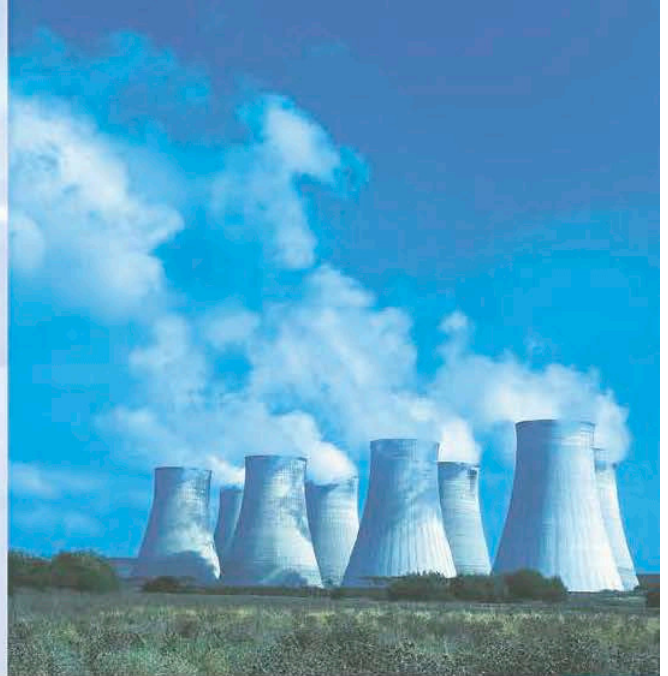
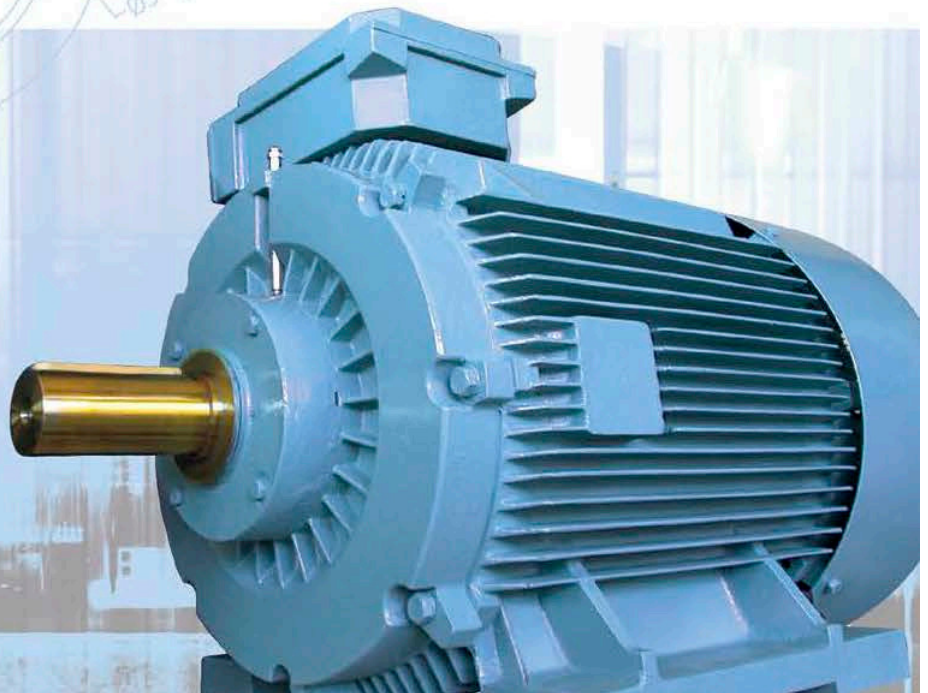


TECHNICAL SPECIFICATIONS



hindustan
ELECTRIC MOTORS

motoring the wheels of success



CRANE DUTY MOTOR



INTRODUCTION:

Crane duty motors are specially designed for frequent starts/stops & reversing required in cranes & lifts of all types. They can also be used in applications such as material handling, weirs & sluices, auxiliary motors in rolling mills or wherever intermittent drives are required.

RANGE:

KW	: 0.18 to 200.0 kW
Pole	: 4P, 6P & 8P
Mounting	: B3, B5, B14 & combinations
Frame	: 71 to 315LX
Voltage	: 415V $\pm$ 10% or as required
Frequency	: 50Hz $\pm$ 5% or as required
Ambient	: 50°C. (Refer Table 1)
Altitude	: up to 1000m above msl (Refer Table 2)
Rotor type	: Squirrel cage aluminium die cast
Enclosure	: Totally enclosed fan cooled (TEFC)
Protection	: IP55
Ins. class	: Class F with temp. rise limited to class B
Duty cycle	: S3, S4 & S5

Table 1

Ambient temp. (°C)	Deration factor for Power
50°C	1.00
55°C	0.96
60°C	0.92

Table 2

Altitude above msl (m)	Deration factor for Power
1000	1.00
1500	0.97
2000	0.94
2500	0.90
3000	0.86

CONSTRUCTION:

Castings: Crane duty motors' housings & end shields are made from high quality castings as per IS 210. All components are machined to correct accuracy & alignment.

Stampings: The stampings are made from low loss high permeability steel.

Terminal Box: Standard location of terminal box is on top. However the terminal box on right or left side can be provided on request. The terminal box can be rotated in steps of 90° in each position. Motors up to 250 frames have aluminium boxes whereas frames 280 & 315 are with cast iron terminal boxes as standard. Cast iron terminal boxes up to frames 250 can also be provided on request.

Winding & Protection: All motors are wound with super enameled dual coat copper wires. This enable motors to be used for inverter applications as well. Features like vacuum pressure impregnation (VPI) & PTC thermistors embedded in stator winding can be provided on request.

Earthing terminals: Two earthing terminals are provided, one in the terminal box & other on the motor body.

Anti-condensation Heater: To avoid moisture accumulation inside the motor, the motor windings can be heated by connecting 4-10% of rated voltage to the motor terminals. This will generate enough heat equivalent to 20-25% of rated current. Alternatively any method as described in IS: 900 can be used. Motor can also be offered with space heaters on request for frames 90 & above.

MOTORS WITH INTEGRAL BRAKES:

These motors can be supplied with integral electromagnetic DC fail safe brakes with built in rectifiers for frames up to frames 250MX.

FLAMEPROOF MOTORS:

"Hindustan" crane duty motors are also available with flameproof enclosures.

ENQUIRY DETAILS:

When placing an enquiry, please furnish the following details;

- Application details
- Motor power & speed
- Voltage & frequency variations
- Mounting
- No. of start/stops per hour with duty & CDF
- Load GD² at motor speed
- Load torque or torque/speed curve of driven equipment
- Duty cycle diagram if other than those described herein

SELECTION CHART FOR CRANE & HOIST DUTY MOTORS

4 POLE

4 POLE

Frame Size	Type Designation	Speed (rpm)	Torque (kgm)	Eff (%)	Power Factor	S3/S4 Duty 60 st/hr						S3/S4 Duty 150 st/hr						S3/S4 Duty 300 st/hr						T_{ST}/T_N	T_{PD}/T_N	Rotor GD ² (kgm ²)
						40% CDF	60% CDF	Power (kW)	Current (A)	Power (kW)	Current (A)	40% CDF	60% CDF	Power (kW)	Current (A)	40% CDF	60% CDF	40% CDF	60% CDF	Power (kW)	Current (A)	40% CDF	60% CDF			
71	2HC1 070-04	1320	0.41	66.0	0.72	0.55	1.6	0.55	1.6	0.55	1.6	0.55	1.6	0.55	1.6	0.55	1.6	0.55	1.6	0.55	1.6	0.55	1.6	2.2	2.7	0.0022
80	2HC1 080-04	1350	0.54	73.0	0.71	0.75	2.0	0.75	2.0	0.75	2.0	0.75	2.0	0.75	2.0	0.75	2.0	0.75	2.0	0.75	2.0	0.75	2.0	2.3	2.7	0.0038
80	2HC1 083-04	1365	0.78	73.0	0.70	1.1	3.0	1.1	3.0	1.1	3.0	1.1	3.0	1.1	3.0	1.1	3.0	1.1	3.0	1.1	3.0	1.1	3.0	2.3	2.7	0.0049
90S	2HC1 090-04	1375	1.06	76.5	0.72	1.5	3.8	1.5	3.8	1.5	3.8	1.5	3.8	1.5	3.8	1.5	3.8	1.5	3.8	1.5	3.8	1.5	3.8	2.3	2.7	0.0072
90L	2HC1 096-04	1375	1.56	78.0	0.75	2.2	5.2	2.2	5.2	2.2	5.2	2.2	5.2	2.2	5.2	2.2	5.2	2.2	5.2	2.2	5.2	2.2	5.2	2.4	2.8	0.0093
100L	2HC1 106-04	1395	2.58	82.0	0.77	3.7	8.2	3.7	8.2	3.7	8.2	3.7	8.2	3.7	8.2	3.7	8.2	3.7	8.2	3.7	8.2	3.7	8.2	2.4	2.8	0.0182
112M	2HC1 123-04	1400	3.83	83.0	0.77	5.5	12.0	5.5	12.0	5.5	12.0	5.5	12.0	5.5	12.0	5.5	12.0	5.5	12.0	5.5	12.0	5.5	12.0	2.6	3.0	0.0342
132S	2HC1 130-04	1415	5.16	87.0	0.77	7.5	15.5	7.5	15.5	7.5	15.5	7.5	15.5	7.5	15.5	7.5	15.5	7.5	15.5	7.5	15.5	7.5	15.5	2.3	2.6	0.0676
132M	2HC1 133-04	1415	6.40	87.0	0.78	9.3	19.0	9.3	19.0	9.3	19.0	9.3	19.0	9.3	19.0	9.3	19.0	9.3	19.0	9.3	19.0	9.3	19.0	2.7	3.0	0.0912
160M	2HC1 163-04	1430	7.49	87.0	0.76	11.0	23.0	11.0	23.0	11.0	23.0	11.0	23.0	11.0	23.0	11.0	23.0	11.0	23.0	11.0	23.0	11.0	23.0	2.3	2.5	0.1404
160M	2HC1 164-04	1430	10.22	88.0	0.76	15.0	31.0	15.0	31.0	15.0	31.0	15.0	31.0	15.0	31.0	15.0	31.0	15.0	31.0	15.0	31.0	15.0	31.0	2.3	2.5	0.1696
160L	2HC1 166-04	1430	12.60	87.0	0.79	18.5	37.5	18.5	37.5	18.5	37.5	18.5	37.5	18.5	37.5	18.5	37.5	18.5	37.5	18.5	37.5	18.5	37.5	2.6	3.0	0.2222
180L	2HC1 186-04	1440	14.88	90.0	0.81	22.0	42.0	22.0	42.0	22.0	42.0	22.0	42.0	22.0	42.0	22.0	42.0	22.0	42.0	22.0	42.0	22.0	42.0	2.6	3.0	0.3790
200L	2HC1 206-04	1440	20.29	91.0	0.83	30.0	55.0	30.0	55.0	30.0	55.0	30.0	55.0	30.0	55.0	30.0	55.0	30.0	55.0	30.0	55.0	30.0	55.0	2.7	3.0	0.8066
225SX	2HC1 220-04	1450	24.85	91.5	0.85	37.0	66.0	37.0	66.0	37.0	66.0	37.0	66.0	37.0	66.0	37.0	66.0	37.0	66.0	37.0	66.0	37.0	66.0	2.5	3.0	1.2224
225MX	2HC1 223-04	1450	30.23	92.0	0.86	45.0	79.0	45.0	79.0	45.0	79.0	45.0	79.0	45.0	79.0	45.0	79.0	45.0	79.0	45.0	79.0	45.0	79.0	2.5	3.0	1.4552
250MX	2HC1 253-04	1455	36.82	92.0	0.86	55.0	97.0	55.0	97.0	55.0	97.0	55.0	97.0	55.0	97.0	55.0	97.0	55.0	97.0	55.0	97.0	55.0	97.0	2.5	3.0	2.2563
280SX	2HC1 280-04	1460	50.03	92.5	0.84	75.0	134.0	75.0	134.0	75.0	134.0	75.0	134.0	75.0	134.0	75.0	134.0	75.0	134.0	75.0	134.0	75.0	134.0	2.5	3.0	3.9994
280MX	2HC1 283-04	1460	60.04	92.5	0.85	90.0	160.0	90.0	160.0	90.0	160.0	90.0	160.0	90.0	160.0	90.0	160.0	90.0	160.0	90.0	160.0	90.0	160.0	2.5	3.0	4.7993
315SX	2HC1 310-04	1470	72.88	93.0	0.86	110.0	191.0	110.0	191.0	110.0	191.0	110.0	191.0	110.0	191.0	110.0	191.0	110.0	191.0	110.0	191.0	110.0	191.0	2.5	3.0	8.1503
315MX	2HC1 313-04	1470	87.46	93.0	0.87	132.0	227.0	132.0	227.0	132.0	227.0	132.0	227.0	132.0	227.0	132.0	227.0	132.0	227.0	132.0	227.0	132.0	227.0	2.5	3.0	9.7803
315LX	2HC1 316-04	1470	106.01	94.0	0.87	160.0	272.0	160.0	272.0	160.0	272.0	160.0	272.0	160.0	272.0	160.0	272.0	160.0	272.0	160.0	272.0	160.0	272.0	2.5	3.0	11.8549
315LX	2HC1 317-04	1470	119.27	94.0	0.87	180.0	305.0	180.0	305.0	180.0	305.0	180.0	305.0	180.0	305.0	180.0	305.0	180.0	305.0	180.0	305.0	180.0	305.0	2.5	3.0	13.3368
315LX	2HC1 318-04	1470	132.52	94.0	0.87	200.0	340.0	200.0	340.0	200.0	340.0	200.0	340.0	200.0	340.0	200.0	340.0	200.0	340.0	200.0	340.0	200.0	340.0	2.5	3.0	14.8187

Suffix "X" denotes motors other than 2 pole motors.

To be offered against specific enquiry

SELECTION CHART FOR CRANE & HOIST DUTY MOTORS

6 POLE

6 POLE

Frame Size	Type Designation	Speed (rpm)	Torque (kgm)	Eff (%)	Power Factor	S3/S4 Duty 60 st/hr						S3/S4 Duty 150 st/hr						S3/S4 Duty 300 st/hr						I _{ST} /I _N	T _{ST} /T _N	T _{PO} /T _N	Rotor GD ² (kgm ²)
						40% CDF		60% CDF		40% CDF		60% CDF		40% CDF		60% CDF		40% CDF		60% CDF							
						Power (kW)	Current (A)	Power (kW)	Current (A)	Power (kW)	Current (A)	Power (kW)	Current (A)	Power (kW)	Current (A)	Power (kW)	Current (A)	Power (kW)	Current (A)	Power (kW)	Current (A)	Power (kW)	Current (A)				
71	2HC1 070-06	870	0.41	60.0	0.66	0.37	1.3	0.37	1.3	0.37	1.3	0.37	1.3	0.37	1.3	0.37	1.3	0.37	1.3	0.37	1.3	3.5	1.6	2.0	0.0033		
80	2HC1 080-06	870	0.62	67.0	0.63	0.55	1.8	0.55	1.8	0.55	1.8	0.55	1.8	0.55	1.8	0.55	1.8	0.55	1.8	0.55	1.8	4.3	2.2	2.5	0.0049		
80	2HC1 083-06	870	0.84	69.0	0.69	0.75	2.2	0.75	2.2	0.75	2.2	0.75	2.2	0.75	2.2	0.75	2.2	0.8	2.2	0.8	2.2	4.3	2.2	2.5	0.0063		
90S	2HC1 090-06	895	1.20	72.0	0.66	1.1	3.2	1.1	3.2	1.1	3.2	1.1	3.2	1.1	3.2	1.1	3.2	1.1	3.2	1.1	3.2	5.2	2.3	2.5	0.0095		
90L	2HC1 096-06	895	1.63	74.0	0.67	1.5	4.2	1.5	4.2	1.5	4.2	1.5	4.2	1.5	4.2	1.5	4.2	1.5	4.2	1.5	4.2	5.2	2.3	2.5	0.0122		
100L	2HC1 106-06	905	2.37	75.0	0.74	2.2	5.5	2.2	5.5	2.2	5.5	2.2	5.5	2.2	5.5	2.2	5.5	2.2	5.5	2.2	5.5	5.5	2.4	2.7	0.0269		
112M	2HC1 123-06	915	3.94	79.0	0.74	3.7	8.8	3.7	8.8	3.7	8.8	3.7	8.8	3.7	8.8	3.7	8.8	3.7	8.8	3.7	8.8	5.5	2.4	2.7	0.0467		
132S	2HC1 130-06	930	5.76	84.0	0.71	5.5	12.8	5.5	12.8	5.5	12.8	5.5	12.8	5.5	12.8	5.5	12.8	5.5	12.8	5.5	12.8	5.5	2.4	2.7	0.0826		
132M	2HC1 133-06	935	7.81	85.0	0.72	7.5	17.0	7.5	17.0	7.5	17.0	7.5	17.0	7.5	17.0	7.5	17.0	7.5	17.0	7.5	17.0	5.5	2.3	2.6	0.1156		
160M	2HC1 164-06	945	9.59	86.0	0.72	9.3	21.0	9.3	21.0	9.3	21.0	9.3	21.0	9.3	21.0	9.3	21.0	9.3	21.0	9.3	21.0	6.0	2.3	2.6	0.2625		
160L	2HC1 166-06	950	11.28	87.0	0.73	11.0	24.0	11.0	24.0	11.0	24.0	11.0	24.0	11.0	24.0	11.0	24.0	11.0	24.0	11.0	24.0	6.0	2.3	2.6	0.3440		
160L	2HC1 167-06	955	15.30	87.0	0.75	15.0	32.0	15.0	32.0	15.0	32.0	15.0	32.0	15.0	32.0	15.0	32.0	15.0	32.0	15.0	32.0	6.0	2.3	2.6	0.3440		
200L	2HC1 206-06	960	18.77	89.0	0.75	18.5	38.5	18.5	38.5	18.5	38.5	18.5	38.5	18.5	38.5	18.5	38.5	18.5	38.5	18.5	38.5	6.0	2.5	3.0	0.8605		
200L	2HC1 207-06	960	22.32	89.0	0.76	22.0	45.0	22.0	45.0	22.0	45.0	22.0	45.0	22.0	45.0	22.0	45.0	22.0	45.0	22.0	45.0	6.0	2.5	3.0	1.0123		
225MX	2HC1 223-06	965	30.28	90.0	0.83	30.0	56.0	30.0	56.0	30.0	56.0	30.0	56.0	30.0	56.0	30.0	56.0	30.0	56.0	30.0	56.0	6.0	2.3	2.6	1.8378		
250MX	2HC1 253-06	965	37.35	91.0	0.86	37.0	66.0	37.0	66.0	37.0	66.0	37.0	66.0	37.0	66.0	37.0	66.0	37.0	66.0	37.0	66.0	6.0	2.3	2.6	2.5127		
280SX	2HC1 280-06	967	45.33	93.0	0.85	45.0	79.0	45.0	79.0	45.0	79.0	45.0	79.0	45.0	79.0	45.0	79.0	45.0	79.0	45.0	79.0	6.0	2.3	2.6	4.3751		
280MX	2HC1 283-06	967	55.40	92.0	0.86	55.0	97.0	55.0	97.0	55.0	97.0	55.0	97.0	55.0	97.0	55.0	97.0	55.0	97.0	55.0	97.0	6.0	2.3	2.6	5.2502		
315SX	2HC1 310-06	970	75.31	93.0	0.86	75.0	131.0	75.0	131.0	75.0	131.0	75.0	131.0	75.0	131.0	75.0	131.0	75.0	131.0	75.0	131.0	6.0	2.3	2.6	7.2611		
315MX	2HC1 313-06	970	90.37	93.0	0.86	90.0	157.0	90.0	157.0	90.0	157.0	90.0	157.0	90.0	157.0	90.0	157.0	90.0	157.0	90.0	157.0	6.0	2.3	2.6	8.5948		
315MX	2HC1 314-06	970	110.45	93.0	0.87	110.0	189.0	110.0	189.0	110.0	189.0	110.0	189.0	110.0	189.0	110.0	189.0	110.0	189.0	110.0	189.0	6.0	2.3	2.6	10.3731		
315LX	2HC1 316-06	970	132.54	93.0	0.87	132.0	227.0	132.0	227.0	132.0	227.0	132.0	227.0	132.0	227.0	132.0	227.0	132.0	227.0	132.0	227.0	6.0	2.3	2.6	12.4477		
315LX	2HC1 317-06	970	160.66	93.0	0.86	160.0	279.0	160.0	279.0	160.0	279.0	160.0	279.0	160.0	279.0	160.0	279.0	160.0	279.0	160.0	279.0	6.0	2.3	2.6	14.2259		

Suffix "X" denotes motors other than 2 pole motors.

SELECTION CHART FOR CRANE & HOIST DUTY MOTORS

8 POLE

8 POLE

Frame Size	Type Designation	Speed (rpm)	Torque (kgm)	Eff (%)	Power Factor	S3/S4 Duty 60 st/hr			S3/S4 Duty 150 st/hr			S3/S4 Duty 300 st/hr			I_{ST}/I_N	T_{ST}/T_N	T_{PO}/T_N	Rotor GD ² (kgm ²)	
						40% CDF		60% CDF	40% CDF		60% CDF	40% CDF		60% CDF					
						Power (kW)	Current (A)	Power (kW)	Current (A)	Power (kW)	Current (A)	Power (kW)	Current (A)	Power (kW)					Current (A)
80	2HC1 083-08	640	0.56	57.0	0.65	0.37	1.4	0.37	1.4	0.37	1.4	0.37	1.4	0.37	1.4	3.0	2.0	2.3	0.0063
90S	2HC1 090-08	650	0.82	64.0	0.57	0.55	2.1	0.55	2.1	0.55	2.1	0.55	2.1	0.55	2.1	3.0	2.1	2.4	0.0095
90L	2HC1 096-08	665	1.10	67.0	0.68	0.75	2.3	0.75	2.3	0.75	2.3	0.75	2.3	0.75	2.3	4.0	2.2	2.5	0.0122
100L	2HC1 106-08	665	1.61	72.0	0.63	1.1	3.4	1.1	3.4	1.1	3.4	1.1	3.4	1.1	3.4	4.3	2.2	2.5	0.0228
100L	2HC1 107-08	665	2.20	73.0	0.66	1.5	4.3	1.5	4.3	1.5	4.3	1.5	4.3	1.5	4.3	4.5	2.2	2.5	0.0296
112M	2HC1 123-08	685	3.13	76.0	0.71	2.2	5.7	2.2	5.7	2.2	5.7	2.2	5.7	2.2	5.7	5.0	2.2	2.5	0.0467
132S	2HC1 130-08	695	5.19	78.0	0.67	3.7	9.8	3.7	9.8	3.7	9.8	3.7	9.8	3.7	9.8	5.5	2.2	2.5	0.0826
160M	2HC1 164-08	695	7.71	83.0	0.68	5.5	13.5	5.5	13.5	5.5	13.5	5.5	13.5	5.5	13.5	5.5	2.2	2.5	0.2625
160L	2HC1 166-08	695	10.51	83.5	0.69	7.5	18.0	7.5	18.0	7.5	18.0	7.5	18.0	7.5	18.0	5.5	2.2	2.5	0.3440
160L	2HC1 167-08	695	13.03	83.5	0.70	9.3	22.0	9.3	22.0	9.3	22.0	9.3	22.0	9.3	22.0	5.5	2.2	2.5	0.3440
180L	2HC1 186-08	700	15.31	87.0	0.66	11.0	26.5	11.0	26.5	11.0	26.5	11.0	26.5	11.0	26.5	5.5	2.2	2.5	0.5949
200L	2HC1 206-08	700	20.87	88.0	0.70	15.0	34.0	15.0	34.0	15.0	34.0	15.0	34.0	15.0	34.0	5.5	2.2	2.5	1.1023
225SX	2HC1 220-08	705	25.56	89.0	0.71	18.5	41.0	18.5	41.0	18.5	41.0	18.5	41.0	18.5	41.0	5.5	2.2	2.5	1.5437
225MX	2HC1 223-08	710	30.18	89.5	0.74	22.0	46.0	22.0	46.0	22.0	46.0	22.0	46.0	22.0	46.0	5.5	2.2	2.5	1.8378
250MX	2HC1 253-08	715	40.87	91.0	0.76	30.0	60.0	30.0	60.0	30.0	60.0	30.0	60.0	30.0	60.0	5.5	2.2	2.5	2.5127
280SX	2HC1 280-08	720	50.05	92.0	0.79	37.0	71.0	37.0	71.0	37.0	71.0	37.0	71.0	37.0	71.0	6.0	2.2	2.5	4.8613
280MX	2HC1 283-08	720	60.88	92.5	0.77	45.0	88.0	45.0	88.0	45.0	88.0	45.0	88.0	45.0	88.0	6.0	2.2	2.5	5.8335
315SX	2HC1 310-08	730	73.38	92.0	0.78	55.0	106.0	55.0	106.0	55.0	106.0	55.0	106.0	55.0	106.0	6.0	2.2	2.5	7.2611
315MX	2HC1 313-08	730	100.07	92.5	0.77	75.0	146.0	75.0	146.0	75.0	146.0	75.0	146.0	75.0	146.0	6.0	2.2	2.5	8.5948
315MX	2HC1 314-08	730	120.08	93.0	0.79	90.0	170.0	90.0	170.0	90.0	170.0	90.0	170.0	90.0	170.0	6.0	2.2	2.5	10.3731
315LX	2HC1 316-08	730	146.77	93.0	0.79	110.0	207.0	110.0	207.0	110.0	207.0	110.0	207.0	110.0	207.0	6.0	2.2	2.5	12.4477
315LX	2HC1 317-08	730	176.12	93.0	0.79	132.0	250.0	132.0	250.0	132.0	250.0	132.0	250.0	132.0	250.0	6.0	2.2	2.5	14.2259

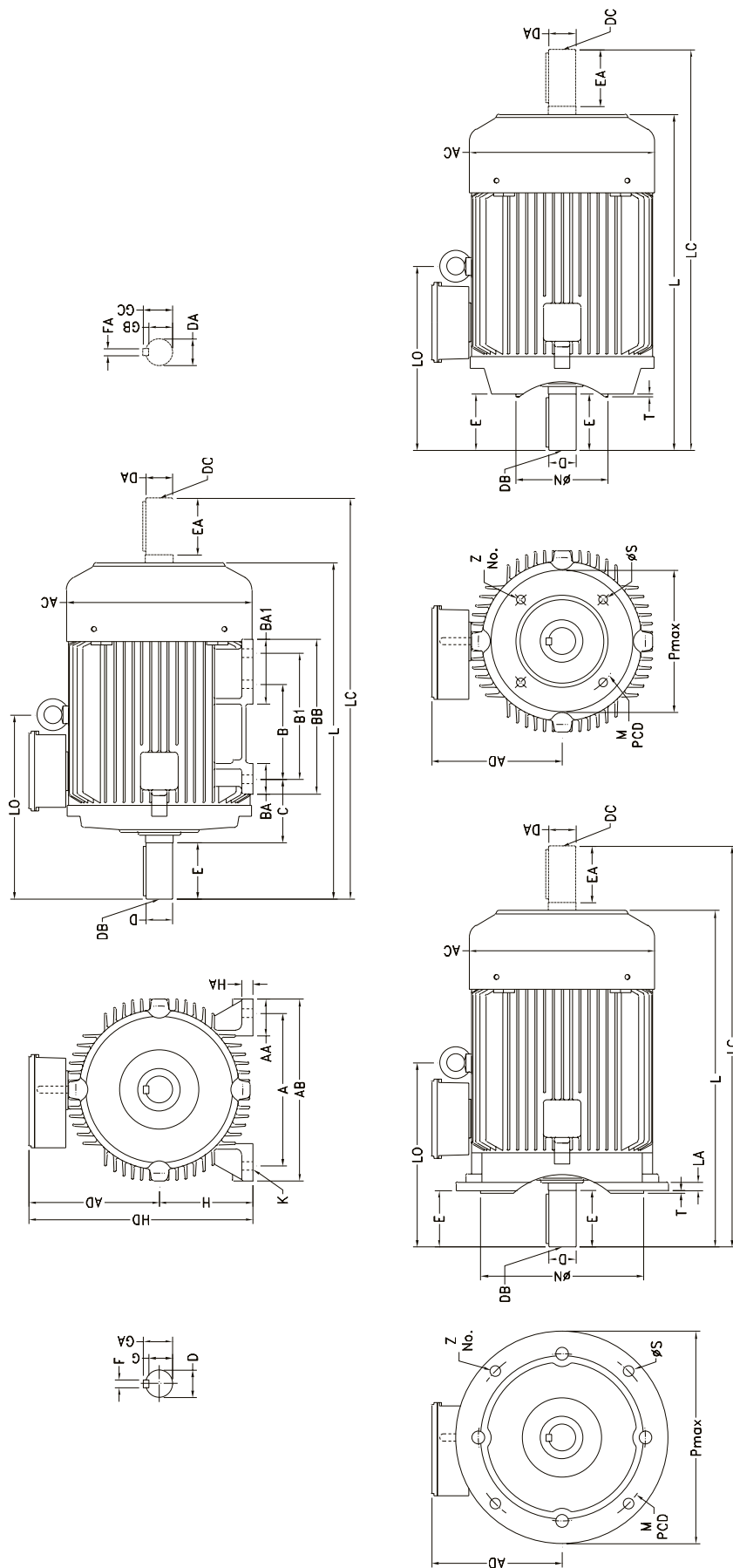
To be offered against specific enquiry

Suffix "X" denotes motors other than 2 pole motors.



MECHANICAL DIMENSIONS - CRANE DUTY MOTORS

FOOT (B3), FLANGE (B5) & FACE (B14) MOUNTED CRANE DUTY MOTORS



MECHANICAL DIMENSIONS - CRANE DUTY MOTORS

Frame Size	General				Foot mounted motors (B3)										Flange mounted motors (B5)						Face mounted motors (B14)						DE, NDE & Shaft										
	L	LC	LO	AC	AD	A	B	B1	C	H	K	AA	AB	BB	BA	BA1	HA	HD	P max	M PCD	øN	øS	Z No.	T max	LA	P max	M PCD	øN	øS	Z No.	T	D, DA	E, EA	F, FA	G, GA, GC	GB	
71	240	272	-	140	107	112	90	-	45	71	7	31	134	112	31	31	8	178	160	130	110	10			9	105	85	70		2.5	14	M5	30	5	16	11	
80	282	326	-	158	125	125	100	-	50	80	10	30	150	125	31	36	9	205								120	100	80	M6		19	M6	40	6	21.5	15.5	
90S	319	376					100	-						124					200	165	130	12			10				3	24	M8	50	8	27	20		
90L	344	401	-	180	133	140	-	125	56	90	10	33	168	149	33	37	10	223								140	115	95	M8								
100L	374	440	221	198	153	160	140	-	63	100	12	43	200	180	46	46	14	253									160	130	110	4	28	M10	60	8	31	24	
112M	398	464	228	222	168	190	140	-	70	112	12	49	230	180	47	47	15	280	250	215	180					11	160	130	110	3.5							
132S	451	538					140	-						180													200	165	130	38	M12	80	10	41	33		
132M	489	576	260	262	185	216	-	178	89	132	12	52	256	218	47	85		317	300	265	230						200	165	130	4	42						
160M	589	706					210	-						260				376									250	215	180								
160L	633	750	354	314	216	254	-	254	108	160	15	64	304	304	60	104			350	300	250				13					4							
180M	655	772					241	-						297																	48						
180L	693	810	381	354	236	279	-	279	121	180	15	65	335	335	66	103		416																			
200L	760	880	416	395	276	318	305	-	133	200	19	84	386	365	74	74	26	476	400	350	300				15												
225SX																																					
225MX	835	985	466	435	297	356	286	311	149	225	19	90	428	371	74	95	28	522	450	400	350				16					60							
250MX	930	1085	483	481	319	406	349	-	168	250	24	105	490	433	93	93	38	569												65							
280SX	1040	1195	590	543	426	457	368	419	190	280	24	100	557	483	90	145	42	706	550	500	450				18					75							
280MX																																					
315SX																																					
315MX	1185	1392	641				406	457						533		151	46	767	660	600	550	24			6	23				80							
315LX	1348	1565	696				457	508						616		191																					

Note: 1) Suffix "X" denotes motors other than 2 pole motors.

2) All flange dimensions are conforming to IS: 2223.

3) " \$ " Shaft dimensions on NDE side may be different for 2P motors. Please contact sales office for details.