

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :				
Product line : W22 Tru-Metric IE3 Three-Phase	Product code : 14950819			
Frame : 160M Insulation class : F Duty cycle : S1 Ambient temperature : -20°C to +40°C Altitude : 1000 m.a.s.l. Protection degree : IP55 Design : N	Cooling method : IC411 - TEFC Mounting : B35L(E) Rotation <sup>1</sup> : Both (CW and CCW) Starting method : Direct On Line Approx. weight <sup>3</sup> : 135 kg Moment of inertia (J) : 0.0472 kgm <sup>2</sup>			
Output [HP]	20	20	20	
Poles	2	2	2	
Frequency [Hz]	50	50	60	
Rated voltage [V]	380	415	230/460	
Rated current [A]	28.2	26.4	47.8/23.9	
L. R. Amperes [A]	197	224	454/227	
LRC [A]	7.0	8.5	9.5	
No load current [A]	9.10	10.4	18.6/9.30	
Rated speed [RPM]	2935	2950	3555	
Slip [%]	2.17	1.67	1.25	
Rated torque [kgfm]	4.95	4.92	4.08	
Locked rotor torque [%]	250	290	330	
Breakdown torque [%]	310	370	400	
Service factor	1.25	1.25	1.25	
Temperature rise	80 K	80 K	80 K	
Locked rotor time	14s (cold) 8s (hot)	14s (cold) 8s (hot)	19s (cold) 11s (hot)	
Noise level <sup>2</sup>	67.0 dB(A)	67.0 dB(A)	72.0 dB(A)	
Efficiency (%)	25%			
	50%	91.5	91.3	
	75%	91.7	91.7	
	100%	91.9	91.9	
Power Factor	25%			
	50%	0.77	0.70	
	75%	0.85	0.81	
	100%	0.88	0.86	
Losses at normative operating points (speed;torque), in percentage of rated output power				
Losses (%)	P1 (0,9;1,0)	8.3	8.3	8.6
	P2 (0,5;1,0)	6.5	6.5	6.7
	P3 (0,25;1,0)	6.2	6.2	6.3
	P4 (0,9;0,5)	4.8	4.8	4.9
	P5 (0,5;0,5)	2.9	2.9	3.0
	P6 (0,5;0,25)	2.1	2.1	2.2
	P7 (0,25;0,25)	1.4	1.4	1.4
Bearing type	Drive end : 6309 C3	Non drive end : 6209 C3	Foundation loads	
Sealing	: V'Ring	: V'Ring	Max. traction : 189 kgf	
Lubrication interval	: 19000 h	: 20000 h	Max. compression : 324 kgf	
Lubricant amount	: 13 g	: 9 g		
Lubricant type	: Mobil Polyrex EM			
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.		
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Customer : \_\_\_\_\_

Notes

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# LOAD PERFORMANCE CURVE

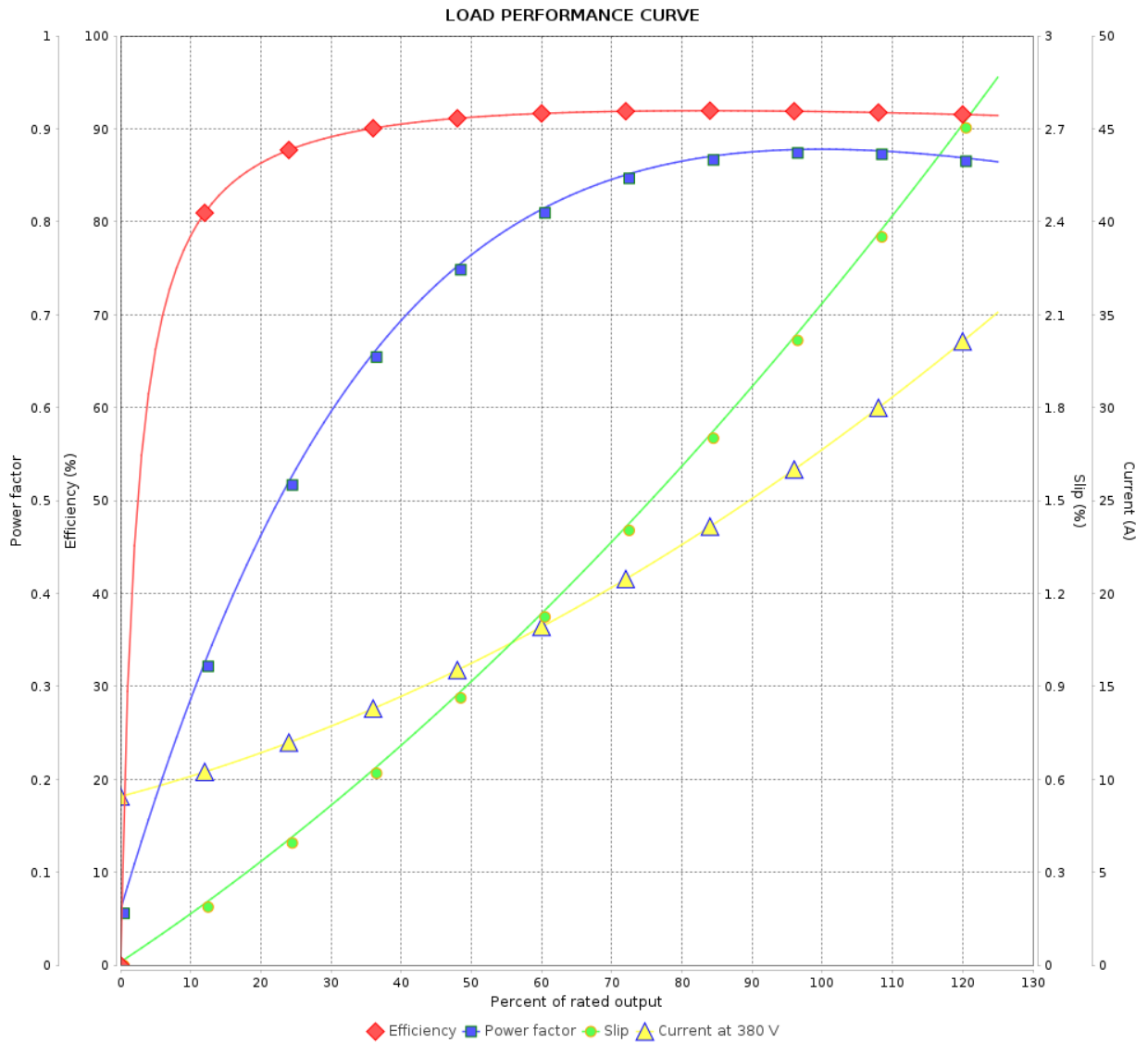
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Performance : 380 V 50 Hz 2P

Rated current : 28.2 A  
 LRC : 7.0  
 Rated torque : 4.95 kgfm  
 Locked rotor torque : 250 %  
 Breakdown torque : 310 %  
 Rated speed : 2935 rpm

Moment of inertia (J) : 0.0472 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : N

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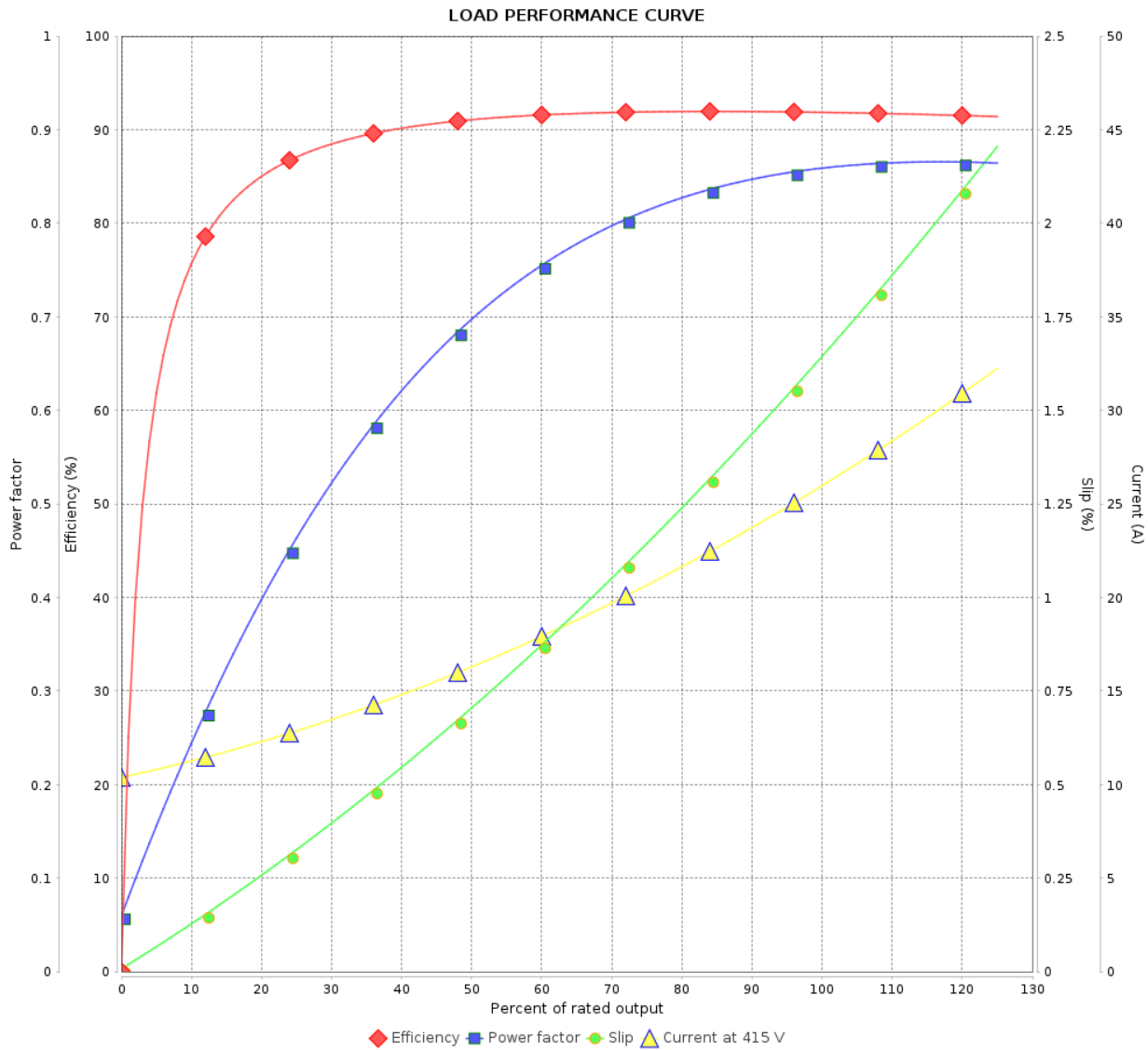
Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

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Performance : 415 V 50 Hz 2P

Rated current : 26.4 A  
 LRC : 8.5  
 Rated torque : 4.92 kgfm  
 Locked rotor torque : 290 %  
 Breakdown torque : 370 %  
 Rated speed : 2950 rpm

Moment of inertia (J) : 0.0472 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : N

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

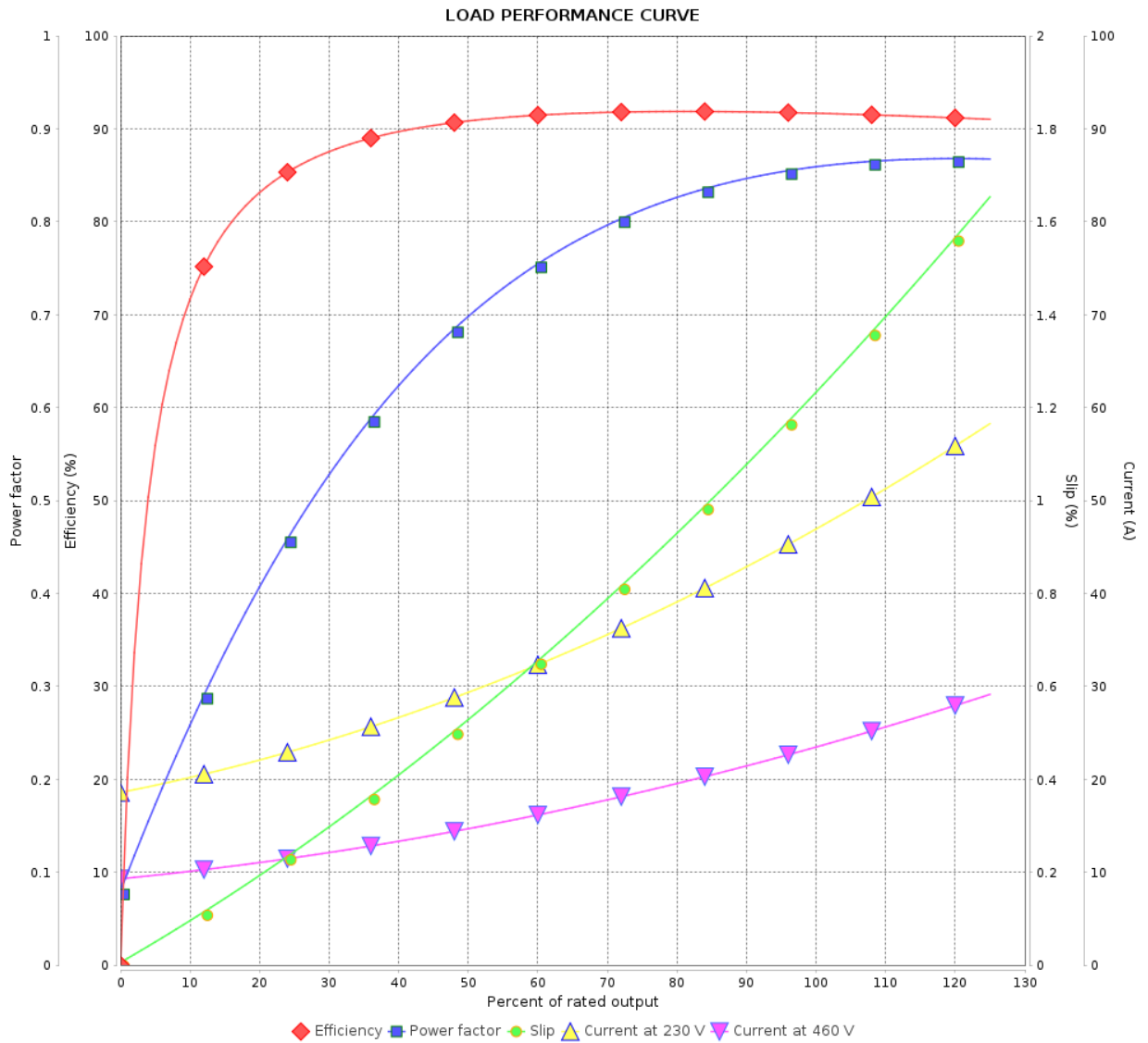


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14950819



Performance : 230/460 V 60 Hz 2P

Rated current : 47.8/23.9 A  
 LRC : 9.5  
 Rated torque : 4.08 kgfm  
 Locked rotor torque : 330 %  
 Breakdown torque : 400 %  
 Rated speed : 3555 rpm

Moment of inertia (J) : 0.0472 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : N

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