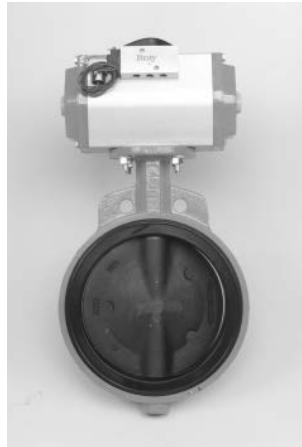


BUTTERFLY GATES (NOT CE COMPLIANT)

MANUAL OPERATOR



AIR OPERATOR



MATERIALS OF CONSTRUCTION

Coperion K-Tron's production standard butterfly gates are constructed of the following materials:

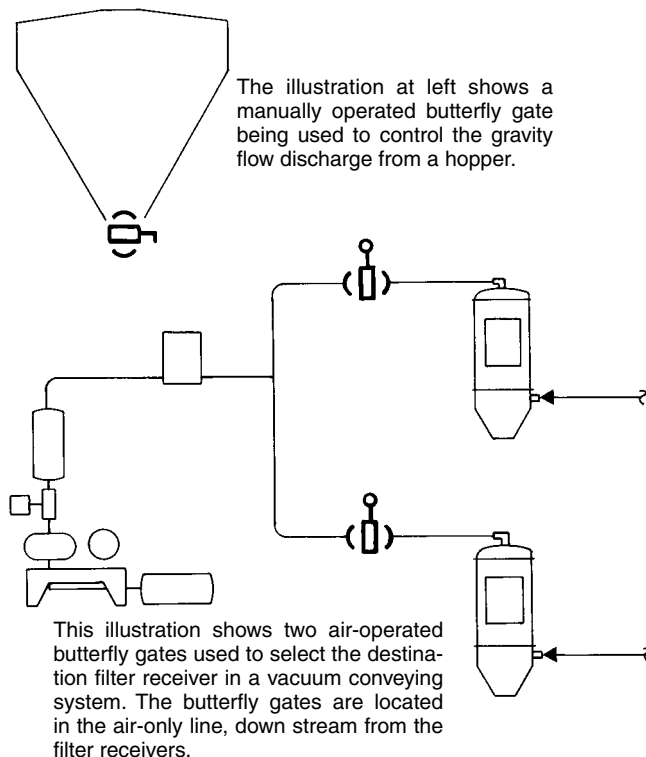
- Valve Body - cast iron, epoxy coated
- Disc & Stem - ductile iron, phosphate coated
- Stem Bushing- bronze
- Seat - Ethylene Propylene Diene Monomer (EPDM)

The one-piece seat provides the seal between the disc and the body, and forms the flange gaskets between the body and ANSI drilled flanges used to mount the gate. The standard gate is suitable for applications with pressure differentials up to 1.7 Bar [25 PSI] and a temperature range of -23 to 82° C [-10 to 180° F].

Various parts of Coperion K-Tron butterfly valves can be ordered in alternate materials of construction. Please check with the Customer Service Department for availability, price, and delivery.

APPLICATION

Coperion K-Tron butterfly gates are used to control gravity flow discharge from storage bins and hoppers. In addition, they are well suited to controlling the air-only lines in pneumatic conveying systems.



In applications requiring a gate in the material conveying line, the butterfly gate should not be used. When in the fully-open position the butterfly gate's disc remains in the control opening making it unsuitable for material line conveying applications. A Coperion K-Tron diverter valve or knife gate is the correct choice for material conveying applications.

ACTUATORS

Coperion K-Tron butterfly gates are available in either hand-operated or air-actuated assemblies.

The hand operator is a lever-type unit with 90 degrees of travel. Intermediate positions between fully open and closed can be selected in 10-degree increments.

The air actuator assembly requires a 6.2 Bar [90 PSI], clean, dry compressed air supply. The operator is air powered in both directions. Control of the air operator is accomplished via gate-mounted solenoids, as described below. The standard air operator does not provide for intermediate positioning between fully open and closed.

SOLENOIDS

Solenoid valves are used to control the air actuator on gates which are so equipped. The solenoids require 24 VDC control power. They are shipped assembled to the gate.

A single solenoid powers the gate in one direction. When the current to the solenoid is interrupted, the gate returns to the original position. The standard butterfly gate is closed in the absence of power to the solenoid and open when power is applied. The opposite configuration (power to close and remove power to open) can be accomplished by reversing the air line connections from the solenoid to the actuator. The single solenoid should be selected in applications where one position (either open or closed) is temporary; or where the gate is required to close or open automatically upon electrical failure.

An optional double solenoid is powered in both directions. In the absence of power, the gate remains in the position to which it was last actuated. A double solenoid should be used in applications where the gate will remain in either position for extended periods or when the gate is required to stay in its last position upon electrical failure.

Coperion K-Tron butterfly gate model numbers contain the following suffixes to indicate solenoid selection:

VSS – standard IP65 [NEMA 4] enclosure, single solenoid

PROOF SWITCHES

Coperion K-Tron butterfly gates can be equipped with position proof switches. The switches are mounted and adjusted prior to shipment.

Single-pole double-throw (SPDT) switches provide one set of contacts for each position. SPDT switches are adequate for all position information required by the control panel, and should be selected unless a special requirement for DPDT switches exists.

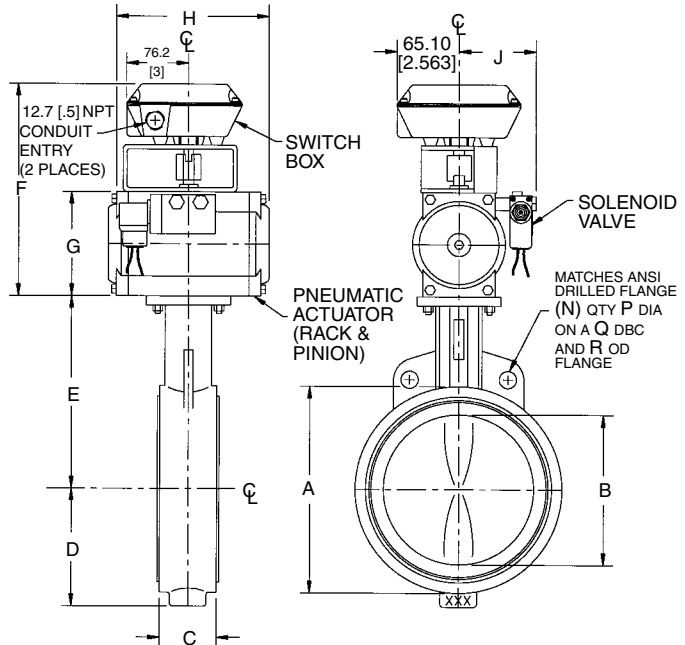
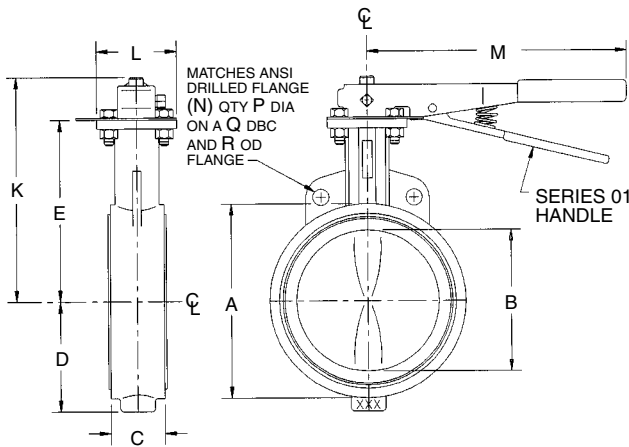
Optional double-pole double-throw (DPDT) switches provide two sets of contacts for each position. DPDT switches are used when a second set of contacts are needed to control another device or illuminate pilot lights (other than those in the main panel) without going through the main control panel. In this type of application, only one set of contacts from each switch is wired to the main control panel.

Coperion K-Tron butterfly gate model numbers contain the following suffixes to indicate proof switch selection:

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

AIR-OPERATED BUTTERFLY VALVE WITH SOLENOID VALVE AND PROOF SWITCHES

MANUAL-OPERATED BUTTERFLY VALVE WITH SERIES 01 HANDLE



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 mm [in]	K mm [in]	L mm [in]	M mm [in]	N	P mm [in]	Q mm [in]	R mm [in]
50.8 [2]	93.67 [3.688]	50.8 [2]	41.27 [1.625]	56.33 [2.218]	139.7 [5.5]	209.5 [8.25]	80.16 [3.156]	133.3 [5.25]	71.45 [2.813]	171.4 [6.75]	90.50 [3.563]	269.8 [10.625]	4	19.05 [.75]	120.6 [4.75]	152.4 [6]
63.5 [2.5]	106.3 [4.188]	63.5 [2.5]	44.45 [1.75]	64.28 [2.531]	152.4 [6]	209.5 [8.25]	80.16 [3.156]	133.3 [5.25]	71.45 [2.813]	184.1 [7.25]	90.50 [3.563]	269.8 [10.625]	4	19.05 [.75]	139.7 [5.5]	177.8 [7]
76.2 [3]	123.8 [4.875]	76.2 [3]	44.45 [1.75]	71.45 [2.813]	158.7 [6.25]	209.5 [8.25]	80.16 [3.156]	133.3 [5.25]	71.45 [2.813]	190.5 [7.5]	90.50 [3.563]	269.8 [10.625]	4	19.05 [.75]	152.4 [6]	190.5 [7.5]
101.6 [4]	154.0 [6.063]	101.6 [4]	50.8 [2]	86.51 [3.406]	177.8 [7]	228.6 [9]	100.0 [3.938]	174.6 [6.875]	76.2 [3]	209.5 [8.25]	90.50 [3.563]	269.8 [10.625]	8	19.05 [.75]	190.5 [7.5]	228.6 [9]
127 [5]	180.9 [7.125]	127 [5]	53.97 [2.125]	102.3 [4.031]	190.5 [7.5]	228.6 [9]	100.0 [3.938]	174.6 [6.875]	76.2 [3]	222.2 [8.75]	90.50 [3.563]	269.8 [10.625]	8	22.22 [.875]	215.9 [8.5]	254 [10]
152.4 [6]	206.3 [8.125]	146.0 [5.75]	53.97 [2.125]	115.0 [4.531]	203.2 [8]	228.6 [9]	100.0 [3.938]	174.6 [6.875]	76.2 [3]	234.9 [9.25]	90.50 [3.563]	269.8 [10.625]	8	22.22 [.875]	241.3 [9.5]	279.4 [11]
203.2 [8]	266.7 [10.5]	196.8 [7.75]	63.5 [2.5]	146.0 [5.75]	241.3 [9.5]	279.4 [11]	142.0 [5.593]	276.2 [10.875]	101.6 [4]	273.0 [10.75]	149.2 [5.875]	298.4 [11.75]	8	22.2 [.875]	298.4 [11.75]	342.9 [13.5]
254 [10]	323.8 [12.75]	247.6 [9.75]	63.5 [2.5]	180.9 [7.125]	273.0 [10.75]	279.4 [11]	142.0 [5.593]	276.2 [10.875]	101.6 [4]	323.8 [12.75]	149.2 [5.875]	298.4 [11.75]	12	25.4 [1]	361.9 [14.25]	406.4 [16]
304.8 [12]	377.8 [14.875]	298.4 [11.75]	76.2 [3]	206.3 [8.125]	311.1 [12.25]	279.4 [11]	142.0 [5.593]	276.2 [10.875]	101.6 [4]	361.9 [14.25]	149.2 [5.875]	298.4 [11.75]	12	25.4 [1]	431.8 [17]	482.6 [19]