q08 | 203 | 200 | 359 | 391 | 441 | 371 | 50 |

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



Valves

Handling the world's dry bulk solids®

VORTEX® MAINTENANCE GATE™

The Vortex® Maintenance Gate offers quality features at an economical price. This gate is the best choice when material needs to be positively isolated in a hopper or silo, while maintenance is being performed on equipment below. In the open position, the Vortex® Maintenance Gate positively seals conveying air to atmosphere. Available in a wide variety of configurations, including round inlet/outlet transitions, the Maintenance Gate is your best insurance policy against equipment failure.

Vortex® Maintenance Gate Features

- Self-Cleaning Action on Closure, No Material Build-Up
- Positive Seal Across the Valve to Atmosphere
- Live-Loaded, Wear Compensating Seals
- Narrow Profile
- Easy Installation and Maintenance



Valve Specifications

| | |
|----------------------------|---|
| Size/Bore Options | 150mm to 450mm Round or Square |
| Media | Powder, Pellets, Granulars |
| Connection Options | SVC Flange, ANSI, DIN, JIS, or Custom Flanges |
| Media Temperature | Up to 82°C continuous to 121°C intermittent service, Modifications allow up to 204°C continuous to 232°C intermittent service |
| Media Pressure | Up to 15 psig, -0.1 MPa +0.1 MPa, 1 barg depending on size |
| Metal Construction Options | 304 or 316L Stainless Steel, Aluminium, and/or Carbon Steel |
| Seal/Seat Material Options | Nylon, PET, UHMW, Glass Filled Teflon, Natural Rubber, and/or Silicon Rubber |
| Drive/Actuation Options | Hand Crank |
| Position Confirmation | Visual Indication, Proximity Switch |
| Compliance/Approvals | CE, ATEX, FDA |
| Industry Use | Plastics, Petrochemicals, Chemicals, Foods, Minerals, Textiles, Agriculture |

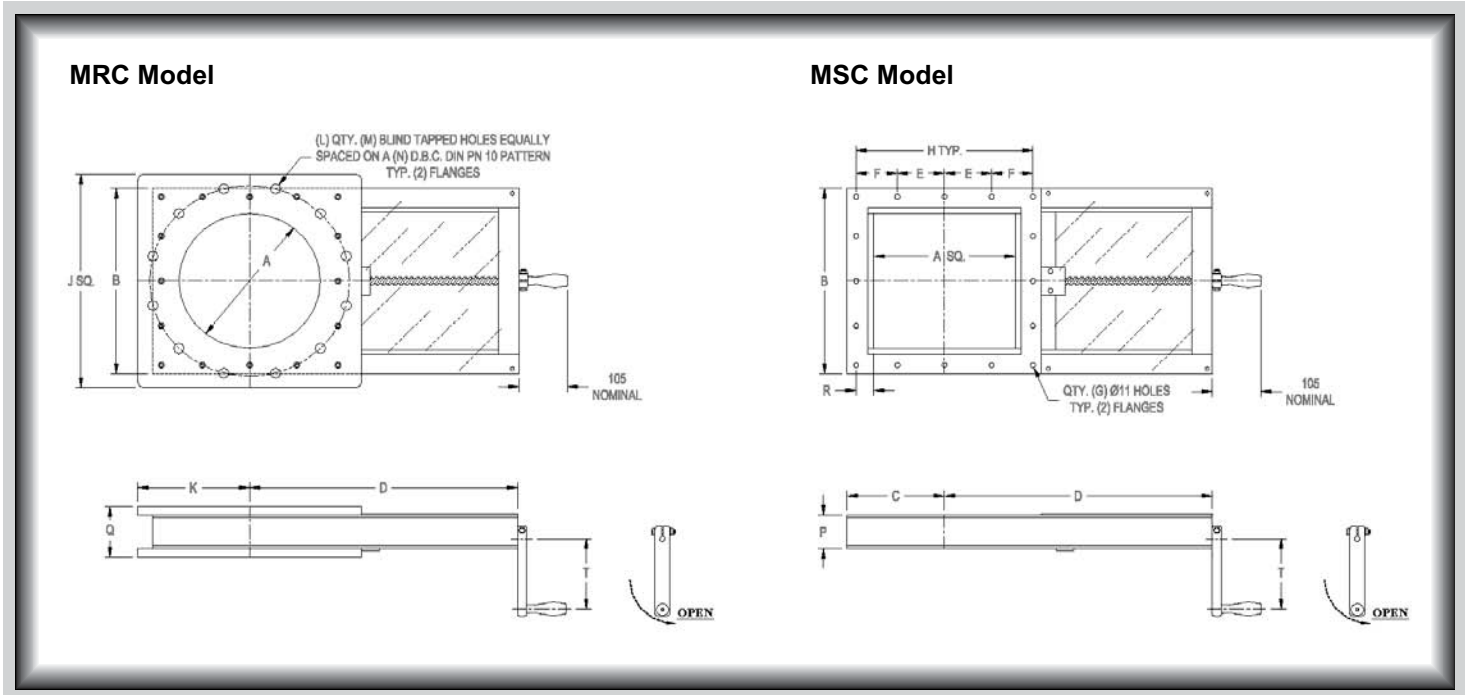


Application Specific Modifications

| | |
|------|--|
| S | Material contact is 316L stainless steel (MSC only). |
| SC | Slide Blade and gate liner are made of 304 stainless steel (MRC models only). |
| S-SC | Slide Blade and gate liner are made of 316L stainless steel (MRC models only). |
| HT4 | Modifications are made allowing 204°C continuous to 232°C intermittent service. |
| WS | Slide Blade is electro-polished. Polyethylene Terephthalate (PET) seals are used to replace nylon. |



VORTEX® MAINTENANCE GATE™ DIMENSIONAL INFORMATION



| Model | A | B | C | D | E | F | G | H | J | K | L | M | N | P | Q | R | T | WT (kg) | |
|-------|-----|-----|-----|-----|-----|----|----|-----|-----|-----|----|-----------|-----|-----|-----|----|-----|---------|-----|
| | | | | | | | | | | | | | | | | | | MSC | MRC |
| 150 | 152 | 267 | 133 | 349 | 114 | -- | 8 | 229 | 279 | 140 | 8 | M20 x 2.5 | 240 | 76 | 114 | 38 | 108 | 7 | 34 |
| 200 | 203 | 318 | 159 | 425 | 140 | -- | 8 | 279 | 343 | 171 | 8 | M20 x 2.5 | 295 | 76 | 114 | 38 | 108 | 10 | 37 |
| 250 | 254 | 368 | 184 | 502 | 83 | -- | 16 | 330 | 406 | 203 | 12 | M20 x 2.5 | 350 | 76 | 114 | 38 | 159 | 14 | 45 |
| 300 | 305 | 419 | 210 | 578 | 102 | 89 | 16 | 381 | 483 | 241 | 12 | M20 x 2.5 | 400 | 76 | 114 | 38 | 159 | 16 | 59 |
| 350 | 356 | 470 | 235 | 654 | 108 | -- | 16 | 432 | 533 | 267 | 16 | M20 x 2.5 | 460 | 76 | 114 | 38 | 159 | 19 | 75 |
| 400 | 406 | 546 | 273 | 730 | 121 | -- | 16 | 483 | 597 | 298 | 16 | M24 x 3.0 | 515 | 102 | 140 | 38 | 210 | 22 | 91 |
| 450 | 457 | 597 | 298 | 806 | 133 | -- | 16 | 533 | 635 | 318 | 20 | M24 x 3.0 | 565 | 102 | 140 | 38 | 260 | 27 | 97 |

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



Valves

Handling the world's dry bulk solids®

VORTEX® ROLLER GATE™

The Vortex® Roller Gate™ offers quality features at an economical price. This gate is your best choice for handling dry material in gravity flow applications where positive material shut-off and dust tight sealing are required in compact locations. The Vortex® Roller Gate™ is available in a wide variety of configurations to meet customer requirements, including rectangular sizes and customer specific hole patterns.

Vortex® Roller Gate™ Features

- Narrow Profile
- Positive Seal of Dust and Fine Powders
- Seals and Cam Adjustable Nylon Rollers Protected from Abrasion
- Accurate Metering of Material with Optional Metering Controls
- Easy Installation, Maintenance, and in-place Bonnet Seal Replacement



Valve Specifications

| | |
|----------------------------|---|
| Size/Bore Options | 150mm to 750mm and larger in Square or Rectangular sizes |
| Media | Powder, Pellets, Granulars |
| Connection Options | SVC Flange, CEMA Flange, and/or Custom Flanges |
| Media Temperature | Up to 82°C continuous to 121°C intermittent service, Modifications allow up to 204°C continuous to 232°C intermittent service |
| Media Pressure | 0 barg, Gravity Flow Only |
| Metal Construction Options | Aluminium, 304 or 316L Stainless Steel, and Carbon Steel. Material contact is 304 or 316L Stainless Steel. |
| Seal/Seat Material Options | Nylon, PET, UHMW, Glass Filled Teflon, Natural Rubber, and/or Silicon Rubber |
| Drive/Actuation Options | Double Acting Air Cylinder and Solenoid Operated Air Control Valve, Electric Actuator, Hydraulic Actuator, Hand Crank, or Chain Wheel |
| Position Confirmation | Magnetic Reed, Proximity, or Mechanical Limit Switches |
| Compliance/Approvals | CE, ATEX, FDA |
| Industry Use | Plastics, Petrochemicals, Chemicals, Foods, Minerals, Textiles, Agriculture |

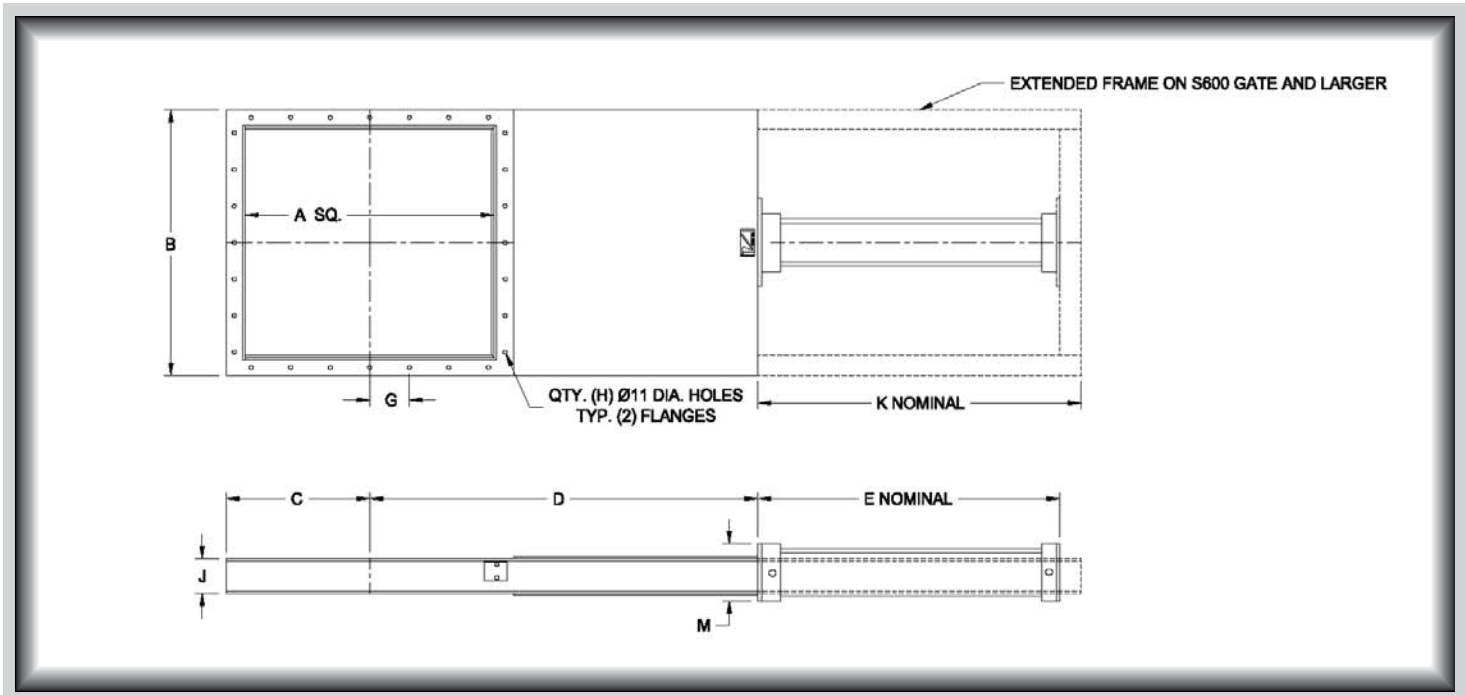


Application Specific Modifications

| | |
|-----|---|
| S | Material contact is 316L stainless steel. |
| MG | Air cylinder has a magnetic ring which activates a magnetic reed position indicating switch. |
| HS | Hardened steel cam rollers replace standard nylon cam rollers. |
| HT3 | Modifications are made allowing 121°C continuous to 149°C intermittent service. |
| HT4 | Modifications are made allowing up to 204°C continuous to 232°C intermittent service. |
| WS1 | Slide Blade is electro-polished. Polyethylene Terephthalate (PET) dust seals are used to replace nylon. |
| SB | Bonnet is manufactured with solid covers and has a gasket. (Allows the valve to accept air purge.) |
| RS | Access ports are provided for removing/replacing worn bonnet seals. |



VORTEX® ROLLER GATE™ DIMENSIONAL INFORMATION



| Model | A | B | C | D | E | F | G | H | J | K | WT (kg) |
|-------|-----|-----|-----|------|-----|-----|-----|----|-----|-----|---------|
| S150 | 152 | 254 | 127 | 305 | 279 | 114 | 105 | 8 | 76 | -- | 14 |
| S200 | 203 | 305 | 152 | 381 | 330 | 114 | 89 | 12 | 76 | -- | 17 |
| S250 | 254 | 356 | 178 | 457 | 381 | 114 | 114 | 12 | 76 | -- | 20 |
| S300 | 305 | 406 | 203 | 533 | 432 | 114 | 70 | 20 | 76 | -- | 22 |
| S350 | 356 | 457 | 229 | 610 | 483 | 114 | 83 | 20 | 76 | -- | 27 |
| S400 | 406 | 508 | 254 | 686 | 533 | 140 | 95 | 20 | 76 | -- | 34 |
| S450 | 457 | 559 | 330 | 762 | 584 | 140 | 108 | 20 | 76 | -- | 38 |
| S500 | 508 | 610 | 305 | 838 | 635 | 140 | 76 | 28 | 76 | -- | 45 |
| S550 | 559 | 660 | 406 | 914 | 686 | 140 | 89 | 28 | 76 | -- | 63 |
| S600 | 610 | 737 | 368 | 991 | -- | 140 | 95 | 28 | 102 | 813 | 77 |
| S750 | 762 | 889 | 445 | 1220 | -- | 140 | 92 | 36 | 102 | 959 | 91 |

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



Valves

Handling the world's dry bulk solids®

VORTEX® HAND SLIDE ORIFICE GATE™

The Vortex® Hand Slide Orifice Gate™ is designed specifically to handle dry bulk solids in gravity flow conveying. 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. By design, the valve “self cleans” material from the seat on each stroke of the valve blade, improving overall seat life. The Hand Slide Orifice Gate™ is designed to eliminate problems, enabling you to meet your objectives by increasing production, while decreasing labour and equipment costs.

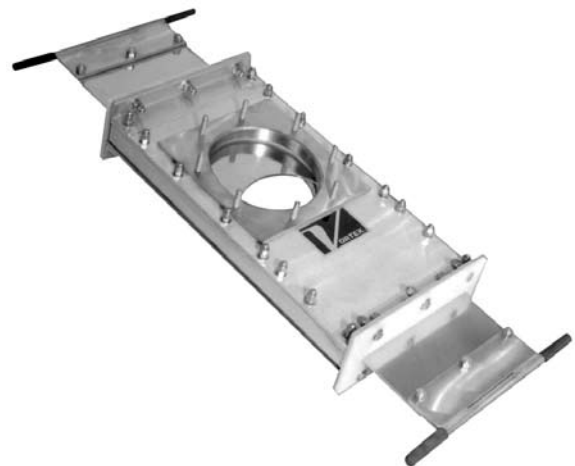
Vortex® Hand Slide Orifice Gate™ Features

- Self-Cleaning Action, No Material Build-Up
- Narrow Profile
- Smooth, Unobstructed Bore for Unrestricted Flow of Material
- Seal Protected from Abrasion
- Easy Installation and Maintenance



Valve Specifications

| | |
|-----------------------------------|---|
| Size/Bore Options | 50mm to 300mm Diameters |
| Media | Powder, Pellets, Granulars |
| Connection Options | SVC Standard Stud Pattern, ANSI, DIN, JIS, Custom Flanges |
| Media Temperature | Up to 82°C continuous to 121°C intermittent service, Modifications allow up to 204°C continuous to 232°C intermittent service |
| Media Pressure | 0 barg, Gravity Only |
| Metal Construction Options | 304 or 316L Stainless Steel, Aluminium, and/or Carbon Steel |
| Seal/Seat Material Options | Nylon, PET, UHMW, Glass Filled Teflon, Rubber, and/or Silicon |
| Drive/Actuation Options | Hand Slide |
| Position Confirmation | Visual Detection |
| Compliance/Approvals | CE, ATEX, FDA |
| Industry Use | Plastics, Petrochemicals, Chemicals, Foods, Minerals, Textiles, Agriculture |

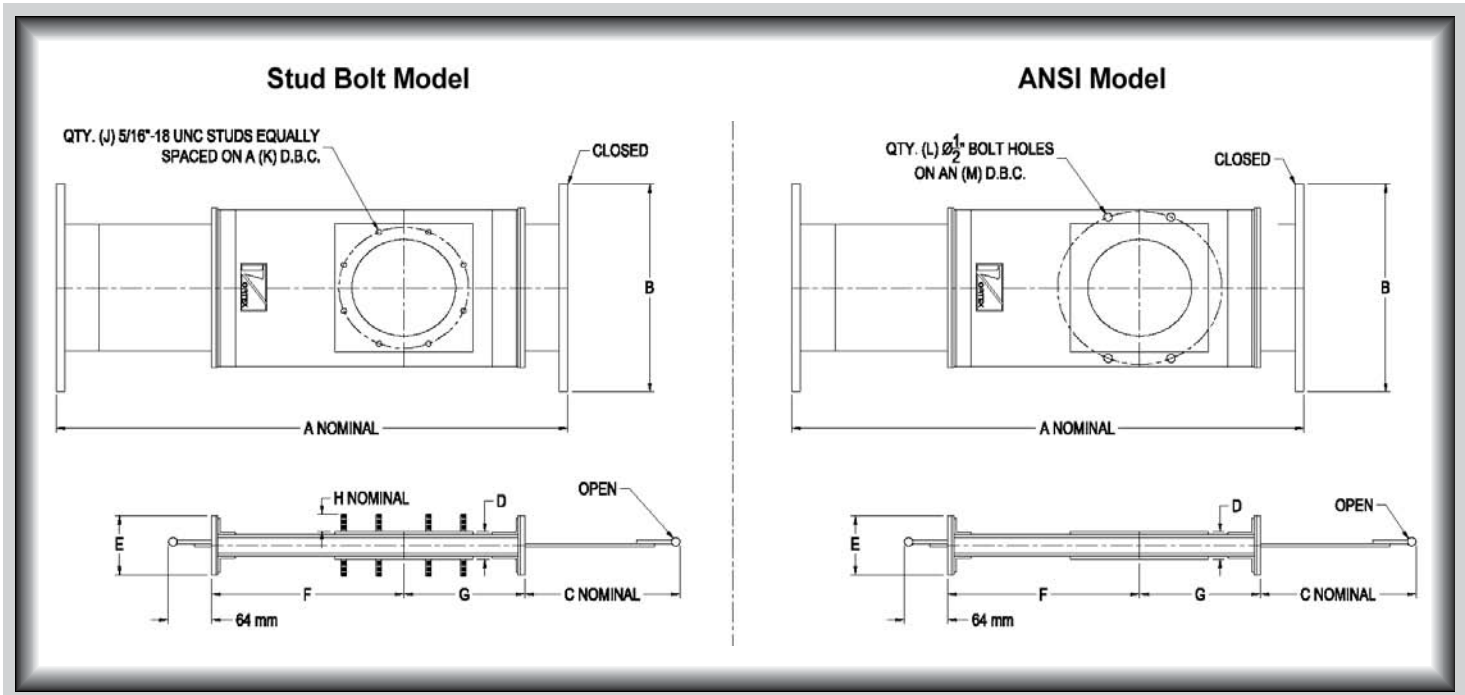


Application Specific Modifications

| | |
|------------|--|
| S | Material contact is 316L stainless steel. |
| P | Mounting studs are removed and special mounting holes matching an ANSI pattern are provided for bolting through the gate flange. |
| HT3 | Modifications are made allowing 121°C continuous to 149°C intermittent service. |
| HT4 | Modifications are made allowing up to 204°C continuous to 232°C intermittent service. |
| WS1 | Gate blade is electro-polished. Polyethylene Terephthalate (PET) pressure plate seals are used to replace nylon. |



VORTEX® HAND SLIDE ORIFICE GATE™ DIMENSIONAL INFORMATION



| Model | A | B | C | D | E | F | G | H | J | K | ANSI Model L | ANSI Model M | WT (kg) |
|-------|------|-----|-----|----|-----|-----|-----|----|-----|-----|--------------|--------------|---------|
| HS02 | 410 | 225 | 127 | 44 | 89 | 121 | 98 | 29 | 102 | 98 | 51 | 121 | 5 |
| HS03 | 489 | 257 | 152 | 44 | 92 | 159 | 114 | 29 | 102 | 127 | 51 | 152 | 6 |
| HS04 | 575 | 283 | 181 | 44 | 89 | 203 | 127 | 29 | 152 | 140 | 102 | 191 | 7 |
| HS05 | 660 | 302 | 203 | 44 | 92 | 270 | 149 | 29 | 203 | 165 | 102 | 216 | 9 |
| HS06 | 752 | 327 | 229 | 44 | 92 | 283 | 178 | 29 | 203 | 191 | 102 | 241 | 12 |
| HS08 | 902 | 378 | 286 | 44 | 89 | 359 | 200 | 29 | 203 | 241 | 102 | 298 | 16 |
| HS10 | 1057 | 429 | 330 | 44 | 92 | 438 | 225 | 32 | 203 | 292 | 102 | 362 | 27 |
| HS12 | 1213 | 479 | 381 | 48 | 121 | 511 | 251 | 32 | 305 | 351 | 102 | 432 | 33 |

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



Valves

Handling the world's dry bulk solids®

VORTEX® DUAL CYLINDER ROLLER GATE™

The Vortex® Dual Cylinder Roller Gate™ offers quality features at an economical price. This gate is your best choice for handling dry material in gravity flow applications where positive material shut-off and dust tight sealing are required in compact locations. The Vortex® Dual Cylinder Roller Gate™ is available in a wide variety of configurations, including rectangular sizes and round inlet/outlet transitions.

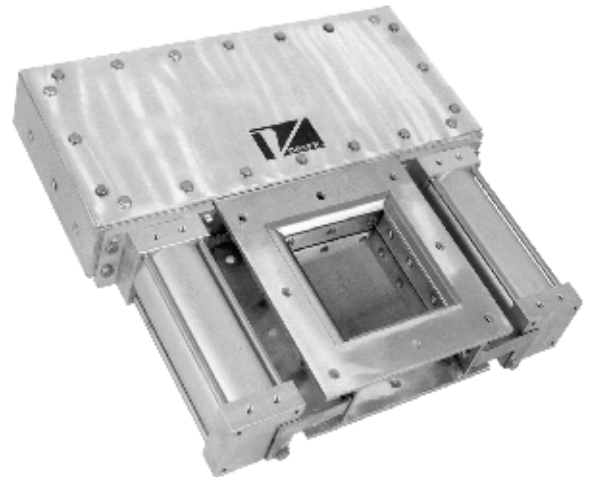
Vortex® Dual Cylinder Roller Gate™ Features

- Narrow Profile
- Positive Seal of Dust and Fine Powders
- Seals Protected from Abrasion
- Accurate Metering of Material with Optional Metering Controls
- Easy Installation and Maintenance



Valve Specifications

| | |
|----------------------------|--|
| Size/Bore Options | 150mm to 750mm Square, Round, or Rectangular |
| Media | Powder, Pellets, Granulars |
| Connection Options | SVC Flange, CEMA Flange, and/or Custom Flanges |
| Media Temperature | Up to 82°C continuous to 121°C intermittent service, Modifications allow up to 204°C continuous to 232°C intermittent service. |
| Media Pressure | 0 barg, Gravity Flow Only |
| Metal Construction Options | 304 or 316L Stainless Steel, Aluminium, and/or Carbon Steel |
| Seal/Seat Material Options | Nylon, PET, UHMW, Glass Filled Teflon, Rubber, and/or Silicon |
| Drive/Actuation Options | Double Acting Air Cylinder and Solenoid Operated Air Control Valve. |
| Position Confirmation | Magnetic Reed Switch, Proximity Switch, or Mechanical Switch |
| Compliance/Approvals | CE, ATEX, FDA |
| Industry Use | Plastics, Petrochemicals, Chemicals, Foods, Minerals, Textiles, Agriculture |

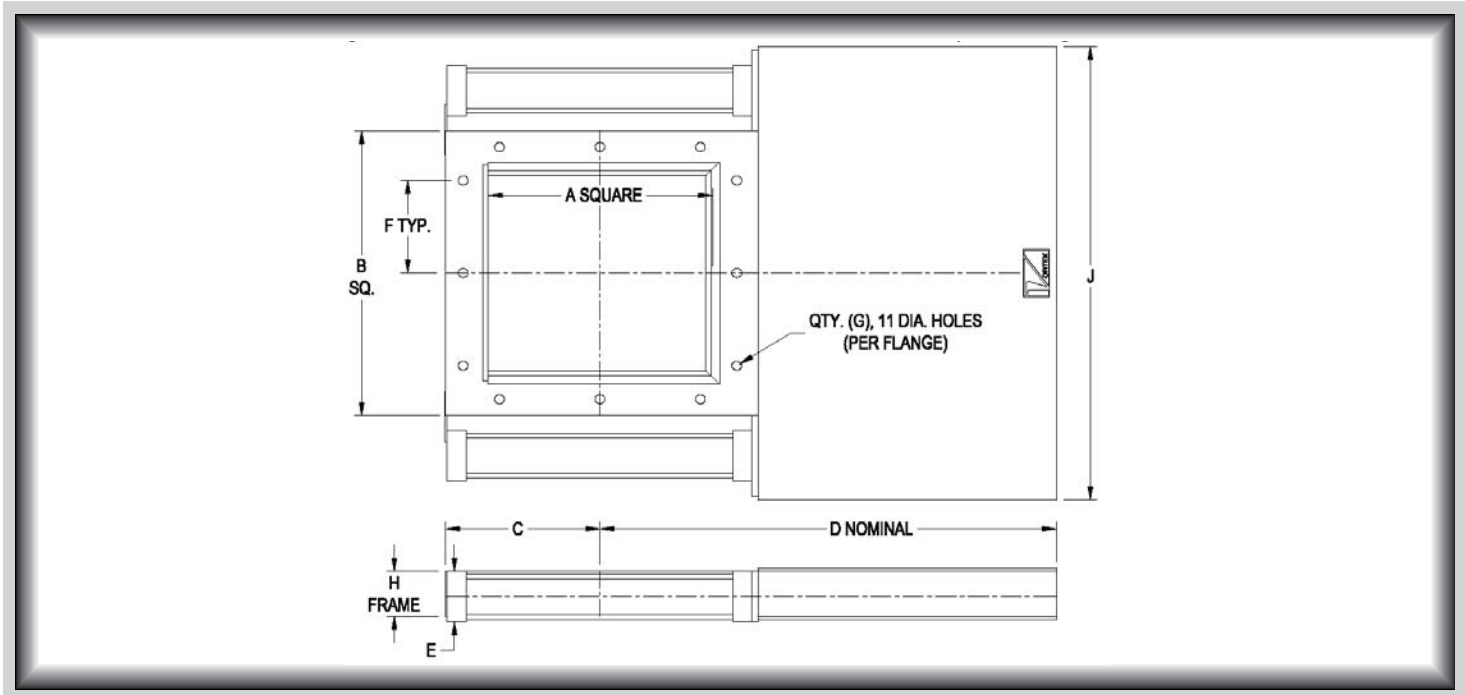


Application Specific Modifications

| | |
|-----|---|
| S | Material contact is 316L stainless steel. |
| MG | Air cylinder has a magnetic ring which activates a magnetic reed position indicating switch. |
| HS | Hardened steel rollers replace standard nylon rollers and bonnet seal protector is installed. |
| HT3 | Modifications are made allowing 121°C continuous to 149°C intermittent service. |
| HT4 | Modifications are made allowing up to 204°C continuous to 232°C intermittent service. |
| WS1 | Slide Blade is electro-polished. Polyethylene Terephthalate (PET) pressure plate seals are used to replace nylon. |
| SB | Bonnet is manufactured with solid, gasket covers. (Allows the valve to accept air purge.) |
| RS | Access ports are provided for removing worn bonnet seals. |



VORTEX® DUAL CYLINDER ROLLER GATE™ DIMENSIONAL INFORMATION



| Model | A | B | C | D | E | F | G | H | J | WT (kg) |
|-------|-----|-----|-----|------|-----|-----|----|-----|------|---------|
| SD150 | 152 | 254 | 127 | 371 | 86 | 105 | 8 | 76 | 540 | 18 |
| SD200 | 203 | 305 | 152 | 448 | 86 | 89 | 12 | 76 | 591 | 20 |
| SD250 | 254 | 356 | 178 | 524 | 86 | 114 | 12 | 76 | 641 | 23 |
| SD300 | 305 | 406 | 203 | 600 | 86 | 70 | 20 | 76 | 692 | 27 |
| SD350 | 356 | 457 | 229 | 676 | 86 | 83 | 20 | 76 | 743 | 29 |
| SD400 | 406 | 508 | 270 | 768 | 105 | 95 | 20 | 76 | 832 | 36 |
| SD450 | 457 | 559 | 295 | 845 | 105 | 108 | 20 | 76 | 883 | 41 |
| SD500 | 508 | 610 | 321 | 921 | 105 | 76 | 28 | 76 | 933 | 48 |
| SD550 | 559 | 660 | 346 | 997 | 105 | 89 | 28 | 76 | 984 | 52 |
| SD600 | 610 | 737 | 368 | 1089 | 130 | 95 | 28 | 102 | 1124 | 57 |
| SD750 | 762 | 889 | 445 | 1318 | 130 | 92 | 36 | 102 | 1276 | 79 |

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



Valves

Handling the world's dry bulk solids®

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 |

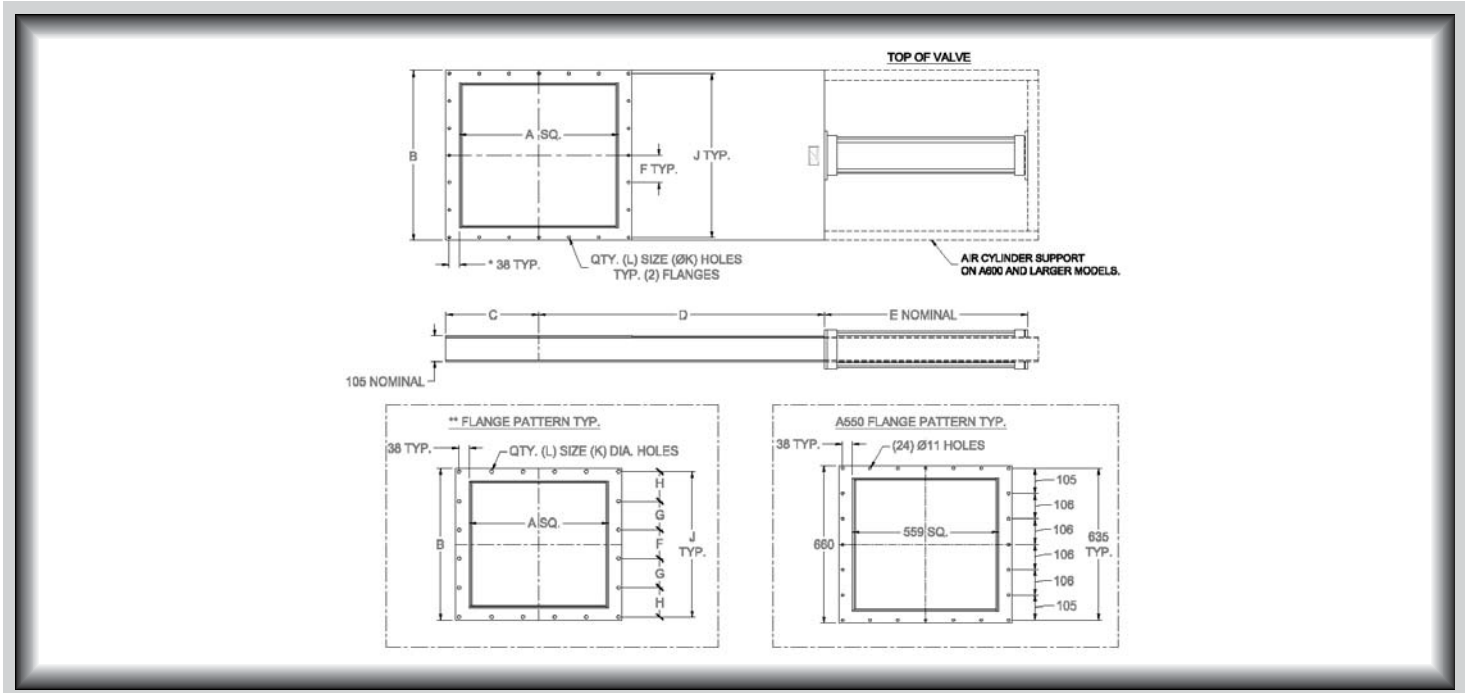


Application Specific Modifications

| | |
|-----|--|
| 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

Handling the world's dry bulk solids®

VORTEX® METERING CONTROLS AND ACCESSORIES

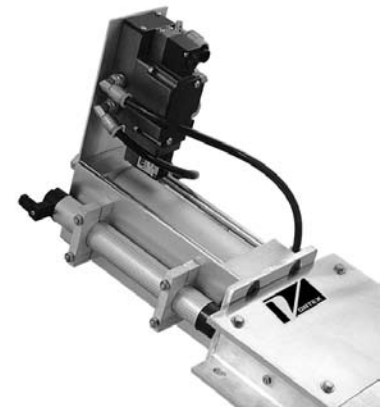
Vortex® offers a variety of controls that allow variable positioning of the gate blade on the opening or closing strokes. Metering controls are an ideal solution for Volume Metering Applications. These assemblies provide more Accurate Batchweights, and Reducing Fill Times. Assemblies can be ordered for 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

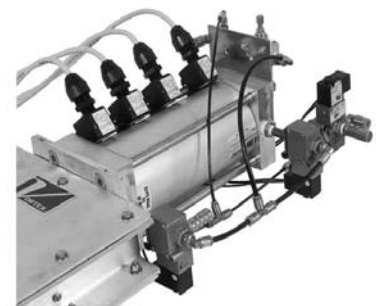
Infinite Variable Position

| | |
|-----------------------|--|
| 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 |



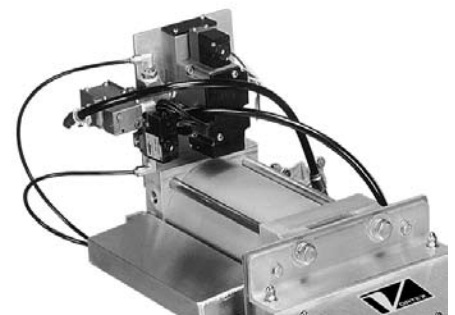
Adjustable Variable Position

| | |
|-----------------------|--|
| 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



Valves

Handling the world's dry bulk solids®

VORTEX® QUANTUM™ SERIES 2-WAY WYE LINE DIVERTER™

The patent pending Vortex® Quantum™ Series Wye Line Diverter™ is specifically engineered to handle dry bulk solids in vacuum or dilute phase pneumatic conveying systems with pressures up to 15 psig (1 barg). A full flow orifice provides unrestricted conveying of material with no disk or ledges to impede flow. The diverter seat and live-loaded seals are shielded from abrasion by a metal insert, which provides superior shearing action. The Wye Line Diverter™ is designed to eliminate problems, enabling you to meet your objectives by increasing production, while decreasing labour and equipment costs.

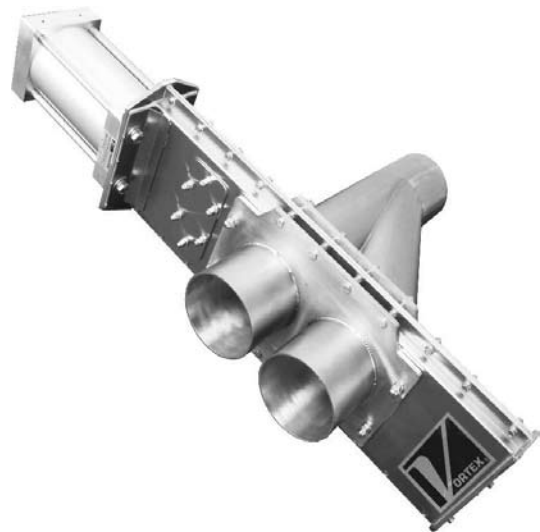
Vortex® Quantum™ Series Wye Line Diverter™ Features

- Ability to Shift without Shutting Down Blower
- Improves Conveying Efficiency
- Smooth, Unobstructed Bore for Unrestricted Flow of Material
- Seal Protected from Abrasion
- Easy Installation and Maintenance



Valve Specifications

| | |
|----------------------------|--|
| Size/Bore Options | 50mm to 125mm Diameters Pipe, 50mm to 150mm Tube. Consult Factory for 150mm to 300mm Pipe, 200mm to 300mm Tube Models |
| Media | Powder, Pellets, Granulars |
| Connection Options | ANSI, DIN, JIS, or Compression Couplings |
| Media Temperature | Up to 82°C continuous to 121°C intermittent service, Modifications allow up to 204°C continuous to 232°C intermittent service. |
| Media Pressure | -0.1 MPa +0.1 MPa, 1 barg, 15 psig, depending on size |
| Metal Construction Options | 304 or 316L Stainless Steel, Aluminium, and/or Carbon Steel |
| Seal/Seat Material Options | Nylon, PET, UHMW, Glass Filled Teflon, Natural Rubber, and/or Silicon Rubber |
| Drive/Actuation Options | Double Acting Air Cylinder and Solenoid Operated Air Control Valve, Electric Actuator, Handwheel, or Chainwheel |
| Position Detection | Magnetic Reed Switch, Proximity Switch, or Mechanical Switch |
| Compliance/Approvals | CE, ATEX, FDA |
| Industry Use | Plastics, Petrochemicals, Chemicals, Foods, Minerals, Textiles, Agriculture |



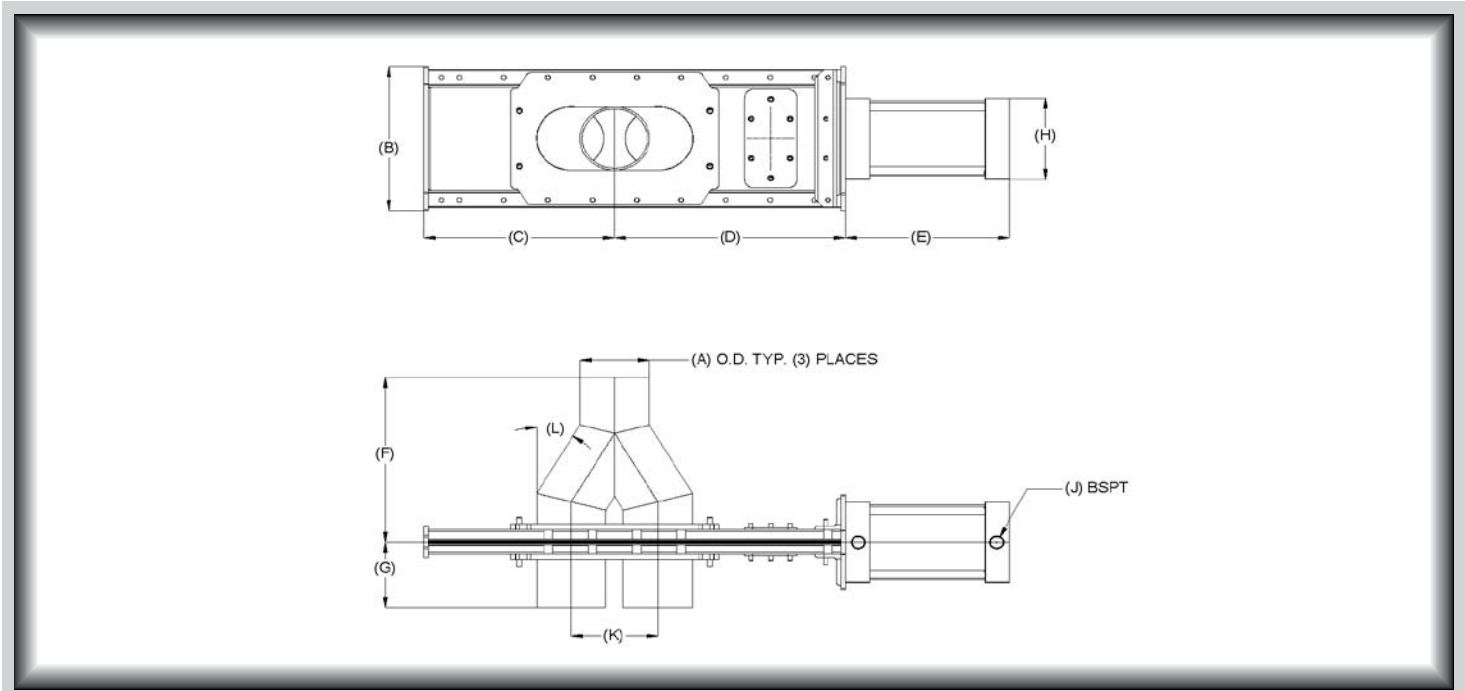
Patent Pending

Application Specific Modifications

| | |
|-----|--|
| S | Material contact is 316L stainless steel. |
| SL | Diverter has straight through conveying line designed for easier "in line" installation and less system conveying pressure drop when using multiple diverters. |
| MG | Air cylinder has a magnetic piston, 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 up to 204°C continuous to 232°C intermittent service. |
| P10 | Diverters are made with schedule 10 Pipe throughout. |
| P20 | Diverters are made with schedule 20 Pipe throughout. |
| P40 | Diverters are made with schedule 40 Pipe throughout. |
| WS1 | Slide Blade is electro-polished. Polyethylene Terephthalate (PET) pressure plate seals replace Nylon. |



VORTEX® 2-WAY WYE LINE DIVERTER™ DIMENSIONAL INFORMATION



| Tube Model | A | B | C | D | E | F | G | H | J | K | L |
|-------------|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|----|
| DR50-2(XX) | 51 | 181 | 165 | 210 | 159 | 184 | 108 | 89 | 10 | 64 | 30 |
| DR65-2(XX) | 64 | 206 | 216 | 279 | 203 | 203 | 108 | 105 | 13 | 89 | 30 |
| DR75-2(XX) | 76 | 206 | 216 | 279 | 203 | 222 | 108 | 105 | 13 | 89 | 30 |
| DR100-2(XX) | 102 | 232 | 279 | 340 | 241 | 267 | 108 | 130 | 13 | 127 | 30 |
| DR125-2(XX) | 127 | 257 | 330 | 394 | 273 | 324 | 133 | 140 | 13 | 152 | 30 |
| DR150-2(XX) | 152 | 283 | 381 | 445 | 298 | 356 | 133 | 140 | 13 | 178 | 30 |

| Pipe Model | A | B | C | D | E | F | G | H | J | K | L |
|------------------|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|----|
| DR50-2(XX)-PXX* | 60 | 206 | 216 | 279 | 203 | 260 | 121 | 105 | 13 | 89 | 30 |
| DR65-2(XX)-PXX* | 73 | 206 | 216 | 279 | 203 | 260 | 130 | 105 | 13 | 89 | 30 |
| DR75-2(XX)-PXX* | 89 | 232 | 279 | 340 | 241 | 327 | 159 | 130 | 13 | 127 | 30 |
| DR100-2(XX)-PXX* | 114 | 257 | 330 | 394 | 273 | 352 | 159 | 140 | 13 | 152 | 30 |
| DR125-2(XX)-PXX* | 143 | 283 | 381 | 445 | 298 | 387 | 165 | 140 | 13 | 178 | 30 |

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

(XX) Material of construction, aluminum (AL), carbon steel (CS), or stainless steel (SS).

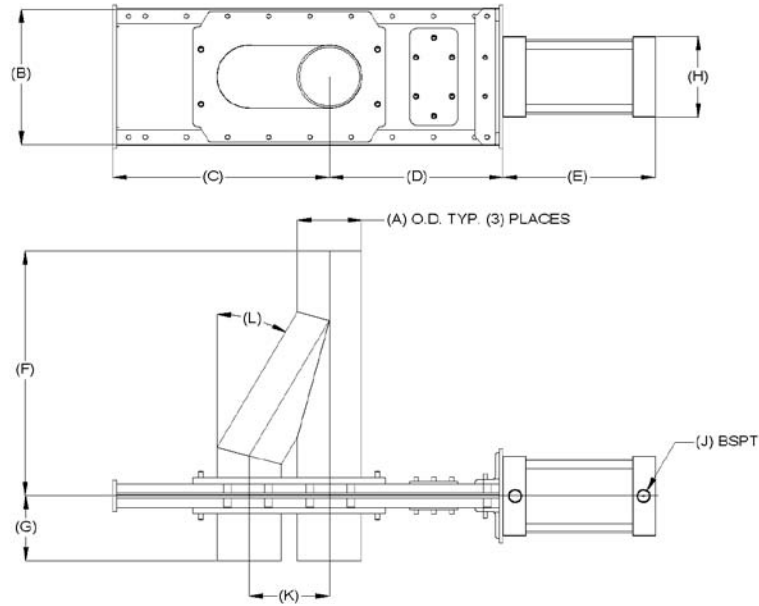
*Select pipe schedule 10, 20, or 40.



Valves

Handling the world's dry bulk solids®

VORTEX® 2-WAY WYE LINE DIVERTER™ DIMENSIONAL INFORMATION



| Tube Model | A | B | C | D | E | F | G | H | J | K | L |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|----|
| DR50-2(XX)-SL | 51 | 181 | 197 | 178 | 159 | 248 | 108 | 89 | 10 | 64 | 30 |
| DR65-2(XX)-SL | 64 | 206 | 260 | 235 | 203 | 260 | 108 | 105 | 13 | 89 | 30 |
| DR75-2(XX)-SL | 76 | 206 | 260 | 235 | 203 | 298 | 108 | 105 | 13 | 89 | 30 |
| DR100-2(XX)-SL | 102 | 232 | 343 | 276 | 241 | 400 | 108 | 130 | 13 | 127 | 30 |
| DR125-2(XX)-SL | 127 | 257 | 406 | 318 | 273 | 451 | 133 | 140 | 13 | 152 | 30 |
| DR150-2(XX)-SL | 152 | 283 | 470 | 356 | 298 | 514 | 133 | 140 | 13 | 178 | 30 |

| Pipe Model | A | B | C | D | E | F | G | H | J | K | L |
|---------------------|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|----|
| DR50-2(XX)-SL-PXX* | 60 | 206 | 260 | 235 | 203 | 337 | 121 | 105 | 13 | 89 | 30 |
| DR65-2(XX)-SL-PXX* | 73 | 206 | 260 | 235 | 203 | 333 | 159 | 105 | 13 | 89 | 30 |
| DR75-2(XX)-SL-PXX* | 89 | 232 | 343 | 276 | 241 | 438 | 159 | 130 | 13 | 127 | 30 |
| DR100-2(XX)-SL-PXX* | 114 | 257 | 406 | 318 | 273 | 489 | 159 | 140 | 13 | 152 | 30 |
| DR125-2(XX)-SL-PXX* | 143 | 283 | 470 | 356 | 298 | 540 | 165 | 140 | 13 | 178 | 30 |

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

(XX) Material of construction, aluminum (AL), carbon steel (CS), or stainless steel (SS).

*Select pipe schedule 10, 20, or 40.



VORTEX® 3-WAY WYE LINE DIVERTER™

The Vortex® 3-Way Wye Line Diverter™ is specifically engineered to handle dry bulk solids in vacuum or dilute phase pneumatic conveying systems with pressures up to 15 psig (1 barg). A full flow orifice provides unrestricted conveying of material with no disk or ledges to impede flow. The diverter seat and live-loaded seals are shielded from abrasion by a metal insert, which provides superior shearing action. The Wye Line Diverter™ is designed to eliminate problems, enabling you to meet your objectives by increasing production, while decreasing labour and equipment costs.

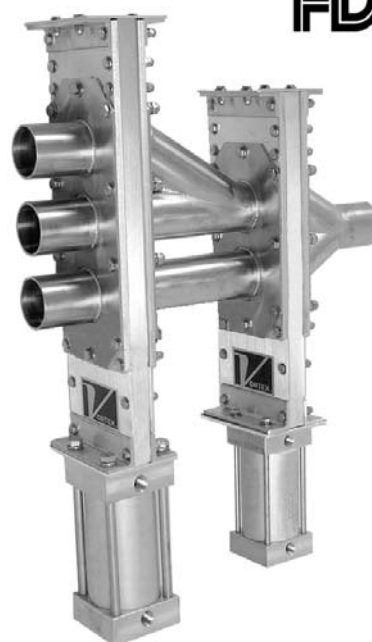
Vortex® Wye Line Diverter™ Features

- Ability to Shift without Shutting Down Blower
- Improves Conveying Efficiency
- Smooth, Unobstructed Bore for Unrestricted Flow of Material
- Seal Protected from Abrasion
- Easy Installation and Maintenance



Valve Specifications

| | |
|-----------------------------------|--|
| Size/Bore Options | 50mm to 200mm Diameters, Pipe or Tube |
| Media | Powder, Pellets, Granulars |
| Connection Options | Compression Coupling |
| Media Temperature | Up to 82°C continuous to 121°C intermittent service, Modifications allow up to 204°C continuous to 232°C intermittent service. |
| Media Pressure | -0.1 MPa +0.1 MPa, 1 barg, 15 psig, depending on size |
| Metal Construction Options | 304 or 316L Stainless Steel, Aluminium, and/or Carbon Steel |
| Seal/Seat Material Options | Nylon, PET, UHMW, Glass Filled Teflon, Natural Rubber, and/or Silicon Rubber |
| Drive/Actuation Options | Double Acting Air Cylinder and Solenoid Operated Air Control Valve |
| Position Confirmation | Magnetic Reed Switch or Proximity Switch |
| Compliance/Approvals | CE, ATEX, FDA |
| Industry Use | Plastics, Petrochemicals, Chemicals, Foods, Minerals, Textiles, Agriculture |



Application Specific Modifications

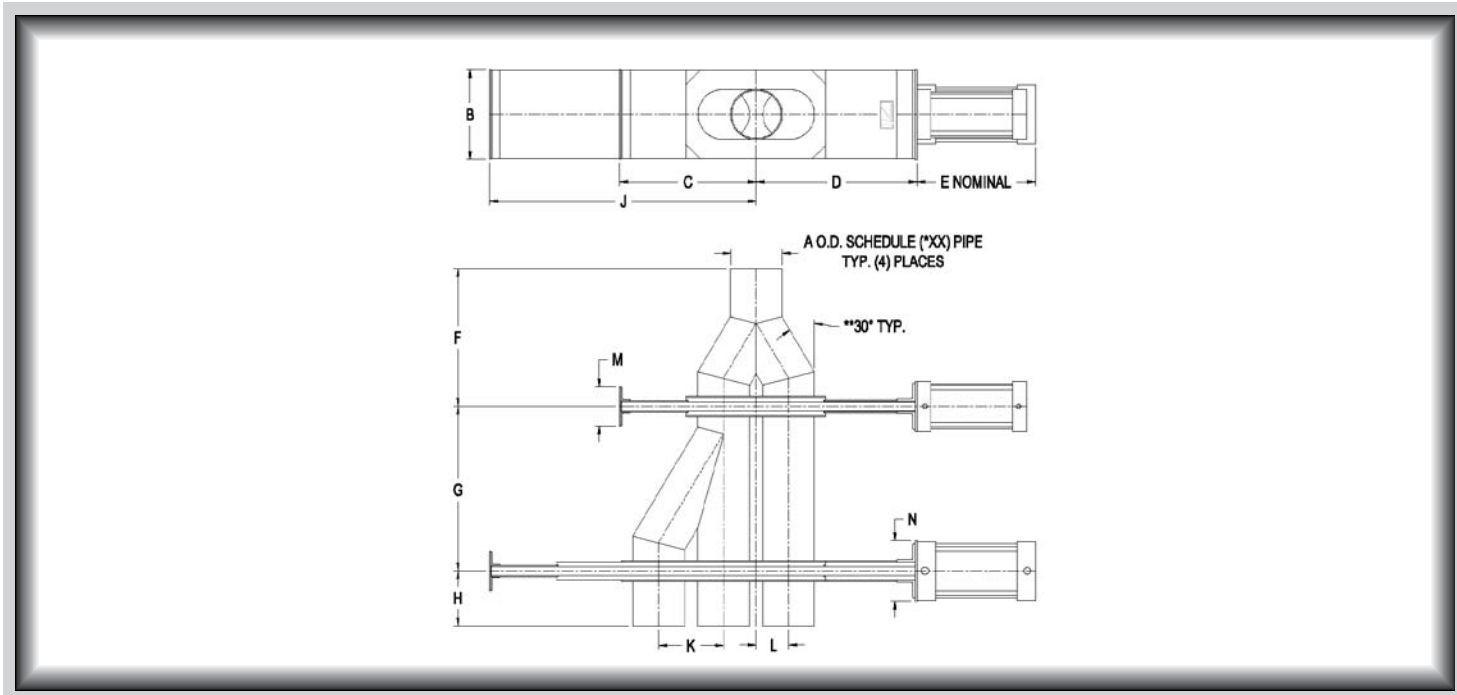
| | |
|------------|---|
| S | Material contact is 316L stainless steel. |
| MG | Air cylinder has a magnetic ring which activates a magnetic reed position indicating switch. |
| HT3 | Modifications are made allowing 121°C continuous to 149°C intermittent service. |
| HT4 | Modifications are made allowing 204°C continuous to 232°C intermittent service. |
| P10 | Diverter are made with Schedule 10 Pipe. |
| P40 | Diverter are made with Schedule 40 Pipe. |
| WS1 | Slide Blade is electro-polished. Polyethylene Terephthalate (PET) pressure plate seals replace Nylon. |



Valves

Handling the world's dry bulk solids®

VORTEX® 3-WAY WYE LINE DIVERTER™ DIMENSIONAL INFORMATION



| Tube Model | A | B | C | D | E | F | G | H | J | K | L | M | N |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|
| D2-3(XX)Y | 51 | 133 | 146 | 200 | 159 | 184 | 203 | 105 | 273 | 64 | 32 | 105 | 114 |
| D3-3(XX)Y | 76 | 152 | 197 | 251 | 203 | 219 | 254 | 105 | 375 | 89 | 44 | 117 | 111 |
| D4-3(XX)Y | 102 | 184 | 264 | 324 | 260 | 264 | 337 | 105 | 518 | 127 | 64 | 114 | 140 |
| D5-3(XX)Y | 127 | 225 | 324 | 391 | 267 | 321 | 394 | 130 | 619 | 152 | 76 | 111 | 171 |
| D6-3(XX)Y | 152 | 251 | 375 | 467 | 324 | 352 | 464 | 130 | 730 | 178 | 89 | 111 | 171 |

| Pipe Model | A | B | C | D | E | F | G | H | J | K | L | M | N |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|
| D2-3(XX)Y-P* | 60 | 152 | 197 | 251 | 203 | 257 | 254 | 130 | 375 | 89 | 44 | 117 | 140 |
| D3-3(XX)Y-P* | 89 | 184 | 264 | 324 | 264 | 324 | 337 | 156 | 518 | 127 | 64 | 114 | 165 |
| D4-3(XX)Y-P* | 114 | 225 | 321 | 391 | 298 | 346 | 384 | 156 | 629 | 152 | 76 | 111 | 171 |
| D5-3(XX)Y-P* | 141 | 251 | 375 | 441 | 302 | 387 | 464 | 156 | 730 | 178 | 89 | 111 | 171 |
| D6-3(XX)Y-P* | 168 | 292 | 549 | 597 | 400 | 394 | 441 | 178 | 1026 | 254 | 127 | 76 | 229 |

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

(XX) Material of construction, aluminum (AL), carbon steel (CS), or stainless steel (SS).

*Select pipe schedule 10, 20, or 40.

** D6 model has 45° angle.



VORTEX® 4-WAY WYE LINE DIVERTER™

The Vortex® 4-Way Wye Line Diverter™ is specifically engineered to handle dry bulk solids in vacuum or dilute phase pneumatic conveying systems with pressures up to 15 psig (1 barg). A full flow orifice provides unrestricted conveying of material with no disk or ledges to impede flow. The diverter seat and live-loaded seals are shielded from abrasion by a metal insert, which provides superior shearing action. The Wye Line Diverter™ is designed to eliminate problems, enabling you to meet your objectives by increasing production, while decreasing labour and equipment costs.

Vortex® Wye Line Diverter™ Features

- Ability to Shift without Shutting Down Blower
- Improves Conveying Efficiency
- Smooth, Unobstructed Bore for Unrestricted Flow of Material
- Seal Protected from Abrasion
- Easy Installation and Maintenance



Valve Specifications

| | |
|----------------------------|---|
| Size/Bore Options | 50mm to 200mm Diameters, Pipe or Tube |
| Media | Powder, Pellets, Granulars |
| Connection Options | Compression Coupling |
| Media Temperature | Up to 82°C continuous to 121°C intermittent service, Modifications allow up to 204°C continuous to 232°C intermittent service |
| Media Pressure | -0.1 MPa +0.1 MPa, 1 barg, 15 psig, depending on size |
| Metal Construction Options | 304 or 316L Stainless Steel, Aluminium, and/or Carbon Steel |
| Seal/Seat Material Options | Nylon, PET, UHMW, Glass Filled Teflon, Natural Rubber, and/or Silicon Rubber |
| Drive/Actuation Options | Double Acting Air Cylinder and Solenoid Operated Air Control Valve |
| Position Confirmation | Magnetic Reed Switch, Proximity Switch, or Mechanical Switch |
| Compliance/Approvals | CE, ATEX, FDA |
| Industry Use | Plastics, Petrochemicals, Chemicals, Foods, Minerals, Textiles, Agriculture |



Application Specific Modifications

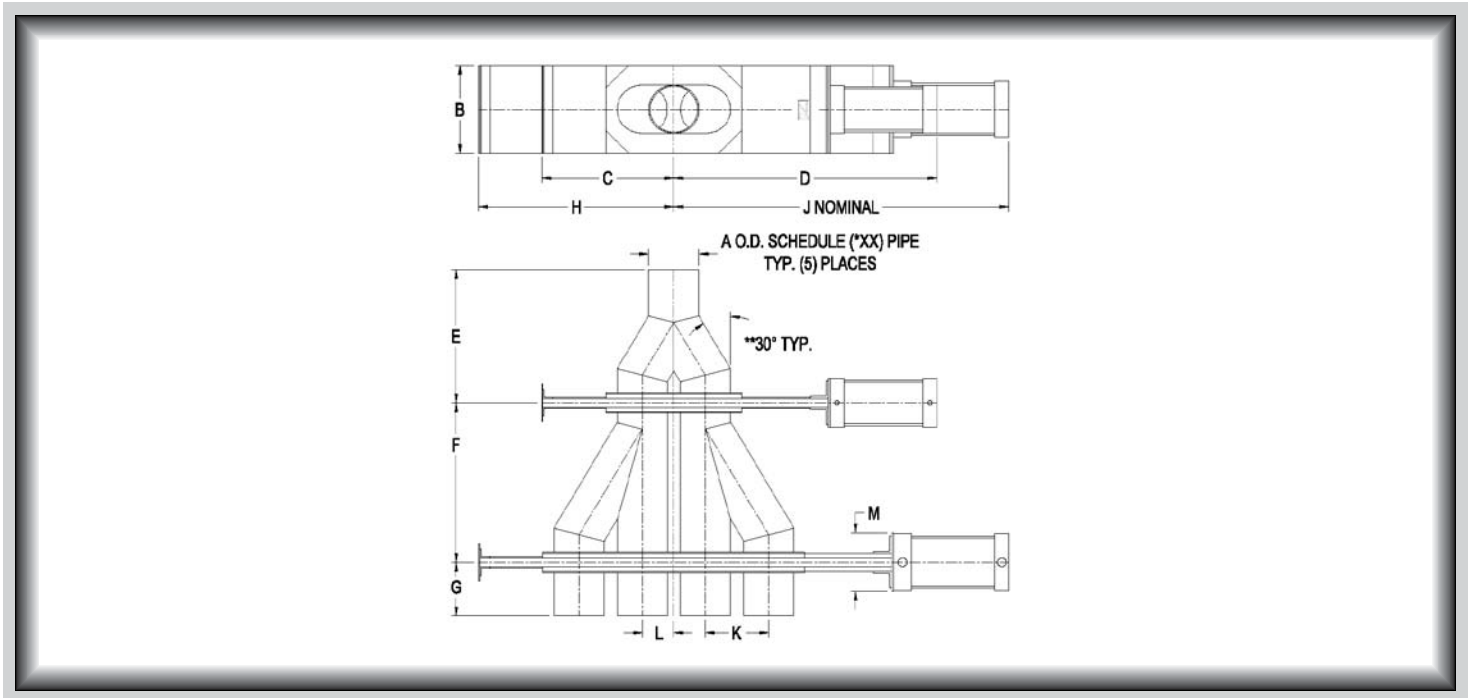
| | |
|-----|---|
| S | Material contact is 316L stainless steel. |
| MG | Air cylinder has a magnetic ring which activates a magnetic reed position indicating switch. |
| HT3 | Modifications are made allowing 121°C continuous to 149°C intermittent service. |
| HT4 | Modifications are made allowing 204°C continuous to 232°C intermittent service. |
| P10 | Diverter are made with Schedule 10 Pipe. |
| P40 | Diverter are made with Schedule 40 Pipe. |
| WS1 | Slide Blade is electro-polished. Polyethylene Terephthalate (PET) pressure plate seals replace Nylon. |



Valves

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VORTEX® 4-WAY WYE LINE DIVERTER™ DIMENSIONAL INFORMATION



| Tube Model | A | B | C | D | E | F | G | H | J | K | L | M |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|
| D2-4(XX)Y | 51 | 133 | 146 | 359 | 184 | 203 | 105 | 210 | 445 | 64 | 32 | 114 |
| D3-4(XX)Y | 76 | 152 | 197 | 454 | 219 | 276 | 105 | 286 | 521 | 89 | 44 | 140 |
| D4-4(XX)Y | 102 | 184 | 267 | 584 | 267 | 337 | 105 | 394 | 759 | 127 | 64 | 178 |
| D5-4(XX)Y | 127 | 229 | 324 | 664 | 321 | 394 | 130 | 476 | 841 | 152 | 76 | 178 |
| D6-4(XX)Y | 152 | 254 | 375 | 740 | 429 | 464 | 130 | 552 | 943 | 178 | 89 | 178 |

| Pipe Model | A | B | C | D | E | F | G | H | J | K | L | M |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|
| D2-4(XX)Y-P* | 60 | 159 | 197 | 454 | 257 | 254 | 137 | 279 | 552 | 89 | 44 | 140 |
| D3-4(XX)Y-P* | 89 | 184 | 267 | 584 | 324 | 337 | 156 | 394 | 737 | 127 | 64 | 178 |
| D4-4(XX)Y-P* | 114 | 229 | 324 | 664 | 349 | 394 | 156 | 476 | 841 | 152 | 76 | 178 |
| D5-4(XX)Y-P* | 141 | 254 | 375 | 740 | 352 | 464 | 130 | 552 | 943 | 178 | 89 | 178 |
| D6-4(XX)Y-P* | 168 | 292 | 549 | 997 | 394 | 441 | 178 | 772 | 1251 | 254 | 127 | 178 |

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

(XX) Material of construction, aluminum (AL), carbon steel (CS), or stainless steel (SS).

*Select pipe schedule 10, 20, or 40.

** D6 model has 45° angle.



VORTEX® MULTI-PORT WYE LINE DIVERTER™

The Vortex® Multi-Port Wye Line Diverter™ is specifically engineered to handle dry bulk solids in vacuum or dilute phase pneumatic conveying systems with pressures up to 15 psig (1 barg). A full flow orifice provides unrestricted conveying of material with no disk or ledges to impede flow. The diverter seat and live-loaded seals are shielded from abrasion by a metal insert, which provides superior shearing action. The Wye Line Diverter™ is designed to eliminate problems, enabling you to meet your objectives by increasing production, while decreasing labour and equipment cost.

Vortex® Wye Line Diverter™ Features

- Ability to Shift without Shutting Down Blower
- Improves Conveying Efficiency
- Smooth, Unobstructed Bore for Unrestricted Flow of Material
- Seal Protected from Abrasion
- Easy Installation and Maintenance



Valve Specifications

| | |
|-----------------------------------|---|
| Size/Bore Options | 50mm to 200mm Diameters, Pipe or Tube |
| Media | Powder, Pellets, Granulars |
| Connection Options | Compression Coupling |
| Media Temperature | Up to 82°C continuous to 121°C intermittent service, Modifications allow up to 204°C continuous to 232°C intermittent service |
| Media Pressure | -0.1 MPa +0.1 MPa, 1 barg, 15 psig, depending on size |
| Metal Construction Options | 304 or 316L Stainless Steel, Aluminium, and/or Carbon Steel |
| Seal/Seat Material Options | Nylon, PET, UHMW, Glass Filled Teflon, Rubber, and/or Silicon |
| Drive/Actuation Options | Double Acting Air Cylinder and Solenoid Operated Air Control Valve |
| Position Confirmation | Magnetic Reed Switch, Proximity Switch, or Mechanical Switch |
| Compliance/Approvals | CE, ATEX, FDA |
| Industry Use | Plastics, Petrochemicals, Chemicals, Foods, Minerals, Textiles, Agriculture |



Application Specific Modifications

| | |
|------------|---|
| S | Material contact is 316L 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. |
| P10 | Diverters are made with Schedule 10 Pipe. |
| P40 | Diverters are made with Schedule 40 Pipe. |
| SM | Slide Blade is electro-polished. Polyethylene Terephthalate (PET) pressure plate seals replace Nylon. |



Valves

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VORTEX® 2-WAY FLEX TUBE DIVERTER™

The Vortex® Flex Tube Diverter™ is specifically engineered to handle dry bulk solids in vacuum or dilute phase pneumatic conveying systems up to 15 psig (1 barg). The unique design eliminates material cross contamination by a positive seal across the closed port and the elimination of internal ledges and pockets where material can lodge and remain trapped. A smooth unobstructed transition from inlet to outlet shields the wear compensating seals from abrasion. The Flex Tube Diverter™ is designed to eliminate problems, enabling you to meet your objectives by increasing production, while decreasing labour and equipment costs.

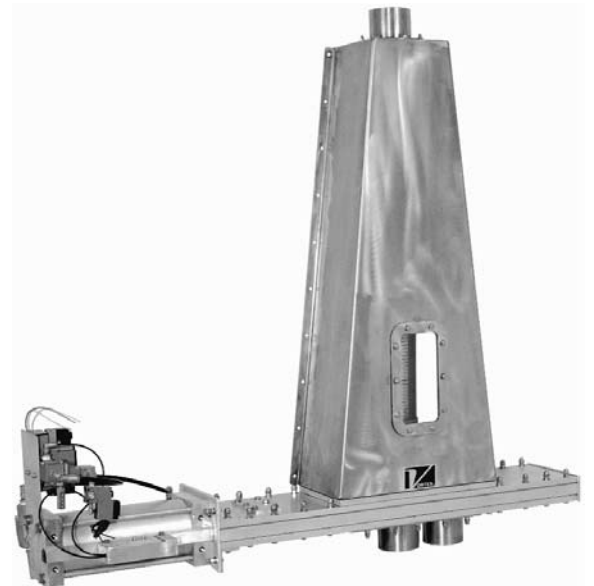
Vortex® Flex Tube Diverter™ Features

- Improves Conveying Efficiency
- Smooth, Unobstructed Bore for Unrestricted Flow of Material
- Seals Protected from Abrasion
- Easy Installation and Maintenance



Valve Specifications

| | |
|----------------------------|---|
| Size/Bore Options | 50mm to 200mm Diameters, Pipe or Tube |
| Media | Powder, Pellets, Granulars |
| Connection Options | Compression Coupling, ANSI, DIN, JIS, Custom Flanges |
| Media Temperature | Up to 82°C continuous to 121°C intermittent service, Modifications allow up to 121°C continuous to 149°C intermittent service |
| Media Pressure | -0.1 MPa +0.1 MPa, 1 barg, 15 psig, depending on size |
| Metal Construction Options | 304 or 316L Stainless Steel, Aluminium, and/or Carbon Steel |
| Seal/Seat Material Options | Nylon, PET, UHMW, Glass Filled Teflon, Rubber, and/or Silicon |
| Drive/Actuation Options | Double Acting Air Cylinder and Solenoid Operated Air Control Valve, Electric Actuator, or Hand Wheel |
| Position Confirmation | Magnetic Reed Switch or Proximity Switch |
| Compliance/Approvals | CE, ATEX, FDA |
| Industry Use | Plastics, Petrochemicals, Chemicals, Foods, Minerals, Textiles, Agriculture |

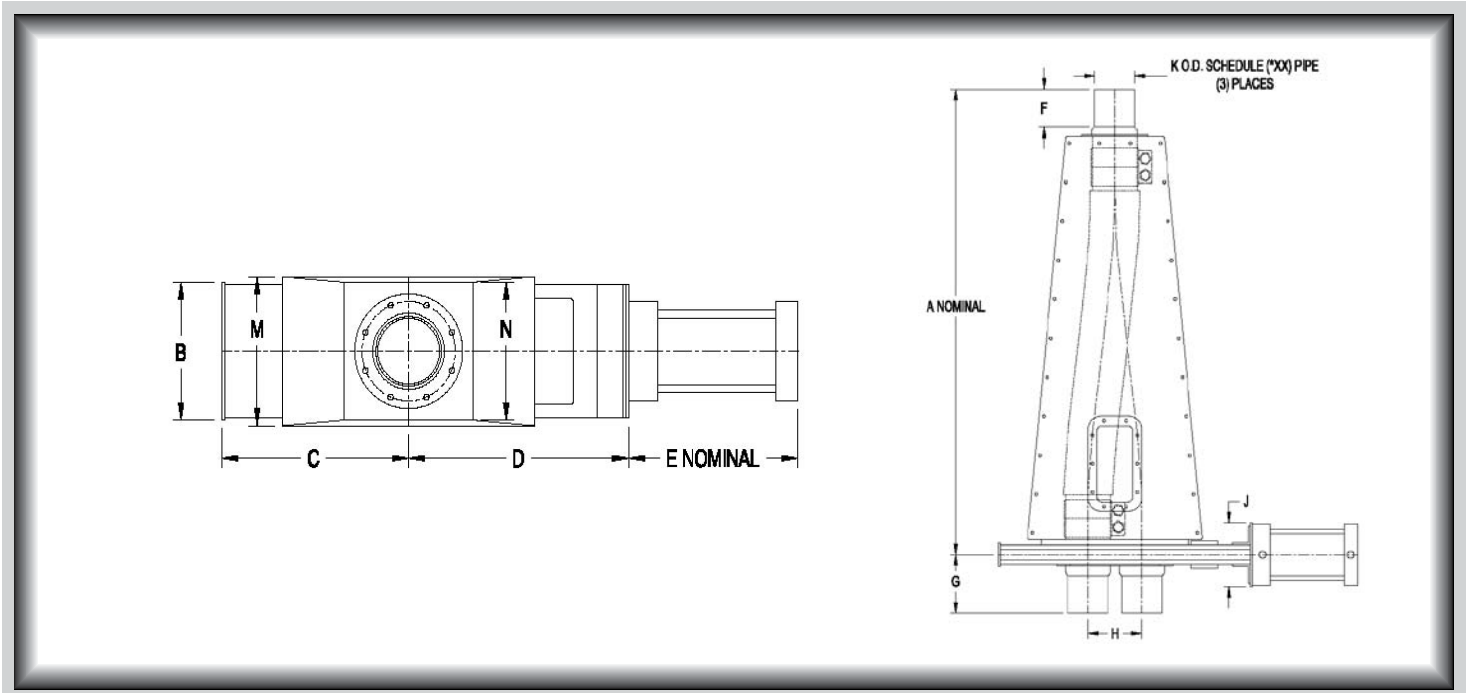


Application Specific Modifications

| | |
|----------|---|
| FS1 | 304 Stainless Steel directional flex hose is installed for material to run through the valve from one port to two ports. |
| FS2 | 304 Stainless Steel directional flex hose is installed for material to run through the valve from two ports to one port. |
| S | Material contact is 316L stainless steel. |
| MG | Air cylinder has a magnetic ring which activates a magnetic reed position indicating switch. |
| HT3 | Modifications are made allowing 204°C continuous to 232°C intermittent service. |
| SM | Slide Blade is electro-polished. Polyethylene Terephthalate (PET) pressure plate seals replace Nylon. |
| P1/P4 | Utilizing Schedule 10 or Schedule 40 Pipe. |
| OF 45/30 | Inlets and outlets are flanged with ANSI, DIN or JIS connections. The outlet opposite the air cylinder is offset at 45 or 30 degrees. |



VORTEX® 2-WAY FLEX TUBE DIVERTER™ DIMENSIONAL INFORMATION



| MODEL | TUBE SIZE | A | B | C | D | E | F | G | H | J | K | M | N | WT (kg) |
|-------------|-----------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|
| T2-2(XX)Y | 51 | 775 | 127 | 149 | 197 | 184 | 76 | 108 | 64 | 121 | 51 | 159 | 127 | 36 |
| T2.5-2(XX)Y | 64 | 895 | 165 | 197 | 251 | 203 | 105 | 133 | 89 | 133 | 64 | 203 | 168 | 41 |
| T3-2(XX)Y | 76 | 867 | 165 | 197 | 251 | 203 | 73 | 105 | 89 | 159 | 76 | 203 | 168 | 43 |
| T4-2(XX)Y | 102 | 1108 | 191 | 270 | 340 | 248 | 79 | 108 | 127 | 140 | 102 | 216 | 181 | 57 |
| T5-2(XX)Y | 127 | 1213 | 229 | 330 | 391 | 298 | 95 | 130 | 152 | 171 | 127 | 248 | 232 | 66 |
| T6-2(XX)Y | 152 | 1527 | 264 | 378 | 441 | 324 | 102 | 130 | 178 | 171 | 152 | 298 | 257 | 98 |
| T8-2(XX)Y | 203 | 1664 | 318 | 546 | 584 | 406 | 98 | 235 | 254 | 194 | 203 | 333 | 333 | 120 |

| MODEL | PIPE SIZE | A | B | C | D | E | F | G | H | J | K | M | N | WT (kg) |
|----------------|-----------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|
| T2-2(XX)Y-P* | 51 | 895 | 165 | 197 | 251 | 203 | 76 | 133 | 89 | 159 | 60 | 203 | 168 | 45 |
| T2.5-2(XX)Y-P* | 64 | 895 | 165 | 197 | 251 | 203 | 76 | 133 | 89 | 159 | 73 | 203 | 168 | 45 |
| T3-2(XX)Y-P* | 76 | 1159 | 191 | 270 | 340 | 235 | 102 | 159 | 127 | 140 | 89 | 216 | 181 | 59 |
| T4-2(XX)Y-P* | 102 | 1245 | 229 | 330 | 391 | 298 | 102 | 159 | 152 | 171 | 114 | 248 | 232 | 68 |
| T5-2(XX)Y-P* | 127 | 1553 | 264 | 378 | 441 | 324 | 102 | 156 | 178 | 171 | 141 | 298 | 257 | 100 |
| T6-2(XX)Y-P* | 152 | 1565 | 264 | 378 | 441 | 324 | 102 | 187 | 194 | 171 | 168 | 298 | 257 | 100 |
| T8-2(XX)Y-P* | 203 | 1759 | 318 | 546 | 584 | 406 | 152 | 241 | 254 | 194 | 219 | 333 | 333 | 123 |

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

(XX) Material of construction, aluminum (AL), carbon steel (CS), or stainless steel (SS).

*Select pipe schedule 10 or 40, note flex tube is O.D. hose.



Valves

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VORTEX® 3-WAY FLEX TUBE DIVERTER™

The Vortex® Flex Tube Diverter™ is specifically engineered to handle dry bulk solids in vacuum or dilute phase pneumatic conveying systems up to 15 psig (1 barg). The unique design eliminates material cross contamination by a positive seal across the closed port and the elimination of internal ledges and pockets where material can lodge and remain trapped. A smooth unobstructed transition from inlet to outlet shields the wear compensating seals from abrasion. The Flex Tube Diverter™ is designed to eliminate problems, enabling you to meet your objectives by increasing production, while decreasing labour and equipment costs.

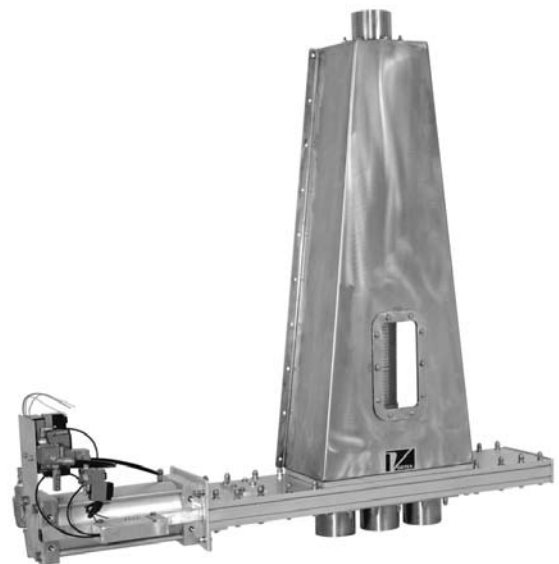
Vortex® Flex Tube Diverter™ Features

- Improves Conveying Efficiency
- Smooth, Unobstructed Bore for Unrestricted Flow of Material
- Seal Protected from Abrasion
- Easy Installation and Maintenance



Valve Specifications

| | |
|-----------------------------------|---|
| Size/Bore Options | 50mm to 200mm Diameters, Pipe or Tube |
| Media | Powder, Pellets, Granulars |
| Connection Options | Compression Coupling, ANSI, DIN, JIS, Custom Flanges |
| Media Temperature | Up to 82°C continuous to 121°C intermittent service, Modifications allow up to 121°C continuous to 149°C intermittent service |
| Media Pressure | -0.1 MPa +0.1 MPa, 1 barg, 15 psig, depending on size |
| Metal Construction Options | 304 or 316L Stainless Steel, Aluminium, and/or Carbon Steel |
| Seal/Seat Material Options | Nylon, PET, UHMW, Glass Filled Teflon, Rubber, and/or Silicon |
| Drive/Actuation Options | Double Acting Air Cylinder and Solenoid Operated Air Control Valve, Electric Actuator, or Hand Wheel |
| Position Confirmation | Magnetic Reed Switch or Proximity Switch |
| Compliance/Approvals | CE, ATEX, FDA |
| Industry Use | Plastics, Petrochemicals, Chemicals, Foods, Minerals, Textiles, Agriculture |

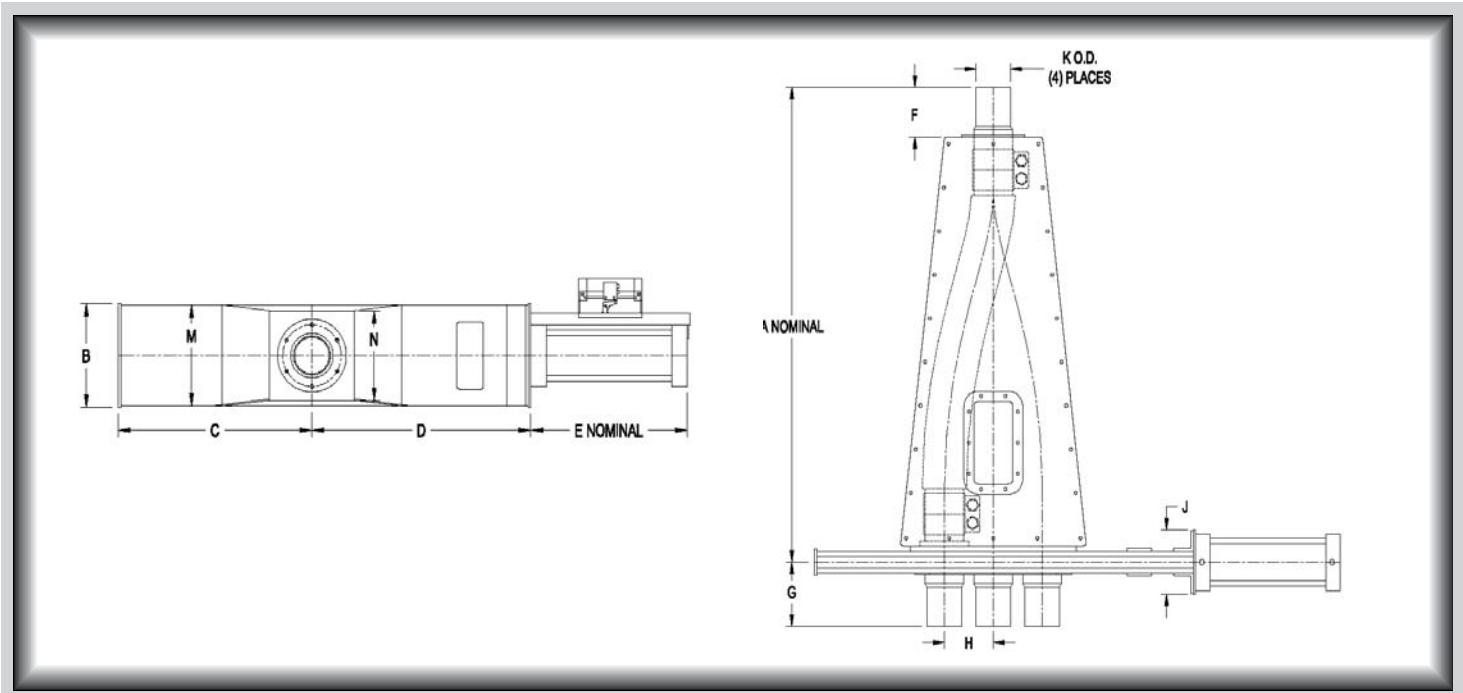


Application Specific Modifications

| | |
|--------------|--|
| FS1 | 304 Stainless Steel directional flex hose is installed for material to run through the valve from one port to two ports. |
| FS2 | 304 Stainless Steel directional flex hose is installed for material to run through the valve from two ports to one port. |
| S | Material contact is 316L 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. |
| SM | Slide Blade is electro-polished. Polyethylene Terephthalate (PET) pressure plate seals replace Nylon. |
| P1/P4 | Utilizing Schedule 10 or Schedule 40 Pipe. |



VORTEX® 3-WAY FLEX TUBE DIVERTER™ DIMENSIONAL INFORMATION



| MODEL | TUBE SIZE | A | B | C | D | E | F | G | H | J | K | M | N | WT (kg) |
|-------------|-----------|------|-----|-----|-----|-----|----|-----|-----|-----|-----|-----|-----|---------|
| T2-3(XX)Y | 51 | 772 | 184 | 273 | 330 | 248 | 76 | 105 | 64 | 127 | 51 | 184 | 127 | 45 |
| T2.5-3(XX)Y | 64 | 921 | 225 | 333 | 403 | 365 | 76 | 133 | 89 | 159 | 64 | 219 | 168 | 59 |
| T3-3(XX)Y | 76 | 889 | 225 | 333 | 403 | 365 | 73 | 108 | 89 | 159 | 76 | 225 | 168 | 59 |
| T4-3(XX)Y | 102 | 1118 | 229 | 467 | 527 | 375 | 67 | 105 | 127 | 159 | 102 | 229 | 191 | 73 |
| T5-3(XX)Y | 127 | 1229 | 270 | 537 | 625 | 451 | 92 | 133 | 152 | 184 | 127 | 270 | 232 | 91 |
| T6-3(XX)Y | 152 | 1829 | 286 | 641 | 705 | 502 | 98 | 130 | 178 | 171 | 152 | 286 | 254 | 118 |
| T8-3(XX)Y | 203 | 2203 | 337 | 927 | 972 | 657 | 98 | 235 | 254 | 391 | 203 | 356 | 333 | 145 |

| MODEL | PIPE SIZE | A | B | C | D | E | F | G | H | J | K | L | M | N | WT (kg) |
|----------------|-----------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|
| T2-3(XX)Y-P* | 51 | 921 | 225 | 333 | 403 | 365 | 76 | 133 | 89 | 159 | 60 | 76 | 219 | 168 | 59 |
| T2.5-3(XX)Y-P* | 64 | 921 | 225 | 333 | 403 | 365 | 76 | 133 | 89 | 159 | 73 | 76 | 219 | 168 | 59 |
| T3-3(XX)Y-P* | 76 | 1178 | 235 | 467 | 527 | 375 | 102 | 156 | 127 | 140 | 89 | 102 | 229 | 178 | 73 |
| T4-3(XX)Y-P* | 102 | 1257 | 270 | 562 | 625 | 451 | 102 | 162 | 152 | 184 | 114 | 127 | 260 | 232 | 91 |
| T5-3(XX)Y-P* | 127 | 1549 | 286 | 641 | 705 | 502 | 102 | 156 | 178 | 165 | 141 | 152 | 279 | 254 | 118 |
| T6-3(XX)Y-P* | 152 | 1873 | 286 | 641 | 705 | 502 | 146 | ** | 184 | 171 | 168 | 152 | 279 | 254 | 125 |
| T8-3(XX)Y-P* | 203 | 2305 | 337 | 927 | 972 | 657 | 152 | 241 | 254 | 391 | 219 | 203 | 356 | 333 | 227 |

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

(XX) Material of construction, aluminum (AL), carbon steel (CS), or stainless steel (SS).

*Select pipe schedule 10 or 40, note flex tube is O.D. tube.

** - For T6-3(XX)Y-P* the (G) dimension for outside ports is 187mm, (G) dimension for center port is 378mm to allow for Morris couplings.



Valves

Handling the world's dry bulk solids®

VORTEX® FILL PASS DIVERTER™

The Vortex® Fill Pass Diverter is specifically engineered to handle dry bulk solids in vacuum or dilute phase pneumatic conveying systems with pressures up to 15 psig (1 barg). It provides a versatile and reliable method for filling one or more “in-line” weigh hoppers when material is conveyed pneumatically through a closed loop system. The Fill Pass Diverter is designed to eliminate problems, enabling you to meet your objectives by increasing production, while decreasing labour and equipment costs.

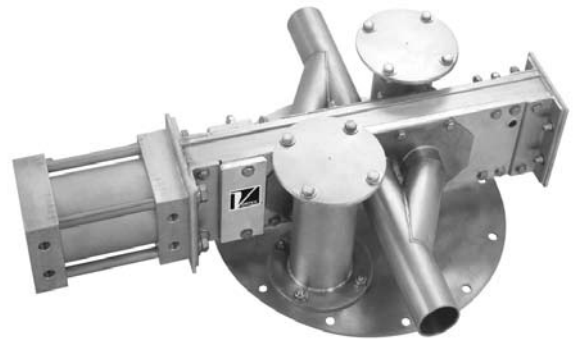
Vortex® Fill Pass Diverter Features

- Superior Air/Material Separation
- Improves Weighing Efficiency and Accuracy
- Smooth, Unobstructed Bore for Unrestricted Flow of Material
- Seal Protected from Abrasion
- Ability to Shift without Shutting Down Blower



Valve Specifications

| | |
|-----------------------------------|--|
| Size/Bore Options | 50mm to 200mm, Diameters, Pipe or Tube |
| Media | Powder, Pellets, Granulars |
| Connection Options | Compression Couplings |
| Media Temperature | Up to 121°C continuous to 149°C intermittent service |
| Media Pressure | -0.1 MPa +0.1 MPa, 1 barg, 15 psig, depending on size |
| Metal Construction Options | 304 or 316L Stainless Steel, Aluminium, and/or Carbon Steel |
| Seal/Seat Material Options | Nylon, PET, UHMW, Glass Filled Teflon, Natural Rubber, and/or Silicon Rubber |
| Drive/Actuation Options | Double Acting Air Cylinder and Solenoid Operated Air Control Valve |
| Position Confirmation | Magnetic Reed Switch or Proximity Switch |
| Compliance/Approvals | CE, ATEX, FDA |
| Industry Use | Plastics, Petrochemicals, Chemicals, Foods, Minerals, Textiles, Agriculture |

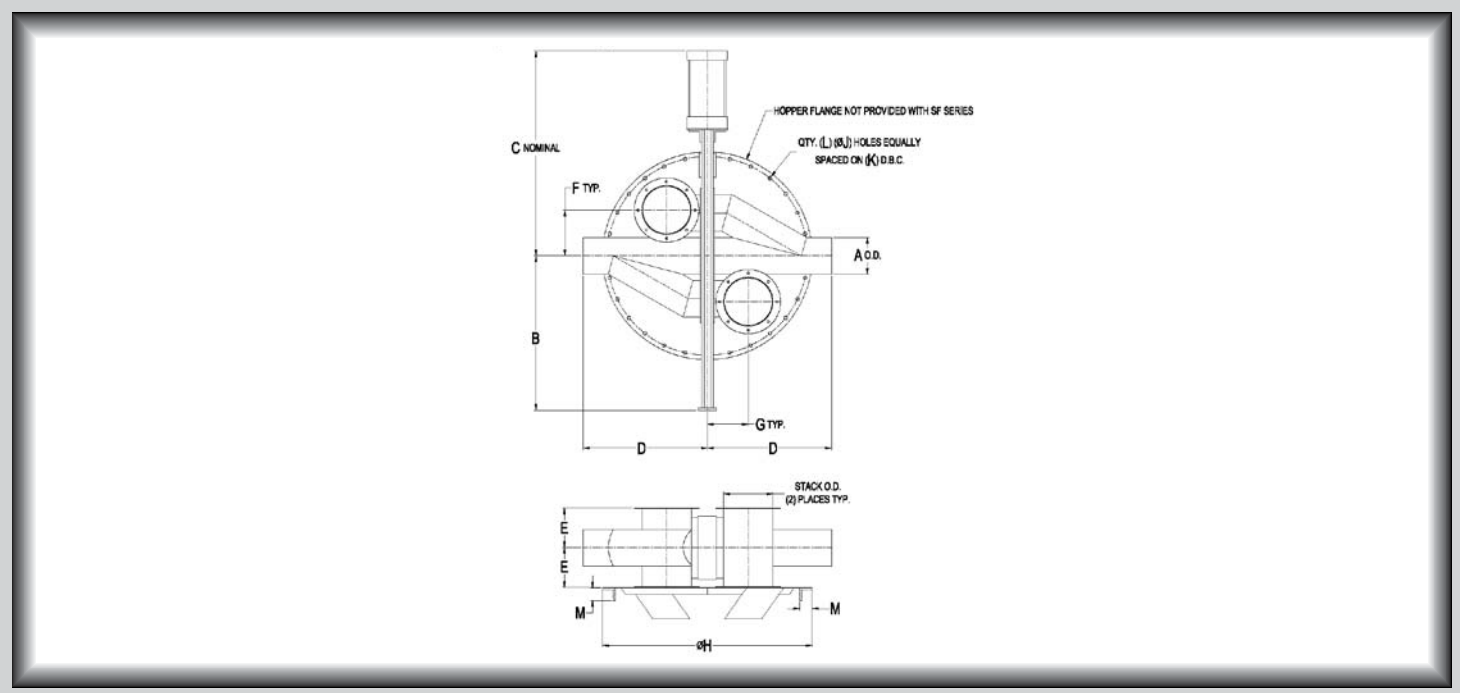


Application Specific Modifications

| | |
|-----------|---|
| S | Material contact is 316L stainless steel. |
| MG | Air cylinder has a magnetic ring which activates a magnetic reed position indicating switch. |
| P1 | A standard tube size diverter is modified with pipe size inlets and outlets. The -P1 modification would match schedule 10 pipe. |
| P4 | A standard tube size diverter is modified with pipe size inlets and outlets. The -P4 modification would match schedule 40 pipe. |
| SM | Slide Blade is electro-polished. Polyethylene Terephthalate (PET) pressure plate seals replace Nylon. |



VORTEX® FILL PASS DIVERTER™ DIMENSIONAL INFORMATION



| Series | Model | A | B | C | D | E | F | G | H | J | K | L | M |
|----------------------------------|-----------|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|----|
| HOPPER COMPACT HC SERIES | D23-3SSHC | 51 | 111 | 410 | 244 | 89 | 76 | 76 | 384 | 11 | 351 | 305 | 38 |
| | D33-4SSHC | 76 | 333 | 498 | 302 | 102 | 102 | 102 | 502 | 11 | 460 | 406 | 44 |
| | D43-4SSHC | 102 | 429 | 702 | 397 | 127 | 127 | 127 | 603 | 11 | 562 | 508 | 44 |
| HOPPER STACKABLE HS SERIES | D23-6SSHS | 51 | 111 | 410 | 244 | 89 | 165 | 168 | 762 | 11 | 724 | 610 | 51 |
| | D23-8SSHS | 51 | 238 | 410 | 244 | 89 | 191 | 168 | 864 | 11 | 826 | 711 | 51 |
| | D33-6SSHS | 76 | 327 | 498 | 302 | 102 | 165 | 168 | 762 | 11 | 724 | 610 | 51 |
| | D33-8SSHS | 76 | 327 | 498 | 302 | 102 | 191 | 168 | 864 | 11 | 826 | 711 | 51 |
| | D43-6SSHS | 102 | 429 | 702 | 397 | 127 | 165 | 168 | 762 | 11 | 724 | 610 | 51 |
| | D43-8SSHS | 102 | 429 | 702 | 397 | 127 | 191 | 168 | 864 | 11 | 826 | 711 | 51 |
| | D53-8SSHS | 127 | 552 | 765 | 448 | 152 | 191 | 168 | 864 | 11 | 826 | 711 | 51 |
| | D63-8SSHS | 152 | 641 | 854 | 511 | 165 | 191 | 168 | 864 | 11 | 826 | 711 | 51 |
| STACKABLE FLANGE SF SERIES | D23-6SSSF | 51 | 238 | 410 | 244 | 89 | 165 | 168 | -- | -- | -- | -- | -- |
| | D23-8SSSF | 51 | 238 | 410 | 244 | 89 | 191 | 168 | -- | -- | -- | -- | -- |
| | D33-6SSSF | 76 | 327 | 498 | 302 | 102 | 165 | 168 | -- | -- | -- | -- | -- |
| | D33-8SSSF | 76 | 327 | 498 | 302 | 102 | 191 | 168 | -- | -- | -- | -- | -- |
| | D43-6SSSF | 102 | 429 | 702 | 397 | 127 | 165 | 168 | -- | -- | -- | -- | -- |
| | D43-8SSSF | 102 | 429 | 702 | 397 | 127 | 191 | 168 | -- | -- | -- | -- | -- |
| | D53-8SSSF | 127 | 552 | 765 | 448 | 152 | 191 | 168 | -- | -- | -- | -- | -- |
| | D63-8SSSF | 152 | 641 | 854 | 511 | 165 | 191 | 168 | -- | -- | -- | -- | -- |

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

Reference A (Nominal Size O.D. tubing)



Valves

Handling the world's dry bulk solids®

VORTEX® 2-WAY SEAL TITE DIVERTER™

The Vortex® 2-Way Seal Tite™ Diverter is designed for use in gravity flow applications where material can be diverter from one source to either of two destinations. The Seal Tite™ Diverter offers a removable access door for replacement of blade and shaft seals. All internal ledges have been eliminated to promote cleanliness. The Seal Tite™ Diverter's superior design promotes efficiency, durability, and long service life.

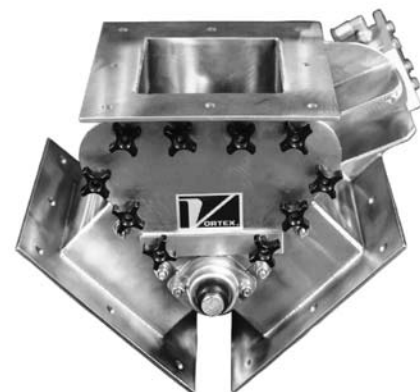
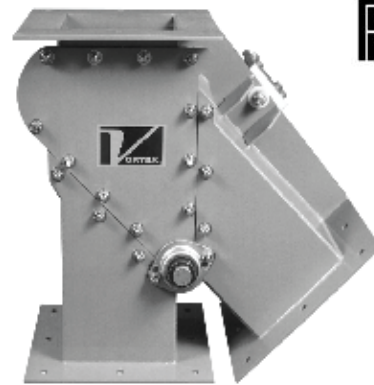
Vortex® Seal Tite™ Diverter Features

- Positive Seal of Dust and Fine Powders
- Leading Edge of Blade Seal Protected from Abrasion
- Access Door for Internal Inspection, Cleaning, or Maintenance
- Easy Installation and in-place Maintenance



Valve Specifications

| | |
|----------------------------|---|
| Size/Bore Options | 100mm to 750mm Diameter Round, Square, or Rectangular |
| Media | Powder, Pellets, Granulars |
| Connection Options | SVC Standard Flange, ANSI, DIN, JIS, or Custom Flanges |
| Media Temperature | Up to 82°C continuous to 121°C intermittent service, Modifications allow up to 204°C continuous to 232°C intermittent service |
| Media Pressure | 0 barg, Gravity Flow Only |
| Metal Construction Options | 304 or 316L Stainless Steel, and Carbon Steel |
| Seal/Seat Material Options | Nylon, PET, UHMW, Glass Filled Teflon, Natural Rubber, Kryptane, and/or Silicon Rubber |
| Drive/Actuation Options | Double Acting Air Cylinder with Solenoid Operated Air Control Valve, Electric Actuator, or Hand Lever |
| Position Confirmation | Magnetic Reed Switch, Proximity Switch, or Mechanical Switch |
| Compliance/Approvals | CE, ATEX, FDA |
| Industry Use | Plastics, Petrochemicals, Chemicals, Foods, Minerals, Textiles, Agriculture |

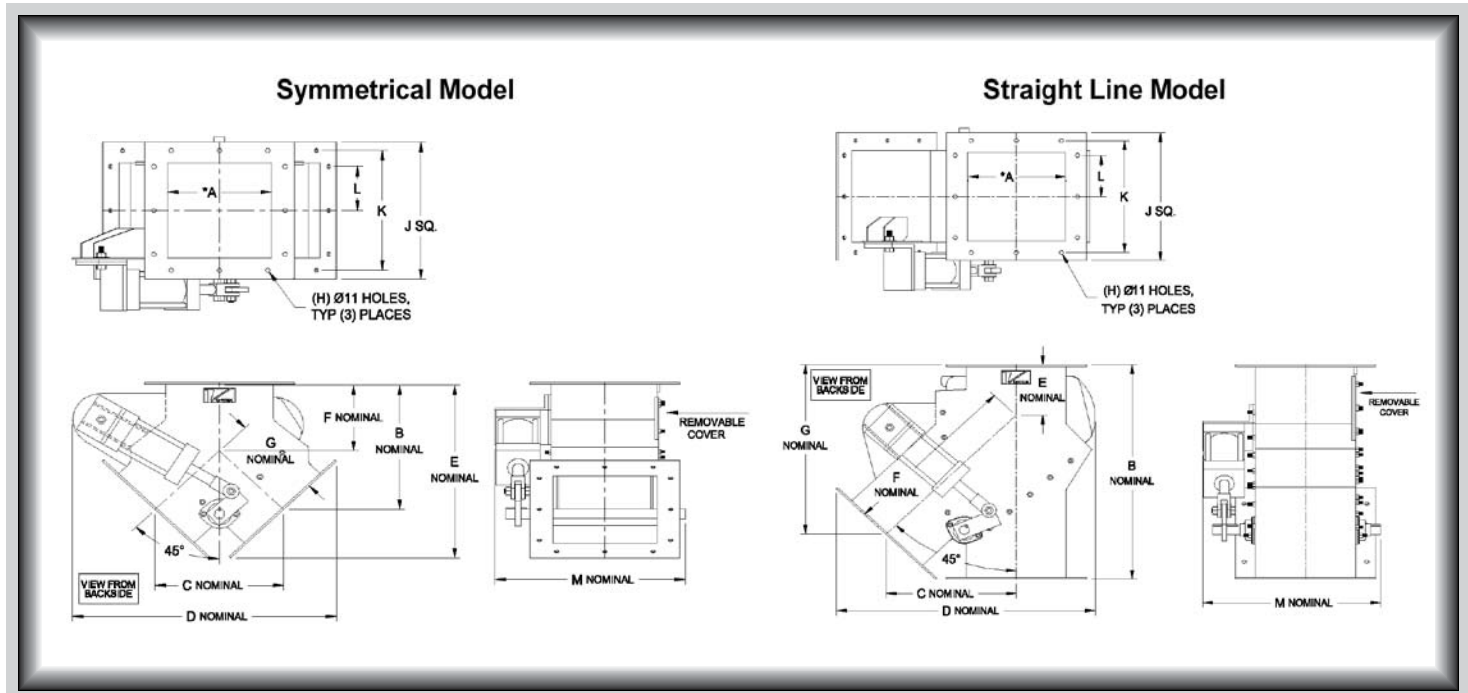


Application Specific Modifications

| | |
|---------|--|
| S | Material contact is 316L stainless steel. |
| MG | Air cylinder has a magnetic ring which activates a magnetic reed position indicating switch. |
| HT3 | Modifications are made allowing up to 121°C continuous to 149°C intermittent service. |
| HT4 | Modifications are made allowing up to 204°C continuous to 232°C intermittent service. |
| CIP | Access panel and fasteners allow for quicker access to the interior of the valve for more frequent inspection, cleaning or sanitation. |
| RT | Round transitions with SVC bolt hole pattern are mounted to the inlet and two outlets of the valve. |
| RTP | Round transitions with ANSI, DIN, or JIS bolt hole pattern are mounted to the inlet and two outlets of the valve. |
| 45 / 30 | The angle the outlets are offset (45 or 30) degrees. |
| KS | Kryptane blade seal for more abrasive materials. |



VORTEX® 2-WAY SEAL TITE DIVERTER™ DIMENSIONAL INFORMATION



| Symmetrical Model | A | B | C | D | E | F | G | H | J | K | L | M | WT (kg) |
|-------------------|-----|-----|-----|------|------|-----|-----|-----|-----|-----|-----|------|---------|
| Z100-2XX-45 | 102 | 229 | 191 | 403 | 302 | 133 | 133 | 203 | 203 | 159 | 79 | 305 | 18 |
| Z150-2XX-45 | 152 | 260 | 229 | 457 | 349 | 146 | 162 | 203 | 254 | 210 | 105 | 349 | 23 |
| Z200-2XX-45 | 203 | 292 | 267 | 495 | 400 | 159 | 187 | 305 | 305 | 260 | 89 | 400 | 30 |
| Z250-2XX-45 | 254 | 330 | 305 | 625 | 457 | 178 | 216 | 305 | 356 | 311 | 114 | 451 | 36 |
| Z300-2XX-45 | 305 | 362 | 330 | 673 | 505 | 197 | 235 | 508 | 406 | 362 | 70 | 502 | 43 |
| Z350-2XX-45 | 356 | 400 | 368 | 699 | 562 | 216 | 260 | 508 | 457 | 413 | 83 | 610 | 54 |
| Z400-2XX-45 | 406 | 432 | 406 | 765 | 613 | 229 | 289 | 508 | 508 | 464 | 95 | 660 | 64 |
| Z450-2XX-45 | 457 | 483 | 483 | 876 | 679 | 241 | 340 | 508 | 559 | 514 | 108 | 711 | 209 |
| Z500-2XX-45 | 508 | 546 | 559 | 991 | 762 | 267 | 394 | 711 | 610 | 565 | 76 | 762 | 84 |
| Z550-2XX-45 | 559 | 584 | 610 | 1076 | 819 | 279 | 432 | 711 | 660 | 616 | 89 | 813 | 95 |
| Z600-2XX-45 | 635 | 648 | 737 | 1257 | 908 | 279 | 521 | 711 | 737 | 667 | 95 | 927 | 163 |
| Z650-2XX-45 | 660 | 686 | 787 | 1346 | 965 | 292 | 559 | 711 | 787 | 718 | 105 | 978 | 195 |
| Z700-2XX-45 | 711 | 756 | 838 | 1432 | 1051 | 337 | 594 | 711 | 838 | 768 | 108 | 1029 | 227 |
| Z750-2XX-45 | 762 | 775 | 889 | 1518 | 1089 | 330 | 629 | 914 | 889 | 819 | 92 | 1080 | 259 |

| Straight Line Model | A | B | C | D | E | F | G | H | J | K | L | M | WT (kg) |
|---------------------|-----|------|-----|------|-----|------|------|-----|-----|-----|-----|------|---------|
| Z100-2XX-45-SL | 102 | 387 | 203 | 384 | 114 | 289 | 314 | 203 | 203 | 159 | 79 | 305 | 23 |
| Z150-2XX-45-SL | 152 | 464 | 248 | 464 | 114 | 349 | 375 | 203 | 254 | 210 | 105 | 349 | 30 |
| Z200-2XX-45-SL | 203 | 533 | 292 | 562 | 133 | 413 | 425 | 305 | 305 | 260 | 89 | 400 | 34 |
| Z250-2XX-45-SL | 254 | 597 | 330 | 657 | 140 | 467 | 470 | 305 | 356 | 311 | 114 | 451 | 50 |
| Z300-2XX-45-SL | 305 | 667 | 375 | 746 | 149 | 530 | 524 | 508 | 406 | 362 | 70 | 502 | 59 |
| Z350-2XX-45-SL | 356 | 743 | 419 | 810 | 159 | 594 | 581 | 508 | 457 | 413 | 83 | 610 | 82 |
| Z400-2XX-45-SL | 406 | 832 | 470 | 937 | 181 | 664 | 651 | 508 | 508 | 464 | 95 | 660 | 100 |
| Z450-2XX-45-SL | 457 | 914 | 521 | 1054 | 197 | 737 | 718 | 508 | 559 | 514 | 108 | 711 | 118 |
| Z500-2XX-45-SL | 508 | 1003 | 572 | 1165 | 216 | 810 | 787 | 711 | 610 | 565 | 76 | 762 | 136 |
| Z550-2XX-45-SL | 559 | 1092 | 622 | 1251 | 238 | 879 | 860 | 711 | 660 | 616 | 89 | 813 | 159 |
| Z600-2XX-45-SL | 610 | 1181 | 686 | 1356 | 235 | 968 | 921 | 711 | 737 | 667 | 95 | 927 | 227 |
| Z650-2XX-45-SL | 660 | 1270 | 737 | 1483 | 254 | 1041 | 991 | 711 | 787 | 718 | 105 | 978 | 318 |
| Z700-2XX-45-SL | 711 | 1346 | 787 | 1578 | 264 | 1114 | 1051 | 711 | 838 | 768 | 108 | 1029 | 409 |
| Z750-2XX-45-SL | 762 | 1372 | 810 | 1641 | 251 | 1146 | 1070 | 914 | 889 | 819 | 92 | 1080 | 499 |

All dimensions are given in mm, Information subject to change without notice.
 * less material thickness.



Valves

Handling the world's dry bulk solids®

VORTEX® 3-WAY SEAL TITE DIVERTER™

The patented Vortex® 3-Way Seal Tite™ Diverter is designed for use in gravity flow applications where material can be diverter from one source to either of three destinations. The Seal Tite™ Diverter offers a removable access door for replacement of blade and shaft seals. All internal ledges have been eliminated to promote cleanliness. The Seal Tite™ Diverter's superior design promotes efficiency, durability, and long service life.

Vortex® Seal Tite™ Diverter Features

- Positive Seal of Dust and Fine Powders
- Leading Edge of Blade Seals Protected from Abrasion
- Access Door for Internal Inspection, Cleaning, or Maintenance
- Easy Installation and Maintenance



Valve Specifications

| | |
|----------------------------|---|
| Size/Bore Options | 100mm to 450mm Diameter Round, Square, or Rectangular |
| Media | Powder, Pellets, Granulars |
| Connection Options | SVC Standard Flange, ANSI, DIN, JIS, or Custom Flanges |
| Media Temperature | Up to 82°C continuous to 121°C intermittent service, Modifications allow up to 204°C continuous to 232°C intermittent service |
| Media Pressure | 0 barg, Gravity Flow Only |
| Metal Construction Options | 304 or 316L Stainless Steel, and/or Carbon Steel |
| Seal/Seat Material Options | PET, UHMW, Natural Rubber, Kryptane, and/or Silicon Rubber |
| Drive/Actuation Options | Double Acting Air Cylinder with Solenoid Operated Air Control Valve, Electric Actuator, or Hand Lever. |
| Position Confirmation | Magnetic Reed Switch, Proximity Switch, or Mechanical Switch |
| Compliance/Approvals | CE, ATEX, FDA |
| Industry Use | Plastics, Petrochemicals, Chemicals, Foods, Minerals, Textiles, Agriculture |



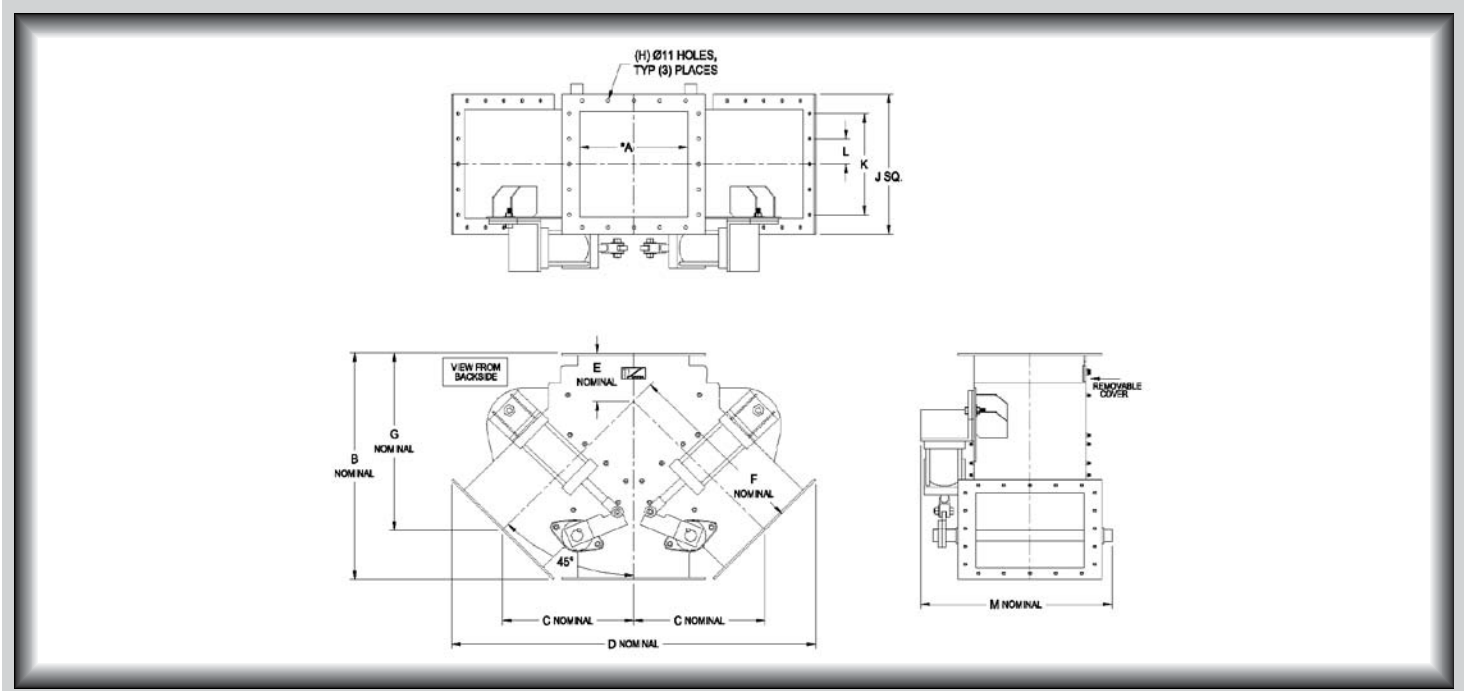
Patent No. 7290566

Application Specific Modifications

| | |
|---------|---|
| S | Material contact is 316L stainless steel. |
| MG | Air cylinder has a magnetic ring which activates a magnetic reed position indicating switch. |
| HT3 | Modifications are made allowing up to 121°C continuous to 149°C intermittent service. |
| HT4 | Modifications are made allowing up to 204°C continuous to 232°C intermittent service. |
| CIP | A special access panel and fasteners that allow for quicker access to the interior of the valve for inspection, cleaning or sanitation. |
| RT | Round transitions with SVC bolthole pattern are mounted to the inlet and two outlets of the valve. |
| RTP | Round transitions with ANSI, DIN, or JIS bolt hole pattern are mounted to the inlet and two outlets of the valve. |
| 45 / 30 | The angle the outlets are offset (45 or 30) degrees. |
| KS | Kryptane blade seal for more abrasive materials. |



VORTEX® 3-WAY SEAL TITE DIVERTER™ DIMENSIONAL INFORMATION



| Model | A | B | C | D | E | F | G | H | J | K | L | M | WT (kg) |
|-------------|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|---------|
| Z100-3XX-45 | 102 | 387 | 203 | 549 | 114 | 289 | 314 | 203 | 203 | 159 | 79 | 305 | 45 |
| Z150-3XX-45 | 152 | 457 | 248 | 676 | 121 | 349 | 368 | 203 | 254 | 184 | 105 | 349 | 68 |
| Z200-3XX-45 | 203 | 533 | 292 | 800 | 133 | 413 | 425 | 305 | 305 | 260 | 89 | 375 | 91 |
| Z250-3XX-45 | 254 | 584 | 330 | 911 | 127 | 467 | 457 | 305 | 356 | 311 | 114 | 451 | 114 |
| Z300-3XX-45 | 305 | 660 | 375 | 1038 | 140 | 530 | 518 | 508 | 406 | 362 | 70 | 502 | 136 |
| Z350-3XX-45 | 356 | 737 | 419 | 1162 | 156 | 594 | 575 | 508 | 457 | 413 | 83 | 610 | 204 |
| Z400-3XX-45 | 406 | 826 | 470 | 1299 | 178 | 664 | 645 | 508 | 508 | 464 | 95 | 660 | 238 |
| Z450-3XX-45 | 457 | 914 | 521 | 1435 | 197 | 737 | 718 | 508 | 559 | 514 | 108 | 711 | 272 |

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

* less material thickness.



Valves

Handling the world's dry bulk solids®

VORTEX® ABRASIVE DUTY DIVERTER™

The Vortex® Abrasive Duty Diverter™ is designed to meet the demanding applications associated with handling material such as sand, gravel, whole grains, and coal. This diverter has been engineered to address the problems associated with typical aggregate or “bucket” diverters. The removable access door and abrasion resistant wear liners allow for a “maintenance friendly” diverter. The Abrasive Duty Diverter™ is designed to eliminate problems, enabling you to meet your objectives by increasing production, while decreasing labour and equipment costs.

Vortex® Abrasive Duty Diverter™ Features

- Heavy Duty Construction
- Seals and Body Protected from Abrasion
- Access Door for Internal Inspection, Cleaning, or Maintenance
- Easy Installation and Maintenance



Valve Specifications

| | |
|-----------------------------------|---|
| Size/Bore Options | 150mm to 600mm Diameter Round, Square, or Rectangular |
| Media | Abrasives, Granulars |
| Connection Options | SVC Standard Flange, ANSI, DIN, JIS, or Custom Flanges |
| Media Temperature | Up to 82°C continuous to 121°C intermittent service, Modifications allow up to 204°C continuous to 232°C intermittent service |
| Media Pressure | 0 barg, Gravity Flow Only |
| Metal Construction Options | 304 or 316L Stainless Steel, and/or Carbon Steel |
| Seal/Seat Material Options | Nylon, PET, UHMW, Glass Filled Teflon, Chute Rubber, Belted Rubber, Kryptane, and/or Silicon Rubber |
| Drive/Actuation Options | Double Acting Air Cylinder with Solenoid Operated Air Control Valve, Electric Actuator, or Hand Lever |
| Position Confirmation | Magnetic Reed Switch, Proximity Switch, or Mechanical Switch |
| Compliance/Approvals | CE, ATEX |
| Industry Use | Plastics, Petrochemicals, Chemicals, Minerals, Textiles, Agriculture |

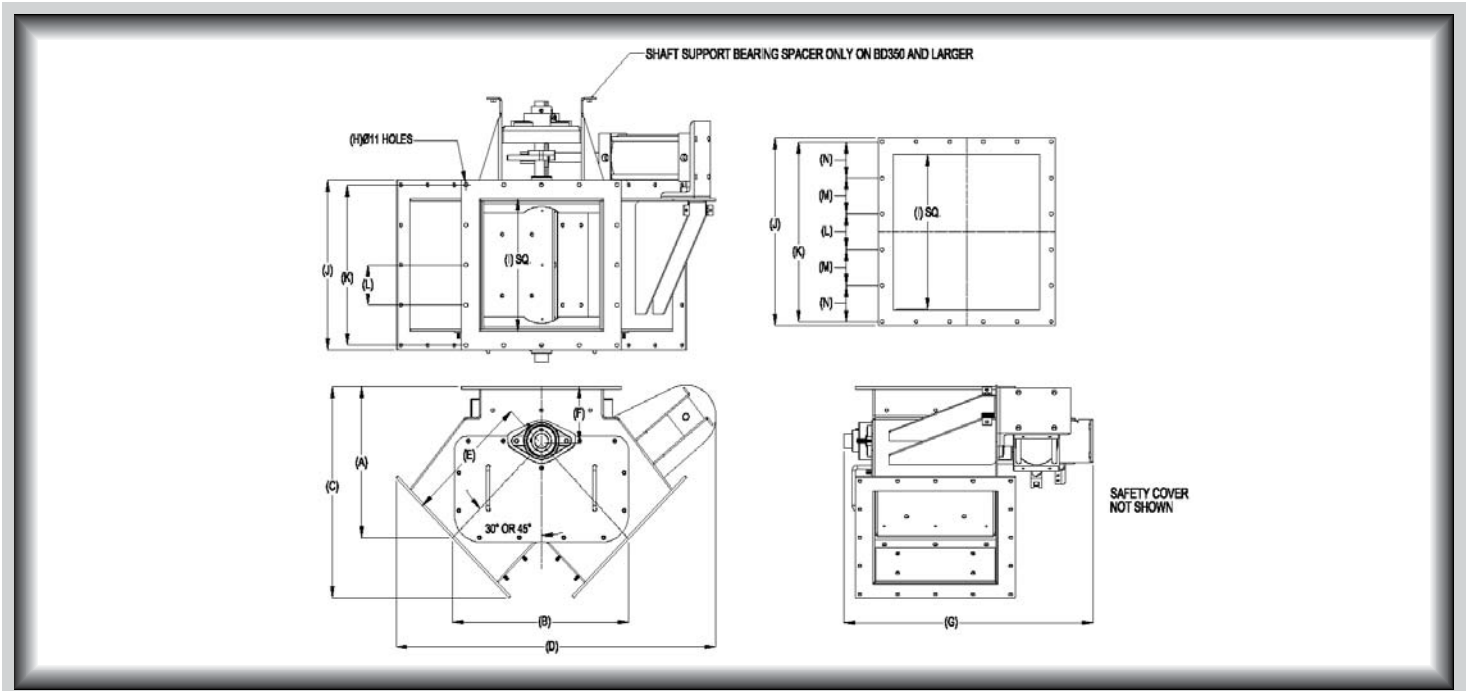


Application Specific Modifications

| | |
|----------------|---|
| 45 / 30 | The angle the outlets are offset (45 or 30) degrees. |
| MG | Air cylinder has a magnetic ring which activates a magnetic reed position indicating switch. |
| HT4 | Modifications are made allowing 204°C continuous to 232°C intermittent service. |
| DP | Carbon steel special service inlet with built-in dead pocket deflector. |
| PL | Replaceable abrasion resistant polymer liner on bucket legs. |
| HL | AR400 carbon steel honeycomb liner on bucket legs. |
| HB | AR400 carbon steel honeycomb liner on bucket. |
| RT | Round transitions with Vortex Standard flange patterns are mounted to the inlet and two outlets of the valve. |
| RTP | Round transitions with ANSI, DIN, or JIS flange patterns are mounted to the inlet and two outlets of the valve. |



VORTEX® ABRASIVE DUTY™ DIMENSIONAL INFORMATION



| Model | A | B | C | D | E | F | G | H | I | J | K | L | M | WT (kg) |
|--------------|-----|-----|-----|------|-----|-----|------|-----|-----|-----|-----|-----|-----|---------|
| BD150-2CS-45 | 292 | 305 | 381 | 603 | 216 | 140 | 356 | 203 | 143 | 254 | 229 | 114 | -- | 32 |
| BD200-2CS-45 | 318 | 356 | 425 | 648 | 251 | 140 | 406 | 203 | 194 | 305 | 279 | 140 | -- | 45 |
| BD250-2CS-45 | 343 | 406 | 470 | 772 | 289 | 140 | 457 | 406 | 244 | 356 | 330 | 83 | -- | 59 |
| BD300-2CS-45 | 368 | 457 | 511 | 813 | 324 | 140 | 508 | 406 | 295 | 406 | 381 | 95 | -- | 82 |
| BD350-2CS-45 | 406 | 508 | 568 | 914 | 359 | 152 | 610 | 406 | 346 | 457 | 432 | 108 | -- | 109 |
| BD400-2CS-45 | 432 | 559 | 613 | 991 | 394 | 152 | 762 | 406 | 397 | 508 | 483 | 121 | -- | 127 |
| BD450-2CS-45 | 457 | 610 | 654 | 1092 | 432 | 152 | 813 | 406 | 448 | 559 | 533 | 133 | -- | 145 |
| BD500-2CS-45 | 533 | 660 | 759 | 1178 | 467 | 203 | 889 | 406 | 495 | 635 | 584 | 146 | -- | 261 |
| BD550-2CS-45 | 559 | 711 | 800 | 1251 | 502 | 203 | 921 | 610 | 546 | 686 | 635 | 106 | 105 | 284 |
| BD600-2CS-45 | 673 | 914 | 937 | 1476 | 648 | 216 | 1016 | 610 | 597 | 737 | 686 | 114 | -- | 318 |

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



Valves

Handling the world's dry bulk solids®

VORTEX® GRAVITY VEE DIVERTER™

The Vortex, Gravity Vee Diverter™ is designed for diversity when diverting the flow of dry bulk solids in a gravity flow conveying system. The design allows for material flow through both outlets simultaneously, one outlet at a time, or a complete shut-off of flow. The Gravity Vee Diverter™ is also capable of metering flow in both or either direction. The Gravity Vee Diverter™ is designed to eliminate problems, enabling you to meet your objectives by increasing production, while decreasing labor and equipment costs.

Vortex® Gravity Vee Diverter™ Features

- Positive Seal of Dust and Fine Powders
- Seals Protected from Abrasion
- Accurate Metering of Material with Optional Metering Controls
- Easy Installation and Maintenance



Valve Specifications

| | |
|----------------------------|---|
| Size/Bore Options | 150mm to 450mm Diameter Round, Square, or Rectangular |
| Media | Powder, Pellets, Granulars |
| Connection Options | SVC Standard Flange, ANSI, DIN, JIS, Custom Flanges |
| Media Temperature | Up to 82°C continuous to 121°C intermittent service, Modifications allow up to 121°C continuous to 149°C intermittent service |
| Media Pressure | 0 barg, Gravity Flow Only |
| Metal Construction Options | 304 or 316L Stainless Steel, Aluminum, and/or Carbon Steel |
| Seal/Seat Material Options | Nylon, PET, UHMW, Glass Filled Teflon, Natural Rubber, and/or Silicon Rubber |
| Drive/Actuation Options | Double Acting Air Cylinder with Solenoid Operated Air Control Valve, Electric Actuator, or Hand Wheel |
| Position Confirmation | Magnetic Reed Switch, Proximity Switch, or Mechanical Switch |
| Compliance/Approvals | CE, ATEX, FDA |
| Industry Use | Plastics, Petrochemicals, Chemicals, Foods, Minerals, Textiles, Agriculture |

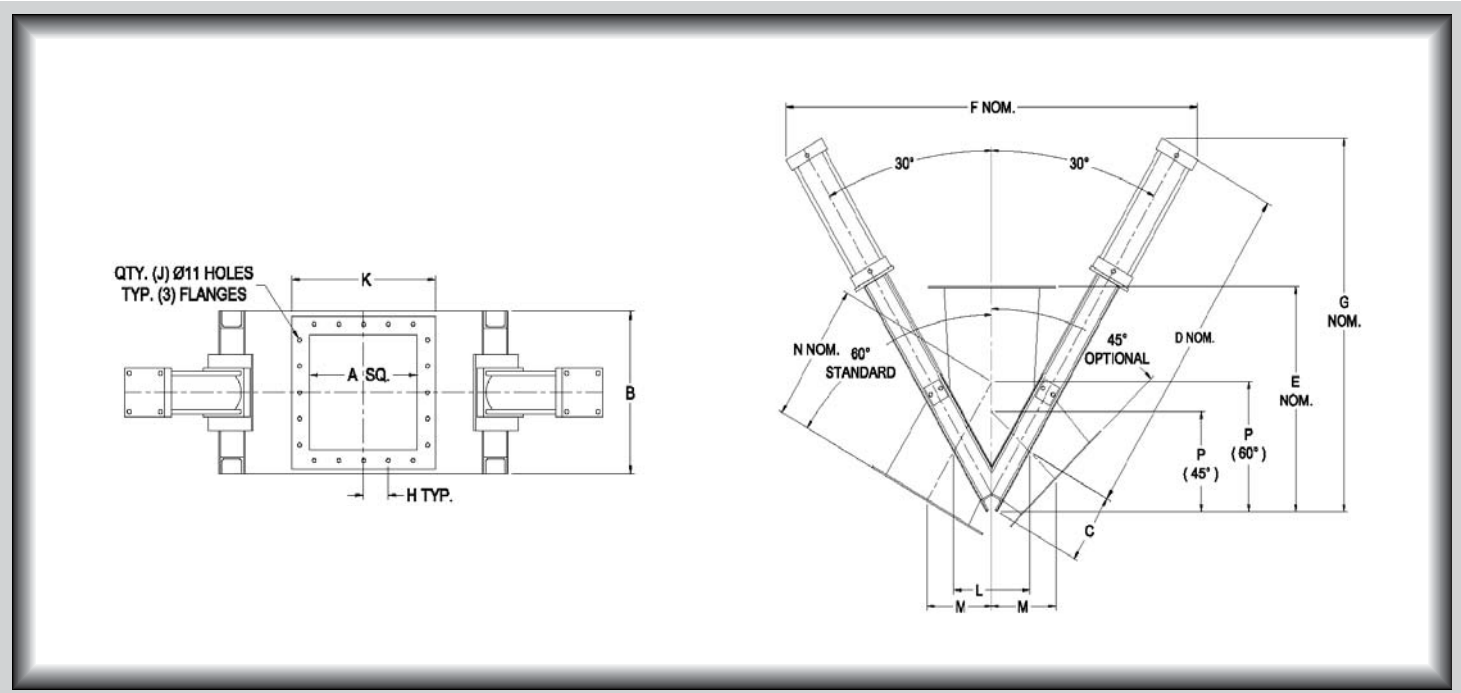


Application Specific Modifications

| | |
|-----|---|
| S | Material contact is 316L stainless steel. |
| MG | Air cylinder has a magnetic ring which activates a magnetic reed position indicating switch. |
| WS1 | Slide Blade is electro-polished. Polyethylene Terephthalate (PET) dust seals replace Nylon. |
| 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. |
| HS | Hardened steel rollers replace standard nylon rollers. |
| SB | Bonnet is manufactured with solid, gasket covers. (Allows the valve to accept air purge.) |
| AD | Modifications are made to handle medium abrasive products. Includes flow deflector and 5mm 304 stainless steel blade. |



VORTEX® GRAVITY VEE DIVERTER™ DIMENSIONAL INFORMATION



| Model | A | B | C | D | E | F | G | H | J | K | L | M (60°) | M (45°) | N (60°) | N (45°) | P (60°) | P (45°) | WT (kg) |
|------------------------|-----|-----|-----|------|-----|------|------|-----|----|-----|-----|---------|---------|---------|---------|---------|---------|---------|
| V150-2(XX*) S-60-NR | 152 | 279 | 133 | 645 | 441 | 835 | 718 | 105 | 8 | 254 | 165 | 146 | 149 | 292 | 213 | 260 | 200 | 63 |
| V200-2(XX*) S-60-NR | 203 | 330 | 159 | 772 | 530 | 987 | 864 | 89 | 12 | 305 | 191 | 162 | 168 | 324 | 235 | 305 | 235 | 77 |
| V250-2(XX*) S-60-NR | 254 | 381 | 184 | 899 | 610 | 1140 | 991 | 114 | 12 | 356 | 216 | 187 | 191 | 375 | 267 | 349 | 270 | 91 |
| V300-2(XX*) S-60-NR | 305 | 432 | 210 | 1026 | 679 | 1292 | 1124 | 70 | 20 | 406 | 241 | 208 | 206 | 416 | 289 | 391 | 305 | 104 |
| V350-2(XX*) S-60-NR | 356 | 483 | 235 | 1153 | 784 | 1445 | 1257 | 83 | 20 | 457 | 267 | 230 | 233 | 460 | 330 | 435 | 340 | 118 |
| V400-2(XX*) S-60-NR | 406 | 533 | 260 | 1280 | 899 | 1600 | 1372 | 95 | 20 | 508 | 295 | 237 | 241 | 397 | 340 | 483 | 375 | 131 |
| V450-2(XX*) S-60-NR | 457 | 584 | 286 | 1407 | 940 | 1775 | 1524 | 108 | 20 | 559 | 321 | 275 | 259 | 549 | 365 | 524 | 406 | 145 |

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

*(XX) Material of construction, aluminum (AL), carbon steel (CS), or stainless steel (SS).



Valves

Handling the world's dry bulk solids®

VORTEX® IRIS VALVE™

The patented Vortex® Iris Valve is designed specifically to handle dry bulk solids in gravity discharge of free-flowing material from bins, bulk bags, chutes, and hoppers. The Vortex® Iris Valve is constructed with stainless steel control rings, metal handle and trigger lock, and nylon shim for durability and smooth actuation. A form fitted fabric sleeve provides a dust tight seal and product barrier, which prevents material leakage to atmosphere. The Iris Valve is designed to eliminate problems, enabling you to meet your objectives by increasing production, while decreasing labour and equipment costs.

Vortex® Iris Valve Features

- No Binding or Galling. Smooth Actuation
- Unobstructed Bore for Unrestricted Flow of Material
- Fabric Sleeve Prevents Material Degradation
- Easy Installation and Maintenance



Valve Specifications

| | |
|----------------------------|---|
| Size/Bore Options | 100mm to 450 mm Diameters |
| Media | Powder, Pellets, Granulars |
| Connection Options | Standard Flange Pattern, Tube Stub, or Ferrule Couplings |
| Media Temperature | Up to 66°C continuous / intermittent service |
| Media Pressure | 0 barg, Gravity Flow Only |
| Metal Construction Options | 304 or 316L Stainless Steel, and/or Aluminium |
| Sleeve Material Options | Nylon, Teflon, Urethane, or Rubber |
| Drive/Actuation Options | Infinite Position Hand Lever , Quick Lock Hand Lever, or Tote Handle |
| Position Confirmation | Visual, Proximity Switch |
| Compliance/Approvals | CE, FDA |
| Industry Use | Plastics, Petrochemicals, Chemicals, Foods, Minerals, Textiles, Agriculture |



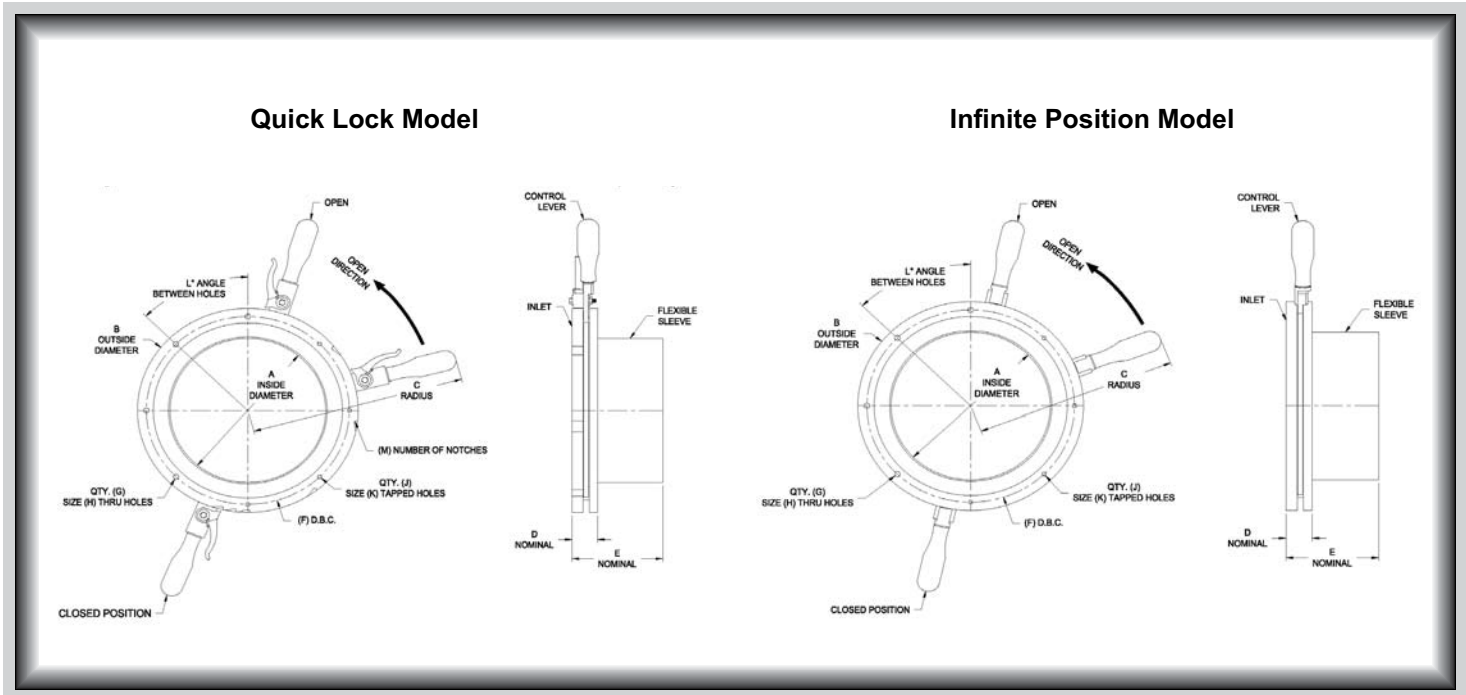
Patent No. 7021604

Application Specific Modifications

| | |
|------|---|
| SC | All steel material contact components are 304 stainless steel. |
| S-SC | All steel material contact components are 316L stainless steel. |
| UR | Valve Sleeve is a 4 oz. nylon that is urethane coated. |
| TF | Valve Sleeve is an 8 oz. Teflon material. |
| FP | Optional bolt-hole pattern is specified. |



VORTEX® IRIS VALVE™ DIMENSIONAL INFORMATION



| Quick Lock Model | A | B | C | D | E | F | G | H | J | K | L | M | N | O | P | Q | R | S | WT (kg) |
|------------------|-----|-----|-----|----|-----|-----|---|---|---|---------|----|---|----|----|-------|----|------------|----|---------|
| UB100QL | 102 | 178 | 257 | 41 | 57 | 152 | 3 | 9 | 3 | M8-1.25 | 60 | 4 | 1 | -- | -- | -- | -- | -- | 3 |
| UB150QL | 152 | 229 | 283 | 41 | 89 | 203 | 3 | 9 | 3 | M8-1.25 | 60 | 4 | 3 | 3 | 9/32 | 3 | 1/4-20 UNC | 60 | 6 |
| UB200QL | 203 | 279 | 308 | 41 | 114 | 254 | 4 | 9 | 4 | M8-1.25 | 45 | 4 | 4 | 3 | 9/32 | 3 | 1/4-20 UNC | 60 | 7 |
| UB250QL | 254 | 356 | 346 | 41 | 146 | 327 | 4 | 9 | 4 | M8-1.25 | 45 | 4 | 5 | 4 | 13/32 | 4 | 3/8-16 UNC | 45 | 10 |
| UB300QL | 305 | 406 | 371 | 41 | 165 | 378 | 4 | 9 | 4 | M8-1.25 | 45 | 4 | 7 | 4 | 13/32 | 4 | 3/8-16 UNC | 45 | 16 |
| UB375QL | 381 | 495 | 416 | 41 | 203 | 470 | 6 | 9 | 6 | M8-1.25 | 30 | 4 | 11 | 4 | 13/32 | 4 | 3/8-16 UNC | 45 | 25 |
| UB450QL | 457 | 559 | 448 | 41 | 267 | 530 | 9 | 9 | 6 | M8-1.25 | 30 | 4 | 15 | -- | -- | -- | -- | -- | 34 |

| Infinite Position Model | A | B | C | D | E | F | G | H | J | K | L | WT (kg) |
|-------------------------|-----|-----|-----|----|-----|-----|---|---|---|---------|----|---------|
| UB100IP | 102 | 178 | 232 | 41 | 57 | 152 | 3 | 9 | 3 | M8-1.25 | 60 | 1 |
| UB150IP | 152 | 229 | 257 | 41 | 90 | 203 | 3 | 9 | 3 | M8-1.25 | 60 | 3 |
| UB200IP | 203 | 279 | 283 | 41 | 114 | 254 | 4 | 9 | 4 | M8-1.25 | 45 | 4 |
| UB250IP | 254 | 356 | 321 | 41 | 146 | 327 | 4 | 9 | 4 | M8-1.25 | 45 | 5 |
| UB300IP | 305 | 406 | 346 | 41 | 165 | 378 | 4 | 9 | 4 | M8-1.25 | 45 | 7 |
| UB375IP | 381 | 495 | 391 | 41 | 203 | 470 | 6 | 9 | 6 | M8-1.25 | 30 | 11 |
| UB450IP | 457 | 559 | 422 | 41 | 254 | 530 | 6 | 9 | 6 | M8-1.25 | 30 | 15 |

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

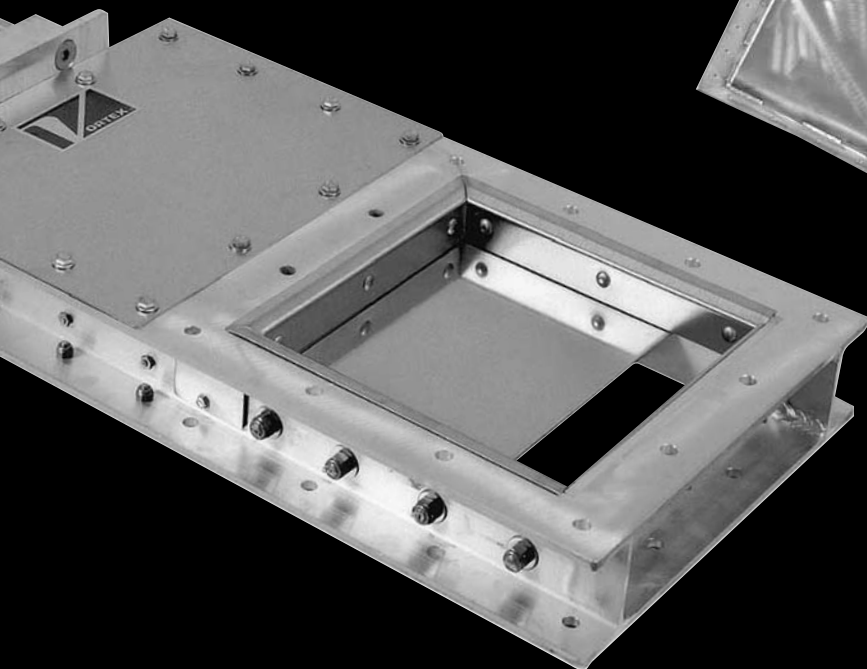
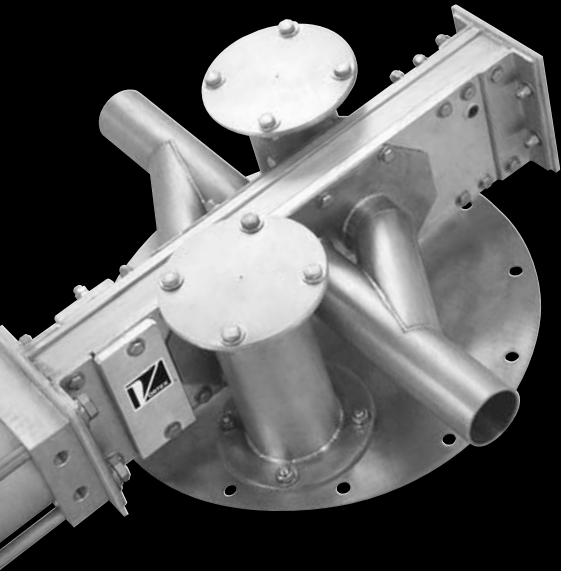


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