

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line		: W40 NEMA Premium Efficiency Three-Phase		Product code : 14272539	
			Catalog # :	15018OT3G444TC-W40	
Frame		: 444/5TC		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>	: 1435 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		Drive end	Non drive end	Foundation loads	
Sealing		Without	Without	Max. traction	: 2700 lb
Lubrication interval		Bearing Seal	Bearing Seal	Max. compression	: 4134 lb
Lubricant amount		20000 h	20000 h		
Lubricant type		45 g	27 g		
		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



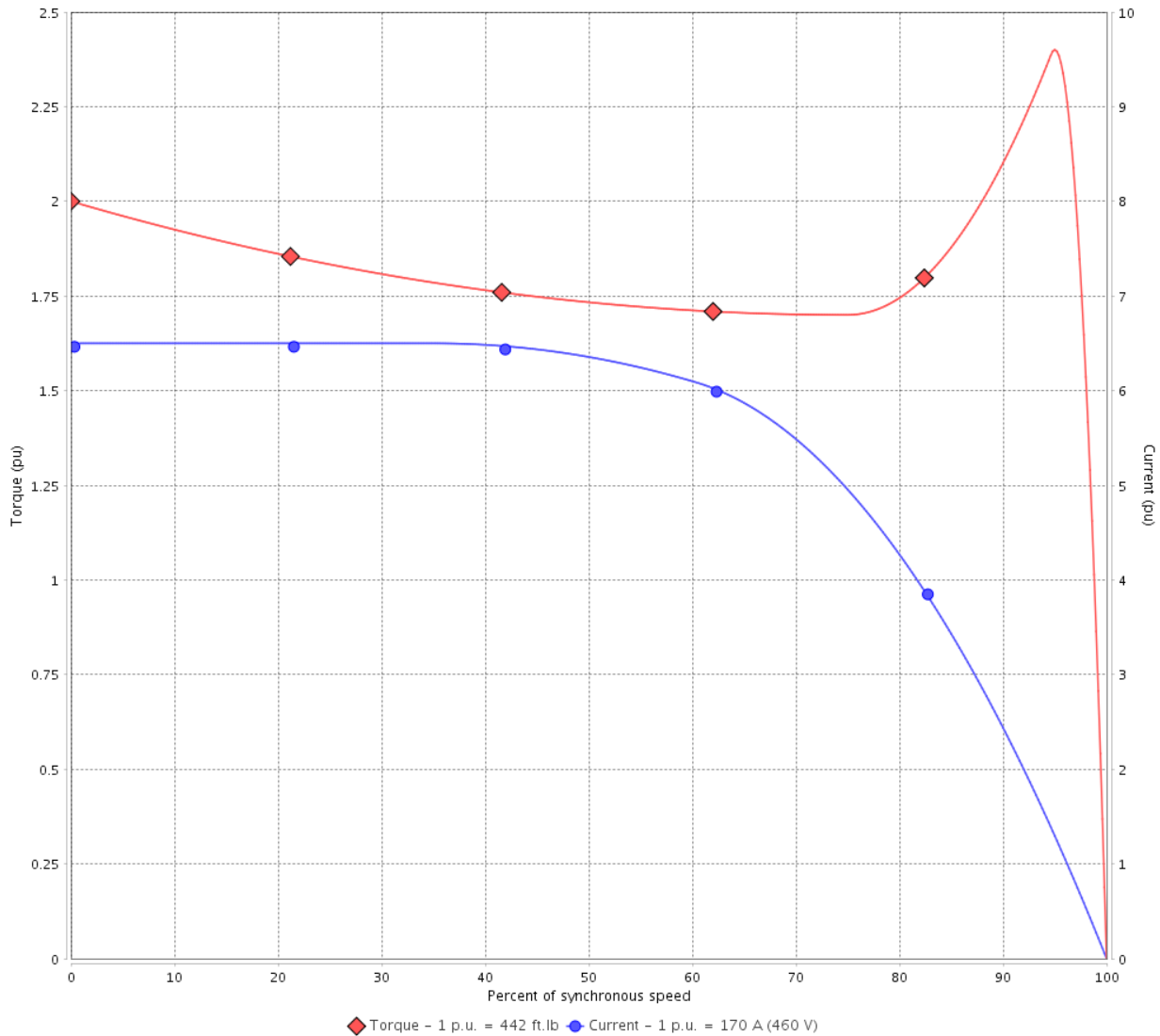
Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272539

Catalog # : 15018OT3G444TC-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



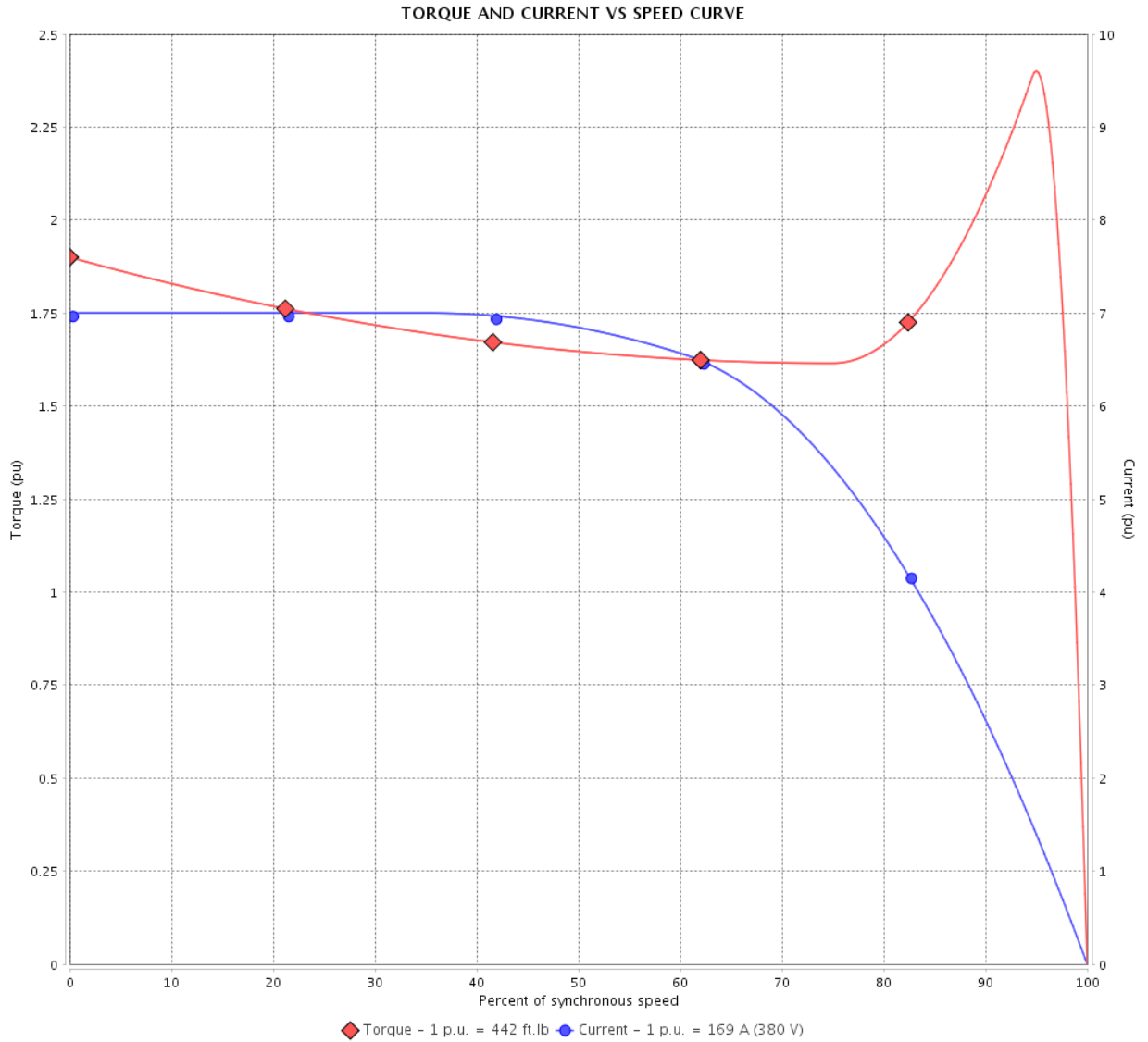
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272539

Catalog # : 15018OT3G444TC-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



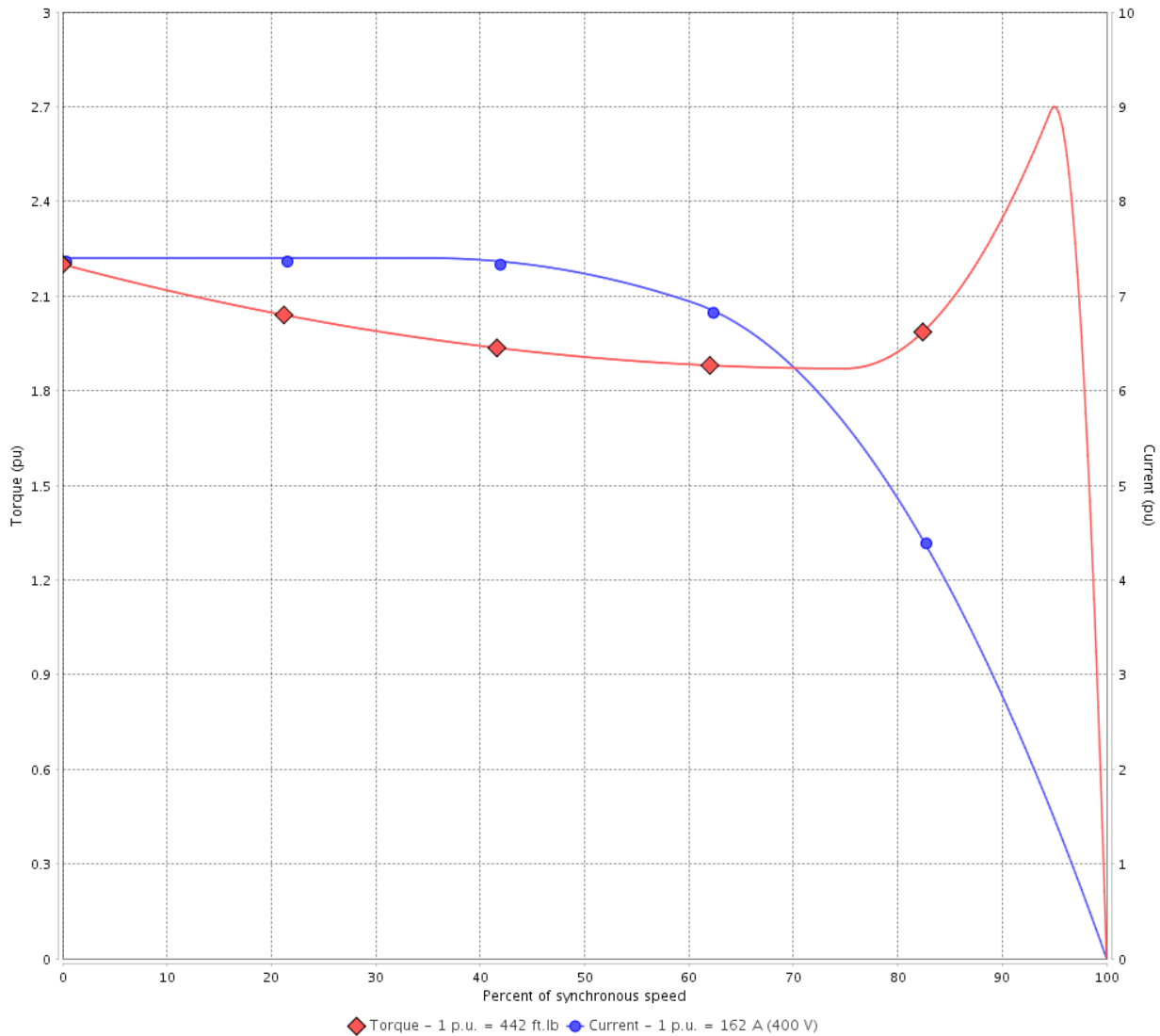
Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272539

Catalog # : 15018OT3G444TC-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



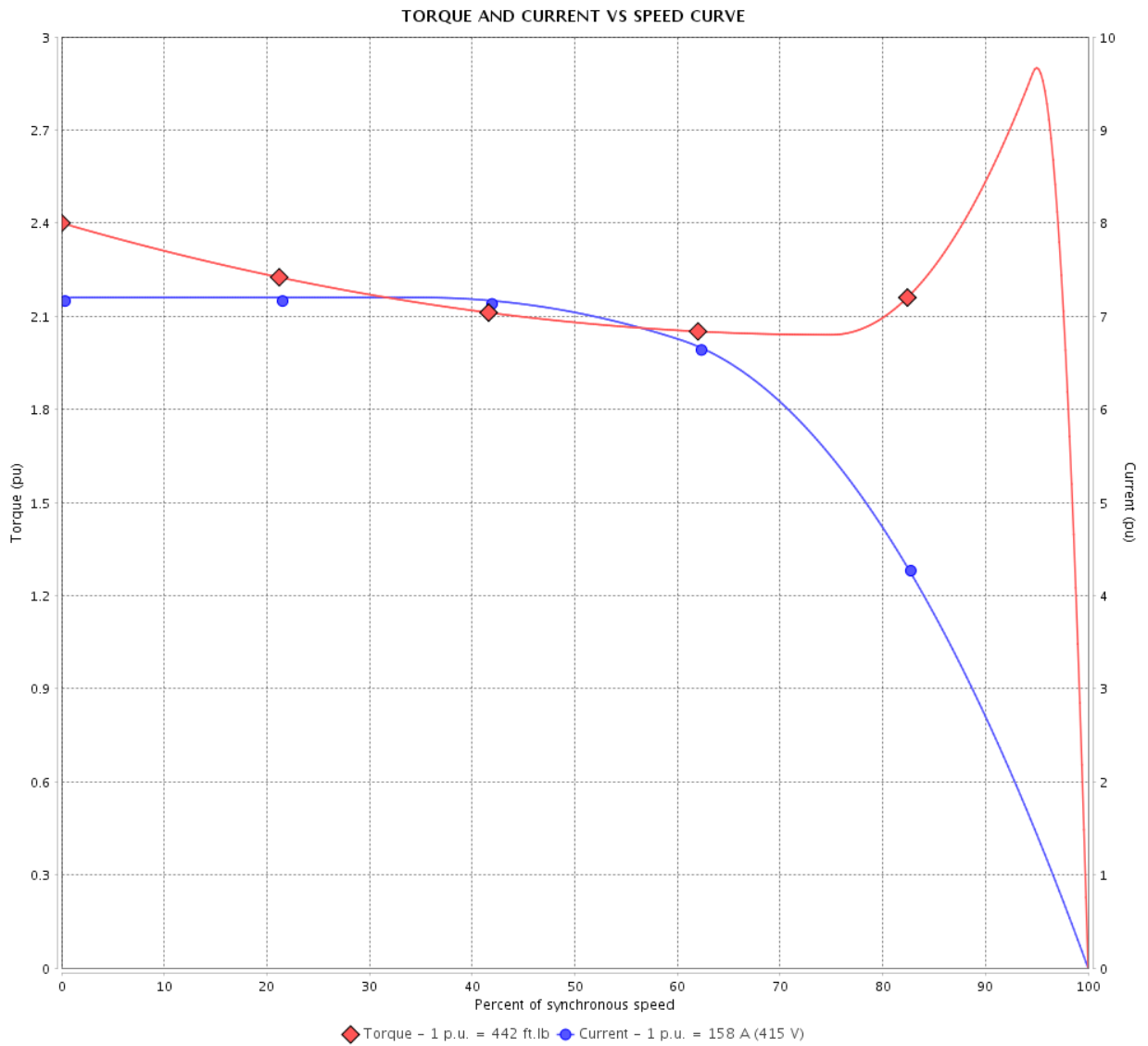
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272539

Catalog # : 15018OT3G444TC-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

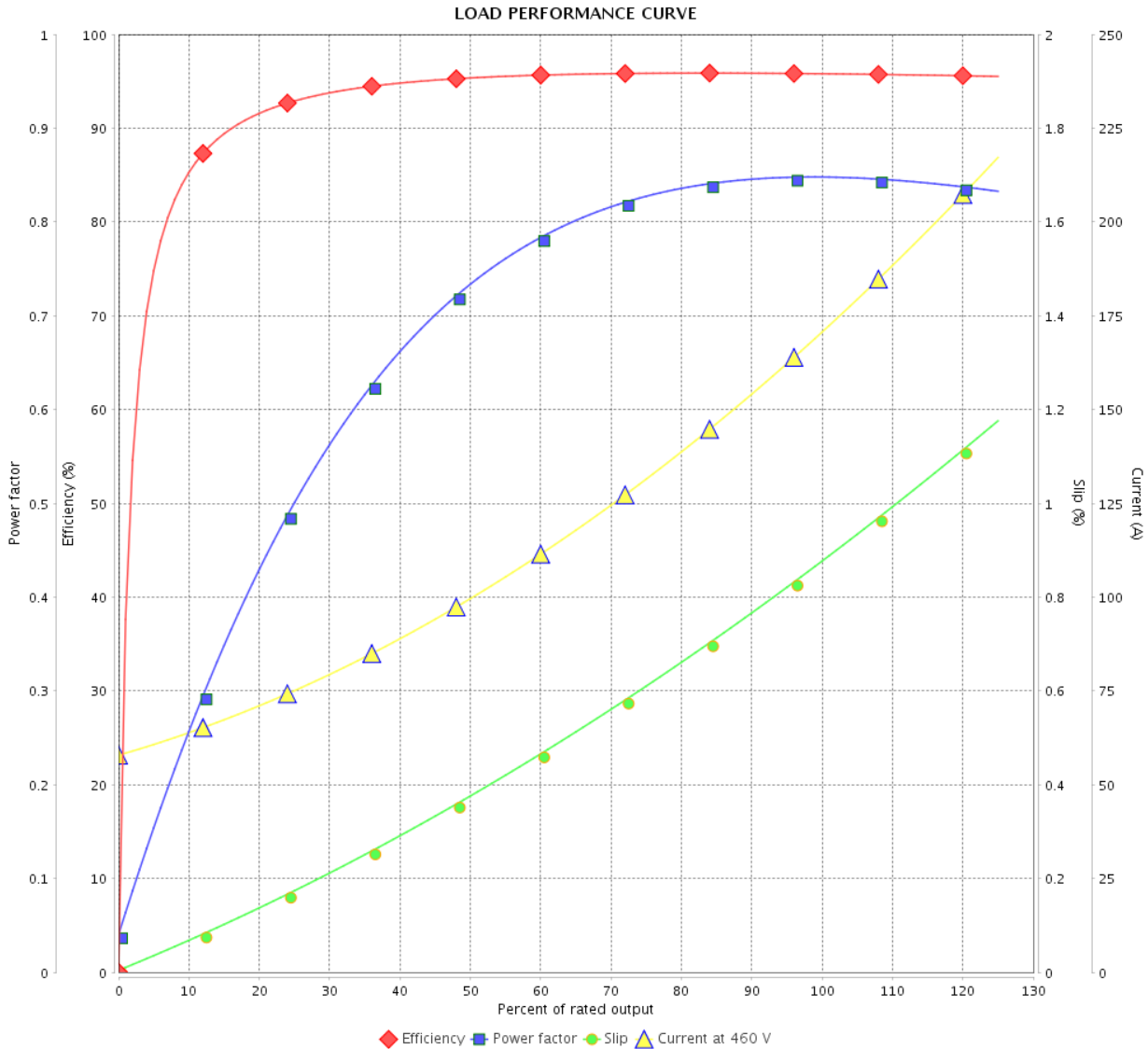


Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272539

Catalog # : 15018OT3G444TC-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

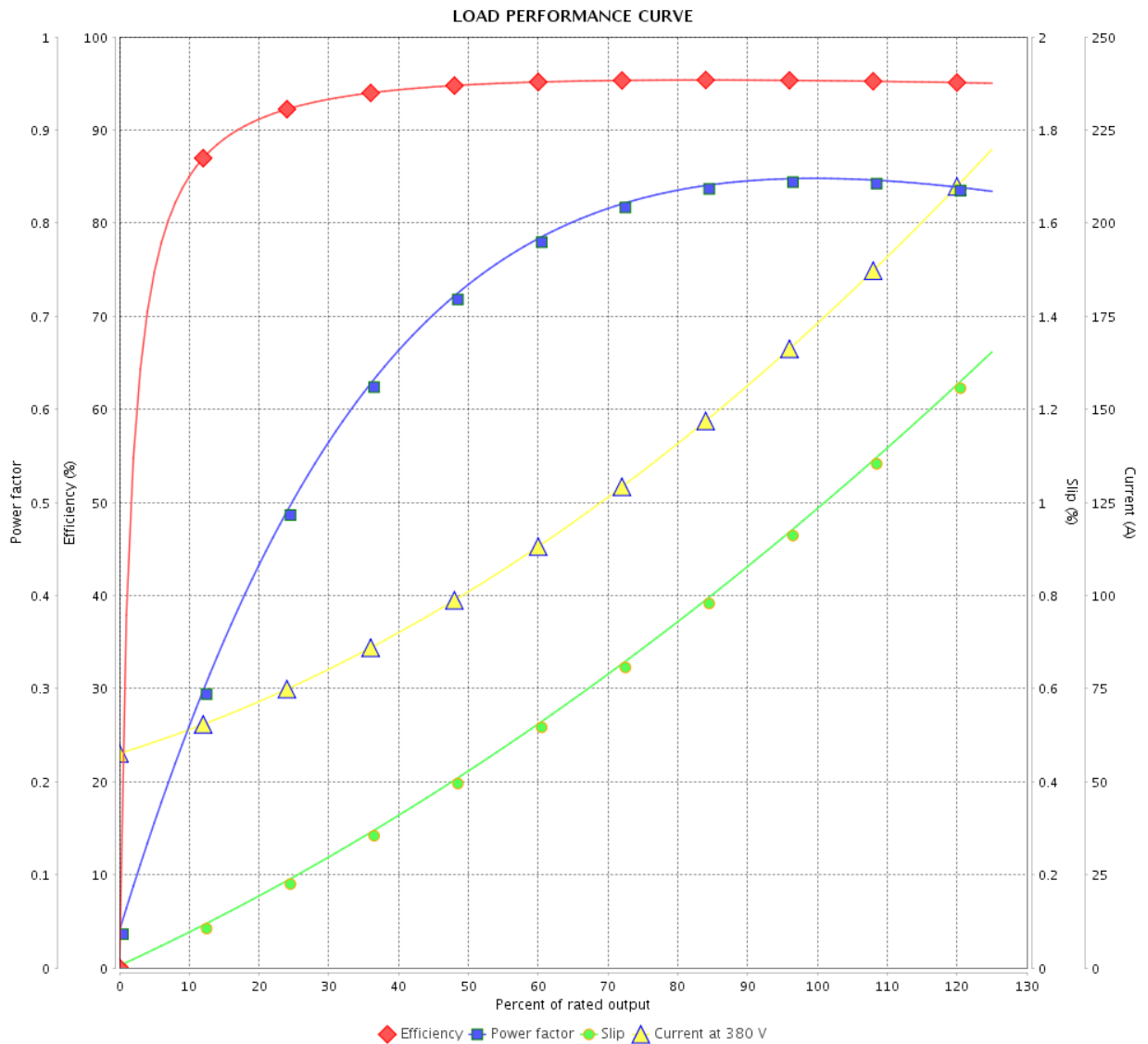


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Product code : 14272539

Catalog # : 15018OT3G444TC-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



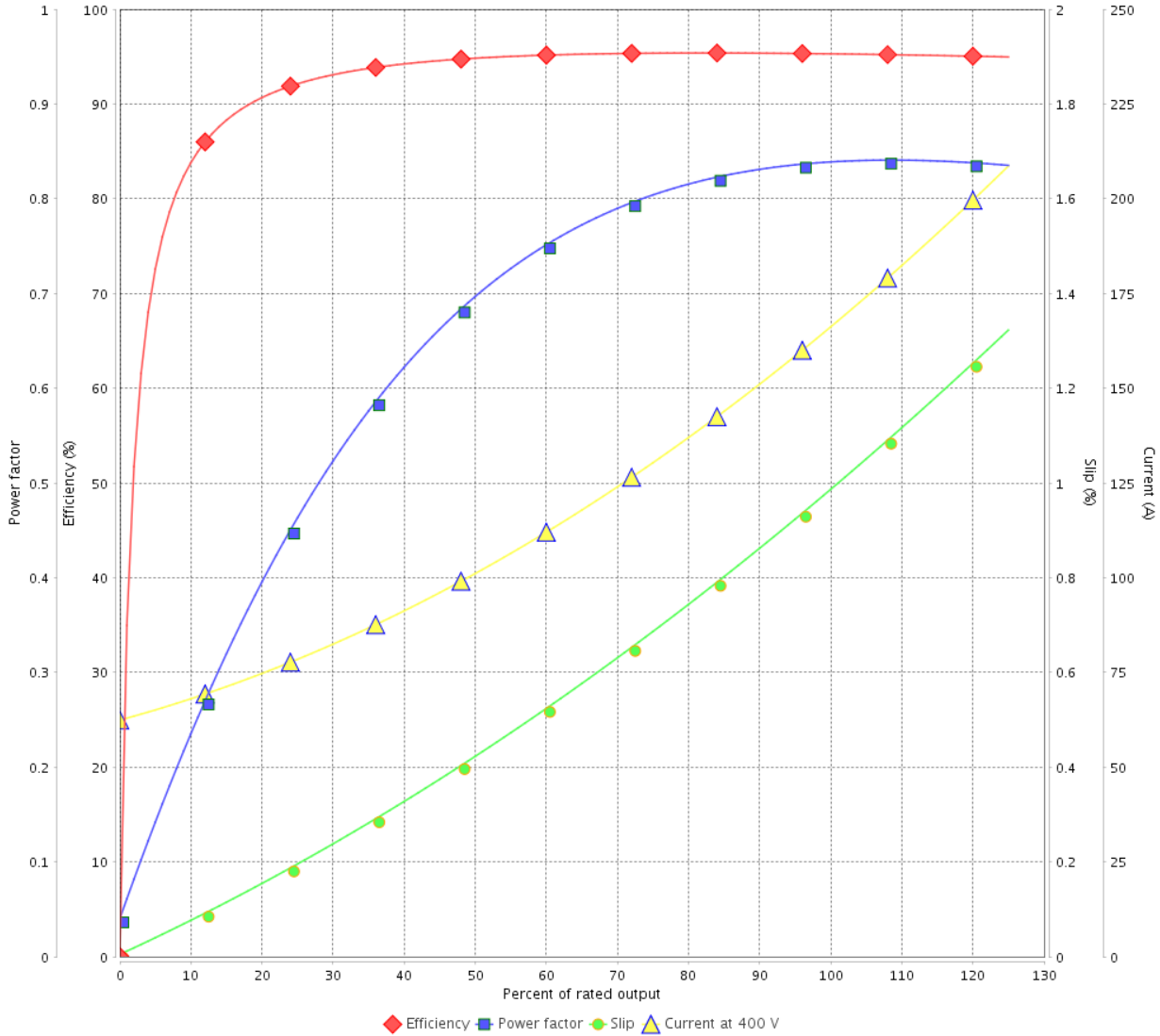
Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14272539

Catalog # : 15018OT3G444TC-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

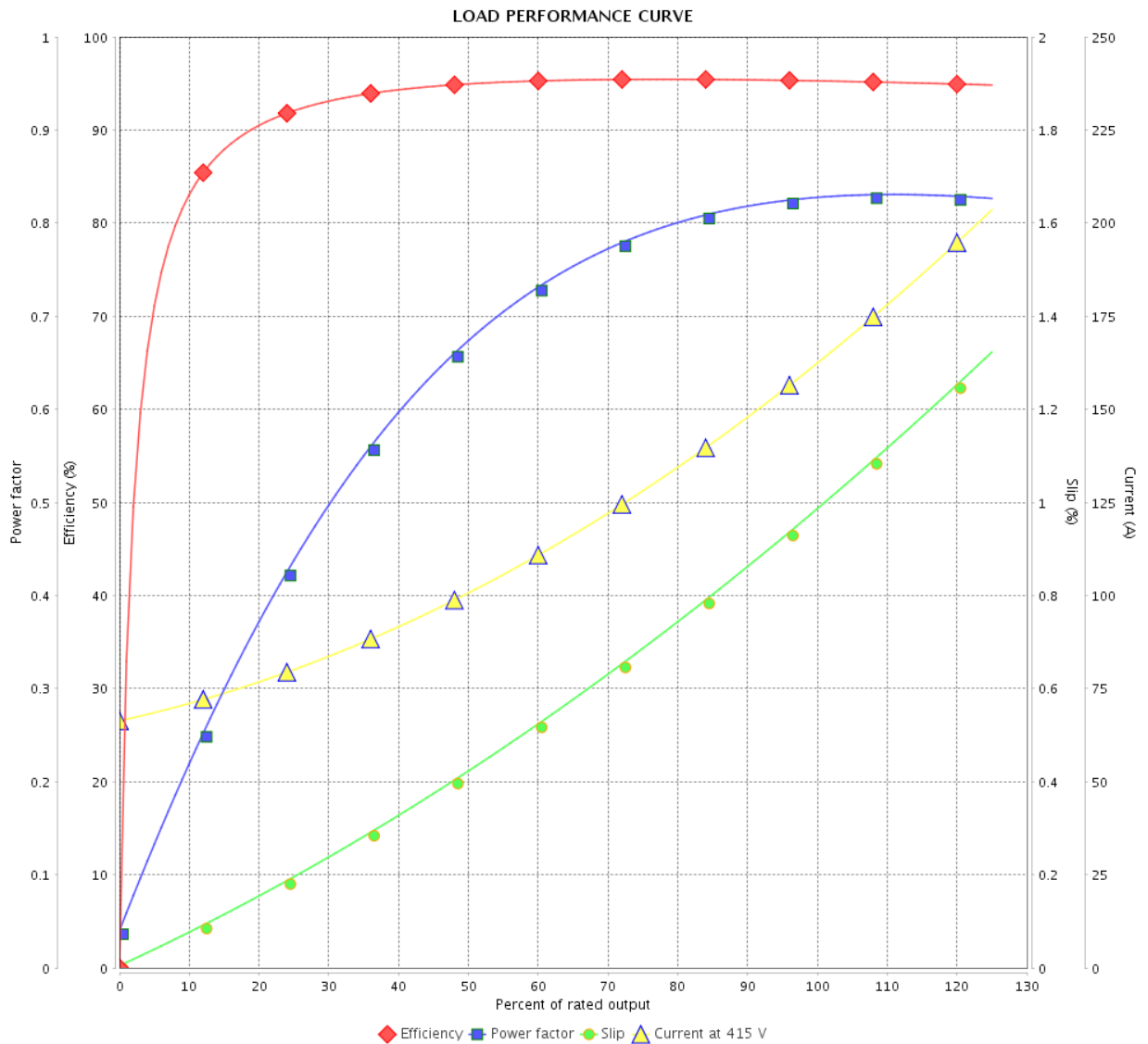


Customer : \_\_\_\_\_

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272539

Catalog # : 15018OT3G444TC-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

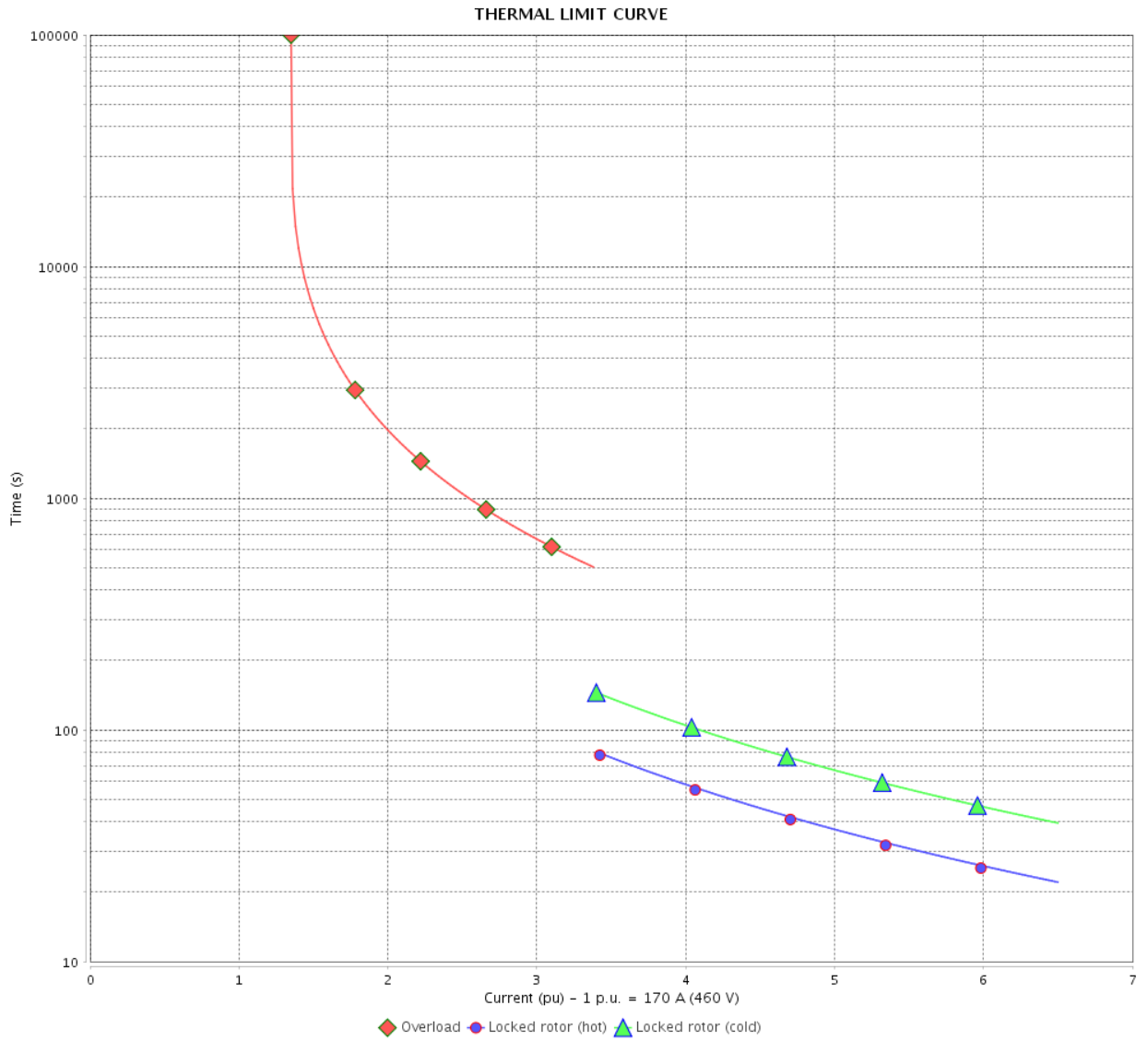
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Customer : \_\_\_\_\_



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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

Heating constant

Cooling constant

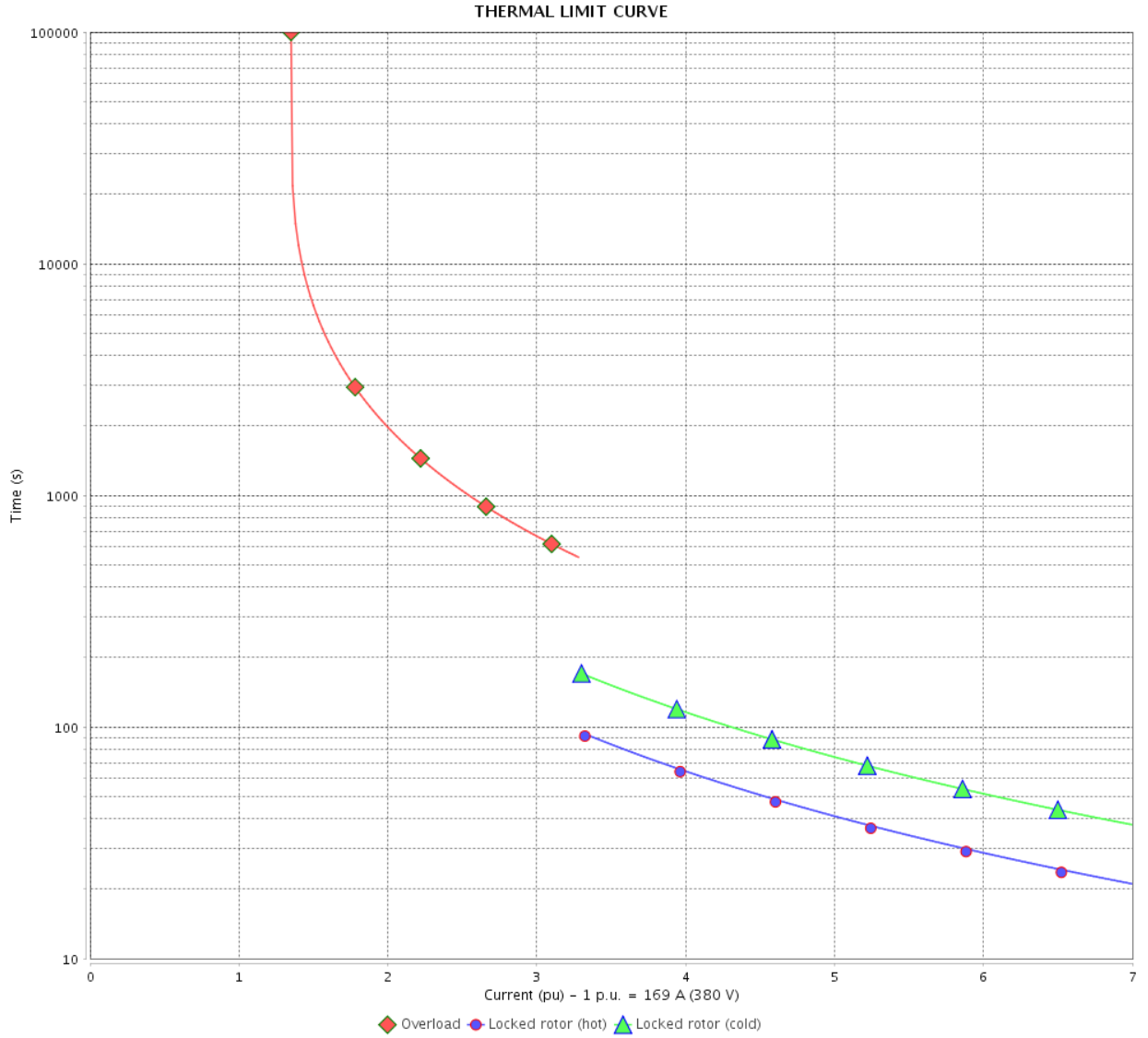
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Performed by				
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Performance : 400 V 50 Hz 4P IE3

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

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Cooling constant

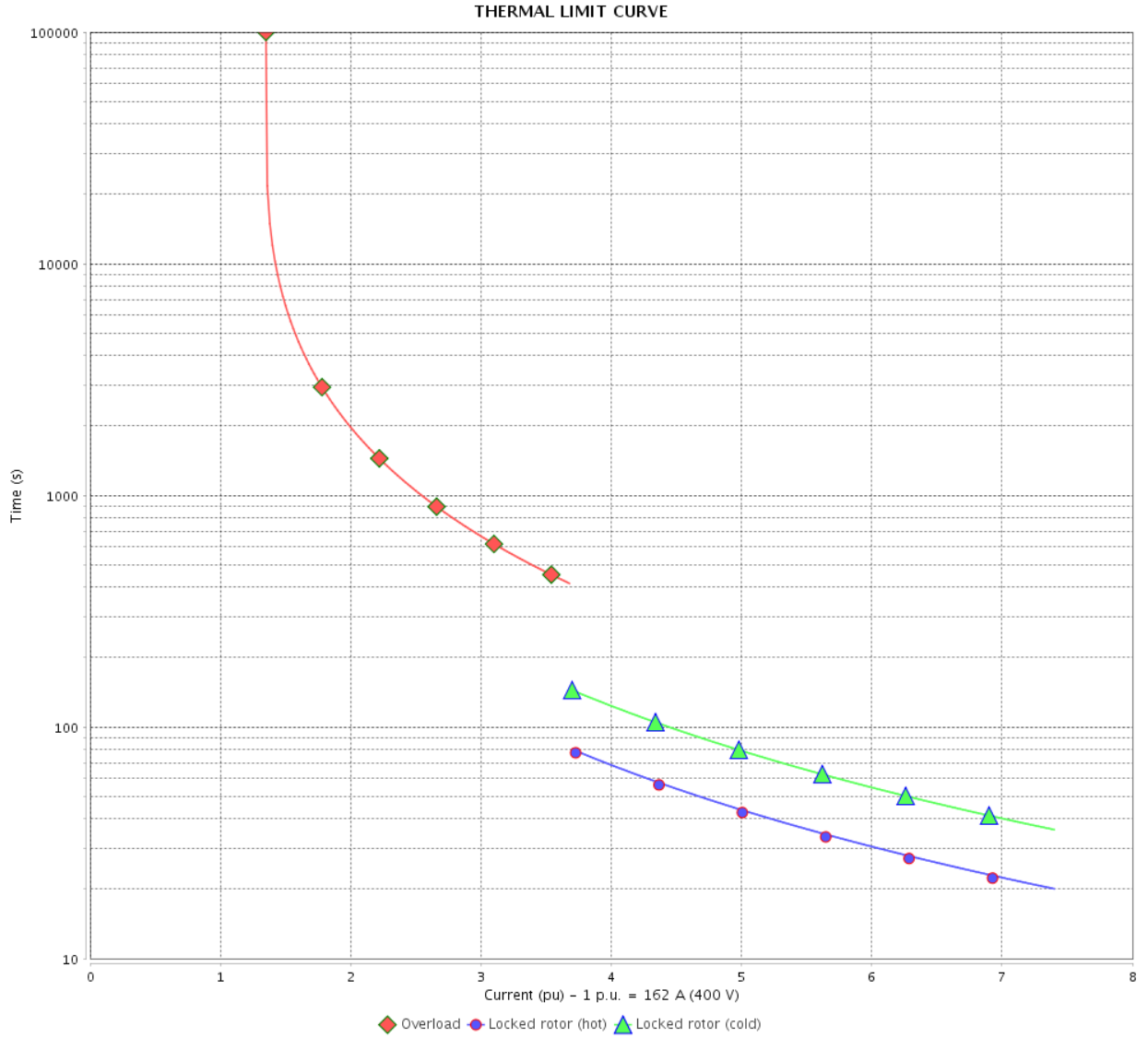
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## Three Phase Induction Motor - Squirrel Cage

Customer :

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Three-Phase

Product code : 14272539

Catalog # : 15018OT3G444TC-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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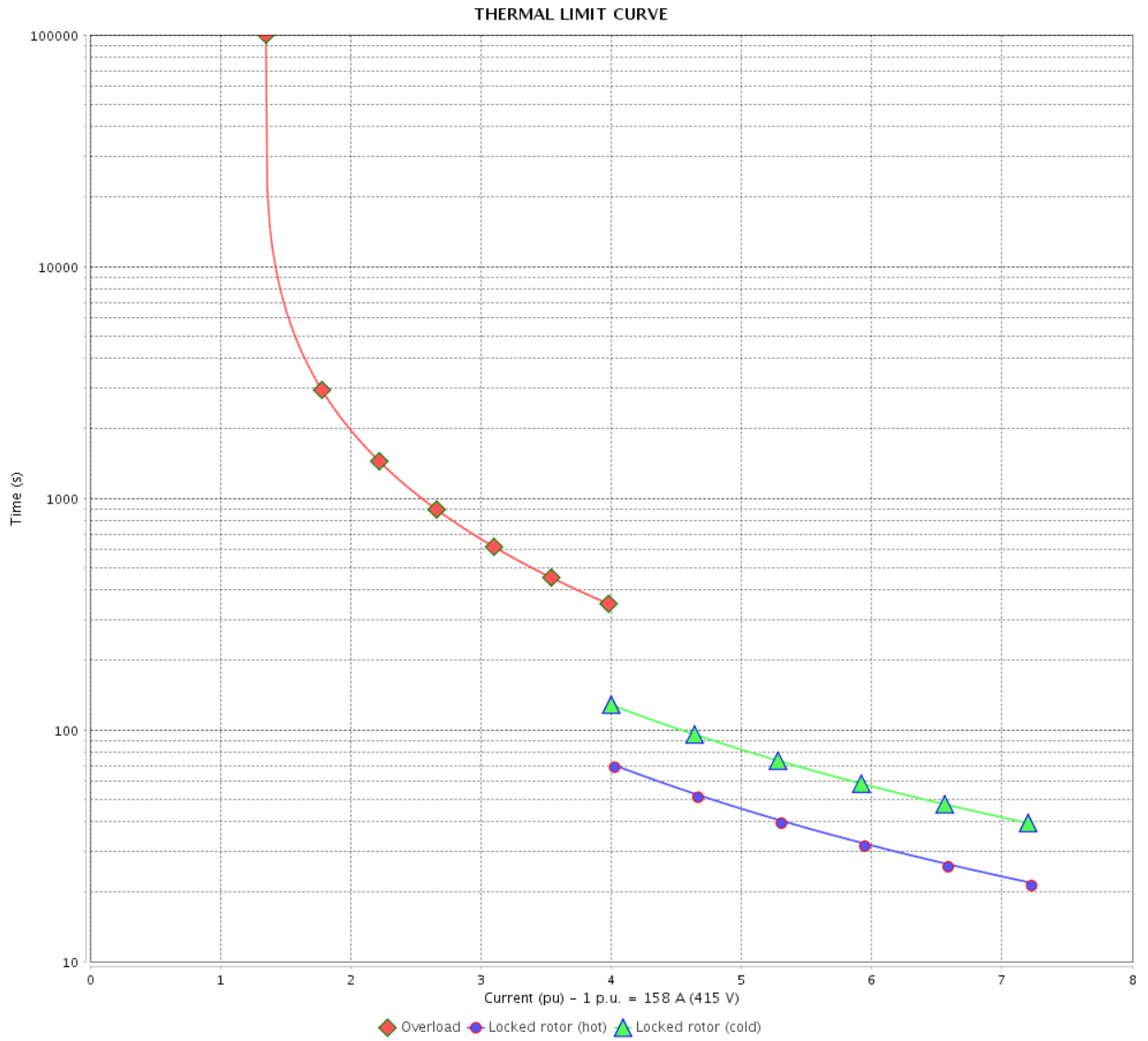


# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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Date				

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

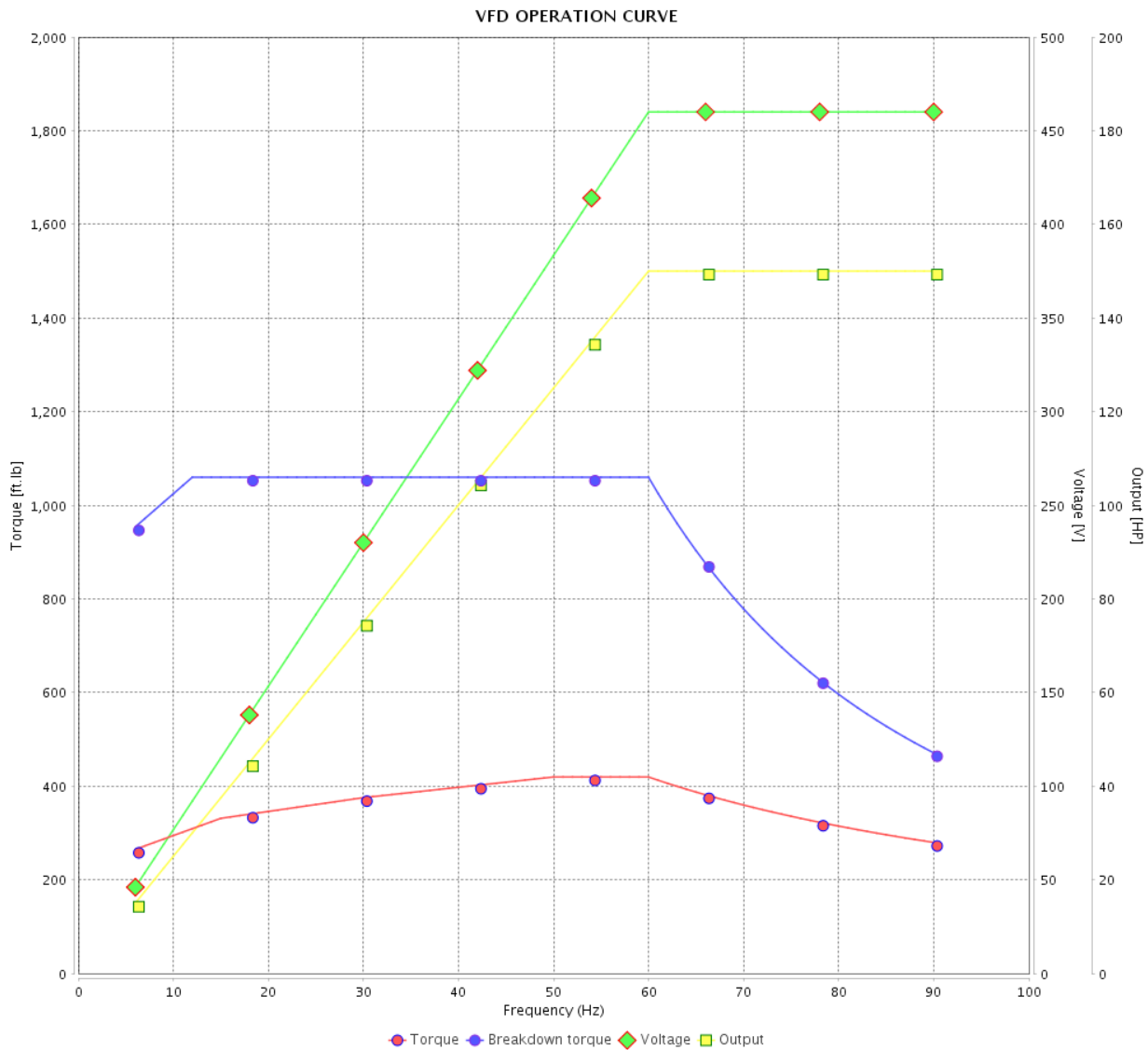


Customer :

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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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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

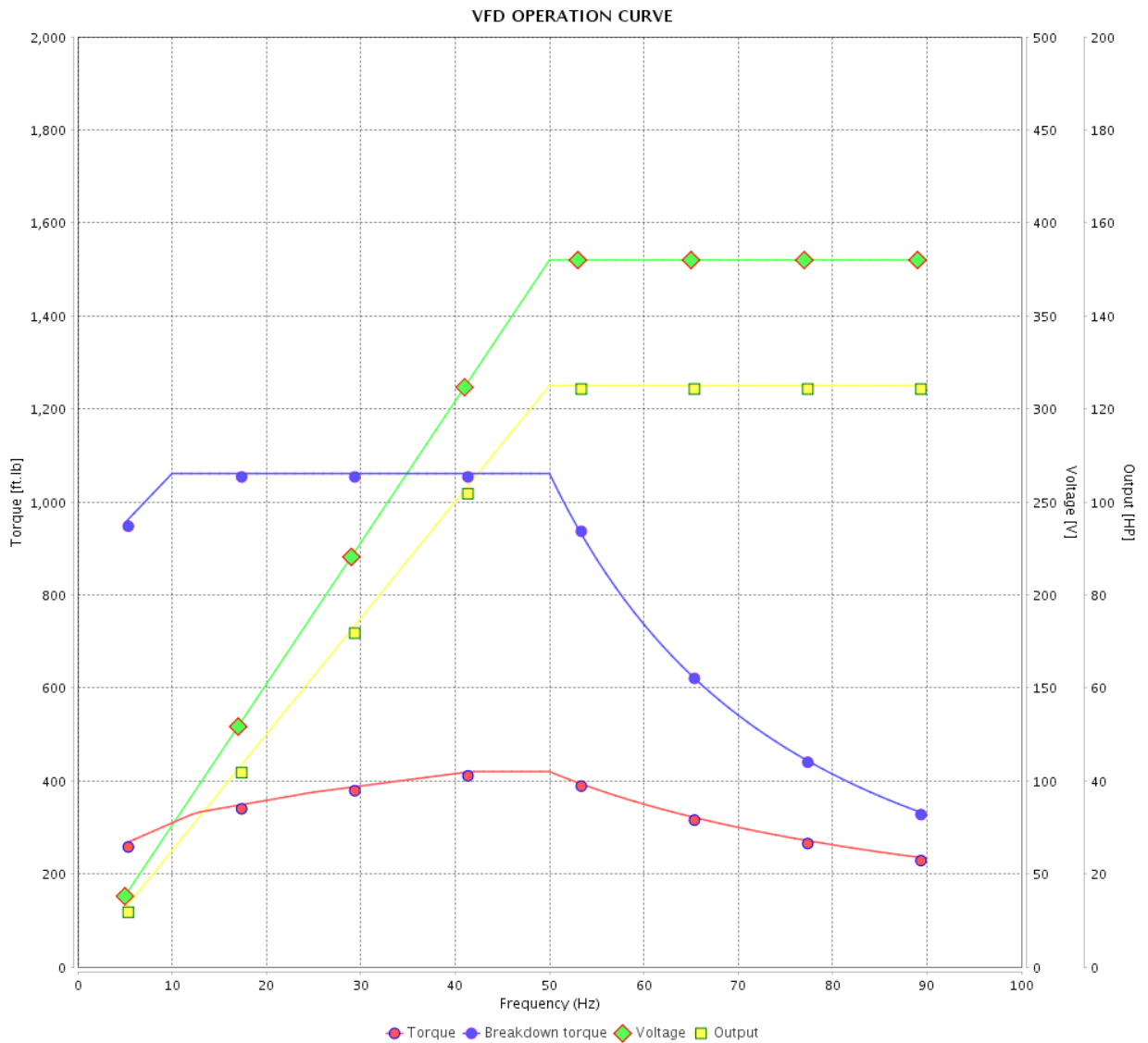


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Three-Phase

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Catalog # : 15018OT3G444TC-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  
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Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : B

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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

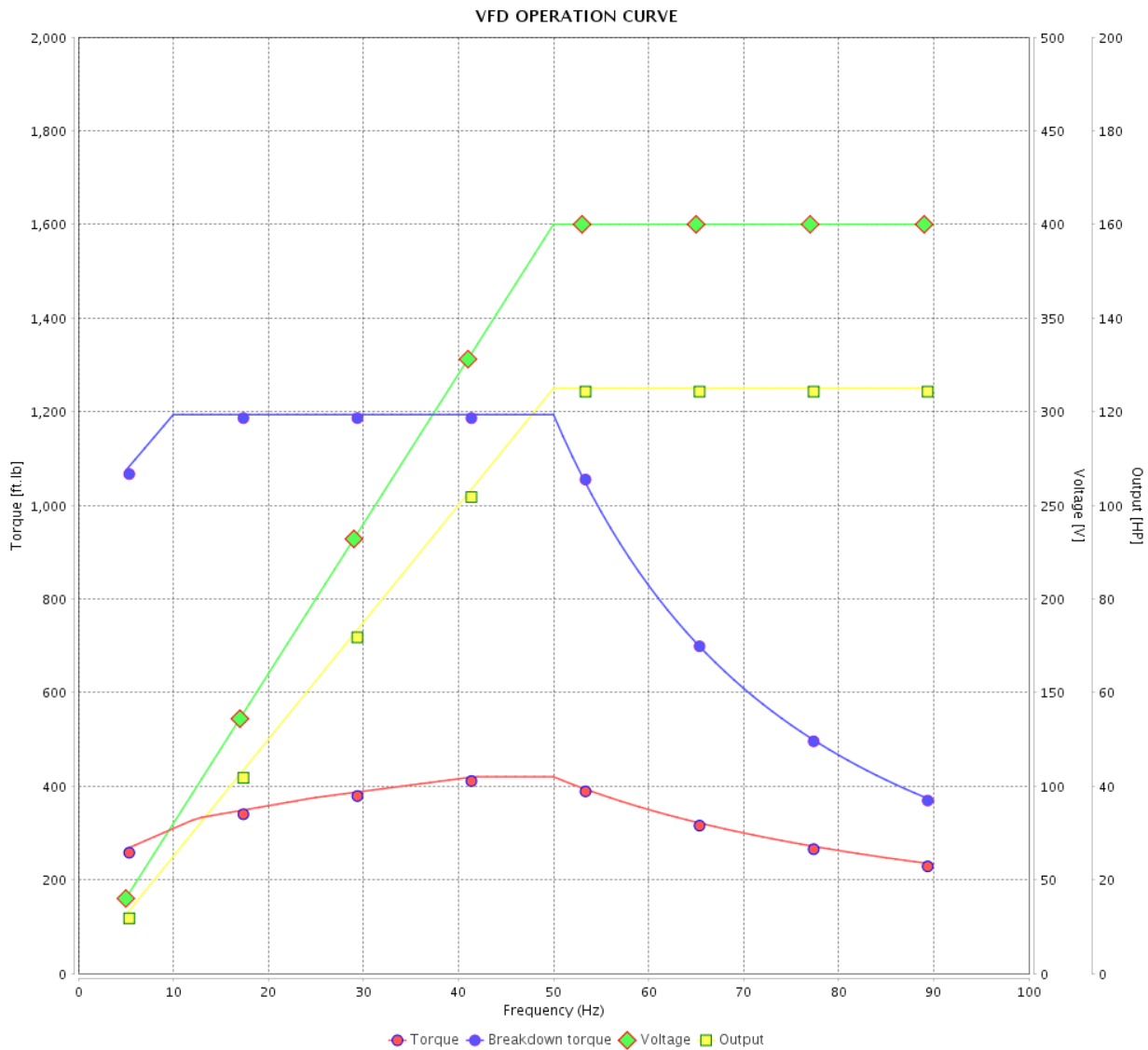


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LRC	: 7.4	Duty cycle	: Cont.(S1)
Rated torque	: 442 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 270 %	Temperature rise	: 80 K
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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

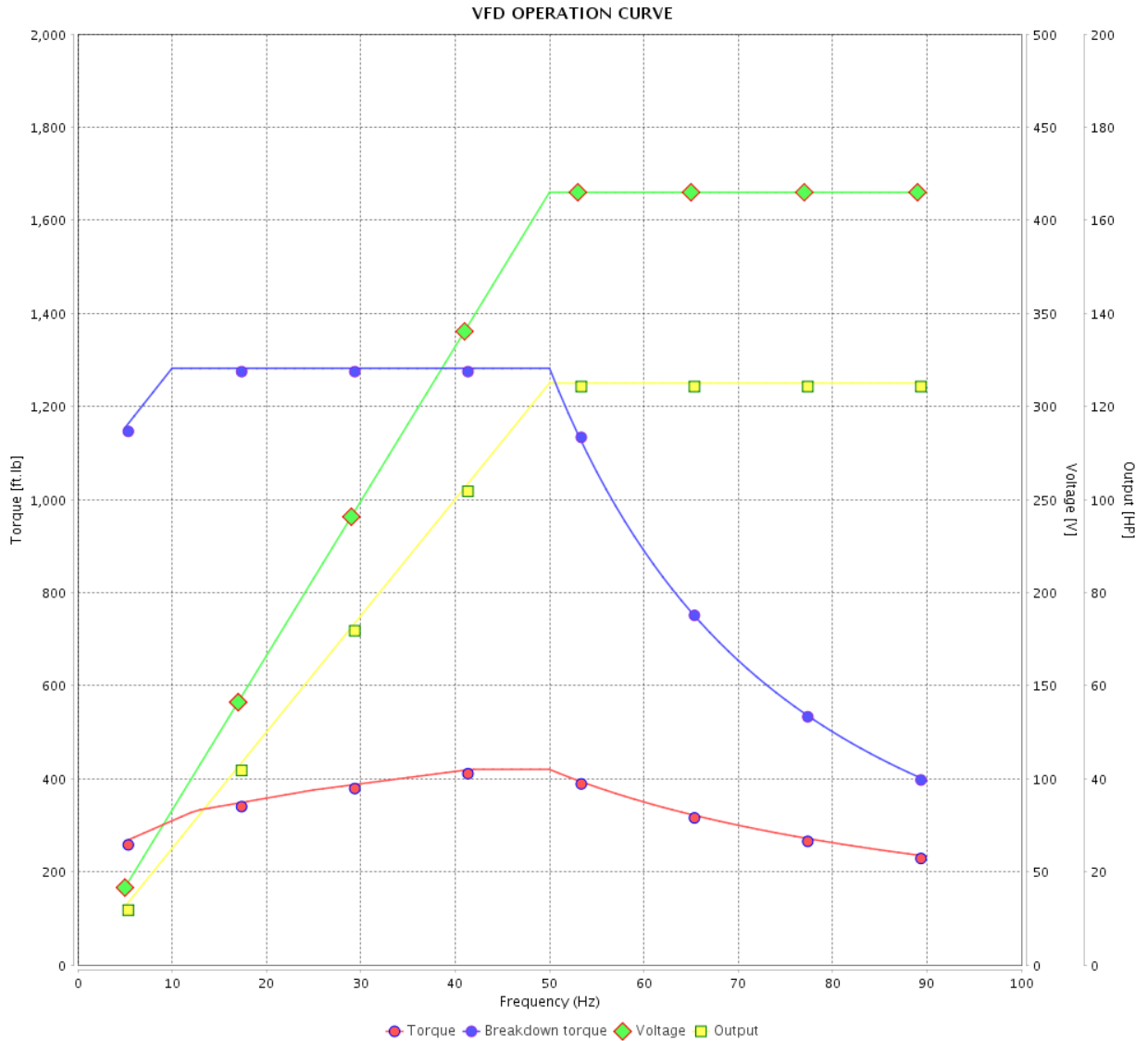


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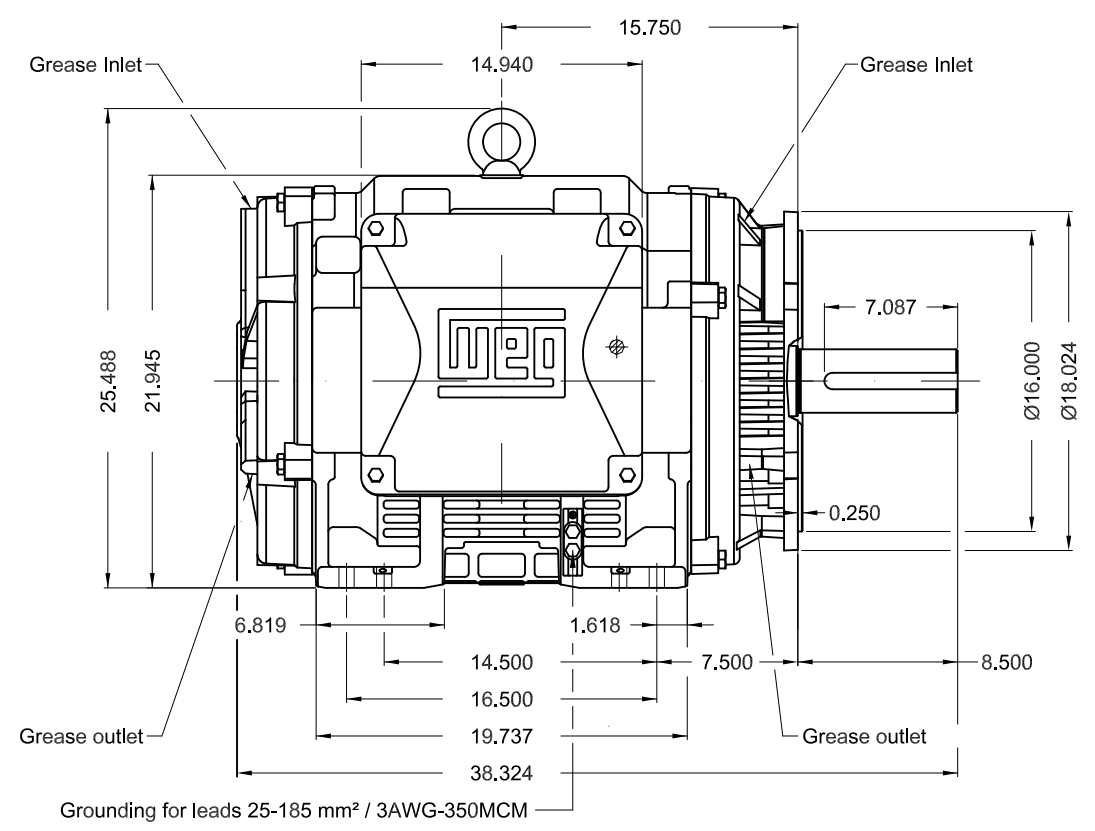
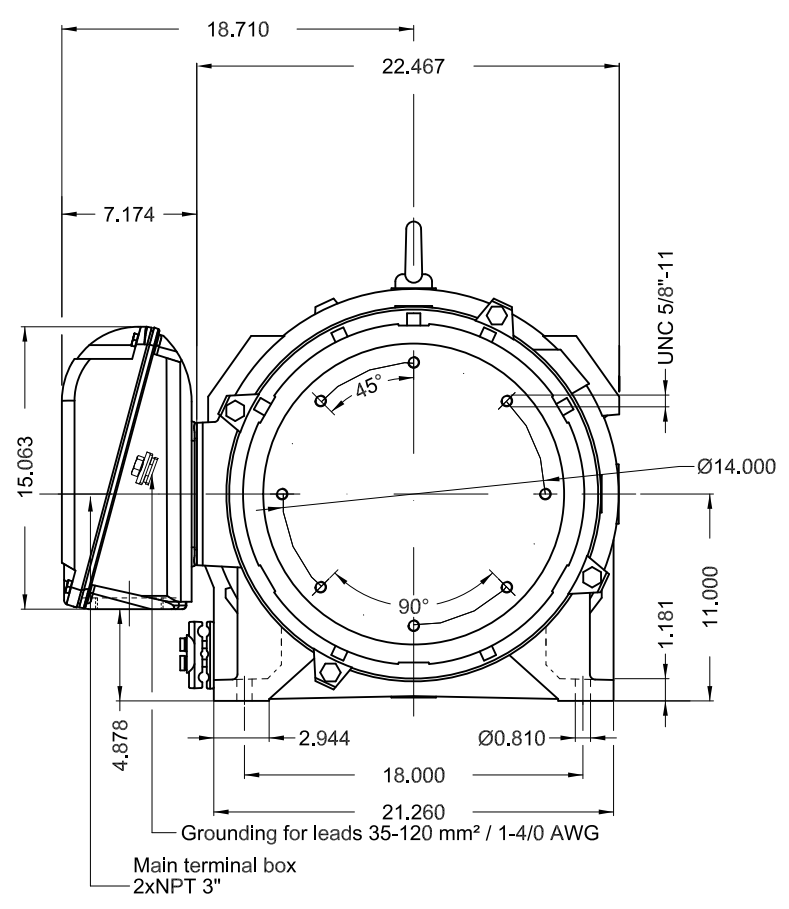


Performance : 415 V 50 Hz 4P IE3

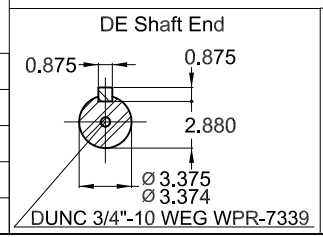
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Rated torque : 442 ft.lb  
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Rated speed : 1485 rpm

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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C3 NDE bearing
Color RAL 5009
Painting plan 203A
Mounting NEMA F-1
Mounting B34R(D)



150 HP 04 Poles 60 Hz

						1:10
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ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR W40 PREM. EFF.					
CHECKED		FRAME 444/5TC IP23 ODP					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

**PREVIEW**  
WDD

MODEL 150180T3G444TC-W40  
MADE IN BRAZIL  
14272539

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

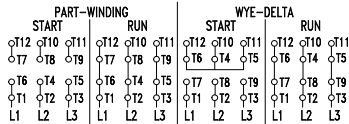



IEC 60034-1  
MOD.T01#FOXON



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

PH 3	FR 444/5TC	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)			



 → 6319-C3(45g)  
→ 6314-C3(27g)

MOBIL POLYREX EM  
20000 h

1387 Lbs