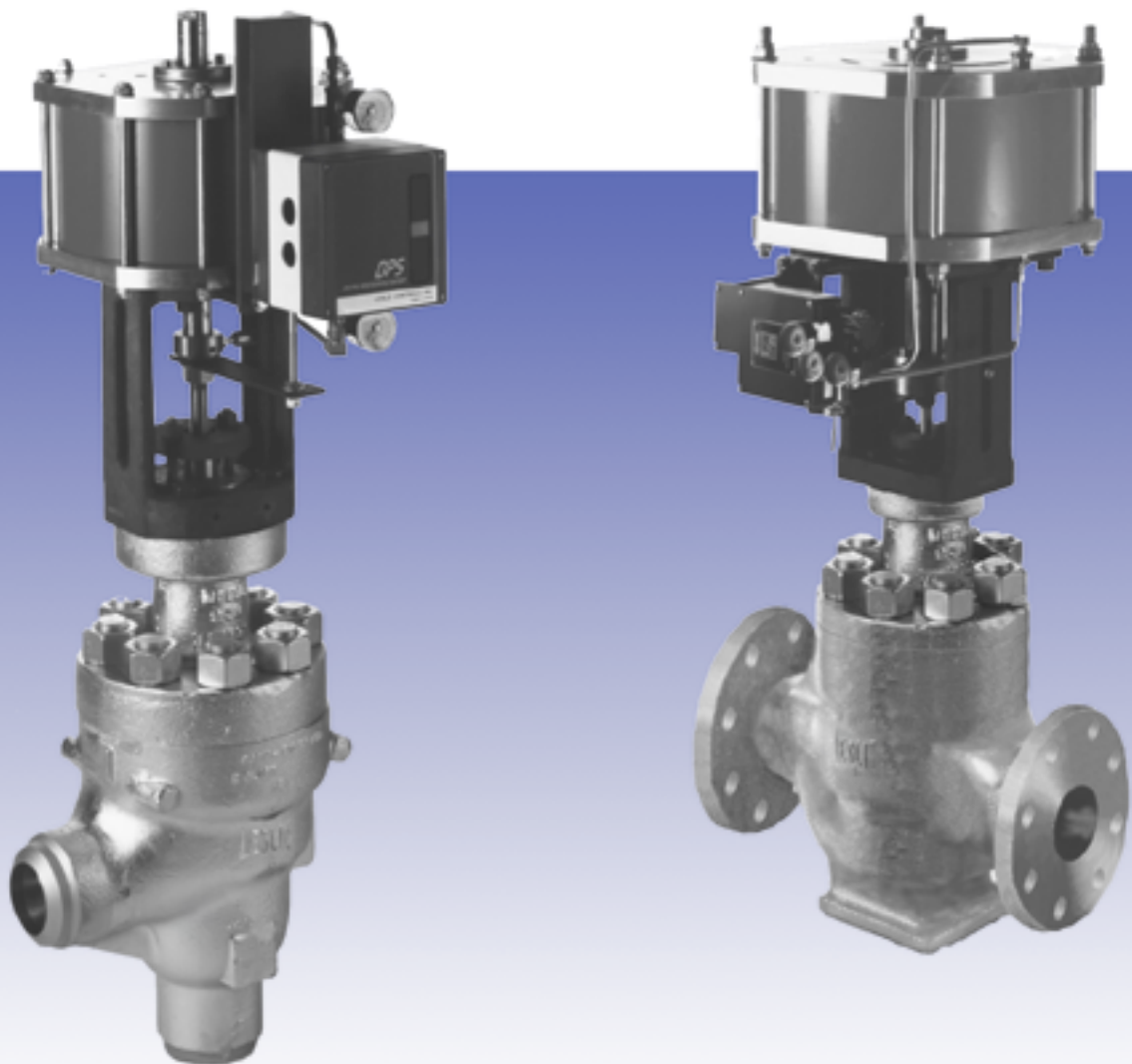


AEROFLOW

HIGH PERFORMANCE CONTROL VALVES ANSI 150-2500 CLASS DIN PN16-PN400

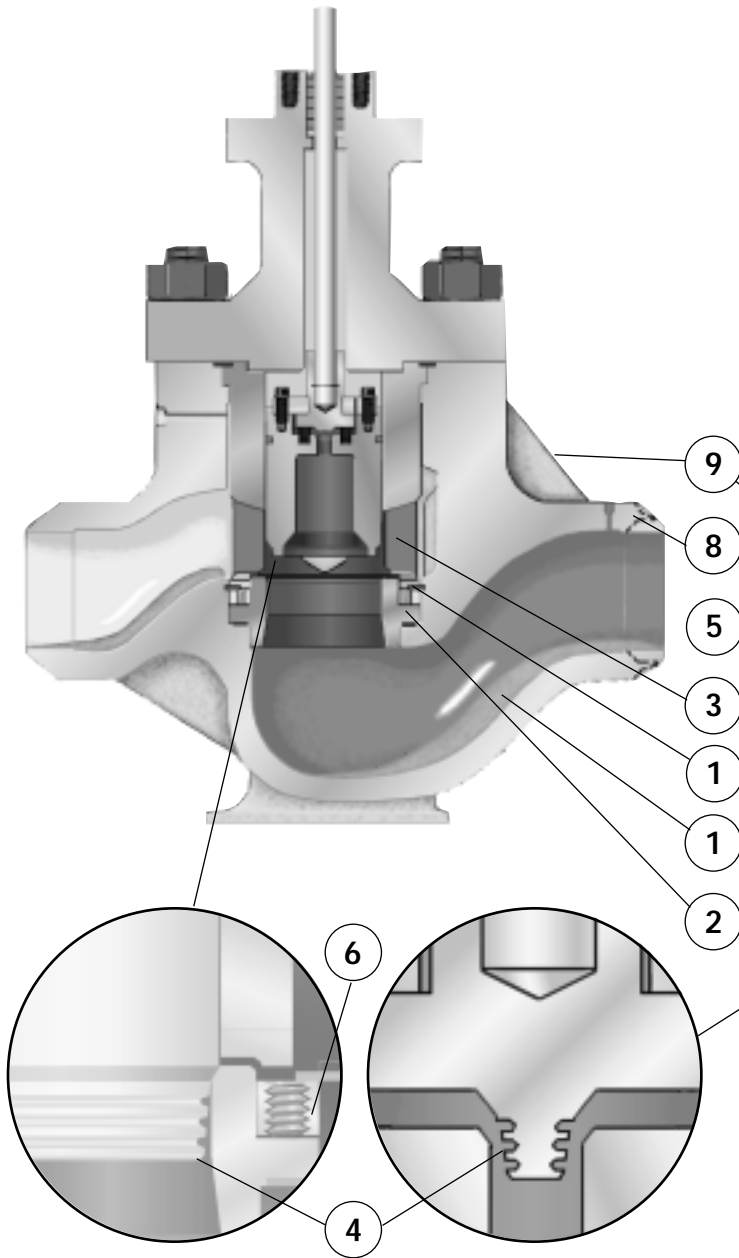


AEROFLOW HIGH PERFORMANCE CONTROL VALVES

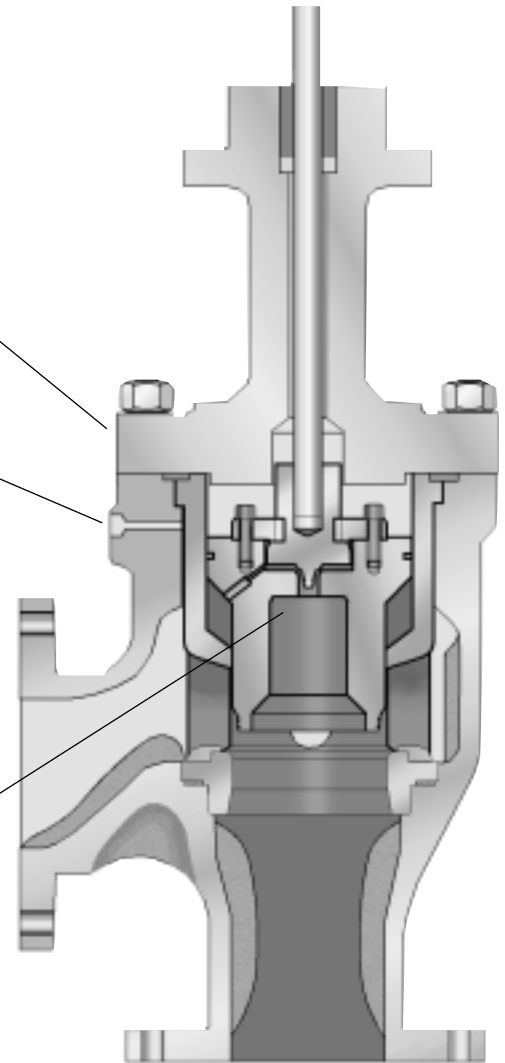
Innovative Technology for the 21st Century

Leslie Aeroflow control valve family represent, an integrated valve solution for the 1990's ... and beyond. Not a compromise or re-packaging of old valve technologies. The Aeroflow valve concept integrates proven state-of-the-art design in aerodynamic/hydrodynamic flow, field proven materials, digital positioning, and "smart" valve technology, with a modular design concept. The sum benefit of Aeroflow's technological advances is simply the most accurate, reliable control valve product line available in the world today.

Typical Globe Style Body
w/Pilot Balanced Trim



Typical Angle Style Body
w/ High-Gain T^2 Trim



AEROFLOW HIGH PERFORMANCE CONTROL VALVES

Solution-Engineered Features for Demanding Applications

1. Aerodynamic Flow Control Valves

Integrally cast into the Inlet and Outlet

- Profiles flow to reduce turbulence
- Evenly distributes flow around the cage
- Reduces Noise generated in the valve

2. Zero Leakage Tight Shut-off

- Exceeds ANSI Class VI Shut-Off
- Metal to Metal Seat and Pilot Balanced Plug Design
- Zero cc/min without over Sized Actuators

3. Custom Characterized Trim Options

- C3 Combination Characterized Cage – Combines High Rangeability, Cavitation I Protection and Low Noise in One Valve
- T2 High Gain Trim – Ultra High Speed, Extraordinary Accuracy Guaranteed Repeatability
- Mini P Multi Stage Trim – Designed For Low-Flow, High ΔP , Cavitating Service with Tight Shut-Off
- Les-Sonic Cage – Provide up to a 25 BA noise reduction
- Les-CAV Multi Stage Cage – Up to five stages control for pressure drops to 4000 PSI (276 BAR)
- Micro Taper Trim – Specially designed trim for very fine control in Low-Flow/ High ΔP Applications

4. Tri-Shear Protected Seat Design

- Prevents high velocity erosion at opening and closing
- Provides a five-stage pressure drop near the seating position
- Prevents particle impingement on the seating surfaces since they are withdrawn from the direct flow path before flow commences

5. "Smart Valve" Capability –

- Optional Inlet and Outlet pressure taps provide accurate, stable pressure measurements required by today's "smart" instrument-action

6. Quick Change Trim Design (ANSI 900 and above)

- Seat retention and gasket loading are designed of reliability and ease of maintenance

7. Hung Cage Design (ANSI 900 and above)

- Suspended Trim Cage eliminates damaging effects of thermal expansion
- Cage is free to expand and contract with temperature changes

8. Oversized Outlet Connection –

- Aeroflow Valves can be supplied with a larger outlet connection than the valve body size

9. Parts Interchangeability

- All parts interchangeable between globe and angle style bodies
- Reduces parts inventory
- Reduces maintenance training

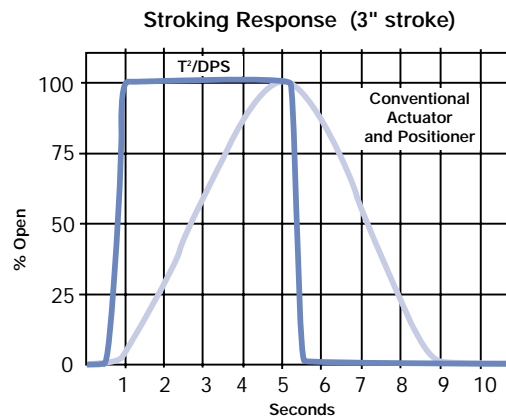
AEROFLOW HIGH PERFORMANCE CONTROL VALVES

FINALLY... A VALVE DESIGN THAT ALLOWS YOU TO TAKE FULL ADVANTAGE OF TODAY'S SMART POSITIONER TECHNOLOGY.

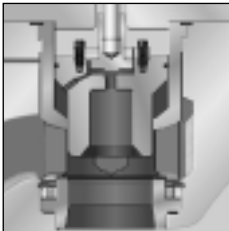
LESLIE CONTROLS

T²/DPS SYSTEM

SPEED	—	.5 SECOND OPERATION
ACCURACY	—	± .001"
REPEATABILITY	—	± .001"
ZERO LEAKAGE	—	0.00 CC/MIN AT RATED ΔP



Three Components make up the T²/DPS System:



- T² (Trim in Trim) High Gain Balanced Trim Pilot Trim that uses fluid pressure to assist in opening/closing the valve plug in milliseconds



- Optical/Digital Electro-Pneumatic Positioner Ultra-Fast stable response using a plus Modulated output and an optical/digital non-mechanical stem position feedback



- Leslie's Low Volume Cylinder Actuators Low Air volume requirements translates into extremely fast speed of response

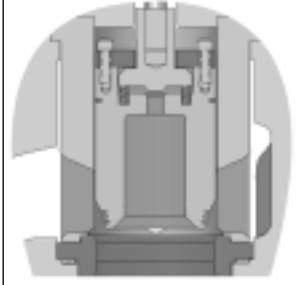
AEROFLOW HIGH PERFORMANCE CONTROL VALVES

MODULAR TRIM

Aeroflow trim design allows you to choose the ideal cost/performance combination for each application. All trim modules are 100% field interchangeable providing extraordinary flexibility and value. Any of the cage throttling designs shown below can be combined with any of the characterized cages shown in this section to give you the best possible solution to your specific flow control application. In addition, as shown at the bottom of this page, we can also offer customized trim sets for specific severe service applications where fine control of low flows and high differential pressures is a critical part to your operation.

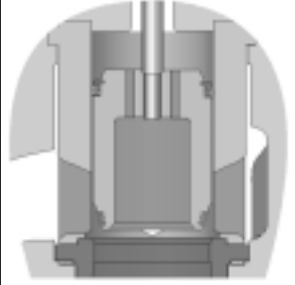
CAGE THROTTLING DESIGNS

PILOT BALANCED (PB)



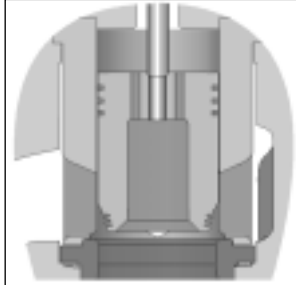
-20°F — 1050°F
-29°C — 565°C
Class IV/V/VI/Zero

BAL. LOW-TEMP (BL)



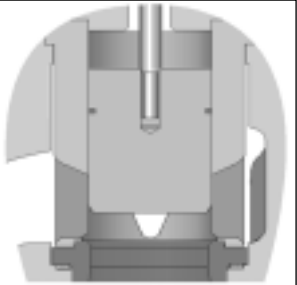
-20°F — 500°F
-29°C — 260°C
Class IV/V

BAL. HIGH-TEMP (BH)



-20°F — 1050°F
-29°C — 565°C
Class III

UNBALANCED (UBC)



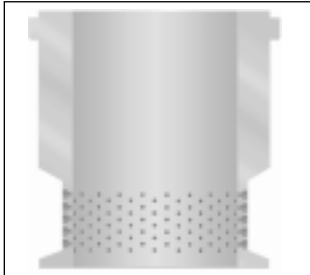
-20°F — 1050°F
-29°C — 565°C
Class IV/V/VI/Zero

CUSTOM CHARACTERIZED CONTROL

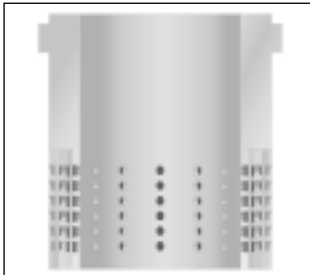
Standard Cage



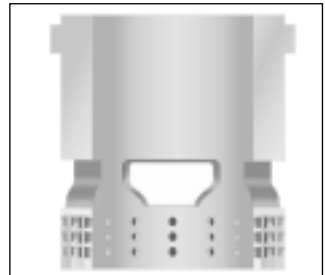
**LesSonic Cage
Noise Control**



**LesCav V Cage
Cavitation Control**

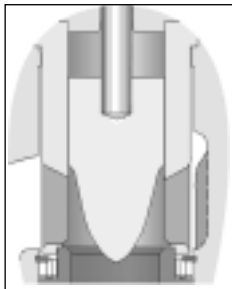


**C³ Cage
Range Control**



CUSTOM TRIM SET OPTIONS

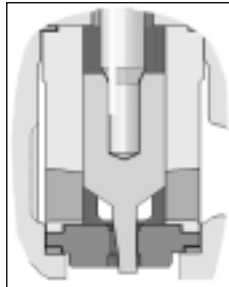
UNBALANCED (UBP)



-20°F — 1050°F
-29°C — 565°C
Class IV/V/VI/Zero

MICROTAPER® (MT)

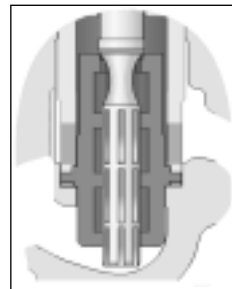
For Fine Control on
Low Flow/
High ΔP Service



-20°F — 1050°F
-29°C — 565°C
Class IV/V/VI/Zero

MINI-P

For Staged Low Flow/
High ΔP Cavitating
Service



-20°F — 800°F
-29°C — 427°C
Class IV/V/Zero

AEROFLOW HIGH PERFORMANCE CONTROL VALVES

UNBALANCED PLUG THROTTLING (UBP) Cv Table ANSI Class 150 – 2500

Linear and Equal %					
Valve Size in/DN	Stroke in/mm	Stem Dia. in/mm	Seat Dia. in/mm	Min Cv STD/DPS ¹	Max CV
1 / 25	1 / 25	0.75 / 20	1.00 / 25	0.2/0.06	16
1.5 / 40	1 / 25	0.75 / 20	1.50 / 40	0.2/0.1	30
2 / 50	1.5 / 40	0.75 / 20	2.25 / 57	0.3/0.1	57
3 / 80	2 / 50	0.75 / 20	3.00 / 80	0.4/0.2	120

Note: Minimum, Intermediate, and Maximum Cv's are shown for reference. Custom Cv's are standard.

¹ Minimum controllable Cv's are based on use of standard pneumatic positioner(STD) or Leslie Digital Positioning System (DPS).

CAGE THROTTLING (UBC, BL, BH, PB) Cv Table ANSI Class 150 – 2500

Flow Characteristic								
Valve Size in/DN	Stroke in/mm	Stem Dia. ² in/mm	Seat Dia. in/mm	Min Cv STD/DPS ¹	LINEAR		EQUAL %	
					MAX. Cv		MAX. Cv	
					ANSI 150-600	ANSI 900-2500	ANSI 150-600	ANSI 900-2500
2 / 50	1.5 / 38	0.75 / 20	2.21/56	0.6/0.2	65	60	55	50
3 / 80	2 / 51	0.75 / 20	2.96/75	0.8/0.3	140	130	125	120
4 / 100	2 / 51	0.75 / 20	3.80/97	0.9/0.4	210	200	190	180
6 / 150	3 / 76	1.00 / 25	5.31/135	1.4/0.6	470	450	420	400
8 / 200	3 / 76 4 / 102	1.25 / 32	7.06/179	1.8/0.7	725 830	700 800	650 750	580 720
10 / 250	3 / 76 4 / 102	1.25 / 32	8.5/216	5.0/2.0	1375 1550	1020 1160	1230 1390	850 1040
12 / 300	3 / 76 4 / 102	1.25 / 32	10/254	6.0/2.6	1740 2020	1300 1470	1560 1790	1080 1320
14 / 350	3 / 76 4 / 102	1.25 / 32	11.86/301	7.5/3.7	— —	1650 1950	— —	1370 1750
16 / 400	3 / 76 4 / 102	1.25 / 32	12.5/318	7.5/3.7	2500 3100	1850 7200	2250 2750	1530 1980

Note: Standard travel maximum, 0.6 and 0.2 factor Cv's are shown for reference in 2-6" valve sizes. Standard travel maximum and 0.6 Cv's are shown for reference in 8-16" valves sizes. Maximum Cv's shown for extended travel. **Custom Cv's are standard.**

¹ Minimum controllable Cv's are based on use of standard pneumatic positioner (STD or Leslie Digital Positioning System (DPS).

² Stem diameter for T² trim is 1/2" for 2-6" sizes and 3/4" for 8" sizes.

AEROFLOW HIGH PERFORMANCE CONTROL VALVES

LES-SONIC CAGE THROTTLING Cv Table

Flow Characteristic - LINEAR										
Valve Size in/DN	Stroke	Stem Dia. ¹ in/mm	Seat Dia. in/mm	Min Cv	$\Delta P/P1$					
					≤ 0.6		$>0.6 \leq 0.8$		$>0.8 \leq 0.99$	
					150-600	900-2500	150-600	900-2500	150-600	900-2500
2 / 50	1.5 / 38 2 / 51	0.75 / 20	2.21 / 56	0.60	45	45	30	30	17	17
					60	60	40	40	23	23
3 / 80	2 / 51 3 / 76	0.75 / 20	2.96 / 75	0.80	100	100	55	55	30	30
					150	150	82	82	45	45
4 / 100	2 / 51 3 / 76	0.75 / 20	3.80 / 97	0.90	150	150	75	75	40	40
					225	225	110	110	60	60
6 / 150	3 / 76 4 / 102	1.00 / 25	5.31 / 135	1.40	330	330	150	150	85	85
					440	440	200	200	115	115
8 / 200	3 / 76 4 / 102 5 / 127	1.25 / 32	7.06 / 179	1.80	430	430	200	200	110	110
					525	575	265	265	150	150
					720	720	330	330	180	180
10 / 250	3 / 76 4 / 102 5 / 127	1.25 / 32	8.5 / 216	5.02	620	535	280	240	160	135
					830	720	375	320	210	180
					1030	890	470	400	270	225
12 / 300	3 / 76 4 / 102 5 / 127	1.25 / 32	10 / 254	6.00	760	620	340	280	190	160
					1010	830	450	375	250	210
					1270	1030	570	470	315	270
14 / 350	3 / 76 4 / 102 5 / 127	1.25 / 32	11.86 / 301	7.50	—	760	—	340	—	190
					—	1010	—	450	—	250
					—	1270	—	570	—	315
16 / 400	3 / 76 4 / 102 5 / 127	1.25 / 32	12.5 / 318	7.50	920	790	410	350	230	200
					1230	1060	550	465	310	270
					1540	1320	690	585	390	335

† Stem diameter for T² trim is 1/2" for 2-6" sizes and 3/4" for 8" size.

LES-CAV CAGE THROTTLING (Single - Stage) Cv Table

Flow Characteristic - LINEAR															
Valve Size in/DN	Stroke in/mm	Stem Dia. ² in/mm	Seat Dia. in/mm	Min Cv	ANSI 150-600					ANSI 900-2500					
					STD/DPS ¹	CAV I	CAV II	CAV III	CAV IV	CAV V	CAV I	CAV II	CAV III	CAV IV	CAV V
2 / 50	1.5 / 38 2 / 51	0.75 / 20	2.2 / 56	0.6	40	15	9	3.6	2.4	40	15	9	6	4	
					52	20	12	7	6	52	20	12	7	6	
3 / 80	2 / 51 3 / 76	0.75 / 20	2.96/75	0.8	75	28	18	6	4.8	75	28	18	10	8	
					110	48	28	14	12	110	48	28	14	12	
4 / 100	2 / 51 3 / 76	0.75 / 20	3.80/93	0.9	95	45	27	10.8	7.8	95	45	27	18	13	
					140	76	46	26	22	140	76	46	26	22	
6 / 150	3 / 76 4 / 102	1 / 25	5.31/135	1.4	200	110	58	22.8	16.8	200	110	58	38	28	
					265	175	90	60	52	265	175	90	60	52	
8 / 200	3 / 76 4 / 102 5 / 127	1.25 / 32	7.06/179	1.8	270	150	106	58	50	270	150	106	58	50	
					340	225	140	87	75	340	225	140	87	75	
					430	300	180	116	100	430	300	180	116	100	
10 / 250	3 / 76 4 / 102 5 / 127	1.25 / 32	8.50/216	5.0	370	210	150	81	70	320	185	127	70	60	
					490	280	195	122	106	425	250	168	104	90	
					620	350	250	162	140	530	310	215	140	120	
12 / 300	3 / 76 4 / 102 5 / 127	1.25 / 32	10/254	5.6	450	250	178	97	84	370	210	150	81	70	
					600	330	235	146	126	490	280	195	122	106	
					750	415	300	195	168	620	350	250	162	140	
14 / 350	3 / 76 4 / 102 5 / 127	1.25 / 32	11.86 / 301	6.6	—	—	—	—	—	345	250	178	97	84	
					—	—	—	—	—	580	330	235	146	126	
					—	—	—	—	—	730	415	300	195	168	
16 / 400	3 / 76 4 / 102 5 / 127	1.25 / 32	12.5/318	6.9	550	310	220	120	104	470	260	187	103	88	
					730	410	290	180	150	630	345	248	154	133	
					910	515	370	240	200	780	430	320	205	177	

Note: Standard travel maximum and 0.6 factor Cv's are shown in 2-6" valve size for reference. Maximum Cv's are shown otherwise. **Custom Cv's are standard.**

¹ Stem diameter for T² trim is 1/2" for 2-6" sizes and 3/4" for 8" sizes.

AEROFLOW HIGH PERFORMANCE CONTROL VALVES

Mini-P (3-STAGE) PLUG THROTTLING Cv Table

Flow Characteristic - LINEAR					
Valve Size in/DN	Stroke in/mm	Stem Dia. in/mm	Seat Dia. in/mm	Min Cv	Max Cv
1/25 or 1.5/40	0.75/20	0.75/20	0.375/22	0.08	1.2 3 5

MICROTAPER® PLUG THROTTLING Cv Table

Flow Characteristic - LINEAR					
Valve Size in/DN	Stroke in/mm	Stem Dia. in/mm	Seat Dia. in/mm	Min Cv	Max Cv
1/25 or 1.5/40	0.75/20	0.75/20	0.375/9.5	0.01	0.3
			0.375/9.5	0.01	0.6
			0.375/9.5	0.01	1.2
			0.50/13	0.013	2.1
			.75/19	0.02	4.8
			1.0/25	0.03	8.5

Flow Coefficients Globe vs. Angle

	Flow Coefficients/Allowable ΔP for AeroFlow Anti-Cav Trim Configurations				Maximum Pressure Differential psi (bar)*
	Globe		Angle		
	FL	XT	FL	XT	
Unbalanced Plug Throttling (Flow under seat)	0.92	0.80	0.90	0.76	N/A
Unbalanced Plug Throttling (Flow over seat)	0.75	0.50	0.65	0.40	N/A
Cage (UBC/LT/HT) Throttling (Flow under seat)	0.88	0.76	0.85	0.72	N/A
Cage (LT/HT/PB/T2) Throttling (Flow over seat)	0.85	0.72	0.83	0.70	N/A
Les-Sonic (Flow under seat)	N/A	0.68	N/A	0.64	N/A
Les-Sonic (Flow over seat)	N/A	0.88	N/A	0.62	N/A
Les-Cav I (Flow over seat)	0.94	N/A	0.92	N/A	400 (27.6)
Les-Cav II (Flow over seat)	0.96	N/A	0.94	N/A	750 (51.7)
Les-Cav III (Flow over seat)	0.98	N/A	0.96	N/A	2000 (138)
Les-Cav IV (Flow over seat)	0.99	N/A	0.97	N/A	3000 (207)
Les-Cav V (Flow over seat)	0.99	N/A	0.98	N/A	4000 (276)
MicroTaper® (Flow under seat)	0.92	0.80	0.90	0.78	N/A
MicroTaper® (Flow over seat)	0.70	0.45	0.60	0.35	N/A
Mini-P (Flow under seat)	0.98	N/A	0.96	N/A	2000 (138)

* Other trim Configurations Maximum Pressure Differential will be limited on Allowable Liquid Velocities

** Consult factory for limitations of using unbalanced trim to flow over seat.

AEROFLOW HIGH PERFORMANCE CONTROL VALVES

How to Specify Aeroflow Control Valves

Valve Body

- 1.1.1 Body should have integrally cast flow control vanes in the inlet, outlet and body gallery to reduce turbulence and allow maximum Cv/Size ratios.
- 1.1.2 Body should be designed with pressure taps on the inlet and outlet side so that adjacent piping penetration points are not needed.
- 1.1.3 Globe and angle body configurations should be designed so that trim modules are fully interchangeable.
- 1.1.4 High pressure body designs (900-2500#) should allow for machining to accept an outlet pipe nominally one size larger than the valve body size.

Valve Trim

- 1.2.1 Pilot balanced trim to have capability to shutoff to ANSI Class VI or Zero (cc/min) Leakage utilizing metal-to-metal seats.
- 1.2.2 Valve plug should be designed with a three stage labyrinth style plug tip.
- 1.2.3 Trim design should allow for reduction down to a 0.2 factor of full Cv, without changing the original plug or seat ring
- 1.2.4 Cage design should allow for modification of flow window for a desired flow characteristic without changing plug assembly.
- 1.2.5 Unbalanced designs should allow for reduction of Cv without reducing seat ring diameter.

Actuators

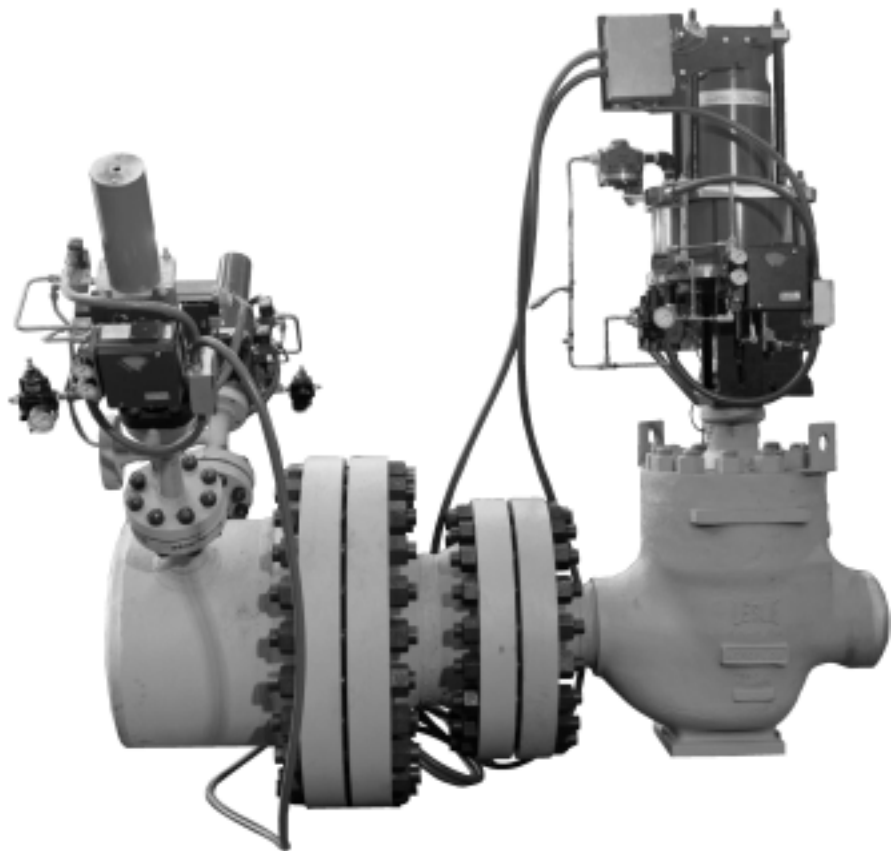
- 2.1.1 Actuator should be designed in a steel or composite construction that is rated for 150 psig working pressure.
- 2.1.2 Air failure spring should be mounted outside air cylinder to minimize residual air volume.
- 2.1.3 Spring cartridge should be mounted so that accessibility for reversing failure modes is easily accomplished.
- 2.1.4 Actuator/spring assembly shall be designed to provide a low center of gravity for vibration and seismic resistance.

Electro-Pneumatic Positioners

- 3.1.1 Positioner design should include as a standard: built in limit switch contacts and a 4-20mA position transmitter output.
- 3.1.2 Positioner should have a guaranteed accuracy of +0.0012" of calibrated span.
- 3.1.3 Positioner should have a guaranteed repeatability of +0.0012" of span.
- 3.1.4 Hysteresis including dead band should be 0.0%.
- 3.1.5 Positioner steady state air consumption-on should be 0.00 SCFM.

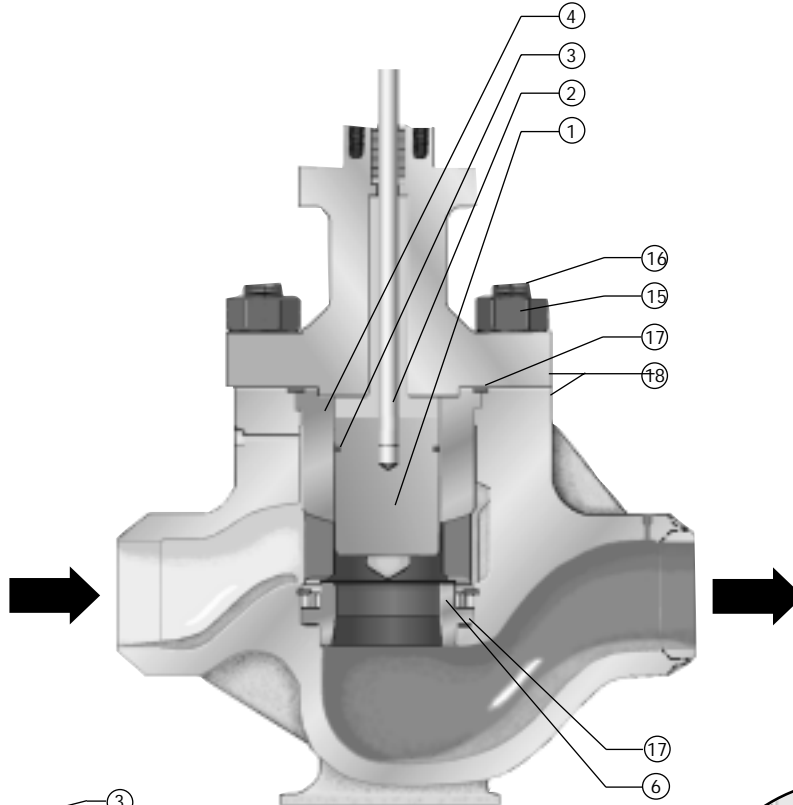
Steam Conditioning Station

Leslie offers its unique Aeroflow pressure reducing valve in combination with a state of the art, variable area, mechanically atomized desuperheating system. This combination system meets today's stringent requirements for control and turndown without the temperature stress problems associated with combination units. We offer complete fabricated systems that include either Globe or Angle body PRV designs with noise attenuation plates (as required), customized trim selection and desuperheating equipment.

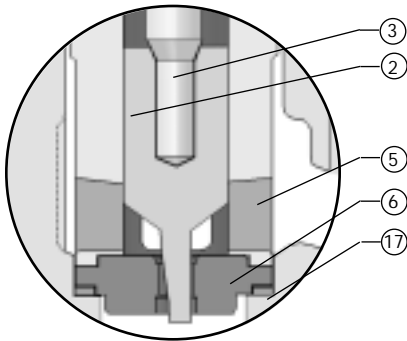


AEROFLOW HIGH PERFORMANCE CONTROL VALVES

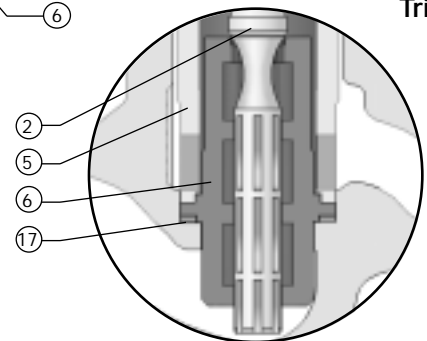
UNBALANCED DESIGN



MicroTaper® Trim

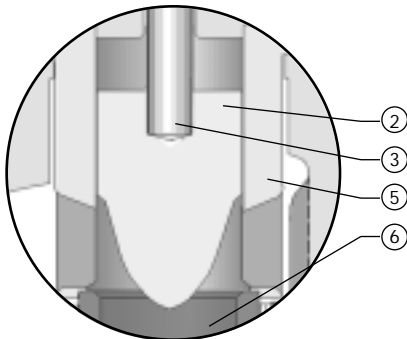


Mini-P Multi-Stage Plug Throttling Trim

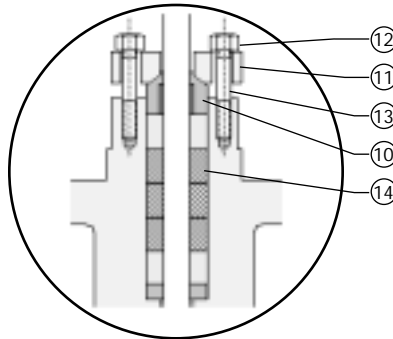


Body/bonnet Module shown with Unbalanced Cage Throttling Trim

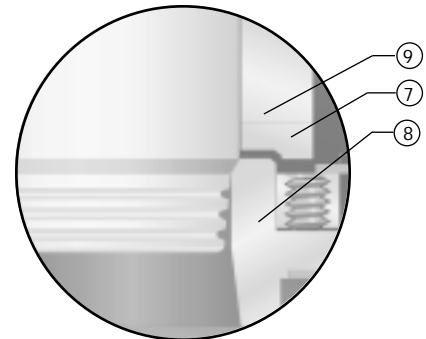
Unbalanced Plug Throttling Trim



Packing Box Detail



Load Ring Detail
(Cage Throttling 4" Valve Size Only)



AEROFLOW HIGH PERFORMANCE CONTROL VALVES

UNBALANCED DESIGN Materials Specifications

Item	Description	Material	Material Specification
1	Body/Bonnet	Carbon Steel Stainless Steel Chrome-moly Steel	ASTM A-216 GR WCB ASTM A-351 GR CF8M ASTM A-217 GR WC9
2	Valve Plug Mini P Trim only Microtaper Trim only	Stainless Steel 1 3-8 MO Stainless Steel	AISI SST 420 ASTM A-564 AISI SST 431
3	Valve Stem	Nitronic 60	ASTM A-276
4	Piston Ring	Stellite	Stellite #25
5	¹ Cage	Stainless Steel	AISI SST 440
6	Seat Ring	Stainless Steel	AISI SST 440C
7	² Load Ring	Stainless Steel	AISI SST 17-4PH
8	² Load Screws	Stainless Steel	ASTM F880
9	² Retaining Ring	Stainless Steel	AISI SST 302
10	Packing Follower	Stainless Steel	AISI SST 303
11	Packing Flange	Stainless Steel	AISI 1144CF
12	Hex Nut	Stainless Steel	ASTM A-194 GR4
13	Studs	Alloy Steel	ASTM A-193 B16
14	Packing	BTG or Laminated Graphite	
15	Hex Nut	Alloy Steel Alloy Steel (WCB body)	ASTM A-194 GR7 ASTM A-194 GR2
16	Stud	Alloy Steel Alloy Steel (WCB body)	ASTM A-193 B16 ASTM A-193 GR7
17	Gasket	Graphite	Inconel 600

¹ Included in all other trim modules unless otherwise listed

² Cage Guided 4" valve size only

NACE Material available upon request

INCONEL® is a trademark of the Inco Family of Companies

MICROTAPER® is a registered trademark of Leslie Controls, Inc.

NITRONIC 60® is a trademark of Armco, Inc.

STELLITE® is a trademark of Stoodly Deloro Stellite, Inc.

AEROFLOW HIGH PERFORMANCE CONTROL VALVES

BALANCED DESIGN Materials Specifications

Item	Description	Material	Material Specification
1	Body/Bonnet	Carbon Steel Stainless Steel Chrome-moly	ASTM A-216 GR WCB ASTM A-351 GR CF8M ASTM A-217 GR WC9
2	Valve Plug	Stainless Steel	AISI 420
3	Valve Stem	Nitronic 60	ASTM A-276
4	Pilot Plug	Stainless Steel	AISI SST 431
5	Socket Head Cap Screw	18-8 Stainless Steel	AISI SST 300
6	Pilot Plate	Stainless Steel	ASTM A-582
7	Piston Ring	Stellite	Stellite #25
8	Spring	Inconel	INCO: x 750
9	¹ Cage	Stainless Steel	AISI SST 440
10	Seat Ring	Stainless Steel	AISI SST 440 C
11	² Load Ring	Stainless Steel	AISI SST 17-4PH
12	² Load Screws	Stainless Steel	ASTM F880
13	Retaining Ring	Stainless Steel	AISI SST 302
14	Seal Retainer	Stainless Steel	ASTM A-240
15	Seal	PTFE	Fluo 36
16	Packing Follower	Stainless Steel	AISI SST 303
17	Packing Flange	Stainless Steel	AISI 1144 CF
18	Hex Nut	Stainless Steel	ASTM A-194 GR4
19	Studs	Alloy Steel	A-193 B16
20	Packing	BTG or Laminated Graphite	
21	Hex Nut	Alloy Steel Alloy Steel (WCB only)	ASTM 194 GR7 ASTM 194 GR2H
22	Stud	Alloy Steel Alloy Steel (WCB only)	ASTM 193 B16 ASTM 193 GR7
23	Gasket	Graphite	Inconel 600

* Common to all trim modules including Les-Cav/Les-Sonic unless otherwise listed

¹ 4" - 16" valve sizes only

² Malcolimized[®] in applications over 800°F (427°C)

NACE Material available upon request

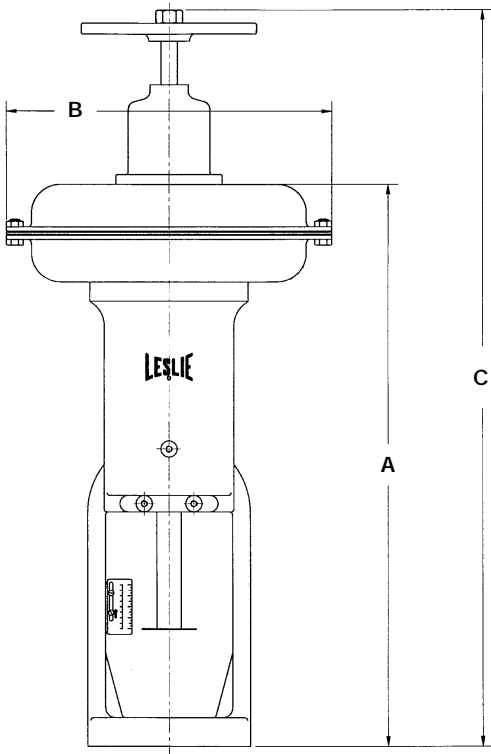
INCONEL[®] is a trademark of the Inco Family of Companies

NITRONIC 60[®] is a trademark of Armco, Inc.

STELLITE[®] is a trademark of Stoodly Deloro Stellite, Inc.

AEROFLOW HIGH PERFORMANCE CONTROL VALVES

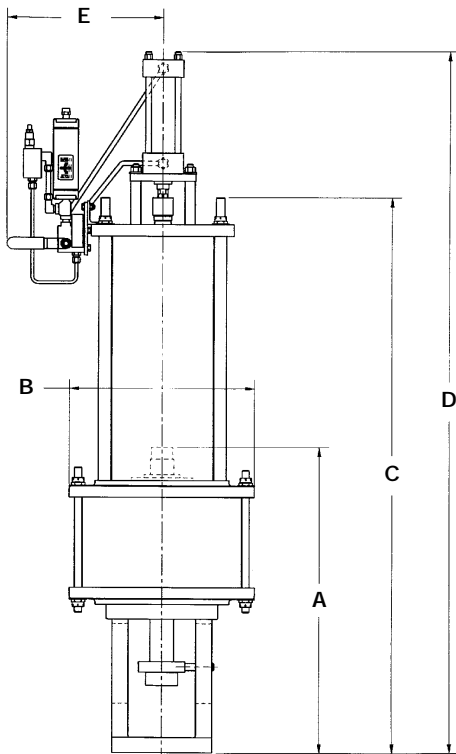
Diaphragm Actuator



DIAPHRAGM ACTUATOR

SIZE	STANDARD		W/optional Handwheel
	A	B	C
55AFR	16 $\frac{1}{4}$	11 $\frac{15}{16}$	25 $\frac{5}{16}$
55AF	18 $\frac{5}{8}$	11 $\frac{15}{16}$	26 $\frac{5}{16}$
85AFR	22 $\frac{15}{32}$	14 $\frac{3}{4}$	31 $\frac{13}{16}$
85AF	25 $\frac{1}{16}$	14 $\frac{3}{4}$	33 $\frac{5}{8}$

Piston Actuator



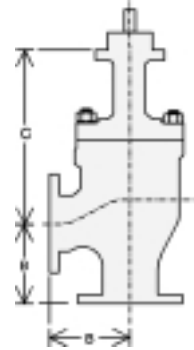
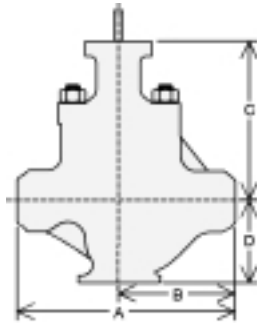
PISTON ACTUATOR

SIZE	STANDARD		W/optional Spg. Return	W/optional Hyd. Ovh'd	
	A	B	C	D	E
6"	16 $\frac{1}{2}$	7 $\frac{7}{8}$	25 $\frac{15}{16}$	35 $\frac{5}{8}$	11 $\frac{1}{2}$
10"	17 $\frac{1}{16}$	10 $\frac{1}{2}$	33 $\frac{3}{8}$	45 $\frac{3}{4}$	12 $\frac{13}{16}$
13"	26	15 $\frac{3}{4}$	47 $\frac{5}{16}$	59 $\frac{13}{16}$	13 $\frac{3}{8}$
16"	24 $\frac{3}{4}$	19	42 $\frac{1}{16}$	51 $\frac{13}{16}$	14 $\frac{11}{16}$
20"	24 $\frac{3}{4}$	23	42 $\frac{1}{16}$	51 $\frac{13}{16}$	14 $\frac{1}{16}$

Leslie's unique optional Manual Hydraulic Override System (MHO), shown above, assures easy, accurate manual valve positioning using a hydraulic hand pump to position the valve plug in 1/8" increments per pump stroke.

AEROFLOW HIGH PERFORMANCE CONTROL VALVES

LINEAR



ANSI 150-600 CLASS Dimensions

DIMENSIONS IN INCHES							Shpg. Info. ¹		DIMENSIONS IN MILLIMETERS							Shpg. Info. ¹	
SIZE	A	B	C ²	D	WGT.	VOL.	SIZE	A	B	C ²	D	WGT.	VOL.				
ANSI 150/300/600# PN16-100 BWE/SWE							ANSI 150/300/600# PN16-100 BWE/SWE										
1	8-1/4	4-1/8	8	3	53 lb.	2 ft ³	25	210	105	203	76	24 kg	0.1 m ³				
1-1/2	9-7/8	4-15/16	8	3-1/16	63 lb.	2 ft ³	40	251	125	203	78	29 kg	0.1 m ³				
2	11-1/4	5-5/8	12-3/4	3-11/16	94 lb.	3 ft ³	50	286	143	324	94	43 kg	0.1 m ³				
3	13-1/4	6-5/8	14-1/2	4-3/4	160 lb.	4 ft ³	75	337	168	368	121	73 kg	0.2 m ³				
4	15-1/2	7-3/4	16-1/2	5-9/16	215 lb.	6 ft ³	100	394	197	419	141	98 kg	0.2 m ³				
6	20	10	21-9/16	6-13/16	450 lb.	11 ft ³	150	508	254	548	173	204 kg	0.4 m ³				
8	24	12	24	8-7/8	860 lb.	17 ft ³	200	610	305	610	225	390 kg	0.5 m ³				
10	29-5/8	14-13/16	18-3/4	9-3/4	1100 lb.	22 ft ³	250	752	376	476	248	499 kg	0.6 m ³				
12	32-1/4	16-1/8	20-1/2	10-3/4	1700 lb.	27 ft ³	300	819	410	521	273	771 kg	0.8 m ³				
16	43-5/8	21-13/16	23-1/2	12-3/4	3200 lb.	53 ft ³	400	1108	552	597	324	1451 kg	1.5 m ³				
ANSI 150# PN16 Flanged							ANSI 150# PN16 Flanged										
1	7-1/4	3-5/8	8	3	56 lb.	2 ft ³	25	184	92	203	76	25 kg	0.1 m ³				
1-1/2	8-3/4	4-3/8	8	3-1/16	65 lb.	2 ft ³	40	222	111	203	78	29 kg	0.1 m ³				
2	10	5	12-3/4	3-11/16	95 lb.	3 ft ³	50	284	127	324	94	43 kg	0.1 m ³				
3	11-3/4	5-7/8	14-1/2	4-3/4	155 lb.	4 ft ³	75	298	149	368	121	70 kg	0.1 m ³				
4	13-7/8	6-15/16	16-1/2	5-9/16	230 lb.	5 ft ³	100	352	176	419	141	105 kg	0.3 m ³				
6	17-3/4	8-7/8	21-9/16	6-13/16	505 lb.	9 ft ³	150	451	225	548	173	230 kg	0.3 m ³				
8	21-3/8	10-5/8	24	8-7/8	930 lb.	14 ft ³	200	543	270	610	225	423 kg	0.4 m ³				
10	26-1/2	14-13/16	18-3/4	9-3/4	1120 lb.	18 ft ³	250	673	376	476	248	508 kg	0.5 m ³				
12	29	16-1/8	20-1/2	10-3/4	1730 lb.	23 ft ³	300	737	410	521	273	785 kg	0.7 m ³				
16	40	21-13/16	23-1/2	12-3/4	3250 lb.	46 ft ³	400	1016	554	597	324	1474 kg	1.3 m ³				
ANSI 300# PN40-64 Flanged							ANSI 300# PN40-64 Flanged										
1	7-3/4	3-7/8	8	3	58 lb.	2 ft ³	25	197	98	203	76	26 kg	0.1 m ³				
1-1/2	9-1/4	4-5/8	8	3-1/16	67 lb.	2 ft ³	40	235	117	203	78	30 kg	0.1 m ³				
2	10-1/2	5-1/4	12-3/4	3-11/16	97 lb.	3 ft ³	50	267	133	324	94	44 kg	0.1 m ³				
3	12-1/4	6-1/4	14-1/2	4-3/4	160 lb.	4 ft ³	75	311	159	368	121	73 kg	0.1 m ³				
4	14-1/2	7-1/4	16-1/2	5-9/16	240 lb.	6 ft ³	100	368	184	419	141	109 kg	0.2 m ³				
6	18-5/8	9-5/16	21-9/16	6-13/16	525 lb.	10 ft ³	150	473	237	548	173	239 kg	0.3 m ³				
8	22-3/8	11-3/16	24	8-7/8	950 lb.	15 ft ³	200	568	284	610	225	432 kg	0.5 m ³				
10	27-7/8	13-15/16	18-3/4	9-3/4	1140 lb.	20 ft ³	250	708	354	476	248	517 kg	0.6 m ³				
12	30-1/2	15-1/4	20-1/2	10-3/4	1760 lb.	25 ft ³	300	775	387	521	273	798 kg	0.7 m ³				
16	41-5/8	20-13/16	23-1/2	12-3/4	3300 lb.	49 ft ³	400	1057	529	597	324	1497 kg	1.4 m ³				
ANSI 600# PN40-64 Flanged							ANSI 600# PN40-64 Flanged										
1	8-1/4	4-1/8	8	3	59 lb.	2 ft ³	25	210	105	203	76	27 kg	0.1 m ³				
1-1/2	9-7/8	4-15/16	8	3-1/16	69 lb.	2 ft ³	40	251	125	203	78	31 kg	0.1 m ³				
2	11-1/4	5-5/8	12-3/4	3-11/16	100 lb.	3 ft ³	50	286	143	324	100	45 kg	0.1 m ³				
3	13-1/4	6-5/8	14-1/2	4-3/4	170 lb.	4 ft ³	75	337	168	368	121	77 kg	0.2 m ³				
4	15-1/2	7-3/4	16-1/2	5-9/16	260 lb.	6 ft ³	100	394	197	419	141	118 kg	0.2 m ³				
6	20	10	21-9/16	6-13/16	450 lb.	11 ft ³	150	508	254	548	173	204 kg	0.3 m ³				
8	24	12	24	8-7/8	1000 lb.	17 ft ³	200	610	305	610	225	390 kg	0.5 m ³				
10	29-5/8	14-13/16	18-3/4	9-3/4	1160 lb.	22 ft ³	250	752	376	476	248	526 kg	0.6 m ³				
12	32-1/4	16-1/8	20-1/2	10-3/4	1740 lb.	28 ft ³	300	819	410	521	273	812 kg	0.8 m ³				
16	43-5/8	21-13/16	23-1/2	12-3/4	3350 lb.	53 ft ³	400	1108	554	597	324	1520 kg	1.5 m ³				

NOTE: DIMENSIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE. Request certified drawings for piping layout and construction purposes.

1 Approximate weight and volume
2 Consult factory for extended travel (C dimension)

AEROFLOW HIGH PERFORMANCE CONTROL VALVES

APPLICABLE INDUSTRY STANDARDS

All Leslie control valves are 100% factory tested and serialized. Leslie Controls' quality assurance program is accredited and certified to ISO 9001†. All Leslie control valves are also designed, built and tested to meet the following industry standards.

ANSI B1.20.1 Pipe Threads - Conforms to pipe thread requirements.

ANSI B16.11 Socket Weld Ends - Conforms to socket weld end requirements.

ANSI B16.5 Pipe Flanges and Flanged Fittings - Conforms to flange thickness, diameter and drilling requirements.

ANSI B16.25 Butt-welding Ends - Conforms to requirements of Schedule 40 or Schedule 80 pipe, without backing rings.

ANSI B16.34 Valves, Flanged and Butt-weld - Integral flanged and BWE valve conforms to wall thickness, materials, pressure/temperature ratings, markings, and hydrostatic test requirements.

ANSI B16.37 Hydrotesting of Control Valves - Conforms to hydrotesting requirements.

ANSI/ISA 70-2 Control Valve Seat Leakage** - Conforms to Class II, III, IV, V and VI shutoff requirements.

ISA S75.01 Flow Equations for Sizing Control Valves.

ISA S75.02 Control Valve Capacity Test Procedure - Conforms to flow capacity test procedure requirements.

ISA S75.03 Uniform Face-To-Face Dimensions for Flanged Globe Style Control Valves - Conforms to face-to-face dimension requirements.

ISA S75.12 Face-To-Face Dimensions for Socketweld End and Screwed End Globe Style Control Valves - Conforms to face-to-face dimension requirements.

ISA S75.15 Face-To-Face Dimensions for Butt-weld End Globe Style Control Valves - Conforms to face-to-face dimension requirements.

MSS SP25 Standard Marking System for Valves, Fittings, Flanges, and Unions - Conforms to marking requirements for flanged, screwed and weld end fittings.

MSS SP84 Steel Valves, Socketweld End and Threaded End - Conforms to end connection requirements.

In addition, when required, Leslie control valves can be manufactured and tested in compliance with:

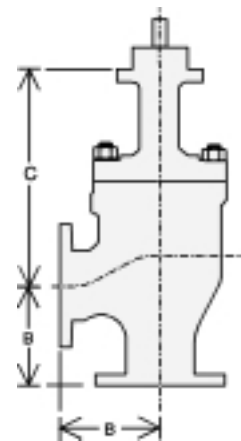
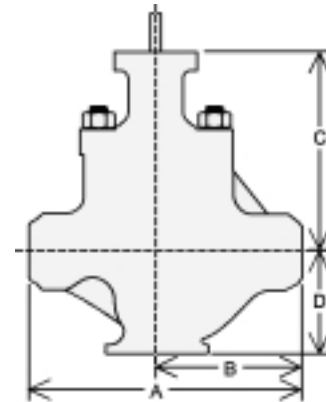
CAN 3 Z299.3
ANSI N45.2
MIL-I-STD-45662
MIL-I-45208
B 31.1

* Assessed and certified by ABS, Houston, Texas

** Formerly listed as B16.104

Dimensions

Body/Bonnet Assembly (see chart next page)



AEROFLOW HIGH PERFORMANCE CONTROL VALVES

ANSI CLASS 900-2500 Dimensions

DIMENSIONS IN INCHES							Shpg. Info. ¹		DIMENSIONS IN MILLIMETERS					Shpg. Info. ¹	
SIZE	A	B	C ²	D	WGT.	VOL.	SIZE	A	B	C ²	D	WGT.	VOL.		
ANSI CLASS 900/1500 PN160-250 BWE/SWE							ANSI CLASS 900/1500 PN160-250 BWE/SWE								
1	11	5-1/2	9-1/2	3-1/8	87 lb.	2 ft ³	25	279	140	241	79	39 kg	0.1 m ³		
1-1/2	13	6-1/2	9-7/8	3-1/2	125 lb.	3 ft ³	40	330	165	251	89	57 kg	0.1 m ³		
2	14-3/4	7-3/8	12-3/4	4-15/16	230 lb.	4 ft ³	50	400	200	323	379	104 kg	0.1 m ³		
3	18-1/8	9-1/16	14-1/2	6-1/8	346 lb.	7 ft ³	75	460	251	368	156	157 kg	0.2 m ³		
4 Gib	20-7/8	11-11/16	15-3/4	7-3/4	484 lb.	10 ft ³	100	574	308	400	197	220 kg	0.3 m ³		
4 Angl	N/A	11-3/16	15-3/4	7-3/4	484 lb.	10 ft ³	100	574	308	400	197	220 kg	0.3 m ³		
6	30-1/4	15-1/8	20-3/4	10-3/16	1311 lb.	24 ft ³	150	819	384	527	259	595 kg	0.7 m ³		
8	32-3/4	16-3/8	23-9/16	13-1/4	3069 lb.	34 ft ³	200	1022	416	598	337	1392 kg	1.0 m ³		
10	39	19-1/2	28-1/2	16-1/2	3800 lb.	52 ft ³	250	991	495	724	419	1723 kg	1.5 m ³		
12	44-1/2	22-1/4	30-1/2	19-3/4	5700 lb.	74 ft ³	300	1130	565	775	502	2585 kg	2.1 m ³		
16	56	28	34-1/2	26	8100 lb.	134 ft ³	400	1422	711	876	660	3674 kg	3.8 m ³		
ANSI CLASS 2500 PN400 BWE/SWE							ANSI CLASS 2500 PN400 BWE/SWE								
1	12-1/2	6-1/4	9-1/2	3-1/8	90 lb.	3 ft ³	25	318	159	241	79	41 kg	0.1 m ³		
1-1/2	14-1/8	7-1/2	9-7/8	3-1/2	130 lb.	3 ft ³	40	359	191	251	89	59 kg	0.1 m ³		
2	15-3/4	7-7/8	12-3/4	4-45/16	250 lb.	5 ft ³	50	375	187	323	379	113 kg	0.1 m ³		
3	19-5/8	9-13/16	14-1/2	6-1/8	511 lb.	8 ft ³	75	460	230	368	156	232 kg	0.2 m ³		
4 Gib	22-5/8	12-1/16	15-3/4	8	625 lb.	11 ft ³	100	530	301	400	203	283 kg	0.3 m ³		
4 Angl	N/A	11-5/16	15-3/4	8	625 lb.	11 ft ³	100	530	301	400	203	283 kg	0.3 m ³		
6	32-1/4	16-1/8	20-3/4	11	1590 lb.	27 ft ³	150	768	409	527	280	721 kg	0.8 m ³		
8	40-1/4	20-1/8	23-9/16	14-1/4	4059 lb.	51 ft ³	200	832	511	598	362	1841 kg	1.4 m ³		
10	50	25	28-1/2	17-1/2	4900 lb.	84 ft ³	250	1270	635	724	419	2223 kg	2.4 m ³		
12	56	28	30-1/2	20-3/4	7100 lb.	115 ft ³	300	1422	711	775	502	3221 kg	3.3 m ³		
16	Call	Call	34-1/2	27	10600 lb.	Call ft ³	400	Call	Call	876	660	4808 kg	Call		
ANSI CLASS 900 PN160 Flanged (RF and RTJ)							ANSI CLASS 900 PN160 Flanged (RF and RTJ)								
1	17-1/4	8-5/8	9-1/2	3-1/8	105 lb.	4 ft ³	25	438	219	241	79	48 kg	0.1 m ³		
1-1/2	20	10	9-7/8	3-1/2	150 lb.	6 ft ³	40	508	254	251	89	68 kg	0.2 m ³		
2	23-1/4	11-5/8	12-3/4	4-15/16	280 lb.	9 ft ³	50	591	295	323	379	113 kg	0.3 m ³		
3	26-5/8	13-5/16	14-1/2	6-1/8	551 lb.	13 ft ³	75	676	338	368	156	232 kg	0.4 m ³		
4 Gib	30-3/8	15-7/8	15-3/4	8	680 lb.	18 ft ³	100	770	379	400	203	283 kg	0.5 m ³		
4 Angl	N/A	15-3/16	15-3/4	8	680 lb.	Call ft ³	100	N/A	386	400	203	283 kg	Call		
6	41-3/4	20-7/8	20-3/4	11	1680 lb.	43 ft ³	150	1060	530	527	280	721 kg	1.2 m ³		
8	46-1/8	23-1/16	23-9/16	14-1/4	4189 lb.	78 ft ³	200	1172	586	598	362	1841 kg	1.9 m ³		
10	54	27	28-1/2	17-1/2	5070 lb.	106 ft ³	250	1372	686	724	419	2300 kg	2.8 m ³		
12	60-3/4	30-3/8	30-1/2	20-3/4	7300 lb.	147 ft ³	300	1543	772	775	502	3311 kg	3.8 m ³		
16	73-1/2	36-3/4	34-1/2	27	10840 lb.	225 ft ³	400	1867	933	876	660	4917 kg	6.5 m ³		
ANSI CLASS 1500 PN250 Flanged (RF and RTJ)							ANSI CLASS 1500 PN250 Flanged (RF and RTJ)								
1	17-1/4	8-5/8	9-1/2	3-1/8	105 lb.	4 ft ³	25	438	219	241	79	48 kg	0.1 m ³		
1-1/2	20	10	9-7/8	3-1/2	150 lb.	6 ft ³	40	508	254	251	89	68 kg	0.2 m ³		
2	23-1/4	11-5/8	12-3/4	4-15/16	280 lb.	9 ft ³	50	591	295	323	379	113 kg	0.3 m ³		
3	26-5/8	13-15/16	14-1/2	6-1/8	561 lb.	14 ft ³	75	708	354	368	156	254 kg	0.4 m ³		
4 Gib	31-1/8	16-1/16	15-3/4	8	690 lb.	19 ft ³	100	791	389	400	203	313 kg	0.5 m ³		
4 Angl	N/A	15-9/16	15-3/4	8	690 lb.	Call	100	N/A	395	400	203	313 kg	Call		
6	44-1/4	22-1/8	20-3/4	11	1685 lb.	47 ft ³	150	1124	562	527	280	764 kg	1.4 m ³		
8	50-1/8	25-1/16	23-9/16	14-1/4	4199 lb.	90 ft ³	200	1273	637	598	362	1905 kg	2.2 m ³		
10	59-1/2	29-3/4	28-1/2	17-1/2	5100 lb.	126 ft ³	250	1511	756	724	419	2313 kg	3.3 m ³		
12	67-1/4	33-5/8	30-1/2	20-3/4	7360 lb.	176 ft ³	300	1708	854	775	502	3338 kg	4.6 m ³		
16	81	40-1/2	34-1/2	27	10980 lb.	271 ft ³	400	2057	1029	876	660	4980 kg	7.7 m ³		
ANSI CLASS 2500 PN400 Flanged (RF and RTJ)							ANSI CLASS 2500 PN400 Flanged (RF and RTJ)								
1	20	10	9-1/2	3-1/8	110 lb.	6 ft ³	25	508	254	241	79	50 kg	0.2 m ³		
1-1/2	23-3/8	11-11/16	9-7/8	3-1/2	160 lb.	8 ft ³	40	594	297	251	89	73 kg	0.2 m ³		
2	26-1/4	13-1/8	12-3/4	4-15/16	290 lb.	12 ft ³	50	667	333	323	379	113 kg	0.3 m ³		
3	33-3/8	16-11/16	14-1/2	6-1/8	576 lb.	27 ft ³	75	848	424	368	156	232 kg	0.6 m ³		
4 Gib	38-1/8	19-9/16	15-3/4	8	710 lb.	37 ft ³	100	968	562	400	203	283 kg	0.8 m ³		
4 Angl	N/A	19-1/16	15-3/4	8	710 lb.	Call	100	N/A	484	400	203	283 kg	Call		
6	54-1/4	27-1/8	20-3/4	11	1745 lb.	73 ft ³	150	1378	689	527	280	721 kg	2.0 m ³		
8	65-3/4	32-5/8	23-9/16	14-1/4	4249 lb.	124 ft ³	200	1670	829	598	362	1841 kg	3.6 m ³		
10	83-1/2	41-3/4	28-1/2	17-1/2	5180 lb.	240 ft ³	250	2121	1060	724	419	2350 kg	6.2 m ³		
12	93	46-1/2	30-1/2	20-3/4	7460 lb.	336 ft ³	300	2362	1181	775	502	3384 kg	8.5 m ³		
16	C/F	C/F	34-1/2	27	11120 lb.	C/F	400	C/F	C/F	876	660	5044 kg	C/F		

NOTE: DIMENSIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE. Request certified drawings for piping layout and construction purposes.

1 Approximate weight and volume
2 Consult factory for extended travel (C dimension)

AEROFLOW HIGH PERFORMANCE CONTROL VALVES

ACCESSORIES



Moore Series 760 Positioners

- Pneumatic: Model 760P
- Electropneumatic: Model 760E
- Digital: Model 760D
- Optional internal limit switches
- Optional valve position transmission

Other Positioners

- PMV Series 1200, 2000 and P5
- Hartmann & Braun/Sensycon TZID
- SMAR FY302 Fieldbus
- Siemens PS2
- Bailey AV Series

Process Controllers

- Electropneumatic: Leslie PMC-1
- Pneumatic: Leslie PDAP/PRAP

Solenoid Valves

- ASCO 8320G174 is standard
- Other Asco models, Versa, Skinner, as required

Electric Actuators

- Jordan

Electrohydraulic Actuators

- Rexa L & T Series

Limit Switches

- Westlock
- National Acme (NAMCO)
- Honeywell (Micro)
- GO Proximity Switches

Noise Reduction Devices

- Leslie Noise Suppressor
- Leslie Les-Sonic Silencing Orifice

Air Regulators

- Leslie AFG-2
- Bellofram Type 50
- Control Air Type 300

Other Options

- Handwheels
- Hydraulic Manual Override System
- Limit Stops
- Special Connections
 - Socketweld
 - Butt weld
 - Stub Ends
 - Pipe Reducers
 - Smooth Flange Faces
 - Ring Type Joints

Instruments

- Lockup Valves
- Leslie S-Transfer Valve

Specification form for Measurement and Control Instruments, Primary Elements and AEROFLOW Control Valves



LESLIE
CONTROLS, INC.

A division of CIRCOR International, Inc.

12501 Telecom Drive • Tampa, Florida 33637
(813) 978-1000 • FAX: (813) 978-0984

Project/Job _____
Unit/Customer _____
P.O./LCO File # _____
Item _____
Contract _____
MFR Serial# _____

Data Sheet ____ of ____
Spec _____
Tag _____
Dwg _____
Service _____

1	Fluid	<input type="checkbox"/> Steam	<input type="checkbox"/> Water	<input type="checkbox"/> Gases	<input type="checkbox"/> Liquid	Crit Pres PC			
2	S	Flow	<input type="checkbox"/> #/hr	<input type="checkbox"/> gpm	<input type="checkbox"/> scfh	Max. Flow	Norm. Flow	Min. Flow	Shut-off
3	E		<input type="checkbox"/> kg/hr	<input type="checkbox"/>	<input type="checkbox"/> m ³ /hr				--
4	R	Inlet Press.	<input type="checkbox"/> psig	<input type="checkbox"/> psia	<input type="checkbox"/> kg/cm ²				psig
5	V	Outlet Press.	<input type="checkbox"/> psig	<input type="checkbox"/> psia	<input type="checkbox"/> kg/cm ²				psig
6	I	Temperature	<input type="checkbox"/> °C	<input type="checkbox"/> °F					
7	C	Spec. Wt./Spec. Grav./Mol. Wgt.							
8	E	Viscosity/Spec. Heats Ratio							--
9	C	Vapor Pressure Pv	<input type="checkbox"/> psia	<input type="checkbox"/>					--
10	O	*Required Cv							--
11	N	*Travel %							--
12	D	Allowable/*Predicted SPL (dBA)							0
		FL _____	X _T _____						

13	L	Pipe Size/Sch. In	_____ /Sch _____
14	I	Pipe Size/Sch. Out	_____ /Sch _____
15	N	Pipe Line Insulation	_____ in.
16	E	Type	<input type="checkbox"/> Globe <input type="checkbox"/> Angle
17	V	*Body Size in.	<input type="checkbox"/> 1 <input type="checkbox"/> 1 1/2 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4
18	A		<input type="checkbox"/> 6 <input type="checkbox"/> 8 <input type="checkbox"/> 10 <input type="checkbox"/> 12 <input type="checkbox"/> 16 <input type="checkbox"/> _____
19	L	ANSI Class	<input type="checkbox"/> 150 <input type="checkbox"/> 300 <input type="checkbox"/> 600 <input type="checkbox"/> _____
20	V		<input type="checkbox"/> 900 <input type="checkbox"/> 1500 <input type="checkbox"/> 2500 <input type="checkbox"/> 4500
21	A	Design. Press. Temp	_____ / _____
22	L	Mfr./Model:	Leslie/Aeroflow
23	B	Body/Bonnet Mat'l	<input type="checkbox"/> WCB <input type="checkbox"/> WC9 <input type="checkbox"/> CF8M
24	O		<input type="checkbox"/> C5 <input type="checkbox"/> WC6 <input type="checkbox"/> _____
25	D	End Conn Inlet/Outlet	<input type="checkbox"/> Flg RF <input type="checkbox"/> Thd <input type="checkbox"/> RTJ
26	A		<input type="checkbox"/> SWE <input type="checkbox"/> BWE/Sch _____
27	N		<input type="checkbox"/> In BWE/Sch _____ <input type="checkbox"/> In SWE _____
28	E		<input type="checkbox"/> Out BWE/Sch _____ <input type="checkbox"/> Out SWE _____
29	T		<input type="checkbox"/> In Stubs/Sch _____ Length (in.) _____
30			<input type="checkbox"/> Out Stub/Sch _____ Length (in.) _____
31			<input type="checkbox"/> Exp _____ x _____ In/Sch _____
32			<input type="checkbox"/> Exp _____ x _____ Out/Sch _____
33	B	Flg. Face Finish	RMS <input type="checkbox"/> Std. (125-500)
34	O	End Ext/Mat'l.	
35	D	*Flow	<input type="checkbox"/> Over <input type="checkbox"/> Under Seat
36	A	*Type Bonnet	<input type="checkbox"/> Std <input type="checkbox"/> Ext
37	N	Lub & Isol Valve	<input type="checkbox"/> Yes <input type="checkbox"/> No
38	E	Lube	<input type="checkbox"/> Yes <input type="checkbox"/> No
39	T	*Packing Mat'l	<input type="checkbox"/> LG <input type="checkbox"/> BTG
40			<input type="checkbox"/> DTFE <input type="checkbox"/> _____
41		*Type	<input type="checkbox"/> UBC <input type="checkbox"/> UBP <input type="checkbox"/> MT <input type="checkbox"/> Mini-P
42			<input type="checkbox"/> BH <input type="checkbox"/> BL <input type="checkbox"/> PB <input type="checkbox"/> T2
43		Les-Sonic Cage	<input type="checkbox"/> Yes <input type="checkbox"/> No
44		Les-Cav	<input type="checkbox"/> I <input type="checkbox"/> II <input type="checkbox"/> III <input type="checkbox"/> IV <input type="checkbox"/> V
45		*Characteristic	<input type="checkbox"/> Linear <input type="checkbox"/> =% <input type="checkbox"/> QO
46			<input type="checkbox"/> Custom
47		Travel	<input type="checkbox"/> STD <input type="checkbox"/> Ext <input type="checkbox"/> Max
48		*Rated Cv	% Max. Cv = _____
49		*Plug Mat'l	<input type="checkbox"/> 420 <input type="checkbox"/> _____
50		Pilot Valve Material	<input type="checkbox"/> 431 <input type="checkbox"/> _____
51		*Seat Ring Mat'l	<input type="checkbox"/> 440C <input type="checkbox"/> _____
52		*Cage Mat'l	<input type="checkbox"/> 440A <input type="checkbox"/> _____
53		Stem Mat'l	<input type="checkbox"/> Nitronic® 60 <input type="checkbox"/> _____
54	S	NEC Class	Group _____ Div. _____

49		*Type	<input type="checkbox"/> DA <input type="checkbox"/> SR <input type="checkbox"/> DASR
50			<input type="checkbox"/> Diaph <input type="checkbox"/> EHA <input type="checkbox"/> Electr. <input type="checkbox"/> Other
51	A	*Mfr./Model	_____ / _____
52	C	*Size/Eff Area	<input type="checkbox"/> 6"/28 in ² <input type="checkbox"/> 10"/80 in ² <input type="checkbox"/> 13"/130 in ²
53	T		<input type="checkbox"/> 16"/200 in ² <input type="checkbox"/> 20"/300 in ² <input type="checkbox"/> Other
54	A		<input type="checkbox"/> On/Off <input type="checkbox"/> Modulating
55	O	Spring Action/Air Failure	<input type="checkbox"/> Open <input type="checkbox"/> Closed <input type="checkbox"/> None
56	R		Spring # _____
57		*Max. Allowable Press.	_____ psig
58		*Min. Required Press.	_____ psig
59		Available Air Supply Press.	_____
60			Max. _____ Min. _____
61		*Bench Range	_____ psig <input type="checkbox"/> N/A
62		Act. Orientation	<input type="checkbox"/> Horiz. <input type="checkbox"/> Vert.
63		Override Type	<input type="checkbox"/> Manual Hyd. <input type="checkbox"/> None
64		Air Failure Valve	<input type="checkbox"/> Opens <input type="checkbox"/> Closes <input type="checkbox"/> Last
65		Tubing	<input type="checkbox"/> SST <input type="checkbox"/> Copper <input type="checkbox"/> 3/8" <input type="checkbox"/> 1/2" <input type="checkbox"/> _____
66		Data Tag:	<input type="checkbox"/> Brass <input type="checkbox"/> SST
67	SOL	Solenoid:	<input type="checkbox"/> Asco/8320G174 <input type="checkbox"/> None
68			<input type="checkbox"/> Other Mfr./Model _____ / _____
69	P	Input Signal	<input type="checkbox"/> 3-15 psi <input type="checkbox"/> 4-20 mA <input type="checkbox"/> _____
70	O	*Type	<input type="checkbox"/> Pneu. (750P) <input type="checkbox"/> I/P(750E) <input type="checkbox"/> DPS <input type="checkbox"/> None
71	S		<input type="checkbox"/> Other *Mfr./Model _____ / _____
72	I	*On Incr. Signal Output	<input type="checkbox"/> Incr. <input type="checkbox"/> Decr.
73	T	Gauges	<input type="checkbox"/> Yes <input type="checkbox"/> No, By-Pass <input type="checkbox"/> Yes <input type="checkbox"/> No
74		*Cam Charact.	<input type="checkbox"/> Linear <input type="checkbox"/> =% <input type="checkbox"/> Sq.Root
75	A	*Type	<input type="checkbox"/> Mech (Namco EA170-1100) <input type="checkbox"/> None
76	S		<input type="checkbox"/> Other *Mfr./Model _____ / _____
77	E	Contacts/Rating	<input type="checkbox"/> Other <input type="checkbox"/> SPDT <input type="checkbox"/> DPDT
78	T	Actuation points:	<input type="checkbox"/> Both <input type="checkbox"/> Open <input type="checkbox"/> Closed
79		NEMA Class	1,4, &13
80		*Mfr./Model: Leslie/	<input type="checkbox"/> AFG-2 <input type="checkbox"/> None
81		*Set Press.	<input type="checkbox"/> PSIG <input type="checkbox"/> _____ / _____
82		Filter	<input type="checkbox"/> Yes <input type="checkbox"/> No, Gauge <input type="checkbox"/> Yes <input type="checkbox"/> No
83		Range:	<input type="checkbox"/> 3-60 psi <input type="checkbox"/> 30-150psi <input type="checkbox"/> _____
84		*Hydro Pressure	
85		ANSI/FCI Leakage Class	<input type="checkbox"/> III <input type="checkbox"/> IV
86			<input type="checkbox"/> V <input type="checkbox"/> VI <input type="checkbox"/> Zero CC/min
87	M	No Service Cond. Available	<input type="checkbox"/>
88	I	Attached Cv Calcs	<input type="checkbox"/> Yes <input type="checkbox"/> No
89	S	Special Factory Instr. Attached	<input type="checkbox"/> Yes <input type="checkbox"/> No
90	C	Shipping Schedule:	_____ weeks ARO
91		SRI#	_____ Date _____
92		Approx. Weight	_____ lbs. each
93		Qty.	_____ Approx. Weight _____ lbs. Total
94		Unit Net Price \$	_____ each
95		Extension Net Price \$	_____ Total
96		Leslie Quote #	_____
97		Rev.	Date _____ Revision _____ Orig _____ App _____
98			
99			
100			

Notes:

A large grid of graph paper for taking notes, consisting of 20 columns and 30 rows of small squares.