GAS SHUTOFF AND VENT VALVES FIGURE 1056

The JAMESBURY® Figure 1056 Automatic Safety Gas Valves are CSA approved for providing protection against fire and explosive hazards during light-off and operation of gas-burning equipment. When the electrical signal is interrupted or when there is a loss of air pressure, these gas-line valves operate rapidly to isolate or allow gas flow. This action may be initiated either by safety trip or normal shutdown sequencing.

The units consist of a valve with EMISSION-PAK®, actuator, limit switch, and solenoid pilot valve, and are approved as an assembly. Valves are available in ANSI Class 150 flanged design in 3" through 8" (DN 80 – 200) standard-port sizes. Valves are offered with either carbon steel or 316 stainless steel bodies. Trim is 316 stainless steel.

3" – 8" (DN 80 – 200) EMISSION-PAK ball valves are certified by the Canadian Standard Association for use in gas appliances and for automatic gas safety shutoff under ANSI Z21.21-1995/CSA 6.5 automatic valves CGA 3.9.

The JAMESBURY gas valve assemblies are available with a QUADRA-POWR® spring-diaphragm actuator rated for 65 psi (4.5 BAR) minimum air supply (100 psi (6.9 BAR) maximum).

Single-pole double-throw (SPDT) and double-pole double-throw (DPDT) limit switches are available with the contact arrangements shown to the right. Solenoid pilot valves are manufactured by Automatic Switch Co. Specific model numbers are given in the table on page 1.

FEATURES

Tight Shutoff

- The flexible-lip XTREME® seat design is self-compensating for wear and eliminates the need for lubricant injection.

Reliable Operation

- Automatic quarter-turn rotation is provided a spring-diaphragm actuators

Corrosion Resistant

- 316 stainless-steel valves are available for highly corrosive atmospheres. QUADRA-POWR actuators are constructed of all ferrous materials and are especially well-suited to industrial environments.

True Position Indication

- Limit switches are actuated directly from the valve/actuator drive train, reliably communicating a true valve-position.

Approved For Watertight And Hazardous Location

- The limit switch housing assemblies are also CSA approved, filling NEMA 4, 4X, 6 and 7 Class 1 Groups C & D, and 9 Class II Groups E, F, and G Div. 1 & 2 specifications for combined watertight and hazardous location design.

SPECIFICATIONS

Switch Ratings in Amperes		
Voltage	**QZM2VB1DSS (SPDT)**	**QZM14B1DSS (DPDT)**
125V AC	10	10
250V AC	10	10
125V DC	.50*	.50*

* Not recommended for electrical circuits operating at less than 20mA @ 24 VDC

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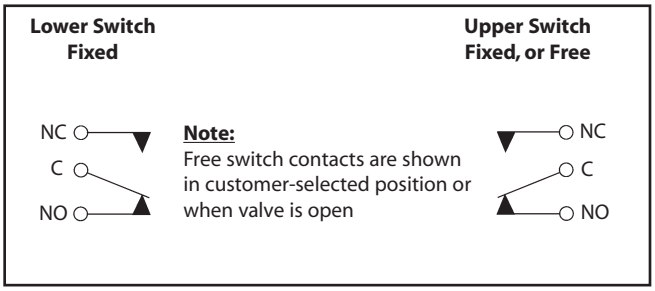
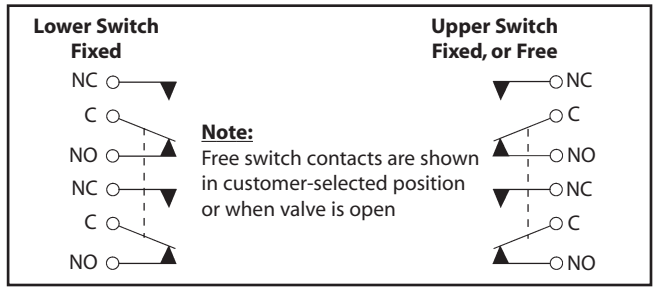
Switch Arrangements

Contacts of Each Switch are in Position Shown When Valve is Closed

SPDT Switch Contact Schematic



DPDT Switch Contact Schematic



The available switch arrangements are shown in the "How to Order" table. Switches designated as "fixed" are set so that they are actuated only when the valve is in the fully closed position. They are secured to avoid accidental relocation and marked to show any attempts at tampering. Switches indicated as "free" are for indicator lights or other control purposes. These are normally set to close when the valve is fully open, but are not secured and may therefore be adjusted to operate in any valve position. (DPDT switches can be adjusted only for end of travel, i.e., valve full open or valve full closed.

A solenoid operated 3-way pilot valve controls valve operation and is of sufficient flow capacity to provide valve closing within 2 seconds. Coils are continuous duty molded Class A.

Maximum Operating Pressure Ratings

Valve Size		Valve Series	Valve Material	Seats	Maximum Operating Pressure		Maximum Operating Temperature		Minimum Operating Temperature	
Inches	DN				psi	bar	˚F	˚C	˚F	˚C
3 – 8	80 – 200	7150	Carbon steel, 316 Stainless Steel	PTFE, XTREME	200	14	125	52	-40	-40

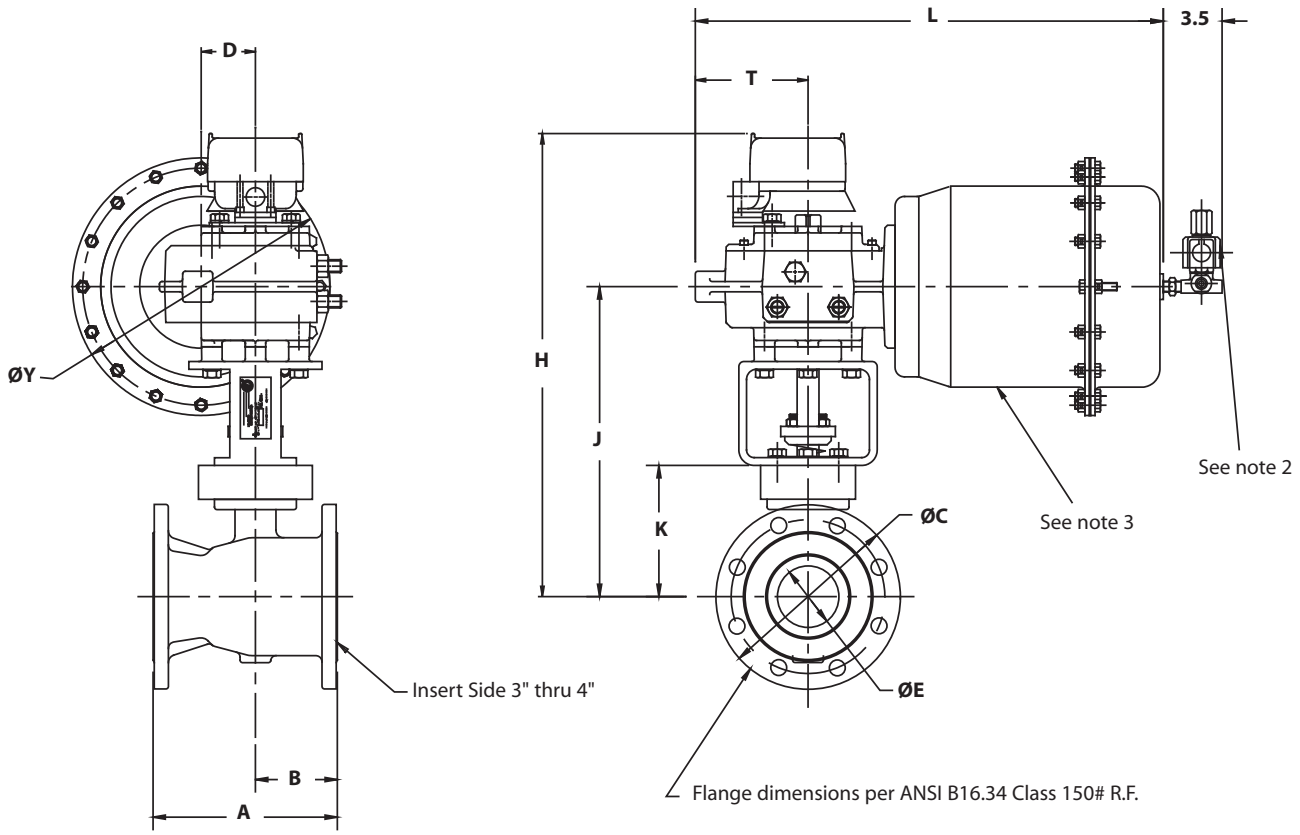
Flow Data

The table at right provides flow coefficients of Figure 1056 Gas Safety Shutoff Valves covered in this bulletin. The C_v values represent the flow of water at +60˚F through the valve in U.S. gallons per minute at a pressure drop of 1 psi. The metric equivalent, K_v, is the flow of water at 16˚C through the valve in cubic meters per hour at a pressure drop of 1 kg/cm^2. To convert C_v to K_v, multiply by 0.8569.

Valve Size		Cv	
inches	DN	Reduced Port	Full Port
3	80	350	1160
4	100	550	2200
6	150	765	5100
8	200	1860	9300

DIMENSIONS

3" – 8" (DN 80 – 200) Figure 1056 Valve Actuator Assemblies



3" – 8" (DN80 – 200) Figure 1056 Valve-Actuator Assemblies

Valve Size		Approximate Dimensions														Approx. Weight	
Inches	DN	A		B		C		E		H		J		K			
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lb	kg
3	80	8.00	203	3.75	95	7.50	191	2.31	59	21.45	537	14.72	374	8.21	209	124	56.4
4	100	9.00	229	4.00	102	9.00	229	3.00	76	21.93	549	15.20	386	8.70	221	148	67.3
6	150	10.50	267	6.85	174	11.00	279	4.00	102	29.04	726	18.16	461	10.97	279	264	120
8	300	11.50	292	6.41	163	13.50	343	6.00	152	34.14	854	22.75	577	14.47	368	510	231.8

Actuator Size	Approximate Dimensions							
	D		L		T		Y	
	in.	mm	in.	mm	in.	mm	in.	mm
QP3XC/M	2.09	53	20.28	515	4.69	119	10.79	274
QP4XC/M	2.65	67	23.03	585	5.51	140	12.60	320
QP5XC/M	3.34	85	28.27	718	6.30	160	15.04	382

HOW TO ORDER GAS SAFETY SHUTOFF VALVES

The Gas Safety Shutoff Valve designation is made up of numbers and letters that describe all features of the available variations of these units. Coding is as follows:

EXAMPLE: 3" Gas or Oil Safety Shutoff Valve in Series 7150 ANSI Class 150 flanged design in carbon steel with 316 stainless steel trim and XTREME® seats with two supervisory double pole double throw switches and Type QP diaphragm actuator with 120 V.A.C. ASCO Solenoid valve model EF8317G35 and close valve on loss of air or electrical power has the designation 1056 61233A1.

	1	2	3	4	5	6	7	8	9
Figure 1056	6		1	3	3	3	A	1	

1	Valve Size	
Code	**inches**	**DN**
6	3	80
7	4	100
8	6	150
9	8	200

2	Valve Style		
Code			
	7150	3"-8" (DN 80-200)	Reduced Flanged Bore ASME Class 150

3	Valve Body, Ball, and Stem Materials
Code	
1	A216 WCB carbon steel body,
	316 stainless steel ball and stem
2	A351 CF8M stainless steel body,
	316 stainless steel ball and stem

4	Valve Seat and Seal Materials		
Code			
2	PTFE seat	PTFE graphite seals	8" 7000 Series Only
3	XTREME	PTFE graphite seals	up to 6" 7000 Series

5	Switch Description	
Code		
0	No switches	
1	2 SPDT switches, both fixed	QZM2VB1DSS Mechanical switches
2	2 SPDT switches, 1 fixed, 1 adjustable	
3	2 DPDT switches, both fixed	QZM14B1DSS Mechanical switches
4	2 DPDT switches, 1 fixed, 1 adjustable	

6	Actuators			
Code	**Valve Series**	**Valve Size**		**Actuator Type**
		Inches	**DN**	
3	7150	3 – 4	80 – 100	QPX3C/M
4		6	150	QPX4C/M
5		8	200	QP5C/M

7	Solenoids
Code	
A	Standard
B	High Temp
D	Stainless

8	Solenoid Voltage
Code	**Voltage**
1	120 V.A.C. 60 HZ
4	24 VDC

9	Spring Direction
Code	**Vent Service**
0	Spring to Open
	No entry - Spring to Close

Subject to change without prior notice.

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