

DATA SHEET



Three Phase Induction Motor - Squirrel Cage

Customer :								
Product line	: ODP NEMA Premium Efficiency Three-Phase	Product code :	11087164					
		Catalog # :	20018OT3G445TC					
Frame	: 444/5TC	Cooling method	: IC01 - ODP					
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	: 1499 lb					
Protection degree	: IP23	Moment of inertia (J)	: 49.5 sq.ft.lb					
Design	: B							
Output [HP]	200	175	175	175	200	200	200	
Poles	4	4	4	4	4	4	4	
Frequency [Hz]	60	50	50	50	50	50	50	
Rated voltage [V]	460	380	400	415	380	400	415	
Rated current [A]	229	250	240	237	286	275	265	
L. R. Amperes [A]	1397	1575	1680	1778	1602	1705	1776	
LRC [A]	6.1x(Code F)	6.3x(Code G)	7.0x(Code H)	7.5x(Code J)	5.6x(Code F)	6.2x(Code G)	6.7x(Code H)	
No load current [A]	75.0	91.5	101	111	91.5	101	111	
Rated speed [RPM]	1780	1480	1480	1485	1480	1480	1485	
Slip [%]	1.11	1.33	1.33	1.00	1.33	1.33	1.00	
Rated torque [ft.lb]	582	613	613	611	700	700	698	
Locked rotor torque [%]	200	210	220	240	180	190	210	
Breakdown torque [%]	229	250	290	320	220	250	280	
Service factor	1.15	1.15	1.15	1.15	1.15	1.15	1.15	
Temperature rise	80 K	80 K	80 K	80 K	80 K	80 K	80 K	
Locked rotor time	28s (cold) 16s (hot)	23s (cold) 13s (hot)	21s (cold) 12s (hot)	19s (cold) 11s (hot)	23s (cold) 13s (hot)	21s (cold) 12s (hot)	19s (cold) 11s (hot)	
Noise level ²	78.0 dB(A)							
Efficiency (%)	25%	95.3	90.9	91.2	91.2	93.2	93.3	92.5
	50%	95.4	92.5	92.6	92.6	93.4	93.4	93.4
	75%	95.8	94.0	94.2	94.2	93.6	93.6	94.0
	100%	95.8	95.6	95.6	95.6	93.7	93.6	94.9
Power Factor	25%	0.50	0.47	0.42	0.38	0.51	0.46	0.42
	50%	0.76	0.71	0.67	0.63	0.76	0.72	0.68
	75%	0.83	0.81	0.78	0.75	0.82	0.80	0.78
	100%	0.86	0.84	0.83	0.81	0.85	0.84	0.83
Bearing type	: Drive end 6319 C3	: Non drive end 6316 C3	Foundation loads					
Sealing	: Without	: Without	Max. traction	: 4530 lb				
	Bearing Seal		Max. compression	: 6028 lb				
Lubrication interval	: 20000 h	: 20000 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	08/11/2019				1 / 36			

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



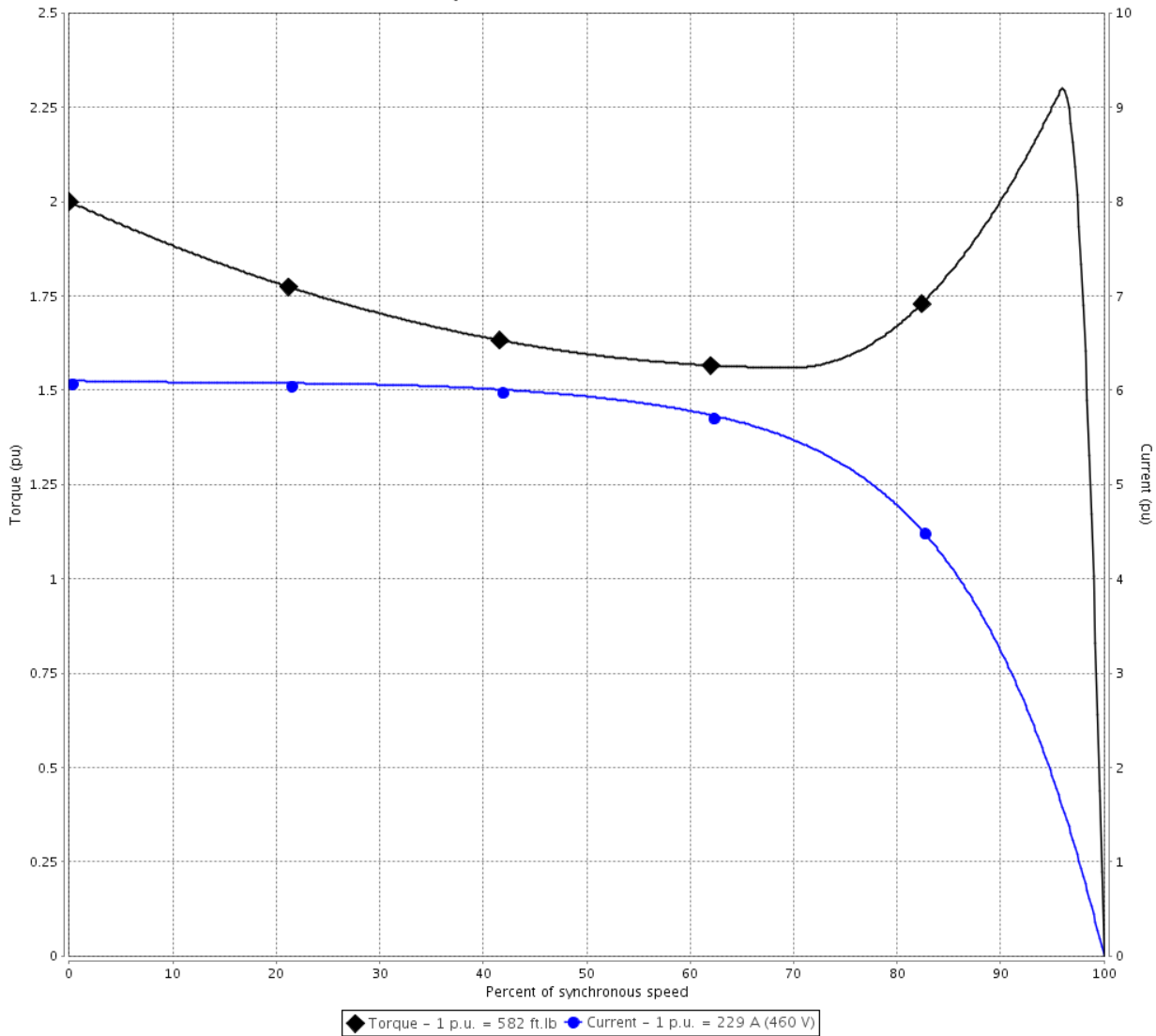
Customer :

Product line : ODP NEMA Premium Efficiency
Three-Phase

Product code : 11087164

Catalog # : 20018OT3G445TC

TORQUE AND CURRENT VS SPEED CURVE



Performance : 460 V 60 Hz 4P

Rated current	: 229 A	Moment of inertia (J)	: 49.5 sq.ft.lb
LRC	: 6.1	Duty cycle	: Cont.(S1)
Rated torque	: 582 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.15
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 1780 rpm	Design	: B

Locked rotor time : 28s (cold) 16s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 2 / 36	Revision
Checked by				
Date	08/11/2019			

TORQUE AND CURRENT VS SPEED CURVE



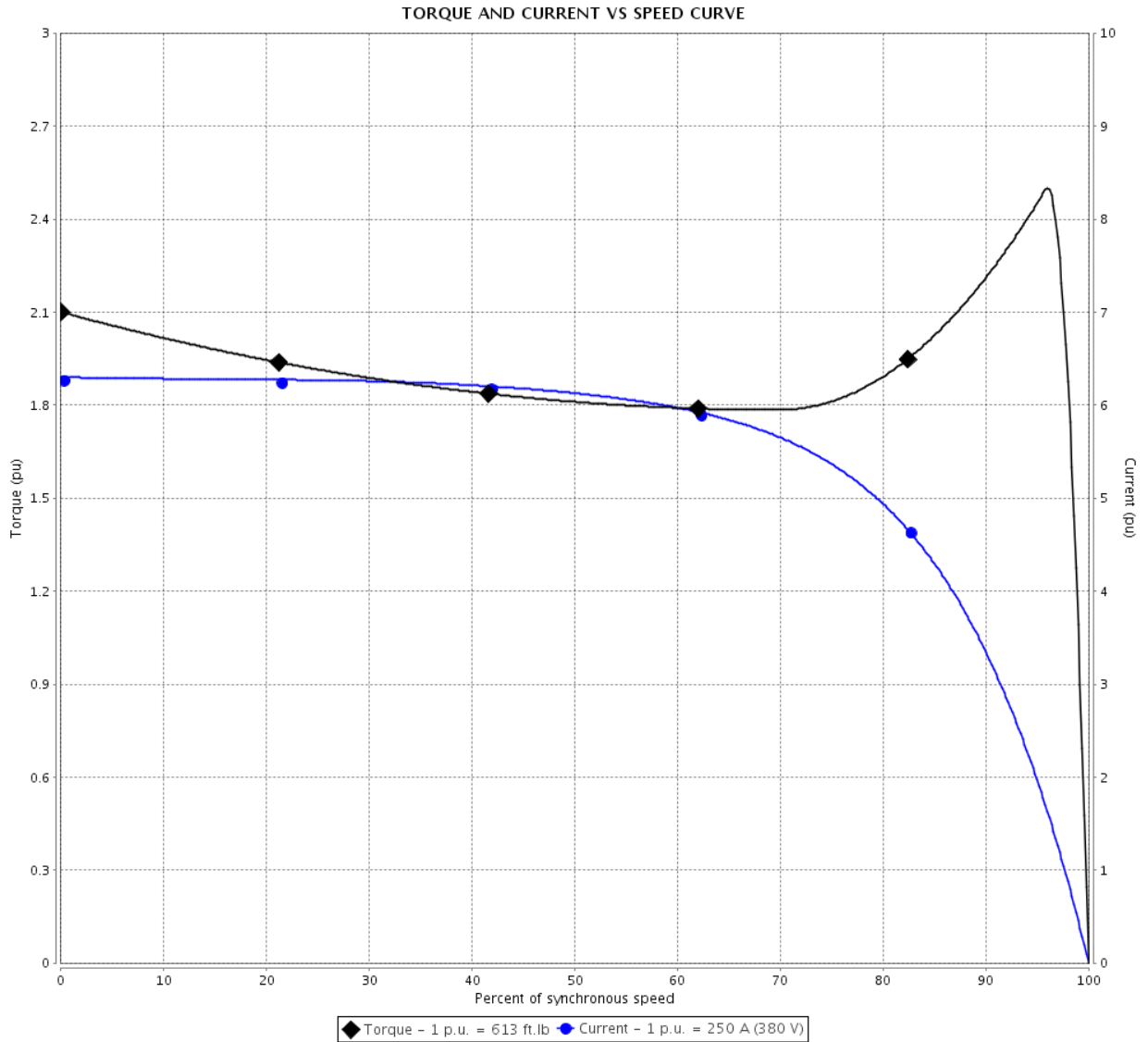
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : ODP NEMA Premium Efficiency
Three-Phase

Product code : 11087164

Catalog # : 20018OT3G445TC



Performance : 380 V 50 Hz 4P IE3

Rated current	: 250 A	Moment of inertia (J)	: 49.5 sq.ft.lb
LRC	: 6.3	Duty cycle	: Cont.(S1)
Rated torque	: 613 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.15
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

Locked rotor time : 23s (cold) 13s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by			3 / 36	
Date	08/11/2019			

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



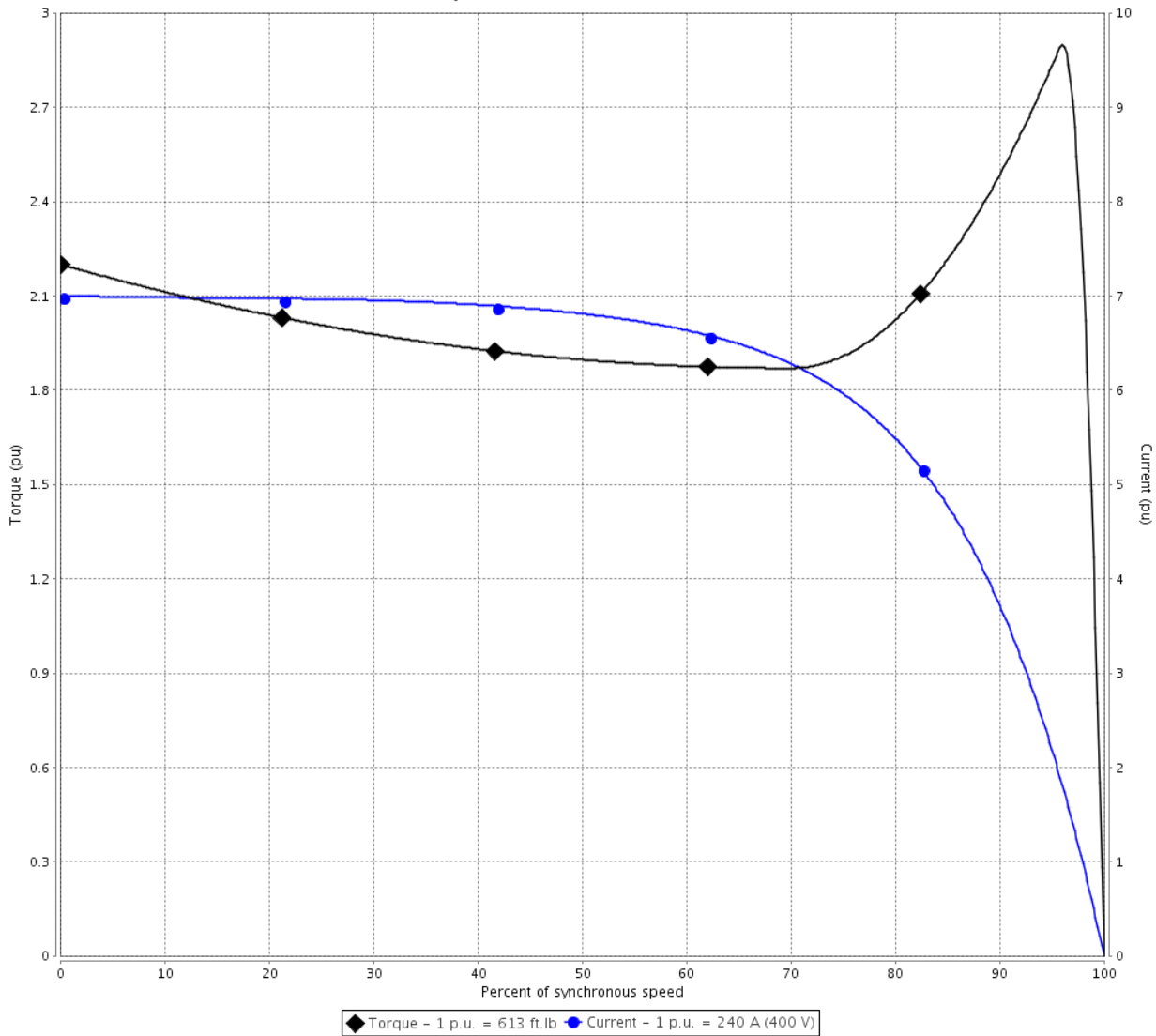
Customer :

Product line : ODP NEMA Premium Efficiency
Three-Phase

Product code : 11087164

Catalog # : 20018OT3G445TC

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current	: 240 A	Moment of inertia (J)	: 49.5 sq.ft.lb
LRC	: 7.0	Duty cycle	: Cont.(S1)
Rated torque	: 613 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.15
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

Locked rotor time : 21s (cold) 12s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 36	Revision
Checked by				
Date	08/11/2019			

TORQUE AND CURRENT VS SPEED CURVE



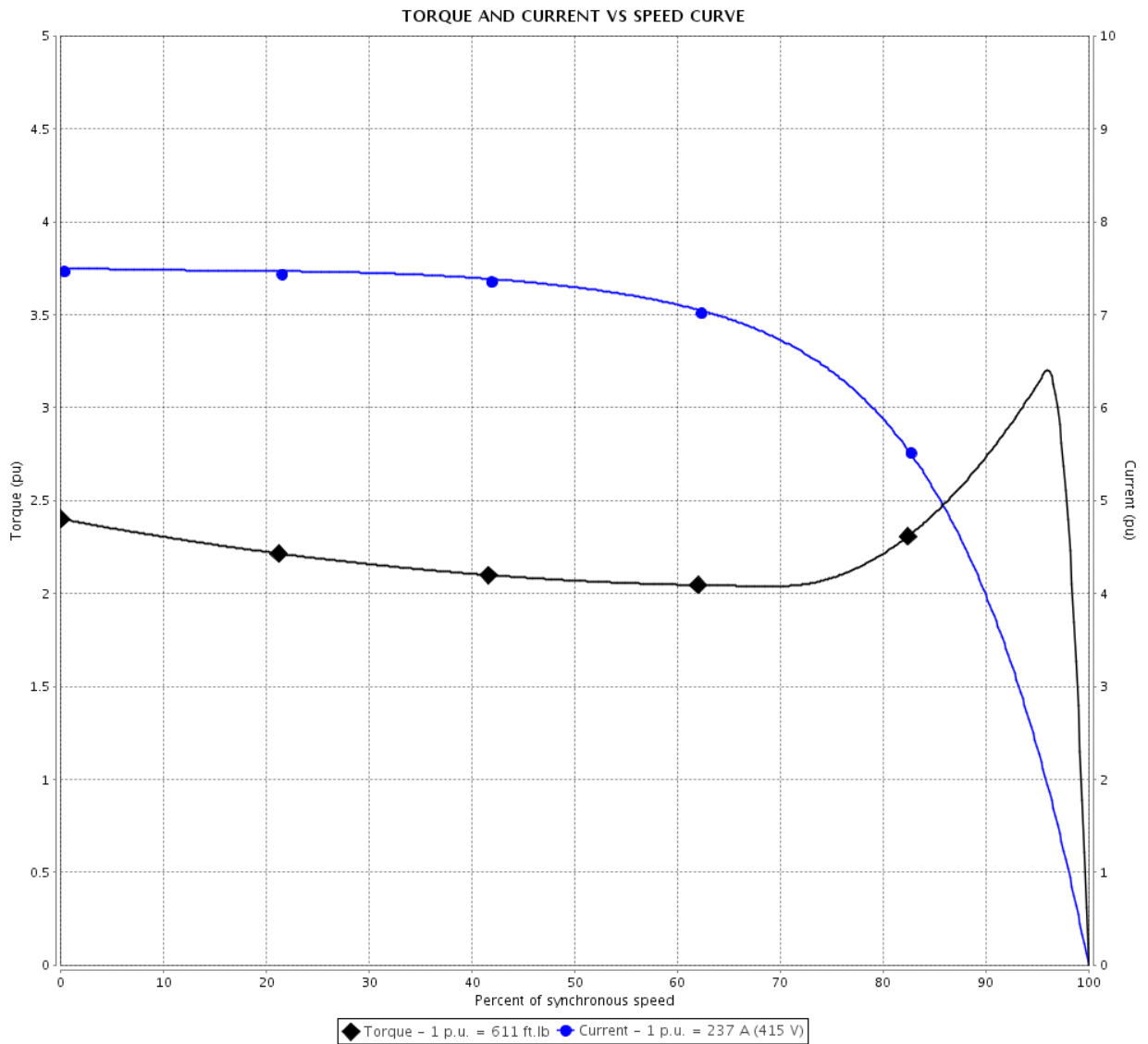
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : ODP NEMA Premium Efficiency
Three-Phase

Product code : 11087164

Catalog # : 20018OT3G445TC



Performance : 415 V 50 Hz 4P IE3

Rated current	: 237 A	Moment of inertia (J)	: 49.5 sq.ft.lb
LRC	: 7.5	Duty cycle	: Cont.(S1)
Rated torque	: 611 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.15
Breakdown torque	: 320 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

Locked rotor time : 19s (cold) 11s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 5 / 36	Revision
Checked by				
Date	08/11/2019			

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



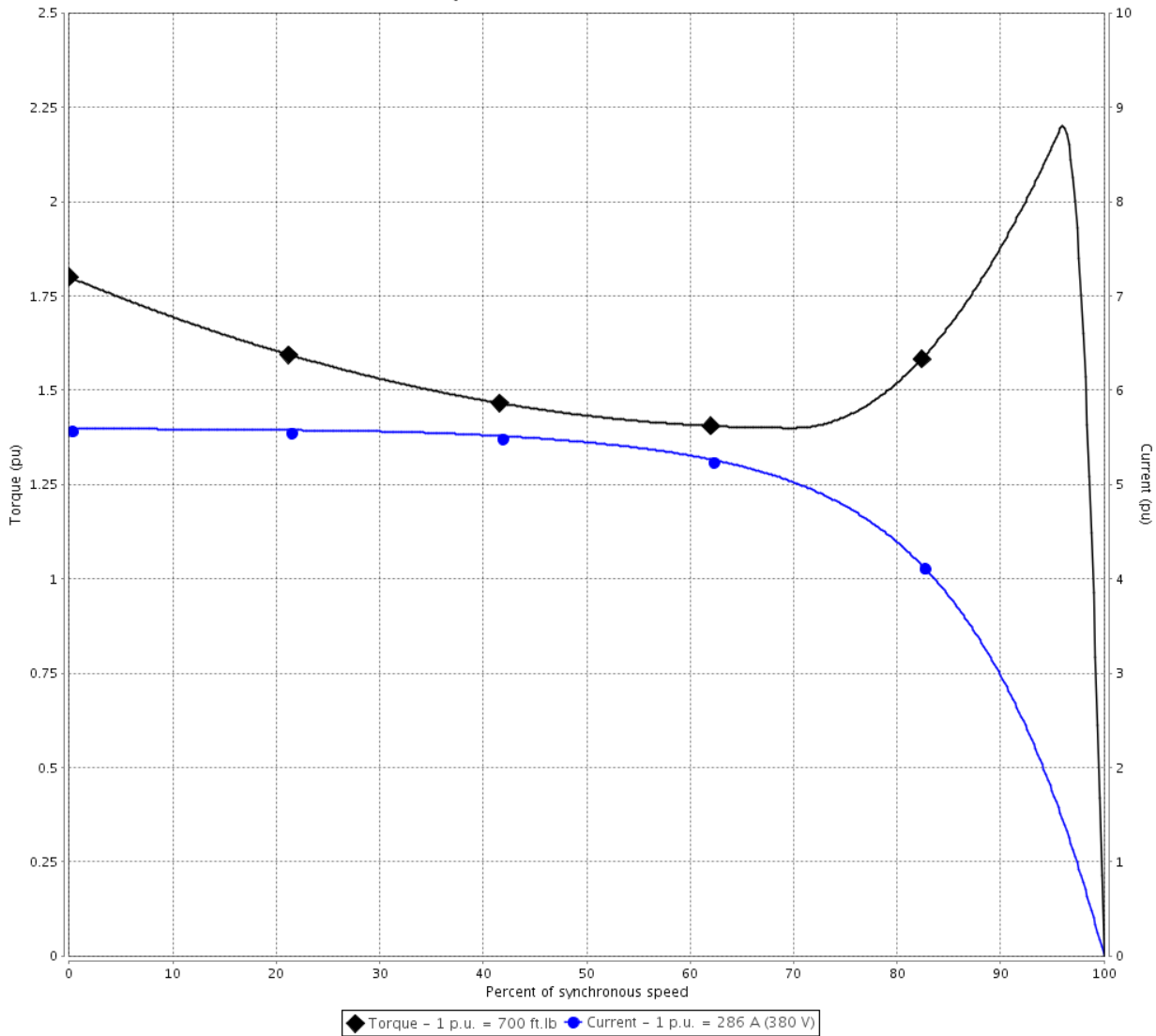
Customer :

Product line : ODP NEMA Premium Efficiency
Three-Phase

Product code : 11087164

Catalog # : 20018OT3G445TC

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 4P

Rated current	: 286 A	Moment of inertia (J)	: 49.5 sq.ft.lb
LRC	: 5.6	Duty cycle	: Cont.(S1)
Rated torque	: 700 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.15
Breakdown torque	: 220 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

Locked rotor time : 23s (cold) 13s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 6 / 36	Revision
Checked by				
Date	08/11/2019			

TORQUE AND CURRENT VS SPEED CURVE



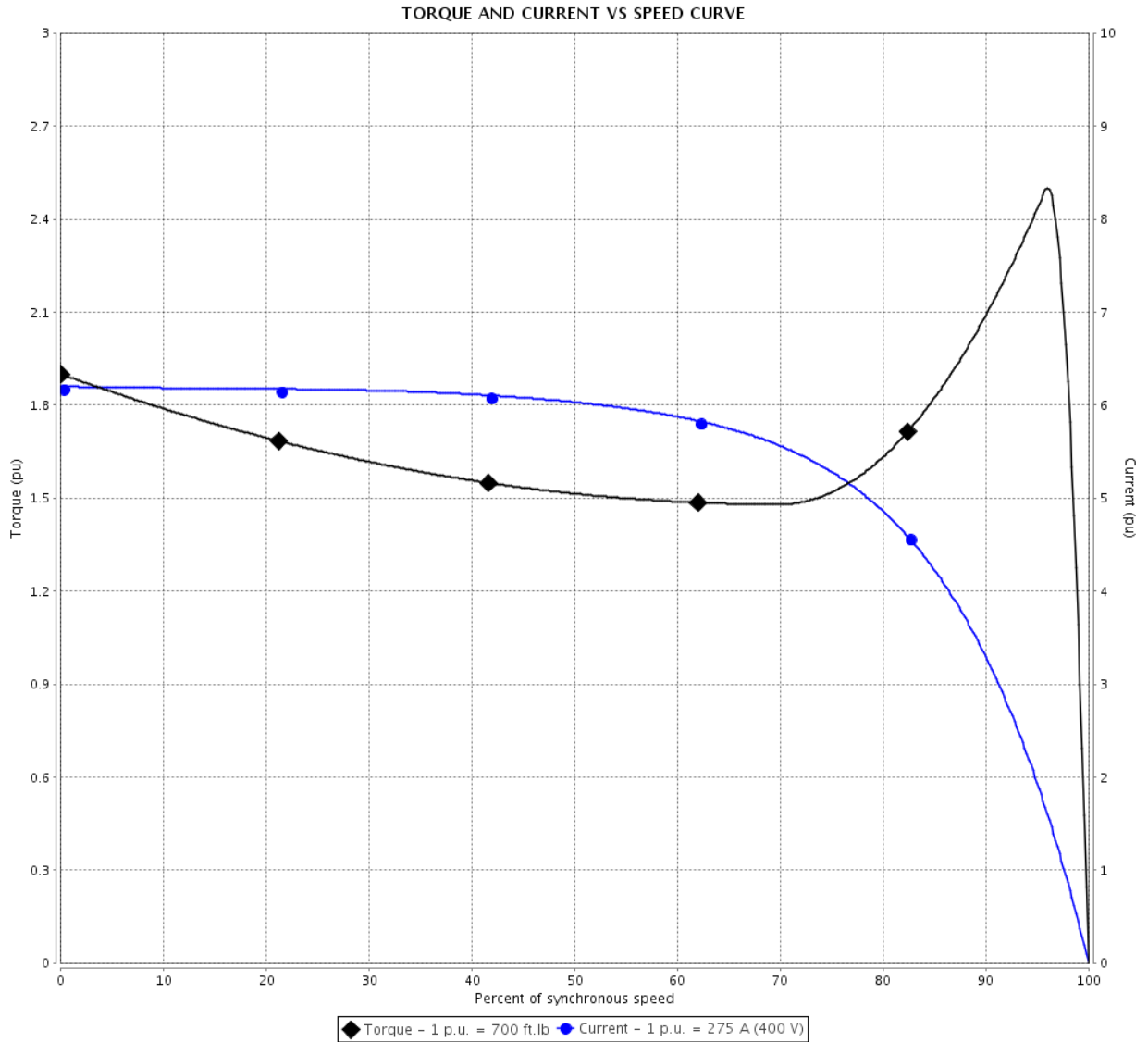
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : ODP NEMA Premium Efficiency
Three-Phase

Product code : 11087164

Catalog # : 20018OT3G445TC



Performance : 400 V 50 Hz 4P

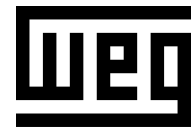
Rated current	: 275 A	Moment of inertia (J)	: 49.5 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 700 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.15
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

Locked rotor time : 21s (cold) 12s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 7 / 36	Revision
Checked by				
Date	08/11/2019			

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage

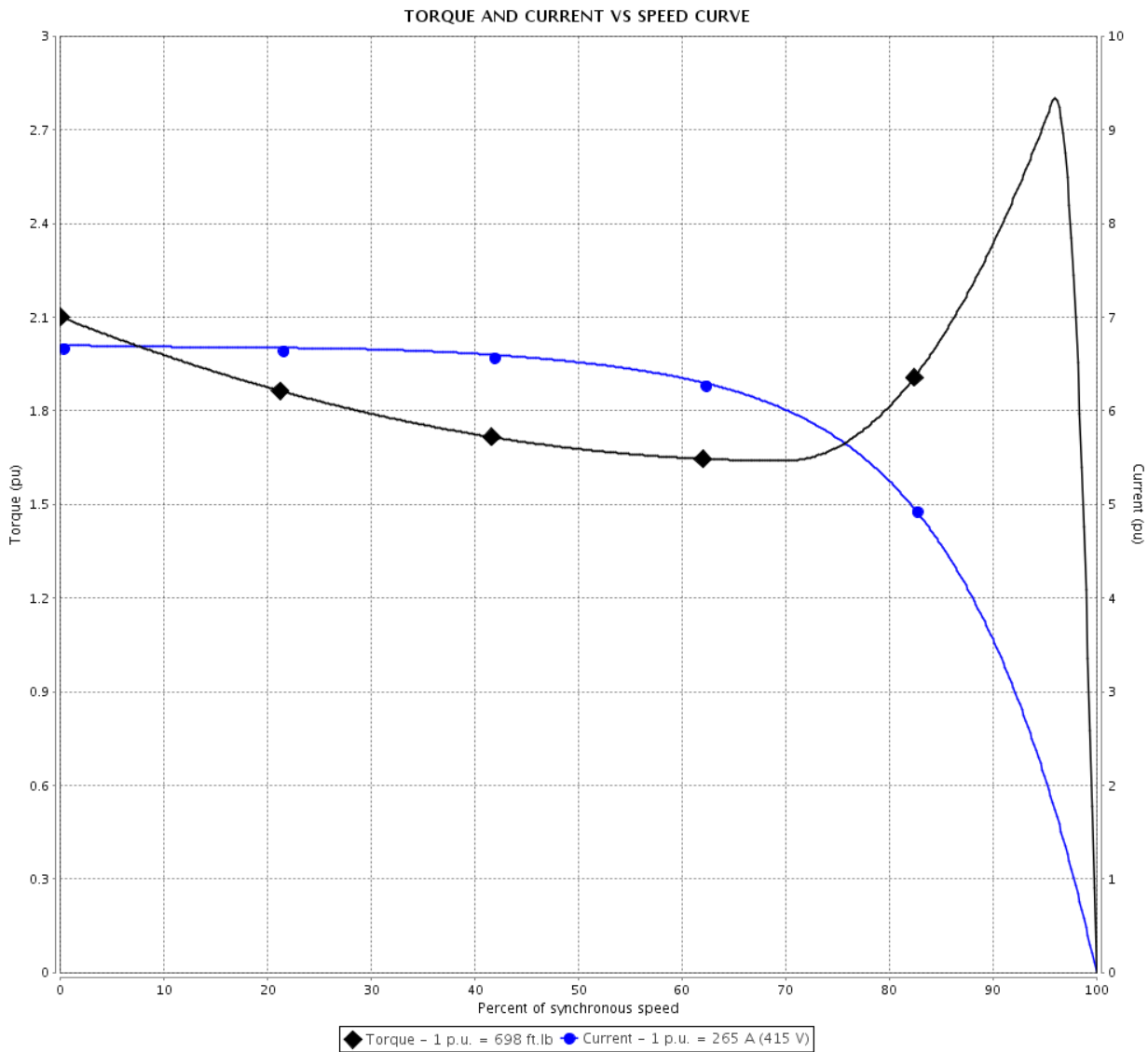


Customer :

Product line : ODP NEMA Premium Efficiency
Three-Phase

Product code : 11087164

Catalog # : 20018OT3G445TC



Performance : 415 V 50 Hz 4P IE2

Rated current	: 265 A	Moment of inertia (J)	: 49.5 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 698 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.15
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

Locked rotor time : 19s (cold) 11s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 8 / 36	Revision
Checked by				
Date	08/11/2019			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

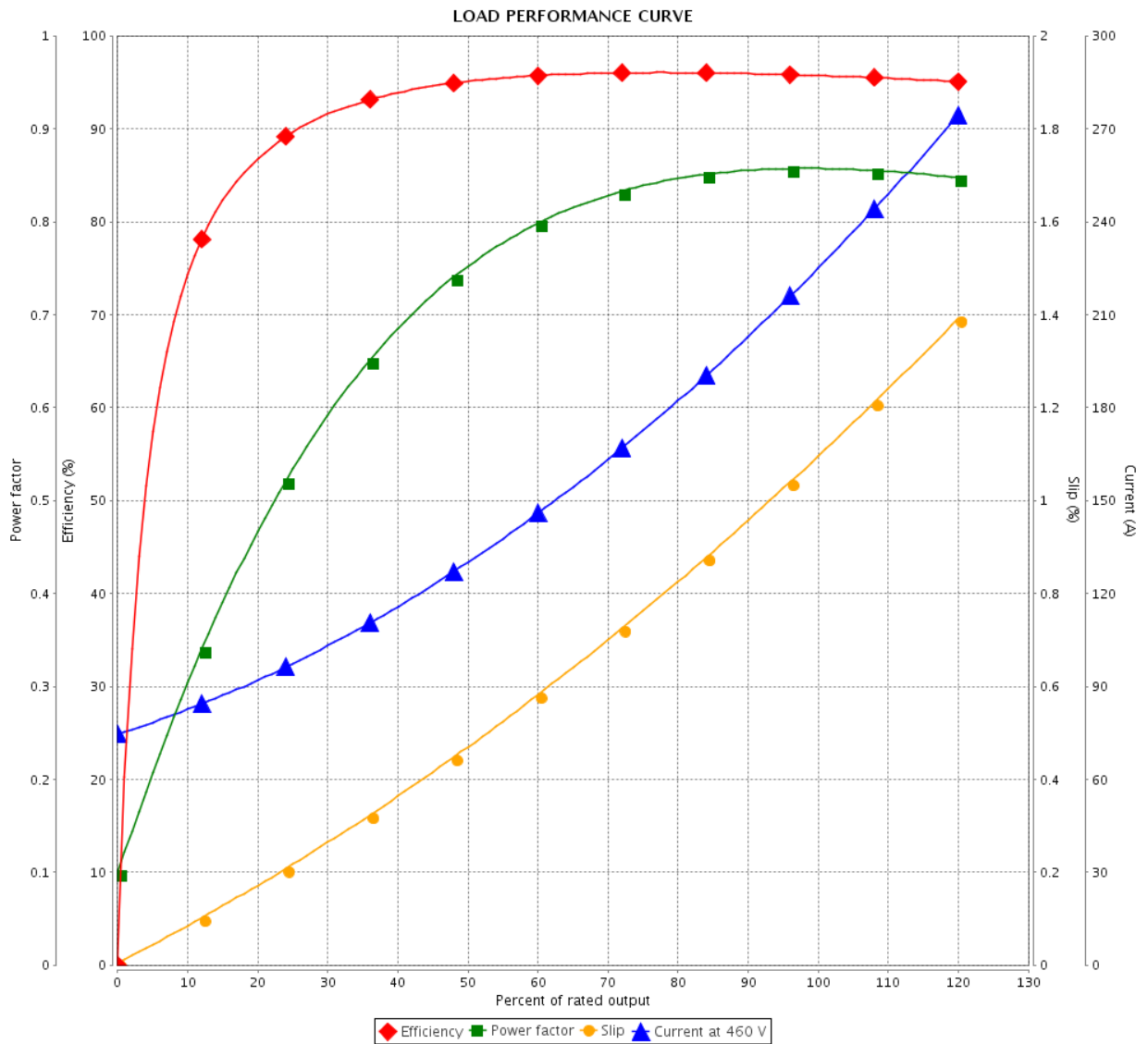


Customer :

Product line : ODP NEMA Premium Efficiency
Three-Phase

Product code : 11087164

Catalog # : 20018OT3G445TC



Performance : 460 V 60 Hz 4P

Rated current : 229 A
 LRC : 6.1
 Rated torque : 582 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 229 %
 Rated speed : 1780 rpm

Moment of inertia (J) : 49.5 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			9 / 36	
Date	08/11/2019			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

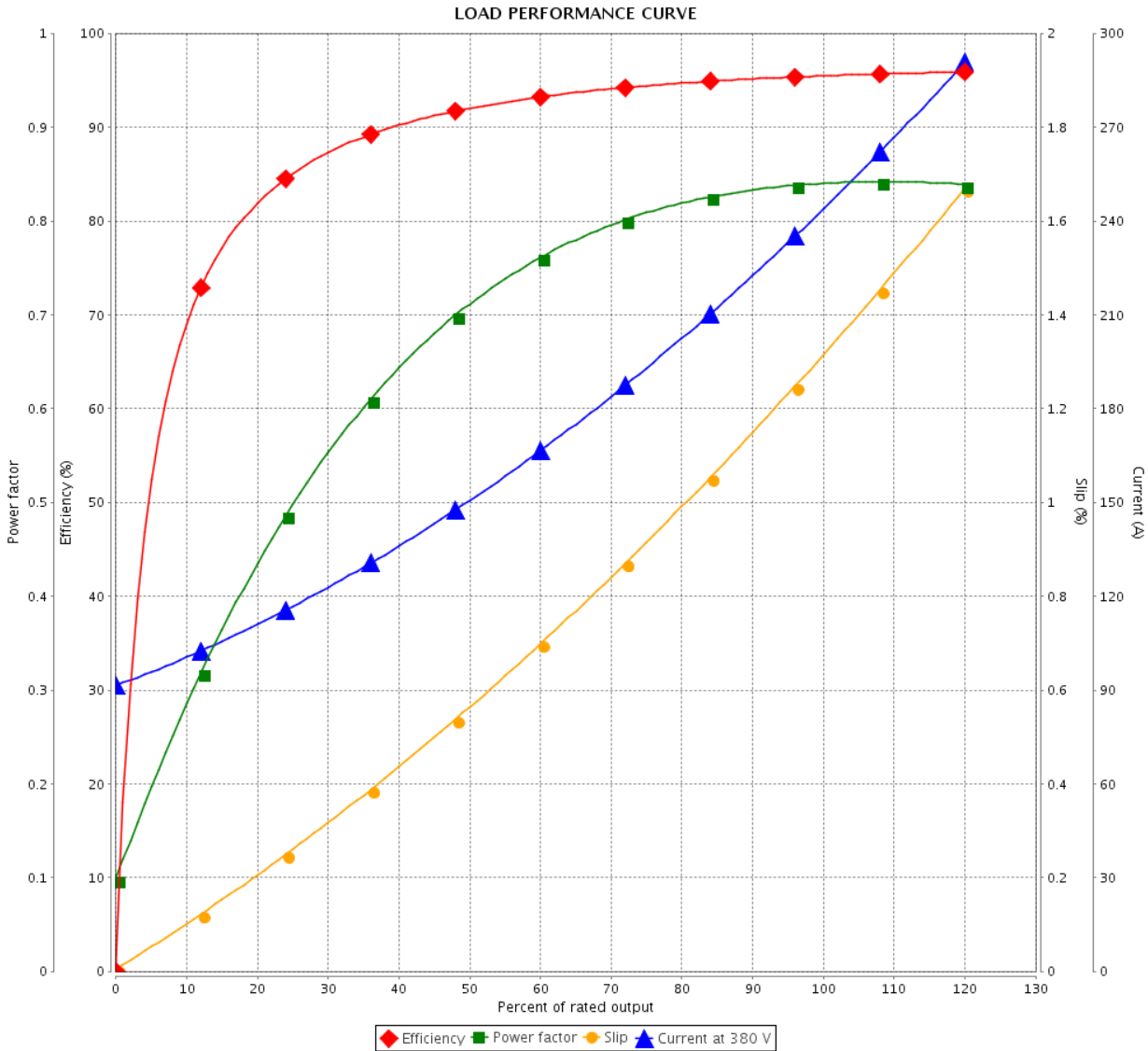


Customer :

Product line : ODP NEMA Premium Efficiency Three-Phase

Product code : 11087164

Catalog # : 20018OT3G445TC



Performance : 380 V 50 Hz 4P IE3

Rated current	: 250 A	Moment of inertia (J)	: 49.5 sq.ft.lb
LRC	: 6.3	Duty cycle	: Cont.(S1)
Rated torque	: 613 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.15
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 10 / 36	Revision
Checked by				
Date	08/11/2019			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

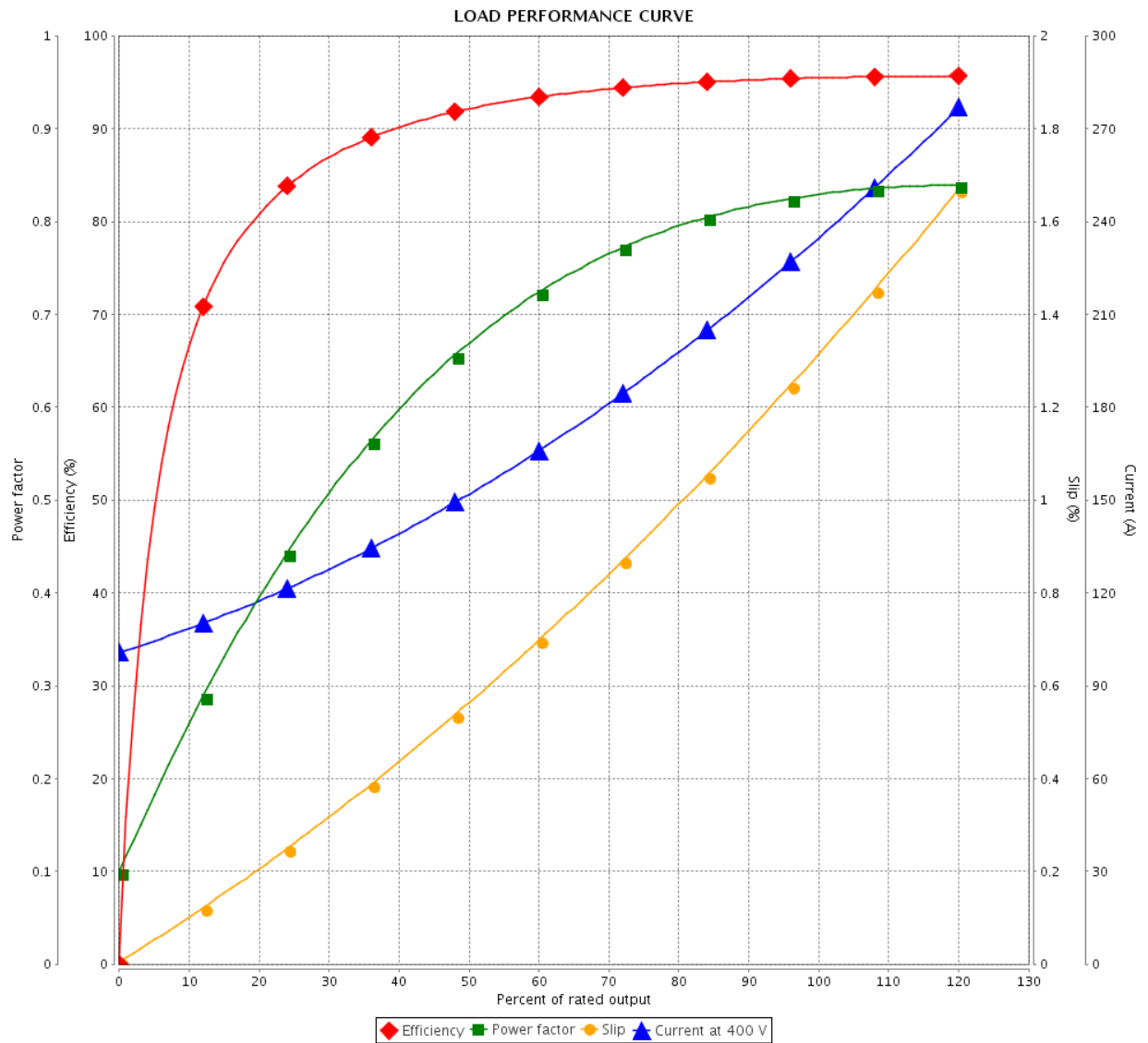


Customer :

Product line : ODP NEMA Premium Efficiency Three-Phase

Product code : 11087164

Catalog # : 20018OT3G445TC



Performance : 400 V 50 Hz 4P IE3

Rated current : 240 A
 LRC : 7.0
 Rated torque : 613 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 290 %
 Rated speed : 1480 rpm

Moment of inertia (J) : 49.5 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			11 / 36	
Date	08/11/2019			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

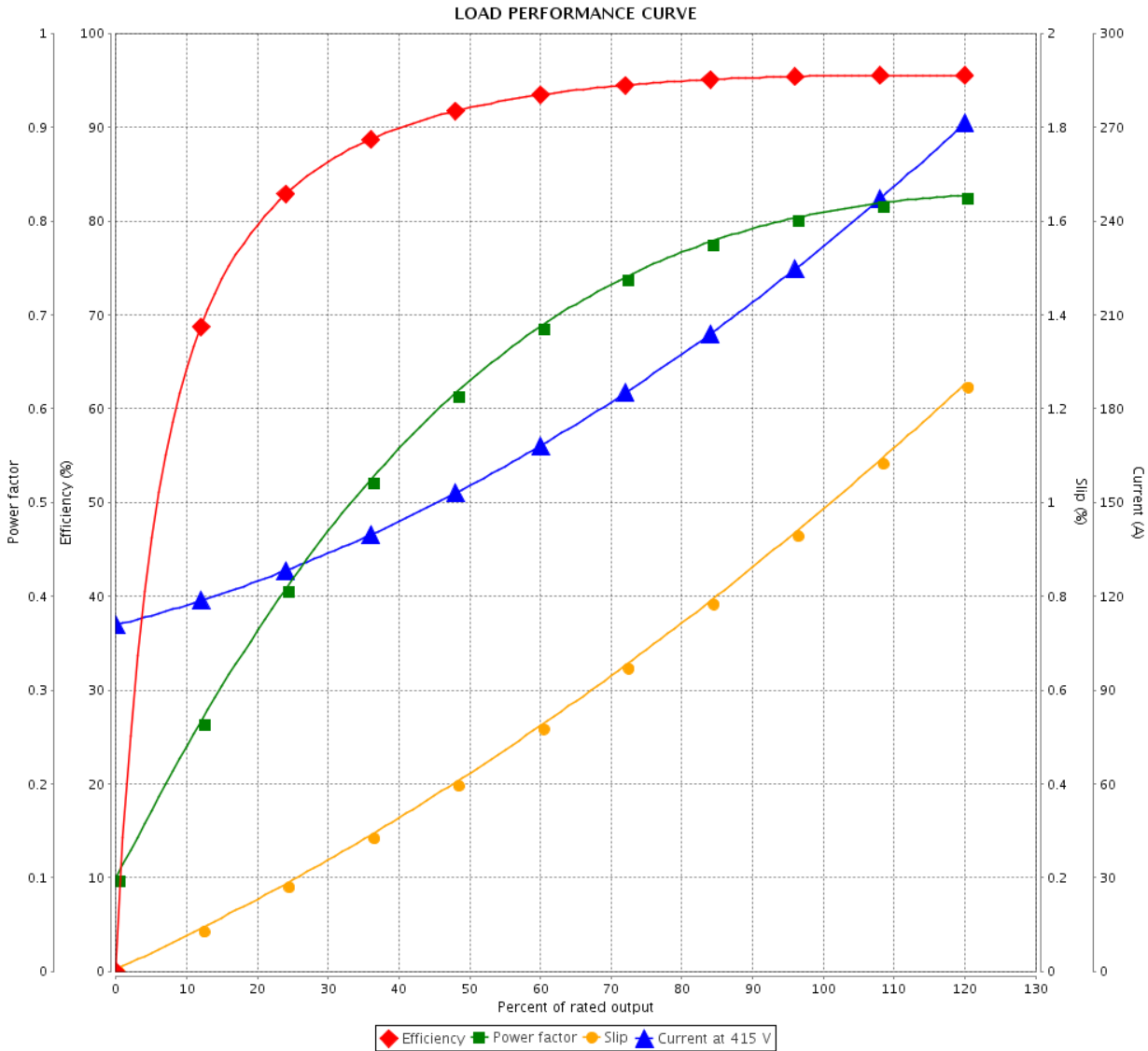


Customer :

Product line : ODP NEMA Premium Efficiency Three-Phase

Product code : 11087164

Catalog # : 20018OT3G445TC



Performance : 415 V 50 Hz 4P IE3

Rated current : 237 A
 LRC : 7.5
 Rated torque : 611 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 320 %
 Rated speed : 1485 rpm

Moment of inertia (J) : 49.5 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			12 / 36	
Date	08/11/2019			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

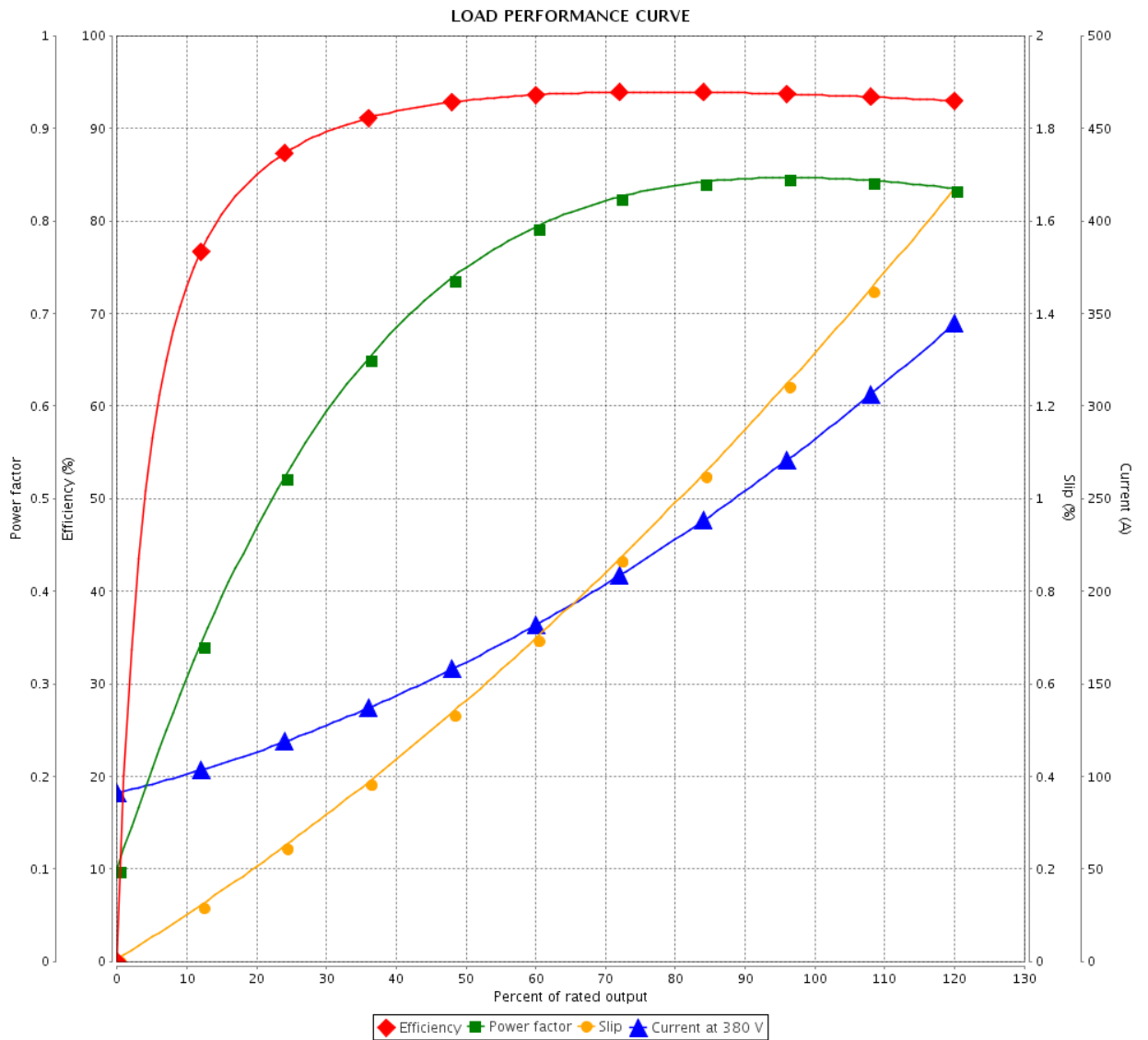


Customer :

Product line : ODP NEMA Premium Efficiency Three-Phase

Product code : 11087164

Catalog # : 20018OT3G445TC



Performance : 380 V 50 Hz 4P

Rated current : 286 A
 LRC : 5.6
 Rated torque : 700 ft.lb
 Locked rotor torque : 180 %
 Breakdown torque : 220 %
 Rated speed : 1480 rpm

Moment of inertia (J) : 49.5 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			13 / 36	
Date	08/11/2019			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

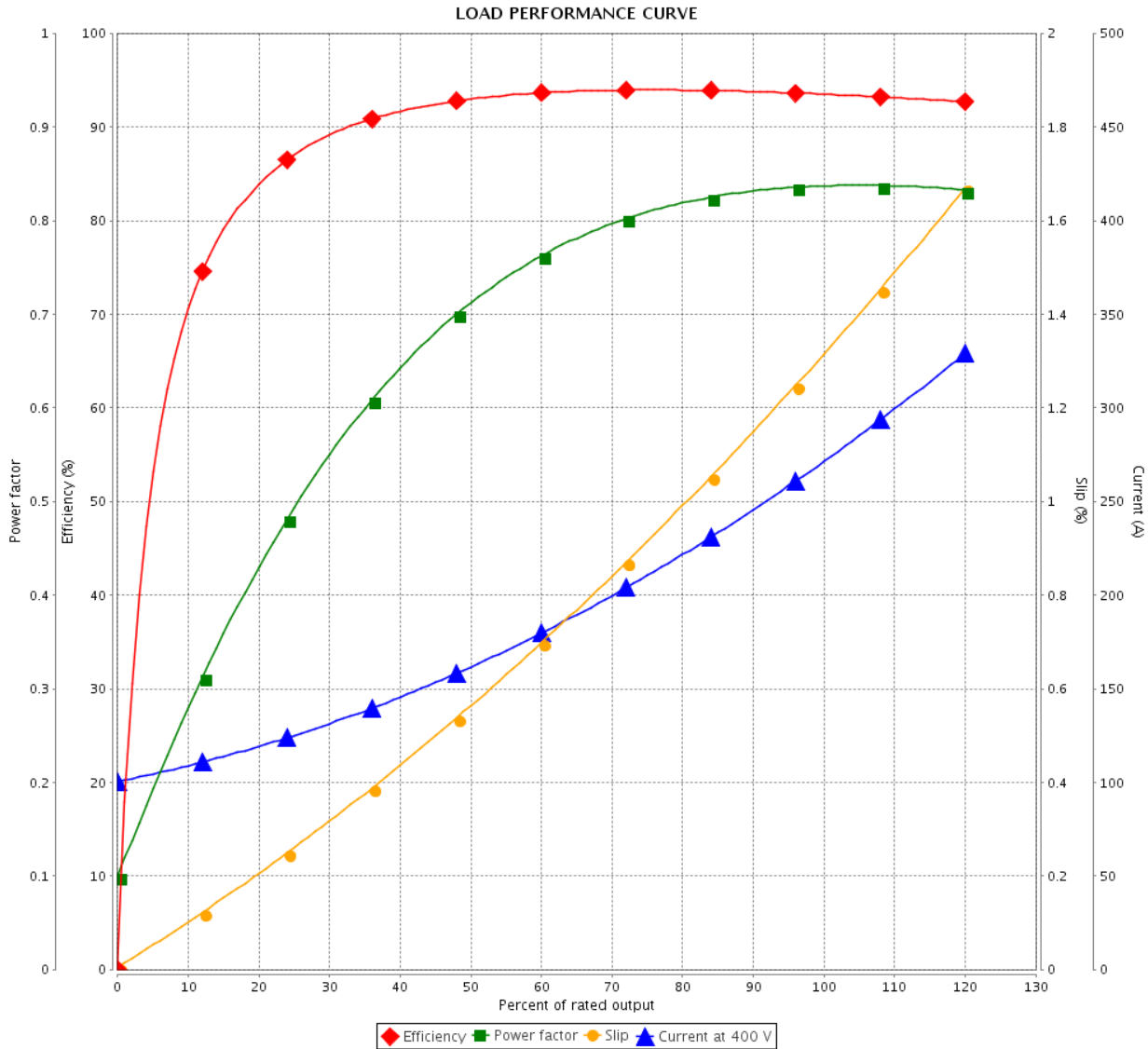


Customer :

Product line : ODP NEMA Premium Efficiency Three-Phase

Product code : 11087164

Catalog # : 20018OT3G445TC



Performance : 400 V 50 Hz 4P

Rated current : 275 A
 LRC : 6.2
 Rated torque : 700 ft.lb
 Locked rotor torque : 190 %
 Breakdown torque : 250 %
 Rated speed : 1480 rpm

Moment of inertia (J) : 49.5 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 14 / 36	Revision
Checked by				
Date	08/11/2019			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

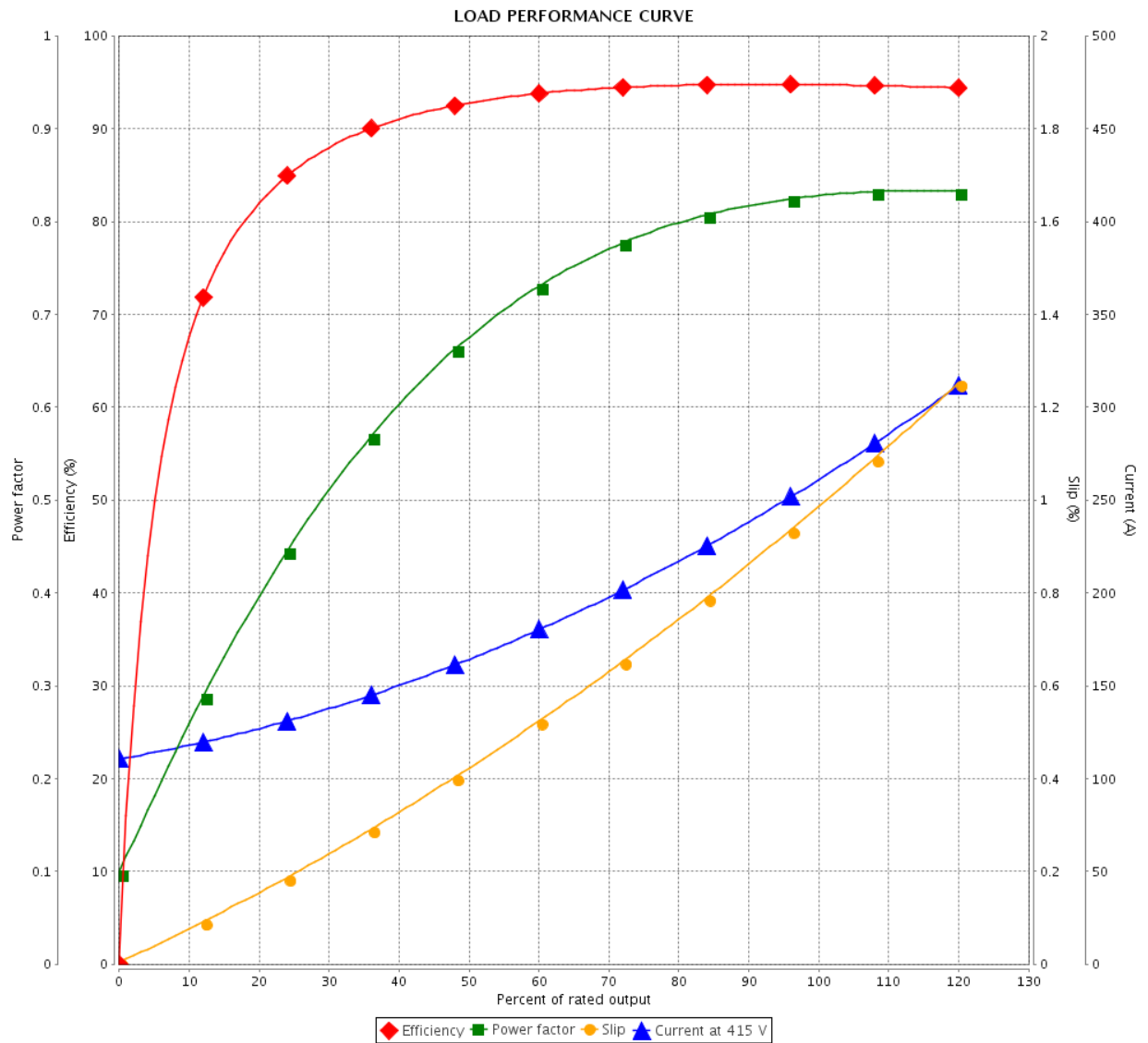


Customer :

Product line : ODP NEMA Premium Efficiency Three-Phase

Product code : 11087164

Catalog # : 20018OT3G445TC



Performance : 415 V 50 Hz 4P IE2

Rated current : 265 A
 LRC : 6.7
 Rated torque : 698 ft.lb
 Locked rotor torque : 210 %
 Breakdown torque : 280 %
 Rated speed : 1485 rpm

Moment of inertia (J) : 49.5 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

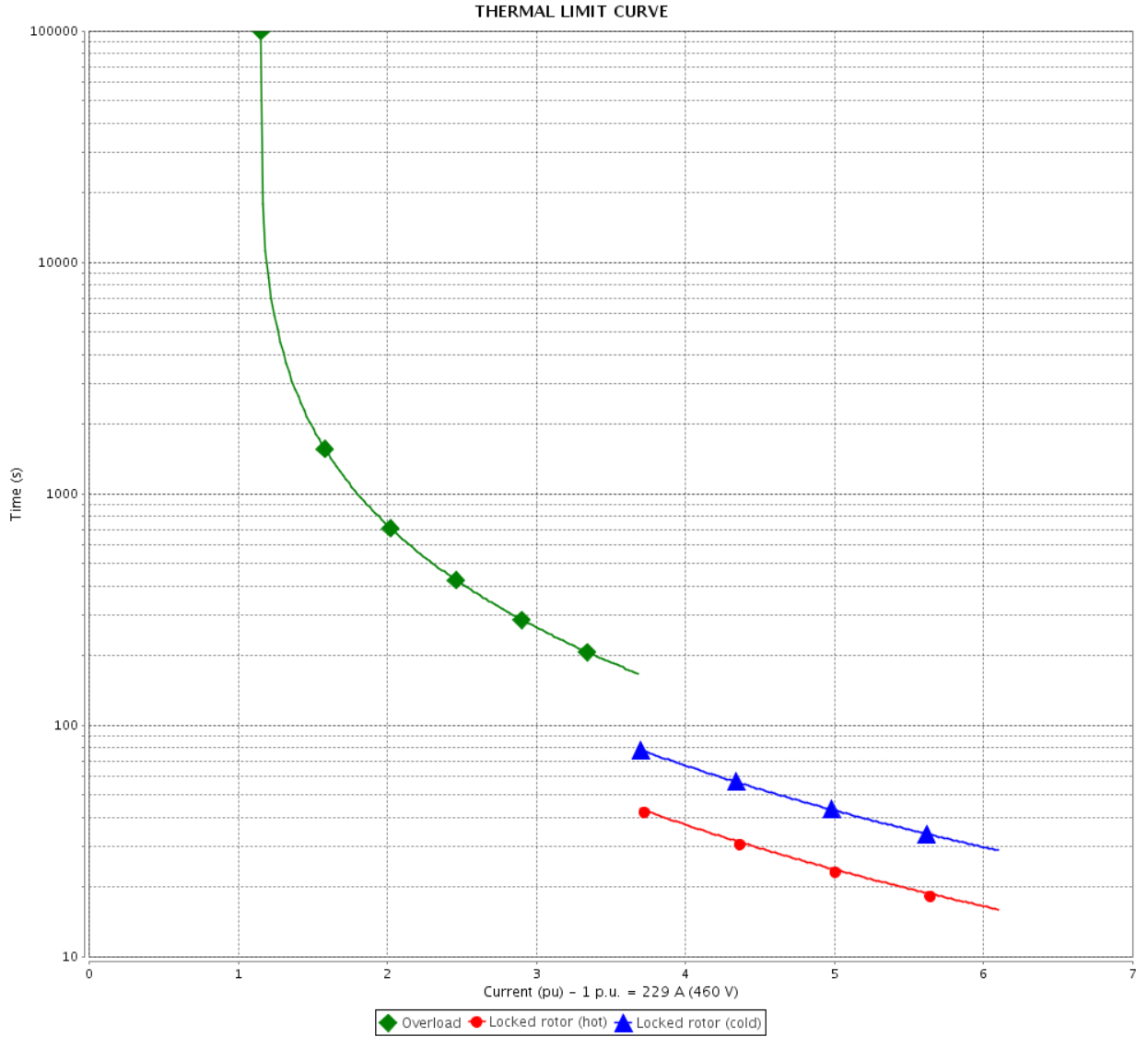
Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		15 / 36		
Date		08/11/2019		

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



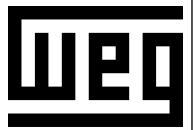
Customer : _____



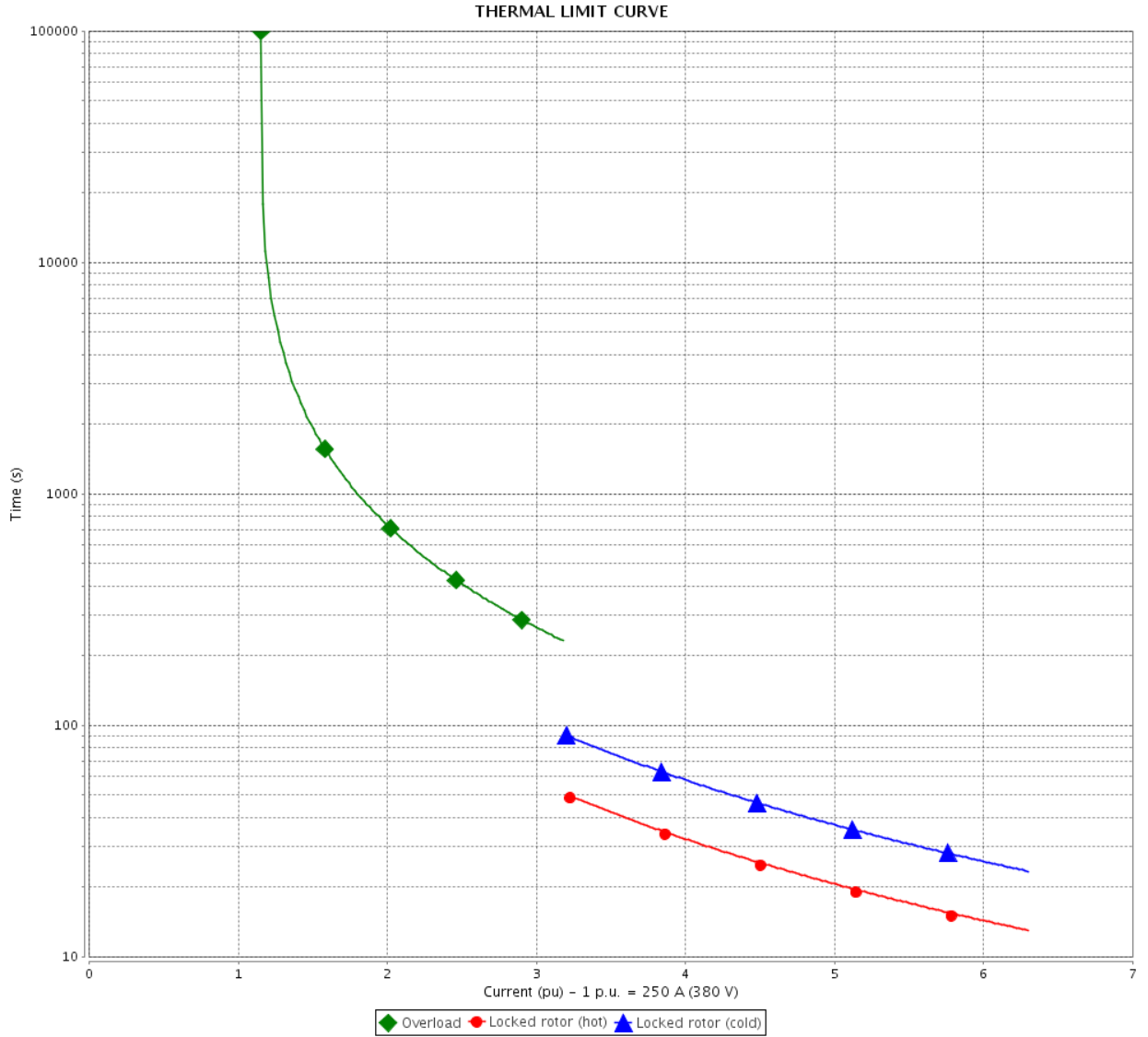
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date				
			Page	Revision
			17 / 36	

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



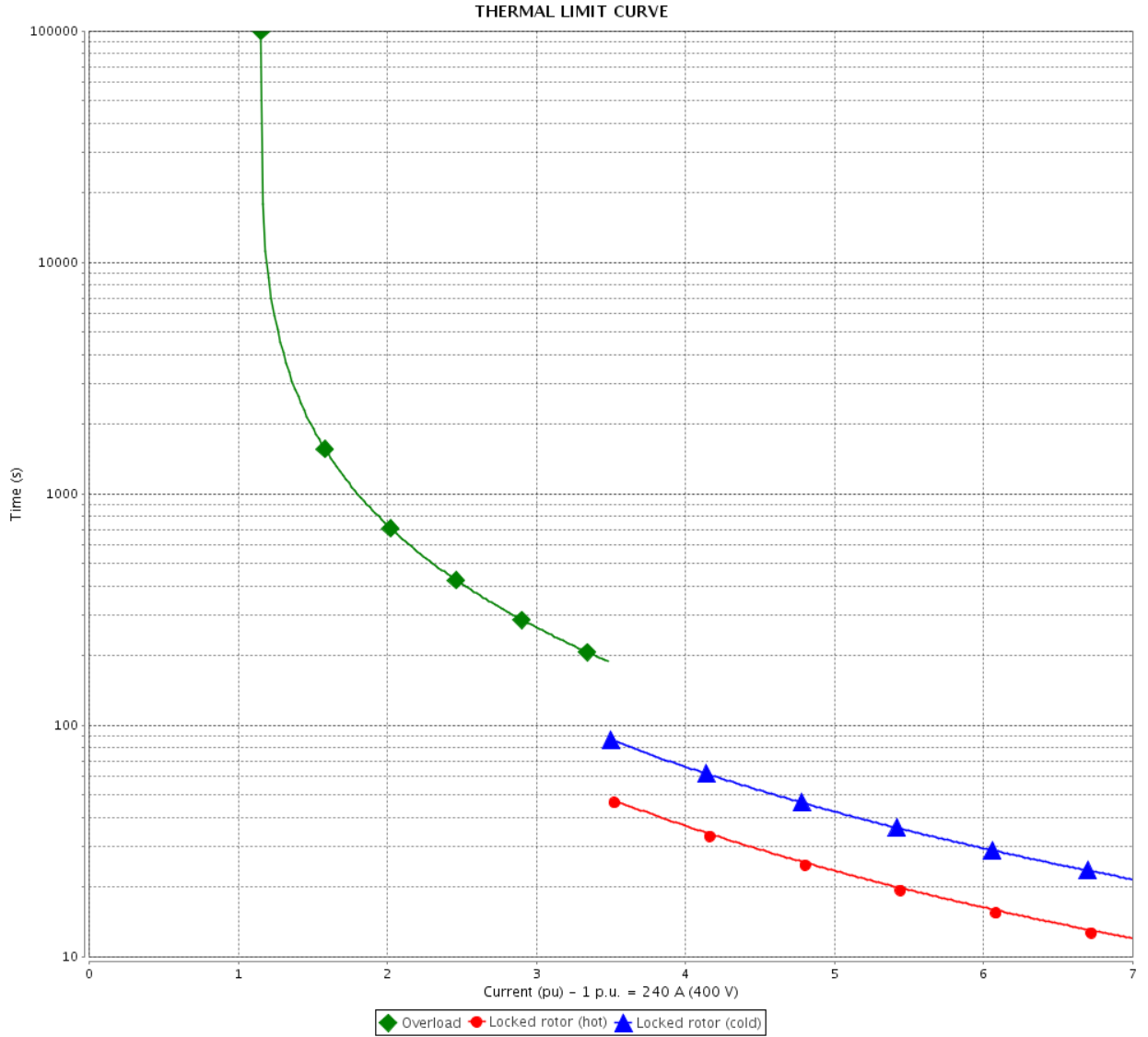
Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page Revision 19 / 36		
Checked by				
Date				

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



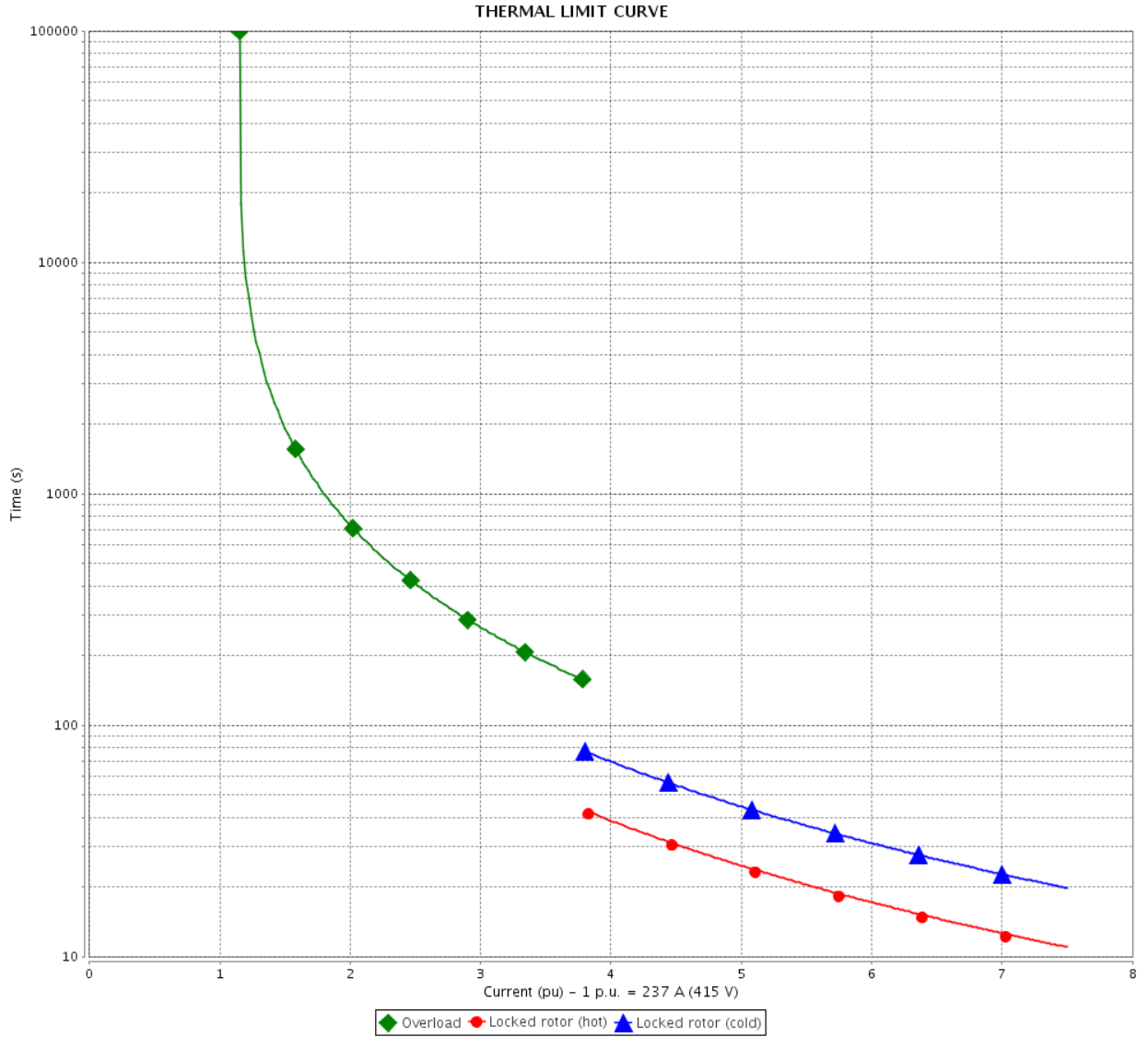
Rev.	Changes Summary	Performed	Checked	Date
Performed by				Page 21 / 36
Checked by				
Date	08/11/2019			
				Revision

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



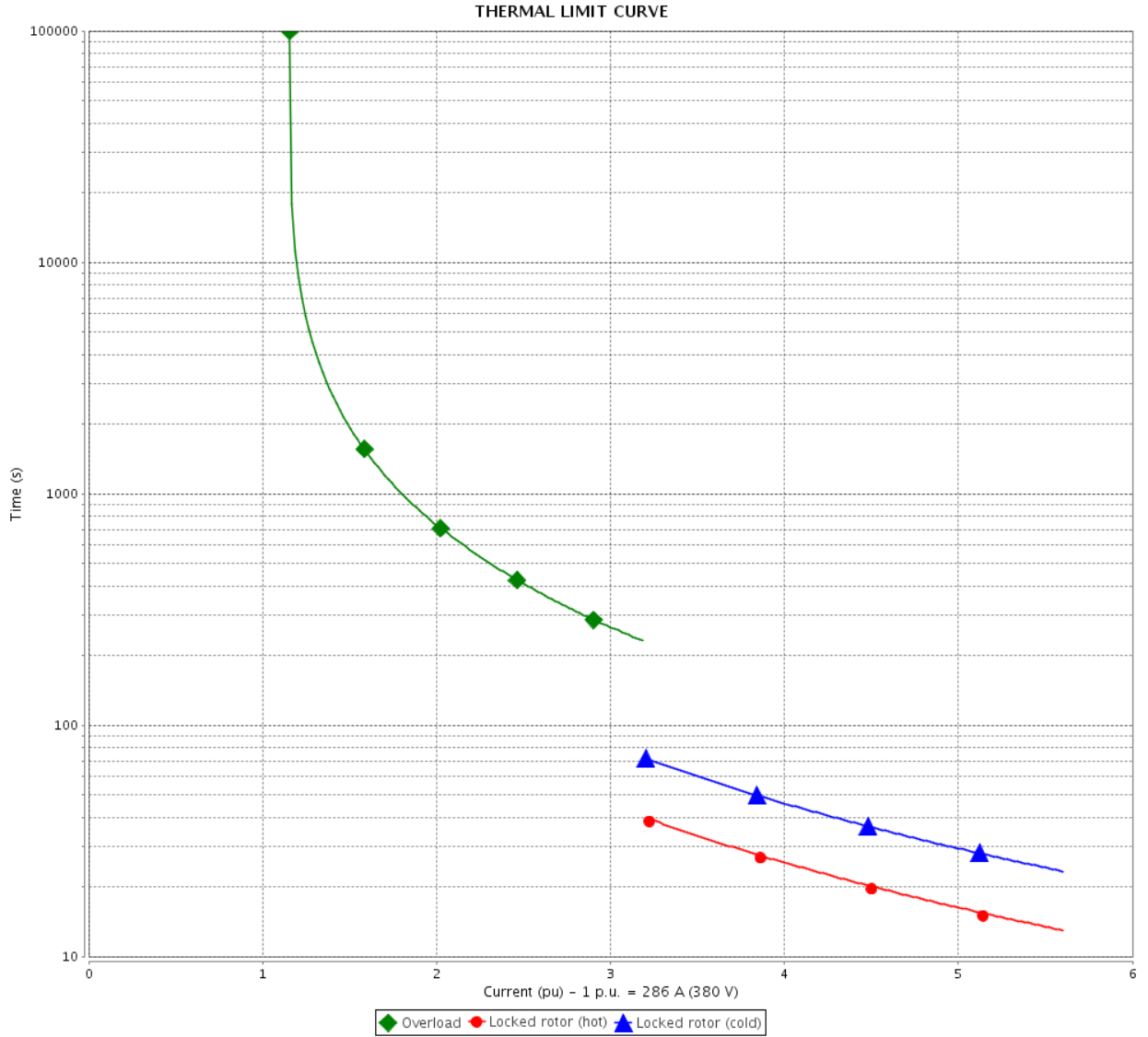
Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		23 / 36		
Date		08/11/2019		

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



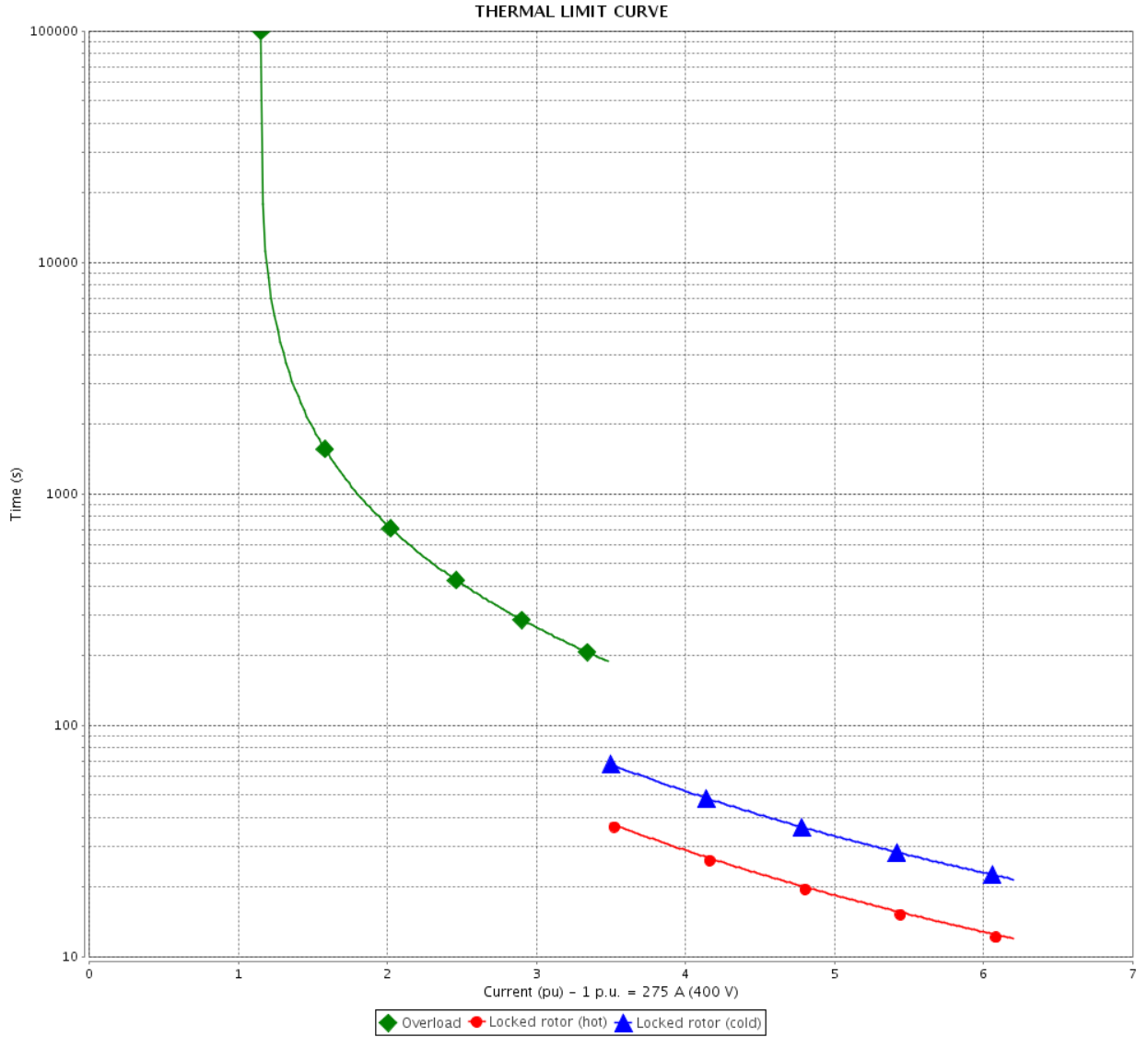
Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 25 / 36		Revision
Checked by				
Date				

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



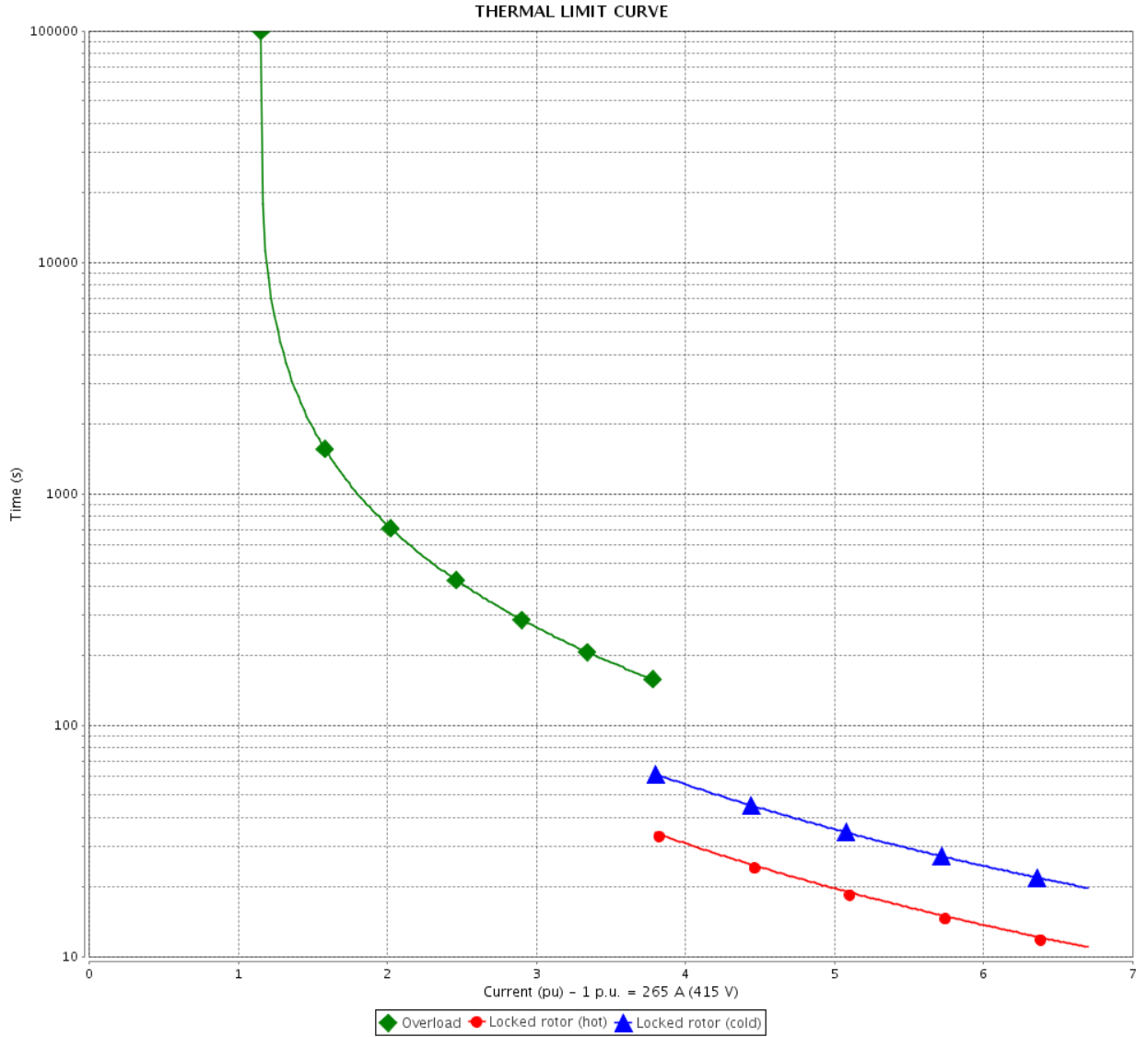
Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page Revision 27 / 36		
Checked by				
Date				

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		29 / 36		
Date		08/11/2019		

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

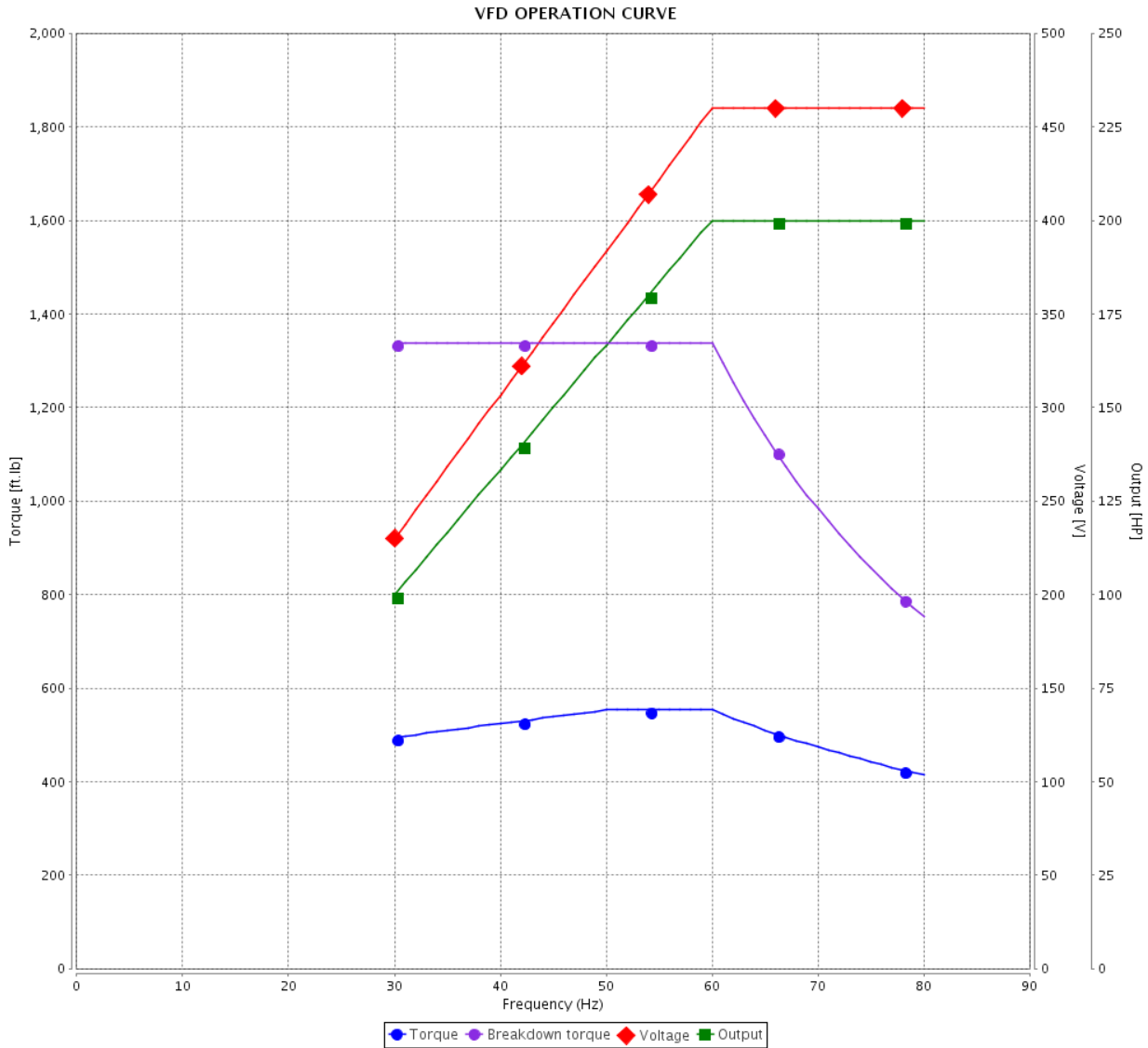


Customer : _____

Product line : ODP NEMA Premium Efficiency Three-Phase

Product code : 11087164

Catalog # : 20018OT3G445TC



Performance : 460 V 60 Hz 4P

Rated current : 229 A
 LRC : 6.1
 Rated torque : 582 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 229 %
 Rated speed : 1780 rpm

Moment of inertia (J) : 49.5 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 30 / 36	Revision
Checked by				
Date	08/11/2019			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

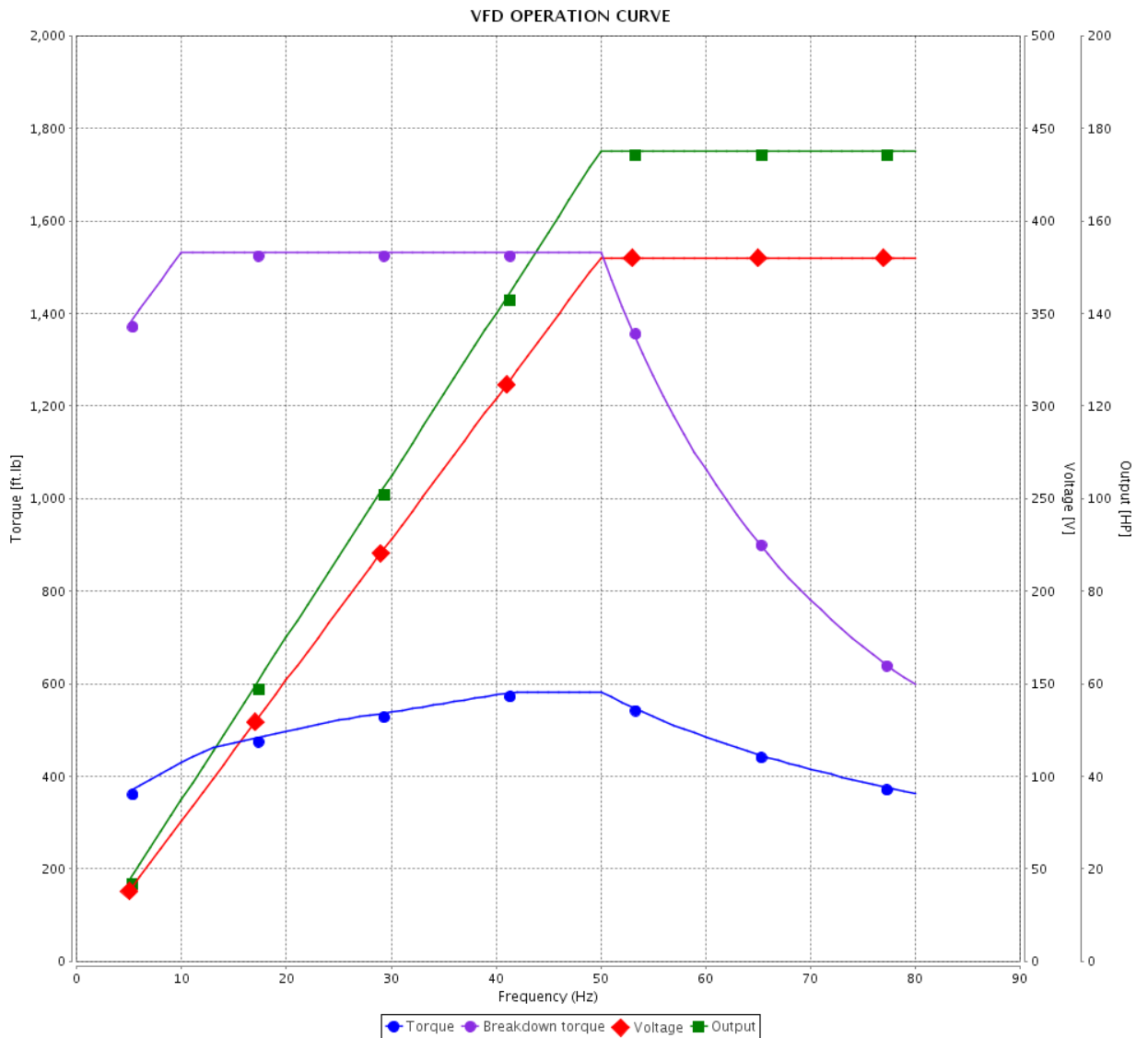


Customer :

Product line : ODP NEMA Premium Efficiency
Three-Phase

Product code : 11087164

Catalog # : 20018OT3G445TC



Performance : 380 V 50 Hz 4P IE3

Rated current : 250 A
LRC : 6.3
Rated torque : 613 ft.lb
Locked rotor torque : 210 %
Breakdown torque : 250 %
Rated speed : 1480 rpm

Moment of inertia (J) : 49.5 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		31 / 36		
Date	08/11/2019			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

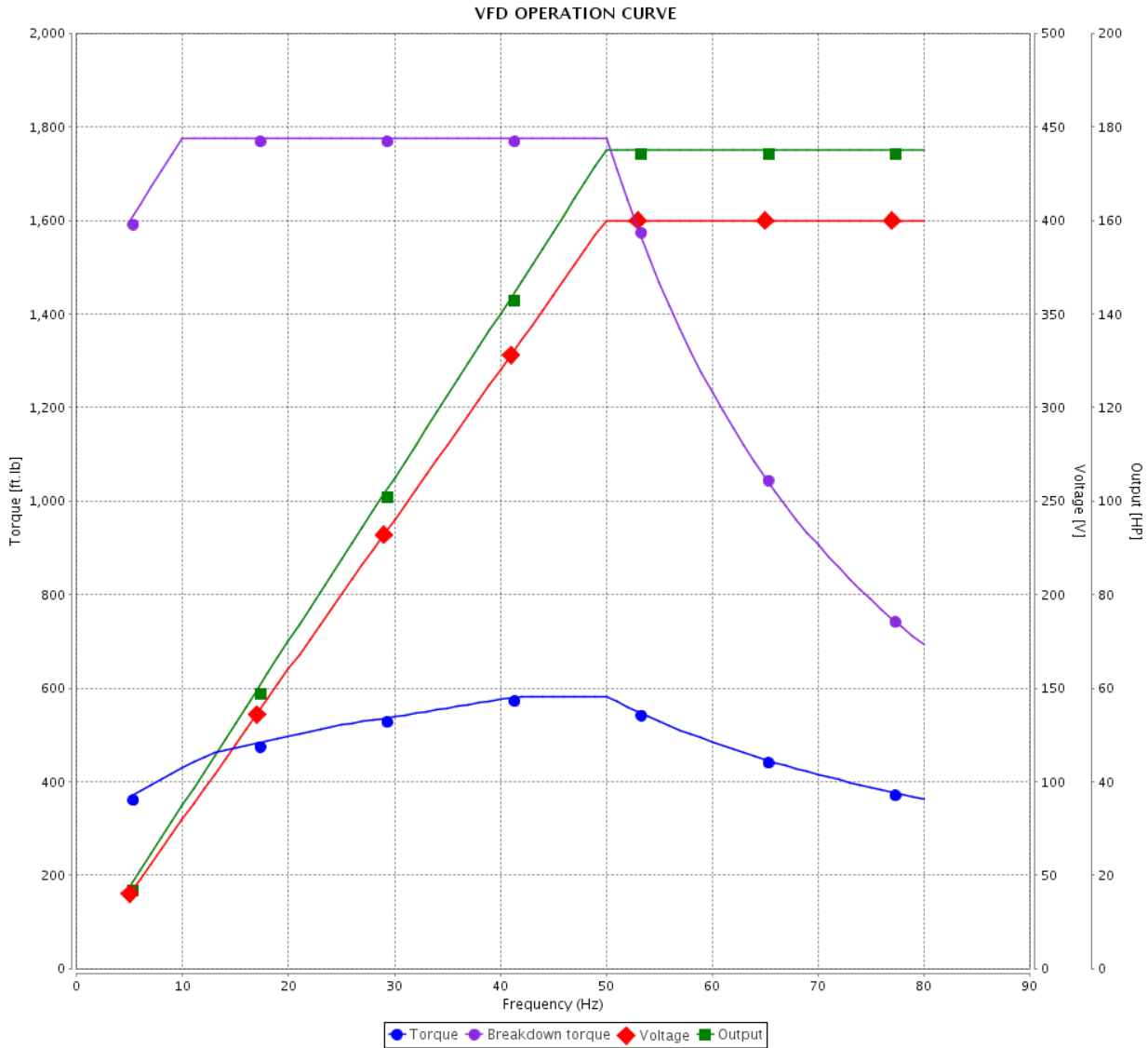


Customer :

Product line : ODP NEMA Premium Efficiency Three-Phase

Product code : 11087164

Catalog # : 20018OT3G445TC



Performance : 400 V 50 Hz 4P IE3

Rated current	: 240 A	Moment of inertia (J)	: 49.5 sq.ft.lb
LRC	: 7.0	Duty cycle	: Cont.(S1)
Rated torque	: 613 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.15
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		32 / 36		
Date	08/11/2019			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

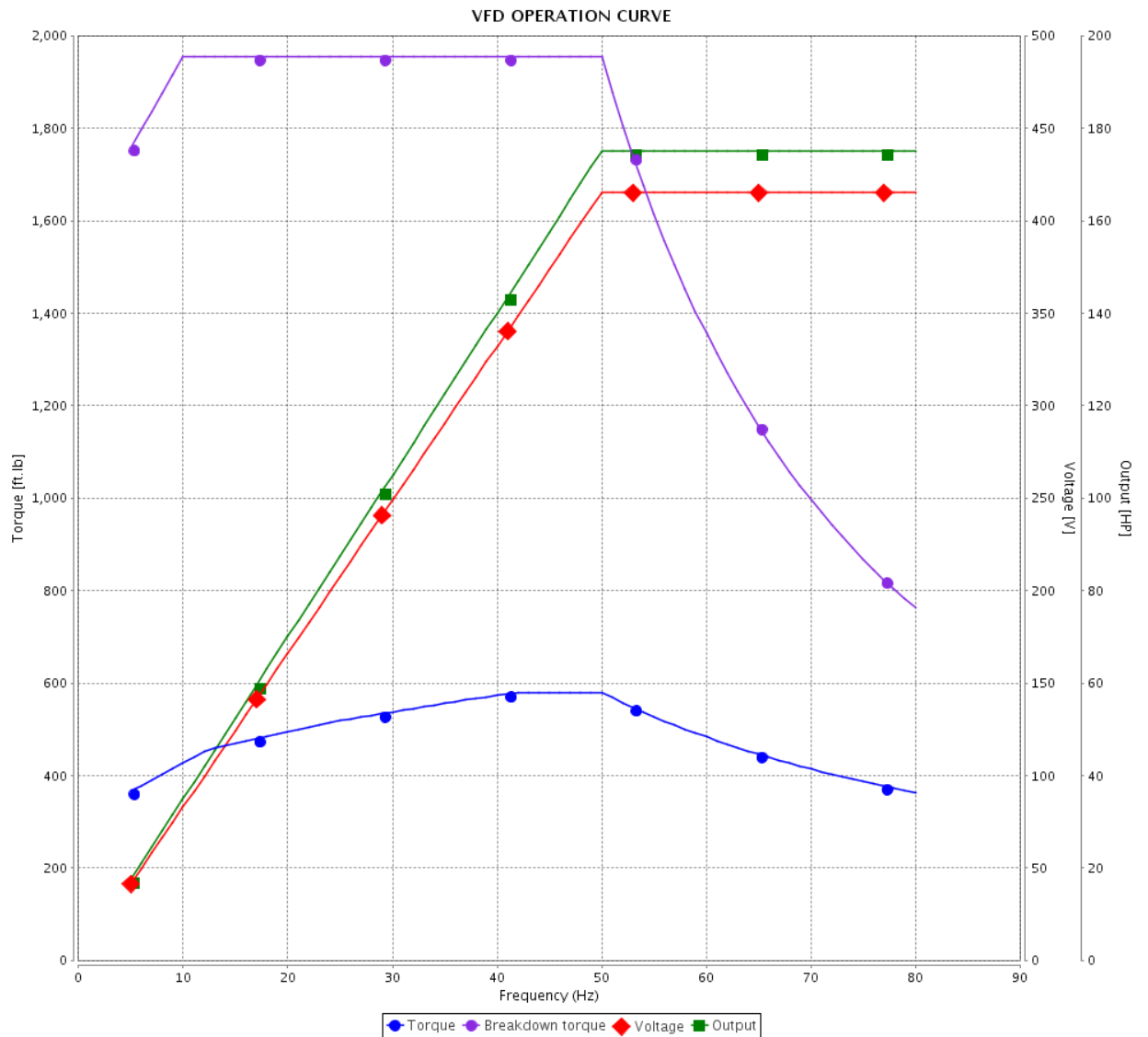


Customer :

Product line : ODP NEMA Premium Efficiency
Three-Phase

Product code : 11087164

Catalog # : 20018OT3G445TC



Performance : 415 V 50 Hz 4P IE3

Rated current : 237 A
LRC : 7.5
Rated torque : 611 ft.lb
Locked rotor torque : 240 %
Breakdown torque : 320 %
Rated speed : 1485 rpm

Moment of inertia (J) : 49.5 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		33 / 36		
Date	08/11/2019			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

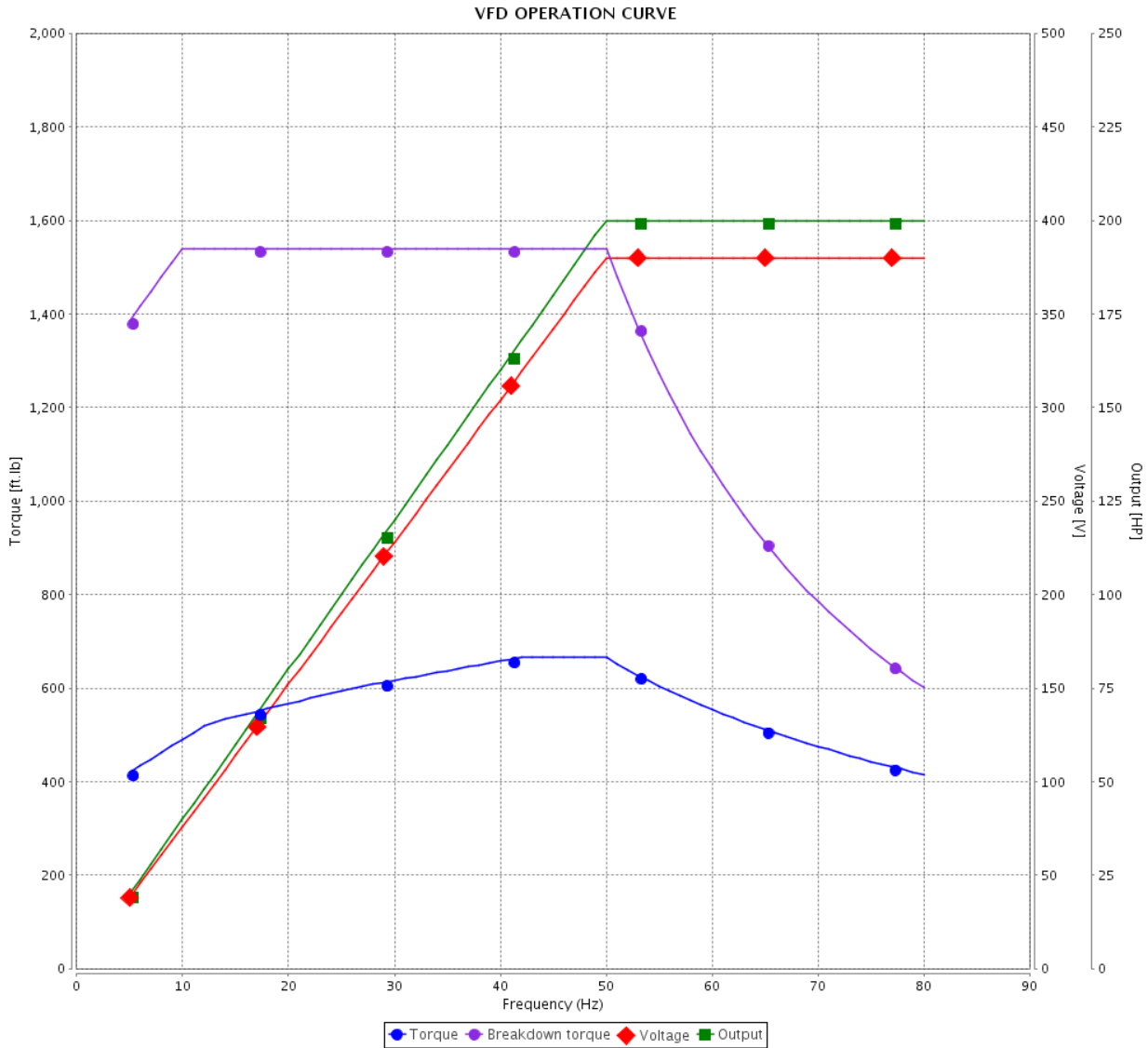


Customer :

Product line : ODP NEMA Premium Efficiency Three-Phase

Product code : 11087164

Catalog # : 20018OT3G445TC



Performance : 380 V 50 Hz 4P

Rated current : 286 A
 LRC : 5.6
 Rated torque : 700 ft.lb
 Locked rotor torque : 180 %
 Breakdown torque : 220 %
 Rated speed : 1480 rpm

Moment of inertia (J) : 49.5 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 34 / 36	Revision
Checked by				
Date	08/11/2019			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

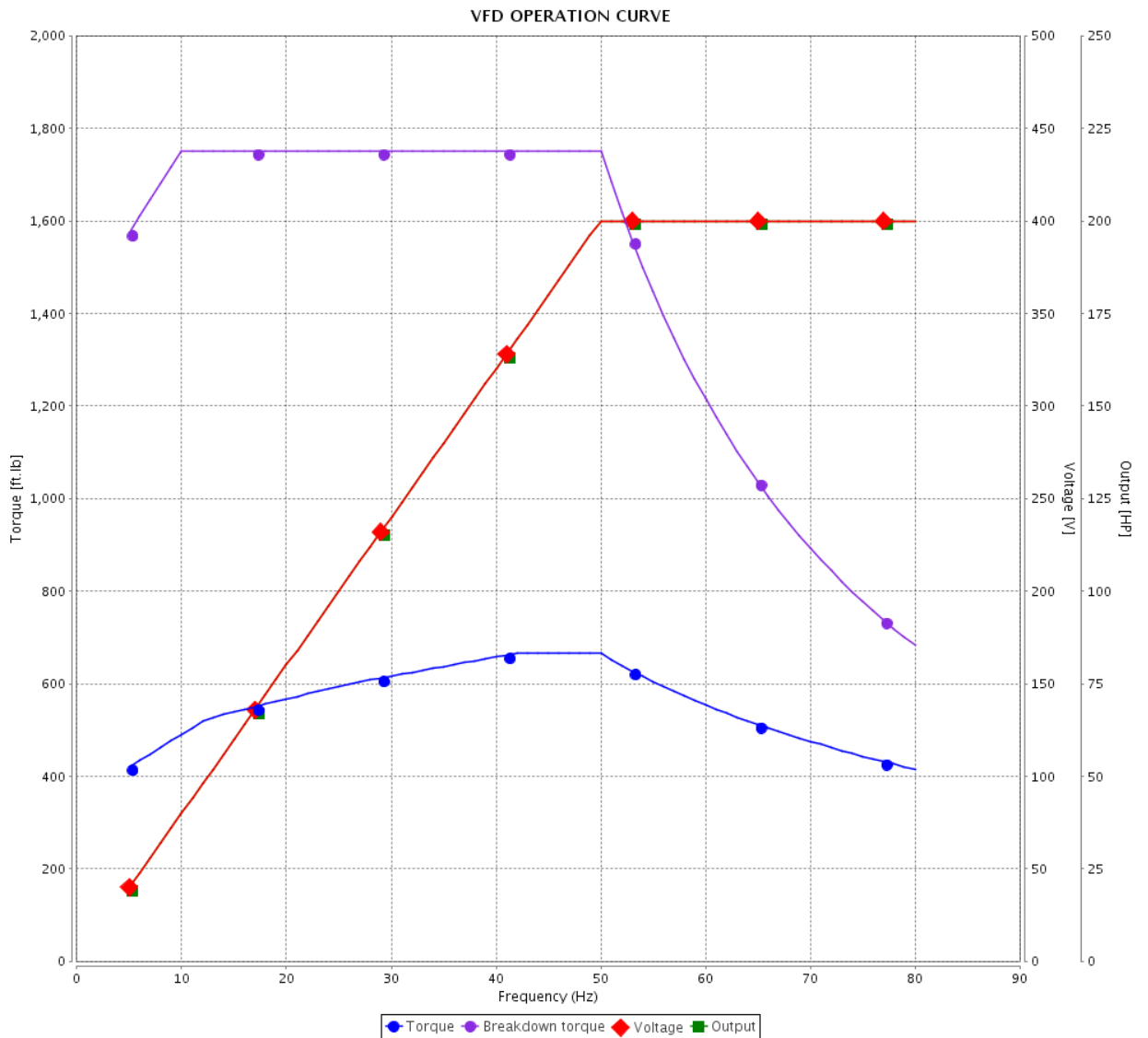


Customer :

Product line : ODP NEMA Premium Efficiency
Three-Phase

Product code : 11087164

Catalog # : 20018OT3G445TC



Performance : 400 V 50 Hz 4P

Rated current : 275 A
LRC : 6.2
Rated torque : 700 ft.lb
Locked rotor torque : 190 %
Breakdown torque : 250 %
Rated speed : 1480 rpm

Moment of inertia (J) : 49.5 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		35 / 36		
Date	08/11/2019			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

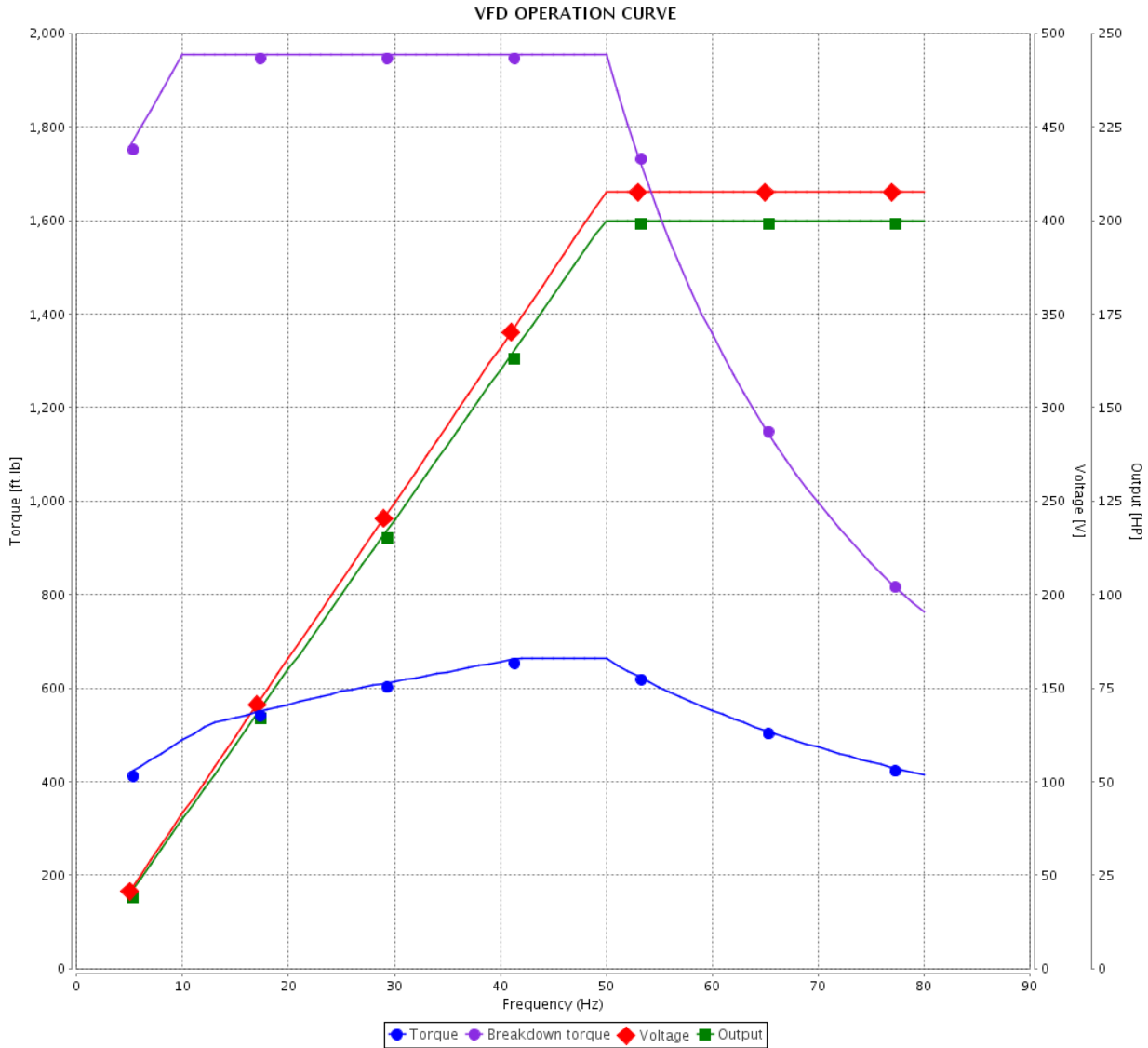


Customer :

Product line : ODP NEMA Premium Efficiency Three-Phase

Product code : 11087164

Catalog # : 20018OT3G445TC



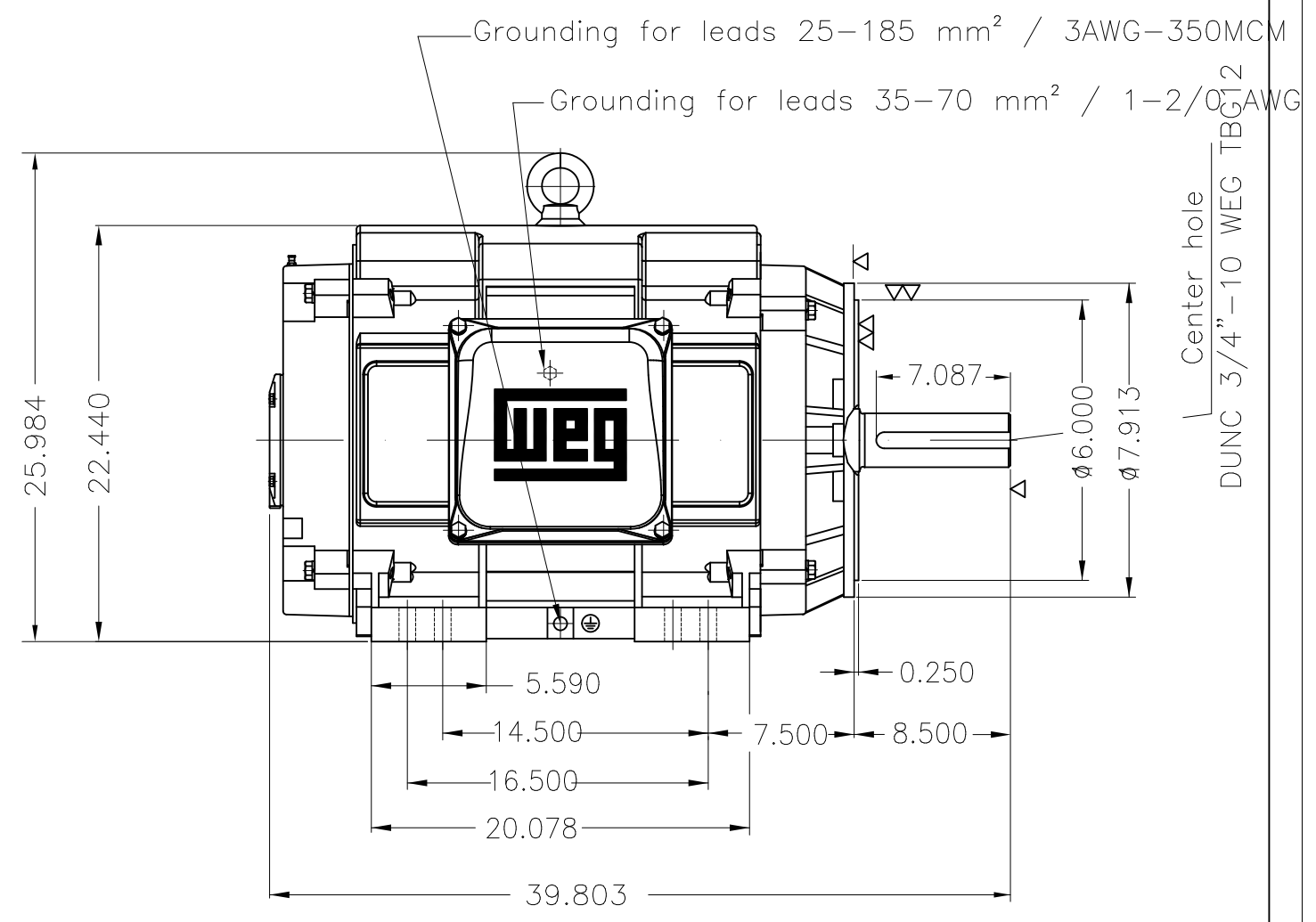
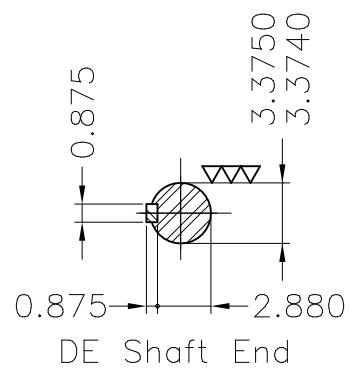
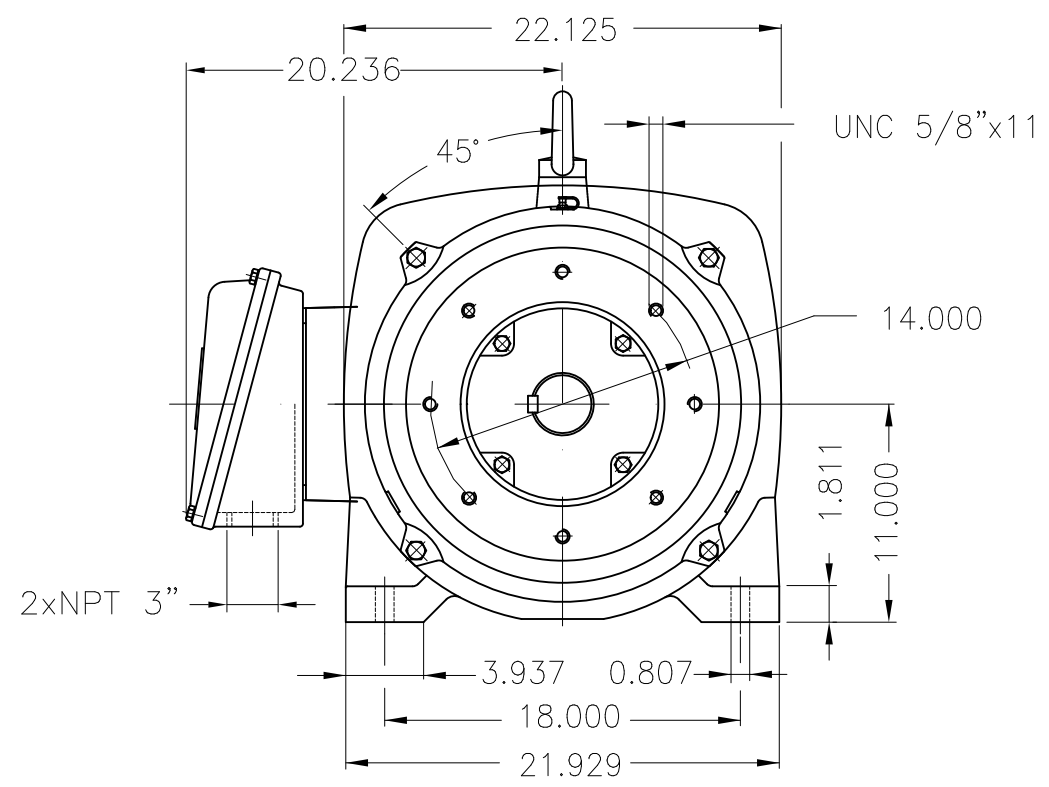
Performance : 415 V 50 Hz 4P IE2

Rated current	: 265 A	Moment of inertia (J)	: 49.5 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 698 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.15
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 36 / 36	Revision
Checked by				
Date	08/11/2019			

Dimensões em polegada
Dimensions in inches

THIS IS AN UPDATED REVISION, THE
PREVIOUS ONE MUST BE DISREGARDED.



Color RAL 5009
Painting plan 203A
Mounting B34R(D)

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	USERADMIN	THREE PHASE NEMA P. EFF MOTOR					
CHECKED		FRAME 444/5TC IP23 ODP					
RELEASED		WEG code: 11087164					
REL DT	08.11.2019	WMO Jaragua do Sul	Product Engineering	SHEET	1 / 1		

200 HP 04 Poles 60Hz

A

