

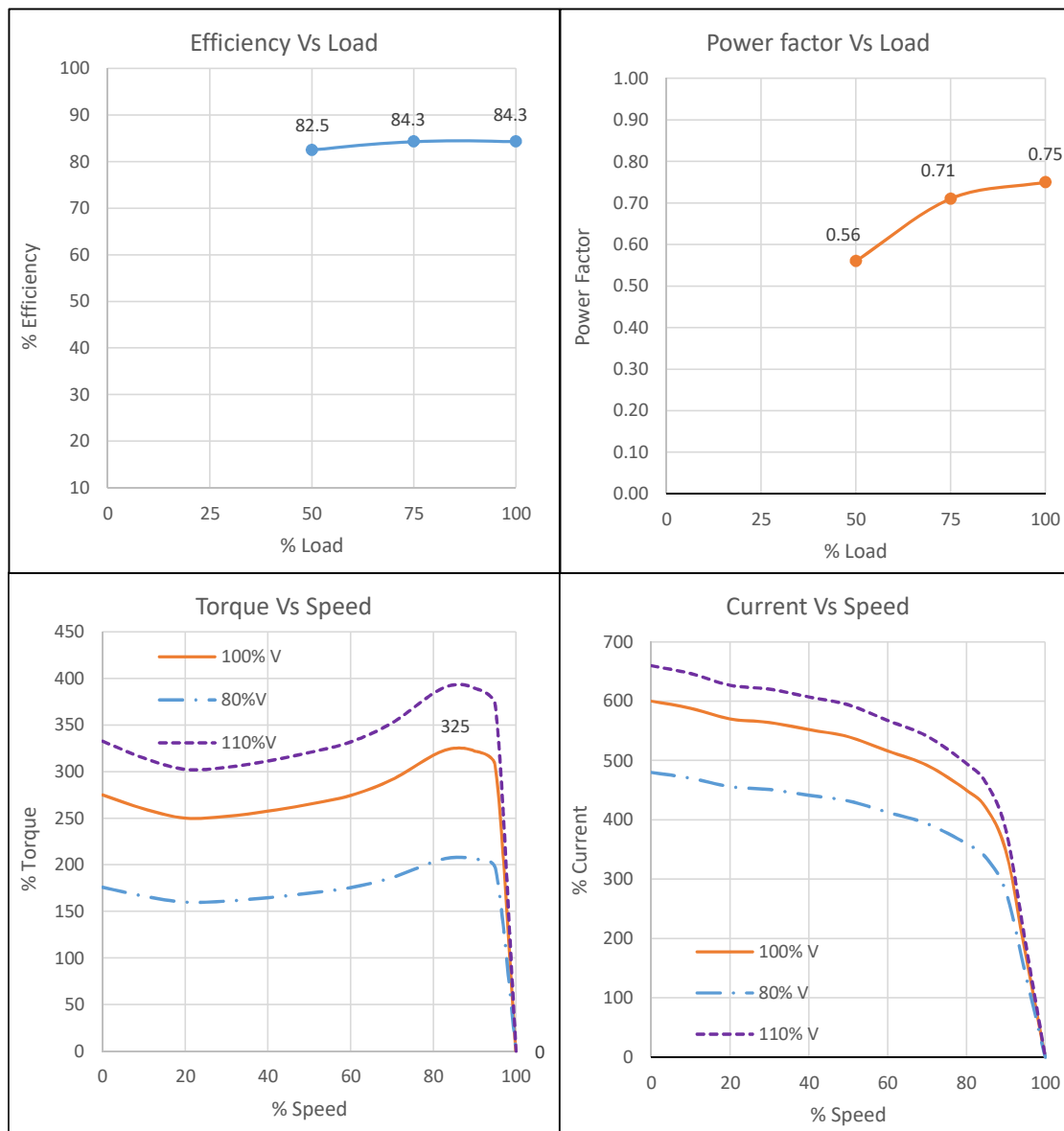
**IE2**

# **TECHNICAL DATASHEET** **3 PHASE INDUCTION MOTOR**



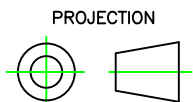
| Sr No                                                                                                                                         | Parameter                             | Unit              | Data                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-------------------|--------------------------------------|
| <b>Product Specifications</b>                                                                                                                 |                                       |                   |                                      |
| 1                                                                                                                                             | Rated Output                          | kW                | 2.2                                  |
| 2                                                                                                                                             | Number of Poles                       | No                | 4                                    |
| 3                                                                                                                                             | Frame Designation                     |                   | KM100L                               |
| 4                                                                                                                                             | Product Code                          |                   | KM2.2T20.BIA.B14.TSS                 |
| 5                                                                                                                                             | Mounting                              |                   | B14                                  |
| <b>Electrical</b>                                                                                                                             |                                       |                   |                                      |
| 6                                                                                                                                             | Type of Duty                          |                   | Continuous S1                        |
| 7                                                                                                                                             | Rated Voltage                         | V                 | 415 ±10%                             |
| 8                                                                                                                                             | Rated Frequency                       | Hz                | 50 ±5%                               |
| 9                                                                                                                                             | Rated Speed                           | RPM               | 1435                                 |
| 10                                                                                                                                            | Rated Current                         | A                 | 4.84                                 |
| 11                                                                                                                                            | Method of Starting                    |                   | Direct On Line                       |
| 12                                                                                                                                            | Starting Current (SCC)                | % of FLA          | 600                                  |
| 13                                                                                                                                            | Rated Torque                          | Kg-m              | 1.49                                 |
| 14                                                                                                                                            | Starting Torque (STT)                 | % of FLT          | 275                                  |
| 15                                                                                                                                            | Maximum Torque (POT)                  | % of FLT          | 325                                  |
| 16                                                                                                                                            | Efficiency at 100% / 75% / 50% load   | %                 | 84.3 / 84.3/ 82.5                    |
| 17                                                                                                                                            | Power factor at 100% / 75% / 50% load |                   | 0.75 / 0.71 / 0.56                   |
| 18                                                                                                                                            | Thermal Withstand Time (Hot)          | s                 | 6                                    |
| 19                                                                                                                                            | Thermal Withstand Time (Cold)         | s                 | 12                                   |
| 20                                                                                                                                            | Thermal Time Constant (Stator)        | min               | 30                                   |
| 21                                                                                                                                            | Connection / Number of Terminals      |                   | Delta / 6                            |
| 22                                                                                                                                            | Permissible Starts/hour (Hot/Cold)    | Nos               | 2/3                                  |
| 23                                                                                                                                            | Insulation Class / Thermal Limit      |                   | F/B                                  |
| 24                                                                                                                                            | Winding Treatment                     |                   | VPI, Dual Coat Copper Wire           |
| <b>Mechanical</b>                                                                                                                             |                                       |                   |                                      |
| 25                                                                                                                                            | Degree of Protection                  |                   | IP55                                 |
| 26                                                                                                                                            | Enclosure / MOC /Method of Cooling    |                   | TEFC / AL/ IC411                     |
| 27                                                                                                                                            | Bearing DE/NDE                        |                   | 6206ZZ/6206ZZ                        |
| 28                                                                                                                                            | Type of Coupling                      |                   | Direct/Flexible                      |
| 29                                                                                                                                            | Noise Level                           |                   | As per IS12065                       |
| 30                                                                                                                                            | Vibration Level                       |                   | As per IS12075                       |
| 31                                                                                                                                            | Moment of Inertia GD <sup>2</sup>     | kg-m <sup>2</sup> | 0.0236                               |
| 32                                                                                                                                            | Position of Terminal Box              |                   | TOP                                  |
| 33                                                                                                                                            | Maximum Cable Size                    |                   | 2X3CX6 mm <sup>2</sup>               |
| 34                                                                                                                                            | Direction of Rotation                 |                   | Bidirectional ( Default: CW from DE) |
| 35                                                                                                                                            | Paint Shade                           |                   | RAL 7046- Telegrey                   |
| 36                                                                                                                                            | Net weight                            | kg                | 23.00                                |
| 37                                                                                                                                            | Accessories                           |                   | NA                                   |
| <b>Enviromental</b>                                                                                                                           |                                       |                   |                                      |
| 38                                                                                                                                            | Ambient Temperature /Temperature Rise | °C                | 50 / 70 (By resistance method)       |
| 39                                                                                                                                            | Altitude Above MSL                    | m                 | ≤ 1000                               |
| <b>Notes:</b> All performance data shall be subject to tolerances as per IS15999/IEC 60034.<br>Applicable Standards:IS 12615-2018, IS 15999-1 |                                       |                   |                                      |
| Customer                                                                                                                                      |                                       | PO No./ Enq. No   |                                      |
|                                                                                                                                               |                                       | Date              |                                      |
| Checked                                                                                                                                       | BMD                                   | 27/10/2022        |                                      |
| Approved                                                                                                                                      | SSN                                   | 27/10/2022        | Document No: KM2-001 Rev.0           |
| <b>KIRLOSKAR OIL ENGINES LTD.</b><br><b>ELECTRIC MOTORS</b>                                                                                   |                                       |                   |                                      |

## PERFORMANCE CURVE

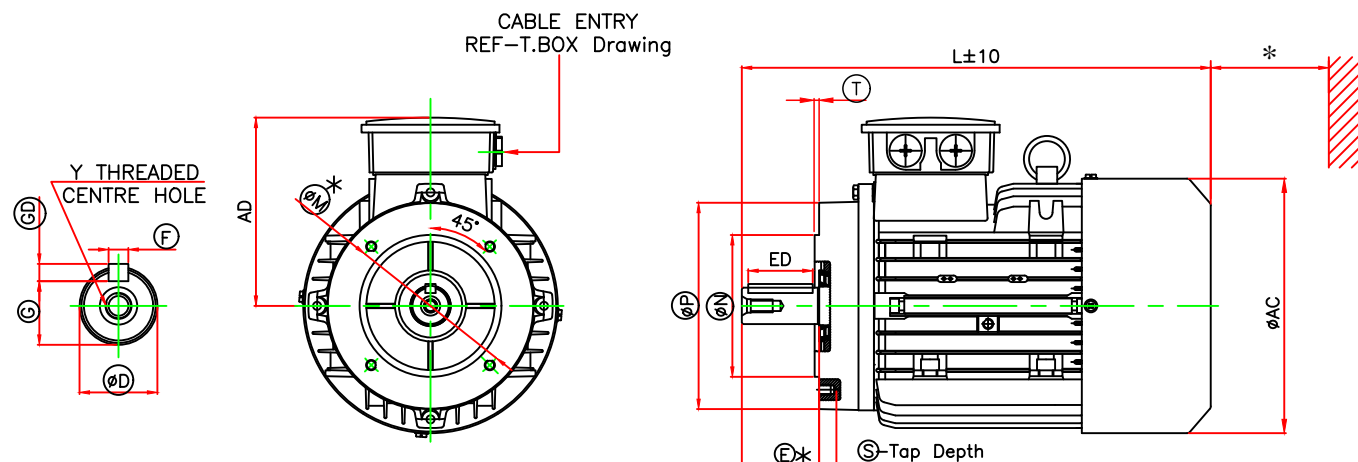


|          |        |                 |                            |
|----------|--------|-----------------|----------------------------|
| kW       | 2.2    | Customer        |                            |
| Pole     | 4      | PO No / Enq. No |                            |
| Frame    | KM100L | Date            |                            |
| Mounting | B14    | Product Code    | KM2.2T20.BIA.B14.TSS       |
| Checked  | BMD    | 27/10/2022      |                            |
| Approved | SSN    | 27/10/2022      | Document No KM2-002 Rev. 0 |

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ELECTRIC MOTORS



# GENERAL ARRANGEMENT DRAWING FOR TEFC 3 PHASE INDUCTION MOTOR



| FRAME  | FACE FIXING |                 |     |      |     | OVER ALL |     |     |
|--------|-------------|-----------------|-----|------|-----|----------|-----|-----|
|        | M TOL.      | N TOL.          | P   | S    | T   | AC       | L   | AD  |
| KM100L | 130         | 110.013/109.991 | 160 | M8X9 | 3.5 | 198      | 364 | 146 |

| D END SHAFT EXTENSION AND KEY |    |    |         |         |           |        |
|-------------------------------|----|----|---------|---------|-----------|--------|
| D TOL.                        | E  | ED | F TOL.  | GD TOL. | G         | Y      |
| 28.009/27.996                 | 60 | 50 | 8/7.964 | 7.0/6.9 | 24.0/23.9 | M10X24 |

| kW   | PRODUCT CODE         | PRODUCT CODE         | PRODUCT CODE         | PRODUCT CODE         |
|------|----------------------|----------------------|----------------------|----------------------|
|      | 2 POLE               | 4 POLE               | 6 POLE               | 8 POLE               |
| 0.75 | --                   | --                   | --                   | KM2.0T75.DIA.B14.TSS |
| 1.1  | --                   | --                   | --                   | KM2.1T10.DIA.B14.TSS |
| 1.5  | --                   | --                   | KM2.1T50.CIA.B14.TSS | --                   |
| 2.2  | --                   | KM2.2T20.BIA.B14.TSS | --                   | --                   |
| 3.7  | KM2.3T70.AIA.B14.TSS | --                   | --                   | --                   |

## NOTES:

- ONE EARTHING TERMINAL IS PROVIDED INSIDE MAIN TERMINAL BOX.
- \* 80mm MINIMUM DISTANCE TO BE MAINTAINED FOR EFFICIENT COOLING OF THE MOTOR.
- \* TOLERANCES ON MANDATORY DIMENSIONS ARE AS PER IS:2223/IEC:60072

RINGED DIMENSIONS ARE AS PER IS:2223/IEC:60072

ALL DIMENSIONS ARE IN mm,

|          | NAME | DATE       | kW              | REFER TABLE            | FRAME    | KM100L                |
|----------|------|------------|-----------------|------------------------|----------|-----------------------|
| DRAWN    | KSK  | 19/10/2022 | POLE            | REFER TABLE            | MOUNTING | B14 (HORIZONTAL FACE) |
| CHECKED  | SGS  | 19/10/2022 | PRODUCT CODE    | REFER TABLE            | CUSTOMER |                       |
| APPROVED | SSN  | 19/10/2022 | MAX. CABLE SIZE | 2RX3CX6MM <sup>2</sup> | PO NO    |                       |
|          |      |            | PROJECT         |                        | CLIENT   |                       |

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ELECTRIC MOTORS

DO NOT SCALE  
FORMAT NO.:KM-GA-2021 R0

DRAWING NO  
KM100LB14TSALR0

