

GATE DIVERTER VALVES (NOT CE COMPLIANT)



APPLICATION

Gate diverter valves direct material (or air) from one source to multiple destinations in vacuum conveying systems. The gate's sliding orifice allows the gate to be used in vacuum applications where material needs to be converged from two sources to one destination. It also allows the valve to be actuated during material transfer.

The valve has a straight-through conveying line for easier "in-line" installation and is compact and light for installation in crowded or overhead equipment areas.

In contrast, Coperion K-Tron's cast diverter valve is recommended for pressure conveying applications. Its cylindrical, cast housing provides a smooth, low resistance path for conveying air and material. This allows the material to flow with little opportunity for accumulation or degradation. Please consult our Valves brochure (brochure no. 352) for additional information.

MATERIALS OF CONSTRUCTION

Gate diverter valves are constructed of an aluminum frame, 304 stainless steel gate blade and stubs, and nylon pressure plate gate seals.

Each valve is designed for dilute phase pneumatic conveying service up to 1 Bar [15 PSIG] and temperatures through 77° C [170° F]. All seals and surfaces are shielded from material abrasion.

ACTUATORS

The standard gate diverters include air-actuated assemblies.

The air actuator requires 5.5 - 6.89 Bar [80-100 PSI] (maximum 13.78 Bar [200 PSI]) of air. Dry, filtered, and lubricated compressed air is recommended. The actuator is air powered in both directions. Control of the air actuator is accomplished through a gate-mounted solenoid.

SOLENOIDS

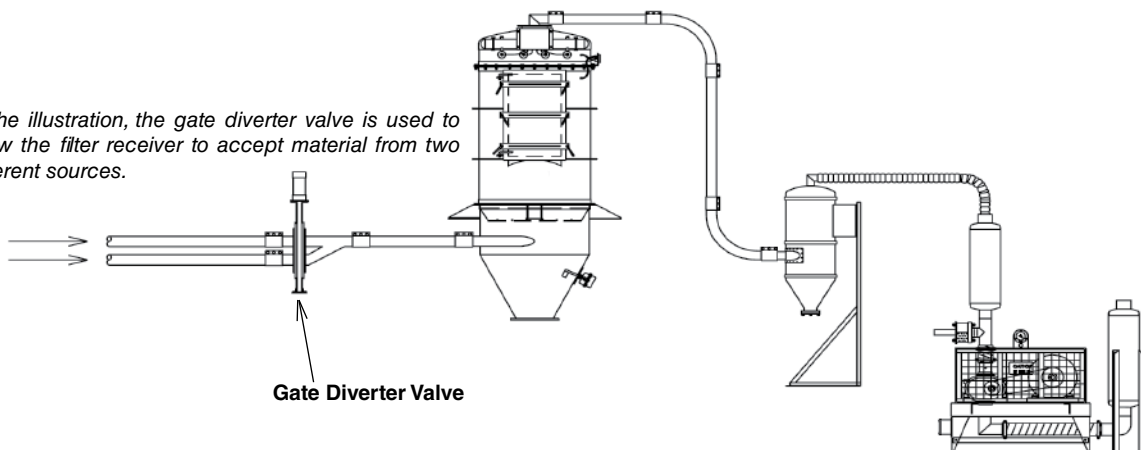
Double solenoids are used to control the air actuator and power the gate in both directions. The solenoids require 24 VDC.

Model numbers contain the following suffixes to indicate solenoid selection:

VSD —standard IP65 [NEMA 4] enclosure, double solenoid

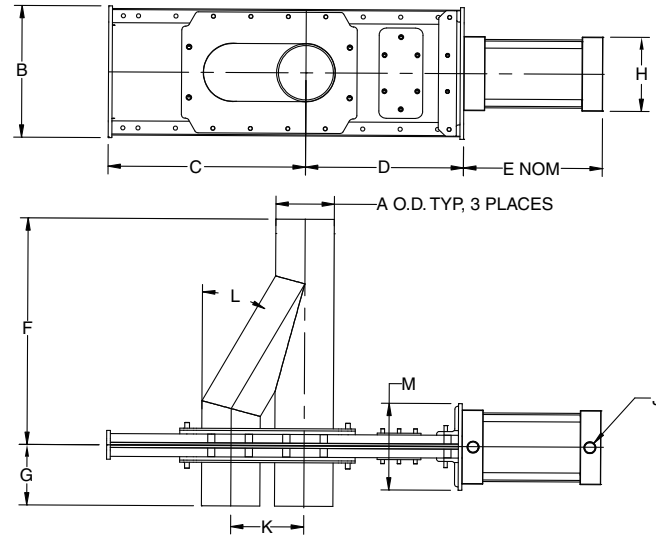
PROOF SWITCHES

In the illustration, the gate diverter valve is used to allow the filter receiver to accept material from two different sources.



The gate diverters can be ordered with single-pole, single-throw (SPST) position proof switches. They are mounted and adjusted prior to shipment.

Single-pole, single-throw switches provide one set of contacts for each position. SPST switches are adequate for all position information required by the control panel and should be selected unless special requirements exist.



AIR-ACTUATED DIVERter VALVE

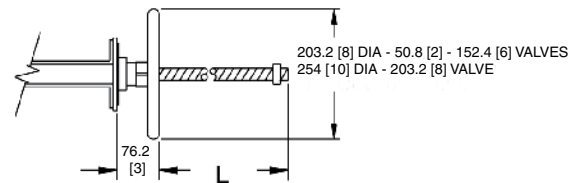
The following suffixes indicate proof switch selection:
 SSS –standard IP65 [NEMA 4] enclosure, SPDT switches

OPTIONAL PRE-WIRED TERMINAL BOXES

Pre-wired terminal boxes (on selected valves) are available with IP65 [NEMA 4] enclosures. They include IP65 [NEMA 4] water/dust tight flex conduit and fittings between solenoids and switches. The terminal box is typically mounted on the end of the air cylinder. NEMA 7/9 terminal boxes are available on a special order basis.

SPECIAL OPTIONS

Coperion K-Tron gate diverter valves can be ordered with different materials of construction, actuators, switches, and/or solenoids on a special order basis. Please check with our Customer Service Department for availability, price, and delivery.



DIVERter VALVE WITH MANUAL OPERATOR

Tube Line Size

A mm [in]	B mm [in]	C mm [in]	D mm [in]	E mm [in]	F mm [in]	G mm [in]	H mm [in]	J NPT [G]		K mm [in]	L	M mm [in]
51 [2]	181 [7.125]	197 [7.75]	178 [7]	158 [6.25]	245 [9.625]	106 [4.125]	87 [3.5]	0.375	0.375	64 [2.5]	30°	115 [4.5]
63 [2.5]	206 [8.125]	260 [10.25]	233 [9.125]	203 [8]	296 [11.625]	106 [4.125]	105 [4.125]	0.5	0.5	89 [3.5]	30°	127 [5]
76 [3]	206 [8.125]	260 [10.25]	233 [9.125]	203 [8]	296 [11.625]	106 [4.125]	105 [4.125]	0.5	0.5	89 [3.5]	30°	127 [5]
102 [4]	232 [9.125]	343 [13.5]	275 [10.875]	241 [9.5]	398 [15.625]	106 [4.125]	130 [5.125]	0.5	0.5	127 [5]	30°	152 [6]
127 [5]	257 [10.125]	406 [16]	318 [12.5]	273 [10.75]	449 [17.625]	132 [5.125]	140 [5.5]	0.5	0.5	152 [6]	30°	152 [6]
152 [6]	283 [11.125]	470 [18.5]	354 [14]	298 [11.75]	513 [20.125]	132 [5.125]	140 [5.5]	0.5	0.5	178 [7]	30°	156 [6.125]
203 [8]	337 [13.25]	654 [25.75]	464 [18.25]	399 [15.75]	588 [23.125]	233 [9.125]	165 [6.5]	0.5	0.5	254 [10]	45°	195 [7.625]
254 [10]	406 [16]	895 [35.25]	603 [23.75]	504 [19.875]	735 [28.875]	243 [9.5]	216 [8.5]	0.5	0.5	356 [14]	45°	391 [15.375]
305 [12]	457 [18]	1073 [42.25]	705 [27.75]	580 [22.875]	837 [33]	247 [9.75]	216 [8.5]	0.5	0.5	432 [17]	45°	391 [15.375]

Pipe Line Size

A mm [in]	B mm [in]	C mm [in]	D mm [in]	E mm [in]	F mm [in]	G mm [in]	H mm [in]	J NPT [G]		K mm [in]	L	M mm [in]
60 [2.375]	206 [8.125]	260 [10.25]	233 [9.125]	203 [8]	334 [13.125]	131 [5.125]	105 [4.125]	0.5	0.5	89 [3.5]	30°	127 [5]
73 [2.875]	206 [8.125]	260 [10.25]	233 [9.125]	203 [8]	333 [13.125]	131 [5.125]	105 [4.125]	0.5	0.5	89 [3.5]	30°	127 [5]
89 [3.5]	232 [9.125]	343 [13.5]	275 [10.75]	241 [9.5]	436 [17.125]	157 [6.125]	130 [5.125]	0.5	0.5	127 [5]	30°	152 [6]
114 [4.5]	257 [10.125]	406 [16]	318 [12.5]	273 [10.75]	487 [19.125]	157 [6.125]	140 [5.5]	0.5	0.5	152 [6]	30°	152 [6]
141 [5.5]	283 [11.125]	470 [18.5]	354 [13.875]	298 [11.75]	538 [21.125]	157 [6.125]	140 [5.5]	0.5	0.5	178 [7]	30°	156 [6.125]
168 [6.625]	302 [11.875]	654 [25.75]	464 [18.25]	399 [15.75]	504 [20]	179 [7]	165 [6.5]	0.5	0.5	254 [10]	45°	194 [7.625]
219 [8.625]	352 [13.875]	768 [30.25]	527 [20.75]	453 [17.875]	624 [24.625]	208 [8.25]	216 [8.5]	0.5	0.5	305 [12]	45°	391 [15.375]
273 [10.75]	406 [16]	895 [35.25]	603 [23.75]	504 [19.875]	735 [28.875]	243 [9.5]	216 [8.5]	0.5	0.5	356 [14]	45°	391 [15.375]
324 [12.75]	457 [18]	1073 [42.25]	705 [27.75]	580 [22.875]	837 [32.875]	246 [9.625]	216 [8.5]	0.5	0.5	432 [17]	45°	391 [15.375]

NOTE: All dimensions are in inches.

PROOF SWITCHES

The gate diverters can be ordered with single-pole, double-throw (SPDT) position proof switches. They are mounted and adjusted prior to shipment and are available in either standard or explosion-proof enclosures.

Single-pole, single-throw switches provide one set of contacts for each position. SPST switches are adequate

for all position information required by the control panel and should be selected unless special requirements exist.

The following suffixes indicate proof switch selection:

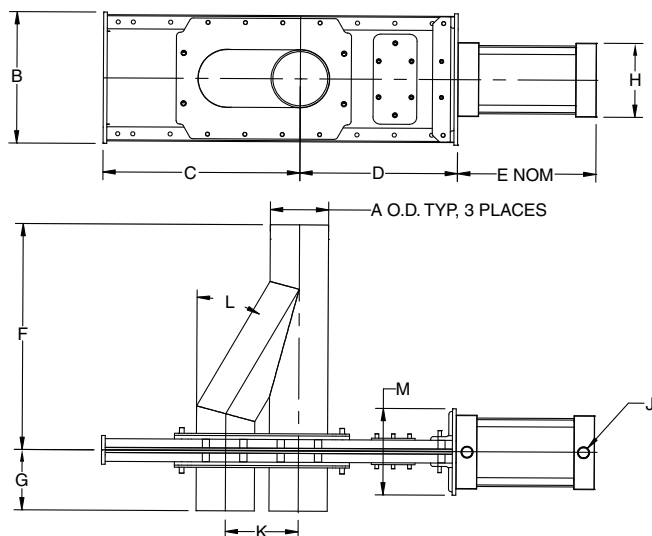
SSS – standard IP65 [NEMA 4] enclosure, SPDT switches

PRE-WIRED TERMINAL BOXES

Pre-wired terminal boxes are standard and include an IP 65 [NEMA 4] enclosure. Water/dust tight flex conduit and fittings between solenoids and switches. The terminal box is typically mounted on the end of the air cylinder.

SPECIAL OPTIONS

Coperion K-Tron gate diverter valves can be ordered with different materials of construction, actuators, switches, and/or solenoids on a special order basis. Please check with our Customer Service Department for availability, price, and delivery.



AIR-ACTUATED DIVERTER VALVE

Tube Line Size

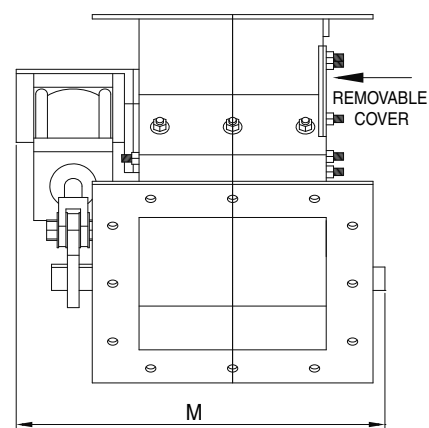
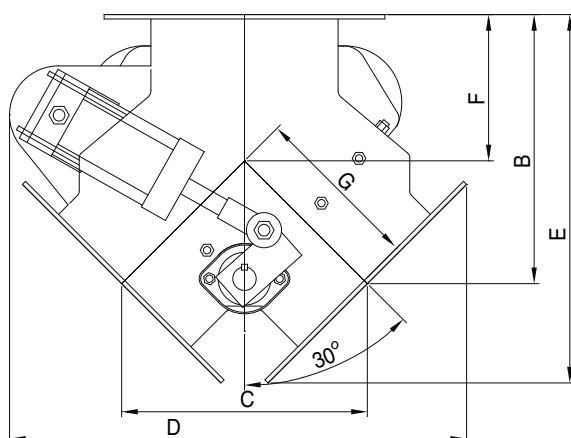
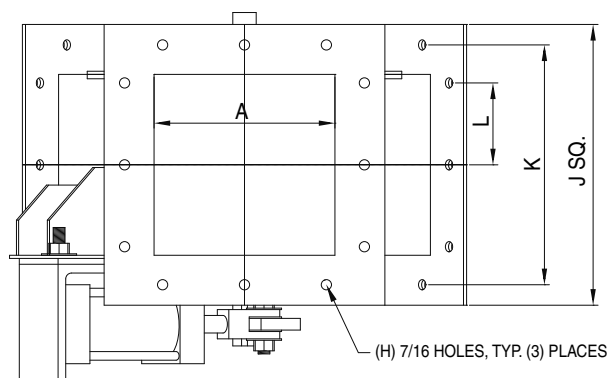
A mm [in]	B mm [in]	C mm [in]	D mm [in]	E mm [in]	F mm [in]	G mm [in]	H mm [in]	J NPT [G]		K mm [in]	L	M mm [in]
51 [2]	181 [7.125]	197 [7.75]	178 [7]	158 [6.25]	245 [9.625]	106 [4.125]	87 [3.5]	0.375	0.375	64 [2.5]	30°	115 [4.5]
63 [2.5]	206 [8.125]	260 [10.25]	233 [9.125]	203 [8]	296 [11.625]	106 [4.125]	105 [4.125]	0.5	0.5	89 [3.5]	30°	127 [5]
76 [3]	206 [8.125]	260 [10.25]	233 [9.125]	203 [8]	296 [11.625]	106 [4.125]	105 [4.125]	0.5	0.5	89 [3.5]	30°	127 [5]
102 [4]	232 [9.125]	343 [13.5]	275 [10.875]	241 [9.5]	398 [15.625]	106 [4.125]	130 [5.125]	0.5	0.5	127 [5]	30°	152 [6]
127 [5]	257 [10.125]	406 [16]	318 [12.5]	273 [10.75]	449 [17.625]	132 [5.125]	140 [5.5]	0.5	0.5	152 [6]	30°	152 [6]
152 [6]	283 [11.125]	470 [18.5]	354 [14]	298 [11.75]	513 [20.125]	132 [5.125]	140 [5.5]	0.5	0.5	178 [7]	30°	156 [6.125]
203 [8]	337 [13.25]	654 [25.75]	464 [18.25]	399 [15.75]	588 [23.125]	233 [9.125]	165 [6.5]	0.5	0.5	254 [10]	45°	195 [7.625]
254 [10]	406 [16]	895 [35.25]	603 [23.75]	504 [19.875]	735 [28.875]	243 [9.5]	216 [8.5]	0.5	0.5	356 [14]	45°	391 [15.375]
305 [12]	457 [18]	1073 [42.25]	705 [27.75]	580 [22.875]	837 [33]	247 [9.75]	216 [8.5]	0.5	0.5	432 [17]	45°	391 [15.375]

Pipe Line Size

A mm [in]	B mm [in]	C mm [in]	D mm [in]	E mm [in]	F mm [in]	G mm [in]	H mm [in]	J NPT [G]		K mm [in]	L	M mm [in]
60 [2.375]	206 [8.125]	260 [10.25]	233 [9.125]	203 [8]	334 [13.125]	131 [5.125]	105 [4.125]	0.5	0.5	89 [3.5]	30°	127 [5]
73 [2.875]	206 [8.125]	260 [10.25]	233 [9.125]	203 [8]	333 [13.125]	131 [5.125]	105 [4.125]	0.5	0.5	89 [3.5]	30°	127 [5]
89 [3.5]	232 [9.125]	343 [13.5]	275 [10.75]	241 [9.5]	436 [17.125]	157 [6.125]	130 [5.125]	0.5	0.5	127 [5]	30°	152 [6]
114 [4.5]	257 [10.125]	406 [16]	318 [12.5]	273 [10.75]	487 [19.125]	157 [6.125]	140 [5.5]	0.5	0.5	152 [6]	30°	152 [6]
141 [5.5]	283 [11.125]	470 [18.5]	354 [13.875]	298 [11.75]	538 [21.125]	157 [6.125]	140 [5.5]	0.5	0.5	178 [7]	30°	156 [6.125]
168 [6.625]	302 [11.875]	654 [25.75]	464 [18.25]	399 [15.75]	504 [20]	179 [7]	165 [6.5]	0.5	0.5	254 [10]	45°	194 [7.625]
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273 [10.75]	406 [16]	895 [35.25]	603 [23.75]	504 [19.875]	735 [28.875]	243 [9.5]	216 [8.5]	0.5	0.5	356 [14]	45°	391 [15.375]
324 [12.75]	457 [18]	1073 [42.25]	705 [27.75]	580 [22.875]	837 [32.875]	246 [9.625]	216 [8.5]	0.5	0.5	432 [17]	45°	391 [15.375]

NOTE: All dimensions are in inches.

SEAL TITE DIVERTER VALVES



Size mm [in]	A mm [in]	B mm [in]	C mm [in]	D mm [in]	E mm [in]	F mm [in]	G mm [in]	H mm [in]	J mm [in]	K mm [in]	L mm [in]	M mm [in]	WT (IBS)
152.4 [6]	152.4 [6]	260.3 [10.25]	228.6 [9]	457.2 [18]	349.2 [13.75]	146.0 [5.75]	161.9 [6.375]	203.2 [8]	254 [10]	209.5 [8.25]	104.7 [4.125]	349.2 [13.75]	50
203.2 [8]	203.2 [8]	292.1 [11.5]	266.7 [10.5]	495.3 [19.5]	400.0 [15.75]	158.7 [6.25]	187.3 [7.375]	304.8 [12]	304.8 [12]	260.3 [10.25]	88.9 [3.5]	400.0 [15.75]	65
254 [10]	254 [10]	330.2 [13]	304.8 [12]	625.4 [24.625]	457.2 [18]	177.8 [7]	215.9 [8.5]	304.8 [12]	355.6 [14]	311.1 [12.25]	114.3 [4.5]	450.8 [17.75]	80
304.8 [12]	304.8 [12]	361.9 [14.25]	330.2 [13]	673.1 [26.5]	504.8 [19.875]	196.8 [7.75]	234.9 [9.25]	508 [20]	406.4 [16]	361.9 [14.25]	69.85 [2.75]	501.6 [19.75]	95
355.6 [14]	355.6 [14]	400.0 [15.75]	368.3 [14.5]	698.5 [27.5]	561.9 [22.125]	215.9 [8.5]	260.3 [10.25]	508 [20]	457.2 [18]	412.7 [16.25]	82.55 [3.25]	609.6 [24]	120