

DATA SHEET



Three Phase Induction Motor - Squirrel Cage

Customer :																																																																														
Product line : W22 NEMA Premium Efficiency Three-Phase	Product code : 11356018 Catalog # : 10009ET3G445T-W22																																																																													
Frame : 444/5T Output : 100 HP (75 kW) Poles : 8 Frequency : 60 Hz Rated voltage : 460 V Rated current : 127 A L. R. Amperes : 762 A LRC : 6.0x(Code G) No load current : 56.0 A Rated speed : 890 rpm Slip : 1.11 % Rated torque : 590 ft.lb Locked rotor torque : 190 % Breakdown torque : 220 % Insulation class : F Service factor : 1.25 Moment of inertia (J) : 87.3 sq.ft.lb Design : B	Locked rotor time : 27s (cold) 15s (hot) Temperature rise : 80 K Duty cycle : Cont.(S1) Ambient temperature : -20°C to +40°C Altitude : 1000 m.a.s.l. Protection degree : IP55 Cooling method : IC411 - TEFC Mounting : F-1 Rotation ¹ : Both (CW and CCW) Noise level ² : 63.0 dB(A) Starting method : Direct On Line Approx. weight ³ : 1760 lb																																																																													
<table border="1"> <tr> <td>Output</td> <td>25%</td> <td>50%</td> <td>75%</td> <td>100%</td> </tr> <tr> <td>Efficiency (%)</td> <td>93.5</td> <td>92.9</td> <td>93.6</td> <td>92.9</td> <td>94.1</td> <td>93.4</td> <td>94.1</td> <td>93.2</td> </tr> <tr> <td></td> <td>91.5</td> <td>90.6</td> <td>91.9</td> <td>91.2</td> <td>93.0</td> <td>92.6</td> <td>93.2</td> <td>93.1</td> </tr> <tr> <td></td> <td>94.0</td> <td>92.9</td> <td>93.6</td> <td>93.0</td> <td>93.0</td> <td>93.0</td> <td>92.4</td> <td>93.0</td> </tr> <tr> <td></td> <td>92.2</td> <td>92.4</td> <td>93.0</td> <td>93.0</td> <td>93.0</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Power Factor</td> <td>0.38</td> <td>0.36</td> <td>0.63</td> <td>0.59</td> <td>0.74</td> <td>0.72</td> <td>0.79</td> <td>0.78</td> </tr> <tr> <td></td> <td>0.32</td> <td>0.29</td> <td>0.55</td> <td>0.51</td> <td>0.68</td> <td>0.65</td> <td>0.75</td> <td>0.73</td> </tr> <tr> <td></td> <td>0.44</td> <td>0.40</td> <td>0.69</td> <td>0.65</td> <td>0.78</td> <td>0.75</td> <td>0.81</td> <td>0.79</td> </tr> <tr> <td></td> <td>0.37</td> <td>0.61</td> <td>0.73</td> <td>0.78</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Output	25%	50%	75%	100%	Efficiency (%)	93.5	92.9	93.6	92.9	94.1	93.4	94.1	93.2		91.5	90.6	91.9	91.2	93.0	92.6	93.2	93.1		94.0	92.9	93.6	93.0	93.0	93.0	92.4	93.0		92.2	92.4	93.0	93.0	93.0				Power Factor	0.38	0.36	0.63	0.59	0.74	0.72	0.79	0.78		0.32	0.29	0.55	0.51	0.68	0.65	0.75	0.73		0.44	0.40	0.69	0.65	0.78	0.75	0.81	0.79		0.37	0.61	0.73	0.78					Foundation loads Max. traction : 3282 lb Max. compression : 5042 lb
Output	25%	50%	75%	100%																																																																										
Efficiency (%)	93.5	92.9	93.6	92.9	94.1	93.4	94.1	93.2																																																																						
	91.5	90.6	91.9	91.2	93.0	92.6	93.2	93.1																																																																						
	94.0	92.9	93.6	93.0	93.0	93.0	92.4	93.0																																																																						
	92.2	92.4	93.0	93.0	93.0																																																																									
Power Factor	0.38	0.36	0.63	0.59	0.74	0.72	0.79	0.78																																																																						
	0.32	0.29	0.55	0.51	0.68	0.65	0.75	0.73																																																																						
	0.44	0.40	0.69	0.65	0.78	0.75	0.81	0.79																																																																						
	0.37	0.61	0.73	0.78																																																																										
Losses at normative operating points (speed;torque), in percentage of rated output power																																																																														
Losses (%)	P1 (0,9;1,0)	6.1	6.1	6.1	6.1	6.1	6.1	6.1																																																																						
	P2 (0,5;1,0)	4.9	4.9	4.9	4.9	4.9	4.9	4.9																																																																						
	P3 (0,25;1,0)	4.4	4.4	4.4	4.4	4.4	4.4	4.4																																																																						
	P4 (0,9;0,5)	3.0	3.0	3.0	3.0	3.0	3.0	3.0																																																																						
	P5 (0,5;0,5)	2.0	2.0	2.0	2.0	2.0	2.0	2.0																																																																						
	P6 (0,5;0,25)	1.4	1.4	1.4	1.4	1.4	1.4	1.4																																																																						
	P7 (0,25;0,25)	0.9	0.9	0.9	0.9	0.9	0.9	0.9																																																																						
Bearing type	Drive end : 6319 C3	Non drive end : 6316 C3																																																																												
Sealing	WSeal	WSeal																																																																												
Lubrication interval	17000 h	20000 h																																																																												
Lubricant amount	45 g	34 g																																																																												
Lubricant type	Mobil Polyrex EM																																																																													
Notes:																																																																														
This revision replaces and cancel the previous one, which must be eliminated. (1) Looking the motor from the shaft end. (2) Measured at 1m and with tolerance of +3dB(A). (3) Approximate weight subject to changes after manufacturing process. (4) At 100% of full load.	These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in NEMA MG-1.																																																																													
Rev.	Changes Summary	Performed	Checked	Date																																																																										
Performed by																																																																														
Checked by			Page	Revision																																																																										
Date	28/03/2024		1 / 1																																																																											