



**JSL INDUSTRIES LTD.**

## Squirrel Cage Drip Proof Motors



Provides protection against  
dripping liquids and falling objects



**ISO 9001 : 2015**

## 'JSL' SPDP MOTORS - CD Series upto 355 frames

'JSL' Screen Protected Drip Proof Squirrel Cage Motors series CD 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.

### RANGE

'JSL' CD Series Motors are available in ratings as given in table.

### SPECIFICATIONS

'JSL' "CD Series" Squirrel Cage Drip Proof motors are continuously rated for S1 duty as per IS/IEC 60034-1. They are suitable for 3 phase supply of 415 V 10% and frequency of 50 Hz.  $\pm 5\%$ . Combined voltage and frequency variation allowed is 10%. The performance in general conforms to above standard and other equivalent international standards like VDE 0530 and BS 5000/4999.

### ENCLOSURE AND MOUNTING

The motor enclosure offers IP-23 Degree of Protection as per IS/IEC 60034-5. The mounting dimensions of these motors are in accordance with IS:1231 which are also conforming to IEC-72.

These motors have octagonal shaped cast iron frame upto 250 frame and steel fabricated frame for 280, 315 & 355 frame. This gives rugged construction and sturdy bearing support and optimum cooling characteristics.

**'JSL' CD Series Squirrel cage drip proof motors are available from 15 KW to 370 KW rating & complies requirements of IS/IEC 60034-1**

### WINDING & INSULATION

The insulation in these motors is of Class 'F' with temperature rise limited to Class 'B'. Materials are so used as to suit electrical, mechanical, thermal and environmental conditions. Polyester super enamelled copper 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 braced to withstand high stresses due to starting currents. Vacuum and pressure impregnation (VPI) with thermosetting varnish is applied to strengthen the windings and to increase heat transfer. The temperature rise is limited to 70°C over the ambient temperature of 50°C. For special requirement of protection against high humid conditions, additional coating of air drying varnish is given.

### STATOR & ROTOR

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

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 digital balancing machine. This limits vibrations within the tolerance as per IS-12075.



## TERMINAL 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 gasketed for protection against weather. The terminal box can be fitted in any position in a step of 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 of more than 160°C

## 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 TERMINAL

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 before despatch in accordance with IS/IEC 60034-1.

'JSL also offers Three-Phase LT motors of standard range like

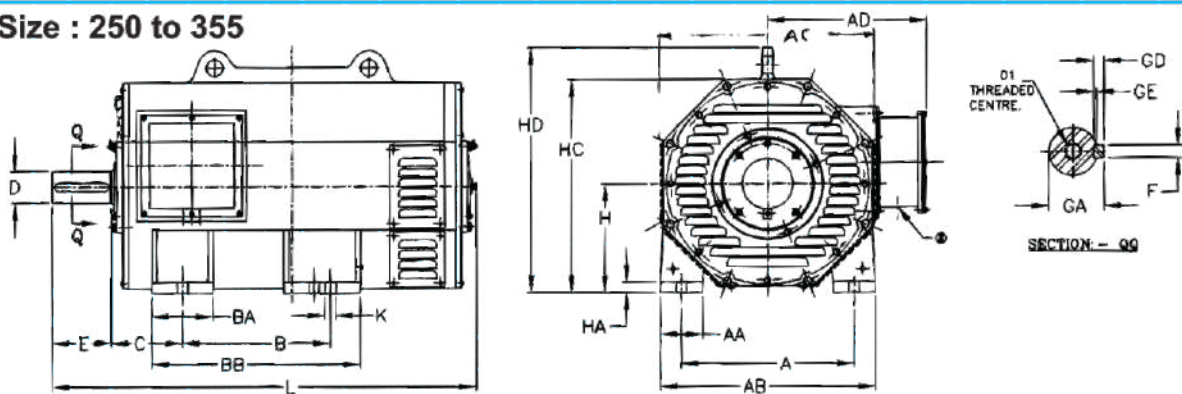
- TEFC Squirrel Cage, Horizontal and Flange Mounted, Induction Motors. (ISI marked)
- Surface-cooled Squirrel Cage Motors for carding, spinning and weaving for Textile Industry.
- TEFC and Drip-proof Squirrel Cage Vertical Hollow Shaft Motors.
- TEFC and other custom designed motors.
- Slipring Induction Motors.
- TEFC Induction Generator

## RATING (in KW) OF 'JSL' CD-MOTORS

FRAME	2 POLE	4 POLE	6 POLE
CD-160L	15, 18.5	15, 18.5	15
CD-180L	15, 18.5, 22, 26, 30, 37	15, 18.5, 22, 26, 30	15, 18.5
CD-200M	45	33.5, 37	18.5, 22, 26
CD-200L	55	45	30
CD-225M	75	55	30
CD-250S	90	75	37
CD-250M	110	90, 93	45
CD-280S/M	--	110, 125, 132, 150	67, 75, 90
CD-315S/M/L	--	160, 180, 200, 220, 250, 280	110, 125, 132, 150, 160
CD-355S/M/L	--	300, 315, 335, 355, 370	180, 200, 220, 250

## GENERAL DIMENSIONAL SKETCH OF 'JSL' SQ. CAGE DRIP PROOF HORIZONTAL MOTORS

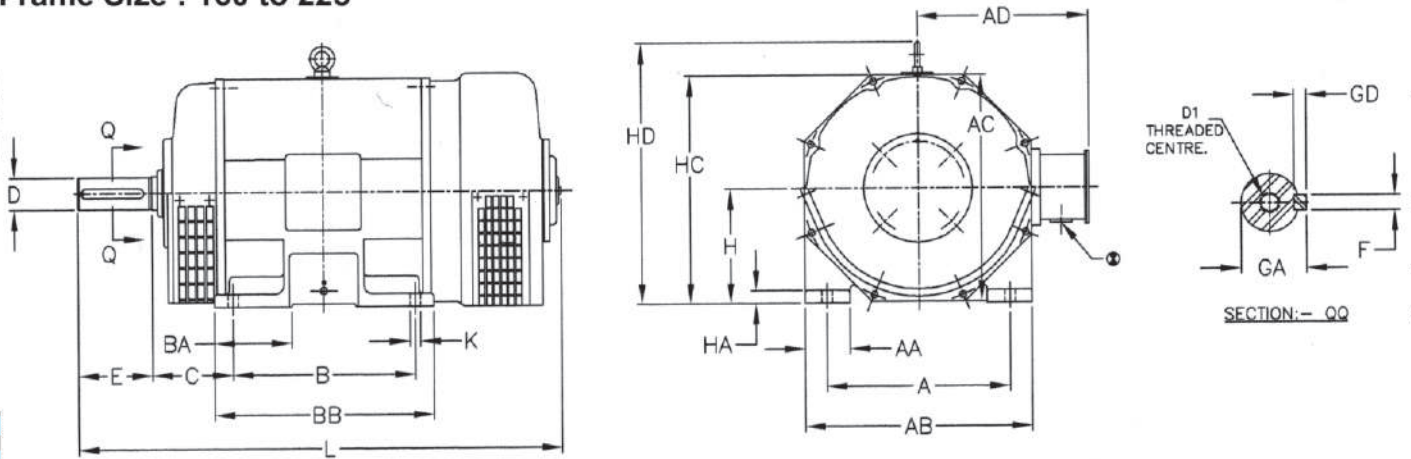
Frame Size : 250 to 355



FRAME	AA+	AB+	AC+	AD+	A*	BA+	BB+	B*	C*	fD	E	F	GA	HA+	HC+	HD+	H	Kf	L+	D1 Thrds.
CD-250S	100	505	490	373	406	145	492	311	168	75m6	140	20	79.5	25	495	570	250.00 249.50	24	1000	M20X40
CD-250M	100	505	490	373	406	145	492	349	168	75m6	140	20	79.5	25	495	570	250.00 249.50	24	1000	M20X40
CD-280S	120	584	--	645	457	200	674	368	190	80m6	170	22	85	20	--	575	280-1.0	24	1150	M20X40
CD-280M	120	584	--	645	457	200	674	418	190	80m6	170	22	85	20	--	575	280-1.0	24	1150	M20X40
CD-315S	130	640	--	635	508	200	627	406	216	90m6	170	25	95	20	--	640	315-1.0	28	1185	M24X50
CD-315M	130	640	--	635	508	200	627	457	216	90m6	170	25	95	20	--	640	315-1.0	28	1185	M24X50
CD-315L	150	640	--	635	508	200	700	508	216	90m6	170	25	95	20	--	640	315-1.0	28	1320	M24X50
CD-355S	120	720	--	615	610	200	764	500	250	100m6	210	28	106	20	--	718	355-1.0	28	1475	M30X50
CD-355M	120	720	--	615	610	200	764	560	250	100m6	210	28	106	20	--	718	355-1.0	28	1475	M30X50
CD-355L	120	720	--	615	610	200	764	630	250	100m6	210	28	106	20	--	718	355-1.0	28	1475	M30X50

## GENERAL DIMENSIONAL SKETCH OF 'JSL' SQ. CAGE DRIP PROOF HORIZONTAL MOTORS

Frame Size : 160 to 225



FRAME	AA+	AB+	AC+	AD+	A*	BA+	BB+	B*	C*	Ø D	E	F	GA	GD	HA+	HC+	HD+	H	ØK	L+	D1 THRS.
CD-160L	62.5	315	315	253	254	107	305	254	108	48k6	110	14	51.5	9.000 8.910	18	320	378	160.00 160.50	15	690	M16X32
CD-180L	70	350	350	263	279	80	360	279	121	55m6	110	16	59.0	10.000 9.910	20	355	412	180.00 179.50	15	725	M20X40
CD-200M	70	390	390	308	318	70	327	267	133	60m6	140	18	64.0	11.000 10.890	25	398	464	200.00 199.50	19	770	M20X40
CD-200L	70	390	390	308	318	70	365	305	133	60m6	140	18	64.0	11.000 10.890	25	398	464	200.00 199.50	19	805	M20X40
CD-225M	82.5	440	440	340	356	80	390	311	149	65m6	140	18	69.0	11.000 10.890	25	447	510	225.00 199.50	19	819	M20X40

- Note :
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 requirement.



FOR FURTHER ENQUIRIES  
PLEASE CONTACT

ZONAL & BRANCH OFFICES

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In Keeping with the technological strides the world is making in the engineering field, we introduce changes in the design of our products. Hence, the products as actually supplied might have features varying herefrom.