

L SERIES PRESSURE REDUCING & DIFFERENTIAL PRESSURE REGULATOR

SIZES 1/2" - 4"

PRESSURES to 600 PSIG at 750°F



L SERIES

- Steam, Air or Gas Service
- 99% Accuracy of Regulation
- 10:1 Rangeability
- Packless Construction
- One Valve Adjusts to All Ranges
- Pressure Reduction of 15 psi minimum

APPLICATION DATA

- HVAC Systems
- Process Control Systems for Food, Moulding, Textile, Pulp, etc.
- Packaged OEM Systems for Heat Exchangers, Metal Cleaning, Vaporizers, etc.

VALVE RATINGS

Valve Ends ASME/ANSI	Pressure PSIG (bar)	Temperature °F (°C)
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CAST IRON

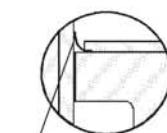
B16.1 Class 250 NPT	250 (17.2)	@ 450 (232)
B16.1 Class 125 Flanged	125 (8.6)	@ 450 (232)
B16.1 Class 250 Flanged	250 (17.2)	@ 450 (232)

BRONZE

B16.24 Class 300 NPT	300 (21.0)	@ 500 (260)
B16.24 Class 150 Flanged	150 (10.3)	@ 500 (260)
B16.24 Class 300 Flanged	300 (21.0)	@ 500 (260)

CAST STEEL

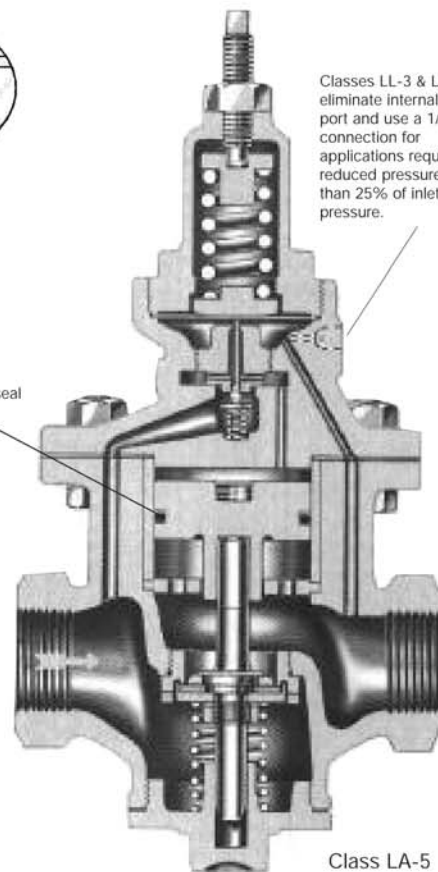
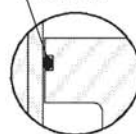
B16.34 Class 600 NPT	600 (41.4)	@ 750 (400)
B16.34 Class 150 Flanged	150 (10.3)	@ 750 (400)
B16.34 Class 300 Flanged	300 (21.0)	@ 750 (400)
B16.34 Class 600 Flanged	600 (41.4)	@ 750 (400)



Classes
LY
LEY
LLY
are fitted with a
TEFLON® seal

Classes
LA-5
LAE-5
are fitted with a
Neoprene O-Ring seal

Classes
L-3
LE-3
LL-3
are fitted with a
Piston Ring



Classes LL-3 & LAE-5 eliminate internal sensing port and use a 1/4" NPT connection for applications requiring reduced pressure less than 25% of inlet pressure.

Class LA-5

RATED FLOW COEFFICIENTS (Cv)

	REGULATOR SIZE									
	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
STEAM	1.8	3.4	5.6	10	13.7	23	33	51	69	89

1. Insert letter code for options in model number as required.
2. For inlet pressures over 200 psi, minimum pressure is 5% of inlet pressure.
3. For inlet pressures over 100 psi, minimum pressure is 5% of inlet pressure.
4. For inlet pressures over 300 psi, minimum pressure is 8% of inlet pressure.

For Sizing Capacity Tables see Pages 42 & 43



L SERIES

L SERIES PRESSURE REDUCING & DIFFERENTIAL PRESSURE REGULATOR

CLASS LKY, LEKY, LLKY, IRON BODY, FOR STEAM SERVICE; LAK, LAEK IRON BODY FOR AIR, GAS SERVICE

PRESSURE RANGES AND CONSTRUCTION

BODY MAT'L	CLASS	SIZE	INLET PRESSURE & TEMPERATURE	REDUCED PRESSURE RANGE-PSI/bar ¹		END CONNECTIONS	TRIM PARTS AND MATERIALS					
				MIN. ²	MAX.		SEAT RING	MAIN VALVE ³	CON-TROLLING VALVE	CYLINDER LINER	CON-TROLLING VALVE SEAT	LOWER DIA-PHRAGM
Cast Iron	LKY LEKY	1/2 - 4"	25-250 psi (2-17 bar) 450°F Max. (232°C Max.)	10/0.5*	235/16	1/2 - 2" 250 lb. Threaded 1/2 - 4" 125 or 250 lb. Flanged	400 Series Stainless Steel STELLITE®	400 Series Stainless Steel, Hardened	400 Series Stainless Steel, Hardened	Cast Bronze with TEFLON® Seal	18-8 Stainless Steel TEFLON® Seal	Cast Bronze with
	2/0.1**			35/2.5								
	LAK LAEK	1/2 - 4"	25-400 psi (2-28 bar) 150°F Max. (65°C Max.)	5/0.3*	385/27	1/2 - 4" 125 & 250 lb. Flanged	Cast Bronze	18-8° Stainless Steel Stem Neoprene Seating Disc	Phosphor Bronze and MONEL®	Bronze	Phosphor Bronze with Plastic Seating Surface	Cast Bronze with Neoprene O-Ring

* 5% of inlet pressure over 200 psi (14 bar)

** 5% of inlet pressure over 100 psi (7 bar)

¹ Minimum differential between inlet and outlet pressures is 15 psi (1 bar)

² Models with external sensing line required for reduced pressure less than 25% of inlet pressure

³ Soft seat configuration required for dead end service

® See page ____ for listing of trademarks and their owners

CLASSES LY, LEY, LLY, L-3, LL-3 BRONZE BODY, FOR STEAM SERVICE; LA-5, LAE-5 BRONZE BODY FOR AIR SERVICE

PRESSURE RANGES AND CONSTRUCTION

BODY MAT'L	CLASS ²	SIZE	INLET PRESSURE & TEMPERATURE	REDUCED PRESSURE RANGE-PSI/bar ¹		END CONNECTIONS	TRIM PARTS AND MATERIALS					
				MIN. ²	MAX.		SEAT RING	MAIN VALVE ³	CON-TROLLING VALVE	CYLINDER LINER	CON-TROLLING VALVE SEAT	LOWER DIA-PHRAGM
Bronze	LY LEY L-3	1/2 - 3"	20-300 psi (1.5-21 bar) 500°F Max. ² (260°C Max. ²)	10/0.5*	285/20	1/2 - 2" 300 lb. Threaded 1/2 - 4" 150 & 300 lb. Flanged	400 Series Stainless Steel STELLITE®	400 Series Stainless Steel, Hardened	400 Series Stainless Steel, Hardened	Cast Bronze with TEFLON® Seal	18-8 Stainless Steel TEFLON® Seal	Cast Bronze with
	2/0.1***			35/2.4								
	LA-5 LAE-5	1/2 - 3"	25-400 psi (2-17 bar) 150°F Max. (65°C Max.)	5/0.3**	385/27	1/2 - 2" 300 lb. Threaded 1/2 - 4" 150 & 300 lb. Flanged	Cast Bronze	18-8° Stainless Steel Stem Neoprene Seating Disc	Phosphor Bronze and MONEL®	Bronze	Phosphor Bronze with Plastic Seating Surface	Cast Bronze with Neoprene O-Ring

* 5% of inlet pressure over 200 psi (14 bar)

** 5% of inlet pressure over 100 psi (7 bar)

*** 2% of inlet pressure over 100 psi (7 bar)

¹ Minimum differential between inlet and outlet pressures is 15 psi (1 bar)

² Models with external sensing line required for reduced pressure less than 25% of inlet pressure

³ Soft seat configuration required for dead end service

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L SERIES

L SERIES PRESSURE REDUCING & DIFFERENTIAL PRESSURE REGULATOR

CLASSES LS-5*, LYS-1, LES-5, LEYS-1, LLS-5, LLYS-1, LAAS-1 STEEL BODY FOR STEAM, AIR OR GAS SERVICE

PRESSURE RANGES AND CONSTRUCTION

BODY MAT'L	CLASS2	SIZE	INLET PRESSURE & TEMPERA-TURE2	REDUCED PRESSURE RANGE-PSI/bar1		END CONNECTION	TRIM PARTS AND MATERIALS		
				MIN.	MAX.		SEATING SURFACE	MAIN & CONTROLLING VALVES: CONTROLLING VALVE SEAT & CYLINDER LINER	PISTON
Cast	LS-5 LYS-1† LES-5 LEYS-1†	1/2 - 3"	40-1000 psi (3-69 bar) 750°F Max.† (398°C Max.†)	25/2*	400/28	1/2 - 2" 600 lb. Threaded 1/2 - 3" 150, 300, & 600 lb. Flanged	Integral STELLITE®	400 Series Stainless 400 Series Stainless steel, hardened	400 Series Stainless Steel with Cast Iron Piston Rings†
	10/0.5**			50/3.5					
Steel	LAAS-1	1/2 - 2"	25-400 psi (2-28 bar) 180°F Max. (82°C Max.)	5/0.3***	385/27	1/2 - 2" SWE, THD 150, 300, & 600 lb. Flanged W/ TEFLON® insert	416 St. Steel/ TEFLON®	300 Series St. St. except MAIN VALVE: 420 St. St. CYL. LINER: Bronze	Bronze Cast Iron Piston Rings

* 5% of inlet pressure over 300 psi (21 bar)
 ** 5% of inlet pressure over 250 psi (17 bar)
 *** 2% of inlet pressure over 100 psi (7 bar)
 † LYS-1, LEYS-1, LLYS-1 are fitted with a TEFLON® piston cup washer for steam service up to 500°F (260°C)
 1 Minimum differential between inlet and outlet pressures is 15 psi (1 bar)
 2 1000 psi, 665°F (69 bar, 351°C) maximums in air and gas service
 ® See page ____ for listing of trademarks and their owners

L SERIES PRESSURE REDUCING & DIFFERENTIAL PRESSURE REGULATOR SPECIFICATIONS

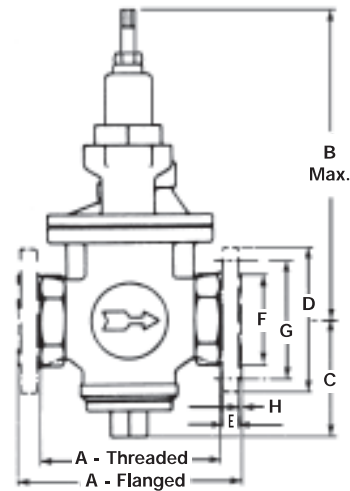
CAST IRON AND BRONZE REGULATORS shall be of the self-contained, internal pilot, piston operated type. Internal pilot valve and pilot valve seat shall be interchangeable in all sizes and contained wholly within the valve and entirely self draining. The main valve shall be made of stainless steel hardened to at least 500 Brinell. No stuffing boxes or bellows will be permitted. All valve seats shall be renewable. Main valve seat ring to be stainless with STELLITE® seating surface. Pistons in steam pressure regulating service shall be of bronze with a TEFLON® seal. All regulators for over 500°F (260°C) service shall have cylinder liners of stainless steel hardened to 500 Brinell, and bronze pistons with cast iron rings. In air service, piston and liner shall be of bronze with a rubber “O” ring seal. Internal pilot valve to be stainless steel hardened to at least 500 Brinell, with ground finish. Adjusting spring shall cover 2-35 psi (0.1-2.5 bar) or 10-285 psi (0.7-20 bar) range.

STEEL REGULATORS shall be of the self-contained, internal pilot, piston operated type. Internal pilot valve and pilot valve seat shall be interchangeable in all sizes and for all pressure conditions, contained wholly within the valve and entirely self-draining. The main valve shall be made of stainless steel hardened to at least 500 Brinell. No stuffing boxes, rubber diaphragms or bellows will be permitted. Main valve seat to be STELLITE® welded integral with body. Main valve, internal pilot valve and renewable piston cylinder shall be made of stainless steel hardened to at least 500 Brinell. The pilot valve and piston cylinder shall have ground finish. Wide range adjusting spring (10-50 psi) (0.7-3.5 bar) or (25-400 psi) (1.7-28 bar) shall be contained within a steel spring case bolted to valve top cap.

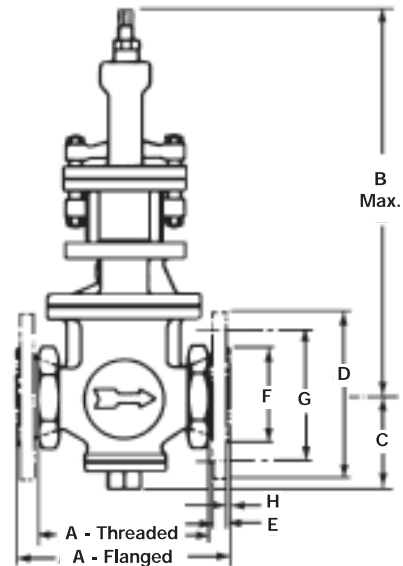
MATERIALS OF CONSTRUCTION

Body, Cast Iron	ASTM A126 Cl. B
Body, Cast Bronze.....	ASTM B61 UNS C92200
Body, Cast Steel	ASTM A216 WCB
Seat Ring, std.	SS w/Stellite®
opt.	Bronze*
Main Valve Trim, std.	Hardened SS
opt.	SS w/Neoprene Disc*

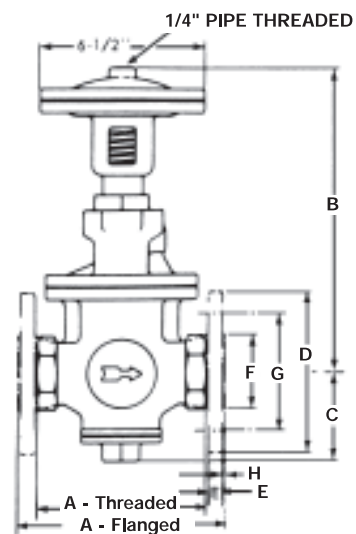
*Installed in units with “A” in model code.



STANDARD REGULATOR - L SERIES AND UL SERIES
See Dimensions Chart on page 16



DIFFERENTIAL REGULATOR - LX SERIES
See Dimensions Chart on page 16



T TOPWORKS
See Dimensions Chart on page 16