

10000 Series Control Valves

Specification Data

CH2500 E

11/97



A complete Line of Rugged
Top and Bottom
Guided Double Ported
Globe Valves



Masoneilan
Valve & Controls **DRESSER**

Table of Contents

Foreword	2
Numbering System	3
General Data	3
Flow Coefficients Rated C_v	4
Ratings/Connections	4
C_v and F_L versus Travel.	5
Materials of Construction	6, 7
Allowable Pressure Drops	8 - 15
Dimensions	16, 17
Weights	18
Accessories and Options	19
Sales Offices and Distribution Centers	20

Foreword

The 10000 Series double ported control valves are designed to handle a wide variety of process applications. Construction features have been carefully selected to provide optimum performance. Standard features include :

Top and Bottom Guiding

A well accepted industry standard particularly suited for double ported plugs to provide adequate support against side loads.

High Allowable Pressure Drops

Incorporates the simplest form of balanced construction and provides high pressure drop capability with standard actuators.

Allowable pressure drop shown on all tables reflect actuator capability for the leakage class.

Proper application requires consideration with regards to cavitation, noise, velocity, etc. Refer to Masoneilan sizing and noise manuals.

High Capacity with Low Recovery

Flow capacity is at top levels for contemporary double ported control valves and is attained with little pressure recovery as indicated by its high critical flow factors.

Invertible Bodies and Plugs

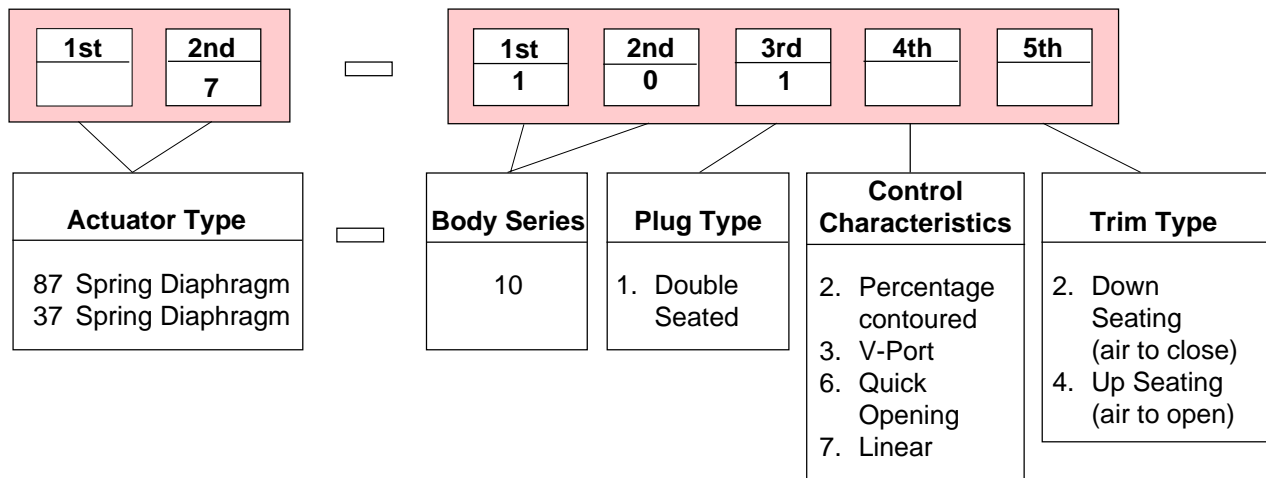
All 10000 Series bodies and plugs are invertible, so either air to open or air to close action can be obtained with the same actuator.

The following pages provide the necessary technical information required to specify a 10000 Series control valve with Masoneilan 87 and 37 spring diaphragm actuators.

For additional information, contact your local Masoneilan Representative.

Trade names noted throughout are for reference only. Masoneilan reserves the right to supply trade named material or its equivalent.

Numbering System



General Data

- **Flow Direction**

all trims : inlet between the ports

- **Body**

type : double seated globe

- **Bonnet and Blind Flange**

type : bolted

- **Body, Bonnet and Blind Flange**

materials : carbon steel
316 stainless steel
chrome-molybdenum steel

- **Actuators**

type : spring diaphragm
handwheel : optional

- **Trim**

plug type : double seated, V-Port or contoured

leakage : IEC 534-4 and ANSI/FCI 70.2, Class II

seat ring : threaded

guide : top and bottom

capacity : full area and 0.4 factor all sizes

C_v ratio : 50:1

flow characteristics : equal percentage, linear and quick opening

Flow Coefficients - Rated C_v

Equal Percentage (V-Port and Contoured) and Linear (Contoured)

Nominal Trim Size	Full Area		2	3	4	6	8	10	12	14	16					
	Reduced Area		2	3	4	6	8	10	12	14	16					
Orifice Dia. (mm)	Upper		36.5	47.7	50.8	60.4	66.7	88.9	117.5	108.0	161.9	177.8	222.3	266.7	311.2	355.6
	Lower		34.4	45.3	48.4	58.0	64.3	86.5	115.1	131.0	158.8	174.6	219.1	263.5	308.0	352.0
Valve Size		Travel (mm)	Rated C_v													
mm	inch															
50	2	20.3	19		48											
80	3	38.1		44			110									
100	4	38.1				78		195								
150	6	50.8						180		450						
200	8	63.5							300			750				
250	10	63.5								460			1160			
300	12	88.9									650			1620		
350	14	101.6													2000 ^①	
400	16	101.6														2560 ^①

^① Available with equal percentage plug only.

Note : Rated C_v for quick opening valves multiply times around 1.3.

Ratings/Connections

- Socket Weld
- Butt Weld
- △ RT Joint
- Threaded
- RF Flanged

Valve Size		ANSI Class and equivalent PN				
mm	inch	150	300	600	900	1500
50	2	□ △	□ △	○ □ △ ●	□ △ ●	□ △ ●
80 - 300	3 - 12	□ △ ■	□ △ ■	□ △ ■	□ △ ■	□ △ ■
350 & 400	14 & 16	□ △ ■	□ △ ■	□ △ ■		
500 & 600	20 & 24	□ ■	□ ■	□ ■		

Note : For details about 20" and 24" valves, consult Masoneilan

C_v and F_L Versus Travel

V-Port Trim

Body rating : PN 10 to PN 260 - ANSI Class 150 to 1500

Sizes : DN 50 to DN 400 (2" to 16")

Flow Characteristics : **EQUAL PERCENTAGE**

Percent of Plug Travel				10	20	30	40	50	60	70	80	90	100
F _L		Full Area		.96	.96	.96	.96	.95	.94	.94	.93	.91	.90
		Reduced Area		.96	.96	.95	.94	.93	.92	.91	.90	.89	.88
Valve Size		Orifice Diameter (mm) Upper/Lower	Travel (mm)	Rated C _v									
mm	inch												
50	2	36.5 / 34.4	20.3	0.6	1.1	1.5	2.0	2.8	4.2	5.5	8.5	12.3	19
		50.8 / 48.4	20.3	1.4	2.8	3.8	5.3	7.2	10.5	13.9	21.6	31.2	48
80	3	47.7 / 45.3	38.1	1.3	2.6	3.5	4.8	6.6	9.7	12.8	19.8	28.6	44
		66.7 / 64.3	38.1	3.3	6.6	8.8	12.1	16.5	24.2	31.9	49.5	71.5	110
100	4	60.4 / 58.0	38.1	2.3	4.7	6.2	8.6	11.7	17.2	22.6	35.1	50.7	78
		88.9 / 86.5	38.1	5.8	11.7	15.6	21.4	29.2	42.9	56.5	87.7	126	195
150	6	88.9 / 86.5	50.8	5	11	14	20	27	40	52	81	117	180
		133.4 / 131.0	50.8	14	27	36	50	68	99	130	202	292	450
200	8	117.5 / 115.1	63.5	9	18	24	33	45	66	87	135	195	300
		177.8 / 174.6	63.5	23	45	60	83	112	165	217	337	487	750
250	10	133.4 / 131.0	63.5	14	28	37	51	69	101	133	207	299	460
		222.3 / 219.1	63.5	35	70	93	127	174	255	336	522	754	1160
300	12	161.9 / 158.8	88.9	20	39	52	72	98	143	189	293	423	650
		266.7 / 263.5	88.9	49	97	130	178	243	356	469	729	1053	1620
350	14	311.2 / 308.0	101.6	60	120	160	220	300	440	580	900	1300	2000
400	16	355.6 / 352.0	101.6	77	153	207	281	384	563	742	1152	1664	2560

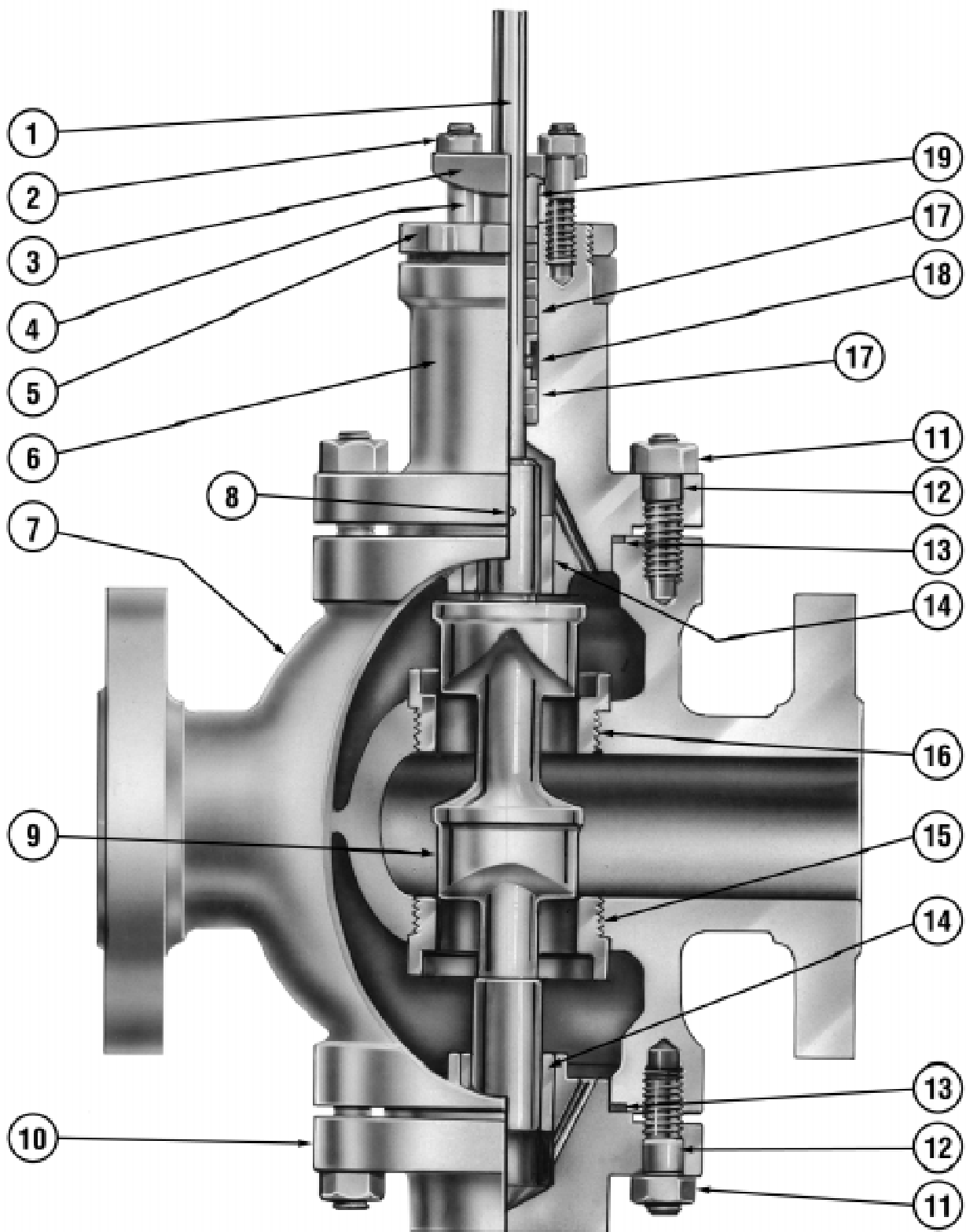
Contoured Trim

Body rating : PN 10 to PN 260 - ANSI Class 150 to 1500

Sizes : DN 50 to DN 300 (2" to 12")

Flow Characteristics : **LINEAR**

Percent of Plug Travel				10	20	30	40	50	60	70	80	90	100
F _L		Full Area		.63	.64	.65	.70	.77	.85	.90	.90	.89	.88
		Reduced Area		.63	.64	.65	.70	.75	.80	.82	.82	.81	.80
Valve Size		Orifice Diameter (mm) Upper/Lower	Travel (mm)	Rated C _v									
mm	inch												
50	2	36.5 / 34.4	20.3	1.9	3.8	5.7	7.6	9.5	11.4	13.3	15.2	17.1	19
		50.8 / 48.4	20.3	4.8	9.6	14.4	19.2	24	28.8	33.6	38.4	43.2	48
80	3	47.7 / 45.3	38.1	4.4	8.8	13.2	17.6	22	26.4	30.8	35.2	39.6	44
		66.7 / 64.3	38.1	11	22	33	44	55	66	77	88	99	110
100	4	60.4 / 58.0	38.1	7.8	15.6	23.4	31.2	39	46.8	54.6	62.4	70.2	78
		88.9 / 86.5	38.1	19.5	39	58.5	78	97.5	117	136	156	175	195
150	6	88.9 / 86.5	50.8	18	36	54	72	90	108	126	144	162	180
		133.4 / 131.0	50.8	45	90	135	180	225	270	315	360	405	450
200	8	117.5 / 115.1	63.5	30	60	90	120	150	180	210	240	270	300
		177.8 / 174.6	63.5	75	150	225	300	375	450	525	600	675	750
250	10	133.4 / 131.0	63.5	46	92	138	184	230	276	322	368	414	460
		222.3 / 219.1	63.5	116	232	348	464	580	696	812	928	1044	1160
300	12	161.9 / 158.8	88.9	65	130	195	260	325	390	455	520	585	650
		266.7 / 263.5	88.9	162	324	486	648	810	972	1134	1296	1458	1620



Materials of Construction

Ref. No.	Temperature Range	-29°C ▽	+232°C ▽	+427°C ▽	+454°C ▽	
	Description	Standard Materials (<i>Optional Materials</i>)				
1	Valve Plug Stem	316 Stainless Steel ASTM A479 TY 316				
2	Packing Flange Nut	304 Stainless Steel				
3	Packing Flange	Carbon Steel Zinc Plated				
4	Packing Flange Stud	304 Stainless Steel				
5	Drive Nut	Carbon steel				
6	Bonnet	Carbon Steel ASTM A216				
7	Body	316 St. St. ASTM A351 Gr CF8M				
10	Blind Flange	Chrome-Moly Steel ASTM A217				
8	Plug Pin	Austenitic Stainless Steel				
9	Valve Plug	316 Stainless Steel				
		<i>316 Stainless Steel w/Hardfacing Seat and Post or Solid Stellite</i>				
11	Valve Body Stud Nuts	Alloy Steel ASTM A194 Gr 2H				
12	Valve Body Studs	Alloy Steel ASTM A193 Gr B7				
13	Valve Body Gasket	316C Stainless Steel w/Graphite Filler (Spiral Wound)				
14	Guide Bushing	440C Stainless Steel				
		<i>Stellite No. 6 (standard with St. St. body materials)</i>				
15	Lower Seat Ring	316 Stainless Steel				
16	Upper Seat Ring	<i>316 Stainless Steel w/Hardfacing</i>				
17	Packing	PTFE Kevlar				
		<i>Graphite</i>				
18	Packing Spacer	303 Stainless Steel				
19	Packing Follower	303 Stainless Steel				
	Temperature Range	-29°C Δ	+232°C Δ	+427°C Δ	+454°C Δ	

Note : EN materials available on request, consult Masoneilan.

Not applicable



Allowable Pressure Drops for 10132 Series (bar g) Air To Close

Equal Percentage - V-Port

Flow Direction : Flow Passing into the Seats

Leakage : Per IEC 534-4 and ANSI/FCI 70.2, Class II

Temperature : -29°C to +454°C

Valve Size		Travel (mm)	Rated C _v	Actuator Size	Bench Range	Supply Pressure (bar g)	Compressible Flow		Incompressible Flow	
mm	inch						Closed	Open	Closed	Open
50	2	20.3	48	6	3-15	1.4	44	44	44	44
					11-23	2.4	152	152	152	152
			10	3-15	1.4	72	72	72	72	
				11-23	2.4	252	252	252	252	
			19	6	3-15	1.4	70	70	71	71
					11-23	2.4	242	242	245	245
10	10	3-15	1.4	117	117	117	117			
		11-23	2.4	259	259	259	259			
80	3	38.1	110	10	3-15	1.4	56	56	56	47
					11-23	2.4	192	192	192	168
			16	10	3-15	1.4	88	88	88	76
					11-23	2.4	259	259	259	259
			44	10	3-15	1.4	103	103	81	81
					11-23	2.4	259	259	259	259
16	16	3-15	1.4	163	163	128	128			
		11-23	2.4	259	259	259	259			
100	4	38.1	195	10	3-15	1.4	42	42	42	23
					11-23	2.4	143	143	143	86
			16	10	3-15	1.4	67	67	67	38
					11-23	2.4	229	229	229	138
			78	10	3-15	1.4	63	63	64	64
					11-23	2.4	216	216	218	218
16	16	3-15	1.4	100	100	101	101			
		11-23	2.4	259	259	259	259			
150	6	50.8	450	16	3-15	1.4	46	39	46	15
					11-23	2.4	153	145	153	58
			23	10	3-15	1.4	64	58	64	23
					11-23	2.4	219	210	202	185
			180	16	3-15	1.4	68	68	71	71
					11-23	2.4	227	227	239	239
23	10	3-15	1.4	95	95	101	101			

Note : Inlet pressure must not exceed the quoted rating for the selected pressure class

Allowable Pressure Drops for 10132 Series (bar g) Air To Close

Equal Percentage - V-Port

Flow Direction : Flow Passing into the Seats

Leakage : Per IEC 534-4 and ANSI/FCI 70.2, Class II

Temperature : -29°C to +454°C

Valve Size		Travel (mm)	Rated C _v	Actuator Size	Bench Range	Supply Pressure (bar g)	Compressible Flow		Incompressible Flow	
mm	inch						Closed	Open	Closed	Open
200	8	63.5	750	16	3-15	1.4	29	19	31	8
					11-23	2.4	93	77	99	32
				23	3-15	1.4	40	30	43	12
			11-23		2.4	132	112	141	47	
			300	16	3-15	1.4	57	57	58	44
					11-23	2.4	181	181	186	170
23	3-15	1.4		79	79	80	66			
	250	63.5	1160	16	3-15	1.4	27	9	29	4
11-23					2.4	79	44	86	19	
23				3-15	1.4	36	15	39	6	
			11-23	2.4	111	66	120	28		
460			16	3-15	1.4	57	57	59	26	
				11-23	2.4	168	168	171	124	
	23	3-15	1.4	77	77	79	44			
300		88.9	1620	18 (16)	3-15	1.4	25	12	28	4.1
	6-30				2.4	25	29	28	9.7	
	24			3-15	1.4	35	21	39	6.9	
			6-30	2.4	62	47	39	16		
	650		18 (16)	3-15	1.4	52	52	54	31	
				6-30	2.4	52	52	52	52	
350		101.6	2000	18 (16)	3-15	1.4	21	6.6	24	2.1
	6-30				2.4	21	19	24	5.8	
	24			3-18	11.4	28	13	32	4.1	
			6-30	2.4	28	13	32	9.7		
	2560		18 (16)	3-15	1.4	18	4.1	20	1.2	
				6-30	2.4	18	13	20	3.8	
24		3-18	1.4	24	9.0	27	2.6			
	6-30	2.4	24	23	27	6.6				

Note : Inlet pressure must not exceed the quoted rating for the selected pressure class

Allowable Pressure Drops for 10162 and 10172 Series (bar g) Air To Close

Linear and Quick Opening

Flow Direction : Flow Passing into the Seats

Leakage : Per IEC 534-4 and ANSI/FCI 70.2, Class II

Temperature : -29°C to +454°C

Valve Size		Travel (mm)	Rated C _v		Actuator Size	Bench Range	Supply Pressure (bar g)	Compressible Flow		Incompressible Flow			
mm	inch		Linear	Quick opening				Closed	Open	Closed	Open		
50	2	20.3	48	60	6	3-15	1.4	44	44	44	25		
						11-23	2.4	152	152	151	90		
					10	3-15	1.4	72	72	72	42		
			11-23			2.4	252	252	251	151			
			19		6	3-15	1.4	71	71	70	70		
						11-23	2.4	245	245	241	241		
		10		3-15	1.4	117	117	111	111				
			11-23	2.4	259	259	259	259					
		80	3	38.1	110	140	10	3-15	1.4	56	47	56	21
								11-23	2.4	192	168	192	77
							16	3-15	1.4	88	76	88	34
					11-23			2.4	259	259	259	123	
44	10				3-15		1.4	81	81	79	79		
					11-23		2.4	259	259	259	259		
	16			3-15	1.4	128	128	126	126				
11-23				2.4	259	259	259	259					
100	4			38.1	195	250	10	3-15	1.4	42	23	42	11
								11-23	2.4	143	86	143	40
							16	3-15	1.4	67	38	67	18
					11-23			2.4	229	138	229	65	
		78	10		3-15		1.4	64	64	63	63		
					11-23		2.4	218	218	213	213		
			16	3-15	1.4	101	101	99	99				
		11-23		2.4	259	259	259	259					
		150	6	50.8	450	540	16	3-15	1.4	46	15	46	7
								11-23	2.4	153	58	153	27
							23	3-15	1.4	64	23	64	10
					11-23			2.4	202	185	219	39	
180	16				3-15		1.4	71	71	69	50		
					11-23		2.4	239	239	231	187		
	23			3-15	1.4	101	101	97	74				

Note : Inlet pressure must not exceed the quoted rating for the selected pressure class

Allowable Pressure Drops for 10162 and 10172 Series (bar g) Air To Close

Linear and Quick Opening

Flow Direction : Flow Passing into the Seats

Leakage : Per IEC 534-4 and ANSI/FCI 70.2, Class II

Temperature : -29°C to +454°C

Valve Size		Travel (mm)	Rated C _v		Actuator Size	Bench Range	Supply Pressure (bar g)	Compressible Flow		Incompressible Flow				
mm	inch		Linear	Quick opening				Closed	Open	Closed	Open			
200	8	63.5	750	980	16	3-15	1.4	31	8	28	3			
						11-23	2.4	99	32	88	15			
					23	3-15	1.4	43	12	38	6			
			11-23	2.4		141	47	126	23					
			300	16	3-15	1.4	58	43	56	27	186	170	178	106
11-23	2.4	86			19	26	1.4							
250	10	63.5	1160	1550	16	3-15	1.4	29	4	26	1.4			
						11-23	2.4	86	19	74	9			
					23	3-15	1.4	39	6	34	2.7			
			11-23	2.4		120	28	103	14					
			460	16	3-15	1.4	59	26	57	16	171	124	164	76
11-23	2.4	54			31	49	19							
300	12	88.9	1620	2250	18 (16)	3-15	1.4	28	4.1	21	2.5			
						6-30	2.4	28	9.7	21	21			
					24	3-15	1.4	39	6.9	29	4.1			
			6-30	2.4		39	16	52	9.7					
			650	18 (16)	3-15	1.4	54	31	49	19	52	52	49	47
6-30	2.4	24			5.8	15	3.8							
350	14	101.6	2000	18 (16)	3-15	1.4	24	2.1	15	1.4				
					6-30	2.4	24	5.8	15	3.8				
					24	3-18	1.4	32	4.1	21	2.6			
6-30	2.4	32	9.7	21		6.2								
400	16	101.6	2560	18 (16)	3-15	1.4	20	1.2	11	0.8				
					6-30	2.4	20	3.8	11	2.6				
					24	3-18	1.4	27	2.6	16	1.8			
				6-30		2.4	27	6.6	16	4.6				

Note : Inlet pressure must not exceed the quoted rating for the selected pressure class

Allowable Pressure Drops for 10134 Series (bar g) Air To Open

Equal Percentage - V-Port

Flow Direction : Flow Passing into the Seats

Leakage : Per IEC 534-4 and ANSI/FCI 70.2, Class II

Temperature : -29°C to +454°C

Valve Size		Travel (mm)	Rated C _v	Actuator Size	Bench Range	Supply Pressure (bar g)	Compressible Flow		Incompressible Flow	
mm	inch						Closed	Open	Closed	Open
50	2	20.3	48	6	6-30	2.4	55	55	55	54
					11-23	2.4	120	120	120	120
			19	10	6-30	2.4	94	152	94	90
					11-23	2.4	201	201	201	201
				6	6-30	2.4	90	90	90	90
					11-23	2.4	193	193	194	194
10	6-30	2.4	150	150	152	152				
	11-23	2.4	259	259	259	259				
80	3	38.1	110	10	6-30	2.4	70	70	70	57
					11-23	2.4	152	152	152	140
			44	16	6-30	2.4	114	114	114	90
					11-23	2.4	245	245	245	223
				10	6-30	2.4	101	101	101	101
					11-23	2.4	217	217	218	218
16	6-30	2.4	162	162	163	163				
	11-23	2.4	259	259	259	259				
100	4	38.1	195	10	6-30	2.4	52	52	52	34
					11-23	2.4	112	112	112	86
			78	16	6-30	2.4	84	106	84	54
					11-23	2.4	181	181	181	136
				10	6-30	2.4	77	77	78	78
					11-23	2.4	168	168	170	170
16	6-30	2.4	126	126	127	127				
	11-23	2.4	259	259	259	259				
150	6	50.8	450	16	6-30	2.4	54	47	54	23
					11-23	2.4	119	114	119	58
			180	23	6-30	2.4	79	66	79	34
					11-23	2.4	172	164	172	83
				16	6-30	2.4	83	83	85	85
					11-23	2.4	182	182	185	185
23	6-30	2.4	121	121	123	123				

Note : Inlet pressure must not exceed the quoted rating for the selected pressure class

Allowable Pressure Drops for 10134 Series (bar g) Air To Open

Equal Percentage - V-Port

Flow Direction : Flow Passing into the Seats

Leakage : Per IEC 534-4 and ANSI/FCI 70.2, Class II

Temperature : -29°C to +454°C

Valve Size		Travel (mm)	Rated C _v	Actuator Size	Bench Range	Supply Pressure (bar g)	Compressible Flow		Incompressible Flow	
mm	inch						Closed	Open	Closed	Open
200	8	63.5	750	16	6-30	2.4	30	32	32	15
					11-23	2.4	69	69	73	37
				23	6-30	2.4	45	44	48	21
			11-23		2.4	101	101	107	52	
			300	16	6-30	2.4	60	60	60	60
					11-23	2.4	135	135	137	137
23	6-30	2.4		89	89	90	90			
250	10	63.5	1160	16	6-30	2.4	21	23	23	11
					11-23	2.4	52	52	57	25
				23	6-30	2.4	33	32	36	15
					11-23	2.4	78	74	84	35
			460	16	6-30	2.4	45	45	46	46
					11-23	2.4	110	110	113	113
				23	6-30	2.4	70	70	72	72
					11-23	2.4	110	110	113	113
300	12	88.9	1620	18 (16)	6-30	2.4	27	20	30	6.9
				24	3-15	1.4	5.5	5.5	6.2	6.2
					6-30	2.4	46	43	52	7.6
			650	18 (16)	3-15	1.4	1.8	1.8	1.8	1.8
					6-30	2.4	57	57	57	54
				24	6-30	2.4	57	57	57	54
350	14	101.6	2000	18 (16)	6-30	2.4	18	15	20	4.8
				24	3-18	1.4	1.2	1.2	1.4	1.4
					6-30	2.4	32	21	37	6.9
400	16	101.6	2560	18 (16)	6-30	2.4	12	12	14	3.7
				24	6-30	2.4	24	24	27	5.2

Note : Inlet pressure must not exceed the quoted rating for the selected pressure class

Allowable Pressure Drops for 10634 and 10174 Series (bar g) Air To Open

Linear and Quick Opening

Flow Direction : Flow Passing into the Seats

Leakage : Per IEC 534-4 and ANSI/FCI 70.2, Class II

Temperature : -29°C to +454°C

Valve Size		Travel (mm)	Rated C _v		Actuator Size	Bench Range	Supply Pressure (bar g)	Compressible Flow		Incompressible Flow				
mm	inch		Linear	Quick opening				Closed	Open	Closed	Open			
50	2	20.3	48	60	6	6-30	2.4	55	54	55	31			
						11-23	2.4	120	120	120	77			
					10	6-30	2.4	94	90	94	52			
						11-23	2.4	201	201	201	129			
			19	6	6-30	2.4	90	90	88	88				
					11-23	2.4	194	194	190	190				
				10	6-30	2.4	152	152	149	149				
					11-23	2.4	259	259	259	259				
80	3	38.1	110	140	10	6-30	2.4	70	57	70	31			
						11-23	2.4	152	140	152	77			
					16	6-30	2.4	114	90	114	50			
						11-23	2.4	245	223	245	123			
					44	10	6-30	2.4	101	101	99	99		
							11-23	2.4	218	218	214	214		
			16	16	6-30	2.4	163	163	161	161				
					11-23	2.4	259	259	259	259				
			100	4	38.1	195	250	10	6-30	2.4	52	34	52	18
									11-23	2.4	112	86	112	44
								16	6-30	2.4	84	54	84	28
									11-23	2.4	181	136	181	70
78	10	6-30						2.4	78	78	77	77		
		11-23						2.4	170	170	166	166		
16	16	6-30				2.4	127	127	124	124				
		11-23				2.4	259	259	259	259				
150	6	50.8				450	540	16	6-30	2.4	54	23	54	12
									11-23	2.4	119	58	119	30
								23	6-30	2.4	79	34	79	17
									11-23	2.4	172	83	172	43
			180	16	6-30	2.4	85	85	82	63				
					11-23	2.4	185	185	179	153				
				23	16	6-30	2.4	123	123	120	89			
						11-23	2.4	123	123	120	89			

Note : Inlet pressure must not exceed the quoted rating for the selected pressure class

Allowable Pressure Drops for 10164 and 10174 Series (bar g) Air To Open

Linear and Quick Opening

Flow Direction : Flow Passing into the Seats

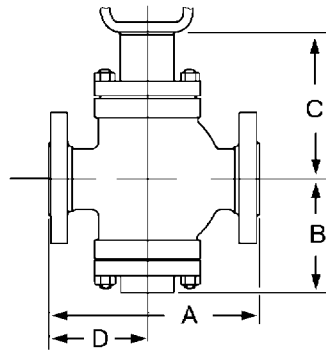
Leakage : Per IEC 534-4 and ANSI/FCI 70.2, Class II

Temperature : -29°C to +454°C

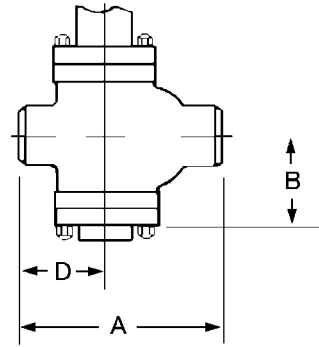
Valve Size		Travel (mm)	Rated C _v		Actuator Size	Bench Range	Supply Pressure (bar g)	Compressible Flow		Incompressible Flow						
mm	inch		Linear	Quick opening				Closed	Open	Closed	Open					
200	8	63.5	750	980	16	6-30	2.4	32	15	28	7.6					
						11-23	2.4	73	37	65	19					
					23	6-30	2.4	48	21	43	11					
			11-23	2.4		107	52	95	27							
			300	16	6-30	2.4	60	60	58	40						
											11-23	2.4	137	137	131	96
6-30	2.4	90														
250	10	63.5	1160	1550	16	6-30	2.4	23	11	19	5.5					
						11-23	2.4	57	25	49	12					
					23	6-30	2.4	36	15	31	7.6					
			11-23	2.4		84	35	73	18							
			460	16	6-30	2.4	46	46	44	36						
											11-23	2.4	113	113	110	81
6-30	2.4	72														
300	12	88.9	1620	2250	18 (16)	6-30	2.4	30	6.9	23	4.8					
					24	3-15	1.4	6.2	6.2	4.7	4.7					
						6-30	2.4	52	7.6	39	10					
			650	18 (16)	3-15	1.4	1.8	1.8	1.8	1.8						
											6-30	2.4	57	54	57	31
350	14	101.6	2000	24	3-18	1.4	1.4	1.4	0.9	0.9						
					6-30	2.4	37	6.9	23	4.8						
											18 (16)	6-30	2.4	14	3.7	7.9
400	16	101.6	2560	24	6-30	2.4	27	5.2	16	3.9						

Note : Inlet pressure must not exceed the quoted rating for the selected pressure class

Dimensions (mm)



Flanged Ends



Socket Weld
or Threaded Ends

Body S/A

Valve Size		ANSI Class 150 and equivalent PN				ANSI Class 300 and equivalent PN				ANSI Class 300 and equivalent PN				PN 10	PN 16, 25 & 40	PN 64 & 100
		RF		RTJ		RF		RTJ		R F		RTJ				
mm	inch	A	D	A	D	A	D	A	D	A	D	A	D	A	A	A
50	2	254	117	267	124	267	124	283	132	286	133	289	135	254	267	286
80	3	299	140	311	146	318	149	334	157	337	159	340	160	299	318	337
100	4	353	167	365	173	369	175	384	183	394	187	397	189	353	369	394
150	6	451	194	464	200	473	205	489	213	508	222	511	224	451	473	508
200	8	543	217	556	224	569	230	584	238	610	251	613	252	543	569	610
250	10	626	252	638	259	661	270	677	278	705	292	708	294	626	661	705
300	12	731	286	743	292	769	305	784	313	813	327	816	329	731	769	813
350	14	851	330	864	337	889	349	905	357	934	371	937	373	851	889	931
400	16	899	399	911	405	940	419	956	427	991	438	994	440	899	940	991

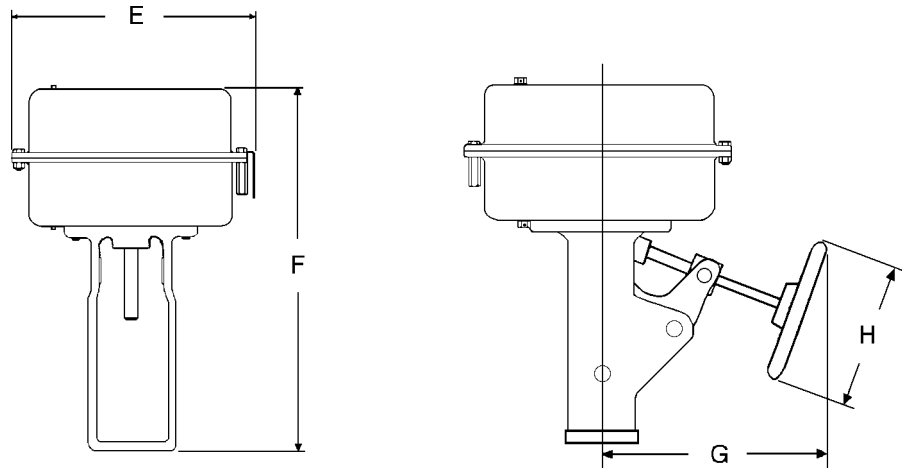
ANSI Class 150-1500 and equivalent PN

Valve Size		ANSI Class 900 and equivalent PN				ANSI Class 1500 and equivalent PN			
		RF		RTJ		RF		RTJ	
mm	inch	A	D	A	D	A	D	A	D
50	2	311	149	315	151	311	149	315	151
80	3	388	181	391	183	407	191	410	192
100	4	464	219	467	221	483	229	486	230
150	6	556	240	559	241	610	279	616	282
200	8	708	324	711	325	765	353	775	357
250	10	829	384	832	386	905	422	914	427
300	12	937	397	940	399	1026	449	1042	457

Valve Size		B (Max)	C (Max)
mm	inch		
50	2	152	183
80	3	198	236
100	4	206	241
150	6	284	320
200	8	340	373
250	10	376	417
300	12	452	503
350	14 ^①	546	612
400	16 ^①	566	663

① ANSI Class 150-600 and equivalent PN only

Note : For Butt Weld and Socket Weld dimensions, consult Masoneilan

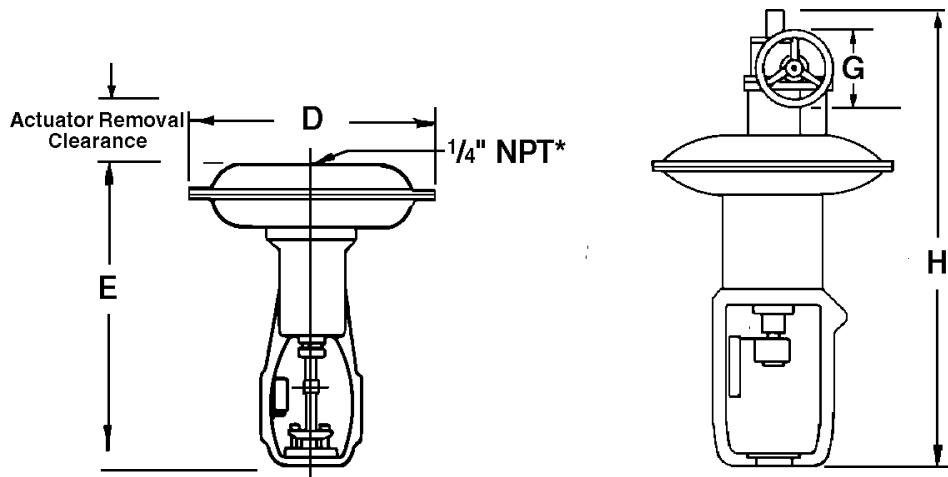


Shown with optional handwheel

Model 87 Actuator

Actuator Size	E	F	G	H
6	292	395	254	229
10	368	497	277	305
16	476	717	330	457
23	549	780	381	457

Actuator removal clearance = 150 mm



Type 8A Handwheel

Model 37 Actuator

Size	Actuator			Top-Mounted Handwheel		
	Actuator Removal Clearance	D	E	Type	G	H
18 (16)	142	527	843	8A	203	1346
24	127	699	881	8A	305	1346

*1/2" NPT for No. 24 Actuator

Weights (kg)

Body S/A

Valve Size		Flanged ANSI Class and equivalent PN				
mm	inch	150	300	600	900	1500
50	2	68	72	79	135	13
80	3	111	116	122	180	185
100	4	138	140	152	223	229
150	6	233	240	270	404	412
200	8	362	374	435	652	661
250	10	612	625	679	1019	1019
300	12	770	788	861	1291	1291

Model 87 Spring Diaphragm Actuator

Size	Standard	with Handwheel
6	20	27
10	38	48
16	95	111
23	120	154

Model 37 Spring Diaphragm Actuator

Size	Standard	with Handwheel
18 (16)	86	104
24	147	179

Accessories

Side Mounted Handwheels
For 87 Actuators
(See Specification Data CR8788 E)
Top Mounted Handwheels
For 37 Actuators

4700 P Series Pneumatic Positioner
Instrument signals 0.2-1 and 0.4-2 bar
 3-15 and 6-30 psig

4700 E Series Electropneumatic Positioner
8012/8013 Series Electropneumatic Positioners
Input range 4-20 mA
 Split range

7000 Electropneumatic (I/P) Transducer
Input range 4-20 mA
 Split range
Output 0.2-1 bar, adjustable
 0.4-2 bar, adjustable
 3-15 psi, adjustable
 6-30 psi, adjustable
(See TS-Model 7000)

Smart Valve Interface (SVI®)
Smart Positioner and Smart Valve Process
Controller
Input range 4-20 mA
 split range
HART Communication
(See Brochure BW1000 E)

ValVue Software
Calibration, Configuration, Diagnostic, and
Operator Interface Tool
(See Brochure BW1000 E)

2700 Controllers
(See Bulletin 213 E)

77-4 or 77-40 Airset
(See Bulletin 78 E)
80-4 or 80-40 Airset
77-6 or 77-60 Lockup Valve
2" Gauge 0-2 bar

496 Rotary Electric Switches
496-1 (1-Switch SPDT)
496-2 (2-Switches SPDT)
496-3 Potentiometer Position Transmitter
496-6 (1-Switch DPDT)
496-7 (2-Switches DPDT)
496-8 Opto-electronic Position Transmitter
(See Specification Data CS7050 E)

Other Limit Switches

Solenoid Valves

Options

Extension Bonnets
TFE V-ring Packing
Environmental Capabilities (LE Packing)
Lubricator & Isolation Valve
Other Flange Facings
Limit Stops
Body Drain Plug
Reducer and Nipple Connections
NACE Compliance
Custom Trim Materials
U.O.P. Trim Materials
Other Materials
Non-Destructive Examination
Oxygen Cleaning
Electric and electro-hydraulic Actuators

For additional Accessories and Options, consult Masoneilan

