

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: W22 NEMA Premium Efficiency Three-Phase	Product code :	12717282		
Frame	: 213/5TC	Cooling method	: IC411 - TEFC		
Insulation class	: F	Mounting	: F-1		
Duty cycle	: Cont.(S1)	Rotation <sup>1</sup>	: Both (CW and CCW)		
Ambient temperature	: -20°C to +40°C	Starting method	: Direct On Line		
Altitude	: 1000 m.a.s.l.	Approx. weight <sup>3</sup>	: 77.8 kg		
Protection degree	: IP55	Moment of inertia (J)	: 0.0566 kgm <sup>2</sup>		
Design	: B				
Output [HP]	7.5	7.5	7.5	7.5	
Poles	4	4	4	4	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	18.4/9.18	11.0	10.6	10.3	
L. R. Amperes [A]	130/65.2	61.6	65.7	69.0	
LRC [A]	7.1x(Code H)	5.6x(Code F)	6.2x(Code G)	6.7x(Code H)	
No load current [A]	8.40/4.20	4.10	4.40	4.70	
Rated speed [RPM]	1765	1455	1460	1465	
Slip [%]	1.94	3.00	2.67	2.33	
Rated torque [kgfm]	3.08	3.74	3.73	3.72	
Locked rotor torque [%]	220	170	190	210	
Breakdown torque [%]	310	240	270	290	
Service factor	1.25	1.25	1.25	1.25	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	36s (cold) 20s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	
Noise level <sup>2</sup>	58.0 dB(A)	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)	
Efficiency (%)	25%				
	50%	89.5	89.5	89.5	
	75%	91.0	89.5	90.2	
	100%	91.7	89.6	90.2	
Power Factor	25%				
	50%	0.66	0.72	0.69	
	75%	0.76	0.81	0.78	
	100%	0.82	0.85	0.83	
Losses at normative operating points (speed;torque), in percentage of rated output power					
Losses (%)	P1 (0,9;1,0)	8.8	8.8	8.8	8.8
	P2 (0,5;1,0)	7.0	7.0	7.0	7.0
	P3 (0,25;1,0)	6.5	6.5	6.5	6.5
	P4 (0,9;0,5)	4.9	4.9	4.9	4.9
	P5 (0,5;0,5)	3.3	3.3	3.3	3.3
	P6 (0,5;0,25)	2.4	2.4	2.4	2.4
	P7 (0,25;0,25)	1.6	1.6	1.6	1.6
Bearing type	: Drive end : 6308 ZZ Non drive end : 6207 ZZ	Foundation loads			
Sealing	: V'Ring V'Ring	Max. traction	: 160 kgf		
Lubrication interval	: - -	Max. compression	: 238 kgf		
Lubricant amount	: - -				
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.		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	25/04/2024		1 / 6		

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

Notes  
USABLE @208V 19.9A SF 1.15 SFA 22.9A

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	25/04/2024		2 / 6	

# LOAD PERFORMANCE CURVE

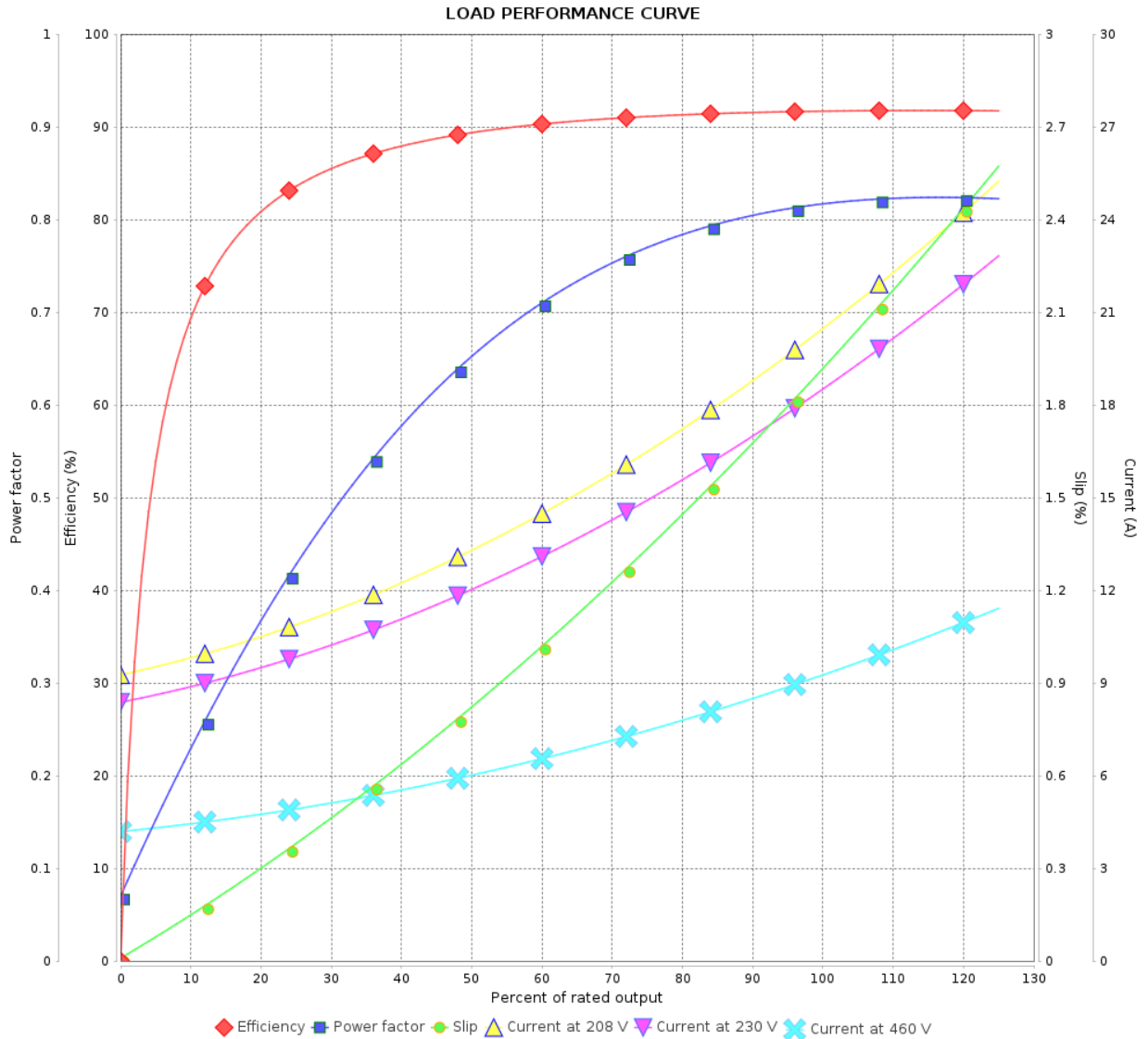
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Performance : 230/460 V 60 Hz 4P

Rated current : 18.4/9.18 A  
 LRC : 7.1  
 Rated torque : 3.08 kgfm  
 Locked rotor torque : 220 %  
 Breakdown torque : 310 %  
 Rated speed : 1765 rpm

Moment of inertia (J) : 0.0566 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date				

# LOAD PERFORMANCE CURVE

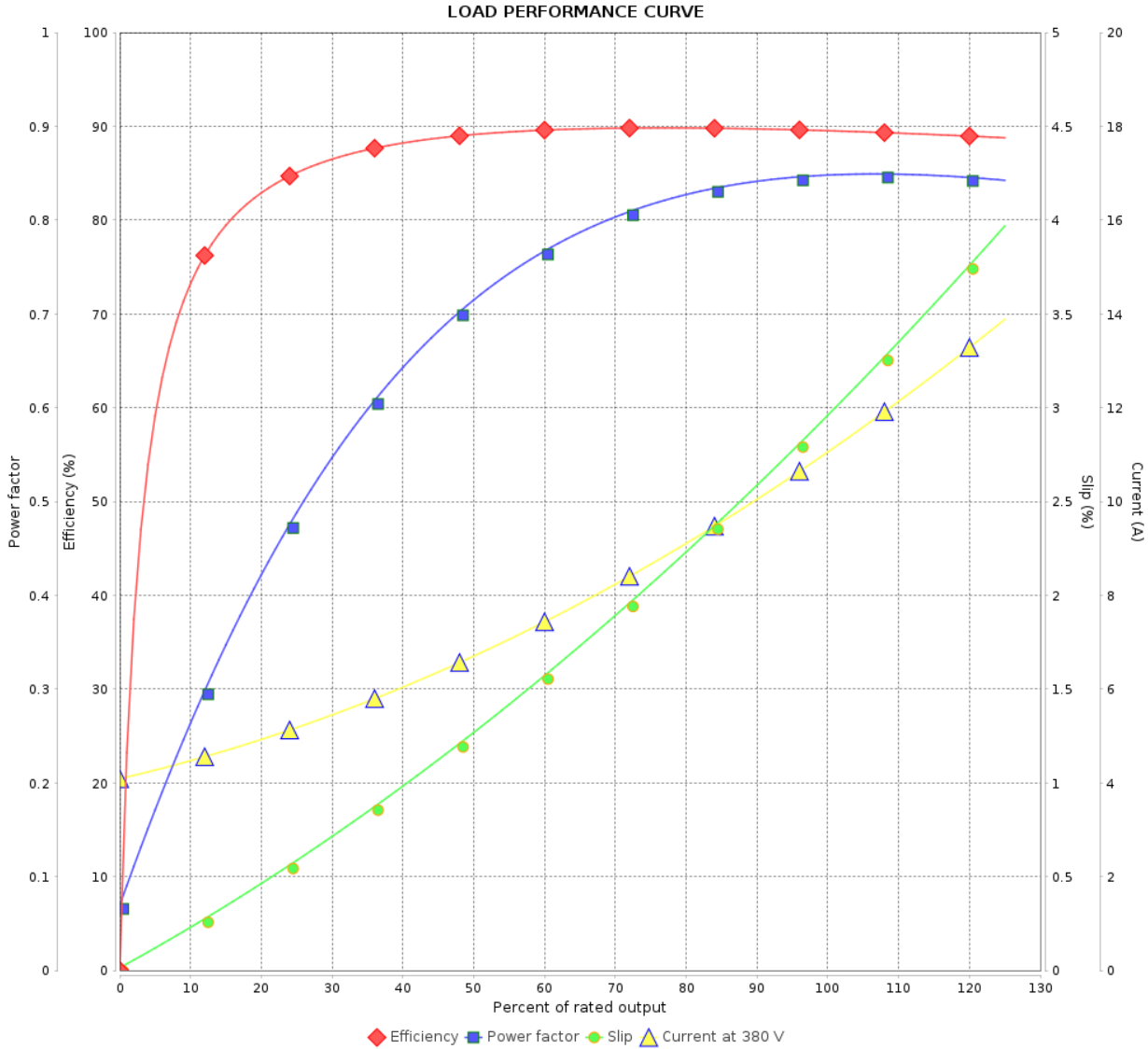
Three Phase Induction Motor - Squirrel Cage



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

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Performance : 380 V 50 Hz 4P IE3

Rated current : 11.0 A  
 LRC : 5.6  
 Rated torque : 3.74 kgfm  
 Locked rotor torque : 170 %  
 Breakdown torque : 240 %  
 Rated speed : 1455 rpm

Moment of inertia (J) : 0.0566 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

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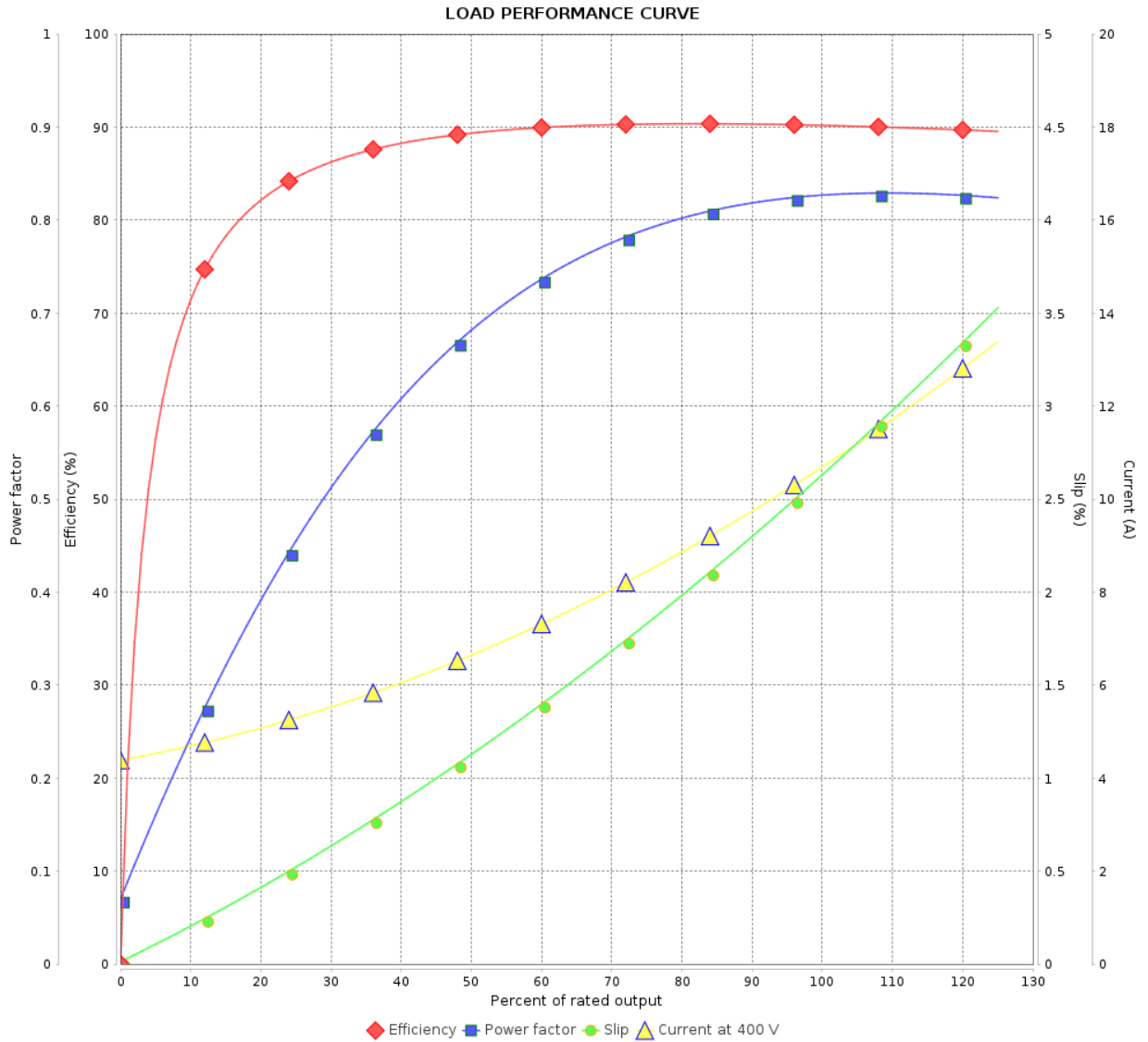
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Performance : 400 V 50 Hz 4P IE3

Rated current : 10.6 A  
 LRC : 6.2  
 Rated torque : 3.73 kgfm  
 Locked rotor torque : 190 %  
 Breakdown torque : 270 %  
 Rated speed : 1460 rpm

Moment of inertia (J) : 0.0566 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

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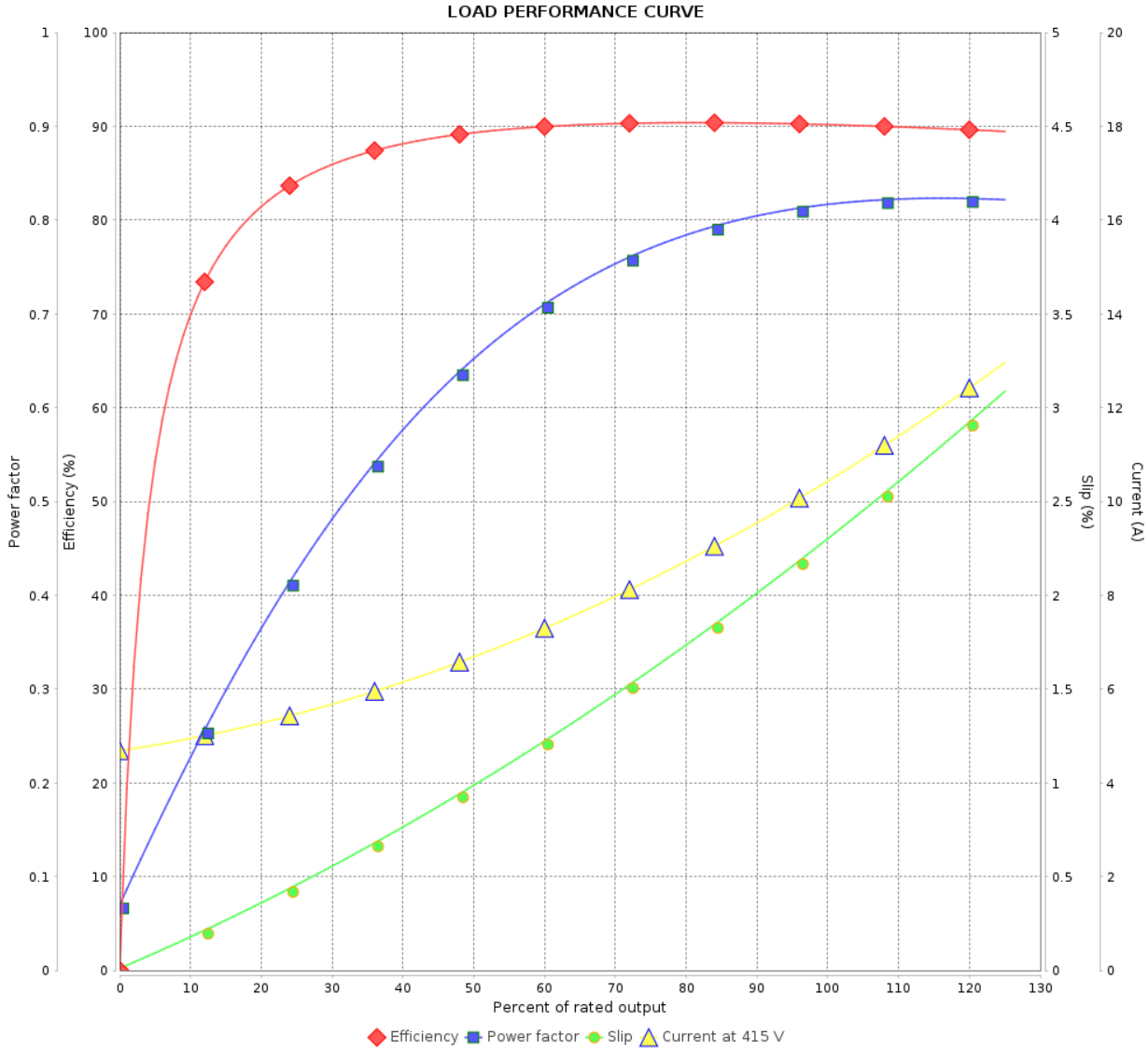
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Performance : 415 V 50 Hz 4P IE3

Rated current : 10.3 A  
 LRC : 6.7  
 Rated torque : 3.72 kgfm  
 Locked rotor torque : 210 %  
 Breakdown torque : 290 %  
 Rated speed : 1465 rpm

Moment of inertia (J) : 0.0566 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

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