



## 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:

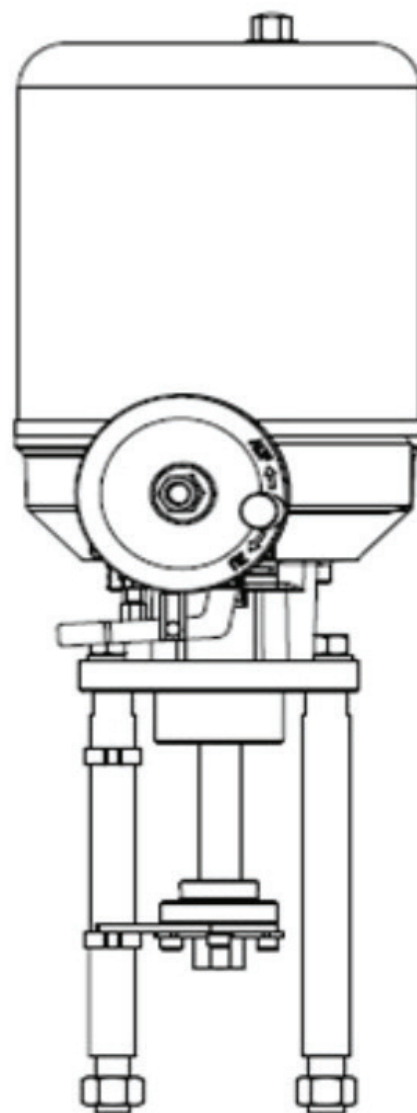
- Vibration levels can be problematic – e.g. vent valves
- Steam systems where water hammer can be experienced

\* 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.

<b>2 - Port</b>	DN15 - DN300	Spira - trol™ L, K, and J series control valves
		Hiter series 85 and 1000
<b>3 - Port</b>	DN15 - DN300	QL series control valves

	<p><b>WARNING</b></p> <p>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.</p>
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## Standards and approvals:

This equipment is  marked and conforms to the following:

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

## Certification options:

The DN15-100 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 or order.

The EN14597 certification is only valid for DN15-100 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 <sup>1</sup>	AEL7	AEL72T <sup>1</sup>	AEL73	AEL74	AEL75	AEL76	AEL77	AEL78
Thrust ( kN)	1.2	0.9	2	2.1	4	6	8	12	15	20
Full Load Speed (mm/s) @ 24 Vac – 240 Vac (50/60Hz)										
Low	0.2	0.29	0.4	0.29	0.4	0.6	0.7	0.4	0.4	
Medium					0.8		1.4			0.8
High			1.7							
Full load Speed mm/s @ 24 Vdc										
Low	0.5						0.7	0.4	0.4	
Medium			0.8		0.8	0.8	1.4			1
High			1.7							
Set Stroke (mm) <sup>3</sup>	20	30								70
Maximum stroke (mm)		35	40	35	40	50	60			100
Motor Brake										Vac Only
Ambient temperature	-20 °C ... +60 °C									
Media temperature	-20 °C ... +300 °C (425 °C with extended valve bonnet <sup>6</sup> )									
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 <sup>4</sup>	M8	M8 and M12				M12			M30 x 1.5	
AEL7 Actuator Options										
2WE	2 auxiliary limit switches 5 A - 230 Vac									
POT <sup>2</sup>	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 <sup>5</sup>	FSC20		FSC20		FSC20	FSC40			FSC60	

<sup>1</sup> Not available 24 Vdc.

<sup>2</sup> Required for Positioner Card.

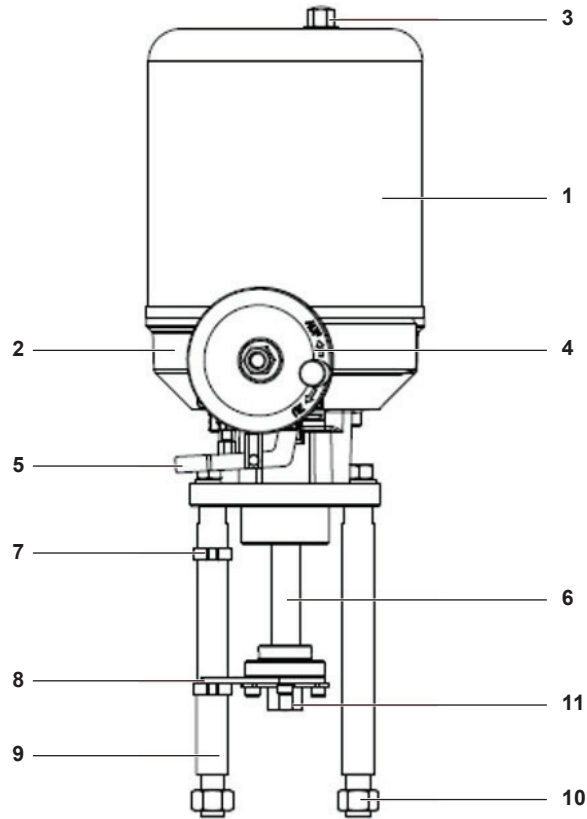
<sup>3</sup> Actuator supplied with stroke at this setting. Actuator travel can be adjusted up to the maximum stroke. See IM-P713-01.

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

<sup>5</sup> Factory fitment only. Not available 24 Vac.

<sup>6</sup> Bonnet must not be insulated.

## Materials



No.	Description	Materials	Surface Finish
1	Cover	Polycarbonate (1-6 kN)	None
		Carbon Steel (8 kN+)	Painted
2	Housing	Machined Aluminium	None
		Cast Aluminium	Painted
3	Cover Nut <sup>1</sup>	Polycarbonate (1-6 kN)	None
		Carbon Steel (8 kN+)	Galvanic zinc plated
4	Hand wheel <sup>2</sup>	Polycarbonate (8 kN+)	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 only)	EPDM	None

<sup>1</sup> Internal o - seal in place of gasket for 1 - 6 kN actuators

<sup>2</sup> 1 - 4 kN actuators use a hand crank

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

Actuator	Thrust	DN15-50			DN65-100			DN125-300		
		Flange	Thread	Adapter	Flange	Thread	Adapter	Flange	Thread	Adapter
AEL71	1.2 kN	EL5970	M8	Integral	EL5971	M12	Integral			
AEL71T	0.9 kN									
AEL72	2.0 kN									
AEL72T	2.1 kN			AEL7XM8 <sup>1</sup>						
AEL73	4.0 kN									
AEL74	6.0 kN									
AEL75	8.0 kN									
AEL76	12.0 kN									
AEL77	15.0 kN									
AEL78	20.0 kN				EL5972		AEL7XM12 <sup>2</sup>	EL5974	M30 x 1.5	Integral

<sup>1</sup> Included in the standard scope of supply AEL71 to AEL75

<sup>2</sup> Adapter must be ordered separately

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

Actuator	Thrust	DN15-50			DN65-100			DN125-300		
		Flange	Thread	Adapter	Flange	Thread	Adapter	Flange	Thread	Adapter
AEL71	1.2 kN	EL5971J	M8	AEL7XJ01 <sup>1</sup>	EL5972J	M12	AEL7XJ02 <sup>1</sup>			
AEL71T	0.9 kN									
AEL72	2.0 kN									
AEL72T	2.1 kN									
AEL73	4.0 kN									
AEL74	6.0 kN									
AEL75	8.0 kN									
AEL76	12.0 kN									
AEL77	15.0 kN									
AEL78	20.0 kN				EL5972J		AEL7XM12 <sup>1</sup>	EL5974	M30 x 1.5	Integral

<sup>1</sup> Adapter must be ordered separately

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

Actuator	Thrust	DN15-50			DN65-100			DN125-200			
		Flange	Thread	Adapter	Flange	Thread	Adapter	Flange	Thread	Adapter	
AEL71	1.2 kN	EL5970 <sup>3</sup>	M8	Integral							
AEL71T	0.9 kN			AEL7XM8 <sup>1</sup>	EL5971	M12	Integral				
AEL72	2.0 kN										
AEL72T	2.1 kN										
AEL73	4.0 kN										
AEL74	6.0 kN										
AEL75	8.0 kN										
AEL76	12.0 kN										
AEL77	15.0 kN										
AEL78	20.0 kN				EL5972		AEL7XM12 <sup>2</sup>	EL5974	M30 x 1.5	Integral	

<sup>1</sup> Included in the standard scope of supply AEL71 to AEL75

<sup>2</sup> Adapter must be ordered separately

<sup>3</sup> 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	AEL7Y3	Ø5/16"-18UNC x1.1/2" Hex Head. ASTM A307 gr.A Zinc Plated"	8			
	1.5						
01-11-51-61-21-71 Red. Bore	1.5						
08-18-58-68	2.0	AEL7Y3					
01-11-51-61-21-71 Full Bore							
01-11-51-61-21-71 Red. Bore							
02-12-52-62	3.0	AEL7Y4					
08-18-58-68-02-12-52-62							
01-11-51-61-21-71 Full Bore							
01-11-51-61-21-71 Red.							
08-18-58-68-02-12-52-62	4.0	AEL7Y3					
01-11-51-61-21-71 Full Bore							
01-11-51-61-21-71 Red. Bore							
51-61-71 - Stroke 2"	6.0						
51-61-71 - Stroke 3"	6.0						
51-61-71 - Stroke 4"	6.0				Y6	n/a	
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	230 Vac	AEL7X016	AEL7X001*	AEL7X181
		110 Vac			AEL7X183
		24 Vac			
		24 Vdc			
	2 - 4 kN	230 Vac	AEL7X010	AEL7X002*	AEL7X191
		110 Vac			AEL7X193
		24 Vac			
		24 Vdc			
	6 kN	230 Vac	AEL7X011	AEL7X003*	AEL7X201
		110 Vac			AEL7X203
		24 Vac			
		24 Vdc			
	8-20 kN	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	230 Vac	AEL7X017	AEL7X001*	AEL7X181	AEL7X241
		110 Vac			AEL7X183	AEL7X233
		24 Vac				AEL7X224
		24 Vdc				
	2 - 4 kN	230 Vac	AEL7X014	AEL7X002*	AEL7X191	AEL7X241
		110 Vac			AEL7X193	AEL7X233
		24 Vac				AEL7X224
		24 Vdc				
	6 kN	230 Vac	AEL7X015	AEL7X003*	AEL7X201	AEL7X241
		110 Vac			AEL7X203	AEL7X233
		24 Vac				AEL7X224
		24 Vdc				
	8-20 kN	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	230 Vac	AEL71PEL1
		110 Vac	
		24 Vac	
		24Vdc	n/a
	2 - 4 kN	230 Vac	AEL73PEL1
		110 Vac	
		24 Vac	
		24Vdc	n/a
	6 kN	230 Vac	AEL74PEL1
		110 Vac	
		24 Vac	
		24Vdc	n/a
	8-15 kN	230 Vac	AEL77PEL1
		110 Vac	
		24 Vac	
		24Vdc	AEL78PEL4
20 kN	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	230 Vac	AEL7T010	AEL7T001	AEL7X241
		110 Vac			AEL7X233
		24 Vac			AEL7X241
	2 kN	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")														
Actuator Type	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)		N - P	H	D	N - P	H	D	N - P	H	D	N - P	H	D	N - P	H	D
AEL71	1200	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	2000	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	4000	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")														
Actuator Type	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)		N - P	H	D	N - P	H	D	N - P	H	D	N - P	H	D	N - P	H	D
AEL71	1200	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	2000	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	4000	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")														
Actuator Type	Kvs	4			6.3			10			16			17.5 - 18		
	Cv	4.6			7.3			12			18			20.2 - 21		
Actuator Type	Actuator thrust (N)	N - P	H	D	N - P	H	D	N - P	H	D	N - P	H	D	N - P	H	D
		AEL71	1200	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
AEL72	2000	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	4000	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	6000	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*	8000	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")											
Actuator Type	Kvs	25			31 - 36			46 - 50			All Kvs		
	Cv	29			36 - 42			53 - 58			All Cv		
Actuator Type	Actuator thrust (N)	N - P	H	D	N - P	H	D	N - P	H	D	N - P	H	D
		AEL71	1200	6.2	2.9	4.8	4.4	1.8	3.3	2.5	0.6	1.7	2.5
AEL72	2000	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	4000	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	6000	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*	8000	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")														
Actuator Type	Kvs	16			25			36			73 - 90			100 - 117		
	Cv	18			29			42			85 - 104			116 - 135		
Actuator thrust (N)		P	H	D	N - P	H	D	P	H	D	P	H	D	P	H	D
		AEL71	1200	13.4	3.0	11.8	4.0		3.3	2.2		1.7	0.4			
AEL72	2000	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	4000	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	6000	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	8000	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	12000	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*	15000	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*	20000	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 - 80			DN100		
Actuator Type	Kvs	160 - 180			All Kvs					
	Cv	185 - 208			All Cv					
Actuator thrust (N)		P	H	D	P	H	D	P	H	D
		AEL72	2000	0.5		0.4	1.5	0.4	1.3	0.5
AEL73	4000	3.3	2.6	3.2	6.0	4.9	5.9	3.3	2.6	3.2
AEL74	6000	6.1	5.4	6.0	10.6	9.4	10.4	6.1	5.4	6.0
AEL75	8000	9.0	8.2	8.9	15.1	13.9	14.9	9.0	8.2	8.9
AEL76	12000	14.6	13.9	14.5	24.2	23.0	24.0	14.6	13.9	14.5
AEL77*	15000	18.9	18.1	18.8	31.0	29.8	25.0	18.9	18.1	18.8
AEL78*	20000	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 (1/2" - 1")  
- FLOW UNDER**

Actuator Type	Cage Type	Standard Cage (S)														
	Valve size	DN15 to DN25 (1/2" 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)		N - P	H	D	N - P	H	D	N - P	H	D	N - P	H	D	N - P	H	D
	AEL71	1200	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	2000	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 (1/2" 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)		N - P	H	D	N - P	H	D	N - P	H	D	N - P	H	D	N - P	H	D
	AEL71	1200	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	2000	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

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

**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)		N - P	H	D	N - P	H	D	N - P	H	D	N - P	H	D	N - P	H	D
	AEL71	1200	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
AEL72	2000	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)		N - P	H	D	N - P	H	D	N - P	H	D	N - P	H	D
	AEL71	1200	9.8	6.5	8.3	7.6	4.9	6.4	5.1	3.3	4.3	5.1	3.3
AEL72	2000	18.6	15.3	17.1	14.6	12.0	13.5	10.2	8.3	9.4	10.2	8.3	9.4

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

**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")														
Actuator Type	Kvs	16			25			36			73 - 90			100 - 117		
	Cv	18			29			42			85 - 104			116 - 135		
Actuator thrust (N)		P	H	D	P	H	D	P	H	D	P	H	D	P	H	D
		AEL71	1200	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
AEL72	2000	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	4000	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	6000	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	8000	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	12000	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 - 80			DN100		
Actuator Type	Kvs	160 - 180			All Kvs					
	Cv	185 - 208			All Cv					
Actuator thrust (N)		P	H	D	P	H	D	P	H	D
		AEL71	1200	0.6		0.5	1.3	0.2	1.1	0.6
AEL72	2000	1.8	1.0	1.7	3.1	2.0	2.9	1.8	1.0	1.7
AEL73	4000	4.6	3.9	4.5	7.6	6.5	7.5	4.6	3.9	4.5
AEL74	6000	7.4	6.7	7.3	12.2	11.0	12.0	7.4	6.7	7.3
AEL75	8000	10.2	9.5	10.1	16.7	15.5	16.5	10.2	9.5	10.1
AEL76	12000	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")														
K <sub>vs</sub>	0.01-0.5			1			1.6			2.5			4			
	C <sub>v</sub>	0.012-0.58			1.2			1.8			2.9			4.6		
Actuator thrust (N)	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D	
	AEL71 1200	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 2000	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 4000	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")														
K <sub>vs</sub>	4.9-6.3			7.2			10			11			2.5-4-6.3-10			
	C <sub>v</sub>	5.7-7.3			8.3			12			12.7			2.9-4.6-7.3-12		
Actuator thrust (N)	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D	
	AEL71 1200	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 2000	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 4000	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")														
K <sub>vs</sub>		4			6.3			10			16			17.5 - 18		
	C <sub>v</sub>	4.6			7.3			12			18			20.2-21		
Actuator thrust (N)		N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D
	AEL71	1200	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	2000	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	4000	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")											
K <sub>vs</sub>		25			31-36			46-50			All Kvs		
	C <sub>v</sub>	29			36-42			53-58			All Cv		
Actuator thrust (N)		N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D
	AEL71	1200	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
AEL72	2000	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	4000	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")														
K <sub>vs</sub>		16			25			36			73 - 90			100 - 117		
	C <sub>v</sub>	18			29			42			85 - 104			116 - 135		
Actuator thrust (N)		P	H	D	N-P	H	D	P	H	D	P	H	D	P	H	D
		AEL71	1200	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
AEL72	2000	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	4000	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	6000	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")			DN65-80			DN100		
K <sub>vs</sub>		160-180			All Kvs					
	C <sub>v</sub>	185-208			All Cv					
Actuator thrust (N)		P	H	D	P	H	D	P	H	D
		AEL71	1200	1.3	0.6	1.2	2.1	1.0	1.9	1.3
AEL72	2000	2.4	1.7	2.3	3.9	2.8	3.7	2.4	1.7	2.3
AEL73	4000	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
AEL74	6000	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")														
	K <sub>vs</sub>	0.01-0.5			1			1.6			2.5			4		
	C <sub>v</sub>	0.012-0.58			1.2			1.8			2.9			4.6		
	Actuator thrust (N)	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D
AEL71	1200	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	2000	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	4000	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	6000	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")														
	K <sub>vs</sub>	4.9-6.3			7.2			10			11			2.5-4-6.3-10		
	C <sub>v</sub>	5.7-7.3			8.3			12			12.7			2.9-4.6-7.3-12		
	Actuator thrust (N)	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D
AEL71	1200	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	2000	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	4000	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	6000	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")														
Type	K <sub>vs</sub>	4			6.3			10			16			17.5 - 18		
	C <sub>v</sub>	4.6			7.3			12			18			20.2-21		
Type	Actuator thrust (N)	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D
		AEL71	1200	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
AEL72	2000	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	4000	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	6000	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")											
Type	K <sub>vs</sub>	25			31-36			46-50			All Kvs		
	C <sub>v</sub>	29			36-42			53-58			All Cv		
Type	Actuator thrust (N)	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D
		AEL72	2000	9.2	5.9	7.7	6.2	3.6	5.1	3.1	1.2	2.2	3.1
AEL73	4000	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	6000	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	8000										40.8	38.9	25.0
AEL76	12000										65.9	64.0	25.0
AEL77	15000										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")														
Type	K <sub>vs</sub>	16			25			36			73 - 90			100 - 117		
	C <sub>v</sub>	18			29			42			85 - 104			116 - 135		
Type	Actuator thrust (N)	P	H	D	N-P	H	D	P	H	D	P	H	D	P	H	D
		AEL72	2000	21.7	11.3	20.1	5.8	1.3	5.1	2.7		2.2				
AEL73	4000	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	6000	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	8000	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	12000	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")			DN65-80			DN100		
Type	K <sub>vs</sub>	160-180			All Kvs					
	C <sub>v</sub>	185-208			All Cv					
Type	Actuator thrust (N)	P	H	D	P	H	D	P	H	D
		AEL73	4000	1.2	0.5	1.1	3.4	2.2	3.2	1.2
AEL74	6000	4.0	3.3	3.9	7.9	6.8	7.7	4.0	3.3	3.9
AEL75	8000	6.9	6.1	6.8	12.4	11.3	12.3	6.9	6.1	6.8
AEL76	12000	12.5	11.8	12.4	21.5	20.3	21.3	12.5	11.8	12.4
AEL77	15000				28.3	27.1	25.0	16.7	16.0	16.6
AEL78	20000				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**

Cage Type		Standard Cage (S)														
Actuator Type	Valve size	DN15 to DN25 (½" to 1")														
	K <sub>vs</sub>	0.01-0.5			1			1.6			2.5			4		
	C <sub>v</sub>	0.012-0.58			1.2			1.8			2.9			4.6		
	Thrust (N)	Pressure	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H
AEL71T	900	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

Cage Type		Standard Cage (S)														
Actuator Type	Valve size	DN15 to DN25 (½" to 1")														
	K <sub>vs</sub>	4.9-6.3			7.2			10			11					
	C <sub>v</sub>	5.7-7.3			8.3			12			12.7					
	Thrust (N)	Pressure	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H
AEL71T	900	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

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

Cage Type		Standard Cage (S)														
Actuator Type	Valve size	DN32 to DN50 (1¼" to 2")														
	K <sub>vs</sub>	4			6.3			10			16			17.5 - 18		
	C <sub>v</sub>	4.6			7.3			12			18			20.2-21		
	Thrust (N)	Pressure	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H
AEL71T	900	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

Cage Type		Standard Cage (S)														
Actuator Type	Valve size	DN32 to DN50 (1¼" to 2")														
	K <sub>vs</sub>	25			31-36			46-50								
	C <sub>v</sub>	29			36-42			53-58								
	Thrust (N)	Pressure	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H
AEL71T	900	Max.	60.4	56.6	25.0	47.0	44.1	25.0	32.5	30.5	25.0	32.5	30.5	25.0	32.5	30.5
		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	0.2

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

Cage Type		Standard Cage (S)														
Actuator Type	Valve size	DN65 to DN100 (2½" to 4")														
	K <sub>vs</sub>	16			25			36			73 - 90			100 - 117		
	C <sub>v</sub>	18			29			42			85 - 104			116 - 135		
	Thrust (N)	Pressure	P	H	D	P	H	D	P	H	D	P	H	D	P	H
AEL71T 900	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 2100	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	

Cage Type		Standard Cage (S)			
Actuator Type	Valve size	DN65 to DN100 (2½" to 4")			
	K <sub>vs</sub>	160-180			
	C <sub>v</sub>	185-208			
	Thrust (N)	Pressure	P	H	D
AEL71T 900	Max.	6.9	6.2	6.8	
	Min.	1.0	1.8	1.2	
AEL72T 2100	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**

Cage Type		Standard Cage (S)															
Valve size		DN15 to DN25 (½" to 1")															
Actuator Type	K <sub>vs</sub>	0.01-0.5			1			1.6			2.5			4			
		C <sub>v</sub>			1.2			1.8			2.9			4.6			
AEL71T	900	Thrust (N)	Pressure	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H
		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	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	0.0	0.0	0.0

Cage Type		Standard Cage (S)															
Valve size		DN15 to DN25 (½" to 1")															
Actuator Type	K <sub>vs</sub>	4.9-6.3			7.2			10			11						
		C <sub>v</sub>			8.3			12			12.7						
AEL71T	900	Thrust (N)	Pressure	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H
		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	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	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**

Cage Type		Standard Cage (S)															
Valve size		DN32 to DN50 (1¼" to 2")															
Actuator Type	K <sub>vs</sub>	4			6.3			10			16			17.5 - 18			
		C <sub>v</sub>			7.3			12			18			20.2-21			
AEL71T	900	Thrust (N)	Pressure	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H
		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	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	0.0	0.0	0.0

Cage Type		Standard Cage (S)															
Valve size		DN32 to DN50 (1¼" to 2")															
Actuator Type	K <sub>vs</sub>	25			31-36			46-50									
		C <sub>v</sub>			36-42			53-58									
AEL71T	900	Thrust (N)	Pressure	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H
		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	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	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**

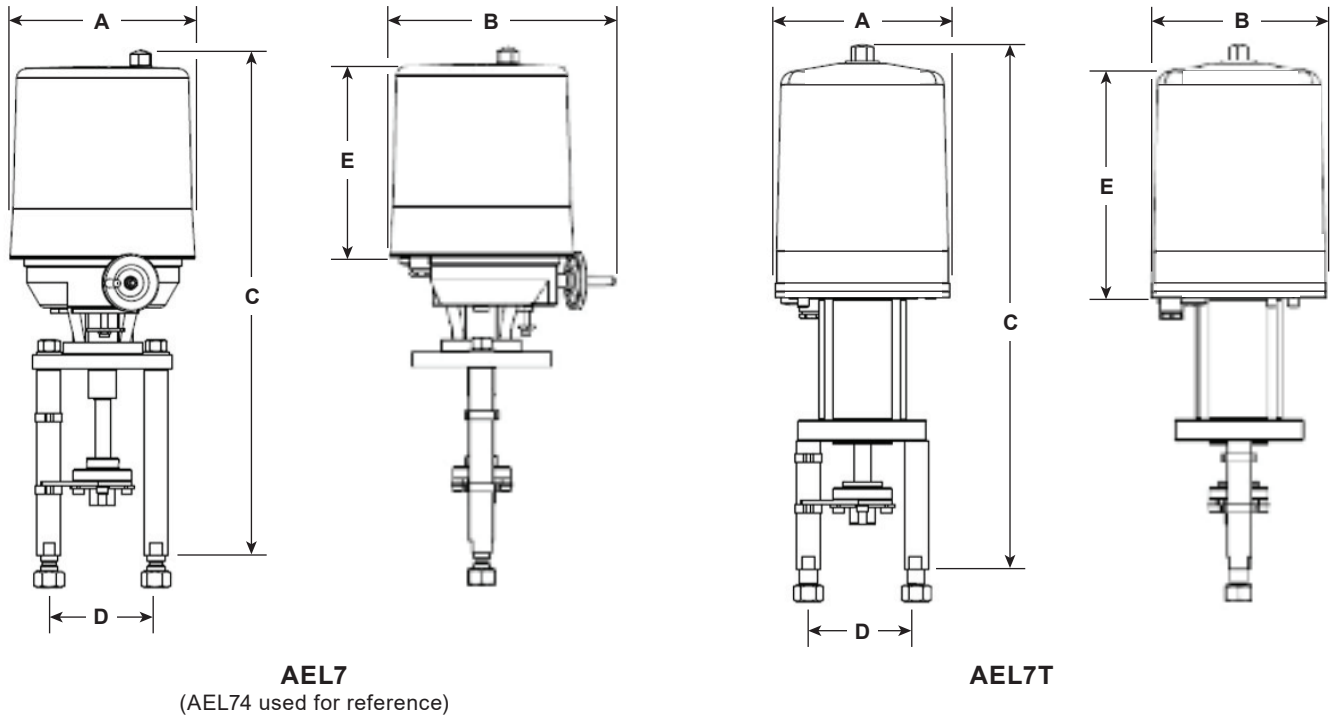
Cage Type		Standard Cage (S)													
Valve size		DN65 to DN100 (2½" to 4")													
Actuator Type	K <sub>vs</sub>	16			25			36			73 - 90			100 - 117	
	C <sub>v</sub>	18			29			42			85 - 104			116 - 135	
Thrust (N)	Pressure	N-P	H	D	N-P	H	D	N-P	H	D	N-P	H	D	P	H
		AEL71T 900	Max.	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	18.1	16.1	17.8
	Min.	0.0	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 2100	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	K <sub>vs</sub>	160-180		
	C <sub>v</sub>	185-208		
Thrust (N)	Pressure	P	H	D
		AEL71T 900	Max.	6.9
	Min.	0.0	0.5	0.0
AEL72T 2100	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.



Actuator	Thrust	Dimensions (mm)					Weight (kg)
		A	B	C	D	E	
AEL71	1.2 kN	129	129	292	100	140	2.1
AEL71T	0.9 kN	162	162	490		213	8.7
AEL72	2.0 kN	173	173	379		189	4.8
AEL72T	2.1 kN	162	162	508		213	9.3
AEL73	4.0 kN	173	173	379		189	4.8
AEL74	6.0 kN	173	211	474		165	8.0
AEL75	8.0 kN	188	259	527		179	15.0
AEL76	12.0 kN						15.0
AEL77	15.0 kN				15.0		
AEL78	20.0 kN	216	282	657	155	187	19.0

## 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

<b>Control Valve</b>	DN20 JE43 HTSUSS Kv10
<b>Kvs</b>	6.3
<b>Connection</b>	PN63
<b>Operating <math>\Delta P</math></b>	30 bar
<b>Electrical Supply</b>	24Vdc
<b>Control Input Signal</b>	4-20mA
<b>Position Feedback</b>	4-20mA
<b>End-position Feedback</b>	VFC

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

## Nomenclature and How to order

<b>Product</b>	<b>A</b>	Actuator		<b>A</b>	
<b>Type</b>	<b>E</b>	Electric		<b>E</b>	
<b>Action</b>	<b>L</b>	Linear		<b>L</b>	
<b>Series</b>	<b>7</b>	-		<b>7</b>	
<b>Thrust</b>	<b>1</b>	1.2 kN	0.9 kN for AEL71T	<b>3</b>	
	<b>2</b>	2.0 kN	2.1 kN for AEL72T		
	<b>3</b>	4.0 kN			
	<b>4</b>	6.0 kN			
	<b>5</b>	8.0 kN			
	<b>6</b>	12.0 kN			
	<b>7</b>	15.0 kN			
	<b>8</b>	20.0 kN			
<b>Nominal Stroke</b>	<b>1</b>	20 mm	Stroke Setting from factory. For full stroke information and adjustment, refer to IM-P713-01.	<b>2</b>	
	<b>2</b>	30 mm			
	<b>3</b>	50 mm			
	<b>4</b>	70 mm			
<b>Speed</b>	<b>1</b>	Low	≤0.7 mm/s	<b>2</b>	
	<b>2</b>	Medium	0.8-1.5 mm/s		
	<b>3</b>	High	1.6+ mm/s		
<b>Supply Voltage</b>	<b>1</b>	230 Vac		<b>4</b>	
	<b>2</b>	115 Vac			
	<b>3</b>	24 Vac			
	<b>4</b>	24 Vdc			
<b>Control Signal</b>	<b>F</b>	VMD	24 Vac	<b>P</b>	
	<b>G</b>	VMD	110 Vac		
	<b>J</b>	VMD	230 Vac		
	<b>K</b>	VMD	24 Vdc		
	<b>P</b>	Modulating	(0)4-20 mA / 0(2)-10V Positioner		
<b>Failure Mode</b>	<b>X</b>	None		<b>X</b>	
	<b>T</b>	Spring			Non-retrofit option. Not suitable for 24 Vdc
	<b>S</b>	Super-Capacitor			Non-retrofit option. Not suitable for 24 Vac
<b>Potentiometer</b>	<b>X</b>	None		<b>A</b>	
	<b>A</b>	Potentiometer			1 x 1000Ω <sup>1</sup>

<sup>1</sup> 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