

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: W40 NEMA Premium Efficiency Three-Phase	Product code :	14272558		
		Catalog # :	20018OT3GRB445T-W40		
Frame	: 444/5T	Cooling method	: IC01 - ODP		
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>	: 1467 lb		
Protection degree	: IP23	Moment of inertia (J)	: 46.4 sq.ft.lb		
Design	: B				
Output [HP]	200	175	175	175	175
Poles	4	4	4	4	4
Frequency [Hz]	60	50	50	50	50
Rated voltage [V]	460	380	400	415	415
Rated current [A]	234	247	237	234	234
L. R. Amperes [A]	1544	1630	1635	1568	1568
LRC [A]	6.6x(Code G)	6.6x(Code G)	6.9x(Code H)	6.7x(Code H)	6.7x(Code H)
No load current [A]	86.5	85.2	93.6	101	101
Rated speed [RPM]	1783	1480	1480	1485	1485
Slip [%]	0.94	1.33	1.33	1.00	1.00
Rated torque [ft.lb]	589	621	621	619	619
Locked rotor torque [%]	210	190	210	229	229
Breakdown torque [%]	250	220	250	270	270
Service factor	1.15	1.00	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K	80 K
Locked rotor time	25s (cold) 14s (hot)	21s (cold) 12s (hot)	23s (cold) 13s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)
Noise level <sup>2</sup>	78.0 dB(A)				
Efficiency (%)	25%	95.3	95.1	95.3	95.1
	50%	95.4	95.2	95.4	95.2
	75%	95.8	95.6	95.6	95.6
	100%	95.8	95.6	95.6	95.6
Power Factor	25%	0.46	0.48	0.44	0.41
	50%	0.72	0.74	0.70	0.67
	75%	0.80	0.82	0.80	0.77
	100%	0.84	0.85	0.84	0.82
Bearing type	: <u>Drive end</u> NU-319 C3	<u>Non drive end</u> 6314 C3	Foundation loads		
Sealing	: Without	Without	Max. traction	: 3720 lb	
	Bearing Seal	Bearing Seal	Max. compression	: 5188 lb	
Lubrication interval	: 18825 h	20000 h			
Lubricant amount	: 45 g	27 g			
Lubricant type	: Mobil Polyrex EM				
Notes					
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



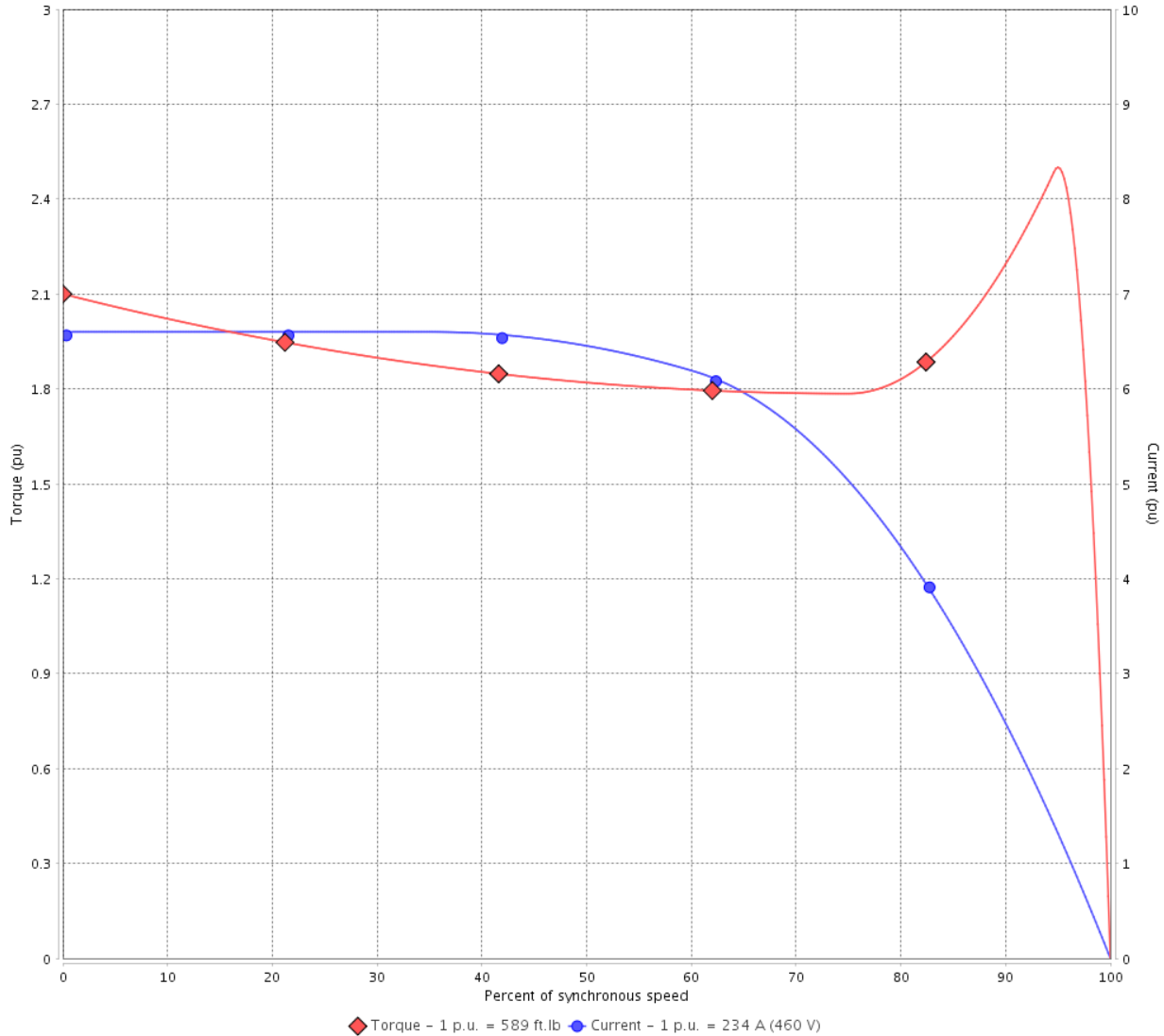
Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272558

Catalog # : 20018OT3GRB445T-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 460 V 60 Hz 4P

Rated current	: 234 A	Moment of inertia (J)	: 46.4 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 589 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.15
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1783 rpm	Design	: B

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

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# TORQUE AND CURRENT VS SPEED CURVE



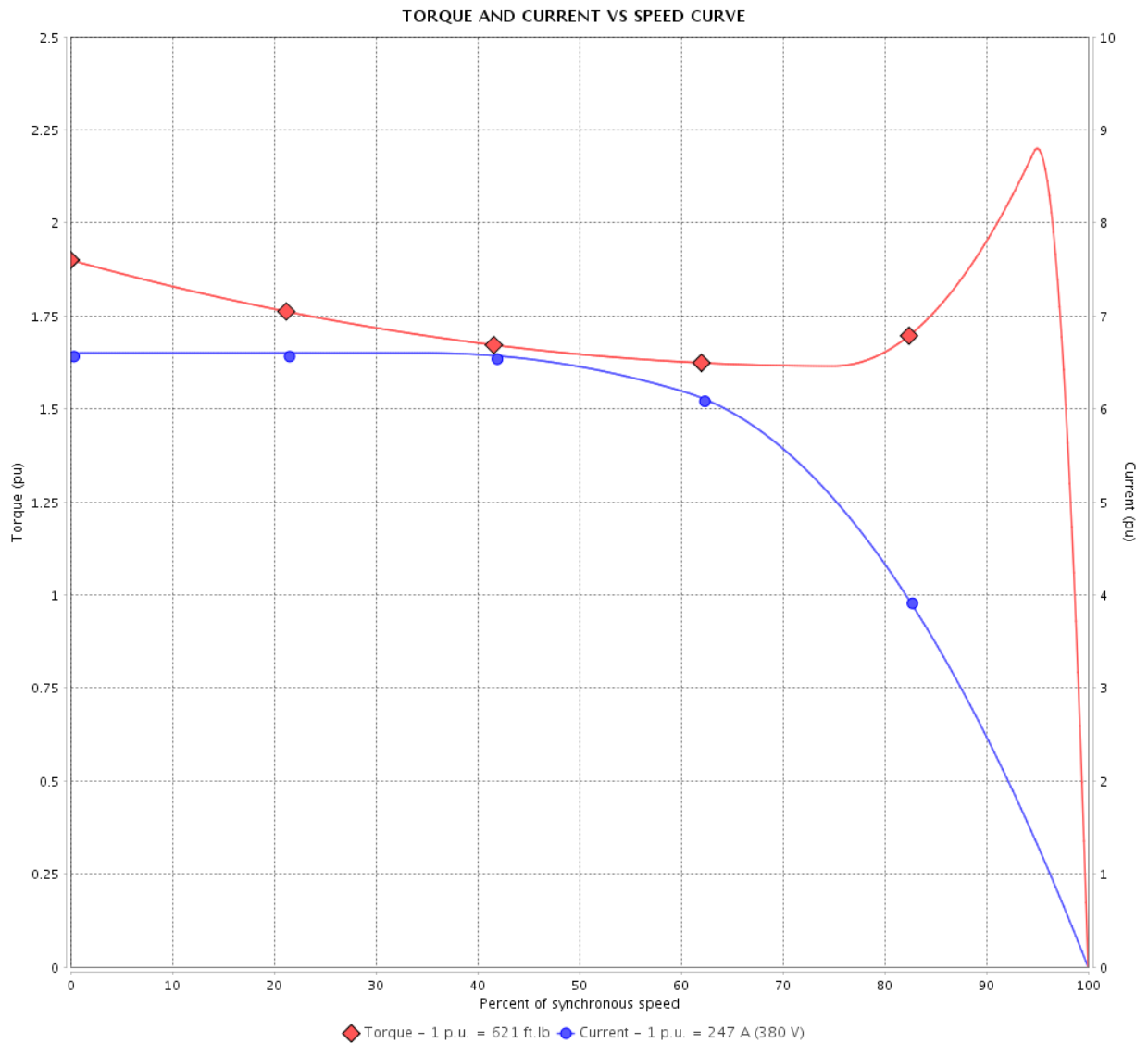
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14272558

Catalog # : 20018OT3GRB445T-W40



Performance : 380 V 50 Hz 4P IE3

Rated current	: 247 A	Moment of inertia (J)	: 46.4 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 621 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

Locked rotor time : 21s (cold) 12s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



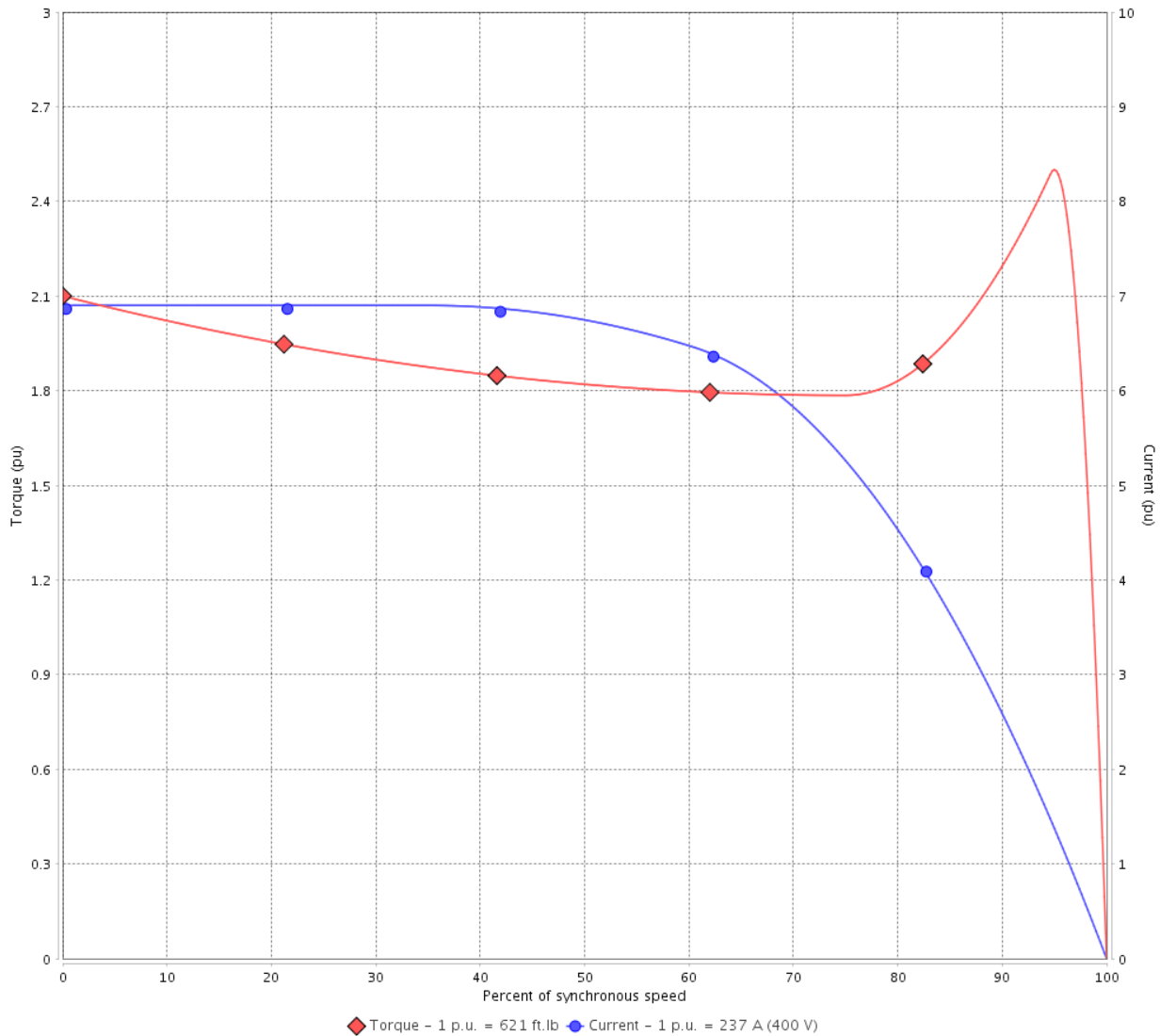
Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272558

Catalog # : 20018OT3GRB445T-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current	: 237 A	Moment of inertia (J)	: 46.4 sq.ft.lb
LRC	: 6.9	Duty cycle	: Cont.(S1)
Rated torque	: 621 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 : 23s (cold) 13s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



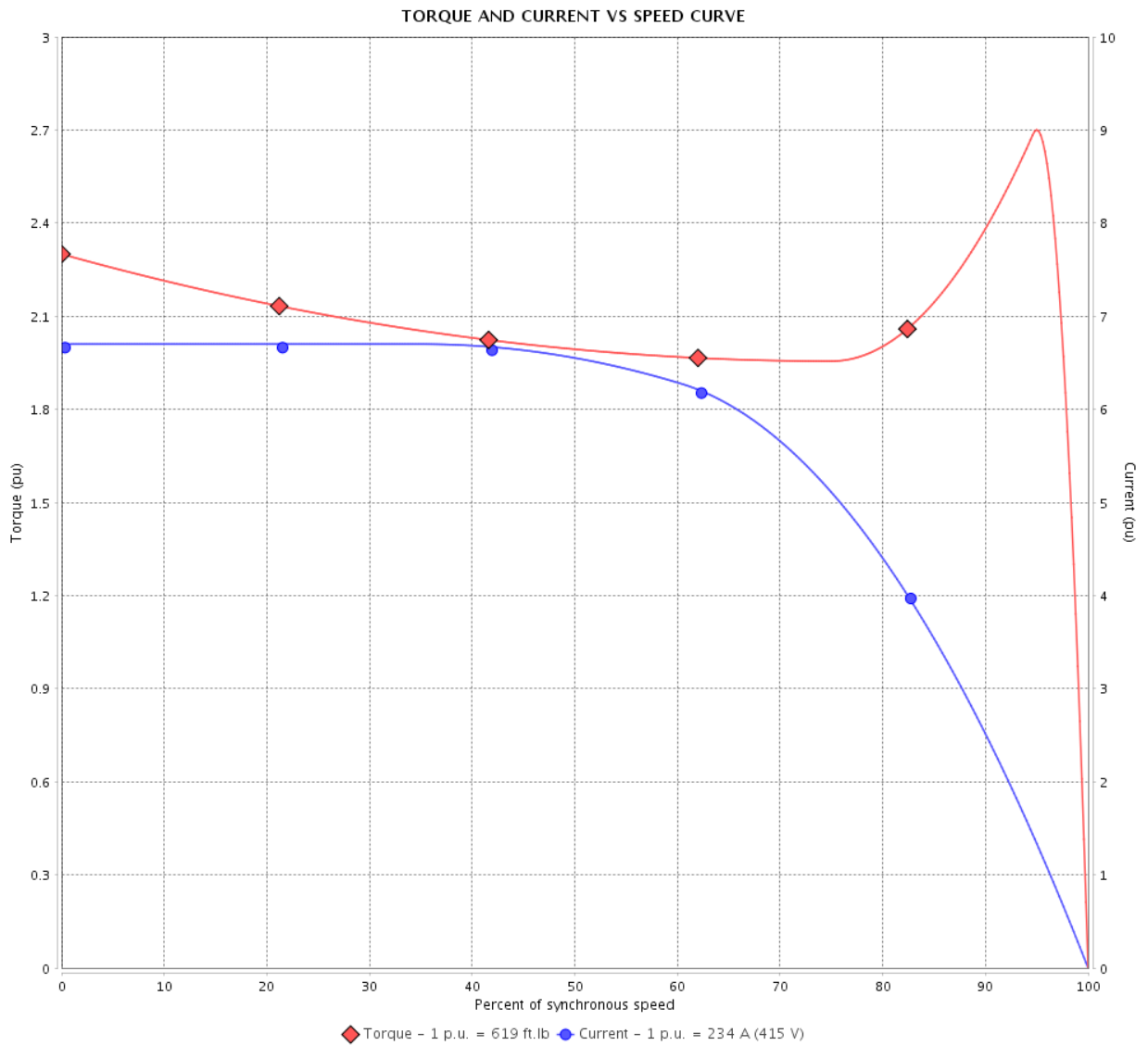
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Three-Phase

Product code : 14272558

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Performance : 415 V 50 Hz 4P IE3

Rated current	: 234 A	Moment of inertia (J)	: 46.4 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 619 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

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

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



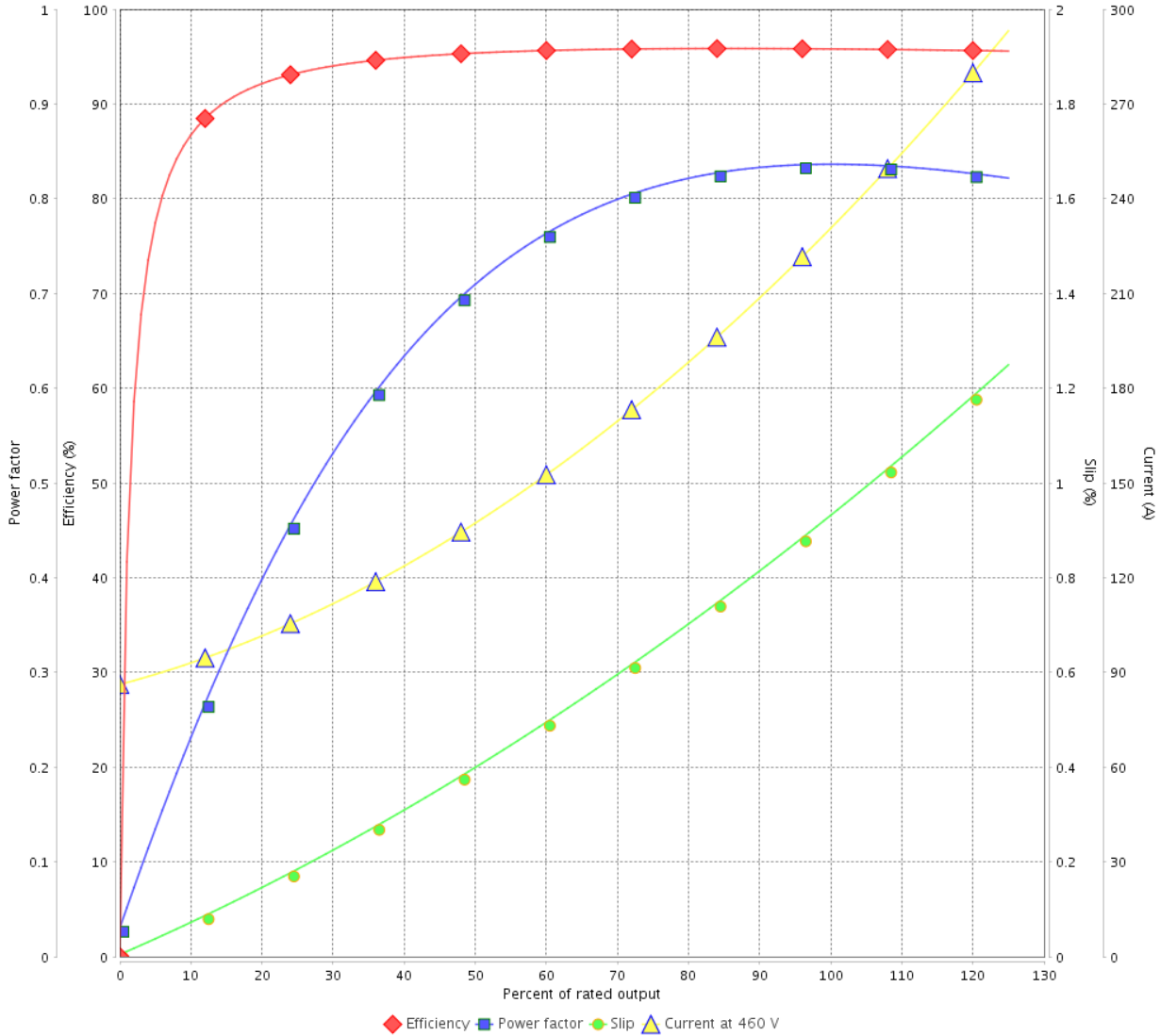
Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272558

Catalog # : 20018OT3GRB445T-W40

LOAD PERFORMANCE CURVE



Performance : 460 V 60 Hz 4P

Rated current : 234 A  
 LRC : 6.6  
 Rated torque : 589 ft.lb  
 Locked rotor torque : 210 %  
 Breakdown torque : 250 %  
 Rated speed : 1783 rpm

Moment of inertia (J) : 46.4 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

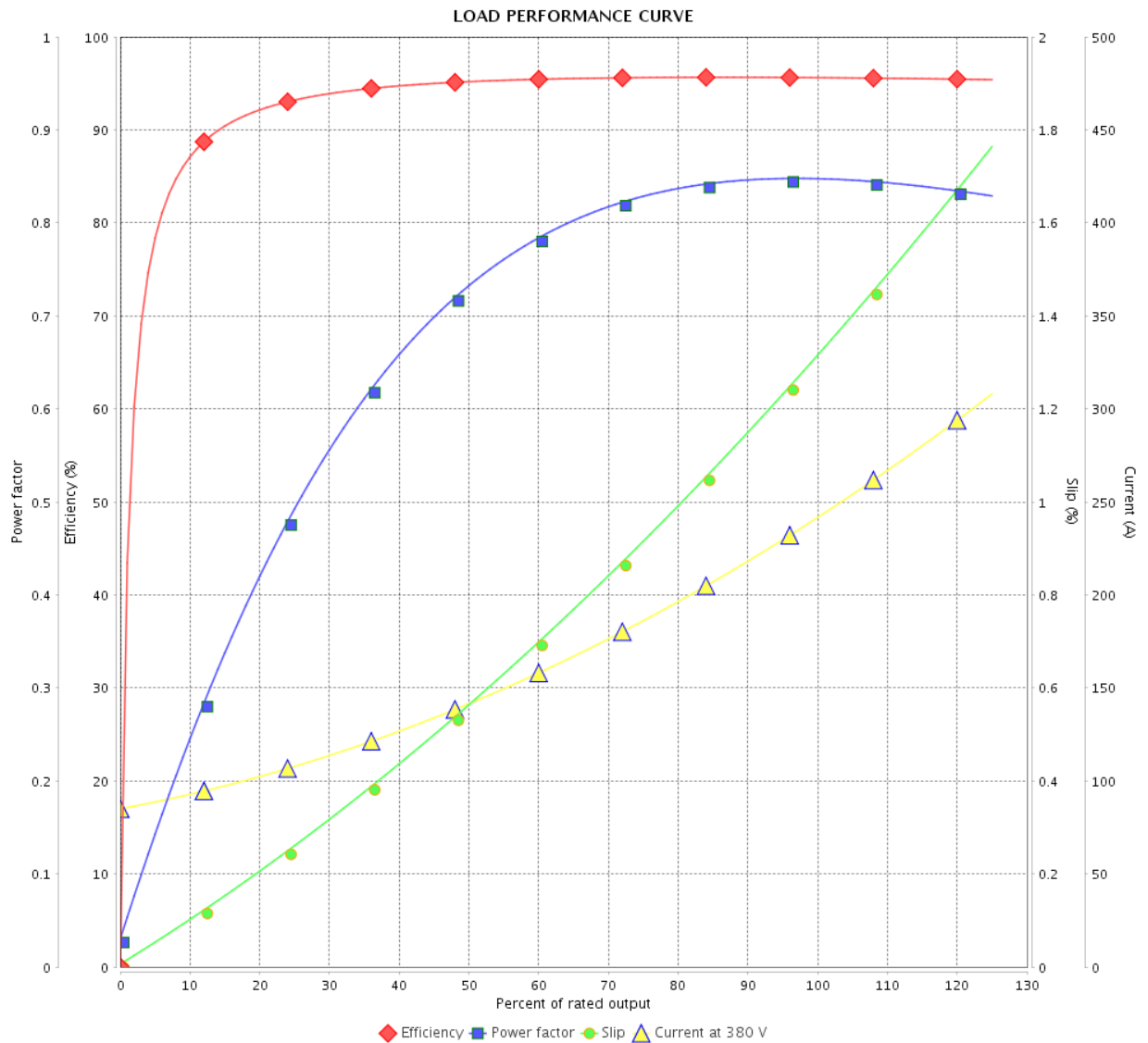


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Product code : 14272558

Catalog # : 20018OT3GRB445T-W40



Performance : 380 V 50 Hz 4P IE3

Rated current : 247 A  
 LRC : 6.6  
 Rated torque : 621 ft.lb  
 Locked rotor torque : 190 %  
 Breakdown torque : 220 %  
 Rated speed : 1480 rpm

Moment of inertia (J) : 46.4 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

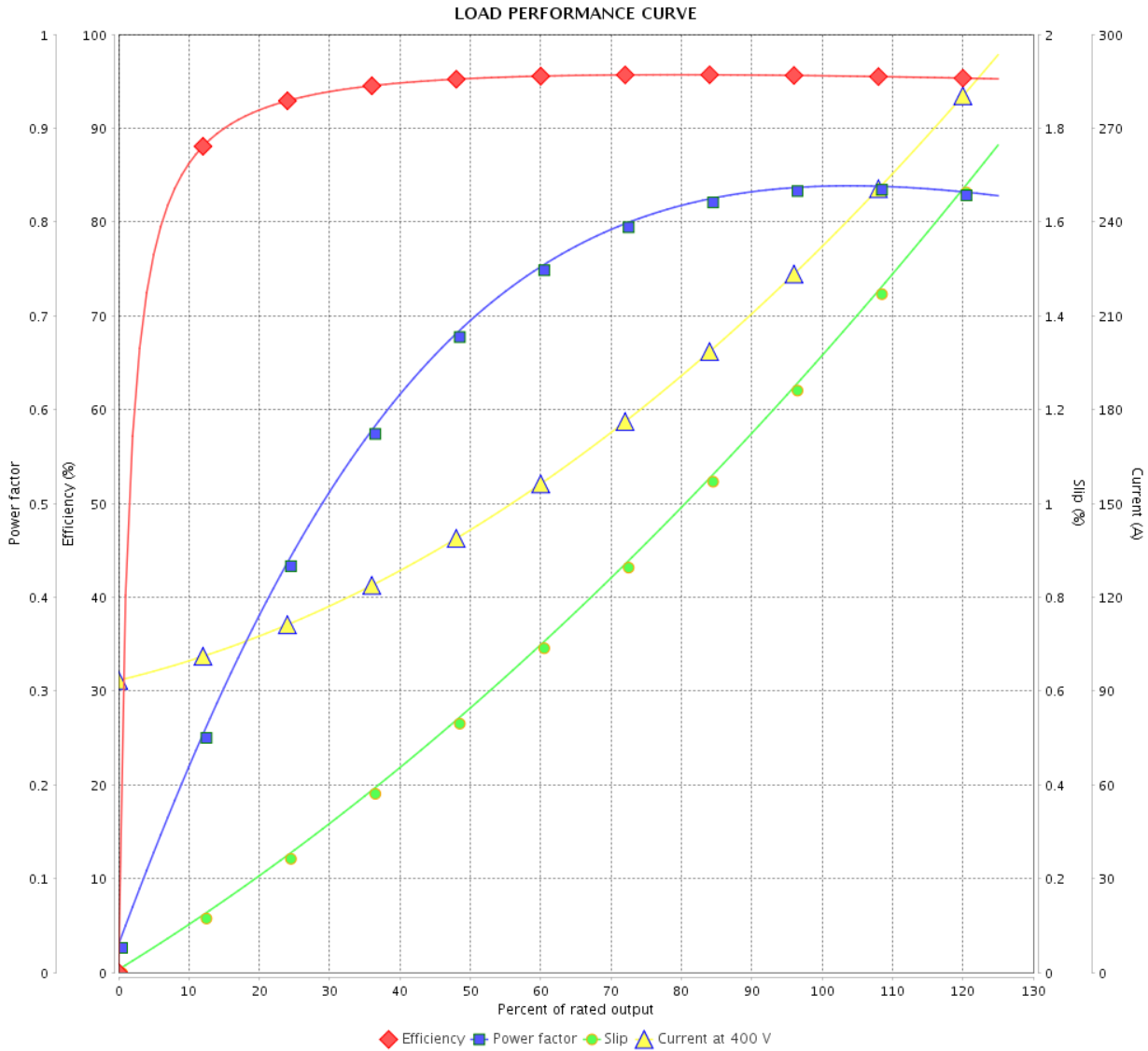


Customer :

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Product code : 14272558

Catalog # : 20018OT3GRB445T-W40



Performance : 400 V 50 Hz 4P IE3

Rated current : 237 A  
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 Rated torque : 621 ft.lb  
 Locked rotor torque : 210 %  
 Breakdown torque : 250 %  
 Rated speed : 1480 rpm

Moment of inertia (J) : 46.4 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

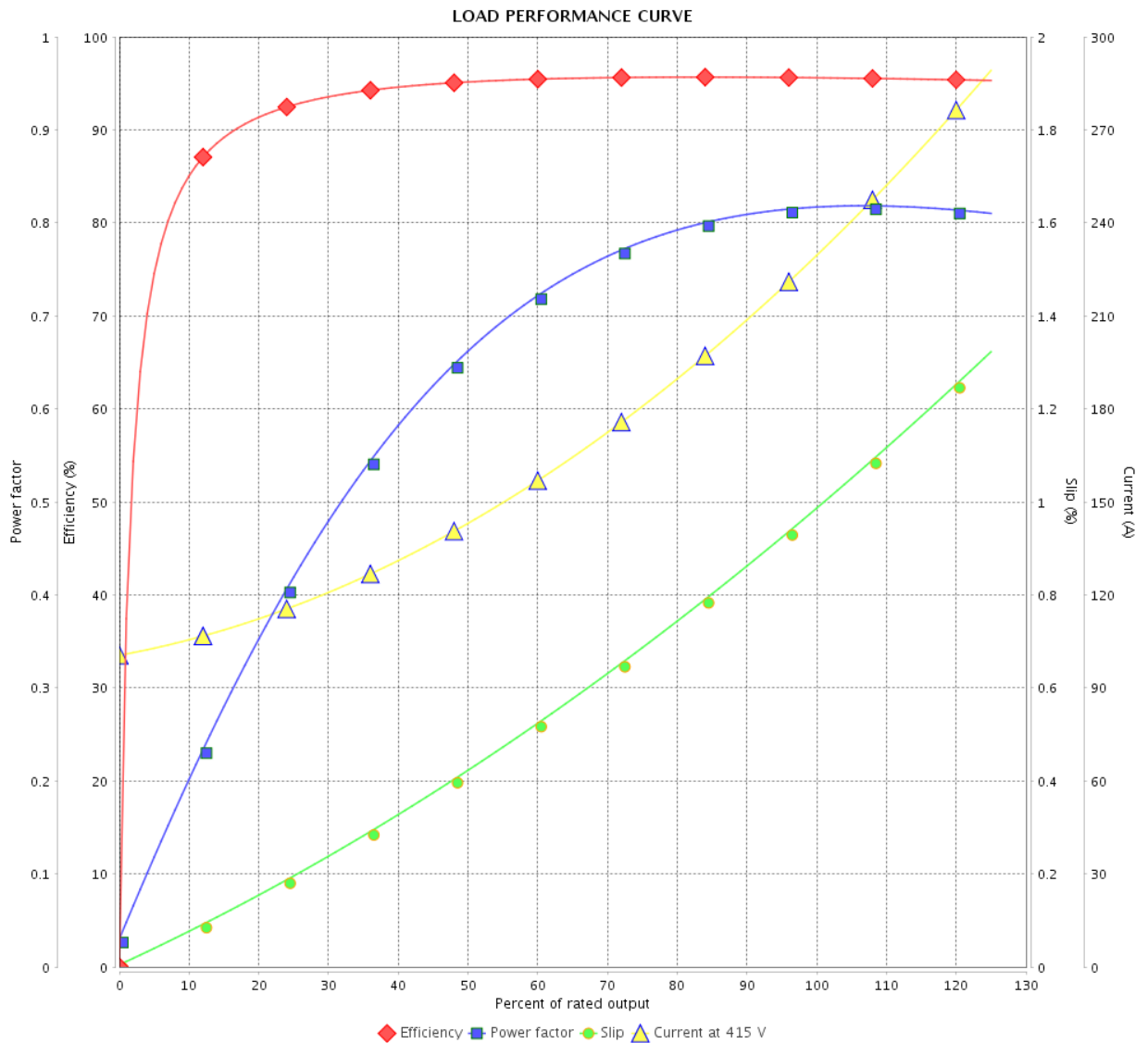


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 Breakdown torque : 270 %  
 Rated speed : 1485 rpm

Moment of inertia (J) : 46.4 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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Rated torque	: 589 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.15
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1783 rpm	Design	: B

Heating constant

Cooling constant

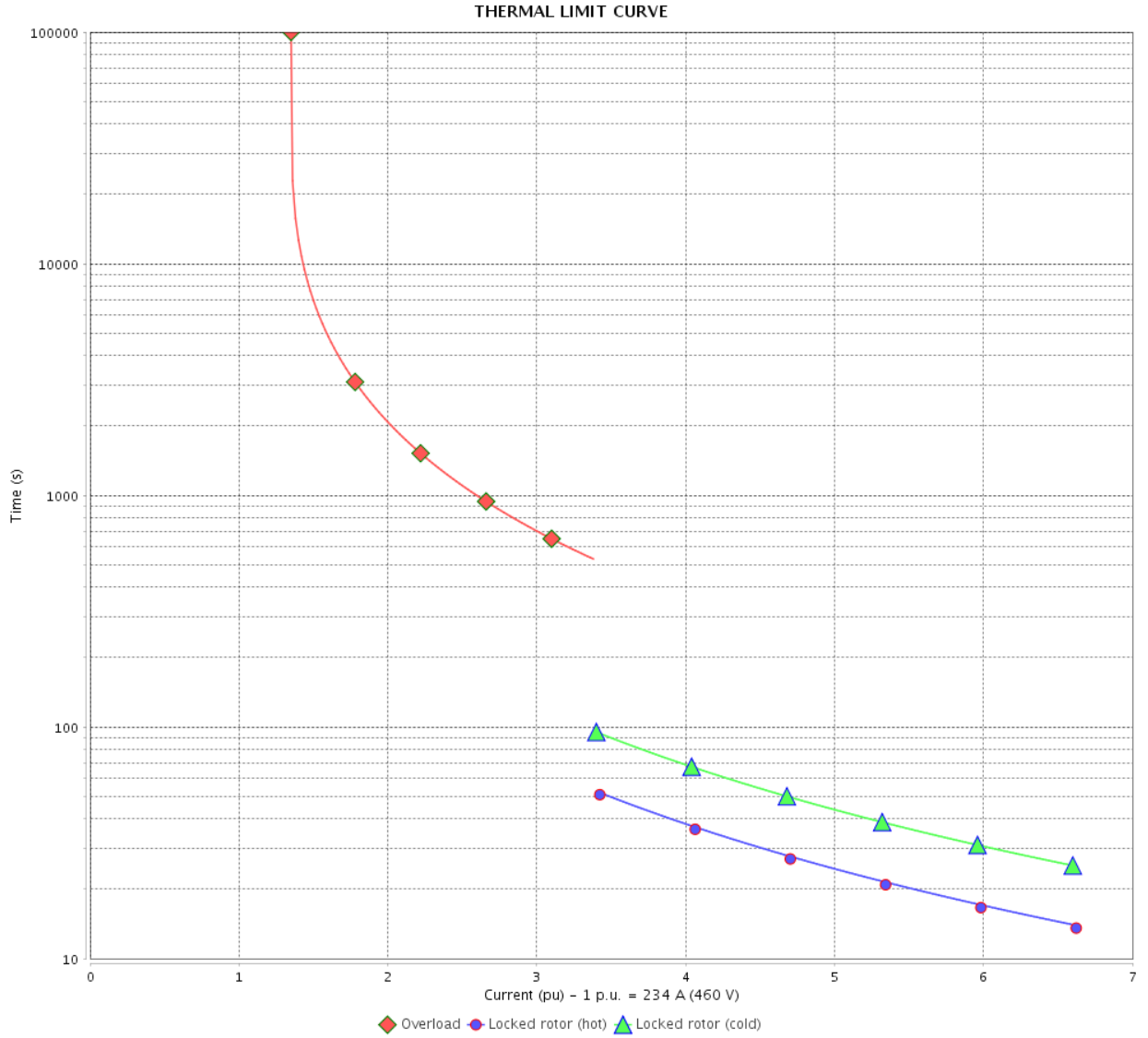
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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## Three Phase Induction Motor - Squirrel Cage



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Rated current	: 247 A	Moment of inertia (J)	: 46.4 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 621 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

Heating constant

Cooling constant

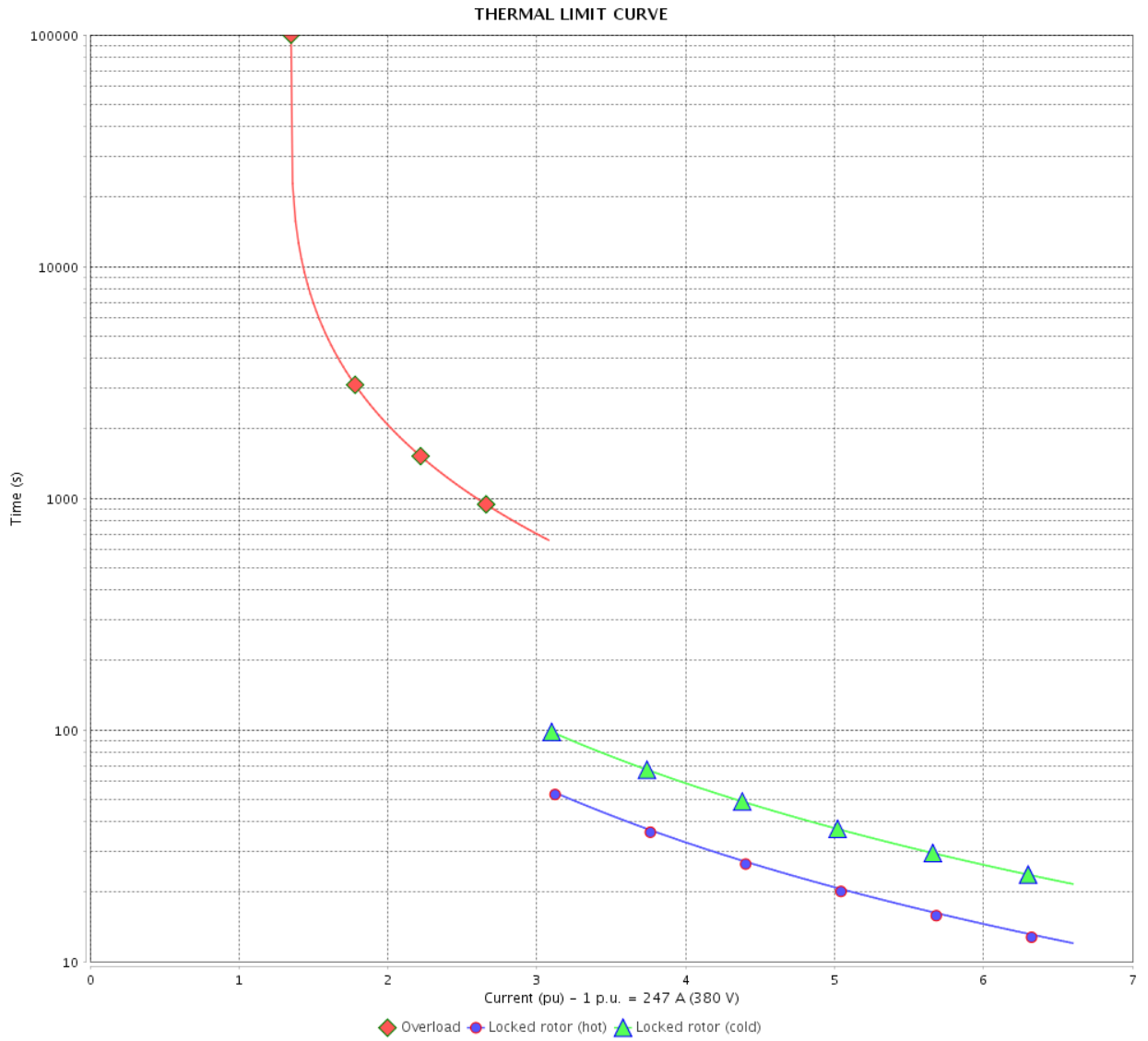
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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Date				

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Performance : 400 V 50 Hz 4P IE3

Rated current	: 237 A	Moment of inertia (J)	: 46.4 sq.ft.lb
LRC	: 6.9	Duty cycle	: Cont.(S1)
Rated torque	: 621 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

Heating constant

Cooling constant

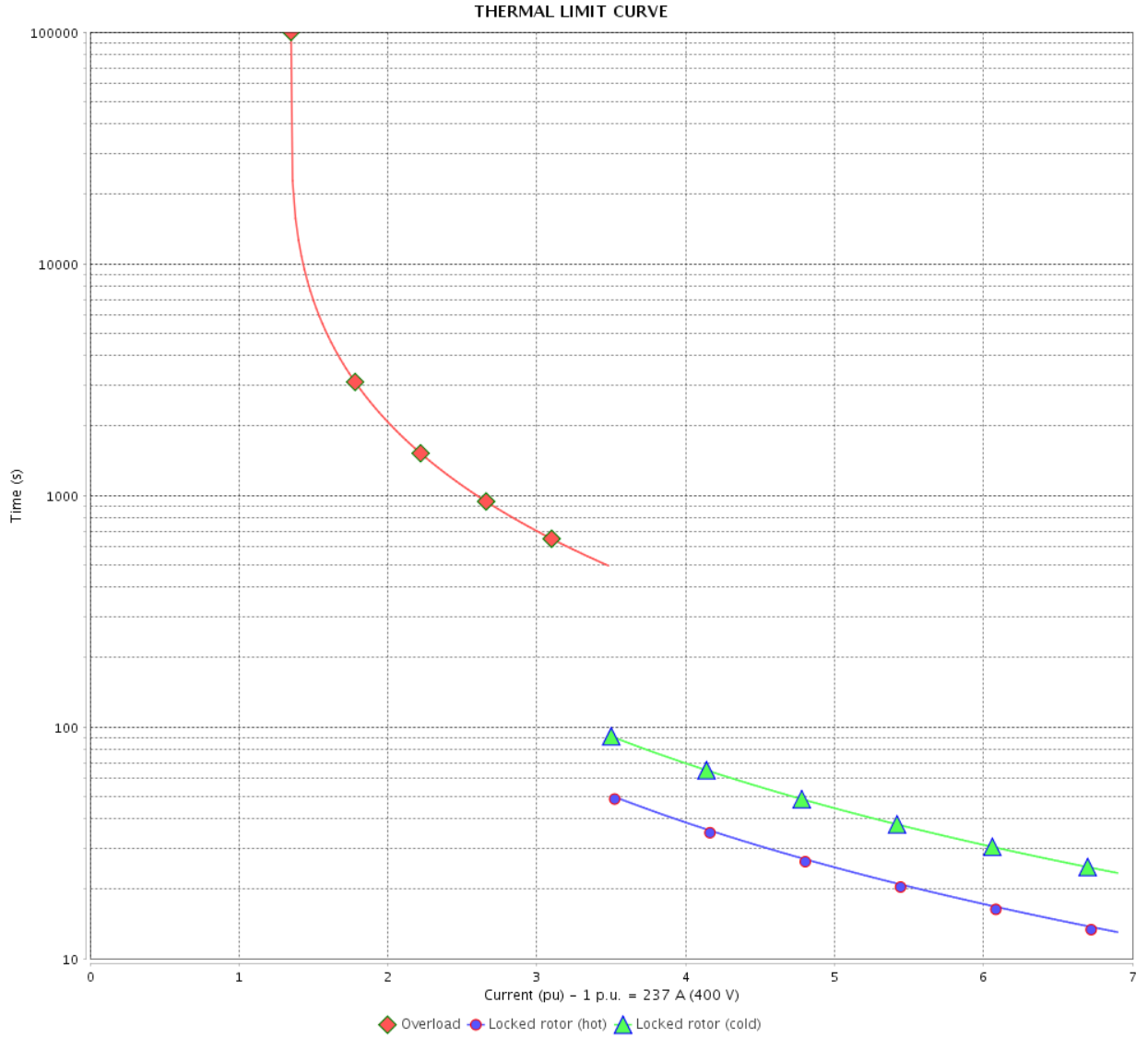
Rev.	Changes Summary	Performed	Checked	Date
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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# THERMAL LIMIT CURVE



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Product code : 14272558

Catalog # : 20018OT3GRB445T-W40

Performance : 415 V 50 Hz 4P IE3

Rated current	: 234 A	Moment of inertia (J)	: 46.4 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 619 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

Heating constant

Cooling constant

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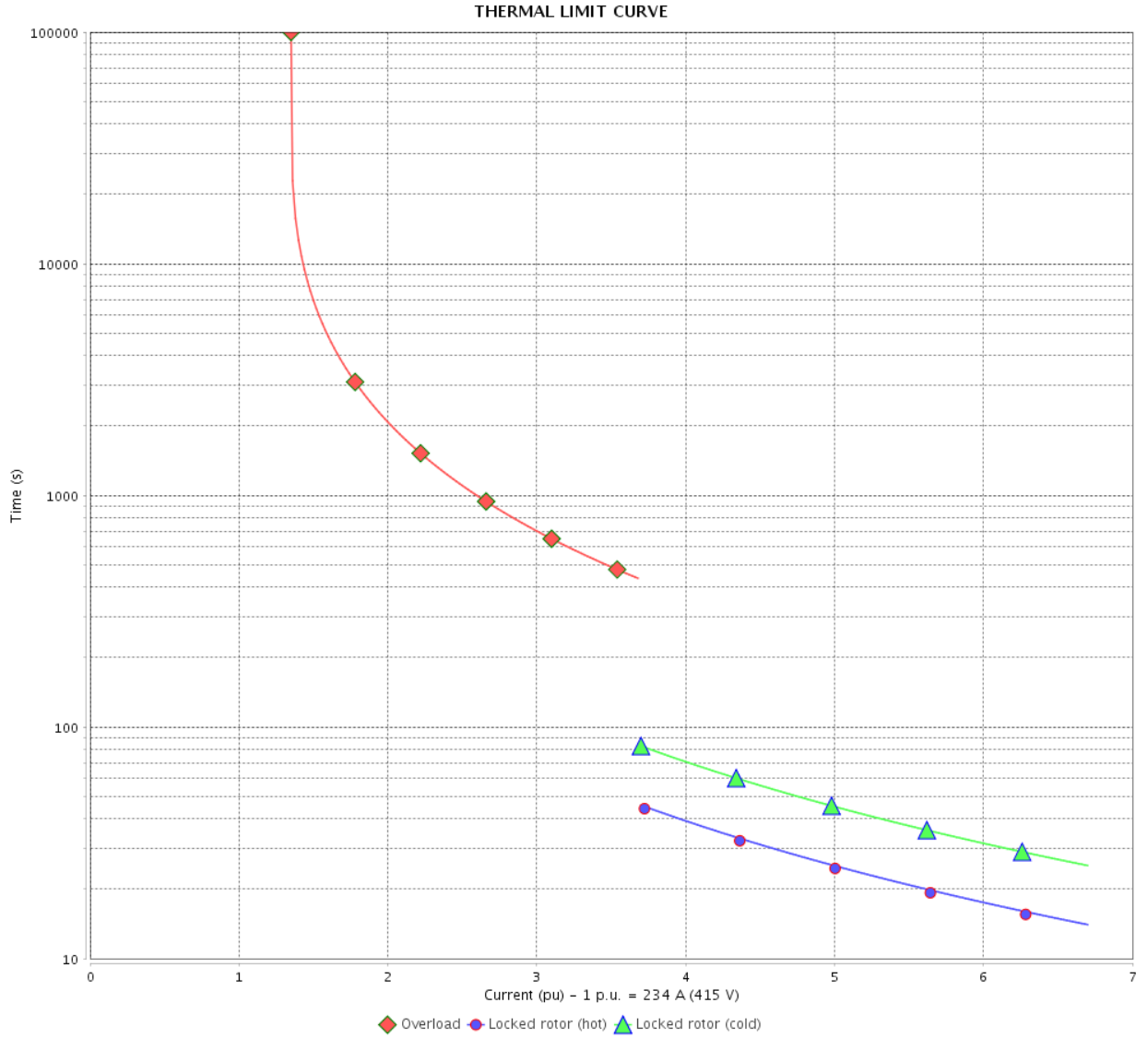


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Three Phase Induction Motor - Squirrel Cage



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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



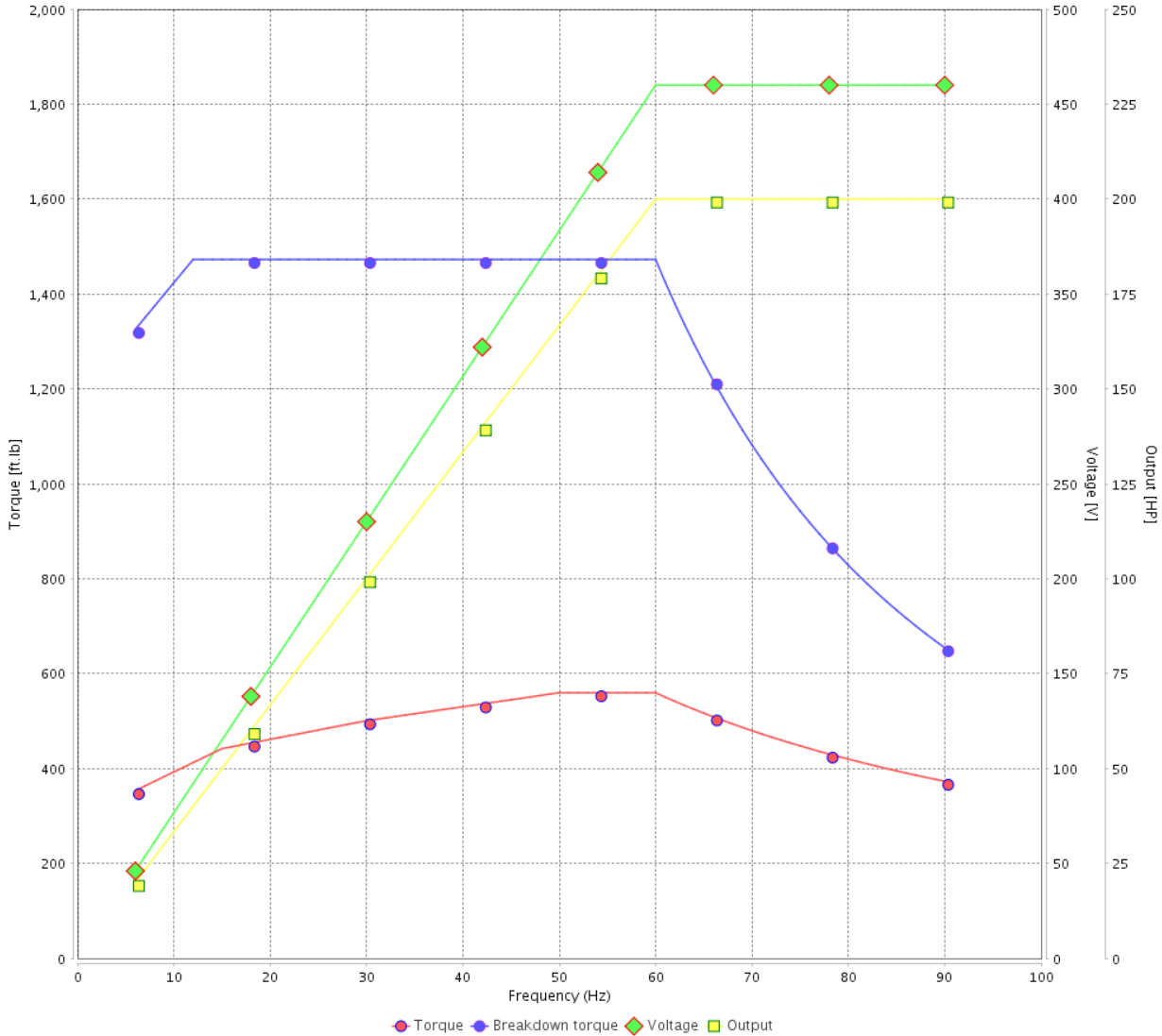
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VFD OPERATION CURVE



Performance : 460 V 60 Hz 4P

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Breakdown torque : 250 %  
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Moment of inertia (J) : 46.4 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

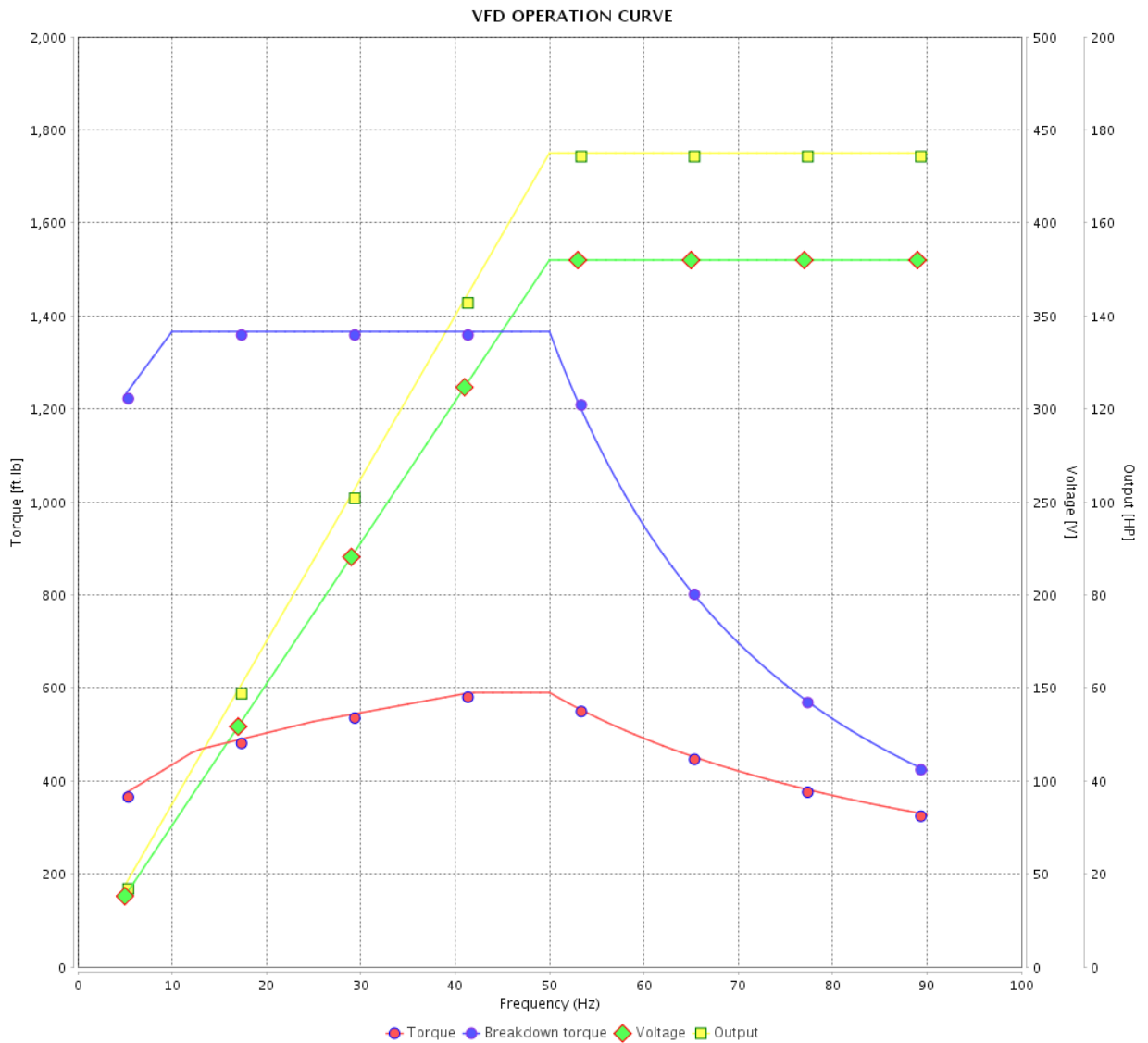


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Performance : 380 V 50 Hz 4P IE3

Rated current : 247 A  
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Three Phase Induction Motor - Squirrel Cage



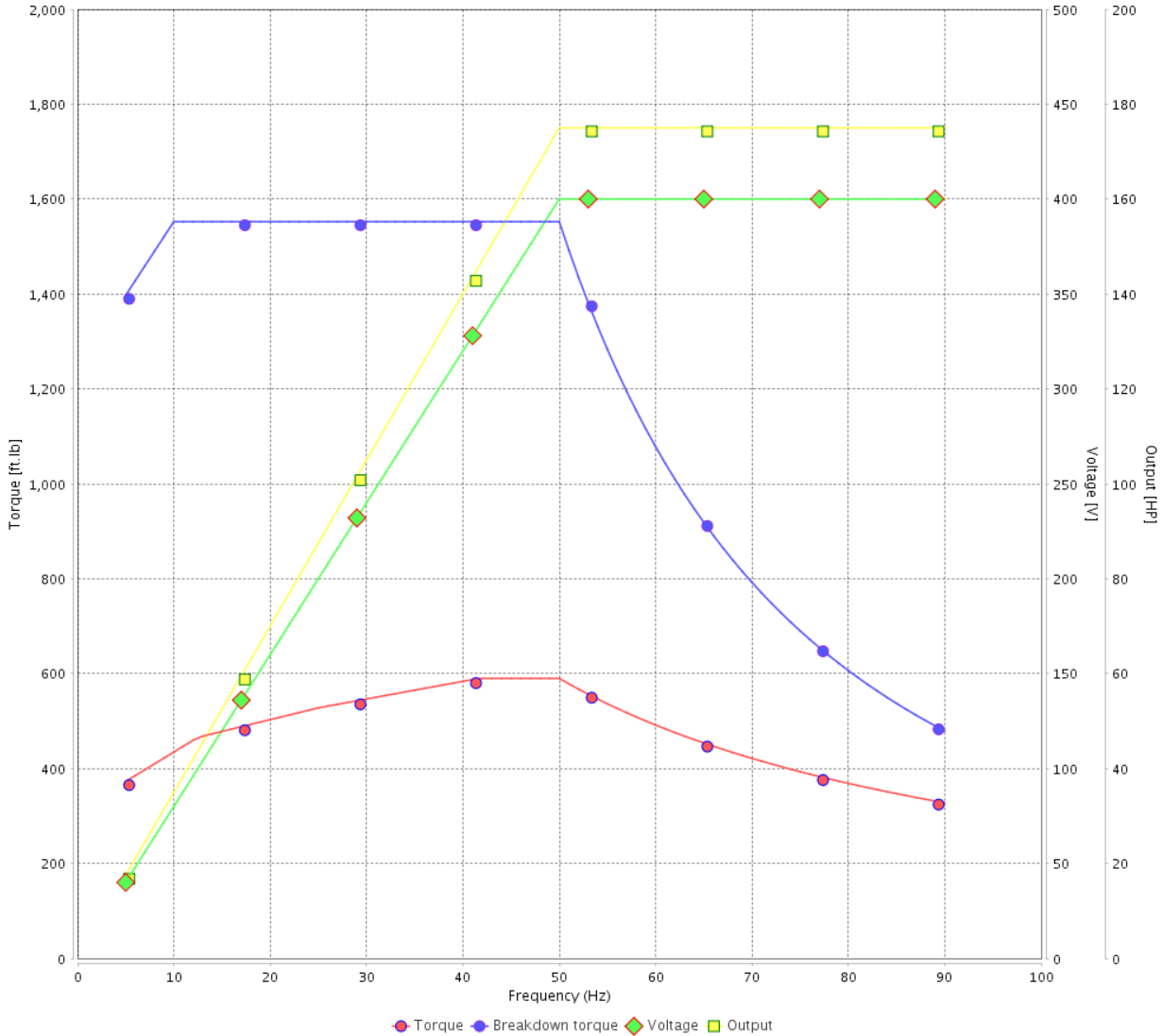
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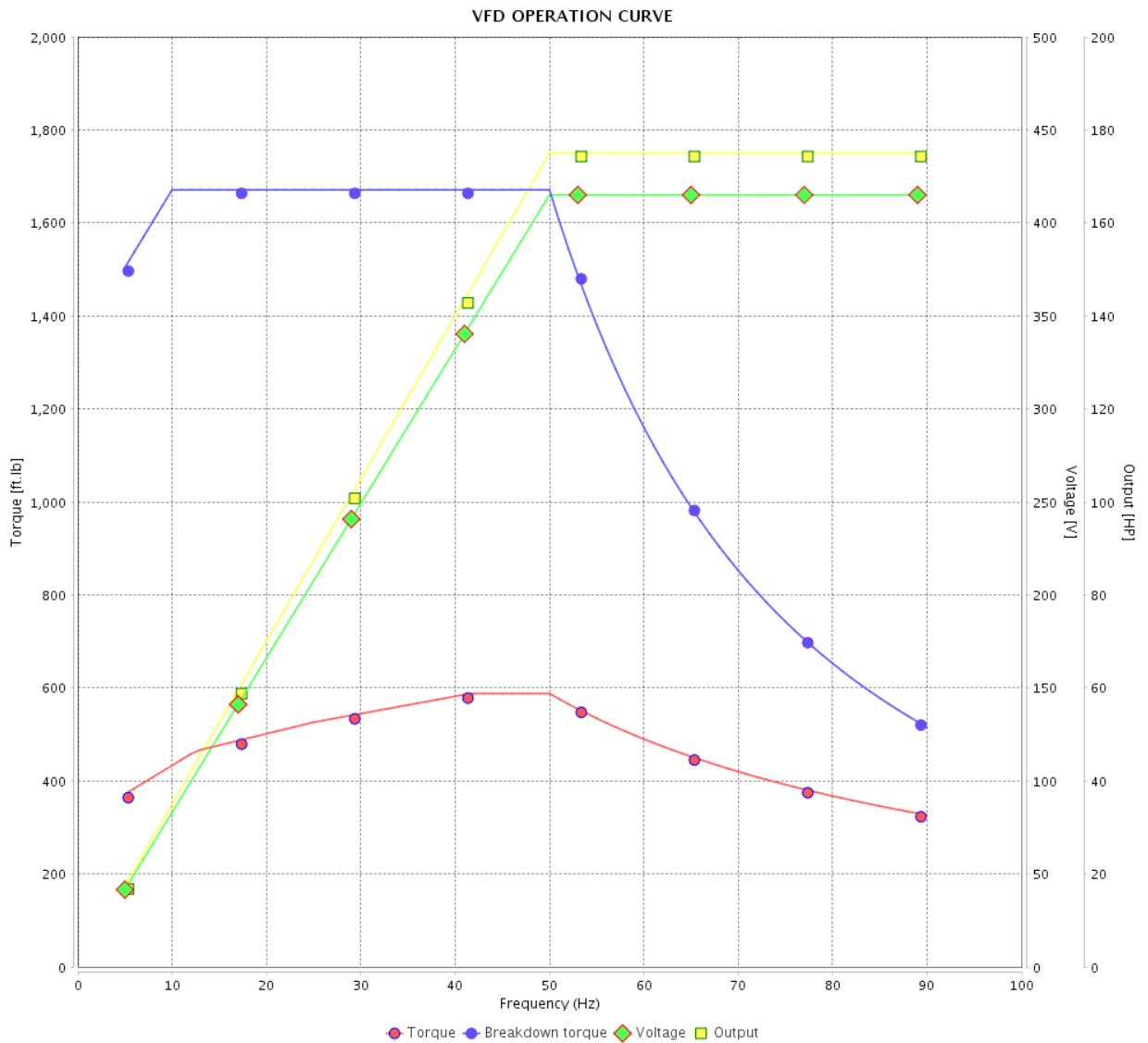


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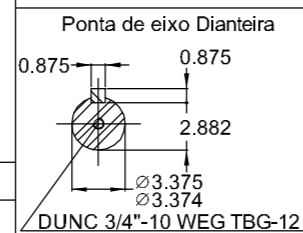
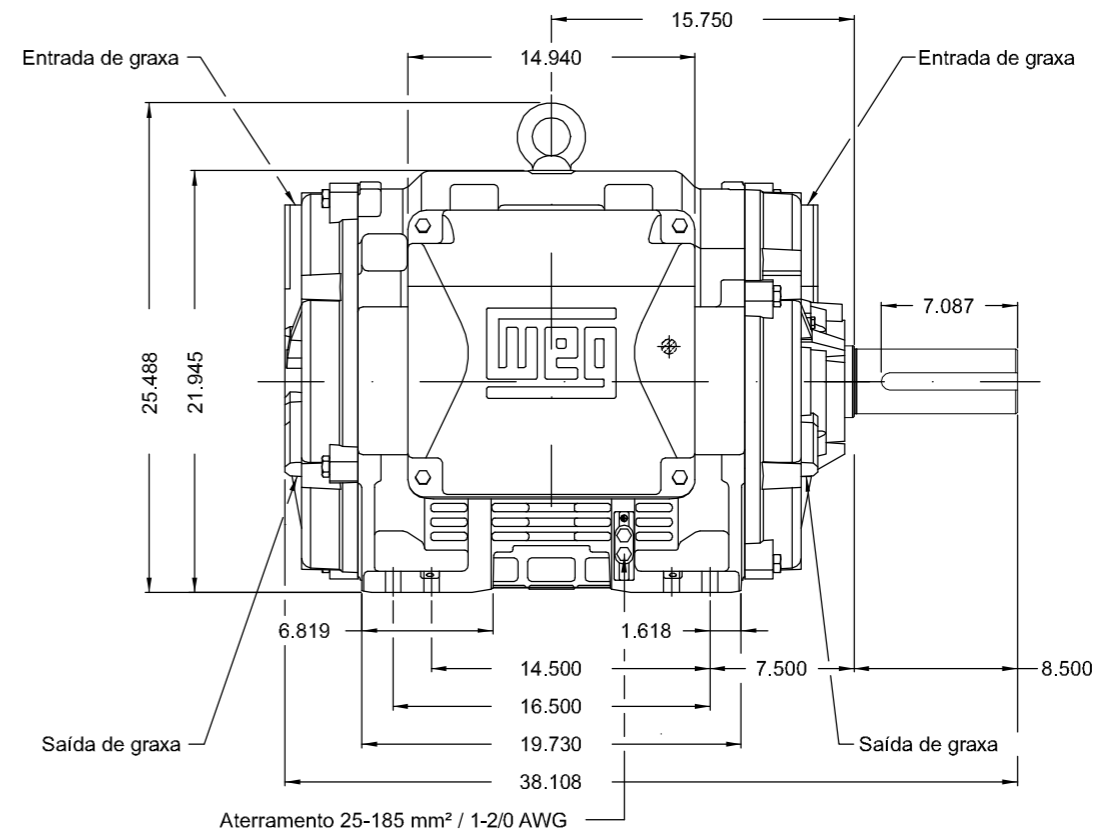
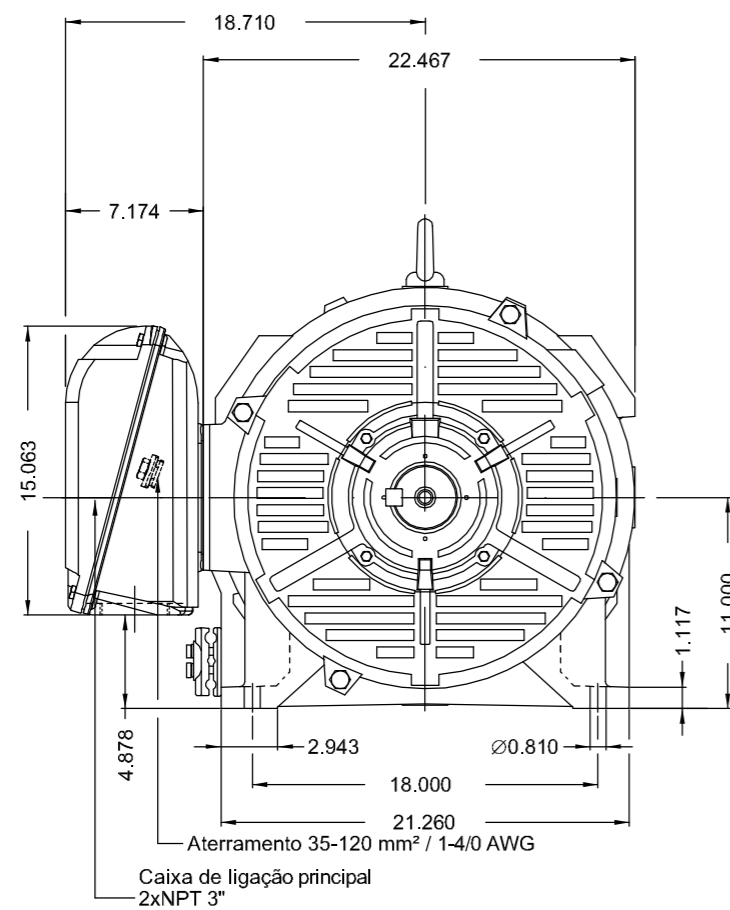


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Date				



250 HP 04 Polos 60Hz

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EXEC. /EXECUTED	BURIGO	EXECUTADO	VERIFICADO	LIBERADO	DATA	VER
VERIF. /CHECKED	PIRWBUSER	EXECUTED	CHECKED	RELEASED	DATE	VER
LIBER. /RELEASED	PIRWBUSER	RESUMO MODIFICAÇÃO SUMMARY OF MODIFICATIONS				
DATA LB /REL DT	27.06.2018	MOTOR TRIFÁSICO W40 NEMA PREMIUM EFF CARÇAÇA 444/5T IP23 ODP				
	WMO	Jaragua do Sul	Engenharia de Produto	10005861275	000	00
				FOLHA/SHEET	1 / 1	

Forma construtiva NEMA F-1  
Forma construtiva B3D

CÓPIA SEM CONTROLE

Dimensões em polegadas

LIBERADO

ZME A3