

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line		: W40 NEMA Premium Efficiency Three-Phase	Product code :	14501324	
			Catalog # :	02012OT3E286T-W40G	
Frame		: 284/6T	Cooling method : IC01 - ODP		
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 : 385 lb		
Protection degree		: IP23	Moment of inertia (J) : 6.89 sq.ft.lb		
Design		: B			
Output [HP]	20	15	15	15	
Poles	6	6	6	6	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	48.6/24.3	22.0	21.4	20.9	
L. R. Amperes [A]	311/156	158	161	157	
LRC [A]	6.4x(Code G)	7.2x(Code H)	7.5x(Code J)	7.5x(Code J)	
No load current [A]	18.8/9.40	9.30	10.0	10.5	
Rated speed [RPM]	1177	980	980	984	
Slip [%]	1.92	2.00	2.00	1.60	
Rated torque [ft.lb]	89.2	80.4	80.4	80.0	
Locked rotor torque [%]	229	270	310	340	
Breakdown torque [%]	260	280	320	340	
Service factor	1.25	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	27s (cold) 15s (hot)	28s (cold) 16s (hot)	28s (cold) 16s (hot)	28s (cold) 16s (hot)	
Noise level ²	59.0 dB(A)				
Efficiency (%)	25%	91.5	89.7	89.7	
	50%	91.7	89.9	89.9	
	75%	92.4	90.3	90.3	
	100%	92.4	90.3	90.3	
Power Factor	25%	0.45	0.42	0.39	
	50%	0.71	0.68	0.64	
	75%	0.80	0.79	0.76	
	100%	0.84	0.84	0.82	
Bearing type	: Drive end : 6311 Z C3	Non drive end : 6211 Z C3	Foundation loads		
Sealing	: Without	Without	Max. traction		
	Bearing Seal	Bearing Seal	Max. compression		
Lubrication interval	: 20000 h	20000 h			
Lubricant amount	: 18 g	11 g			
Lubricant type	: Mobil Polyrex EM				
Notes USABLE @208V 53.7A SF 1.15 SFA 61.8A					
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



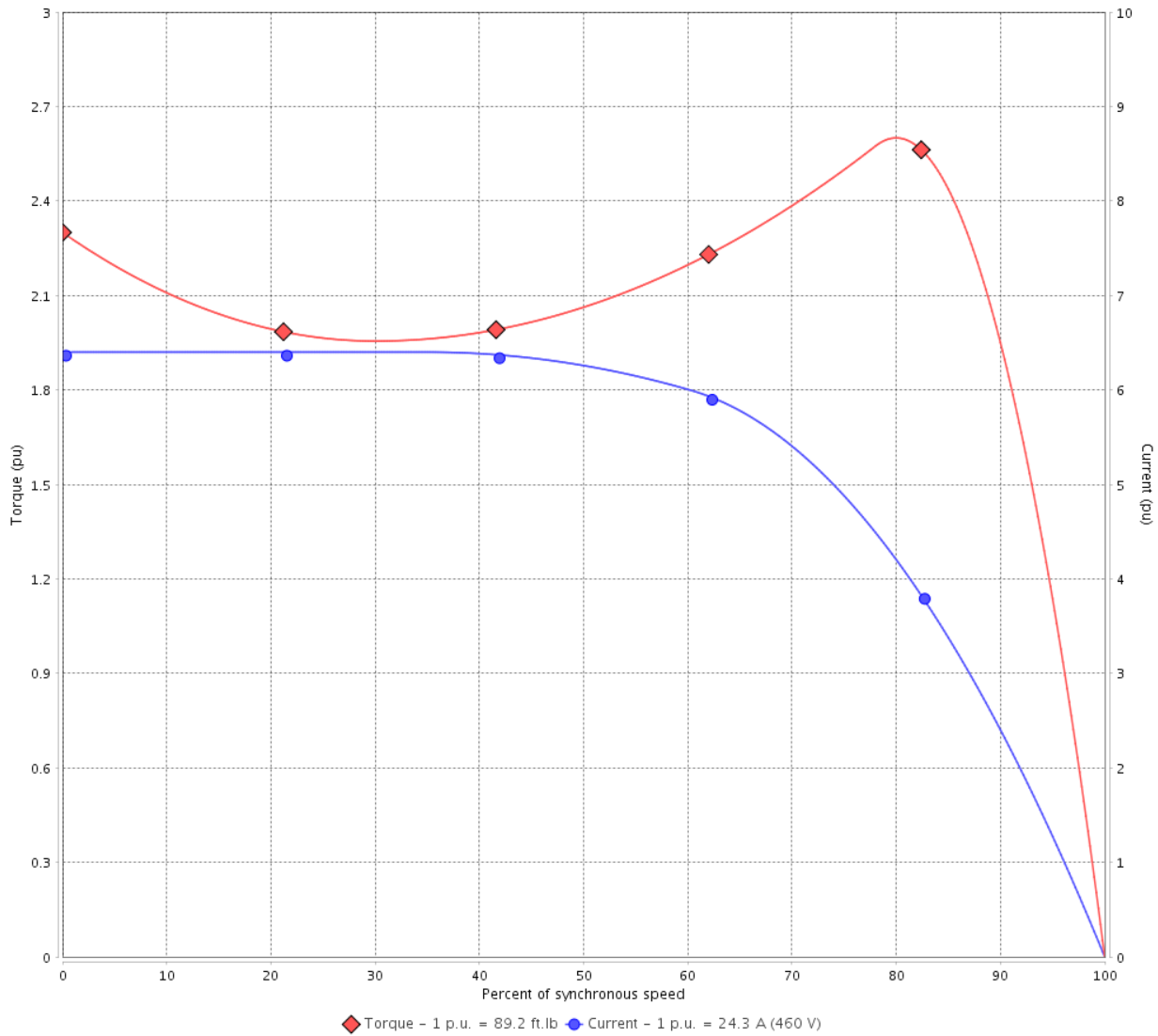
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14501324

Catalog # : 020120T3E286T-W40G

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 6P

Rated current	: 48.6/24.3 A	Moment of inertia (J)	: 6.89 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 89.2 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.25
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1177 rpm	Design	: B

Locked rotor time : 27s (cold) 15s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



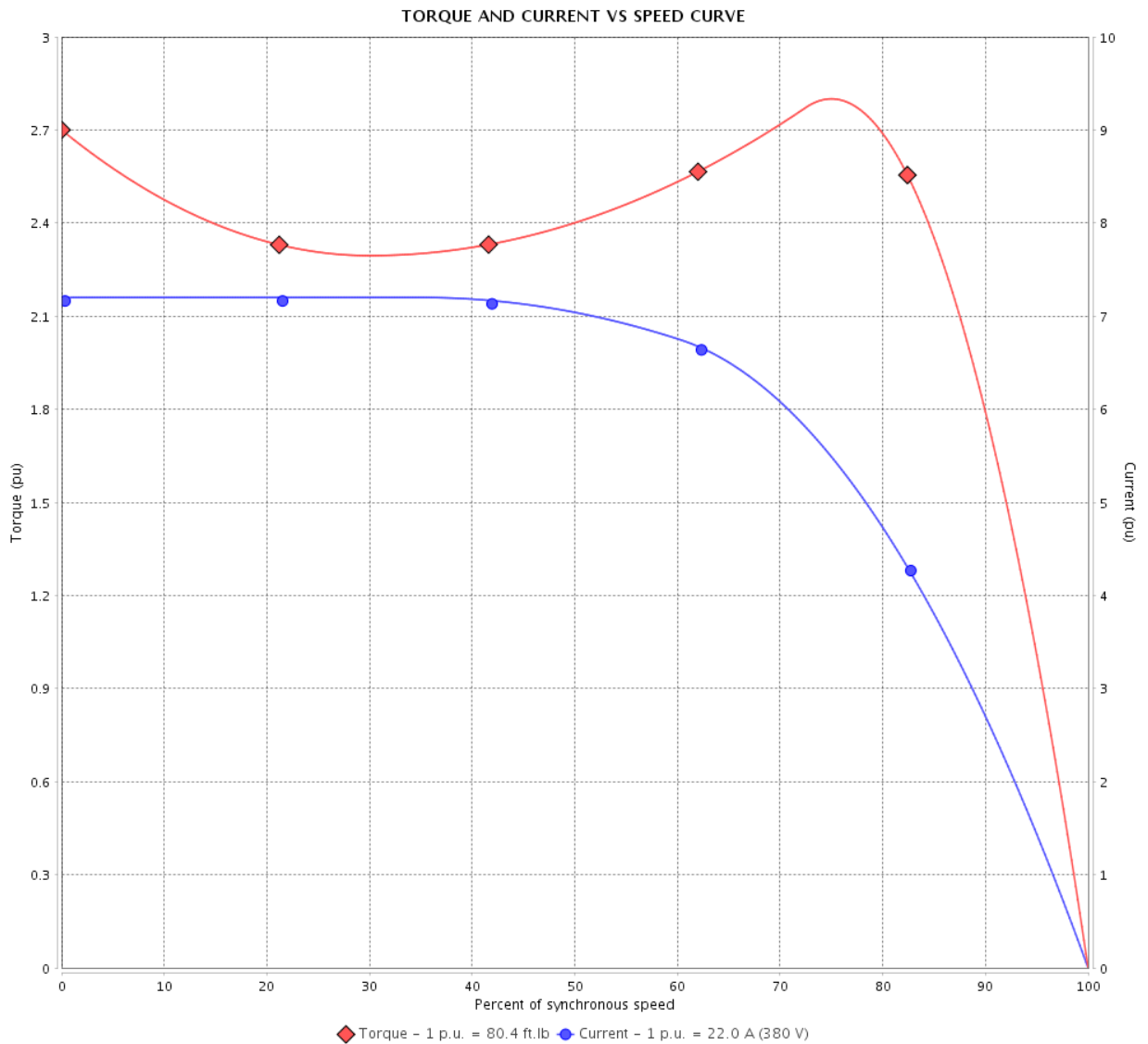
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14501324

Catalog # : 02012OT3E286T-W40G



Performance : 380 V 50 Hz 6P IE3

Rated current	: 22.0 A	Moment of inertia (J)	: 6.89 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 80.4 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 980 rpm	Design	: B

Locked rotor time : 28s (cold) 16s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



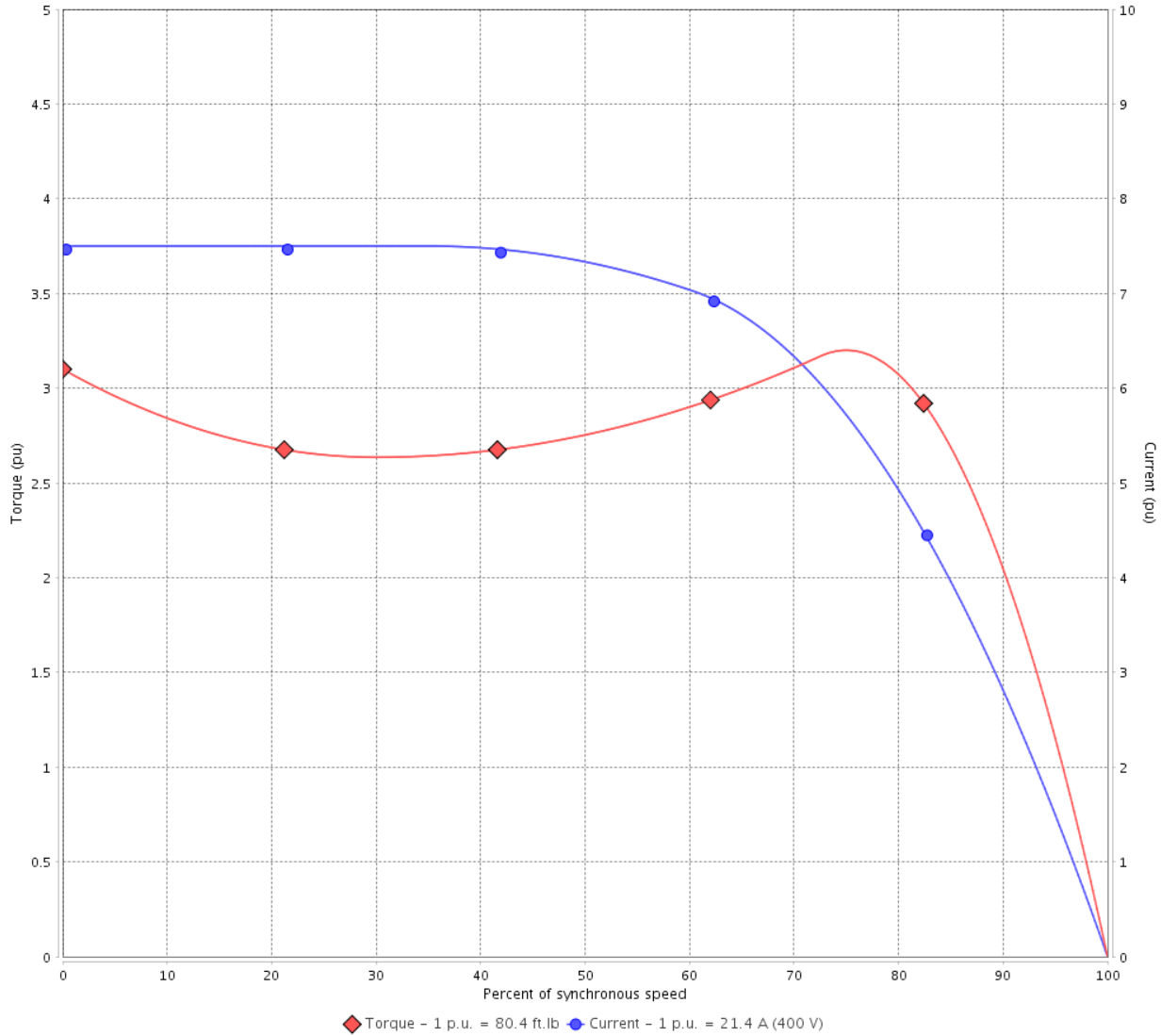
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14501324

Catalog # : 020120T3E286T-W40G

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current	: 21.4 A	Moment of inertia (J)	: 6.89 sq.ft.lb
LRC	: 7.5	Duty cycle	: Cont.(S1)
Rated torque	: 80.4 ft.lb	Insulation class	: F
Locked rotor torque	: 310 %	Service factor	: 1.00
Breakdown torque	: 320 %	Temperature rise	: 80 K
Rated speed	: 980 rpm	Design	: B

Locked rotor time : 28s (cold) 16s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



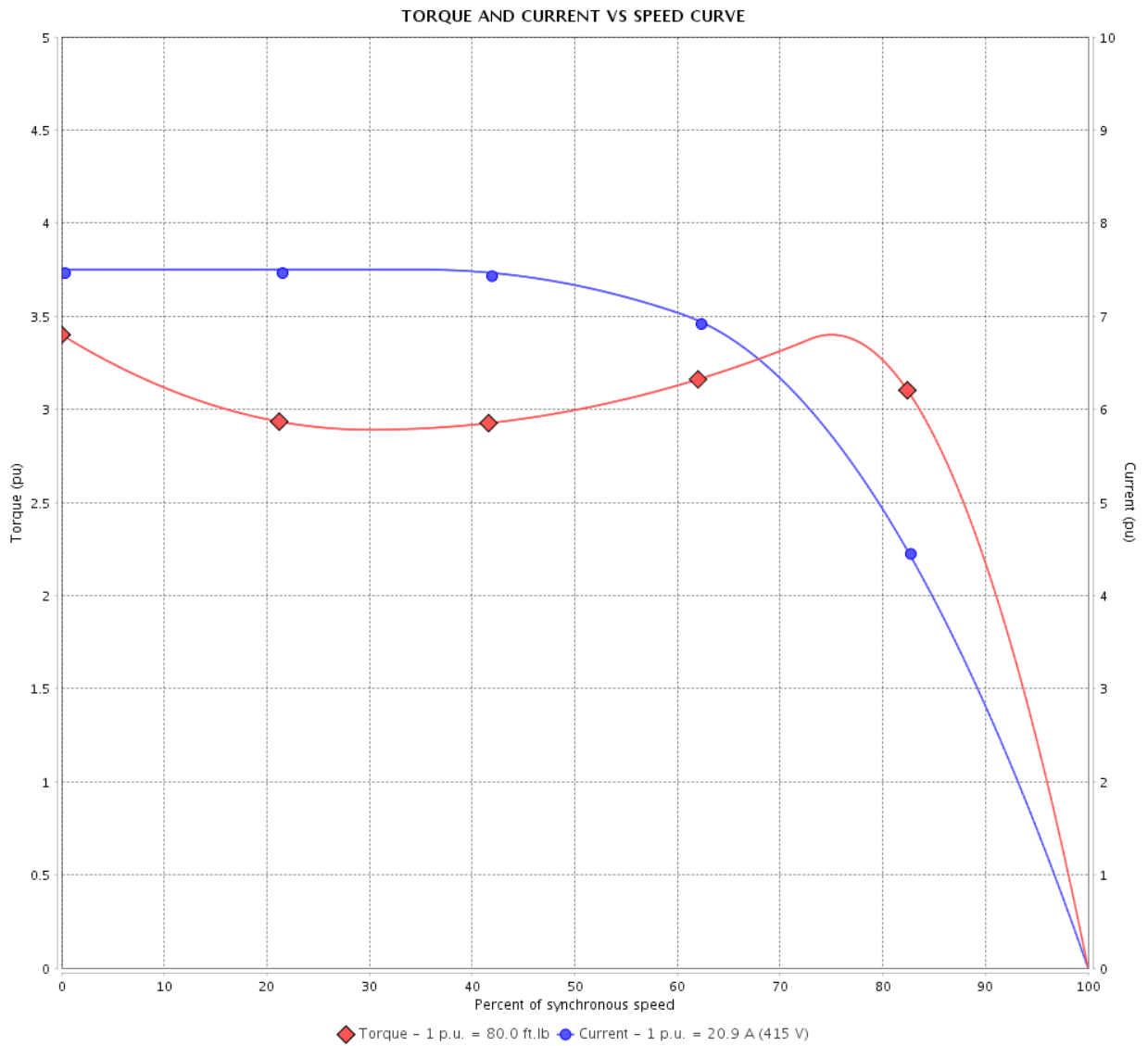
Three Phase Induction Motor - Squirrel Cage

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Product code : 14501324

Catalog # : 02012OT3E286T-W40G



Performance : 415 V 50 Hz 6P IE3

Rated current	: 20.9 A	Moment of inertia (J)	: 6.89 sq.ft.lb
LRC	: 7.5	Duty cycle	: Cont.(S1)
Rated torque	: 80.0 ft.lb	Insulation class	: F
Locked rotor torque	: 340 %	Service factor	: 1.00
Breakdown torque	: 340 %	Temperature rise	: 80 K
Rated speed	: 984 rpm	Design	: B

Locked rotor time : 28s (cold) 16s (hot)

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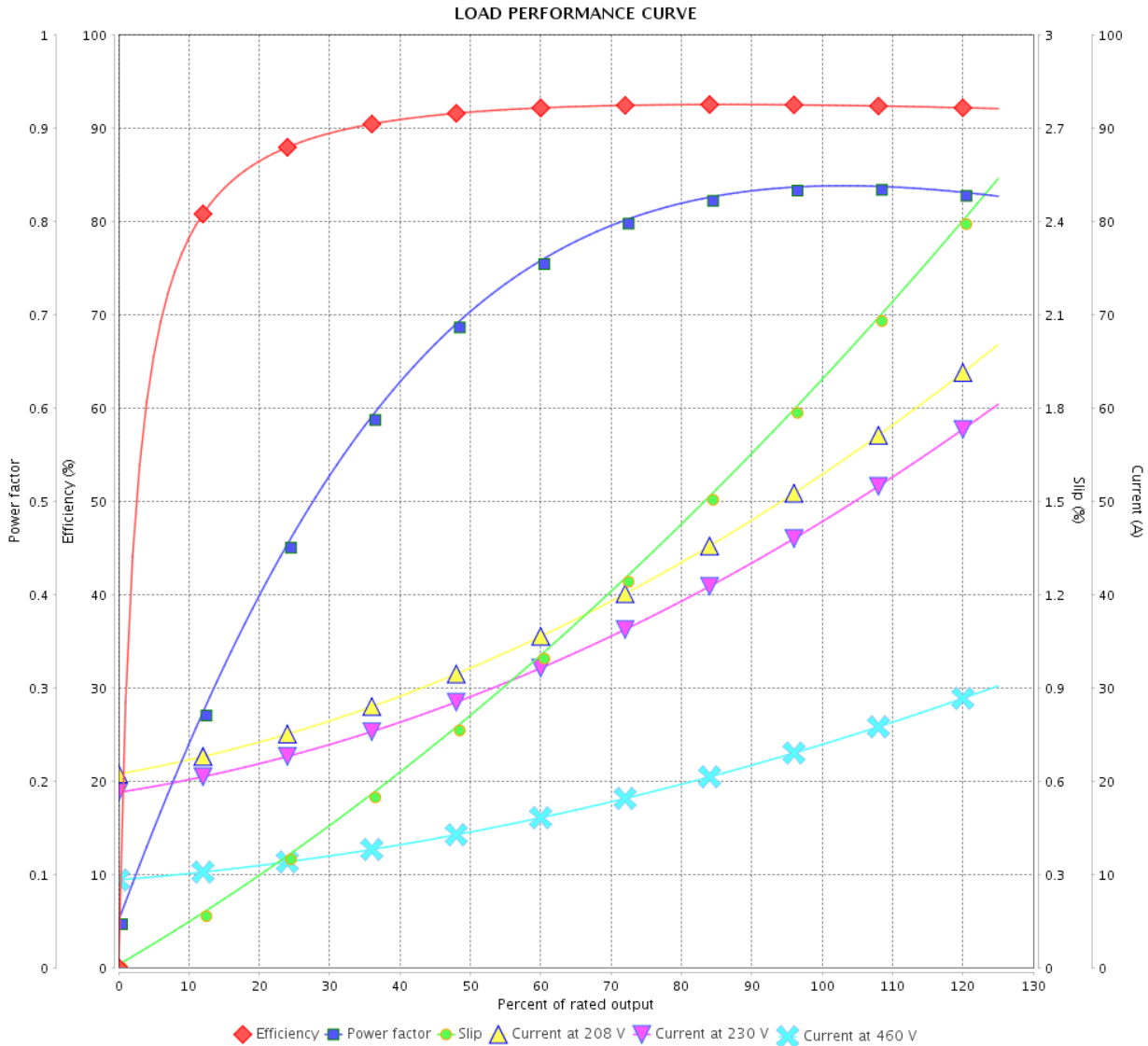


Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

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Catalog # : 020120T3E286T-W40G



Performance : 230/460 V 60 Hz 6P

Rated current : 48.6/24.3 A
 LRC : 6.4
 Rated torque : 89.2 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 260 %
 Rated speed : 1177 rpm

Moment of inertia (J) : 6.89 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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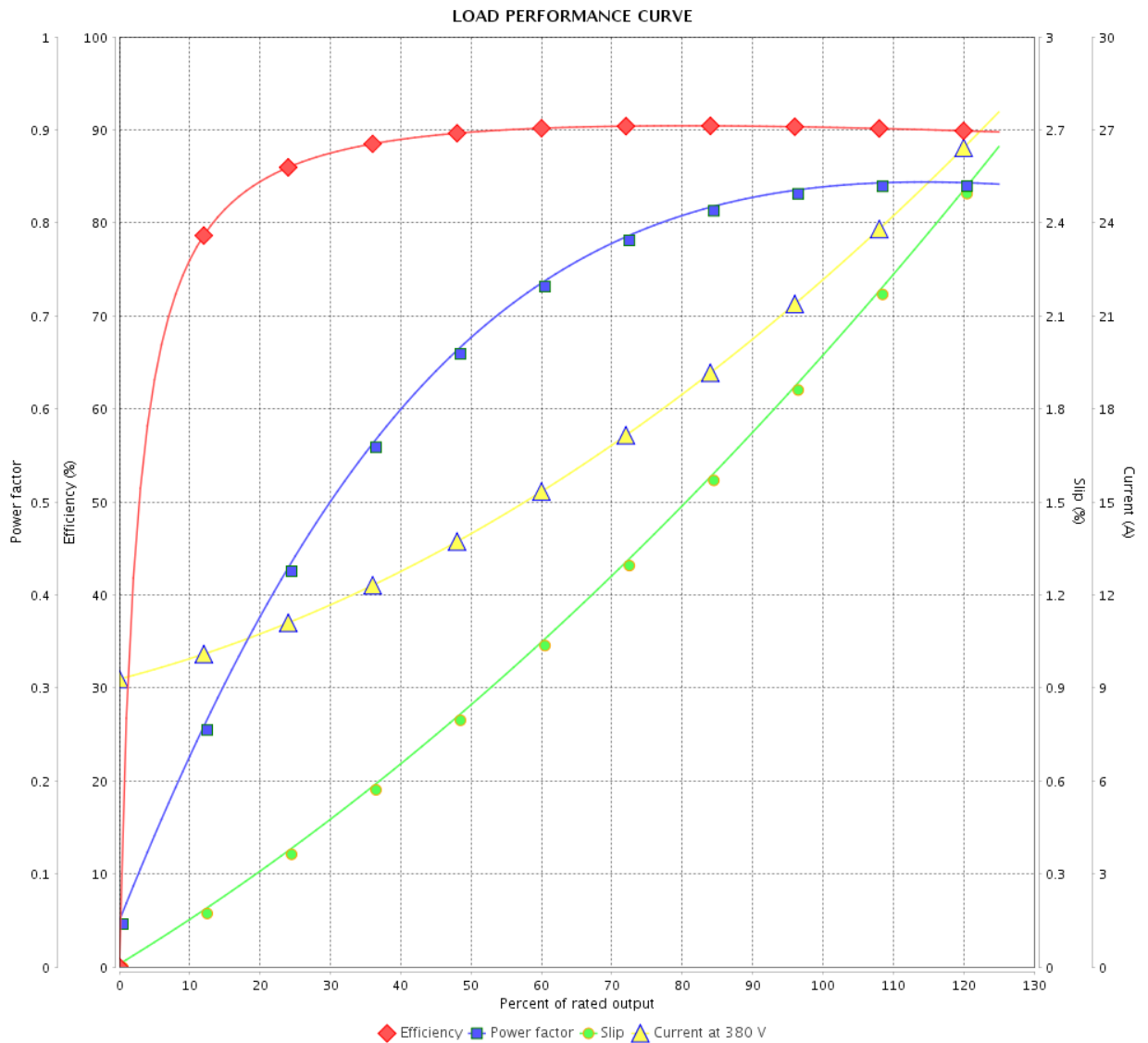


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Performance : 380 V 50 Hz 6P IE3

Rated current : 22.0 A
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 Rated torque : 80.4 ft.lb
 Locked rotor torque : 270 %
 Breakdown torque : 280 %
 Rated speed : 980 rpm

Moment of inertia (J) : 6.89 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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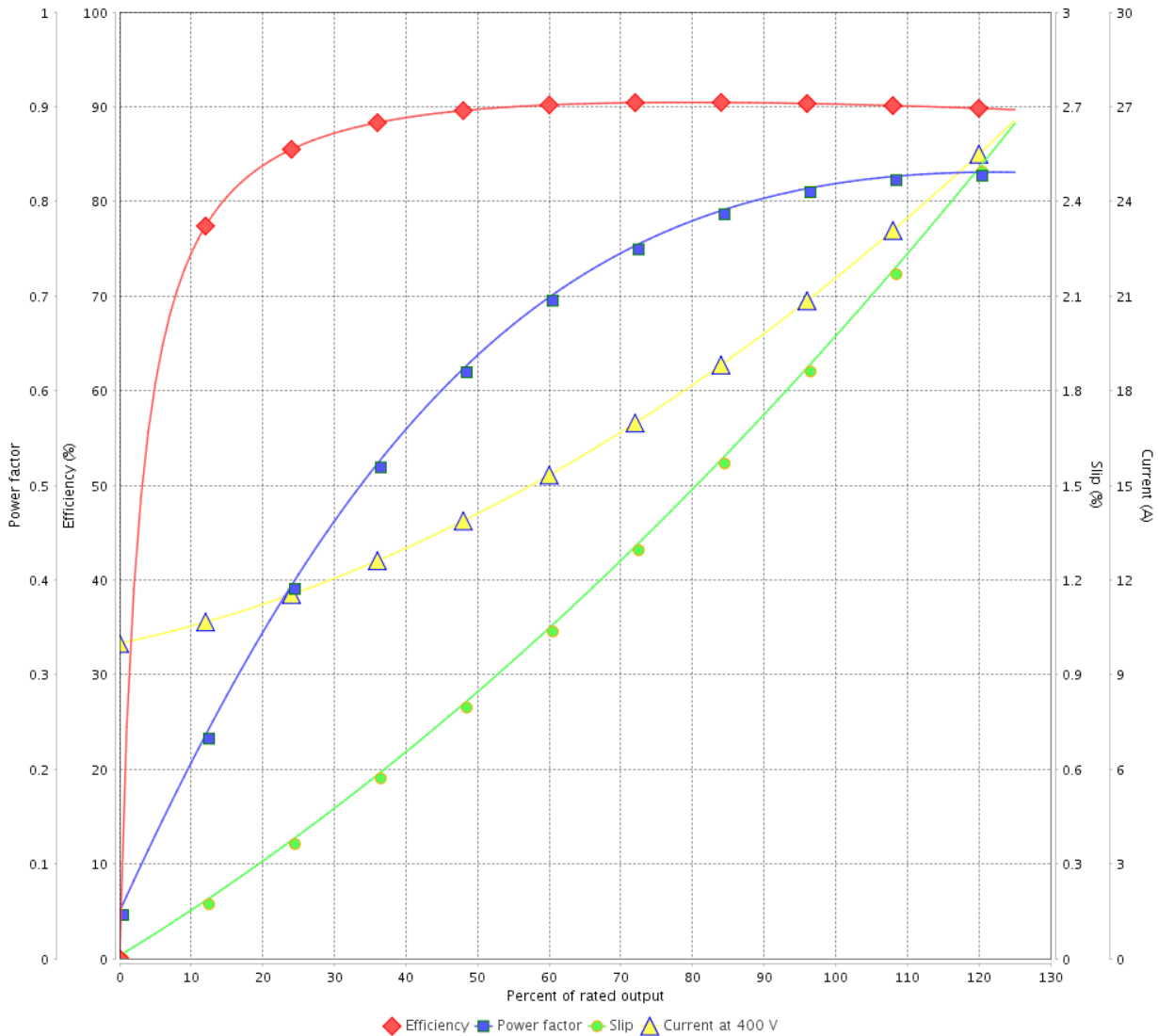
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LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current : 21.4 A
LRC : 7.5
Rated torque : 80.4 ft.lb
Locked rotor torque : 310 %
Breakdown torque : 320 %
Rated speed : 980 rpm

Moment of inertia (J) : 6.89 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : B

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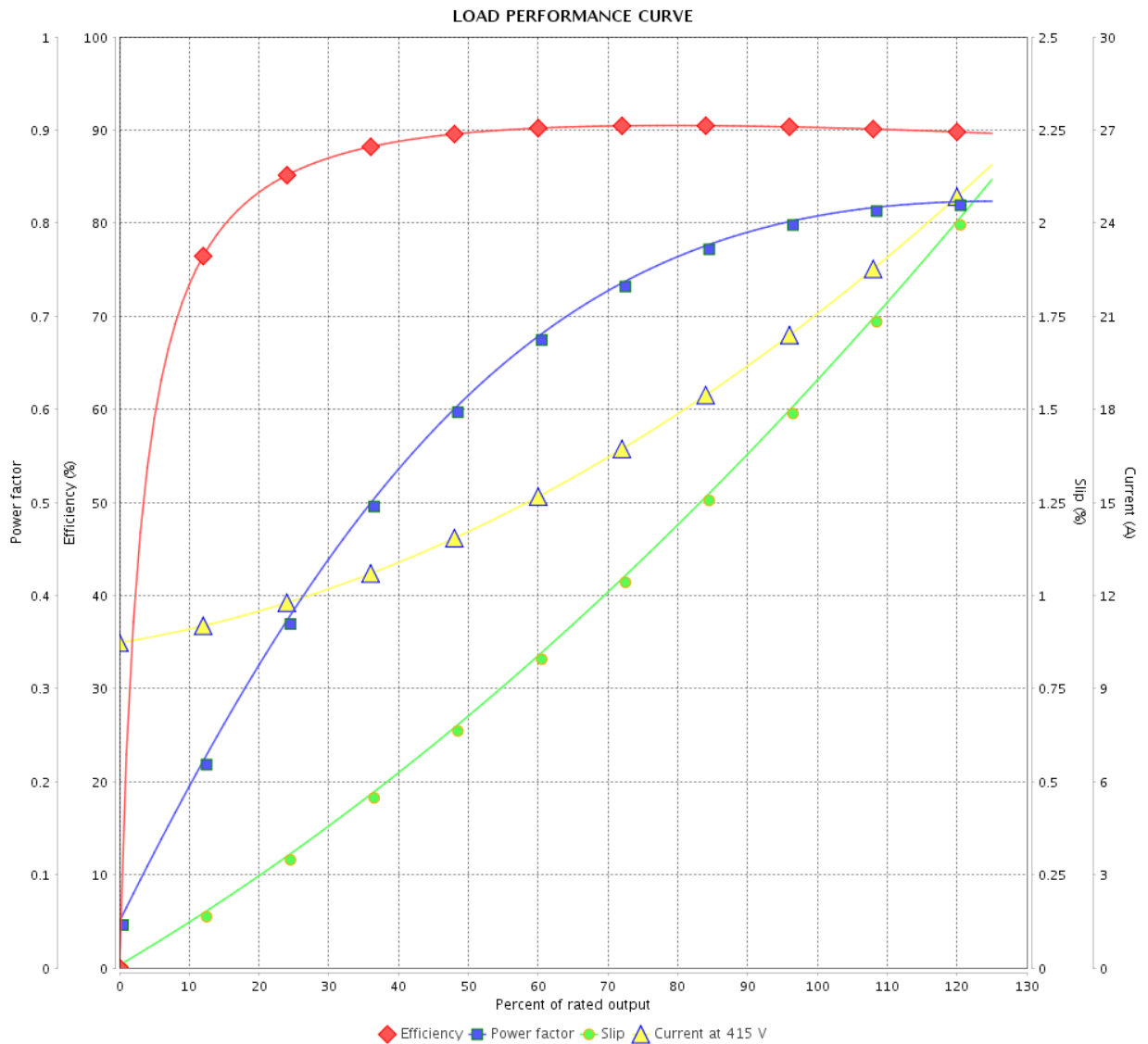


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 LRC : 7.5
 Rated torque : 80.0 ft.lb
 Locked rotor torque : 340 %
 Breakdown torque : 340 %
 Rated speed : 984 rpm

Moment of inertia (J) : 6.89 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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Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

Heating constant

Cooling constant

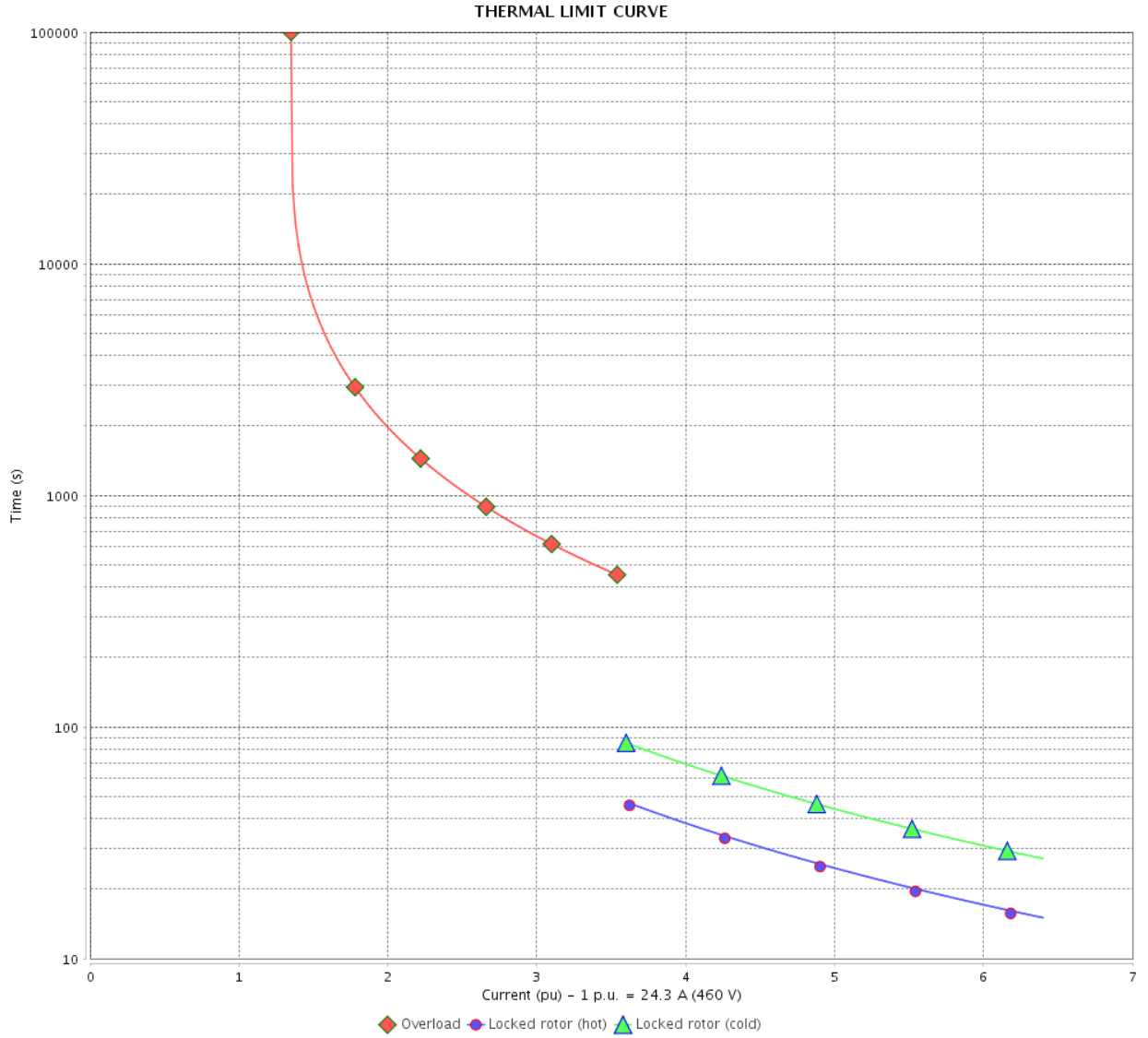
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Three Phase Induction Motor - Squirrel Cage



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Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 980 rpm	Design	: B

Heating constant

Cooling constant

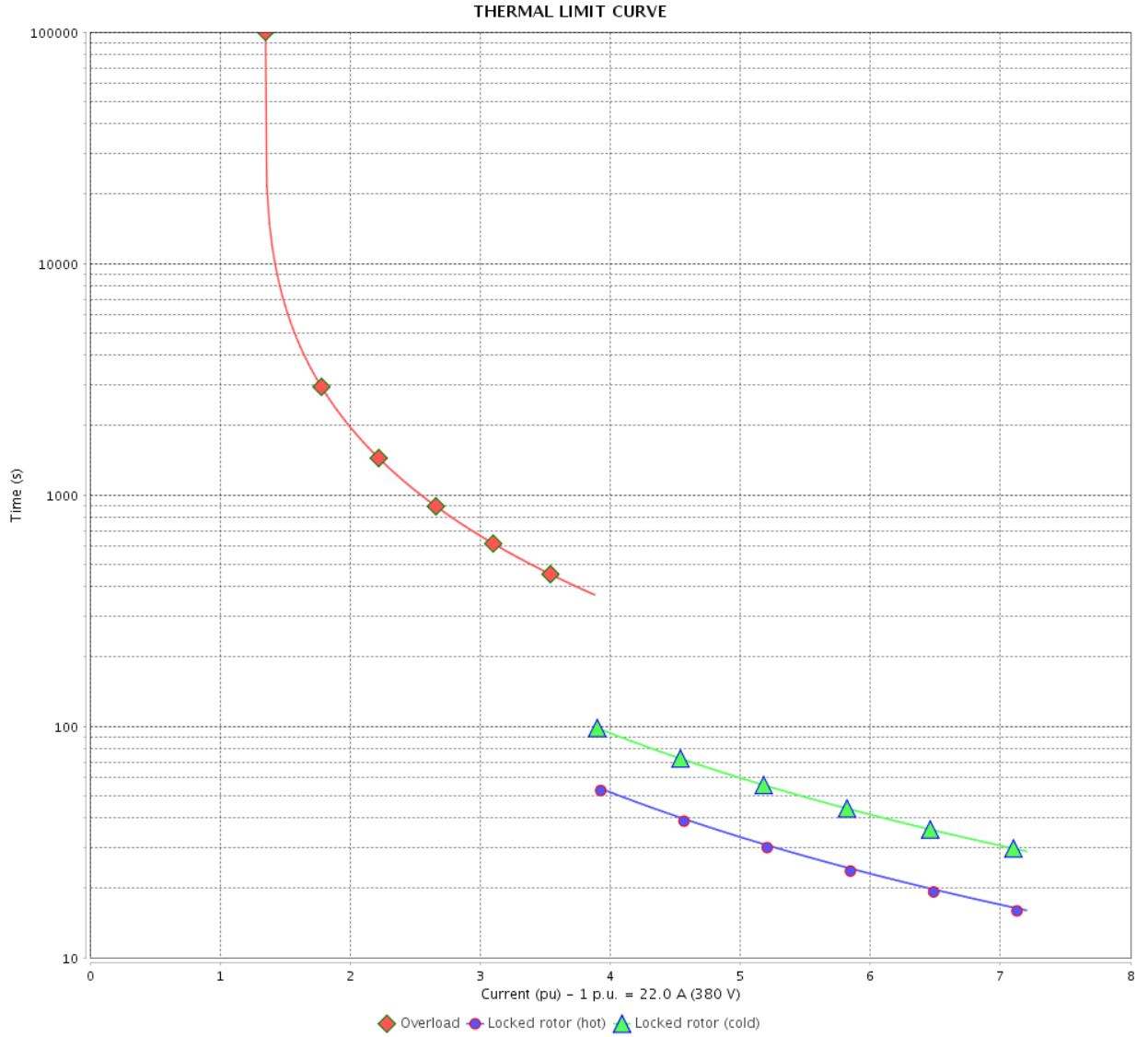
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Rated torque : 80.4 ft.lb
Locked rotor torque : 310 %
Breakdown torque : 320 %
Rated speed : 980 rpm

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Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
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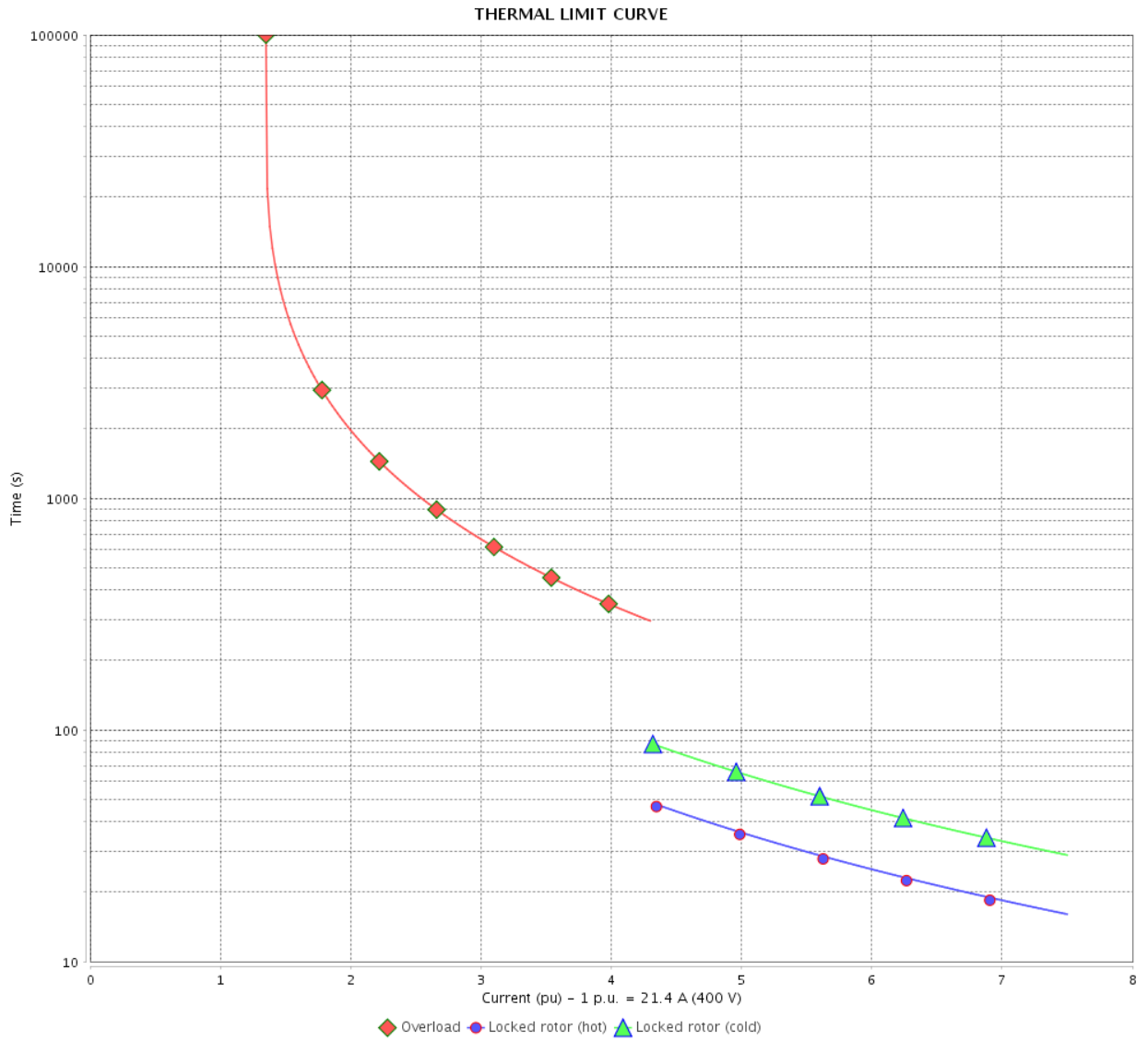
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Rated torque	: 80.0 ft.lb	Insulation class	: F
Locked rotor torque	: 340 %	Service factor	: 1.00
Breakdown torque	: 340 %	Temperature rise	: 80 K
Rated speed	: 984 rpm	Design	: B

Heating constant

Cooling constant

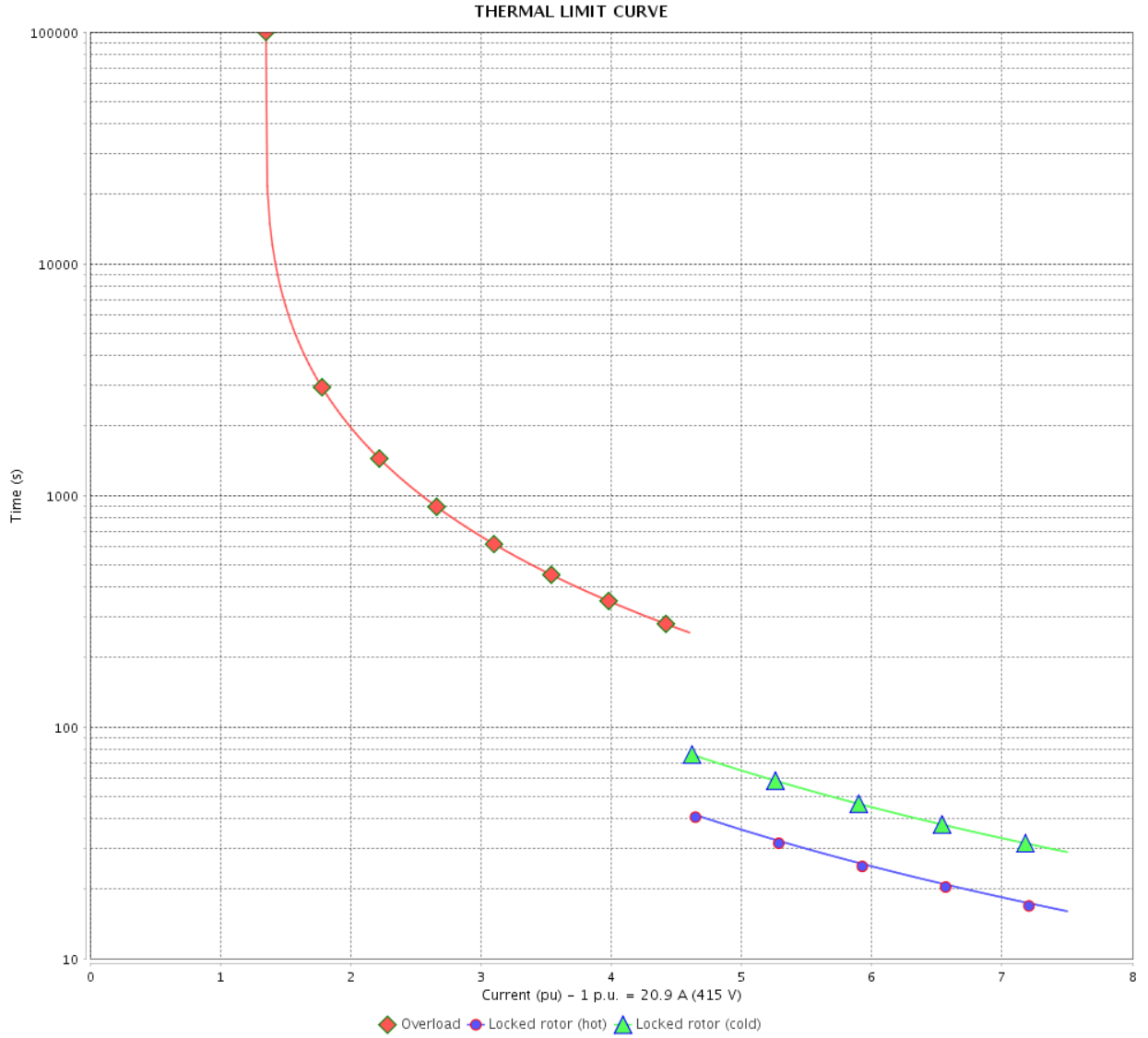
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Three Phase Induction Motor - Squirrel Cage



Customer : _____



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Checked by				
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

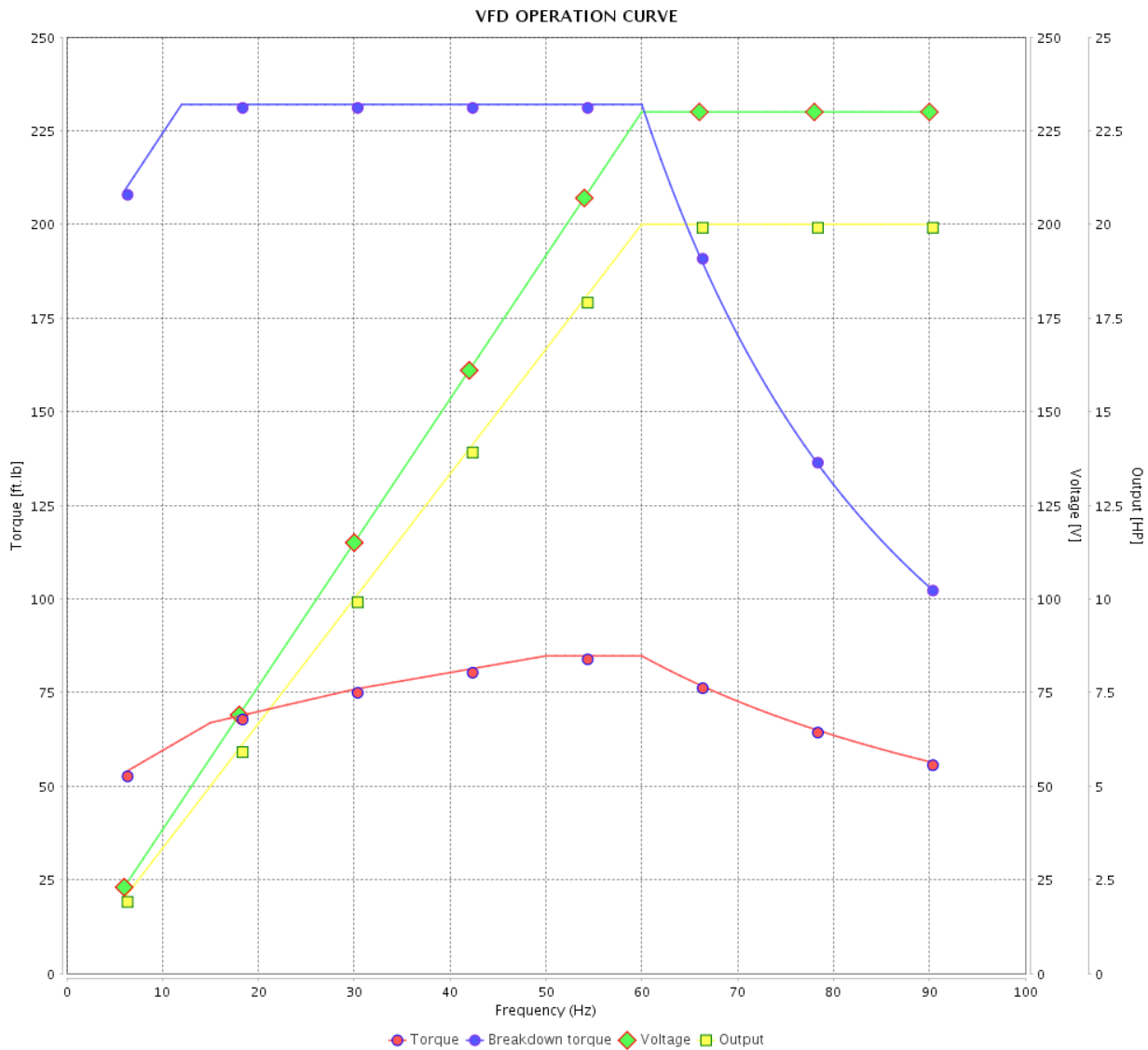


Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14501324

Catalog # : 020120T3E286T-W40G



Performance : 230/460 V 60 Hz 6P

Rated current : 48.6/24.3 A
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Rated torque : 89.2 ft.lb
Locked rotor torque : 229 %
Breakdown torque : 260 %
Rated speed : 1177 rpm

Moment of inertia (J) : 6.89 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
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Rev.	Changes Summary	Performed	Checked	Date
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Date				

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

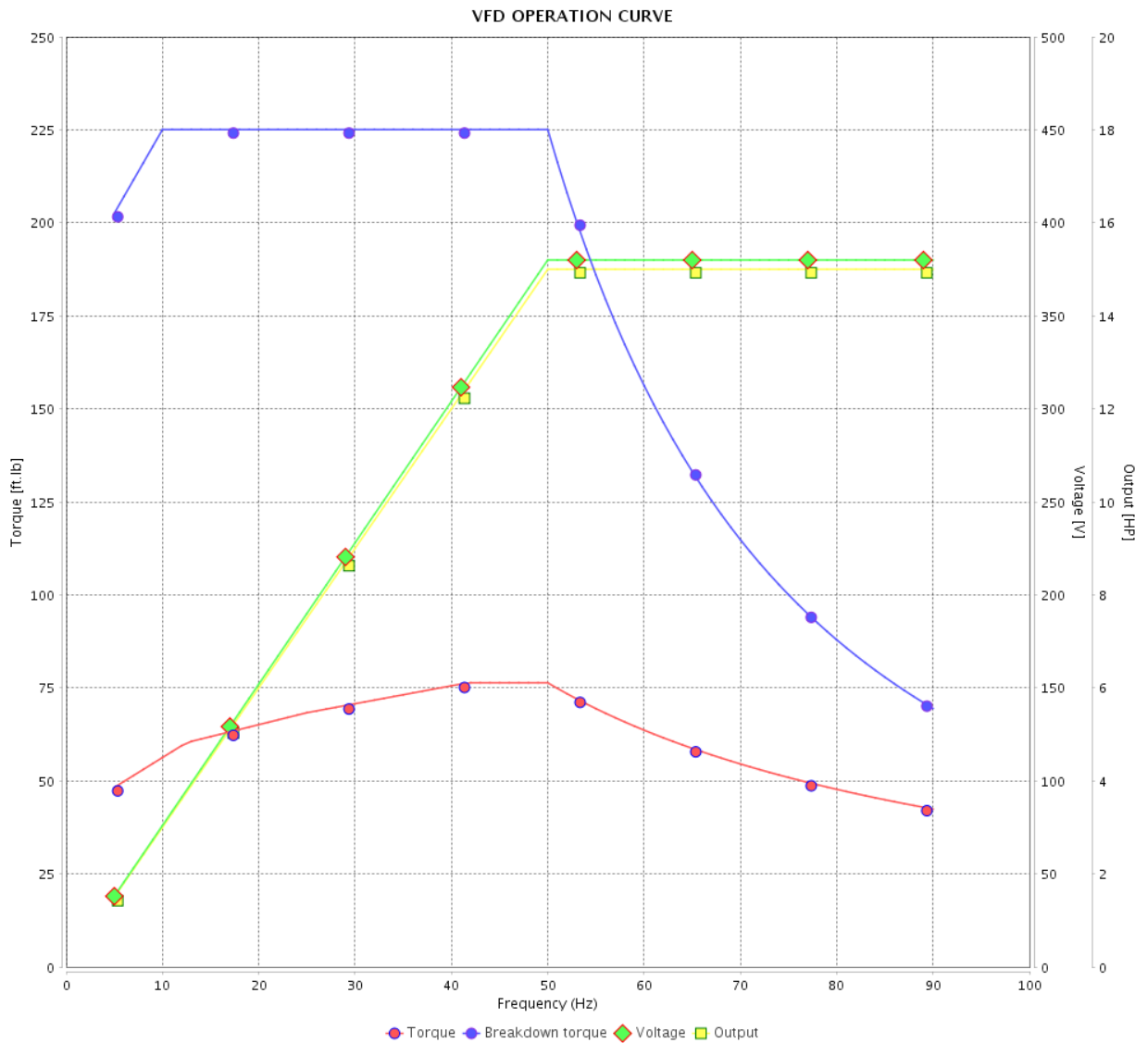


Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14501324

Catalog # : 02012OT3E286T-W40G



Performance : 380 V 50 Hz 6P IE3

Rated current : 22.0 A
 LRC : 7.2
 Rated torque : 80.4 ft.lb
 Locked rotor torque : 270 %
 Breakdown torque : 280 %
 Rated speed : 980 rpm

Moment of inertia (J) : 6.89 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



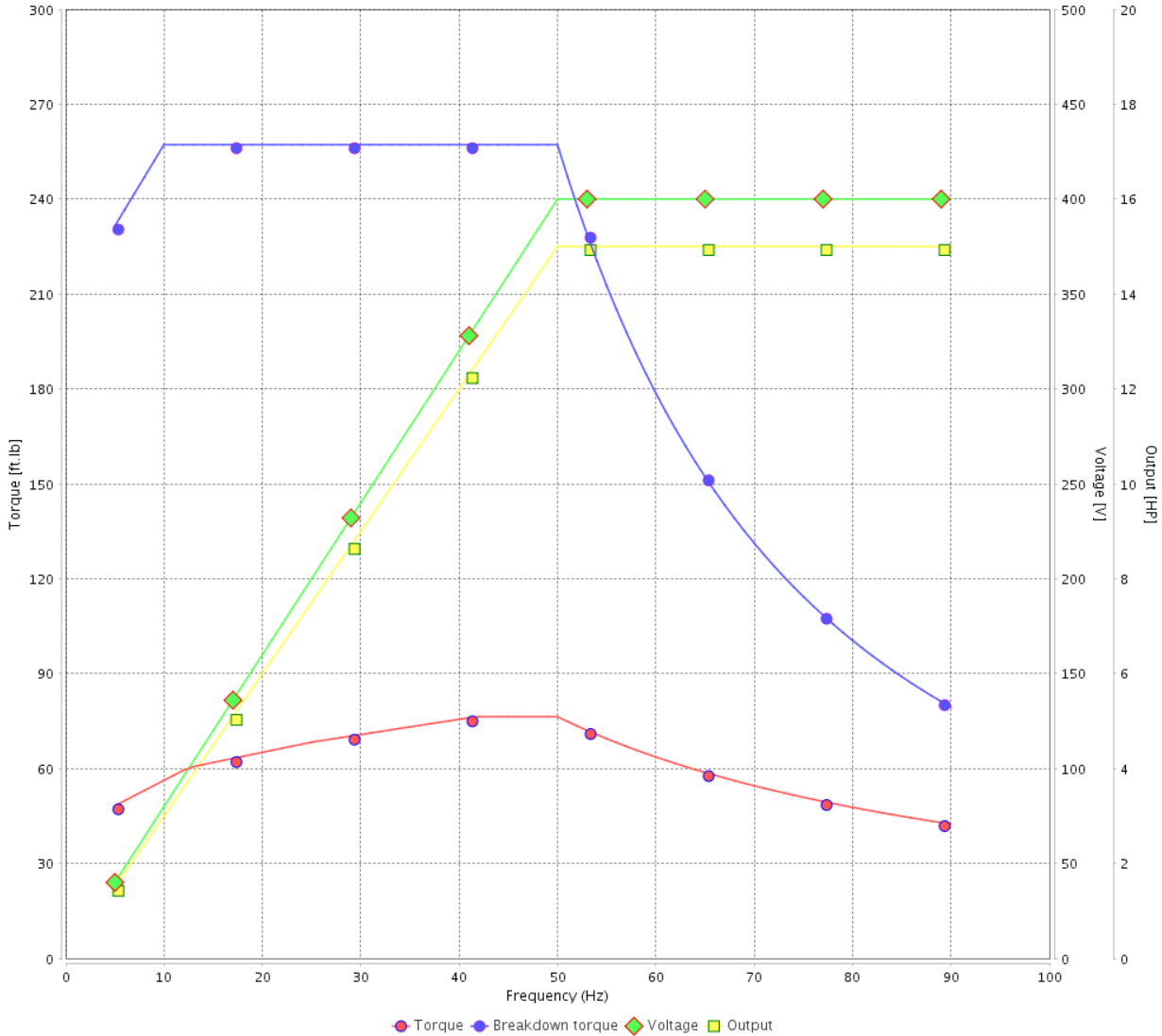
Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14501324

Catalog # : 020120T3E286T-W40G

VFD OPERATION CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current	: 21.4 A	Moment of inertia (J)	: 6.89 sq.ft.lb
LRC	: 7.5	Duty cycle	: Cont.(S1)
Rated torque	: 80.4 ft.lb	Insulation class	: F
Locked rotor torque	: 310 %	Service factor	: 1.00
Breakdown torque	: 320 %	Temperature rise	: 80 K
Rated speed	: 980 rpm	Design	: B

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Date	14/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

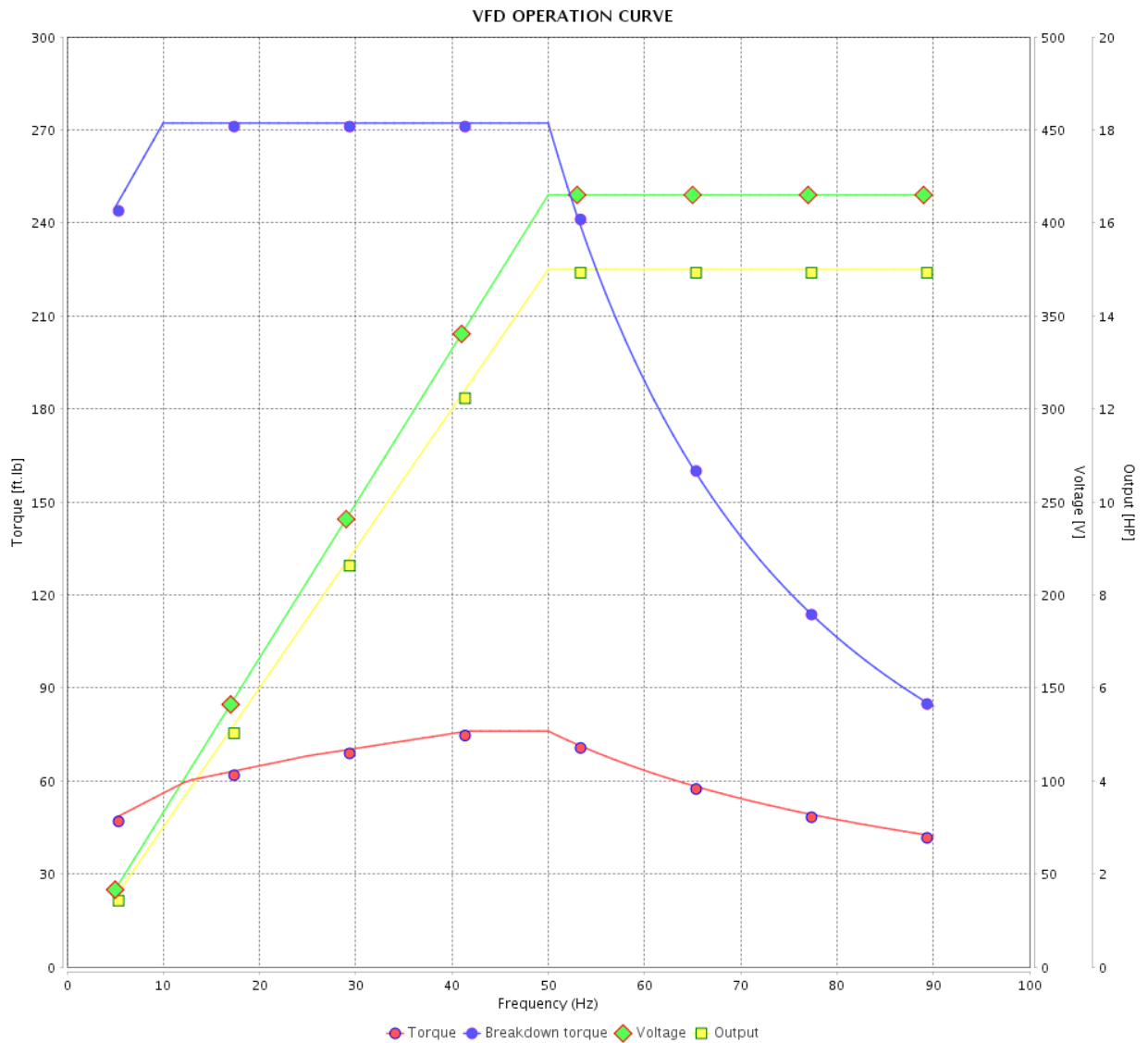


Customer :

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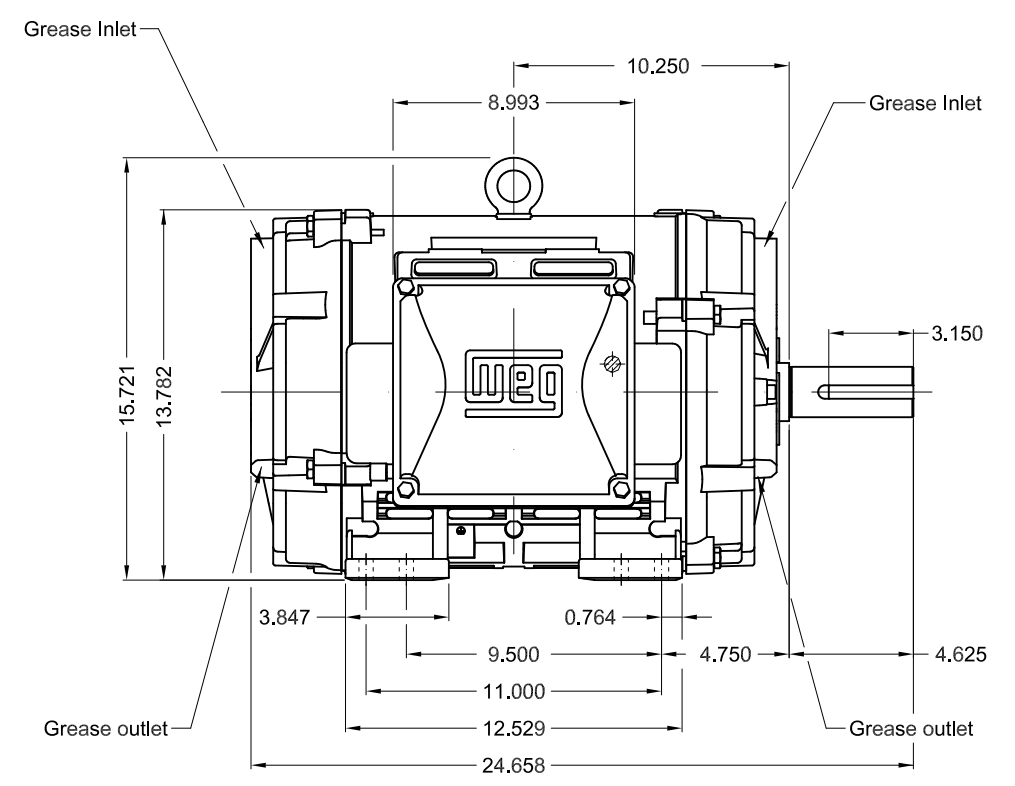
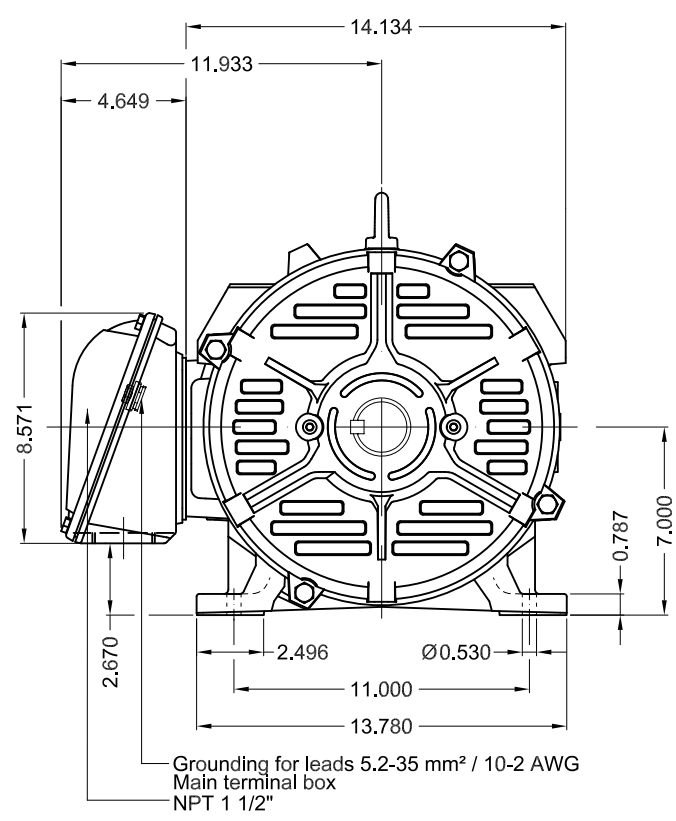


Performance : 415 V 50 Hz 6P IE3

Rated current : 20.9 A
 LRC : 7.5
 Rated torque : 80.0 ft.lb
 Locked rotor torque : 340 %
 Breakdown torque : 340 %
 Rated speed : 984 rpm

Moment of inertia (J) : 6.89 sq.ft.lb
 Duty cycle : Cont.(S1)
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Date	14/04/2022			

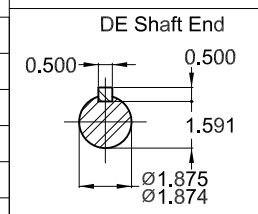


20 HP 06 Poles 60 Hz A

1:7

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR W40 PREM. EFF.					
CHECKED		FRAME 284/6T IP23 ODP					
RELEASED							
REL DT.		WMO Jaragua do Sul	Product Engineering	SHEET	1 / 1		

- Bearing cap
- Internal AEGIS ground ring on the DE
- Color RAL 5009
- Painting plan 203A
- Mounting NEMA F-1
- Mounting B3R(D)



Dimensions in inches XME A3



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



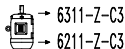
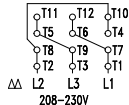
IEC 60034-1
 MOD.T01#FOXON



For 60Hz use on PWM, VT 1000:1, CT 3:1, 1.0SF

MODEL 020120T3E286T-W40G
 MADE IN BRAZIL
 14501324

PH 3	FR 284/6T	HP(kW) 20.0(15.0)	Hz 60
V 230/460	A 48.6/24.3	RPM 1177	DES B
NEMA NOM EFF 92.4 %	INS. CL. F Δ T 80 K	IP23	
ENCL ODP	DUTY CONT.	AMB. 40°C	
CODE G	PF 0.84	SF 1.25	SFA 60.8/30.4
USABLE @208V	53.7 A	SF 1.15	SFA 61.8
15HP 11kW 50Hz 380V 22.0A 980RPM SF1.00 EFF 90.3% (IE3)	ALT 1000 m.a.s.l.	386 Lbs	



MOBIL POLYREX EM
 18 g 20000 h