LSES
high efficiency
three-phase asynchronous motors

General information

Efficiency class IE2

Totally enclosed three-phase power-saving asynchronous motors, LSES series, according to IEC 60034, 60038, 60072 ; power 0.75 to 200 kW, frame size 80 to 315 mm.
Single speed: 2,4 and 6 poles; 230/400 V or 400 V Δ, 50 Hz.

The selection tables for motors in this catalogue allow for:
• Direct on line starting on the mains supplies 230 V or 400 V operating in:
- delta connection (Δ) at 230 V,
- star connection (Y) at 400 V.
• Star/ delta start (Y/Δ) on mains supply 400 V with:
- star connection (Y) during initial starting,
- delta connection (Δ) on 400 V duty.

Finish
Assembled with protected screws.
RAL 6000 finishing paint (green).
Protection of the flange and shaft end against atmospheric corrosion.

Mains supply
• Standard according to IEC 60038:
- 230/400 V +10% -10% at 50 Hz.
Voltages for the powers equal or greater than 3 kW:
- 400 V Δ +10% -10% at 50 Hz,
Construction suitable for Y/Δ starting.

Description of LSES aluminium three-phase motors

Component	Materials	Remarks
Housing with cooling fins	Aluminium alloy	- with integral or screw-on feet, or without feet - 4 or 6 fixing holes for housings with feet - lifting rings for frame size ≥ 100 - earth terminal with an optional jumper screw
Stator	Insulated low carbon magnetic steel laminations Electroplated copper	- low carbon content guarantees long-term lamination pack stability - semi-enclosed slots - class F insulation
Rotor	Insulated low carbon magnetic steel laminations Aluminium	- inclined cage bars - rotor cage pressure die cast in aluminium (or alloy for special applications) - shrink-fitted to shaft - rotor balanced dynamically, 1/2 key
Shaft	Steel	- for frame size ≤ 160 MP - LR: • shaft end hole • tapped closed keyway - for frame size ≥ 160 M - L : • tapped hole • open keyway
End shields	Aluminium alloy	- LS 80 - 90 non drive end
	Cast iron	- LS 80 - 90 drive end (exept for 6 pole, optional for LS 80 anf 90 at non drive end) - LS 100 to 315 drive end and non drive end
Bearings and lubrication		- ball bearings “greased for life” from frame size 80 to 225 inclusive - ball bearings regreasable from frame size 250 to 315 - bearings preloaded at non drive end
Labyrinth seals Lipseals	Plastic or steel Synthetic rubber	- lipseal or deflector at drive end for all flange mounted motors -lipseal, deflector or labyrinth seals for foot mounted motors
Fan	Composite material or aluminium alloy	- 2 directions of rotation: straight blades
Fan cover	Composite material or pressed steel	- on request, fitted with a drip cover for operation in vertical position, shaft end facing down
Terminal box	Composite material or aluminium alloy	- IP 55 - can be turned on, opposite side to feet - fitted with a terminal block with 6 steel terminals as standard (brass as an option) - terminal box fitted with threaded plugs, supplied without cable glands (cable glands as an option) - 1 earth terminal in each terminal box - fixation system cover with captive screws

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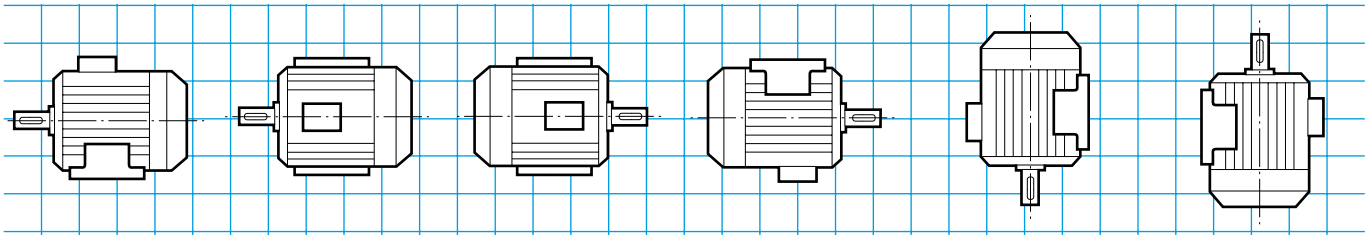
Mounting positions

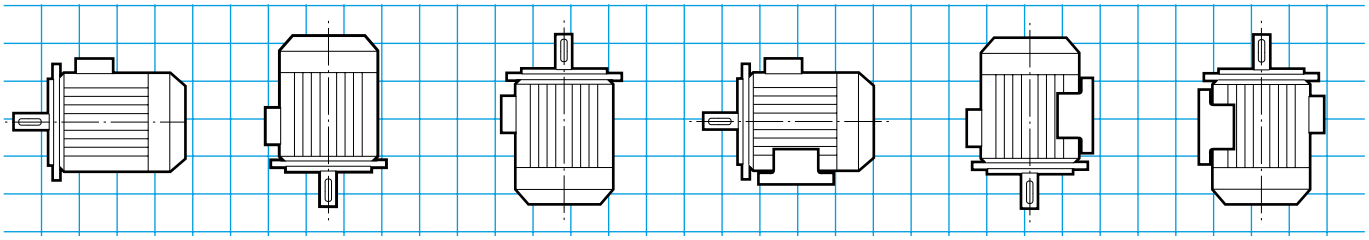
Foot mounted motors



IM 1001 (IM B3) | **IM 1051** (IM B6) | **IM 1061** (IM B7) | **IM 1071** (IM B8) | **IM 1011** (IM V5) | **IM 1031** (IM V6)

(FF) plain hole flange mounted motors

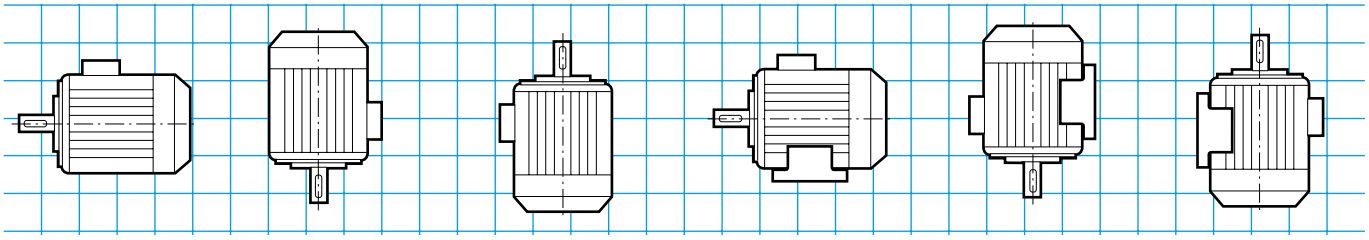
• Possible position IM 3001 (IM B5) up to 225 frame size inclusive



IM 3001 (IM B5) | **IM 3011** (IM V1) | **IM 3031** (IM V3) | **IM 2001** (IM B35) | **IM 2011** (IM V15) | **IM 2031** (IM V36)

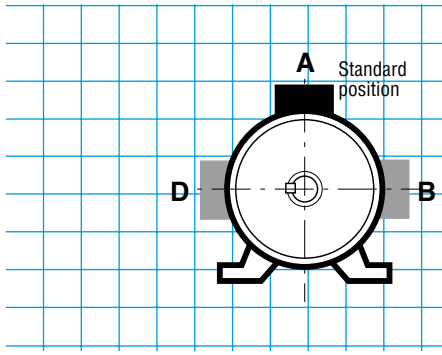
(FT) tapped hole flange mounted motors

• Possible positions up to 132 frame size inclusive



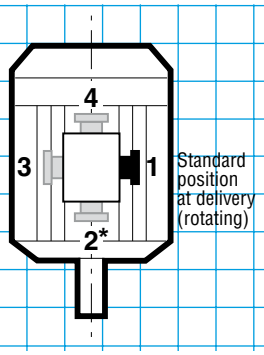
IM 3601 (IM B14) | **IM 3611** (IM V18) | **IM 3631** (IM V19) | **IM 2101** (IM B34) | **IM 2111** (IM V58) | **IM 2131** (IM V69)

Terminal box position in relation to the motor shaft end



A: standard

Cable gland position in relation to the motor shaft end



1: standard

* Position 2 not recommended and not feasible on plain hole flange standard motor (FF)

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Adaptation possibilities

Leroy-Somer offers, for use with the LSES totally enclosed three-phase asynchronous motors, many options which meet the needs of highly diverse applications. They are described below and in the chapters relating to gearboxes and to speed variation.
For other variants or any specific adaptation, consult the technical specialists at Leroy-Somer.

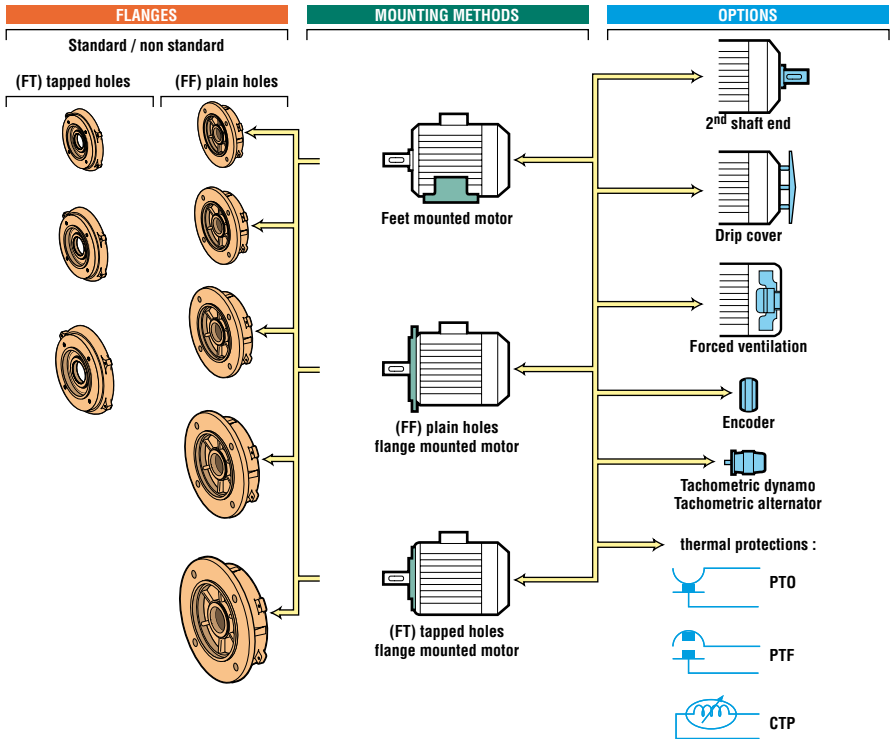
The LSES three-phase motors may be associated to:

- gearboxes
- electronic variable speed drive (1)

The options:

- drip cover
- anti-blocking cover
- forced ventilation
- thermal protections
- aluminium terminal box
- brass cable glands
- cable glands of different dimensions
- switch
- cable output
- stainless steel plate
- second shaft end
- non standard flanges
- reinforced sealing
- plug-in connector

(1) Conforming to the regulations for use indicated by the norm IEC 34-17.



Designation / Codification

4P 1500 min^{-1}	LSES	180	MT	18.5 kW	LS2 / IE2	IM 1001 (IM B3)	400 VΔ	50 Hz	IP 55
Speed polarity	Motor type	IEC 60072-1 frame size	Housing designation and builder index	Rated power	Efficiency class	IEC 60034-7 mounting position	Power supply voltage	Power supply frequency	IEC 60034-5 protection

Codification example:
LSES three-phase asynchronous motor, 1500 min^{-1}, 18.5 kW IM 1001 (IM B3), 400 V Δ

Designation	Code
4P LSES 180 MT 18.5 kW LS2/IE2 IM 1001 (IM B3) 400 V Δ	IE4 18 030

The table above is an example.
It enables the creation of the designation for the required product.
This designation corresponds to a product code.
The product codes that are present in the selection grids can be used directly.
They simplify the ordering process.
The codification table is incorporated in the price list with the designations list.

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Selection

IP 55 - 50 Hz - Class F - ΔT 80 K - 230 V Δ / 400 V Y and 400 V Δ - S1 - Class IE2

2 poles 3000 min^{-1}

IE2

Type	Rated power	Rated speed	Rated torque	Rated current	Power factor			Efficiency IEC 60034-2-1 2007			Starting current/ Rated current	Starting torque/ Rated torque	Maximum torque/ Rated torque	Moment of inertia	Weight	Noise
	P_N	N_N	M_N	$I_{N(400V)}$	Cos φ			η			Id / In	Md/Mn	M_M/Mn	J	IM B3	LP
	kW	min^{-1}	N.m	A	4/4	3/4	2/4	4/4	3/4	2/4				kg.m^2	kg	db(A)
LS 56 M*	*0.09*	*2860*	*0.3*	*0.44*	*0.55*	*0.45*	*0.40*	*54.0*	*45.2*	*37.1*	*5.0*	*5.3*	*5.4*	*0.00015*	*3.8*	*54*
LS 56 M*	*0.12*	*2820*	*0.4*	*0.5*	*0.60*	*0.55*	*0.45*	*58.7*	*54*	*45.2*	*4.6*	*4.0*	*4.1*	*0.00015*	*3.8*	*54*
LS 63 M*	*0.18*	*2790*	*0.6*	*0.5*	*0.75*	*0.65*	*0.55*	*67.4*	*66.9*	*59.3*	*5.0*	*3.3*	*2.9*	*0.00019*	*4.8*	*57*
LS 63 M*	*0.25*	*2800*	*0.9*	*0.7*	*0.75*	*0.65*	*0.55*	*67.8*	*67.3*	*59.2*	*5.4*	*3.2*	*2.9*	*0.00025*	*6*	*57*
LS 71 L*	*0.37*	*2800*	*1.3*	*1.0*	*0.80*	*0.70*	*0.60*	*68.4*	*67.6*	*63.9*	*5.2*	*3.3*	*3.9*	*0.00035*	*6.4*	*62*
LS 71 L*	*0.55*	*2800*	*1.9*	*1.3*	*0.80*	*0.70*	*0.55*	*75.7*	*75.2*	*71.1*	*6.0*	*3.2*	*3.1*	*0.00045*	*7.3*	*62*
LSES 80 L	0.75	2860	2.5	1.7	0.85	0.77	0.66	78.6	78.8	77.2	6.0	2.4	3.0	0.00073	9.5	61
LSES 80 L	1.1	2845	3.7	2.3	0.85	0.78	0.64	79.7	80.9	79.2	7.0	2.8	3.4	0.00095	10.7	61
LSES 90 S	1.5	2860	5.0	3.2	0.84	0.76	0.62	81.7	82.3	80.6	7.8	3.4	4.5	0.00149	12.9	64
LSES 90 L	2.2	2870	7.2	4.5	0.84	0.76	0.63	83.7	83.7	81.6	8.7	4.0	4.1	0.00197	16.1	64
LSES 100 L	3	2870	10.0	5.9	0.87	0.81	0.69	84.8	85.5	84.4	8.5	4.0	4.0	0.00267	22.2	66
LSES 112 MR	4	2864	13.4	7.9	0.85	0.79	0.66	86.2	86.9	86.0	8.6	4.2	3.7	0.00323	26.5	66
LSES 132 S	5.5	2923	17.9	10.0	0.90	0.86	0.76	88.1	88.9	88.4	8.3	2.5	3.5	0.00881	35	72
LSES 132 SU	7.5	2923	24.1	13.3	0.91	0.88	0.79	88.1	88.9	88.9	8.6	2.7	3.1	0.01096	41	72
LSES 160 MP	11	2927	35.9	21.2	0.84	0.77	0.66	89.6	90.1	89.4	8.3	3.6	4.6	0.01940	63	72
LSES 160 MR	15	2928	49.2	27.2	0.89	0.84	0.75	90.4	91.4	91.3	9.0	2.7	3.8	0.02560	75	72
LSES 160 L	18.5	2944	60.1	32.9	0.89	0.86	0.79	91.5	91.9	91.4	8.4	2.9	3.0	0.05000	101	72
LSES 180 MT	22	2938	71.9	38.9	0.89	0.87	0.80	91.8	92.3	91.9	8.4	2.7	3.2	0.06000	105	69
LSES 200 LR	30	2952	97.3	51.2	0.92	0.90	0.85	92.3	92.7	92.1	8.6	3.0	3.5	0.10000	155	77
LSES 200 L	37	2943	119	64.8	0.89	0.87	0.81	92.6	93.1	92.7	7.1	2.2	2.5	0.12000	182	73
LSES 225 MT	45	2953	145	79.5	0.88	0.85	0.78	93.1	93.4	92.8	7.9	3.0	3.4	0.14000	203	73
LSES 250 MZ	55	2950	179	95.7	0.89	0.86	0.80	93.5	93.8	93.4	7.9	3.0	3.3	0.17000	238	76
LSES 280 SC	75	2967	241	128	0.90	0.88	0.82	94.3	94.5	93.9	8.2	2.7	3.0	0.36000	340	81
LSES 280 MC	90	2969	287	153	0.90	0.88	0.82	94.6	94.8	94.3	8.4	2.8	3.4	0.43000	370	80
LSES 315 SN	110	2964	353	185	0.91	0.90	0.86	94.4	94.9	94.7	8.3	2.8	3.3	0.55000	447	80
LSES 315 MP	132	2976	425	223	0.89	0.88	0.83	94.9	94.7	93.7	7.6	2.8	3.0	1.67000	718	84
LSES 315 MR	160	2975	512	270	0.90	0.89	0.85	94.9	94.8	94.0	7.6	2.9	3.1	1.97000	823	83
LSES 315 MR	200	2982	641	348	0.88	0.83	0.75	95.3	94.8	93.4	8.7	3.8	3.9	2.05000	849	85

** Motors nonconcerned by IE2*

Non standards powers

Type	Rated power	Rated speed	Rated torque	Rated current	Power factor			Efficiency IEC 60034-2-1 2007			Starting current/ Rated current	Starting torque/ Rated torque	Maximum torque/ Rated torque	Moment of inertia	Weight	Noise
	P_N	N_N	M_N	$I_{N(400V)}$	Cos φ			η			Id / In	Md/Mn	M_M/Mn	J	IM B3	LP
	kW	min^{-1}	N.m	A	4/4	3/4	2/4	4/4	3/4	2/4				kg.m^2	kg	db(A)
LSES 71 LG	0.75	2825	2.5	1.7	0.83	0.76	0.64	77.7	77.7	74.8	6.4	3.4	3.4	0.000692	7.5	62
LSES 80 LG	1.5	2860	5.0	3.2	0.87	0.76	0.62	81.7	82.3	80.6	7.8	3.4	4.5	0.00150	13	64
LSES 90 L	1.8	2874	6	3.6	0.87	0.81	0.69	83.3	83.5	81.9	8.6	4.3	4.3	0.00169	14.5	64
LSES 100 L	3.7	2867	12	7.5	0.83	0.76	0.65	85.7	85.8	84.4	8.8	4.2	3.6	0.00291	24	66
LSES 112 MG	5.5	2922	17.9	8.3	0.91	0.87	0.79	87.4	88.2	87.6	8.3	2.5	3.5	0.00855	33	72
LSES 132 M	9	2925	29.2	17.7	0.82	0.75	0.63	89.5	89.8	89.2	8.0	3.5	3.6	0.0164	50	72
LSES 132 M	11	2927	35.9	21.2	0.84	0.77	0.66	89.6	90.1	89.4	8.3	3.6	4.6	0.0194	55	72
LSES 200 LR	40	2963	129	72.6	0.86	0.81	0.70	92.6	92.2	90.7	10.7	3.9	4.6	0.10	170	73
LSES 200 LU	55	2963	179	95.7	0.89	0.86	0.80	93.5	93.8	93.4	7.9	3.0	3.3	0.17	225	73
LSES 225 MR	55	2950	179	95.7	0.89	0.86	0.80	93.5	93.8	93.4	7.9	3.0	3.3	0.17	230	73
LSES 225 MG	90	2968	287	153	0.90	0.88	0.82	94.6	94.8	94.3	8.4	2.8	3.4	0.43	355	73
LSES 250 MF	105	2965	338	175	0.92	0.90	0.85	94.6	95.0	94.7	8.6	2.8	3.2	0.45	430	76
LSES 280 SU	160	2975	512	270	0.90	0.89	0.85	94.9	94.8	94.0	7.6	2.9	3.1	1.97	805	81

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Selection

IP 55 - 50 Hz - Class F - ΔT 80 K - 230 V Δ / 400 V Y and 400 V Δ - S1 - Class IE2

4 poles 1500 min^{-1}

IE2

Type	Rated power	Rated speed	Rated torque	Rated current	Power factor			Efficiency IEC 60034-2-1 2007			Starting current/ Rated current	Starting torque/ Rated torque	Maximum torque/ Rated torque	Moment of inertia	Weight	Noise
	P_N	N_N	M_N	$I_{N\,(400V)}$	Cos φ			η			*Id / In*	*Md/Mn*	M_M/Mn	*J*	IM B3	LP
	kW	min^{-1}	N.m	A	4/4	3/4	2/4	4/4	3/4	2/4				kg.m^2	kg	db(A)
LS 56 M*	*0.06*	*1380*	*0.4*	*0.29*	*0.76*	*0.69*	*0.62*	*41.8*	*37.1*	*29.7*	*2.8*	*2.4*	*2.5*	*0.00025*	*4*	*47*
LS 56 M*	*0.09*	*1400*	*0.6*	*0.39*	*0.60*	*0.52*	*0.42*	*55.2*	*49.6*	*42.8*	*3.2*	*2.8*	*2.8*	*0.00025*	*4*	*47*
LS 63 M*	*0.12*	*1380*	*0.8*	*0.44*	*0.70*	*0.58*	*0.47*	*56.1*	*53.9*	*46.8*	*3.2*	*2.4*	*2.3*	*0.00035*	*4.8*	*49*
LS 63 M*	*0.18*	*1390*	*1.2*	*0.64*	*0.65*	*0.55*	*0.44*	*61.6*	*58.0*	*51.3*	*3.7*	*2.6*	*2.6*	*0.00048*	*5*	*49*
LS 71 M*	*0.25*	*1425*	*1.7*	*0.80*	*0.65*	*0.55*	*0.44*	*69.4*	*66.8*	*59.8*	*4.6*	*2.7*	*2.9*	*0.00068*	*6.4*	*49*
LS 71 M*	*0.37*	*1420*	*2.5*	*1.06*	*0.70*	*0.59*	*0.47*	*72.1*	*71.7*	*66.4*	*4.9*	*2.4*	*2.8*	*0.00085*	*7.3*	*49*
LS 71 L*	*0.55*	*1400*	*3.8*	*1.62*	*0.70*	*0.62*	*0.49*	*70.4*	*70.0*	*65.1*	*4.8*	*2.3*	*2.5*	*0.0011*	*8.3*	*49*
LS 80 L*	*0.55*	*1410*	*3.7*	*1.42*	*0.76*	*0.68*	*0.55*	*73.2*	*69.1*	*62.1*	*4.5*	*2.0*	*2.3*	*0.0013*	*8.2*	*47*
LSES 80 LG	0.75	1445	5.0	1.7	0.77	0.69	0.55	80.1	80.8	79.0	5.6	1.8	2.6	0.00261	11.7	47
LSES 90 S	1.1	1435	7.5	2.4	0.82	0.75	0.62	81.5	83.3	83.0	5.4	1.9	2.5	0.00298	12.2	48
LSES 90 L	1.5	1445	9.9	3.2	0.80	0.71	0.55	83.0	83.9	82.4	5.5	1.9	2.4	0.00374	14.6	48
LSES 100 L	2.2	1440	14.6	4.6	0.82	0.74	0.63	84.7	85.9	86.1	6.3	2.3	2.2	0.00531	21.3	48
LSES 100 LR	3	1439	19.9	6.5	0.78	0.72	0.58	85.5	86.7	86.4	7.1	3.0	4.1	0.00665	25.7	48
LSES 112 MU	4	1455	26.3	8.4	0.79	0.71	0.57	87.0	87.9	87.5	7.2	2.5	3.2	0.0129	35	49
LSES 132 SU	5.5	1455	35.9	11.9	0.76	0.67	0.53	87.7	88.4	87.5	7.2	2.6	3.7	0.0157	42	49
LSES 132 M	7.5	1458	48.6	14.6	0.83	0.76	0.63	88.9	89.8	89.3	8.0	2.9	3.9	0.0252	57	62
LSES 160 MR	11	1459	72.2	21.2	0.83	0.78	0.66	90.1	90.9	90.5	8.2	3.3	4.0	0.035	77	62
LSES 160 L	15	1457	97.9	28.2	0.84	0.80	0.69	90.8	91.8	92.1	7.4	2.2	3.1	0.07	91	62
LSES 180 MT	18.5	1458	121	35.1	0.83	0.78	0.66	91.4	92.1	92.1	7.6	2.9	3.6	0.08	103	64
LSES 180 LR	22	1458	144	41.0	0.84	0.79	0.67	91.8	92.5	92.5	7.8	2.8	3.3	0.09	115	64
LSES 200 LR	30	1463	196	56.5	0.83	0.78	0.67	92.4	92.9	92.5	7.0	2.8	2.8	0.16	164	69
LSES 225 ST	37	1469	240	69.7	0.82	0.78	0.68	92.9	93.7	93.8	6.3	2.7	2.7	0.23	205	64
LSES 225 MR	45	1471	292	84.1	0.83	0.79	0.68	93.3	93.9	93.8	6.9	2.3	2.4	0.29	235	64
LSES 250 ME	55	1482	355	102	0.84	0.79	0.69	94.1	94.4	93.9	7.4	2.6	2.7	0.65	328	69
LSES 280 SC	75	1482	483	139	0.83	0.78	0.67	94.5	94.6	94.0	8.8	2.4	2.9	0.86	392	70
LSES 280 MD	90	1481	582	166	0.83	0.78	0.68	94.6	94.8	94.3	7.9	3.4	3.7	1.03	455	69
LSES 315 SP	110	1488	706	204	0.82	0.78	0.67	94.5	94.1	92.8	7.9	3.1	3.4	2.32	670	76
LSES 315 MP	132	1486	855	238	0.85	0.81	0.72	95.4	95.2	94.3	7.9	3.1	3.4	2.79	758	70
LSES 315 MR	160	1484	1027	288	0.84	0.80	0.72	95.2	95.2	94.5	7.5	2.8	2.9	3.25	850	77
LSES 315 MR[1]	200	1484	1295	361	0.84	0.79	0.68	95.7	95.8	95.2	7.6	2.8	3.0	3.25	850	77

** Motors nonconcerned by IE2 1. Temperature rise class F*

Non standards powers

Type	Rated power	Rated speed	Rated torque	Rated current	Power factor			Efficiency IEC 60034-2-1 2007			Starting current/ Rated current	Starting torque/ Rated torque	Maximum torque/ Rated torque	Moment of inertia	Weight	Noise
	P_N	N_N	M_N	$I_{N\,(400V)}$	Cos φ			η			*Id / In*	*Md/Mn*	M_M/Mn	*J*	IM B3	LP
	kW	min^{-1}	N.m	A	4/4	3/4	2/4	4/4	3/4	2/4				kg.m^2	kg	db(A)
LSES 80 LG	0.9	1437	6.0	2.1	0.83	0.74	0.60	80.0	81.7	80.0	5.5	1.9	2.5	0.00374	12.5	47
LSES 80 LG	1.1	1435	7.5	2.4	0.82	0.75	0.62	81.5	83.3	83.0	6.2	2.4	2.8	0.00374	12.7	47
LSES 90 LU	1.8	1442	12.4	3.8	0.81	0.72	0.57	83.9	84.4	82.8	6.6	2.6	2.3	0.0043	19	48
LSES 132 MU	9	1462	58.9	17.4	0.83	0.77	0.66	89.8	90.5	89.9	8.0	3.3	3.7	0.0293	68	62
LSES 160 LU	18.5	1458	121	35.1	0.83	0.78	0.66	91.4	92.1	92.1	7.6	2.9	3.6	0.08	98	62
LSES 180 LUR	30	1463	196	56.5	0.83	0.78	0.67	92.4	92.9	92.5	7.0	2.8	2.8	0.16	160	69
LSES 225 MG	70	1482	451	127	0.84	0.79	0.68	94.4	94.4	93.6	8.8	2.0	2.9	0.85	380	69
LSES 280 SU	145	1487	937	261	0.84	0.79	0.69	95.4	95.1	93.9	9.0	3.3	3.4	3.11	800	70

LSES
high efficiency
three-phase asynchronous motors

Selection

IP 55 - 50 Hz - Class F - ΔT 80 K - 230 V Δ / 400 V Y and 400 V Δ - S1 - Class IE2

6 poles 1000 min^{-1}

IE2

Type	Rated power	Rated speed	Rated torque	Rated current	Power factor			Efficiency IEC 60034-2-1 2007			Starting current/ Rated current	Starting torque/ Rated torque	Maximum torque/ Rated torque	Moment of inertia	Weight	Noise
	P_N	N_N	M_N	$I_{N(400V)}$	Cos φ			η			*Id / In*	*Md/Mn*	M_M/Mn	*J*	IM B3	LP
	kW	min^{-1}	N.m	A	4/4	3/4	2/4	4/4	3/4	2/4				kg.m^2	kg	db(A)
LS 56 M*	*0.045*	*860*	*0.5*	*0,29*	*0.66*	*0.59*	*0.52*	*34*	*31.5*	*25.3*	*2*	*1.7*	*1.7*	*0.00025*	*4*	*54*
LS 56 M*	*0.06*	*850*	*0.7*	*0.39*	*0.67*	*0.60*	*0.53*	*33.4*	*30.9*	*25*	*2*	*1.7*	*1.7*	*0.00025*	*4*	*54*
LS 63 M*	*0.09*	*860*	*1.0*	*0.46*	*0.80*	*0.70*	*0.63*	*35*	*32*	*26*	*2.1*	*1.6*	*1.6*	*0.0006*	*5.5*	*48*
LS 71 M*	*0.12*	*950*	*1.2*	*0.75*	*0.51*	*0.44*	*0.38*	*45.6*	*40.5*	*32*	*3*	*2.4*	*3.0*	*0.0007*	*6.5*	*52*
LS 71 M*	*0.18*	*945*	*1.8*	*0.95*	*0.52*	*0.46*	*0.38*	*52.8*	*48.8*	*40.7*	*3.3*	*2.3*	*2.9*	*0.0011*	*7.6*	*52*
LS 71 L*	*0.25*	*915*	*2.6*	*1.15*	*0.60*	*0.52*	*0.43*	*51.9*	*49.6*	*42.2*	*3.1*	*2.0*	*2.2*	*0.0013*	*7.9*	*52*
LS 80 L*	*0.25*	*955*	*2.5*	*0.85*	*0.67*	*0.64*	*0.48*	*62.8*	*62.7*	*56*	*3.9*	*1.6*	*1.8*	*0.0024*	*8.4*	*41*
LS 80 L*	*0.37*	*950*	*3.7*	*1.1*	*0.72*	*0.67*	*0.57*	*65.8*	*59.7*	*59*	*4.3*	*1.7*	*2.2*	*0.0032*	*9.7*	*41*
LS 80 L*	*0.55*	*950*	*5.5*	*1.8*	*0.64*	*0.60*	*0.47*	*68*	*63*	*55*	*4.9*	*2.1*	*2.6*	*0.0042*	*11*	*41*
LSES 90 S	0.75	953	7.6	2.1	0.68	0.59	0.46	76.6	77.1	74.4	4.1	1.6	2.1	0.00319	14	51
LSES 90 L	1.1	955	11.0	3.0	0.67	0.58	0.45	79.1	79.5	77.4	4.8	2.0	3.1	0.0044	16.6	51
LSES 100 L	1.5	957	14.9	4.0	0.66	0.58	0.45	80.5	81.1	79.0	4.7	2.0	2.2	0.00587	22.1	50
LSES 112 MG	2.2	957	20.9	5.0	0.73	0.65	0.51	82.2	83.3	82.0	5.3	1.6	2.4	0.011	28	51
LSES 132 S	3	962	29.1	7.0	0.72	0.64	0.50	83.8	84.5	83.1	6.2	2.2	3.1	0.0154	38	55
LSES 132 M	4	963	39.4	9.0	0.75	0.68	0.56	85.2	86.7	86.4	5.7	2.0	2.6	0.0249	48	55
LSES 132 MU	5.5	963	55.0	12.9	0.72	0.66	0.54	86.4	87.4	86.9	5.6	2.5	2.8	0.0364	63	55
LSES 160 M	7.5	970	73.3	15.5	0.80	0.76	0.65	87.2	88.3	88.3	5.0	1.4	2.1	0.09	82	56
LSES 160 LU	11	970	108	23.0	0.79	0.74	0.62	88.7	89.3	88.9	5.4	1.7	2.5	0.13	98	56
LSES 180 L	15	973	148	30.1	0.80	0.74	0.63	90.0	90.9	90.7	6.9	2.5	3.1	0.19	134	60
LSES 200 LR	18.5	973	182	36.6	0.81	0.76	0.66	90.5	91.5	91.6	6.9	2.4	2.8	0.25	165	63
LSES 200 L	22	975	215	43.6	0.80	0.75	0.65	91.3	92.0	91.9	6.8	2.3	2.9	0.3	187	62
LSES 225 MR	30	977	293	62.5	0.75	0.70	0.59	91.8	92.2	91.6	7.2	2.8	3.1	0.4	234	63
LSES 250 ME	37	983	358	67.8	0.85	0.81	0.72	92.7	93.1	92.6	6.0	2.0	2.3	0.72	286	65
LSES 280 SC	45	982	439	85.5	0.82	0.78	0.67	93.0	93.5	93.3	6.1	2.0	2.5	0.83	312	65
LSES 280 MC	55	982	536	103	0.82	0.78	0.67	93.4	93.7	93.1	6.5	2.4	2.8	1.03	354	65
LSES 315 SN	75	982	729	136	0.85	0.82	0.74	93.7	94.3	94.1	6.5	2.4	2.5	1.4	460	65
LSES 315 MP	90	986	872	168	0.82	0.79	0.71	94.1	94.5	94.2	6.0	1.8	2.4	2.93	642	69
LSES 315 MP	110	988	1062	209	0.80	0.76	0.66	94.6	94.8	94.1	6.5	2.4	2.6	3.54	718	74
LSES 315 MR	132	987	1278	248	0.81	0.77	0.67	94.7	95.0	94.7	6.6	2.5	2.5	4.2	840	68

** Motors nonconcerned by IE2*

Non standards powers

Type	Rated power	Rated speed	Rated torque	Rated current	Power factor			Efficiency IEC 60034-2-1 2007			Starting current/ Rated current	Starting torque/ Rated torque	Maximum torque/ Rated torque	Moment of inertia	Weight	Noise
	P_N	N_N	M_N	$I_{N(400V)}$	Cos φ			η			*Id / In*	*Md/Mn*	M_M/Mn	*J*	IM B3	LP
	kW	min^{-1}	N.m	A	4/4	3/4	2/4	4/4	3/4	2/4				kg.m^2	kg	db(A)
LSES 180 LUR	18.5	973	182	36.6	0.81	0.76	0.66	90.5	91.5	91.6	6.9	2.4	2.8	0.25	162	60
LSES 200 LU	27	978	263	55.0	0.77	0.76	0.60	91.6	91.6	90.7	6.7	2.6	2.8	0.39	220	63
LSES 225 MG	45	982	439	85.5	0.82	0.78	0.67	93.0	93.5	93.3	6.1	2.0	2.5	0.83	300	63
LSES 280 SK	100	988	966	195	0.79	0.73	0.60	94.5	94.4	93.5	6.6	2.4	2.8	3.27	650	65

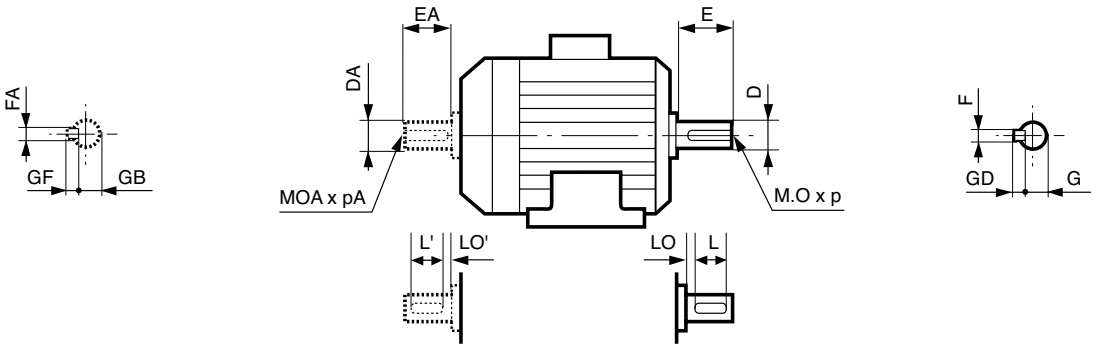
LSES
high efficiency
three-phase asynchronous motors

Dimensions

LSES totally enclosed three-phase asynchronous motors dimensions - IP 55
Cage rotor

Dimensions in millimetres

- shaft end



Type	Main shaft end																		
	4 and 6 poles									2 poles									
	F	GD	D	G	E	O	p	L	LO	F	GD	D	G	E	O	p	L	LO
LSES 80L/LG	6	6	19j6	15.5	40	6	16	30	6	6	6	19j6	15.5	40	6	16	30	6
LSES 90S/L	8	7	24j6	20	50	8	19	40	6	8	7	24j6	20	50	8	19	40	6
LSES 100L/LR	8	7	28j6	24	60	10	22	50	6	8	7	28j6	24	60	10	22	50	6
LSES 112MR/MG/MU	8	7	28j6	24	60	10	22	50	6	8	7	28j6	24	60	10	22	50	6
LSES 132S/SU/M/MU	10	8	38k6	33	80	12	28	63	10	10	8	38k6	33	80	12	28	63	10
LSES 160MP/MR/LR/M/L/LU	12	8	42k6	37	110	16	36	100	6	12	8	42k6	37	110	16	36	100	6
LSES 180MT/L/LR	14	9	48k6	42.5	110	16	36	98	12	14	9	48k6	42.5	110	16	36	98	12
LSES 200L/LR	16	10	55m6	49	110	20	42	97	13	16	10	55m6	49	110	20	42	97	13
LSES 225ST/MR/MT	18	11	60m6	53	140	20	42	126	14	16	10	55m6	49	110	20	42	97	13
LSES 250ME/MZ	18	11	65m6	58	140	20	42	126	14	18	11	60m6	53	140	20	42	126	14
LSES 280SC/MC/MD	20	12	75m6	67.5	140	20	42	125	15	18	11	65m6	58	140	20	42	125	14
LSES 315SN/SP/MP/MR	22	14	80m6	71	170	20	42	155	15	18	11	65m6	58	140	20	42	126	14

Type	Secondary shaft end																		
	4 and 6 poles									2 poles									
	FA	GF	DA	GB	EA	OA	pA	L'	LO'	FA	GF	DA	GB	EA	OA	pA	L'	LO'
LSES 80L/LG	5	5	14j6	11	30	5	15	25	3.5	5	5	14j6	11	30	5	15	25	3.5
LSES 90S/L	6	6	19j6	15.5	40	6	16	30	6	6	6	19j6	15.5	40	6	16	30	6
LSES 100L/LR	8	7	24j6	20	50	8	19	40	6	8	7	24j6	20	50	8	19	40	6
LSES 112MR/MG/MU	8	7	24j6	20	50	8	19	40	6	8	7	24j6	20	50	8	19	40	6
LSES 132S/SU/M/MU	8	7	28k6	24	60	10	22	50	6	8	7	28k6	24	60	10	22	50	6
LSES 160MP/MR/LR	12	8	38k6	37	80	16	36	100	6	12	8	38k6	37	80	16	36	100	6
LSES 160M/L/LU	12	8	42k6	37	110	16	36	100	6	12	8	42k6	37	110	16	36	100	6
LSES 180MT/L/LR	14	9	48k6	42.5	110	16	36	98	12	14	9	48k6	42.5	110	16	36	98	12
LSES 200L/LR	16	10	55m6	49	110	20	42	97	13	16	10	55m6	49	110	20	42	97	13
LSES 225ST/MR/MT	18	11	60m6	53	140	20	42	126	14	16	10	55m6	49	110	20	42	97	13
LSES 250ME/MZ	18	11	60m6	53	140	20	42	126	14	18	11	60m6	53	140	20	42	126	14
LSES 280SC/MC/MD	18	11	65m6	58	140	20	42	126	14	18	11	65m6	58	140	20	42	126	14
LSES 315SN	20	12	75m6	67.5	140	20	42	125	15	18	11	65m6	58	140	20	42	125	14
LSES 315SP/MP/MR	22	14	80m6	71	170	24	42	155	15	18	11	65m6	58	140	20	42	126	14

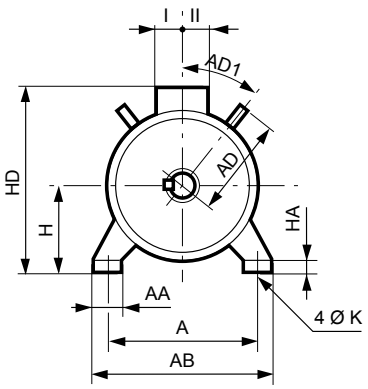
LSES
high efficiency
three-phase asynchronous motors

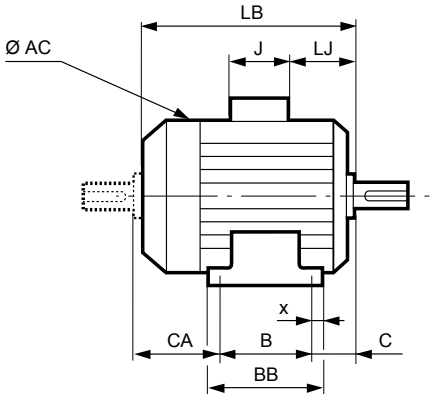
Dimensions

LSES totally enclosed three-phase asynchronous motors dimensions - IP 55
Cage rotor

Dimensions in millimetres

- foot mounted





Type	Mains dimensions																			
	A	AB	B	BB	C	X	AA	K	HA	H	AC*	HD	LB	LB1**	LJ	J	I	II	AD	AD1	CA
LSES 80 L	125	157	100	120	50	10	29	10	10	80	170	205	215	177	25.5	86	43	43	-	-	68
LSES 80 LG	125	157	100	125	50	14	31	10	10	80	185	215	247	204	25.5	86	43	43	-	-	99
LSES 90 S	140	172	100	120	56	10	37	10	11	90	190	225	217.5	177	25.5	86	43	43	-	-	66
LSES 90 L	140	172	125	162	56	28	39	10	11	90	190	225	244.5	204	25.5	86	43	43	-	-	68
LSES 100 L	160	196	140	165	63	12	40	12	13	100	200	240	290	250	26.5	86	43	43	118	45	93
LSES 100 LR	160	196	140	165	63	12	40	12	13	100	200	240	309	264	26.5	86	43	43	118	45	111
LSES 112 MR	190	220	140	165	69	13	45	12	14	112	200	252	309	264	26.5	86	43	43	118	45	104
LSES 112 MU	190	220	140	165	70	12	52	12	14	112	235	261	333	288	35.5	86	43	43	-	-	130
LSES 112 MG	190	220	140	165	70	12	52	12	14	112	235	261	315	265	35.5	86	43	43	-	-	110
LSES 132 S	216	250	140	170	89	16	42	12	16	132	220	304	350	306	32.5	126	63	63	130	45	128
LSES 132 SU	216	250	140	170	89	16	42	12	16	132	220	304	377	329	32.5	126	63	63	130	45	152
LSES 132 M	216	250	178	208	89	15	50	12	15	132	265	322	385	327	17	126	63	63	140	45	126
LSES 132 MU	216	250	178	208	89	15	50	12	15	132	265	322	412	351	17	126	63	63	140	45	148
LSES 160 MP	254	294	210	294	108	20	64	14.5	25	160	264	350	468	407	58.5	126	63	63	155	45	154
LSES 160 MR	254	294	210	294	108	20	64	14.5	25	160	264	350	495	440	58.5	126	63	63	155	45	138
LSES 160 M	254	294	254	294	108	20	60	14.5	25	160	312	395	495	435	42.75	135	88	64	-	-	182
LSES 160 L	254	294	254	294	108	20	60	14.5	25	160	312	395	495	435	42.75	135	88	64	-	-	138
LSES 160 LU	254	294	254	294	108	20	60	14.5	25	160	312	395	510	450	42.75	135	88	64	-	-	153
LSES 180 MT	279	324	241	316	121	20	79	14.5	28	180	312	428	495	435	54.75	186	112	98	-	-	138
LSES 180 LR	279	324	279	316	121	20	79	14.5	28	180	312	428	520	450	54.75	186	112	98	-	-	125
LSES 180 L	279	339	279	329	121	25	86	14.5	25	180	350	436	552	481	63.5	186	112	98	-	-	159
LSES 200 LR	318	378	305	365	133	30	108	18.5	30	200	350	456	620	539	69.5	186	112	98	-	-	194
LSES 200 L	318	388	305	375	133	35	103	18.5	36	200	390	476	621	539	77	186	112	98	-	-	194
LSES 200 LU	318	388	305	375	133	35	103	18.5	36	200	390	476	669	587	77	186	112	98	-	-	194
LSES 225 ST	356	431	286	386	149	50	127	18.5	36	225	390	535	627.5	545	61	231	119	142	-	-	203
LSES 225 MT	356	431	311	386	149	50	127	18.5	36	225	390	535	627.5	545	61	231	119	142	-	-	178
LSES 225 MR	356	431	311	386	149	50	127	18.5	36	225	390	535	675.5	593	61	231	119	142	-	-	228
LSES 225 MG	356	420	311	375	142	30	65	18.5	30	225	479	630	810	727.5	68	292	151	181	-	-	360
LSES 250 MZ	406	470	349	449	167.5	70	150	24	47	250	390	560	675.5	593	61	231	119	142	-	-	171
LSES 250 ME	406	470	349	420	168	35	90	24	36	250	479	656	810	716	67.5	292	151	181	-	-	303
LSES 250 MF	406	470	349	420	168	35	90	24	36	250	479	656	870	776	67.5	292	151	181	-	-	353
LSES 280 MC	457	520	419	478	190	35	90	24	35	280	479	686	810	716	67.5	292	151	181	-	-	211
LSES 280 SC	457	520	368	478	190	35	90	24	35	280	479	686	810	716	67.5	292	151	181	-	-	262
LSES 280 SK	457	533	368	495	190	40	85	24	35	280	586	746	921	827	99	292	151	181	-	-	312
LSES 280 SU	457	533	368	495	190	40	85	24	35	280	586	746	991	897	99	292	151	181	-	-	382
LSES 280 MD	457	520	419	478	190	35	90	24	35	280	479	686	870	870	67.5	292	151	181	-	-	271
LSES 315 SN	508	594	406	537	216	40	140	28	50	315	479	805	870	776	4.5	418	180	236	-	-	248
LSES 315 MP	508	594	457	537	216	40	114	28	70	315	586	865	947	845	61.5	418	180	236	-	-	290
LSES 315 MR	508	594	457	537	216	40	114	28	70	315	586	865	1017	947	61.5	418	180	236	-	-	360
LSES 315 SP	508	594	406	537	216	40	114	28	70	315	586	865	947	845	61.5	418	180	236	-	-	341

* AC : housing diameter without ring of lifting.
** LB1 : motor not ventilated.

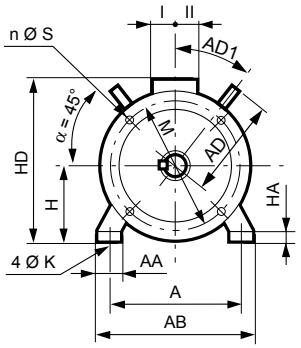
LSES
high efficiency
three-phase asynchronous motors

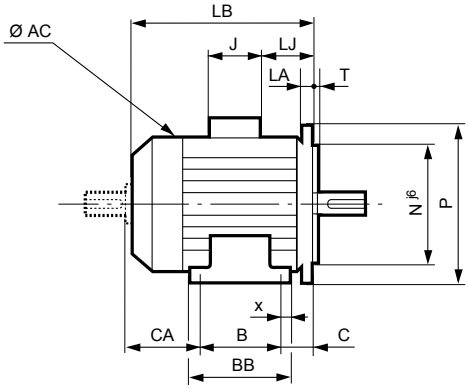
Dimensions

LSES totally enclosed three-phase asynchronous motors dimensions - IP 55
Cage rotor

Dimensions in millimetres

– (FF) foot and plain hole flange mounted





Type	Main dimensions																				
	A	AB	B	BB	C	X	AA	K	HA	H	AC*	HD	LB	LB1**	LJ	J	I	II	AD	AD1	CA	Symb
LSES 80 L	125	157	100	120	50	10	29	10	10	80	170	205	215	177	25.5	86	43	43	-	-	68	FF 165
LSES 80 LG	125	157	100	125	70	14	31	10	10	80	185	215	267	224	46	86	43	43	-	-	99	FF 165
LSES 90 S	140	172	100	120	76	10	37	10	11	90	190	225	237	196.5	46	86	43	43	-	-	66	FF 165
LSES 90 L	140	172	125	162	76	28	39	10	11	90	190	225	265	224.5	46	86	43	43	-	-	68	FF 165
LSES 100 L	160	196	140	165	63	12	40	12	13	100	200	240	290	250	26.5	86	43	43	118	45	93	FF 215
LSES 100 LR	160	196	140	165	63	12	40	12	13	100	200	240	309	264	26.5	86	43	43	118	45	111	FF 215
LSES 112 MR	190	220	140	165	69	13	45	12	14	112	200	252	309	264	26.5	86	43	43	118	45	104	FF 215
LSES 112 MU	190	220	140	165	70	12	52	12	14	112	235	261	333	288	35.5	86	43	43	-	-	130	FF 215
LSES 112 MG	190	220	140	165	70	12	52	12	14	112	235	261	315	265	35.5	86	43	43	-	-	110	FF 215
LSES 132 S	216	250	140	170	89	16	42	12	16	132	220	304	350	306	32.5	126	63	63	130	45	128	FF 265
LSES 132 SU	216	250	140	170	89	16	42	12	16	132	220	304	377	329	32.5	126	63	63	130	45	152	FF 265
LSES 132 M	216	250	178	208	89	15	50	12	15	132	265	322	385	327	17	126	63	63	140	45	126	FF 265
LSES 132 MU	216	250	178	208	89	15	50	12	15	132	265	322	412	351	17	126	63	63	140	45	148	FF 265
LSES 160 MP	254	294	210	294	108	20	64	14.5	25	160	264	350	468	407	58.5	126	63	63	155	45	154	FF 300
LSES 160 MR	254	294	210	294	108	20	64	14.5	25	160	264	350	495	440	58.5	126	63	63	155	45	138	FF 300
LSES 160 M	254	294	254	294	108	20	60	14.5	25	160	312	395	495	435	42.75	135	88	64	-	-	182	FF 300
LSES 160 L	254	294	254	294	108	20	60	14.5	25	160	312	395	495	435	42.75	135	88	64	-	-	138	FF 300
LSES 160 LU	254	294	254	294	108	20	60	14.5	25	160	312	395	510	450	42.75	135	88	64	-	-	153	FF 300
LSES 180 MT	279	324	241	316	121	20	79	14.5	28	180	312	428	495	435	54.75	186	112	98	-	-	138	FF 300
LSES 180 LR	279	324	279	316	121	20	79	14.5	28	180	312	428	520	450	54.75	186	112	98	-	-	125	FF 300
LSES 180 L	279	339	279	329	121	25	86	14.5	25	180	350	436	552	481	63.5	186	112	98	-	-	159	FF 300
LSES 200 LR	318	378	305	365	133	30	108	18.5	30	200	350	456	620	539	69.5	186	112	98	-	-	194	FF 350
LSES 200 L	318	388	305	375	133	35	103	18.5	36	200	390	476	621	539	77	186	112	98	-	-	194	FF 350
LSES 200 LU	318	388	305	375	133	35	103	18.5	36	200	390	476	669	587	77	186	112	98	-	-	194	FF 350
LSES 225 ST	356	431	286	386	149	50	127	18.5	36	225	390	535	627.5	545	61	231	119	142	-	-	203	FF 400
LSES 225 MT	356	431	311	386	149	50	127	18.5	36	225	390	535	627.5	545	61	231	119	142	-	-	178	FF 400
LSES 225 MR	356	431	311	386	149	50	127	18.5	36	225	390	535	675.5	593	61	231	119	142	-	-	228	FF 400
LSES 225 MG	356	420	311	375	142	30	65	18.5	30	225	479	630	810	727.5	68	292	151	181	-	-	360	FF 400
LSES 250 MZ	406	470	349	449	167.5	70	150	24	47	250	390	560	675.5	593	61	231	119	142	-	-	171	FF 500
LSES 250 ME	406	470	349	420	168	35	90	24	36	250	479	656	810	716	67.5	292	151	181	-	-	303	FF 500
LSES 250 MF	406	470	349	420	168	35	90	24	36	250	479	656	870	776	67.5	292	151	181	-	-	353	FF 500
LSES 280 MC	457	520	419	478	190	35	90	24	35	280	479	686	810	716	67.5	292	151	181	-	-	211	FF 500
LSES 280 SC	457	520	368	478	190	35	90	24	35	280	479	686	810	716	67.5	292	151	181	-	-	262	FF 500
LSES 280 SK	457	533	368	495	190	40	85	24	35	280	586	746	921	827	99	292	151	181	-	-	312	FF 500
LSES 280 SU	457	533	368	495	190	40	85	24	35	280	586	746	991	897	99	292	151	181	-	-	382	FF 500
LSES 280 MD	457	520	419	478	190	35	90	24	35	280	479	686	870	870	67.5	292	151	181	-	-	271	FF 500
LSES 315 SN	508	594	406	537	216	40	140	28	50	315	479	805	870	776	4.5	418	180	236	-	-	248	FF 600
LSES 315 MP	508	594	457	537	216	40	114	28	70	315	586	865	947	845	61.5	418	180	236	-	-	290	FF 600
LSES 315 MR	508	594	457	537	216	40	114	28	70	315	586	865	1017	947	61.5	418	180	236	-	-	360	FF 600
LSES 315 SP	508	594	406	537	216	40	114	28	70	315	586	865	947	845	61.5	418	180	236	-	-	341	FF 600

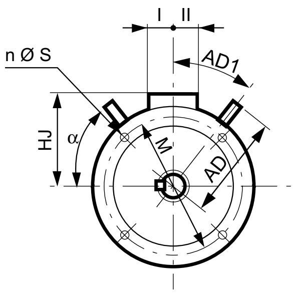
* AC : housing diameter without ring of lifting.
** LB1 : motor not ventilated.

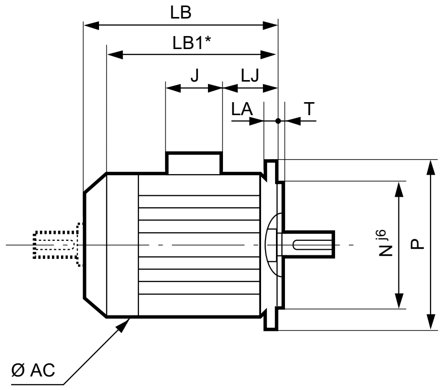
Dimensions

LSES totally enclosed three-phase asynchronous motors dimensions - IP 55
Cage rotor

Dimensions in millimetres

– (FF) plain hole flange mounted





IEC symbol	Flange dimensions							
	M	N	P	T	n	α°	S	LA
FF 165	165	130	200	3.5	4	45	12	10
FF 165	165	130	200	3.5	4	45	12	10
FF 165	165	130	200	3.5	4	45	12	10
FF 165	165	130	200	3.5	4	45	12	10
FF 215	215	180	250	4	4	45	14.5	12
FF 215	215	180	250	4	4	45	14.5	12
FF 215	215	180	250	4	4	45	14.5	11
FF 215	215	180	250	4	4	45	14.5	11
FF 215	215	180	250	4	4	45	14.5	11
FF 265	265	230	300	4	4	45	14.5	12
FF 265	265	230	300	4	4	45	14.5	12
FF 265	265	230	300	4	4	45	14.5	12
FF 265	265	230	300	4	4	45	14.5	12
FF 300	300	250	350	5	4	45	18.5	14
FF 300	300	250	350	5	4	45	18.5	14
FF 300	300	250	350	5	4	45	18.5	14
FF 300	300	250	350	5	4	45	18.5	14
FF 300	300	250	350	5	4	45	18.5	14
FF 300	300	250	350	5	4	45	18.5	14
FF 300	300	250	350	5	4	45	18.5	14
FF 300	300	250	350	5	4	45	18.5	14
FF 350	350	300	400	5	4	45	18.5	15
FF 350	350	300	400	5	4	45	18.5	15
FF 350	350	300	400	5	4	45	18.5	15
FF 400	400	350	450	5	8	22.5	18.5	16
FF 400	400	350	450	5	8	22.5	18.5	16
FF 400	400	350	450	5	8	22.5	18.5	16
FF 400	400	350	450	5	8	22.5	18.5	16
FF 500	500	450	550	5	8	22.5	18.5	18
FF 500	500	450	550	5	8	22.5	18.5	18
FF 500	500	450	550	5	8	22.5	18.5	18
FF 500	500	450	550	5	8	22.5	18.5	18
FF 500	500	450	550	5	8	22.5	18.5	18
FF 500	500	450	550	5	8	22.5	18.5	18
FF 500	500	450	550	5	8	22.5	18.5	18
FF 500	500	450	550	5	8	22.5	18.5	18
FF 600	600	550	660	6	8	22.5	24	22
FF 600	600	550	660	6	8	22.5	24	22
FF 600	600	550	660	6	8	22.5	24	22
FF 600	600	550	660	6	8	22.5	24	22

Type	Main dimensions									
	AC*	LB	LB1**	HJ	LJ	J	I	II	AD	AD1
LSES 80 L	170	215	177	125	25.5	86	43	43	-	-
LSES 80 LG	185	267	224	135	46	86	43	43	-	-
LSES 90 S	190	237	196.5	135	46	86	43	43	-	-
LSES 90 L	190	265	224.5	135	46	86	43	43	-	-
LSES 100 L	200	290	250	140	26.5	86	43	43	118	45
LSES 100 LR	200	309	264	140	26.5	86	43	43	118	45
LSES 112 MR	200	309	264	140	26.5	86	43	43	118	45
LSES 112 MU	235	333	288	149	35.5	86	43	43	-	-
LSES 112 MG	235	315	265	149	35.5	86	43	43	-	-
LSES 132 S	220	350	306	172	32.5	126	63	63	130	45
LSES 132 SU	220	377	329	172	32.5	126	63	63	130	45
LSES 132 M	265	385	327	190	17	126	63	63	140	45
LSES 132 MU	265	412	351	190	17	126	63	63	140	45
LSES 160 MP	264	468	407	190	58.5	126	63	63	155	45
LSES 160 MR	264	495	440	190	58.5	126	63	63	155	45
LSES 160 M	312	495	435	235	42.75	135	88	64	-	-
LSES 160 L	312	495	435	235	42.75	135	88	64	-	-
LSES 160 LU	312	510	450	235	42.75	135	88	64	-	-
LSES 180 MT	312	495	435	248	54.75	186	112	98	-	-
LSES 180 LR	312	520	450	248	54.75	186	112	98	-	-
LSES 180 L	350	552	481	256	63.5	186	112	98	-	-
LSES 200 LR	350	620	539	256	69.5	186	112	98	-	-
LSES 200 L	390	621	539	276	77	186	112	98	-	-
LSES 200 LU	390	669	587	276	77	186	112	98	-	-
LSES 225 ST	390	627.5	545	310	61	231	119	142	-	-
LSES 225 MT	390	627.5	545	310	61	231	119	142	-	-
LSES 225 MR	390	675.5	593	310	61	231	119	142	-	-
LSES 225 MG	479	810	727.5	405	68	292	151	181	-	-
LSES 250 MZ	390	675.5	593	310	61	231	119	142	-	-
LSES 250 ME	479	810	716	406	67.5	292	151	181	-	-
LSES 250 MF	479	870	776	406	67.5	292	151	181	-	-
LSES 280 MC	479	810	716	406	67.5	292	151	181	-	-
LSES 280 SC	479	810	716	406	67.5	292	151	181	-	-
LSES 280 SK	586	921	827	466	99	292	151	181	-	-
LSES 280 SU	586	991	897	466	99	292	151	181	-	-
LSES 280 MD	479	870	870	406	67.5	292	151	181	-	-
LSES 315 SN	479	870	776	490	4.5	418	180	236	-	-
LSES 315 MP	586	947	845	550	61.5	418	180	236	-	-
LSES 315 MR	586	1017	947	550	61.5	418	180	236	-	-
LSES 315 SP	586	947	845	550	61.5	418	180	236	-	-

* AC : housing diameter without ring of lifting
** LB1 : motor not ventilated
For IM 3001 use, for frame size ≥ 250mm, consult us.
Shaft end dimensions identical to those of the foot mounted motors.

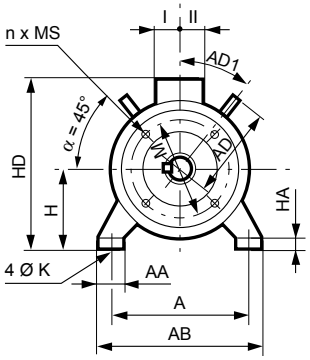
LSES
high efficiency
three-phase asynchronous motors

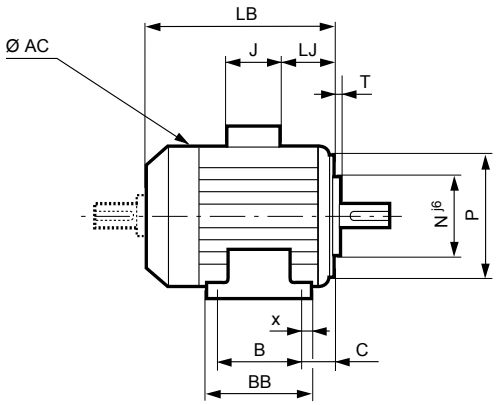
Dimensions

LSES totally enclosed three-phase asynchronous motors dimensions - IP 55
Cage rotor

Dimensions in millimetres

– (FT) foot and tapped hole flange mounted motor





Type	Main dimensions																				
	A	AB	B	BB	C	X	AA	K	HA	H	AC*	HD	LB	LB1**	LJ	J	I	II	AD	AD1	CA	Symb
LSES 80 L	125	157	100	120	50	10	29	10	10	80	170	205	215	177	25.5	86	43	43	-	-	68	FT 100
LSES 80 LG	125	157	100	125	50	14	31	10	10	80	185	215	247	204	25.5	86	43	43	-	-	99	FT 100
LSES 90 S	140	172	100	120	56	10	37	10	11	90	190	225	217.5	177	25.5	86	43	43	-	-	66	FT 115
LSES 90 L	140	172	125	162	56	28	39	10	11	90	190	225	244.5	204	25.5	86	43	43	-	-	68	FT 115
LSES 100 L	160	196	140	165	63	12	40	12	13	100	200	240	290	250	26.5	86	43	43	118	45	93	FT 130
LSES 100 LR	160	196	140	165	63	12	40	12	13	100	200	240	309	264	26.5	86	43	43	118	45	111	FT 130
LSES 112 MR	190	220	140	165	69	13	45	12	14	112	200	252	309	264	26.5	86	43	43	118	45	104	FT 130
LSES 112 MU	190	220	140	165	70	12	52	12	14	112	235	261	333	288	35.5	86	43	43	-	-	130	FT 130
LSES 112 MG	190	220	140	165	70	12	52	12	14	112	235	261	315	265	35.5	86	43	43	-	-	110	FT 130
LSES 132 S	216	250	140	170	89	16	42	12	16	132	220	304	350	306	32.5	126	63	63	130	45	128	FT 215
LSES 132 SU	216	250	140	170	89	16	42	12	16	132	220	304	377	329	32.5	126	63	63	130	45	152	FT 215
LSES 132 M	216	250	178	208	89	15	50	12	15	132	265	322	385	327	17	126	63	63	140	45	126	FT 215
LSES 132 MU	216	250	178	208	89	15	50	12	15	132	265	322	412	351	17	126	63	63	140	45	148	FT 215
LSES 160 MP	254	294	210	294	108	20	64	14.5	25	160	264	350	468	407	58.5	126	63	63	155	45	154	FT 215
LSES 160 MR	254	294	210	294	108	20	64	14.5	25	160	264	350	495	440	58.5	126	63	63	155	45	138	FT 215

* AC : housing diameter without ring of lifting
** LB1 : motor not ventilated

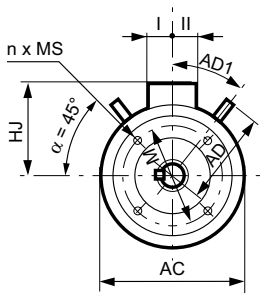
LSES
high efficiency
three-phase asynchronous motors

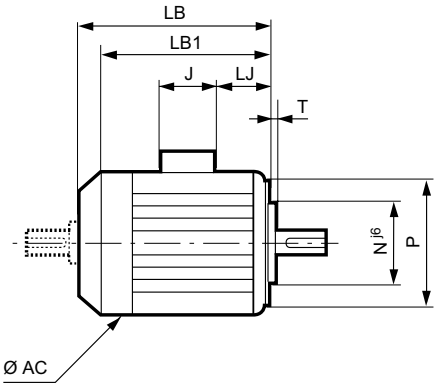
Dimensions

LSES totally enclosed three-phase asynchronous motors dimensions - IP 55
Cage rotor

Dimensions in millimetres

– (FT) tapped hole flange mounted





IEC symbol	Flange dimensions					
	M	N	P	T	n	MS
FT 100	100	80	120	3	4	M6
FT 100	100	80	120	3	4	M6
FT 115	115	95	140	3	4	M8
FT 115	115	95	140	3	4	M8
FT 130	130	110	160	3.5	4	M8
FT 130	130	110	160	3.5	4	M8
FT 130	130	110	160	3.5	4	M8
FT 130	130	110	160	3.5	4	M8
FT 130	130	110	160	3.5	4	M8
FT 215	215	180	250	4	4	M12
FT 215	215	180	250	4	4	M12
FT 215	215	180	250	4	4	M12
FT 215	215	180	250	4	4	M12
FT 215	215	180	250	4	4	M12
FT 215	215	180	250	4	4	M12

Type	Main dimensions									
	AC*	LB	LB1**	HJ	LJ	J	I	II	AD	AD1
LSES 80 L	170	215	177	125	25.5	86	43	43	-	-
LSES 80 LG	185	247	204	135	25.5	86	43	43	-	-
LSES 90 S	190	217.5	177	135	25.5	86	43	43	-	-
LSES 90 L	190	244.5	204	135	25.5	86	43	43	-	-
LSES 100 L	200	290	250	140	26.5	86	43	43	118	45
LSES 100 LR	200	309	264	140	26.5	86	43	43	118	45
LSES 112 MR	200	309	264	140	26.5	86	43	43	118	45
LSES 112 MG	235	333	288	149	35.5	86	43	43	-	-
LSES 112 MU	235	315	265	149	35.5	86	43	43	-	-
LSES 132 S	220	350	306	172	32.5	126	63	63	130	45
LSES 132 SU	220	377	329	172	32.5	126	63	63	130	45
LSES 132 M	265	385	327	190	17	126	63	63	140	45
LSES 132 MU	265	412	351	190	17	126	63	63	140	45
LSES 160 MP	264	468	407	190	58.5	126	63	63	155	45
LSES 160 MR/LR	264	495	440	190	58.5	126	63	63	155	45

* AC : housing diameter without ring of lifting
** LB1 : motor not ventilated