

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :				
Product line	: JM Pump NEMA Premium Efficiency Three-Phase			
Product code :	13199509			
Catalog # :	02036OT3E254JM-SG			
Frame	: 254/6JM	Cooling method	: IC01 - ODP	
Insulation class	: F	Mounting	: F-1	
Duty cycle	: Cont.(S1)	Rotation ¹	: Both (CW and CCW)	
Ambient temperature	: -20°C to +40°C	Starting method	: Direct On Line	
Altitude	: 1000 m.a.s.l.	Approx. weight ²	: 179 lb	
Design	: B	Moment of inertia (J)	: 0.7848 sq.ft.lb	
Output [HP]	20	20	20	
Poles	2	2	2	
Frequency [Hz]	60	50	50	
Rated voltage [V]	230/460	190/380	220/415	
Rated current [A]	47.6/23.8	58.0/29.0	51.7/27.4	
L. R. Amperes [A]	286/143	261/131	264/140	
LRC [A]	6.0x(Code G)	4.5x(Code D)	5.1x(Code E)	
No load current [A]	17.0/8.50	16.2/8.09	17.1/9.04	
Rated speed [RPM]	3525	2895	2905	
Slip [%]	2.08	3.50	3.17	
Rated torque [ft.lb]	29.8	36.3	36.2	
Locked rotor torque [%]	180	130	140	
Breakdown torque [%]	240	190	210	
Service factor	1.15	1.00	1.00	
Temperature rise	80 K	105 K	80 K	
Locked rotor time	23s (cold) 13s (hot)	0s (cold) 0s (hot)	0s (cold) 0s (hot)	
Noise level ²	70.0 dB(A)	68.0 dB(A)	68.0 dB(A)	
Efficiency (%)	25%	90.0	92.6	91.6
	50%	90.2	90.6	90.6
	75%	91.0	89.5	90.0
	100%	91.0	87.2	88.7
Power Factor	25%	0.49	0.56	0.51
	50%	0.76	0.82	0.78
	75%	0.83	0.88	0.86
	100%	0.87	0.90	0.89
Bearing type	: <u>Drive end</u> 6309 Z C3 <u>Non drive end</u> 6208 Z C3	Foundation loads		
Sealing	: Without Without Bearing Seal Bearing Seal	Max. traction	: 274 lb	
Lubrication interval	: 20000 h 20000 h	Max. compression	: 453 lb	
Lubricant amount	: 13 g 8 g			
Lubricant type	: Mobil Polyrex EM			
Notes USABLE @208V 52.6A SF 1.00 SFA 52.6A				
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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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



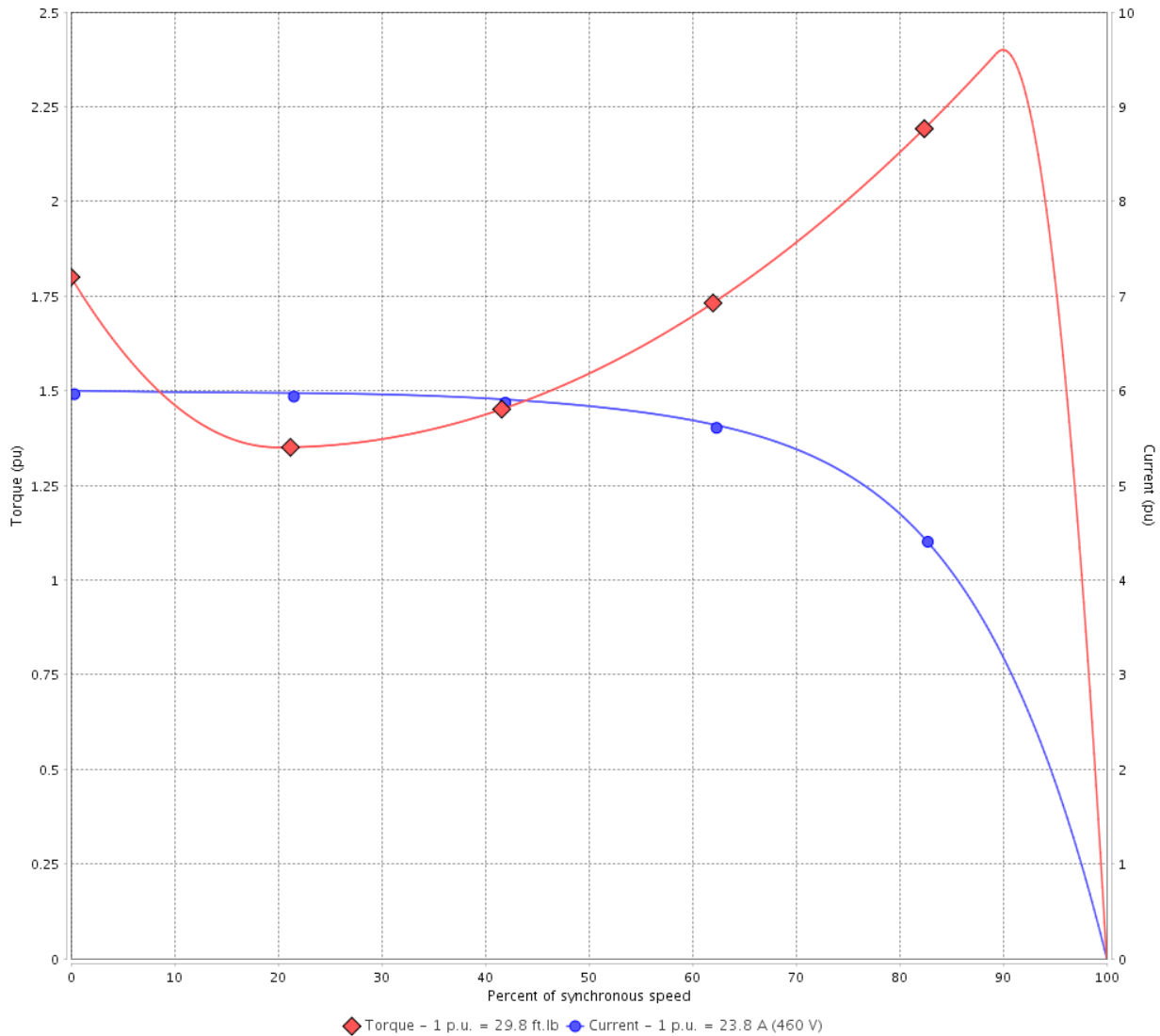
Customer :

Product line : JM Pump NEMA Premium
Efficiency Three-Phase

Product code : 13199509

Catalog # : 020360T3E254JM-SG

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 2P

Rated current : 47.6/23.8 A
LRC : 6.0
Rated torque : 29.8 ft.lb
Locked rotor torque : 180 %
Breakdown torque : 240 %
Rated speed : 3525 rpm

Moment of inertia (J) : 0.7848 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K
Design : B

Locked rotor time : 23s (cold) 13s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



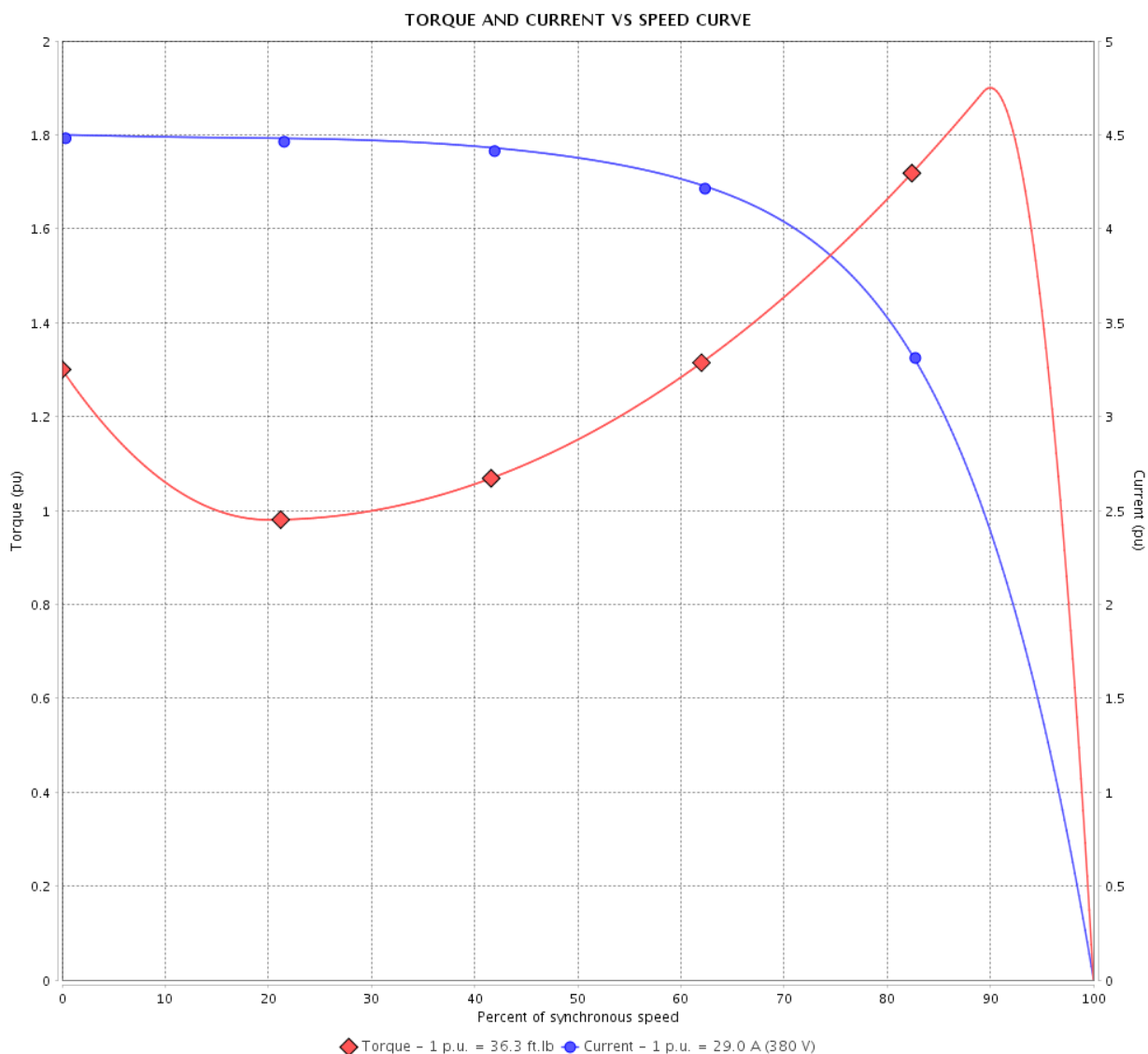
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : JM Pump NEMA Premium Efficiency Three-Phase

Product code : 13199509

Catalog # : 02036OT3E254JM-SG



Performance : 190/380 V 50 Hz 2P

Rated current : 58.0/29.0 A
 LRC : 4.5
 Rated torque : 36.3 ft.lb
 Locked rotor torque : 130 %
 Breakdown torque : 190 %
 Rated speed : 2895 rpm

Moment of inertia (J) : 0.7848 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

Locked rotor time : 0s (cold) 0s (hot)

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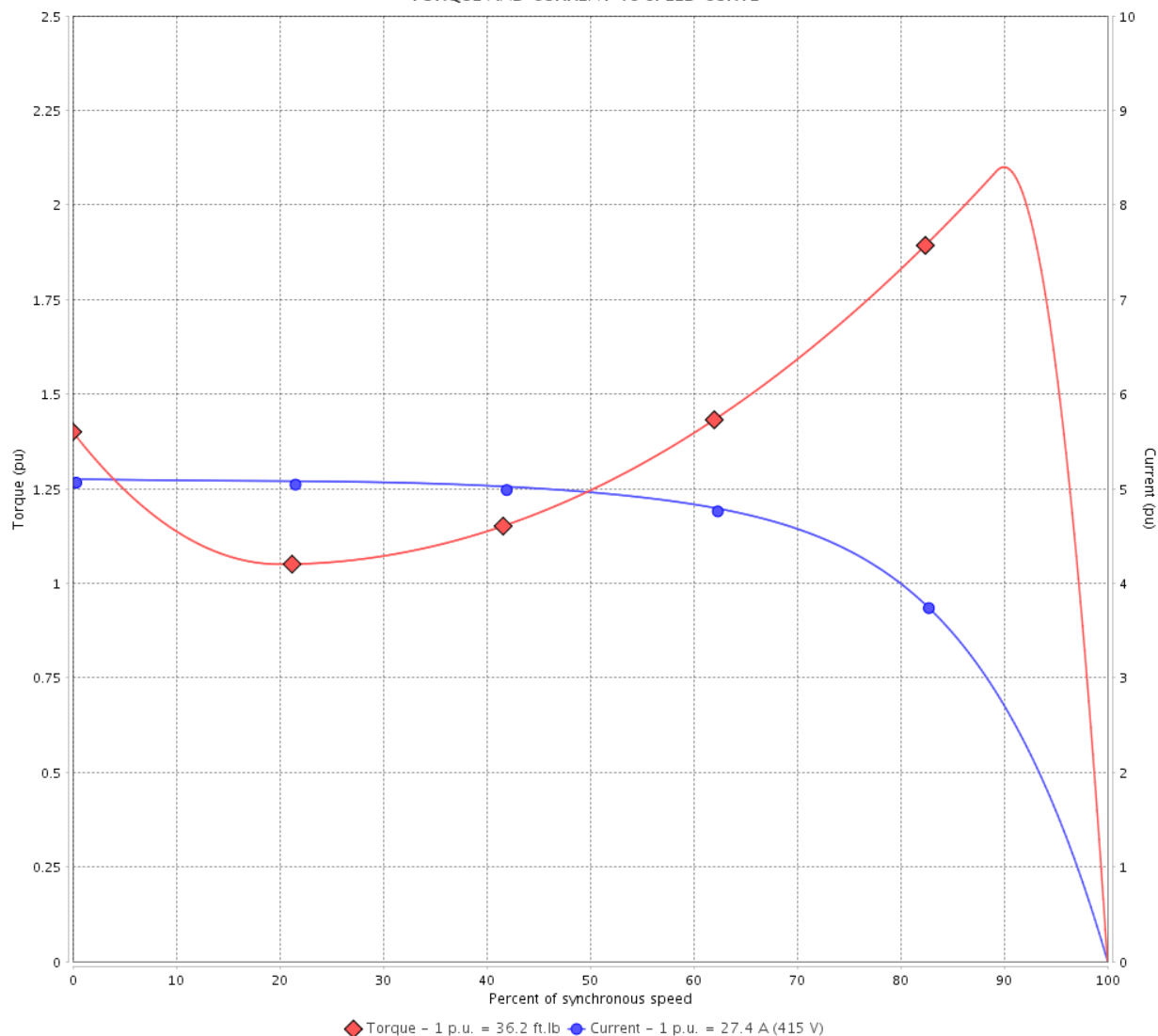
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Efficiency Three-Phase

Product code : 13199509

Catalog # : 02036OT3E254JM-SG

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 2P

Rated current	: 51.7/27.4 A	Moment of inertia (J)	: 0.7848 sq.ft.lb
LRC	: 5.1	Duty cycle	: Cont.(S1)
Rated torque	: 36.2 ft.lb	Insulation class	: F
Locked rotor torque	: 140 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 80 K
Rated speed	: 2905 rpm	Design	: B

Locked rotor time : 0s (cold) 0s (hot)

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LOAD PERFORMANCE CURVE

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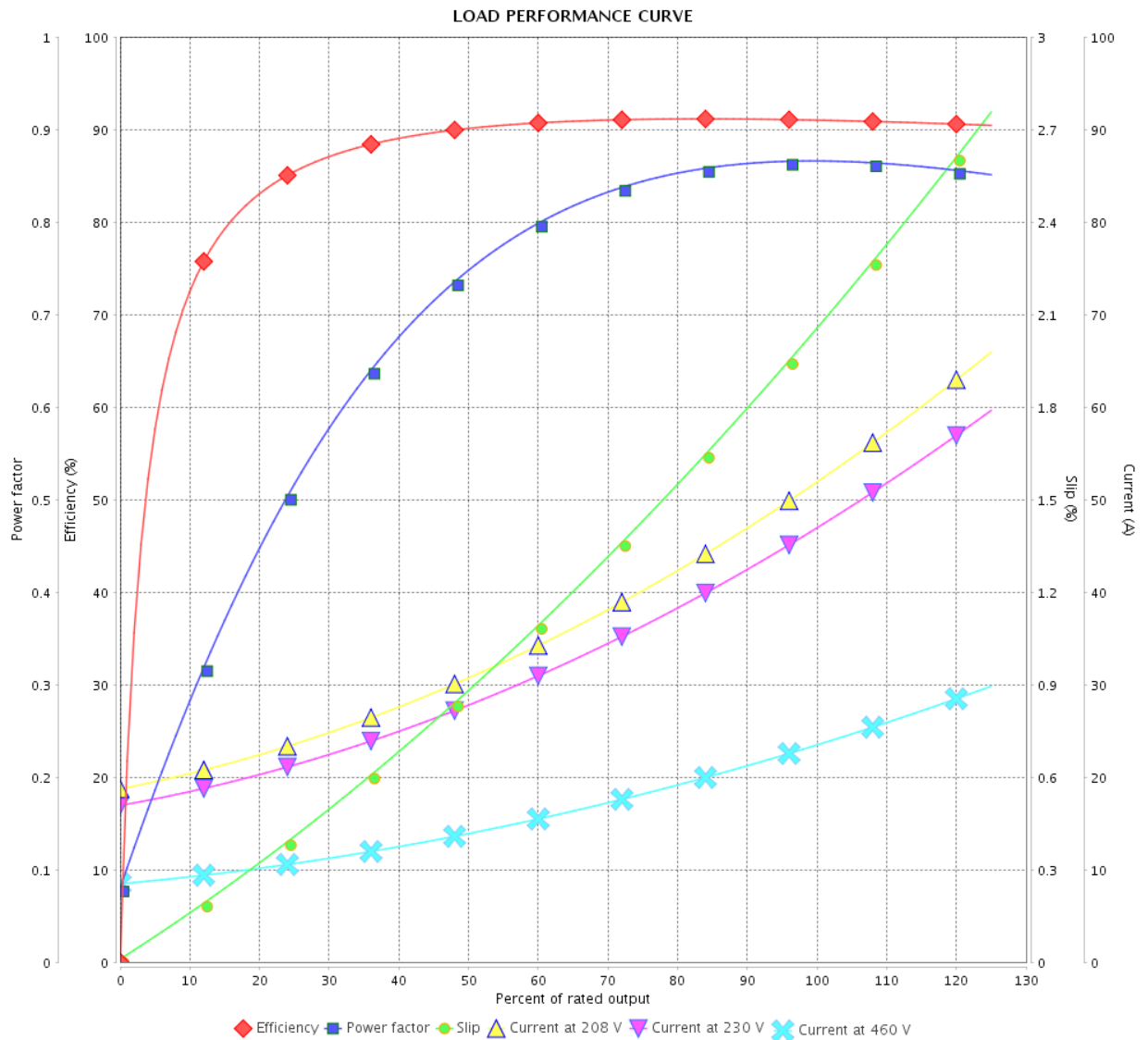


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Rated current : 47.6/23.8 A
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 Locked rotor torque : 180 %
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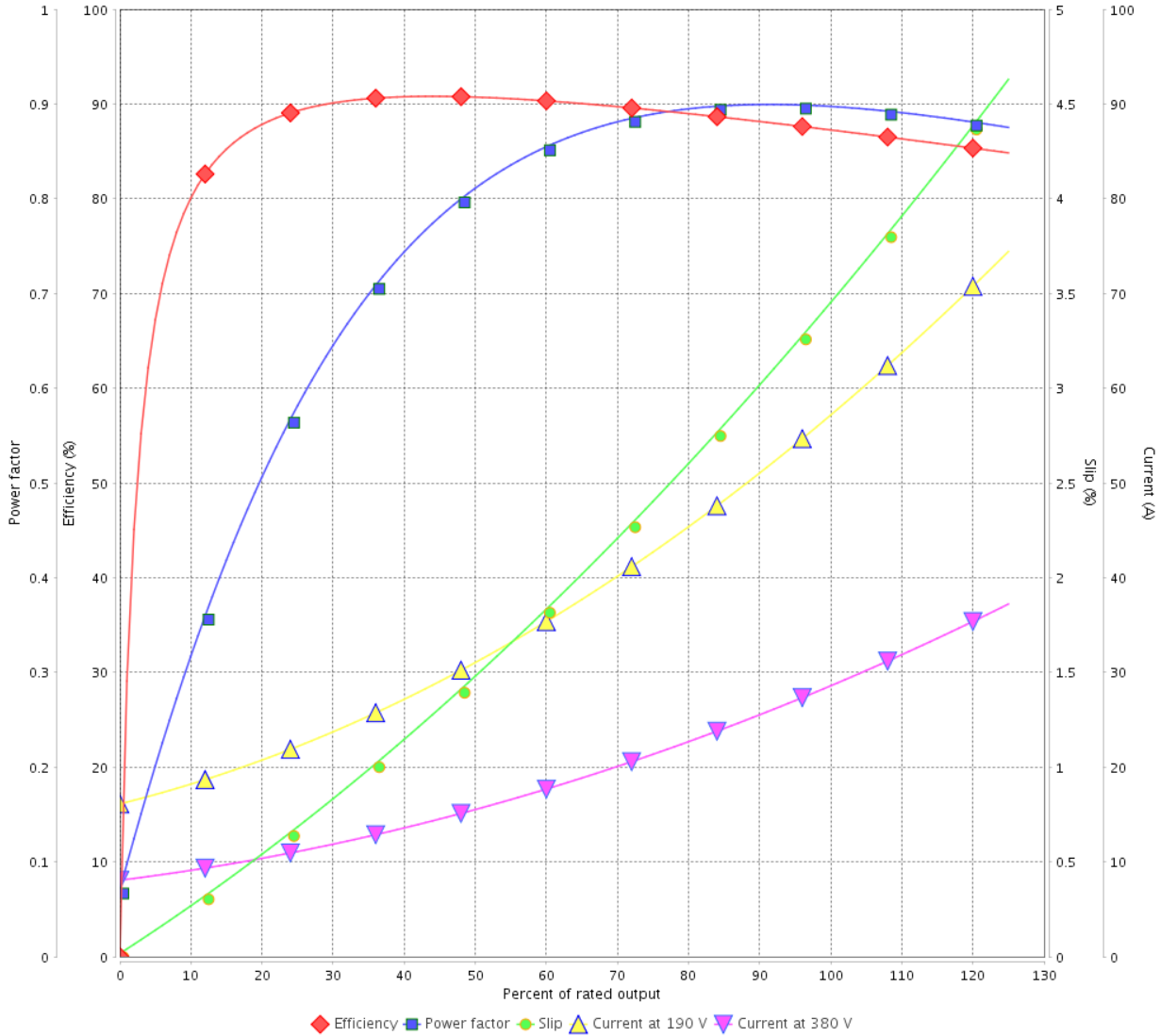
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 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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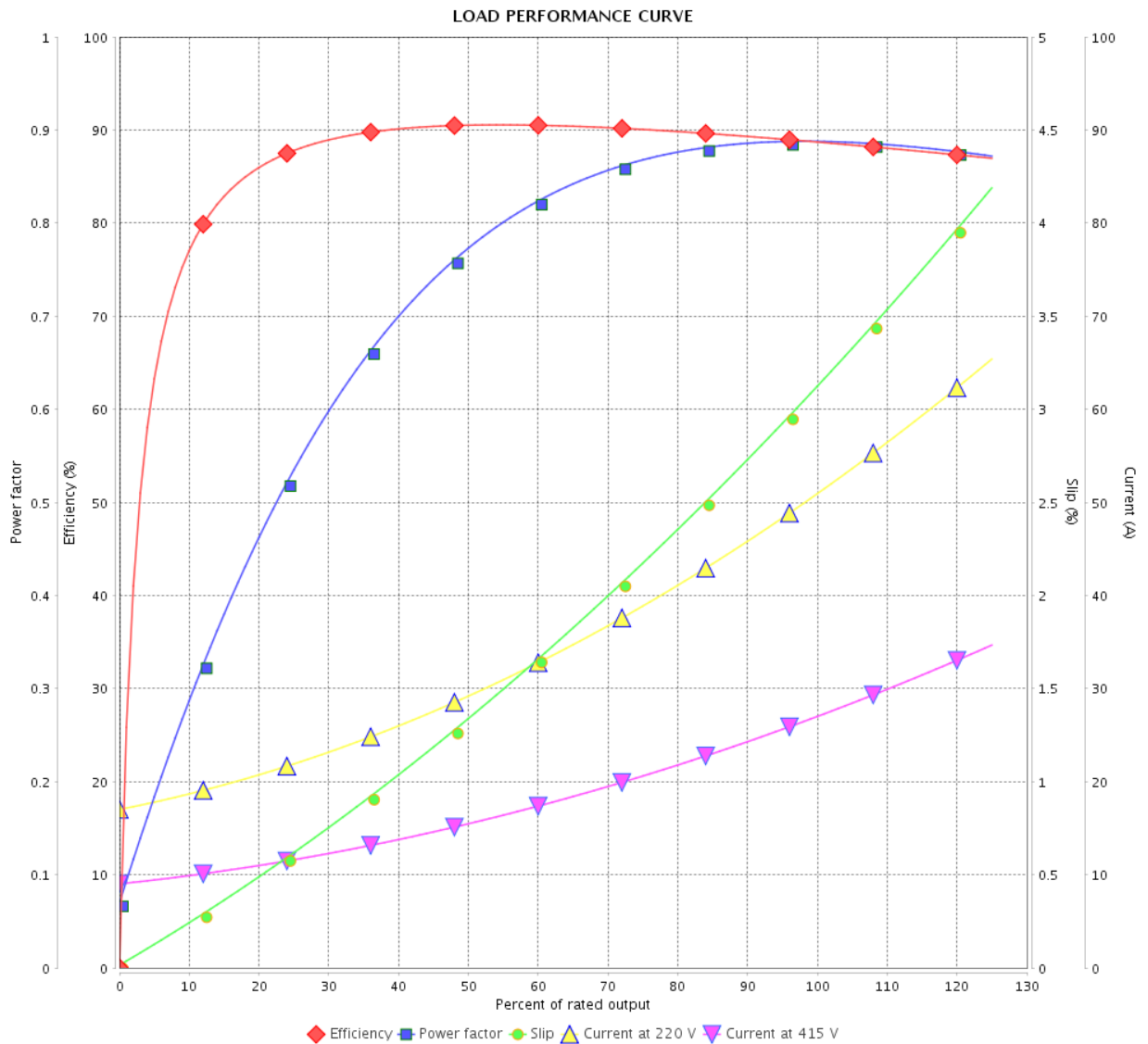


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THERMAL LIMIT CURVE

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Heating constant

Cooling constant

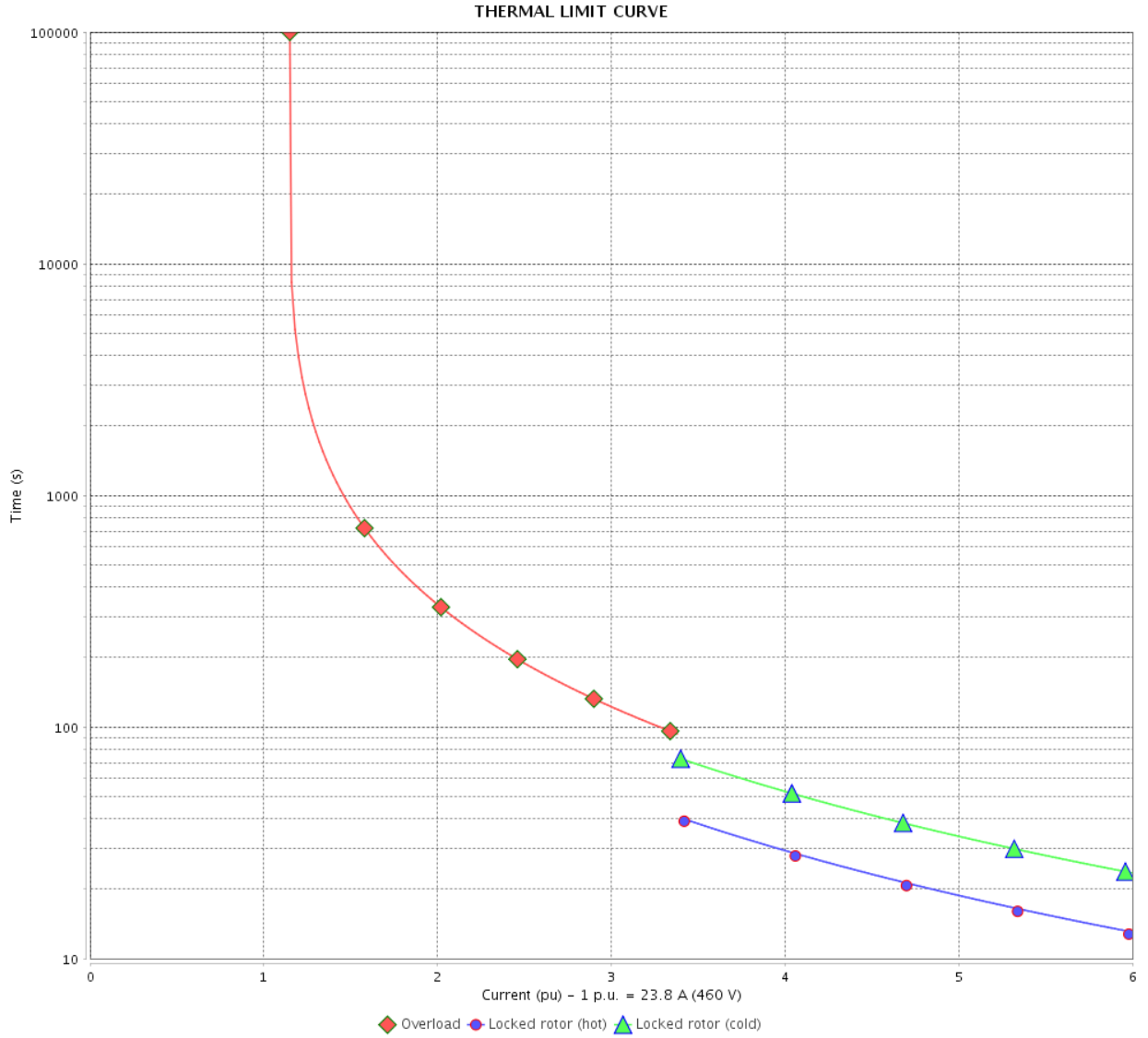
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Temperature rise : 105 K
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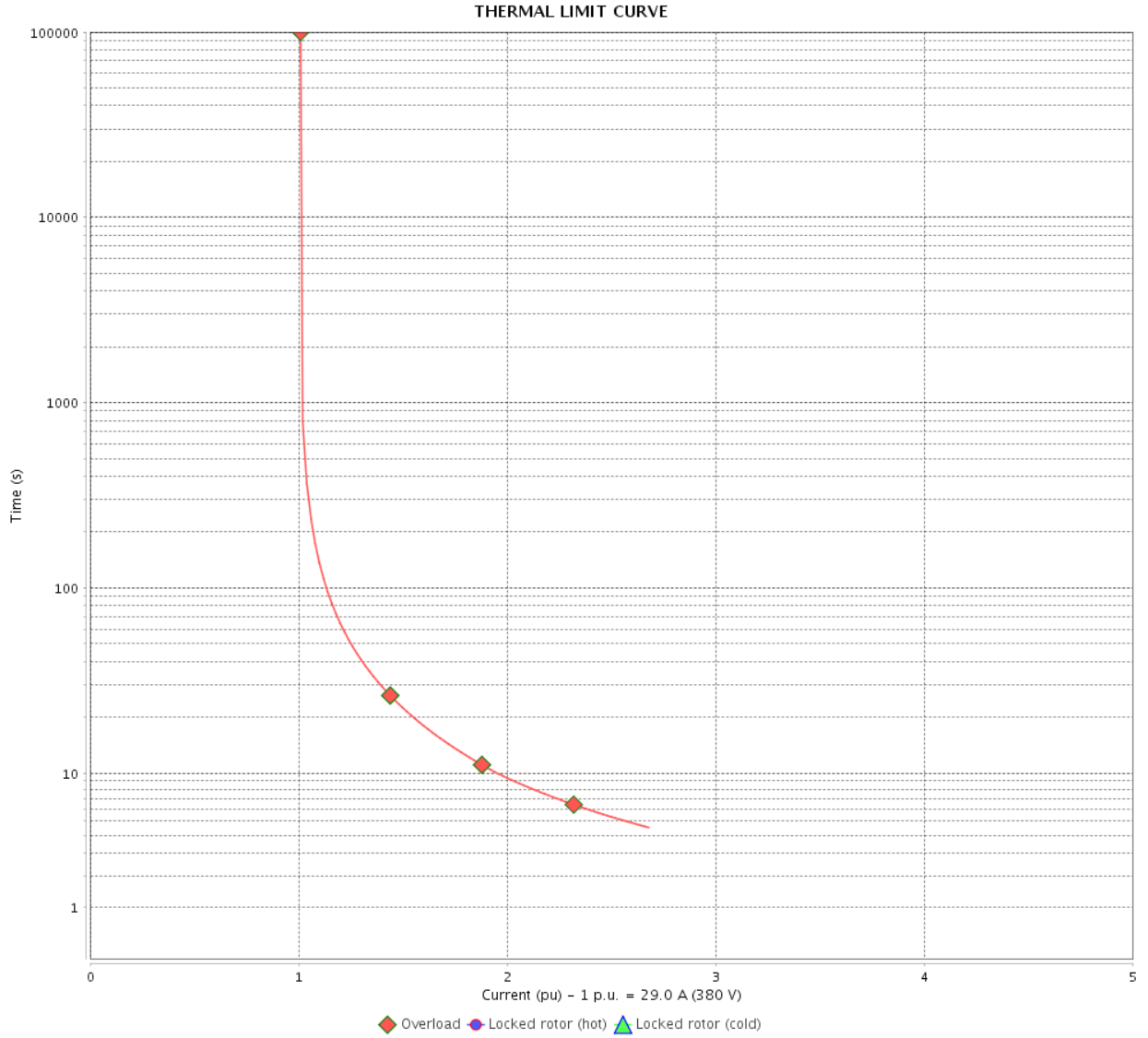
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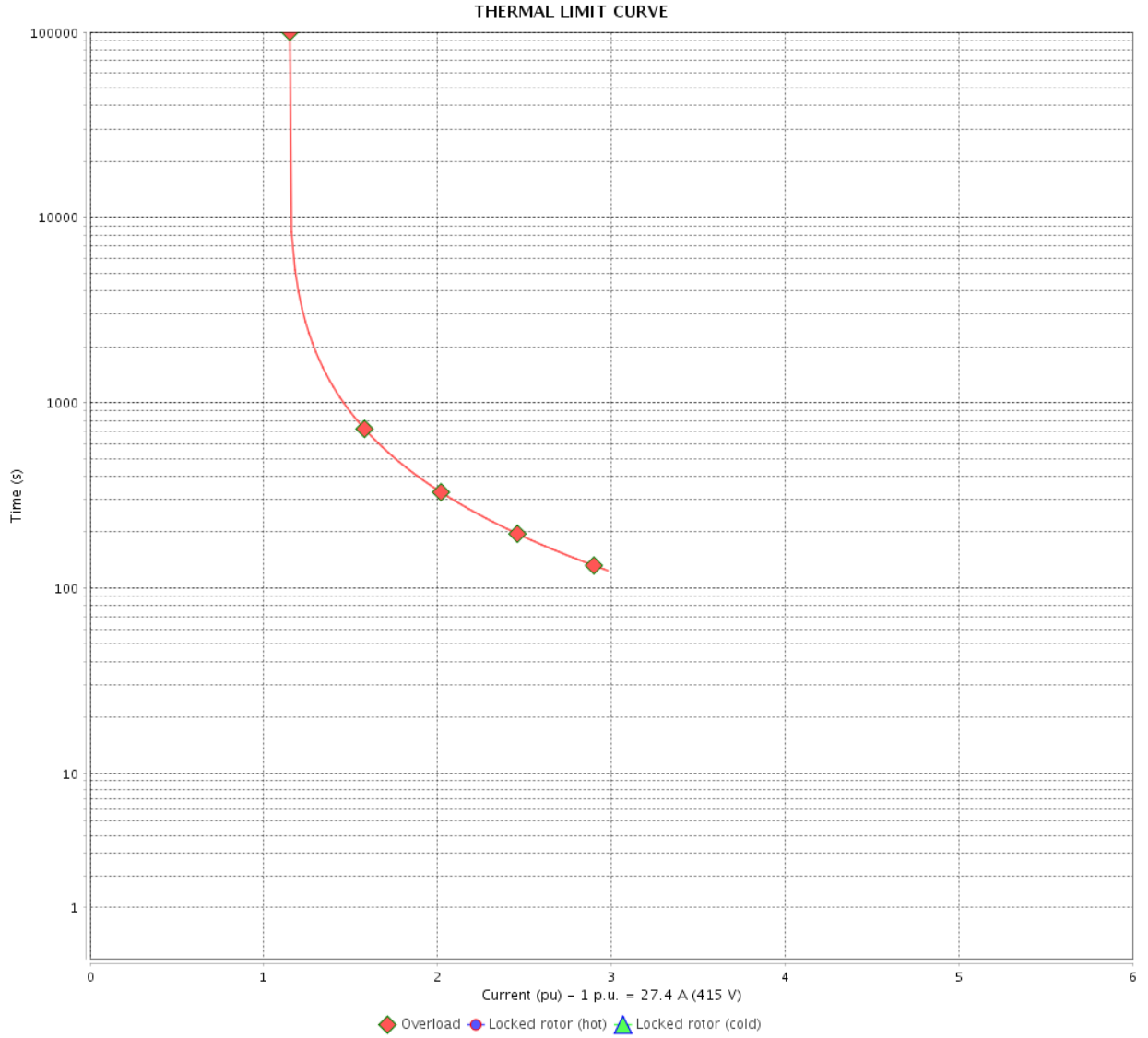
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



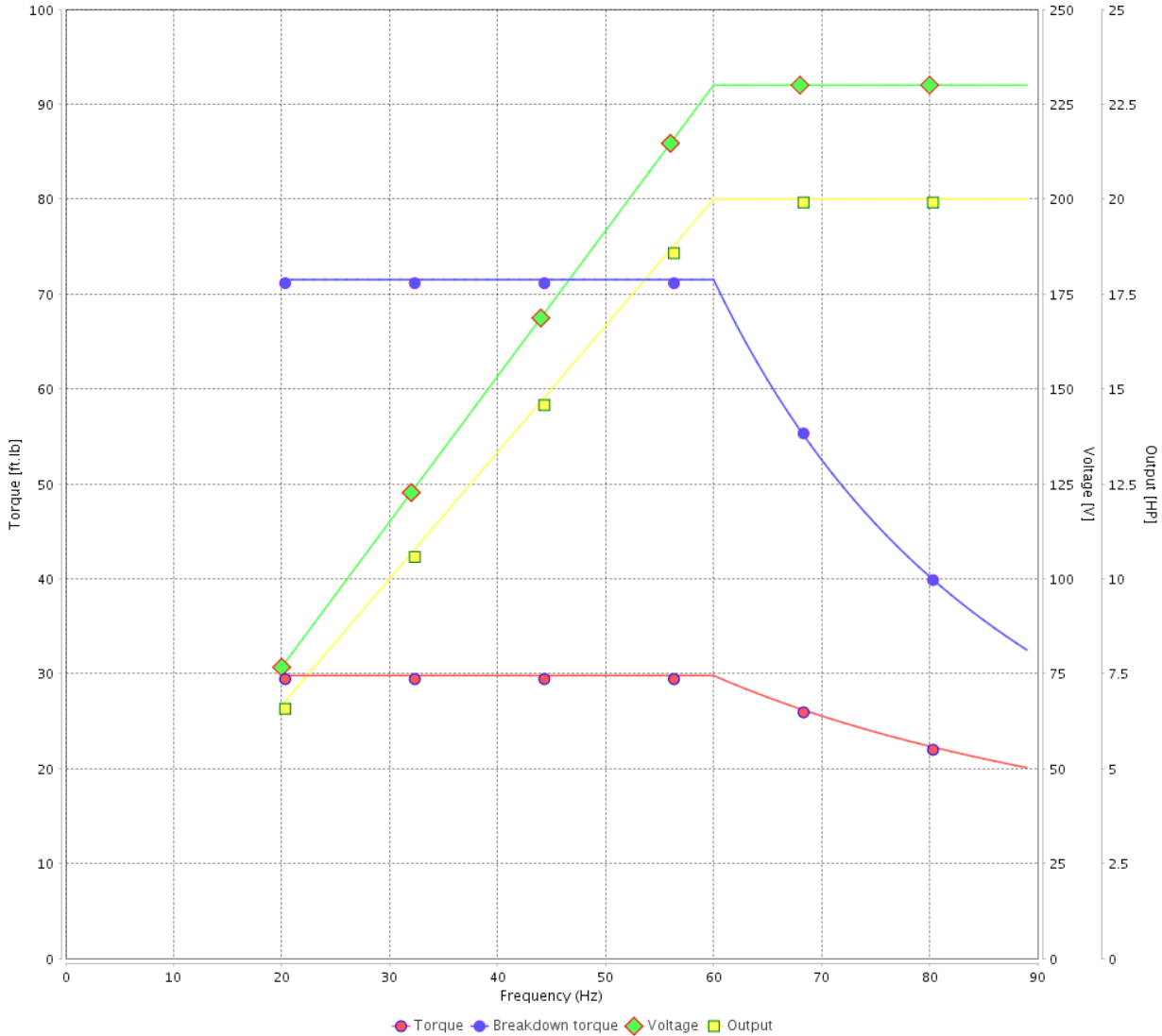
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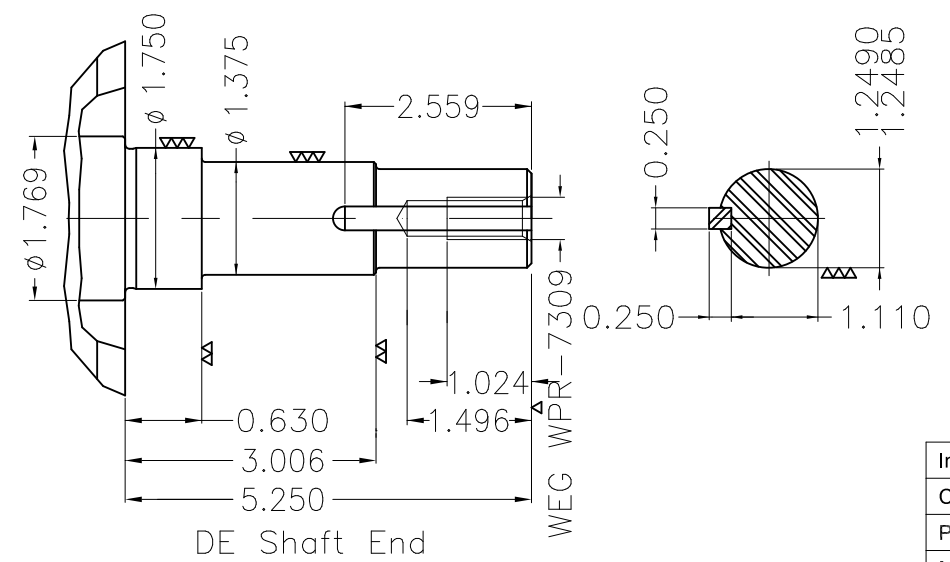
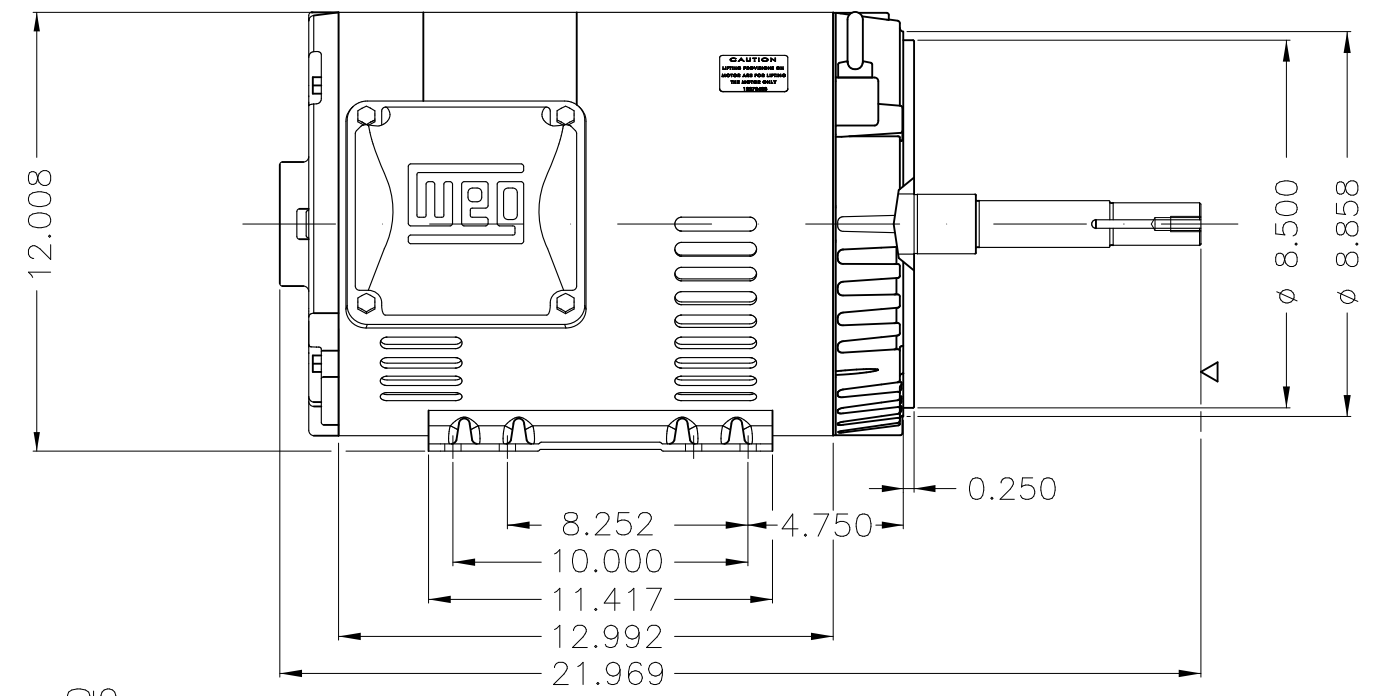
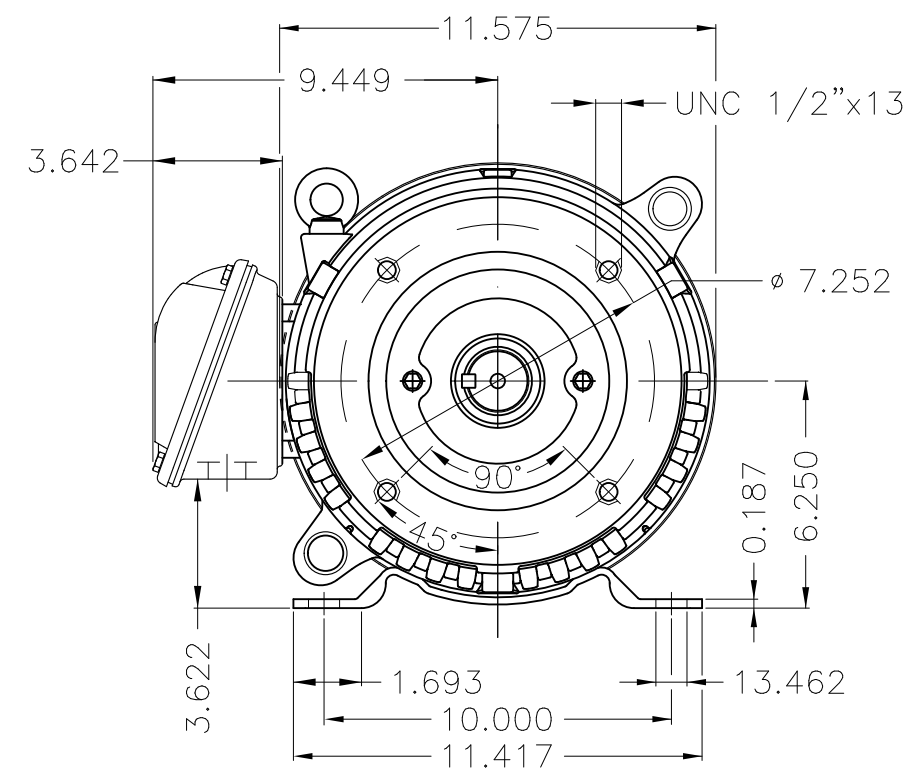
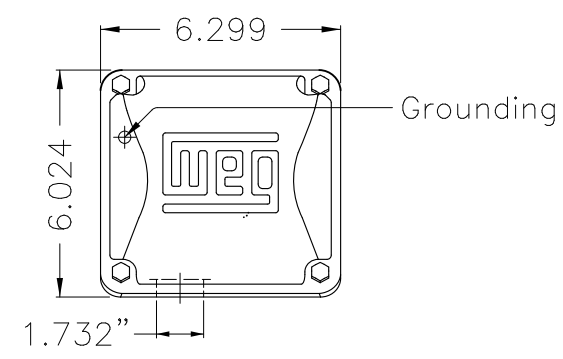
A

B

C

D

E



EUNC 1/2"-13 WEG WPR-7309

Internal AEGIS ground ring on the DE
 Color Munsell N 1 matte black
 Painting plan 207N
 Mounting F-1/B34R(D)

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRBUSER	THREE PH. MOTOR ROLLED STEEL CLOSE COUPLED PUMP JN TYPE PSE 1/2 HP					
CHECKED		FRAME 254/6JM IP21 ODP					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	WDD	SHEET	1 / 1	

20 HP 02 Poles 60 Hz



**NEMA
Premium**

MADE IN MEXICO

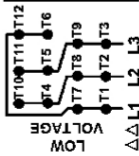
MAT: 13199509 CC029A**W01.T00IC0X0N****MODEL 02036OT3E254JM-SG****21FEB2022 S/N:**

PH 3	Hz 60	HP 20
FR 254/6JM		KW 15
DUTY CONT.		V 230/460
ALT 1000 m.a.s.l.		A 47.6/23.8
INS CL F AT 80K		SFA 54.7/27.4
AMB 40°C	DES B	SF 1.15
ENCL ODP	CODE G	PF 0.87
USABLE @ 208V 52.8A		RPM 3525
SF1.00		NEMA NOM. EFF 91.0%

ALTERNATE RATING: 20HP 50Hz 190-220/380-415V SF1.00
58.0-50.4/29.0-26.7A 2895RPM EFF 87.2% IEC 60034-1

Inverter duty motor For 80Hz use on VPWM 1000:1 VT, 3:1 CT

DE 6309-Z-C3	ODE 6208-Z-C3	MOBIL POLYREX EM	20000h
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T1-BLU T2-WHT
 T3-ORG T4-YEL
 T5-BLK T6-GRY
 T7-PNK T8-RED
 T9-BRK RED
 T10-CURRY
 T11-GRN T12-VLT

INTERCHANGE ANY TWO LINE WIRES TO REVERSE THE ROTATION



WARNING: Motor must be grounded in accordance with local and national electrical codes to prevent serious electrical shocks. Disconnect power source before servicing unit.

AVERTISSEMENT: Le moteur doit être mis à la terre

conformément aux codes électriques locaux et nationaux afin d'éviter tout choc électrique grave. Déconnectez l'alimentation avant l'entretien de la machine.

