DATA SHEET

Three Phase Induction Motor - Squirrel Cage

Customer	:
Product line	: W22 - Nema Premium Efficiency (Derating)
Product code	: 11438180

Frame	: 324/6TS	Cooling method	: IC411 - TEFC
Insulation class	: F	Mounting	: B3R(D)
Duty cycle	: S1	Rotation	: Both
Ambient temperature	: -20 °C to +40 °C	Starting method	: Direct On Line
Altitude	: 1000 m	Approx. weight	: 265 kg
Protection degree	: IP55	Moment of inertia (J)	: 0.2422 kgm²
Design	: B		

Output		50 HP (37	50 HP (37	40 HP (30	40 HP (30	40 HP (30	50 HP (37	50 HP (37	50 HP (37
Poles		2	2	2	2	2	2	2	2
Frequency		60 Hz	60 Hz	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz
Rated voltage		230/460 V	208 V	380 V	400 V	415 V	380 V	400 V	415 V
Rated current		115/57.4 A	124 A	55.7 A	53.4 A	52.6 A	69.4 A	66.2 A	64.0 A
L. R. Amperes			782 A	368 A	379 A	405 A	361 A	371 A	403 A
LRC		723/362 A	6.3 Code G	6.6 Code G	7.1 Code H	7.7 Code J	5.2 Code E	5.6 Code F	6.3 Code G
No load current		6.3 Code G	27.4 A	14.8 A	16.5 A	18.0 A	14.8 A	16.5 A	18.0 A
Rated speed			3560 rpm	2960 rpm	2965 rpm	2969 rpm	2950 rpm	2955 rpm	2957 rpm
Slip		31.8/15.9 A	1.11 %	1.33 %	1.17 %	1.03 %	1.67 %	1.50 %	1.43 %
Rated torque			10.0 kgfm	9.81 kgfm	9.79 kgfm	9.78 kgfm	12.3 kgfm	12.3 kgfm	12.3 kgfm
Locked rotor torque		3560 rpm	240 %	240 %	260 %	280 %	190 %	210 %	220 %
Breakdown torque		1.11 %	240 %	230 %	250 %	280 %	200 %	200 %	250 %
Service factor		10.2 kgfm	1.25	1.00	1.00	1.00	1.00	1.00	1.00
Temperature rise		240 %	80 K	80 K	80 K	80 K	105 K	105 K	105 K
Noise level		240 %	76.0 dB(A)	72 dB(A)	72 dB(A)	72 dB(A)	72 dB(A)	72 dB(A)	72 dB(A)
Locked rotor time		1.25	20 s (hot) 36 s (cold)	18 s (hot) 32 s (cold)	18 s (hot) 32 s (cold)	17 s (hot) 31 s (cold)	12 s (hot) 22 s (cold)	13 s (hot) 23 s (cold)	12 s (hot) 22 s (cold)
		80 K							
		76 dB(A)							
		20 s (hot) 36 s (cold)							
Efficiency (%)	50%	93.0	93.0	92.8	92.2	92.2	93.0	93.0	93.0
	75%	93.0	93.0	92.9	92.8	93.1	92.4	92.4	93.0
	100%	93.0	93.0	93.0	93.3	93.3	91.0	91.7	92.4
Power Factor	Start	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
	50%	0.78	0.78	0.80	0.75	0.72	0.84	0.80	0.78
	75%	0.85	0.85	0.86	0.83	0.81	0.88	0.86	0.85
	100%	0.87	0.87	0.88	0.87	0.85	0.89	0.88	0.87
Losses at normative operating points (speed;torque), in percentage of rated output power									
P1 (0,9;1,0)		6.98	6.98	6.98	6.66	6.66	9.18	8.40	7.63
P2 (0,5;1,0)		5.10	5.10	5.10	4.86	4.86	6.70	6.13	5.57
P3 (0,25;1,0)		4.61	4.61	4.61	4.40	4.40	6.06	5.55	5.04
P4 (0,9;0,5)		3.77	3.77	3.77	3.60	3.60	4.96	4.54	4.12
P5 (0,5;0,5)		2.07	2.07	2.07	1.97	1.97	2.72	2.49	2.26
P6 (0,5;0,25)		1.38	1.38	1.38	1.32	1.32	1.81	1.66	1.51
P7 (0,25;0,25)		0.77	0.77	0.77	0.74	0.74	1.02	0.93	0.84

	Drive end	Non drive end
Bearing type	6312-C3	6212-C3
Lubrication interval	12000 h	15000 h
Lubricant amount	21 g	13 g
Lubricant type	MOBIL POLYREX EM	

Foundation loads
Max. traction : 249 kgf
Max. compression : 514 kgf

Notes:

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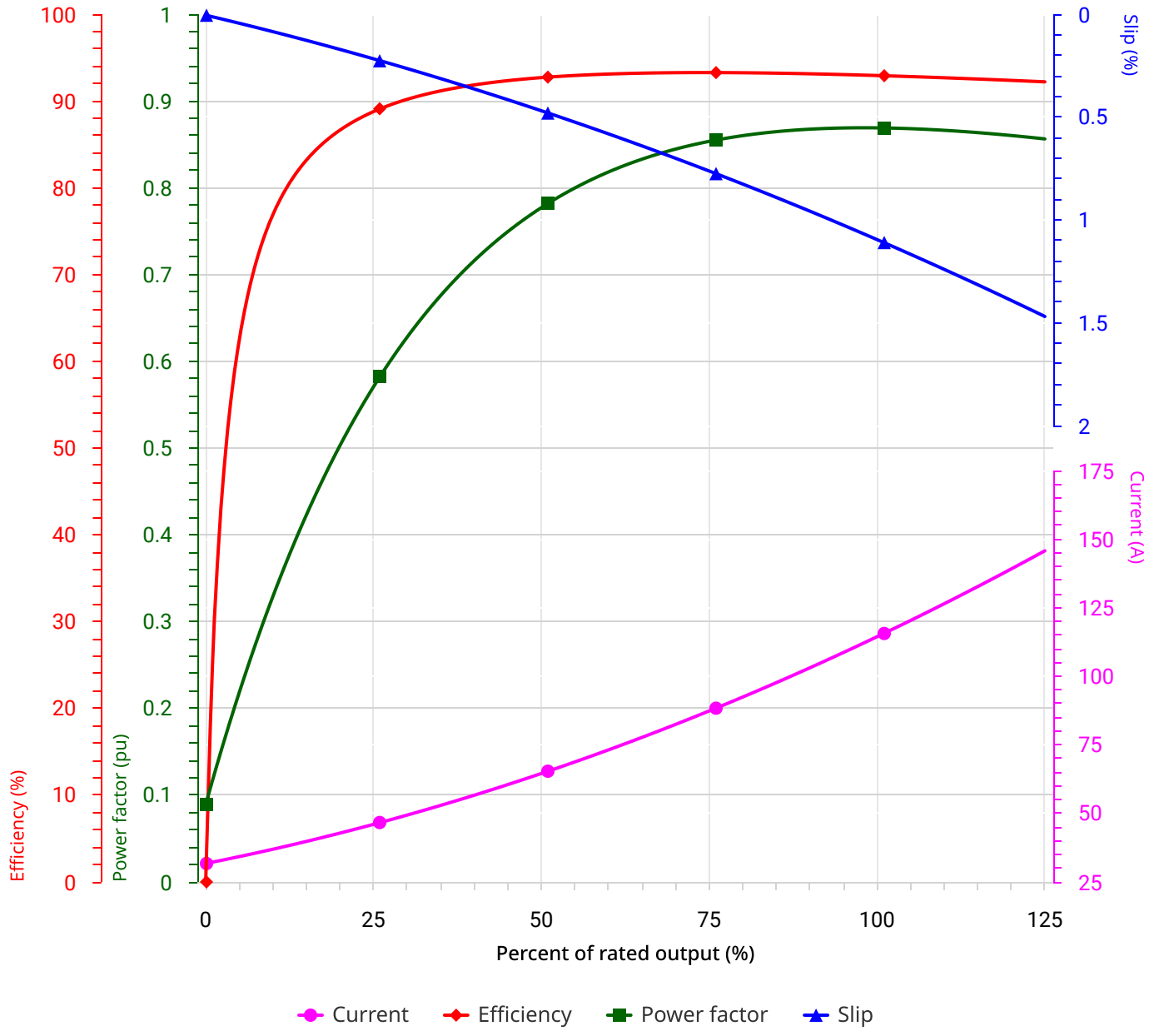
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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

Customer	:
Product line	: W22 - Nema Premium Efficiency (Derating)
Product code	: 11438180



Performance	: 50 HP (37 kW) 230/460V 60Hz 2P 324/6TS

Rated current	: 115/57.4 A	Moment of inertia (J)	: 0.2422 kgm²
LRC	: 6.3 Code G	Duty cycle	: Cont.(S1)
Rated torque	: 10.2 kgfm	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.25
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 3560 rpm	Design	: B

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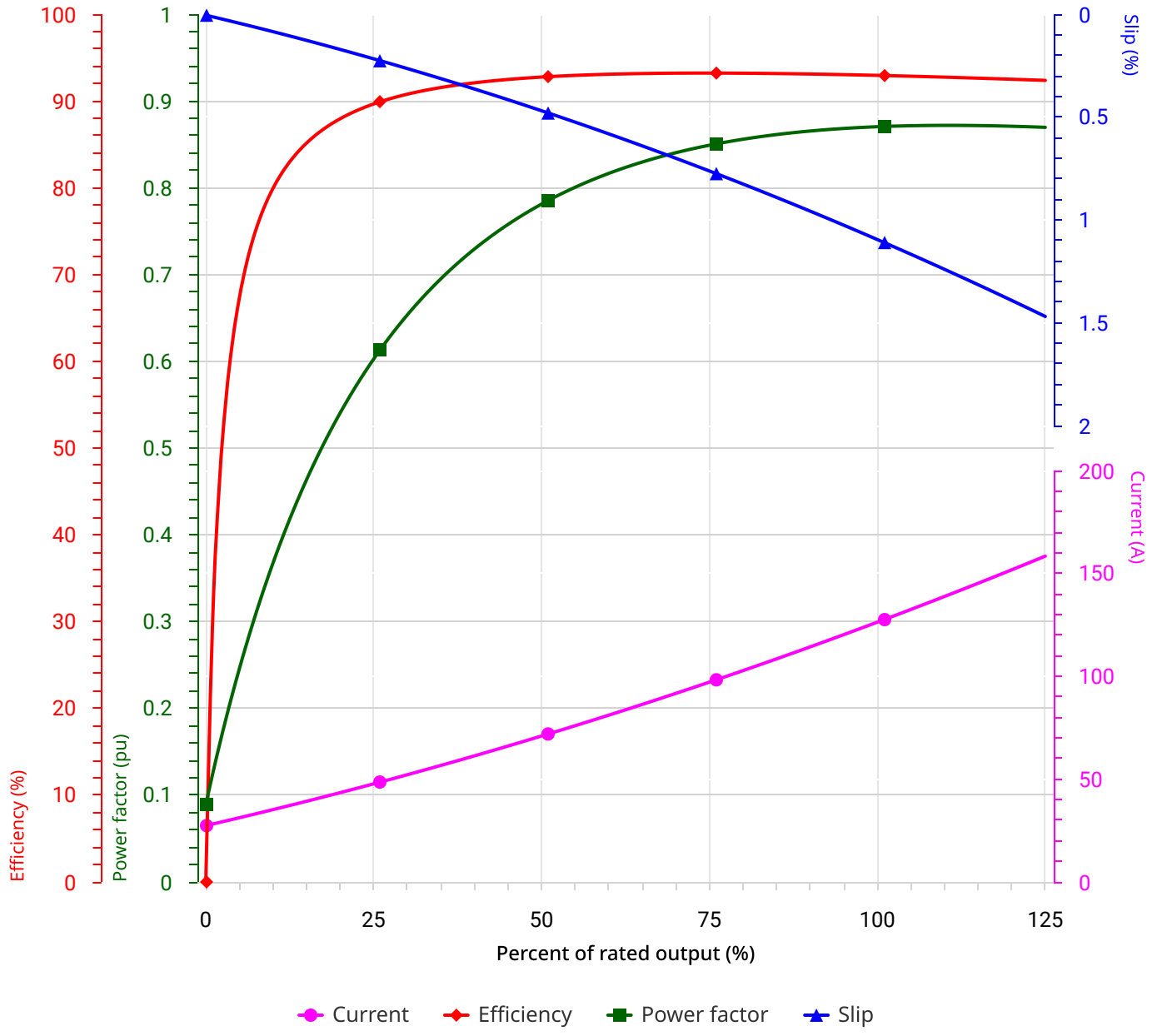
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Three Phase Induction Motor - Squirrel Cage

Customer	:
Product line	: W22 - Nema Premium Efficiency (Derating)
Product code	: 11438180



Performance	: 50 HP (37 kW) 208V 60Hz 2P 324/6TS

Rated current	: 124 A	Moment of inertia (J)	: 0.2422 kgm²
LRC	: 6.3 Code G	Duty cycle	: Cont.(S1)
Rated torque	: 10.0 kgfm	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.25
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 3560 rpm	Design	: 00002

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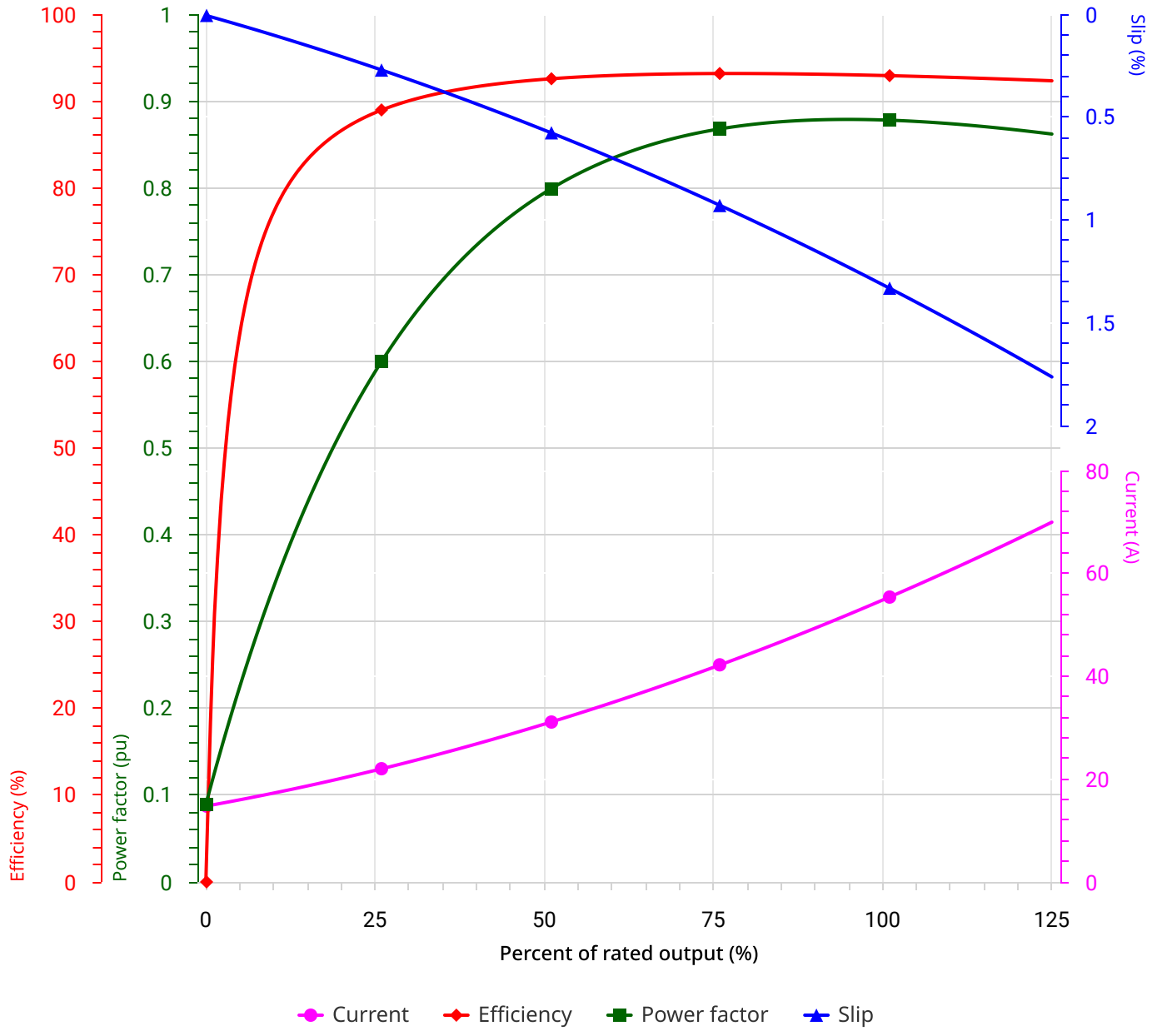
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Three Phase Induction Motor - Squirrel Cage

Customer	:
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Product code	: 11438180



Performance	: 40 HP (30 kW) 380V 50Hz 2P 324/6TS

Rated current	: 55.7 A	Moment of inertia (J)	: 0.2422 kgm²
LRC	: 6.6 Code G	Duty cycle	: Cont.(S1)
Rated torque	: 9.81 kgfm	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 230 %	Temperature rise	: 80 K
Rated speed	: 2960 rpm	Design	: B

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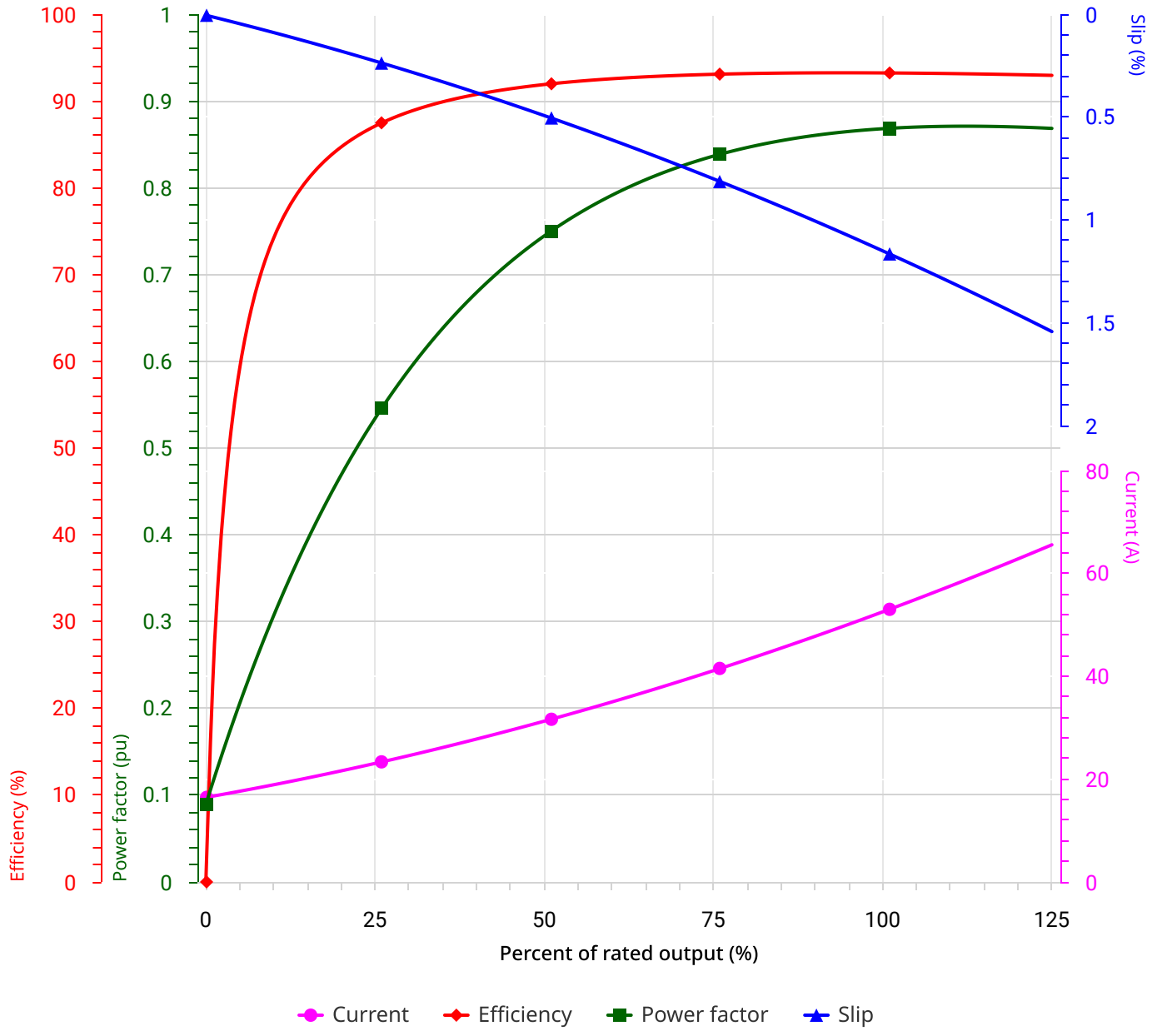
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Three Phase Induction Motor - Squirrel Cage

Customer	:
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Performance	: 40 HP (30 kW) 400V 50Hz 2P 324/6TS

Rated current	: 53.4 A	Moment of inertia (J)	: 0.2422 kgm²
LRC	: 7.1 Code H	Duty cycle	: Cont.(S1)
Rated torque	: 9.79 kgfm	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 2965 rpm	Design	: B

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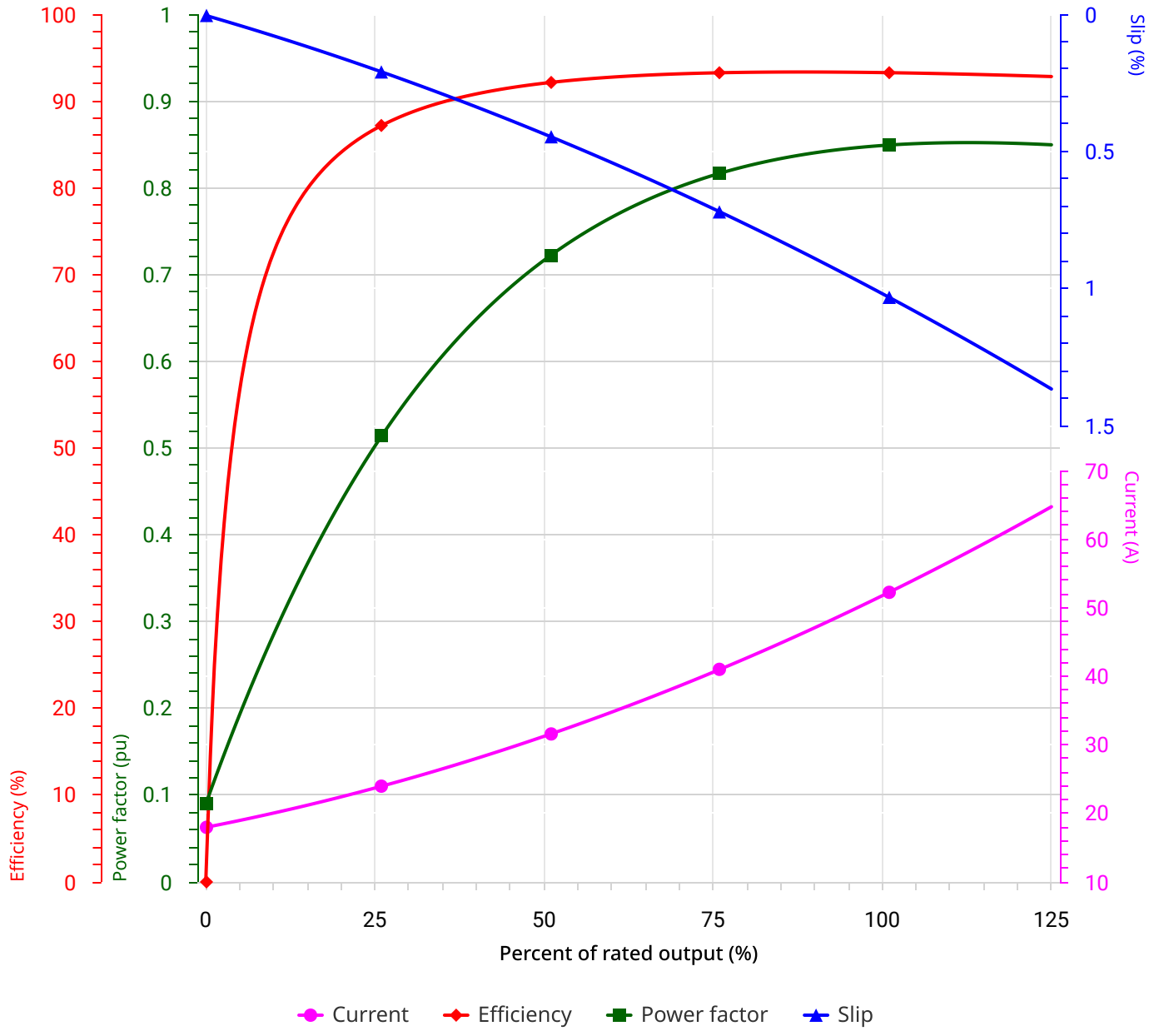
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Three Phase Induction Motor - Squirrel Cage

Customer	:
Product line	: W22 - Nema Premium Efficiency (Derating)
Product code	: 11438180



Performance	: 40 HP (30 kW) 415V 50Hz 2P 324/6TS

Rated current	: 52.6 A	Moment of inertia (J)	: 0.2422 kgm²
LRC	: 7.7 Code J	Duty cycle	: Cont.(S1)
Rated torque	: 9.78 kgfm	Insulation class	: F
Locked rotor torque	: 280 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 2969 rpm	Design	: B

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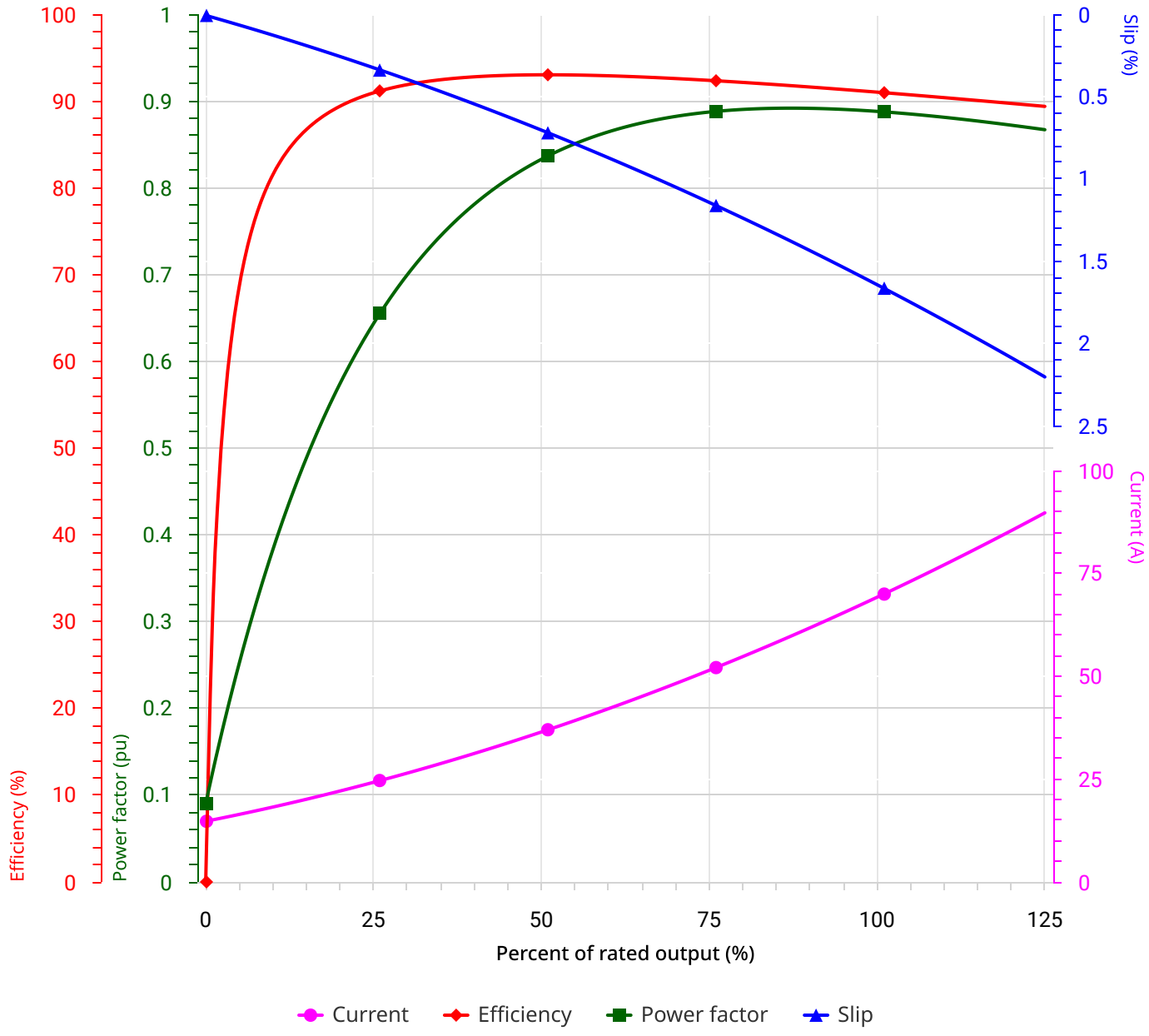
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Performance	: 50 HP (37 kW) 380V 50Hz 2P 324/6TS

Rated current	: 69.4 A	Moment of inertia (J)	: 0.2422 kgm²
LRC	: 5.2 Code E	Duty cycle	: Cont.(S1)
Rated torque	: 12.3 kgfm	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 105 K
Rated speed	: 2950 rpm	Design	: B

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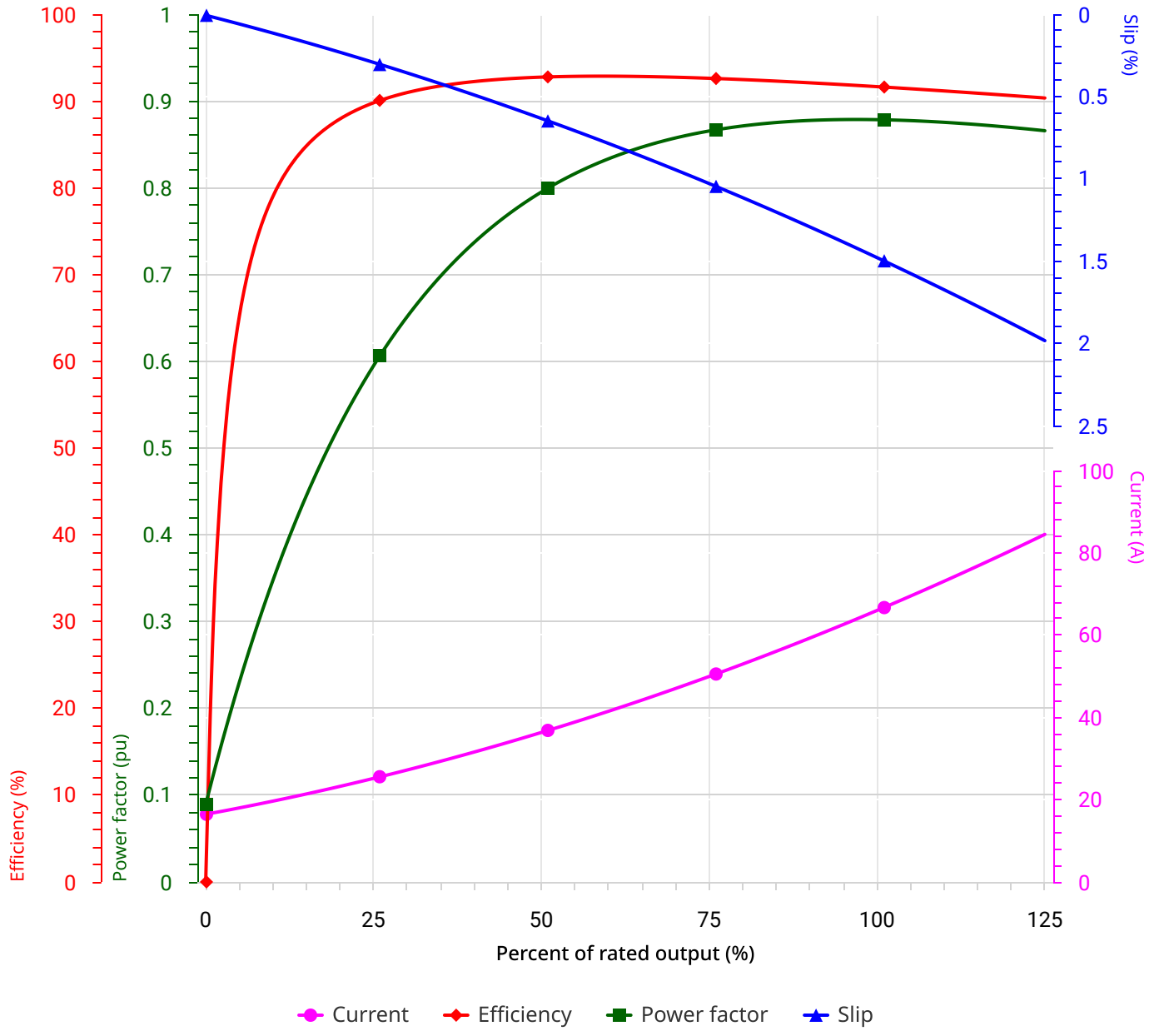
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Product code	: 11438180



Performance	: 50 HP (37 kW) 400V 50Hz 2P 324/6TS

Rated current	: 66.2 A	Moment of inertia (J)	: 0.2422 kgm²
LRC	: 5.6 Code F	Duty cycle	: Cont.(S1)
Rated torque	: 12.3 kgfm	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 105 K
Rated speed	: 2955 rpm	Design	: B

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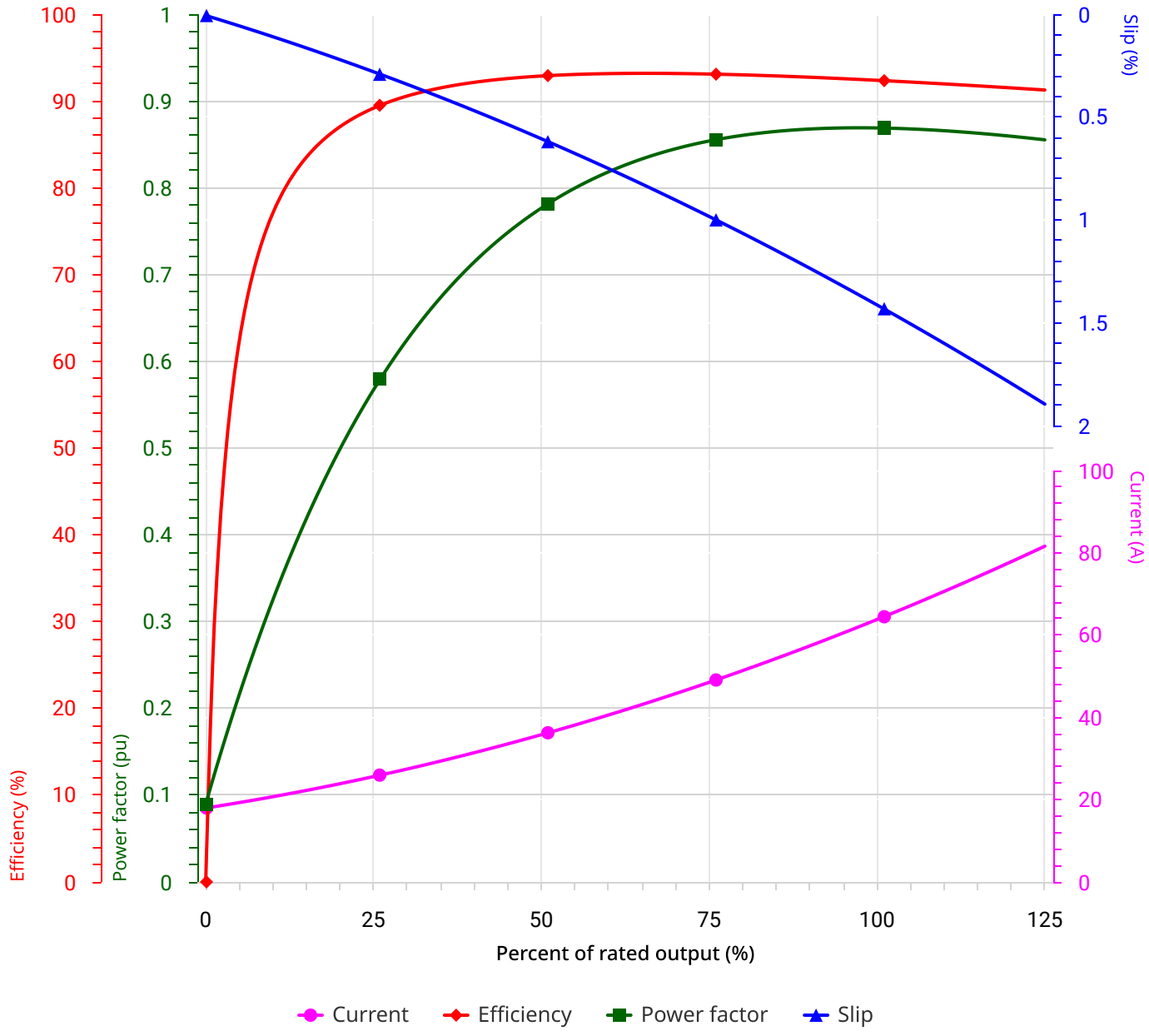
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Product code	: 11438180



Performance	: 50 HP (37 kW) 415V 50Hz 2P 324/6TS

Rated current	: 64.0 A	Moment of inertia (J)	: 0.2422 kgm²
LRC	: 6.3 Code G	Duty cycle	: Cont.(S1)
Rated torque	: 12.3 kgfm	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 105 K
Rated speed	: 2957 rpm	Design	: B

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