Masoneilan® 21000 Series Control Valves

Specification Data

CH1080

11/99

A Complete Line of Rugged, Top Guided, Globe Valves with LO-DB®/Anti-Cavitation Capabilities

A Halliburton Company

DRESSER VALVE DIVISION

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Foreword

21000 Series single ported heavy top guided control valves are designed with built in versatility making them well-suited to handle a wide variety of process applications. Standard features include:

Top Guided
Rugged, heavy top plug guiding provides maximum support to ensure plug stability.

Single and Double Stage
LO-DB®/Anti-cavitation Trim
Replacing the conventional plug with the LO-DB®/Anti-cavitation design provides excellent noise attenuation or cavitation control.

Reduced Capacity
A series of reduced area trim is available to provide wide flow range capabilities in all valve sizes.

Environmental Packing
Low emission LE Packing is available to assure compliance with the Clean Air Act.

Pressure Drop Capability
A variety of actuator sizes to handle low to high pressure drop requirements.

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

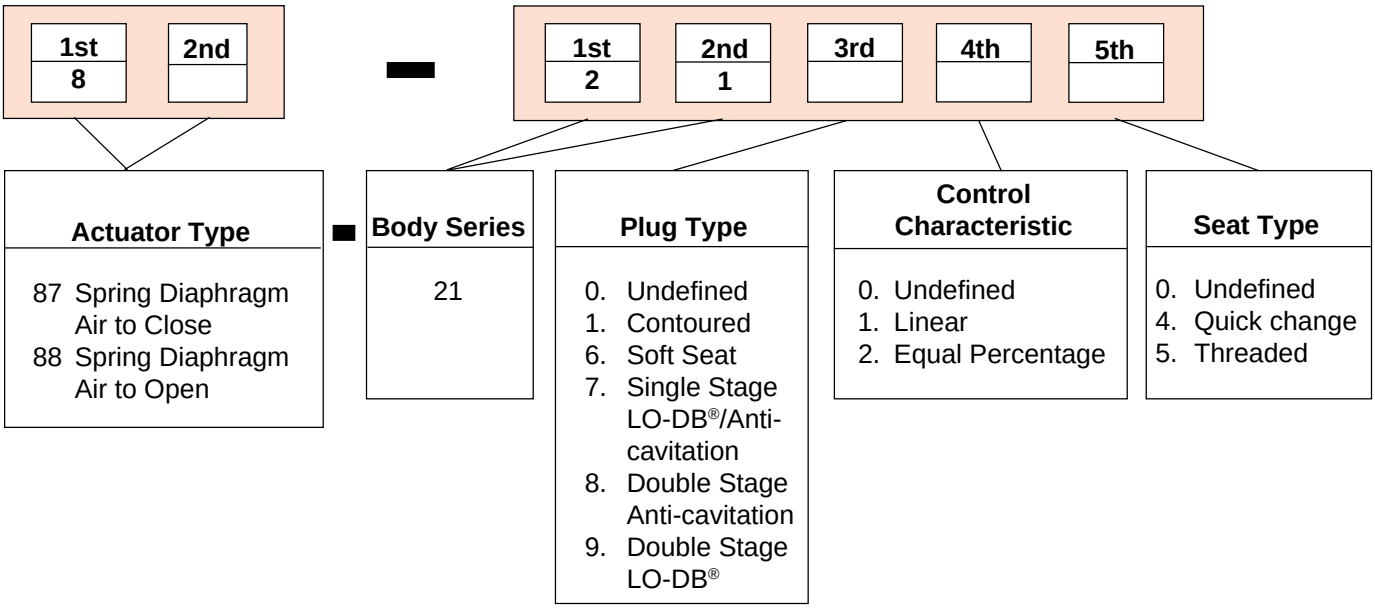
Proper application requires consideration with regards to cavitation, noise, velocity, etc. Refer to Masoneilan sizing and noise manuals.

Tight Shutoff
Class IV leakage is standard. Optional constructions meet IEC 534-4 and ANSI/FCI 70.2 Class V and VI.

Hardened Trim
Provided as standard to handle the high pressure drop capabilities of the 21000 Series.

Trim Type
Standard construction offers a quick change or threaded seat ring.

Numbering System



General Data

- **Flow Direction**
  - contoured: flow-to-open
  - LO-DB®: flow-to-open
  - anti-cavitation: flow-to-close
- **Body**
  - type: high capacity globe
- **Bonnet**
  - type: bolted
    - standard
    - extension
- **Body and Bonnet**
  - materials: carbon steel
    - 316 stainless steel
    - chrome-molybdenum steel
- **Trim**
  - plug type: contoured
    - soft seat
    - LO-DB® (1 or 2 stages)
    - anti-cavitation (1 or 2 stages)
  - seat ring: threaded
    - quick change
  - guide: heavy top guided
  - capacity: full area
    - reduced capacity in all sizes
  - C_v ratio: 50:1
  - flow characteristic: linear
    - equal percentage
- **Actuator**
  - type: spring diaphragm
  - handwheel: optional

Temperature Range/Seat Leakage

Contoured Trim

Valve Size		Body Rating	Seat Type	Temperature Range ①				Seat Leakage, IEC 534-4 and ANSI/FCI 70.2 Class	
				Standard Bonnet		Extension Bonnet			
mm	inch			min.	max.	min.	max.		
20 to 150	3/4 to 6	PN 10 to 100 ANSI Class 150 to 600	Threaded Metal	-20°F (-29°C)	+450°F (+232°C)	-20°F (-29°C)	+650°F (+343°C)	IV	V
			Quick Change Metal	-20°F (-29°C)	+450°F (+232°C)	-20°F (-29°C)	+800°F (+427°C)		
			Threaded Soft Seat	-20°F (-29°C)	+450°F (+232°C)	-20°F (-29°C)	+450°F (+232°C)	VI	
			Quick Change Soft Seat	-20°F (-29°C)	+450°F (+232°C)	-20°F (-29°C)	+450°F (+232°C)		

LO-DB®/Anti-cavitation Trim (1 or 2 stages) ②

Valve Size		Body Rating	Seat Type	Temperature Range ①				Seat Leakage, IEC 534-4 and ANSI/FCI 70.2 Class	
				Standard Bonnet		Extension Bonnet			
mm	inch			min.	max.	min.	max.		
20 to 150	3/4 to 6	PN 10 to 100 ANSI Class 150 to 600	Threaded Metal	-20°F (-29°C)	+450°F (+232°C)	-20°F (-29°C)	+650°F (+343°C)	IV	V
			Quick Change Metal	-20°F (-29°C)	+450°F (+232°C)	-20°F (-29°C)	+800°F (+427°C)		

Ratings/Connections ③

□ RF Flanged • Socket Weld ○ Threaded Δ RT Joint ■ Butt Weld

Valve Size		PN 10 to 100 ANSI Class 150 to 600
mm	inch	
20 to 50	3/4 to 2	□ • ○ Δ
80 to 150	3 to 6	□ Δ ■

① Temperature limitations are valid for PTFE based packings and LE packing. The LE Packing also has a pressure limit of 750 PSIG (52 bar). For graphite packing, there is no temperature limitation inherent with the packing itself. For other material limitations, refer to table on Materials of Construction, page 9.

② Quick Change seat ring only for double stage control valves.
DN 150 (6") not available for double stage anticavitation valves.

③ Ra 125 - 250 is the standard flange finish.
Other flange facings and surface finishes are available.
Other ratings, sizes, and materials are available, consult Masoneilan.

C_v and F_L versus Travel for 21100 and 21600 Series

Contoured Trim
Body Rating: PN 10 to 100 - ANSI Class 150 to 600
Sizes: DN 20 to DN 150 - 3/4" to 6"

Flow Characteristic: **LINEAR**

Percent of Travel						10	20	30	40	50	60	70	80	90	100
F_L						0.93	0.93	0.92	0.92	0.91	0.91	0.91	0.90	0.90	0.90
Valve Size		Orifice Diameter		Travel		Rated C_v									
inches	mm	inches	mm	inches	mm										
3/4 & 1	20 & 25	0.250	6.4	0.8	20.3	0.10	0.24	0.41	0.61	0.88	1.14	1.36	1.51	1.63	1.7
		0.375	9.5	0.8	20.3	0.23	0.53	0.91	1.37	1.98	2.55	3.04	3.38	3.65	3.8
		0.500	12.7	0.8	20.3	0.36	0.84	1.44	2.16	3.12	4.02	4.80	5.34	5.76	6
		0.812	20.6	0.8.	20.3	0.7	1.7	2.9	4.3	6.2	8.0	9.6	10.7	11.5	12
1 1/2	40	0.250	6.4	0.8	20.3	0.10	0.24	0.41	0.61	0.88	1.14	1.36	1.51	1.63	1.7
		0.375	9.5	0.8	20.3	0.23	0.53	0.91	1.37	1.98	2.55	3.04	3.38	3.65	3.8
		0.500	12.7	0.8	20.3	0.36	0.84	1.44	2.16	3.12	4.02	4.8	5.34	5.76	6
		0.812	20.6	0.8	20.3	0.8	1.8	3.1	4.7	6.8	8.7	10.4	11.6	12.5	13
		1.250	31.8	0.8	20.3	1.5	3.5	6.0	9.0	13.0	16.8	20.0	22.3	24.0	25
		1.625	41.3	0.8	20.3	2.1	4.9	8.4	12.6	18.2	23.5	28.0	31.2	33.6	35
2	50	0.250	6.4	0.8	20.3	0.10	0.24	0.41	0.61	0.88	1.14	1.36	1.51	1.63	1.7
		0.375	9.5	0.8	20.3	0.23	0.53	0.91	1.37	1.98	2.55	3.04	3.38	3.65	3.8
		0.500	12.7	0.8	20.3	0.36	0.84	1.44	2.16	3.12	4.02	4.80	5.34	5.76	6
		0.812	20.6	0.8	20.3	0.9	2.1	3.6	5.4	7.8	10.1	12.0	13.4	14.4	15
		1.250	31.8	0.8	20.3	1.6	3.6	6.2	9.4	13.5	17.4	20.8	23.1	24.9	26
		1.625	41.3	0.8	20.3	2.8	6.4	11.0	16.6	23.9	30.8	36.8	40.9	44.2	46
3	80	1.250	31.8	1.5	38.1	1.9	4.3	7.4	11.2	16.1	20.8	24.8	27.6	29.8	31
		1.625	41.3	1.5	38.1	2.8	6.6	11.3	16.9	24.4	31.5	37.6	41.8	45.1	47
		2.625	66.7	1.5	38.1	6.6	15.4	26.4	39.6	57.2	73.7	88.0	97.9	105.6	110
4	100	1.625	41.3	1.5	38.1	2.9	6.9	11.8	17.6	25.5	32.8	39.2	43.6	47.0	49
		2.625	66.7	1.5	38.1	6.8	15.8	27.1	40.7	58.8	75.7	90.4	100.6	108.5	113
		3.500	88.9	1.5	38.1	11.7	27.3	46.8	70.2	101.4	130.6	156.0	173.6	187.2	195
6	150	1.625	66.7	2.0	50.8	7.6	17.6	30.2	45.4	65.5	84.4	100.8	112.1	120.9	126
		3.500	88.9	2.0	50.8	12.5	29.1	49.9	74.9	108.2	139.4	166.4	185.1	199.7	208
		5.000	127	2.0	50.8	24	56	96	144	208	268	320	356	384	400

C_v and F_L versus Travel for 21100 and 21600 Series

Contoured Trim
Body Rating: PN 10 to 100 - ANSI Class 150 to 600
Sizes: DN 20 to DN 150 - 3/4" to 6"

Flow Characteristic: **EQUAL PERCENTAGE**

Percent of Travel						10	20	30	40	50	60	70	80	90	100
F_L						0.93	0.93	0.93	0.93	0.93	0.92	0.92	0.91	0.91	0.90
Valve Size		Orifice Diameter		Travel		Rated C_v									
inches	mm	inches	mm	inches	mm										
3/4 & 1	20 & 25	0.375	9.5	0.8	20.3	0.13	0.19	0.27	0.42	0.72	1.37	2.14	2.86	3.42	3.8
		0.500	12.7	0.8	20.3	0.21	0.30	0.42	0.66	1.13	2.16	3.38	4.52	5.4	6
		0.812	20.6	0.8	20.3	0.4	0.6	0.8	1.3	2.3	4.3	6.8	9.0	10.8	12
1 1/2	40	0.375	9.5	0.8	20.3	0.13	0.19	0.27	0.42	0.72	1.37	2.14	2.86	3.42	3.8
		0.500	12.7	0.8	20.3	0.21	0.30	0.42	0.66	1.13	2.16	3.38	4.52	5.4	6
		0.812	20.6	0.8	20.3	0.5	0.6	0.9	1.4	2.5	4.7	7.3	9.8	11.7	13
		1.250	31.8	0.8	20.3	0.9	1.3	1.8	2.8	4.7	9.0	14.1	18.8	22.5	25
		1.625	41.3	0.8	20.3	1.2	1.8	2.5	3.9	6.6	12.6	19.7	26	31.5	35
2	50	0.375	9.5	0.8	20.3	0.13	0.19	0.27	0.42	0.72	1.37	2.14	2.86	3.42	3.8
		0.500	12.7	0.8	20.3	0.21	0.30	0.42	0.66	1.13	2.16	3.38	4.52	5.4	6
		0.812	20.6	0.8	20.3	0.5	0.8	1.1	1.7	2.8	5.4	8.5	11.3	13.5	15
		1.250	31.8	0.8	20.3	0.9	1.3	1.8	2.9	4.9	9.4	14.7	19.6	23.4	26
		1.625	41.3	0.8	20.3	1.6	2.3	3.2	5.1	8.7	16.6	26	35	41	46
3	80	1.250	31.8	1.5	38.1	1.1	1.6	2.2	3.4	5.9	11.2	17.5	23.3	28	31
		1.625	41.3	1.5	38.1	1.7	2.4	3.3	5.2	8.9	16.9	26.5	35.0	42.0	47
		2.625	66.7	1.5	38.1	3.9	5.5	7.7	12.1	21	40	62	83	99	110
4	100	1.625	41.3	1.5	38.1	1.7	2.5	3.4	5.4	9.3	17.6	27.6	36.9	44	49
		2.625	66.7	1.5	38.1	3.9	5.7	7.9	12.4	21	41	64	85	102	113
		3.500	88.9	1.5	38.1	6.8	9.8	13.7	21	37	70	110	147	176	195
6	150	2.625	66.7	2.0	50.8	4.4	6.3	8.8	13.9	24	45	71	95	113	126
		3.500	88.9	2.0	50.8	7.3	10.4	14.6	23	39	75	117	157	187	208
		5.000	127	2.0	50.8	14	20	28	44	76	144	226	301	360	400

21700 Series

Single Stage LO-DB®/Anti-cavitation Trim
Body Rating: PN 10 to 100 - ANSI Class 150 to 600
Sizes: DN 20 to DN 150 - 3/4" to 6"

Flow Characteristic: **LINEAR**

Percent of Travel						10	20	30	40	50	60	70	80	90	100
F_L						0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Valve Size		Orifice Diameter		Travel		Rated C_v									
inches	mm	inches	mm	inches	mm										
3/4 & 1	20 & 25	0.812	20.6	0.8	20.3	0.24	0.56	0.96	1.44	2.08	2.68	3.20	3.56	3.84	4
		0.812	20.6	0.8	20.3	0.48	1.12	1.92	2.88	4.16	5.36	6.40	7.12	7.68	8*
1 1/2	40	1.250	31.8	0.8	20.3	0.48	1.12	1.92	2.88	4.16	5.36	6.40	7.12	7.68	8
						0.9	2.1	3.6	5.4	7.8	10.1	12.0	13.4	14.4	15
2	50	1.250	31.8	0.8	20.3	0.48	1.12	1.92	2.88	4.16	5.36	6.40	7.12	7.68	8
						0.9	2.1	3.6	5.4	7.8	10.1	12.0	13.4	14.4	15
		2.000	50.8	0.8	20.3	1.5	3.5	6.0	9.0	13.0	16.8	20.0	22.3	24.0	25
3	80	2.625	66.7	1.5	38.1	2.9	6.7	11.5	17.3	24.9	32.2	38.4	42.7	46.1	48
						4.5	10.5	18.0	27.0	39.0	50.3	60.0	66.8	72.0	75
4	100	2.625	66.7	1.5	38.1	3.8	8.8	15.1	22.7	32.8	42.2	50.4	56.1	60.5	63
		3.500	88.9	1.5	38.1	6	14	24	36	52	67	80	89	96	100
6	150	5.000	127	2.0	50.8	9	21	36	54	78	101.5	120	134	144	150
		5.000	127	2.0	50.8	12	28	48	72	104	134	160	178	192	200

*** Quick change only**

C_v and F_L versus Travel for 21800 Series

Double Stage Anti-cavitation Trim
Body Rating: PN 10 to 100 - ANSI Class 150 to 600
Sizes: DN 20 to DN 100 - 3/4" to 4"

Flow Characteristic: **LINEAR**

Percent of Travel						10	20	30	40	50	60	70	80	90	100
F_L						0.975	0.975	0.975	0.975	0.975	0.975	0.975	0.975	0.975	0.975
Valve Size		Orifice Diameter		Travel		Rated C_v									
inches	mm	inches	mm	inches	mm										
3/4 & 1	20 & 25	0.812	20.6	0.8	20.3	0.14	0.32	0.55	0.83	1.20	1.54	1.84	2.05	2.21	2.3
		0.812	20.6	0.8	20.3	0.27	0.63	1.08	1.62	2.34	3.02	3.60	4.01	4.32	4.5
1 1/2	40	0.812	20.6	0.8	20.3	0.14	0.32	0.55	0.83	1.20	1.54	1.84	2.05	2.21	2.3
		1.250	31.8	0.8	20.3	0.27	0.63	1.08	1.62	2.34	3.02	3.60	4.01	4.32	4.5
						0.51	1.19	2.04	3.06	4.42	5.70	6.8	7.57	8.16	8.5
2	50	1.250	31.8	0.8	20.3	0.14	0.32	0.55	0.83	1.20	1.54	1.84	2.05	2.21	2.3
		1.250	31.8	0.8	20.3	0.27	0.63	1.08	1.62	2.34	3.02	3.60	4.01	4.32	4.5
		1.250	31.8	0.8	20.3	0.51	1.19	2.0	3.06	4.42	5.70	6.8	7.57	8.16	8.5
		1.625	41.3	0.8	20.3	0.8	1.9	3.4	5.0	7.3	9.4	11.2	12.5	13.4	14
3	80	2.625	66.7	1.5	38.1	1.7	4.1	6.9	10.4	15.1	19.4	23.2	25.8	27.8	29
		2.625	66.7	1.5	38.1	2.5	5.9	10.1	15.1	21.8	28.1	33.6	37.4	40.3	42
4	100	2.625	66.7	1.5	38.1	2.4	5.6	9.6	14.4	20.8	26.8	32.0	35.6	38.4	40
		3.500	88.9	1.5	38.1	3.7	8.7	14.9	22.3	32.2	41.5	49.6	55.2	59.5	62

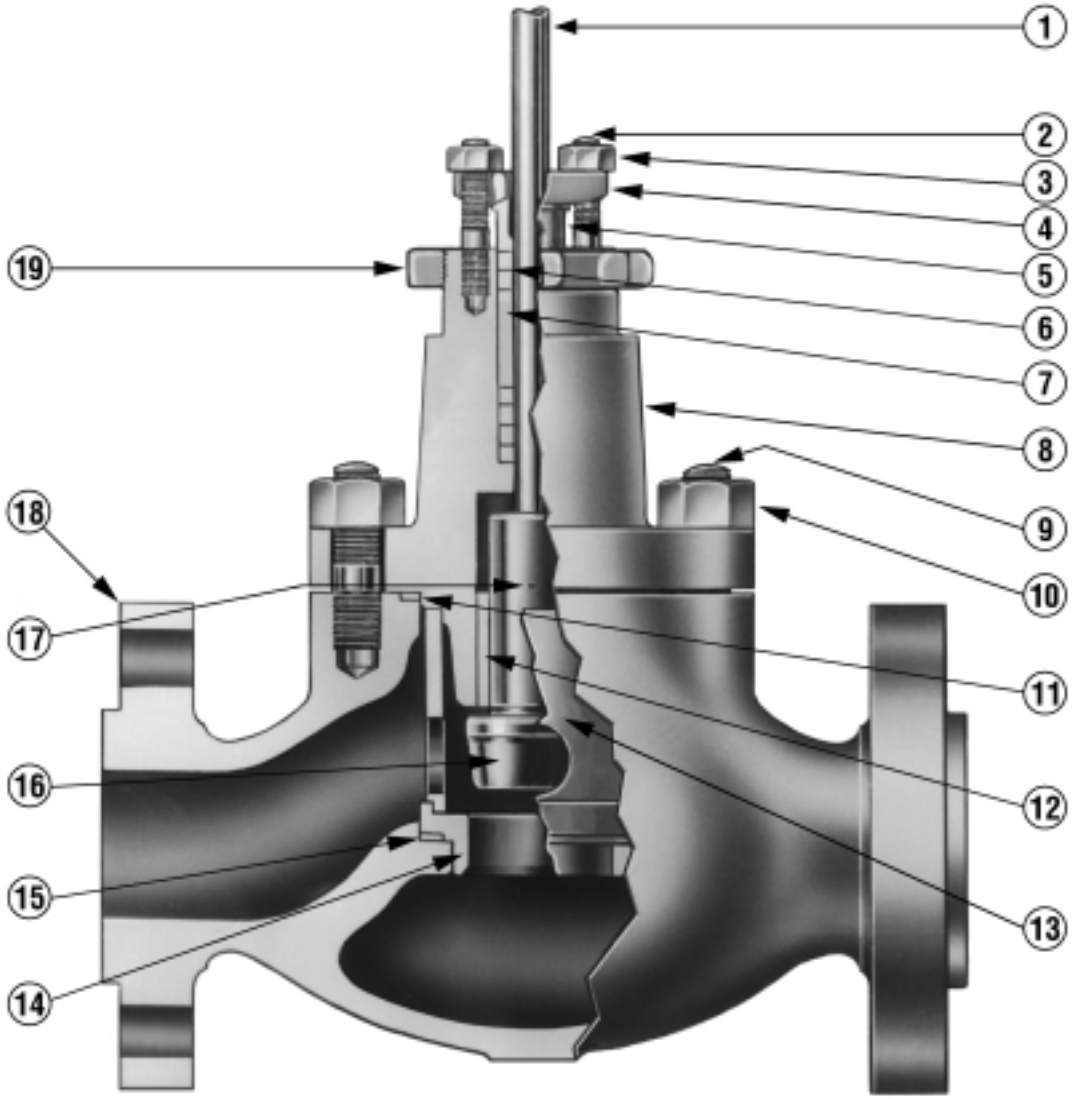
21900 Series

Double Stage LO-DB® Trim
Body Rating: PN 10 to 100 - ANSI Class 150 to 600
Sizes: DN 20 to DN 150 - 3/4" to 6"

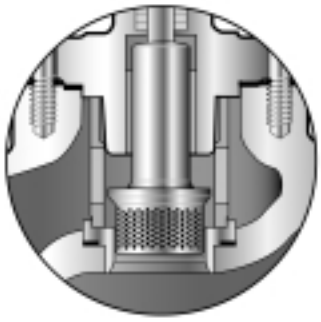
Flow Characteristic: **LINEAR**

Percent of Travel						10	20	30	40	50	60	70	80	90	100
F_L						0.975	0.975	0.975	0.975	0.975	0.975	0.975	0.975	0.975	0.975
Valve Size		Orifice Diameter		Travel		Rated C_v									
inches	mm	inches	mm	inches	mm										
3/4 & 1	20 & 25	0.812	20.6	0.8	20.3	0.21	0.49	0.84	1.26	1.82	2.35	2.8	3.12	3.36	3.5
		0.812	20.6	0.8	20.3	0.34	0.80	1.37	2.05	2.96	3.82	4.56	5.07	5.47	5.7
1 1/2	40	1.250	31.8	0.8	20.3	0.42	0.98	1.68	2.52	3.64	4.69	5.6	6.23	6.72	7
						0.8	1.8	3.1	4.7	6.8	8.7	10.4	11.6	12.5	13
2	50	1.250	31.8	0.8	20.3	0.8	1.8	3.1	4.7	6.8	8.7	10.4	11.6	12.5	13
		1.625	41.3	0.8	20.3	1.3	2.9	5.0	7.6	10.9	14.1	16.8	18.7	20.2	21
3	80	2.625	66.7	1.5	38.1	2.4	5.6	9.6	14.4	20.8	26.8	32.0	35.6	38.4	40
						3.8	8.8	15.1	22.7	32.8	42.2	50.4	56.1	60.5	63
4	100	2.625	66.7	1.5	38.1	3.2	7.4	12.7	19.1	27.6	35.5	42.4	47.2	50.9	53
		3.500	88.9	1.5	38.1	4.9	11.6	19.9	29.9	43.2	55.6	66.4	73.9	79.7	83
6	150	5.000	127	2.0	50.8	7.5	17.5	30	45	65	84	100	111	120	125

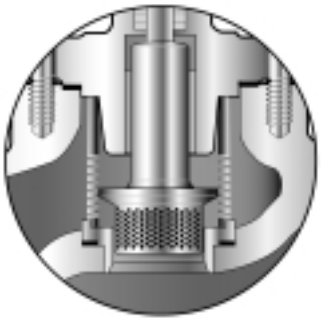
Materials of Construction



Standard Construction

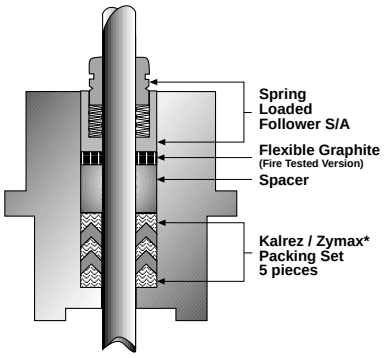


Single Stage LO-DB®/ Anti-cavitation Trim



Double Stage LO-DB®/ Anti-cavitation Trim

Soft Seated Plug S/A



LE® Packing System *(Optional)* Low Emission Stem Packing

*Kalrez and Zymax are registered Dupont Corporation Trademarks for Perfluoroelastomer and long carbon fiber filled PTFE, respectively.

Materials of Construction

Ref. No.	Temperature Range / Description	-20°F (-29°C) ∇	450°F (232°C) ∇	650°F (343°C) ∇	800°F (427°C) ∇
		Standard Materials *(Optional Materials)*			
1	Plug Stem	316 St. St. ASTM 479 TY 316			
		17-4 PH St. St. ASTM A564 Gr 630			
2	Packing Flange Stud	304 St. St. ASTM A193 Gr B8			
3	Packing Flange Nut	304 St. St. ASTM A194 Gr 8			
4	Packing Flange	Carbon Steel ASTM A668 CL B			
5	Packing Follower	300 Series Stainless Steel			
6	Packing	Kevlar PTFE or *Braided PTFE* w/ std. bonnet			
		Kevlar PTFE or *Braided PTFE* with extension bonnet			
		Flexible Graphite			
		LE Packing (See Page 4 for Temperature and Pressure Limits)			
7	Lantern ring	300 Series Stainless Steel (Packing Spacer Optional)			
8	Bonnet	Carbon Steel ASTM A216 Gr WCC			
18	Body	Chrome-Moly Steel ASTM A217 Gr WC9			
		316 St. St. ASTM A351 Gr CF8M			
9	Valve Body Studs	Alloy Steel ASTM A193 Gr B7			
10	Valve Body Stud Nut	Alloy Steel ASTM A194 Gr 2H			
11	Valve Body Gasket	316L St. St. w/Flexible Graphite Filler (Spiral Wound)			
12	Guide Bushing	440C St. St. ASTM A276 TY 440C ①			
		Nitronic 60			
13	Cage	304 St. St. ASTM A487 Gr CA6NM CLB			
14	Seat Ring ② ③	416 St. St. ASTM A582 TY 416 or ASTM A479 TY 316 ①			
		316 St. St. ASTM A479 TY 316; Standard w/St. St. Body			
		316 St. St. ASTM A479 TY 316 with Hardfacing			
15	Seat Ring Gasket	316 L St. St. w/Flexible Graphite Filler (Spiral Wound)			
16	Plug ③	416 St. St. ASTM A582 TY 416			
		316 St. St. ASTM A479 TY 316; Standard w/St. St. Body			
		316 St. St. ASTM A479 TY 316 with Hardfacing			
		316 St. St. ASTM A479 TY 316 w/Hardfacing Seat & Post or Solid Stellite			
		316 St. St. ASTM A479 TY 316 with Teflon Soft Seat			
17	Plug Pin	ASTM A582 TY 303			
19	Drive Nut	SAE 1117			
Ref. No.	Temperature Range	Δ -20°F (-29°C)	Δ 450°F (232°C)	Δ 650°F (343°C)	Δ 800°F (427°C)

① Not supplied with st. st. body.

② For threaded seat ring version, temperature should not exceed limits specified page 4, irrespective of materials.

③ Seat ring material must be identical to plug material.

Not applicable

Consult Masoneilan

Note:
- Materials compliant with UOP, NACE specifications are available.
- EN materials available on request.
- For temperature below -20°F and above 800°F, consult Masoneilan for recommended materials combination.

Allowable Pressure Drops for 21100 Series (PSIG)
Air to Close, Flow to Open

Contoured Trim
Body Rating: PN 10 to 100 - ANSI Class 150 to 600
Leakage: Per IEC 534-4 and ANSI/FCI 70.2, Class IV and Class V
PTFE Packing and Standard Bonnet

Bench Range (PSIG): 3 - 15

Valve Size		Travel (inches)	Rated Cv	Actuator Size	Supply Pressure (PSIG)									
					20		30		40		50		60	
mm	inch				Cl IV	Cl V	Cl IV	Cl V	Cl IV	Cl V	Cl IV	Cl V	Cl IV	Cl V
20 & 25	3/4 & 1	0.8	12	6	331	-	1490	899	1500	1500	1500	1500	1500	1500
			6	6	1024	64	1500	1500	1500	1500	1500	1500	1500	1500
			3.8	6	1500	647	1500	1500	1500	1500	1500	1500	1500	1500
			1.7	6	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
40	1 1/2	0.8	35	6	46	-	335	40	624	329	914	618	1203	908
			35	10	142	-	624	329	1107	811	1500 *	1293 *	1500 *	1500 *
			25	6	106	-	595	211	1084	700	1500	1189	1500	1500
			25	10	269	-	1084	700	1500	1500	1500 *	1500 *	1500 *	1500 *
			13	6	331	-	1490	899	1500	1500	1500	1500	1500	1500
			6	6	1024	64	1500	1500	1500	1500	1500	1500	1500	1500
			3.8	6	1500	647	1500	1500	1500	1500	1500	1500	1500	1500
			1.7	6	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
50	2	0.8	46	6	46	-	335	40	624	329	914	618	1203	908
			46	10	142	-	624	329	1107	811	1500 *	1293 *	1500 *	1500 *
			26	6	106	-	595	211	1084	700	1500	1189	1500	1500
			26	10	269	-	1084	700	1500	1500	1500 *	1500 *	1500 *	1500 *
			15	6	331	-	1490	899	1500	1500	1500	1500	1500	1500
			6	6	1024	64	1500	1500	1500	1500	1500	1500	1500	1500
			3.8	6	1500	647	1500	1500	1500	1500	1500	1500	1500	1500
			1.7	6	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
80	3	1.5	110	10	37	-	222	39	407	224	591 *	409 *	776 *	593 *
			110	16	93	-	388	205	684 *	501 *	-	-	-	-
			47	10	142	-	624	329	1107	811	1500 *	1293 *	1500 *	1500 *
			47	16	287	-	1058	763	1500 *	1500 *	-	-	-	-
			31	10	269	-	1084	700	1500	1500	1500 *	1500 *	1500 *	1500 *
100	4	1.5	195	10	12	-	116	-	220	83	324 *	187 *	428 *	291 *
			195	16	43	-	210	73	376 *	239 *	-	-	-	-
			113	10	37	-	222	39	407	224	591 *	409 *	776 *	593 *
			113	16	93	-	388	205	684 *	501 *	-	-	-	-
			49	10	142	-	624	329	1107	811	1500 *	1293 *	1500 *	1500 *
			49	16	287	-	1058	763	1500 *	1500 *	-	-	-	-
150	6	2.0	400	16	12	-	94	-	175	79	256	160	338 *	242 *
			400	23	30	-	147	51	264	168	381 *	285 *	498 *	402 *
			208	16	39	-	205	68	372	234	538	401	704 *	567 *
			208	23	75	-	314	177	553	416	793 *	655 *	1032 *	894 *
			126	16	84	-	380	197	676	493	971	789	1267 *	1084 *
			126	23	149	-	574	391	999	816	1424 *	1241 *	1500 *	1500 *

***17-4PH A 638 Gr 660 Stem Standard**

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

Allowable Pressure Drops for 21100 Series (bar)
Air to Close, Flow to Open

Contoured Trim
Body Rating: PN 10 to 100 - ANSI Class 150 to 600
Leakage: Per IEC 534-4 and ANSI/FCI 70.2, Class IV and Class V
Kevlar PTFE Packing and Standard Bonnet

Bench Range (PSIG): 3 - 15

Valve Size		Travel (mm)	Rated Cv	Actuator Size	Supply Pressure (bar)									
					1.4		2.1		2.8		3.4		4.1	
mm	inch				Cl IV	Cl V	Cl IV	Cl V	Cl IV	Cl V	Cl IV	Cl V	Cl IV	Cl V
20 & 25	3/4 & 1	20.3	12	6	23	-	103	103	103	103	103	103	103	103
			6	6	71	4.2	103	103	103	103	103	103	103	103
			3.8	6	103	44	103	103	103	103	103	103	103	103
			1.7	6	103	103	103	103	103	103	103	103	103	103
40	1 1/2	20.3	35	6	3.2	-	23	2.7	43	23	63	43	83	63
			35	10	9.9	-	43	23	76	56	103 *	89 *	103 *	103 *
			25	6	7.4	-	41	15	75	48	103	82	103	103
			25	10	19	-	75	48	103	103	103 *	103 *	103 *	103 *
			13	6	23	-	103	62	103	103	103	103	103	103
			6	6	71	4.2	103	103	103	103	103	103	103	103
			3.8	6	103	44	103	103	103	103	103	103	103	103
			1.7	6	103	103	103	103	103	103	103	103	103	103
50	2	20.3	46	6	3.2	-	23	2.7	43	23	63	43	83	63
			46	10	9.9	-	43	23	76	56	103 *	89 *	103 *	103 *
			26	6	7.4	-	41	15	75	48	103	82	103	103
			26	10	19	-	75	48	103	103	103 *	103 *	103 *	103 *
			15	6	23	-	103	62	103	103	103	103	103	103
			6	6	71	4.2	103	103	103	103	103	103	103	103
			3.8	6	103	44	103	103	103	103	103	103	103	103
			1.7	6	103	103	103	103	103	103	103	103	103	103
80	3	38.1	110	10	2.6	-	15	2.7	28	15	41 *	28 *	54 *	41 *
			110	16	6.4	-	27	14	47 *	35 *	-	-	-	-
			47	10	9.9	-	43	23	76	56	103 *	89 *	103 *	103 *
			47	16	20	-	73	53	103 *	103 *	-	-	-	-
			31	10	19	-	75	48	103	103	103 *	103 *	103 *	103 *
100	4	38.1	195	10	0.8	-	8.0	-	15	5.7	22 *	13 *	30 *	20 *
			195	16	3.0	-	15	5.0	26 *	17 *	-	-	-	-
			113	10	2.6	-	15	2.7	28	15	41 *	28 *	54 *	41 *
			113	16	6.4	-	27	14	47 *	35 *	-	-	-	-
			49	10	9.9	-	43	23	76	56	103 *	89 *	103 *	103 *
			49	16	20	-	73	53	103 *	103 *	-	-	-	-
150	6	50.8	400	16	0.8	-	6.5	-	12	5.4	18	11	23 *	17 *
			400	23	2.0	-	10	3.5	18	12	26 *	20 *	34 *	28 *
			208	16	2.7	-	14	4.7	26	16	37	28	49 *	39 *
			208	23	5.2	-	22	12	38	29	55 *	45 *	71 *	62 *
			126	16	5.8	-	26	14	47	34	67	54	88 *	75 *
			126	23	10	-	40	27	69	56	98 *	86 *	103 *	103 *

***17-4PH or A 638 Gr 660 Stem Standard**

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

Allowable Pressure Drops for 21100 Series (PSIG)
Air to Open, Flow to Open

Contoured Trim

Body Rating: PN 10 to 100 - ANSI Class 150 to 600

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

PTFE Packing and Standard Bonnet

Supply pressure is 5 PSIG over bench range

Valve Size		Travel (inches)	Rated Cv	Actuator Size	Bench Range (PSIG)							
					3 - 15		6 - 30		11 - 23		21 - 45	
mm	inch				Cl IV	Cl V	Cl IV	Cl V	Cl IV	Cl V	Cl IV	Cl V
20 & 25	3/4 & 1	0.8	12	6	100	-	447	-	1027	435	1500	1500
			12	10	331	-	911	320	1500	1285	1500	1500
			6	6	413	-	1329	369	1500	1500	1500	1500
			6	10	1024	64	1500	1500	1500	1500	1500	1500
			3.8	6	840	-	1500	1190	1500	1500	1500	1500
			1.7	6	1500	211	1500	1500	1500	1500	1500	1500
40	1 1/2	0.8	35	6	-	-	75	-	219	-	509	213
			35	10	46	-	190	-	432	136	914	618
			25	6	8	-	155	-	400	16	889	505
			25	10	106	-	351	-	758	374	1500	1189
			13	6	100	-	447	-	1027	435	1500	1500
			13	10	331	-	911	320	1500	1285	1500	1500
			6	6	413	-	1329	369	1500	1500	1500	1500
			6	10	1024	64	1500	1500	1500	1500	1500	1500
			3.8	6	840	-	1500	1190	1500	1500	1500	1500
			1.7	6	1500	211	1500	1500	1500	1500	1500	1500
50	2	0.8	46	6	-	-	75	-	219	-	509	213
			46	10	46	-	190	-	432	136	914	618
			26	6	8	-	155	-	400	16	889	505
			26	10	106	-	351	-	758	374	1500	1189
			15	6	100	-	447	-	1027	435	1500	1500
			15	10	331	-	911	320	1500	1285	1500	1500
			6	6	413	-	1329	369	1500	1500	1500	1500
			6	10	1024	64	1500	1500	1500	1500	1500	1500
			3.8	6	840	-	1500	1190	1500	1500	1500	1500
			1.7	6	1500	211	1500	1500	1500	1500	1500	1500
80	3	1.5	110	10	-	-	56	-	148	-	333	150
			110	16	33	-	122	-	270	87	566 *	383 *
			110	23	72	-	200	17	412	229	-	-
			47	10	46	-	190	-	432	136	914	618
			47	16	133	-	364	69	750	454	1500 *	1226 *
			31	10	106	-	351	-	758	374	1500	1189
			31	16	253	-	644	260	1296	912	1500 *	1500 *
100	4	1.5	195	10	-	-	23	-	75	-	179	42
			195	16	10	-	60	-	143	-	310 *	172*
			195	23	32	-	104	-	223	86	-	-
			113	10	-	-	56	-	148	-	333	150
			113	16	33	-	122	-	270	87	566 *	383*
			113	23	72	-	200	17	412	229	-	-
			49	10	46	-	190	-	432	136	914	618
			49	16	133	-	364	69	750	454	1500 *	1226 *
150	6	2.0	400	23	6	-	41	-	100	-	217	121
			208	16	6	-	56	-	139	-	305	168
			208	23	28	-	99	-	219	82	458	321
			126	16	25	-	114	-	262	79	558	375
			126	23	64	-	192	-	404	221	829	646

***17-4PH A 638 Gr 660 Stem Standard**

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

Allowable Pressure Drops for 21100 Series (bar)
Air to Open, Flow to Open

Contoured Trim
Body Rating: PN 10 to 100 - ANSI Class 150 to 600
Leakage: Per IEC 534-4 and ANSI/FCI 70.2, Class IV and Class V
Kevlar PTFE Packing and Standard Bonnet

Supply pressure is 0.4 bar over bench range

Valve Size		Travel (mm)	Rated Cv	Actuator Size	Bench Range (PSIG)							
					3 - 15		6 - 30		11 - 23		21 - 45	
mm	inch				Cl IV	Cl V	Cl IV	Cl V	Cl IV	Cl V	Cl IV	Cl V
20 & 25	3/4 & 1	20.3	12	6	6.9	-	31	-	71	30	103	103
			12	10	23	-	63	22	103	89	103	103
			6	6	29	-	92	25	103	103	103	103
			6	10	71	4.2	103	103	103	103	103	103
			3.8	6	58	-	103	82	103	103	103	103
			1.7	6	103	14	103	103	103	103	103	103
40	1 1/2	20.3	35	6	-	-	5.2	-	15	-	35	15
			35	10	3.2	-	13	-	30	9.4	63	43
			25	6	0.6	-	11	-	28	1.0	61	35
			25	10	7.4	-	24	-	52	26	103	82
			13	6	6.9	-	31	-	71	30	103	103
			13	10	23	-	63	22	103	89	103	103
			6	6	29	-	92	25	103	103	103	103
			6	10	71	4.2	103	103	103	103	103	103
			3.8	6	58	-	103	82	103	103	103	103
			1.7	6	103	14	103	103	103	103	103	103
50	2	20.3	46	6	-	-	5.2	-	15	-	35	15
			46	10	3.2	-	13	-	30	9.4	63	43
			26	6	0.6	-	11	-	28	1.0	61	35
			26	10	7.4	-	24	-	52	26	103	82
			15	6	6.9	-	31	-	71	30	103	103
			15	10	23	-	63	22	103	89	103	103
			6	6	29	-	92	25	103	103	103	103
			6	10	71	4.2	103	103	103	103	103	103
			3.8	6	58	-	103	82	103	103	103	103
			1.7	6	103	14	103	103	103	103	103	103
80	3	38.1	110	10	-	-	3.9	-	10	-	23	10
			110	16	2.3	-	8.5	-	19	6.0	39 *	26 *
			110	23	5.0	-	14	1.1	29	16	-	-
			47	10	3.2	-	13	-	30	9.4	63	43
			47	16	9.2	-	25	4.7	52	31	103 *	85 *
			31	10	7.4	-	24	-	52	26	103	82
			31	16	18	-	45	18	90	63	103 *	103 *
100	4	38.1	195	10	-	-	1.6	-	5.2	-	12	2.8
			195	16	0.7	-	4.2	-	9.9	-	21 *	12 *
			195	23	2.2	-	7.2	-	15	5.9	-	-
			113	10	-	-	3.9	-	10	-	23	10
			113	16	2.3	-	8.5	-	19	6.0	39 *	26 *
			113	23	5.0	-	14	1.1	29	16	-	-
			49	10	3.2	-	13	-	30	9.4	63	43
			49	16	9.2	-	25	4.7	52	31	103 *	85 *
150	6	50.8	400	23	0.4	-	2.9	-	6.9	-	15	8.3
			208	16	0.4	-	3.9	-	9.6	-	21	12
			208	23	1.9	-	6.9	-	15	5.6	32	22
			126	16	1.8	-	7.9	-	18	5.4	39	26
			126	23	4.5	-	13	-	28	15	57	45

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

***17-4PH or A 638 Gr 660 Stem Standard**

Allowable Pressure Drops for 21600 Series (PSIG)
Air to Close, Flow to Open

Contoured Soft Seat Trim
Body Rating: PN 10 to 100 - ANSI Class 150 to 600
Leakage: Per IEC 534-4 and ANSI/FCI 70.2, Class VI
PTFE Packing and Standard Bonnet

Bench Range (PSIG): 3 - 15

Valve Size		Travel (inches)	Rated Cv	Actuator Size	Supply Pressure (PSIG)				
					20	30	40	50	60
mm	inch				Cl VI	Cl VI	Cl VI	Cl VI	Cl VI
20 & 25	3/4 & 1	0.8	12	6	233	1000	1000	1000	1000
			12	10	619	1000	1000	1000 *	1000 *
			6	6	864	1000	1000	1000	1000
			6	10	1000	1000	1000	1000 *	1000 *
			3.8	6	1000	1000	1000	1000	1000
			1.7	6	1000	1000	1000	1000	1000
40	1 1/2	0.8	35	6	-	286	575	864	1000
			35	10	93	575	1000	1000 *	1000 *
			25	6	42	531	1000	1000	1000
			25	10	205	1000	1000	1000 *	1000 *
			13	6	233	1000	1000	1000	1000
			13	10	619	1000	1000	1000 *	1000 *
			6	6	864	1000	1000	1000	1000
			6	10	1000	1000	1000	1000 *	1000 *
			3.8	6	1000	1000	1000	1000	1000
			1.7	6	1000	1000	1000	1000	1000
50	2	0.8	46	6	-	286	575	864	1000
			46	10	93	575	1000	1000 *	1000 *
			26	6	42	531	1000	1000	1000
			26	10	205	1000	1000	1000 *	1000 *
			15	6	233	1000	1000	1000	1000
			15	10	619	1000	1000	1000 *	1000 *
			6	6	864	1000	1000	1000	1000
			6	10	1000	1000	1000	1000 *	1000 *
			3.8	6	1000	1000	1000	1000	1000
			1.7	6	1000	1000	1000	1000	1000
80	3	1.5	110	10	-	191	376	561 *	746 *
			110	16	62	358	653 *	-	-
			47	10	93	575	1000	1000 *	1000 *
			31	10	205	1000	1000	1000 *	1000 *
100	4	1.5	195	10	-	93	197	301 *	405 *
			195	16	21	187	353 *	-	-
			113	10	-	191	376	561 *	746 *
			113	16	62	358	653 *	-	-
			49	10	93	575	1000	1000 *	1000 *
150	6	2.0	400	16	-	77	159	240	322 *
			400	23	-	131	250	365 *	482 *
			208	16	-	182	349	515	681 *
			208	23	52	292	531	770 *	1000 *
			126	16	54	350	645	941	1000 *
			126	23	119	544	969	1000 *	1000 *

***17-4PH A 638 Gr 660 Stem Standard**

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

Allowable Pressure Drops for 21600 Series (bar)
Air to Close, Flow to Open

Contoured Soft Seat Trim
Body Rating: PN 10 to 100 - ANSI Class 150 to 600
Leakage: Per IEC 534-4 and ANSI/FCI 70.2, Class VI
PTFE Packing and Standard Bonnet

Bench Range (PSIG): 3 - 15

Valve Size		Travel (mm)	Rated Cv	Actuator Size	Supply Pressure (bar)				
					1.4	2.1	2.8	3.4	4.1
mm	inch				Cl VI	Cl VI	Cl VI	Cl VI	Cl VI
20 & 25	3/4 & 1	20.3	12	6	16	69	69	69	69
			12	10	43	69	69	69 *	69 *
			6	6	52	69	69	69	69
			6	10	69	69	69	69 *	69 *
			3.8	6	69	69	69	69	69
			1.7	6	69	69	69	69	69
40	1 1/2	20.3	35	6	-	20	40	60	69
			35	10	6	40	69	69 *	69 *
			25	6	3	37	69	69	69
			25	10	14	69	69	69 *	69 *
			13	6	16	69	69	69	69
			13	10	43	69	69	69 *	69 *
			6	6	52	69	69	69	69
			6	10	69	69	69	69 *	69 *
			3.8	6	69	69	69	69	69
			1.7	6	69	69	69	69	69
50	2	20.3	46	6	-	20	40	60	69
			46	10	6	40	69	69 *	69 *
			26	6	3	37	69	69	69
			26	10	14	69	69	69 *	69 *
			15	6	16	69	69	69	69
			15	10	43	69	69	69 *	69 *
			6	6	52	69	69	69	69
			6	10	69	69	69	69 *	69 *
			3.8	6	69	69	69	69	69
			1.7	6	69	69	69	69	69
80	3	38.1	110	10	-	13	26	39 *	51 *
			110	16	4	25	45 *	-	-
			47	10	6	40	69	69 *	69 *
			31	10	14	69	69	69 *	69 *
100	4	38.1	195	10	-	6	14	21 *	28 *
			195	16	1	13	24 *	-	-
			113	10	-	13	26	39 *	51 *
			113	16	4	25	45 *	-	-
			49	10	6	40	69	69 *	69 *
150	6	50.8	400	16	-	5	11	17	22 *
			400	23	-	9	17	25 *	33 *
			208	16	-	13	24	36	47 *
			208	23	4	20	37	53 *	69 *
			126	16	4	24	44	65	69 *
			126	23	8	38	67	69 *	69 *

***17-4PH A 638 Gr 660 Stem Standard**

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

Allowable Pressure Drops for 21600 Series (PSIG)
Air to Open, Flow to Open

Contoured Soft Seat Trim
Body Rating: PN 10 to 100 - ANSI Class 150 to 600
Leakage: Per IEC 534-4 and ANSI/FCI 70.2, Class VI
PTFE Packing and Standard Bonnet

Supply pressure is 5 PSIG over bench range

Valve Size		Travel (inches)	Rated Cv	Actuator Size	Bench Range (PSIG)			
mm	inch				3 - 15	6 - 30	11 - 23	21 - 45
20 & 25	3/4 & 1	0.8	12	6	-	349	928	1000
			12	10	233	812	1000	1000
			6	6	253	1000	1000	1000
			6	10	864	1000	1000	1000
			3.8	6	627	1000	1000	1000
			1.7	6	1000	1000	1000	1000
40	1 1/2	0.8	35	6	-	26	170	459
			35	10	-	141	382	864
			25	6	-	91	336	825
			25	10	42	287	694	1000
			13	6	-	349	928	1000
			13	10	233	812	1000	1000
			6	6	253	1000	1000	1000
			6	10	864	1000	1000	1000
			3.8	6	627	1000	1000	1000
			1.7	6	1000	1000	1000	1000
50	2	0.8	46	6	-	26	170	459
			46	10	-	141	382	864
			26	6	-	91	336	825
			26	10	42	287	694	1000
			15	6	-	349	928	1000
			15	10	233	812	1000	1000
			6	6	253	1000	1000	1000
			6	10	864	1000	1000	1000
			3.8	6	627	1000	1000	1000
			1.7	6	1000	1000	1000	1000
80	3	1.5	110	10	-	25	117	302
			110	16	-	92	239	535
			110	23	42	169	382	-
			47	10	-	141	382	864
			47	16	83	315	701	1000
			31	10	42	287	694	1000
100	4	1.5	195	10	-	-	52	156
			195	16	-	37	120	287 *
			195	23	-	81	200 *	-
			113	10	-	25	117	302
			113	16	-	92	239	535 *
			113	23	42	169	382 *	-
			49	10	-	141	382	864
			49	16	83	315	701	1000 *
150	6	2.0	400	23	-	25	84	201
			208	16	-	33	116	282
			208	23	-	76	196	435
			126	16	-	84	231	527
			126	23	34	161	374	799

***17-4PH A 638 Gr 660 Stem Standard**

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

Allowable Pressure Drops for 21600 Series (bar)
Air to Open, Flow to Open

Contoured Soft Seat Trim
Body Rating: PN 10 to 100 - ANSI Class 150 to 600
Leakage: Per IEC 534-4 and ANSI/FCI 70.2, Class VI
PTFE Packing and Standard Bonnet

Supply pressure is 0.4 bar over bench range

Valve Size		Travel (mm)	Rated Cv	Actuator Size	Bench Range (PSIG)			
mm	inch				3 - 15	6 - 30	11 - 23	21 - 45
20 & 25	3/4 & 1	20.3	12	6	-	24	64	69
			12	10	16	56	69	69
			6	6	17	69	69	69
			6	10	60	69	69	69
			3.8	6	43	69	69	69
			1.7	6	69	69	69	69
40	1 1/2	20.3	35	6	-	2	12	32
			35	10	-	10	26	60
			25	6	-	6	23	57
			25	10	3	20	48	69
			13	6	-	24	64	69
			13	10	16	56	69	69
			6	6	17	69	69	69
			6	10	60	69	69	69
			3.8	6	43	69	69	69
			1.7	6	69	69	69	69
50	2	20.3	46	6	-	2	12	32
			46	10	-	10	26	60
			26	6	-	6	23	57
			26	10	3	20	48	69
			15	6	-	24	64	69
			15	10	16	56	69	69
			6	6	17	69	69	69
			6	10	60	69	69	69
			3.8	6	43	69	69	69
			1.7	6	69	69	69	69
80	3	38.1	110	10	-	2	8	21
			110	16	-	6	16	37
			110	23	3	12	26	-
			47	10	-	10	26	60
			47	16	6	22	48	69
			31	10	3	20	48	69
100	4	38.1	195	10	-	-	4	11
			195	16	-	3	8	20 *
			195	23	-	6	14 *	-
			113	10	-	2	8	21
			113	16	-	6	16	37 *
			113	23	3	12	26 *	-
			49	10	-	10	26	60
			49	16	6	22	48	69 *
150	6	50.8	400	23	-	2	6	14
			208	16	-	2	8	19
			208	23	-	5	14	30
			126	16	-	6	16	36
			126	23	2	11	26	55

***17-4PH A 638 Gr 660 Stem Standard**

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

Allowable Pressure Drops for 21700 Series (PSIG)
Air to Close, Flow to Open

Single Stage LO-DB® Trim
Body Rating: PN 10 to 100 - ANSI Class 150 to 600
Leakage: Per IEC 534-4 and ANSI/FCI 70.2, Class IV and Class V
PTFE Packing and Standard Bonnet

Bench Range (PSIG): 3 - 15

Valve Size		Travel (inches)	Rated Cv	Actuator Size	Supply Pressure (PSIG)									
					20		30		40		50		60	
mm	inch				Cl IV	Cl V	Cl IV	Cl V	Cl IV	Cl V	Cl IV	Cl V	Cl IV	Cl V
20 & 25	3/4 & 1	0.8	8 / 4	6	331	-	1490	899	1500	1500	1500	1500	1500	1500
			8 / 4	10	718	127	1500	1500	1500	1500	1500 *	1500 *	1500 *	1500 *
40	1½	0.8	15 / 8	6	106	-	595	211	1084	700	1500	1189	1500	1500
			15 / 8	10	269	-	1084	700	1500	1500	1500 *	1500 *	1500 *	1500 *
50	2	0.8	15 / 8	6	106	-	595	211	1084	700	1500	1189	1500 *	1500 *
			15 / 8	10	269	-	1084	700	1500	1500	1500 *	1500 *	1500 *	1500 *
			25	6	46	-	335	40	624	329	914	618	1203	908
			25	10	142	-	624	329	1107	811	1500 *	1293 *	1500 *	1500 *
80	3	1.5	75 / 48	10	37	-	222	39	407	224	591 *	409 *	776 *	593 *
			75 / 48	16	93	-	388	205	684 *	501 *	-	-	-	-
100	4	1.5	100	10	12	-	116	-	220	83	324 *	187 *	428 *	291 *
			100	16	44	-	210	73	376 *	239 *	-	-	-	-
			63	10	37	-	222	39	407	224	591 *	409 *	776 *	593 *
			63	16	93	-	388	205	684 *	501 *	-	-	-	-
150	6	2	200 / 150	16	12	-	93	-	175	79	256	160	338 *	242 *
			200 / 150	23	30	-	147	51	264	168	381 *	285 *	498 *	402 *

***17-4PH A 638 Gr 660 Stem Standard**

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

Allowable Pressure Drops for 21700 Series (bar)
Air to Close, Flow to Open

Single Stage LO-DB® Trim
Body Rating: PN 10 to 100 - ANSI Class 150 to 600
Leakage: Per IEC 534-4 and ANSI/FCI 70.2, Class IV and Class V
Kevlar PTFE Packing and Standard Bonnet

Bench Range (PSIG): 3 - 15

Valve Size		Travel (mm)	Rated Cv	Actuator Size	Supply Pressure (bar)									
					1.4		2.1		2.8		3.4		4.1	
mm	inch				Cl IV	Cl V	Cl IV	Cl V	Cl IV	Cl V	Cl IV	Cl V	Cl IV	Cl V
20 & 25	3/4 & 1	20.3	8 / 4	6	23	-	103	62	103	103	103	103	103	103
			8 / 4	10	49	8.0	103	103	103	103	103 *	103 *	103 *	103 *
40	1½	20.3	15 / 8	6	7.4	-	41	15	75	48	103	82	103	103
			15 / 8	10	19	-	75	48	103	103	103 *	103 *	103 *	103 *
50	2	20.3	15 / 8	6	7.4	-	41	15	75	48	103	81	103 *	103 *
			15 / 8	10	19	-	75	48	103	103	103 *	103 *	103 *	103 *
			25	6	3.2	-	23	2.7	43	23	63	43	83	63
			25	10	9.9	-	43	23	76	56	103 *	89 *	103 *	103 *
80	3	38.1	75 / 48	10	2.6	-	15	2.7	28	15	41 *	28 *	54 *	41 *
			75 / 48	16	6.4	-	27	14	47 *	35 *	-	-	-	-
100	4	38.1	100	10	0.8	-	8.0	-	15	5.7	22 *	13 *	30 *	20 *
			100	16	3.0	-	15	5.0	26 *	17 *	-	-	-	-
			63	10	2.6	-	15	2.7	28	15	41 *	28 *	54 *	41 *
			63	16	6.4	-	27	14	47 *	35 *	-	-	-	-
150	6	50.8	200 / 150	16	0.8	-	6.5	-	12	5.4	18	11	23 *	17 *
			200 / 150	23	2.0	-	10	3.5	18	12	26 *	20 *	34 *	28 *

***17-4PH or A 638 Gr 660 Stem Standard**

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

Allowable Pressure Drops for 21700 Series (PSIG)
Air to Open, Flow to Open

Single Stage LO-DB® Trim
Body Rating: PN 10 to 100 - ANSI Class 150 to 600
Leakage: Per IEC 534-4 and ANSI/FCI 70.2, Class IV and Class V
PTFE Packing and Standard Bonnet

Supply pressure is 5 PSIG over bench range

Valve Size		Travel (inches)	Rated Cv	Actuator Size	Bench Range (PSIG)							
					3 - 15		6 - 30		11 - 23		21 - 45	
mm	inch				Cl IV	Cl V	Cl IV	Cl V	Cl IV	Cl V	Cl IV	Cl V
20 & 25	3/4 & 1	0.8	8 /4	6	100	-	447	-	1027	435	1500	1500
			8 / 4	10	331	-	911	320	1500	1285	1500	1500
40	1 1/2	0.8	15 / 8	6	-	-	155	-	400	16	889	505
			15 / 8	10	106	-	351	-	758	374	1500	1189
50	2	0.8	15 / 8	6	-	-	155	-	400	16	889	505
			15 / 8	10	106	-	351	-	758	374	1500	1189
			25	10	46	-	190	-	432	136	914	618
			25	16	133	-	364	69	750	454	1500 *	1226 *
80	3	1.5	75 / 48	16	33	-	122	-	270	87	566	383
			75 / 48	23	72	-	200	17	412	229	-	-
100	4	1.5	100	10	-	-	23	-	75	-	179	41
			100	16	10	-	60	-	143	6	310 *	172 *
			100	23	32	-	104	-	223	86	-	-
			63	10	-	-	56	-	148	-	333	150 *
			63	16	33	-	122	-	270	87	566 *	383 *
			63	23	72	-	200	17	412	229	-	-
150	6	2.0	200 / 150	16	-	-	20	-	61	-	142	46
			200 / 150	23	6	-	41	-	100	-	217	121

***17-4PH A 638 Gr 660 Stem Standard**

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

Allowable Pressure Drops for 21700 Series (bar)
Air to Open, Flow to Open

Single Stage LO-DB® Trim
Body Rating: PN 10 to 100 - ANSI Class 150 to 600
Leakage: Per IEC 534-4 and ANSI/FCI 70.2, Class IV and Class V
Kevlar PTFE Packing and Standard Bonnet

Supply pressure is 0.4 bar over bench range

Valve Size		Travel (mm)	Rated Cv	Actuator Size	Bench Range (PSIG)							
					3 - 15		6 - 30		11 - 23		21 - 45	
mm	inch				Cl IV	Cl V	Cl IV	Cl V	Cl IV	Cl V	Cl IV	Cl V
20 & 25	3/4 & 1	20.3	8 /4	6	6.9	-	31	-	71	30	103	103
			8 / 4	10	23	-	63	22	103	89	103	103
40	1 1/2	20.3	15 / 8	6	-	-	11	-	28	1.0	61	35
			15 / 8	10	7.4	-	24	-	52	26	103	82
50	2	20.3	15 / 8	6	-	-	11	-	28	1.0	61	35
			15 / 8	10	7.4	-	24	-	52	26	103	82
			25	10	3.2	-	13	-	30	9.4	63	43
			25	16	9.2	-	25	4.7	52	31	103 *	85 *
80	3	38.1	75 / 48	16	2.3	-	8.5	-	19	6.0	39	26
			75 / 48	23	5.0	-	14	1.1	29	16	-	-
100	4	38.1	100	10	-	-	1.6	-	5.2	-	12	2.8
			100	16	-	-	4.2	-	9.9	0.4	21 *	12 *
			100	23	2.2	-	7.2	-	15	5.9	-	-
			63	10	-	-	3.9	-	10	-	23	10
			63	16	2.3	-	8.5	-	19	6.0	39	26 *
			63	23	5.0	-	14	1.1	29	16	-	-
150	6	50.8	200 / 150	16	-	-	1.4	-	4.2	-	9.8	3.2
			200 / 150	23	-	-	2.9	-	6.9	-	15	8.3

***17-4PH or A 638 Gr 660 Stem Standard**

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

Allowable Pressure Drops for 21700 Series (PSIG)
Air to Close or Air to Open, Flow to Close

Single Stage Anti-cavitation Trim
Body Rating: PN 10 to 100 - ANSI Class 150 to 600
Leakage: Per IEC 534-4 and ANSI/FCI 70.2, Class IV and V
PTFE Packing and Standard Bonnet

Valve Size (inches)	Travel (inches)	Rated Cv	Actuator Size	Bench Range (PSIG)	
				3-15	6-30
3/4 & 1	0.8	8	6	209	419
		8	10	349	698
		8	16	558	1116
		4	6	209	419
		4	10	349	698
		4	16	558	1116
1.5	0.8	15	6	148	295
		15	10	246	492
		15	16	393	787
		8	6	148	295
		8	10	246	492
		8	16	393	787
2	0.8	25	6	103	207
		25	10	172	345
		25	16	276	552
		15	6	148	295
		15	10	246	492
		15	16	393	787
		8	6	148	295
		8	10	246	492
		8	16	393	787
3	1.5	75	10	75	150
		75	16	120	239
		75	23	172	344
		48	10	75	150
		48	16	120	239
		48	23	172	344
4	1.5	100	10	44	87
		100	16	70	140
		100	23	100	201
		63	10	75	150
		63	16	120	239
		63	23	172	344
6	2.0	150	16	34	68
		150	23	49	97
		200	16	34	68
		200	23	49	97

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

Allowable Pressure Drops for 21700 Series (bar)
Air to Close or Air to Open, Flow to Close

Single Stage Anti-cavitation Trim
Body Rating: PN 10 to 100 - ANSI Class 150 to 600
Leakage: Per IEC 534-4 and ANSI/FCI 70.2, Class IV and V
PTFE Packing and Standard Bonnet

Valve Size (mm)	Travel (mm)	Rated Cv	Actuator Size	Bench Range (PSIG)	
				3-15	6-30
20 & 25	20.3	8	6	14	29
		8	10	24	48
		8	16	38	77
		4	6	14	29
		4	10	24	48
		4	16	38	77
40	20.3	15	6	10	20
		15	10	17	34
		15	16	27	54
		8	6	10	20
		8	10	17	34
		8	16	27	54
50	20.3	25	6	7	14
		25	10	12	24
		25	16	19	38
		15	6	10	20
		15	10	17	34
		15	16	27	54
		8	6	10	20
		8	10	17	34
		8	16	27	54
80	38.1	75	10	5	10
		75	16	8	16
		75	23	12	24
		48	10	5	10
		48	16	8	16
		48	23	12	24
100	38.1	100	10	3	6
		100	16	5	10
		100	23	7	14
		63	10	5	10
		63	16	8	16
		63	23	12	24
150	50.8	150	16	2	5
		150	23	3	7
		200	16	2	5
		200	23	3	7

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

Allowable Pressure Drops for 21800 Series (PSIG)
Air to Close or Air to Open, Flow to Close

Double Stage Anti-cavitation Trim
Body Rating: PN 10 to 100 - ANSI Class 150 to 600
Leakage: Per IEC 534-4 and ANSI/FCI 70.2, Class IV and V
PTFE Packing and Standard Bonnet

Valve Size (inches)	Travel (inches)	Rated Cv	Actuator Size	Bench Range (PSIG)	
				3-15	6-30
3/4 & 1	0.8	4.5	6	236	472
		4.5	10	394	787
		2.3	6	236	472
		2.3	10	394	787
1.5	0.8	8.5	6	158	316
		8.5	10	263	526
		8.5	16	421	842
		4.5	6	158	316
		4.5	10	263	526
		4.5	16	421	842
		2.3	6	236	472
		2.3	10	394	787
		2.3	16	630	1260
2	0.8	14	6	107	215
		14	10	179	358
		14	16	286	572
		8.5	6	158	316
		8.5	10	263	526
		8.5	23	605	1211
		4.5	6	158	316
		4.5	10	263	526
		4.5	16	421	842
		2.3	6	158	316
		2.3	10	263	526
		2.3	16	421	842
3	1.5	42	10	77	154
		42	16	123	246
		42	23	177	353
		29	10	77	154
		29	16	123	246
		29	23	177	353
4	1.5	62	10	44	88
		62	16	70	141
		62	23	101	202
		40	10	77	154
		40	16	123	246
		40	23	177	353

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

Allowable Pressure Drops for 21800 Series (bar)
Air to Close or Air to Open, Flow to Close

Double Stage Anti-cavitation Trim
Body Rating: PN 10 to 100 - ANSI Class 150 to 600
Leakage: Per IEC 534-4 and ANSI/FCI 70.2, Class IV and V
PTFE Packing and Standard Bonnet

Valve Size (mm)	Travel (mm)	Rated Cv	Actuator Size	Bench Range (PSIG)	
				3-15	6-30
20 & 25	20.3	4.5	6	16	33
		4.5	10	27	54
		2.3	6	16	33
		2.3	10	27	54
40	20.3	8.5	6	11	22
		8.5	10	18	36
		8.5	16	29	58
		4.5	6	11	22
		4.5	10	18	36
		4.5	16	29	58
		2.3	6	16	33
		2.3	10	27	54
		2.3	16	43	87
50	20.3	14	6	7	15
		14	10	12	25
		14	16	20	39
		8.5	6	11	22
		8.5	10	18	36
		8.5	23	42	84
		4.5	6	11	22
		4.5	10	18	36
		4.5	16	29	58
		2.3	6	11	22
		2.3	10	18	36
		2.3	16	29	58
80	38.1	42	10	5	11
		42	16	8	17
		42	23	12	24
		29	10	5	11
		29	16	8	17
		29	23	12	24
100	38.1	62	10	3	6
		62	16	5	10
		62	23	7	14
		40	10	5	11
		40	16	8	17
		40	23	12	24

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

Allowable Pressure Drops for 21900 Series (PSIG)
Air to Close, Flow to Open

Double Stage LO-DB® Trim
Body Rating: PN 10 to 100 - ANSI Class 150 to 600
Leakage: Per IEC 534-4 and ANSI/FCI 70.2, Class IV and V
PTFE Packing and Standard Bonnet

Valve Size (inches)	Rated Cv	Actuator Size	Travel (inches)	Supply Pressure (PSIG)									
				20		30		40		50		60	
				Cl IV	Cl V	Cl IV	Cl V	Cl IV	Cl V	Cl IV	Cl V	Cl IV	Cl V
3/4 & 1	5.7	6	0.8	331	-	1490	899	1500	1500	1500	1500	1500	1500
	5.7	10		718	127	1500	1500	1500	1500	1500	1500	1500*	1500*
	3.5	6		331	-	1490	899	1500	1500	1500	1500	1500	1500
	3.5	10		718	127	1500	1500	1500	1500	1500	1500	1500*	1500*
1.5	13	6	0.8	106	-	595	211	1084	700	1500	1189	1500	1500
	13	10		269	-	1084	700	1500	1500	1500	1500	1500*	1500*
	7	6		106	-	595	211	1084	700	1500	1189	1500	1500
	7	10		269	-	1084	700	1500	1500	1500	1500	1500*	1500*
2	21	6	0.8	46	-	335	40	624	329	914	618	1203	908
	21	10		142	-	624	329	1107	811	1500	1293	1500*	1500*
	21	16		287	-	1058	763	1500*	1500*	-	-	-	-
	21	23		456	160	1500*	1269*	-	-	-	-	-	-
	13	6		106	-	595	211	1084	700	1500	1189	1500	1500
	13	10		269	-	1084	700	1500	1500	1500	1500	1500*	1500*
	13	16		514	130	1500	1433	1500*	1500*	-	-	-	-
	13	23		799	415	1500*	1500*	-	-	-	-	-	-
3	63 & 40	10	1.5	37	-	222	40	407	224	591	409	776	593
		16		93	-	388	205	684*	501*	-	-	-	-
		23		157	-	582*	399*	-	-	-	-	-	-
4	83	10	1.5	-	-	116	-	220	83	324	187	428*	291*
	83	16		43	-	210	73	376*	239*	-	-	-	-
	83	23		80	-	319*	182*	-	-	-	-	-	-
	53	10		37	-	222	39	407	224	591	409	776*	593*
	53	16		93	-	388	205	684*	501*	-	-	-	-
	53	23		157	-	582*	399*	-	-	-	-	-	-
6	125	16	2.0	-	-	93	-	175	79	256	160	338*	242*
	125	23		30	-	147	51	264	168	381*	285*	498*	402*

***17-4PH A 638 Gr 660 Stem Standard**

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

Allowable Pressure Drops for 21900 Series (bar)
Air to Close, Flow to Open

Double Stage LO-DB® Trim
Body Rating: PN 10 to 100 - ANSI Class 150 to 600
Leakage: Per IEC 534-4 and ANSI/FCI 70.2, Class IV and V
PTFE Packing and Standard Bonnet

Valve Size (mm)	Rated Cv	Actuator Size	Travel (mm)	Supply Pressure (bar)									
				1.4		2.1		2.8		3.4		4.1	
				Cl IV	Cl V	Cl IV	Cl V	Cl IV	Cl V	Cl IV	Cl V	Cl IV	Cl V
20 & 25	5.7	6	20.3	23	-	103	62	103	103	103	103	103	103
	5.7	10		50	9	103	103	103	103	103	103	103*	103*
	3.5	6		23	-	103	62	103	103	103	103	103	103
	3.5	10		50	9	103	103	103	103	103	103	103*	103*
40	13	6	20.3	7	-	41	15	75	48	103	82	103	103
	13	10		19	-	75	48	103	103	103	103	103*	103*
	7	6		7	-	41	15	75	48	103	82	103	103
	7	10		19	-	75	48	103	103	103	103	103*	103*
50	21	6	20.3	3	-	23	3	43	23	63	43	83	63
	21	10		10	-	43	23	76	56	103	89	103*	103*
	21	16		20	-	73	53	103*	103*	-	-	-	-
	21	23		31	11	103*	88*	-	-	-	-	-	-
	13	6		7	-	41	15	75	48	103	82	103	103
	13	10		19	-	75	48	103	103	103	103	103*	103*
	13	16		35	9	103	99	103*	103*	-	-	-	-
	13	23		55	29	103*	103*	-	-	-	-	-	-
80	63 & 40	10	38.1	3	-	15	3	28	15	41	28	54	41
		16		6	-	27	14	47*	35*	-	-	-	-
		23		11	-	40*	28*	-	-	-	-	-	-
100	83	10	38.1	-	-	8	-	15	6	22	13	30*	20*
	83	16		3	-	14	5	26*	16*	-	-	-	-
	83	23		6	-	22*	13*	-	-	-	-	-	-
	53	10		3	-	15	3	28	15	41	28	54*	41*
	53	16		6	-	27	14	47*	35*	-	-	-	-
	53	23		11	-	40*	28*	69	57	99	86	103	-
150	125	16	50.8	-	-	6.4	-	12	5	18	11	23*	17*
	125	23		2	-	10	4	18	12	26*	20*	34*	28*

***17-4PH A 638 Gr 660 Stem Standard**

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

Allowable Pressure Drops for 21900 Series (PSIG)
Air to Open, Flow to Open

Double Stage LO-DB® Trim
Body Rating: PN 10 to 100 - ANSI Class 150 to 600
Leakage: Per IEC 534-4 and ANSI/FCI 70.2, Class IV and V
PTFE Packing and Standard Bonnet

Valve Size (inches)	Rated Cv	Actuator Size	Travel (inches)	Bench Range (PSIG)							
				3-15		6-30		11-23		21-45	
				Cl IV	Cl V	Cl IV	Cl V	Cl IV	Cl V	Cl IV	Cl V
3/4 & 1	5.7	6	0.8	100	-	447	-	1027	435	1500	1500
	5.7	10		331	-	911	320	1500	1285	1500	1500
	3.5	6		100	-	447	-	1027	435	1500	1500
	3.5	10		331	-	911	320	1500	1285	1500	1500
1.5	13	6	0.8	-	-	155	-	400	16	889	505
	13	10		106	-	351	-	758	374	1500	1189
	7	6		-	-	155	-	400	16	889	505
	7	10		106	-	351	-	758	374	1500	1189
2	21	6	0.8	-	-	75	-	219	-	509	213
	21	10		46	-	190	-	432	136	914	618
	21	16		133	-	364	69	750	454	1500*	1226*
	21	23		234	-	567	271	1121	826	-	-
	13	6		-	-	155	-	400	16	889	505
	13	10		106	-	351	-	758	374	1500	1189
	13	16		253	-	644	260	1296	912	1500*	1500*
	13	23		424	40	986	602	1500	1500	-	-
3	63 & 40	10	1.5	-	-	56	-	148	-	333	150
		16		33	-	122	-	270	87	566*	383*
		23		72	-	200	17	412	229	-	-
4	83	10	1.5	-	-	23	-	75	-	179	41
	83	16		10	-	60	-	143	-	310*	172*
	83	23		32	-	104	-	223	86	-	-
	53	10		-	-	56	-	148	-	333	150
	53	16		33	-	122	-	170	87	566	383
	53	23		72	-	200	17	412	229	-	-
6	125	16	2.0	-	-	20	-	61	-	142	46
	125	23		-	-	41	-	100	-	217	21

***17-4PH A 638 Gr 660 Stem Standard**

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

Allowable Pressure Drops for 21900 Series (bar)
Air to Open, Flow to Open

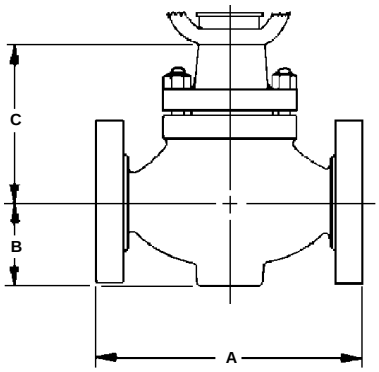
Double Stage LO-DB® Trim
Body Rating: PN 10 to 100 - ANSI Class 150 to 600
Leakage: Per IEC 534-4 and ANSI/FCI 70.2, Class IV and V
PTFE Packing and Standard Bonnet

Valve Size (mm)	Rated Cv	Actuator Size	Travel (mm)	Bench Range (PSIG)							
				3-15		6-30		11-23		21-45	
				Cl IV	Cl V	Cl IV	Cl V	Cl IV	Cl V	Cl IV	Cl V
20 & 25	5.7	6	20.3	7	-	31	-	71	30	103	103
	5.7	10		23	-	63	22	103	89	103	103
	3.5	6		7	-	31	-	71	30	103	103
	3.5	10		23	-	63	22	103	89	103	103
40	13	6	20.3	-	-	11	-	28	1	61	35
	13	10		7	-	24	-	52	26	103	82
	7	6		-	-	11	-	28	1	61	35
	7	10		7	-	24	-	52	26	103	82
50	21	6	20.3	-	-	5	-	15	-	35	15
	21	10		3	-	13	-	30	9	63	43
	21	16		9	-	25	5	52	31	103*	85*
	21	23		16	-	39	19	77	57	-	-
	13	6		-	-	11	-	28	1	61	35
	13	10		7	-	24	-	52	26	103	82
	13	16		17	-	44	18	89	63	103*	103*
	13	23		29	3	68	42	103	103	-	-
80	63 & 40	10	38.1	-	-	4	-	10	-	23	10
		16		2	-	8	-	19	6	39*	26*
		23		5	-	14	1	28	16	-	-
100	83	10	38.1	-	-	2	-	5	-	12	3
	83	16		1	-	4	-	10	-	21*	12*
	83	23		2	-	7	-	15	6	-	-
	53	10		-	-	4	-	10	-	23	10
	53	16		2	-	8	-	12	6	39	26
	53	23		5	-	14	1	28	16	-	-
150	125	16	50.8	-	-	1	-	4	-	10	3
	125	23		-	-	3	-	7	-	15	1

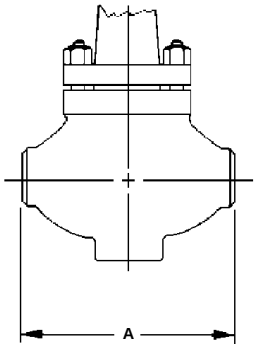
***17-4PH A 638 Gr 660 Stem Standard**

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

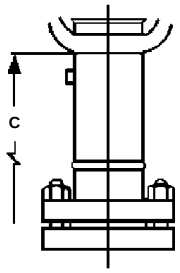
Dimensions (inches)



Standard



Butt, Socket Weld or Threaded Ends

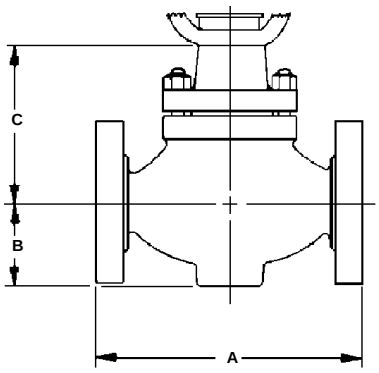


Extension Bonnet

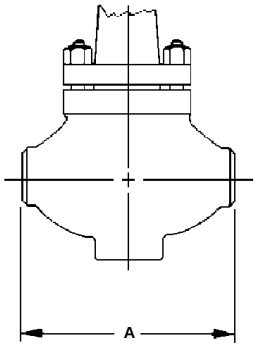
ANSI Class 150 through 600 and equivalent PN

Valve Size		A											
		ANSI Class 150 - 600 and equivalent PN	ANSI Class 150 and equivalent PN		ANSI Class 300 and equivalent PN		ANSI Class 600 and equivalent PN		PN 10		PN 16, 25 and 40		PN 63 and 100	
mm	inch	BW, SW & THD	RF	RTJ	RF	RTJ	RF	RTJ	RF	RTJ	RF	RTJ	RF	RTJ
20	3/4	8.24	7.25	-	7.64	8.11	8.11	8.11	7.25	-	7.64	8.11	8.11	8.11
25	1	8.24	7.25	7.76	7.76	8.26	8.26	8.26	7.25	7.76	7.76	8.26	8.26	8.26
40	1 1/2	9.88	8.75	9.25	9.25	9.76	9.88	9.88	8.75	9.25	9.25	9.76	9.88	9.88
50	2	11.24	10.00	10.51	10.51	11.10	11.26	11.38	10.00	10.51	10.51	11.10	11.26	11.38
80	3	13.24	11.73	12.24	12.52	13.11	13.27	13.39	11.73	12.24	12.52	13.11	13.27	13.39
100	4	15.50	13.86	14.37	14.49	15.12	15.51	15.63	13.86	14.37	14.49	14.53	15.51	15.63
150	6	20.00	17.76	-	18.62	19.25	20.00	20.12	17.76	-	18.62	19.25	20.00	20.12

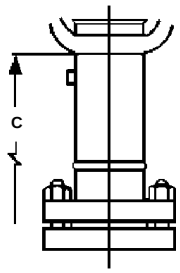
Valve Size		B		C	
		PN < 63 ANSI Class 150-300	PN 63, 100 ANSI Class 600	Standard Bonnet	Extension Bonnets
mm	inch			PN 10 to 100 ANSI Class 150 to 600	PN 10 to 100 ANSI Class 150 to 600
20 & 25	3/4 & 1	2.13	2.44	5.51	9.92
40	1 1/2	2.52	3.07	5.51	9.92
50	2	2.99	2.99	5.51	9.92
80	3	3.70	4.50	7.99	13.90
100	4	4.61	5.51	8.07	15.87
150	6	5.90	7.36	11.18	16.69



Standard



Butt, Socket Weld or Threaded Ends



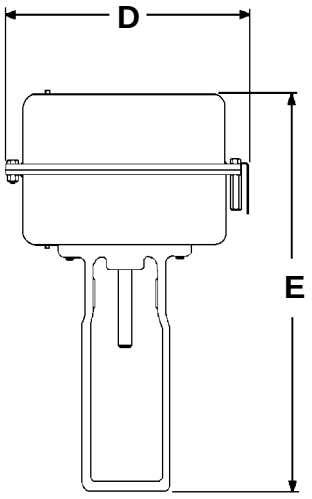
Extension Bonnet

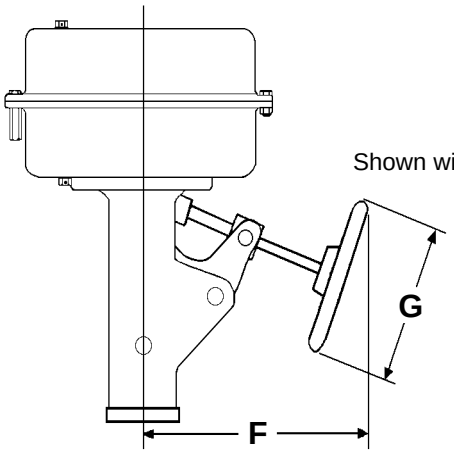
ANSI Class 150 through 600 and equivalent PN

Valve Size		A											
		ANSI Class 150 - 600 and equivalent PN	ANSI Class 150 and equivalent PN		ANSI Class 300 and equivalent PN		ANSI Class 600 and equivalent PN		PN 10		PN 16, 25 and 40		PN 63 and 100	
mm	inch	BW, SW & THD	RF	RTJ	RF	RTJ	RF	RTJ	RF	RTJ	RF	RTJ	RF	RTJ
20	3/4	206	184	-	194	206	206	206	184	-	194	206	206	206
25	1	206	184	197	197	210	210	210	184	197	197	210	210	210
40	1 1/2	251	222	235	235	248	251	251	222	235	235	248	251	251
50	2	286	254	267	267	282	286	289	254	267	267	282	286	289
80	3	337	298	311	318	333	337	340	298	311	318	333	337	340
100	4	394	352	365	368	369	394	397	352	365	368	369	394	397
150	6	508	451	-	473	489	508	511	451	-	473	489	508	511

Valve Size		B		C	
		PN < 63 ANSI Class 150-300	PN 63, 100 ANSI Class 600	Standard Bonnet	Extension Bonnets
mm	inch			PN 10 to 100 ANSI Class 150 to 600	PN 10 to 100 ANSI Class 150 to 600
20 & 25	3/4 & 1	51	51	140	353
40	1 1/2	64	64	140	353
50	2	76	76	140	353
80	3	94	114	203	390
100	4	117	140	205	404
150	6	150	187	284	520

Dimensions





Shown with optional handwheel

Model 87/88 Actuator (inches)

Actuator Size	D	E	F	G
6	11.49	15.54	10.00	9.00
10	14.50	19.58	10.90	12.00
16	18.75	28.22	13.00	18.00
23	21.63	30.71	15.00	18.00

Actuator removal clearance = 6 inches

Model 87/88 Actuator (mm)

Actuator Size	D	E	F	G
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

Body S/A (lbs)

Valve Size		Up to PN 40 ANSI Class 150, 300 FLG	Up to PN 40 ANSI Class 150, 300 BW, SW & THD	Up to PN 100 ANSI Class 600 FLG	Up to PN 100 ANSI Class 600 BW, SW & THD
mm	inch				
20	3/4	36	27	38	27
25	1	36	27	38	27
40	1 1/2	49	36	53	36
50	2	57	44	64	44
80	3	127	73	128	99
100	4	196	121	216	135
150	6	355	238	450	272

Body S/A (kg)

Valve Size		Up to PN 40 ANSI Class 150, 300 FLG	Up to PN 40 ANSI Class 150, 300 BW, SW & THD	Up to PN 100 ANSI Class 600 FLG	Up to PN 100 ANSI Class 600 BW, SW & THD
mm	inch				
20	3/4	16	12	17	12
25	1	16	12	17	12
40	1 1/2	22	16	24	16
50	2	26	20	29	20
80	3	57	33	58	45
100	4	89	55	98	61
150	6	161	108	204	123

Actuator Weights (lbs)

Actuator Size	Standard	with Handwheel
6	45	60
10	85	105
16	210	245
23	265	340

Actuator Weights (kg)

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

Body/Actuator Volume (cu.ft)

Valve		PN 10 to 100 ANSI Class 150 to 600
mm	inch	
20	3/4	10.0
25	1	10.0
40	1 1/2	10.0
50	2	10.0
80	3	22.0
100	4	22.0
150	6	22.0

Body/Actuator Volume (dm^3)

Valve		PN 10 to 100 ANSI Class 150 to 600
mm	inch	
20	3/4	283
25	1	283
40	1 1/2	283
50	2	283
80	3	623
100	4	623
150	6	623

Accessories

Side Mounted Handwheels
For 87/88 Actuators
(See Specification Data CR8788)

4700 P Series Pneumatic Positioner
Instrument signals 0.2-1 and 0.4-2 bar
3-15 and 6-30 psig
(See Specification Data CS2007)

4700 E Series Electropneumatic Positioners
(See Specification Data CS2007)
8012 and 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)

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

2700 Controllers
(See Specification Data CW6000)

77-4 or 77-40 Airset
(See Specification Data CY7700)
80-4 or 80-40 Airset
(See Specification Data CY7800)
77-6 or 77-60 Lockup Valve
2" Gauge 0-2 bar

496 Rotary Electric Switches
(See Specification Data CS7000)
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
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 Actuators

For additional Accessories and Options, consult Masoneilan.

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