

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :						
Product line		: Rolled Steel Premium Efficiency Three-Phase		Product code :	14786559	
				Catalog # :	00118ET3E56CFL-S	
Frame	:	56C	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>	:	16.7 kg	
Protection degree	:	IP55	Moment of inertia (J)	:	0.0052 kgm <sup>2</sup>	
Design	:	B				
Output [HP]		1		1	1	
Poles		4		4	4	
Frequency [Hz]		60		50	50	
Rated voltage [V]		230/460		190-220/380	415	
Rated current [A]		2.94/1.47		3.40-2.94/1.70	1.62	
L. R. Amperes [A]		25.3/12.6		22.1-19.1/11.0	12.2	
LRC [A]		8.6x(Code M)		6.5x(Code J)	7.5x(Code K)	
No load current [A]		1.78/0.890		1.76-1.52/0.879	0.988	
Rated speed [RPM]		1765		1450	1460	
Slip [%]		1.94		3.33	2.67	
Rated torque [kgfm]		0.411		0.501	0.497	
Locked rotor torque [%]		280		200	250	
Breakdown torque [%]		300		270	330	
Service factor				1.00	1.00	
Temperature rise		80 K		80 K	80 K	
Locked rotor time		34s (cold) 19s (hot)		32s (cold) 18s (hot)	28s (cold) 16s (hot)	
Noise level <sup>2</sup>		52.0 dB(A)		49.0 dB(A)	49.0 dB(A)	
Efficiency (%)	25%	81.0		82.5	80.4	
	50%	82.5		82.2	80.9	
	75%	84.0		83.7	83.5	
	100%	85.5		82.9	83.7	
Power Factor	25%	0.30		0.36	0.31	
	50%	0.52		0.62	0.55	
	75%	0.66		0.74	0.68	
	100%	0.75		0.81	0.77	
Bearing type	:	<u>Drive end</u> 6204 ZZ	<u>Non drive end</u> 6202 ZZ	Foundation loads		
Sealing	:	V'Ring	Without Bearing Seal	Max. traction	: 44 kgf	
				Max. compression	: 61 kgf	
Lubrication interval	:	-	-			
Lubricant amount	:	-	-			
Lubricant type	:	Mobil Polyrex EM				
Notes USABLE @208V 3.25A SF 1.00 SFA 3.25A						
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	09/05/2023				1 / 16	

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage

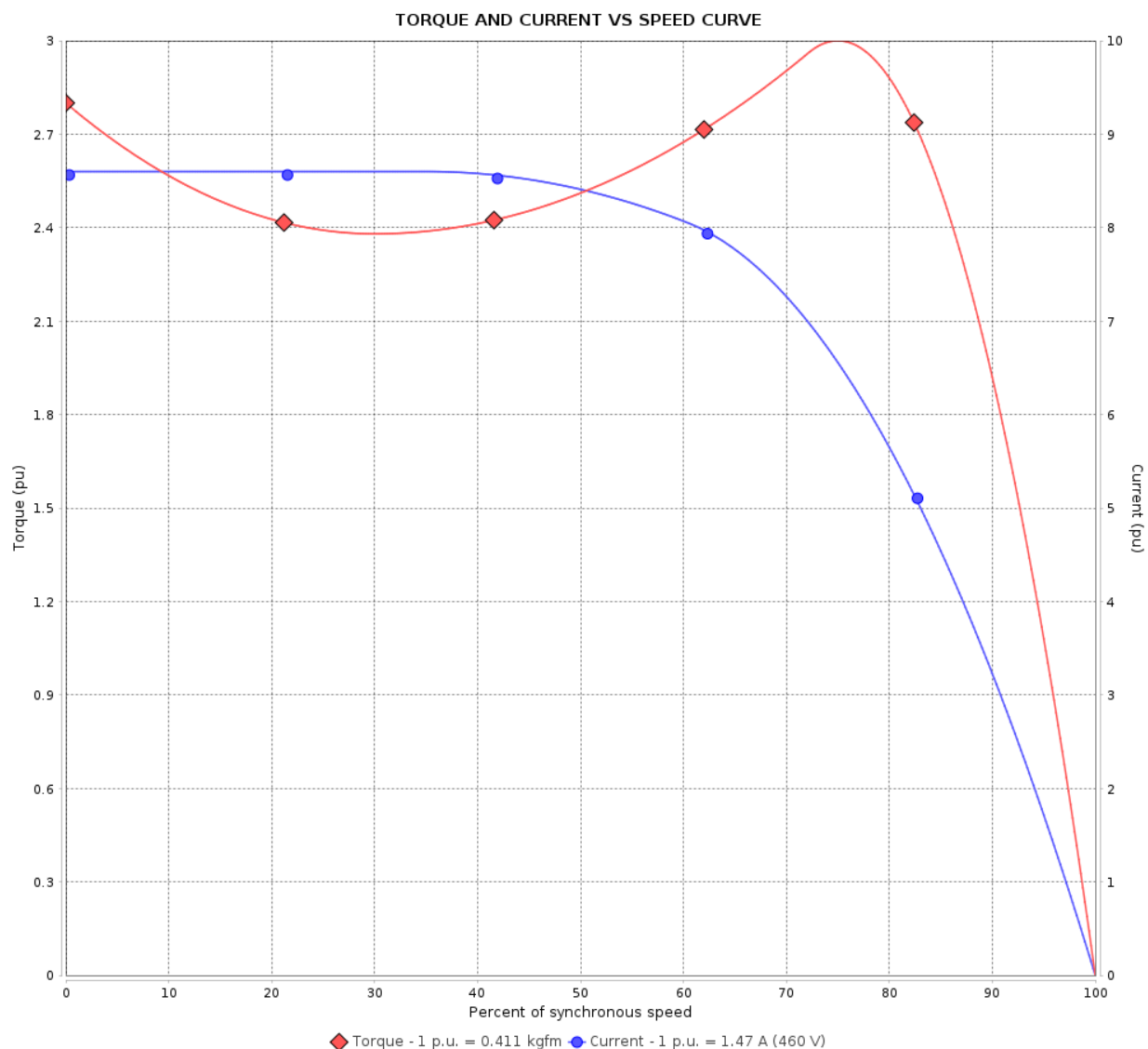


Customer :

Product line : Rolled Steel Premium Efficiency Three-Phase

Product code : 14786559

Catalog # : 00118ET3E56CFL-S



Performance : 230/460 V 60 Hz 4P

Rated current	: 2.94/1.47 A	Moment of inertia (J)	: 0.0052 kgm <sup>2</sup>
LRC	: 8.6	Duty cycle	: Cont.(S1)
Rated torque	: 0.411 kgfm	Insulation class	: F
Locked rotor torque	: 280 %	Service factor	:
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1765 rpm	Design	: B

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 2 / 16	Revision
Checked by				
Date	09/05/2023			

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage

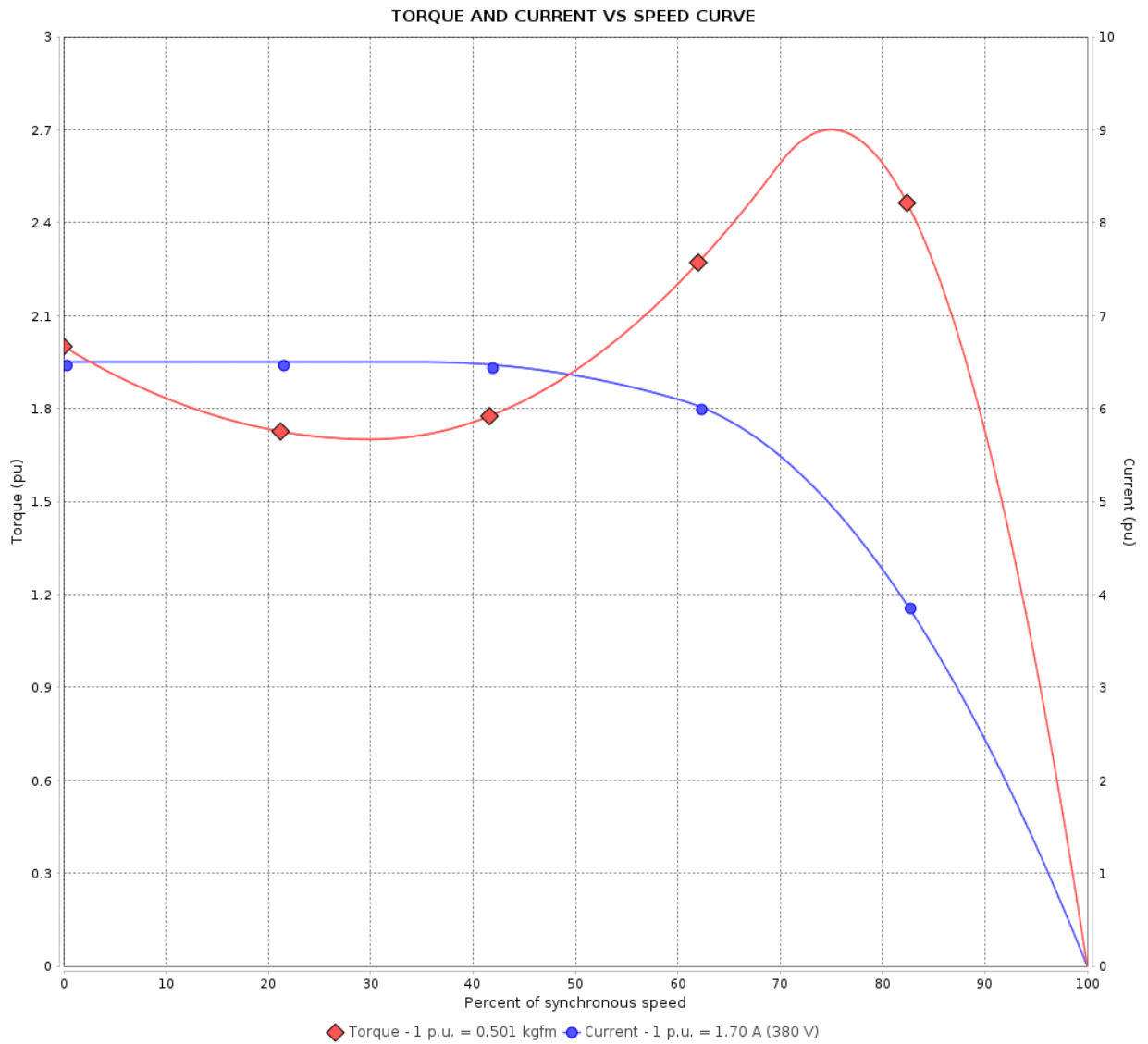


Customer :

Product line : Rolled Steel Premium Efficiency Three-Phase

Product code : 14786559

Catalog # : 00118ET3E56CFL-S



Performance : 190-220/380 V 50 Hz 4P

Rated current	: 3.40-2.94/1.70 A	Moment of inertia (J)	: 0.0052 kgm <sup>2</sup>
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 0.501 kgfm	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1450 rpm	Design	: B

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		3 / 16		
Date	09/05/2023			

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage

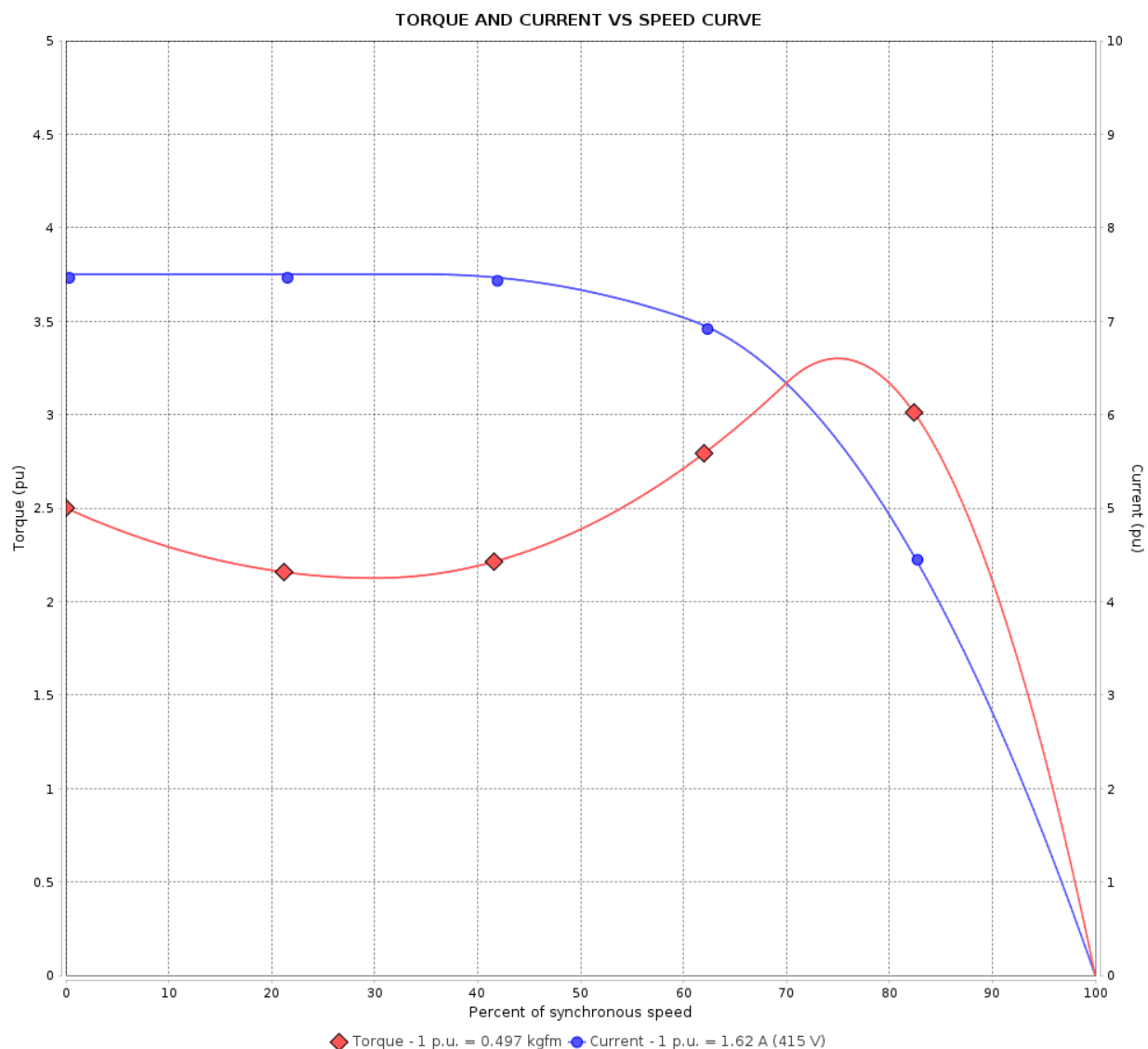


Customer :

Product line : Rolled Steel Premium Efficiency Three-Phase

Product code : 14786559

Catalog # : 00118ET3E56CFL-S



Performance : 415 V 50 Hz 4P

Rated current	: 1.62 A	Moment of inertia (J)	: 0.0052 kgm <sup>2</sup>
LRC	: 7.5	Duty cycle	: Cont.(S1)
Rated torque	: 0.497 kgfm	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 1460 rpm	Design	: B

Locked rotor time : 28s (cold) 16s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 16	Revision
Checked by				
Date	09/05/2023			

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

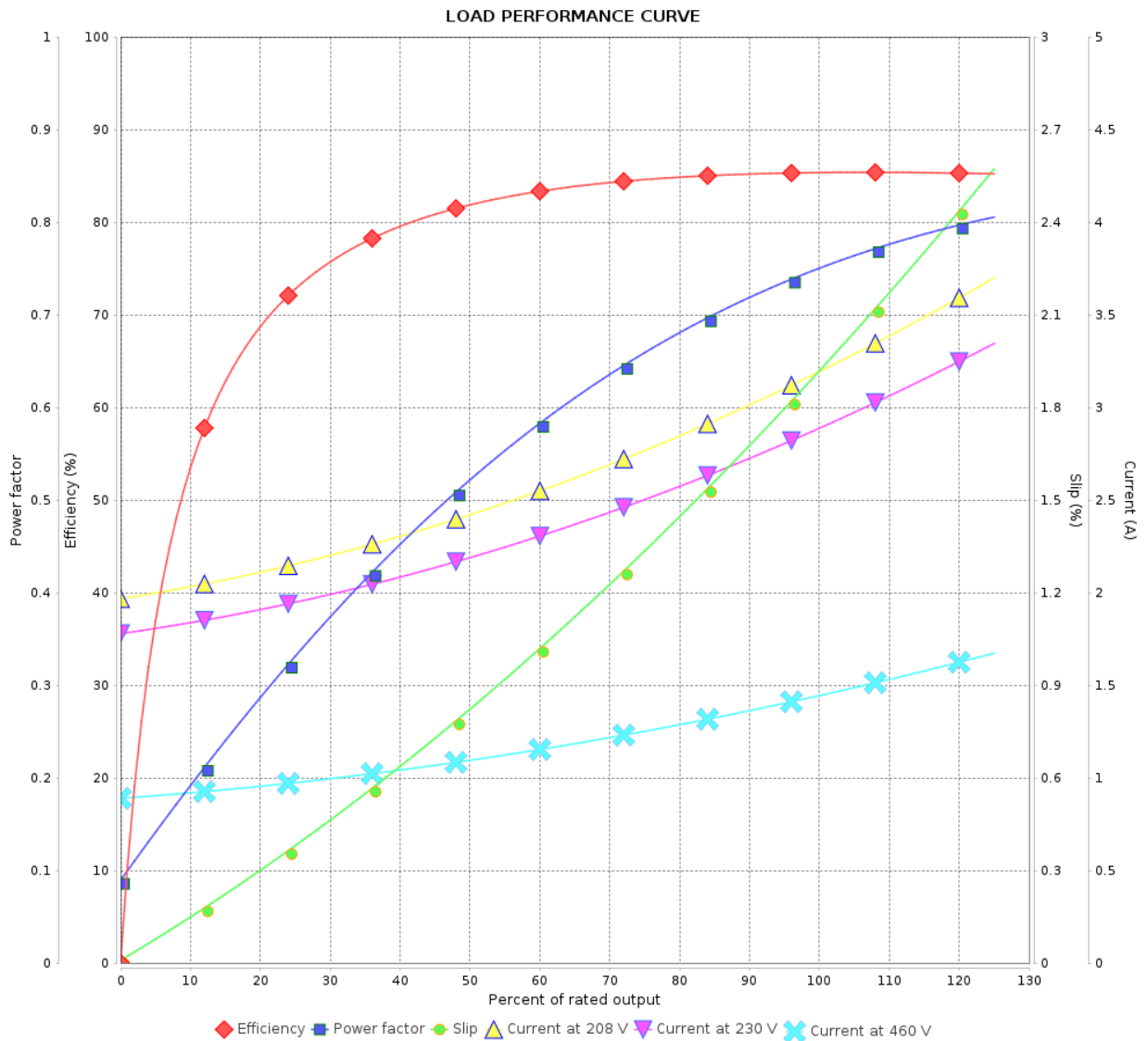


Customer :

Product line : Rolled Steel Premium Efficiency Three-Phase

Product code : 14786559

Catalog # : 00118ET3E56CFL-S



Performance : 230/460 V 60 Hz 4P

Rated current : 2.94/1.47 A  
 LRC : 8.6  
 Rated torque : 0.411 kgfm  
 Locked rotor torque : 280 %  
 Breakdown torque : 300 %  
 Rated speed : 1765 rpm

Moment of inertia (J) : 0.0052 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by			5 / 16	
Date	09/05/2023			

# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

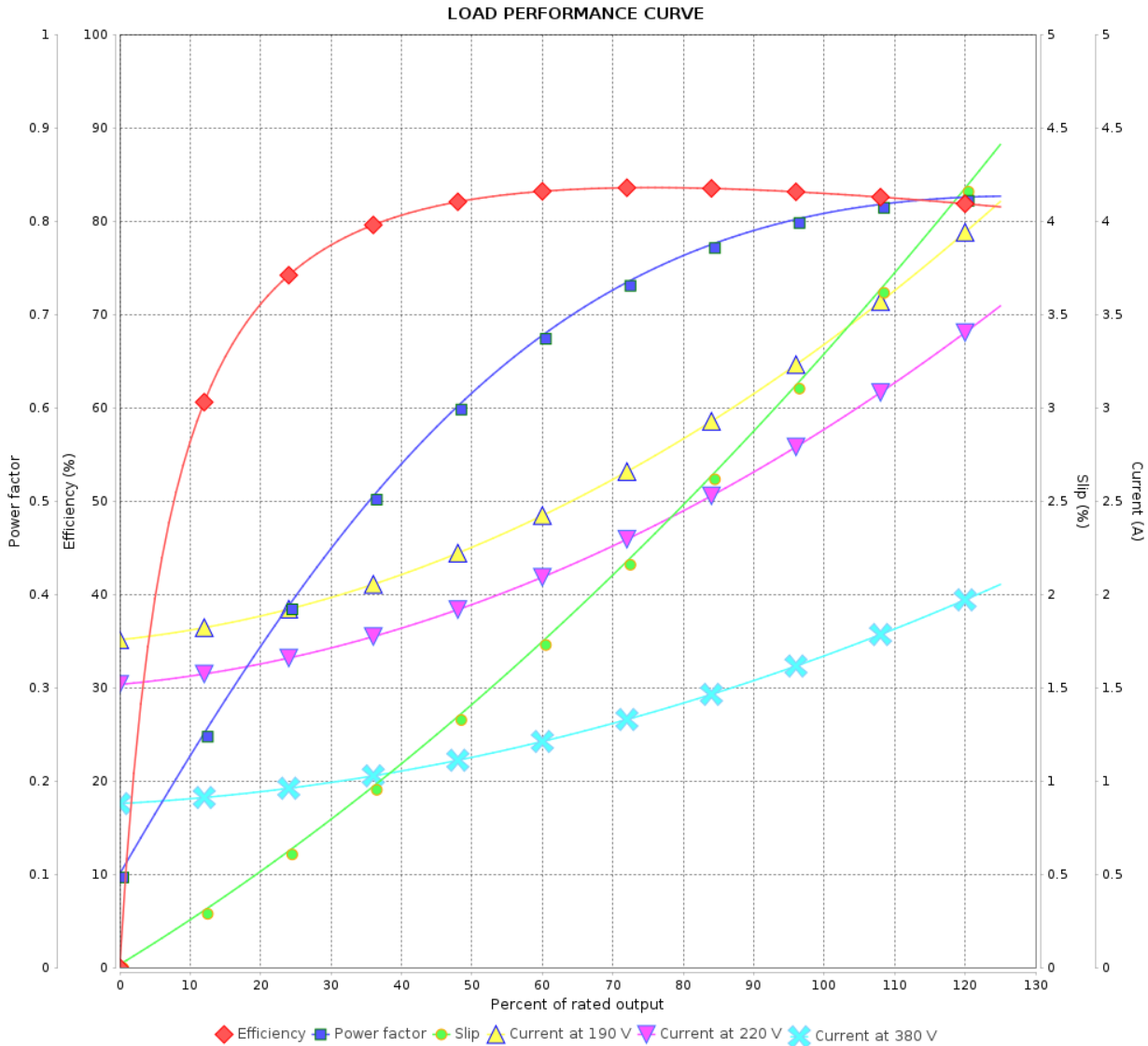


Customer :

Product line : Rolled Steel Premium Efficiency Three-Phase

Product code : 14786559

Catalog # : 00118ET3E56CFL-S



Performance : 190-220/380 V 50 Hz 4P

Rated current : 3.40-2.94/1.70 A  
 LRC : 6.5  
 Rated torque : 0.501 kgfm  
 Locked rotor torque : 200 %  
 Breakdown torque : 270 %  
 Rated speed : 1450 rpm

Moment of inertia (J) : 0.0052 kgm<sup>2</sup>  
 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			6 / 16	
Date	09/05/2023			

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

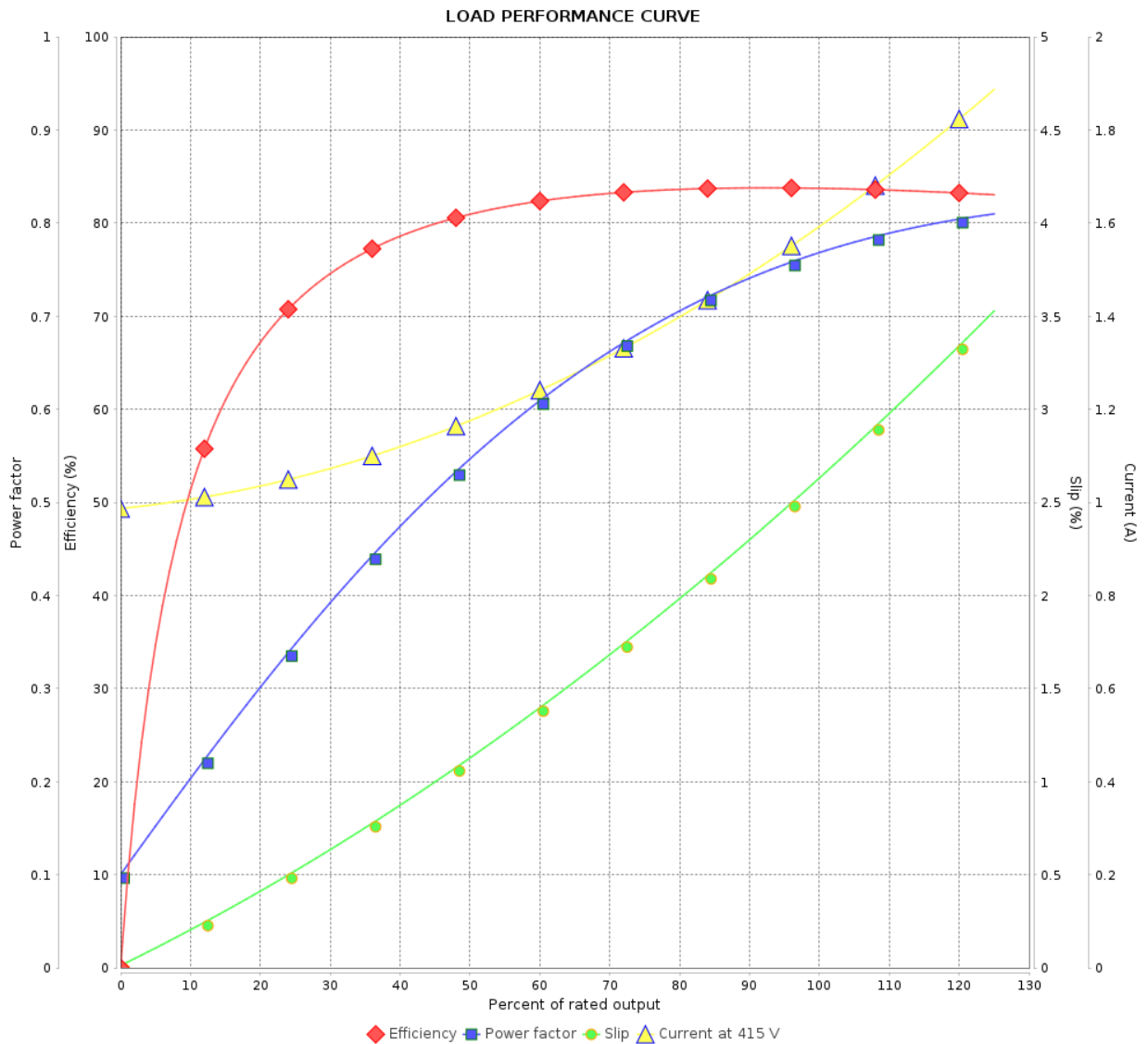


Customer : \_\_\_\_\_

Product line : Rolled Steel Premium Efficiency Three-Phase

Product code : 14786559

Catalog # : 00118ET3E56CFL-S



Performance : 415 V 50 Hz 4P

Rated current : 1.62 A  
 LRC : 7.5  
 Rated torque : 0.497 kgfm  
 Locked rotor torque : 250 %  
 Breakdown torque : 330 %  
 Rated speed : 1460 rpm

Moment of inertia (J) : 0.0052 kgm<sup>2</sup>  
 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			7 / 16	
Date	09/05/2023			

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

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Catalog # : 00118ET3E56CFL-S

Performance : 230/460 V 60 Hz 4P

Rated current : 2.94/1.47 A  
LRC : 8.6  
Rated torque : 0.411 kgfm  
Locked rotor torque : 280 %  
Breakdown torque : 300 %  
Rated speed : 1765 rpm

Moment of inertia (J) : 0.0052 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor :  
Temperature rise : 80 K  
Design : B

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	09/05/2023		8 / 16	

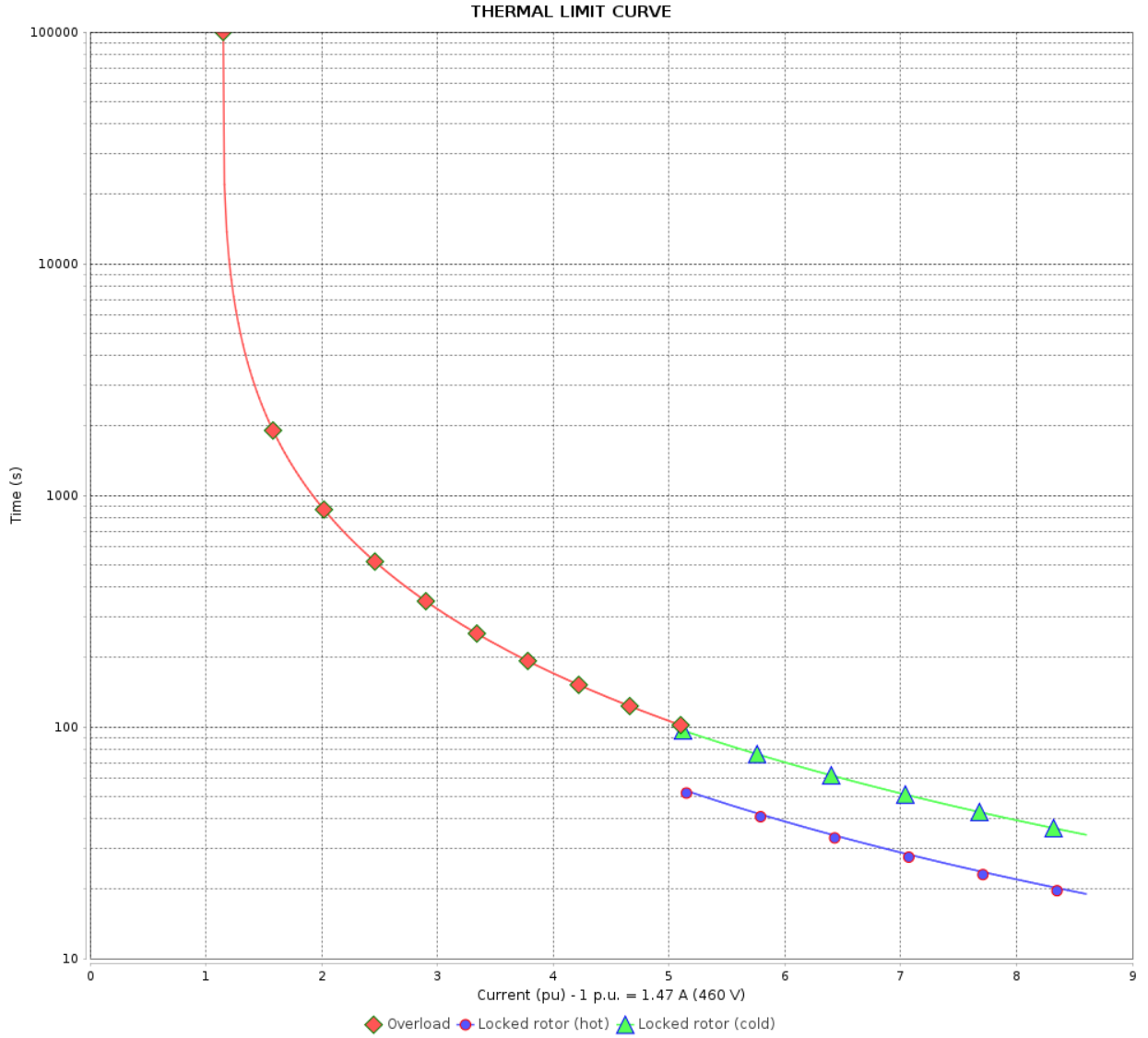


# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 9 / 16		Revision
Checked by				
Date				

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : Rolled Steel Premium Efficiency Three-Phase

Product code : 14786559

Catalog # : 00118ET3E56CFL-S

Performance : 190-220/380 V 50 Hz 4P

Rated current : 3.40-2.94/1.70 A

LRC : 6.5

Rated torque : 0.501 kgfm

Locked rotor torque : 200 %

Breakdown torque : 270 %

Rated speed : 1450 rpm

Moment of inertia (J) : 0.0052 kgm<sup>2</sup>

Duty cycle : Cont.(S1)

Insulation class : F

Service factor : 1.00

Temperature rise : 80 K

Design : B

Heating constant

Cooling constant

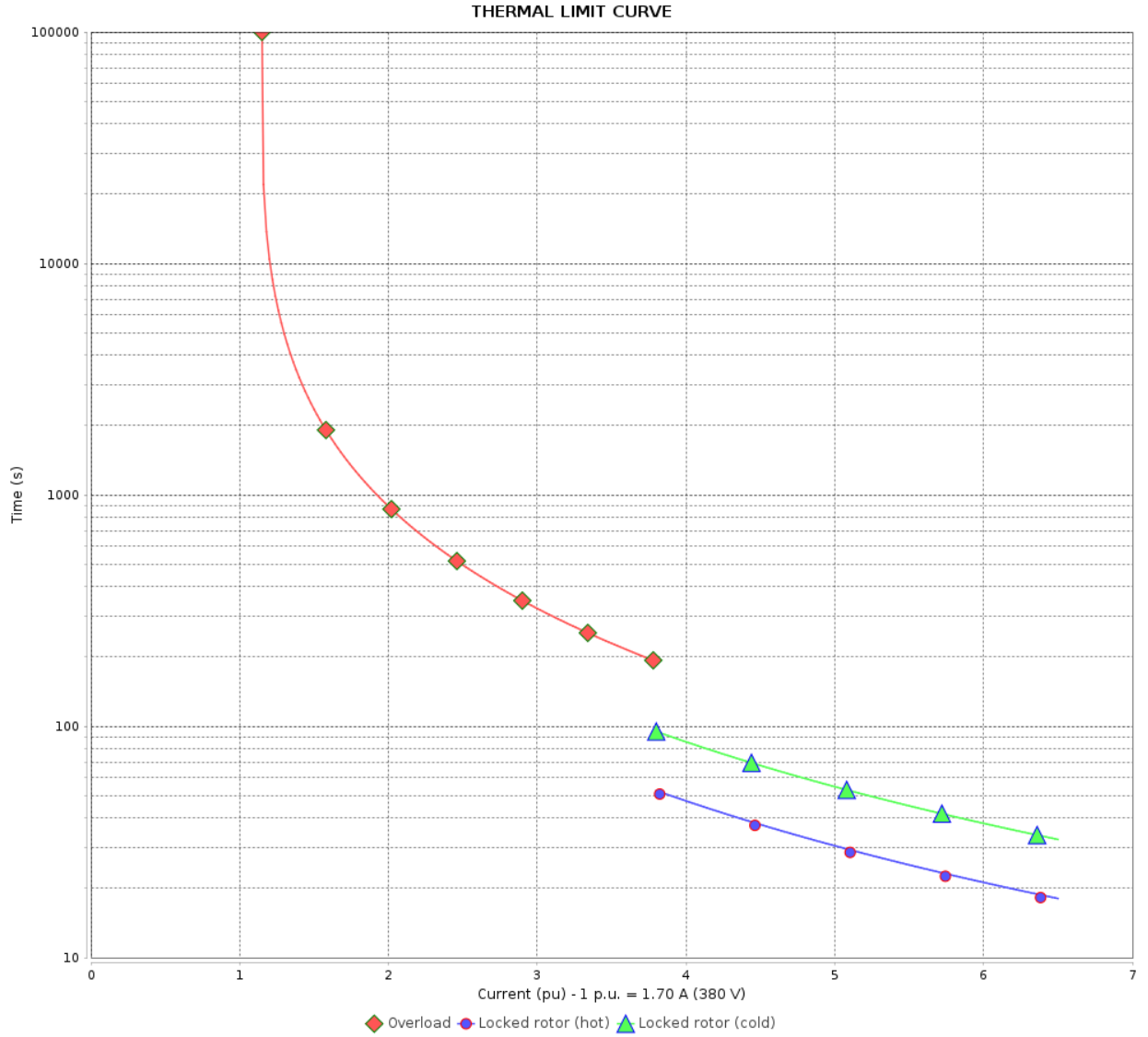
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	09/05/2023		10 / 16	

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 11 / 16		Revision
Checked by				
Date				

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## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : Rolled Steel Premium Efficiency Three-Phase

Product code : 14786559

Catalog # : 00118ET3E56CFL-S

Performance : 415 V 50 Hz 4P

Rated current	: 1.62 A	Moment of inertia (J)	: 0.0052 kgm <sup>2</sup>
LRC	: 7.5	Duty cycle	: Cont.(S1)
Rated torque	: 0.497 kgfm	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 1460 rpm	Design	: B

Heating constant

Cooling constant

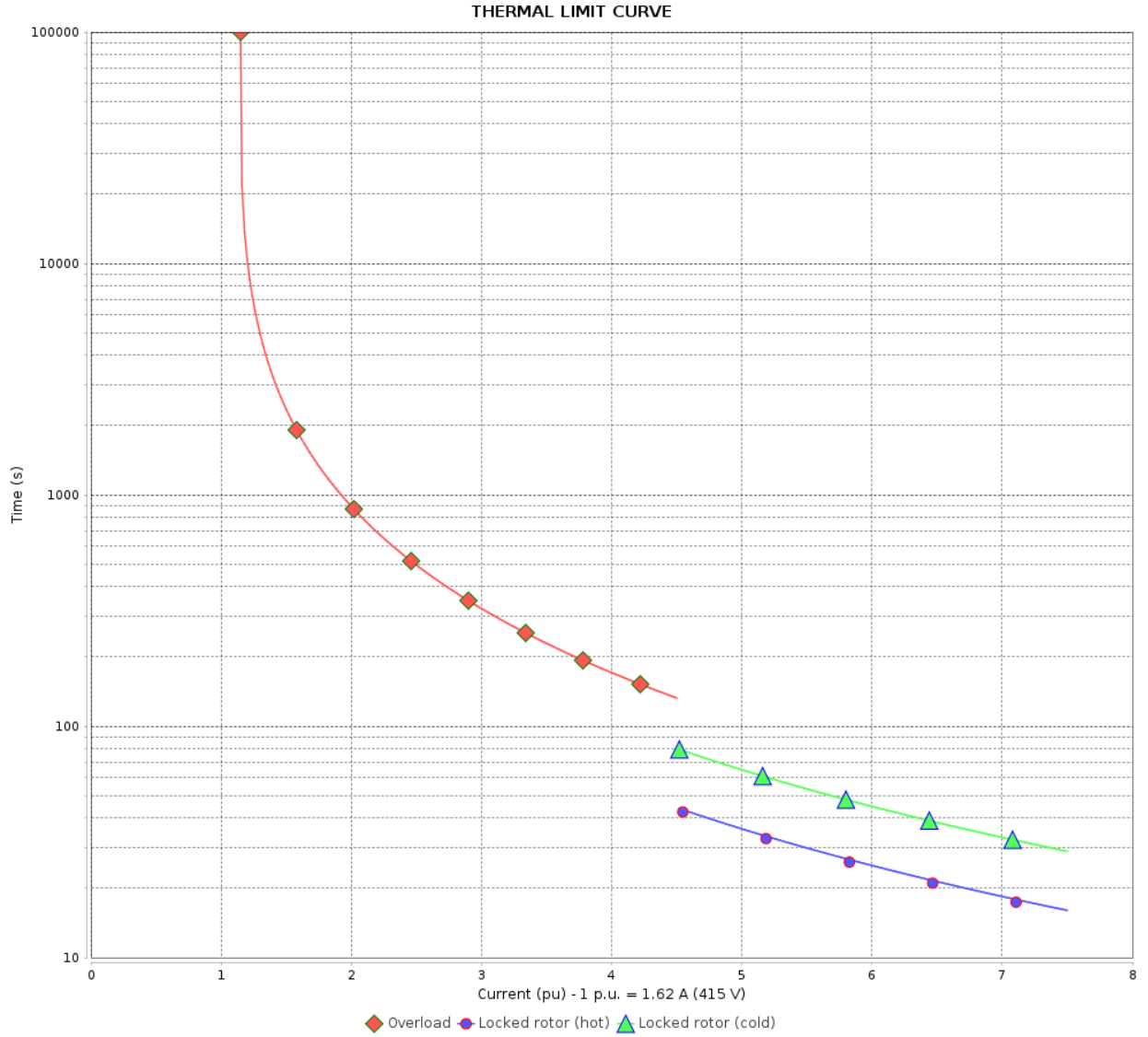
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	09/05/2023		12 / 16	

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

# VFD OPERATION CURVE

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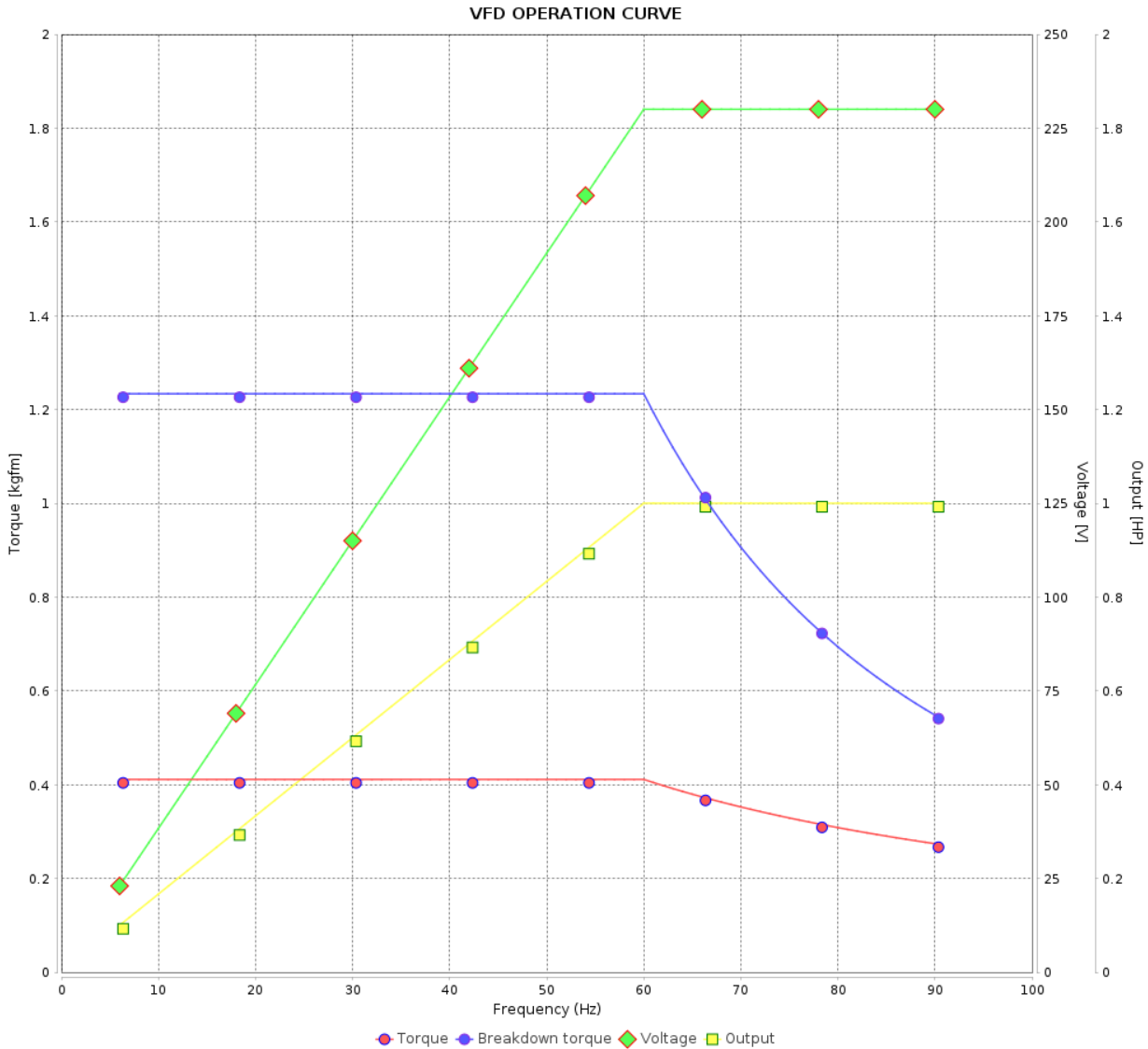


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Performance : 230/460 V 60 Hz 4P

Rated current : 2.94/1.47 A  
 LRC : 8.6  
 Rated torque : 0.411 kgfm  
 Locked rotor torque : 280 %  
 Breakdown torque : 300 %  
 Rated speed : 1765 rpm

Moment of inertia (J) : 0.0052 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 14 / 16	Revision
Checked by				
Date	09/05/2023			

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

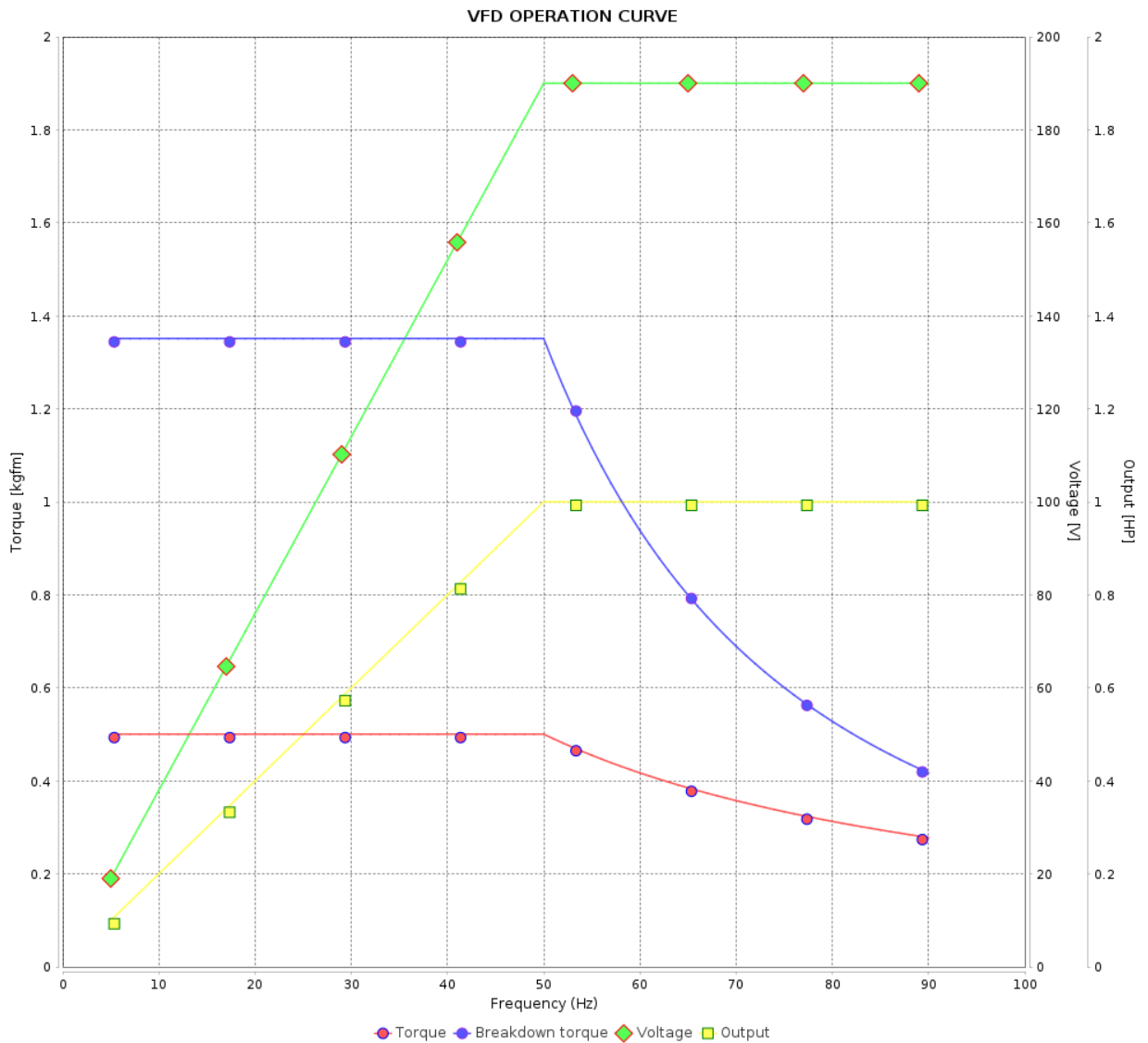


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 Breakdown torque : 270 %  
 Rated speed : 1450 rpm

Moment of inertia (J) : 0.0052 kgm<sup>2</sup>  
 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 15 / 16
Checked by				
Date	09/05/2023			
				Revision

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

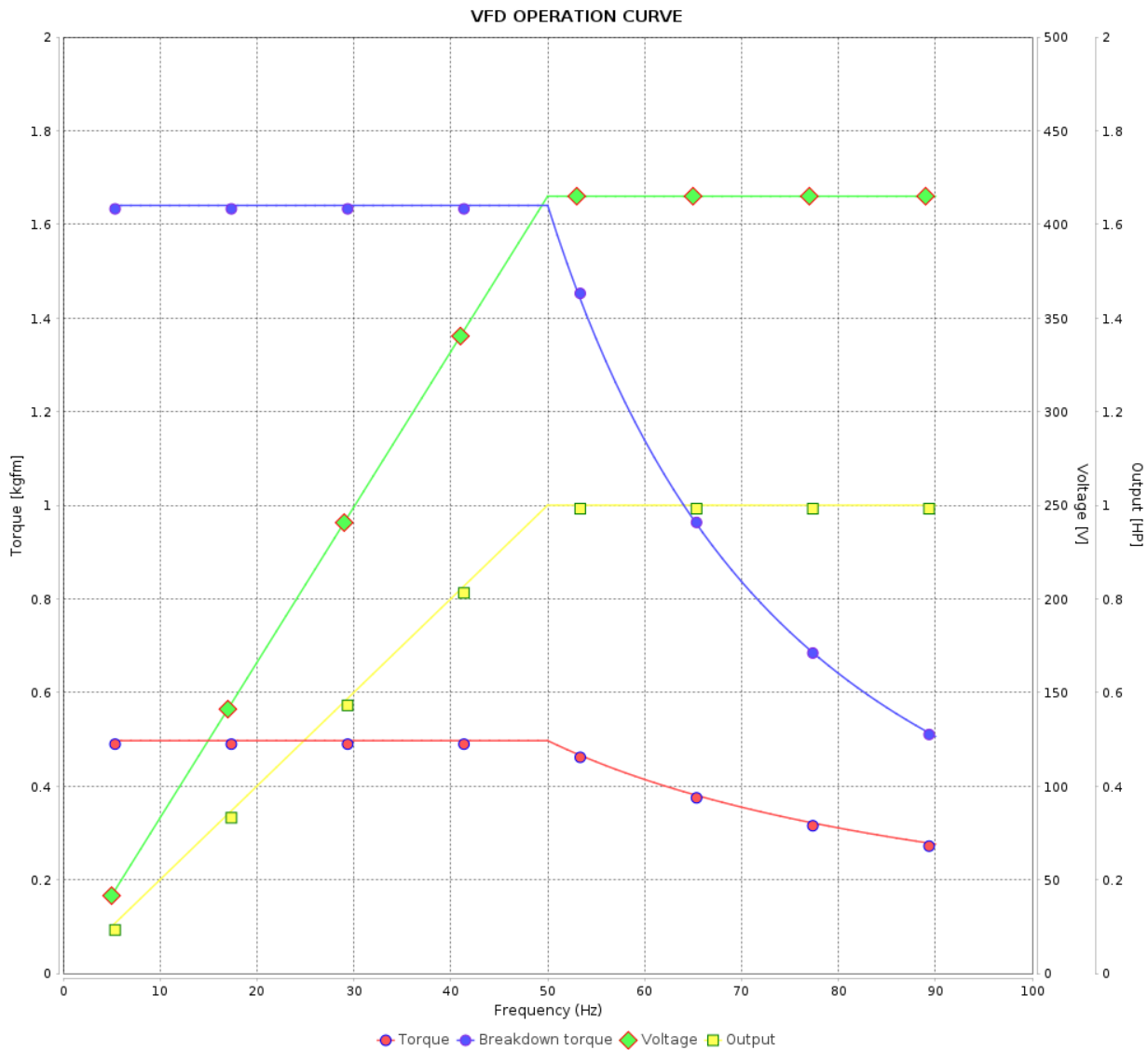


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 Insulation class : F  
 Service factor : 1.00  
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Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 16 / 16	Revision
Checked by				
Date	09/05/2023			