

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :				
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	12759400	
		Catalog # :	00712ET3E254T-SG	
Frame	: 254/6T	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>2</sup>	: 209 lb	
Protection degree	: IP55	Moment of inertia (J)	: 2.34 sq.ft.lb	
Design	: B			
Output [HP]	7.5	7.5	7.5	
Poles	6	6	6	
Frequency [Hz]	60	50	50	
Rated voltage [V]	230/460	190/380	220/415	
Rated current [A]	20.0/9.98	24.0/12.0	21.7/11.5	
L. R. Amperes [A]	108/53.9	101/50.4	102/54.1	
LRC [A]	5.4x(Code G)	4.2x(Code D)	4.7x(Code E)	
No load current [A]	10.1/5.03	9.92/4.96	10.1/5.35	
Rated speed [RPM]	1175	965	970	
Slip [%]	2.08	3.50	3.00	
Rated torque [ft.lb]	33.5	40.8	40.6	
Locked rotor torque [%]	200	150	170	
Breakdown torque [%]	229	180	200	
Service factor	1.15	1.00	1.00	
Temperature rise	80 K	105 K	105 K	
Locked rotor time	75s (cold) 42s (hot)	0s (cold) 0s (hot)	0s (cold) 0s (hot)	
Noise level <sup>2</sup>	59.0 dB(A)	57.0 dB(A)	57.0 dB(A)	
Efficiency (%)	25%	88.1	91.0	90.5
	50%	89.5	89.9	89.6
	75%	89.5	89.5	89.8
	100%	91.0	88.0	88.5
Power Factor	25%	0.35	0.40	0.37
	50%	0.58	0.65	0.61
	75%	0.70	0.75	0.72
	100%	0.76	0.79	0.78
Bearing type	: <u>Drive end</u> 6309 Z C3 <u>Non drive end</u> 6208 Z C3	Foundation loads		
Sealing	: V'Ring Without Bearing Seal	Max. traction	: 284 lb	
		Max. compression	: 494 lb	
Lubrication interval	: 20000 h 20000 h			
Lubricant amount	: 13 g 8 g			
Lubricant type	: Mobil Polyrex EM			
Notes USABLE @208V 22.1A SF 1.00 SFA 22.1A				
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



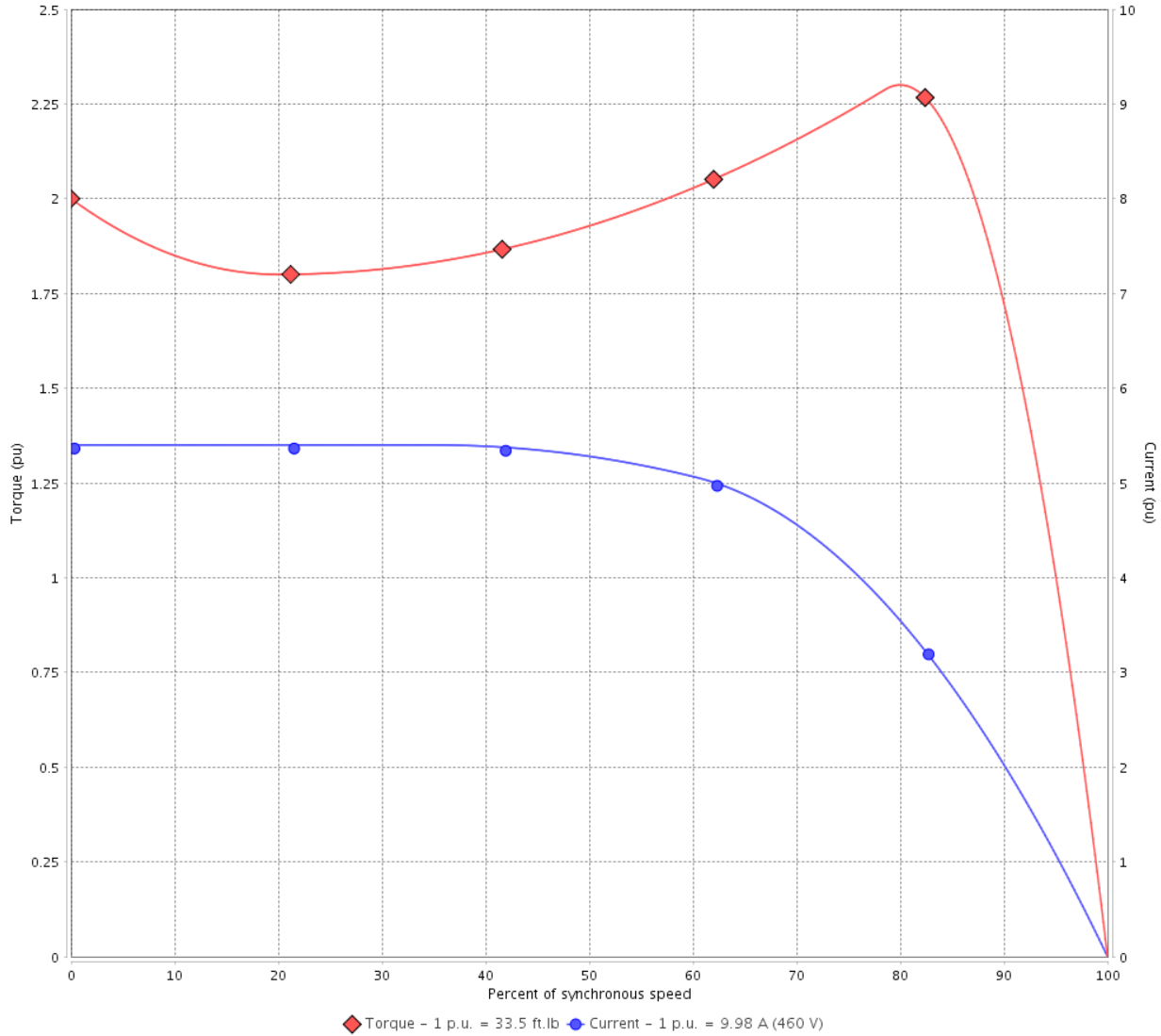
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12759400

Catalog # : 00712ET3E254T-SG

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 6P

Rated current	: 20.0/9.98 A	Moment of inertia (J)	: 2.34 sq.ft.lb
LRC	: 5.4	Duty cycle	: Cont.(S1)
Rated torque	: 33.5 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.15
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 1175 rpm	Design	: B

Locked rotor time : 75s (cold) 42s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



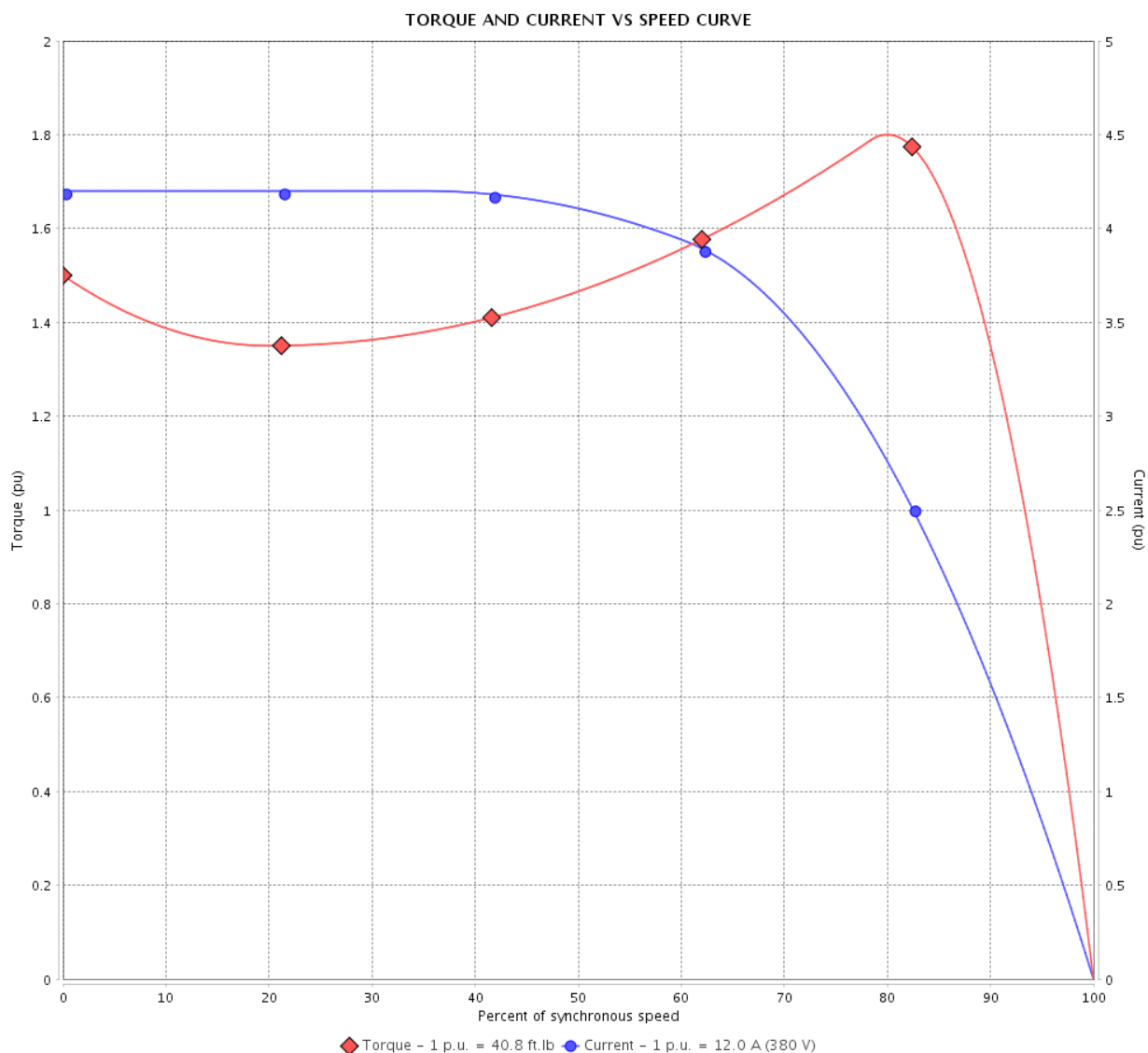
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12759400

Catalog # : 00712ET3E254T-SG



Performance : 190/380 V 50 Hz 6P

Rated current	: 24.0/12.0 A	Moment of inertia (J)	: 2.34 sq.ft.lb
LRC	: 4.2	Duty cycle	: Cont.(S1)
Rated torque	: 40.8 ft.lb	Insulation class	: F
Locked rotor torque	: 150 %	Service factor	: 1.00
Breakdown torque	: 180 %	Temperature rise	: 105 K
Rated speed	: 965 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



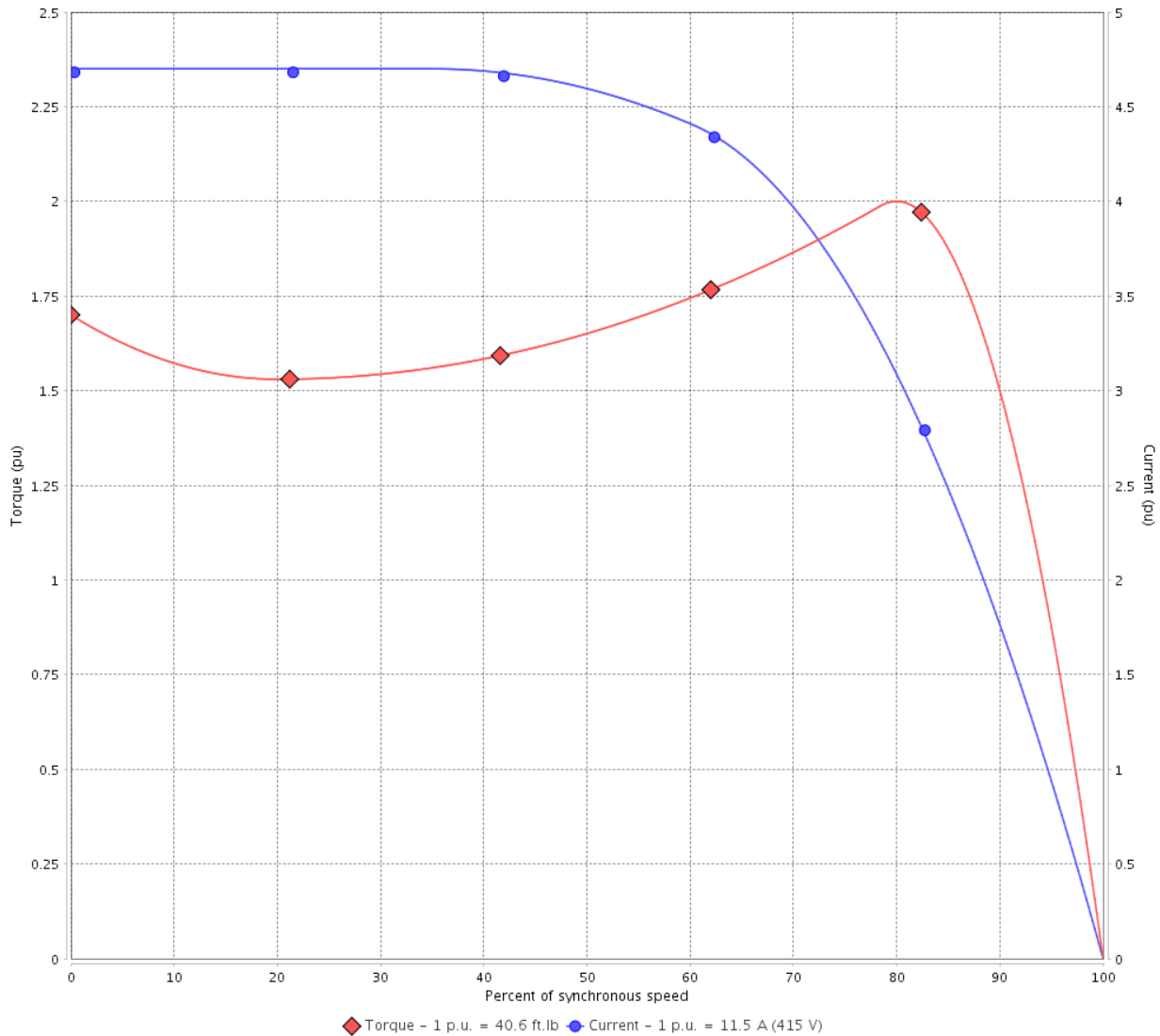
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12759400

Catalog # : 00712ET3E254T-SG

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 6P

Rated current	: 21.7/11.5 A	Moment of inertia (J)	: 2.34 sq.ft.lb
LRC	: 4.7	Duty cycle	: Cont.(S1)
Rated torque	: 40.6 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 105 K
Rated speed	: 970 rpm	Design	: B

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

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

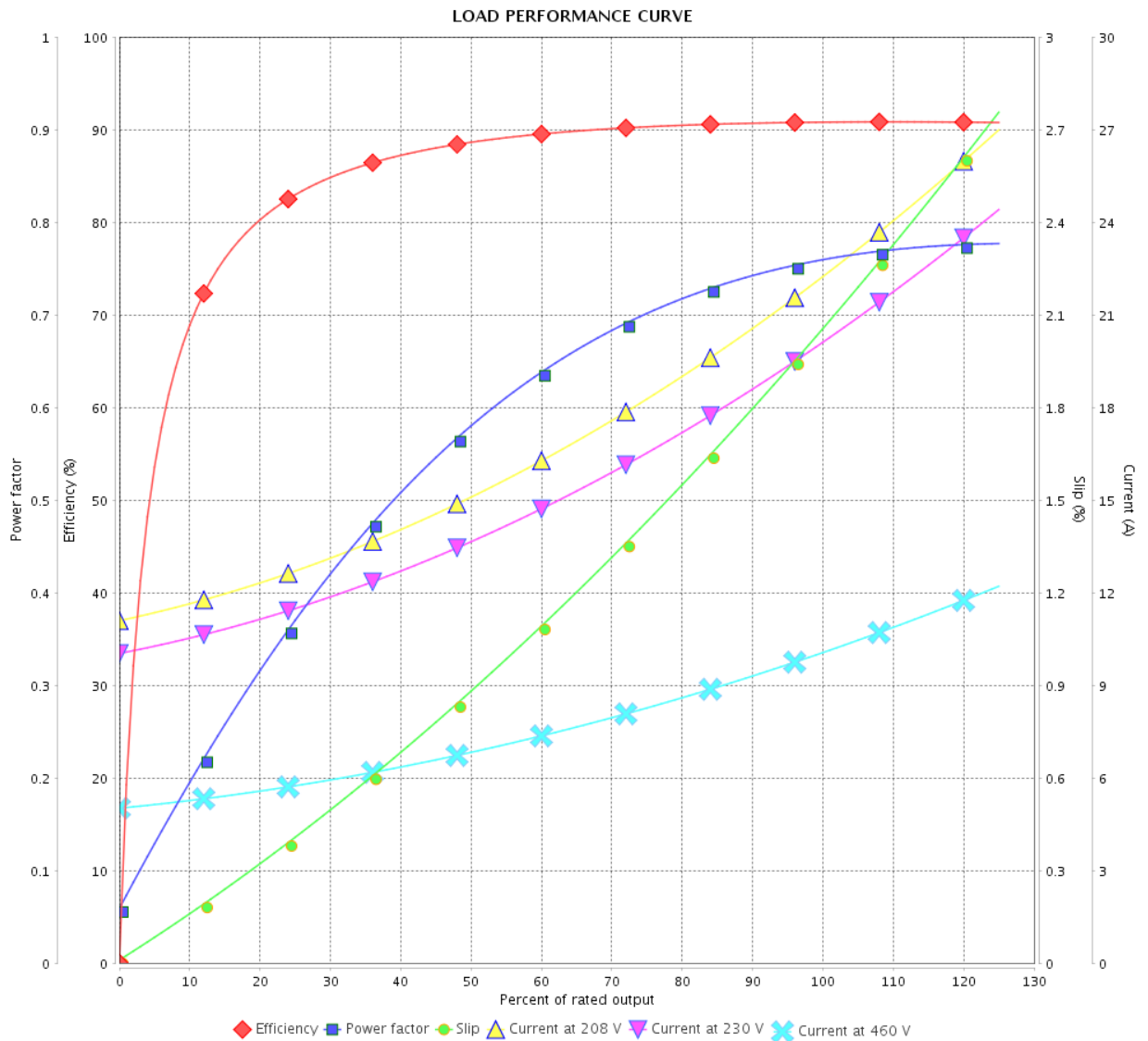


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12759400

Catalog # : 00712ET3E254T-SG



Performance : 230/460 V 60 Hz 6P

Rated current : 20.0/9.98 A  
 LRC : 5.4  
 Rated torque : 33.5 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 229 %  
 Rated speed : 1175 rpm

Moment of inertia (J) : 2.34 sq.ft.lb  
 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



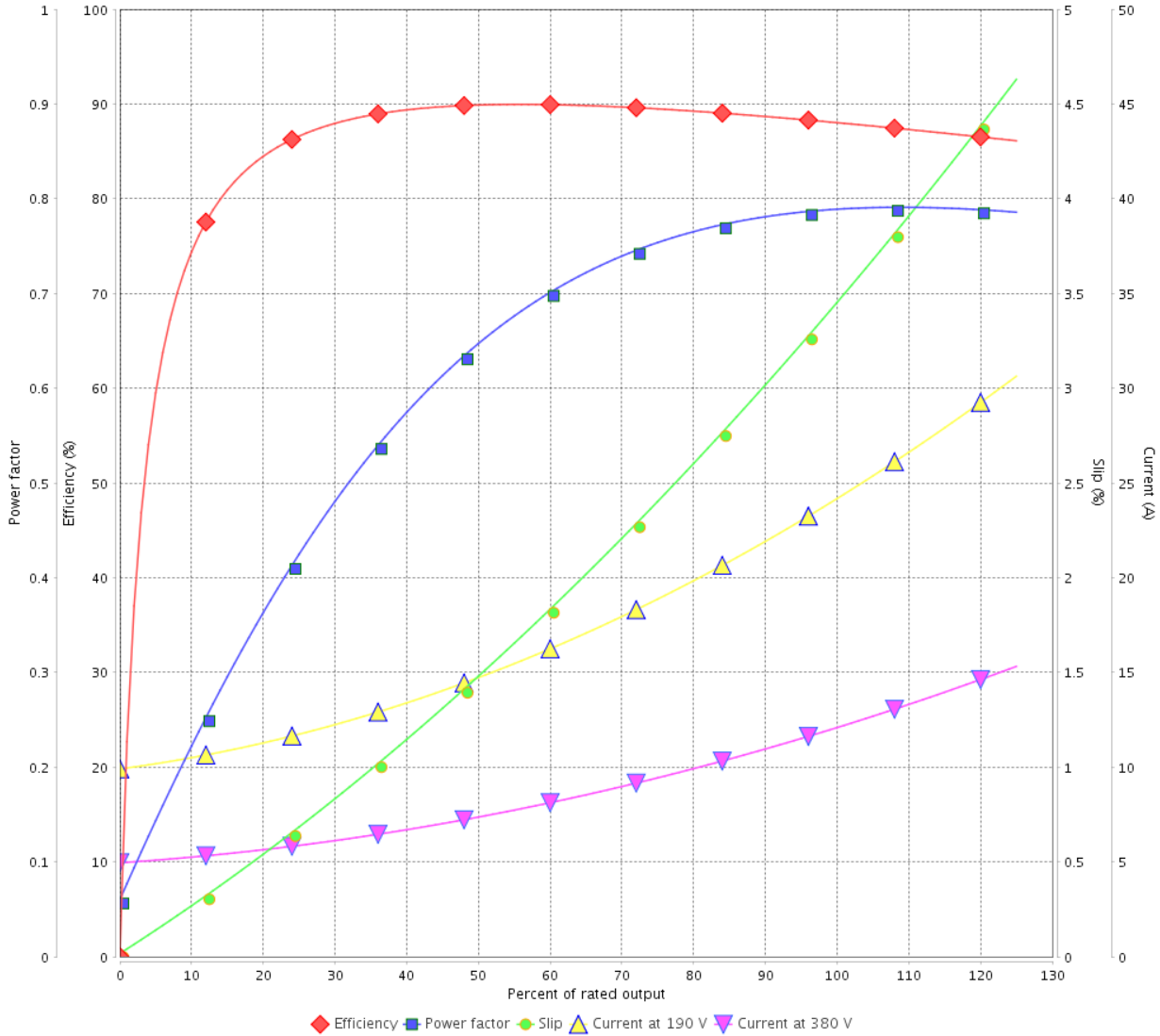
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12759400

Catalog # : 00712ET3E254T-SG

LOAD PERFORMANCE CURVE



Performance : 190/380 V 50 Hz 6P

Rated current : 24.0/12.0 A  
 LRC : 4.2  
 Rated torque : 40.8 ft.lb  
 Locked rotor torque : 150 %  
 Breakdown torque : 180 %  
 Rated speed : 965 rpm

Moment of inertia (J) : 2.34 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

## Three Phase Induction Motor - Squirrel Cage

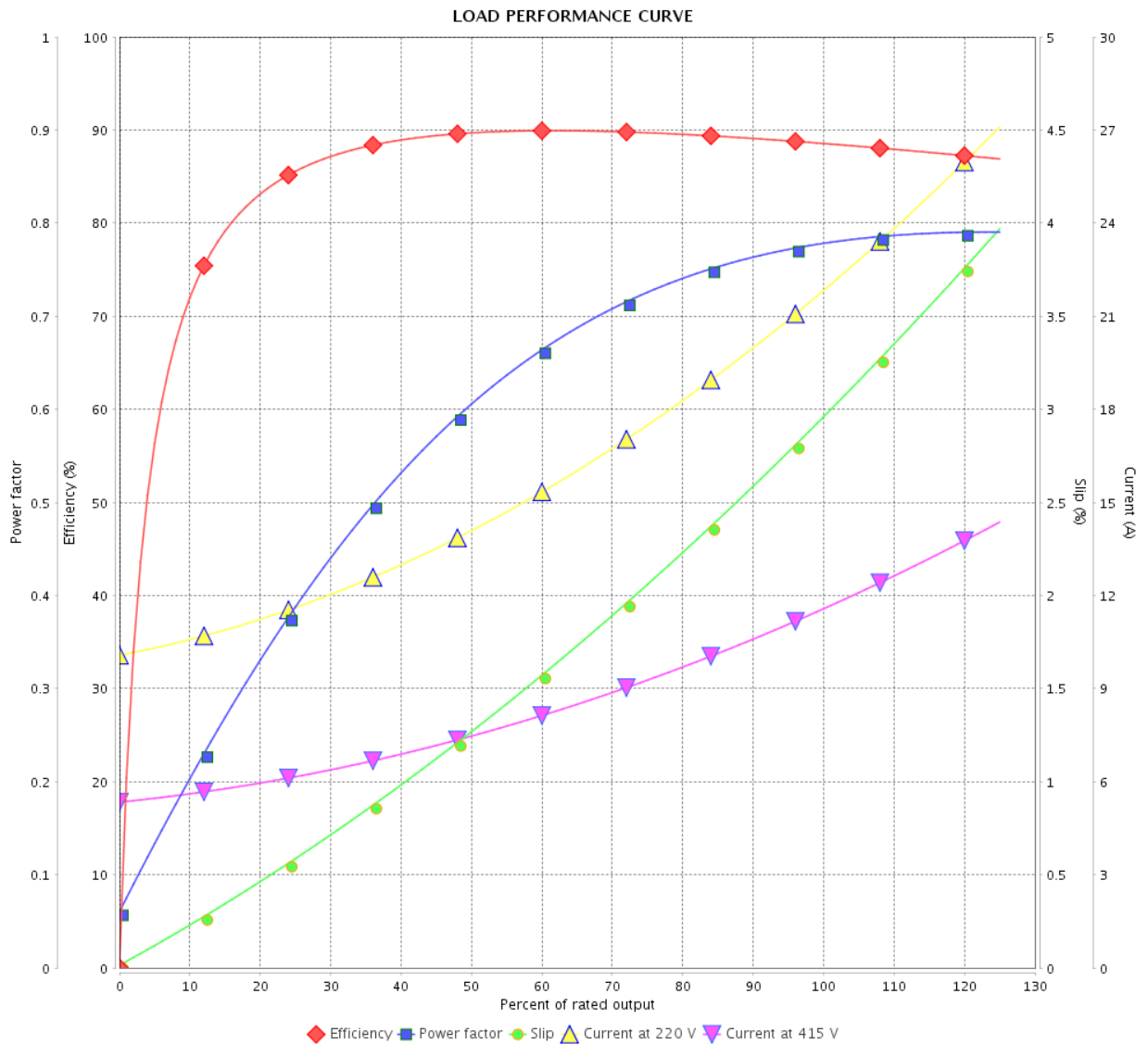


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12759400

Catalog # : 00712ET3E254T-SG



Performance : 220/415 V 50 Hz 6P

Rated current : 21.7/11.5 A  
 LRC : 4.7  
 Rated torque : 40.6 ft.lb  
 Locked rotor torque : 170 %  
 Breakdown torque : 200 %  
 Rated speed : 970 rpm

Moment of inertia (J) : 2.34 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 105 K  
 Design : B

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# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 12759400  
Catalog # : 00712ET3E254T-SG

Performance : 230/460 V 60 Hz 6P

Rated current	: 20.0/9.98 A	Moment of inertia (J)	: 2.34 sq.ft.lb
LRC	: 5.4	Duty cycle	: Cont.(S1)
Rated torque	: 33.5 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.15
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 1175 rpm	Design	: B

Heating constant

Cooling constant

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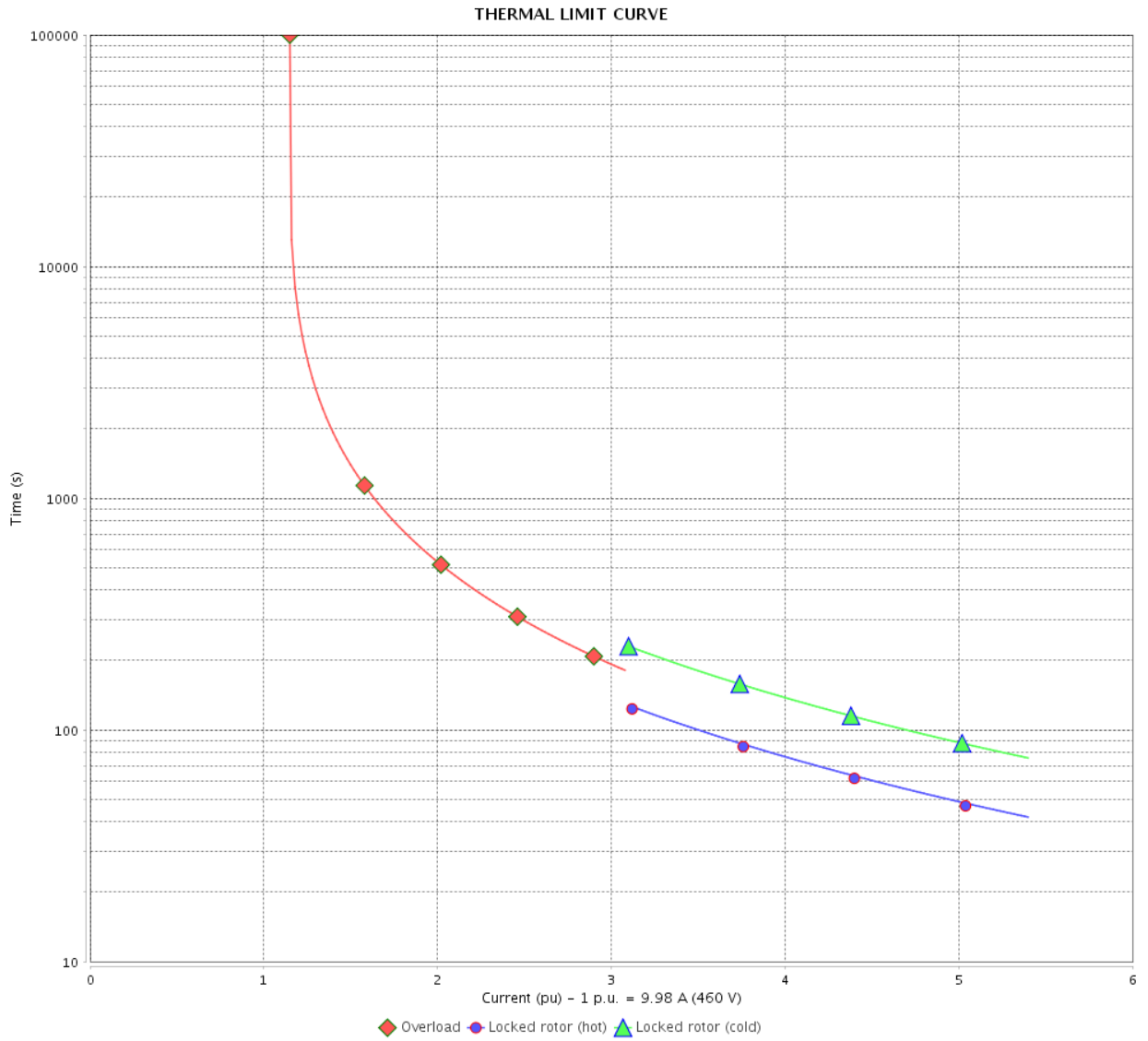


# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 12759400  
Catalog # : 00712ET3E254T-SG

Performance : 190/380 V 50 Hz 6P

Rated current	: 24.0/12.0 A	Moment of inertia (J)	: 2.34 sq.ft.lb
LRC	: 4.2	Duty cycle	: Cont.(S1)
Rated torque	: 40.8 ft.lb	Insulation class	: F
Locked rotor torque	: 150 %	Service factor	: 1.00
Breakdown torque	: 180 %	Temperature rise	: 105 K
Rated speed	: 965 rpm	Design	: B

Heating constant

Cooling constant

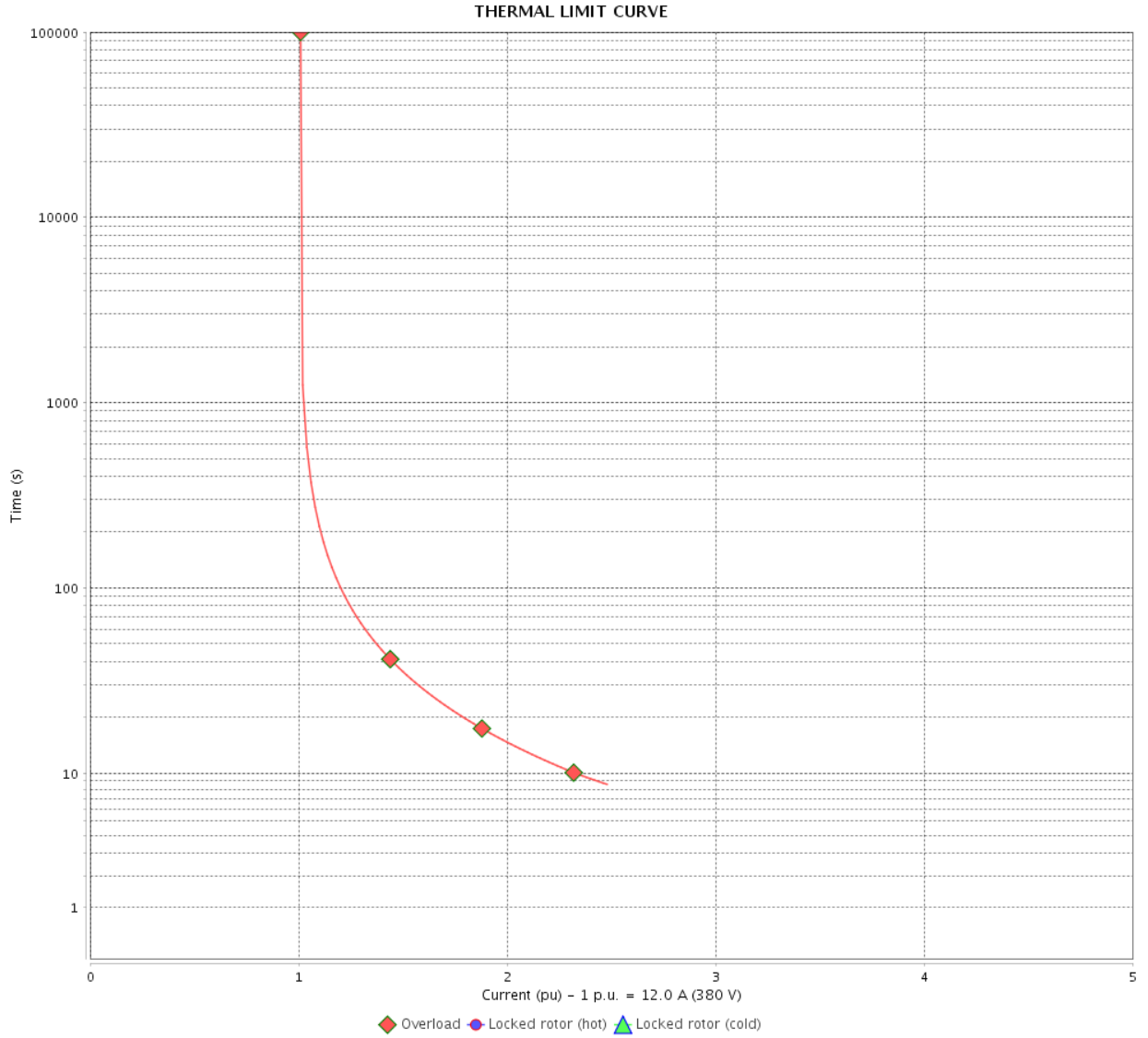
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
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Catalog # : 00712ET3E254T-SG

Performance : 220/415 V 50 Hz 6P

Rated current	: 21.7/11.5 A	Moment of inertia (J)	: 2.34 sq.ft.lb
LRC	: 4.7	Duty cycle	: Cont.(S1)
Rated torque	: 40.6 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 105 K
Rated speed	: 970 rpm	Design	: B

Heating constant

Cooling constant

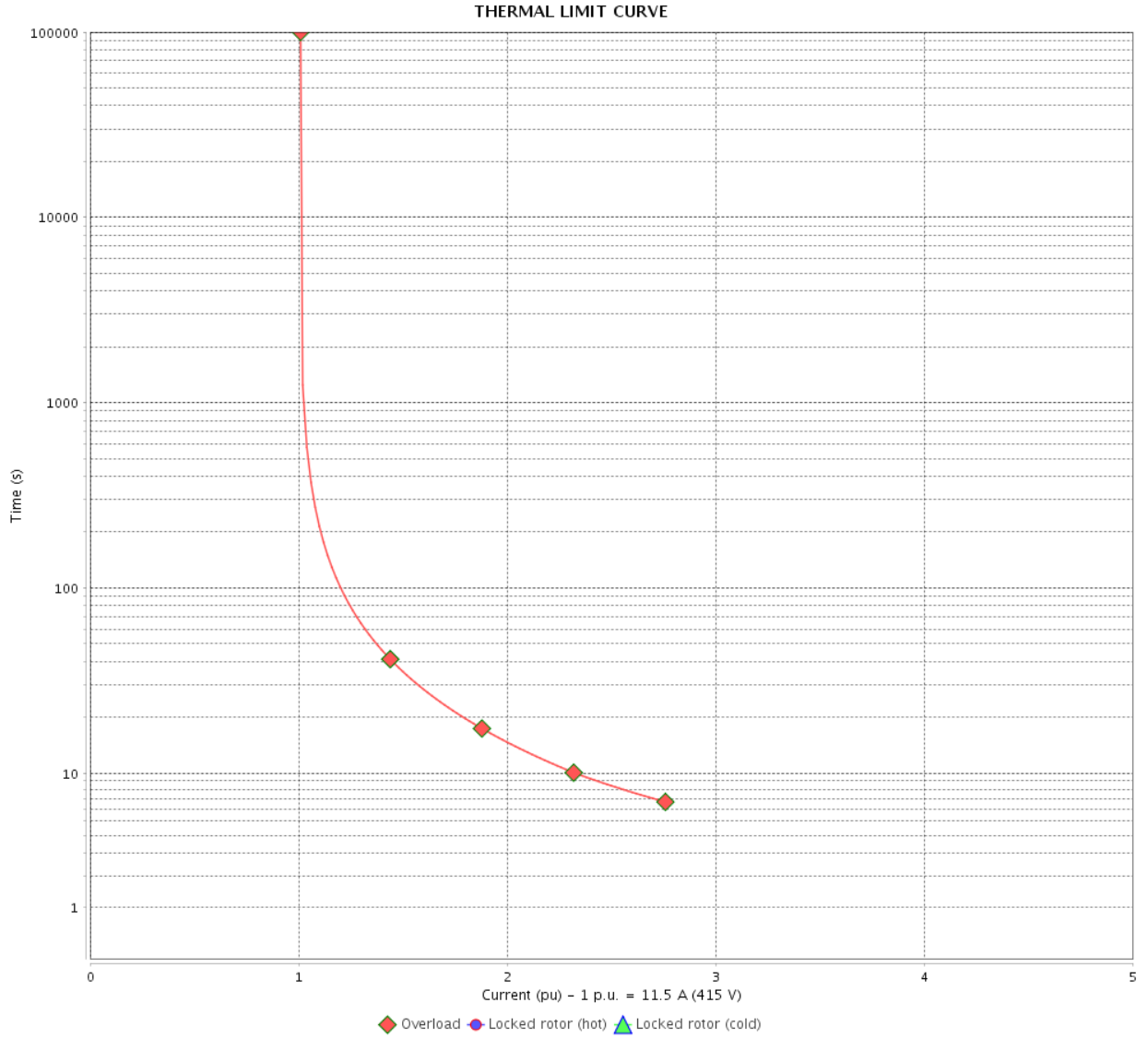
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



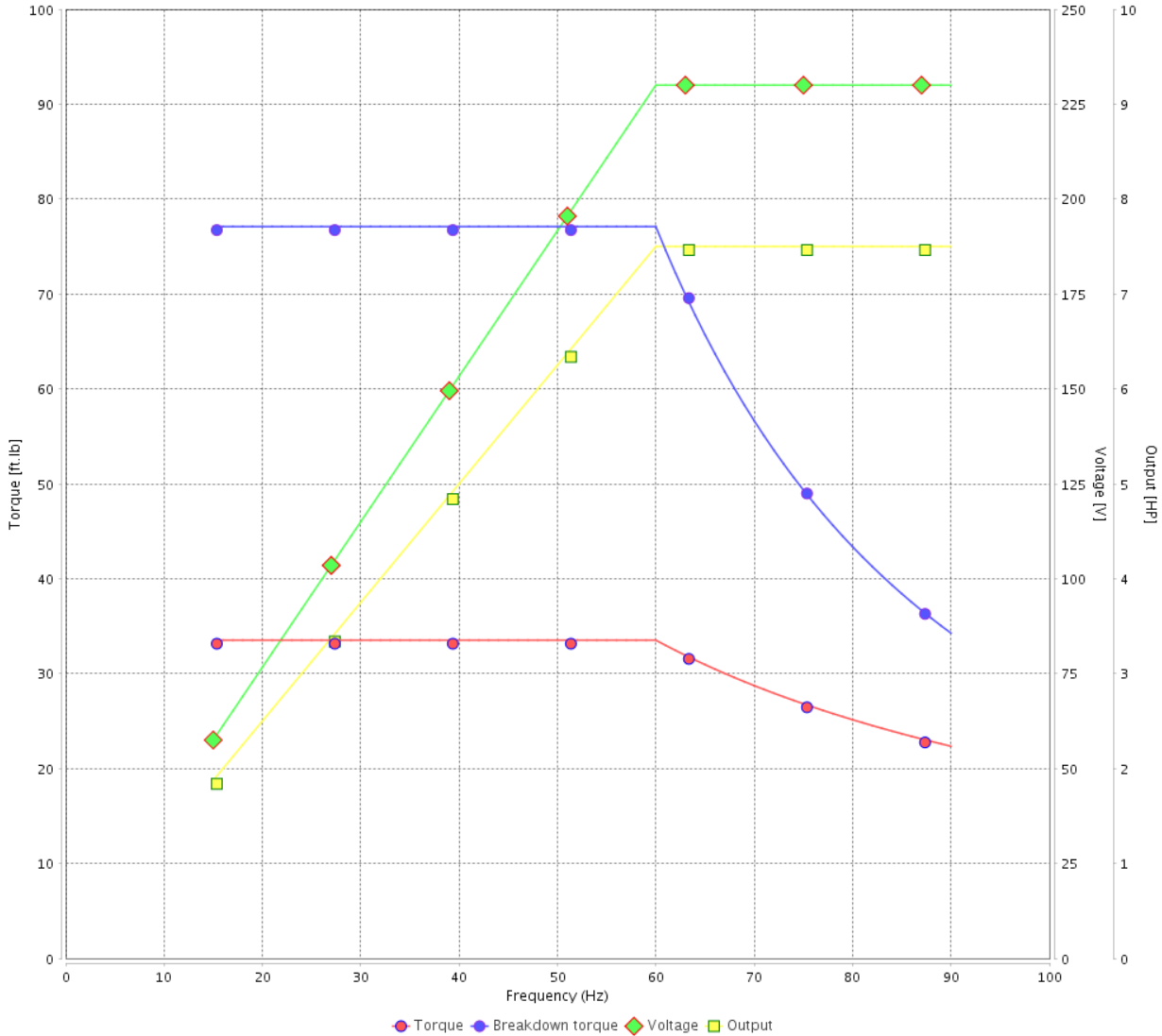
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12759400

Catalog # : 00712ET3E254T-SG

VFD OPERATION CURVE



Performance : 230/460 V 60 Hz 6P

Rated current : 20.0/9.98 A  
 LRC : 5.4  
 Rated torque : 33.5 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 229 %  
 Rated speed : 1175 rpm

Moment of inertia (J) : 2.34 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

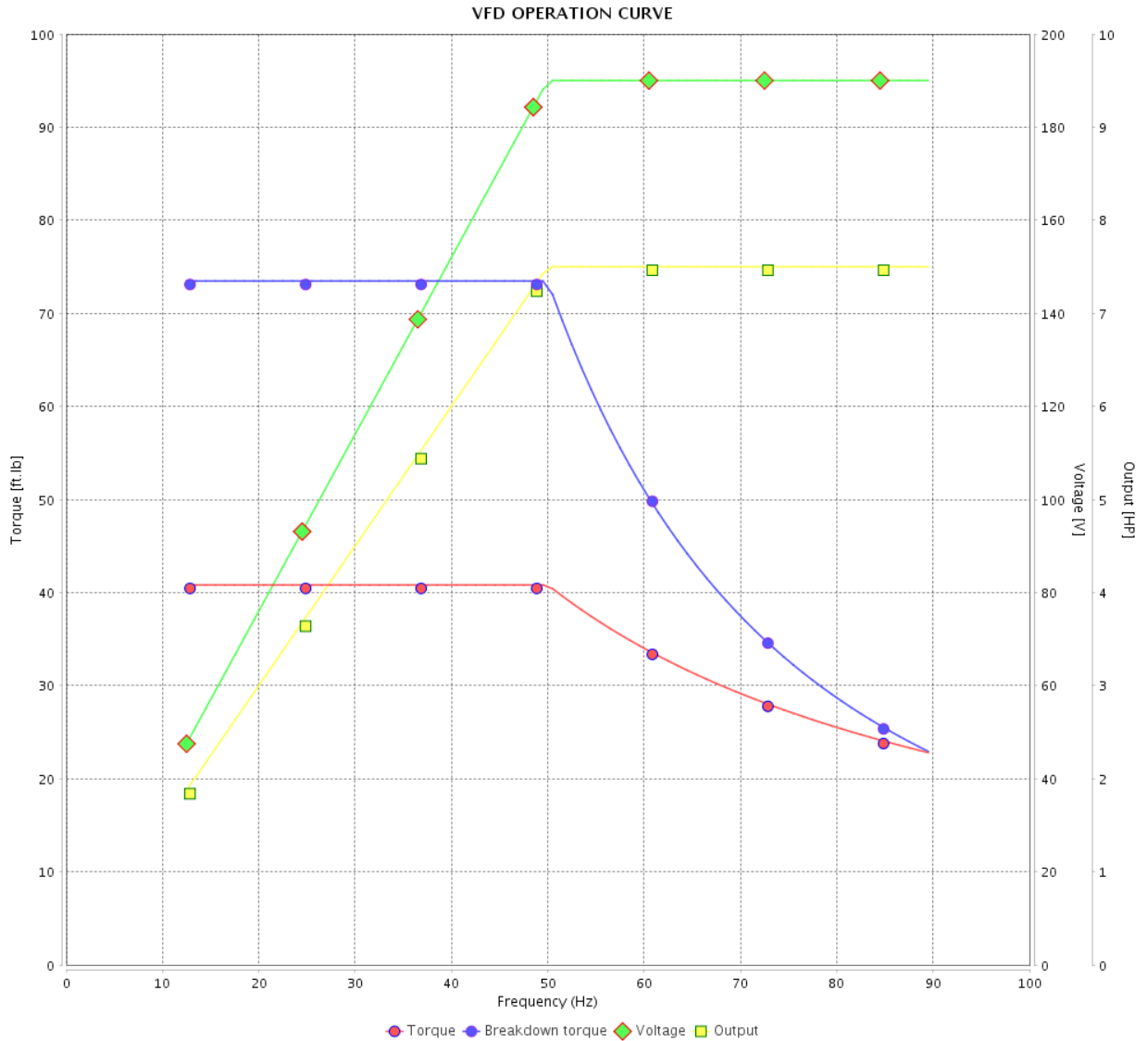


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 Locked rotor torque : 150 %  
 Breakdown torque : 180 %  
 Rated speed : 965 rpm

Moment of inertia (J) : 2.34 sq.ft.lb  
 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



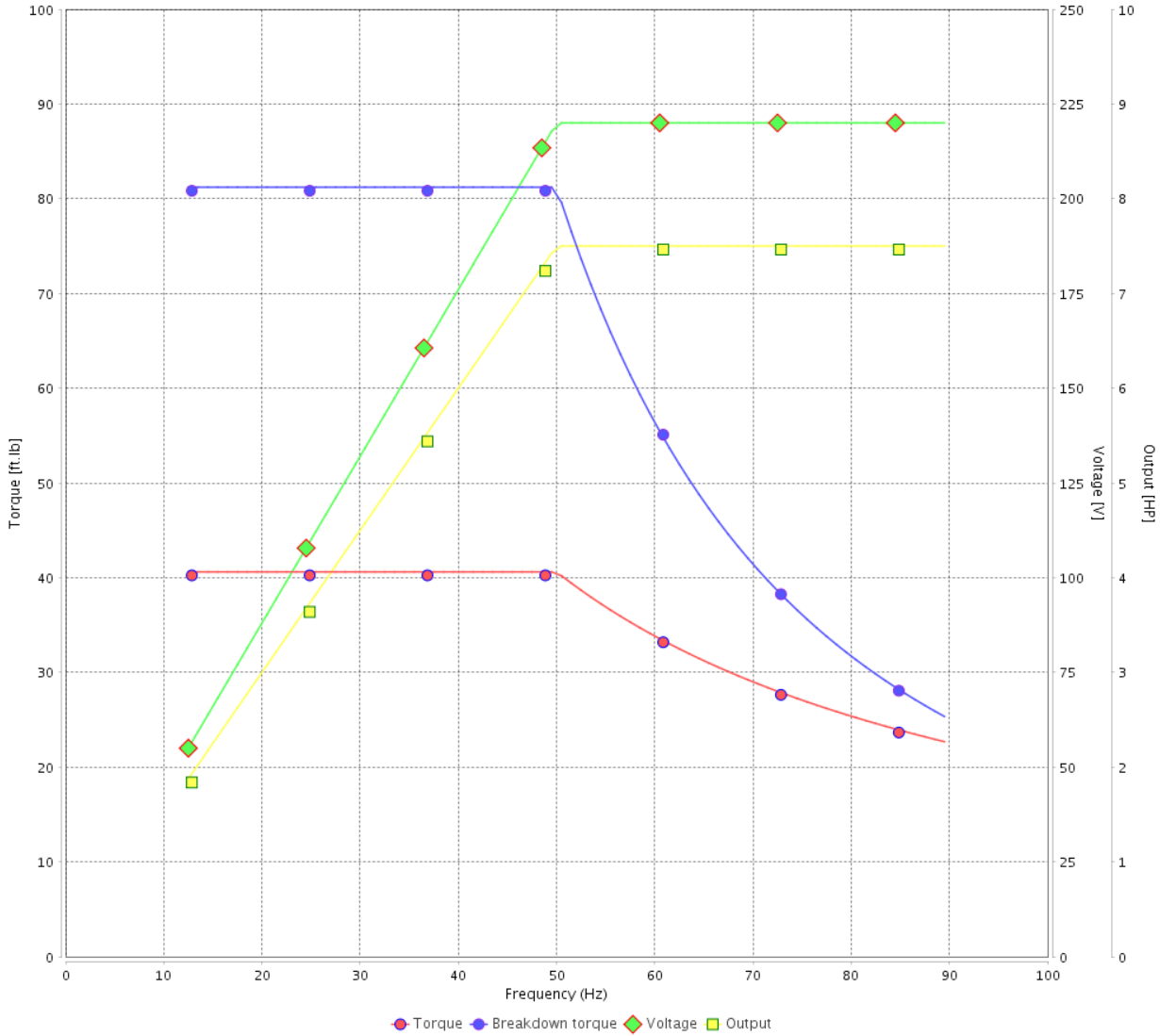
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12759400

Catalog # : 00712ET3E254T-SG

VFD OPERATION CURVE



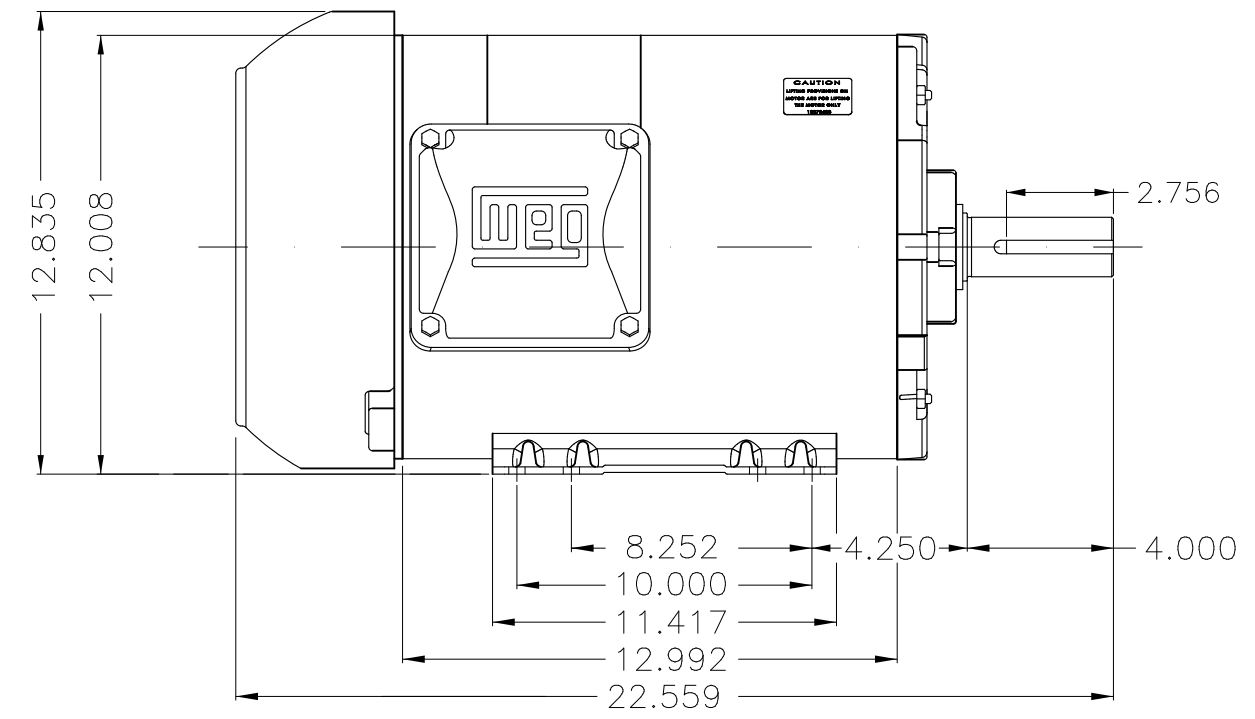
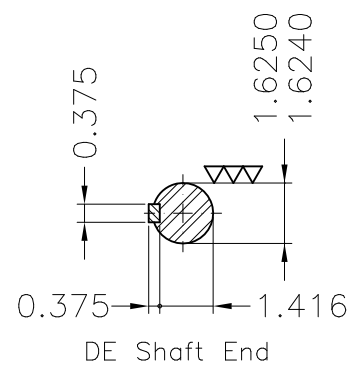
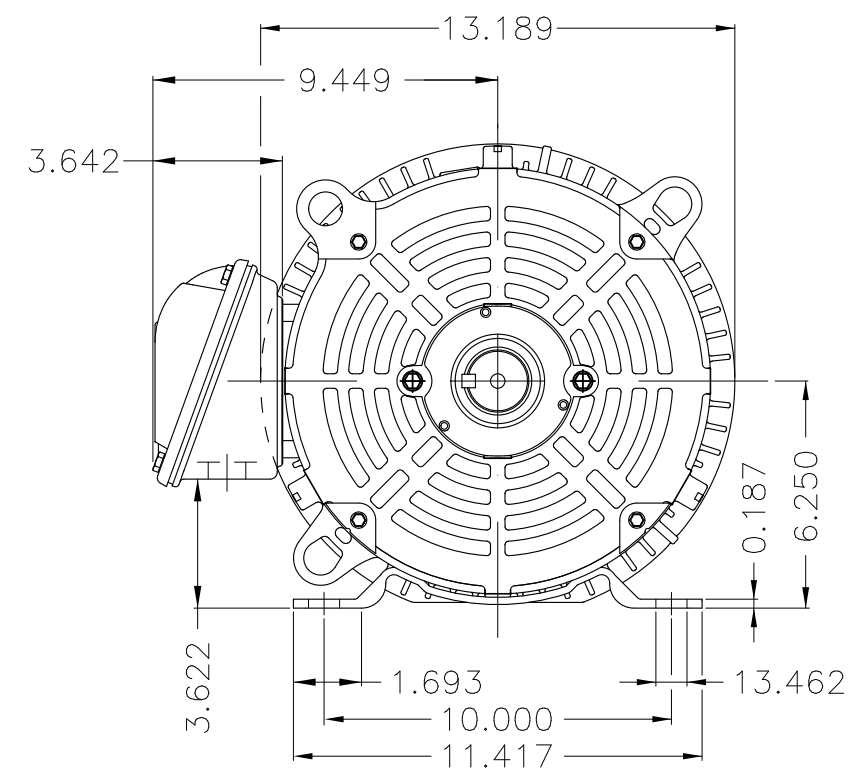
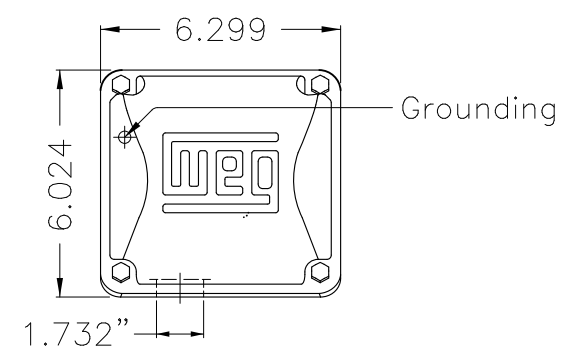
Performance : 220/415 V 50 Hz 6P

Rated current : 21.7/11.5 A  
 LRC : 4.7  
 Rated torque : 40.6 ft.lb  
 Locked rotor torque : 170 %  
 Breakdown torque : 200 %  
 Rated speed : 970 rpm

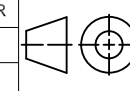
Moment of inertia (J) : 2.34 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 105 K  
 Design : B

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- Bearing cap
- Internal AEGIS ground ring on the DE
- Color Munsell N 1 matte black
- Painting plan 207N
- Mounting F-1/B3R(D)

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	 THREE PH. MOTOR ROLLED STEEL PREM. EFF. FRAME 254/6T IP55 TEFC					
CHECKED							
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET 1 / 1			

7.5 HP 06 Poles 60 Hz





**NEMA**  
**Premium**



3PT9



MADE IN MEXICO

**MAT: 12759400 CC029A**

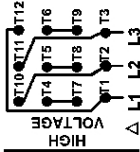
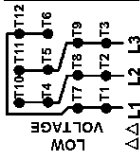
**W01.TE0IC0X0N**

**MODEL 00712ET3E254T-SG**

**16MAR2022 S/N:**



PH 3	Hz 60	HP 7.5
FR 254/6T		KW 5.5
DUTY CONT.		V 230/460
ALT 1000 m.a.s.l.		A 20.0/9.98
INS CL F AT 80K	IP55	SFA 23.0/11.5
AMB 40°C	DES B	SF 1.15
ENCL TEFC	CODE G	PF 0.76
USABLE @ 208V 22.1A		RPM 1175
SF1.00		NEMA NOM. EFF 91.0%
ALTERNATE RATING: 7.5HP 50Hz 190-220/380-415V SF1.00		
24.0-21.3/12.0-11.3A 965RPM EFF 88.0% (IE3) IEC 60034-1		
Inverter duty motor For 80Hz use on VPWM 1000:1 VT, 4:1 CT		
DE 6309-Z-C3	ODE 6208-Z-C3	MOBIL POLYREX EM 20000h



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

△△ L1 L2 L3

△ L1 L2 L3

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.

