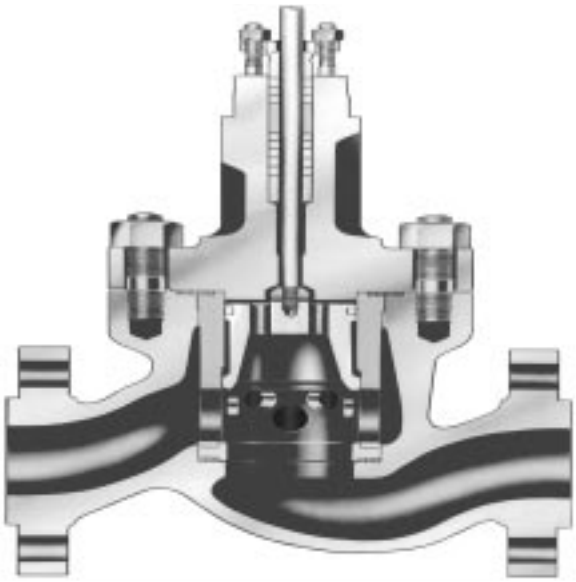
Specification Data CH30004 E
02/98

41000 Series Control Valves



A Complete Line of Heavy Duty, Balanced, Cage Guided, Globe Valves with Noise Control Lo-dB® Trim

Masoneilan
Valve & Controls DRESSER

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Foreword

Masoneilan's 41000 Series heavy-duty control valve line, engineered to handle the most demanding process conditions, exceeds the capabilities of regular valves.

Broad Temperature Ranges
Size for size, the 41000 Series provides effective control throughout a broad range of process temperatures from **-196°C to +566°C**.

Higher Allowable Pressure Drops
41000 Series control valves provide exceptional and dependable performance over a wide range of pressure drops typical of severe services.

Greater Capacity with Low Recovery
Masoneilan's 41000 Series control valves have the highest capacities of contemporary cage-type globe valves. These unusually high capacities are attained with minimum pressure recovery, as indicated by high critical flow (F_L) factors.

High-Performance Materials are Standard
Without exception, the materials we specify as standard on the 41000 Series have been tested and selected to provide trouble-free operation in services with high pressures and extreme temperatures. Therefore, specification is simplified and longevity on any application is assured.

Variety of High Performance Engineered Trim Packages
Available with full area as well as reduced C_V capacities, 41000 Series trim options include :

- **Lo-dB** Single Stage trim - provides excellent noise attenuation on gas and steam services and cavitation protection on liquid services.

- **Lo-dB** Double Stage trim - designed for noise control on gas or steam at high pressure drop ratios.

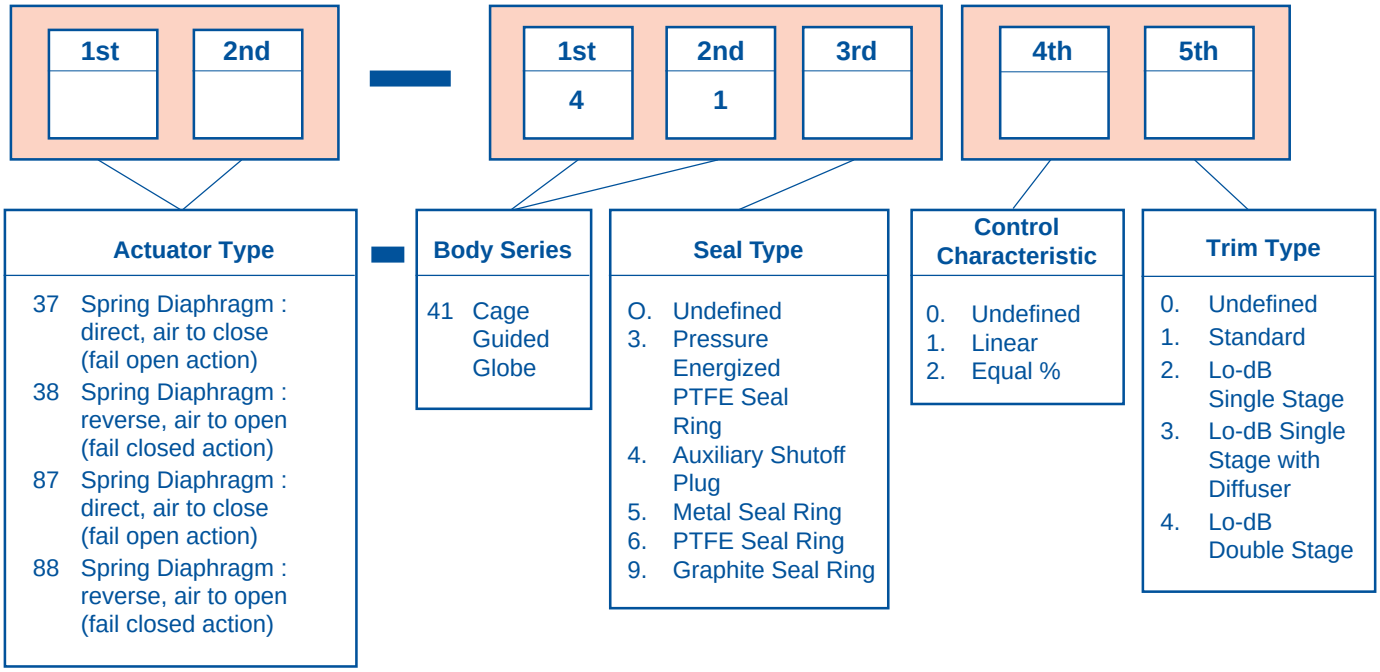
For more information regarding NACE conformance, cavitation, critical pressure drop, and VRT trim, consult your Masoneilan representative or refer to the following publications :

1. Masoneilan Handbook for Control Valve Sizing (Bulletin OZ1000)

2. Masoneilan Noise Control Manual (Bulletin OZ3000)

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

Numbering System



Ratings/Connections

○ **Threaded** • **Socket Weld** ■ **Butt Weld** □ **RF & RTJ**

Valve Size		ANSI Class 150 to 1500 and equivalent PN	ANSI Class 2500 and equivalent PN
mm	inch		
50	2	■ • □ ○	■ • □
80 to 200	3 to 8	■ □	■ □
250 to 400	10 to 16	■ □	
80x50x80	3x2x3	■ □	■ □
100x50x100	4x2x4	■ □	■ □
100x80x100 to 400x300x400	4x3x4 to 16x12x16	■ □	

Note : For AFNOR and DIN connections, consult Masoneilan

General Data

Standard Valve (41300, 41400, 41500, 41600 and 41900)

- **Body**
  - type : high-capacity globe
  - flow direction : see Allowable Pressure Drop Table
  - Lo-dB trim : flow to open for gas or steam
  - Lo-dB trim with diffuser : flow to close for gas or steam
  - cavitation service : flow to close
  - C_V ratio : 100:1 standard capacity trim
50:1 Lo-dB and reduced capacity trim
- **Bonnet**
  - type : stud bolted, extended
- **Trim**
  - cage : cylindrical ported or Lo-dB
  - plug : pressure balanced cage guided with metal, PTFE, or graphite seal ring ; pressure balanced cage guided, with spring loaded internal auxiliary tight shutoff plug
- **Flow Characteristic**
  - standard trim : linear, equal percentage

Lo-dB Double Stage Valve (41314)

- flow direction : flow to open
gas or steam only
- C_V ratio : 50:1
- **Trim**
  - cage : two-stage Lo-dB
  - plug : pressure balanced cage guided with pressure energized PTFE seal ring
- **Flow Characteristic**
  - standard trim : linear

Actuator

- type : spring diaphragm,
- handwheel : optional

Allowable Pressure Drop Page Index

Model	F.T.C./Page	F.T.O./Page	Model	F.T.C./Page	F.T.O./Page
41311	-	20, 21, 22, 23	41611	17, 18	26, 27
41312	-	20, 21, 22, 23	41621	17, 18	26, 27
41321	-	20, 21, 22, 23	41612	19	26, 27
41314	-	24, 25	41613	19	26, 27
41411	14, 15	-			
41421	14, 15	-	41911	17, 18	26, 27
41412	16	-	41921	17, 18	26, 27
41413	16	-	41912	19	26, 27
41511	17, 18	26, 27	41913	19	26, 27
41521	17, 18	26, 27			
41512	19	26, 27			
41513	19	26, 27			

Temperature Range/Seat Leakage

Valve Type	Model	Size		Temperature Range (°C)		Seat Leakage per IEC 534-4 and ANSI / FCI 70.2 Class
		mm	inch	Minimum	Maximum	
Standard Single Stage Lo-dB Anti-Cavitation	41300	50 - 400	2 - 16	-46	+ 232	IV & V
	41400	50 - 400	2 -16	-196	+ 566	IV V (optional)
	41500	50 - 100	2 - 4	-196	+ 566	II
		150 - 400	6 - 16	-196	+ 566	III
	41600	50 - 400	2 - 16	-29	+ 149	IV
	41900	50 - 100	2 - 4	-196	+ 566	III
		150 - 400	6 - 16	-196	+ 566	IV
Lo-dB Double Stage	41314	50 - 400	2 - 16	-46	+ 232	IV & V

C_V and F_L versus Travel

Standard Trim (Single Stage) Models 41411, 41511, 41611 and 41911

Flow Characteristic : **LINEAR**

Percent of Travel					10	20	30	40	50	60	70	80	90	100
F_L					0.94	0.94	0.93	0.93	0.92	0.92	0.91	0.91	0.90	0.90
Valve Size		ANSI Class and equivalent PN	Orifice Diameter (mm)	Travel (mm)	Rated C_V									
mm	inch													
50	2	900-2500	46.7	20.3	1.4	2.7	4.2	6	8	10	12.5	14	15.5	16
					2	4.9	8.3	13	19	25	30	35	38	**40**
50	2	300,600	63.5	38.1	2.7	5.1	7.9	11	15	19	23	26	29	30
80	3	2500			4	8	14	22	34	46	56	65	72	**75**
80	3	300-1500	88.9	50.8	5.4	10	16	23	30	38	45	51	59	60
100	4	2500			8	17	28	46	70	95	115	134	148	**155**
100	4	300-1500	111.3	50.8	9	16	25	36	47	60	71	81	93	95
150	6	2500			12	32	55	86	122	156	184	208	226	**240**
150	6	150-1500	130.0	20.3	6	16	26	42	58	74	93	119	142	165
200	8	2500		50.8	20	54	90	145	205	260	305	345	375	**400**
200	8	150-1500	165.1	38.1	15	40	75	110	145	190	250	310	365	415
				63.5	30	85	145	235	330	415	495	550	600	**640**
250	10	150-1500	203.2	38.1	20	50	80	130	180	230	290	370	440	510
				76.2	50	130	230	370	510	650	770	860	940	**1000**
300	12	150-1500	247.7	50.8	30	70	140	200	270	350	450	570	680	770
				95.25	70	180	320	520	710	910	1080	1200	1320	**1400**
400	16	150-1500	330.2	63.5	30	130	230	298	410	548	730	900	1050	**1280**
				101.6	100	260	460	740	1020	1300	1540	1720	1880	**2000**

C_V and F_L versus Travel

Standard Trim (Single Stage) Models 41421, 41521, 41621 and 41921

Flow Characteristic : **EQUAL PERCENTAGE**

Percent of Travel					10	20	30	40	50	60	70	80	90	100
F_L					0.94	0.94	0.94	0.94	0.94	0.94	0.93	0.92	0.92	0.90
Valve Size		ANSI Class and equivalent PN	Orifice Diameter (mm)	Travel (mm)	Rated C_V									
mm	inch													
50	2	900-2500	46.7	20.3	0.5	0.7	1	1.5	2.7	5	7.9	10.5	12.6	14
					0.7	1.3	2.2	3.6	6.6	12.6	19.8	26.4	31.5	**35**
50	2	300,600	63.5	38.1	0.9	1.3	1.8	2.9	4.9	9.4	14.7	19.6	23.4	26
80	3	2500			1.2	2.3	4.2	6.8	12.3	23.4	36.7	49	58.5	**65**
80	3	300-1500	88.9	50.8	2	2.8	3.9	6.2	10.6	20.1	31.2	42.2	50.4	56
100	4	2500			3	5	9	15	26	50	79	105	126	**140**
100	4	300-1500	111.3	50.8	3	5	6	10	17	32	51	68	81	90
150	6	2500			4	8	14	23	43	81	127	170	203	**225**
150	6	150-1500	130.0	50.8	5	7	10	16	27	52	81	108	130	144
200	8	2500			7	13	23	37	68	130	203	271	324	**360**
200	8	150-1500	165.1	63.5	8	12	16	25	43	83	130	174	207	230
					11	21	37	60	109	207	324	433	518	**575**
250	10	150-1500	203.2	76.2	17	32	58	94	170	324	508	678	810	**900**
300	12	150-1500	247.7	95.25	24	45	81	131	238	454	711	949	1134	**1260**

41300 Series (Single Stage) Model 41311

Flow Characteristic : **LINEAR**

Percent of Travel					10	20	30	40	50	60	70	80	90	100
F_L					0.94	0.94	0.93	0.93	0.92	0.92	0.91	0.91	0.90	0.90
Valve Size		ANSI Class and equivalent PN	Orifice Diameter (mm)	Travel (mm)	Rated C_V									
mm	inch													
50	2	900-1500	46.7	20.3	1.4	2.7	4.2	6	8	10	12.5	14	15.5	16
					2	4.9	8.3	13	19	25	30	35	38	**40**
50	2	600	63.5	38.1	2.7	5.1	7.9	11	15	19	23	26	29	30
					4	8	14	22	34	46	56	65	72	**75**
80	3	600-1500	88.9	50.8	5.4	10	16	23	30	38	45	51	59	60
					8	17	28	46	70	95	115	134	148	**155**
100	4	600-1500	111.3	50.8	9	16	25	36	47	60	71	81	93	95
					12	32	55	86	122	156	184	208	226	**240**
150	6	600-1500	130.0	50.8	20	52	92	144	204	260	308	344	376	**400**
200	8	600-1500	165.1	63.5	32	83	147	230	326	416	493	550	602	**640**
250	10	600-1500	203.2	76.2	50	130	230	360	510	650	770	860	940	**1000**
300	12	600-1500	247.7	95.3	70	182	322	504	714	910	1078	1204	1316	**1400**
400	16	300,600	330.2	101.6	100	260	460	740	1020	1300	1540	1720	1880	**2000**

C_V and F_L versus Travel

41300 Series (Single Stage) Model 41321

Flow Characteristic : **EQUAL PERCENTAGE**

Percent of Travel					10	20	30	40	50	60	70	80	90	100
F_L					0.94	0.94	0.94	0.94	0.94	0.94	0.93	0.92	0.92	0.90
Valve Size		ANSI Class and	Orifice Diameter	Travel	Rated C_V									
mm	inch	equivalent PN	(mm)	(mm)										
50	**2**	900-1500	46.7	20.3	0.7	1.3	2.2	3.6	6.6	12.6	19.8	26.4	31.5	**35**
50	**2**	600	63.5	38.1	1.2	2.3	4.2	6.8	12.3	23.4	36.7	49	58.5	**65**
80	**3**	600-1500	88.9	50.8	3	5	9	15	26	50	79	105	126	**140**
100	**4**	600-1500	111.3	50.8	4	8	14	23	43	81	127	170	203	**225**
150	**6**	600-1500	130.0	50.8	7	13	23	37	68	130	202	272	324	**360**
200	**8**	600-1500	165.1	63.5	12	21	36	59	109	207	322	434	518	**575**
250	**10**	600-1500	203.2	76.2	18	32	57	93	171	324	504	680	810	**900**
300	**12**	600-1500	247.7	95.3	25	45	79	130	239	454	706	951	1134	**1260**

Lo-dB /Anti-cavitation (Single Stage) Model 41312

Flow Characteristic : **LINEAR**

Percent of Travel					10	20	30	40	50	60	70	80	90	100
F_L					0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Valve Size		ANSI Class and	Orifice Diameter	Travel	Rated C_V									
mm	inch	equivalent PN	(mm)	(mm)										
50	**2**	900-1500	46.7	20.3	1.2	2.4	3.6	4.8	6.0	7.2	8.4	9.6	10.8	12
					2.5	5	7.5	10	12.5	15	17.5	20	22.5	25
					3	6	9	12	15	18	21	24	27	**30**
50	**2**	600	63.5	38.1	2.5	5	7.5	10	12.5	15	17.5	20	22.5	25
					5	10	15	20	25	30	35	40	45	50
					7	13	20	26	33	39	46	52	59	**65**
80	**3**	600-1500	88.9	50.8	5	9	14	18	23	27	32	36	41	45
					10	19	29	38	48	57	67	76	86	95
					12	24	36	48	60	72	84	96	108	**120**
100	**4**	600-1500	111.3	50.8	7	14	21	28	35	42	49	56	63	70
					15	29	44	58	73	87	102	116	131	145
					20	40	60	80	100	115	135	155	175	**195**
150	**6**	600-1500	130.0	63.5	11	21	32	42	53	63	74	84	95	105
					21	42	63	84	105	126	147	168	189	210
					30	60	90	120	150	180	210	240	270	**300**
200	**8**	600-1500	165.1	76.2	35	63	95	126	158	189	221	252	284	**315**
250	**10**	600-1500	203.2	88.9	50	100	150	200	250	300	350	400	450	**500**
300	**12**	600,900	247.7	101.6	73	145	218	290	363	435	508	580	653	**725**
400	**16**	600	330.2	101.6	120	240	360	480	600	720	840	960	1080	**1200**

C_V and F_L versus Travel

Lo-dB/Anti-cavitation (Single Stage) Models① 41412 41512 41612 41912 41413 41513 41613 41913

Flow Characteristic : **LINEAR**

Percent of Travel					10	20	30	40	50	60	70	80	90	100
F_L					0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Valve Size mm	Valve Size inch	ANSI Class and equivalent PN	Orifice Diameter (mm)	Travel (mm)	Rated C_V									
50	2	900-2500	46.7	20.3	1.2	2.4	3.6	4.8	6.0	7.2	8.4	9.6	10.8	12
					2.5	5	7.5	10	12.5	15	17.5	20	22.5	25
					3	6	9	12	15	18	21	24	27	**30**
50	2	300,600	63.5	38,1	2.5	5	7.5	10	12.5	15	17.5	20	22.5	25
80	3	2500			5	10	15	20	25	30	35	40	45	50
					7	13	20	26	33	39	46	52	59	**65**
80	3	300-1500	88.9	50,8	5	9	14	18	23	27	32	36	41	45
100	4	2500			10	19	29	38	48	57	67	76	86	95
					12	24	36	48	60	72	84	96	108	**120**
100	4	300-1500	111.3	50,8	7	14	21	28	35	42	49	56	63	70
150	6	2500			15	29	44	58	73	87	102	116	131	145
					20	40	60	80	100	115	135	155	175	**195**
150	6	150-1500	130.0	63,5	11	21	32	42	53	63	74	84	95	105
200	8	2500			21	42	63	84	105	126	147	168	189	210
					30	60	90	120	150	180	210	240	270	**300**
200	8	150-1500	165.1	76.2	16	31	47	62	78	93	109	124	140	155
					32	63	95	126	156	189	221	252	284	315
					50	100	150	200	250	300	350	400	450	**500**
250	10	150-1500	203.2	88.9	25	50	75	100	125	150	175	200	225	250
					50	100	150	200	250	300	350	400	450	500
					65	130	195	260	325	390	455	520	585	**650**
300	12	150-1500	247.7	101.6	70	145	215	290	360	435	505	580	650	**725**
400	16	150-600	330.2	101.6	120	240	360	480	600	720	840	960	1080	**1200**

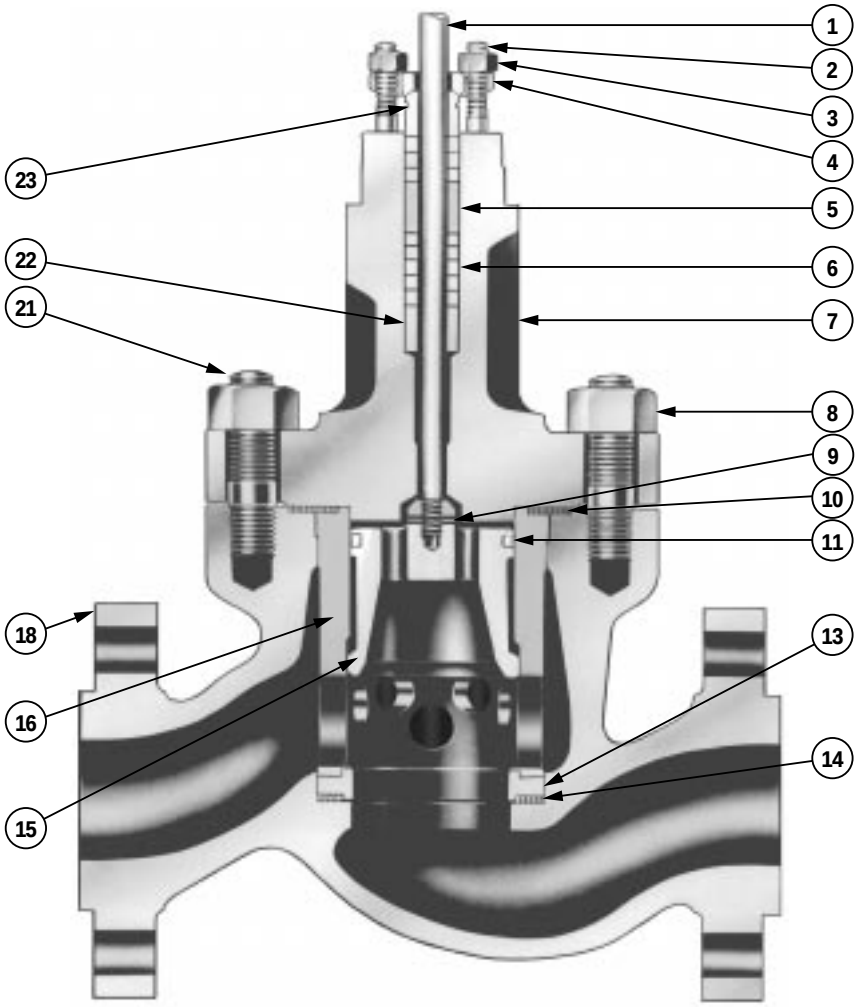
① Where diffuser is added on high capacity trim, overall C_V is reduced as much as 15%.

Lo-dB (Double Stage) Model 41314

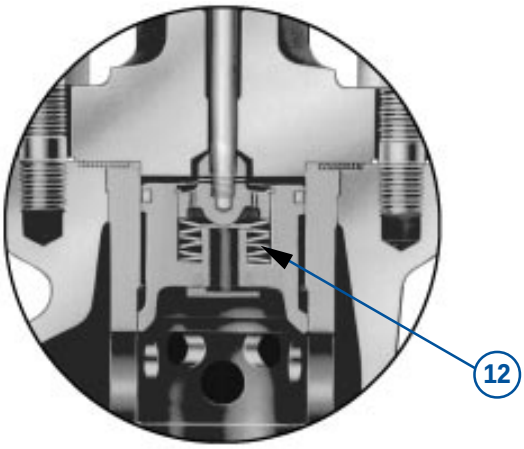
Flow Direction : **FLOW TO OPEN**

Flow Characteristic : **LINEAR**

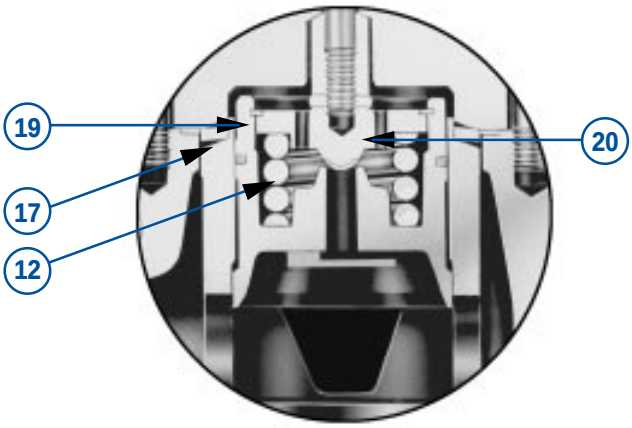
Percent of Travel					10	20	30	40	50	60	70	80	90	100
F_L					0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Valve Size mm	Valve Size inch	ANSI Class and equivalent PN	Nominal Orifice Diameter (mm)	Travel (mm)	Rated C_V									
50	2	600-1500	46.7	38.1	3.5	7	11	14	18	21	25	28	32	**35**
80	3	600-1500	88.9	50.8	6.5	13	20	26	33	39	46	52	59	**65**
100	4	600-1500	111.3	63.5	13	25	38	50	63	75	88	100	113	**125**
150	6	600-1500	130.0	63.5	15	30	45	60	75	90	105	120	135	**150**
200	8	600-1500	165.1	76.2	30	60	90	120	150	160	190	220	250	**300**
250	10	600-1500	203.2	101.6	41	82	123	164	205	246	287	328	369	**410**
300	12	600,900	247.7	101.6	60	120	180	240	300	360	420	480	540	**600**
400	16	600	330.2	101.6	80	160	240	320	400	480	560	640	720	**800**



Balance Plug Construction
41500, 41600, 41900 Series
DN 50 to DN 400 (2" to 16")
(DN 50 to DN 100 Shown)



Pilot Balanced Construction
41400 Series
DN 50 to DN 100 (2" to 4")



Pilot Balanced Construction
41400 Series
DN 150 to DN 400 (6" to 16")

Materials

Carbon and Low Alloy Steel Version

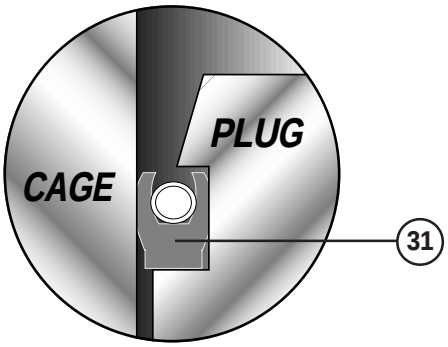
Ref. No	Temperature Range	-29°C ▽	+343°C ▽	+427°C ▽	+454°C ▽	+566°C ▽
	Description	Standard Materials				
1	Valve plug stem	Martensitic St. St. Type 17-4 PH			ASTM A 638 Gr 660	
2	Packing flange stud	Austenitic St. St. Type 304				
3	Packing flange nut	Austenitic St. St. Type 304				
4	Packing flange	Carbon steel zinc plated				
5	Packing spacer	Austenitic St. St. Type 303				
6	Packing	KEVLAR + PTFE			GRAPHITE	
7	Bonnet	CARBON STEEL ASTM A 216 Gr WCC				
18	Body	CHROME-MOLYBDENUM STEEL ASTM A 217 Gr WC6				
8	Valve body nut	ASTM A 194 Gr 2H				ASTM A 194 Gr 4
9	Plug pin	Austenitic Stainless Steel				
10	Valve body gasket	Spiral wound 316L St. St. with graphite filler				
11	Seal ring type	See page 12				
12	Plug spring (41400 only)	INCONEL X750				
13	Seat ring	Austenitic St. St. Type 316 with hardfacing				(2 to 4") St. St. Type 316 w. hardfacing (6" to 16") St St type CA6 NM w. hardfacing
14	Seat ring gasket	Spiral wound 316L St. St. with graphite filler				
15	Valve plug	Martensitic St. St. Type 17-4 PH			Martensitic St. St. Type CA6NM Nitrited	
16	Cage	Martensitic St. St. Type CA6NM Chromium-plated			Martensitic St. St. Type CA6NM Nitrited	
17	Flat spring (6" to 16")	Martensitic St. St. Type 17-4 PH			INCONEL X750 + shot peening	
19	Retaining ring (41400 only)	INCONEL X750				
20	Auxiliary plug (41400 only)	(2" to 4") Martensitic St. St Type 410			Martensitic St. St. Type CA6NM with hardfaced and chromium-plated	
		(6 to 16") Martensitic St. St. Type CA6NM with hardfaced and chromium-plated				
21	Valve body stud	ASTM A 193 Gr B7				ASTM A 193 Gr 16
22	Guide bushing	Martensitic St. St. Type 440 C				
23	Packing follower	Austenitic St. St. Type 303				

Stainless Steel Version

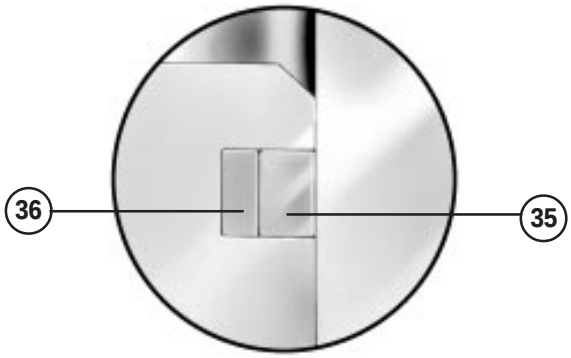
Ref. No	Temperature Range	-196°C ∇	-101°C ∇	-46°C ∇	-29°C ∇	+149°C ∇	+343°C ∇	+427°C ∇	+454°C ∇	+566°C ∇
	Description	**Standard Materials**								
1	Valve plug stem	ASTM A 638 Gr 660				Martensitic St. St. Type 17-4 PH				ASTM A 638 Gr 660
2	Packing flange stud	Austenitic St. St. Type 304								
3	Packing flange nut	Austenitic St. St. Type 304								
4	Packing flange	Stainless Steel								
5	Packing spacer	Austenitic St. St. Type 303								
6	Packing	KEVLAR + PTFE								GRAPHITE
7 18	Bonnet Body	AUSTENITIC STAINLESS STEEL TYPE 316								
8	Valve body nut	ASTM A 194 Gr 8M		ASTM A 194 Gr 4			ASTM A 194 Gr 2H			ASTM A 194 Gr 4
9	Plug pin	316 Stainless Steel								
10	Valve body gasket	Spiral wound 316L St. St. with graphite filler								
11	Seal ring type	See page 12								
12	Plug spring (41400 only)	INCONEL X750								
13	Seat ring	Austenitic St. St. Type 316 with hardfacing								(2 to 4") St. St. Type 316 with hardfacing (6" to 16") St. St. Type CA6NM with hardfacing
14	Seat ring gasket	Spiral wound 316L St. St. with graphite filler								
15	Valve plug	Martensitic St. St. Type 17-4 PH					Consult Masoneilan			
16	Cage	Martensitic St. St. Type CA6NM Chrome-plated					Consult Masoneilan			
17	Flat spring (6" to 16")	INCONEL X750 +shot peening				Martensitic St. St. Type 17-4 PH				INCONEL X750 + shot peening
19	Retaining ring (41400 only)	INCONEL X750								
20	Auxiliary plug (41400 only)	Martensitic St. St. Type CA6NM with hardfaced and chromium-plated				(2" to 4") Martensitic St. St. Type 410 (6" to 16") Martensitic St. St. Ty. CA6NM w. hardfaced & chromium-plated				Martensitic St. St. Type CA6NM with hardfaced and chrome-plated
21	Valve body stud	ASTM A 193 Gr 8M		ASTM A 320 Gr L7			ASTM A 193 Gr B7			ASTM A 193 Gr 16
22	Guide bushing	Austenitic St. St. Ty. 316 w. hardfacing					Martensitic St. St. Type 440 C			
23	Packing follower	Austenitic St. St. Type 303								

Seal Ring Construction

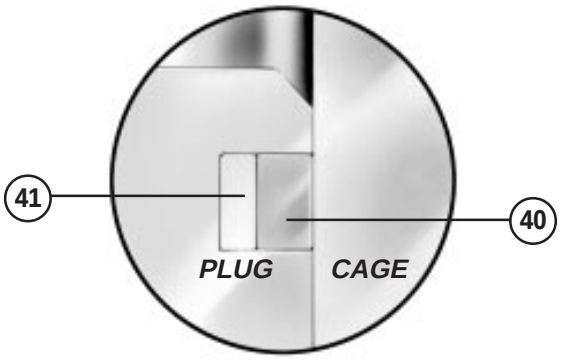
41300 Series has a Pressure Energized Polymeric Seal Ring.



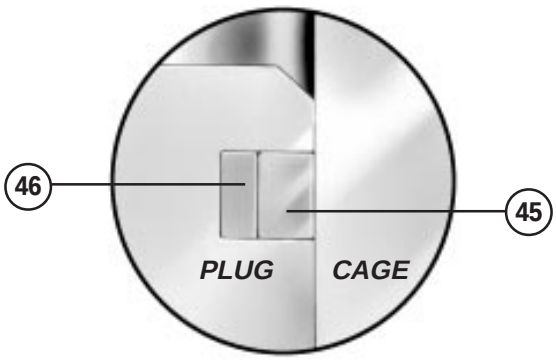
41400 and 41500 Series has a Metal Seal Ring. Leakage Class Ranging from Class II to Class V are obtainable with temperatures ranging from -196°C to +566°C.



41600 Series has a TFE Seal Ring and a Resilient Inner Ring.
Leakage Class IV is standard with temperatures ranging from -29°C to +149°C.



41900 has a Graphite Seal Ring and Metal Inner Ring. Leakage Class IV is standard with temperatures ranging from -196°C to +566°C for 6" to 16" and Class III for 2" to 4".

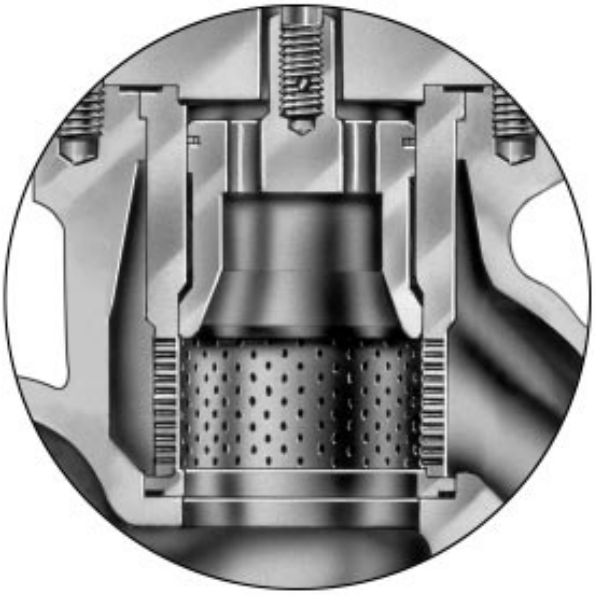


DN 50 - DN 400
(2" - 16")

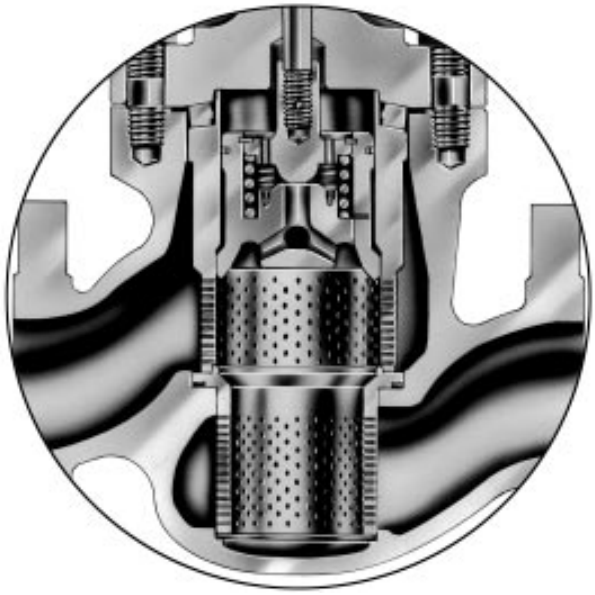
Materials of Construction

Temperature Range		-196°C ∇	-46°C ∇	-29°C ∇	+149°C ∇	+232°C ∇	+343°C ∇	+566°C ∇
Ref. No.	**Description**	**Materials**						
31	Seal Ring		PTFE + 25% graphite and ELGILOY spring					
35	External Seal Ring	Ni-Resist ASTM A439 Type D3						
36	Internal Seal Ring	Ni-Resist ASTM A439 Type D3					Ni-Resist ASTM A439 Type D3 Nitrited	
40	External Seal Ring			PTFE (Bronze)				
41	Internal Seal Ring			Nordel				
45	External Seal Ring	Graphite						
46	Internal Seal Ring	Ni-Resist Cast Iron ASTM A439 Type D3						
Temperature Range		Δ -196°C	Δ -46°C	Δ -29°C	Δ +149°C	Δ +232°C	Δ +343°C	Δ +566°C

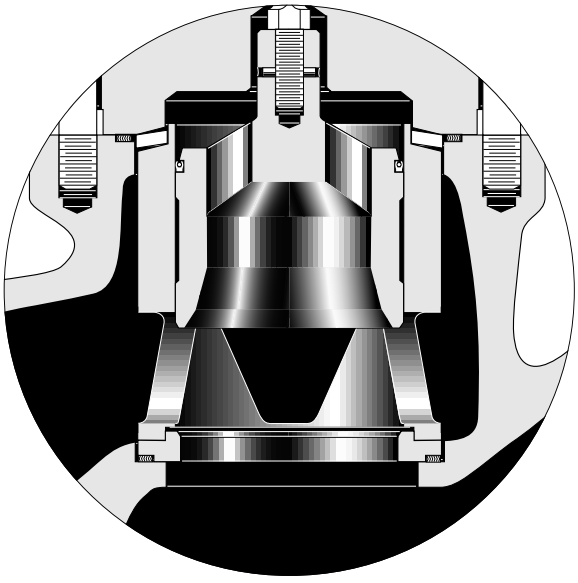
Optional Trim Types



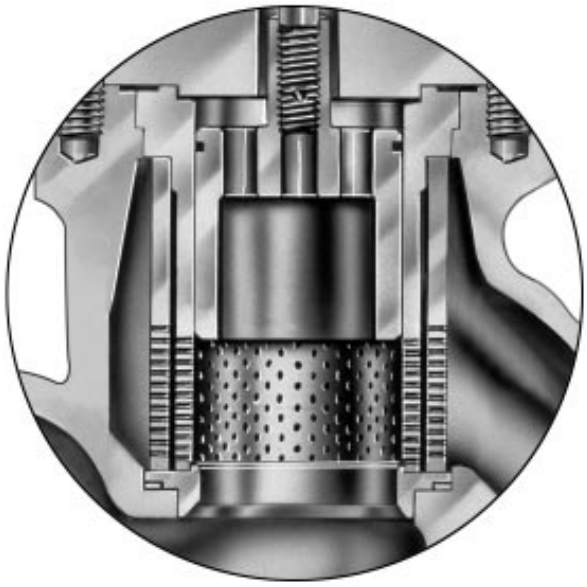
41512 - 41612- 41912
Single Stage
Multi-hole
Low Noise and Cavitation Protection
DN 50 - DN 100 Shown
(2" - 4")



41413
Multi-hole, Low Noise
and Cavitation Protection
Trim with Internal Diffuser
DN 150 - DN 400
(6" - 16")



41311
Pressure Energized Seal
DN 150 - DN 400 Shown
(6" - 16")



41314
Double Stage
High Attenuation,
Low Noise Trim
DN 50 - DN 100 Shown (2" - 4")

Allowable Pressure Drops for 41400 Series (bar)
Flow To Close

Models 41411 and 41421

Leakage : IEC 534-4 and ANSI/FCI 70.2, Class IV (V Optional)
Kevlar PTFE Packing

Model 87/88 Actuator

Valve Size - mm (inch)				Travel	Rated C_V				Actu-ator	AIR TO OPEN				AIR TO CLOSE			
ANSI Class and equivalent PN					Line		Equal %		Size	bench‡ range	net‡‡ range	supply (bar)	ΔP (bar)	bench‡ range	net‡‡ range	supply (bar)	ΔP (bar)
150	300,600	900,1500	2500	(mm)	full	reduced	full	reduced									
---	---	50 (2)	50 (2)	20.3	40	---	35	14	6	11-23	4-23	2.0	29	3-15	3-22	1.9	29
										21-45	14-45	3.8	57.5	6-30	6-37	3.0	57.5
									10	11-23	7-23	2.0	48	3-15	3-19	1.6	48
										21-45	17-45	3.8	96	6-30	6-34	2.8	96
									16	6-30	3-30	2.7	153	3-15	3-18	1.5	77
										11-23	8-23	1.9	77	6-30	6-33	2.7	153
									23	6-30	4-30	2.7	220	-	-	-	-
										11-23	9-23	1.9	110	-	-	-	-
					---	16	---	---	6	11-23	4-23	1.9	28	3-15	3-22	1.9	28
										21-45	14-45	3.7	56	6-30	6-37	3.0	56
									10	11-23	7-23	1.9	46	3-15	3-19	1.6	46
										21-45	17-45	3.7	93	6-30	6-34	2.8	93
									16	6-30	3-30	2.6	148	3-15	3-18	1.5	74
										11-23	8-23	1.9	74	6-30	6-33	2.7	148
---	50 (2)	---	80 (3)	38.1	75	---	65	26	10	11-23	5-23	2.0	32	3-15	3-21	1.8	32
										21-45	15-45	3.8	64	6-30	6-36	2.9	64
									16	11-23	7-23	2.0	51	3-15	3-19	1.6	51
										21-45	17-45	3.8	102	6-30	6-34	2.7	102
									23	6-30	3-30	2.7	147	3-15	3-18	1.5	73
										11-23	8-23	2.0	73	6-30	6-33	2.7	147
					---	30	---	---	10	11-23	5-23	2.0	31	3-15	3-21	1.8	31
										21-45	15-45	3.8	62	6-30	6-36	2.9	62
									16	11-23	7-23	2.0	49	3-15	3-19	1.6	49
										21-45	17-45	3.8	99	6-30	6-34	2.7	99
									23	6-30	3-30	2.7	142	3-15	3-18	1.5	71
										11-23	8-23	2.0	71	6-30	6-33	2.7	142
										-	-	-	-	21-45	21-48	3.8	142
---	80 (3)	80 (3)	100 (4)	50.8	155	---	140	56	16	21-45	13-45	3.8	70	3-15	3-23	1.9	35
										-	-	-	-	6-30	6-38	3.1	70
									23	11-23	5-23	2.0	51	3-15	3-21	1.7	50
										21-45	15-45	3.8	101	6-30	6-36	2.9	101
					---	60	---	---	16	21-45	13-45	3.8	67	3-15	3-23	1.9	34
										-	-	-	-	6-30	6-38	3.1	67
									23	11-23	5-23	1.9	48	3-15	3-21	1.7	48
										21-45	15-45	3.8	97	6-30	6-36	2.9	97
---	100 (4)	100 (4)	150 (6)	50.8	240	---	225	90	16	21-45	13-45	3.9	60	3-15	3-23	1.9	30
										-	-	-	-	6-30	6-38	3.1	60
									23	11-23	5-23	2.0	43	3-15	3-21	1.7	43
										21-45	15-45	3.8	86	6-30	6-36	2.9	86
					---	95	---	---	16	21-45	13-45	3.8	56	3-15	3-23	1.9	28
										-	-	-	-	6-30	6-38	3.1	56
									23	21-45	15-45	3.8	81	3-15	3-21	1.7	40.5
										-	-	-	-	6-30	6-36	2.9	81
										-	-	-	-	21-45	21-51	4.0	81

‡ Nominal bench range of actuator used for specifying actuator on valve data sheet
‡‡ Actual bench range of valve/actuator assembly, resulting from combined pilot plug load force and actuator nominal bench range

Note : Inlet pressure must not exceed the quoted rating for the selected pressure class.
All pressure drops (ΔP) shown within this publication reflect actuator capability and shutoff class shown for a particular trim type. It does not imply proper application with regards to cavitation, noise, critical pressure drop, etc. Consult Masoneilan Handbook for Control Valve Sizing OZ1000 for more information.

Allowable Pressure Drops for 41400 Series (bar)
Flow To Close

Models 41411 and 41421

Leakage : IEC 534-4 and ANSI/FCI 70.2, Class IV (V Optional)
Kevlar PTFE Packing

Model 87/88 and 37/38 Actuators

Valve Size - mm (inch)				Travel	Rated C_V				Actu-ator	AIR TO OPEN				AIR TO CLOSE			
ANSI Class and equivalent PN					Linear		Equal %		Size	bench‡ range	net‡‡ range	supply (bar)	ΔP (bar)	bench‡ range	net‡‡ range	supply (bar)	ΔP (bar)
150	300,600	900,1500	2500	(mm)	full	reduced	full	reduced									
150 (6)	150 (6)	150 (6)	200 (8)	50.8	400	--	360	144	16	21-45	12-45	4.1	71	3-15	3-24	2.0	20
										-	-	-	-	6-30	6-39	3.1	46
									23	11-23	5-23	2.2	60	3-15	3-21	1.8	31.5
										21-45	15-45	4.1	102	6-30	6-36	2.9	68
				20.3	---	165	---	---	10	-	-	-	-	3-15	3-29	2.4	4.1
										-	-	-	-	11-23	11-37	3.0	20
									16	21-45	12-45	4.1	28	3-15	3-24	2.0	7.8
										-	-	-	-	11-23	11-32	2.6	34
									23	11-23	5-23	2.8	60	3-15	3-21	1.8	12
										-	-	-	-	11-23	11-29	2.4	49
200 (8)	200 (8)	200 (8)	---	63.5	640	---	575	230	16	21-45	9-45	4.1	37	3-15	3-28	2.3	12
										-	-	-	-	6-30	6-43	3.4	29
									23	21-45	12-45	4.1	70	3-15	3-24	2.0	19.5
										-	-	-	-	6-30	6-39	3.1	45
				38.1	---	415	---	---	16	21-45	9-45	4.1	8.9	3-15	3-28	2.3	4.4
										-	-	-	-	11-23	11-36	2.9	22
									23	21-45	12-45	4.1	27	3-15	3-24	2.0	7.3
										-	-	-	-	11-23	11-32	2.6	32
250 (10)	250 (10)	250 (10)	---	76.2	1000	---	900	---	18	9-41	3-42	4.0	52	7-38	7-48	3.9	45
									18	10-50	3-50	4.1	15	4-45	4-56	4.1	26
									24	9-44	4-44	4.1	66	6-40	6-47	3.8	55
									24	6-40	3-42	4.1	86	4-50	4-57	4.1	36
				38.1	---	510	---	---	16	21-45	9-45	4.1	5.9	3-15	3-28	2.3	2.9
										-	-	-	-	6-30	6-43	3.4	7.2
										-	-	-	-	11-23	11-36	2.9	14
									23	21-45	12-45	4.1	9.1	3-15	3-24	2.0	4.8
										-	-	-	-	6-30	6-39	3.1	11
										-	-	-	-	11-23	11-32	2.6	21
300 (12)	300 (12)	300 (12)	---	95.25	1400	---	1260	---	18	9-28	3-29	2.7	19	6-27	6-38	3.0	24
									18	-	-	-	-	3-45	3-56	4.1	12
									24	11-50	6-50	4.1	14	6-28	6-36	2.9	34
									24	6-28	3-30	2.9	36	3-25	3-33	2.6	16
				50.8	---	770	---	---	16	21-45	9-45	4.1	3.4	6-30	6-43	3.4	4.8
										-	-	-	-	11-23	11-36	2.9	9.6
									23	21-45	12-45	4.1	5.5	6-30	6-39	3.1	7.3
										-	-	-	-	11-23	11-32	2.6	14
400 (16)	400 (16)	400 (16)	---	101.6	2000	---	---	---	18	12-30	5-30	2.8	8.9	3-15	3-26	2.1	6.8
									18	-	-	-	-	6-30	6-41	3.3	14
									24	6-30	3-32	3.1	20	3-15	3-24	2.0	9.3
									24	-	-	-	-	6-30	6-38	3.1	20
				63.5	---	1280	---	---	23	21-45	12-45	4.1	1.6	6-30	6-39	3.1	4.2
										-	-	-	-	11-23	11-32	2.6	8.2

‡ Nominal bench range of actuator used for specifying actuator on valve data sheet
‡‡ Actual bench range of valve/actuator assembly, resulting from combined pilot plug load force and actuator nominal bench range

Note : Inlet pressure must not exceed the quoted rating for the selected pressure class.
All pressure drops (ΔP) shown within this publication reflect actuator capability and shutoff class shown for a particular trim type. It does not imply proper application with regards to cavitation, noise, critical pressure drop, etc. Consult Masoneilan Handbook for Control Valve Sizing OZ1000 for more information.

Allowable Pressure Drops for 41400 Series Lo-dB/Anti-cavitation (bar) Flow to Close

Models 41412 and 41413

Leakage : IEC 534-4 and ANSI/FCI 70.2, Class IV (V Optional)
Kevlar PTFE Packing

Model 87/88 and 37/38 Actuators

Valve Size - mm (inch)				Travel (mm)	Rated C_V			Actu-ator Size	AIR TO OPEN				AIR TO CLOSE			
ANSI Class and equivalent PN					High Capacity	Standard	Reduced		bench‡ range	net‡‡ range	supply (bar)	ΔP (bar)	bench‡ range	net‡‡ range	supply (bar)	ΔP (bar)
150	300,600	900,1500	2500													
---	---	50 (2)	50 (2)	20.3	30	25	12	6	11-23	4-23	1.9	28	3-15	3-22	1.9	28
									21-45	14-45	3.7	56	6-30	6-37	3.0	56
								10	11-23	7-23	1.9	47	3-15	3-19	1.6	47
									21-45	17-45	3.7	94	6-30	6-34	2.8	94
								16	6-30	3-30	2.6	150	3-15	3-18	1.5	75
									11-23	8-23	1.9	75	6-30	6-33	2.7	150
---	50 (2)	---	80 (3)	38.1	65	50	25	10	11-23	5-23	2.0	31	3-15	3-21	1.8	31
									21-45	15-45	3.8	62	6-30	6-36	2.9	62
								16	11-23	7-23	2.0	50	3-15	3-19	1.6	50
									21-45	17-45	3.8	100	6-30	6-34	2.7	100
								23	6-30	3-30	2.7	143	3-15	3-18	1.5	72
									11-23	8-23	2.0	72	6-30	6-33	2.7	143
---	80 (3)	80 (3)	100 (4)	50.8	120	95	45	16	21-45	13-45	3.8	68	3-15	3-23	1.9	34
									-	-	-	-	6-30	6-38	3.1	68
								23	11-23	5-23	1.9	49	3-15	3-21	1.7	49
									21-45	15-45	3.8	98	6-30	6-36	2.9	98
---	100 (4)	100 (4)	150 (6)	50.8	195	145	70	16	21-45	13-45	3.8	58	3-15	3-23	1.9	29
									-	-	-	-	6-30	6-38	3.1	58
								23	11-23	5-23	2.0	41	3-15	3-21	1.7	41
									21-45	15-45	3.8	83	6-30	6-36	2.9	83
150 (6)	150 (6)	150 (6)	200 (8)	63.5	300	210	105	16	21-45	12-45	4.1	83	3-15	3-24	2.0	26.5
									-	-	-	-	6-30	6-39	3.1	60
								23	11-23	5-23	2.1	59.5	3-15	3-21	1.8	41
									21-45	15-45	4.1	119	6-30	6-36	2.9	87
200 (8)	200 (8)	200 (8)	---	76.2	500	315	155	18	9-41	3-42	3.8	69	5-46	5-57	4.1	65
								18	10-40	3-40	3.6	63	10-43	10-54	4.1	71
								24	6-40	3-42	3.8	115	6-40	6-47	3.8	106
250 (10)	250 (10)	250 (10)	---	88.9	650	500	250	18	14-30	6-30	2.6	18	6-30	6-41	3.3	39
								18	13-27	5-27	2.3	15	5-43	5-54	4.1	39.5
								24	9-30	4-30	2.8	44	6-30	6-38	3.0	54.5
								24	12-48	7-48	4.1	45	7-28	7-36	2.9	45
300 (12)	300 (12)	300 (12)	---	101.6	---	725	---	18	12-30	5-30	2.8	19	6-30	6-41	3.3	30
								18	10-34	3-34	3.4	30	-	-	-	-
								24	6-30	3-32	3.1	44	6-30	6-38	3.1	43
400 (16)	400 (16)	---	---	101.6	---	1200	---	18	12-30	5-30	2.9	13	6-30	6-41	3.3	18
								18	10-34	3-34	3.5	21	-	-	-	-
								24	6-30	3-32	3.3	32	6-30	6-38	3.1	25

‡ Nominal bench range of actuator used for specifying actuator on valve data sheet
‡‡ Actual bench range of valve/actuator assembly, resulting from combined pilot plug load force and actuator nominal bench range

Note : Inlet pressure must not exceed the quoted rating for the selected pressure class.
All pressure drops (ΔP) shown within this publication reflect actuator capability and shutoff class shown for a particular trim type. It does not imply proper application with regards to cavitation, noise, critical pressure drop, etc. Consult Masoneilan Handbook for Control Valve Sizing OZ1000 for more information.

Allowable Pressure Drops for 41500, 41600 and 41900 Series (bar) Flow To Close

Models 41511, 41521, 41611, 41621, 41911 and 41921

41500 Leakage : IEC 534-4 and ANSI/FCI 70.2, Class II (2" - 4")
41600 Leakage : IEC 534-4 and ANSI/FCI 70.2, Class IV
41900 Leakage : IEC 534-4 and ANSI/FCI 70.2, Class III (2" - 4")
Kevlar PTFE Packing

Model 87/88 Actuator

Valve Size - mm (inch) ANSI Class and equivalent PN				Travel (mm)	Rated C_V				Actu-ator Size	AIR TO OPEN			AIR TO CLOSE		
					Linear		Equal %			bench range	supply (bar)	ΔP (bar)	bench range	supply (bar)	ΔP (bar)
150	300,600	900,1500	2500		full	reduced	full	reduced							
---	---	50 (2)	50 (2)	20.3	40	---	35	14	6	3-15	1.3	28	3-15	1.3	28
										6-30	2.6	55	6-30	2.5	55
									10	3-15	1.3	46	3-15	1.3	46
										6-30	2.6	92	6-30	2.5	92
									16	3-15	1.3	73.5	3-15	1.3	73.5
										6-30	2.6	147	6-30	2.5	147
					---	16	---	---	6	3-15	1.3	27	3-15	1.3	27
										6-30	2.6	55	6-30	2.5	55
									10	3-15	1.3	46	3-15	1.3	46
										6-30	2.6	91	6-30	2.5	91
									16	3-15	1.3	73	3-15	1.3	73
										6-30	2.6	146	6-30	2.5	146
---	50 (2)	---	80 (3)	38.1	75	---	65	26	10	3-15	1.3	30.5	3-15	1.3	30.5
										6-30	2.6	61	6-30	2.5	61
									16	3-15	1.3	49	3-15	1.3	49
										6-30	2.6	97.5	6-30	2.5	97.5
									23	3-15	1.3	70	3-15	1.3	70
										6-30	2.6	140	6-30	2.5	140
					---	30	---	---	10	3-15	1.3	30	3-15	1.3	30
										6-30	2.6	60	6-30	2.5	60
									16	3-15	1.3	48	3-15	1.3	48
										6-30	2.6	96.5	6-30	2.5	96.5
									23	3-15	1.3	69	3-15	1.3	69
										6-30	2.6	139	6-30	2.5	139
---	80 (3)	80 (3)	100 (4)	50.8	155	---	140	56	16	3-15	1.3	33	3-15	1.3	33
										6-30	2.6	66.5	6-30	2.5	66.5
									23	3-15	1.3	48	3-15	1.3	48
										6-30	2.6	96	6-30	2.5	96
					---	60	---	---	16	3-15	1.3	33	3-15	1.3	33
										6-30	2.6	65	6-30	2.5	65
									23	3-15	1.3	47	3-15	1.3	47
										6-30	2.6	94	6-30	2.5	94
---	100 (4)	100 (4)	150 (6)	50.8	240	---	225	90	16	3-15	1.3	28	3-15	1.3	28
										6-30	2.6	55	6-30	2.5	55
									23	3-15	1.3	40	3-15	1.3	40
										6-30	2.6	80	6-30	2.5	80
					---	95	---	---	16	3-15	1.3	27	3-15	1.3	27
										6-30	2.6	54.5	6-30	2.5	54.5
									23	3-15	1.3	39	3-15	1.3	39
										6-30	2.6	78	6-30	2.5	78

Note : Inlet pressure must not exceed the quoted rating for the selected pressure class.
All pressure drops (ΔP) shown within this publication reflect actuator capability and shutoff class shown for a particular trim type. It does not imply proper application with regards to cavitation, noise, critical pressure drop, etc. Consult Masoneilan Handbook for Control Valve Sizing OZ1000 for more information.

Allowable Pressure Drops for 41500, 41600 and 41900 Series (bar)
Flow To Close

Models 41511, 41521, 41611, 41621, 41911 and 41921

41500 Leakage : IEC 534-4 and ANSI/FCI 70.2, Class III (6" - 16")
41600 Leakage : IEC 534-4 and ANSI/FCI 70.2, Class IV
41900 Leakage : IEC 534-4 and ANSI/FCI 70.2, Class IV (6" - 16")
Kevlar PTFE Packing

Model 87/88 and 37/38 Actuators

Valve Size - mm (inch) ANSI Class and equivalent PN				Travel (mm)	Rated C_V				Actu-ator Size	AIR TO OPEN			AIR TO CLOSE		
					Linear		Equal %			bench range	supply (bar)	ΔP (bar)	bench range	supply (bar)	ΔP (bar)
150	300,600	900,1500	2500		full	reduced	full	reduced							
150 (6)	150 (6)	150 (6)	200 (8)	50.8	400	---	360	144	16	3-15	1.5	39	3-15	1.3	26.5
										6-30	2.9	78	6-30	2.5	60
									23	3-15	1.5	56	3-15	1.3	41
										6-30	2.9	112	6-30	2.5	87
				20.3	---	165	---	---	16	3-15	1.8	39	3-15	1.3	13
										6-30	3.5	78	6-30	2.5	28
									23	3-15	1.7	56	3-15	1.3	19.5
										6-30	3.5	112	6-30	2.5	42
200 (8)	200 (8)	200 (8)	---	63.5	640		575	230	16	3-15	1.4	24	3-15	1.3	19
										6-30	2.8	48	6-30	2.5	46
									23	3-15	1.4	34	3-15	1.3	31
										6-30	2.7	69	6-30	2.5	69
				38.1	---	415	---	---	16	3-15	1.7	24	6-30	2.5	19
										6-30	3.3	48	21-45	3.6	48
									23	3-15	1.7	34	3-15	1.3	13
										6-30	3.3	69	6-30	2.5	29
										11-23	2.3	34	11-23	1.9	34
										-	-	-	21-45	3.6	69
250 (10)	250 (10)	250 (10)	---	76.2	1000	---	900	---	18	6-27	2.5	32	6-27	2.2	33
										6-48	4.1	38	6-48	3.6	60
										9-41	3.7	49	7-38	2.8	49
									24	6-40	3.7	82	6-40	3.0	81.5
										6-52	4.1	20	6-52	3.9	84
				38.1	---	510	---	---	16	6-30	3.4	36	6-30	2.5	13
										-	-	-	21-45	3.6	36
									23	3-15	1.7	26	3-15	1.3	8.8
										6-30	3.4	51.5	6-30	2.5	20
										-	-	-	11-23	1.9	26
										-	-	-	21-45	3.6	51.5
300 (12)	300 (12)	300 (12)	---	95.25	1400	---	1260	---	18	6-27	2.6	24	6-27	2.0	24
									24	6-28	2.6	35	6-28	2.1	35
				50.8	---	770	---	---	16	6-30	3.4	27	6-30	2.5	10
										-	-	-	21-45	3.6	27
									23	3-15	1.7	19.5	3-15	1.3	6.7
										6-30	3.4	39	6-30	2.5	15
										-	-	-	11-23	1.9	19.5
										-	-	-	21-45	3.6	39
400 (16)	400 (16)	400 (16)	---	101.6	2000	---	---	---	18	6-30	2.7	15	3-15	1.2	8.0
										-	-	-	6-30	2.2	15
									24	3-15	1.3	9.8	3-15	1.1	9.8
										6-30	2.6	20	6-30	2.1	20
				63.5	---	1280	---	---	16	6-30	3.4	16	6-30	2.5	6.1
										-	-	-	21-45	3.6	16
									23	3-15	1.7	12	3-15	1.3	4.0
										6-30	3.4	23	6-30	2.5	9.2
										-	-	-	11-23	1.9	12
										-	-	-	21-45	3.6	23

Note : Inlet pressure must not exceed the quoted rating for the selected pressure class.
All pressure drops (ΔP) shown within this publication reflect actuator capability and shutoff class shown for a particular trim type. It does not imply proper application with regards to cavitation, noise, critical pressure drop, etc. Consult Masoneilan Handbook for Control Valve Sizing OZ1000 for more information.

Allowable Pressure Drops for Single Stage Series Anti-cavitation Trim (bar) Flow To Close

Models 41512, 41513, 41612, 41613, 41912 and 41913

41500 Leakage : IEC 534-4 and ANSI/FCI 70.2, Class II (2" - 4")
41500 Leakage : IEC 534-4 and ANSI/FCI 70.2, Class III (6" - 16")
41600 Leakage : IEC 534-4 and ANSI/FCI 70.2, Class IV
41900 Leakage : IEC 534-4 and ANSI/FCI 70.2, Class III (2" - 4")
41900 Leakage : IEC 534-4 and ANSI/FCI 70.2, Class IV (6" - 16")
Kevlar PTFE Packing

Model 87/88 and 37/38 Actuators

Valve Size - mm (inch) ANSI Class and equivalent PN				Travel (mm)	Rated C_V			Actu-ator Size	AIR TO OPEN			AIR TO CLOSE		
150	300,600	900,1500	2500		High Capacity	Standard	Reduced		bench range	supply (bar)	ΔP (bar)	bench range	supply (bar)	ΔP (bar)
---	---	50 (2)	50 (2)	20.3	30	25	12	6	3-15 6-30	1.3 2.6	27 55	3-15 6-30	1.3 2.5	27 55
								10	3-15 6-30	1.3 2.6	46 91	3-15 6-30	1.3 2.5	46 91
								16	3-15 6-30	1.3 2.6	73 146	3-15 6-30	1.3 2.5	73 146
								23	3-15 6-30	1.3 2.6	105 210	3-15 6-30	1.3 2.5	105 210
---	50 (2)	---	80 (3)	38.1	65	50	25	10	3-15 6-30	1.3 2.6	30 60	3-15 6-30	1.3 2.5	30 60
								16	3-15 6-30	1.3 2.6	48 96.5	3-15 6-30	1.3 2.5	48 96.5
								23	3-15 6-30	1.3 2.6	69 139	3-15 6-30	1.3 2.5	69 139
---	80 (3)	80 (3)	100 (4)	50.8	120	95	45	16	3-15 6-30	1.3 2.6	33 65.5	3-15 6-30	1.3 2.5	33 65.5
								23	3-15 6-30	1.3 2.6	47 94	3-15 6-30	1.3 2.5	47 94
---	100 (4)	100 (4)	150 (6)	50.8	195	145	70	16	3-15 6-30	1.3 2.6	27 55	3-15 6-30	1.3 2.5	27 55
								23	3-15 6-30	1.3 2.6	39 79	3-15 6-30	1.3 2.5	39 79
150 (6)	150 (6)	150 (6)	200 (8)	63.5	300	210	105	16	3-15 6-30	1.5 2.9	48 95	3-15 6-30	1.3 2.0	33 74
								23	3-15 6-30	1.4 2.9	68.5 137	3-15 6-30	1.0 2.0	51 106
200 (8)	200 (8)	200 (8)	---	76.2	500	315	155	18	6-48 15-50 -	4.1 4.1 -	62.5 38 -	3-13 3-35 6-48	1.1 2.8 3.8	22 48.5 89
250 (10)	250 (10)	250 (10)	---	88.9	650	500	250	18	6-30 -	2.7 -	34 -	3-15 6-30	1.3 2.2	19 35
								24	9-40 12-48	3.6 4.1	65 59	3-25 -	1.9 -	43 -
300 (12)	300 (12)	300 (12)	---	101.6	---	725	---	18	6-30 10-34 -	2.9 3.2 -	30 27 -	3-9 3-15 6-30	0.8 1.3 2.5	7.6 16 31
								24	6-30 -	2.9 -	40 -	3-15 6-30	1.1 2.1	20 41
400 (16)	400 (16)		---	101.6	---	1200	---	18	6-30 10-34 -	3.0 3.3 -	21 19 -	3-9 3-15 6-30	0.8 1.3 2.5	5.4 11 22
								24	6-30 -	3.0 -	29 -	3-15 6-30	1.3 2.5	14 29.5

Note : Inlet pressure must not exceed the quoted rating for the selected pressure class.
All pressure drops (ΔP) shown within this publication reflect actuator capability and shutoff class shown for a particular trim type. It does not imply proper application with regards to cavitation, noise, critical pressure drop, etc. Consult Masoneilan Handbook for Control Valve Sizing OZ1000 for more information.

Allowable Pressure Drops for 41300 Series (bar)
Flow To Open

Models 41311, 41321 and 41312

Leakage : IEC 534-4 and ANSI/FCI 70.2, Class IV
Kevlar PTFE Packing

Model 87/88 Actuator

Valve Size		ANSI Class and equivalent PN	Travel (mm)	Rated C_V (1)		Actu-ator Size	AIR TO OPEN (2)				AIR TO CLOSE				
							Allowable pressure drops (bar)				Allowable pressure drops (bar)				
											Bench range 3 - 15		Bench range 6 - 30		
							Bench range				Supply (bar)		Supply (bar)		
mm	inch						3 - 15	6 - 30	11 - 23	21 - 45	1.4	1.7	2.4	2.8	3.1
50	**2**	600	38.1	75, 30	L	10	14.5	103	-	-	96	103	96	103	-
				65	E										
				65, 50 ou 25	LO DB										
50	**2**	900 1500	20.3	40, 16	L	6 10	- 57.5	83 139	*86* *144*	*172.5* 258	57 115.5	*86* *144*	57 115.5	138.5 231.5	*172.5* 258
				35	E										
				30, 25 ou 12	LO DB										
80	**3**	600 900 1500	50.8	155, 60	L	16 23	31 91	142.5 205.5	*129.5* *186.5*	258 258	116 171.5	*129.5* *186.5*	116 171.5	237 258	258 -
				140	E										
				120, 95 ou 45	LO DB										
100	**4**	600 900 1500	50.8	240, 95	L	16 23	4.5 58	113.5 198	*108* *156*	*216* 258	81.5 152	*108* *156*	81.5 152	*216* 258	- -
				225	E										
				195, 145 ou 70	LO DB										
150	**6**	600 900 1500	50.8	400	L	16 23	- 28.5	81 148.5	*88.5* *128*	*177.5* 219	50.5 113	*88.5* *128*	50.5 113	171 219	*177.5* -
				360	E										
			63.5	300, 210 ou 105	LO DB										
200	**8**	600 900 1500	63.5	640	L	16 23	- -	37 91.5	*65* *95.5*	*132.5* 175	11 69	*65* *95.5*	11 69	105.5 152	*132.5* 175
				575	E										

(1) L : Linear
E : Equal percentage

(2) Supply pressure is 0.4 bar (5 psi) over bench range

Lo-dB Trim

Note : Inlet pressure must not exceed the quoted rating for the selected pressure class.
Values in italics correspond to throtling delta P limitation for stability. Shutoff delta P is greater, consult Masoneilan.
All pressure drops (ΔP) shown within this publication reflect actuator capability and shutoff class shown for a particular trim type. It does not imply proper application with regards to cavitation, noise, critical pressure drop, etc. Consult Masoneilan Handbook for Control Valve Sizing OZ1000 for more information.

Allowable Pressure Drops for 41300 Series (bar)
Flow To Open

Models 41311, 41321 and 41312

Leakage : IEC 534-4 and ANSI/FCI 70.2, Class IV
Kevlar PTFE Packing

Models 41311 and 41321 — **Model 37/38 Actuator**

Valve Size		ANSI Class and equivalent PN	Travel (mm)	Rated C_V (1)		Actu-ator Size	AIR TO OPEN			AIR TO CLOSE		
mm	inch						Bench range	Supply (bar)	ΔP (bar)	Bench range	Supply (bar)	ΔP (bar)
250	**10**	600 900 1500	76.2	1000	L	18	8-30	2.4	138	3-13 3-13 6-27 6-27	1.4 1.7 2.4 2.8	62.5 *76.5* 78 138
				900	E							
300	**12**	600 900 1500	95.3	1400	L	18	6-27 10-33	2.2 2.8	75 95	3-14 3-14 6-27 6-27	1.4 1.7 2.4 2.8	10.5 *70.5* 47.5 95
				1260	E							
400	**16**	300 600	101.6	2000	L	18	6-30 12-30	2.4 2.4	41 78	3-15 3-15 6-30 6-30	1.7 2.1 2.8 3.1	40 *57* 39 78

(1) L : Linear ; E : Equal percentage

Model 41312 — **Model 37/38 Actuator**

Valve Size		ANSI Class and equivalent PN	Travel (mm)	Rated C_V	Actu-ator Size	AIR TO OPEN			AIR TO CLOSE		
mm	inch					Bench range	Supply (bar)	ΔP (bar)	Bench range	Supply (bar)	ΔP (bar)
200	**8**	600 900 1500	76.2	315	18	8-30 15-50	2.4 3.8	146.5 175	3-13 3-13 6-27 6-27 6-27	1.4 1.7 2.4 2.8 3.1	88 *89.5* 97 156.5 175
250	**10**	600 900 1500	88.9	500	18	6-30 10-30	2.4 2.4	104.5 *136*	3-15 3-15 6-30 6-30	1.4 1.7 2.8 3.1	7.0 *90.5* 113.5 138
300	**12**	600 900	101.6	725	18	6-30 12-30	2.4 2.4	75 95	3-15 6-30 6-30	2.1 2.8 3.1	*75* 74 95
400	**16**	600	101.6	1200	18	6-30 12-30	2.4 2.4	41 78	3-15 3-15 6-30 6-30	1.7 2.1 2.8 3.1	40 *57* 39 78

Note : Inlet pressure must not exceed the quoted rating for the selected pressure class.
Values in italics correspond to throtling delta P limitation for stability. Shutoff delta P is greater, consult Masoneilan.
All pressure drops (ΔP) shown within this publication reflect actuator capability and shutoff class shown for a particular trim type. It does not imply proper application with regards to cavitation, noise, critical pressure drop, etc. Consult Masoneilan Handbook for Control Valve Sizing OZ1000 for more information.

Allowable Pressure Drops for 41300 (bar)
Flow To Open

Models 41311, 41321 and 41312

Leakage : IEC 534-4 and ANSI/FCI 70.2, Class V
Kevlar PTFE Packing

Model 87/88 Actuator

Valve Size		ANSI Class and equivalent PN	Travel (mm)	Rated C_V (1)		Actu-ator Size	AIR TO OPEN (2)				AIR TO CLOSE					
							Allowable pressure drops (bar)				Allowable pressure drops (bar)					
											Bench range 3 - 15			Bench range 6 - 30		
							Bench range				Supply (bar)			Supply (bar)		
mm	inch						3 - 15	6 - 30	11 - 23	21 - 45	2.1	2.4	2.8	3.1	3.5	3.8
50	**2**	600	38.1	75, 30	L	10	-	-	-	103	103	-	-	103	-	-
				65	E											
				65, 50 ou 25	LO DB											
50	**2**	900 1500	20.3	40, 16	L	6 10	- -	- -	- 130.5	*172.5* 258	31.5 *144*	*86* -	- -	31.5 258	*172* -	- -
				35	E											
				30, 25 ou 12	LO DB											
80	**3**	600 900 1500	50.8	155, 60	L	16 23	- -	- -	35 *186.5*	258 258	*129.5* *186.5*	- -	- -	194.5 258	258 -	- -
				140	E											
				120, 95 ou 45	LO DB											
100	**4**	600 900 1500	50.8	240, 95	L	16 23	- -	- -	- 109	*216* 258	81 *156*	*108* -	- -	81 258	*216* -	- -
				225	E											
				195, 145 ou 70	LO DB											
150	**6**	600 900 1500	50.8	400	L	16 23	- -	- -	- 15	160.5 219	- *128*	*88.5* -	- -	- 178	134.5 219	*177.5* -
				360	E											
			63.5	300, 210 ou 105	LO DB											
200	**8**	600 900 1500	63.5	640	L	16 23	- -	- -	- -	33.5 175	- 51	7.5 *95.5*	*65* -	- 51	7.5 175	120 -
				575	E											

(1) L : Linear
E : Equal percentage

Lo-dB Trim

(2) Supply pressure is 0.4 bar (5 psi) over bench range

Note : Inlet pressure must not exceed the quoted rating for the selected pressure class.
Values in italics correspond to throtling delta P limitation for stability. Shutoff delta P is greater, consult Masoneilan.
All pressure drops (ΔP) shown within this publication reflect actuator capability and shutoff class shown for a particular trim type. It does not imply proper application with regards to cavitation, noise, critical pressure drop, etc. Consult Masoneilan Handbook for Control Valve Sizing OZ1000 for more information.

Allowable Pressure Drops for 41300 Series (bar)
Flow To Open

Models 41311, 41321 and 41312

Leakage : IEC 534-4 and ANSI/FCI 70.2, Class V
Kevlar PTFE Packing

Models 41311 and 41321 — **Model 37/38 Actuator**

Valve Size		ANSI Class and equivalent PN	Travel (mm)	Rated C_V (1)		Actu-ator Size	AIR TO OPEN			AIR TO CLOSE		
mm	inch						Bench range	Supply (bar)	ΔP (bar)	Bench range	Supply (bar)	ΔP (bar)
250	**10**	600 900 1500	76.2	1000	L	18	15-50 20-50	3.8 3.8	10.5 138	3-13 3-13 6-27 6-27	2.4 2.8 3.5 3.8	24.5 *76.5* 45.5 138
				900	E							
300	**12**	600 900 1500	95.3	1400	L	18	-	-	-	3-14 6-27	3.1 3.8	*70.5* 37
				1260	E	24	16-45	3.5	95	6-28	3.5	95
400	**16**	300 600	101.6	2000	L	24	18-50	3.8	52	3-15	3.1	*76*

(1) L : Linear
E : Equal percentage

Model 41312 — **Model 37/38 Actuator**

Valve Size		ANSI Class and equivalent PN	Travel (mm)	Rated C_V	Actu-ator Size	AIR TO OPEN			AIR TO CLOSE		
mm	inch					Bench range	Supply (bar)	ΔP (bar)	Bench range	Supply (bar)	ΔP (bar)
200	**8**	600 900 1500	76.2	315	18	15-50 20-50	3.8 3.8	111 175	3-13 6-27 6-27 6-27	2.4 3.1 3.5 3.8	*89.5* 21 143 175
250	**10**	600 900 1500	88.9	500	18	-	-	-	3-15 3-15	2.8 3.1	77.5 *90.5*
					24	19-46	3.5	138	6-30 6-30	3.1 3.5	8.5 138
300	**12**	600 900	101.6	725	18	-	-	-	3-15 3-15	3.1 3.5	38 *75*
					24	18-50	3.8	95	3-15	2.8	95
400	**16**	600	101.6	1200	24	18-50	3.8	52	3-15	3.1	*76*

Note : Inlet pressure must not exceed the quoted rating for the selected pressure class.
Values in italics correspond to throtling delta P limitation for stability. Shutoff delta P is greater, consult Masoneilan.
All pressure drops (ΔP) shown within this publication reflect actuator capability and shutoff class shown for a particular trim type. It does not imply proper application with regards to cavitation, noise, critical pressure drop, etc. Consult Masoneilan Handbook for Control Valve Sizing OZ1000 for more information.

Allowable Pressure Drops for 41300 Series (bar)
Flow To Open

Model 41314

Leakage : IEC 534-4 and ANSI/FCI 70.2, Class IV
Kevlar PTFE Packing

Model 87/88 Actuator

Valve Size		ANSI Class and equivalent PN	Travel (mm)	Rated C_V	Actu-ator Size	AIR TO OPEN (1)				AIR TO CLOSE				
						Allowable pressure drops (bar)				Allowable pressure drops (bar)				
										Bench range 3 - 15		Bench range 6 - 30		
						Bench range				Supply (bar)		Supply (bar)		
mm	inch					3 - 15	6 - 30	11 - 23	21 - 45	1.4	1.7	2.4	2.8	3.1
50	**2**	600 900 1500	38.1	35	10	57.5	139	*144*	258	115.5	*144*	115.5	231.5	258
80	**3**	600 900 1500	50.8	65	16	88	209.5	*183*	258	174.5	*183*	174.5	258	-
100	**4**	600 900 1500	63.5	125	16 23	31 91	142.5 205.5	*129.5* *186.5*	258 258	116 171.5	*129.5* *186.5*	116 171.5	237 258	258 -
150	**6**	600 900 1500	63.5	150	16 23	4.5 58	113.5 198	*108* *156*	*216* 219	81.5 152	*108* *156*	81.5 152	*216* 219	- -

(1) Supply pressure is 0.4 bar (5 psi) over bench range

Model 37/38 Actuator

Valve Size		ANSI Class and equivalent PN	Travel (mm)	Rated C_V	Actu-ator Size	AIR TO OPEN			AIR TO CLOSE		
						Bench range	Supply (bar)	ΔP (bar)	Bench range	Supply (bar)	ΔP (bar)
mm	inch										
200	**8**	600 900 1500	76.2	300	18	8-30 15-50	2.4 3.8	146.5 175	3-13 3-13 6-27 6-27 6-27	1.4 1.7 2.4 2.8 3.1	88 *89.5* 97 156.5 175
250	**10**	600 900 1500	101.6	410	18	6-30 10-30	2.4 2.4	104.5 *132.5*	3-15 3-15 6-30 6-30	1.4 1.7 2.8 3.1	2.5 *88* 102 138
300	**12**	600 900	101.6	600	18	6-30 12-30	2.4 2.4	75 95	3-15 6-30 6-30	2.1 2.8 3.1	*75* 74 95
400	**16**	600	101.6	800	18	6-30 12-30	2.4 2.4	41 78	3-15 3-15 6-30 6-30	1.7 2.1 2.8 3.1	40 *57* 39 78

Note : Inlet pressure must not exceed the quoted rating for the selected pressure class.
Values in italics correspond to throtling delta P limitation for stability. Shutoff delta P is greater, consult Masoneilan.
All pressure drops (ΔP) shown within this publication reflect actuator capability and shutoff class shown for a particular trim type. It does not imply proper application with regards to cavitation, noise, critical pressure drop, etc. Consult Masoneilan Handbook for Control Valve Sizing OZ1000 for more information.

Allowable Pressure Drops for 41300 Series (bar)
Flow To Open

Models 41314

Leakage : IEC 534-4 and ANSI/FCI 70.2, Class V
Kevlar PTFE Packing

Model 87/88 Actuator

Valve Size		ANSI Class and equivalent PN	Travel (mm)	Rated C_V	Actu-ator Size	AIR TO OPEN (1)				AIR TO CLOSE				
						Allowable pressure drops (bar)				Allowable pressure drops (bar)				
										Bench range 3 - 15		Bench range 6 - 30		
						Bench range				Supply (bar)		Supply (bar)		
mm	inch					3 - 15	6 - 30	11 - 23	21 - 45	2.1	2.4	2.8	3.1	3.4
50	**2**	600 900 1500	38.1	35	10	-	-	130.5	258	*144*	-	87.5	258	-
80	**3**	600 900 1500	50.8	65	16	-	-	*183*	258	*183*	-	165	258	-
100	**4**	600 900 1500	63.5	125	16 23	- -	- -	35 *186.5*	258 258	*129.5* *186.5*	- -	- 173.5	194.5 258	258 -
150	**6**	600 900 1500	63.5	150	16 23	- -	- -	- 109	*216* 219	81 *156*	*108* -	- 61.5	81 219	*216* -

(1) Supply pressure is 0.4 bar (5 psi) over bench range

Model 37/38 Actuator

Valve Size		ANSI Class and equivalent PN	Travel (mm)	Rated C_V	Actu-ator Size	AIR TO OPEN			AIR TO CLOSE		
						Bench range	Supply (bar)	ΔP (bar)	Bench range	Supply (bar)	ΔP (bar)
mm	inch										
200	**8**	600 900 1500	76.2	300	18	15-50 20-50	3.8 3.8	111 175	3-13 6-27 6-27 6-27	2.4 3.1 3.5 3.8	*89.5* 21 143 175
250	**10**	600 900 1500	101.6	410	18	-	-	-	3-15 3-15	2.8 3.1	51 *88*
					24	19-46	3.5	138	6-30	3.5	107.5
300	**12**	600 900	101.6	600	18	-	-	-	3-15 3-15	3.1 3.5	38 *75*
					24	18-50	3.8	95	3-15	2.8	95
400	**16**	600	101.6	800	24	18-50	3.8	52	3-15	3.1	*76*

Note : Inlet pressure must not exceed the quoted rating for the selected pressure class.
Values in italics correspond to throtling delta P limitation for stability. Shutoff delta P is greater, consult Masoneilan.
All pressure drops (ΔP) shown within this publication reflect actuator capability and shutoff class shown for a particular trim type. It does not imply proper application with regards to cavitation, noise, critical pressure drop, etc. Consult Masoneilan Handbook for Control Valve Sizing OZ1000 for more information.

Allowable Pressure Drops for 41500, 41600 and 41900 Series (bar)
Flow To Open

Models 41511, 41521, 41611, 41621, 41911 and 41921
Models 41512, 41513, 41612, 41613, 41912 and 41913

41500 Leakage : IEC 534-4 and ANSI/FCI 70.2, Class II (2" - 4")
41500 Leakage : IEC 534-4 and ANSI/FCI 70.2, Class III (6" - 16")
41600 Leakage : IEC 534-4 and ANSI/FCI 70.2, Class IV
41900 Leakage : IEC 534-4 and ANSI/FCI 70.2, Class III (2" - 4")
41900 Leakage : IEC 534-4 and ANSI/FCI 70.2, Class IV (6" - 16")
Kevlar PTFE Packing

Model 87/88 Actuator

Valve Size		ANSI Class and equivalent PN	Travel (mm)	Rated C_V (1)		Actu-ator Size	AIR TO OPEN (2)				AIR TO CLOSE					
							Allowable pressure drops (bar)				Allowable pressure drops (bar)					
											Bench range 3 - 15		Bench range 6 - 30			
							Bench range				Supply (bar)		Supply (bar)			
mm	inch						3 - 15	6 - 30	11 - 23	21 - 45	1.7	2.4	2.8	3.1	3.5	3.8
50	**2**	600	38.1	75, 30	L	10	-	20	*46*	*97.5*	*46*	-	46	74	*97.5*	-
				65	E	16	12	43	*77.5*	103	*77.5*	-	78.5	103	-	-
				65, 50 ou 25	LO DB	23	26	67.5	103	-	103	-	103	-	-	-
50	**2**	900 1500	20.3	40, 16	L	6	-	12.5	42	95.5	36	*44.5*	36	65	90.5	*97.5*
				35	E	10	7.0	36	*81.5*	159.5	75	*81.5*	75	114	152	*163.5*
				30, 25 ou 12	LO DB	16	24	70.5	*129.5*	253	120.5	*129.5*	120.5	180.5	241	258
80	**3**	600 900 1500	50.8	155, 60	L	16	3.5	24.5	*53*	*109*	52.5	*53*	52.5	80.5	107.5	*109*
				140	E	23	12.5	43.5	*79*	*158*	77.5	*79*	77.5	116.5	155	*158*
				120, 95 ou 45	LO DB											
100	**4**	600 900 1500	50.8	240, 95	L	16	-	15.5	*27.5*	*59.5*	*27.5*	-	36.5	*59.5*	-	-
				225	E	23	7.0	29.5	*42*	*87*	*42*	-	59	*87*	-	-
				195, 145 ou 70	LO DB											
150	**6**	600 900 1500	50.8	400	L	16	-	15	*16.5*	*36.5*	*16.5*	-	*36.5*	-	-	-
				360	E	23	4.5	31.5	*25*	*54*	*25*	-	*54*	-	-	-
			63.5	300, 210 ou 105	LO DB											
200	**8**	600 900 1500	63.5	640	L	16	-	5.0	*11.5*	*27*	*11.5*	-	21	*27*	-	-
				575	E	23	-	16	*18.5*	*41*	*18.5*	-	38.5	*41*	-	-
250	**10**	600 900 1500	38.1	510	L	16	-	1.5	*9.0*	*22*	*9.0*	-	13.5	*22*	-	-
						23	-	9.5	*15*	*33.5*	*15*	-	26.5	*33.5*	-	-
300	**12**	600 900 1500	50.8	770	L	16	-	-	*5.0*	*12*	*5.0*	-	7.0	*12*	-	-
						23	-	4.0	*8.0*	*18*	*8.0*	-	15.5	*18*	-	-
400	**16**	600 900 1500	63.5	1280	L	16	-	-	*3.5*	*8.5*	3.0	*3.5*	3.0	*8.5*	-	-
						23	-	1.0	*6.0*	*13*	*6.0*	-	8.5	*13*	-	-

(1) L : Linear ; E : Equal percentage
(2) Supply pressure is 0.4 bar (5 psi) over bench range

Lo-dB Trim

Note : Inlet pressure must not exceed the quoted rating for the selected pressure class.
Values in italics correspond to throtling delta P limitation for stability. Shutoff delta P is greater, consult Masoneilan.
All pressure drops (ΔP) shown within this publication reflect actuator capability and shutoff class shown for a particular trim type. It does not imply proper application with regards to cavitation, noise, critical pressure drop, etc. Consult Masoneilan Handbook for Control Valve Sizing OZ1000 for more information.

Allowable Pressure Drops for 41500, 41600 and 41900 Series (bar)
Flow To Open

Models 41511, 41521, 41611, 41621, 41911 and 41921
Models 41512, 41513, 41612, 41613, 41912 and 41913

41500 Leakage : IEC 534-4 and ANSI/FCI 70.2, Class III (10" - 12")
41600 Leakage : IEC 534-4 and ANSI/FCI 70.2, Class IV
41900 Leakage : IEC 534-4 and ANSI/FCI 70.2, Class IV (10" - 12")
Kevlar PTFE Packing

Models 41511, 41521, 41611, 41621, 41911 and 41921 — **Model 37/38 Actuator**

Valve Size		ANSI Class and equivalent PN	Travel (mm)	Rated C_V (1)		Actu-ator Size	AIR TO OPEN			AIR TO CLOSE		
							Bench range	Supply (bar)	ΔP (bar)	Bench range	Supply (bar)	ΔP (bar)
mm	inch											
250	10	600 900 1500	76.2	1000	L	18	6-48	3.8	16	3-13 8-30	3.8 3.8	*13.5* *31*
				900	E	24	6-40	3.1	28	6-40	3.8	61
300	12	600 900 1500	95.25	1400	L	18	6-27	2.4	8.5	3-30	3.8	*22.5*
				1260	E	24	6-28	2.4	16.5	6-28	3.8	*24.5*
400	16	600 900 1500	101.6	2000	L	18	10-34	2.8	12	6-30	3.4	*13.5*
						24	6-30	2.4	9.5	3-15 6-30	1.7 3.1	*8.5* *19*

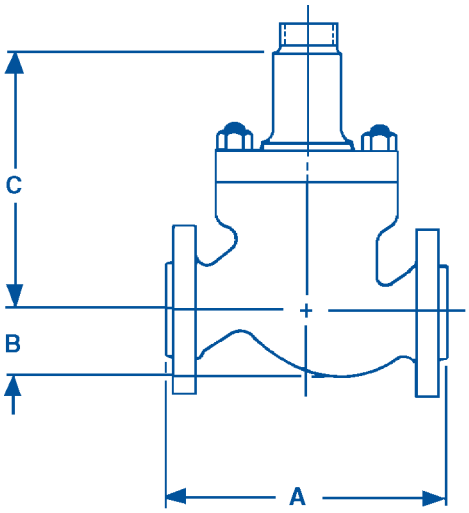
(1) L : Linear
E : Equal percentage

Models 41512, 41513, 41612, 41613, 41912 and 41913 — **Model 37/38 Actuator**

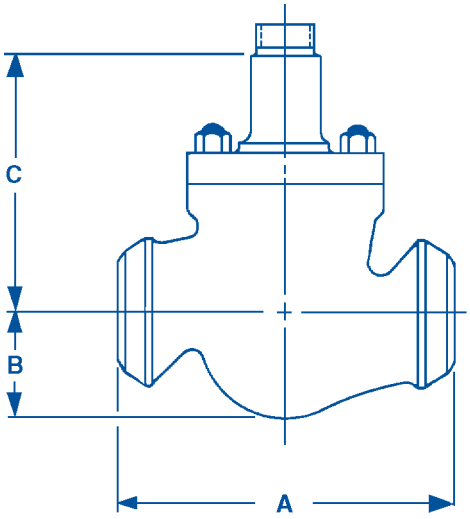
Valve Size		ANSI Class and equivalent PN	Travel (mm)	Rated C_V	Actu-ator Size	AIR TO OPEN			AIR TO CLOSE		
						Bench range	Supply (bar)	ΔP (bar)	Bench range	Supply (bar)	ΔP (bar)
mm	inch										
200	8	600 900 1500	76.2	315	18	6-48 15-50	3.8 3.8	24 *60*	3-13 3-35	3.8 3.8	*17* *61.5*
					24	6-52	3.8	40.5	6-40	3.8	*79*
250	10	600 900 1500	88.9	500	18	6-30	2.8	16	3-15 6-30	3.8 3.8	*17* *34.5*
					24	9-30 13-50	2.4 3.8	*41.5* 71	6-30	3.5	*49*
300	12	600 900 1500	101.6	725	18	10-34	2.8	*17.5*	6-30	3.5	*18.5*
					24	6-30	2.8	16.5	3-15 6-30	1.7 3.1	*12* *26*
400	16	600 900 1500	101.6	1200	18	10-34	2.8	12	6-30	3.5	*13.5*
					24	6-30	2.4	9.5	3-15 6-30	1.7 3.1	*8.5* *19*

Note : Inlet pressure must not exceed the quoted rating for the selected pressure class.
Values in italics correspond to throtling delta P limitation for stability. Shutoff delta P is greater, consult Masoneilan.
All pressure drops (ΔP) shown within this publication reflect actuator capability and shutoff class shown for a particular trim type. It does not imply proper application with regards to cavitation, noise, critical pressure drop, etc. Consult Masoneilan Handbook for Control Valve Sizing OZ1000 for more information.

Dimensions (mm)



Flanged



Butt, Socket Weld
or Screwed Ends

Body S/A

Pressure Class		A										
		ANSI Class 150 and equivalent PN		ANSI Class 300 and equivalent PN			ANSI Class 600 and equivalent PN			ANSI Class 900 and equivalent PN		
Valve Size		RF	RTJ	BW & SW	RF	RTJ	BW & SW	RF	RTJ	BW & SW	RF	RTJ
mm	inch											
50	2	-	-	390	267	283	390	286	289	398	375	378
80	3	-	-	434	318	334	434	337	340	434	441	445
80x50x80	3x2x3			"	"	"	"	"	"	(a)	(a)	(a)
100	4			492	369	384	492	394	397	492	511	514
100x50x100	4x2x4	-	-	"	"	"	"	"	"	(a)	(a)	(a)
100x80x100	4x3x4			"	"	"	"	"	"	492	511	514
150	6	451	464	560	473	489	560	508	511	680	714	717
150x80x150	6x3x6			"	"	"	"	"	"	"	"	"
150x100x150	6x4x6			"	"	"	"	"	"	"	"	"
200	8	543	556	656	569	584	656	610	613	854	915	918
200x100x200	8x4x8			"	"	"	"	"	"	"	"	"
200x150x200	8x6x8			"	"	"	"	"	"	"	"	"
250	10	673	686	802	708	724	802	752	755	892	1092	1095
250x150x250	10x6x10			"	"	"	"	"	"			
300	12	737	750	822	775	791	822	819	822	1034	1130	1133
300x200x300	12x8x12			"	"	"	"	"	"	"	"	"
400	16	1016	1029	1002	1057	1072	(a)	1108	1111	1600	1375	1384
400x300x400	16x12x16			"	"	"	(a)	"	"	(a)	(a)	(a)

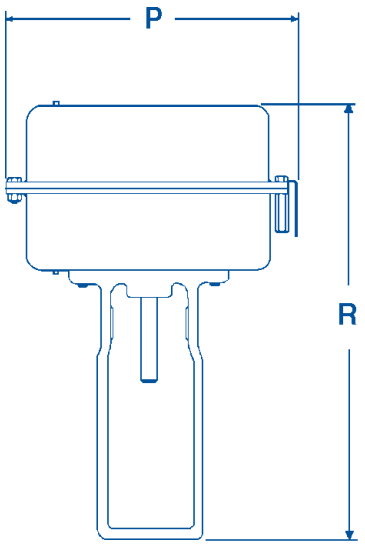
(a) Consult Masoneilan

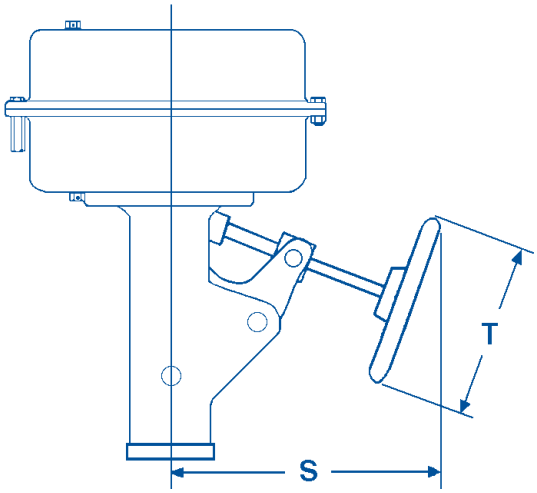
Body S/A

Pressure Class		A						B max	C max
		ANSI Class 1500 and equivalent PN			ANSI Class 2500 and equivalent PN			All Classes	All Classes
Valve Size		BW & SW	RF	RTJ	BW & SW	RF	RTJ		
mm	inch								
50	2	398	375	378	388	400	403	94	250
80	3	434	460	464	(a)	(a)	(a)	93	300
80x50x80	3x2x3	(a)	(a)	(a)				"	"
100	4	492	531	533	(a)	(a)	(a)	112	330
100x50x100	4x2x4	(a)	(a)	(a)	-	-	-	"	"
100x80x100	4x3x4	492	531	533	-	-	-	"	"
150	6	680	768	774	760	(a)	(a)	166	394
150x80x150	6x3x6	"	"	"	-	-	-	"	"
150x100x150	6x4x6	"	"	"	-	-	-	"	"
200	8	854	972	981	(a)	(a)	(a)	205	521
200x100x200	8x4x8	"	"	"	-	-	-	"	"
200x150x200	8x6x8	"	"	"	-	-	-	"	"
250	10	892	1168	1178	1168	-	-	247	571
250x150x250	10x6x10				-			"	"
300	12	(a)	1218	1234	-	-	-	359	626
300x200x300	12x8x12	(a)	(a)	(a)				"	"
400	16	(a)	1508	1530	-	-	-	449	694
400x300x400	16x12x16	(a)	(a)	(a)				"	"

Note : For AFNOR and DIN dimensions, consult Masoneilan
(a) Consult Masoneilan

Dimensions (mm)



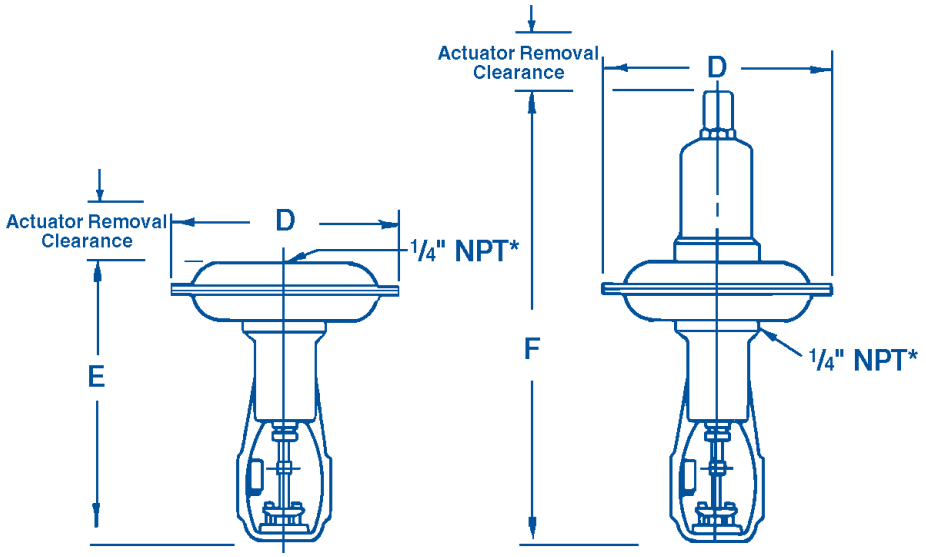


Shown with optional handwheel

Model 87/88 Spring Diaphragm Actuator

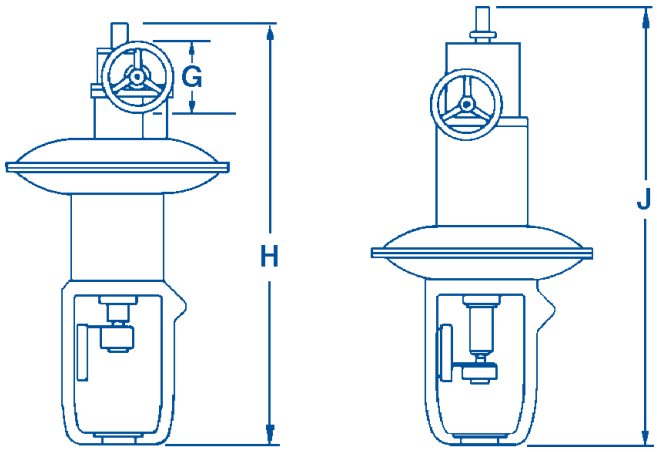
Actuator Size	P	R	S	T
6	292	394	254	228
10	368	497	277	305
16	476	717	330	457
23	549	780	381	457

Actuator removal clearance = 150 mm



Direct (37)
Air to Close

Reverse (38)
Air to Open



Direct (37)
Air to Close

Reverse (38)
Air to Open

Type 8A
Handwheel

Model 37/38 Spring Diaphragm Actuator

Actuator					Top-Mounted Handwheel			
Size	Actuator Removal Clearance	D	E Dir.	F Rev.	Type	G	H Dir.	J Rev.
18 with 16" Spring	142	527	843	1069	8A	203	1346	1346
18 with 20" Spring	142	527	-	1321	8A	203	-	1346
24	127	699	881	1156	8A	305	1346	1473

*1/2" NPT for No. 24 Actuator

Weights (kg)

Body S/A Weights

Valve Size		Flanged Connection					Threaded / Welded Connection			
mm	inch	ANSI Class 150, 300 and equivalent PN	ANSI Class 600 and equivalent PN	ANSI Class 900 and equivalent PN	ANSI Class 1500 and equivalent PN	ANSI Class 2500 and equivalent PN	ANSI Class 600 and equivalent PN	ANSI Class 900 and equivalent PN	ANSI Class 1500 and equivalent PN	ANSI Class 2500 and equivalent PN
50	**2**	45	45	65	65	69	36	39	39	39
80	**3**	100	100	147	160	182	84	113	113	118
100	**4**	165	169	240	248	299	127	185	185	222
150	**6**	245	260	526	536	657	234	394	394	471
200	**8**	418	439	692	816	997	353	701	701	845
250	**10**	630	677	1066	1270	-	547	714	973	-
300	**12**	980	1015	1497	1769	-	954	1211	1320	-
400	**16**	1454	1506	-	-	-	1412	-	-	-

Model 87/88 Spring Diaphragm Actuator

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

Model 37/38 Spring Diaphragm Actuator

Size	Standard		With Handwheel	
	Direct	Reverse	Direct	Reverse
18 (16)	86	167	104	186
18 (20)	-	204	-	222
24	147	245	179	276

Accessories

Side Mounted Handwheels
For 87/88 Actuators
(See Specification Data CR8788 E)
Top Mounted Handwheels
For 37/38 Actuators
(See Specification Data CR3000)

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

4700 E Series Electropneumatic Positioner
8013 Series Electropneumatic Positioner
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)
77-6 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
496-4 (1-Proximity Detector)
496-5 (2-Proximity Detectors)
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
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
Soft Seat (IEC 534-4 and ANSI Class VI)
Non-Destructive Examination
Oxygen Cleaning
Electric Actuators

For additional Accessories and Options, consult Masoneilan

Notes

Notes