





AutoTite Automatic Gas Shut-Off Valves

Rc Series 2000AT

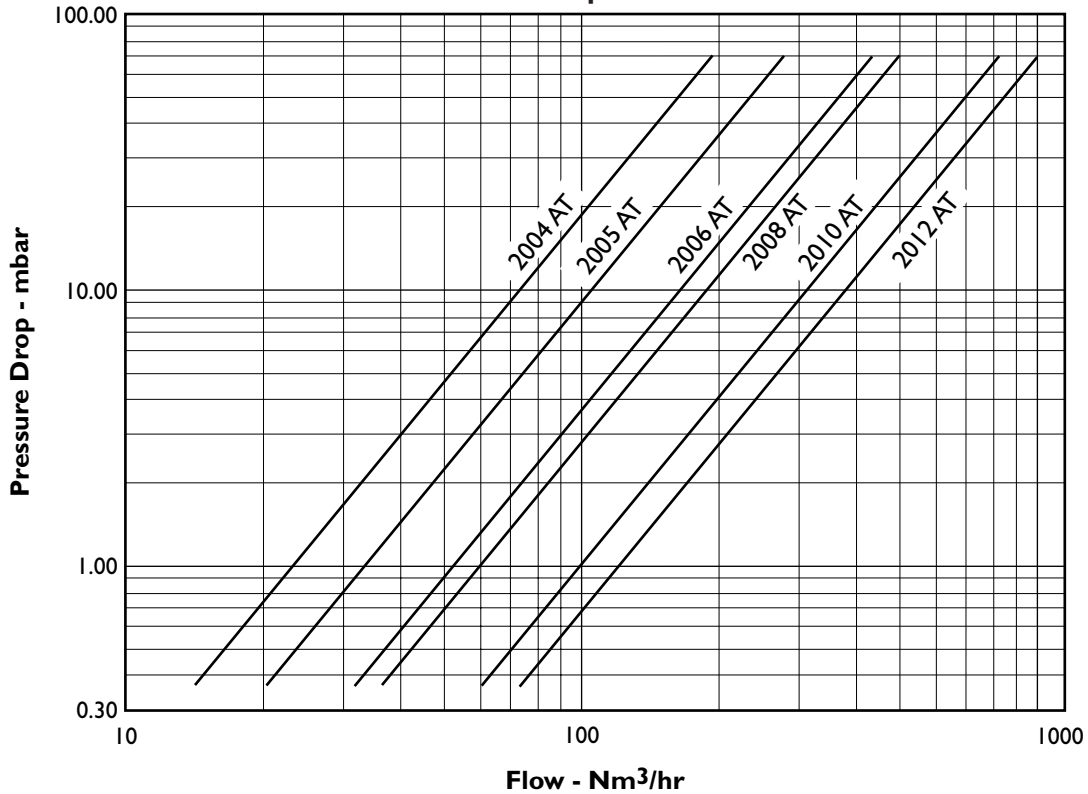
Version 1.01

PARAMETER	SPECIFICATIONS															
Ambient Temp. Limits	-25° to +60°C @ 50 Hz  <u>Caution:</u> Below 0°C, the gas must be free of water vapor which could condense and freeze within the valve.															
Max. Operating Pressure	2 bar															
Gases	Approved for air, natural gas, propane, and butane. For other gases, contact Eclipse Combustion.															
Nominal Opening Time	16 seconds @ 50 Hz.															
Max. Closing Time	One second															
Electrical-Actuator	<table border="0"> <tr> <td></td> <td><u>110V/50Hz</u></td> <td><u>220-240V/50Hz¹⁾</u></td> </tr> <tr> <td>Amps Opening</td> <td>1.57</td> <td>0.59</td> </tr> <tr> <td>Amps Holding</td> <td>0.13</td> <td>0.07</td> </tr> <tr> <td>Watts Opening</td> <td>77.00</td> <td>70.30</td> </tr> <tr> <td>Watts Holding</td> <td>9.50</td> <td>7.20</td> </tr> </table>		<u>110V/50Hz</u>	<u>220-240V/50Hz¹⁾</u>	Amps Opening	1.57	0.59	Amps Holding	0.13	0.07	Watts Opening	77.00	70.30	Watts Holding	9.50	7.20
	<u>110V/50Hz</u>	<u>220-240V/50Hz¹⁾</u>														
Amps Opening	1.57	0.59														
Amps Holding	0.13	0.07														
Watts Opening	77.00	70.30														
Watts Holding	9.50	7.20														
Electrical-Aux. Switches	For SPDT: 25(16)A115V 25(12)A230V For DPDT: 10(3)A115V 10(1.9)A230V Max. total connected load for both switches: 1800 VA															
Agency Approvals	 CE marking (EC Product I.D. #C87AT104) Class A, Group 2															
Degree of Protection	IP30, general purpose IP52, dust and oil mist tight construction IP65, water tight construction															

1) Actuator ratings listed are at 230V

Valve Capacities

Pressure Drop Across Valve



Flows for natural gas (.744 kg/m³ sw, 0.6 sg) at standard conditions of +15° C, 1013mbar.
 Multiply capacities by the factors below for other gases:

Butane (2.48 kg/m³ sw, 2.0 sg)..... 0.548
 Propane (1.86 kg/m³ sw, 1.55 sg)..... 0.632
 Air (1.24 kg/m³ sw, 1.0 sg)..... 0.775

Flows corrected to standard conditions (60°F, 14.7 psia)
 using the following formula:

$$Q_n = Q \left[\frac{P_a + P_1}{1013} \times \frac{288}{T} \right]^{1/2}$$

Flow - Pressure Drop formula:

$$Q = 440 C_v \frac{[(P_1 - P_2)P_2]^{1/2}}{(G \times T)^{1/2}}$$

Estimated Pressure Drop formula:

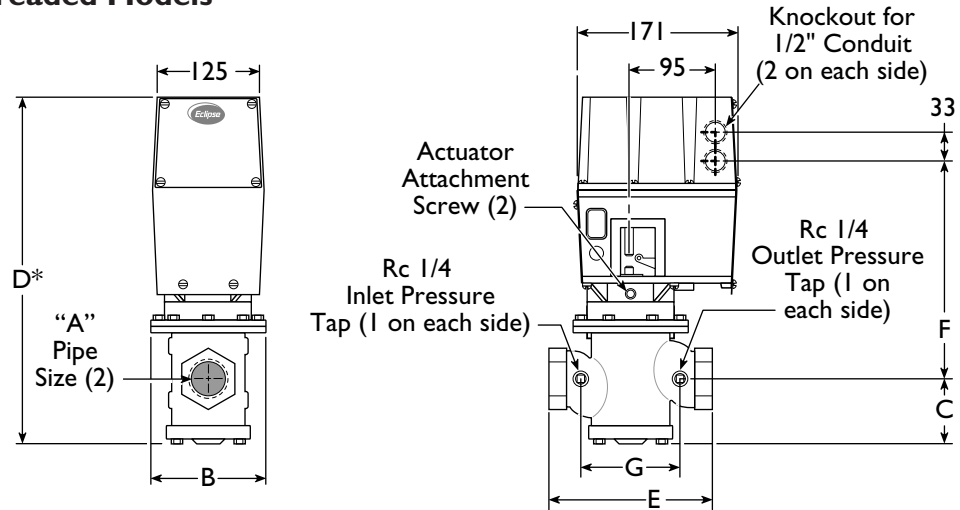
$$\Delta P = \Delta P_{\text{graph}} \times \left[\frac{Q^2}{Q_n^2} \times \frac{T}{288} \times \frac{1013}{P_1} \right]$$

Q_n = Corrected gas flow (Nm³/h)
 Q = Gas flow (m³/h)
 P_a = Atmospheric pressure (mbar)
 P_1 = Inlet pressure (ata)
 P_2 = Outlet pressure (ata)
 T = Gas temperature (273+°C)

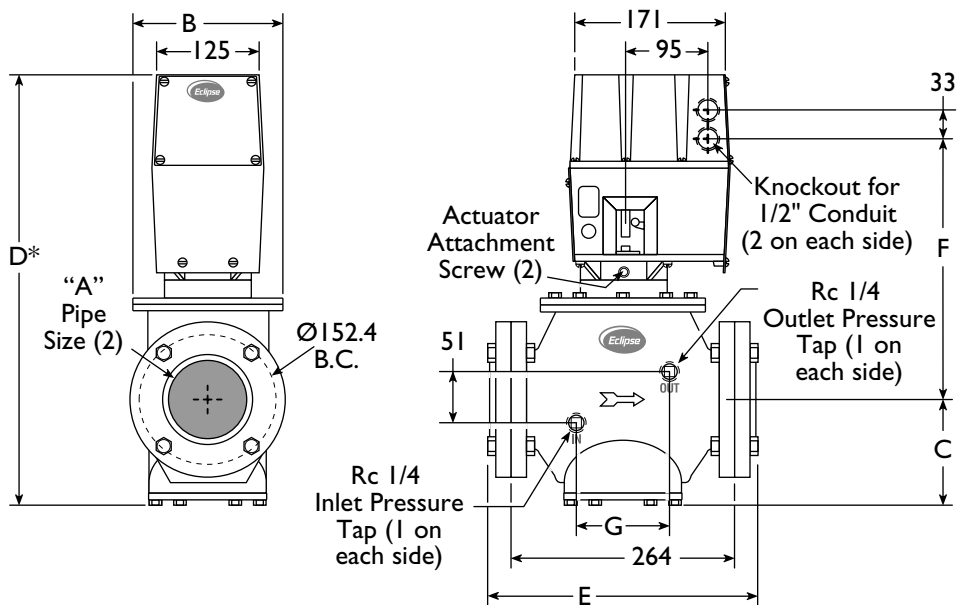
 C_v = 25 (2004 AT)
 36 (2005 AT)
 55 (2006 AT)
 63 (2008 AT)
 106 (2010 AT)
 129 (2012 AT)

Valve Dimensions

Threaded Models



Flanged Models




Model Number	Connection Type	Dimensions In mm							Net kgs.
		A	B	C	D*	E	F	G	
2004 AT	Threaded	Rc 1	146	89	413	184	249	114	14.5
2005 AT	Threaded	Rc 1-1/4	146	89	413	184	249	114	14.5
2006 AT	Threaded	Rc 1-1/2	146	91	427	229	260	127	17.3
2008 AT	Threaded	Rc 2	146	91	427	229	260	127	17.3
2010 AT	Flanged	Rc 2-1/2	187	121	476	327	279	114	37.7
2012 AT	Flanged	Rc 3	187	121	476	327	279	114	37.7

* Add 55 mm clearance to overall height for installation/removal of actuator.

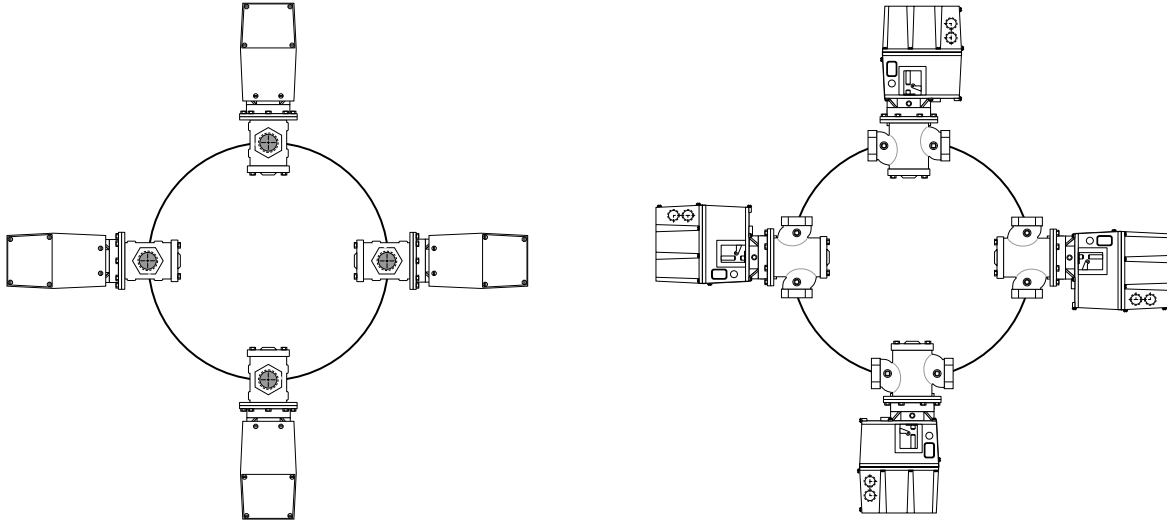
MOUNTING INFORMATION

The valve body with 110V/50Hz actuator can be mounted in any position.

The valve body with 220-240V/50Hz actuator is only to be mounted in the vertical or horizontal position (including upside down) as shown below.

 **Note:**

Actuator to be mounted with the nameplate facing 0°, 90°, 180° or 270° when valve is mounted horizontally.



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

- 140mm for 1 inch and 1-1/4 inch valves
- 155mm for 1-1/2 inch and 2 inch valves
- 170mm 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. IP30 actuators are general purpose; IP65 are watertight, and IP52 are dust and oil mist tight. Actuator shipped detached from valve body.

ACTUATOR ASSEMBLY NUMBERS

Model Number	Actuator Assembly Numbers					
	IP30 110V	IP30 220-240V	IP65 110V	IP65 220-240V	IP52 110V	IP52 220-240V
2004AT	100093	100093-1	100093-2	100093-3	100093-4	100093-5
2005AT	100094	100094-1	100094-2	100094-3	100094-4	100093-5
2006AT	100095	100095-1	100095-2	100095-3	100095-4	100095-5
2008AT	100096	100096-1	100096-2	100096-3	100096-4	100096-5
2010AT ¹	100097	100097-1	100097-2	100097-3	100097-4	100097-5
2012AT ¹	100098	100098-1	100098-2	100098-3	100098-4	100098-5
2010AT ²	100097-10	100097-11	100097-12	100097-13	100097-14	100098-15
2012AT ²	100098-10	100098-11	100098-12	100098-13	100098-14	100098-15

¹ Valves shipped with forged steel Rc threaded flanges.

² Valves shipped with forged steel slip-on weld flanges.

NOTE:



Flange kits include forged steel flanges, M16 nuts and bolts (Class 8.8, zinc plated) and gaskets.

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Eclipse Combustion

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