

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA Premium Efficiency Three-Phase Product code : 11705683

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>	: 902 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	: NU-219 C3	6316 C3	Max. traction	: 659 kgf
Sealing	: Oil Seal	Lip Seal	Max. compression	: 1559 kgf
Lubrication interval	: 5526 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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Performed by				
Checked by				
Date	30/10/2024			

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Customer :

Thermal protection

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

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Date	30/10/2024				

# LOAD PERFORMANCE CURVE

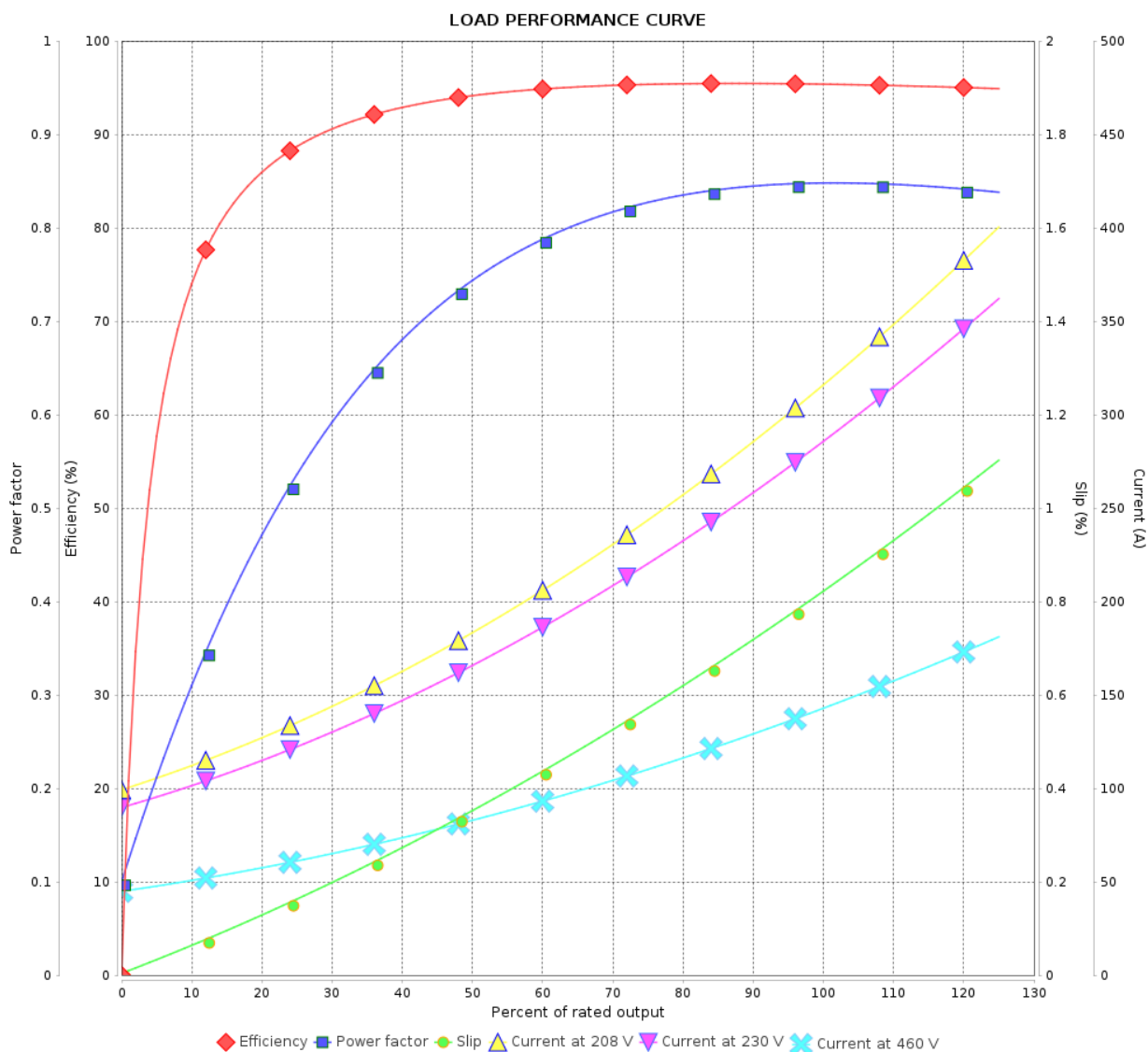
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11705683



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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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

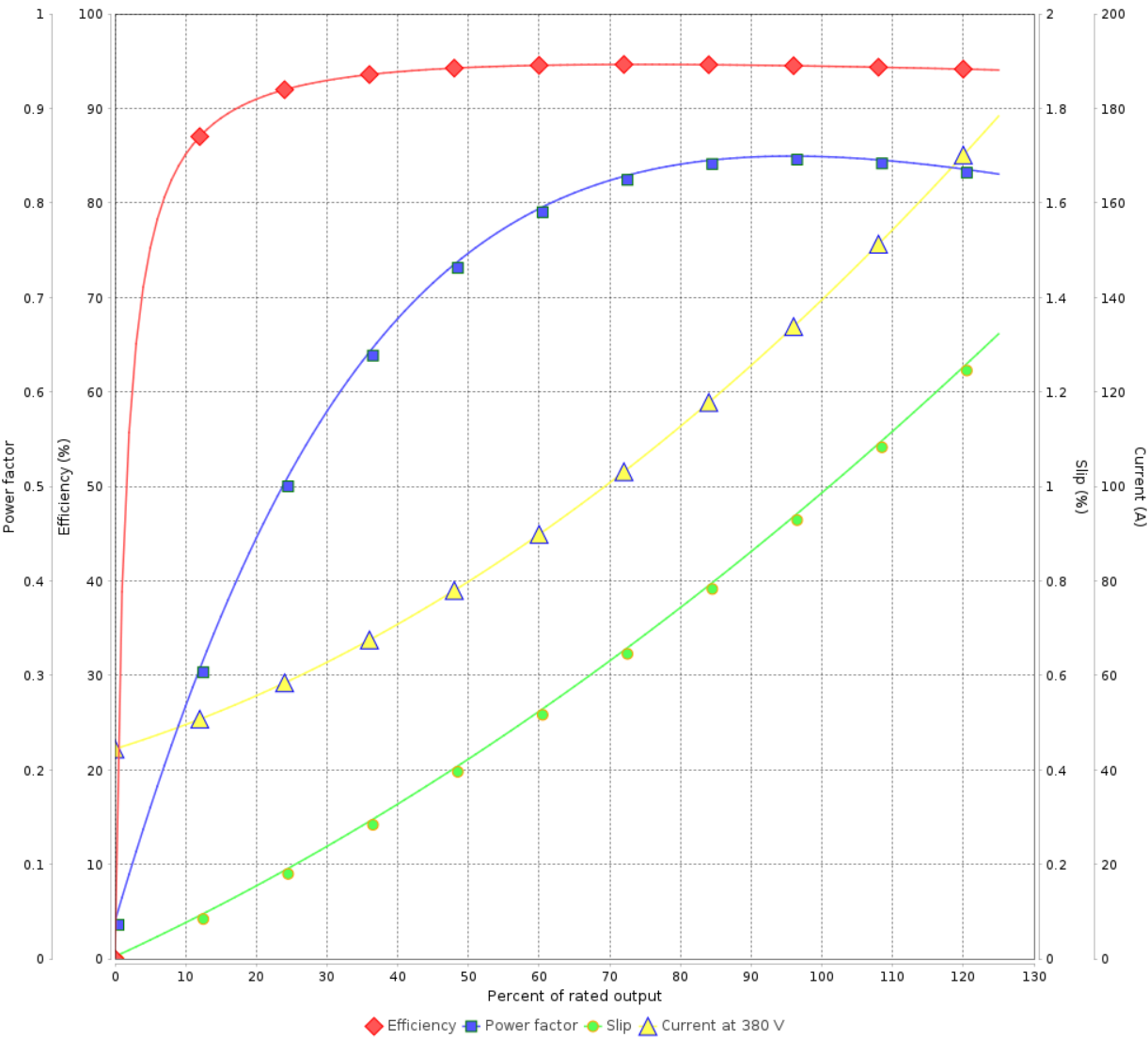


Customer :

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

Product code : 11705683

LOAD PERFORMANCE CURVE



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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# LOAD PERFORMANCE CURVE

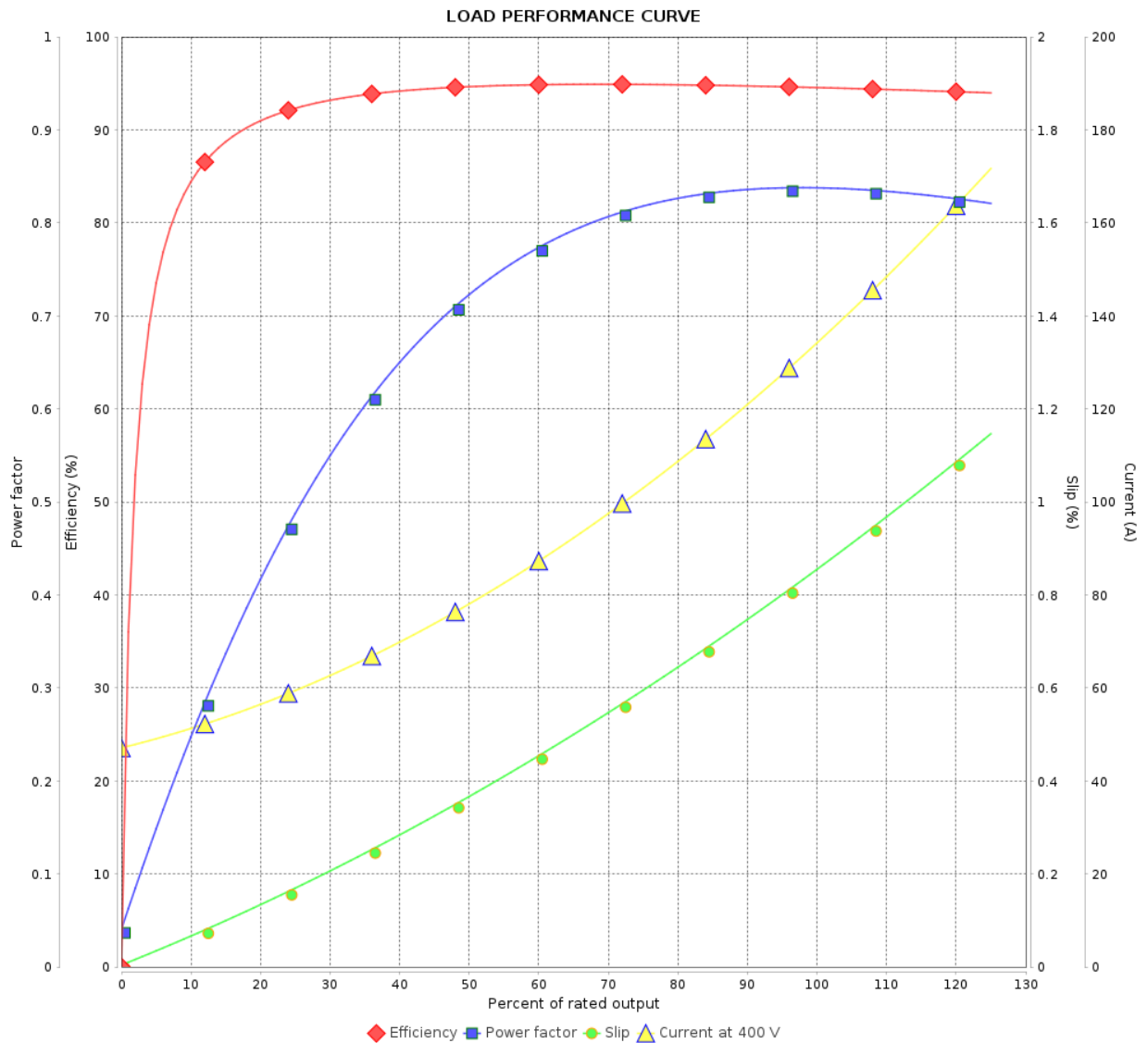
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11705683



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

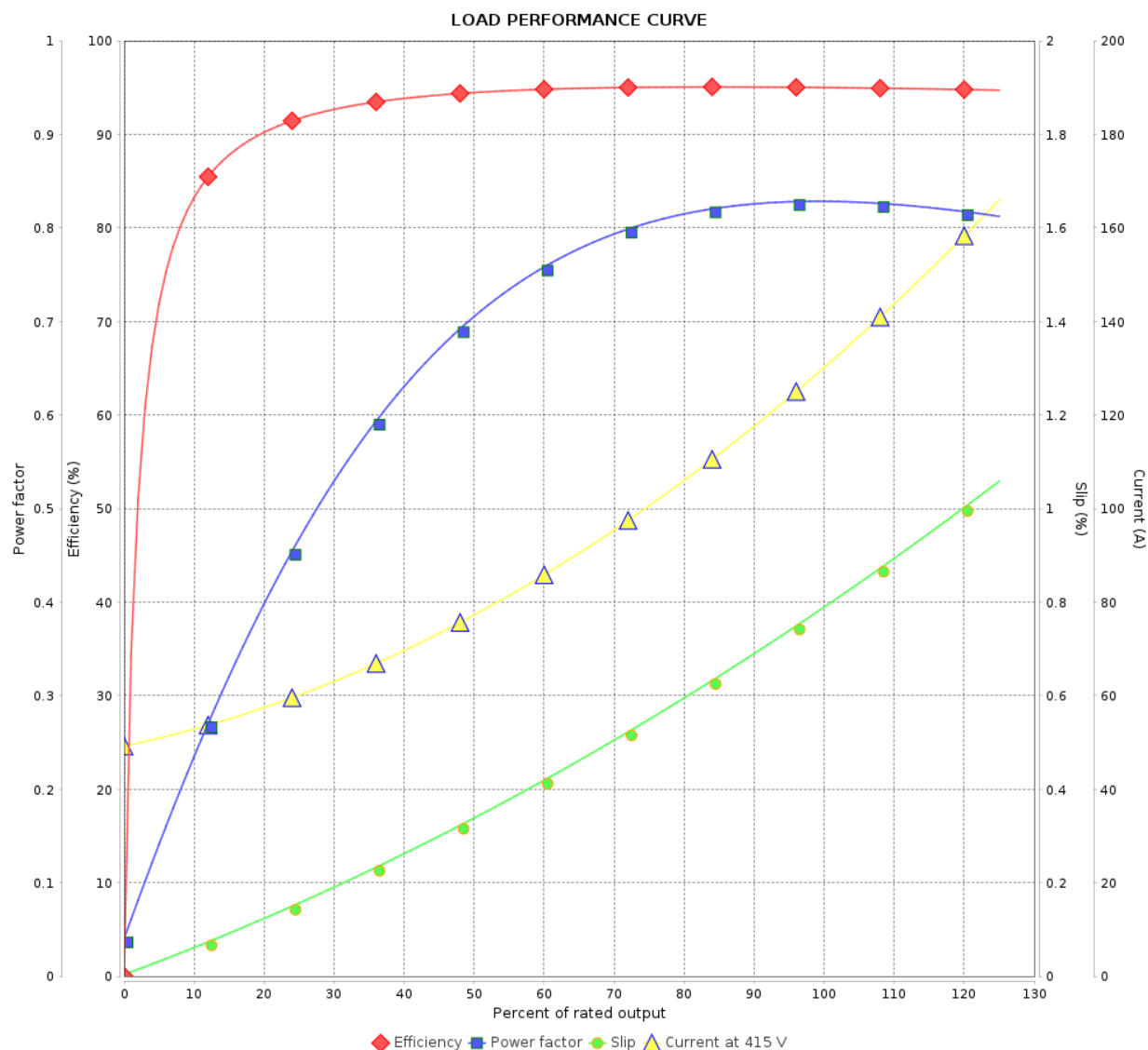
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

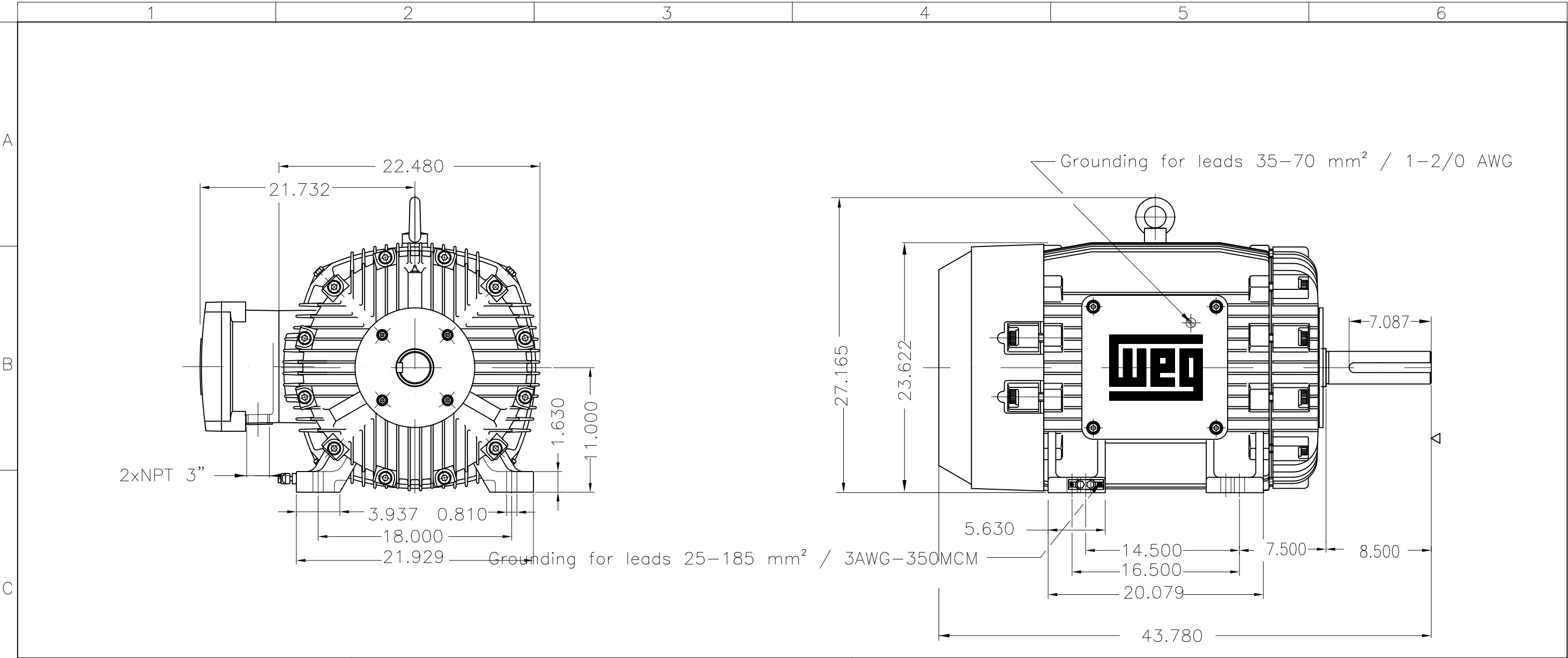
Product code : 11705683

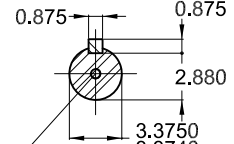




Performance : 415 V 50 Hz 4P IE3

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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D					125 HP   04 Poles   60 Hz										A	
											HYBRISUSER					00
E	<div>DE roller bearing</div> <div>Shaft locking device</div> <div>Color RAL 5009</div> <div>Painting plan 222P</div> <div>Mounting B3R(D)</div>	<div>DE Shaft End</div> <div></div> <div>DUNC 3/4"-10 WEG WPR-7339</div>			ECM	LOC	SUMMARY OF MODIFICATIONS				EXECUTED	CHECKED	RELEASED	DATE	VER	
					EXECUTED	HYBRISUSER		THREE PH. MOTOR EXPLOSION PROOF NEMA PREM. EFF. FRAME 444/5T IP55 TEFC				PREVIEW				
					CHECKED							WDD	00			
					RELEASED											
					REL. DATE		WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1					