DOUBLE SEATED BALANCED IRON - 2 1/2" - 10"

▶ APPLICATION:

Control of Saturated Steam; Water; Water & Glycol Solutions to 60%. Seat Leakage ANSI Class III.

▶ VALVE CONSTRUCTION:

Body:	ANSI B16.1 Iron 125lb. Flange or 250lb. Flange
Trim:	EQ%, Bronze or 300 Series Stainless Steel
Stem:	316 Stainless Steel
Bonnet:	Brass
Packing:	EPDM Lip Packing (+20 to 350ºF) Standard (EPDM is **not** suitable for use with oils, hydrocarbons, or acids.) PTFE V-Ring, (+60 to 350ºF) Optional, must be specified on order
Agency Approval:	CRN # CSA - OC20496 (Excludes 250# Type 22/32)

▶ TRIM LIMITS (Flowing Differential Pressure):

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

▶ ACTUATOR SPECIFICATIONS:

Control Signal:	2-10 Vdc (4-20 mAdc with 500 ohm resistor Kit KR500-supplied with motor)
Control Action, Loss of Signal:	Increasing Signal Opens Valve, Loss of Signal Closes Valve (Default Setting) Reversible with Switch. Can be specified when ordering.
Feedback Signal:	2-10 Vdc
Power Supply:	24 VAC/DC
Loss of Power:	**E024** & **E029** (FAIL LAST POSITION) **E031** (E029 w/ VMS-50 BCM, FAIL SAFE TO LOSS OF SIGNAL POSITION) **E025 & E026** (ELECTRONIC FAIL SAFE) Fail Closed (Default Setting) Reversible with Switch. Can be specified when ordering.
Power Consumption	
Running:	**E024** 2W; **E025** 3W; **E026** 5W; **E029** 6W; **E031** Battery Charging 12.84W; Battery charged 7.2W
Holding:	**E024** 1.5W; **E025** 2W; **E026** 2W; **E029** 1.5W; **E031** Battery Charging 8.34W; Battery charged 2.7W
Transformer sizing:	**E024** 4VA; **E025** 7VA; **E026** 9.5VA; **E029** 11VA;
(24VAC Class 2)	**E031** N/A
Switching Power Supply	**E031** 24Vdc 2.0A
Timing:	See Configuration Tables
Manual Override:	Hex crank (supplied with actuator)
Construction:	Aluminum Die Cast and Plastic Housing
Locations:	NEMA Type 2 / IP54, UL enclosure type 2
Temperature Limits:	+32ºF to 122ºF Ambient
Mounting:	Vertical above centerline of valve
Safety Agency Listing:	CE , cULus

▶ VMS-50 BCM (BACK-UP CONTROL MODULE) SPECIFICATIONS:

Required for Fail Safe Operation with fail last position (Actuators E024 & E029)
(One VMS-50BCM can operate one, two or three actuators at a time)
The E031 includes a VMS-50 BCM. The VMS-50 BCM does not include a VMS-50 PS.

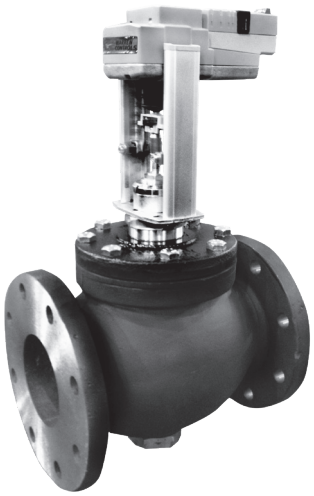
Fail Direction:	Fail Safe to Loss of Signal Position
Power Requirement:	24 Vdc 2.0 A from Separate External Switching Power Supply
Power Output:	24 Vdc 48W Total
Construction:	Battery w/Circuit Board & Transformer in the Nema 4x Enclosure
Mounting:	Wall Mount
Dimensions:	8.75" (W) x 6.97" (H) x 5.19" (D) (See page 34)
Safety Agency Listing:	Not Listed

▶ VMS-50 PS (SWITCHING POWER SUPPLY) SPECIFICATIONS:

Required to supply 24Vdc power to the VMS-50 BCM Back-up Control Module
The VMS-50 BCM does not include a VMS-50 PS.

Input:	115 VAC 50/60 Hz 1.5A
Power Output:	24 Vdc 2.0 A
Input Connector:	Three Pin Input Plug
Construction:	Molded Plastic
Dimensions:	4.31" (L) x 2.16" (W) x 1.62" (H)
Safety Agency Listing:	UL Listed

Note: If the building already has a 24 Vdc circuit rated at or above 2.0 Amps that is available for use with the VMS-50 BCM, then the VMS-50 PS is not required.



VA2213CA-E024

VA2215CC-E029

NOTES:
1) Inlet Pressure cannot exceed Body Pressure-Temperature Rating.
2) Shut-off pressures listed are with respect to stated ANSI Leakage Classes.
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.

CRN REGISTERED

DOUBLE SEATED BALANCED IRON - 2 1/2" - 10"

▸ ACTUATOR & VALVE CONFIGURATIONS: Select Valve & Actuator Code in Tables:

Fail Last Position — ACTUATOR CODE E024

Cv	Size (IN)	FLNG	Trim	Valve Code	SHUT-OFF (PSID)	Max Timing (SEC)
					CL III	Motor
70	2.5	125	BRZ	VA2210CA	175	90
70	2.5	125	S/S	VA2210CC	175	90
70	2.5	250	BRZ	VA2210DA	400	90
70	2.5	250	S/S	VA2210DC	400	90
100	3	125	BRZ	VA2211CA	175	90
100	3	125	S/S	VA2211CC	175	90
100	3	250	BRZ	VA2211DA	400	90
100	3	250	S/S	VA2211DC	400	90
200	4	125	BRZ	VA2213CA	175	90
200	4	125	S/S	VA2213CC	175	90
200	4	250	BRZ	VA2213DA	223	90
200	4	250	S/S	VA2213DC	223	90

Fail Safe — ACTUATOR CODE E025

Cv	Size (IN)	FLNG	Trim	Valve Code	SHUT-OFF (PSID)	Max Timing (SEC)	
					CL III	Motor	Fail Safe
70	2.5	125	BRZ	VA2210CA	175	90	35
70	2.5	125	S/S	VA2210CC	175	90	35
70	2.5	250	BRZ	VA2210DA	400	90	35
70	2.5	250	S/S	VA2210DC	400	90	35
100	3	125	BRZ	VA2211CA	175	90	35
100	3	125	S/S	VA2211CC	175	90	35
100	3	250	BRZ	VA2211DA	400	90	35
100	3	250	S/S	VA2211DC	400	90	35
200	4	125	BRZ	VA2213CA	175	90	35
200	4	125	S/S	VA2213CC	175	90	35
200	4	250	BRZ	VA2213DA	223	90	35
200	4	250	S/S	VA2213DC	223	90	35

Fail Safe — ACTUATOR CODE E026

Cv	Size (IN)	FLNG	Trim	Valve Code	SHUT-OFF (PSID)	Max Timing (SEC)	
					CL III	Motor	Fail Safe
200	4	125	BRZ	VA2213CA	175	90	35
200	4	125	S/S	VA2213CC	175	90	35
200	4	250	BRZ	VA2213DA	400	90	35
200	4	250	S/S	VA2213DC	400	90	35
260	5	125	BRZ	VA2214CA	175	90	35
260	5	125	S/S	VA2214CC	175	90	35
260	5	250	BRZ	VA2214DA	287	90	35
260	5	250	S/S	VA2214DC	287	90	35
350	6	125	BRZ	VA2215CA	175	90	35
350	6	125	S/S	VA2215CC	175	90	35
350	6	250	BRZ	VA2215DA	197	90	35
350	6	250	S/S	VA2215DC	197	90	35

Fail Last Position/ Fail Safe ACTUATOR CODE E029/E031

Cv	Size (IN)	FLNG	Trim	Valve Code	Fail Last Position (Actuator Code)	Fail Safe w/VMS50 (Actuator Code)	SHUT-OFF (PSID)	Max Timing (SEC)
							CL III	Motor
350	6	125	BRZ	VA2215CA	E029	E031	175	90
350	6	125	S/S	VA2215CC	E029	E031	175	90
350	6	250	BRZ	VA2215DA	E029	E031	400	90
350	6	250	S/S	VA2215DC	E029	E031	400	90
680	8	125	BRZ	VA2217CA	E029	E031	175	90
680	8	125	S/S	VA2217CC	E029	E031	175	90
680	8	250	BRZ	VA2217DA	E029	E031	400	90
680	8	250	S/S	VA2217DC	E029	E031	400	90
960	10	125	BRZ	VA2219CE	E029	E031	175	90
960	10	125	S/S	VA2219CG	E029	E031	175	90
960	10	250	BRZ	VA2219DE	E029	E031	392	90
960	10	250	S/S	VA2219DG	E029	E031	392	90

ACTUATED ASSEMBLY BODY PRESSURE TEMPERATURE RATINGS

TEMP.	125 FLG (PSIG)	250 FLG (PSIG)
+20 to 150º F	175	400
350º F	125	280

Ratings are PSIG
Pressure boundary meets ANSI B16.1

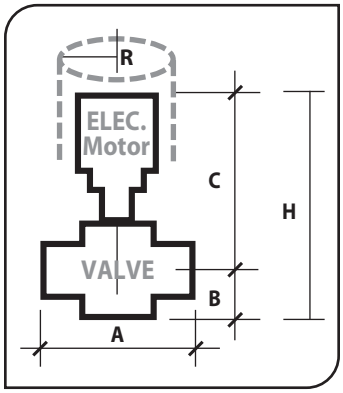
WEIGHTS

ITEM	WEIGHT (LBS)	
VALVE SIZE (IN)	125 FLG	250 FLG
2-1/2	32	42
3	42	54
4	77	96
5	124	162
6	169	220
8	290	380
10	CF	CF
ACTUATOR	LBS	
E024	3-1/2	
E025	4-1/2	
E026	8-1/2	
E029/E031	8-1/2	
BCM	LBS	
VMS-50	4-1/2	

Actual shipping weights may vary.
CF = Consut Factory

▸ Dimensions (IN):

Component		Dimension by Valve Size (IN)						
Variable		2-1/2	3	4	5	6	8	10
A	125 FLG	7-3/4	9	11-3/8	12	14-1/8	16-1/4	20
A	250 FLG	8-3/8	9-3/4	12	12-7/8	14-1/2	16-1/4	21-3/8
B		4-1/8	4-3/8	5	6-7/8	7-5/8	8-7/8	10-7/8
C	E024	13-1/8	13-3/8	14-7/8	-	-	-	-
C	E025	13-7/8	14-1/8	15-5/8	-	-	-	-
C	E026/E029/E031	-	-	19-1/8	20-1/8	21	22-1/8	23-3/4
	E024	17-1/4	17-3/4	19-7/8	-	-	-	-
H	E025	18	18-1/2	20-5/8	-	-	-	-
H	E026/E029/E031	-	-	24-1/8	27	28-5/8	31	34-1/2
R*	E024/E029/E031	7-1/2	7-1/2	7-1/2	7-1/2	7-1/2	7-1/2	7-1/2
R*	E025/E026	8-3/4	8-3/4	8-3/4	8-3/4	8-3/4	8-3/4	8-3/4

Allow 6 inch clearance above actuator for removal / service.

*Center line of Valve to Outside Actuator