

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer					
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	12445775		
		Catalog # :	00712ET3E254TC-W22		
Frame	: 254/6TC	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	: 300 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%				
	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%				
	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	: <u>Drive end</u> 6309 C3 <u>Non drive end</u> 6209 C3	Foundation loads			
Sealing	: V'Ring V'Ring	Max. traction : 354 lb			
Lubrication interval	: 20000 h 20000 h	Max. compression : 653 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.		
Rev.	Changes Summary		Performed	Checked	Date
Performed by					
Checked by				Page	Revision
Date	13/04/2022			1 / 21	

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



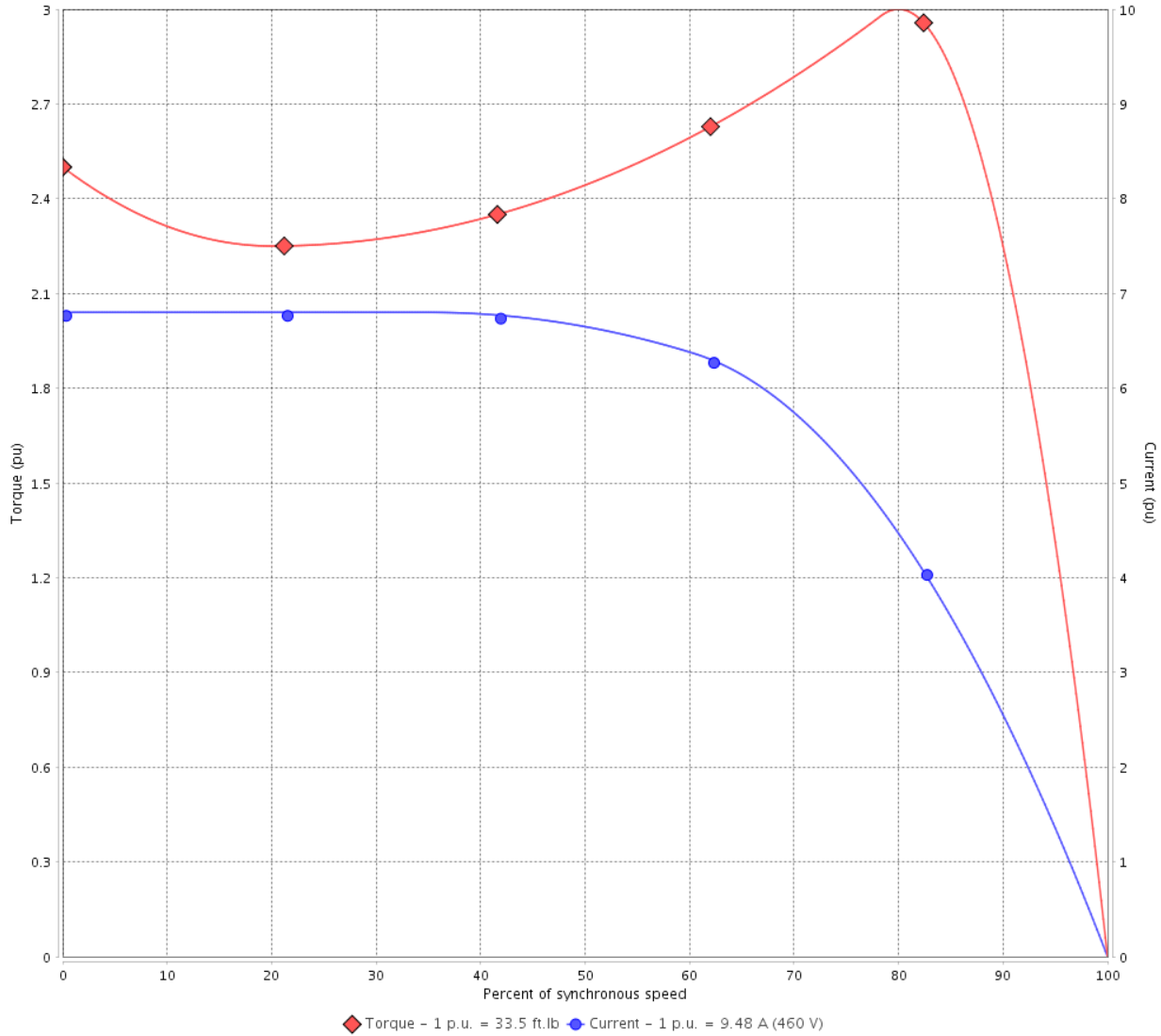
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12445775

Catalog # : 00712ET3E254TC-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)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 2 / 21	Revision
Checked by				
Date	13/04/2022			

TORQUE AND CURRENT VS SPEED CURVE



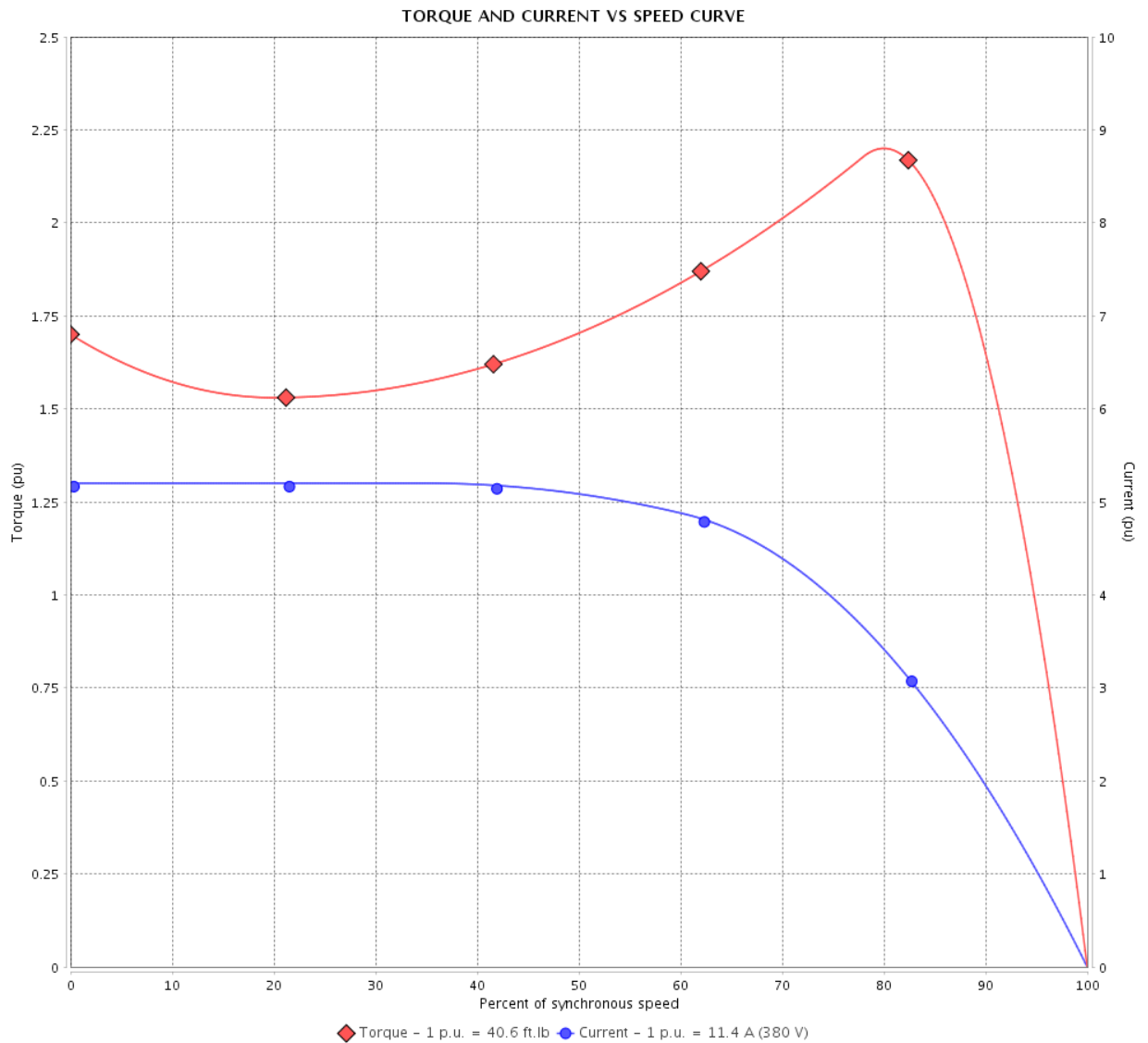
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12445775

Catalog # : 00712ET3E254TC-W22



Performance : 380 V 50 Hz 6P IE3

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

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 3 / 21	Revision
Checked by				
Date	13/04/2022			

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



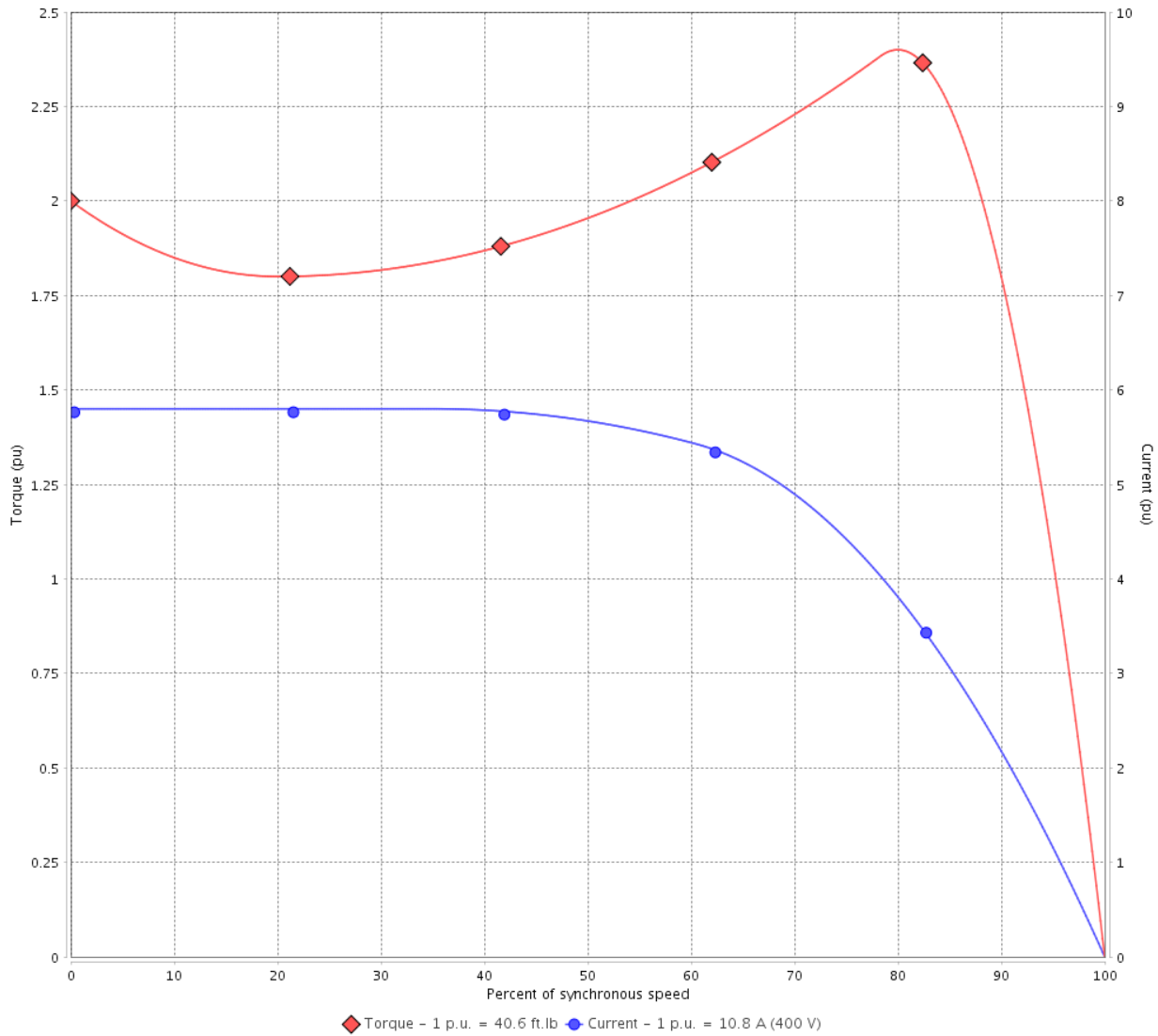
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12445775

Catalog # : 00712ET3E254TC-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)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date	13/04/2022			
			4 / 21	

TORQUE AND CURRENT VS SPEED CURVE



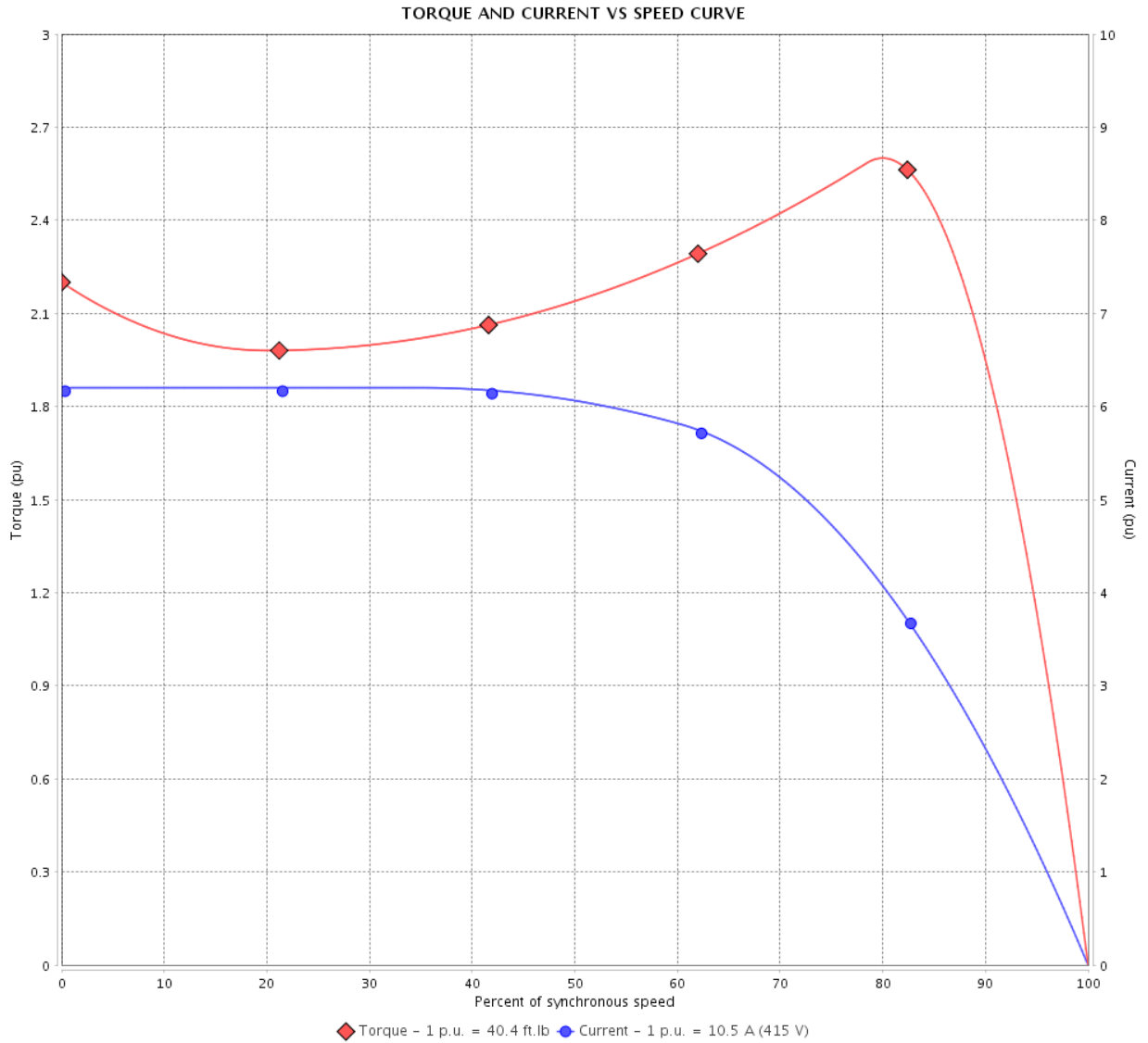
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12445775

Catalog # : 00712ET3E254TC-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)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 5 / 21	Revision
Checked by				
Date	13/04/2022			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



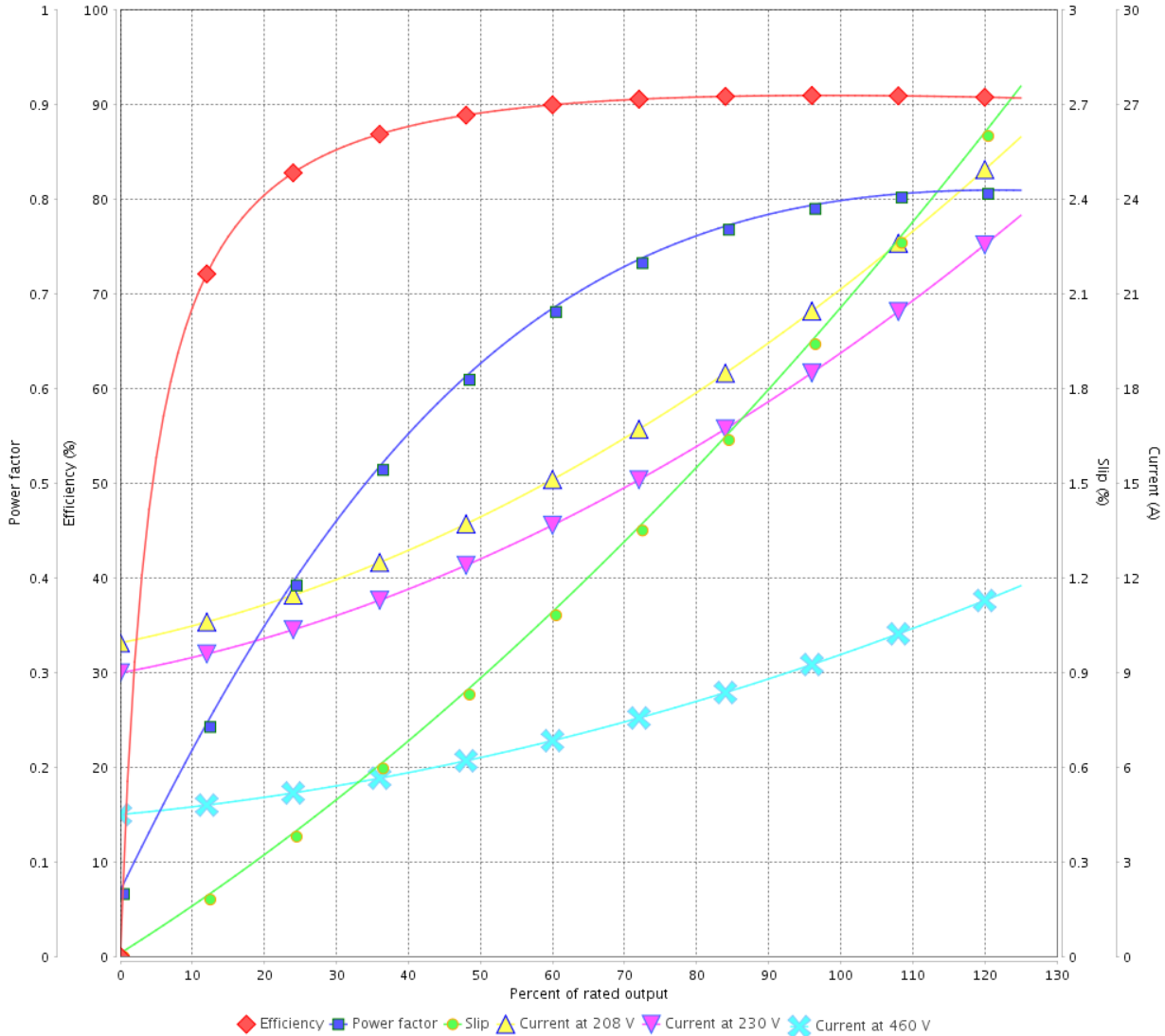
Customer :

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Catalog # : 00712ET3E254TC-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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 6 / 21	Revision
Checked by				
Date	13/04/2022			

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Three Phase Induction Motor - Squirrel Cage

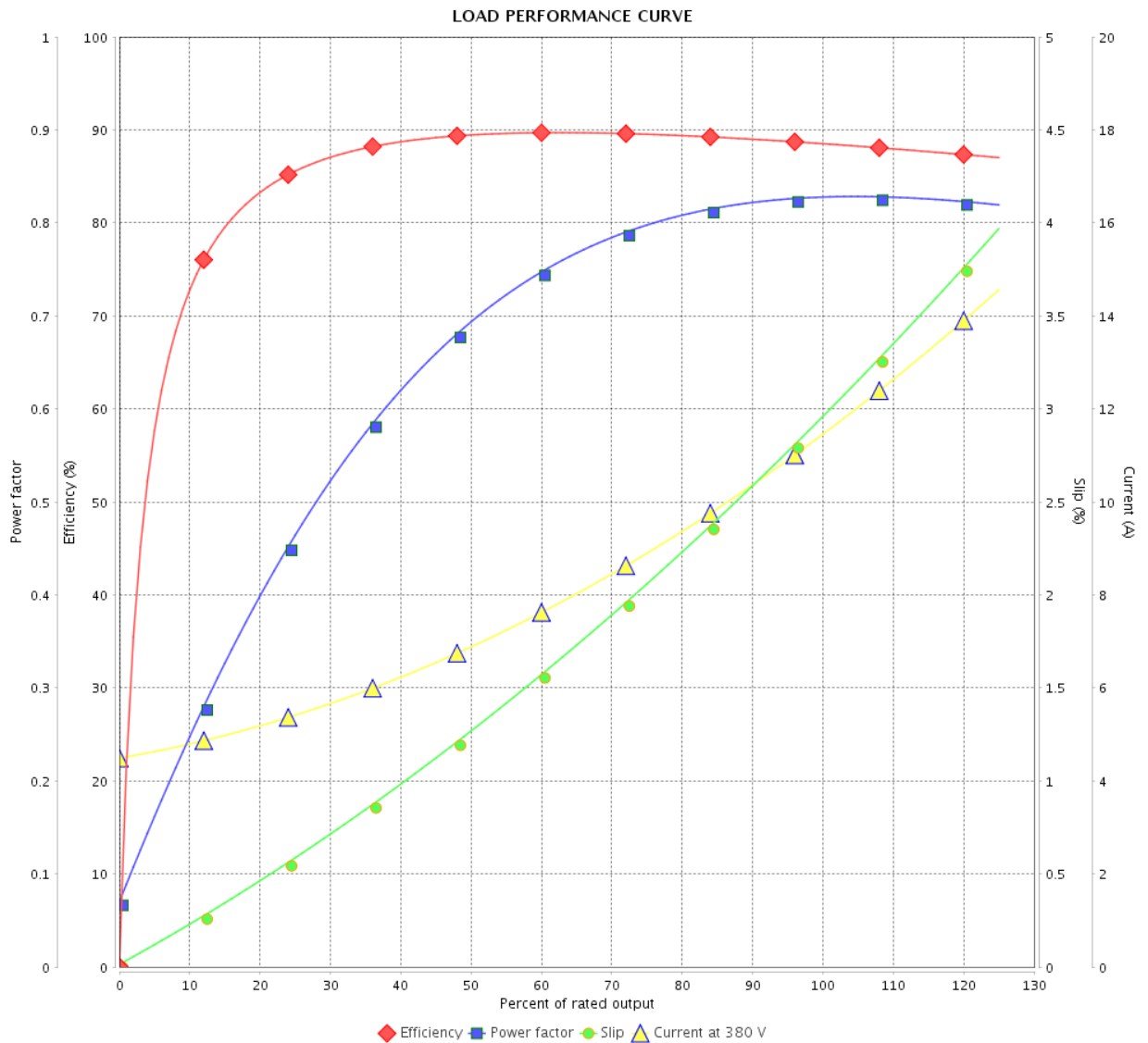


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12445775

Catalog # : 00712ET3E254TC-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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
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Three Phase Induction Motor - Squirrel Cage



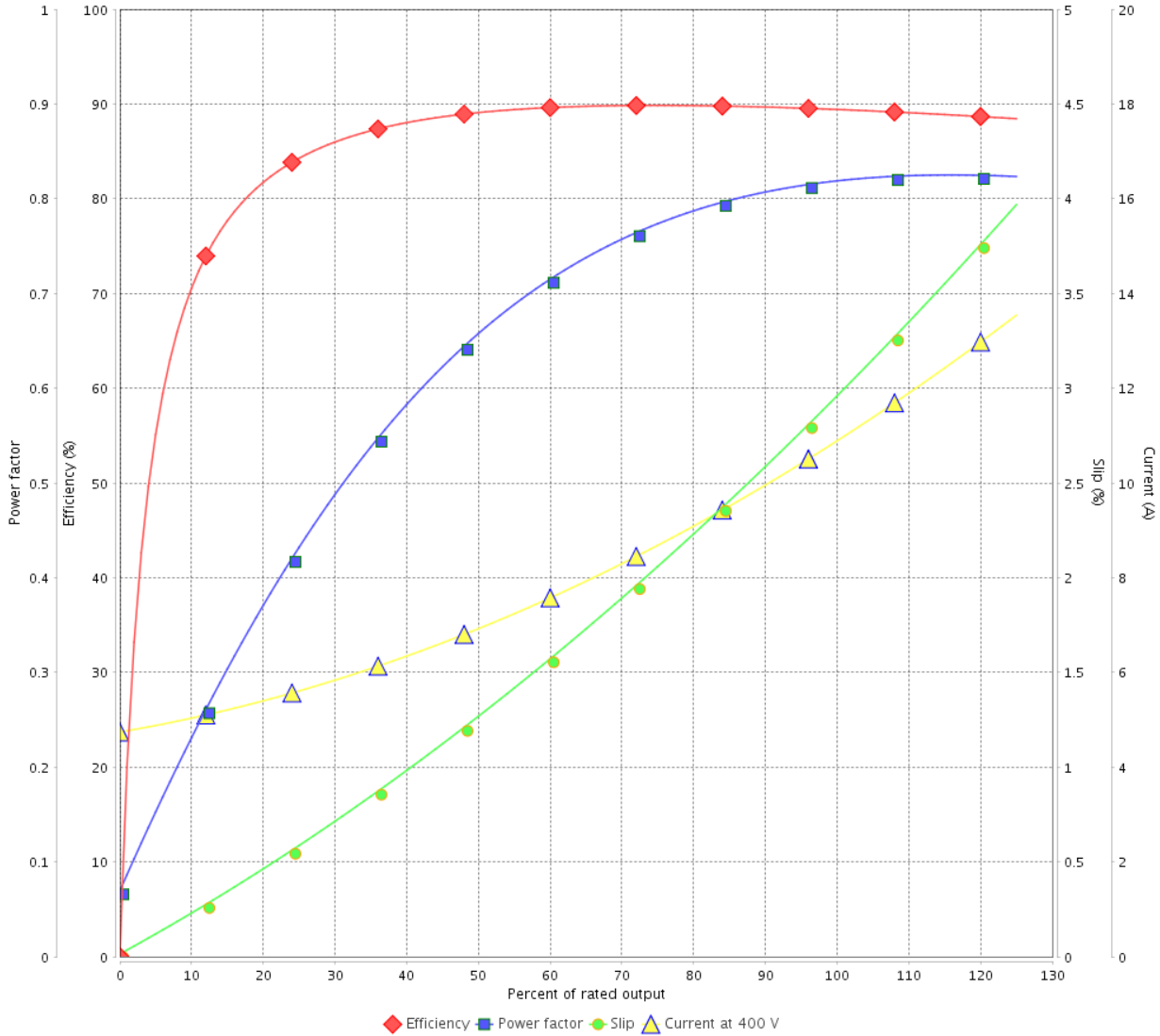
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LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current : 10.8 A
 LRC : 5.8
 Rated torque : 40.6 ft.lb
 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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Performed by			Page	Revision
Checked by				
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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

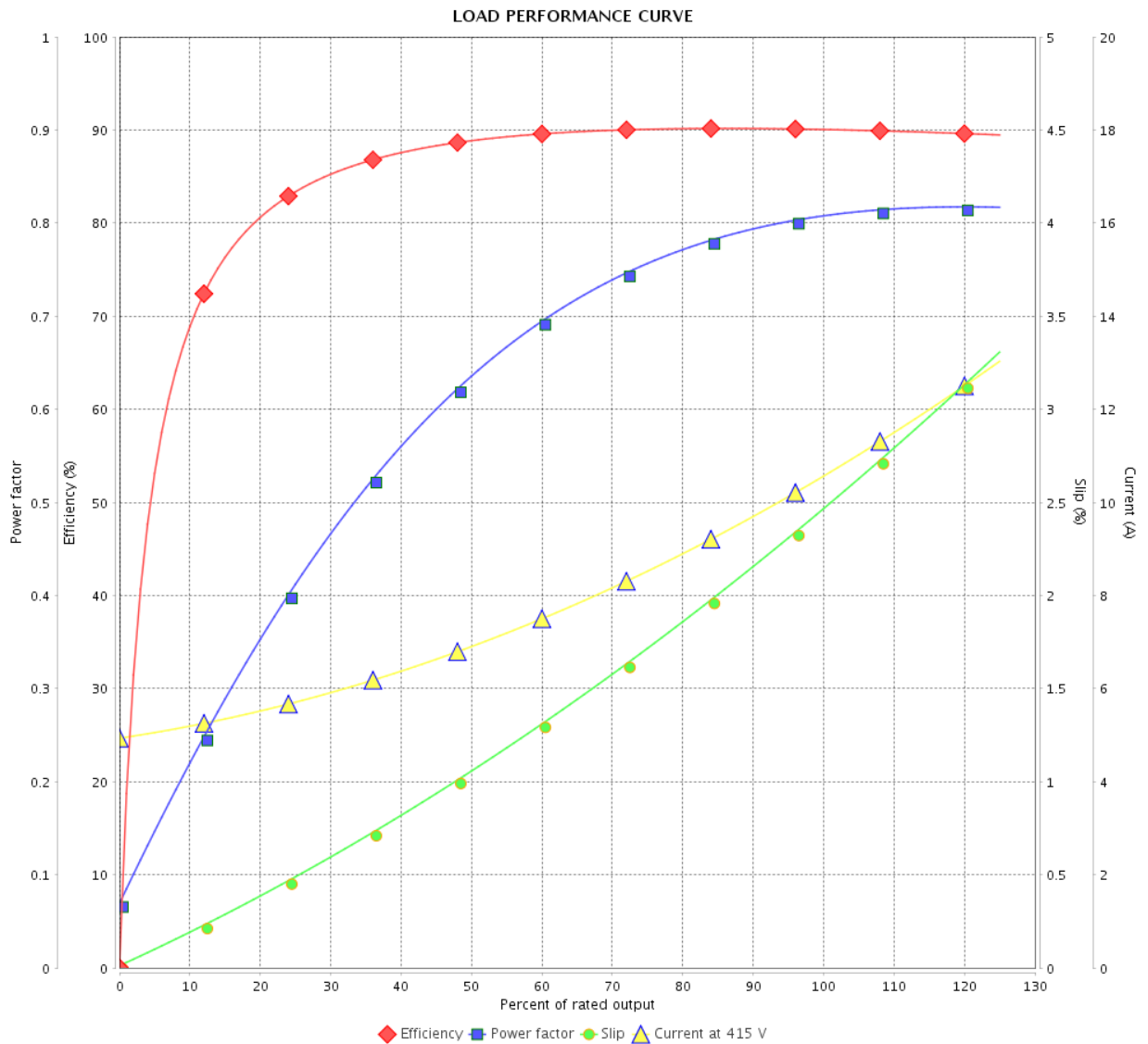


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 Breakdown torque : 260 %
 Rated speed : 975 rpm

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 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		9 / 21		
Date		13/04/2022		

THERMAL LIMIT CURVE

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Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1175 rpm	Design	: B

Heating constant

Cooling constant

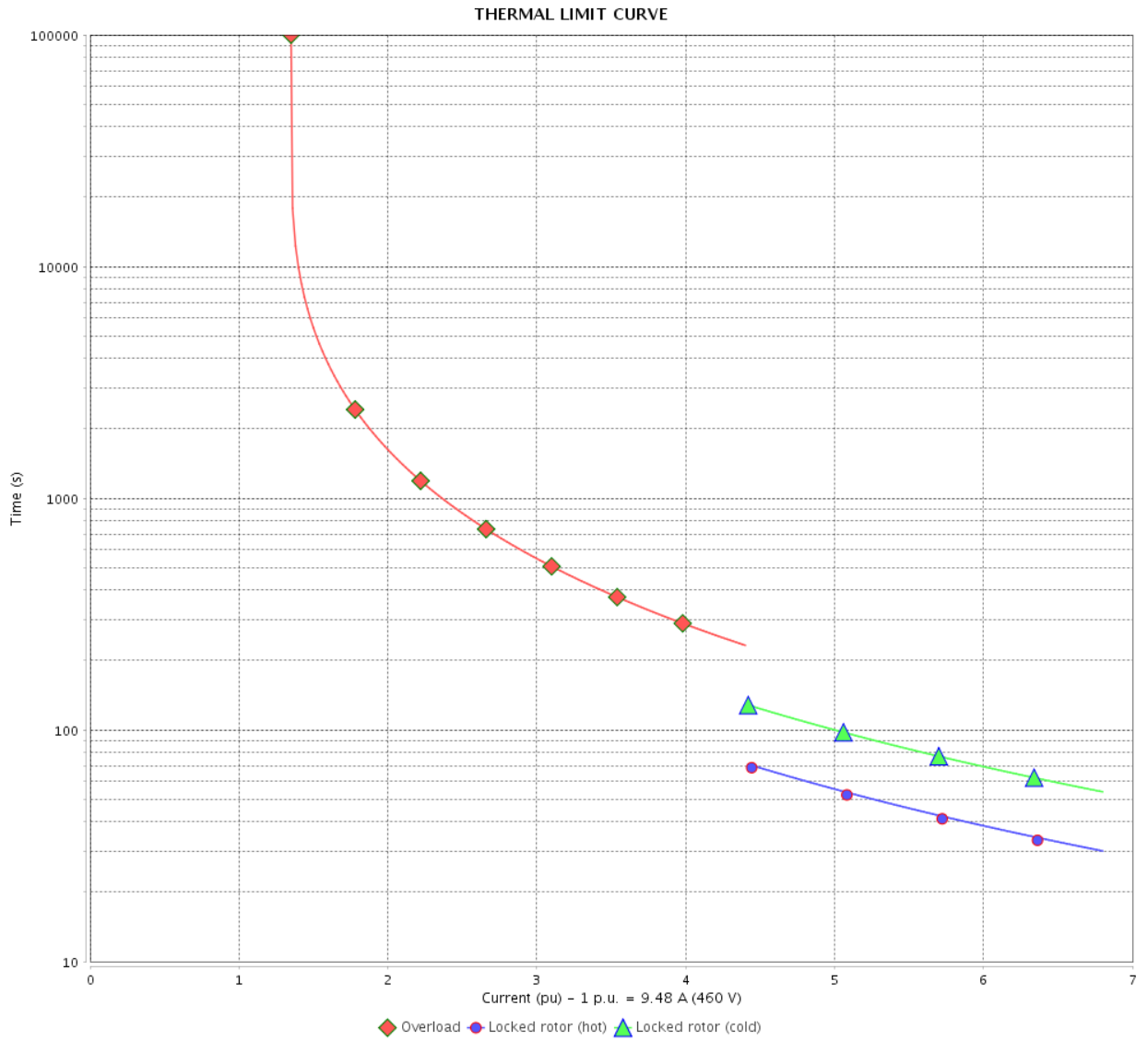
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		10 / 21	

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date				
		Page	Revision	
		11 / 21		

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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

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Cooling constant

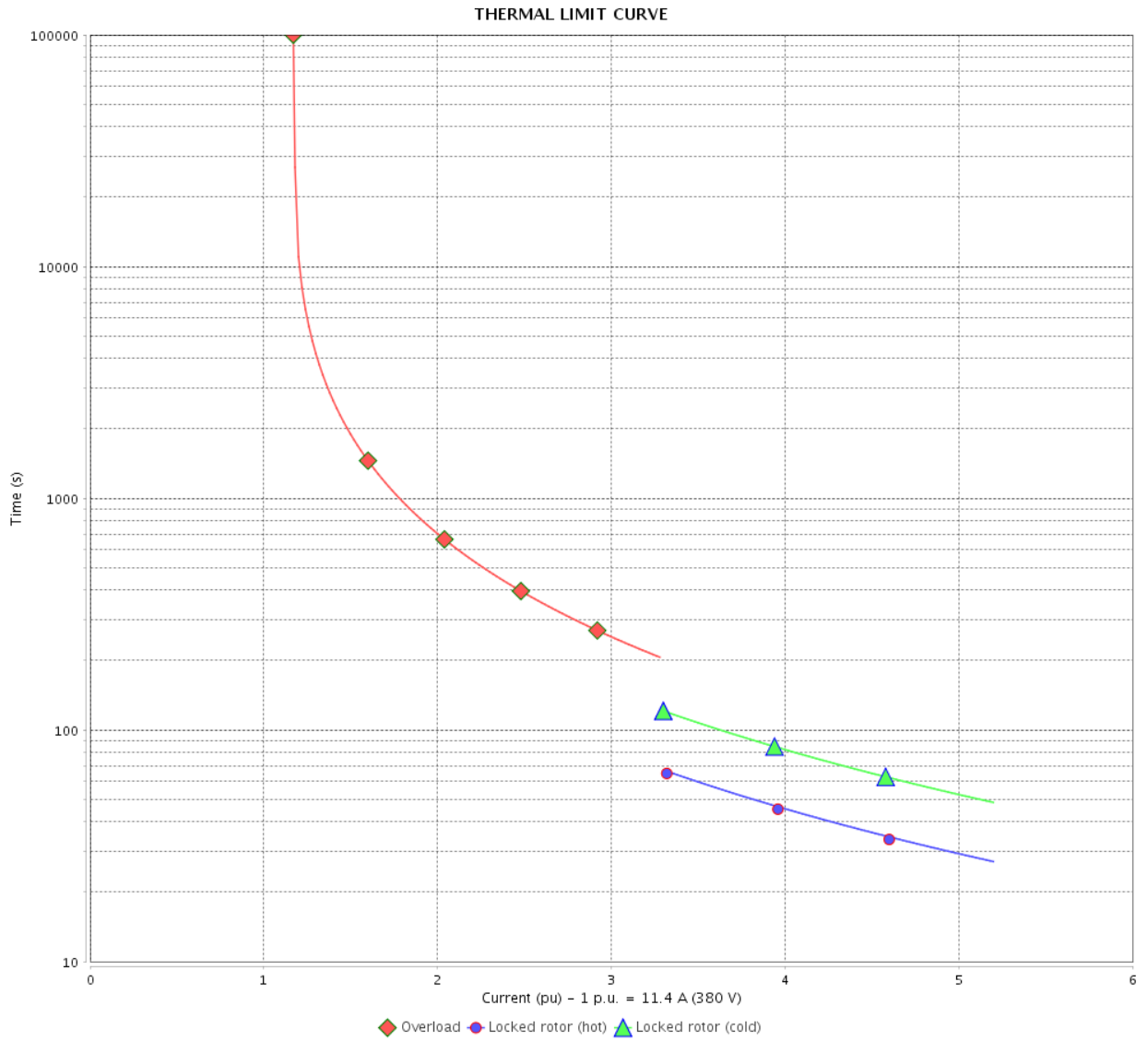
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Performed by				
Checked by			Page	Revision
Date	13/04/2022		12 / 21	

THERMAL LIMIT CURVE

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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		13 / 21		
Date		13/04/2022		

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Product code : 12445775

Catalog # : 00712ET3E254TC-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

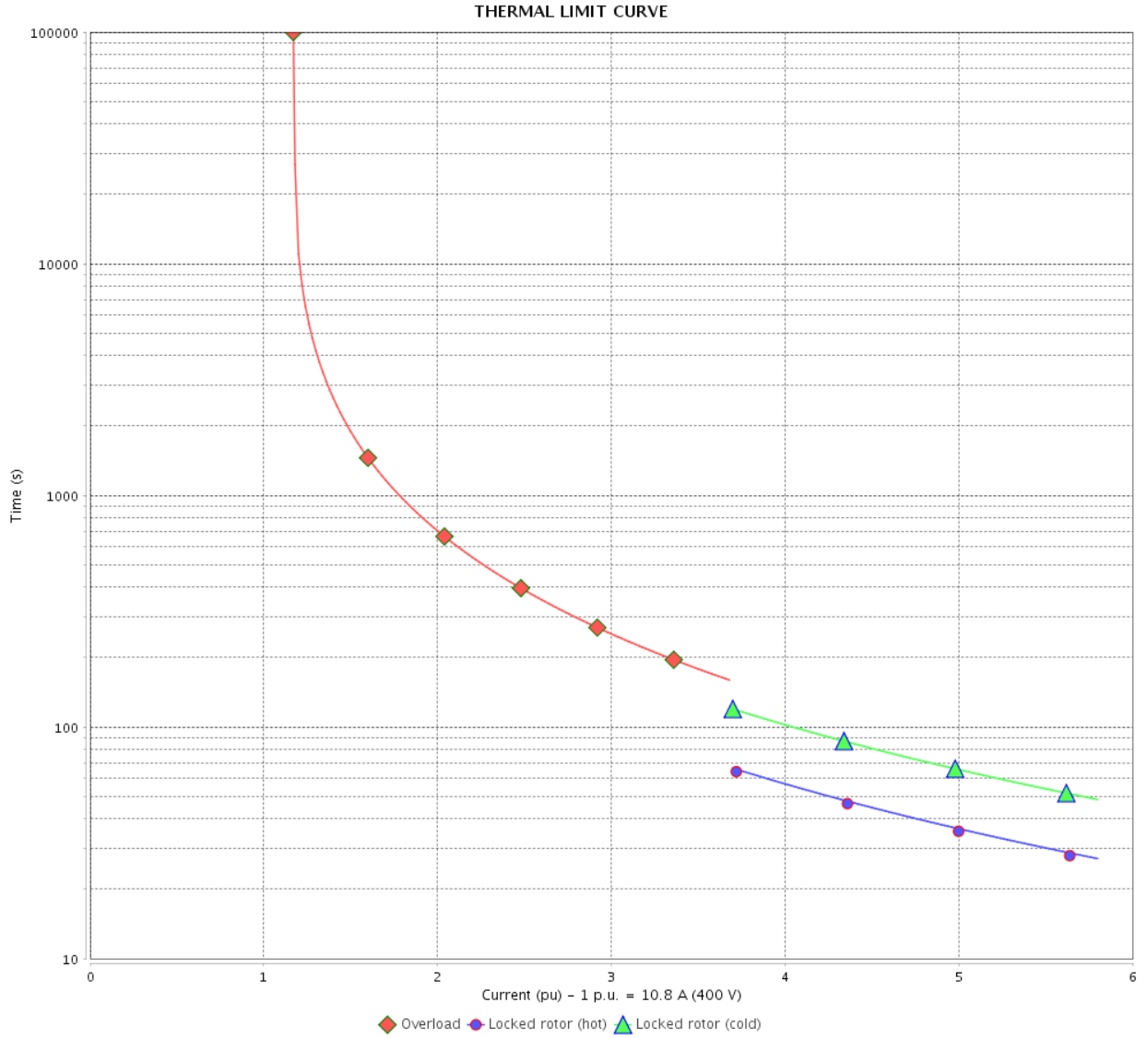
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Performed by				
Checked by			Page	Revision
Date	13/04/2022		14 / 21	

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		15 / 21		
Date		13/04/2022		

THERMAL LIMIT CURVE



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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

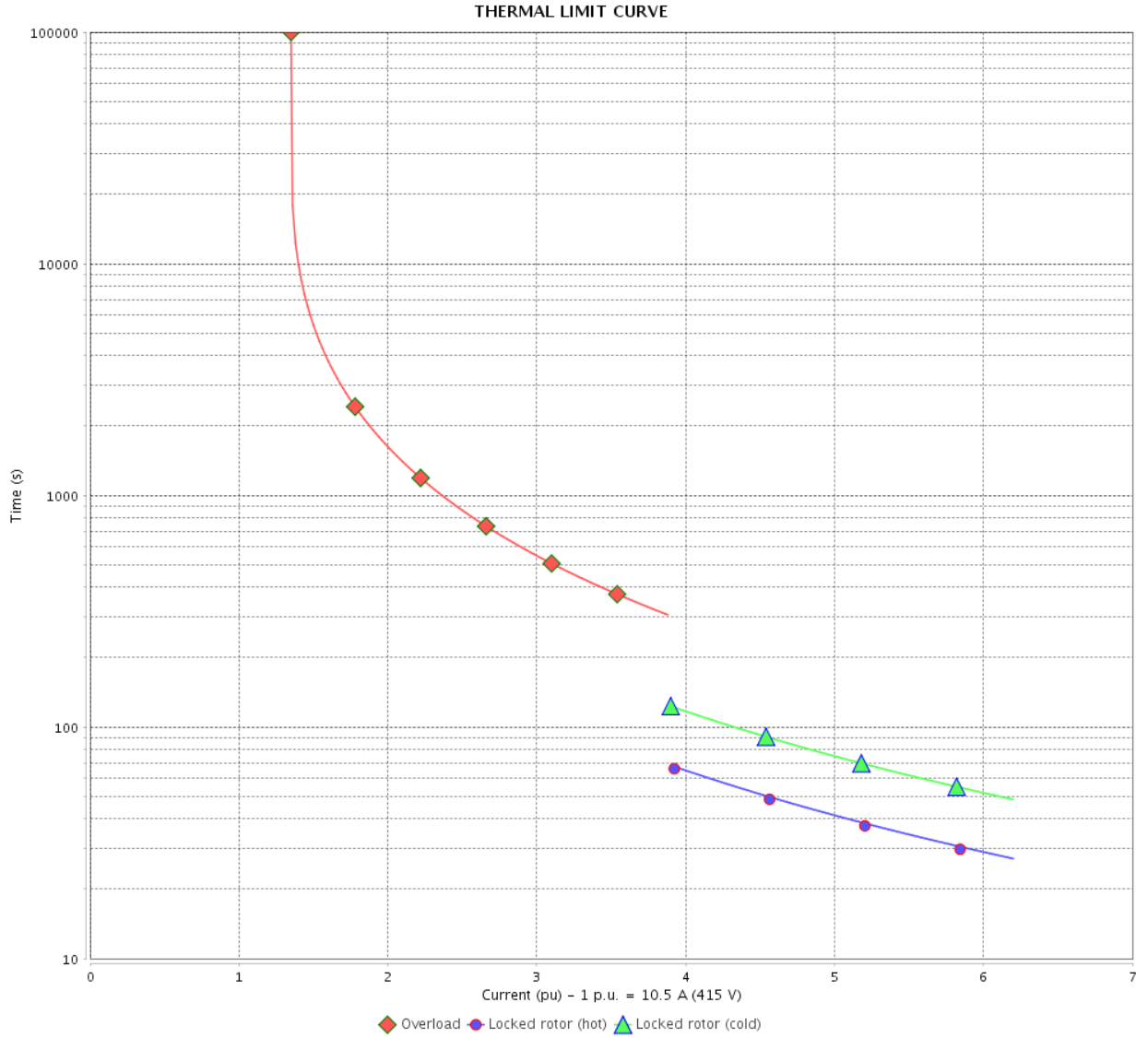
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Performed by				
Checked by			Page	Revision
Date	13/04/2022		16 / 21	

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 17 / 21		Revision
Checked by				
Date				

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



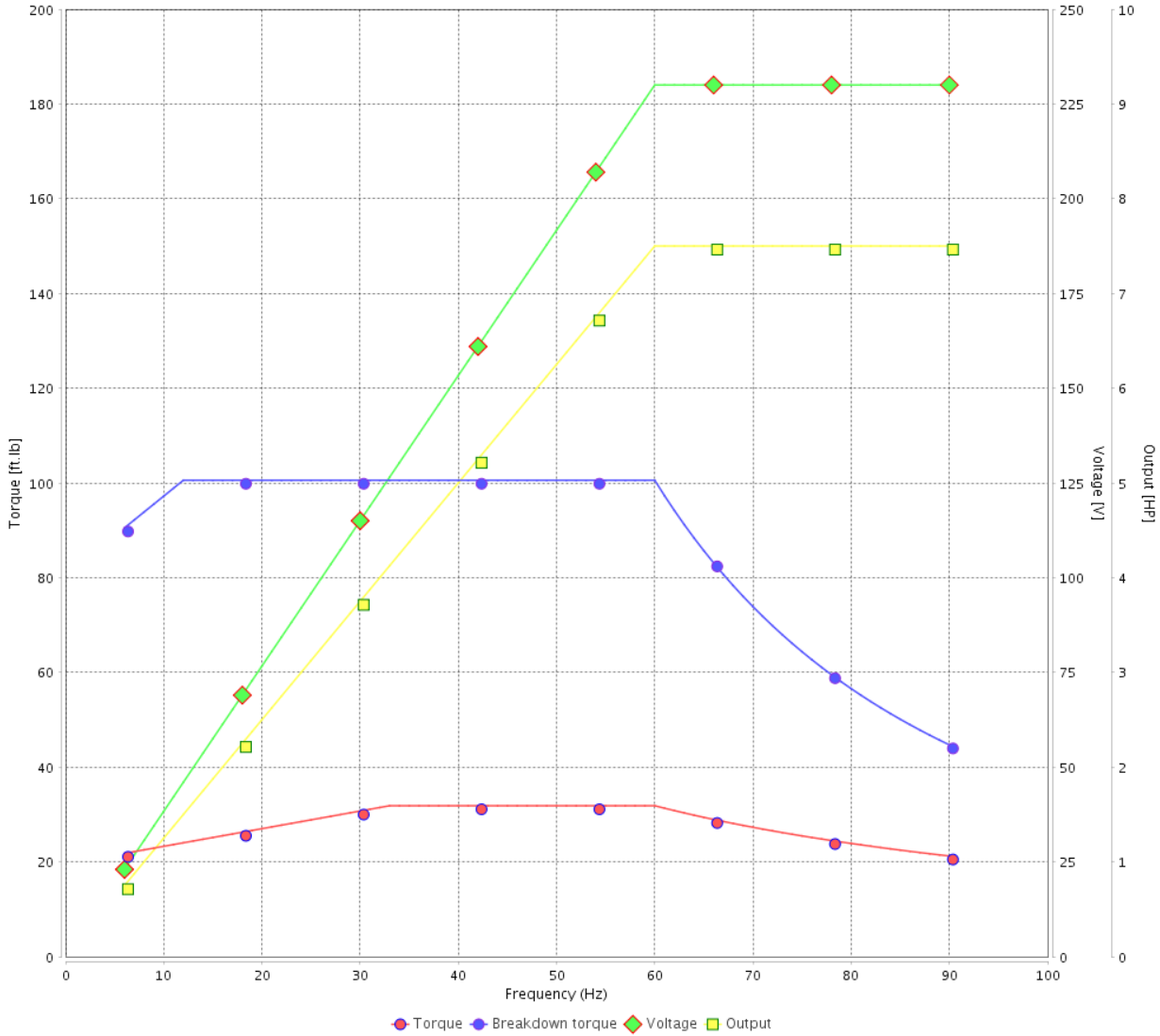
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12445775

Catalog # : 00712ET3E254TC-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
Performed by			Page 18 / 21	Revision
Checked by				
Date	13/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

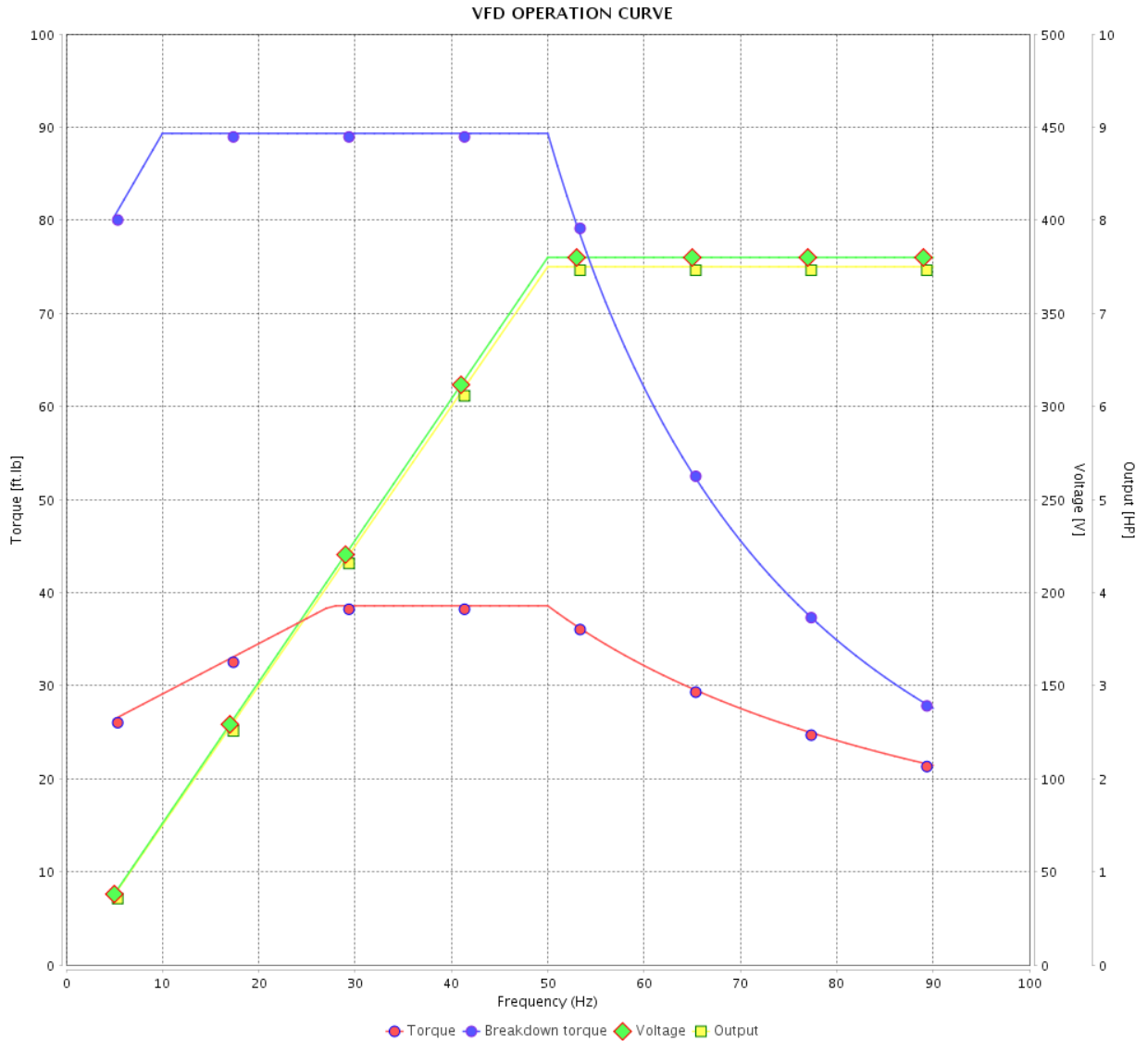


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12445775

Catalog # : 00712ET3E254TC-W22



Performance : 380 V 50 Hz 6P IE3

Rated current : 11.4 A
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 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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Performed by		Page		Revision
Checked by		19 / 21		
Date	13/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

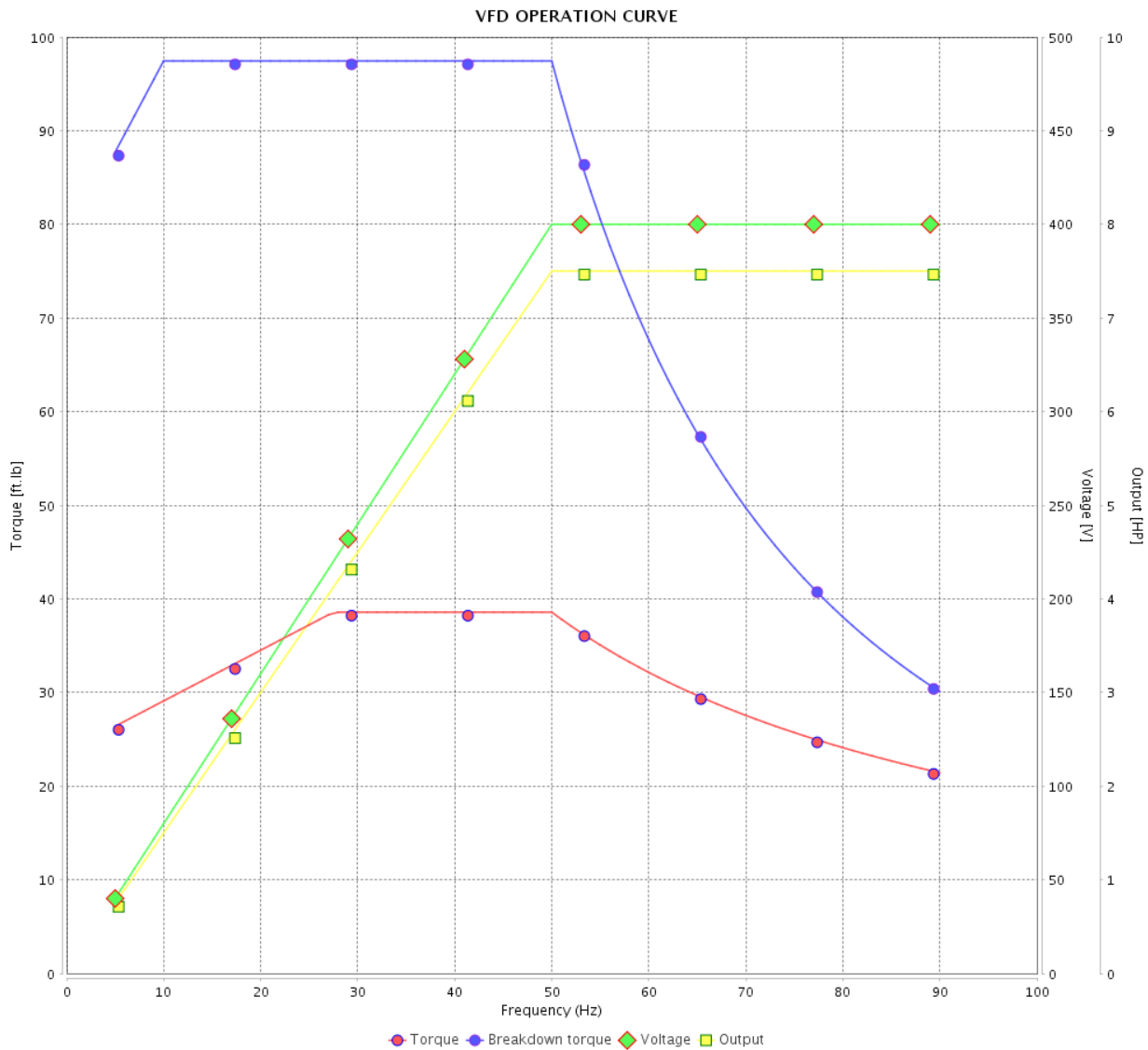


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Performance : 400 V 50 Hz 6P IE3

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 Locked rotor torque : 200 %
 Breakdown torque : 240 %
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 Insulation class : F
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Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 20 / 21	Revision
Checked by				
Date	13/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

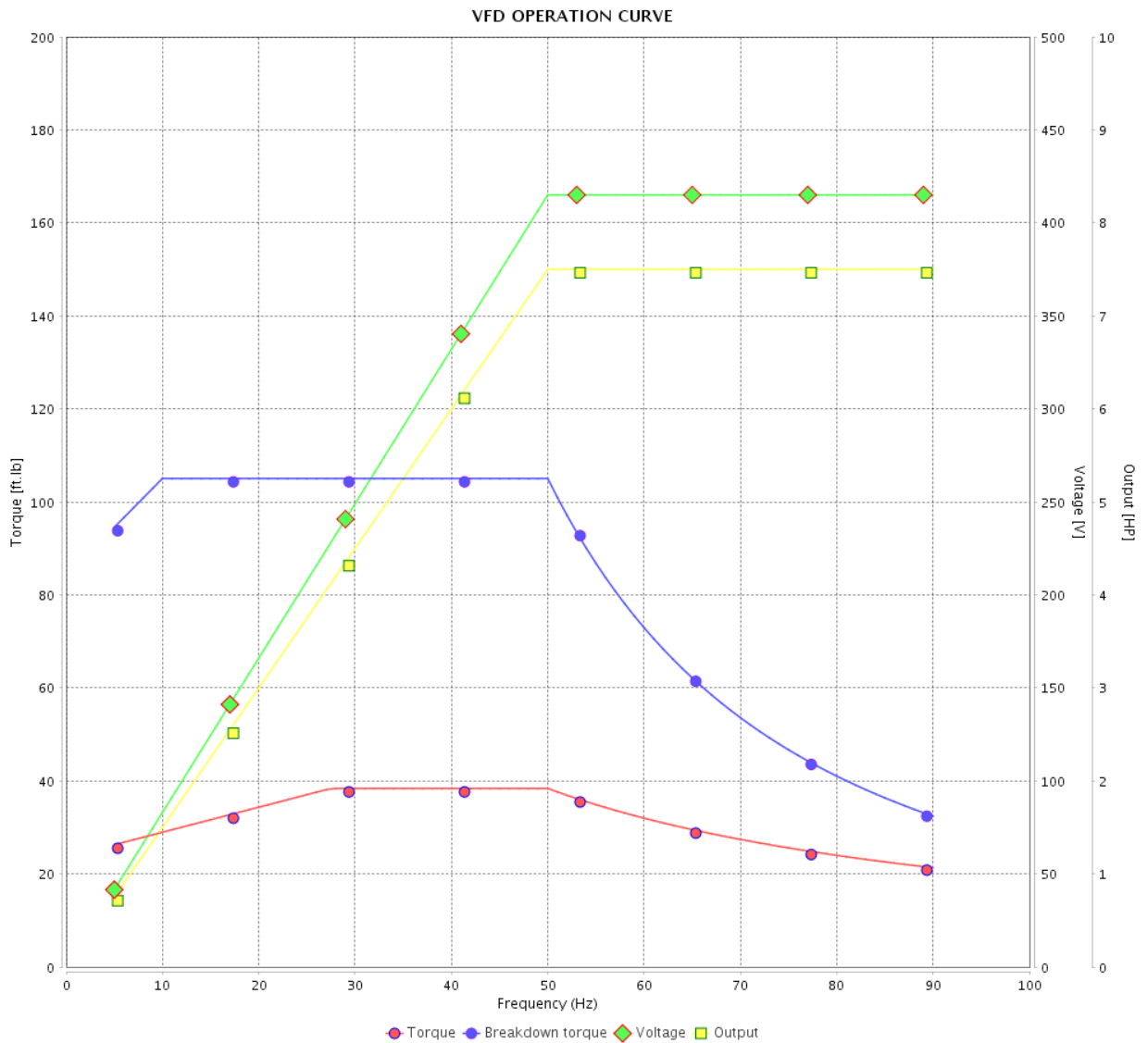


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 Breakdown torque : 260 %
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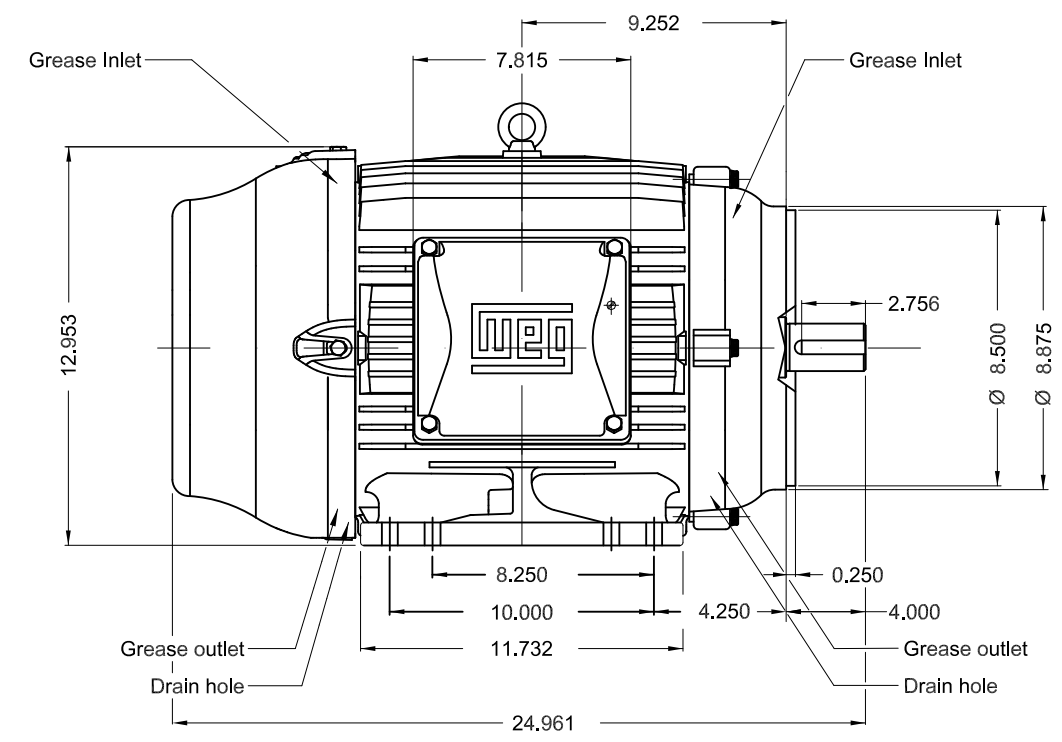
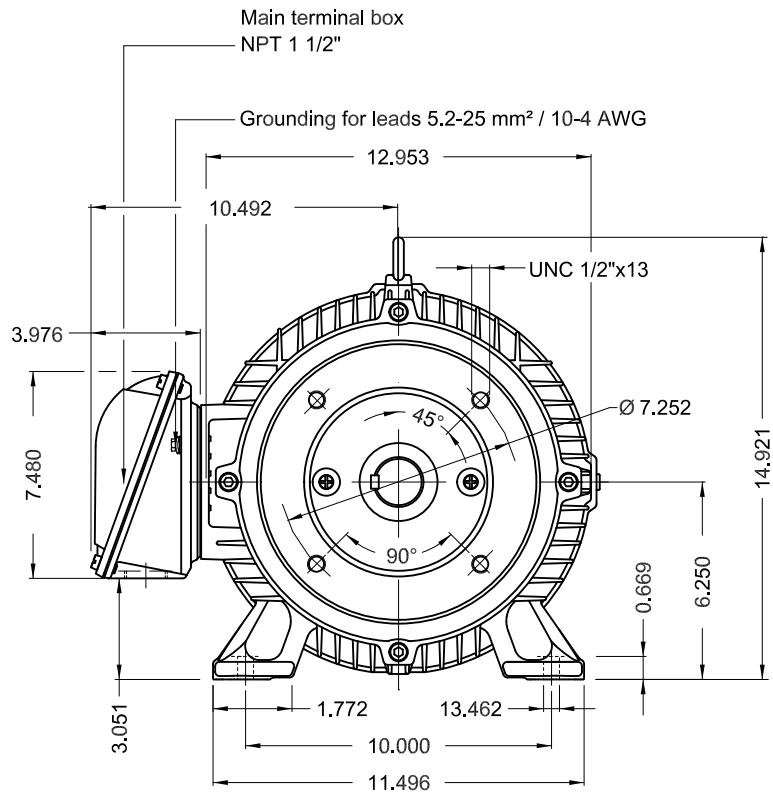
Rev.	Changes Summary	Performed	Checked	Date
Performed by				Page 21 / 21
Checked by				
Date	13/04/2022			

1 2 3 4 5 6

A

B

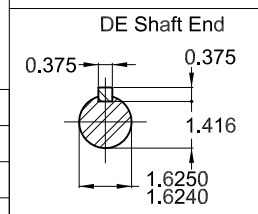
C



D

E

Without vertical jackscrews
 Color RAL 5009
 Painting plan 203A
 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 W22 PREM. EFF. FRAME 254/6TC IP55 TEFC					
CHECKED							
RELEASED							
REL DT.	WMO		Jaragua do Sul	Product Engineering	SHEET	1 / 1	

PREVIEW
WDD





FOR SAFE AREA
Mod.TE1BFOXON
CC029A



For use on 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 use on PWM: Gr. A, B, C, D and F,
VT 1000:1, CT 20:1, 1.00SF - T3A

MODEL 00712ET3E254TC-W22

Inverter Duty Motor
Severe Duty

PH3 60Hz Fr. 254/6TC 1000m.a.s.l. IP55 TEFC 300lb

V 230/460

A 19.0/9.48

HP 7.5

kW 5.5

SF 1.25

SFA 23.8/11.9

RPM 1175

PF 0.80

AMB 40°C

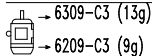
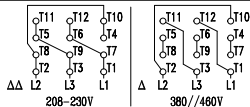
INS cl. F DT80K NEMA NOM EFF 91.0%

DUTY CONT.

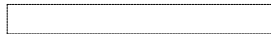
DES B Code H

USABLE @208V 21.0A SF 1.15 SFA 24.1

7.5HP 5.5kW 50Hz 380V 11.4A 970RPM SF 1.00 EFF 88.5% (IE3)



MOBIL POLYREX EM (20000h)



MADE IN BRAZIL
12445775