

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	12408378		
		Catalog # :	15012XT3G504		
Frame	: 504/5T	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	: 2715 lb		
Protection degree	: IP55	Moment of inertia (J)	: 134 sq.ft.lb		
Design	: B				
Output [HP]	150	125	125	125	
Poles	6	6	6	6	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	460	380	400	415	
Rated current [A]	174	173	166	164	
L. R. Amperes [A]	1305	1228	1311	1394	
LRC [A]	7.5x(Code H)	7.1x(Code H)	7.9x(Code J)	8.5x(Code K)	
No load current [A]	66.0	66.0	70.0	73.0	
Rated speed [RPM]	1190	990	990	990	
Slip [%]	0.83	1.00	1.00	1.00	
Rated torque [ft.lb]	662	663	663	663	
Locked rotor torque [%]	260	240	270	290	
Breakdown torque [%]	260	260	290	310	
Service factor	1.15	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	75s (cold) 42s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)	
Noise level ²	73.0 dB(A)	69.0 dB(A)	69.0 dB(A)	69.0 dB(A)	
Efficiency (%)	25%	94.9	94.4	94.3	94.3
	50%	95.0	94.5	94.5	94.5
	75%	95.8	95.0	95.4	95.4
	100%	95.8	95.0	95.4	95.4
Power Factor	25%	0.44	0.44	0.41	0.38
	50%	0.68	0.68	0.65	0.62
	75%	0.78	0.78	0.76	0.74
	100%	0.83	0.83	0.82	0.80
Bearing type	: <u>Drive end</u> 6319 C3 <u>Non drive end</u> 6316 C3	Foundation loads			
Sealing	: Viton Oil Seal Viton Seal	Max. traction	: 3574 lb		
		Max. compression	: 6289 lb		
Lubrication interval	: 11094 h 12823 h				
Lubricant amount	: 45 g 34 g				
Lubricant type	: Mobil Polyrex EM				
Notes					
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 / 22		

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		2 / 22	

TORQUE AND CURRENT VS SPEED CURVE



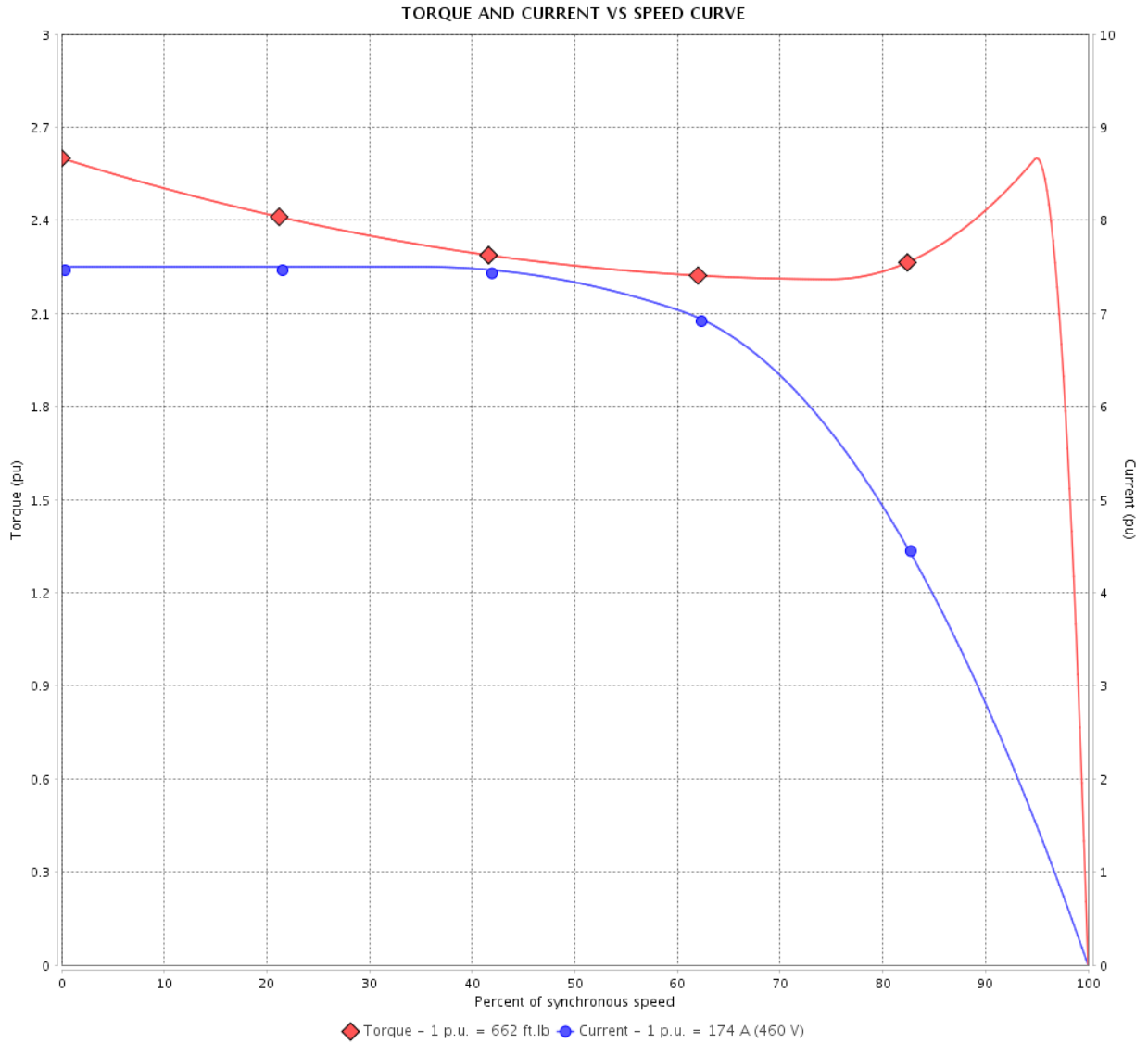
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408378

Catalog # : 15012XT3G504



Performance : 460 V 60 Hz 6P

Rated current	: 174 A	Moment of inertia (J)	: 134 sq.ft.lb
LRC	: 7.5	Duty cycle	: Cont.(S1)
Rated torque	: 662 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.15
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1190 rpm	Design	: B

Locked rotor time : 75s (cold) 42s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 3 / 22	Revision
Checked by				
Date	13/04/2022			

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



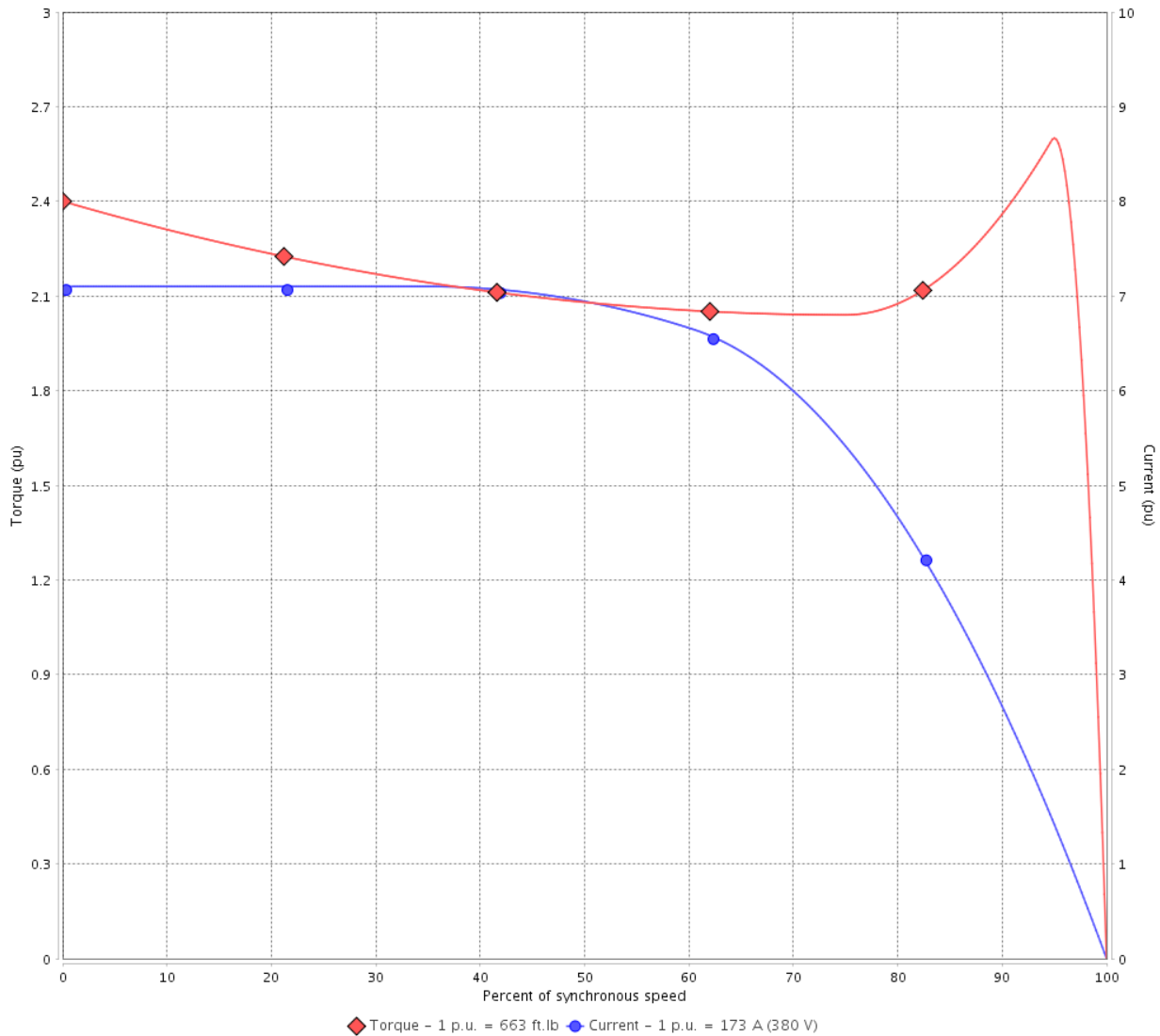
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408378

Catalog # : 15012XT3G504

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 6P IE3

Rated current	: 173 A	Moment of inertia (J)	: 134 sq.ft.lb
LRC	: 7.1	Duty cycle	: Cont.(S1)
Rated torque	: 663 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 990 rpm	Design	: B

Locked rotor time : 36s (cold) 20s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 22	Revision
Checked by				
Date	13/04/2022			

TORQUE AND CURRENT VS SPEED CURVE



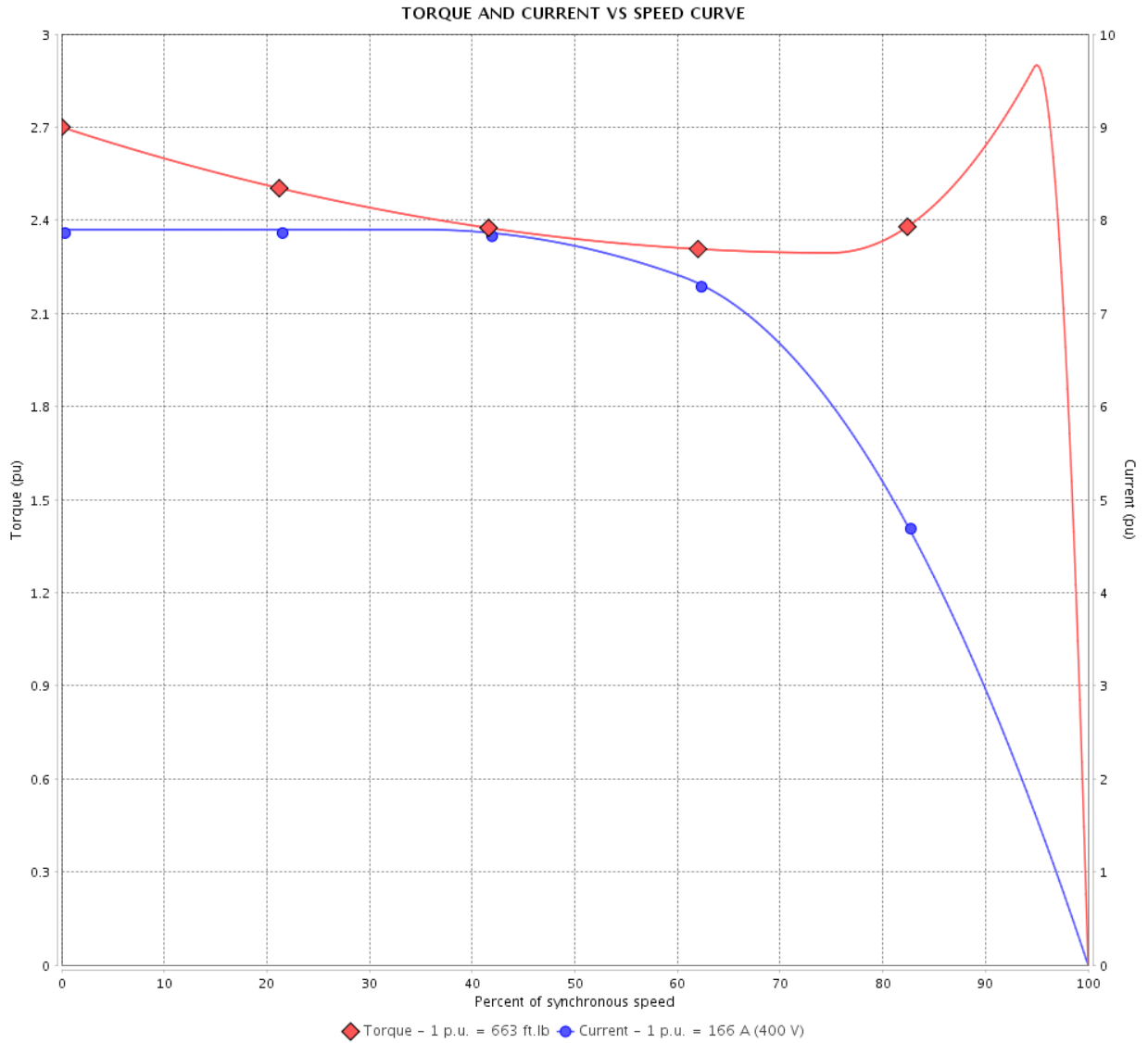
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408378

Catalog # : 15012XT3G504



Performance : 400 V 50 Hz 6P IE3

Rated current	: 166 A	Moment of inertia (J)	: 134 sq.ft.lb
LRC	: 7.9	Duty cycle	: Cont.(S1)
Rated torque	: 663 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 990 rpm	Design	: B

Locked rotor time : 36s (cold) 20s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 5 / 22	Revision
Checked by				
Date	13/04/2022			

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



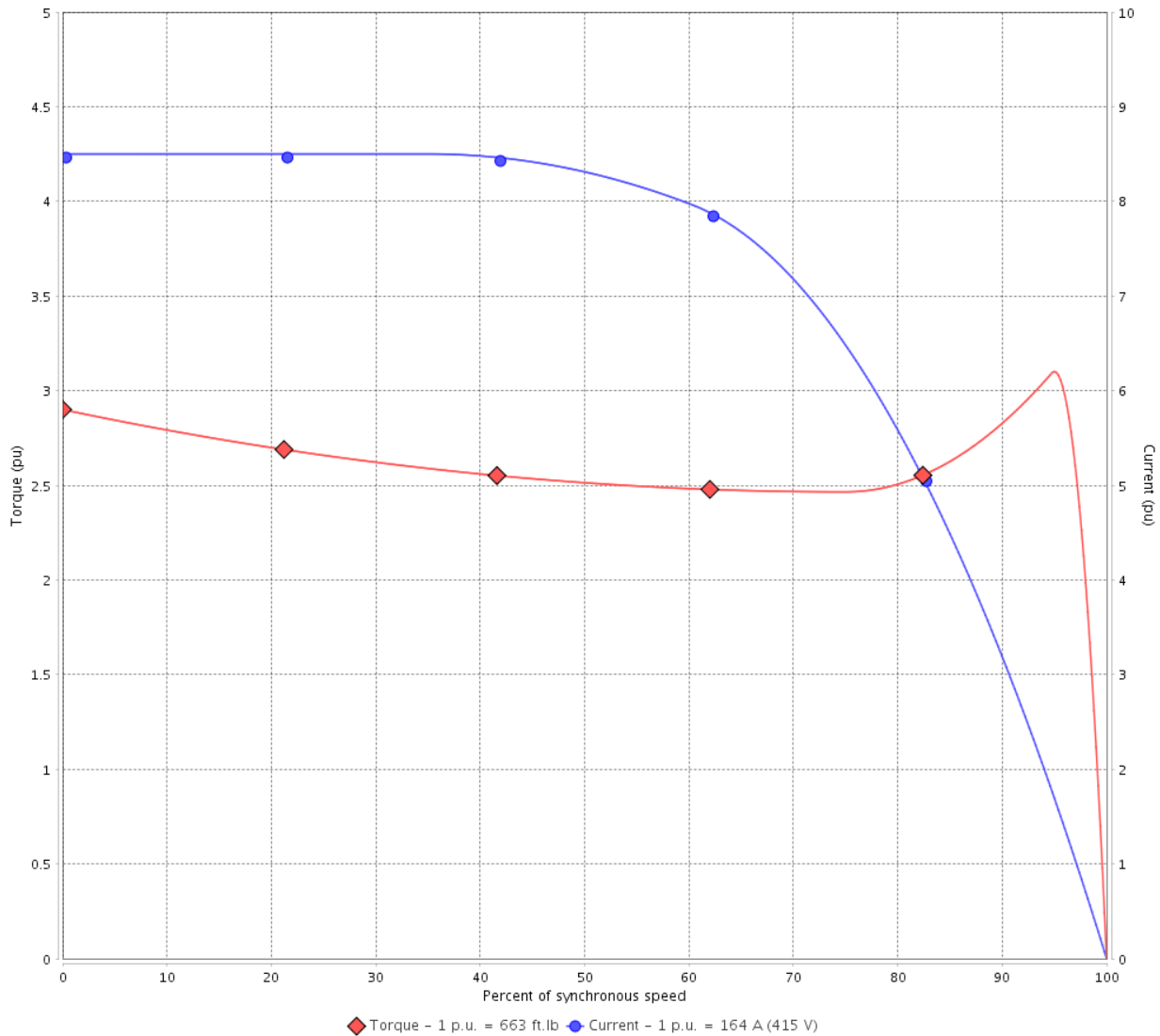
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408378

Catalog # : 15012XT3G504

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 6P IE3

Rated current	: 164 A	Moment of inertia (J)	: 134 sq.ft.lb
LRC	: 8.5	Duty cycle	: Cont.(S1)
Rated torque	: 663 ft.lb	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.00
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 990 rpm	Design	: B

Locked rotor time : 36s (cold) 20s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 6 / 22	Revision
Checked by				
Date	13/04/2022			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

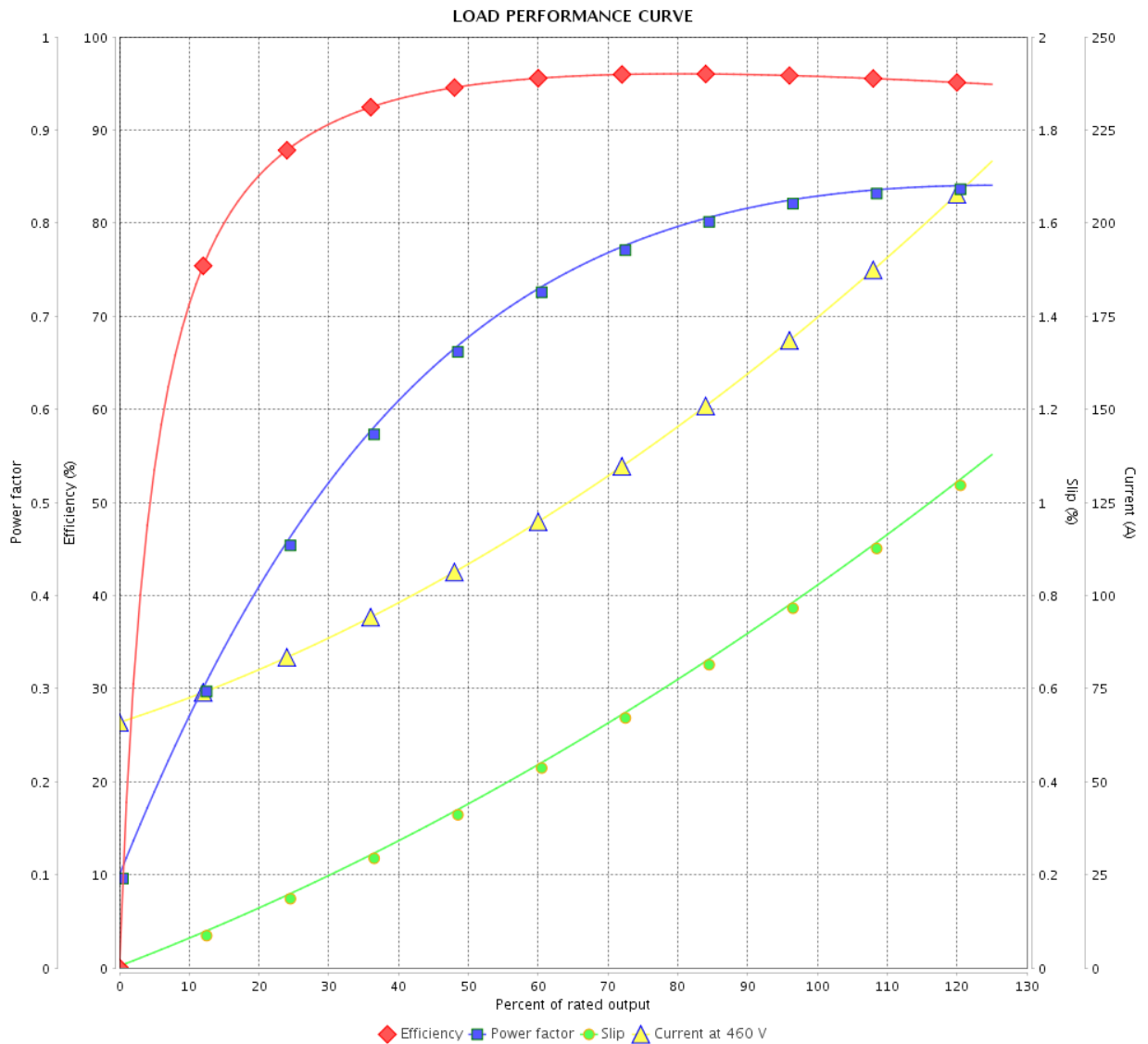


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408378

Catalog # : 15012XT3G504



Performance : 460 V 60 Hz 6P

Rated current : 174 A
 LRC : 7.5
 Rated torque : 662 ft.lb
 Locked rotor torque : 260 %
 Breakdown torque : 260 %
 Rated speed : 1190 rpm

Moment of inertia (J) : 134 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
Performed by		Page		Revision
Checked by		7 / 22		
Date		13/04/2022		

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

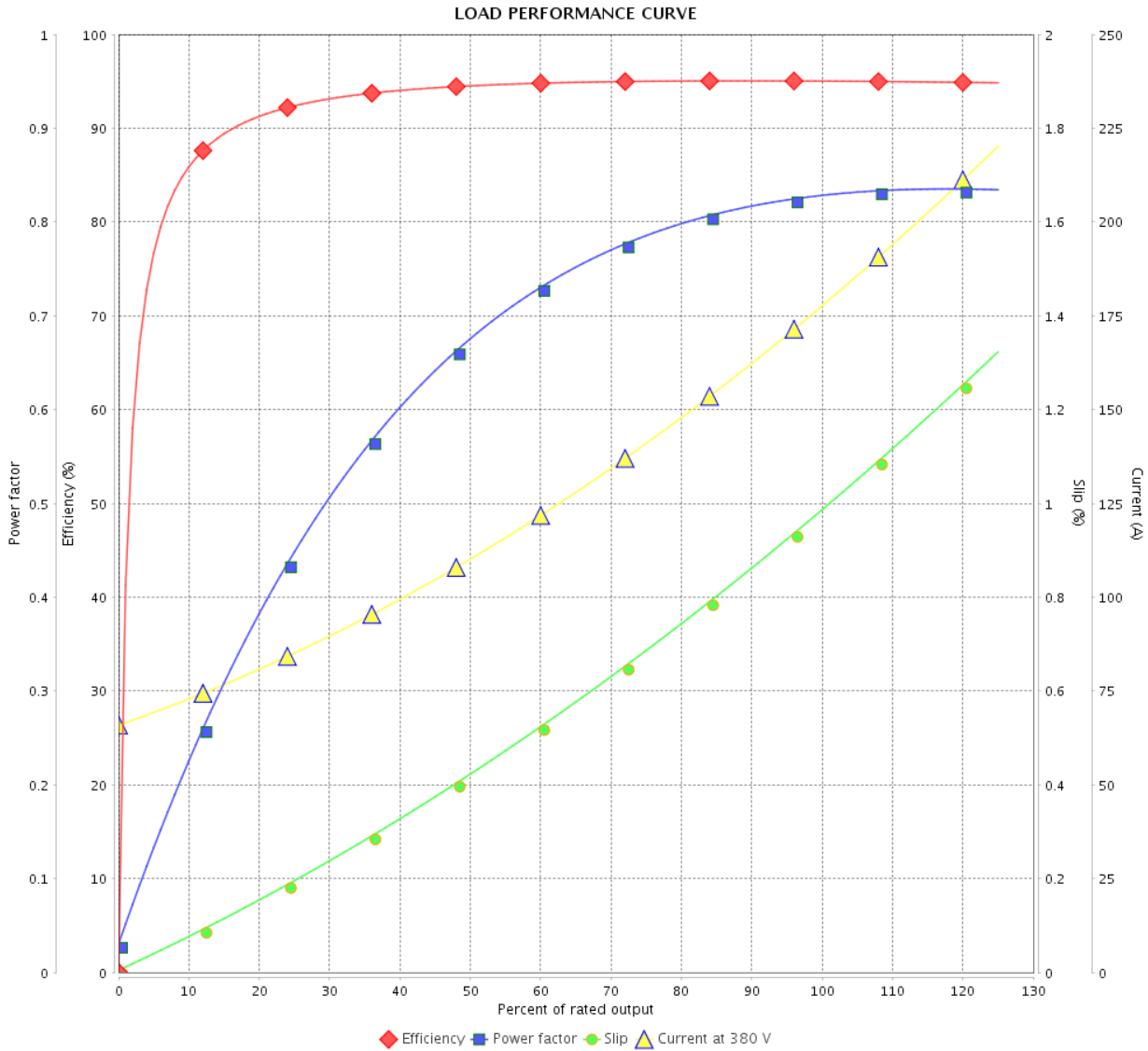


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408378

Catalog # : 15012XT3G504



Performance : 380 V 50 Hz 6P IE3

Rated current	: 173 A	Moment of inertia (J)	: 134 sq.ft.lb
LRC	: 7.1	Duty cycle	: Cont.(S1)
Rated torque	: 663 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 990 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 8 / 22	Revision
Checked by				
Date	13/04/2022			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

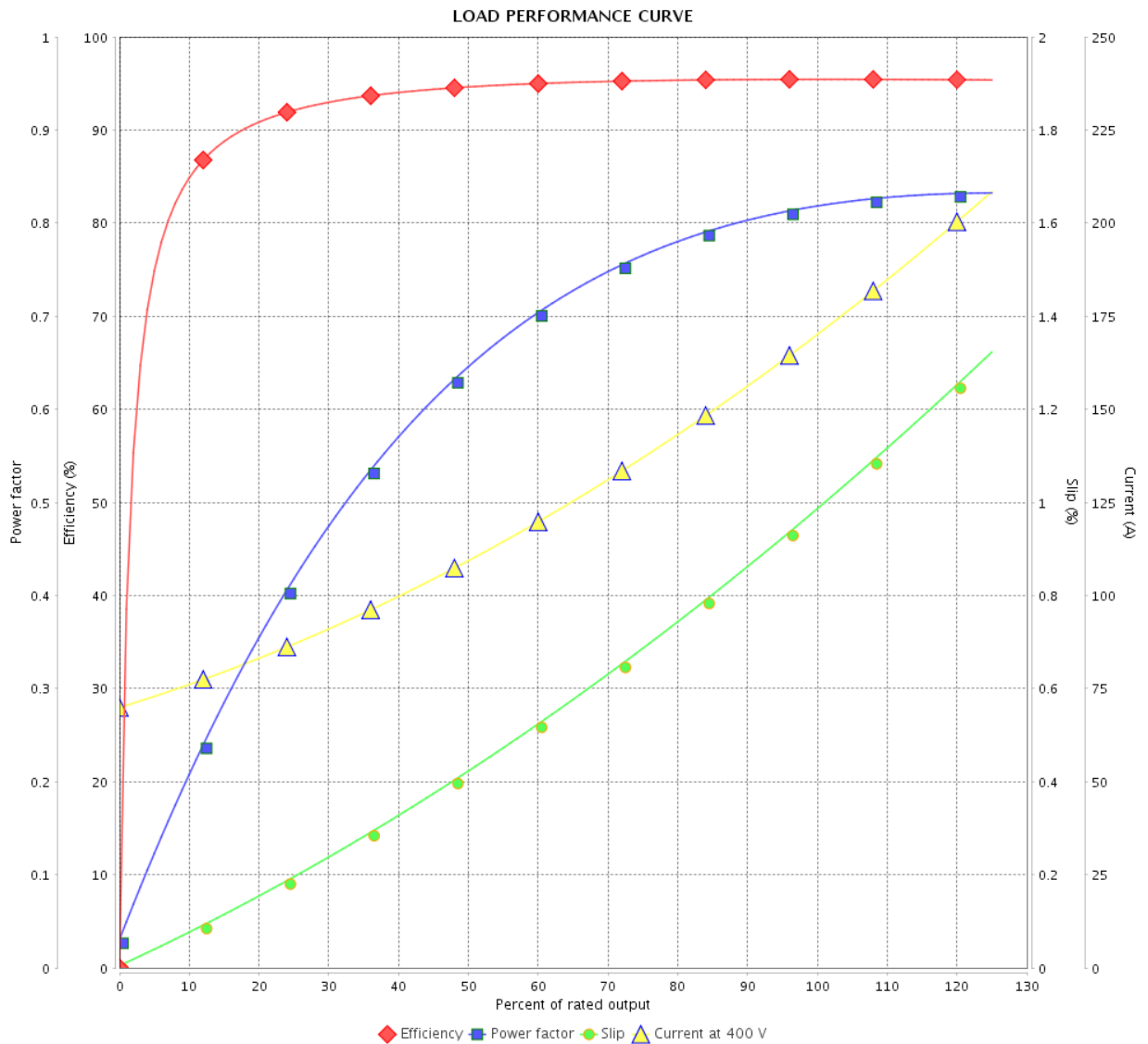


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408378

Catalog # : 15012XT3G504



Performance : 400 V 50 Hz 6P IE3

Rated current : 166 A
 LRC : 7.9
 Rated torque : 663 ft.lb
 Locked rotor torque : 270 %
 Breakdown torque : 290 %
 Rated speed : 990 rpm

Moment of inertia (J) : 134 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
Performed by		Page		Revision
Checked by		9 / 22		
Date		13/04/2022		

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

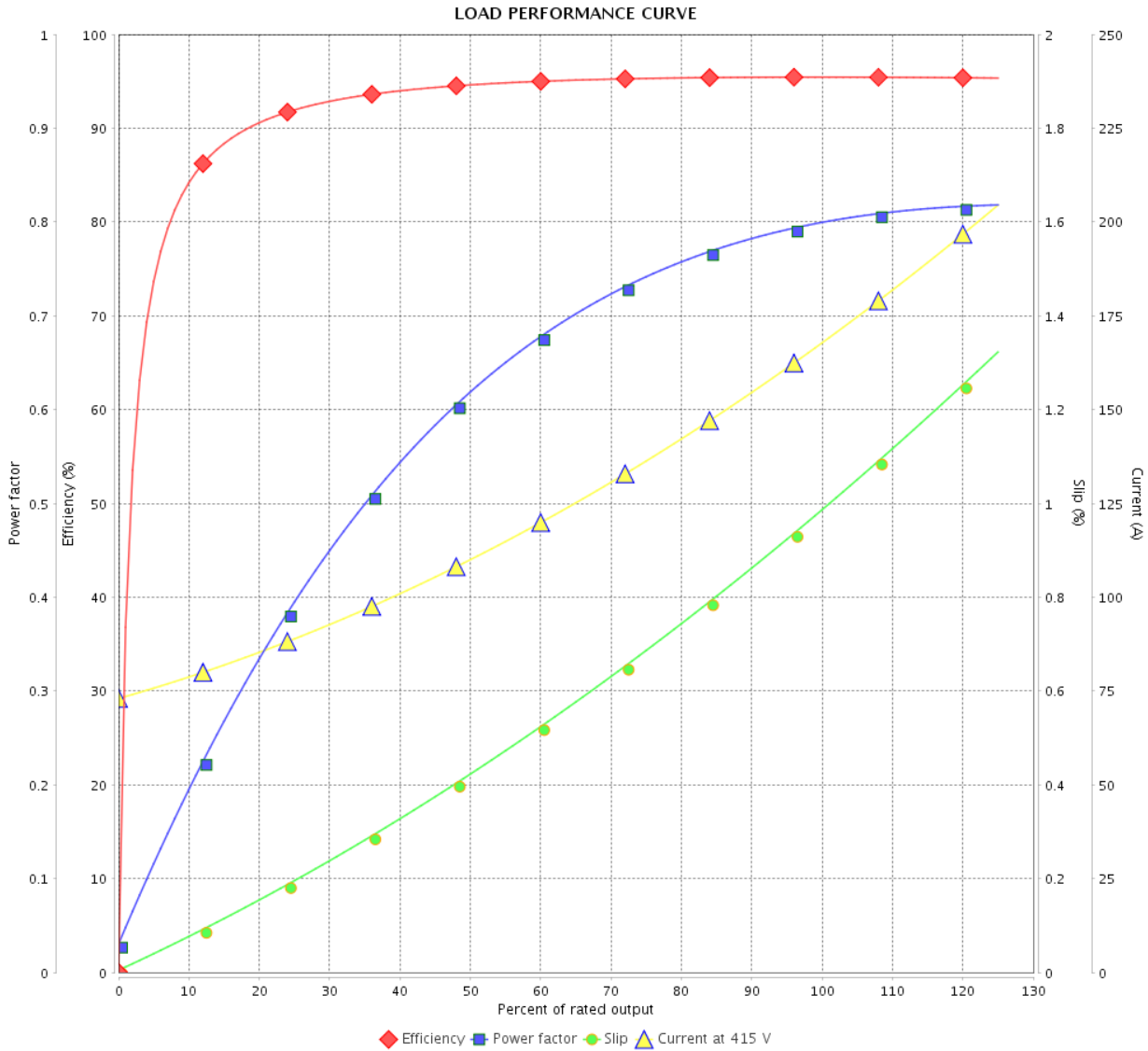


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408378

Catalog # : 15012XT3G504



Performance : 415 V 50 Hz 6P IE3

Rated current : 164 A
 LRC : 8.5
 Rated torque : 663 ft.lb
 Locked rotor torque : 290 %
 Breakdown torque : 310 %
 Rated speed : 990 rpm

Moment of inertia (J) : 134 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
Performed by			Page	Revision
Checked by				
Date				
			10 / 22	

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase
Product code : 12408378
Catalog # : 15012XT3G504

Performance : 460 V 60 Hz 6P

Rated current : 174 A	Moment of inertia (J) : 134 sq.ft.lb
LRC : 7.5	Duty cycle : Cont.(S1)
Rated torque : 662 ft.lb	Insulation class : F
Locked rotor torque : 260 %	Service factor : 1.15
Breakdown torque : 260 %	Temperature rise : 80 K
Rated speed : 1190 rpm	Design : B

Heating constant

Cooling constant

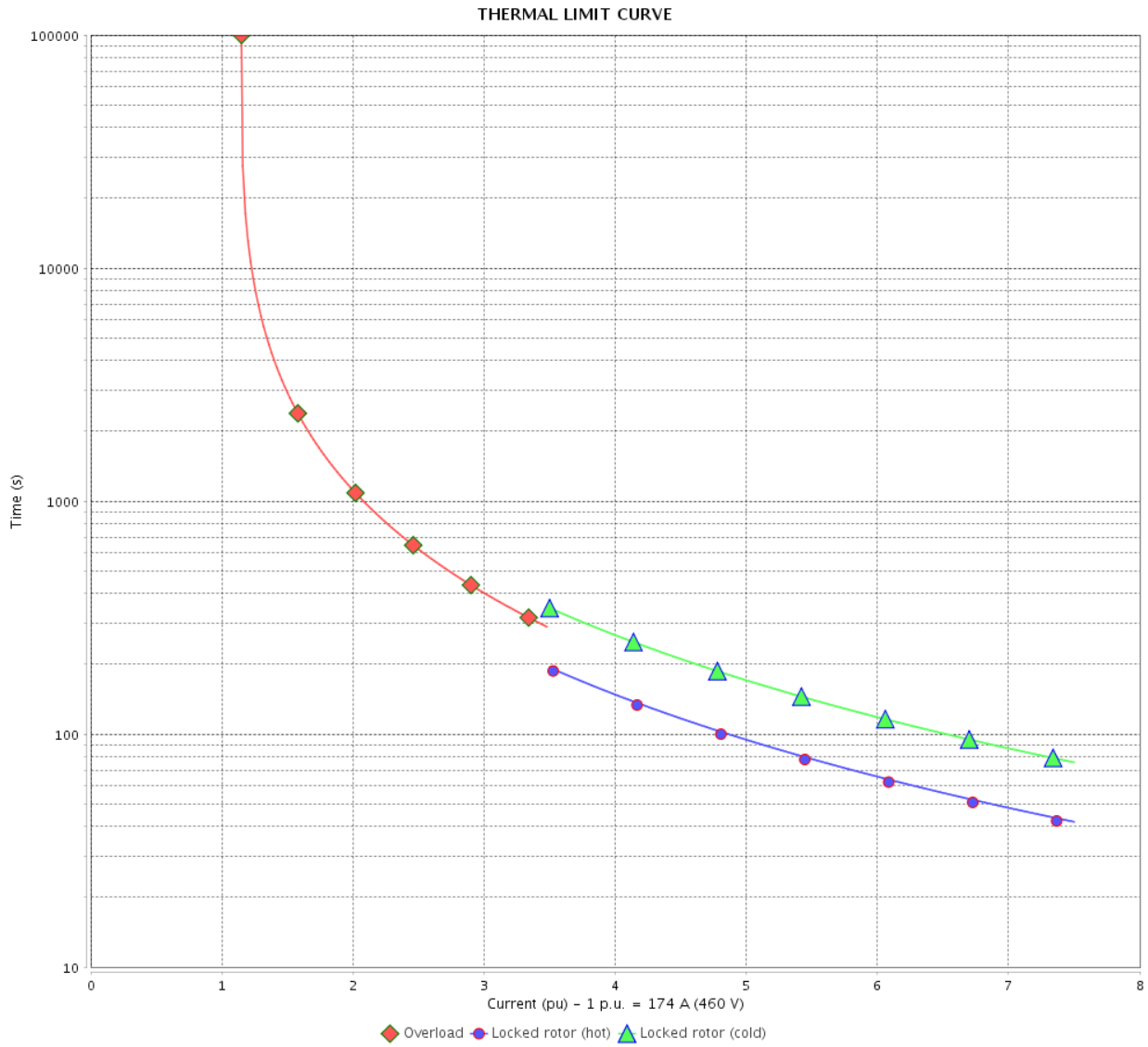
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		11 / 22	

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		12 / 22		
Date		13/04/2022		

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 12408378
 Catalog # : 15012XT3G504

Performance : 380 V 50 Hz 6P IE3

Rated current : 173 A	Moment of inertia (J) : 134 sq.ft.lb
LRC : 7.1	Duty cycle : Cont.(S1)
Rated torque : 663 ft.lb	Insulation class : F
Locked rotor torque : 240 %	Service factor : 1.00
Breakdown torque : 260 %	Temperature rise : 80 K
Rated speed : 990 rpm	Design : B

Heating constant

Cooling constant

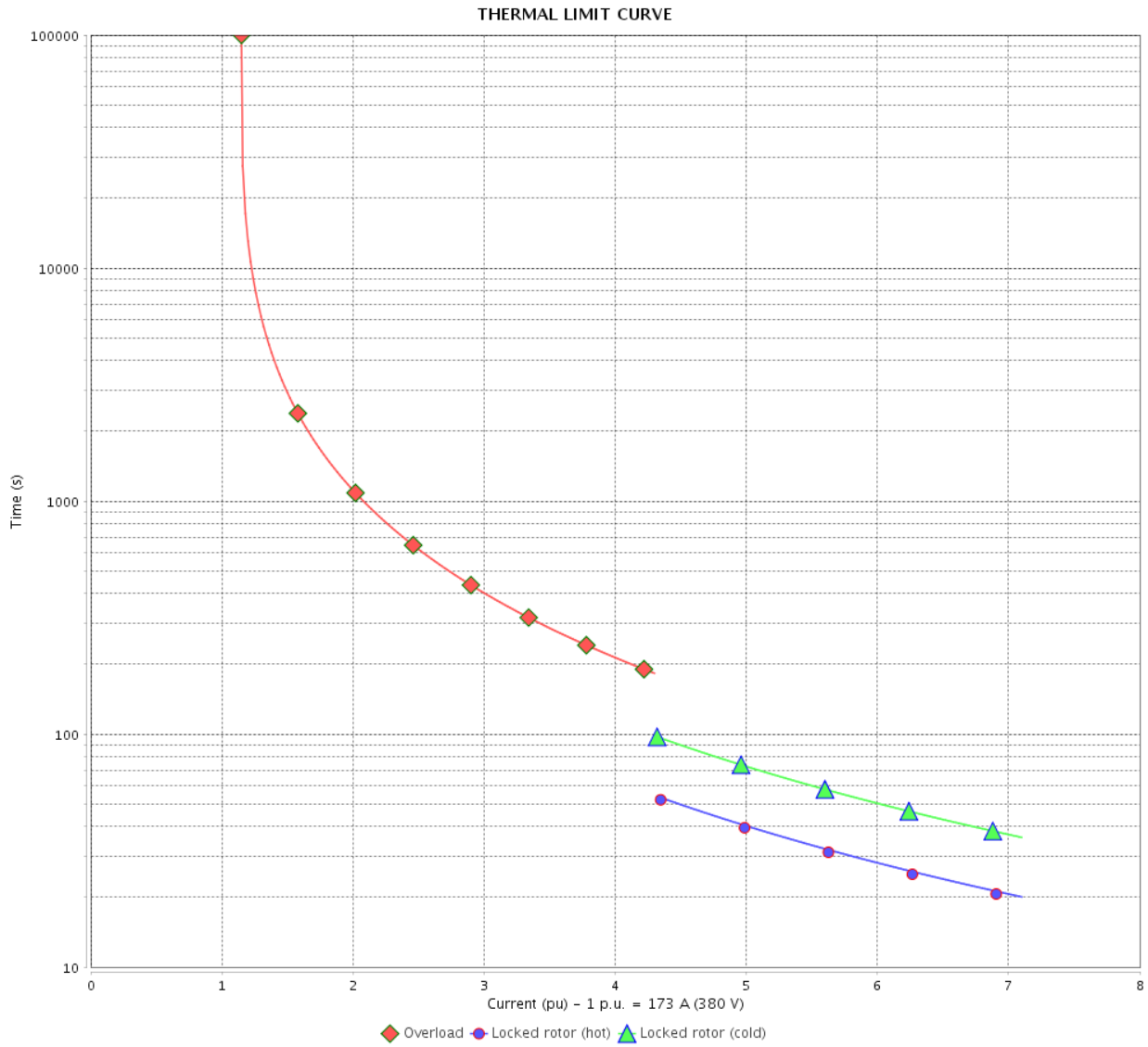
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 13 / 22	Revision
Checked by				
Date	13/04/2022			

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		14 / 22		
Date		13/04/2022		

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 12408378
 Catalog # : 15012XT3G504

Performance : 400 V 50 Hz 6P IE3

Rated current : 166 A	Moment of inertia (J) : 134 sq.ft.lb
LRC : 7.9	Duty cycle : Cont.(S1)
Rated torque : 663 ft.lb	Insulation class : F
Locked rotor torque : 270 %	Service factor : 1.00
Breakdown torque : 290 %	Temperature rise : 80 K
Rated speed : 990 rpm	Design : B

Heating constant

Cooling constant

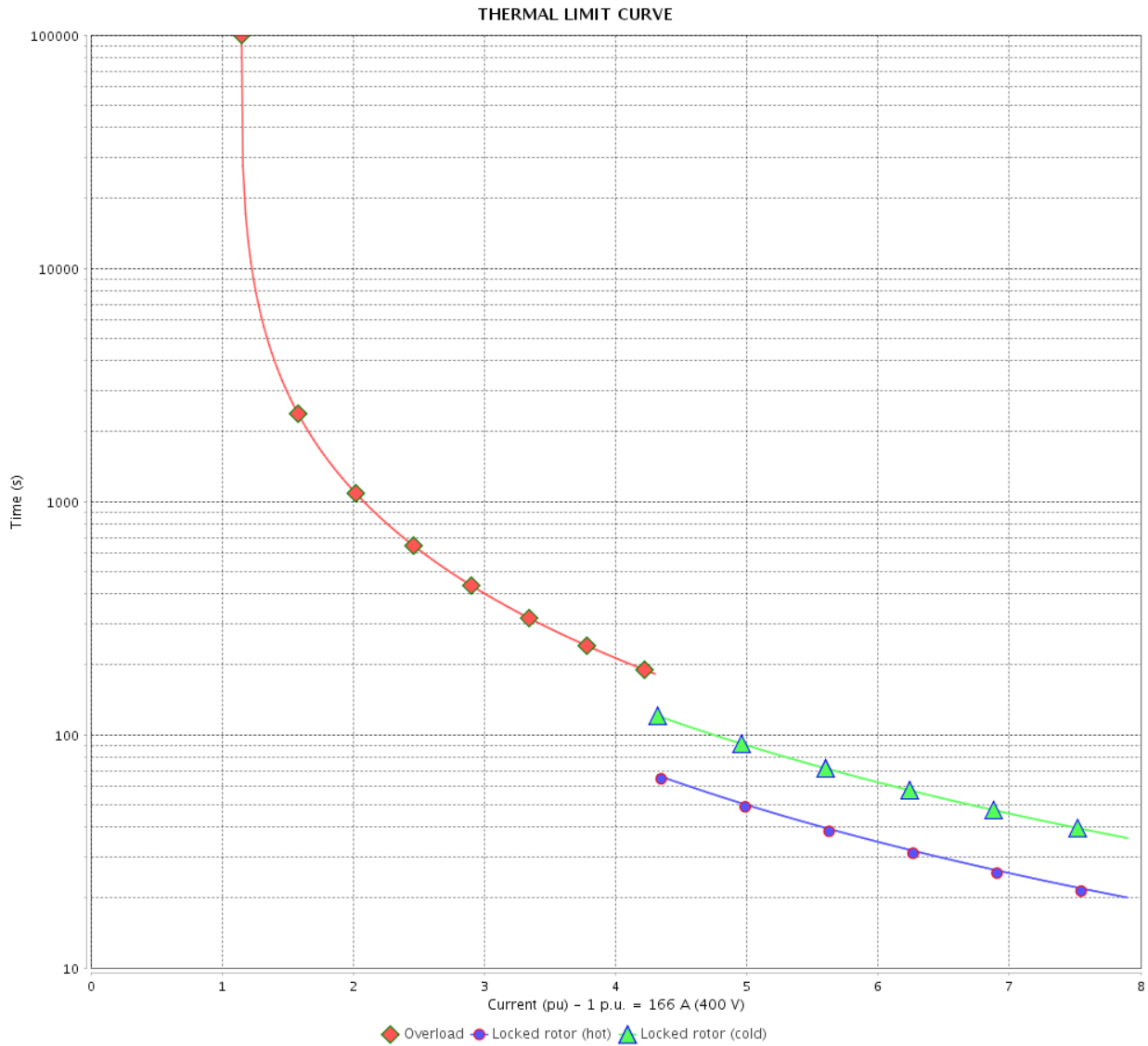
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date	13/04/2022	15 / 22		

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 16 / 22		Revision
Checked by				
Date				

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
Product code : 12408378
Catalog # : 15012XT3G504

Performance : 415 V 50 Hz 6P IE3

Rated current	: 164 A	Moment of inertia (J)	: 134 sq.ft.lb
LRC	: 8.5	Duty cycle	: Cont.(S1)
Rated torque	: 663 ft.lb	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.00
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 990 rpm	Design	: B

Heating constant

Cooling constant

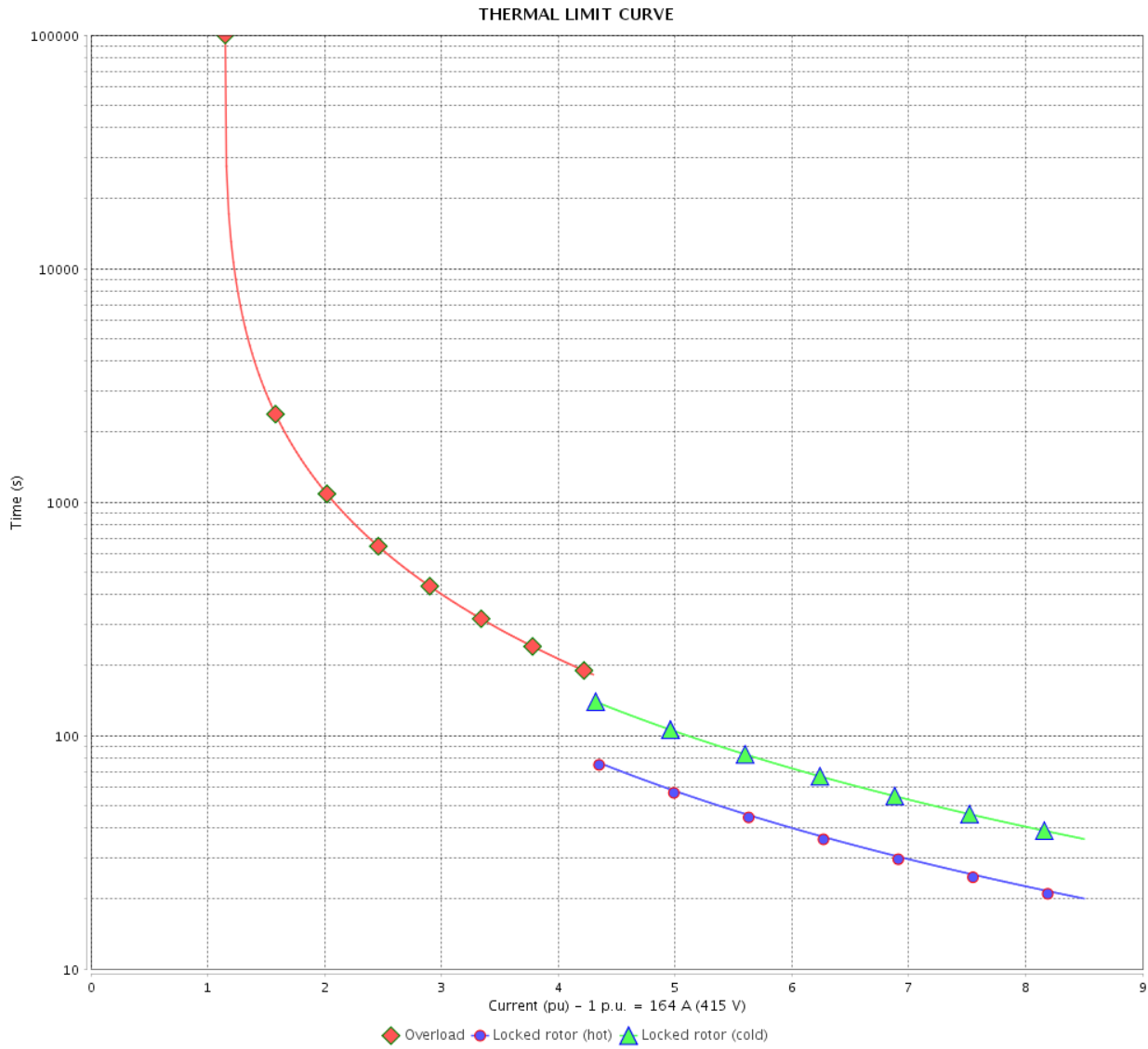
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		17 / 22	

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		18 / 22		
Date		13/04/2022		

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

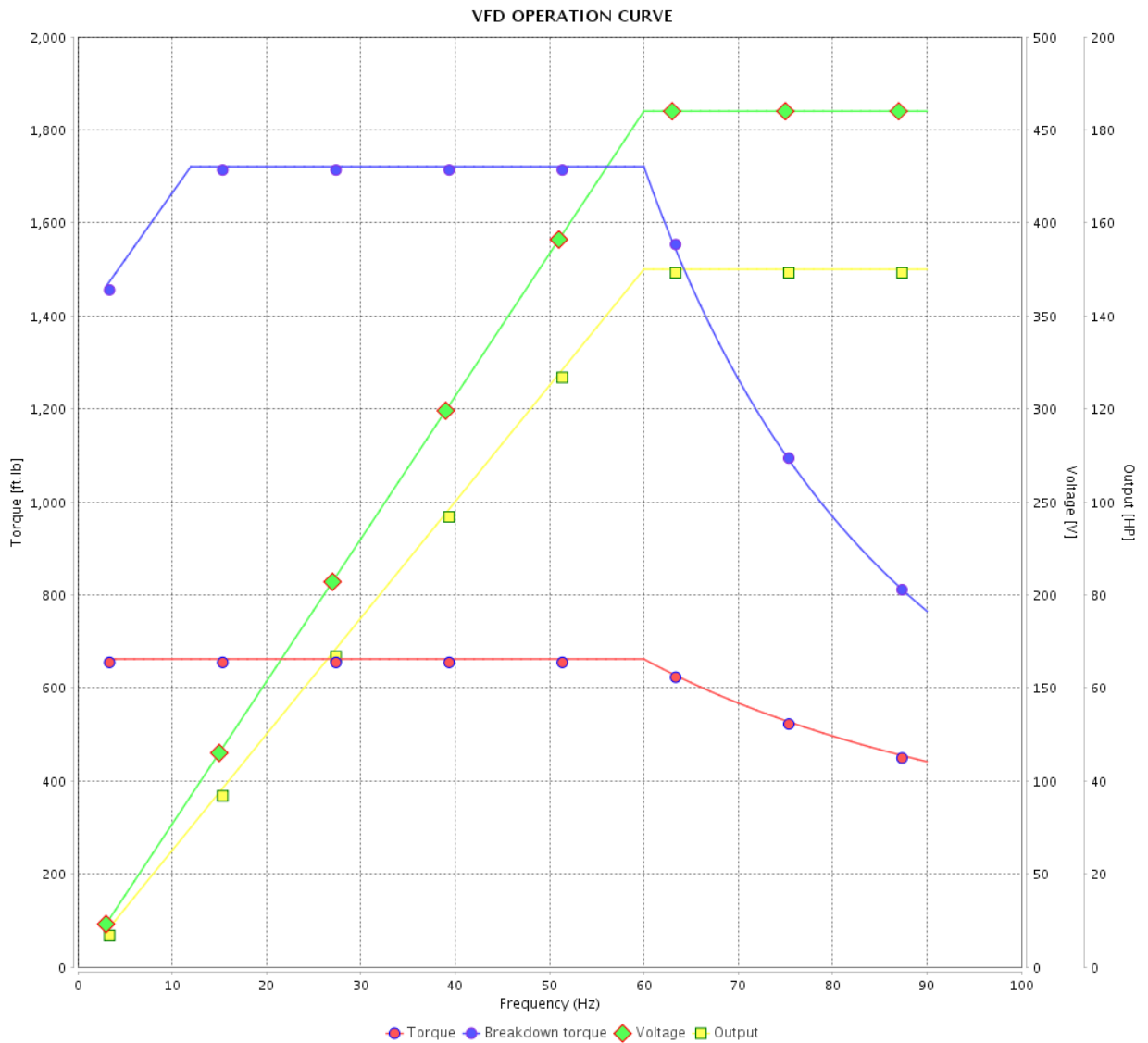


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408378

Catalog # : 15012XT3G504



Performance : 460 V 60 Hz 6P

Rated current : 174 A
 LRC : 7.5
 Rated torque : 662 ft.lb
 Locked rotor torque : 260 %
 Breakdown torque : 260 %
 Rated speed : 1190 rpm

Moment of inertia (J) : 134 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
Performed by				Page 19 / 22
Checked by				
Date	13/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



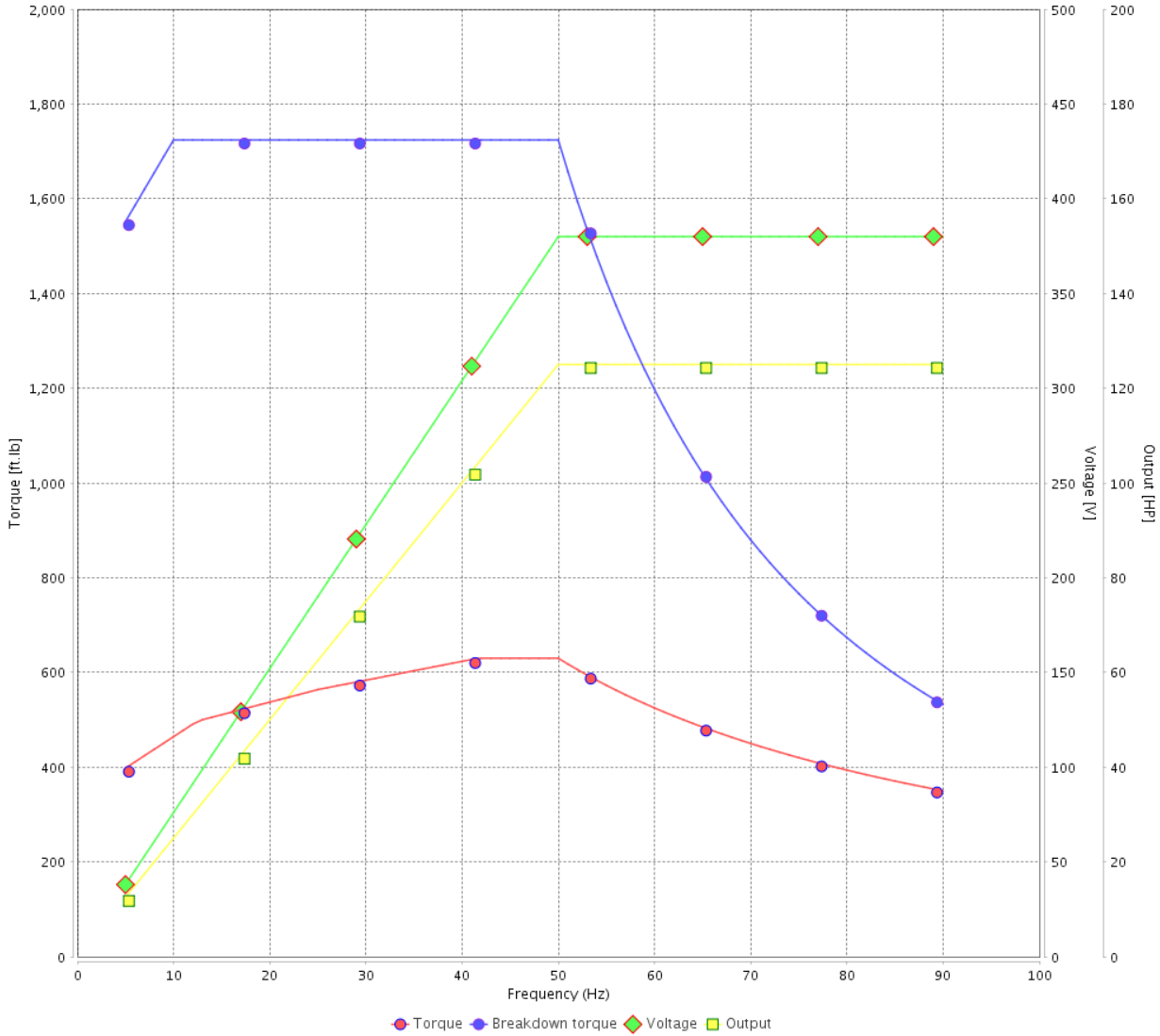
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408378

Catalog # : 15012XT3G504

VFD OPERATION CURVE



Performance : 380 V 50 Hz 6P IE3

Rated current	: 173 A	Moment of inertia (J)	: 134 sq.ft.lb
LRC	: 7.1	Duty cycle	: Cont.(S1)
Rated torque	: 663 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 990 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 20 / 22	Revision
Checked by				
Date	13/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

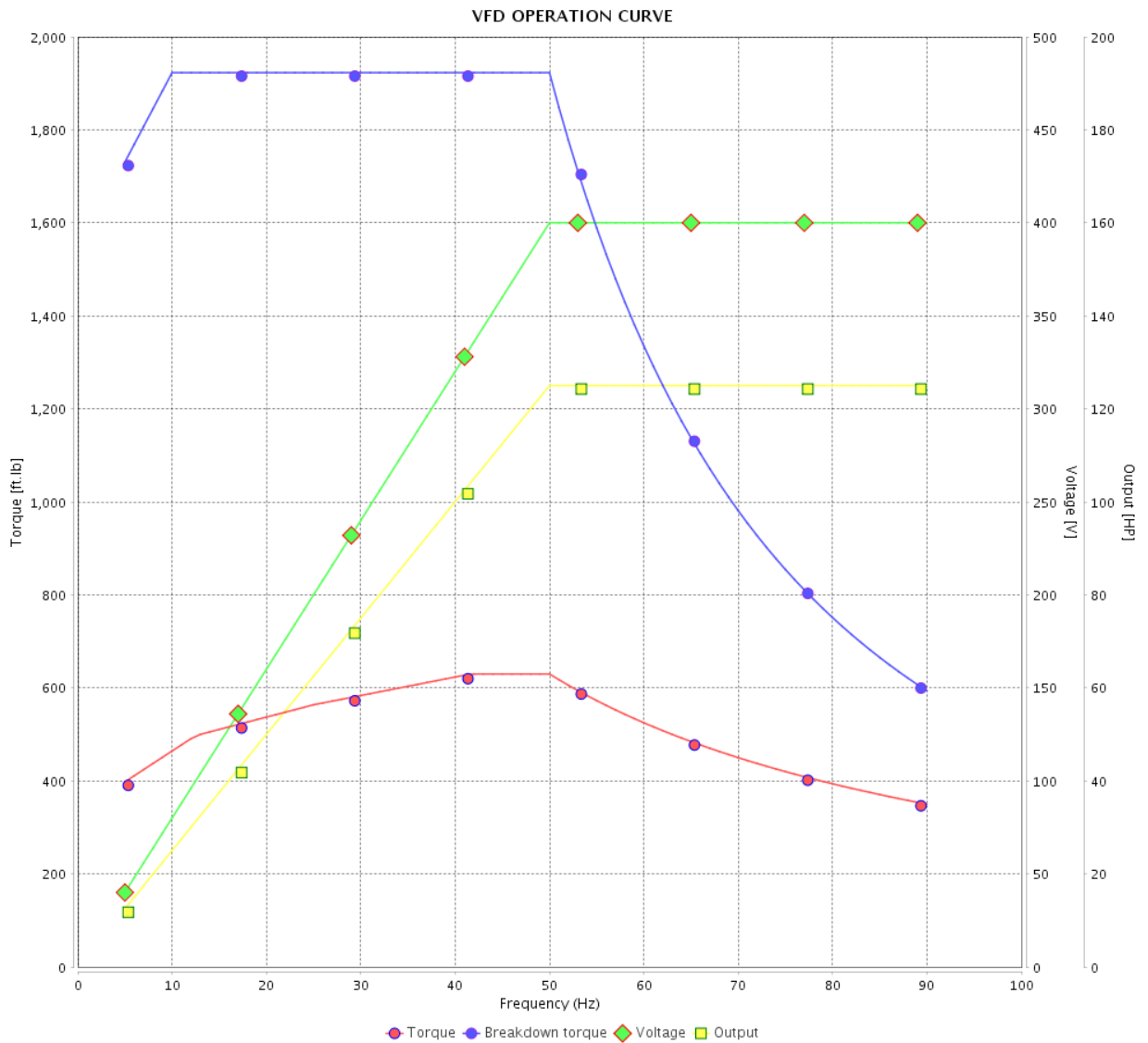


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408378

Catalog # : 15012XT3G504



Performance : 400 V 50 Hz 6P IE3

Rated current : 166 A
 LRC : 7.9
 Rated torque : 663 ft.lb
 Locked rotor torque : 270 %
 Breakdown torque : 290 %
 Rated speed : 990 rpm

Moment of inertia (J) : 134 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
Performed by				Page 21 / 22
Checked by				
Date	13/04/2022			
				Revision

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



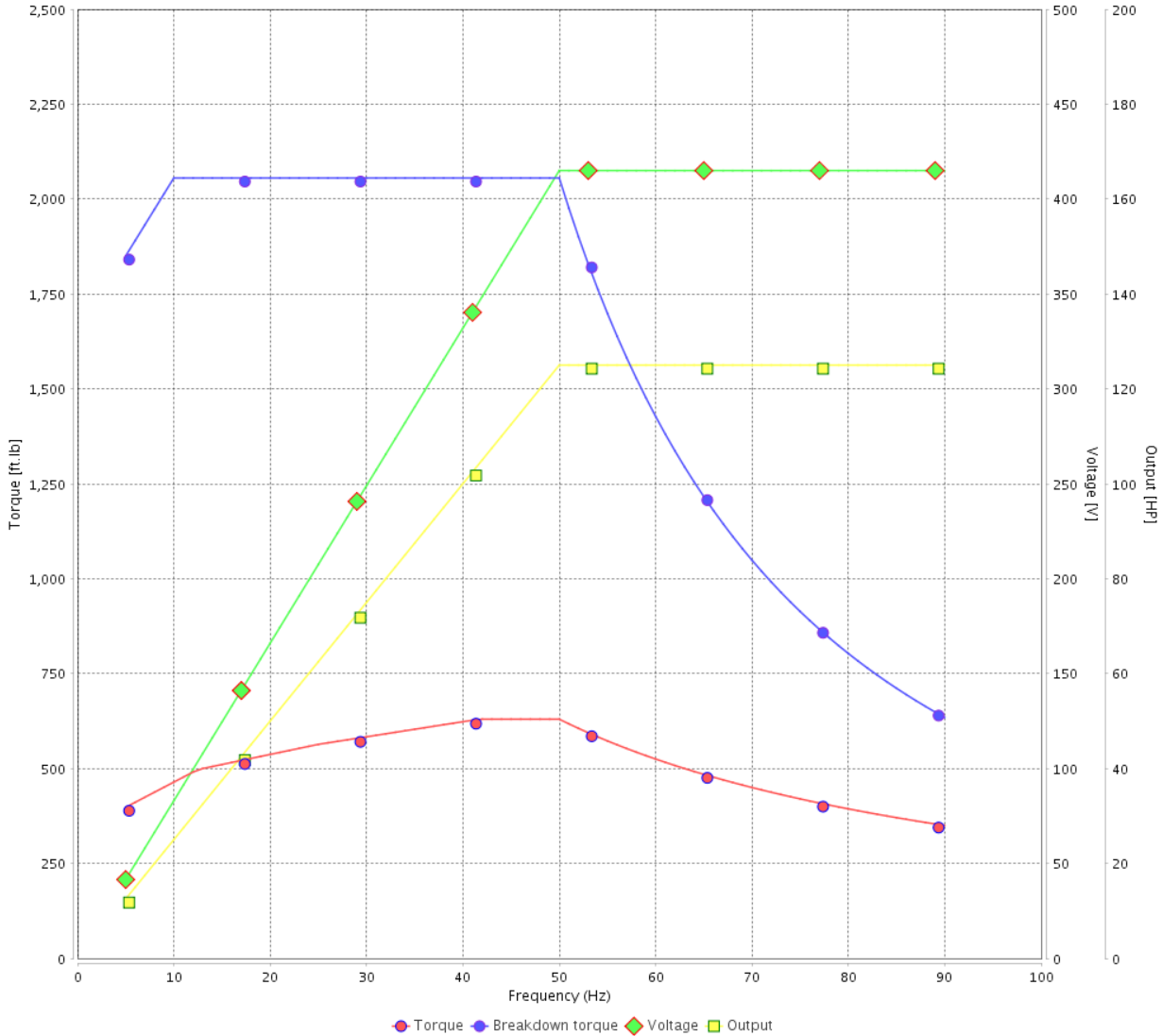
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408378

Catalog # : 15012XT3G504

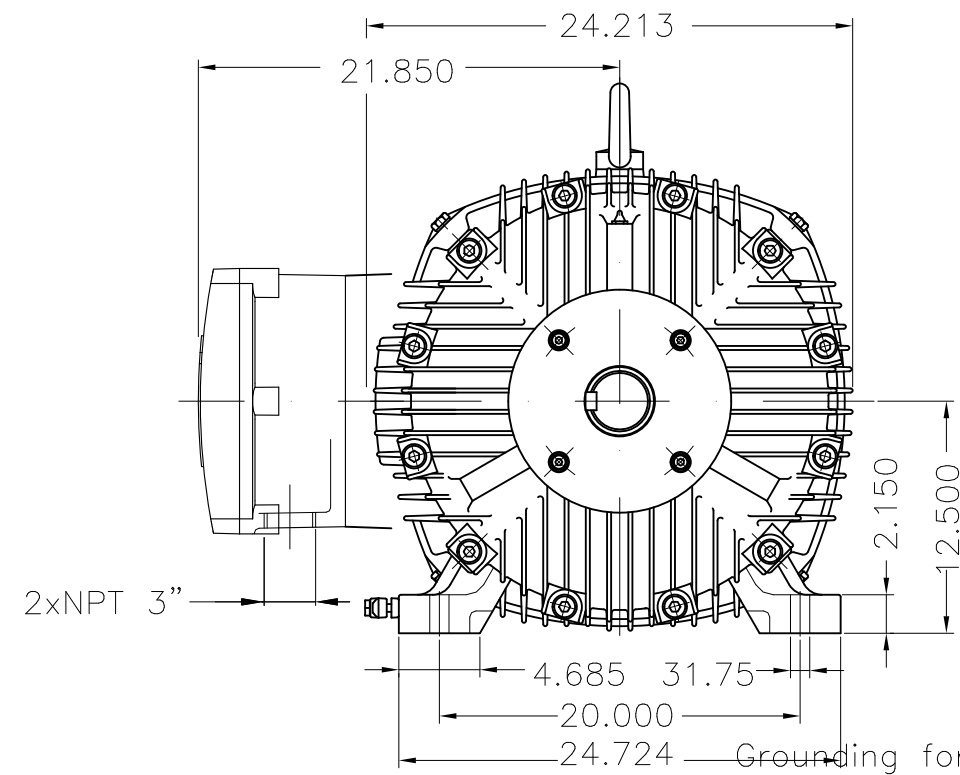
VFD OPERATION CURVE



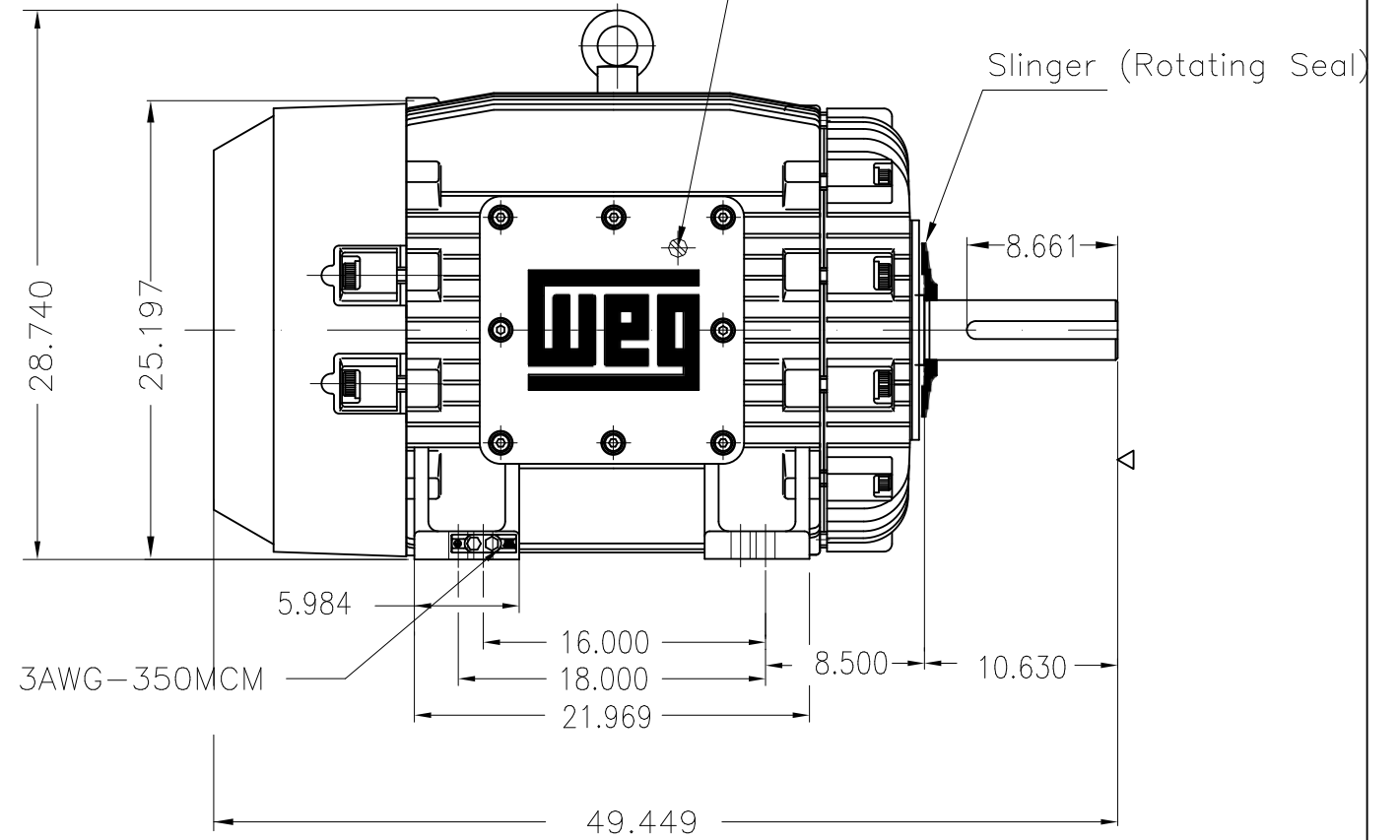
Performance : 415 V 50 Hz 6P IE3

Rated current	: 164 A	Moment of inertia (J)	: 134 sq.ft.lb
LRC	: 8.5	Duty cycle	: Cont.(S1)
Rated torque	: 663 ft.lb	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.00
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 990 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 22 / 22	Revision
Checked by				
Date	13/04/2022			



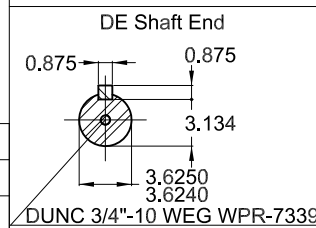
Grounding for leads 35-70 mm² / 1-2/0 AWG



Grounding for leads 25-185 mm² / 3AWG-350MCM

150 HP 06 Poles 60 Hz

A



DUNC 3/4"-10 WEG WPR-7339

Color RAL 5009
Painting plan 202P
Mounting B3R(D)

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR EXPLOSION PROOF PREM. EFF.					
CHECKED		FRAME 504/5T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

PREVIEW
WDD



SHEET 1 / 1

Dimensions in inches XME A3