

Reinforced sealing for machining application closed three-phase asynchronous motors

General information



Totally enclosed three-phase asynchronous motors, LS series, according to IEC 60034, 60038, 60072.

- Single speed: power 0.18 to 11 kW, frame size 80 to 132 mm, 2, 4, 6 and 8 poles, 230/400 V or 400 V Δ , 50 Hz. Higher powers: consult us.
- Two speed: consult us.

Protection

IP 55 reinforced standard version assures good sealing against projected liquid and dust.

Operation

These motors are used in the spray lubrication sectors of machine tools, and machining centres. Their design guarantees a long-lasting operation in arduous conditions: oil projections, oil laden environment, aggressiveness of the cutting fluids.

Mains supply

- Standard according to IEC 60038:
 - 230/400 V +10% -10% at 50 Hz.
- Standard construction suitable for the following mains supplies:
 - 220/380 V +5% -5% at 50 Hz,
 - 230/400 V +10% -10% (IEC 60038) at 50 Hz,
 - 240/415 V +5% -5% at 50 Hz,
 - 265/460 V +5% -5% at 60 Hz.
- Voltagages for powers equal or greater than 3kW:
 - 380 V Δ +5% -5% at 50 Hz,
 - 400 V Δ +10% -10% at 50 Hz,
 - 415 V Δ +5% -5% at 50 Hz,
 - 460 V Δ +5% -5% at 60 Hz.
- Construction suitable for Y/ Δ starting.

Description of the LS aluminium three-phase motors for machining application finish

Component	Materials	Remarks
Finned housing	Aluminium alloy	- with bolt-on or cast foot, or without foot • 4 or 6 mounting holes for the foot housings - optional earth terminal
Stator	Insulated low carbon magnetic steel laminations Electrolytic copper	- the low carbon content guarantees long term stability of the characteristics - assembled sheet metal - 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) - mounted to the shaft by heat shrinking - dynamically balanced rotor
Shaft	Steel	- for frame size < 132: • shaft end fitted with screw and washer • closed keyway
End shields	Aluminium alloy	- LS 80 - 90 rear - sealing specific to the housing / flange fitting
	Cast iron	- LS 80 - 90 front (optional for LS 80 and 90 rear) - LS 100 to 132 front and rear
Bearings and lubrication		- ball bearings - ZZ types lubricated for life - rear preloaded bearings
Lipseals	Synthetic rubber	- specific lipseals
Fan	Composite material	- 2 directions of rotation: straight blades
Fan cover	Steel sheet metal	- fitted, on request: • with a drip cover for operation in vertical position, shaft facing down • with a mounting system for protection filter
Terminal box	Aluminium alloy	- rotating in 4 directions, mounted opposite to foot - includes as standard a board with 6 steel terminals (brass as an optional extra) - delivered fitted with cable gland (optionally without cable glands) - 1 earth terminal in all terminal boxes - specific lipseals - specific cable glands

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Adaptation possibilities

Leroy-Somer offers, for use with the LS 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 the gearboxes and to variable speed operation.

For other variants or any specific adaptation, consult the technical specialists at Leroy-Somer.

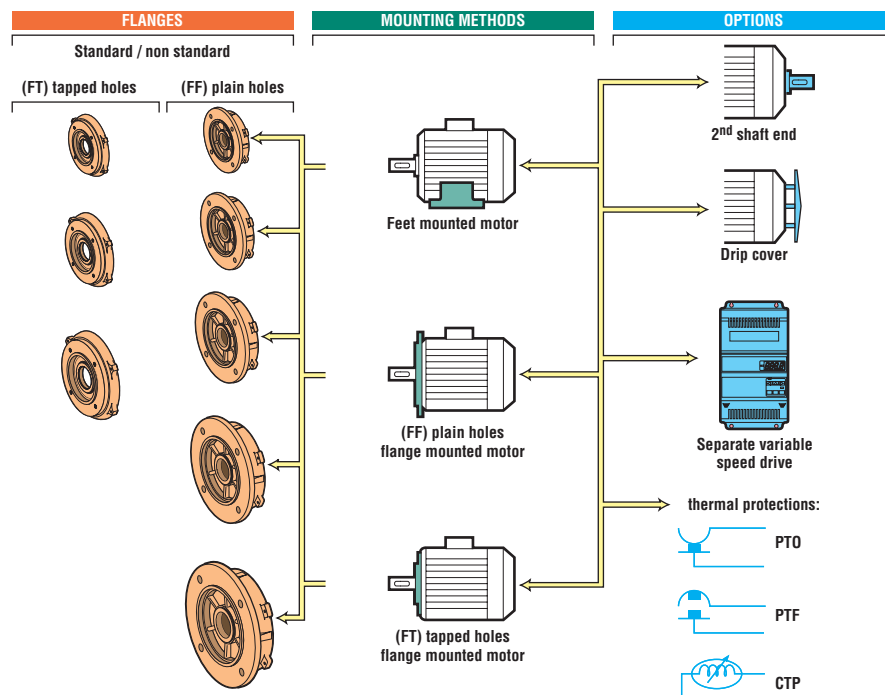
 **The LS three-phase motors may be associated to:**

- gearboxes
- electronic variable speed drives¹

 **The options:**

- mounting system for protection filters
- drip cover
- anti-jamming cover
- thermal protections
- stainless steel nameplate
- second shaft extension
- non standard flanges

¹ Conforming to the regulations for use as indicated by the standard IEC 34-17.



Selection

Frame size mm	Power kW	Polarity
80 to 132	0.75 to 11	2 p
80 to 132	0.55 to 9	4 p
80 to 132	0.25 to 5.5	6 p
80 to 132	0.18 to 3	8 p

Dimensions

See the dimensions of the LS series page A2.41 to A2.46.