



600 Series Electric Actuators

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FEATURES

- **Compact Size and Lightweight Construction**
- **Simple Push Button Manual Override Design with Exclusive Fold-Out Lever Handle Provides for Easy Manual Operation**
- **Unique Heat Dissipation Design Allows High Duty Cycles at Full Operating Torque**
- **Teflon[®] Coated Cast Aluminum Base, Dupont[®] FR50 Cover and Stainless External Trim for Maximum Corrosion Resistance**
- **Integral Thermal Overload Protection Circuit & Permanently Lubricated Drive Train**
- **UL[®] 508 Listed (AC Models)**

Gemini Valve offers the 600 Series electric actuators for use with all sizes of the Gemini 76, 82, 86, 96, 309 and 89 Series ball valves. Two model sizes are available, the 150 in-lb model 615 and the 300 in-lb model 630.

Both models are mounted to the valves with a compact mounting system that assures rigid and precise coupling of the actuator to the valve. Our unique system features machined alignment brackets oriented with precision locator elements that serve to absorb the reaction torque independent of the mounting bolts. The end result is a system that eliminates backlash, misalignment and the common

problem of the mounting bolts loosening while in service.

The 600 Series electric actuators have been designed for durability and longevity. The cast aluminum base dissipates internal heat through a special thermal conductor that pulls heat from the motor and allows for cooler operation during high duty cycle operation. The permanently lubricated drive train and brushless motor is housed within a Viton[®] sealed enclosure to protect against moisture and contamination. As a final measure of electrical protection all AC motors utilize auto-resetting thermal overload circuits.

Both models come standard with

an effective and reliable manual override. The push-button operated override with exclusive fold-out lever handle allows the user to disengage the drive train and effortlessly turn the valve. The override system will automatically re-engage the drive train in the proper orientation when power is reconnected.

Options include up to four limit switches to signal accessory devices, heater & thermostat, and voltages of 24, 120, 240 VAC, and 12 & 24 VDC (120VAC is standard).

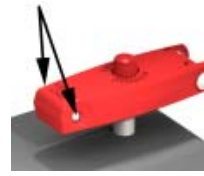


Made In The USA

Manual Override Operation

The push-button manual override system allows the user to easily disengage the electric drive gear train for manual operation of the actuator. All external power must be off prior to using the manual override feature. The actuator manual override handle can be used in the closed or open (lever extended) position to provide additional leverage. To open the handle, pinch the Lever Release Buttons and pull up. Press down the manual override button (atop the center) and turn the handle to manually open or close the actuated valve assembly. To reengage the drive train, release the override button and turn the handle until the manual override button 'clicks' signaling the re-engagement of the drive train. The manual override lever handle can then be closed.

Lever Release Buttons



Manual Override Button



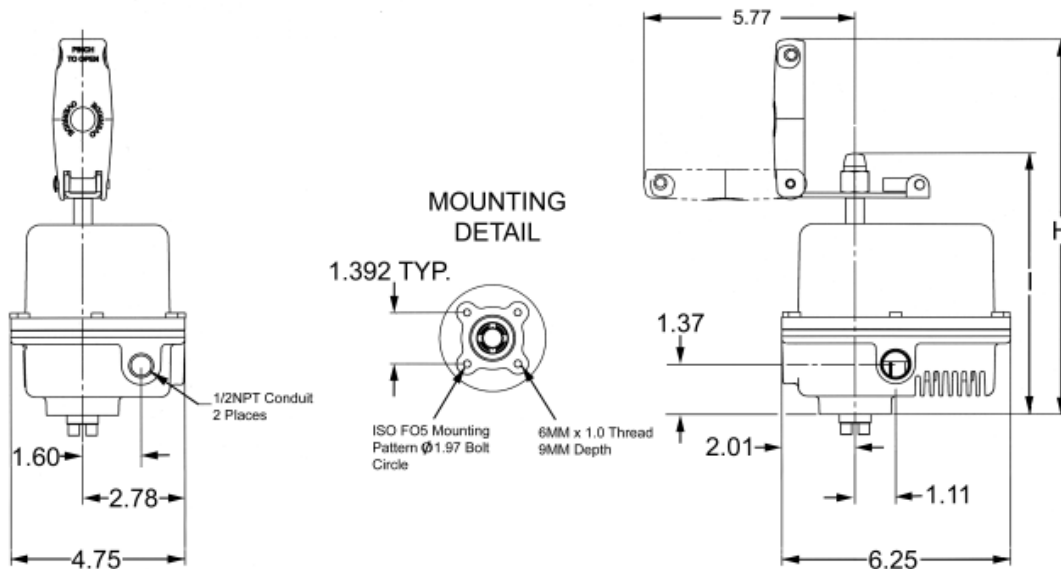
Specifications / Dimensions

Motor (AC Models):

Reversing, Brushless, Capacitor-Run Motors with Auto-Reset Thermal Overload Protection. 120VAC 50/60 Hz, Single Phase, Maintenance-free Permanently Lubricated Gear Train.

Enclosure:

Corrosion Resistant Teflon® Coated Aluminum Base. Two 1/2" NPT Conduit Ports Prevent Interference Between Control and Power Signals. Cover made from Fire Resistant, Impact Resistant, UL® Approved Dupont® FR50. Shaft and External Trim made from 18-8 Stainless Steel. UL® 508 Listed Device (AC Models Only)

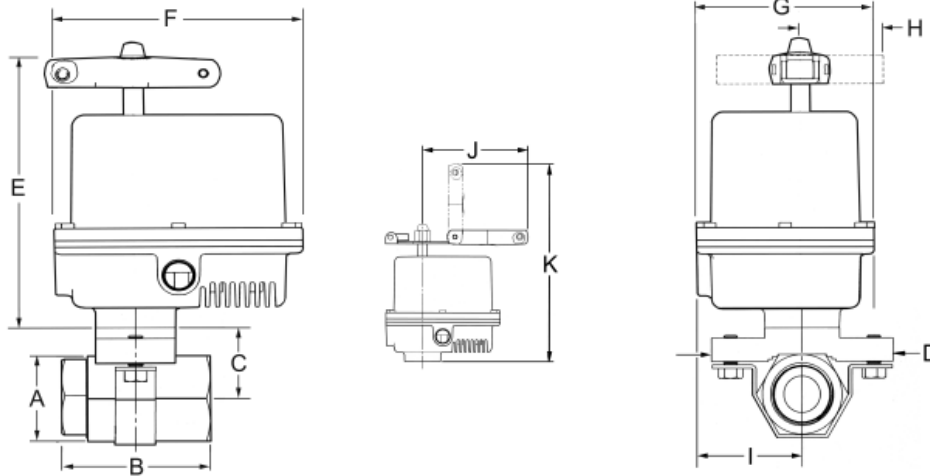


Model	Output (Inch Lbs.)	Cycle Time (Seconds)	Amps (Full Load)	Duty Cycle*	H	I	UL® A508
615-120AC	150	6	0.3	78%	10.35	7.19	Yes
630-120AC	300	6	0.5	78%	10.85	7.69	Yes
615-12VDC	250	6	1	100%	10.35	7.19	-
630-12VDC	250	6	1	75%	10.85	7.69	-
615-24VDC	250	6	.5	100%	10.35	7.19	-
630-24VDC	250	6	.5	75%	10.85	7.69	-

*Duty Cycle Measured at Maximum Output 40°C Ambient

Assembly Dimensions

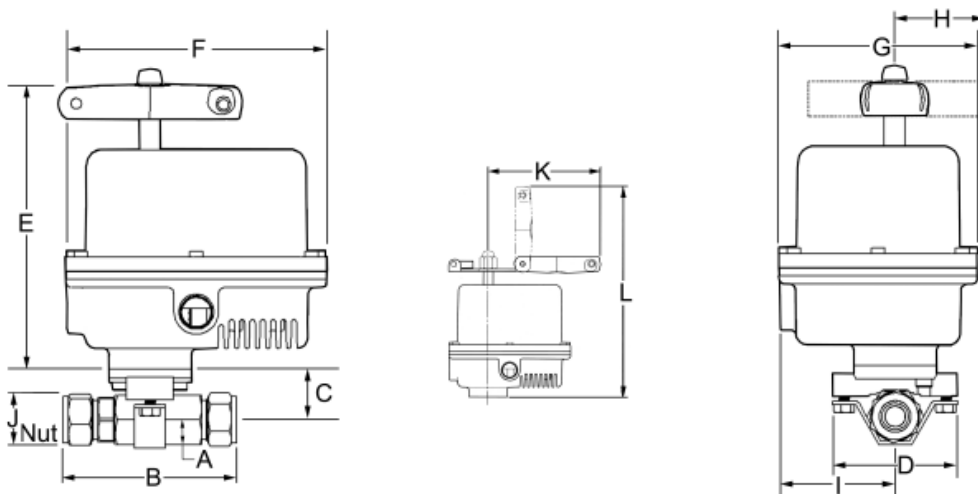
76, 86/96 Series



2D / 3D CAD
SolidWorks
AutoCAD
 AVAILABLE UPON REQUEST

Valve Series			Dimensions - Inches											
76	86	96	A	76 B	86/96 B	C	D	E	F	G	H	I	J	K
1/2	1/4 & 3/8	-	1.00	2.18	2.18	1.15	3.00	6.74	6.25	4.75	2.23	2.78	5.77	10.35
3/4	1/2	-	1.18	2.22	2.61	1.24	3.00	6.74	6.25	4.75	2.23	2.78	5.77	10.35
1	3/4	1/2	1.50	2.76	2.94	1.40	3.00	6.74	6.25	4.75	2.23	2.78	5.77	10.35
1-1/4	1	3/4	1.94	3.02	3.32	1.62	3.00	6.74	6.25	4.75	2.23	2.78	5.77	10.35
1-1/2	1-1/4	1	2.12	3.45	3.70	1.76	4.80	7.24	6.25	4.75	2.23	2.78	5.77	10.85
2	1-1/2	1-1/4	2.62	4.04	4.25	2.02	4.80	7.24	6.25	4.75	2.23	2.78	5.77	10.85
-	2	1-1/2	3.00	-	4.57	2.21	4.80	7.24	6.25	4.75	2.23	2.78	5.77	10.85

82 Series

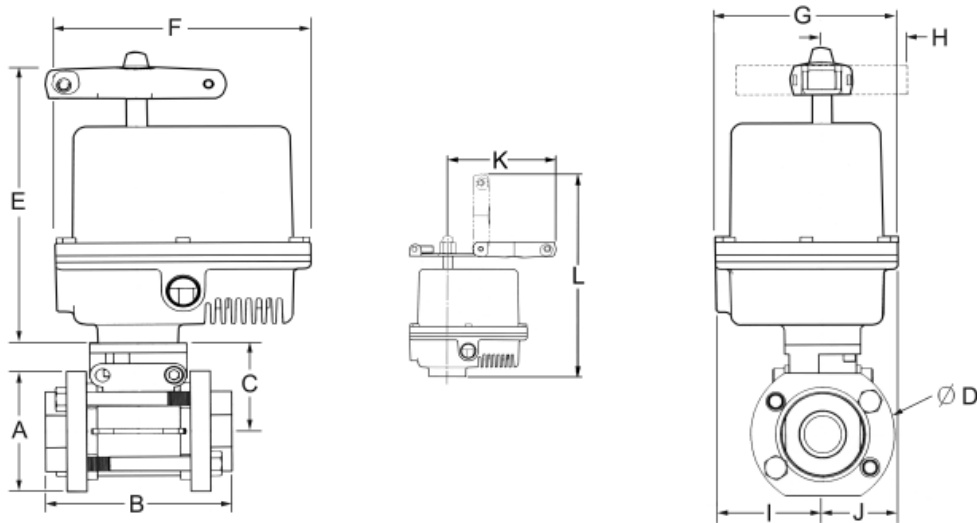


2D / 3D CAD
SolidWorks
AutoCAD
 AVAILABLE UPON REQUEST

Tube Size	Dimensions - Inches											
	A	B	C	D	E	F	G	H	I	J	K	L
1/4	.50	3.72	1.15	3.00	6.74	6.25	4.75	2.23	2.78	9/16	5.77	10.35
3/8	.50	3.70	1.15							11/16	5.77	10.35
1/2	.50	3.94	1.15							7/8	5.77	10.35
3/4	.59	4.17	1.24							1-1/8	5.77	10.35
1	.75	4.92	1.40							1-1/2	5.77	10.35

Assembly Dimensions

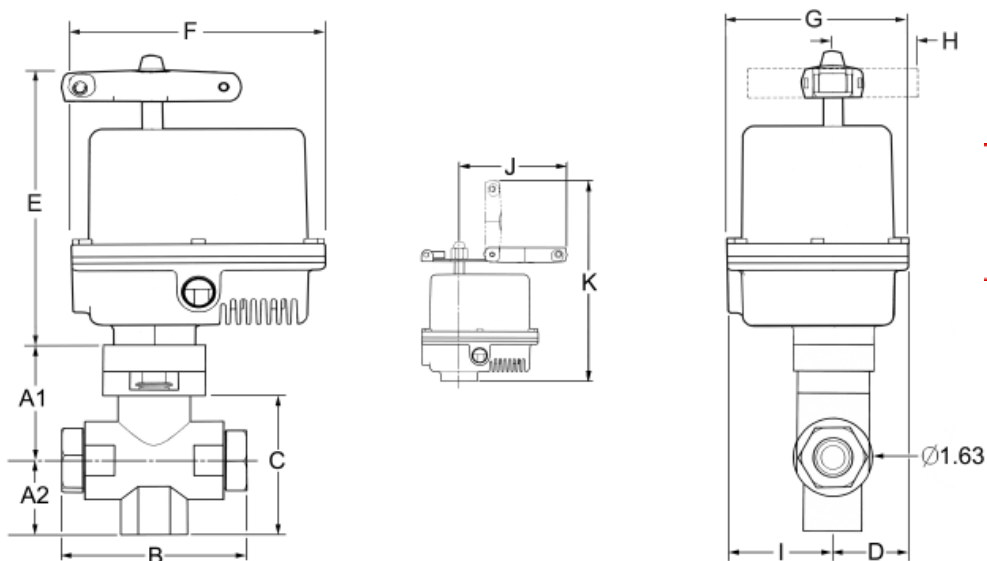
89 Series



2D / 3D CAD
SolidWorks
AutoCAD
 AVAILABLE UPON REQUEST

STD. Port	FULL Port	Dimensions - Inches											
		A	B	C	D	E	F	G	H	I	J	K	L
1/2	1/4 & 3/8	2.18	3.18	1.59	2.50	6.74	6.25	4.75	2.23	2.78	1.97	5.77	10.35
3/4	1/2	2.34	3.38	1.67	2.75	6.74	6.25	4.75	2.23	2.78	1.97	5.77	10.35
1	3/4	2.86	3.74	1.93	3.25	6.74	6.25	4.75	2.23	2.78	1.97	5.77	10.35
1-1/4	1	3.20	4.56	2.33	3.75	7.24	6.25	4.75	2.23	2.78	1.97	5.77	10.85
1-1/2	1-1/4	3.84	4.66	2.65	4.50	7.24	6.25	4.75	2.23	2.78	1.97	5.77	10.85
2	1-1/2	4.00	5.12	2.77	4.75	7.24	6.25	4.75	2.23	2.78	1.97	5.77	10.85

309 Series



2D / 3D CAD
SolidWorks
AutoCAD
 AVAILABLE UPON REQUEST

Valve Size	Dimensions - Inches											
	A1	A2	B	C	D	E	F	G	H	I	J	K
1/2 & 3/4	2.41	1.55	3.84	2.90	1.96	6.73	6.25	4.75	2.23	2.75	5.77	10.35

LIMITED WARRANTY - Copy Available Upon Request.

Specifications subject to change without notice and without obligation on the part of the manufacturer.

Note: A small amount of lubricant is often used in the assembly of the internal components of the valve.

ISL085-1305