

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line		: NEMA Premium Efficiency Three-Phase	Product code :	11408911	
			Catalog # :	45018ET3GRB449T-W22	
Frame		: L447/9T	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	: 3510 lb	
Protection degree		: IP55	Moment of inertia (J)	: 152 sq.ft.lb	
Design		: A			
Output [HP]	450	400	400	400	
Poles	4	4	4	4	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	460	380	400	415	
Rated current [A]	513	564	549	542	
L. R. Amperes [A]	4566	4456	4721	4986	
LRC [A]	8.9x(Code K)	7.9x(Code J)	8.6x(Code K)	9.2x(Code K)	
No load current [A]	215	215	232	255	
Rated speed [RPM]	1791	1489	1490	1490	
Slip [%]	0.50	0.73	0.67	0.67	
Rated torque [ft.lb]	1320	1410	1410	1410	
Locked rotor torque [%]	320	270	300	370	
Breakdown torque [%]	330	280	320	350	
Service factor	1.15	1.00	1.00	1.00	
Temperature rise	80 K	105 K	105 K	105 K	
Locked rotor time	39s (cold) 22s (hot)	37s (cold) 21s (hot)	36s (cold) 20s (hot)	32s (cold) 18s (hot)	
Noise level ²	79.0 dB(A)	74.0 dB(A)	74.0 dB(A)	74.0 dB(A)	
Efficiency (%)	25%	95.3	95.7	95.0	
	50%	95.4	95.8	95.4	
	75%	96.2	96.2	95.8	
	100%	96.2	96.2	96.2	
Power Factor	25%	0.41	0.45	0.40	
	50%	0.66	0.70	0.65	
	75%	0.78	0.80	0.77	
	100%	0.84	0.84	0.82	
Bearing type		Drive end : NU-322 C3	Non drive end : 6319 C3	Foundation loads	
Sealing		: WSeal	: WSeal	Max. traction : 11399 lb	
Lubrication interval		: 4000 h	: 8000 h	Max. compression : 14909 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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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



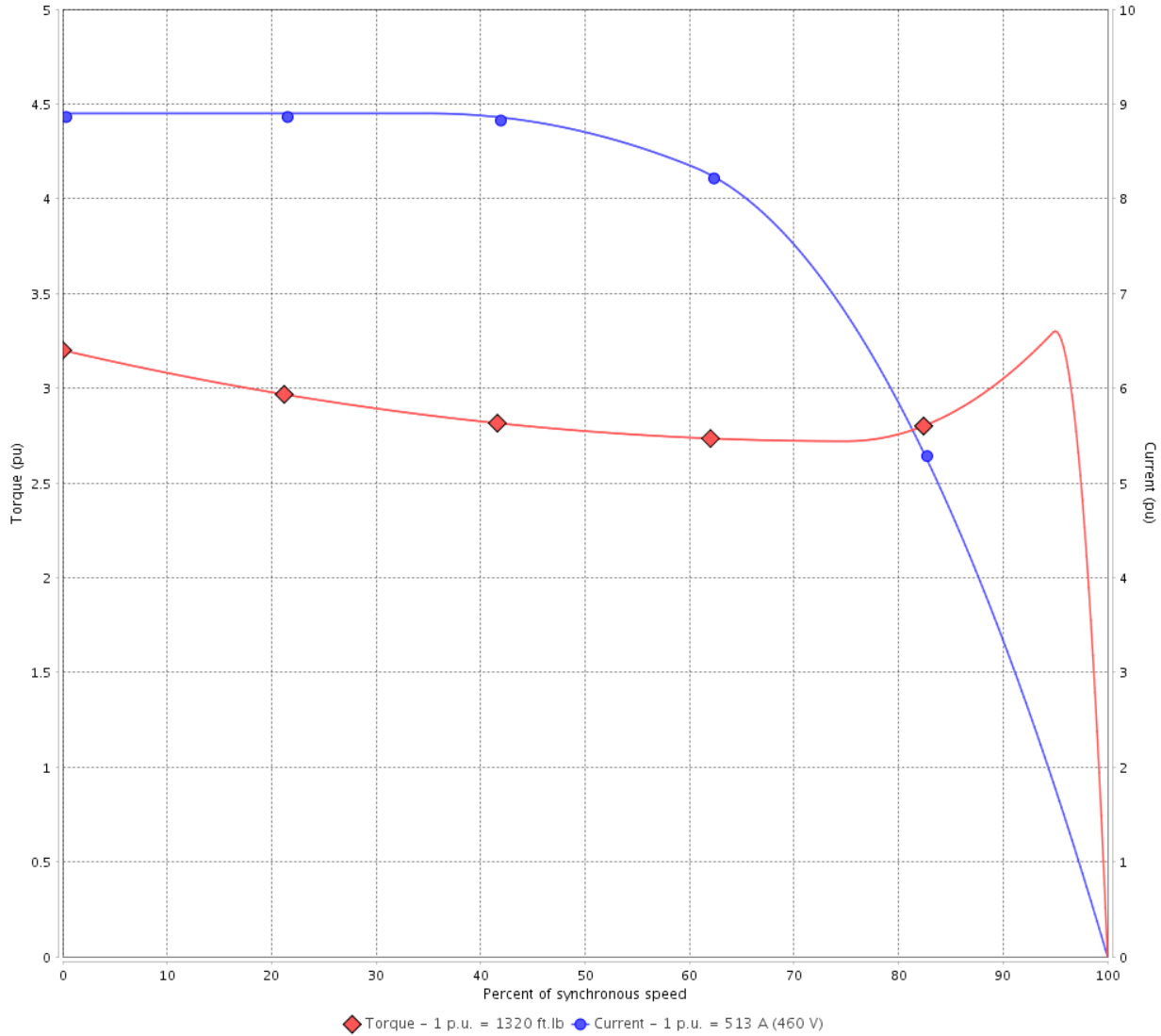
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11408911

Catalog # : 45018ET3GRB449T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 460 V 60 Hz 4P

Rated current	: 513 A	Moment of inertia (J)	: 152 sq.ft.lb
LRC	: 8.9	Duty cycle	: Cont.(S1)
Rated torque	: 1320 ft.lb	Insulation class	: F
Locked rotor torque	: 320 %	Service factor	: 1.15
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 1791 rpm	Design	: A

Locked rotor time : 39s (cold) 22s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



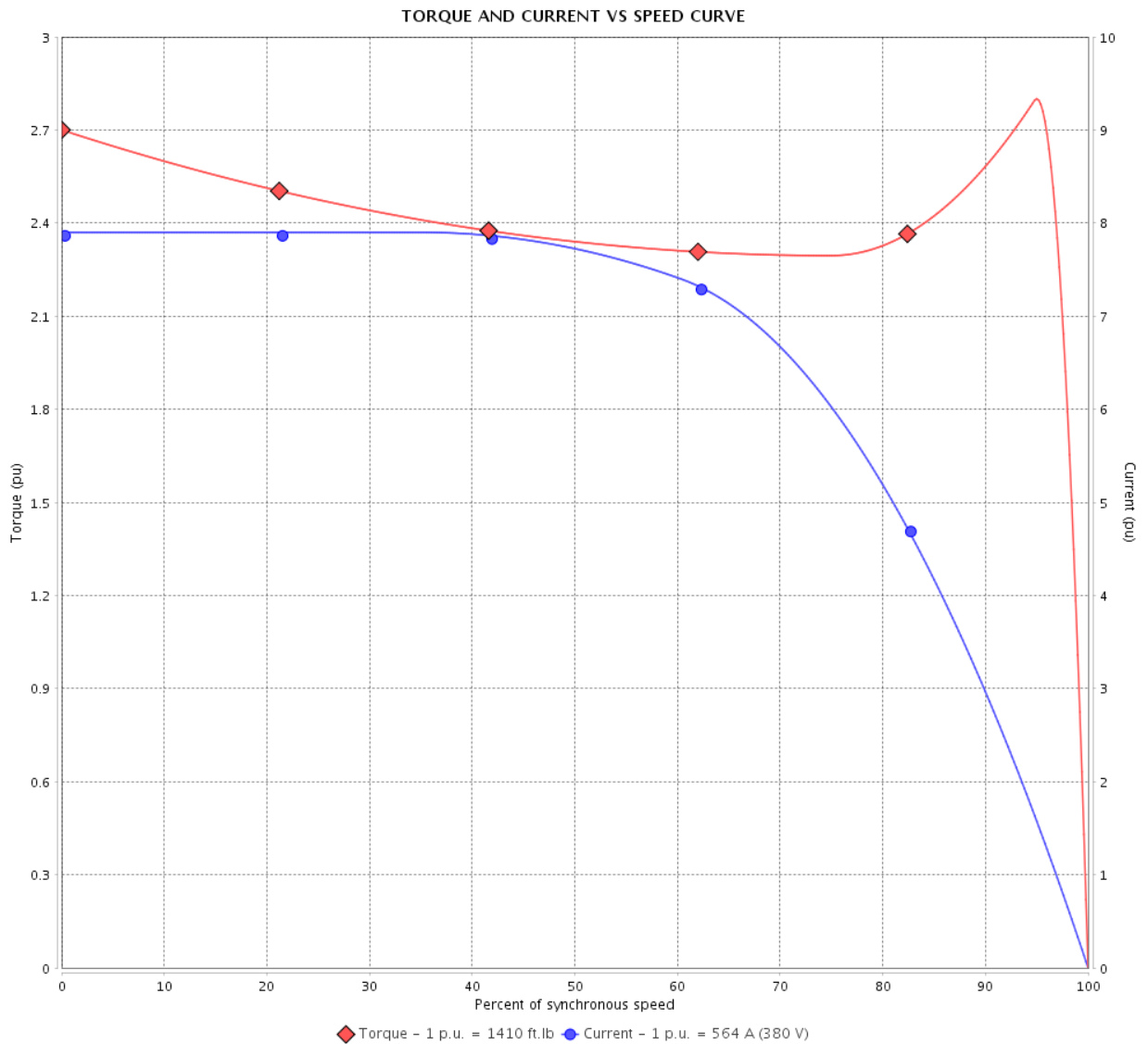
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11408911

Catalog # : 45018ET3GRB449T-W22



Performance : 380 V 50 Hz 4P IE3

Rated current	: 564 A	Moment of inertia (J)	: 152 sq.ft.lb
LRC	: 7.9	Duty cycle	: Cont.(S1)
Rated torque	: 1410 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 105 K
Rated speed	: 1489 rpm	Design	: A

Locked rotor time : 37s (cold) 21s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



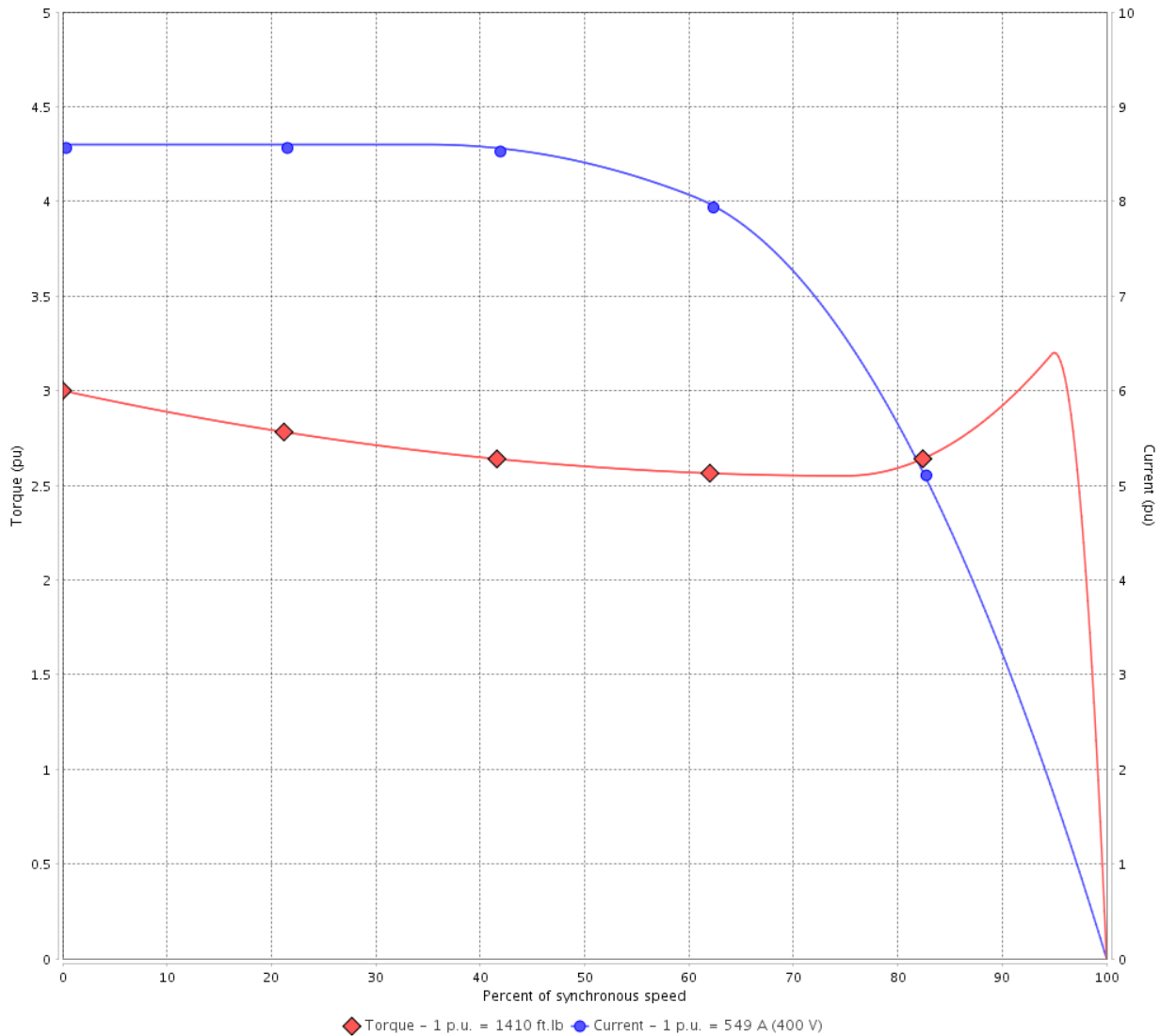
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11408911

Catalog # : 45018ET3GRB449T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current	: 549 A	Moment of inertia (J)	: 152 sq.ft.lb
LRC	: 8.6	Duty cycle	: Cont.(S1)
Rated torque	: 1410 ft.lb	Insulation class	: F
Locked rotor torque	: 300 %	Service factor	: 1.00
Breakdown torque	: 320 %	Temperature rise	: 105 K
Rated speed	: 1490 rpm	Design	: A

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

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TORQUE AND CURRENT VS SPEED CURVE



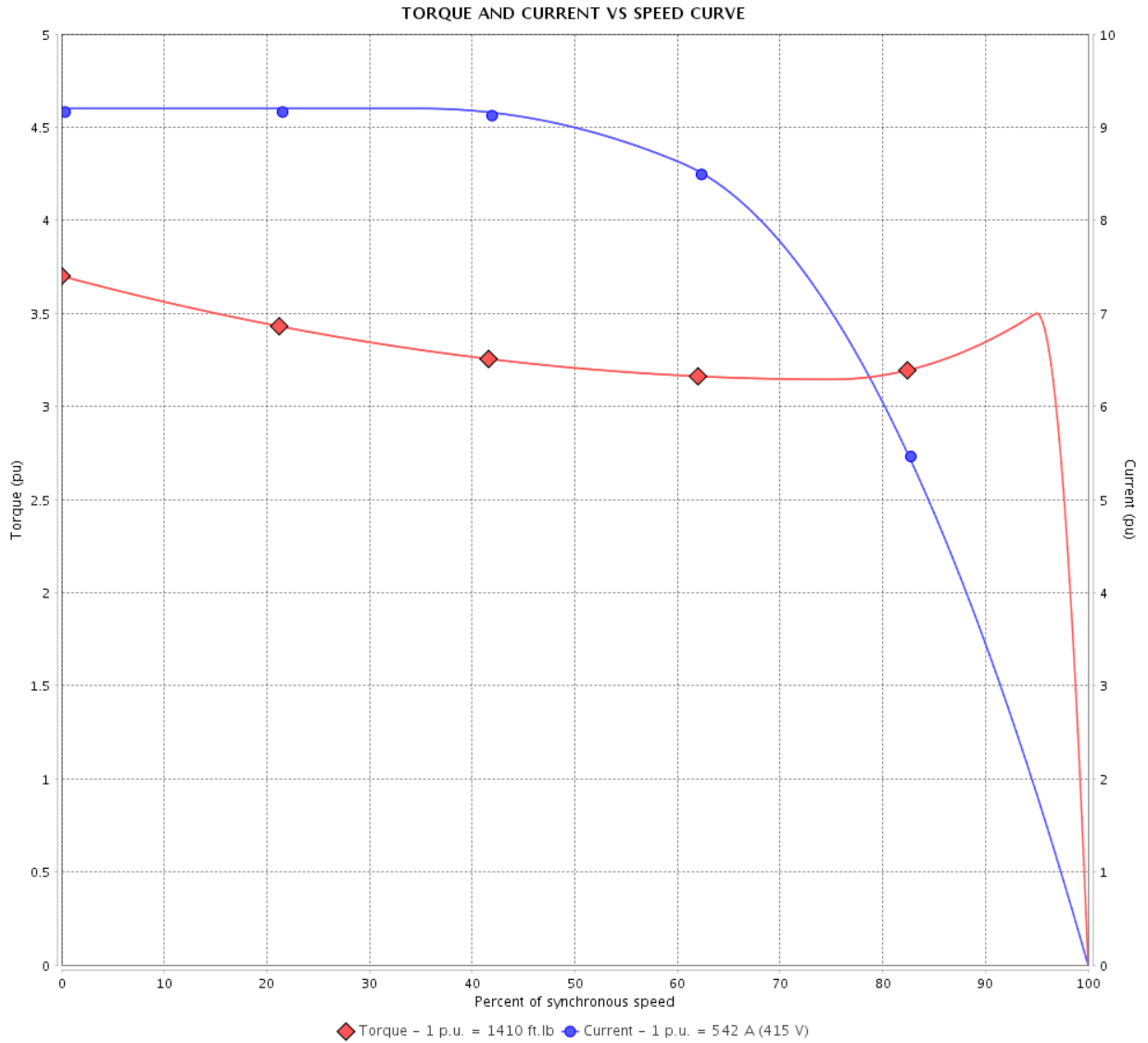
Three Phase Induction Motor - Squirrel Cage

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Product code : 11408911

Catalog # : 45018ET3GRB449T-W22



Performance : 415 V 50 Hz 4P IE3

Rated current	: 542 A	Moment of inertia (J)	: 152 sq.ft.lb
LRC	: 9.2	Duty cycle	: Cont.(S1)
Rated torque	: 1410 ft.lb	Insulation class	: F
Locked rotor torque	: 370 %	Service factor	: 1.00
Breakdown torque	: 350 %	Temperature rise	: 105 K
Rated speed	: 1490 rpm	Design	: A

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

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

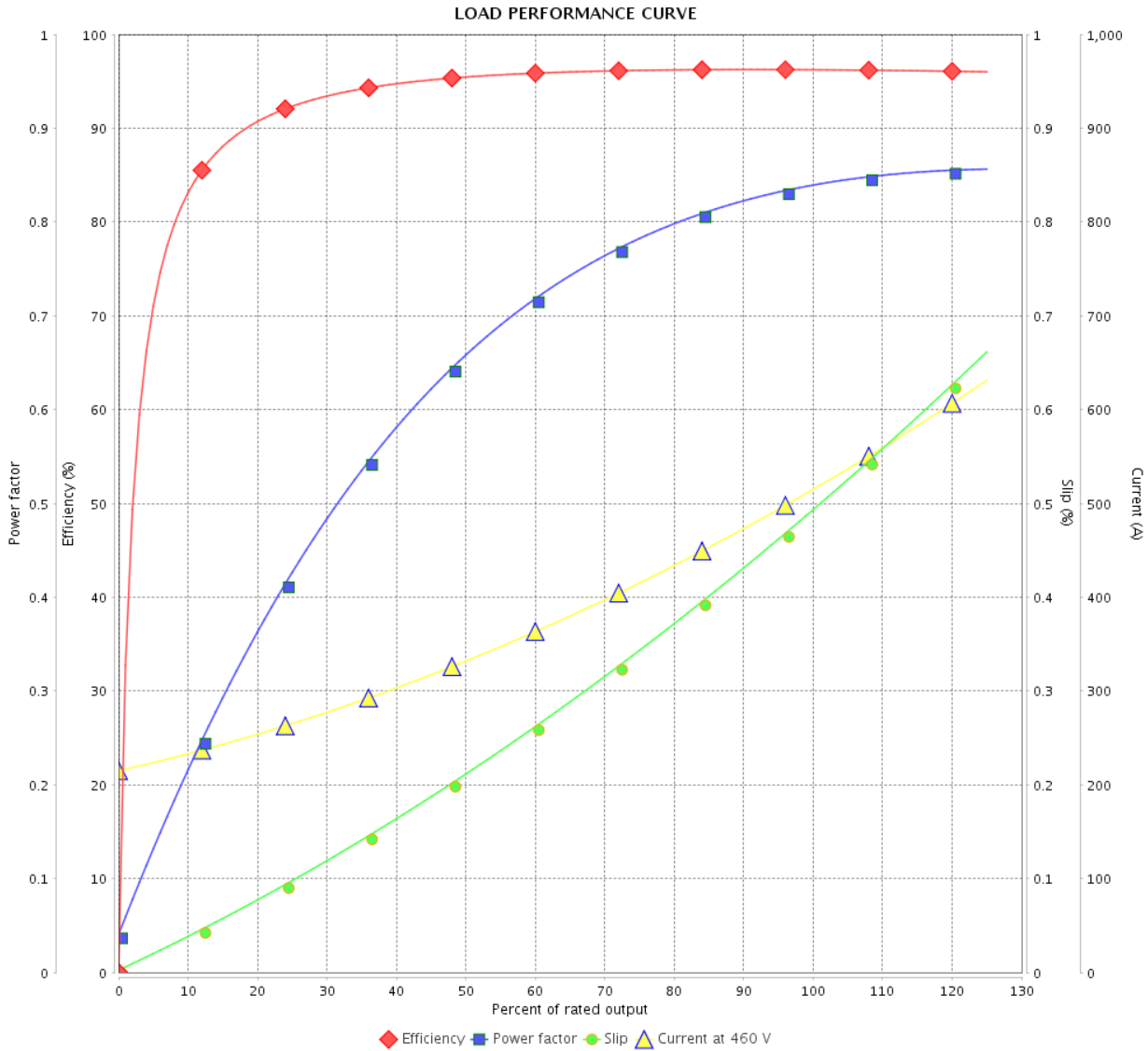


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Product code : 11408911

Catalog # : 45018ET3GRB449T-W22



Performance : 460 V 60 Hz 4P

Rated current : 513 A
 LRC : 8.9
 Rated torque : 1320 ft.lb
 Locked rotor torque : 320 %
 Breakdown torque : 330 %
 Rated speed : 1791 rpm

Moment of inertia (J) : 152 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : A

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Three Phase Induction Motor - Squirrel Cage

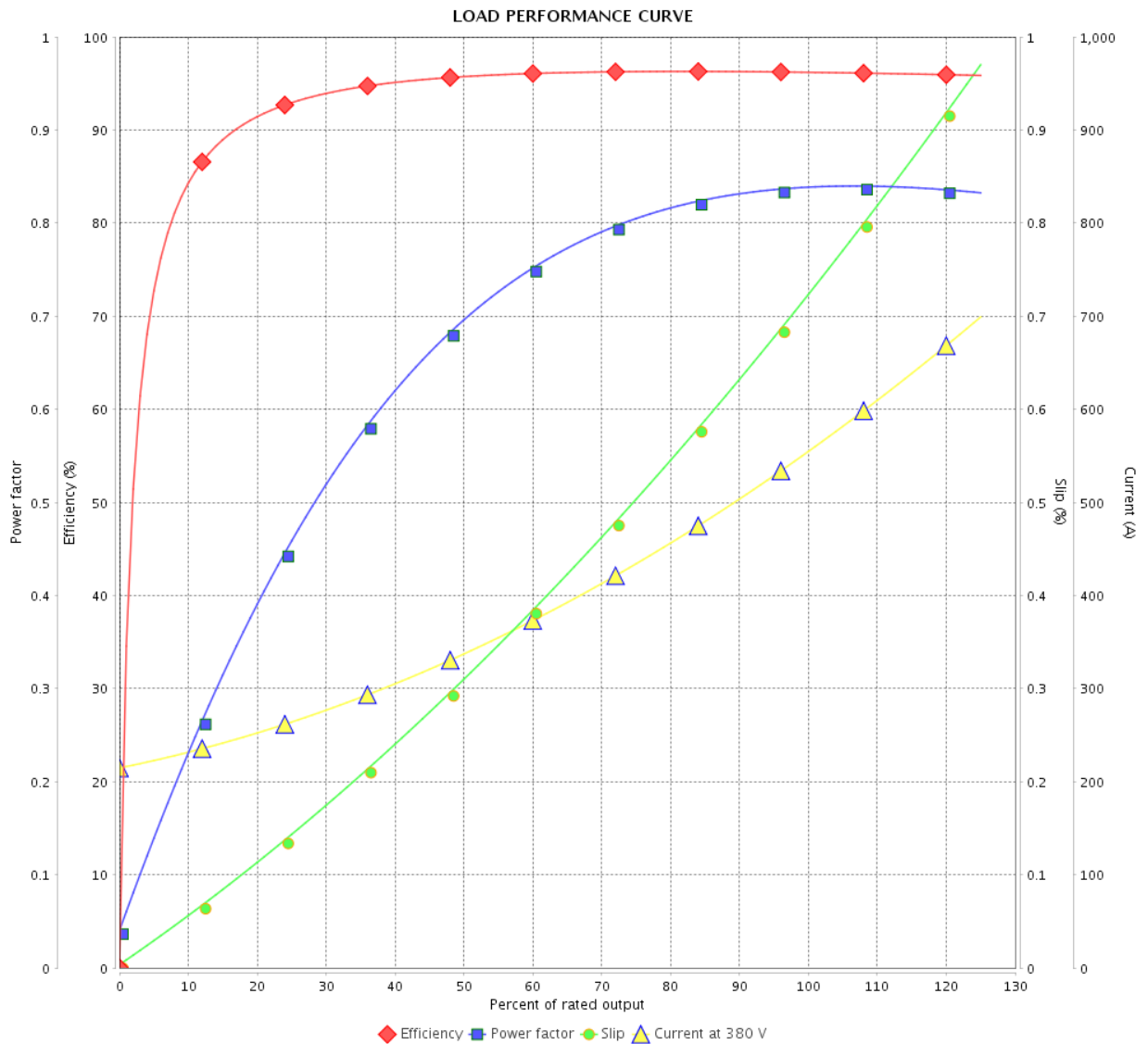


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Performance : 380 V 50 Hz 4P IE3

Rated current : 564 A
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 Rated torque : 1410 ft.lb
 Locked rotor torque : 270 %
 Breakdown torque : 280 %
 Rated speed : 1489 rpm

Moment of inertia (J) : 152 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : A

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Three Phase Induction Motor - Squirrel Cage



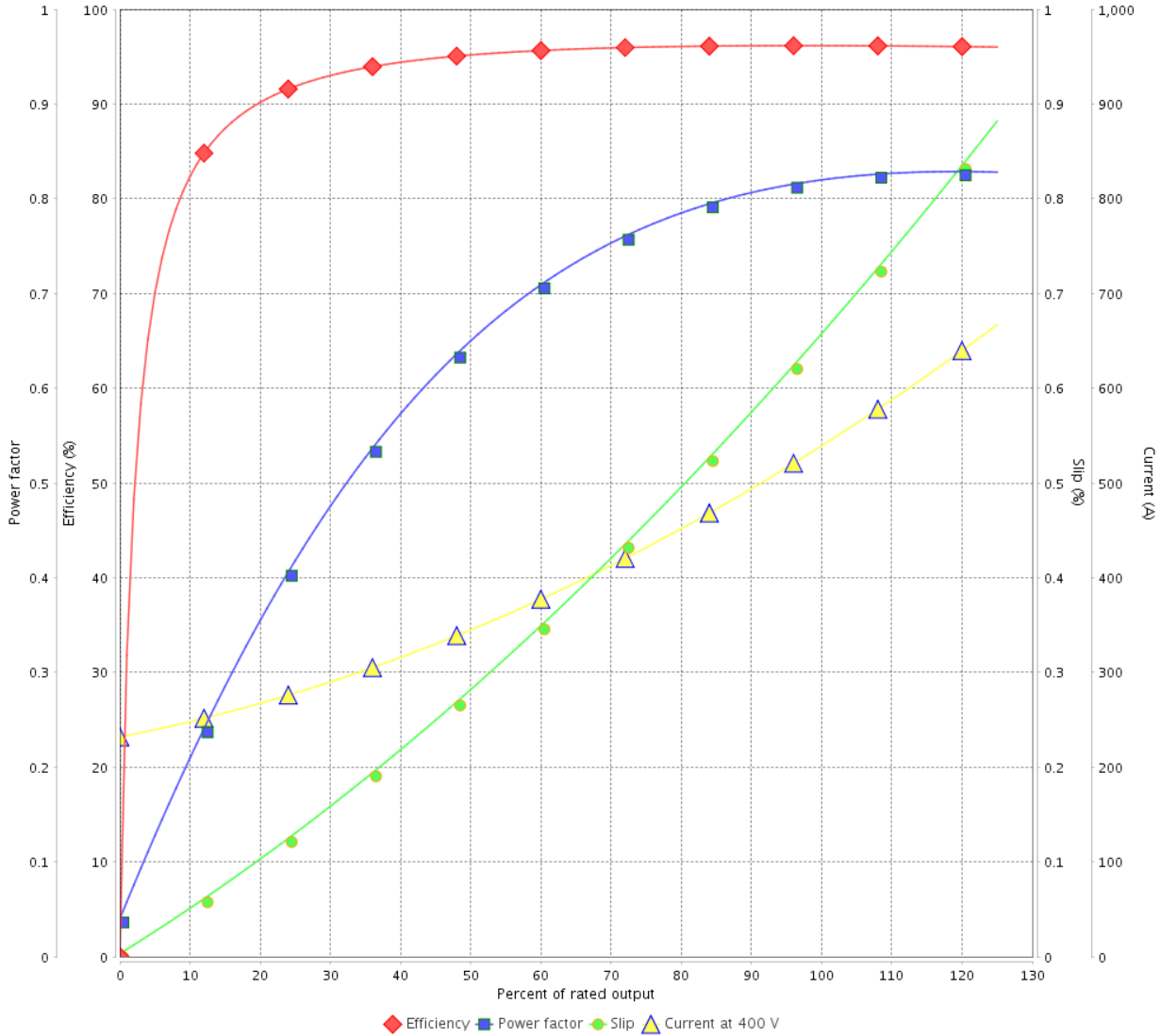
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Performance : 400 V 50 Hz 4P IE3

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Rated torque	: 1410 ft.lb	Insulation class	: F
Locked rotor torque	: 300 %	Service factor	: 1.00
Breakdown torque	: 320 %	Temperature rise	: 105 K
Rated speed	: 1490 rpm	Design	: A

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Three Phase Induction Motor - Squirrel Cage

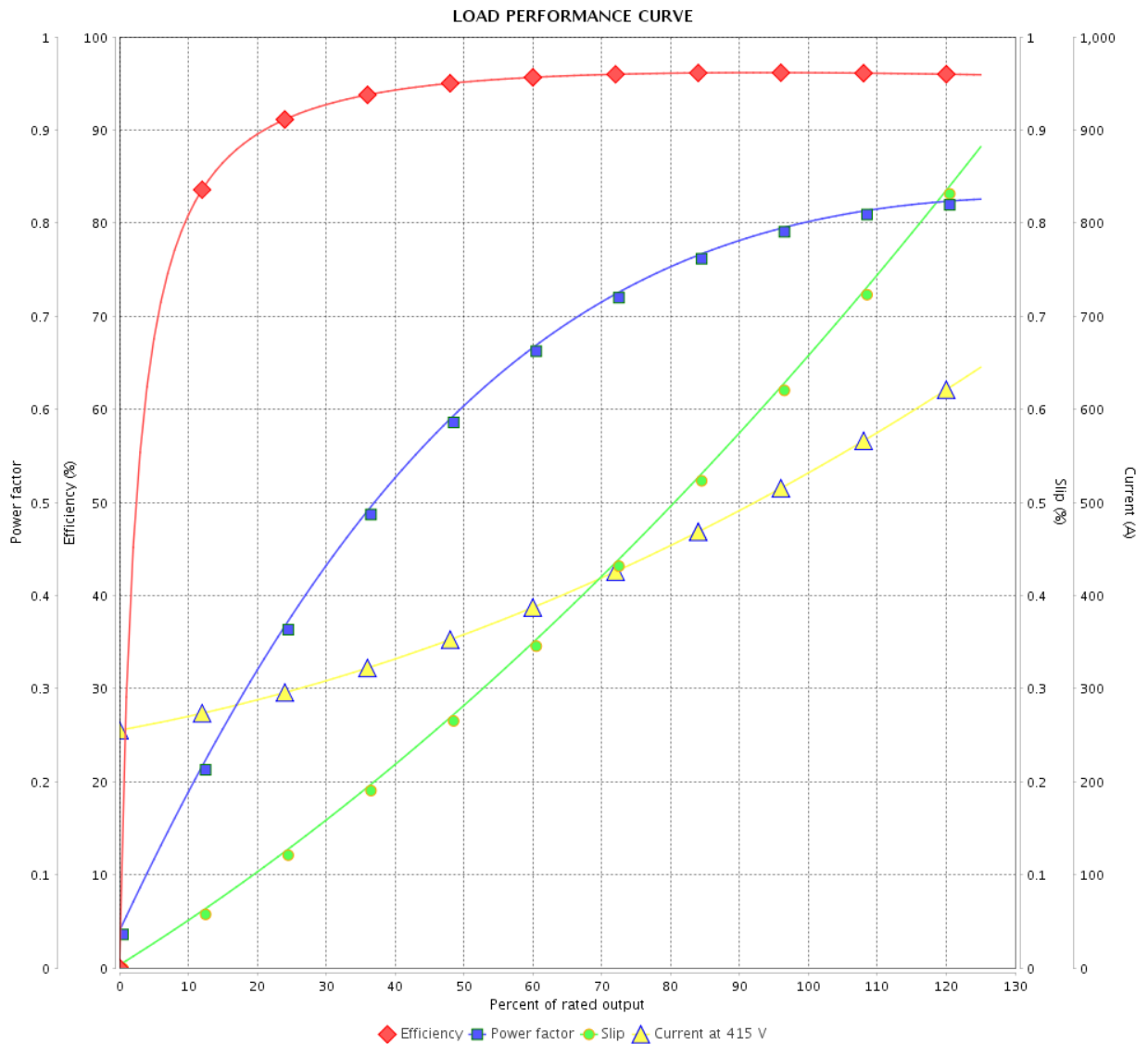


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 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
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THERMAL LIMIT CURVE

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Heating constant

Cooling constant

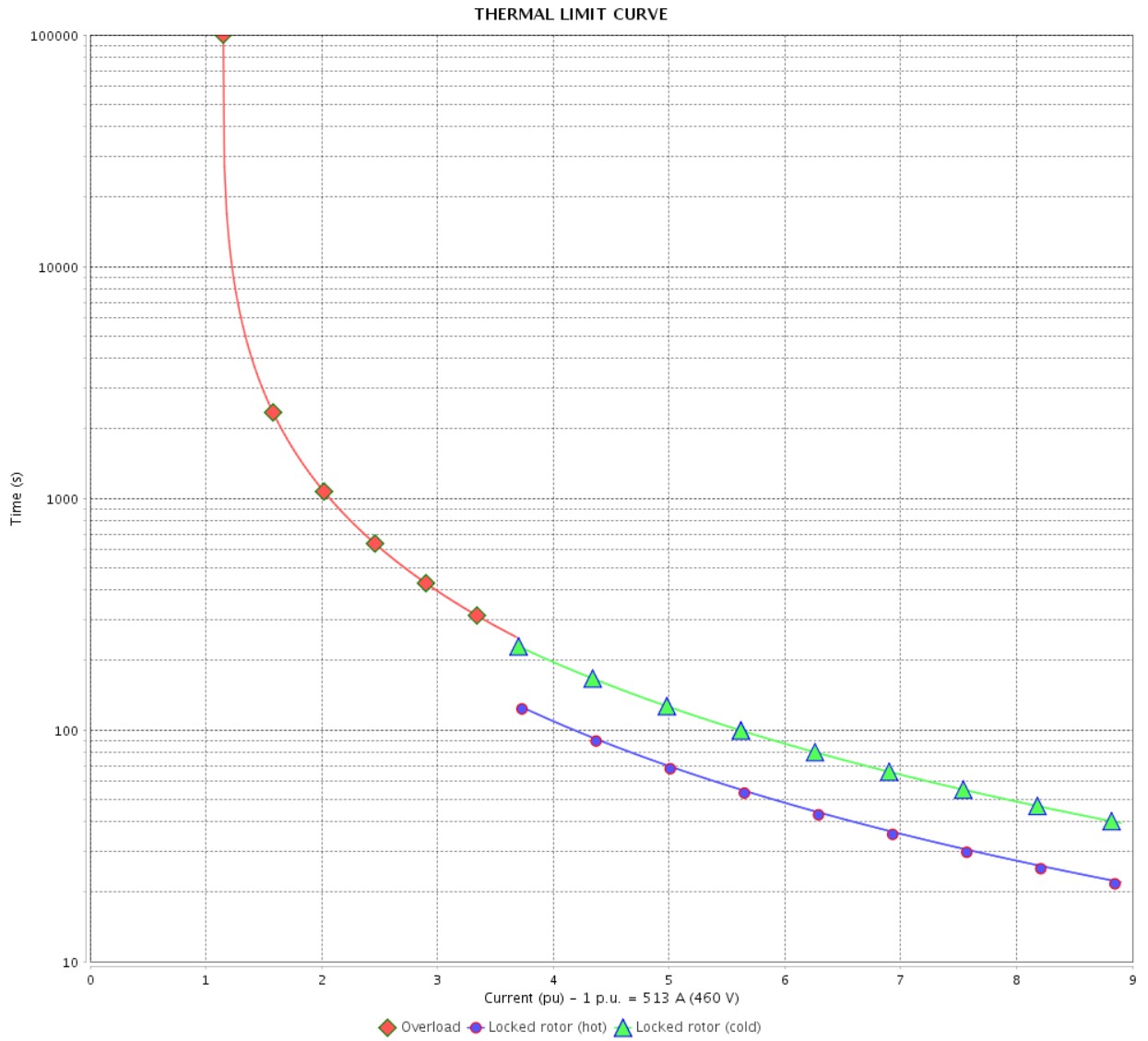
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Cooling constant

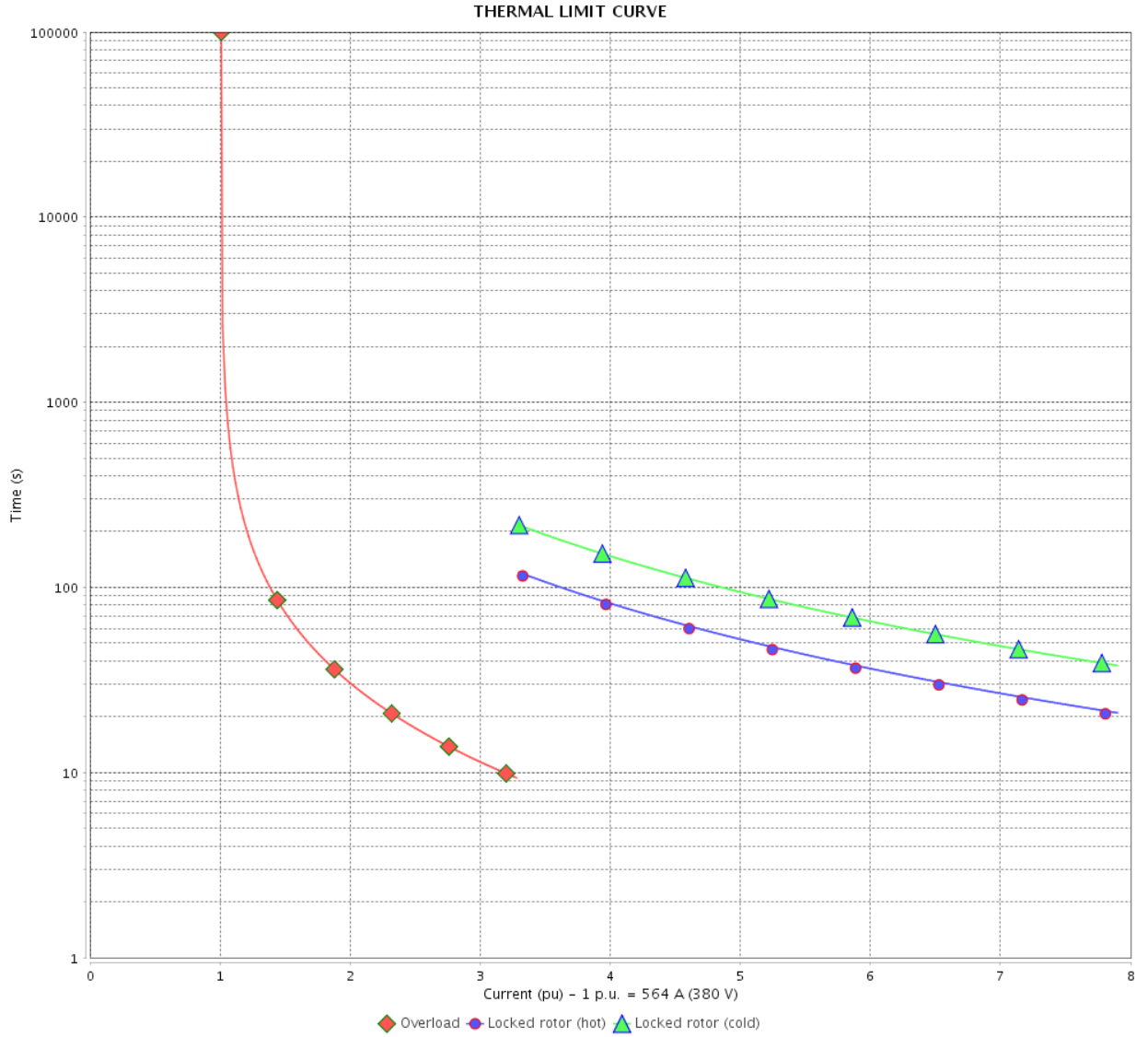
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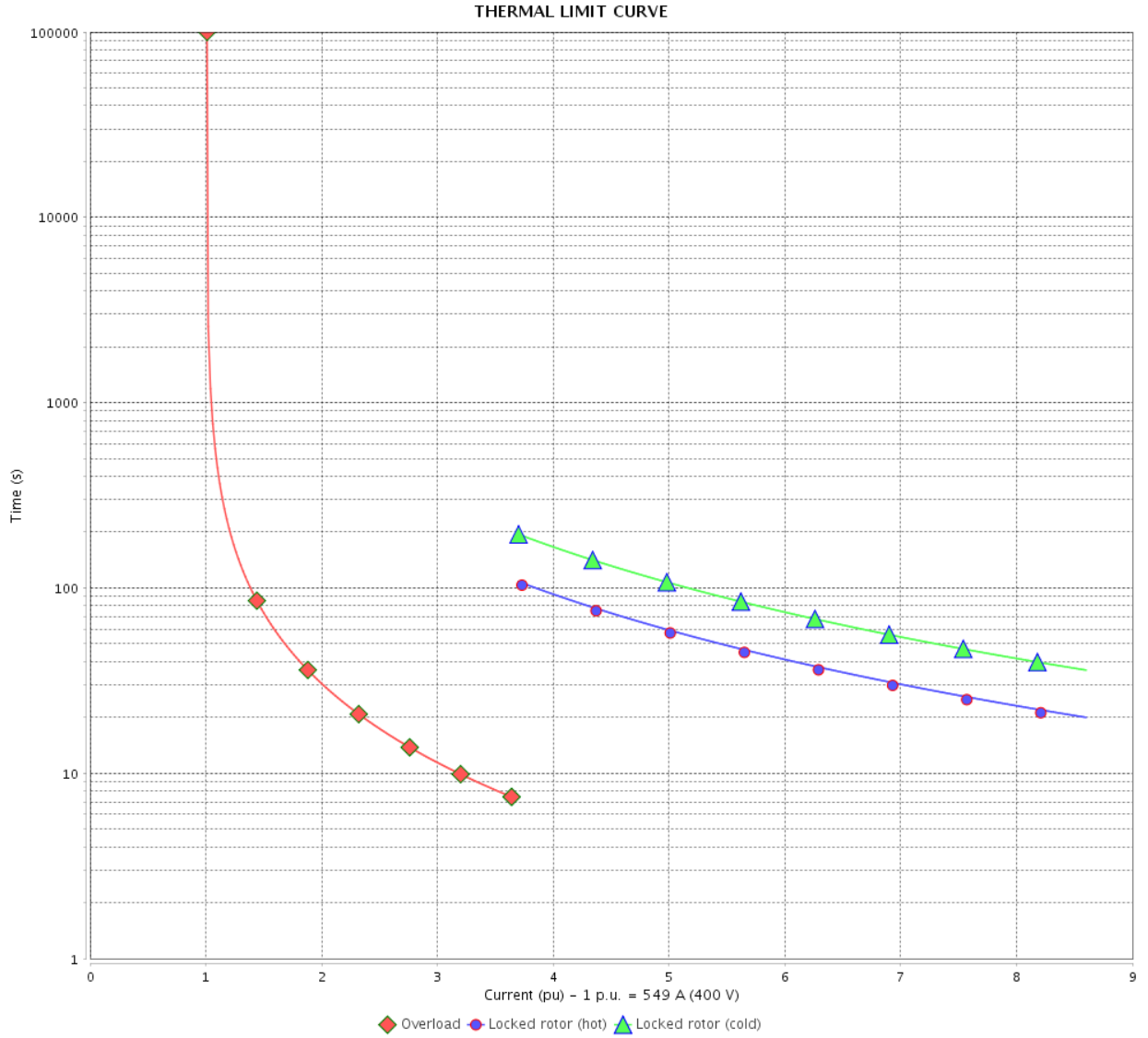
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Locked rotor torque	: 370 %	Service factor	: 1.00
Breakdown torque	: 350 %	Temperature rise	: 105 K
Rated speed	: 1490 rpm	Design	: A

Heating constant

Cooling constant

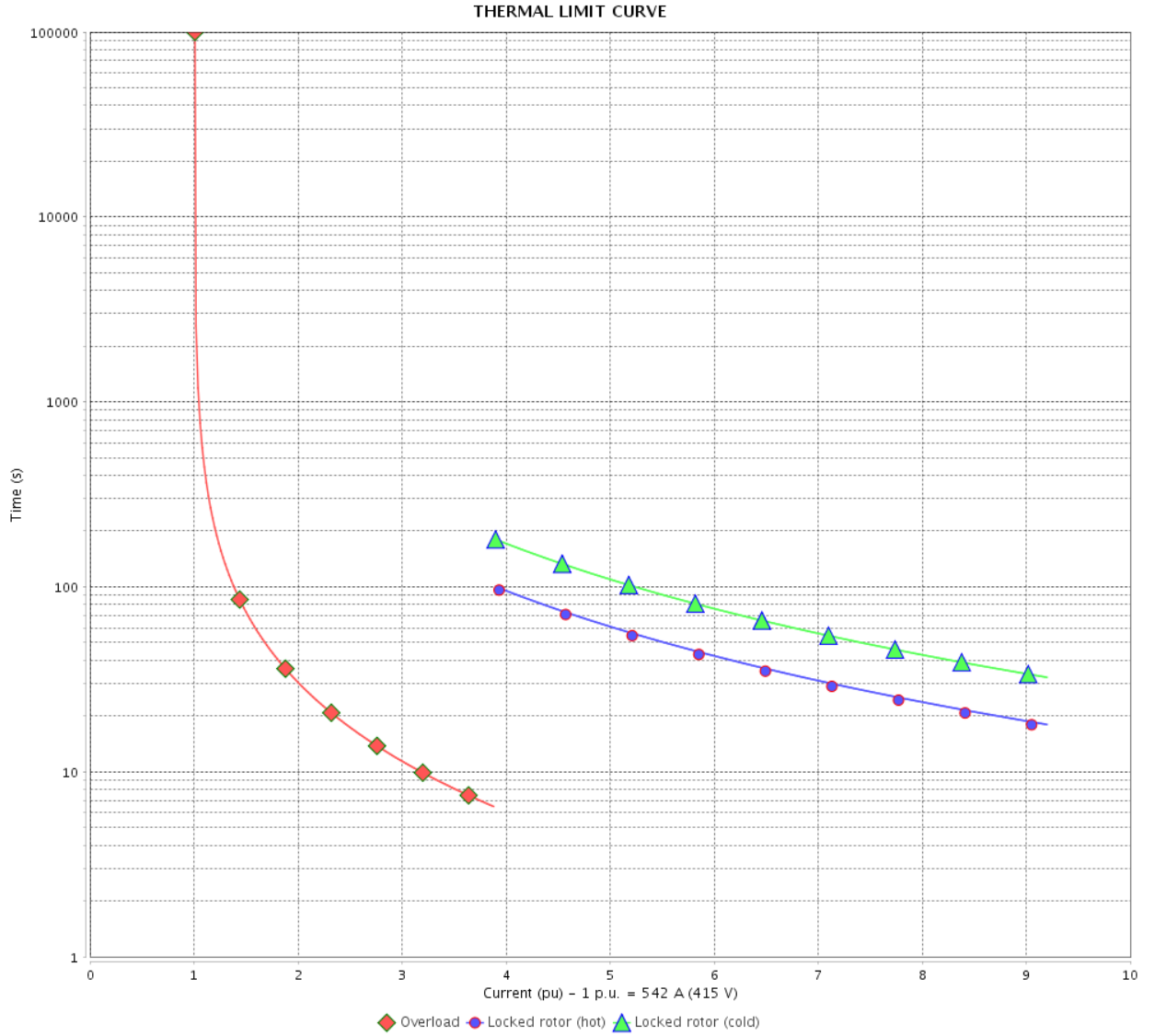
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

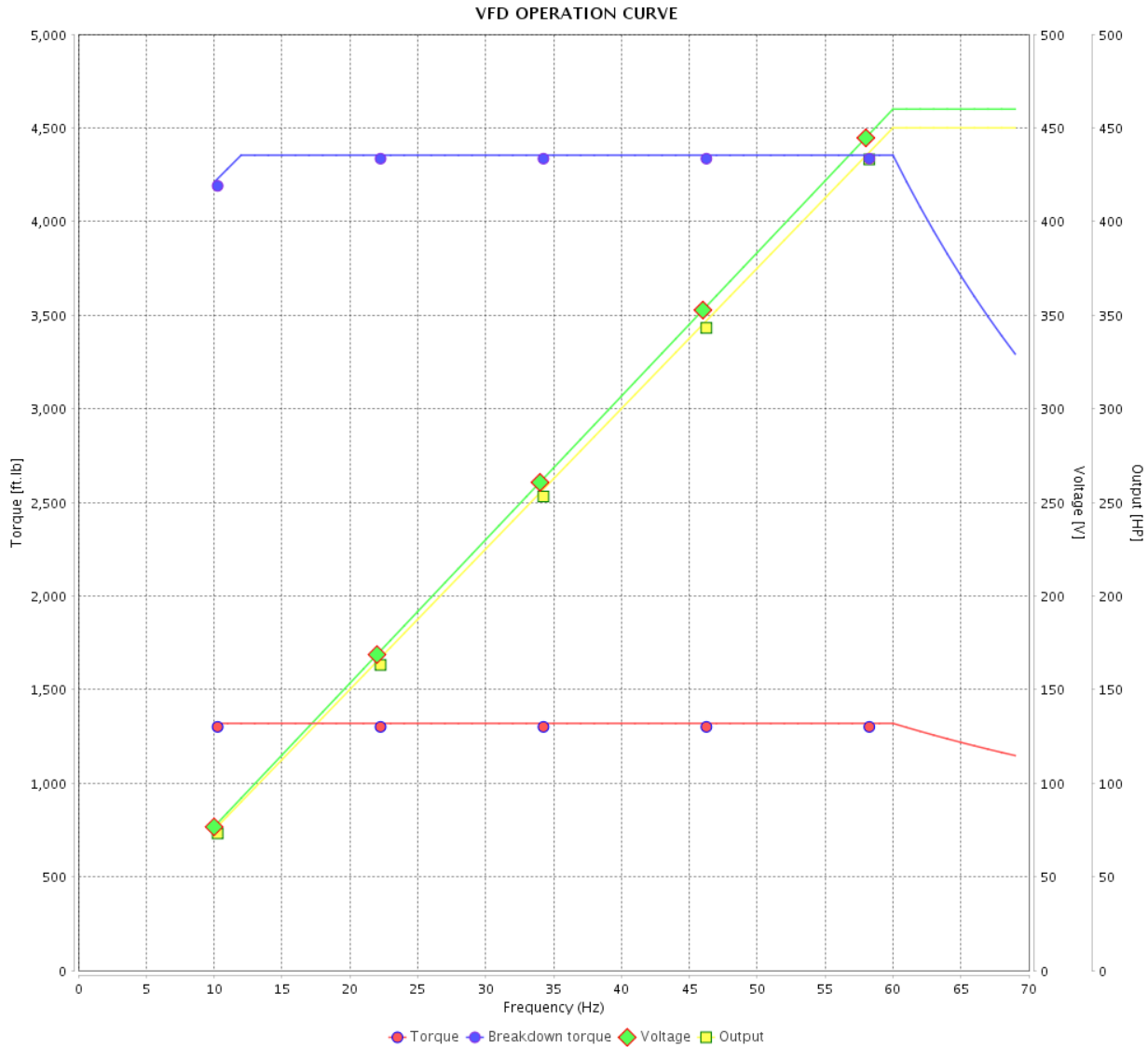


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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

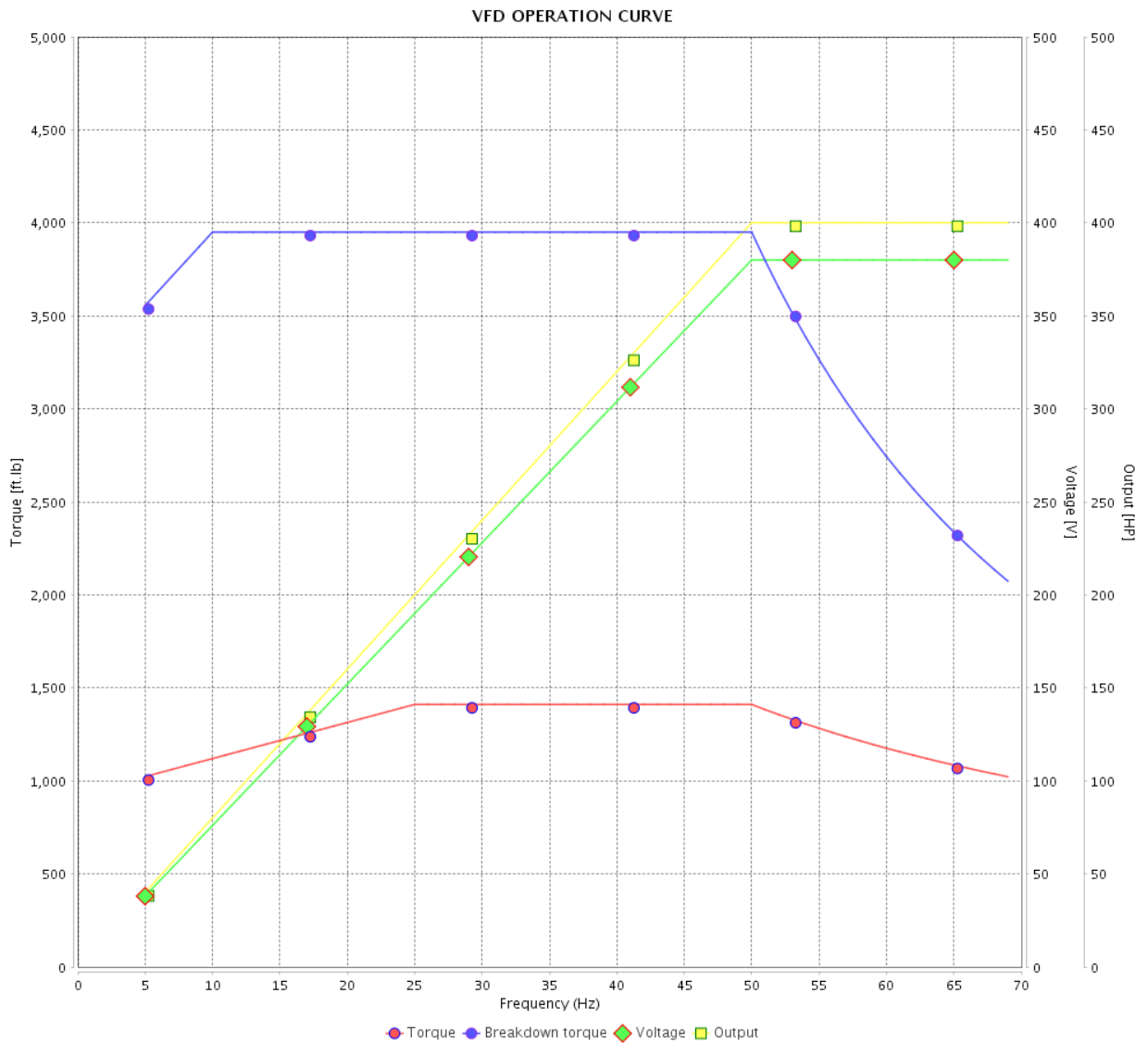


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Performance : 380 V 50 Hz 4P IE3

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

Three Phase Induction Motor - Squirrel Cage

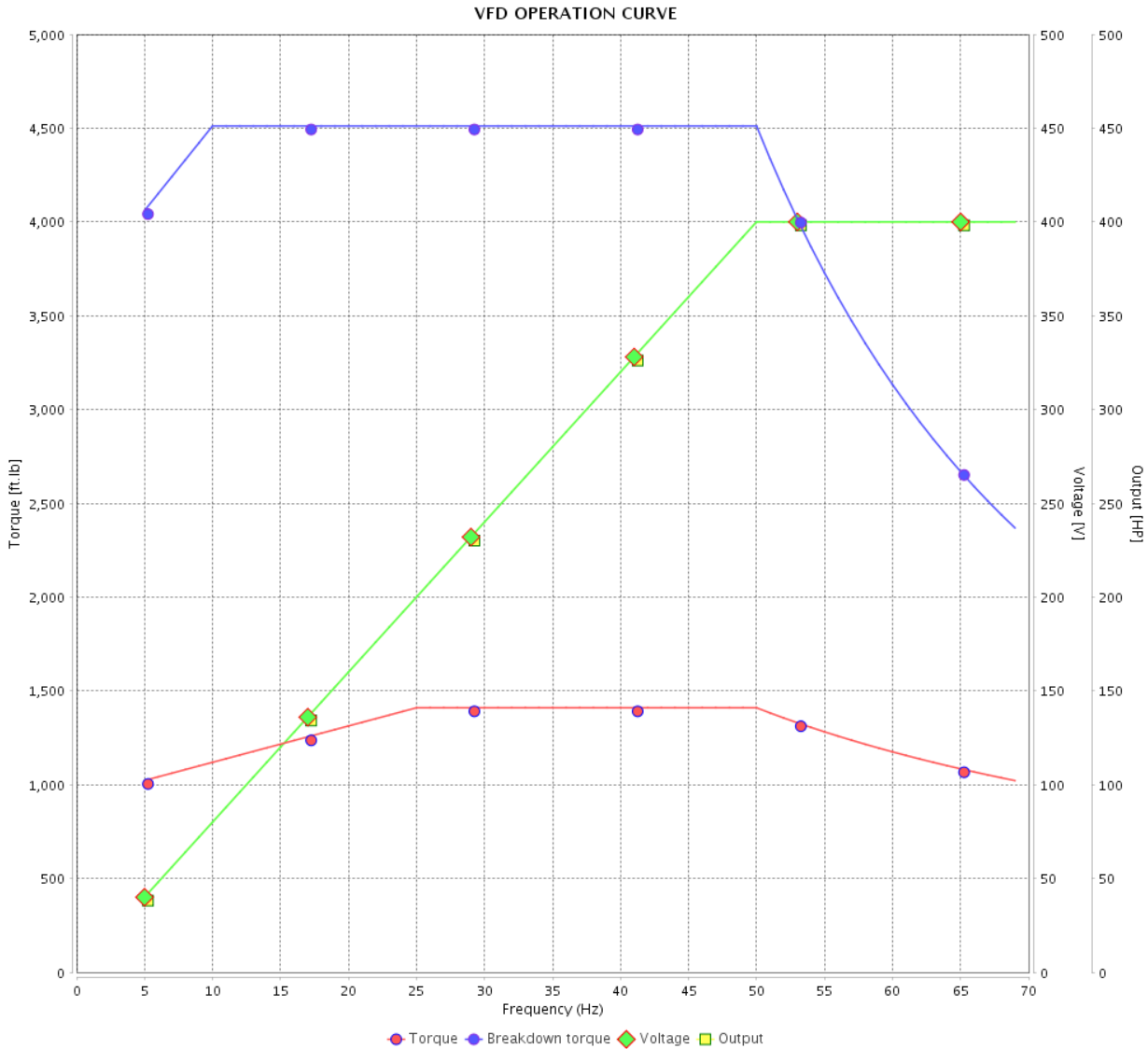


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Performance : 400 V 50 Hz 4P IE3

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

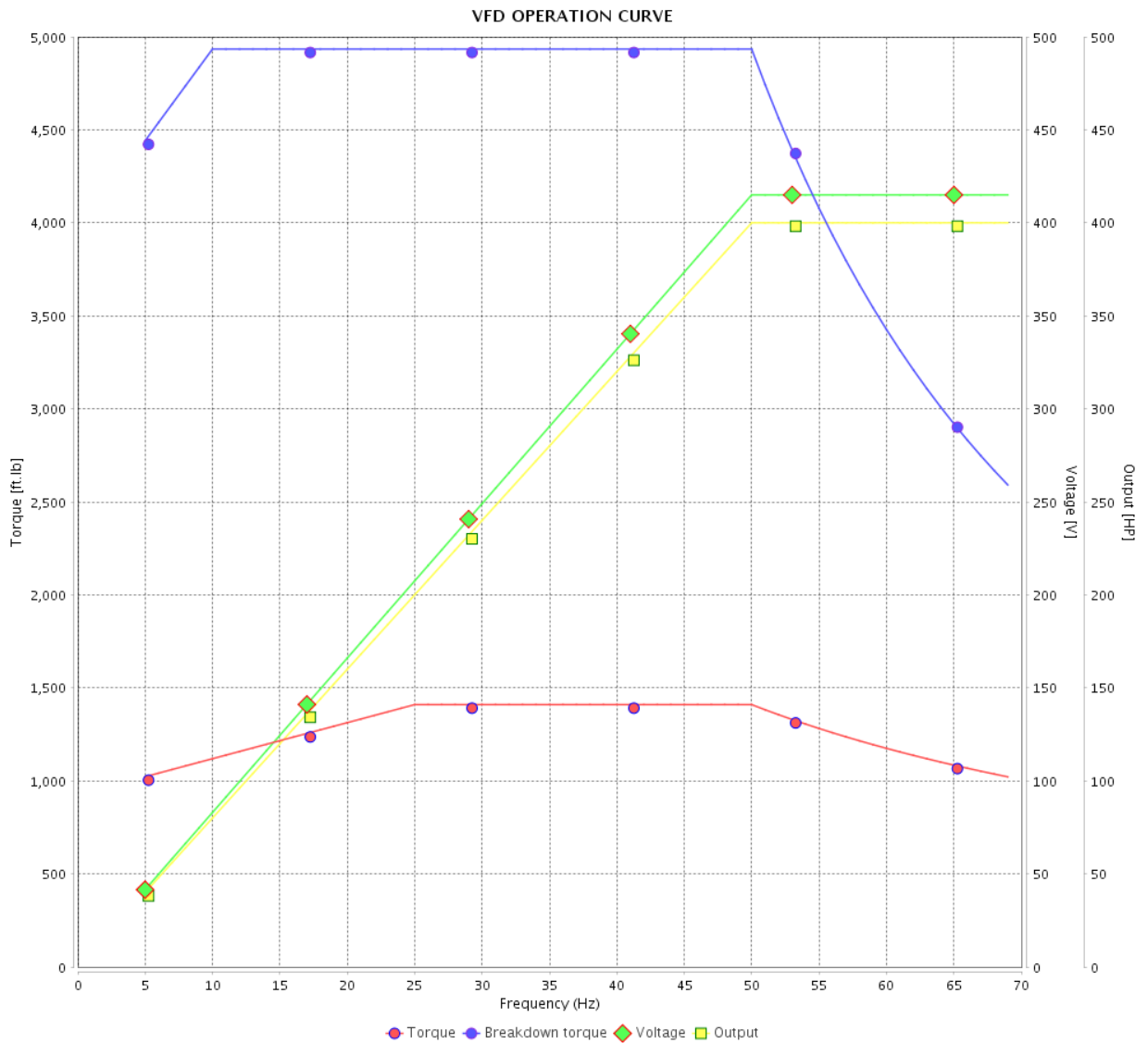


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 Service factor : 1.00
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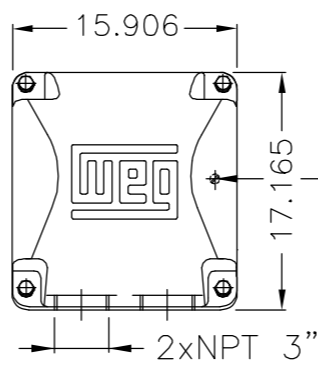
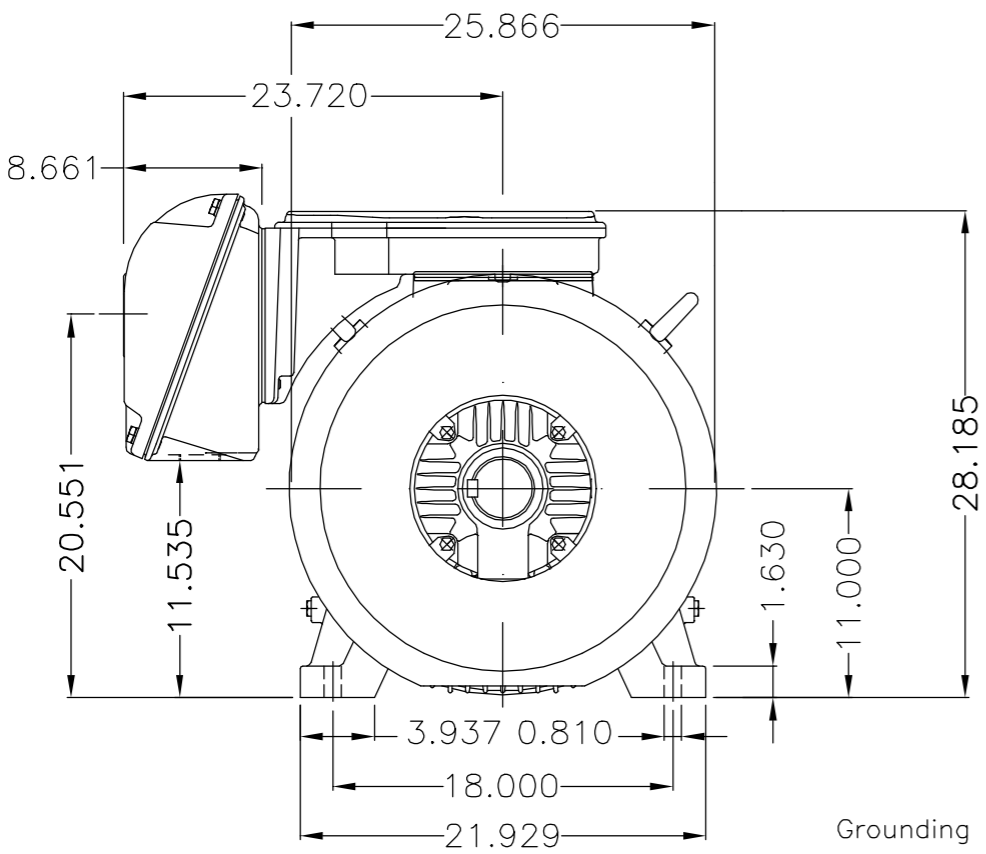
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EIXO/SHAFT	
PADRÃO/STANDARD	X
OPCIONAL/OPTIONAL	
ESPECIAL/SPECIAL	

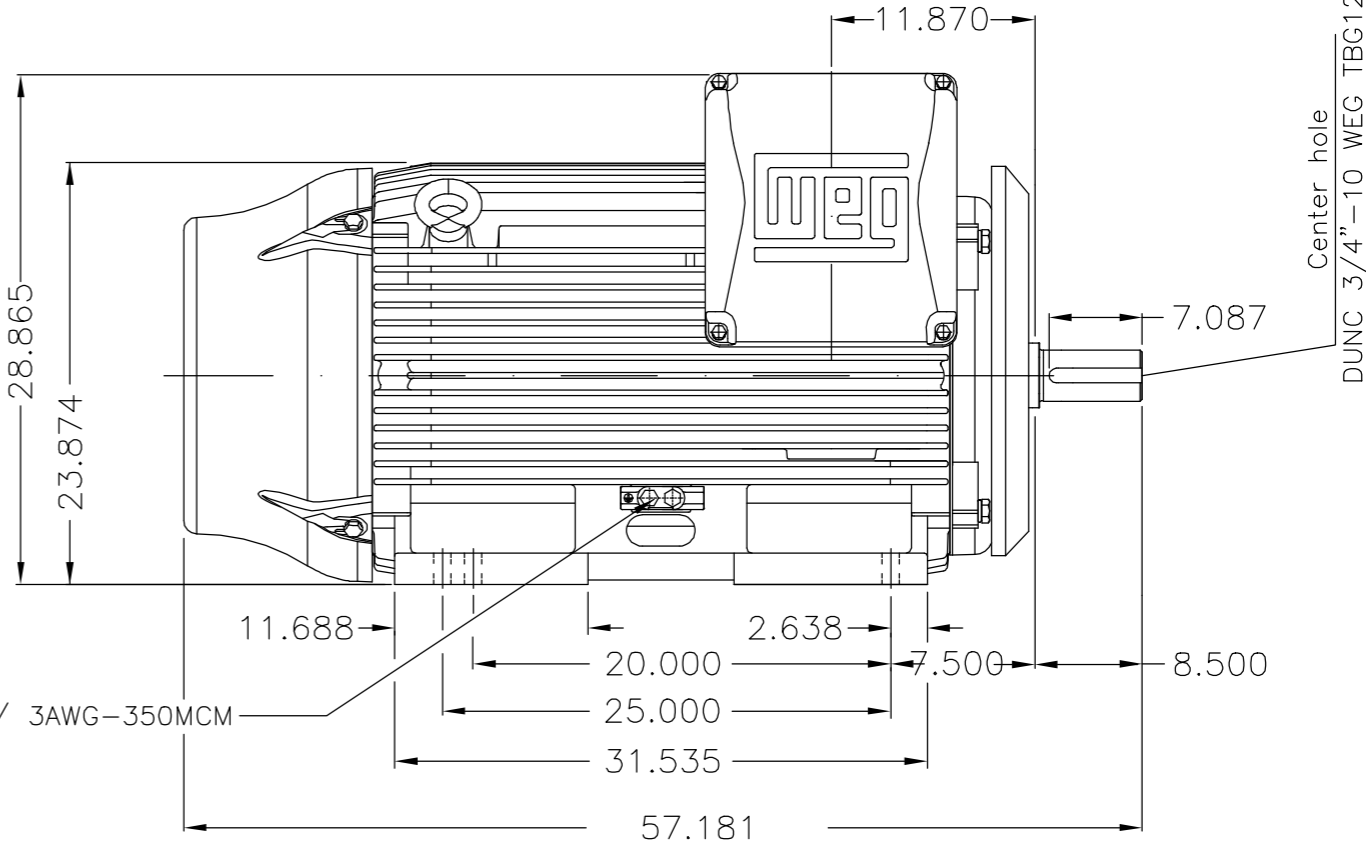
Dimensões em polegada
Dimensions in inches

THIS IS AN UPDATED REVISION, THE PREVIOUS ONE MUST BE DISREGARDED.

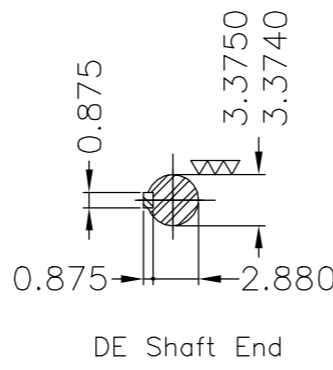
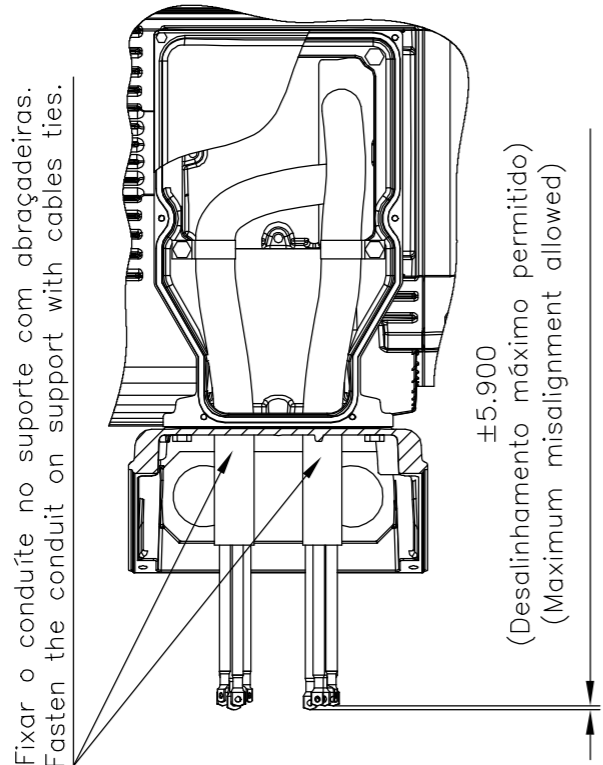
A
B
C
D
E



Main terminal box



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



DE Shaft End

Defletor de ar dianteiro / Drive-End Air Deflector
Rolamento dianteiro de rolos / DE roller bearing
Conduite para cabos no interior do suporte da caixa de ligação
Cables conduit inside terminal box support
Dispositivo de travamento de eixo / Shaft locking device
Linha do motor: Crusher Duty / Motor purpose: Crusher Duty
Tampa traseira com mancal eletricamente isolado
NDE endshield with electrically insulated bearing hub
Cor RAL 5009 / Color RAL 5009
Plano de pintura 203A / Painting plan 203A
Forma construtiva B3D / Mounting B3R(D)

WEG EQUIPAMENTOS ELÉTRICOS S/A

500001731403	ALTERADO CFME CLAIM 417220375	SCATOLIN	DALTONR	DALTONR	28.02.2020	05			
500001473490	ALTERADO CONFORME CLAIM 415116242	PKREYSSIG	CLEBERP	CLEBERP	09.07.2018	04			
ECM	LOC	SUMMARY OF MODIFICATIONS			EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	GABRIELID	THREE PHASE W22 MOTOR		10004946483					
CHECKED	JMANENTE	FRAME L447/9T IP55 TEFC		000 05					
RELEASED	JMANENTE								
REL DT	23.05.2017	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1			

350 HP	06 Poles	60Hz	414668751	C
450 HP	04 Poles	60Hz	414668751	B
400 HP	04 Poles	60Hz	414668751	A



UNCONTROLLED COPY
RELEASED
ZME A3

MADE IN BRAZIL
11408911



FOR SAFE AREA
Mod.TE1BFOXON
CC029A

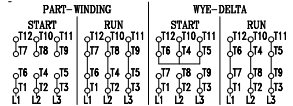




Class I, Div 2, Gr A, B, C and D - T3
Class I, Zone 2, IIC - T3
Class II, Div 2, Gr F and G - T3C
For use on PWM: Gr. A, B, C and D,
VT 1000:1, CT 6:1, 1.00SF - T2B


MODEL 45018ET3GRB449T-W22

Inverter Duty Motor
Severe Duty

PH3	60Hz	Fr. L447/9T	1000m.a.s.l.	IP55	TEFC	3512lb
V 460				A 513		
HP 450				kW 330		
SF 1.15				SFA 590		
RPM 1791				PF 0.84		
AMB 40°C				INS cl. F DT80K	NEMA NOM EFF 96.2%	
DUTY CONT.				DES A Code K		



-  → NU-322-C3 (60g)
-  → 6319-C3 (45g)

 MOBIL POLYREX EM (4000h)