

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase      Product code : 12745775

Frame	: 324/6TC	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>	: 255 kg
Protection degree	: IP55	Moment of inertia (J)	: 0.5561 kgm <sup>2</sup>
Design	: B		

Output [HP]	30	25	25	25	30	30	30
Poles	6	6	6	6	6	6	6
Frequency [Hz]	60	50	50	50	50	50	50
Rated voltage [V]	230/460	380	400	415	380	400	415
Rated current [A]	72.4/36.2	37.4	36.2	35.4	43.7	41.7	40.7
L. R. Amperes [A]	449/225	217	228	237	214	225	236
LRC [A]	6.2x(Code G)	5.8x(Code G)	6.3x(Code H)	6.7x(Code H)	4.9x(Code E)	5.4x(Code F)	5.8x(Code G)
No load current [A]	32.8/16.4	15.5	16.8	18.0	15.5	16.8	18.0
Rated speed [RPM]	1180	980	980	985	970	975	980
Slip [%]	1.67	2.00	2.00	1.50	3.00	2.50	2.00
Rated torque [kgfm]	18.5	18.5	18.5	18.4	22.4	22.3	22.2
Locked rotor torque [%]	220	190	220	240	160	180	200
Breakdown torque [%]	240	229	260	280	200	220	240
Service factor	1.25	1.00	1.15	1.15	1.00	1.15	1.15
Temperature rise	80 K	80 K	80 K	80 K	80 K	80 K	80 K
Locked rotor time	37s (cold) 21s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)
Noise level <sup>2</sup>	62.0 dB(A)	60.0 dB(A)	60.0 dB(A)	60.0 dB(A)	60.0 dB(A)	60.0 dB(A)	60.0 dB(A)
Efficiency (%)	25%						
	50%	91.7	91.3	91.3	90.7	91.7	91.0
	75%	93.0	91.8	92.2	91.9	91.7	92.4
	100%	93.0	91.7	92.1	92.0	91.0	91.7
Power Factor	25%						
	50%	0.65	0.64	0.61	0.58	0.71	0.65
	75%	0.76	0.76	0.74	0.71	0.80	0.76
	100%	0.82	0.82	0.80	0.79	0.84	0.82

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

Losses (%)	P1 (0,9;1,0)	7.3	8.8	8.3	8.4	9.6	8.8	8.8
	P2 (0,5;1,0)	6.1	7.4	7.0	7.1	8.1	7.4	7.4
	P3 (0,25;1,0)	6.0	7.2	6.8	6.9	7.9	7.2	7.2
	P4 (0,9;0,5)	3.6	4.3	4.1	4.2	4.8	4.3	4.3
	P5 (0,5;0,5)	2.5	3.1	2.9	2.9	3.3	3.1	3.1
	P6 (0,5;0,25)	1.7	2.1	2.0	2.0	2.3	2.1	2.1
	P7 (0,25;0,25)	1.2	1.5	1.4	1.4	1.6	1.5	1.5

Bearing type	: 6312 C3	6212 C3	Foundation loads	
	: V'Ring	V'Ring		Max. traction : 544 kgf
	: 20000 h	20000 h		Max. compression : 799 kgf
	: 21 g	13 g		
	: Mobil Polyrex EM			

This revision replaces and cancel the previous one, which must be eliminated.

(1) Looking the motor from the shaft end.

These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in NEMA MG-1.

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## Three Phase Induction Motor - Squirrel Cage



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

Notes  
USABLE @208V 79.2A SF 1.15 SFA 91.0A

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# LOAD PERFORMANCE CURVE

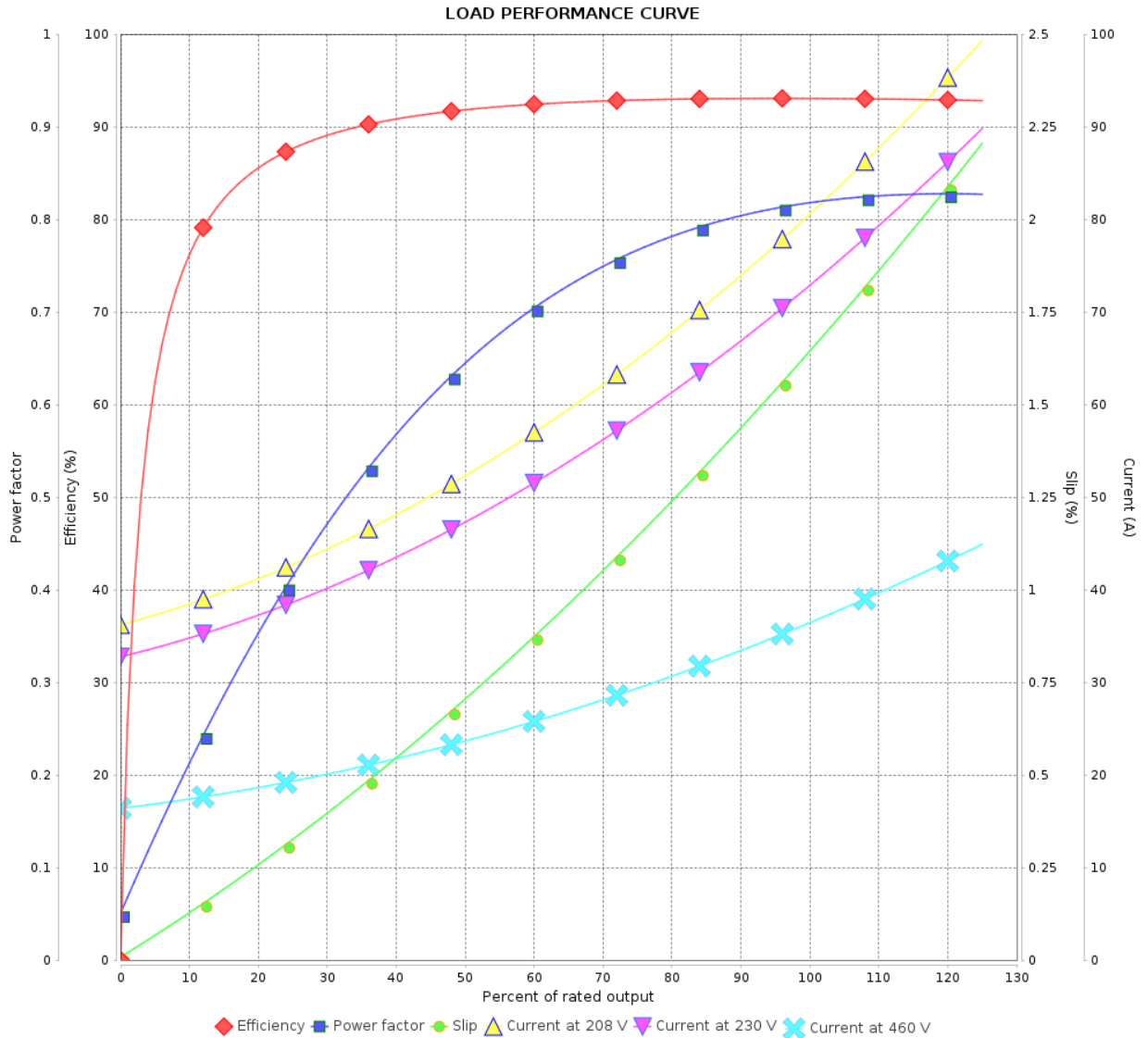
## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 12745775



Performance : 230/460 V 60 Hz 6P

Rated current : 72.4/36.2 A  
 LRC : 6.2  
 Rated torque : 18.5 kgfm  
 Locked rotor torque : 220 %  
 Breakdown torque : 240 %  
 Rated speed : 1180 rpm

Moment of inertia (J) : 0.5561 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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# LOAD PERFORMANCE CURVE

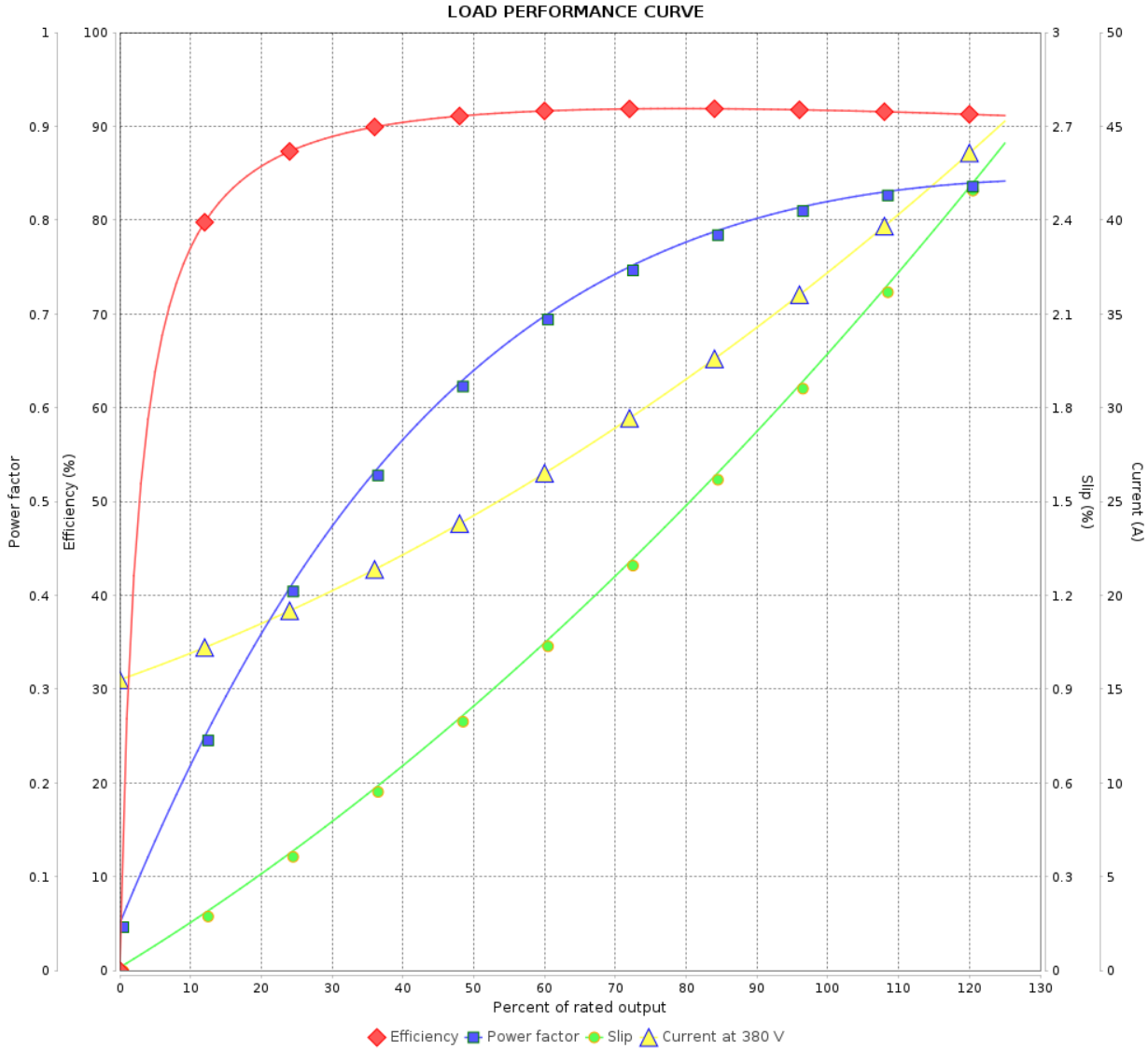
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 12745775



Performance : 380 V 50 Hz 6P IE3

Rated current : 37.4 A  
 LRC : 5.8  
 Rated torque : 18.5 kgfm  
 Locked rotor torque : 190 %  
 Breakdown torque : 229 %  
 Rated speed : 980 rpm

Moment of inertia (J) : 0.5561 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

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# LOAD PERFORMANCE CURVE

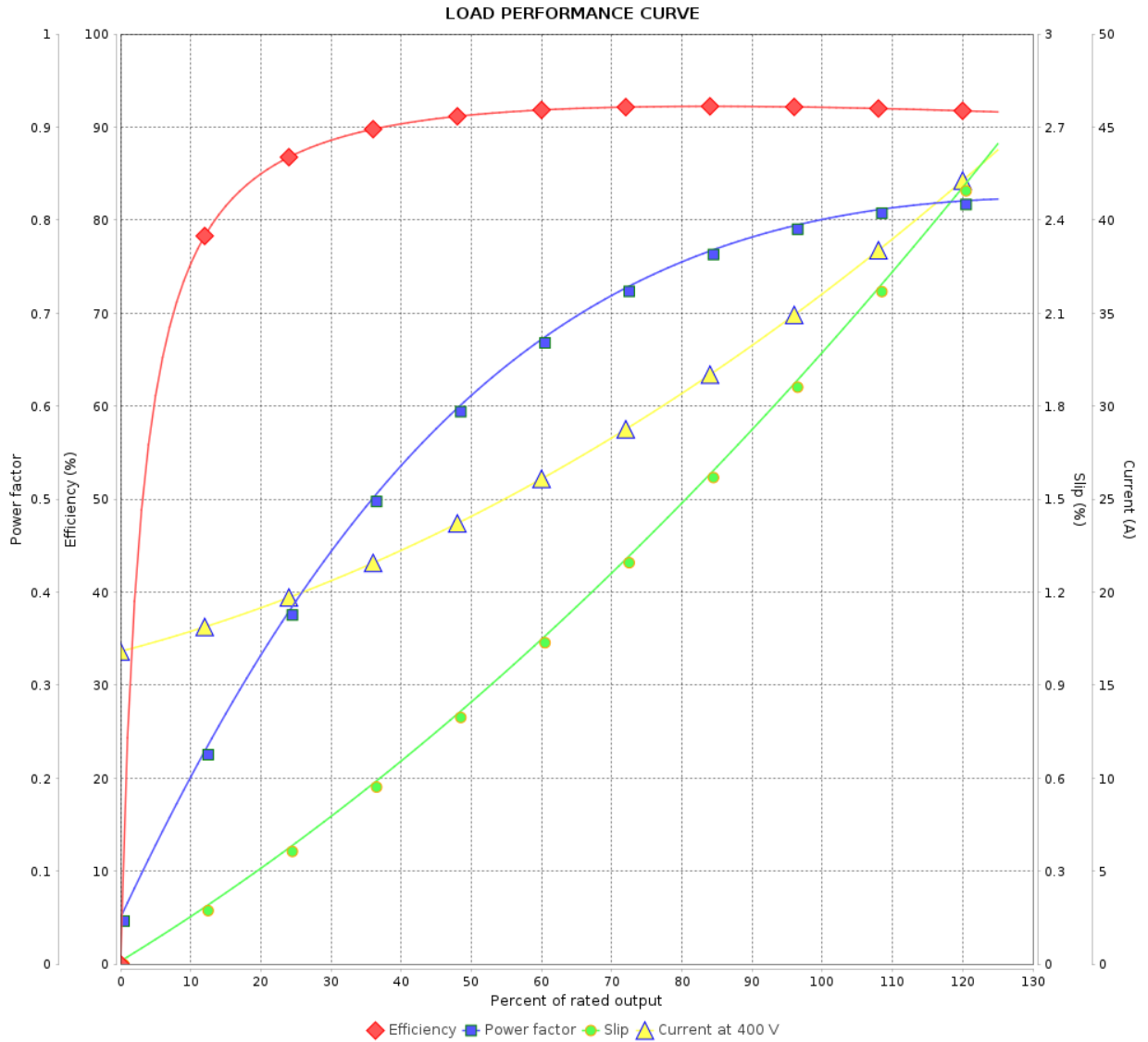
## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 12745775



Performance : 400 V 50 Hz 6P IE3

Rated current : 36.2 A  
 LRC : 6.3  
 Rated torque : 18.5 kgfm  
 Locked rotor torque : 220 %  
 Breakdown torque : 260 %  
 Rated speed : 980 rpm

Moment of inertia (J) : 0.5561 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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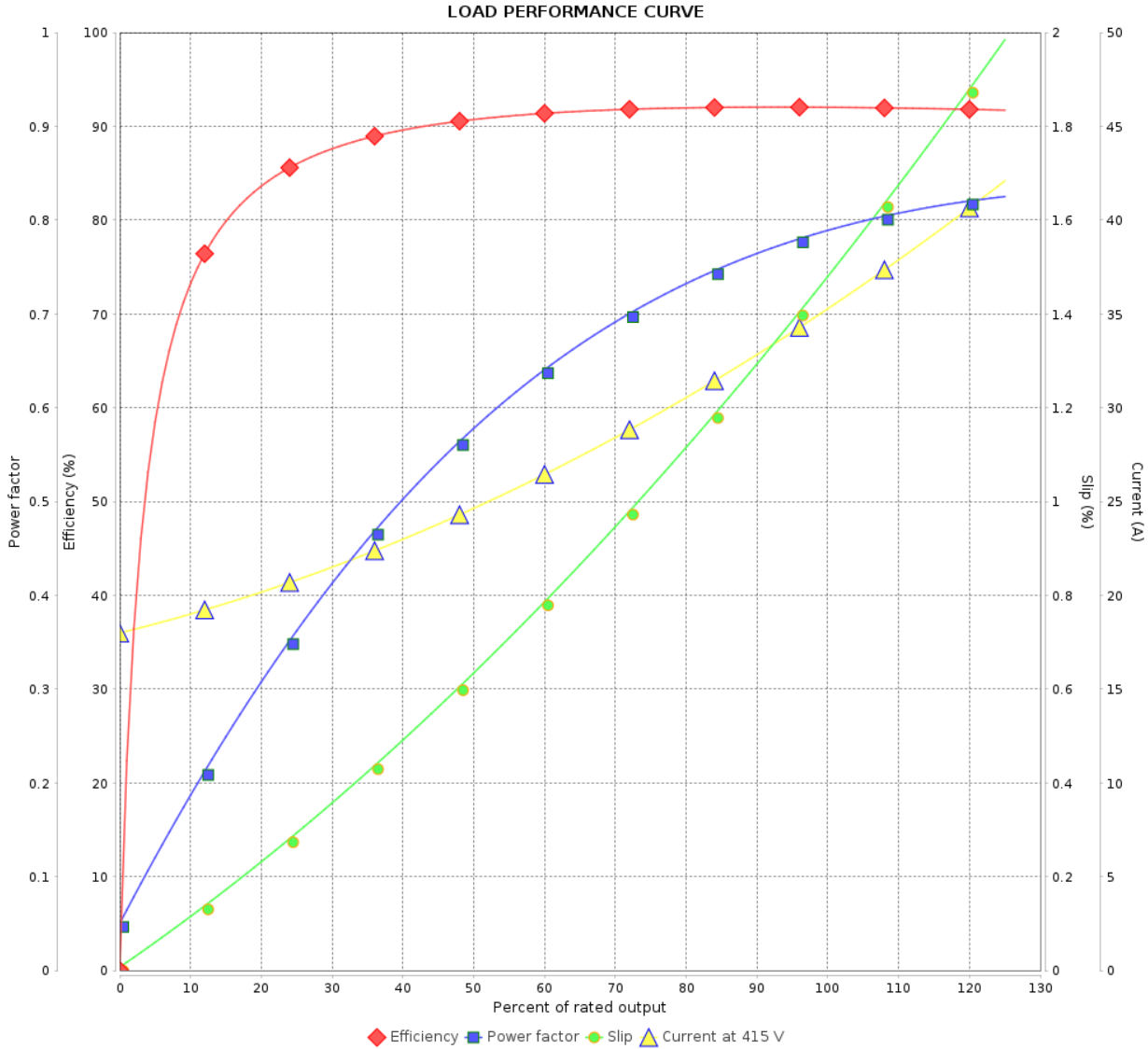
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 12745775



Performance : 415 V 50 Hz 6P IE3

Rated current : 35.4 A  
 LRC : 6.7  
 Rated torque : 18.4 kgfm  
 Locked rotor torque : 240 %  
 Breakdown torque : 280 %  
 Rated speed : 985 rpm

Moment of inertia (J) : 0.5561 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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# LOAD PERFORMANCE CURVE

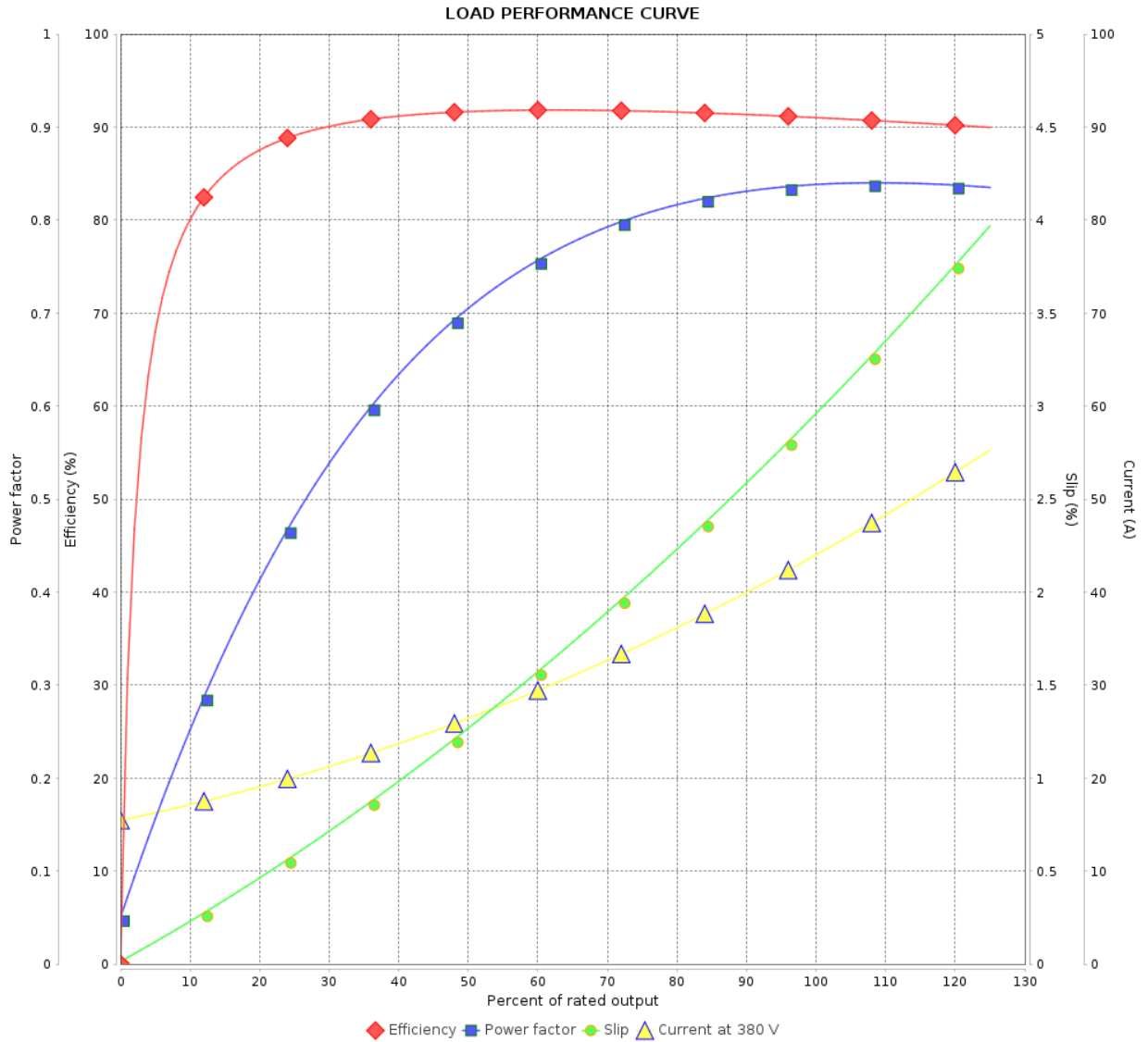
## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 12745775



Performance : 380 V 50 Hz 6P IE2

Rated current : 43.7 A  
 LRC : 4.9  
 Rated torque : 22.4 kgfm  
 Locked rotor torque : 160 %  
 Breakdown torque : 200 %  
 Rated speed : 970 rpm

Moment of inertia (J) : 0.5561 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

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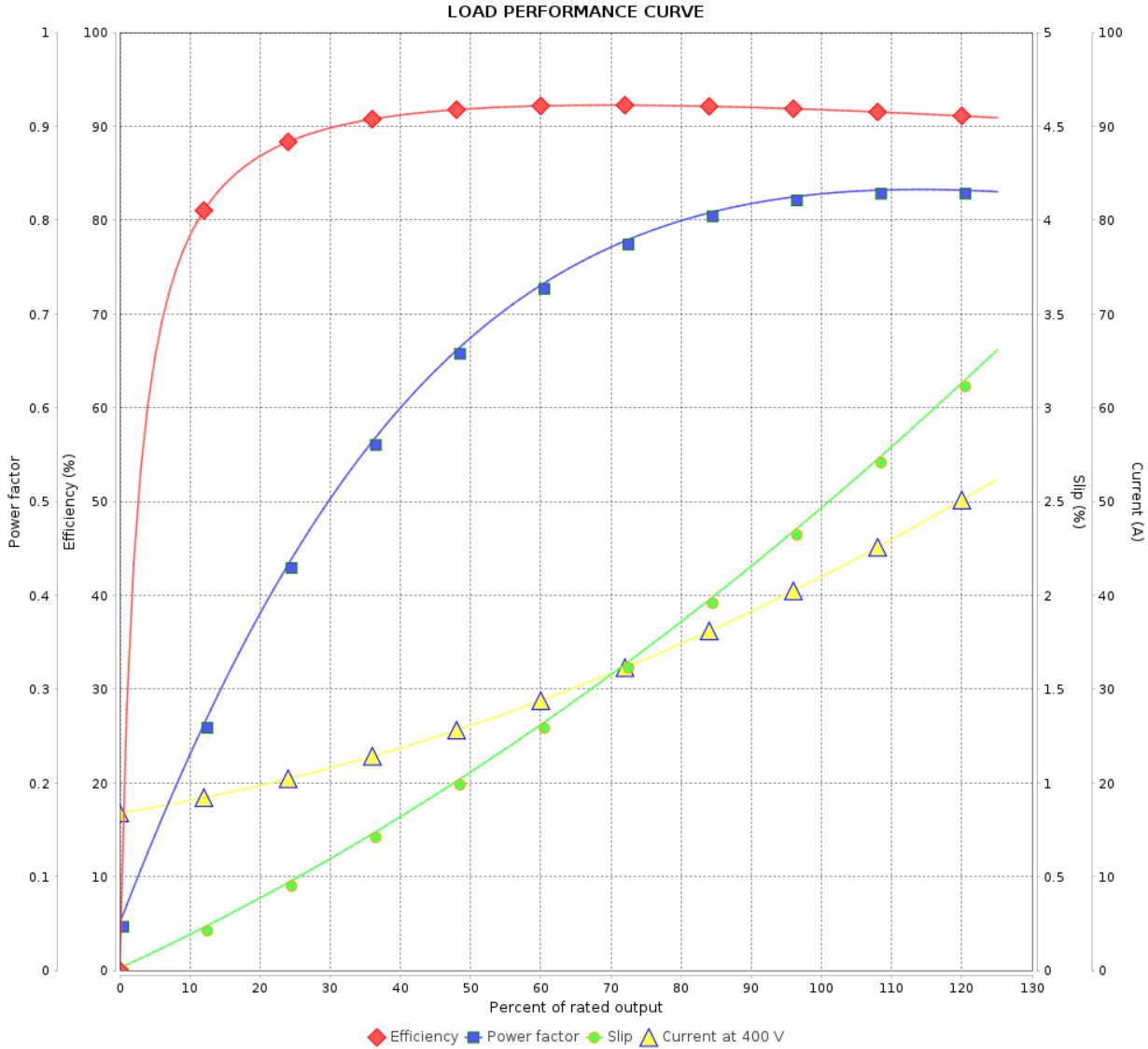
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 12745775



Performance : 400 V 50 Hz 6P IE2

Rated current : 41.7 A  
 LRC : 5.4  
 Rated torque : 22.3 kgfm  
 Locked rotor torque : 180 %  
 Breakdown torque : 220 %  
 Rated speed : 975 rpm

Moment of inertia (J) : 0.5561 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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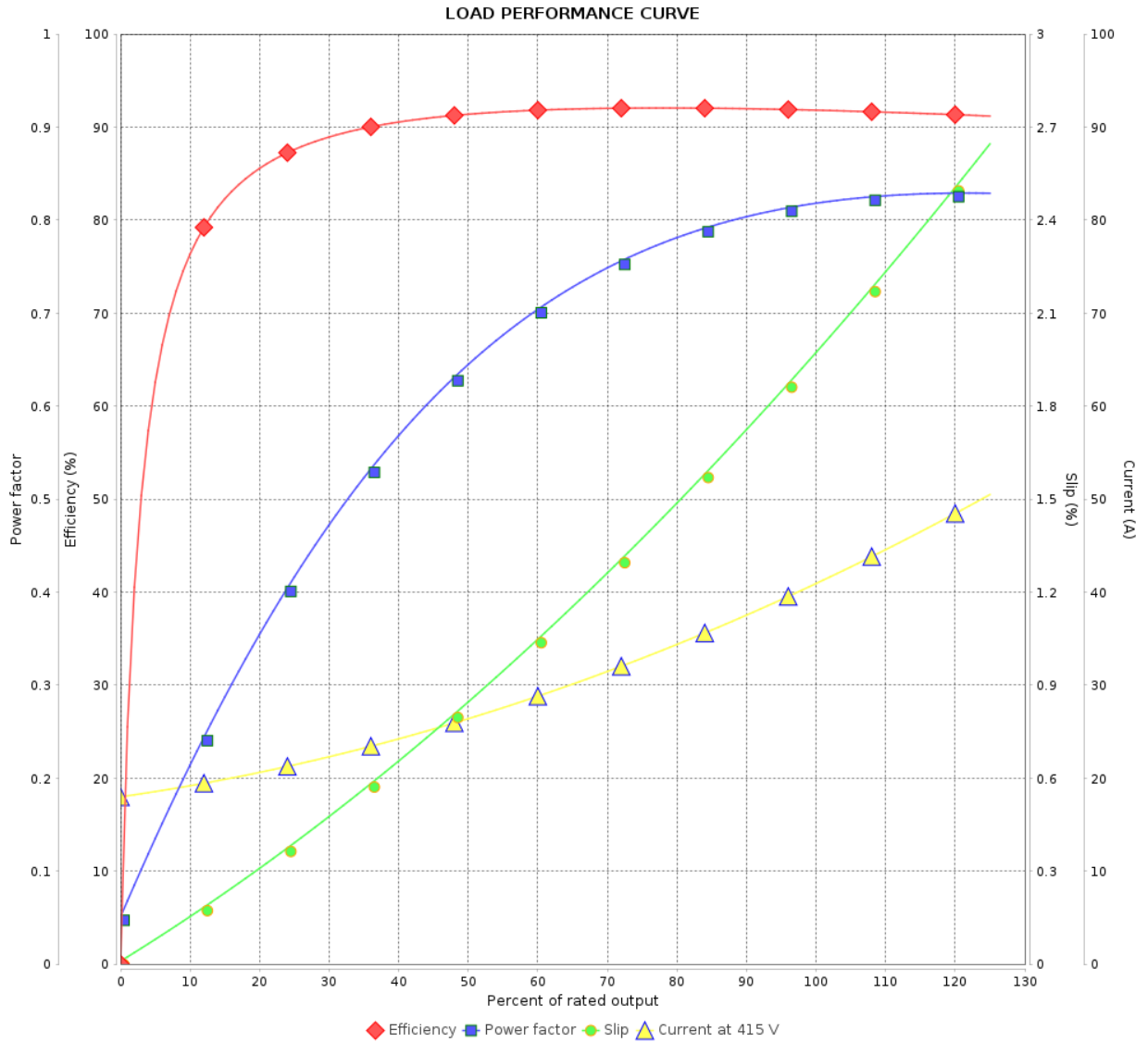
## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 12745775



Performance : 415 V 50 Hz 6P IE2

Rated current : 40.7 A  
 LRC : 5.8  
 Rated torque : 22.2 kgfm  
 Locked rotor torque : 200 %  
 Breakdown torque : 240 %  
 Rated speed : 980 rpm

Moment of inertia (J) : 0.5561 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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