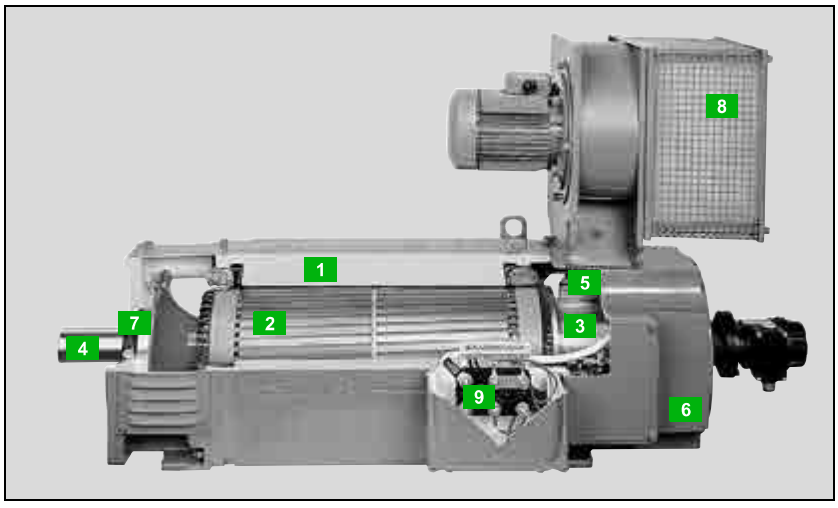
LSK
D.C. motors
Construction

C2 - Components

Description of LEROY-SOMER LSK D.C. motors (IC 06)

Component	Materials	Remarks
1 Stator (or body)	Insulated low-carbon magnetic steel laminations. Class H insulated electro-plated copper	- low carbon content guarantees long-term lamination pack stability - laminations prestressed and welded using MIG process - main poles built into all of the range (except LSK 1324C & 1604C) - auxiliary poles built in up to LSK 1604, above that they are separate - class H insulation
2 Armature	Insulated low-carbon magnetic steel laminations. Class H insulated electro-plated copper	- low carbon content guarantees long-term lamination pack stability - semi-enclosed inclined slots - bindings reinforced with heat-treated polymerized fiber glass - cooling ducts - class H insulation
3 Commutator	Silver-plated copper on plastic	- toothed type - large number of segments - cooled via ducts
4 Shaft	Steel	- open keyway - round-ended key
5 Brush holder Brushes	Thermoset plastic and bronze Electrographite compound	- moulded, rigid, can be rotated - adjustment position marked in relation to neutral axis - evenly-spaced accurate brush holders - as an option: detection of wear limit on brush holders - brushes with dampers
6 End shields	FGL cast iron	- flange built into front end shield (manufactured on request: LSK 1124 to 1804) - feet built into front and rear end shields - inspection doors on front end shield: 3 on LSK 1124 to 1604, 4 on larger models - 4 inspection doors on rear end shield - square inspection doors, all with identical mounting to allow accessories to be fixed at 90° (LSK 1124 to 1324)
7 Bearings and lubrification	Steel	- ball bearings, series 6300 (wide), C3 play, with high load capacity - type 2RS, dust and damp protected, permanently greased up to LSK 2004, and above this, open with a greasing system - front bearing preloaded - translational movement of rear bearing blocked
8 Fan	Sheet steel	- multivoltage, multifrequency, 2 pole, IP55 fan motor - multiposition fan, separate from the position of the terminal box - axial fan cooling kit
9 Terminal box	Aluminium alloy Cast iron Steel	- multiposition - removable cable gland support plate - can be located at the rear (LSK 1124 to 1604) - IP 55 (dust and damp protected) - 6 terminals + connector for options



LSK 1324 S - LSK 1324C S
D.C. motors
Electrical characteristics

E4 - Selection tables (IC 06)

The electrical characteristics are given for:
- 3-phase supply with full bridge
- degree of protection IP 23S
- cooling method IC 06 (FV)
- continuous S1 duty
- ambient temperature ≤ 40°C

Total weight: 155 kg
Moment of inertia: 0.12 kg.m²
Field power: 0.7 kW
104 - 120 N.m
$n_{max\ mech}$: 4000 min⁻¹

Key to abbreviations: see page 86.

P	Speed of rotation n for armature voltage U							$n_{max\ elec*}$		M	I	η	L	$R_{115°}$	U_{max}	Code	Deliv-ery
	260 V	400 V	420 V	440 V	460 V	500 V	600 V	N.C.	C.			Not inc.					
kW	min⁻¹	min⁻¹	min⁻¹	min⁻¹	min⁻¹	min⁻¹	min⁻¹	min⁻¹	min⁻¹	N.m	A	excitation	mH	Ω	V		
6.9	630							1000	1600	105	39	0.68	41	2.23	550		
12.2		970						1550	2480	120	38.5	0.79	41	2.23	550		
12.7			1020					1630	2610	119	38	0.79	41	2.23	550	03	✶
13.3				1070				1710	2740	119	38	0.79	41	2.23	550		
14					1120			1790	2860	119	38	0.80	41	2.23	550		
15.5						1220		1950	3120	121	38	0.81	41	2.23	550		
17.9							1460		3740	117	36.5	0.82	25	2.69	600	▼	
9.7	890							2000	3200	104	49.5	0.75	22	1.3	550		
16.5		1310						2200	3520	120	49.5	0.83	22	1.3	550		
17.3			1440					2320	3710	115	49	0.83	22	1.3	550	05	✶✶
18				1510				2410	3860	114	49	0.83	22	1.3	550		
18.7					1580			2520	4000	113	48.5	0.84	22	1.3	550		
20.6						1720		2750	4000	114	48.5	0.85	22	1.3	550		
23.6							2060		4000	109	46	0.86	14	1.59	600	▼	
15.6	1470							2350	3760	101	73.5	0.82	10	0.56	550		
25.4		2260						3610	4000	107	72.5	0.87	10	0.56	550		
26.6			2380					3800	4000	107	72	0.88	10	0.56	550		
27.9				2490				3980	4000	107	72	0.88	10	0.56	550	08	✶
29.3					2600			4000	4000	108	72	0.88	10	0.56	550		
32						2830		4000	4000	108	72	0.89	10	0.56	550		
36.8							3390		4000	104	69	0.89	6.3	0.64	600	▼	
19.9	1850							2400	4000	103	90	0.85	6.5	0.35	460		
32		2840						3260	4000	108	89.5	0.89	6.5	0.35	460		
33.4			2990					3400	4000	107	89	0.89	6.5	0.35	460	09	✶
34.4				3130				3400	4000	105	87.5	0.89	6.5	0.35	460		
35.3					3270			3470	4000	103	86	0.89	6.5	0.35	460		

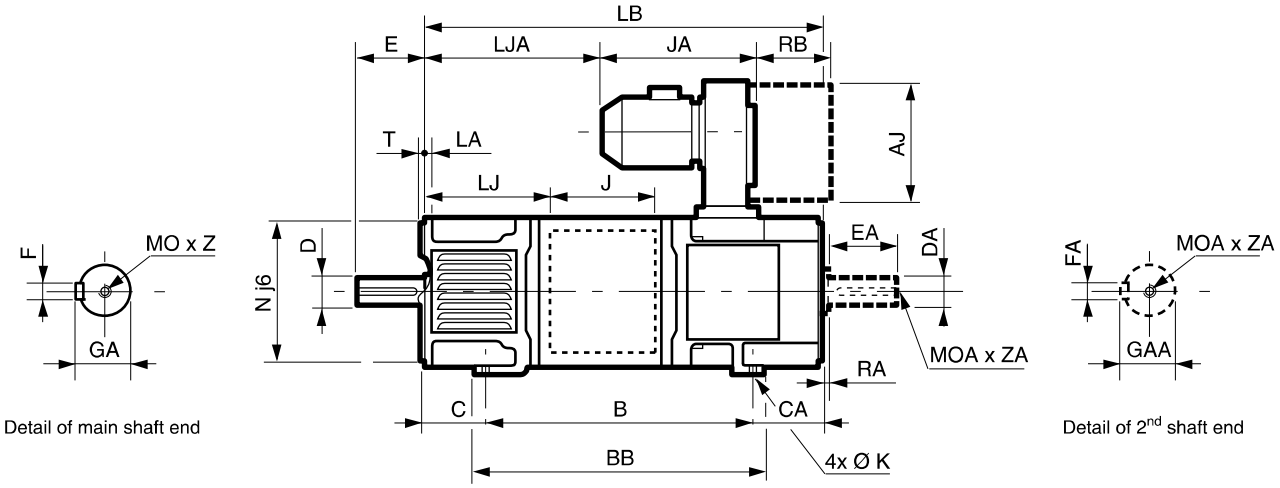
*: greater speed ranges by use of field weakening may be considered depending on the application: please consult us.
▼: motor available in compensated version only: LSK 1324C S.

P : Rated output power
M : Rated torque
I : Permissible current in continuous operation
R : Armature resistance at 115°C
U_{max} : Maximum armature voltage
N. C. : Non-compensated motor
C : Compensated motor

LSK
D.C. motors
Dimensions

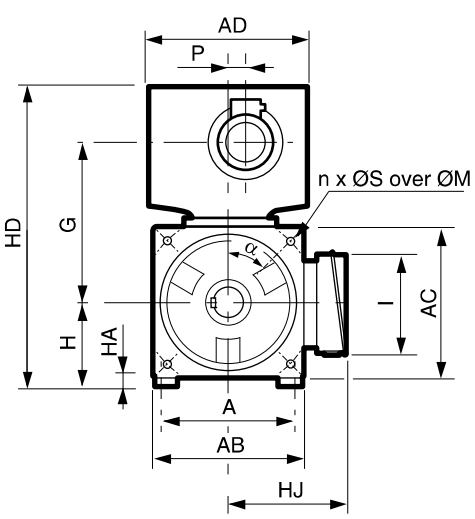
F1 - Foot, Flange, or Foot and flange mounted

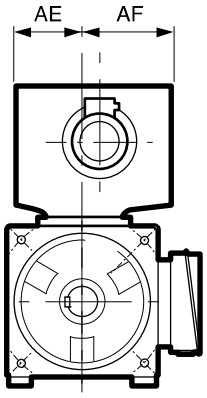
Dimensions of LSK D.C. motors IP 23S - IC 06



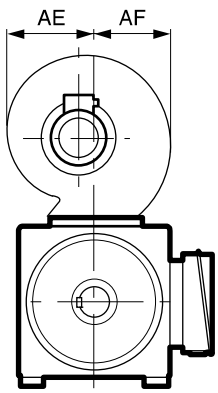
Detail of main shaft end

Detail of 2nd shaft end

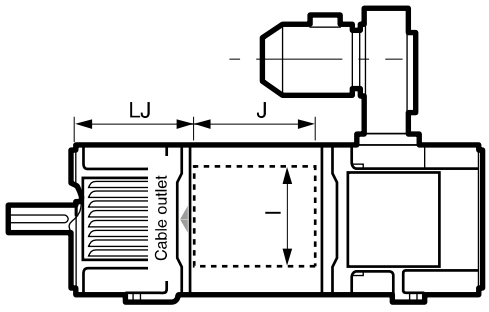




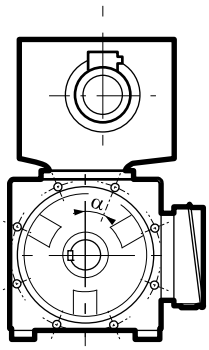
Configuration for **LSK 2004 to 2804**



Configuration for **LSK 3554**



Details of terminal box: **LSK 1804 to 2804C**



Flange configuration for **LSK 2254 to 3554**

LSK
D.C. motors
Dimensions

F1 - Foot, Flange, or Foot and flange mounted

Dimensions in millimetres

Dimensions of LSK IP 23S - IC 06 D.C. motors

Type	Main dimensions																						
	A	AB	AC	AD	AE	AF	B	BB	C	CA	G	H	HA	HD	HJ	I	J	JA	K	LB	LJ	LJA	P
LSK 1124 M	190	220	220	220	-	-	380	404	70	96	248	112	10	472	202	168	182	297	12	546	183	199	17
LSK 1124 L	190	220	220	220	-	-	450	474	70	96	248	112	10	472	202	168	182	297	12	616	253	269	17
LSK 1124 VL	190	220	220	220	-	-	520	544	70	96	248	112	10	472	202	168	182	297	12	686	323	339	17
LSK 1324 S	216	245	260	260	-	-	432	462	89	69	290	132	12	552	248	200	178	315	12	590	165	205	18
LSK 1324 M	216	245	260	260	-	-	482	512	89	69	290	132	12	552	248	200	178	315	12	640	215	255	18
LSK 1324 VL	216	245	260	260	-	-	582	612	89	69	290	132	12	552	248	200	178	315	12	740	315	355	18
LSK 1324 XVL	216	245	260	260	-	-	652	682	89	69	290	132	12	552	248	200	178	315	12	810	385	425	18
LSK 1604 S	254	300	316	318	-	-	425	469	103	222	361	160	15	678	313	250	217	353	14	750	271	293	20
LSK 1604 M	254	300	316	318	-	-	505	549	103	222	361	160	15	678	313	250	217	353	14	830	351	373	20
LSK 1604 L	254	300	316	318	-	-	565	609	103	222	361	160	15	678	313	250	217	353	14	890	411	433	20
LSK 1604 VL	254	300	316	318	-	-	665	709	103	222	361	160	15	678	313	250	217	353	14	990	511	533	20
LSK 1804 M	279	356	356	318	-	-	653	738	121	115	396	180	15	735	317	230	270	353	14	889	340	434	20
LSK 1804 L	279	356	356	318	-	-	698	783	121	115	396	180	15	735	317	230	270	353	14	934	385	481	20
LSK 1804 VL	279	356	358	356	-	-	883	968	121	95	405	180	15	760	317	230	270	415	14	1099	505	554	23
LSK 1804C M	279	356	356	318	-	-	653	738	121	115	396	180	15	735	317	230	270	353	14	889	340	434	20
LSK 1804C L	279	356	356	318	-	-	698	783	121	115	396	180	15	735	317	230	270	353	14	934	385	481	20
LSK 2004 M	318	396	396	-	197	298	737	830	133	130	471	200	18	921	335	230	270	410	18	1000	420	489	73
LSK 2004 L	318	396	396	-	197	298	802	895	133	130	471	200	18	921	335	230	270	410	18	1065	485	554	73
LSK 2254 M	356	445	445	-	207	341	793,5	888	149	147,5	491	225	21	993	360	262	320	427	18	1090	452	515	92
LSK 2254 L	356	445	445	-	207	341	863,5	958	149	147,5	491	225	21	993	360	262	320	427	18	1160	522	585	92
LSK 2254 VL	356	445	445	-	207	341	913,5	1008	149	147,5	491	225	21	993	360	262	320	427	18	1210	572	635	92
LSK 2504C M	406	494	494	-	240	360	1018	1216	168	174	624	250	22	1180	495	470	340	416	22	1360	400	776	90
LSK 2504C L	406	494	494	-	240	360	1078	1276	168	174	624	250	22	1180	495	470	340	416	22	1420	460	836	90
LSK 2804C SM	457	550	550	-	275	380	1106	1248	190	182	660	280	29	1300	530	470	340	485	22	1477	655	871	62
LSK 2804C M	457	550	550	-	275	380	1106	1315	190	249	660	280	29	1300	530	470	340	485	22	1544	655	836	62
LSK 2804C SL	457	550	550	-	275	380	1216	1358	190	182	660	280	29	1300	530	470	340	485	22	1587	765	981	62
LSK 2804C L	457	550	550	-	275	380	1216	1425	190	249	660	280	29	1300	530	470	340	485	22	1654	765	946	62
LSK 3554C VS	610	700	700	-	374	331	700	1536	254*	617	815	355	22,5	1521	680	434	520	621	27	1580*	336*	680*	72
LSK 3554C S	610	700	700	-	374	331	800	1636	254*	617	815	355	22,5	1521	680	434	520	621	27	1680*	436*	785*	72
LSK 3554C M	610	700	700	-	374	331	850	1686	254*	617	815	355	22,5	1521	680	434	520	621	27	1730*	486*	835*	72
LSK 3554C L	610	700	700	-	374	331	950	1786	254*	617	815	355	22,5	1521	680	434	520	621	27	1830*	586*	935*	72
LSK 3554C VL	610	700	700	-	374	331	1100	1936	254*	617	815	355	22,5	1521	680	434	520	621	27	1980*	736*	1085*	72

Type	Drive shafts													Filter		Standard flange**					
	D	DA	E	EA	F	FA	GA	GAA	O	OA	RA	Z	ZA	AJ	RB	LA	M	N j6	n ◊	S	T
LSK 1124	38 k6	38 k6	80	80	10	10	41	41	12	12	3	28	28	220	135	20	265	230	4	14	4
LSK 1324	48 k6	48 k6	110	110	14	14	51,5	51,5	16	16	3	36	36	260	135	22	300	250	4	18	5
LSK 1604	55 m6	55 m6	110	110	16	16	59	59	20	20	3	42	42	318	185	24	350	300	4	18	5
LSK 1804 M-L	60 m6	60 m6	140	140	18	18	64	64	20	20	6	42	42	318	185	20	350	300	4	18	5
LSK 1804 VL	60 m6	60 m6	140	140	18	18	64	64	20	20	6	42	42	356	200	20	350	300	4	18	5
LSK 1804C	60 m6	60 m6	140	140	18	18	64	64	20	20	6	42	42	318	185	20	350	300	4	18	5
LSK 2004	65 m6	65 m6	140	140	18	18	69	69	20	20	3	42	42	490	189	20	400	350	4	18	5
LSK 2254	80 m6	80 m6	170	170	22	22	85	85	20	20	1,5	36	36	500	230	31	400	350	8	18	5
LSK 2504C	100 m6	100 m6	170	170	28	28	106	106	24	24	1,5	50	50	460	356	35	400	350	8	18	5
LSK 2804C	110 m6	110 m6	170	170	28	28	116	116	24	24	1,5	50	50	620	180	46	500	450	8	26	6
LSK 3554C	125 m6	110 m6	210*	210	32	28	132	116	24	24	-	50	50	600	400	28	940	880	8	25	6

*: The dimensions at the front (D.E.) are given for the shaft shoulder.
**: other versions: see section G1 page 139.

◊: a = 45 degrees if n=4, a = 22 degrees 30 if n=8.