

Innovative Combustion Solutions Worldwide

Locktite Manual Reset Gas Shut-Off Valves

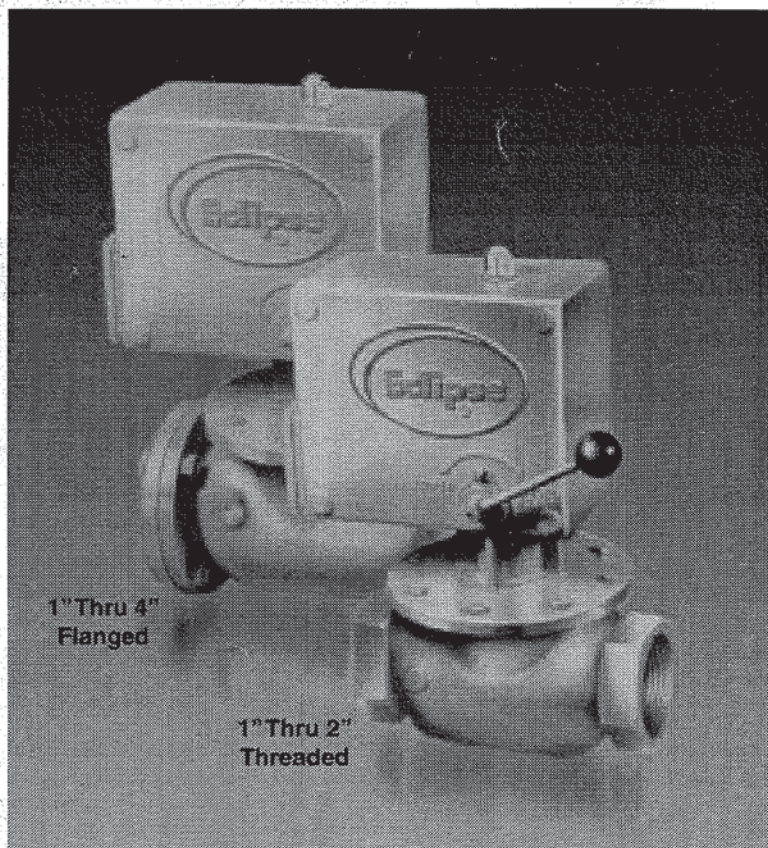
Series 200 LT

*U.S. Patent No. 3,259,357
Canadian Patent No. 764,833*

- UL listed, FM & CGA approved.
- Snap-acting solenoid for fast closing.
- Two visual indicators of valve position.
- Raintight construction.
- Soft seat disc for positive shut-off.
- Two built-in auxilliary switches.
- Ball bearing trip mechanism reduces wear.
- Lever with extension chains available for remote mounting.
- 100% factory tested before shipment.

Eclipse 200 LT valves are manually opening valves that automatically shut off the gas supply to a combustion system when any interlocking limit switch opens. The valve handle cannot be reset until the condition causing the open switch is corrected and all limit switches are closed. Typical limit switches include air pressure, gas pressure, temperature limit, and flame monitoring contacts. In the event of a power failure, the valve immediately closes.

Series 200 LT valves include two visual indicators of "open" or "closed" position: a red "flag" visible in the plastic dome on top of the valve; and the reset handle position as indicated by cast markings on the operator case. These valves also include two SPDT micro-switches that can be used for auxiliary circuits. Two contacts are made when the valve opens, and two are made when the valve is closed.



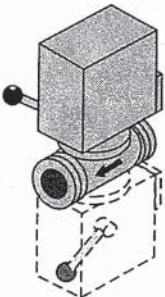
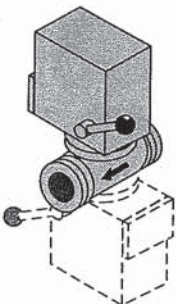
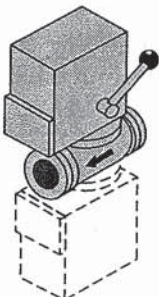
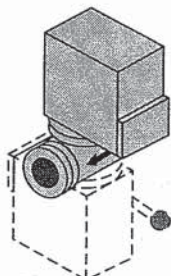
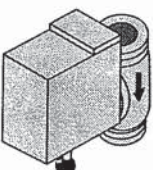
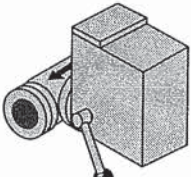
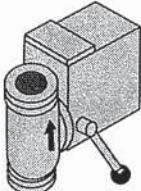
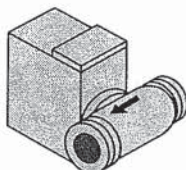
Eclipse Combustion
ISO 9001 Registered



2.0 Operating Parameters & Requirements

- 2.1 Install a manual shutoff valve upstream of the Lock-tite® to facilitate maintenance.
- 2.2 Before installing the valve, remove pipe scale and foreign matter that may have accumulated in the connecting pipes.
- 2.3 Ambient temperature at the location of the valve should not exceed 125° F.
- 2.4 Flow through the valve must be in the direction indicated by the arrow on the valve body.
- 2.5 Do not use the valve body to support piping.
- 2.6 "LT" valves are agency listed as follows:
UL listed for air, natural gas, LP gas & hydrogen.
FM approved for natural, LP & manufactured gases.
CGA approved for natural and LP gases.
For wet or corrosive gases such as coke oven or digester gas, corrosion-resistant trim must be installed at Eclipse. Be sure your valve was ordered to suit your application.
- 2.7 See Figure 1 for allowable mounting positions.

Figure 1—Operator Orientation & Mounting Position

Factory Supplied Operator Position	#1 (Standard)	#2	#3	#4
Valve Mounted With Operator Straight Up or Down				
Valve Mounted With Wiring Box Cover Facing Up				

200 LT valves can be supplied with the operator rotated in any of four positions with respect to the valve body, #1, #2, #3, and #4. Position #1 is supplied standard unless otherwise specified. The sketches above show the allowable mounting orientations for each of the four factory-supplied operator positions. The operator must not be mounted in a position other than those shown.

3.0 Pressure Taps & Position Indicators

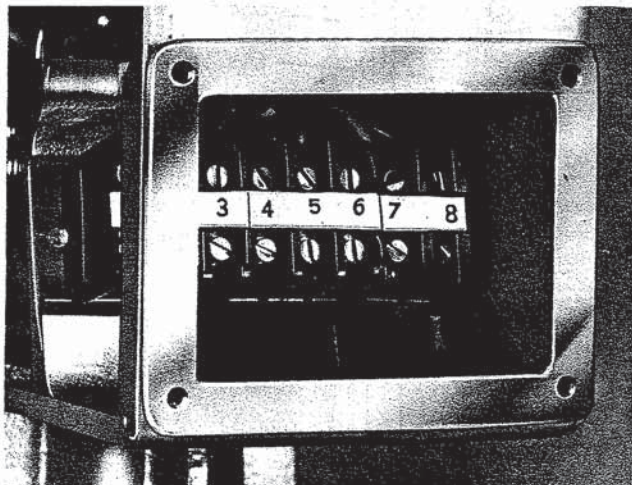
- 3.1 The valve body has a plugged test connection upstream and downstream of the valve disc for leakage test and connection of pressure gauges.
- 3.2 An indicating "flag" enclosed in a clear plastic housing on top of the valve operator provides visual indication of the valve position. When the red indicating "flag" is visible, the valve is open; when it is not visible, the valve is closed.
- 3.3 The reset handle can also be used as a valve position indicator since it is spring loaded and automatically returns to the "reset" position when the valve closes.
- 3.4 The operator is equipped with two internal SPDT microswitches. These switches are normally used for actuating an alarm signal or for enforced low fire start of the system. The switch is rated for 8 amps, 1/3 HP, 120 or 240 volts A.C.

4.0 Wiring

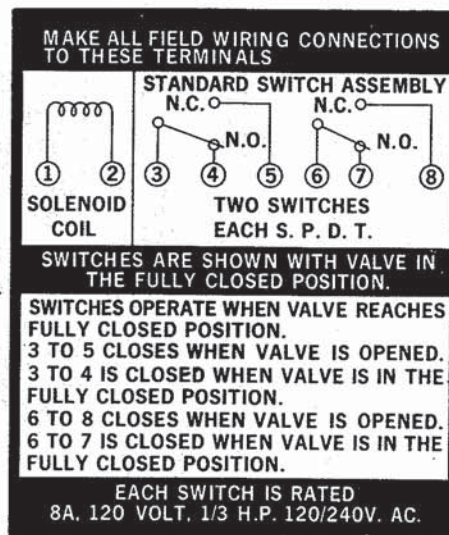
- 4.1 Check valve nameplate to make certain electrical characteristics correspond with electrical service being used.
- 4.2 All wiring connections should be made in accordance with local or regional electric codes.
- 4.3 All internal wiring is connected at the factory to a terminal block included in the built-in wiring compartment of the valve (see figure 4). Make all field connections to this terminal block.
- 4.4 Wiring diagrams for the latching solenoid and microswitch(es) are located on the inside surface of the terminal block cover, and also in Figure 4.
- 4.5 The operator has two 1/2" threaded conduit connections for field wiring. Use wiring suitable for 75° C operation.
- 4.6 For raintight applications, wiring connections to the valve must be made with 90° close ell rigid conduit fittings.

Figure 4—Wiring Details

Terminal Block

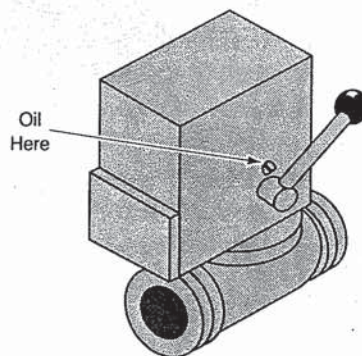


Wiring Diagram



5.0 Maintenance

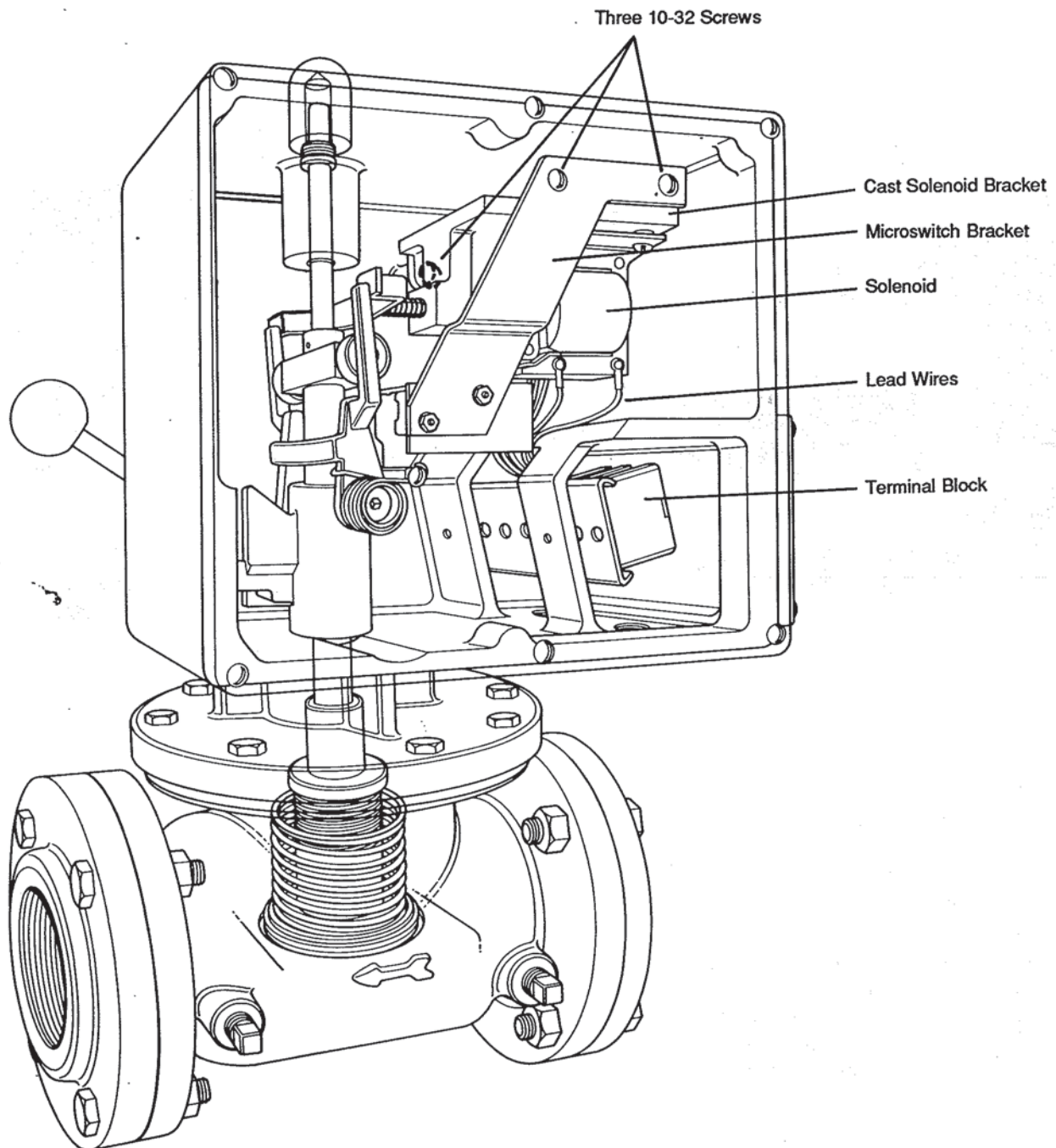
- 5.1 Every six months, lubricate the lever with light motor oil as shown to the right.
- 5.2 Since the "LT" valve is a safety device, test it regularly for proper functioning. Interrupt electrical power to simulate an unsafe condition. **If the valve does not close immediately, remove it from service and return it to Eclipse for repair or replacement.**



6.0 Replacement of Solenoid & Bracket Assembly

- 6.1 Remove main housing cover and gasket.
- 6.2 Remove the wiring box cover. Disconnect solenoid lead wires from the terminal block.
- 6.3 Remove the three 10-32 machine screws holding the cast solenoid bracket and microswitch bracket to the operator housing. Remove both brackets.
- 6.4 Mount the new solenoid and bracket assembly in the operator housing, replace the microswitch bracket, replace the three 10-32 screws, reconnect lead wires, and install main and side gaskets and covers.

Figure 5—View of Valve With Side Cover Removed



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Litho in U.S.A.

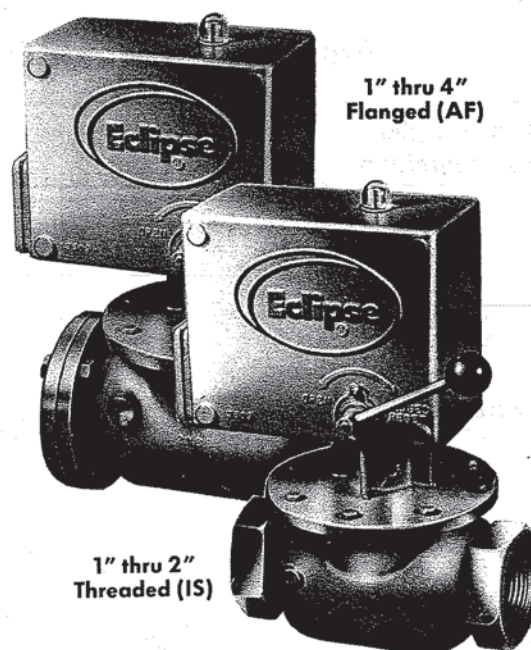
ECLIPSE INFORMATION GUIDE

LOCKTITE® MANUAL RESET SHUT-OFF VALVES

Series 200 LT

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LISTED 326R



CGA 3.9



APPROVED

1.0 Materials of Construction

- 1.1 **Operator housing**—heat treated cast aluminum.
- 1.2 **Valve body**—cast aluminum or cast iron depending on model selected.
- 1.3 **Valve disc**—steel with Hycar synthetic rubber bonded to provide soft seating on valve port.
- 1.4 **Valve shaft**—stainless steel.
- 1.5 **Closing spring**—stainless steel.
- 1.6 **Main shaft gas seal**—plated steel with O-ring.
- 1.7 **Main housing and terminal strip**—tightly sealed using nitrile (UL listed) gaskets in order to assure a raintight enclosure.



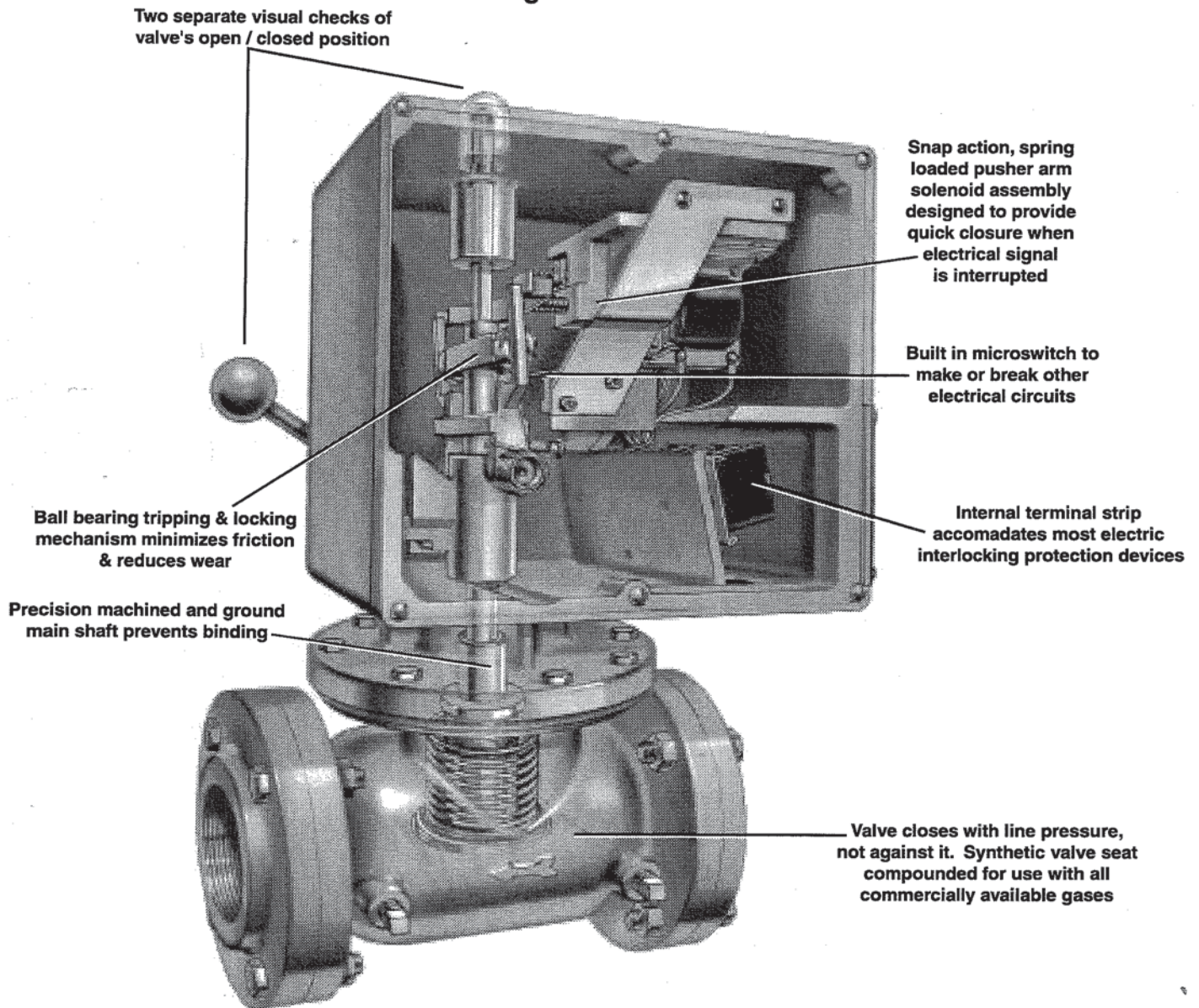
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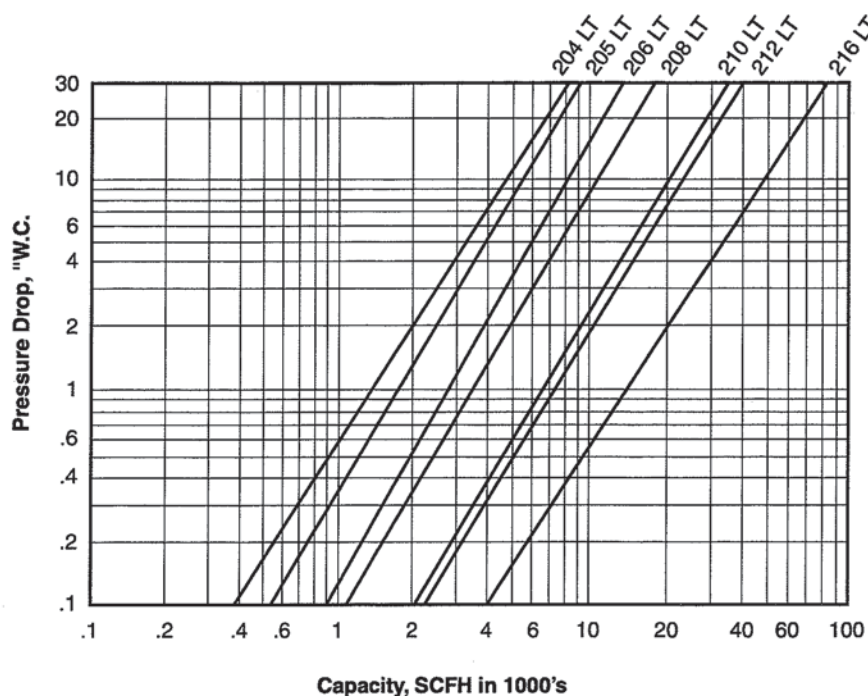
200 LT Specifications

Temperature Limits	+125° to -20° F (+52° to -29° C) fluid and ambient . Below 32° F (0° C) the gas must be free of water vapor which could condense and freeze within the valve.	
Maximum Inlet & Differential Pressure	1" thru 2"	30 psig
	2-1/2" thru 4"	20 psig
Gases	UL listed for air, natural gas, LP gas and hydrogen. FM approved for natural, LP and manufactured gases. CGA approved for natural and LP gases. Contact Eclipse for other gases. For corrosive or wet gases such as coke oven or digester gas, corrosion-resistant valve trim must be installed at Eclipse.	
Electrical	Volts/Cycles	115/120 volt 50/60 hz standard. 220/50 or 240/60 available.
	Holding Current	35 VA at 120 volt
	Auxiliary Switches (2)	8 amp, 1/3 hp, 120 or 240 volts A.C.
Approvals	UL listed, FM & CGA approved.	

Design Features



Capacities*



*For natural gas (.6 s.g.) with an inlet pressure no higher than 1.1 psig. For other gases, multiply capacity by:

Butane (2.0 s.g.) .548

Propane (1.5 s.g.) .628

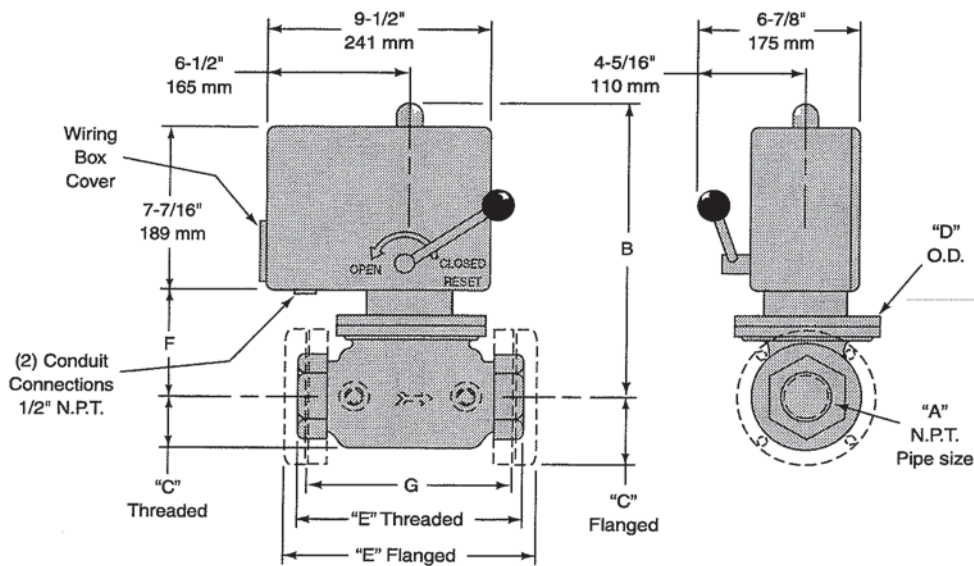
Air (1.0 s.g.) .775

Allowable Mounting Positions

Factory Supplied Operator Position	#1 (Standard)	#2	#3	#4
Valve Mounted With Operator Straight Up or Down				
Valve Mounted With Wiring Box Cover Facing Up				

200 LT valves can be supplied with the operator rotated in any of four positions with respect to the valve body, #1, #2, #3, and #4. Position #1 is supplied standard unless otherwise specified. The sketches above show the allowable mounting orientations for each of the four factory-supplied operator positions. The operator must not be mounted in a position other than those shown.

200 LT Dimensions



English Units

Catalog Number	Assembly Number		C _v Open	Dimensions in Inches							Net Lbs.
	120 V.	240 V.		A	B	C	D	E	F	G	
Threaded Iron Body											
204 LT-IS	571604	571604-1	23.4	1	12-1/16	1-1/2	5-1/2	7-1/4	3-11/16	---	26
205 LT-IS	571605	571605-1	29.8	1-1/4	12-1/16	1-1/2	5-1/2	7-1/4	3-11/16	---	26
206 LT-IS	571606	571606-1	50.4	1-1/2	12-5/8	2-1/16	5-1/2	9	4-5/16	---	32
208 LT-IS	571608	571608-1	58.5	2	12-5/8	2-1/16	5-1/2	9	4-5/16	---	30
Flanged Aluminum Body											
204 LT-AF	560604	560604-1	23.4	1	12-3/16	1-3/4	5-7/8	7-1/16	3-13/16	5-7/8	23
205 LT-AF	560605	560605-1	29.8	1-1/4	12-3/16	1-3/4	5-7/8	7-1/16	3-13/16	5-7/8	23
206 LT-AF	560606	560606-1	50.4	1-1/2	12-3/4	2-1/2	5-7/8	9	4-13/16	7	28
208 LT-AF	560608	560608-1	58.5	2	12-3/4	2-1/2	5-7/8	9	4-13/16	7	27
216 LT-AF	560616	560616-1	234.0	4	16-3/16	4	7-15/16	15-5/8	7-13/16	13	60
Flanged Iron Body											
210 LT-IF	560611	560611-1	116.0	2-1/2	14-1/8	3-1/16	7-7/8	12-5/8	5-3/4	9-3/4	52
212 LT-IF	560613	560613-1	126.0	3	14-1/8	3-1/16	7-7/8	12-1/4	5-3/4	9-3/4	52

Metric Units

Catalog Number	Assembly Number		C _v Open	Dimensions In Millimeters							Net Kgs.
	120 V.	240 V.		A	B	C	D	E	F	G	
Threaded Iron Body											
204 LT-IS	571604	571604-1	23.4	1"	306	38	140	184	94	---	11.8
205 LT-IS	571605	571605-1	29.8	1-1/4"	306	38	140	184	94	---	11.8
206 LT-IS	571606	571606-1	50.4	1-1/2"	321	52	140	229	110	---	14.5
208 LT-IS	571608	571608-1	58.5	2"	321	52	140	229	110	---	13.6
Flanged Aluminum Body											
204 LT-AF	560604	560604-1	23.4	1"	310	44	149	195	97	149	10.4
205 LT-AF	560605	560605-1	29.8	1-1/4"	310	44	149	195	97	149	10.4
206 LT-AF	560606	560606-1	50.4	1-1/2"	324	64	149	229	122	178	12.7
208 LT-AF	560608	560608-1	58.5	2"	324	64	149	229	122	178	12.2
216 LT-AF	560616	560616-1	234.0	4"	411	102	202	397	198	330	27.2
Flanged Iron Body											
210 LT-IF	560611	560611-1	116.0	2-1/2"	359	78	200	321	146	248	23.5
212 LT-IF	560613	560613-1	126.0	3"	359	78	200	321	146	248	23.5