

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer					
Product line		: NEMA Premium Efficiency Three-Phase	Product code :		12775600
			Catalog # :		00712ET3E254JM-W22
Frame		: 254/6JM	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		: 297 lb
Protection degree		: IP55	Moment of inertia (J)		: 3.92 sq.ft.lb
Design		: B			
Output [HP]	7.5	7.5	7.5	7.5	7.5
Poles	6	6	6	6	6
Frequency [Hz]	60	50	50	50	50
Rated voltage [V]	230/460	380	400	415	415
Rated current [A]	19.0/9.48	11.4	10.8	10.5	10.5
L. R. Amperes [A]	129/64.5	59.3	62.6	65.1	65.1
LRC [A]	6.8x(Code H)	5.2x(Code F)	5.8x(Code G)	6.2x(Code G)	6.2x(Code G)
No load current [A]	9.00/4.50	4.50	4.75	4.95	4.95
Rated speed [RPM]	1175	970	970	975	975
Slip [%]	2.08	3.00	3.00	2.50	2.50
Rated torque [ft.lb]	33.5	40.6	40.6	40.4	40.4
Locked rotor torque [%]	250	170	200	220	220
Breakdown torque [%]	300	220	240	260	260
Service factor	1.25	1.00	1.15	1.15	1.15
Temperature rise	80 K	105 K	105 K	80 K	80 K
Locked rotor time	54s (cold) 30s (hot)	48s (cold) 27s (hot)	48s (cold) 27s (hot)	48s (cold) 27s (hot)	48s (cold) 27s (hot)
Noise level ²	59.0 dB(A)	57.0 dB(A)	57.0 dB(A)	57.0 dB(A)	57.0 dB(A)
Efficiency (%)	25%	88.6	90.2	89.3	88.7
	50%	89.5	89.5	89.5	89.5
	75%	90.2	89.5	89.5	89.5
	100%	91.0	88.5	89.5	90.2
Power Factor	25%	0.38	0.44	0.41	0.39
	50%	0.63	0.70	0.66	0.64
	75%	0.74	0.79	0.77	0.75
	100%	0.80	0.83	0.82	0.81
Bearing type		Drive end : 6309 C3	Non drive end : 6209 C3	Foundation loads	
Sealing		: V'Ring	: V'Ring	Max. traction : 355 lb	
Lubrication interval		: 20000 h	: 20000 h	Max. compression : 652 lb	
Lubricant amount		: 13 g	: 9 g		
Lubricant type		: Mobil Polyrex EM			
Notes					
USABLE @208V 21.0A SF 1.15 SFA 24.1A					
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



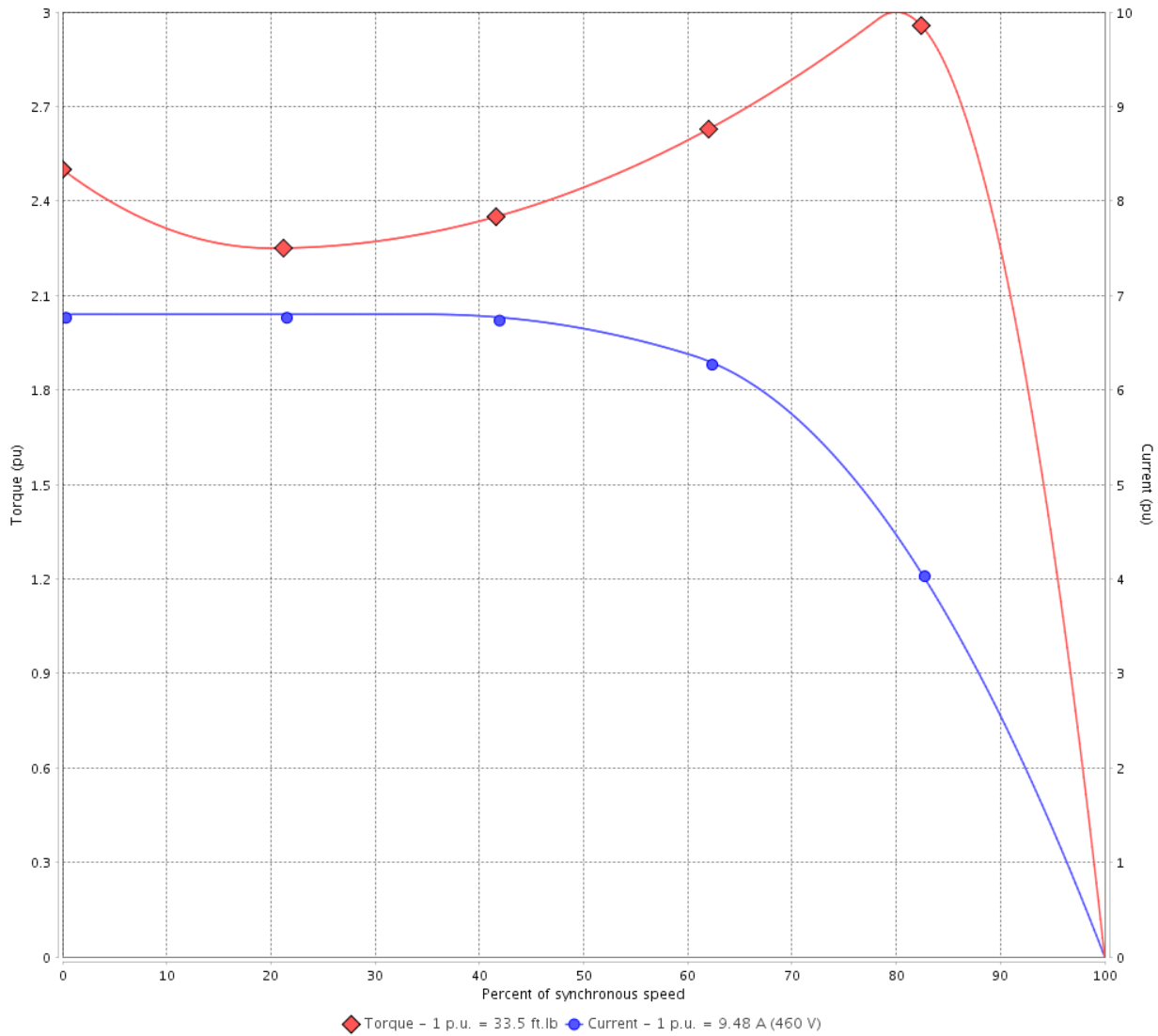
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12775600

Catalog # : 00712ET3E254JM-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 6P

Rated current	: 19.0/9.48 A	Moment of inertia (J)	: 3.92 sq.ft.lb
LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 33.5 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.25
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1175 rpm	Design	: B

Locked rotor time : 54s (cold) 30s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



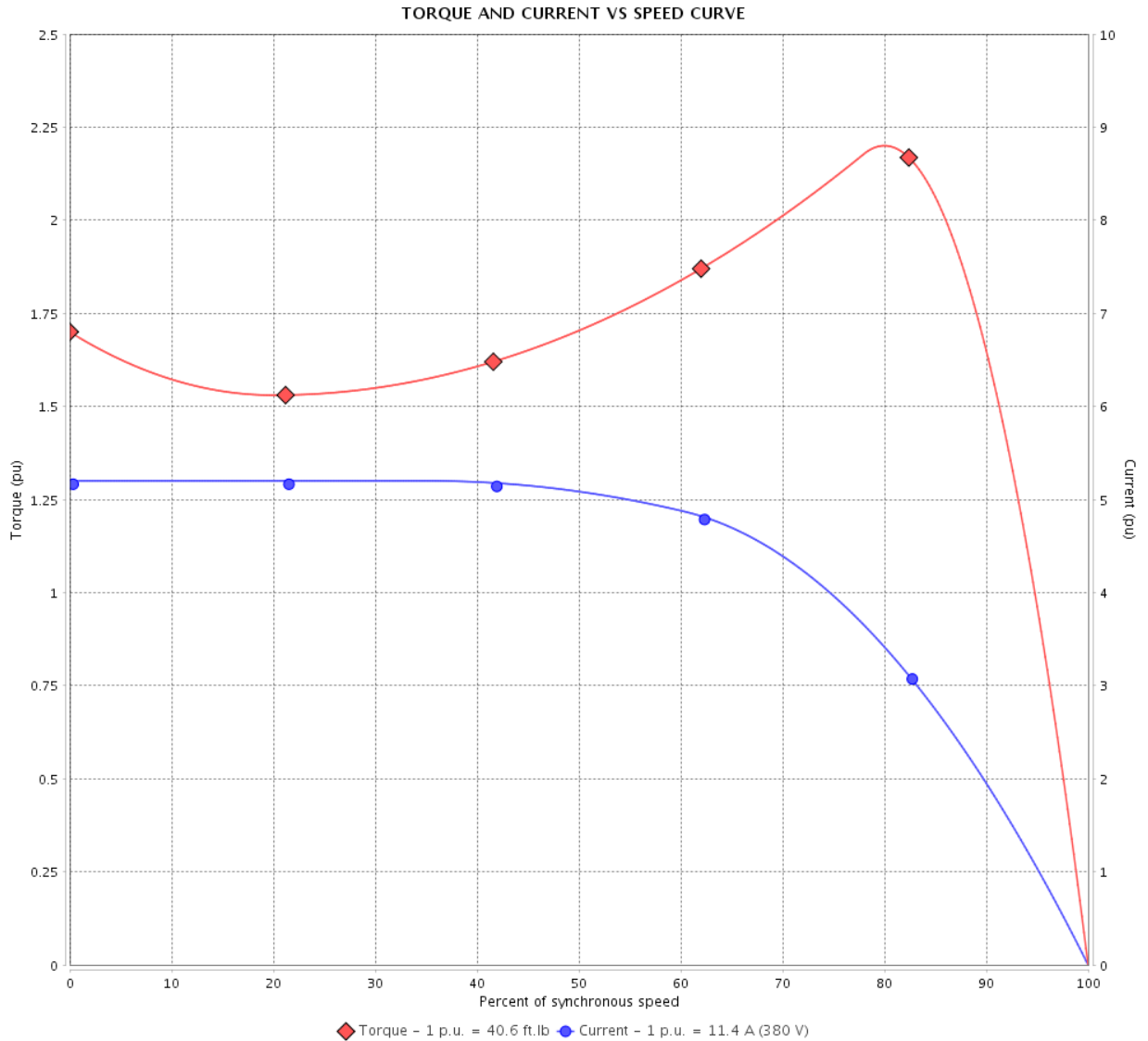
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12775600

Catalog # : 00712ET3E254JM-W22



Performance : 380 V 50 Hz 6P IE3

Rated current : 11.4 A
 LRC : 5.2
 Rated torque : 40.6 ft.lb
 Locked rotor torque : 170 %
 Breakdown torque : 220 %
 Rated speed : 970 rpm

Moment of inertia (J) : 3.92 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

Locked rotor time : 48s (cold) 27s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



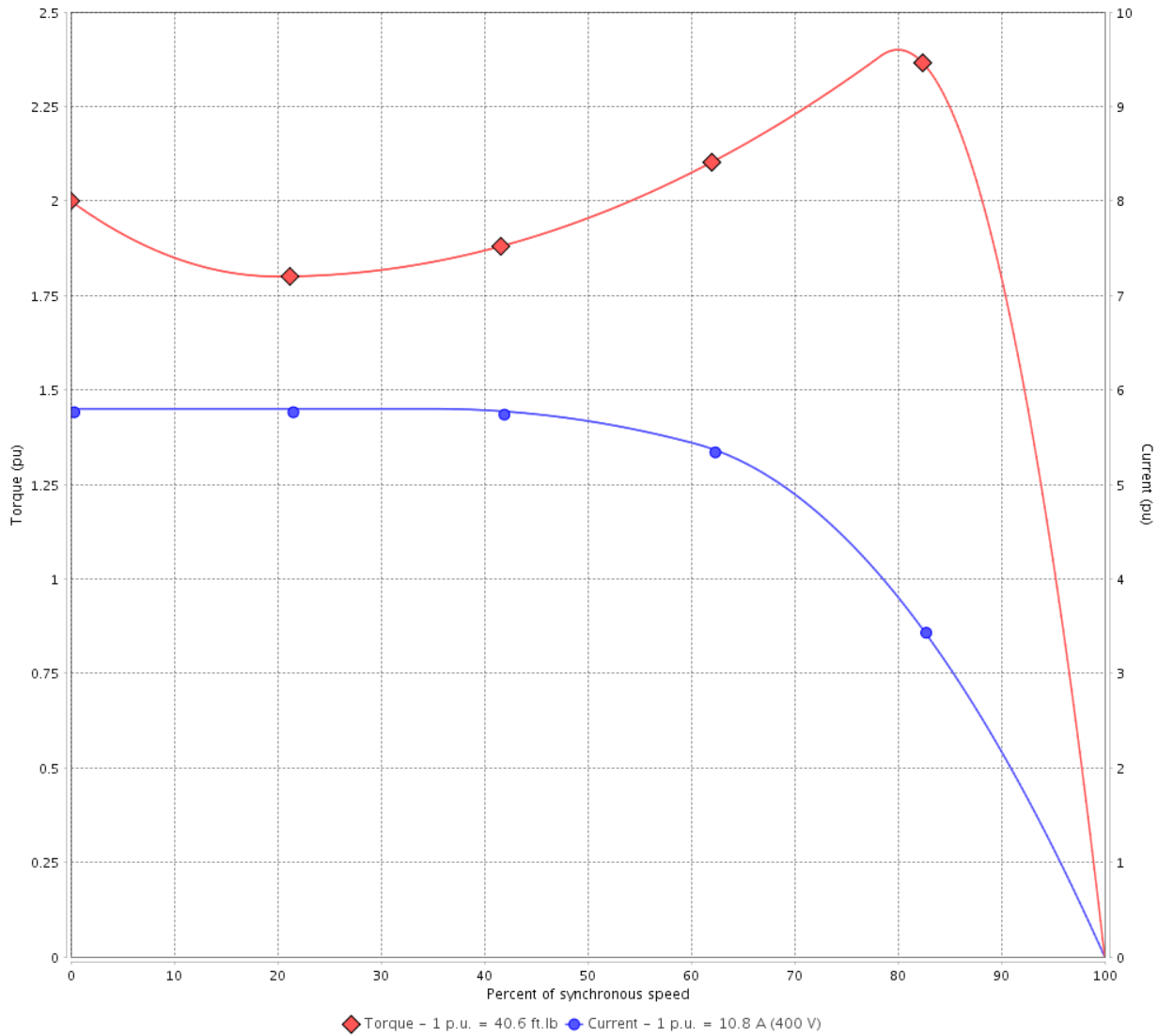
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12775600

Catalog # : 00712ET3E254JM-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current	: 10.8 A	Moment of inertia (J)	: 3.92 sq.ft.lb
LRC	: 5.8	Duty cycle	: Cont.(S1)
Rated torque	: 40.6 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.15
Breakdown torque	: 240 %	Temperature rise	: 105 K
Rated speed	: 970 rpm	Design	: B

Locked rotor time : 48s (cold) 27s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



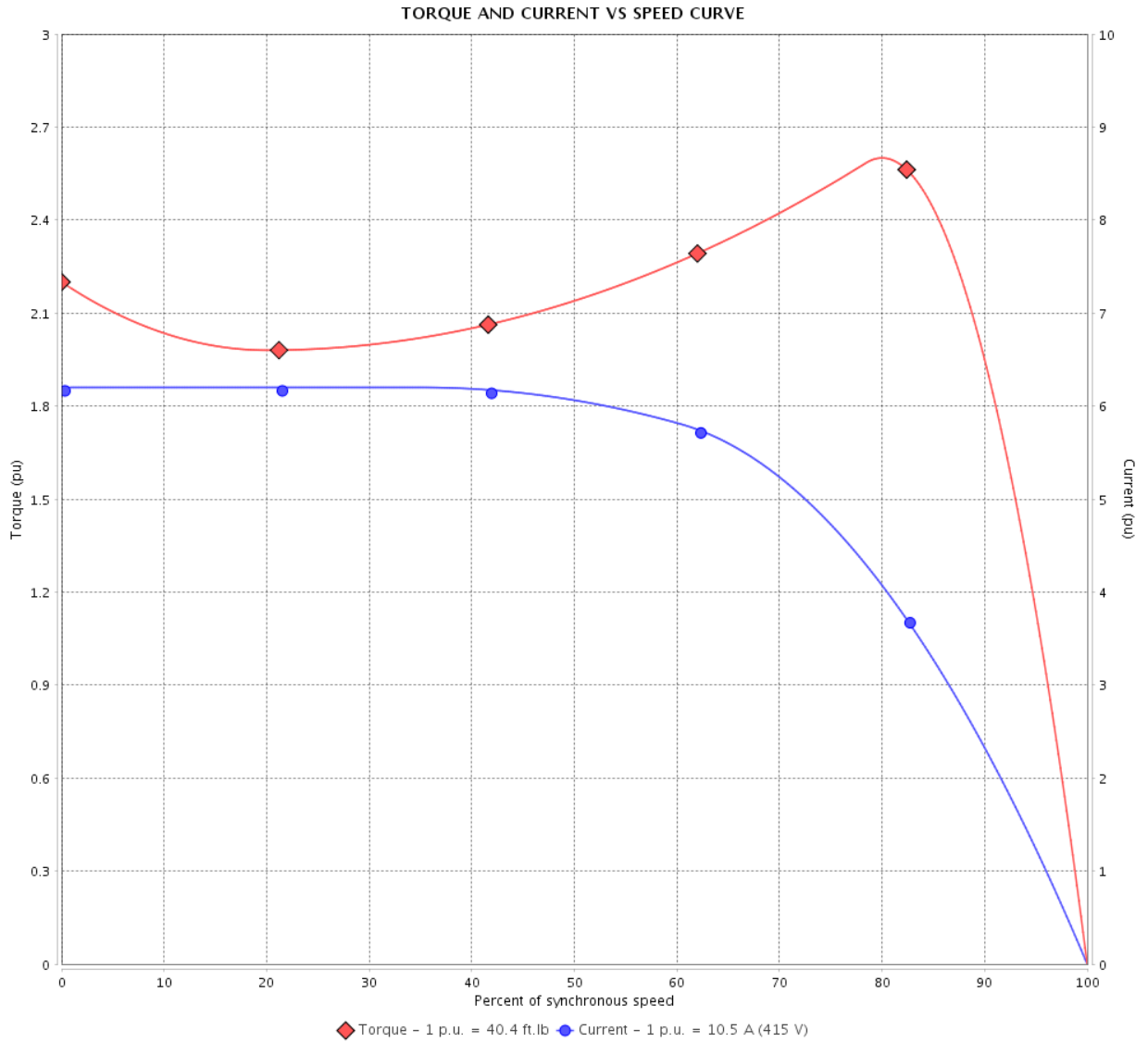
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12775600

Catalog # : 00712ET3E254JM-W22



Performance : 415 V 50 Hz 6P IE3

Rated current	: 10.5 A	Moment of inertia (J)	: 3.92 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 40.4 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.15
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 975 rpm	Design	: B

Locked rotor time : 48s (cold) 27s (hot)

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



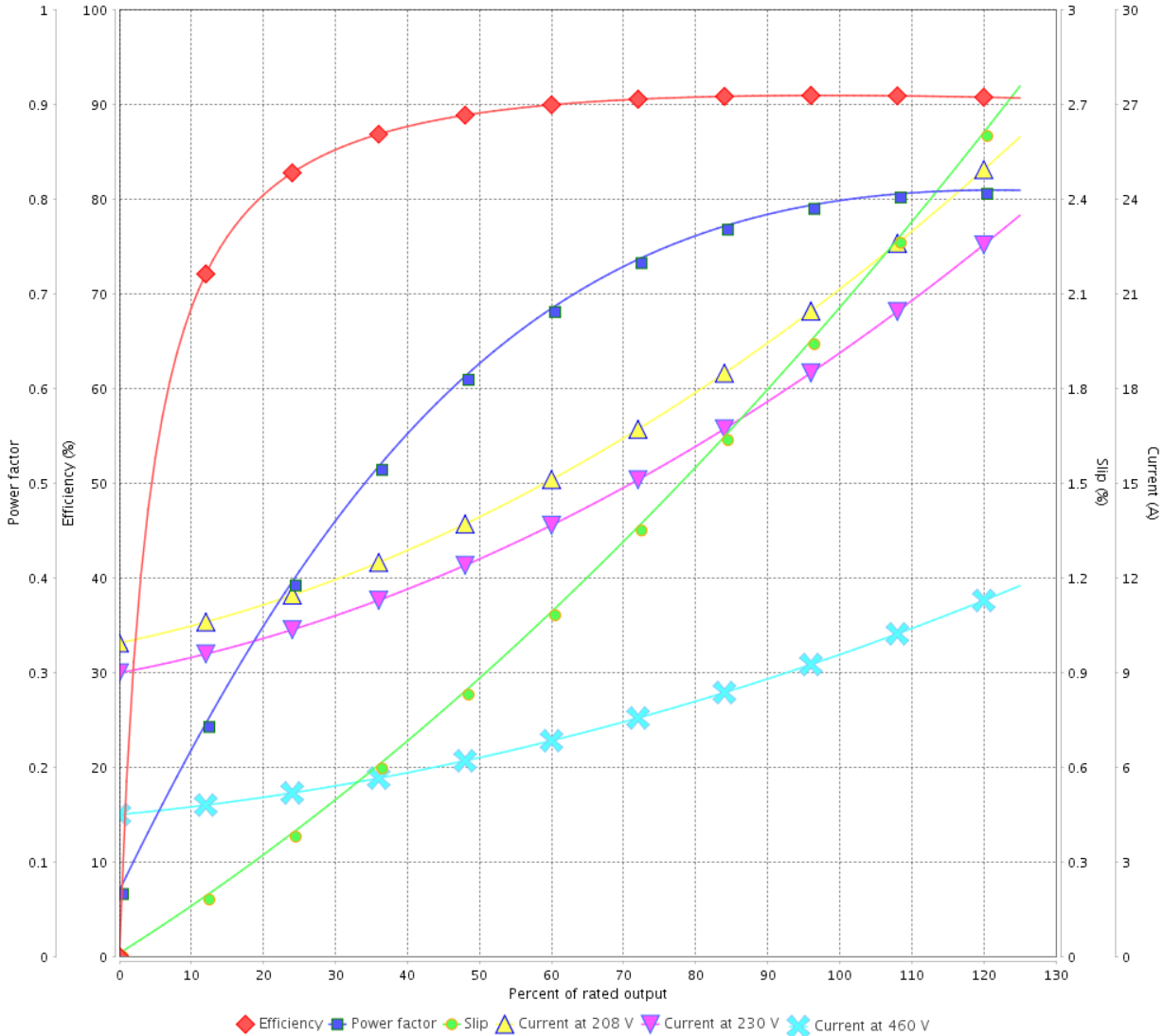
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12775600

Catalog # : 00712ET3E254JM-W22

LOAD PERFORMANCE CURVE



Performance : 230/460 V 60 Hz 6P

Rated current : 19.0/9.48 A
 LRC : 6.8
 Rated torque : 33.5 ft.lb
 Locked rotor torque : 250 %
 Breakdown torque : 300 %
 Rated speed : 1175 rpm

Moment of inertia (J) : 3.92 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage

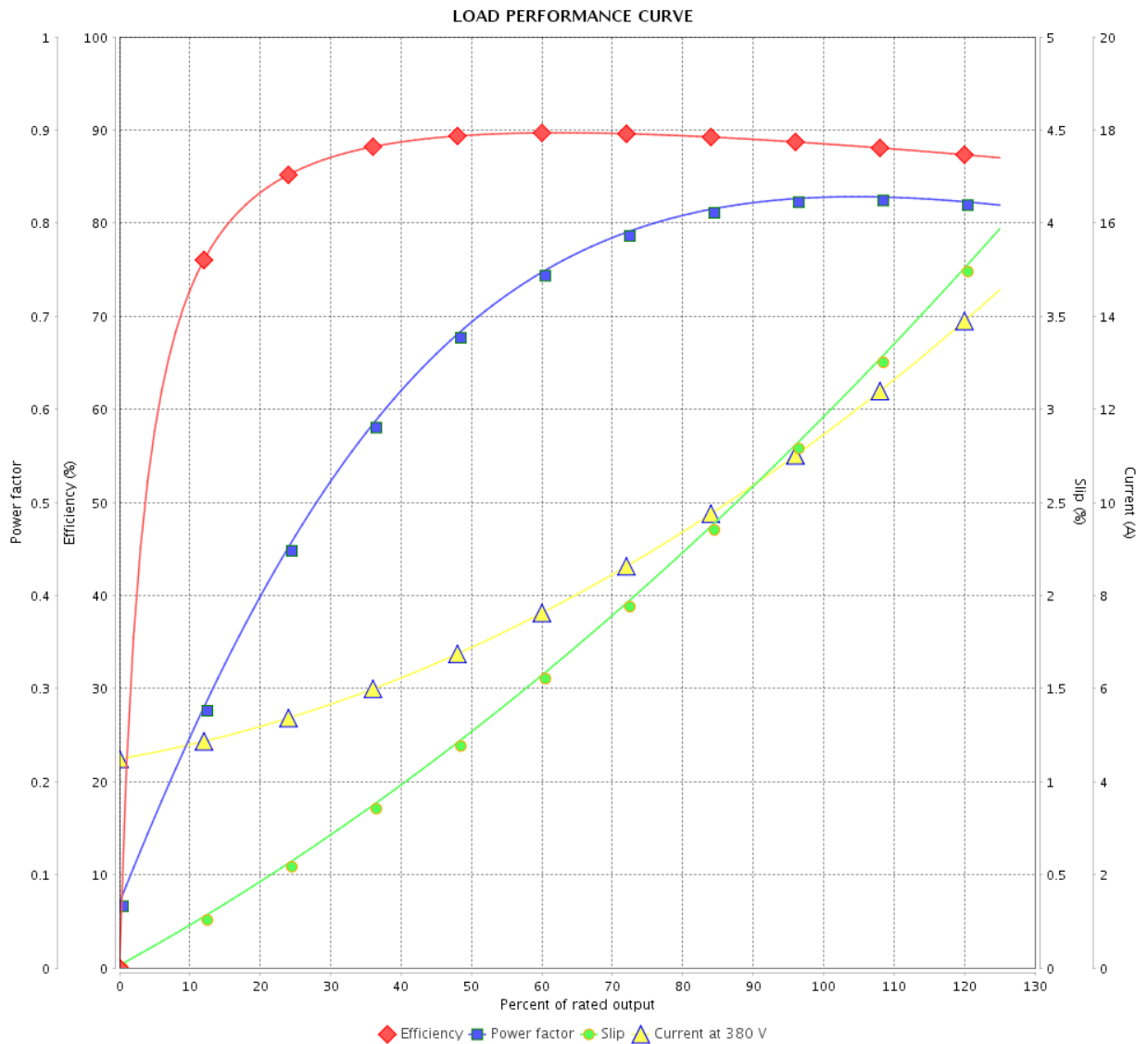


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Catalog # : 00712ET3E254JM-W22



Performance : 380 V 50 Hz 6P IE3

Rated current : 11.4 A
 LRC : 5.2
 Rated torque : 40.6 ft.lb
 Locked rotor torque : 170 %
 Breakdown torque : 220 %
 Rated speed : 970 rpm

Moment of inertia (J) : 3.92 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage



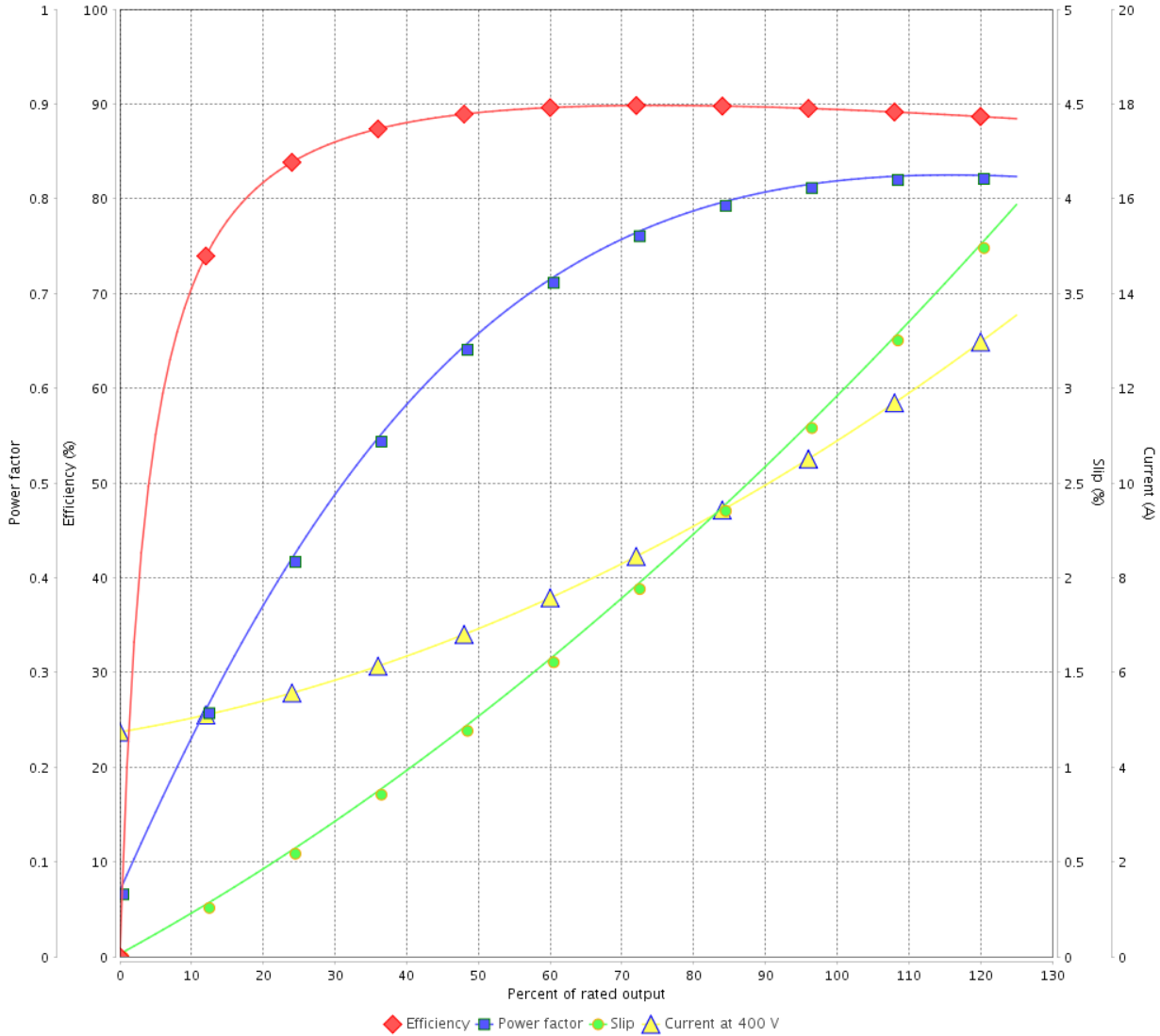
Customer :

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LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current : 10.8 A
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 Locked rotor torque : 200 %
 Breakdown torque : 240 %
 Rated speed : 970 rpm

Moment of inertia (J) : 3.92 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 105 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage

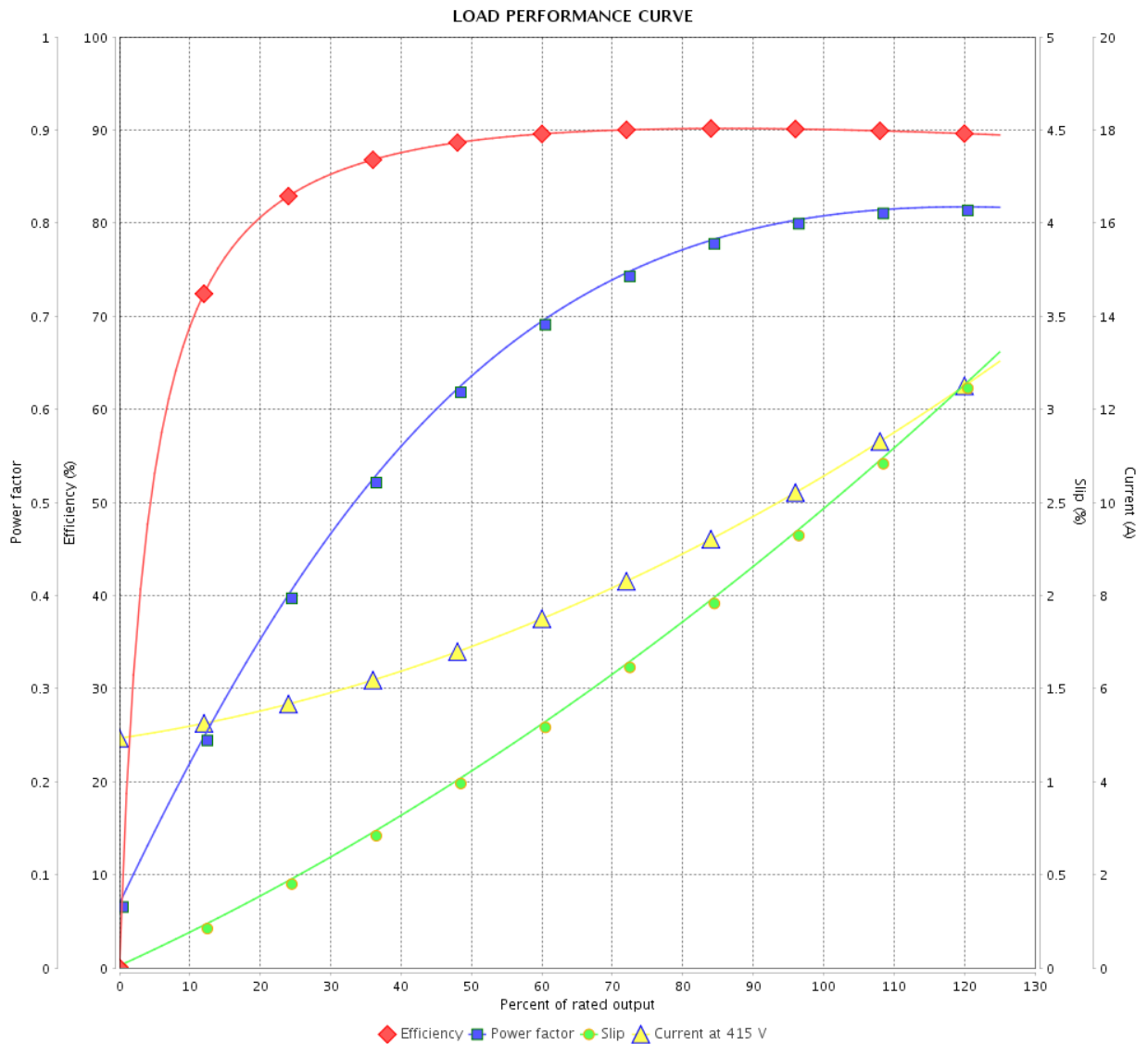


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12775600

Catalog # : 00712ET3E254JM-W22



Performance : 415 V 50 Hz 6P IE3

Rated current : 10.5 A
 LRC : 6.2
 Rated torque : 40.4 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 260 %
 Rated speed : 975 rpm

Moment of inertia (J) : 3.92 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

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Locked rotor torque	: 250 %	Service factor	: 1.25
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1175 rpm	Design	: B

Heating constant

Cooling constant

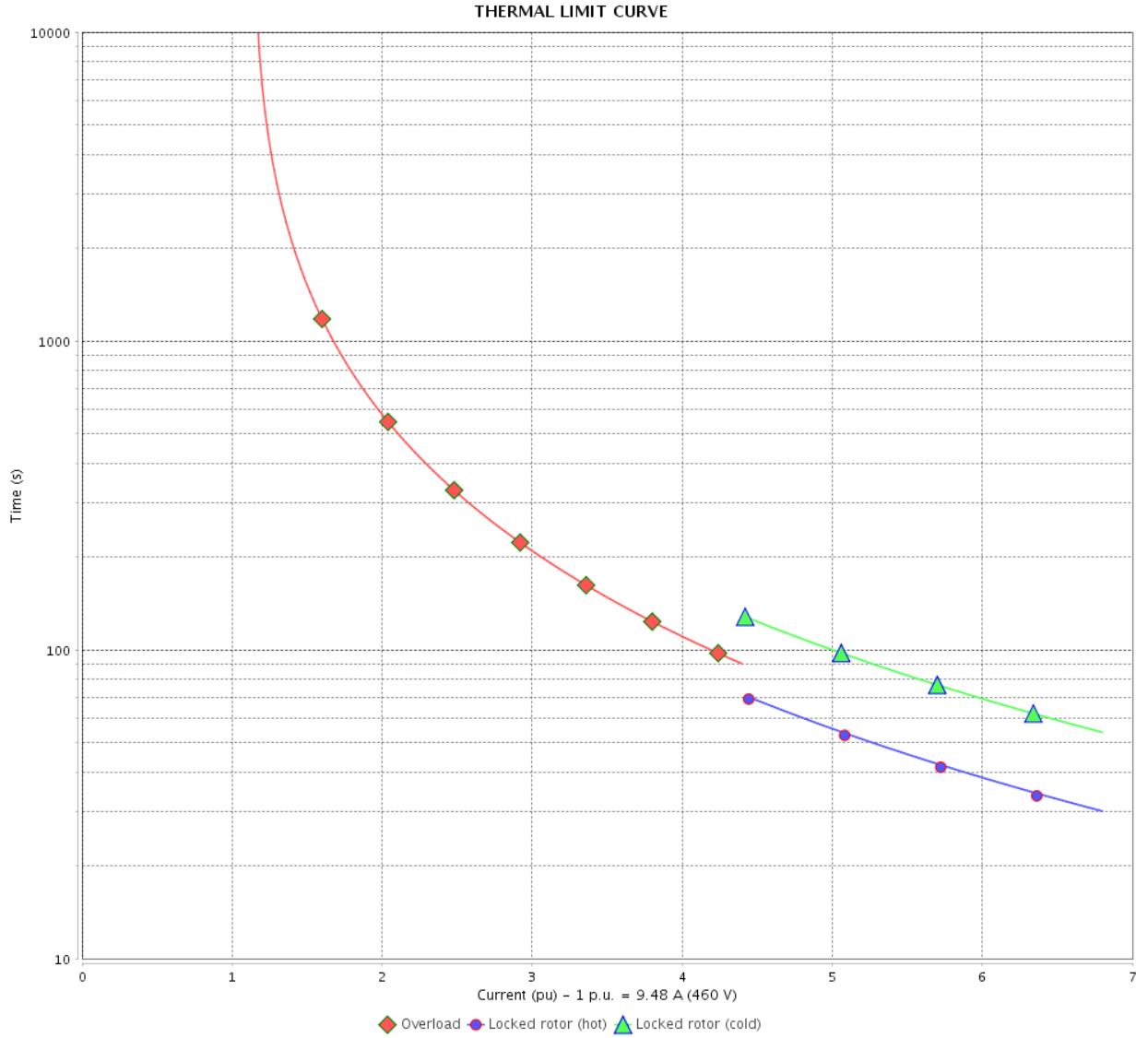
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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Rated current	: 11.4 A	Moment of inertia (J)	: 3.92 sq.ft.lb
LRC	: 5.2	Duty cycle	: Cont.(S1)
Rated torque	: 40.6 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 105 K
Rated speed	: 970 rpm	Design	: B

Heating constant

Cooling constant

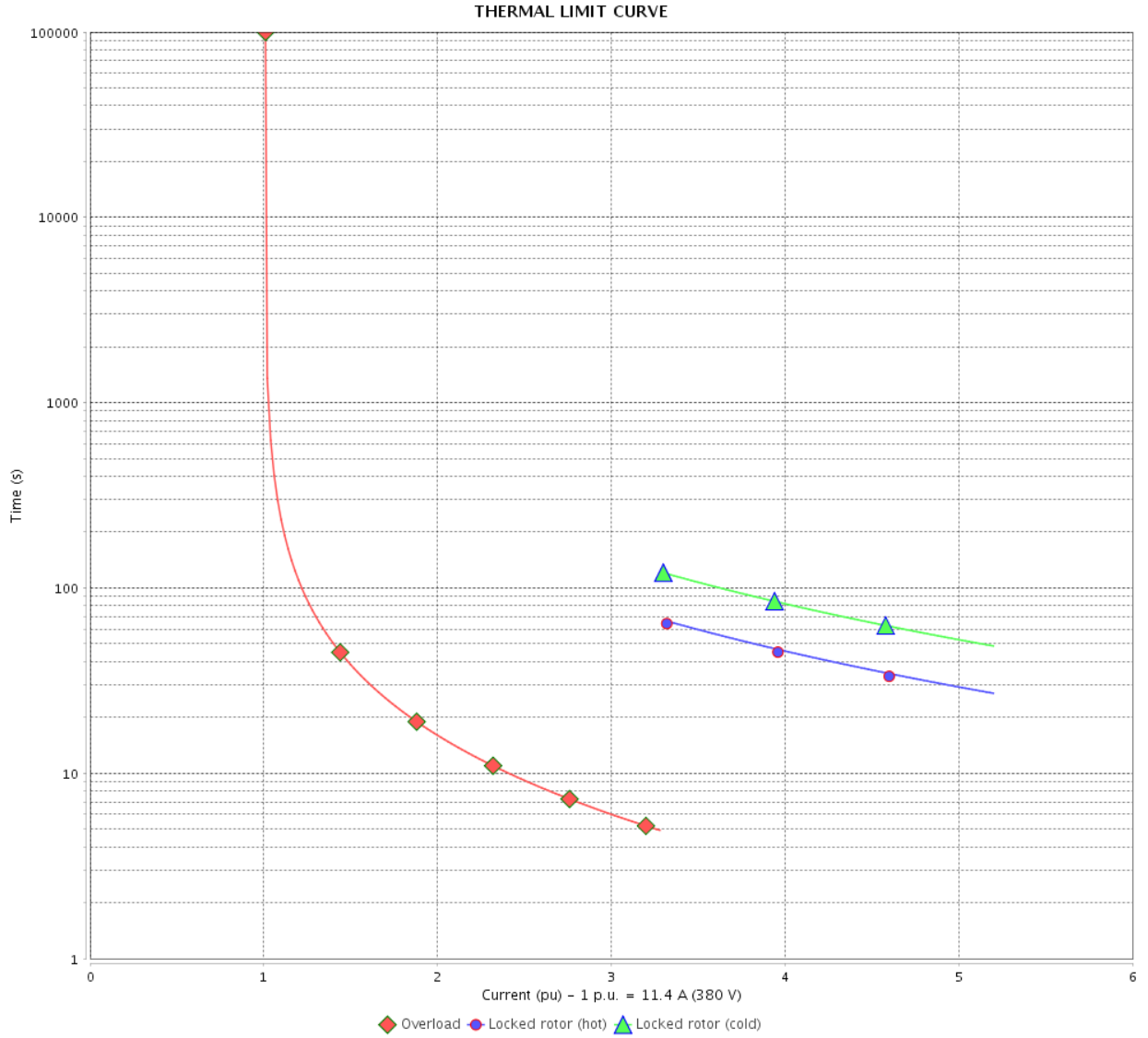
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase
Product code : 12775600
Catalog # : 00712ET3E254JM-W22

Performance : 400 V 50 Hz 6P IE3

Rated current	: 10.8 A	Moment of inertia (J)	: 3.92 sq.ft.lb
LRC	: 5.8	Duty cycle	: Cont.(S1)
Rated torque	: 40.6 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.15
Breakdown torque	: 240 %	Temperature rise	: 105 K
Rated speed	: 970 rpm	Design	: B

Heating constant

Cooling constant

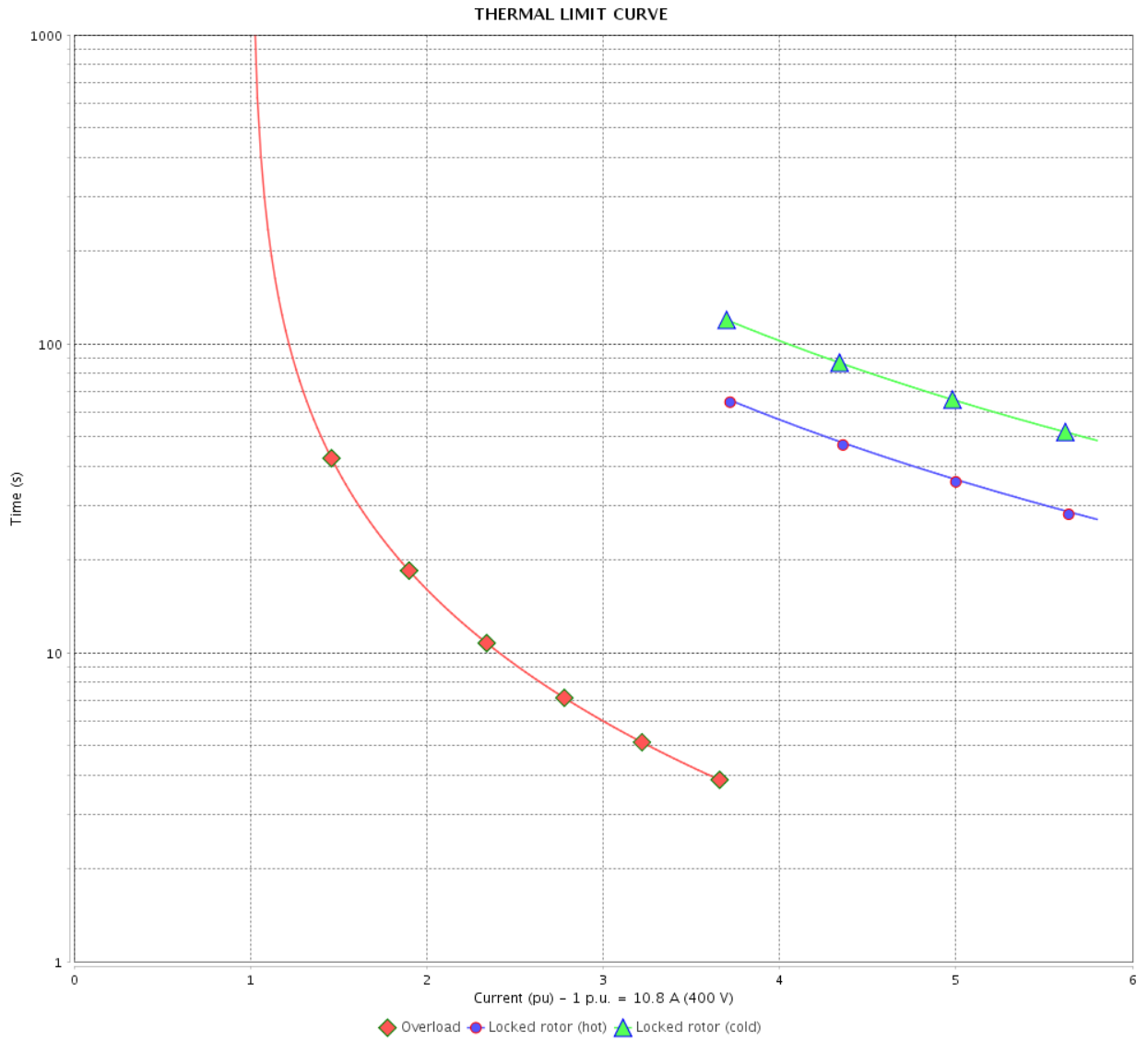
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Performed by				
Checked by			Page	Revision
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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Date				

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase
Product code : 12775600
Catalog # : 00712ET3E254JM-W22

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Locked rotor torque	: 220 %	Service factor	: 1.15
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 975 rpm	Design	: B

Heating constant

Cooling constant

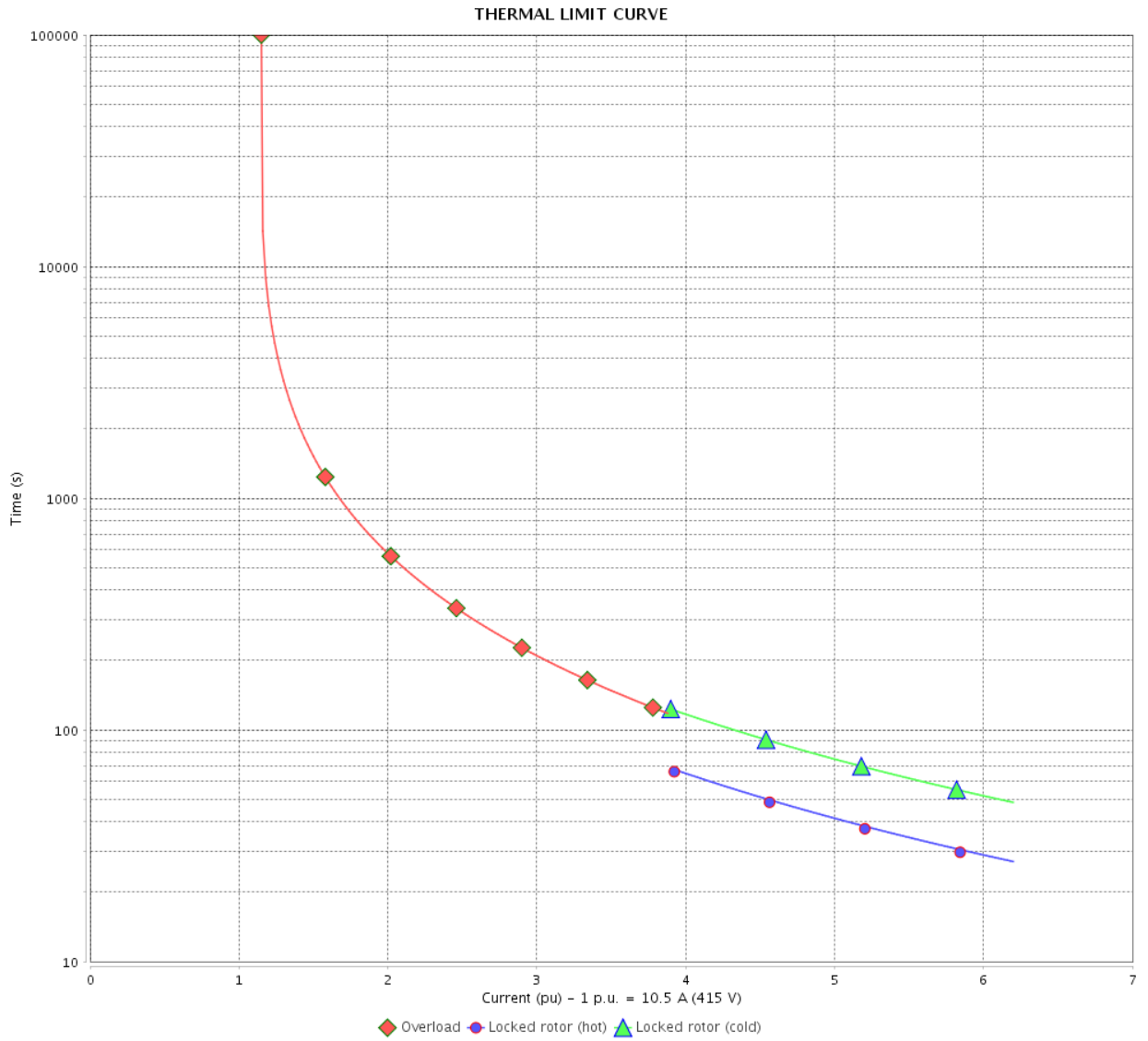
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



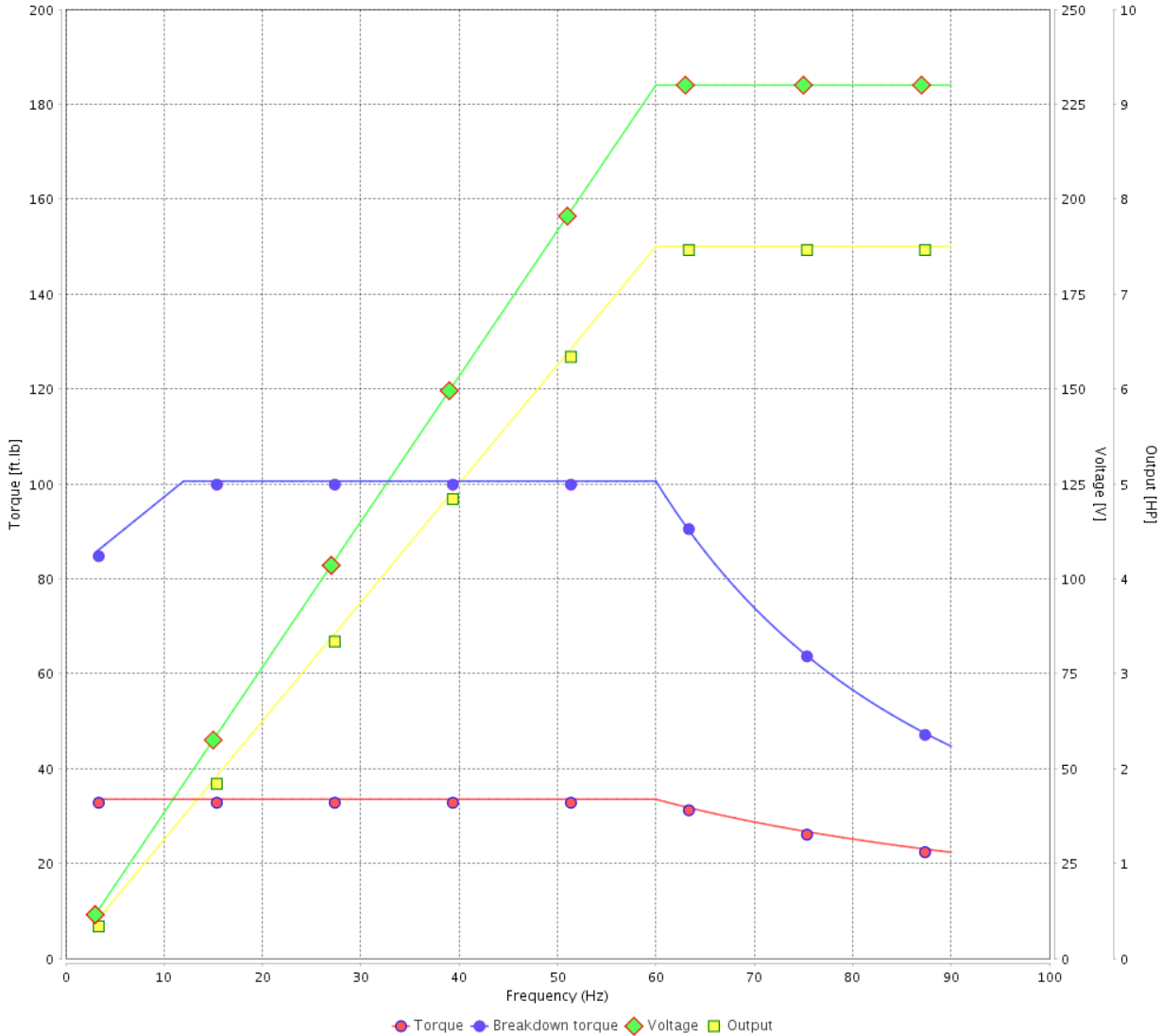
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12775600

Catalog # : 00712ET3E254JM-W22

VFD OPERATION CURVE



Performance : 230/460 V 60 Hz 6P

Rated current : 19.0/9.48 A
 LRC : 6.8
 Rated torque : 33.5 ft.lb
 Locked rotor torque : 250 %
 Breakdown torque : 300 %
 Rated speed : 1175 rpm

Moment of inertia (J) : 3.92 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
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Checked by				
Date				

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

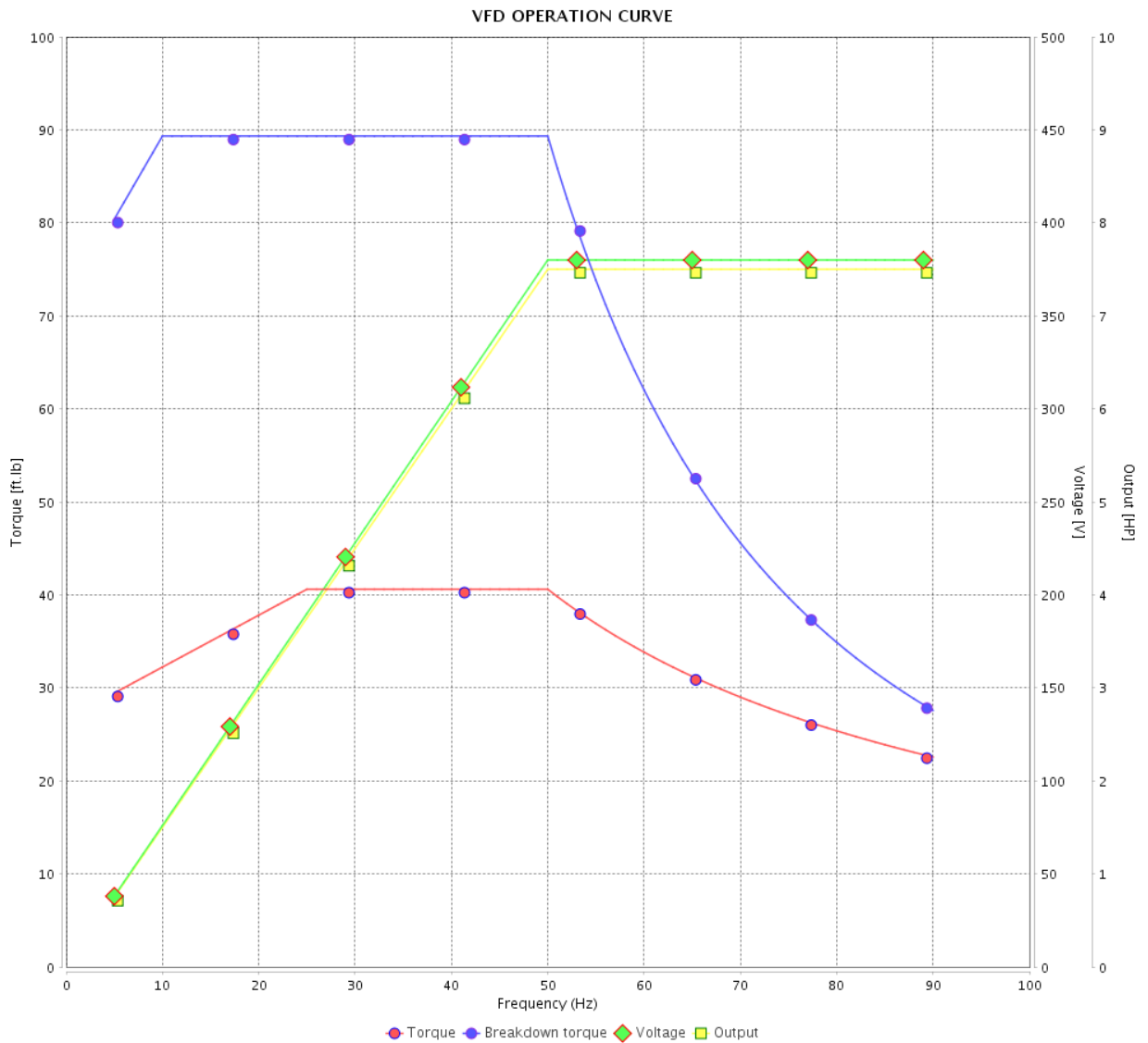


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12775600

Catalog # : 00712ET3E254JM-W22



Performance : 380 V 50 Hz 6P IE3

Rated current : 11.4 A
 LRC : 5.2
 Rated torque : 40.6 ft.lb
 Locked rotor torque : 170 %
 Breakdown torque : 220 %
 Rated speed : 970 rpm

Moment of inertia (J) : 3.92 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

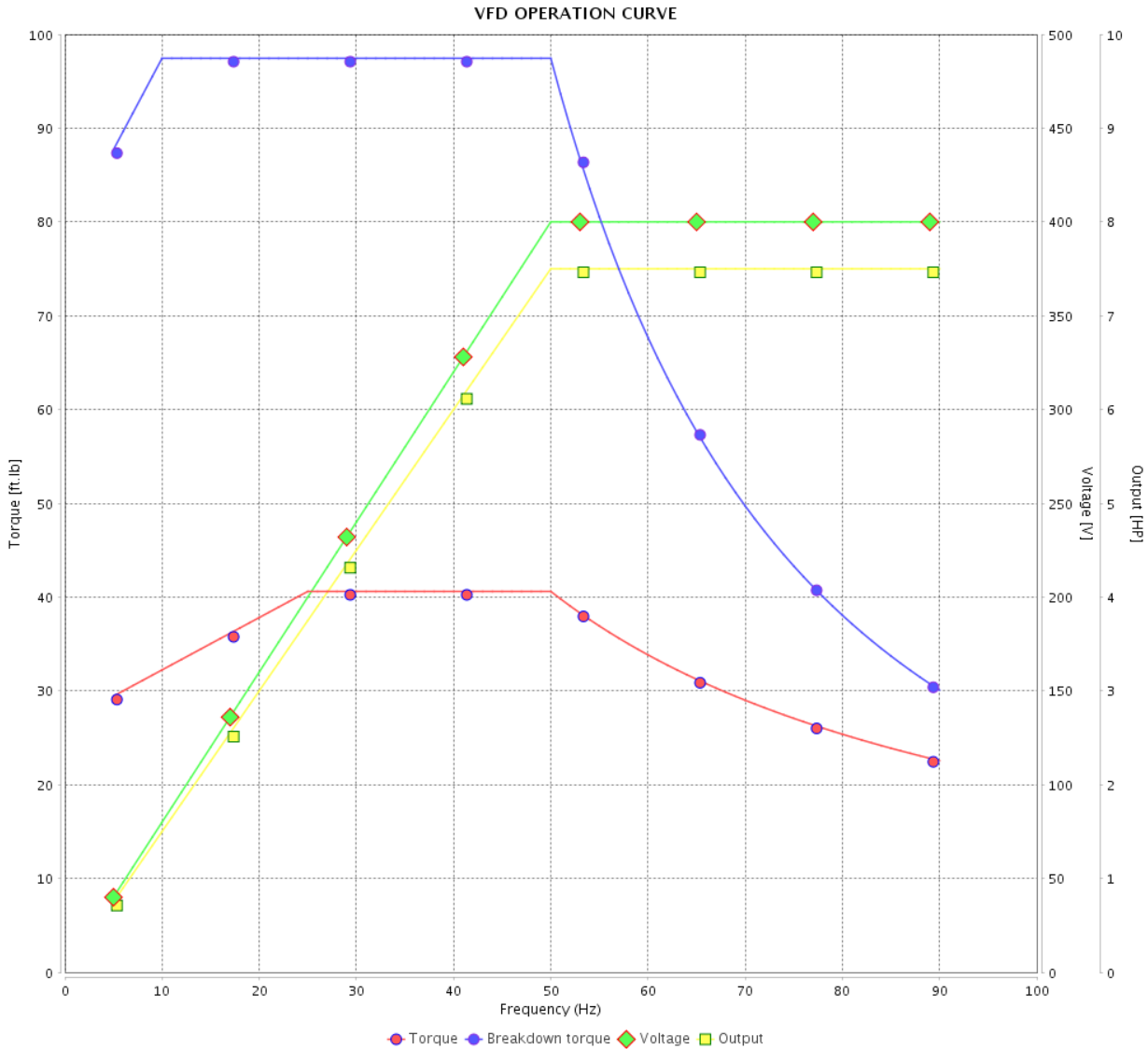


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Catalog # : 00712ET3E254JM-W22



Performance : 400 V 50 Hz 6P IE3

Rated current	: 10.8 A	Moment of inertia (J)	: 3.92 sq.ft.lb
LRC	: 5.8	Duty cycle	: Cont.(S1)
Rated torque	: 40.6 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.15
Breakdown torque	: 240 %	Temperature rise	: 105 K
Rated speed	: 970 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
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Date	13/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

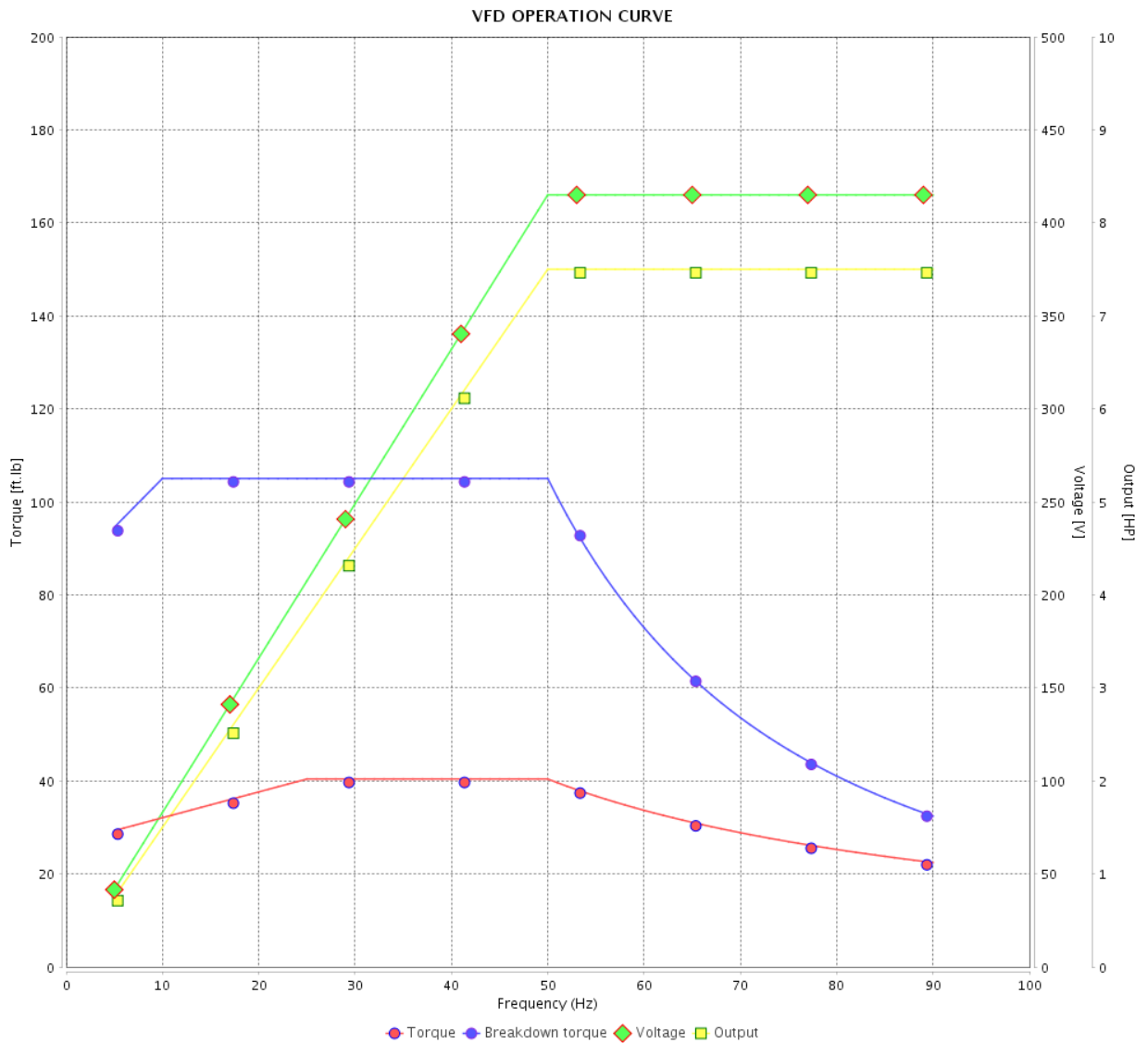


Customer : _____

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12775600

Catalog # : 00712ET3E254JM-W22



Performance : 415 V 50 Hz 6P IE3

Rated current : 10.5 A
 LRC : 6.2
 Rated torque : 40.4 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 260 %
 Rated speed : 975 rpm

Moment of inertia (J) : 3.92 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

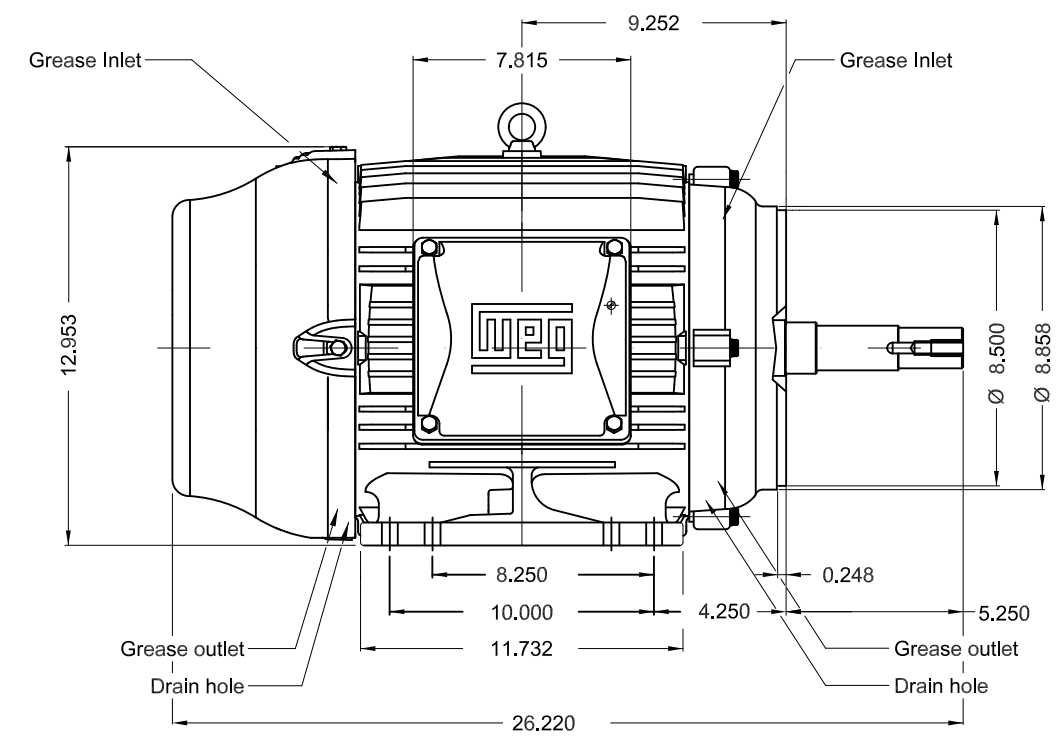
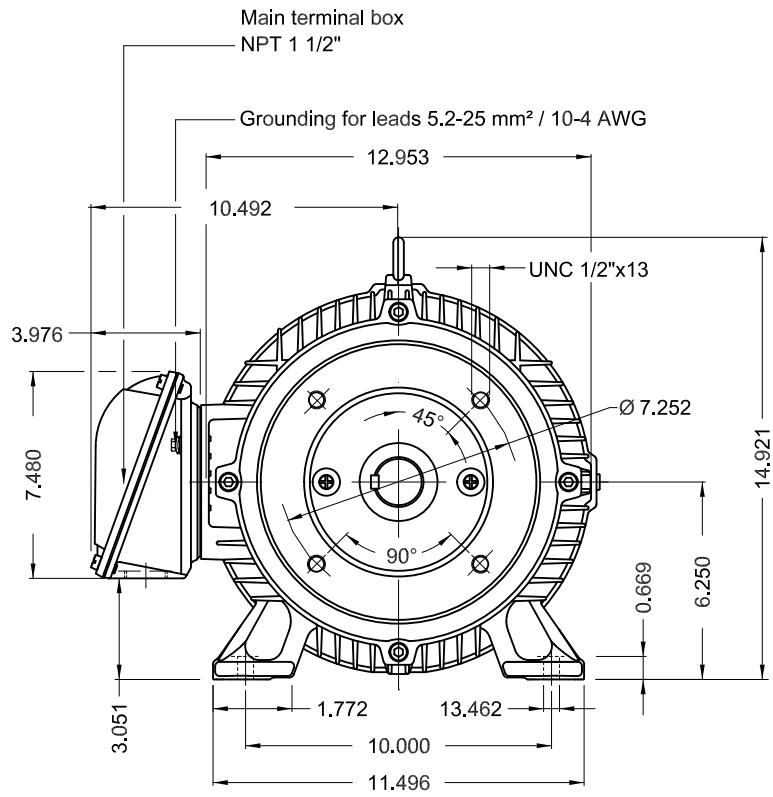
Rev.	Changes Summary	Performed	Checked	Date
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Date	13/04/2022			
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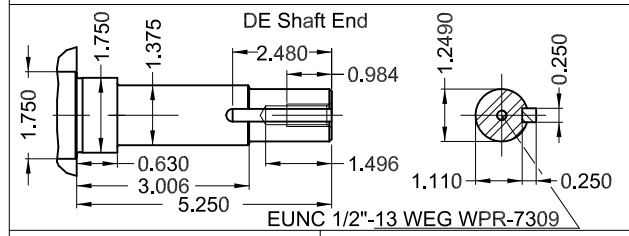
A

B

C



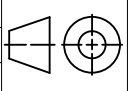
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E

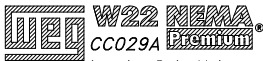
Color RAL 5009
 Painting plan 203A
 Mounting NEMA F-1
 Mounting B34R(D)

7.5 HP 06 Poles 60 Hz A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	 THREE PH. MOTOR JM/JP/JET PUMP W22 PREM. EFF. FRAME 254/6JM IP55 TEFC					
CHECKED							
RELEASED							
REL DT.	WMO		Jaragua do Sul	Product Engineering	SHEET	1 / 1	

PREVIEW
 WDD





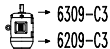
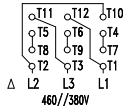
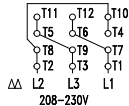
FOR SAFE AREA
MOD.TE1BFOXON



For 60Hz: Class I, Div 2, Gr. A, B, C and D - T3
Class I, Zone 2, IIC - T3
Class II, Div 2, Gr. F and G - T4
For 60Hz use on PWM, Gr. A, B, C, D and F,
VT 1000:1, CT 20:1, 1.0SF, T3A

MODEL 00712ET3E254JM-W22
MADE IN BRAZIL
12775600

PH 3	FR 254/6JM	HP(kW) 7.5(5.5)	Hz 60
V 230/460	A 19.0/9.48	RPM 1175	DES B
NEMA NOM EFF 91.0 %	INS. CL. F ΔT 80 K	IP55	
ENCL TEFC	DUTY CONT.	AMB. 40°C	
CODE H	PF 0.80	SF 1.25	SFA 23.8/11.9
USABLE @208V	21.0 A	SF 1.15	SFA 24.1
7.5HP 5.5kW 50Hz 380V 11.4A 970RPM SF1.00 EFF 88.5% (IE3)			



→ 6309-C3
→ 6209-C3

MOBIL POLYREX EM
13 g 20000 h

ALT 1000 m.a.s.l. 298 Lbs