

Model No. 2-Pole cage motor 5RN 280M 90kW D400V 50Hz IM1041

| 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       | 154      | 2975       | 288,9     | IE2         | 95,0 94,9 94,1                     | 0,89 0,86 0,80                  | 7,60                                   | 2,47                                   | 3,05                                   |
| 690      | Y             |           |           |           | 89       |            |           |             |                                    |                                 |                                        |                                        |                                        |
| 460      | D             | 60        | 105       | 140,8     | 154      | 3574       | 280,6     | N/A         | 95,4 95,1 94,2                     | 0,89 0,87 0,81                  | 7,13                                   | 2,49                                   | 2,86                                   |

|                |                              |
|----------------|------------------------------|
| Motor type     | 5RN280M02B3                  |
| Enclosure      | Totally Enclosed Fan Cooling |
| Frame Material | Cast iron                    |
| Frame size     | 280M                         |
| Duty           | S1                           |
| Voltage        | 400 V                        |
| Frequency      | 50 Hz                        |
| Power output   | 90 kW                        |

|                               |                  |
|-------------------------------|------------------|
| Insulation class              | F                |
| Ambient temperature           | -20 till 40 °C   |
| Temperature rise              | temp.rise acc. H |
| Temperature rise winding      | 81 K             |
| Temperature rise surface      | 34 K             |
| Altitude above sea level      | 1000 mtr         |
| Hazardous area classification | Safe area        |

|                    |              |
|--------------------|--------------|
| Rotor type         | Cage motor   |
| Bearing type       | 6217/C3      |
| Lubrication method | 37gr/2500hrs |
| Type of grease     | Unirex N3    |

|                          |            |
|--------------------------|------------|
| Phase resistance at 20°C | 0,0475 Ohm |
| Country of origin        | CZ         |

| 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 | 247%                              | 759%                           | 199%                         | 305%                           | 43,9 A                    |
| @ D 460V 60Hz | 249%                              | 707%                           | 187%                         | 286%                           | 39,3 A                    |

#### 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               | IP55                    |
| Mounting type                      | IM1041                  |
| Cooling method                     | IC411                   |
| Motor weight - approx.             | 550 kg                  |
| Gross weight - approx.             | 570 kg                  |
| Motor inertia                      | 0,8500 kgm <sup>2</sup> |
| Vibration level                    | according IEC60034-14   |
| Noise level (pressure) acc 60034-9 | 0 dB(A)                 |

|                       |          |
|-----------------------|----------|
| Direction of rotation | cw / ccw |
|-----------------------|----------|

Schematic presentation of torque-speed curve



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P000001118



Driving efficiency and sustainability

