





AutoTite Automatic Gas Shut-Off Valves

Rc Series 2000AT

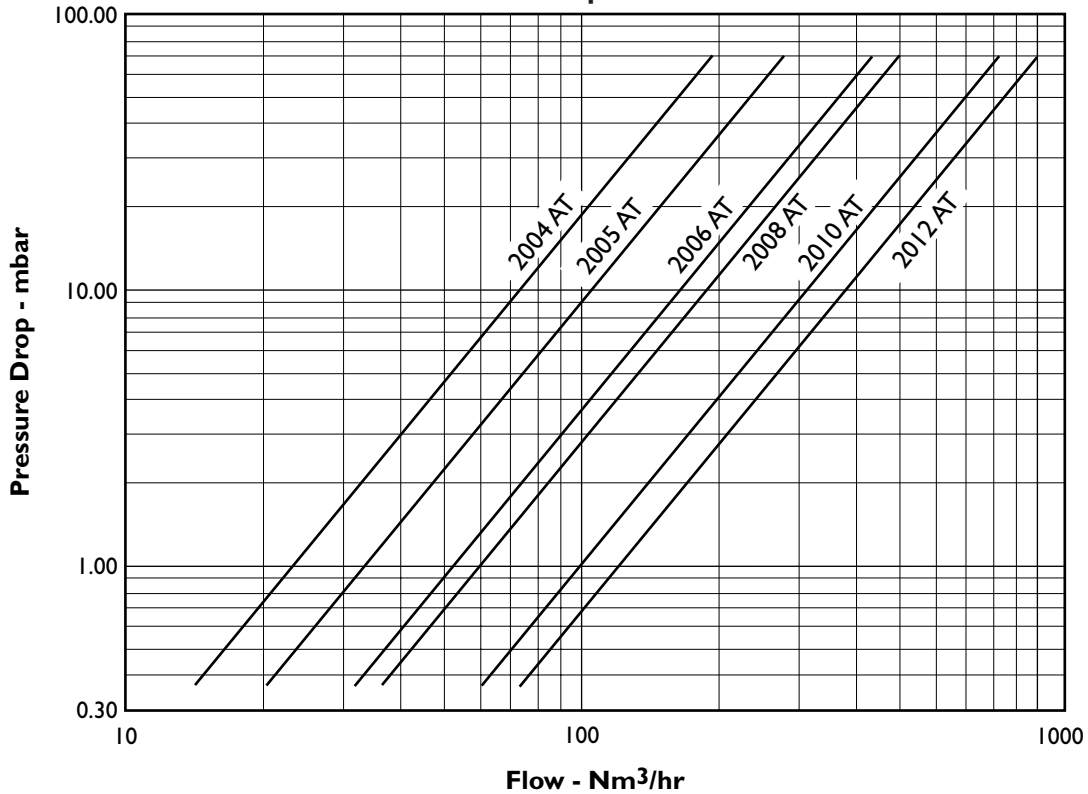
Version 1.01

| 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 | <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:

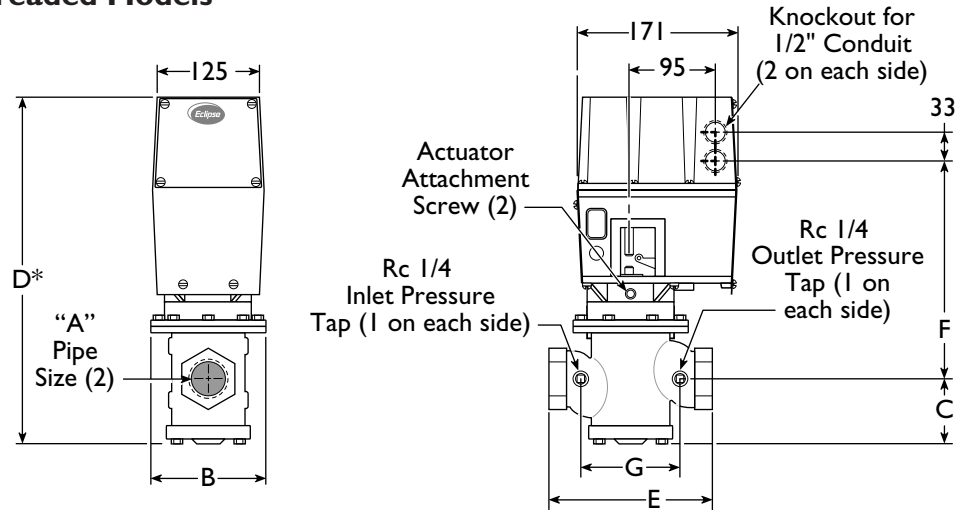
$$\Delta P = \Delta P_{\text{graph}} \times \left[\frac{Q^2}{Q_n^2} \times \frac{T}{288} \times \frac{1013}{P_1} \right]$$

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)

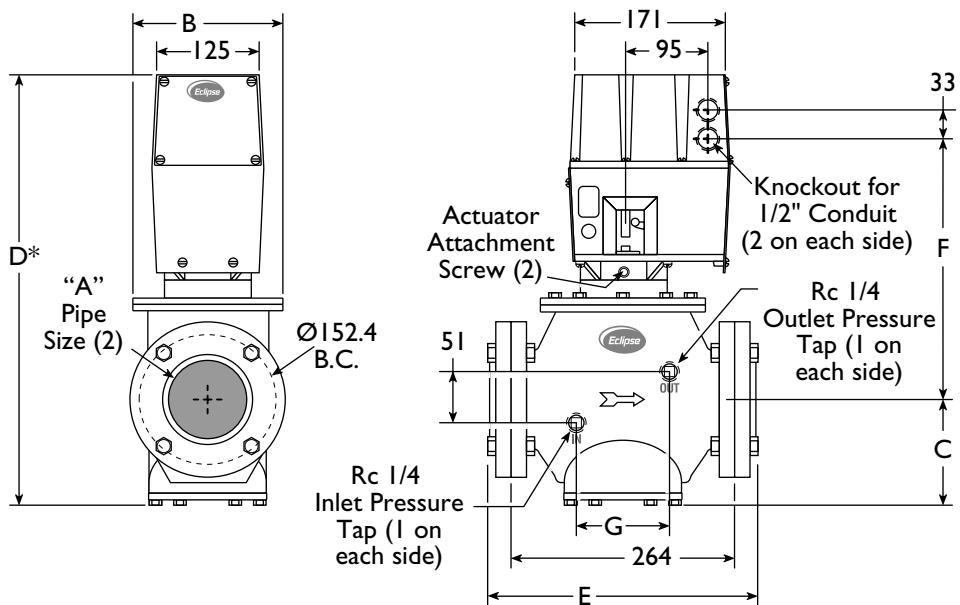
C_v = 25 (2004 AT)
 36 (2005 AT)
 55 (2006 AT)
 63 (2008 AT)
 106 (2010 AT)
 129 (2012 AT)

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.

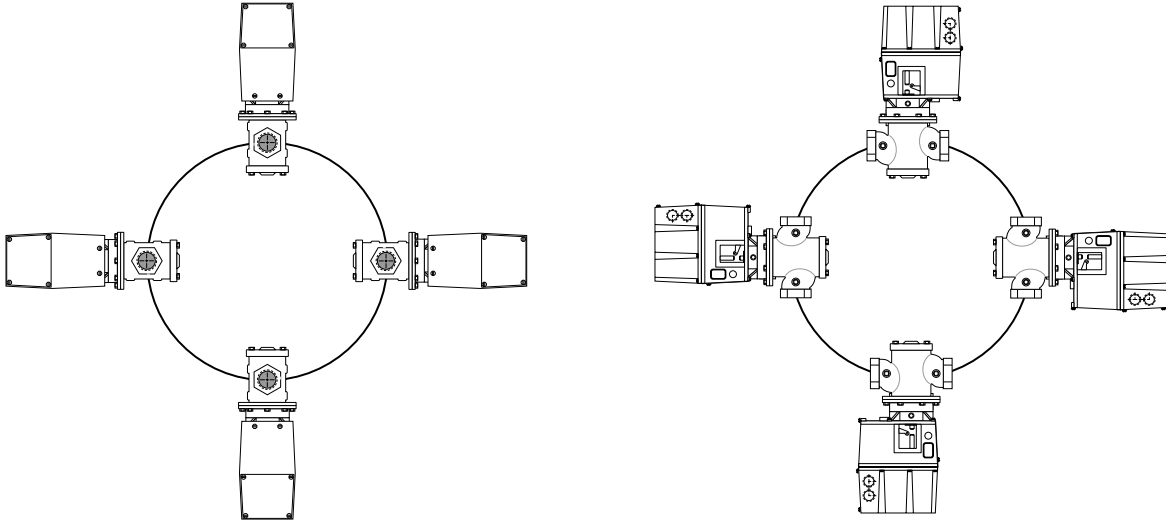
MOUNTING INFORMATION

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.

ECLIPSE™
Innovative Thermal Solutions

Eclipse Combustion

ISO 9001 Registered



Offered By:

Power Equipment Company
2011 Williamsburg Road
Richmond, Virginia 23231
Phone (804) 236-3800
Fax (804) 236-3882

www.peconet.com