

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :								
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	13472769					
		Catalog # :	07518ET3ER365TC-W22					
Frame	: 364/5TC	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>	: 942 lb					
Protection degree	: IP55	Moment of inertia (J)	: 23.3 sq.ft.lb					
Design	: B							
Output [HP]	75	60	60	60	75	75	75	
Poles	4	4	4	4	4	4	4	
Frequency [Hz]	60	50	50	50	50	50	50	
Rated voltage [V]	230/460	380	400	415	380	400	415	
Rated current [A]	174/87.2	88.5	84.9	82.7	106	102	98.7	
L. R. Amperes [A]	1116/558	620	637	662	541	571	602	
LRC [A]	6.4x(Code G)	7.0x(Code H)	7.5x(Code J)	8.0x(Code J)	5.1x(Code E)	5.6x(Code F)	6.1x(Code G)	
No load current [A]	66.0/33.0	33.0	35.0	38.0	33.0	35.0	38.0	
Rated speed [RPM]	1780	1480	1480	1485	1470	1475	1480	
Slip [%]	1.11	1.33	1.33	1.00	2.00	1.67	1.33	
Rated torque [ft.lb]	221	213	213	212	268	267	266	
Locked rotor torque [%]	240	210	240	260	170	200	210	
Breakdown torque [%]	260	250	280	310	200	220	240	
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	25s (cold) 14s (hot)	18s (cold) 10s (hot)	18s (cold) 10s (hot)	18s (cold) 10s (hot)	18s (cold) 10s (hot)	18s (cold) 10s (hot)	18s (cold) 10s (hot)	
Noise level <sup>2</sup>	67.0 dB(A)	63.0 dB(A)	63.0 dB(A)	63.0 dB(A)	63.0 dB(A)	63.0 dB(A)	63.0 dB(A)	
Efficiency (%)	25%	94.0	93.6	93.3	93.0	94.8	94.7	94.0
	50%	94.5	93.7	93.6	93.5	94.5	94.5	94.1
	75%	95.0	94.2	94.2	94.2	94.1	94.5	94.5
	100%	95.4	94.2	94.4	94.6	93.6	94.1	94.5
Power Factor	25%	0.44	0.44	0.40	0.37	0.51	0.46	0.43
	50%	0.68	0.68	0.64	0.61	0.75	0.70	0.67
	75%	0.78	0.78	0.75	0.73	0.82	0.80	0.78
	100%	0.83	0.82	0.81	0.80	0.84	0.83	0.82
Bearing type	: Drive end : 6314 C3	Non drive end : 6314 C3	Foundation loads					
Sealing	: WSeal	WSeal	Max. traction : 1715 lb					
Lubrication interval	: 6000 h	6000 h	Max. compression : 2657 lb					
Lubricant amount	: 27 g	27 g						
Lubricant type	: Mobil Polyrex EM							
Notes USABLE @208V 186A SF 1.10 SFA 205A								
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.				
Rev.	Changes Summary			Performed	Checked	Date		
Performed by								
Checked by					Page	Revision		
Date	13/04/2022				1 / 36			

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



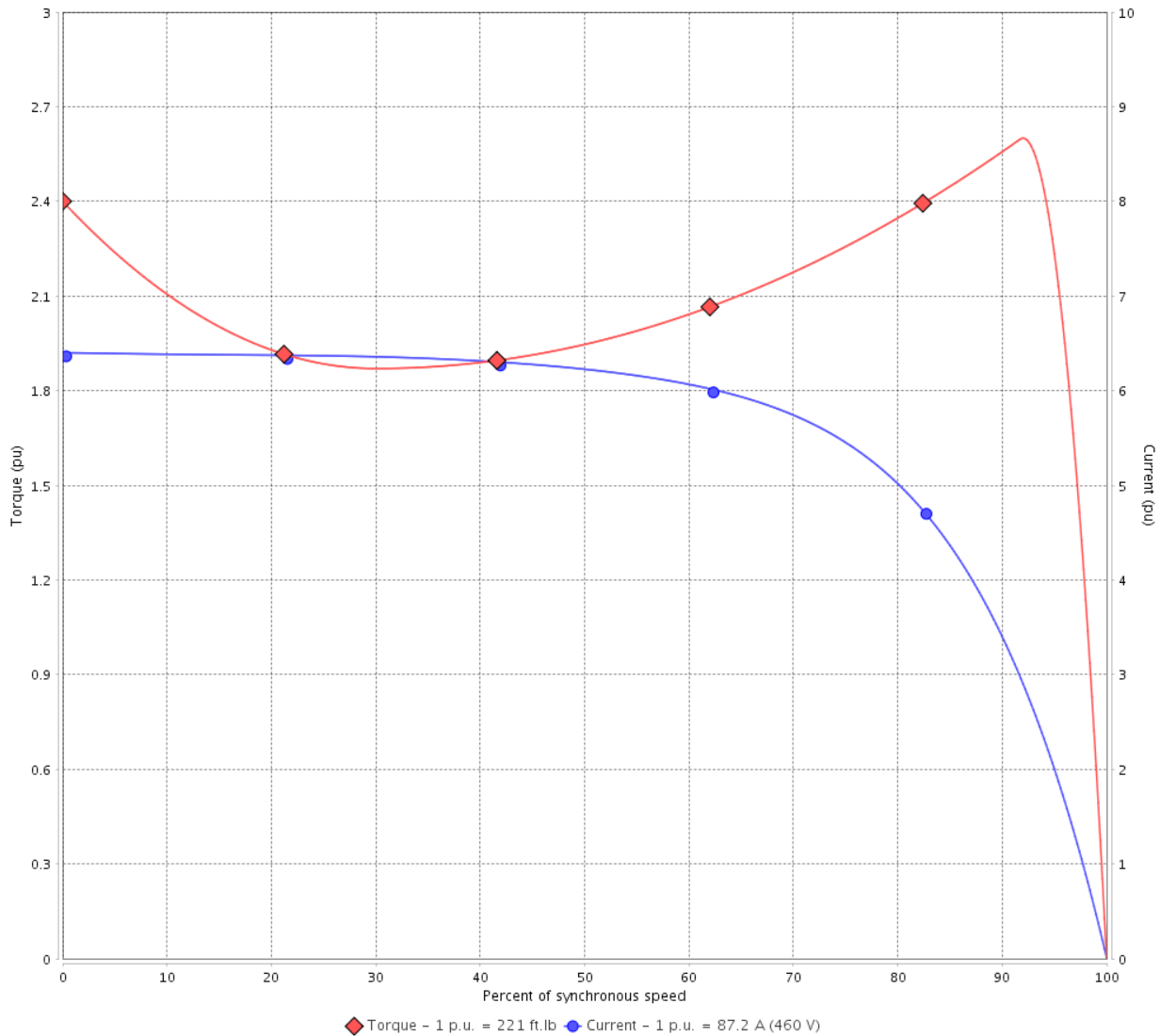
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13472769

Catalog # : 07518ET3ER365TC-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 4P

Rated current	: 174/87.2 A	Moment of inertia (J)	: 23.3 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 221 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.25
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1780 rpm	Design	: B

Locked rotor time : 25s (cold) 14s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 2 / 36	Revision
Checked by				
Date	13/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE



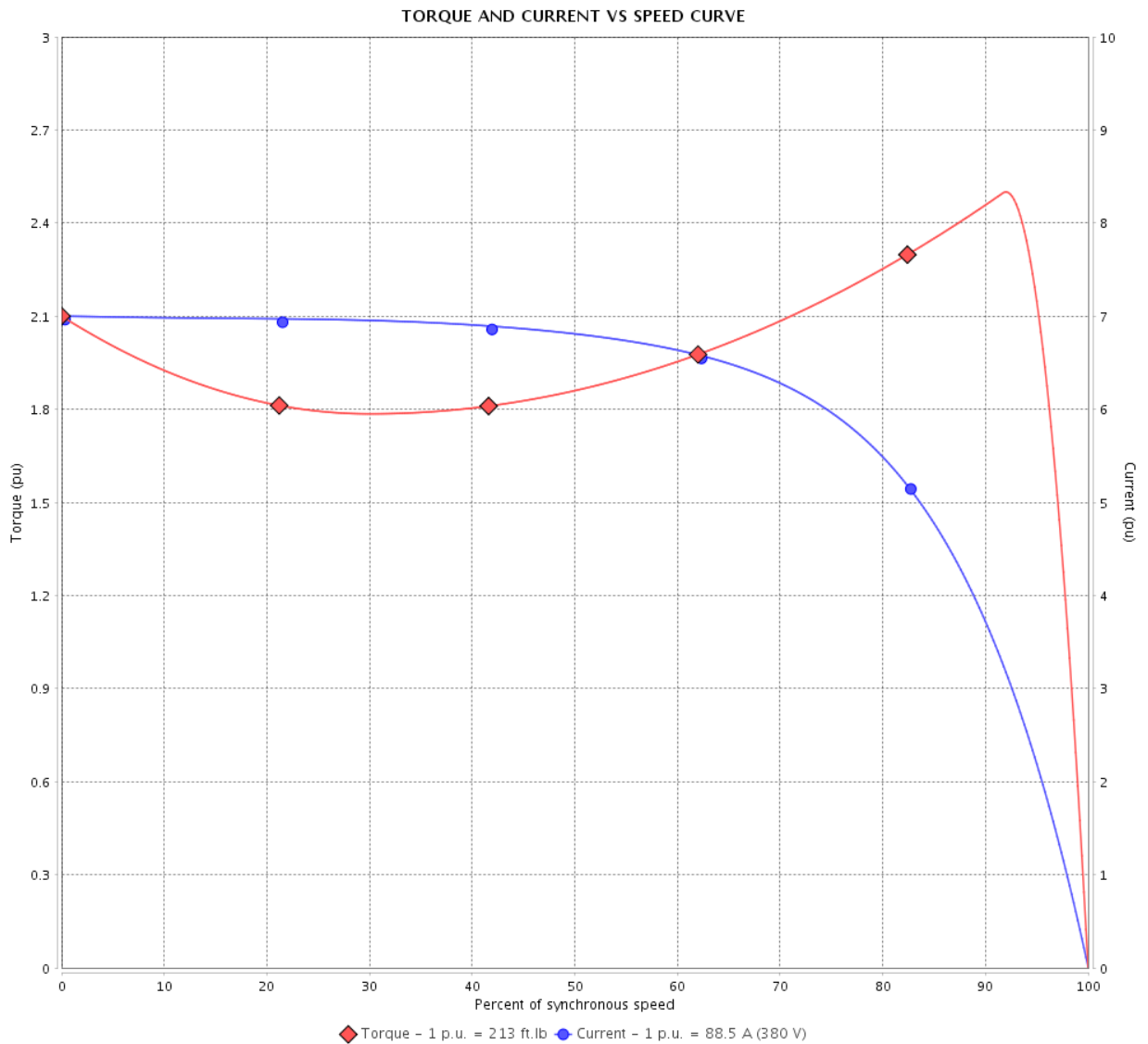
## Three Phase Induction Motor - Squirrel Cage

Customer :

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Product code : 13472769

Catalog # : 07518ET3ER365TC-W22



Performance : 380 V 50 Hz 4P IE3

Rated current	: 88.5 A	Moment of inertia (J)	: 23.3 sq.ft.lb
LRC	: 7.0	Duty cycle	: Cont.(S1)
Rated torque	: 213 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

Locked rotor time : 18s (cold) 10s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 3 / 36	Revision
Checked by				
Date	13/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE

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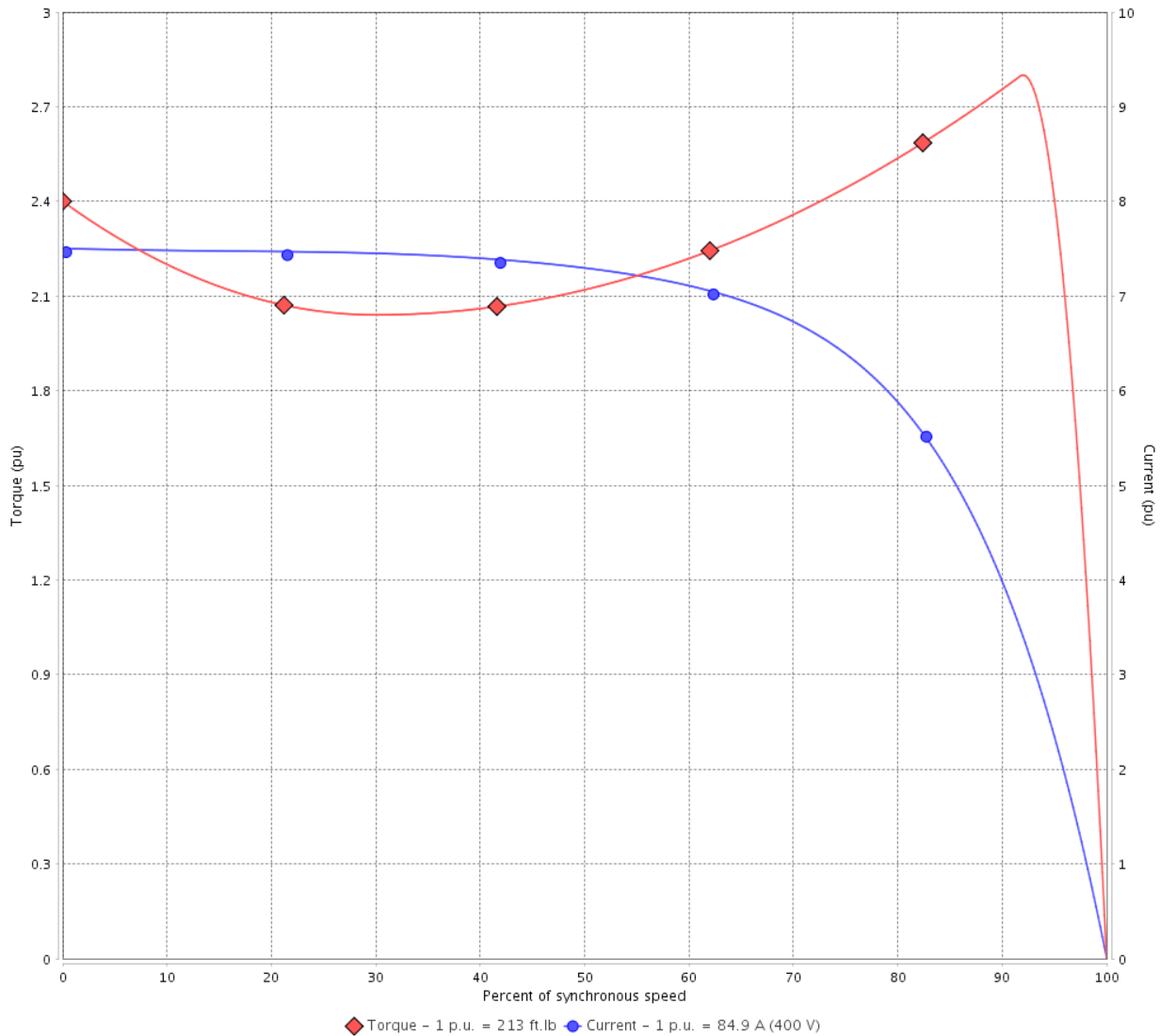
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TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current	: 84.9 A	Moment of inertia (J)	: 23.3 sq.ft.lb
LRC	: 7.5	Duty cycle	: Cont.(S1)
Rated torque	: 213 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

Locked rotor time : 18s (cold) 10s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 36	Revision
Checked by				
Date	13/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE



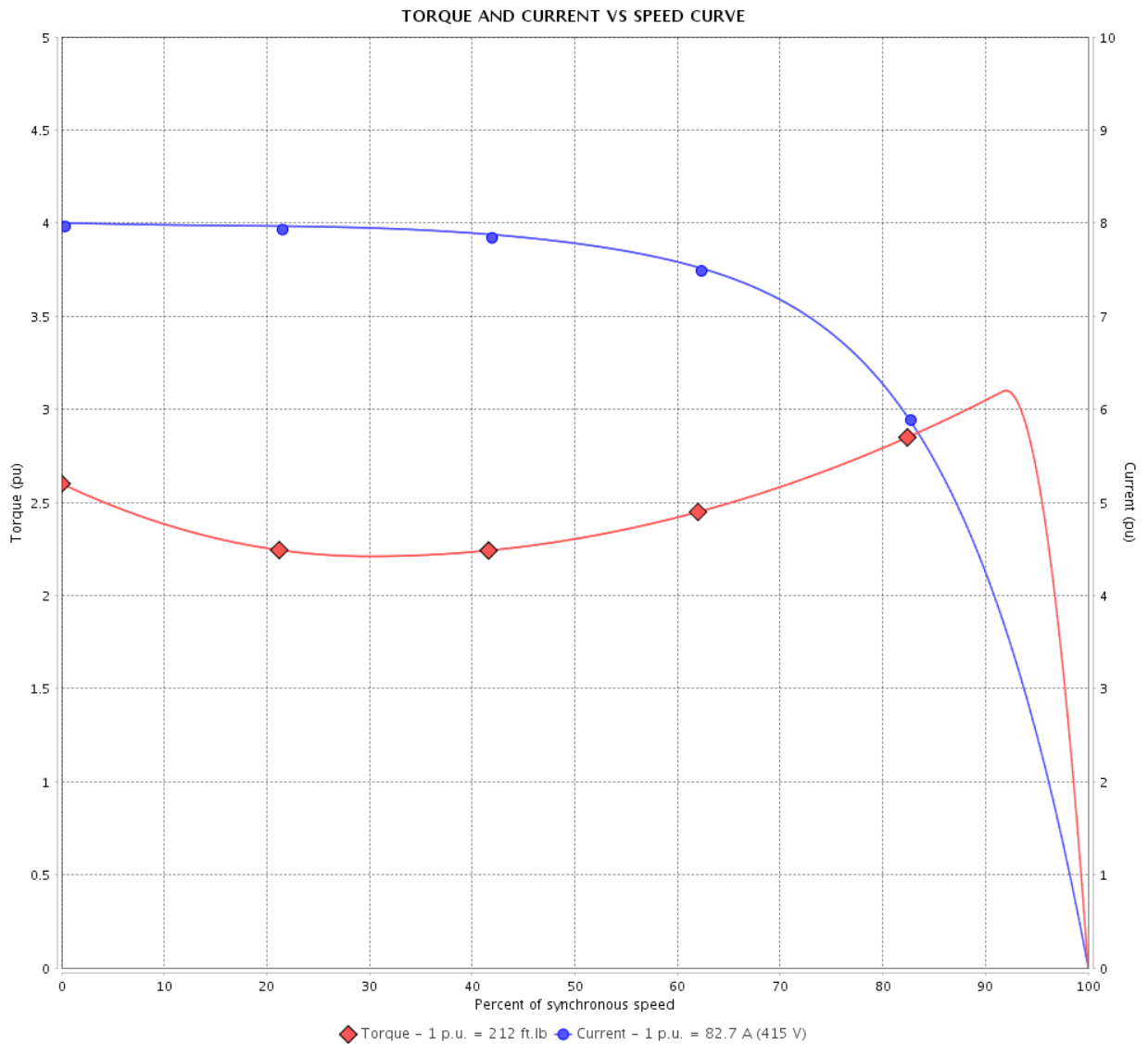
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Product code : 13472769

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Performance : 415 V 50 Hz 4P IE3

Rated current	: 82.7 A	Moment of inertia (J)	: 23.3 sq.ft.lb
LRC	: 8.0	Duty cycle	: Cont.(S1)
Rated torque	: 212 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.00
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

Locked rotor time : 18s (cold) 10s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 5 / 36	Revision
Checked by				
Date	13/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage



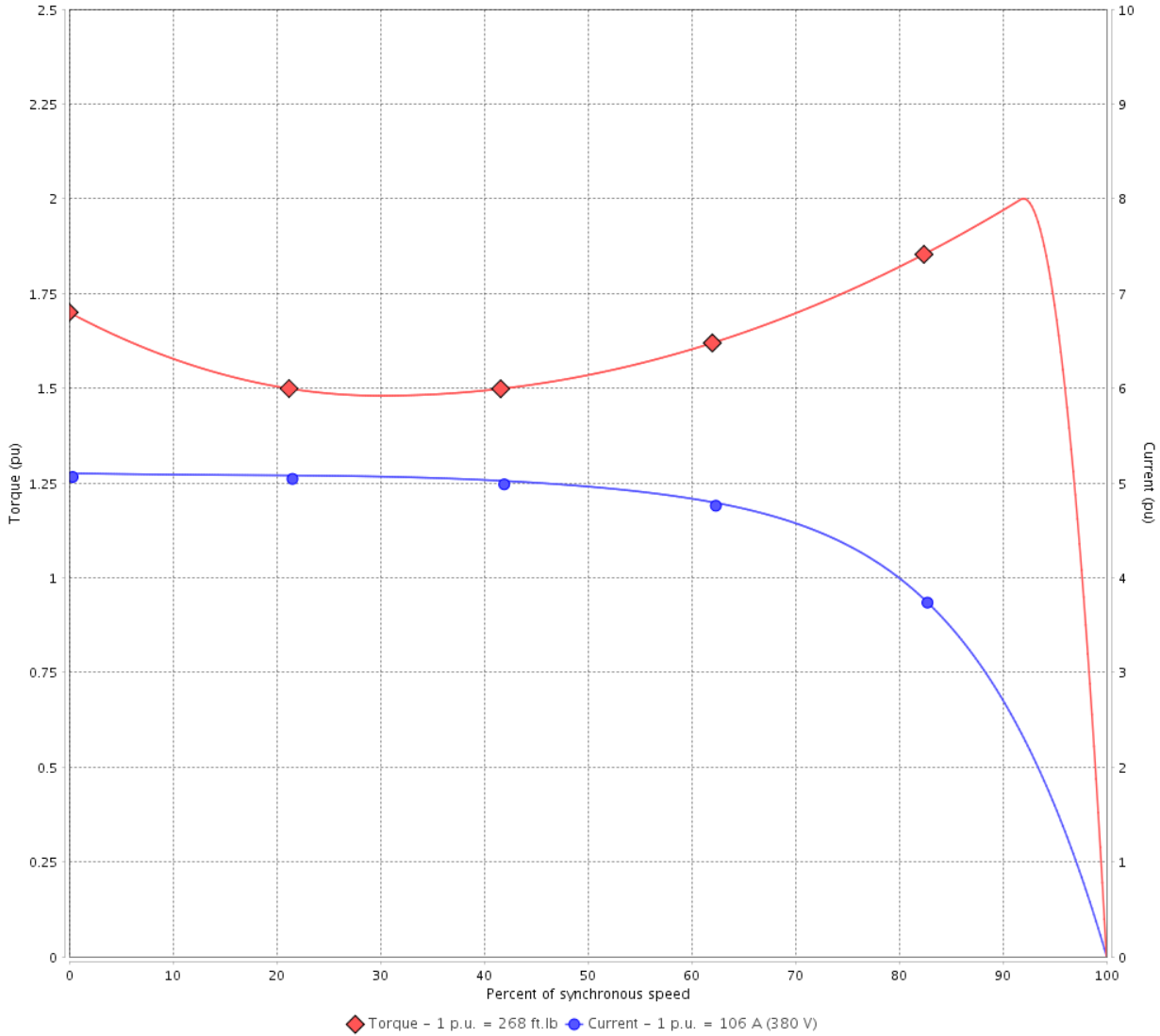
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Product code : 13472769

Catalog # : 07518ET3ER365TC-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 4P IE2

Rated current	: 106 A	Moment of inertia (J)	: 23.3 sq.ft.lb
LRC	: 5.1	Duty cycle	: Cont.(S1)
Rated torque	: 268 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 105 K
Rated speed	: 1470 rpm	Design	: B

Locked rotor time : 18s (cold) 10s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 6 / 36	Revision
Checked by				
Date	13/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE



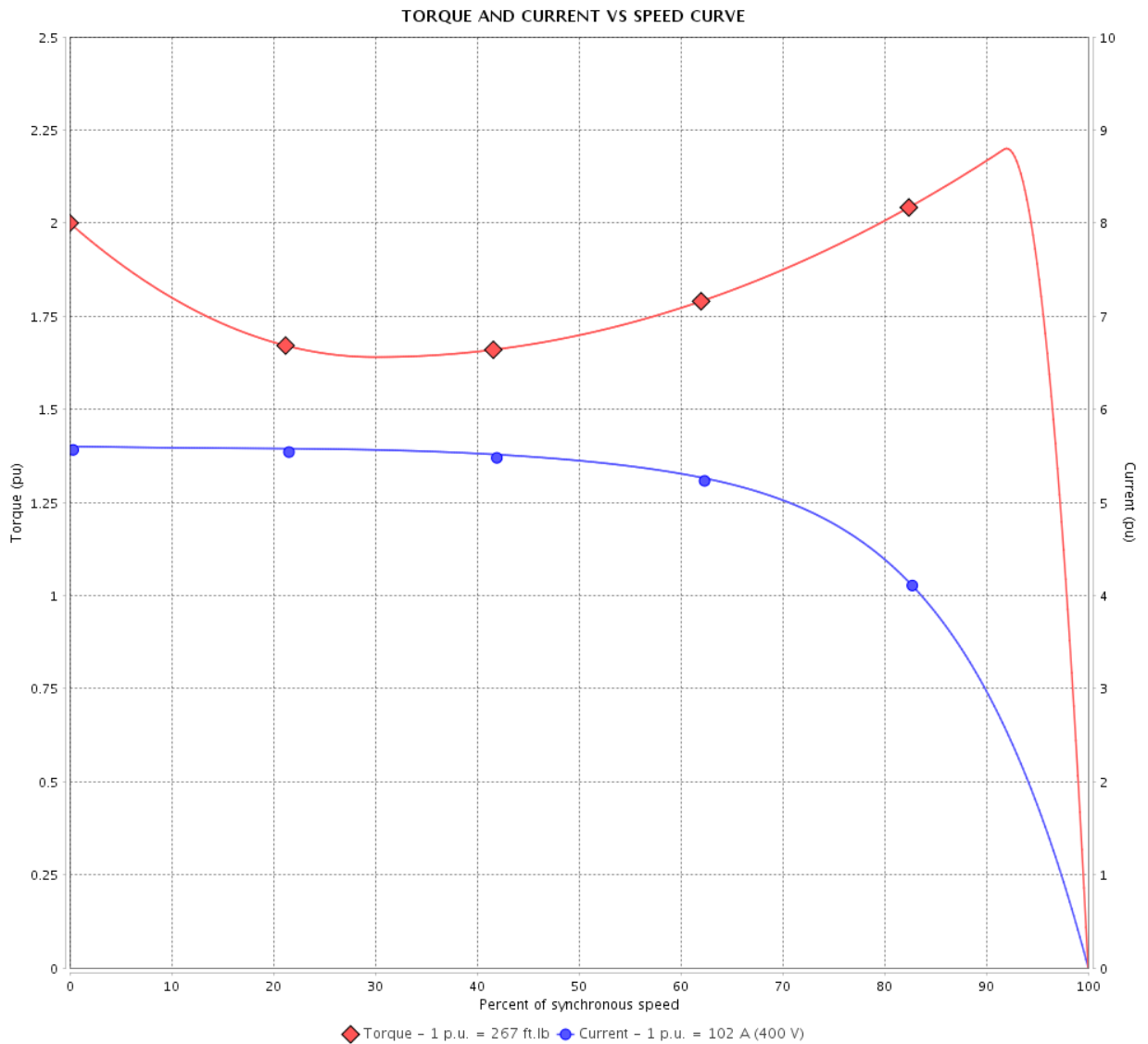
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Customer :

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Product code : 13472769

Catalog # : 07518ET3ER365TC-W22



Performance : 400 V 50 Hz 4P IE2

Rated current	: 102 A	Moment of inertia (J)	: 23.3 sq.ft.lb
LRC	: 5.6	Duty cycle	: Cont.(S1)
Rated torque	: 267 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 105 K
Rated speed	: 1475 rpm	Design	: B

Locked rotor time : 18s (cold) 10s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 7 / 36	Revision
Checked by				
Date	13/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



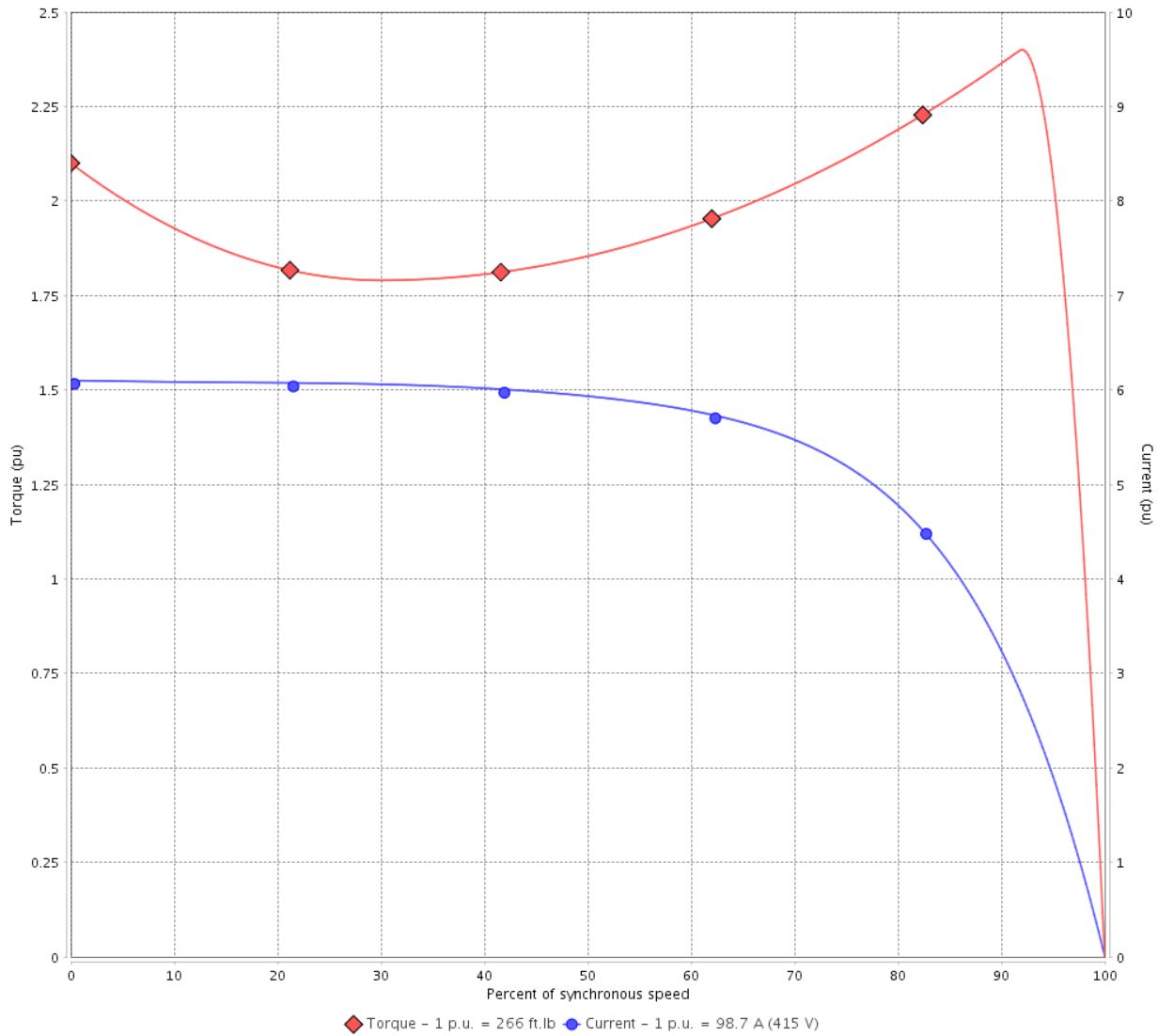
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TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 4P IE2

Rated current	: 98.7 A	Moment of inertia (J)	: 23.3 sq.ft.lb
LRC	: 6.1	Duty cycle	: Cont.(S1)
Rated torque	: 266 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 105 K
Rated speed	: 1480 rpm	Design	: B

Locked rotor time : 18s (cold) 10s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 8 / 36	Revision
Checked by				
Date	13/04/2022			



# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

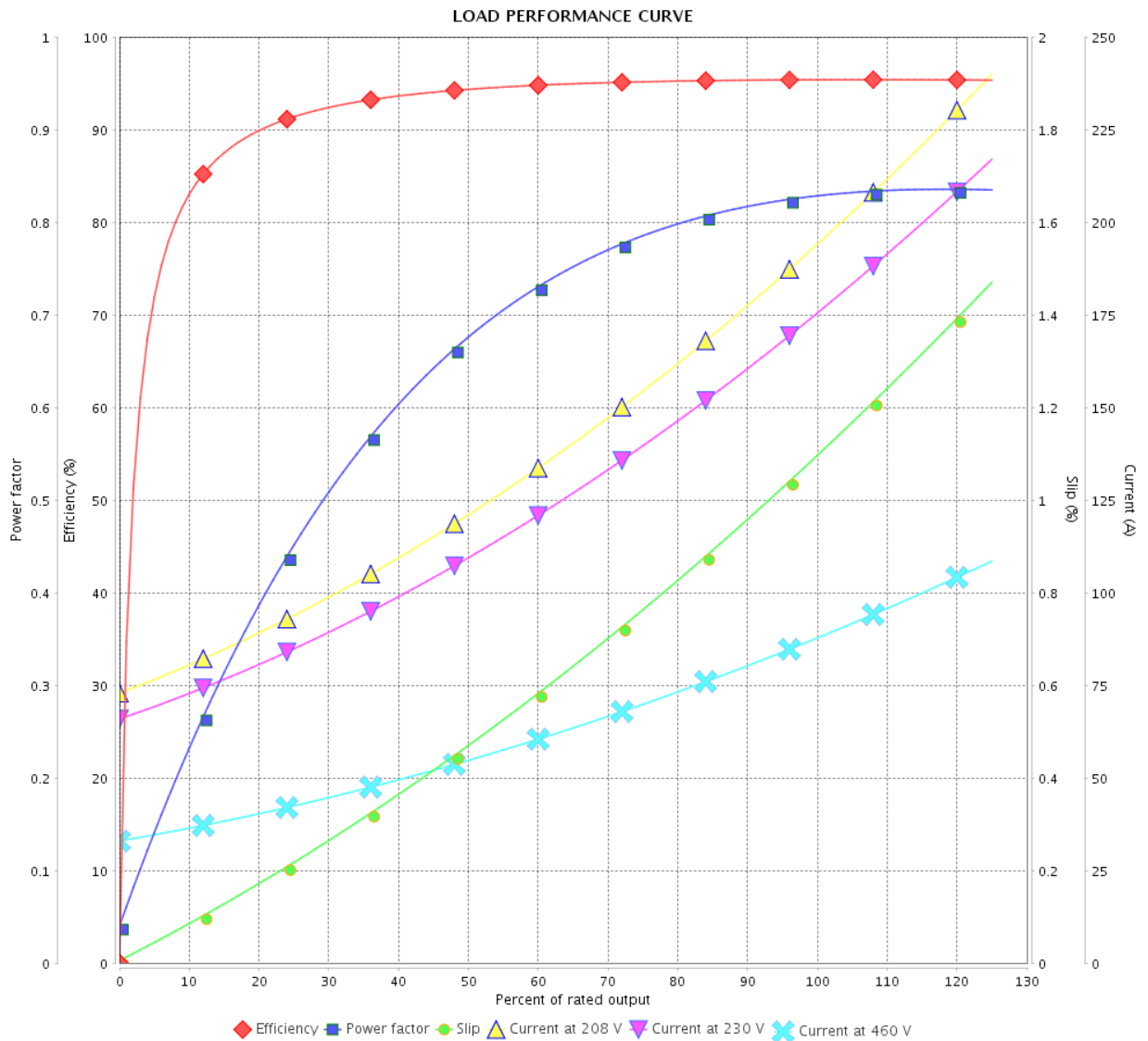


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Catalog # : 07518ET3ER365TC-W22



Performance : 230/460 V 60 Hz 4P

Rated current : 174/87.2 A  
 LRC : 6.4  
 Rated torque : 221 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 260 %  
 Rated speed : 1780 rpm

Moment of inertia (J) : 23.3 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		Revision
Checked by		9 / 36		
Date		13/04/2022		

# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

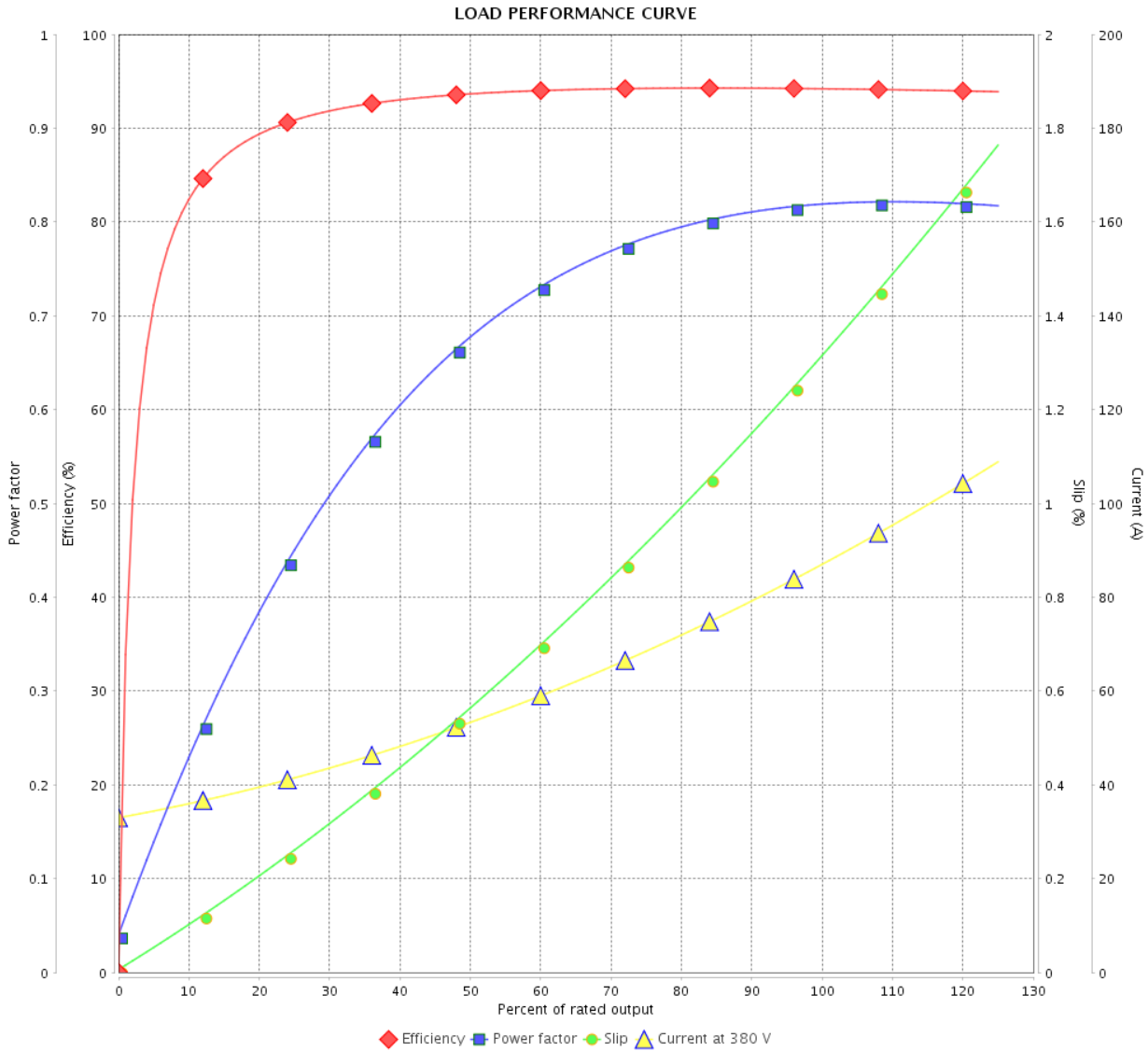


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Performance : 380 V 50 Hz 4P IE3

Rated current	: 88.5 A	Moment of inertia (J)	: 23.3 sq.ft.lb
LRC	: 7.0	Duty cycle	: Cont.(S1)
Rated torque	: 213 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		10 / 36		
Date	13/04/2022			

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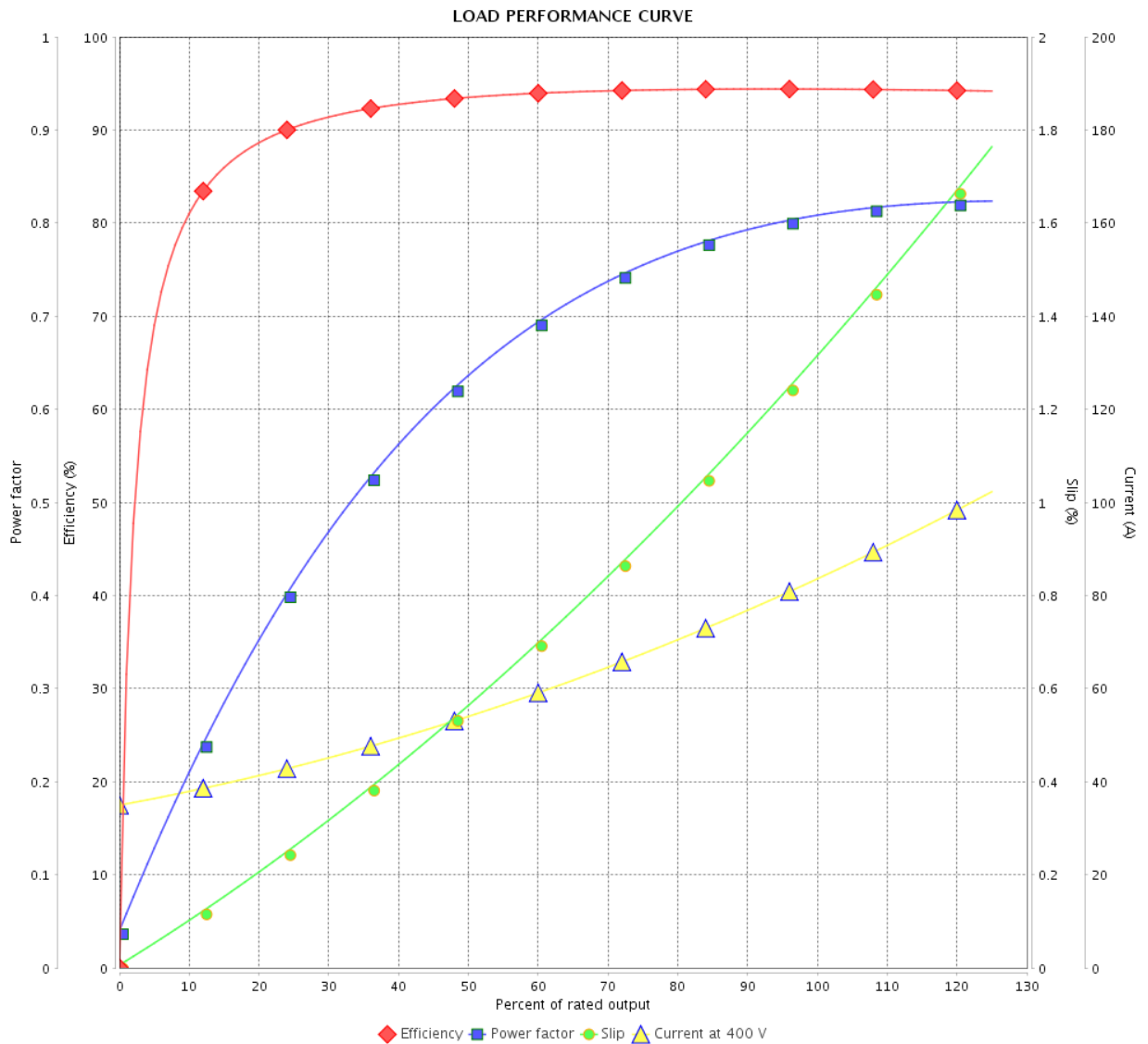


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Performance : 400 V 50 Hz 4P IE3

Rated current : 84.9 A  
 LRC : 7.5  
 Rated torque : 213 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 280 %  
 Rated speed : 1480 rpm

Moment of inertia (J) : 23.3 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		11 / 36		
Date		13/04/2022		

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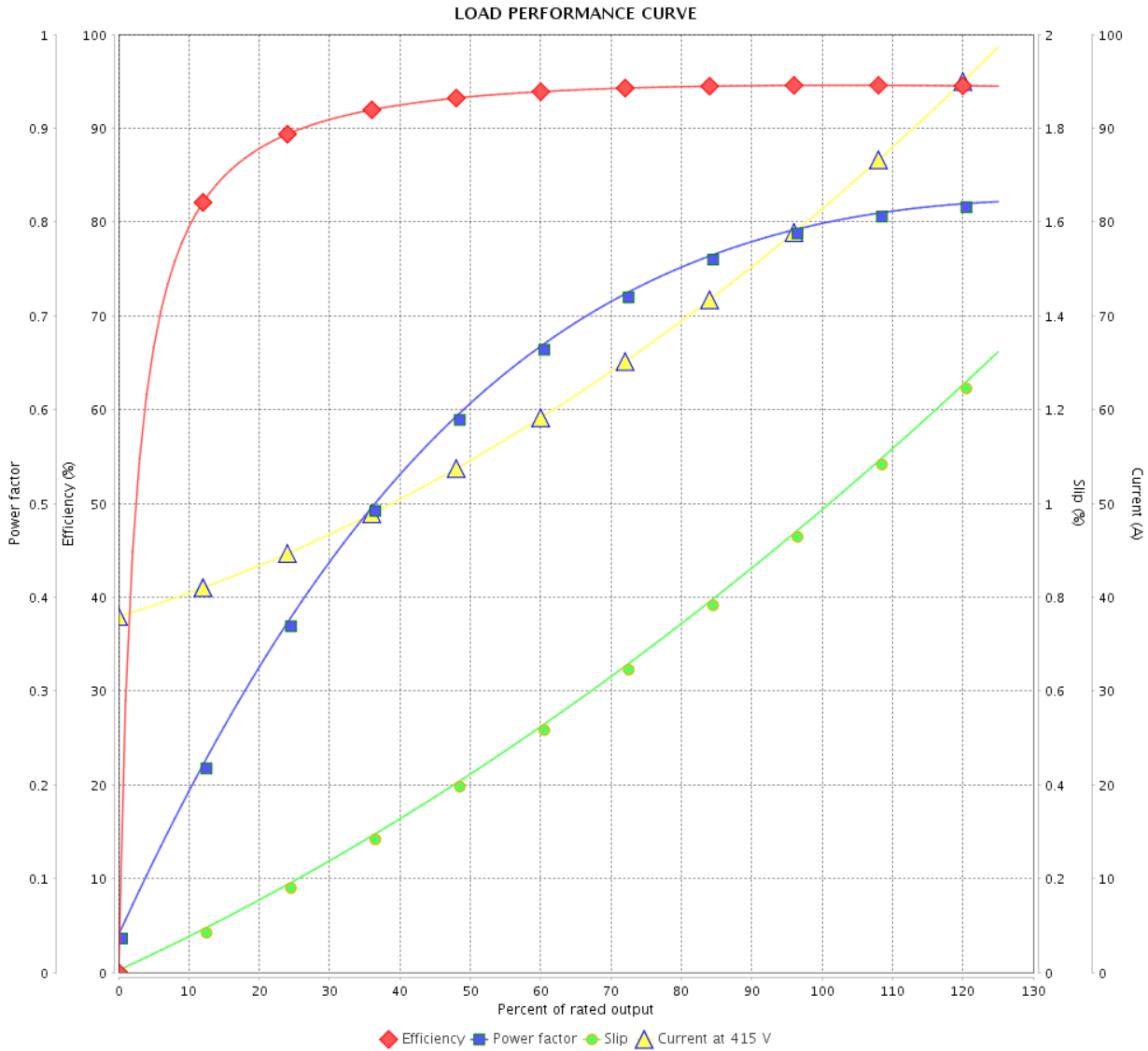


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Product code : 13472769

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Performance : 415 V 50 Hz 4P IE3

Rated current : 82.7 A	Moment of inertia (J) : 23.3 sq.ft.lb
LRC : 8.0	Duty cycle : Cont.(S1)
Rated torque : 212 ft.lb	Insulation class : F
Locked rotor torque : 260 %	Service factor : 1.00
Breakdown torque : 310 %	Temperature rise : 80 K
Rated speed : 1485 rpm	Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 12 / 36	Revision
Checked by				
Date	13/04/2022			

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## Three Phase Induction Motor - Squirrel Cage

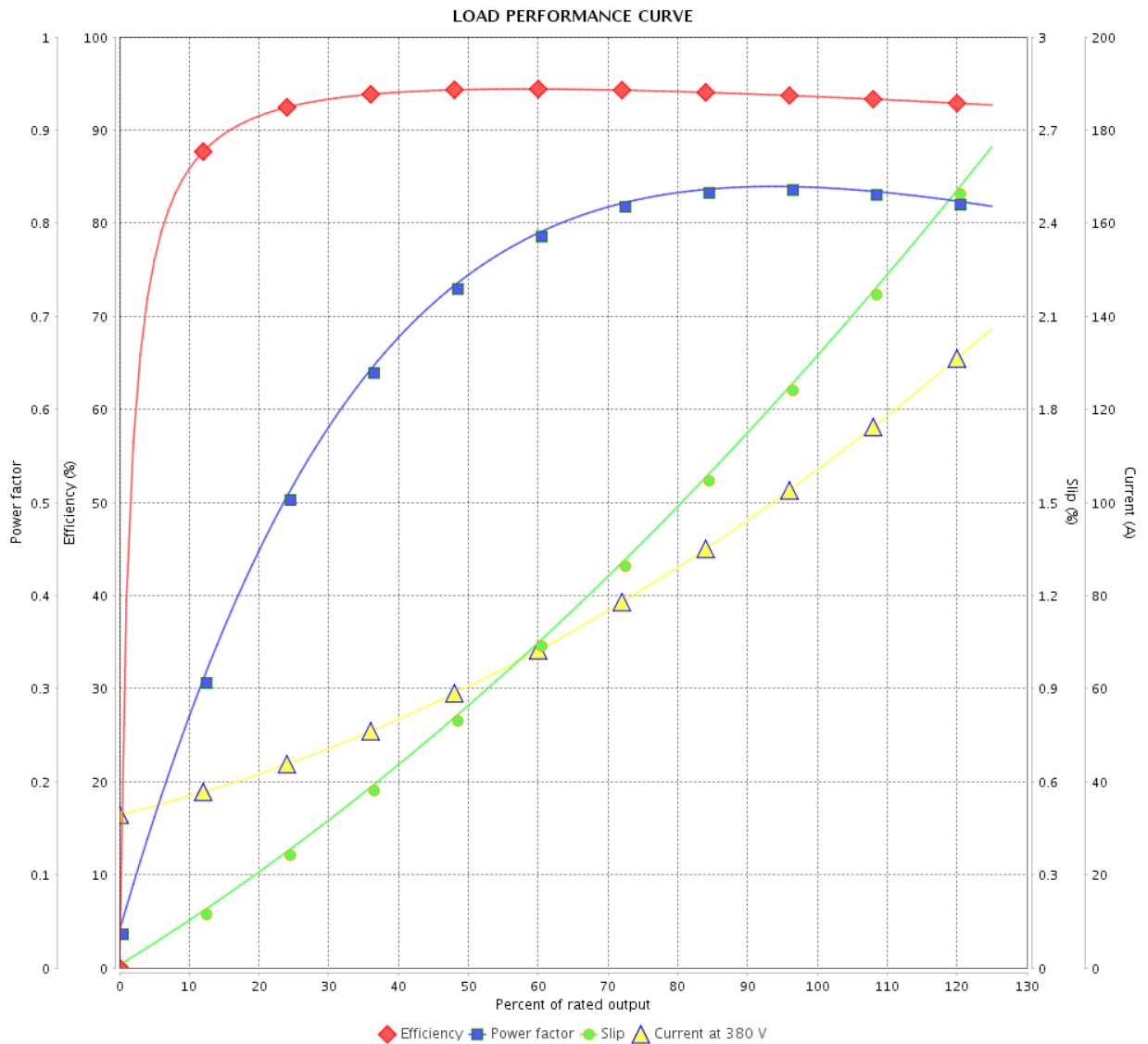


Customer :

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Product code : 13472769

Catalog # : 07518ET3ER365TC-W22



Performance : 380 V 50 Hz 4P IE2

Rated current : 106 A  
 LRC : 5.1  
 Rated torque : 268 ft.lb  
 Locked rotor torque : 170 %  
 Breakdown torque : 200 %  
 Rated speed : 1470 rpm

Moment of inertia (J) : 23.3 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	Revision
Checked by			13 / 36	
Date	13/04/2022			

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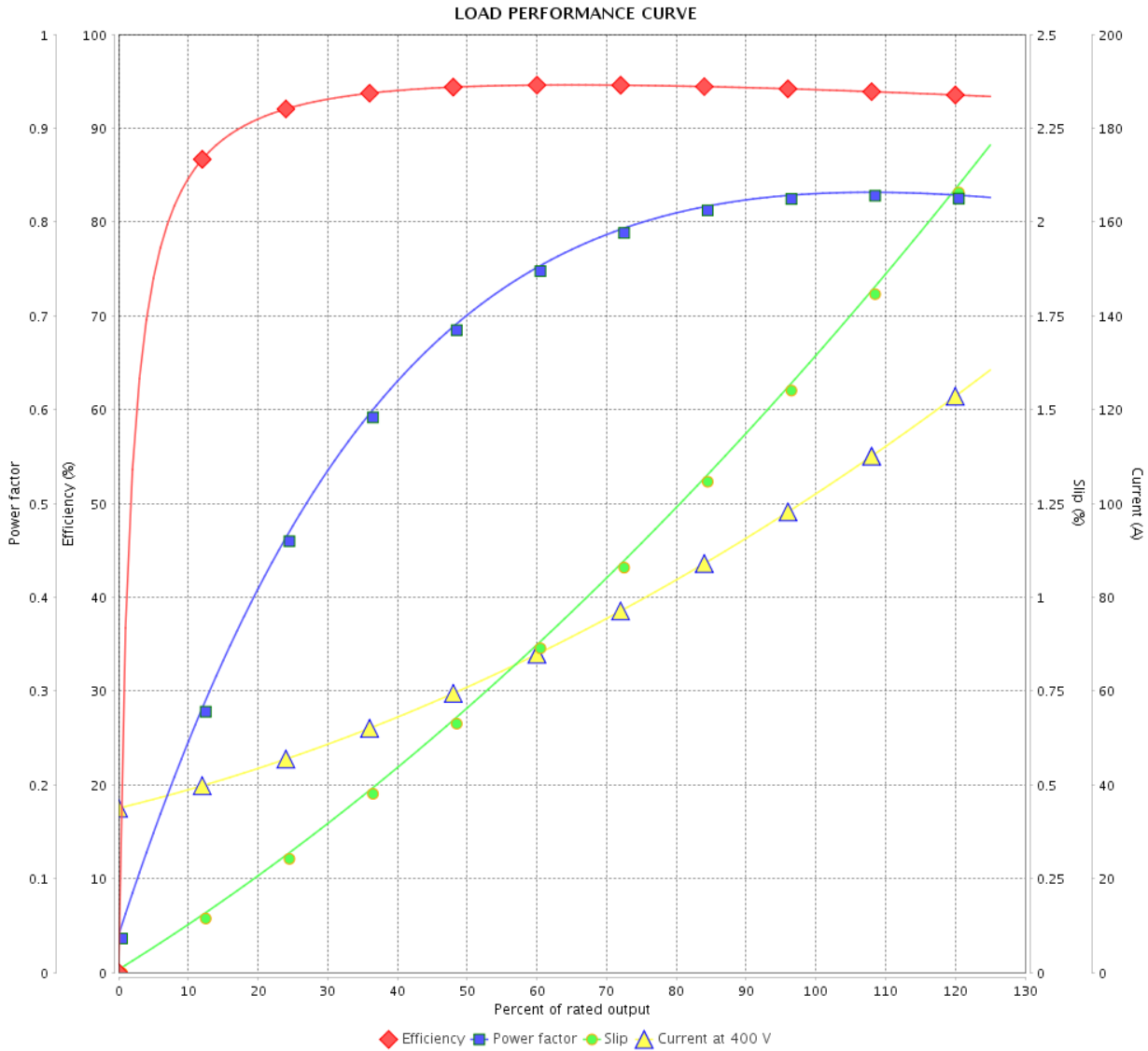


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Performance : 400 V 50 Hz 4P IE2

Rated current	: 102 A	Moment of inertia (J)	: 23.3 sq.ft.lb
LRC	: 5.6	Duty cycle	: Cont.(S1)
Rated torque	: 267 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 105 K
Rated speed	: 1475 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by			14 / 36	
Date	13/04/2022			

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

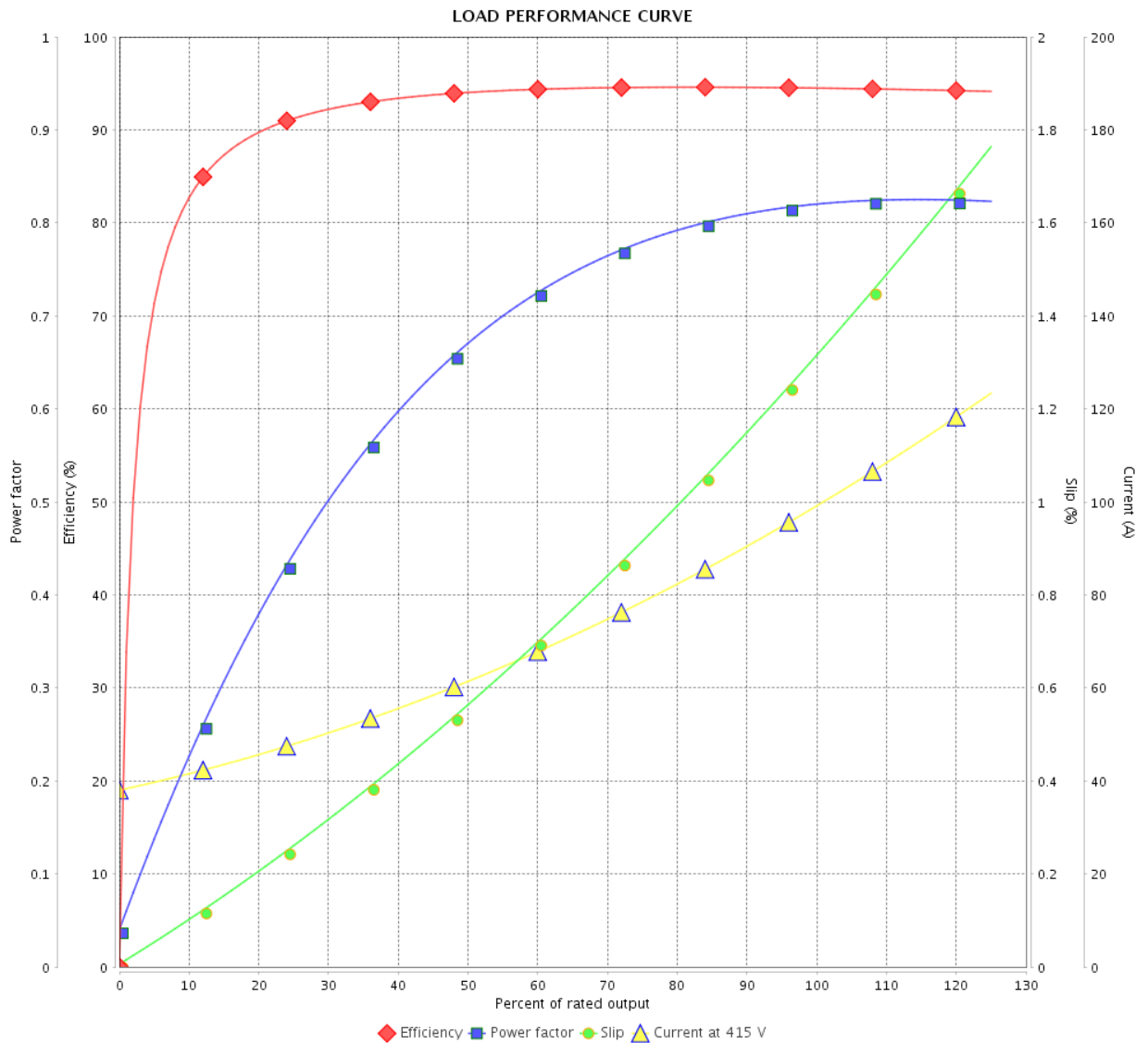


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13472769

Catalog # : 07518ET3ER365TC-W22



Performance : 415 V 50 Hz 4P IE2

Rated current : 98.7 A  
 LRC : 6.1  
 Rated torque : 266 ft.lb  
 Locked rotor torque : 210 %  
 Breakdown torque : 240 %  
 Rated speed : 1480 rpm

Moment of inertia (J) : 23.3 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		Revision
Checked by		15 / 36		
Date		13/04/2022		

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

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Product code : 13472769  
Catalog # : 07518ET3ER365TC-W22

Performance : 230/460 V 60 Hz 4P

Rated current	: 174/87.2 A	Moment of inertia (J)	: 23.3 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 221 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.25
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1780 rpm	Design	: B

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		16 / 36	

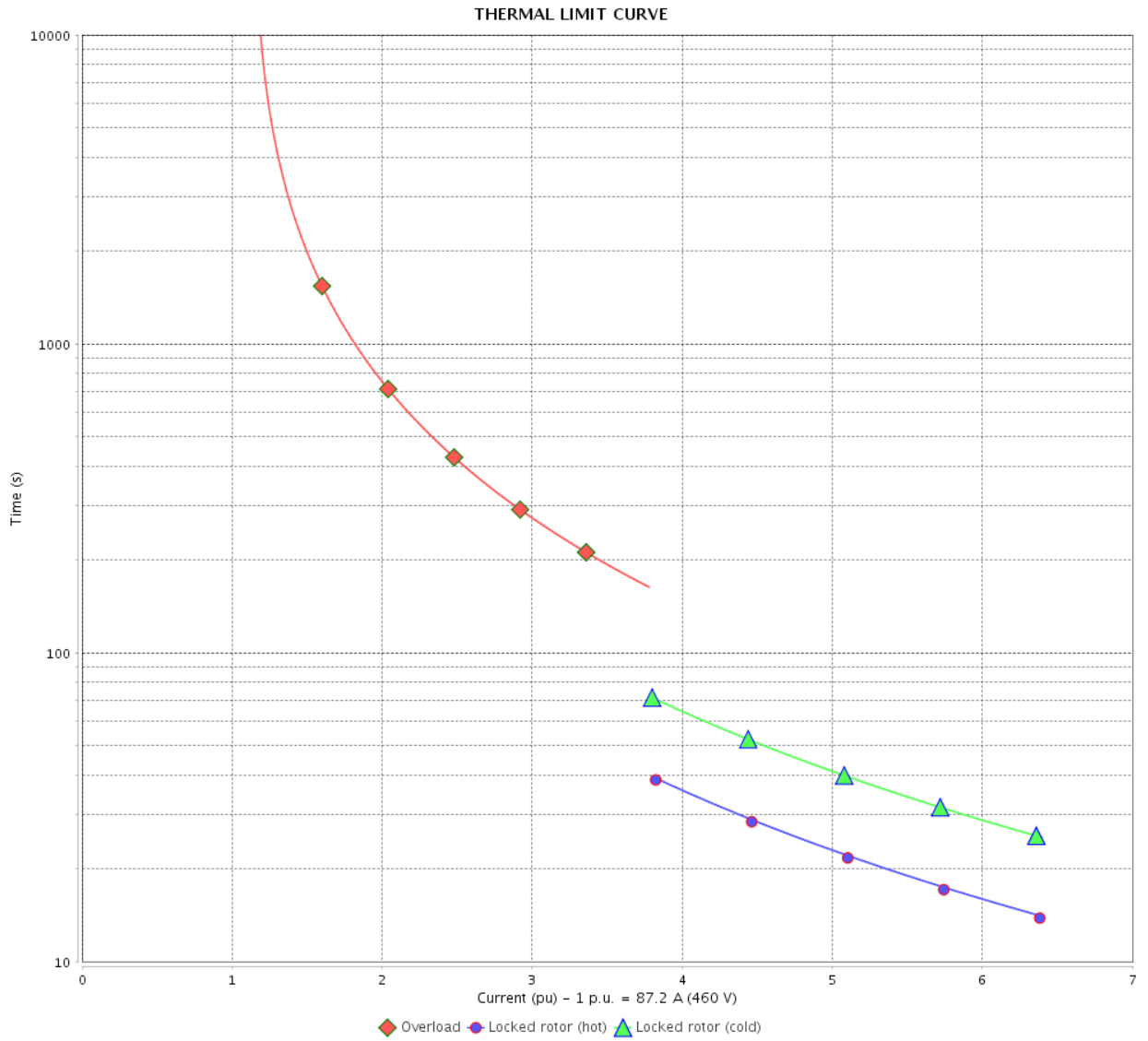


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Three Phase Induction Motor - Squirrel Cage



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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		17 / 36		
Date		13/04/2022		

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## Three Phase Induction Motor - Squirrel Cage



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Performance : 380 V 50 Hz 4P IE3

Rated current	: 88.5 A	Moment of inertia (J)	: 23.3 sq.ft.lb
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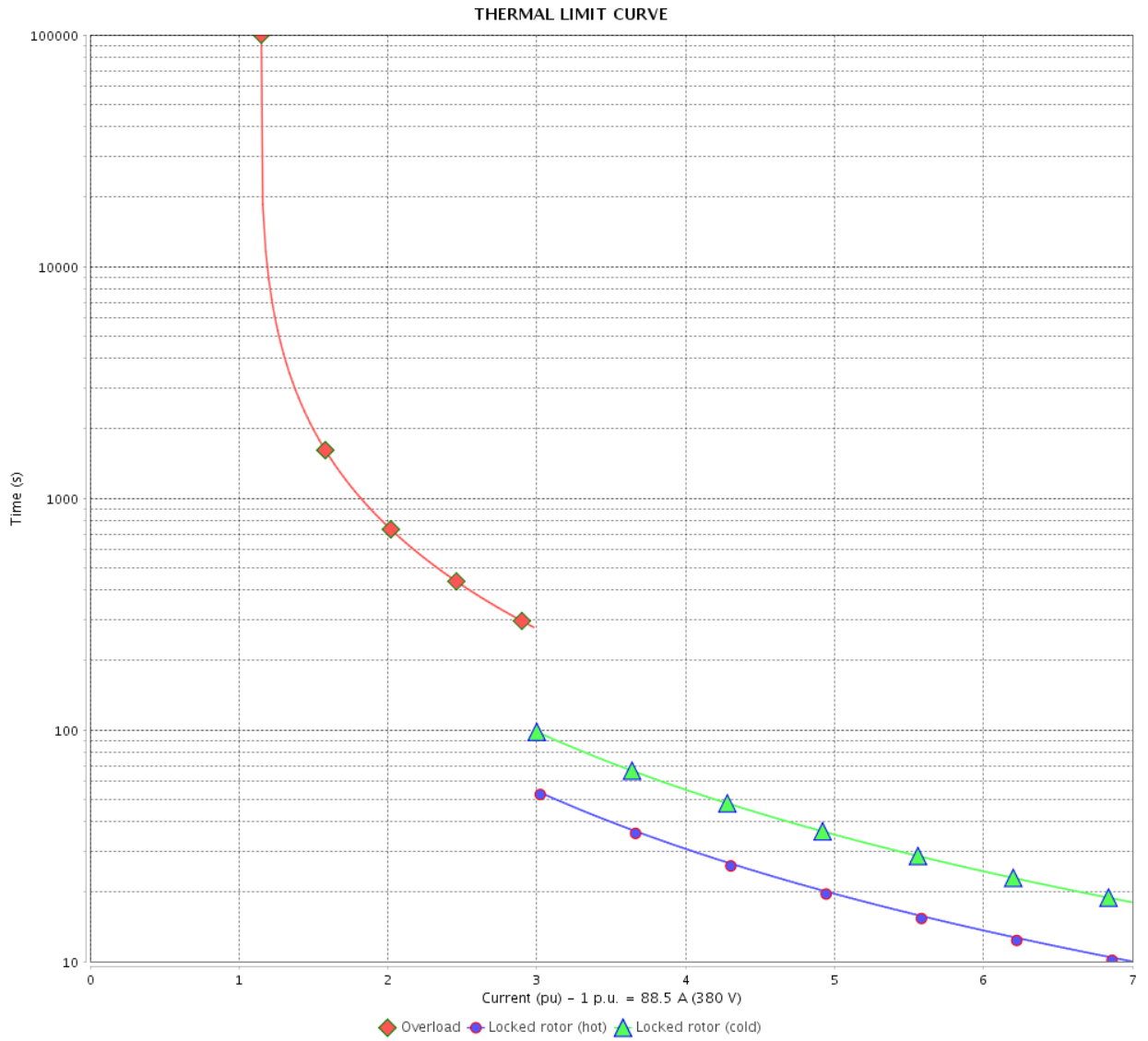
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		18 / 36	

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Three Phase Induction Motor - Squirrel Cage



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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 19 / 36		Revision
Checked by				
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Breakdown torque	: 280 %	Temperature rise	: 80 K
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Heating constant

Cooling constant

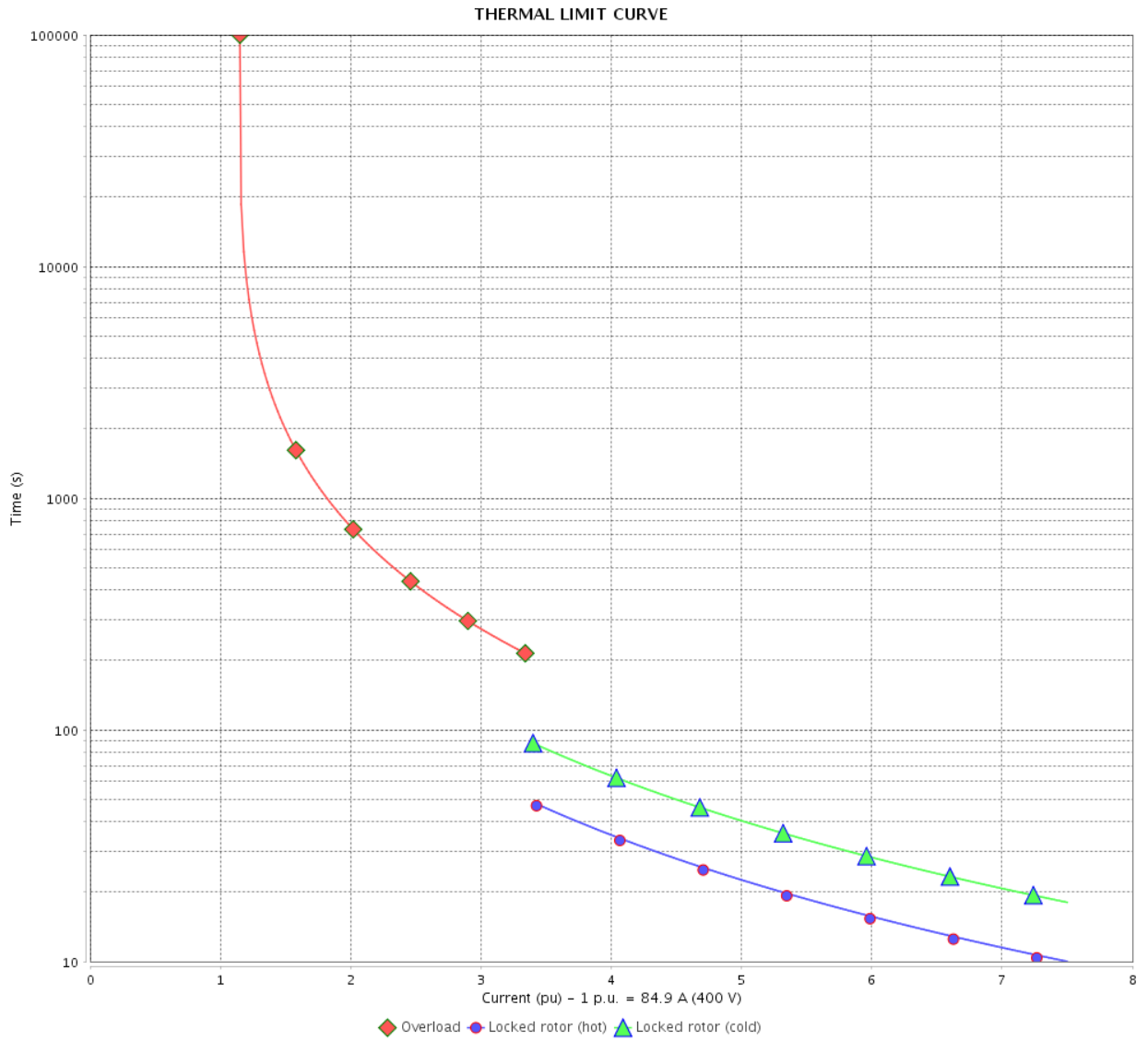
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		20 / 36	

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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 21 / 36		Revision
Checked by				
Date				

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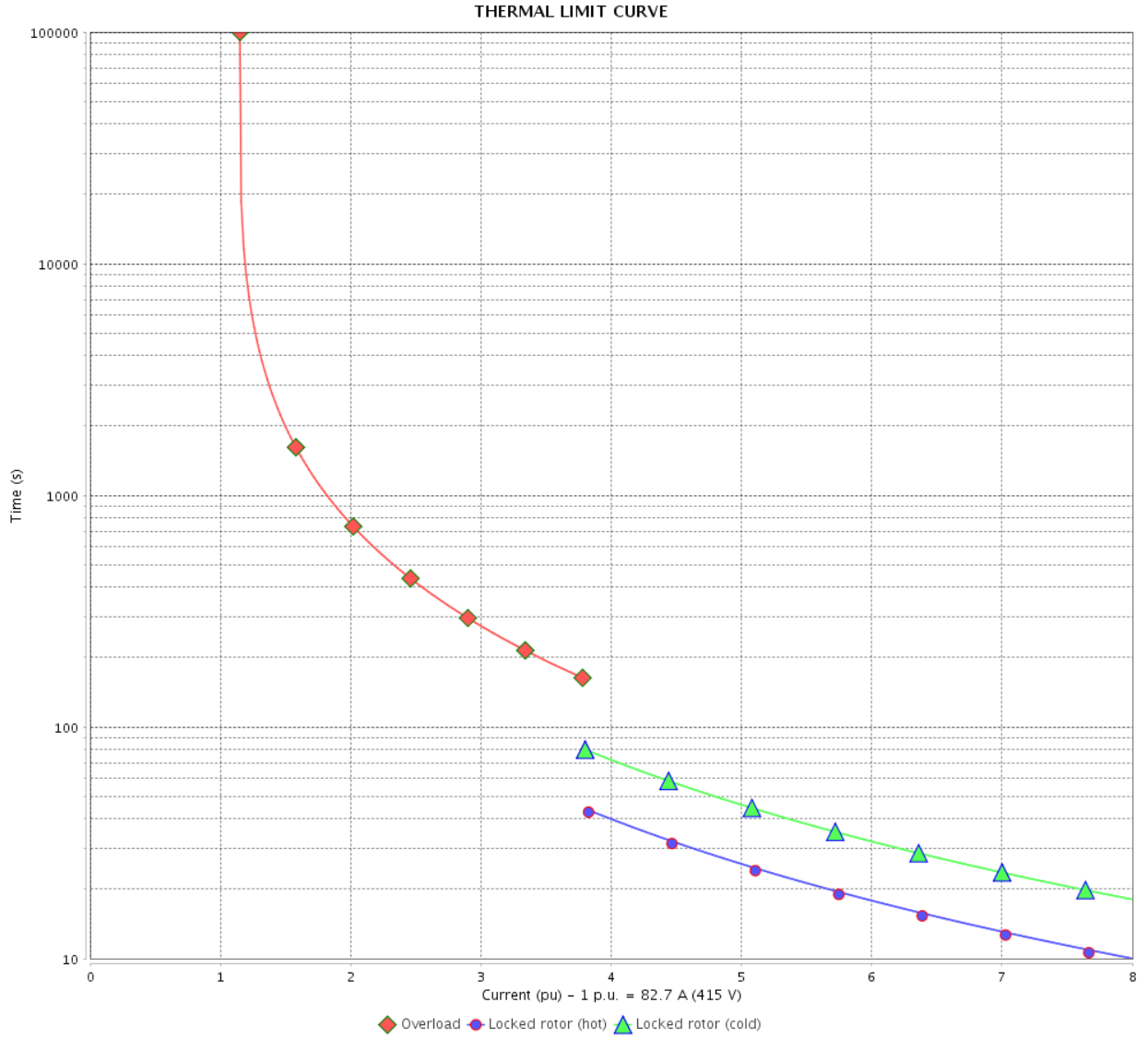
Rev.	Changes Summary	Performed	Checked	Date
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Checked by			Page	Revision
Date	13/04/2022		22 / 36	

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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		23 / 36		
Date		13/04/2022		

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Breakdown torque	: 200 %	Temperature rise	: 105 K
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Performed by				
Checked by			Page	Revision
Date	13/04/2022		24 / 36	

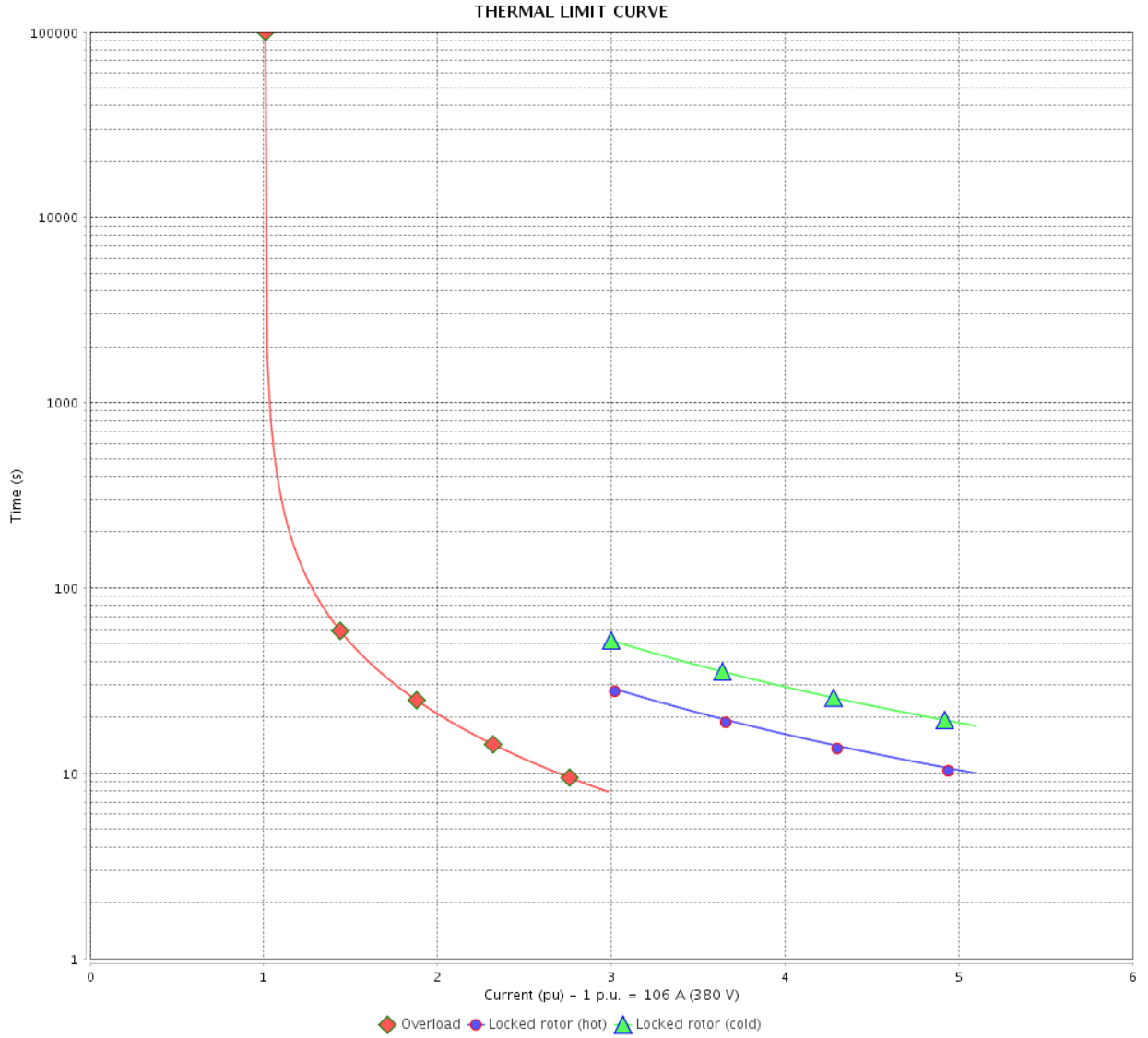


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Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date				
			Page	Revision
			25 / 36	

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 13472769  
Catalog # : 07518ET3ER365TC-W22

Performance : 400 V 50 Hz 4P IE2

Rated current	: 102 A	Moment of inertia (J)	: 23.3 sq.ft.lb
LRC	: 5.6	Duty cycle	: Cont.(S1)
Rated torque	: 267 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 105 K
Rated speed	: 1475 rpm	Design	: B

Heating constant

Cooling constant

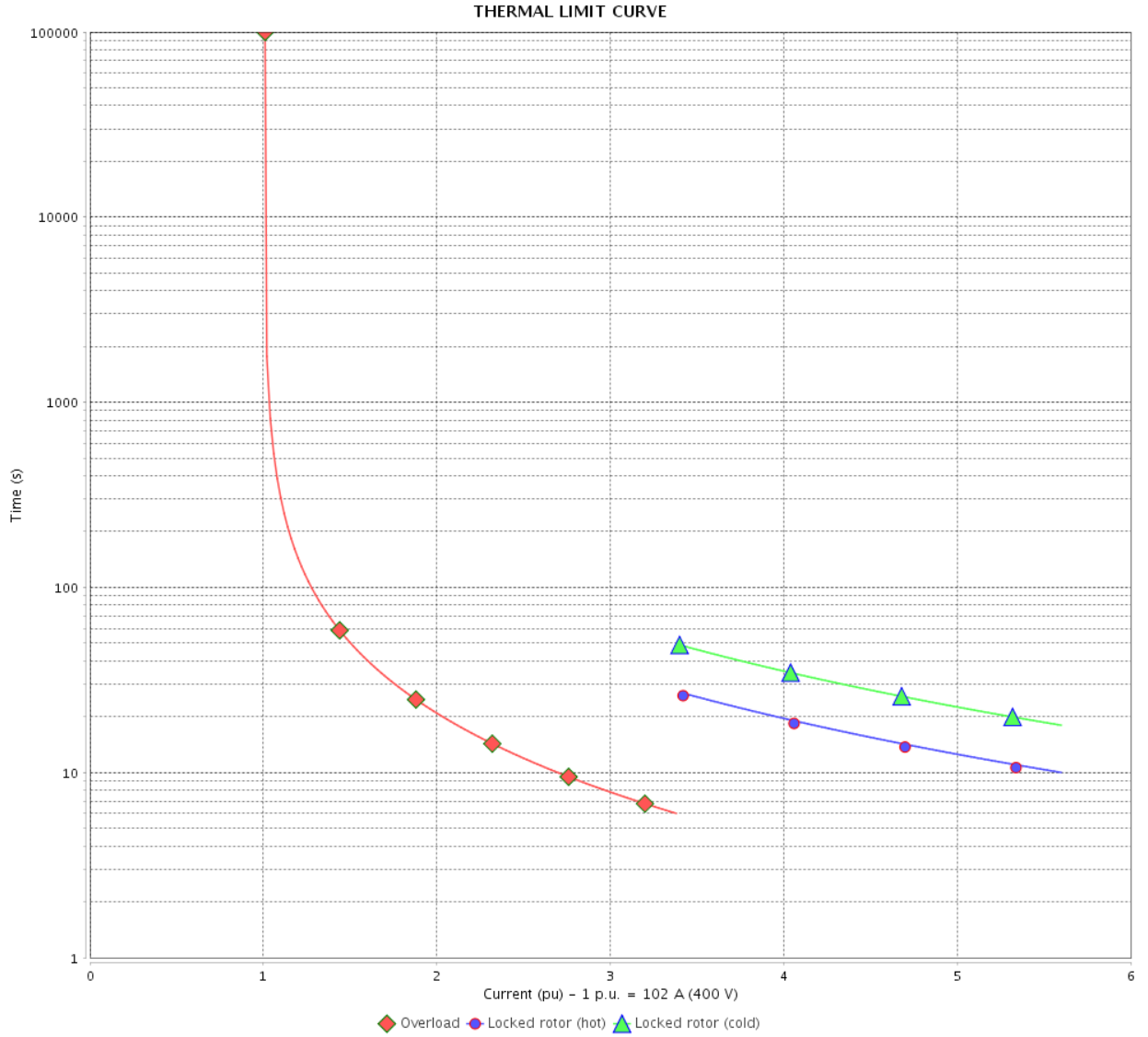
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		26 / 36	

# 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 : 13472769  
Catalog # : 07518ET3ER365TC-W22

Performance : 415 V 50 Hz 4P IE2

Rated current	: 98.7 A	Moment of inertia (J)	: 23.3 sq.ft.lb
LRC	: 6.1	Duty cycle	: Cont.(S1)
Rated torque	: 266 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 105 K
Rated speed	: 1480 rpm	Design	: B

Heating constant

Cooling constant

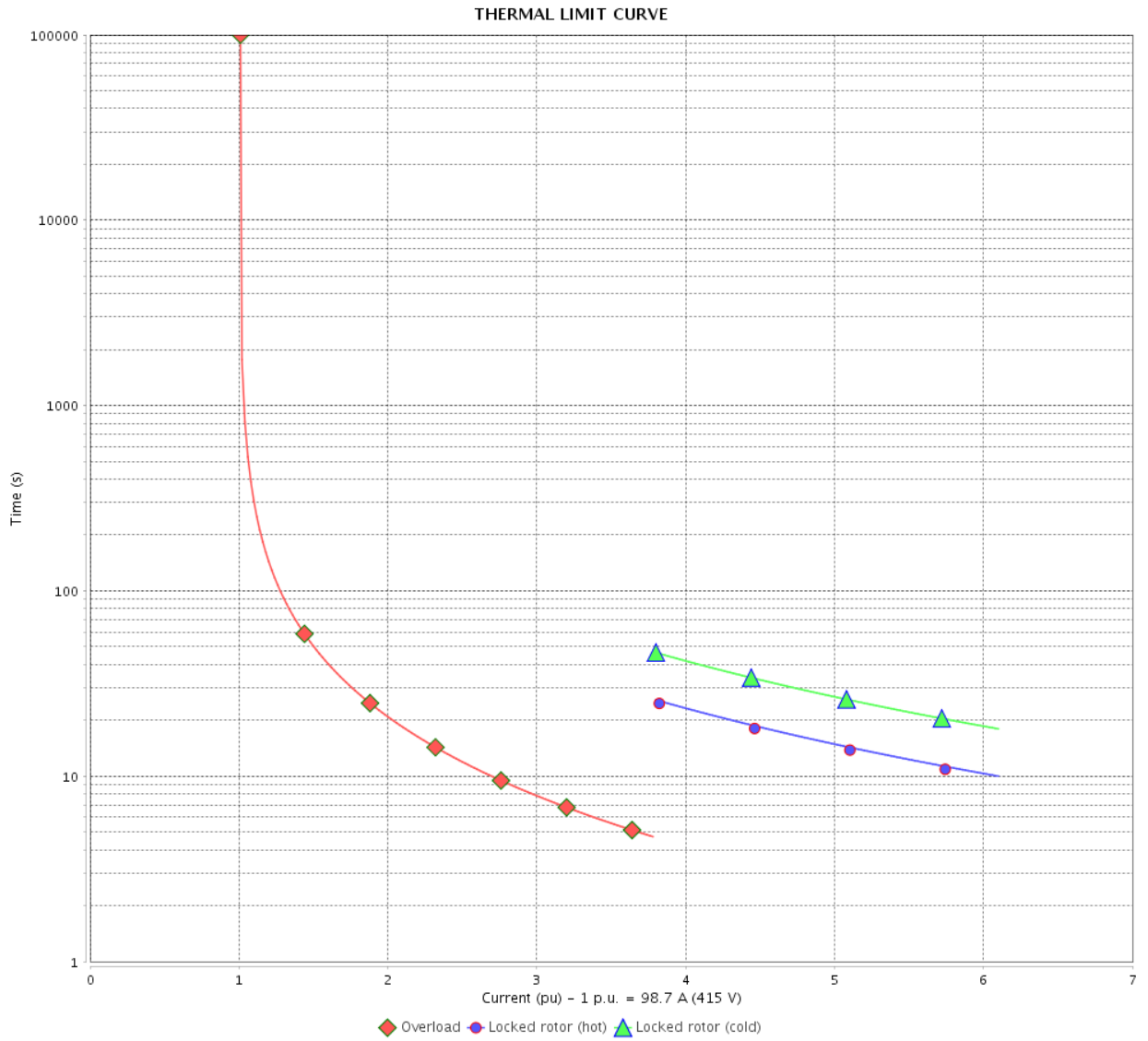
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Performed by				
Checked by			Page	Revision
Date	13/04/2022		28 / 36	

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



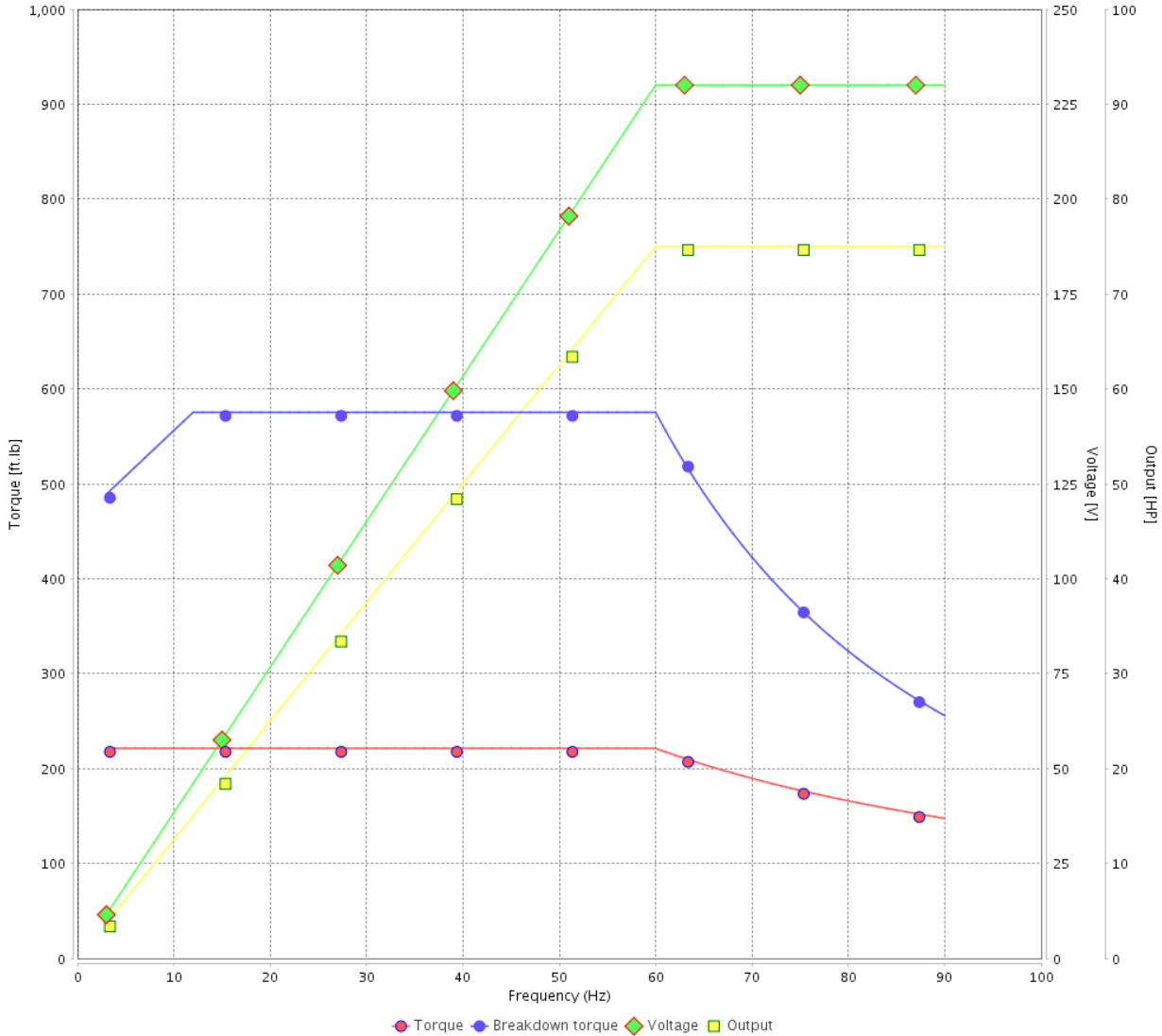
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13472769

Catalog # : 07518ET3ER365TC-W22

VFD OPERATION CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 174/87.2 A  
 LRC : 6.4  
 Rated torque : 221 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 260 %  
 Rated speed : 1780 rpm

Moment of inertia (J) : 23.3 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	Revision
Checked by			30 / 36	
Date	13/04/2022			

# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

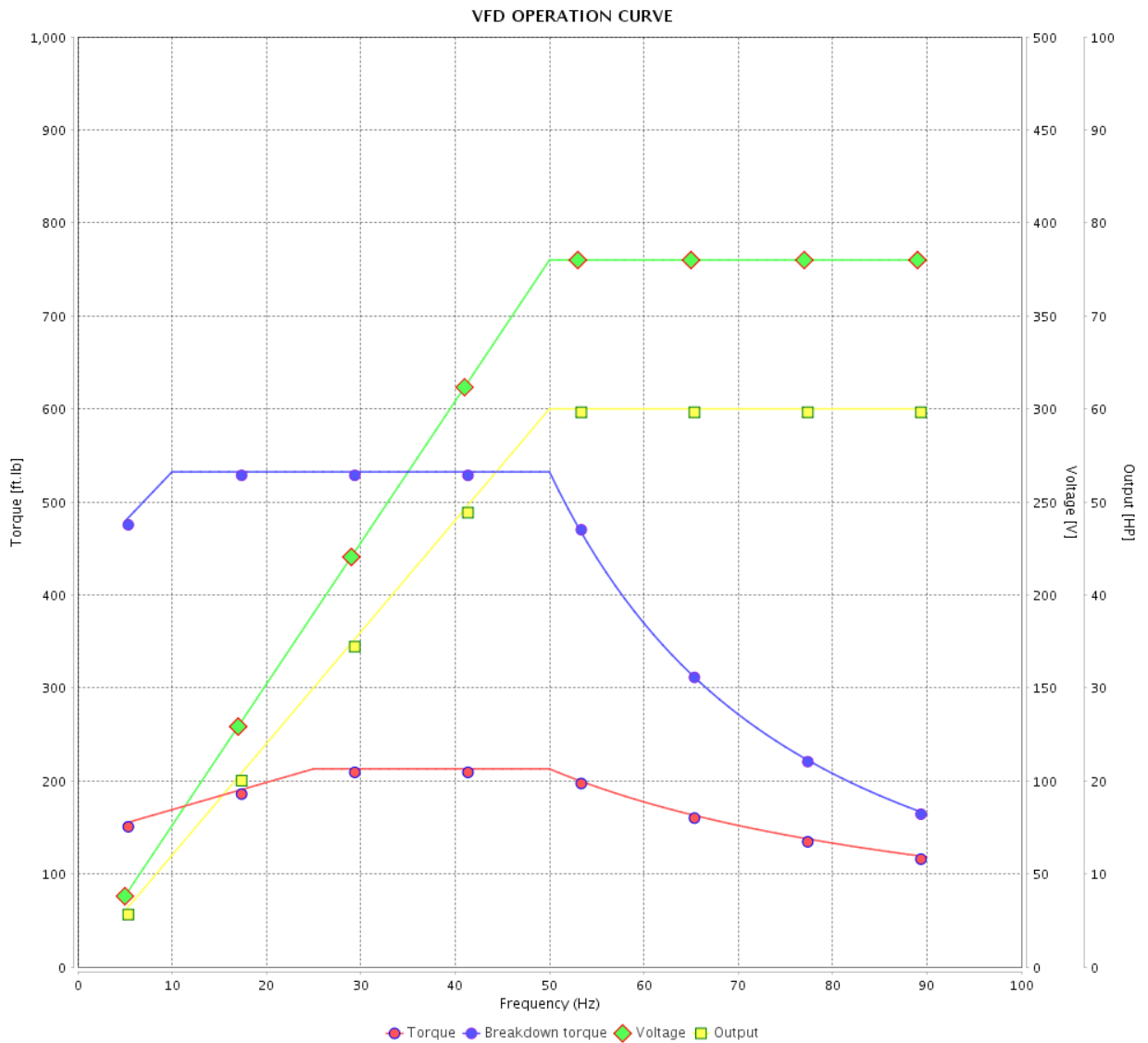


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13472769

Catalog # : 07518ET3ER365TC-W22



Performance : 380 V 50 Hz 4P IE3

Rated current : 88.5 A  
 LRC : 7.0  
 Rated torque : 213 ft.lb  
 Locked rotor torque : 210 %  
 Breakdown torque : 250 %  
 Rated speed : 1480 rpm

Moment of inertia (J) : 23.3 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
Checked by				
Date	13/04/2022			

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



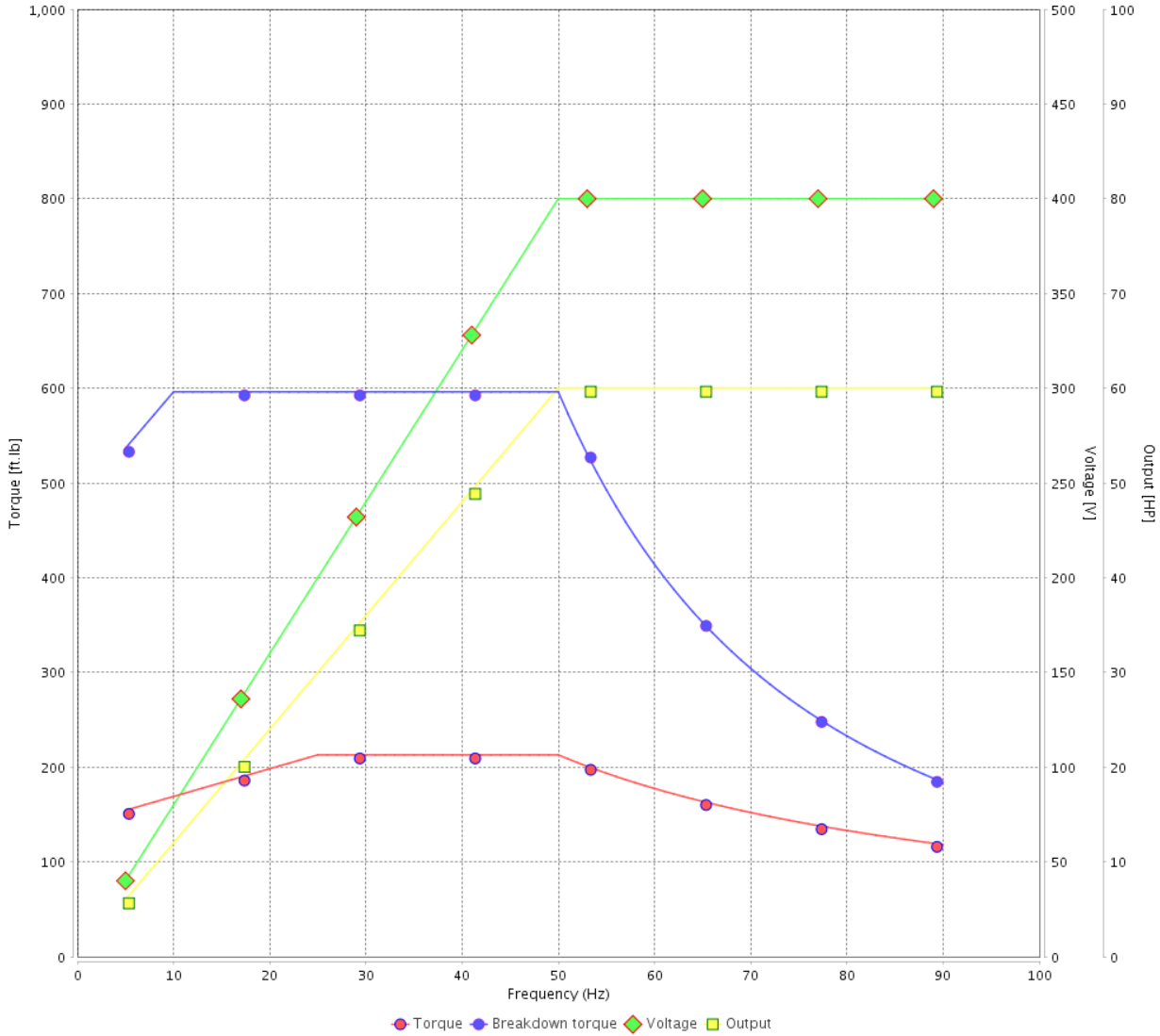
Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13472769

Catalog # : 07518ET3ER365TC-W22

VFD OPERATION CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current : 84.9 A  
 LRC : 7.5  
 Rated torque : 213 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 280 %  
 Rated speed : 1480 rpm

Moment of inertia (J) : 23.3 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 32 / 36	Revision
Checked by				
Date	13/04/2022			



# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

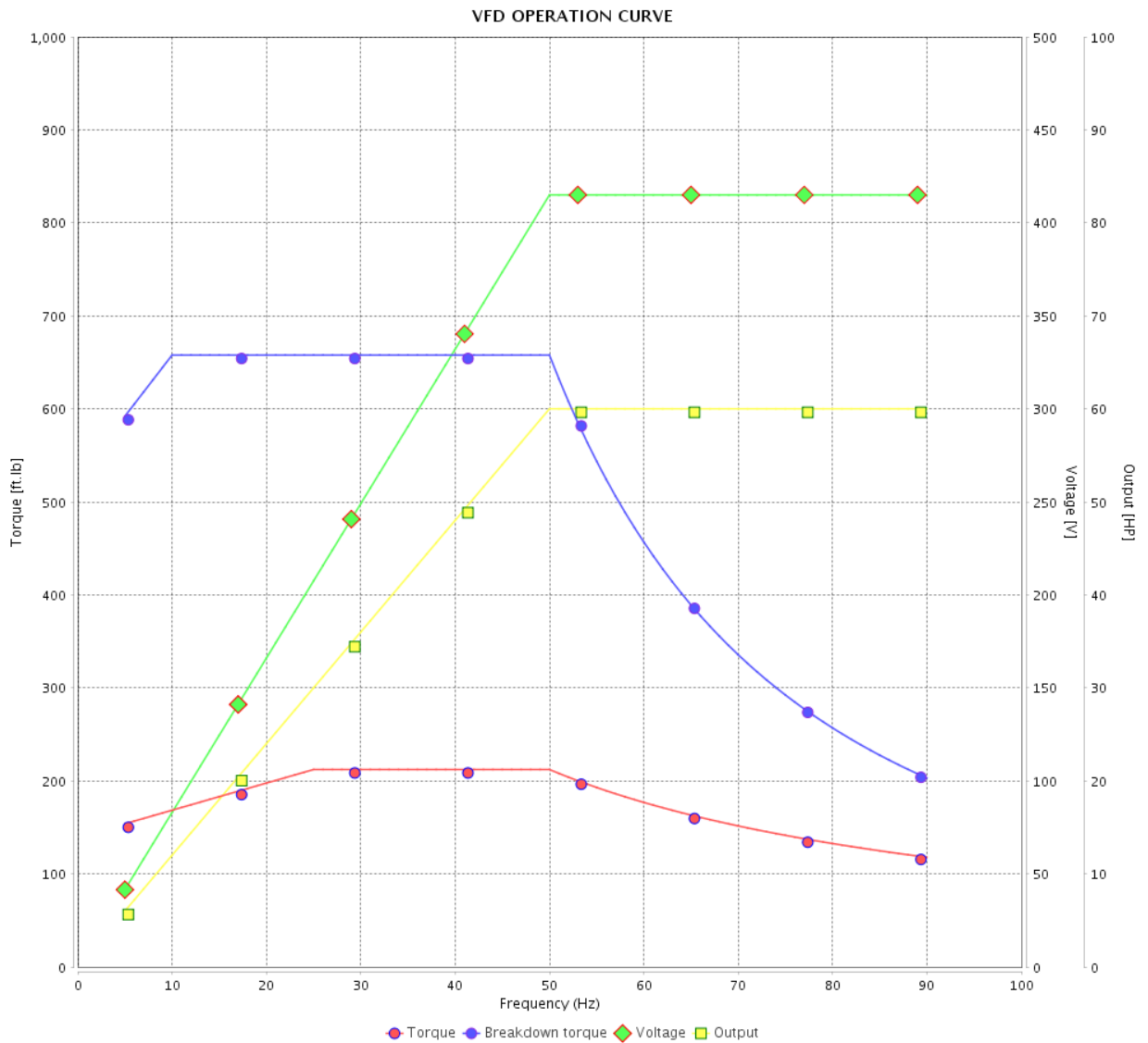


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13472769

Catalog # : 07518ET3ER365TC-W22



Performance : 415 V 50 Hz 4P IE3

Rated current : 82.7 A  
 LRC : 8.0  
 Rated torque : 212 ft.lb  
 Locked rotor torque : 260 %  
 Breakdown torque : 310 %  
 Rated speed : 1485 rpm

Moment of inertia (J) : 23.3 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 33 / 36	Revision
Checked by				
Date	13/04/2022			

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



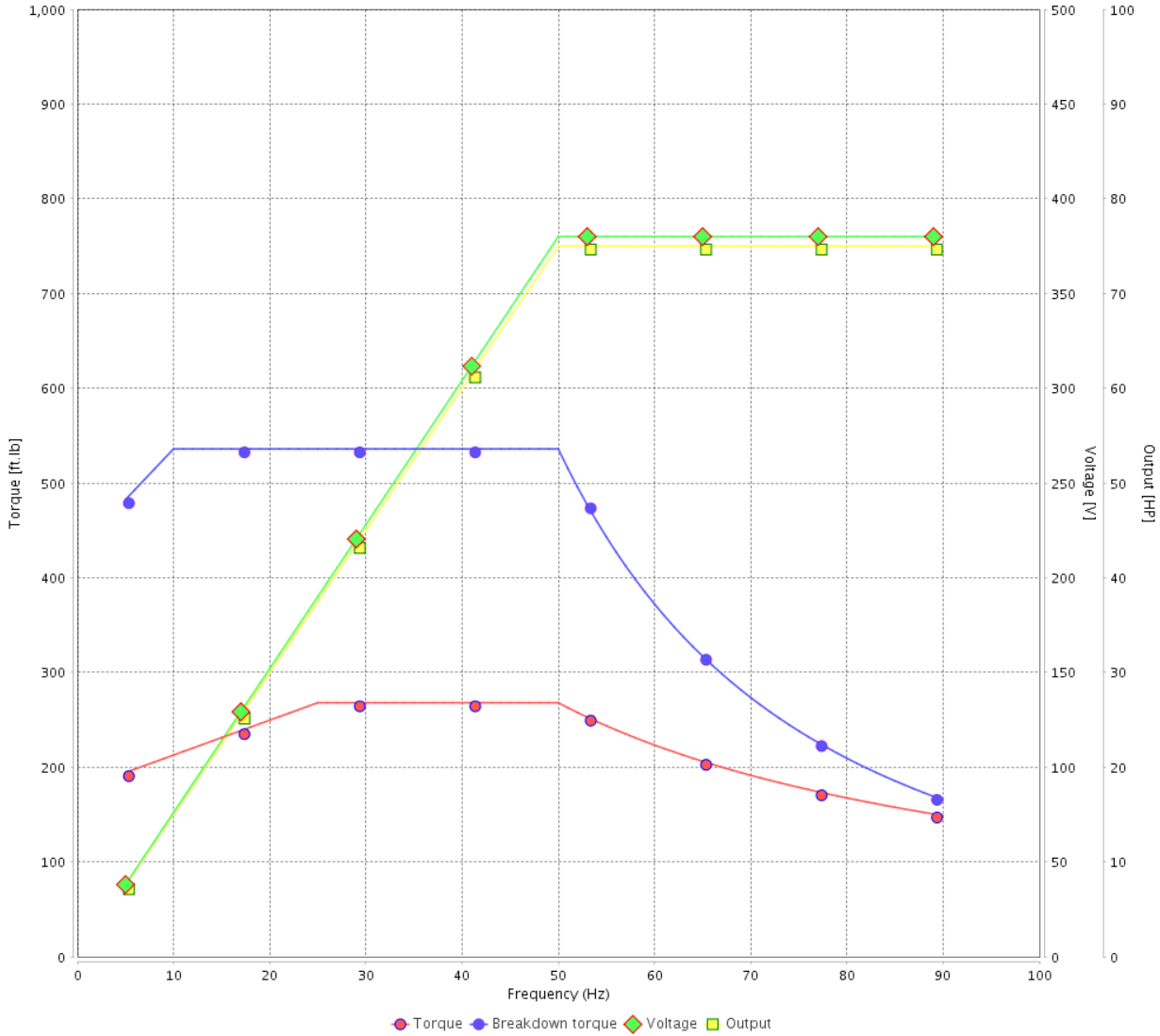
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13472769

Catalog # : 07518ET3ER365TC-W22

VFD OPERATION CURVE



Performance : 380 V 50 Hz 4P IE2

Rated current : 106 A  
 LRC : 5.1  
 Rated torque : 268 ft.lb  
 Locked rotor torque : 170 %  
 Breakdown torque : 200 %  
 Rated speed : 1470 rpm

Moment of inertia (J) : 23.3 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 34 / 36	Revision
Checked by				
Date	13/04/2022			

# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

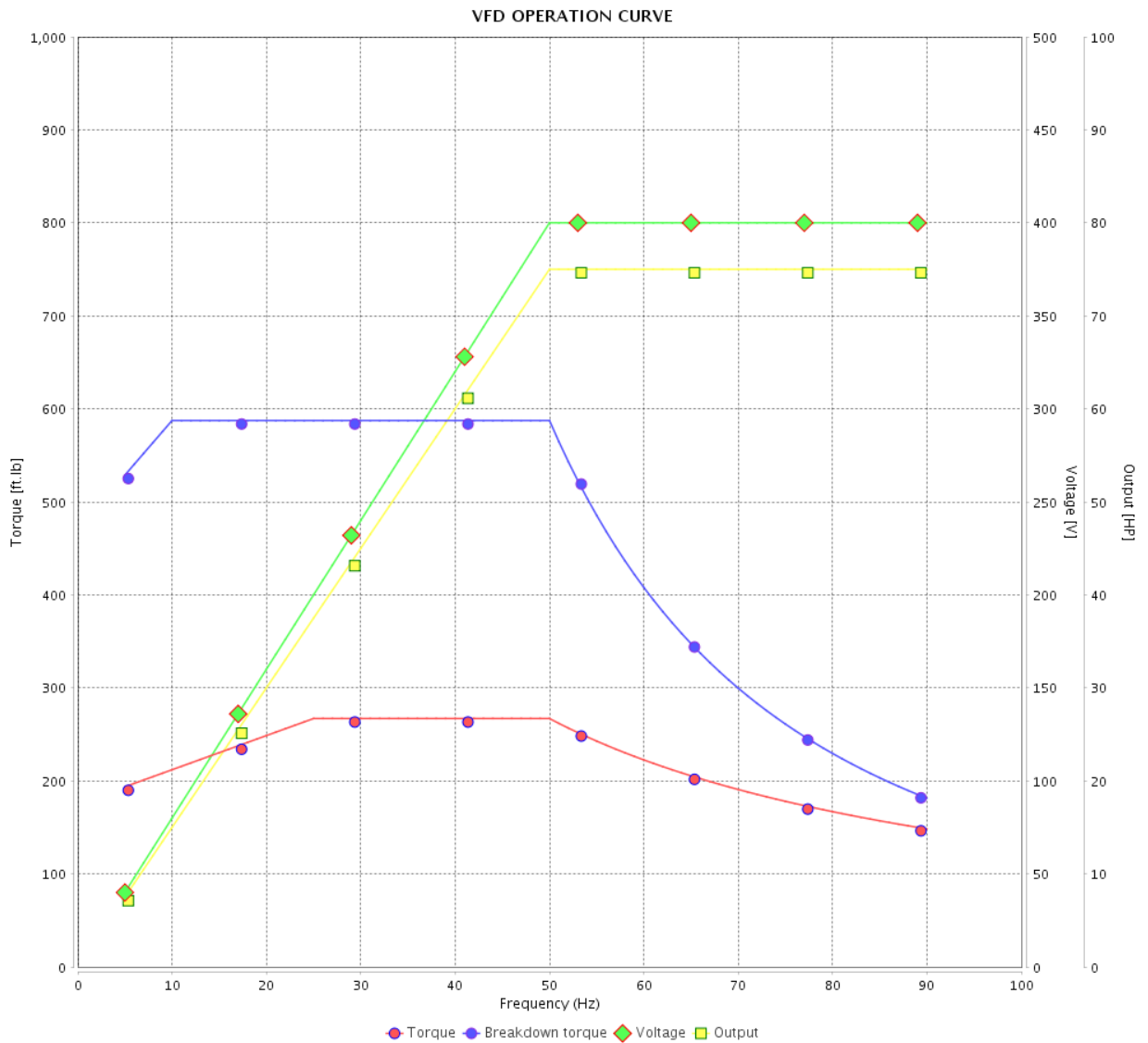


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13472769

Catalog # : 07518ET3ER365TC-W22



Performance : 400 V 50 Hz 4P IE2

Rated current : 102 A  
 LRC : 5.6  
 Rated torque : 267 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 220 %  
 Rated speed : 1475 rpm

Moment of inertia (J) : 23.3 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 35 / 36	Revision
Checked by				
Date	13/04/2022			

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



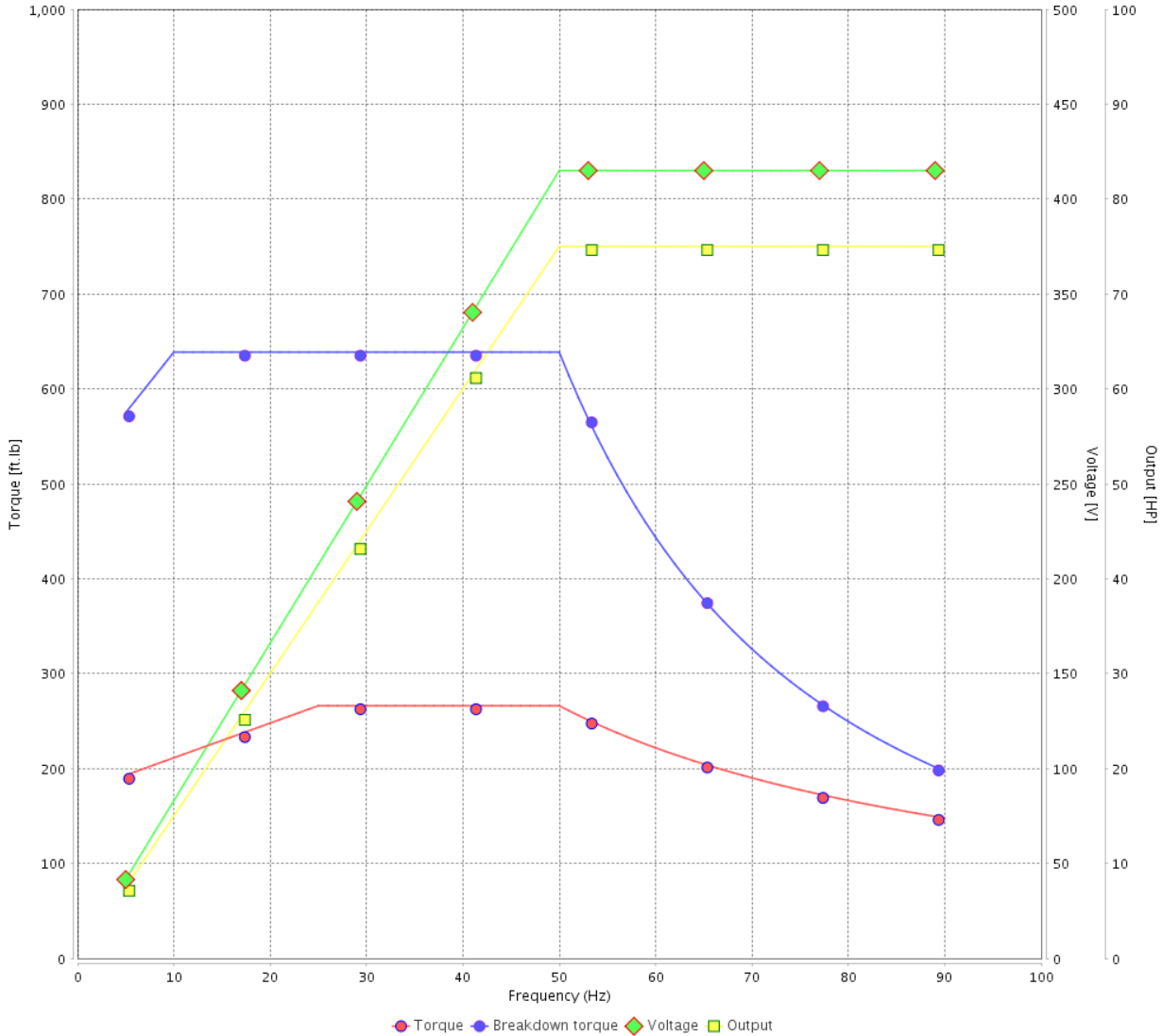
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13472769

Catalog # : 07518ET3ER365TC-W22

VFD OPERATION CURVE



Performance : 415 V 50 Hz 4P IE2

Rated current : 98.7 A  
 LRC : 6.1  
 Rated torque : 266 ft.lb  
 Locked rotor torque : 210 %  
 Breakdown torque : 240 %  
 Rated speed : 1480 rpm

Moment of inertia (J) : 23.3 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			

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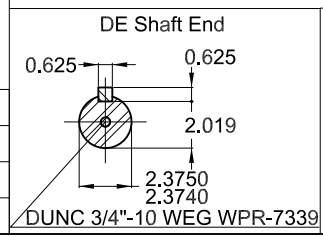
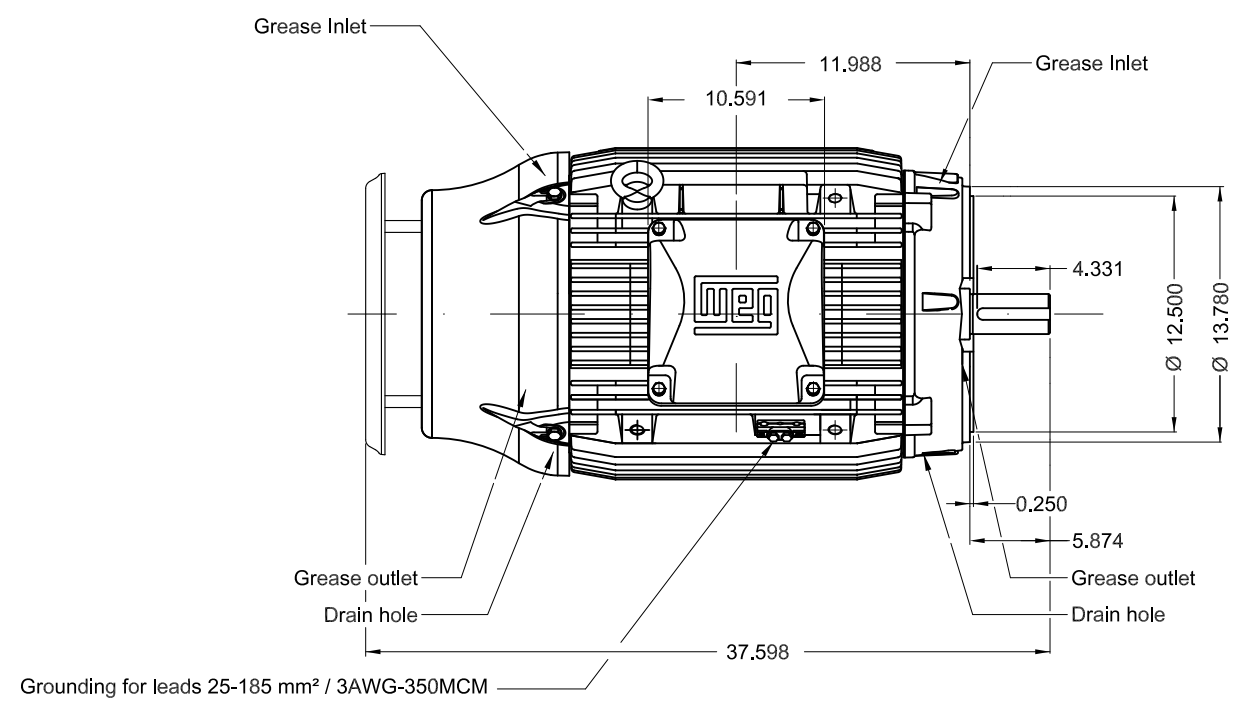
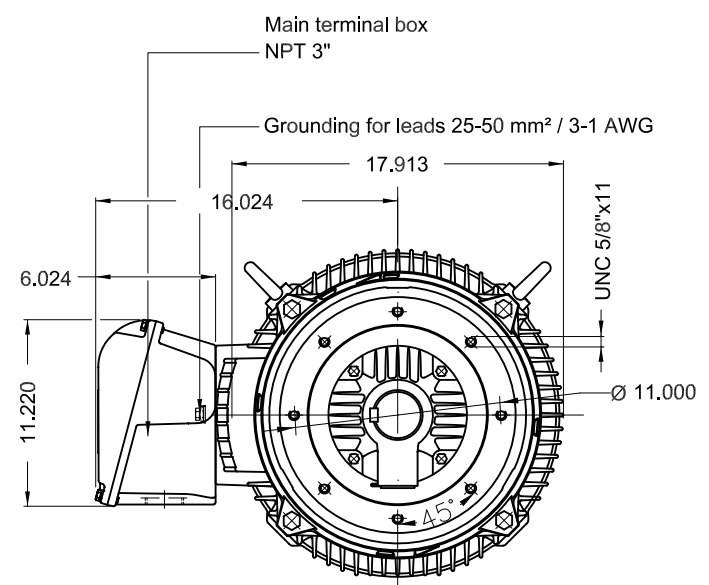
A

B

C

D

E



Color RAL 5009  
 Painting plan 203A  
 Mounting NEMA W-6  
 Mounting V18

75 HP 04 Poles 60 Hz A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR W22 PREM. EFF.					
CHECKED		FRAME 364/5TC IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

**PREVIEW**  
**WDD**





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 - T4  
For use on PWM: Gr. A, B, C, D and F,  
VT 1000:1, CT 20:1, 1.00SF - T3A

MODEL 07518ET3ER365TC-W22

Inverter Duty Motor  
Severe Duty

PH3 60Hz Fr. 364/5TC 1000m.a.s.l. IP55 TEFC 942lb

V 230/460

A 174/87.2

HP 75

kW 55

SF 1.25

SFA 218/109

RPM 1780

PF 0.83

AMB 40°C

INS cl. F DT80K

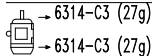
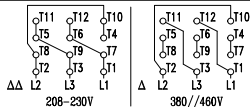
NEMA NOM EFF 95.4%

DUTY CONT.

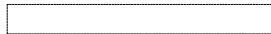
DES B Code G

USABLE @208V 186A SF 1.10 SFA 205

75HP 55kW 50Hz 380V 106A 1470RPM SF 1.00 EFF 93.6% (IE2)



MOBIL POLYREX EM (6000h)



MADE IN BRAZIL  
13472769