

# Valve Body Capacities/Specifications

**Table 1: Normally-closed valve bodies**

Body Material	End Connections	Pipe Size in Inches	Cv Factor	Body Type [1]
Gray Iron	Threaded	1/2	3.4	SG
		3/4	9.6	SG
			20	RS
		1	12	SG
			20	RS
		1-1/4	17	SG
			45	RS
		1-1/2	53	RS
		2	86	RS
	2-1/2	304	RS	
	3	432	RS	
	Flanged	2	86	RS
		2-1/2	304	RS
		3	432	RS
		4	551	RS
			903	RS
6		1230	RS	
Cast Steel		Threaded	1/2	3.4
	3/4		9.6	SG
	1		12	SG
			20	RS
	1-1/4		17	SG
			45	SG
	1-1/2		53	RS
	2		86	RS
	Flanged		1-1/2	123
		2	218	SG
		2-1/2	304	RS
		3	432	RS
		4	551	RS
			903	RS
		6	1230	RS

[1] RS = Rising stem body; SG = Swinging gate body  
See catalog page 6313 for construction details

**Table 2: Normally-open valve bodies**

Body Material	End Connections	Pipe Size in Inches	Cv Factor	Body Type [1]
Gray Iron	Threaded	3/4	20	RS
		1	20	RS
		1-1/2	53	RS
		2	86	RS
		2-1/2	304	RS
		3	432	RS
	Flanged	2	86	RS
		2-1/2	304	RS
		3	432	RS
Cast Steel	Threaded	1	20	RS
		1-1/2	53	RS
		2	86	RS
		2-1/2	304	RS
	Flanged	3	432	RS
		4	551	RS
		3	432	RS
		4	551	RS

[1] RS = Rising stem body

Each complete valve assembly must include one of these valve bodies, regardless of ultimate series designation.

Flows through the valve body and resulting pressure drops may be estimated by inserting your specific conditions into following formula and using C<sub>v</sub> flow factors given for each valve body.

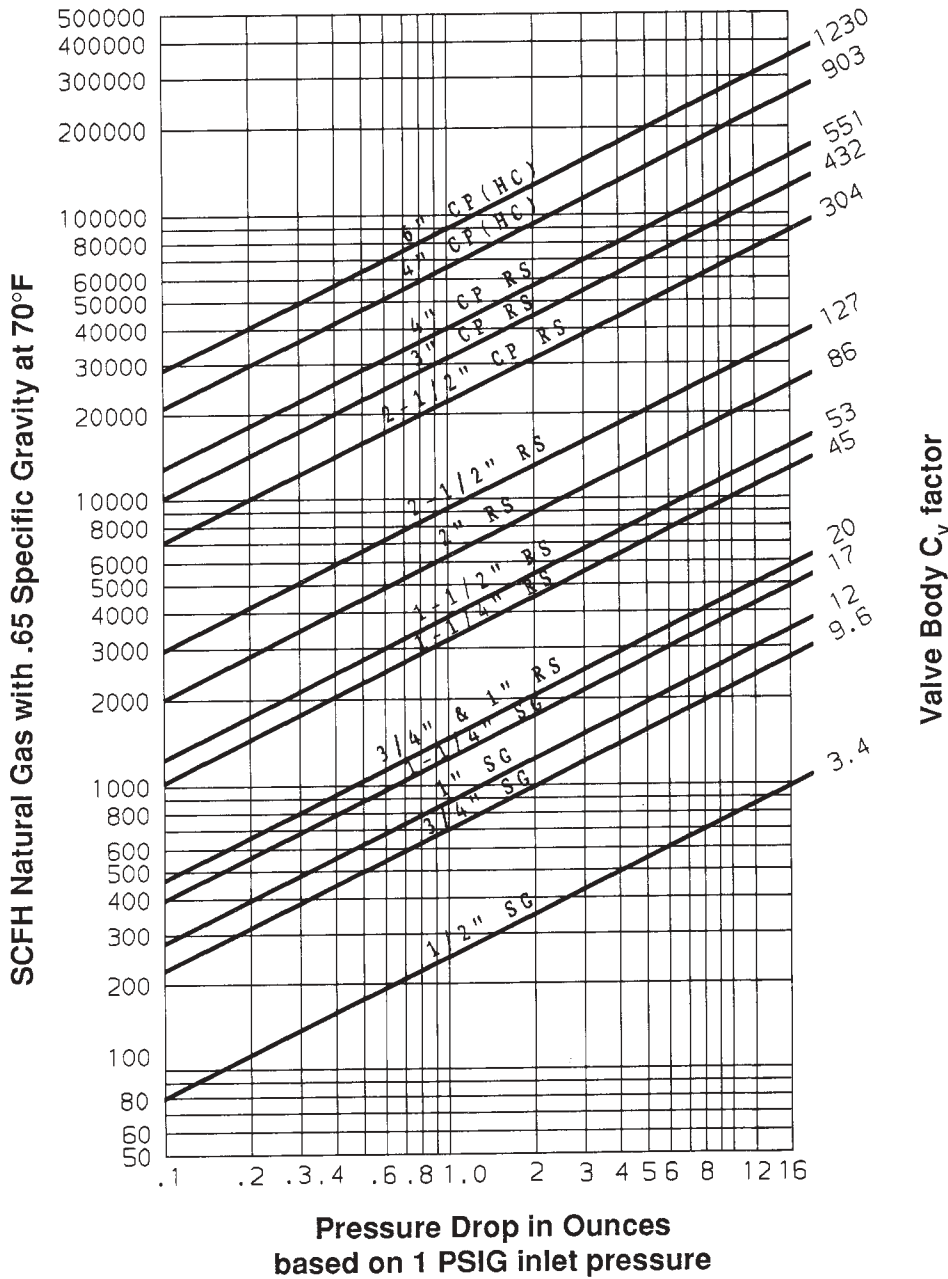
$$\text{Gases: } Q = (1360) \times C_v \times \left( \sqrt{\frac{(P_1 + P_2)}{G T_f}} \right) \times \left( \sqrt{\frac{(P_1 - P_2)}{2}} \right)$$

$$\text{Liquids: } V = C_v \times \left( \sqrt{\frac{(P_1 - P_2)}{G_f}} \right)$$

**Where:**

- G = Gas specific gravity (air = 1.0)
- G<sub>f</sub> = Specific gravity @ flowing temperature °F
- P<sub>1</sub> = Inlet pressure PSIA (14.7 psi + psi gauge)
- P<sub>2</sub> = Outlet pressure PSIA (14.7 psi + psi gauge)
- Q = Cubic feet per hour @ 14.7 PSIA and 60°F
- T<sub>f</sub> = Flowing temperature absolute (460° + °F)
- V = Flow in U.S. gallons/minute

## Valve Body Capacities with Natural Gas at 1 PSIG inlet pressures



**Approximate** pressure drops for various valve sizes and flows may be determined by using this graph.

Typically, pressure drop for fuel flows should not exceed 10% of inlet pressure; however, for 2" and smaller valves, the drop should not exceed 5 PSIG, and for 2-1/2" and larger size valves, must not exceed 2.5 PSIG.

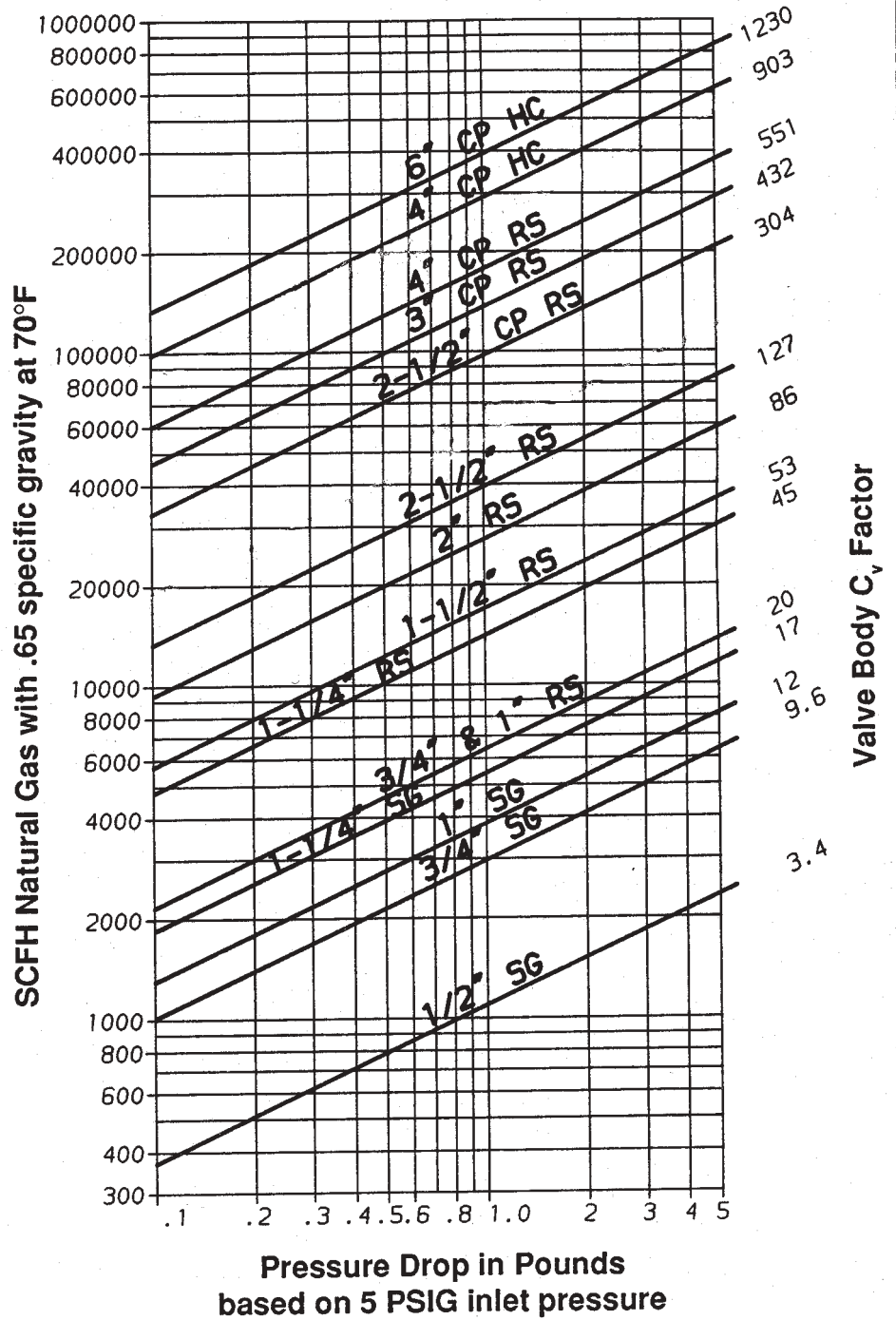
Select valve size on basis of the **lower** of these parameters to avoid critical flow conditions.

## Valve Body Capacities with Natural Gas at 5 PSIG inlet pressure

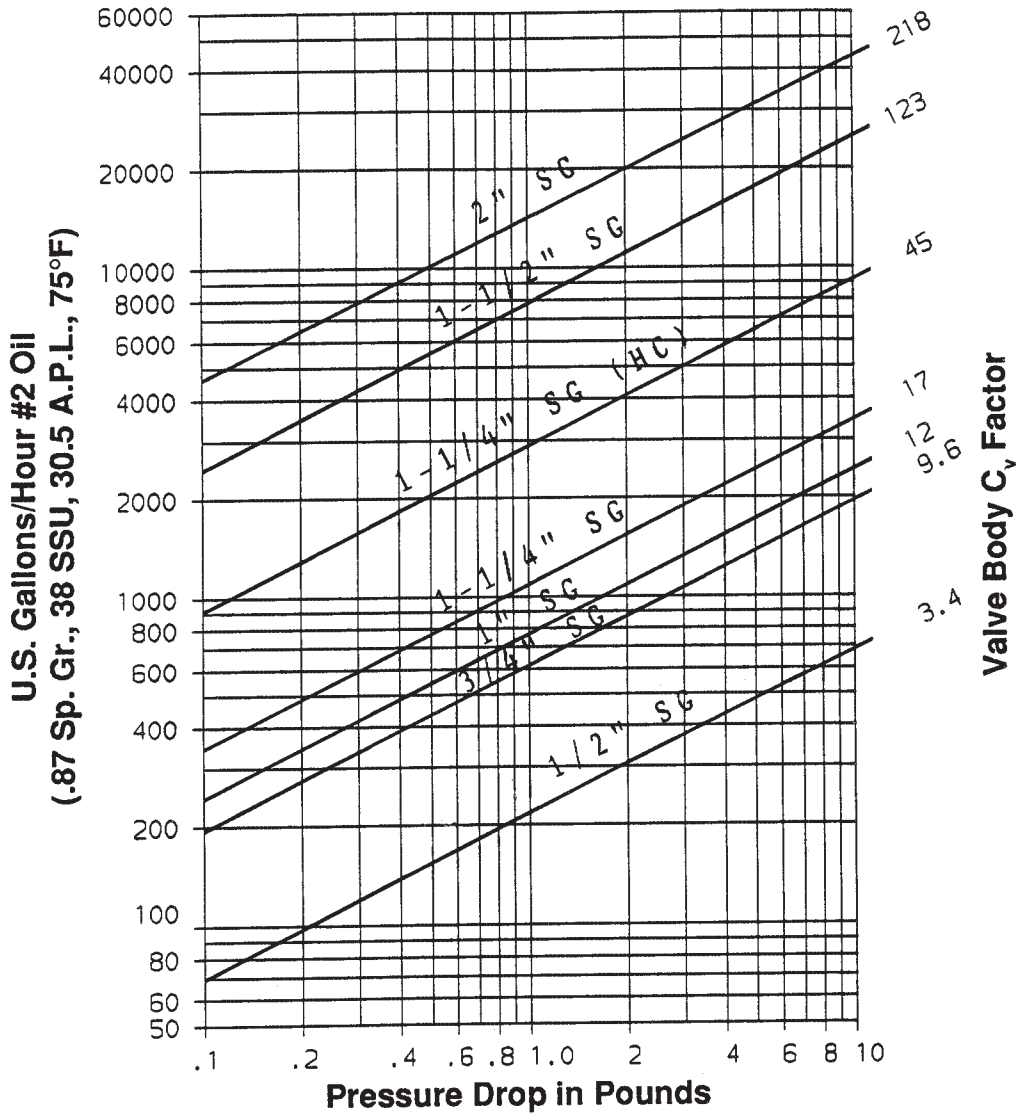
Approximate pressure drops for various valve sizes and flows may be determined by using this graph.

Typically, pressure drop for fuel flows should not exceed 10% of inlet pressure; however for 2" and smaller valves, the drop should not exceed 5 PSIG, and for 2-1/2" and larger size valves, must not exceed 2.5 PSIG.

Select valve size on basis of the **lower** of these parameters to avoid critical flow conditions.



### Valve Body Capacities with #2 Oil



To select a valve for YOUR application, use either  $C_v$  factor calculations, or this graph showing approximate pressure drop at various flows of #2 oil.

Typically, pressure drop for fuel flows should not exceed 10% of inlet pressure.

For preheated #5 or #6 oil, multiply the required flow rate in GPH by the factor given in the table at right, then select a valve based upon that equivalent flow of #2 oil and the allowable drop.

Oil Grade	#5		#6				
	125	160	122	140	180	210	220
°F @ Inlet							
Factor	1.43	1.11	2.86	2.00	1.25	1.11	1.05

For example: To size for 5 psi drop with a 3500 GPH flow of #6 oil preheated to 140°F, the multiplier is "2". Equivalent flow of #2 oil is then 3500 x 2, or 7000 GPH. Chart shows that a 5 psi drop will require use of a valve body having a  $C_v$  factor of at least 45.

## Selection Data

### Series 1000

- For gas service
- Normally closed
- Rising stem body design



1-1/2" Series 1220

#### Available sizes and pressure ratings

Pipe Size (inches)	Body Cv	Maximum Inlet Pressure (PSIG)			
		Gray Iron Bodies		Cast Steel Bodies	
		Clean Gases	Special Service	Clean Gases	Special Service
3/4	19	200	125	---	---
1	20	200	125	255	125
1-1/4	45	200	100	---	---
1-1/2	53	200	70	255	70
2	86	200	70	255	70
2-1/2	304	175	60	175	60
3	432	135	45	135	45
4	551	135	45	135	45
4-HC	903	120	40	120	40
6-HC	1230	100	35	100	35

NOTE: Ambient and fluid temperature limits are -40°F (-40°C) to +140°F (+60°C).

#### Series Designation

Body Material	General Purpose (GP)				Hazardous Duty (HD)			
	Gray Iron		Cast Steel		Gray Iron		Cast Steel	
Actuator Function	Sanctioned * Service	Special Service (Non- sanctioned)	Sanctioned * Service	Special Service (Non- sanctioned)	Sanctioned * Service	Special Service (Non- sanctioned)	Sanctioned * Service	Special Service (Non- sanctioned)
Automatic	1010	1110	1210	1310	1010-HD	1110-HD	1210-HD	1310-HD
Manual	1020	1120	1220	1320	1020-HD	1120-HD	1220-HD	1320-HD
Power-to-Close	---	1130	---	1330	---	1130-HD	---	1330-HD

\*Sanctioned service fuels include: air, natural gas, manufactured gas, liquified petroleum gases, #1 and #2 fuel oils.

**NOTE:** All standard actuators require 115v 50/60 AC electrical signal to operate the air control solenoid, which opens the valve assembly. Contact your Maxon representative for optional electrical voltages.

## Selection Data

### Series 2000

- For gas service
- Normally open
- Rising stem body design



1-1/2" Series 2010

#### Available sizes and pressure ratings

Pipe Size (inches)	Body Cv	Maximum Inlet Pressure (PSIG)			
		Gray Iron Bodies		Cast Steel Bodies	
		Clean Gases	Special Service	Clean Gases	Special Service
3/4	19	200	125	---	---
1	20	200	125	255	125
1-1/2	53	200	70	255	70
2	86	200	70	255	70
2-1/2	304	175	60	175	60
3	432	135	45	135	45
4	551	135	45	135	45

NOTE: Ambient and fluid temperature limits are -40°F (-40°C) to +140°F (+60°C).

#### Series Designation

Body Material	General Purpose (GP)				Hazardous Duty (HD)			
	Gray Iron		Cast Steel		Gray Iron		Cast Steel	
Actuator Function	Sanctioned * Service	Special Service (Non- sanctioned)	Sanctioned * Service	Special Service (Non- sanctioned)	Sanctioned * Service	Special Service (Non- sanctioned)	Sanctioned * Service	Special Service (Non- sanctioned)
<b>Automatic</b>	2010	2110	2210	2310	2010-HD	2110-HD	2210-HD	2310-HD
<b>Manual</b>	2020	2120	2220	2320	2020-HD	2120-HD	2220-HD	2320-HD
<b>Power-to-Close</b>	---	2130	---	2330	---	2130-HD	---	2330-HD

\*Sanctioned service fuels include: air, natural gas, manufactured gas, liquified petroleum gases, #1 and #2 fuel oils.

**NOTE:** All standard actuators require 115v 50/60 AC electrical signal to operate the air control solenoid, which closes the valve assembly. Contact your Maxon representative for optional electrical voltages.

## Selection Data

### Series 3000

- For oil service
- Normally closed
- Swinging gate body design



1-1/4" Series 3320

#### Available sizes and pressure ratings

Pipe Size (inches)	Body Cv	Maximum Inlet Pressure (PSIG) [1]			
		Gray Iron Bodies		Cast Steel Bodies	
		Clean Oils	Special Service	Clean Oils	Special Service
1/2	3.4	500	150	700	500
3/4	9.6				
1	12				
1-1/4	17	400	135	550	185
1-1/4 HC	45				
1-1/2	123	350	110	400	135
2	218	225	75	225	75

[1] Note: Maximum Operating Pressure ratings indicated are for fluid temperatures in range of -40°F to +150°F with minimum cylinder air pressures of 95 PSIG. Fluid temperatures above 150°F (to a maximum of 450°F) or air cylinder pressures below 95 PSIG will lower the Maximum Operating Pressure rating. Contact your Maxon representative with specific application details.

NOTE: Minimum ambient and fluid temperature limit is -40°F (-40°C). Maximum ambient temperature limit is +140°F (+60°C). Maximum fluid temperature limit for standard body is +150°F (+66°C) at the pressure listed in the table above. Fluids up to 450°F can be used with a reduction in the maximum inlet pressure (see Product Information Sheet 6300-1 & 2), and with special high temperature body can go up to +550°F (+288°C).

#### Series Designation

Body Material	General Purpose (GP)				Hazardous Duty (HD)			
	Gray Iron		Cast Steel		Gray Iron		Cast Steel	
Actuator Function	Sanctioned * Service	Special Service (Non- sanctioned)	Sanctioned * Service	Special Service (Non- sanctioned)	Sanctioned * Service	Special Service (Non- sanctioned)	Sanctioned * Service	Special Service (Non- sanctioned)
Automatic	3010	3110	3210	3310	3010-HD	3110-HD	3210-HD	3310-HD
Manual	3020	3120	3220	3320	3020-HD	3120-HD	3220-HD	3320-HD
Power-to-Close	---	3130	---	3330	---	3130-HD	---	3330-HD

\*Sanctioned service fuels include: light oil (i.e. #1, 2 & 4) and preheated heavy oils (i.e. #5 & 6) with maximum viscosity of 5000 SSU

**NOTE:** All standard actuators require 115v 50/60 AC electrical signal to operate the air control solenoid, which opens the valve assembly. Contact your Maxon representative for optional electrical voltages.

# Notes



# Rising Stem Body/Trim Specifications

All Maxon Rising Stem Gate Valves carry a two-part trim identification (for example, Trim 1-1).

The first digit (a 1, 2, 3 or 4 before the hyphen) identifies valve body and bonnet material as shown in Table 1 below.

The second digit (a 1, 2 or 3 after the hyphen) identifies the specific internals used, as described in Table 2 and identified in the sketches at right.

*Internal trim -1* is normally suitable for clean fuel gases and oils (for example, natural gas, propane, butane, clean atmosphere gases, #1 and #2 fuel oil).

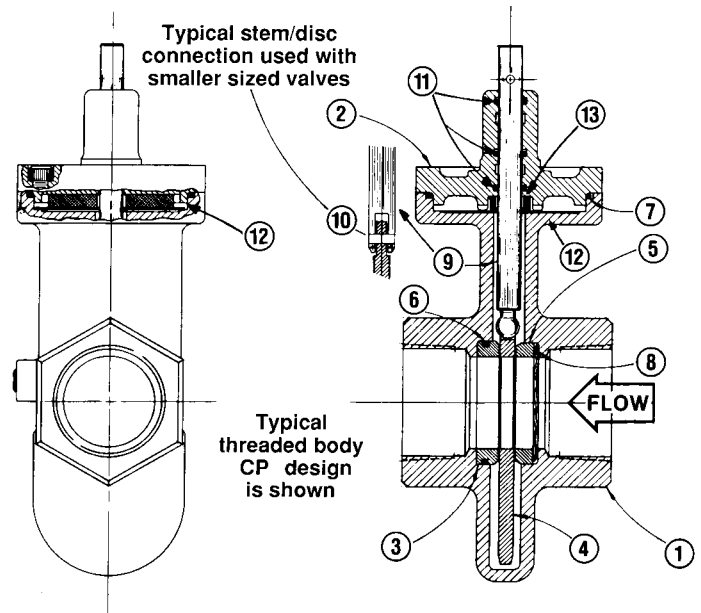
*Internal trim -2* may be required for such gases as coke oven, refinery, town or off-gas. Contact Maxon with specific fuel analysis for prices and/or availability.

*Internal trim -3* is designed for more corrosive environments such as digester gas, sour natural gas and landfill gas. Contact Maxon with specific fuel analysis for prices and/or availability.

Normally closed and normally open threaded and flanged body versions are identical in material specifications.

The drawing at right carries item numbers matching those in Tables 2, 3 & 4. This information is furnished for identification only, not for ordering parts.

**WARNING: Do not attempt field repair of ACTION-AIR® valve body or pneumatic actuator. Any field alterations void all warranties.**



**Table 1: Body (Item 1) and Bonnet (Item 2) Specifications**

Body Description	Body 1-	Body 2-	Body 3-	Body 4-	Body 5 -
Material	Cast Iron, G3000, CL 30	Cast Steel	Cast Iron, G3000, CL 30	Cast Steel	Stainless Steel
Specifications	ASTM A159 / UL 429	ASTM A216-WCB / UL 429	ASTM A159 / UL 429	ASTM A216-WCB / UL 429	A351-CF8M
Special Coating	---	---	Electroless Nickel-Coated	Electroless Nickel-Coated	---

**Table 2: Internal Trim Material Specifications**

Item No.	Description	Trim: -1				Trim: -2		
		3/4" - 2"	2-1/2" - 3"	4", 6" (HC)	CP (2-1/2" - 4")	3/4" - 2"	4", 6" (HC)	CP (2-1/2" - 4")
3	Seat	#440-F Stainless Steel	#416 Stainless Steel	#303 Stainless Steel	#440-F Stainless Steel	#303 SS (Hard Faced)	#303 SS (Hard Faced)	#303 SS (Hard Faced)
4	Disc	80-55-06 Ductile Iron	80-55-06 Ductile Iron	80-55-06 Ductile Iron	80-55-06 Ductile Iron	80-55-06 Ductile Iron (chrome plated)	80-55-06 Ductile Iron (chrome plated)	80-55-06 Ductile Iron (chrome plated)
5	Follow Ring	Leadaloy (nickel plated)	Ductile Iron (nickel plated)	Low-Carbon Steel (nickel plated)	Low-Carbon Steel (nickel plated)	Leadaloy (nickel plated)	Low-Carbon Steel (nickel plated)	Low-Carbon Steel (nickel plated)
6	Seat O-Ring	Buna N	Buna N	Buna N	Buna N	Viton	Viton	Viton
7	Gasket O-Ring	Buna N	Buna N	Buna N	Buna N	Viton	Viton	Viton
8	Wavy-Spring Washer	#302 Stainless Steel	#302 Stainless Steel	#302 Stainless Steel	#302 Stainless Steel	#302 Stainless Steel	#302 Stainless Steel	#302 Stainless Steel
9	Stem	Type 630 Stainless Steel	Type 630 Stainless Steel	Type 630 Stainless Steel	Type 630 Stainless Steel	Type 630 Stainless Steel	Type 630 Stainless Steel	Type 630 Stainless Steel
10	Stem/Disc Pins	#1070 Carbon Steel (hardened)	#1070 Carbon Steel (hardened)	---	---	#420 Stainless Steel	---	---
11	Stem O-Rings	Buna N	Buna N	Buna N	Buna N	Viton	Viton	Viton
12	Striker Plate	#17-7 Stainless Steel	#17-7 Stainless Steel	#17-7 Stainless Steel	#17-7 Stainless Steel	#17-7 Stainless Steel	#17-7 Stainless Steel	#17-7 Stainless Steel
13	Bumper	Buna N	Buna N	Buna N	Buna N	Viton	Viton	Buna N*

\*For oxygen service, bumper material is EPDM

## Rising Stem Body/Trim Specifications

**Table 3: Internal Trim Specifications for Trim -2**

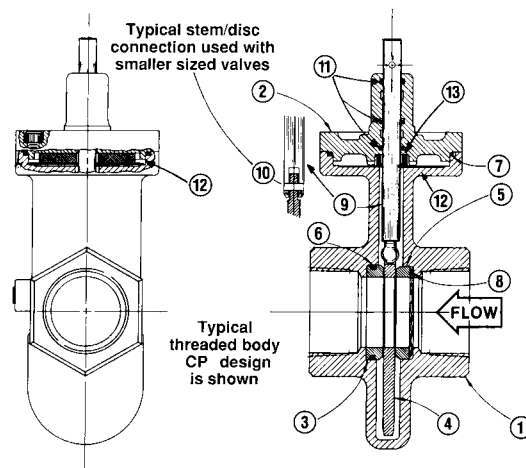
Item No.	Description	Trim: -2		
		.75" – 2"	2.5" – 4" CP	6"
3	Seat	#303 SS (hard faced)	#303 SS (hard faced)	#303 SS (hard faced)
4	Disc	80-55-06 Ductile Iron (chrome plated)	80-55-06 Ductile Iron (chrome plated)	80-55-06 Ductile Iron (chrome plated)
5	Follow Ring	303 SS (chrome plated)	303 SS (chrome plated)	303 SS (chrome plated)
6	Seat O-ring	Viton	Viton	Viton
7	Bonnet O-ring	Viton	Viton	Steel
8	Wavy-Spring Washer	#302 Stainless Steel	#302 Stainless Steel	#302 Stainless Steel
9	Stem	Type 630 Stainless Steel	Type 630 Stainless Steel	Type 630 Stainless Steel
10	Stem/Disc Pins	#420 Stainless Steel	---	Shear-Proof Steel
11	Stem O-rings	Viton	Viton	Viton
12	Striker Plate	#17-7 Stainless Steel	#17-7 Stainless Steel	Carbon Steel
13	Bumper	Viton	Buna N*	Viton

\*For oxygen service, bumper material is EPDM

**Table 4: Internal Trim Specifications for Trim -3**

Item No.	Description	Trim: -3		
		.75" – 2"	2.5" – 4" CP	6"
3	Seat	PEEK	PEEK	PEEK
4	Disc	A351-CF8M	A351-CF8M	A351-CF8M
5	Follow Ring	PEEK	PEEK	PEEK
6	Seat O-ring	Viton	Viton	Viton
7	Bonnet O-ring	Viton	Viton	Viton
8	Wavy-Spring Washer	#302 Stainless Steel	#302 Stainless Steel	#302 Stainless Steel
9	Stem	Type 630 Stainless Steel	Type 630 Stainless Steel	Type 630 Stainless Steel
10	Stem/Disc Pins	---	---	---
11	Stem O-rings	Viton	Viton	Viton
12	Striker Plate	#17-7 Stainless Steel	#17-7 Stainless Steel	#17-7 Stainless Steel
13	Bumper	Viton	Buna N*	Viton

\*For oxygen service, bumper material is EPDM



## Swinging Gate Body/Trim Specifications

**Trim identification** of Maxon Swinging Gate Shut-Off Valves is two-part. The first digit before the hyphen is a number (1, 2, 3 or 4) identifying body material as shown in Table 1 below. The second digit after the hyphen identifies a trim utilizing the materials indicated in Table 2 below.

Standard sanctioned valves incorporating a *cast iron body* will normally be identified by trim 1-B or 1-D. Non-sanctioned valves with *steel body* will normally be trim 2-D.

Non-listed services or unusual applications may require upgrading of internal trim. Contact Maxon with specific fuel analysis for price and availability.

The drawings shown carry item numbers matching those in Table 2. This information is furnished for identification only, not for ordering parts.

**WARNING: Do not attempt field repair of ACTIONAIR® valve body or pneumatic top actuator. Any field alterations void all warranties.**

**Table 1: Body (item 1) Specifications**

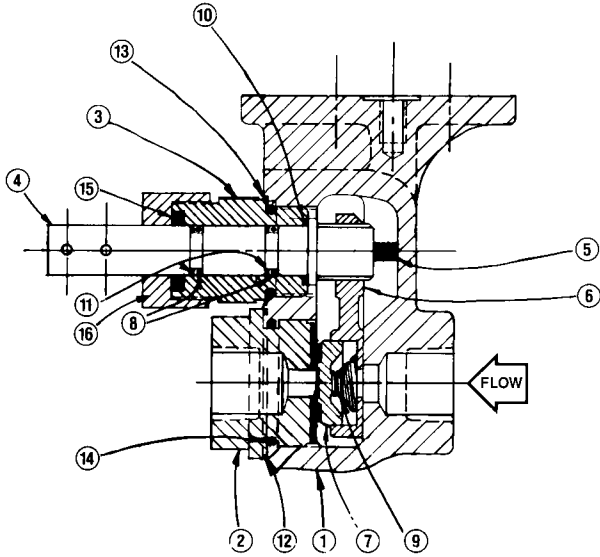
Body Description	Body 1-	Body 2-	Body 3-	Body 4-
Material	Cast Iron, G3000, CL 30	Cast Steel	Cast Iron, G3000, CL 30	Cast Steel
ASTM Spec	A159	A216-WCB	A159	A216-WCB
Special Coating	---	---	Electroless Nickel-Coated	Electroless Nickel-Coated

**Table 2: Internal Trim Material Specifications**

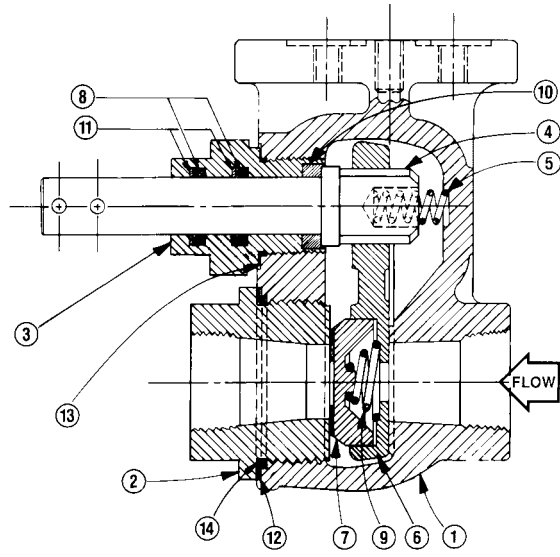
Item No.	Part Description	For 1/2" & 3/4" valves	For 1" & 1-1/4" valves		For 1-1/2" & 2" valves	
		Trim: -D	Trim: -B	Trim: -D	Trim: -B	Trim: -D
2	Hex Nut or Renewable Seat	Hard-Faced Steel	Cast Iron with #420 Stainless Steel Seat Ring	Hard-Faced Steel	Cast Iron with #420 Stainless Steel Seat Ring	Hard-Faced Steel
3	Stem Bushing	Zinc-Plated Steel	Zinc-Plated Steel	Zinc-Plated Steel	#416 Stainless Steel	#416 Stainless Steel
4	Stem	#416 Stainless Steel	#416 Stainless Steel	#416 Stainless Steel	#416 Stainless Steel	#416 Stainless Steel
5	Stem Spring	#302 Stainless Steel	#302 Stainless Steel	#302 Stainless Steel	#302 Stainless Steel	#302 Stainless Steel
6	Disc Carrier	Steel	Steel	Steel	Steel	Steel
7	Disc	Hard-Faced Steel	Nodular Iron	Hard-Faced Steel	Nodular Iron	Hard-Faced Steel
8	Stem O-Rings	Hydrin	Viton	Viton	Viton	Viton
9	Disc Spring	#302 Stainless Steel	#302 Stainless Steel	#302 Stainless Steel	#302 Stainless Steel	#302 Stainless Steel
10	Inner Stem Thrust Ring	Teflon	Teflon	Teflon	Grafoil	Teflon
11	Back-Up O-Rings	Teflon	Teflon	Teflon	---	---
12	Body Gaskets	Soft Iron	Soft Iron	Soft Iron	Soft Iron	Soft Iron
13	Stem Bushing Gasket	Soft Iron	Soft Iron	Soft Iron	Soft Iron	Soft Iron
14	Body O-Ring	Viton	Viton	Viton	---	---
15	Stem Packing Ring	Grafoil	---	---	---	---
16	Packing Nut	Zinc-Plated Steel	---	---	---	---
17	Outlet Flange	---	---	---	Steel (same as body material)	Steel (same as body material)

# Swinging Gate Body/Trim Specifications

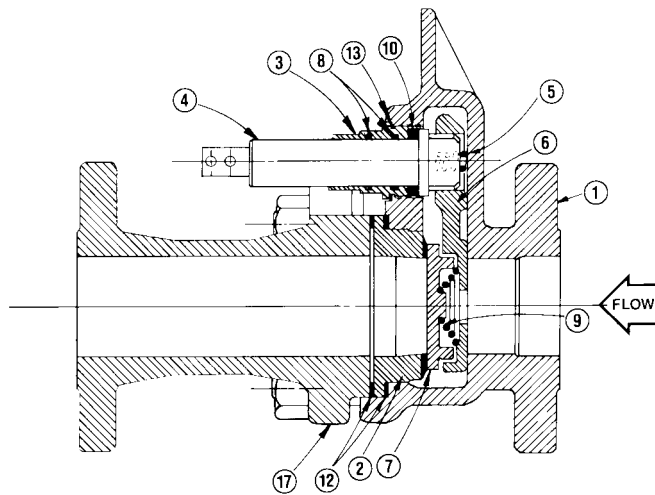
Typical construction of  
1/2" through 3/4" screwed body valves



Typical construction of  
1" through 2" screwed body valves



Typical construction of  
1-1/2" through 2" flanged body valves



# ACTIONAIR® Valve Nameplate Designations

Example:

3/4" ACTIONAIR 1 0 1 1 – HD – D – 2E – TD

Pipe Size

Body Function

- 1 = Normally-closed (gas)
- 2 = Normally-open (gas)
- 3 = Normally-closed (oil)

Body Type

- 0 = Iron body (listed)
- 1 = Iron body (unlisted)
- 2 = Steel body (listed)
- 3 = Steel body (unlisted)

Operator Type

- 1 = Automatic solenoid valve
- 2 = Manual solenoid valve
- 3 = Power-to-XXX solenoid valve

Operator Cylinder Designation

There are five designations (#1 – #5) which are automatically selected with actuator

“TD” Trip Delay Unit  
“HT” High Temperature Body

**Switch Identification**

- 0 = None
- 1 = VCS-1 & VOS-1 (general purpose)
- 1H = VCS-1 & VOS-1 (hermetically sealed)
- 1E = VCS-1 & VOS-1 (hazardous duty)
- 2 = VCS-2 & VOS-2 (general purpose)
- 2H = VCS-2 & VOS-2 (hermetically sealed)
- 2E = VCS-2 & VOS-2 (hazardous duty)

**Solenoid Valve Voltage**

A = AC voltage  
D = DC voltage  
NOTE: Nameplate shows specific voltage

**Operator Classification**

GP = general purpose  
HD = hazardous duty

**For quotation or order entry, specify:**

1. **Quantity**
2. **Pipe size** or fluid flow rate:
  - Specific fluid service
  - Maximum line pressure
  - Fluid temperature
  - Viscosity (if oil service)
3. **Body function**
4. **Body type**
5. **End connection:**
  - Threaded ends
  - Socket-welded nipples
  - Flanged ends
6. **Operator type**
7. **Operator classification**
8. **Solenoid valve voltage**
9. **Accessory options:**
  - Signal switch sets
  - High temperature body
  - Trip delay unit
10. **Top assembly position:**
  - “R”, “L”, “TO” or “AW”

# Electrical Data

## General

ACTIONAIR® Valves are air operated and the air supply is controlled by a 115V 50/60 AC solenoid valve wired directly into the control system.

**Switch wiring diagrams** (reproduced below) are part of each valve assembly, summarizing electrical data and wiring for a valve equipped with terminal block and a full complement of optional switches.

Good practice normally dictates that auxiliary switches in valves used for safety shut-off functions should be used for signal duty only, not to operate additional safety devices.

## For normally closed versions (Series 1000 & 3000)

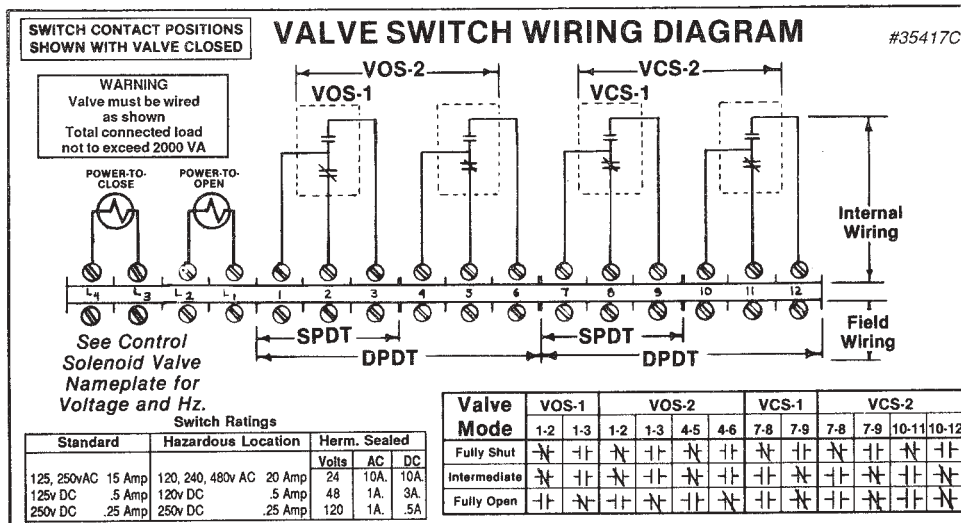
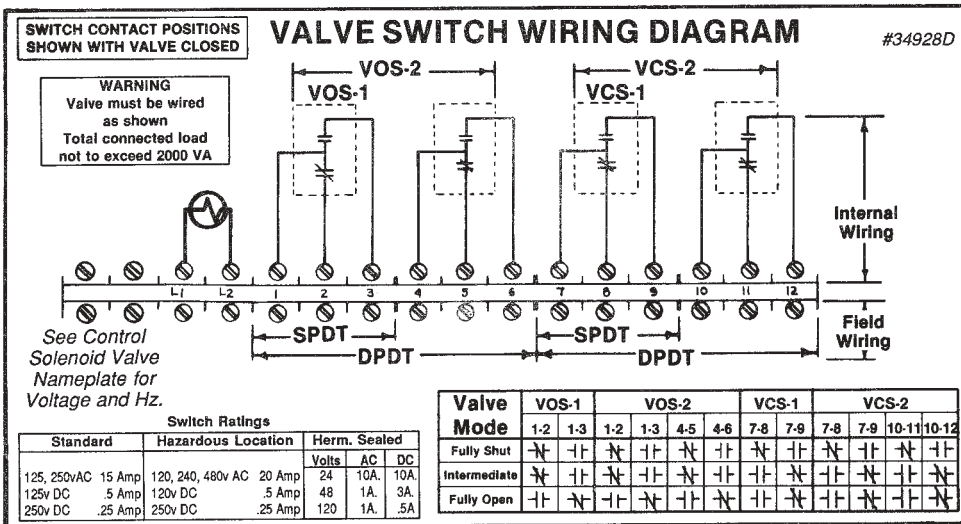
**VCS** (Valve Closed Switch) is actuated at the end of the closing stroke. VCS-1 is SPDT; VCS-2 is DPDT.

**VOS** (Valve Open Switch) is actuated at the end of opening stroke. VOS-1 is SPDT; VOS-2 is DPDT.

Switch amp ratings are shown on the schematic wiring diagrams below. **DO NOT EXCEED** rated amperage or total load shown.

Diagrams show valve in its normally closed (at rest) position with a full complement of switches. The indicated internal wiring is present only when the appropriate auxiliary switches are specified.

## Normally closed Series 1000 & 3000 ACTIONAIR® Valves (internal wiring schematic)



## Power-to-Close Series 1000 & 3000 ACTIONAIR® Valves (internal wiring schematic)

**WARNING: ACTIONAIR® Valves equipped with Power-to-Close actuator assembly require electrical power and compressed air to be opened. The valve will remain in the opened position for a minimum of 15 minutes on loss of power. The valve will return to its normally closed position with a loss of cylinder air or continuous power to the overriding solenoid valve.**

## Electrical Data (continued)

### For normally open versions (Series 2000)

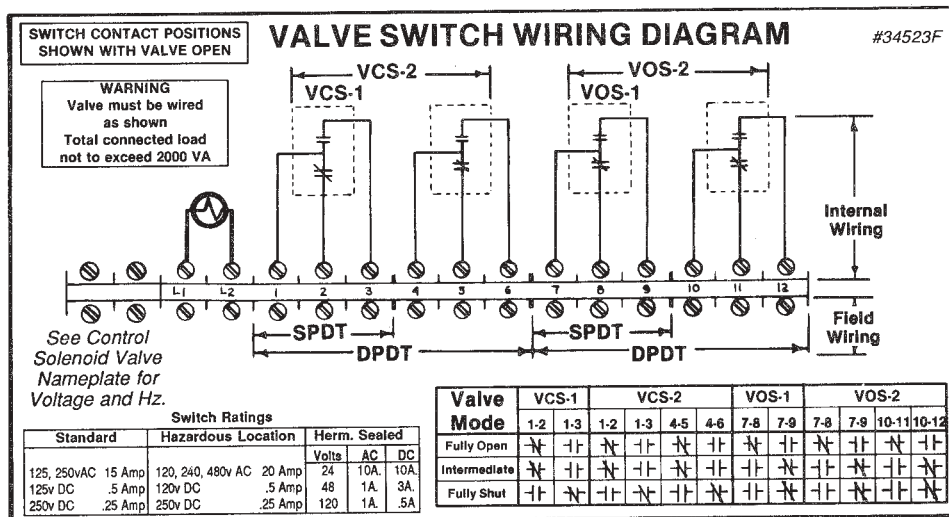
**VCS** (Valve Closed Switch) is actuated at the end of the closing stroke. VCS-1 is SPDT; VCS-2 is DPDT.

**VOS** (Valve Open Switch) is actuated at the end of opening stroke. VOS-1 is SPDT; VOS-2 is DPDT.

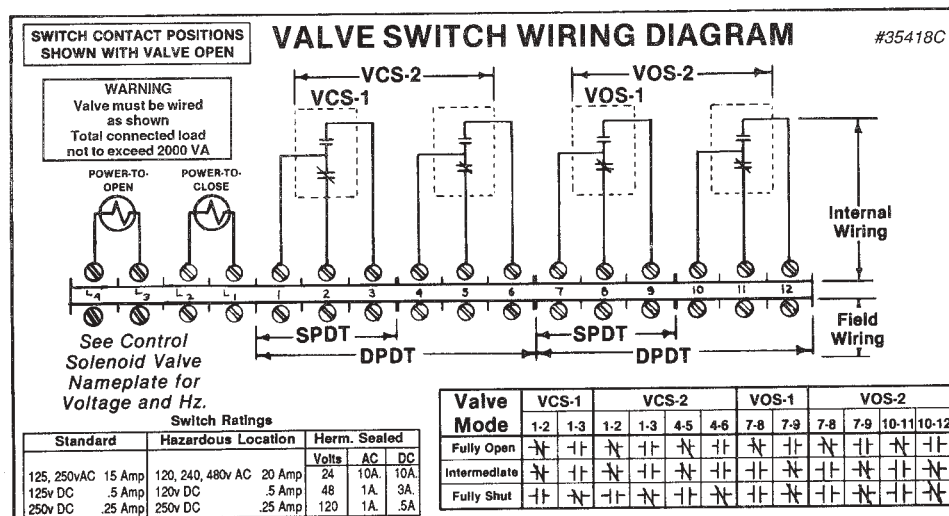
Switch amp ratings are shown on the schematic

wiring diagrams below. DO NOT EXCEED rated amperage or total load shown.

Diagram shows valve in its normally open (at rest) position with a full complement of switches. The indicated internal wiring is present only when the appropriate auxiliary switches are specified.



**Normally open  
Series 2000  
ACTIONAIR® Valve**  
(internal wiring schematic)

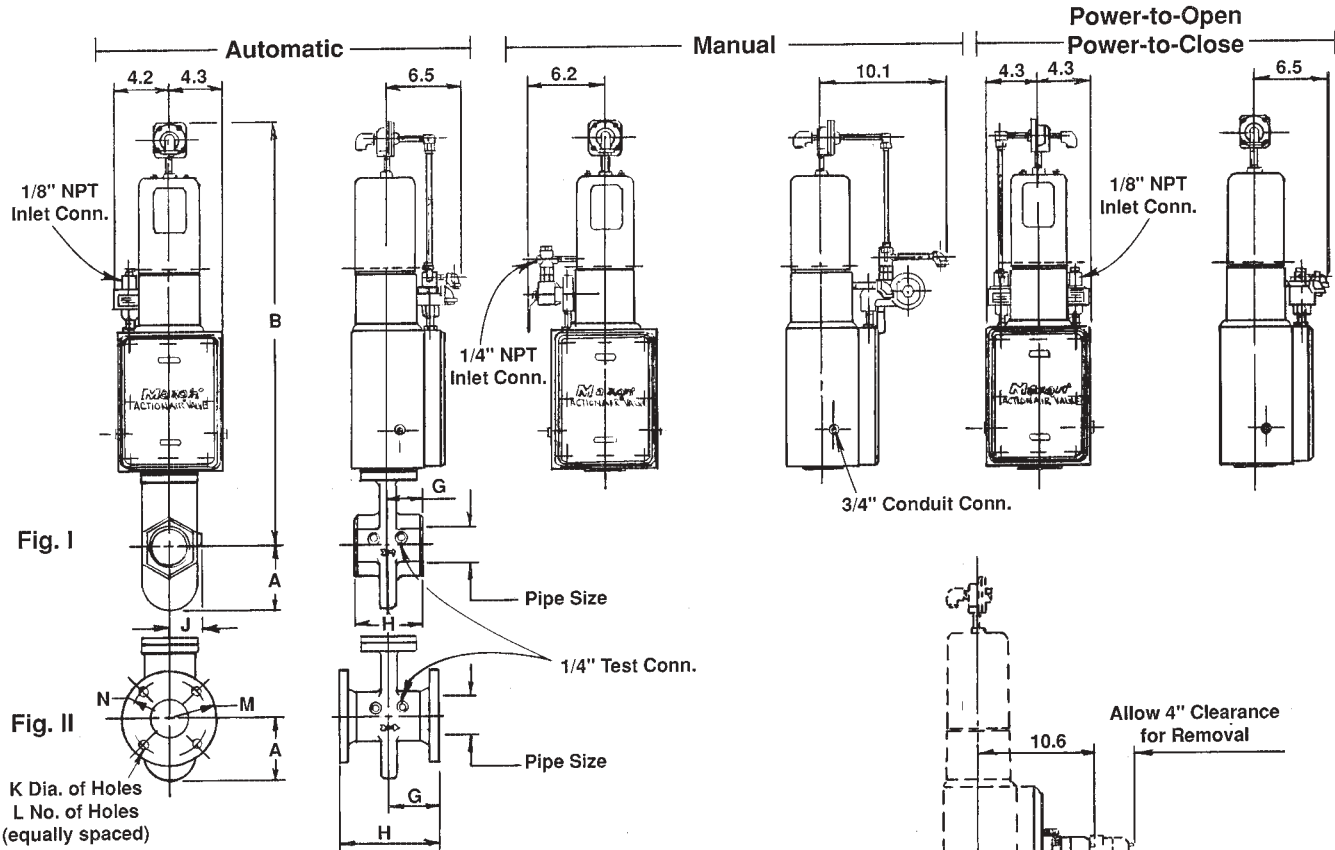


**Power-to-Open  
Series 2000  
ACTIONAIR® Valve**  
(internal wiring schematic)

**WARNING: ACTIONAIR® Valves** equipped with Power-to-Open actuator assembly require electrical power and compressed air to be closed. The valve will remain in the closed position for a minimum of 15 minutes on loss of power. The valve will return to its normally open position with a loss of cylinder air or continuous power to the overriding solenoid valve.

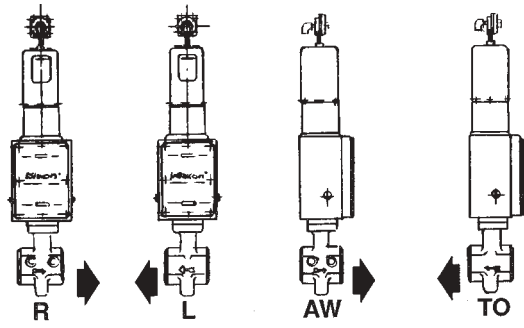
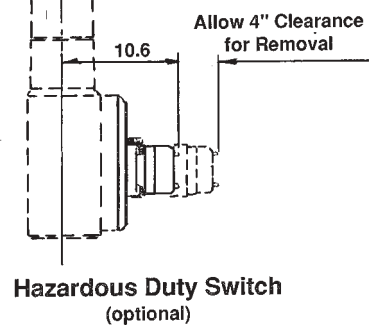
# Approximate envelope dimensions for Series 1000 & 2000

(Nominal, in inches)



Valve Size	Figure	A	B	G	H	J	K	L	M	N		
3/4"	I	2	25.4	1.9	3.81	0.81						
1"		2.43	26.5	2	4	1.56	---	---	---	---		
1-1/4"		2.69	27.2									
1-1/2"		3.25	28.3	2.19	4.38	1.88						
2"	II	3.5	7	2	3/4	4					3	2.38
2-1/2"	I	4.31	35.9	2.5	5	2.25	3/4	4	3.5	2.75		
	II	4.5		3.75	7.5							
3"	I	5.12	37.5	2.75	5.5	2.56	---	---	---	---		
		5.25		4	8							
4"	II	5.43	37.7	4.5	9	2.27	3/4	8	4.5	3.75		
4 HC		7.31									46.5	3.25
6"		8.38									51	5.25

Fig. II - Iron bodied flanged valves are flat-faced ANSI Class #125. Steel bodied flanged valves are flat-faced ANSI Class #150. Special "raised face" ANSI Class #150 steel bodied valves are available. Contact Maxon representative for cost and availability.



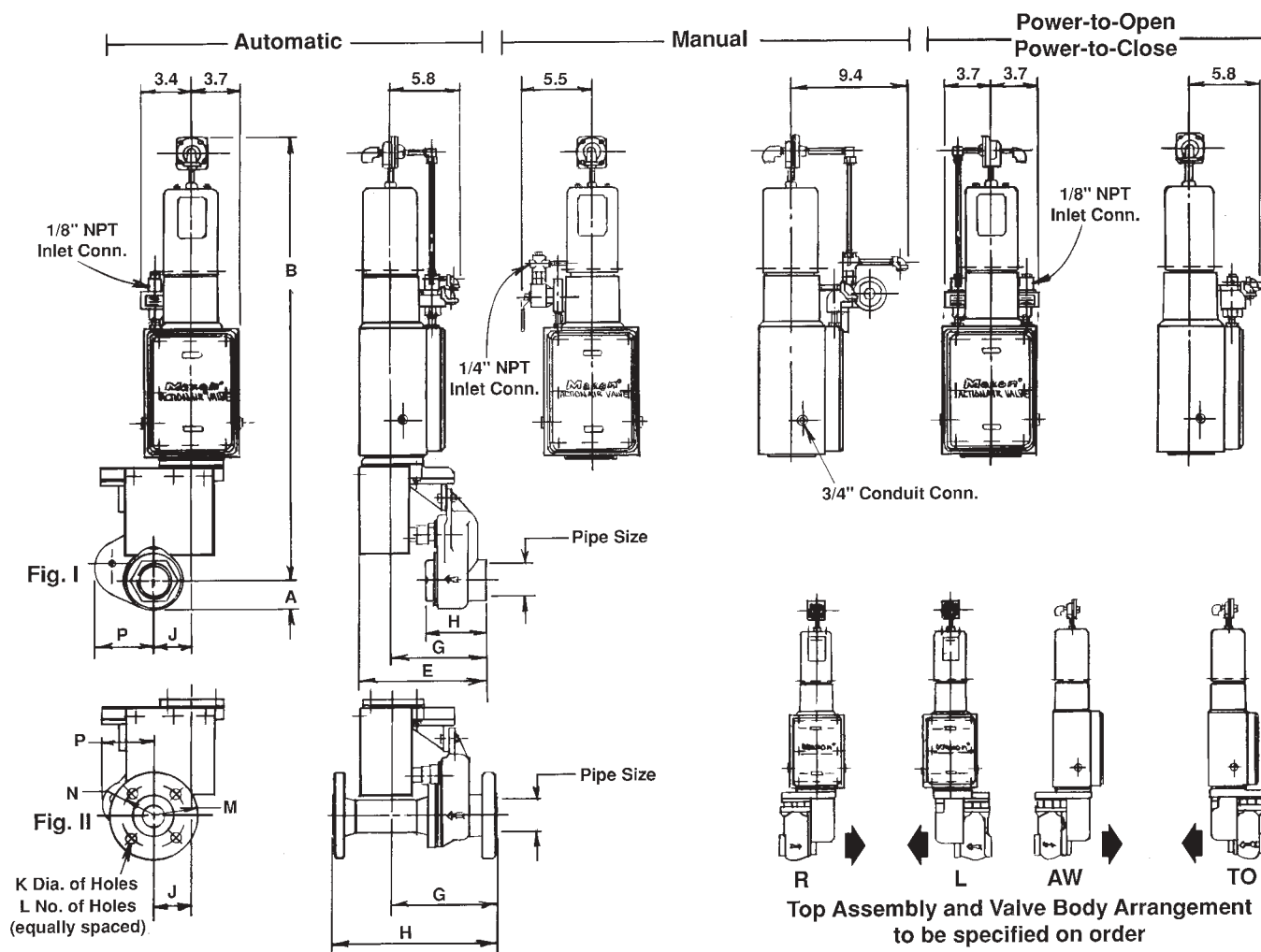
Top Assembly and Valve Body Arrangement to be specified on order

Pipe threads on this page conform to NPT (ANSI Standard B2.1)



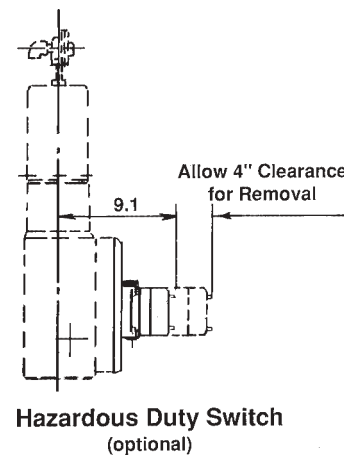
# Approximate envelope dimensions for Series 3000

(Nominal, in inches)



Valve Size	Figure	A	B	E	G	H	J	K	L	M	N	P
1/2"	I	1.19	29.1	6.8	4.34	3.19	2.91	---	---	---	---	---
3/4"												
1"												
1-1/4"	II	1.88	32.4	9.4	6.84	4.36	2.72	7/8	4	3.06	2.25	3.7
1-1/2"					7.02	11.4						
2"					7.27	11.9						

Fig. II - Steel bodied flanged valves are raised face ANSI Class #300



Pipe threads on this page conform to NPT (ANSI Standard B2.1)

Notes