

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :				
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	14406980	
		Catalog # :	00712XT3E254T	
Frame	: 254T	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	: 322 lb	
Protection degree	: IP55	Moment of inertia (J)	: 3.32 sq.ft.lb	
Design	: B			
Output [HP]	7.5	7.5	7.5	7.5
Poles	6	6	6	6
Frequency [Hz]	60	50	50	50
Rated voltage [V]	230/460	380	400	415
Rated current [A]	19.5/9.73	11.5	11.0	10.8
L. R. Amperes [A]	136/68.1	64.4	68.2	71.3
LRC [A]	7.0x(Code J)	5.6x(Code G)	6.2x(Code H)	6.6x(Code H)
No load current [A]	10.4/5.20	5.20	5.50	5.80
Rated speed [RPM]	1175	960	965	965
Slip [%]	2.08	4.00	3.50	3.50
Rated torque [ft.lb]	33.5	41.0	40.8	40.8
Locked rotor torque [%]	270	175	200	220
Breakdown torque [%]	320	229	260	280
Service factor	1.15	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K
Locked rotor time	45s (cold) 25s (hot)	18s (cold) 10s (hot)	18s (cold) 10s (hot)	18s (cold) 10s (hot)
Noise level ²	59.0 dB(A)	57.0 dB(A)	57.0 dB(A)	57.0 dB(A)
Efficiency (%)	25%	87.5	89.8	89.8
	50%	88.5	89.5	89.5
	75%	90.2	89.5	90.2
	100%	91.0	88.5	89.5
Power Factor	25%	0.34	0.37	0.34
	50%	0.58	0.62	0.59
	75%	0.71	0.74	0.72
	100%	0.78	0.82	0.81
Bearing type	: <u>Drive end</u> 6309 C3 <u>Non drive end</u> 6209 C3	Foundation loads		
Sealing	: Oil Seal Lip Seal	Max. traction	: 387 lb	
Lubrication interval	: 20000 h 20000 h	Max. compression	: 709 lb	
Lubricant amount	: 13 g 9 g			
Lubricant type	: Mobil Polyrex EM			
Notes				
USABLE @208V 21.5A SF 1.15 SFA 24.7A				
This revision replaces and cancel the previous one, which must be eliminated.		These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in NEMA MG-1.		
(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.				
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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



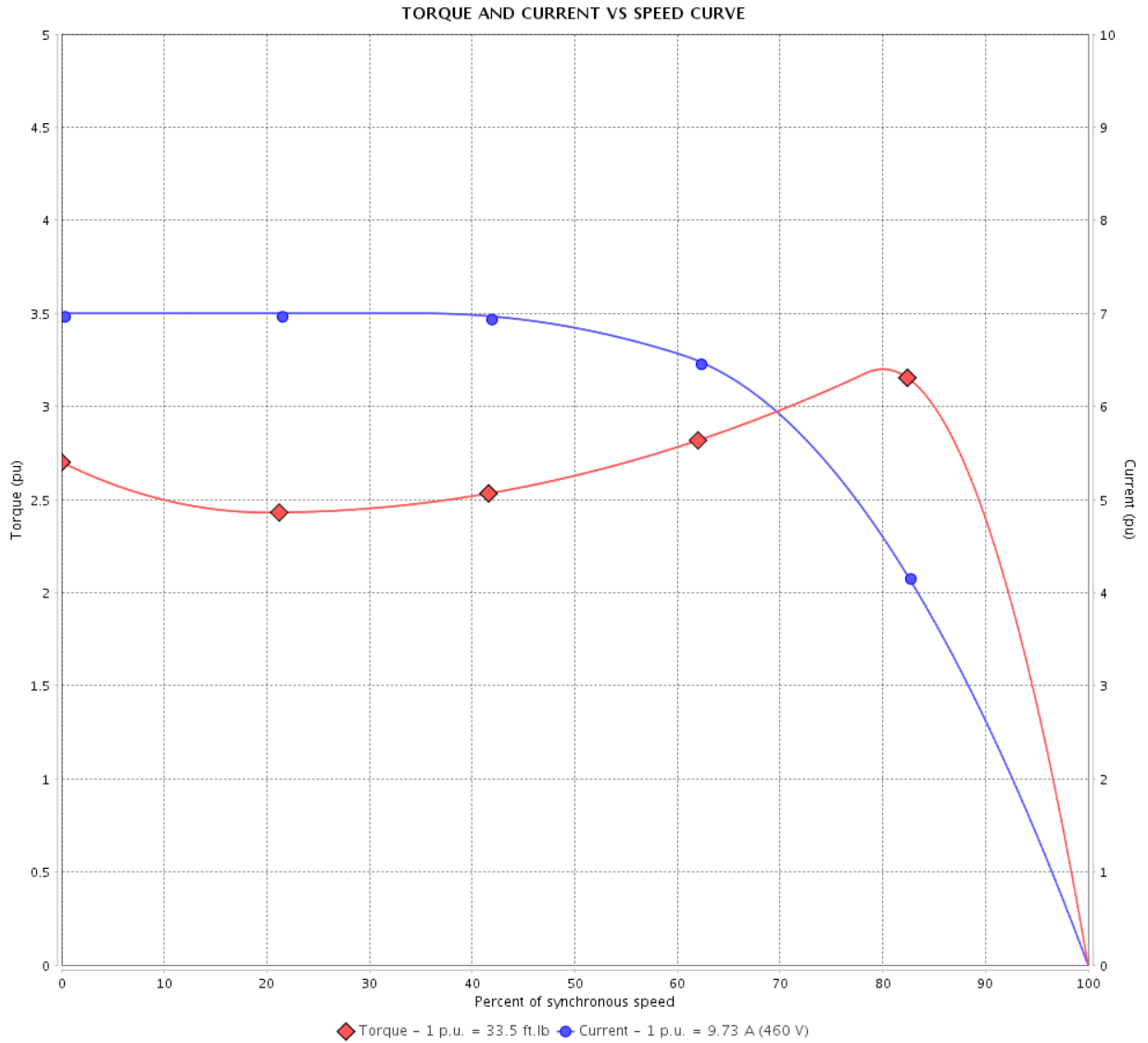
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14406980

Catalog # : 00712XT3E254T



Performance : 230/460 V 60 Hz 6P

Rated current : 19.5/9.73 A
 LRC : 7.0
 Rated torque : 33.5 ft.lb
 Locked rotor torque : 270 %
 Breakdown torque : 320 %
 Rated speed : 1175 rpm

Moment of inertia (J) : 3.32 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

Locked rotor time : 45s (cold) 25s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



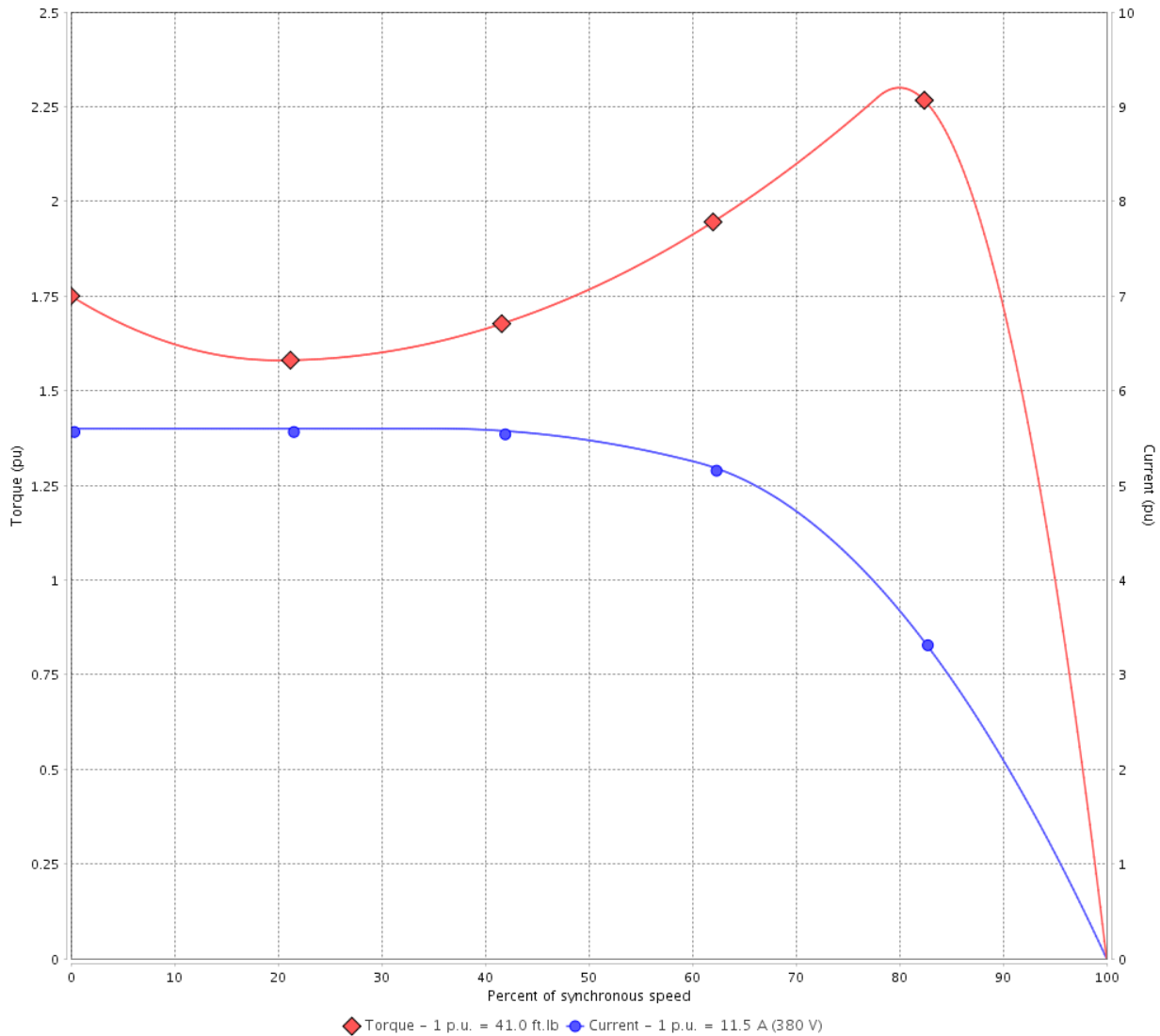
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14406980

Catalog # : 00712XT3E254T

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 6P IE3

Rated current	: 11.5 A	Moment of inertia (J)	: 3.32 sq.ft.lb
LRC	: 5.6	Duty cycle	: Cont.(S1)
Rated torque	: 41.0 ft.lb	Insulation class	: F
Locked rotor torque	: 175 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 960 rpm	Design	: B

Locked rotor time : 18s (cold) 10s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



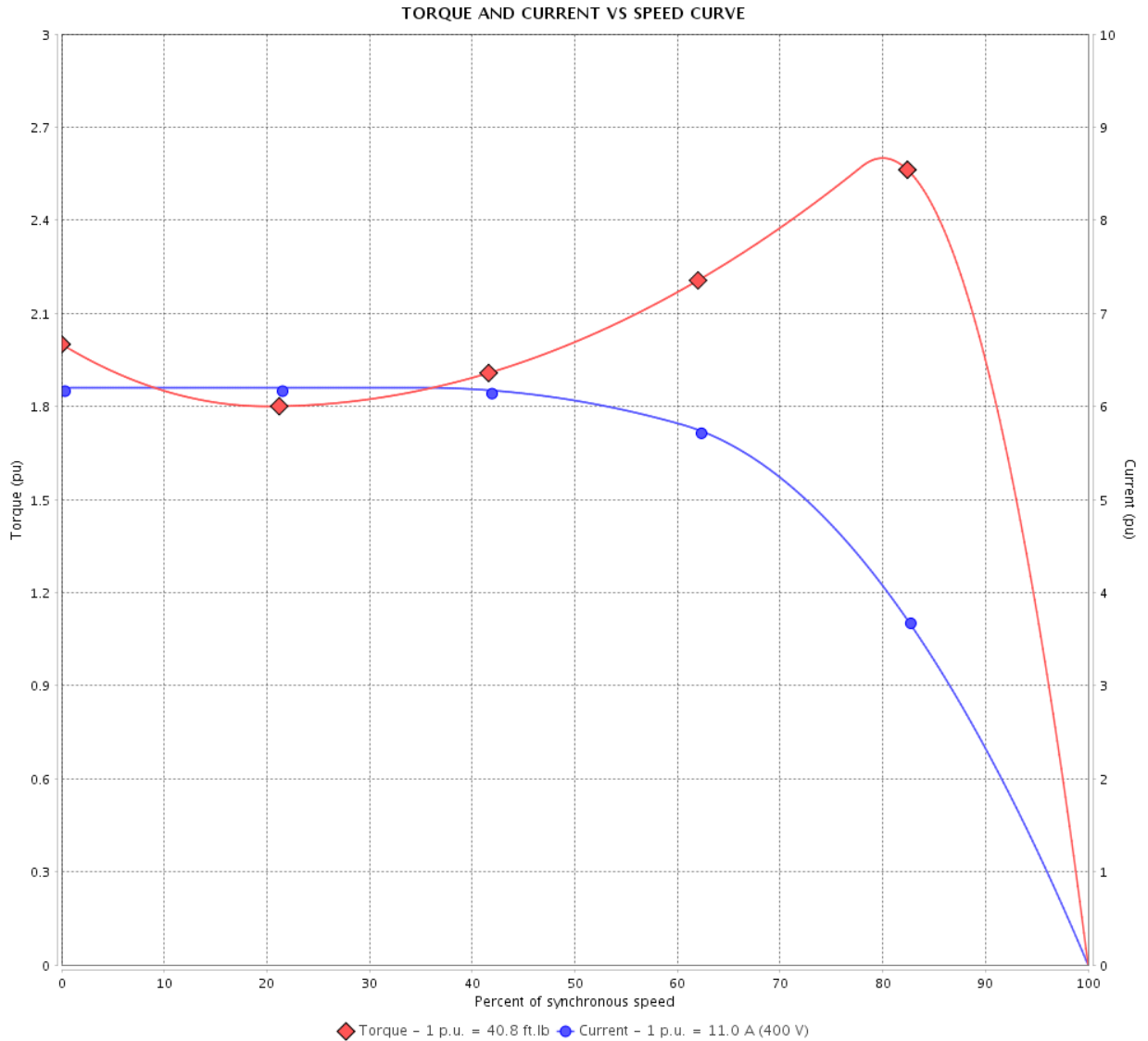
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14406980

Catalog # : 00712XT3E254T



Performance : 400 V 50 Hz 6P IE3

Rated current	: 11.0 A	Moment of inertia (J)	: 3.32 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 40.8 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 965 rpm	Design	: B

Locked rotor time : 18s (cold) 10s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



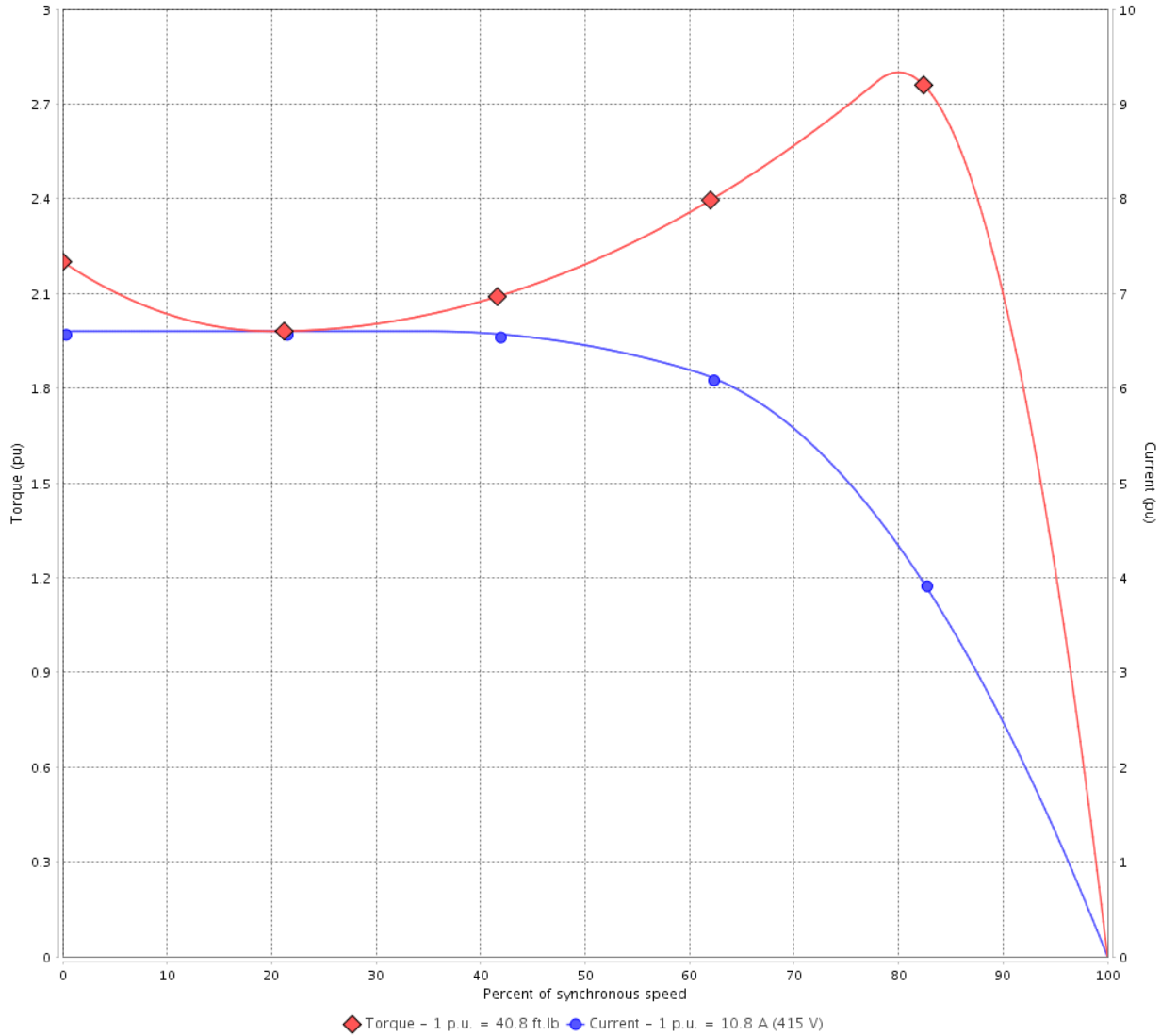
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14406980

Catalog # : 00712XT3E254T

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 6P IE3

Rated current	: 10.8 A	Moment of inertia (J)	: 3.32 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 40.8 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 965 rpm	Design	: B

Locked rotor time : 18s (cold) 10s (hot)

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LOAD PERFORMANCE CURVE

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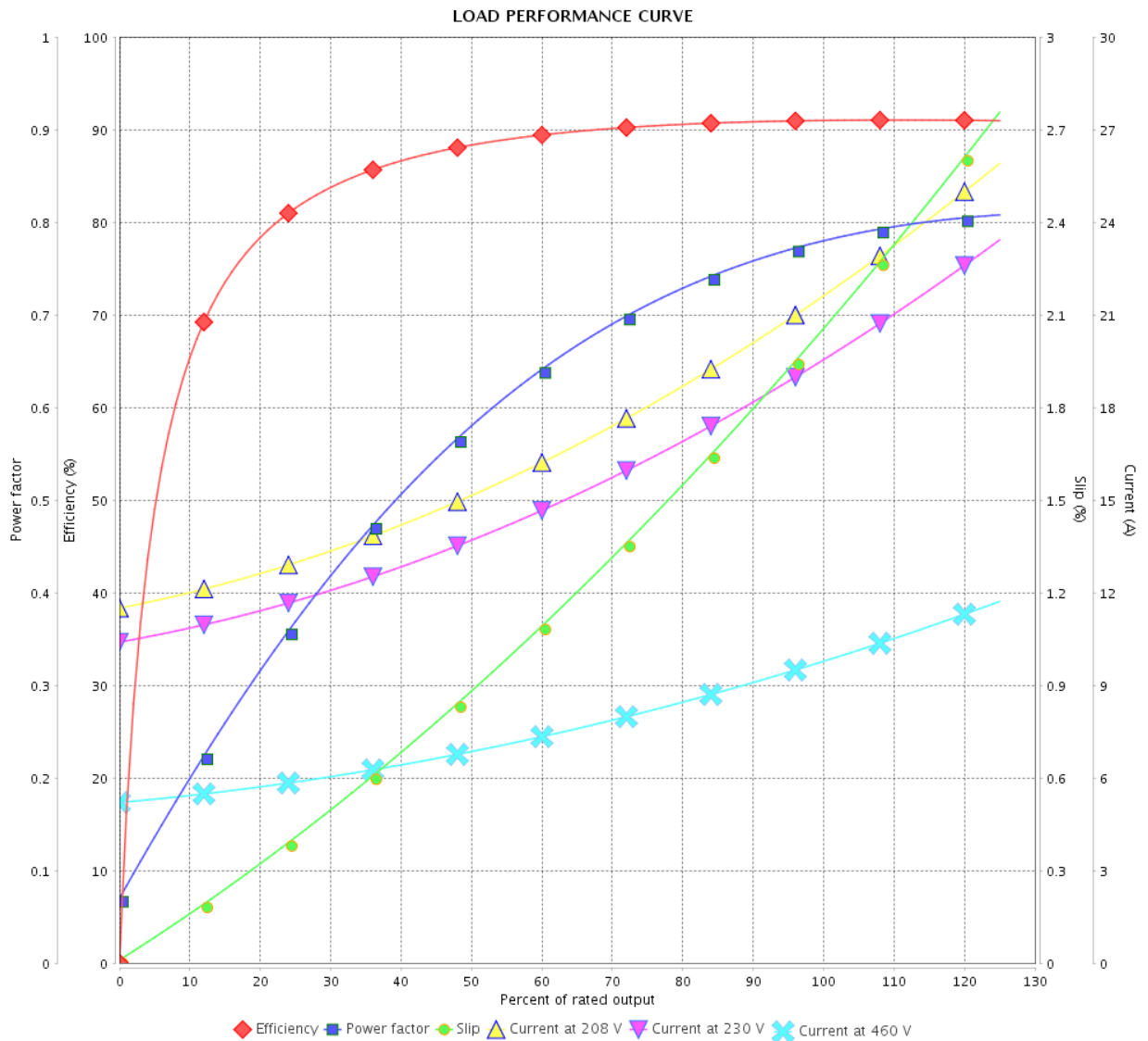


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14406980

Catalog # : 00712XT3E254T



Performance : 230/460 V 60 Hz 6P

Rated current : 19.5/9.73 A
 LRC : 7.0
 Rated torque : 33.5 ft.lb
 Locked rotor torque : 270 %
 Breakdown torque : 320 %
 Rated speed : 1175 rpm

Moment of inertia (J) : 3.32 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage



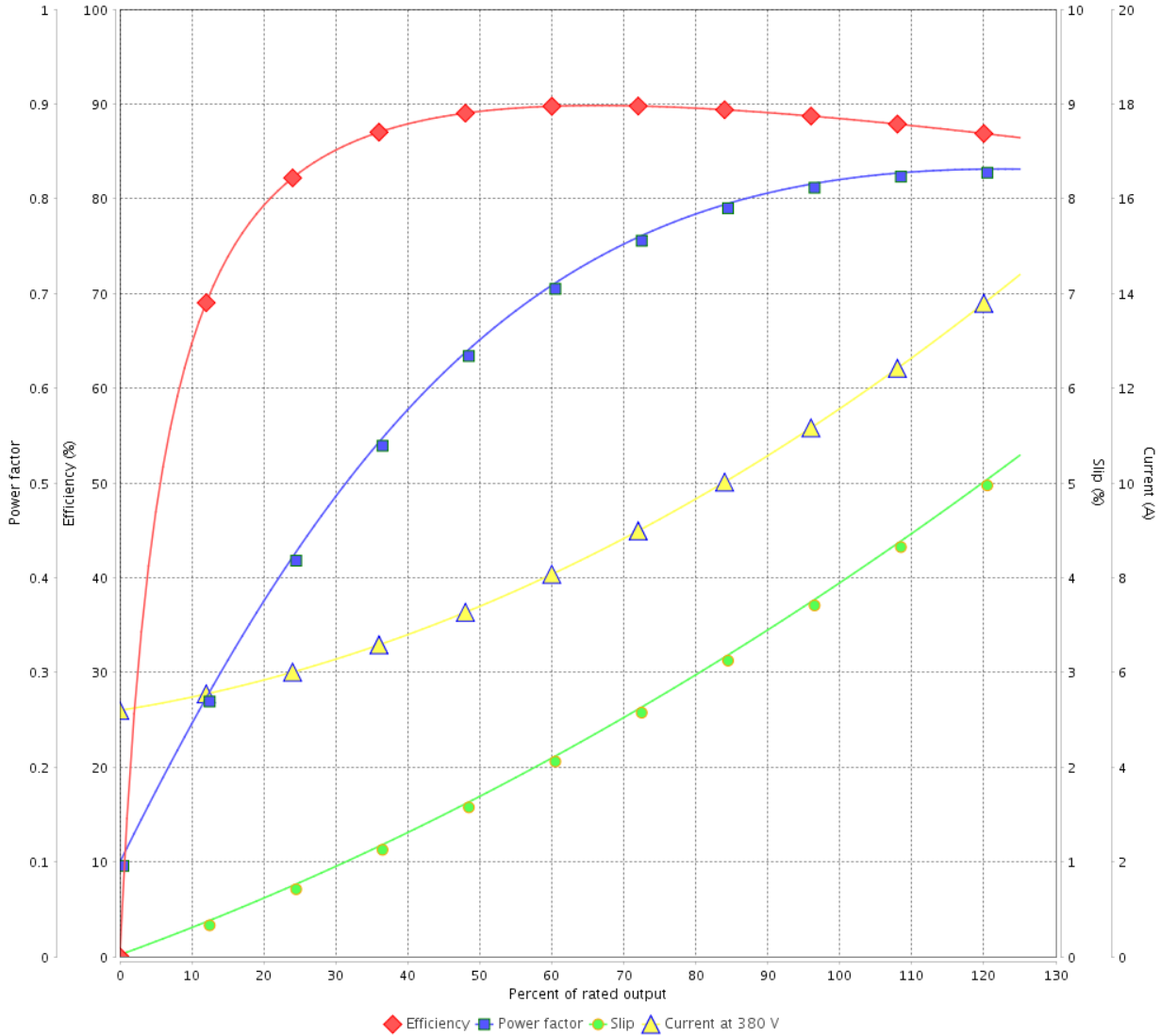
Customer :

Product line : NEMA Premium Efficiency Three-Phase

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Catalog # : 00712XT3E254T

LOAD PERFORMANCE CURVE



Performance : 380 V 50 Hz 6P IE3

Rated current : 11.5 A
 LRC : 5.6
 Rated torque : 41.0 ft.lb
 Locked rotor torque : 175 %
 Breakdown torque : 229 %
 Rated speed : 960 rpm

Moment of inertia (J) : 3.32 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage

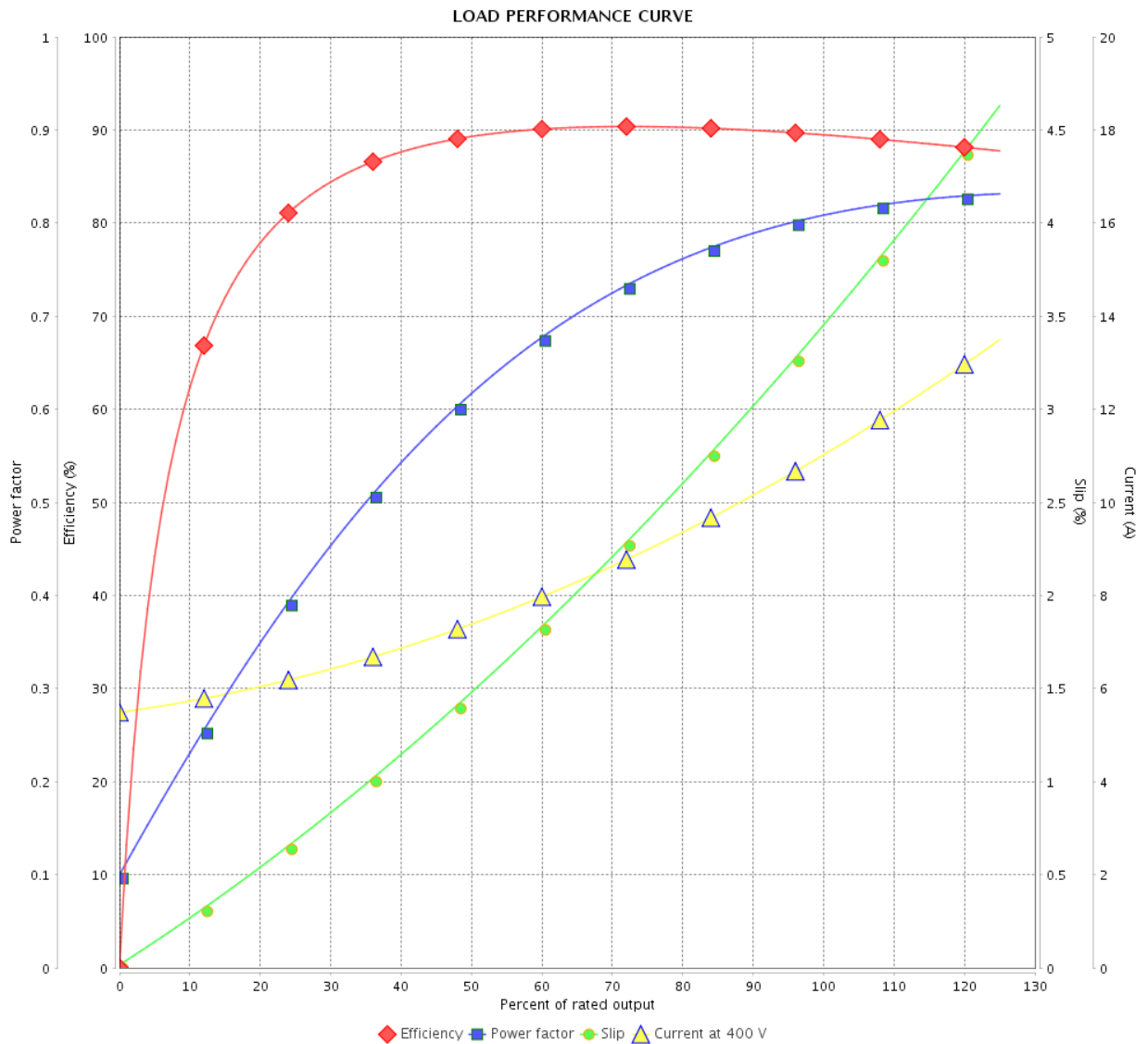


Customer : _____

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14406980

Catalog # : 00712XT3E254T



Performance : 400 V 50 Hz 6P IE3

Rated current : 11.0 A
 LRC : 6.2
 Rated torque : 40.8 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 260 %
 Rated speed : 965 rpm

Moment of inertia (J) : 3.32 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage



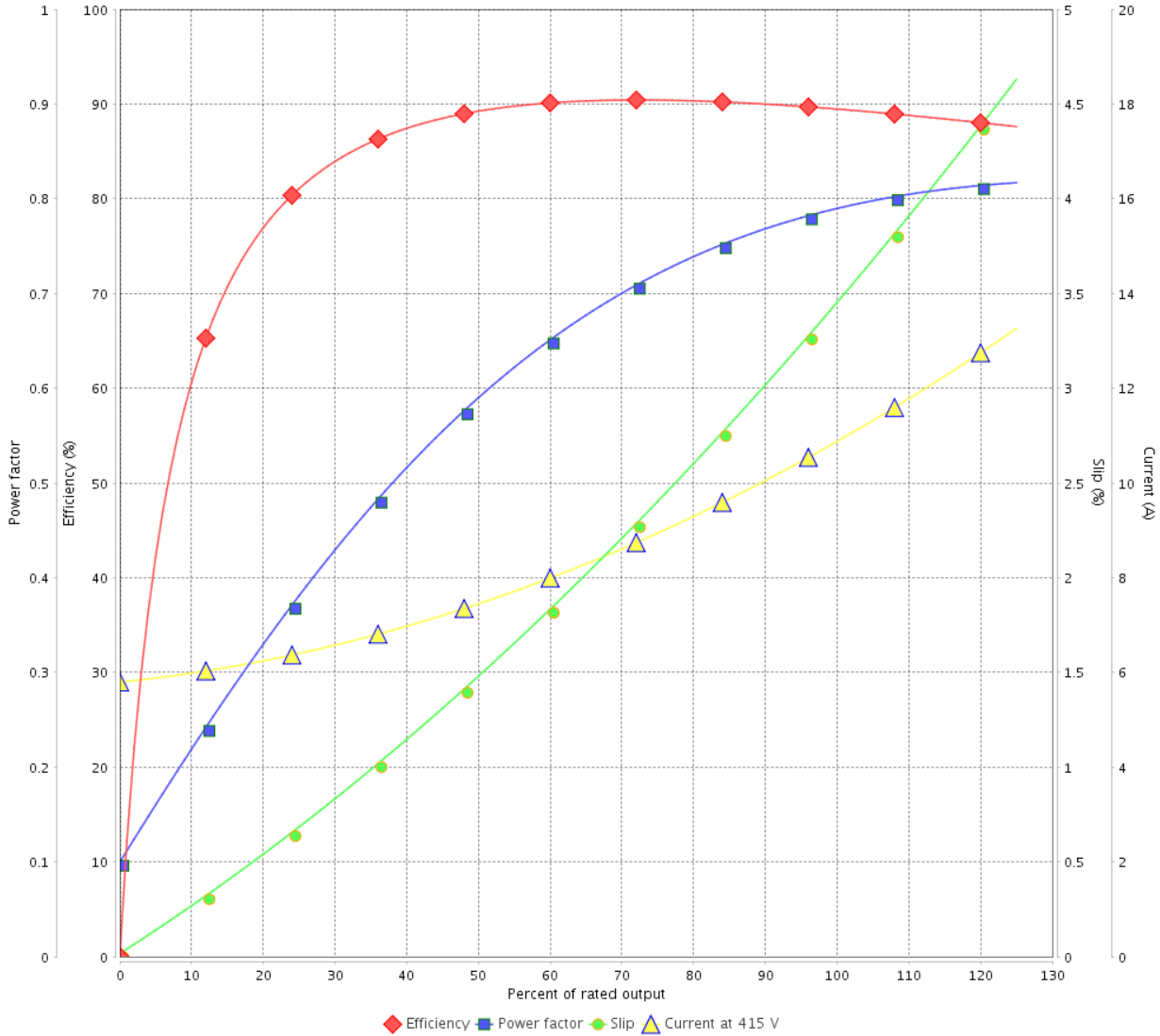
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Product code : 14406980

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LOAD PERFORMANCE CURVE



Performance : 415 V 50 Hz 6P IE3

Rated current : 10.8 A
 LRC : 6.6
 Rated torque : 40.8 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 280 %
 Rated speed : 965 rpm

Moment of inertia (J) : 3.32 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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 Catalog # : 00712XT3E254T

Performance : 230/460 V 60 Hz 6P

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LRC : 7.0	Duty cycle : Cont.(S1)
Rated torque : 33.5 ft.lb	Insulation class : F
Locked rotor torque : 270 %	Service factor : 1.15
Breakdown torque : 320 %	Temperature rise : 80 K
Rated speed : 1175 rpm	Design : B

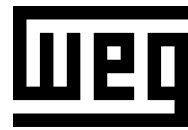
Heating constant

Cooling constant

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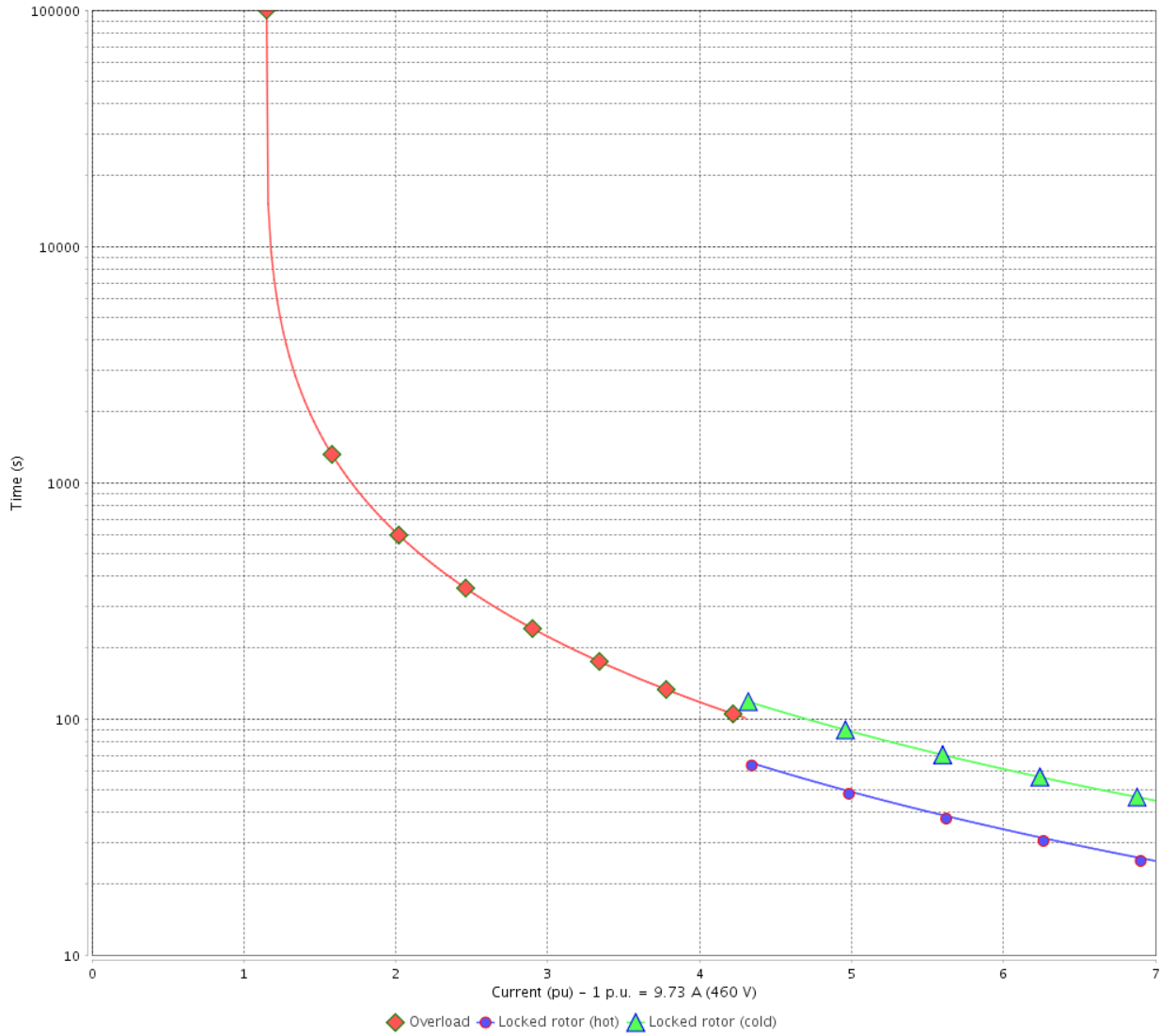
THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____

THERMAL LIMIT CURVE



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THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 14406980
 Catalog # : 00712XT3E254T

Performance : 380 V 50 Hz 6P IE3

Rated current : 11.5 A	Moment of inertia (J) : 3.32 sq.ft.lb
LRC : 5.6	Duty cycle : Cont.(S1)
Rated torque : 41.0 ft.lb	Insulation class : F
Locked rotor torque : 175 %	Service factor : 1.00
Breakdown torque : 229 %	Temperature rise : 80 K
Rated speed : 960 rpm	Design : B

Heating constant

Cooling constant

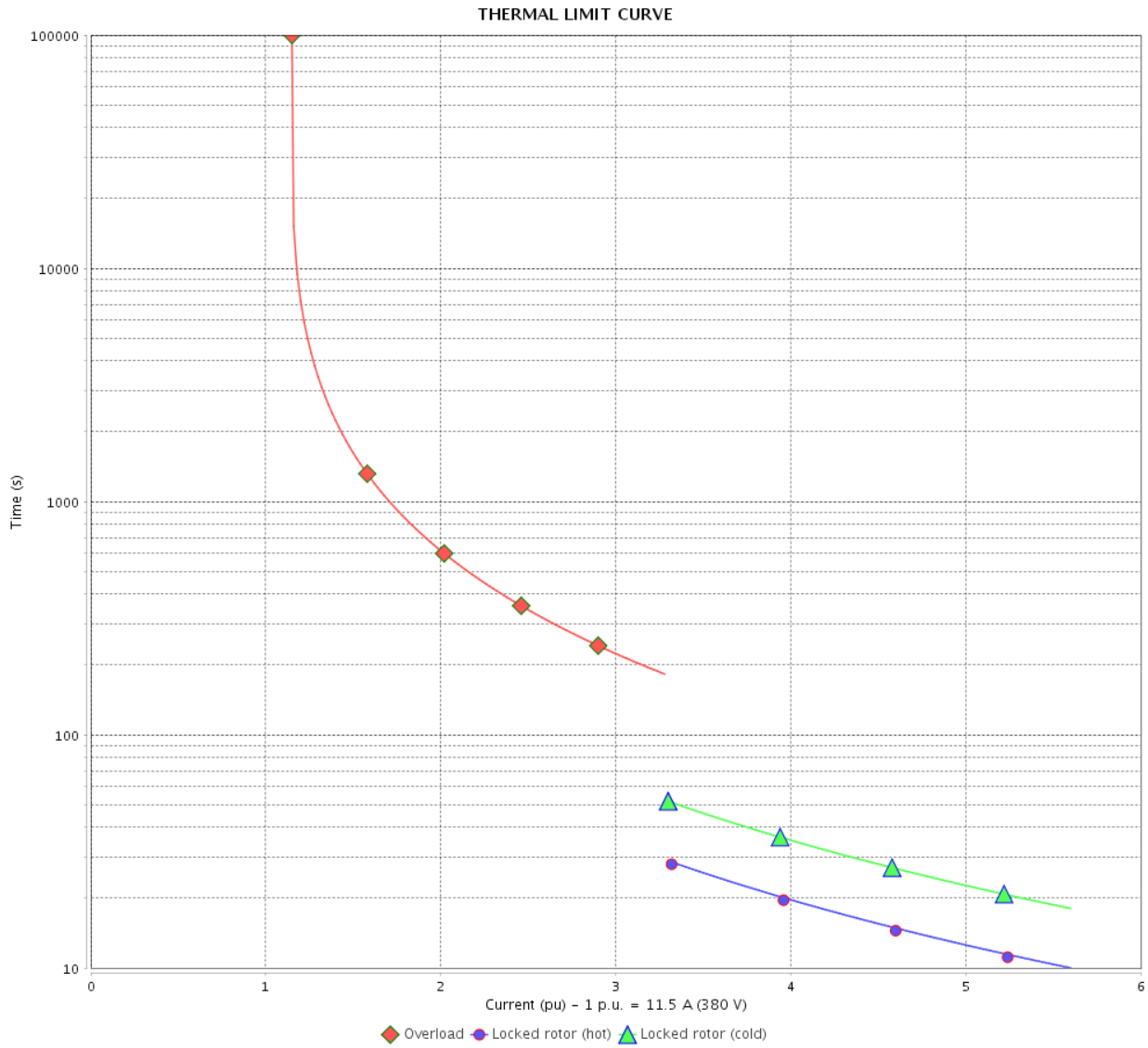
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Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 14406980
 Catalog # : 00712XT3E254T

Performance : 400 V 50 Hz 6P IE3

Rated current : 11.0 A	Moment of inertia (J) : 3.32 sq.ft.lb
LRC : 6.2	Duty cycle : Cont.(S1)
Rated torque : 40.8 ft.lb	Insulation class : F
Locked rotor torque : 200 %	Service factor : 1.00
Breakdown torque : 260 %	Temperature rise : 80 K
Rated speed : 965 rpm	Design : B

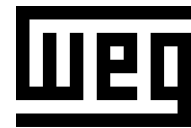
Heating constant

Cooling constant

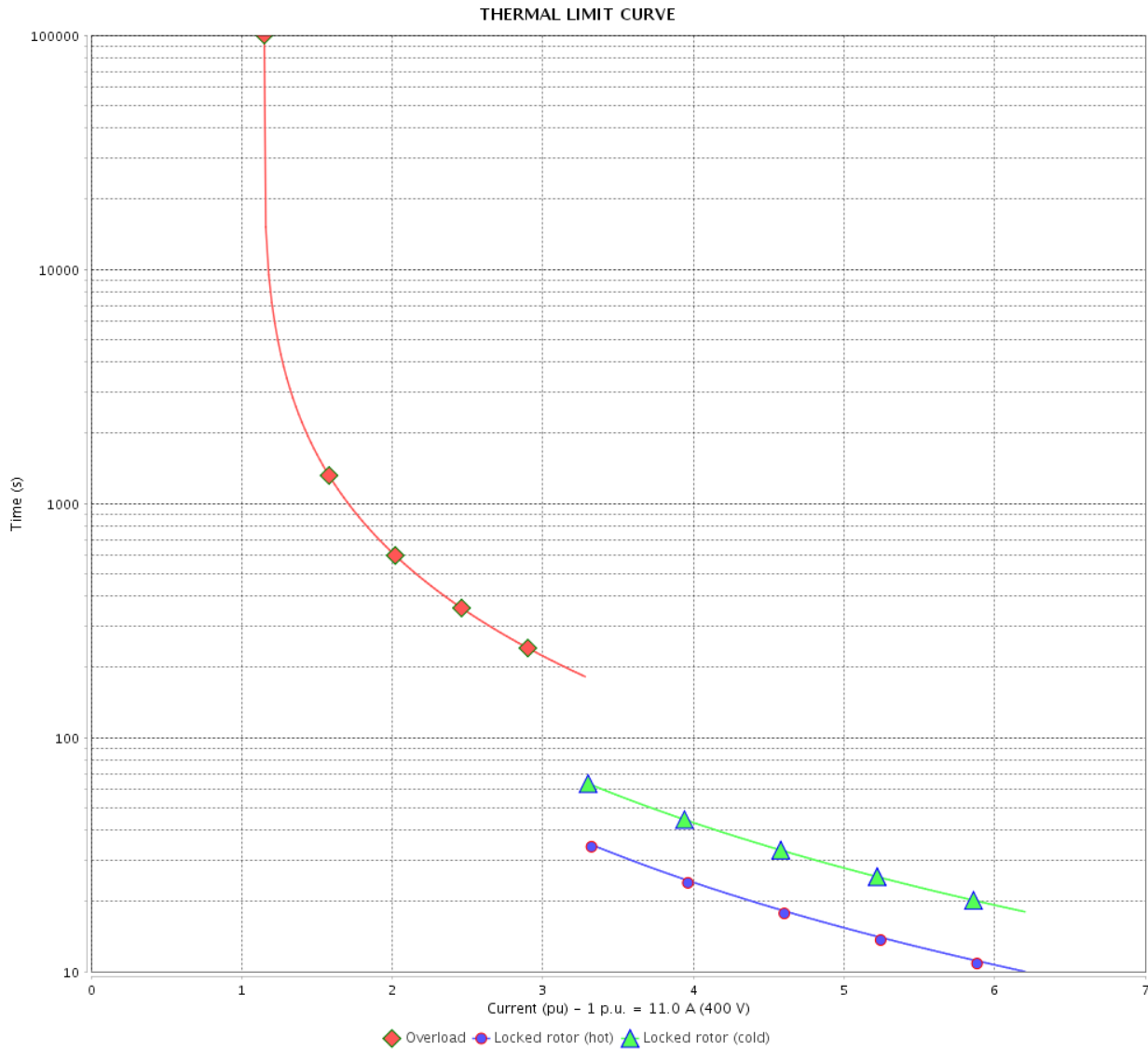
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

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Product code : 14406980
Catalog # : 00712XT3E254T

Performance : 415 V 50 Hz 6P IE3

Rated current : 10.8 A	Moment of inertia (J) : 3.32 sq.ft.lb
LRC : 6.6	Duty cycle : Cont.(S1)
Rated torque : 40.8 ft.lb	Insulation class : F
Locked rotor torque : 220 %	Service factor : 1.00
Breakdown torque : 280 %	Temperature rise : 80 K
Rated speed : 965 rpm	Design : B

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
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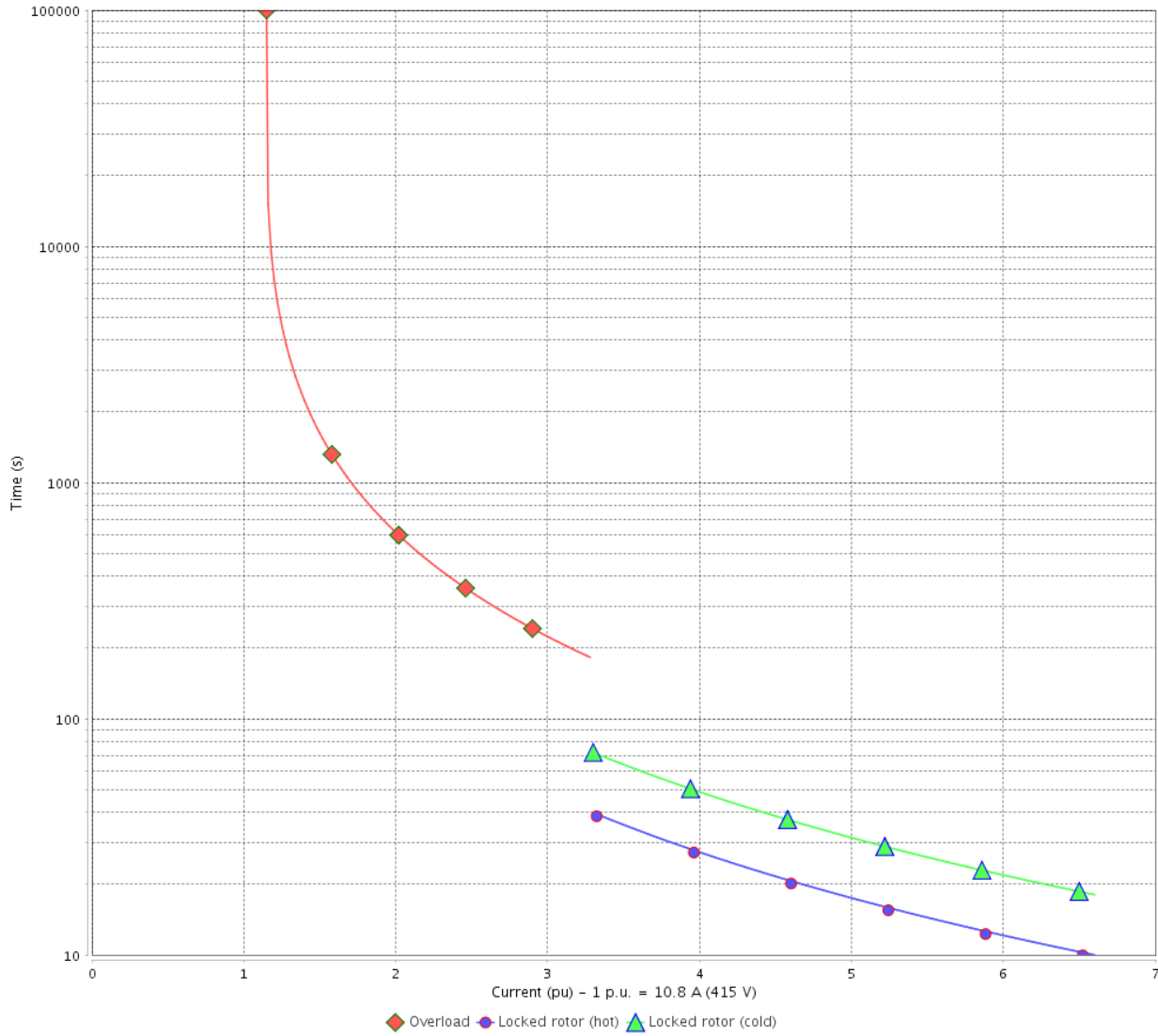
THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____

THERMAL LIMIT CURVE



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

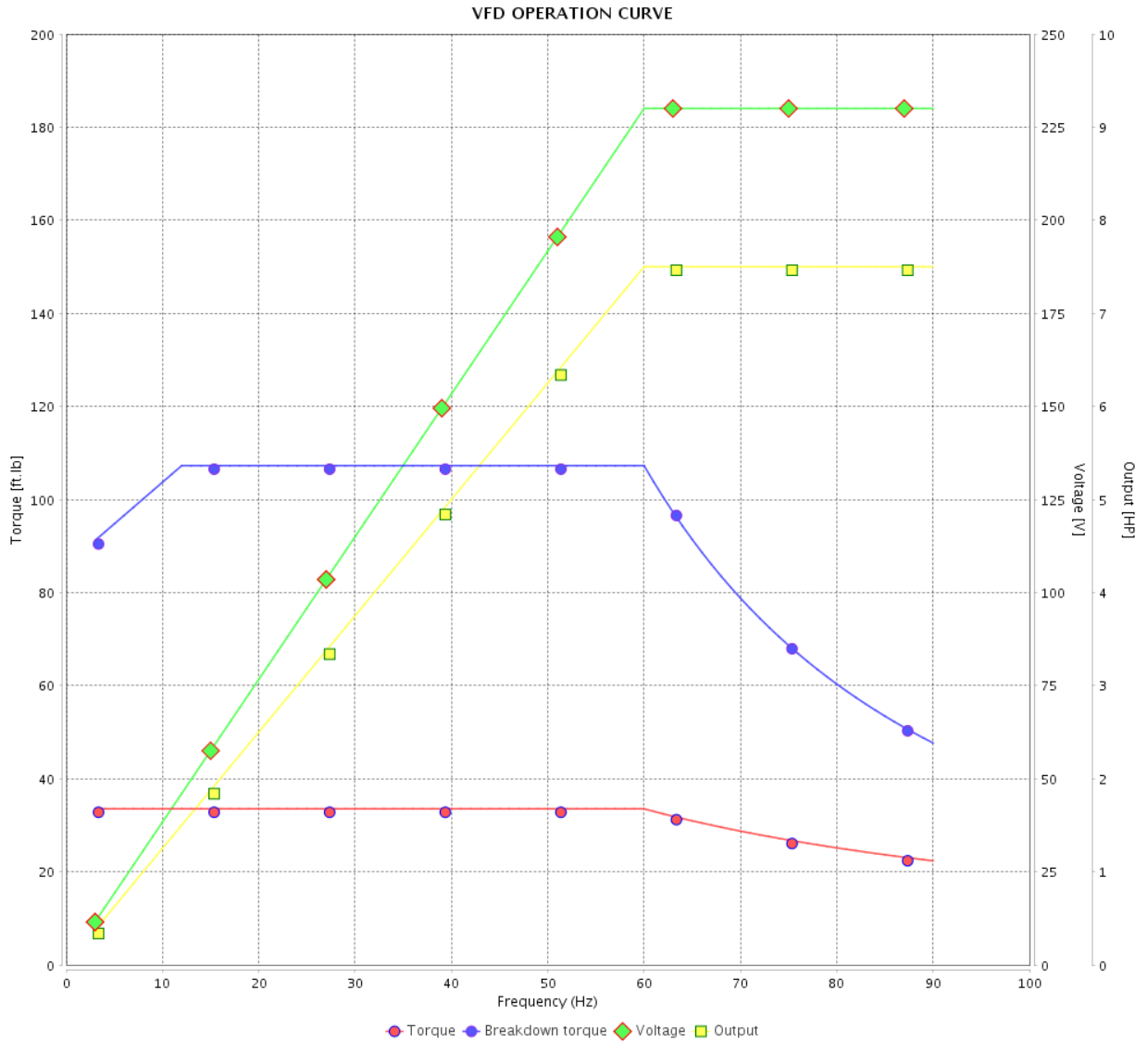


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14406980

Catalog # : 00712XT3E254T



Performance : 230/460 V 60 Hz 6P

Rated current : 19.5/9.73 A
 LRC : 7.0
 Rated torque : 33.5 ft.lb
 Locked rotor torque : 270 %
 Breakdown torque : 320 %
 Rated speed : 1175 rpm

Moment of inertia (J) : 3.32 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 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

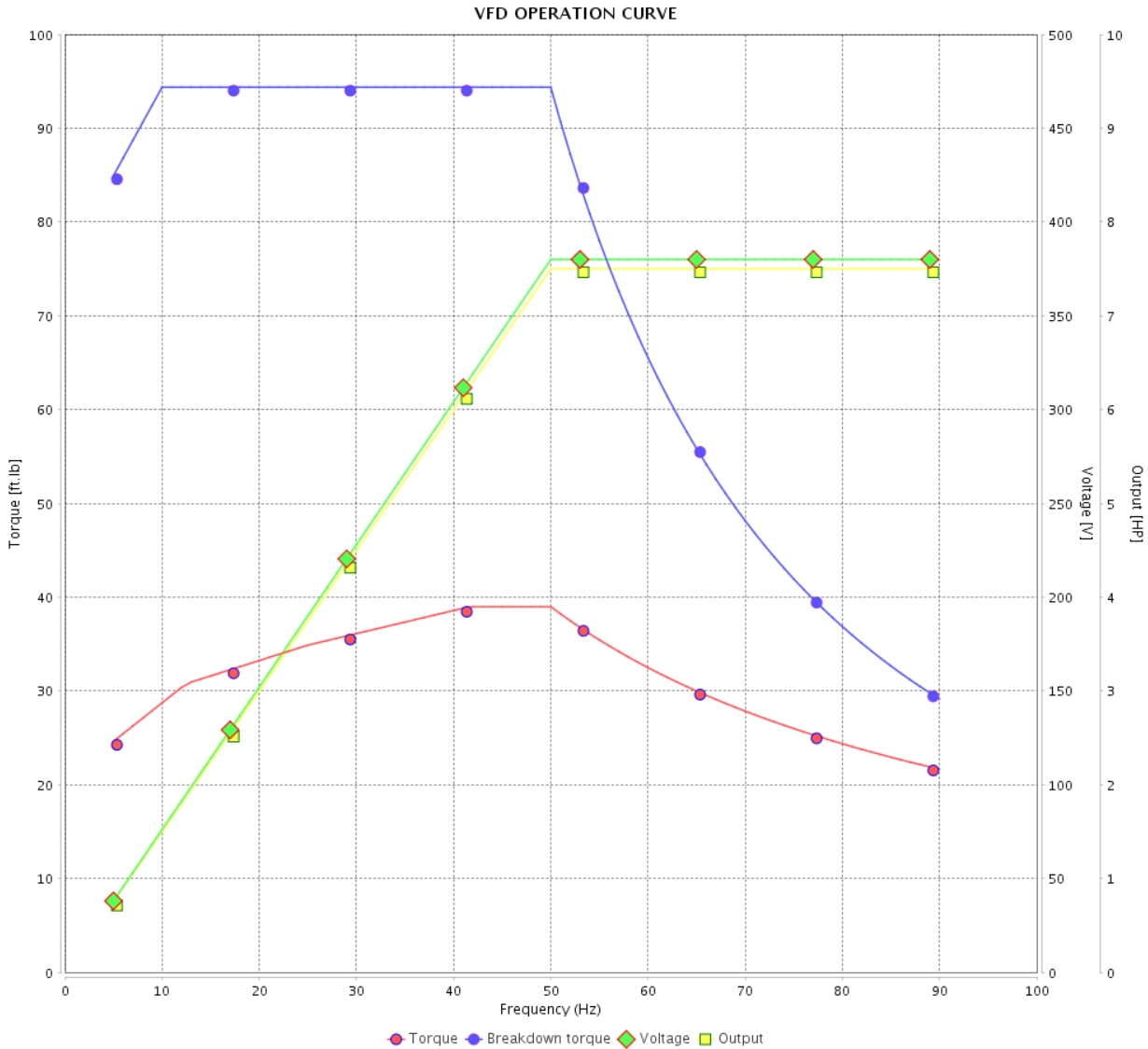


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14406980

Catalog # : 00712XT3E254T



Performance : 380 V 50 Hz 6P IE3

Rated current	: 11.5 A	Moment of inertia (J)	: 3.32 sq.ft.lb
LRC	: 5.6	Duty cycle	: Cont.(S1)
Rated torque	: 41.0 ft.lb	Insulation class	: F
Locked rotor torque	: 175 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 960 rpm	Design	: B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

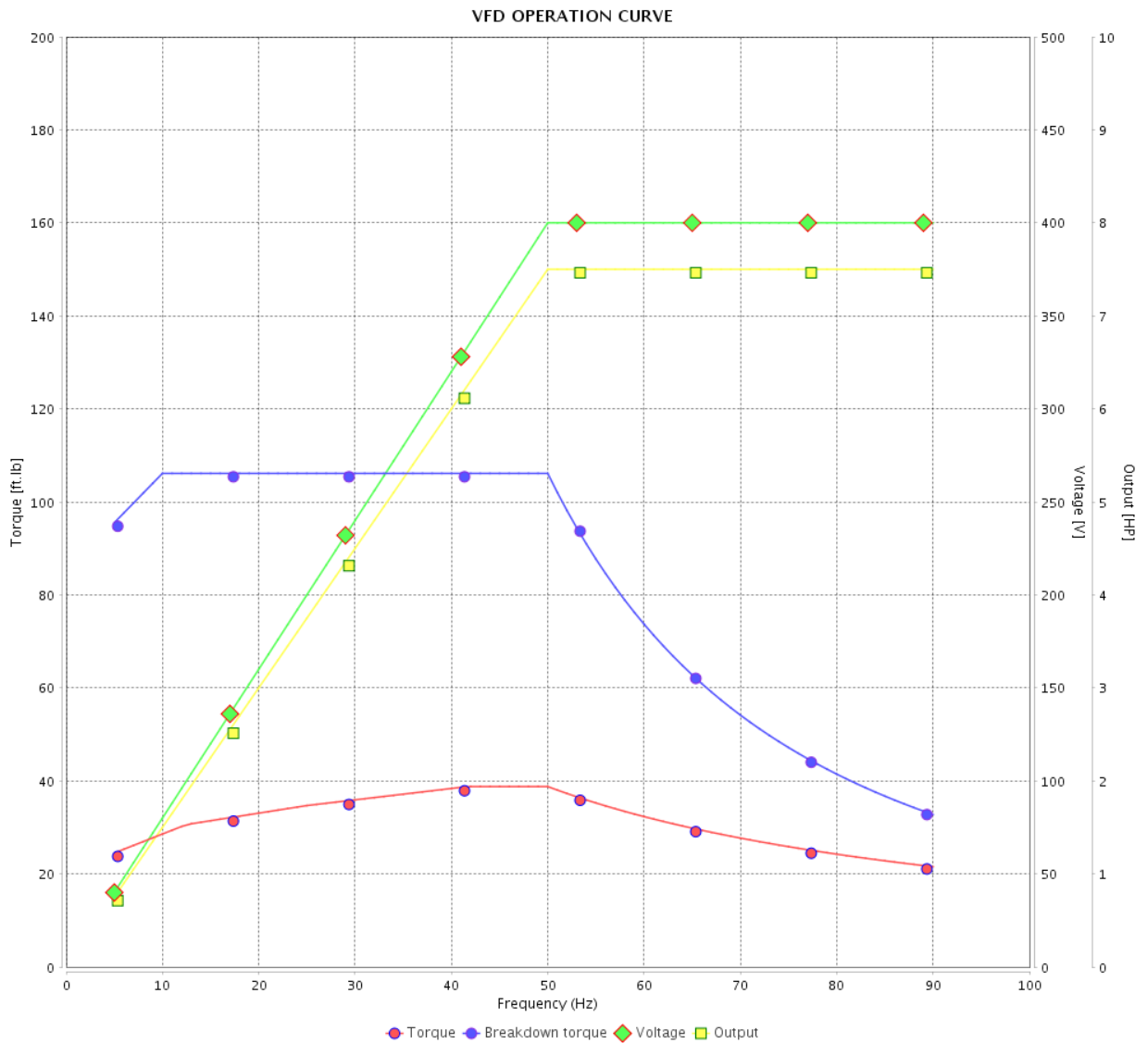


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14406980

Catalog # : 00712XT3E254T



Performance : 400 V 50 Hz 6P IE3

Rated current : 11.0 A
 LRC : 6.2
 Rated torque : 40.8 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 260 %
 Rated speed : 965 rpm

Moment of inertia (J) : 3.32 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

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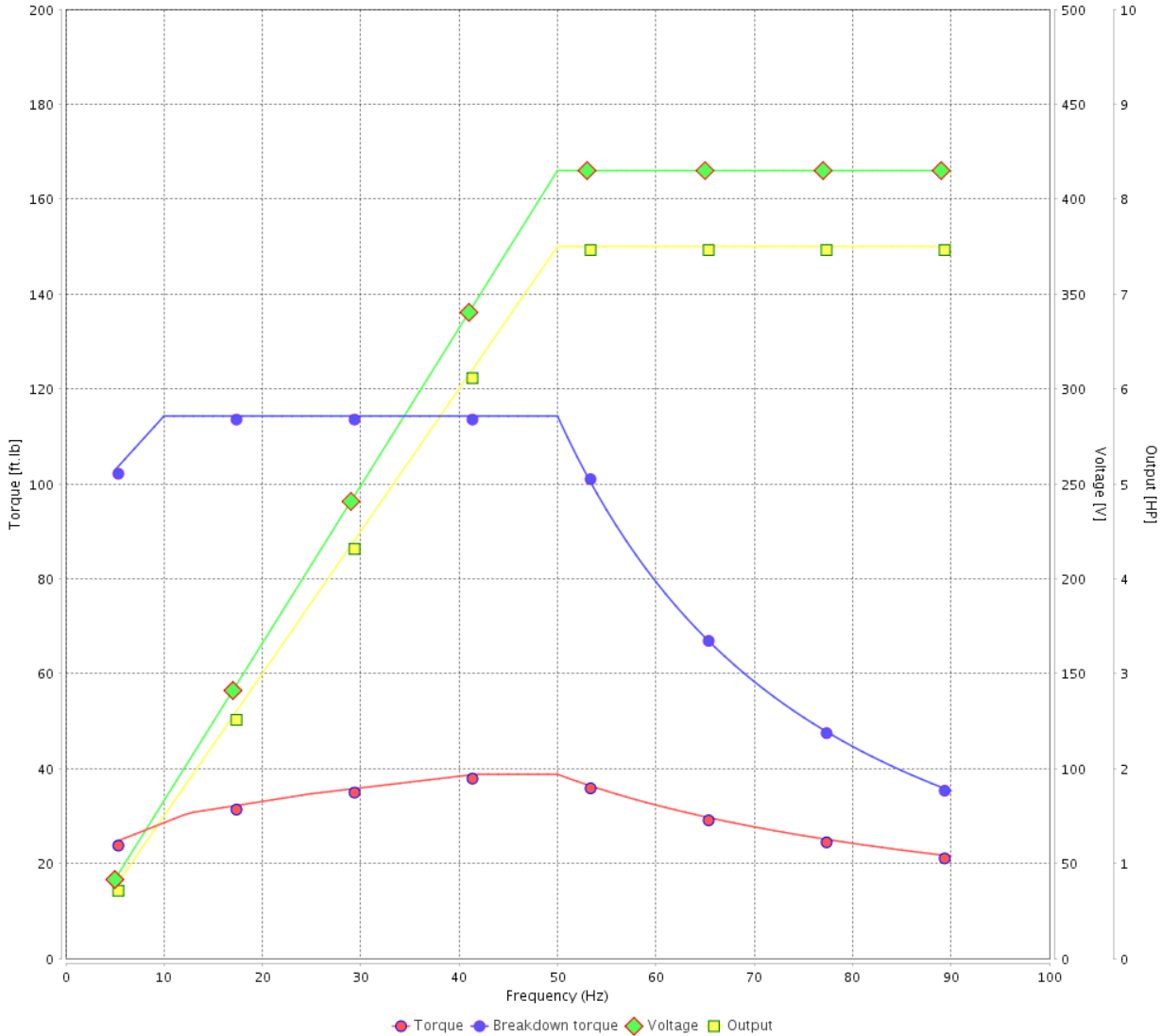
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LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 40.8 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 965 rpm	Design	: B

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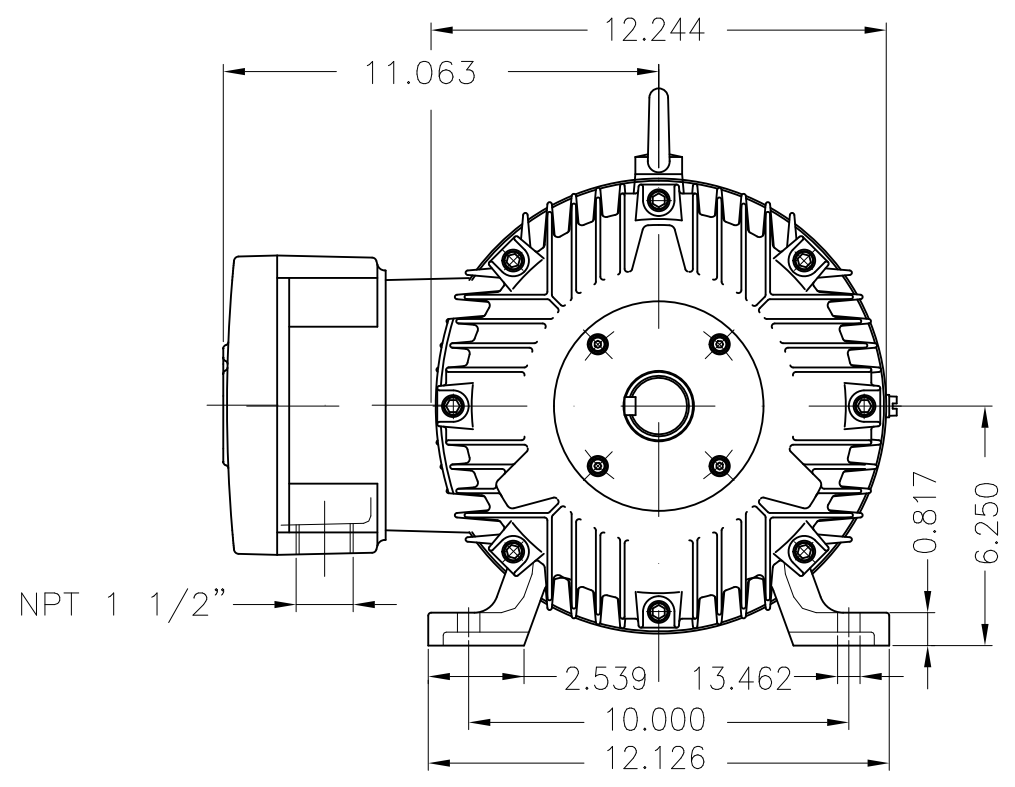
A

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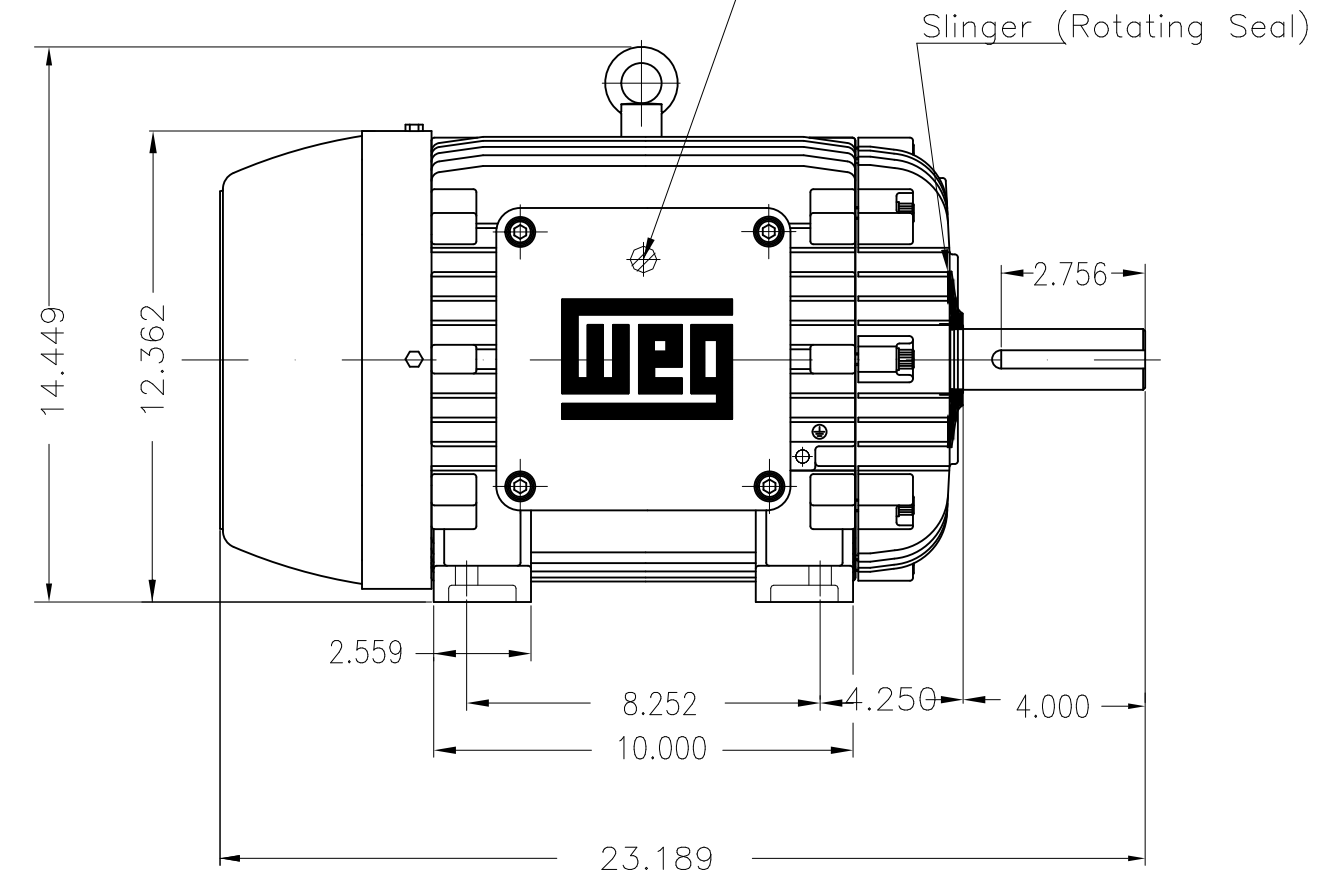
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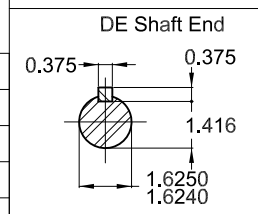


Grounding for leads 5.2–25 mm² / 10–4 AWG



7.5 HP 06 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 254T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW
WDD



MADE IN BRAZIL

**W21X NEMA**
Premium

14406980



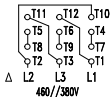
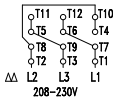
LISTED

CC029A

Inverter Duty Motor
Severe Duty

MODEL 00712XT3E254T

PH 3	FR 254T		
HP(kW) 7.5(5.5)		HZ 60	IP55
V 230/460		A 19.5/9.73	
RPM 1175		NEMA NOM EFF 91.0%	
PF 0.78		SFA 22.4/11.2	DES B
INS CL F Δ T 80 K		SF 1.15	ENCL TEFC
DUTY CONT.		CODE J	ALT 1000 m.a.s.l.
AMB 40°C	USABLE @208V	21.5 A	SF 1.15 SFA 24.7
AMB 55°C SF1.0			
7.5HP 5.5kW 50Hz 380V 11.5A 960RPM SF1.00 EFF 88.5% (IE3)			



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

324 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.