



AEL7 Series Electric Linear Actuator

Description

The AEL7 Series linear electric actuators are a cost effective heavy duty range of linear electric actuators only suitable for the modulation of Spirax Sarco Group valves. The AEL7 Series actuators must not be used for any other purpose. Actuators available with a spring extend failure function are referred to as AEL7T. Full nomenclature details can be found on page 27 of this document.

Simple to commission and especially suited to the steam generation and distribution areas of the steam ecosystem where robustness and reliability are key requirements, the AEL7 Series is compatible with the complete Spira-trol™ 2-port and QL 3-port ranges. It is also suitable for the Hiter Series 85 and 1000 ranges for more arduous applications.

Typical applications for the heavy duty AEL7 Series actuator include:

- Level control including boiler feed water
- Desuperheater TCV
- Thermal oil applications

The AEL7 Series actuator can be used as a problem solver* where:

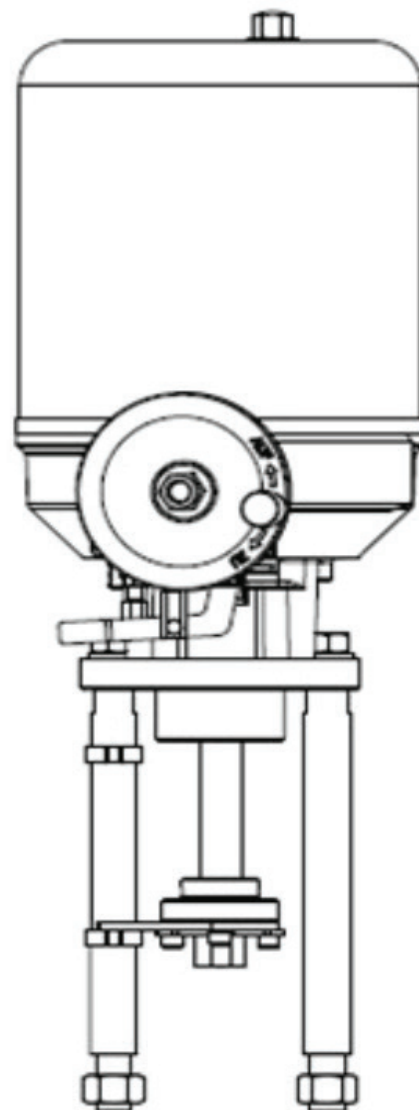
- Vibration levels can be problematic – e.g. vent valves
- Steam systems where water hammer can be experienced

* The source of the problem should always be targeted in parallel with the use of the AEL7 to mitigate the risk of failure

The AEL7 electric linear actuators (with the exclusion of AEL7T) use two physical force dependent (torque) switches to determine the end position of the actuator stroke in both directions and stop the actuator motor i.e. uses the end stops within the valve in order to determine stroke. The force dependent switches do not require any adjustment to correspond to valves with different lengths of stroke thereby minimising the risk of damage due to incorrect set up or in-service wear and tear.

The AEL7T versions require the setting of end position with travel dependent switches due to the spring extend function.

Actuators will normally be supplied fitted to the control valve. When supplied separately, ensure the actuator selected is capable of providing the force necessary to close the two-port or three-port control valve against the expected differential pressure.



Available types

These electric linear actuators are available on 4 different supply variants: 230 Vac, 115 Vac, 24 Vac, and 24 Vdc. The standard version is suitable for VMD (Valve Motor Drive) input power signal. If required the actuator can be fitted with a positioner input card that can accept (4 - 20 mA or 2 - 10 Vdc) control signals.

This can either be used in conjunction with the positioner for 2 - 10 V or 4 - 20 mA input signals, or as feedback for VMD. Also available are auxiliary limit switches and anti - condense heater.

These actuators can be used with the following valves, in conjunction with an appropriate valve adaptor and mounting flange.

2 - Port	DN15 - DN300 (½" - 12")	Spira - trol™ L, K, and J series control valves
		Hiter series 85 and 1000
3 - Port	DN15 - DN300 (½" - 12")	QL series control valves



WARNING

Mains connection is required for the installation of the AEL7T Series actuator and therefore requires specialist knowledge of electrical circuits and systems, and the inherent dangers. A working knowledge of linear actuators is also required. Only suitably qualified personnel can operate the actuator under these conditions.

Standards and approvals:

This equipment is  marked and conforms to the following:

Electrical safety	2014/35/EU (Low Voltage Directive)
Operational safety	EN 60204-1:2018 (Machinery Directive)
	EN14597 (AEL7T only; Temperature control devices and temperature limiters for heat generating systems)
Operational requirements	EN15714-2 (Electric actuators for industrial valves - Basic requirements)
	Modulating actuator Class C acc. to DIN EN ISO 22153
Installation requirements	EN 61000-6-4:2007/A1:2011 (Electromagnetic compatibility)
	EN 60529:92 + A1:00 + A2:13 (Ingress Protection)
Material requirements	REACH and UK REACH

Certification options:

The DN15 to DN100 (½" to 4") Spira-trol™ 'L' and 'K' series valves are available with EN14597 certification for the complete assembly when used with the AEL7T spring extend actuator for high limit applications (Temperature control devices and temperature limiters for heat generating systems). Certification must be specified at time of order.

The EN14597 certification is only valid for DN15 to DN100 (½" to 4") standard trim type valves with seat options:

- **T** - 431 stainless steel
- **P** - Full PEEK

All other size, trim and seat option types are out of scope of this safety standard.

AEL7 Technical specification

Actuator Model	AEL71	AEL71T ¹	AEL7	AEL72T ¹	AEL73	AEL74	AEL75	AEL76	AEL77	AEL78
Thrust	1.2 kN (270 lbf)	0.9 kN (202 lbf)	2 kN (450 lbf)	2.1 kN (472 lbf)	4 kN (900 lbf)	6 kN (1349 lbf)	8 kN (1798 lbf)	12 kN (2698 lbf)	15 kN (3372 lbf)	20 kN (4496 lbf)

Full Load Speed mm/s (in/sec) @ 24 Vac – 240 Vac (50/60Hz)

Low	0.2 mm (0.008")	0.29 mm (0.011")	0.4 mm (0.016")	0.29 mm (0.011")	0.4 mm (0.016")	0.6 mm (0.024")	0.7 mm (0.028")	0.4 mm (0.016")	0.4 mm (0.016")	
Medium					0.8 mm (0.031")		1.4 mm (0.055")			0.8 mm (0.031")
High			1.7 mm (0.067")							

Full load Speed mm/s (in/sec) @ 24 Vdc

Low	0.5 mm (0.019")						0.7 mm (0.028")	0.4 mm (0.016")	0.4 mm (0.016")	
Medium			0.8 mm (0.031")		0.8 mm (0.031")	0.8 mm (0.031")	1.4 mm (0.055")			1 (0.039")
High			1.7 mm (0.067")							
Set Stroke (mm) ³	20 mm (0.79")	30 mm (1.18")								70 mm (2.76")
Maximum stroke (mm)		35 mm (1.38")	40 mm (1.57")	35 mm (1.38")	40 mm (1.57")	50 mm (1.97")	60 mm (2.36")			100 mm (3.94")
Motor Brake										Vac Only
Ambient temperature	-20 °C ... +60 °C (-4 °F ... +140 °F)									
Media temperature	-20 °C ... +300 °C (425 °C with extended valve bonnet ⁶) -4 °F ... +572 °F (797 °F with extended valve bonnet ⁶)									
Enclosure rating	IP54		IP 65	IP54	IP 65					
Enclosure material	Thermoplastic						Steel			
Manual override	Crank handle					Hand wheel				
Conduit entries	2 x M20 x 1.5, 1 x M16 x 1.5					3 x M20 x 1.5				
Electrical connection	Terminal board									
Thread Adaptor ⁴	M8	M8 and M12					M12			M30 x 1.5

AEL7 Actuator Options

2WE	2 auxiliary limit switches 5 A - 230 Vac									
POT ²	Potentiometer 1000 Ohms for all strokes									
Positioner card	Input 0/2...10 V, 0 (4)...20 mA, output 0/2...10 V, 0 (4)...20 mA									
Heater	100-230 Vac / 24 Vac/dc									
Shutdown module ⁵	FSC20		FSC20		FSC20	FSC40			FSC60	

¹ Not available 24 Vdc.

² Required for Positioner Card.

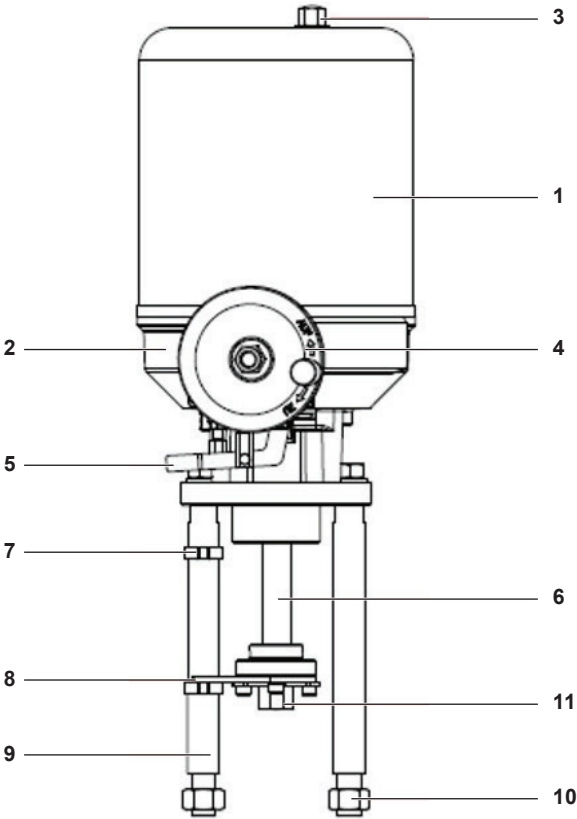
³ Actuator supplied with stroke at this setting. Actuator travel can be adjusted up to the maximum stroke. See IM-P713-01.

⁴ Supplied as Standard. Other options available as a cost option. Refer to Mounting Tables for configuration requirements.

⁵ Factory fitment only. Not available 24 Vac.

⁶ Bonnet must not be insulated.

Materials



No.	Description	Materials		Surface Finish
1	Cover	Polycarbonate	1-6 kN (225 lbf - 1349 lbf)	None
		Carbon Steel	8 kN+ (1798 lbf)	Painted
2	Housing	Machined Aluminium		None
		Cast Aluminium		Painted
3	Cover Nut ¹	Polycarbonate	1-6 kN (225 lbf - 1349 lbf)	None
		Carbon Steel	8 kN+ (1798 lbf)	Galvanic zinc plated
4	Hand wheel ²	Polycarbonate	8 kN+ (1798 lbf)	None
5	Clutch	Carbon Steel		Painted
6	Actuator Spindle	Carbon Steel		None
7	Stroke Indicator	Carbon Steel		None
8	Anti-Rotation Plate and Indicator	Carbon Steel		None
9	Actuator Pillar	Carbon Steel		Galvanic zinc plated
10	Pillar Nut	Carbon Steel		None
11	Actuator Adaptor	Carbon Steel		None
12	Boot (1.2 kN (270 lbf) only)	EPDM		None

¹ Internal o - seal in place of gasket for 1 - 6 kN (225 lbf - 1349 lbf) actuators

² 1 - 4 kN (225 lbf - 900 lbf) actuators use a hand crank

AEL7 Valve Adapter and Mounting Flange Selection - Spira-trol™ K & L

Actuator	Thrust	DN15 to 50 (½" to 2")			DN65 to 100 (2½" to 4")			DN125 to 300 (5" to 12")		
		Flange	Thread	Adapter	Flange	Thread	Adapter	Flange	Thread	Adapter
AEL71	1.2 kN (270 lbf)	EL5970	M8	Integral						
AEL71T	0.9 kN (202 lbf)			AEL7XM8¹	EL5971	M12	Integral			
AEL72	2.0 kN (450 lbf)									
AEL72T	2.1 kN (472 lbf)									
AEL73	4.0 kN (900 lbf)									
AEL74	6.0 kN (1349 lbf)									
AEL75	8.0 kN (1798 lbf)									
AEL76	12.0 kN (2698 lbf)									
AEL77	15.0 kN (3372 lbf)									
AEL78	20.0 kN (4496 lbf)				EL5972		AEL7XM12²	EL5974	M30 x 1.5	Integral

¹ Included in the standard scope of supply AEL71 to AEL75

² Adapter must be ordered separately

AEL7 Valve Adapter and Mounting Flange Selection - Spira-trol™ J

Actuator	Thrust	DN15 to 50 (½" to 2")			DN65 to 100 (2½" to 4")			DN125 to 300 (5" to 12")		
		Flange	Thread	Adapter	Flange	Thread	Adapter	Flange	Thread	Adapter
AEL71	1.2 kN (270 lbf)	EL5971J	M8	AEL7XJ01 ¹	EL5972J	M12	AEL7XJ02 ¹			
AEL71T	0.9 kN (202 lbf)									
AEL72	2.0 kN (450 lbf)									
AEL72T	2.1 kN (472 lbf)									
AEL73	4.0 kN (900 lbf)									
AEL74	6.0 kN (1349 lbf)									
AEL75	8.0 kN (1798 lbf)									
AEL76	12.0 kN (2698 lbf)				EL5972J		AEL7XM12 ¹	EL5974	M30 x 1.5	Integral
AEL77	15.0 kN (3372 lbf)									
AEL78	20.0 kN (4496 lbf)									

¹ Adapter must be ordered separately

AEL7 Valve Adapter and Mounting Flange Selection - Spira-trol™ Q

Actuator	Thrust	DN15 to 50 (½" to 2")			DN65 to 100 (2½" to 4")			DN125 to 300 (5" to 12")		
		Flange	Thread	Adapter	Flange	Thread	Adapter	Flange	Thread	Adapter
AEL71	1.2 kN (270 lbf)	EL5970³	M8	Integral						
AEL71T	0.9 kN (202 lbf)			AEL7XM8¹	EL5971	M12	Integral			
AEL72	2.0 kN (450 lbf)									
AEL72T	2.1 kN (472 lbf)									
AEL73	4.0 kN (900 lbf)									
AEL74	6.0 kN (1349 lbf)									
AEL75	8.0 kN (1798 lbf)									
AEL76	12.0 kN (2698 lbf)									
AEL77	15.0 kN (3372 lbf)									
AEL78	20.0 kN (4496 lbf)				EL5972		AEL7XM12²	EL5974	M30 x 1.5	Integral

¹ Included in the standard scope of supply AEL71 to AEL75

² Adapter must be ordered separately

³ Spacer 3570003 also required

AEL7 Valve Adapter and Mounting Kit Selection - Hiter S85 and S1000

Valve Model	Ø (")	AEL74		Qty Required	AEL78			
		Mounting Kit	Bolts		Mounting Kit	Bolts		
08-18-58-68-02-12-52-62	0.5	AEL7Y1	012XA125111Z	4				
	0.75							
	1.0							
	1.5							
01-11-51-61-21-71 Full Bore	1							
01-11-51-61-21-71 Red. Bore	1.5							
	1.5							
08-18-58-68	2.0	AEL7Y3	Ø½"-18UNC x1½" Hex Head. ASTM A307 gr.A Zinc Plated	8				
01-11-51-61-21-71 Full Bore								
01-11-51-61-21-71 Red. Bore								
02-12-52-62	AEL7Y4							
08-18-58-68-02-12-52-62		3.0						
01-11-51-61-21-71 Full Bore								
01-11-51-61-21-71 Red.	AEL7Y3							
08-18-58-68-02-12-52-62		4.0						
01-11-51-61-21-71 Full Bore								
01-11-51-61-21-71 Red. Bore								
51-61-71 - Stroke 2"	6.0						Y6	n/a
51-61-71 - Stroke 3"	6.0							
51-61-71 - Stroke 4"	6.0							
51-61-71 - Stroke 2"	8.0							
51-61-71 - Stroke 4"	8.0							

AEL7 Accessories (VMD)

Actuator Type	Thrust	Voltage	Switch	Potentiometer	Heater
AEL7 VMD	1 kN (225 lbf)	230 Vac	AEL7X016	AEL7X001*	AEL7X181
		110 Vac			AEL7X183
		24 Vac			
		24 Vdc			
	2 - 4 kN (270 - 900 lbf)	230 Vac	AEL7X010	AEL7X002*	AEL7X191
		110 Vac			AEL7X193
		24 Vac			
		24 Vdc			
	6 kN (1349 lbf)	230 Vac	AEL7X011	AEL7X003*	AEL7X201
		110 Vac			AEL7X203
		24 Vac			
		24 Vdc			
	8-20 kN (1798 - 4496 lbf)	230 Vac	AEL7X012	AEL7X004	AEL7X211
		110 Vac			AEL7X213
		24 Vac			
		24 Vdc			

* Requires limit switch assembly

AEL7 Accessories (Positioner)

Actuator Type	Thrust	Voltage	Switch	Potentiometer	Heater	Positioner**
AEL7 Positioner	1 kN (225 lbf)	230 Vac	AEL7X017	AEL7X001*	AEL7X181	AEL7X241
		110 Vac			AEL7X183	AEL7X233
		24 Vac				AEL7X224
		24 Vdc				
	2 - 4 kN (270 - 900 lbf)	230 Vac	AEL7X014	AEL7X002*	AEL7X191	AEL7X241
		110 Vac			AEL7X193	AEL7X233
		24 Vac				AEL7X224
		24 Vdc				
	6 kN (1349 lbf)	230 Vac	AEL7X015	AEL7X003*	AEL7X201	AEL7X241
		110 Vac			AEL7X203	AEL7X233
		24 Vac				AEL7X224
		24 Vdc				
	8-20 kN (1798 - 4496 lbf)	230 Vac	AEL7X012	AEL7X004	AEL7X211	AEL7X241
		110 Vac			AEL7X213	AEL7X233
		24 Vac				AEL7X224
		24 Vdc				

* Requires limit switch assembly

** Requires potentiometer

AEL7 VMD Positoner Upgrade Kit

Actuator Type	Thrust	Voltage	Positioner Kit*
AEL7 VMD	1 kN (225 lbf)	230 Vac	AEL71PEL1
		110 Vac	
		24 Vac	
		24Vdc	n/a
	2 - 4 kN (270 - 900 lbf)	230 Vac	AEL73PEL1
		110 Vac	
		24 Vac	
		24Vdc	n/a
	6 kN (1349 lbf)	230 Vac	AEL74PEL1
		110 Vac	
		24 Vac	
		24Vdc	n/a
	8-15 kN (1798 - 3372 lbf)	230 Vac	AEL77PEL1
		110 Vac	
		24 Vac	
		24Vdc	AEL78PEL4
	20 kN (4496 lbf)	230 Vac	AEL78PEL1
		110 Vac	
		24 Vac	
		24Vdc	AEL78PEL4

*Kit contains wiring loom, positioner guard and location piece.
Must be used with the relevant positioner and potentiometer (and switches when required).

AEL7T Accessories

Actuator Type	Thrust	Voltage	Aux. Switch	Potentiometer	Positioner
AEL7T	1 kN (225 lbf)	230 Vac	AEL7T010	AEL7T001	AEL7X241
		110 Vac			AEL7X233
		24 Vac			AEL7X241
	2 kN (450 lbf)	230 Vac			AEL7X241
		110 Vac			AEL7X233
		24 Vac			AEL7X233

Maximum differential pressures for Class IV shut - off
- Metal Seated (T&S) Spira - trol
- DN15 to DN25 (½" - 1")
- FLOW UNDER

Actuator Type	Cage Type	Standard Cage (S)														
	Valve size	DN15 to DN25 (½" to 1")														
	Kvs	0.01 - 0.5			1			1.6			2.5			4		
	Cv	0.012 - 0.58			1.2			1.8			2.9			4.6		
	Actuator thrust	N - P	H	D	N - P	H	D	N - P	H	D	N - P	H	D	N - P	H	D
AEL71	1.2 kN (270 lbf)	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0	103.4	77.9	25.0	77.3	50.7	25.0
AEL72	2 kN (450 lbf)	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0
AEL73	4 kN (900 lbf)	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0

Actuator Type	Cage Type	Standard Cage (S)												Low Noise Cage (P1)		
	Valve size	DN15 to DN25 (½" to 1")														
	Kvs	4.9 - 6.3			7.2			10			11			2.5 - 4 - 6.3 - 10		
	(Cv)	5.7 - 7.3			8.3			12			12.7			2.9 - 4.6 - 7.3 - 12		
	Actuator thrust	N - P	H	D	N - P	H	D	N - P	H	D	N - P	H	D	N - P	H	D
AEL71	1.2 kN (270 lbf)	39.7	24.8	25.0	29.9	18.1	24.8	23.0	13.5	18.9	17.6	9.9	14.2	17.6	9.9	14.2
AEL72	2 kN (450 lbf)	79.5	64.6	25.0	61.3	49.5	25.0	48.5	38.9	25.0	38.3	30.5	25.0	38.3	30.5	25.0
AEL73	4 kN (900 lbf)	103.4	103.4	25.0	103.4	103.4	25.0	103.4	102.6	25.0	89.9	82.2	25.0	89.9	82.2	25.0

Maximum differential pressures for Class IV shut - off
- Metal Seated (T&S) Spira - trol
- DN32 to DN50 (1¼" - 2")
- FLOW UNDER

Actuator Type	Cage Type	Standard Cage (S)														
	Valve size	DN32 to DN50 (1¼" to 2")														
	Kvs	4			6.3			10			16			17.5 - 18		
	Cv	4.6			7.3			12			18			20.2 - 21		
	Actuator thrust	N - P	H	D	N - P	H	D	N - P	H	D	N - P	H	D	N - P	H	D
AEL71	1.2 kN (270 lbf)	77.7	52.0	25.0	42.2	27.3	25.0	25.0	15.5	20.9	19.8	12.0	16.4	14.4	8.3	11.8
AEL72	2 kN (450 lbf)	103.4	103.4	25.0	82.0	67.1	25.0	50.5	40.9	25.0	40.9	33.0	25.0	30.7	24.6	25.0
AEL73	4 kN (900 lbf)	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0	93.5	85.6	25.0	71.5	65.3	25.0
AEL74	6 kN (1349 lbf)	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0
AEL75*	8 kN (1800 lbf)	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0

Actuator Type	Cage Type	Standard Cage (S)									Low Noise Cage (P1 - P2 - P3 - A1 - A2)		
	Valve size	DN32 to DN50 (1¼" to 2")											
	Kvs	25			31 - 36			46 - 50			All Kvs		
	Cv	29			36 - 42			53 - 58			All Cv		
	Actuator thrust	N - P	H	D	N - P	H	D	N - P	H	D	N - P	H	D
AEL71	1.2 kN (270 lbf)	6.2	2.9	4.8	4.4	1.8	3.3	2.5	0.6	1.7	2.5	0.6	1.7
AEL72	2 kN (450 lbf)	15.0	11.7	13.6	11.5	8.8	10.3	7.5	5.6	6.7	7.5	5.6	6.7
AEL73	4 kN (900 lbf)	37.1	33.8	25.0	29.1	26.5	25.0	20.1	18.2	19.3	20.1	18.2	19.3
AEL74	6 kN (1349 lbf)	59.1	55.8	25.0	46.8	44.1	25.0	32.7	30.8	25.0	32.7	30.8	25.0
AEL75*	8 kN (1800 lbf)	81.1	77.8	25.0	64.3	61.7	25.0	45.2	43.3	25.0	45.2	43.3	25.0

* Not to be used with 316L plug and stem

Maximum differential pressures for Class IV shut - off
- Metal Seated (T&S) Spira - trol
- DN65 to DN100 (2½" - 4")
- FLOW UNDER

Actuator Type	Cage Type	Standard Cage (S)														
	Valve size	DN65 to DN100 (2½" to 4")														
	Kvs	16			25			36			73 - 90			100 - 117		
	Cv	18			29			42			85 - 104			116 - 135		
	Actuator thrust	P	H	D	N - P	H	D	P	H	D	P	H	D	P	H	D
AEL71	1.2 kN (270 lbf)	13.4	3.0	11.8	4.0		3.3	2.2		1.7	0.4					
AEL72	2 kN (450 lbf)	29.7	19.3	25.0	11.0	6.6	10.3	7.2	4.0	6.7	3.2	1.4	2.9	1.5	0.4	1.3
AEL73	4 kN (900 lbf)	70.4	60.0	25.0	28.7	24.2	25.0	19.8	16.6	19.3	10.3	8.5	10.0	6.0	4.9	5.9
AEL74	6 kN (1349 lbf)	103.4	100.8	25.0	46.3	41.8	25.0	32.3	29.1	25.0	17.4	15.6	17.1	10.6	9.4	10.4
AEL75	8 kN (1800 lbf)	103.4	103.4	25.0	64.0	59.5	25.0	44.9	41.7	25.0	24.4	22.6	24.1	15.1	13.9	14.9
AEL76	12 kN (2698 lbf)	103.4	103.4	25.0	99.2	94.7	25.0	70.1	66.9	25.0	38.6	36.8	25.0	24.2	23.0	24.0
AEL77*	15 kN (3372 lbf)	103.4	103.4	25.0	103.4	103.4	25.0	88.9	85.7	25.0	49.2	47.3	25.0	31.0	29.8	25.0
AEL78*	20 kN (4496 lbf)	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0	66.9	65.1	25.0	42.3	41.1	25.0

Actuator Type	Cage Type	Standard Cage (S)			Low Noise Cage (P1 - A1 - P2 - A2 - P3)					
	Valve size	DN65 to DN100 (2½" to 4")			DN65 to DN80 (2½" to 3")			DN100 (4")		
	Kvs	160 - 180			All Kvs					
	Cv	185 - 208			All Cv					
	Actuator thrust	P	H	D	P	H	D	P	H	D
AEL72	2 kN (450 lbf)	0.5		0.4	1.5	0.4	1.3	0.5		0.4
AEL73	4 kN (900 lbf)	3.3	2.6	3.2	6.0	4.9	5.9	3.3	2.6	3.2
AEL74	6 kN (1349 lbf)	6.1	5.4	6.0	10.6	9.4	10.4	6.1	5.4	6.0
AEL75	8 kN (1800 lbf)	9.0	8.2	8.9	15.1	13.9	14.9	9.0	8.2	8.9
AEL76	12 kN (2698 lbf)	14.6	13.9	14.5	24.2	23.0	24.0	14.6	13.9	14.5
AEL77*	15 kN (3372 lbf)	18.9	18.1	18.8	31.0	29.8	25.0	18.9	18.1	18.8
AEL78*	20 kN (4496 lbf)	25.9	25.2	25.0	42.3	41.1	25.0	25.9	25.2	25.0

* Not to be used with 316L plug and stem

**Maximum differential pressures for Class VI shut - off
- Resilient Seated (P&C) Spira - trol
- DN15 to DN25 (½" - 1")
- FLOW UNDER**

Actuator Type	Cage Type	Standard Cage (S)														
	Valve size	DN15 to DN25 (½" to 1")														
	Kvs	0.01 - 0.5			1			1.6			2.5			4		
	Cv	0.012 - 0.58			1.2			1.8			2.9			4.6		
	Actuator thrust	N - P	H	D	N - P	H	D	N - P	H	D	N - P	H	D	N - P	H	D
AEL71	12 kN (2698 lbf)	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
AEL72	20 kN (4496 lbf)	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0

Actuator Type	Cage Type	Standard Cage (S)												Low Noise Cage (P1 - A1)		
	Valve size	DN15 to DN25 (½" to 1")														
	Kvs	4.9 - 6.3			7.2			10			11			2.5 - 4 - 6.3 - 10		
	Cv	5.7 - 7.3			8.3			12			12.7			2.9 - 4.6 - 7.3 - 12		
	Actuator thrust	N - P	H	D	N - P	H	D	N - P	H	D	N - P	H	D	N - P	H	D
AEL71	12 kN (2698 lbf)	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
AEL72	20 kN (4496 lbf)	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0

**Maximum differential pressures for Class VI shut - off
- Resilient Seated (P&C) Spira - trol
- DN32 to DN50 (1¼" - 2")
- FLOW UNDER**

Actuator Type	Cage Type	Standard Cage (S)														
	Valve size	DN32 to DN50 (1¼" - 2")														
	Kvs	4			6.3			10			16			17.5 - 18		
	Cv	4.6			7.3			12			18			20.2 - 21		
	Actuator thrust	N - P	H	D	N - P	H	D	N - P	H	D	N - P	H	D	N - P	H	D
AEL71	12 kN (2698 lbf)	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	13.1	16.6
AEL72	20 kN (4496 lbf)	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0

Actuator Type	Cage Type	Standard Cage (S)									Low Noise Cage (P1 - P2 - P3 - A1 - A2)		
	Valve size	DN32 to DN50 (1¼" - 2")											
	Kvs	25			31 - 36			46 - 50			All Kvs		
	Cv	29			36 - 42			53 - 58			All Cv		
	Actuator thrust	N - P	H	D	N - P	H	D	N - P	H	D	N - P	H	D
	AEL71	12 kN (2698 lbf)	9.8	6.5	8.3	7.6	4.9	6.4	5.1	3.3	4.3	5.1	3.3
AEL72	20 kN (4496 lbf)	18.6	15.3	17.1	14.6	12.0	13.5	10.2	8.3	9.4	10.2	8.3	9.4

**Maximum differential pressures for Class VI shut - off
- Resilient Seated (P&C) Spira - trol
- DN65 to DN100 (2½" - 4")
- FLOW UNDER**

Actuator Type	Cage Type	Standard Cage (S)														
	Valve size	DN65 to DN100 (2½" to 4")														
	Kvs	16			25			36			73 - 90			100 - 117		
	Cv	18			29			42			85 - 104			116 - 135		
	Actuator thrust	P	H	D	P	H	D	P	H	D	P	H	D	P	H	D
AEL71	1.2 kN (270 lbf)	18.2	7.8	16.6	7.2	2.7	6.4	4.8	1.6	4.3	2.4	0.6	2.1	1.3	0.2	1.1
AEL72	2 kN (450 lbf)	19.0	19.0	19.0	14.2	9.7	13.5	9.9	6.6	9.4	5.2	3.4	4.9	3.1	2.0	2.9
AEL73	4 kN (900 lbf)	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	12.3	10.5	12.0	7.6	6.5	7.5
AEL74	6 kN (1349 lbf)	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	17.6	19.0	12.2	11.0	12.0
AEL75	8 kN (1800 lbf)	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	16.7	15.5	16.5
AEL76	12 kN (2698 lbf)	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0

Actuator Type	Cage Type	Standard Cage (S)			Low Noise Cage (P1 - A1 - P2 - A2 - P3)					
	Valve size	DN65 to DN100 (2½" to 4")			DN65 to DN80 (2½" to 3")			DN100 (4")		
	Kvs	160 - 180			All Kvs					
	Cv	185 - 208			All Cv					
	Actuator thrust	P	H	D	P	H	D	P	H	D
AEL71	1.2 kN (270 lbf)	0.6		0.5	1.3	0.2	1.1	0.6		0.5
AEL72	2 kN (450 lbf)	1.8	1.0	1.7	3.1	2.0	2.9	1.8	1.0	1.7
AEL73	4 kN (900 lbf)	4.6	3.9	4.5	7.6	6.5	7.5	4.6	3.9	4.5
AEL74	6 kN (1349 lbf)	7.4	6.7	7.3	12.2	11.0	12.0	7.4	6.7	7.3
AEL75	8 kN (1800 lbf)	10.2	9.5	10.1	16.7	15.5	16.5	10.2	9.5	10.1
AEL76	12 kN (2698 lbf)	15.9	15.2	15.8	19.0	19.0	19.0	15.9	15.2	15.8

Note: Maximum differential pressure for saturated steam. Refer to Spirax Sarco for other liquids and gases.

Maximum differential pressures for Class VI shut - off
- PTFE Seat (G) Spira - trol
- DN15 to DN25 (½" - 1")
- FLOW UNDER

Actuator Type	Cage Type	Standard Cage (S)														
	Valve size	DN15 to DN25 (½" to 1")														
	Kvs	0.01-0.5			1			1.6			2.5			4		
	Cv	0.012-0.58			1.2			1.8			2.9			4.6		
	Actuator thrust	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D
AEL71	1.2 kN (270 lbf)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
AEL72	2 kN (450 lbf)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
AEL73	4 kN (900 lbf)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Actuator Type	Cage Type	Standard Cage (S)												Low Noise Cage (P1)		
	Valve size	DN15 to DN25 (½" to 1")														
	Kvs	4.9-6.3			7.2			10			11			2.5-4-6.3-10		
	Cv	5.7-7.3			8.3			12			12.7			2.9-4.6-7.3-12		
	Actuator thrust	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D
AEL71	1.2 kN (270 lbf)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
AEL72	2 kN (450 lbf)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
AEL73	4 kN (900 lbf)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Note: Maximum differential pressure for saturated steam. Refer to Spirax Sarco for other liquids and gases.

Maximum differential pressures for Class VI shut - off
- PTFE Seated (G) Spira - trol
- DN32 to DN50 (1¼" - 2")
- FLOW UNDER

Actuator Type	Cage Type	Standard Cage (S)														
	Valve size	DN32 to DN50 (1¼" to 2")														
	Kvs	4			6.3			10			16			17.5 - 18		
	Cv	4.6			7.3			12			18			20.2-21		
	Actuator thrust	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D
AEL71	1.2 kN (270 lbf)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
AEL72	2 kN (450 lbf)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
AEL73	4 kN (900 lbf)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Actuator Type	Cage Type	Standard Cage (S)									Low Noise Cage (P1)		
	Valve size	DN32 to DN50 (1¼" to 2")											
	Kvs	25			31-36			46-50			All Kvs		
	Cv	29			36-42			53-58			All Cv		
	Actuator thrust	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D
AEL71	1.2 kN (270 lbf)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
AEL72	2 kN (450 lbf)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
AEL73	4 kN (900 lbf)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Note: Maximum differential pressure for saturated steam. Refer to Spirax Sarco for other liquids and gases.

Maximum differential pressures for Class VI shut - off
- PTFE Seated (G) Spira - trol
- DN65 to DN100 (2½" - 4")
- FLOW UNDER

Actuator Type	Cage Type	Standard Cage (S)														
	Valve size	DN65 to DN100 (2½" to 4")														
	Kvs	16			25			36			73 - 90			100 - 117		
	Cv	18			29			42			85 - 104			116 - 135		
	Actuator thrust	P	H	D	N-P	H	D	P	H	D	P	H	D	P	H	D
AEL71	1.2 kN (270 lbf)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.0	4.0	3.4	1.6	3.1	2.1	1.0	1.9
AEL72	2 kN (450 lbf)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.9	2.8	3.7
AEL73	4 kN (900 lbf)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
AEL74	6 kN (1349 lbf)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Actuator Type	Cage Type	Standard Cage (S)			Low Noise Cage (P1)					
	Valve size	DN65 to DN100 (2½" to 4")			DN65 to DN80 (2½" to 3")			DN100 (4")		
	Kvs	160-180			All Kvs					
	Cv	185-208			All Cv					
	Actuator thrust	P	H	D	P	H	D	P	H	D
AEL71	1.2 kN (270 lbf)	1.3	0.6	1.2	2.1	1.0	1.9	1.3	0.6	1.2
AEL72	2 kN (450 lbf)	2.4	1.7	2.3	3.9	2.8	3.7	2.4	1.7	2.3
AEL73	4 kN (900 lbf)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
AEL74	6 kN (1349 lbf)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Note: Maximum differential pressure for saturated steam. Refer to Spirax Sarco for other liquids and gases.

**Maximum differential pressures for Class IV shut - off
- Hard Facing (W) Spira - trol
- DN15 to DN25 (½" - 1")
- FLOW UNDER**

Actuator Type	Cage Type	Standard Cage (S)														
	Valve size	DN15 to DN25 (½" to 1")														
	Kvs	0.01-0.5			1			1.6			2.5			4		
	Cv	0.012-0.58			1.2			1.8			2.9			4.6		
	Actuator thrust	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D
AEL71	1.2 kN (270 lbf)	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0	100.1	61.9	25.0	63.9	37.4	25
AEL72	2 kN (450 lbf)	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0
AEL73	4 kN (900 lbf)	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0
AEL74	6 kN (1349 lbf)	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0

Actuator Type	Cage Type	Standard Cage (S)												Low Noise Cage (P1)		
	Valve size	DN15 to DN25 (½" to 1")														
	Kvs	4.9-6.3			7.2			10			11			2.5-4-6.3-10		
	Cv	5.7-7.3			8.3			12			12.7			2.9-4.6-7.3-12		
	Actuator thrust	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D
AEL71	1.2 kN (270 lbf)	29.7	14.8	23.2	21.0	9.2	15.9	15.0	5.5	10.9	10.4	2.6	7.0	10.4	2.6	7.0
AEL72	2 kN (450 lbf)	69.5	54.6	25.0	52.4	40.7	25.0	40.5	30.9	25.0	31.1	23.3	25.0	31.1	23.3	25.0
AEL73	4 kN (900 lbf)	103.4	103.4	25.0	103.4	103.4	25.0	103.4	94.6	25.0	82.7	75.0	25.0	82.7	75.0	25.0
AEL74	6 kN (1349 lbf)	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0

Maximum differential pressures for Class IV shut - off
- Hard Facing (W) Spira - trol
- DN32 to DN50 (1¼" - 2")
- FLOW UNDER

Actuator Type	Cage Type	Standard Cage (S)														
	Valve size	DN32 to DN50 (1¼" to 2")														
	Kvs	4			6.3			10			16			17.5 - 18		
	Cv	4.6			7.3			12			18			20.2-21		
	Actuator thrust	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D
AEL71	1.2 kN (270 lbf)	61.3	35.6	25.0	29.7	14.8	23.2	15.0	5.5	10.9	10.8	2.9	7.3	6.4	0.3	3.8
AEL72	2 kN (450 lbf)	103.4	103.4	25.0	69.5	54.6	25.0	40.5	30.9	25.0	31.8	23.9	25.0	22.7	16.6	20.1
AEL73	4 kN (900 lbf)	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0	103.4	76.5	25.0	63.5	57.3	25.0
AEL74	6 kN (1349 lbf)	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0	103.4	98.1	25.0

Actuator Type	Cage Type	Standard Cage (S)									Low Noise Cage (P1-P2-P3-A1-A2)		
	Valve size	DN32 to DN50 (1¼" to 2")											
	Kvs	25			31-36			46-50			All Kvs		
	Cv	29			36-42			53-58			All Cv		
	Actuator thrust	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D
AEL72	2 kN (450 lbf)	9.2	5.9	7.7	6.2	3.6	5.1	3.1	1.2	2.2	3.1	1.2	2.2
AEL73	4 kN (900 lbf)	31.2	27.9	25.0	23.9	21.2	22.7	15.6	13.7	14.8	15.6	13.7	14.8
AEL74	6 kN (1349 lbf)	53.2	49.9	25.0	41.5	38.9	25.0	28.2	26.3	25.0	28.2	26.3	25.0
AEL75	8 kN (1800 lbf)										40.8	38.9	25.0
AEL76	12 kN (2698 lbf)										65.9	64.0	25.0
AEL77	15 kN (3372 lbf)										84.8	82.9	25.0

Maximum differential pressures for Class IV shut - off
- Hard Facing (W) Spira - trol
- DN65 to DN100 (2½" - 4")
- FLOW UNDER

Actuator Type	Cage Type	Standard Cage (S)														
	Valve size	DN65 to DN100 (2½" to 4")														
	Kvs	16			25			36			73 - 90			100 - 117		
	Cv	18			29			42			85 - 104			116 - 135		
	Actuator thrust	P	H	D	N-P	H	D	P	H	D	P	H	D	P	H	D
AEL72	2 kN (450 lbf)	21.7	11.3	20.1	5.8	1.3	5.1	2.7		2.2						
AEL73	4 kN (900 lbf)	62.4	52.0	25.0	23.4	18.9	22.7	15.3	12.1	14.8	6.9	5.1	6.7	3.4	2.2	3.2
AEL74	6 kN (1349 lbf)	103.2	92.8	25.0	41.1	36.6	25.0	27.9	24.7	25.0	14.0	12.2	13.7	7.9	6.8	7.7
AEL75	8 kN (1800 lbf)	103.4	103.4	25.0	58.7	54.2	25.0	40.5	37.3	25.0	21.1	19.3	20.8	12.4	11.3	12.3
AEL76	12 kN (2698 lbf)	103.4	103.4	25.0	94.0	89.5	25.0	65.6	62.4	25.0	35.1	33.4	25.0	21.5	20.3	21.3

Actuator Type	Cage Type	Standard Cage (S)			Low Noise Cage (P1-A1-P2-A2-P3)					
	Valve size	DN65 to DN100 (2½" to 4")			DN65 to DN80 (2½" to 3")			DN100 (4")		
	Kvs	160-180			All Kvs					
	Cv	185-208			All Cv					
	Actuator thrust	P	H	D	P	H	D	P	H	D
AEL73	4 kN (900 lbf)	1.2	0.5	1.1	3.4	2.2	3.2	1.2	0.5	1.1
AEL74	6 kN (1349 lbf)	4.0	3.3	3.9	7.9	6.8	7.7	4.0	3.3	3.9
AEL75	8 kN (1800 lbf)	6.9	6.1	6.8	12.4	11.3	12.3	6.9	6.1	6.8
AEL76	12 kN (2698 lbf)	12.5	11.8	12.4	21.5	20.3	21.3	12.5	11.8	12.4
AEL77	15 kN (3372 lbf)				28.3	27.1	25.0	16.7	16.0	16.6
AEL78	20 kN (4496 lbf)				39.6	38.4	25.0	23.8	23.1	23.7

Maximum differential pressures for Class IV shut - off
- Metal Seated (T&S) Spira - trol
- DN15 to DN25 (½" - 1")
- FLOW OVER

Actuator Type	Cage Type		Standard Cage (S)													
	Valve size		DN15 to DN25 (½" to 1")													
	Kvs		0.01-0.5			1			1.6			2.5			4	
	Cv		0.012-0.58			1.2			1.8			2.9			4.6	
	Actuator thrust	Pressure	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H
AEL71T	0.9 kN (202 lbf)	Max.	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4
		Min.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Actuator Type	Cage Type		Standard Cage (S)													
	Valve size		DN15 to DN25 (½" to 1")													
	Kvs		4.9-6.3			7.2			10			11				
	Cv		5.7-7.3			8.3			12			12.7				
	Actuator thrust	Pressure	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D		
AEL71T	0.9 kN (202 lbf)	Max.	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0		
		Min.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		

Maximum differential pressures for Class IV shut - off
- Metal Seated (T&S) Spira - trol
- DN32 to DN50 (1¼" - 2")
- FLOW OVER

Actuator Type	Cage Type		Standard Cage (S)													
	Valve size		DN32 to DN50 (1¼" to 2")													
	Kvs		4			6.3			10			16			17.5 - 18	
	Cv		4.6			7.3			12			18			20.2-21	
	Actuator thrust	Pressure	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H
AEL71T	0.9 kN (202 lbf)	Max.	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4	25.0	103.4	103.4
		Min.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Actuator Type	Cage Type		Standard Cage (S)													
	Valve size		DN32 to DN50 (1¼" to 2")													
	Kvs		25			31-36			46-50							
	Cv		29			36-42			53-58							
	Actuator thrust	Pressure	N-P	H	D	N-P	H	D	N-P	H	D					
AEL71T	0.9 kN (202 lbf)	Max.	60.4	56.6	25.0	47.0	44.1	25.0	32.5	30.5	25.0					
		Min.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2					

Maximum differential pressures for Class IV shut - off
- Metal Seated (T&S) Spira - trol
- DN65 to DN100 (2½" - 4")
- FLOW OVER

Actuator Type	Cage Type		Standard Cage (S)													
	Valve size		DN65 to DN100 (2½" to 4")													
	Kvs		16			25			36			73 - 90			100 - 117	
	Cv		18			29			42			85 - 104			116 - 135	
	Actuator thrust	Pressure	P	H	D	P	H	D	P	H	D	P	H	D	P	H
AEL71T	0.9 kN (202 lbf)	Max.	103.4	103.4	25.0	50.9	45.4	25.0	34.2	30.5	25.0	18.1	16.1	17.8	11.3	10.1
		Min.	0.0	3.1	0.0	0.0	3.1	0.0	0.0	2.9	0.2	0.7	2.5	1.0	1.0	2.1
AEL72T	2.1 kN (472 lbf)	Max.	31.7	21.3	25.0	11.9	7.4	11.2	7.8	4.6	7.3	3.6	1.8	3.3	1.7	0.6
		Min.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Actuator Type	Cage Type		Standard Cage (S)			
	Valve size		DN65 to DN100 (2½" to 4")			
	Kvs		160-180			
	Cv		185-208			
	Actuator thrust	Pressure	P	H	D	
AEL71T	0.9 kN (202 lbf)	Max.	6.9	6.2	6.8	
		Min.	1.0	1.8	1.2	
AEL72T	2.1 kN (472 lbf)	Max.	5.2	4.4	5.0	
		Min.	0.0	0.1	0.0	

**Maximum differential pressures for Class VI shut - off
- Resilient Seated (P&C) Spira - trol
- DN15 to DN25 (½" - 1")
- FLOW OVER**

Actuator Type	Cage Type		Standard Cage (S)													
	Valve size		DN15 to DN25 (½" to 1")													
	Kvs		0.01-0.5			1			1.6			2.5			4	
	Cv		0.012-0.58			1.2			1.8			2.9			4.6	
	Actuator thrust	Pressure	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H
AEL71T	0.9 kN (202 lbf)	Max.	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
		Min.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Actuator Type	Cage Type		Standard Cage (S)													
	Valve size		DN15 to DN25 (½" to 1")													
	Kvs		4.9-6.3			7.2			10			11				
	Cv		5.7-7.3			8.3			12			12.7				
	Thrust	Pressure	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D		
AEL71T	0.9 kN (202 lbf)	Max.	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0		
		Min.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		

* Not suitable for use with Spira-trol Steam-Tight (Seat Option C)

**Maximum differential pressures for Class VI shut - off
- Resilient Seated (P&C) Spira - trol
- DN32 to DN50 (1¼" - 2")
- FLOW OVER**

Actuator Type	Cage Type		Standard Cage (S)													
	Valve size		DN32 to DN50 (1¼" to 2")													
	Kvs		4			6.3			10			16			17.5 - 18	
	Cv		4.6			7.3			12			18			20.2-21	
	Actuator thrust	Pressure	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H
AEL71T	0.9 kN (202 lbf)	Max.	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
		Min.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Actuator Type	Cage Type		Standard Cage (S)													
	Valve size		DN32 to DN50 (1¼" to 2")													
	Kvs		25			31-36			46-50							
	Cv		29			36-42			53-58							
	Actuator thrust	Pressure	N-P	H	D	N-P	H	D	N-P	H	D					
AEL71T	0.9 kN (202 lbf)	Max.	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0					
		Min.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					

* Steam - Tight (option C) NOT suitable for Flow Over applications

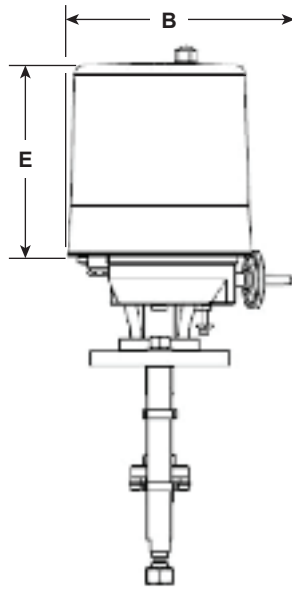
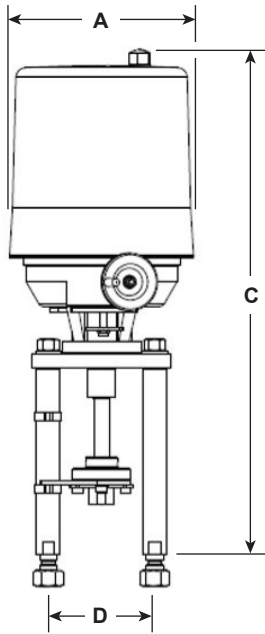
**Maximum differential pressures for Class VI shut - off
- Resilient Seated (P&C) Spira - trol
- DN65 to DN100 (2½" - 4")
- FLOW OVER**

Cage Type		Standard Cage (S)													
Valve size		DN65 to DN100 (2½" to 4")													
Actuator Type	Kvs	16			25			36			73 - 90			100 - 117	
	Cv	18			29			42			85 - 104			116 - 135	
Actuator thrust	Pressure	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D	P	H
AEL71T	0.9 kN (202 lbf)	Max.	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	18.1	16.1	17.8	11.3	10.1
		Min.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.5	0.0	0.5
AEL72T	2.1 kN (472 lbf)	Max.									13.5	1.8	3.3	1.7	0.6
		Min.									0.0	0.0	0.0	0.0	0.0

Cage Type		Standard Cage (S)			
Valve size		DN65 to DN100 (2½" to 4")			
Actuator Type	Kvs	160-180			
	Cv	185-208			
Actuator thrust	Pressure	P	H	D	
AEL71T	0.9 kN (202 lbf)	Max.	6.9	6.2	6.8
		Min.	0.0	0.5	0.0
AEL72T	2.1 kN (472 lbf)	Max.	5.2	4.4	5.0
		Min.	0.0	0.0	0.0

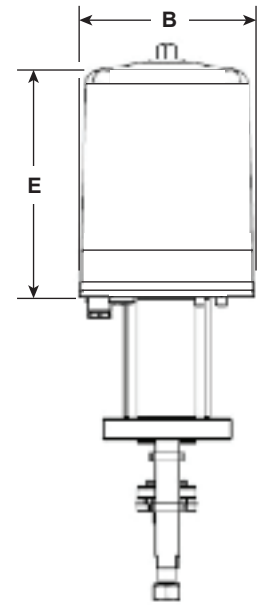
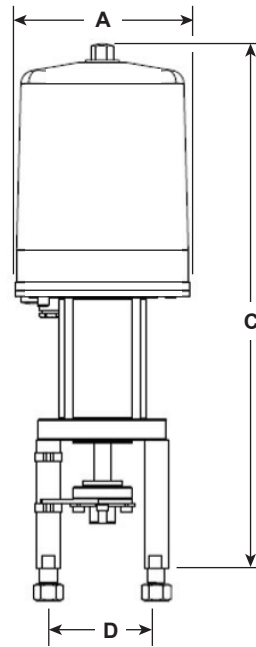
Note: Maximum differential pressure for saturated steam. Refer to Spirax Sarco for other liquids and gases.

Dimensions / Weights (approx.) in mm and kg (inches and lbs)



AEL7

(AEL74 used for reference)



AEL7T

Actuator	Thrust	Dimensions				D	E	Weight
		A	B	C				
AEL71	1.2 kN (270 lbf)	129 mm (5.07")	129 mm (5.0")	292 mm (11.4")	100 mm (3.9")	140 mm (5.5")	2.1 kg (4.6 lbs)	
AEL71T	0.9 kN (202 lbf)	162 mm (6.3")	162 mm (6.3")	490 mm (19.2")		213 mm (8.3")	8.7 kg (19.1 lbs)	
AEL72	2 kN (450 lbf)	173 mm (6.8")	173 mm (6.8")	379 mm (14.9")		189 mm (7.4")	4.8 kg (10.5 lbs)	
AEL72T	2.1 kN (472 lbf)	162 mm (6.3")	162 mm (6.3")	508 mm (20.0")		213 mm (8.3")	9.3 kg (20.5 lbs)	
AEL73	4 kN (900 lbf)	173 mm (6.8")	173 mm (6.8")	379 mm (14.9")		189 mm (7.4")	4.8 kg (10.5 lbs)	
AEL74	6 kN (1349 lbf)	173 mm (6.8")	211 mm (8.3")	474 mm (18.6")		165 mm (6.4")	8.0 kg (17.6 lbs)	
AEL75	8 kN (1800 lbf)	188 mm (7.4")	259 mm (10.1")	527 mm (20.7")		179 mm (7.0")	15.0 kg (33.0 lbs)	
AEL76	12 kN (2698 lbf)						15.0 kg (33.0 lbs)	
AEL77	15 kN (3372 lbf)						15.0 kg (33.0 lbs)	
AEL78	20 kN (4496 lbf)	216 mm (8.5")	282 mm (11.1")	657 mm (25.8")	155 mm (6.1")	187 mm (7.3")	19.0 kg (41.8 lbs)	

Safety information, installation and maintenance

Full details for the safe installation, commissioning and removal of the AEL7 Series actuator can be found in:
IM-P713-01 for AEL7 versions and **IM-P713-02** for AEL7T versions

Installation and wiring note

The valve should be installed in the horizontal line. The position of the actuator will depend on the type of valve to which it is fitted and the temperature of the media. However, it is not recommended that the actuators be fitted directly below the valve or in a wet environment.

Disposal

This product is recyclable. No ecological hazard is anticipated with the disposal of this product, providing due care is taken.

Selection example

Control Valve	DN20 JE43 HTSUSS Kv10
Kvs	6.3
Connection	PN63
Operating ΔP	30 bar
Electrical Supply	24Vdc
Control Input Signal	4-20mA
Position Feedback	4-20mA
End-position Feedback	VFC

Information Source		
Maximum ΔP	103.4 bar	Differential Pressure Tables (Class IV) Metal Seated (T & S)
Mounting Flange	EL5971J	AEL7 Valve Adapter and Mounting Flange Selection - Spira-trol™ J
Stem Adapter	AEL7XJ01	
Positioner	AEL7X224 (Supplied with actuator)	Nomenclature and How to Order
Position Feedback	Positioner function	AEL7 Technical Specification
End-position Feedback	AEL7X014	AEL7 Assessories (Positioner)

Nomenclature and How to order

Product	A	Actuator		A
Type	E	Electric		E
Action	L	Linear		L
Series	7	-		7
Thrust	1	1.2 kN (270 lbf)	0.9 kN (202 lbf) for AEL71T	3
	2	2 kN (450 lbf)	2.1 kN (472 lbf) for AEL72T	
	3	4 kN (900 lbf)		
	4	6 kN (1349 lbf)		
	5	8 kN (1800 lbf)		
	6	12 kN (2698 lbf)		
	7	15 kN (3372 lbf)		
	8	20 kN (4496 lbf)		
Nominal Stroke	1	20 mm (0.79 in)	Stroke Setting from factory. For full stroke information and adjustment, refer to IM-P713-01.	2
	2	30 mm (1.18 in)		
	3	50 mm (1.97 in)		
	4	70 mm (2.76 in)		
Speed	1	Low	≤0.7 mm/s (0.027 in/sec)	2
	2	Medium	0.8-1.5 mm/s (0.031 - 0.05 in/sec)	
	3	High	1.6+ mm/s (0.06 in/sec)	
Supply Voltage	1	230 Vac		4
	2	115 Vac		
	3	24 Vac		
	4	24 Vdc		
Control Signal	F	VMD	24 Vac	P
	G	VMD	110 Vac	
	J	VMD	230 Vac	
	K	VMD	24 Vdc	
	P	Modulating	(0)4-20 mA / 0(2)-10V Positioner	
Failure Mode	X	None		X
	T	Spring	Non-retrofit option. Not suitable for 24 Vdc	
	S	Super-Capacitor	Non-retrofit option. Not suitable for 24 Vac	
Potentiometer	X	None		A
	A	Potentiometer	1 x 1000Ω ¹	

¹ Required for any actuator with positioner card

How to Order Example

1-off AEL73242PXA plus Auxiliary travel switch (AEL7X014)

1-off AEL7XJ08 DN15-50 J Series adapter