

DATA SHEET



Three Phase Induction Motor - Squirrel Cage

Customer :					
Product line		: W21 Explosion Proof NEMA Premium Efficiency Three-Phase		Product code :	14407459
Frame	: 284T	Cooling method	: IC411 - TEFC		
Insulation class	: F	Mounting	: F-1		
Duty cycle	: Cont.(S1)	Rotation ¹	: Both (CW and CCW)		
Ambient temperature	: -20°C to +40°C	Starting method	: Direct On Line		
Altitude	: 1000 m.a.s.l.	Approx. weight ³	: 211 kg		
Protection degree	: IP55	Moment of inertia (J)	: 0.2981 kgm ²		
Design	: B				
Output [HP]	15	15	15	15	15
Poles	6	6	6	6	6
Frequency [Hz]	60	50	50	50	50
Rated voltage [V]	230/460	380	400	415	415
Rated current [A]	35.0/17.5	21.5	20.5	19.7	19.7
L. R. Amperes [A]	252/126	114	117	122	122
LRC [A]	7.2x(Code H)	5.3x(Code E)	5.7x(Code F)	6.2x(Code G)	6.2x(Code G)
No load current [A]	12.0/6.00	6.30	6.70	7.00	7.00
Rated speed [RPM]	1177	965	975	975	975
Slip [%]	1.92	3.50	2.50	2.50	2.50
Rated torque [kgfm]	9.25	11.3	11.2	11.2	11.2
Locked rotor torque [%]	250	170	190	220	220
Breakdown torque [%]	260	200	210	229	229
Service factor	1.15	1.00	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K	80 K
Locked rotor time	45s (cold) 25s (hot)	50s (cold) 28s (hot)	50s (cold) 28s (hot)	50s (cold) 28s (hot)	50s (cold) 28s (hot)
Noise level ²	59.0 dB(A)	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)
Efficiency (%)	25%	90.8	89.8	89.3	89.9
	50%	91.0	89.5	89.5	89.5
	75%	91.7	90.2	90.2	91.0
	100%	91.7	89.5	90.2	90.2
Power Factor	25%	0.49	0.53	0.50	0.48
	50%	0.74	0.77	0.75	0.73
	75%	0.82	0.84	0.83	0.82
	100%	0.86	0.87	0.86	0.86
Losses at normative operating points (speed;torque), in percentage of rated output power					
Losses (%)	P1 (0,9;1,0)	8.8	11.4	10.5	10.5
	P2 (0,5;1,0)	7.2	9.3	8.6	8.6
	P3 (0,25;1,0)	6.4	8.4	7.7	7.7
	P4 (0,9;0,5)	4.2	5.4	5.0	5.0
	P5 (0,5;0,5)	2.7	3.6	3.3	3.3
	P6 (0,5;0,25)	1.7	2.3	2.1	2.1
	P7 (0,25;0,25)	1.1	1.5	1.4	1.4
Bearing type	: Drive end : 6311 C3	Non drive end : 6211 C3	Foundation loads		
Sealing	: Oil Seal	Lip Seal	Max. traction	: 262 kgf	
Lubrication interval	: 20000 h	20000 h	Max. compression	: 473 kgf	
Lubricant amount	: 18 g	11 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.			These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in NEMA MG-1.		
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Notes
USABLE @208V 38.7A SF 1.15 SFA 44.5A

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Thermal protection

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

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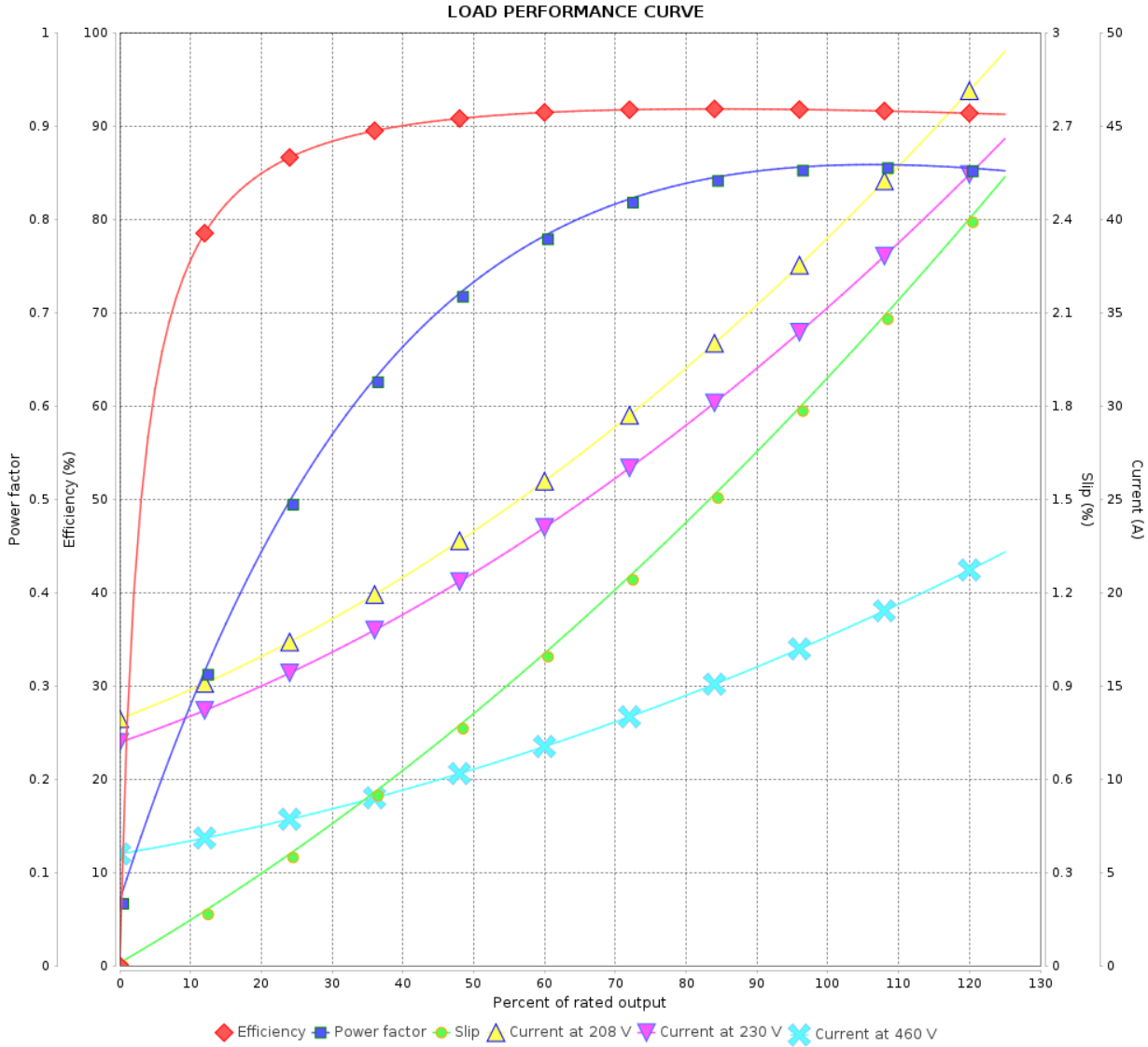
Three Phase Induction Motor - Squirrel Cage



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Product line : W21 Explosion Proof NEMA Premium
Efficiency Three-Phase

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Performance : 230/460 V 60 Hz 6P

Rated current : 35.0/17.5 A
 LRC : 7.2
 Rated torque : 9.25 kgfm
 Locked rotor torque : 250 %
 Breakdown torque : 260 %
 Rated speed : 1177 rpm

Moment of inertia (J) : 0.2981 kgm²
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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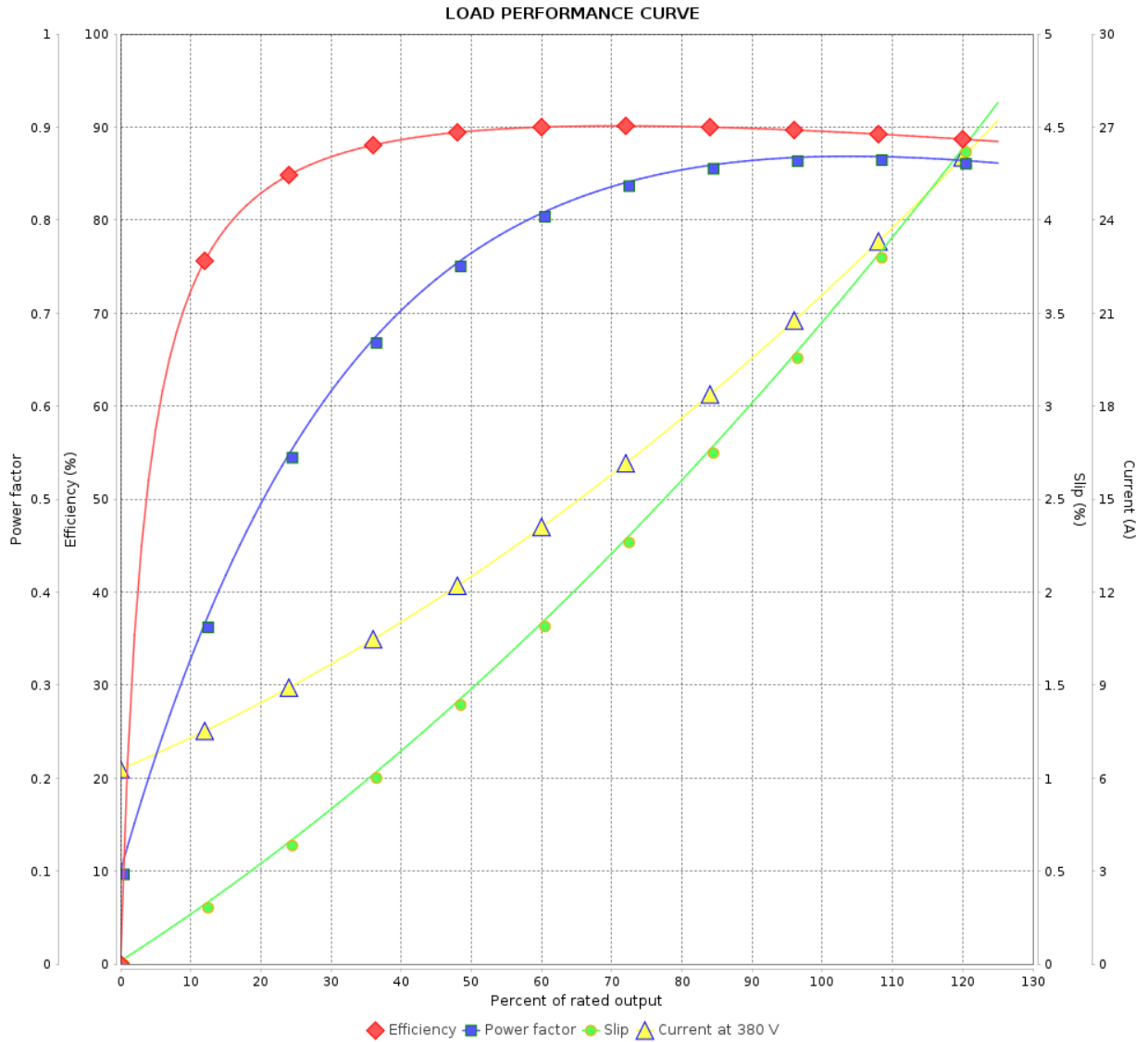
Three Phase Induction Motor - Squirrel Cage



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Performance : 380 V 50 Hz 6P IE2

Rated current : 21.5 A
 LRC : 5.3
 Rated torque : 11.3 kgfm
 Locked rotor torque : 170 %
 Breakdown torque : 200 %
 Rated speed : 965 rpm

Moment of inertia (J) : 0.2981 kgm²
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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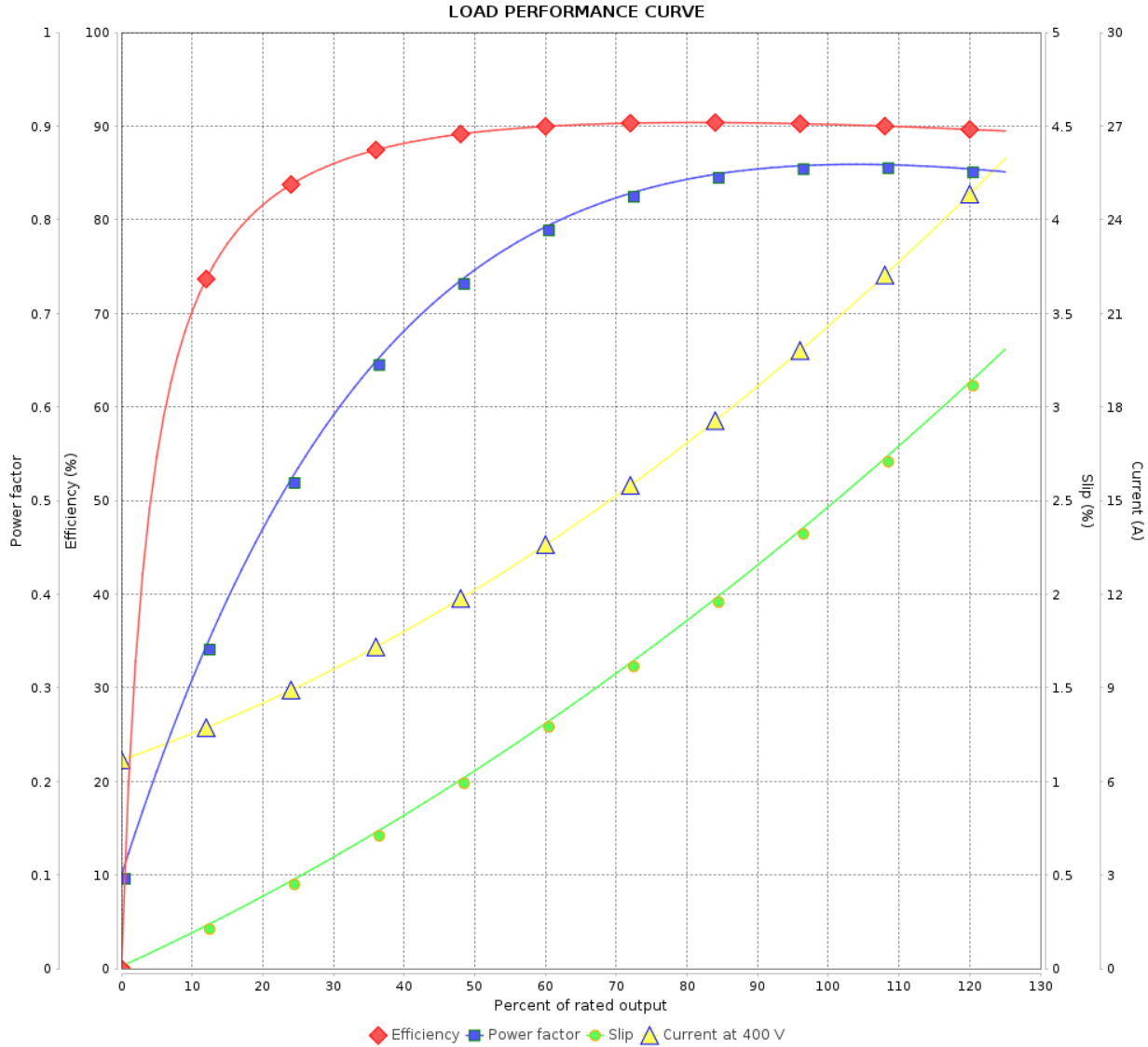
Three Phase Induction Motor - Squirrel Cage



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Performance : 400 V 50 Hz 6P IE2

Rated current : 20.5 A
LRC : 5.7
Rated torque : 11.2 kgfm
Locked rotor torque : 190 %
Breakdown torque : 210 %
Rated speed : 975 rpm

Moment of inertia (J) : 0.2981 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : B

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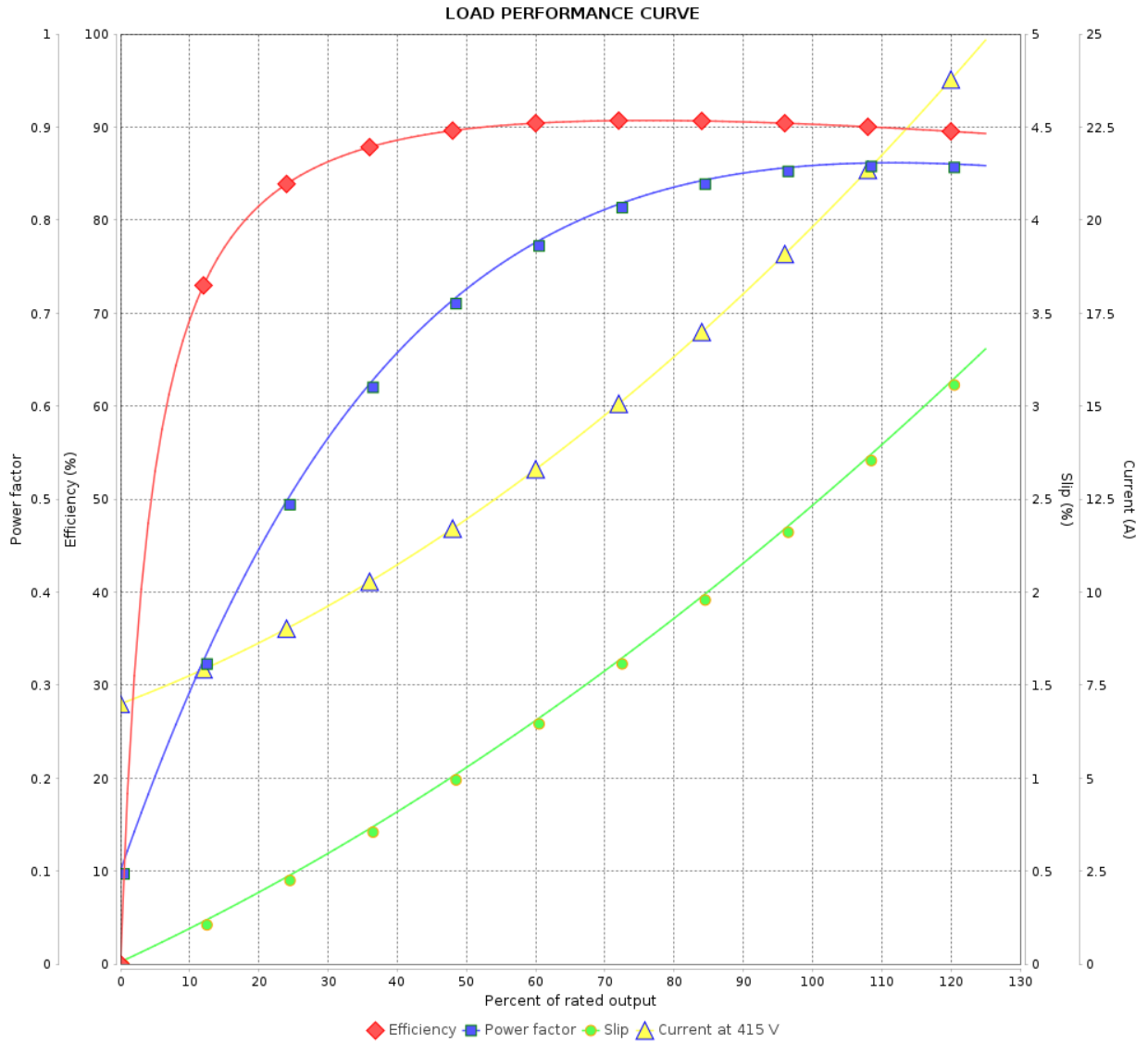
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Performance : 415 V 50 Hz 6P IE2

Rated current : 19.7 A
 LRC : 6.2
 Rated torque : 11.2 kgfm
 Locked rotor torque : 220 %
 Breakdown torque : 229 %
 Rated speed : 975 rpm

Moment of inertia (J) : 0.2981 kgm²
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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