

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :				
Product line	: JM Pump NEMA Premium Efficiency Three-Phase	Product code :	13500386	
		Catalog # :	00112OT3E145JMV-S	
Frame	: 143/5JM	Cooling method	: IC01 - ODP	
Insulation class	: F	Mounting	: W-6	
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>2</sup>	: 35.3 lb	
Design	: B	Moment of inertia (J)	: 0.1419 sq.ft.lb	
Output [HP]	1	1	1	
Poles	6	6	6	
Frequency [Hz]	60	50	50	
Rated voltage [V]	230/460	190/380	220/415	
Rated current [A]	3.30/1.65	3.82/1.91	3.53/1.87	
L. R. Amperes [A]	20.1/10.1	17.6/8.79	18.0/9.54	
LRC [A]	6.1x(Code K)	4.6x(Code G)	5.1x(Code H)	
No load current [A]	2.26/1.13	2.22/1.11	2.27/1.20	
Rated speed [RPM]	1150	920	930	
Slip [%]	4.17	8.00	7.00	
Rated torque [ft.lb]	4.57	5.71	5.65	
Locked rotor torque [%]	250	190	220	
Breakdown torque [%]	300	210	240	
Service factor		1.00	1.00	
Temperature rise	80 K	105 K	105 K	
Locked rotor time	43s (cold) 24s (hot)	0s (cold) 0s (hot)	0s (cold) 0s (hot)	
Noise level <sup>2</sup>	50.0 dB(A)	47.0 dB(A)	47.0 dB(A)	
Efficiency (%)	25%	77.2	78.1	
	50%	78.5	77.7	
	75%	81.5	79.4	
	100%	82.5	78.2	
Power Factor	25%	0.26	0.28	
	50%	0.47	0.51	
	75%	0.60	0.65	
	100%	0.69	0.74	
Bearing type	: <u>Drive end</u> 6206 ZZ <u>Non drive end</u> 6203 ZZ	Foundation loads		
Sealing	: Without Without Bearing Seal Bearing Seal	Max. traction	: 100 lb	
		Max. compression	: 135 lb	
Lubrication interval	: - -			
Lubricant amount	: - -			
Lubricant type	: Mobil Polyrex EM			
Notes USABLE @208V 3.65A SF 1.00 SFA 3.65A				
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



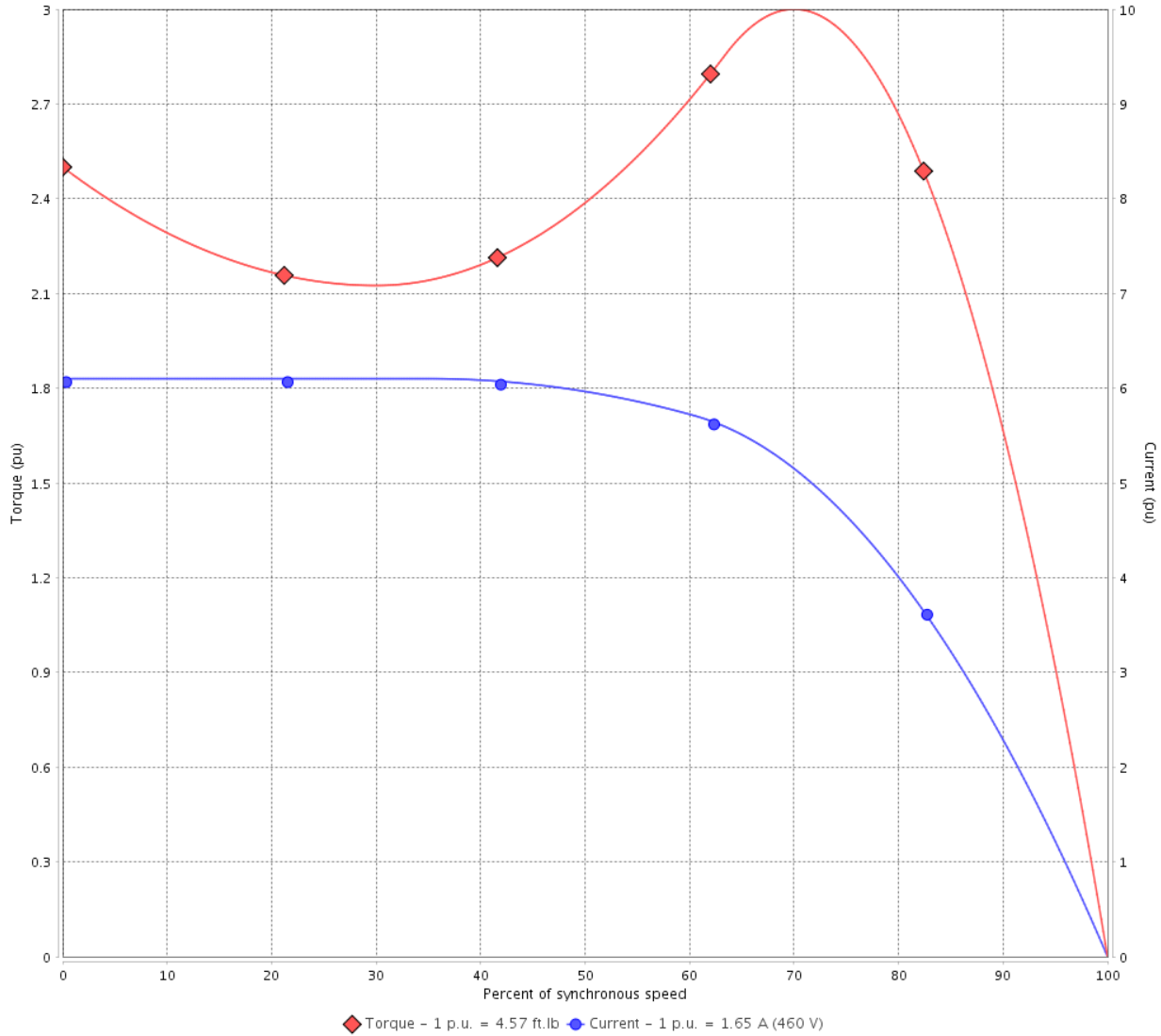
Customer :

Product line : JM Pump NEMA Premium  
Efficiency Three-Phase

Product code : 13500386

Catalog # : 001120T3E145JMV-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 6P

Rated current : 3.30/1.65 A  
LRC : 6.1  
Rated torque : 4.57 ft.lb  
Locked rotor torque : 250 %  
Breakdown torque : 300 %  
Rated speed : 1150 rpm

Moment of inertia (J) : 0.1419 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor :  
Temperature rise : 80 K  
Design : B

Locked rotor time : 43s (cold) 24s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



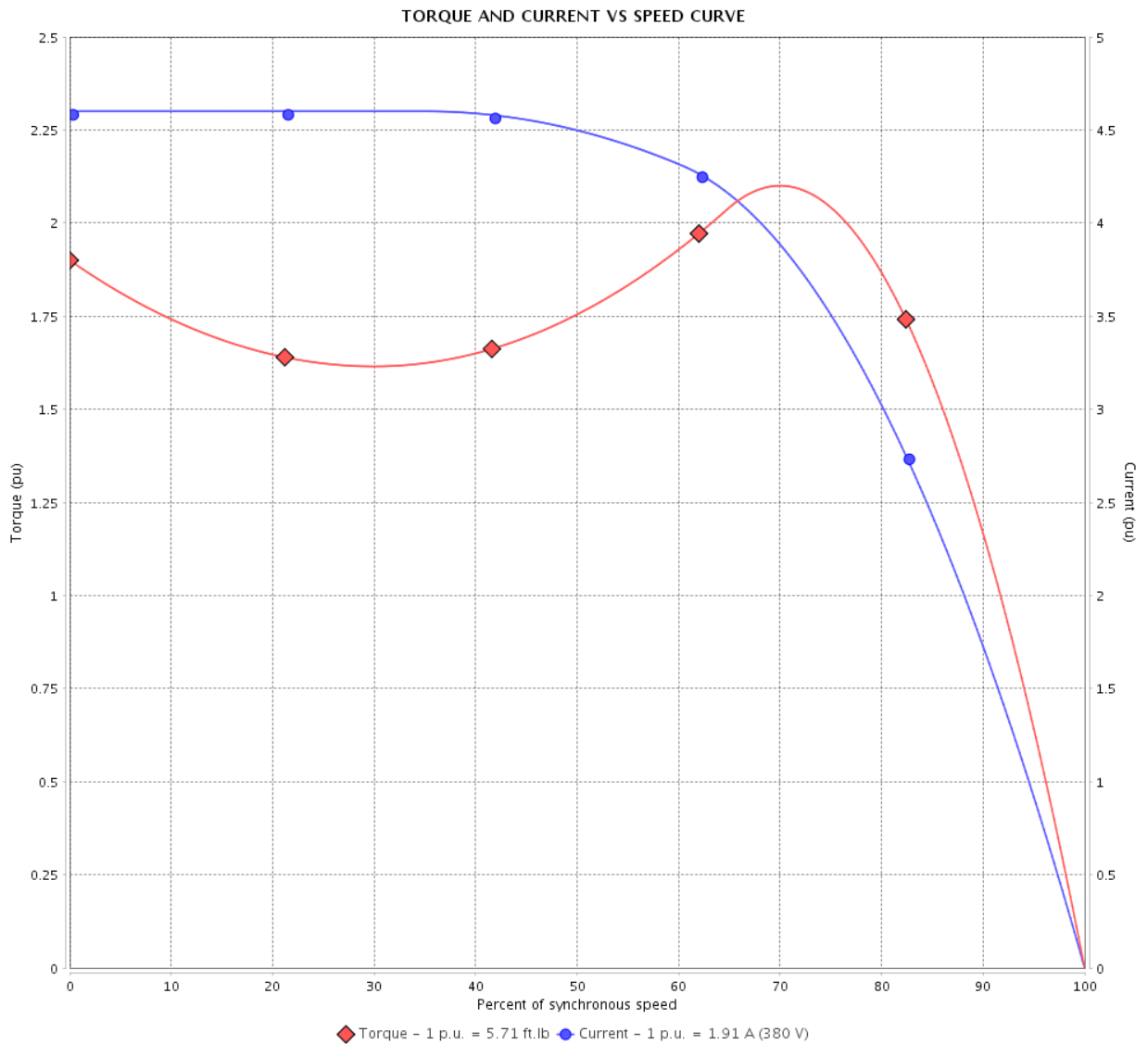
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : JM Pump NEMA Premium Efficiency Three-Phase

Product code : 13500386

Catalog # : 00112OT3E145JMV-S



Performance : 190/380 V 50 Hz 6P

Rated current	: 3.82/1.91 A	Moment of inertia (J)	: 0.1419 sq.ft.lb
LRC	: 4.6	Duty cycle	: Cont.(S1)
Rated torque	: 5.71 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 105 K
Rated speed	: 920 rpm	Design	: B

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

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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



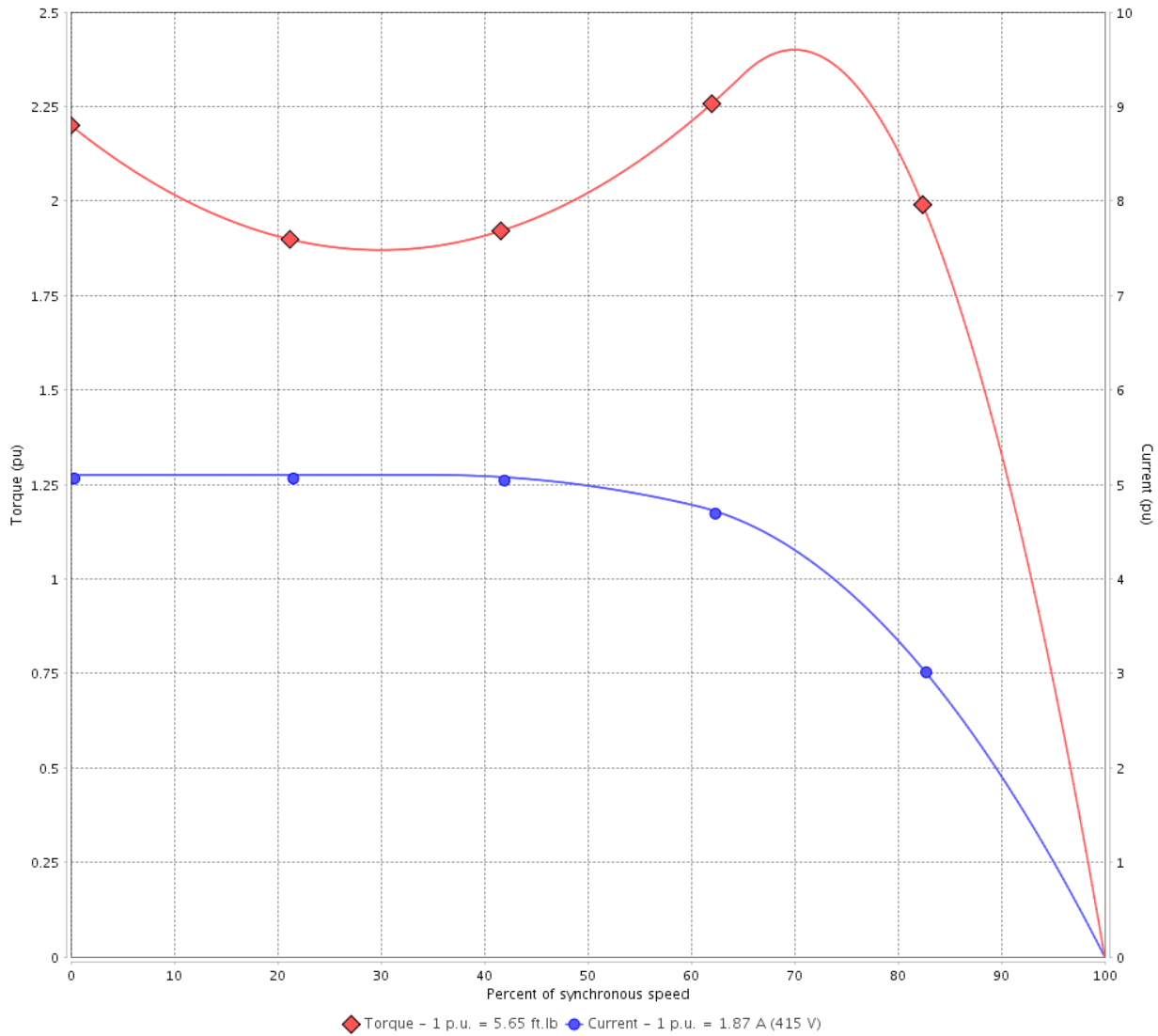
Customer :

Product line : JM Pump NEMA Premium  
Efficiency Three-Phase

Product code : 13500386

Catalog # : 001120T3E145JMV-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 6P

Rated current	: 3.53/1.87 A	Moment of inertia (J)	: 0.1419 sq.ft.lb
LRC	: 5.1	Duty cycle	: Cont.(S1)
Rated torque	: 5.65 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 105 K
Rated speed	: 930 rpm	Design	: B

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

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

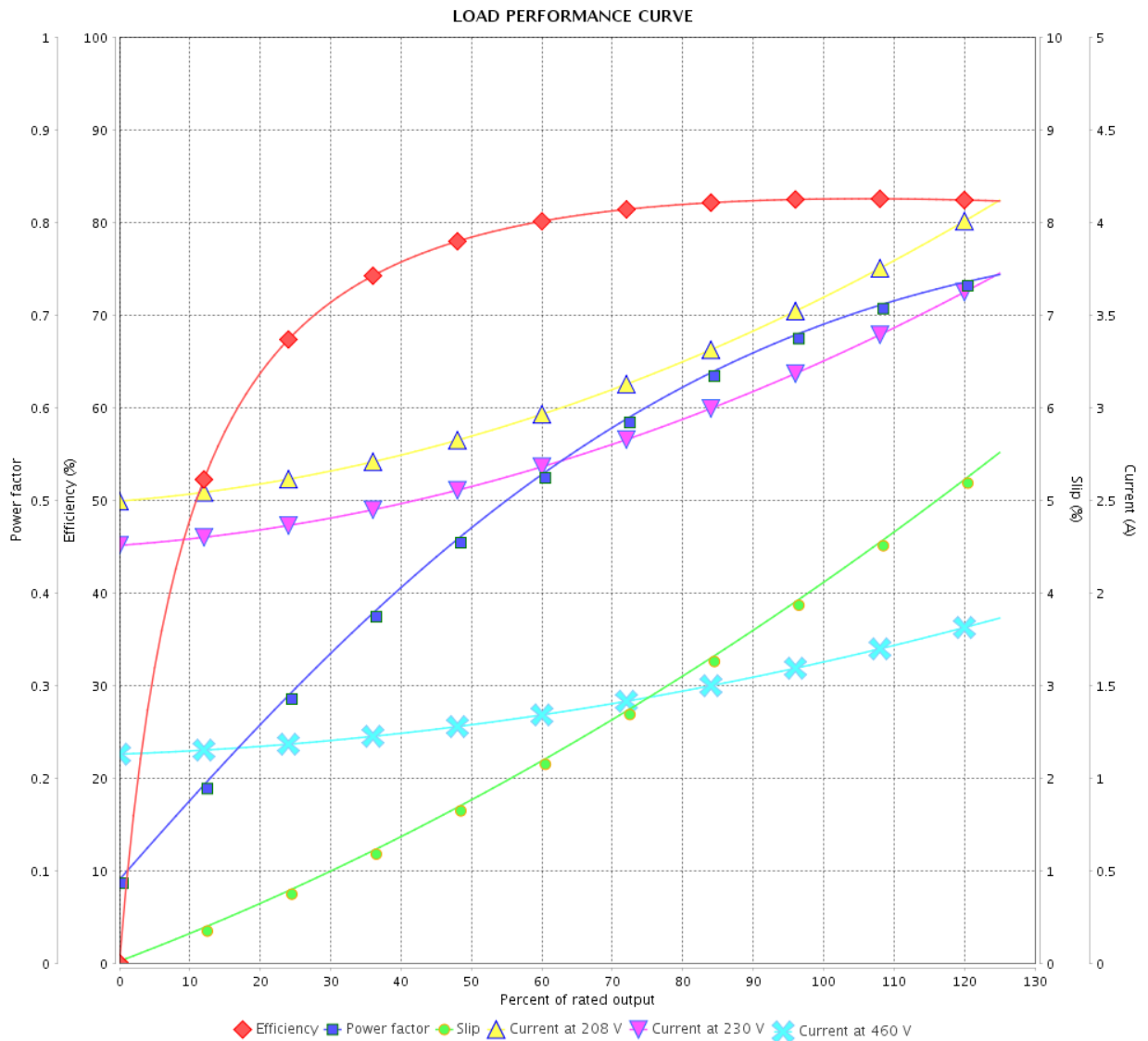


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Performance : 230/460 V 60 Hz 6P

Rated current : 3.30/1.65 A  
LRC : 6.1  
Rated torque : 4.57 ft.lb  
Locked rotor torque : 250 %  
Breakdown torque : 300 %  
Rated speed : 1150 rpm

Moment of inertia (J) : 0.1419 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor :  
Temperature rise : 80 K  
Design : B

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Three Phase Induction Motor - Squirrel Cage



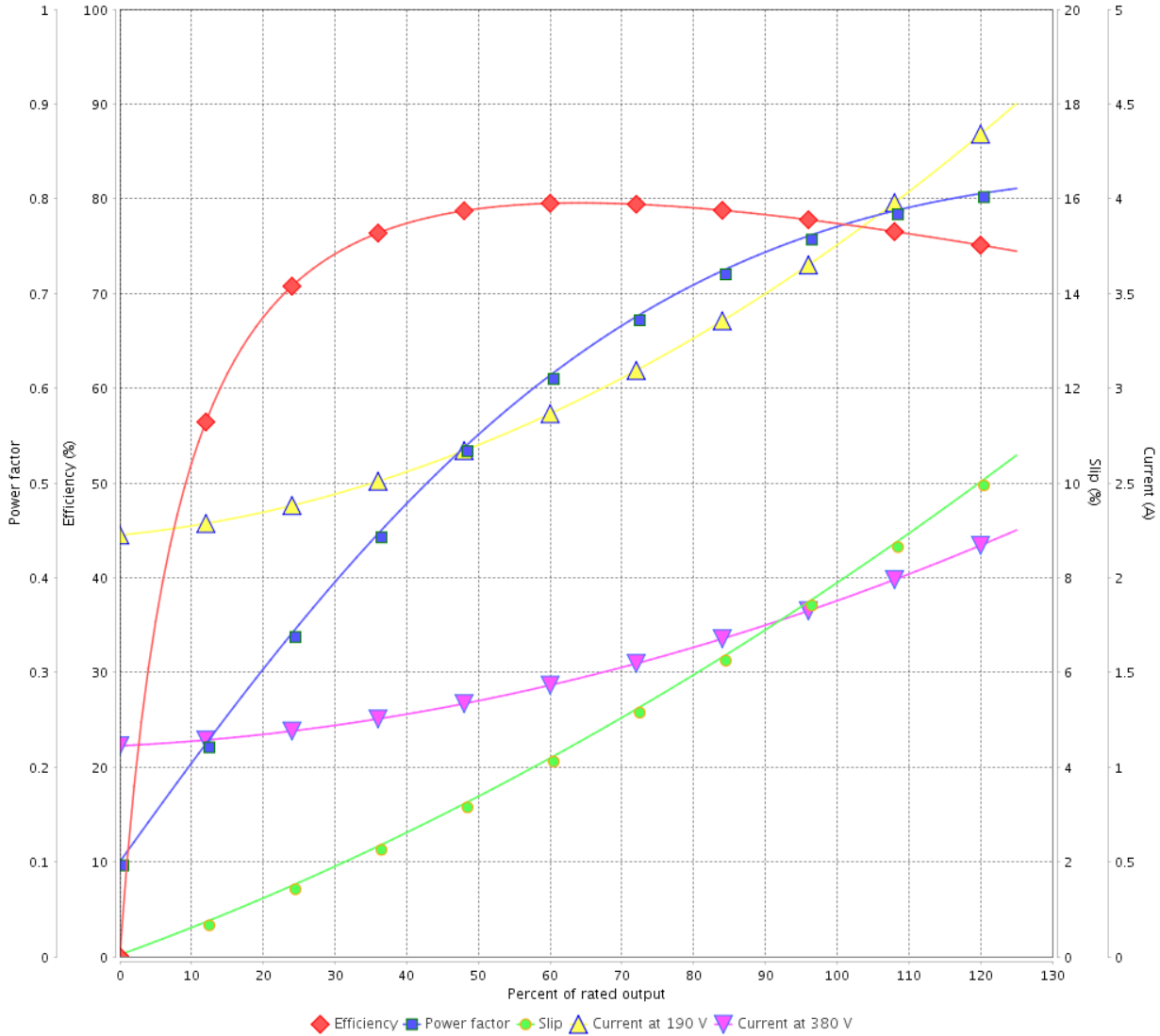
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Catalog # : 001120T3E145JMV-S

LOAD PERFORMANCE CURVE



Performance : 190/380 V 50 Hz 6P

Rated current : 3.82/1.91 A  
LRC : 4.6  
Rated torque : 5.71 ft.lb  
Locked rotor torque : 190 %  
Breakdown torque : 210 %  
Rated speed : 920 rpm

Moment of inertia (J) : 0.1419 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 105 K  
Design : B

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# LOAD PERFORMANCE CURVE

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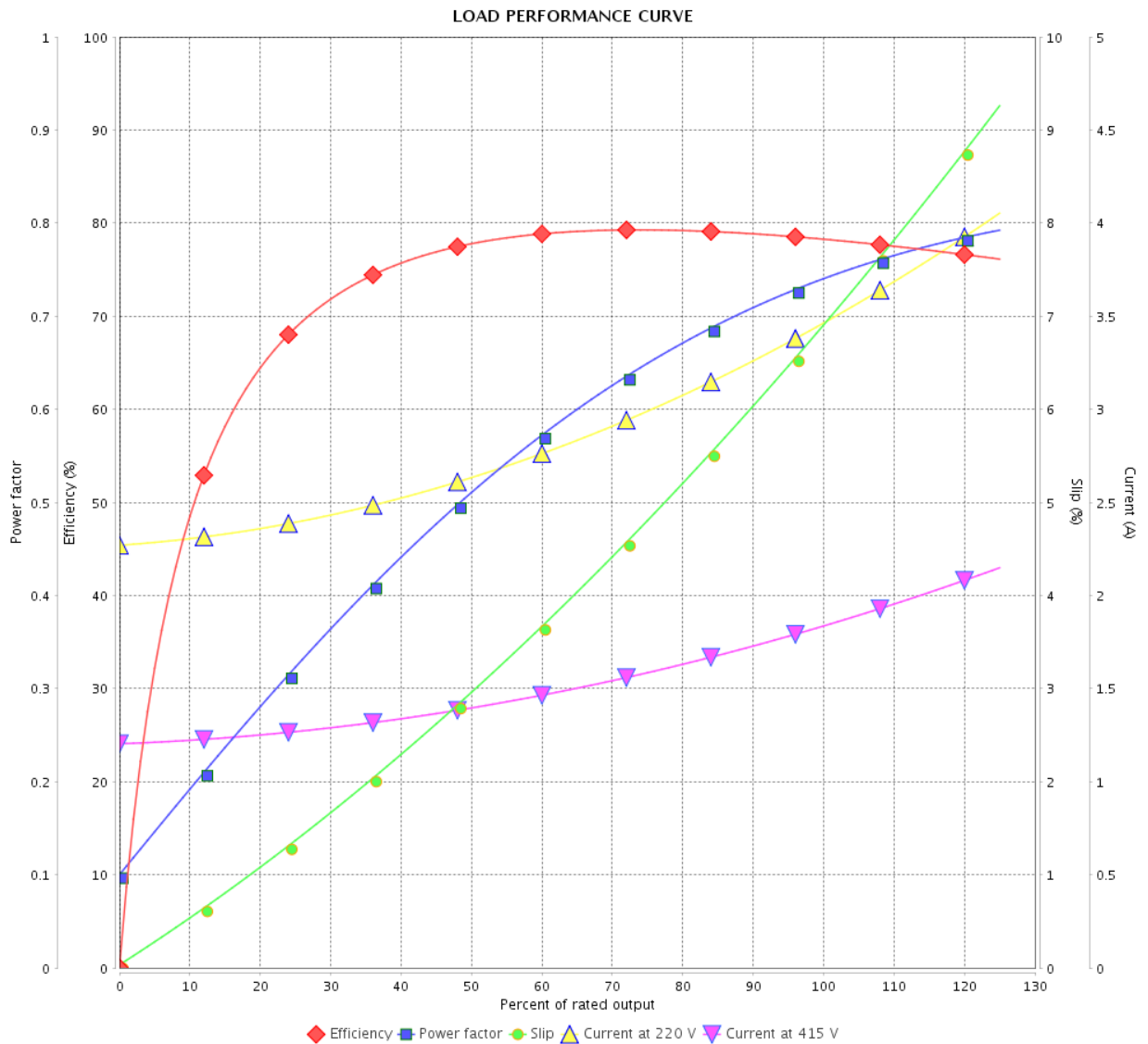


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Performance : 220/415 V 50 Hz 6P

Rated current : 3.53/1.87 A  
 LRC : 5.1  
 Rated torque : 5.65 ft.lb  
 Locked rotor torque : 220 %  
 Breakdown torque : 240 %  
 Rated speed : 930 rpm

Moment of inertia (J) : 0.1419 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 105 K  
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# THERMAL LIMIT CURVE



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Performance : 230/460 V 60 Hz 6P

Rated current : 3.30/1.65 A  
LRC : 6.1  
Rated torque : 4.57 ft.lb  
Locked rotor torque : 250 %  
Breakdown torque : 300 %  
Rated speed : 1150 rpm

Moment of inertia (J) : 0.1419 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor :  
Temperature rise : 80 K  
Design : B

Heating constant

Cooling constant

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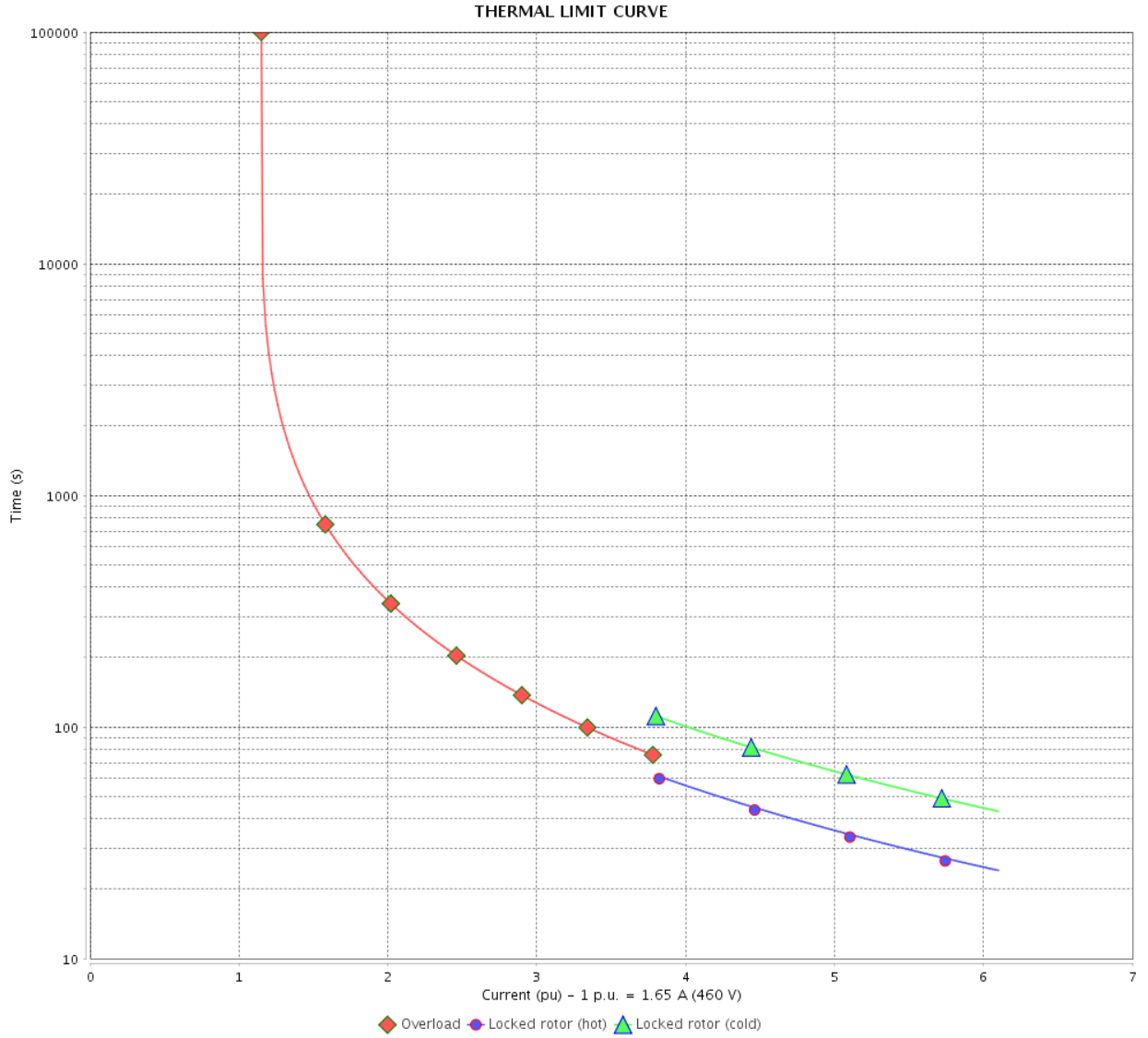


# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_



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Performance : 190/380 V 50 Hz 6P

Rated current : 3.82/1.91 A  
LRC : 4.6  
Rated torque : 5.71 ft.lb  
Locked rotor torque : 190 %  
Breakdown torque : 210 %  
Rated speed : 920 rpm

Moment of inertia (J) : 0.1419 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 105 K  
Design : B

Heating constant

Cooling constant

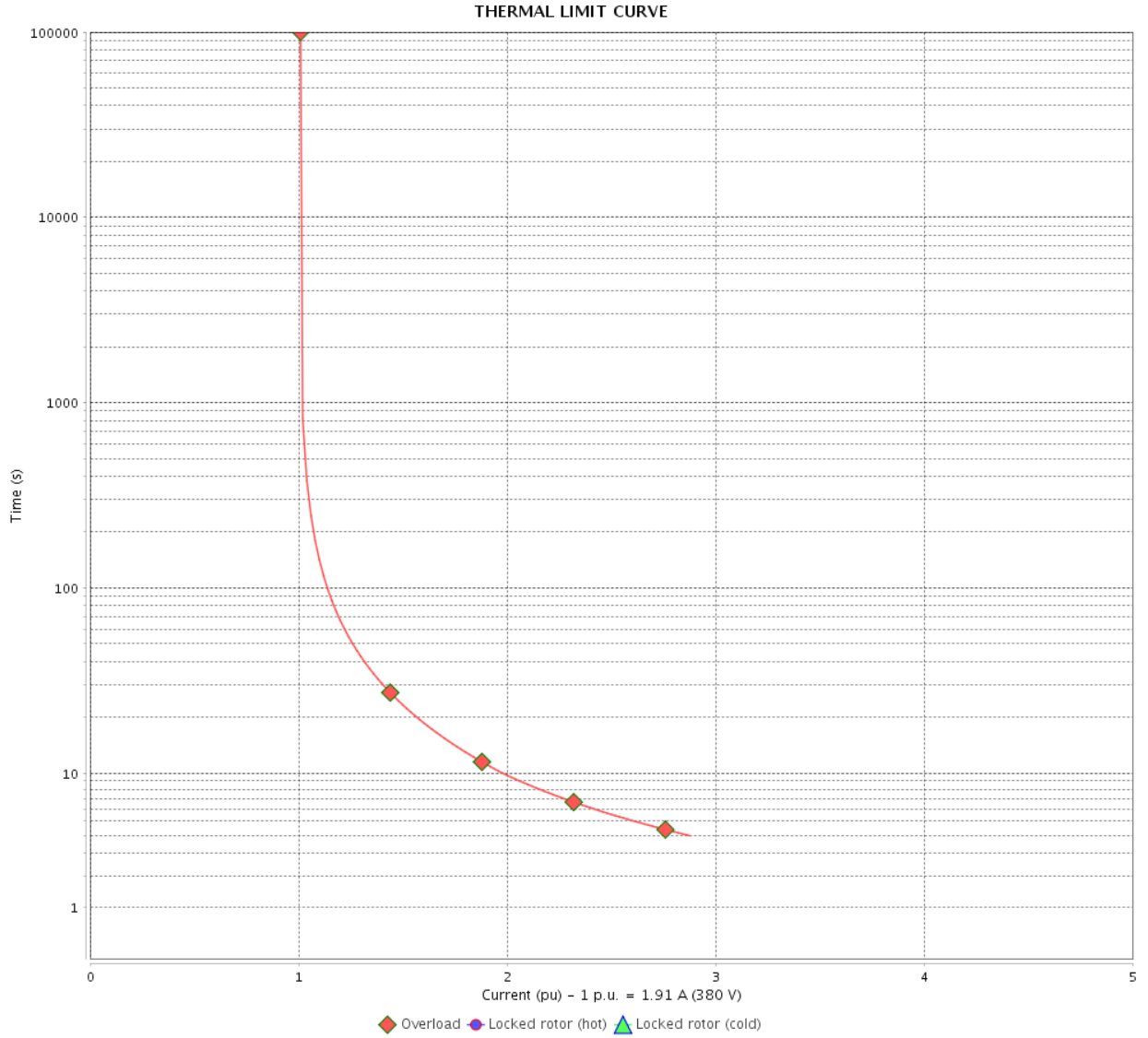
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Design : B

Heating constant

Cooling constant

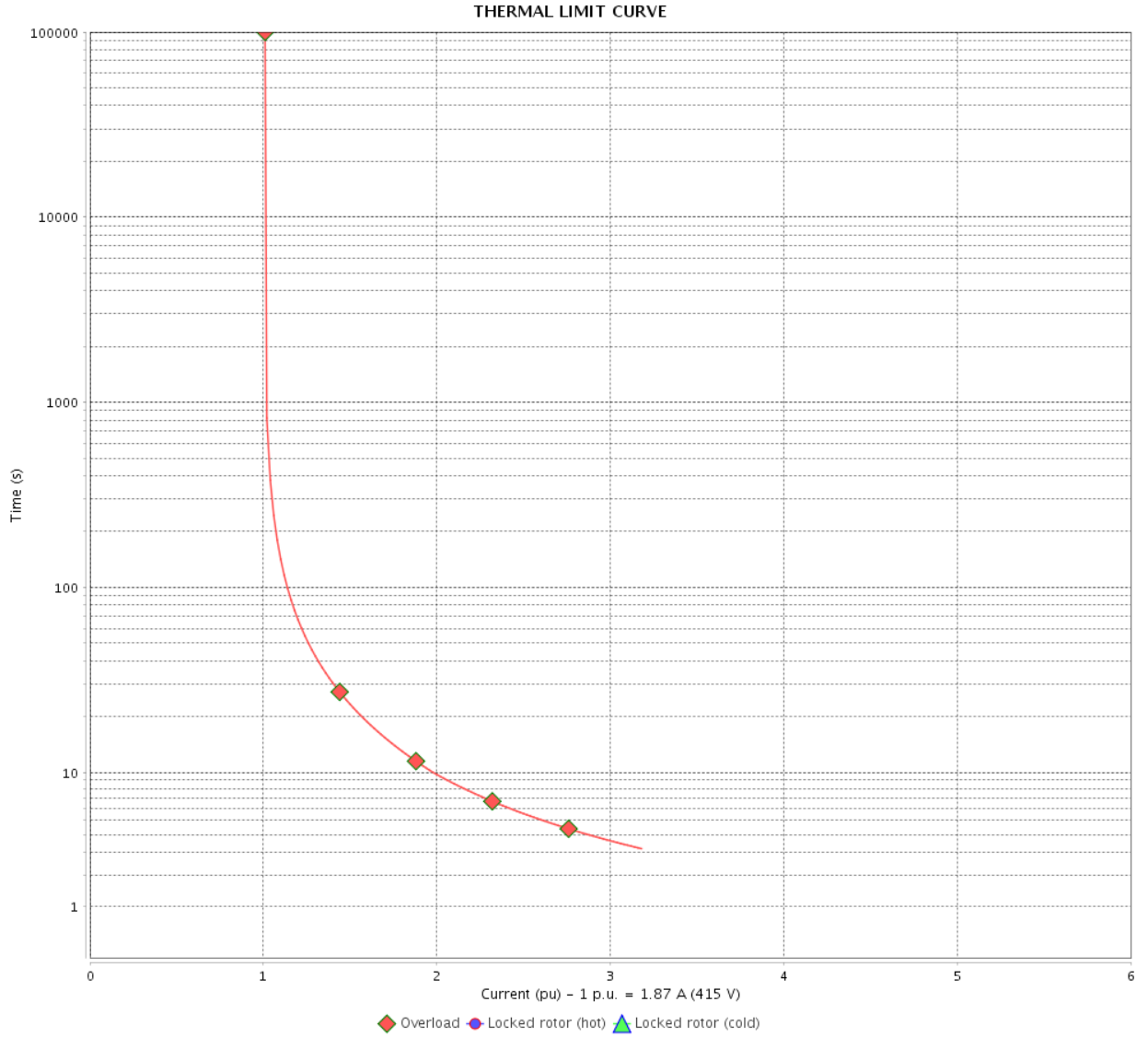
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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



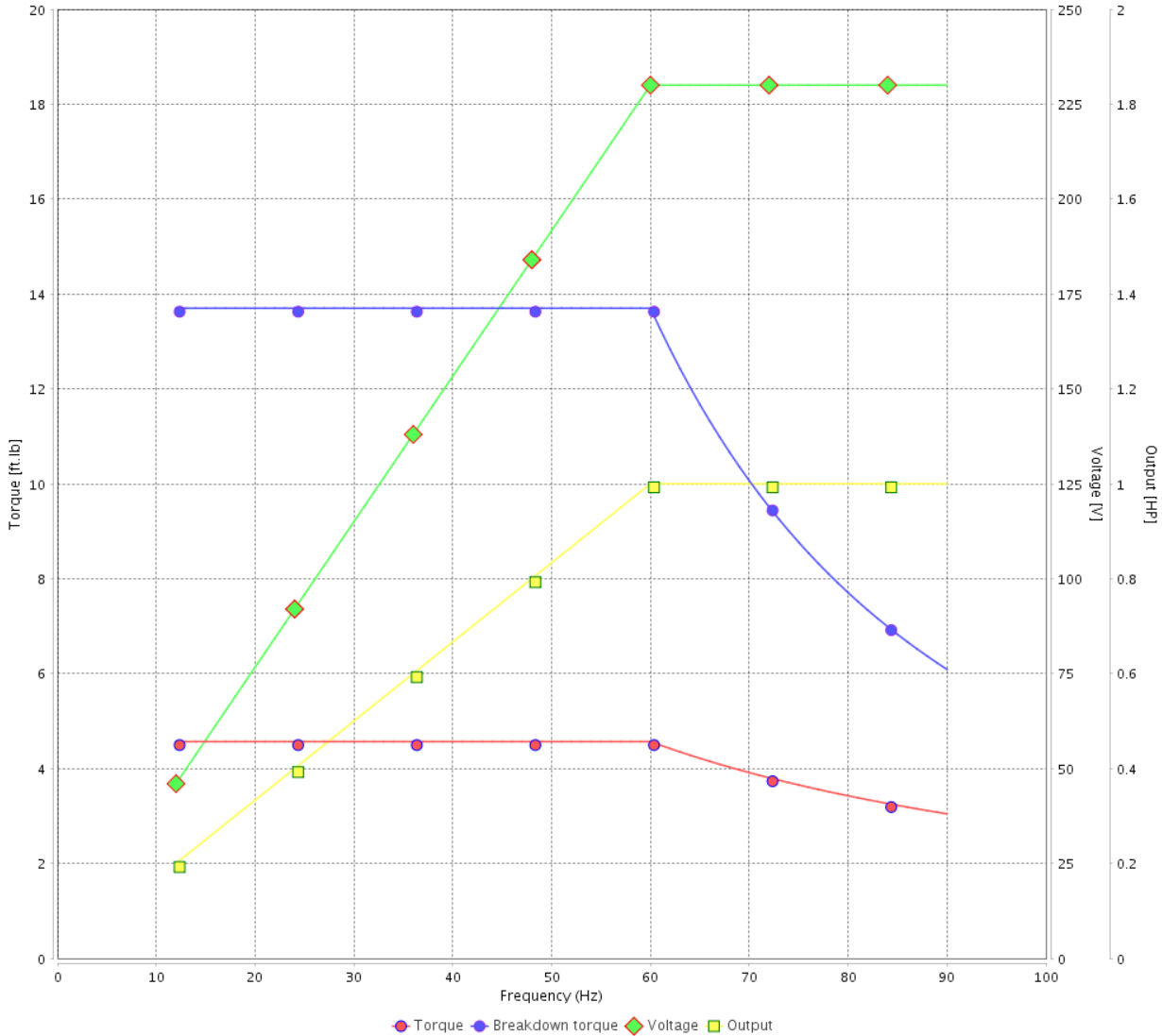
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VFD OPERATION CURVE



Performance : 230/460 V 60 Hz 6P

Rated current : 3.30/1.65 A  
 LRC : 6.1  
 Rated torque : 4.57 ft.lb  
 Locked rotor torque : 250 %  
 Breakdown torque : 300 %  
 Rated speed : 1150 rpm

Moment of inertia (J) : 0.1419 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K  
 Design : B

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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

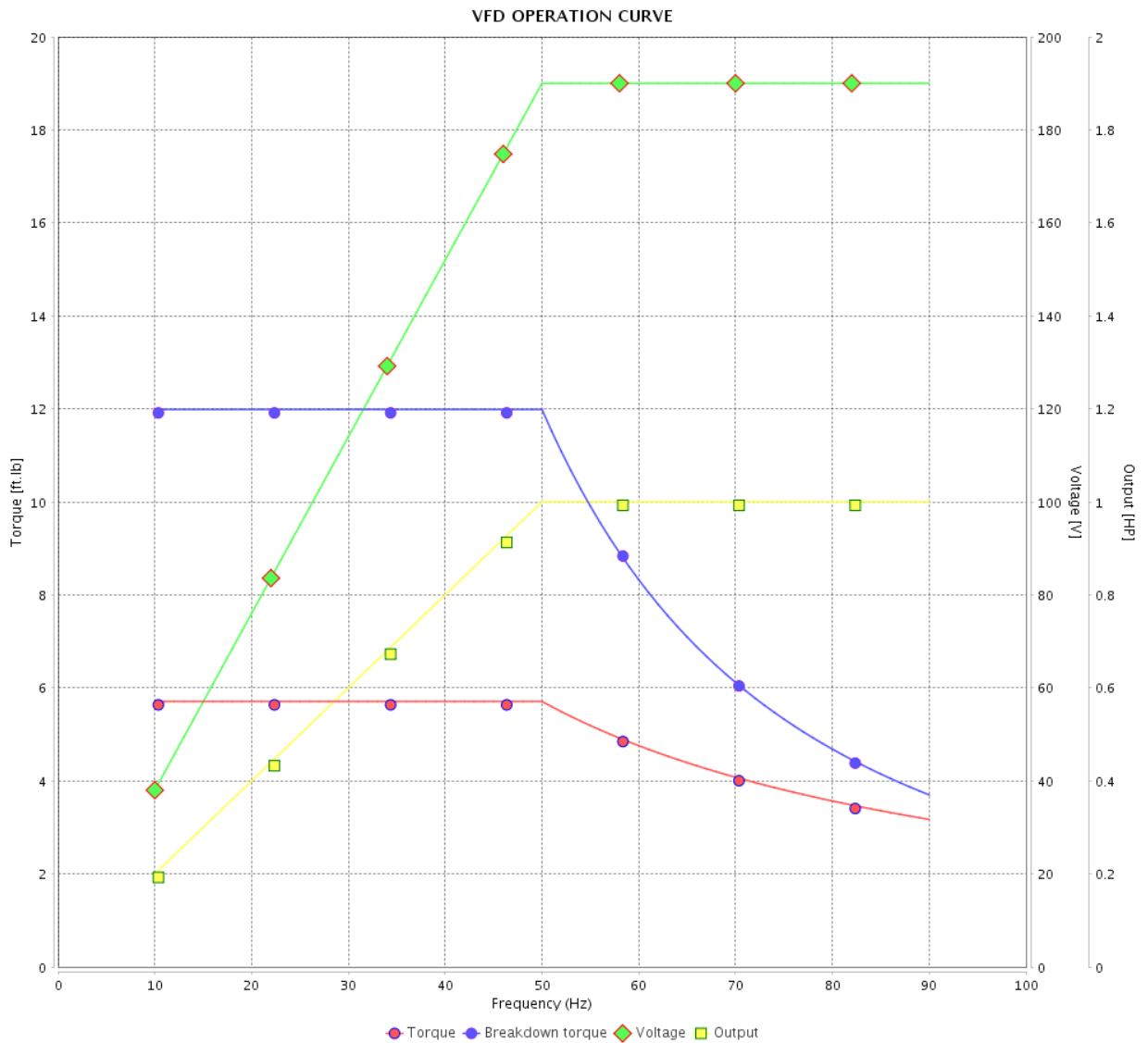


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 Rated speed : 920 rpm

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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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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



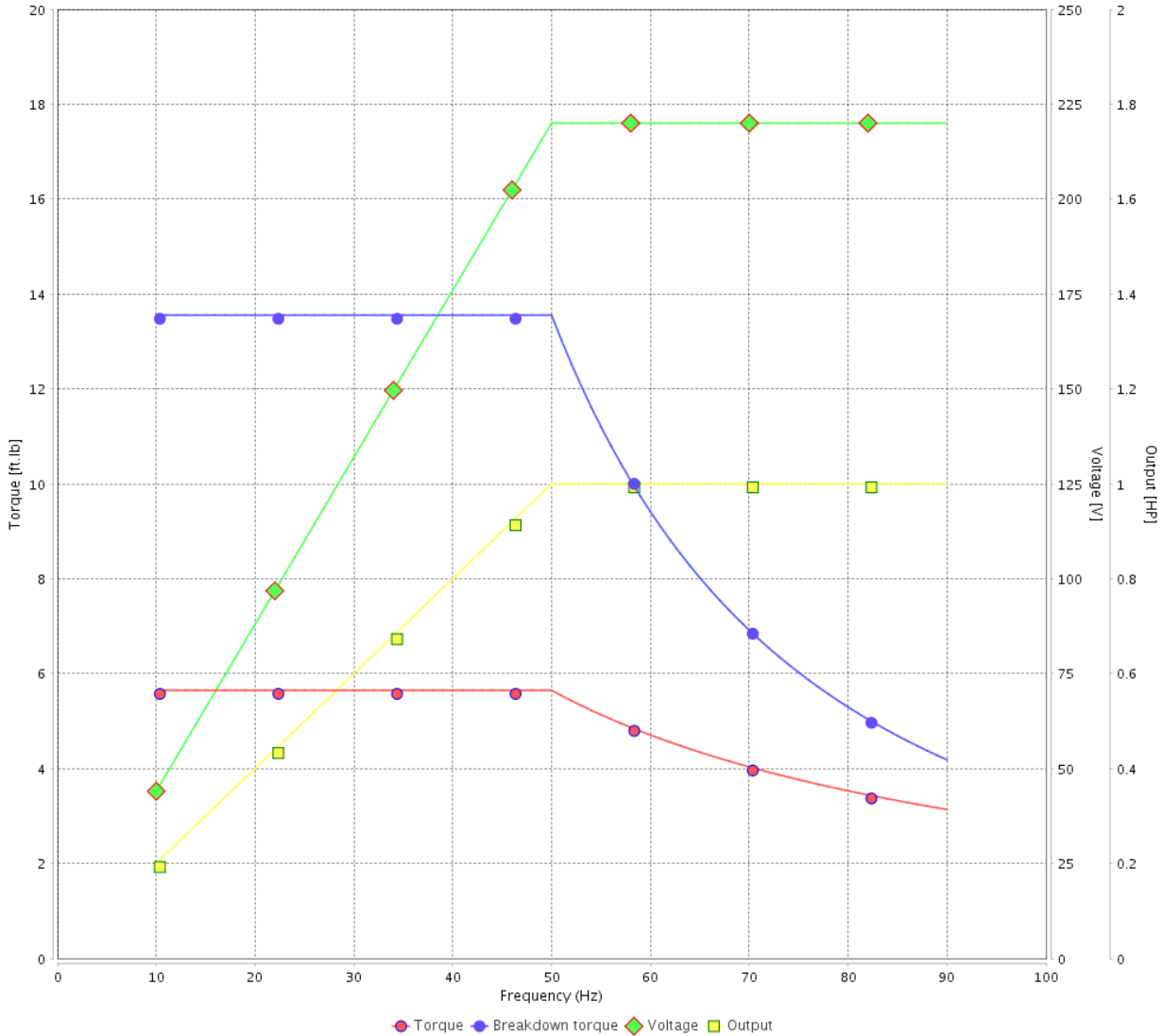
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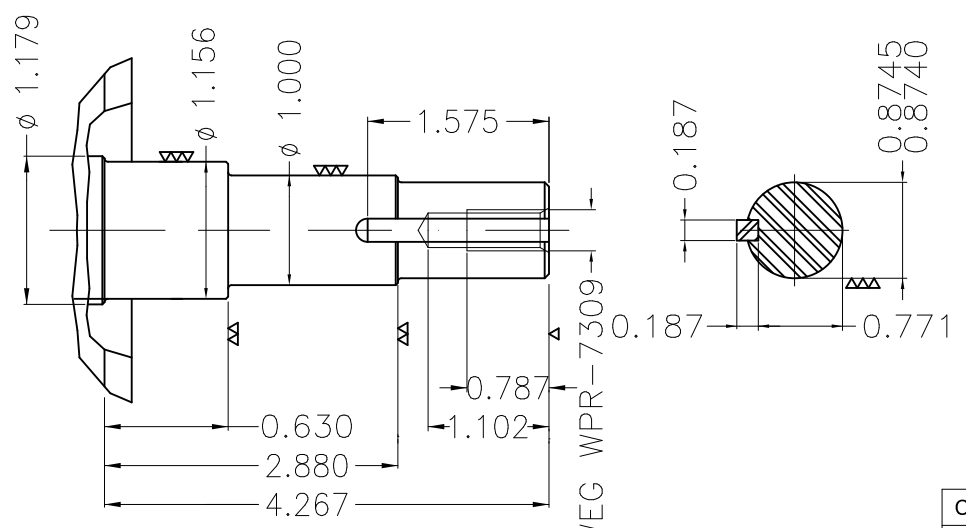
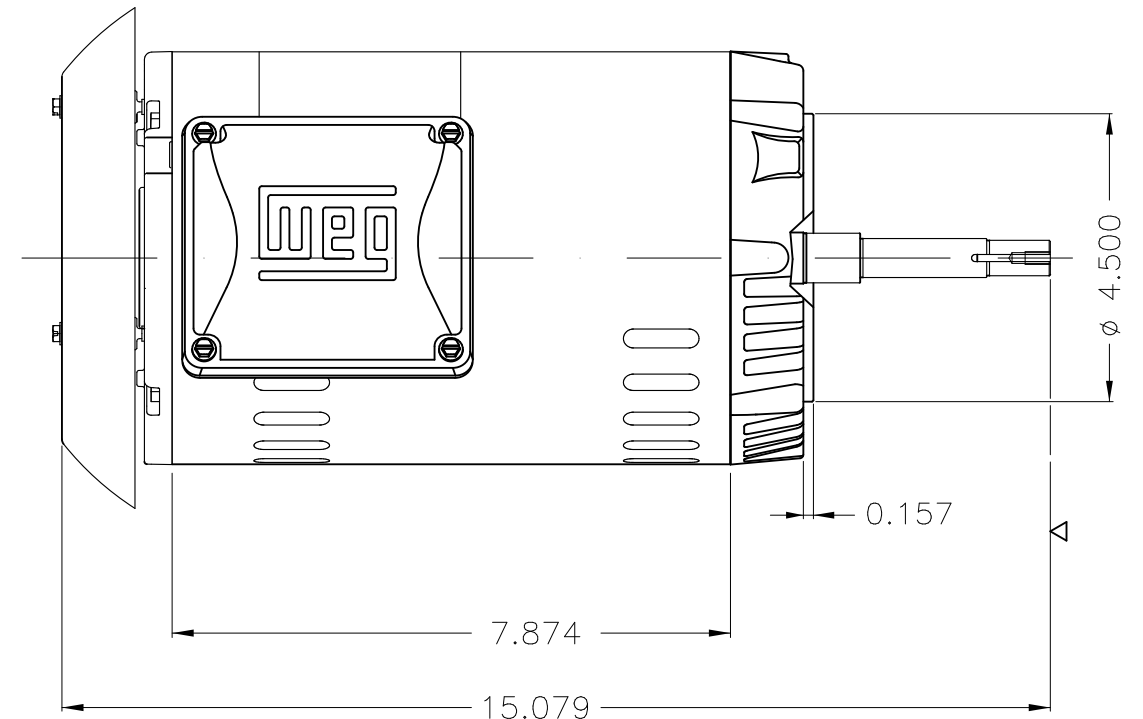
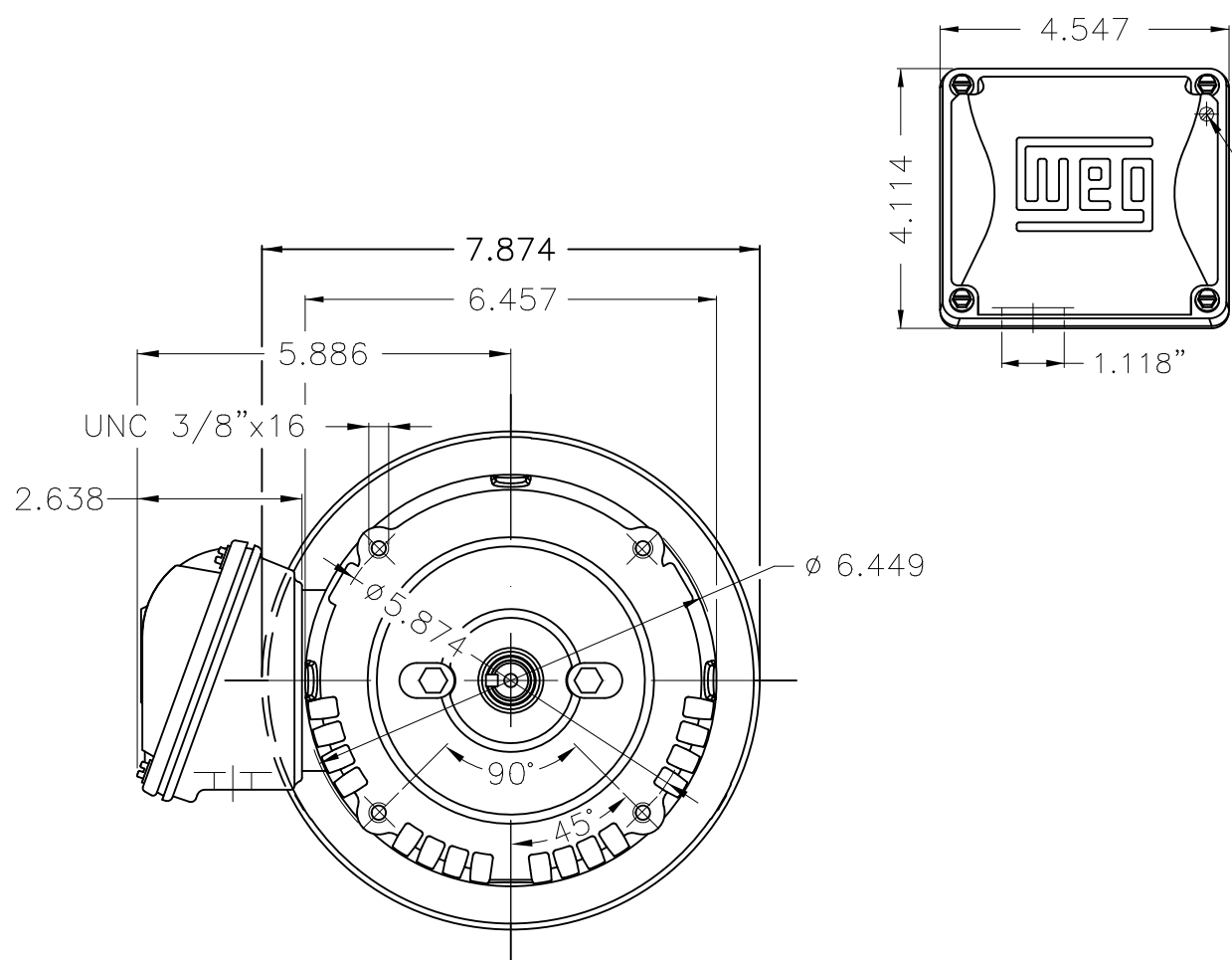
A

B

C

D

E



EUNC 3/8"-16 WEG WPR-7309

DE Shaft End

Color Munsell N 1 matte black									
Painting plan 207N									
Mounting W-6/V18R(D)									
ECM	LOC	SUMMARY OF MODIFICATIONS			EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR ROLLED STEEL CLOSE COUPLED PUMP JN TYPE PSEF 143							
CHECKED		FRAME 143/5JM IP21 ODP							
RELEASED									
REL DT.		WMO	Jaragua do Sul	Product Engineering					

**PREVIEW**



1 HP 06 Poles 60 Hz

Dimensions in inches XME A3

**NEMA**  
**Premium**

MADE IN MEXICO

MAT: 13500386 CC029A

W01.T00IC0X0N

MODEL 001120T3E145JMV-S

25NOV2021 B/N:

PH 3	Hz 60	HP 1.0
FR 143/5JM		KW 0.75
DUTY CONT.		V 230/460
ALT 1000 m.a.s.l.		A 3.30/1.65
INS CL F AT 80K		SFA 3.79/1.90
AMB 40°C	DES B	SF 1.15
ENCL ODP	CODE K	PF 0.69
USABLE @ 208V 3.85A		RPM 1150
SF1.00		NEMA NOM. EFF 82.5%

ALTERNATE RATING: 1.0HP 50Hz 190-220/380-415V SF1.00  
 3.82-3.47/1.91-1.84A 920RPM EFF 77.3% (IE2) IEC 60034-1

Inverter duty motor For 80Hz use on VPWM 1000:1 VT, 5:1 CT

DE 6206-ZZ ODE 6203-ZZ MOBIL POLYREX EM



T1-BLU T2-WHT  
 T3-ORG T4-YEL  
 T5-BLK T6-GRY  
 T7-PNK T8-RED  
 T9-BRK RED

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.

