

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer					
Product line		: NEMA Premium Efficiency Three-Phase		Product code : 11705378	
				Catalog # : 40018XT3G586/7	
Frame		: 586/7T		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 : 4063 lb	
Protection degree		: IP55		Moment of inertia (J) : 179 sq.ft.lb	
Design		: B			
Output [HP]	400	350	350	350	350
Poles	4	4	4	4	4
Frequency [Hz]	60	50	50	50	50
Rated voltage [V]	460	380	400	415	415
Rated current [A]	460	485	459	448	448
L. R. Amperes [A]	2944	2765	2938	3091	3091
LRC [A]	6.4x(Code G)	5.7x(Code F)	6.4x(Code G)	6.9x(Code H)	6.9x(Code H)
No load current [A]	120	118	129	138	138
Rated speed [RPM]	1790	1490	1490	1490	1490
Slip [%]	0.56	0.67	0.67	0.67	0.67
Rated torque [ft.lb]	1170	1230	1230	1230	1230
Locked rotor torque [%]	180	160	180	190	190
Breakdown torque [%]	200	190	210	229	229
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	32s (cold) 18s (hot)	45s (cold) 25s (hot)	45s (cold) 25s (hot)	45s (cold) 25s (hot)	45s (cold) 25s (hot)
Noise level ²	83.0 dB(A)	79.0 dB(A)	79.0 dB(A)	79.0 dB(A)	79.0 dB(A)
Efficiency (%)	25%	95.3	95.3	95.0	95.0
	50%	95.4	95.4	95.4	95.4
	75%	96.2	95.8	95.8	95.8
	100%	96.2	95.8	96.2	96.2
Power Factor	25%	0.56	0.58	0.54	0.51
	50%	0.80	0.81	0.78	0.76
	75%	0.84	0.84	0.83	0.82
	100%	0.85	0.85	0.85	0.84
Bearing type		Drive end : 6322 C3	Non drive end : 6319 C3	Foundation loads	
Sealing		: Viton Oil Seal Viton Seal		Max. traction : 3888 lb	
Lubrication interval		: 5138 h 7038 h		Max. compression : 7951 lb	
Lubricant amount		: 60 g 45 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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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



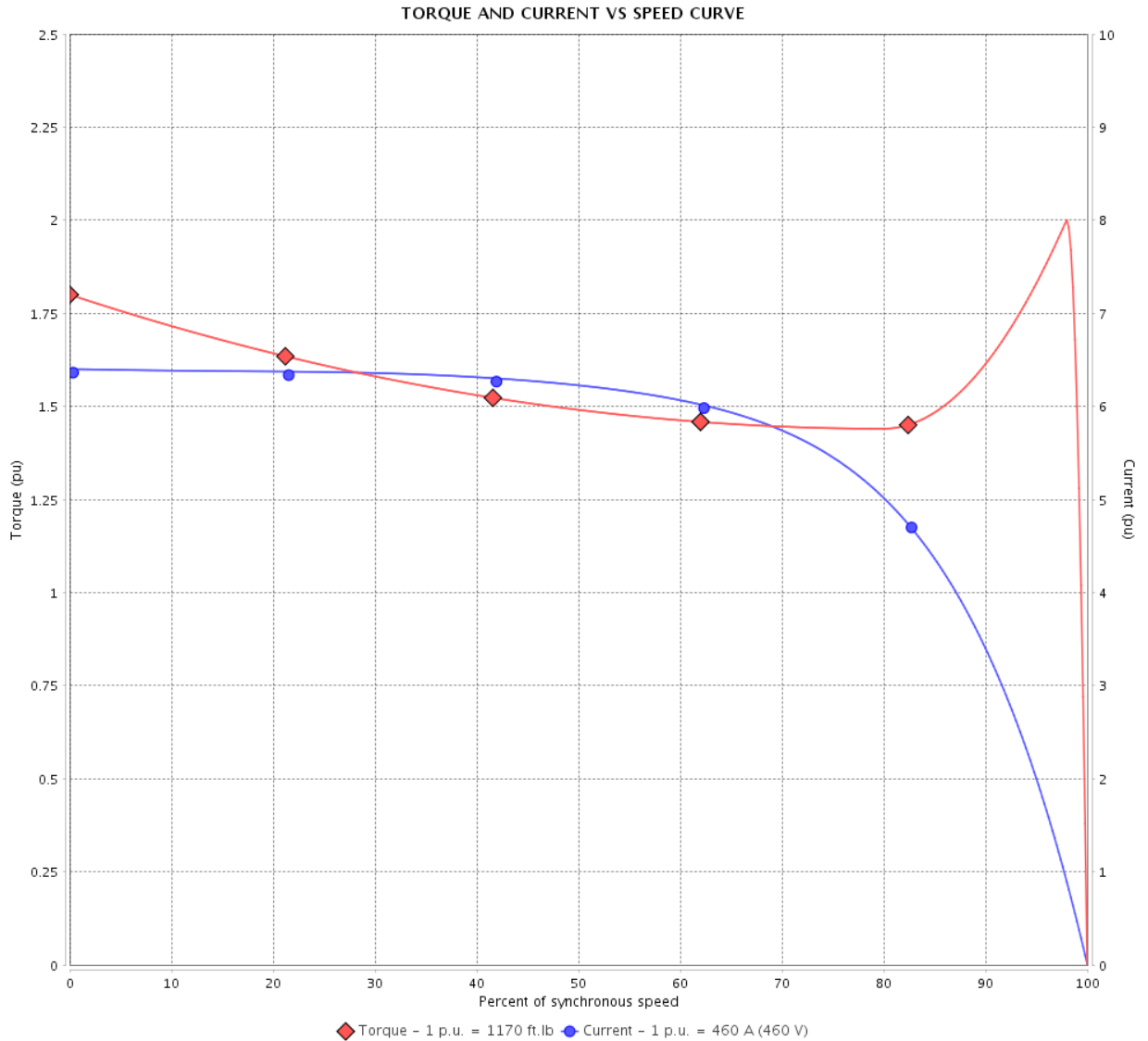
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11705378

Catalog # : 40018XT3G586/7



Performance : 460 V 60 Hz 4P

Rated current	: 460 A	Moment of inertia (J)	: 179 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 1170 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.15
Breakdown torque	: 200 %	Temperature rise	: 80 K
Rated speed	: 1790 rpm	Design	: B

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

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



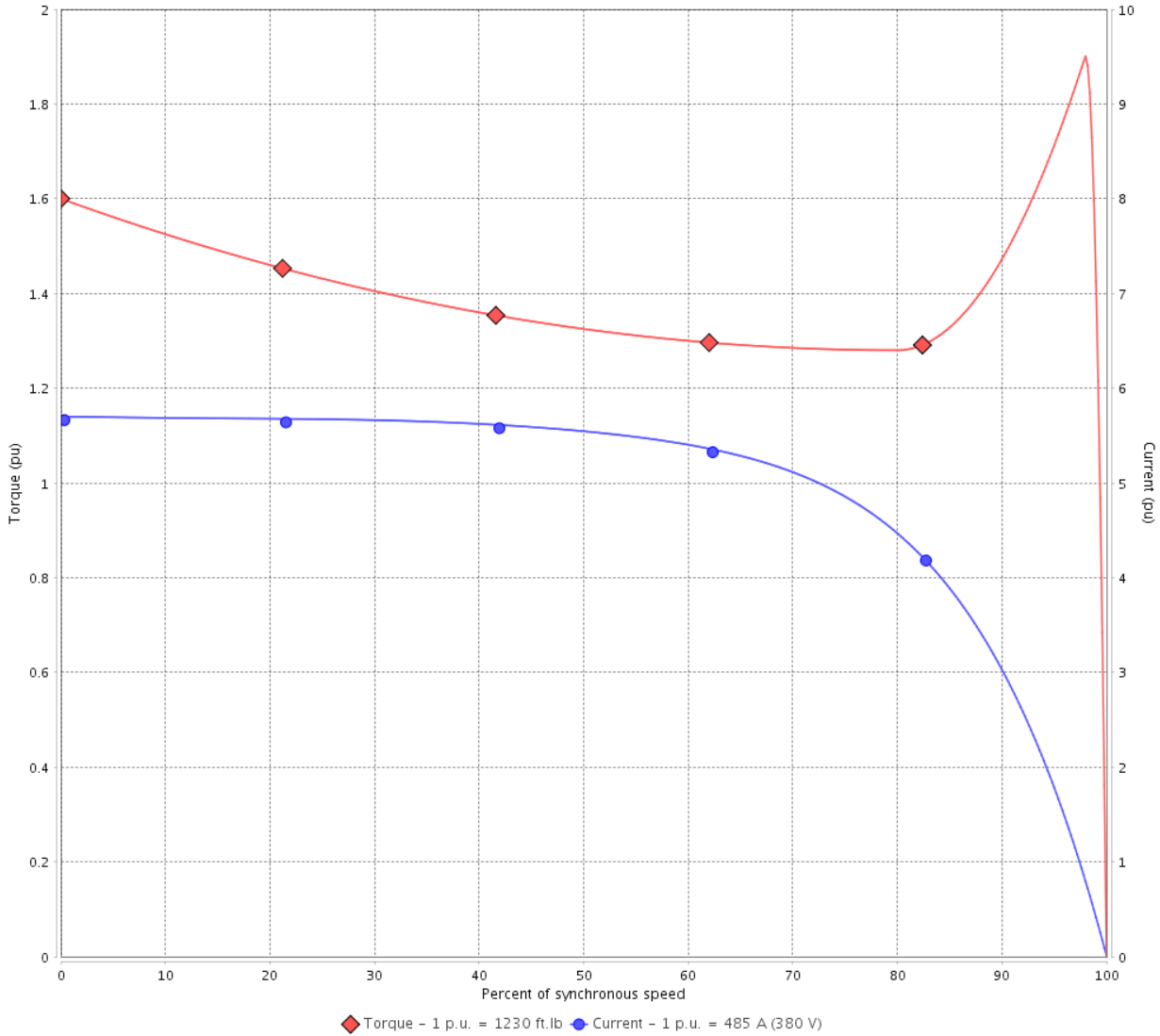
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11705378

Catalog # : 40018XT3G586/7

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 4P IE2

Rated current	: 485 A	Moment of inertia (J)	: 179 sq.ft.lb
LRC	: 5.7	Duty cycle	: Cont.(S1)
Rated torque	: 1230 ft.lb	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.00
Breakdown torque	: 190 %	Temperature rise	: 80 K
Rated speed	: 1490 rpm	Design	: B

Locked rotor time : 45s (cold) 25s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



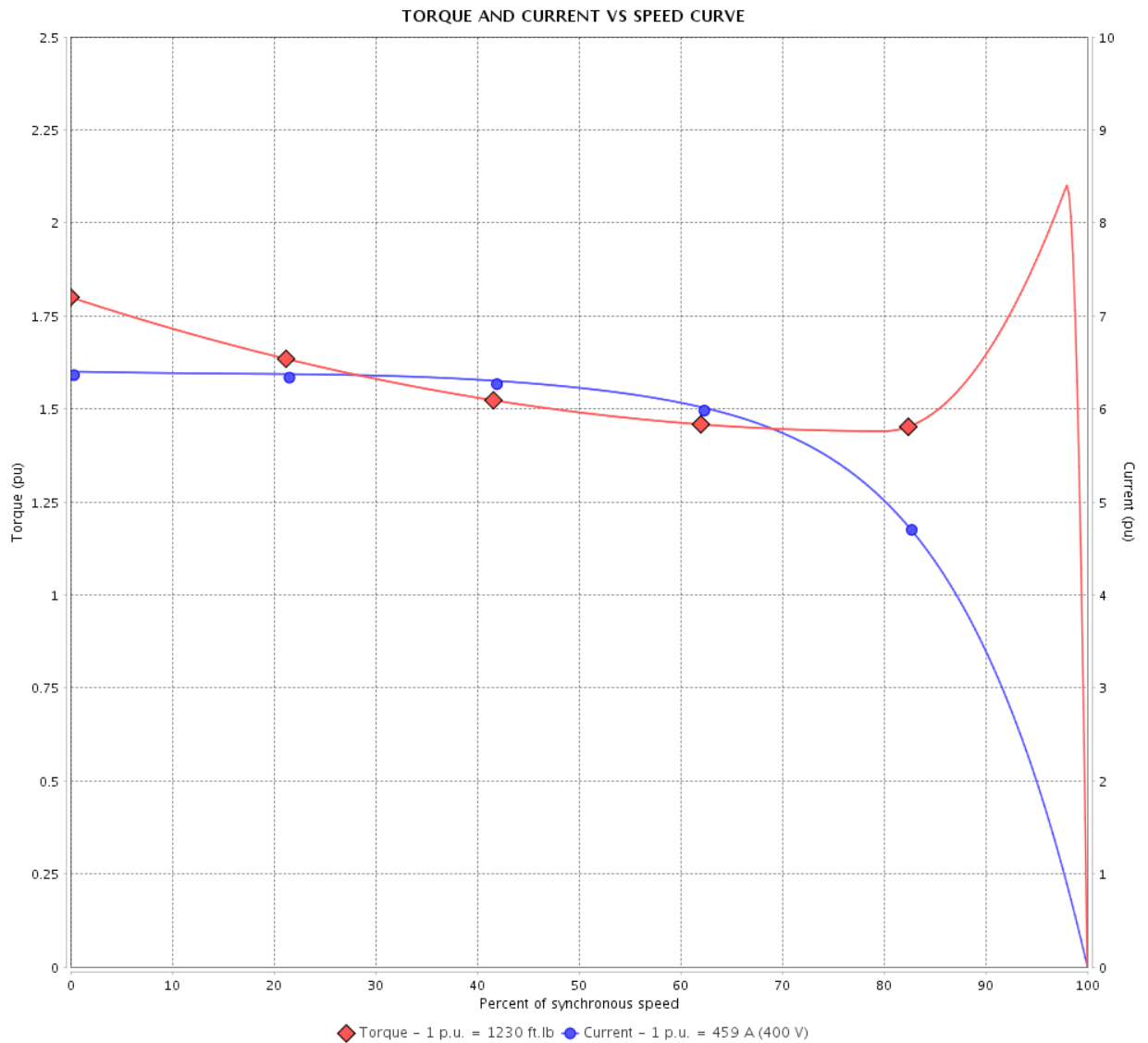
Three Phase Induction Motor - Squirrel Cage

Customer :

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Product code : 11705378

Catalog # : 40018XT3G586/7



Performance : 400 V 50 Hz 4P IE3

Rated current	: 459 A	Moment of inertia (J)	: 179 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 1230 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 80 K
Rated speed	: 1490 rpm	Design	: B

Locked rotor time : 45s (cold) 25s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



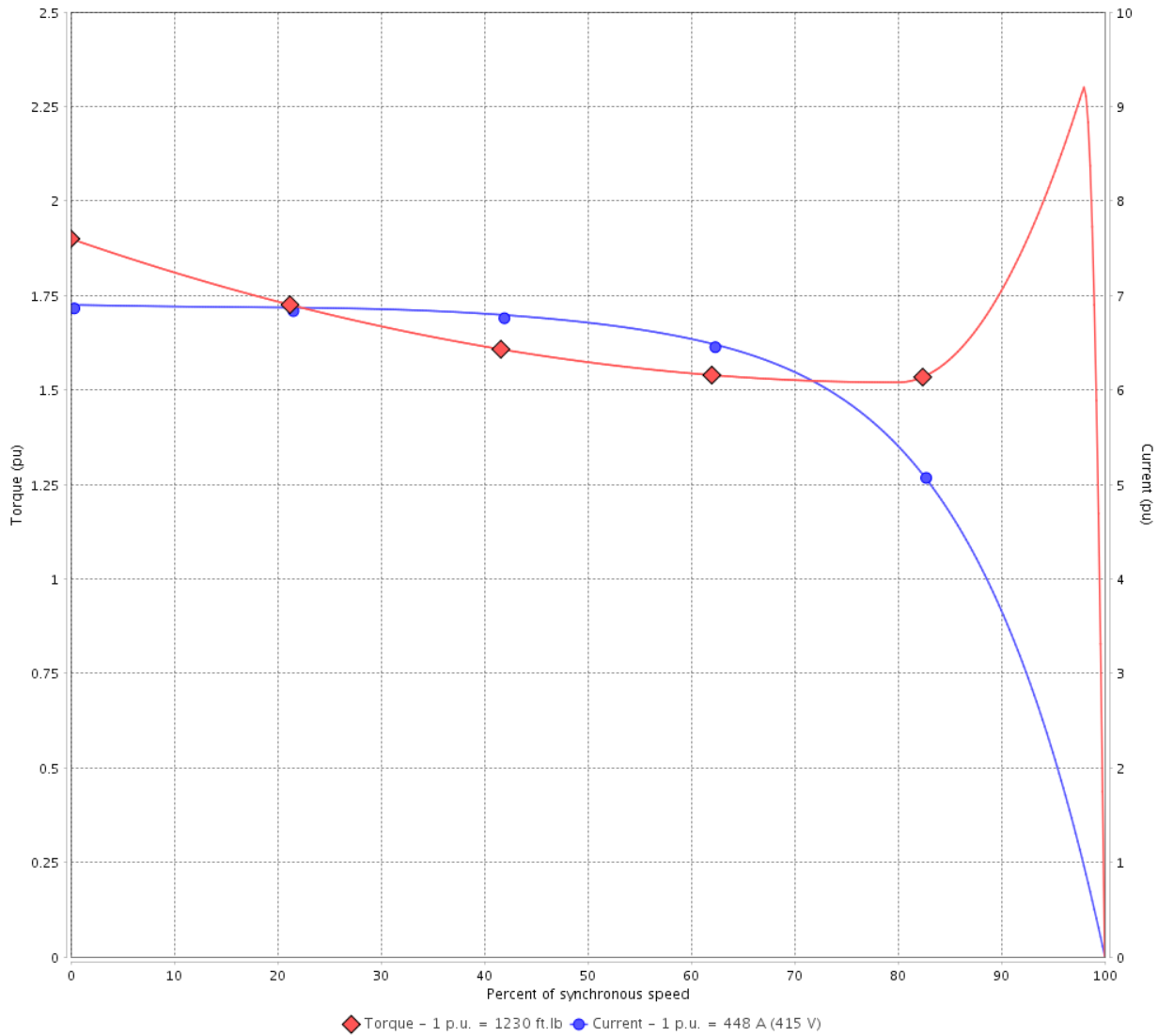
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Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 1490 rpm	Design	: B

Locked rotor time : 45s (cold) 25s (hot)

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

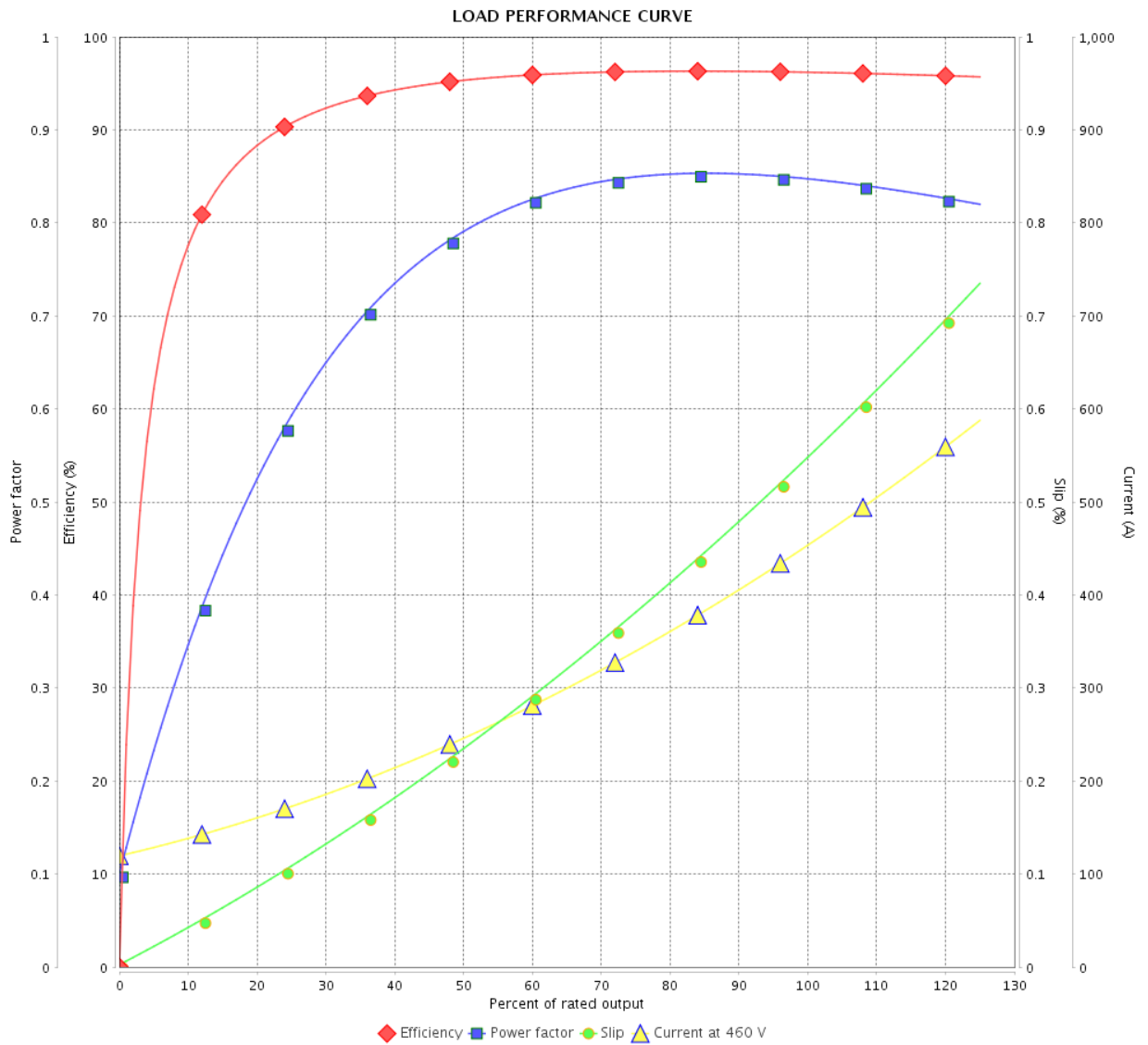


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Product line : NEMA Premium Efficiency Three-Phase

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Catalog # : 40018XT3G586/7



Performance : 460 V 60 Hz 4P

Rated current : 460 A
 LRC : 6.4
 Rated torque : 1170 ft.lb
 Locked rotor torque : 180 %
 Breakdown torque : 200 %
 Rated speed : 1790 rpm

Moment of inertia (J) : 179 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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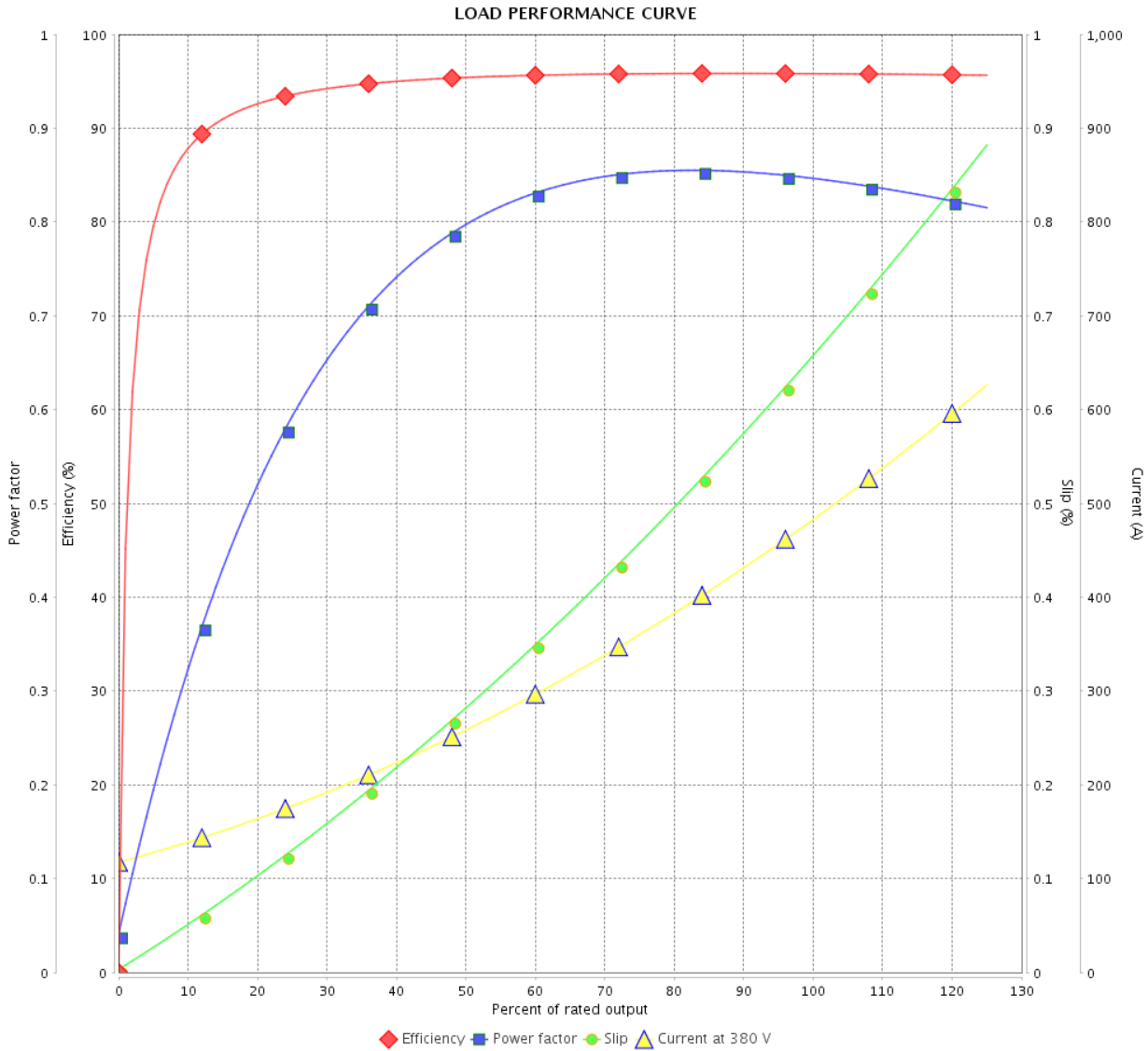


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Performance : 380 V 50 Hz 4P IE2

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Rated torque	: 1230 ft.lb	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.00
Breakdown torque	: 190 %	Temperature rise	: 80 K
Rated speed	: 1490 rpm	Design	: B

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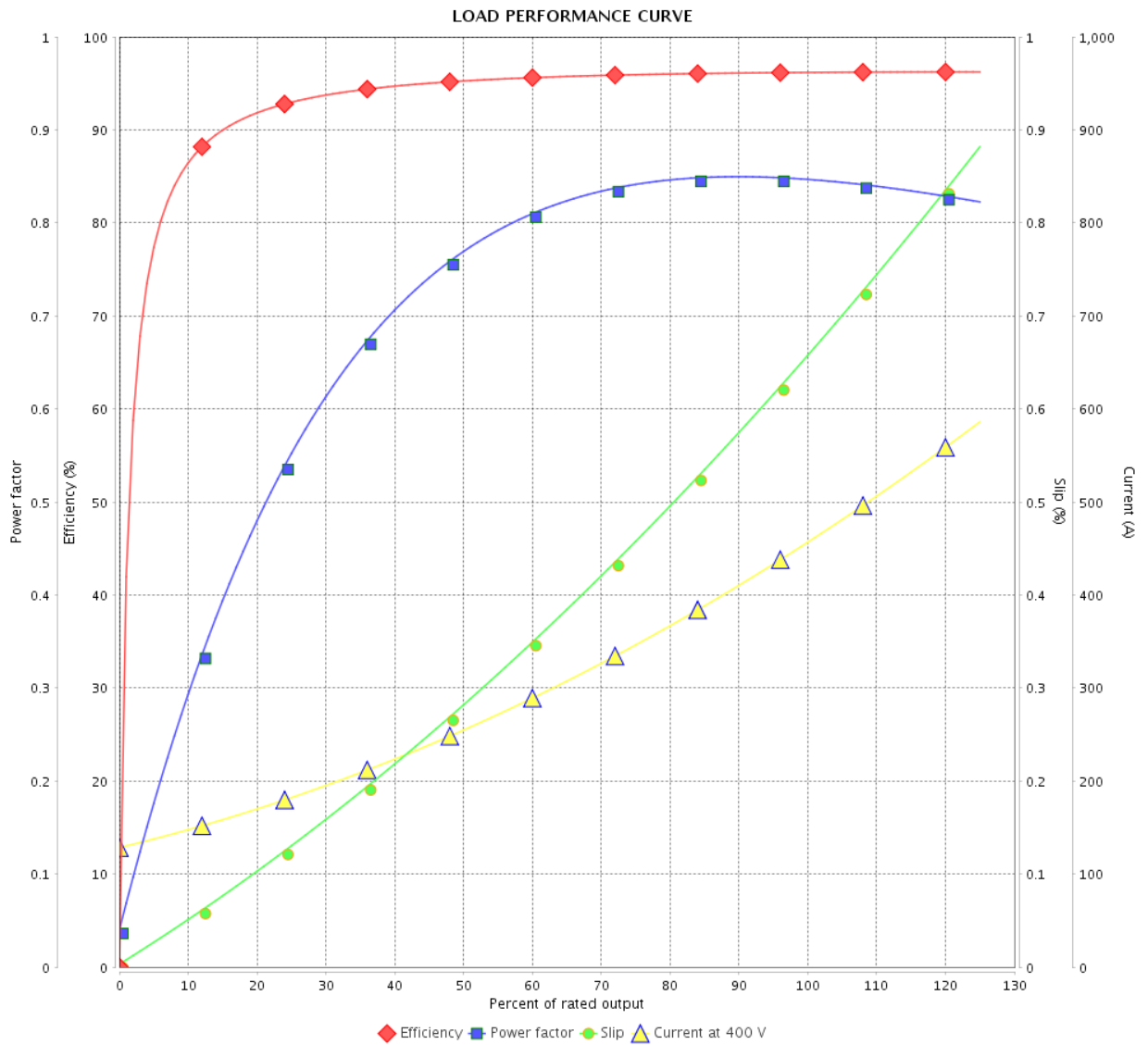


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Catalog # : 40018XT3G586/7



Performance : 400 V 50 Hz 4P IE3

Rated current : 459 A
 LRC : 6.4
 Rated torque : 1230 ft.lb
 Locked rotor torque : 180 %
 Breakdown torque : 210 %
 Rated speed : 1490 rpm

Moment of inertia (J) : 179 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

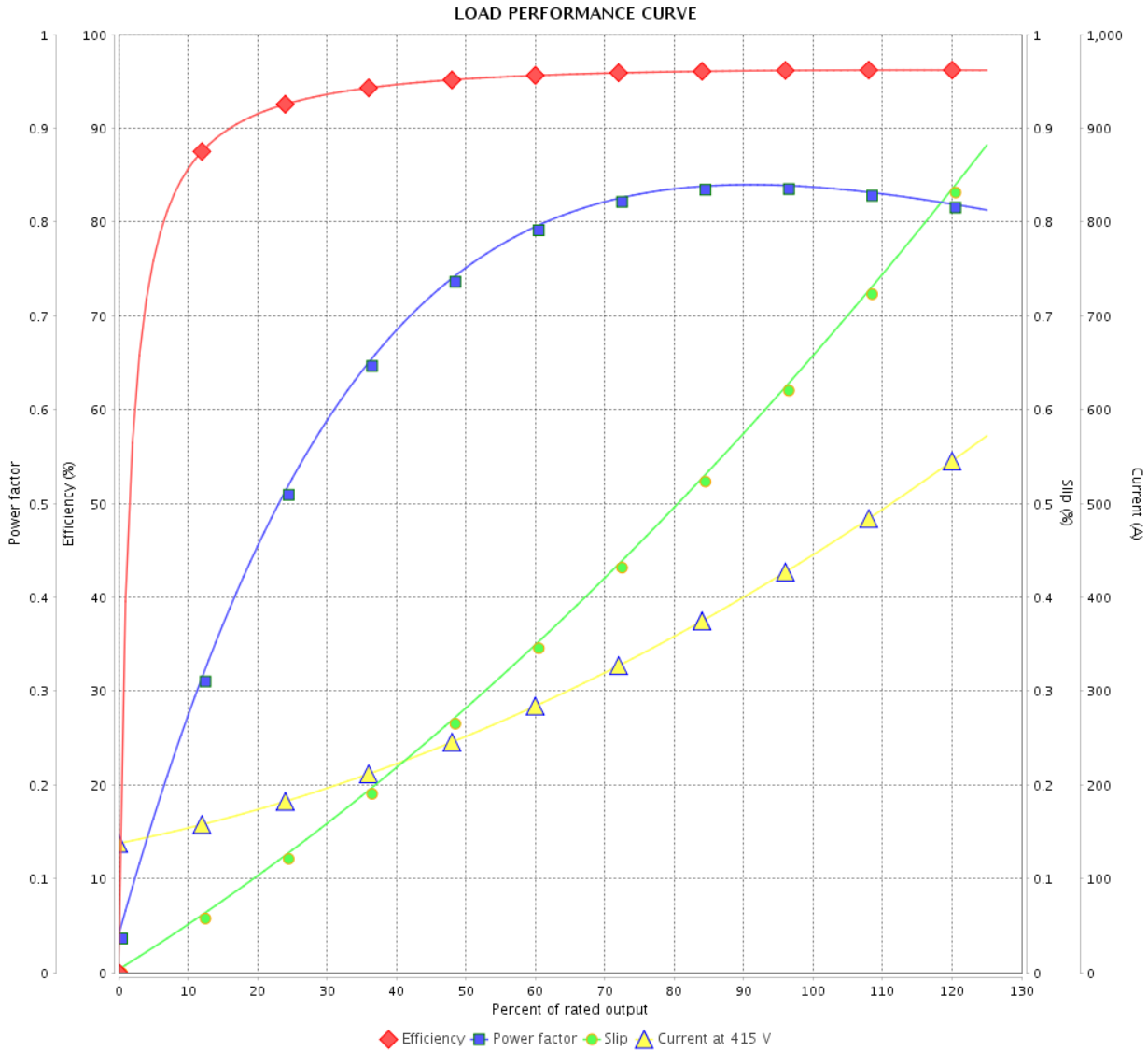


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Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 1490 rpm	Design	: B

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THERMAL LIMIT CURVE



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Heating constant

Cooling constant

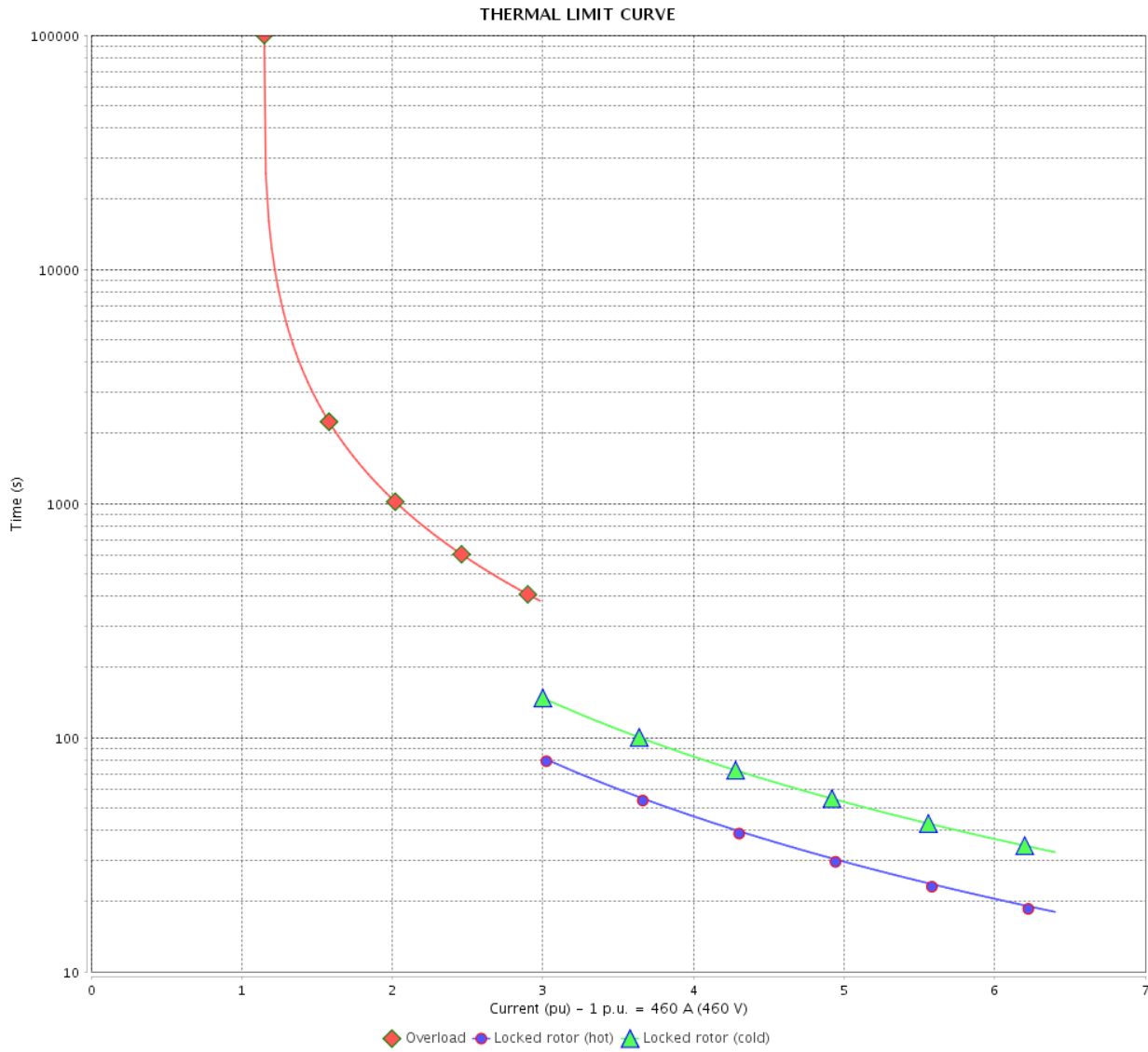
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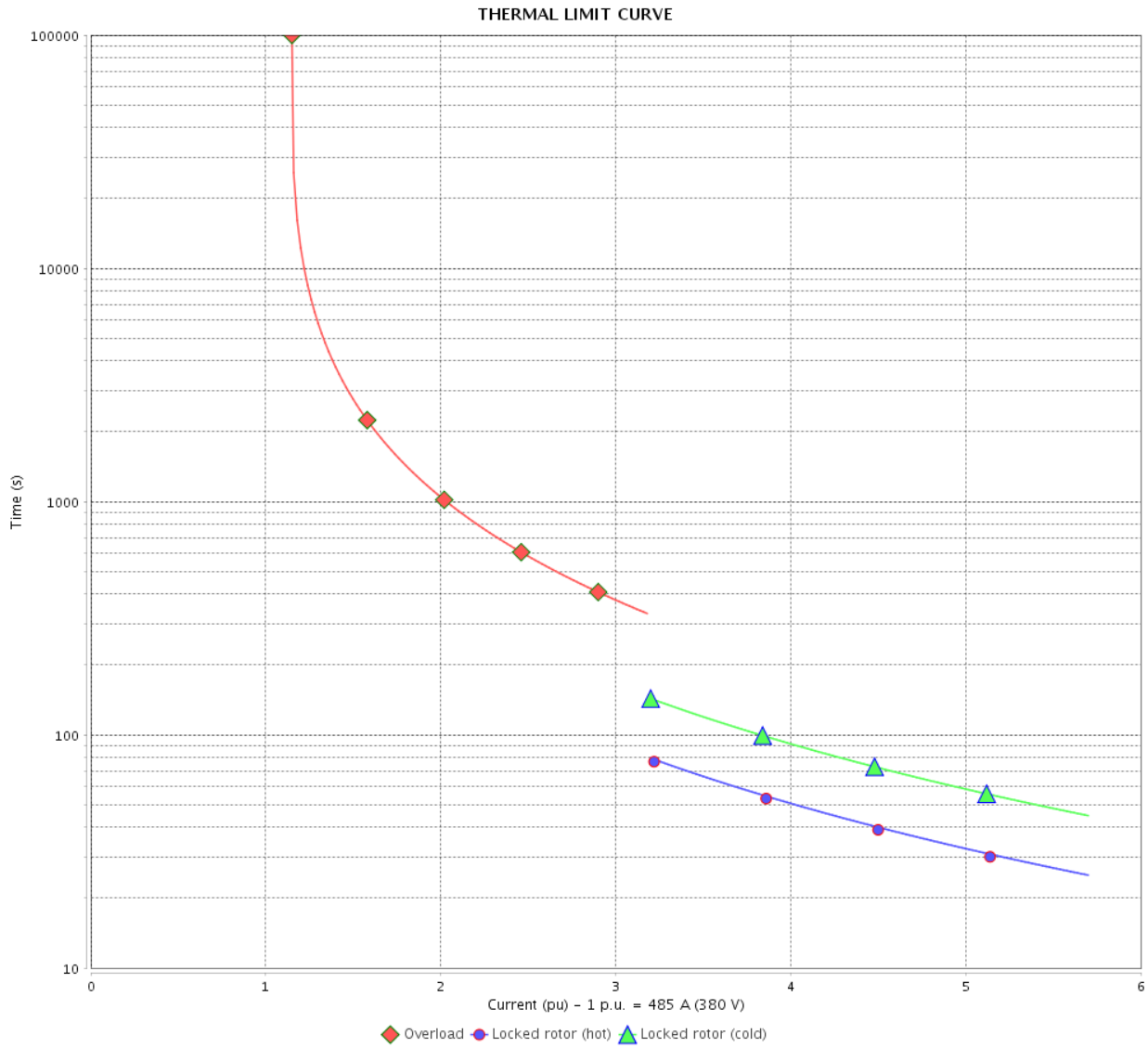
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Cooling constant

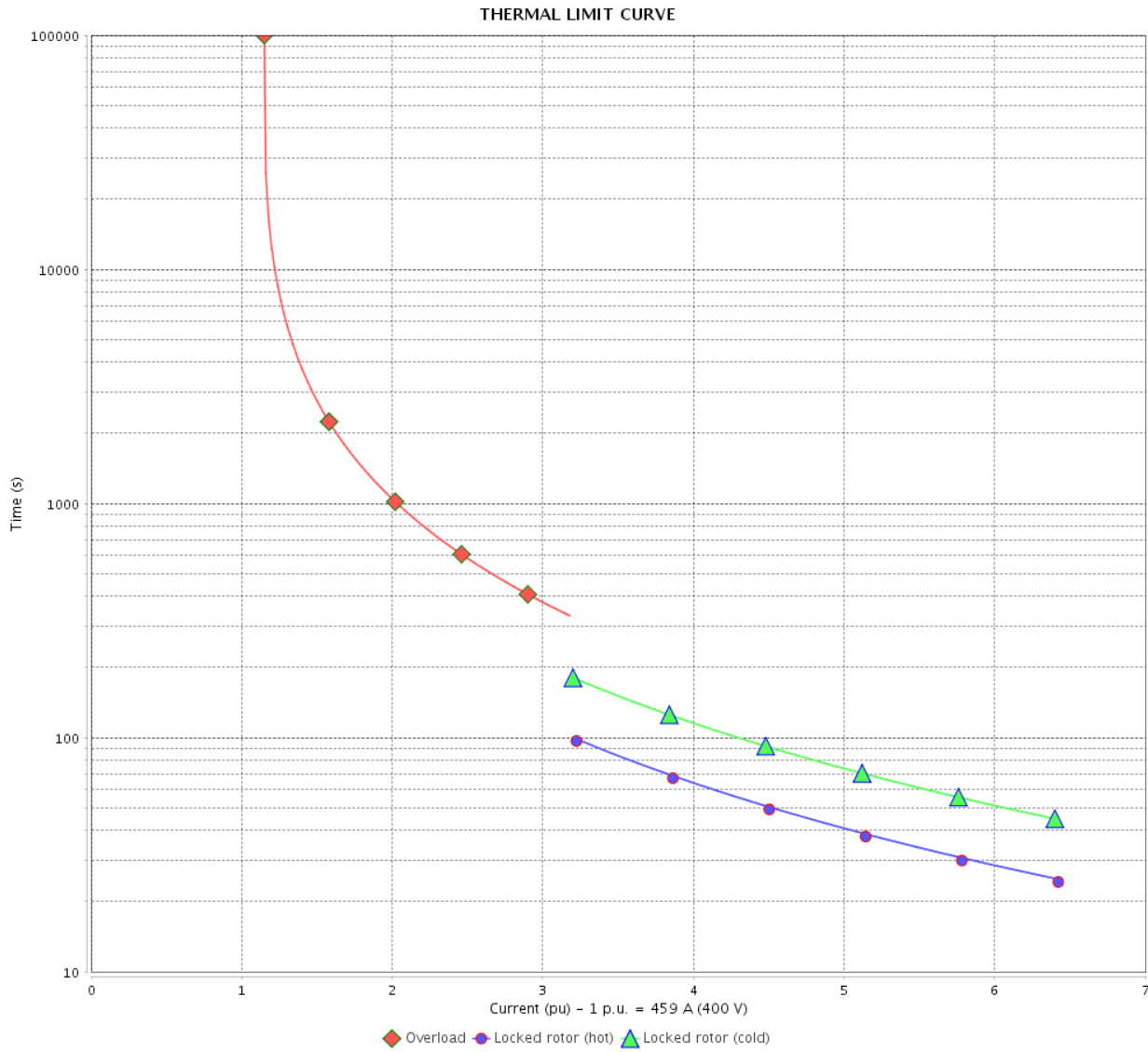
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Three Phase Induction Motor - Squirrel Cage



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Locked rotor torque : 190 %	Service factor : 1.00
Breakdown torque : 229 %	Temperature rise : 80 K
Rated speed : 1490 rpm	Design : B

Heating constant

Cooling constant

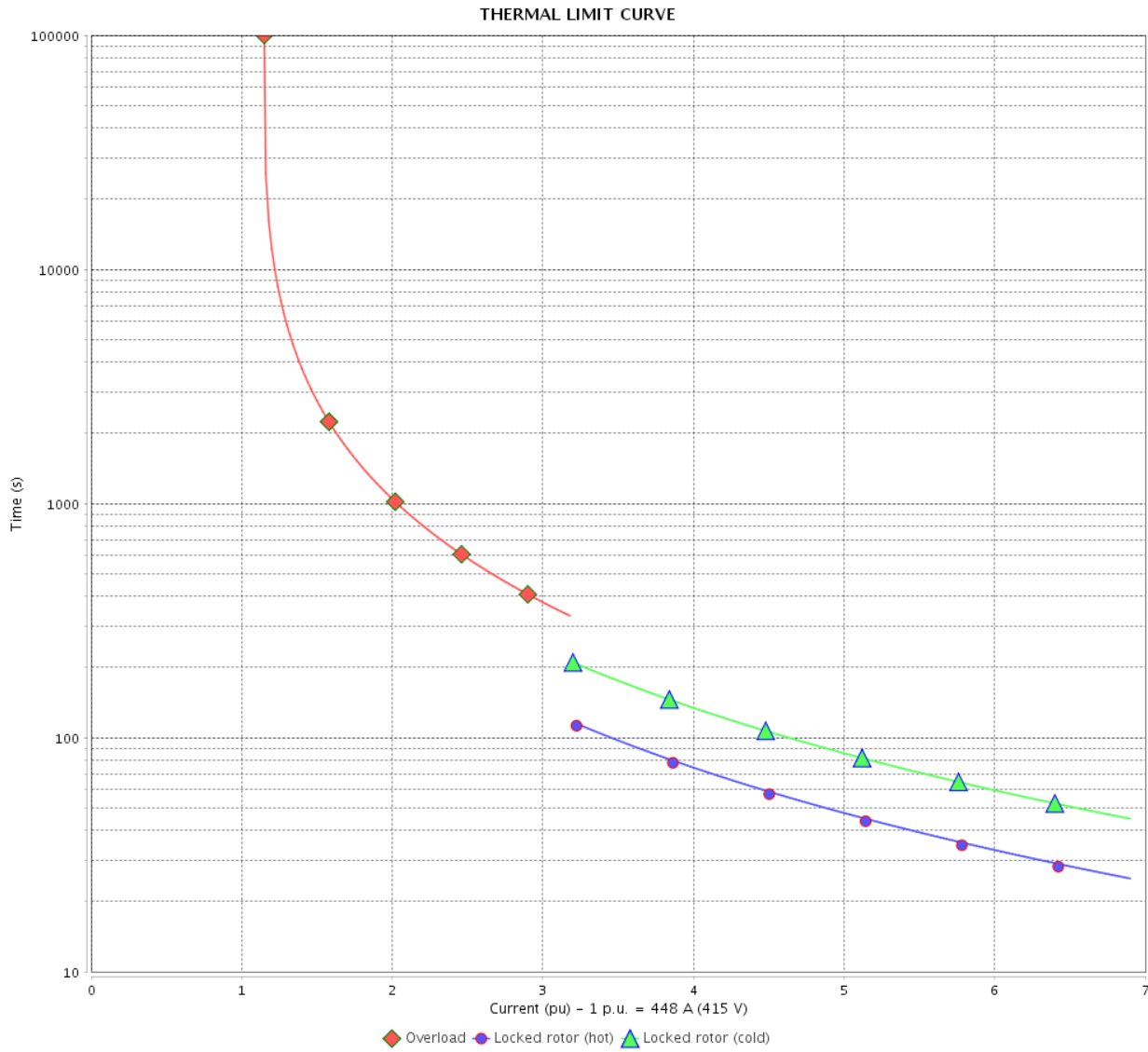
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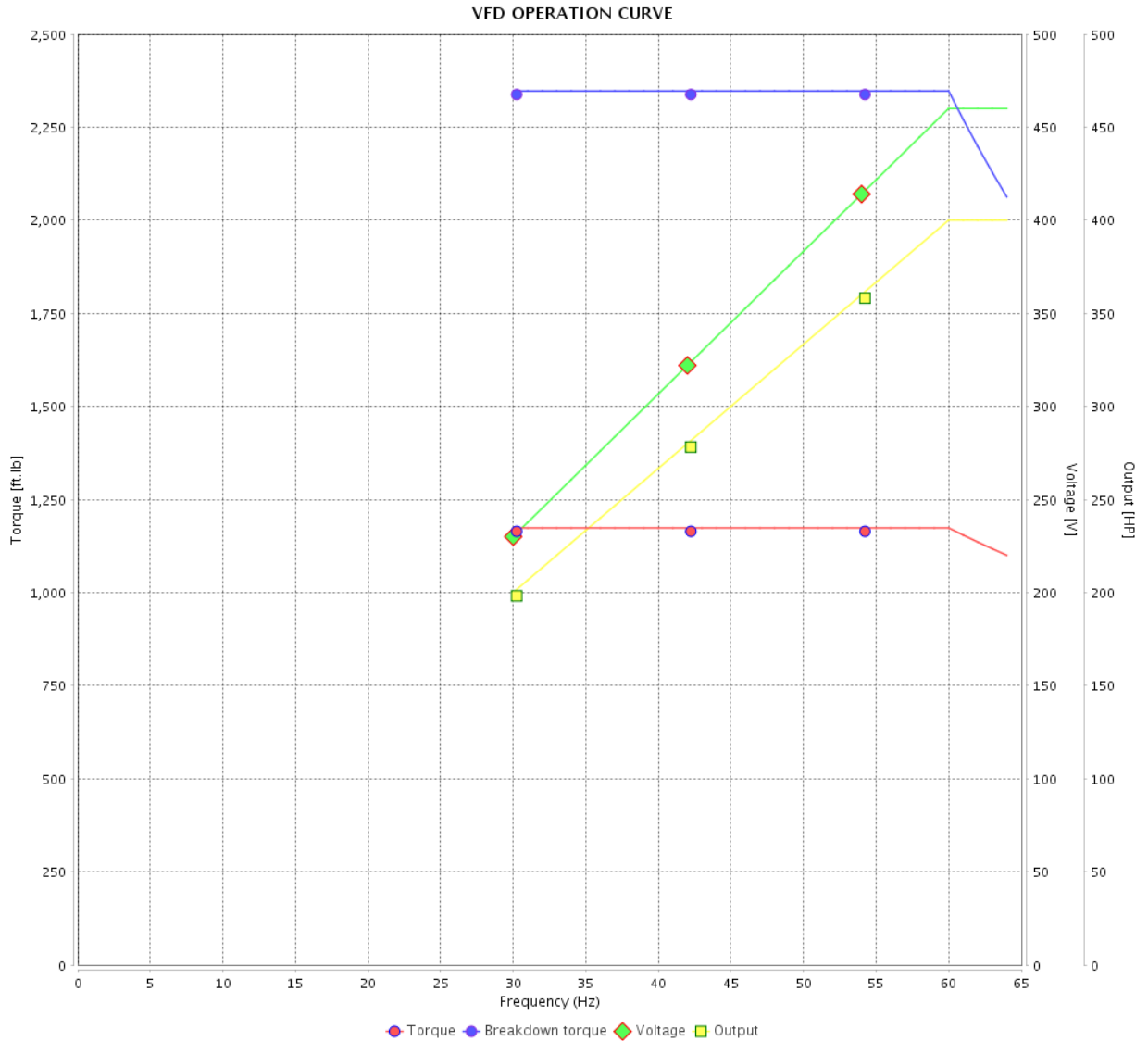
VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



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Performance : 460 V 60 Hz 4P

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LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 1170 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.15
Breakdown torque	: 200 %	Temperature rise	: 80 K
Rated speed	: 1790 rpm	Design	: B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



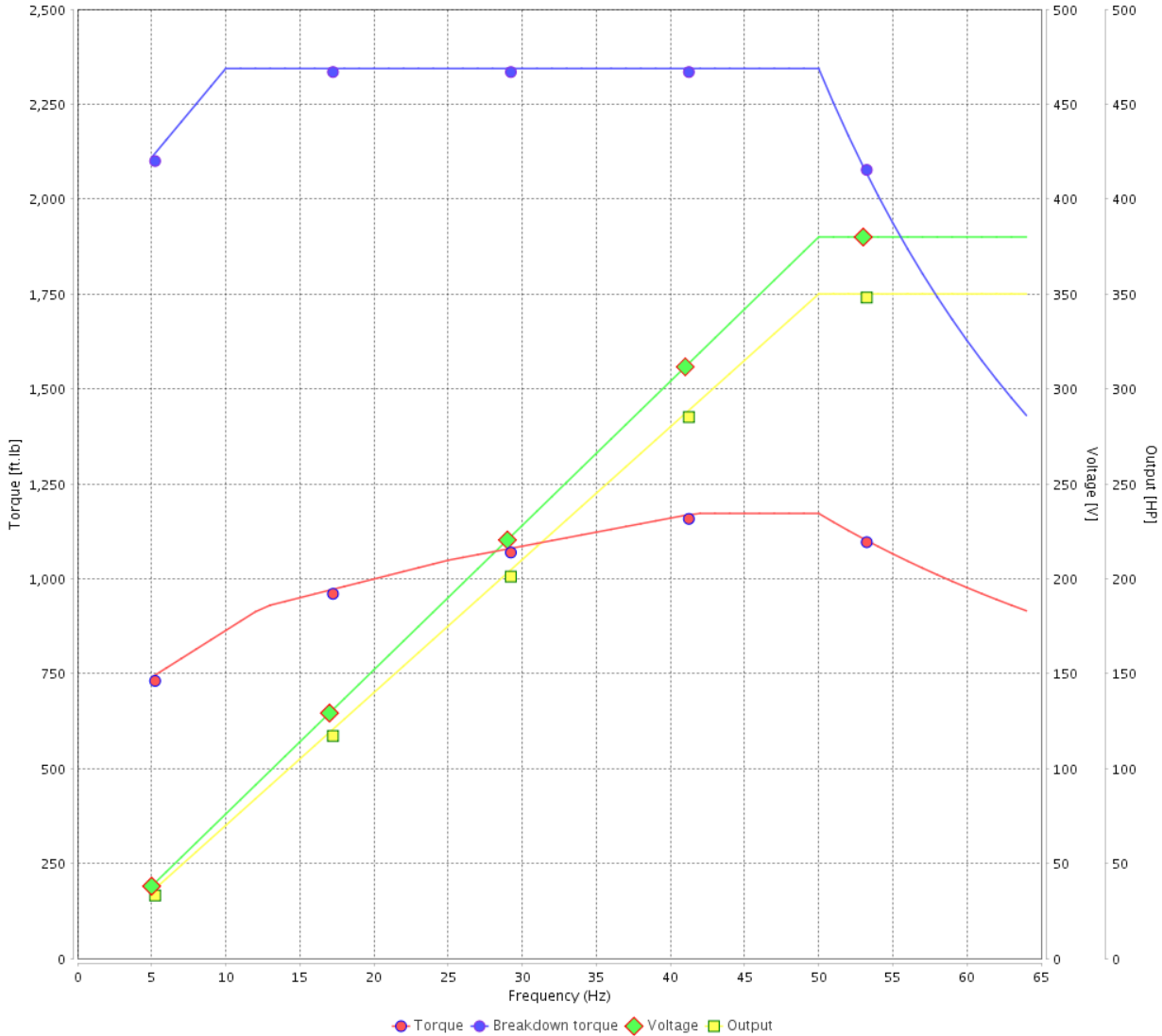
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VFD OPERATION CURVE



Performance : 380 V 50 Hz 4P IE2

Rated current	: 485 A	Moment of inertia (J)	: 179 sq.ft.lb
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Rated torque	: 1230 ft.lb	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.00
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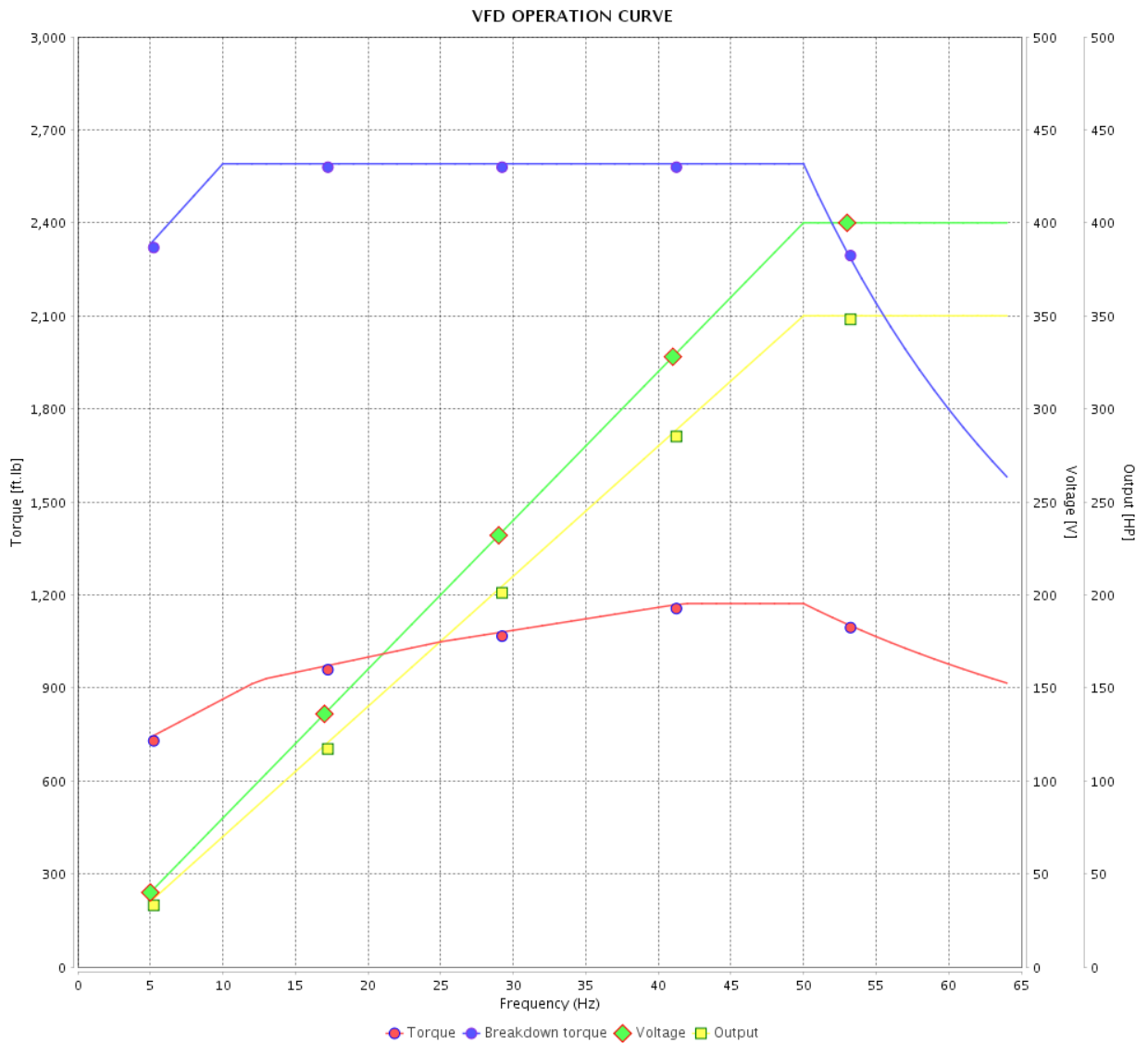
VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



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Rated torque	: 1230 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 80 K
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

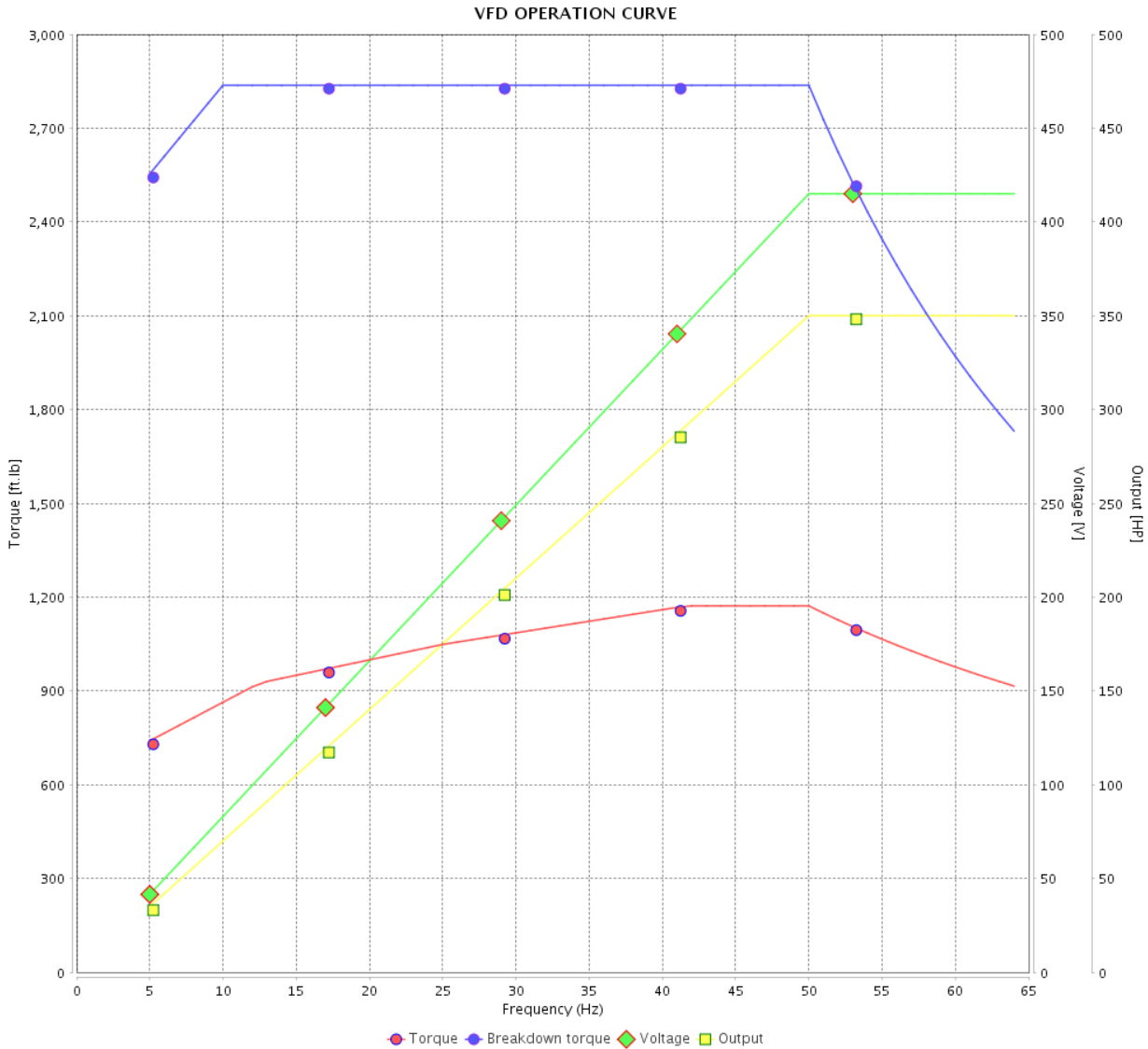


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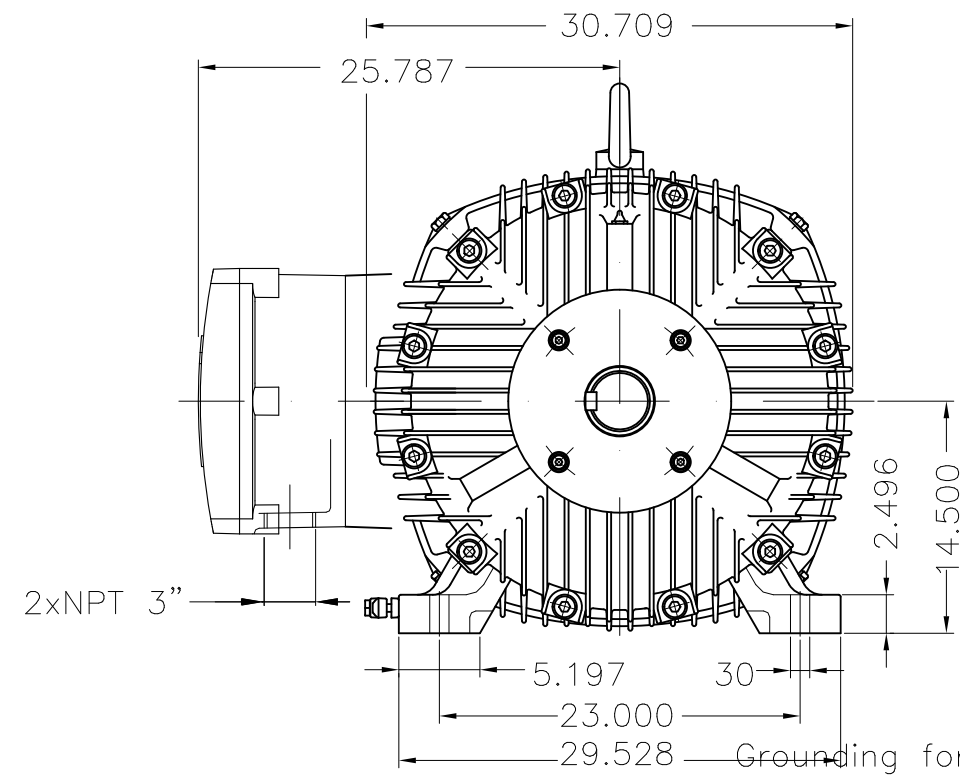
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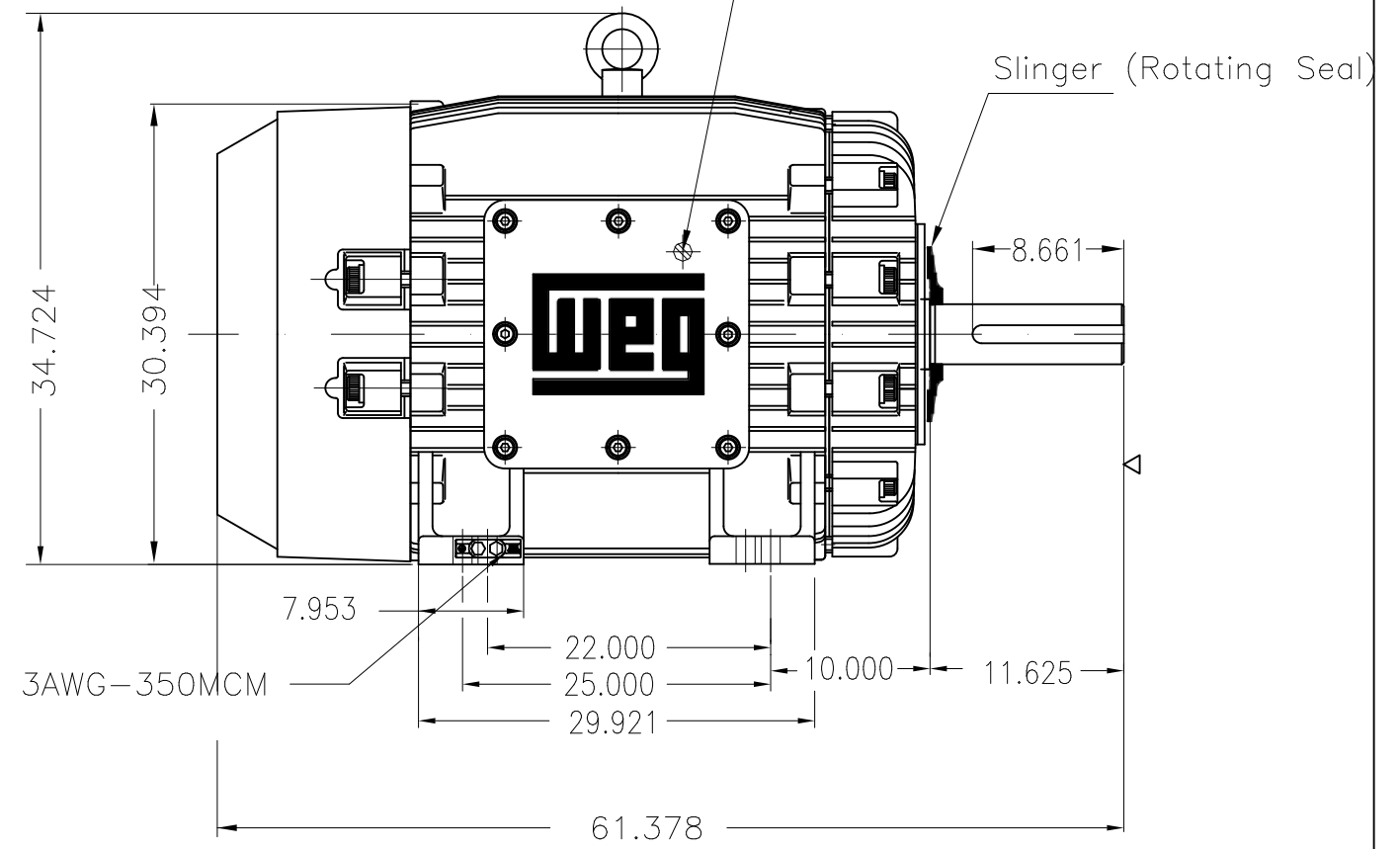
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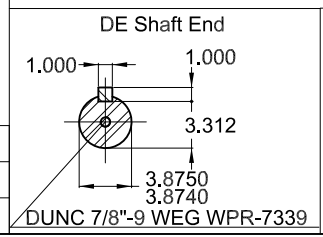
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Grounding for leads 35–120 mm² / 1–4/0 AWG



Grounding for leads 25–185 mm² / 3AWG–350MCM



Color RAL 5009
 Painting plan 202P
 Mounting B3R(D)

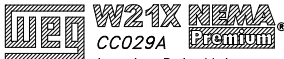
400 HP 04 Poles 60 Hz A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR EXPLOSION PROOF PREM. EFF.					
CHECKED		FRAME 586/7T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

PREVIEW
 WDD



SHEET 1 / 1



W21X NEMA
CC029A Premium

*Inverter Duty Motor
 Severe Duty*



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, 2:1CT, 1.0SF, T3C, AMB 40°C.

HX400404NPBBW21X
 MADE IN BRAZIL
 11705378

PH 3	FR 586/7T	HP(kW) 400(300)	Hz 60
V 460	A 460	RPM 1790	
NEMA NOM. EFF. 96.2%		INS CL F Δ T 80 K	IP55
PF 0.85	DUTY CONT.		CODE G
ENCL. TEFC	SF 1.15	SFA 529	
AMB 40°C	DES B		

PART-WINDING						WYE-DELTA					
START			RUN			START			RUN		
○T12	○T10	○T11	○T12	○T10	○T11	○T12	○T10	○T11	○T12	○T10	○T11
○T7	○T8	○T9	○T7	○T8	○T9	○T6	○T4	○T5	○T6	○T4	○T5
○T6	○T4	○T5	○T6	○T4	○T5	○T7	○T8	○T9	○T7	○T8	○T9
○T1	○T2	○T3	○T1	○T2	○T3	○T1	○T2	○T3	○T1	○T2	○T3
L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3

	→ 6322-C3(60g)	MOBIL POLYREX EM
	→ 6319-C3(45g)	5138 h

ALT 1000 m.a.s.l	4059 Lbs
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