

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	14345152		
		Catalog # :	00118XT3ER143TC		
Frame	: 143/5TC	Cooling method	: IC411 - TEFC		
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>	: 68.1 lb		
Protection degree	: IP55	Moment of inertia (J)	: 0.0975 sq.ft.lb		
Design	: B				
Output [HP]	1	1	1	1	
Poles	4	4	4	4	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	2.86/1.43	1.68	1.64	1.59	
L. R. Amperes [A]	24.6/12.3	11.3	12.1	12.6	
LRC [A]	8.6x(Code M)	6.7x(Code J)	7.4x(Code K)	7.9x(Code L)	
No load current [A]	1.87/0.935	0.924	0.990	1.06	
Rated speed [RPM]	1760	1440	1450	1450	
Slip [%]	2.22	4.00	3.33	3.33	
Rated torque [ft.lb]	2.99	3.63	3.62	3.61	
Locked rotor torque [%]	290	220	250	280	
Breakdown torque [%]	370	250	280	310	
Service factor	1.15	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	32s (cold) 18s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)	
Noise level <sup>2</sup>	51.0 dB(A)	49.0 dB(A)	49.0 dB(A)	49.0 dB(A)	
Efficiency (%)	25%	77.3	81.2	80.7	78.4
	50%	80.0	81.5	81.0	80.0
	75%	82.5	82.5	82.5	82.5
	100%	85.5	82.5	82.5	84.0
Power Factor	25%	0.32	0.37	0.34	0.32
	50%	0.57	0.65	0.61	0.58
	75%	0.70	0.77	0.74	0.72
	100%	0.77	0.82	0.80	0.78
Bearing type	: Drive end : 6205 2RS Non drive end : 6204 2RS	Foundation loads	Max. traction : 63 lb Max. compression : 131 lb		
Sealing	: Oil Seal Lip Seal				
Lubrication interval	: - -				
Lubricant amount	: - -				
Lubricant type	: Mobil Polyrex EM				
Notes USABLE @208V 3.16A SF 1.15 SFA 3.64A					
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



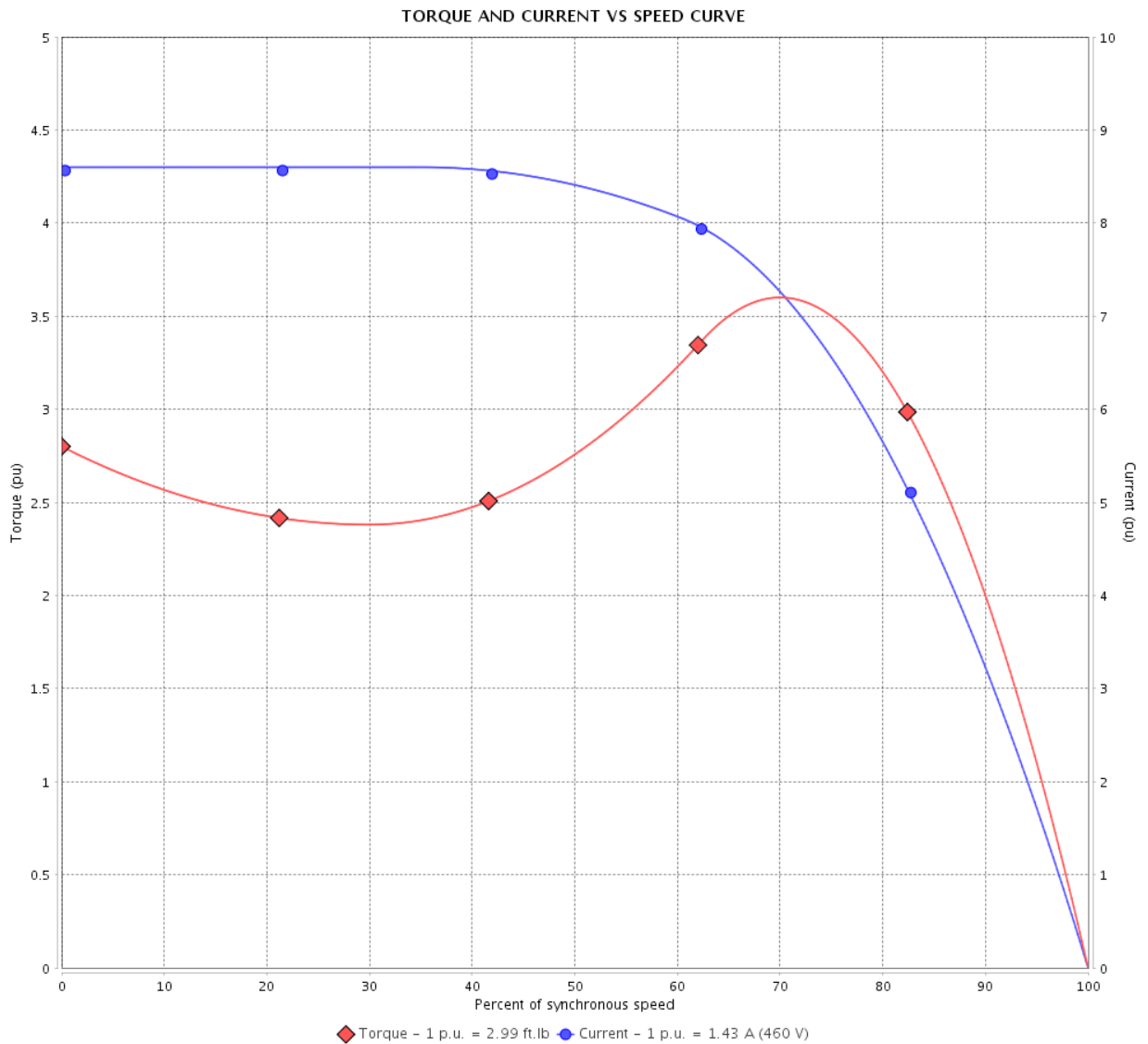
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14345152

Catalog # : 00118XT3ER143TC



Performance : 230/460 V 60 Hz 4P

Rated current : 2.86/1.43 A  
 LRC : 8.6  
 Rated torque : 2.99 ft.lb  
 Locked rotor torque : 290 %  
 Breakdown torque : 370 %  
 Rated speed : 1760 rpm

Moment of inertia (J) : 0.0975 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 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



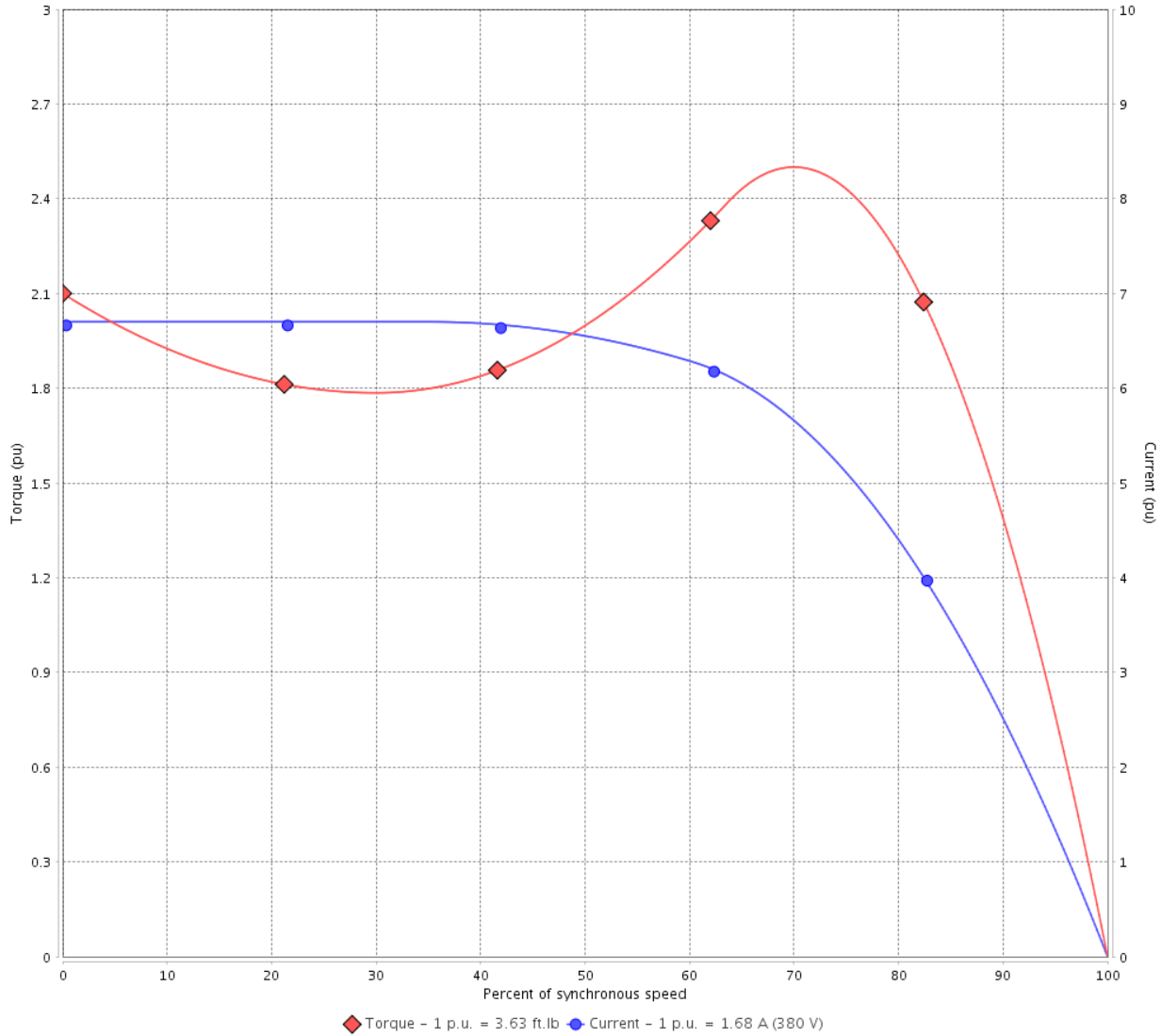
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14345152

Catalog # : 00118XT3ER143TC

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 4P IE3

Rated current	: 1.68 A	Moment of inertia (J)	: 0.0975 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 3.63 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1440 rpm	Design	: B

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

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# TORQUE AND CURRENT VS SPEED CURVE



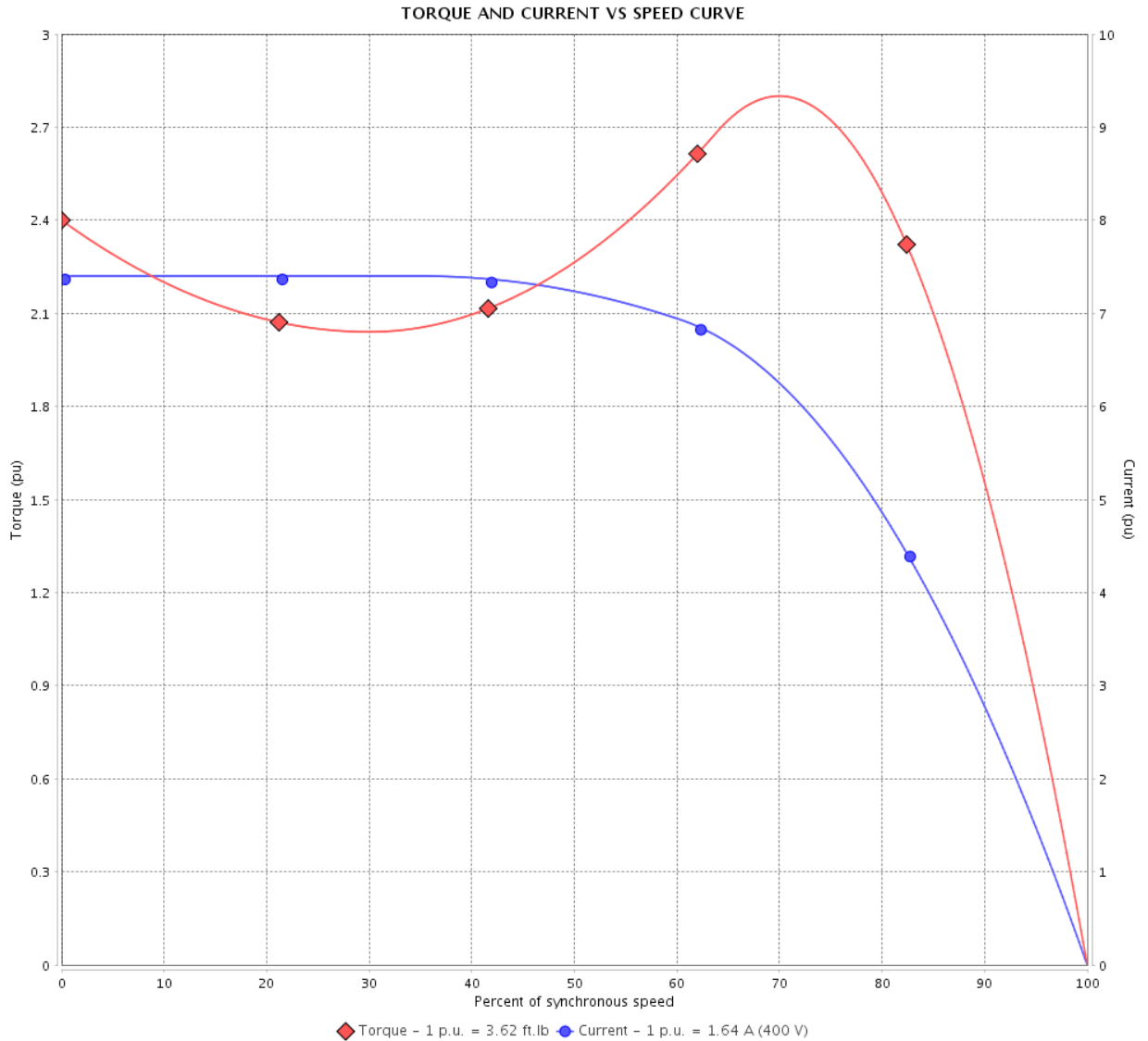
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14345152

Catalog # : 00118XT3ER143TC



Performance : 400 V 50 Hz 4P IE3

Rated current : 1.64 A  
 LRC : 7.4  
 Rated torque : 3.62 ft.lb  
 Locked rotor torque : 250 %  
 Breakdown torque : 280 %  
 Rated speed : 1450 rpm

Moment of inertia (J) : 0.0975 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 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



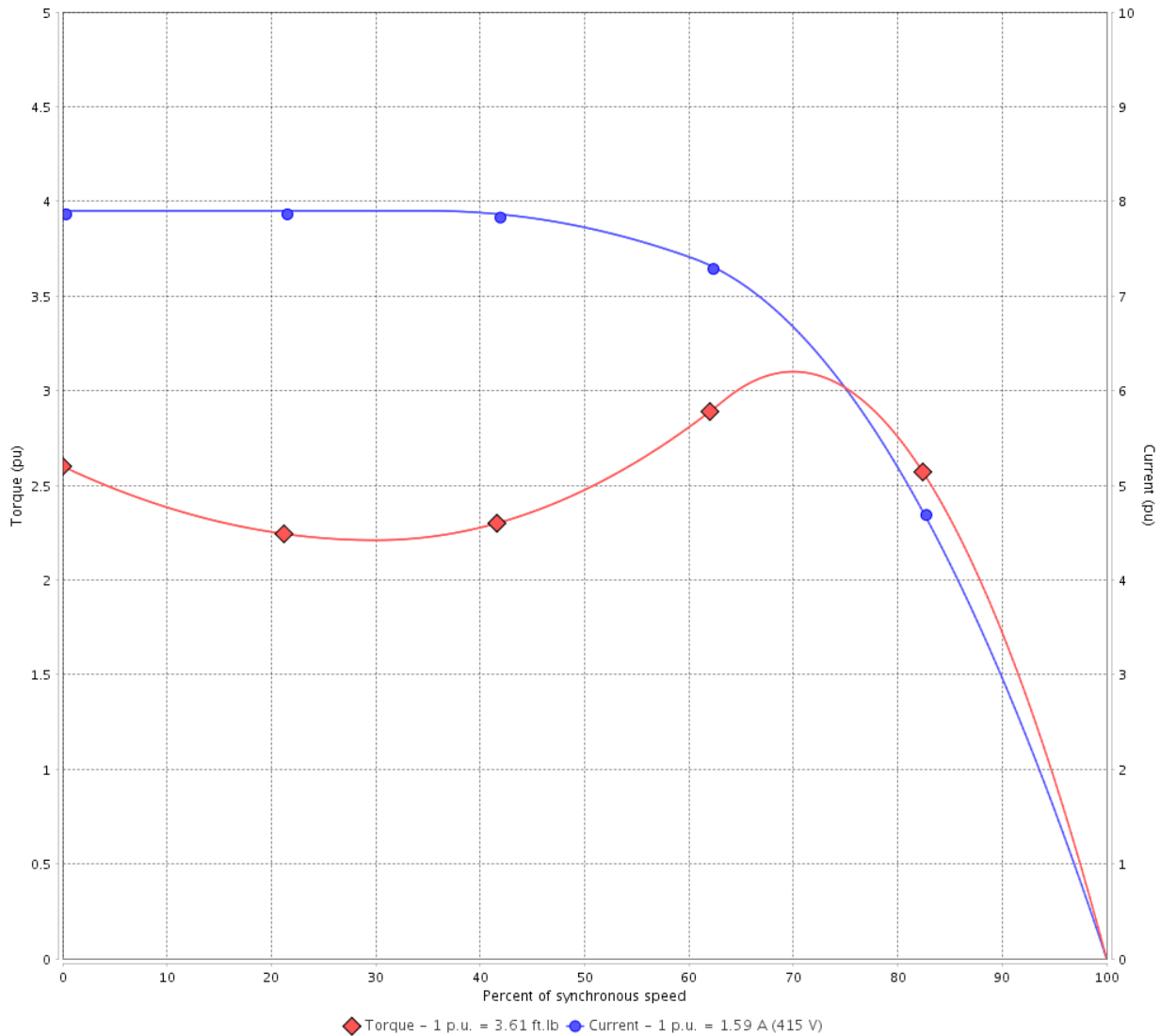
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Product line : NEMA Premium Efficiency Three-Phase

Product code : 14345152

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TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 4P IE3

Rated current	: 1.59 A	Moment of inertia (J)	: 0.0975 sq.ft.lb
LRC	: 7.9	Duty cycle	: Cont.(S1)
Rated torque	: 3.61 ft.lb	Insulation class	: F
Locked rotor torque	: 280 %	Service factor	: 1.00
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 1450 rpm	Design	: B

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

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

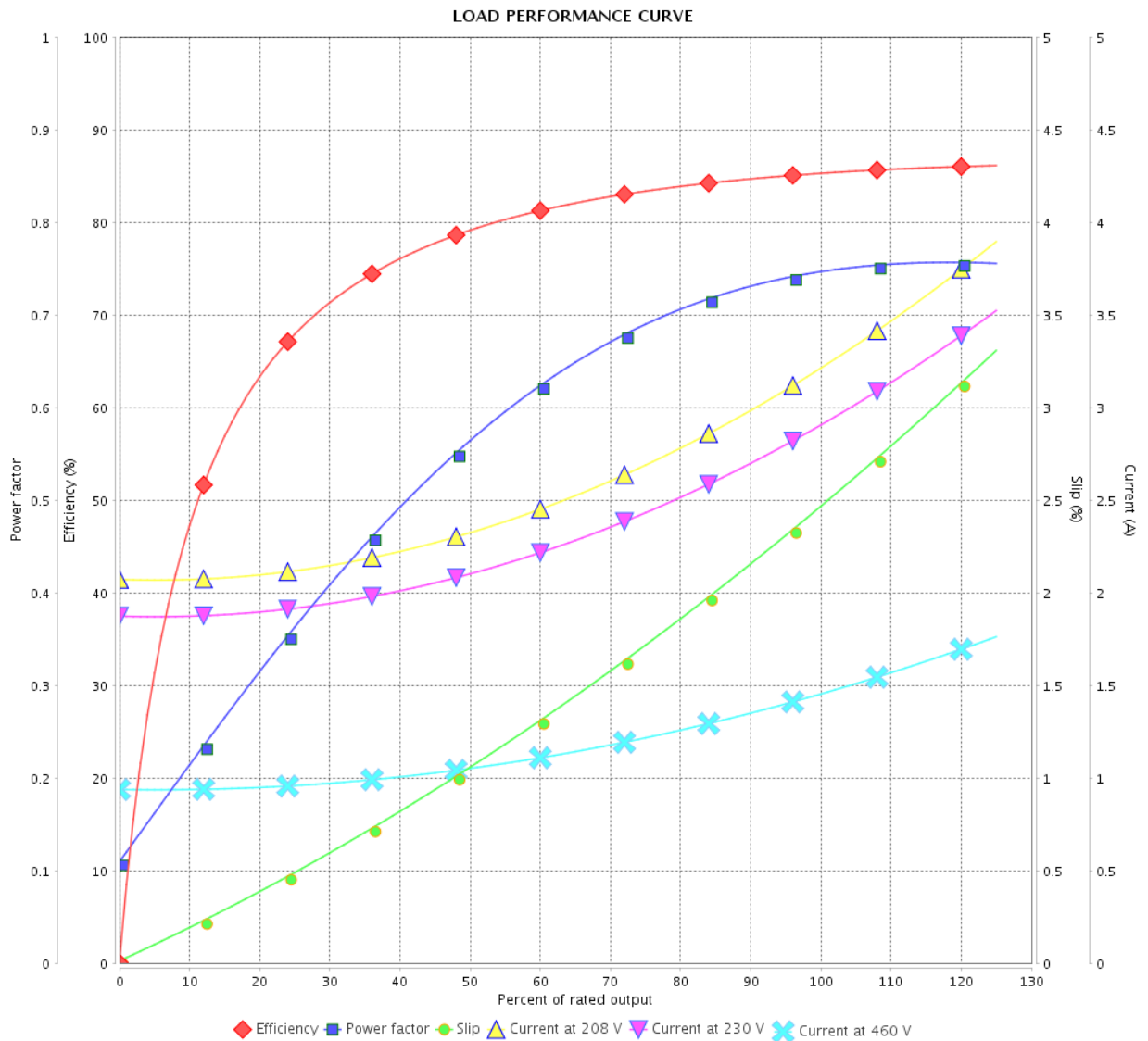


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14345152

Catalog # : 00118XT3ER143TC



Performance : 230/460 V 60 Hz 4P

Rated current : 2.86/1.43 A  
 LRC : 8.6  
 Rated torque : 2.99 ft.lb  
 Locked rotor torque : 290 %  
 Breakdown torque : 370 %  
 Rated speed : 1760 rpm

Moment of inertia (J) : 0.0975 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



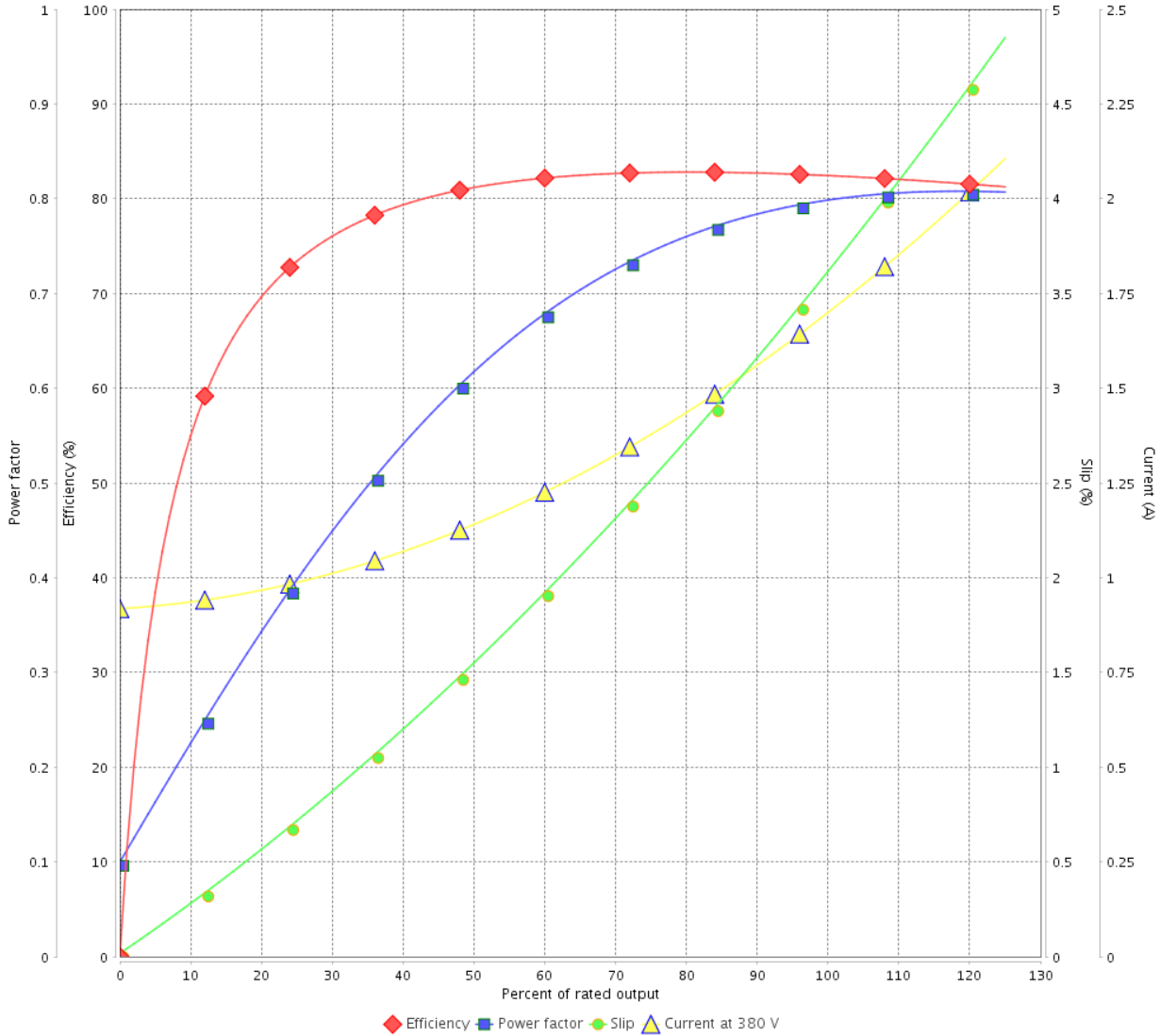
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14345152

Catalog # : 00118XT3ER143TC

LOAD PERFORMANCE CURVE



Performance : 380 V 50 Hz 4P IE3

Rated current : 1.68 A  
 LRC : 6.7  
 Rated torque : 3.63 ft.lb  
 Locked rotor torque : 220 %  
 Breakdown torque : 250 %  
 Rated speed : 1440 rpm

Moment of inertia (J) : 0.0975 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

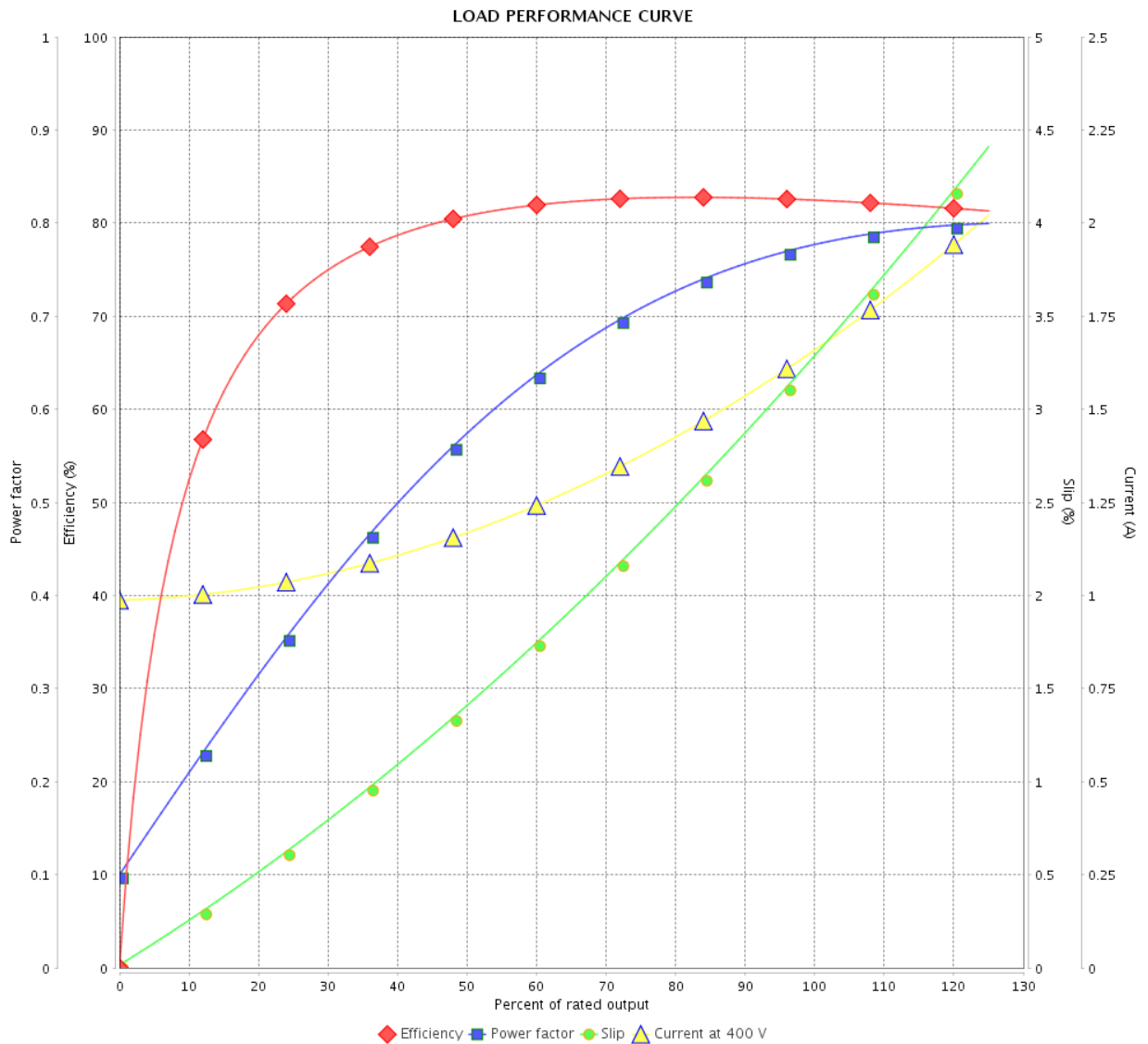


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Product line : NEMA Premium Efficiency Three-Phase

Product code : 14345152

Catalog # : 00118XT3ER143TC



Performance : 400 V 50 Hz 4P IE3

Rated current : 1.64 A  
 LRC : 7.4  
 Rated torque : 3.62 ft.lb  
 Locked rotor torque : 250 %  
 Breakdown torque : 280 %  
 Rated speed : 1450 rpm

Moment of inertia (J) : 0.0975 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



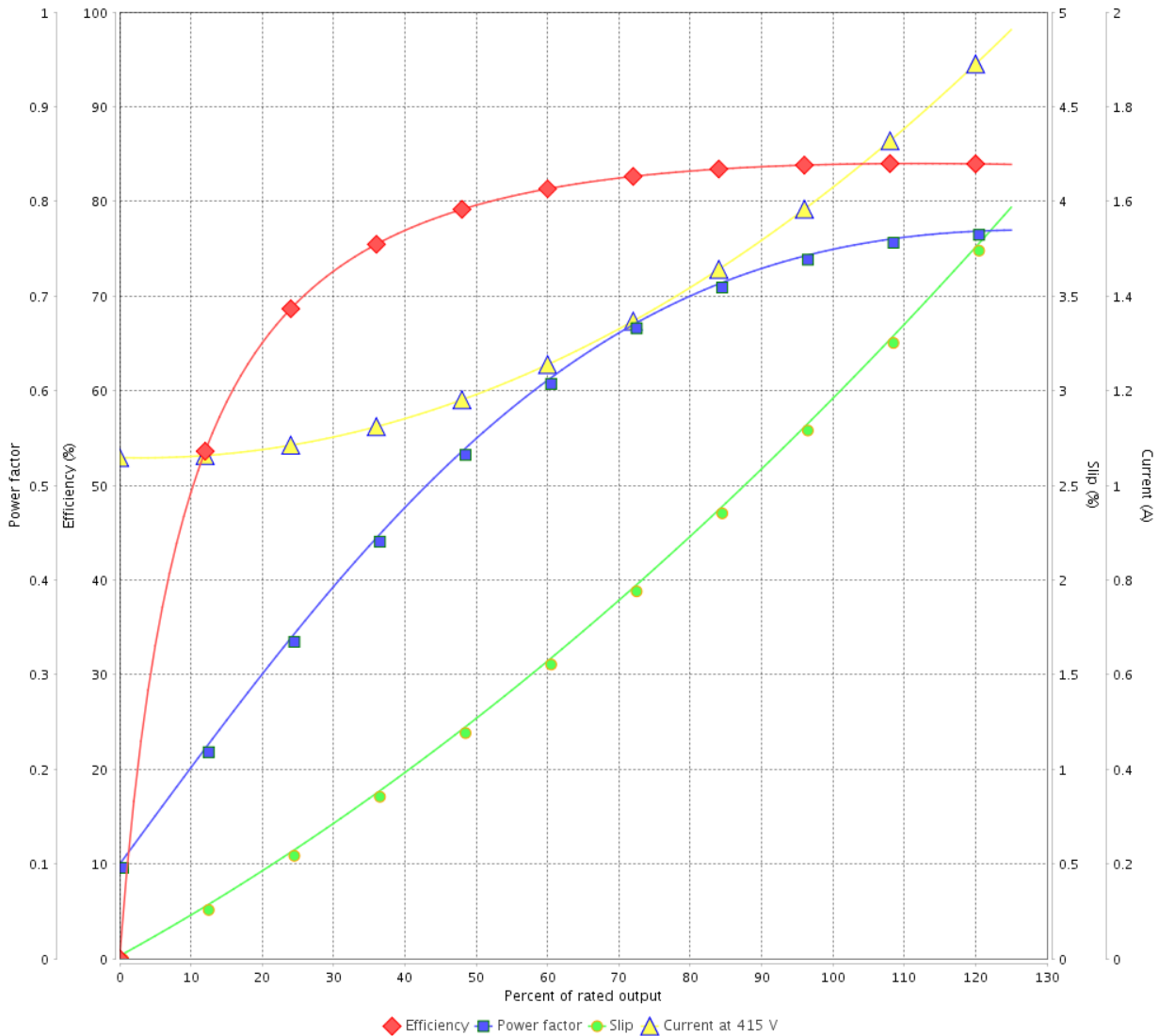
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Product line : NEMA Premium Efficiency Three-Phase

Product code : 14345152

Catalog # : 00118XT3ER143TC

LOAD PERFORMANCE CURVE



Performance : 415 V 50 Hz 4P IE3

Rated current : 1.59 A  
 LRC : 7.9  
 Rated torque : 3.61 ft.lb  
 Locked rotor torque : 280 %  
 Breakdown torque : 310 %  
 Rated speed : 1450 rpm

Moment of inertia (J) : 0.0975 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

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 Product code : 14345152  
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Performance : 230/460 V 60 Hz 4P

Rated current : 2.86/1.43 A	Moment of inertia (J) : 0.0975 sq.ft.lb
LRC : 8.6	Duty cycle : Cont.(S1)
Rated torque : 2.99 ft.lb	Insulation class : F
Locked rotor torque : 290 %	Service factor : 1.15
Breakdown torque : 370 %	Temperature rise : 80 K
Rated speed : 1760 rpm	Design : B

Heating constant

Cooling constant

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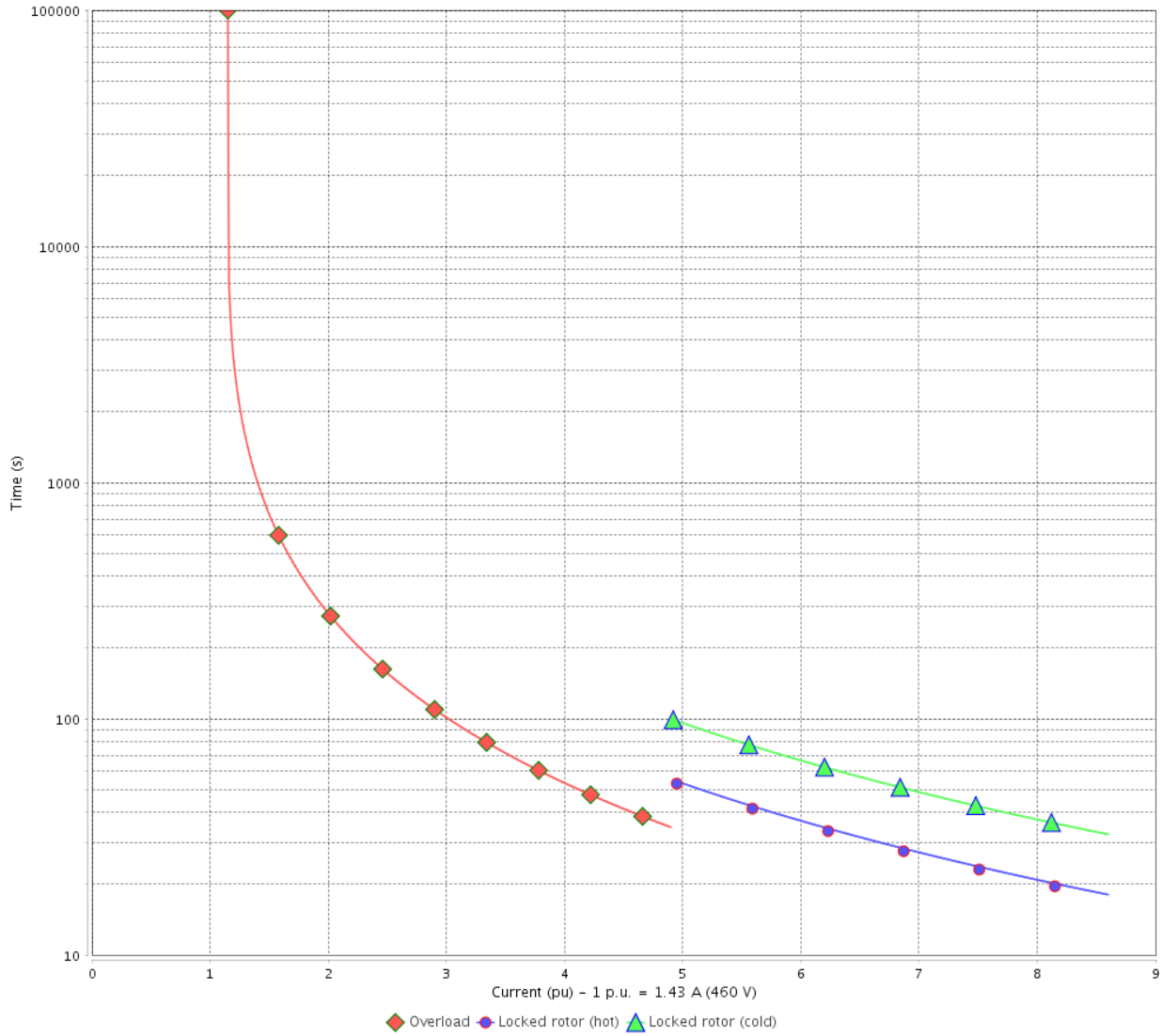
# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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

THERMAL LIMIT CURVE



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# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
 Product code : 14345152  
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Performance : 380 V 50 Hz 4P IE3

Rated current : 1.68 A	Moment of inertia (J) : 0.0975 sq.ft.lb
LRC : 6.7	Duty cycle : Cont.(S1)
Rated torque : 3.63 ft.lb	Insulation class : F
Locked rotor torque : 220 %	Service factor : 1.00
Breakdown torque : 250 %	Temperature rise : 80 K
Rated speed : 1440 rpm	Design : B

Heating constant

Cooling constant

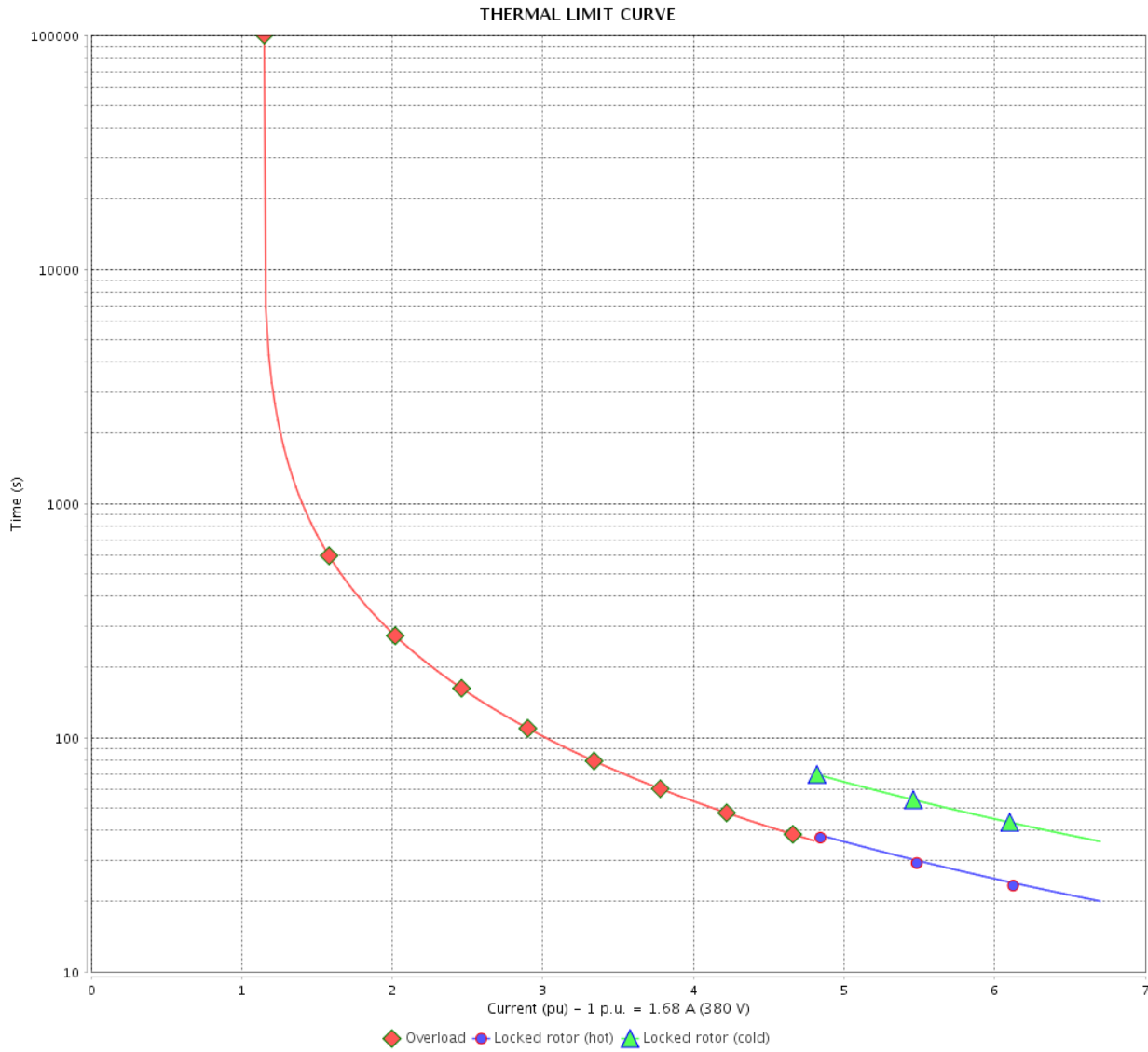
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Date	11/04/2022			

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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## Three Phase Induction Motor - Squirrel Cage

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 Product code : 14345152  
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Performance : 400 V 50 Hz 4P IE3

Rated current : 1.64 A	Moment of inertia (J) : 0.0975 sq.ft.lb
LRC : 7.4	Duty cycle : Cont.(S1)
Rated torque : 3.62 ft.lb	Insulation class : F
Locked rotor torque : 250 %	Service factor : 1.00
Breakdown torque : 280 %	Temperature rise : 80 K
Rated speed : 1450 rpm	Design : B

Heating constant

Cooling constant

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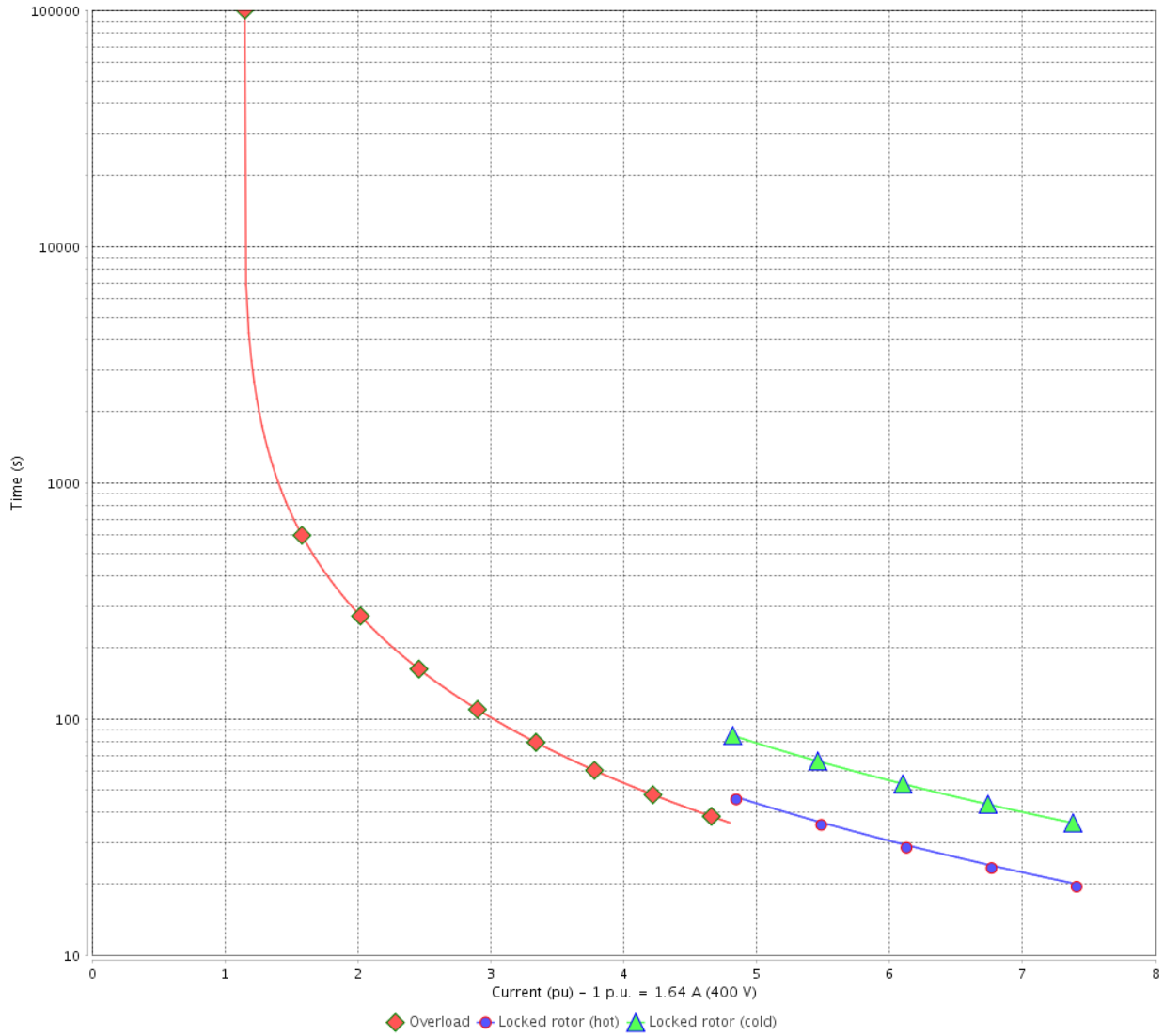
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Three Phase Induction Motor - Squirrel Cage



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 : 14345152  
 Catalog # : 00118XT3ER143TC

Performance : 415 V 50 Hz 4P IE3

Rated current : 1.59 A	Moment of inertia (J) : 0.0975 sq.ft.lb
LRC : 7.9	Duty cycle : Cont.(S1)
Rated torque : 3.61 ft.lb	Insulation class : F
Locked rotor torque : 280 %	Service factor : 1.00
Breakdown torque : 310 %	Temperature rise : 80 K
Rated speed : 1450 rpm	Design : B

Heating constant

Cooling constant

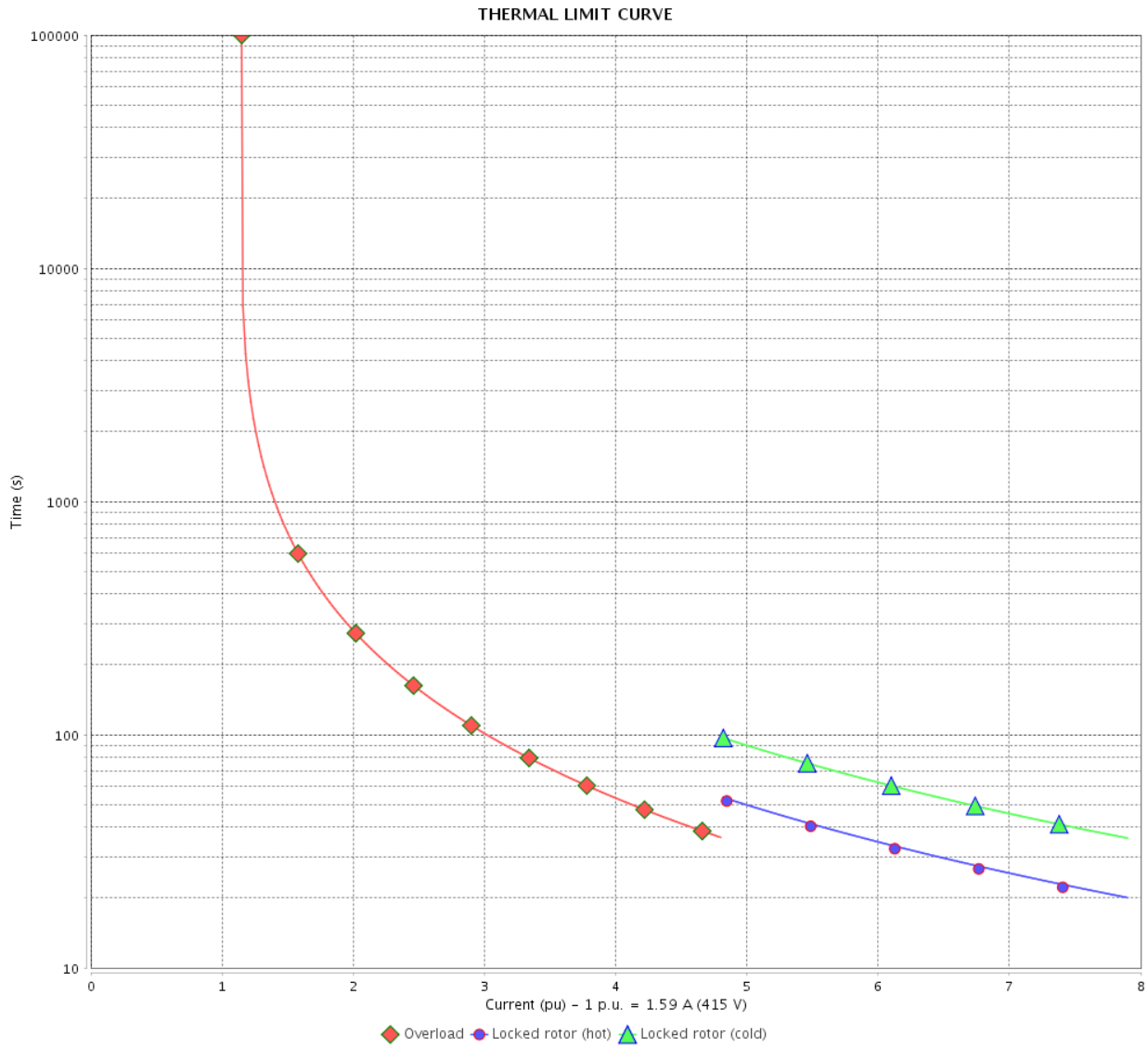
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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# VFD OPERATION CURVE

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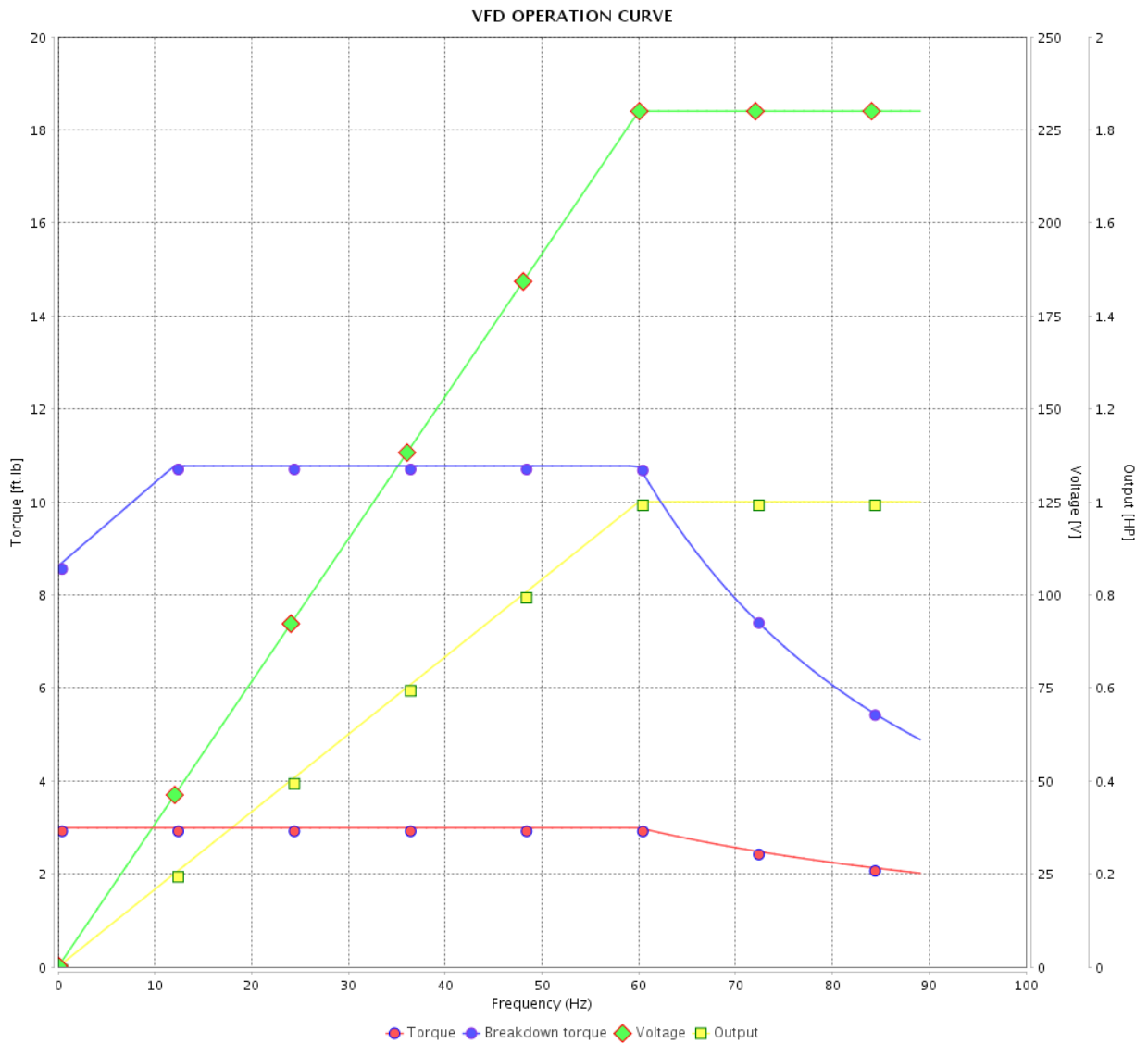


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Product code : 14345152

Catalog # : 00118XT3ER143TC



Performance : 230/460 V 60 Hz 4P

Rated current : 2.86/1.43 A  
 LRC : 8.6  
 Rated torque : 2.99 ft.lb  
 Locked rotor torque : 290 %  
 Breakdown torque : 370 %  
 Rated speed : 1760 rpm

Moment of inertia (J) : 0.0975 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



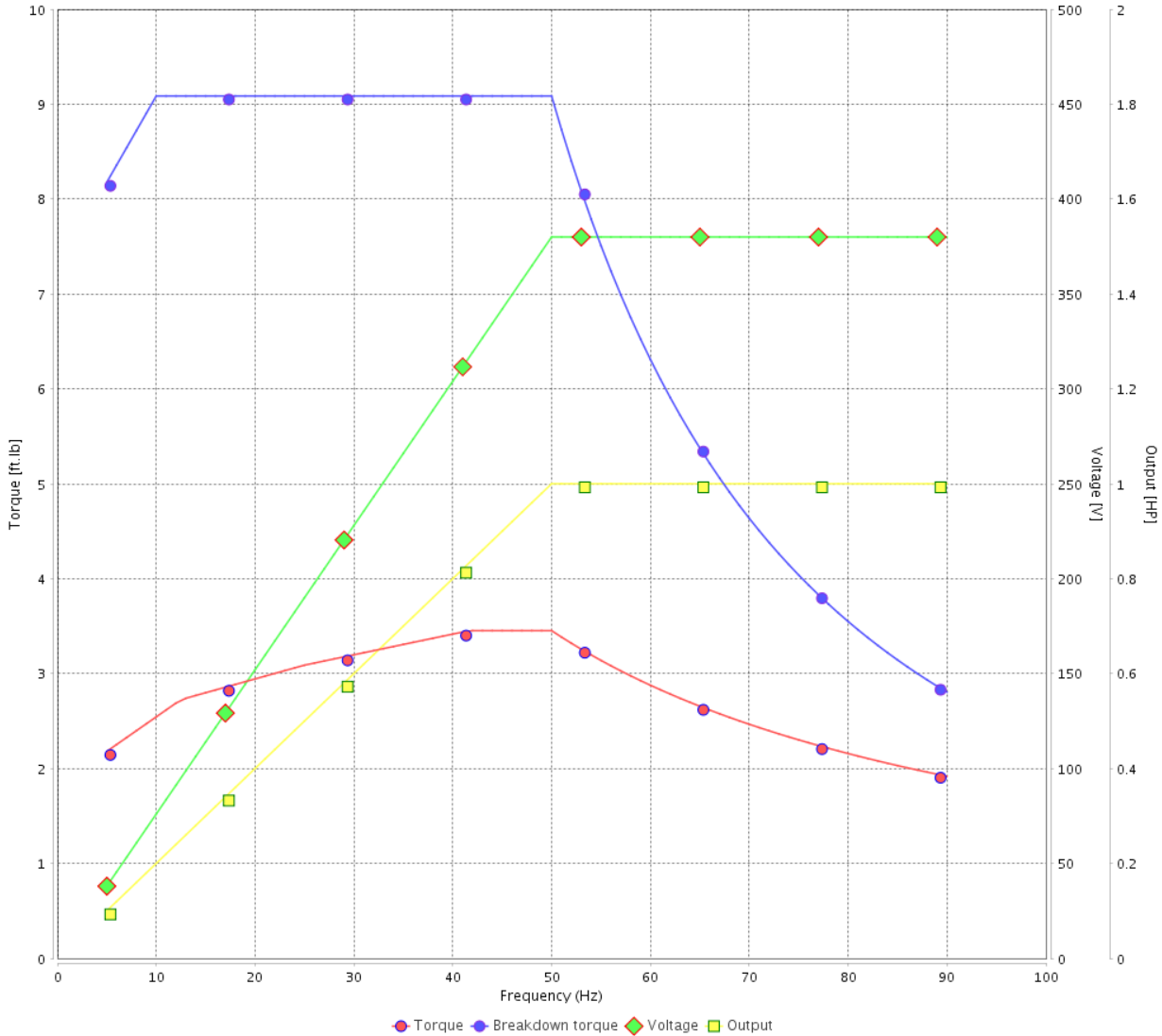
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Product code : 14345152

Catalog # : 00118XT3ER143TC

VFD OPERATION CURVE



Performance : 380 V 50 Hz 4P IE3

Rated current : 1.68 A  
 LRC : 6.7  
 Rated torque : 3.63 ft.lb  
 Locked rotor torque : 220 %  
 Breakdown torque : 250 %  
 Rated speed : 1440 rpm

Moment of inertia (J) : 0.0975 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

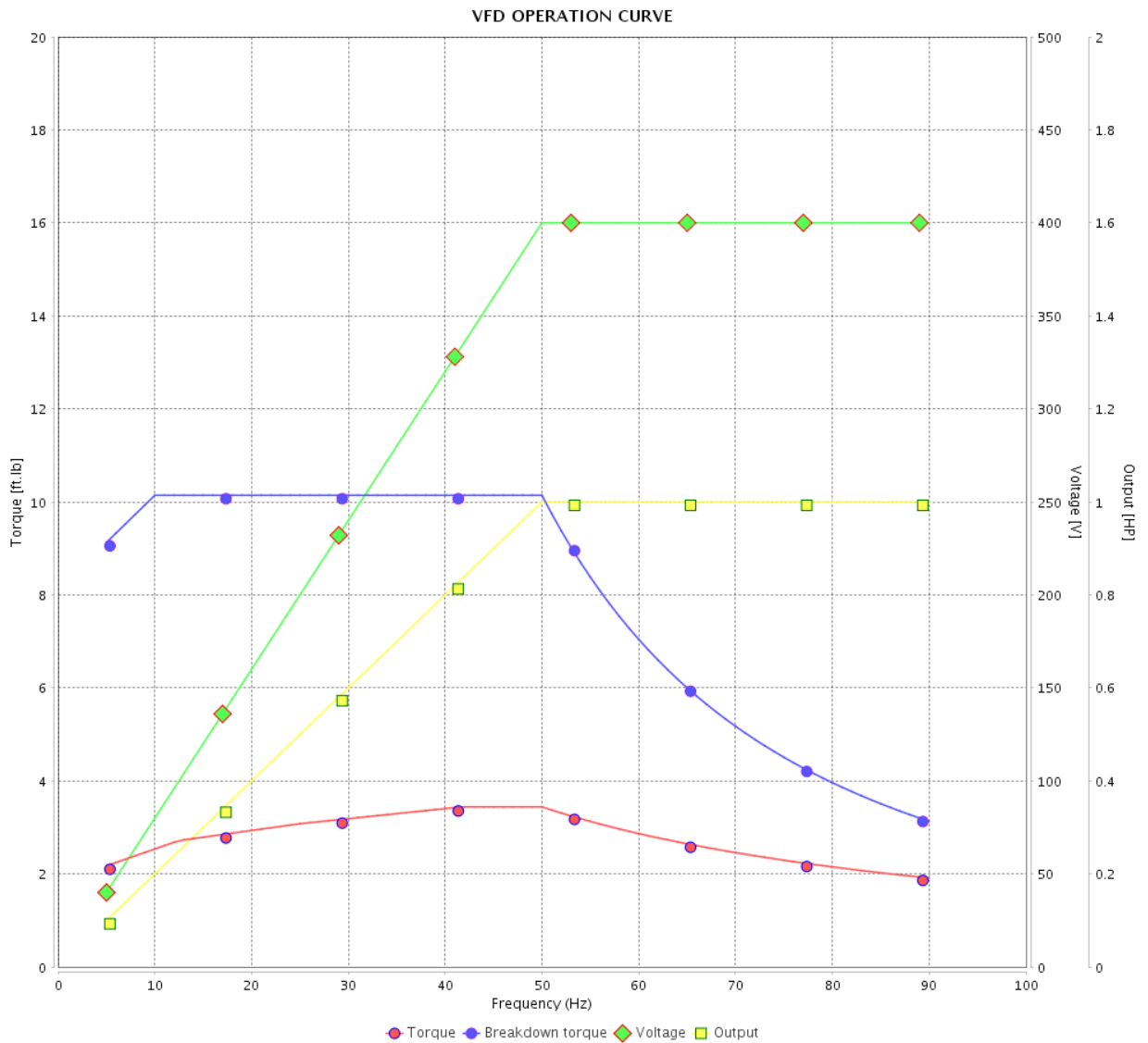


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Product line : NEMA Premium Efficiency Three-Phase

Product code : 14345152

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Performance : 400 V 50 Hz 4P IE3

Rated current : 1.64 A  
 LRC : 7.4  
 Rated torque : 3.62 ft.lb  
 Locked rotor torque : 250 %  
 Breakdown torque : 280 %  
 Rated speed : 1450 rpm

Moment of inertia (J) : 0.0975 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



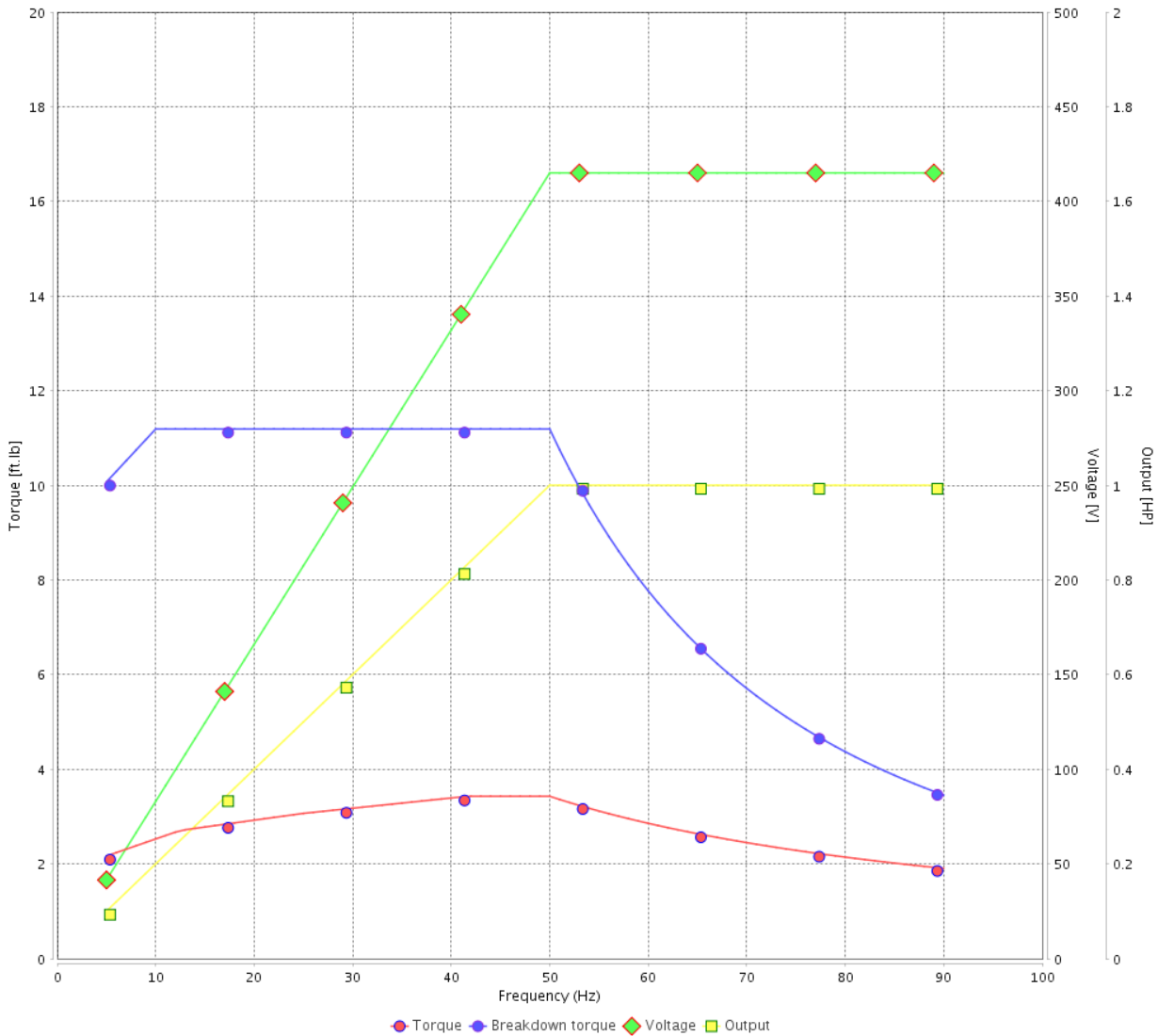
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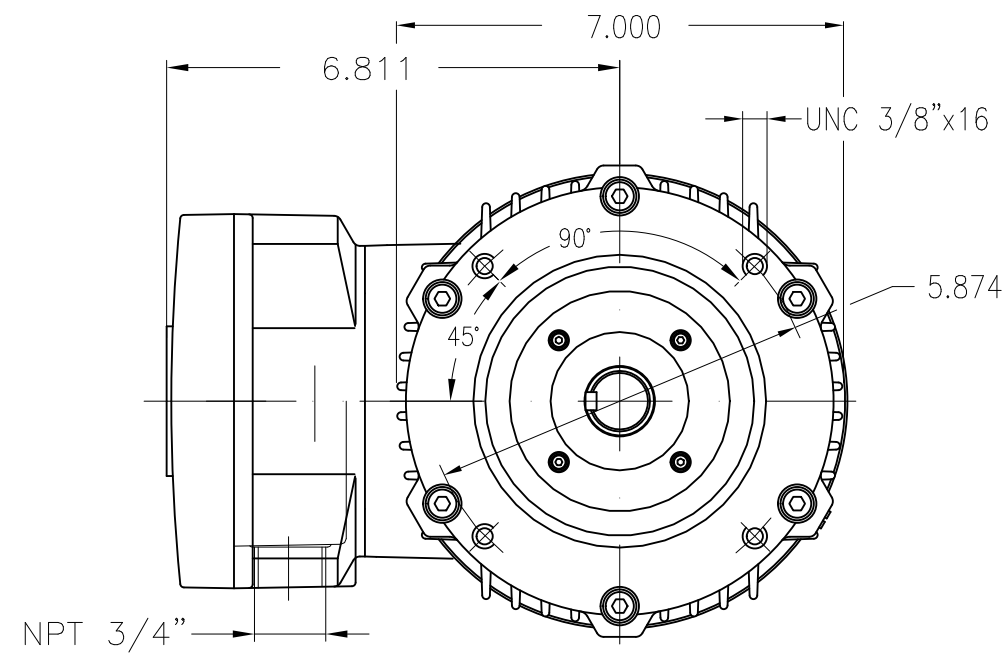


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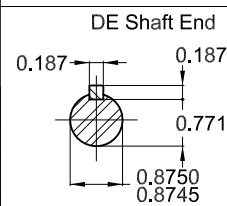
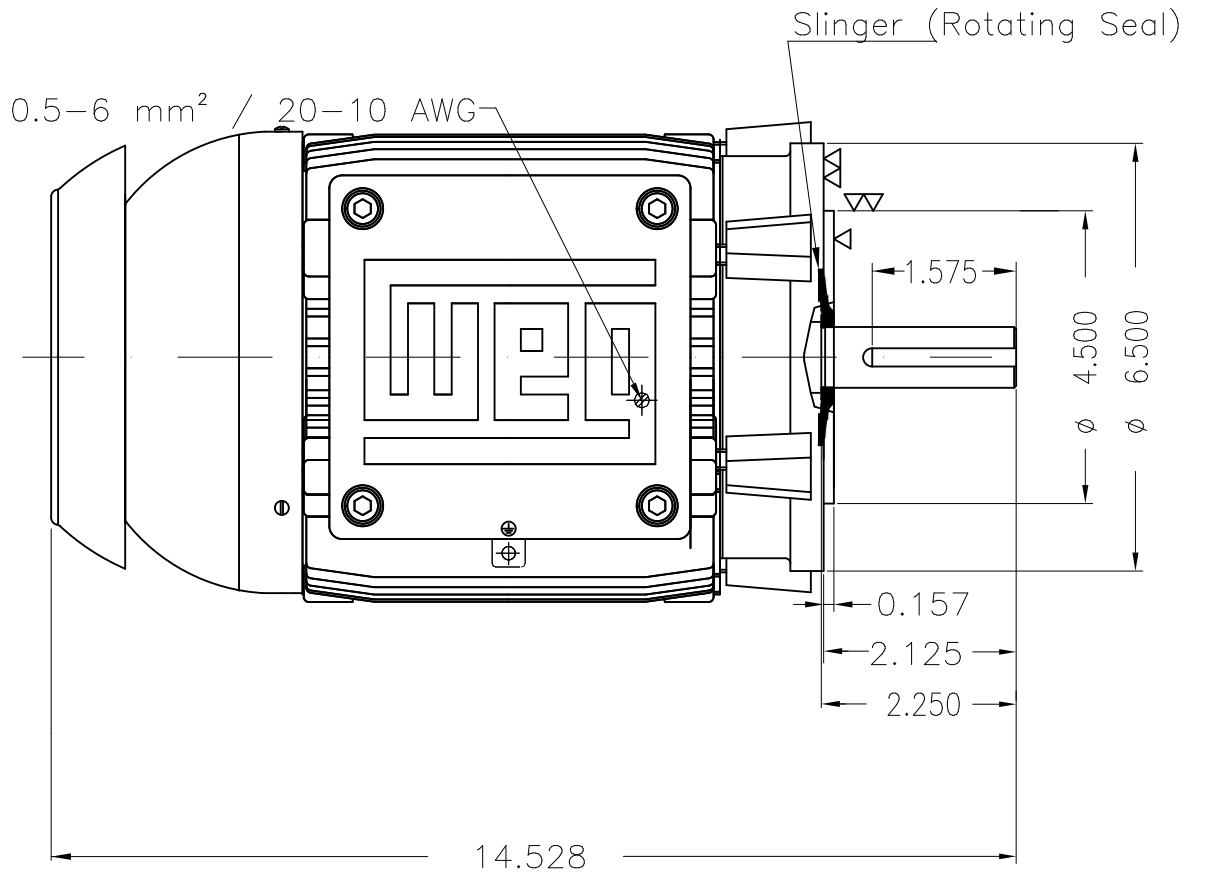
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Grounding for leads 0.5–6 mm<sup>2</sup> / 20–10 AWG



Color RAL 5009  
 Painting plan 202P  
 Mounting NEMA W-6  
 Mounting V18

1 HP 04 Poles 60 Hz

Dimensions in inches

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR EXPLOSION PROOF PREM. EFF.					
CHECKED		FRAME 143/5TC IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

**PREVIEW**  
 WDD



SHEET 1 / 1

MADE IN BRAZIL

**W21X NEMA**  
**Premium**

14345152

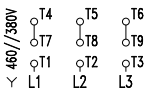
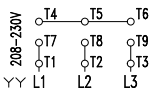
CC029A

*Inverter Duty Motor*  
*Severe Duty*

MODEL 00118XT3ER143TC

PH 3	FR 143/5TC		
HP(kW) 1.0(0.75)		HZ 60	IP55
V 230/460		A 2.94/1.47	
RPM 1755		NEMA NOM EFF 85.5%	
PF 0.75		SFA 3.38/1.69	DES B
INS CL F $\Delta$ T 80 K		SF 1.15	ENCL TEFC
DUTY CONT.		CODE M	ALT 1000 m.a.s.l.
AMB 40°C	USABLE @208V	3.16 A	SF 1.15 SFA 3.63
AMB 55°C SF1.0			

1.0HP 0.75kW 50Hz 380V 1.73A 1445RPM SF1.00 EFF 82.5% (IE3)



→ 6205-2RS MOBIL POLYREX EM  
→ 6204-2RS

71 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, 20:1CT, 1.0SF, T3C, AMB 40°C.