

# FLSE

## Atmospheres containing explosive GAS



### totally enclosed three-phase asynchronous motors

**CATEGORY 2  
ZONE 1**

### General information



**Increased safety totally enclosed three-phase asynchronous motors**, FLSE series, according to IEC 60034, 60072, EN 50014 and 50019.

- Single speed : power 0.75 to 7.5 kW<sup>1</sup>, frame size from 80 to 132 mm, 2, 4, 6, 8 poles ; 230/400 V or 400 V Δ, 50 Hz.
- Two speed : on request.

**IP 55 protection**  
(or IP 65 if GD application).

- Motors for variable speed operation :**
- fitted with thermal probes in winding (obligatory) ;
  - on consultation (for selection).

**Finish : cast iron casing**

Assembled with protected screws.  
Finishing paint **RAL 2004 (orange)**.  
Protection of the flange and shaft end against atmospheric corrosion.  
Individual anti-shock packaging.  
- Motors in accordance with the VIK recommendations (option).

**Mains supply**

- Standard construction according to IEC 60038 :
- 230/400 V +10% -10% at 50 Hz ;
- 400 V Δ +10% -10% at 50 Hz.

1. Other powers : consult us.  
2. Other protections : consult us.

Motors in accordance with the European Directive 94/9/CE.

### Description of the FLSE three-phase motors



**II 2G EEx e II T3 (T125)<sup>2</sup>**

Component	Materials	Remarks
Finned housing	Cast iron	- with bolt-on or cast foot, or without foot <ul style="list-style-type: none"> <li>• 4 or 6 mounting holes for the foot housings</li> <li>• lifting rings</li> </ul> - earth terminal (by pinched wires)
Stator	Insulated low carbon magnetic steel laminations Enameled electrolytic copper	- the low carbon content guarantees long term stability of the characteristics - assembled lamination pack - semi-enclosed slots - insulation system class F
Rotor	Insulated low carbon magnetic steel laminations Aluminium	- inclined slots - squirrel cage pressure die cast in aluminium (or alloy for special applications) - keyed or mounted on the shaft by heat shrinking - dynamically balanced rotor class N - 1/2 key
Shaft	Steel	- for frame size < 132 : <ul style="list-style-type: none"> <li>• shaft end fitted with screw and washer</li> <li>• closed keyway</li> </ul> - for frame size 132 : <ul style="list-style-type: none"> <li>• tapped centre hole</li> <li>• open key</li> </ul>
End shields	Cast iron	- all frame sizes
Bearings and lubrication		- ball bearings set C3 - rear preloaded bearings
Labyrinth seals Lipseals	Technopolymer or steel Synthetic rubber	- lipseals sealing - front or rear jet deflector or labyrinth seals
Fan	Composite material or aluminium alloy	- 2 directions of rotation : straight blades
Fan cover	Sheet steel	- on request, fitted with a drip cover for operation in vertical position, shaft facing down
Terminal box	Cast iron	- <b>IP 55 or IP 65 for «GD» application</b> - rotatable, the opposite position to the foot - fitted with a <b>6 stud safety certified terminal board EEx e</b> - supplied fitted with <b>EEx e safety certified fitted cable glands (type CMDEL)</b> - 1 earth terminal in all terminal boxes

# FLSE

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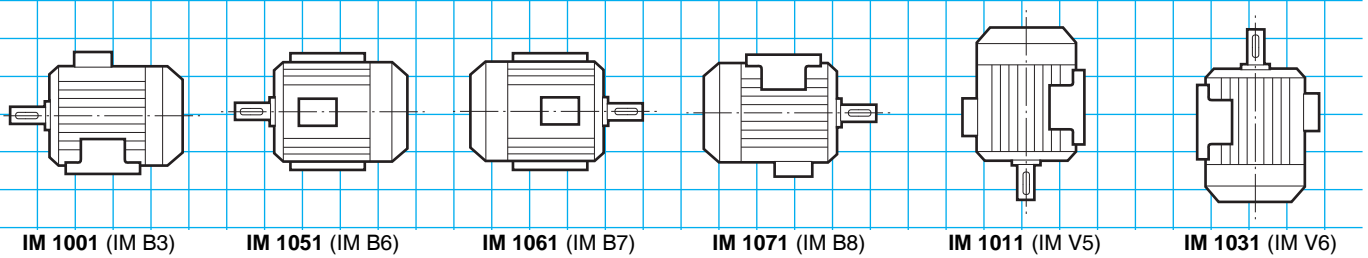


## totally enclosed three-phase asynchronous motors

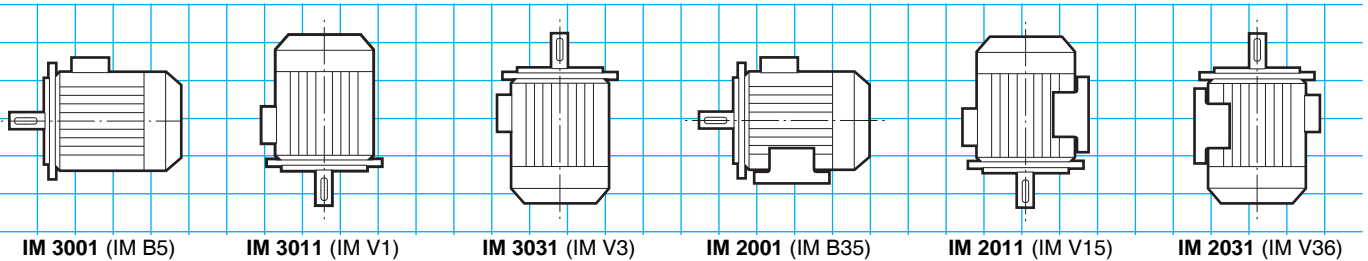
**CATEGORY 2  
ZONE 1**

### Mounting positions

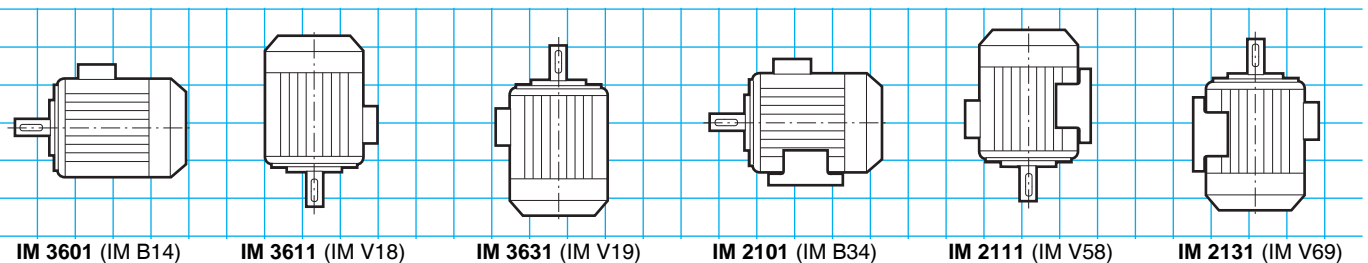
#### Foot mounted motors



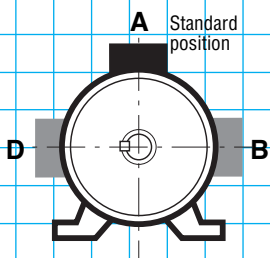
#### (FF) plain hole flange mounted motors



#### (FT) tapped hole flange mounted motors

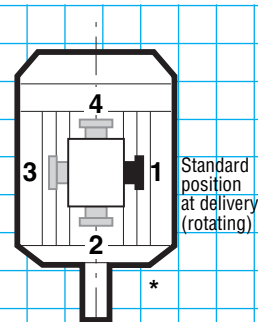


#### Terminal box position in relation to the motor shaft end



A : standard

#### Cable gland position in relation to the motor shaft end



1 : standard

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

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## Adaptation possibilities

Leroy-Somer offers, for use with the FLSE 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 special adaptation, consult the technical specialists at Leroy-Somer.



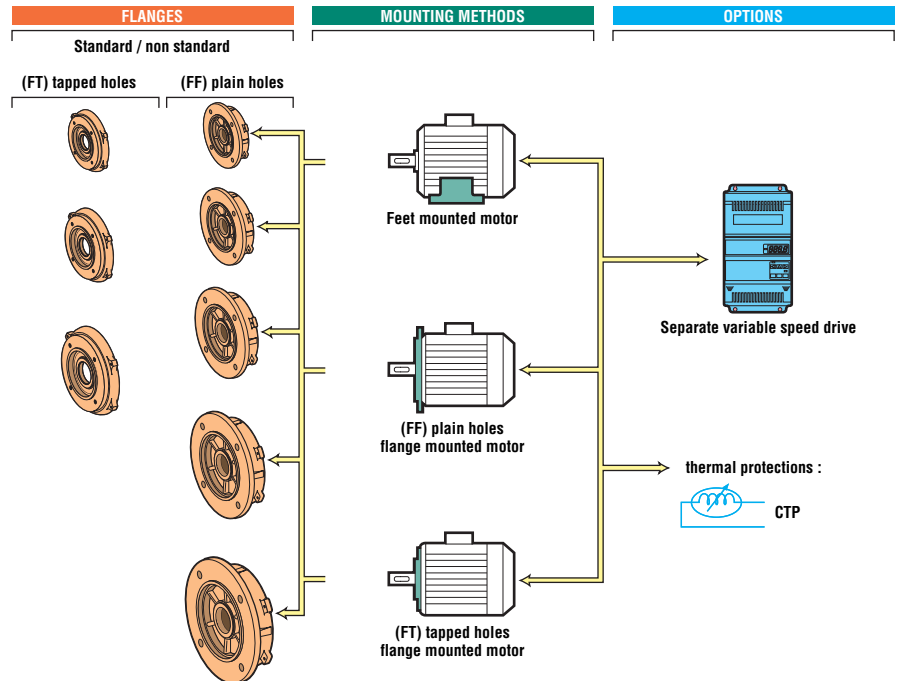
*The FLSE three-phase motors may be associated to :*

- gearboxes
- electronic variable speed drives (1)

*The options (2) :*

- thermal protections
- non standard flanges

(1) Conforming to the regulations of use as indicated by the standard IEC 34-17.  
(2) others options : consult us.



## Designation / Codification

ATEX II 2G T1... T4	4P 1500 min <sup>-1</sup>	FLSE	132	M	7.5 kW	IM 1001 (IM B3)	400 V	50 Hz	IP 55
Specific application	Speed polarity	Motor type	IEC 60072-1 frame size	Housing designation and builder index	Rated power	IEC 60034-7 mounting position	Power supply voltage	Power supply frequency	IEC 60034-5 protection

*Codification example :*

FLSE three-phase asynchronous motor, 1500 min<sup>-1</sup>, 7.5 kW IM 1001 (IM B3), 400 V

**Designation**

4P FLSE 132 M 7.5 kW  
IM 1001 (IM B3) 400 V

**Code**

-

The table above is an example.

It allows 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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### totally enclosed three-phase asynchronous motors

## Selection

**CATEGORY 2  
ZONE 1**

IP 55 - 50 Hz - Class F -  $\Delta T$  80 K - 400 V - S1

II - 2G - EEx e II T3

**2  
poles  
3000 min<sup>-1</sup>**

Type	Rated power at 50 Hz	Rated speed	Rated moment	Rated current	Power factor	Efficiency	Starting torque / Rated torque	Weight
	$P_N$ kW	$N_N$ min <sup>-1</sup>	$M_N$ N.m	$I_N(400V)$ A	$\cos \varphi$ 100 %	$\eta$ 100 %	$I_D / I_N$	IM B3 kg
FLSE 80 L	0.75	2872	2.5	1.6	0.84	79.4	7.1	15
FLSE 80 L	1.1	2870	3.75	2.3	0.86	78.5	7.5	18
FLSE 90 S	1.5	2860	5	2.9	0.88	83.6	7.5	23.5
FLSE 90 L	2.2	2884	7.5	4.2	0.87	85.7	6.7	27.7
FLSE 100 LK	3	2900	10.1	5.5	0.91	86.2	6.1	42
FLSE 112 MU	4	2928	13.5	7.1	0.92	88.6	7.5	54
FLSE 132 SM	5.5	2926	18.6	9.7	0.91	89.8	6.5	71
FLSE 132 SM	7.5	2929	25.4	13.1	0.92	90.4	6.9	75

IP 55 - 50 Hz - Class F -  $\Delta T$  80 K - 400 V - S1

II - 2G - EEx e II T3

**4  
poles  
1500 min<sup>-1</sup>**

Type	Rated power at 50 Hz	Rated speed	Rated moment	Rated current	Power factor	Efficiency	Starting torque / Rated torque	Weight
	$P_N$ kW	$N_N$ min <sup>-1</sup>	$M_N$ N.m	$I_N(400V)$ A	$\cos \varphi$ 100 %	$\eta$ 100 %	$I_D / I_N$	IM B3 kg
FLSE 80 L	0.75	1430	5	2	0.72	74	5.6	17
FLSE 90 S	1.1	1443	7.5	2.4	0.83	81.5	5.2	21
FLSE 90 L	1.5	1450	10	3.7	0.75	78	6.4	23
FLSE 100 LK	2.2	1460	15	4.4	0.84	85.2	5.7	41
FLSE 100 LK	3	1457	20	5.9	0.85	86	5.7	43.6
FLSE 112 MU	4	1458	27.2	7.7	0.86	86.9	6.7	51.5
FLSE 132 SM	5.5	1464	37.4	10.3	0.87	88.4	6.5	65
FLSE 132 M	7.5	1457	50	14.8	0.85	86	8.4	70

IP 55 - 50 Hz - Class F -  $\Delta T$  80 K - 400 V - S1

II - 2G - EEx e II T3

**6  
poles  
1000 min<sup>-1</sup>**

Type	Rated power at 50 Hz	Rated speed	Rated moment	Rated current	Power factor	Efficiency	Starting torque / Rated torque	Weight
	$P_N$ kW	$N_N$ min <sup>-1</sup>	$M_N$ N.m	$I_N(400V)$ A	$\cos \varphi$ 100 %	$\eta$ 100 %	$I_D / I_N$	IM B3 kg
FLSE 80 L	0.37	948	3.7	1.2	0.68	65.3	3.7	15
FLSE 80 L	0.55	955	5.5	1.8	0.64	68.6	4.5	16
FLSE 90 S	0.75	935	7.5	2.2	0.67	75.0	4.6	19
FLSE 90 L	1.1	918	11	3	0.72	75.2	4.1	21
FLSE 100 LK	1.5	947	15	3.8	0.71	80.4	4.8	41
FLSE 112 M	2.2	938	22	5.4	0.74	80.1	4.3	45
FLSE 132 SM	3	963	30	7	0.74	84.6	4.3	72
FLSE 132 M	4	966	40	9.1	0.74	85.9	4.6	76
FLSE 132 MU	5.5	963	55	12.3	0.75	86.4	4.7	88

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ZONE 1**

IP 55 - 50 Hz - Class F -  $\Delta T$  80 K - 400 V - S1

II - 2G - EEx e II T3

**2  
poles  
3000 min<sup>-1</sup>**

Type	Rated power at 50 Hz	IM 1001 (IM B3)		IM 3001 (IM B5)	
	$P_N$ kW	Code	Qty	Code	Qty
FLSE 80 L	0.75		-		-
FLSE 80 L	1.1		-		-
FLSE 90 S	1.5		-		-
FLSE 90 L	2.2		-		-
FLSE 100 LK	3		-		-
FLSE 112 MU	4		-		-
FLSE 132 SM	5.5		-		-
FLSE 132 SM	7.5		-		-

IP 55 - 50 Hz - Class F -  $\Delta T$  80 K - 400 V - S1

II - 2G - EEx e II T3

**4  
poles  
1500 min<sup>-1</sup>**

Type	Rated power at 50 Hz	IM 1001 (IM B3)		IM 3001 (IM B5)	
	$P_N$ kW	Code	Qty	Code	Qty
FLSE 80 L	0.75		-		-
FLSE 90 S	1.1		-		-
FLSE 90 L	1.5		-		-
FLSE 100 LK	2.2		-		-
FLSE 100 LK	3		-		-
FLSE 112 MU	4		-		-
FLSE 132 SM	5.5		-		-
FLSE 132 M	7.5		-		-

IP 55 - 50 Hz - Class F -  $\Delta T$  80 K - 400 V - S1

II - 2G - EEx e II T3

**6  
poles  
1000 min<sup>-1</sup>**

Type	Rated power at 50 Hz	IM 1001 (IM B3)		IM 3001 (IM B5)	
	$P_N$ kW	Code	Qty	Code	Qty
FLSE 80 L	0.37		-		-
FLSE 80 L	0.55		-		-
FLSE 90 S	0.75		-		-
FLSE 90 L	1.1		-		-
FLSE 100 LK	1.5		-		-
FLSE 112 M	2.2		-		-
FLSE 132 SM	3		-		-
FLSE 132 M	4		-		-
FLSE 132 MU	5.5		-		-

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**CATEGORY 2**  
**ZONE 1**

### Selection

**IP 55 - 50 Hz - Class F -  $\Delta T$  80 K - 400 V - S1**  
**II - 2G - EEx e II T3 VIK**

**2**  
poles  
3000 min<sup>-1</sup>

Type	Rated power at 50 Hz	Rated speed	Rated moment	Rated current	Power factor	Efficiency	Starting torque / Rated torque	Weight
	$P_N$ kW	$N_N$ min <sup>-1</sup>	$M_N$ N.m	$I_N(400V)$ A	$\cos \varphi$ 100 %	$\eta$ 100 %	$I_D / I_N$	IM B3 kg
<b>FLSE 80 L</b>	1.1	2875	3.75	2.4	0.85	78.2	7.5	19
<b>FLSE 90 S</b>	1.5	2865	5	3	0.87	82.8	7.5	23.5
<b>FLSE 90 L</b>	1.85	2890	6.3	3.6	0.86	86.2	6.5	27.7
<b>FLSE 100 LK</b>	2.5	2905	8.5	4.6	0.9	86.5	6.2	42
<b>FLSE 112 M</b>	3.3	2925	11.2	6.2	0.93	82.5	9.3	48
<b>FLSE 132 SM</b>	4.6	2932	15.6	8.2	0.9	90	6.8	71
<b>FLSE 132 SM</b>	5.5	2940	18.6	9.9	0.89	90	7.2	75

**IP 55 - 50 Hz - Class F -  $\Delta T$  80 K - 400 V - S1**  
**II - 2G - EEx e II T3 VIK**

**4**  
poles  
1500 min<sup>-1</sup>

Type	Rated power at 50 Hz	Rated speed	Rated moment	Rated current	Power factor	Efficiency	Starting torque / Rated torque	Weight
	$P_N$ kW	$N_N$ min <sup>-1</sup>	$M_N$ N.m	$I_N(400V)$ A	$\cos \varphi$ 100 %	$\eta$ 100 %	$I_D / I_N$	IM B3 kg
<b>FLSE 90 S</b>	1	1450	6.8	2.2	0.81	81.8	5.9	21
<b>FLSE 90 L</b>	1.35	1450	9.2	2.9	0.81	83.5	6.5	23
<b>FLSE 100 LK</b>	1.85	1465	12.6	3.8	0.83	85.5	6.1	41
<b>FLSE 100 LK</b>	2.5	1467	16.9	5.1	0.82	86.8	7	43.6
<b>FLSE 112 MU</b>	3.6	1455	24.4	7.1	0.85	86.4	7.1	51.5
<b>FLSE 132 SM</b>	5	1457	33.9	9.7	0.87	85.5	8.6	65
<b>FLSE 132 M</b>	6.8	1455	46.2	13.1	0.88	84.9	7.8	70

**IP 55 - 50 Hz - Class F -  $\Delta T$  80 K - 400 V - S1**  
**II - 2G - EEx e II T3 VIK**

**6**  
poles  
1000 min<sup>-1</sup>

Type	Rated power at 50 Hz	Rated speed	Rated moment	Rated current	Power factor	Efficiency	Starting torque / Rated torque	Weight
	$P_N$ kW	$N_N$ min <sup>-1</sup>	$M_N$ N.m	$I_N(400V)$ A	$\cos \varphi$ 100 %	$\eta$ 100 %	$I_D / I_N$	IM B3 kg
<b>FLSE 90 S</b>	0.65	938	6.5	1.8	0.68	75.1	4.8	19
<b>FLSE 90 L</b>	0.95	917	9.5	2.5	0.73	75.4	4.2	21
<b>FLSE 100 LK</b>	1.3	948	13	3.3	0.71	79.8	4.7	41
<b>FLSE 112 M</b>	1.9	940	19	4.7	0.73	79.7	4.2	45
<b>FLSE 132 SM</b>	2.6	964	26	6	0.74	84.7	4.2	72
<b>FLSE 132 M</b>	3.5	967	35	8	0.74	85.5	4.5	76
<b>FLSE 132 MU</b>	4.8	967	48	10.8	0.74	86.8	5	88

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### totally enclosed three-phase asynchronous motors

## Selection

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ZONE 1**

IP 55 - 50 Hz - Class F -  $\Delta T$  80 K - 400 V - S1

II - 2G - EEx e II T3 VIK

**2  
poles  
3000 min<sup>-1</sup>**

Type	Rated power at 50 Hz	IM 1001 (IM B3)		IM 3001 (IM B5)	
	$P_N$ kW	Code	Qty	Code	Qty
FLSE 80 L	1.1		-		-
FLSE 90 S	1.5		-		-
FLSE 90 L	1.85		-		-
FLSE 100 LK	2.5		-		-
FLSE 112 M	3.3		-		-
FLSE 132 SM	4.6		-		-
FLSE 132 SM	5.5		-		-

IP 55 - 50 Hz - Class F -  $\Delta T$  80 K - 400 V - S1

II - 2G - EEx e II T3 VIK

**4  
poles  
1500 min<sup>-1</sup>**

Type	Rated power at 50 Hz	IM 1001 (IM B3)		IM 3001 (IM B5)	
	$P_N$ kW	Code	Qty	Code	Qty
FLSE 90 S	1		-		-
FLSE 90 L	1.35		-		-
FLSE 100 LK	1.85		-		-
FLSE 100 LK	2.5		-		-
FLSE 112 MU	3.6		-		-
FLSE 132 SM	5		-		-
FLSE 132 M	6.8		-		-

IP 55 - 50 Hz - Class F -  $\Delta T$  80 K - 400 V - S1

II - 2G - EEx e II T3 VIK

**6  
poles  
1000 min<sup>-1</sup>**

Type	Rated power at 50 Hz	IM 1001 (IM B3)		IM 3001 (IM B5)	
	$P_N$ kW	Code	Qty	Code	Qty
FLSE 90 S	0.65		-		-
FLSE 90 L	0.95		-		-
FLSE 100 LK	1.3		-		-
FLSE 112 M	1.9		-		-
FLSE 132 SM	2.6		-		-
FLSE 132 M	3.5		-		-
FLSE 132 MU	4.8		-		-

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## totally enclosed three-phase asynchronous motors

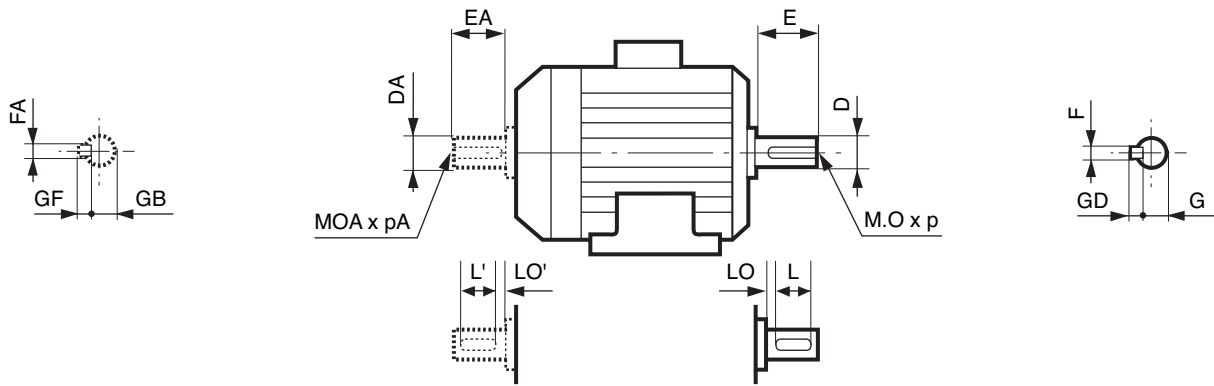
**CATEGORY 2  
ZONE 1**

### Dimensions

Dimensions of the FLSE totally enclosed three-phase asynchronous motors - IP 55  
Cage rotor

Dimensions in millimetres

- shaft end



#### Main shaft end

Type	4 and 6 poles									2 poles								
	F	GD	D	G	E	O	p	L	LO	F	GD	D	G	E	O	p	L	LO
FLSE 80 L	6	6	19j6	15.5	40	6	16	30	6	6	6	19j6	15.5	40	6	16	30	6
FLSE 90 S/L/LU	8	7	24j6	20	50	8	19	40	6	8	7	24j6	20	50	8	19	40	6
FLSE 100 L	8	7	28j6	24	60	10	22	50	6	8	7	28j6	24	60	10	22	50	6
FLSE 112 M/MU	8	7	28j6	24	60	10	22	50	6	8	7	28j6	24	60	10	22	50	6
FLSE 132 S/M/SM/MU	10	8	38k6	33	80	12	28	63	10	10	8	38k6	33	80	12	28	63	10

#### Secondary shaft end

Type	4 and 6 poles									2 poles								
	FA	GF	DA	GB	EA	OA	pA	L'	LO'	FA	GF	DA	GB	EA	OA	pA	L'	LO'
FLSE 80 L	5	5	14j6	11	30	5	15	25	3.5	5	5	14j6	11	30	5	15	25	3.5
FLSE 90 S/L/LU	6	6	19j6	15.5	40	6	16	30	6	6	6	19j6	15.5	40	6	16	30	6
FLSE 100 L	8	7	24j6	20	50	8	19	40	6	8	7	24j6	20	50	8	19	40	6
FLSE 112 M/MU	8	7	24j6	20	50	8	19	40	6	8	7	24j6	20	50	8	19	40	6
FLSE 132 S/M/SM/MU	8	7	28j6	24	60	10	22	50	6	8	7	28j6	24	60	10	22	50	6

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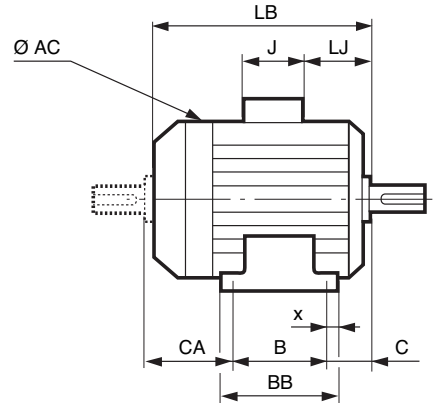
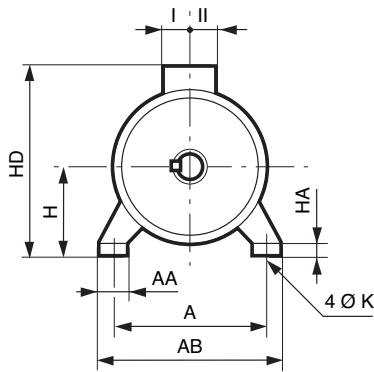
**CATEGORY 2  
ZONE 1**

### Dimensions

Dimensions of the FLSE totally enclosed three-phase asynchronous motors - IP 55  
Cage rotor

Dimensions in millimetres

– foot mounted



Type	Main dimensions																	
	A	AB	B	BB	C	x	AA	K	HA	H	AC	HD	LB	LJ	J	I	II	CA
FLSE 80 L	125	157	100	130	50	20	32	9	10	80	160	222	214	11	187	63.5	63.5	68
FLSE 90 S	140	172	100	160	56	22	34	10	11	90	185	247	243	15.5	187	63.5	63.5	93
FLSE 90 L	141	173	126	161	57	23	35	11	12	91	186	248	244	16.5	188	64.5	64.5	69
FLSE 90 LU	140	172	125	160	56	22	34	10	11	90	185	247	243	15.5	187	63.5	63.5	68
FLSE 100 LK	160	200	140	174	63	22	42	12	12	100	226	276	323	38	187	63.5	63.5	125
FLSE 112 MU	190	230	140	174	70	22	45	12	12	112	226	288	323	38	187	63.5	63.5	119
FLSE 112 M	190	230	140	174	70	22	45	12	12	112	226	288	323	38	187	63.5	63.5	119
FLSE 132 SM	216	255	178	223	89	31	58	12	15	132	264	323	387	46	114	57	57	126
FLSE 132 M	216	255	178	223	89	31	58	12	15	132	264	323	387	46	114	57	57	126
FLSE 132 MU	216	255	178	223	89	31	58	12	15	132	264	323	387	46	114	57	57	126

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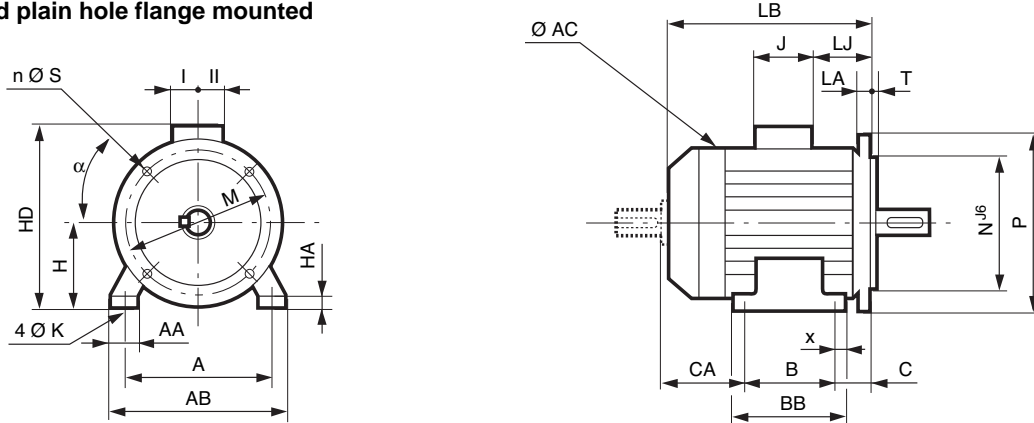
**CATEGORY 2  
ZONE 1**

## Dimensions

Dimensions of the FLSE totally enclosed three-phase asynchronous motors - IP 55  
Cage rotor

Dimensions in millimetres

– (FF) foot and plain hole flange mounted



Main dimensions

Type	A	AB	B	BB	C	x	AA	K	HA	H	AC	HD	LB	LJ	J	I	II	Sym.
FLSE 80 L	125	157	100	130	50	20	32	9	10	80	160	222	214	11	187	63.5	63.5	FF 165
FLSE 90 S	140	172	100	160	56	22	34	10	11	90	185	247	243	15.5	187	63.5	63.5	FF 165
FLSE 90 L	141	173	126	161	57	23	35	11	12	91	186	248	244	16.5	188	64.5	64.5	FF 165
FLSE 90 LU	140	172	125	160	56	22	34	10	11	90	185	247	243	15.5	187	63.5	63.5	FF 165
FLSE 100 LK	160	200	140	174	63	22	42	12	12	100	226	276	323	38	187	63.5	63.5	FF 215
FLSE 112 MU	190	230	140	174	70	22	45	12	12	112	226	288	323	38	187	63.5	63.5	FF 215
FLSE 112 M	190	230	140	174	70	22	45	12	12	112	226	288	323	38	187	63.5	63.5	FF 215
FLSE 132 SM	216	255	178	223	89	31	58	12	15	132	264	323	387	46	114	57	57	FF 265
FLSE 132 M	216	255	178	223	89	31	58	12	15	132	264	323	387	46	114	57	57	FF 265
FLSE 132 MU	216	255	178	223	89	31	58	12	15	132	264	323	387	46	114	57	57	FF 265

CA dimension and shaft end dimensions identical to those of the foot mounted motors.

# FLSE

## Atmospheres containing explosive GAS



## totally enclosed three-phase asynchronous motors

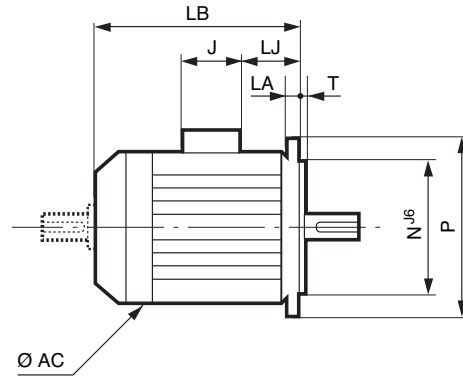
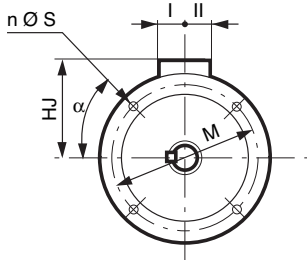
**CATEGORY 2  
ZONE 1**

### Dimensions

Dimensions of the FLSE totally enclosed three-phase asynchronous motors - IP 55  
Cage rotor

Dimensions in millimetres

– (FF) plain holes flange mounted



IEC symbol	Flange dimensions							
	M	N	P	T	n	α	S	LA
<b>FF 165</b>	165	130	200	3.5	4	45	12	10
<b>FF 165</b>	165	130	200	3.5	4	45	12	10
<b>FF 165</b>	165	130	200	3.5	4	45	12	10
<b>FF 165</b>	165	130	200	3.5	4	45	12	10
<b>FF 215</b>	215	180	250	4	4	45	15	12
<b>FF 215</b>	215	180	250	4	4	45	15	12
<b>FF 215</b>	215	180	250	4	4	45	15	12
<b>FF 265</b>	265	230	300	4	4	45	15	14
<b>FF 265</b>	265	230	300	4	4	45	15	14
<b>FF 265</b>	265	230	300	4	4	45	15	14

Type	Main dimensions						
	AC	LB	HJ	LJ	J	I	II
<b>FLSE 80 L</b>	160	214	159.5	11	187	63.5	63.5
<b>FLSE 90 L</b>	185	263	171	35.5	187	63.5	63.5
<b>FLSE 90 LU</b>	185	263	171	35.5	187	63.5	63.5
<b>FLSE 90 S</b>	185	263	171	35.5	187	63.5	63.5
<b>FLSE 100 LK</b>	226	323	194.5	38	187	63.5	63.5
<b>FLSE 112 M</b>	226	323	194.5	38	187	63.5	63.5
<b>FLSE 112 MU</b>	226	323	194.5	38	187	63.5	63.5
<b>FLSE 132 M</b>	264	387	191	46	114	57	57
<b>FLSE 132 MU</b>	264	387	191	46	114	57	57
<b>FLSE 132 SM</b>	264	387	191	46	114	57	57

Shaft end dimensions identical to those of the foot mounted motors.

# FLSE

## Atmospheres containing explosive GAS



### totally enclosed three-phase asynchronous motors

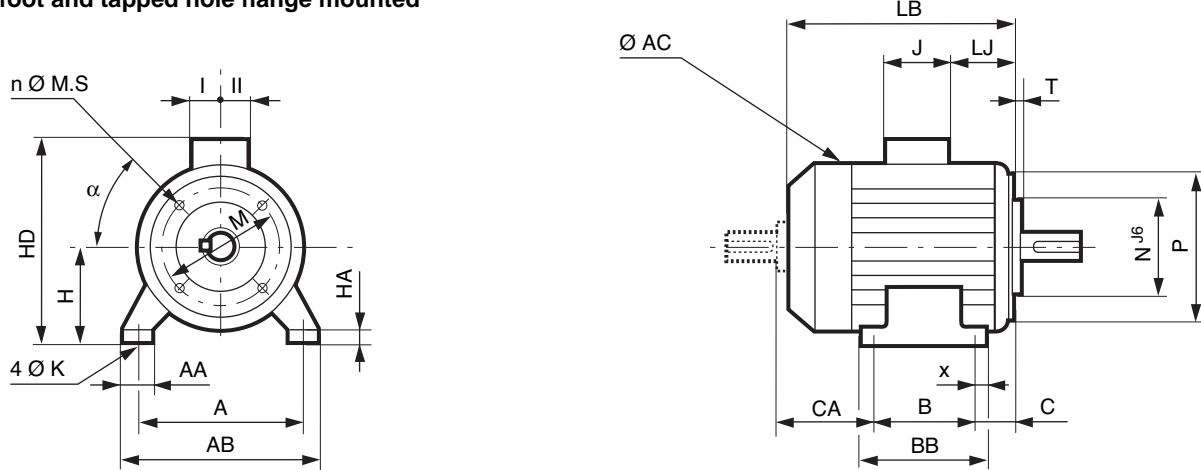
**CATEGORY 2  
ZONE 1**

## Dimensions

### Dimensions of the FLSE totally enclosed three-phase asynchronous motors - IP 55 Cage rotor

Dimensions in millimetres

– (FT) foot and tapped hole flange mounted



Main dimensions

Type	A	AB	B	BB	C	x	AA	K	HA	H	AC	HD	LB	LJ	J	I	II	Sym.
FLSE 80 L	125	157	100	130	50	20	32	9	10	80	160	222	214	11	187	63.5	63.5	FT 100
FLSE 90 S	140	172	100	160	56	22	34	10	11	90	185	247	243	15.5	187	63.5	63.5	FT 115
FLSE 90 L	141	173	126	161	57	23	35	11	12	91	186	248	244	16.5	188	64.5	64.5	FT 115
FLSE 90 LU	140	172	125	160	56	22	34	10	11	90	185	247	243	15.5	187	63.5	63.5	FT 115
FLSE 100 LK	160	200	140	174	63	22	42	12	12	100	226	276	323	38	187	63.5	63.5	FT 130
FLSE 112 MU	190	230	140	174	70	22	45	12	12	112	226	288	323	38	187	63.5	63.5	FT 130
FLSE 112 M	190	230	140	174	70	22	45	12	12	112	226	288	323	38	187	63.5	63.5	FT 130
FLSE 132 SM	216	255	178	223	89	31	58	12	15	132	264	323	387	46	114	57	57	FT 215
FLSE 132 M	216	255	178	223	89	31	58	12	15	132	264	323	387	46	114	57	57	FT 215
FLSE 132 MU	216	255	178	223	89	31	58	12	15	132	264	323	387	46	114	57	57	FT 215

CA dimension and shaft ends dimensions identical to those of the foot mounted motors.

# FLSE

## Atmospheres containing explosive GAS



## totally enclosed three-phase asynchronous motors

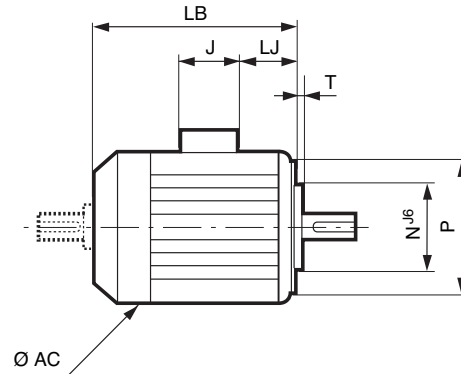
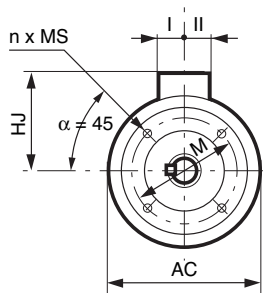
**CATEGORY 2  
ZONE 1**

### Dimensions

Dimensions of the FLSE totally enclosed three-phase asynchronous motors - 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 115	115	95	140	3	4	M8
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 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	HJ	LJ	J	I	II
FLSE 80 L	160	214	142	11	187	63.5	63.5
FLSE 90 L	185	243	157	15.5	187	63.5	63.5
FLSE 90 LU	185	243	157	15.5	187	63.5	63.5
FLSE 90 S	185	243	157	15.5	187	63.5	63.5
FLSE 100 LK	226	323	176	38	187	63.5	63.5
FLSE 112 M	226	323	176	38	187	63.5	63.5
FLSE 112 MU	226	323	176	38	187	63.5	63.5
FLSE 132 M	264	387	191	46	114	57	57
FLSE 132 MU	264	387	191	46	114	57	57
FLSE 132 SM	264	387	191	46	114	57	57

Shaft end dimensions identical to those of the foot mounted motors.

