

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	14303659		
		Catalog # :	00518XT3E184TC		
Frame	: 182/4TC	Cooling method	: IC411 - TEFC		
Insulation class	: F	Mounting	: F-1		
Duty cycle	: Cont.(S1)	Rotation ¹	: Both (CW and CCW)		
Ambient temperature	: -20°C to +40°C	Starting method	: Direct On Line		
Altitude	: 1000 m.a.s.l.	Approx. weight ²	: 135 lb		
Protection degree	: IP55	Moment of inertia (J)	: 0.3695 sq.ft.lb		
Design	: B				
Output [HP]	5	5	5	5	
Poles	4	4	4	4	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	13.1/6.57	7.83	7.54	7.45	
L. R. Amperes [A]	93.3/46.6	47.8	51.3	53.6	
LRC [A]	7.1x(Code J)	6.1x(Code G)	6.8x(Code J)	7.2x(Code J)	
No load current [A]	6.20/3.10	3.10	3.40	3.80	
Rated speed [RPM]	1750	1435	1440	1445	
Slip [%]	2.78	4.33	4.00	3.67	
Rated torque [ft.lb]	15.0	18.3	18.2	18.2	
Locked rotor torque [%]	229	210	229	250	
Breakdown torque [%]	300	229	260	290	
Service factor	1.15	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	43s (cold) 24s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)	34s (cold) 19s (hot)	
Noise level ²	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)	
Efficiency (%)	25%	85.3	85.7	85.8	85.8
	50%	86.5	86.0	86.5	86.5
	75%	88.5	86.5	87.0	87.0
	100%	89.5	86.5	87.5	87.5
Power Factor	25%	0.36	0.43	0.39	0.35
	50%	0.59	0.67	0.63	0.59
	75%	0.71	0.77	0.74	0.72
	100%	0.79	0.83	0.81	0.79
Bearing type	: <u>Drive end</u> 6307 2RS <u>Non drive end</u> 6206 2RS	Foundation loads			
Sealing	: Oil Seal Lip Seal	Max. traction	: 269 lb		
Lubrication interval	: - -	Max. compression	: 404 lb		
Lubricant amount	: - -				
Lubricant type	: Mobil Polyrex EM				
Notes USABLE @208V 14.5A SF 1.15 SFA 16.7A					
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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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



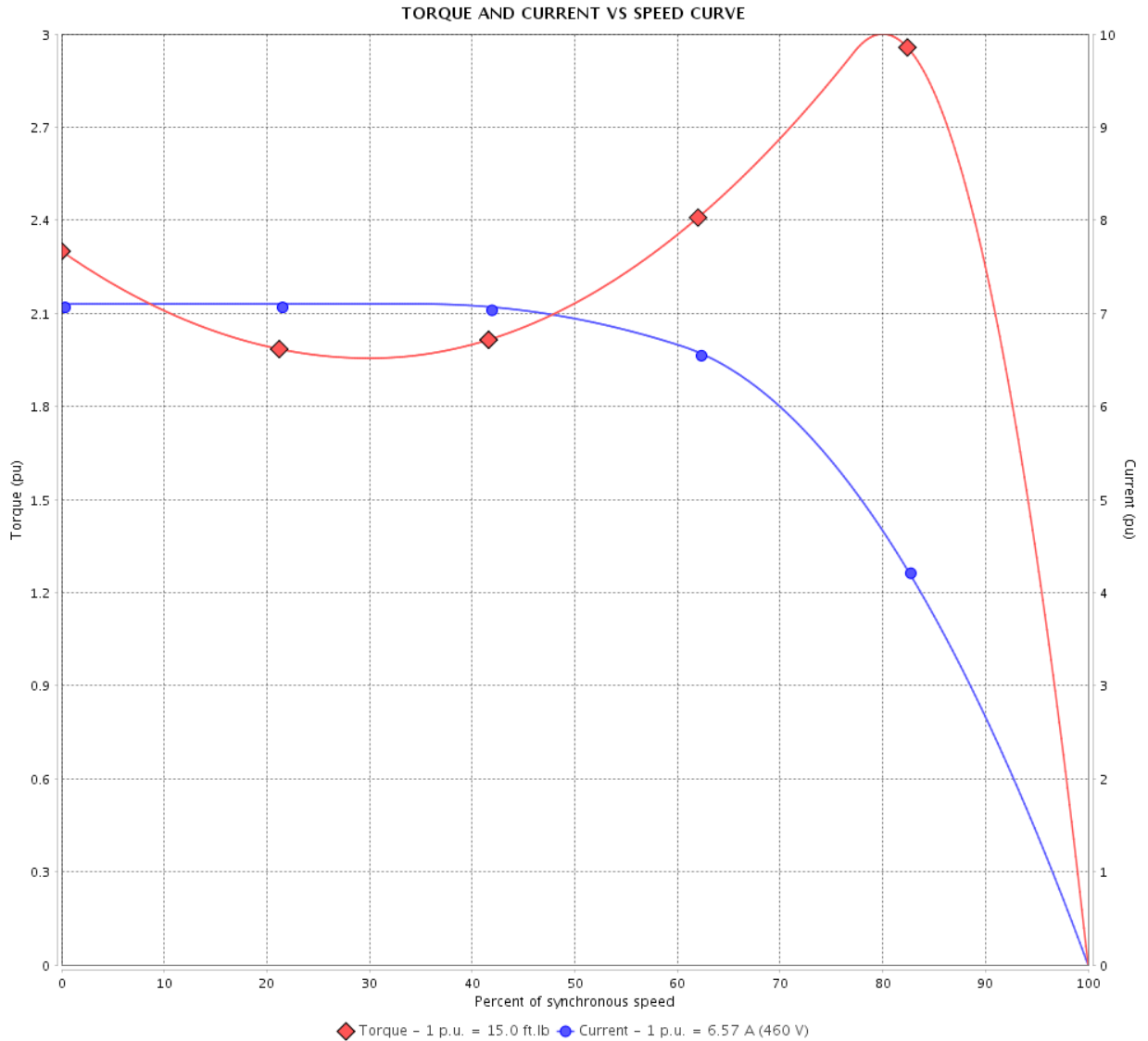
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14303659

Catalog # : 00518XT3E184TC



Performance : 230/460 V 60 Hz 4P

Rated current : 13.1/6.57 A
 LRC : 7.1
 Rated torque : 15.0 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 300 %
 Rated speed : 1750 rpm

Moment of inertia (J) : 0.3695 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

Locked rotor time : 43s (cold) 24s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



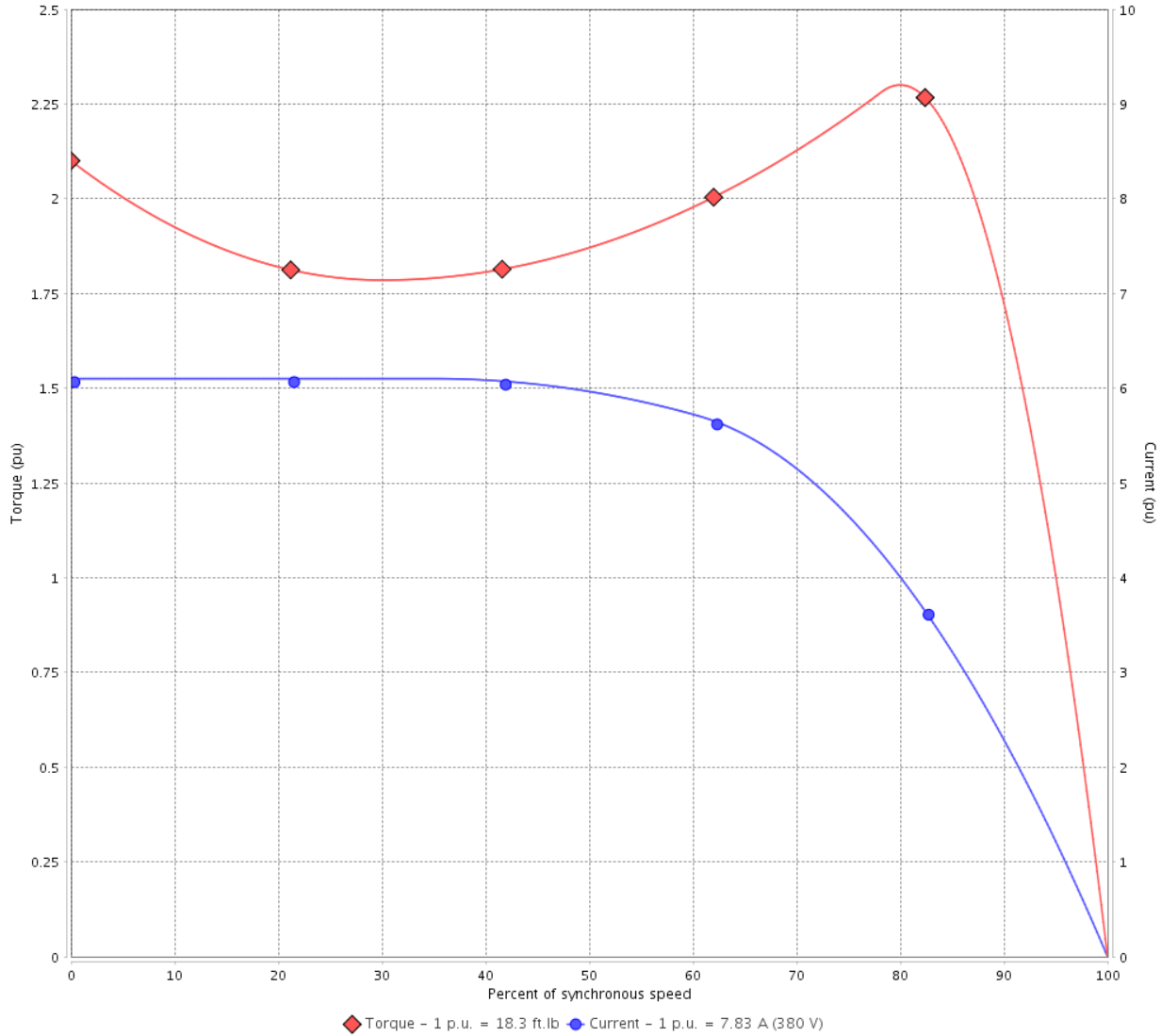
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14303659

Catalog # : 00518XT3E184TC

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 4P IE2

Rated current	: 7.83 A	Moment of inertia (J)	: 0.3695 sq.ft.lb
LRC	: 6.1	Duty cycle	: Cont.(S1)
Rated torque	: 18.3 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 1435 rpm	Design	: B

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

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TORQUE AND CURRENT VS SPEED CURVE



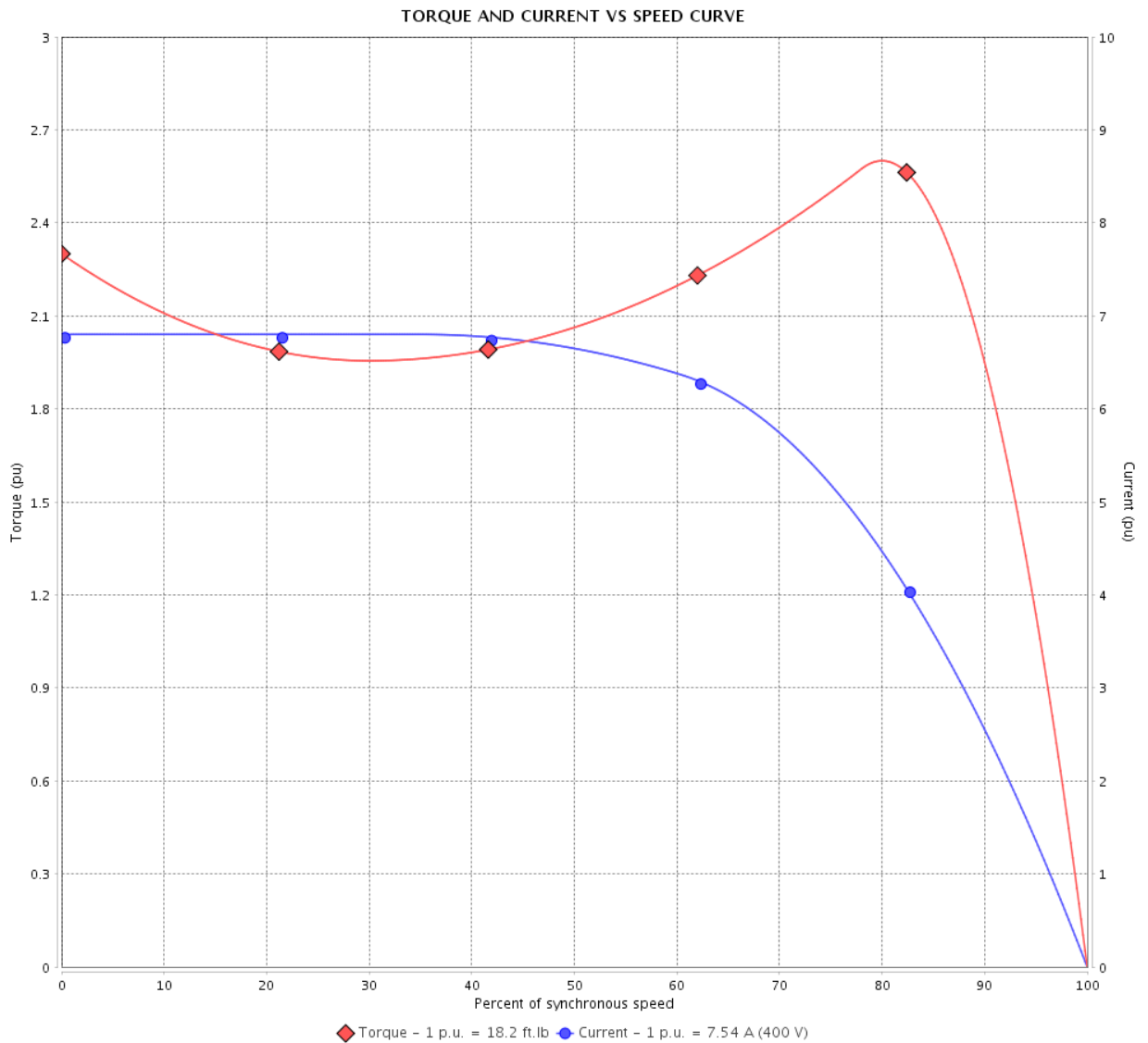
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14303659

Catalog # : 00518XT3E184TC



Performance : 400 V 50 Hz 4P IE2

Rated current	: 7.54 A	Moment of inertia (J)	: 0.3695 sq.ft.lb
LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 18.2 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 260 %	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



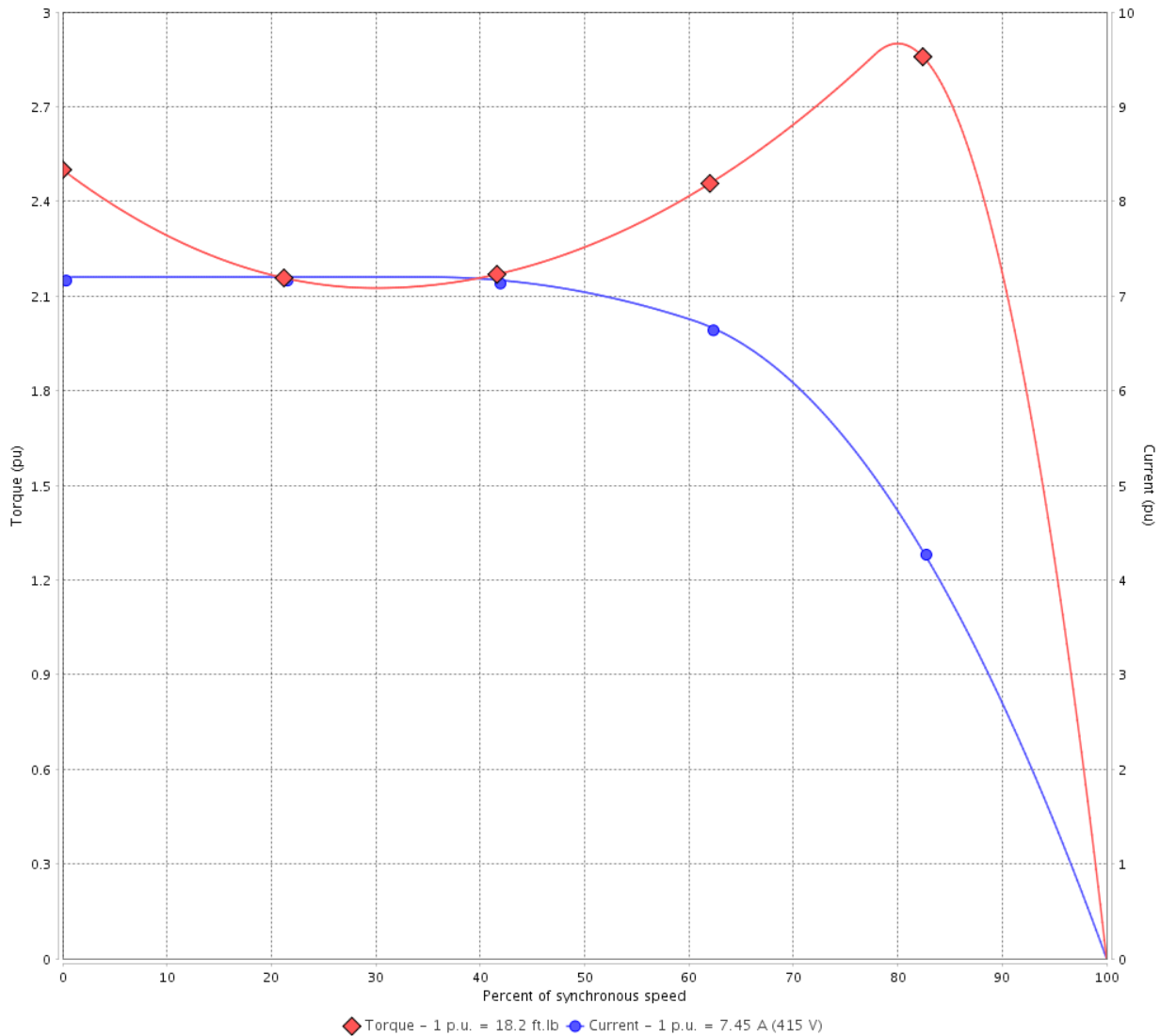
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Catalog # : 00518XT3E184TC

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 4P IE2

Rated current	: 7.45 A	Moment of inertia (J)	: 0.3695 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 18.2 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 1445 rpm	Design	: B

Locked rotor time : 34s (cold) 19s (hot)

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LOAD PERFORMANCE CURVE

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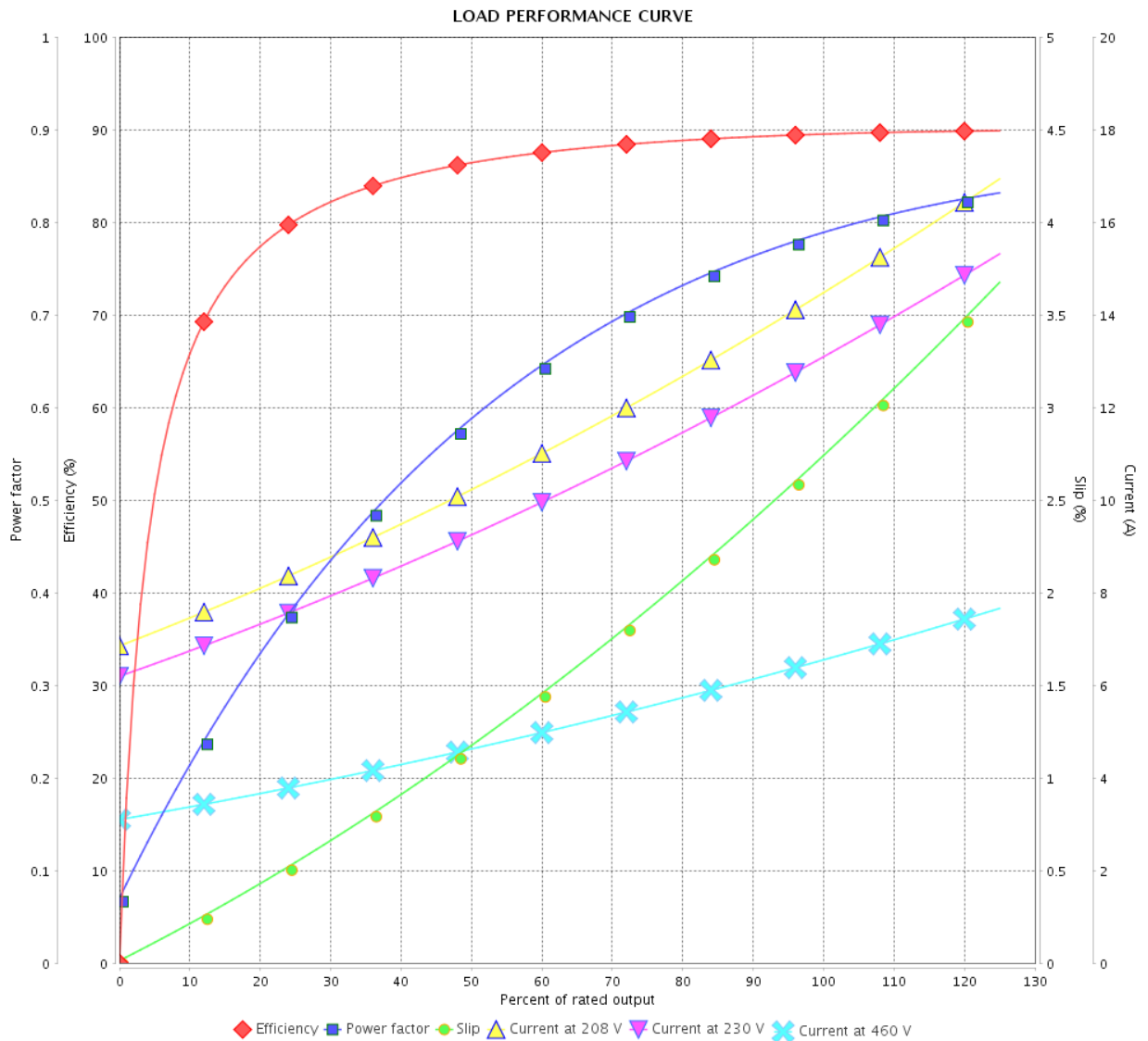


Customer : _____

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14303659

Catalog # : 00518XT3E184TC



Performance : 230/460 V 60 Hz 4P

Rated current : 13.1/6.57 A
 LRC : 7.1
 Rated torque : 15.0 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 300 %
 Rated speed : 1750 rpm

Moment of inertia (J) : 0.3695 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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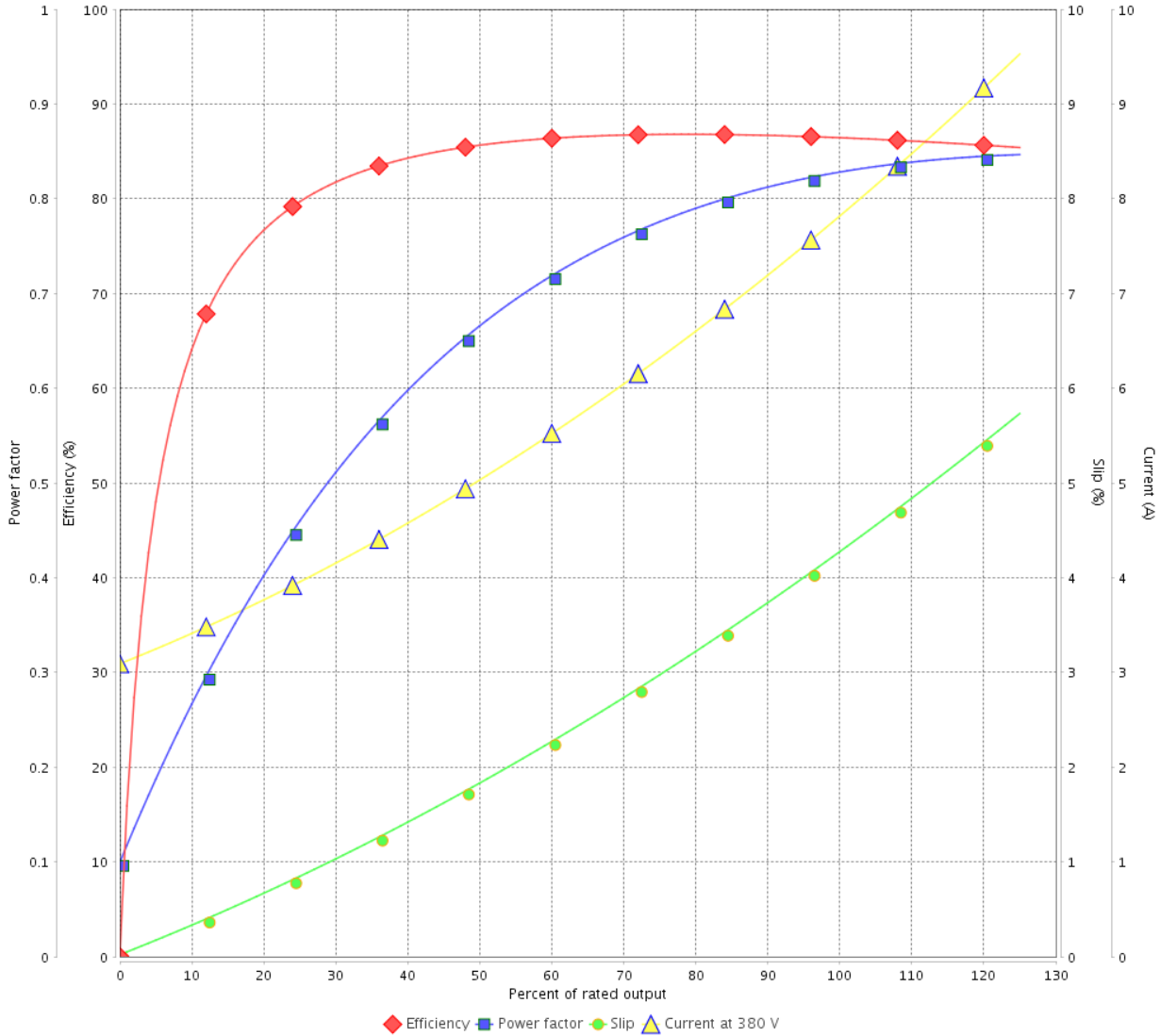
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Product line : NEMA Premium Efficiency Three-Phase

Product code : 14303659

Catalog # : 00518XT3E184TC

LOAD PERFORMANCE CURVE



Performance : 380 V 50 Hz 4P IE2

Rated current : 7.83 A
 LRC : 6.1
 Rated torque : 18.3 ft.lb
 Locked rotor torque : 210 %
 Breakdown torque : 229 %
 Rated speed : 1435 rpm

Moment of inertia (J) : 0.3695 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage

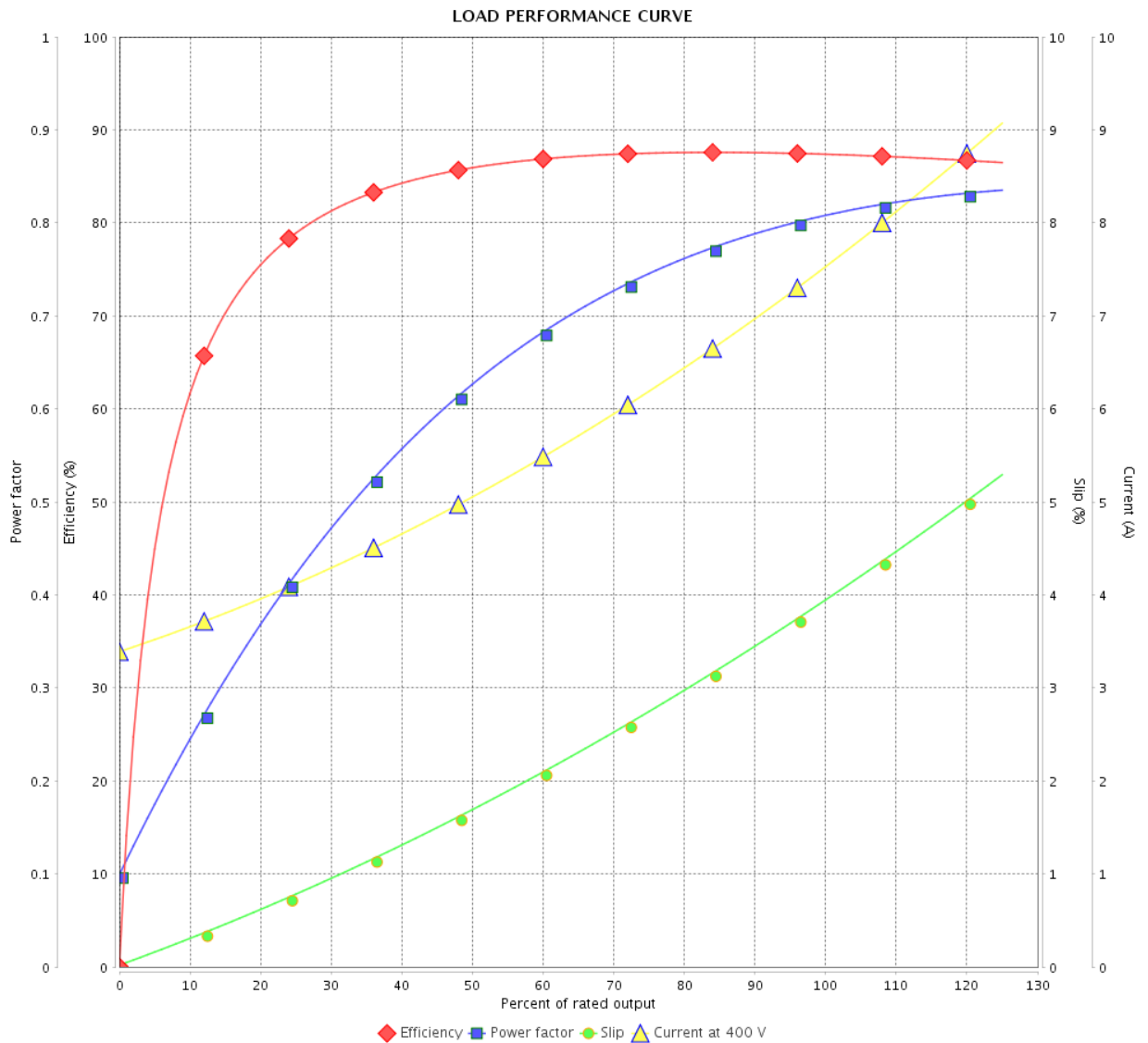


Customer : _____

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14303659

Catalog # : 00518XT3E184TC



Performance : 400 V 50 Hz 4P IE2

Rated current : 7.54 A
 LRC : 6.8
 Rated torque : 18.2 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 260 %
 Rated speed : 1440 rpm

Moment of inertia (J) : 0.3695 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage



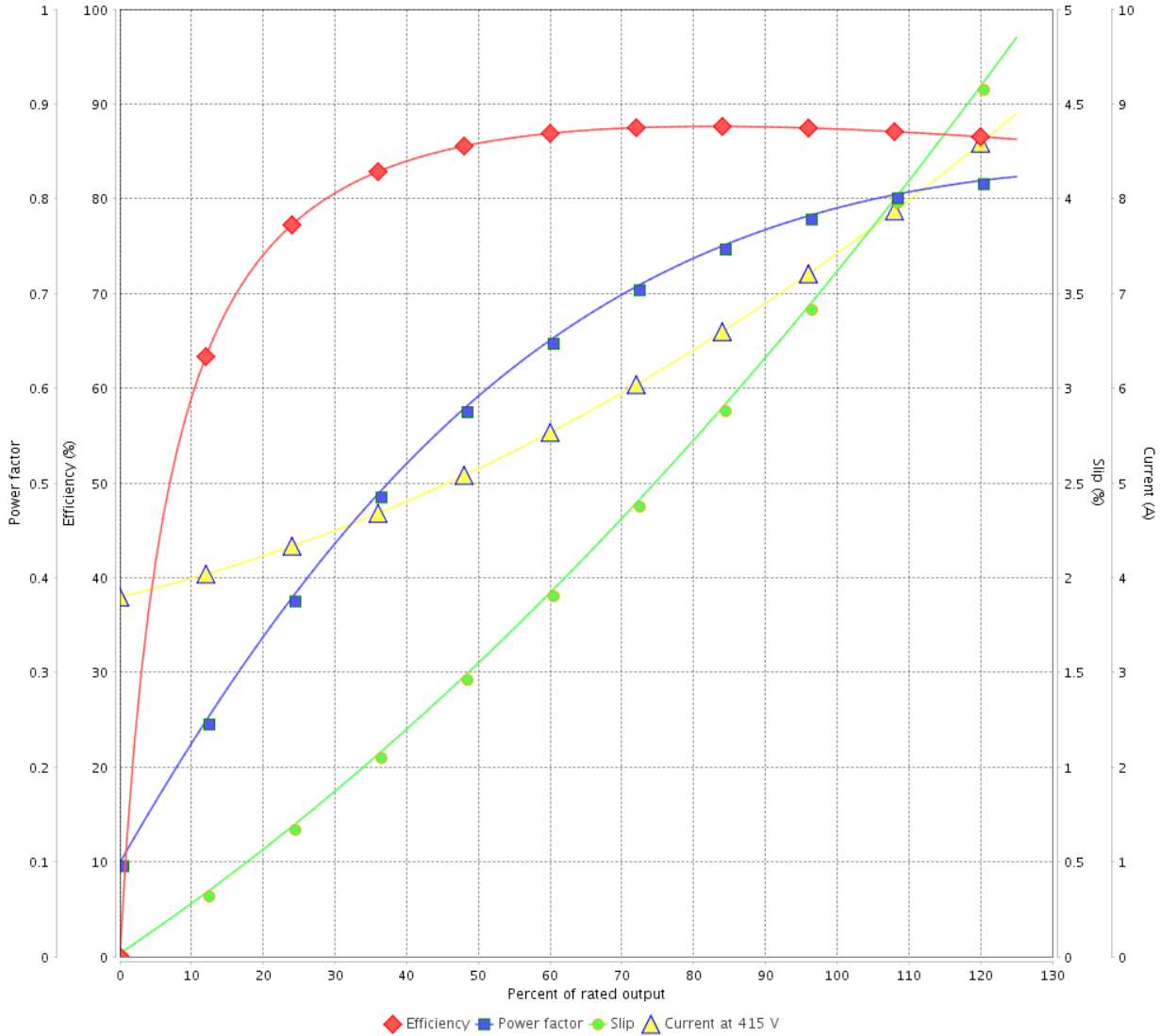
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Performance : 415 V 50 Hz 4P IE2

Rated current : 7.45 A
 LRC : 7.2
 Rated torque : 18.2 ft.lb
 Locked rotor torque : 250 %
 Breakdown torque : 290 %
 Rated speed : 1445 rpm

Moment of inertia (J) : 0.3695 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



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LRC : 7.1	Duty cycle : Cont.(S1)
Rated torque : 15.0 ft.lb	Insulation class : F
Locked rotor torque : 229 %	Service factor : 1.15
Breakdown torque : 300 %	Temperature rise : 80 K
Rated speed : 1750 rpm	Design : B

Heating constant

Cooling constant

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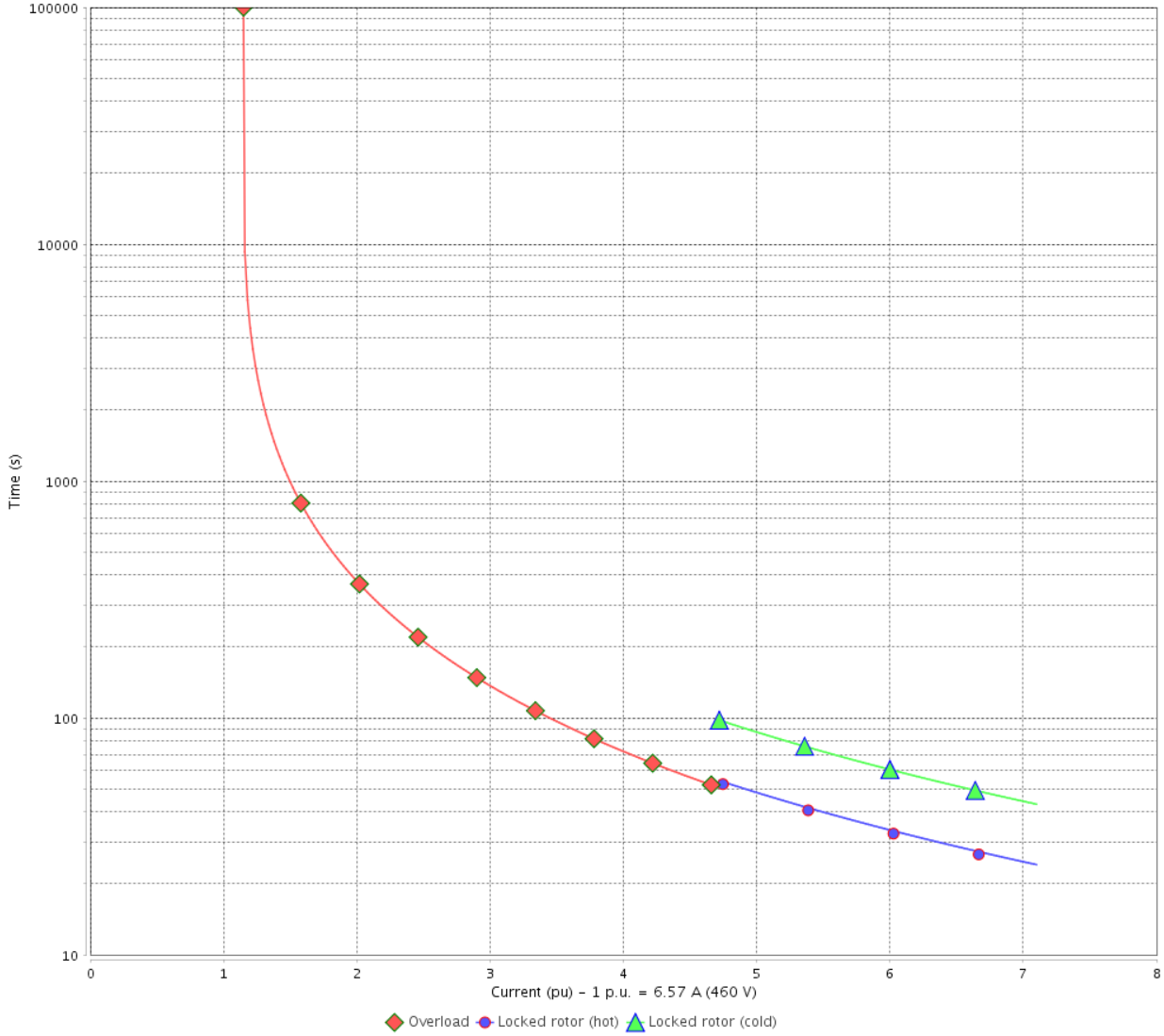
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Three Phase Induction Motor - Squirrel Cage



Customer : _____

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Customer :

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Performance : 380 V 50 Hz 4P IE2

Rated current : 7.83 A	Moment of inertia (J) : 0.3695 sq.ft.lb
LRC : 6.1	Duty cycle : Cont.(S1)
Rated torque : 18.3 ft.lb	Insulation class : F
Locked rotor torque : 210 %	Service factor : 1.00
Breakdown torque : 229 %	Temperature rise : 80 K
Rated speed : 1435 rpm	Design : B

Heating constant

Cooling constant

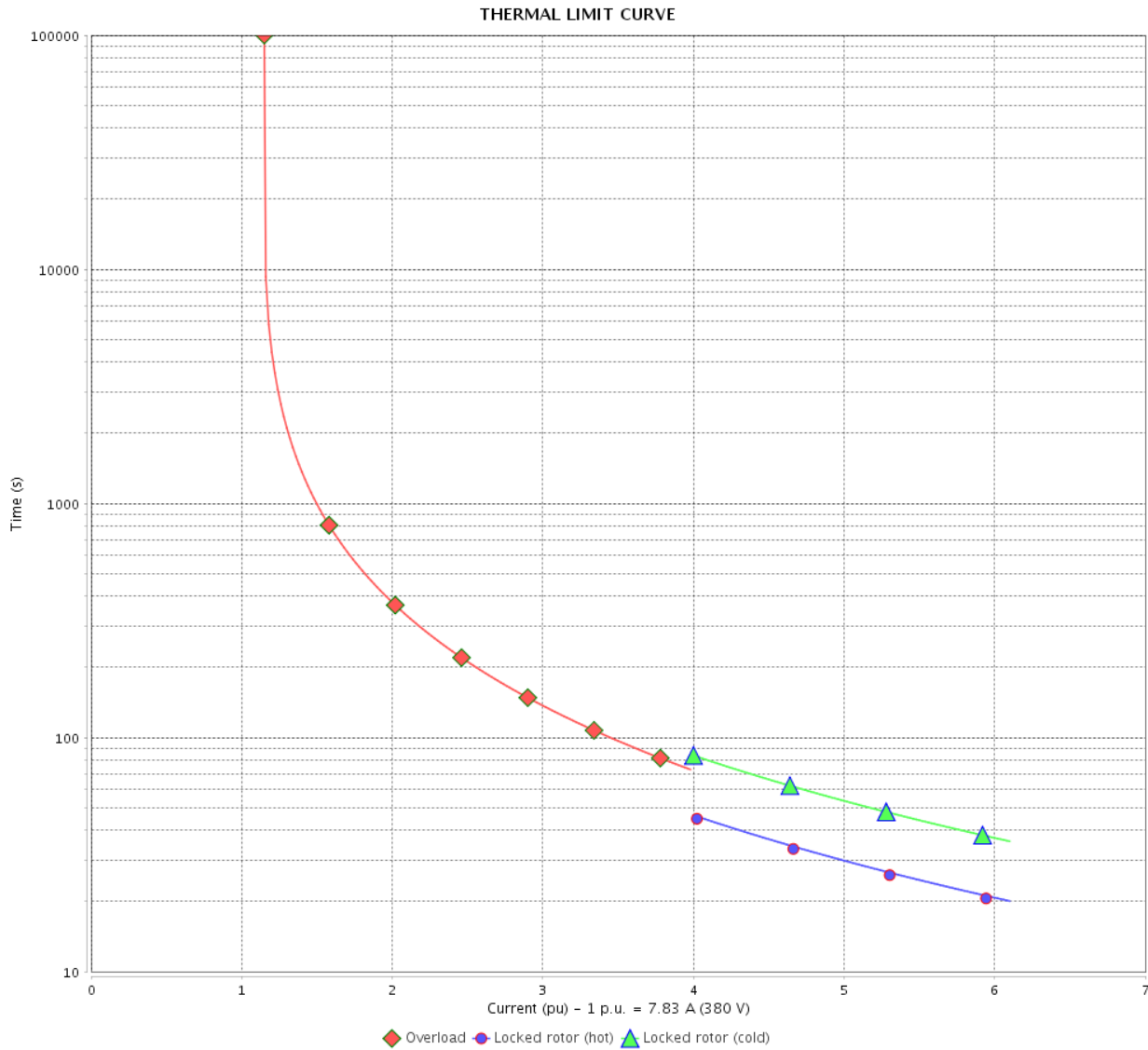
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Three Phase Induction Motor - Squirrel Cage



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THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 14303659
 Catalog # : 00518XT3E184TC

Performance : 400 V 50 Hz 4P IE2

Rated current : 7.54 A	Moment of inertia (J) : 0.3695 sq.ft.lb
LRC : 6.8	Duty cycle : Cont.(S1)
Rated torque : 18.2 ft.lb	Insulation class : F
Locked rotor torque : 229 %	Service factor : 1.00
Breakdown torque : 260 %	Temperature rise : 80 K
Rated speed : 1440 rpm	Design : B

Heating constant

Cooling constant

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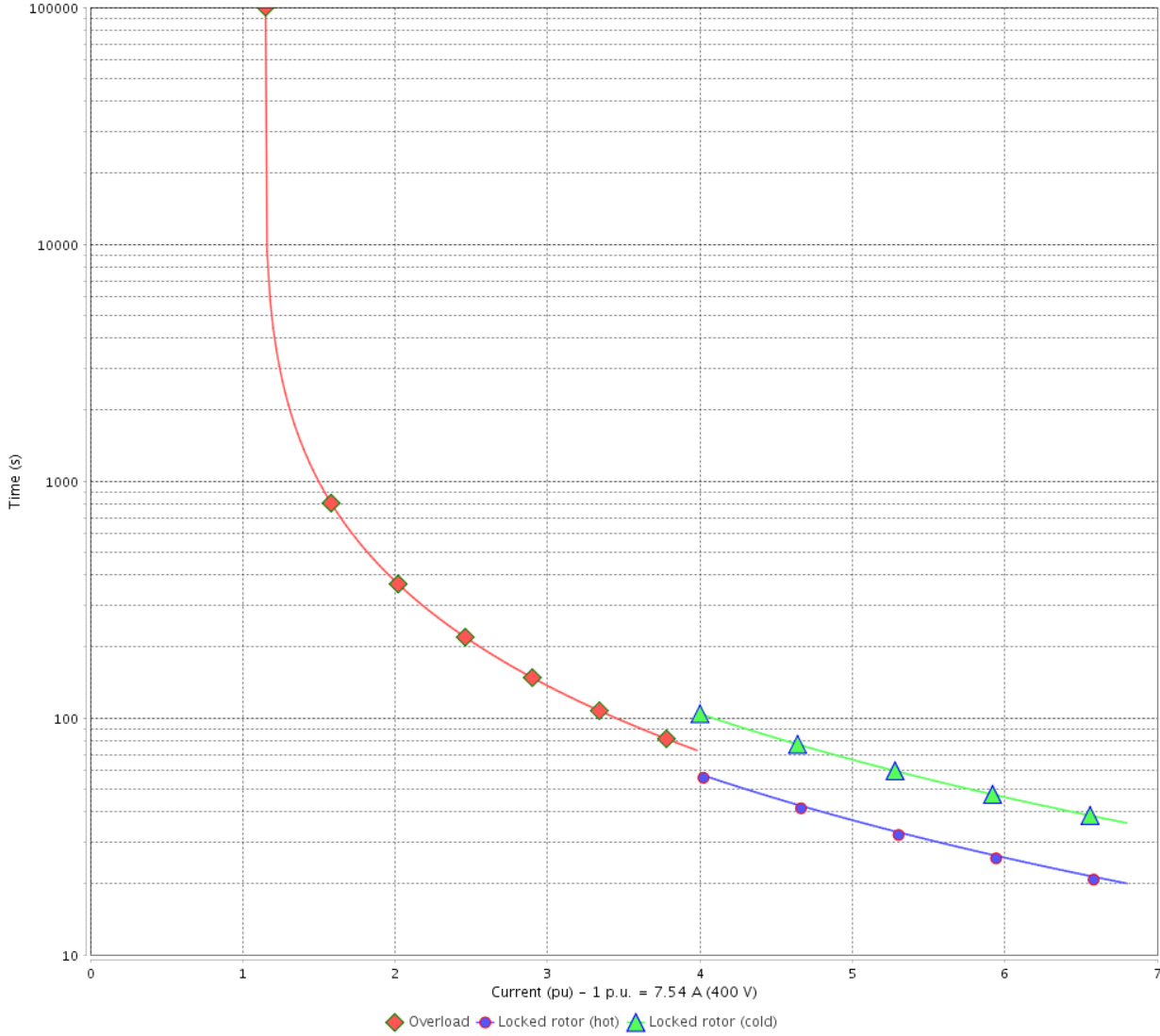
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Three Phase Induction Motor - Squirrel Cage



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THERMAL LIMIT CURVE



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Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 14303659
 Catalog # : 00518XT3E184TC

Performance : 415 V 50 Hz 4P IE2

Rated current : 7.45 A	Moment of inertia (J) : 0.3695 sq.ft.lb
LRC : 7.2	Duty cycle : Cont.(S1)
Rated torque : 18.2 ft.lb	Insulation class : F
Locked rotor torque : 250 %	Service factor : 1.00
Breakdown torque : 290 %	Temperature rise : 80 K
Rated speed : 1445 rpm	Design : B

Heating constant

Cooling constant

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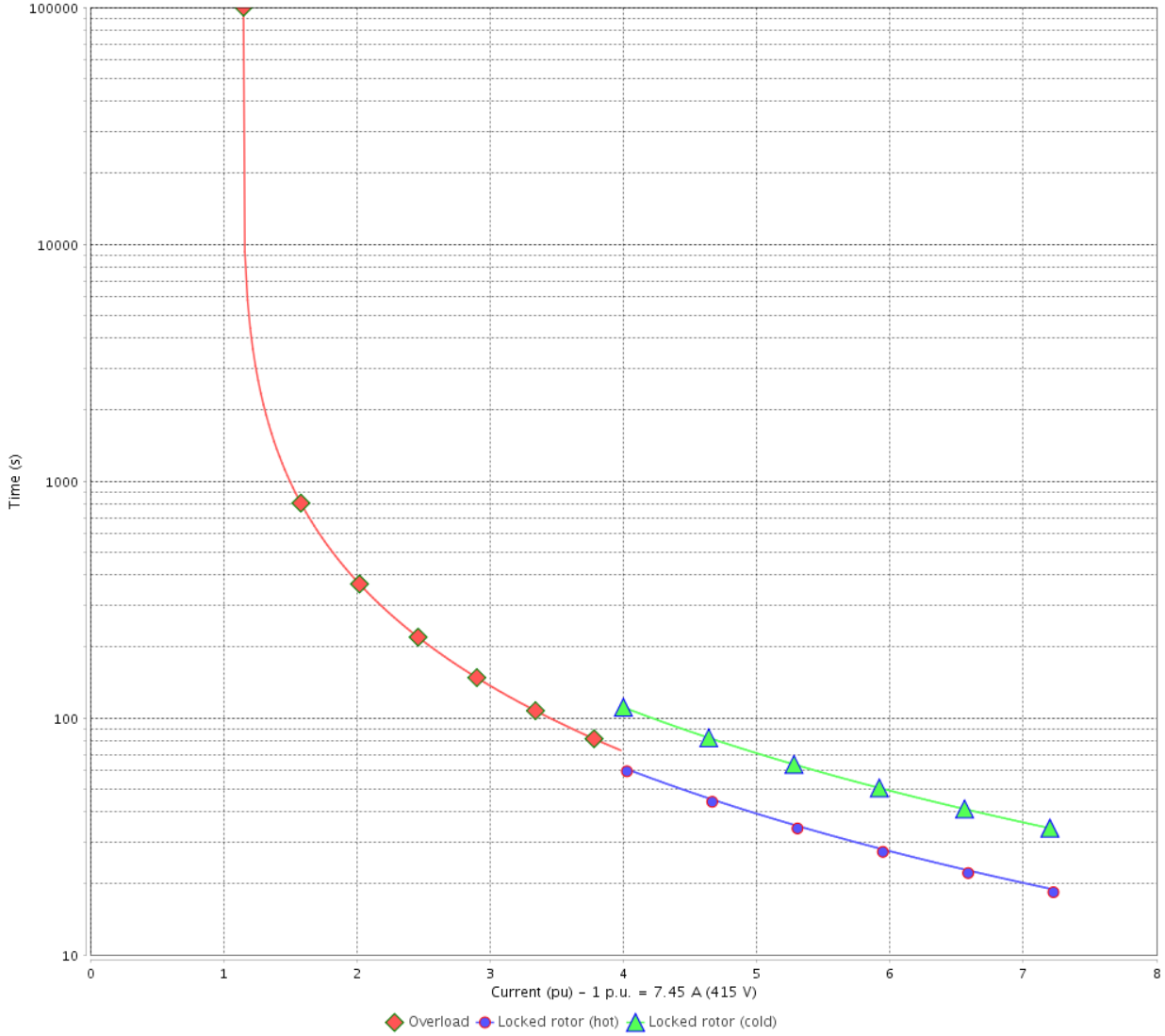
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THERMAL LIMIT CURVE



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

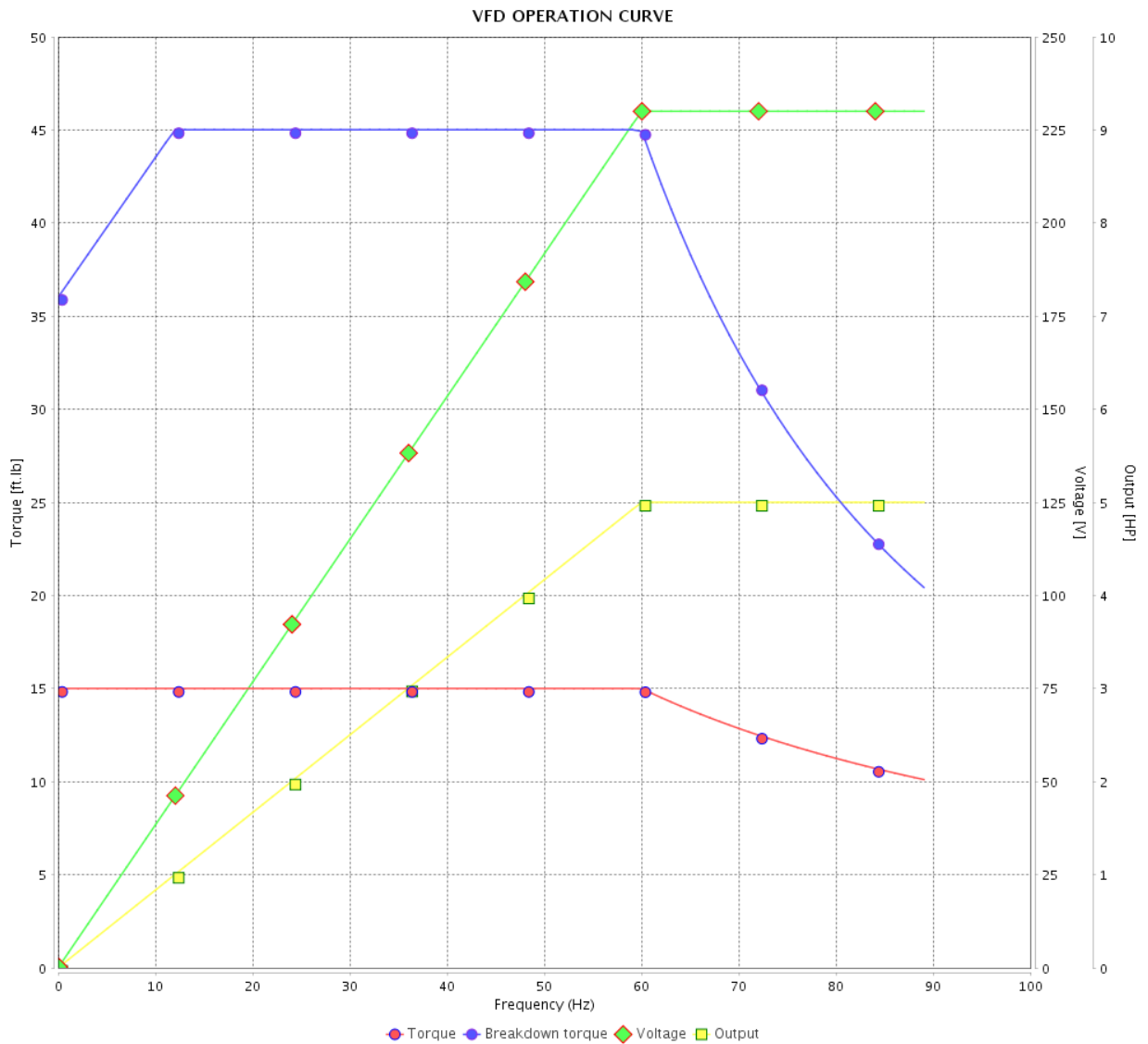


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Performance : 230/460 V 60 Hz 4P

Rated current : 13.1/6.57 A
 LRC : 7.1
 Rated torque : 15.0 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 300 %
 Rated speed : 1750 rpm

Moment of inertia (J) : 0.3695 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



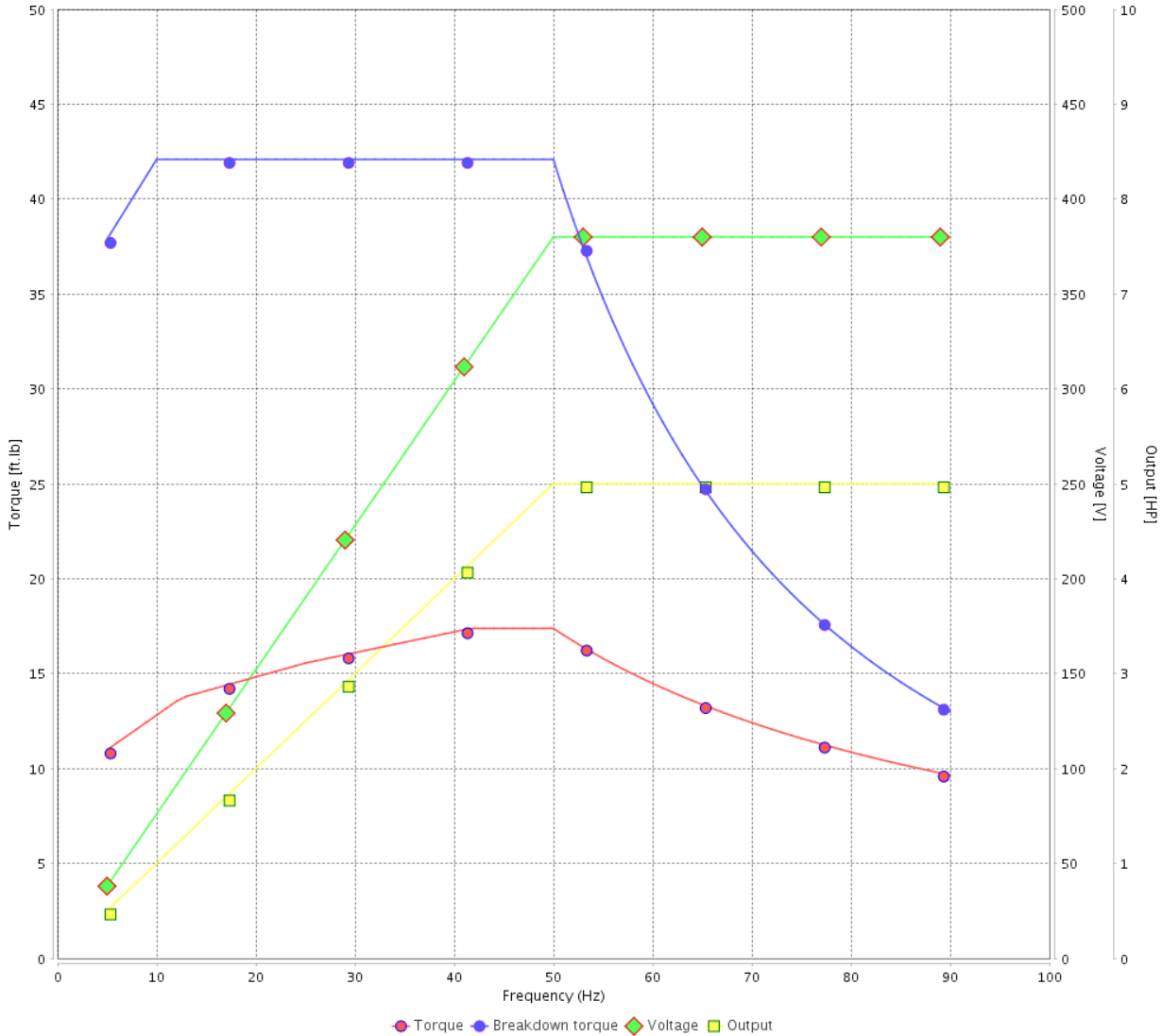
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14303659

Catalog # : 00518XT3E184TC

VFD OPERATION CURVE



Performance : 380 V 50 Hz 4P IE2

Rated current : 7.83 A
 LRC : 6.1
 Rated torque : 18.3 ft.lb
 Locked rotor torque : 210 %
 Breakdown torque : 229 %
 Rated speed : 1435 rpm

Moment of inertia (J) : 0.3695 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

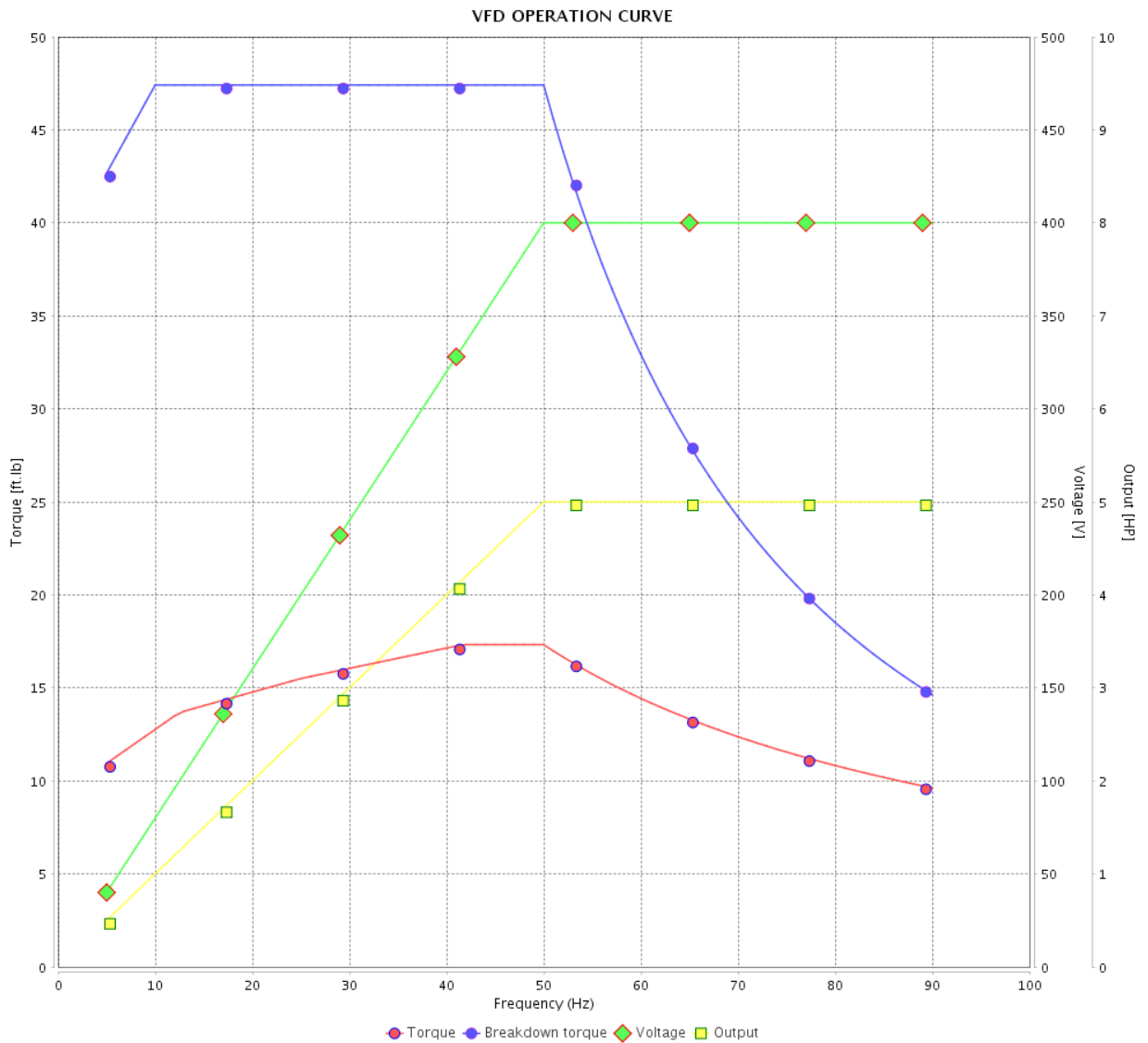


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Product line : NEMA Premium Efficiency Three-Phase

Product code : 14303659

Catalog # : 00518XT3E184TC



Performance : 400 V 50 Hz 4P IE2

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 LRC : 6.8
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 Locked rotor torque : 229 %
 Breakdown torque : 260 %
 Rated speed : 1440 rpm

Moment of inertia (J) : 0.3695 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



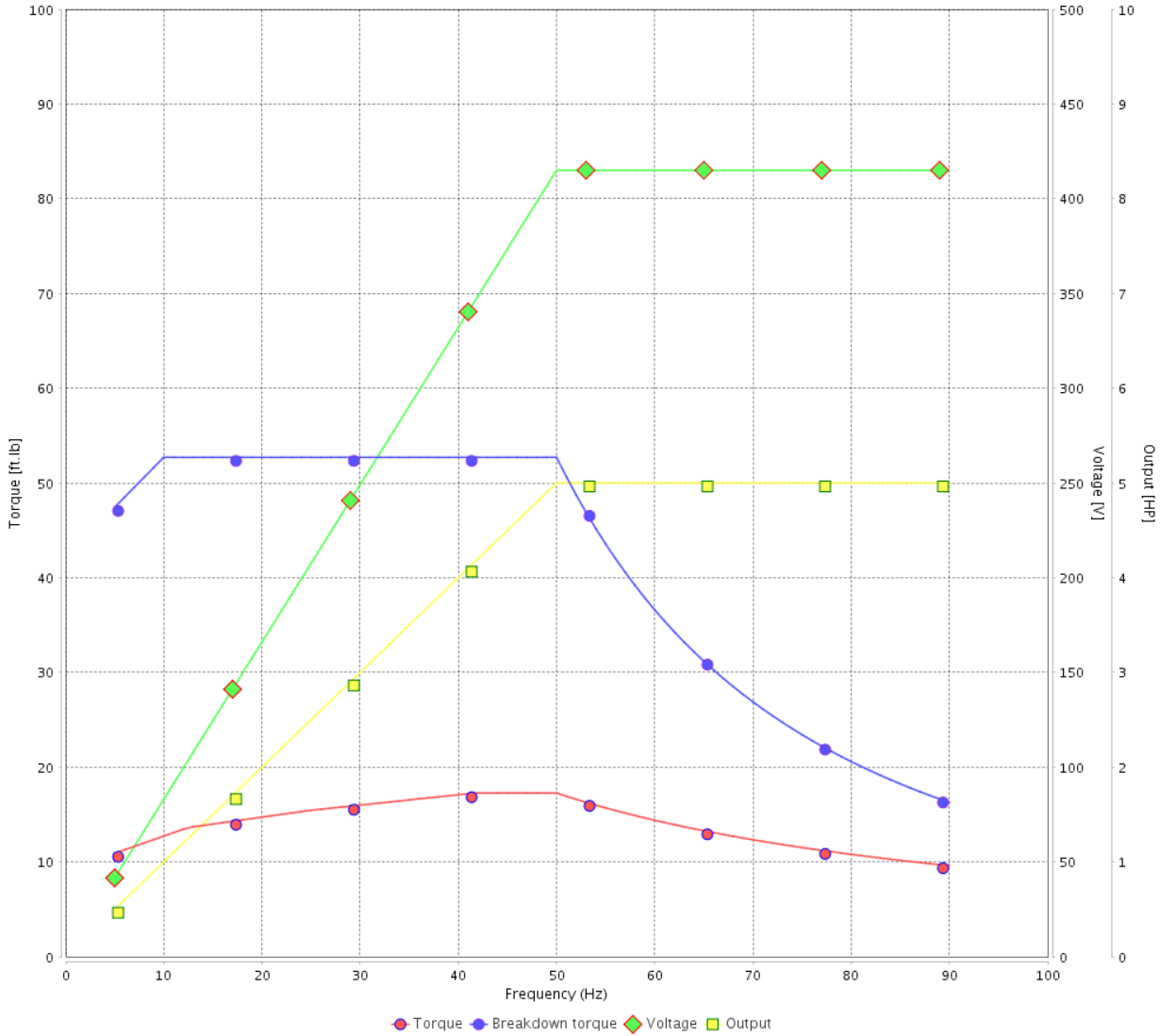
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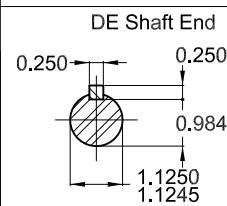
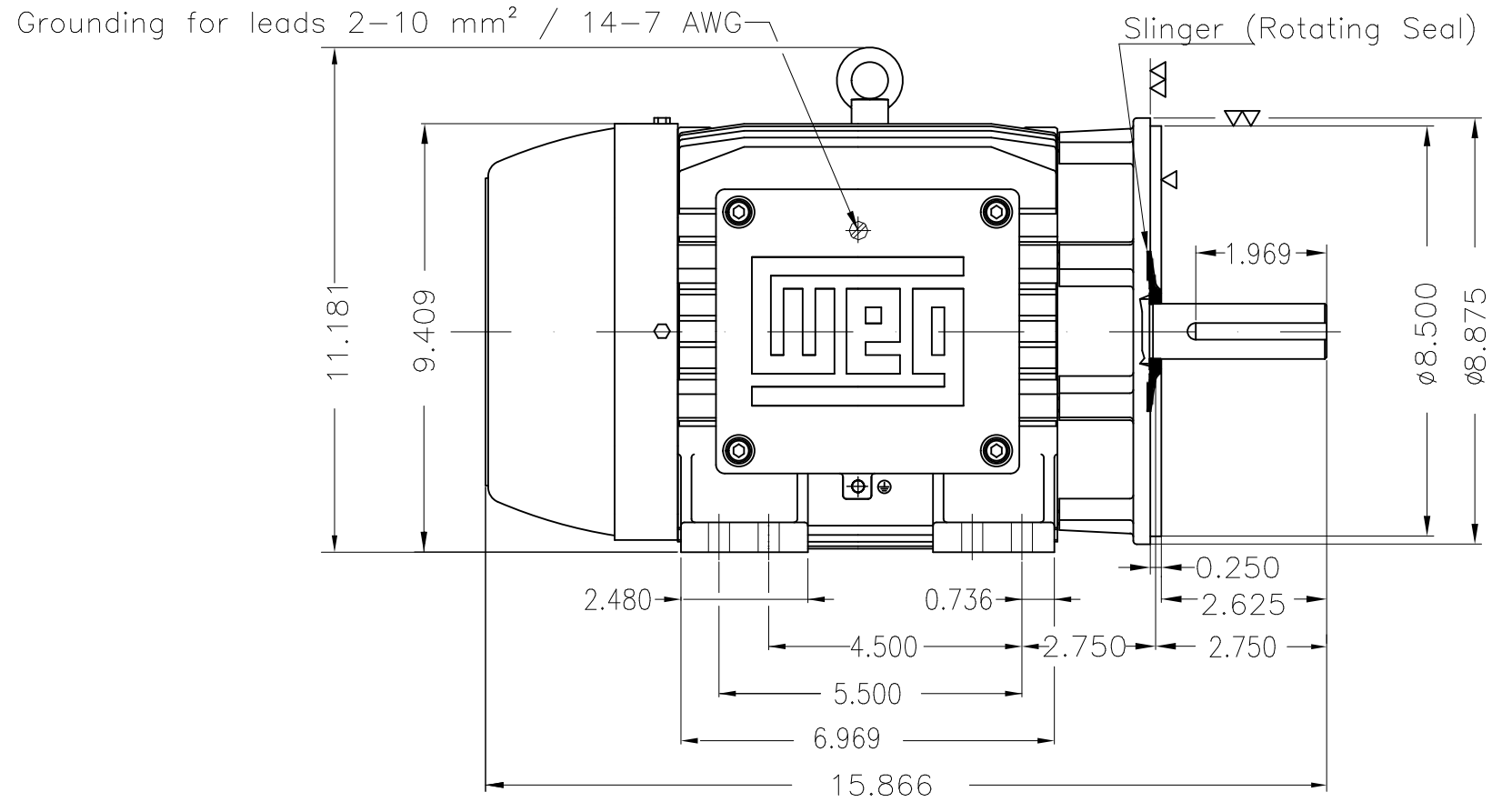
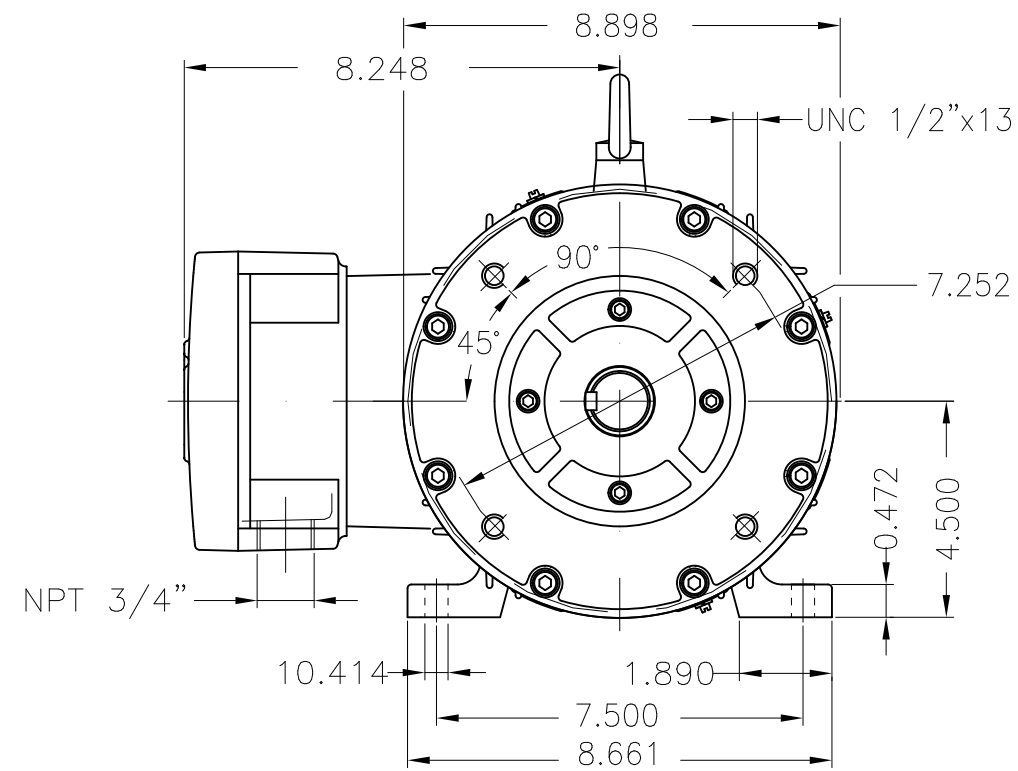


Performance : 415 V 50 Hz 4P IE2

Rated current : 7.45 A
 LRC : 7.2
 Rated torque : 18.2 ft.lb
 Locked rotor torque : 250 %
 Breakdown torque : 290 %
 Rated speed : 1445 rpm

Moment of inertia (J) : 0.3695 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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Packing - crate
 Color RAL 5009
 Painting plan 202P
 Mounting NEMA F-1
 Mounting B34R(D)

5 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 182/4TC IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW
 WDD

