

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer					
Product line		: NEMA Premium Efficiency Three-Phase		Product code : 14406885	
				Catalog # : 03018XT3E286T	
Frame : 286T		Cooling method : IC411 - TEFC			
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 : 517 lb			
Protection degree : IP55		Moment of inertia (J) : 5.16 sq.ft.lb			
Design : B					
Output [HP]	30	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]	72.0/36.0	43.4	41.4	40.4	40.4
L. R. Amperes [A]	569/284	278	298	311	311
LRC [A]	7.9x(Code G)	6.4x(Code F)	7.2x(Code G)	7.7x(Code G)	7.7x(Code G)
No load current [A]	29.0/14.5	14.5	15.5	16.5	16.5
Rated speed [RPM]	1770	1460	1465	1470	1470
Slip [%]	1.67	2.67	2.33	2.00	2.00
Rated torque [ft.lb]	89.0	108	108	108	108
Locked rotor torque [%]	310	229	260	290	290
Breakdown torque [%]	310	229	260	290	290
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	30s (cold) 17s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)
Noise level ²	68.0 dB(A)	64.0 dB(A)	64.0 dB(A)	64.0 dB(A)	64.0 dB(A)
Efficiency (%)	25%	92.8	93.5	93.4	92.7
	50%	93.0	93.0	93.0	92.4
	75%	93.6	92.4	93.0	93.0
	100%	93.6	91.7	92.4	92.4
Power Factor	25%	0.42	0.47	0.44	0.42
	50%	0.66	0.71	0.68	0.66
	75%	0.77	0.80	0.78	0.77
	100%	0.82	0.84	0.83	0.82
Bearing type		Drive end : 6311 C3	Non drive end : 6211 C3	Foundation loads	
Sealing		: Oil Seal	: Lip Seal	Max. traction : 1097 lb	
Lubrication interval		: 20000 h	: 20000 h	Max. compression : 1614 lb	
Lubricant amount		: 18 g	: 11 g		
Lubricant type		: Mobil Polyrex EM			
Notes					
USABLE @208V 79.6A SF 1.00 SFA 79.6A					
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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DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer : _____

Thermal protection

ID	Application	Type	Quantity	Sensing Temperature
1	Winding	Thermostat - 2 wires	1 x Phase	155 °C

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TORQUE AND CURRENT VS SPEED CURVE



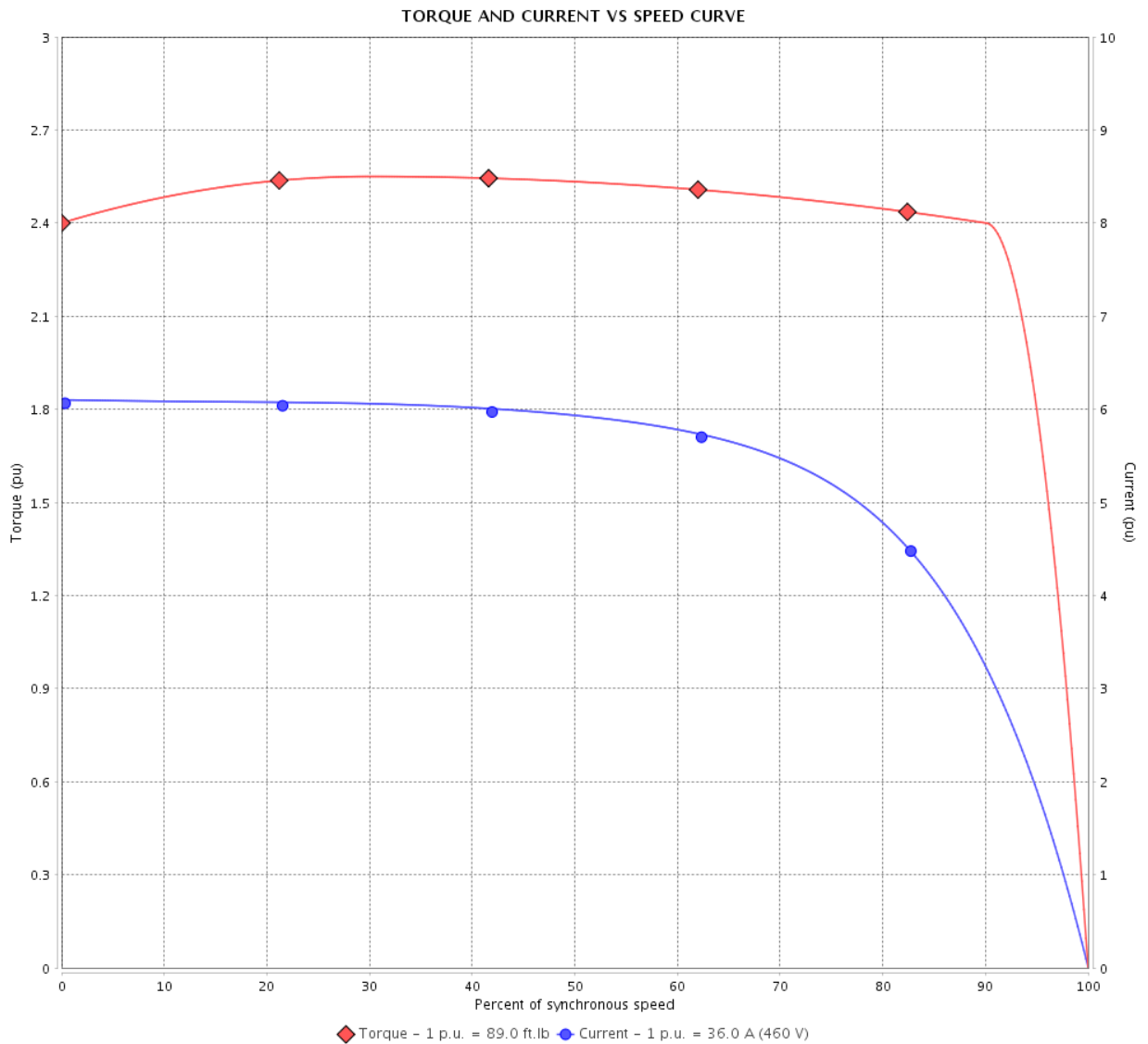
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14406885

Catalog # : 03018XT3E286T



Performance : 230/460 V 60 Hz 4P

Rated current : 72.0/36.0 A
 LRC : 7.9
 Rated torque : 89.0 ft.lb
 Locked rotor torque : 310 %
 Breakdown torque : 310 %
 Rated speed : 1770 rpm

Moment of inertia (J) : 5.16 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 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



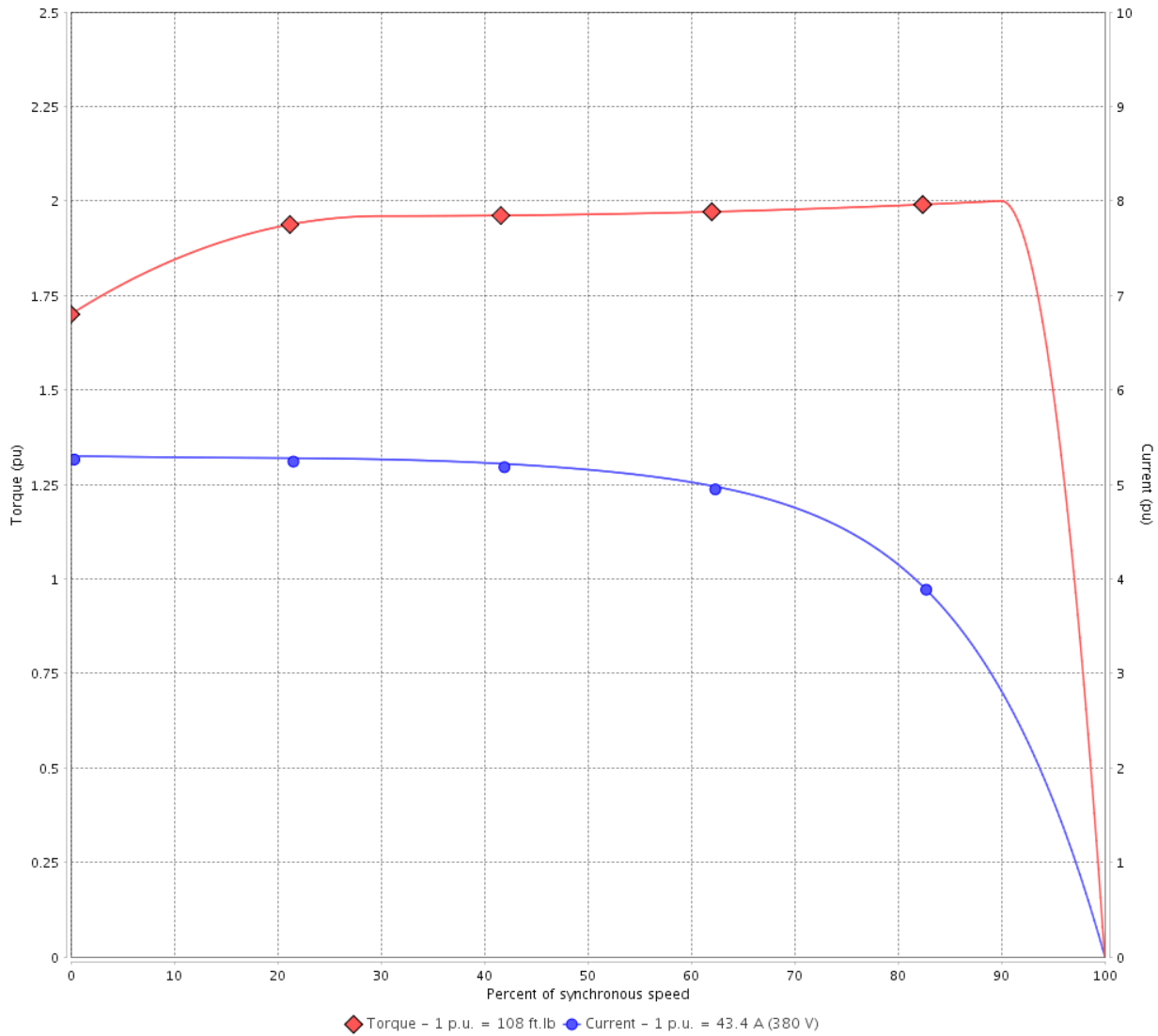
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TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 4P IE2

Rated current	: 43.4 A	Moment of inertia (J)	: 5.16 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 108 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 1460 rpm	Design	: B

Locked rotor time : 36s (cold) 20s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



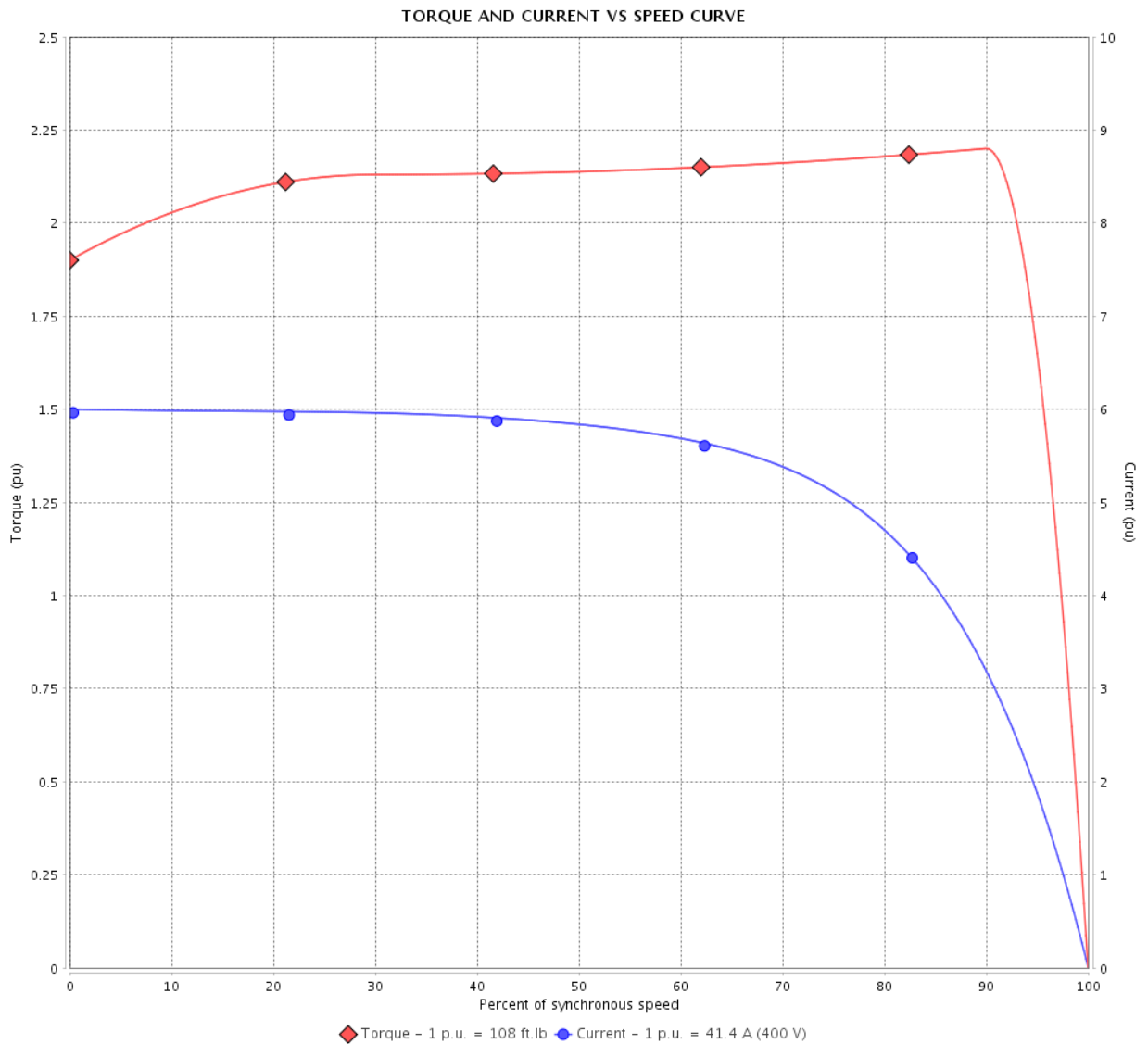
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14406885

Catalog # : 03018XT3E286T



Performance : 400 V 50 Hz 4P IE2

Rated current	: 41.4 A	Moment of inertia (J)	: 5.16 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 108 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1465 rpm	Design	: B

Locked rotor time : 36s (cold) 20s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



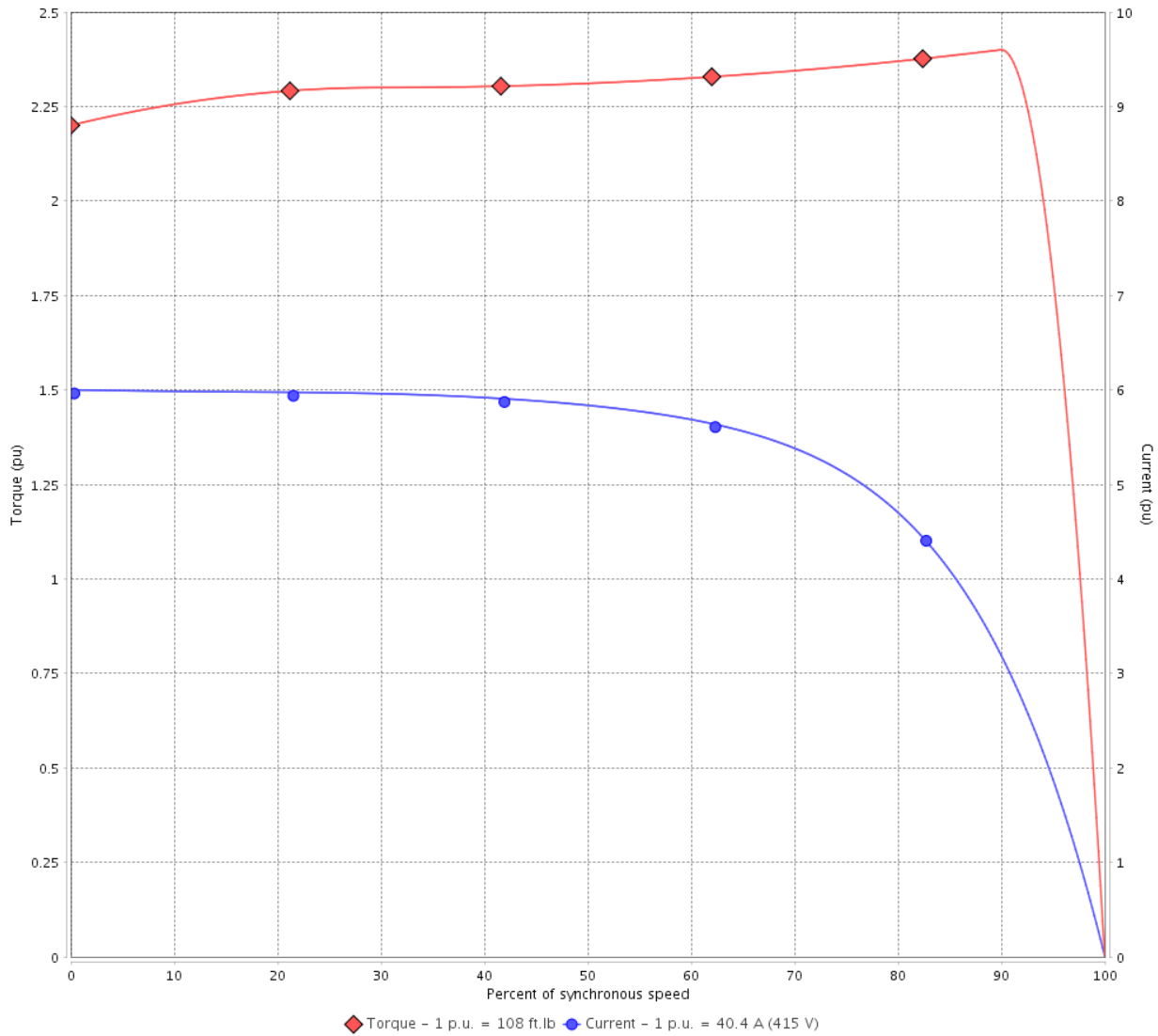
Customer :

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Catalog # : 03018XT3E286T

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 4P IE2

Rated current	: 40.4 A	Moment of inertia (J)	: 5.16 sq.ft.lb
LRC	: 7.7	Duty cycle	: Cont.(S1)
Rated torque	: 108 ft.lb	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 1470 rpm	Design	: B

Locked rotor time : 36s (cold) 20s (hot)

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LOAD PERFORMANCE CURVE

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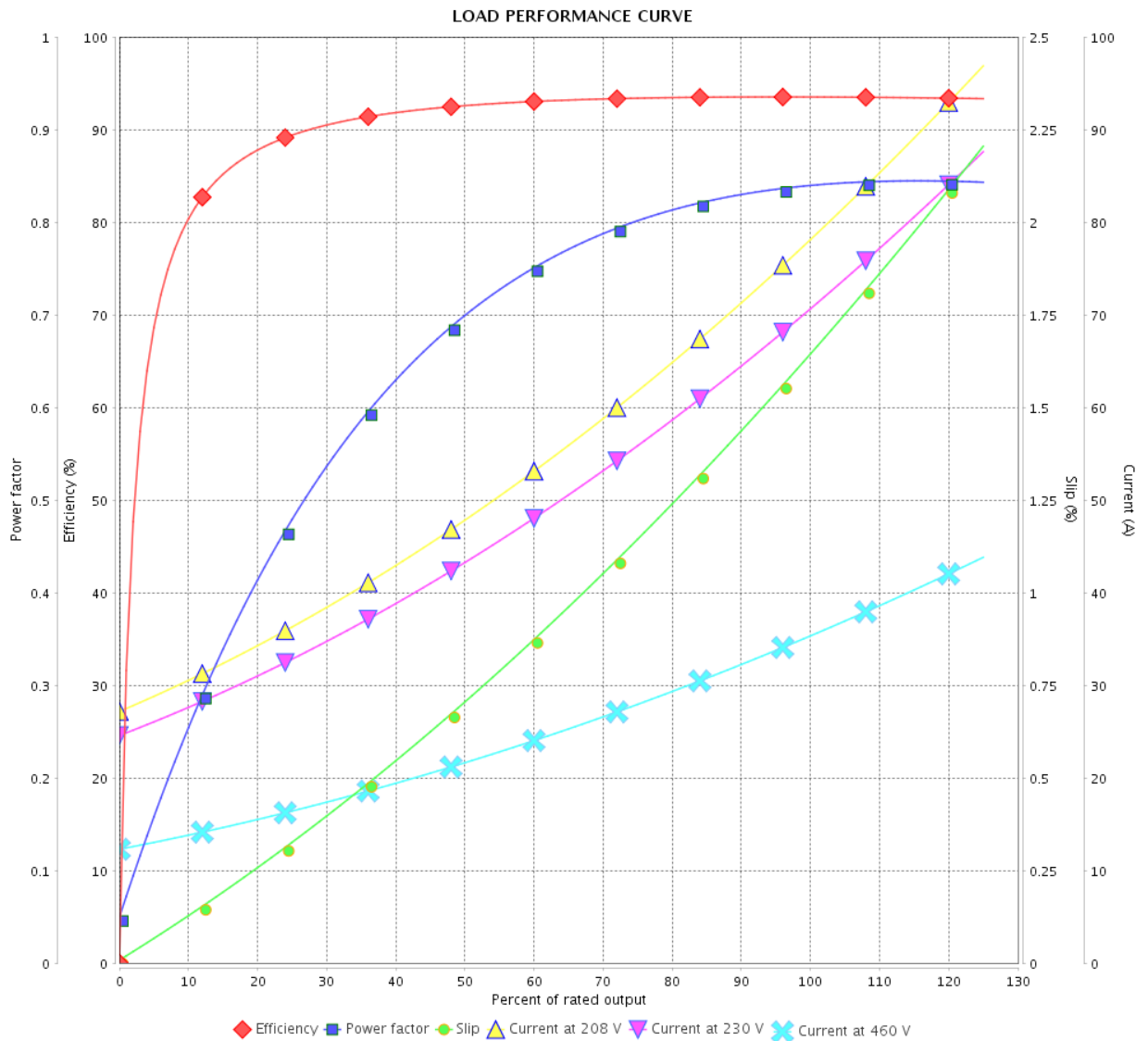


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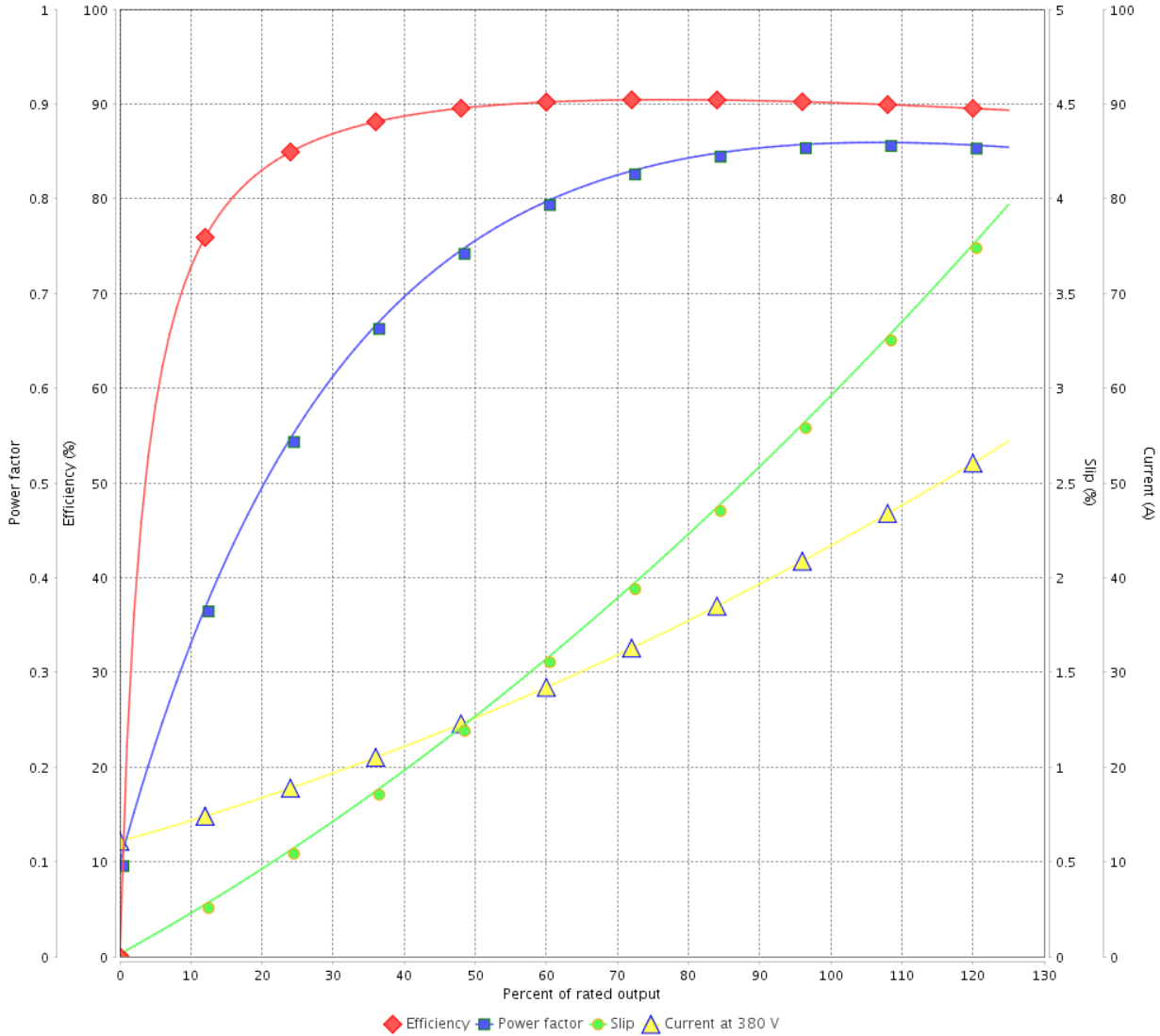
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Three Phase Induction Motor - Squirrel Cage

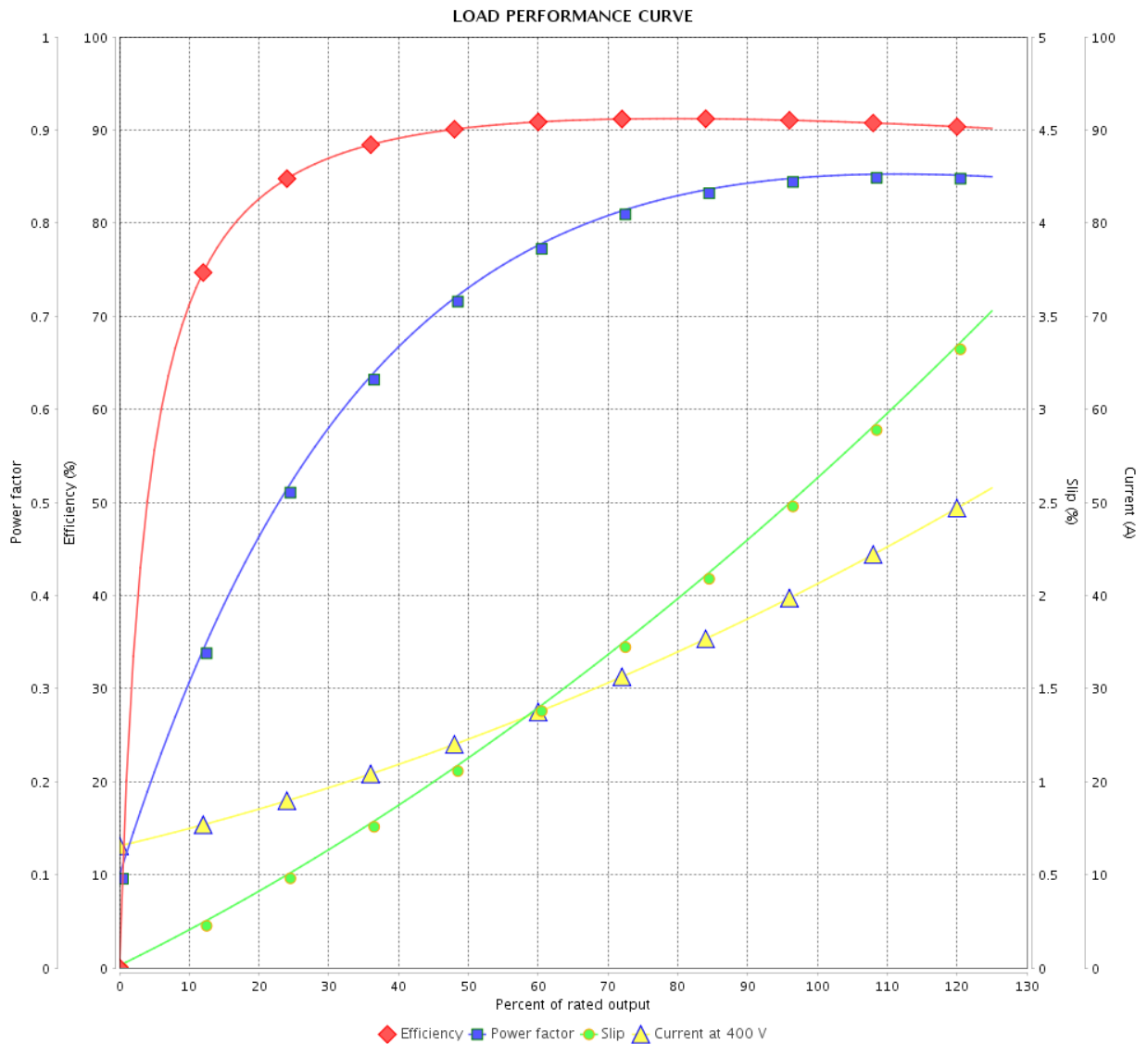


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THERMAL LIMIT CURVE



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Rated speed : 1770 rpm	Design : B

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
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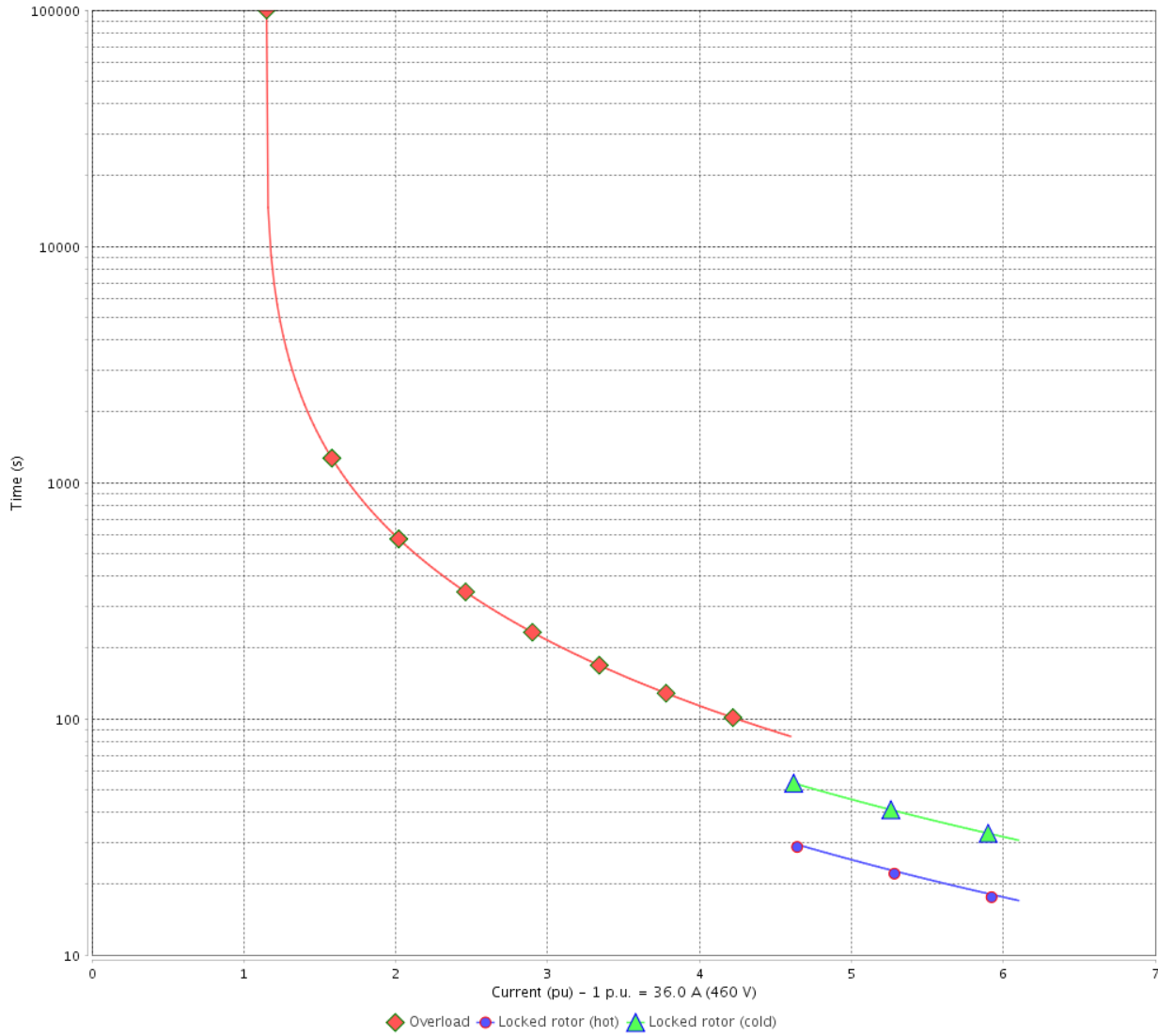
THERMAL LIMIT CURVE

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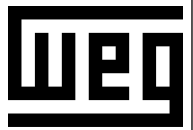
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THERMAL LIMIT CURVE



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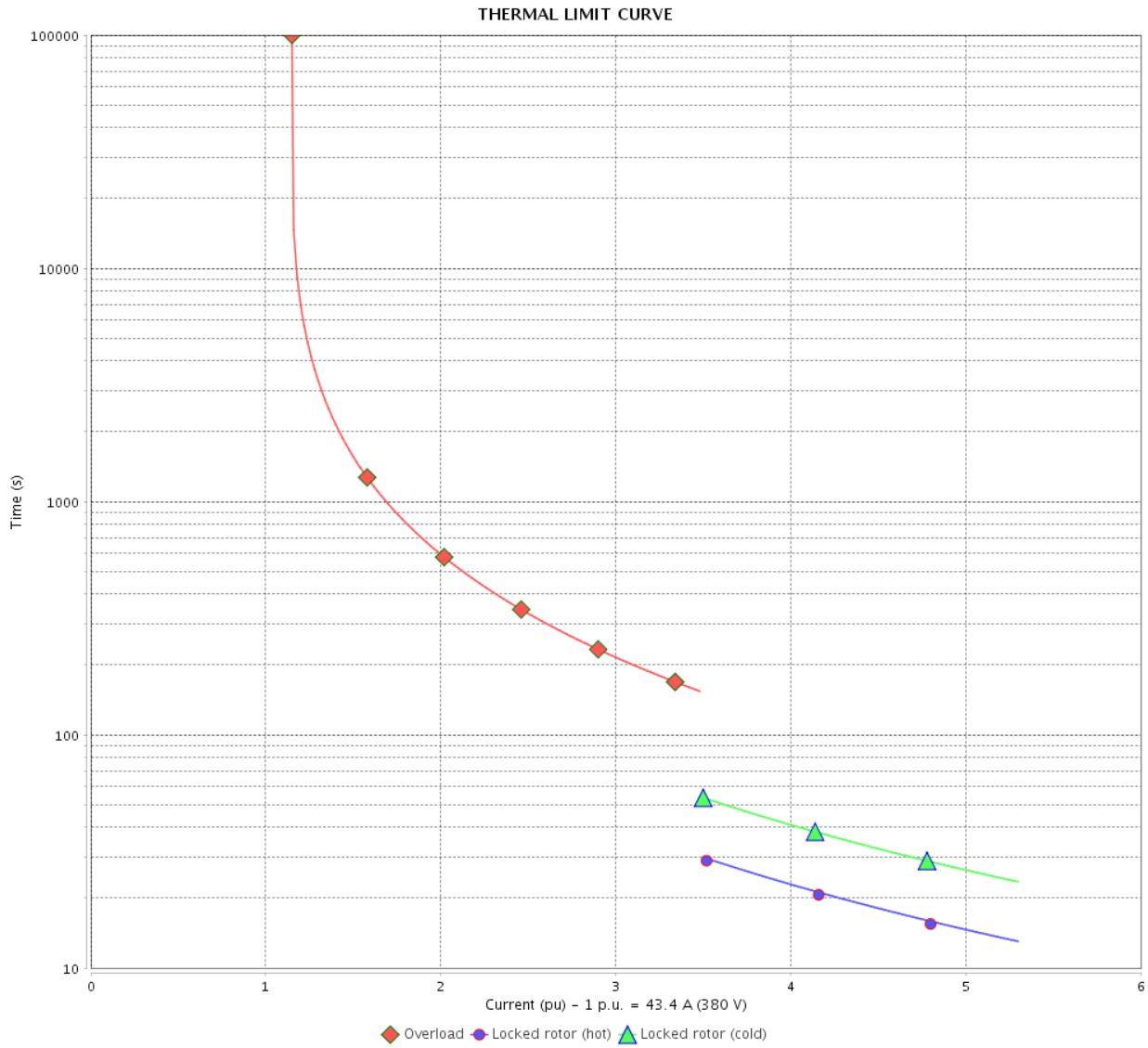
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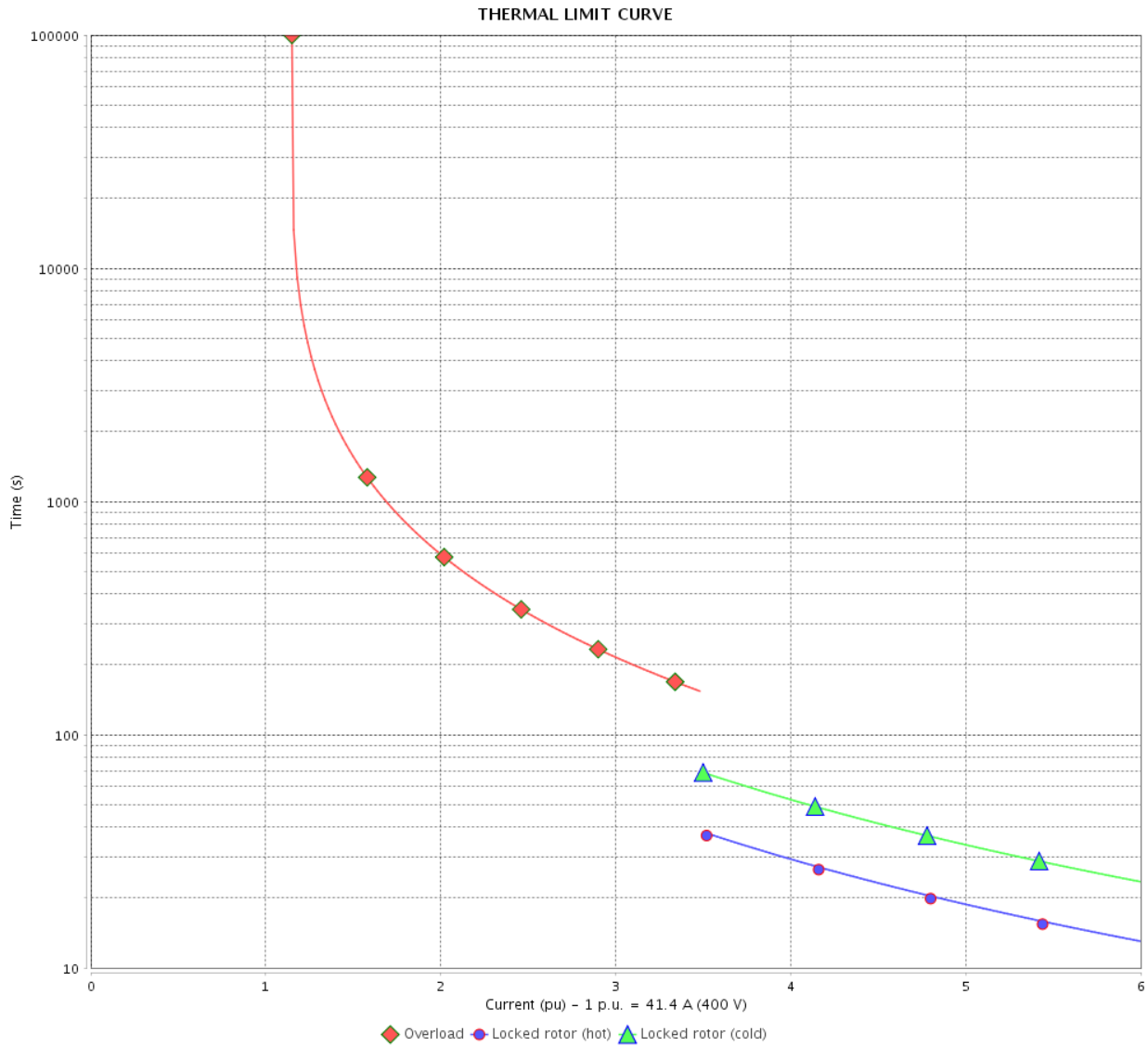
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Locked rotor torque : 290 %	Service factor : 1.00
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Cooling constant

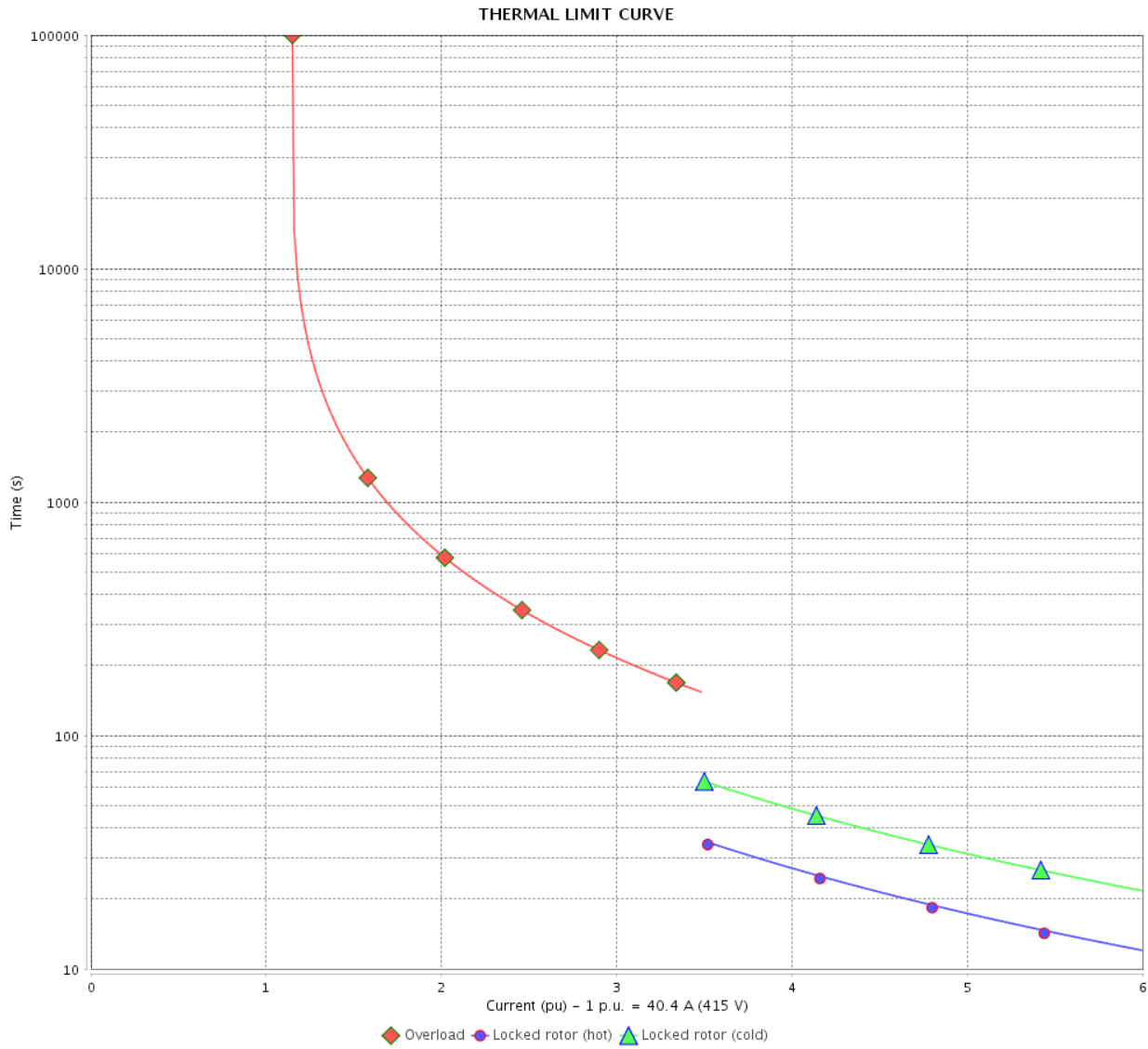
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Date	14/04/2022			

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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Date				
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

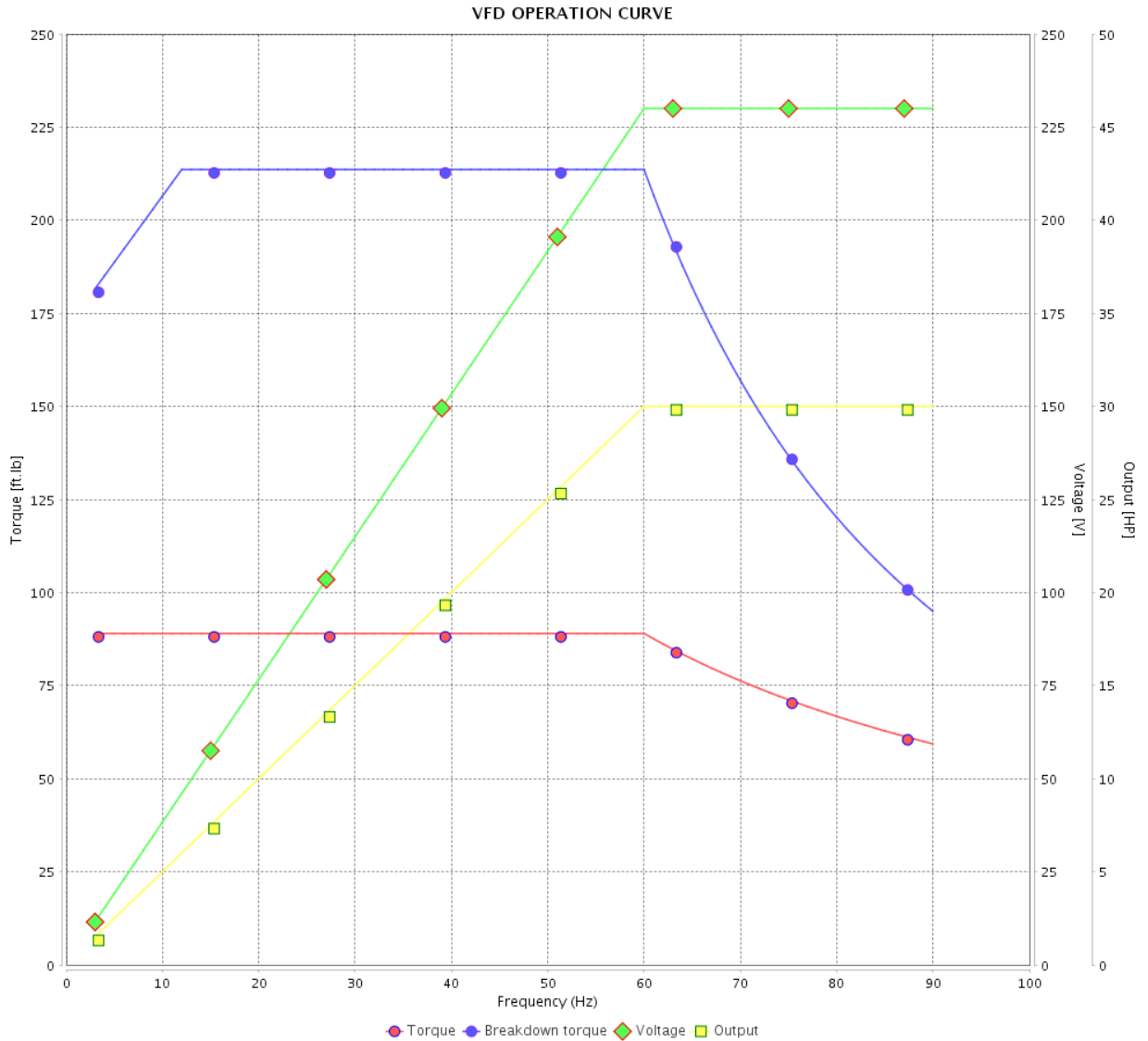


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 Duty cycle : Cont.(S1)
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VFD OPERATION CURVE

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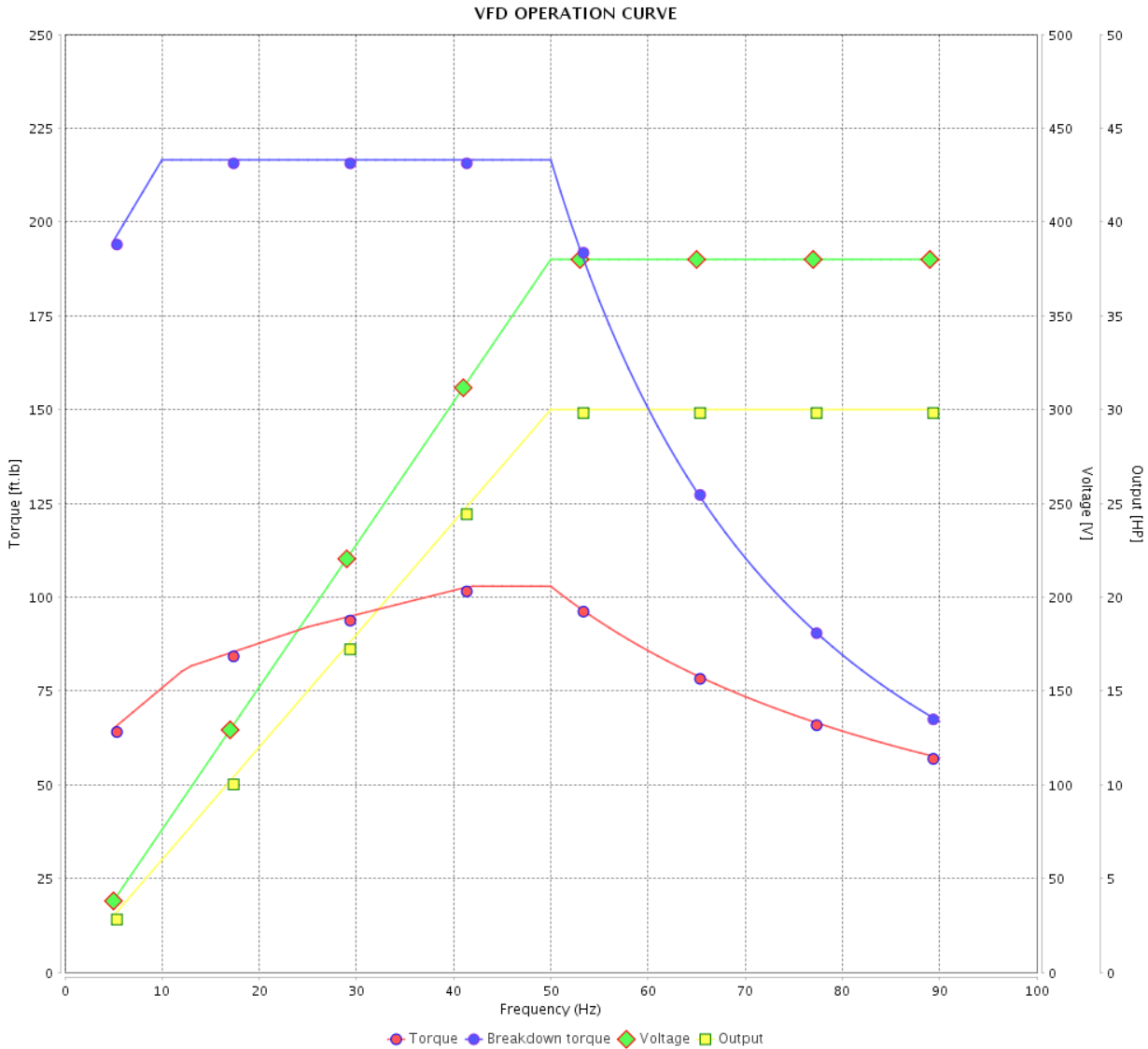


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Moment of inertia (J) : 5.16 sq.ft.lb
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 Insulation class : F
 Service factor : 1.00
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

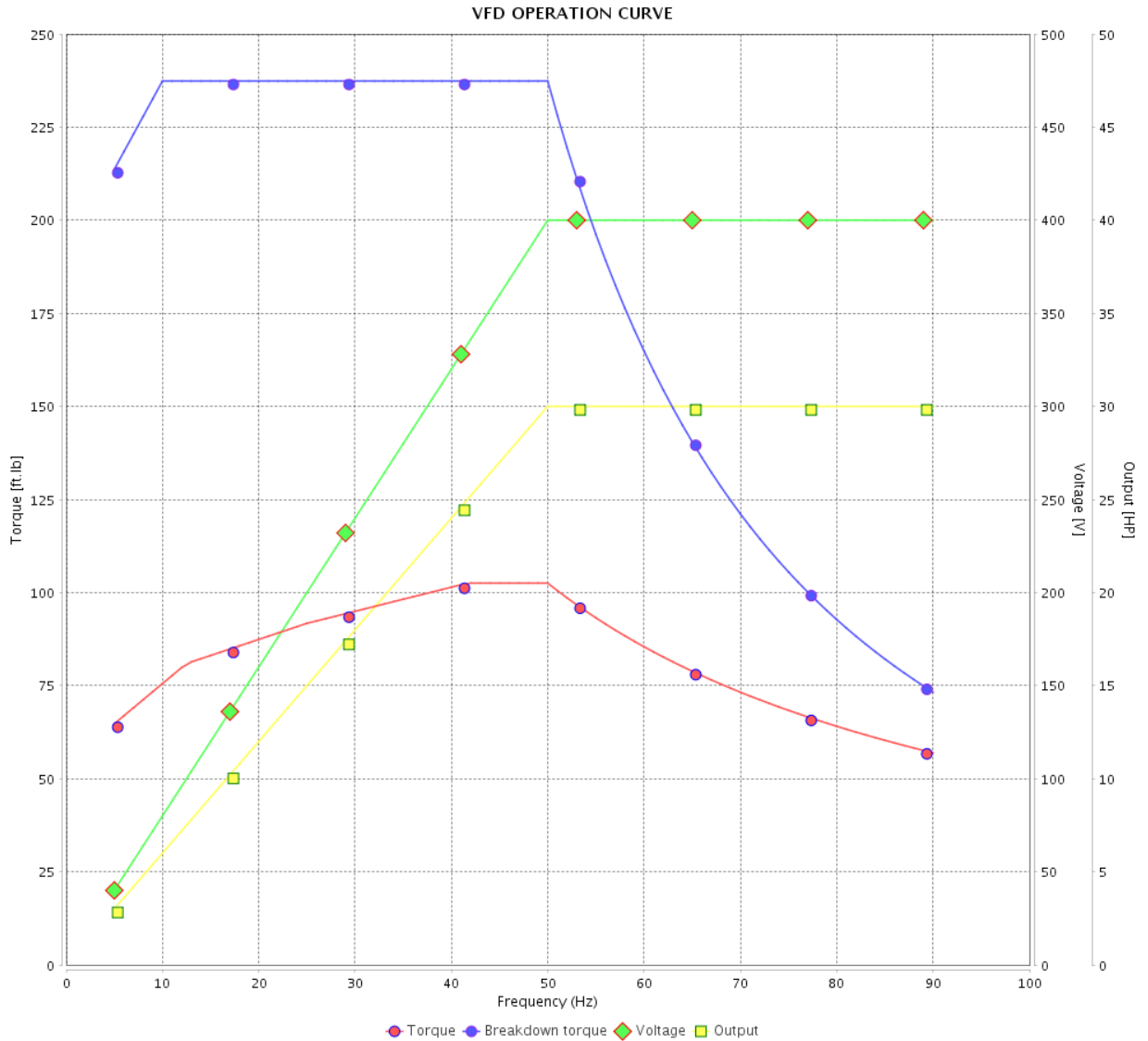


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Performance : 400 V 50 Hz 4P IE2

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 Duty cycle : Cont.(S1)
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 Service factor : 1.00
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



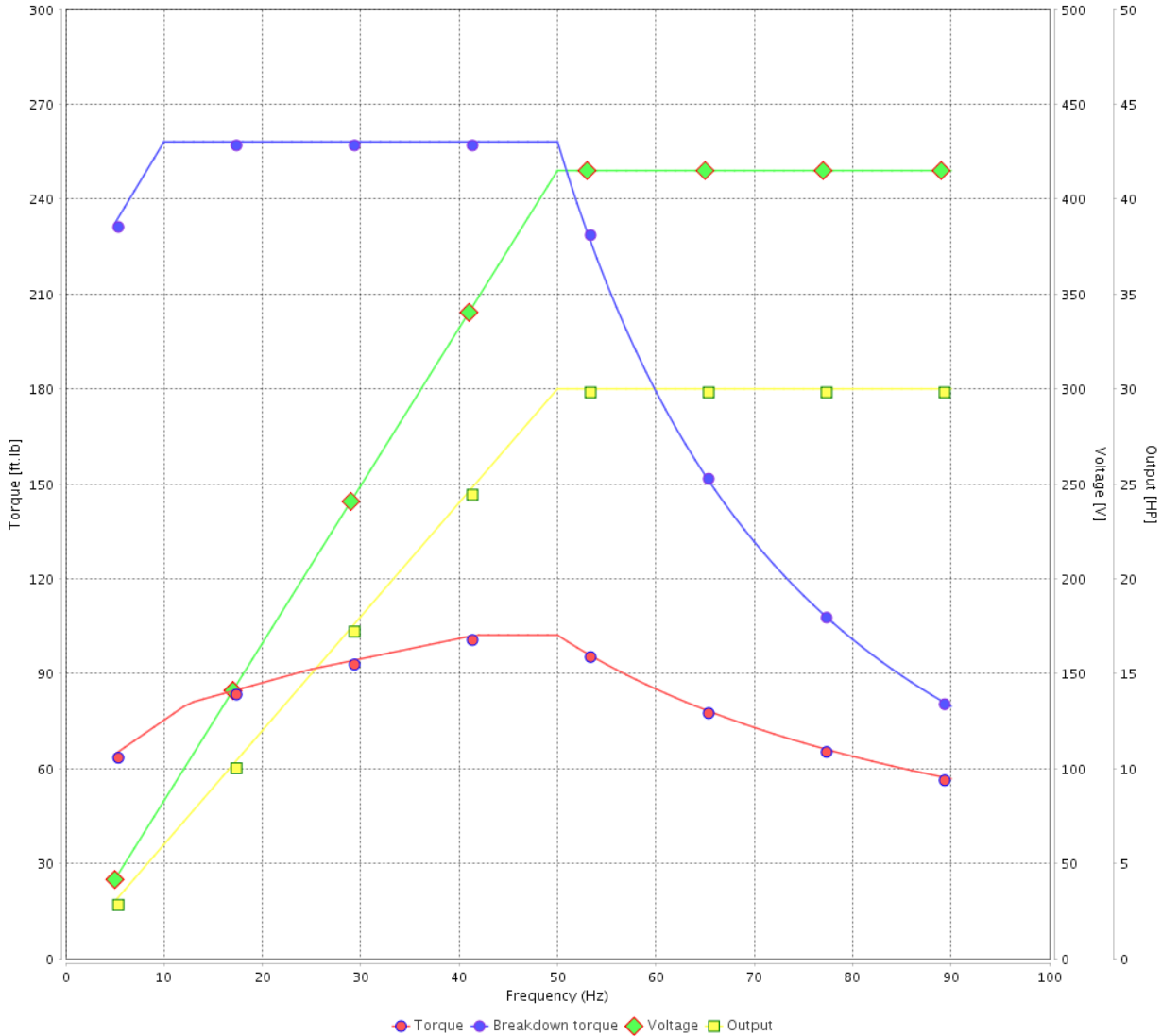
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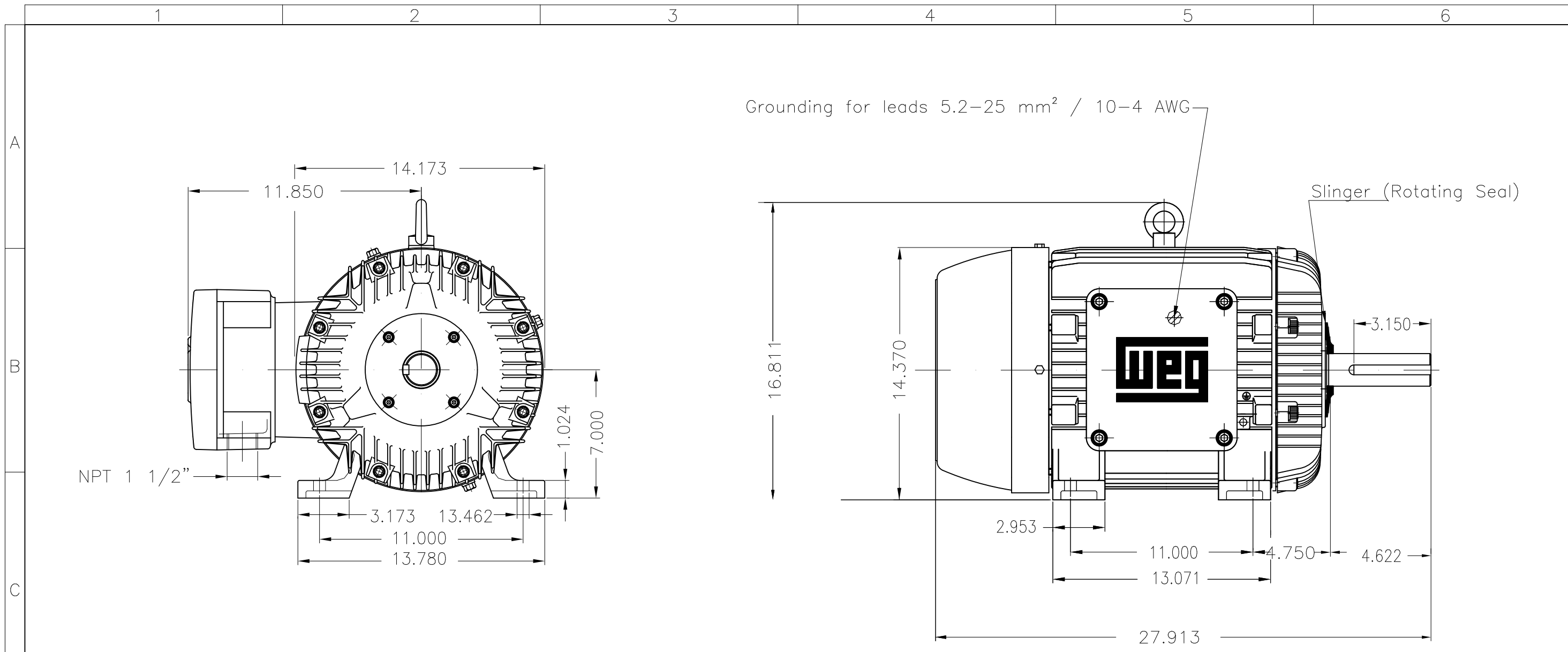
VFD OPERATION CURVE



Performance : 415 V 50 Hz 4P IE2

Rated current	: 40.4 A	Moment of inertia (J)	: 5.16 sq.ft.lb
LRC	: 7.7	Duty cycle	: Cont.(S1)
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Grounding for leads 5.2–25 mm² / 10–4 AWG

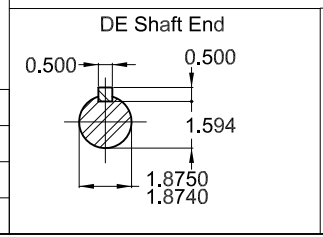
Slinger (Rotating Seal)

C

D

E

Color RAL 5009
 Painting plan 202P
 Mounting NEMA F-1
 Mounting B3R(D)



30 HP 04 Poles 60 Hz A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR EXPLOSION PROOF PREM. EFF.					
CHECKED		FRAME 286T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW
 WDD



MADE IN BRAZIL

**W21X NEMA**
Premium

14406885



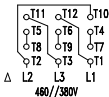
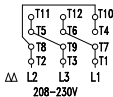
LISTED

CC029A

Inverter Duty Motor
Severe Duty

MODEL 03018XT3E286T

PH 3	FR 286T		
HP(kW) 30.0(22.0)		HZ 60	IP55
V 230/460		A 70.2/35.1	
RPM 1770		NEMA NOM EFF 93.6%	
PF 0.84		SFA 80.7/40.4	DES B
INS CL F Δ T 80 K		SF 1.15	ENCL TEFC
DUTY CONT.		CODE G	ALT 1000 m.a.s.l.
AMB 40°C	USABLE @208V	79.6 A	SF 1.00
AMB 55°C SF1.0			
30HP 22kW 50Hz 380V 43.4A 1455RPM SF1.00 EFF 90.2% (IE1)			



→ 6311-C3 MOBIL POLYREX EM
→ 6211-C3 18 g 20000 h

498 Lbs



TEMP CODE T3C
CSA/UL: Class I - Div. 1 - Groups C and D
CSA: Class II - Div. 1 - Groups F and G
CSA: Class I - Zone 1 - IIB

EXPLOSION PROOF MOTOR

FOR USE ON VPWM VFD 1000:1VT, 6:1CT, 1.0SF, T3C, AMB 40°C.