

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22Xec IE3 Three-Phase

Product code : 12861536

Area classification : ZONA 2/22, GRUPO IIC/IIIB, T3(200 °C)/  
T125 °C

Catalog # : E04512ET3YAX280SMF3W

Frame : 280S/M  
Output : 45 kW (60 HP)  
Poles : 6  
Frequency : 50 Hz  
Rated voltage : 380/660 V  
Rated current : 90.0/51.8 A  
L. R. Amperes : 540/311 A  
LRC : 6.0  
No load current : 37.9/21.8 A  
Rated speed : 985 rpm  
Slip : 1.50 %  
Rated torque : 322 ft.lb  
Locked rotor torque : 190 %  
Breakdown torque : 220 %  
Insulation class : F  
Service factor : 1.00  
Moment of inertia (J) : 55.8 sq.ft.lb  
Design : N

Locked rotor time : 50s (cold) 28s (hot)  
Temperature rise : 80 K  
Duty cycle : S1  
Ambient temperature : -20°C to +40°C  
Altitude : 1000 m.a.s.l.  
Protection degree : IP55  
Cooling method : IC411 - TEFC  
Mounting : B3T  
Rotation<sup>1</sup> : Both (CW and CCW)  
Noise level<sup>2</sup> : 65.0 dB(A)  
Starting method : Direct On Line  
Approx. weight<sup>3</sup> : 1341 lb

| Output         | 25%  |      | 50%  |      | 75%  |      | 100% |      |
|----------------|------|------|------|------|------|------|------|------|
| Efficiency (%) | 93.6 | 92.8 | 93.7 | 93.0 | 93.8 | 93.9 | 93.8 | 93.9 |
|                | 92.8 | 92.5 | 93.0 | 93.0 | 94.0 | 94.1 | 94.0 | 94.5 |
| Power Factor   | 0.41 | 0.37 | 0.66 | 0.62 | 0.77 | 0.73 | 0.81 | 0.80 |
|                | 0.35 | 0.36 | 0.60 | 0.60 | 0.71 | 0.72 | 0.78 | 0.78 |

Foundation loads  
Max. traction : 1320 lb  
Max. compression : 2660 lb

Losses at normative operating points (speed;torque), in percentage of rated output power

|            |                |     |     |     |     |
|------------|----------------|-----|-----|-----|-----|
| Losses (%) | P1 (0,9;1,0)   | 6.3 | 6.2 | 6.1 | 5.5 |
|            | P2 (0,5;1,0)   | 5.1 | 5.0 | 4.9 | 4.5 |
|            | P3 (0,25;1,0)  | 4.8 | 4.8 | 4.7 | 4.3 |
|            | P4 (0,9;0,5)   | 3.2 | 3.2 | 3.1 | 2.9 |
|            | P5 (0,5;0,5)   | 2.1 | 2.1 | 2.1 | 1.9 |
|            | P6 (0,5;0,25)  | 1.5 | 1.4 | 1.4 | 1.3 |
|            | P7 (0,25;0,25) | 1.0 | 1.0 | 1.0 | 0.9 |

|                      |   |                  |                      |
|----------------------|---|------------------|----------------------|
|                      |   | <u>Drive end</u> | <u>Non drive end</u> |
| Bearing type         | : | 6316 C3          | 6316 C3              |
| Sealing              | : | WSeal            | WSeal                |
| Lubrication interval | : | 18000 h          | 18000 h              |
| Lubricant amount     | : | 34 g             | 34 g                 |
| Lubricant type       | : | Mobil Polyrex EM |                      |

Notes:

ATEX  
Baseefa 10ATEX0192X  
BAS21UKEX0284X  
II 3G Ex ec IIC T3 Gc  
II 3D Ex tc IIIB T125°C Dc  
EAC  
TC RU C-BR.AA87.B.00977/22  
2Ex ec IIC T3 Gc X  
Ex tc IIIB T125°C Dc X  
ООО «НАИО ЛЦБЭ»  
IECEX  
IECEX BAS 10.0099X

| Rev.         | Changes Summary | Performed                 | Checked | Date |
|--------------|-----------------|---------------------------|---------|------|
|              |                 |                           |         |      |
| Performed by |                 | Page<br>1 / 3<br>Revision |         |      |
| Checked by   |                 |                           |         |      |
| Date         | 27/03/2024      |                           |         |      |

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Customer :

Ex ec IIC T3 Gc  
Ex tc IIIB T125°C Dc

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|--------------|-----------------|--|-----------|---------|----------|
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Customer :

Thermal protection

| ID | Application | Type                 | Quantity  | Sensing Temperature |
|----|-------------|----------------------|-----------|---------------------|
| 1  | Winding     | Thermistor - 2 wires | 1 x Phase | 140 °C              |
| 2  | Winding     | Thermistor - 2 wires | 1 x Phase | 155 °C              |

|              |                 |  |           |               |          |
|--------------|-----------------|--|-----------|---------------|----------|
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