

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: W40 NEMA Premium Efficiency Three-Phase	Product code :	14503931		
		Catalog # :	04018OT3E324TC-W40G		
Frame	: 324TC	Cooling method	: IC01 - ODP		
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	: 465 lb		
Protection degree	: IP23	Moment of inertia (J)	: 5.69 sq.ft.lb		
Design	: B				
Output [HP]	40	30	30	30	30
Poles	4	4	4	4	4
Frequency [Hz]	60	50	50	50	50
Rated voltage [V]	230/460	380	400	415	415
Rated current [A]	95.2/47.6	43.3	42.2	41.7	41.7
L. R. Amperes [A]	590/295	290	283	313	313
LRC [A]	6.2x(Code G)	6.7x(Code H)	6.7x(Code H)	7.5x(Code J)	7.5x(Code J)
No load current [A]	37.0/18.5	18.3	20.3	22.1	22.1
Rated speed [RPM]	1775	1475	1480	1480	1480
Slip [%]	1.39	1.67	1.33	1.33	1.33
Rated torque [ft.lb]	118	107	106	106	106
Locked rotor torque [%]	200	229	260	280	280
Breakdown torque [%]	240	270	300	330	330
Service factor	1.25	1.00	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K	80 K
Locked rotor time	23s (cold) 13s (hot)	30s (cold) 17s (hot)	30s (cold) 17s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)
Noise level ²	66.0 dB(A)				
Efficiency (%)	25%	93.5	92.4	92.5	92.4
	50%	93.6	92.6	92.6	92.5
	75%	94.1	93.0	93.0	93.0
	100%	94.1	93.0	93.0	93.0
Power Factor	25%	0.44	0.42	0.38	0.34
	50%	0.70	0.68	0.63	0.59
	75%	0.80	0.78	0.75	0.72
	100%	0.84	0.83	0.81	0.79
Bearing type	: Drive end : 6312 Z C3	Non drive end : 6211 Z C3	Foundation loads		
Sealing	: Without	Without	Max. traction		
	Bearing Seal	Bearing Seal	Max. compression		
Lubrication interval	: 20000 h	20000 h			
Lubricant amount	: 21 g	11 g			
Lubricant type	: Mobil Polyrex EM				
Notes					
USABLE @208V 105A SF 1.15 SFA 121A					
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



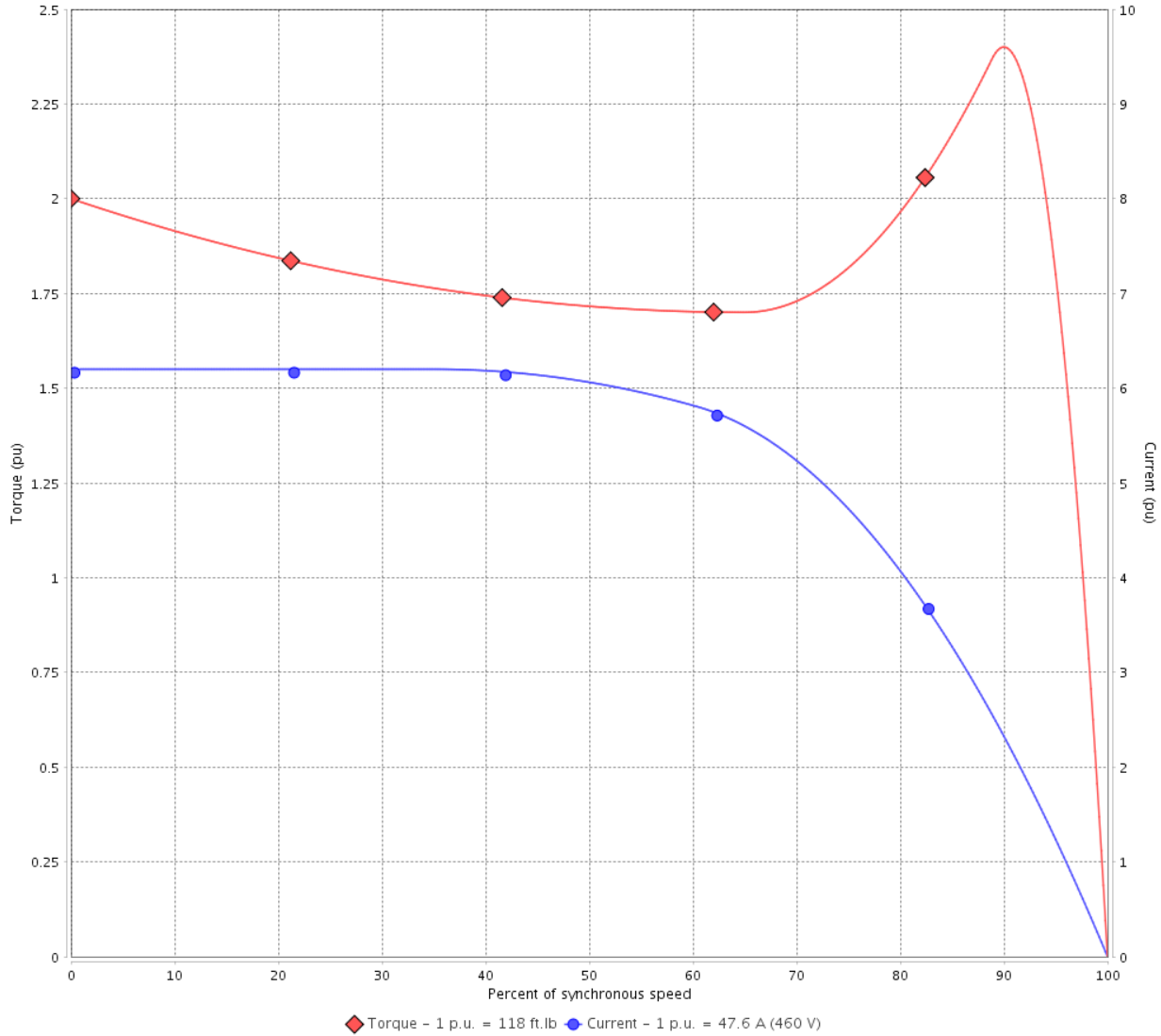
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14503931

Catalog # : 04018OT3E324TC-W40G

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 4P

Rated current	: 95.2/47.6 A	Moment of inertia (J)	: 5.69 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 118 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.25
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1775 rpm	Design	: B

Locked rotor time : 23s (cold) 13s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



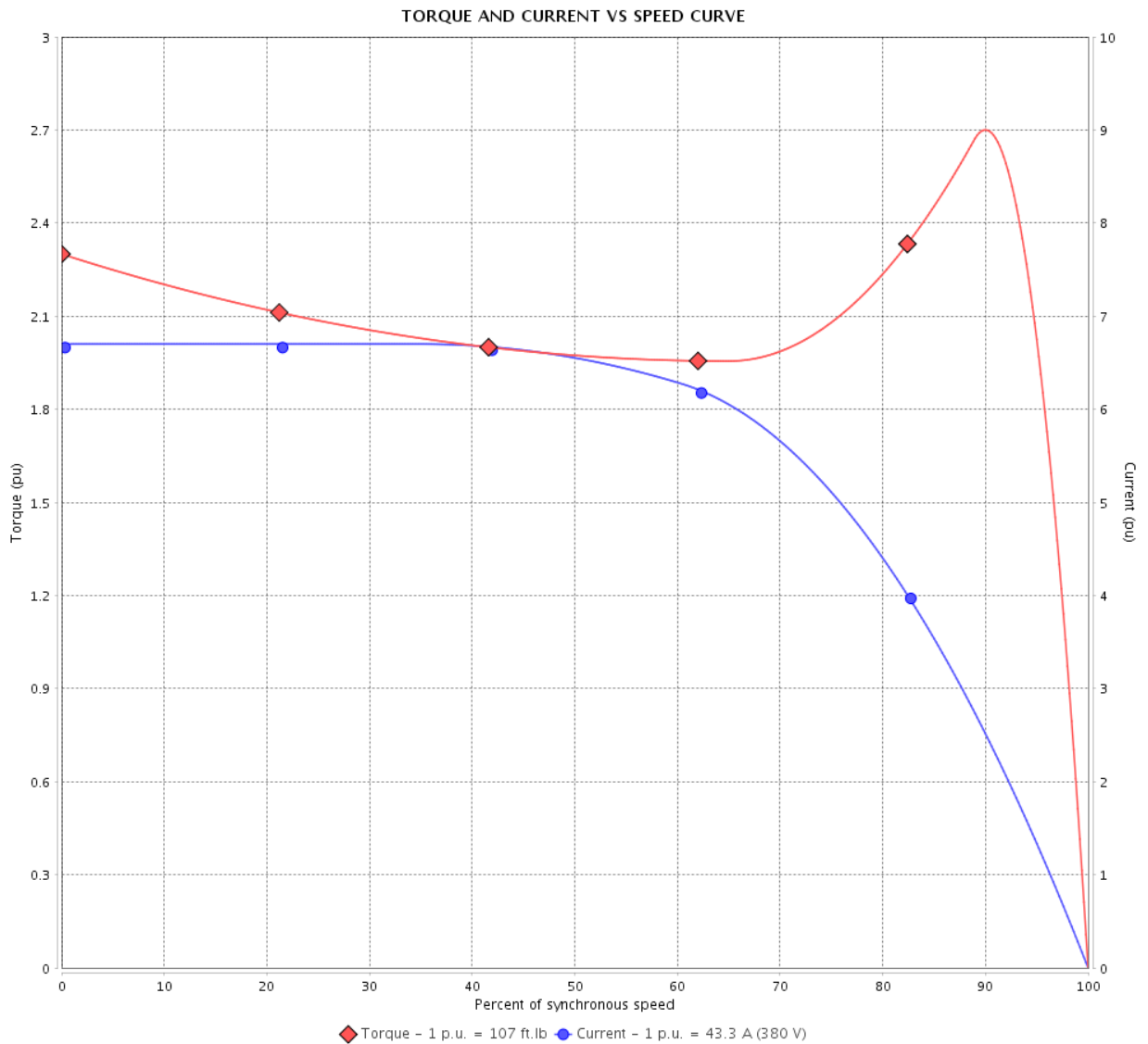
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14503931

Catalog # : 04018OT3E324TC-W40G



Performance : 380 V 50 Hz 4P IE3

Rated current	: 43.3 A	Moment of inertia (J)	: 5.69 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 107 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1475 rpm	Design	: B

Locked rotor time : 30s (cold) 17s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



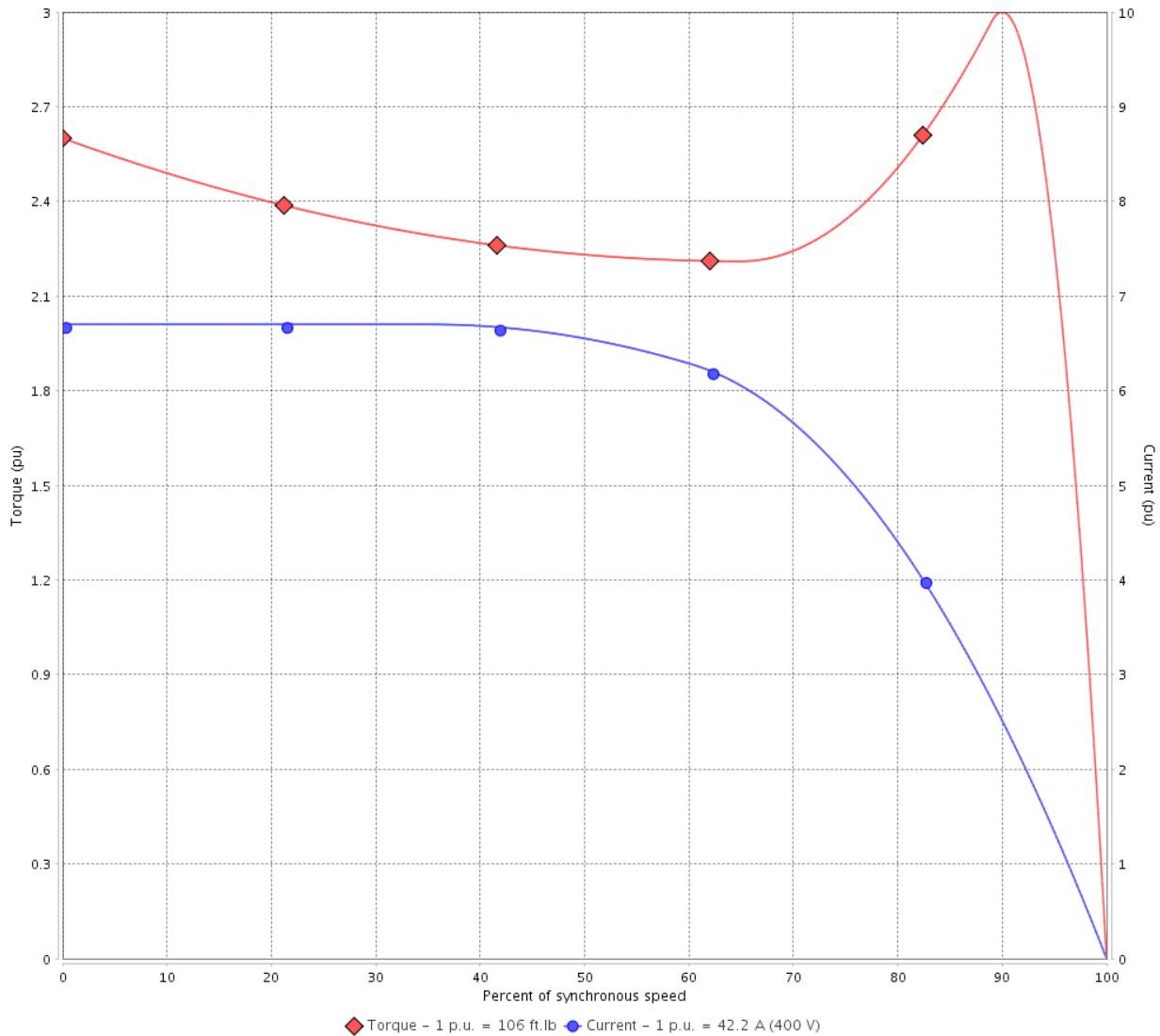
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14503931

Catalog # : 04018OT3E324TC-W40G

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current	: 42.2 A	Moment of inertia (J)	: 5.69 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 106 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

Locked rotor time : 30s (cold) 17s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



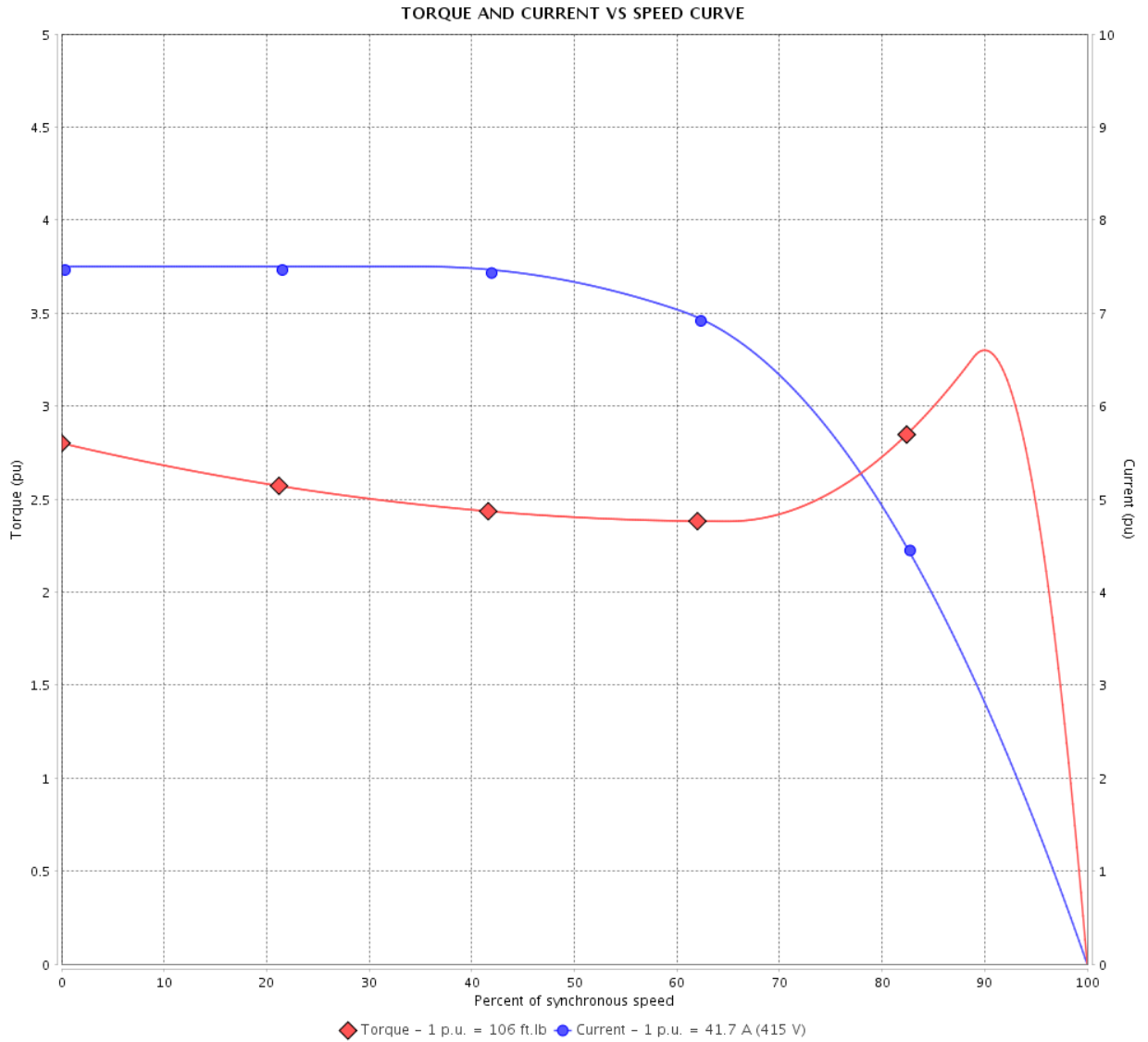
Three Phase Induction Motor - Squirrel Cage

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Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14503931

Catalog # : 04018OT3E324TC-W40G



Performance : 415 V 50 Hz 4P IE3

Rated current	: 41.7 A	Moment of inertia (J)	: 5.69 sq.ft.lb
LRC	: 7.5	Duty cycle	: Cont.(S1)
Rated torque	: 106 ft.lb	Insulation class	: F
Locked rotor torque	: 280 %	Service factor	: 1.00
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

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

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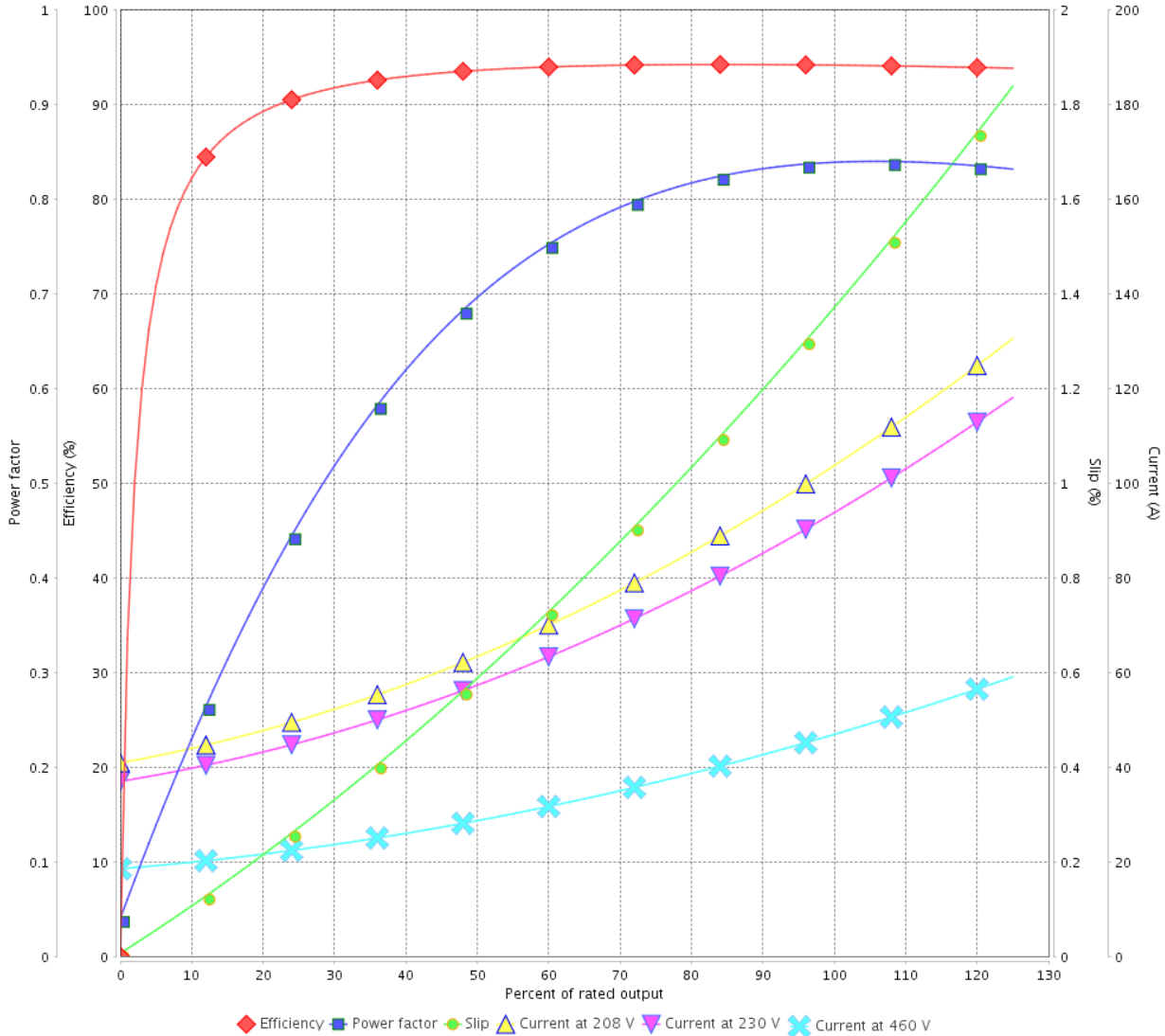
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Product code : 14503931

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LOAD PERFORMANCE CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 95.2/47.6 A
 LRC : 6.2
 Rated torque : 118 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 240 %
 Rated speed : 1775 rpm

Moment of inertia (J) : 5.69 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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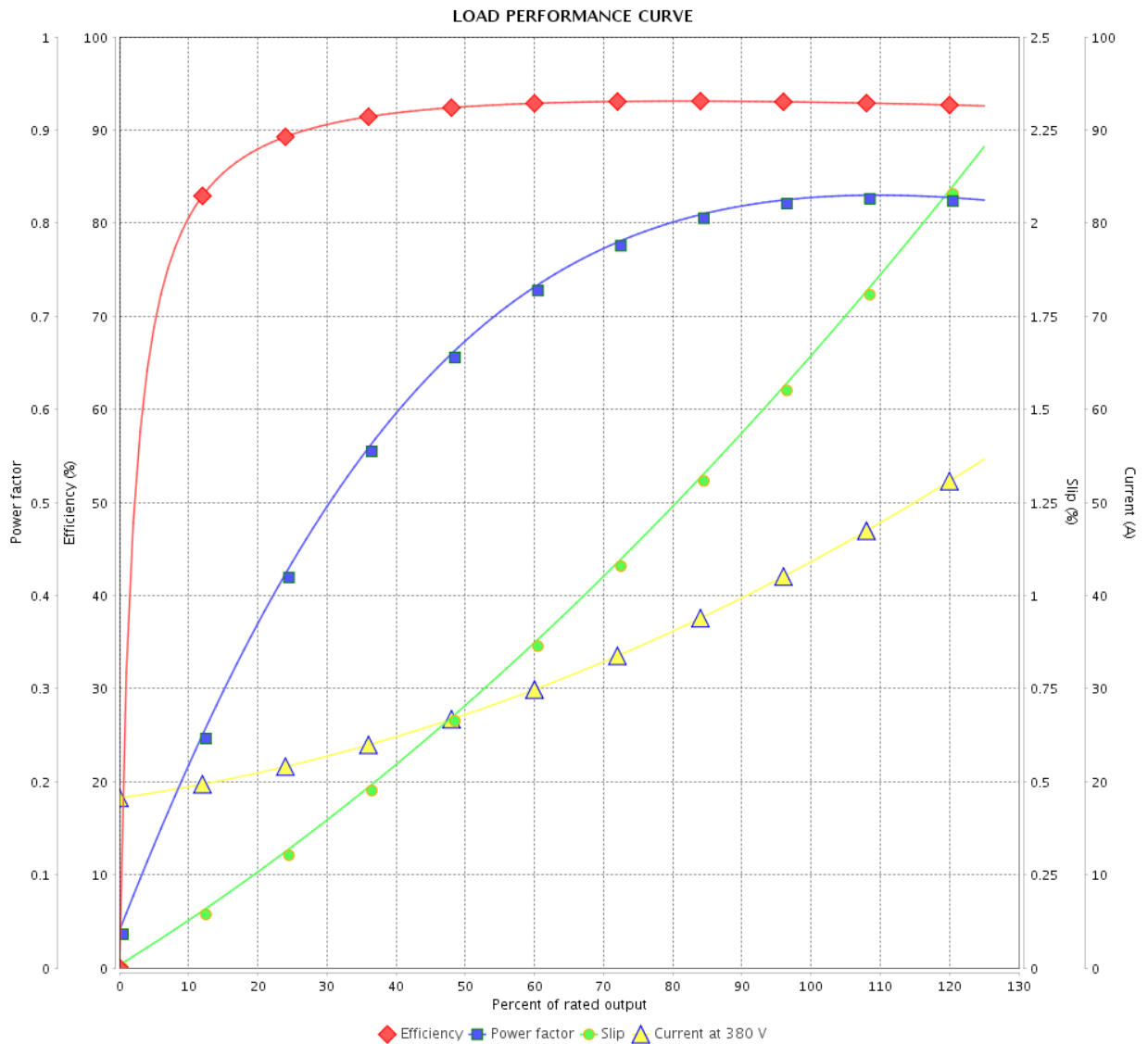


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Performance : 380 V 50 Hz 4P IE3

Rated current : 43.3 A
 LRC : 6.7
 Rated torque : 107 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 270 %
 Rated speed : 1475 rpm

Moment of inertia (J) : 5.69 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
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 Design : B

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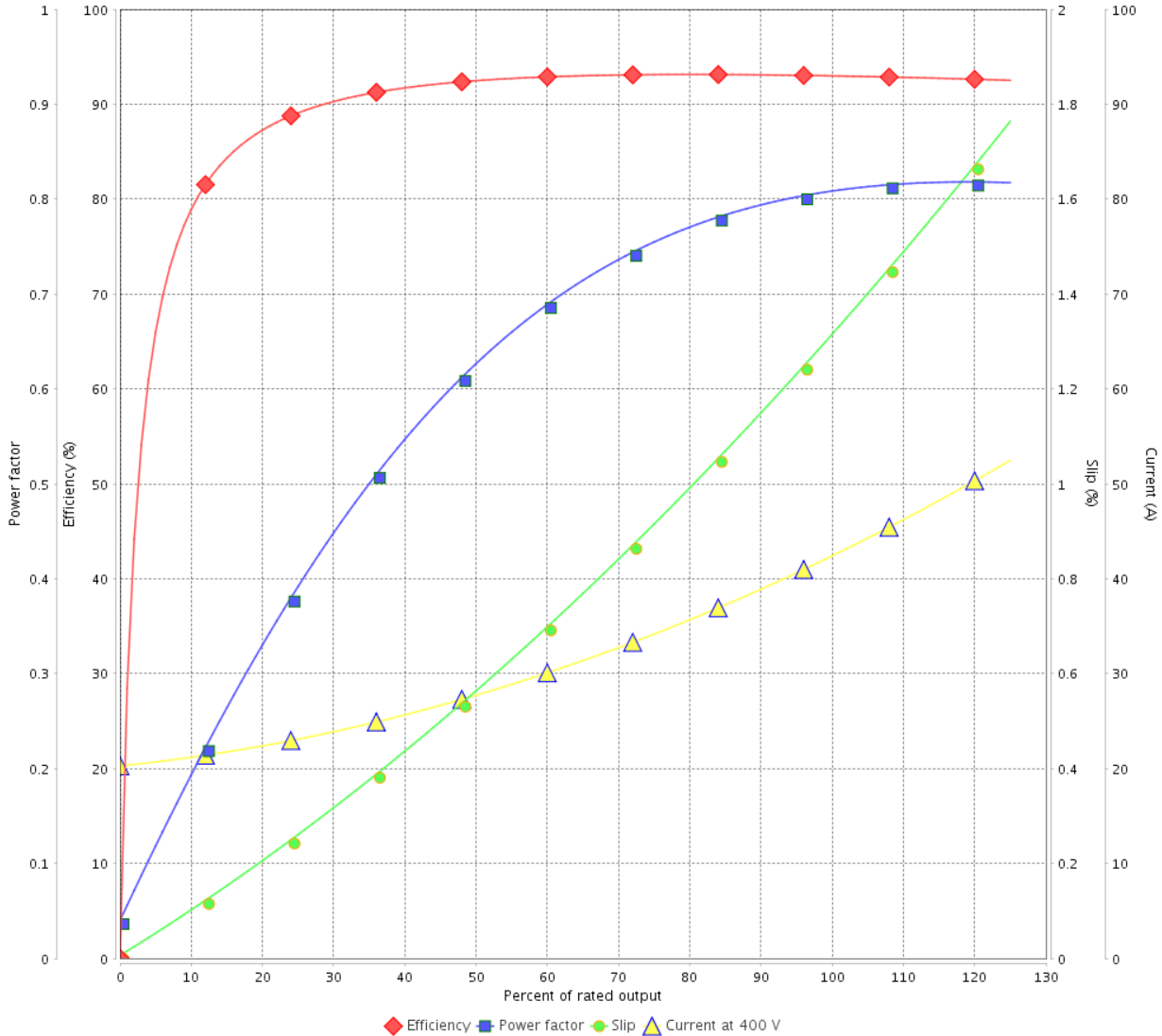
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 LRC : 6.7
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 Locked rotor torque : 260 %
 Breakdown torque : 300 %
 Rated speed : 1480 rpm

Moment of inertia (J) : 5.69 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

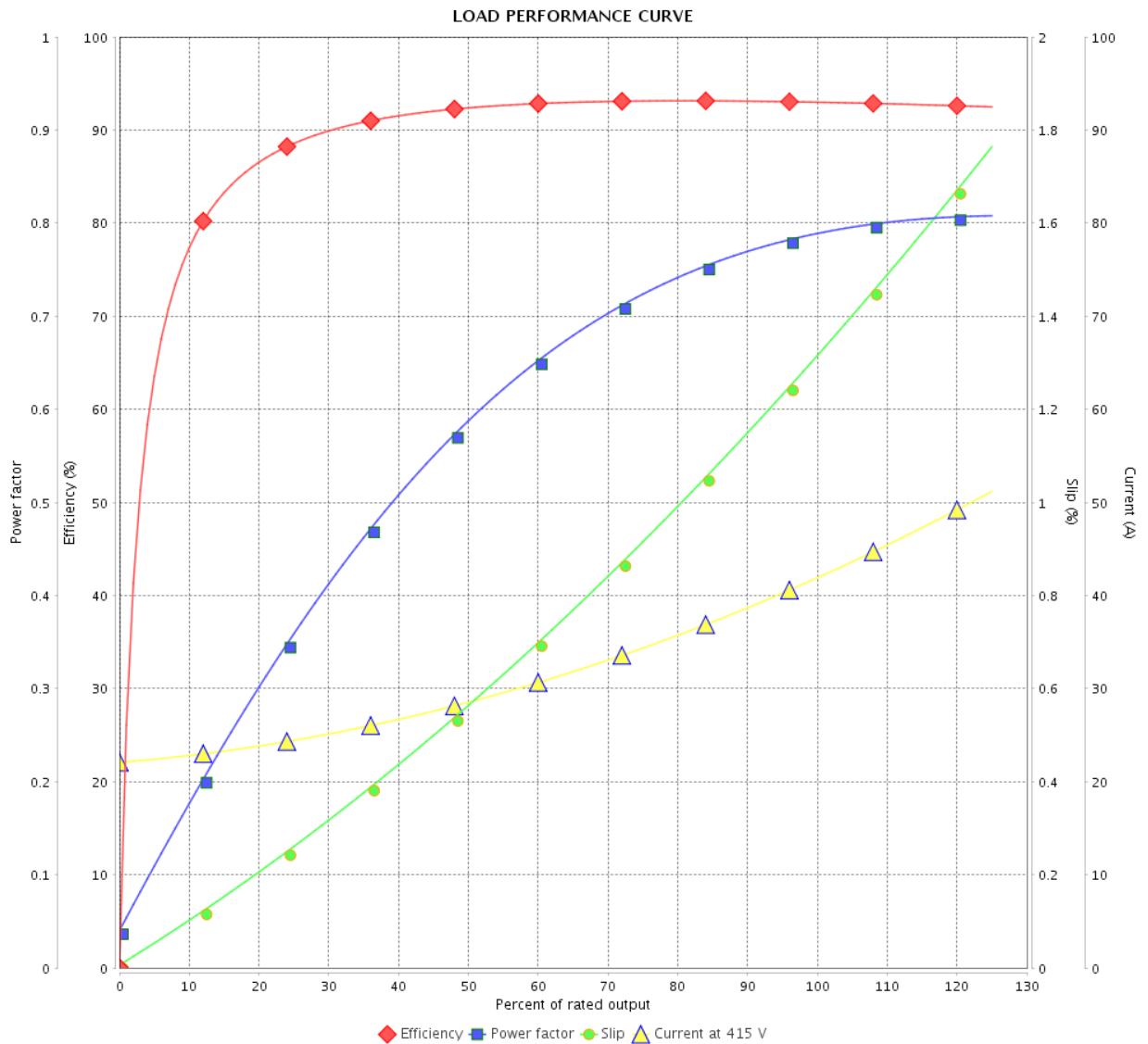


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 Rated torque : 106 ft.lb
 Locked rotor torque : 280 %
 Breakdown torque : 330 %
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Moment of inertia (J) : 5.69 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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THERMAL LIMIT CURVE



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Temperature rise : 80 K
Design : B

Heating constant

Cooling constant

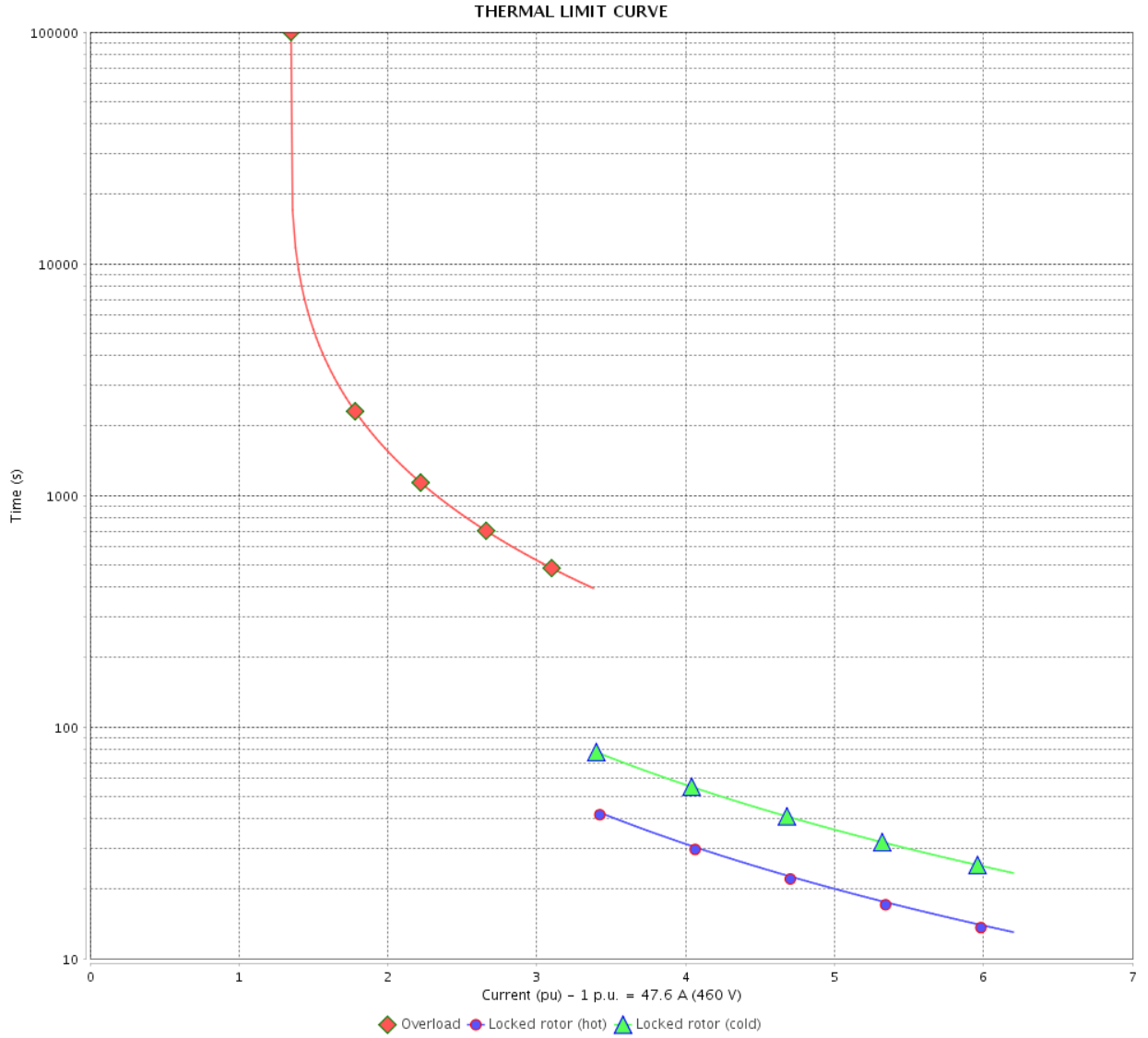
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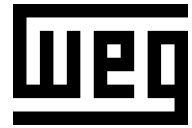


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LRC : 6.7	Duty cycle : Cont.(S1)
Rated torque : 107 ft.lb	Insulation class : F
Locked rotor torque : 229 %	Service factor : 1.00
Breakdown torque : 270 %	Temperature rise : 80 K
Rated speed : 1475 rpm	Design : B

Heating constant

Cooling constant

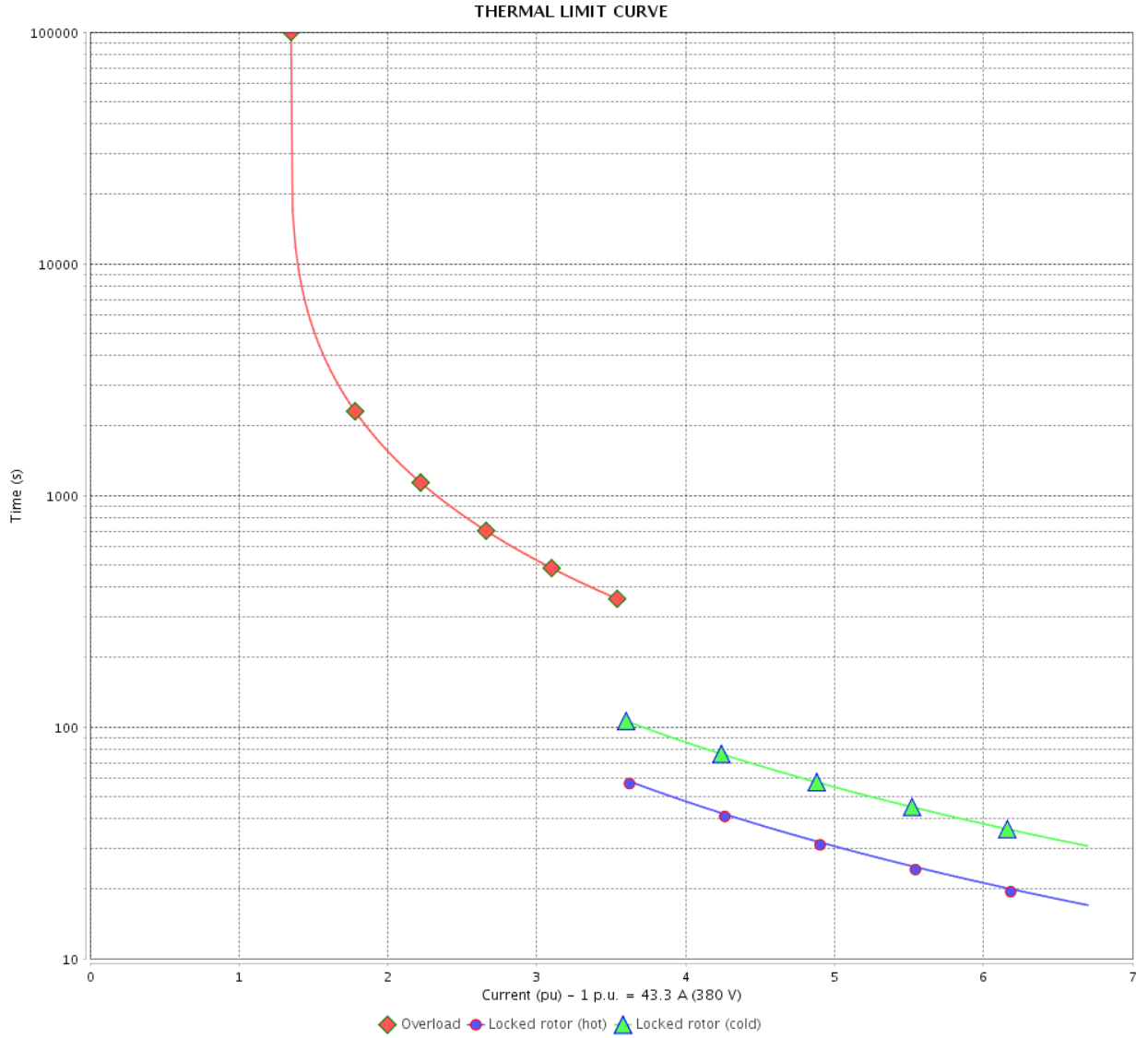
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LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 106 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

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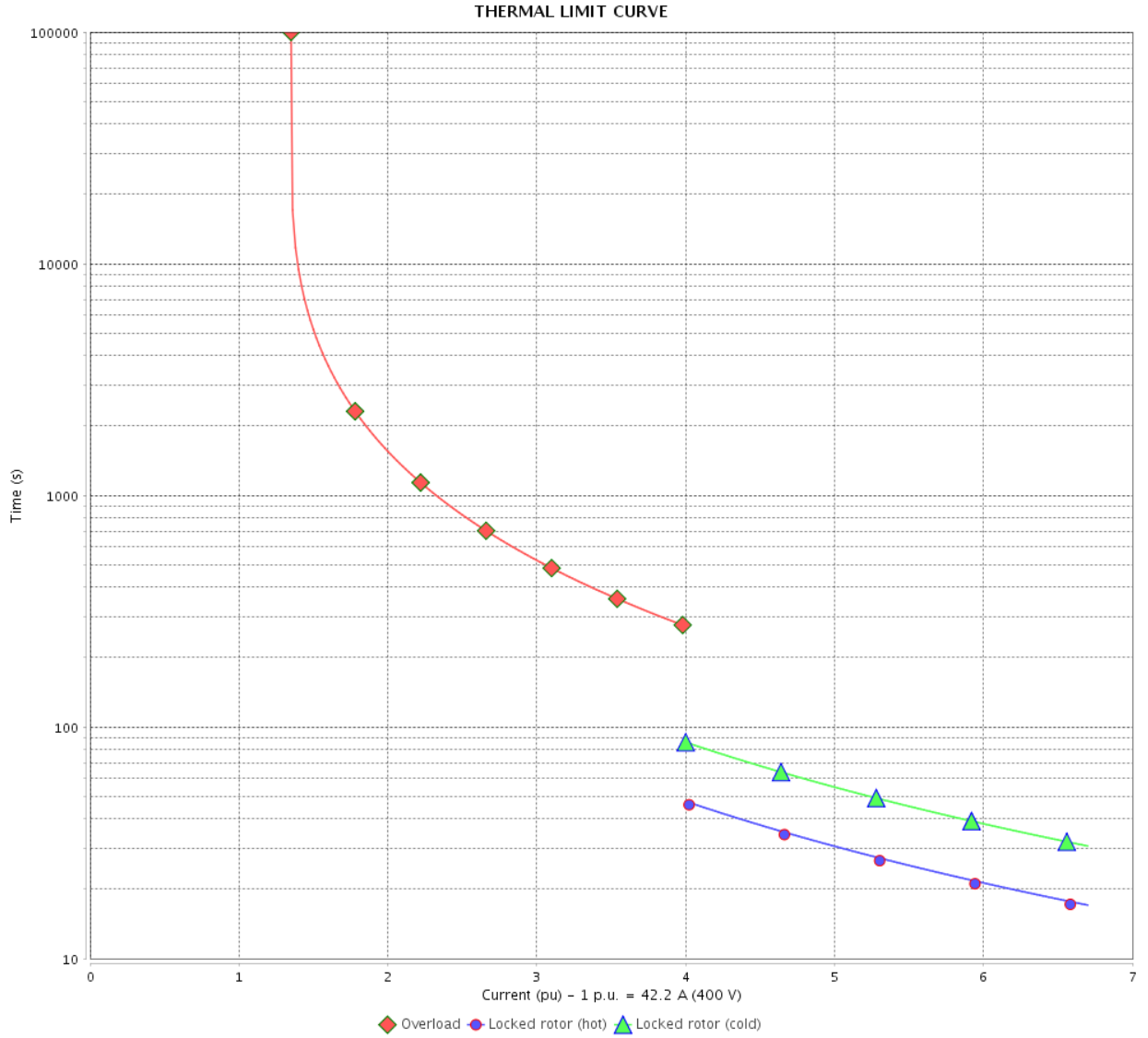
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Three Phase Induction Motor - Squirrel Cage



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Rated torque	: 106 ft.lb	Insulation class	: F
Locked rotor torque	: 280 %	Service factor	: 1.00
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

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Cooling constant

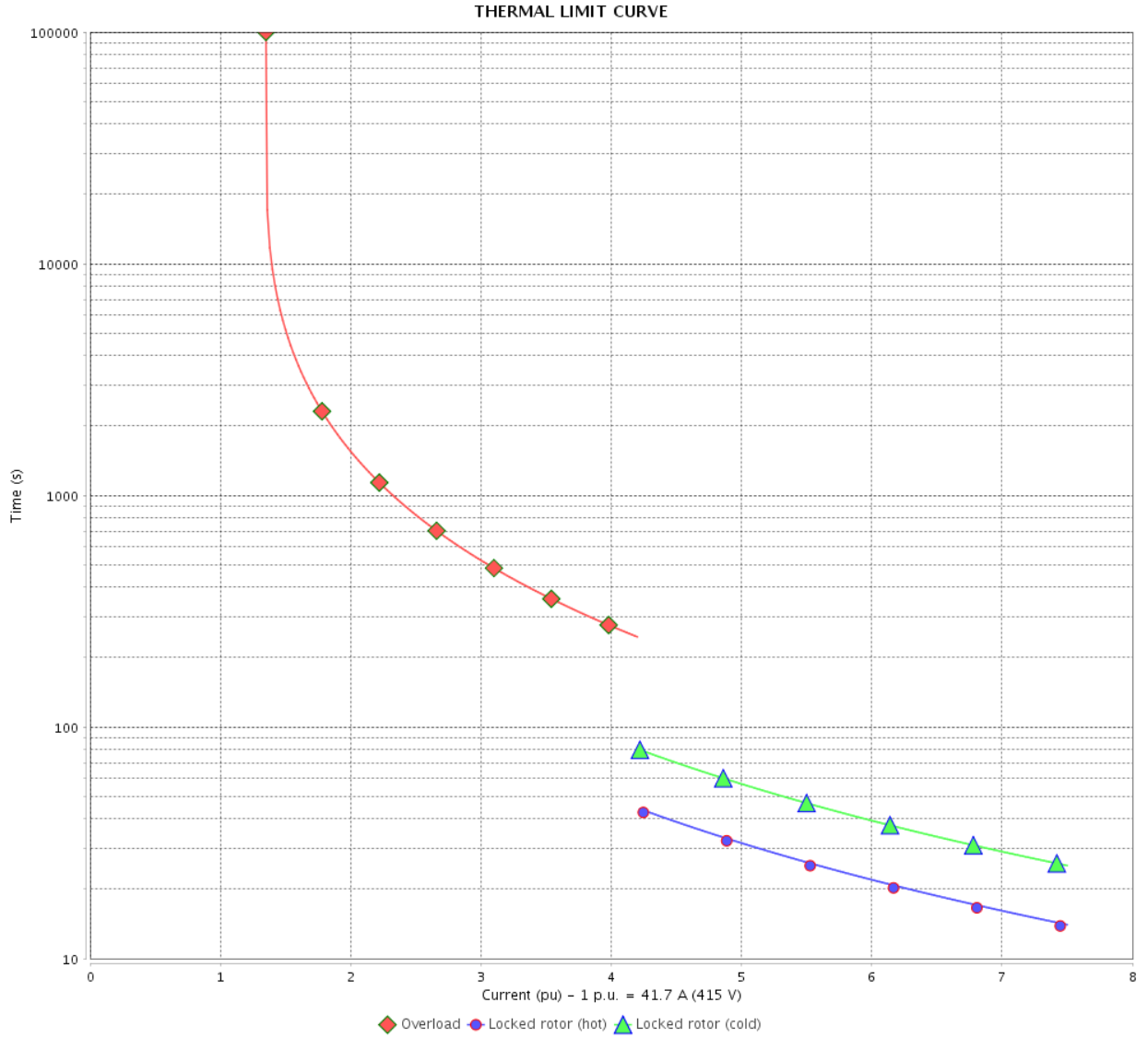
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Three Phase Induction Motor - Squirrel Cage



Customer : _____



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Date				

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



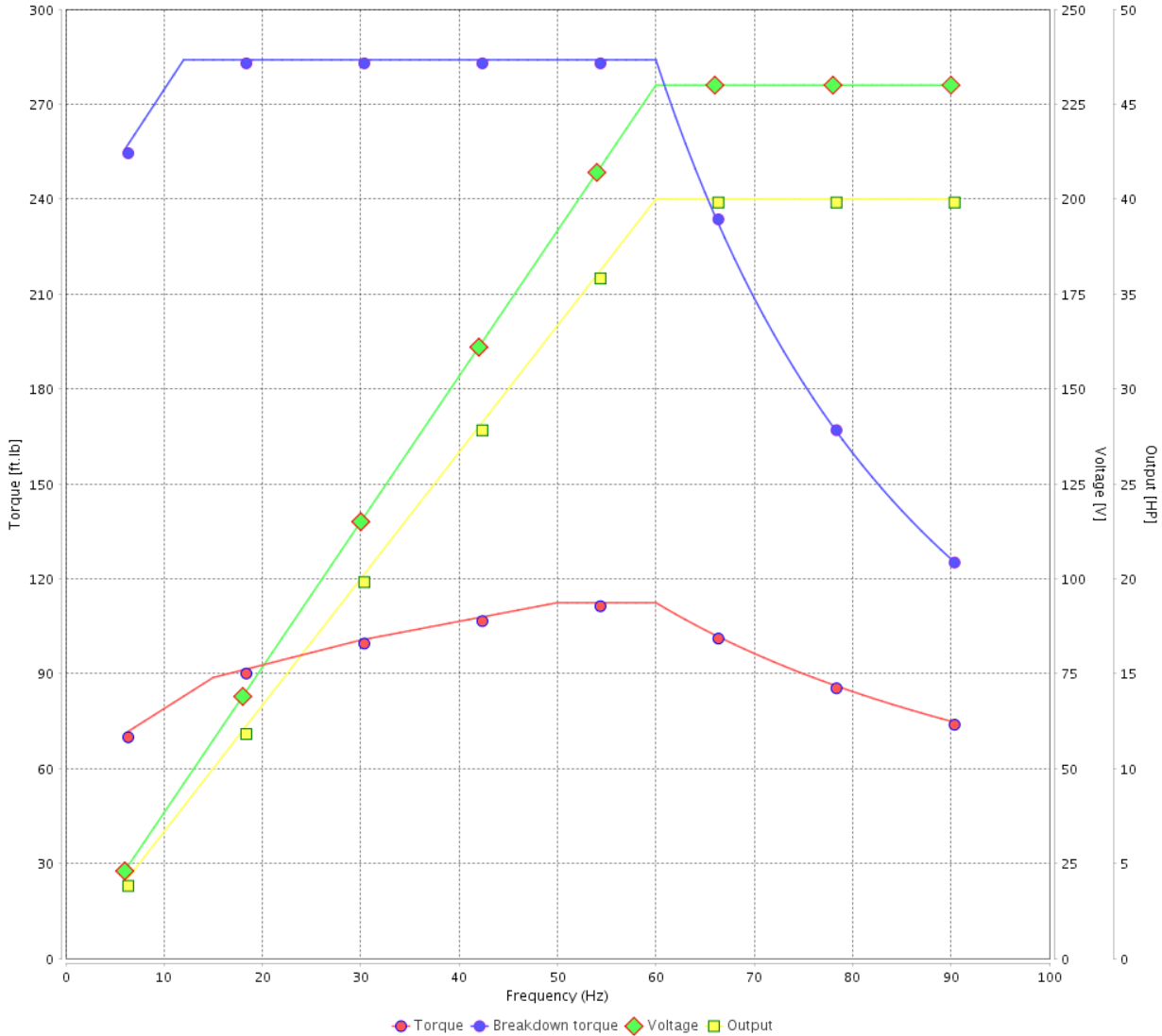
Customer :

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Catalog # : 04018OT3E324TC-W40G

VFD OPERATION CURVE



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Rated current : 95.2/47.6 A
 LRC : 6.2
 Rated torque : 118 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 240 %
 Rated speed : 1775 rpm

Moment of inertia (J) : 5.69 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
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 Design : B

Rev.	Changes Summary	Performed	Checked	Date
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

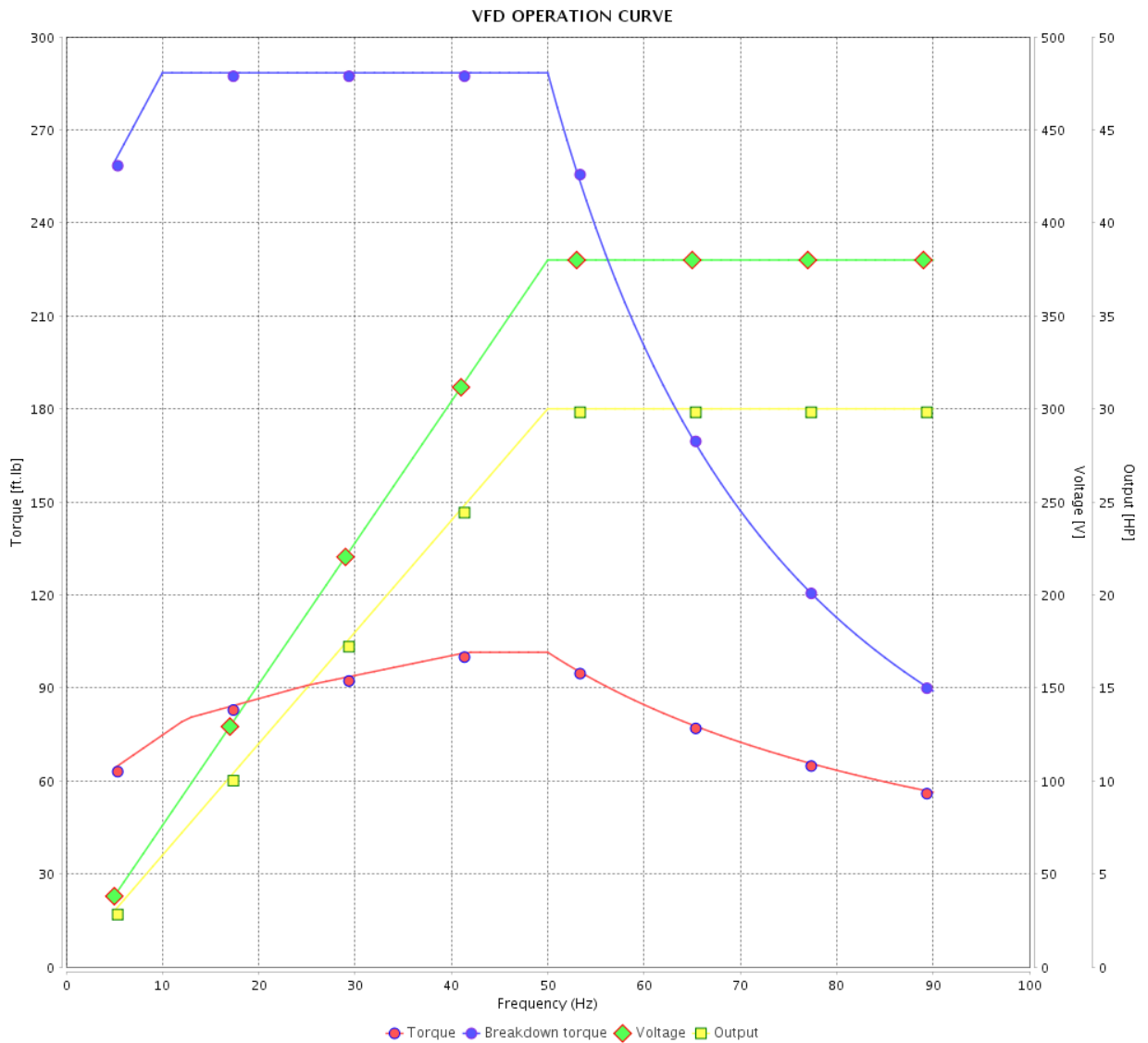


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Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



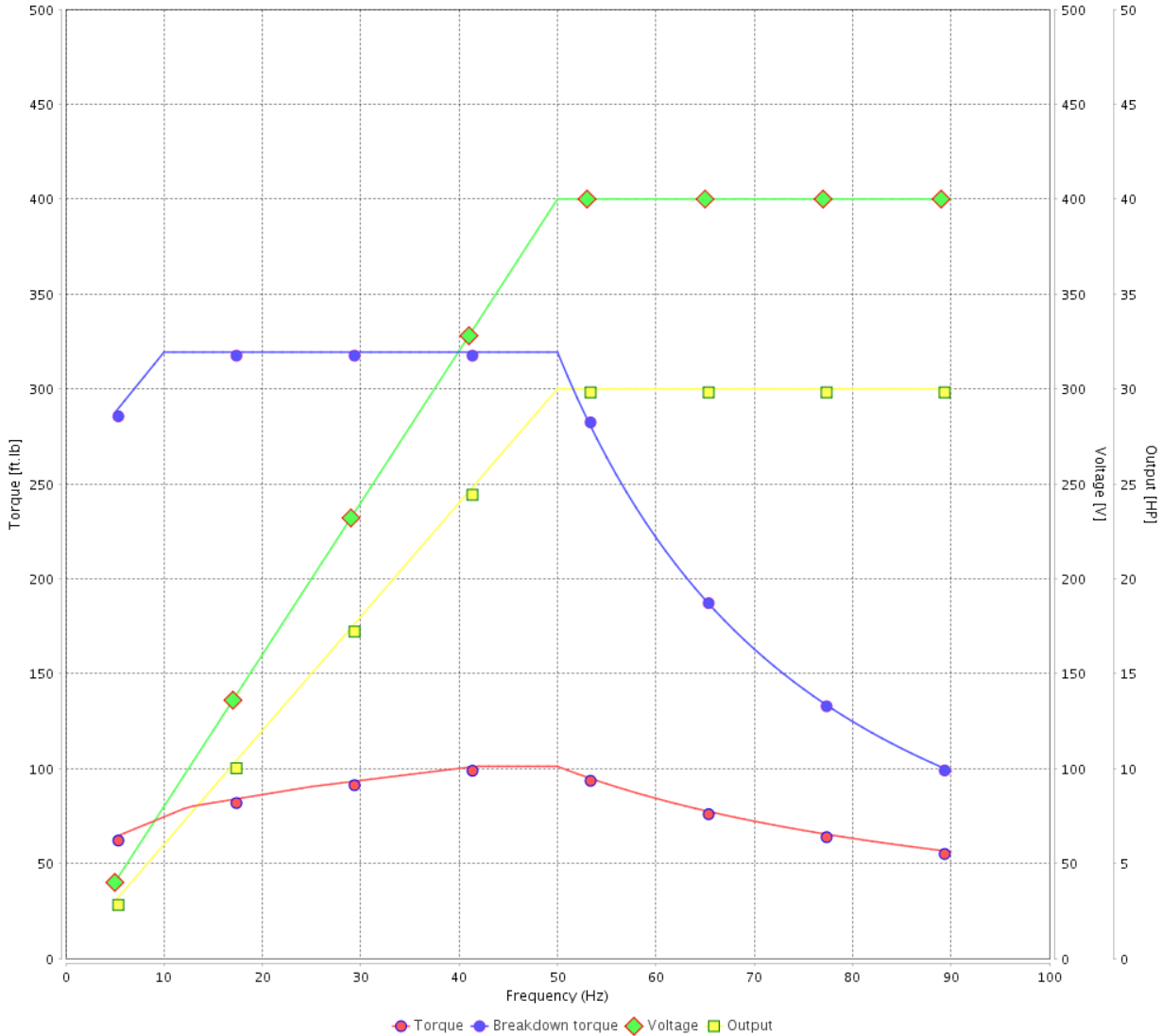
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Locked rotor torque	: 260 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 80 K
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Date	12/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

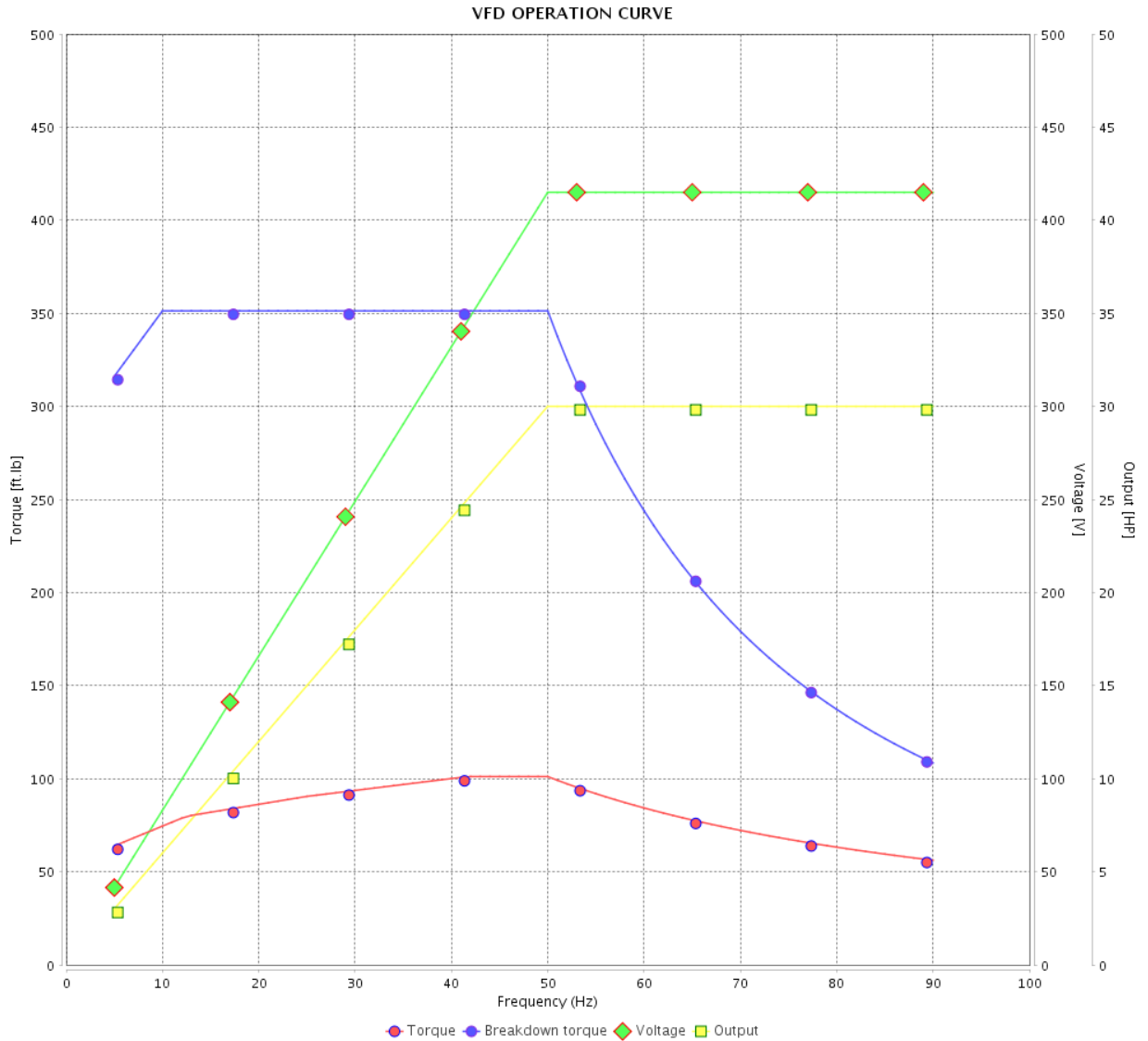


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Performance : 415 V 50 Hz 4P IE3

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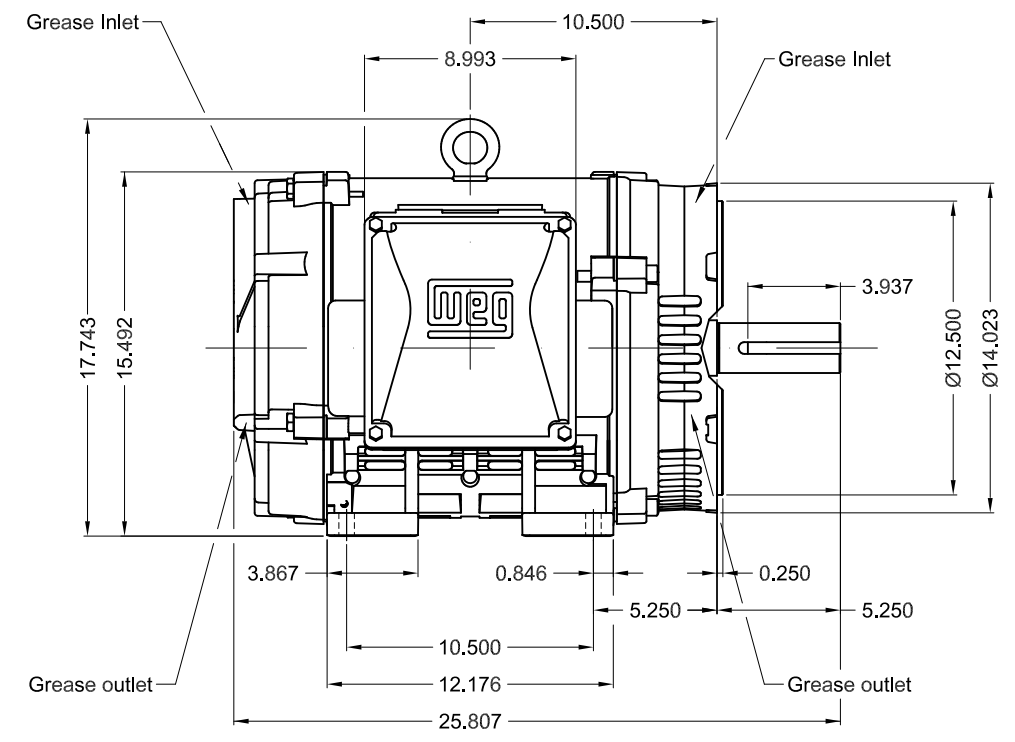
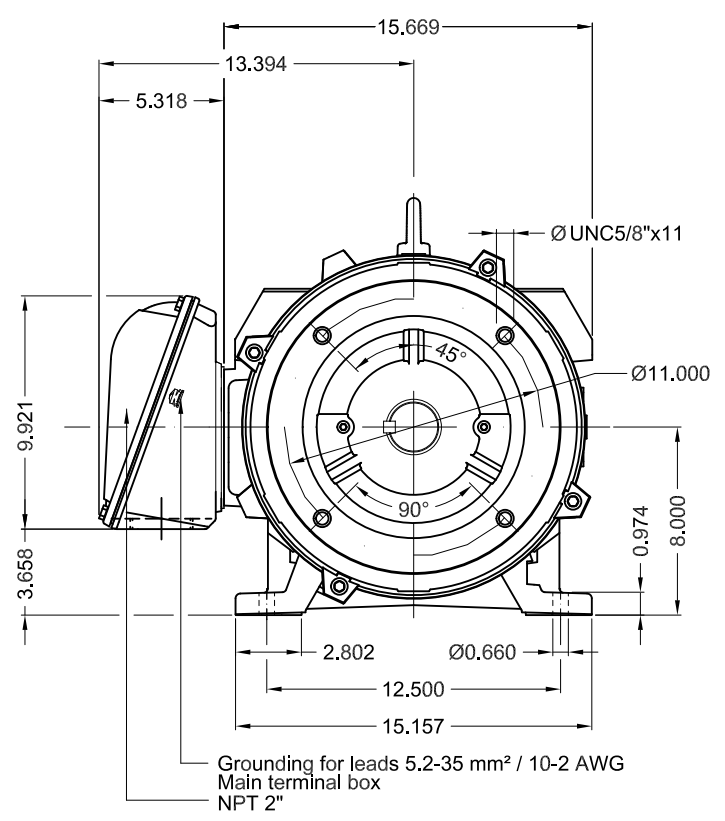
Rev.	Changes Summary	Performed	Checked	Date
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1 2 3 4 5 6

A

B

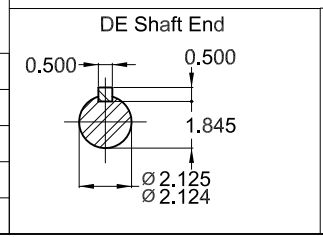
C



D

E

Internal AEGIS ground ring on the DE
Color RAL 5009
Painting plan 203A
Mounting NEMA F-1
Mounting B34R(D)



40 HP 04 Poles 60 Hz A

1:8

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR W40 PREM. EFF.					
CHECKED		FRAME 324TC IP23 ODP					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW
WDD





W40 NEMA
CC029A Premium

Inverter Duty Motor



3PT9
LISTED

IEC 60034-1

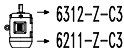
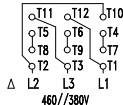
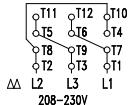
MOD.T01#FOXON



For 60Hz use on PWM, VT 1000:1, CT 3:1, 1.0SF

MODEL 040180T3E324TC-W40G
MADE IN BRAZIL
14503931

PH 3	FR 324TC	HP(kW) 40.0(30.0)	Hz 60
V 230/460	A 95.2/47.6	RPM 1775	DES B
NEMA NOM EFF 94.1 %	INS. CL. F Δ T 80 K	IP23	
ENCL ODP	DUTY CONT.	AMB. 40°C	
CODE G	PF 0.84	SF 1.25	SFA 119/59.5
USABLE @208V	105 A	SF 1.15	SFA 121
30HP 22kW 50Hz 380V 43.3A 1475RPM SF1.00 EFF 93.0% (IE3)	ALT 1000 m.a.s.l.		



MOBIL POLYREX EM
21 g 20000 h

ALT 1000 m.a.s.l. 465 Lbs