




# Eclipse AutoTite

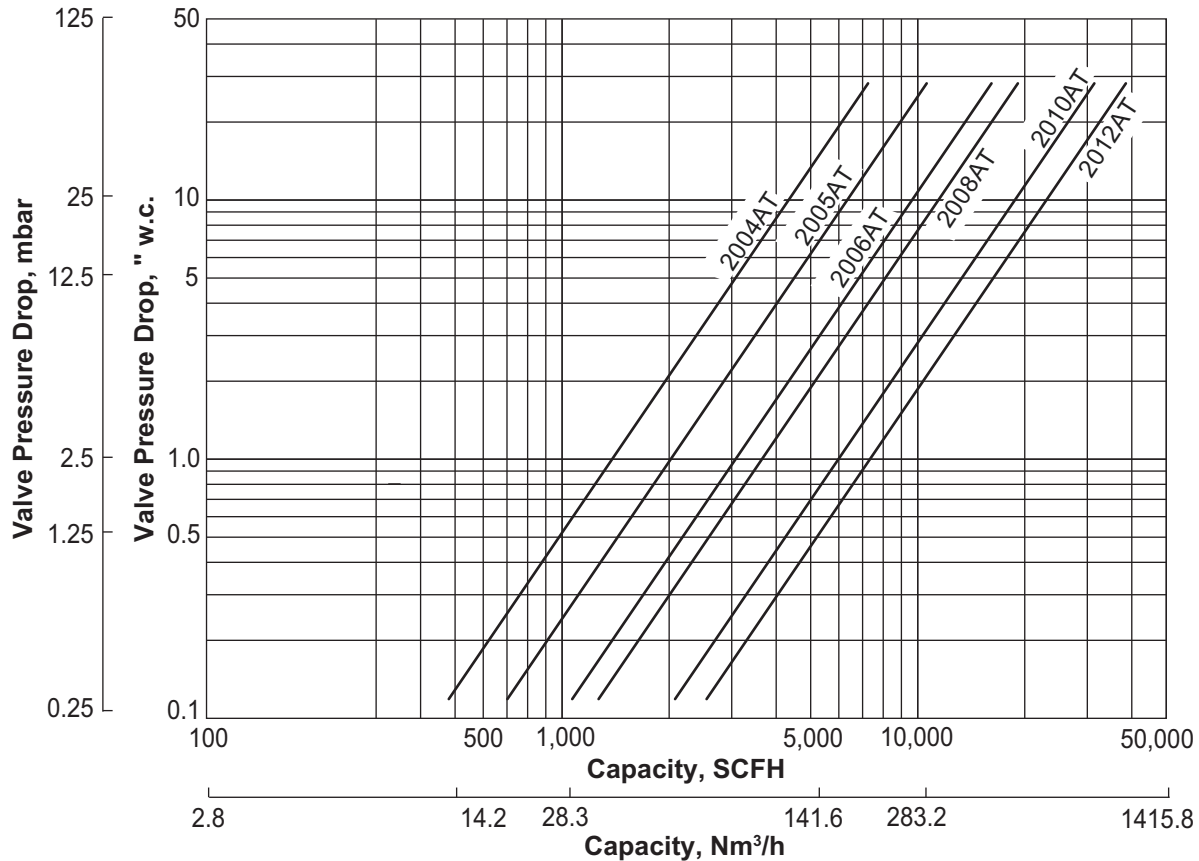
## Automatic Shut-Off Valves

Series 2000 AT

Version 2

Parameter	Specifications			
Ambient Temperature Limits	-20° to 130°F (-28.9° to 54.4°C) (CSA, FM & UL) <i>Below 32°F (0°C), the gas must be free of water vapor which could condense and freeze within the valve.</i>			
Maximum Operating Pressure	30 psi (2068 mbar)			
Fuels <i>For any other mixed gases, contact Eclipse, Inc.</i>	Approved for air, natural gas, propane and butane.			
Nominal Opening Time	10 seconds @ 60 Hz; 20 seconds @ 50 Hz <i>Temperature can affect the opening time.</i>			
Maximum Closing Time	1 second			
Electrical Actuator	110V/50Hz	120V/60Hz	220V/50Hz	240V/60Hz
Amps Inrush	5.6	5.6	2.8	2.8
Amps Running	2.5	2.1	1.3	1.1
Amps Holding	0.1	0.09	0.048	0.044
Electrical-Aux Switches	3 SPDT: 1 non-adjustable, open position, and 2 factory set proof-of-closure.  • 120V: 15 amps • 240V: 7.5 amps  Maximum total connected load for switches: 1800VA			
Agency Approvals		UL Listed (File - MH5769)		
		FM Approved (File - 3045309)		
		CSA Certified (File - 112698/162582)		
Enclosure Ratings	NEMA 1, 3, 4 (Combination general purpose, dust tight and drip tight)			

## Valve Capacities Pressure Drop Across Valve



Flows for natural gas (0.6 sg) at standard conditions of 60°F (15.6°C), 14.7 psia (1013.5 mbar).  
Multiply capacities by the factors below for other gases:

Butane (2.0 sg) 0.548  
Propane (1.55 sg) 0.632  
Air (1.0 sg) 0.775

Flows corrected to standard conditions of 60°F (15.6°C), 14.7 psia (1013.5 mbar) using the following formula:

$$Q_n = Q \times \left[ \frac{520}{460 + T_1} \right] \times \left[ \frac{P_a + P_1}{14.7} \right]$$

Flow - Pressure Drop formula:

$$Q = 1360 \times C_v \times \sqrt{\frac{(P_1 - P_2) \times P_2}{(G \times T_2)}}$$

Estimated Pressure Drop formula:

$$\Delta P = \Delta P_n \times \left[ \frac{Q}{Q_n} \right]^2 \times \frac{(460 + T_1)}{520} \times \frac{14.7}{(P_a + P_1)}$$

Q = Gas flow (cfh)

P<sub>a</sub> = Atmospheric pressure (psia)

P<sub>1</sub> = Inlet pressure (psi)

P<sub>2</sub> = Outlet pressure (psi)

T<sub>1</sub> = Gas temperature (°F)

T<sub>2</sub> = Gas temperature (°R)

G = Specific gravity

C<sub>v</sub> = 25 (2004 AT)

36 (2005 AT)

55 (2006 AT)

63 (2008 AT)

106 (2010 AT)

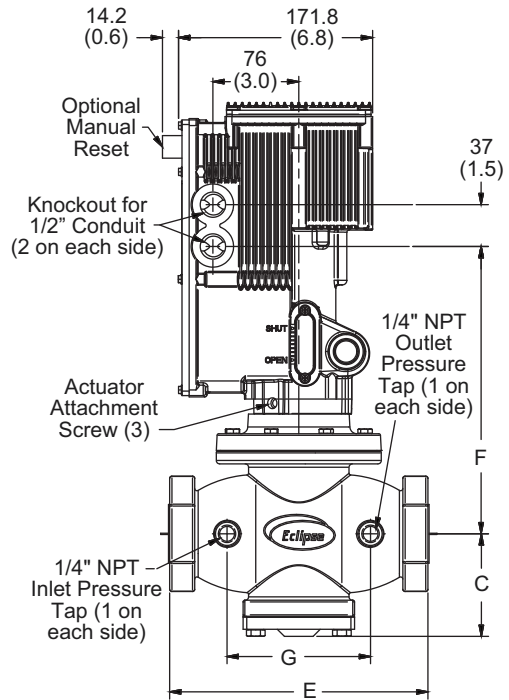
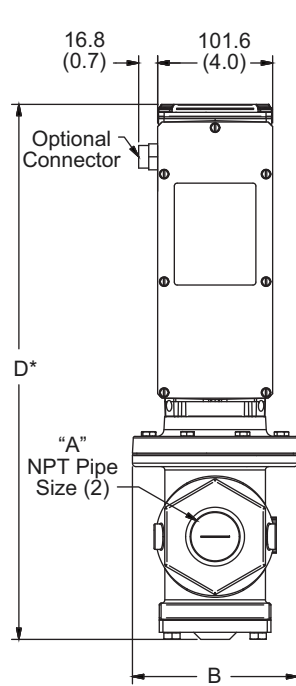
129 (2012 AT)

Q<sub>n</sub> = Gas flow (scfh) under standard conditions

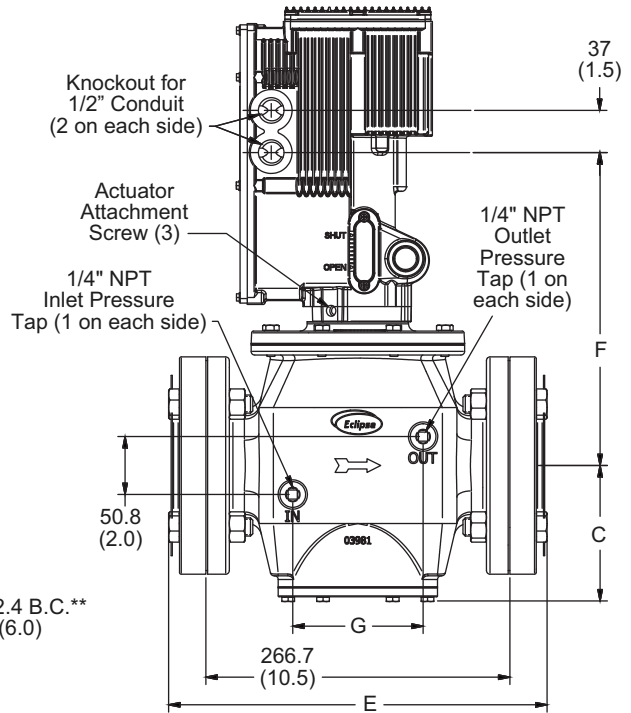
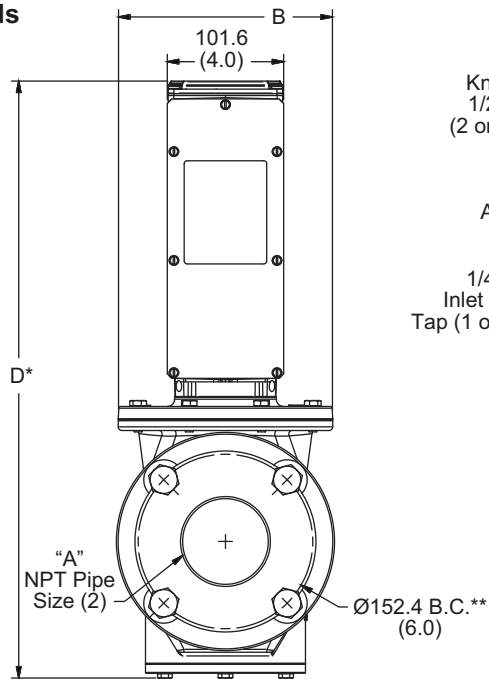
ΔP<sub>n</sub> = Pressure drop ("w.c.) under standard conditions

## Valve Dimensions

### Threaded Models



### Flanged Models



Model Number	Connection Type	Dimensions in mm (inches)							Net lbs (kg)
		A	B	C	D*	E	F	G	
2004 AT	Threaded	1.00	146.1 (5.8)	87.6 (3.5)	457.6 (18.0)	184.2 (7.3)	242.2 (9.5)	114.3 (4.5)	28 (12.7)
2005 AT	Threaded	1.25	146.1 (5.8)	87.6 (3.5)	457.6 (18.0)	184.2 (7.3)	242.2 (9.5)	114.3 (4.5)	28 (12.7)
2006 AT	Threaded	1.5	146.1 (5.8)	90.8 (3.6)	472.7 (18.6)	228.6 (9.0)	254.0 (10.0)	127.0 (5.0)	30 (13.6)
2008 AT	Threaded	2.0	146.1 (5.8)	90.8 (3.6)	472.7 (18.6)	228.6 (9.0)	254.0 (10.0)	127.0 (5.0)	30 (13.6)
2010 AT	Flanged	2.5	187.2 (7.4)	119.2 (4.7)	520.0 (20.5)	330.0 (13.0)	274.3 (10.8)	114.3 (4.5)	86 (39.0)
2012 AT	Flanged	3.0	187.2 (7.4)	119.2 (4.7)	520.0 (20.5)	330.0 (13.0)	274.3 (10.8)	114.3 (4.5)	86 (39.0)

\* Add 2" (50.8mm) clearance to overall height for installation/removal of actuator.

\*\* 3" (76.2mm) flange bolt pattern is used for both 2010AT and 2012AT.

### **Mounting Information**

The valve body with actuators can be mounted in any position.

Approximate radius of rotation required for installing threaded body valves is:

- 5-1/2" (370mm) for 1 inch and 1-1/4 inch valves
- 6" (390mm) for 1-1/2 inch and 2 inch valves
- 6-3/4" (400mm) for 2-1/2 inch and 3 inch valves

### **Ordering Information**

Select the Eclipse valve assembly part numbers based on the valve size and actuator type.

Actuator shipped detached from valve body.

### **AT Valve Part Numbers**

Model Number	Pipe Size	Description	Assembly Part No.	Valve Body Only, Part No.	Actuator Only Part No	Flange Kits
2004AT	1" NPT	110/120V, standard actuator	10054939	501539	10054585	---
	1" NPT	220/240V, standard actuator	10054941	501539	10054586	---
	1" NPT	110/120V, quick connector	10056103	501539-1	10056102	---
	1" Rc	110/120V, standard actuator	10054942	501539-2	10054585	---
2005AT	1.25" NPT	110/120V, standard actuator	10054943	501540	10054585	---
	1.25" NPT	220/240V, standard actuator	10054944	501540	10054586	---
	1.25" NPT	110/120V, quick connector	10056409	501540-1	10056102	---
2006AT	1.5" NPT	110/120V, standard actuator	10054945	501541	10054585	---
	1.5" NPT	220/240V, standard actuator	10054946	501541	10054586	---
	1.5" NPT	110/120V, quick connector	10056404	501541-1	10056102	---
	1.5" Rc	110/120V, standard actuator	10054947	501541-2	10054585	---
2008AT	2" NPT	110/120V, standard actuator	10054948	501542	10054585	---
	2" NPT	220/240V, standard actuator	10054949	501542	10054586	---
	2" NPT	110/120V, quick connector	10056437	501542-1	10056102	---
2010AT	2.5" NPT	110/120V, standard actuator	10054950	501543	10054585	501547
	2.5" NPT	220/240V, standard actuator	10054951	501543	10054586	501547
	2.5" Weld	110/120V, standard actuator	10054954	501543	10054585	501547-10
	2.5" Weld	220/240V, standard actuator	10054955	501543	10054586	501547-10
	2.5" NPT	110/120V, quick connector	10056463	501543-1	10056102	501547
2012AT	3" NPT	110/120V, standard actuator	10054952	501533	10054585	501548
	3" NPT	220/240V, standard actuator	10054953	501533	10054586	501548
	3" Weld	110/120V, standard actuator	10054956	501533	10054585	501548-10
	3" Weld	220/240V, standard actuator	10054957	501533	10054586	501548-10
	3" Weld	110/120V, quick connector	10056536	501533-1	10056102	501548

**NOTE:** Flange kits include ANSI Class 150, A105 forged steel flanges, Grade 2 zinc coated nuts, bolts and gaskets. Flanges are shipped in kit form with the actuator and valve body.

**NOTE:** Valve bodies can only be used with Eclipse 2000AT actuators. Use of other actuators will void all warranty and liability by Eclipse.