

**Model No.** 2-Pole cage motor TCA 280M 90kW D400V 50Hz IM1001

| U<br>(V) | Δ / Y<br>Conn | f<br>[Hz] | P<br>[kW] | P<br>[hp] | I<br>[A] | n<br>[RPM] | T<br>[Nm] | IE<br>Class | % EFF at __ load<br>FL 3/4FL 1/2FL | PF at __ load<br>FL 3/4FL 1/2FL | I <sub>A</sub> /I <sub>N</sub><br>[pu] | T <sub>A</sub> /T <sub>N</sub><br>[pu] | T <sub>K</sub> /T <sub>N</sub><br>[pu] |
|----------|---------------|-----------|-----------|-----------|----------|------------|-----------|-------------|------------------------------------|---------------------------------|----------------------------------------|----------------------------------------|----------------------------------------|
| 400      | D             | 50        | 90        | 120       | 152      | 2981       | 288,3     | IE3         | 95,7                               | 0,89                            | 8,15                                   | 1,80                                   | 3,03                                   |
| 690      | Y             |           |           |           | 88,4     |            |           |             |                                    |                                 |                                        |                                        |                                        |
| 460      | D             | 60        | 101       | 135,4     | 147      | 3581       | 269,4     | IE3         | 95,0 95,0 93,9                     | 0,91                            | 7,29                                   | 1,72                                   | 2,96                                   |
|          |               |           |           |           | 85,1     |            |           |             |                                    |                                 |                                        |                                        |                                        |

|                |                                     |
|----------------|-------------------------------------|
| Motor type     | <b>TCA280MA2E3</b>                  |
| Enclosure      | <b>Totally Enclosed Fan Cooling</b> |
| Frame Material | <b>Cast iron</b>                    |
| Frame size     | <b>280M</b>                         |
| Duty           | <b>S1</b>                           |
| Voltage        | <b>400 V</b>                        |
| Frequency      | <b>50 Hz</b>                        |
| Power output   | <b>90 kW</b>                        |

|                               |                       |
|-------------------------------|-----------------------|
| Insulation class              | <b>F</b>              |
| Ambient temperature           | <b>-20 till 40 °C</b> |
| Temperature rise              | <b>-</b>              |
| Temperature rise winding      | <b>60 K</b>           |
| Temperature rise surface      | <b>36 K</b>           |
| Altitude above sea level      | <b>1000 mtr</b>       |
| Hazardous area classification | <b>Safe area</b>      |

|                    |                      |
|--------------------|----------------------|
| Rotor type         | <b>Cage motor</b>    |
| Bearing type       | <b>6314/C3</b>       |
| Lubrication method | <b>23gr/4300hrs</b>  |
| Type of grease     | <b>Chevron SRI-2</b> |

|                   |           |
|-------------------|-----------|
| Country of origin | <b>CN</b> |
|-------------------|-----------|

| Voltage/Freq  | Locked rotor<br>Torque [%<br>nom] | Starting<br>current<br>[% nom] | Pull-up<br>Torque<br>[% nom] | Breakdown<br>Torque<br>[% nom] | No-load<br>Current<br>[A] |
|---------------|-----------------------------------|--------------------------------|------------------------------|--------------------------------|---------------------------|
| @ D 400V 50Hz | 180%                              | 815%                           |                              | 303%                           | 44,3 A                    |
| @ D 460V 60Hz | 172%                              | 727%                           |                              | 296%                           |                           |

#### NOTE

All performance values at rated voltage and frequency.

All performance parameters are subjected to standard tolerance as per IEC 60034-1

Voltage, Frequency are as per IEC60034-1

Technical data are subject to change. There may be discrepancies between calculated and name plate values.

|            |                  |               |
|------------|------------------|---------------|
| Efficiency | Europe           | Global IEC    |
| Standards  | EN-IEC: 60034-30 | IEC: 60034-30 |

This is an uncontrolled copy, data can be changed anytime.

|                        |                              |
|------------------------|------------------------------|
| Degree of protection   | <b>IP55</b>                  |
| Mounting type          | <b>IM1001</b>                |
| Cooling method         | <b>IC411</b>                 |
| Motor weight - approx. | <b>720 kg</b>                |
| Gross weight - approx. | <b>740 kg</b>                |
| Motor inertia          | <b>1,1700 kgm²</b>           |
| Vibration level        | <b>according IEC60034-14</b> |

|                       |                  |
|-----------------------|------------------|
| Direction of rotation | <b>cw /ccw</b>   |
|                       | <b>PTC 150°C</b> |

Schematic presentation of torque-speed curve



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Driving efficiency and sustainability

