

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	12598734		
		Catalog # :	00718ET3E213JP-W22		
Frame	: 213/5JP	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>	: 174 lb		
Protection degree	: IP55	Moment of inertia (J)	: 1.34 sq.ft.lb		
Design	: B				
Output [HP]	7.5	7.5	7.5	7.5	
Poles	4	4	4	4	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	18.4/9.18	11.0	10.5	10.3	
L. R. Amperes [A]	130/65.2	61.6	65.1	69.0	
LRC [A]	7.1x(Code H)	5.6x(Code F)	6.2x(Code G)	6.7x(Code H)	
No load current [A]	8.80/4.40	4.00	4.30	4.55	
Rated speed [RPM]	1765	1455	1460	1460	
Slip [%]	1.94	3.00	2.67	2.67	
Rated torque [ft.lb]	22.3	27.1	27.0	27.0	
Locked rotor torque [%]	220	170	190	210	
Breakdown torque [%]	310	240	270	290	
Service factor	1.25	1.25	1.25	1.25	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	36s (cold) 20s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	
Noise level <sup>2</sup>	58.0 dB(A)	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)	
Efficiency (%)	25%	88.6	89.2	89.2	
	50%	89.5	89.5	89.5	
	75%	91.0	89.5	90.2	
	100%	91.7	89.6	90.2	
Power Factor	25%	0.40	0.47	0.43	
	50%	0.66	0.72	0.69	
	75%	0.76	0.81	0.78	
	100%	0.82	0.85	0.84	
Bearing type	: <u>Drive end</u> 6309 Z C3 <u>Non drive end</u> 6207 ZZ	Foundation loads			
Sealing	: V'Ring V'Ring	Max. traction	: 354 lb		
Lubrication interval	: 20000 h 40000 h	Max. compression	: 528 lb		
Lubricant amount	: 13 g 0 g				
Lubricant type	: Mobil Polyrex EM				
Notes USABLE @208V 19.9A SF 1.15 SFA 22.9A					
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



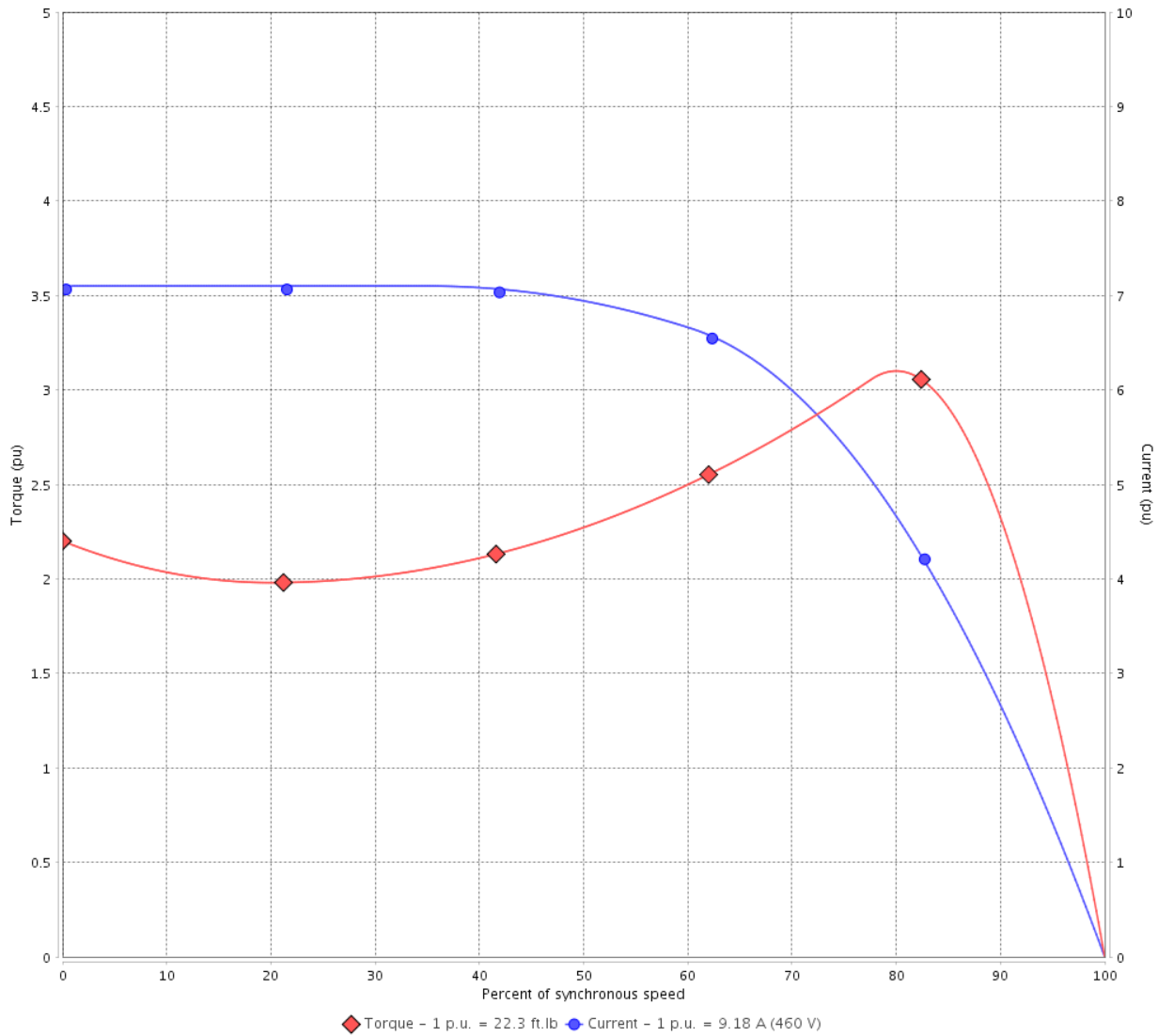
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12598734

Catalog # : 00718ET3E213JP-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 4P

Rated current	: 18.4/9.18 A	Moment of inertia (J)	: 1.34 sq.ft.lb
LRC	: 7.1	Duty cycle	: Cont.(S1)
Rated torque	: 22.3 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.25
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 1765 rpm	Design	: B

Locked rotor time : 36s (cold) 20s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



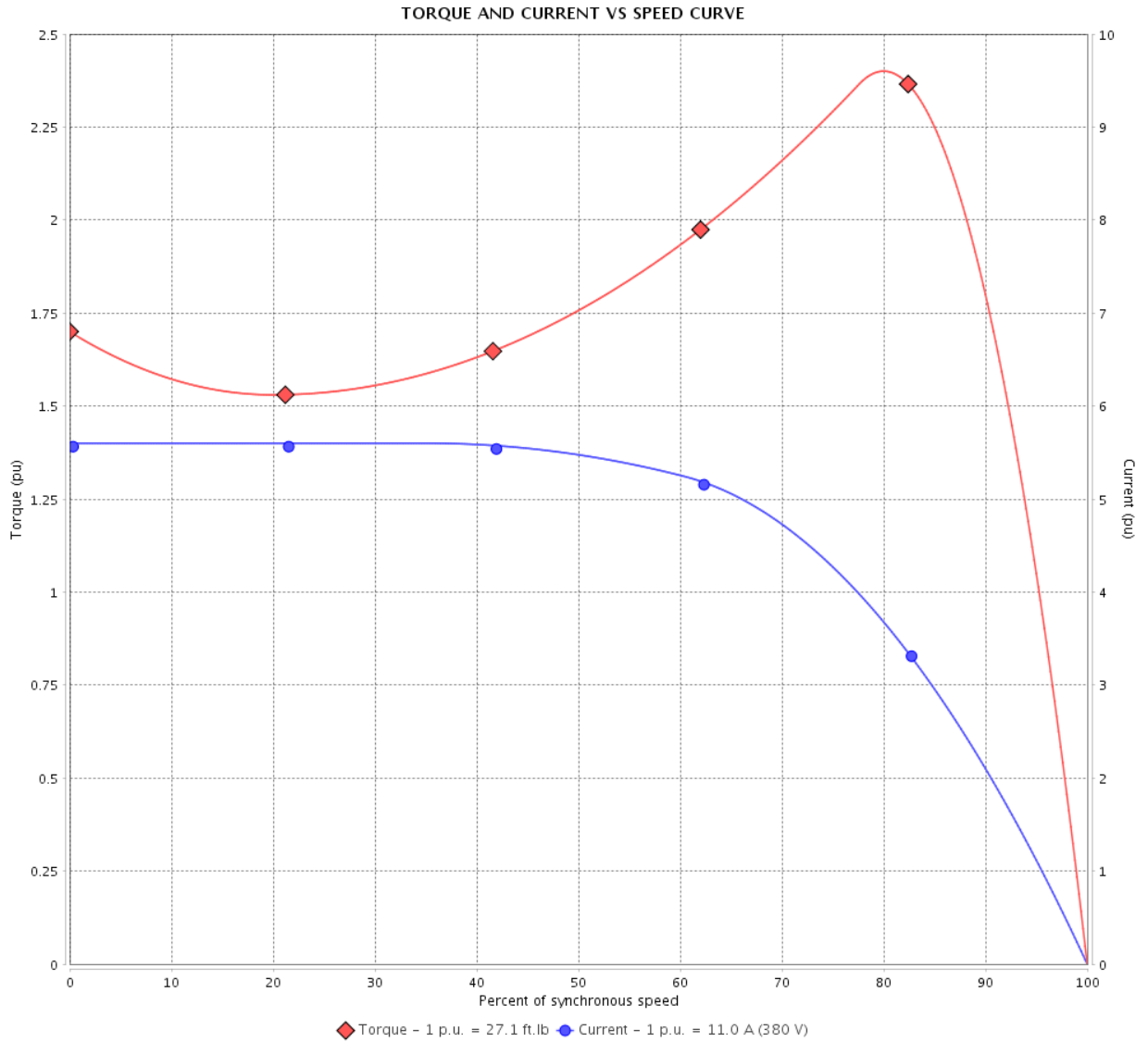
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12598734

Catalog # : 00718ET3E213JP-W22



Performance : 380 V 50 Hz 4P IE3

Rated current : 11.0 A  
 LRC : 5.6  
 Rated torque : 27.1 ft.lb  
 Locked rotor torque : 170 %  
 Breakdown torque : 240 %  
 Rated speed : 1455 rpm

Moment of inertia (J) : 1.34 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

Locked rotor time : 27s (cold) 15s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



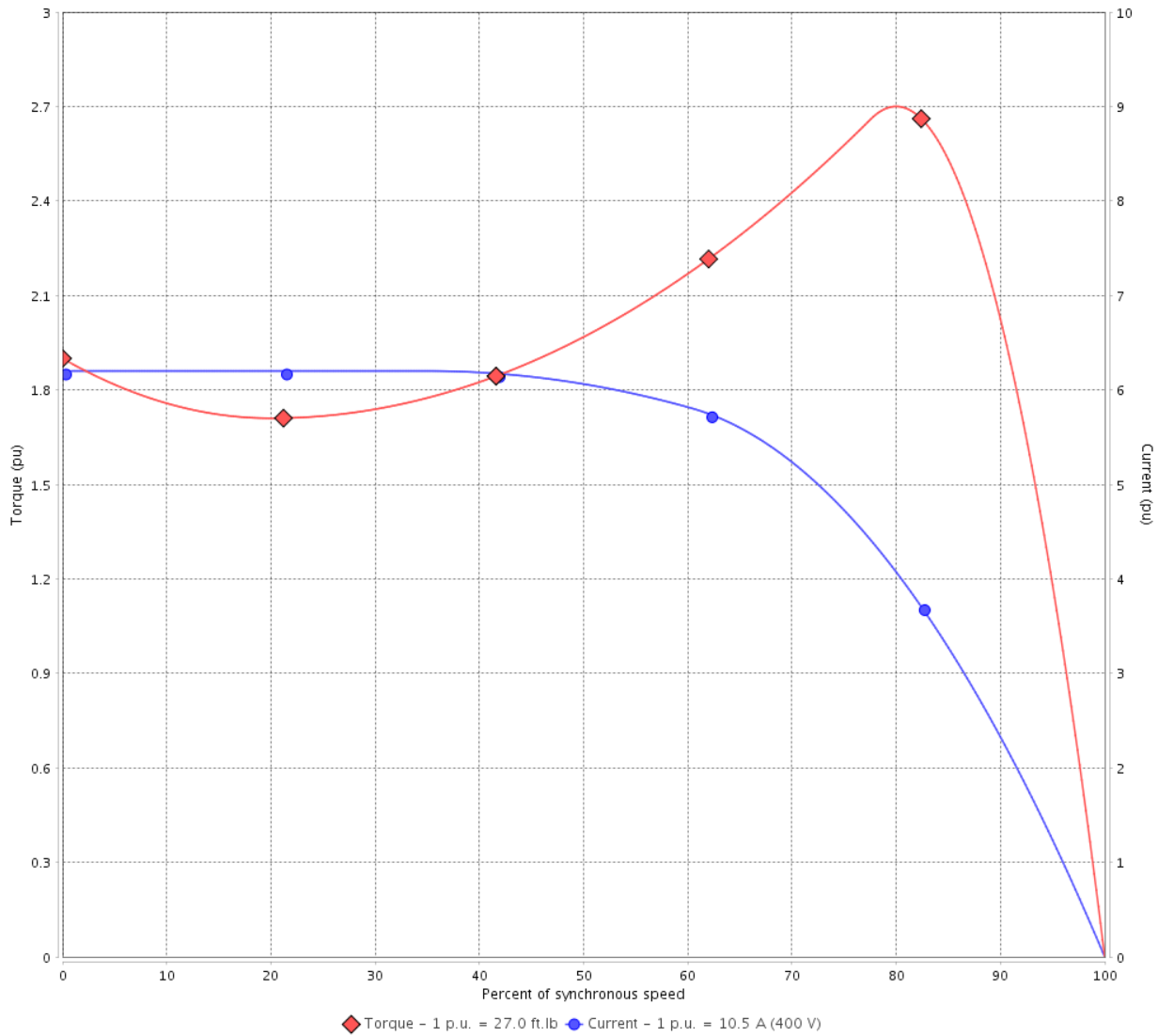
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12598734

Catalog # : 00718ET3E213JP-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current	: 10.5 A	Moment of inertia (J)	: 1.34 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 27.0 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.25
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1460 rpm	Design	: B

Locked rotor time : 27s (cold) 15s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



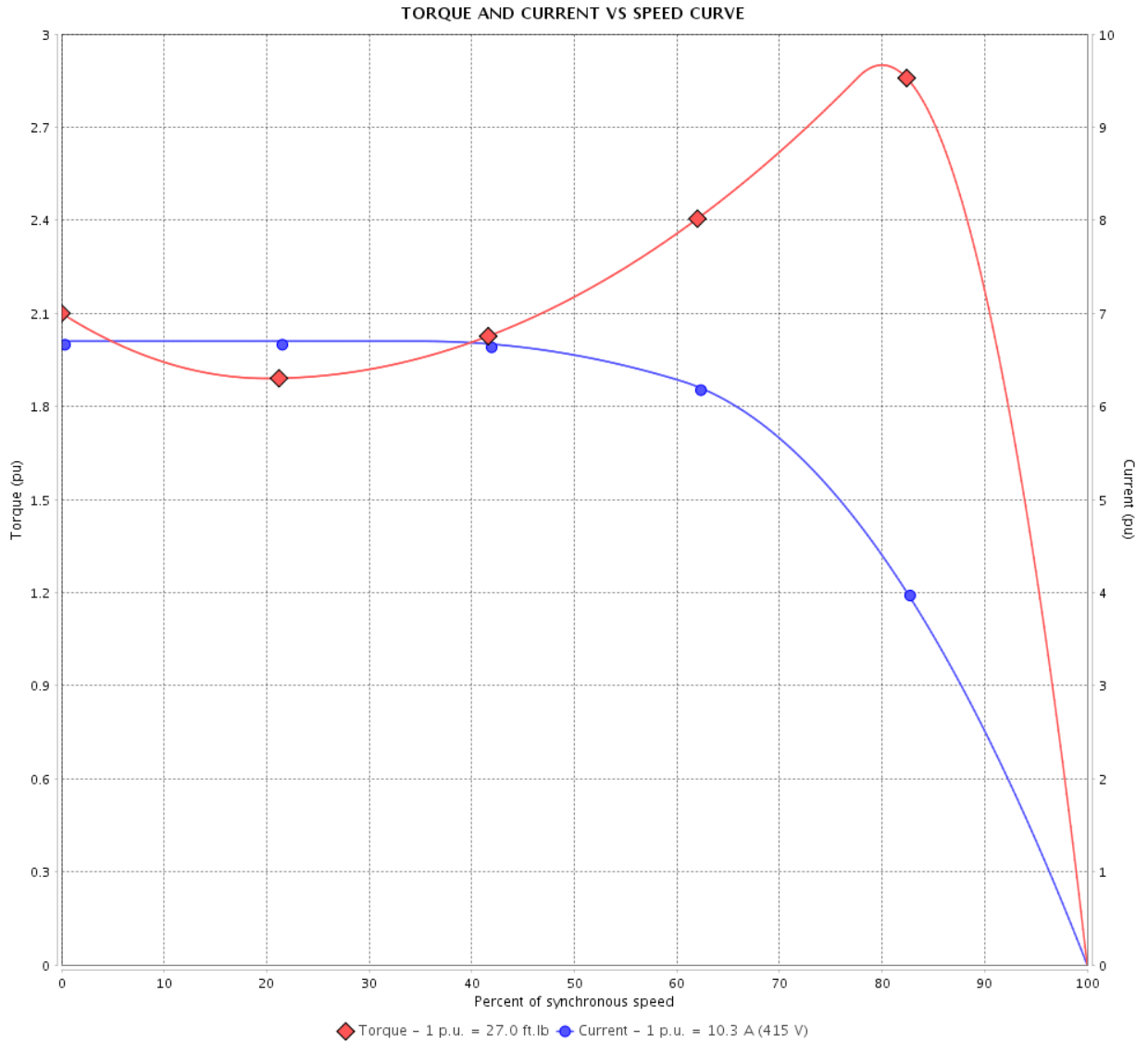
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12598734

Catalog # : 00718ET3E213JP-W22



Performance : 415 V 50 Hz 4P IE3

Rated current	: 10.3 A	Moment of inertia (J)	: 1.34 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 27.0 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.25
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 1460 rpm	Design	: B

Locked rotor time : 27s (cold) 15s (hot)

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



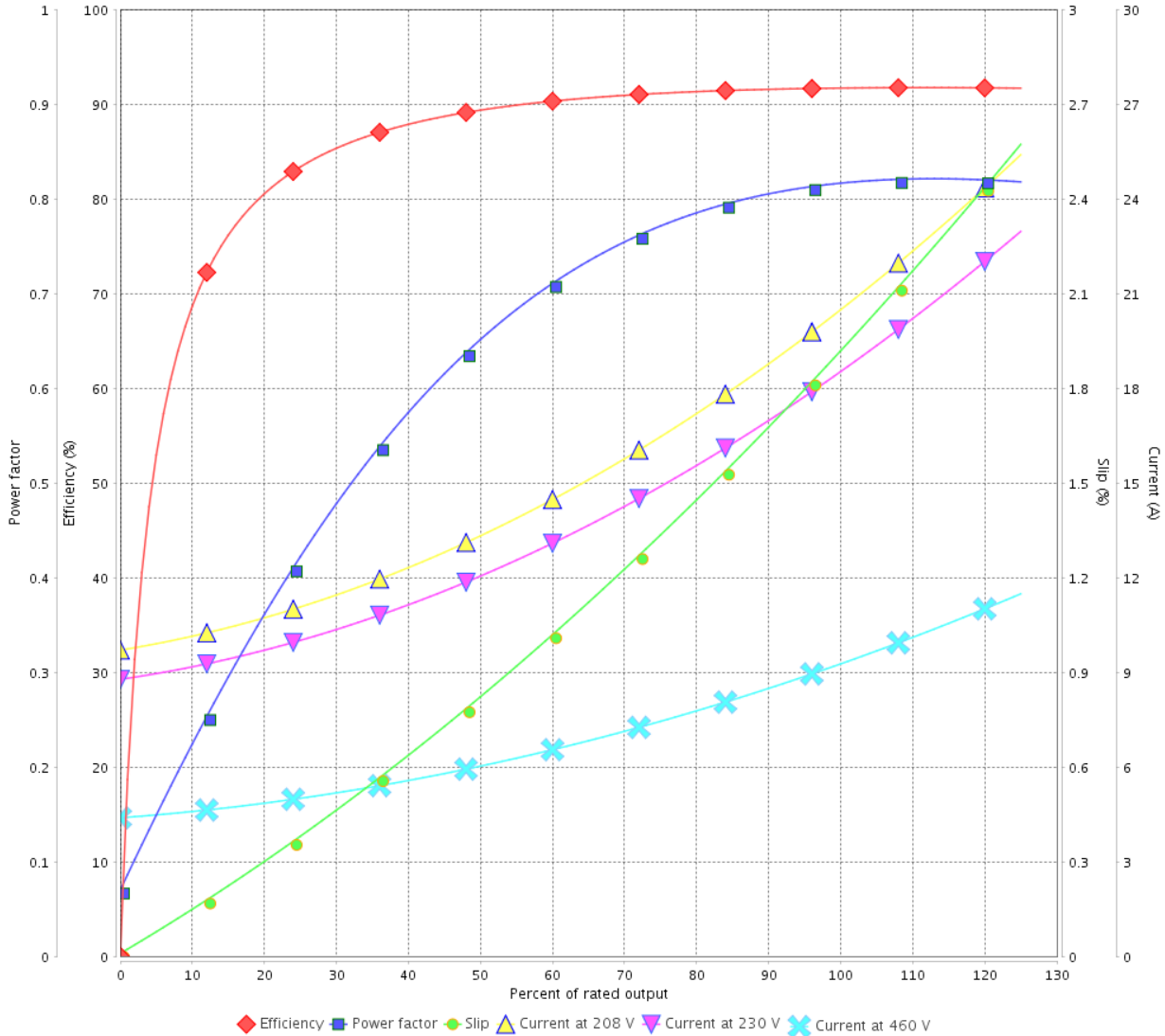
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12598734

Catalog # : 00718ET3E213JP-W22

LOAD PERFORMANCE CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 18.4/9.18 A  
 LRC : 7.1  
 Rated torque : 22.3 ft.lb  
 Locked rotor torque : 220 %  
 Breakdown torque : 310 %  
 Rated speed : 1765 rpm

Moment of inertia (J) : 1.34 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

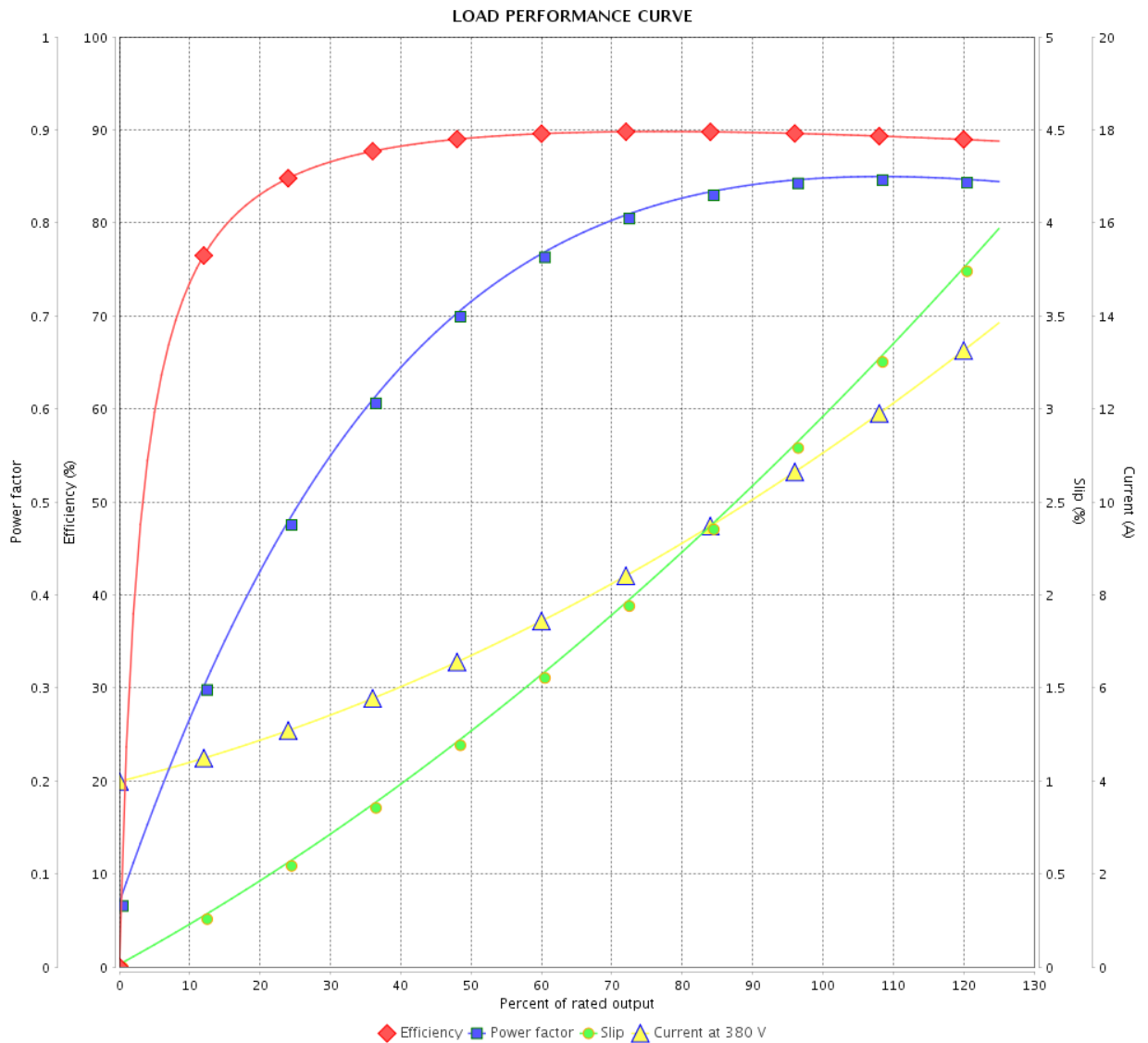


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12598734

Catalog # : 00718ET3E213JP-W22



Performance : 380 V 50 Hz 4P IE3

Rated current : 11.0 A  
 LRC : 5.6  
 Rated torque : 27.1 ft.lb  
 Locked rotor torque : 170 %  
 Breakdown torque : 240 %  
 Rated speed : 1455 rpm

Moment of inertia (J) : 1.34 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



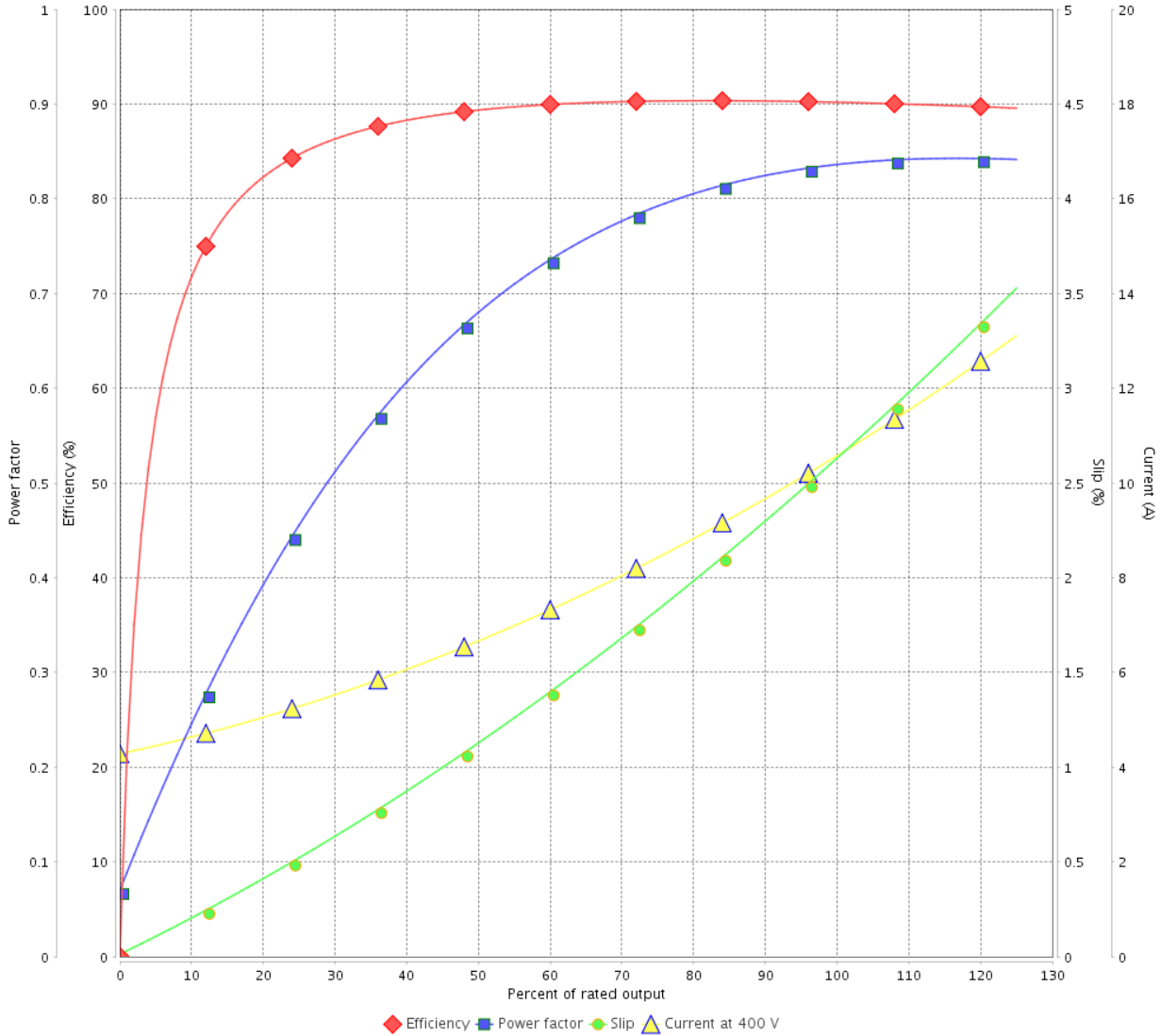
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12598734

Catalog # : 00718ET3E213JP-W22

LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current : 10.5 A  
 LRC : 6.2  
 Rated torque : 27.0 ft.lb  
 Locked rotor torque : 190 %  
 Breakdown torque : 270 %  
 Rated speed : 1460 rpm

Moment of inertia (J) : 1.34 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

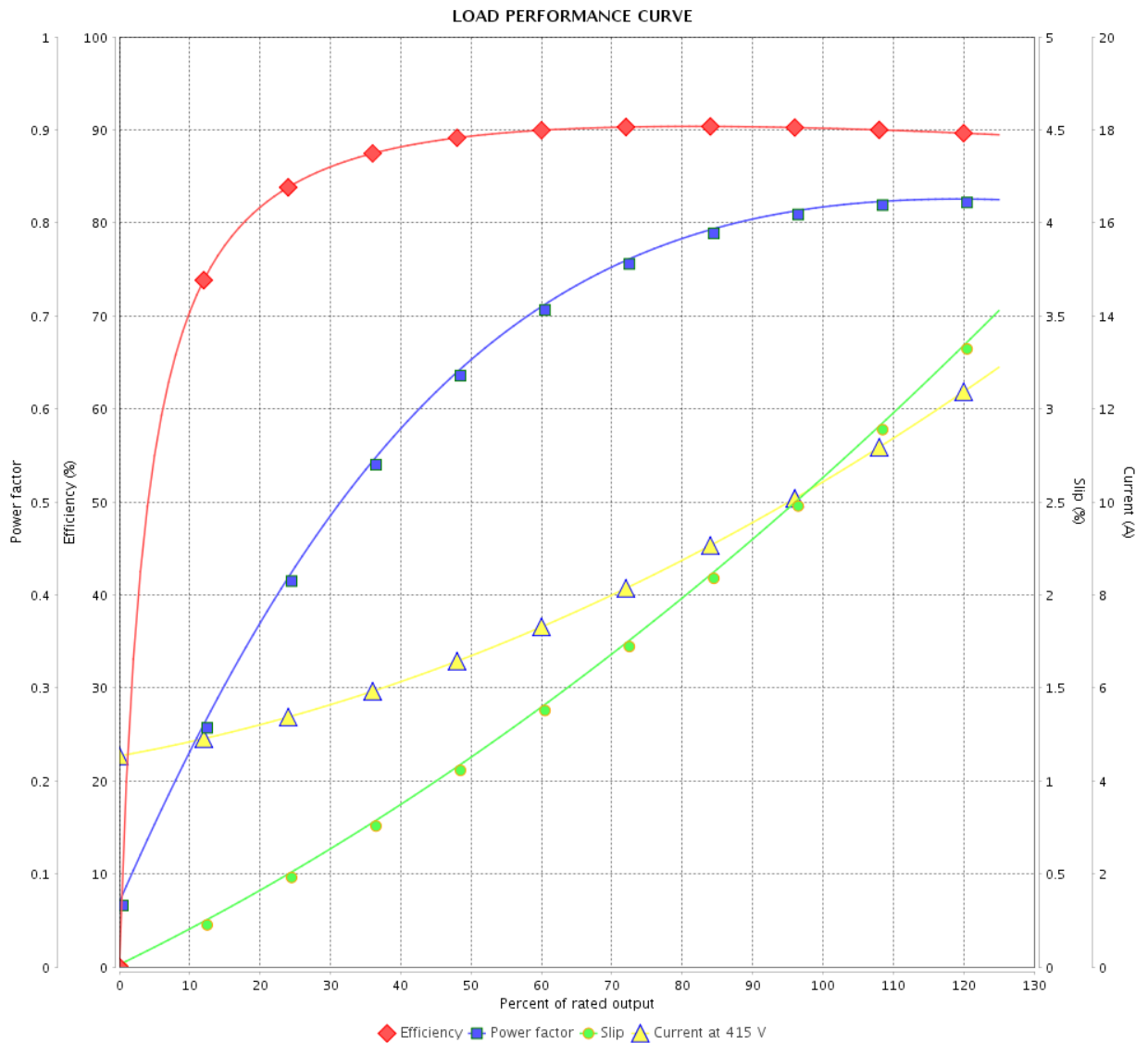


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12598734

Catalog # : 00718ET3E213JP-W22



Performance : 415 V 50 Hz 4P IE3

Rated current : 10.3 A  
 LRC : 6.7  
 Rated torque : 27.0 ft.lb  
 Locked rotor torque : 210 %  
 Breakdown torque : 290 %  
 Rated speed : 1460 rpm

Moment of inertia (J) : 1.34 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 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 : 12598734  
Catalog # : 00718ET3E213JP-W22

Performance : 230/460 V 60 Hz 4P

Rated current	: 18.4/9.18 A	Moment of inertia (J)	: 1.34 sq.ft.lb
LRC	: 7.1	Duty cycle	: Cont.(S1)
Rated torque	: 22.3 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.25
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 1765 rpm	Design	: B

Heating constant

Cooling constant

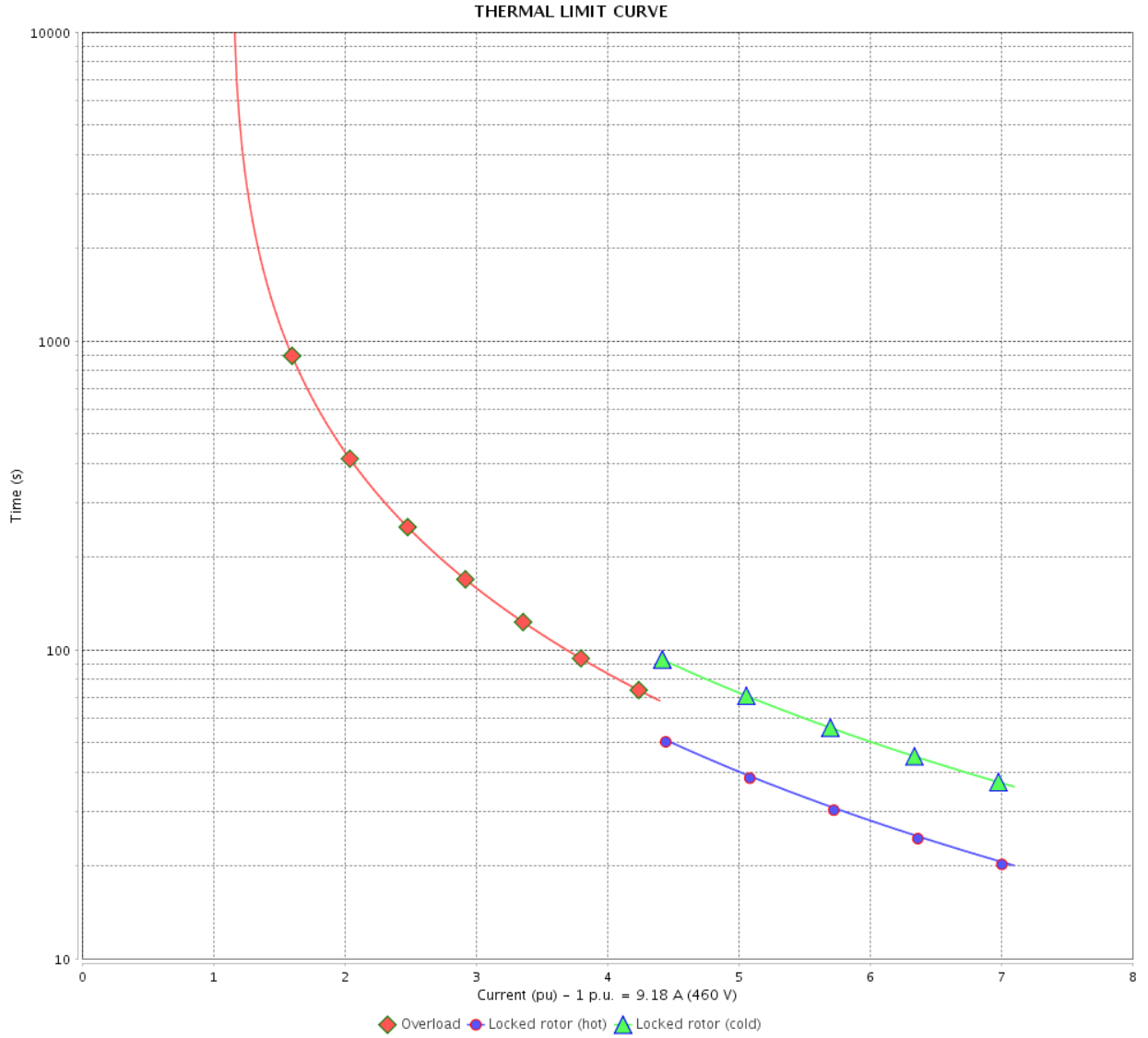
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# THERMAL LIMIT CURVE

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 : 12598734  
 Catalog # : 00718ET3E213JP-W22

Performance : 380 V 50 Hz 4P IE3

Rated current : 11.0 A	Moment of inertia (J) : 1.34 sq.ft.lb
LRC : 5.6	Duty cycle : Cont.(S1)
Rated torque : 27.1 ft.lb	Insulation class : F
Locked rotor torque : 170 %	Service factor : 1.25
Breakdown torque : 240 %	Temperature rise : 80 K
Rated speed : 1455 rpm	Design : B

Heating constant

Cooling constant

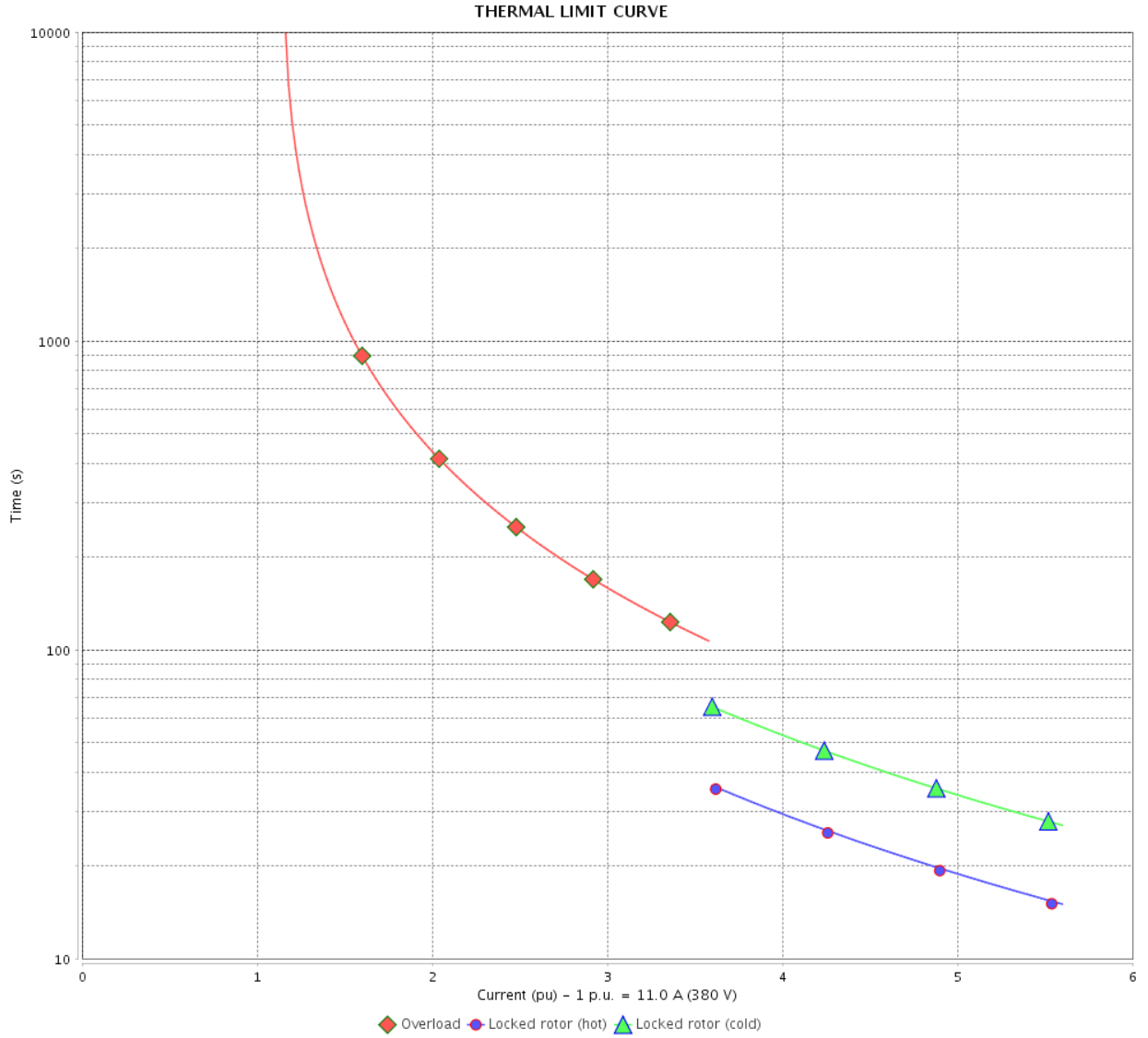
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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Date		13/04/2022		

# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 12598734  
Catalog # : 00718ET3E213JP-W22

Performance : 400 V 50 Hz 4P IE3

Rated current	: 10.5 A	Moment of inertia (J)	: 1.34 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 27.0 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.25
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1460 rpm	Design	: B

Heating constant

Cooling constant

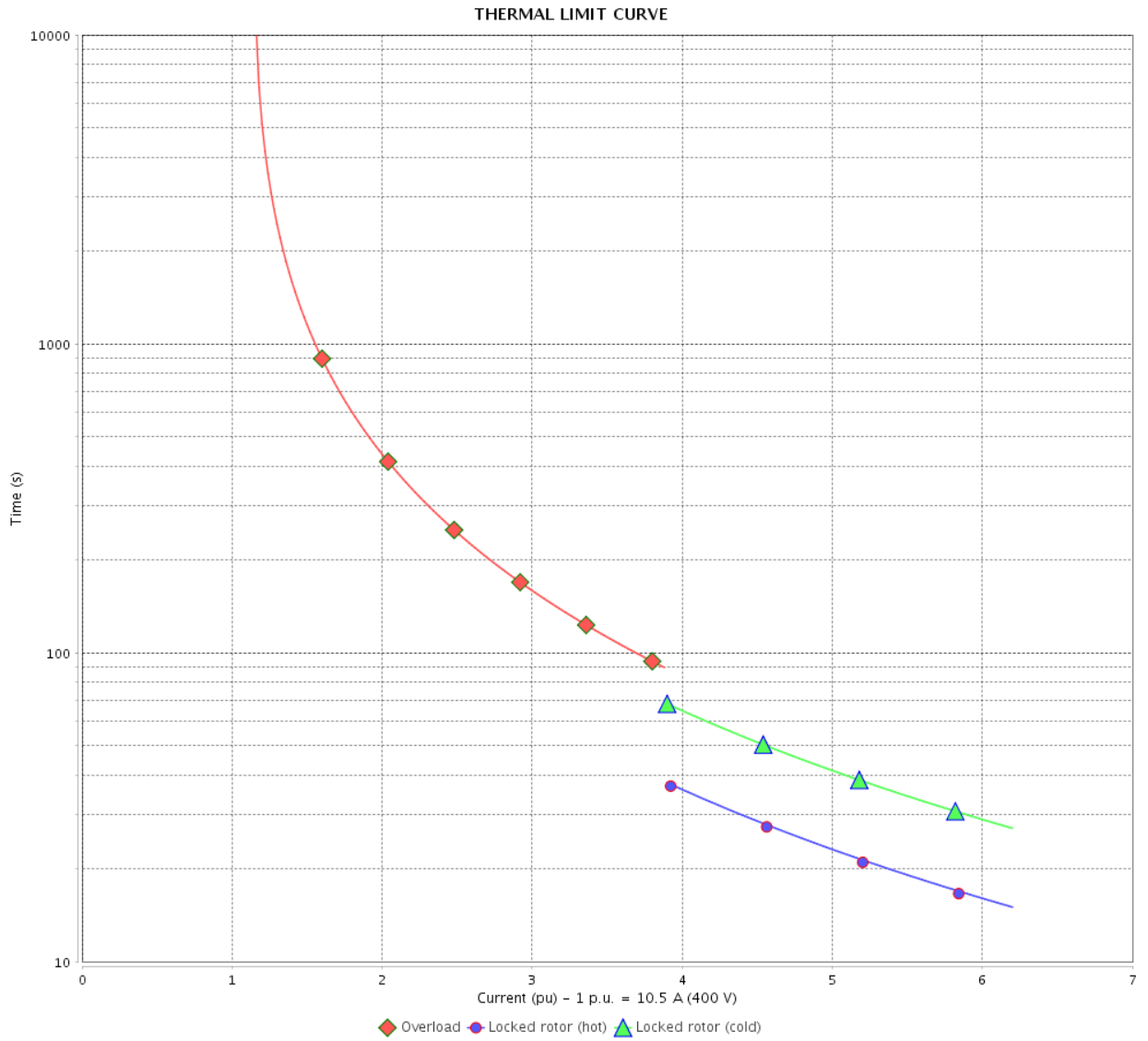
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Performed by				
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# THERMAL LIMIT CURVE

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 : 12598734  
Catalog # : 00718ET3E213JP-W22

Performance : 415 V 50 Hz 4P IE3

Rated current	: 10.3 A	Moment of inertia (J)	: 1.34 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 27.0 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.25
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 1460 rpm	Design	: B

Heating constant

Cooling constant

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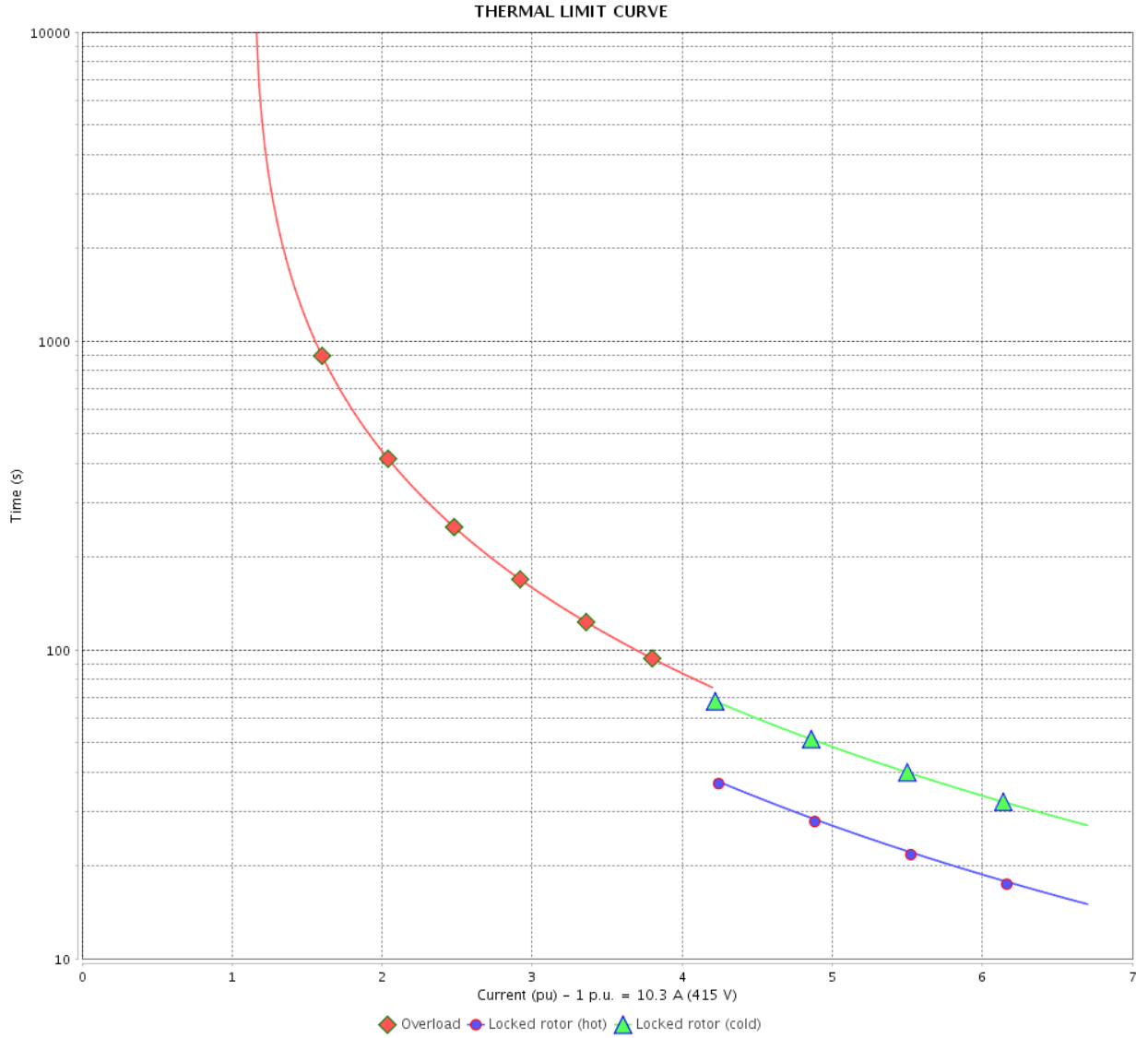


# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



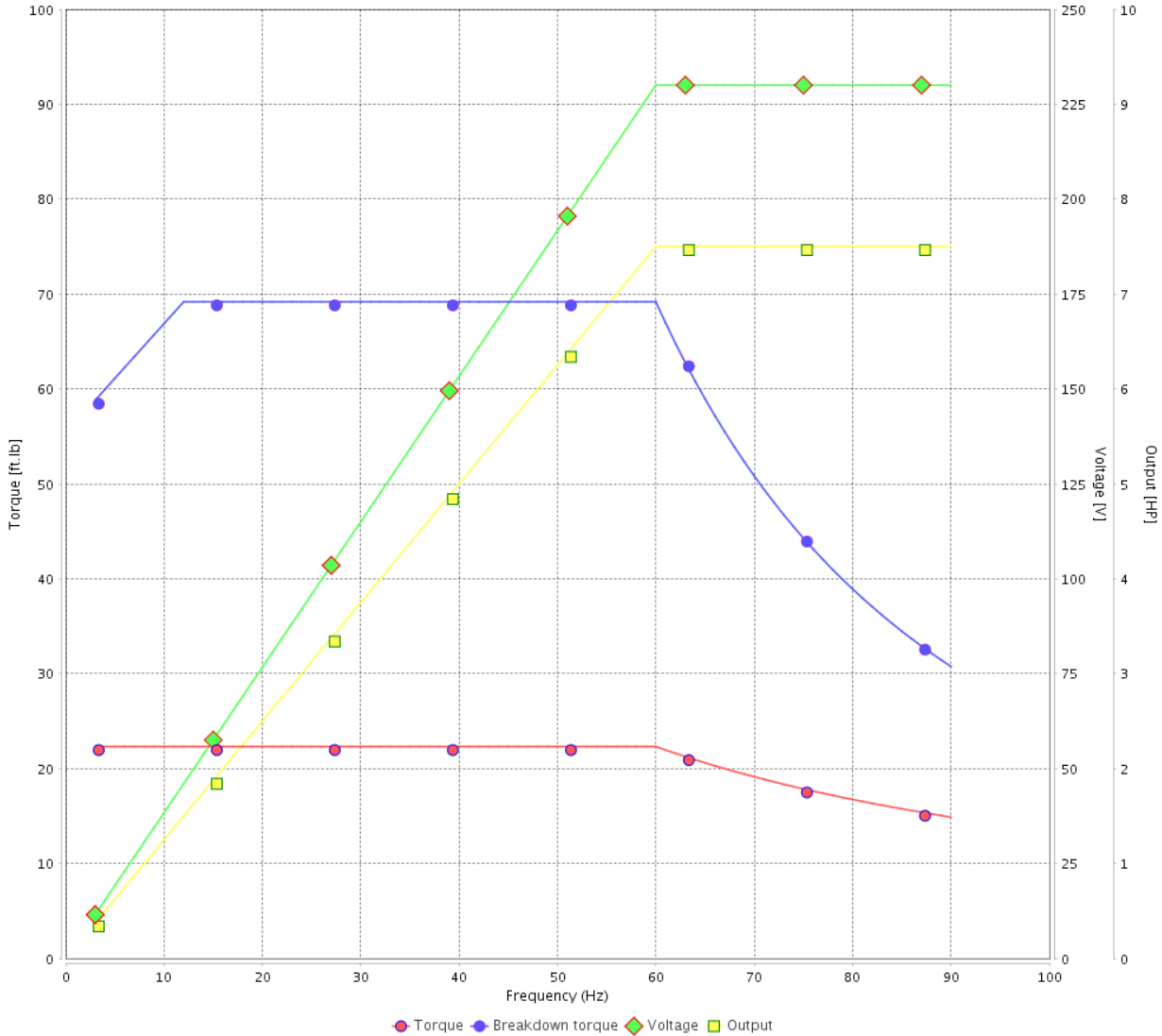
Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12598734

Catalog # : 00718ET3E213JP-W22

VFD OPERATION CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 18.4/9.18 A  
 LRC : 7.1  
 Rated torque : 22.3 ft.lb  
 Locked rotor torque : 220 %  
 Breakdown torque : 310 %  
 Rated speed : 1765 rpm

Moment of inertia (J) : 1.34 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

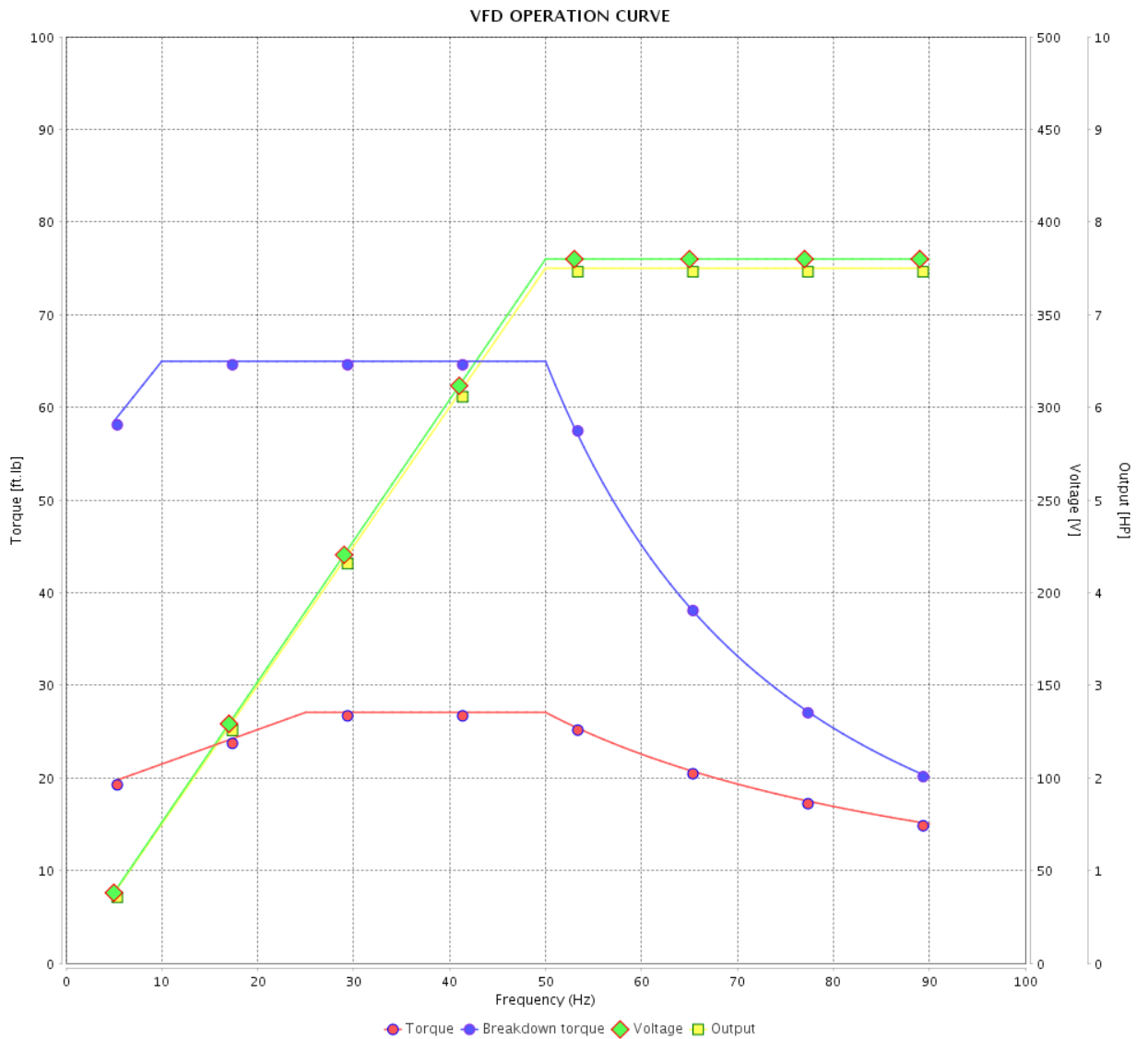


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12598734

Catalog # : 00718ET3E213JP-W22



Performance : 380 V 50 Hz 4P IE3

Rated current : 11.0 A  
 LRC : 5.6  
 Rated torque : 27.1 ft.lb  
 Locked rotor torque : 170 %  
 Breakdown torque : 240 %  
 Rated speed : 1455 rpm

Moment of inertia (J) : 1.34 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



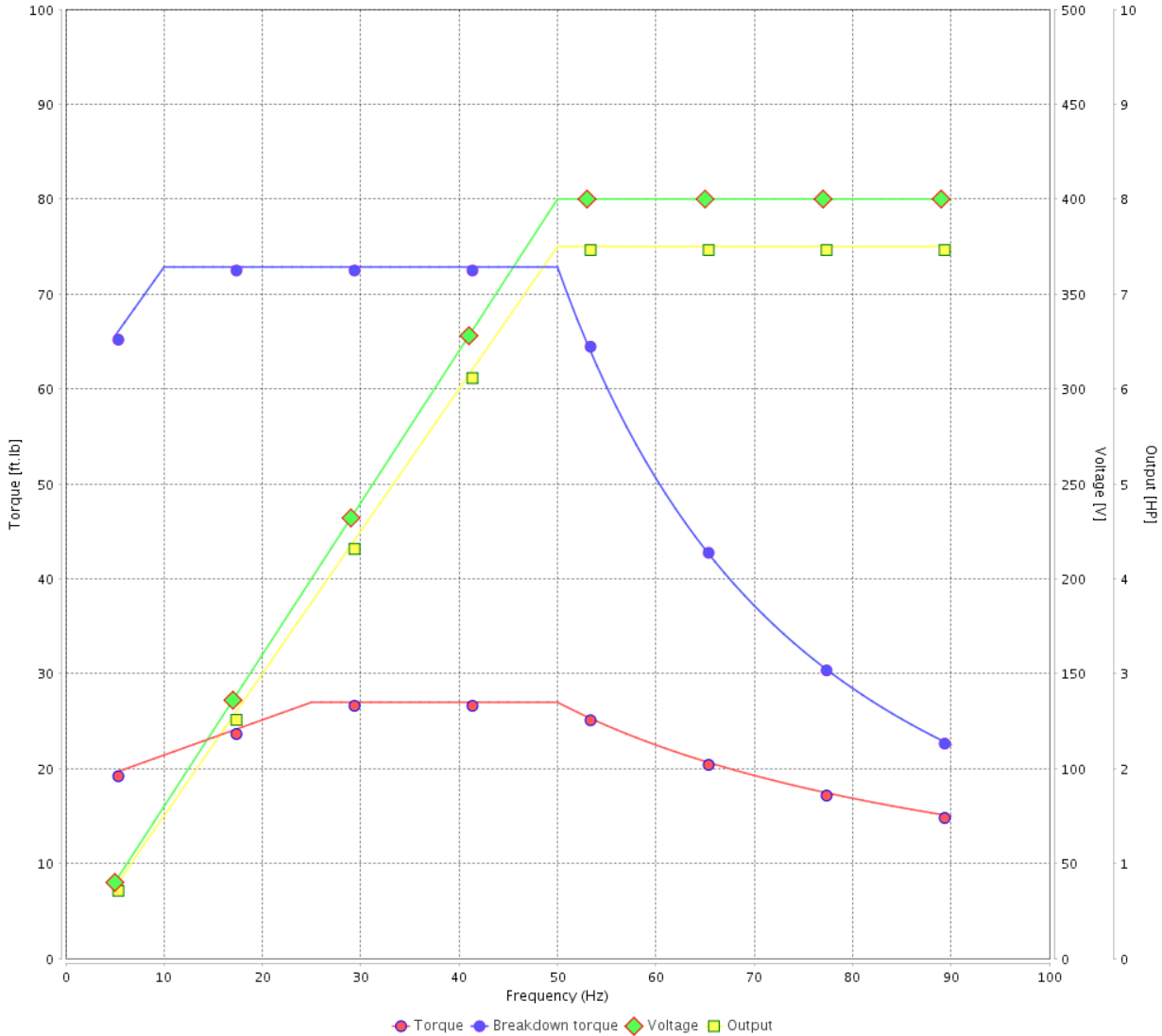
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12598734

Catalog # : 00718ET3E213JP-W22

VFD OPERATION CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current : 10.5 A  
 LRC : 6.2  
 Rated torque : 27.0 ft.lb  
 Locked rotor torque : 190 %  
 Breakdown torque : 270 %  
 Rated speed : 1460 rpm

Moment of inertia (J) : 1.34 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

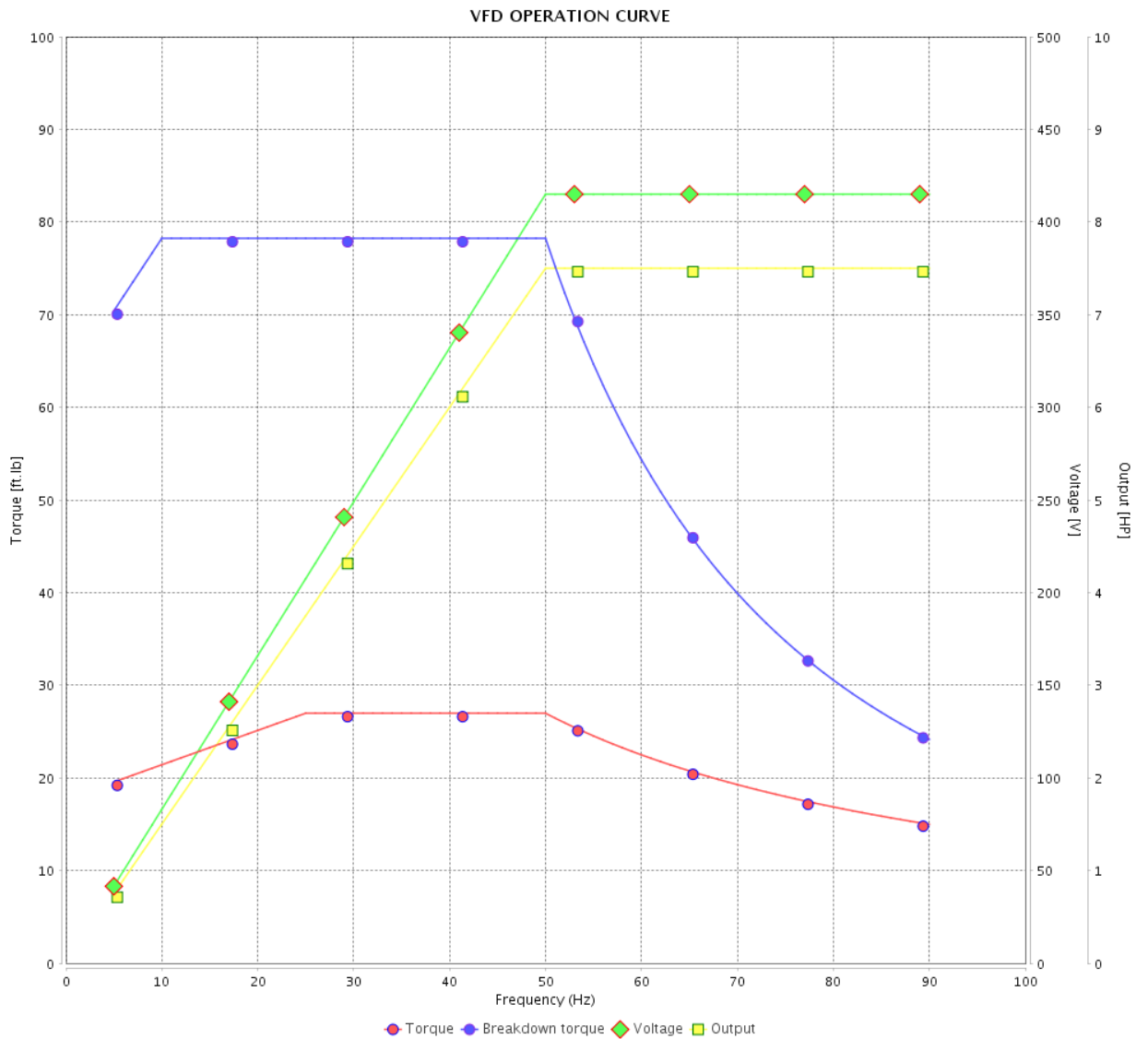


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12598734

Catalog # : 00718ET3E213JP-W22



Performance : 415 V 50 Hz 4P IE3

Rated current : 10.3 A  
 LRC : 6.7  
 Rated torque : 27.0 ft.lb  
 Locked rotor torque : 210 %  
 Breakdown torque : 290 %  
 Rated speed : 1460 rpm

Moment of inertia (J) : 1.34 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

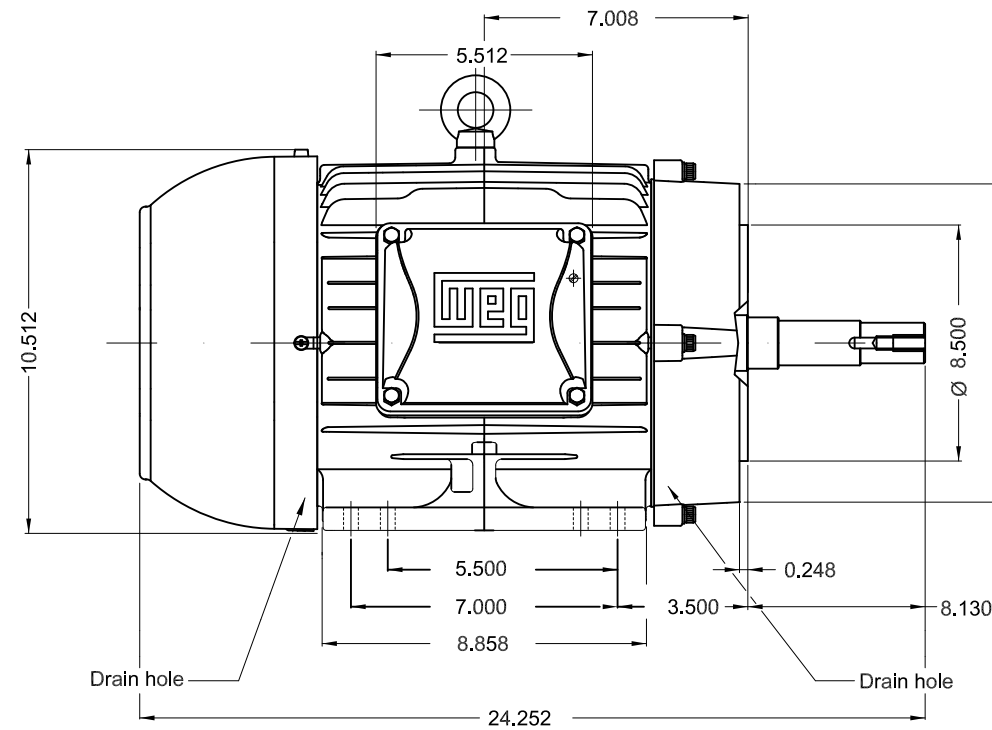
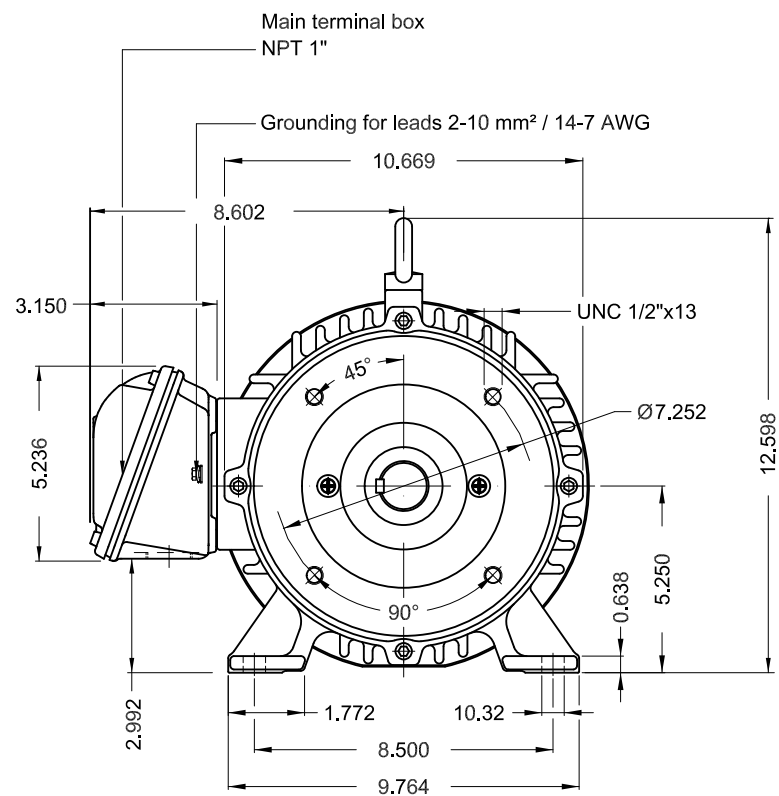
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Date	13/04/2022			

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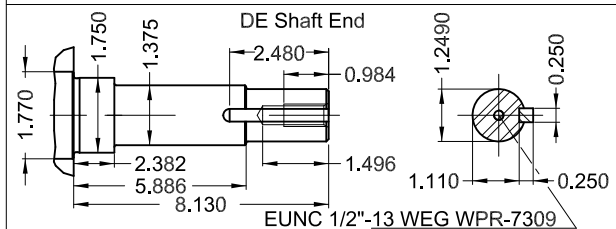
A

B

C



D



E

Color RAL 5009  
 Painting plan 207A  
 Mounting NEMA F-1  
 Mounting B34R(D)

7.5 HP 04 Poles 60 Hz A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR JM/JP/JET PUMP W22 PREM. EFF. FRAME 213/5JP IP55 TEFC					
CHECKED							
RELEASED							
REL DT.	WMO		Jaragua do Sul	Product Engineering	SHEET	1 / 1	

**PREVIEW**  
 WDD



**W22**

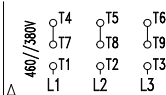
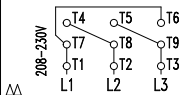
CC029A

® Inverter Duty Motor  
Severe Duty

12598734

MADE IN BRAZIL MODEL 00718ET3E213JP-W22

PH 3	FR 213/5JP	HP(kW) 7.5(5.5)	Hz 60	SF 1.25	PF 0.82
V 230/460	A 18.4/9.18	RPM 1765	INS. CL. F	ΔT 80 K	IP55
NEMA NOM EFF 91.7 %				DES B	DUTY CONT.
				AMB 40°C	
ENCL TEFC	SFA 23.0/11.5	USABLE @208V 19.9 A	SF 1.15	SFA 22.9	
7.5HP 5.5kW 50Hz 380V 11.0A 1455RPM SF1.25 EFF 89.6% (IE3)					CODE H



→ 6309-Z-C3  
→ 6207-ZZ

MOBIL POLYREX EM  
13 g 20000 h

ALT 1000 m.a.s.l. | 174 Lbs

For 60Hz: Class I, Div 2, Gr. A, B, C and D - T3  
 Class I, Zone 2, IIC - T3  
 Class II, Div 2, Gr. F and G - T4  
 For use on PWM, Gr. A, B, C, D and F  
 VT 1000:1, CT 20:1, 1.0SF, T3A

FOR SAFE AREA  
MOD.TE1BFOXON