

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: W40 NEMA Premium Efficiency Three-Phase	Product code :	14272540		
		Catalog # :	15018OT3GRB444T-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>	: 1393 lb		
Protection degree	: IP23	Moment of inertia (J)	: 42.1 sq.ft.lb		
Design	: B				
Output [HP]	150	125	125	125	
Poles	4	4	4	4	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	460	380	400	415	
Rated current [A]	170	169	162	158	
L. R. Amperes [A]	1105	1183	1199	1138	
LRC [A]	6.5x(Code G)	7.0x(Code G)	7.4x(Code H)	7.2x(Code H)	
No load current [A]	58.0	57.7	62.5	66.5	
Rated speed [RPM]	1784	1485	1485	1485	
Slip [%]	0.89	1.00	1.00	1.00	
Rated torque [ft.lb]	442	442	442	442	
Locked rotor torque [%]	200	190	220	240	
Breakdown torque [%]	240	240	270	290	
Service factor	1.25	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	39s (cold) 22s (hot)	37s (cold) 21s (hot)	36s (cold) 20s (hot)	39s (cold) 22s (hot)	
Noise level <sup>2</sup>	78.0 dB(A)				
Efficiency (%)	25%	95.3	94.8	94.8	95.0
	50%	95.4	94.9	94.9	95.1
	75%	95.8	95.3	95.3	95.3
	100%	95.8	95.3	95.3	95.3
Power Factor	25%	0.49	0.49	0.45	0.42
	50%	0.74	0.74	0.70	0.68
	75%	0.82	0.82	0.80	0.78
	100%	0.85	0.85	0.84	0.83
Bearing type	: <u>Drive end</u> NU-319 C3	<u>Non drive end</u> 6314 C3	Foundation loads		
Sealing	: Without	Without	Max. traction	: 2721 lb	
	Bearing Seal	Bearing Seal	Max. compression	: 4113 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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Checked by				Page	Revision
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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



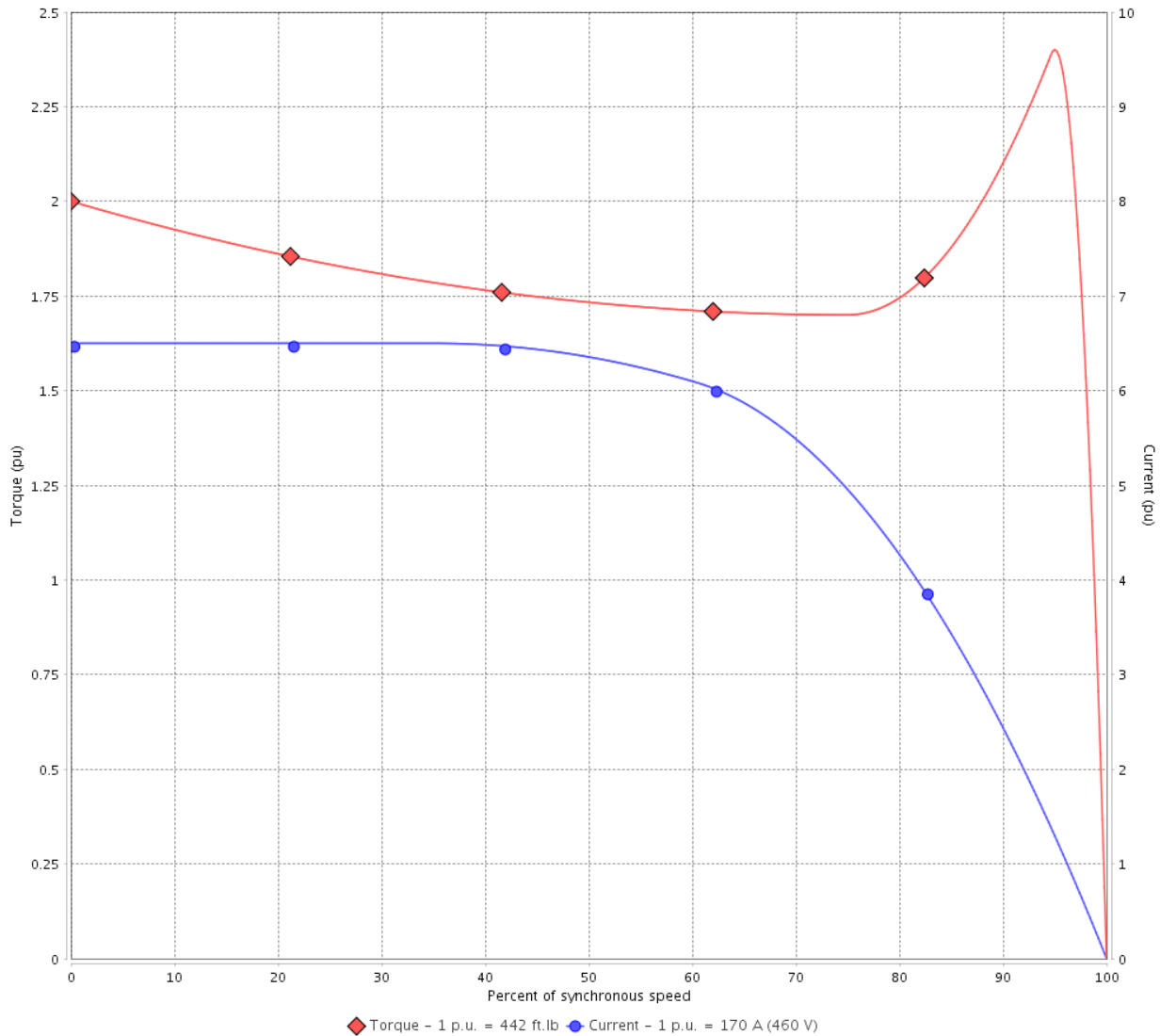
Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272540

Catalog # : 15018OT3GRB444T-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 460 V 60 Hz 4P

Rated current	: 170 A	Moment of inertia (J)	: 42.1 sq.ft.lb
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 442 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.25
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1784 rpm	Design	: B

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

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# TORQUE AND CURRENT VS SPEED CURVE



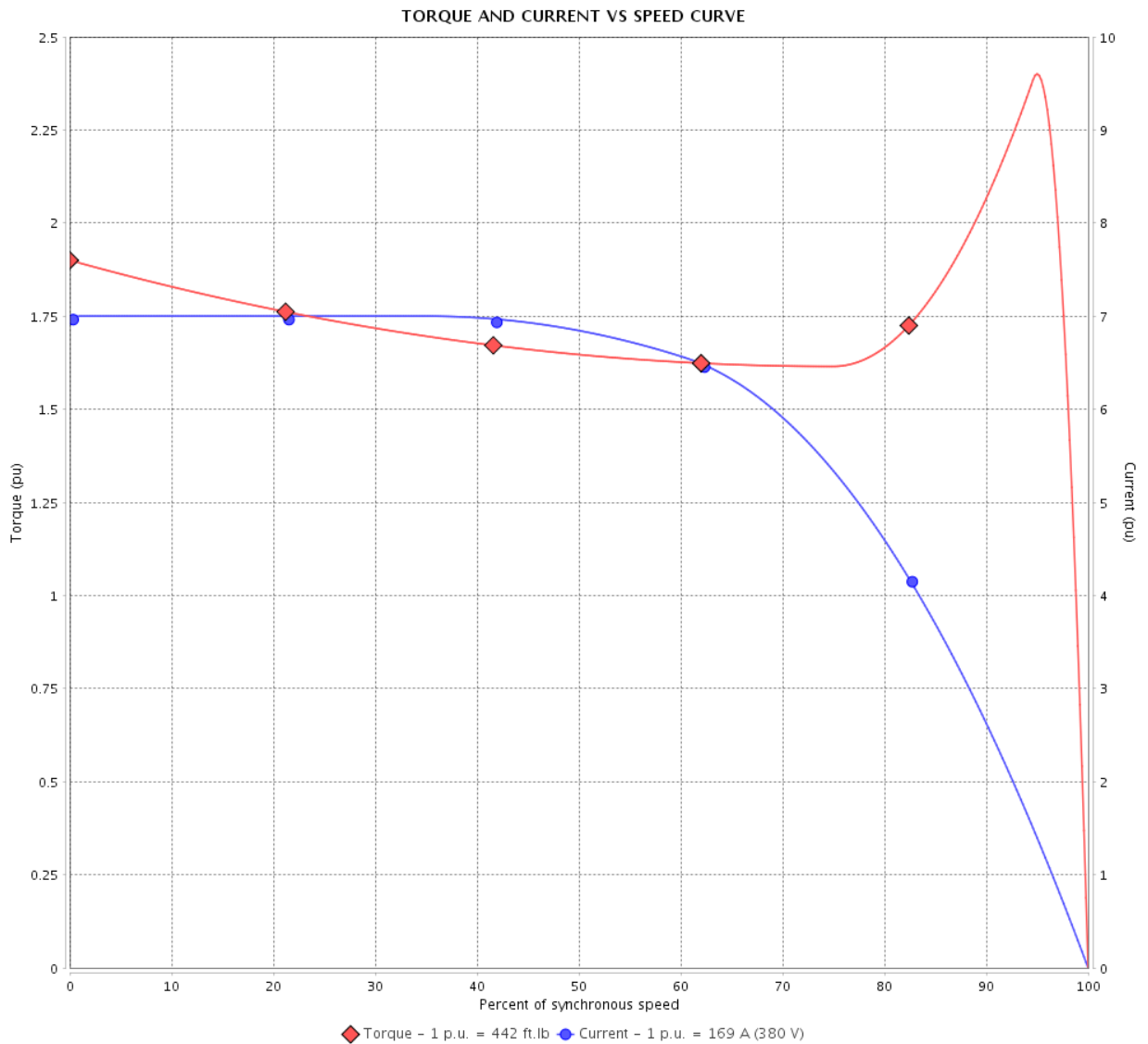
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14272540

Catalog # : 15018OT3GRB444T-W40



Performance : 380 V 50 Hz 4P IE3

Rated current	: 169 A	Moment of inertia (J)	: 42.1 sq.ft.lb
LRC	: 7.0	Duty cycle	: Cont.(S1)
Rated torque	: 442 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

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

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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



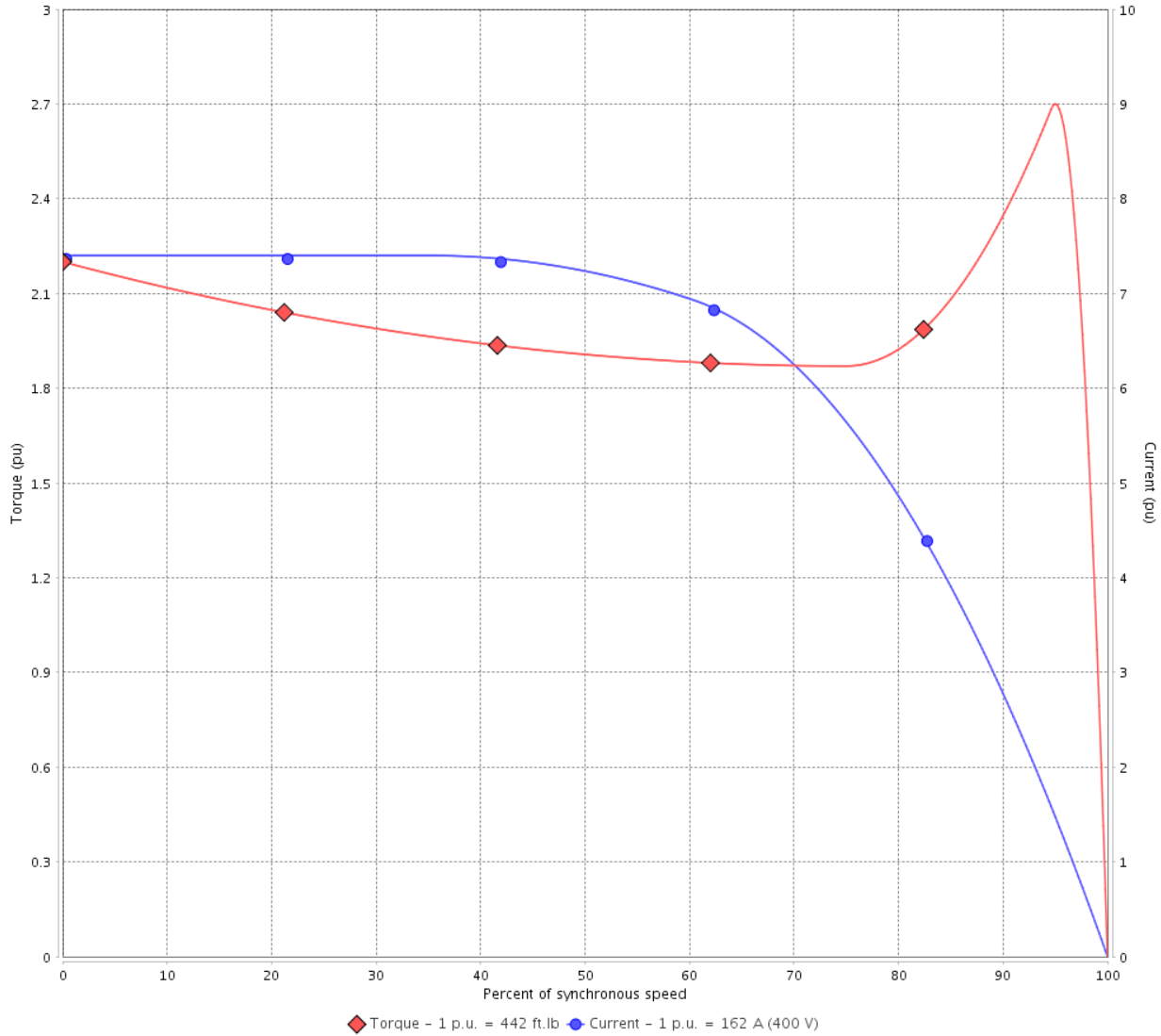
Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272540

Catalog # : 15018OT3GRB444T-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current	: 162 A	Moment of inertia (J)	: 42.1 sq.ft.lb
LRC	: 7.4	Duty cycle	: Cont.(S1)
Rated torque	: 442 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

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

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# TORQUE AND CURRENT VS SPEED CURVE



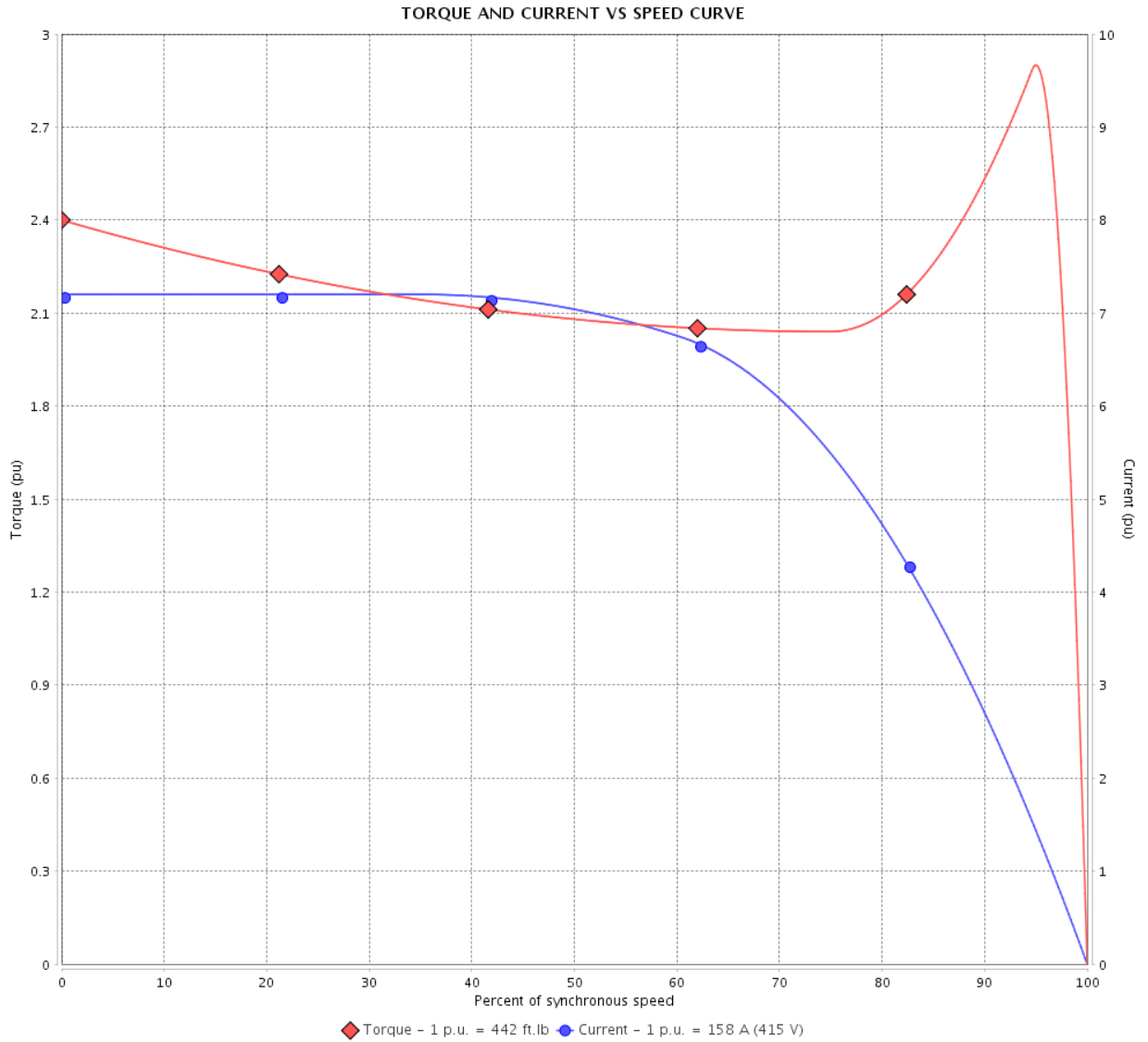
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272540

Catalog # : 15018OT3GRB444T-W40



Performance : 415 V 50 Hz 4P IE3

Rated current	: 158 A	Moment of inertia (J)	: 42.1 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 442 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

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

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

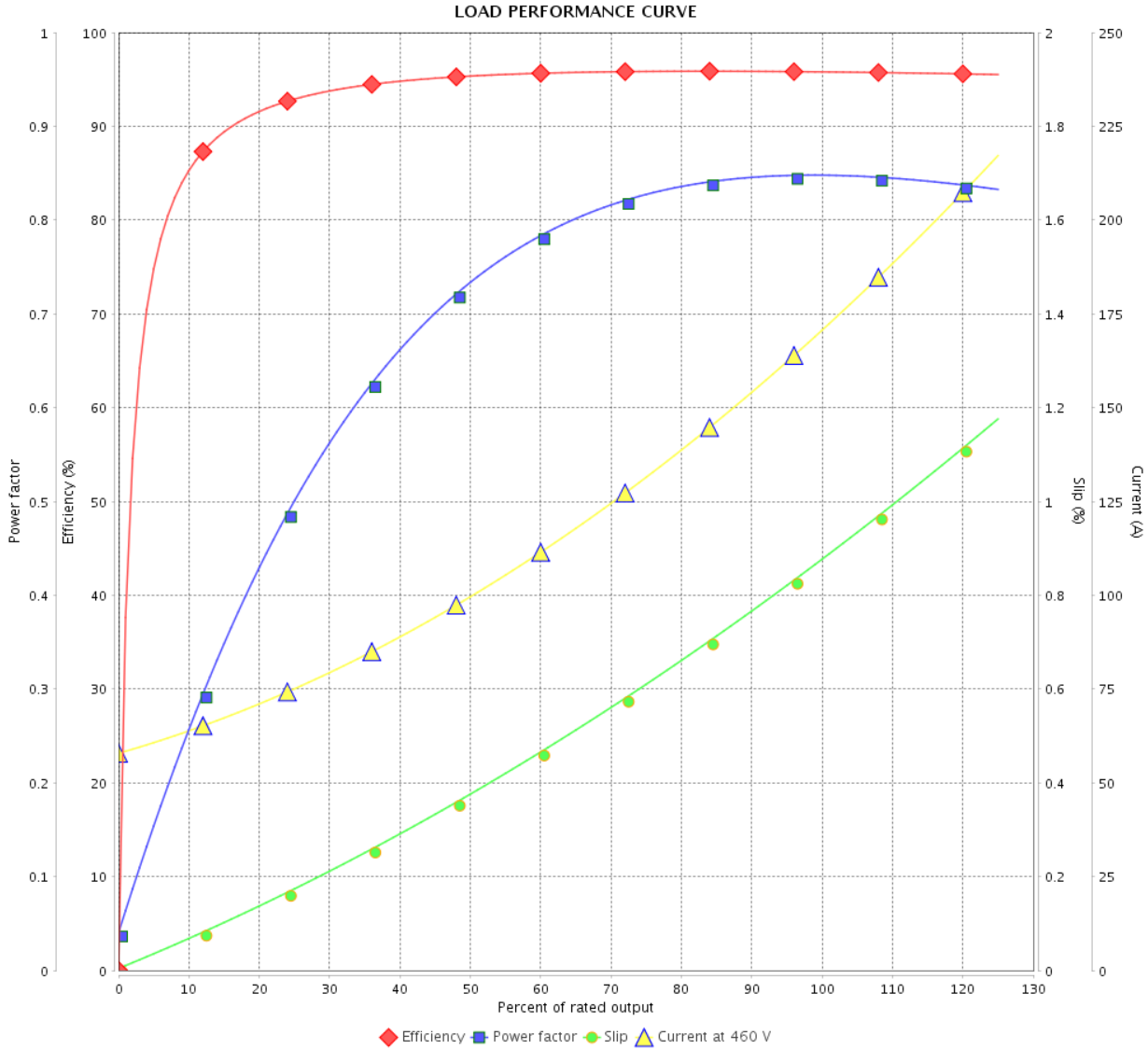


Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272540

Catalog # : 15018OT3GRB444T-W40



Performance : 460 V 60 Hz 4P

Rated current	: 170 A	Moment of inertia (J)	: 42.1 sq.ft.lb
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 442 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.25
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1784 rpm	Design	: B

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

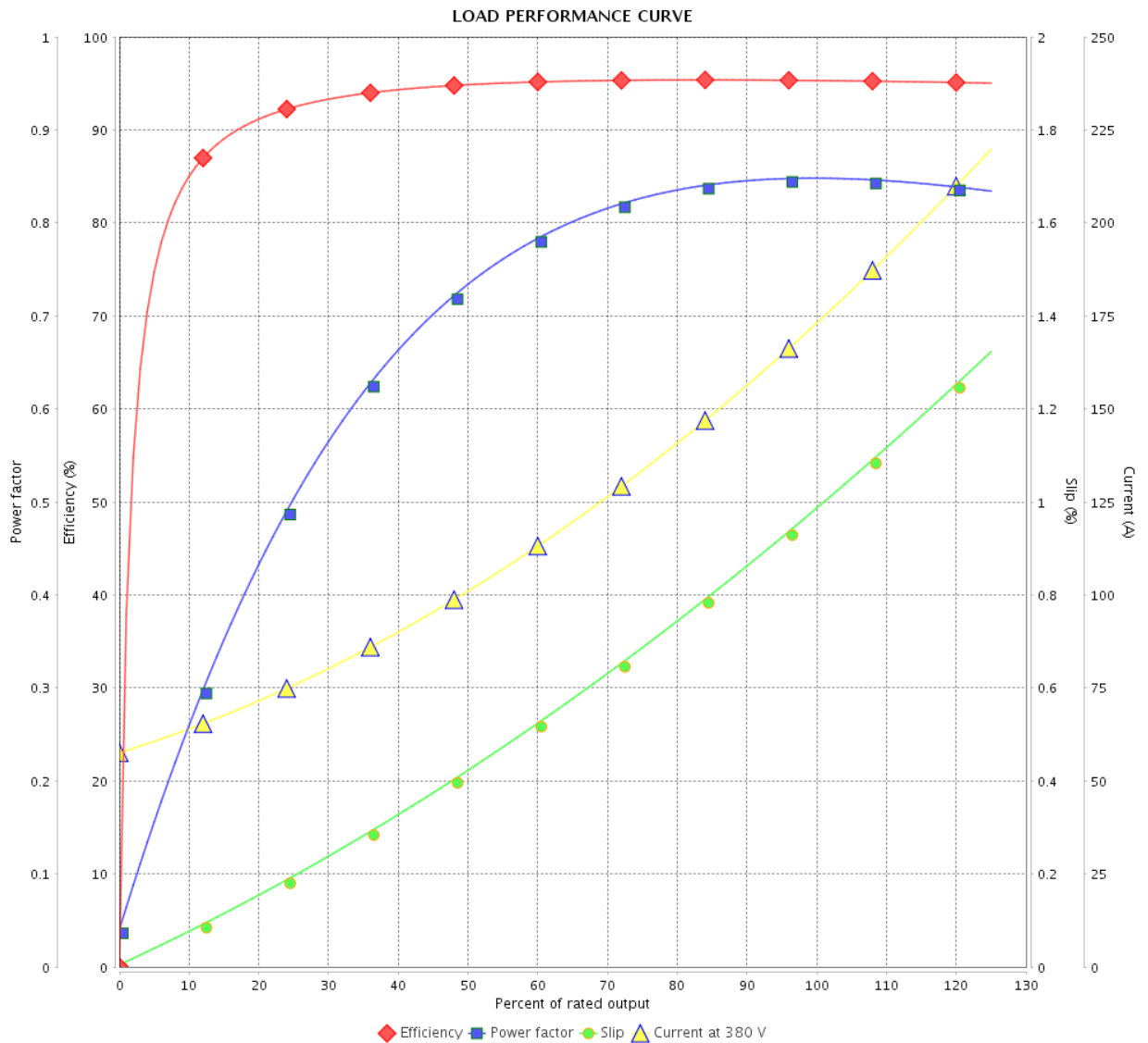


Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14272540

Catalog # : 15018OT3GRB444T-W40



Performance : 380 V 50 Hz 4P IE3

Rated current : 169 A  
 LRC : 7.0  
 Rated torque : 442 ft.lb  
 Locked rotor torque : 190 %  
 Breakdown torque : 240 %  
 Rated speed : 1485 rpm

Moment of inertia (J) : 42.1 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



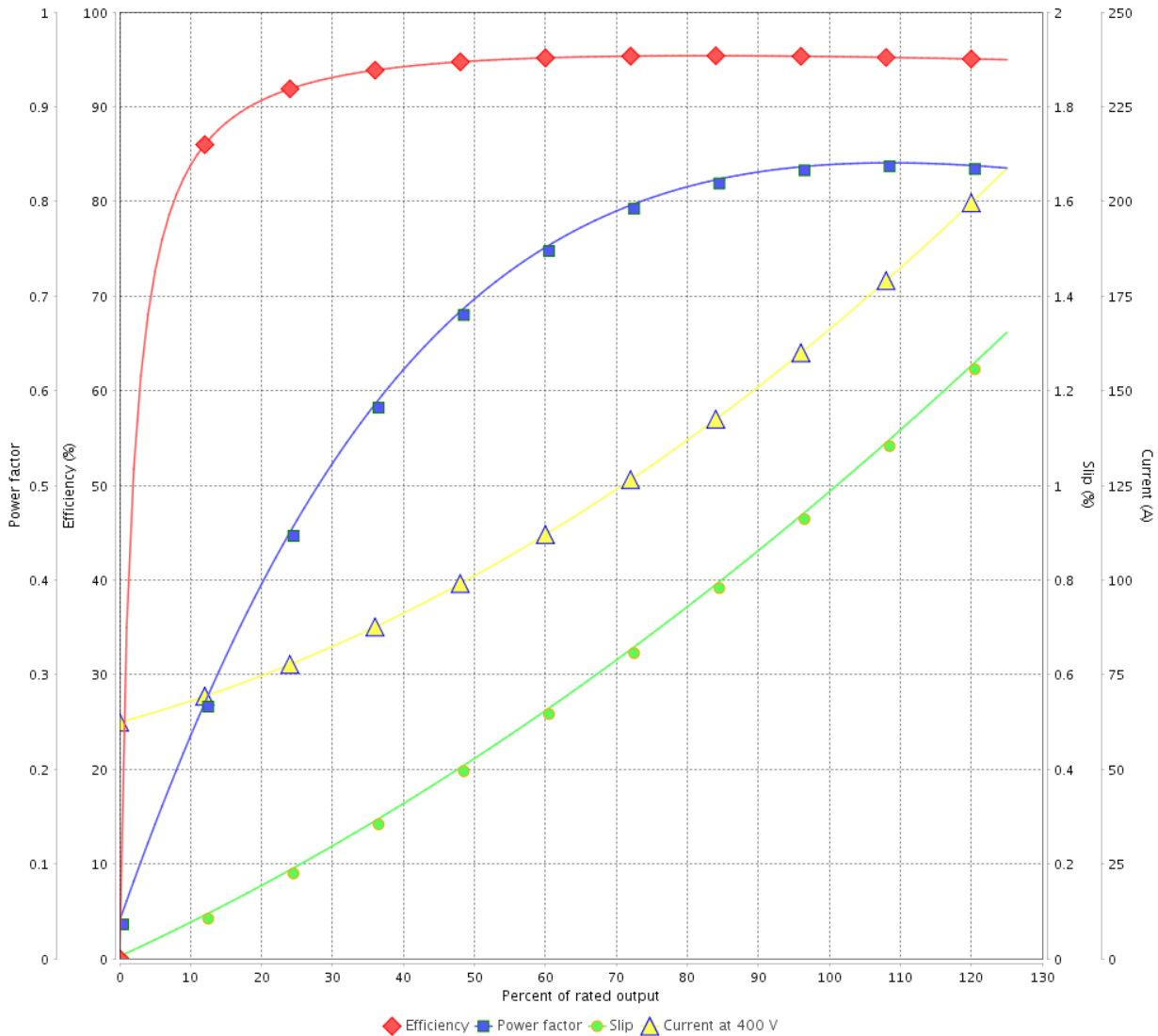
Customer :

Product line : W40 NEMA Premium Efficiency  
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Product code : 14272540

Catalog # : 15018OT3GRB444T-W40

LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current : 162 A  
LRC : 7.4  
Rated torque : 442 ft.lb  
Locked rotor torque : 220 %  
Breakdown torque : 270 %  
Rated speed : 1485 rpm

Moment of inertia (J) : 42.1 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

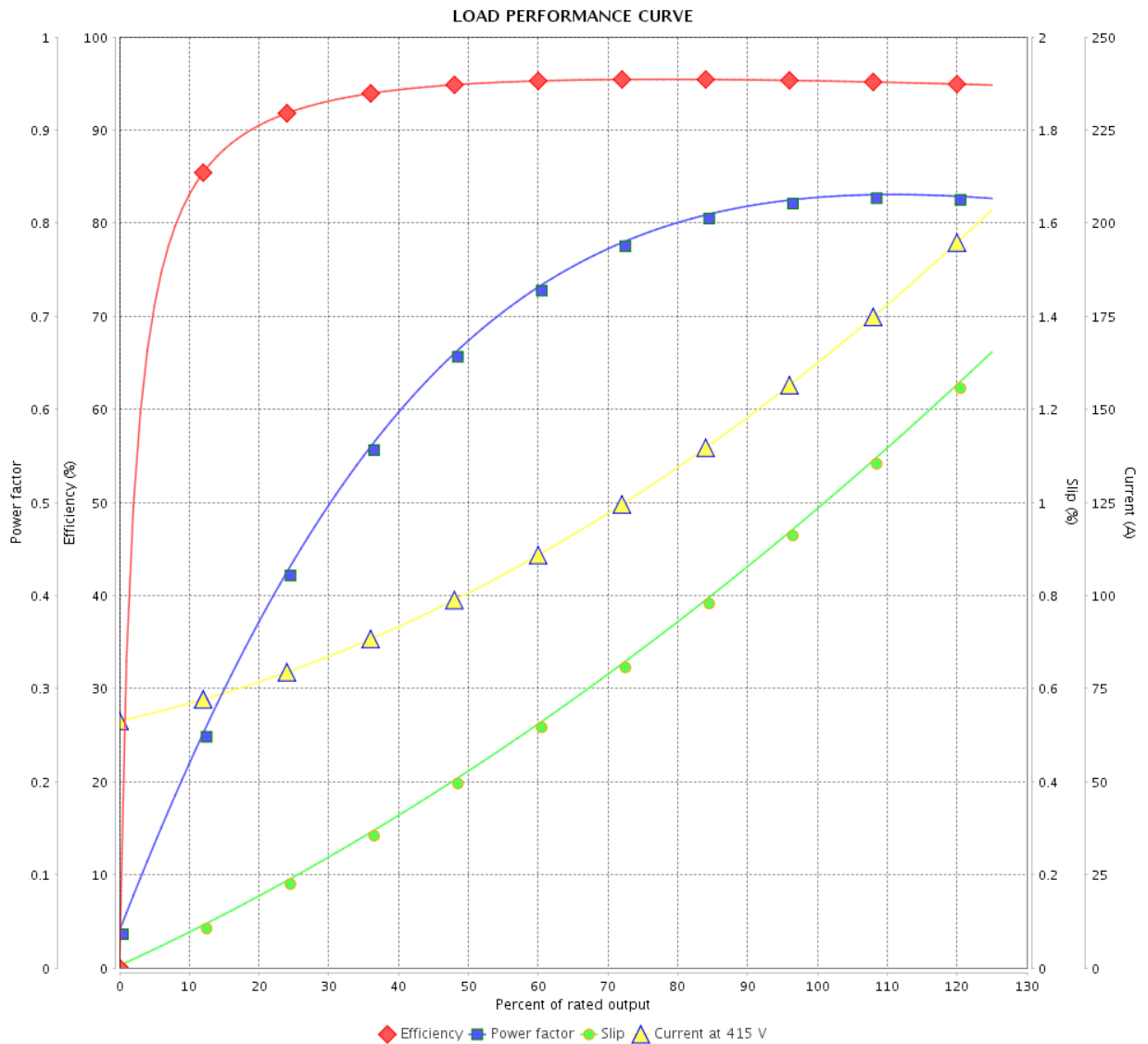


Customer : \_\_\_\_\_

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272540

Catalog # : 15018OT3GRB444T-W40



Performance : 415 V 50 Hz 4P IE3

Rated current : 158 A  
 LRC : 7.2  
 Rated torque : 442 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 290 %  
 Rated speed : 1485 rpm

Moment of inertia (J) : 42.1 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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Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1784 rpm	Design	: B

Heating constant

Cooling constant

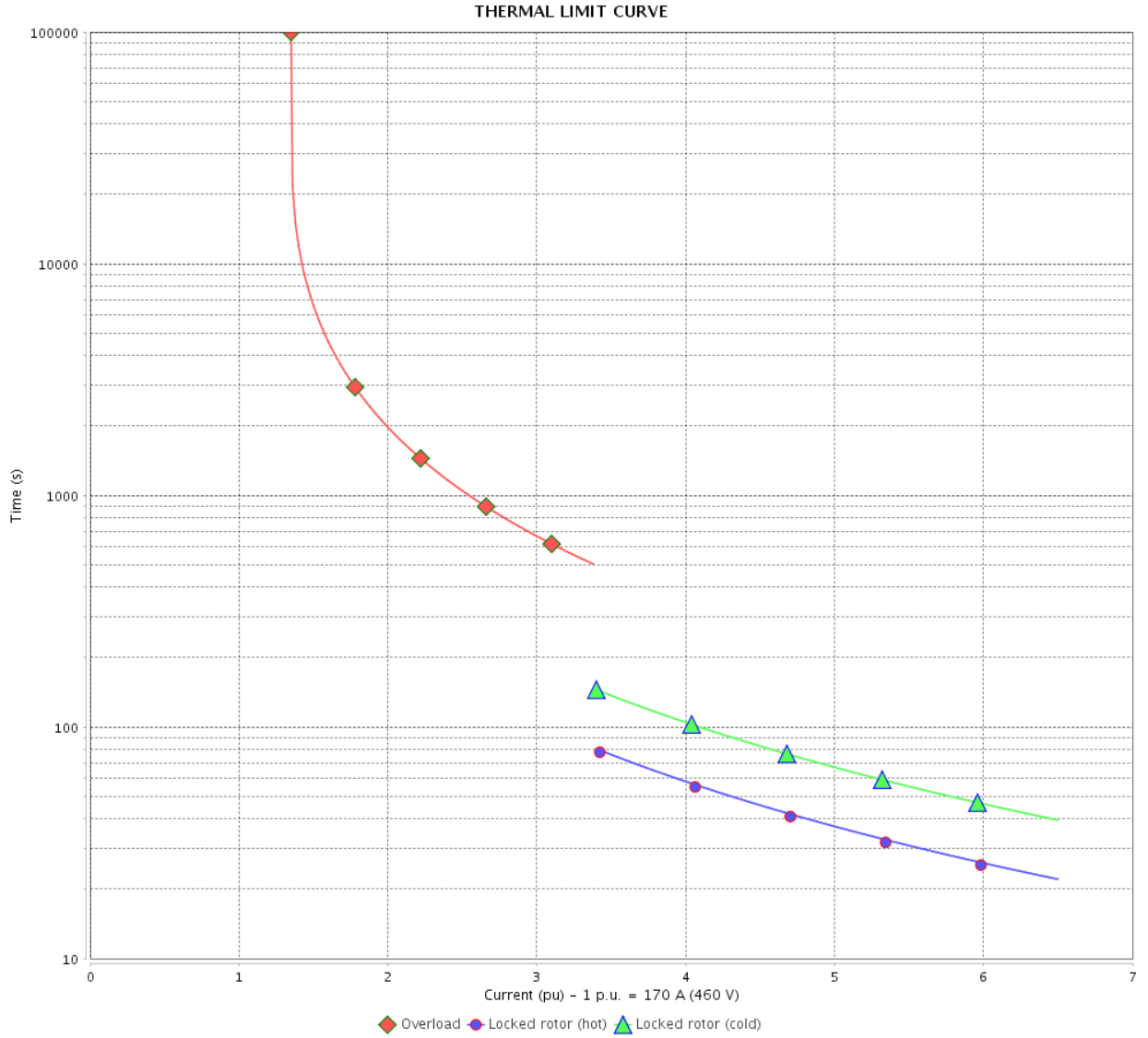
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Three Phase Induction Motor - Squirrel Cage



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LRC	: 7.0	Duty cycle	: Cont.(S1)
Rated torque	: 442 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

Heating constant

Cooling constant

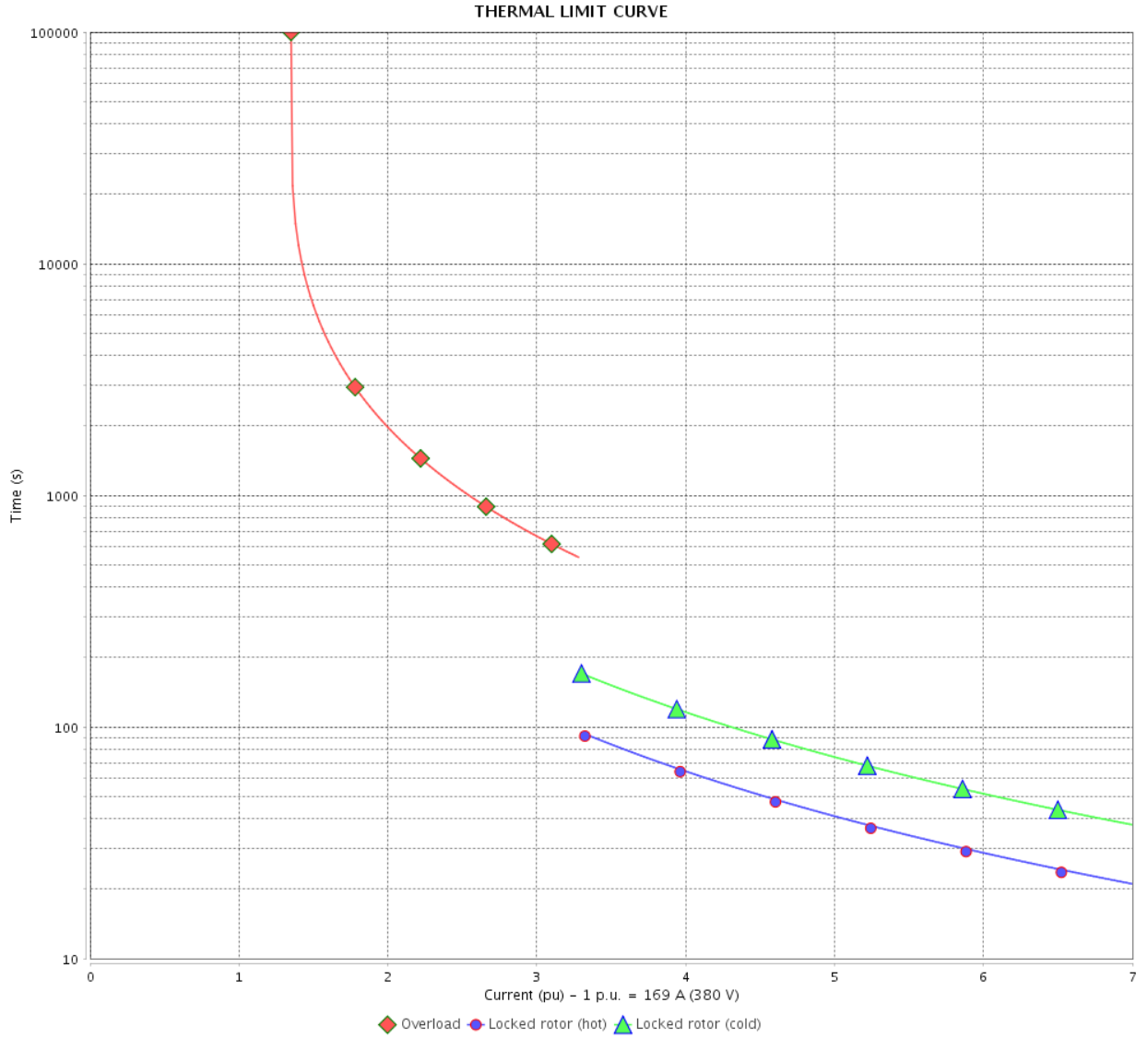
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Catalog # : 15018OT3GRB444T-W40

Performance : 400 V 50 Hz 4P IE3

Rated current	: 162 A	Moment of inertia (J)	: 42.1 sq.ft.lb
LRC	: 7.4	Duty cycle	: Cont.(S1)
Rated torque	: 442 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

Heating constant

Cooling constant

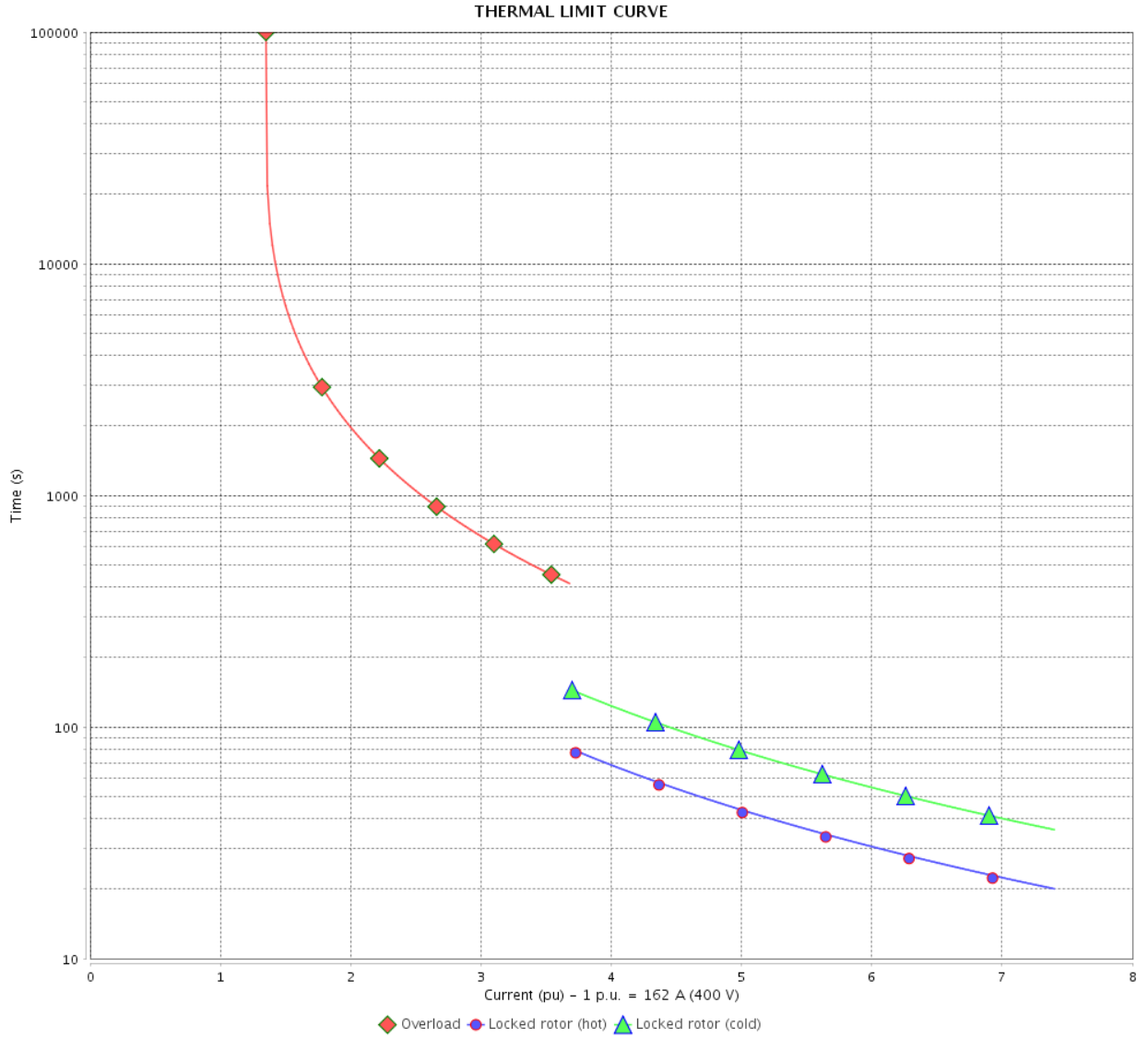
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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Checked by				
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# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272540

Catalog # : 15018OT3GRB444T-W40

Performance : 415 V 50 Hz 4P IE3

Rated current	: 158 A	Moment of inertia (J)	: 42.1 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 442 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

Heating constant

Cooling constant

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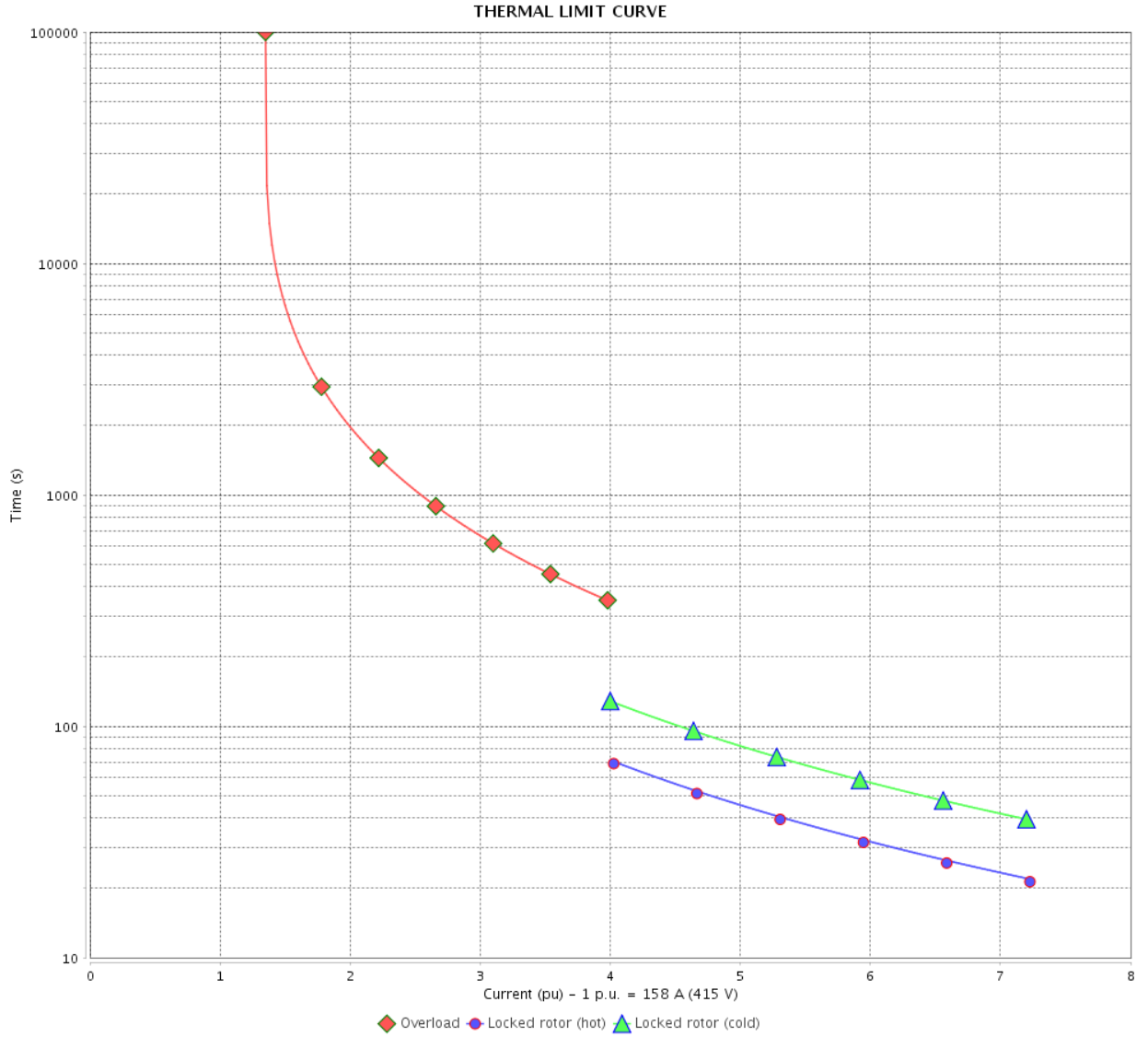


# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_



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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



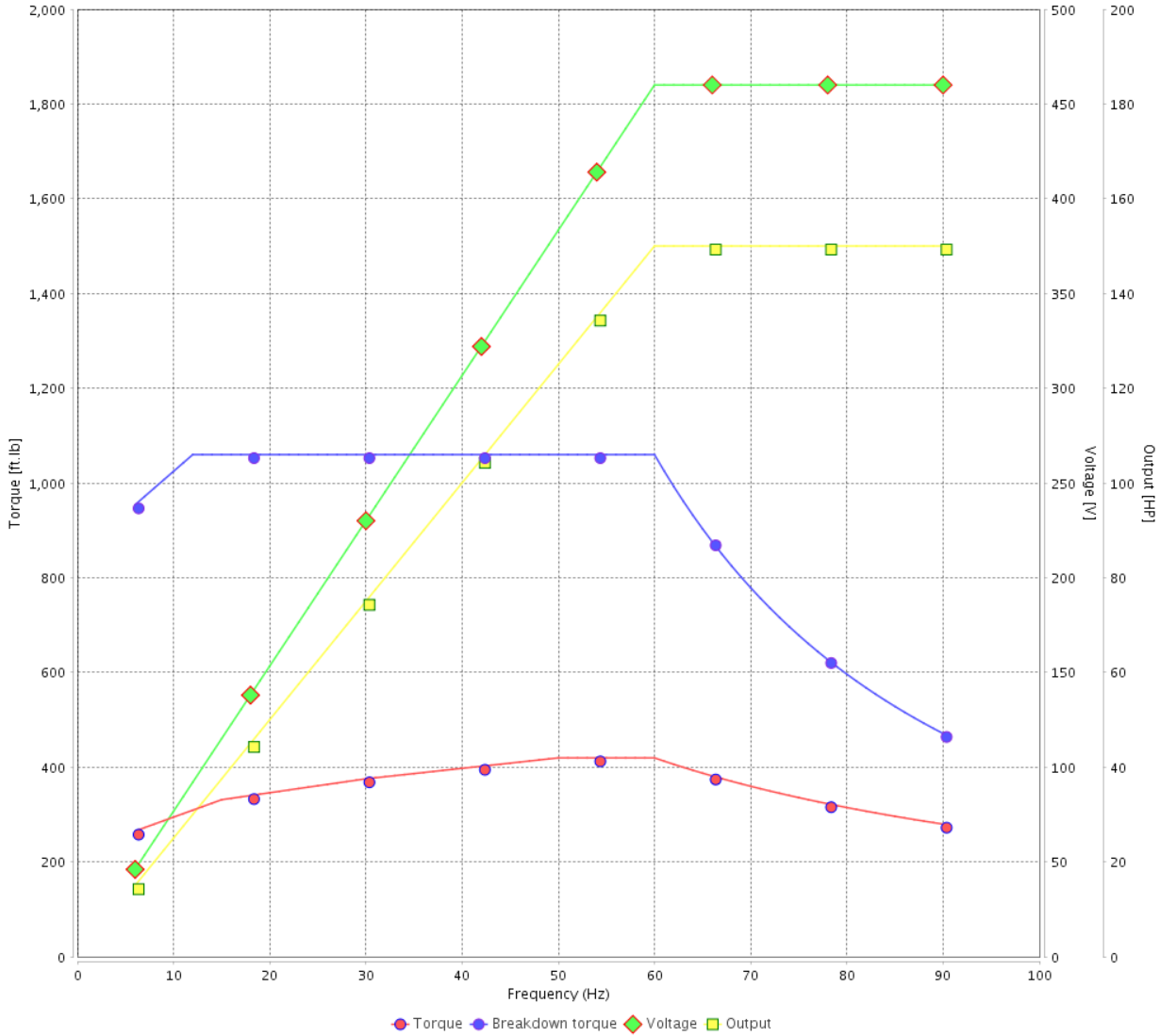
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VFD OPERATION CURVE



Performance : 460 V 60 Hz 4P

Rated current : 170 A  
 LRC : 6.5  
 Rated torque : 442 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 240 %  
 Rated speed : 1784 rpm

Moment of inertia (J) : 42.1 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

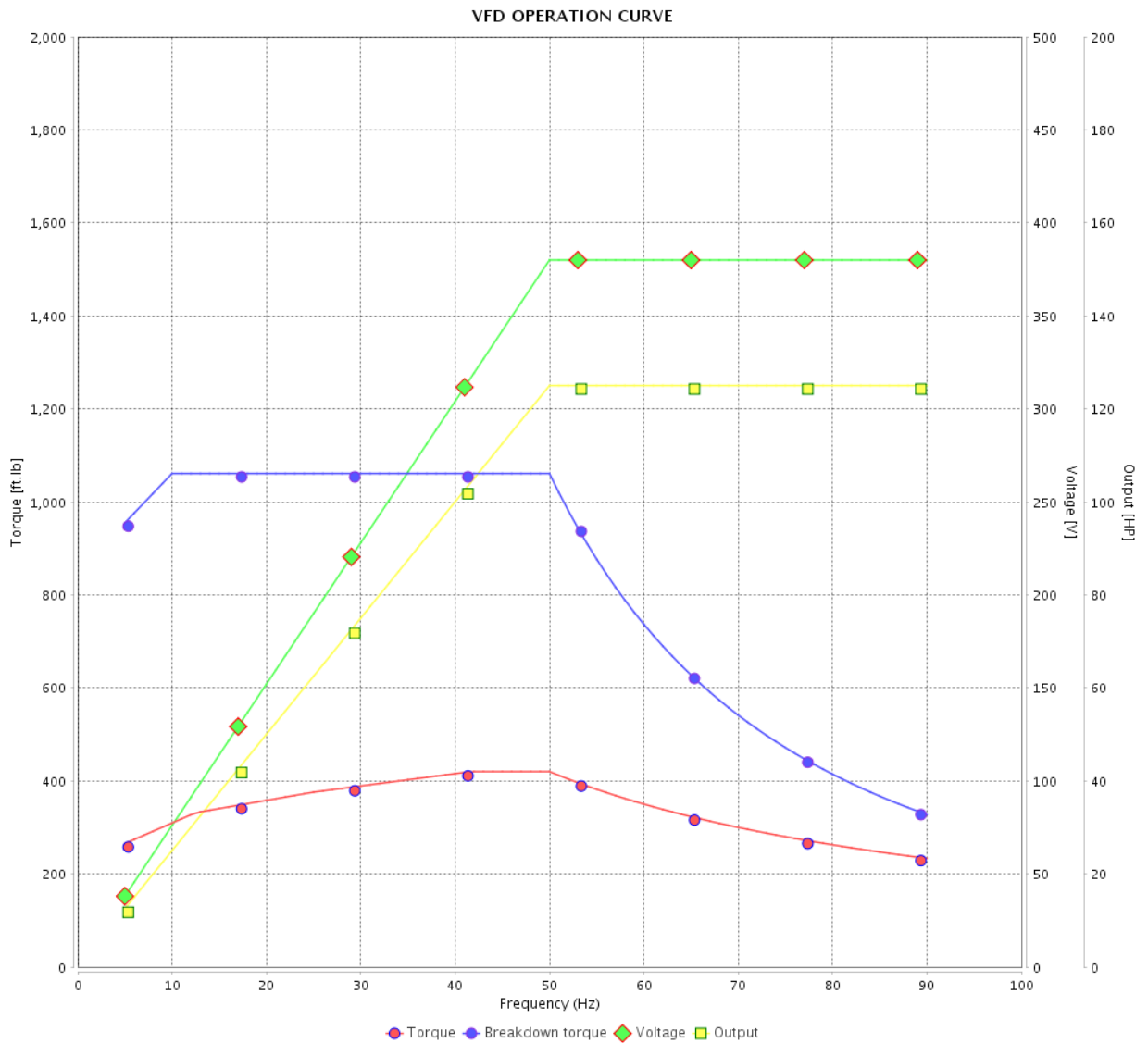


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Performance : 380 V 50 Hz 4P IE3

Rated current : 169 A  
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Service factor : 1.00  
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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



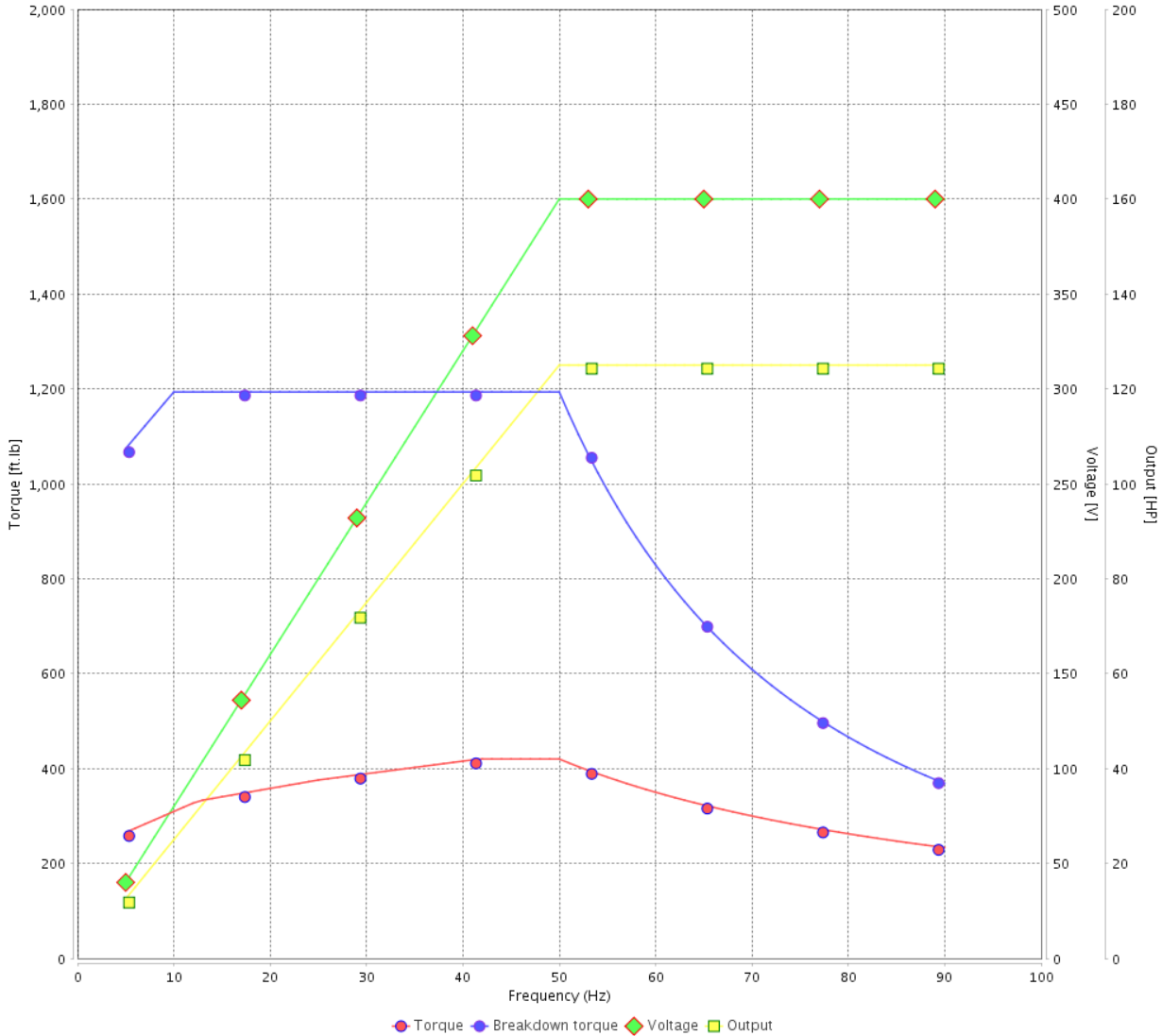
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Product line : W40 NEMA Premium Efficiency  
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VFD OPERATION CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current : 162 A  
LRC : 7.4  
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Locked rotor torque : 220 %  
Breakdown torque : 270 %  
Rated speed : 1485 rpm

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Duty cycle : Cont.(S1)  
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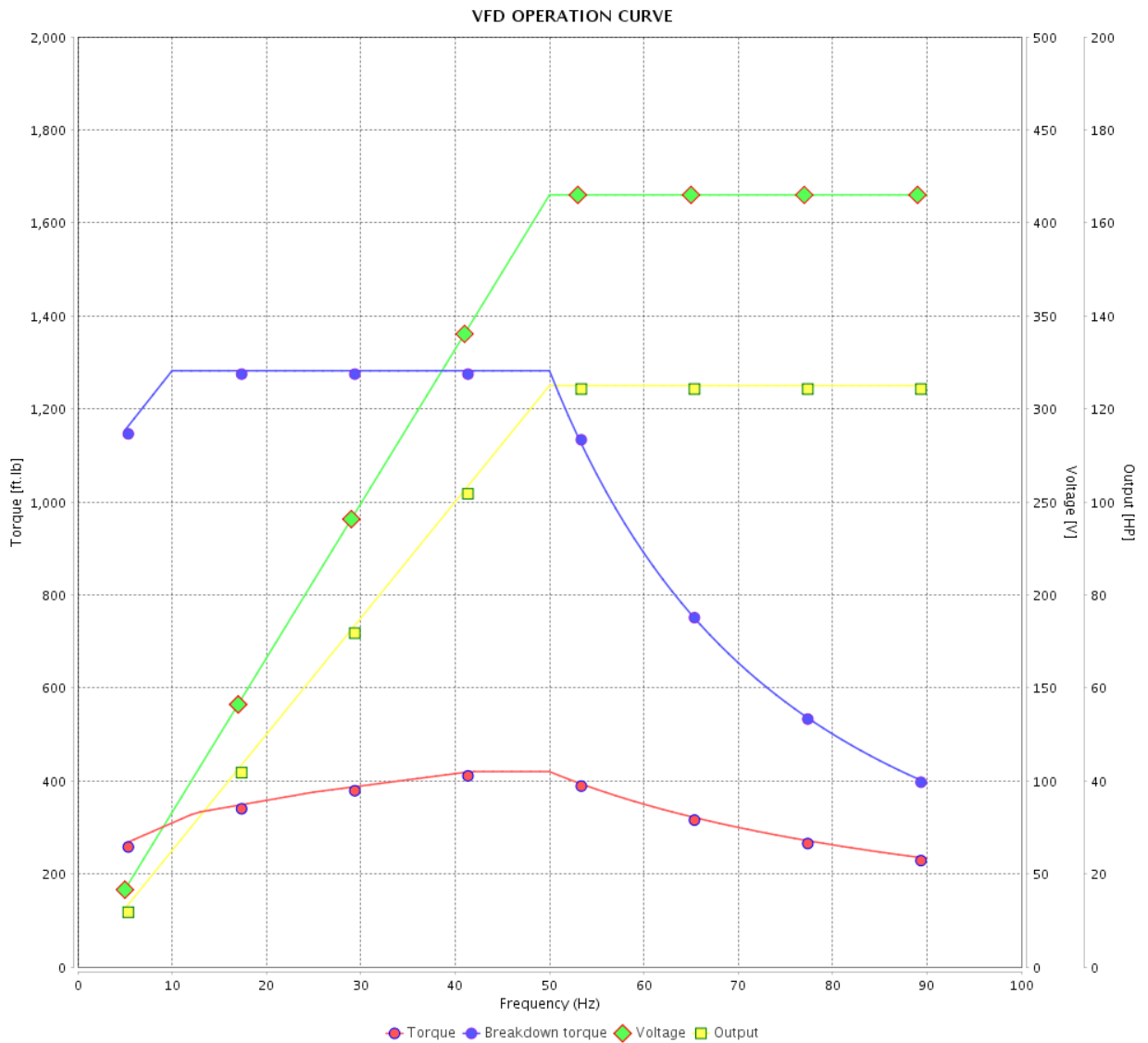


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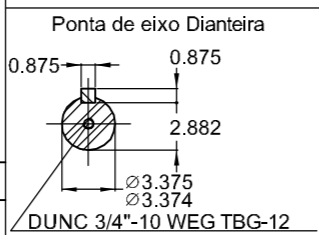
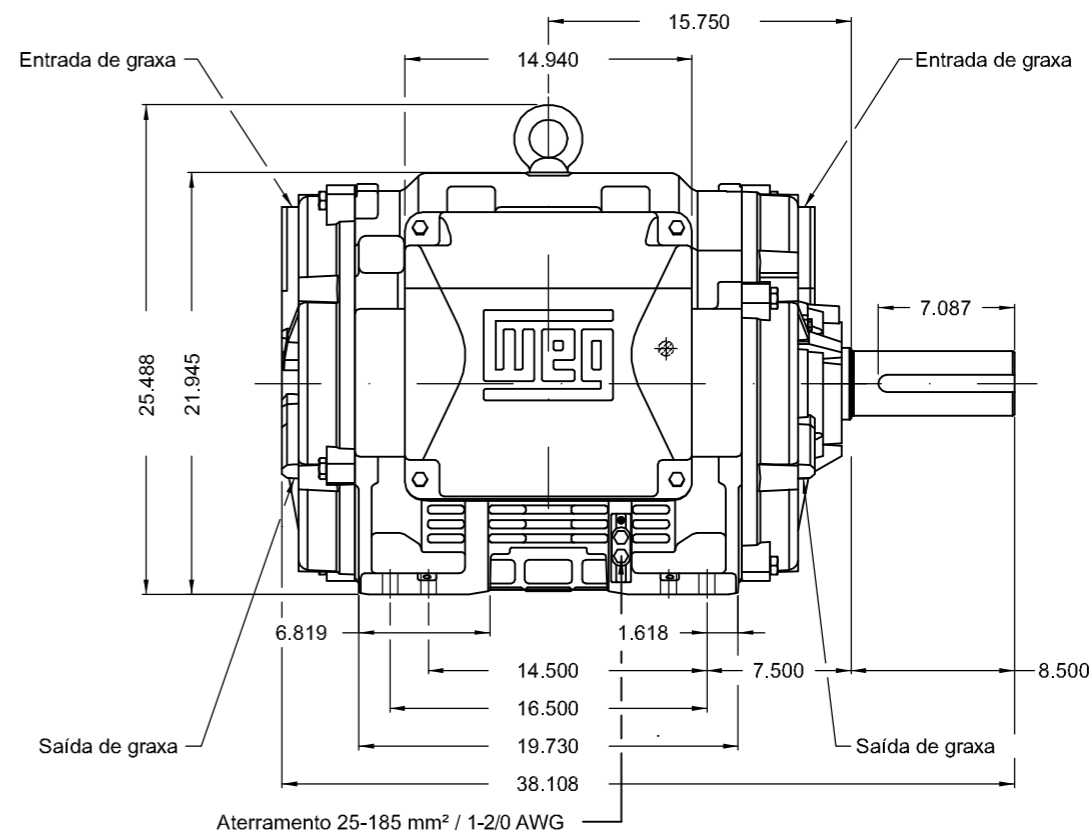
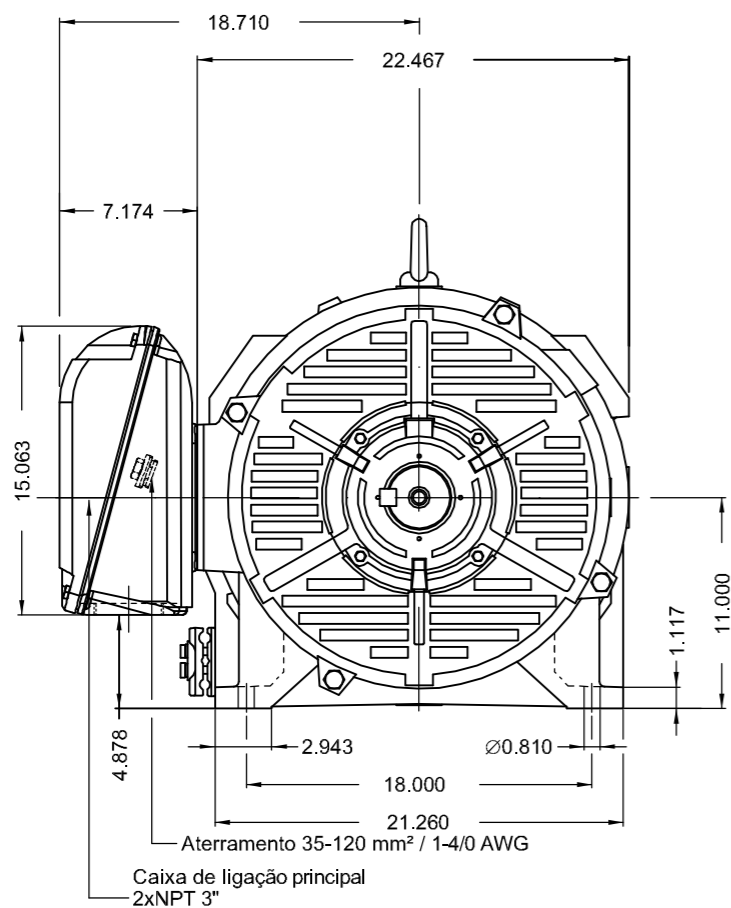


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Breakdown torque : 290 %  
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Moment of inertia (J) : 42.1 sq.ft.lb  
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Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : B

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150 HP 04 Polos 60Hz A

ESC / SCALE [1:10]

500001474832		DOUGLASEF	PIRWUSER	PIRWUSER	09.07.2018			
ECM	LOC	RESUMO MODIFICAÇÃO		EXECUTADO	VERIFICADO	LIBERADO	DATA	VER
ECM	LOC	SUMMARY OF MODIFICATIONS		EXECUTED	CHECKED	RELEASED	DATE	VER
EXEC. /EXECUTED	DOUGLASEF	MOTOR TRIFÁSICO W40 NEMA PREMIUM EFF		10005889519				
VERIF. /CHECKED	PIRWUSER	CARÇAÇA 444/5T IP23 ODP		000   00				
LIBER. /RELEASED	PIRWUSER							
DATA LB /REL DT	09.07.2018	WMO	Jaragua do Sul	Engenharia de Produto	FOLHA/SHEET	1 / 1		

Forma construtiva NEMA F-1  
Forma construtiva B3D

CÓPIA SEM CONTROLE

Dimensões em polegadas

LIBERADO

ZME A3

MODEL 150180T3GRB444T-W40  
MADE IN BRAZIL  
14272540

**WEG** **W40 NEMA**  
**CC029A Premium**  
Inverter Duty Motor

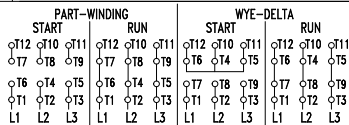



IEC 60034-1  
MOD.T01#FOXON



For 60Hz use on PWM, VT 1000:1, CT 2:1, 1.0SF

PH 3	FR 444/5T	HP(kW) 150(110)	Hz 60
V 460	A 170	IP23	
NEMA NOM EFF	95.8 %	RPM 1784	
ENCL ODP	DUTY CONT.	INS. CL. F $\Delta$ T 80 K	
PF 0.85	DES B	CODE G	AMB. 40°C
SF 1.25	SFA 213	ALT 1000 m.a.s.l.	
125HP 90kW 50Hz 380V 169A 1485RPM SF1.25 EFF 95.3% (IE3)			



 → NU-319-C3(45g) MOBIL POLYREX EM  
→ 6314-C3(27g) 18825 h

1345 Lbs