DATA SHEET

Three Phase Induction Motor - Squirrel Cage

Customer	:

Product line	: W22 P-base - Nema Premium Efficiency - Derating
Product code	: 13181313

Frame	: 284HPH	Cooling method	: IC411 - TEFC
Insulation class	: F	Mounting	: V1
Duty cycle	: S1	Rotation	: Both
Ambient temperature	: -20 °C to +40 °C	Starting method	: Direct On Line
Altitude	: 1000 m	Approx. weight	: 176 kg
Protection degree	: IP55	Moment of inertia (J)	: 0.2153 kgm²
Design	: B		

Output		25 HP (18.5	25 HP (18.5	20 HP (15	20 HP (15	20 HP (15	25 HP (18.5	25 HP (18.5	25 HP (18.5
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		59.0/29.5 A	65.2 A	29.1 A	28.2 A	27.5 A	35.9 A	34.3 A	33.2 A
L. R. Amperes		366/183 A	404 A	175 A	189 A	198 A	190 A	189 A	196 A
LRC		6.2 Code G	6.2 Code G	6.0 Code G	6.7 Code H	7.2 Code J	5.3 Code F	5.5 Code F	5.9 Code G
No load current		22.0/11.0 A	19.0 A	11.0 A	11.7 A	12.4 A	11.0 A	11.7 A	12.4 A
Rated speed		1770 rpm	1770 rpm	1470 rpm	1473 rpm	1475 rpm	1455 rpm	1460 rpm	1465 rpm
Slip		1.67 %	1.67 %	2.00 %	1.80 %	1.67 %	3.00 %	2.67 %	2.33 %
Rated torque		10.3 kgfm	10.0 kgfm	9.87 kgfm	9.85 kgfm	9.84 kgfm	12.5 kgfm	12.4 kgfm	12.4 kgfm
Locked rotor torque		240 %	240 %	230 %	250 %	270 %	180 %	200 %	220 %
Breakdown torque		270 %	270 %	260 %	300 %	330 %	210 %	240 %	260 %
Service factor		1.25	1.25	1.00	1.00	1.00	1.00	1.00	1.00
Temperature rise		80 K	80 K	80 K	80 K	80 K	105 K	105 K	105 K
Noise level		63 dB(A)	63.0 dB(A)	61 dB(A)	61 dB(A)	61 dB(A)	61 dB(A)	61 dB(A)	61 dB(A)
Locked rotor time		24 s (hot) 43 s (cold)	24 s (hot) 43 s (cold)	18 s (hot) 32 s (cold)	18 s (hot) 32 s (cold)	18 s (hot) 32 s (cold)	14 s (hot) 25 s (cold)	14 s (hot) 25 s (cold)	14 s (hot) 25 s (cold)
Efficiency (%)	50%	92.4	92.4	91.3	91.3	91.2	92.4	92.4	92.4
	75%	93.0	93.0	92.1	92.5	92.5	91.7	92.4	92.4
	100%	93.6	93.6	92.1	92.6	92.7	91.0	91.7	92.4
Power Factor	Start	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
	50%	0.70	0.70	0.69	0.65	0.62	0.76	0.73	0.70
	75%	0.80	0.80	0.80	0.78	0.75	0.84	0.82	0.80
	100%	0.84	0.84	0.85	0.83	0.82	0.86	0.85	0.84
Losses at normative operating points (speed;torque), in percentage of rated output power									
P1 (0,9;1,0)		6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75
P2 (0,5;1,0)		5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83
P3 (0,25;1,0)		5.32	5.32	5.32	5.32	5.32	5.32	5.32	5.32
P4 (0,9;0,5)		3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15
P5 (0,5;0,5)		2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23
P6 (0,5;0,25)		1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42
P7 (0,25;0,25)		1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01

	Drive end	Non drive end
Bearing type	6314-C3	6211-C3
Lubrication interval	12000 h	17000 h
Lubricant amount	27 g	11 g
Lubricant type	MOBIL POLYREX EM	

Notes:

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LOAD PERFORMANCE CURVE

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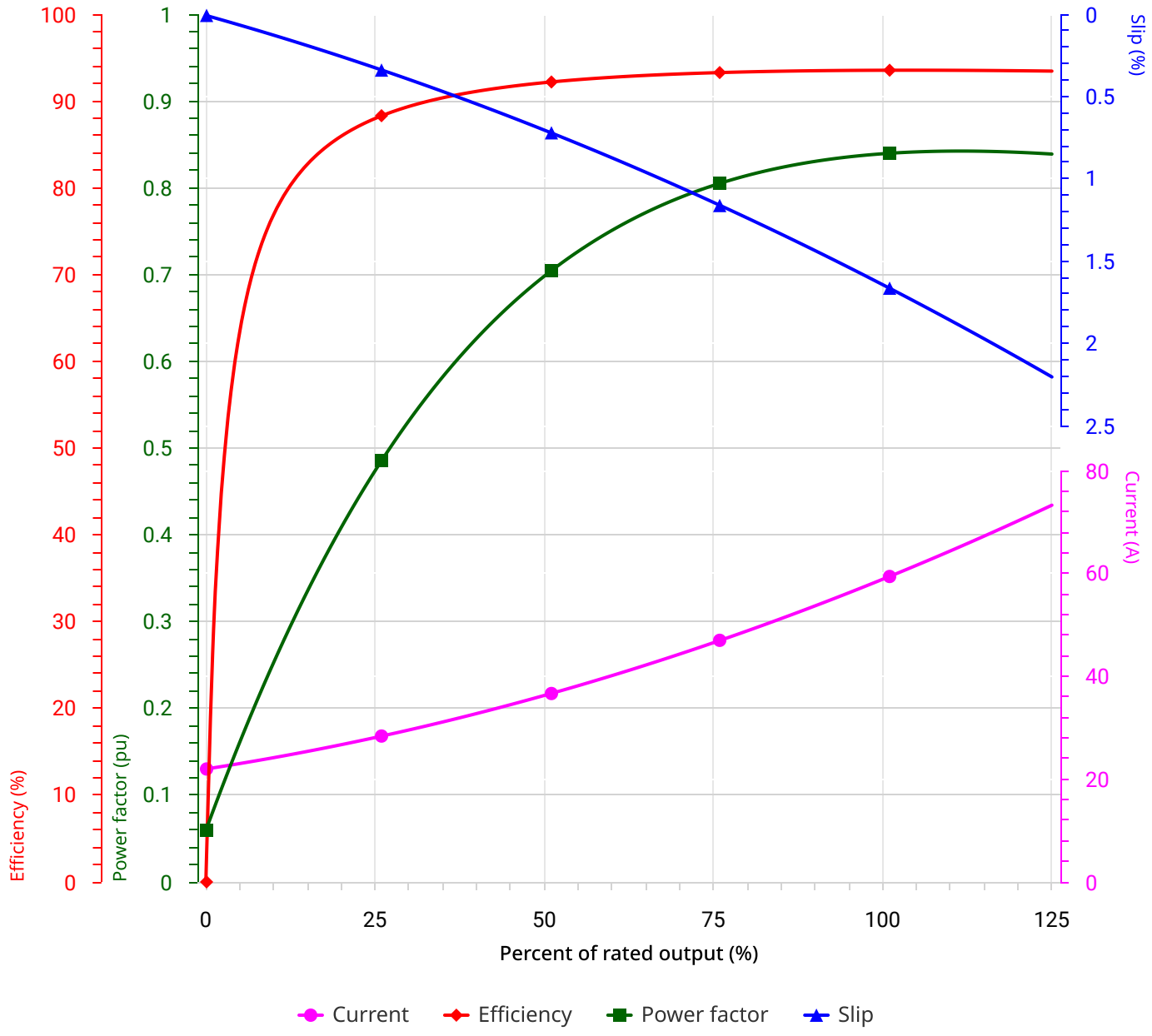

Performance	: 25 HP (18.5 kW) 230/460V 60Hz 4P 284HPH

Rated current	: 59.0/29.5 A	Moment of inertia (J)	: 0.2153 kgm²
LRC	: 6.2 Code G	Duty cycle	: Cont.(S1)
Rated torque	: 10.3 kgfm	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.25
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1770 rpm	Design	: B

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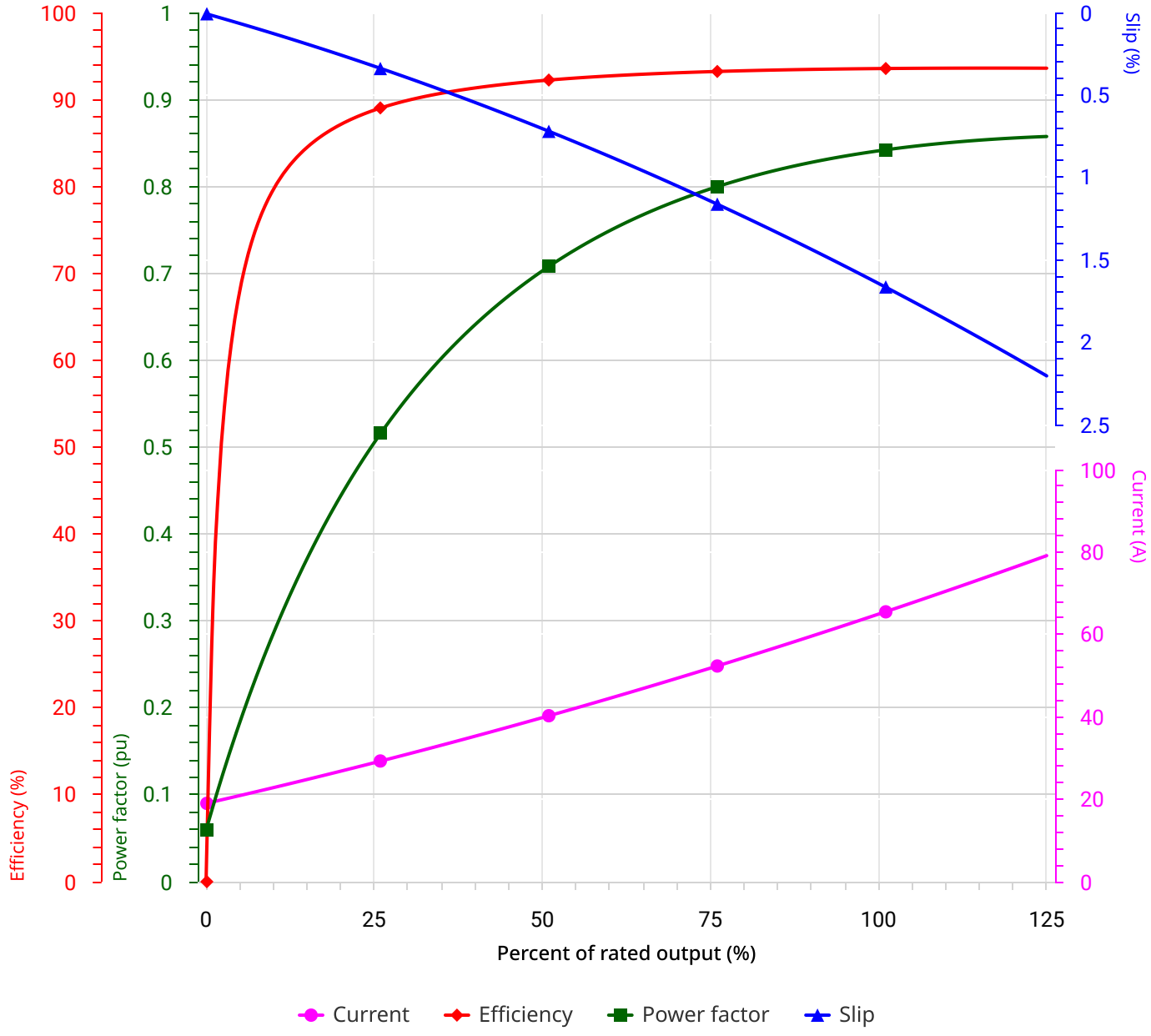

Performance	: 25 HP (18.5 kW) 208V 60Hz 4P 284HPH

Rated current	: 65.2 A	Moment of inertia (J)	: 0.2153 kgm²
LRC	: 6.2 Code G	Duty cycle	: Cont.(S1)
Rated torque	: 10.0 kgfm	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.25
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1770 rpm	Design	: 00002

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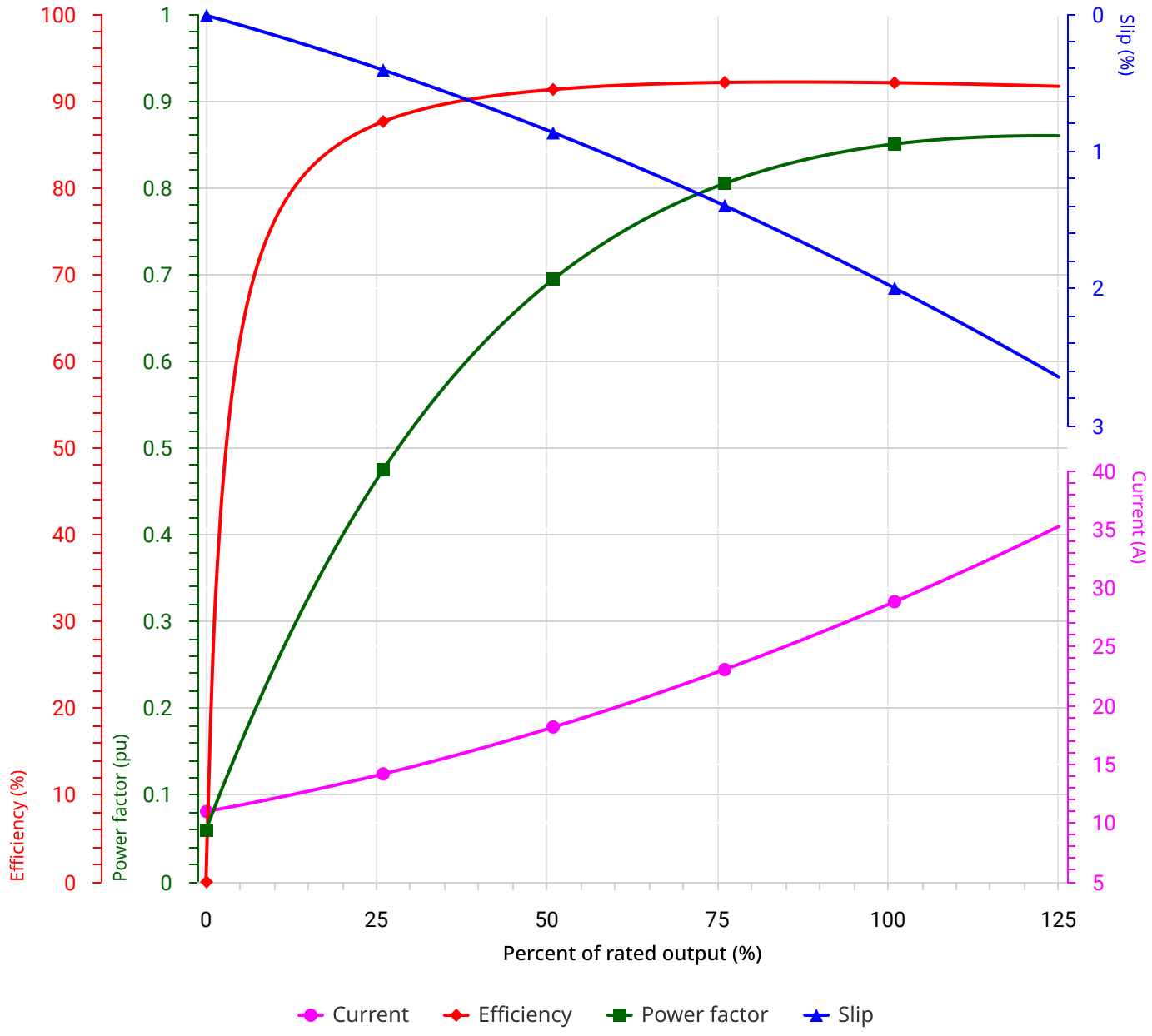

Performance	: 20 HP (15 kW) 380V 50Hz 4P 284HPH

Rated current	: 29.1 A	Moment of inertia (J)	: 0.2153 kgm²
LRC	: 6.0 Code G	Duty cycle	: Cont.(S1)
Rated torque	: 9.87 kgfm	Insulation class	: F
Locked rotor torque	: 230 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1470 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
				2026/11/13

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Date	2026/11/13		4/9	0

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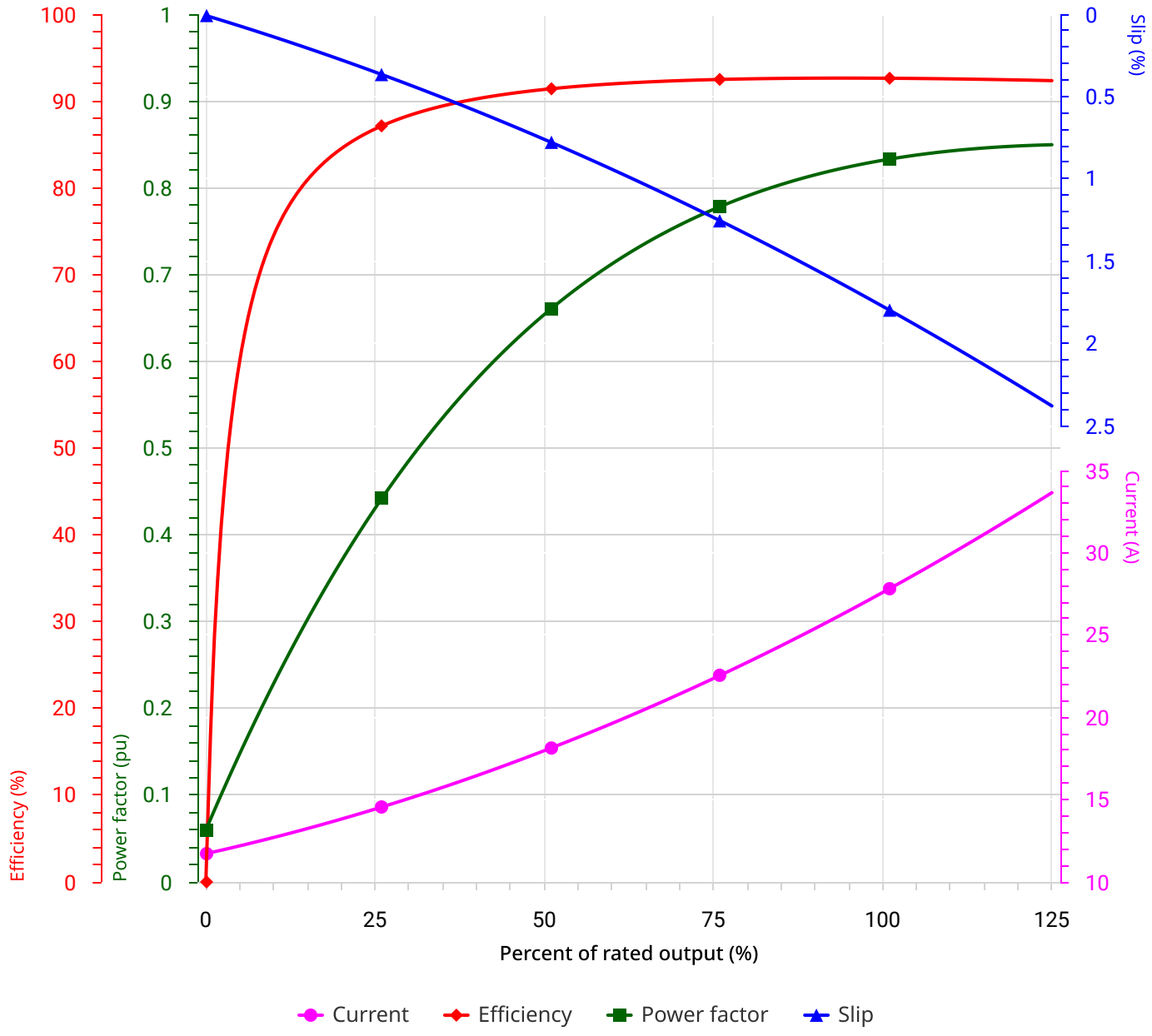

Performance	: 20 HP (15 kW) 400V 50Hz 4P 284HPH

Rated current	: 28.2 A	Moment of inertia (J)	: 0.2153 kgm²
LRC	: 6.7 Code H	Duty cycle	: Cont.(S1)
Rated torque	: 9.85 kgfm	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1473 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
				2026/11/13

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Date	2026/11/13		5/9	0

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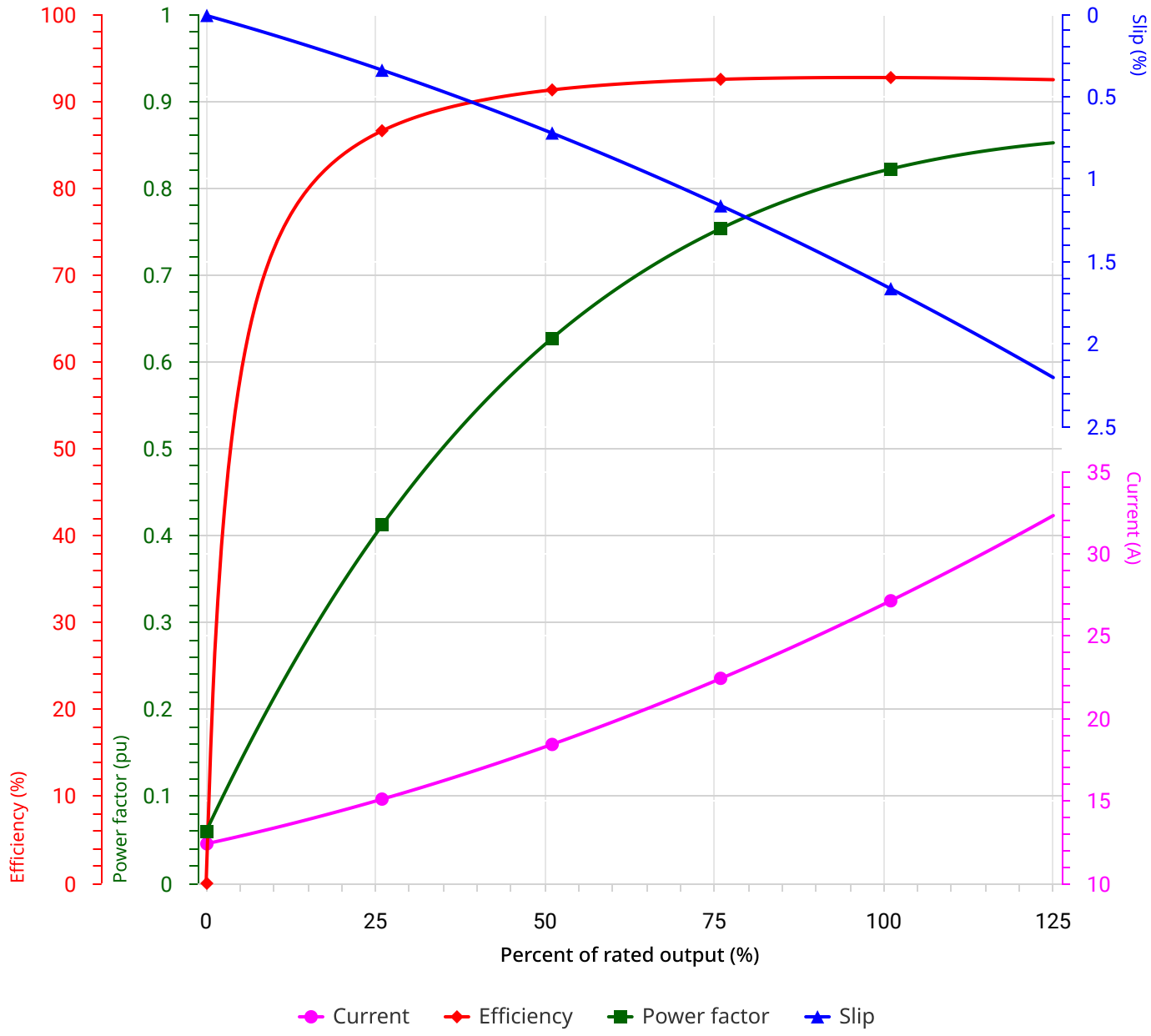

Performance	: 20 HP (15 kW) 415V 50Hz 4P 284HPH

Rated current	: 27.5 A	Moment of inertia (J)	: 0.2153 kgm²
LRC	: 7.2 Code J	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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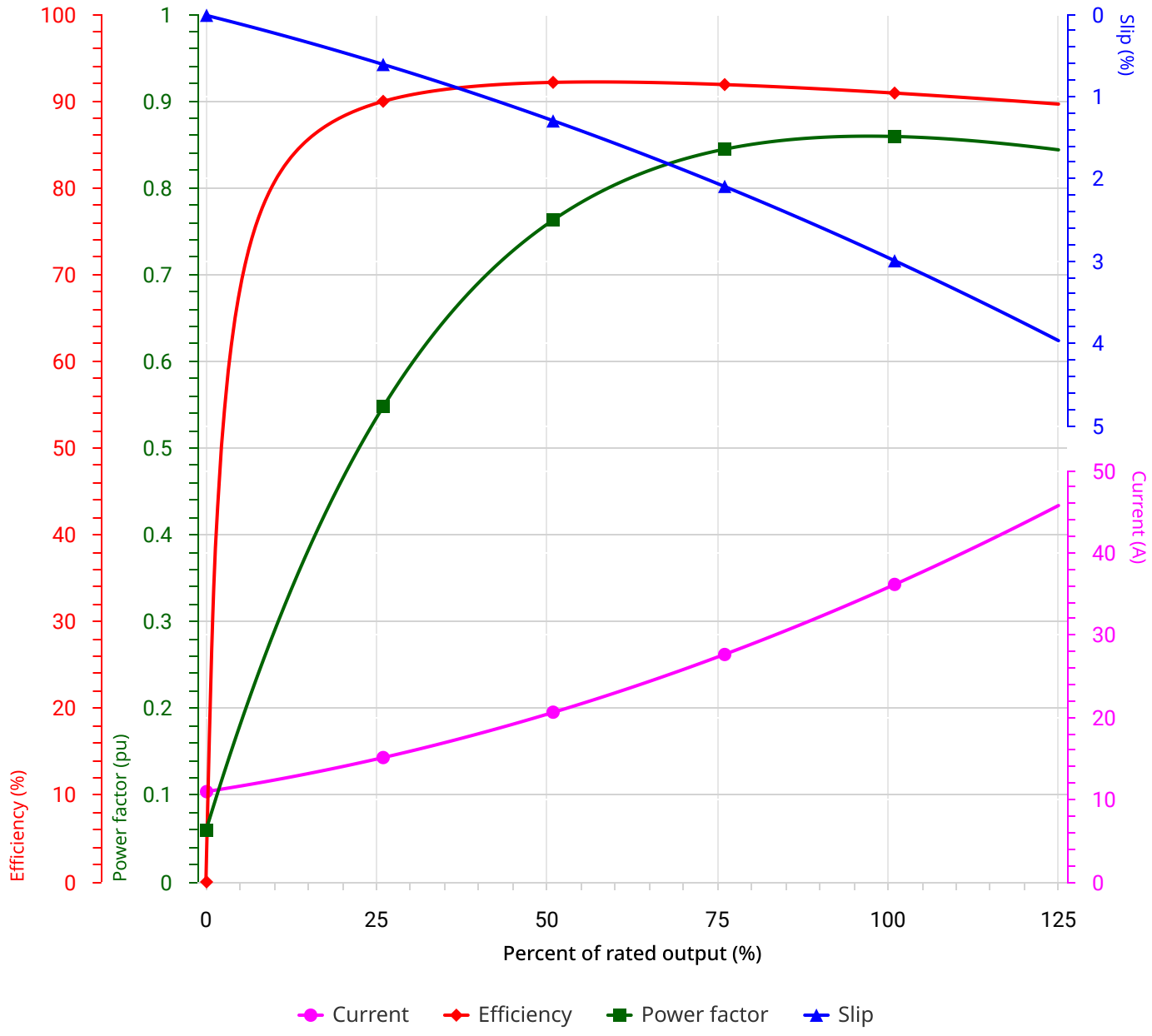

Performance	: 25 HP (18.5 kW) 380V 50Hz 4P 284HPH

Rated current	: 35.9 A	Moment of inertia (J)	: 0.2153 kgm²
LRC	: 5.3 Code F	Duty cycle	: Cont.(S1)
Rated torque	: 12.5 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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Date	2026/11/13		7/9	0

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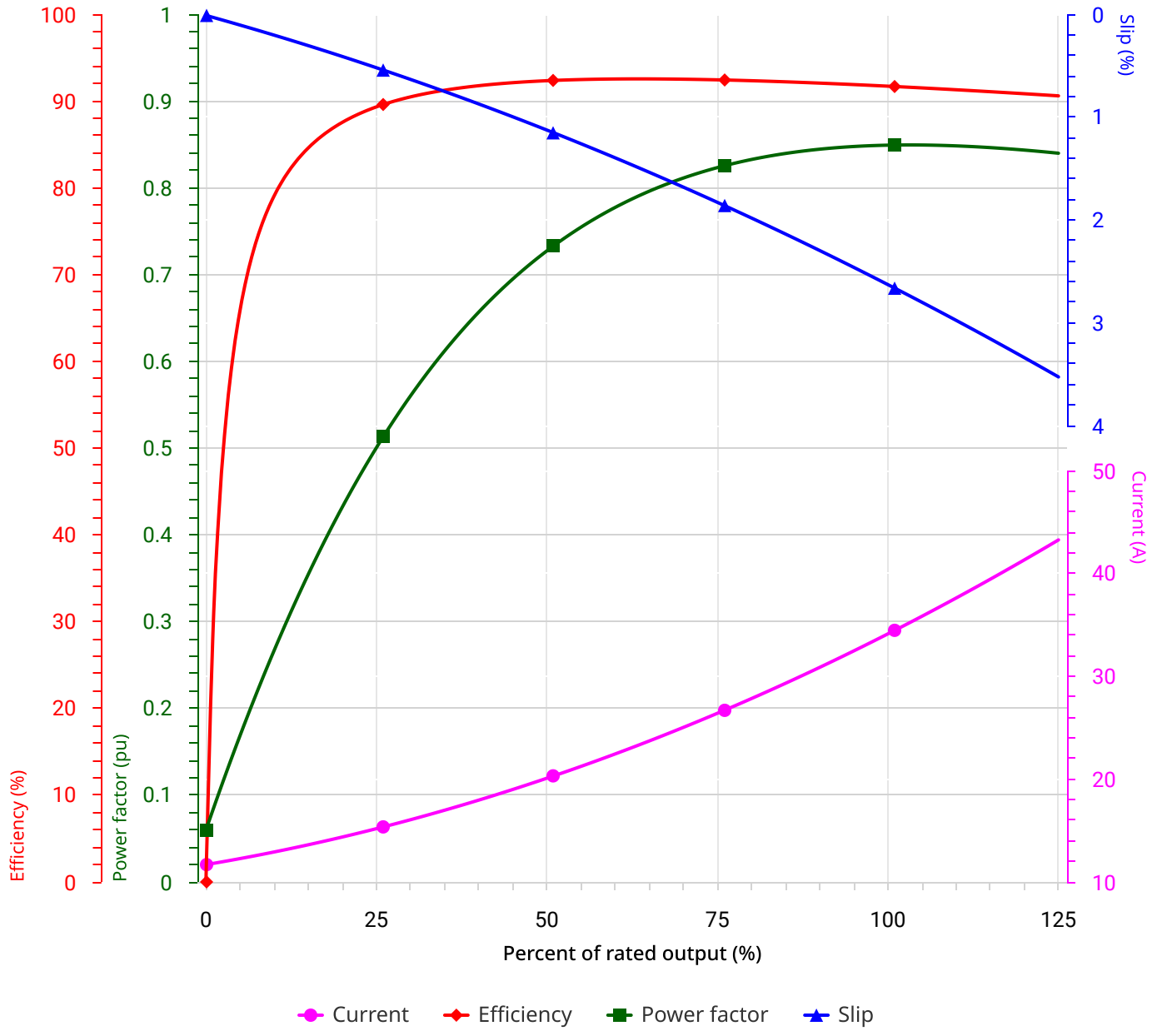

Performance	: 25 HP (18.5 kW) 400V 50Hz 4P 284HPH

Rated current	: 34.3 A	Moment of inertia (J)	: 0.2153 kgm²
LRC	: 5.5 Code F	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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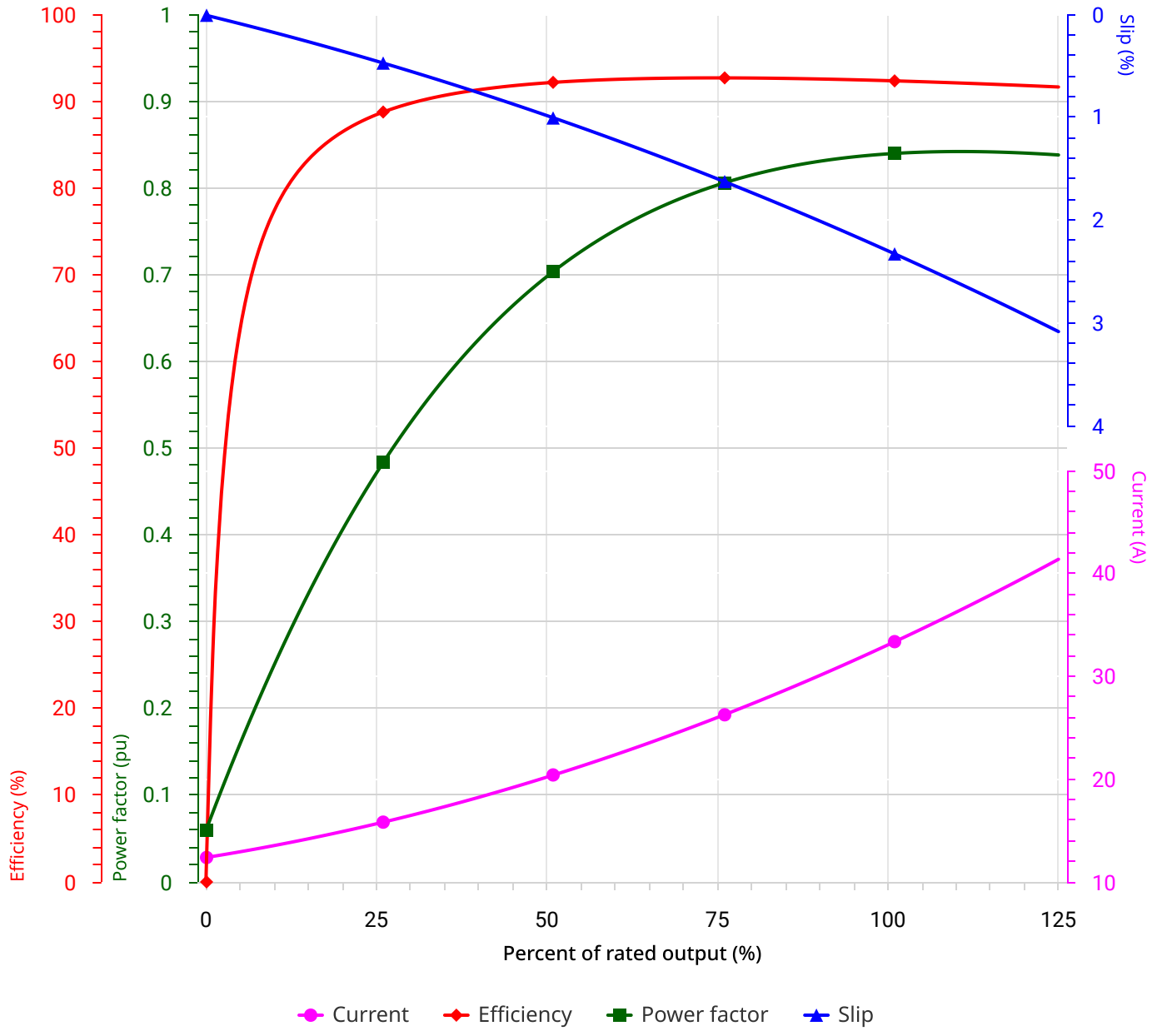

Performance	: 25 HP (18.5 kW) 415V 50Hz 4P 284HPH

Rated current	: 33.2 A	Moment of inertia (J)	: 0.2153 kgm²
LRC	: 5.9 Code G	Duty cycle	: Cont.(S1)
Rated torque	: 12.4 kgfm	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 105 K
Rated speed	: 1465 rpm	Design	: B

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