

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	14407016		
		Catalog # :	01012XT3E256T		
Frame	: 256T	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>	: 366 lb		
Protection degree	: IP55	Moment of inertia (J)	: 4.15 sq.ft.lb		
Design	: B				
Output [HP]	10	10	10	10	
Poles	6	6	6	6	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	26.6/13.3	16.1	15.3	14.8	
L. R. Amperes [A]	192/95.8	86.9	91.8	96.2	
LRC [A]	7.2x(Code J)	5.4x(Code G)	6.0x(Code H)	6.5x(Code J)	
No load current [A]	13.2/6.60	6.20	6.60	6.90	
Rated speed [RPM]	1175	955	960	965	
Slip [%]	2.08	4.50	4.00	3.50	
Rated torque [ft.lb]	44.7	54.4	54.1	53.9	
Locked rotor torque [%]	270	175	200	220	
Breakdown torque [%]	310	220	240	260	
Service factor	1.15	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	46s (cold) 26s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)	
Noise level <sup>2</sup>	59.0 dB(A)	57.0 dB(A)	57.0 dB(A)	57.0 dB(A)	
Efficiency (%)	25%	88.6	90.2	90.1	89.2
	50%	89.5	89.5	89.5	89.5
	75%	90.2	88.5	89.5	89.5
	100%	91.0	87.5	88.5	89.5
Power Factor	25%	0.35	0.41	0.38	0.36
	50%	0.60	0.67	0.63	0.61
	75%	0.70	0.72	0.70	0.68
	100%	0.78	0.81	0.80	0.79
Bearing type	: <u>Drive end</u> 6309 C3 <u>Non drive end</u> 6209 C3	Foundation loads			
Sealing	: Oil Seal Lip Seal	Max. traction	: 496 lb		
Lubrication interval	: 20000 h 20000 h	Max. compression	: 861 lb		
Lubricant amount	: 13 g 9 g				
Lubricant type	: Mobil Polyrex EM				
Notes USABLE @208V 29.4A SF 1.15 SFA 33.8A					
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



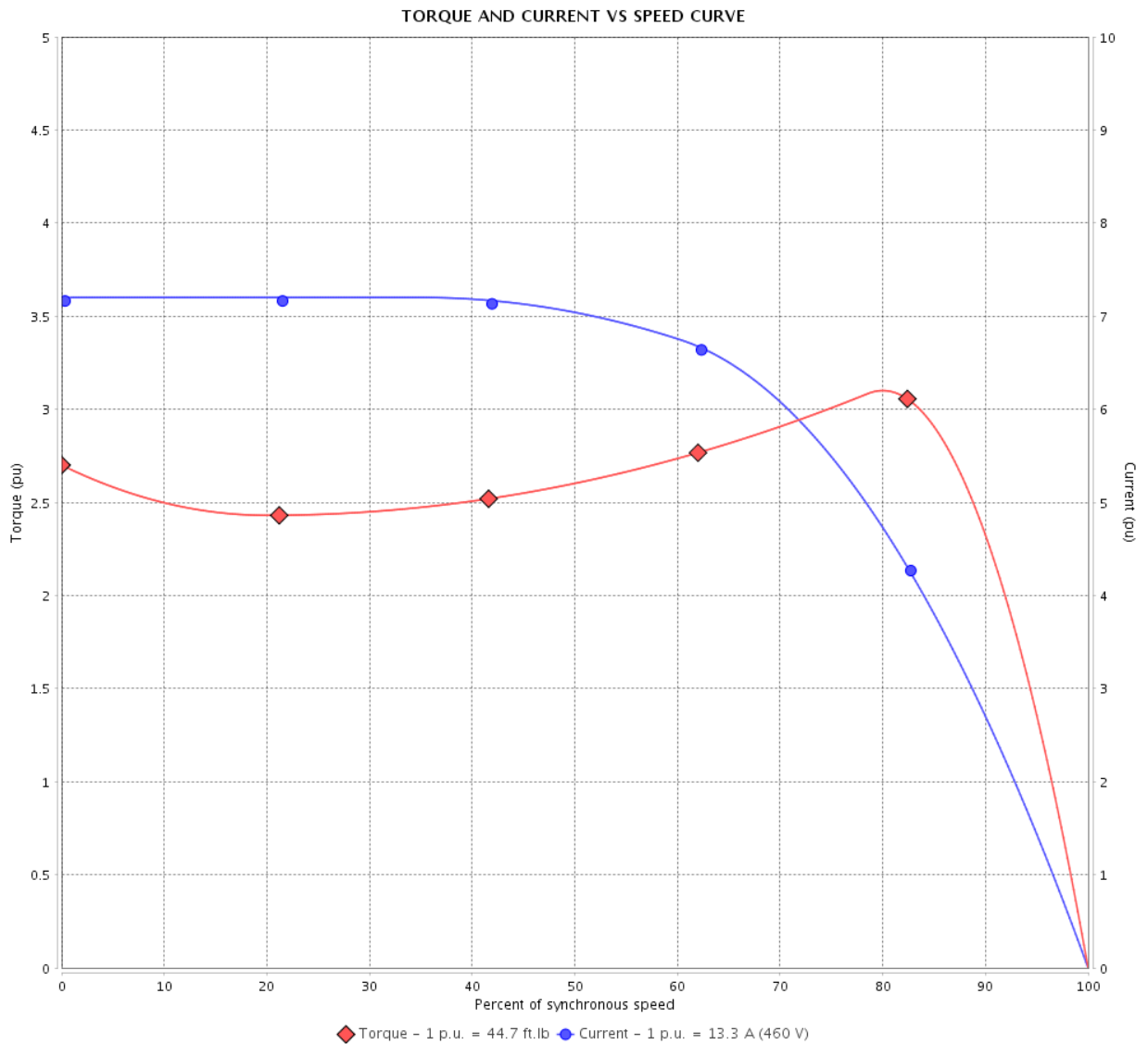
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407016

Catalog # : 01012XT3E256T



Performance : 230/460 V 60 Hz 6P

Rated current : 26.6/13.3 A  
 LRC : 7.2  
 Rated torque : 44.7 ft.lb  
 Locked rotor torque : 270 %  
 Breakdown torque : 310 %  
 Rated speed : 1175 rpm

Moment of inertia (J) : 4.15 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

Locked rotor time : 46s (cold) 26s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage



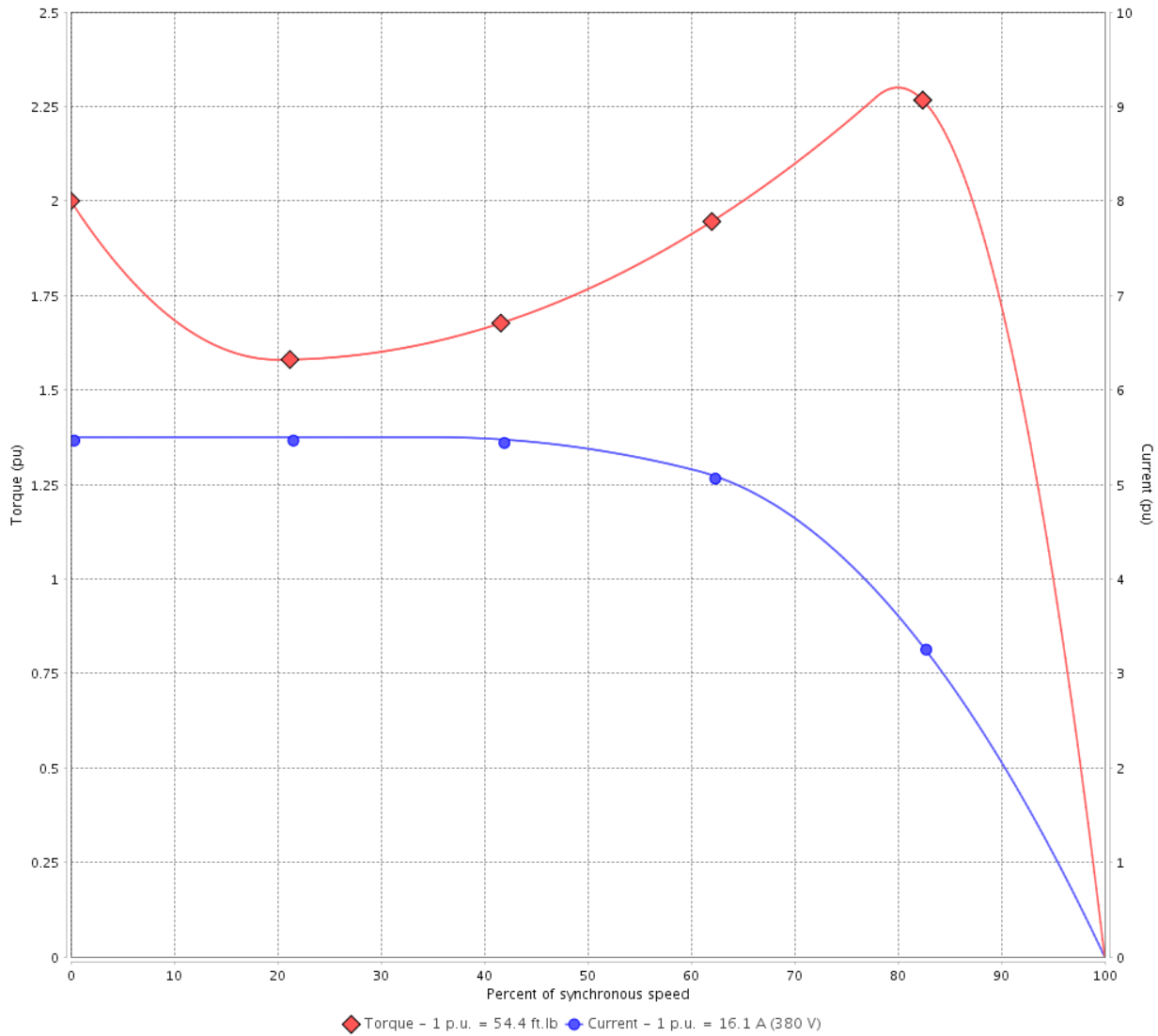
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407016

Catalog # : 01012XT3E256T

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 6P IE2

Rated current	: 16.1 A	Moment of inertia (J)	: 4.15 sq.ft.lb
LRC	: 5.4	Duty cycle	: Cont.(S1)
Rated torque	: 54.4 ft.lb	Insulation class	: F
Locked rotor torque	: 175 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 80 K
Rated speed	: 955 rpm	Design	: B

Locked rotor time : 32s (cold) 18s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



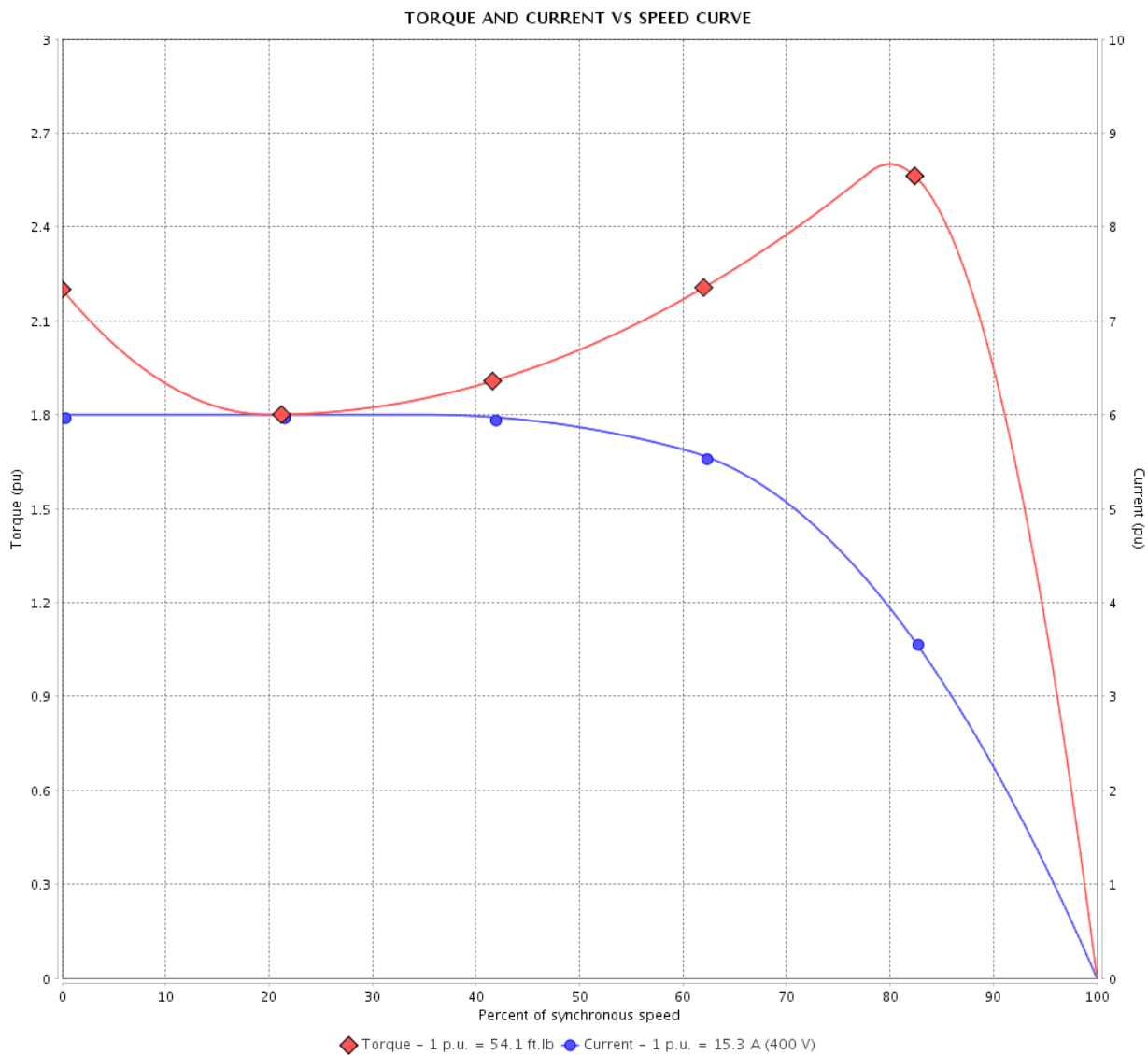
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407016

Catalog # : 01012XT3E256T



Performance : 400 V 50 Hz 6P IE2

Rated current	: 15.3 A	Moment of inertia (J)	: 4.15 sq.ft.lb
LRC	: 6.0	Duty cycle	: Cont.(S1)
Rated torque	: 54.1 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 960 rpm	Design	: B

Locked rotor time : 32s (cold) 18s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage



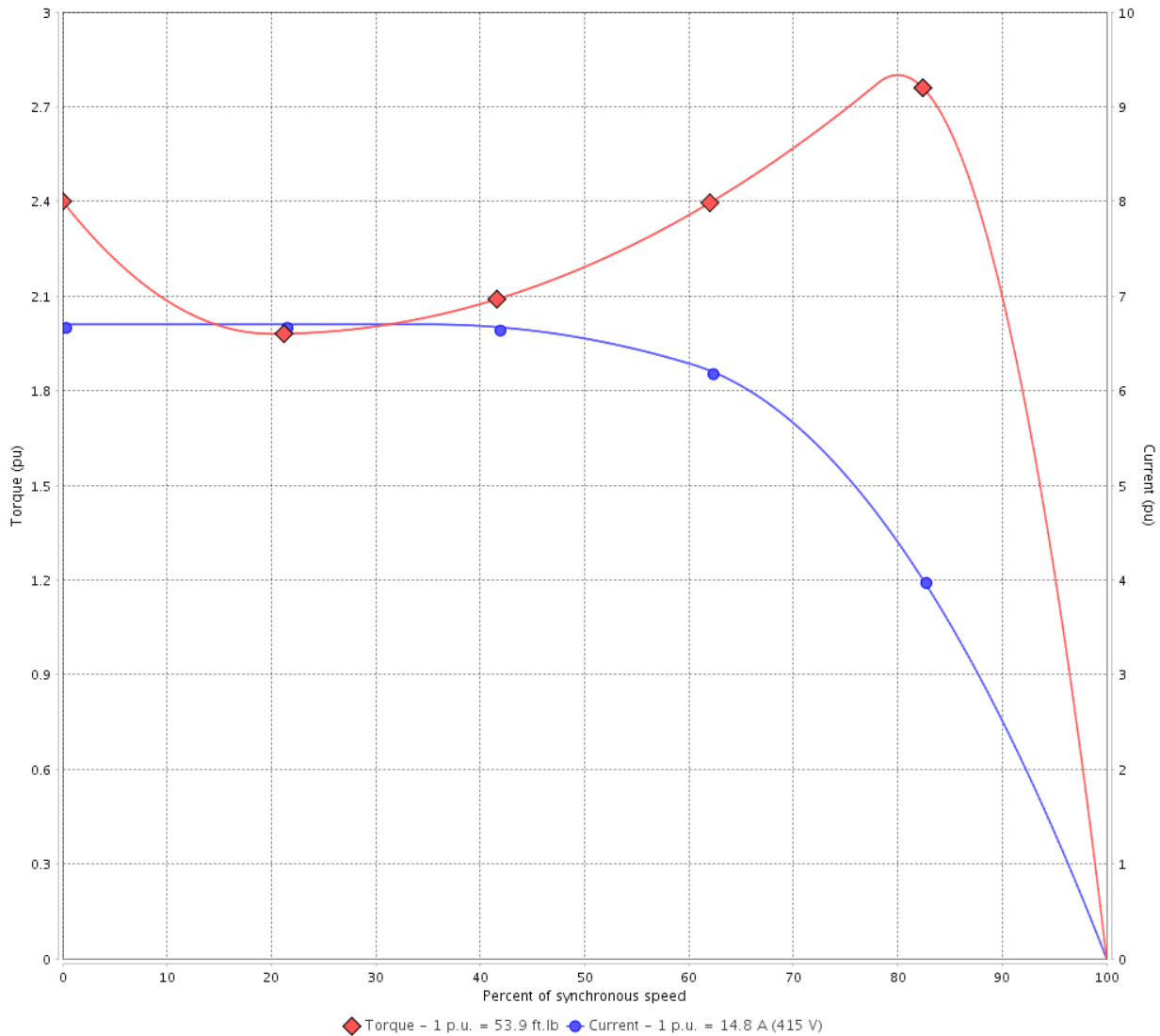
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407016

Catalog # : 01012XT3E256T

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 6P IE3

Rated current	: 14.8 A	Moment of inertia (J)	: 4.15 sq.ft.lb
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 53.9 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 965 rpm	Design	: B

Locked rotor time : 32s (cold) 18s (hot)

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

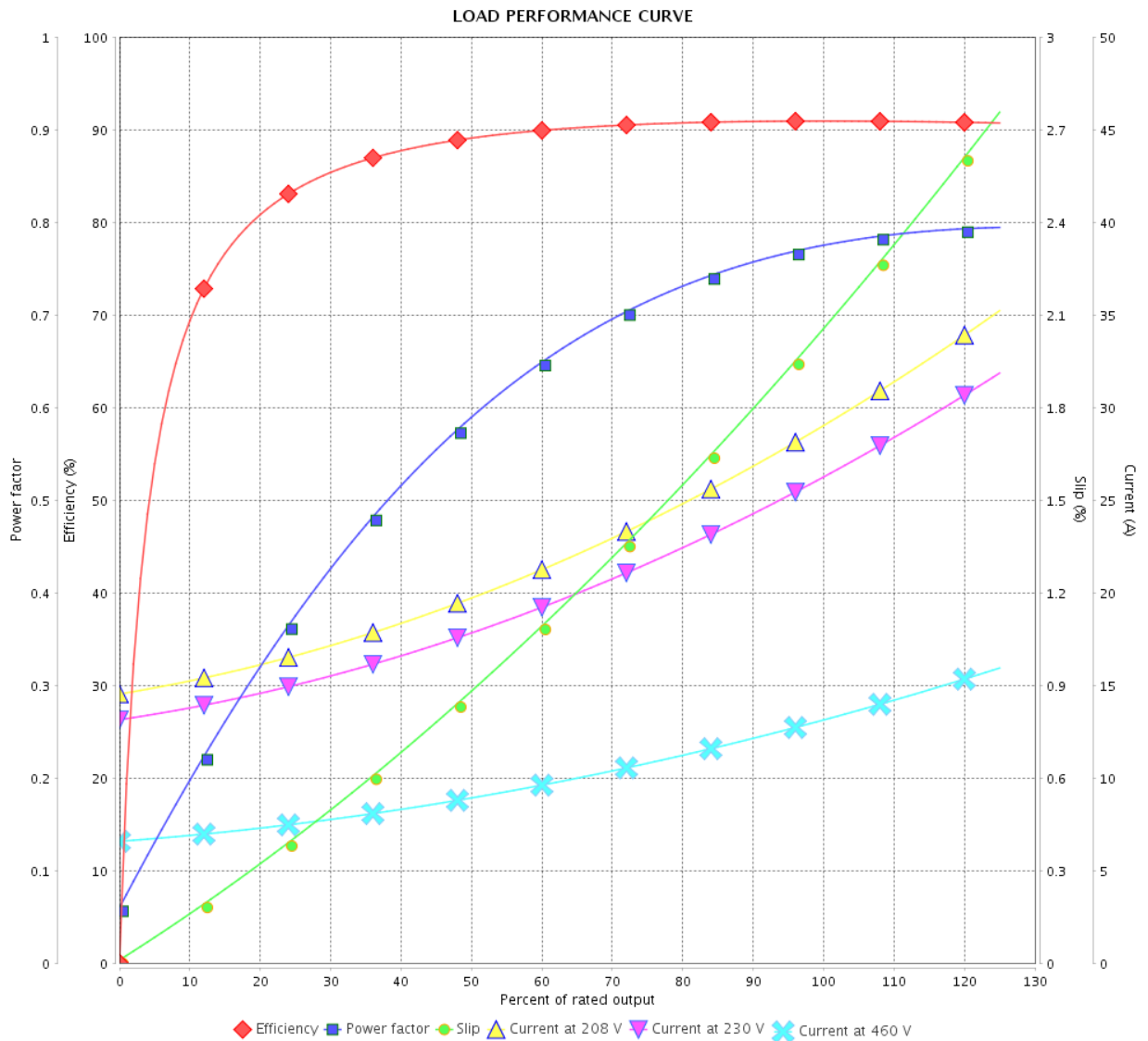


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407016

Catalog # : 01012XT3E256T



Performance : 230/460 V 60 Hz 6P

Rated current : 26.6/13.3 A  
 LRC : 7.2  
 Rated torque : 44.7 ft.lb  
 Locked rotor torque : 270 %  
 Breakdown torque : 310 %  
 Rated speed : 1175 rpm

Moment of inertia (J) : 4.15 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



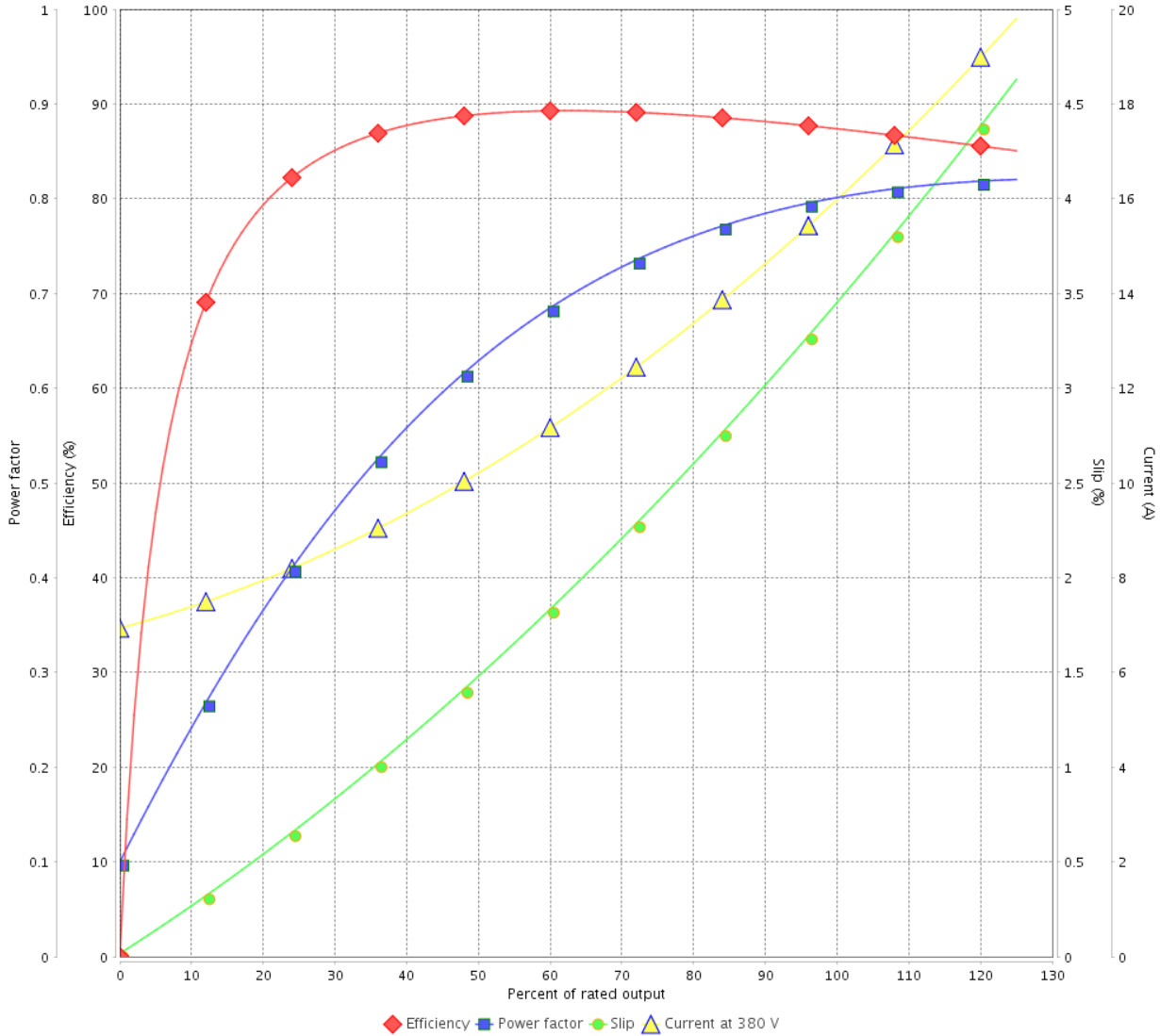
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407016

Catalog # : 01012XT3E256T

LOAD PERFORMANCE CURVE



Performance : 380 V 50 Hz 6P IE2

Rated current : 16.1 A  
 LRC : 5.4  
 Rated torque : 54.4 ft.lb  
 Locked rotor torque : 175 %  
 Breakdown torque : 220 %  
 Rated speed : 955 rpm

Moment of inertia (J) : 4.15 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

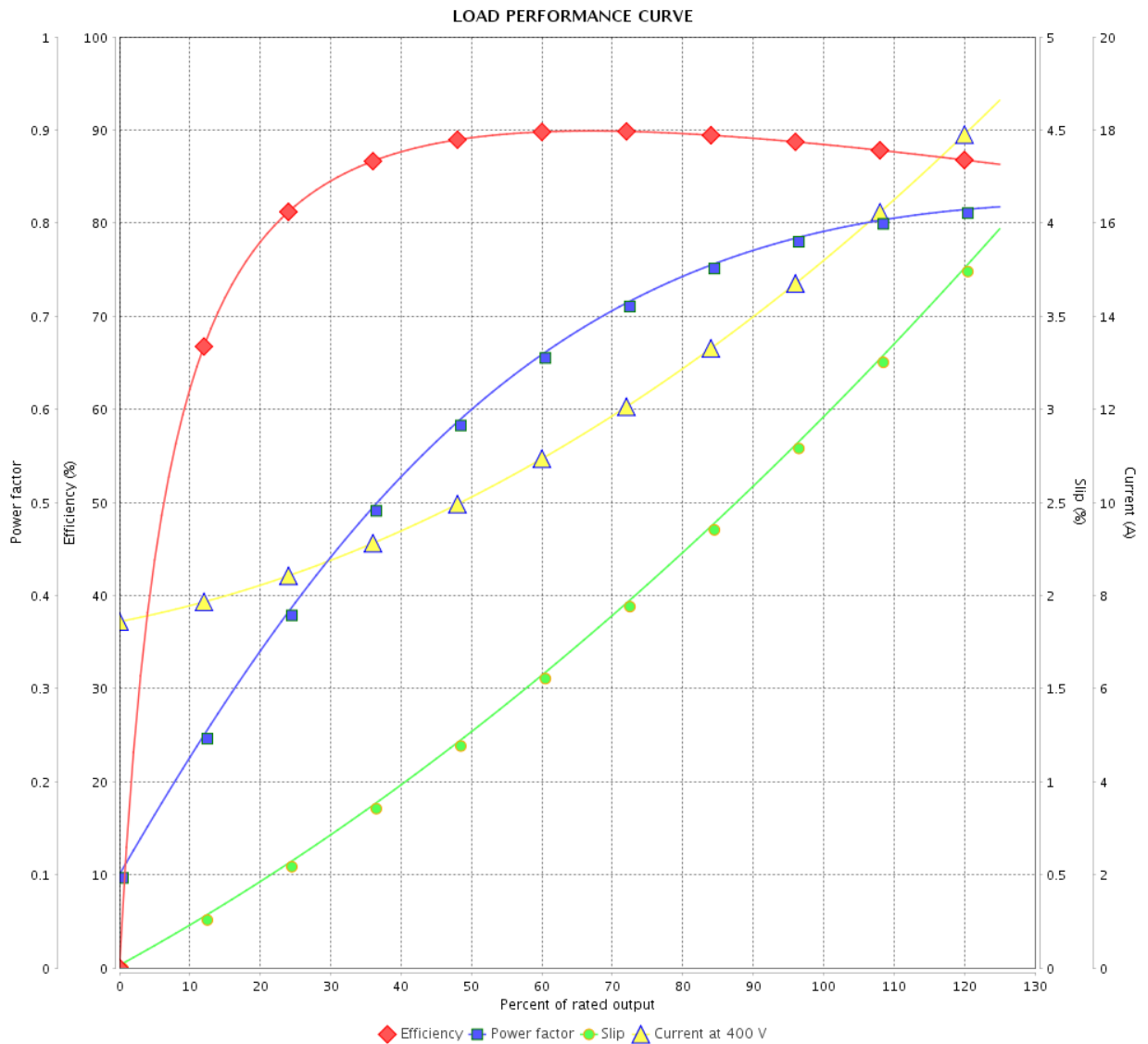


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407016

Catalog # : 01012XT3E256T



Performance : 400 V 50 Hz 6P IE2

Rated current : 15.3 A  
 LRC : 6.0  
 Rated torque : 54.1 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 240 %  
 Rated speed : 960 rpm

Moment of inertia (J) : 4.15 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



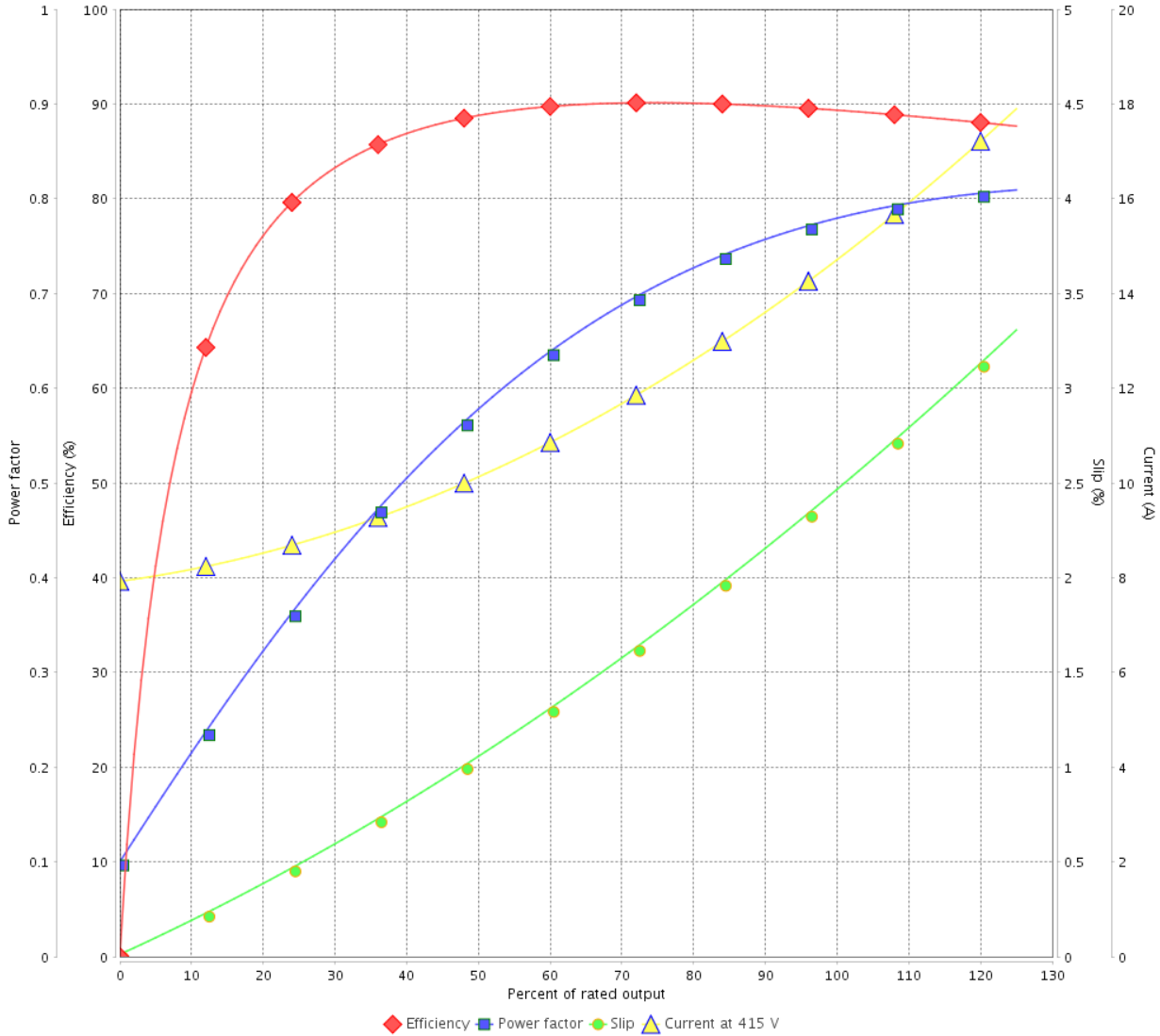
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407016

Catalog # : 01012XT3E256T

LOAD PERFORMANCE CURVE



Performance : 415 V 50 Hz 6P IE3

Rated current : 14.8 A  
 LRC : 6.5  
 Rated torque : 53.9 ft.lb  
 Locked rotor torque : 220 %  
 Breakdown torque : 260 %  
 Rated speed : 965 rpm

Moment of inertia (J) : 4.15 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 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 : 14407016  
 Catalog # : 01012XT3E256T

Performance : 230/460 V 60 Hz 6P

Rated current : 26.6/13.3 A	Moment of inertia (J) : 4.15 sq.ft.lb
LRC : 7.2	Duty cycle : Cont.(S1)
Rated torque : 44.7 ft.lb	Insulation class : F
Locked rotor torque : 270 %	Service factor : 1.15
Breakdown torque : 310 %	Temperature rise : 80 K
Rated speed : 1175 rpm	Design : B

Heating constant

Cooling constant

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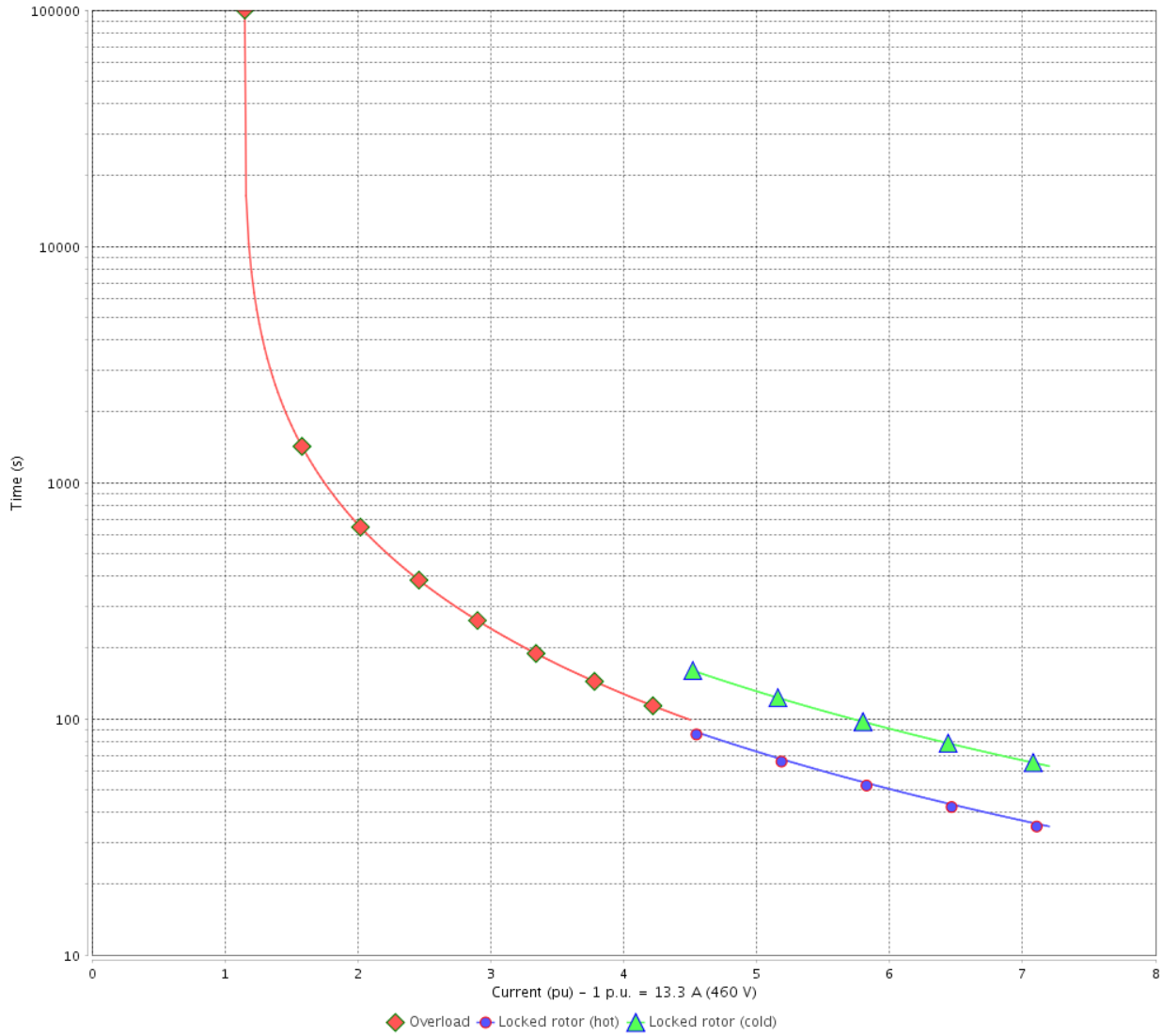
# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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

THERMAL LIMIT CURVE



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Date	12/04/2022			

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
 Product code : 14407016  
 Catalog # : 01012XT3E256T

Performance : 380 V 50 Hz 6P IE2

Rated current : 16.1 A	Moment of inertia (J) : 4.15 sq.ft.lb
LRC : 5.4	Duty cycle : Cont.(S1)
Rated torque : 54.4 ft.lb	Insulation class : F
Locked rotor torque : 175 %	Service factor : 1.00
Breakdown torque : 220 %	Temperature rise : 80 K
Rated speed : 955 rpm	Design : B

Heating constant

Cooling constant

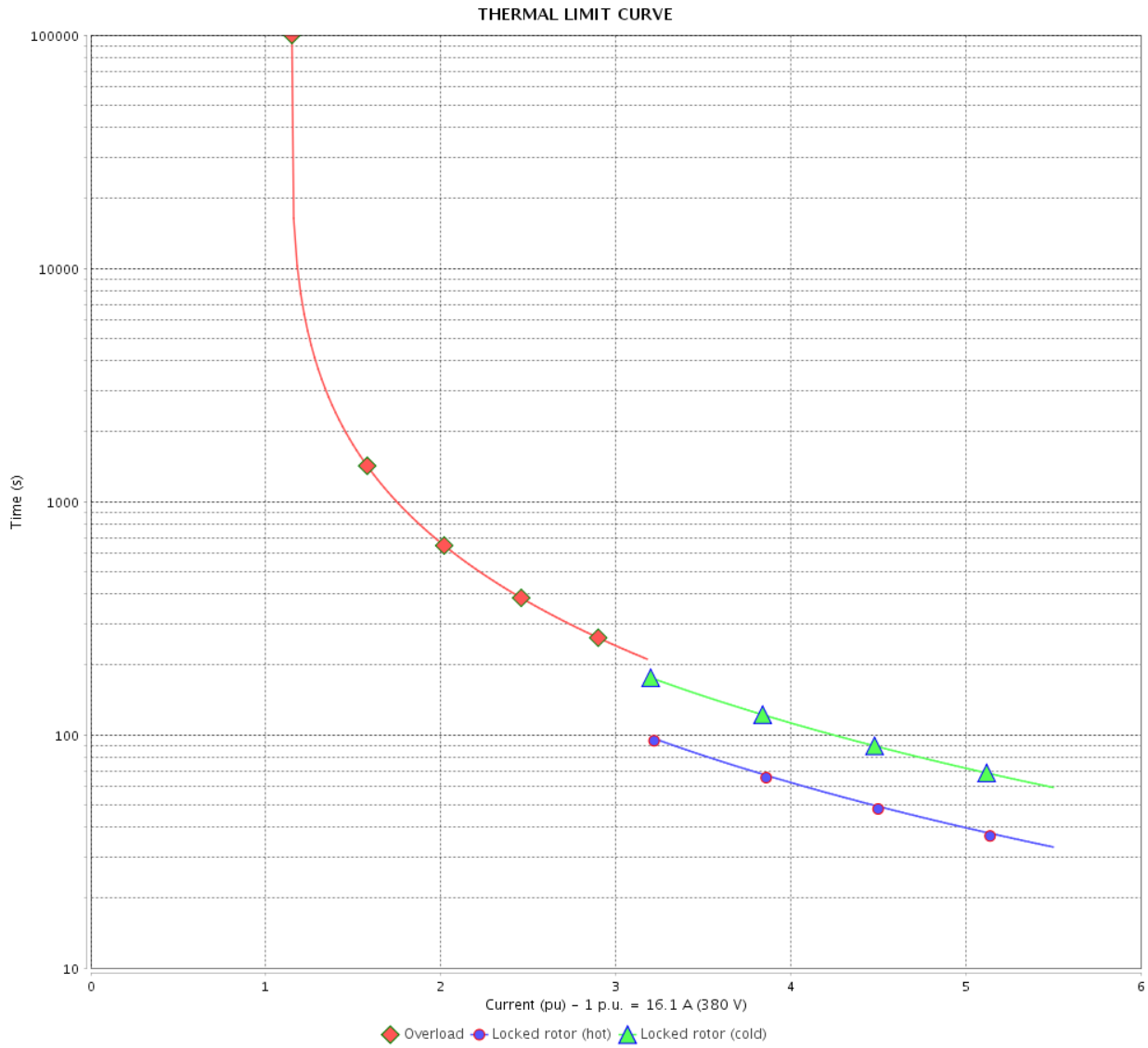
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Date	12/04/2022			

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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Date				

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
 Product code : 14407016  
 Catalog # : 01012XT3E256T

Performance : 400 V 50 Hz 6P IE2

Rated current : 15.3 A	Moment of inertia (J) : 4.15 sq.ft.lb
LRC : 6.0	Duty cycle : Cont.(S1)
Rated torque : 54.1 ft.lb	Insulation class : F
Locked rotor torque : 200 %	Service factor : 1.00
Breakdown torque : 240 %	Temperature rise : 80 K
Rated speed : 960 rpm	Design : B

Heating constant

Cooling constant

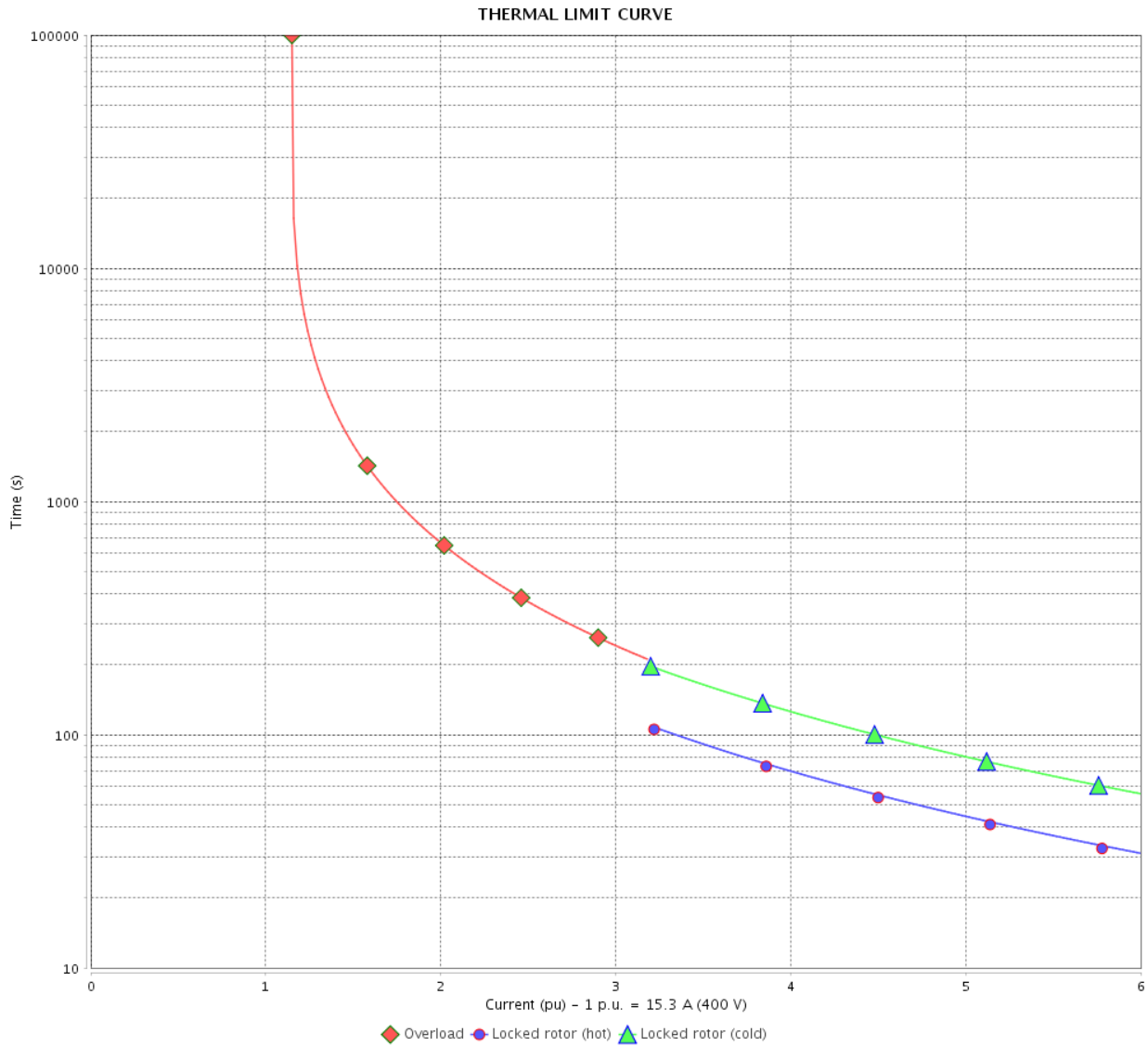
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Date	12/04/2022			

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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Date				



# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
 Product code : 14407016  
 Catalog # : 01012XT3E256T

Performance : 415 V 50 Hz 6P IE3

Rated current : 14.8 A	Moment of inertia (J) : 4.15 sq.ft.lb
LRC : 6.5	Duty cycle : Cont.(S1)
Rated torque : 53.9 ft.lb	Insulation class : F
Locked rotor torque : 220 %	Service factor : 1.00
Breakdown torque : 260 %	Temperature rise : 80 K
Rated speed : 965 rpm	Design : B

Heating constant

Cooling constant

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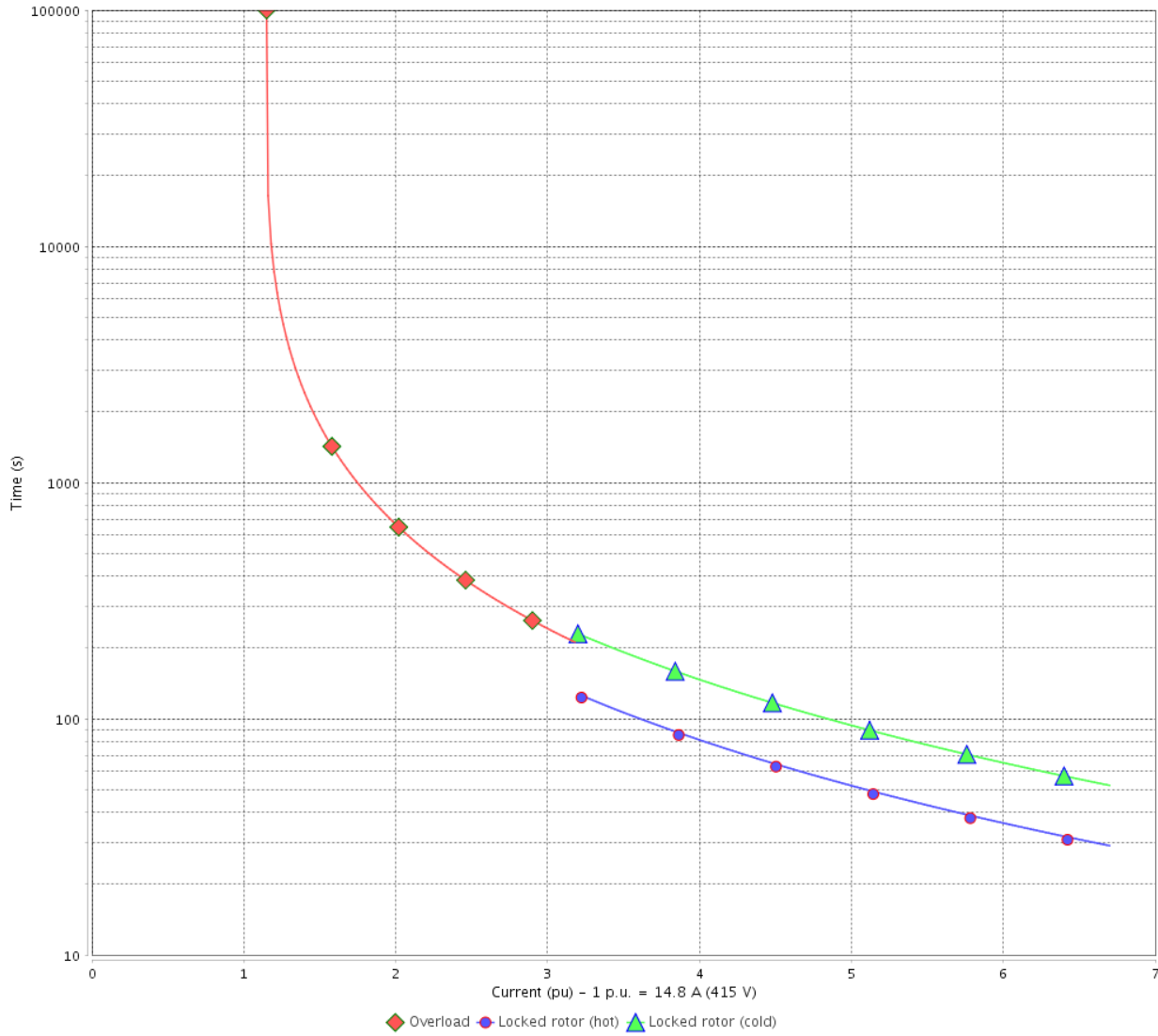
# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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

THERMAL LIMIT CURVE



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# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

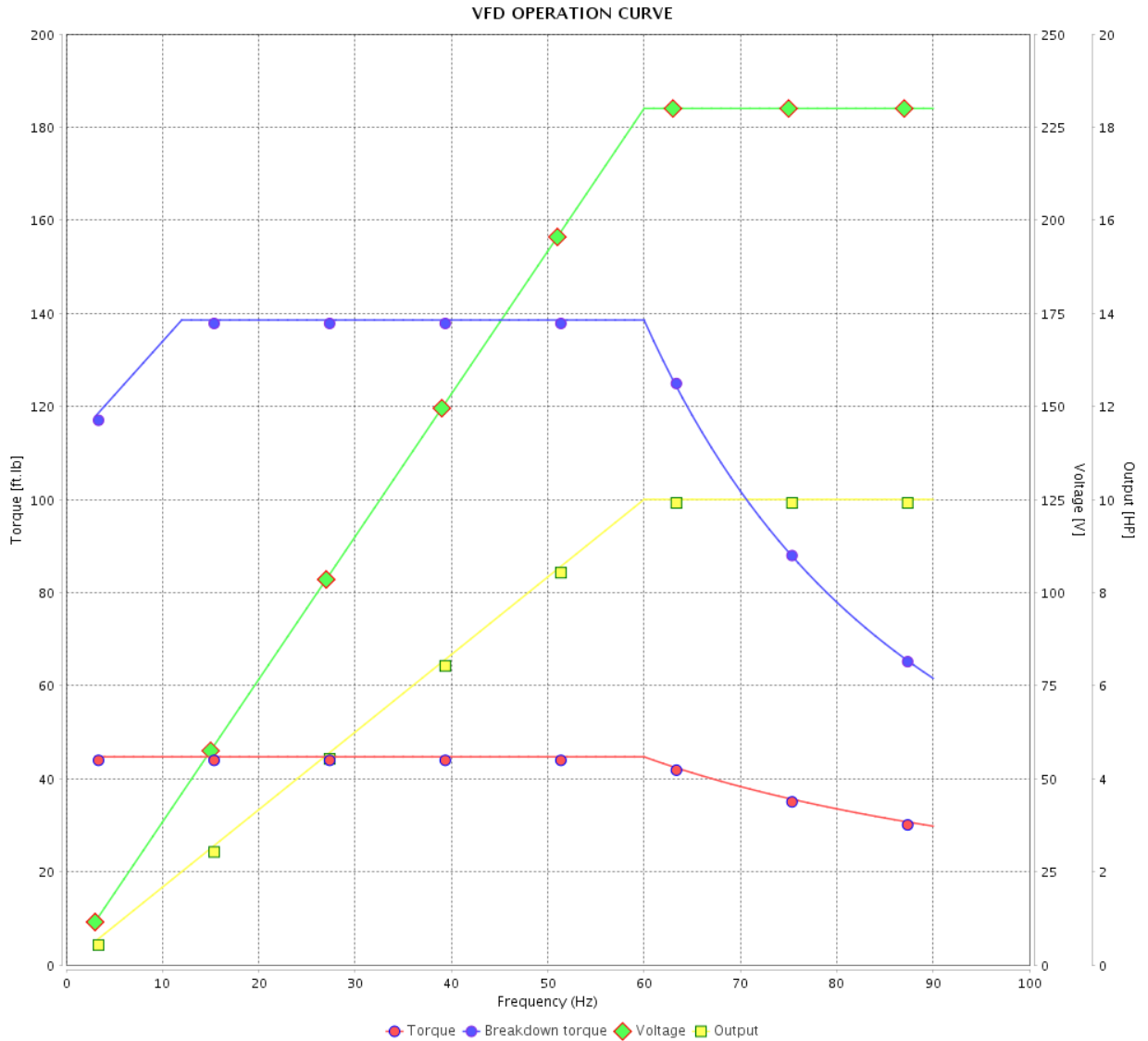


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407016

Catalog # : 01012XT3E256T



Performance : 230/460 V 60 Hz 6P

Rated current : 26.6/13.3 A  
 LRC : 7.2  
 Rated torque : 44.7 ft.lb  
 Locked rotor torque : 270 %  
 Breakdown torque : 310 %  
 Rated speed : 1175 rpm

Moment of inertia (J) : 4.15 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



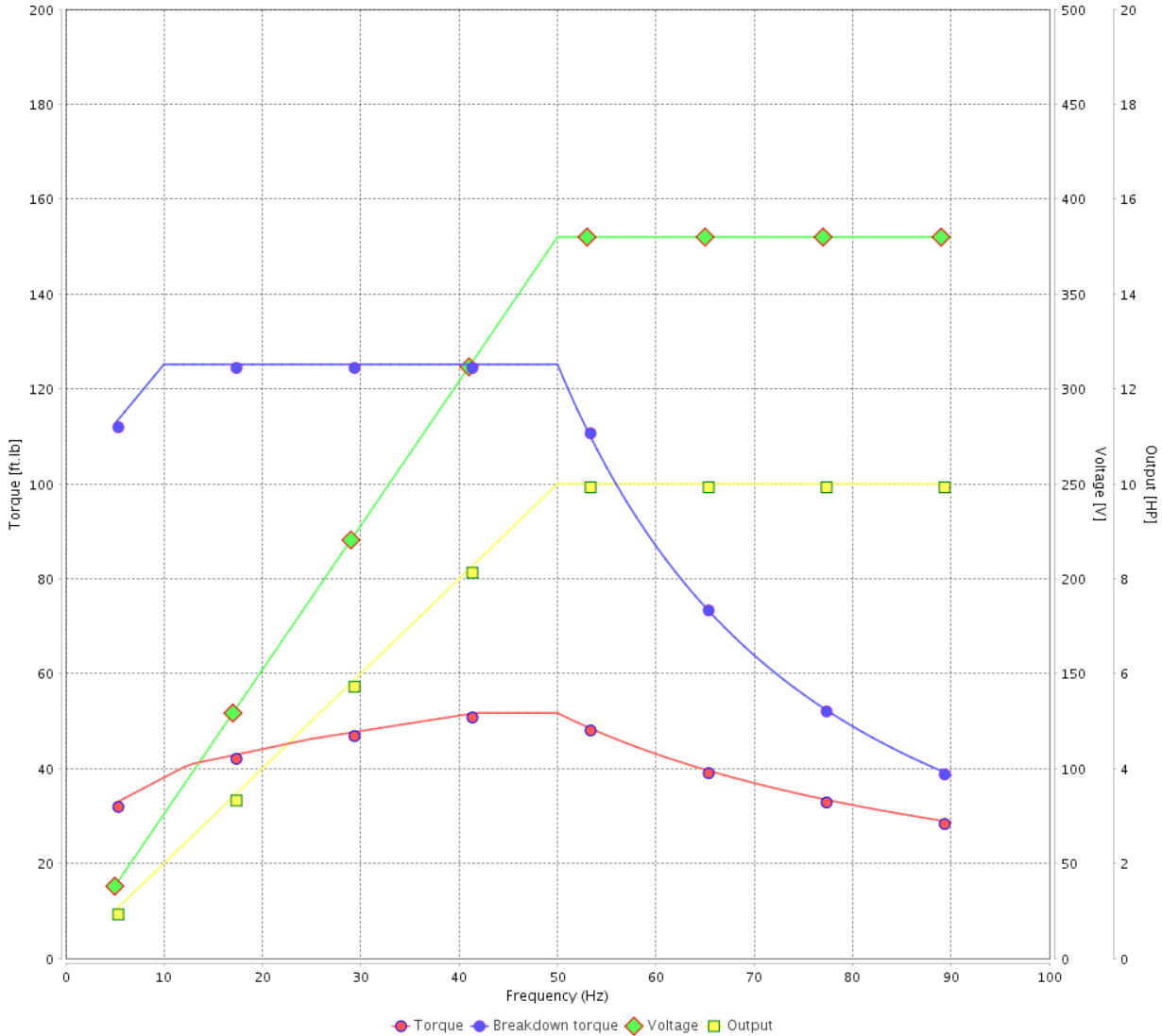
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407016

Catalog # : 01012XT3E256T

VFD OPERATION CURVE



Performance : 380 V 50 Hz 6P IE2

Rated current : 16.1 A  
 LRC : 5.4  
 Rated torque : 54.4 ft.lb  
 Locked rotor torque : 175 %  
 Breakdown torque : 220 %  
 Rated speed : 955 rpm

Moment of inertia (J) : 4.15 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

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# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

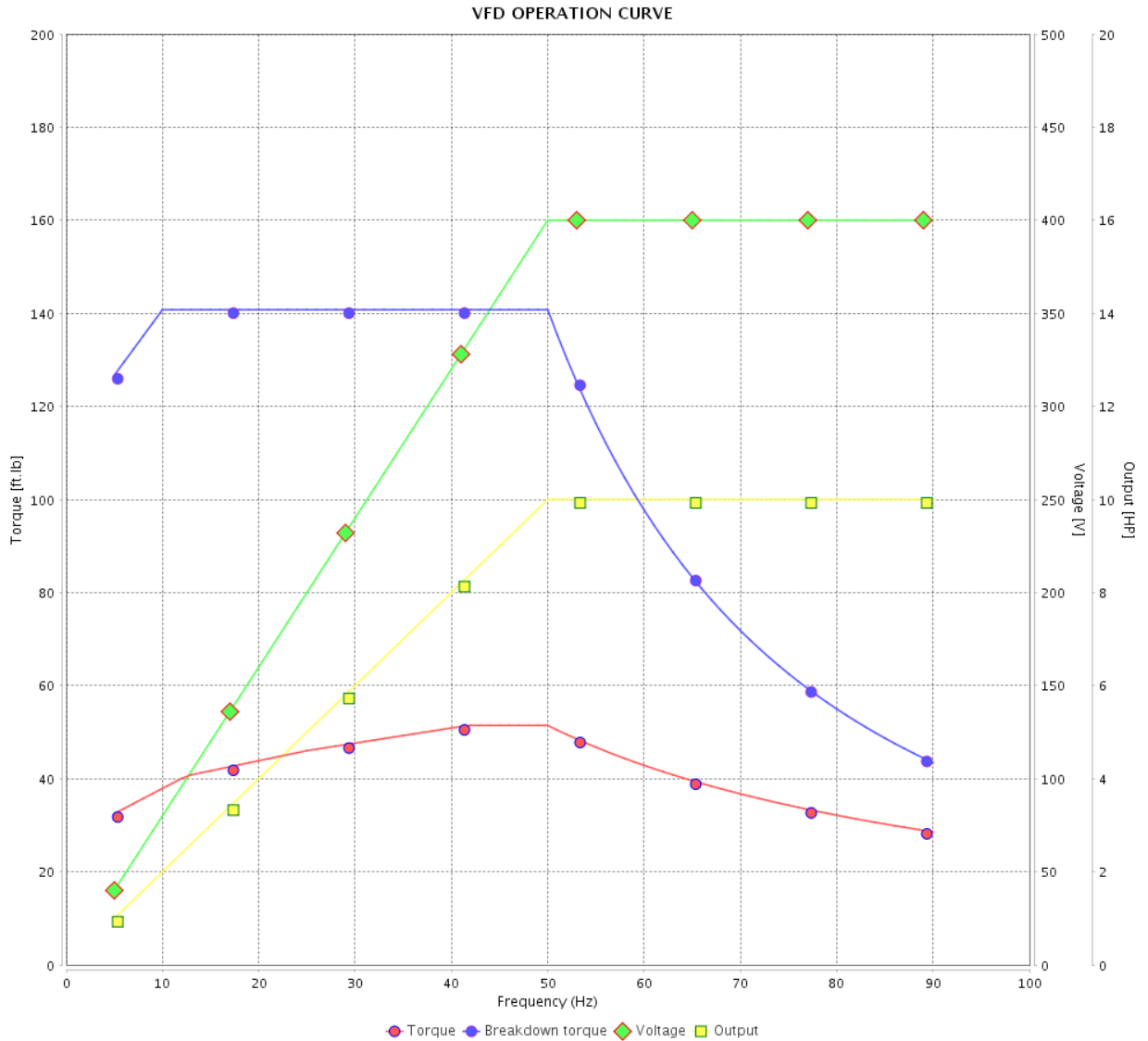


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407016

Catalog # : 01012XT3E256T



Performance : 400 V 50 Hz 6P IE2

Rated current : 15.3 A  
 LRC : 6.0  
 Rated torque : 54.1 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 240 %  
 Rated speed : 960 rpm

Moment of inertia (J) : 4.15 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



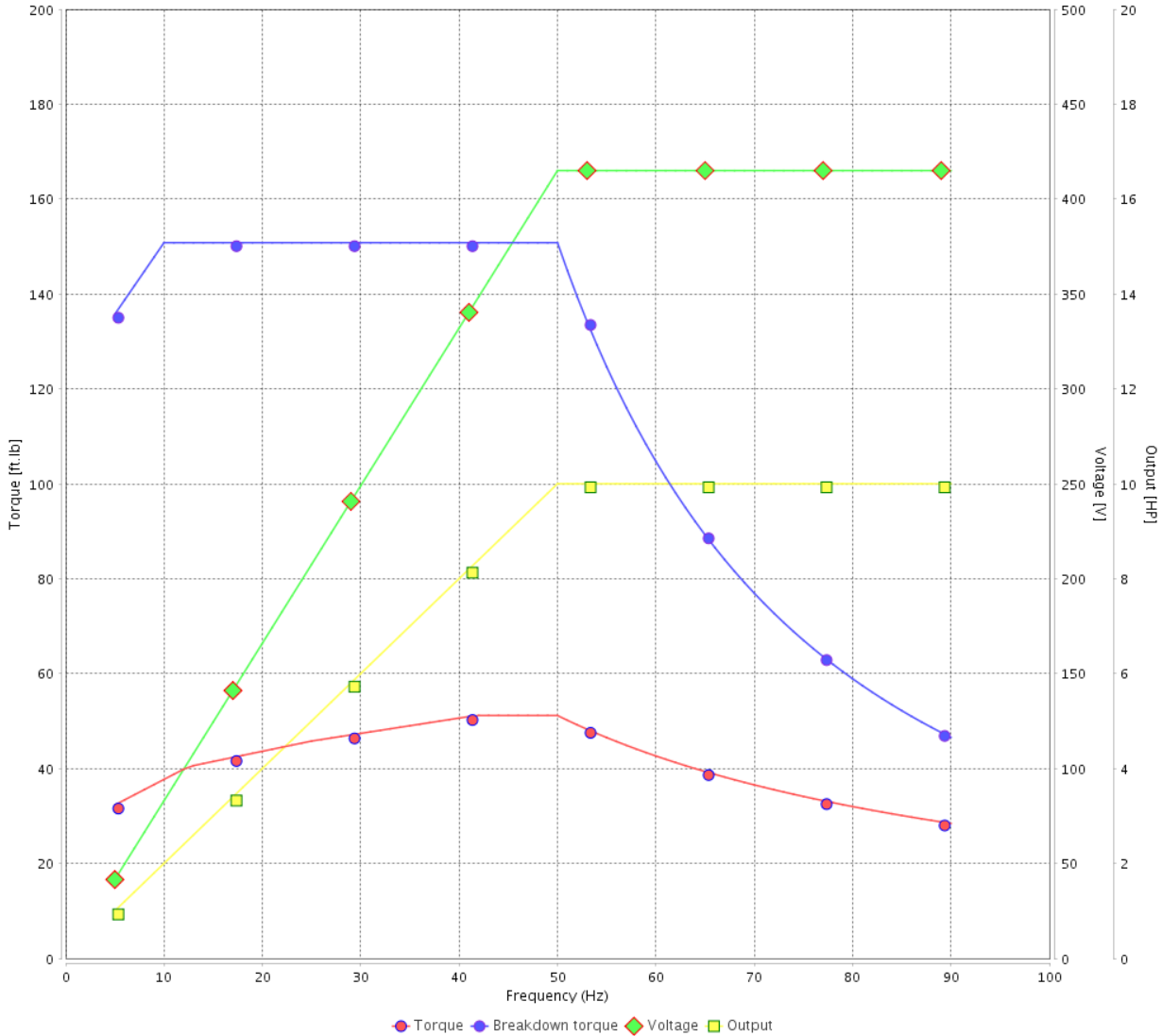
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407016

Catalog # : 01012XT3E256T

VFD OPERATION CURVE



Performance : 415 V 50 Hz 6P IE3

Rated current : 14.8 A  
 LRC : 6.5  
 Rated torque : 53.9 ft.lb  
 Locked rotor torque : 220 %  
 Breakdown torque : 260 %  
 Rated speed : 965 rpm

Moment of inertia (J) : 4.15 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

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1 2 3 4 5 6

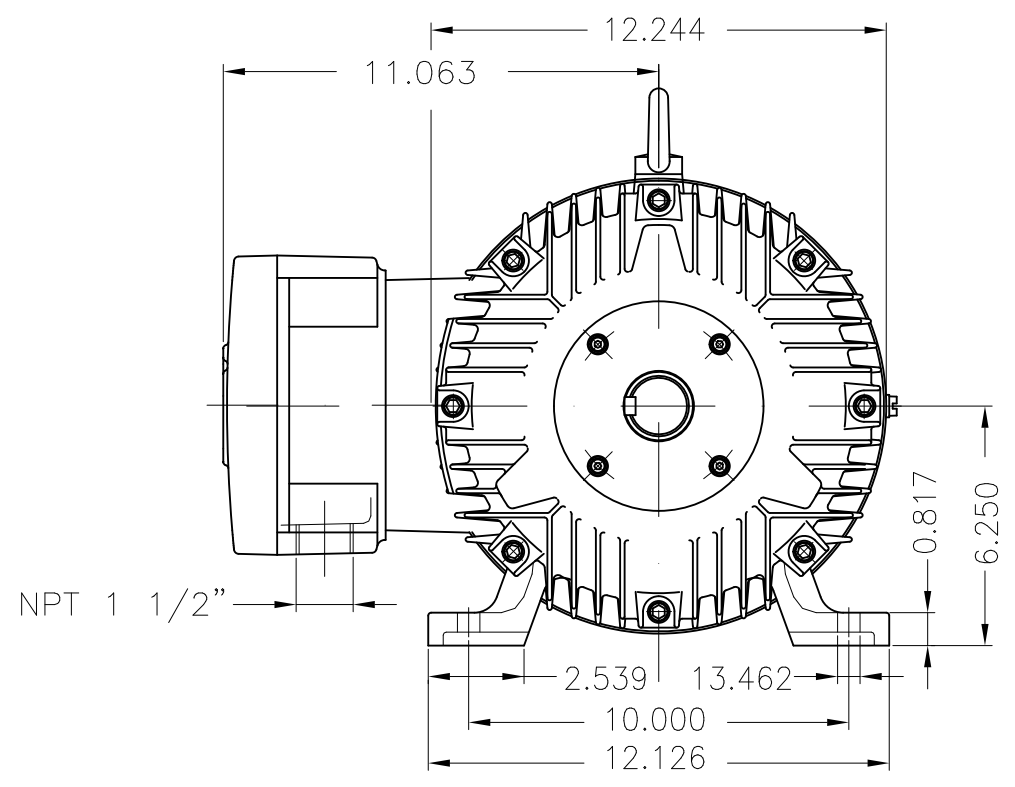
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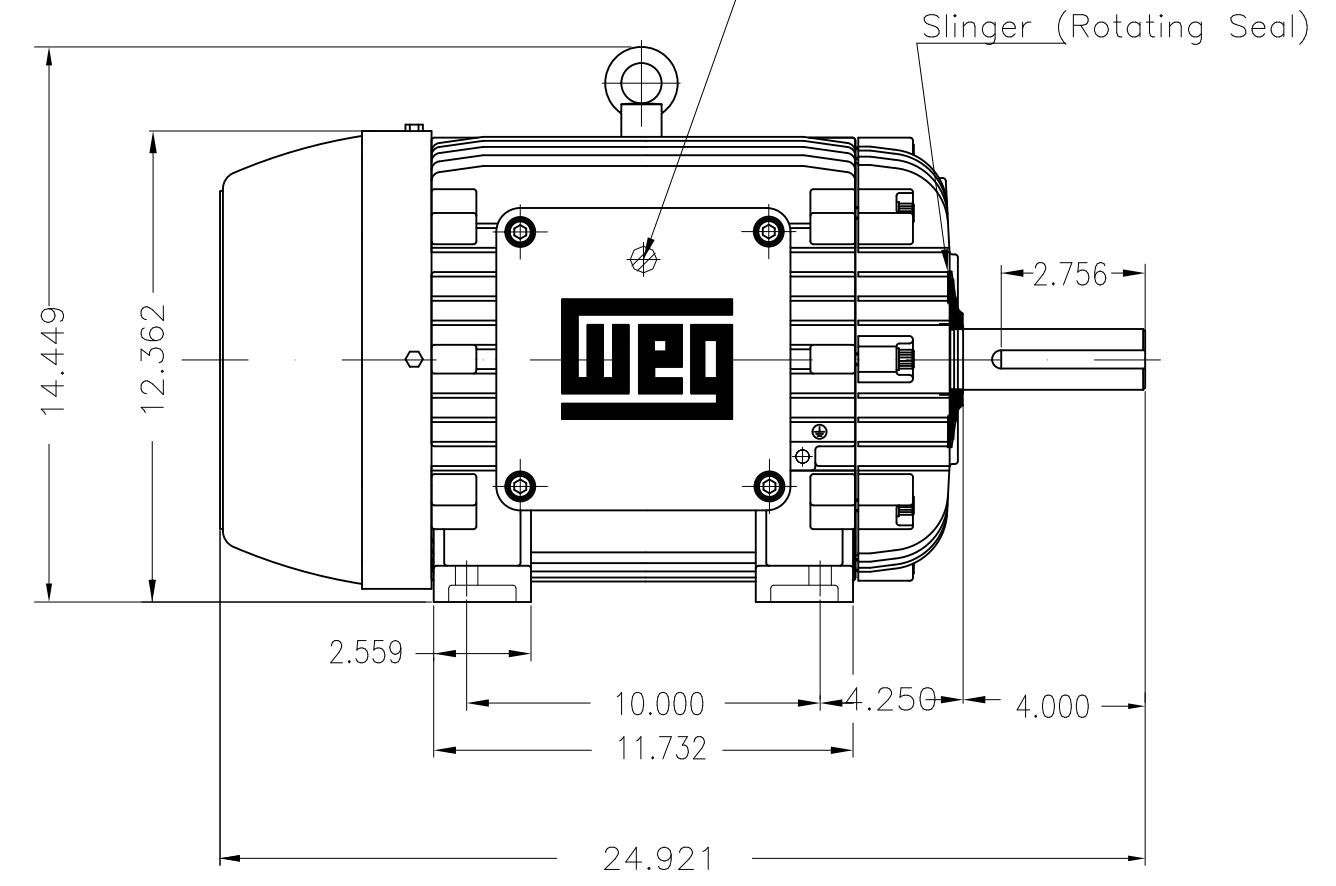
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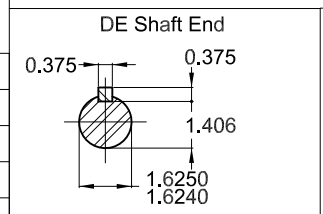


Grounding for leads 5.2–25 mm<sup>2</sup> / 10–4 AWG



10 HP 06 Poles 60 Hz A

- With grease fitting
- Color RAL 5009
- Painting plan 202P
- Mounting NEMA F-1
- Mounting B3R(D)



ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR EXPLOSION PROOF PREM. EFF.					
CHECKED		FRAME 256T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW  
WDD



MADE IN BRAZIL

**W21X NEMA**  
**Premium**

14407016



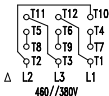
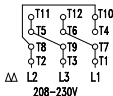
LISTED

CC029A

*Inverter Duty Motor*  
*Severe Duty*

MODEL 01012XT3E256T

PH 3	FR 256T		
HP(kW) 10.0(7.5)		HZ 60	IP55
V 230/460		A 26.6/13.3	
RPM 1175		NEMA NOM EFF 91.0%	
PF 0.78		SFA 30.6/15.3	DES B
INS CL F $\Delta$ T 80 K		SF 1.15	ENCL TEFC
DUTY CONT.		CODE J	ALT 1000 m.a.s.l.
AMB 40°C	USABLE @208V	29.4 A	SF 1.15 SFA 33.8
AMB 55°C SF1.0			
10HP 7.5kW 50Hz 380V 16.1A 965RPM SF1.00 EFF 87.5% (IE2)			



→ 6309-C3 MOBIL POLYREX EM  
→ 6209-C3 13 g 20000 h

368 Lbs



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, 6:1CT, 1.0SF, T3C, AMB 40°C.