

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	11439797		
		Catalog # :	07518XT3E365T		
Frame	: 364/5T	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>2</sup>	: 1014 lb		
Protection degree	: IP55	Moment of inertia (J)	: 23.3 sq.ft.lb		
Design	: A				
Output [HP]	75	60	60	60	60
Poles	4	4	4	4	4
Frequency [Hz]	60	50	50	50	50
Rated voltage [V]	230/460	380	400	415	415
Rated current [A]	166/83.2	83.2	79.9	78.5	78.5
L. R. Amperes [A]	1281/641	599	623	667	667
LRC [A]	7.7x(Code H)	7.2x(Code H)	7.8x(Code J)	8.5x(Code J)	8.5x(Code J)
No load current [A]	56.0/28.0	30.0	30.0	32.0	32.0
Rated speed [RPM]	1782	1480	1480	1483	1483
Slip [%]	1.00	1.33	1.33	1.13	1.13
Rated torque [ft.lb]	221	213	213	212	212
Locked rotor torque [%]	240	220	250	270	270
Breakdown torque [%]	290	280	310	340	340
Service factor	1.15	1.00	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K	80 K
Locked rotor time	28s (cold) 16s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)
Noise level <sup>2</sup>	75.0 dB(A)	70.0 dB(A)	70.0 dB(A)	70.0 dB(A)	70.0 dB(A)
Efficiency (%)	25%	94.0	94.0	94.0	93.0
	50%	94.5	94.1	94.1	93.6
	75%	95.0	94.5	94.5	94.5
	100%	95.4	94.5	94.5	95.0
Power Factor	25%	0.49	0.48	0.45	0.42
	50%	0.74	0.74	0.70	0.67
	75%	0.83	0.83	0.81	0.79
	100%	0.87	0.87	0.86	0.84
Bearing type	: Drive end : 6314 C3	Non drive end : 6314 C3	Foundation loads		
Sealing	: Oil Seal	Lip Seal	Max. traction : 1969 lb		
Lubrication interval	: 9789 h	9789 h	Max. compression : 2982 lb		
Lubricant amount	: 27 g	27 g			
Lubricant type	: Mobil Polyrex EM				
Notes					
USABLE @208V 184A SF 1.00 SFA 184A					
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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# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



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

### Thermal protection

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

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# TORQUE AND CURRENT VS SPEED CURVE



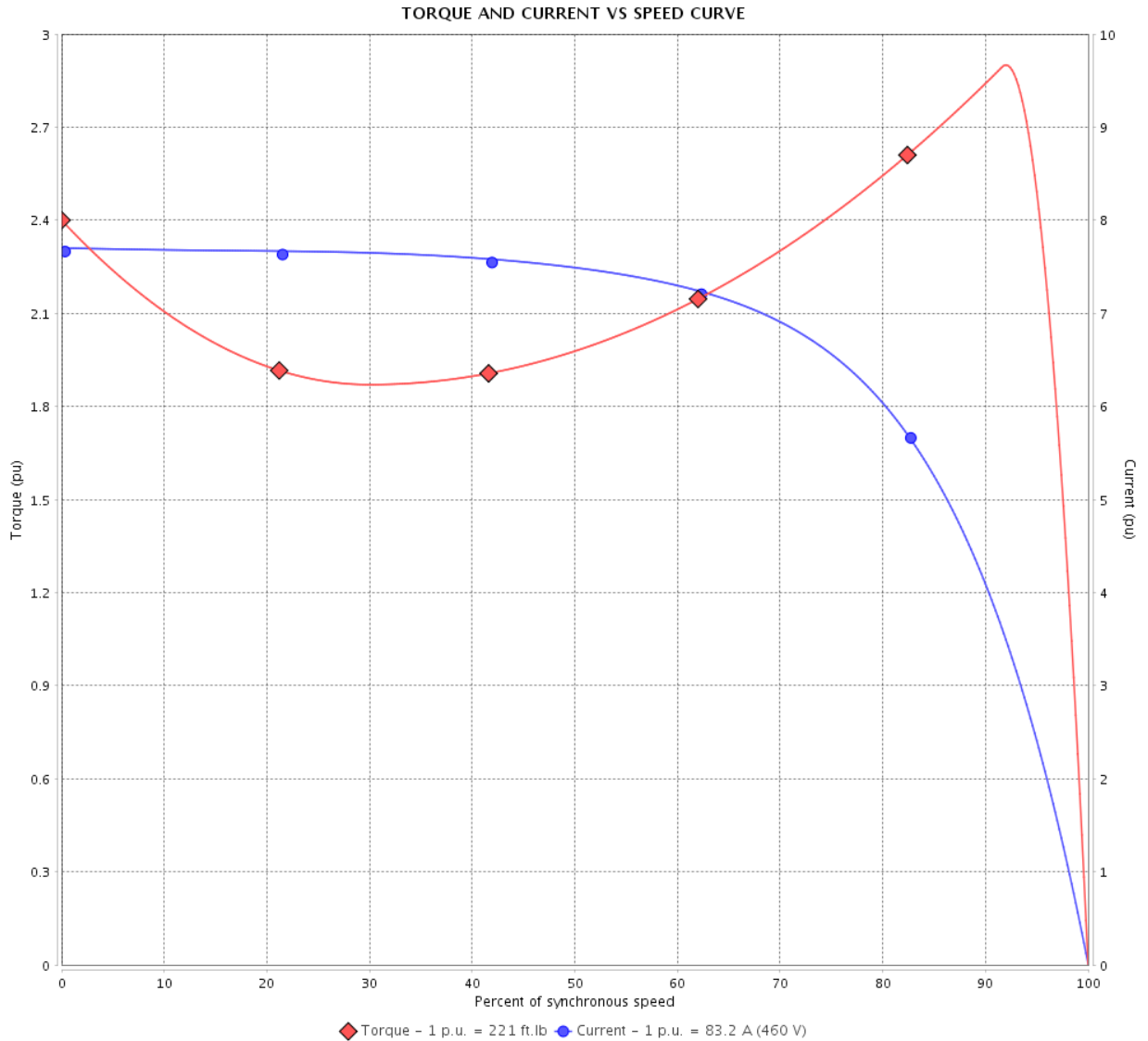
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11439797

Catalog # : 07518XT3E365T



Performance : 230/460 V 60 Hz 4P

Rated current : 166/83.2 A  
 LRC : 7.7  
 Rated torque : 221 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 290 %  
 Rated speed : 1782 rpm

Moment of inertia (J) : 23.3 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : A

Locked rotor time : 28s (cold) 16s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



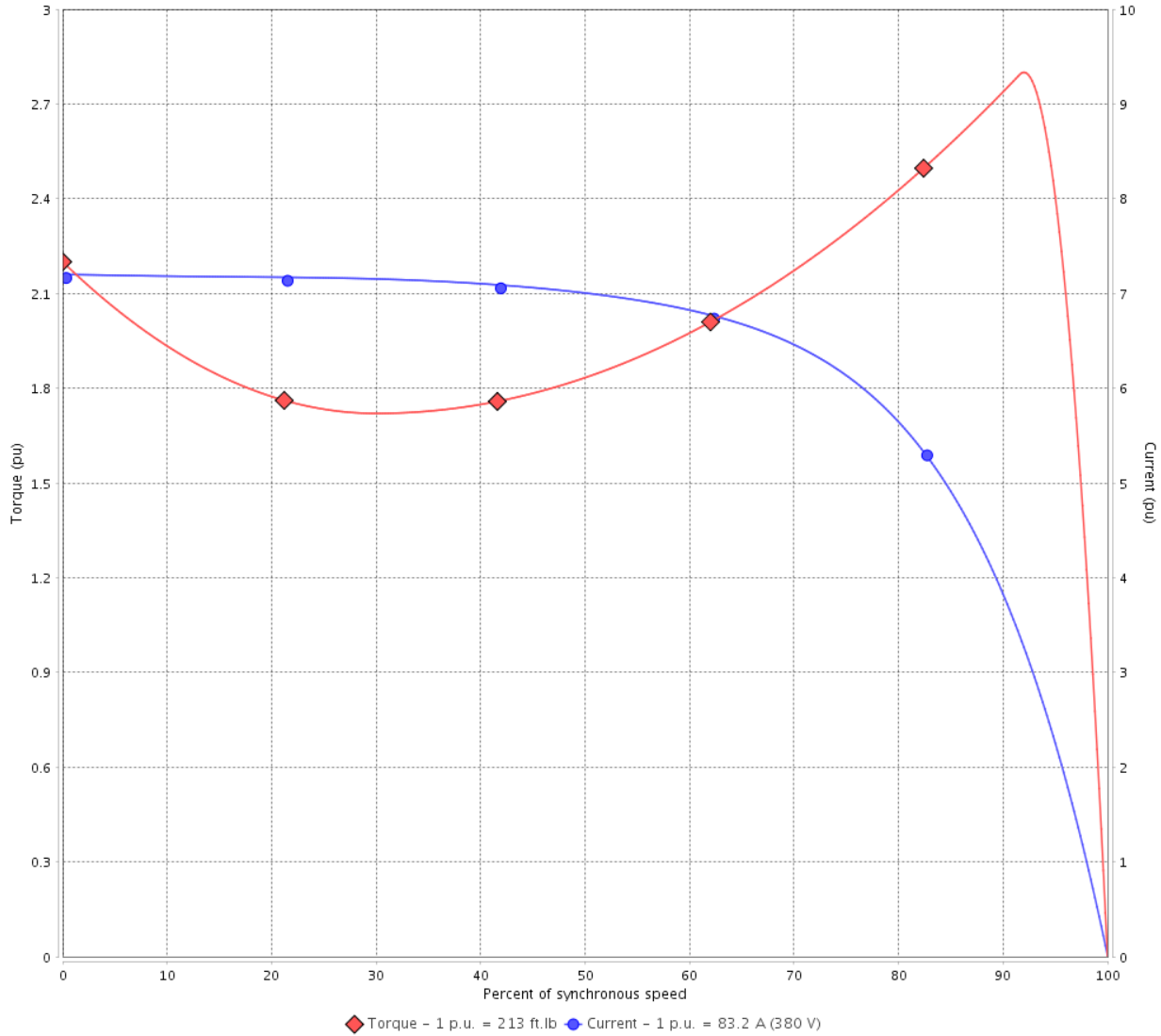
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11439797

Catalog # : 07518XT3E365T

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 4P IE3

Rated current	: 83.2 A	Moment of inertia (J)	: 23.3 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 213 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: A

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

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# TORQUE AND CURRENT VS SPEED CURVE



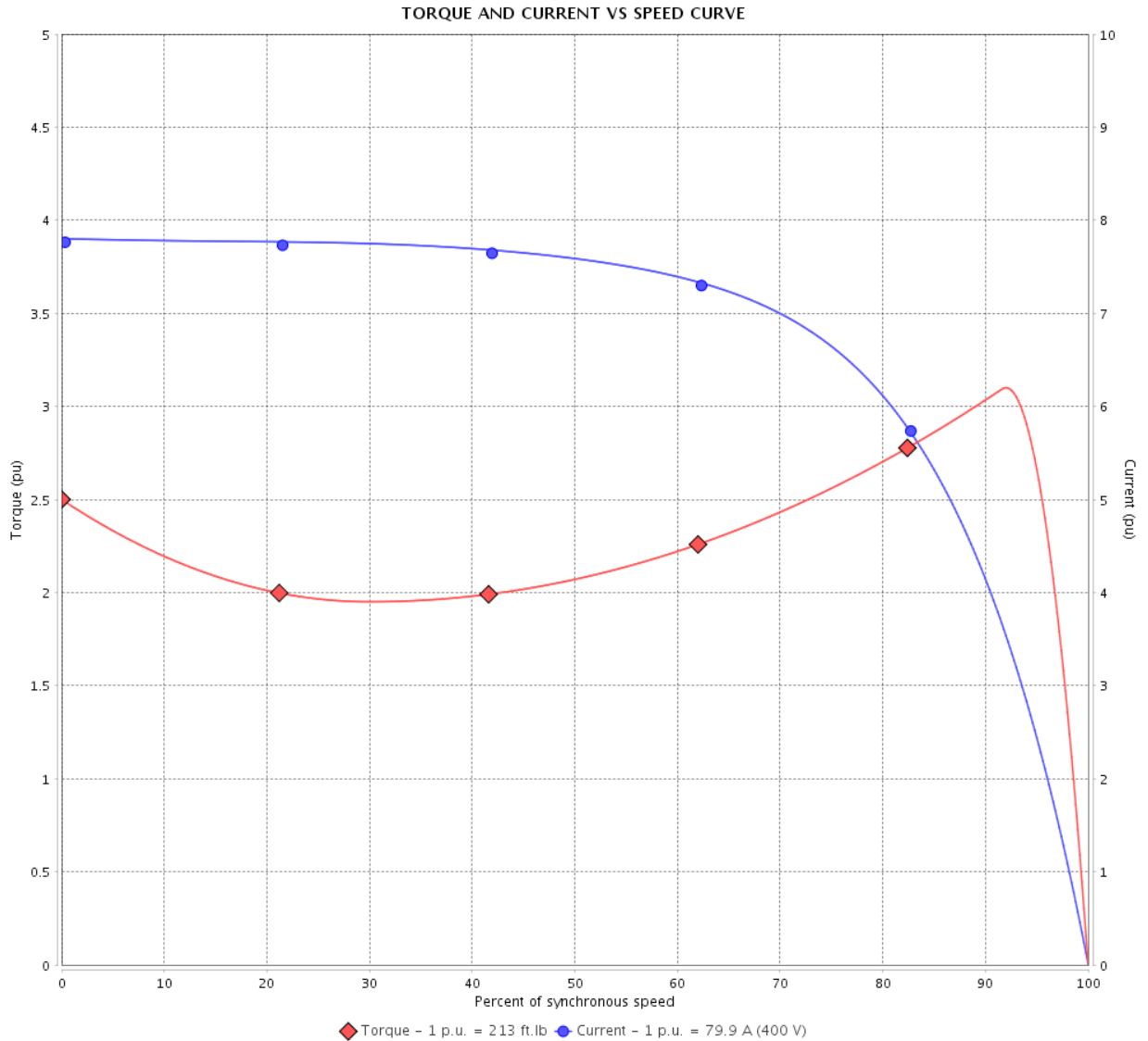
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11439797

Catalog # : 07518XT3E365T



Performance : 400 V 50 Hz 4P IE3

Rated current : 79.9 A  
 LRC : 7.8  
 Rated torque : 213 ft.lb  
 Locked rotor torque : 250 %  
 Breakdown torque : 310 %  
 Rated speed : 1480 rpm

Moment of inertia (J) : 23.3 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : A

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

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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



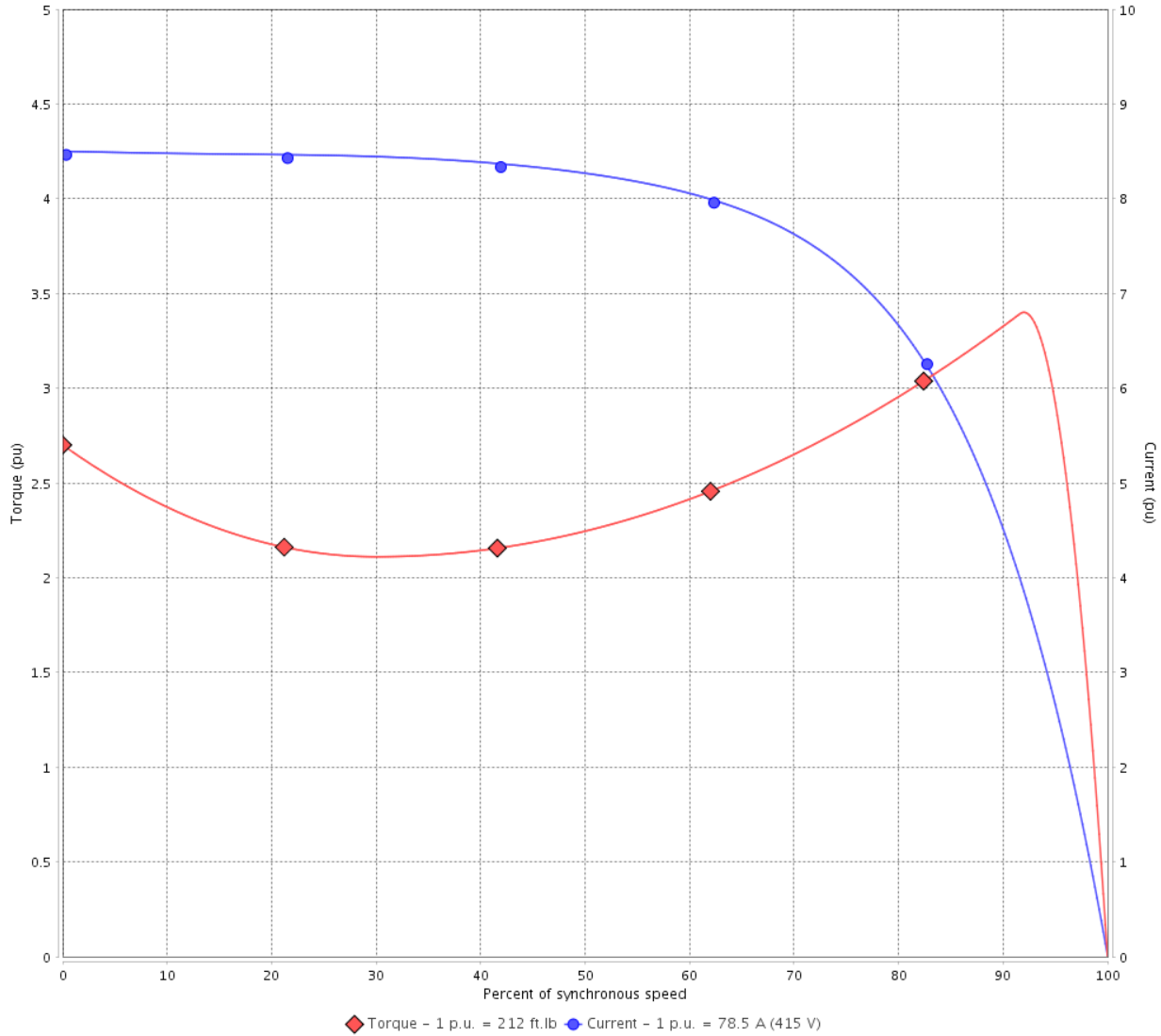
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11439797

Catalog # : 07518XT3E365T

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 4P IE3

Rated current	: 78.5 A	Moment of inertia (J)	: 23.3 sq.ft.lb
LRC	: 8.5	Duty cycle	: Cont.(S1)
Rated torque	: 212 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 340 %	Temperature rise	: 80 K
Rated speed	: 1483 rpm	Design	: A

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

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

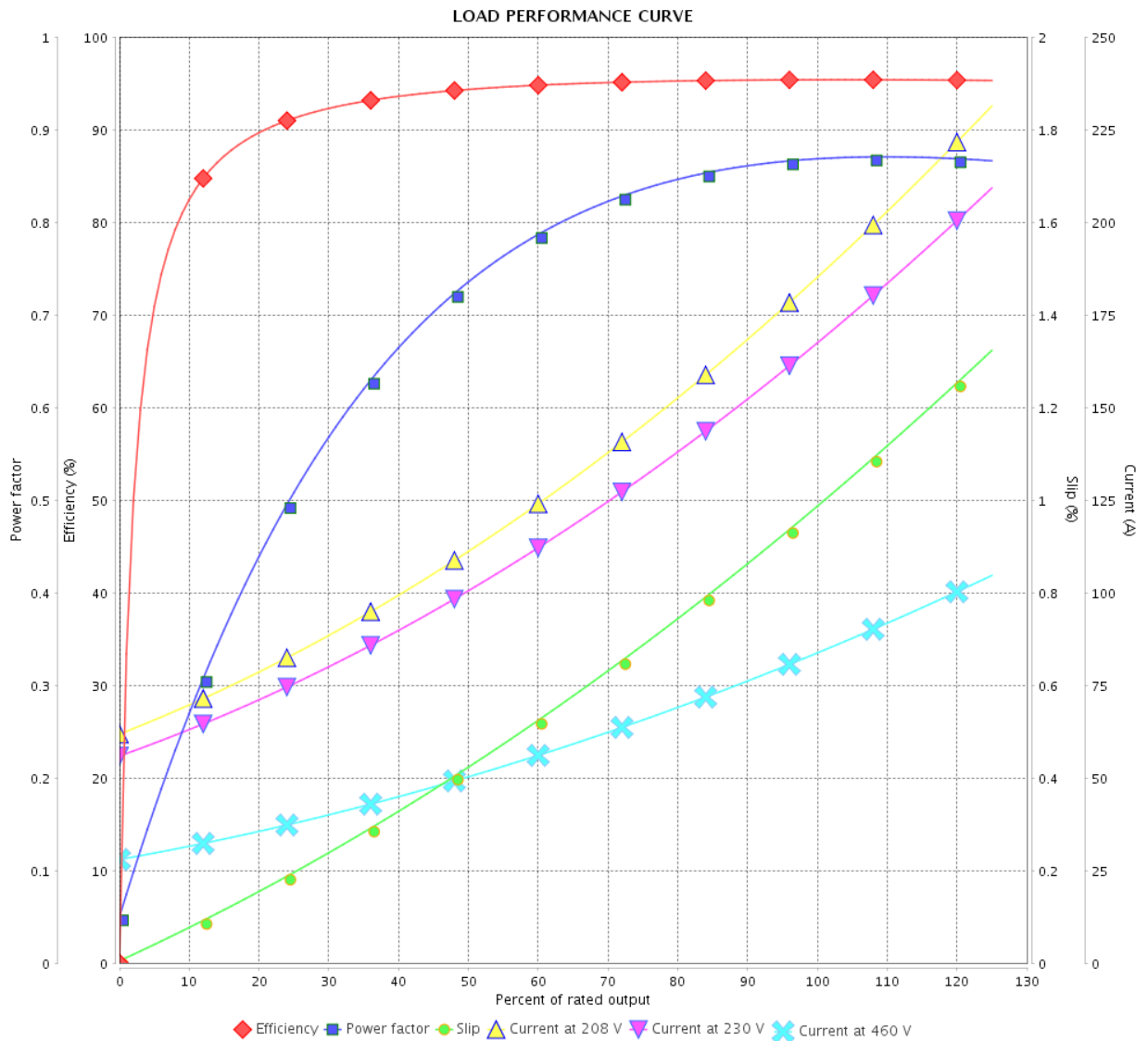


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11439797

Catalog # : 07518XT3E365T



Performance : 230/460 V 60 Hz 4P

Rated current : 166/83.2 A  
 LRC : 7.7  
 Rated torque : 221 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 290 %  
 Rated speed : 1782 rpm

Moment of inertia (J) : 23.3 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : A

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

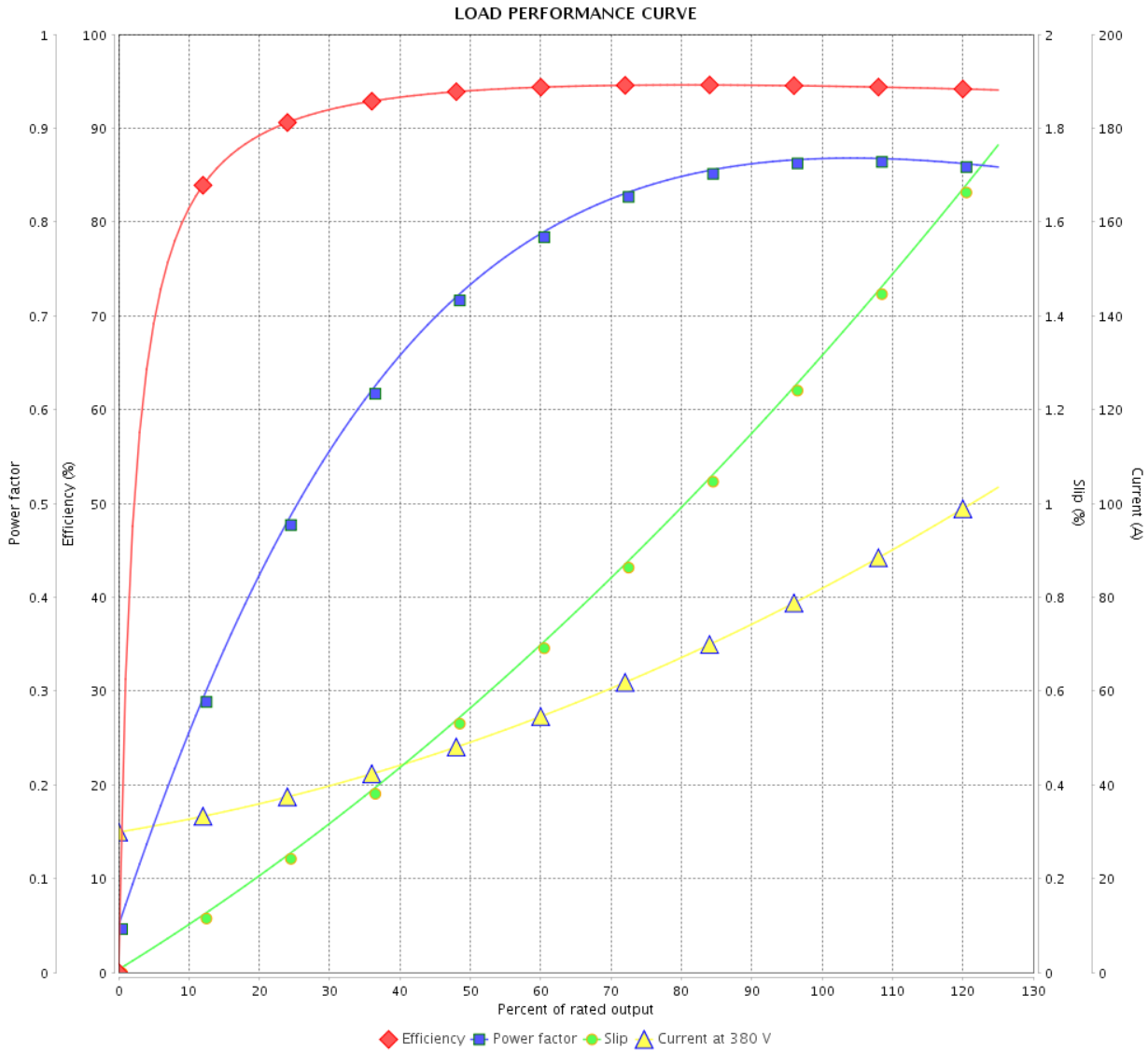


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Product line : NEMA Premium Efficiency Three-Phase

Product code : 11439797

Catalog # : 07518XT3E365T



Performance : 380 V 50 Hz 4P IE3

Rated current : 83.2 A  
 LRC : 7.2  
 Rated torque : 213 ft.lb  
 Locked rotor torque : 220 %  
 Breakdown torque : 280 %  
 Rated speed : 1480 rpm

Moment of inertia (J) : 23.3 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : A

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

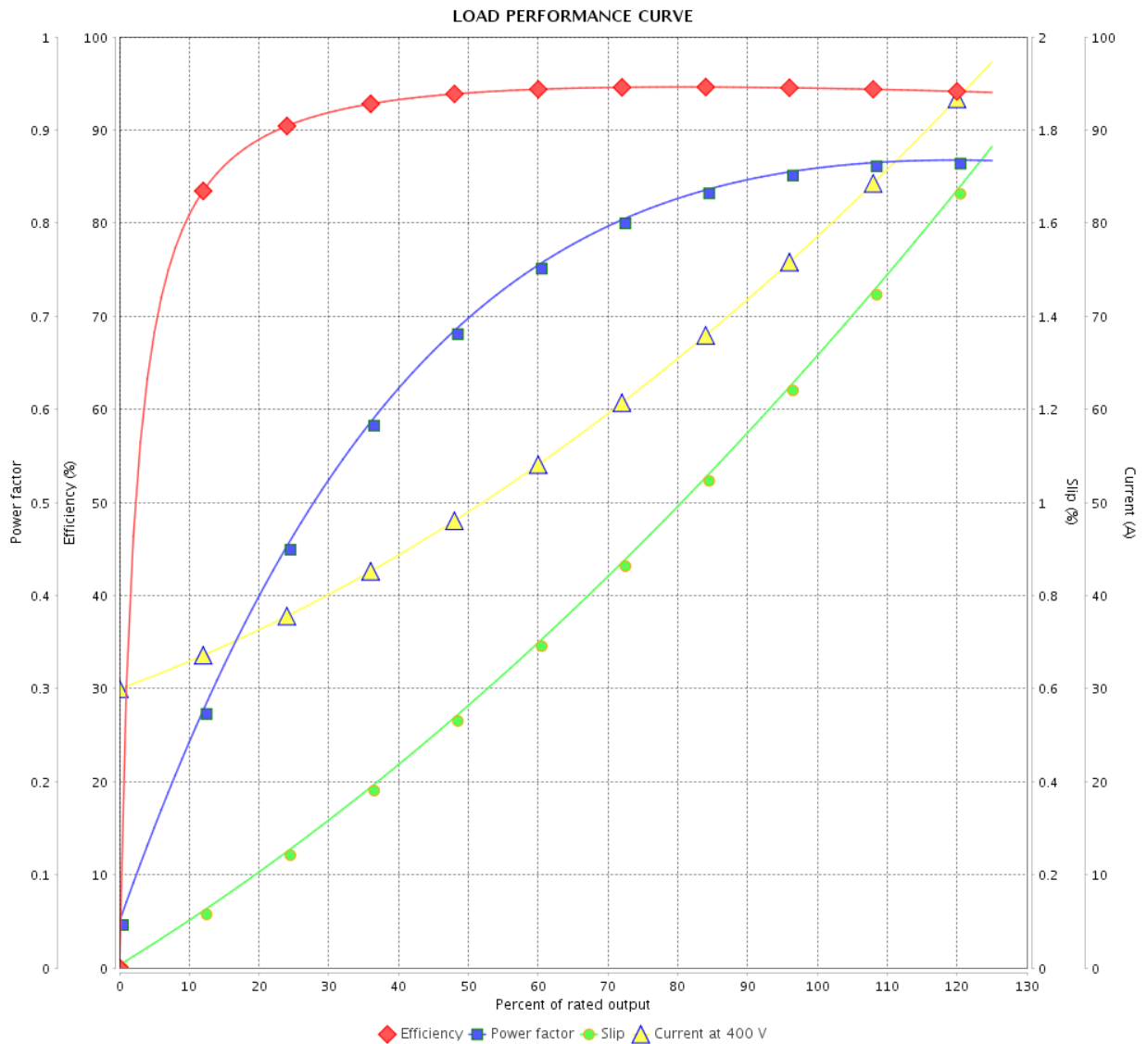


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Product code : 11439797

Catalog # : 07518XT3E365T



Performance : 400 V 50 Hz 4P IE3

Rated current : 79.9 A  
 LRC : 7.8  
 Rated torque : 213 ft.lb  
 Locked rotor torque : 250 %  
 Breakdown torque : 310 %  
 Rated speed : 1480 rpm

Moment of inertia (J) : 23.3 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : A

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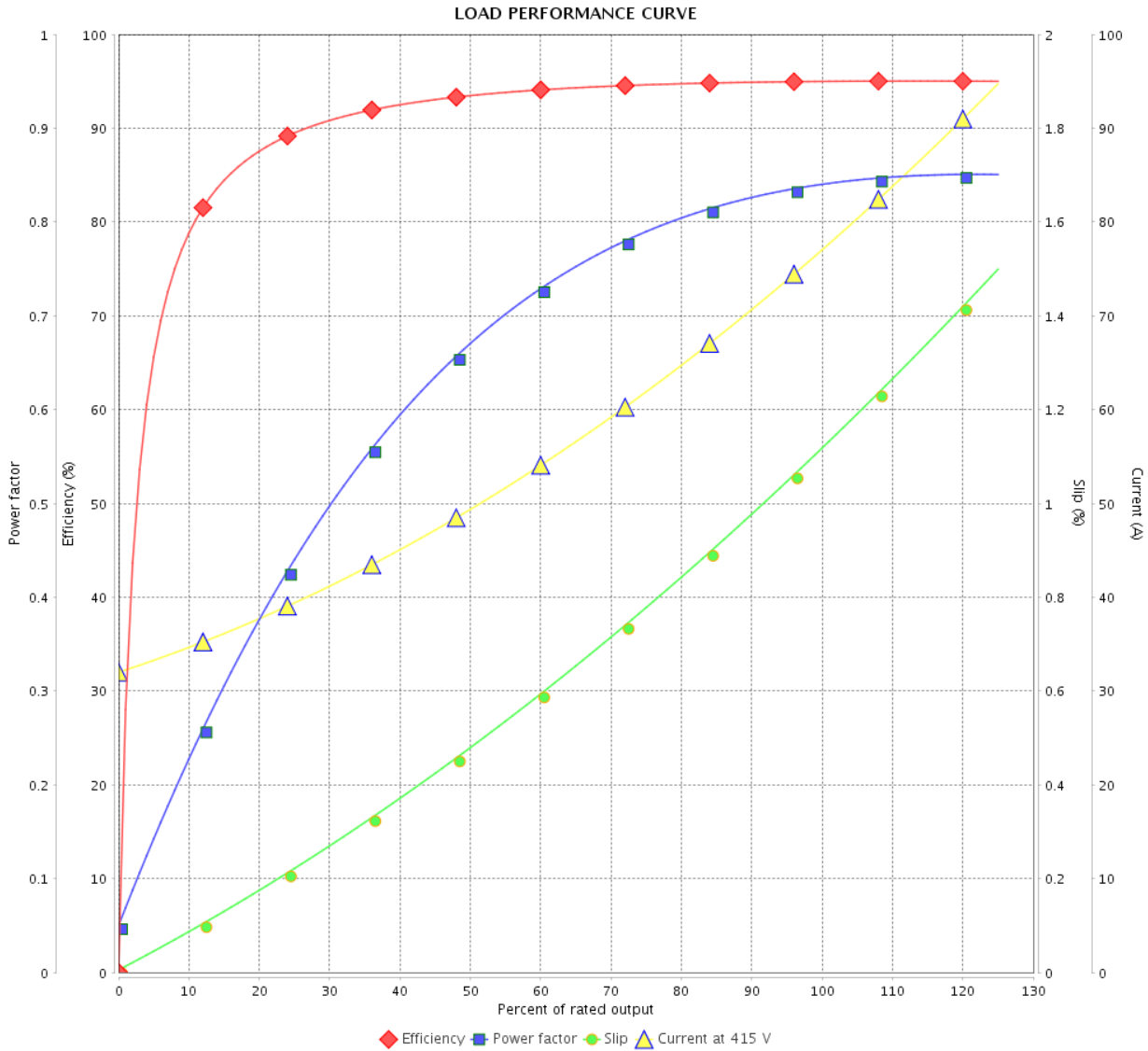


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Rated current : 78.5 A  
 LRC : 8.5  
 Rated torque : 212 ft.lb  
 Locked rotor torque : 270 %  
 Breakdown torque : 340 %  
 Rated speed : 1483 rpm

Moment of inertia (J) : 23.3 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : A

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# THERMAL LIMIT CURVE



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Product code : 11439797  
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LRC : 7.7	Duty cycle : Cont.(S1)
Rated torque : 221 ft.lb	Insulation class : F
Locked rotor torque : 240 %	Service factor : 1.15
Breakdown torque : 290 %	Temperature rise : 80 K
Rated speed : 1782 rpm	Design : A

Heating constant

Cooling constant

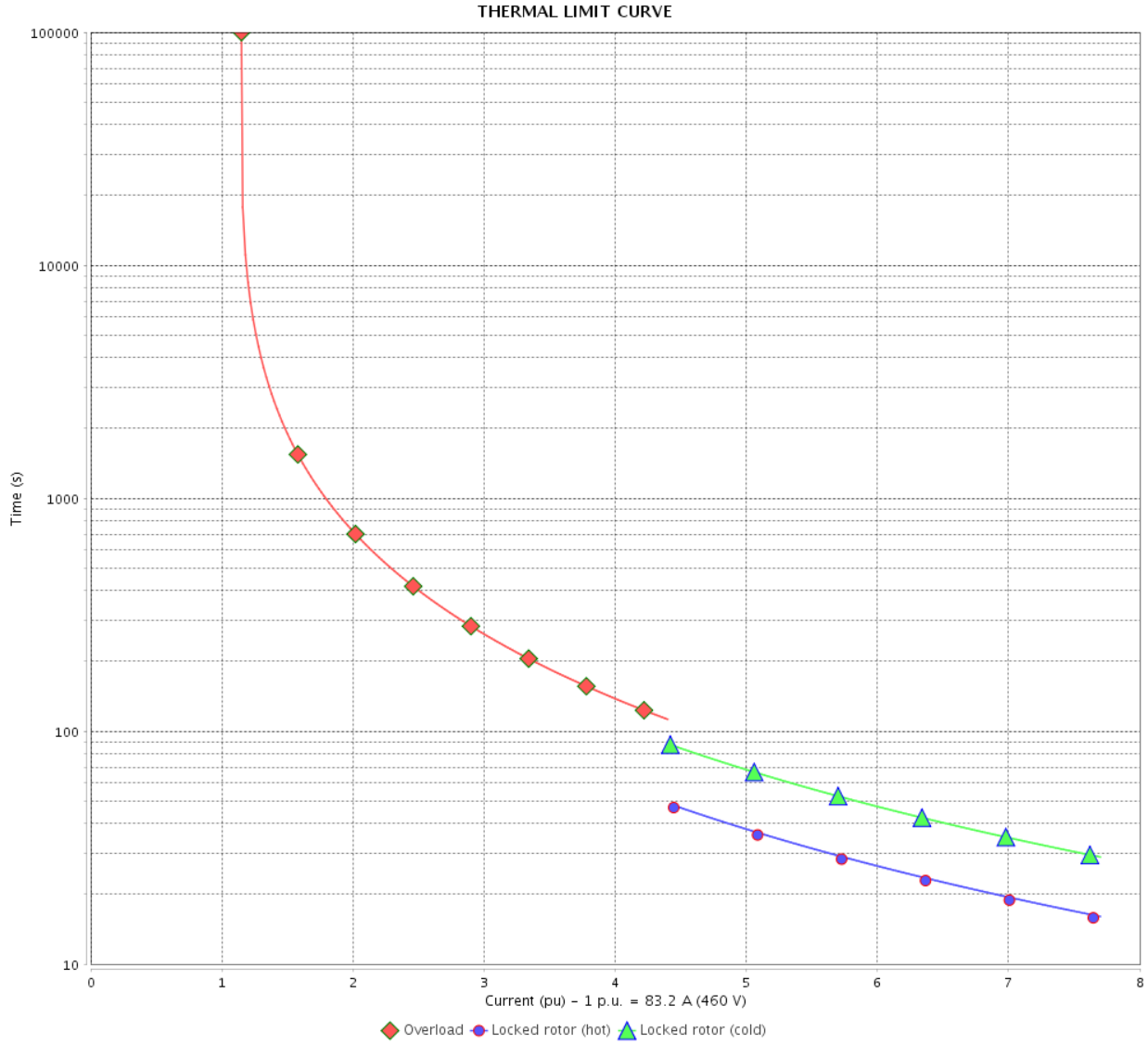
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
 Product code : 11439797  
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Performance : 380 V 50 Hz 4P IE3

Rated current : 83.2 A	Moment of inertia (J) : 23.3 sq.ft.lb
LRC : 7.2	Duty cycle : Cont.(S1)
Rated torque : 213 ft.lb	Insulation class : F
Locked rotor torque : 220 %	Service factor : 1.00
Breakdown torque : 280 %	Temperature rise : 80 K
Rated speed : 1480 rpm	Design : A

Heating constant

Cooling constant

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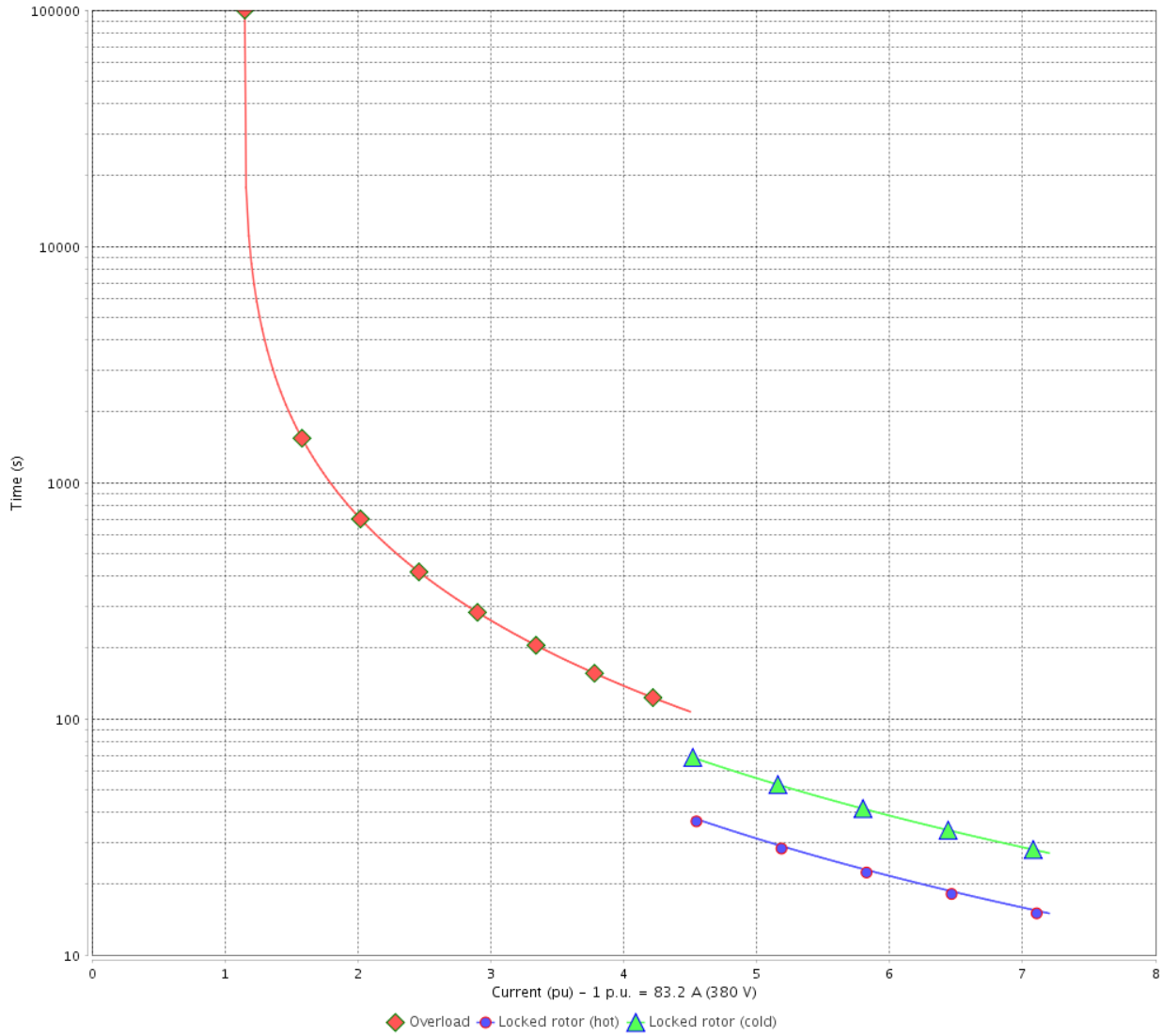
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Three Phase Induction Motor - Squirrel Cage



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

THERMAL LIMIT CURVE



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# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
 Product code : 11439797  
 Catalog # : 07518XT3E365T

Performance : 400 V 50 Hz 4P IE3

Rated current : 79.9 A	Moment of inertia (J) : 23.3 sq.ft.lb
LRC : 7.8	Duty cycle : Cont.(S1)
Rated torque : 213 ft.lb	Insulation class : F
Locked rotor torque : 250 %	Service factor : 1.00
Breakdown torque : 310 %	Temperature rise : 80 K
Rated speed : 1480 rpm	Design : A

Heating constant

Cooling constant

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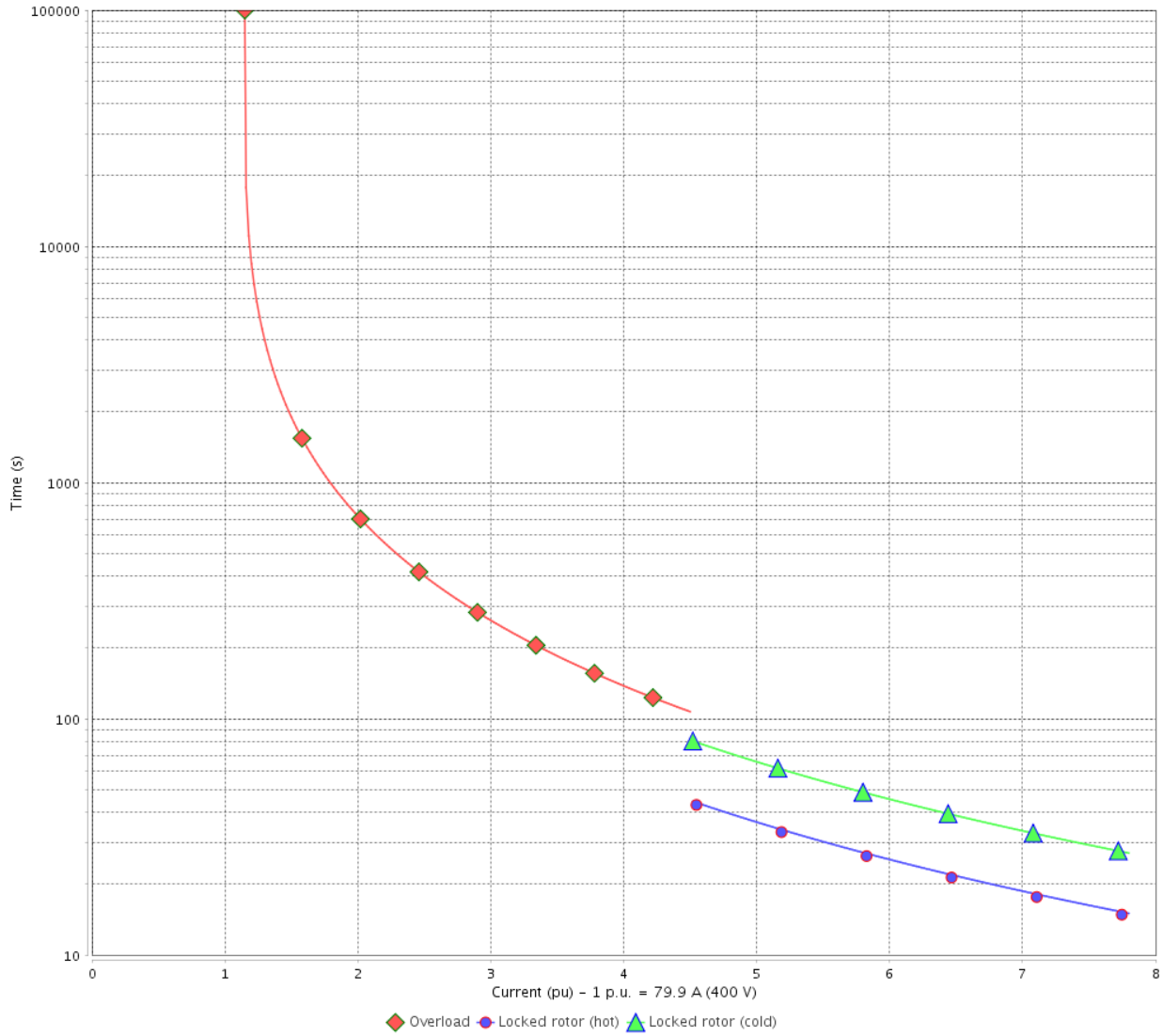
# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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

THERMAL LIMIT CURVE



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# THERMAL LIMIT CURVE



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 Product code : 11439797  
 Catalog # : 07518XT3E365T

Performance : 415 V 50 Hz 4P IE3

Rated current : 78.5 A	Moment of inertia (J) : 23.3 sq.ft.lb
LRC : 8.5	Duty cycle : Cont.(S1)
Rated torque : 212 ft.lb	Insulation class : F
Locked rotor torque : 270 %	Service factor : 1.00
Breakdown torque : 340 %	Temperature rise : 80 K
Rated speed : 1483 rpm	Design : A

Heating constant

Cooling constant

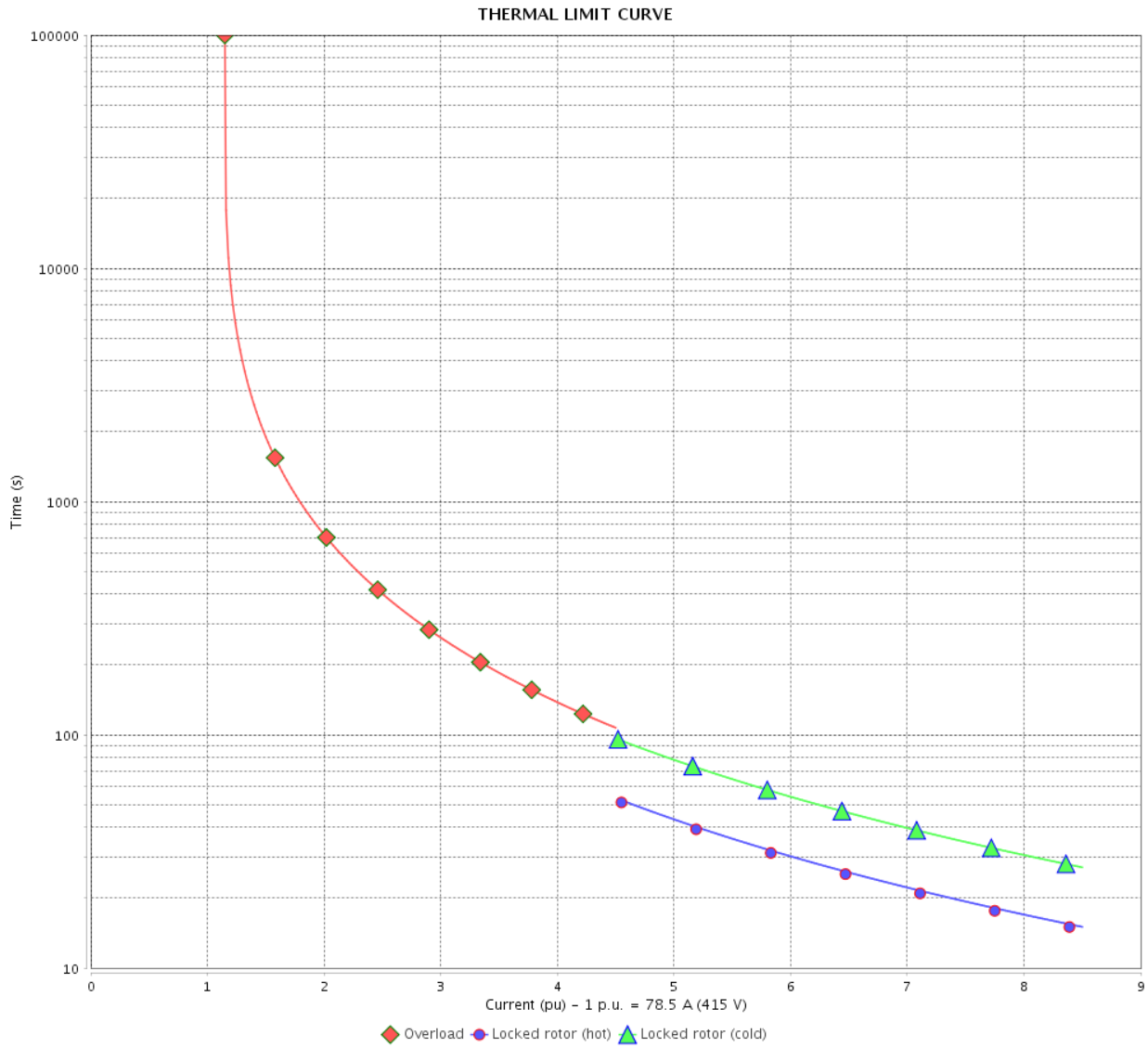
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Three Phase Induction Motor - Squirrel Cage



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



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# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

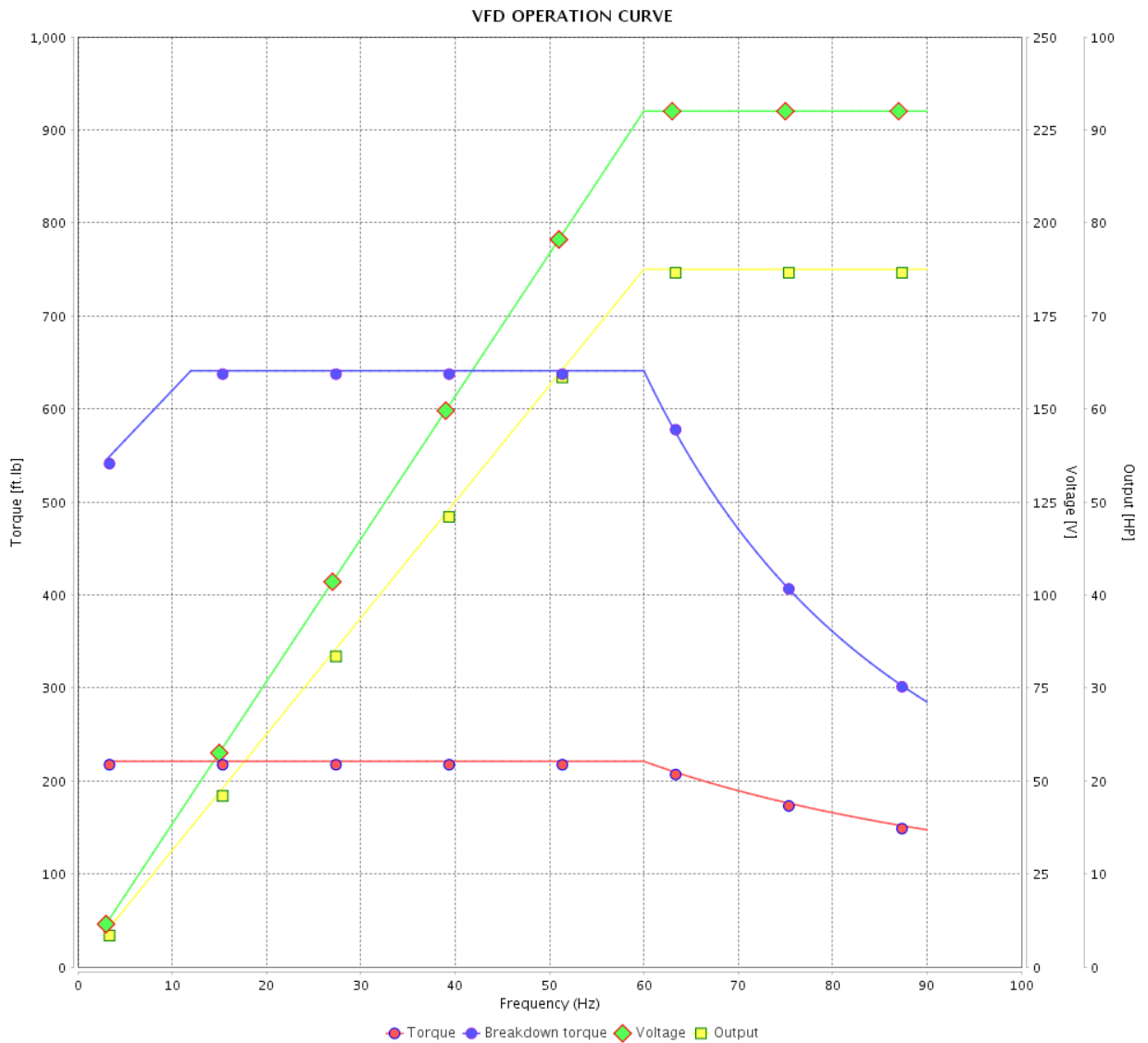


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11439797

Catalog # : 07518XT3E365T



Performance : 230/460 V 60 Hz 4P

Rated current : 166/83.2 A  
 LRC : 7.7  
 Rated torque : 221 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 290 %  
 Rated speed : 1782 rpm

Moment of inertia (J) : 23.3 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : A

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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



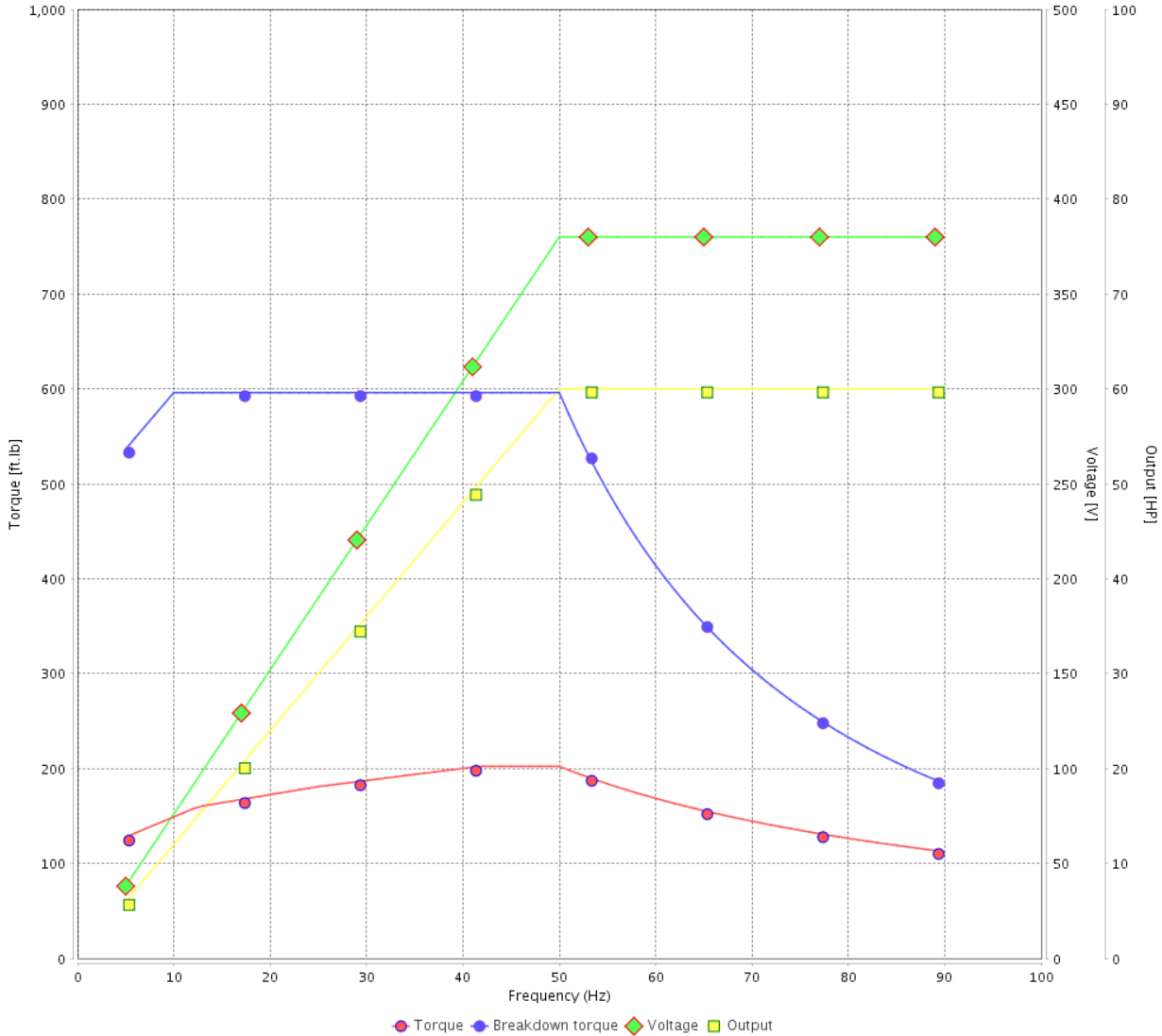
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Product code : 11439797

Catalog # : 07518XT3E365T

VFD OPERATION CURVE



Performance : 380 V 50 Hz 4P IE3

Rated current : 83.2 A  
 LRC : 7.2  
 Rated torque : 213 ft.lb  
 Locked rotor torque : 220 %  
 Breakdown torque : 280 %  
 Rated speed : 1480 rpm

Moment of inertia (J) : 23.3 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : A

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# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

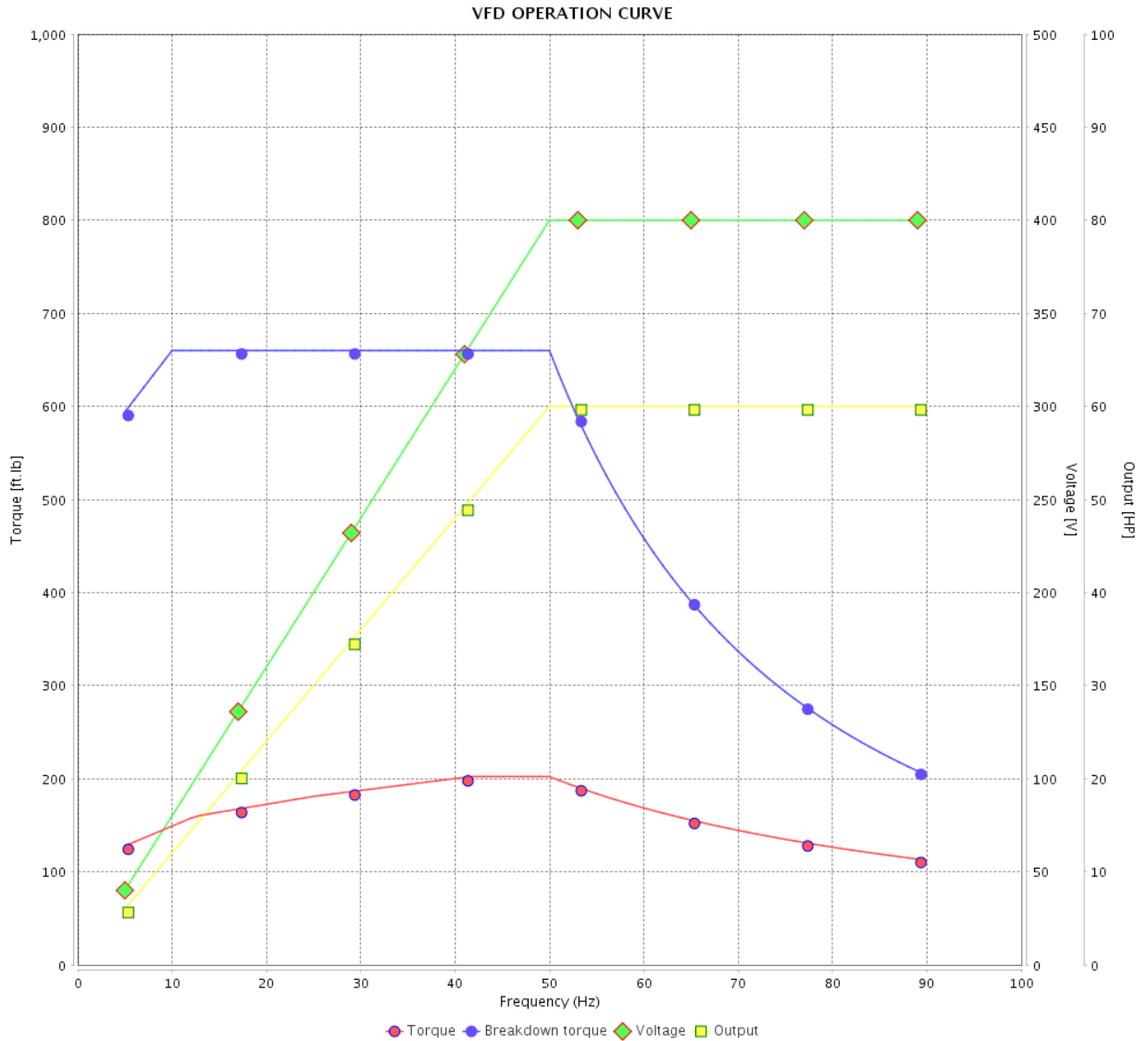


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Performance : 400 V 50 Hz 4P IE3

Rated current : 79.9 A  
 LRC : 7.8  
 Rated torque : 213 ft.lb  
 Locked rotor torque : 250 %  
 Breakdown torque : 310 %  
 Rated speed : 1480 rpm

Moment of inertia (J) : 23.3 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : A

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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



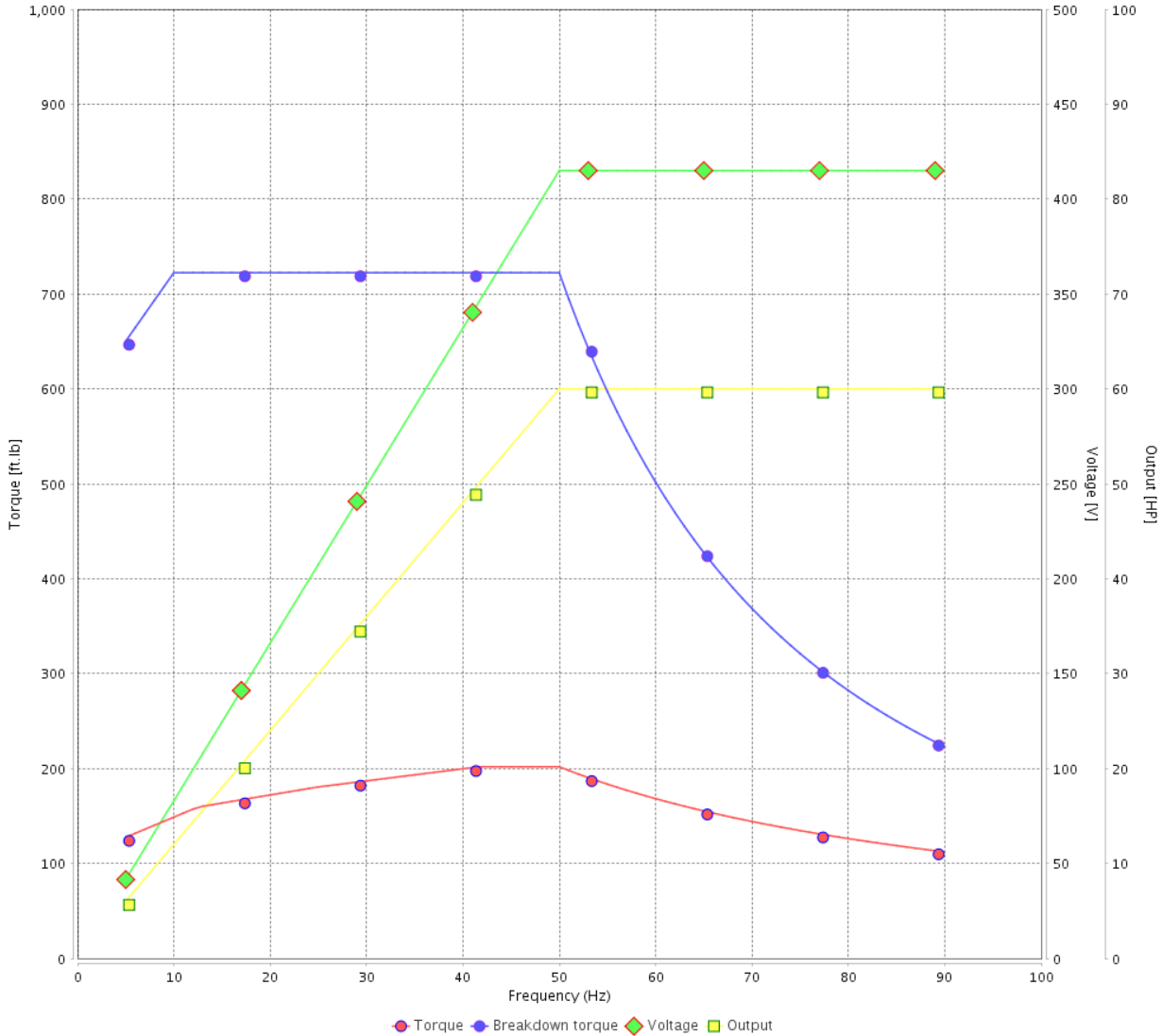
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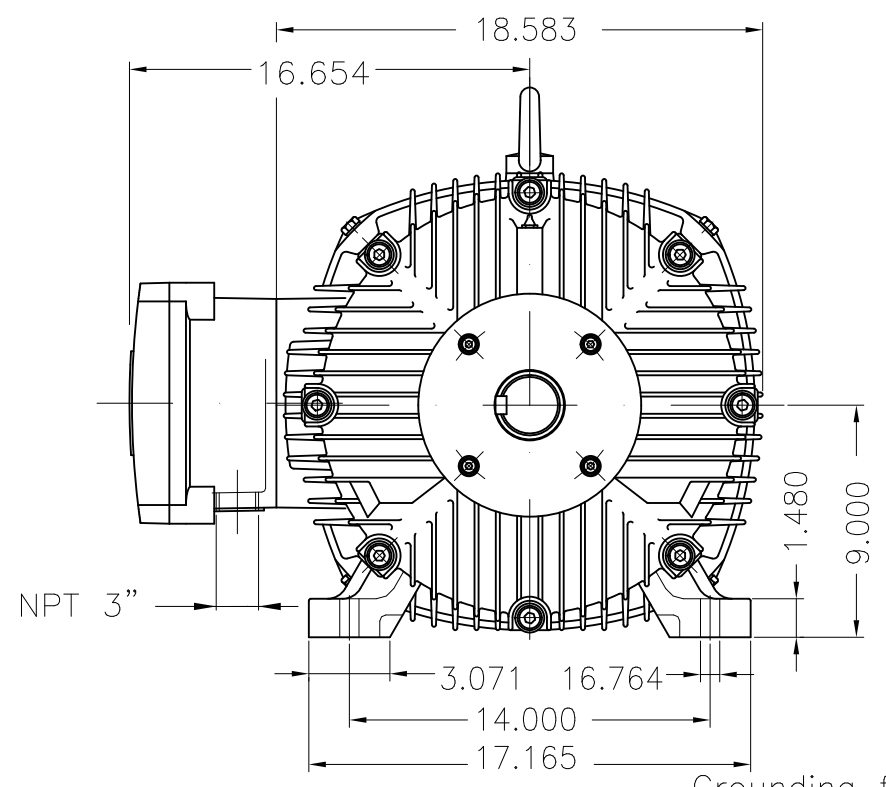
VFD OPERATION CURVE



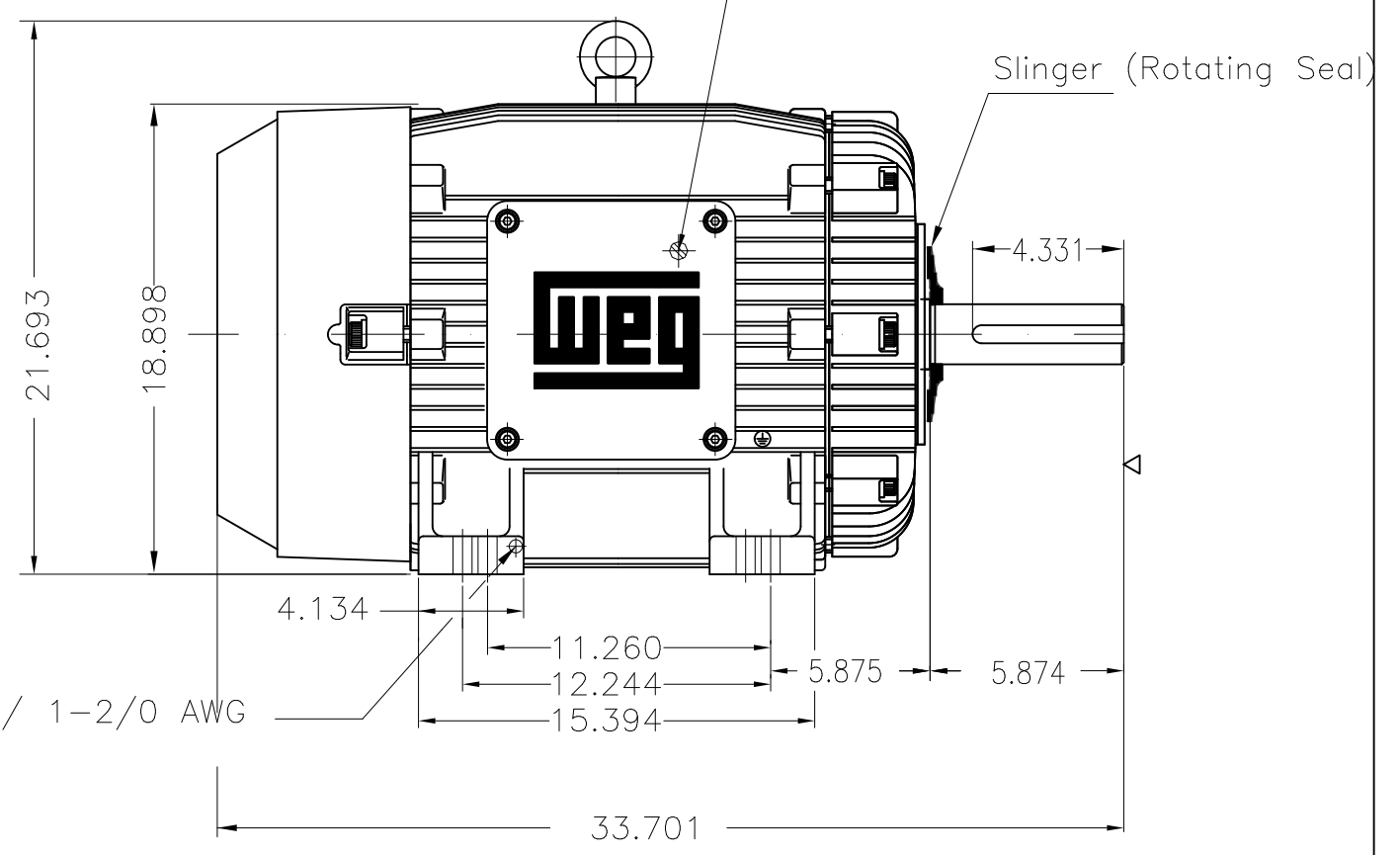
Performance : 415 V 50 Hz 4P IE3

Rated current	: 78.5 A	Moment of inertia (J)	: 23.3 sq.ft.lb
LRC	: 8.5	Duty cycle	: Cont.(S1)
Rated torque	: 212 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 340 %	Temperature rise	: 80 K
Rated speed	: 1483 rpm	Design	: A

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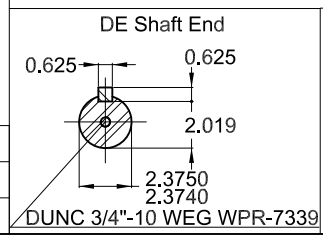


Grounding for leads 25-50 mm<sup>2</sup> / 3-1 AWG



Grounding for leads 35-70 mm<sup>2</sup> / 1-2/0 AWG

75 HP 04 Poles 60 Hz A



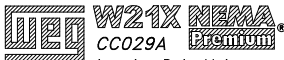
Color RAL 5009  
 Painting plan 202P  
 Mounting B3R(D)

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR EXPLOSION PROOF PREM. EFF.					
CHECKED		FRAME 364/5T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

**PREVIEW**  
 WDD



SHEET 1 / 1



**W21X NEMA**  
**CC029A Premium**

*Inverter Duty Motor  
 Severe Duty*

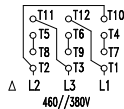
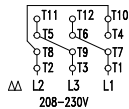


TEMP CODE T3C  
 CSA/UL: Class I - Div. 1 - Groups C and D  
 CSA: Class II - Div. 1 - Groups F and G  
 CSA: Class I - Zone 1 - IIB  
**EXPLOSION PROOF MOTOR**

FOR USE ON VPWM VFD 1000:1VT, 2:1CT, 1.0SF, T3C, AMB 40°C.

MODEL 07518XT3E365T  
 MADE IN BRAZIL  
 11439797

PH 3	FR 364/5T	HP(kW) 75.0(55.0)	Hz 60
V 230/460	A 166/83.2	RPM 1782	
NEMA NOM. EFF. 95.4%	INS CL F	$\Delta T$ 80 K	IP55
PF 0.87	DUTY CONT.	CODE H	
ENCL. TEFC	SF 1.15	SFA 191/95.7	
AMB 40°C	DES A	USABLE @208V 184 A SF 1.00	
AMB 55°C SF1.0	-bearings lub interval reduced by a factor of 50%		
60HP 45kW 50Hz 380V 83.2A 1480RPM SF1.00 EFF 94.5% (IE3)			



→ 6314-C3(27g)  
 → 6314-C3(27g)

MOBIL POLYREX EM  
 9789 h

ALT 1000 m.a.s.l | 1 O 1 4 Lbs