

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 Close Coupled Pump JP  
NEMA Premium Efficiency Three-Phase  
Product code : 12602710

Frame	: 284/6JP	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>2</sup>	: 187 kg
Protection degree	: IP55	Moment of inertia (J)	: 0.2153 kgm <sup>2</sup>
Design	: B		

Output [HP]	25	20	20	20	25	25	25
Poles	4	4	4	4	4	4	4
Frequency [Hz]	60	50	50	50	50	50	50
Rated voltage [V]	230/460	380	400	415	380	400	415
Rated current [A]	59.0/29.5	29.1	28.2	27.5	35.9	34.3	33.2
L. R. Amperes [A]	366/183	175	189	198	190	189	196
LRC [A]	6.2x(Code G)	6.0x(Code G)	6.7x(Code H)	7.2x(Code J)	5.3x(Code F)	5.5x(Code F)	5.9x(Code G)
No load current [A]	22.0/11.0	11.0	11.7	12.4	11.0	11.7	12.4
Rated speed [RPM]	1770	1470	1473	1475	1455	1460	1465
Slip [%]	1.67	2.00	1.80	1.67	3.00	2.67	2.33
Rated torque [kgfm]	10.3	9.87	9.85	9.84	12.5	12.4	12.4
Locked rotor torque [%]	240	229	250	270	180	200	220
Breakdown torque [%]	270	260	300	330	210	240	260
Service factor	1.25	1.00	1.00	1.00	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K	105 K	105 K	105 K
Locked rotor time	43s (cold) 24s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)
Noise level <sup>2</sup>	63.0 dB(A)	61.0 dB(A)	61.0 dB(A)	61.0 dB(A)	61.0 dB(A)	61.0 dB(A)	61.0 dB(A)
Efficiency (%)	25%						
	50%	92.4	91.3	91.3	91.2	92.4	92.4
	75%	93.0	92.1	92.5	92.5	91.7	92.4
	100%	93.6	92.1	92.6	92.7	91.0	92.4
Power Factor	25%						
	50%	0.70	0.69	0.65	0.62	0.76	0.73
	75%	0.80	0.80	0.78	0.75	0.84	0.82
	100%	0.84	0.85	0.83	0.82	0.86	0.84

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

Losses (%)	P1 (0,9;1,0)	6.8	6.8	6.8	6.8	6.8	6.8
	P2 (0,5;1,0)	5.8	5.8	5.8	5.8	5.8	5.8
	P3 (0,25;1,0)	5.3	5.3	5.3	5.3	5.3	5.3
	P4 (0,9;0,5)	3.1	3.1	3.1	3.1	3.1	3.1
	P5 (0,5;0,5)	2.2	2.2	2.2	2.2	2.2	2.2
	P6 (0,5;0,25)	1.4	1.4	1.4	1.4	1.4	1.4
	P7 (0,25;0,25)	1.0	1.0	1.0	1.0	1.0	1.0

	<u>Drive end</u>	<u>Non drive end</u>	Foundation loads
Bearing type	: 6311 C3	6211 C3	Max. traction : 367 kgf
Sealing	: V'Ring	V'Ring	Max. compression : 554 kgf
Lubrication interval	: 20000 h	20000 h	
Lubricant amount	: 18 g	11 g	
Lubricant type	: Mobil Polyrex EM		

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## Three Phase Induction Motor - Squirrel Cage



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

Notes  
USABLE @208V 65.2A SF 1.15 SFA 75.0A

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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# LOAD PERFORMANCE CURVE

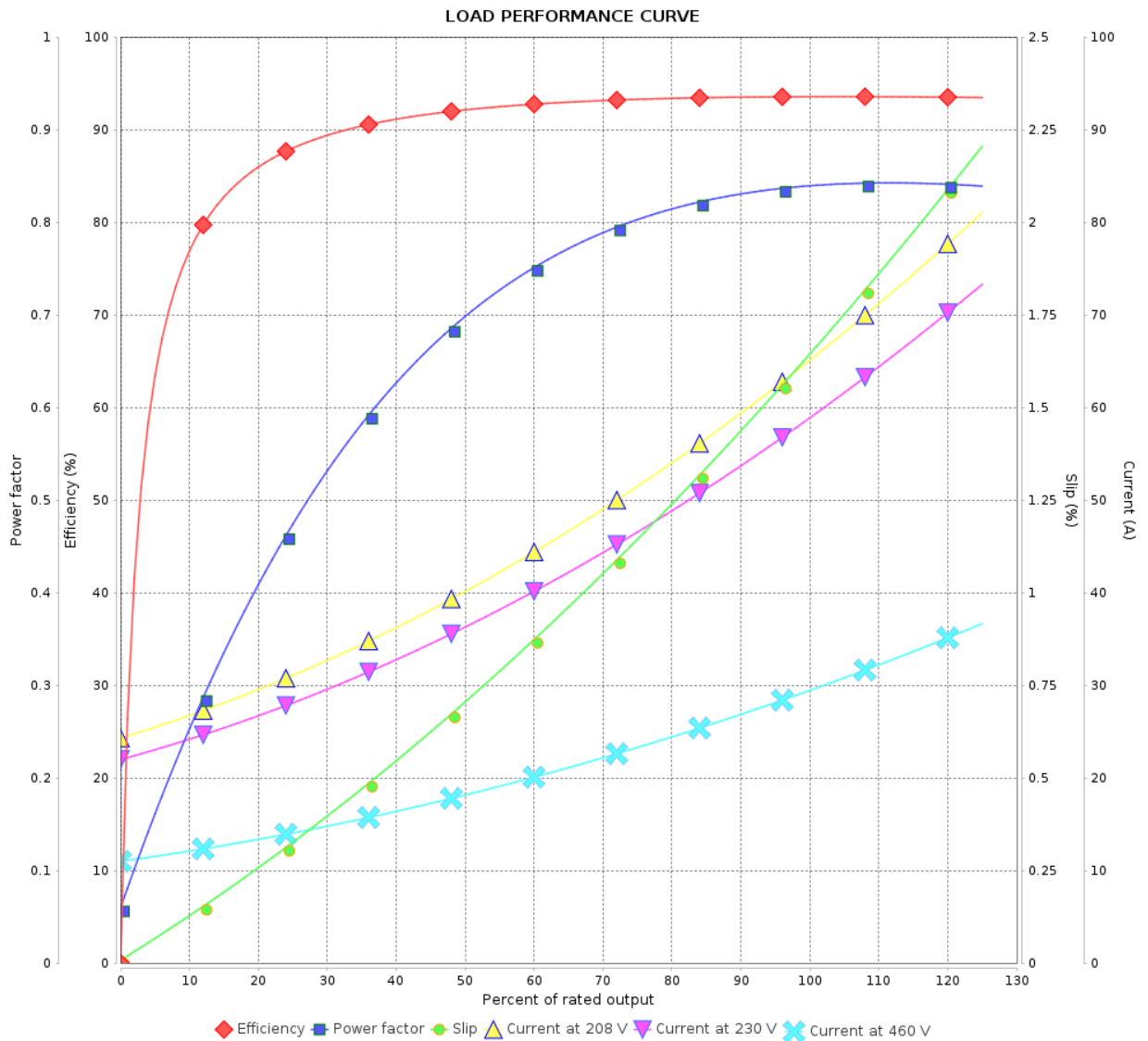
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 Close Coupled Pump JP  
NEMA Premium Efficiency Three-Phase

Product code : 12602710



Performance : 230/460 V 60 Hz 4P

Rated current : 59.0/29.5 A  
LRC : 6.2  
Rated torque : 10.3 kgfm  
Locked rotor torque : 240 %  
Breakdown torque : 270 %  
Rated speed : 1770 rpm

Moment of inertia (J) : 0.2153 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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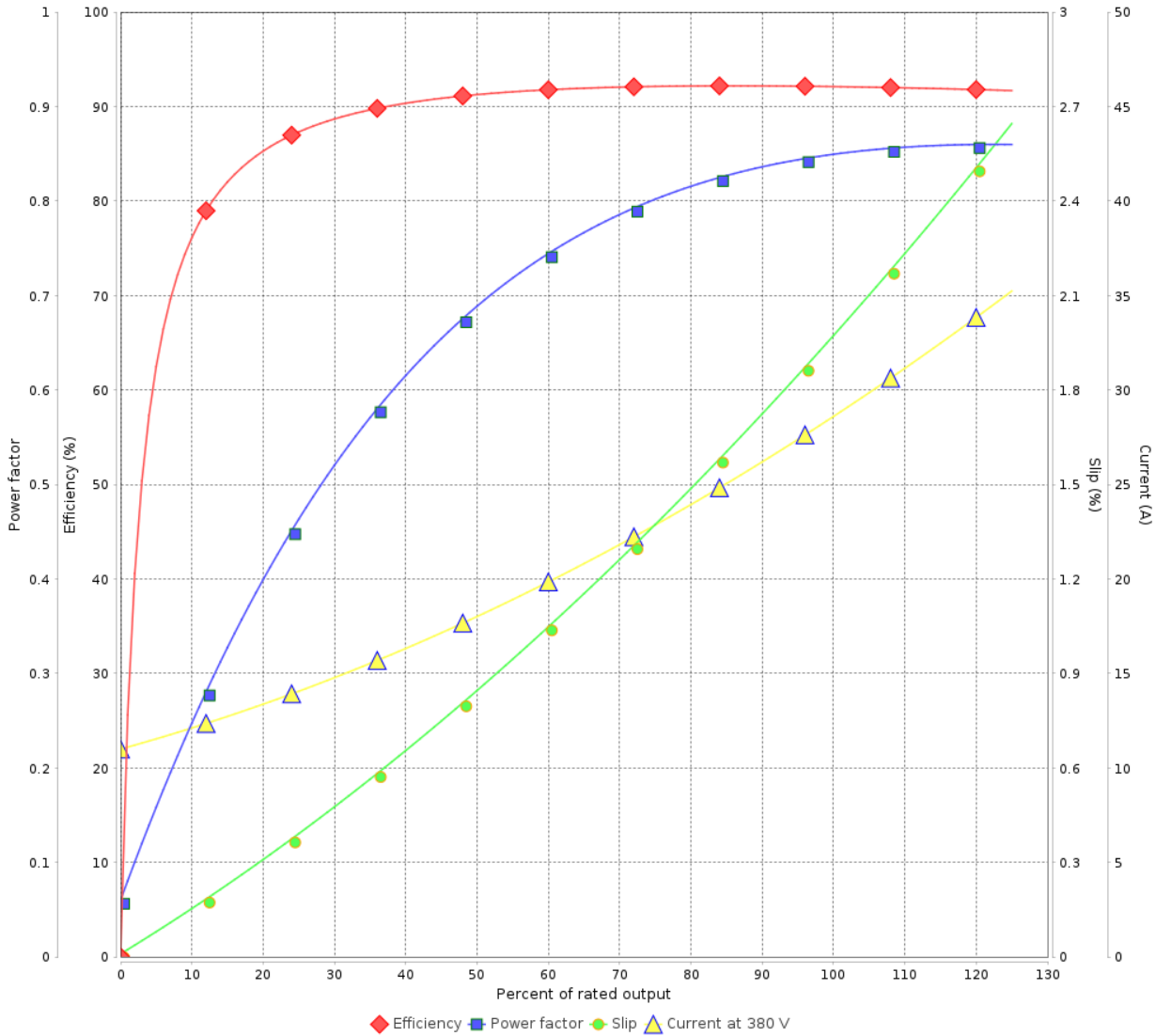
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 Close Coupled Pump JP  
 NEMA Premium Efficiency Three-Phase  
 Product code : 12602710

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Performance : 380 V 50 Hz 4P IE3

Rated current	: 29.1 A	Moment of inertia (J)	: 0.2153 kgm <sup>2</sup>
LRC	: 6.0	Duty cycle	: Cont.(S1)
Rated torque	: 9.87 kgfm	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1470 rpm	Design	: B

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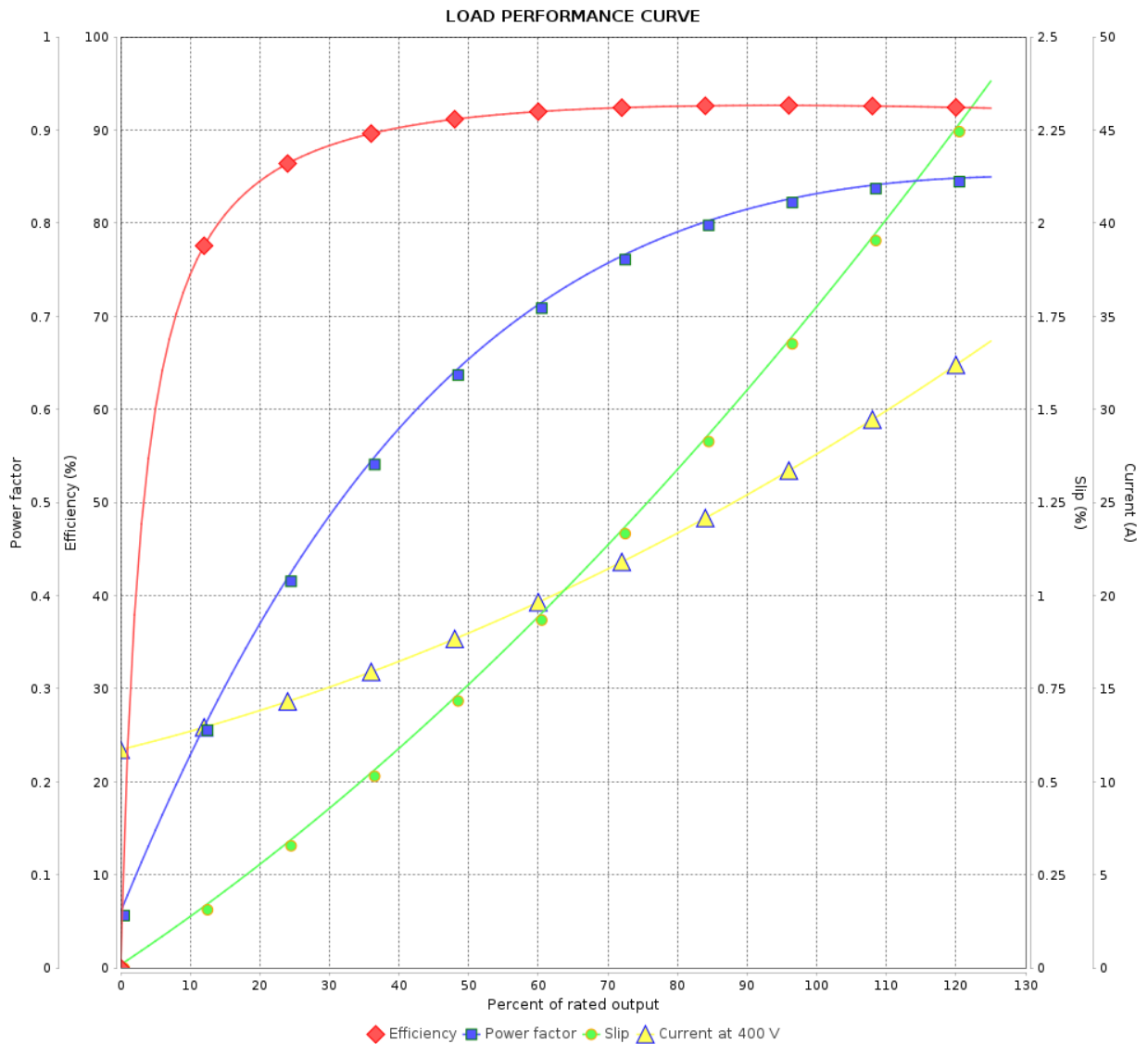
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 Close Coupled Pump JP  
NEMA Premium Efficiency Three-Phase

Product code : 12602710



Performance : 400 V 50 Hz 4P IE3

Rated current : 28.2 A  
LRC : 6.7  
Rated torque : 9.85 kgfm  
Locked rotor torque : 250 %  
Breakdown torque : 300 %  
Rated speed : 1473 rpm

Moment of inertia (J) : 0.2153 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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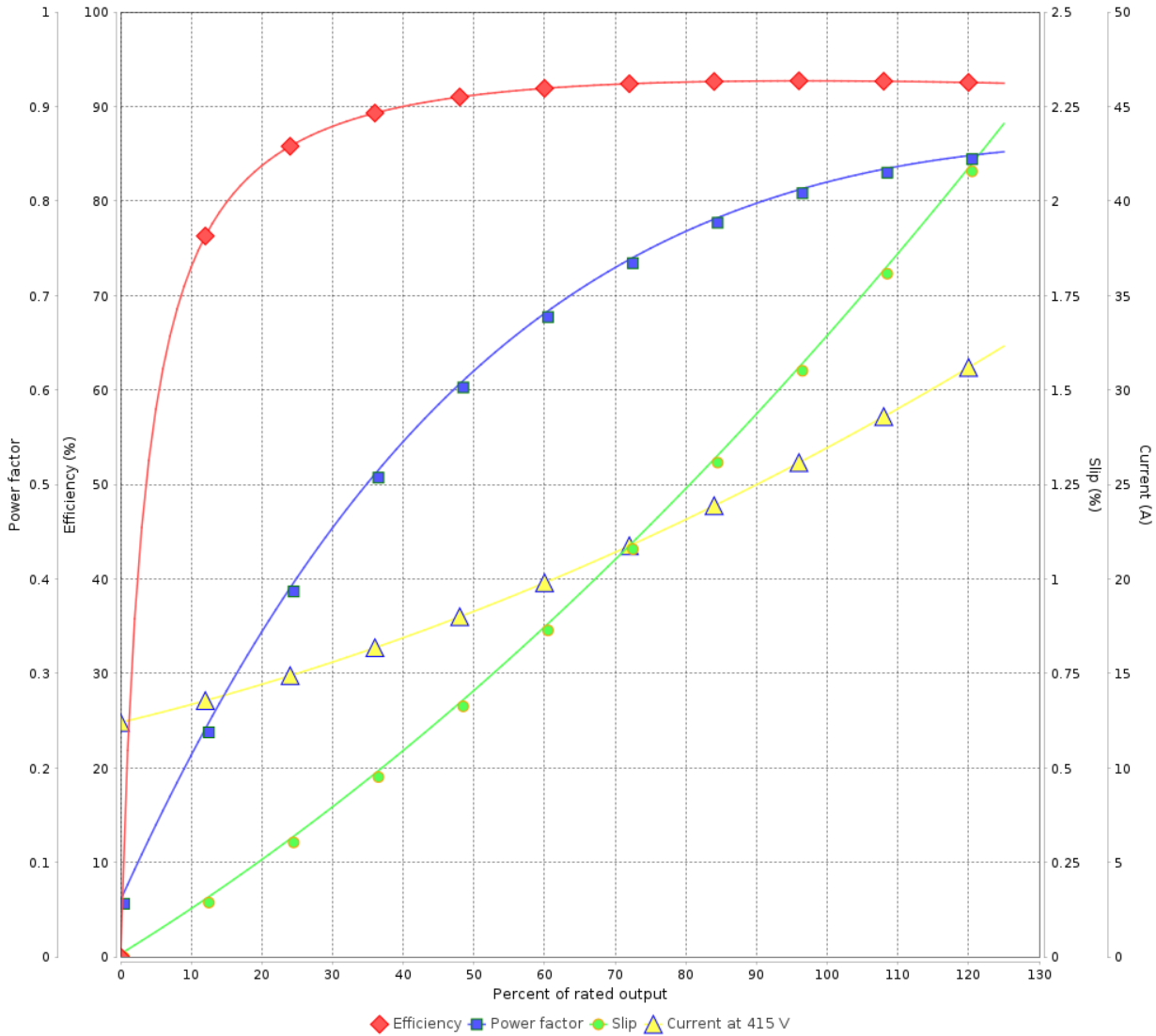
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 Close Coupled Pump JP  
 NEMA Premium Efficiency Three-Phase  
 Product code : 12602710

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Performance : 415 V 50 Hz 4P IE3

Rated current	: 27.5 A	Moment of inertia (J)	: 0.2153 kgm <sup>2</sup>
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 9.84 kgfm	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 1475 rpm	Design	: B

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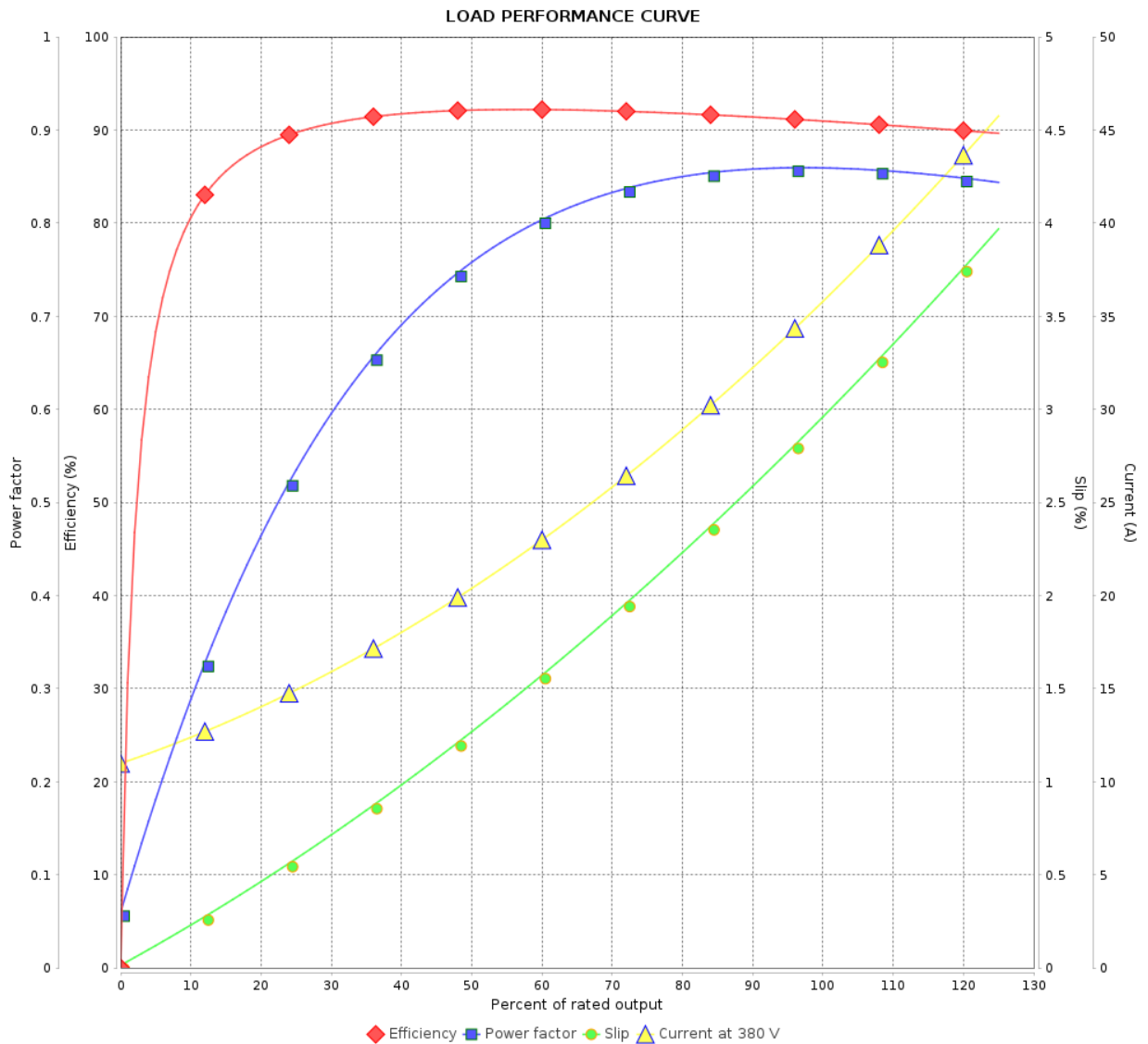
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 Close Coupled Pump JP  
NEMA Premium Efficiency Three-Phase

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Performance : 380 V 50 Hz 4P IE1

Rated current : 35.9 A  
LRC : 5.3  
Rated torque : 12.5 kgfm  
Locked rotor torque : 180 %  
Breakdown torque : 210 %  
Rated speed : 1455 rpm

Moment of inertia (J) : 0.2153 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 105 K  
Design : B

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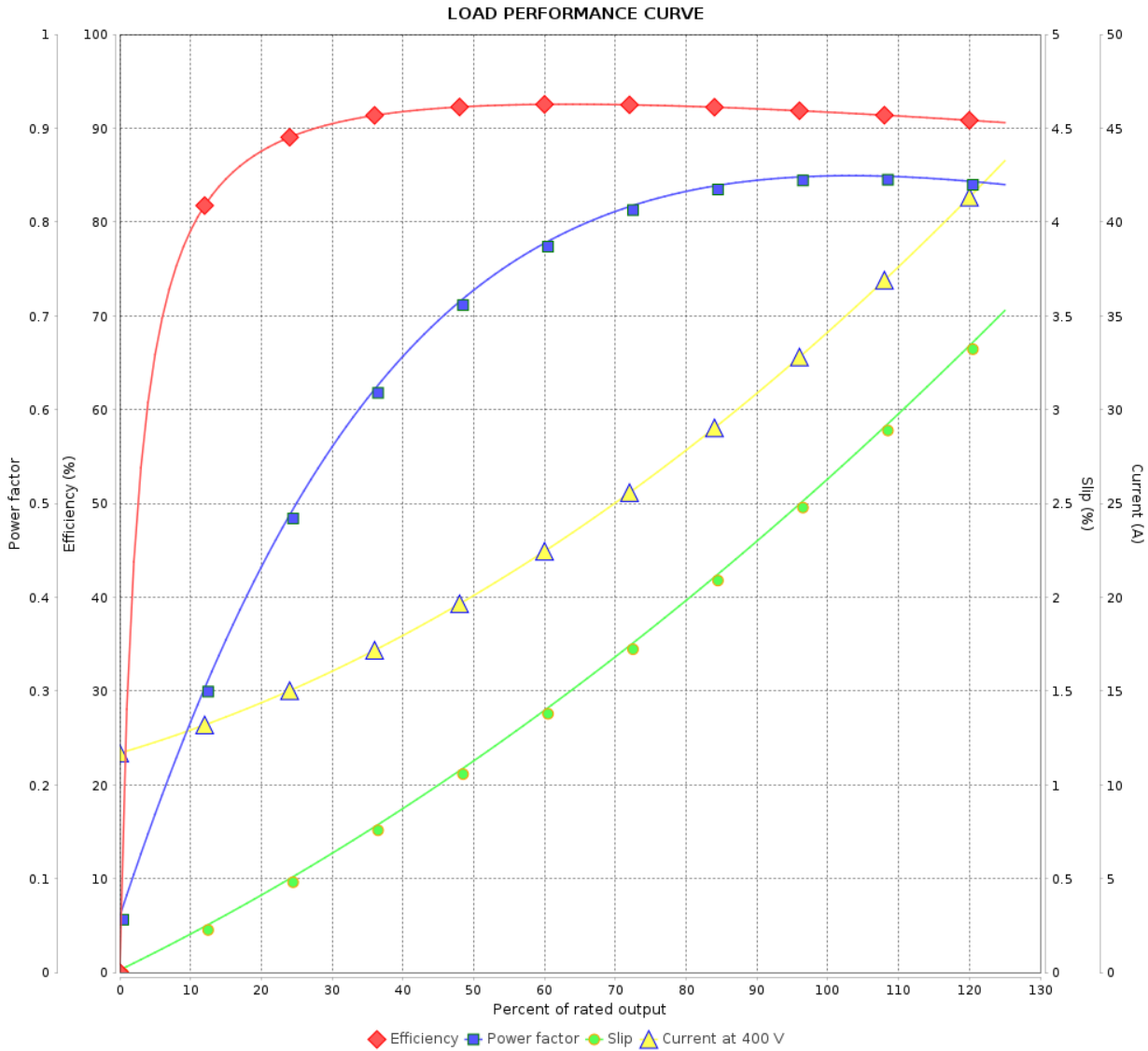
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Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 Close Coupled Pump JP  
 NEMA Premium Efficiency Three-Phase  
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Performance : 400 V 50 Hz 4P IE2

Rated current	: 34.3 A	Moment of inertia (J)	: 0.2153 kgm <sup>2</sup>
LRC	: 5.5	Duty cycle	: Cont.(S1)
Rated torque	: 12.4 kgfm	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 105 K
Rated speed	: 1460 rpm	Design	: B

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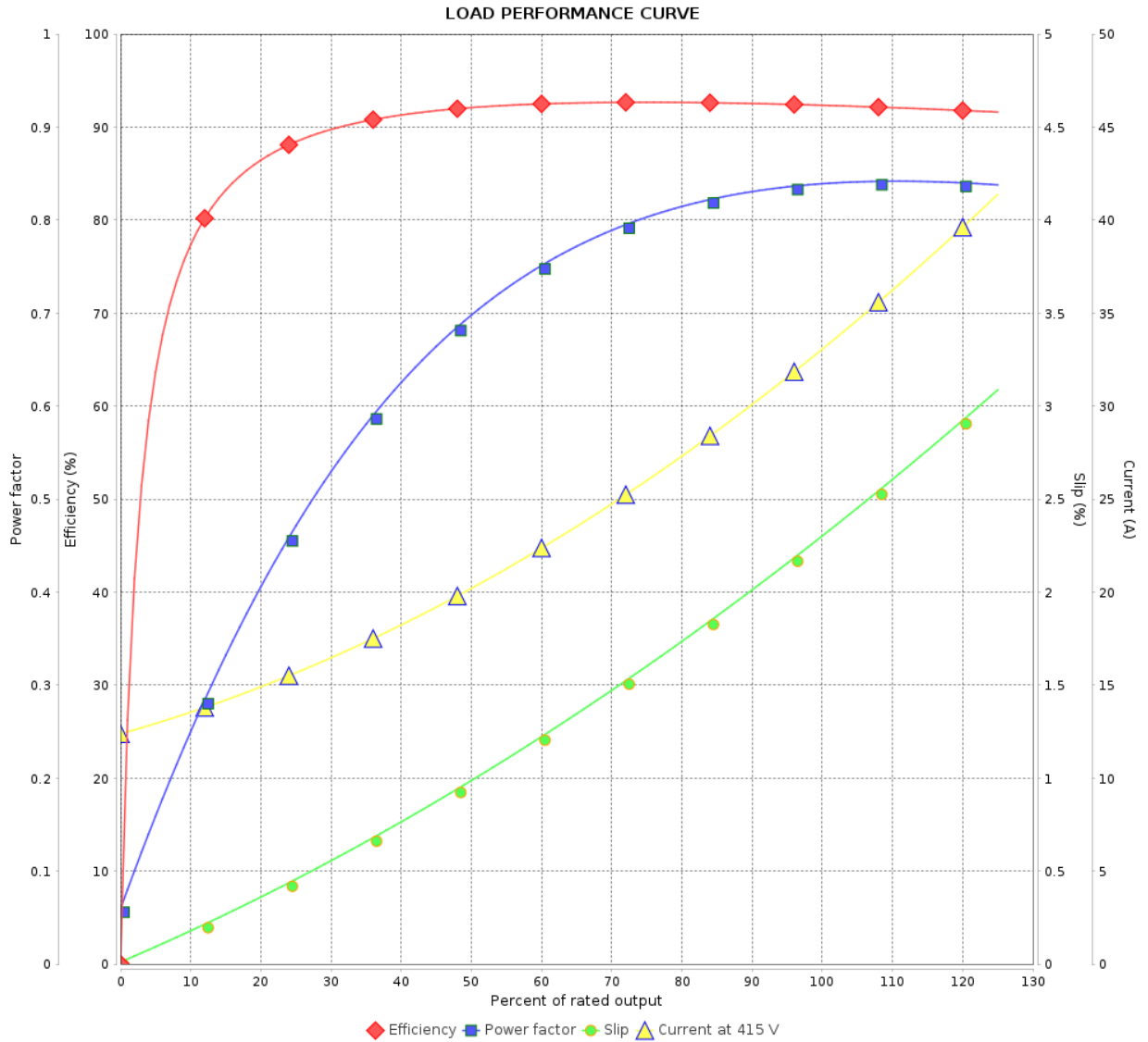
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 Close Coupled Pump JP  
NEMA Premium Efficiency Three-Phase

Product code : 12602710



Performance : 415 V 50 Hz 4P IE2

Rated current : 33.2 A  
LRC : 5.9  
Rated torque : 12.4 kgfm  
Locked rotor torque : 220 %  
Breakdown torque : 260 %  
Rated speed : 1465 rpm

Moment of inertia (J) : 0.2153 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 105 K  
Design : B

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