

# COOLING TOWER MOTORS



## Cooling Tower Motors - General Technical Information

### Features of LHP Cooling tower motors

- Suitable for outdoor duty application and 100% humid and chemical environment.
- IP 55 Protection to prevent water ingress.
- Anticorrosive paint for better life
- Reliable bearing life of 10,00,000 hours
- Can be operated on VVVF for energy saving between 30 to 50 Hz frequency.
- Can eliminate the gear box, cooling system, shafts, couplings, bearings, resulting in less maintenance.
- Low vibration and noise

|            |                                    |
|------------|------------------------------------|
| Range      | Up to 425 HP (315 kW)              |
| R.P.M.     | 1500, 1000, 750                    |
| Pole       | 4/6/8                              |
| Mounting   | B5 / Shaft downward position V1    |
| Frame      | 71 to 355 L                        |
| Protection | IP 55                              |
| Insulation | F Class                            |
| Voltage    | 415 V, 380 V or as per requirement |
| Frequency  | 50 Hz or 60 Hz                     |
| Duty       | S1                                 |
| Paint      | With Anti corrosive Epoxy paint    |

### Applicable Standards

|                        |                                                                             |
|------------------------|-----------------------------------------------------------------------------|
| IS - 4722              | Specifications for rotating electrical machine                              |
| IS 60034-1/ IS 15999-1 | Specifications for 3 phase induction machine                                |
| IS/ IEC 60034 - 5      | Degree of protection provided by enclosure for rotating electrical machines |
| IS/IEC 60034 2-1       | Method of determination of efficiency of rotating electrical machines       |
| IS - 2223 (IEC 72 - 1) | Dimensions of 3 phase flange mounted induction motors                       |

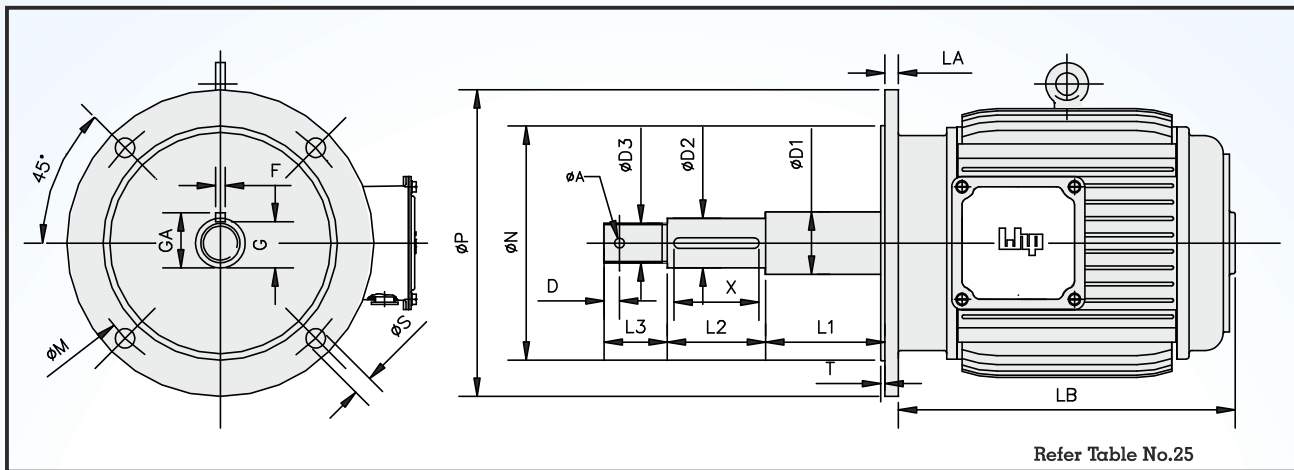


## COOLING TOWER MOTORS

Upto 355 Frame

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## Cooling Tower Motors - General arrangement Drawing/Dimensions



Refer Table No.25

Table No. - 25

| Frame size | M   | N   | P   | S X NO. | T   | LA | LB  | AD  | F  | G    | GA   | ØD1 | L1  | D2              | L2  | D3  | L3 | X   | ØA  | B   |
|------------|-----|-----|-----|---------|-----|----|-----|-----|----|------|------|-----|-----|-----------------|-----|-----|----|-----|-----|-----|
| 71         | 130 | 110 | 160 | 10X4    | 3.5 | 10 | 180 | 115 | 5  | 11   | 16   | 17  | 55  | 14 <sup>6</sup> | 25  | M12 | 30 | 20  | --- | --- |
| 80         | 165 | 130 | 200 | 12X4    | 3.5 | 10 | 220 | 120 | 6  | 15.5 | 21.5 | 20  | 60  | 19 <sup>6</sup> | 50  | M16 | 30 | 45  | --- | --- |
| 90S        | 165 | 130 | 200 | 12X4    | 3.5 | 12 | 240 | 160 | 8  | 24   | 31   | 30  | 60  | 28 <sup>6</sup> | 50  | M24 | 50 | 45  | 5   | 8   |
| 90L        | 165 | 130 | 200 | 12X4    | 3.5 | 12 | 262 | 160 | 8  | 24   | 31   | 30  | 60  | 28 <sup>6</sup> | 50  | M24 | 50 | 45  | 5   | 8   |
| 100L       | 215 | 180 | 250 | 15X4    | 4.0 | 12 | 280 | 165 | 8  | 24   | 31   | 30  | 60  | 28 <sup>6</sup> | 50  | M24 | 50 | 45  | 5   | 8   |
| 112M       | 215 | 180 | 250 | 15X4    | 4.0 | 12 | 300 | 190 | 8  | 24   | 31   | 30  | 60  | 28 <sup>6</sup> | 50  | M24 | 50 | 45  | 5   | 8   |
| 132S       | 265 | 230 | 300 | 15X4    | 4.0 | 12 | 316 | 205 | 10 | 33   | 41   | 40  | 90  | 38 <sup>6</sup> | 75  | M30 | 50 | 65  | 5   | 8   |
| 132M       | 265 | 230 | 300 | 15X4    | 4.0 | 12 | 354 | 205 | 10 | 33   | 41   | 40  | 90  | 38 <sup>6</sup> | 75  | M30 | 50 | 65  | 5   | 8   |
| 132M(N)    | 265 | 230 | 300 | 15X4    | 4.0 | 12 | 394 | 205 | 10 | 33   | 41   | 40  | 90  | 38 <sup>6</sup> | 75  | M30 | 50 | 65  | 5   | 8   |
| 160M       | 300 | 250 | 350 | 19X4    | 5.0 | 13 | 420 | 260 | 12 | 37   | 45   | 45  | 90  | 42 <sup>6</sup> | 75  | M30 | 50 | 70  | 5   | 8   |
| 160L       | 300 | 250 | 350 | 19X4    | 5.0 | 13 | 462 | 260 | 12 | 37   | 45   | 45  | 90  | 42 <sup>6</sup> | 75  | M30 | 50 | 70  | 5   | 8   |
| 180M/L     | 300 | 250 | 350 | 19X4    | 5.0 | 13 | 520 | 270 | 14 | 42.5 | 51.5 | 50  | 100 | 48 <sup>6</sup> | 105 | M30 | 50 | 90  | 5   | 8   |
| 200L       | 350 | 300 | 400 | 19X4    | 5.0 | 15 | 570 | 313 | 16 | 49   | 59   | 60  | 100 | 55 <sup>6</sup> | 105 | M30 | 50 | 95  | 5   | 10  |
| 225S/M     | 400 | 350 | 450 | 19X8    | 5.0 | 16 | 605 | 370 | 18 | 53   | 64   | 65  | 100 | 60 <sup>6</sup> | 115 | M30 | 50 | 100 | 5   | 10  |
| 250M       | 500 | 450 | 550 | 19X8    | 5.0 | 22 | 695 | 415 | 18 | 58   | 69   | 70  | 100 | 65 <sup>6</sup> | 115 | M40 | 60 | 100 | 5   | 10  |
| 280S/M     | 500 | 450 | 550 | 19X8    | 5.0 | 22 | 785 | 430 | 20 | 67.5 | 79.5 | 90  | 120 | 75 <sup>6</sup> | 120 | M40 | 60 | 100 | 5   | 10  |
| 315L       | 600 | 550 | 660 | 24X8    | 6.0 | 22 | 935 | 525 | 22 | 71   | 85   | 95  | 130 | 80 <sup>6</sup> | 120 | M40 | 60 | 120 | 5   | 10  |