

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :							
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	11568627				
		Catalog # :	07509ET3E444T-W22				
Frame	: 444/5T	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>	: 1492 lb				
Protection degree	: IP55	Moment of inertia (J)	: 73.6 sq.ft.lb				
Design	: B						
Output [HP]	75	60	60	60	75	75	75
Poles	8	8	8	8	8	8	8
Frequency [Hz]	60	50	50	50	50	50	50
Rated voltage [V]	230/460	380	400	415	380	400	415
Rated current [A]	187/93.4	95.5	95.8	94.9	114	109	106
L. R. Amperes [A]	1196/598	525	565	607	536	567	604
LRC [A]	6.4x(Code H)	5.5x(Code G)	5.9x(Code H)	6.4x(Code J)	4.7x(Code E)	5.2x(Code F)	5.7x(Code G)
No load current [A]	80.0/40.0	39.3	43.6	47.0	39.3	43.6	47.0
Rated speed [RPM]	890	740	740	740	735	735	740
Slip [%]	1.11	1.33	1.33	1.33	2.00	2.00	1.33
Rated torque [ft.lb]	443	426	426	426	536	536	532
Locked rotor torque [%]	170	170	200	220	140	160	180
Breakdown torque [%]	200	210	229	250	170	190	210
Service factor	1.25	1.00	1.00	1.00	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K	105 K	105 K	105 K
Locked rotor time	32s (cold) 18s (hot)	72s (cold) 40s (hot)	64s (cold) 36s (hot)	61s (cold) 34s (hot)	46s (cold) 26s (hot)	46s (cold) 26s (hot)	48s (cold) 27s (hot)
Noise level <sup>2</sup>	63.0 dB(A)	59.0 dB(A)	59.0 dB(A)	59.0 dB(A)	59.0 dB(A)	59.0 dB(A)	59.0 dB(A)
Efficiency (%)	25%						
	50%	93.0	92.6	91.3	91.2	91.5	92.0
	75%	93.6	93.0	92.6	92.5	91.7	92.4
	100%	93.6	93.0	92.9	92.9	91.7	92.4
Power Factor	25%						
	50%	0.64	0.56	0.52	0.49	0.70	0.66
	75%	0.74	0.69	0.65	0.62	0.77	0.75
	100%	0.79	0.77	0.73	0.71	0.80	0.78
Bearing type	: Drive end : 6319 C3	Non drive end : 6316 C3	Foundation loads				
Sealing	: WSeal	WSeal	Max. traction	: 2233 lb			
Lubrication interval	: 17000 h	20000 h	Max. compression	: 3725 lb			
Lubricant amount	: 45 g	34 g					
Lubricant type	: Mobil Polyrex EM						
Notes USABLE @208V 206A SF 1.10 SFA 226A							
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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# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage



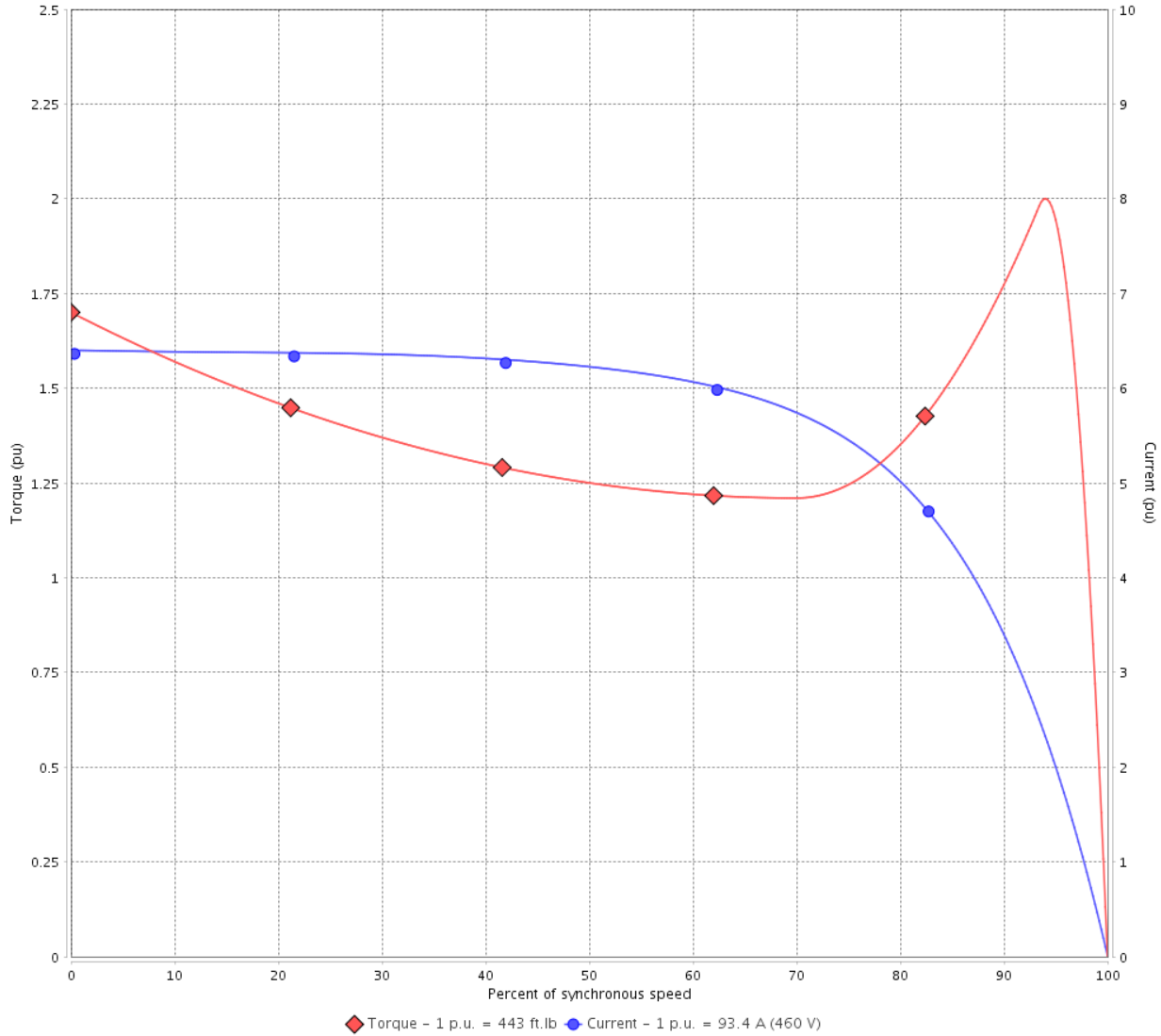
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11568627

Catalog # : 07509ET3E444T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 8P

Rated current	: 187/93.4 A	Moment of inertia (J)	: 73.6 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 443 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.25
Breakdown torque	: 200 %	Temperature rise	: 80 K
Rated speed	: 890 rpm	Design	: B

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

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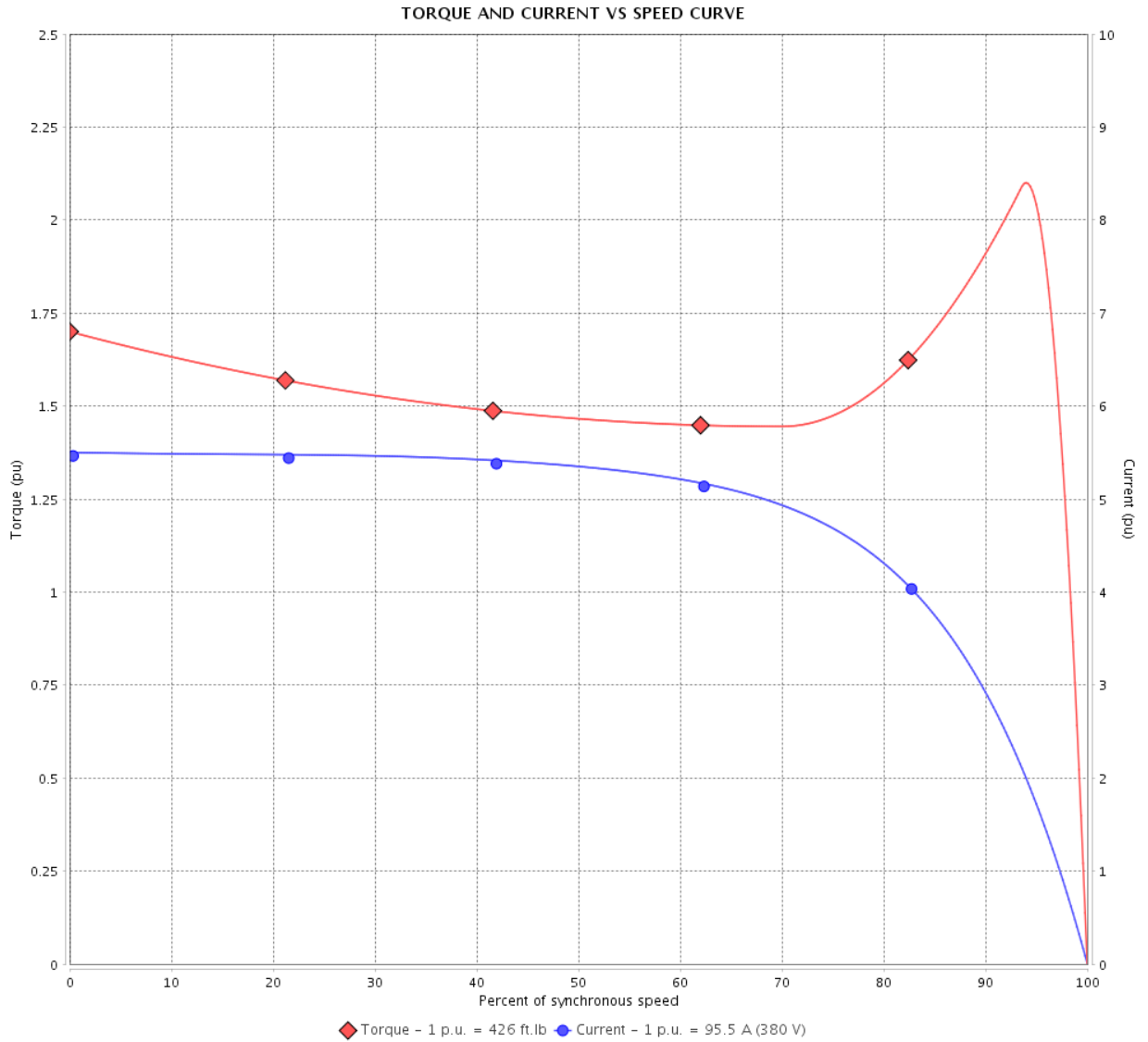
# TORQUE AND CURRENT VS SPEED CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
 Product code : 11568627  
 Catalog # : 07509ET3E444T-W22



Performance : 380 V 50 Hz 8P IE3

Rated current	: 95.5 A	Moment of inertia (J)	: 73.6 sq.ft.lb
LRC	: 5.5	Duty cycle	: Cont.(S1)
Rated torque	: 426 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 80 K
Rated speed	: 740 rpm	Design	: B

Locked rotor time : 72s (cold) 40s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



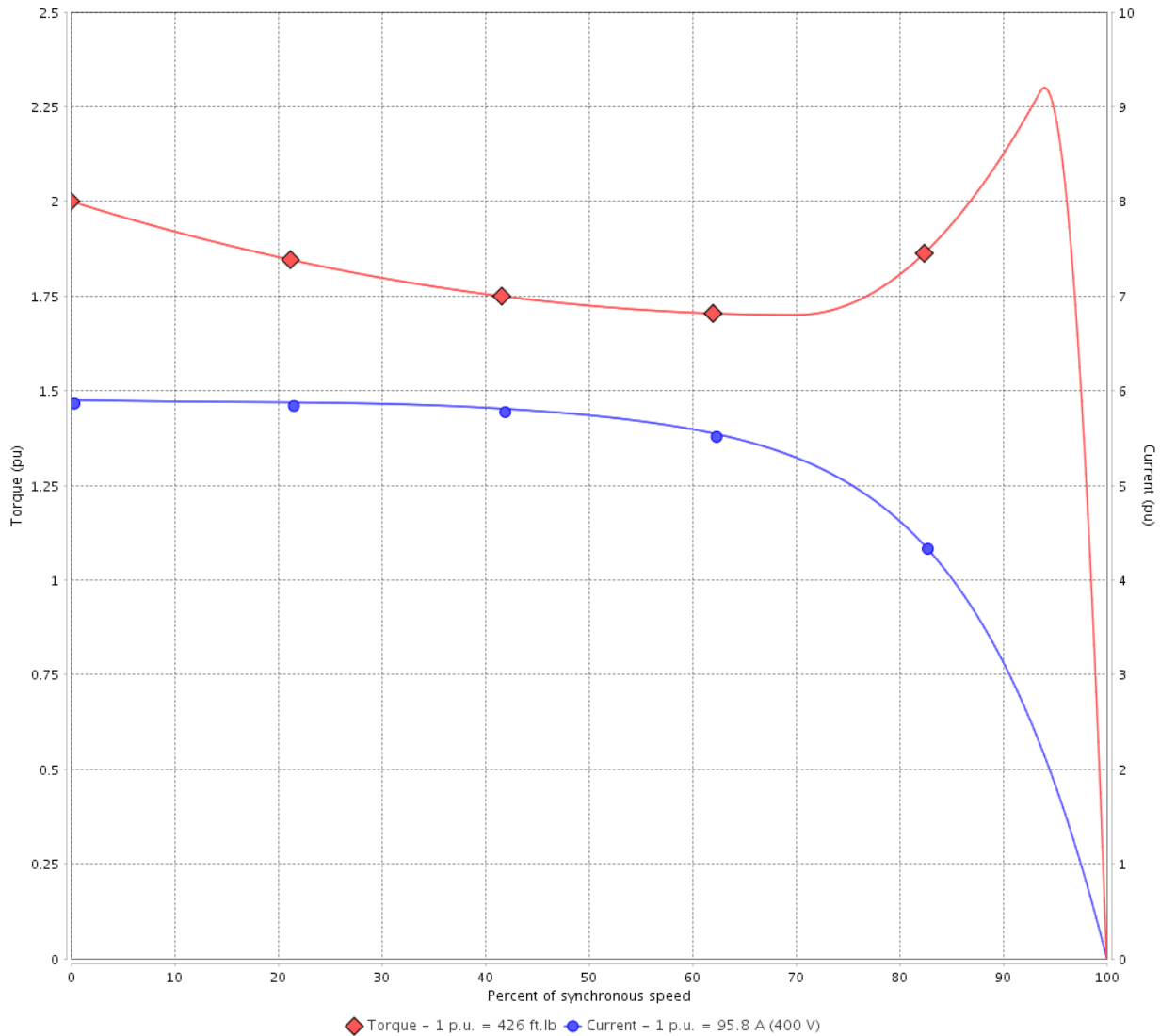
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Product code : 11568627

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TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 8P IE3

Rated current	: 95.8 A	Moment of inertia (J)	: 73.6 sq.ft.lb
LRC	: 5.9	Duty cycle	: Cont.(S1)
Rated torque	: 426 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 740 rpm	Design	: B

Locked rotor time : 64s (cold) 36s (hot)

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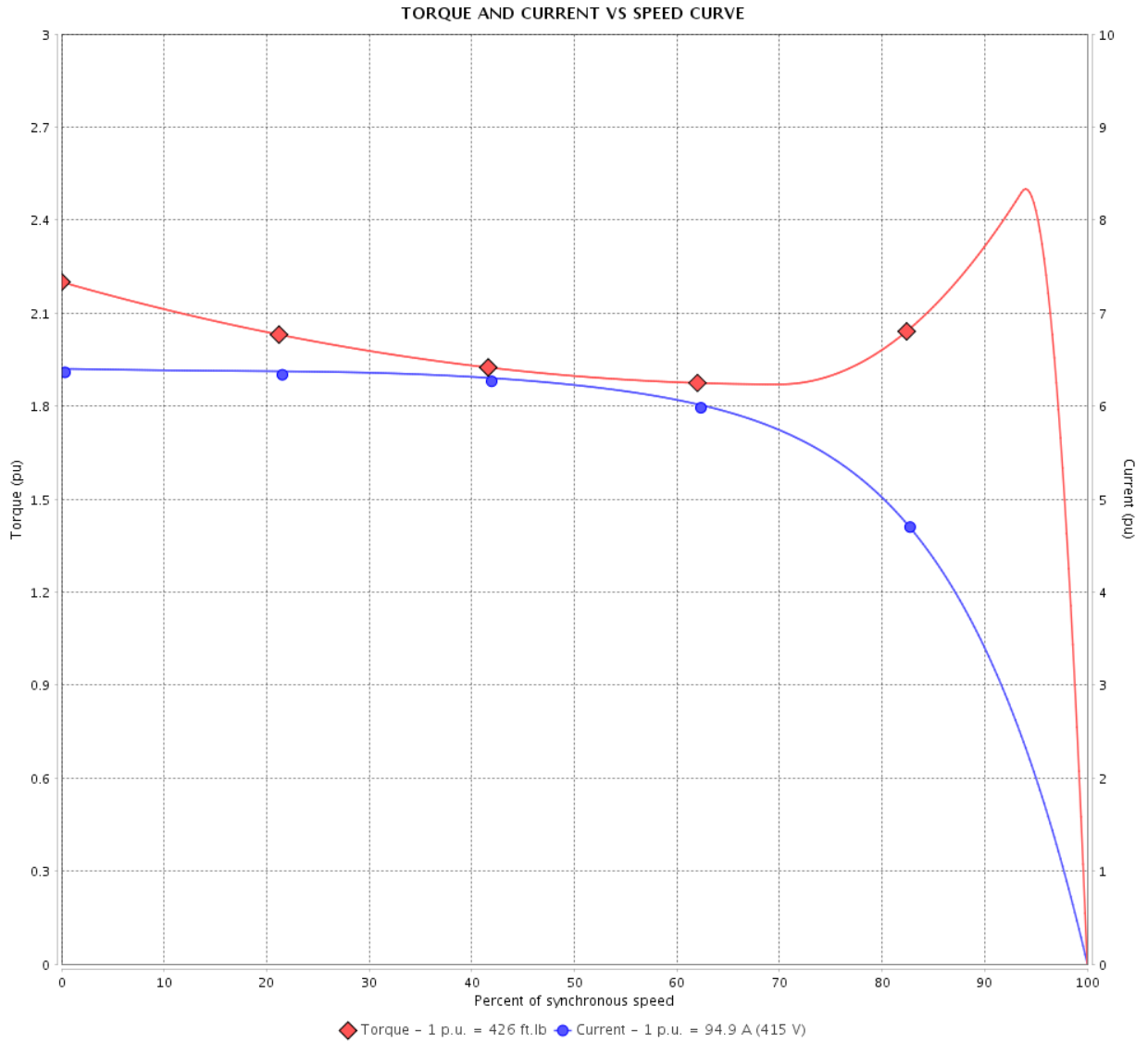
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Rated current	: 94.9 A	Moment of inertia (J)	: 73.6 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 426 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 740 rpm	Design	: B

Locked rotor time : 61s (cold) 34s (hot)

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Three Phase Induction Motor - Squirrel Cage

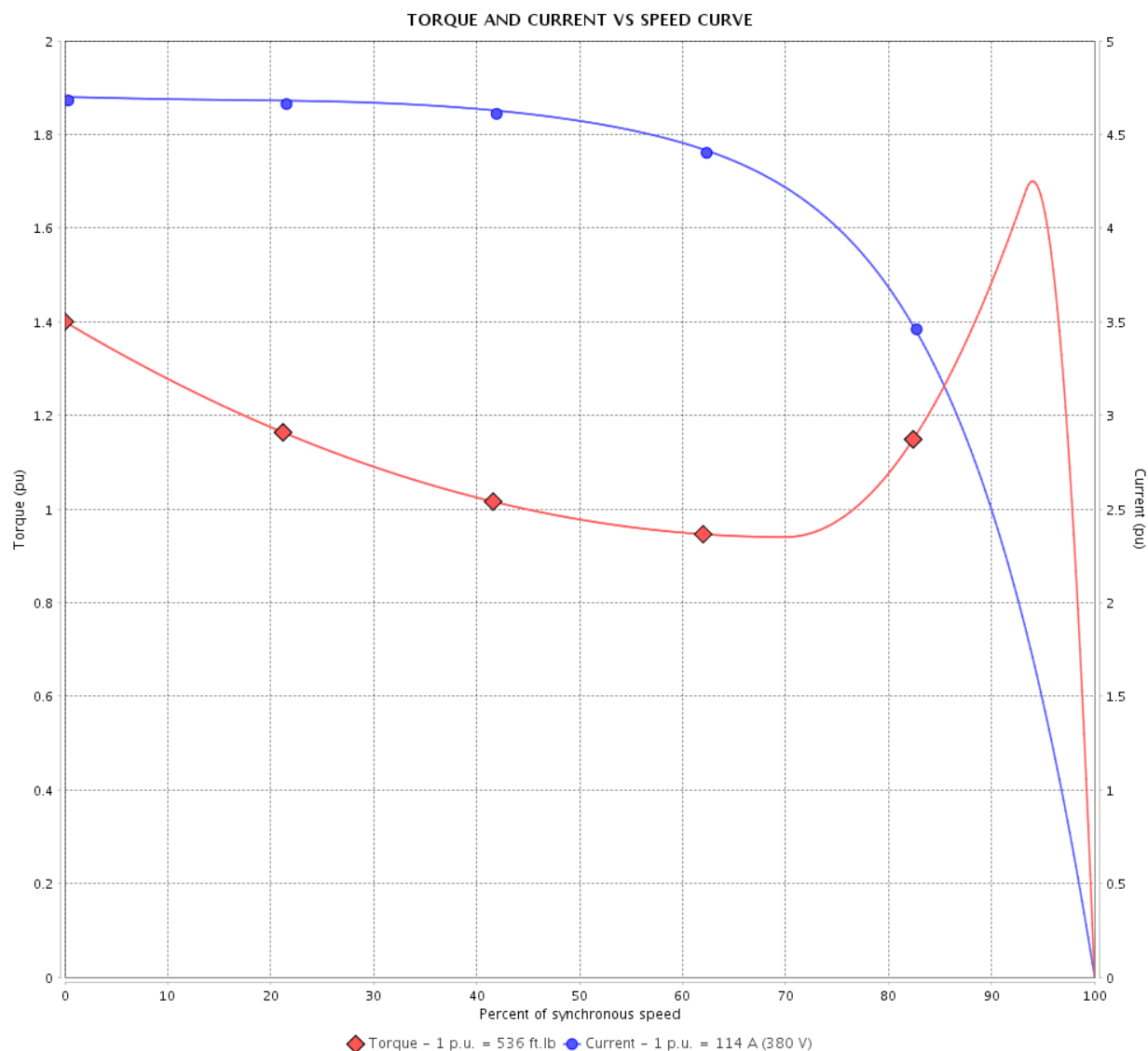


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11568627

Catalog # : 07509ET3E444T-W22



Performance : 380 V 50 Hz 8P IE2

Rated current	: 114 A	Moment of inertia (J)	: 73.6 sq.ft.lb
LRC	: 4.7	Duty cycle	: Cont.(S1)
Rated torque	: 536 ft.lb	Insulation class	: F
Locked rotor torque	: 140 %	Service factor	: 1.00
Breakdown torque	: 170 %	Temperature rise	: 105 K
Rated speed	: 735 rpm	Design	: B

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

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# TORQUE AND CURRENT VS SPEED CURVE



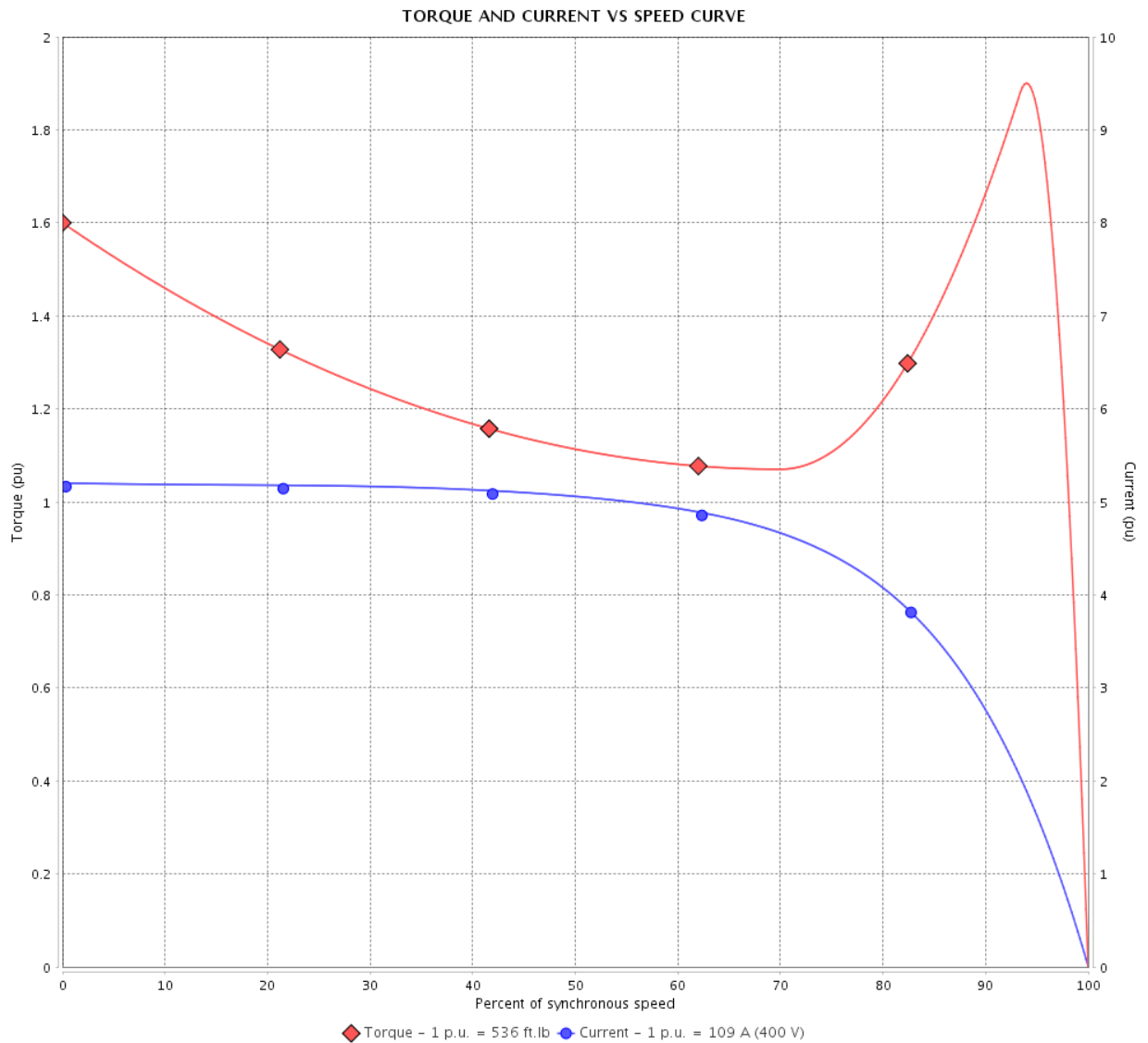
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Customer :

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Catalog # : 07509ET3E444T-W22



Performance : 400 V 50 Hz 8P IE2

Rated current	: 109 A	Moment of inertia (J)	: 73.6 sq.ft.lb
LRC	: 5.2	Duty cycle	: Cont.(S1)
Rated torque	: 536 ft.lb	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.00
Breakdown torque	: 190 %	Temperature rise	: 105 K
Rated speed	: 735 rpm	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



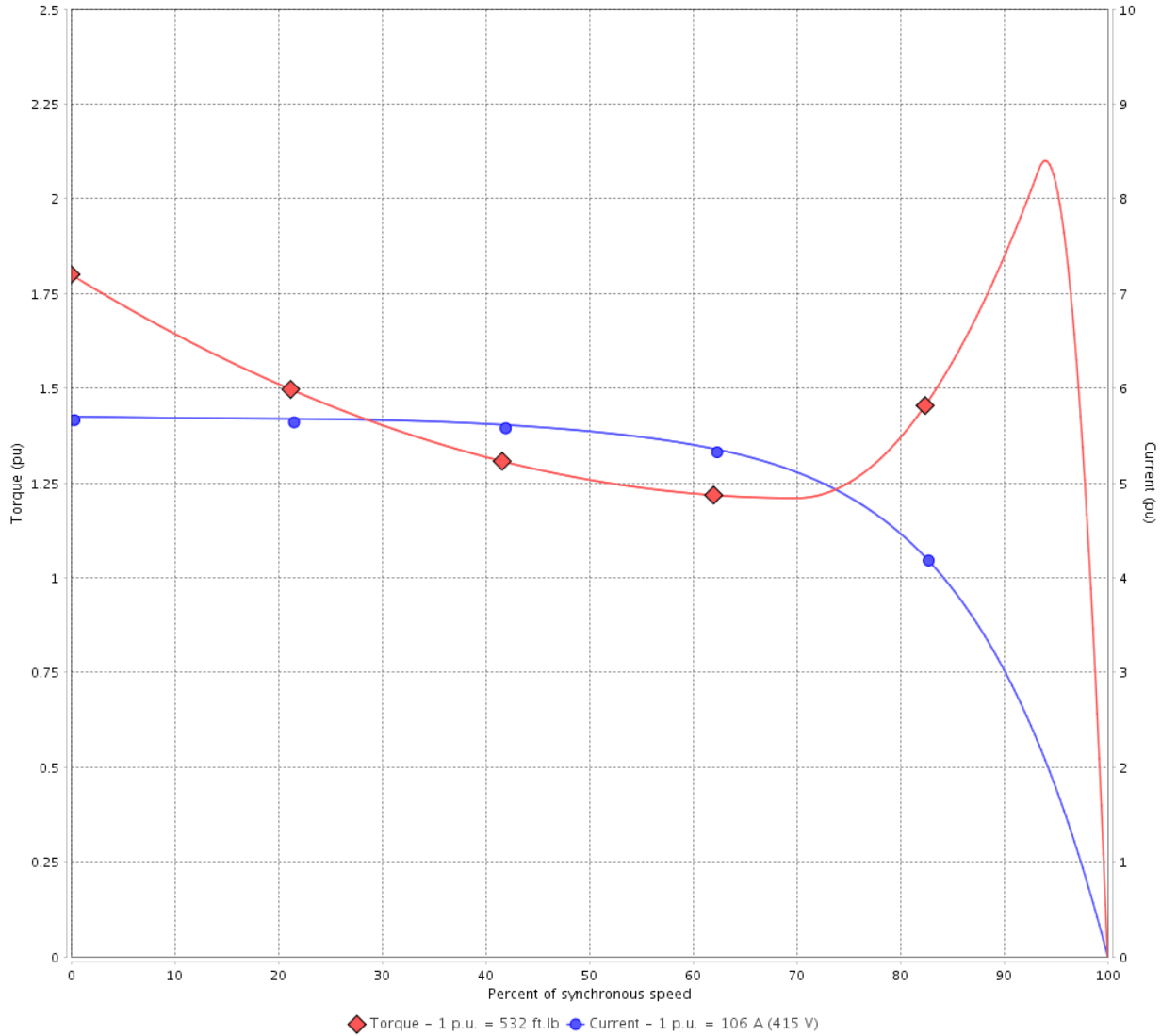
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TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 8P IE2

Rated current	: 106 A	Moment of inertia (J)	: 73.6 sq.ft.lb
LRC	: 5.7	Duty cycle	: Cont.(S1)
Rated torque	: 532 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 105 K
Rated speed	: 740 rpm	Design	: B

Locked rotor time : 48s (cold) 27s (hot)

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# LOAD PERFORMANCE CURVE

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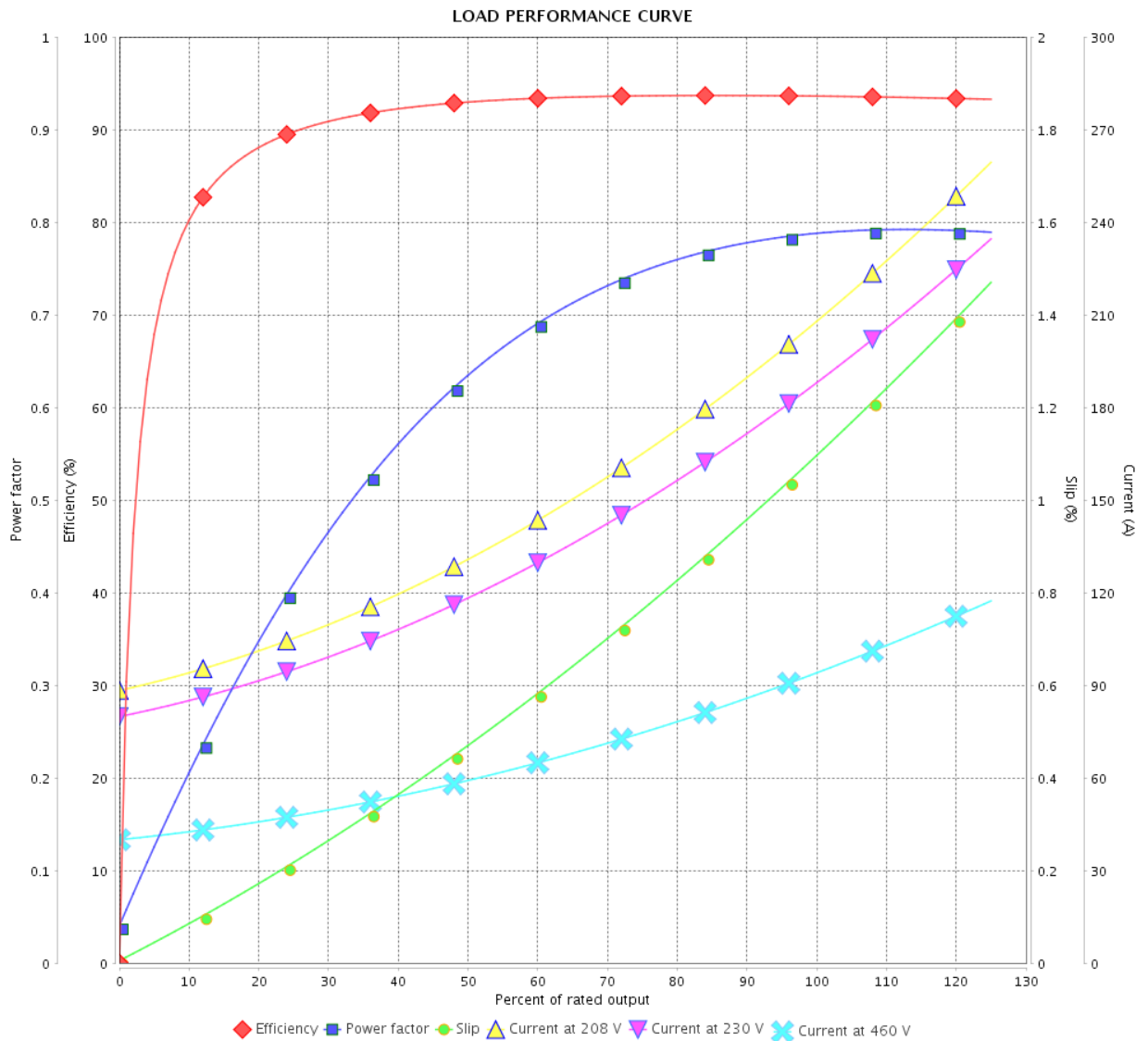


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Product code : 11568627

Catalog # : 07509ET3E444T-W22



Performance : 230/460 V 60 Hz 8P

Rated current : 187/93.4 A  
 LRC : 6.4  
 Rated torque : 443 ft.lb  
 Locked rotor torque : 170 %  
 Breakdown torque : 200 %  
 Rated speed : 890 rpm

Moment of inertia (J) : 73.6 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

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Three Phase Induction Motor - Squirrel Cage



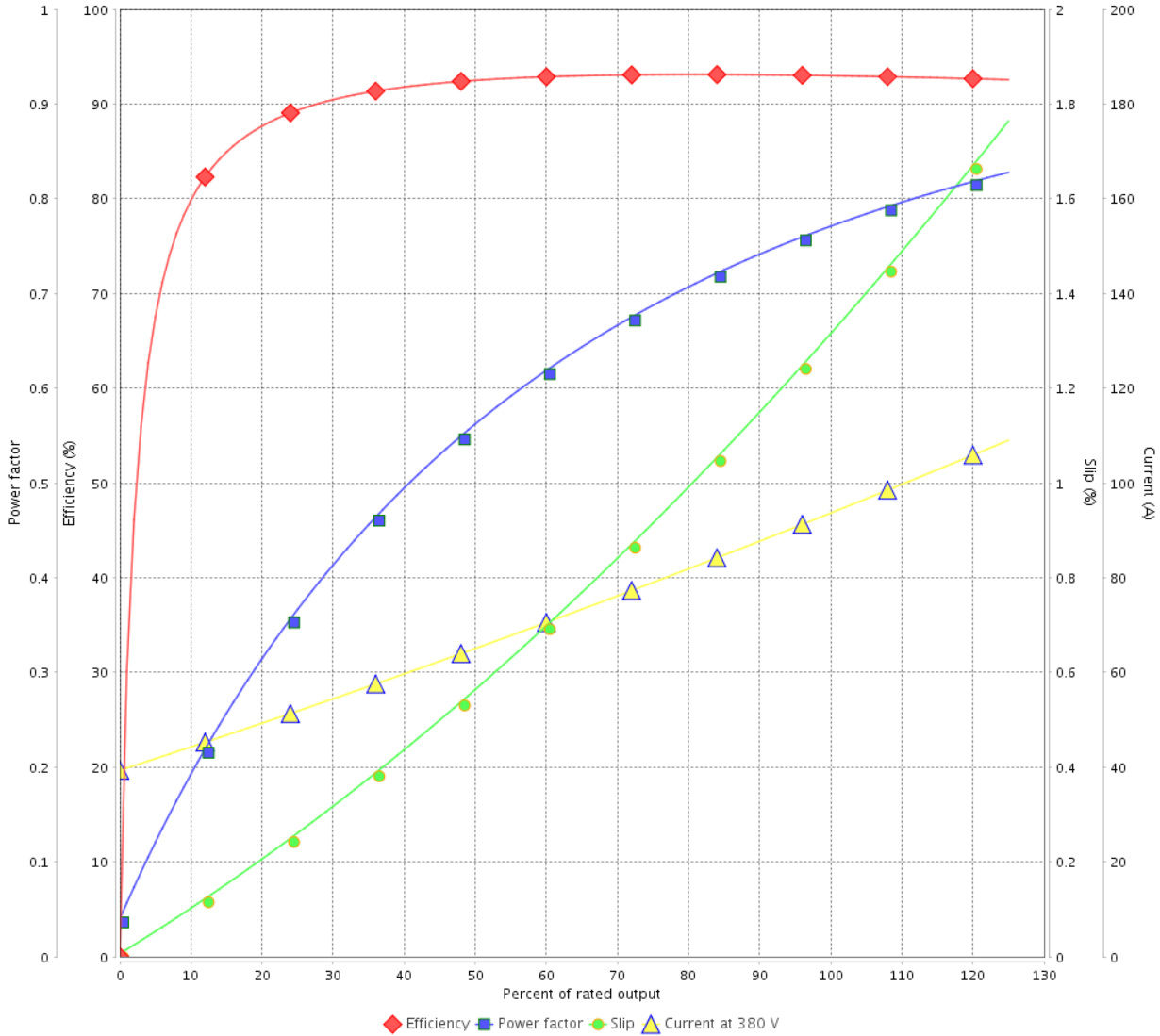
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LOAD PERFORMANCE CURVE



Performance : 380 V 50 Hz 8P IE3

Rated current : 95.5 A  
 LRC : 5.5  
 Rated torque : 426 ft.lb  
 Locked rotor torque : 170 %  
 Breakdown torque : 210 %  
 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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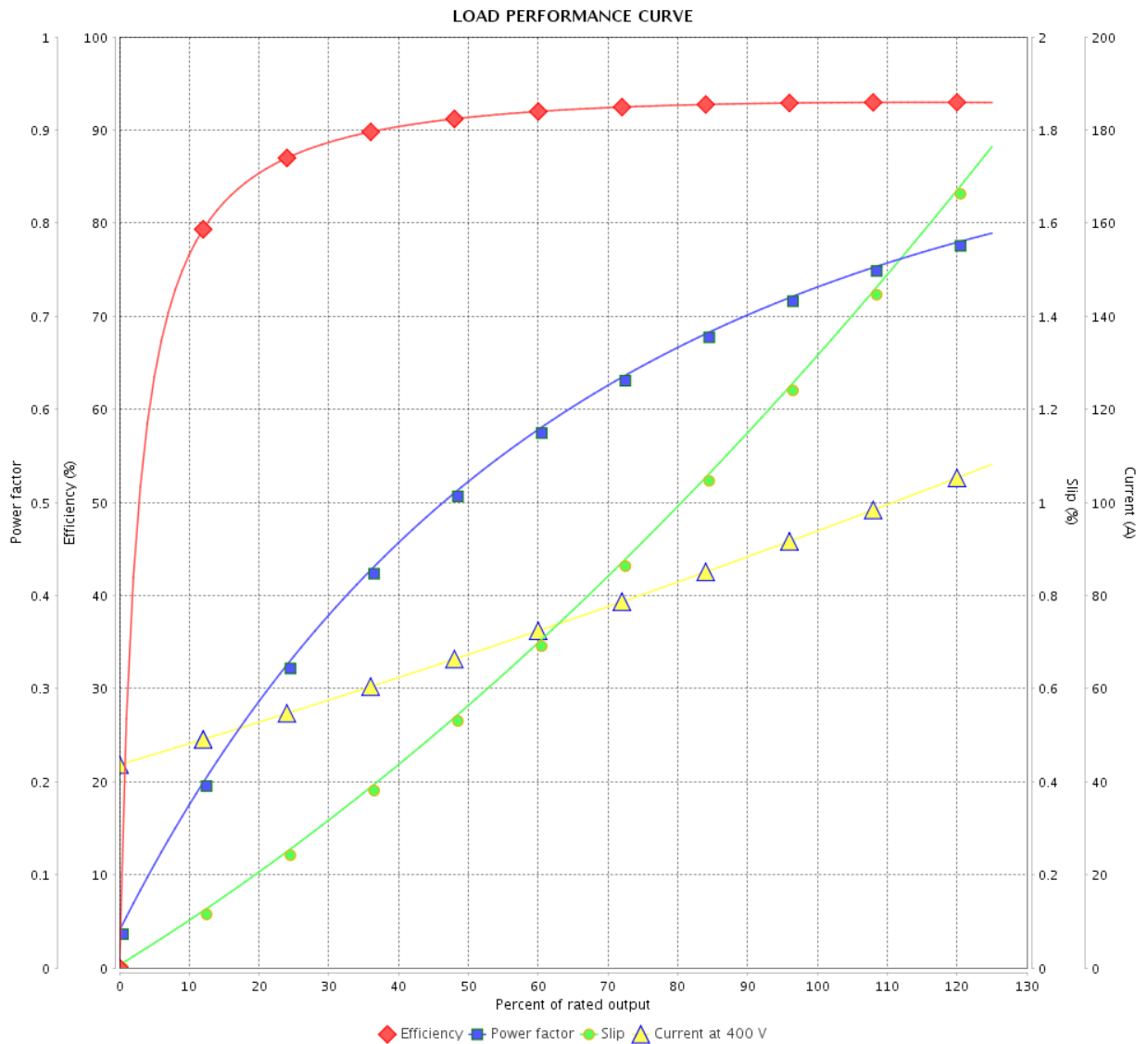


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Performance : 400 V 50 Hz 8P IE3

Rated current : 95.8 A  
 LRC : 5.9  
 Rated torque : 426 ft.lb  
 Locked rotor torque : 200 %  
 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



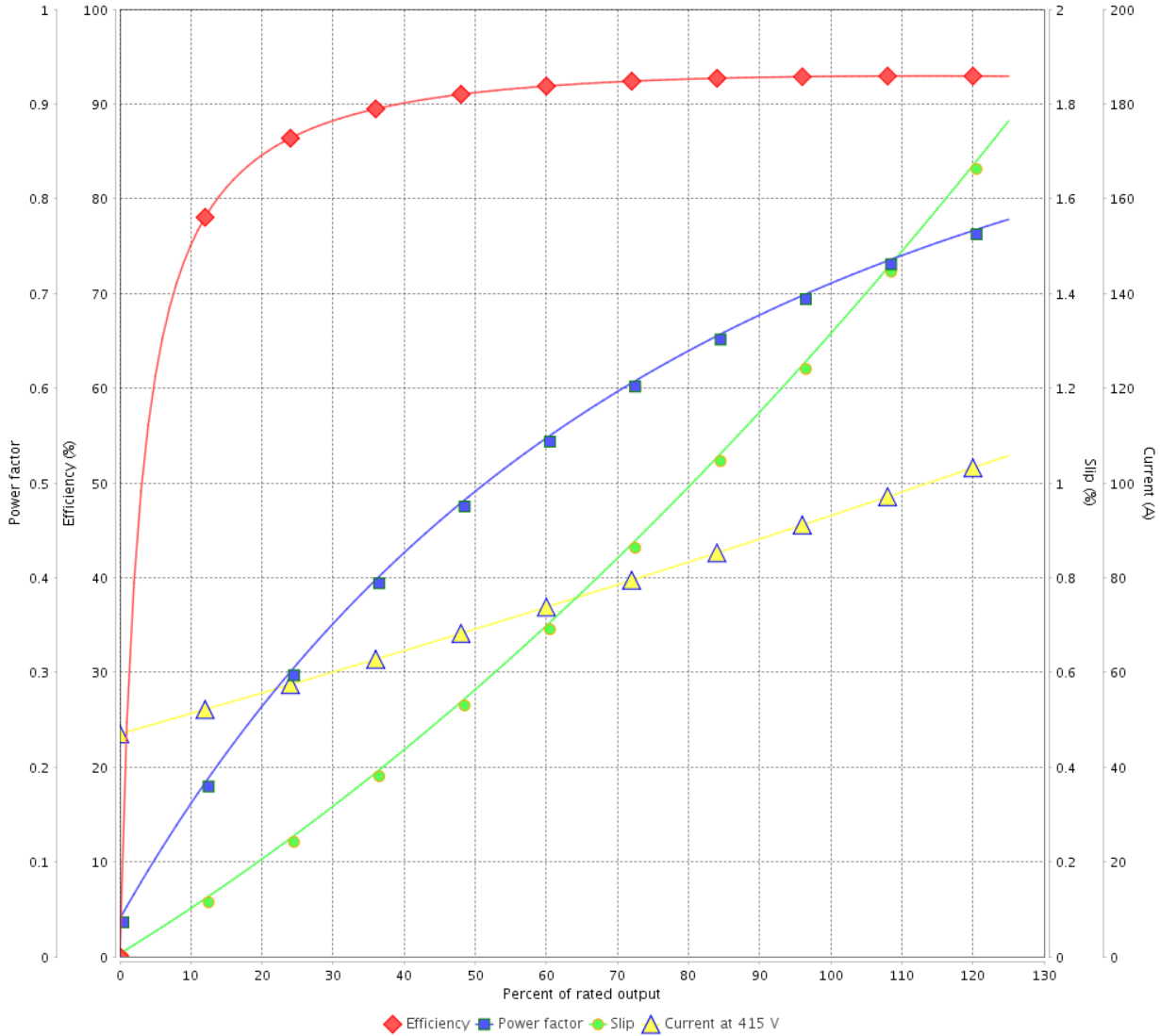
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Product code : 11568627

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Performance : 415 V 50 Hz 8P IE3

Rated current : 94.9 A  
 LRC : 6.4  
 Rated torque : 426 ft.lb  
 Locked rotor torque : 220 %  
 Breakdown torque : 250 %  
 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

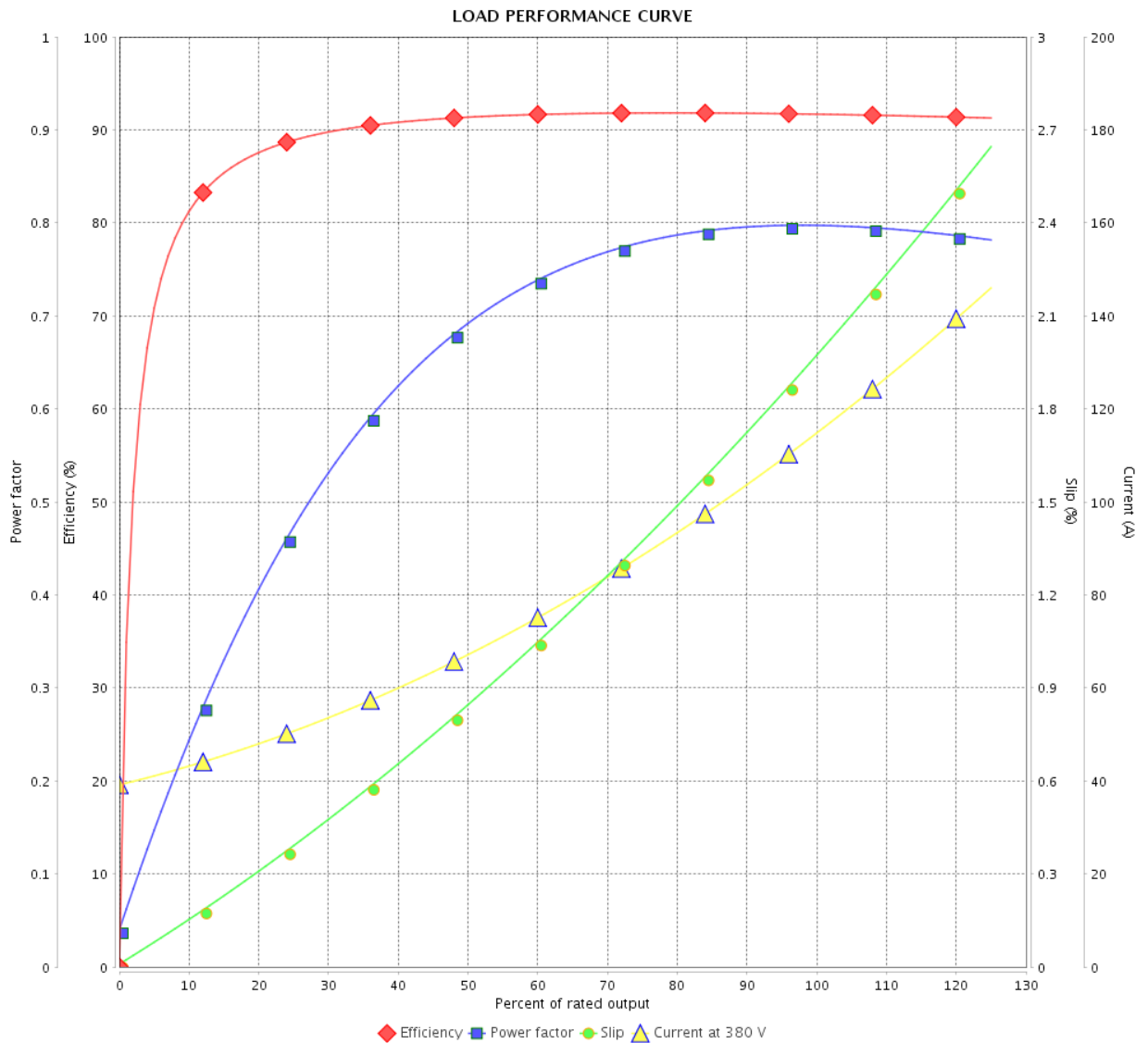


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11568627

Catalog # : 07509ET3E444T-W22



Performance : 380 V 50 Hz 8P IE2

Rated current : 114 A  
 LRC : 4.7  
 Rated torque : 536 ft.lb  
 Locked rotor torque : 140 %  
 Breakdown torque : 170 %  
 Rated speed : 735 rpm

Moment of inertia (J) : 73.6 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 105 K  
 Design : B

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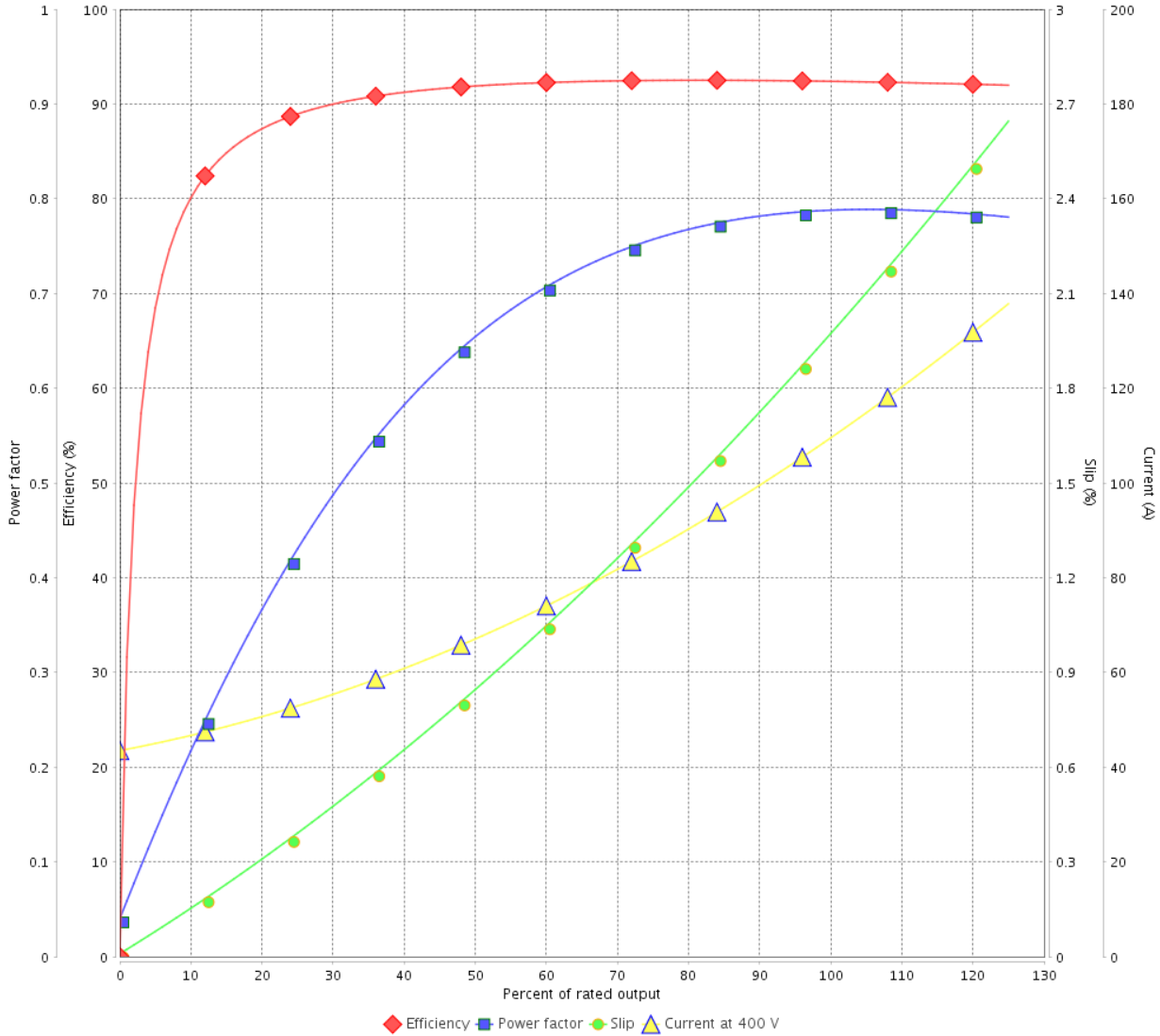
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LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 8P IE2

Rated current : 109 A  
 LRC : 5.2  
 Rated torque : 536 ft.lb  
 Locked rotor torque : 160 %  
 Breakdown torque : 190 %  
 Rated speed : 735 rpm

Moment of inertia (J) : 73.6 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 105 K  
 Design : B

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## Three Phase Induction Motor - Squirrel Cage

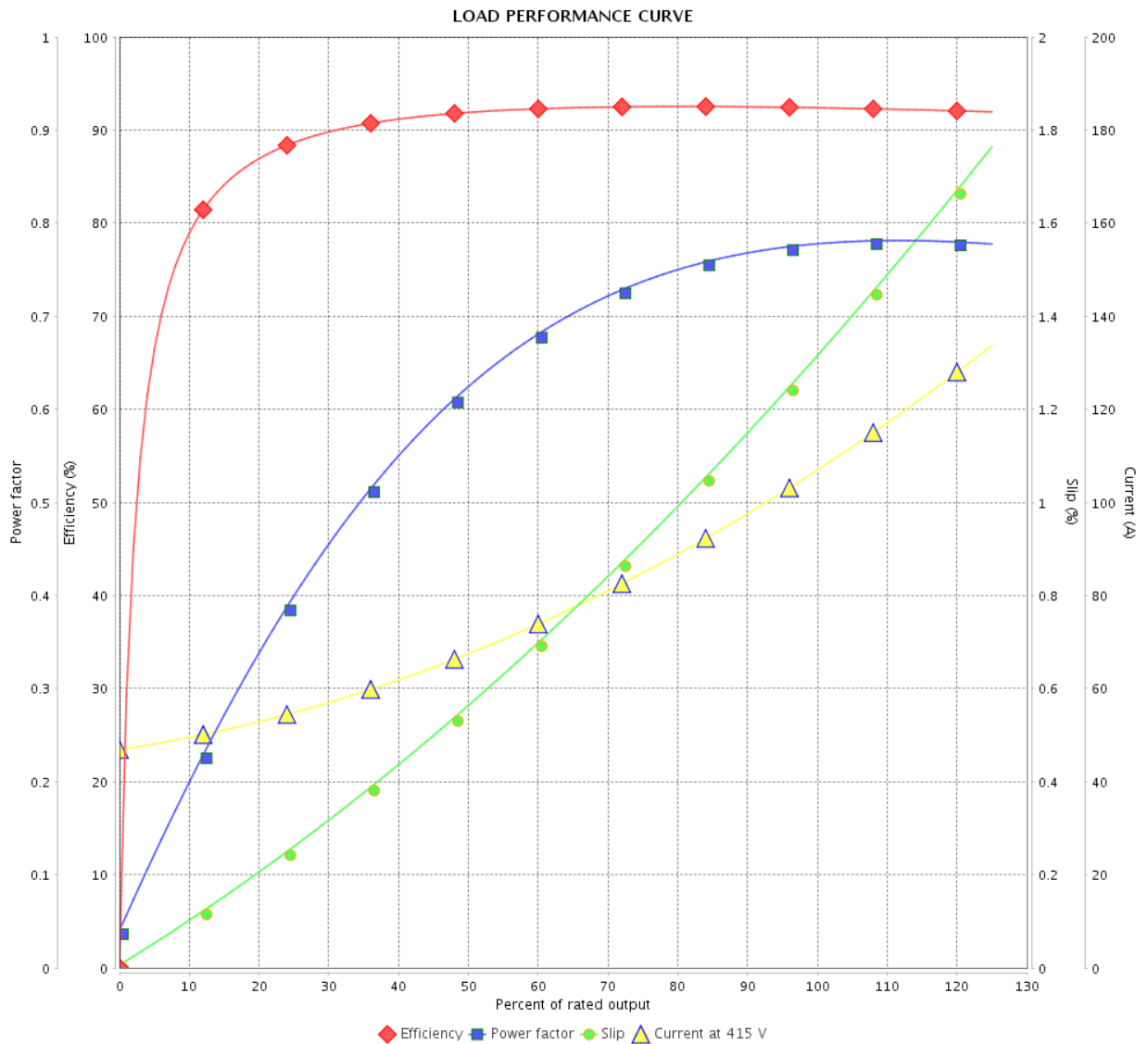


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Performance : 415 V 50 Hz 8P IE2

Rated current : 106 A  
 LRC : 5.7  
 Rated torque : 532 ft.lb  
 Locked rotor torque : 180 %  
 Breakdown torque : 210 %  
 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 : 105 K  
 Design : B

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# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

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Performance : 230/460 V 60 Hz 8P

Rated current	: 187/93.4 A	Moment of inertia (J)	: 73.6 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 443 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.25
Breakdown torque	: 200 %	Temperature rise	: 80 K
Rated speed	: 890 rpm	Design	: B

Heating constant

Cooling constant

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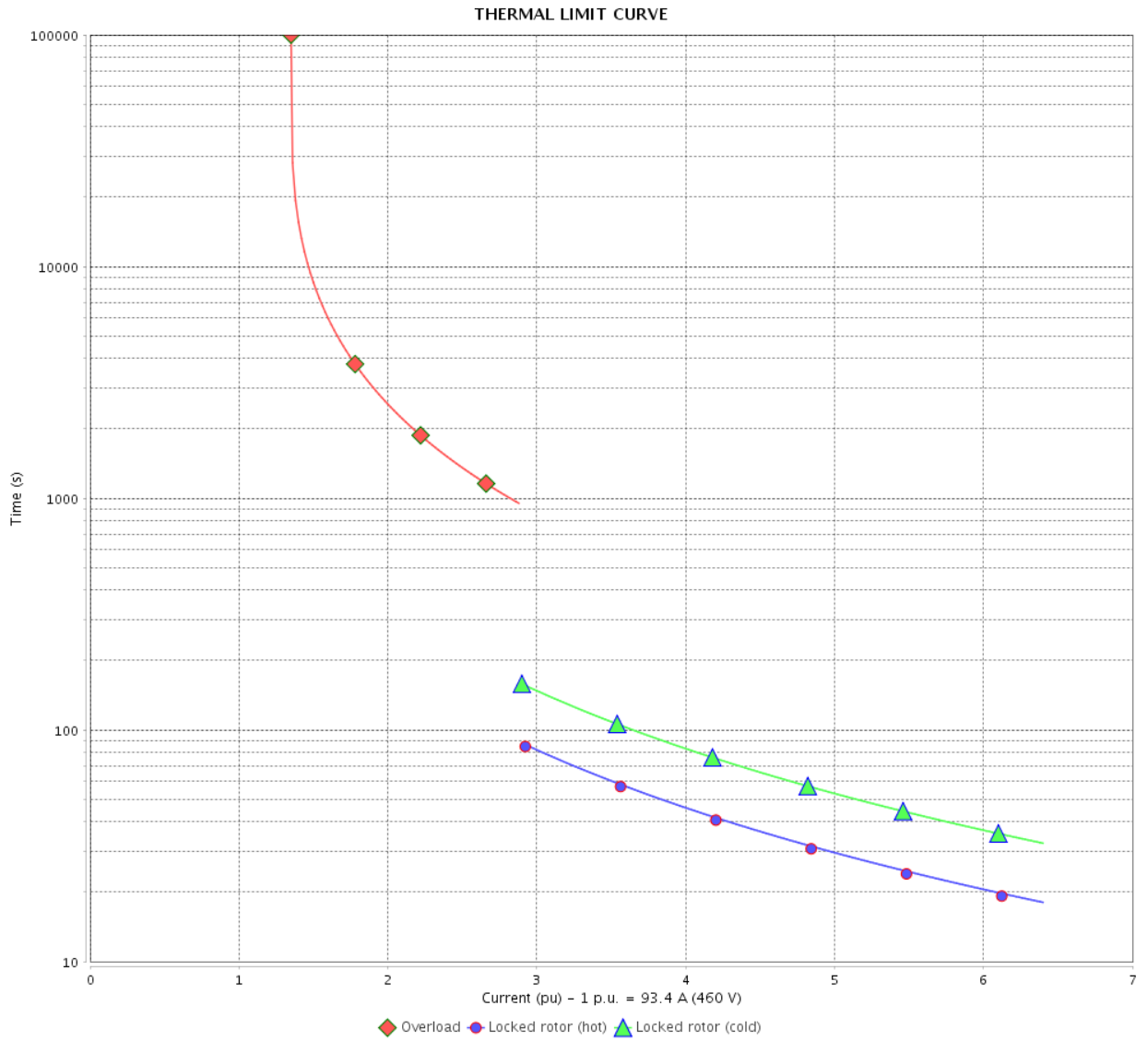


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Three Phase Induction Motor - Squirrel Cage



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Performance : 380 V 50 Hz 8P IE3

Rated current	: 95.5 A	Moment of inertia (J)	: 73.6 sq.ft.lb
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Rated torque	: 426 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.00
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Heating constant

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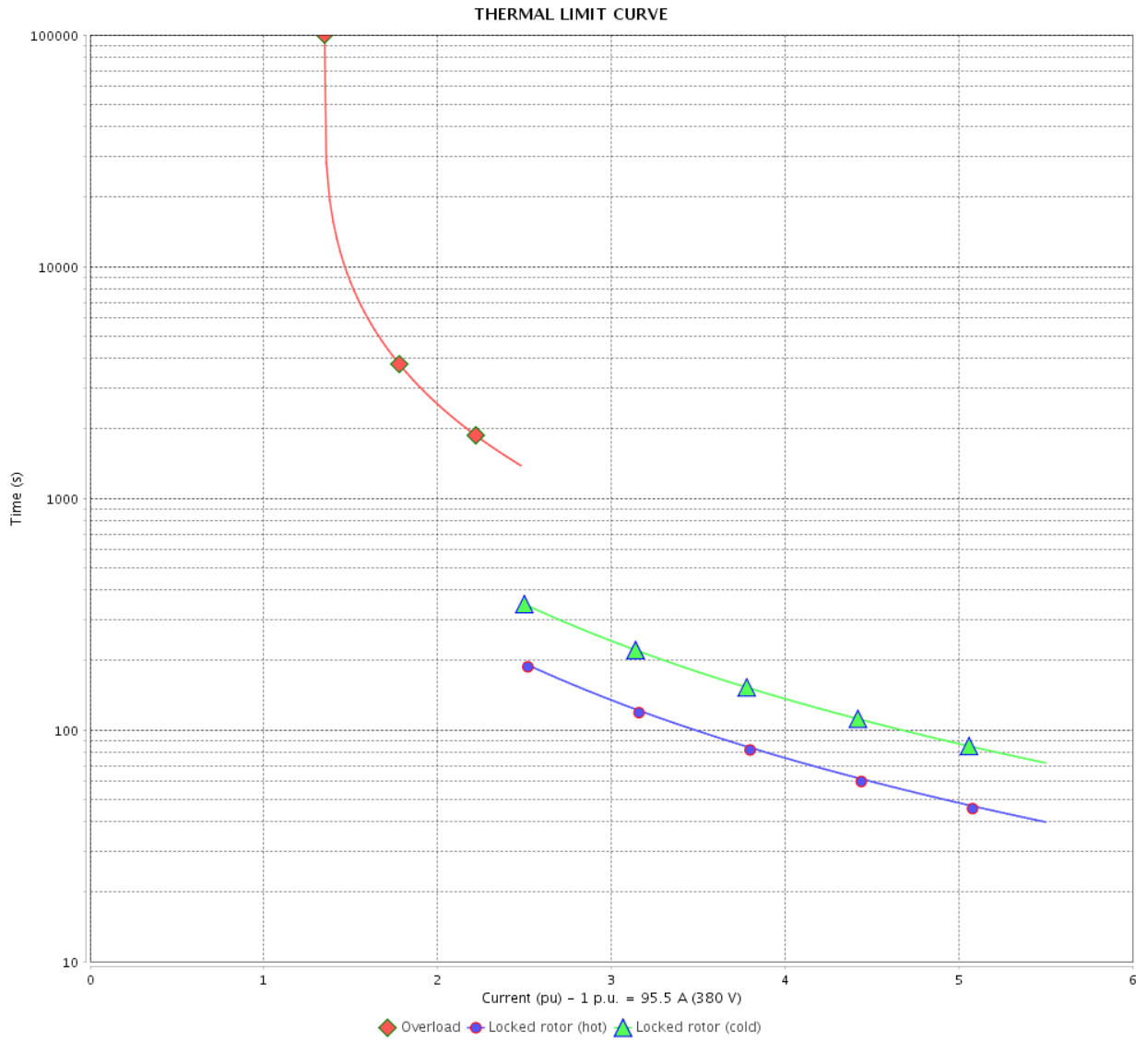
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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Performance : 400 V 50 Hz 8P IE3

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LRC	: 5.9	Duty cycle	: Cont.(S1)
Rated torque	: 426 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 80 K
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Cooling constant

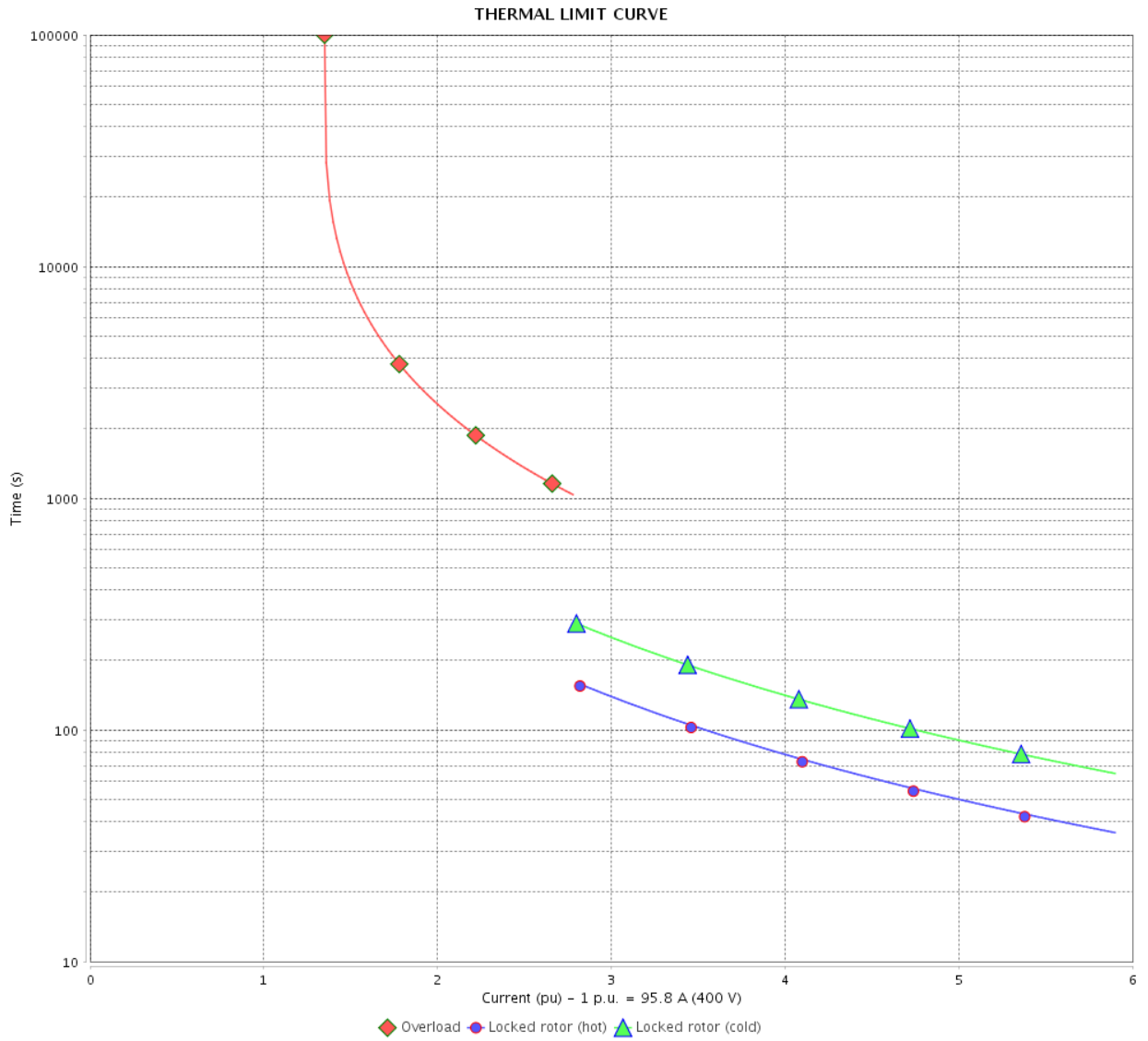
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LRC : 6.4	Duty cycle : Cont.(S1)
Rated torque : 426 ft.lb	Insulation class : F
Locked rotor torque : 220 %	Service factor : 1.00
Breakdown torque : 250 %	Temperature rise : 80 K
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Heating constant

Cooling constant

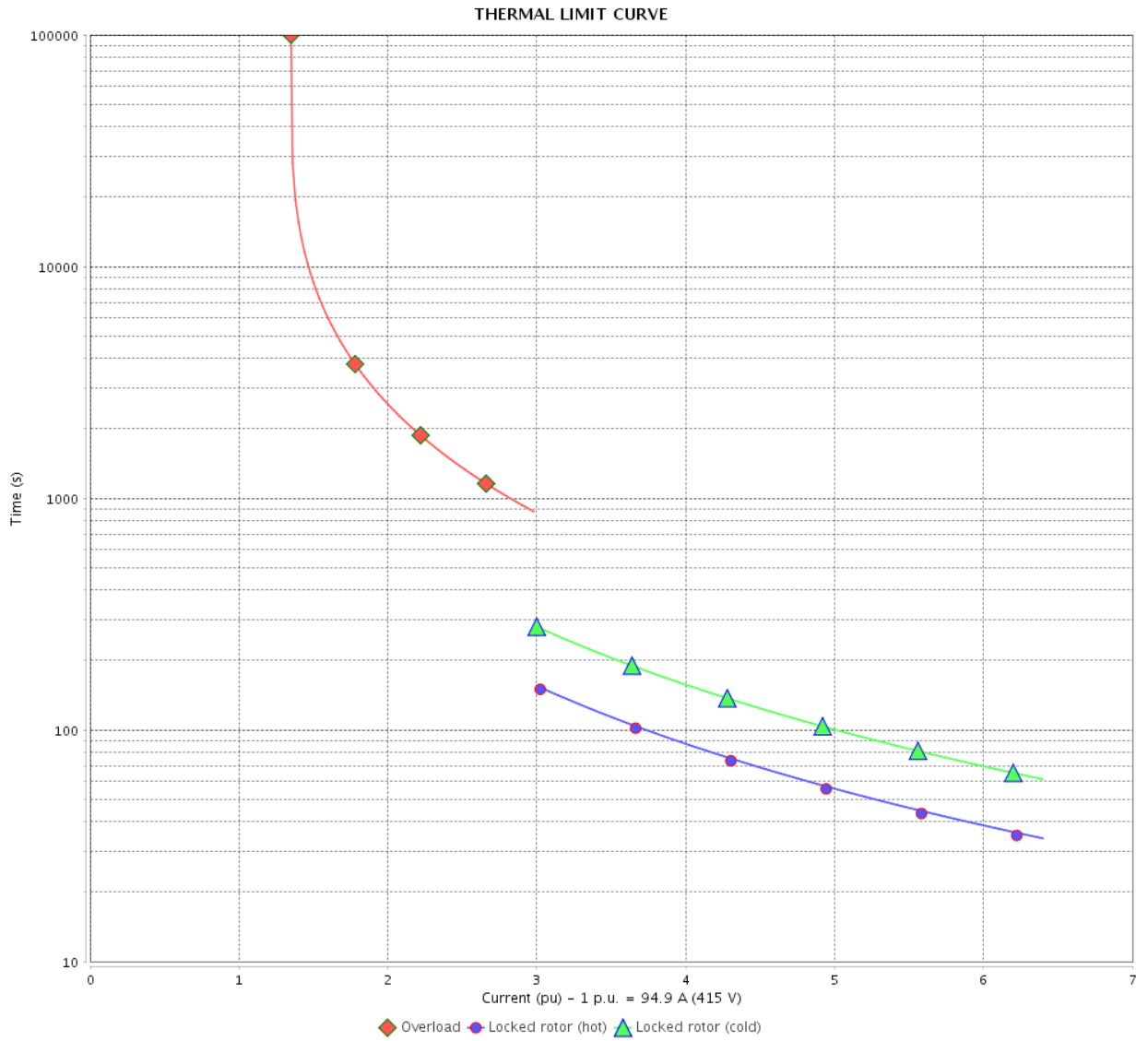
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Locked rotor torque : 140 %	Service factor : 1.00
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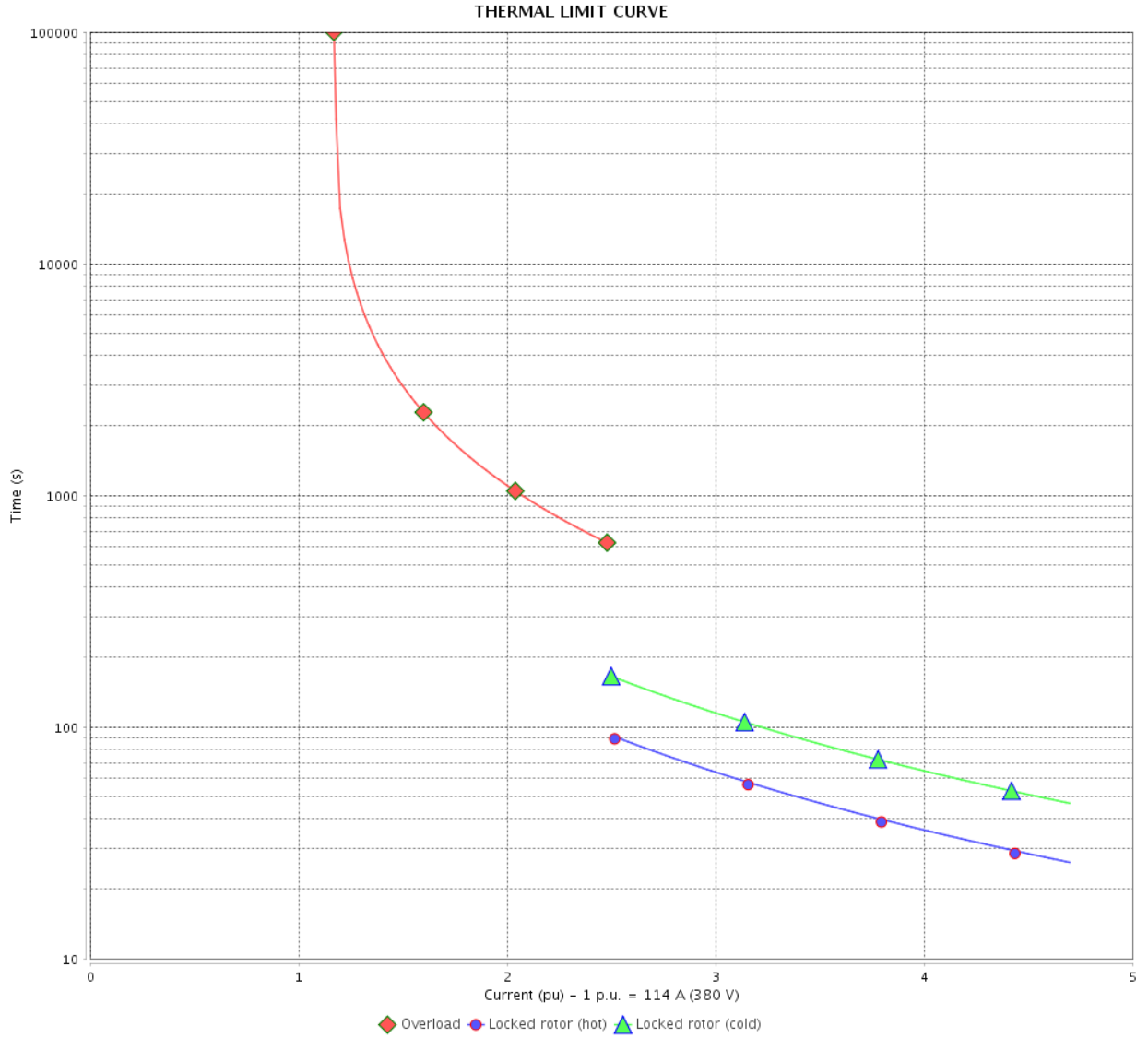


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Three Phase Induction Motor - Squirrel Cage



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Catalog # : 07509ET3E444T-W22

Performance : 400 V 50 Hz 8P IE2

Rated current	: 109 A	Moment of inertia (J)	: 73.6 sq.ft.lb
LRC	: 5.2	Duty cycle	: Cont.(S1)
Rated torque	: 536 ft.lb	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.00
Breakdown torque	: 190 %	Temperature rise	: 105 K
Rated speed	: 735 rpm	Design	: B

Heating constant

Cooling constant

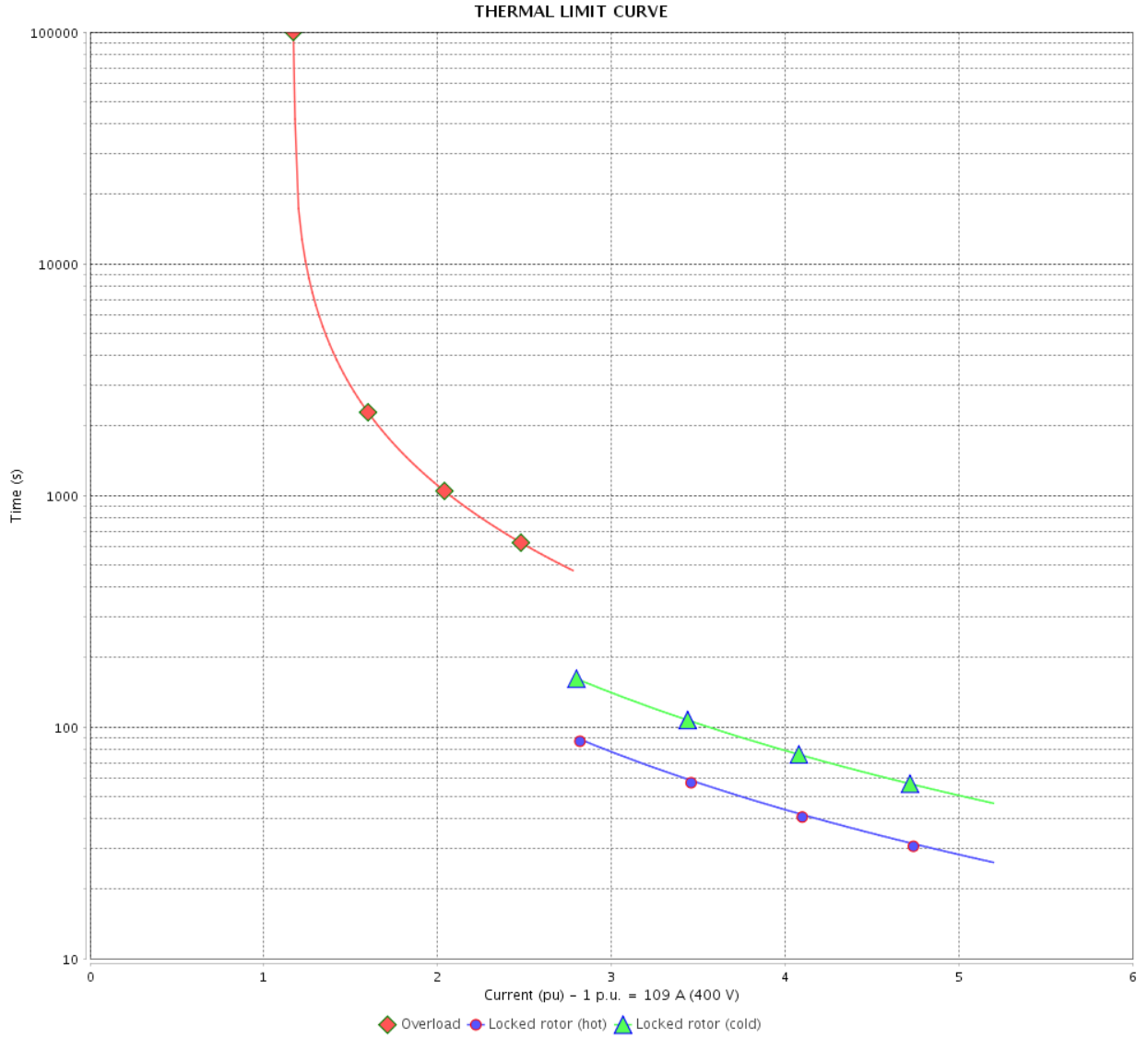
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date	13/04/2022		Page 26 / 36	Revision

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 27 / 36		Revision
Checked by				
Date				

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 11568627  
Catalog # : 07509ET3E444T-W22

Performance : 415 V 50 Hz 8P IE2

Rated current	: 106 A	Moment of inertia (J)	: 73.6 sq.ft.lb
LRC	: 5.7	Duty cycle	: Cont.(S1)
Rated torque	: 532 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 105 K
Rated speed	: 740 rpm	Design	: B

Heating constant

Cooling constant

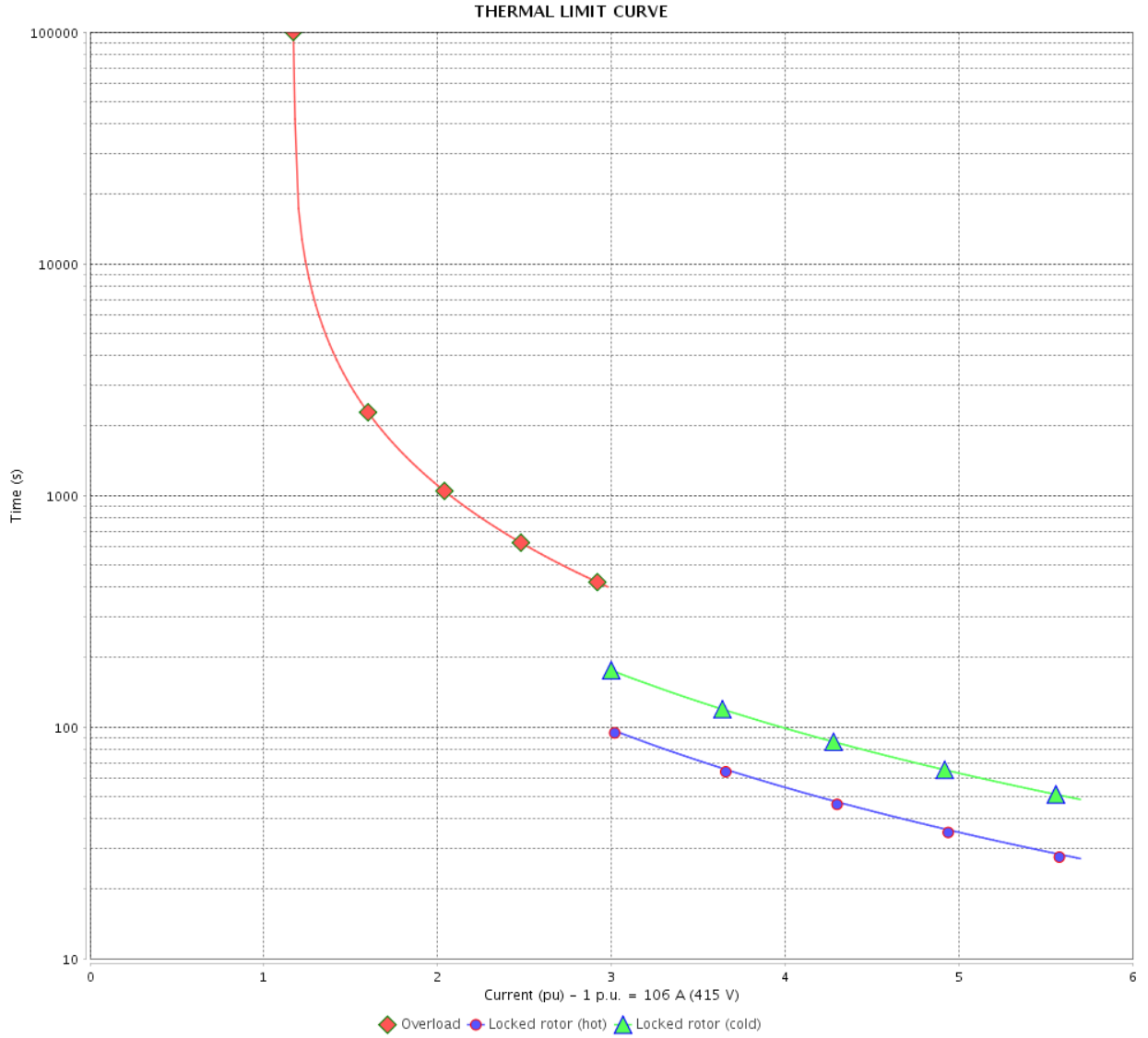
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		28 / 36	

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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Performed by		Page 29 / 36		Revision
Checked by				
Date				

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



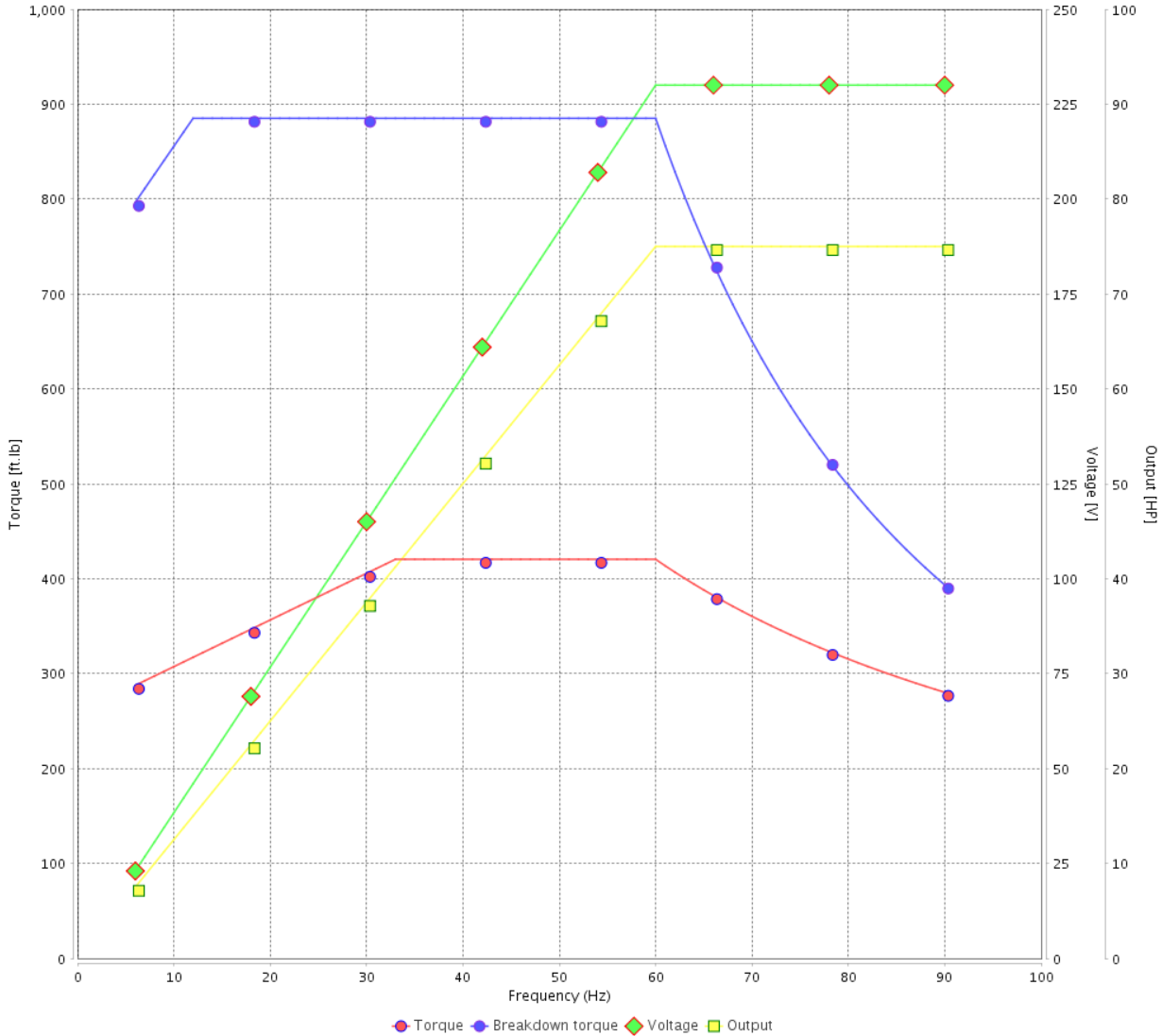
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11568627

Catalog # : 07509ET3E444T-W22

VFD OPERATION CURVE



Performance : 230/460 V 60 Hz 8P

Rated current : 187/93.4 A  
 LRC : 6.4  
 Rated torque : 443 ft.lb  
 Locked rotor torque : 170 %  
 Breakdown torque : 200 %  
 Rated speed : 890 rpm

Moment of inertia (J) : 73.6 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 30 / 36	Revision
Checked by				
Date	13/04/2022			

# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

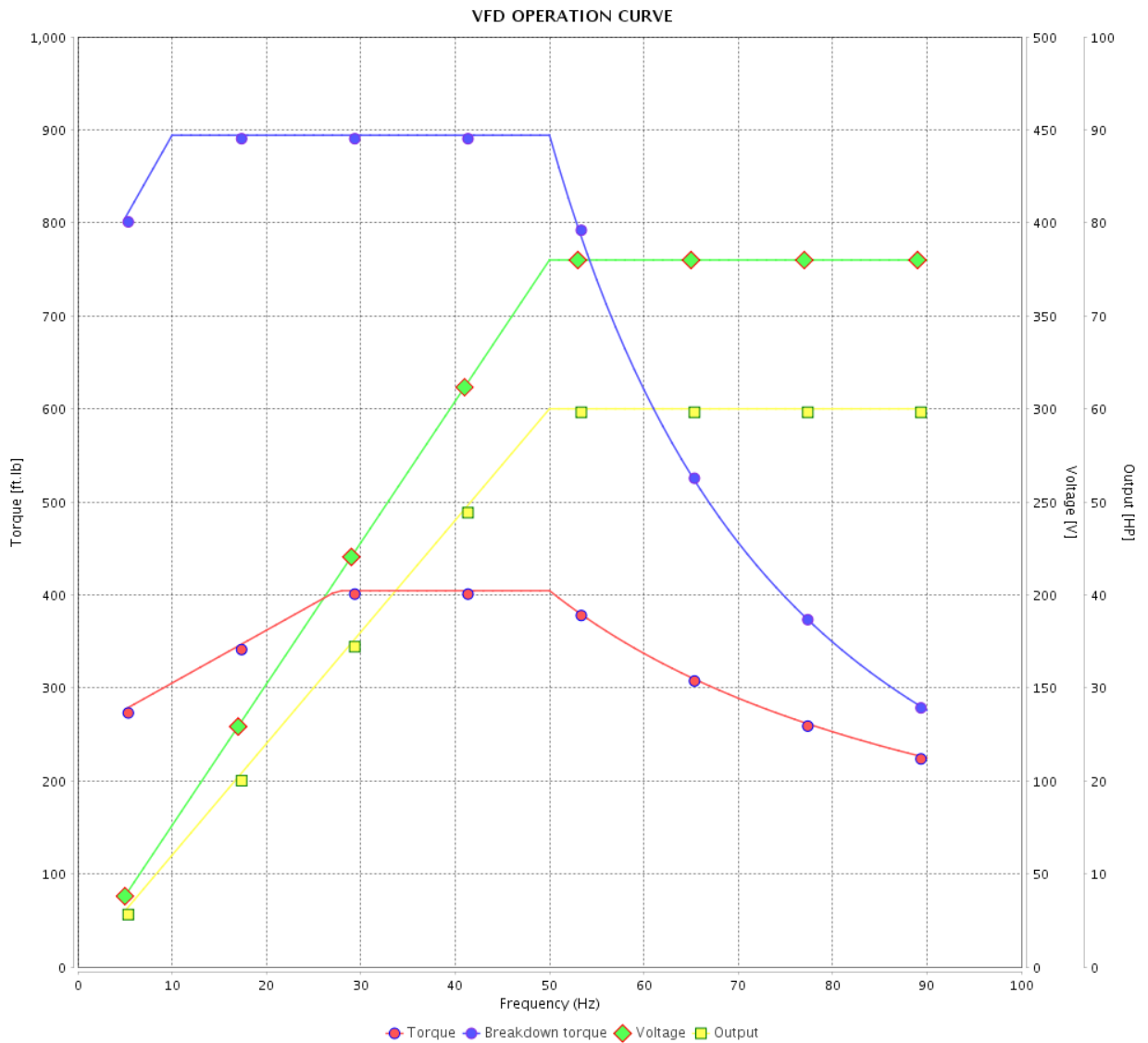


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11568627

Catalog # : 07509ET3E444T-W22



Performance : 380 V 50 Hz 8P IE3

Rated current : 95.5 A  
 LRC : 5.5  
 Rated torque : 426 ft.lb  
 Locked rotor torque : 170 %  
 Breakdown torque : 210 %  
 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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 31 / 36	Revision
Checked by				
Date	13/04/2022			

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

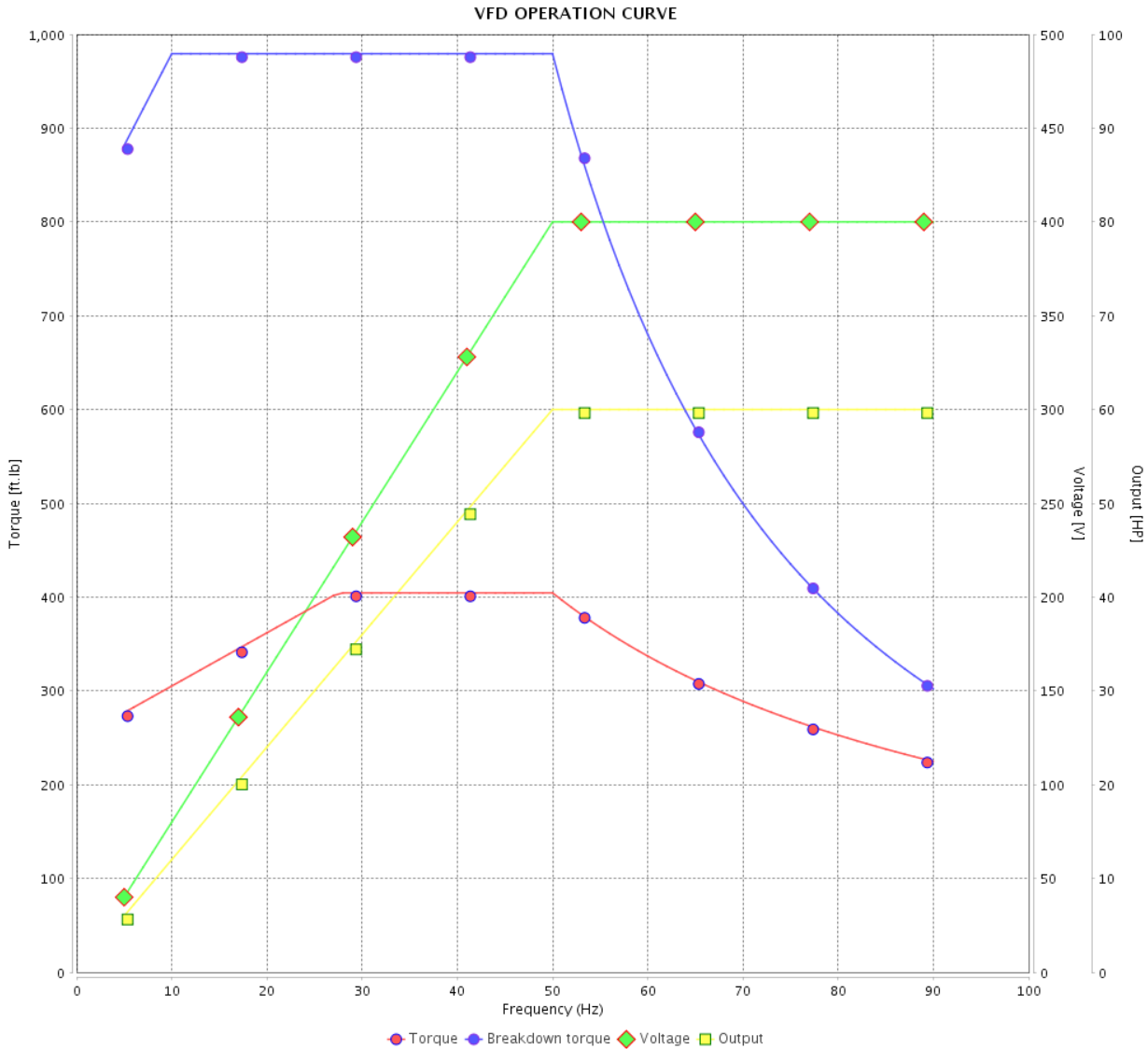


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11568627

Catalog # : 07509ET3E444T-W22



Performance : 400 V 50 Hz 8P IE3

Rated current : 95.8 A  
 LRC : 5.9  
 Rated torque : 426 ft.lb  
 Locked rotor torque : 200 %  
 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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date				



# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

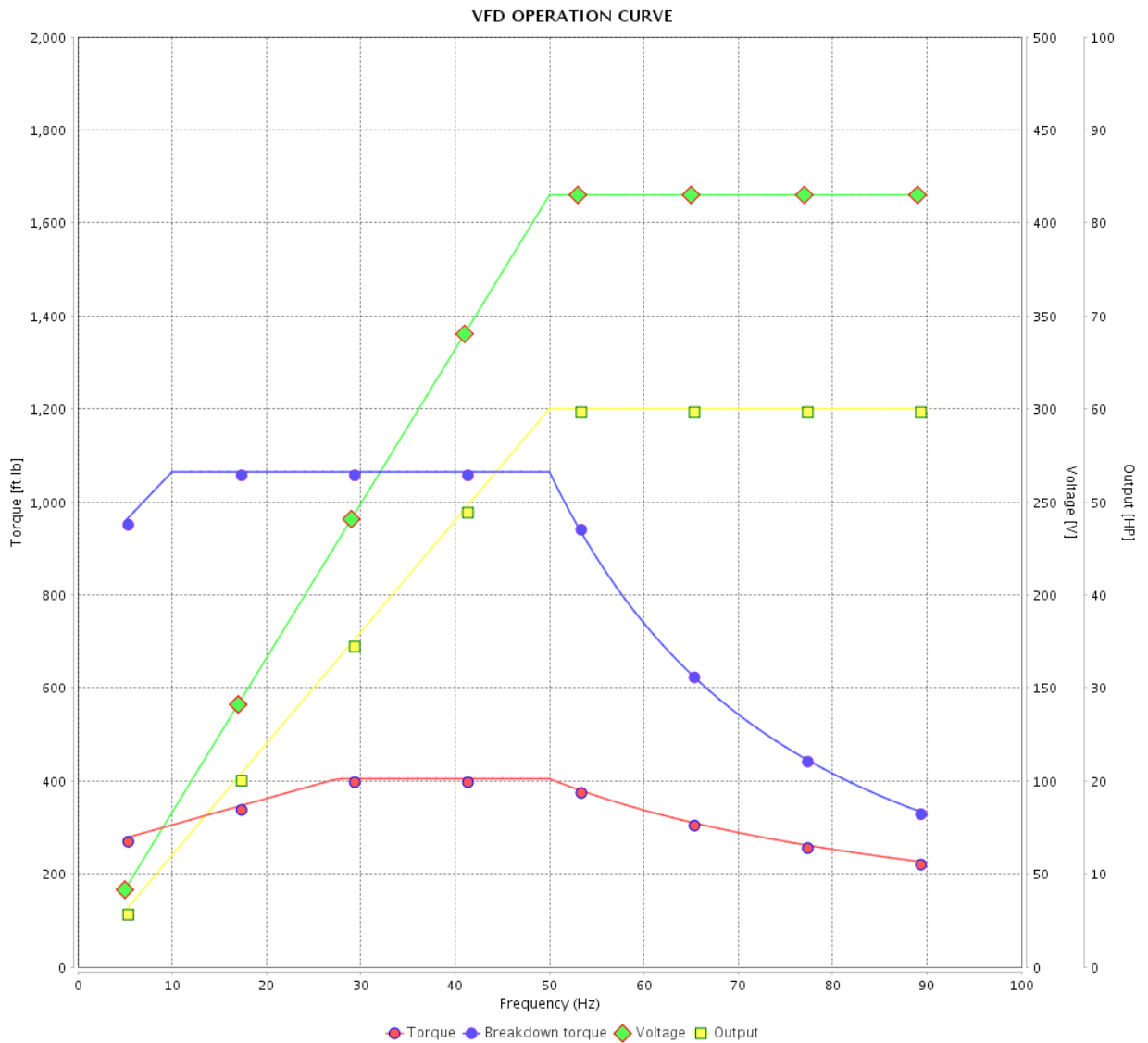


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11568627

Catalog # : 07509ET3E444T-W22



Performance : 415 V 50 Hz 8P IE3

Rated current : 94.9 A  
 LRC : 6.4  
 Rated torque : 426 ft.lb  
 Locked rotor torque : 220 %  
 Breakdown torque : 250 %  
 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

Rev.	Changes Summary	Performed	Checked	Date
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Date		13/04/2022		

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



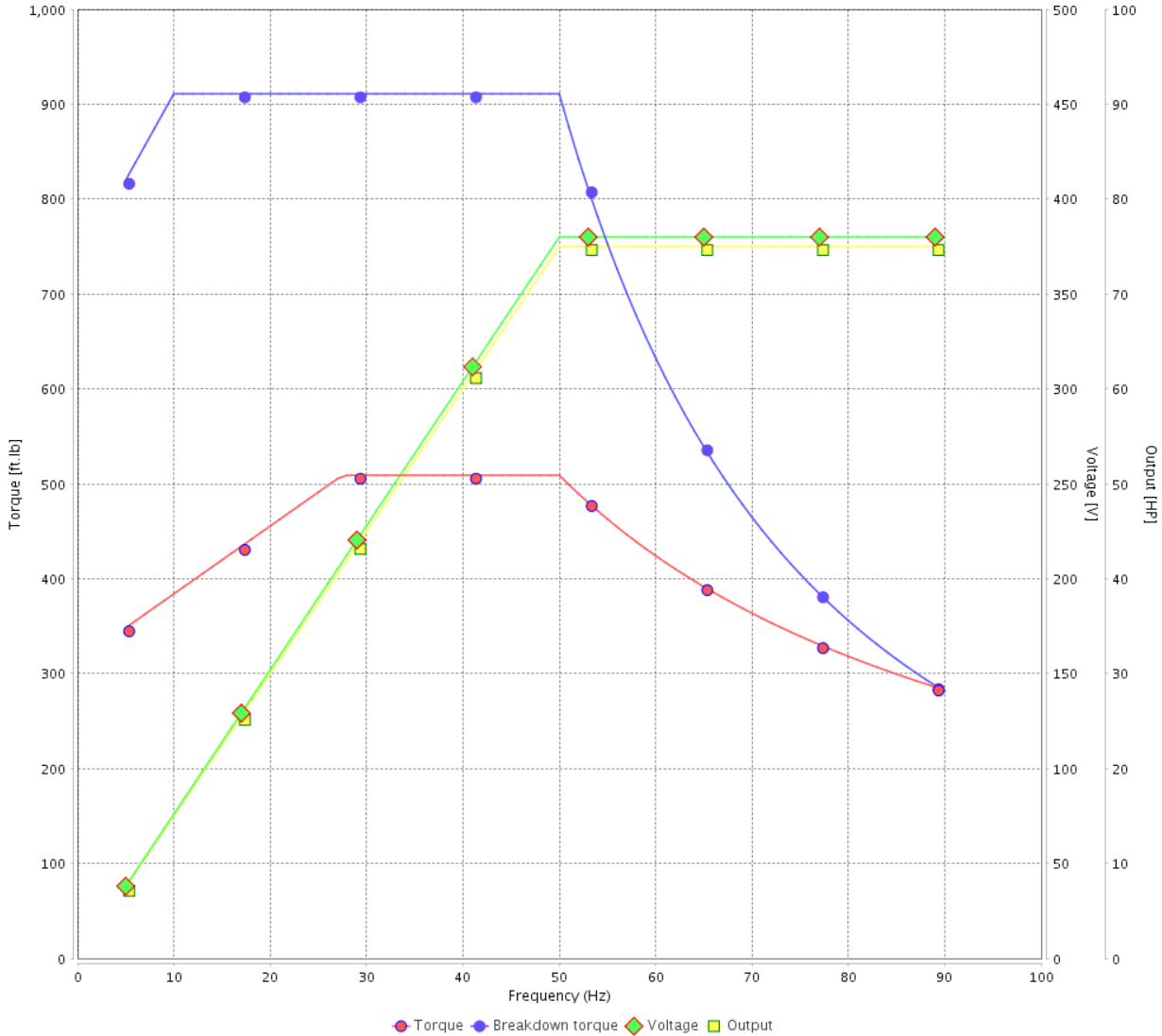
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11568627

Catalog # : 07509ET3E444T-W22

VFD OPERATION CURVE



Performance : 380 V 50 Hz 8P IE2

Rated current	: 114 A	Moment of inertia (J)	: 73.6 sq.ft.lb
LRC	: 4.7	Duty cycle	: Cont.(S1)
Rated torque	: 536 ft.lb	Insulation class	: F
Locked rotor torque	: 140 %	Service factor	: 1.00
Breakdown torque	: 170 %	Temperature rise	: 105 K
Rated speed	: 735 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 34 / 36	Revision
Checked by				
Date	13/04/2022			

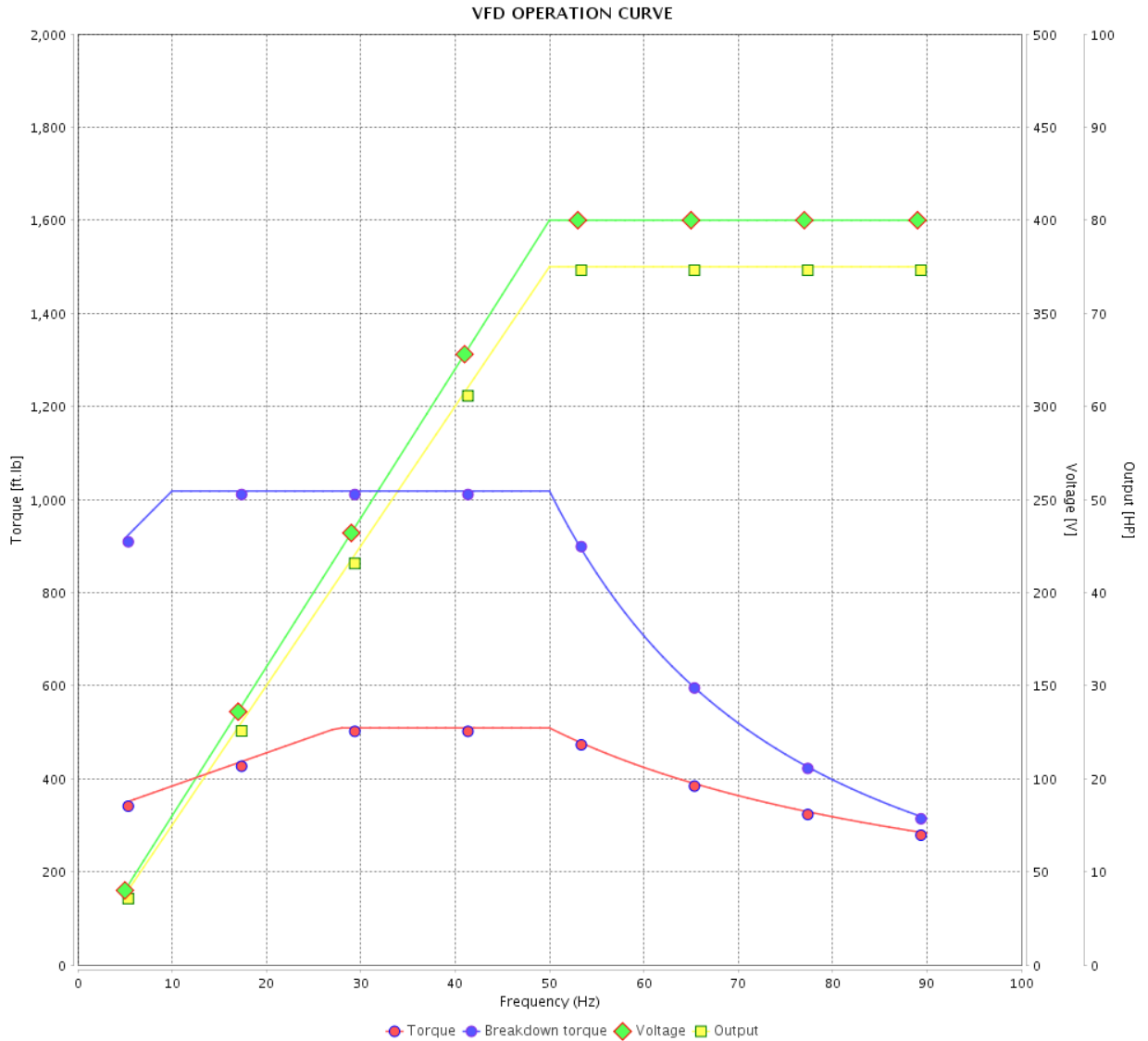
# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase  
 Product code : 11568627  
 Catalog # : 07509ET3E444T-W22



Performance : 400 V 50 Hz 8P IE2

Rated current : 109 A	Moment of inertia (J) : 73.6 sq.ft.lb
LRC : 5.2	Duty cycle : Cont.(S1)
Rated torque : 536 ft.lb	Insulation class : F
Locked rotor torque : 160 %	Service factor : 1.00
Breakdown torque : 190 %	Temperature rise : 105 K
Rated speed : 735 rpm	Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by				Page 35 / 36
Checked by				
Date	13/04/2022			

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



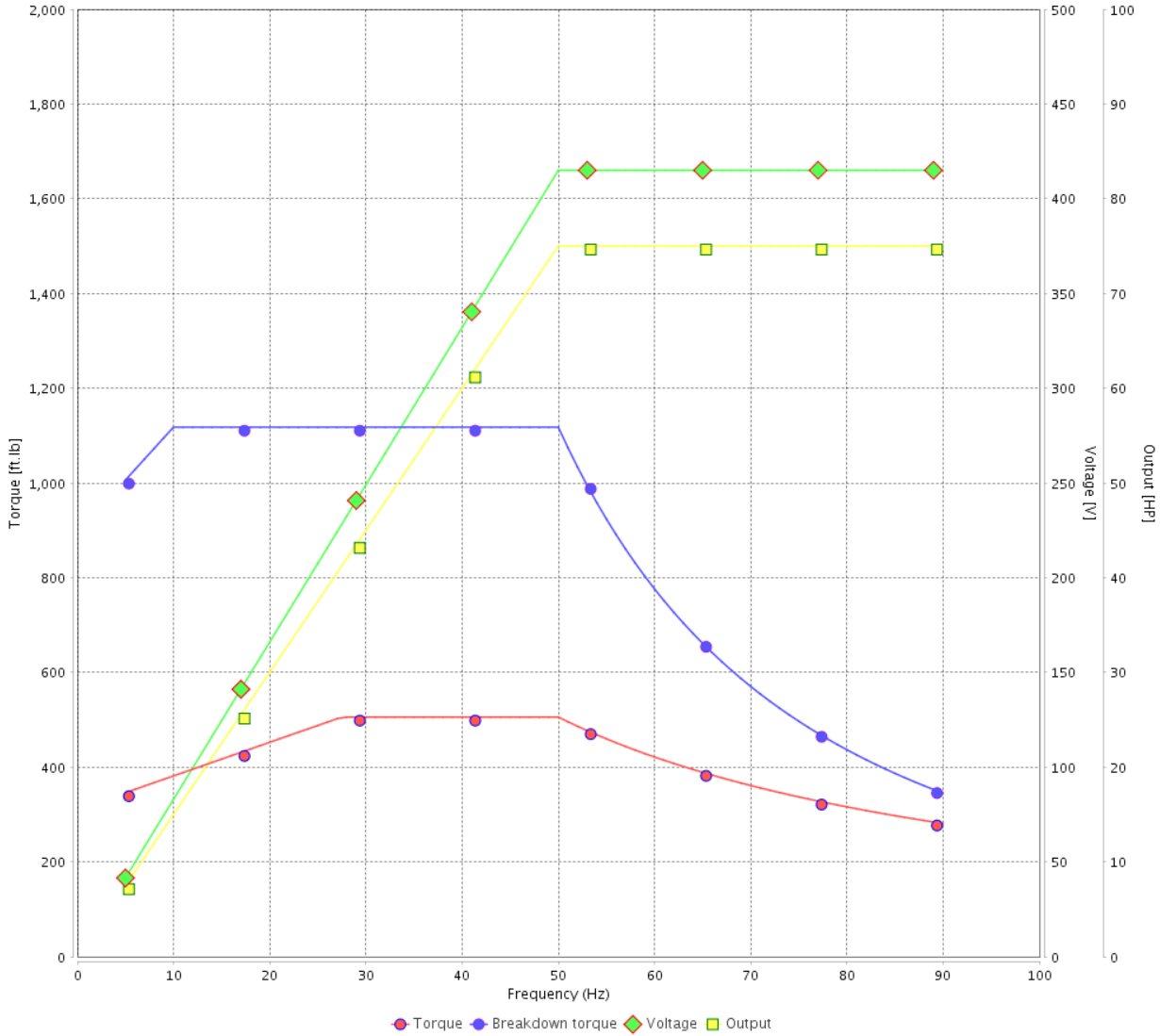
Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11568627

Catalog # : 07509ET3E444T-W22

VFD OPERATION CURVE



Performance : 415 V 50 Hz 8P IE2

Rated current : 106 A  
 LRC : 5.7  
 Rated torque : 532 ft.lb  
 Locked rotor torque : 180 %  
 Breakdown torque : 210 %  
 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 : 105 K  
 Design : B

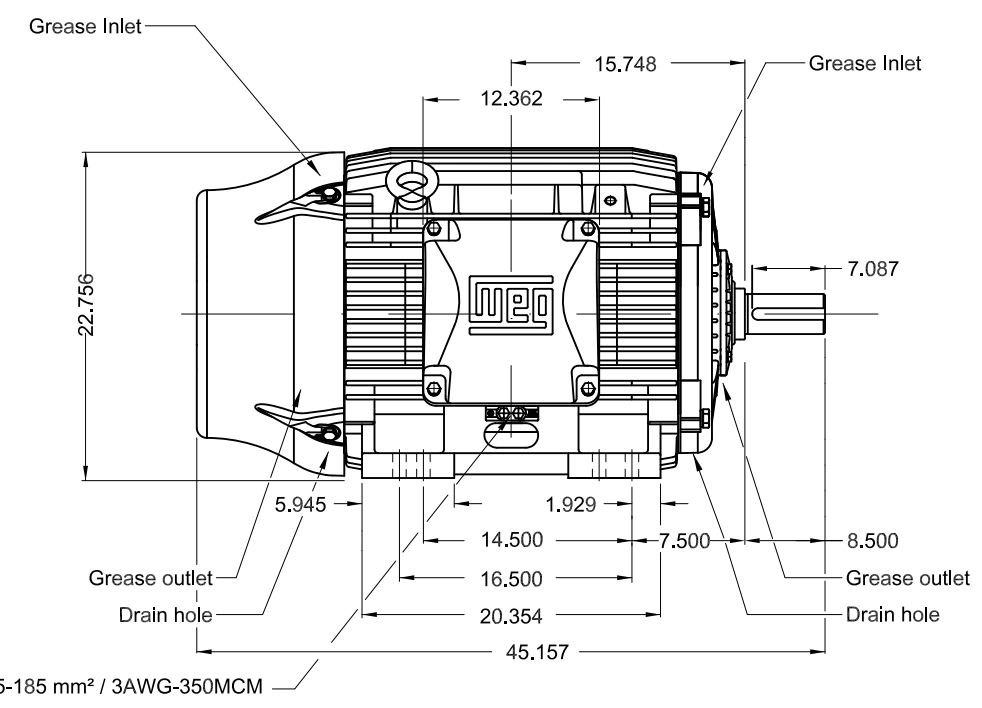
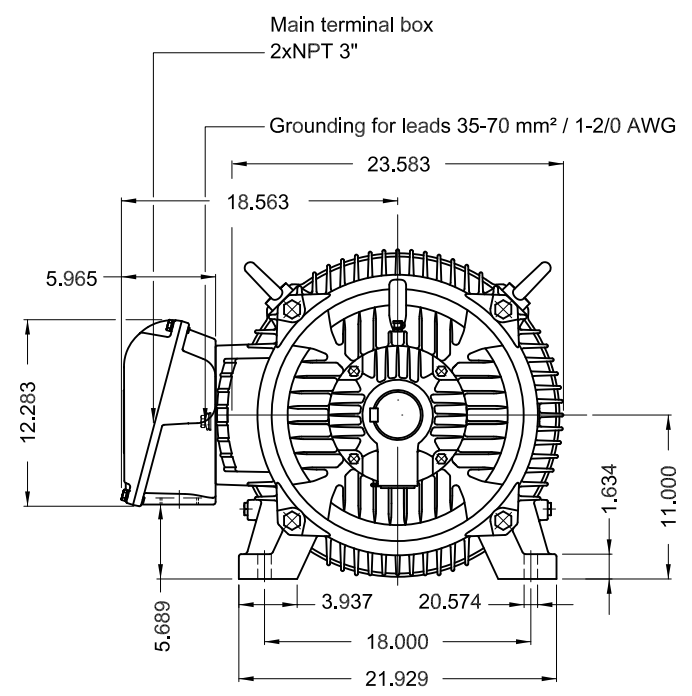
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 36 / 36	Revision
Checked by				
Date	13/04/2022			

1 2 3 4 5 6

A

B

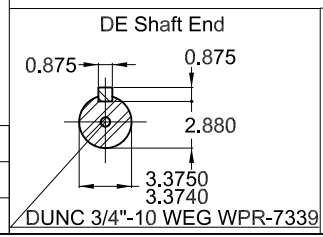
C



D

E

Color RAL 5009  
 Painting plan 203A  
 Mounting B3R(D)



75 HP 08 Poles 60 Hz A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR W22 PREM. EFF.					
CHECKED		FRAME 444/5T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

PREVIEW  
 WDD



SHEET 1 / 1

Dimensions in inches XME A3



FOR SAFE AREA  
Mod.TE1BFOXON  
CC029A



For use on 60Hz  
Class I, Div 2, Gr A, B, C and D - T3  
Class I, Zone 2, IIC - T3  
Class II, Div 2, Gr F and G - T3C  
For use on PWM: Gr. A, B, C, D and F,  
VT 1000:1, CT 20:1, 1.00SF - T3A

MODEL 07509ET3E444T-W22

Inverter Duty Motor  
Severe Duty

PH3 60Hz Fr. 444/5T 1000m.a.s.l. IP55 TEFC 1489lb

V 230/460

A 187/93.4

HP 75

kW 55

SF 1.25

SFA 234/117

RPM 890

PF 0.79

AMB 40°C

INS cl. F DT80K

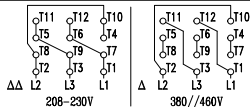
NEMA NOM EFF 93.6%

DUTY CONT.

DES B Code H

USABLE @208V 206A SF 1.10 SFA 227

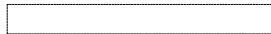
75HP 55kW 50Hz 380V 114A 735RPM SF 1.00 EFF 91.7% (IE2)



→ 6319-C3 (45g)  
 → 6316-C3 (34g)



MOBIL POLYREX EM (17000h)



MADE IN MEXICO  
11568627