

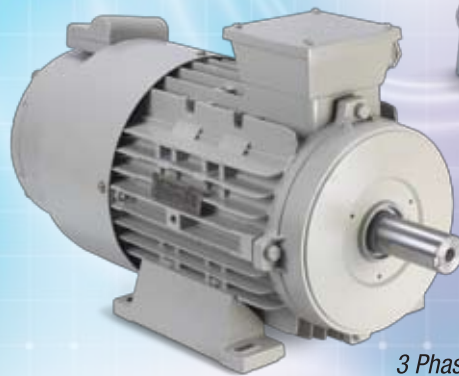
SUPERNOVA™



3 Phase TEFC Cage Motors



3 Phase Laminated Yoke Motors



3 Phase Inverter Duty Motors

3 Phase AC Induction Motors

The company

Larsen & Toubro is a technology-driven, USD 8.5 billion company that infuses engineering with imagination. The Company offers a wide range of advanced solutions, in the field of Engineering, Construction, Electrical & Automation, Machinery and Information Technology. L&T Switchgear, which is a part of the Electrical & Automation business, is India's largest manufacturer of low voltage switchgear, with the scale, sophistication and range, to meet global benchmarks. With over four decades of experience in this field, the Company today enjoys a leadership position in the Indian market, with a growing presence in international markets. It offers a complete range of products, including Controlgear, Powergear, Motor Starters, Energy Meters, Wires and a host of other accessories. Most of our product lines conform to international standards, carry CE markings and are KEMA certified.



Powai Switchgear Factory, Mumbai.

SUPERNOVA™

When imagination meets engineering a Supernova is born. L&T introduces its Supernova range of low-tension AC motors suitable for various market segments namely Industry, OEM, Energy & Infrastructure, Buildings and Agriculture. These power pack motors with an innovative manufacturing technique, enable high performance, energy efficiency and sustainability.



L&T offers complete range of motor starting and protection solutions, through SUPERNOVA™ Range of Soft Starters, Drives, Controlgear Products, MPCB, Fuse, Switches & MCCB.



LTS Series



LTI Series



LTL Series

Features	Standard Motors	Inverter Duty Motors	Laminated Yoke Motors																																													
	Salient Features	Salient Features	Salient Features																																													
Construction	TEFC enclosure with true IP55 Protection (All motors are provided with V seal. Motors from frame 180 & above are also provided with a labyrinth seal)	TEFC enclosure with true IP55 Protection (All motors are provided with V seal. Motors from frame 180 & above are also provided with labyrinth seal)	Laminated Forced cooling with IP23 Protection																																													
Cooling	Shaft Mounted Fan - IC411	Separately driven axial cooling fan - IC416	Separately excited radial fan - IC06																																													
Winding and Impregnation System	1) VPI with Polyesterimide Class H Resin 2) Dual Coated Winding Conductor (Suitable for high temperature with standing capability of 200°C)	1) VPI with Polyesterimide Class H Resin 2) Corona Resistant Winding Wires	1) VPI with Polyesterimide Class H Resin 2) Corona Resistant Winding Wires																																													
Terminal	1) 6 leads for 415 Volts Y / 230 Volts Δ till frame 90 2) 6 leads for 415 Volts Δ from frame 100 and above	1) 6 leads for 415 Volts Y / 230 Volts Δ till frame 90 2) 6 leads for 415 Volts Δ from frame 100 and above	1) 6 leads for 400 Volts Δ connection																																													
Bearings	1) Pre-lubricated till frame 160 (62 series) 2) Regreasable bearings for frame 180- 315 (63 series)	1) Pre-lubricated till frame 160 (62 series) 2) Regreasable bearings for frame 180- 315 (63 series)	1) Deep groove ball bearing type suitable for high speeds and life lubricated																																													
	General Features	General Features	General Features																																													
Supply Conditions	415V \pm 10%, 50 HZ \pm 5% and combined variation of \pm 10%	415V \pm 10%, 50 HZ \pm 5% and combined variation of \pm 10%	415V \pm 10%, 50 HZ \pm 5% and combined variation of \pm 10%																																													
Body	Aluminium body in frames 90-132 and cast Iron body in frames 100-315	Aluminium body in frames 90-132 and cast Iron body in frames 100-315	Stampings with Laminated Yoke																																													
Ambient	50°C	50°C	50°C																																													
Insulation	Class F with temperature rise restricted to class B (as per IS 12802)	Class F with temperature rise restricted to class B (as per IS 12802)	Class F (utilised till Class F limits)																																													
CE marking	yes	yes																																														
Mounting (Others on Request)	B3/B5/B14/V1/V5 /B35/V3	B3/B5/B14/V1/V5/B35/V3	B3/ B35 (foot cum flange)																																													
Efficiency	EFF2 as per IS12615 (EFF1 on Request)	EFF2																																														
Grease	Lithium based grease AP3 or equivalent	Lithium based grease AP3 or equivalent	Lithium based grease AP3 or equivalent																																													
Duty	S1	S1	S1																																													
Reference	IS 325	IS 325	IS325																																													
Paint	RAL 7011 as standard	RAL 7032 as standard	RAL 7045 as standard																																													
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	<ul style="list-style-type: none"> Suitable for all general purpose applications Suitable along with inverter for variable torque applications like fans, pumps, blowers even for Smaller Cable lengths (Inverter to Motor) 	<ul style="list-style-type: none"> Suitable for constant torque applications like extruders, mixers, mills, wire drawing etc even for Longer Cable Lengths (Inverter to Motor) 	<ul style="list-style-type: none"> Compact Size: Low foot print requirement Precise Speed Control: Low inertia requirement (replacement need of DC Motors) Applications like compressor, cranes, paper industry, rolling mills, wind tunnels, extruders, conveyors etc. 																																													

List of special features and accessories (for LTS & LTI range)

<p>Non-Standard Winding</p> <p>Non-Standard output Non-Standard voltage or frequency Class “H” Insulation</p>	<p>Bearings</p> <p>Roller bearing at DE for Radial Loads Online Regreasable Bearings (for frame 180 & above) Thrust Bearings for Vertically Mounted Motors Insulated Bearing at NDE Side only Insulated Bearing Housing (from 225 & above frames) BTD for bearings</p>
<p>Winding Protection</p> <p>Thermistor – PTC (One for Alarm & one for Trip) RTD PT – 100 (3 Nos, 1 per phase.) Epoxy gel coat on overhang</p>	<p>Painting</p> <p>Epoxy Base Paint Epoxy Base Paint – Sp.Shade Normal paint other shade Special paint specification</p>
<p>Non Standard Constructions</p> <p>IM – B35 (Foot cum Flange) IM – B5 (Flange mounted) IM – V1 without canopy (Vertical – down) IM – V1 with canopy (Vertical – down) IM – B6 (Foot – wall mounted) IM – B7 (Foot – wall mounted) IM – B8 (Foot – feet on top) IM – V5 w/o canopy (Vertical – down) IM – V6 (Vertical – up) IM – V5 with canopy (Vertical – down) IM – B14 (Face mounted) IM – B34 (Face mounted)</p>	<p>MS Fan and Fan Cowl</p> <p>Plastic Fan (Standard feature up to frame 160) Metal Fan (Standard feature for frame 180 & above) Fan cowl with canopy</p>
<p>Terminal Box</p> <p>T. Box – RHS T. Box – LHS Flying Leads (Extended leads) Customised Fabricated Terminal Box</p>	<p>Ingress Protection</p> <p>Canopy for vertical motor with shaft downwards and upwards</p>
<p>Shaft Related Modifications</p> <p>Standard Double Extension Non-Standard Cylindrical Single Shaft Extension Non-Standard Double Shaft Extension Labyrinth Seal (Standard feature for frame 180 and above) Shafts made of EN-24 material Shafts made of SS material</p>	<p>For Inverter Duty Motors</p> <p>Insulated Bearings at NDE Corona Resistant Wires (Standard feature in LTI motors) Forced Cooling Arrangement (Standard feature in LTI motors, optional feature in LTS motors) Mounting arrangement for Encoder</p>
	<p>Miscellaneous features</p> <p>Auxiliary data plate Space Heater External earthing Bolt Sea worthy packing Brake mounting Double Compression Glands Fabricated Stator Body</p>

Note: All the above mentioned accessories / features are available on request at an additional price (other than those mentioned as standard features)

Other types of Motors

- Ginning Motors • Dual Speed Motors • EFF1 Motors • Brake Motors • Crane Duty Motors
- Frame 355 and above on request.

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Product improvement is a continuous process. For the latest information and special applications, please contact any of our offices listed here.



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