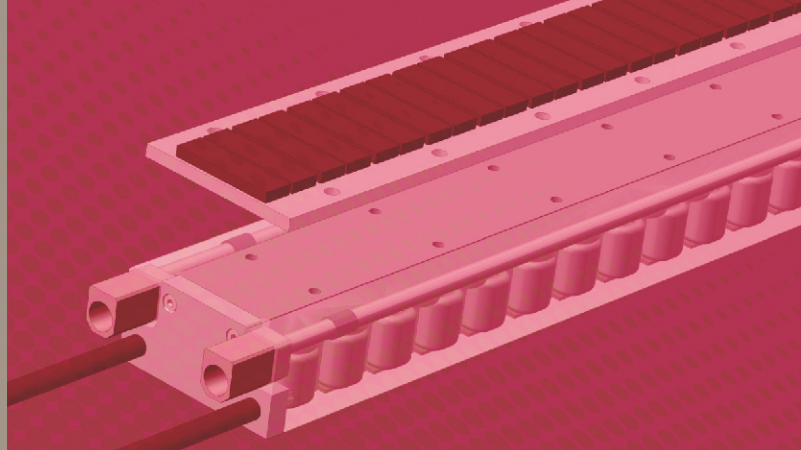


L3S & L3SK LINEAR MOTORS

Air-cooled (L3S) and liquid-cooled (L3SK)
flat linear motors



The Moog air-cooled L3S and liquid-cooled L3SK flat linear motors are designed for highly dynamic applications. L3S and L3SK motors are three-phase, synchronous, linear iron core motors, which are supplied in the form of active parts (built-in motors). Their primary part is formed by a ferromagnetic stack, composed of laminations and a three-phase winding inserted into its slots. This primary part is excited by permanent magnets in the secondary part, which are placed in a standard, static arrangement and used as a magnet way.

Both the L3S motor series and its liquid-cooled variant, the L3SK, offer some of the largest power ranges in the industry, with standard models delivering continuous rated force values ranging from 150 to 7,500 N for the L3S series and 300 to 12,000 N for the L3SK series, when using water as a cooling agent. Additionally, the air-cooled L3S series can be loaded with forces and currents substantially higher than those produced at nominal speeds. In comparison, the liquid-cooled L3SK series has almost double the force and output power of its air-cooled counterpart (L3S), although the dimensions remain the same. Yet another advantage of the L3SK series is its ability to operate at higher ambient temperatures.

The modular design of both linear motor series supports a variety of options. In addition, Moog can provide completely customized solutions. We offer custom winding systems designed for different force constants (from about 40 to 1,000 N/A) and high speed applications. Moog can also provide winding systems and special insulation options for different intermediate circuit voltages (140 V, 330 V, 560 V, 700 V DC). Our linear motors can be engineered with increased IP ratings (our air-cooled linear motor with increased IP rating is the L7S model; its liquid-cooled counterpart is the L7SK). The position of outlet cables can be modified to fit specific application requirements as well*.

*Note: changing position of outlet cables may cause outer dimensions of motors to differ from those in the catalog

SPECIFICATIONS

	MEASURING UNIT	L3S-SERIES	L3SK-SERIES
Peak Force F_{max}	N	400-15,750	400-15,750
Rated Speed v_{NC}	m/s	0-8	0-8
Continuous Force F_{NC} (IC410)	N	150-7,500	-
Continuous Force F_{WC} (ICW37)	N	-	300-12,000
Temperature Monitoring	-	PTC, PT1000, Thermoswitch	PTC, PT1000, Thermoswitch
Rated Bus Voltage V DC	V	140, 330, 560, 700	140, 330, 560, 700
Certificate / Marks	-	CE	CE
Cooling	-	Air	Water**

**The standard cooling agent for L3SK linear motors is water. However, different types of coolants (e.g. oils, antifreeze mixtures, etc.) with varying temperature ranges are available upon request.

FEATURES

- Designed for highly dynamic applications
- High force overload capacity (L3S)
- High values of continuous force (L3SK)
- High quality production
- High precision assembly
- Long life and high operational reliability

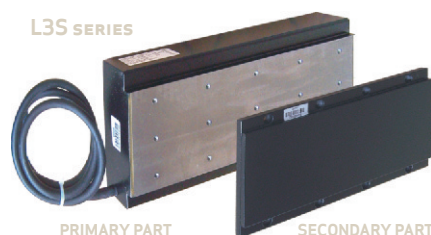
BENEFITS

- Great positioning precision
- Highly customizable
- High force density
- Different winding options available

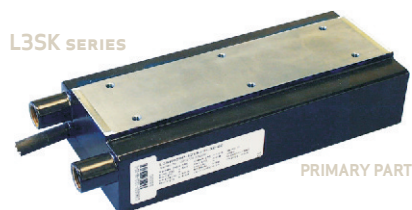
TYPICAL APPLICATIONS

- Industrial automation
- CNC machines
- Production and assembly lines
- Test and simulation
- Optical devices
- Packaging

L3S SERIES



L3SK SERIES



WHAT MOVES YOUR WORLD

MOOG

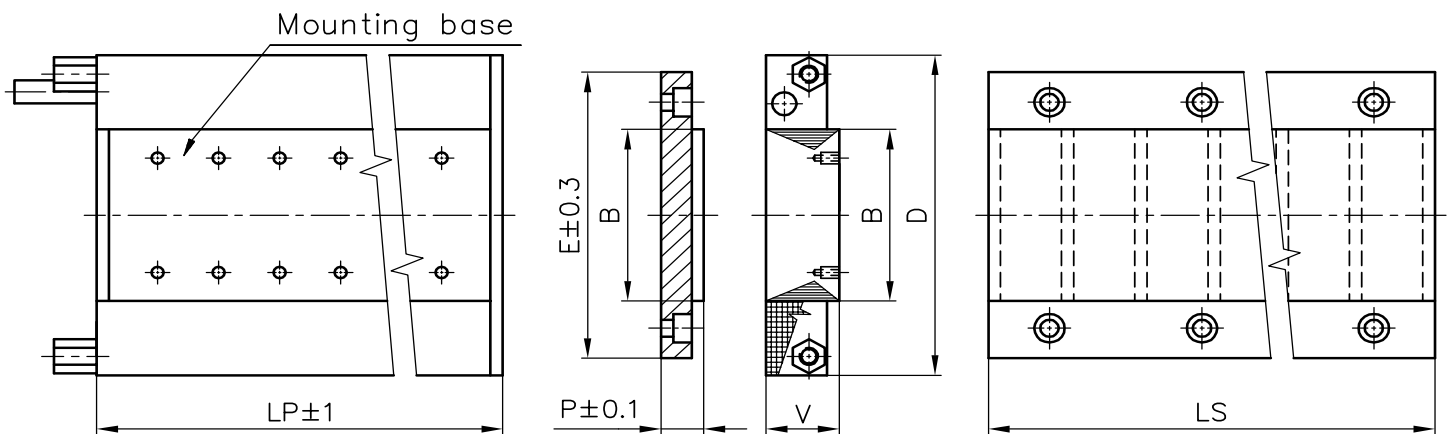
DIMENSIONAL DETAILS

PRIMARY PART

TYPE	F _{peak}	B	L _p	V	D	m
	N					
L3S(K)030P-1215	400	30	192	43.9	64	2.5
L3S(K)030P-2415	800	30	368	43.9	64	4.8
L3S(K)030P-3615	1,200	30	544	43.9	64	7.3
L3S(K)050P-1215	650	50	192	43.9	84	3.6
L3S(K)050P-2415	1,300	50	368	43.9	84	6.9
L3S(K)050P-3615	1,950	50	544	43.9	84	10.4
L3S(K)050P-4815	2,600	50	720	43.9	84	13.9
L3S(K)075P-1215	1,000	75	192	43.9	109	5
L3S(K)075P-2415	2,000	75	368	43.9	109	9.6
L3S(K)075P-3615	3,000	75	544	43.9	109	14.4
L3S(K)075P-4815	4,000	75	720	43.9	109	19.2
L3S(K)075P-6015	5,000	75	896	43.9	109	23.9
L3S(K)100P-1215	1,325	100	192	43.9	134	6.5
L3S(K)100P-2415	2,650	100	368	43.9	134	12.5
L3S(K)100P-3615	3,970	100	544	43.9	134	18.9
L3S(K)100P-4815	5,300	100	720	43.9	134	25
L3S(K)100P-6015	6,600	100	896	43.9	134	31.2
L3S(K)150P-1215	2,000	150	192	45.9	184	9.5
L3S(K)150P-2415	3,900	150	368	45.9	184	18
L3S(K)150P-3615	5,800	150	544	45.9	184	27
L3S(K)150P-4815	7,700	150	720	45.9	184	36
L3S(K)150P-6015	9,600	150	896	45.9	184	45
L3S(K)200P-1215	2,700	200	192	45.9	234	12
L3S(K)200P-2415	5,250	200	368	45.9	234	23.5
L3S(K)200P-3615	7,800	200	544	45.9	234	35
L3S(K)200P-4815	10,350	200	720	45.9	234	47
L3S(K)200P-6015	12,900	200	896	45.9	234	58
L3S(K)250P-1215	3,170	250	192	45.9	284	15
L3S(K)250P-2415	6,300	250	368	45.9	284	29
L3S(K)250P-3615	9,450	250	544	45.9	284	43
L3S(K)250P-4815	12,600	250	720	45.9	284	48
L3S(K)250P-6015	15,750	250	896	45.9	284	72

SECONDARY PART

TYPE	B	L _s	P	E	m
L3S030S-0416	30	64	14	60	0.34
L3S030S-0816	30	128	14	60	0.68
L3S030S-1616	30	256	14	60	1.36
L3S030S-3216	30	512	14	60	2.72
L3S030S-6416	30	1,024	14	60	5.43
L3S050S-0416	50	64	14	80	0.47
L3S050S-0816	50	128	14	80	0.95
L3S050S-1616	50	256	14	80	1.89
L3S050S-3216	50	512	14	80	3.8
L3S050S-6416	50	1,024	14	80	7.58
L3S075S-0416	75	64	14	105	0.64
L3S075S-0816	75	128	14	105	1.28
L3S075S-1616	75	256	14	105	2.56
L3S075S-3216	75	512	14	105	5.12
L3S075S-6416	75	1,024	14	105	10.24
L3S100S-0416	100	64	14	130	0.8
L3S100S-0816	100	128	14	130	1.6
L3S100S-1616	100	256	14	130	3.2
L3S100S-3216	100	512	14	130	6.4
L3S100S-6416	100	1,024	14	130	12.8
L3S150S-0416	150	64	14	180	1.31
L3S150S-0816	150	128	14	180	2.62
L3S150S-1616	150	256	14	180	5.25
L3S150S-3216	150	512	14	180	10.5
L3S150S-6416	150	1,024	14	180	21
L3S200S-0416	200	64	14	230	1.7
L3S200S-0816	200	128	14	230	3.4
L3S200S-1616	200	256	14	230	6.81
L3S200S-3216	200	512	14	230	13.62
L3S200S-6416	200	1,024	14	230	27.24
L3S250S-0416	250	64	19	285	2.11
L3S250S-0816	250	128	19	285	4.22
L3S250S-1616	250	256	19	285	8.45
L3S250S-3216	250	512	19	285	16.9



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L3S & L3SK Linear Motors, Moog Brno, Czech Republic
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This technical data is based on current available information and is subject to change at any time. Specifications for specific systems or applications may vary.

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