



JSL INDUSTRIES LTD.

“Jyoti” Squirrel Cage Drip Proof Motors

Introduction

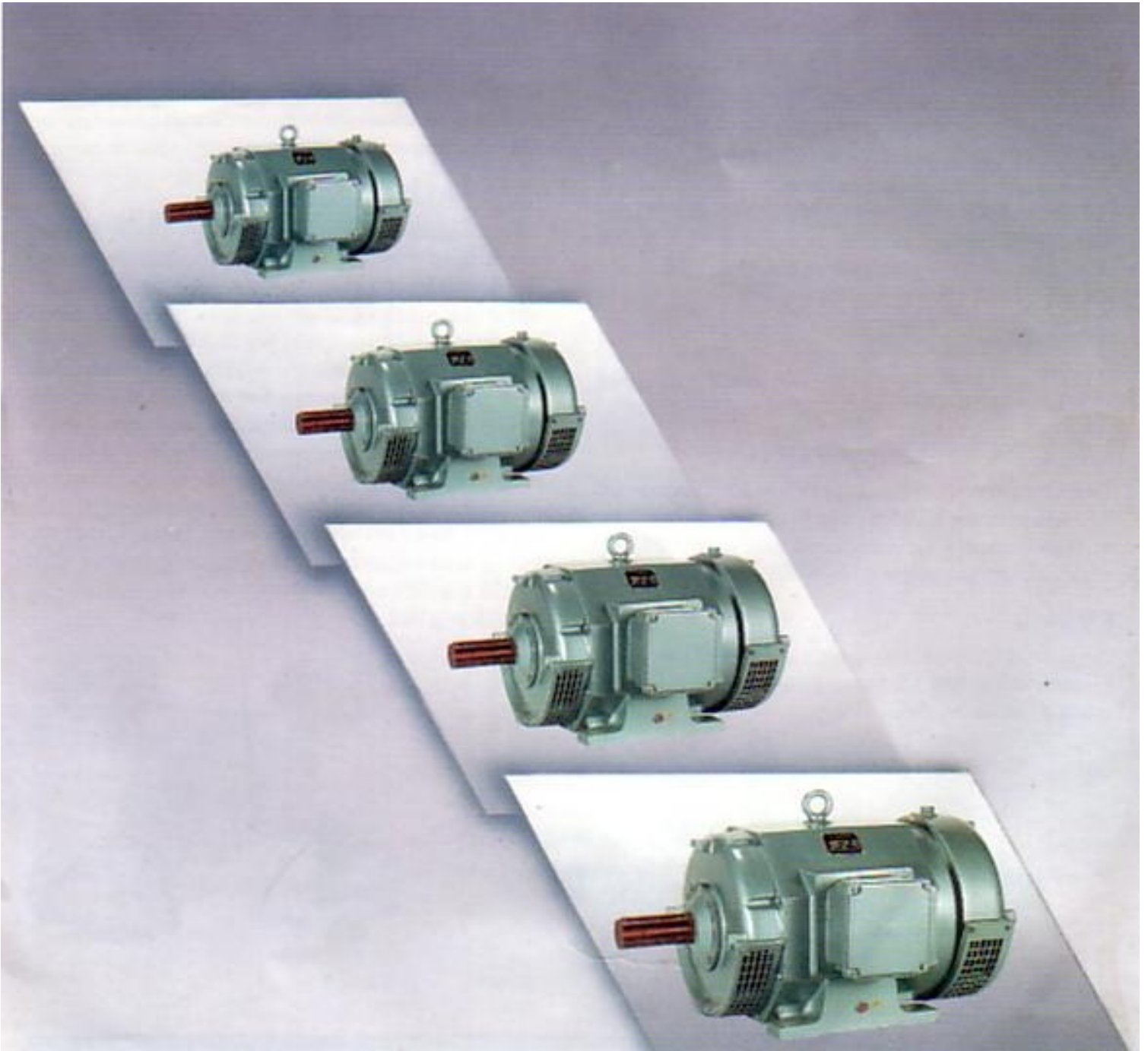
Features & Technical Specification

Dimensional Details



Provides protection against dripping liquids and falling objects.

'Jyoti' Squirrel Cage Drip Proof Motors



'JYOTI' "CD Series" Screen Protected Drip Proof (SPDP) Three Phase Squirrel Cage Induction Motors

'JYOTI' Screen Protected Drip Proof Squirrel Cage Motors are specially designed to provide years of continuous trouble free service. These motors are suitable for all normal industrial drives, pumps, etc. Providing adequate protection against dripping liquids and falling objects.

PERFORMANCE

'JYOTI' "CD Series" Squirrel Cage Drip Proof motors are continuously rated for S1 duty as per IS:325. They are suitable for 3 phase supply of $415 V \pm 10\%$ and frequency of $50 \text{ Hz} \pm 5\%$. Combined voltage and frequency variation allowed is $\pm 10\%$. The performance in general conform to IS:325 and other equivalent standards like IEC-34, VDE 0530 and BS 5000/4999.

RANGE

'JYOTI' CD Series Motors are available in ratings of 15 kW to 55 kW.

ENCLOSURE AND MOUNTING

The motor enclosure offers IP-22 Degree of Protection as per IS:4691, The mounting dimensions of these motors are in accordance with IS:1231 which are also conforming to IEC-72

FRAME

Octagonal shaped cast iron frame gives rugged construction and sturdy bearing support and optimum cooling characteristics.

STATOR

Stator stack is made up of low-loss silicon stampings to minimise iron loss. The stack is held in position on body stacking ribs. The stack is subjected to compression of pre-determined value to make a compact and rigid assembly.

ROTOR

Rotor stack is made up of low-loss silicon steel stampings. They are aluminium diecast and shrink fitted on precision machined, 40C8 Carbon Steel Shaft. Rotors are dynamically balanced on a highly sensitive electronic machine. This limits vibration within the tolerance as per IS-12075

INSULATION

The insulation in these motors is of Class 'F' with temperature rise limited to 'B'. Materials are so used as to suit electrical, mechanical, thermal and environmental conditions. Modified polyester enamelled winding wires as per IS:13730 (Part-III) are used for adequate electrical insulation and good thermal properties. The overhangs are well shaped and are rigidly brazed to withstand high stresses due to starting currents. Vacuum impregnation with thermosetting varnish is applied to strengthen the windings and to increase heat transfer. The temperature rise is limited to 75°C over the ambient temperature of 45°C . For special requirement of protection against high humid conditions. Additional coating of air drying varnish is given.

TERMINALS AND TERMINAL BOX

Motors are provided with six terminals in order that the motor can be started with Star Delta Starter or Auto Transformer Starter. Terminal studs are made from extruded brass rods for good mechanical strength and are having adequate current carrying capacity. They are properly gasketted for protection against weather. The terminal box can be fitted in any position in a step or 90° for suitable cable entry.

BEARINGS

Carefully selected anti-friction bearings are used. These bearings are regreasable and located in bearing housing of adequate size. The grease used is lithium based grade 3 with drop point 160°C minimum.

LIFTING HOOKS

Suitably located hooks of adequate strength are provided to lift the motor for the purpose of installation, alignment, repairs and overhauling etc.

EARTHING TERMINALS

A pair of Earthing Terminals is provided at diametrically opposite points on stator body.

TESTS

All the motors are tested in the course of manufacture and before despatch in accordance with IS-325.

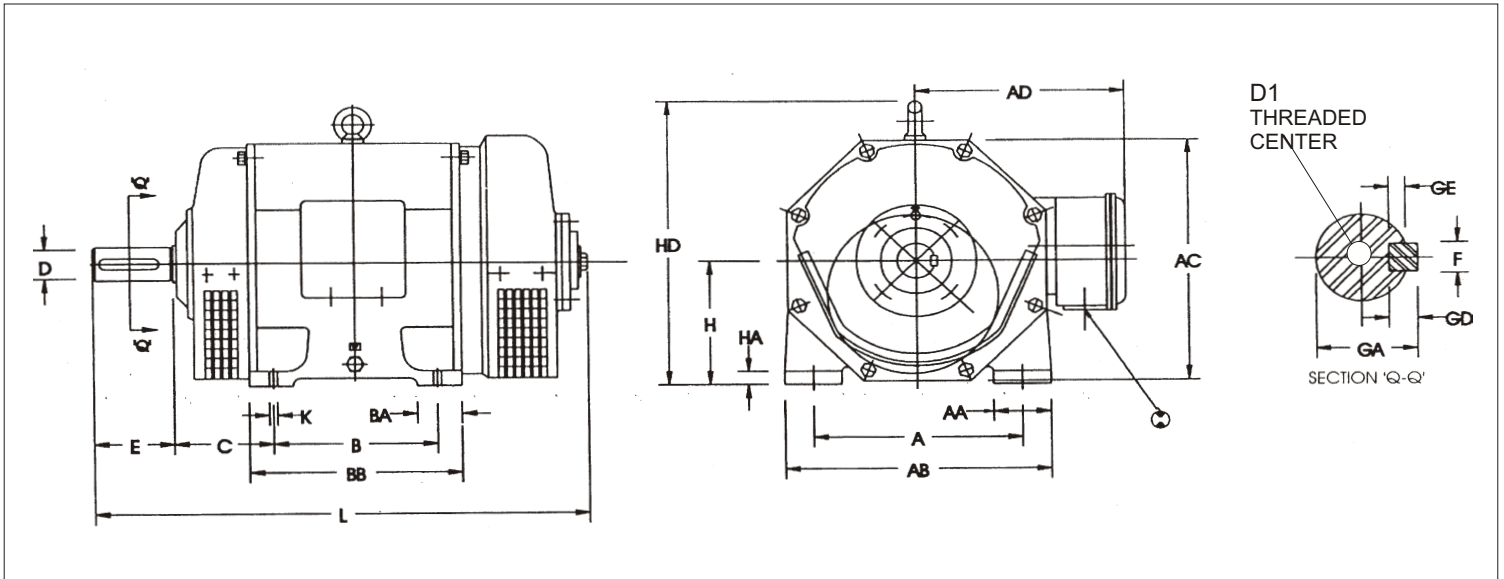
'JYOTI' also offers Three Phase LT motors of standard range like

- TEFC Squirrel Case, Horizontal and/or Flange Mounted, Induction Motors.
- Surface-cooled Squirrel Cage Motors for carding spinning and weaving for Textile Industry.
- TEFC and Drip-proof Squirrel Cage Vertical Hollow Shaft Motors. Surface-cooled Squirrel Cage Motors for carding spinning and weaving for Textile Industry.
- TEFC and other custom designed motors.

RATING (IN kW) OF 'JYOTI' CD-MOTORS

FRAME	2 POLE	4 POLE	6 POLE
CD-160M	15	15	—
CD-160L	18.5	18.5	—
CD-180L	15, 18.5, 22, 26, 30, 37	15, 18.5, 22, 26, 30,	—
CD-200M	45	33.5, 37	15, 18.5, 22, 26
CD-200L	55	45	30
CD-225M	—	55, 67	37

GENERAL DIMENSIONAL SKETCH OF 'JYOTI' LOOM & CARD FOOT MOUNTED MOTOR



FRAME	AA+	AB+	AC+	AD+	A*	BA+	BB+	B *	C *	Ø D	E	F	GA	GD	GE	HA+	HC+	HD+	H	KØ	L+	D1 THRDS
CD-160M	62.5	315	315	253	254	107	305	210	108	48k6	110	14	51.5	9.000 8.910	5.5 5.2	18	320	378	160.00 160.50	15	650	M16 X 32
CD-160L	62.5	315	315	253	254	107	305	254	108	48k6	110	14	51.5	9.000 8.910	5.5 5.2	18	320	378	160.00 160.50	15	690	M16 X 32
CD-180L	70	350	350	263	279	80	360	279	121	55m6	110	16	59.0	10.000 9.910	6.0 6.2	20	355	412	180.00 179.50	15	725	M20 X 40
CD-200M	70	390	390	308	318	70	327	267	133	60m6	140	18	64.0	11.000 10.890	7.0 7.2	25	398	464	200.00 199.50	19	770	M20 X 40
CD-200L	70	390	390	308	318	70	365	305	133	60m6	140	18	64.0	11.000 10.890	7.0 7.2	25	398	464	200.00 199.50	19	805	M20 X 40
CD-225M	82.5	440	440	340	356	80	390	311	149	65m6	140	18	69.0	11.000 10.890	7.0 7.2	25	447	510	225.00 199.50	19	815	M20 X 40

NOTES :

1. All Dimensions are in mm. Except otherwise stated.
2. + Shall not exceed by 5 mm.
3. * These dimensions may vary by ± 0.75 mm
4. Cable gland provided as a special case against client's requirement.