

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer					
Product line		: NEMA Premium Efficiency Three-Phase	Product code :		14407156
			Catalog # :		00709XT3E256T
Frame		: 256T	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		: 364 lb
Protection degree		: IP55	Moment of inertia (J)		: 4.15 sq.ft.lb
Design		: B			
Output [HP]	7.5	7.5	7.5	7.5	7.5
Poles	8	8	8	8	8
Frequency [Hz]	60	50	50	50	50
Rated voltage [V]	230/460	380	400	415	415
Rated current [A]	23.2/11.6	13.9	13.3	12.8	12.8
L. R. Amperes [A]	123/61.5	72.3	69.2	66.6	66.6
LRC [A]	5.3x(Code H)	5.2x(Code H)	5.2x(Code H)	5.2x(Code H)	5.2x(Code H)
No load current [A]	14.4/7.20	6.80	7.10	7.40	7.40
Rated speed [RPM]	880	715	715	720	720
Slip [%]	2.22	4.67	4.67	4.00	4.00
Rated torque [ft.lb]	44.8	55.1	55.1	54.7	54.7
Locked rotor torque [%]	210	150	170	190	190
Breakdown torque [%]	280	200	220	260	260
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	41s (cold) 23s (hot)	41s (cold) 23s (hot)	41s (cold) 23s (hot)	41s (cold) 23s (hot)	41s (cold) 23s (hot)
Noise level ²	55.0 dB(A)	53.0 dB(A)	53.0 dB(A)	53.0 dB(A)	53.0 dB(A)
Efficiency (%)	25%	86.3	85.0	83.7	82.5
	50%	86.5	84.0	84.0	84.0
	75%	87.5	84.0	84.0	84.0
	100%	87.5	82.5	84.0	85.5
Power Factor	25%	0.27	0.33	0.31	0.29
	50%	0.48	0.56	0.53	0.50
	75%	0.60	0.66	0.64	0.61
	100%	0.68	0.73	0.71	0.70
Bearing type		Drive end : 6309 C3	Non drive end : 6209 C3	Foundation loads	
Sealing		: Oil Seal	: Lip Seal	Max. traction : 500 lb	
Lubrication interval		: 20000 h	: 20000 h	Max. compression : 864 lb	
Lubricant amount		: 13 g	: 9 g		
Lubricant type		: Mobil Polyrex EM			
Notes					
USABLE @208V 25.7A SF 1.15 SFA 29.5A					
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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DATA SHEET

Three Phase Induction Motor - Squirrel Cage



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



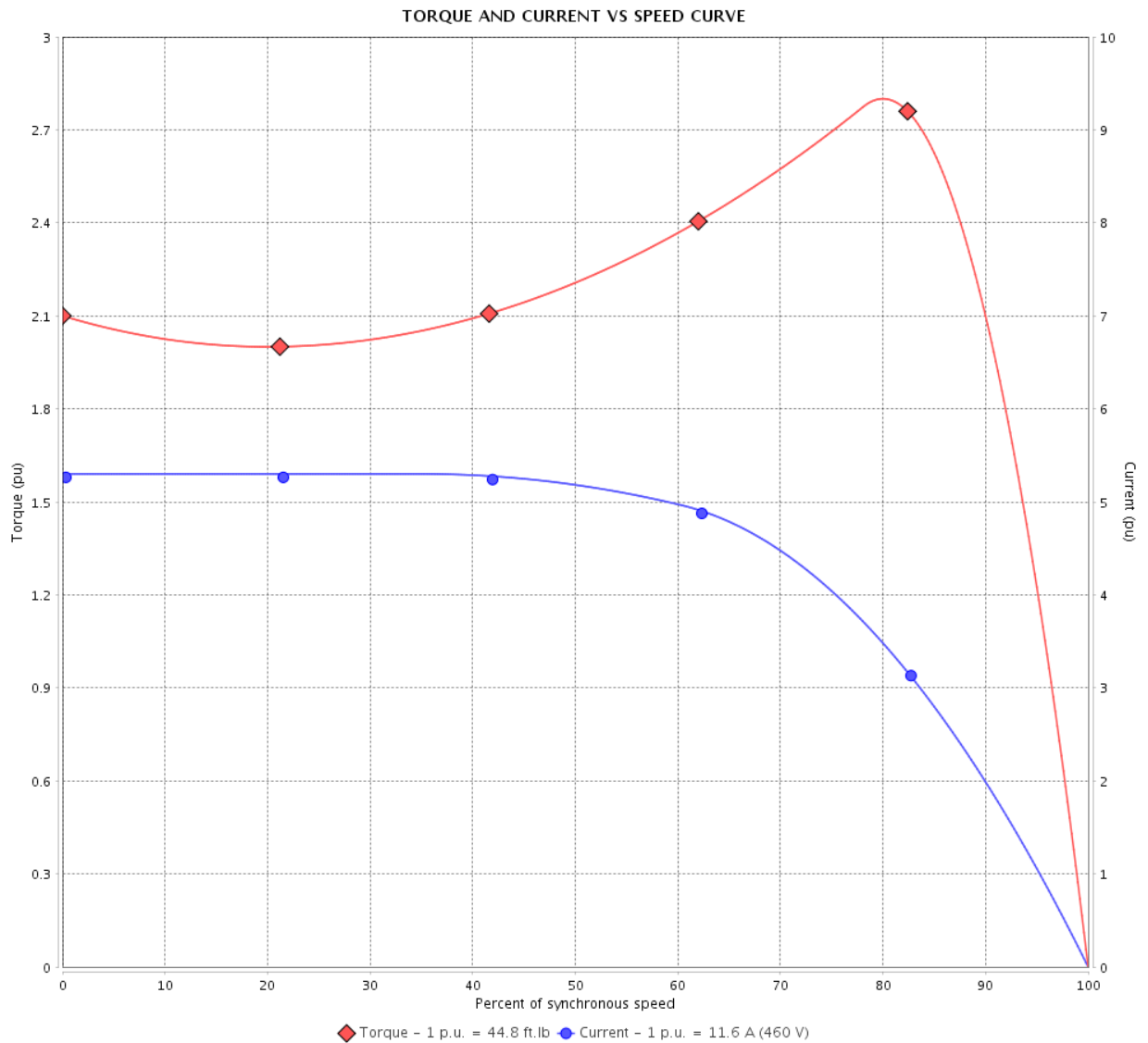
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407156

Catalog # : 00709XT3E256T



Performance : 230/460 V 60 Hz 8P

Rated current : 23.2/11.6 A
 LRC : 5.3
 Rated torque : 44.8 ft.lb
 Locked rotor torque : 210 %
 Breakdown torque : 280 %
 Rated speed : 880 rpm

Moment of inertia (J) : 4.15 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

Locked rotor time : 41s (cold) 23s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



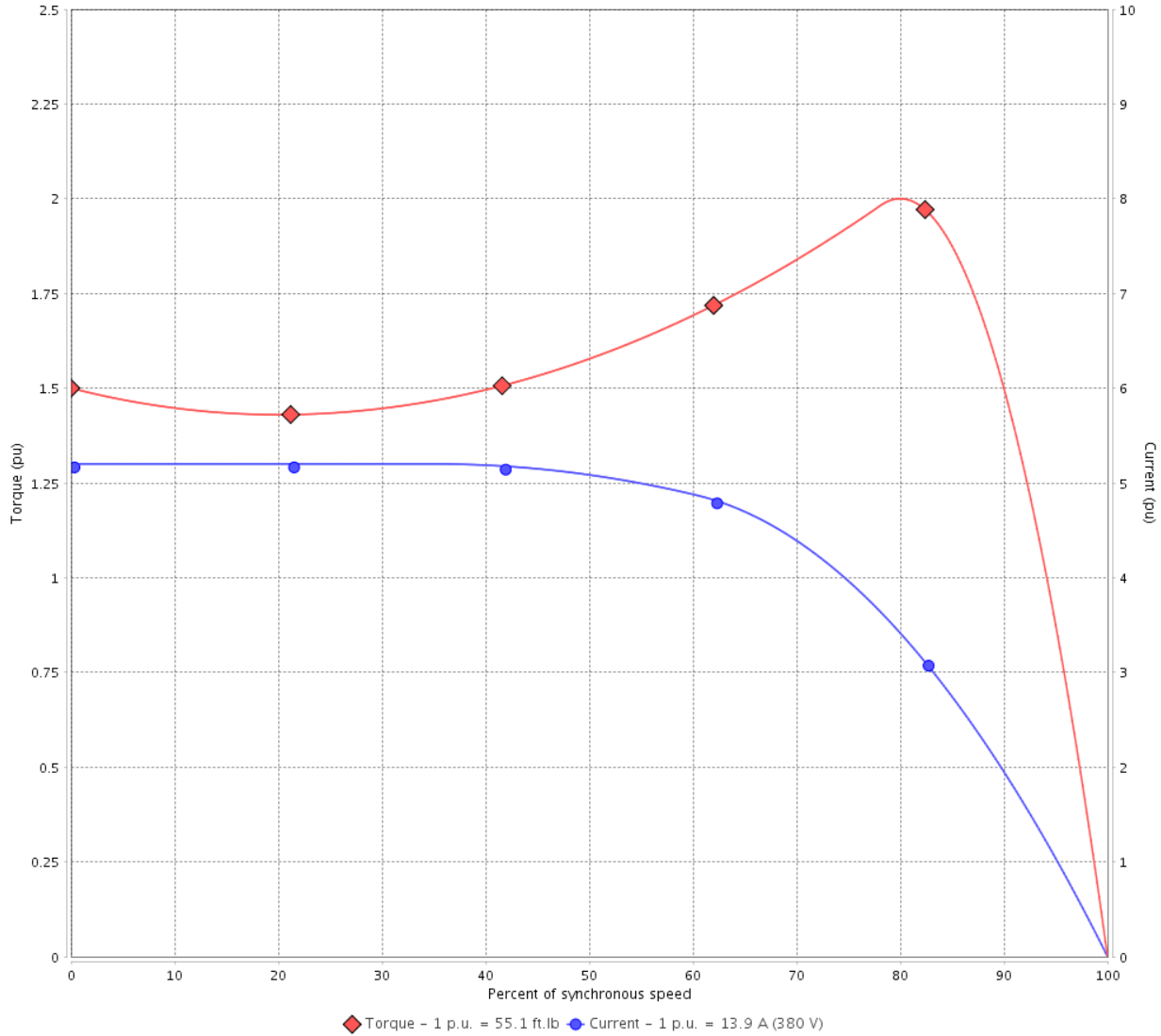
Customer :

Product line : NEMA Premium Efficiency Three-Phase

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TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 8P IE1

Rated current	: 13.9 A	Moment of inertia (J)	: 4.15 sq.ft.lb
LRC	: 5.2	Duty cycle	: Cont.(S1)
Rated torque	: 55.1 ft.lb	Insulation class	: F
Locked rotor torque	: 150 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 80 K
Rated speed	: 715 rpm	Design	: B

Locked rotor time : 41s (cold) 23s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



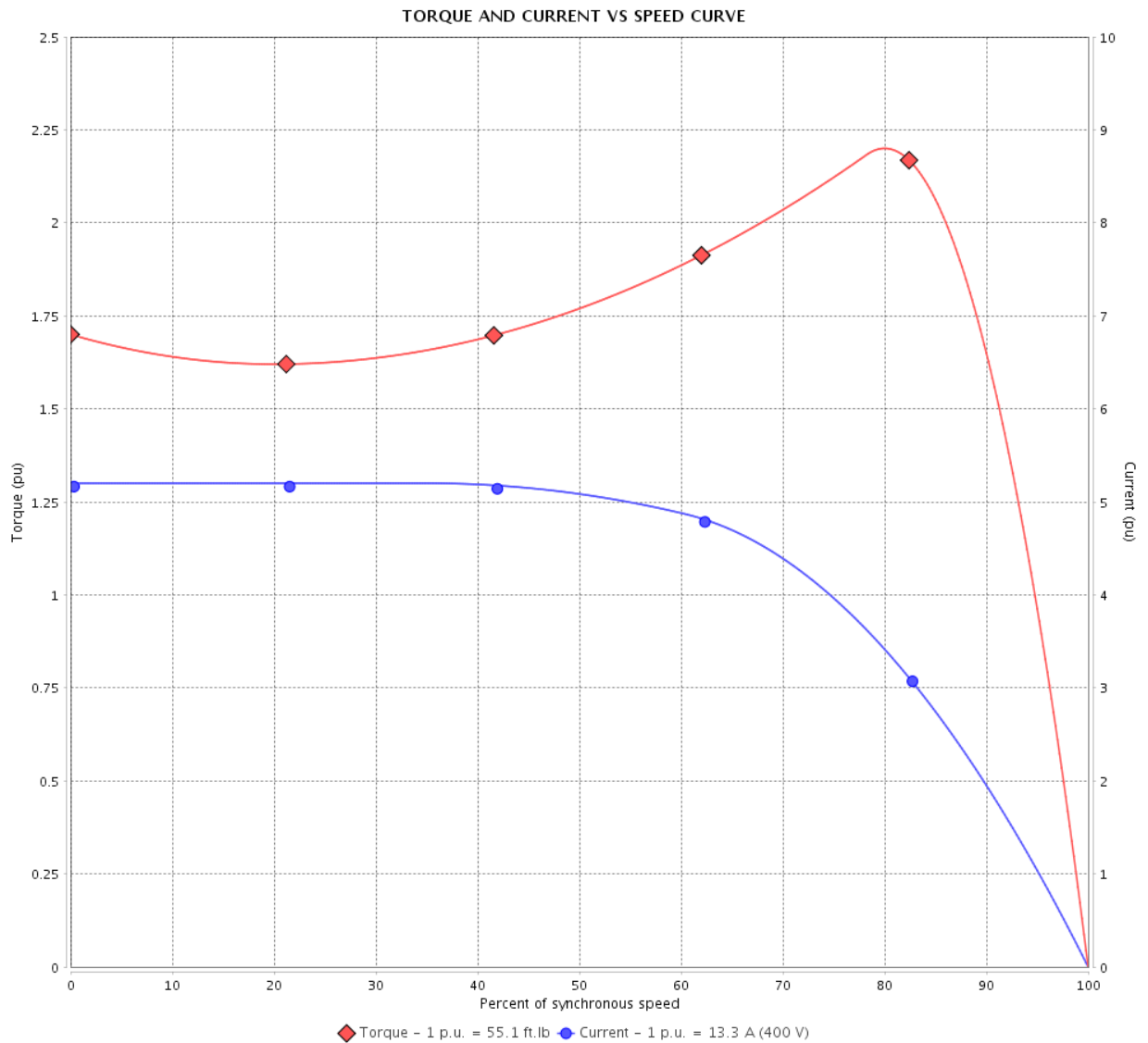
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407156

Catalog # : 00709XT3E256T



Performance : 400 V 50 Hz 8P IE2

Rated current	: 13.3 A	Moment of inertia (J)	: 4.15 sq.ft.lb
LRC	: 5.2	Duty cycle	: Cont.(S1)
Rated torque	: 55.1 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 80 K
Rated speed	: 715 rpm	Design	: B

Locked rotor time : 41s (cold) 23s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



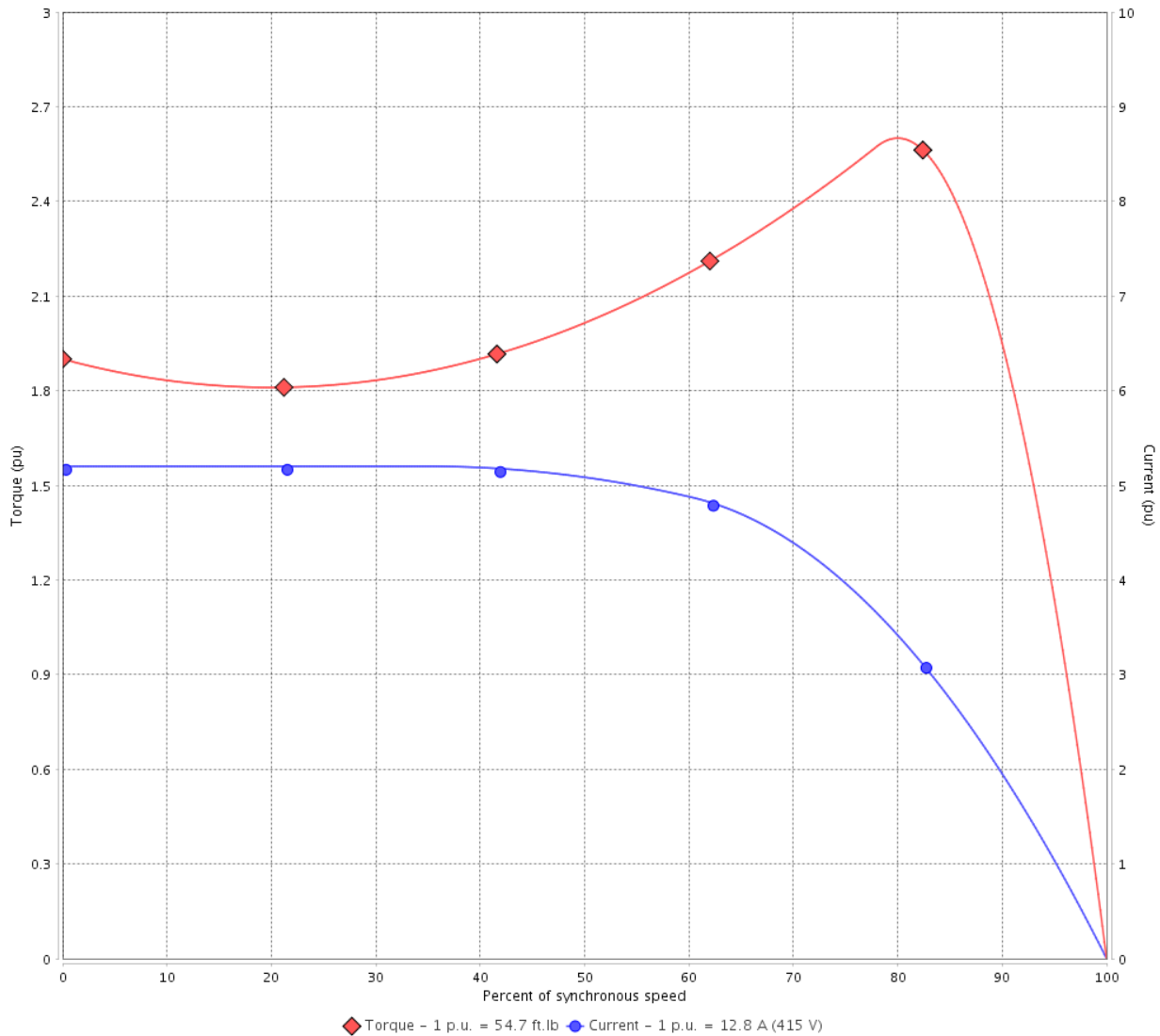
Customer :

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Product code : 14407156

Catalog # : 00709XT3E256T

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 8P IE2

Rated current	: 12.8 A	Moment of inertia (J)	: 4.15 sq.ft.lb
LRC	: 5.2	Duty cycle	: Cont.(S1)
Rated torque	: 54.7 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 720 rpm	Design	: B

Locked rotor time : 41s (cold) 23s (hot)

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

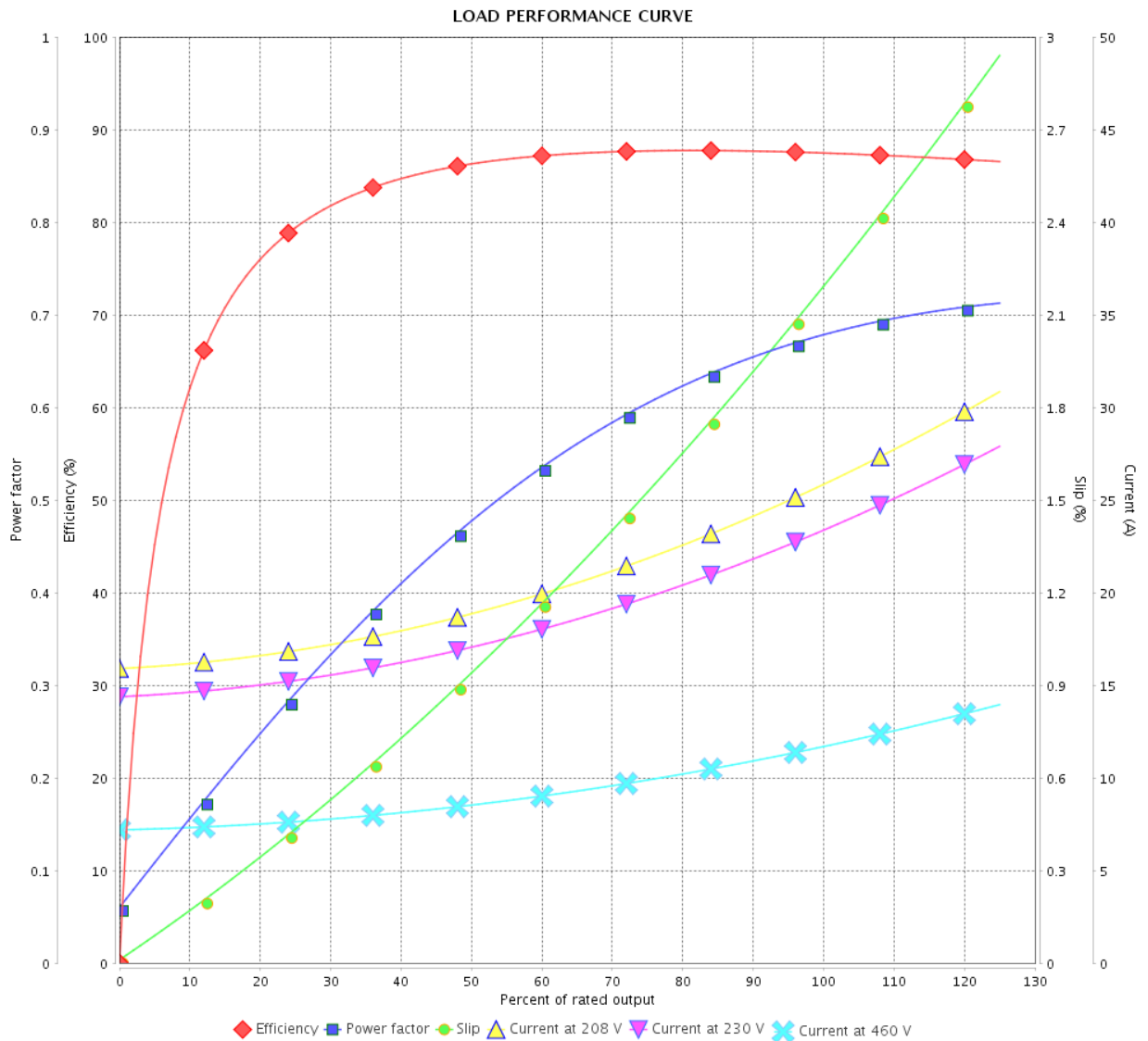


Customer :

Product line : NEMA Premium Efficiency Three-Phase

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Performance : 230/460 V 60 Hz 8P

Rated current : 23.2/11.6 A
 LRC : 5.3
 Rated torque : 44.8 ft.lb
 Locked rotor torque : 210 %
 Breakdown torque : 280 %
 Rated speed : 880 rpm

Moment of inertia (J) : 4.15 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
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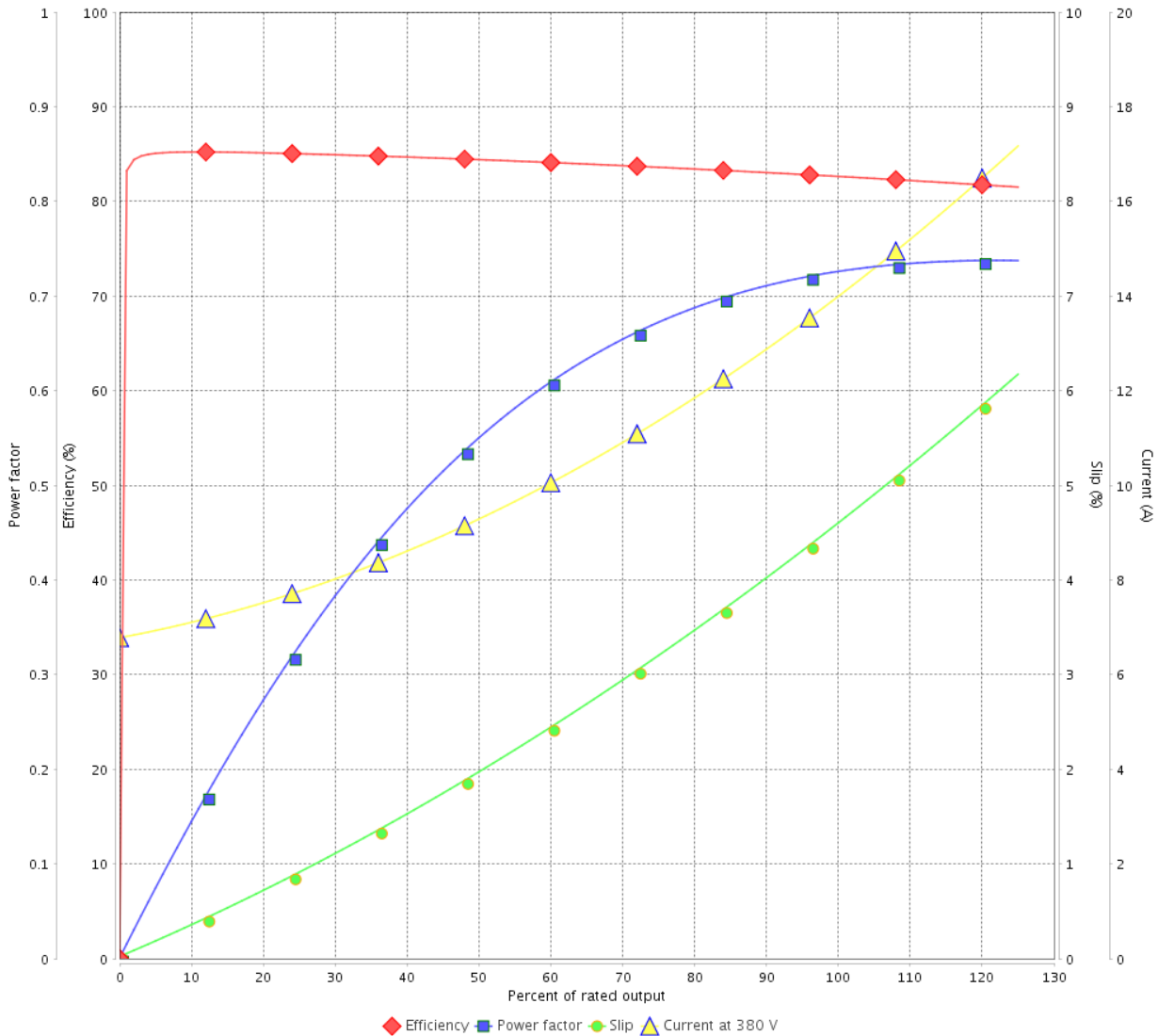
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Performance : 380 V 50 Hz 8P IE1

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LRC	: 5.2	Duty cycle	: Cont.(S1)
Rated torque	: 55.1 ft.lb	Insulation class	: F
Locked rotor torque	: 150 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 80 K
Rated speed	: 715 rpm	Design	: B

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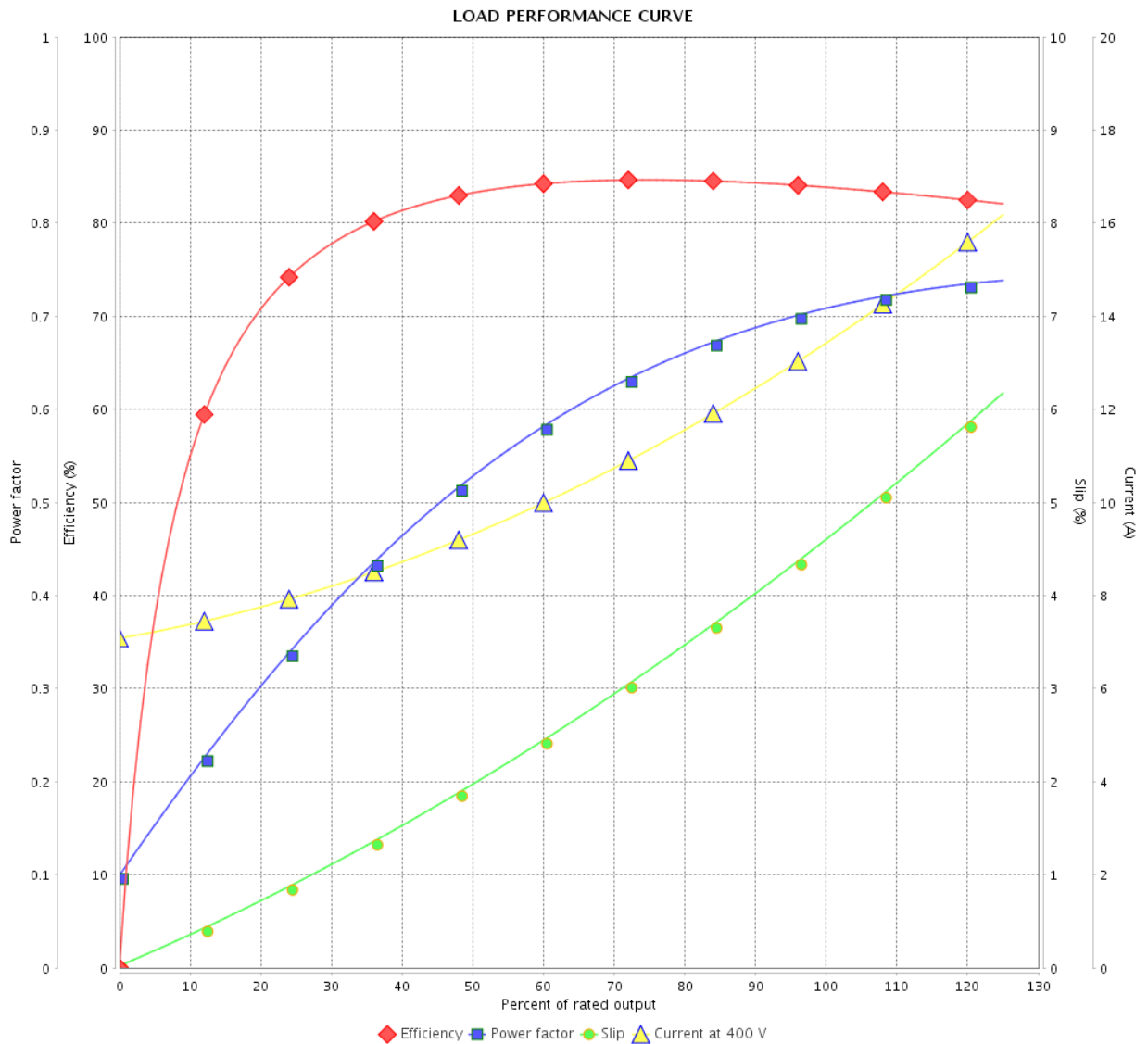


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407156

Catalog # : 00709XT3E256T



Performance : 400 V 50 Hz 8P IE2

Rated current : 13.3 A
 LRC : 5.2
 Rated torque : 55.1 ft.lb
 Locked rotor torque : 170 %
 Breakdown torque : 220 %
 Rated speed : 715 rpm

Moment of inertia (J) : 4.15 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



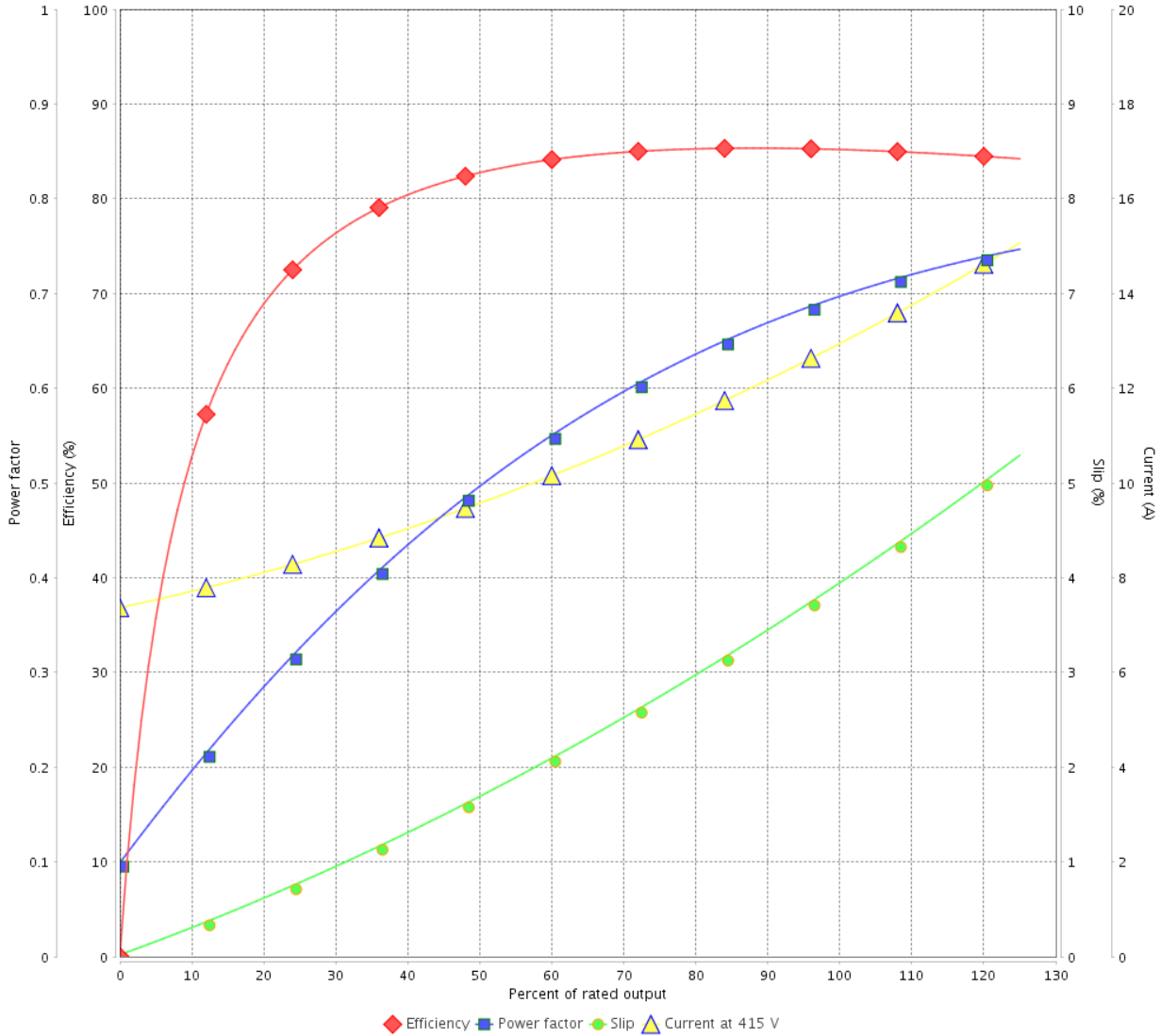
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Rated torque	: 54.7 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 720 rpm	Design	: B

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THERMAL LIMIT CURVE



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Locked rotor torque : 210 %	Service factor : 1.15
Breakdown torque : 280 %	Temperature rise : 80 K
Rated speed : 880 rpm	Design : B

Heating constant

Cooling constant

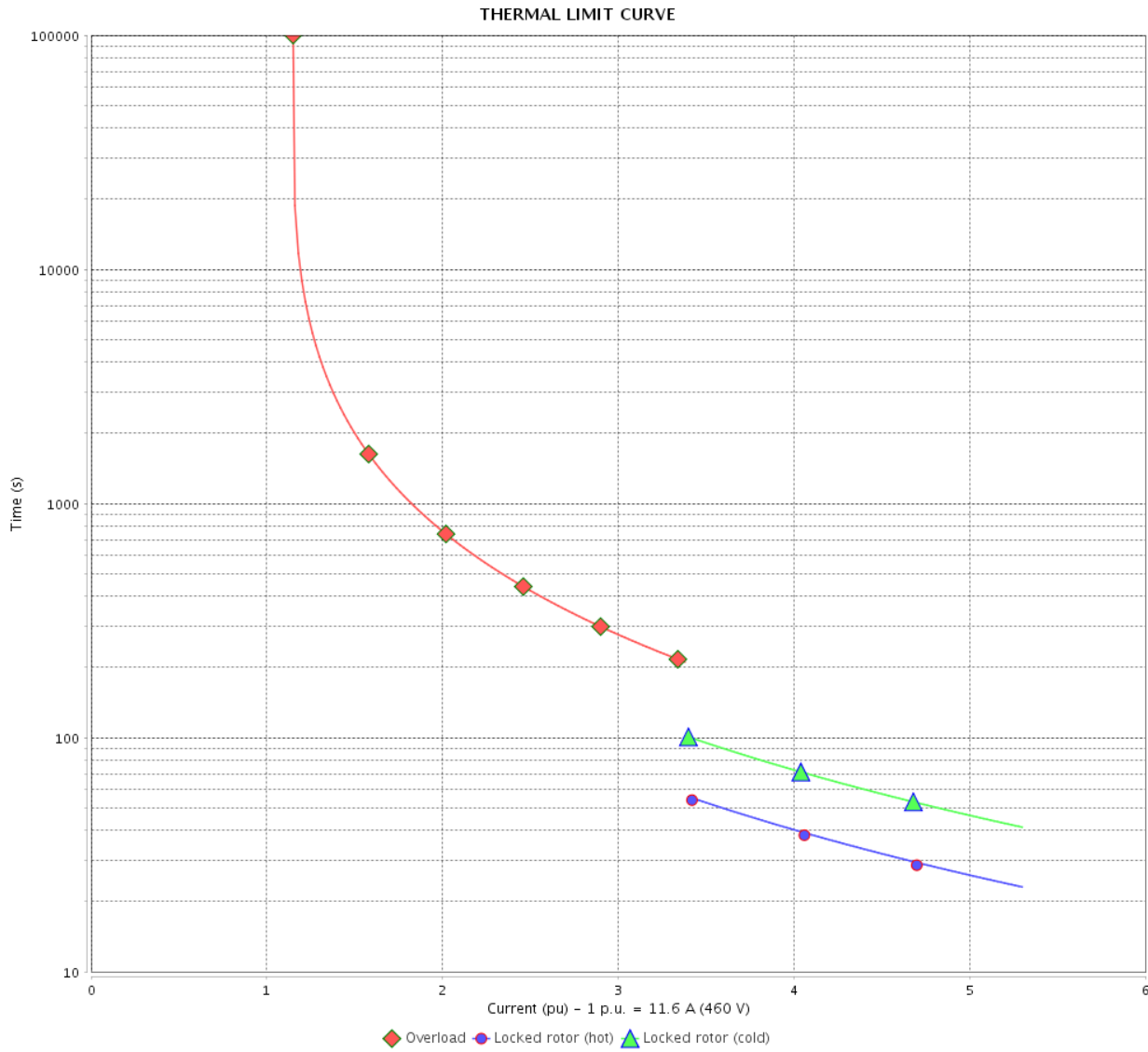
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Three Phase Induction Motor - Squirrel Cage



Customer : _____



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Locked rotor torque : 150 %	Service factor : 1.00
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Heating constant

Cooling constant

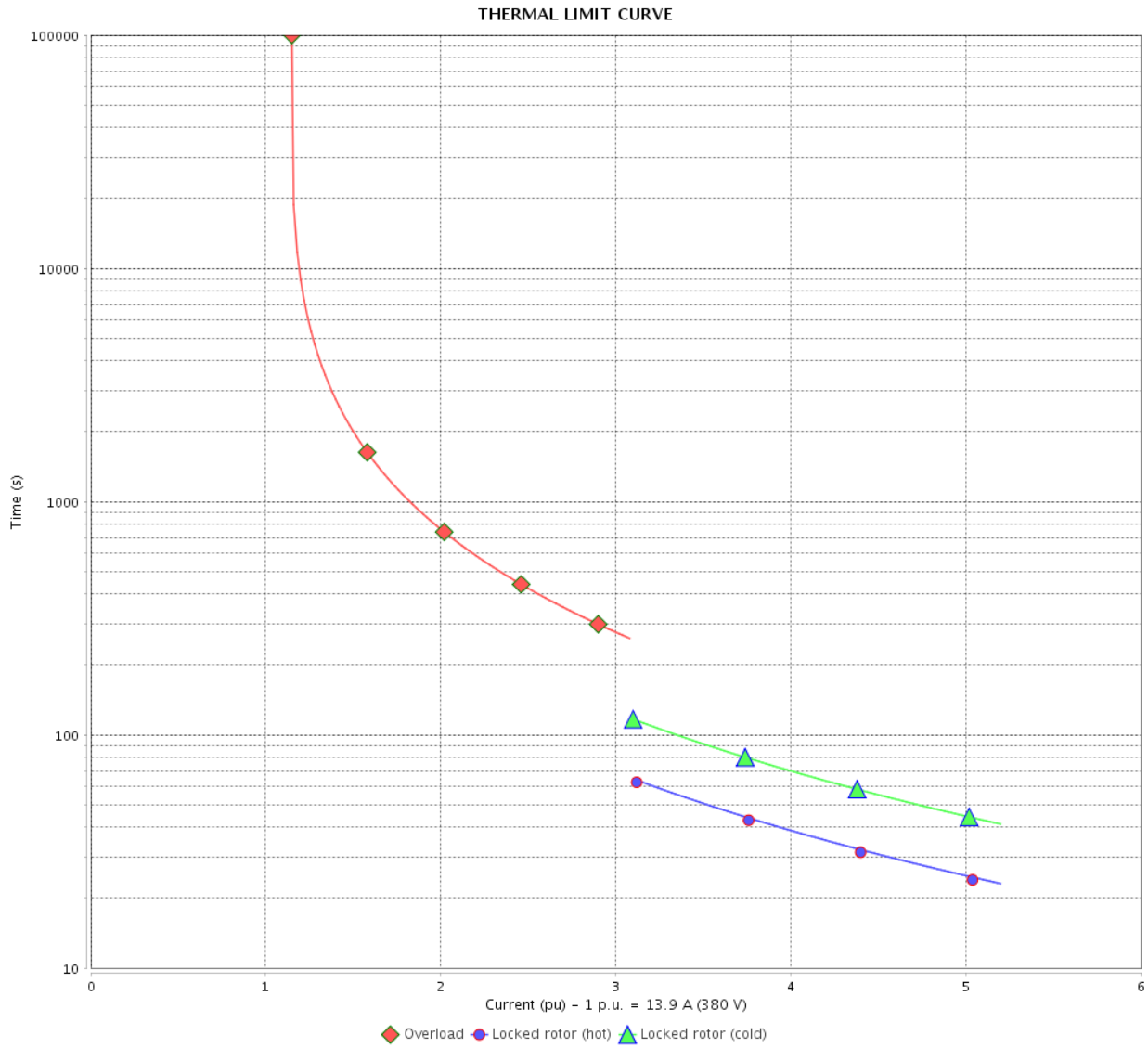
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Three Phase Induction Motor - Squirrel Cage



Customer : _____



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Date				

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Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 14407156
 Catalog # : 00709XT3E256T

Performance : 400 V 50 Hz 8P IE2

Rated current : 13.3 A	Moment of inertia (J) : 4.15 sq.ft.lb
LRC : 5.2	Duty cycle : Cont.(S1)
Rated torque : 55.1 ft.lb	Insulation class : F
Locked rotor torque : 170 %	Service factor : 1.00
Breakdown torque : 220 %	Temperature rise : 80 K
Rated speed : 715 rpm	Design : B

Heating constant

Cooling constant

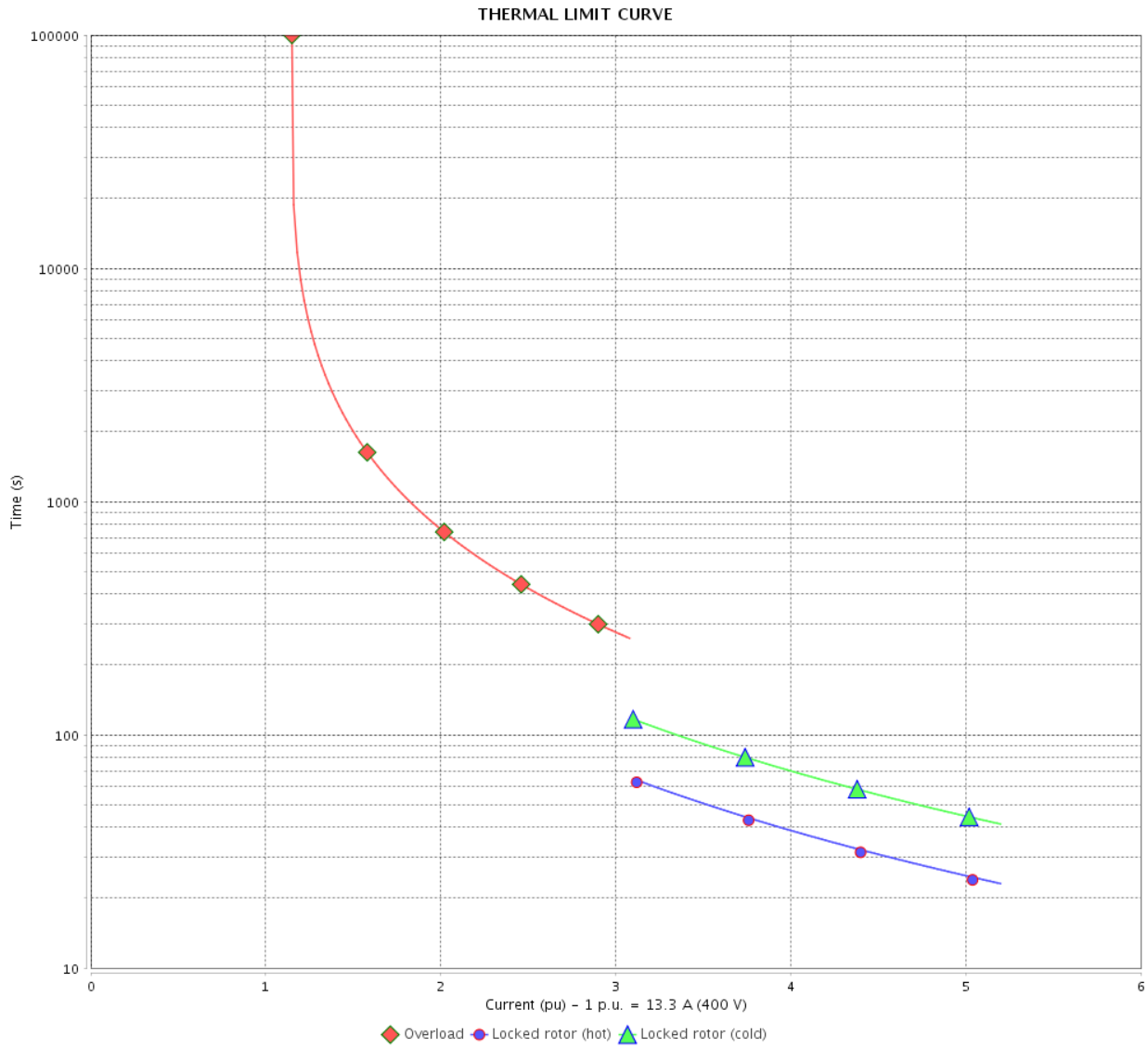
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Three Phase Induction Motor - Squirrel Cage



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Date				

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 14407156
 Catalog # : 00709XT3E256T

Performance : 415 V 50 Hz 8P IE2

Rated current : 12.8 A	Moment of inertia (J) : 4.15 sq.ft.lb
LRC : 5.2	Duty cycle : Cont.(S1)
Rated torque : 54.7 ft.lb	Insulation class : F
Locked rotor torque : 190 %	Service factor : 1.00
Breakdown torque : 260 %	Temperature rise : 80 K
Rated speed : 720 rpm	Design : B

Heating constant

Cooling constant

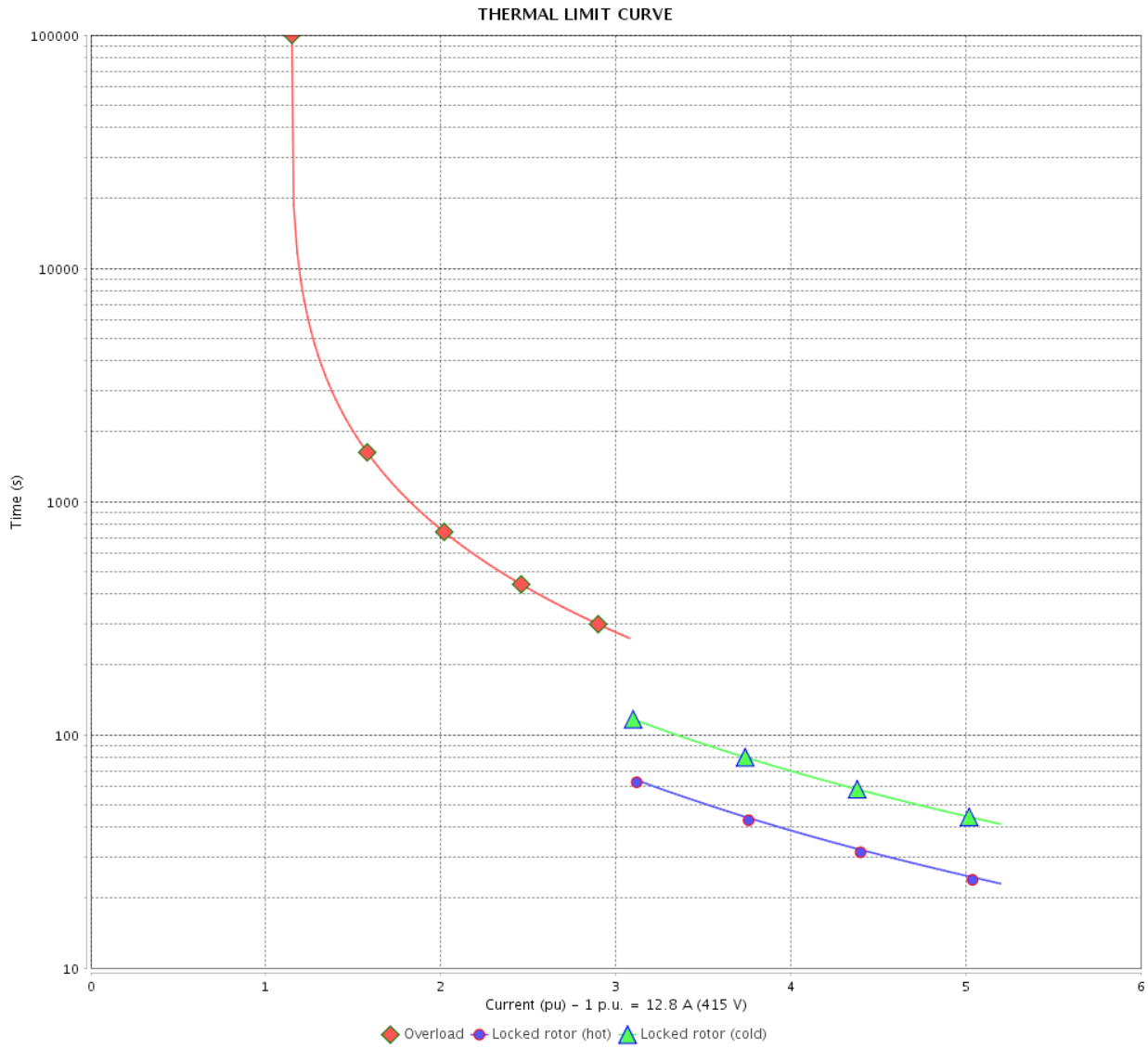
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

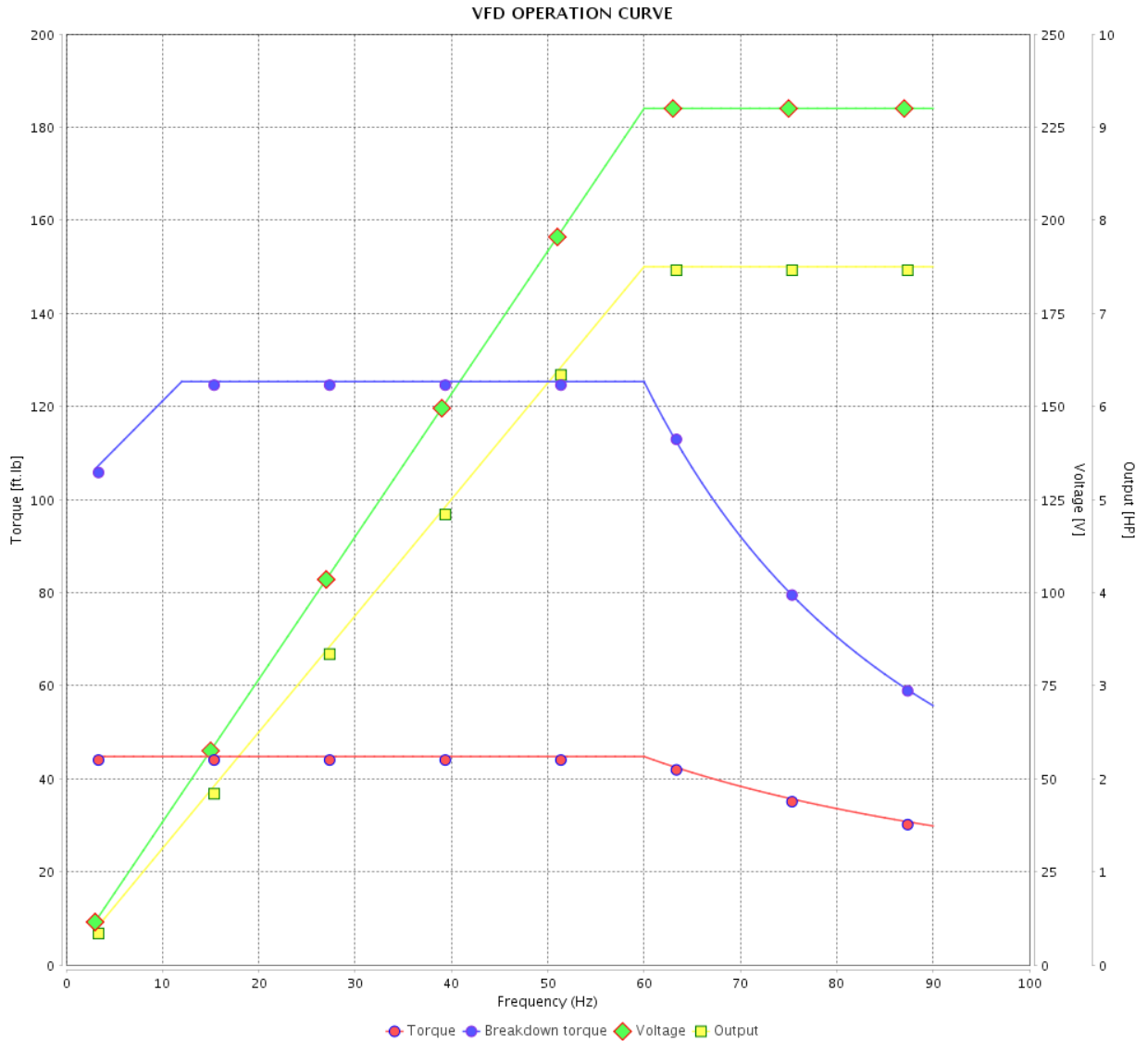


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Performance : 230/460 V 60 Hz 8P

Rated current : 23.2/11.6 A
 LRC : 5.3
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 Breakdown torque : 280 %
 Rated speed : 880 rpm

Moment of inertia (J) : 4.15 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



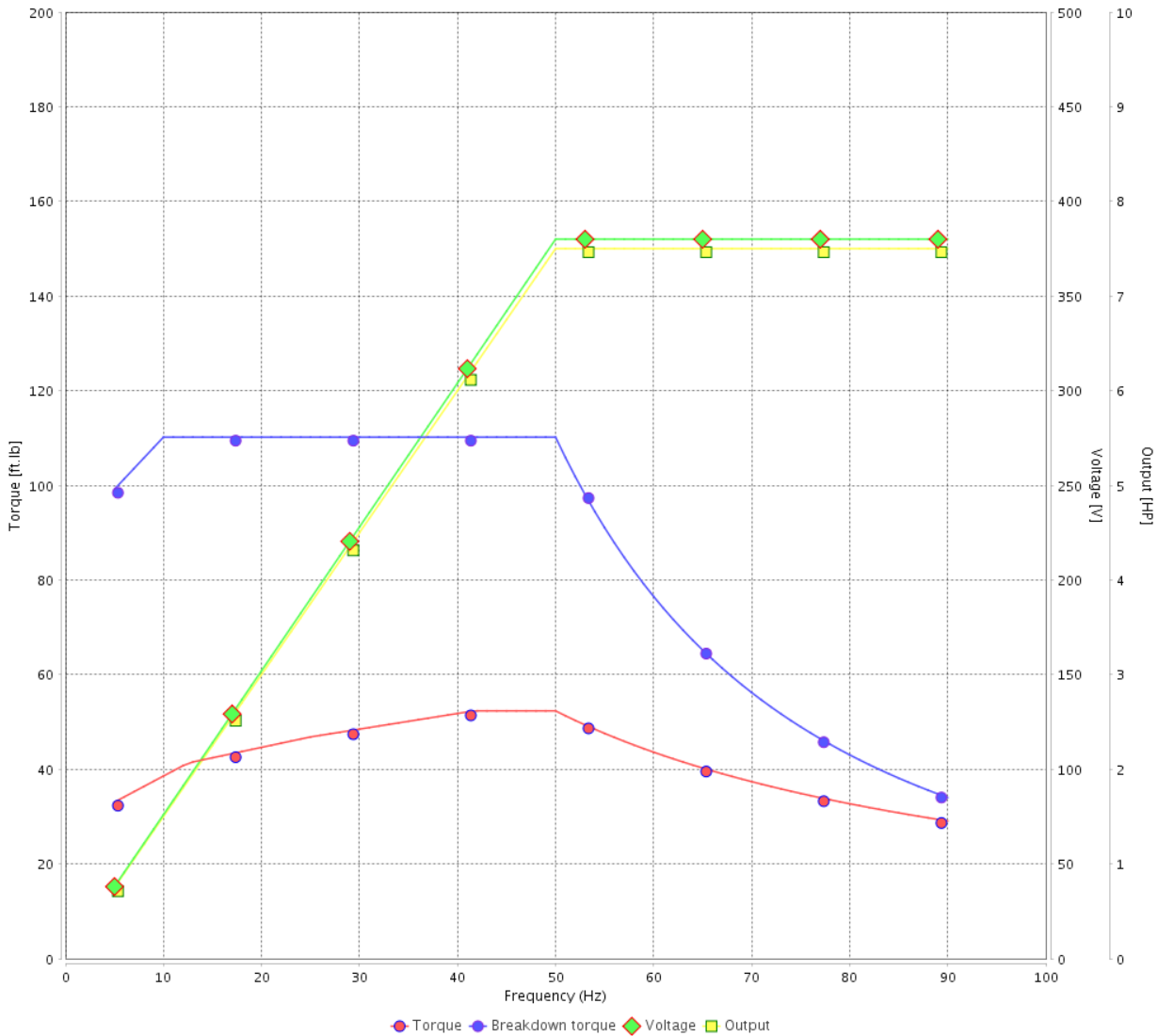
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VFD OPERATION CURVE



Performance : 380 V 50 Hz 8P IE1

Rated current : 13.9 A
 LRC : 5.2
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 Locked rotor torque : 150 %
 Breakdown torque : 200 %
 Rated speed : 715 rpm

Moment of inertia (J) : 4.15 sq.ft.lb
 Duty cycle : Cont.(S1)
 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

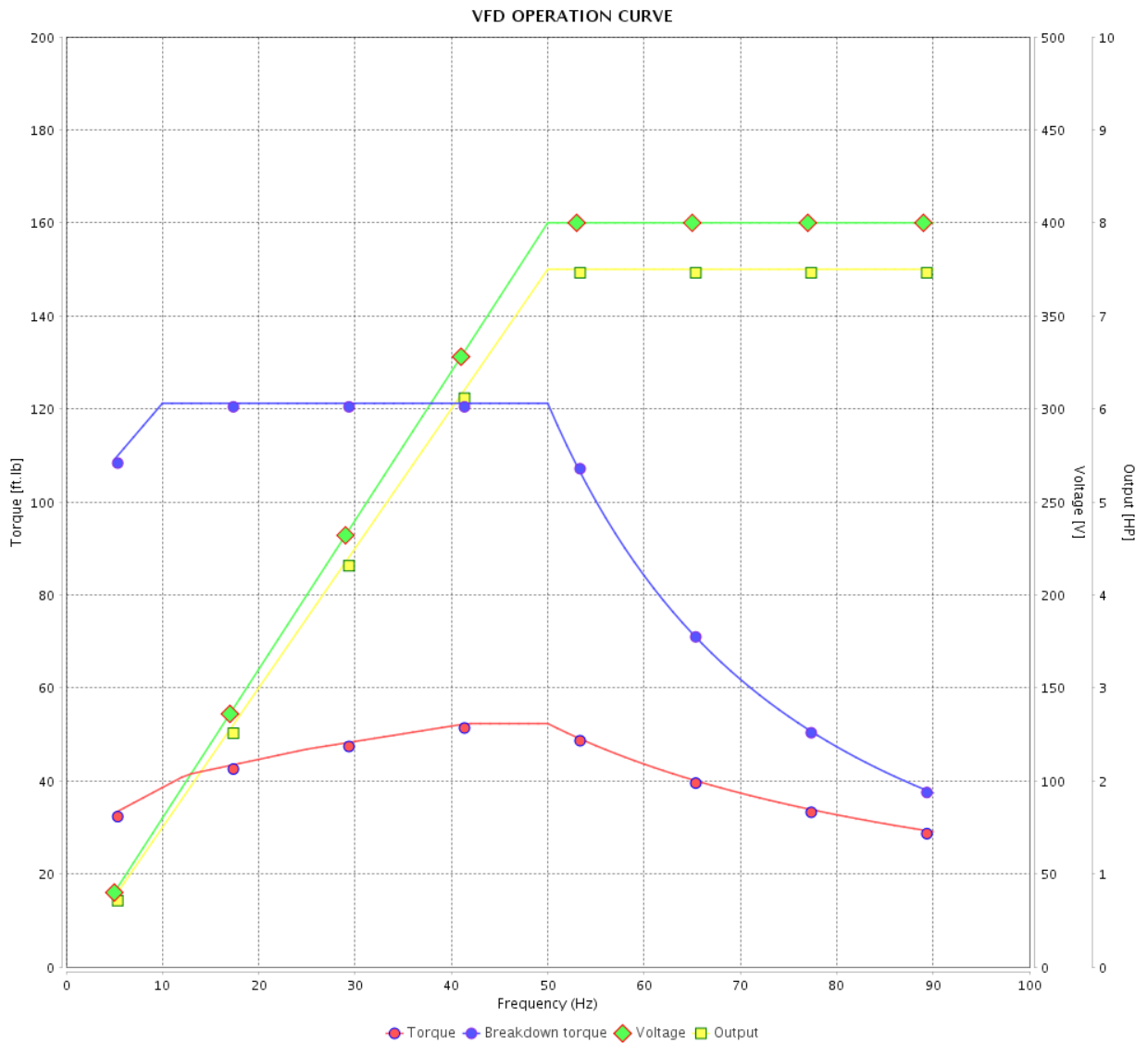


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Performance : 400 V 50 Hz 8P IE2

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

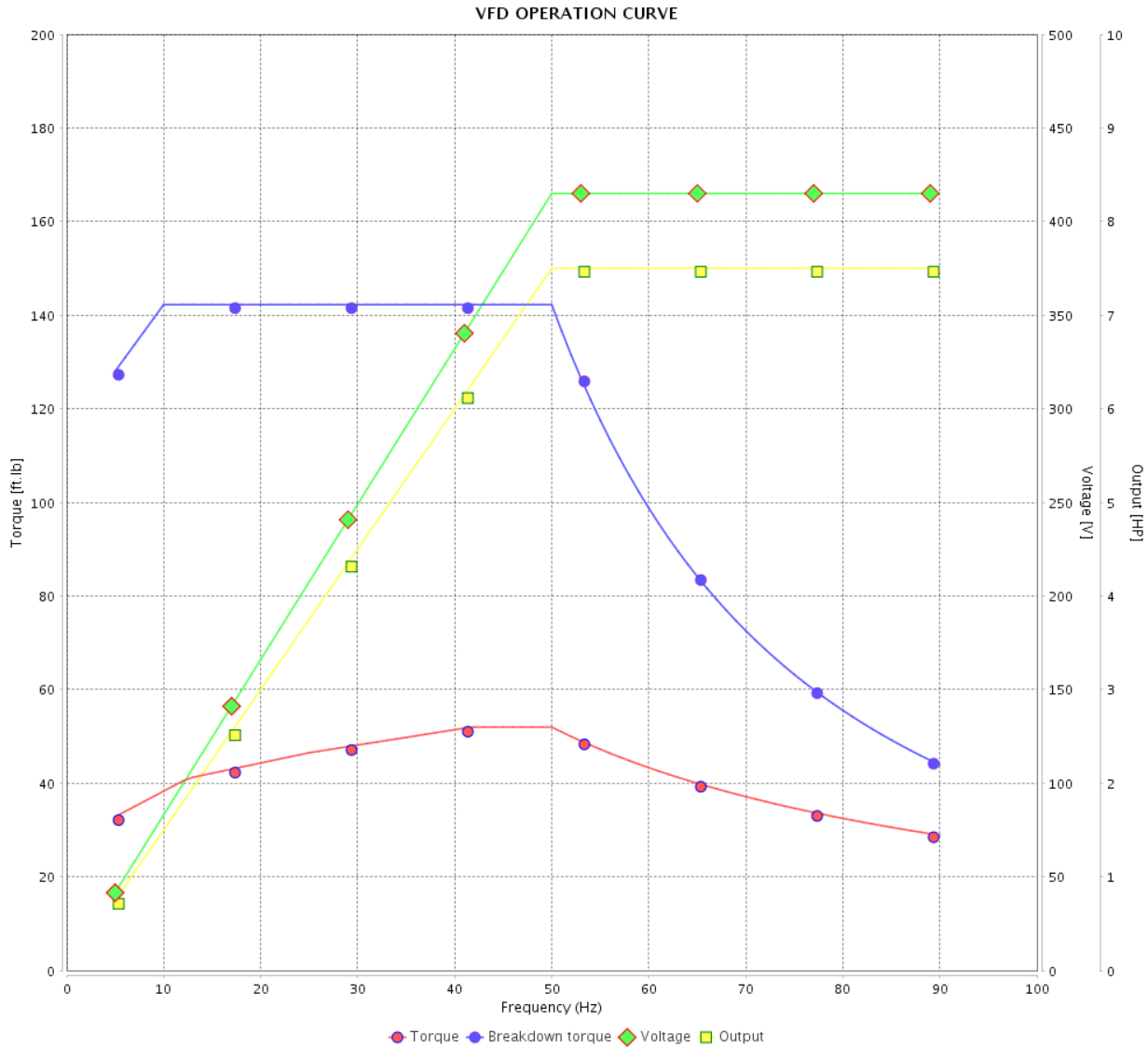


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 Insulation class : F
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 Design : B

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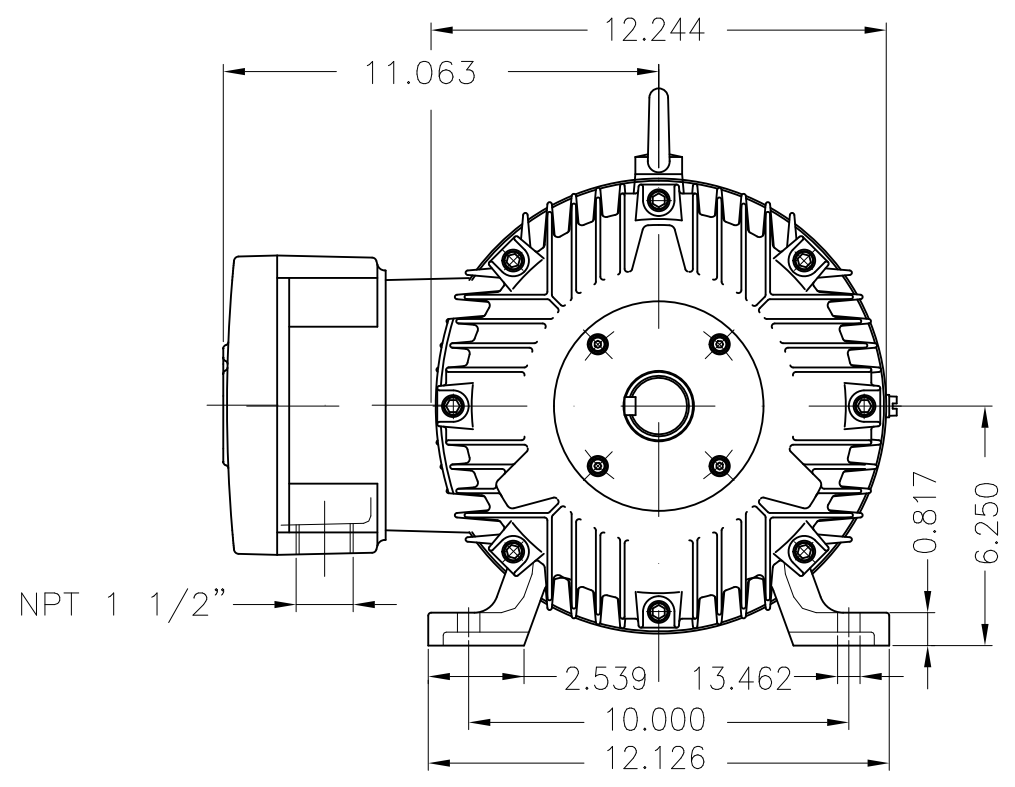
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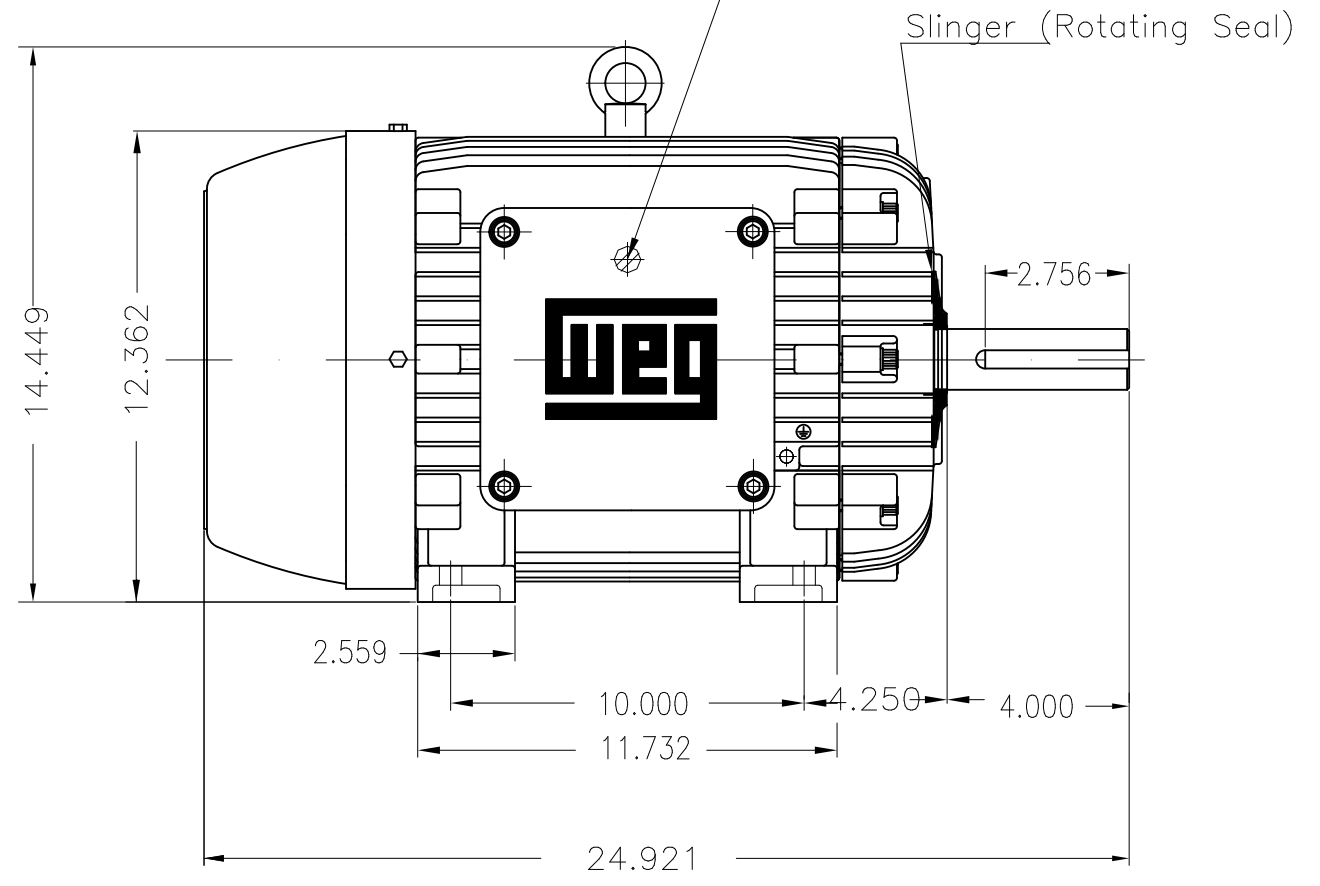
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E

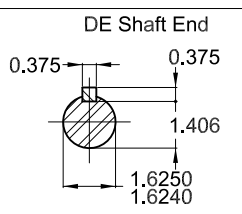


Grounding for leads 5.2–25 mm² / 10–4 AWG



7.5 HP 08 Poles 60 Hz A

- With grease fitting
- Color RAL 5009
- Painting plan 202P
- Mounting NEMA F-1
- Mounting B3R(D)



ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR EXPLOSION PROOF PREM. EFF.					
CHECKED		FRAME 256T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

PREVIEW
WDD



SHEET 1 / 1

Dimensions in inches XME A3

MADE IN BRAZIL

**W21X NEMA**
Premium

14407156

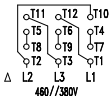
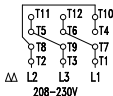
CC029A

Inverter Duty Motor
Severe Duty

LISTED

MODEL 00709XT3E256T

PH 3	FR 256T		
HP(kW) 7.5(5.5)		HZ 60	IP55
V 230/460		A 23.2/11.6	
RPM 880		NEMA NOM EFF 87.5%	
PF 0.68		SFA 26.7/13.3	DES B
INS CL F Δ T 80 K		SF 1.15	ENCL TEFC
DUTY CONT.		CODE H	ALT 1000 m.a.s.l.
AMB 40°C	USABLE @208V	25.7 A	SF 1.15 SFA 29.6
AMB 55°C SF1.0			
7.5HP 5.5kW 50Hz 380V 13.9A 715RPM SF1.00 EFF 82.5% (IE1)			



→ 6309-C3 MOBIL POLYREX EM
→ 6209-C3 13 g 20000 h

366 Lbs



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, 6:1CT, 1.0SF, T3C, AMB 40°C.