

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	14356602		
		Catalog # :	40012XT3G586/7		
Frame	: 586/7T	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	: 4984 lb		
Protection degree	: IP55	Moment of inertia (J)	: 368 sq.ft.lb		
Output [HP]	400	350	350	350	
Poles	6	6	6	6	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	460	380	400	415	
Rated current [A]	479	505	480	468	
L. R. Amperes [A]	2876	2677	2880	3042	
LRC [A]	6.0x(Code G)	5.3x(Code F)	6.0x(Code G)	6.5x(Code G)	
No load current [A]	145	145	153	161	
Rated speed [RPM]	1190	990	990	990	
Slip [%]	0.83	1.00	1.00	1.00	
Rated torque [ft.lb]	1770	1860	1860	1860	
Locked rotor torque [%]	200	180	200	220	
Breakdown torque [%]	200	190	210	229	
Service factor	1.15	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	127s (cold) 71s (hot)	63s (cold) 35s (hot)	63s (cold) 35s (hot)	63s (cold) 35s (hot)	
Noise level ²	77.0 dB(A)	73.0 dB(A)	73.0 dB(A)	73.0 dB(A)	
Efficiency (%)	25%	92.7	92.7	92.0	92.4
	50%	93.6	93.6	93.0	93.0
	75%	95.0	94.5	94.5	95.0
	100%	95.8	95.4	95.4	95.4
Power Factor	25%	0.48	0.50	0.47	0.44
	50%	0.70	0.72	0.69	0.66
	75%	0.78	0.79	0.77	0.76
	100%	0.82	0.82	0.82	0.81
Bearing type	: <u>Drive end</u> 6322 C3	<u>Non drive end</u> 6319 C3	Foundation loads		
Sealing	: Viton	Viton Seal	Max. traction	: 6417 lb	
	Oil Seal		Max. compression	: 11401 lb	
Lubrication interval	: 9212 h	11094 h			
Lubricant amount	: 60 g	45 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				
Date	13/04/2022		Page 2 / 22	Revision

TORQUE AND CURRENT VS SPEED CURVE



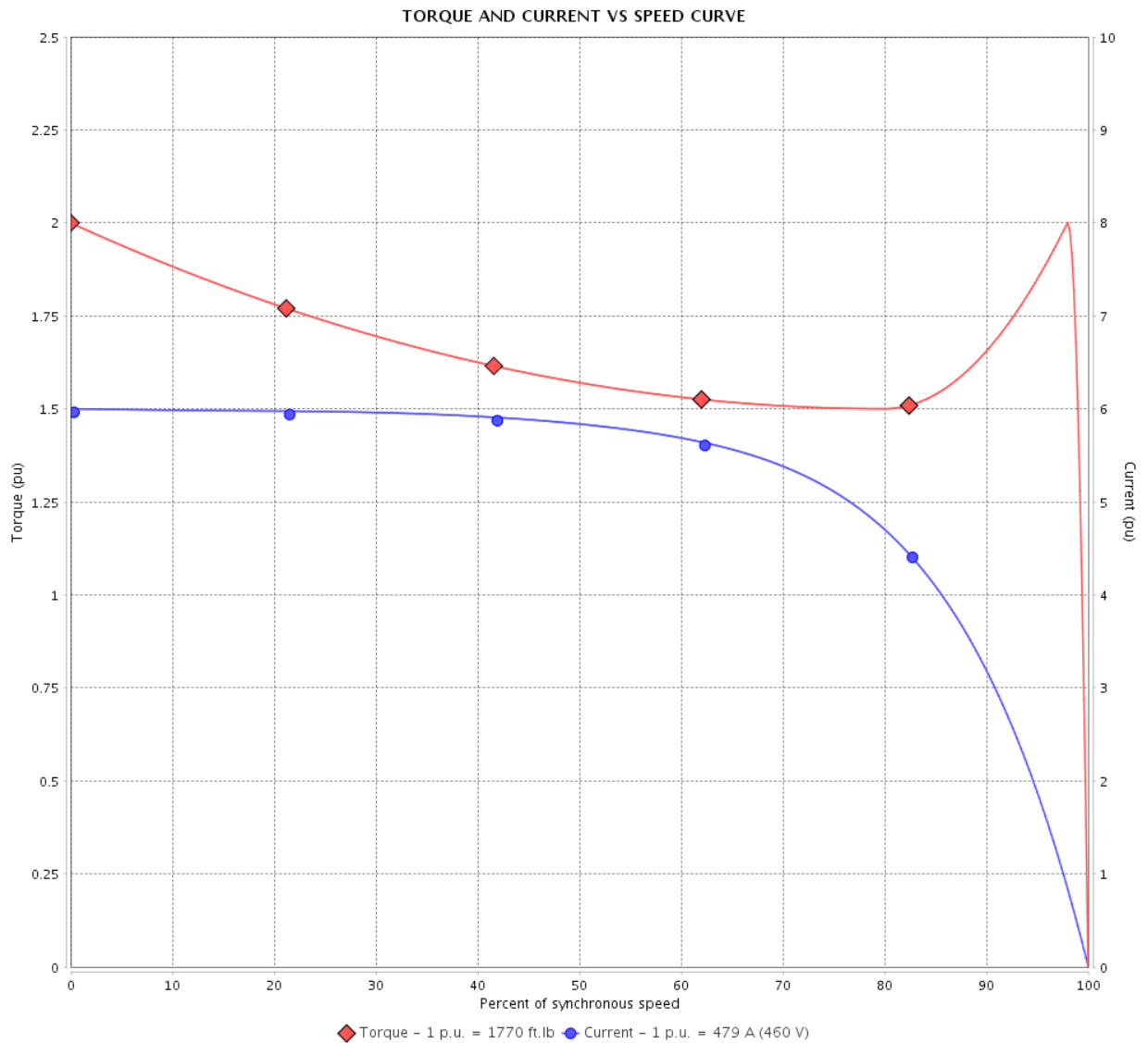
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14356602

Catalog # : 40012XT3G586/7



Performance : 460 V 60 Hz 6P

Rated current : 479 A
 LRC : 6.0
 Rated torque : 1770 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 200 %
 Rated speed : 1190 rpm

Moment of inertia (J) : 368 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K

Locked rotor time : 127s (cold) 71s (hot)

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

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



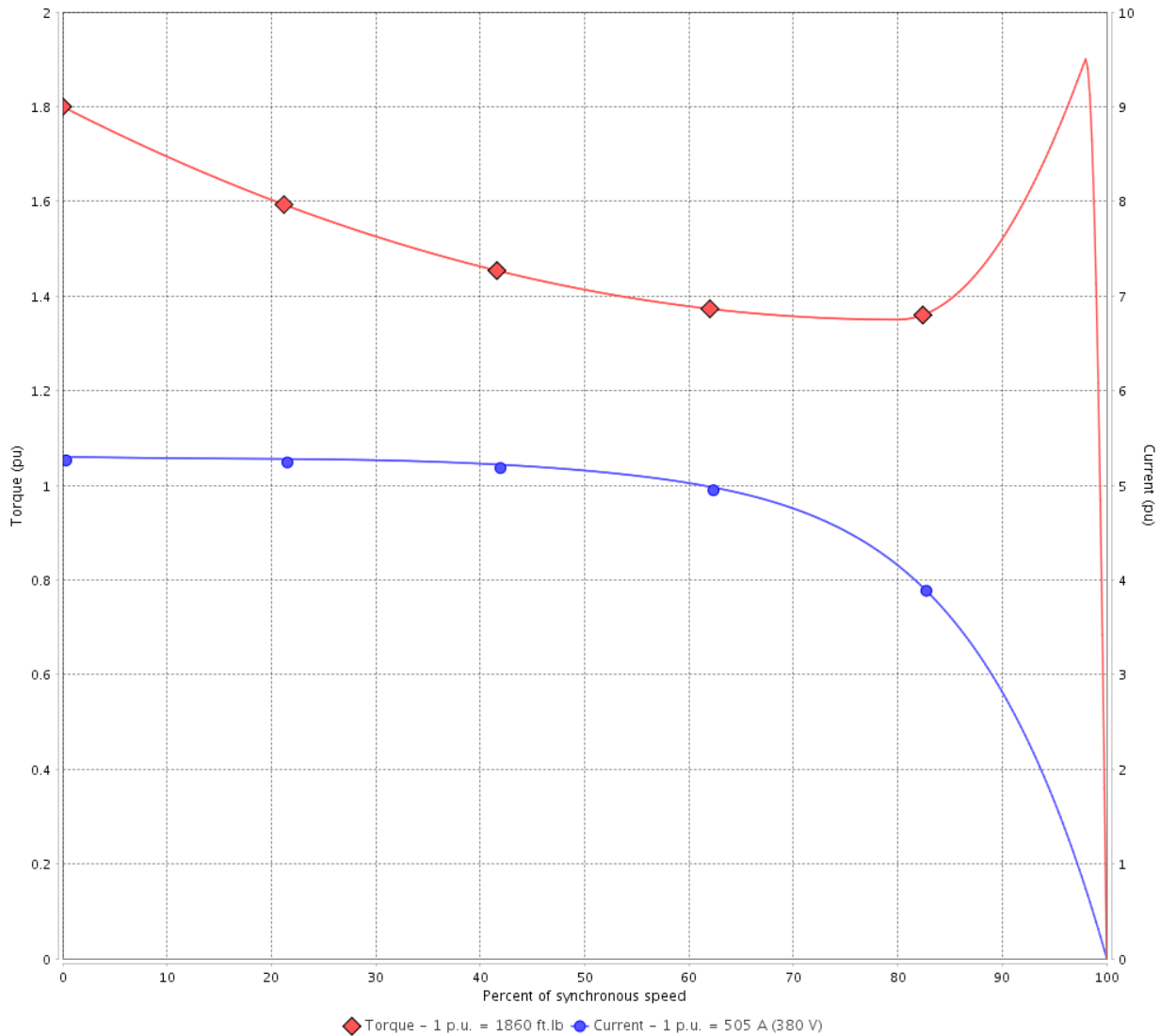
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14356602

Catalog # : 40012XT3G586/7

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 6P IE2

Rated current	: 505 A	Moment of inertia (J)	: 368 sq.ft.lb
LRC	: 5.3	Duty cycle	: Cont.(S1)
Rated torque	: 1860 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 190 %	Temperature rise	: 80 K
Rated speed	: 990 rpm		

Locked rotor time : 63s (cold) 35s (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



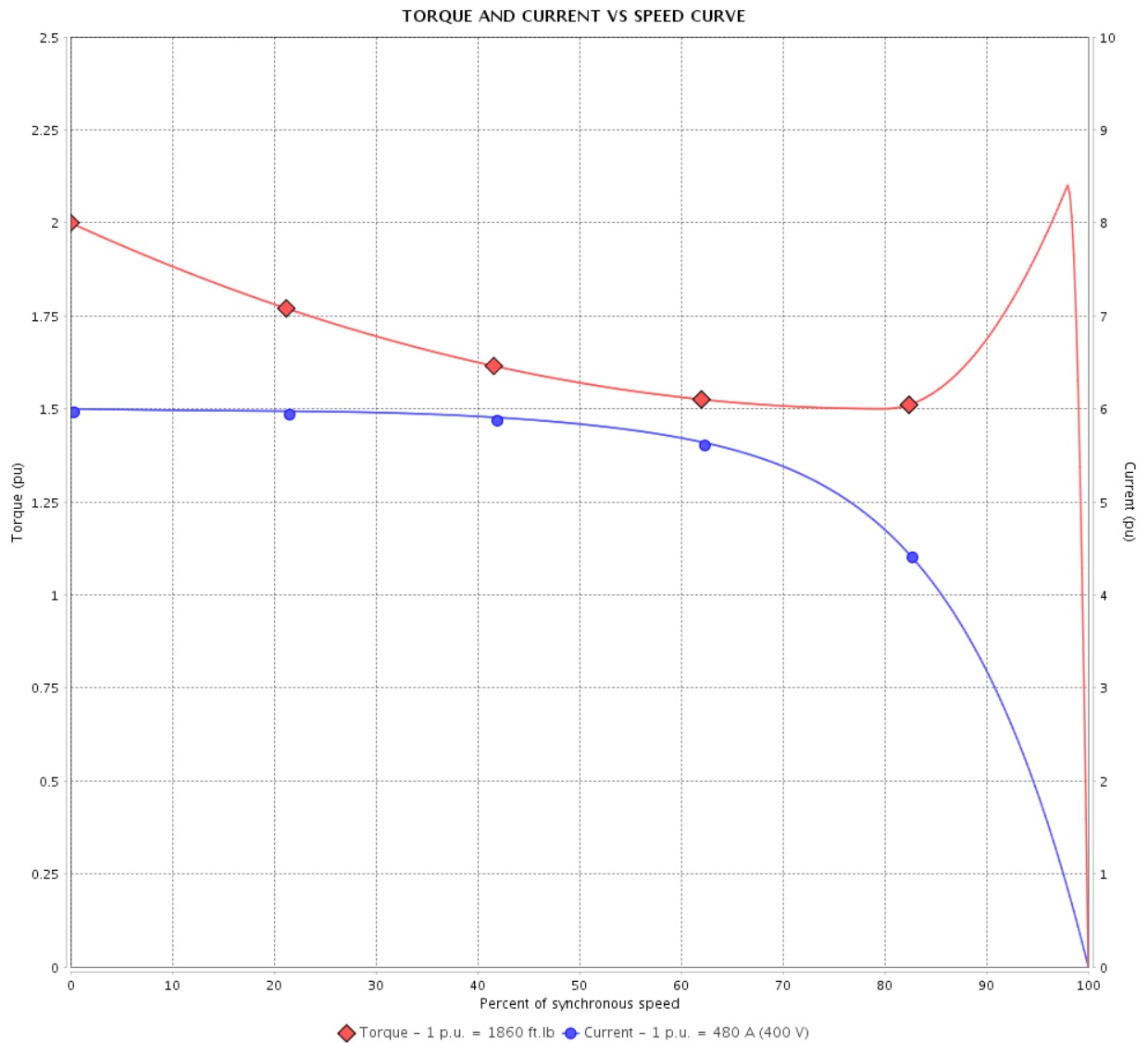
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14356602

Catalog # : 40012XT3G586/7



Performance : 400 V 50 Hz 6P IE2

Rated current : 480 A
 LRC : 6.0
 Rated torque : 1860 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 210 %
 Rated speed : 990 rpm

Moment of inertia (J) : 368 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K

Locked rotor time : 63s (cold) 35s (hot)

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

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



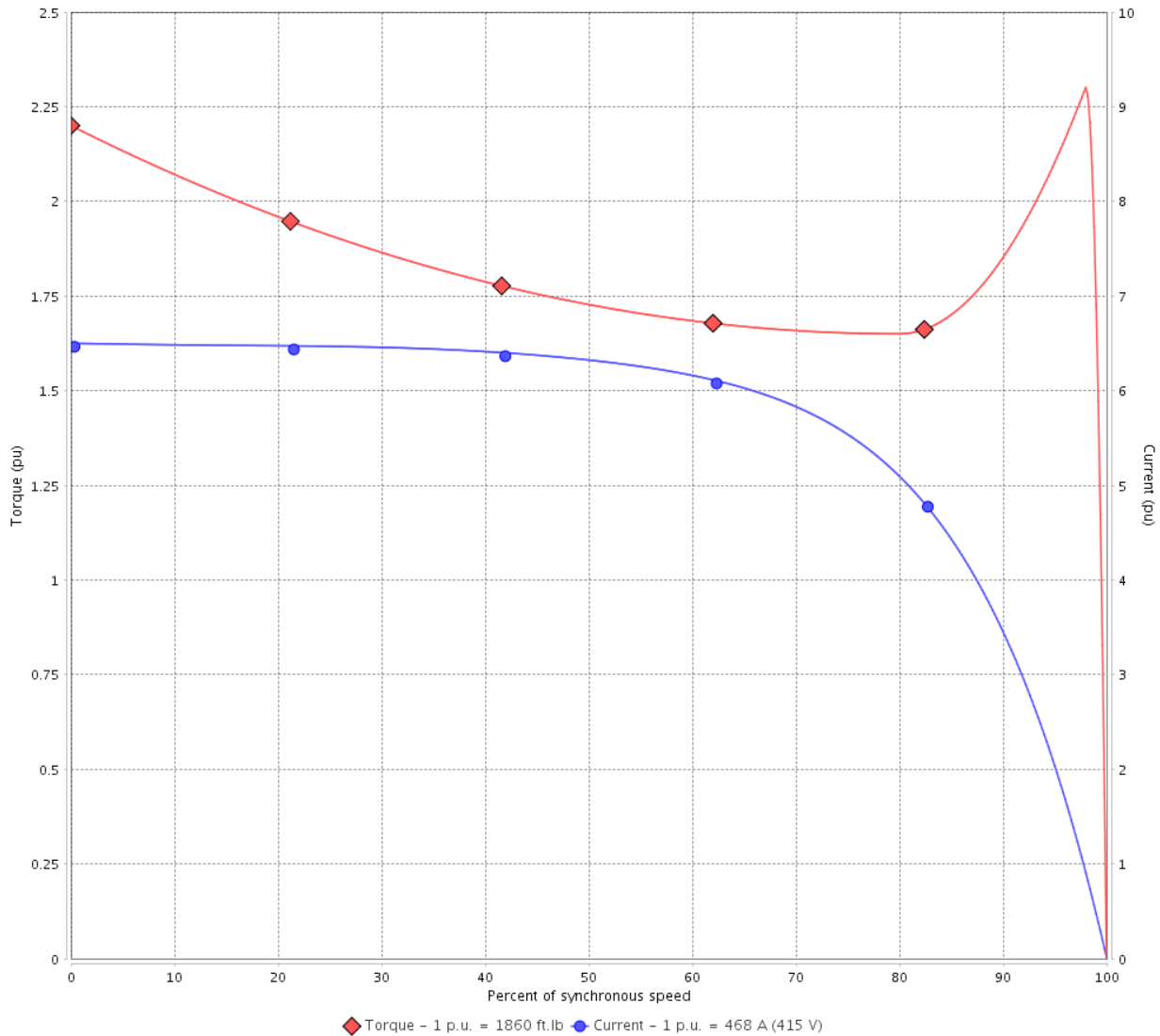
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14356602

Catalog # : 40012XT3G586/7

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 6P IE2

Rated current	: 468 A	Moment of inertia (J)	: 368 sq.ft.lb
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 1860 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 990 rpm		

Locked rotor time : 63s (cold) 35s (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

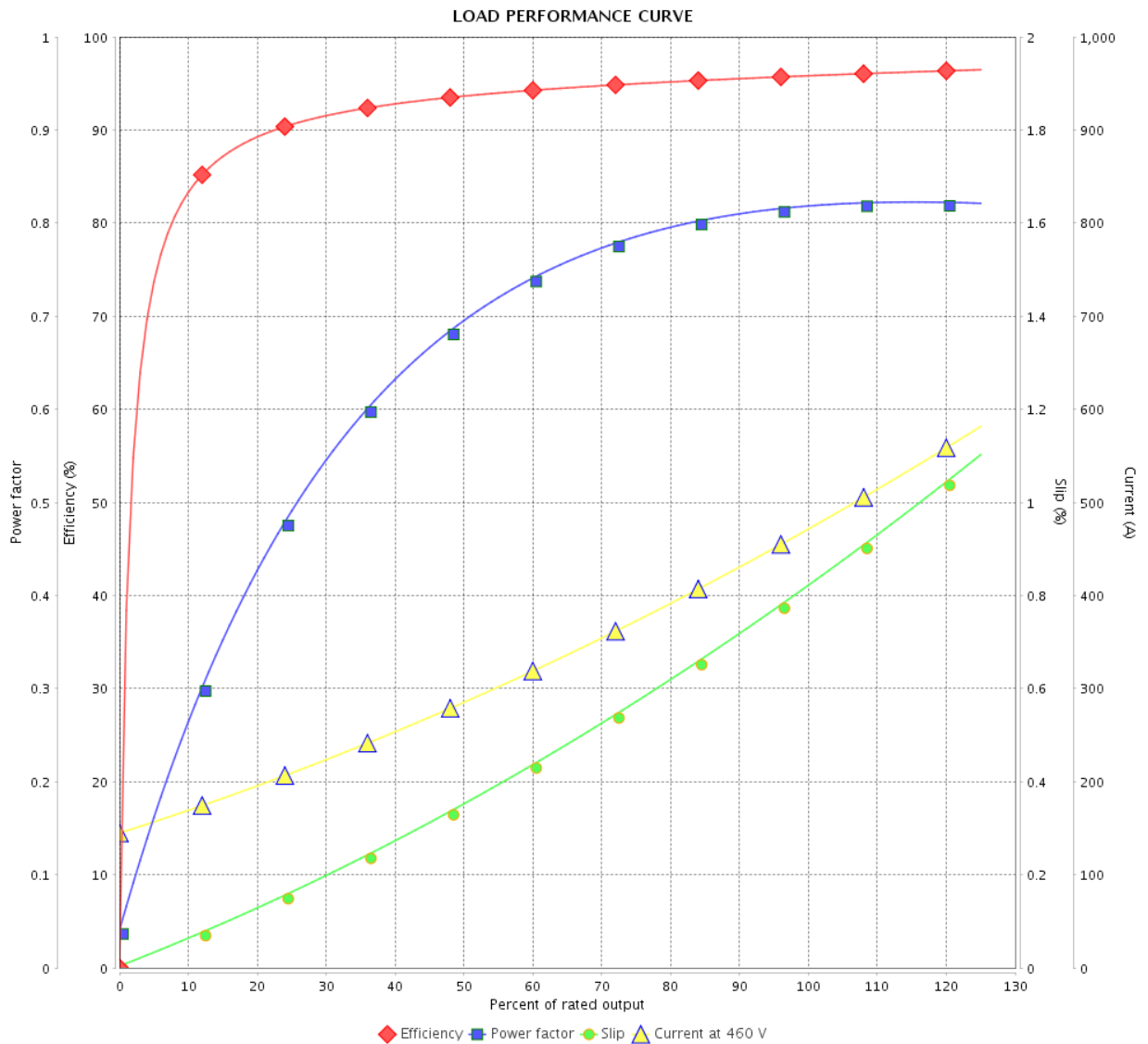


Customer : _____

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14356602

Catalog # : 40012XT3G586/7



Performance : 460 V 60 Hz 6P

Rated current : 479 A
 LRC : 6.0
 Rated torque : 1770 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 200 %
 Rated speed : 1190 rpm

Moment of inertia (J) : 368 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K

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

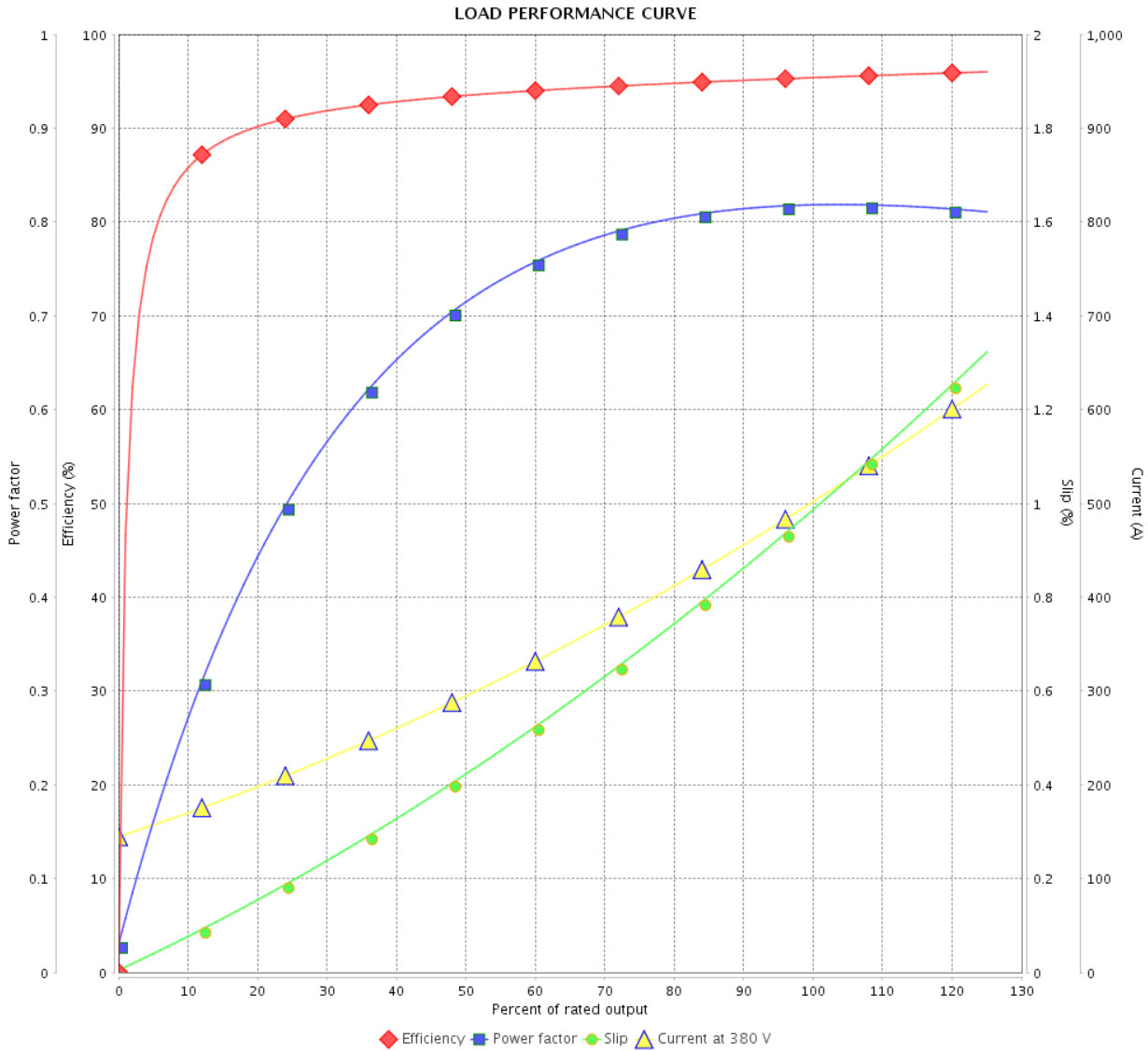


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14356602

Catalog # : 40012XT3G586/7



Performance : 380 V 50 Hz 6P IE2

Rated current : 505 A
 LRC : 5.3
 Rated torque : 1860 ft.lb
 Locked rotor torque : 180 %
 Breakdown torque : 190 %
 Rated speed : 990 rpm

Moment of inertia (J) : 368 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K

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

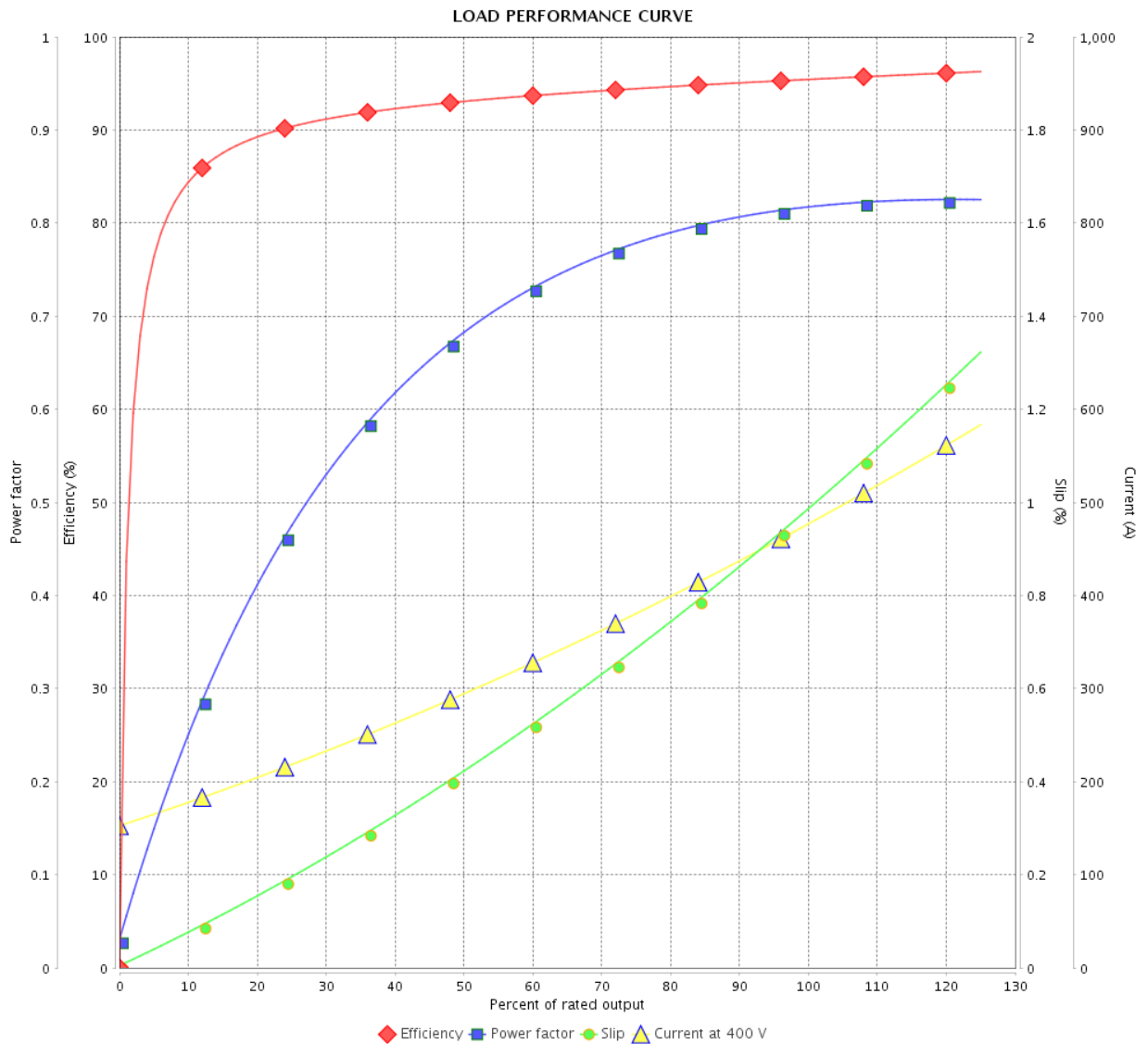


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14356602

Catalog # : 40012XT3G586/7



Performance : 400 V 50 Hz 6P IE2

Rated current : 480 A
 LRC : 6.0
 Rated torque : 1860 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 210 %
 Rated speed : 990 rpm

Moment of inertia (J) : 368 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date				
		Page	Revision	
		9 / 22		

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

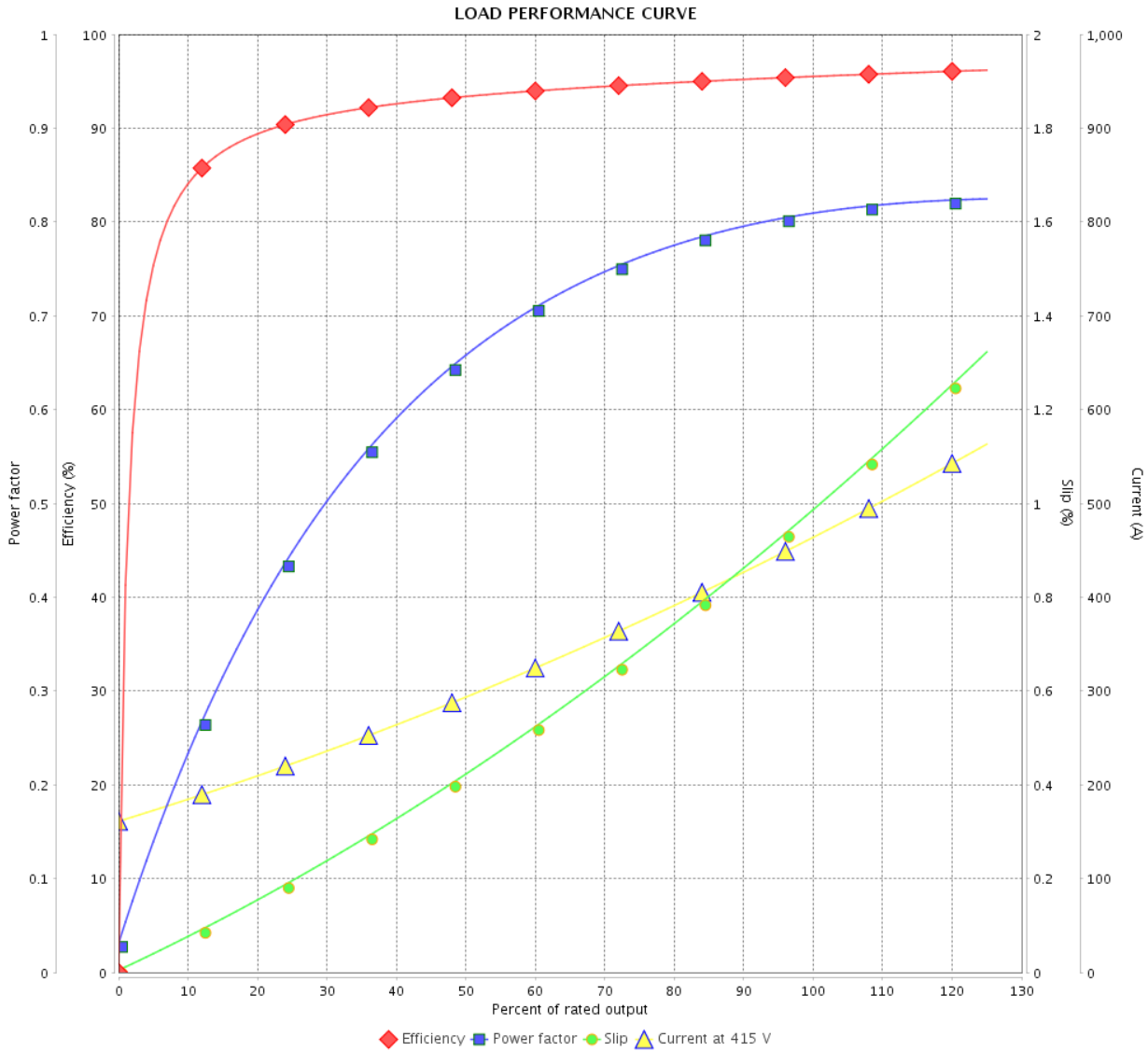


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14356602

Catalog # : 40012XT3G586/7



Performance : 415 V 50 Hz 6P IE2

Rated current : 468 A
 LRC : 6.5
 Rated torque : 1860 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 229 %
 Rated speed : 990 rpm

Moment of inertia (J) : 368 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		10 / 22		
Date		13/04/2022		

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
Product code : 14356602
Catalog # : 40012XT3G586/7

Performance : 460 V 60 Hz 6P

Rated current : 479 A	Moment of inertia (J) : 368 sq.ft.lb
LRC : 6.0	Duty cycle : Cont.(S1)
Rated torque : 1770 ft.lb	Insulation class : F
Locked rotor torque : 200 %	Service factor : 1.15
Breakdown torque : 200 %	Temperature rise : 80 K
Rated speed : 1190 rpm	

Heating constant

Cooling constant

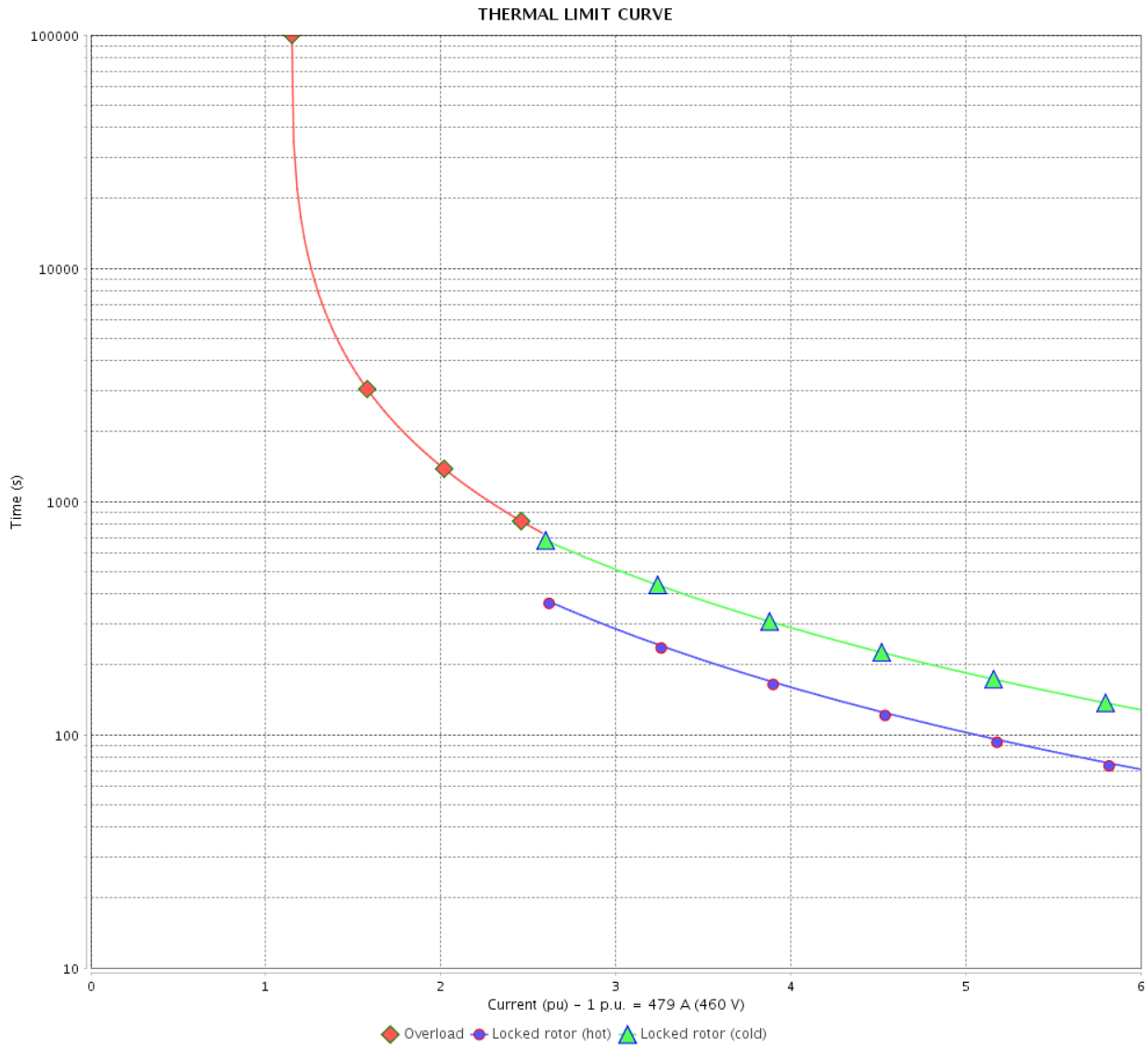
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		11 / 22	

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 : 14356602
 Catalog # : 40012XT3G586/7

Performance : 380 V 50 Hz 6P IE2

Rated current : 505 A	Moment of inertia (J) : 368 sq.ft.lb
LRC : 5.3	Duty cycle : Cont.(S1)
Rated torque : 1860 ft.lb	Insulation class : F
Locked rotor torque : 180 %	Service factor : 1.00
Breakdown torque : 190 %	Temperature rise : 80 K
Rated speed : 990 rpm	

Heating constant

Cooling constant

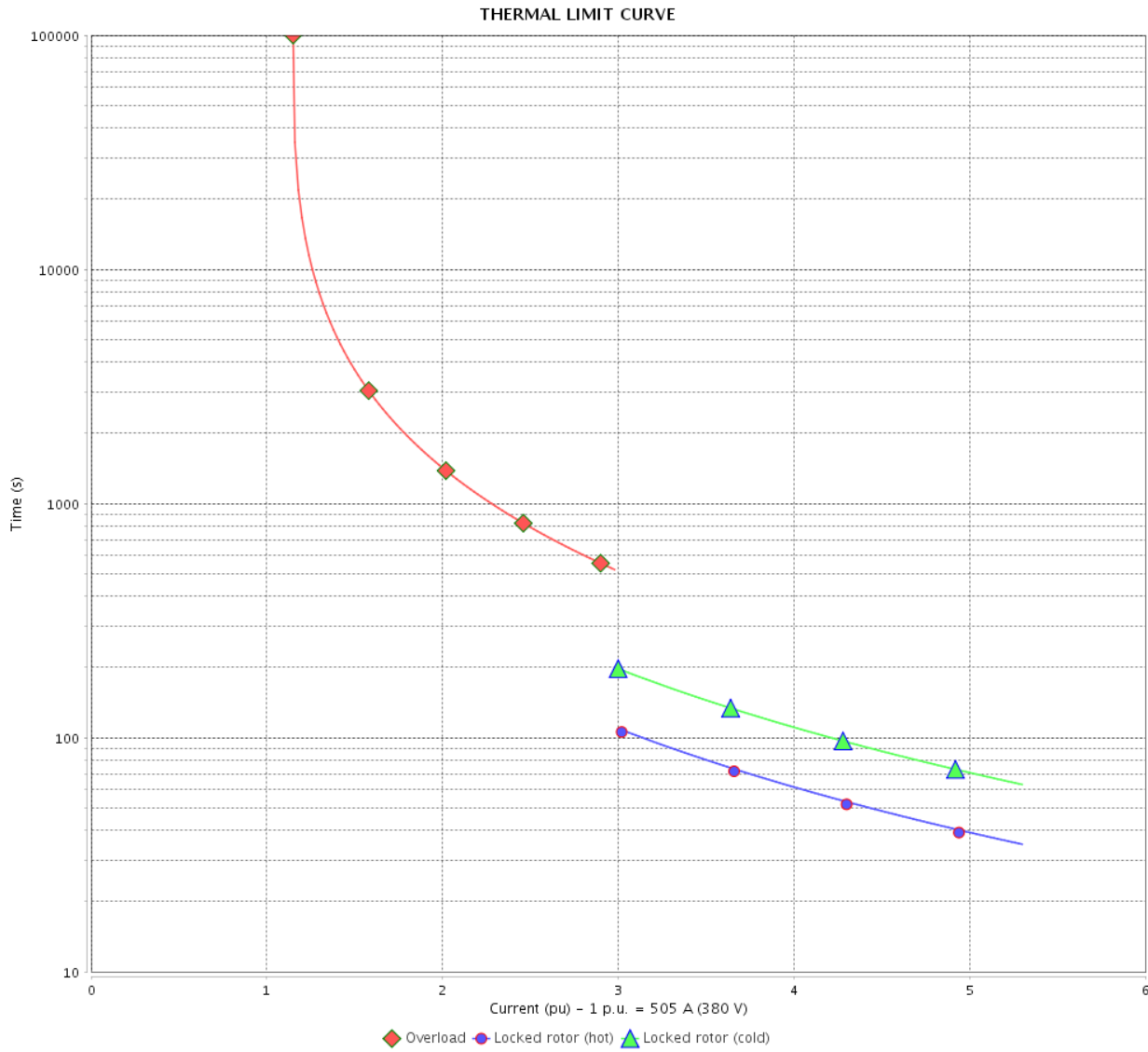
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		13 / 22	

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 : 14356602
 Catalog # : 40012XT3G586/7

Performance : 400 V 50 Hz 6P IE2

Rated current : 480 A	Moment of inertia (J) : 368 sq.ft.lb
LRC : 6.0	Duty cycle : Cont.(S1)
Rated torque : 1860 ft.lb	Insulation class : F
Locked rotor torque : 200 %	Service factor : 1.00
Breakdown torque : 210 %	Temperature rise : 80 K
Rated speed : 990 rpm	

Heating constant

Cooling constant

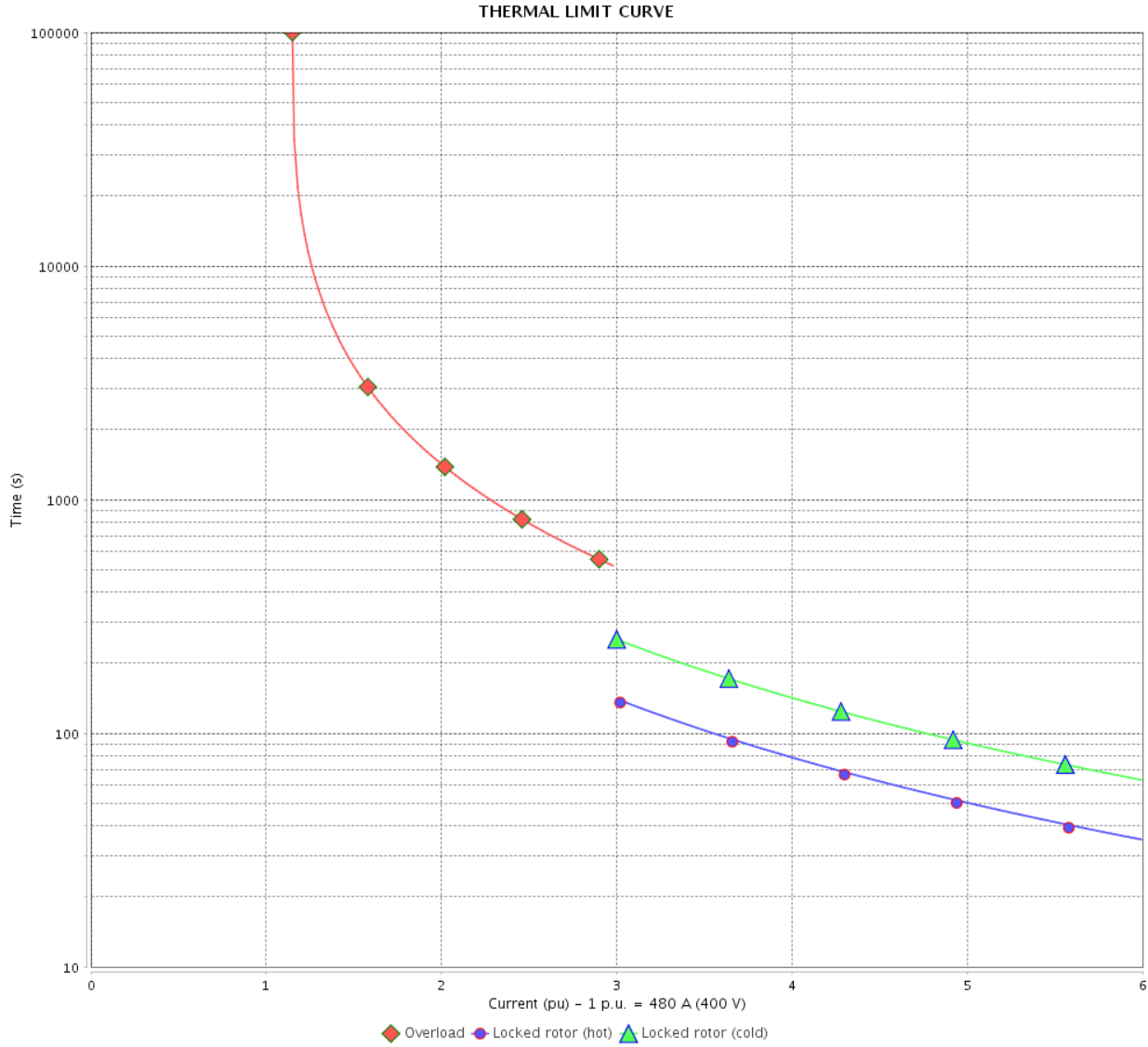
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		15 / 22	

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		16 / 22		
Date		13/04/2022		

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 14356602
 Catalog # : 40012XT3G586/7

Performance : 415 V 50 Hz 6P IE2

Rated current : 468 A	Moment of inertia (J) : 368 sq.ft.lb
LRC : 6.5	Duty cycle : Cont.(S1)
Rated torque : 1860 ft.lb	Insulation class : F
Locked rotor torque : 220 %	Service factor : 1.00
Breakdown torque : 229 %	Temperature rise : 80 K
Rated speed : 990 rpm	

Heating constant

Cooling constant

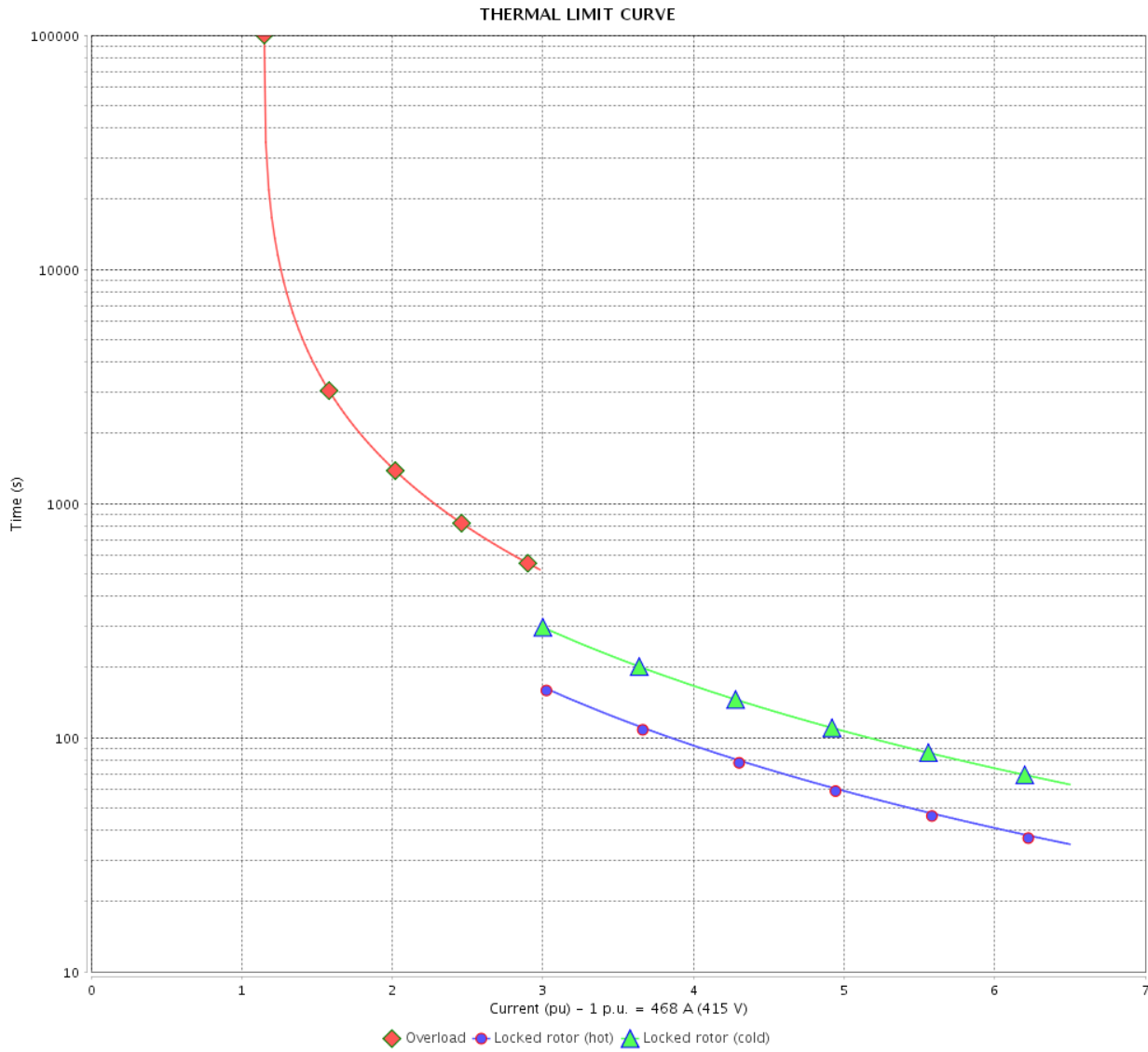
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		17 / 22	

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		

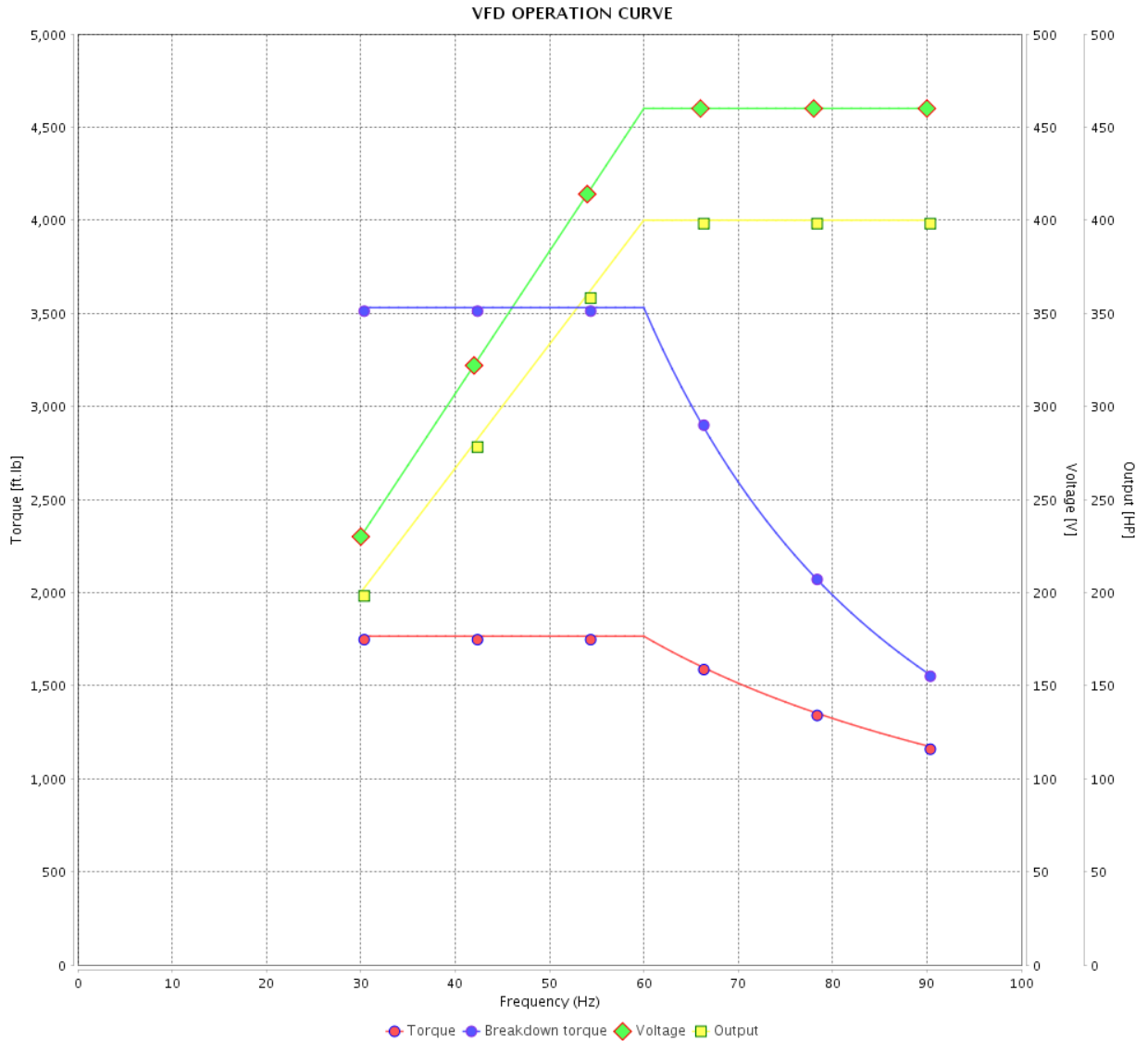
VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 14356602
 Catalog # : 40012XT3G586/7



Performance : 460 V 60 Hz 6P

Rated current : 479 A
 LRC : 6.0
 Rated torque : 1770 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 200 %
 Rated speed : 1190 rpm

Moment of inertia (J) : 368 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 19 / 22	Revision
Checked by				
Date	13/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



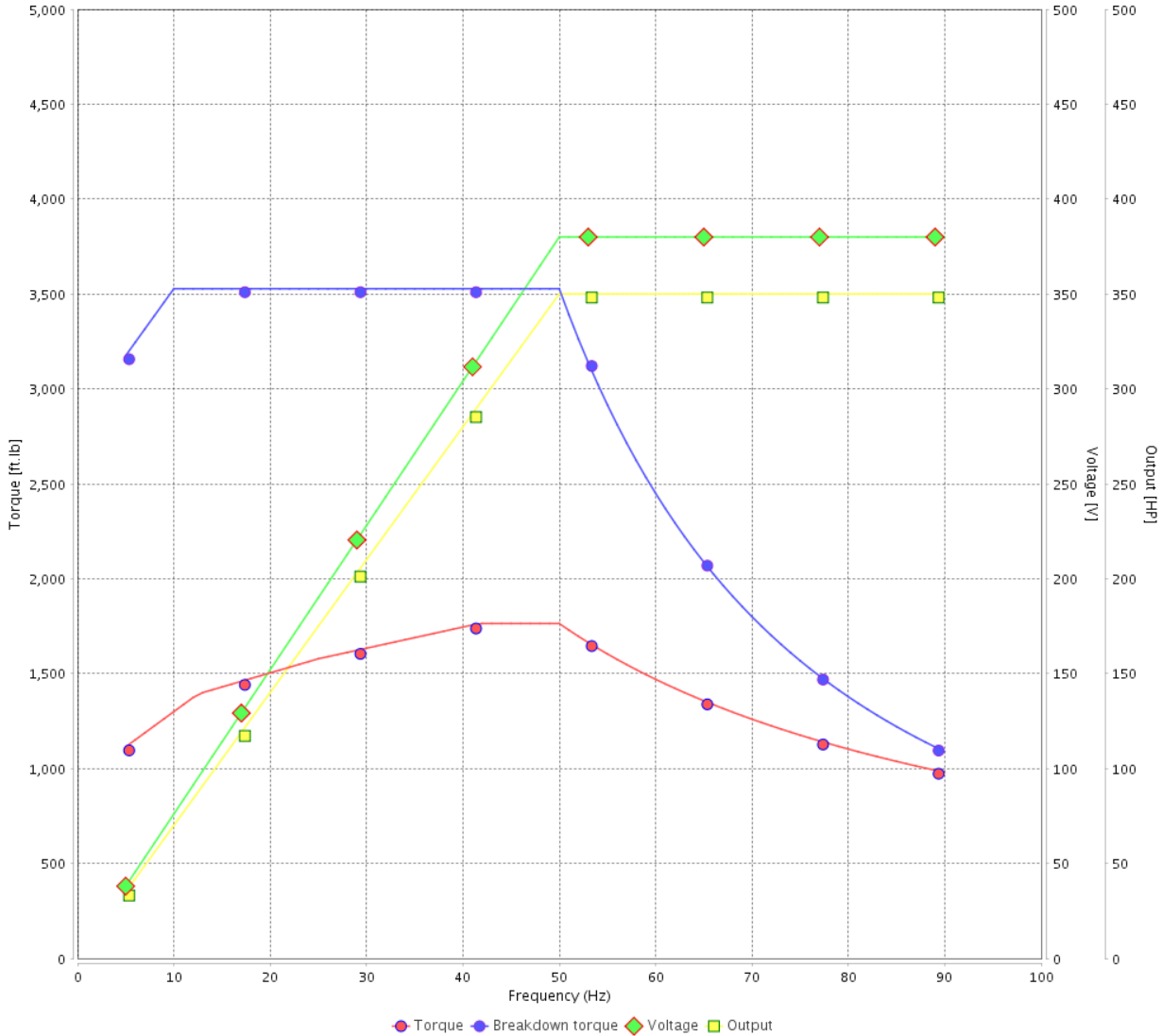
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14356602

Catalog # : 40012XT3G586/7

VFD OPERATION CURVE



Performance : 380 V 50 Hz 6P IE2

Rated current : 505 A
 LRC : 5.3
 Rated torque : 1860 ft.lb
 Locked rotor torque : 180 %
 Breakdown torque : 190 %
 Rated speed : 990 rpm

Moment of inertia (J) : 368 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K

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

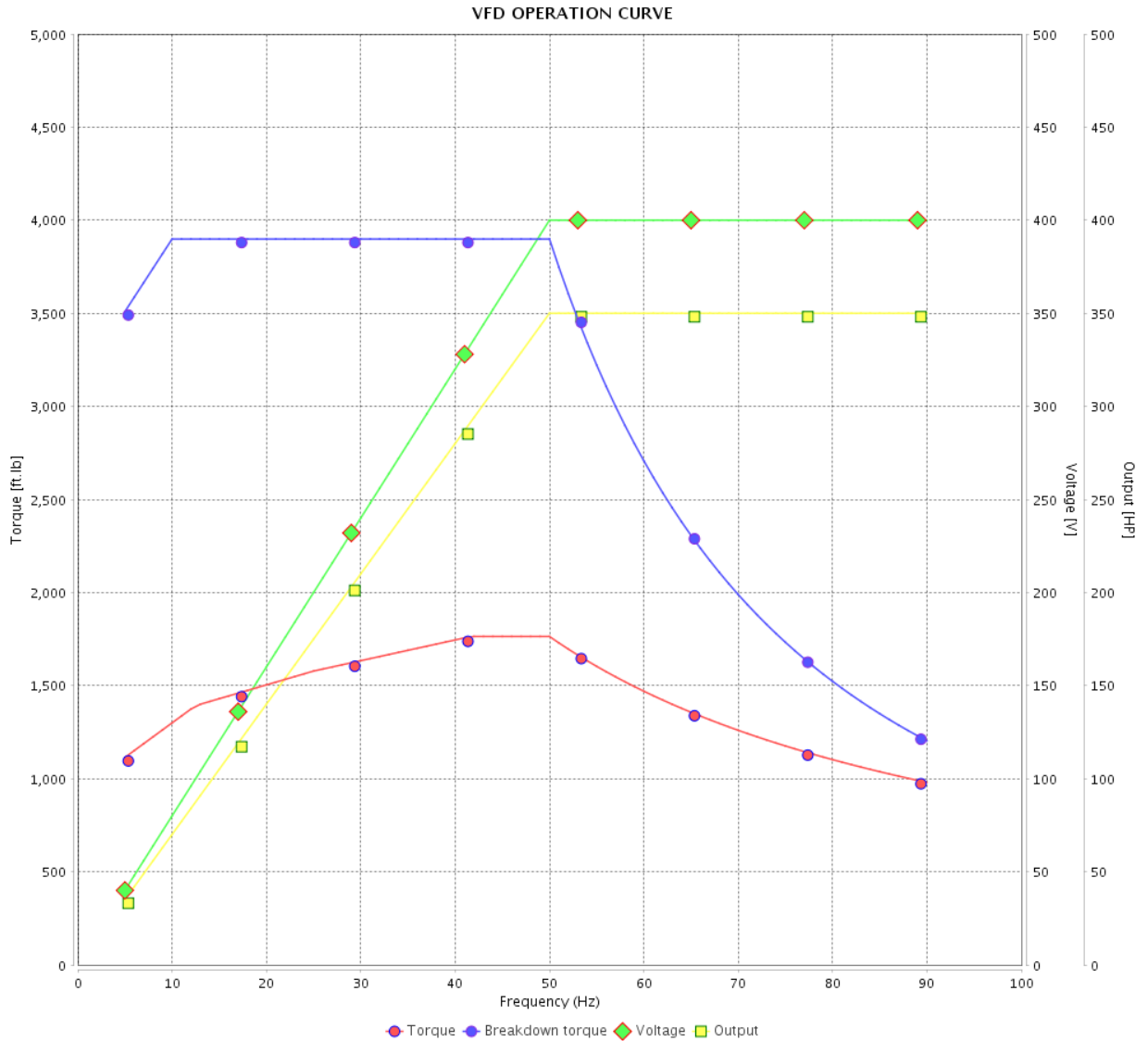


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14356602

Catalog # : 40012XT3G586/7



Performance : 400 V 50 Hz 6P IE2

Rated current : 480 A
 LRC : 6.0
 Rated torque : 1860 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 210 %
 Rated speed : 990 rpm

Moment of inertia (J) : 368 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 21 / 22	Revision
Checked by				
Date	13/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



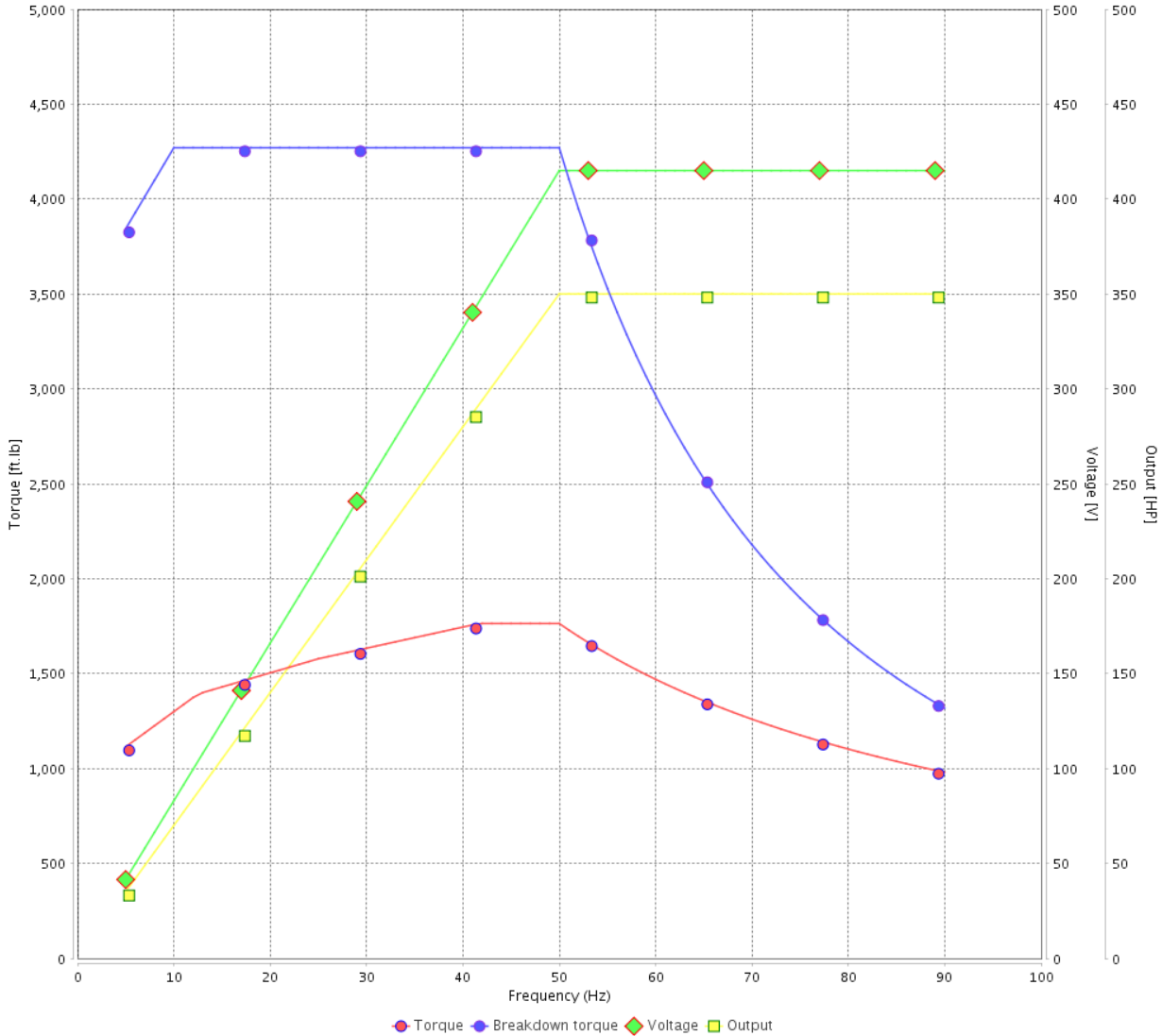
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14356602

Catalog # : 40012XT3G586/7

VFD OPERATION CURVE

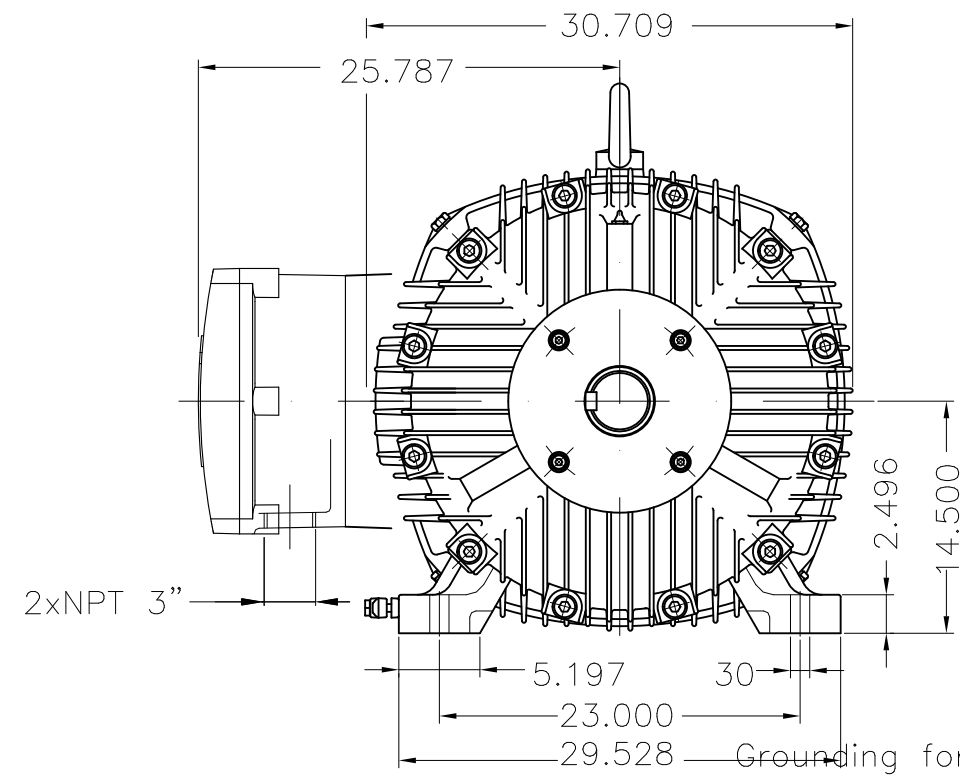


Performance : 415 V 50 Hz 6P IE2

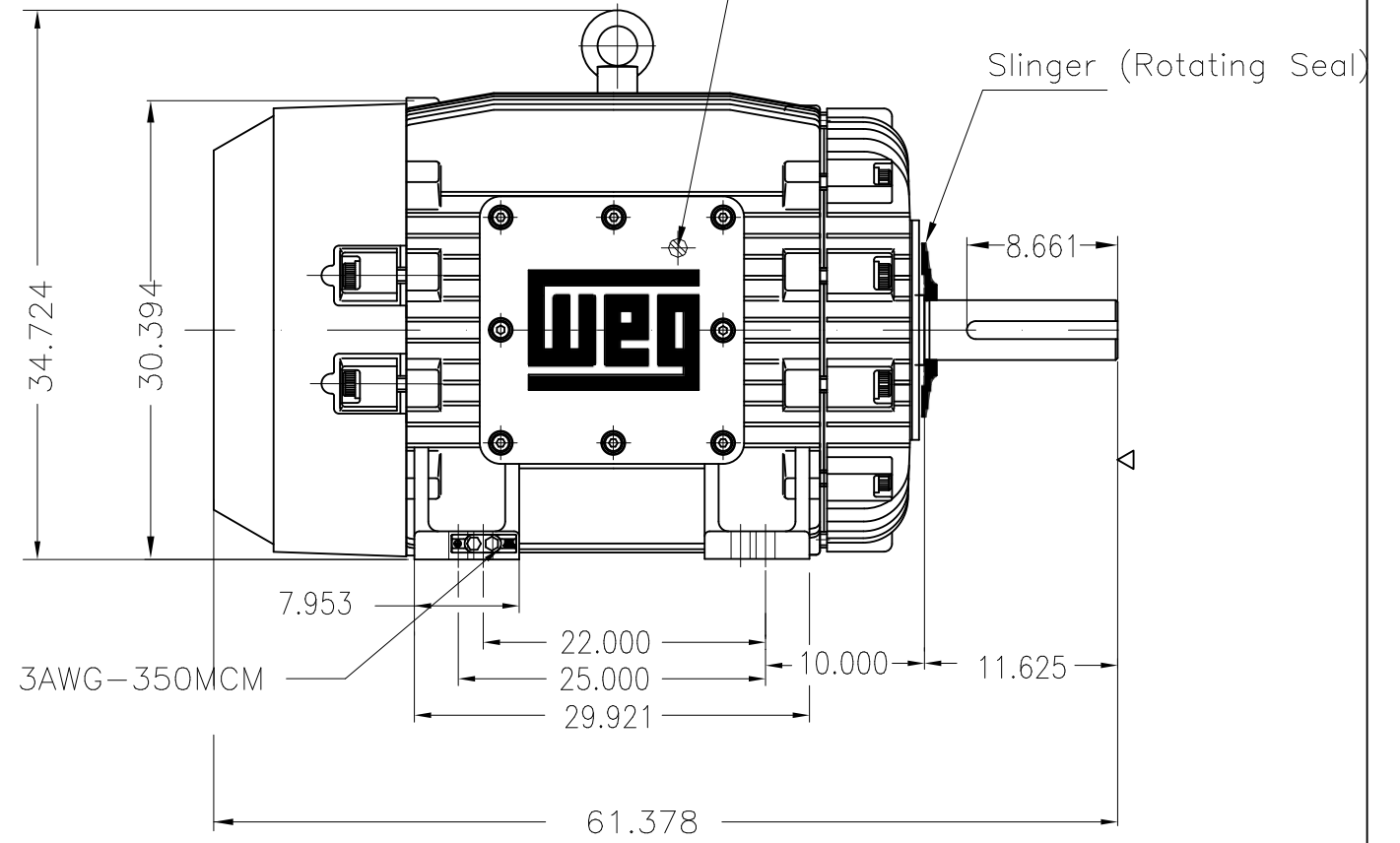
Rated current : 468 A
 LRC : 6.5
 Rated torque : 1860 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 229 %
 Rated speed : 990 rpm

Moment of inertia (J) : 368 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K

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



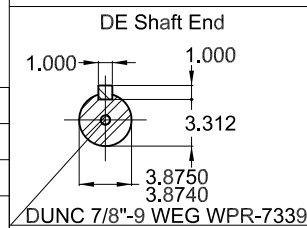
Grounding for leads 35-120 mm² / 1-4/0 AWG



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

400 HP 06 Poles 60 Hz

A



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 586/7T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

PREVIEW
 WDD



SHEET 1 / 1