APPLICATION:

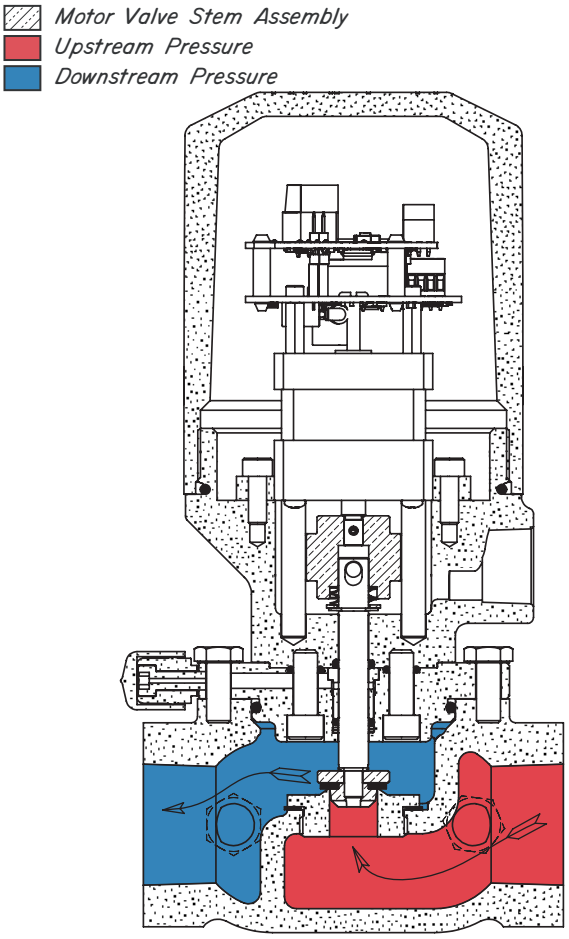
Gas burner supply lines where line pressures are less than 45 psi.
Any system which requires a valve to be electrically controlled with operating pressures up to 45 psi.

FEATURES

Closed position indicator switch (NFPA 87)
Single soft seat
Mechanical overdrive to ensure full closure
Removable valve seat
Minimum maintenance
All internal parts can be removed with valve in line
Integrated double seal to isolate electronics from process gas/fluids
Brushless Stepper motor design for precise control
Modular Input Accessories
- Analog 4-20mA module for proportional control
- Discrete input module for on/off control
- Optional RS485 module for MODBUS communication
Dual Seal with Annunciation

CERTIFICATIONS:

CSA HAZARDOUS LOCATION
Class I, Div 1, Groups B, C, D
Class II, Div 1, Groups E, F, G
Class III, T6
Kimray is an ISO 9001- certified manufacturer.



ELECTRICAL RATINGS			
	Min	Max	Units
Input Voltage	10	28	VDC
Input Current	0.01	0.6	ADC
Ambient Temperature	-40	60	°C
	-40	140	°F
Analog input Module	4	20	mA
Discrete input Module	Dry Contacts only		
Communications Module	RS-485 (MODBUS RTU)		

Standard Order Code	Line Size	Connection Type	Inner Valve Size	Oper. Press psig	Max. W.P. †† psig	Cv	Cf
MXC	1"	THRU FNPT	1/2"	0-45 psig	300	5.60	0.86
MXD			1/8"			1.50	0.87
MXE			3/8"			3.20	0.86
Corrosive Order Code	**Line Size**	**Connection Type**	**Inner Valve Size**	**Oper. Press psig**	**Max. W.P. †† psig**	**Cv**	**Cf**
MXCS6	1"	THRU FNPT	1/2"	0-45 psig	300	5.60	0.86
MXDS6			1/8"			1.50	0.87
MXES6			3/8"			3.20	0.86

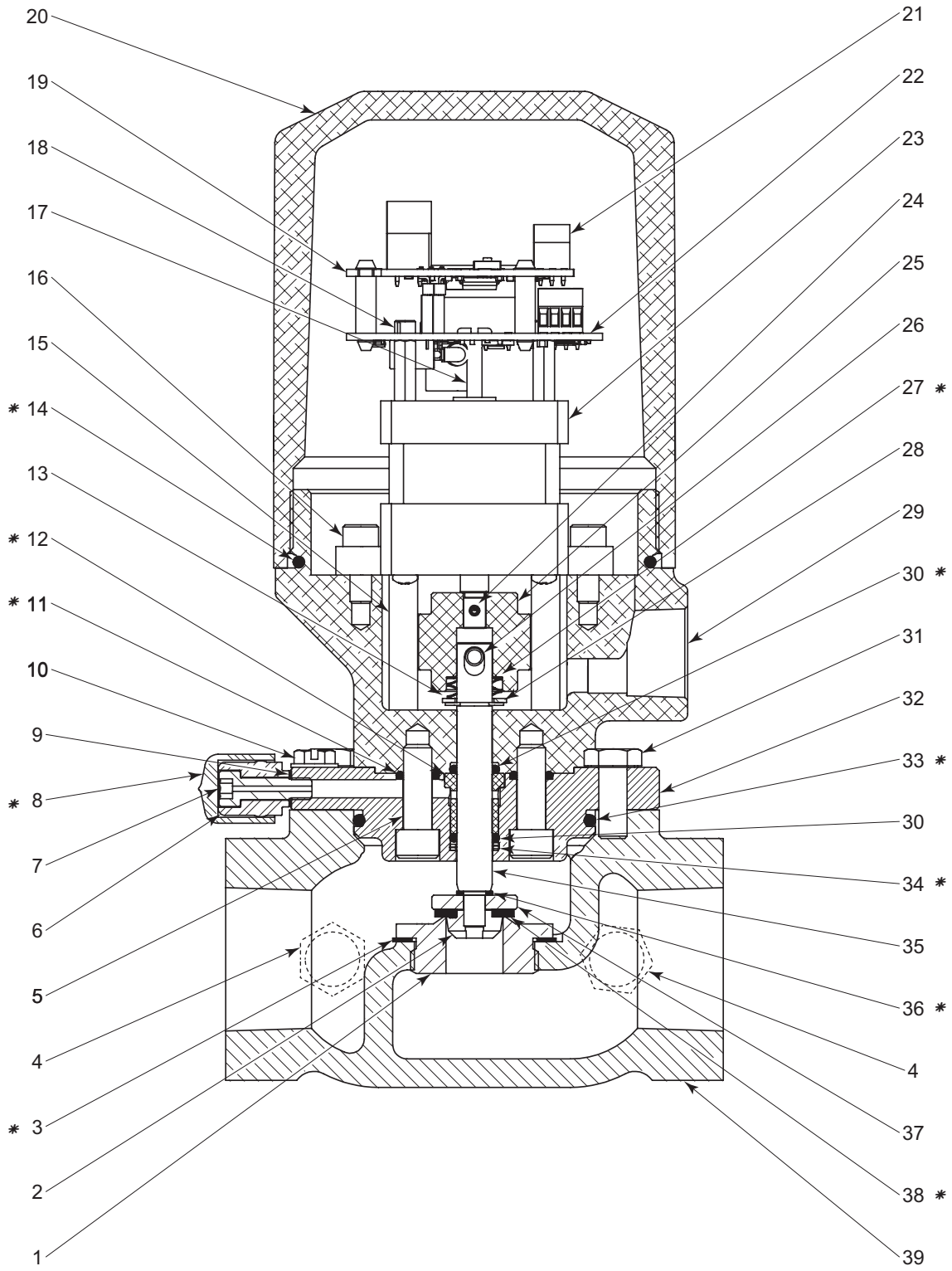
NOTES:

For standard & optional seals, metals, Cf Cv values, material specifications & dimensions see technical data on pages 02:I - 02:VI
†† Max W.P. values based on -20°F to 100°F.

All Pictures shown are for illustration purpose only. Actual product may vary due to product enhancement.

KIMRAY INC.

E-LO CONTROL VALVE
PARTS LIST



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ITEM	QTY.	DESCRIPTION		PART NUMBER		
				STANDARD		CORROSIVE
1	1	Removable Seat		1349		1349SS6
2	1	1/2" IV Ratio Plug		1346SS6		1346SS6
		1/8" IV Ratio Plug		7273S6		7273S6
		3/8" IV Ratio Plug		7714S6		7714S6
3	1	Gasket	*	364		364
4	2	Plug		699		699SS6
5	2	Screw		7531S6		7531S6
6	1	Annunciation Stem		7552		7552
7	1	Vent Screw		7551		7551
8	1	Cap	*	7555		7555
9	1	Gasket		3018		3018
10	1	Ground Screw		7462		7462
11	2	O-Ring	*	638HSN		638HSN
12	1	Stem Bushing	*	7442XP		7442XP
13	1	Felt Retainer		486		486
14	1	O-Ring	*	7425HSN		7425HSN
15	2	Guide Pin		7419		7419
16	2	Screw		7491		7491
17	1	POC Switch Actuator		7439		7439
18	4	Screw		7492		7492
19	1	Module (One Required)				
		Discrete		KA7505		KA7505
		Analog 4-20		KA7506		KA7506
		RTD		KA7508		KA7508
20	1	Cover		7436		7436
21		Modbus Module (Optional)		KA7507		KA7507
22	1	Main PCB		KA7504		KA7504
23	1	Stepper Motor		7460		7460
24	1	Roll Pin		7420		7420
25	1	Stem Carrier		7440		7440
26	1	Dowel Pin		7422		7422
27	1	Spring	*	7421		7421
28	1	Retaining Ring		7457		7457
29	1	Housing		7435XP		7435XP
30	2	O-Ring	*	153LTHSN		153LTHSN
31	6	Screw		7423		7423
32	1	Bonnet		7441XP		7441XP
33	1	O-Ring	*	7434HSN		7434HSN
34	2	Back Up	*	148T		148T
35	1	Valve Stem		7438		7438S6
36	1	Gasket	*	7950		7950
37	1	Seat Disc		1348SS6		1348SS6
38	1	Seat	*	1347LTNHSN		1347LTNHSN
39	1	Body				
		NPT Thru		2343CPC		2343CPC ‡
				‡ Coated Parts available with "E" shell material		
Repair Kits				RZJLTHSN		RZJLTHSN
* These parts are recommended spare parts and are stocked as repair kits.						

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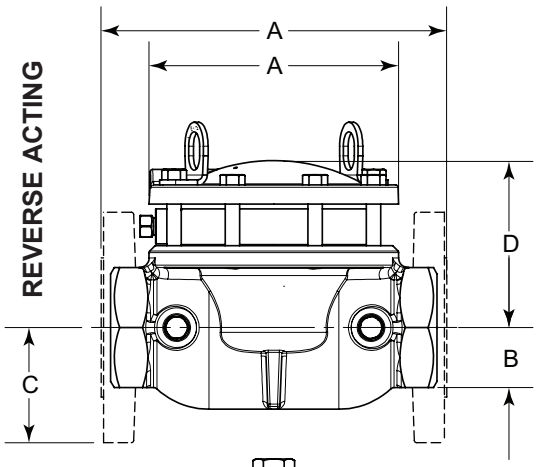
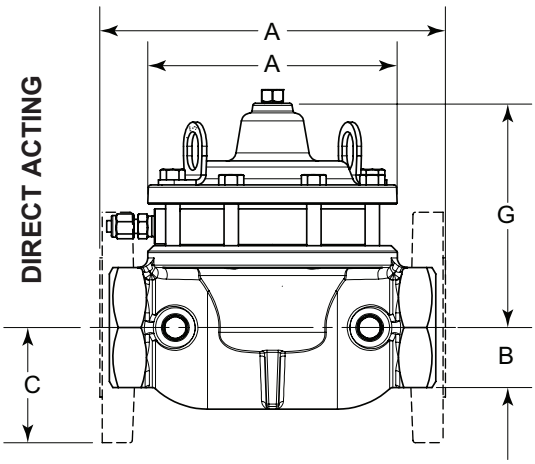
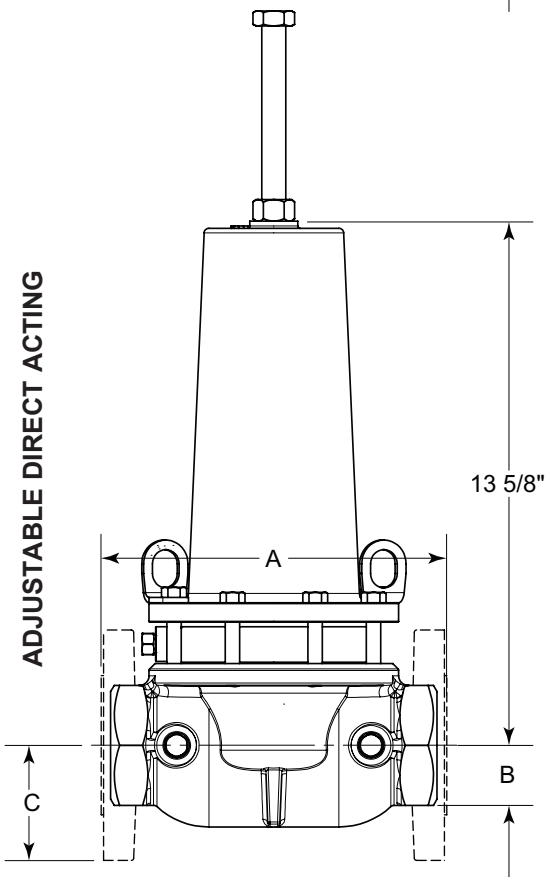
REVERSE ACTING



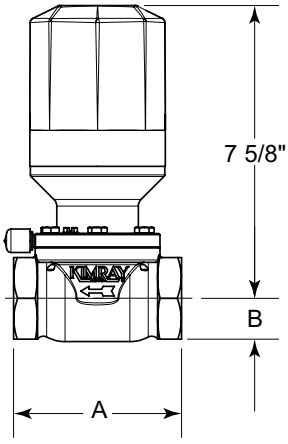
DIRECT ACTING



ADJUSTABLE DIRECT ACTING



E-LO



LINE SIZE	BODY TYPE	A	B	C	D	E	F	G	H
1"	FNPT	4 3/8"	1 1/8"	----	2 3/4	3 3/8	3 3/8	3 3/8	8
2"	FNPT	8 1/2"	2 1/8"	----	4 3/8	5 7/8	6 7/8	6 7/8	18 1/2
	Flanged	9"	----	3"	4 3/8	5 7/8	6 7/8	6 7/8	18 1/2
	Grooved	8 3/4"	2 1/8"	----	4 3/8	5 7/8	6 7/8	6 7/8	18 1/2
3"	FNPT	12 1/16"	3 1/16"	----	5 7/8	8	8	8	20
	Flanged	12 3/16"	----	3 3/4"	5 7/8	8	8	8	20
4"	FNPT	15" 1/16	4"	----	7 1/2	9 3/4	9 1/2	9 1/2	----
	Flanged	15 1/16"	----	4 1/2"	7 1/2	9 3/4	9 1/2	9 1/2	----
6"	Flanged	22"	----	5 1/2"	11	16	15 1/4	----	----
FLANGE DIMENSIONS ARE ANSI 125/150 STANDARD.									

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Table 6 - Seal Options		
Part	**Standard Material**	**Optional Material**
Seat	HSN	FKM, AFLAS®
O-rings	HSN	FKM, AFLAS®
Diaphragm	HSN	FKM, AFLAS®

Table 7 - Seal Specifications				
		HIGHLY SATURATED NITRILE	**FKM**	**AFLAS®**
	Kimray Suffix	HSN	V	AF
Resistance	**Abrasion**	G-E	G	G
	Acid	G-E	G-E	E
	Chemical	F	E	E
	Cold	G	P	P
	Flame	P	E	E
	Heat	E	E	E
	Oil	E	E	E
	Ozone	G	G-E	E
	Set	G	G-E	P
	Tear	F	F	P
	Water/Steam	E	P	G
	Weather	G	E	E
	CO2	G	G	G
	H2S	F	P	E
	Methanol	E	P	P
Properties	**Dynamic**	G	G	G
	Electrical	F	F	G-E
	Impermeability	G	G	G
	Tensile Strength	G-E	G	F
	Temp. Range	-20° to +300°F	-15° to +400°F	+15° to +450°F
		-29° to +149°C	-26° to +204°C	-9° to +232°C
RATINGS: P-POOR, F-FAIR, G-GOOD, E-EXCELLENT				

Table 8 - Material Options				
Part Description	**Valve Size**	**Standard Material**	**Erosive Material**	**Corrosive Material**
Body	1" thru 6"	Ductile (ASTM A395)		Ductile (ASTM A395) with Kimcoat
Stem	1" thru 6"	303SS (ASTM A582)		316SS (ASTM A479)
Ratio Plug	1" & 2"	316 Powdered Metal SS-316NI-25		
	3"	Powdered Metal F-008		316SS (ASTM A479)
	4" & 6"	Ductile (ASTM A395)		316SS (ASTM A479)
Reduced Ratio Plug	1"	316 Powdered Metal SS-316NI-25		
	2"	Alloy Steel (ASTM A108)		316SS (ASTM A479)
	3"	316SS (ASTM A479)		
	4" & 6"	Ductile (ASTM A395)		316SS (ASTM A479)
Seat Disc	1"	Powdered Metal F-0008-30		316SS (ASTM A479)
	2", 3" & 4"	Ductile (ASTM A395)		316SS6 (ASTM A351 CF8M)
	6"	Ductile (ASTM A395)		316SS (ASTM A 240)
Removable Seat	1" thru 6"	Ductile (ASTM A395)		316SS6 (ASTM A351 CF8M)

KIMRAY INC.

LIQUID CAPACITY CHART

Table 3 - Reverse Acting Capacity - Blds. Water/Day, Steady Row											
Valve Size Inches:		Full Inner Valve					Reduced Inner Valve				
		1	2	3	4	6	1	2	3	4	6
Pressure Drop Across Valve psig	1	105	745	1,760	3,350	7,800	26	290	515	835	1,950
	2	150	1,060	2,500	4,900	11,000	37	410	735	1,225	2,750
	3	180	1,300	3,050	6,100	13,500	45	510	895	1,525	3,370
	4	210	1,500	3,500	7,000	15,600	52	590	1,025	1,750	3,900
	5	235	1,700	3,900	7,800	17,500	59	660	1,140	1,950	4,375
	10	330	2,300	5,600	11,000	24,700	82	900	1,640	2,750	6,175
	15	405	2,900	6,800	13,500	30,200	101	1,130	2,000	3,370	7,550
	20	465	3,300	7,900	15,600	34,900	116	1,290	2,320	3,900	8,725
	30	575	4,100	9,600	19,200	42,700	145	1,600	2,820	4,800	10,675
	40	660	4,700	11,100	22,100	49,300	165	1,840	3,260	5,500	12,300
	50	740	5,300	12,400	24,800	55,200	185	2,070	3,640	6,200	13,800
	60	810	5,800	13,600	27,100	60,500	200	2,260	4,000	6,750	15,100
	70	875	6,200	14,700	29,300	65,400	220	2,420	4,300	7,300	16,350
	80	935	6,700	15,700	31,300	69,800	230	2,620	4,600	7,800	17,450
	100	1,045	7,500	17,600	33,500	78,200	260	2,940	5,150	8,350	19,500
	125	1,170	8,400	19,700	38,200	87,500	290	3,280	5,750	9,800	21,900

Table 5 - Direct Acting Capacity - Blds. Water/Day, Steady Row											
Valve Size Inches:		Full Inner Valve					Reduced Inner Valve				
		1	2	3	4	6	1	2	3	4	6
Pressure Drop Across Valve psig	1	405	1,520	3,150	5,830	13,150	101	740	1,080	1,650	3,740
	2	573	2,150	4,460	8,250	18,600	143	1,040	1,525	2,340	5,330
	3	702	2,630	5,450	10,700	22,800	175	1,280	1,860	2,860	6,530
	4	810	3,040	6,300	11,700	26,300	200	1,475	2,150	3,300	7,550
	5	905	3,400	7,030	13,100	29,400	225	1,650	2,400	3,700	8,400
	10	1,280	4,800	9,980	18,500	41,700	320	2,330	3,400	5,250	11,950
	15	1,570	5,880	12,200	22,600	50,900	390	2,875	4,150	6,400	14,600
	20	1,810	6,800	14,100	26,100	58,800	450	3,300	4,800	7,400	16,850
	30	2,220	8,320	17,300	31,900	72,000	555	4,050	5,900	9,050	20,600
	40	2,560	9,600	19,900	36,900	83,100	640	4,650	6,800	10,500	23,800
	50	2,860	10,750	22,300	41,300	93,000	710	5,200	7,600	11,700	26,600
	60	3,130	11,780	24,400	45,200	102,000	780	5,700	8,350	12,800	29,200
	70	3,380	12,700	26,400	48,800	110,000	845	6,150	9,000	13,800	31,500
	80	3,620	13,600	28,200	52,100	117,500	905	6,600	9,650	14,800	33,600
	100	4,050	15,200	31,500	58,300	131,500	1,010	7,375	10,800	16,500	37,400
	125	4,520	16,900	35,200	65,100	147,000	1,105	8,200	12,000	18,450	42,000

Table 4 - Adjustable Direct Acting Capacity - Blds. Water/Day, Steady Row					
Valve Size Inches:		Full Inner Valve		Reduced Inner Valve	
		1	2	1	2
Pressure Drop Across Valve psig	1			101	
	2			143	
	3			175	
	4			200	
	5			225	
	10			320	
	15			390	
	20			450	
	30			555	
	40			640	
	50			710	
	60			780	
	70			845	
	80			905	
	100			1,010	
	125			1,105	

For gravity correction, multiply the above figures by $\frac{1}{\sqrt{G}}$
Where “G” is the specific gravity of the flowing liquid.

KIMRAY INC.

CODE BUILDER
B SERIES

Series:

B = Low Pressure Control Valve

Model:

RA = Reverse Acting
DA = Direct Acting
AA = Adjustable Direct Acting

Line Size:

1 = 1 NPS
2 = 2 NPS
3 = 3 NPS (RA & DA only)
4 = 4 NPS (RA & DA only)
6 = 6 NPS (RA & DA only)

End Connection:

SA = FNPT
AR = 150RF Flange
GV = Grooved (2 NPS only)

Shell Material:

D = Ductile Iron
E = Ductile Iron w/Coating

Inner Valve Size:

F = Full Port
R = Reduced Port

Service Type:

S = Standard
C = Corrosive

B	RA	2	SA	D	F	S	

Options: Additional cost and lead times will apply
If multiple options required input in sequential order
Leave blank if no options required

1 = NACE Certification (Corrosive Option Only)
2 = Hydrostatic Test Certification
3 = MTR (Shell Components)
A = AFLAS Elastomers
H = HSN Elastomers
V = FKM Elastomers
X = Export (Hydrostatic test, MTR & 3.1)

Not all selections available on all products listed.
See product pages 02:10.1 - 02:30.3 for available options

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