DATA SHEET

Three Phase Induction Motor - Squirrel Cage

Customer	:

Product line	: W22 - Nema Premium Efficiency (Derating)
Product code	: 11438008

Frame	: 254/6T	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	: 132 kg
Protection degree	: IP55	Moment of inertia (J)	: 0.1305 kgm²
Design	: B		

Output		20 HP (15	20 HP (15	15 HP (11	15 HP (11	15 HP (11	20 HP (15	20 HP (15	20 HP (15
Poles		4	4	4	4	4	4	4	4
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		48.2/24.1 A	53.3 A	21.8 A	21.2 A	20.6 A	29.4 A	28.0 A	27.1 A
L. R. Amperes			346 A	161 A	167 A	173 A	167 A	174 A	179 A
LRC		313/157 A	6.5 Code G	7.4 Code H	7.9 Code J	8.4 Code K	5.7 Code F	6.2 Code G	6.6 Code H
No load current		6.5 Code G	16.6 A	9.90 A	10.5 A	11.0 A	9.90 A	10.5 A	11.0 A
Rated speed			1770 rpm	1473 rpm	1475 rpm	1477 rpm	1455 rpm	1460 rpm	1465 rpm
Slip		19.2/9.60 A	1.67 %	1.80 %	1.67 %	1.53 %	3.00 %	2.67 %	2.33 %
Rated torque			8.00 kgfm	7.39 kgfm	7.38 kgfm	7.37 kgfm	9.98 kgfm	9.94 kgfm	9.91 kgfm
Locked rotor torque		1770 rpm	240 %	250 %	280 %	300 %	180 %	210 %	230 %
Breakdown torque		1.67 %	260 %	260 %	320 %	340 %	210 %	230 %	260 %
Service factor		8.20 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	95 K	95 K
Noise level		260 %	64.0 dB(A)	61 dB(A)	61 dB(A)	61 dB(A)	61 dB(A)	61 dB(A)	61 dB(A)
Locked rotor time		1.25	18 s (hot) 32 s (cold)	19 s (hot) 34 s (cold)	17 s (hot) 31 s (cold)	17 s (hot) 31 s (cold)	9 s (hot) 16 s (cold)	9 s (hot) 16 s (cold)	10 s (hot) 18 s (cold)
		80 K							
		64 dB(A)							
		18 s (hot) 32 s (cold)							
Efficiency (%)	50%	91.7	91.7	91.0	89.8	89.8	91.7	91.0	91.0
	75%	92.4	92.4	91.5	91.0	91.3	91.0	91.0	91.7
	100%	93.0	93.0	91.4	91.4	91.7	90.2	91.0	91.7
Power Factor	Start	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48
	50%	0.68	0.68	0.65	0.62	0.60	0.75	0.72	0.70
	75%	0.79	0.79	0.78	0.75	0.73	0.83	0.81	0.80
	100%	0.84	0.84	0.84	0.82	0.81	0.86	0.85	0.84
Losses at normative operating points (speed;torque), in percentage of rated output power									
P1 (0,9;1,0)		7.45	7.45	9.32	9.32	8.96	10.76	9.80	8.96
P2 (0,5;1,0)		6.50	6.50	8.13	8.13	7.82	9.39	8.54	7.82
P3 (0,25;1,0)		6.04	6.04	7.55	7.55	7.26	8.72	7.94	7.26
P4 (0,9;0,5)		3.50	3.50	4.38	4.38	4.21	5.06	4.60	4.21
P5 (0,5;0,5)		2.51	2.51	3.14	3.14	3.02	3.62	3.30	3.02
P6 (0,5;0,25)		1.62	1.62	2.03	2.03	1.95	2.34	2.13	1.95
P7 (0,25;0,25)		1.16	1.16	1.46	1.46	1.40	1.68	1.53	1.40

	Drive end	Non drive end
Bearing type	6309-C3	6209-C3
Lubrication interval	20000 h	20000 h
Lubricant amount	13 g	9 g
Lubricant type	MOBIL POLYREX EM	

Foundation loads
Max. traction : 334 kgf
Max. compression : 466 kgf

Notes:

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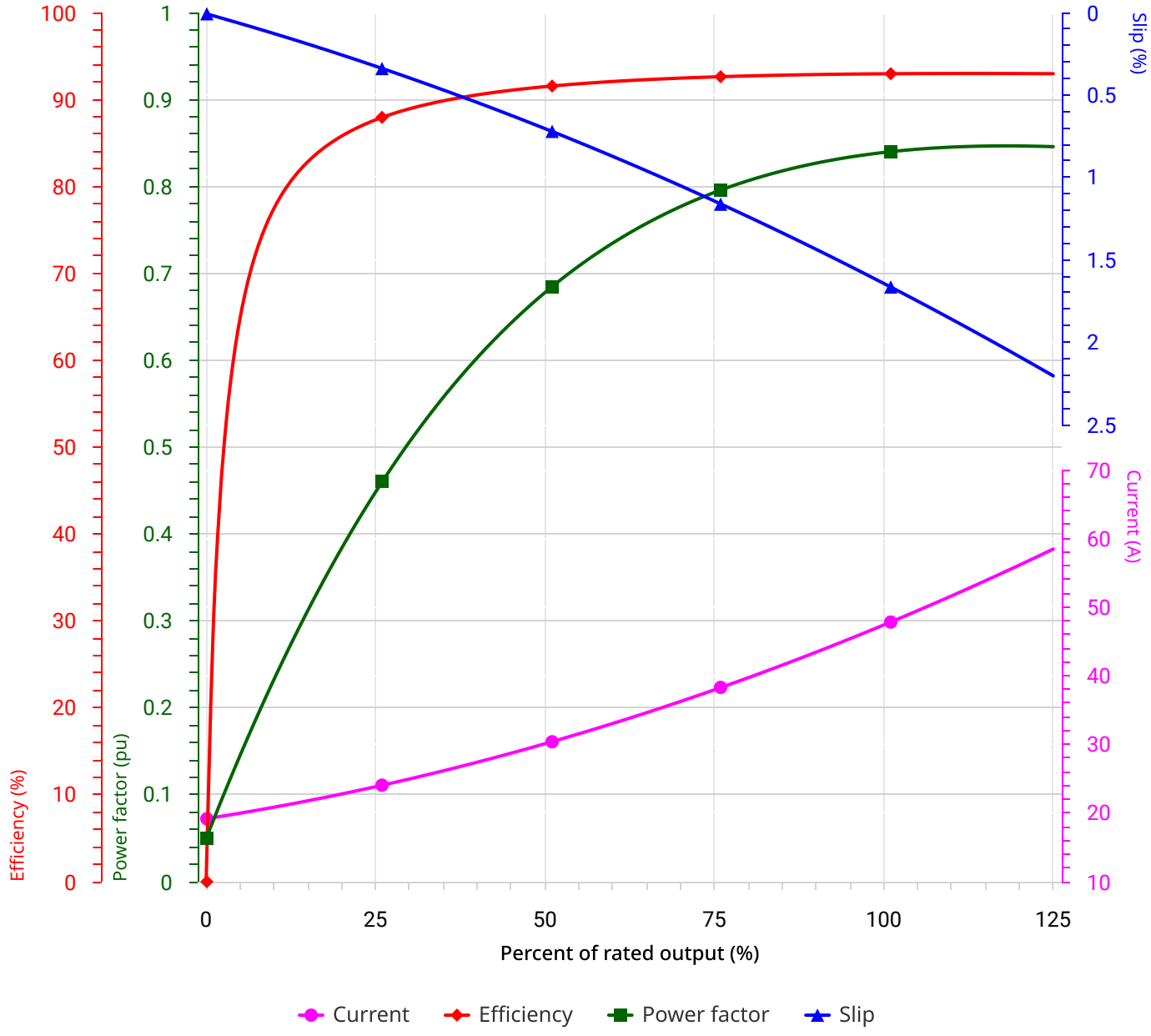
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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

Customer	:
Product line	: W22 - Nema Premium Efficiency (Derating)
Product code	: 11438008



Performance	: 20 HP (15 kW) 230/460V 60Hz 4P 254/6T

Rated current	: 48.2/24.1 A	Moment of inertia (J)	: 0.1305 kgm²
LRC	: 6.5 Code G	Duty cycle	: Cont.(S1)
Rated torque	: 8.20 kgfm	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.25
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1770 rpm	Design	: B

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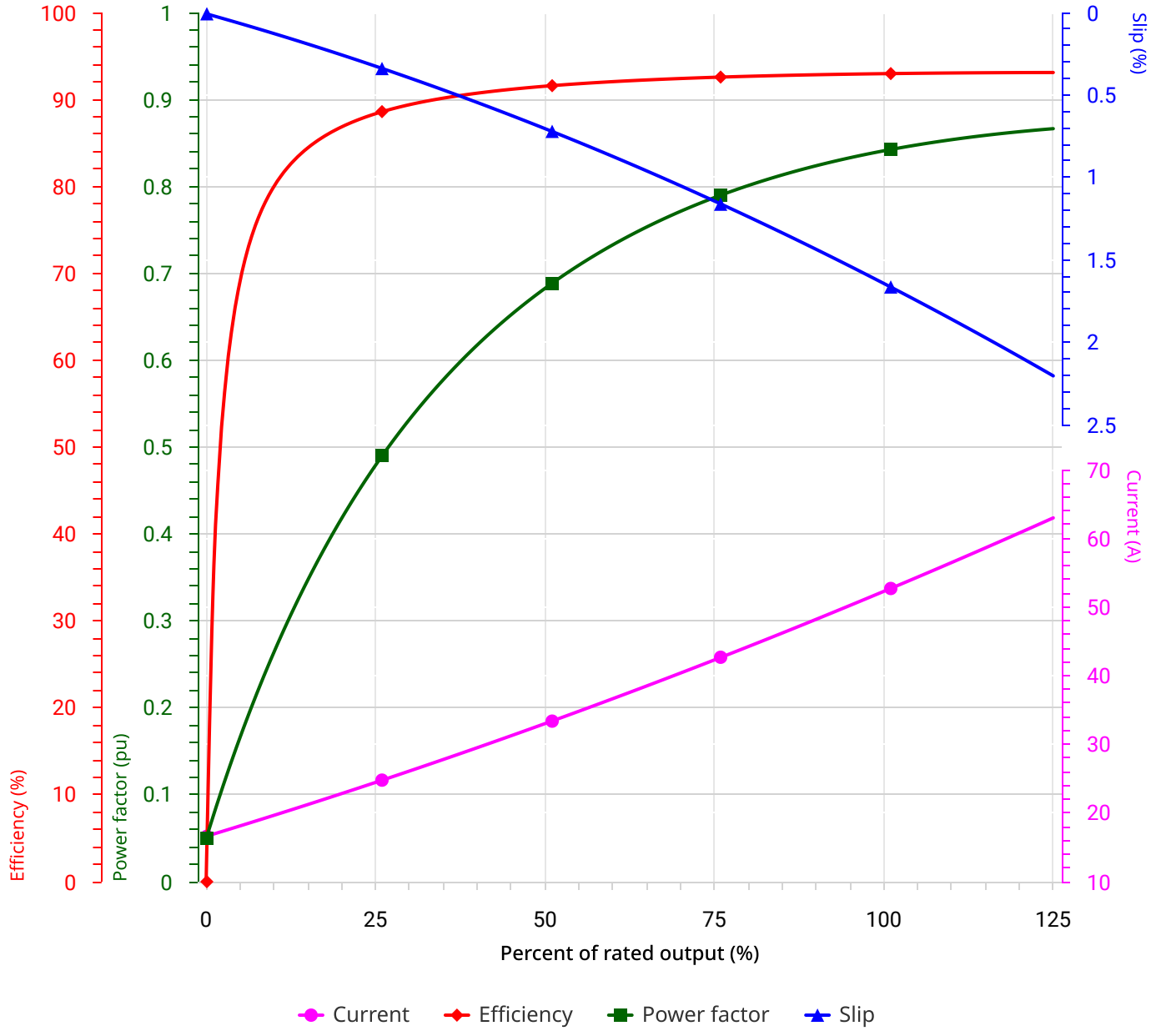
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Three Phase Induction Motor - Squirrel Cage

Customer	:
Product line	: W22 - Nema Premium Efficiency (Derating)
Product code	: 11438008



Performance	: 20 HP (15 kW) 208V 60Hz 4P 254/6T

Rated current	: 53.3 A	Moment of inertia (J)	: 0.1305 kgm²
LRC	: 6.5 Code G	Duty cycle	: Cont.(S1)
Rated torque	: 8.00 kgfm	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.25
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1770 rpm	Design	: 00002

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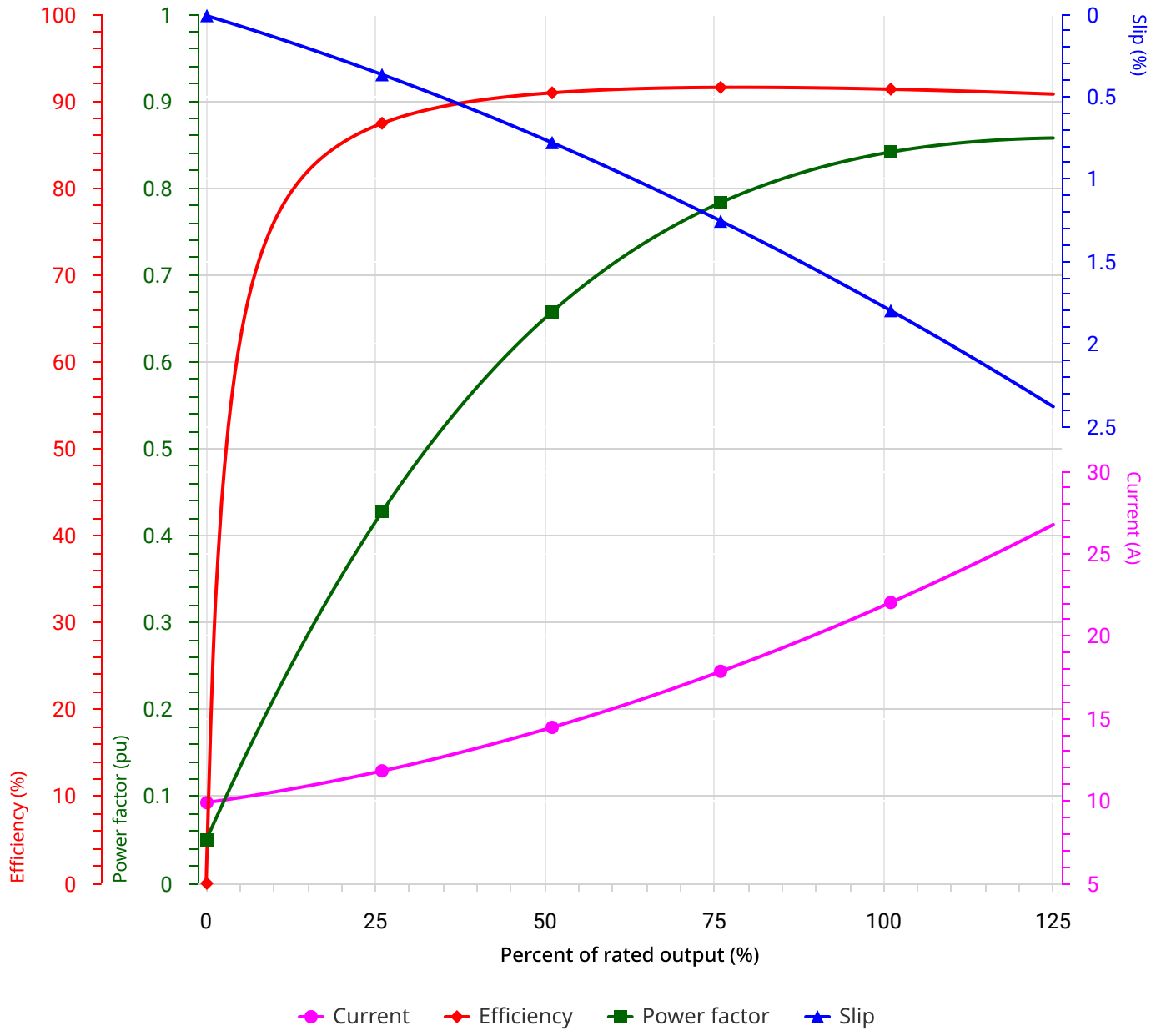
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Three Phase Induction Motor - Squirrel Cage

Customer	:
Product line	: W22 - Nema Premium Efficiency (Derating)
Product code	: 11438008



Performance	: 15 HP (11 kW) 380V 50Hz 4P 254/6T

Rated current	: 21.8 A	Moment of inertia (J)	: 0.1305 kgm²
LRC	: 7.4 Code H	Duty cycle	: Cont.(S1)
Rated torque	: 7.39 kgfm	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1473 rpm	Design	: B

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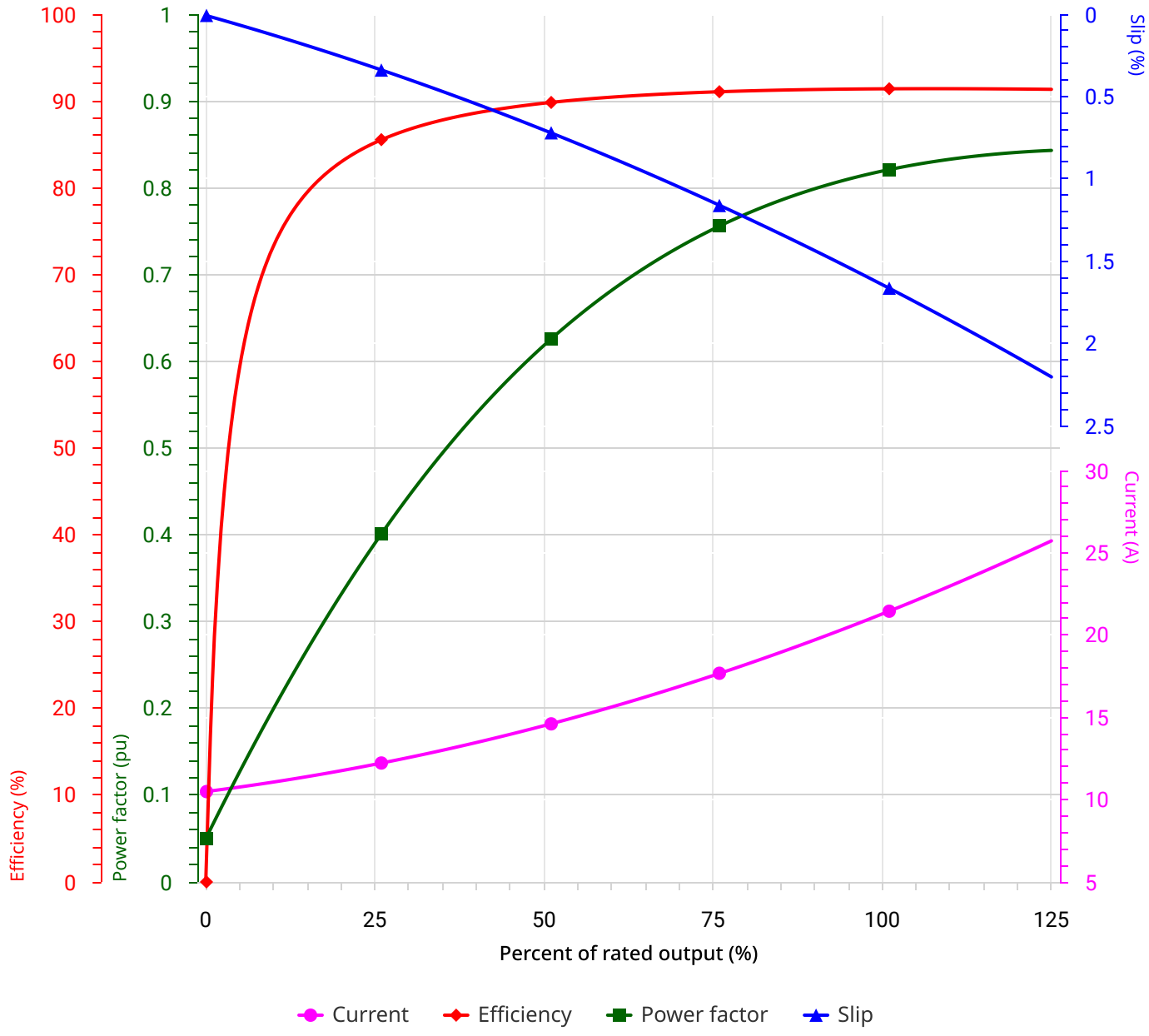
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Three Phase Induction Motor - Squirrel Cage

Customer	:
Product line	: W22 - Nema Premium Efficiency (Derating)
Product code	: 11438008



Performance	: 15 HP (11 kW) 400V 50Hz 4P 254/6T

Rated current	: 21.2 A	Moment of inertia (J)	: 0.1305 kgm²
LRC	: 7.9 Code J	Duty cycle	: Cont.(S1)
Rated torque	: 7.38 kgfm	Insulation class	: F
Locked rotor torque	: 280 %	Service factor	: 1.00
Breakdown torque	: 320 %	Temperature rise	: 80 K
Rated speed	: 1475 rpm	Design	: B

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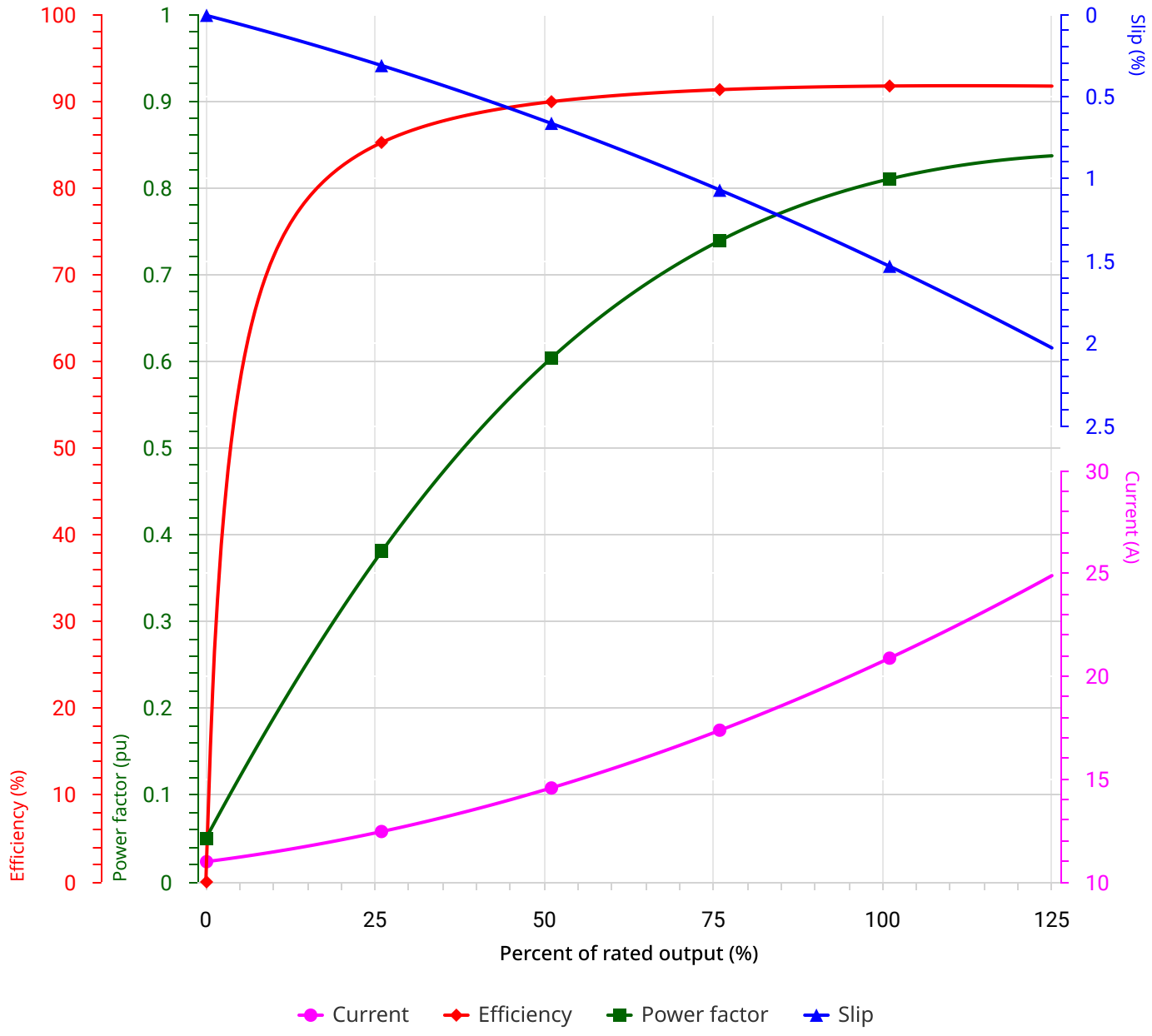
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Three Phase Induction Motor - Squirrel Cage

Customer	:
Product line	: W22 - Nema Premium Efficiency (Derating)
Product code	: 11438008



Performance	: 15 HP (11 kW) 415V 50Hz 4P 254/6T

Rated current	: 20.6 A	Moment of inertia (J)	: 0.1305 kgm²
LRC	: 8.4 Code K	Duty cycle	: Cont.(S1)
Rated torque	: 7.37 kgfm	Insulation class	: F
Locked rotor torque	: 300 %	Service factor	: 1.00
Breakdown torque	: 340 %	Temperature rise	: 80 K
Rated speed	: 1477 rpm	Design	: B

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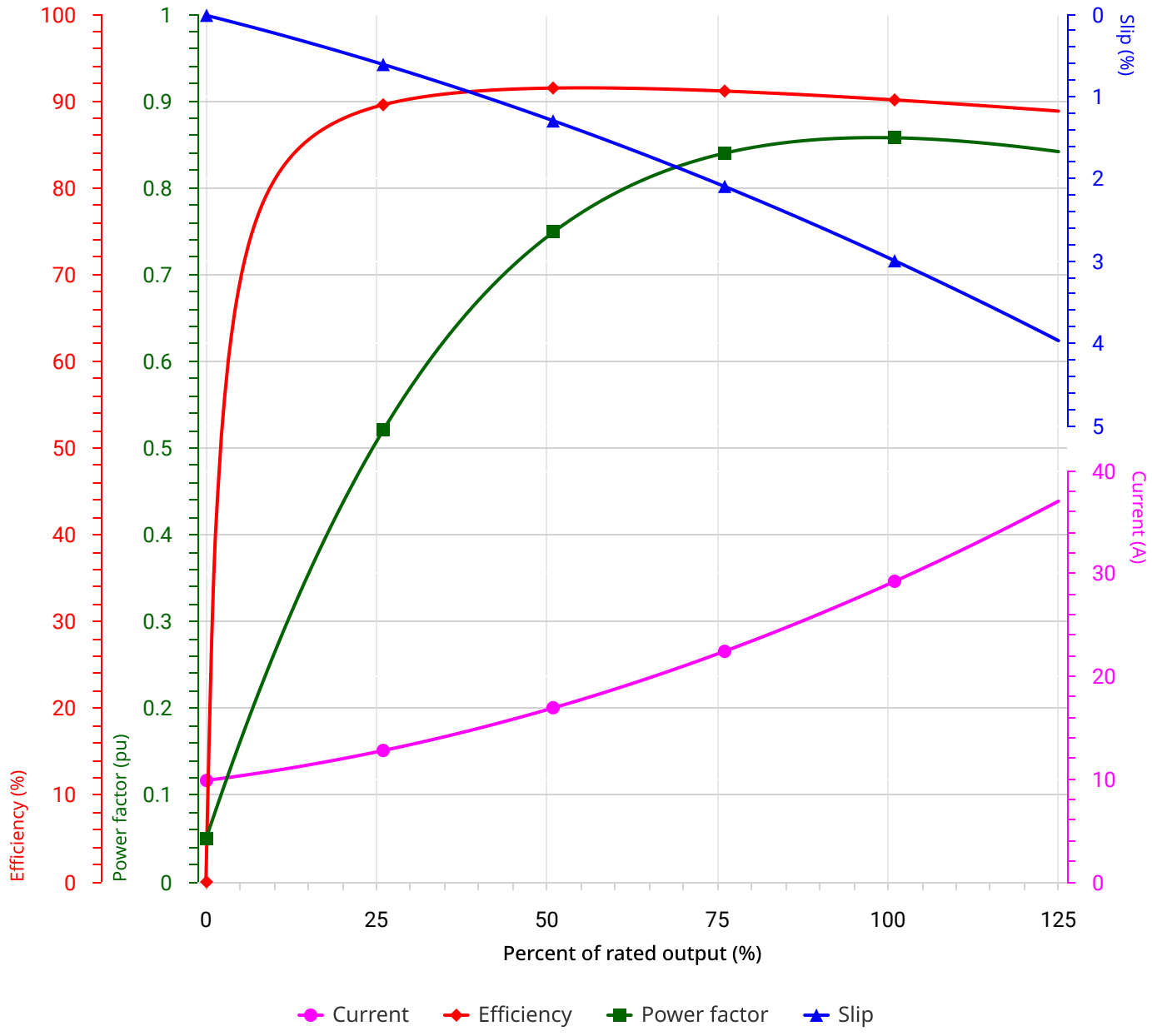
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Performance	: 20 HP (15 kW) 380V 50Hz 4P 254/6T

Rated current	: 29.4 A	Moment of inertia (J)	: 0.1305 kgm²
LRC	: 5.7 Code F	Duty cycle	: Cont.(S1)
Rated torque	: 9.98 kgfm	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 105 K
Rated speed	: 1455 rpm	Design	: B

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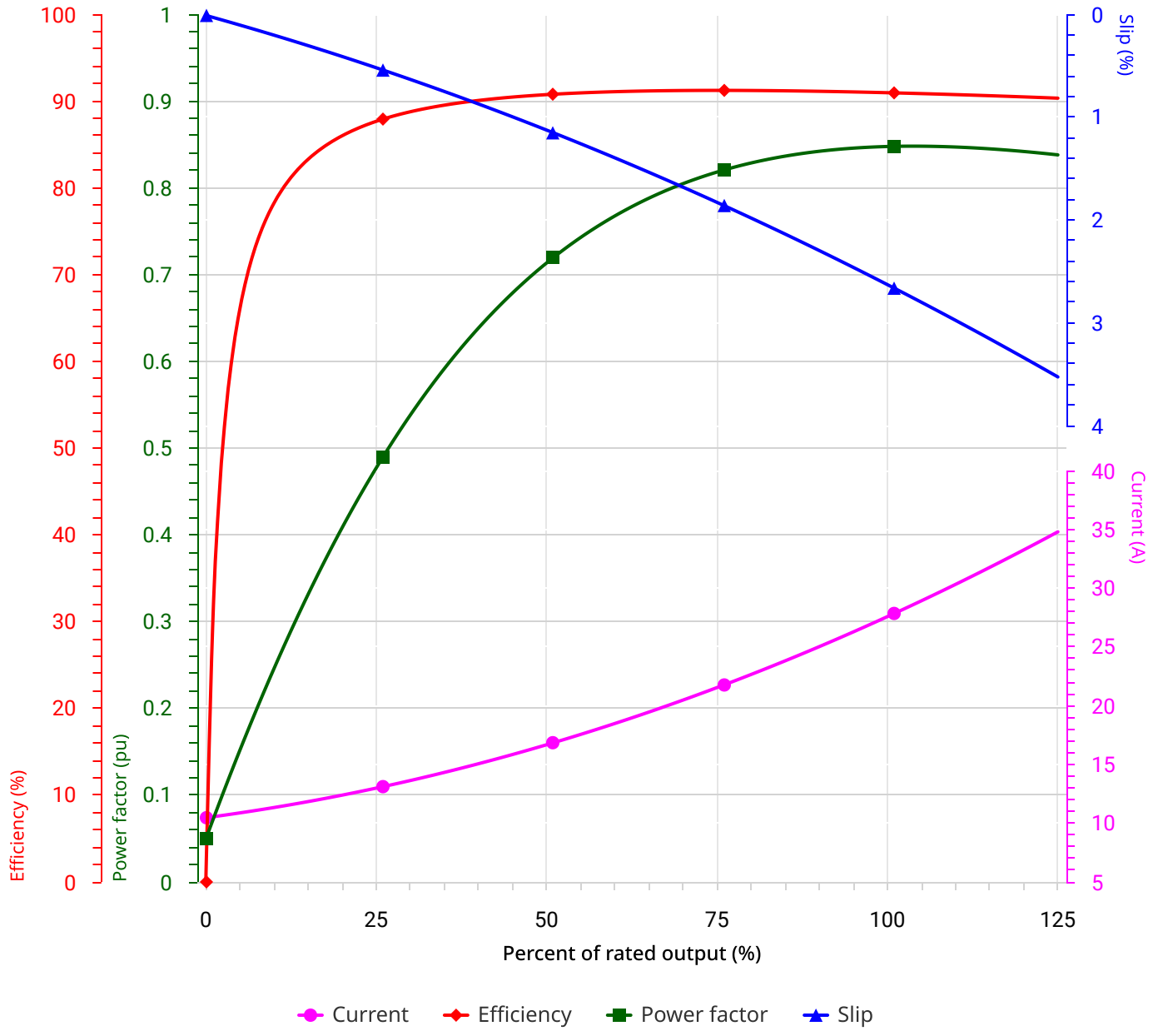
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Performance	: 20 HP (15 kW) 400V 50Hz 4P 254/6T

Rated current	: 28.0 A	Moment of inertia (J)	: 0.1305 kgm²
LRC	: 6.2 Code G	Duty cycle	: Cont.(S1)
Rated torque	: 9.94 kgfm	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 230 %	Temperature rise	: 95 K
Rated speed	: 1460 rpm	Design	: B

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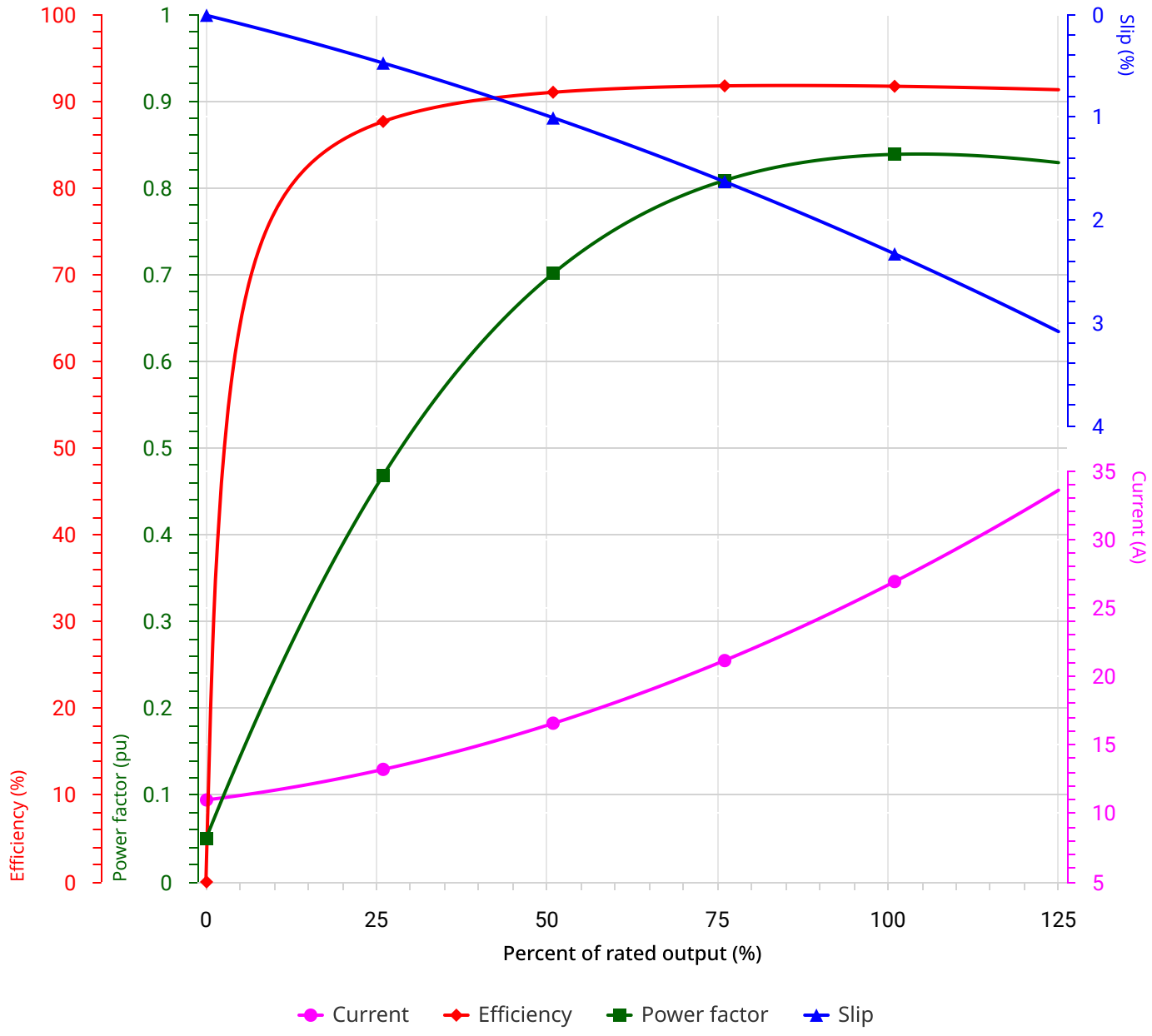
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Performance	: 20 HP (15 kW) 415V 50Hz 4P 254/6T

Rated current	: 27.1 A	Moment of inertia (J)	: 0.1305 kgm²
LRC	: 6.6 Code H	Duty cycle	: Cont.(S1)
Rated torque	: 9.91 kgfm	Insulation class	: F
Locked rotor torque	: 230 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 95 K
Rated speed	: 1465 rpm	Design	: B

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