

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	12408372		
		Catalog # :	07509XT3E444T		
Frame	: 444/5T	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	: 1954 lb		
Protection degree	: IP55	Moment of inertia (J)	: 73.6 sq.ft.lb		
Design	: B				
Output [HP]	75	60	60	60	
Poles	8	8	8	8	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	184/92.2	91.9	88.4	86.9	
L. R. Amperes [A]	1125/562	533	566	600	
LRC [A]	6.1x(Code G)	5.8x(Code G)	6.4x(Code H)	6.9x(Code J)	
No load current [A]	76.0/38.0	37.5	40.7	43.0	
Rated speed [RPM]	890	740	740	740	
Slip [%]	1.11	1.33	1.33	1.33	
Rated torque [ft.lb]	443	426	426	426	
Locked rotor torque [%]	170	160	190	210	
Breakdown torque [%]	210	210	229	260	
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 ²	64.0 dB(A)	62.0 dB(A)	62.0 dB(A)	62.0 dB(A)	
Efficiency (%)	25%	93.9	94.0	93.4	92.8
	50%	93.6	93.6	93.0	93.0
	75%	94.1	93.6	93.6	93.6
	100%	93.6	93.0	93.0	93.6
Power Factor	25%	0.41	0.41	0.37	0.35
	50%	0.66	0.66	0.62	0.59
	75%	0.76	0.76	0.73	0.71
	100%	0.80	0.80	0.79	0.77
Bearing type	: <u>Drive end</u> 6219 C3 <u>Non drive end</u> 6316 C3	Foundation loads			
Sealing	: Viton Viton Seal	Max. traction	: 1974 lb		
	: Oil Seal	Max. compression	: 3928 lb		
Lubrication interval	: 15247 h 15904 h				
Lubricant amount	: 28 g 34 g				
Lubricant type	: Mobil Polyrex EM				
Notes USABLE @208V 204A SF 1.00 SFA 204A					
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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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



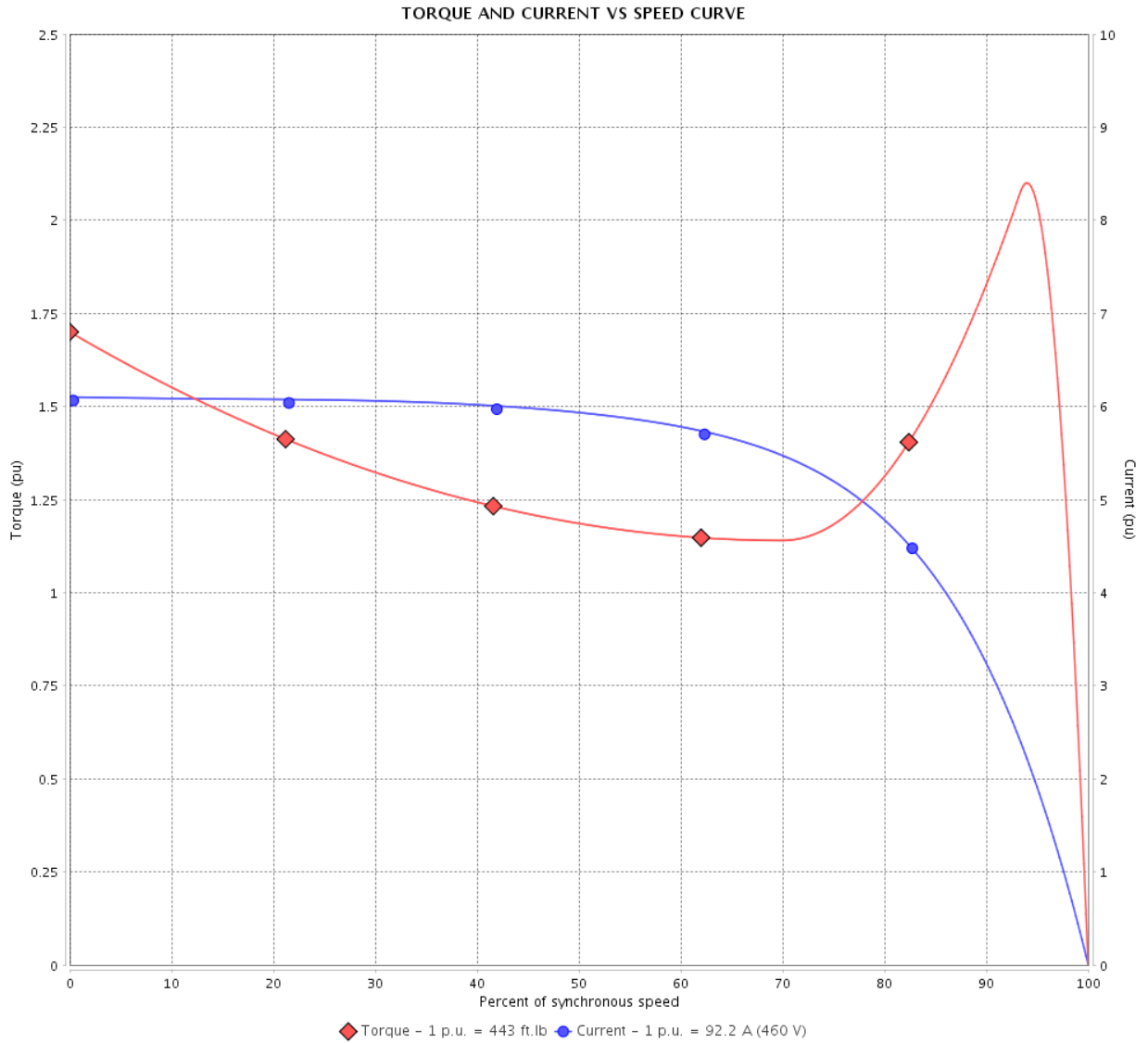
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408372

Catalog # : 07509XT3E444T



Performance : 230/460 V 60 Hz 8P

Rated current : 184/92.2 A
 LRC : 6.1
 Rated torque : 443 ft.lb
 Locked rotor torque : 170 %
 Breakdown torque : 210 %
 Rated speed : 890 rpm

Moment of inertia (J) : 73.6 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



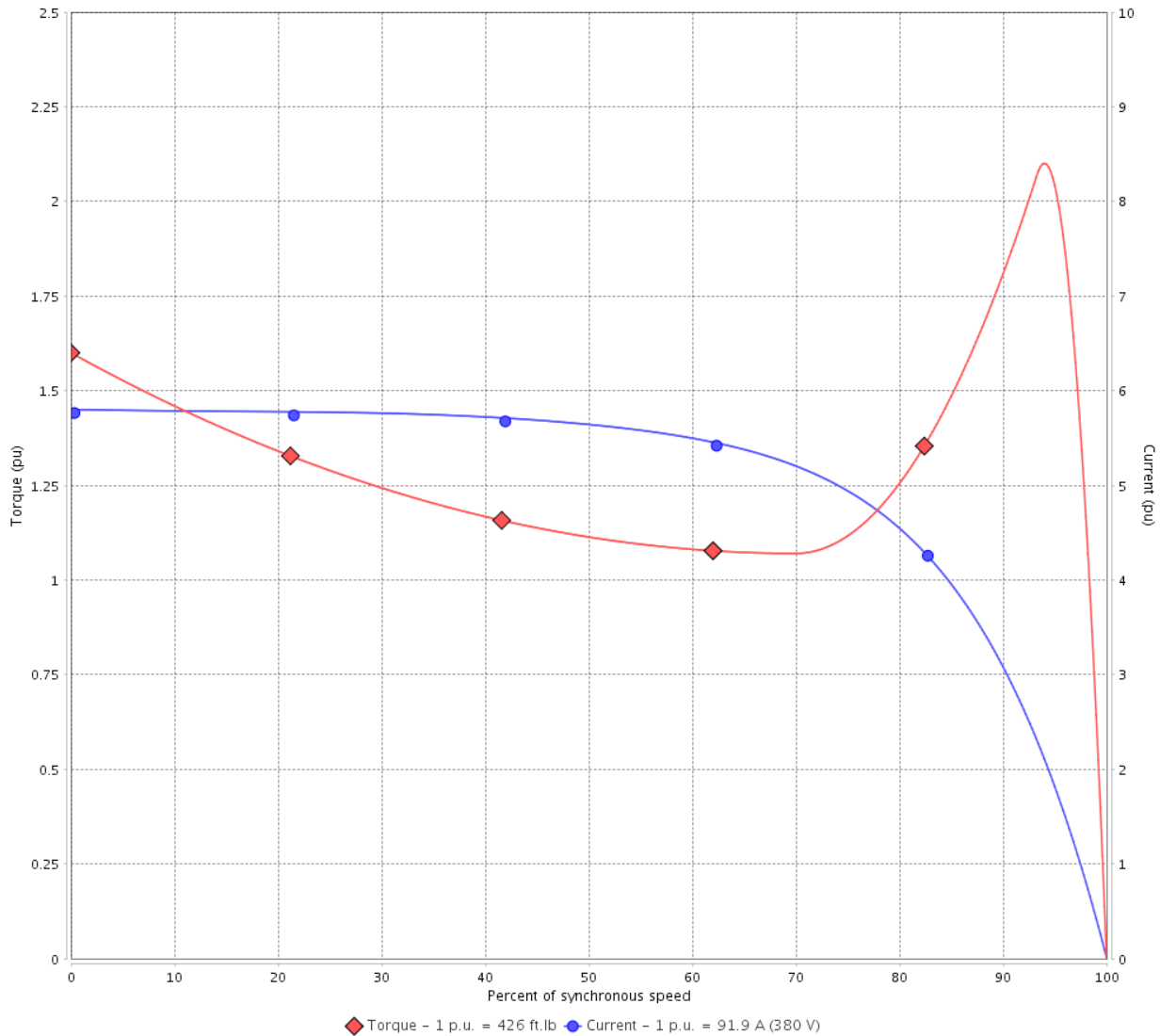
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408372

Catalog # : 07509XT3E444T

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 8P IE3

Rated current	: 91.9 A	Moment of inertia (J)	: 73.6 sq.ft.lb
LRC	: 5.8	Duty cycle	: Cont.(S1)
Rated torque	: 426 ft.lb	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 80 K
Rated speed	: 740 rpm	Design	: B

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

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TORQUE AND CURRENT VS SPEED CURVE



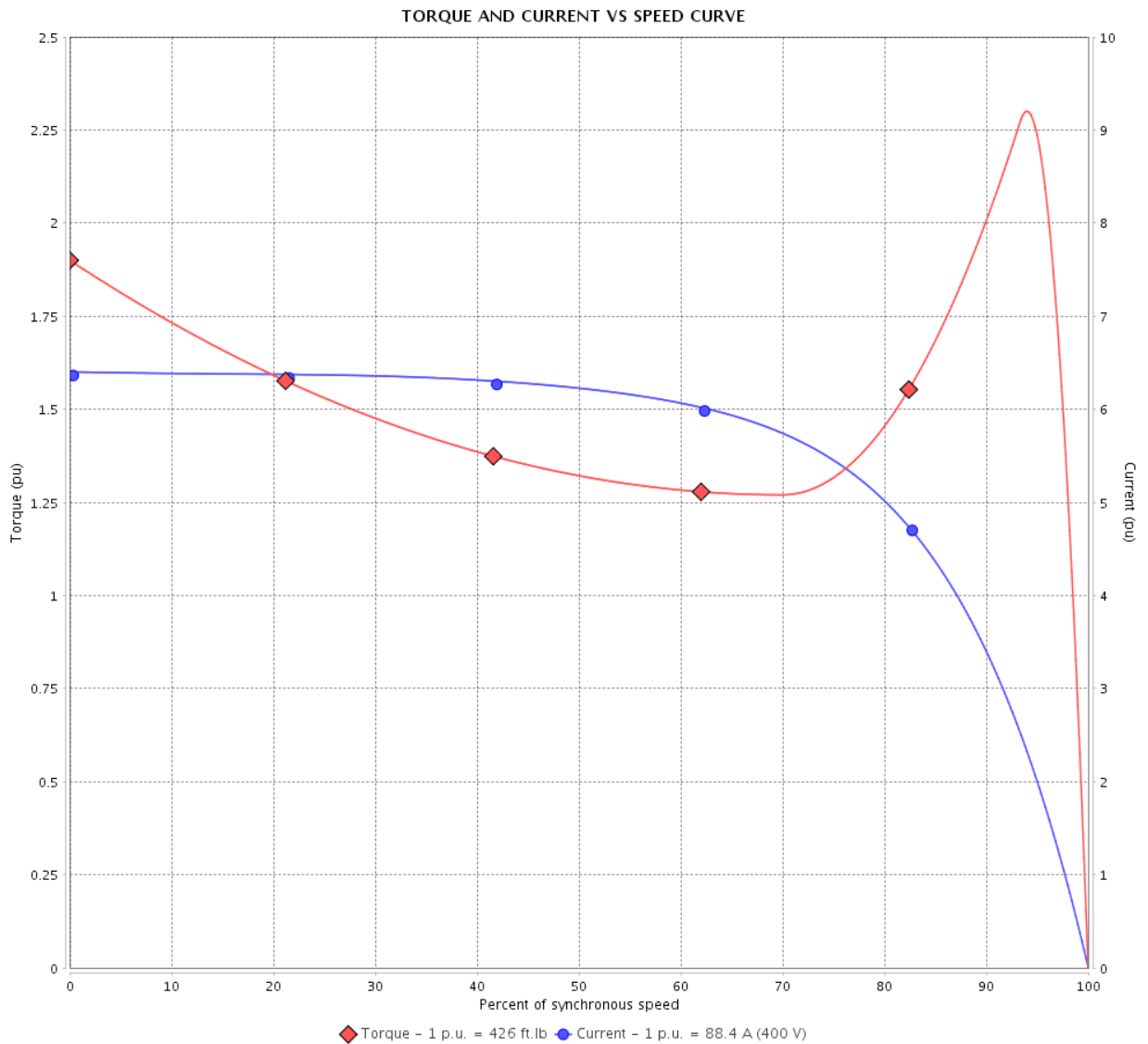
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408372

Catalog # : 07509XT3E444T



Performance : 400 V 50 Hz 8P IE3

Rated current	: 88.4 A	Moment of inertia (J)	: 73.6 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 426 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 740 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



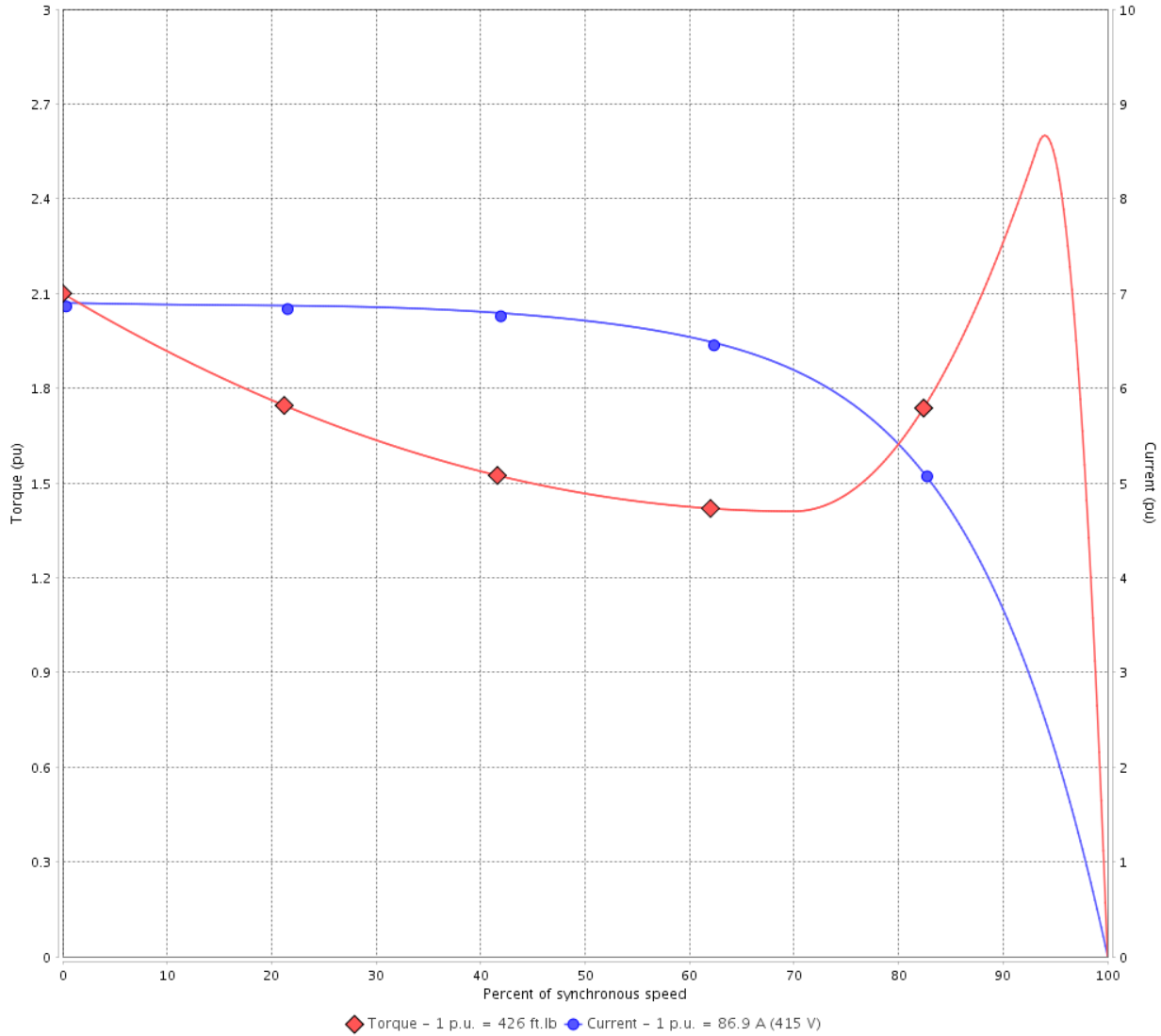
Customer :

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Product code : 12408372

Catalog # : 07509XT3E444T

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 8P IE4

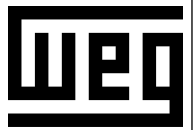
Rated current	: 86.9 A	Moment of inertia (J)	: 73.6 sq.ft.lb
LRC	: 6.9	Duty cycle	: Cont.(S1)
Rated torque	: 426 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 740 rpm	Design	: B

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

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LOAD PERFORMANCE CURVE

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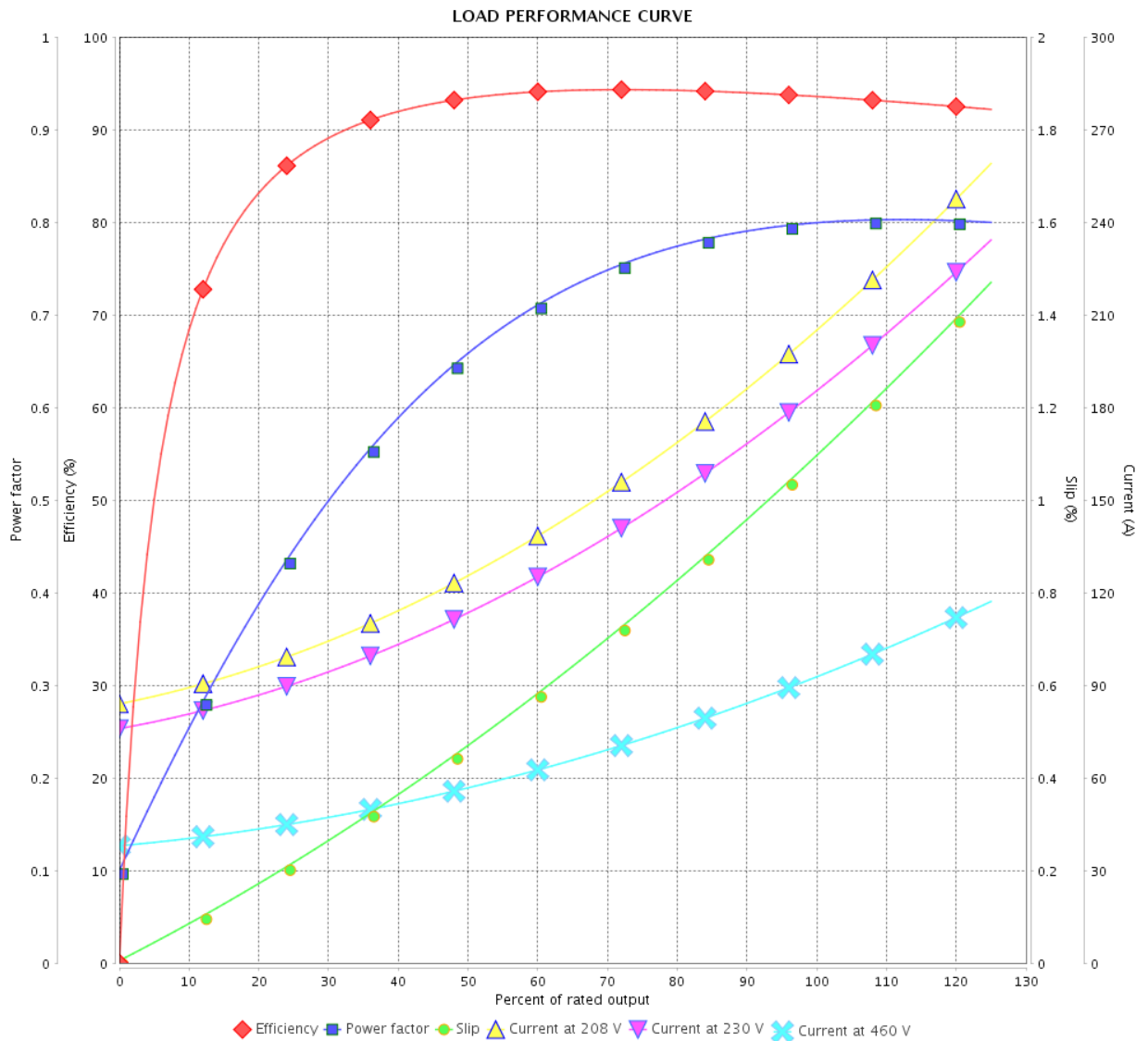


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408372

Catalog # : 07509XT3E444T



Performance : 230/460 V 60 Hz 8P

Rated current : 184/92.2 A
 LRC : 6.1
 Rated torque : 443 ft.lb
 Locked rotor torque : 170 %
 Breakdown torque : 210 %
 Rated speed : 890 rpm

Moment of inertia (J) : 73.6 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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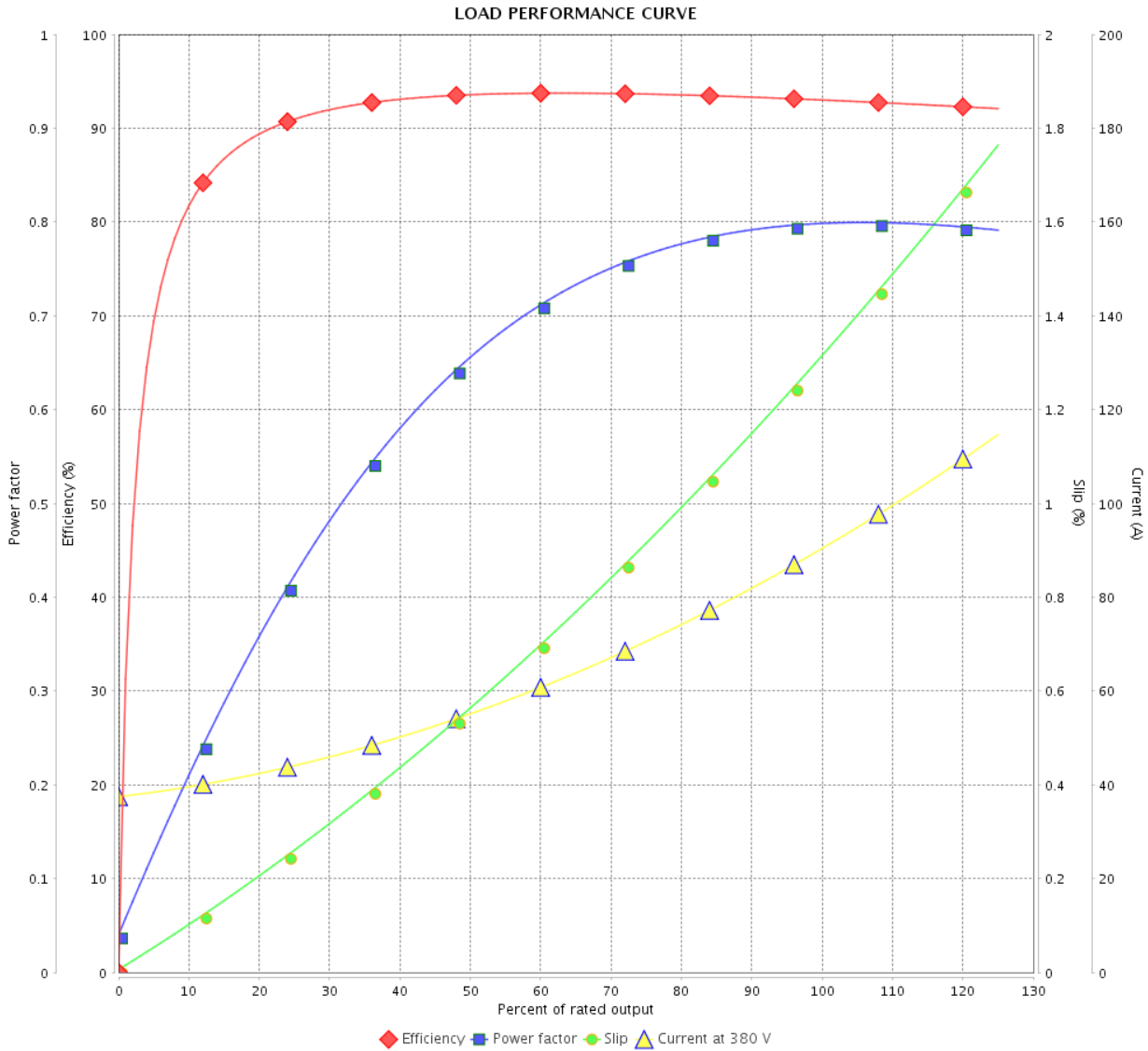


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408372

Catalog # : 07509XT3E444T



Performance : 380 V 50 Hz 8P IE3

Rated current	: 91.9 A	Moment of inertia (J)	: 73.6 sq.ft.lb
LRC	: 5.8	Duty cycle	: Cont.(S1)
Rated torque	: 426 ft.lb	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 80 K
Rated speed	: 740 rpm	Design	: B

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Three Phase Induction Motor - Squirrel Cage

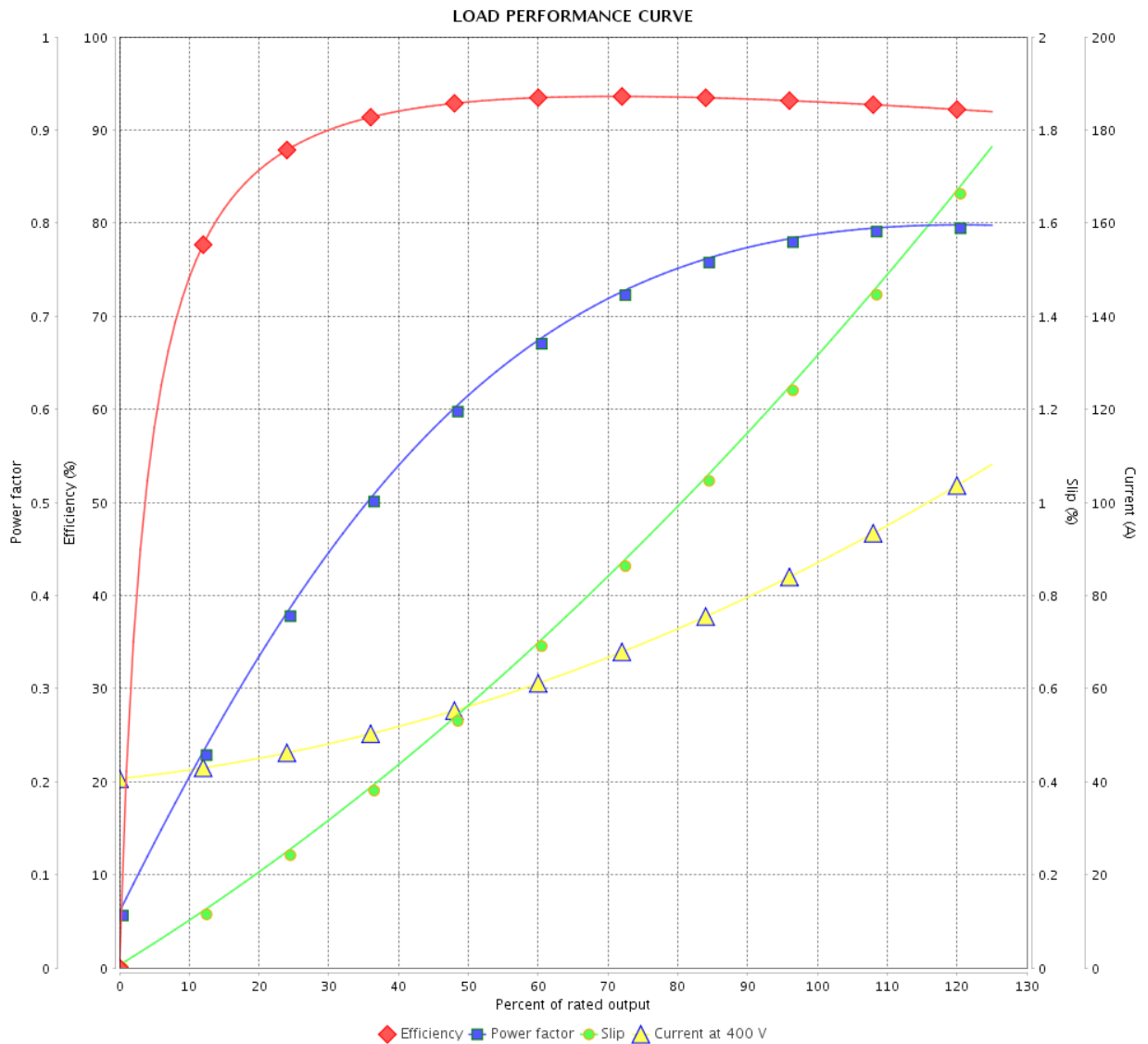


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408372

Catalog # : 07509XT3E444T



Performance : 400 V 50 Hz 8P IE3

Rated current : 88.4 A
 LRC : 6.4
 Rated torque : 426 ft.lb
 Locked rotor torque : 190 %
 Breakdown torque : 229 %
 Rated speed : 740 rpm

Moment of inertia (J) : 73.6 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

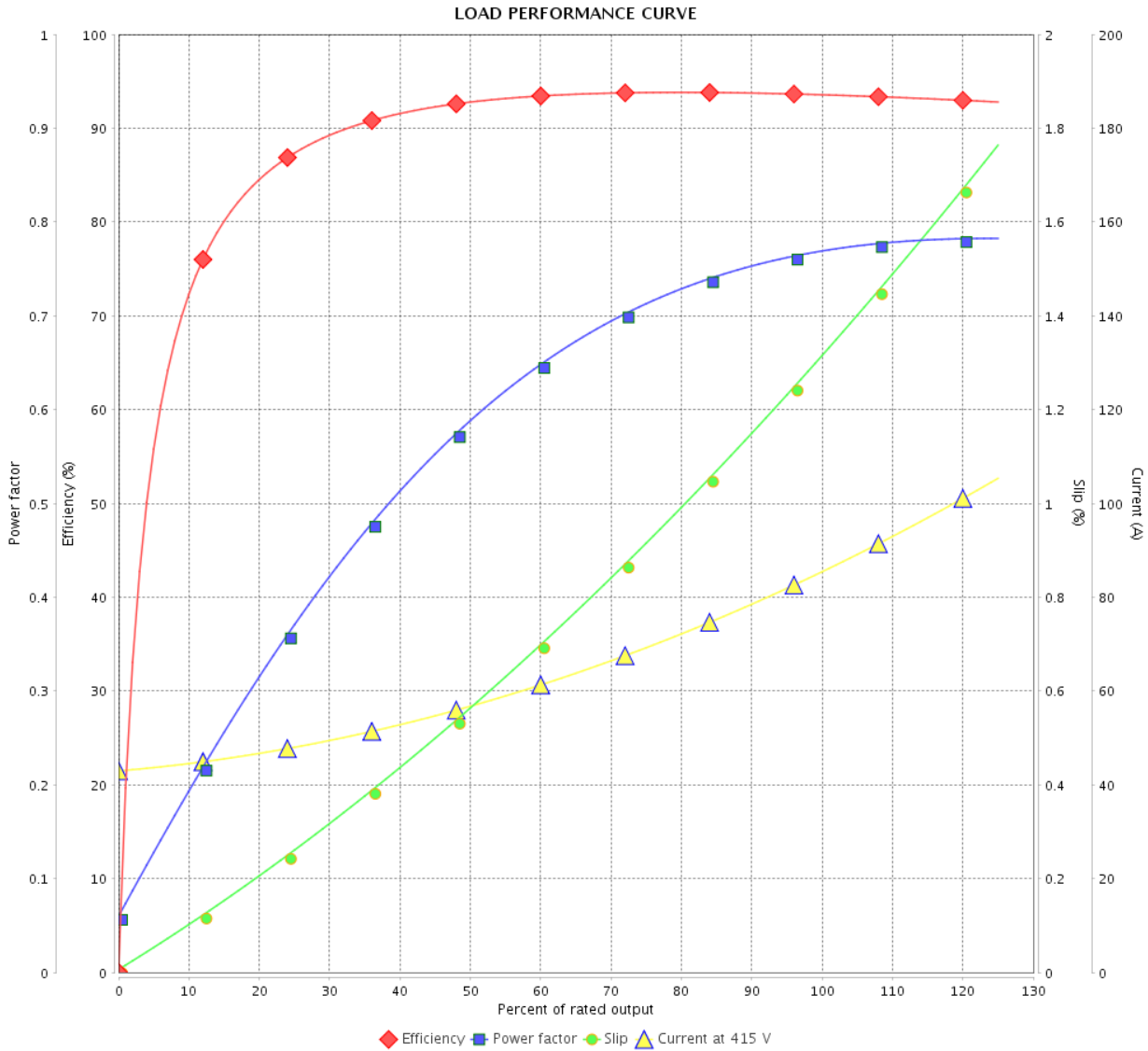


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408372

Catalog # : 07509XT3E444T



Performance : 415 V 50 Hz 8P IE4

Rated current	: 86.9 A	Moment of inertia (J)	: 73.6 sq.ft.lb
LRC	: 6.9	Duty cycle	: Cont.(S1)
Rated torque	: 426 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 740 rpm	Design	: B

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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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Catalog # : 07509XT3E444T

Performance : 230/460 V 60 Hz 8P

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LRC : 6.1	Duty cycle : Cont.(S1)
Rated torque : 443 ft.lb	Insulation class : F
Locked rotor torque : 170 %	Service factor : 1.15
Breakdown torque : 210 %	Temperature rise : 80 K
Rated speed : 890 rpm	Design : B

Heating constant

Cooling constant

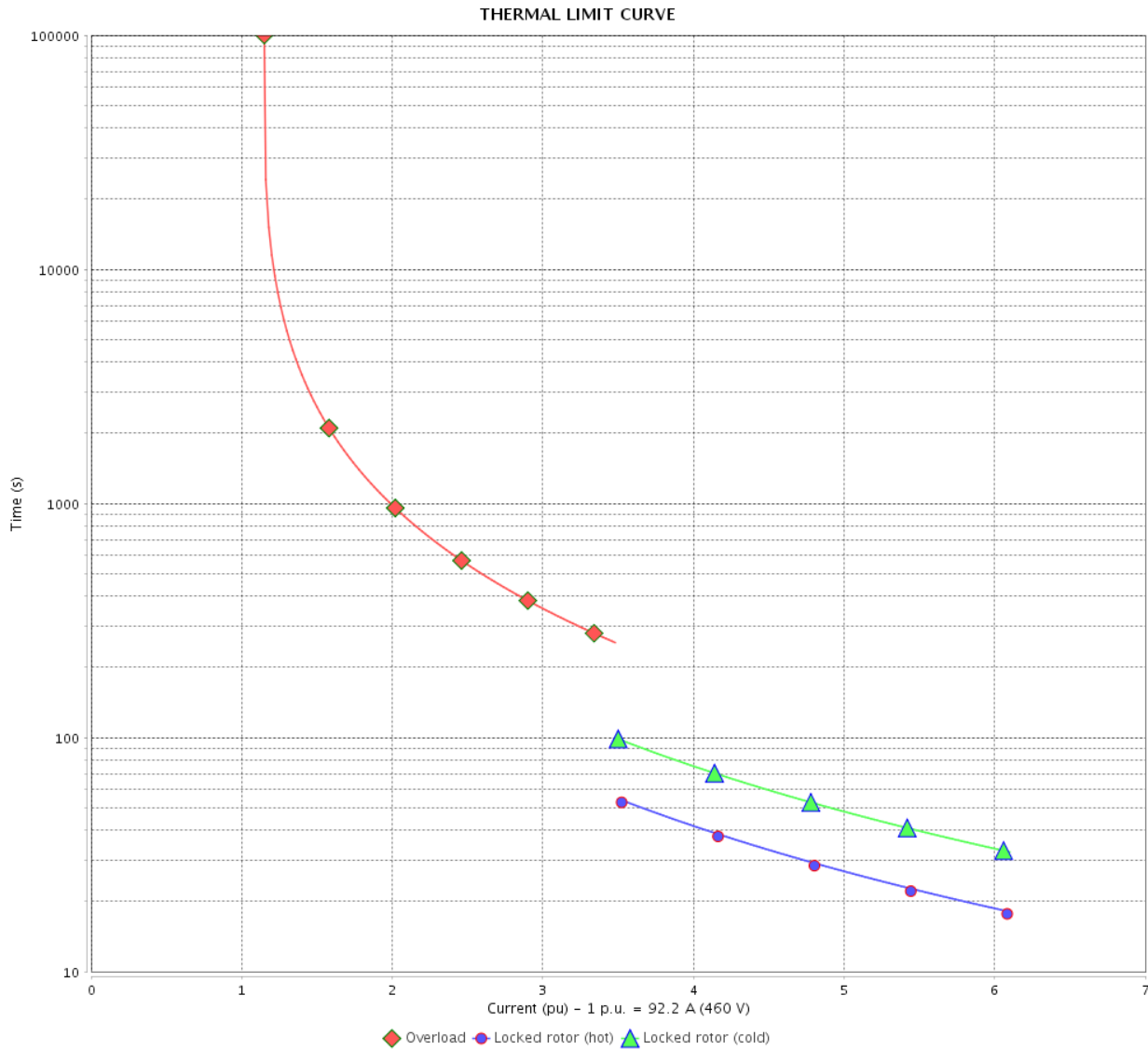
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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Rated current : 91.9 A	Moment of inertia (J) : 73.6 sq.ft.lb
LRC : 5.8	Duty cycle : Cont.(S1)
Rated torque : 426 ft.lb	Insulation class : F
Locked rotor torque : 160 %	Service factor : 1.00
Breakdown torque : 210 %	Temperature rise : 80 K
Rated speed : 740 rpm	Design : B

Heating constant

Cooling constant

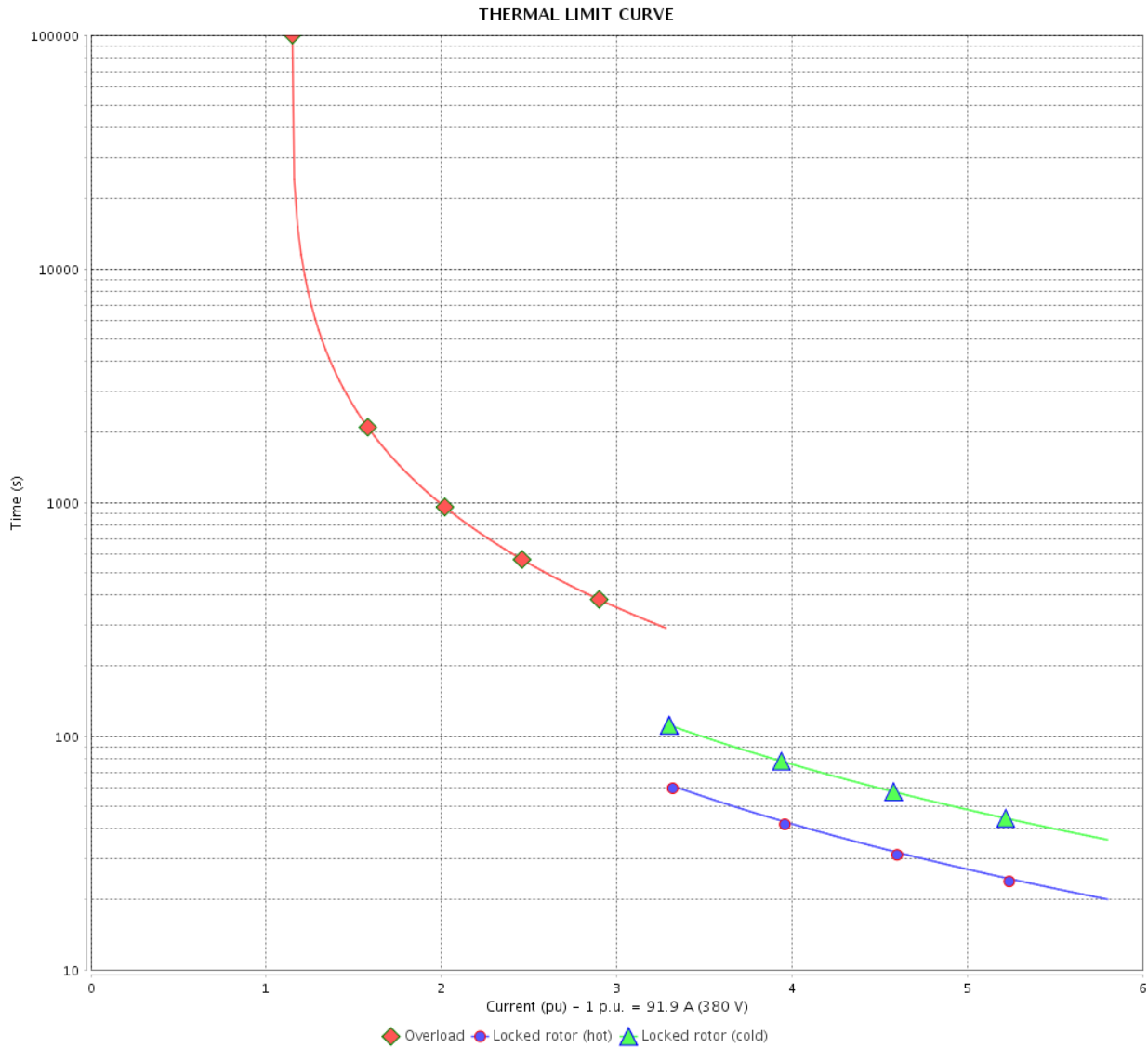
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THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 12408372
 Catalog # : 07509XT3E444T

Performance : 400 V 50 Hz 8P IE3

Rated current : 88.4 A	Moment of inertia (J) : 73.6 sq.ft.lb
LRC : 6.4	Duty cycle : Cont.(S1)
Rated torque : 426 ft.lb	Insulation class : F
Locked rotor torque : 190 %	Service factor : 1.00
Breakdown torque : 229 %	Temperature rise : 80 K
Rated speed : 740 rpm	Design : B

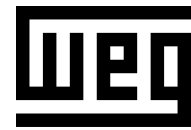
Heating constant

Cooling constant

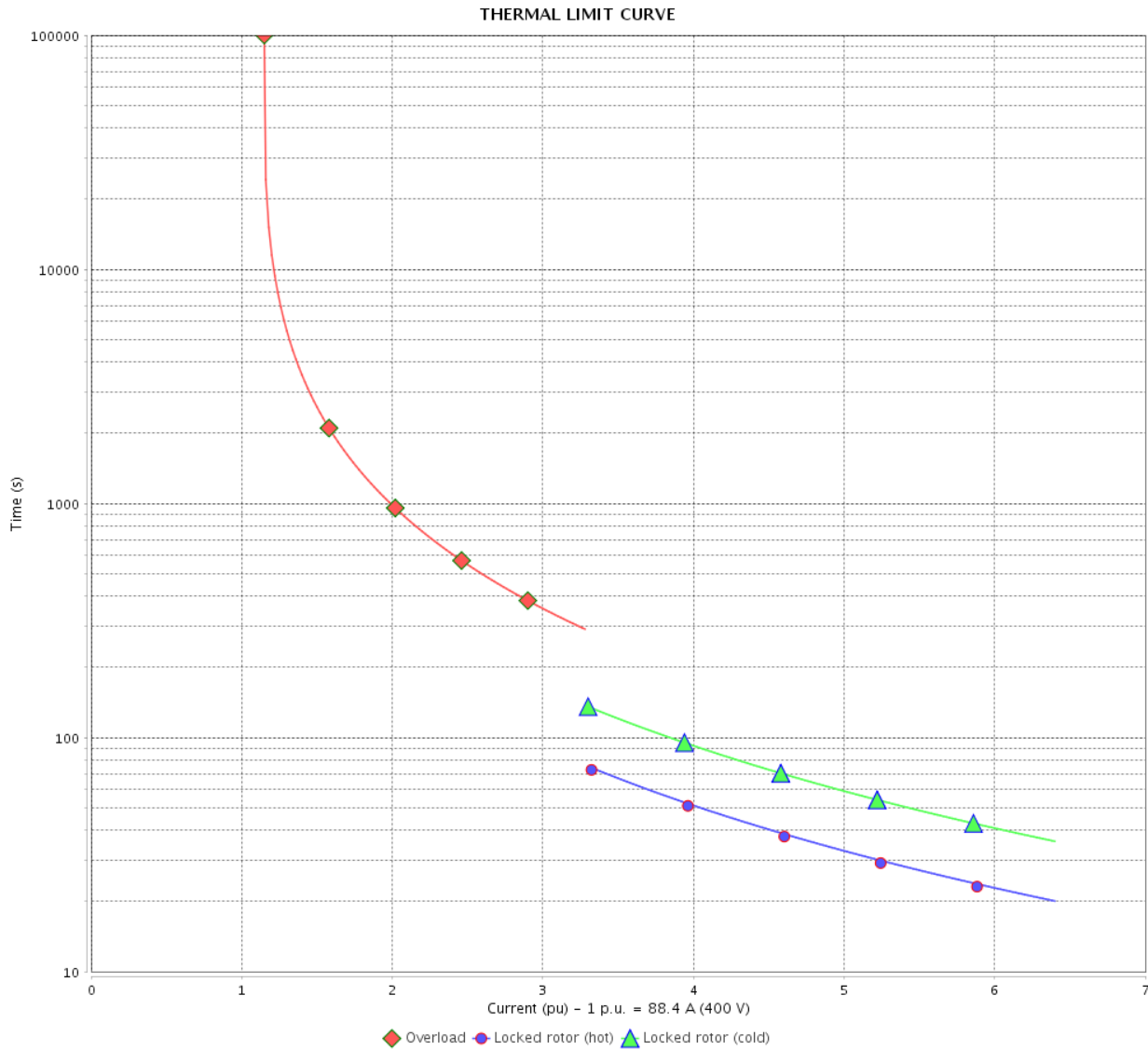
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Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 12408372
 Catalog # : 07509XT3E444T

Performance : 415 V 50 Hz 8P IE4

Rated current : 86.9 A	Moment of inertia (J) : 73.6 sq.ft.lb
LRC : 6.9	Duty cycle : Cont.(S1)
Rated torque : 426 ft.lb	Insulation class : F
Locked rotor torque : 210 %	Service factor : 1.00
Breakdown torque : 260 %	Temperature rise : 80 K
Rated speed : 740 rpm	Design : B

Heating constant

Cooling constant

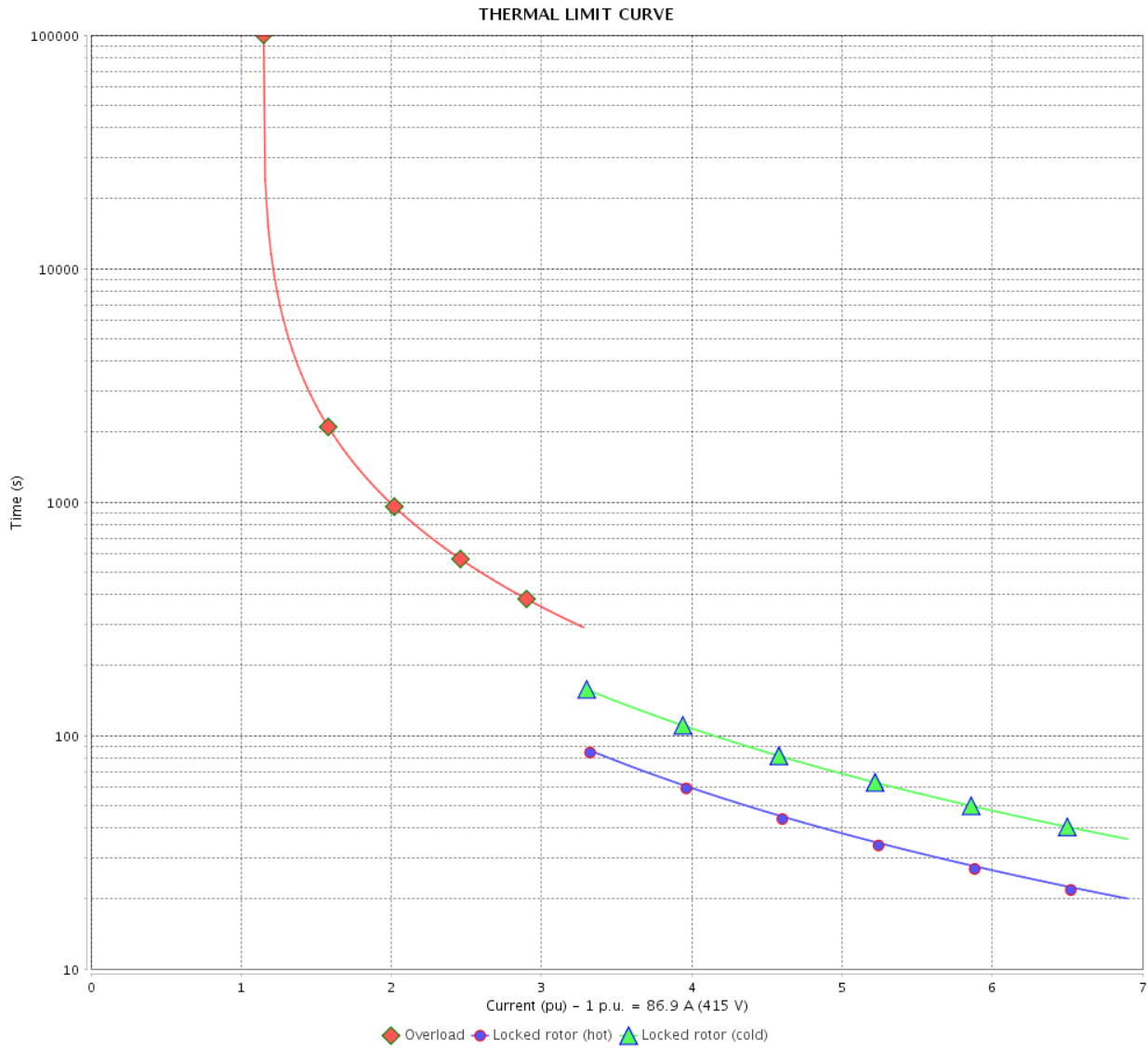
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

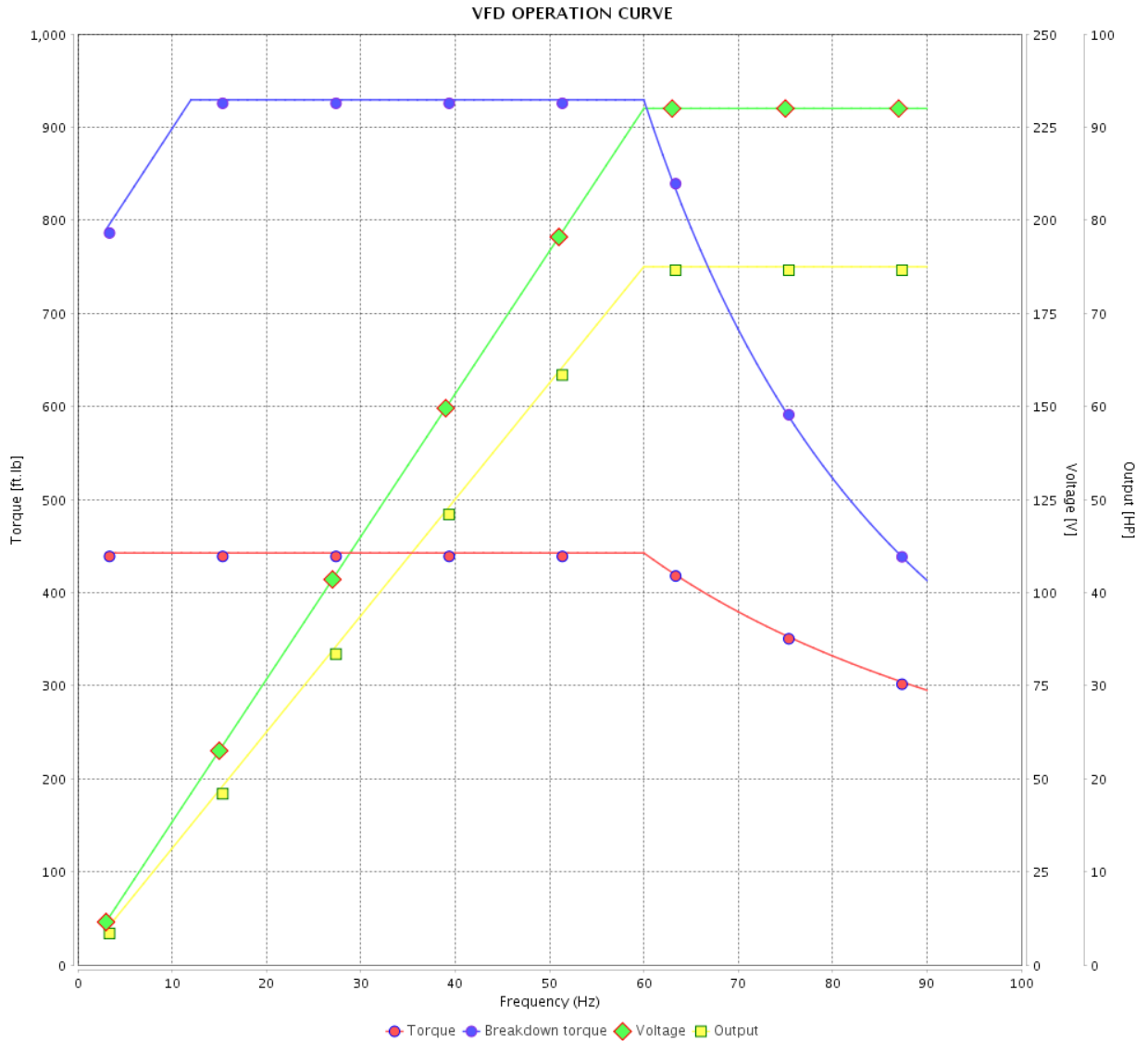


Customer : _____

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408372

Catalog # : 07509XT3E444T



Performance : 230/460 V 60 Hz 8P

Rated current : 184/92.2 A
 LRC : 6.1
 Rated torque : 443 ft.lb
 Locked rotor torque : 170 %
 Breakdown torque : 210 %
 Rated speed : 890 rpm

Moment of inertia (J) : 73.6 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

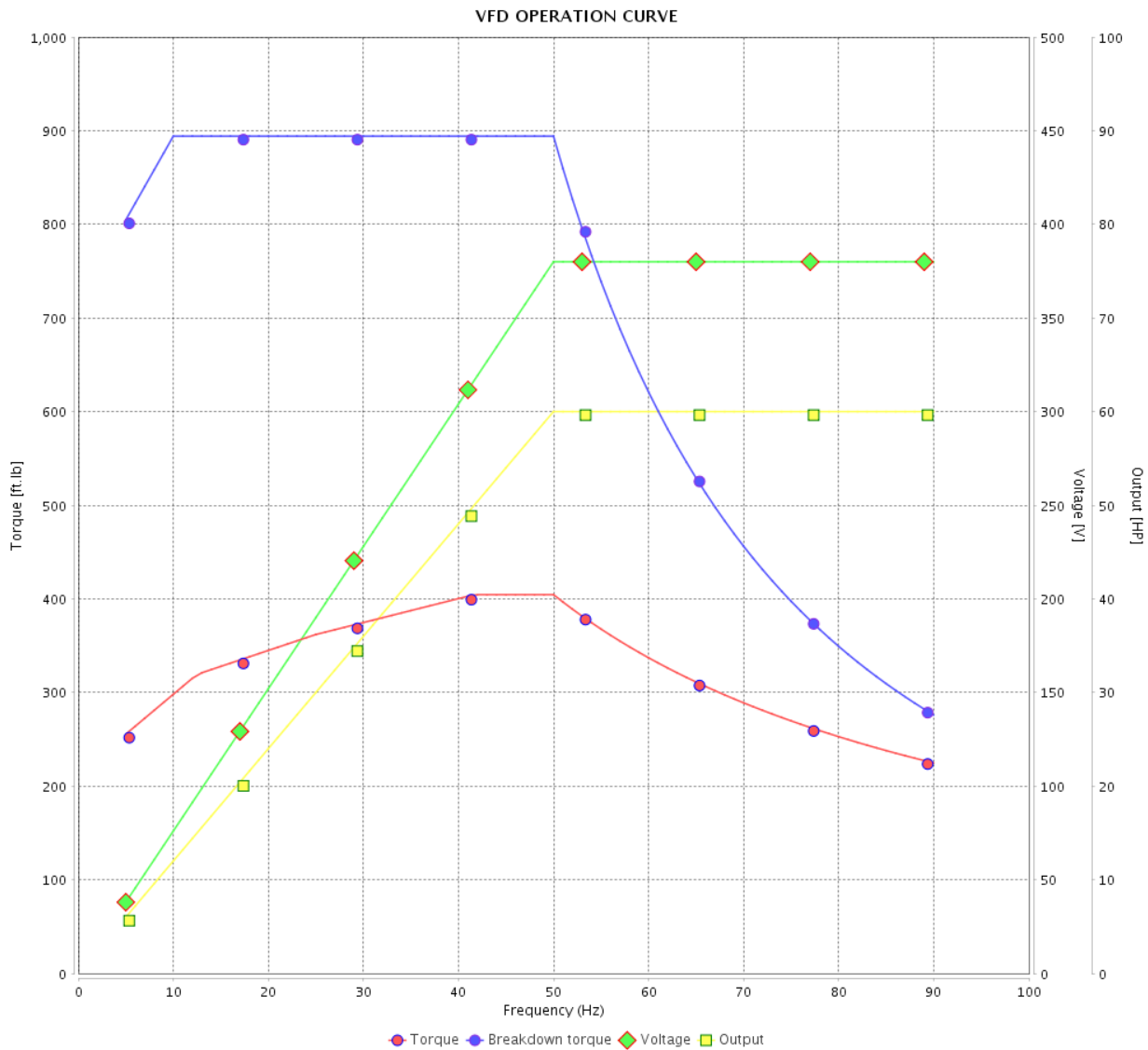


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408372

Catalog # : 07509XT3E444T



Performance : 380 V 50 Hz 8P IE3

Rated current	: 91.9 A	Moment of inertia (J)	: 73.6 sq.ft.lb
LRC	: 5.8	Duty cycle	: Cont.(S1)
Rated torque	: 426 ft.lb	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 80 K
Rated speed	: 740 rpm	Design	: B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

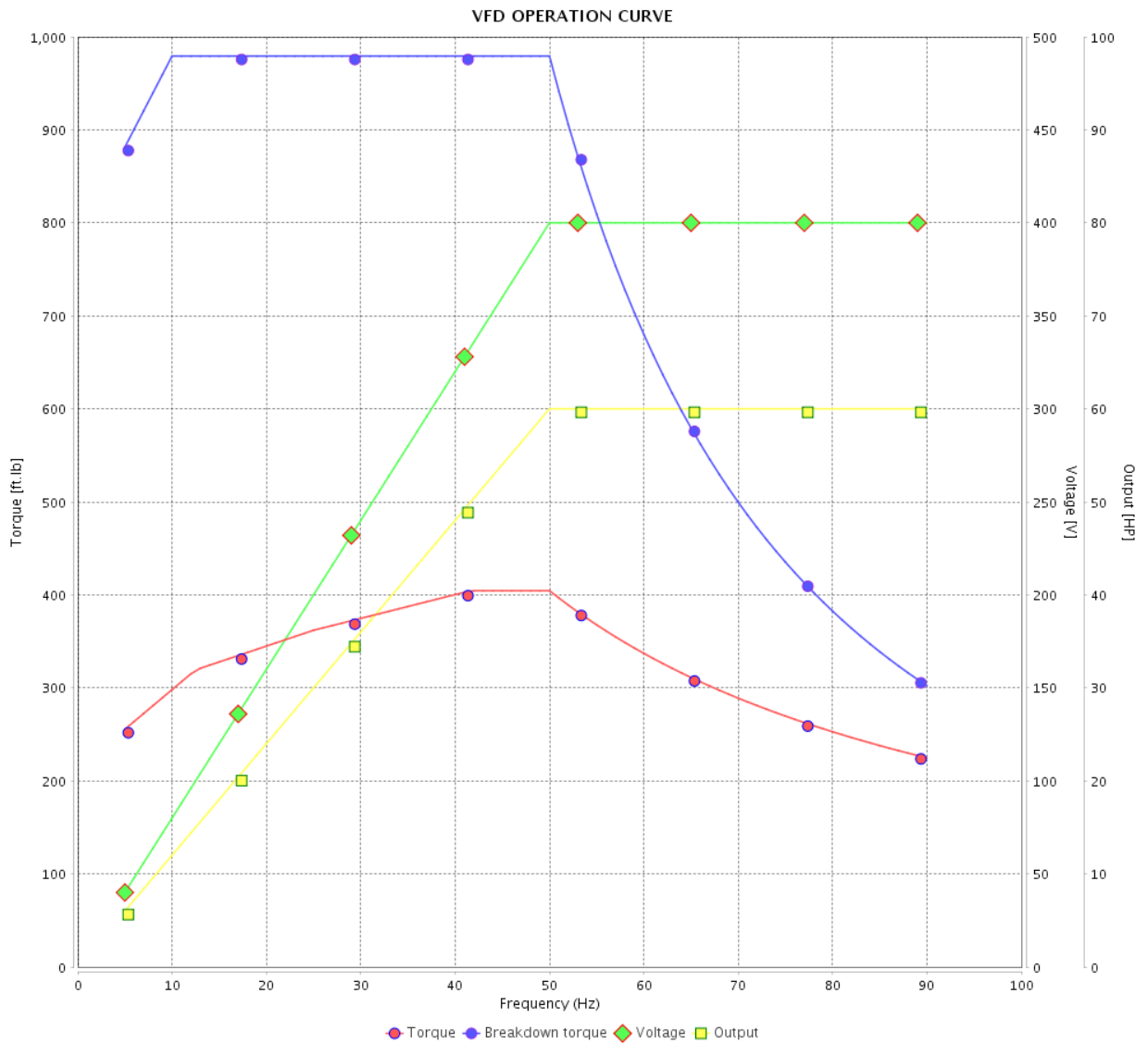


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Product code : 12408372

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Performance : 400 V 50 Hz 8P IE3

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 Rated speed : 740 rpm

Moment of inertia (J) : 73.6 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



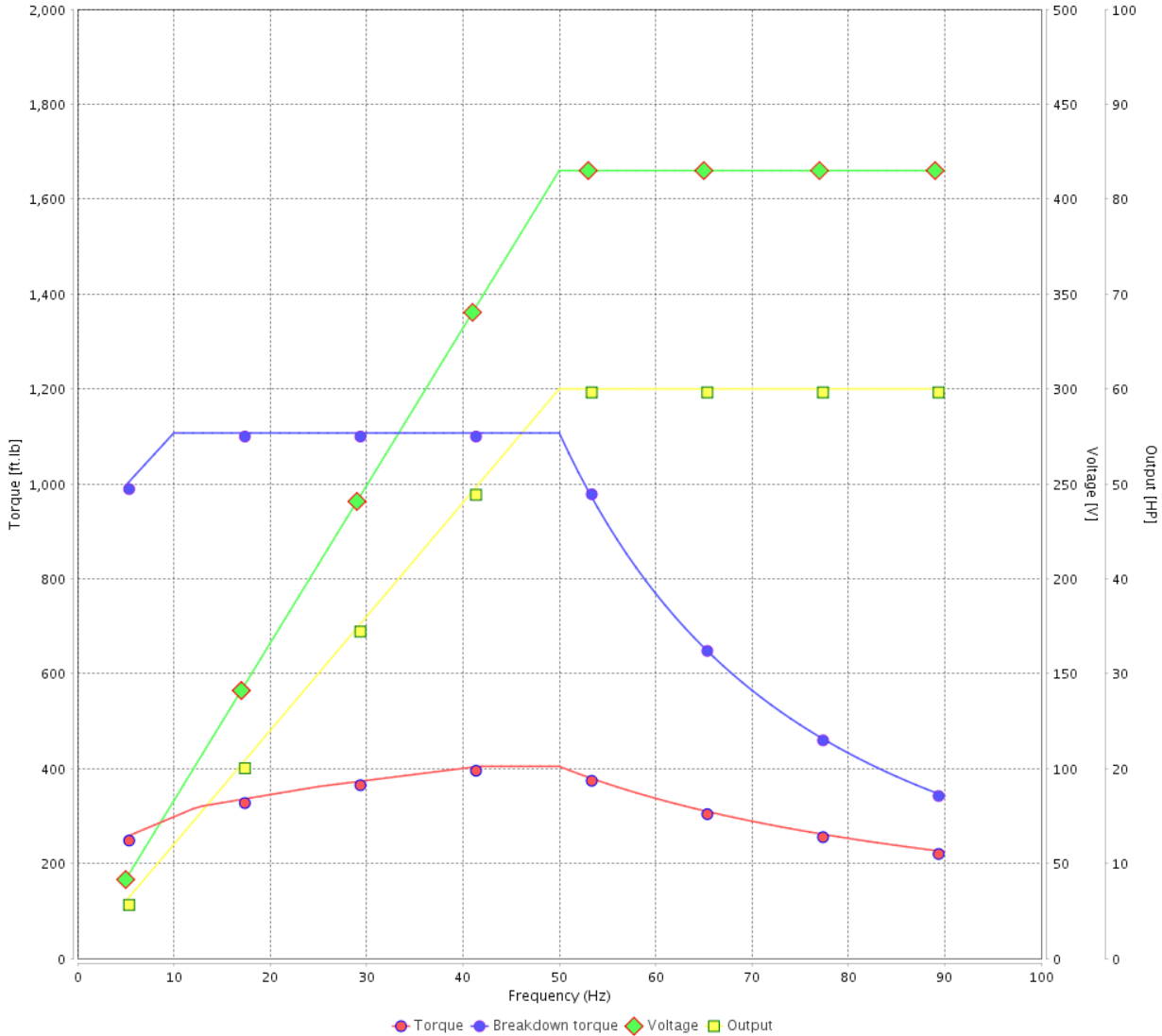
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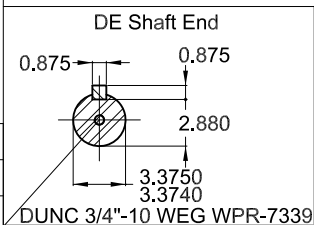
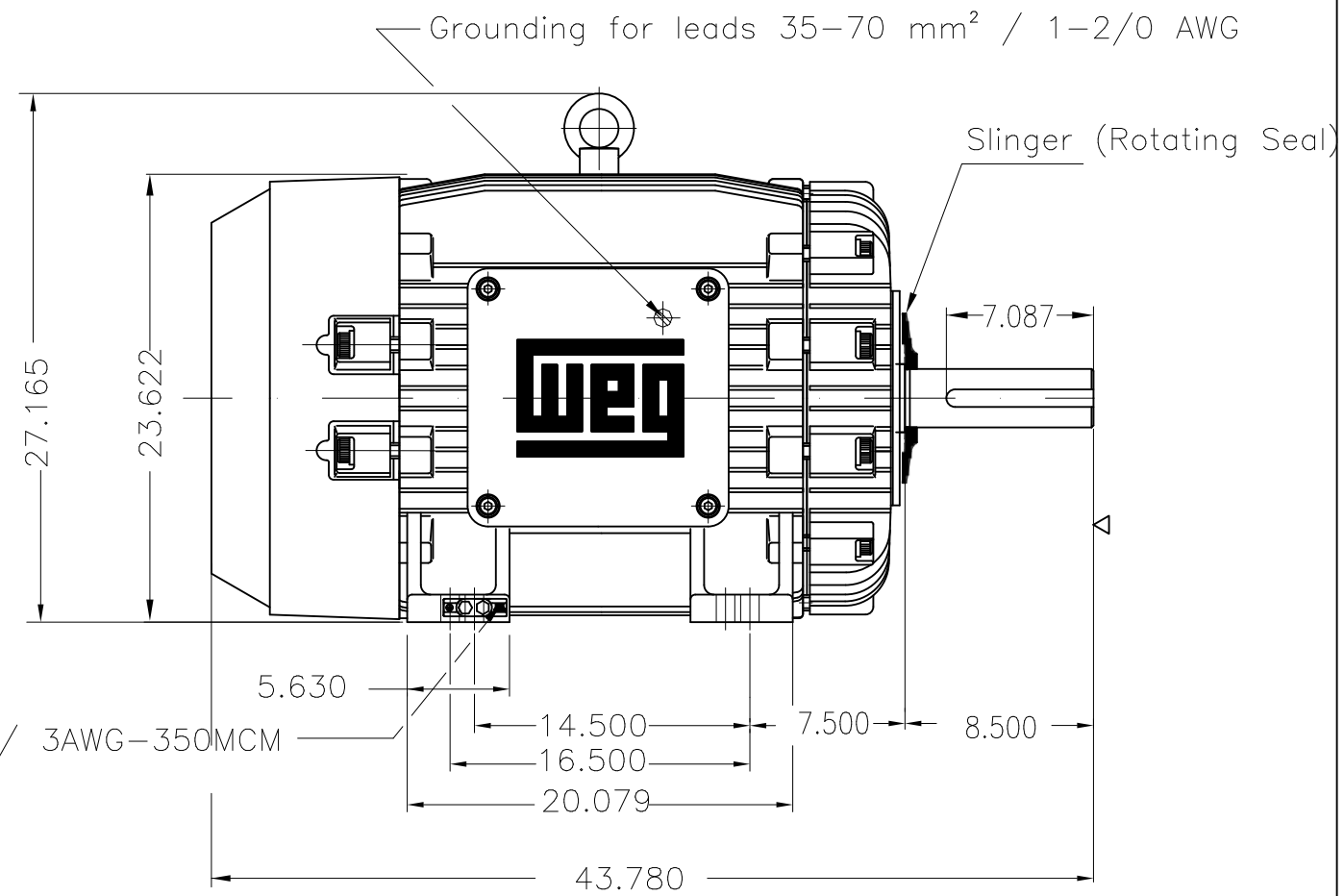
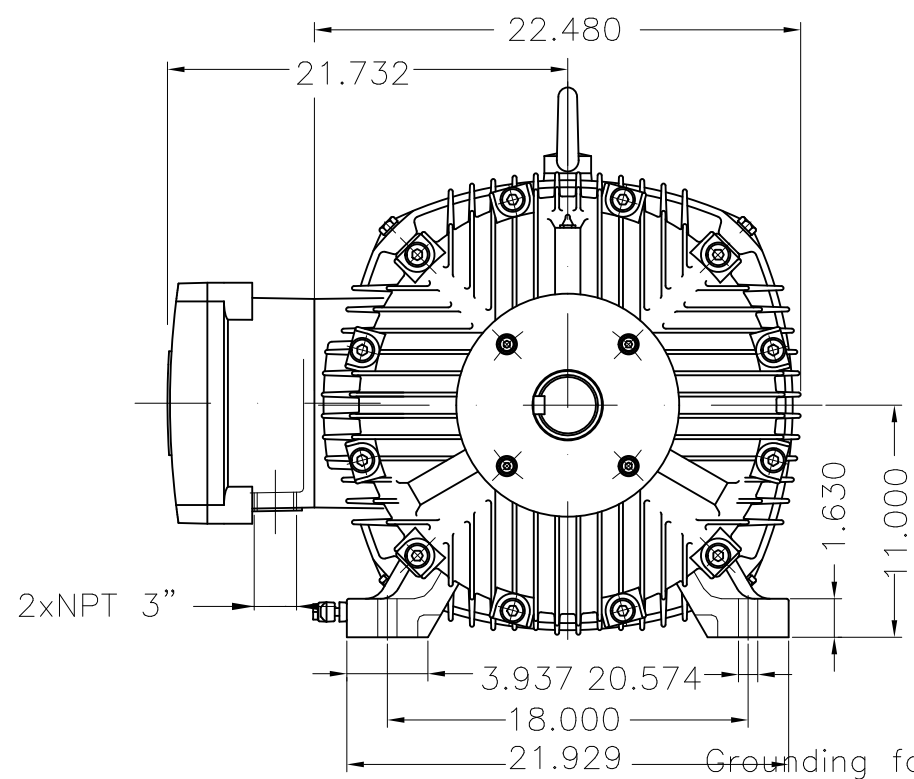


Performance : 415 V 50 Hz 8P IE4

Rated current : 86.9 A
 LRC : 6.9
 Rated torque : 426 ft.lb
 Locked rotor torque : 210 %
 Breakdown torque : 260 %
 Rated speed : 740 rpm

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

75 HP 08 Poles 60 Hz

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR EXPLOSION PROOF PREM. EFF.					
CHECKED		FRAME 444/5T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

PREVIEW
 WDD



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