

# Single-Seated Cylinder Balanced Iron Normally Open 2-1/2" – 6"

Diaphragm-Actuated Valves

## APPLICATION:

Control of Saturated Steam; Water; Water and Glycol Solutions to 50%. Seat Closure ANSI Class III\*

## CONSTRUCTION:

Body: ANSI B16.1 Iron 125lb Flange or 250lb Flange  
 Trim: EQ%, Bronze or 300 Series Stainless Steel  
 Cylinder Seal: EPDM (BRZ Trim) O-Ring  
 Fluoraz 797 (300 SS Trim) O-Ring  
 Stem: 316 Stainless Steel  
 Bonnet: Brass  
 Packing: Guided Low-Friction TFE V-Ring, Self Adjusting

## TRIM LIMITS (Flowing Differential Pressure):

Brz Trim: Liquids or Steam to 40 PSID  
 S/S Trim: Liquids or Steam to 100 PSID

## BODY PRESSURE-TEMPERATURE RATINGS:

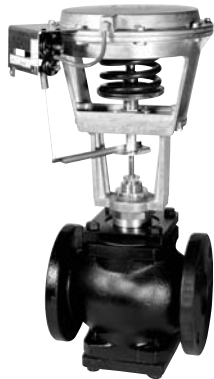
Temp.	125 FLG (ratings are PSIG)	250 FLG (ratings are PSIG)
+32 to 150° F	175	400
350° F	125	280
400° F	–	250

## CYLINDER SEAL TEMPERATURE LIMITS:

+32 to 300° F (BRZ Trim)  
 +32 to 300° F (125 FLG w/300 SS Trim)  
 +32 to 400° F (250 FLG w/300 SS Trim)

## NOTES:

- 1) Inlet Pressure cannot exceed Body Pressure-Temperature Rating.
- 2) Shut-off PSID is per stated ANSI Shut-off Classification.
- 3) Flowing PSID for water service should be no greater than 2/3 of Inlet Pressure unless verified for absence of cavitation with Warren Valve Sizing Program.



VA2310CA-D002

## CONFIGURATIONS:

Select Valve and Actuator Code in Tables:

Valve					50 Actuator 20 PSIG Supply			
Cv	Size	Flng.	Trim	Valve Code	3-8 PSIG Range		w. 42 Positioner	
					Shut Off PSID	Actuator Code	Shut Off PSID	Actuator Code
65	2.5	125	BRZ	VA2310CA	175	D000	175	D002
65	2.5	125	S/S	VA2310CC	175	D000	175	D002
65	2.5	250	BRZ	VA2310DA	400	D000	400	D002
65	2.5	250	S/S	VA2310DC	400	D000	400	D002
90	3	125	BRZ	VA2311CA	175	D000	175	D002
90	3	125	S/S	VA2311CC	175	D000	175	D002
90	3	250	BRZ	VA2311DA	400	D000	400	D002
90	3	250	S/S	VA2311DC	400	D000	400	D002

## 50 Actuator Specifications:

Effective Area: 50 Square Inches  
 Construction: Aluminum Yoke and Diaphragm Chamber with Neoprene Diaphragm.  
 Mounting: Vertical Above Valve

Valve					84 Actuator 20 PSIG Air Supply							
Cv	Size	Flng.	Trim	Valve Code	3-9 PSIG Range		3-15 PSIG Range		w.42 Positioner		w.760P Positioner	
					Shut Off PSID	Actuator Code	Shut Off PSID	Actuator Code	Shut Off PSID	Actuator Code	Shut Off PSID	Actuator Code
65	2.5	125	BRZ	VA2310CA	175	D006	175	D004	175	D010	175	D014
65	2.5	125	S/S	VA2310CC	175	D006	175	D004	175	D010	175	D014
65	2.5	250	BRZ	VA2310DA	400	D006	400	D004	400	D010	400	D014
65	2.5	250	S/S	VA2310DC	400	D006	400	D004	400	D010	400	D014
90	3	125	BRZ	VA2311CA	175	D006	175	D004	175	D010	175	D014
90	3	125	S/S	VA2311CC	175	D006	175	D004	175	D010	175	D014
90	3	250	BRZ	VA2311DA	400	D006	393	D004	400	D010	400	D014
90	3	250	S/S	VA2311DC	400	D006	393	D004	400	D010	400	D014
170	4	125	BRZ	VA2313CA	175	D038	175	D037	175	D040	175	D042
170	4	125	S/S	VA2313CC	175	D038	175	D037	175	D040	175	D042
170	4	250	BRZ	VA2313DA	400	D038	249	D037	400	D040	400	D042
170	4	250	S/S	VA2313DC	400	D038	249	D037	400	D040	400	D042
280	5	125	BRZ	VA2314CA	175	D038	161	D037	175	D040	175	D042
280	5	125	S/S	VA2314CC	175	D038	161	D037	175	D040	175	D042
280	5	250	BRZ	VA2314DA	400	D038	161	D037	400	D040	400	D042
280	5	250	S/S	VA2314DC	400	D038	161	D037	400	D040	400	D042
360	6	125	BRZ	VA2315CA	175	D038	92	D037	175	D040	175	D042
360	6	125	S/S	VA2315CC	175	D038	92	D037	175	D040	175	D042
360	6	250	BRZ	VA2315DA	400	D038	92	D037	400	D040	400	D042
360	6	250	S/S	VA2315DC	400	D038	92	D037	400	D040	400	D042

## 84 Actuator Specifications:

Effective Area: 84 Square Inches  
 Construction: Acrylic Enamel Coated Iron Yoke and Steel Diaphragm Chamber with Buna-N Diaphragm.  
 Mounting: Vertical Above Valve

## Control Action:

Increasing Signal Closes Valve  
 Operating Range may differ from Signal Range,  
 Use a Positioner to Match Ranges

## 42 Positioner Specifications:

Control Signal: 3-15 PSIG (Factory Setting)  
 Adjustable/Non-Reversible  
 Air Supply/Consumption: 20 PSIG/Approx 0.012 SCFM

## 760P Positioner Specifications:

Control Signal: 3-15 PSIG (Factory Setting)  
 Adjustable/Reversible  
 Air Supply/Consumption: 20 PSIG/Approx 0.020 SCFM

## For more Details:

Diaphragm-Actuator Product Sheet - pg. 89 (BAC Catalog)  
 Positioner Product Sheet - pg. 91 (BAC Catalog)

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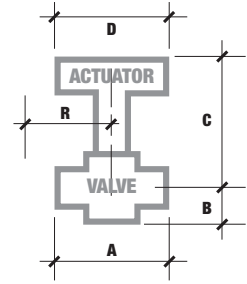
### ROUGHING DIMENSIONS (IN):

Component		Dimension by Valve Size (IN)				
		2-1/2	3	4	5	6
	variable					
A	125 FLG	9	10	13	15-3/4	17-3/4
A	250 FLG	9-5/8	10-3/4	13-5/8	16-5/8	18-5/8
B		4-3/4	5-3/8	6-3/8	7-1/2	8-1/8
C	50 Actuator	18-3/8	19-1/4	N/A	N/A	N/A
C	84 Actuator	21-3/4	22-5/8	23-3/4	24-1/4	24-7/8
D	50 Actuator	10-1/2	10-1/2	N/A	N/A	N/A
D	84 Actuator	13-7/8	13-7/8	13-7/8	13-7/8	13-7/8
R*	50 w/42	7-1/2	7-1/2	N/A	N/A	N/A
R*	84 w/42	9	9	9	9	9
R*	84 w/760P	8-1/8	8-1/8	8-1/8	8-1/8	8-1/8

Allow 4-7/8 inch clearance above actuator for removal / service (50 & 84).

Allow 6-1/8 inch clearance above actuator for removal / service (115).

\*Centerline of Actuator to Outside point of Positioner



### WEIGHTS:

Item	Weight (LBS)	
Valve (IN)	125FLG	250FLG
2-1/2	57	66
3	75	80
4	127	139
5	149	181
6	197	256
Actuator	LBS	
50	13	
84	48-1/2	
Positioner	LBS	
42	1	
760P	8	

Actual shipping weights may vary.



VA2314CC-D042