

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA Premium Efficiency Three-Phase Product code : 11450472

Frame	: 444/5T	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>	: 900 kg
Protection degree	: IP55	Moment of inertia (J)	: 2.41 kgm <sup>2</sup>
Design	: B		

Output [HP]	125	100	100	100
Poles	4	4	4	4
Frequency [Hz]	60	50	50	50
Rated voltage [V]	230/460	380	400	415
Rated current [A]	278/139	142	136	132
L. R. Amperes [A]	1890/945	852	952	977
LRC [A]	6.8x(Code G)	6.0x(Code G)	7.0x(Code H)	7.4x(Code H)
No load current [A]	90.0/45.0	44.5	47.2	49.3
Rated speed [RPM]	1785	1485	1487	1488
Slip [%]	0.83	1.00	0.87	0.80
Rated torque [kgfm]	50.8	48.9	48.8	48.8
Locked rotor torque [%]	200	190	210	229
Breakdown torque [%]	220	210	240	260
Service factor	1.15	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K
Locked rotor time	75s (cold) 42s (hot)	84s (cold) 47s (hot)	77s (cold) 43s (hot)	73s (cold) 41s (hot)
Noise level <sup>2</sup>	76.0 dB(A)	72.0 dB(A)	72.0 dB(A)	72.0 dB(A)
Efficiency (%)	25%			
	50%	94.3	94.5	94.5
	75%	95.2	94.5	95.0
	100%	95.4	94.5	95.0
Power Factor	25%			
	50%	0.75	0.75	0.71
	75%	0.82	0.83	0.80
	100%	0.85	0.85	0.83

	<u>Drive end</u>	<u>Non drive end</u>	Foundation loads	
Bearing type	: 6219 C3	6316 C3	Max. traction	: 659 kgf
Sealing	: Viton	Lip Seal	Max. compression	: 1559 kgf
	Oil Seal			
Lubrication interval	: 8033 h	8569 h		
Lubricant amount	: 28 g	34 g		
Lubricant type	: Mobil Polyrex EM			

Notes  
USABLE @208V 314A SF 1.00 SFA 314A

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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Checked by				
Date	29/10/2024			

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## Three Phase Induction Motor - Squirrel Cage



Customer :

Thermal protection

ID	Application	Type	Quantity	Sensing Temperature
1	Winding	Thermostat - 2 wires	1 x Phase	155 °C

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# LOAD PERFORMANCE CURVE

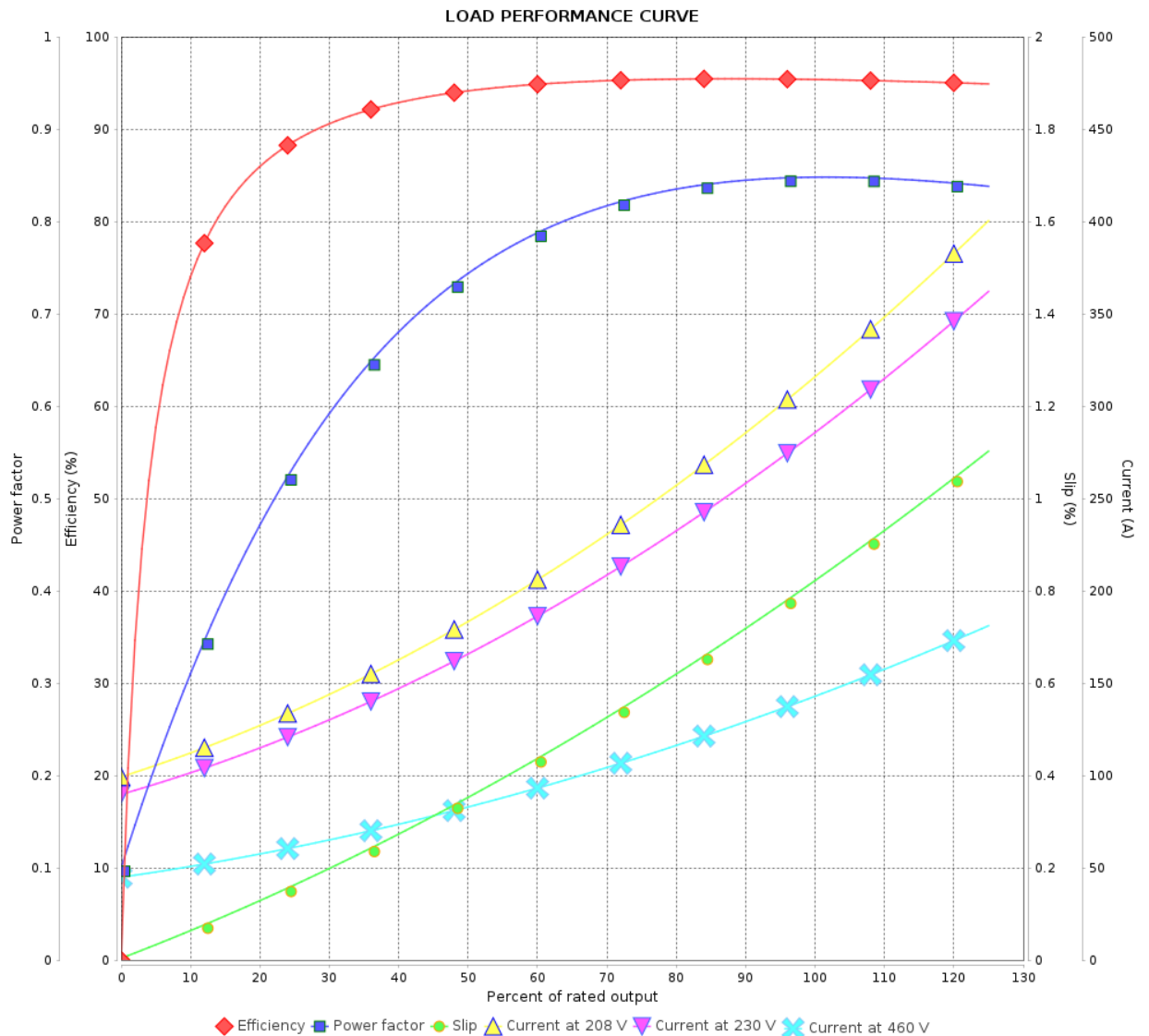
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA  
Premium Efficiency Three-Phase

Product code : 11450472



Performance : 230/460 V 60 Hz 4P

Rated current : 278/139 A  
LRC : 6.8  
Rated torque : 50.8 kgfm  
Locked rotor torque : 200 %  
Breakdown torque : 220 %  
Rated speed : 1785 rpm

Moment of inertia (J) : 2.41 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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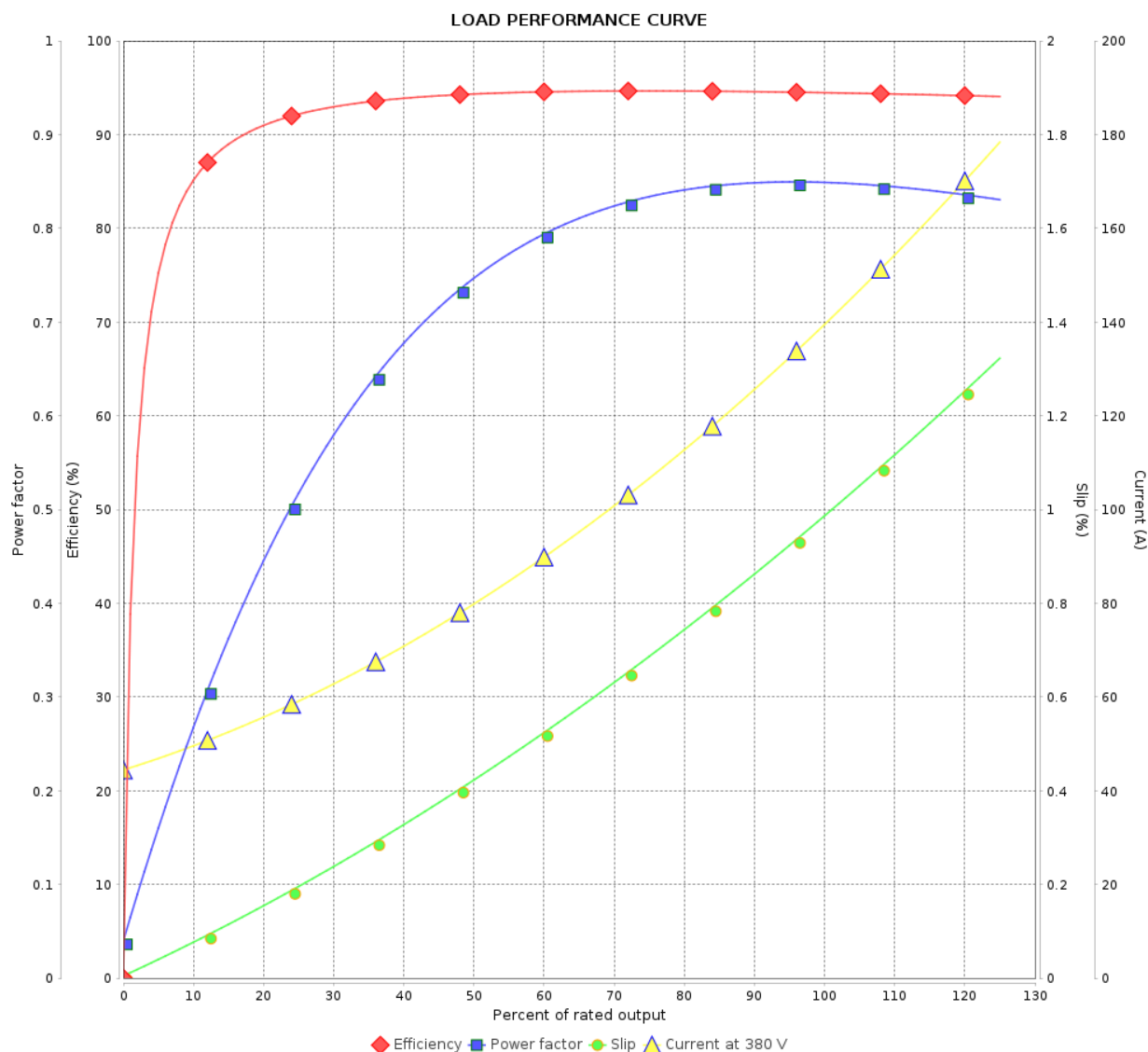
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA  
Premium Efficiency Three-Phase

Product code : 11450472



Performance : 380 V 50 Hz 4P IE2

Rated current	: 142 A	Moment of inertia (J)	: 2.41 kgm <sup>2</sup>
LRC	: 6.0	Duty cycle	: Cont.(S1)
Rated torque	: 48.9 kgfm	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

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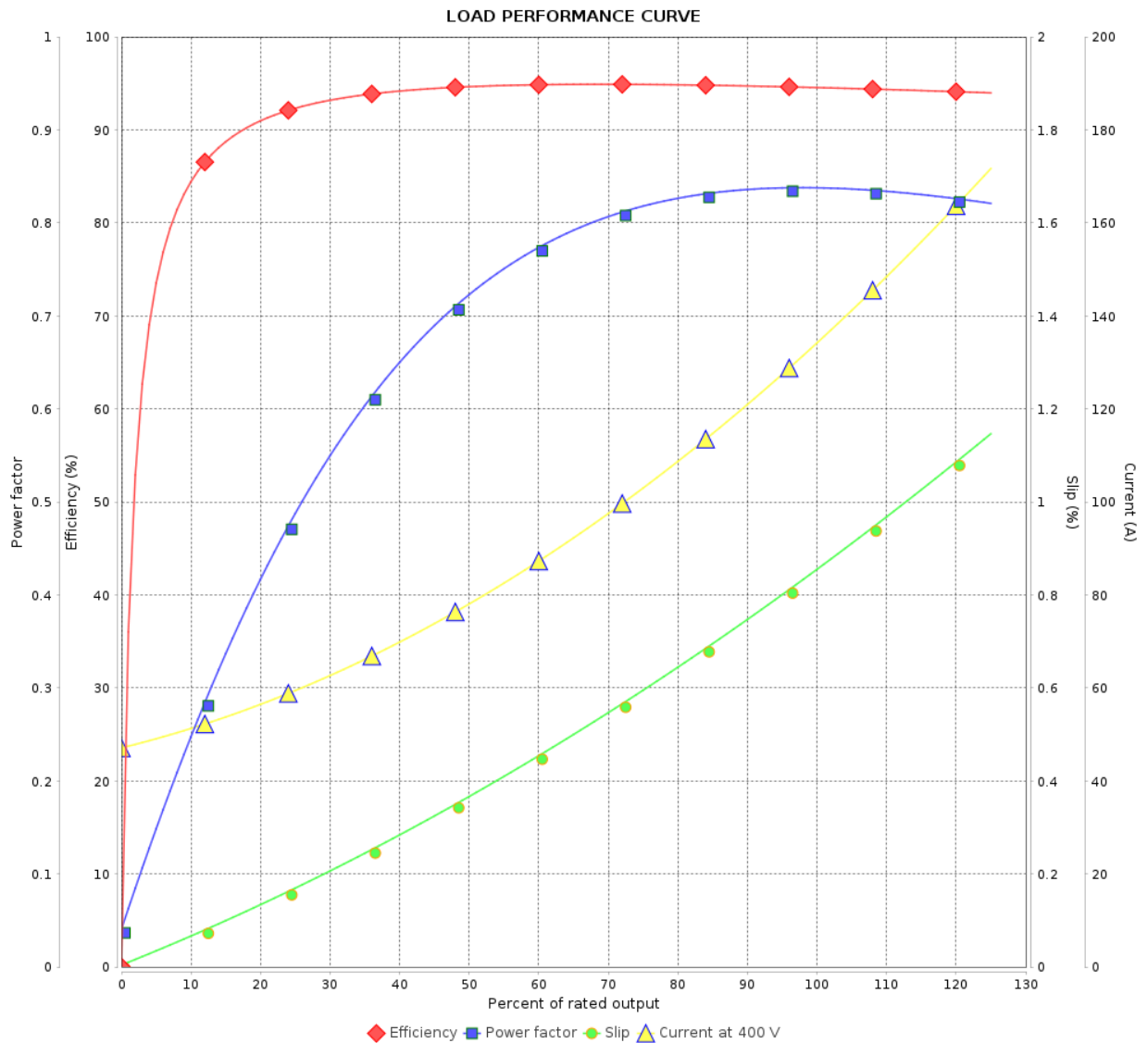
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA  
Premium Efficiency Three-Phase

Product code : 11450472



Performance : 400 V 50 Hz 4P IE2

Rated current : 136 A  
LRC : 7.0  
Rated torque : 48.8 kgfm  
Locked rotor torque : 210 %  
Breakdown torque : 240 %  
Rated speed : 1487 rpm

Moment of inertia (J) : 2.41 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

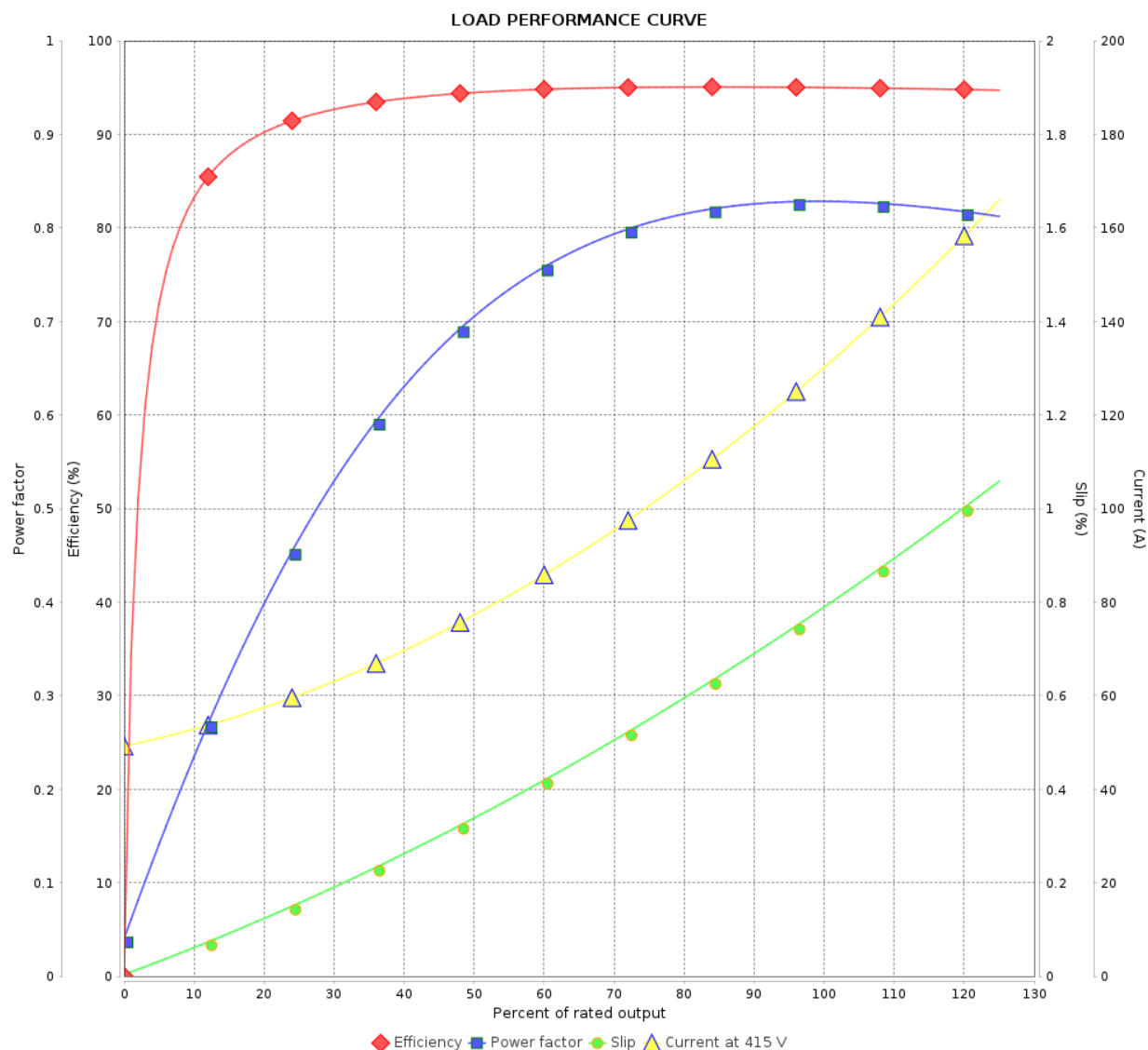
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA  
Premium Efficiency Three-Phase

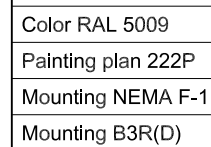
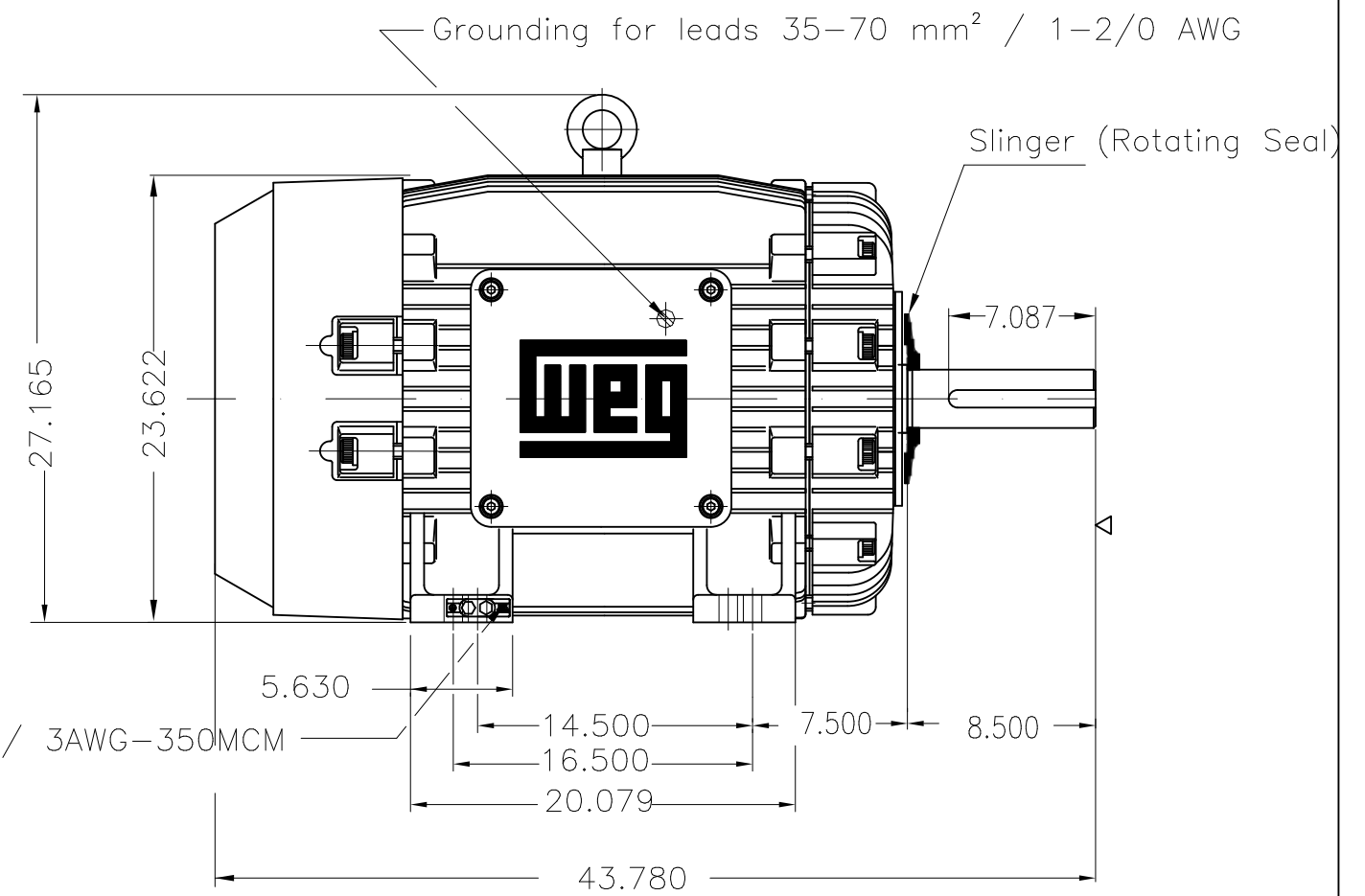
Product code : 11450472



Performance : 415 V 50 Hz 4P IE3

Rated current	: 132 A	Moment of inertia (J)	: 2.41 kgm <sup>2</sup>
LRC	: 7.4	Duty cycle	: Cont.(S1)
Rated torque	: 48.8 kgfm	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1488 rpm	Design	: B

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