

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: W40 JP Pump NEMA Premium Efficiency Three-Phase	Product code :	14270486		
		Catalog # :	10036OT3G365JP-W40		
Frame	: 364/5JP	Cooling method	: IC01 - ODP		
Insulation class	: F	Mounting	: F-1		
Duty cycle	: Cont.(S1)	Rotation <sup>1</sup>	: Both (CW and CCW)		
Ambient temperature	: -20°C to +40°C	Starting method	: Direct On Line		
Altitude	: 1000 m.a.s.l.	Approx. weight <sup>2</sup>	: 760 lb		
Protection degree	: IP23	Moment of inertia (J)	: 7.20 sq.ft.lb		
Design	: B				
Output [HP]	100	75	75	75	
Poles	2	2	2	2	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	460	380	400	415	
Rated current [A]	116	103	100	97.8	
L. R. Amperes [A]	766	773	800	773	
LRC [A]	6.6x(Code G)	7.5x(Code H)	8.0x(Code J)	7.9x(Code J)	
No load current [A]	29.5	28.5	32.5	35.0	
Rated speed [RPM]	3555	2960	2964	2967	
Slip [%]	1.25	1.33	1.20	1.10	
Rated torque [ft.lb]	148	133	133	133	
Locked rotor torque [%]	180	220	240	250	
Breakdown torque [%]	229	260	280	320	
Service factor	1.25	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	23s (cold) 13s (hot)	19s (cold) 11s (hot)	18s (cold) 10s (hot)	19s (cold) 11s (hot)	
Noise level <sup>2</sup>	84.0 dB(A)				
Efficiency (%)	25%	92.2	88.0	88.2	88.2
	50%	92.4	90.2	90.3	90.3
	75%	93.6	91.9	92.0	92.0
	100%	93.6	94.3	94.3	94.3
Power Factor	25%	0.55	0.53	0.47	0.47
	50%	0.77	0.74	0.69	0.70
	75%	0.84	0.83	0.78	0.80
	100%	0.87	0.86	0.84	0.83
Bearing type	: <u>Drive end</u> 6314 C3 <u>Non drive end</u> 6212 Z C3	Foundation loads			
Sealing	: Without Without	Max. traction	: 1075 lb		
	: Bearing Seal Bearing Seal	Max. compression	: 1836 lb		
Lubrication interval	: 14418 h 20000 h				
Lubricant amount	: 27 g 13 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	12/04/2022			1 / 21	

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



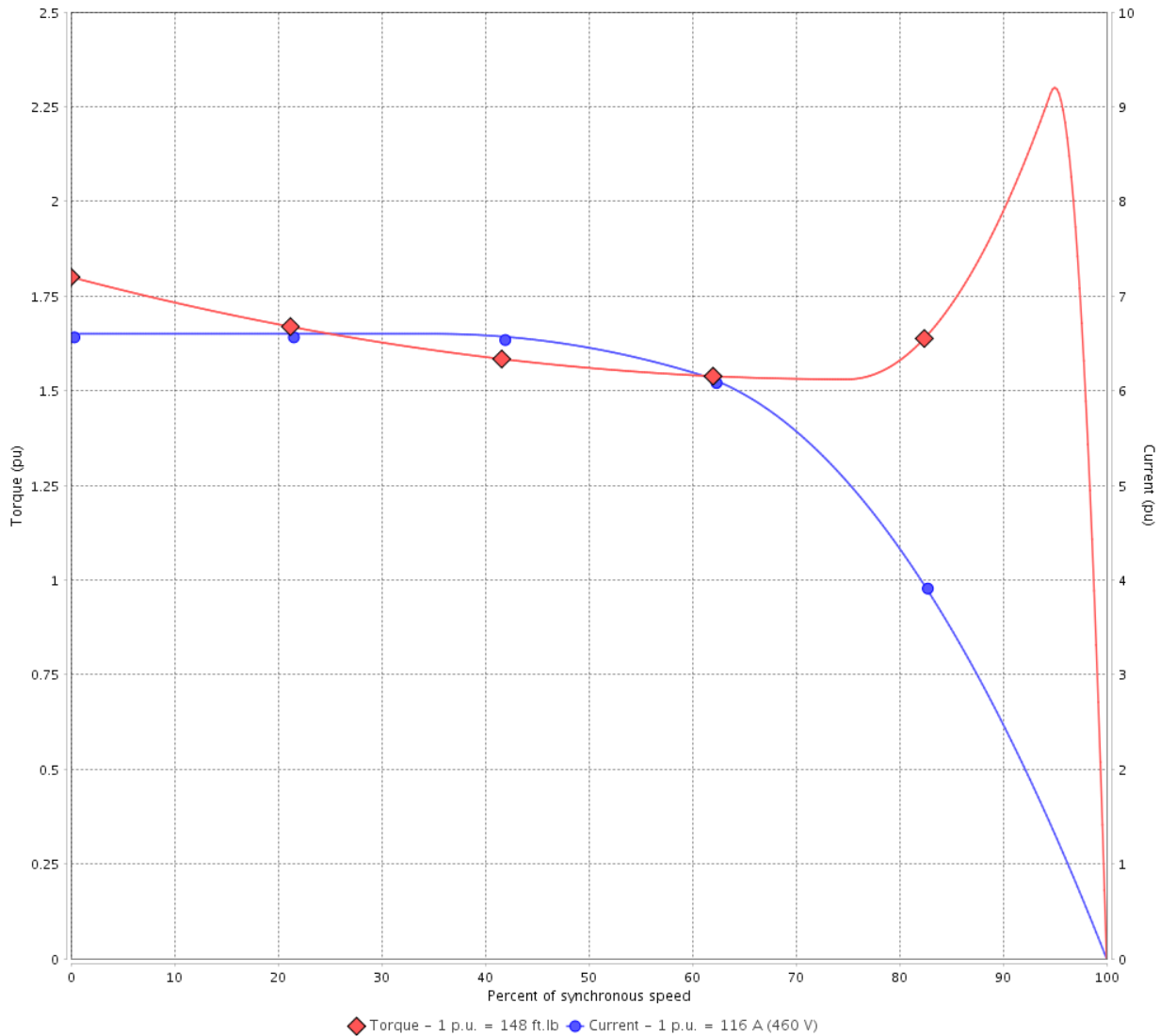
Customer :

Product line : W40 JP Pump NEMA Premium Efficiency Three-Phase

Product code : 14270486

Catalog # : 10036OT3G365JP-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 460 V 60 Hz 2P

Rated current	: 116 A	Moment of inertia (J)	: 7.20 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 148 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.25
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 3555 rpm	Design	: B

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 2 / 21	Revision
Checked by				
Date	12/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE



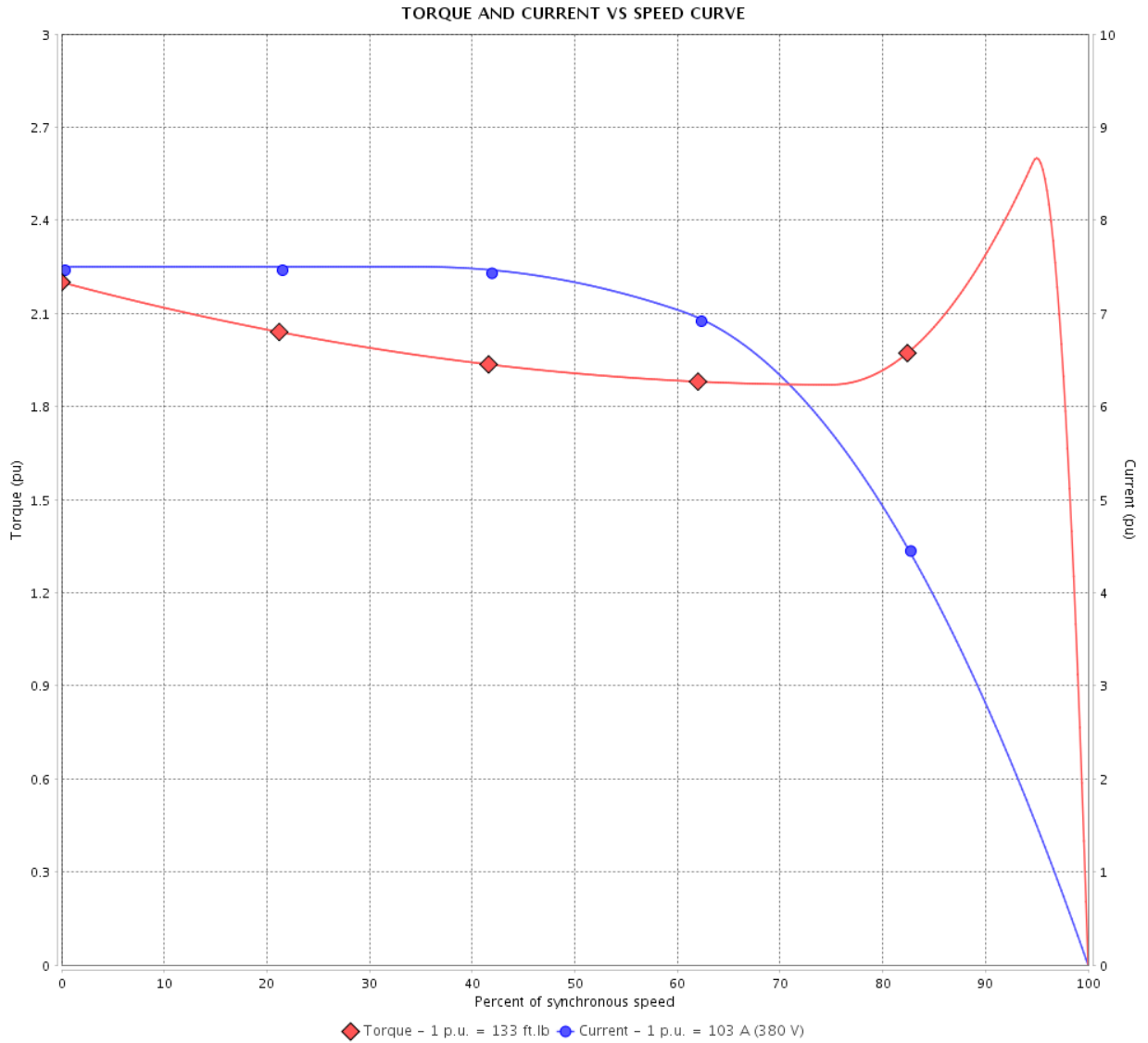
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 JP Pump NEMA Premium Efficiency Three-Phase

Product code : 14270486

Catalog # : 10036OT3G365JP-W40



Performance : 380 V 50 Hz 2P IE3

Rated current	: 103 A	Moment of inertia (J)	: 7.20 sq.ft.lb
LRC	: 7.5	Duty cycle	: Cont.(S1)
Rated torque	: 133 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 2960 rpm	Design	: B

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date	12/04/2022			
			3 / 21	

# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage



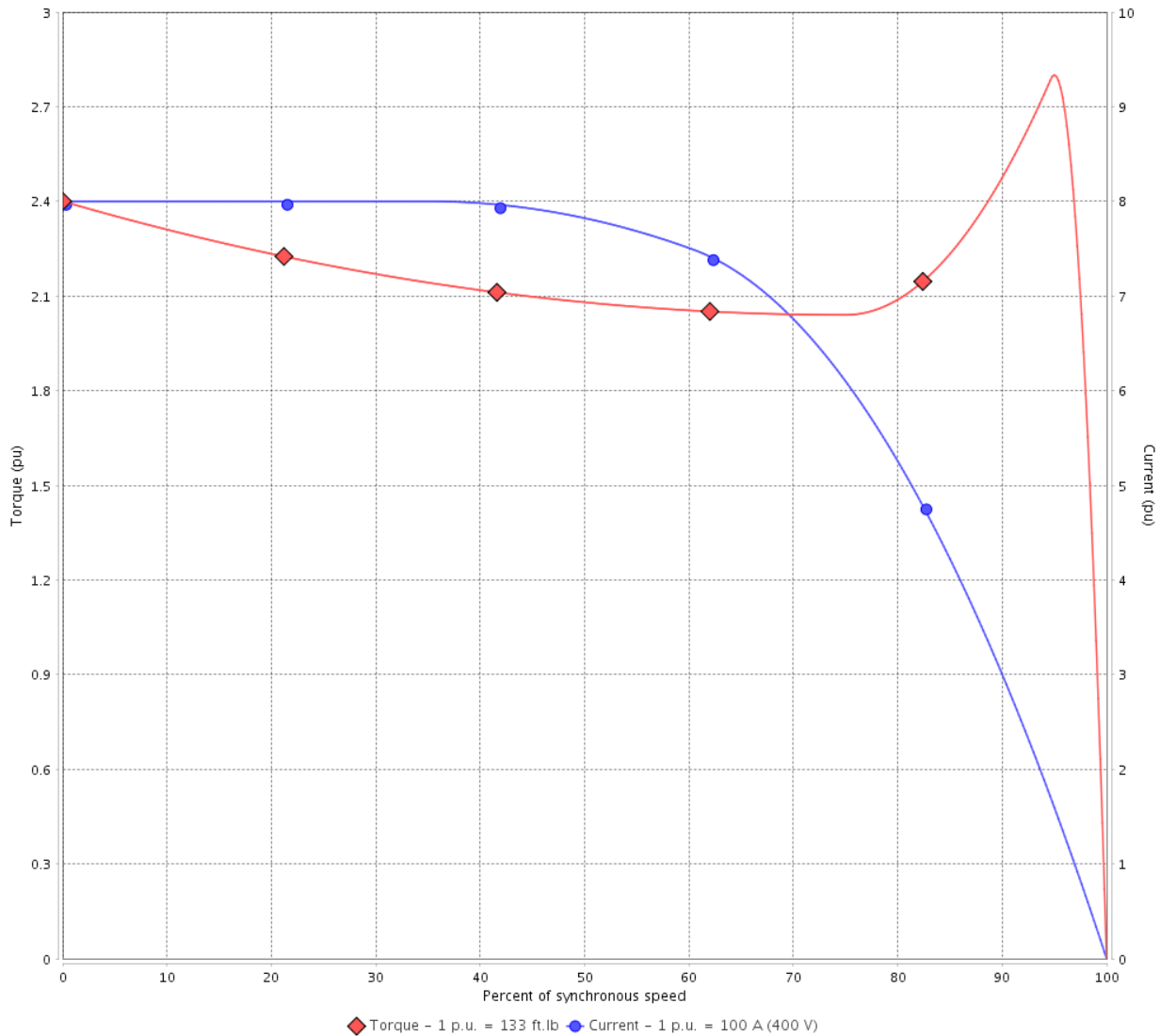
Customer :

Product line : W40 JP Pump NEMA Premium Efficiency Three-Phase

Product code : 14270486

Catalog # : 100360T3G365JP-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 2P IE3

Rated current	: 100 A	Moment of inertia (J)	: 7.20 sq.ft.lb
LRC	: 8.0	Duty cycle	: Cont.(S1)
Rated torque	: 133 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 2964 rpm	Design	: B

Locked rotor time : 18s (cold) 10s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 21	Revision
Checked by				
Date	12/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE



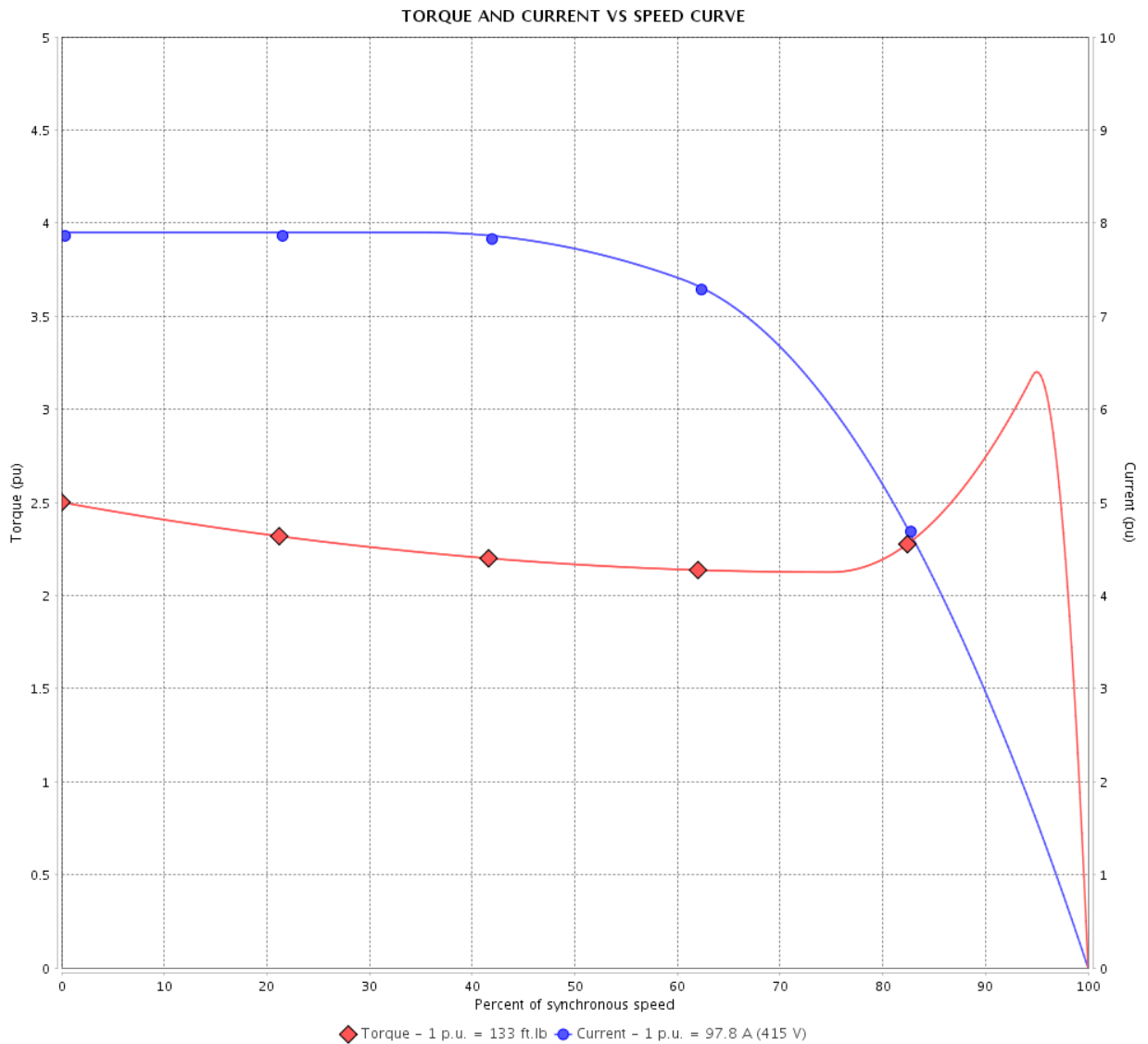
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 JP Pump NEMA Premium Efficiency Three-Phase

Product code : 14270486

Catalog # : 10036OT3G365JP-W40



Performance : 415 V 50 Hz 2P IE3

Rated current	: 97.8 A	Moment of inertia (J)	: 7.20 sq.ft.lb
LRC	: 7.9	Duty cycle	: Cont.(S1)
Rated torque	: 133 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 320 %	Temperature rise	: 80 K
Rated speed	: 2967 rpm	Design	: B

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 5 / 21	Revision
Checked by				
Date	12/04/2022			

# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

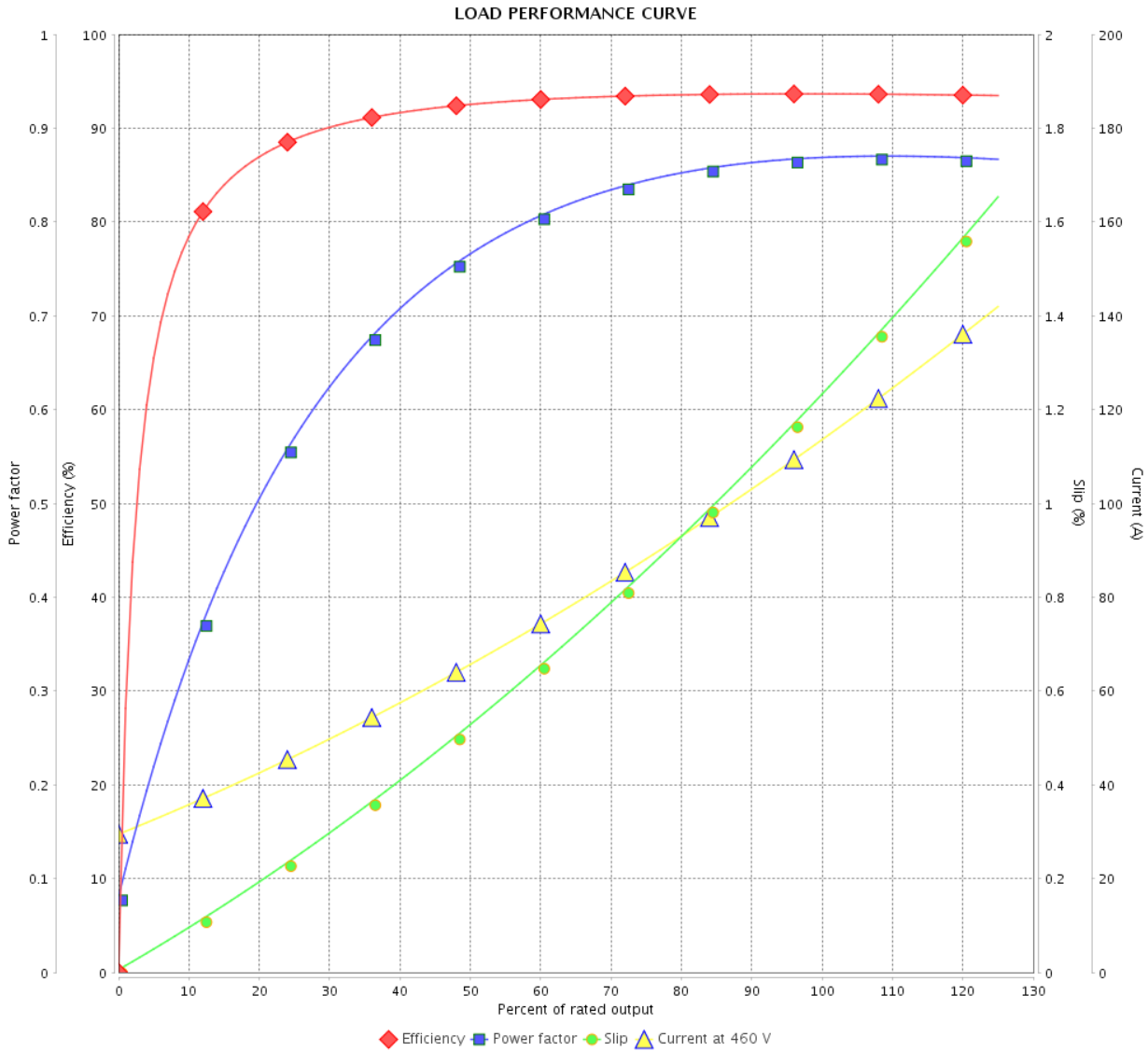


Customer :

Product line : W40 JP Pump NEMA Premium  
Efficiency Three-Phase

Product code : 14270486

Catalog # : 100360T3G365JP-W40



Performance : 460 V 60 Hz 2P

Rated current : 116 A  
 LRC : 6.6  
 Rated torque : 148 ft.lb  
 Locked rotor torque : 180 %  
 Breakdown torque : 229 %  
 Rated speed : 3555 rpm

Moment of inertia (J) : 7.20 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	Revision
Checked by			6 / 21	
Date	12/04/2022			

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

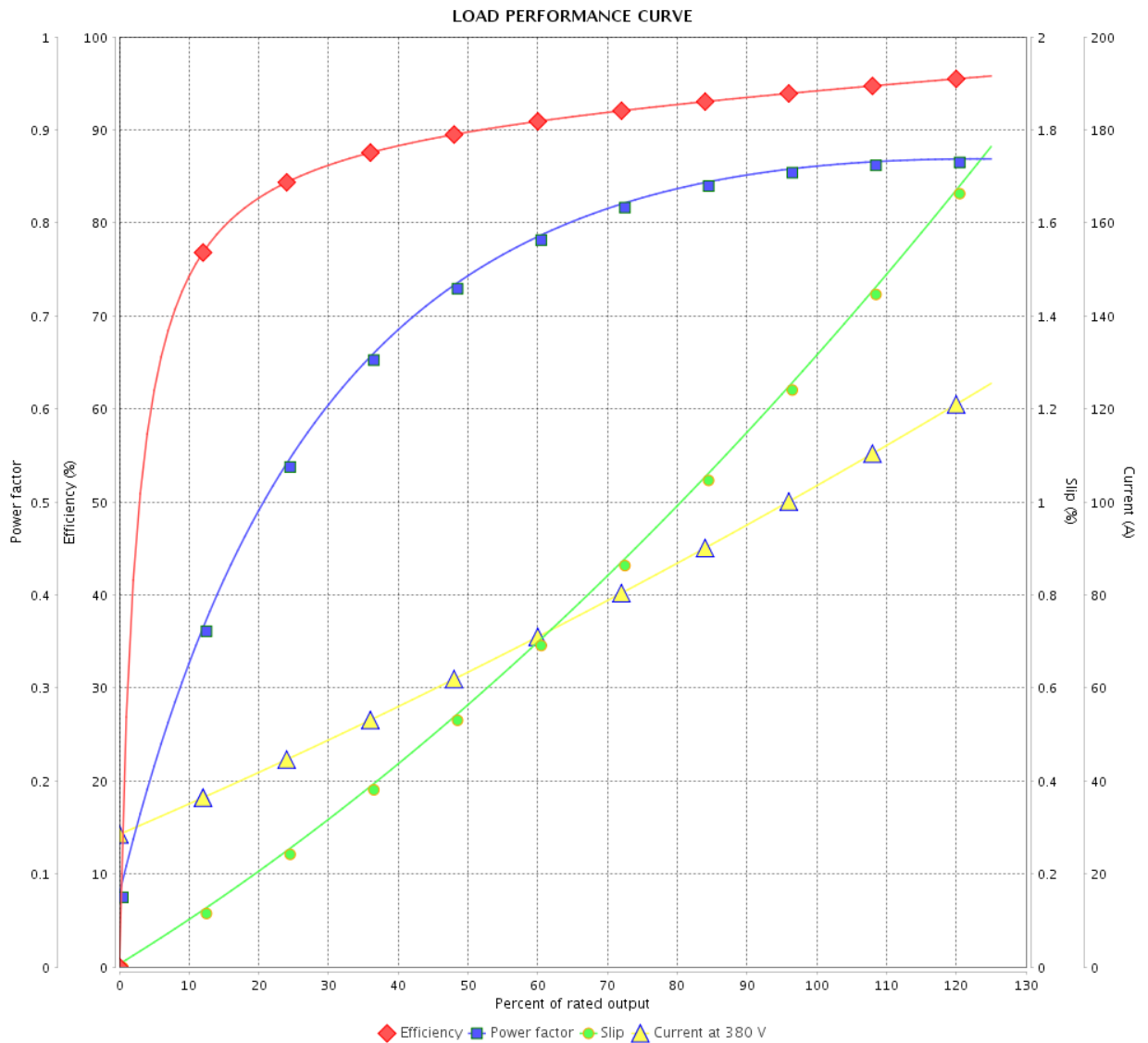


Customer :

Product line : W40 JP Pump NEMA Premium Efficiency Three-Phase

Product code : 14270486

Catalog # : 10036OT3G365JP-W40



Performance : 380 V 50 Hz 2P IE3

Rated current : 103 A  
 LRC : 7.5  
 Rated torque : 133 ft.lb  
 Locked rotor torque : 220 %  
 Breakdown torque : 260 %  
 Rated speed : 2960 rpm

Moment of inertia (J) : 7.20 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		7 / 21		
Date		12/04/2022		

# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

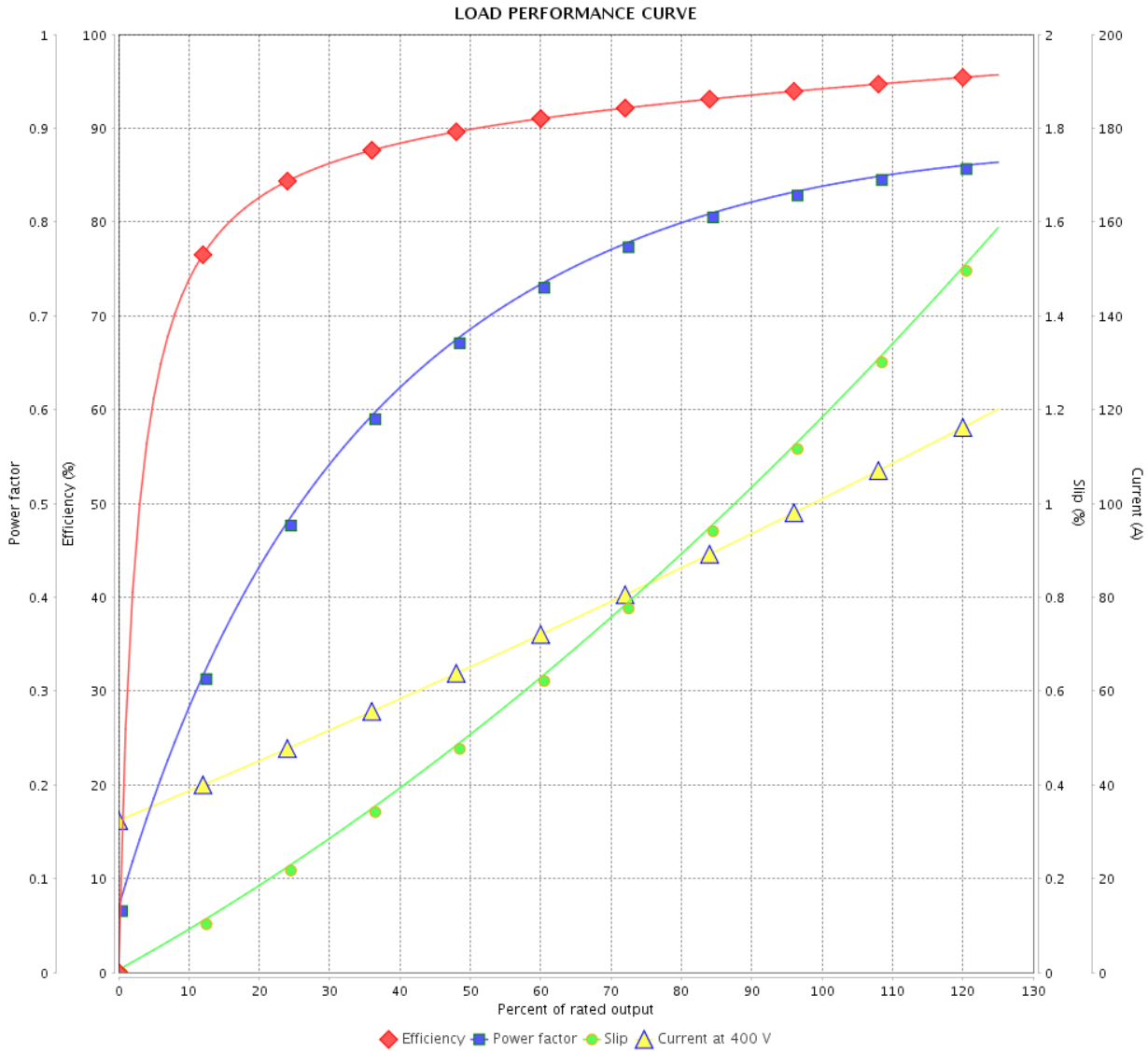


Customer : \_\_\_\_\_

Product line : W40 JP Pump NEMA Premium  
Efficiency Three-Phase

Product code : 14270486

Catalog # : 10036OT3G365JP-W40



Performance : 400 V 50 Hz 2P IE3

Rated current : 100 A  
 LRC : 8.0  
 Rated torque : 133 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 280 %  
 Rated speed : 2964 rpm

Moment of inertia (J) : 7.20 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		8 / 21		
Date		12/04/2022		



# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

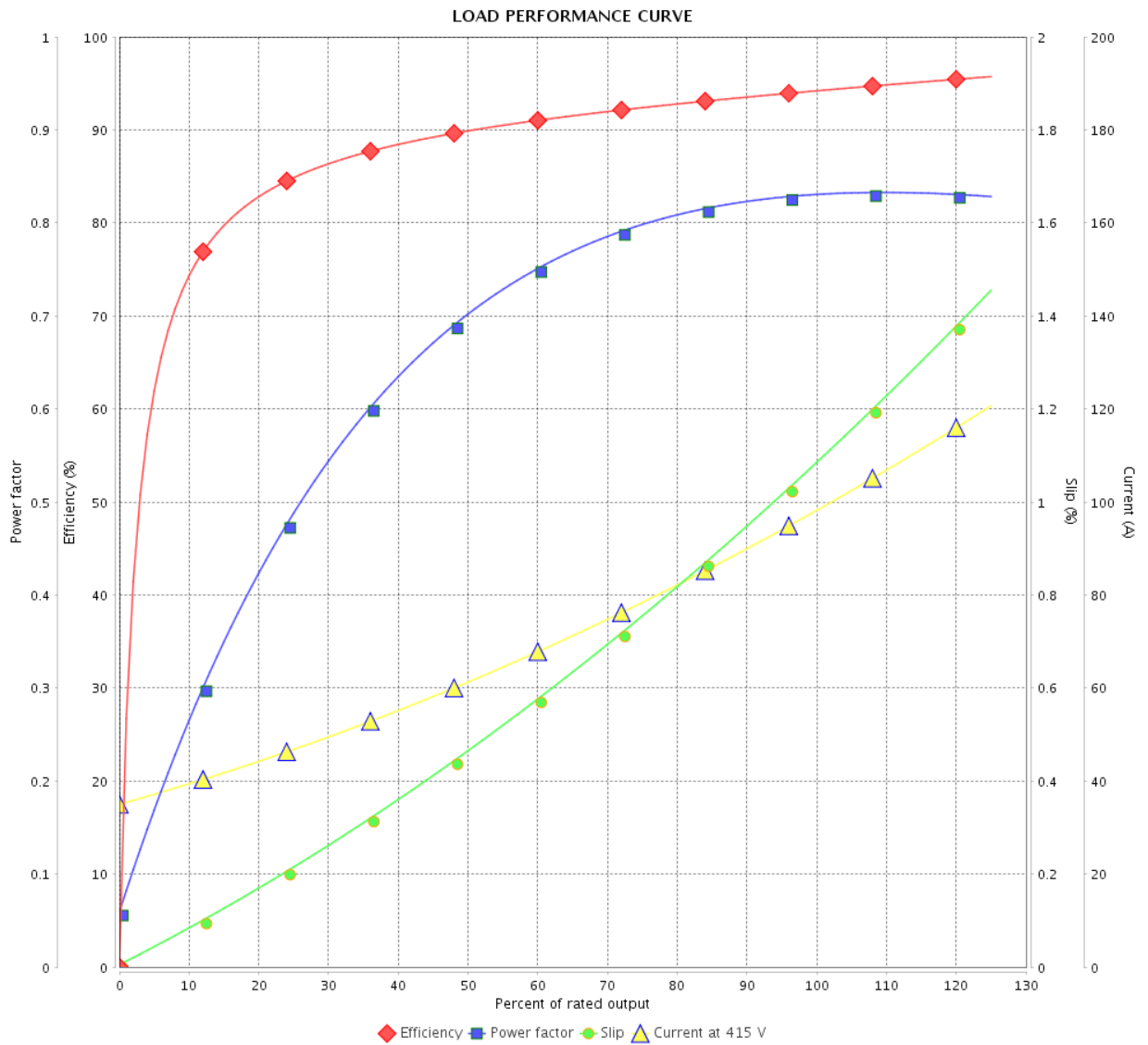


Customer : \_\_\_\_\_

Product line : W40 JP Pump NEMA Premium Efficiency Three-Phase

Product code : 14270486

Catalog # : 10036OT3G365JP-W40



Performance : 415 V 50 Hz 2P IE3

Rated current : 97.8 A  
 LRC : 7.9  
 Rated torque : 133 ft.lb  
 Locked rotor torque : 250 %  
 Breakdown torque : 320 %  
 Rated speed : 2967 rpm

Moment of inertia (J) : 7.20 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 / 21		
Date		12/04/2022		

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 JP Pump NEMA Premium  
Efficiency Three-Phase

Product code : 14270486

Catalog # : 10036OT3G365JP-W40

Performance : 460 V 60 Hz 2P

Rated current : 116 A	Moment of inertia (J) : 7.20 sq.ft.lb
LRC : 6.6	Duty cycle : Cont.(S1)
Rated torque : 148 ft.lb	Insulation class : F
Locked rotor torque : 180 %	Service factor : 1.25
Breakdown torque : 229 %	Temperature rise : 80 K
Rated speed : 3555 rpm	Design : B

Heating constant

Cooling constant

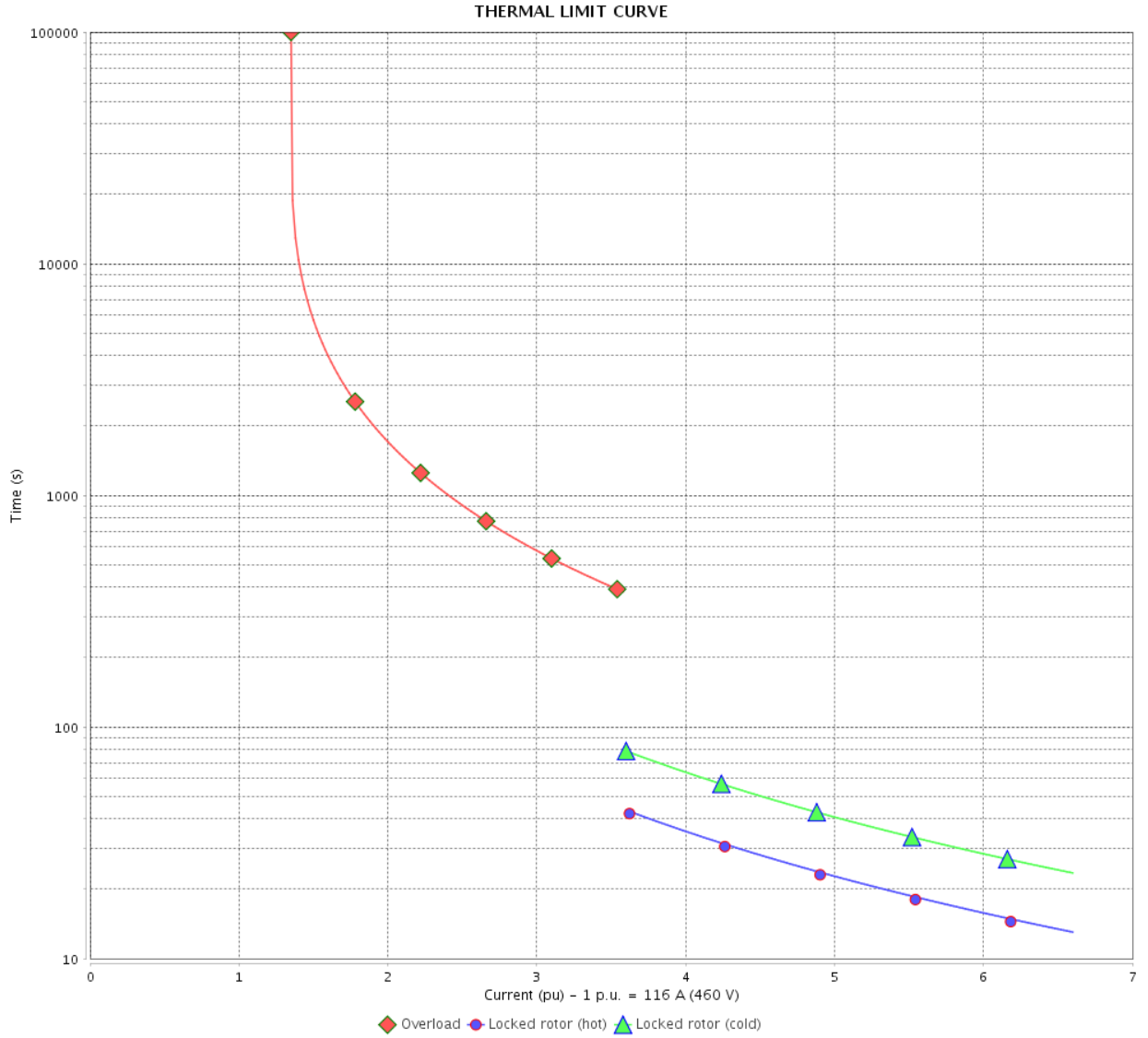
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 10 / 21	Revision
Checked by				
Date	12/04/2022			

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		11 / 21		
Date		12/04/2022		

# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W40 JP Pump NEMA Premium  
Efficiency Three-Phase

Product code : 14270486

Catalog # : 10036OT3G365JP-W40

Performance : 380 V 50 Hz 2P IE3

Rated current	: 103 A	Moment of inertia (J)	: 7.20 sq.ft.lb
LRC	: 7.5	Duty cycle	: Cont.(S1)
Rated torque	: 133 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 2960 rpm	Design	: B

Heating constant

Cooling constant

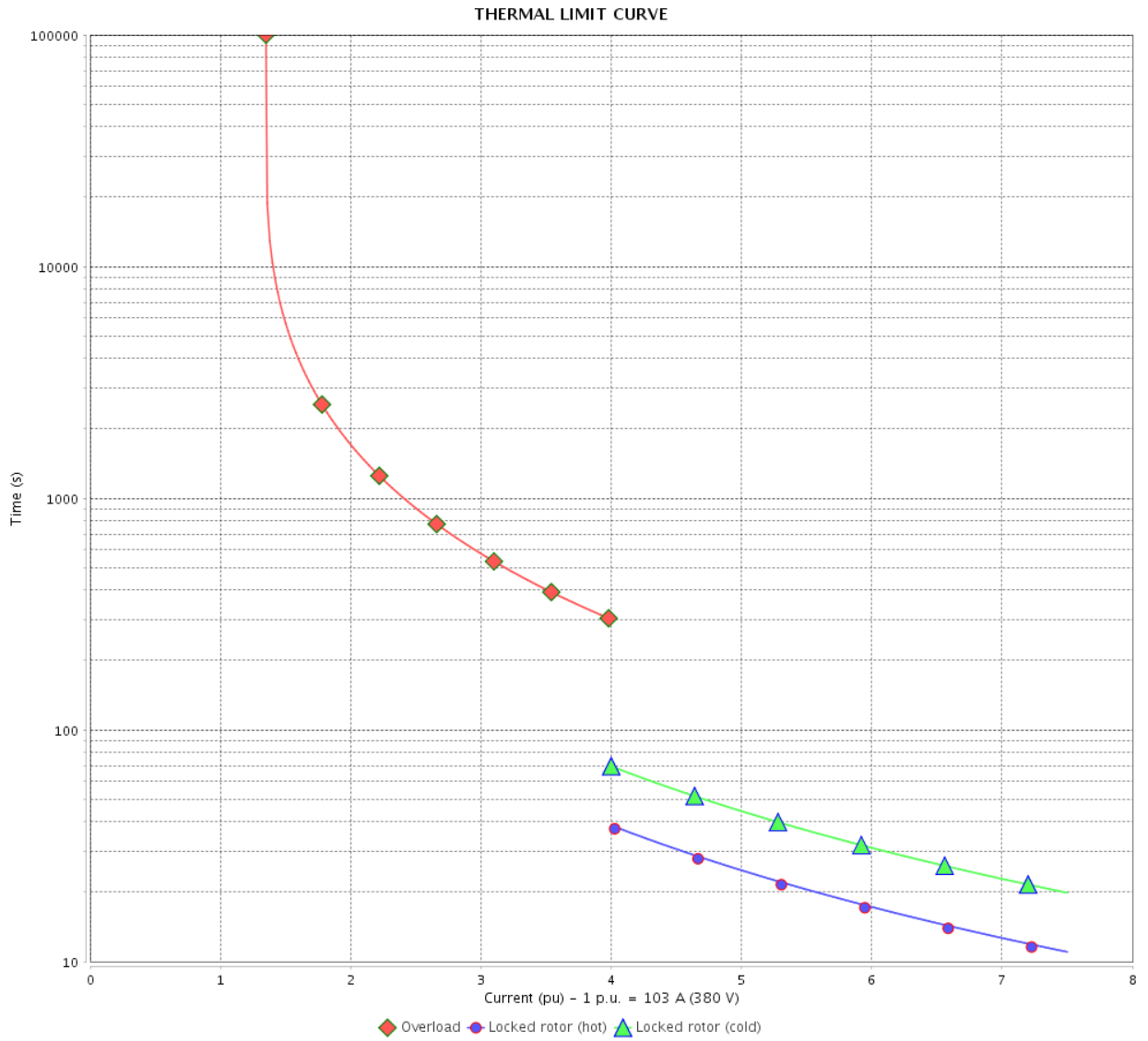
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	12/04/2022		12 / 21	

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		13 / 21		
Date		12/04/2022		

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 JP Pump NEMA Premium  
Efficiency Three-Phase

Product code : 14270486

Catalog # : 10036OT3G365JP-W40

Performance : 400 V 50 Hz 2P IE3

Rated current : 100 A	Moment of inertia (J) : 7.20 sq.ft.lb
LRC : 8.0	Duty cycle : Cont.(S1)
Rated torque : 133 ft.lb	Insulation class : F
Locked rotor torque : 240 %	Service factor : 1.00
Breakdown torque : 280 %	Temperature rise : 80 K
Rated speed : 2964 rpm	Design : B

Heating constant

Cooling constant

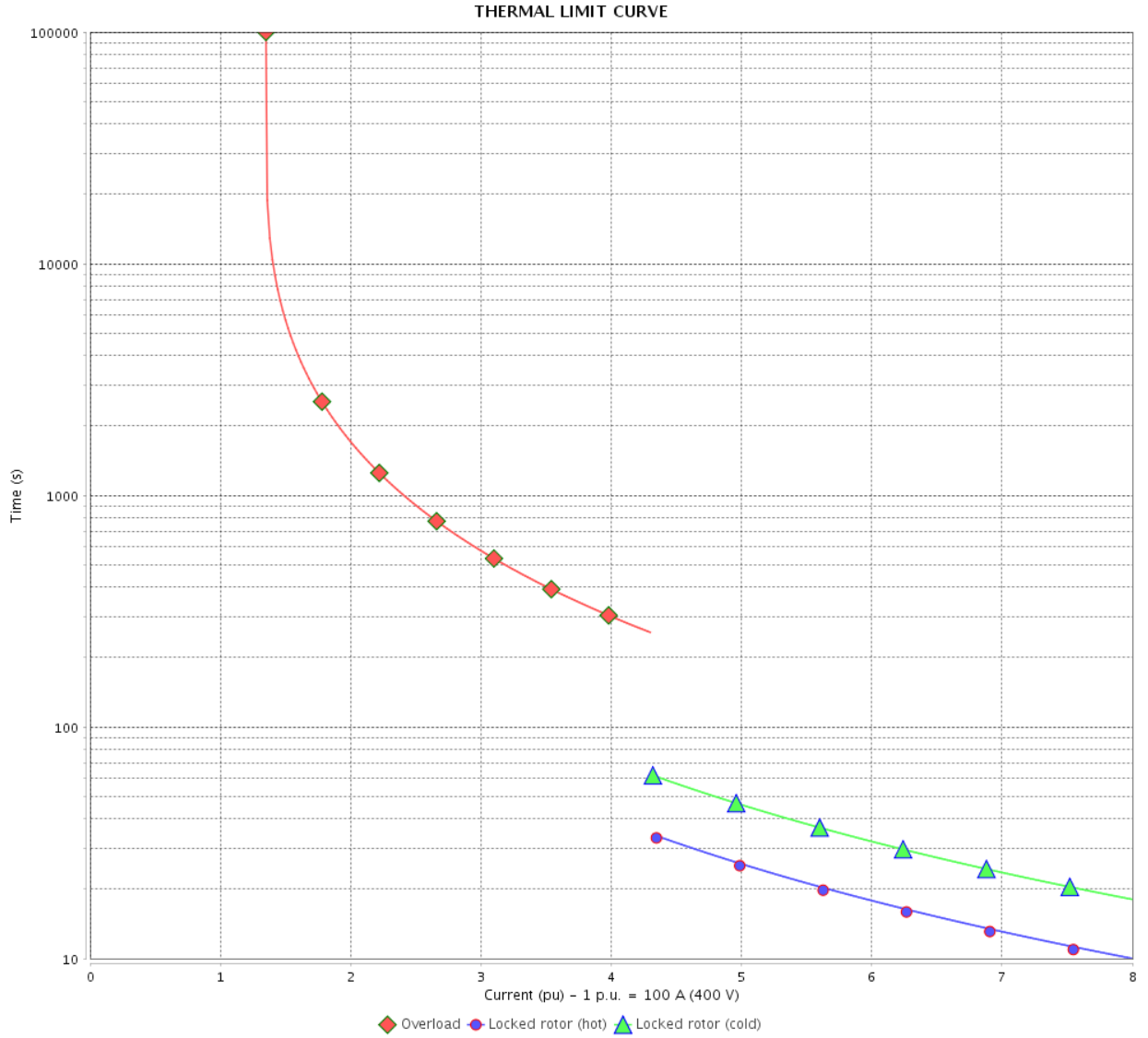
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 14 / 21	Revision
Checked by				
Date	12/04/2022			

# 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		12/04/2022		

# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W40 JP Pump NEMA Premium  
Efficiency Three-Phase

Product code : 14270486

Catalog # : 10036OT3G365JP-W40

Performance : 415 V 50 Hz 2P IE3

Rated current : 97.8 A  
LRC : 7.9  
Rated torque : 133 ft.lb  
Locked rotor torque : 250 %  
Breakdown torque : 320 %  
Rated speed : 2967 rpm

Moment of inertia (J) : 7.20 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : B

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	12/04/2022		16 / 21	

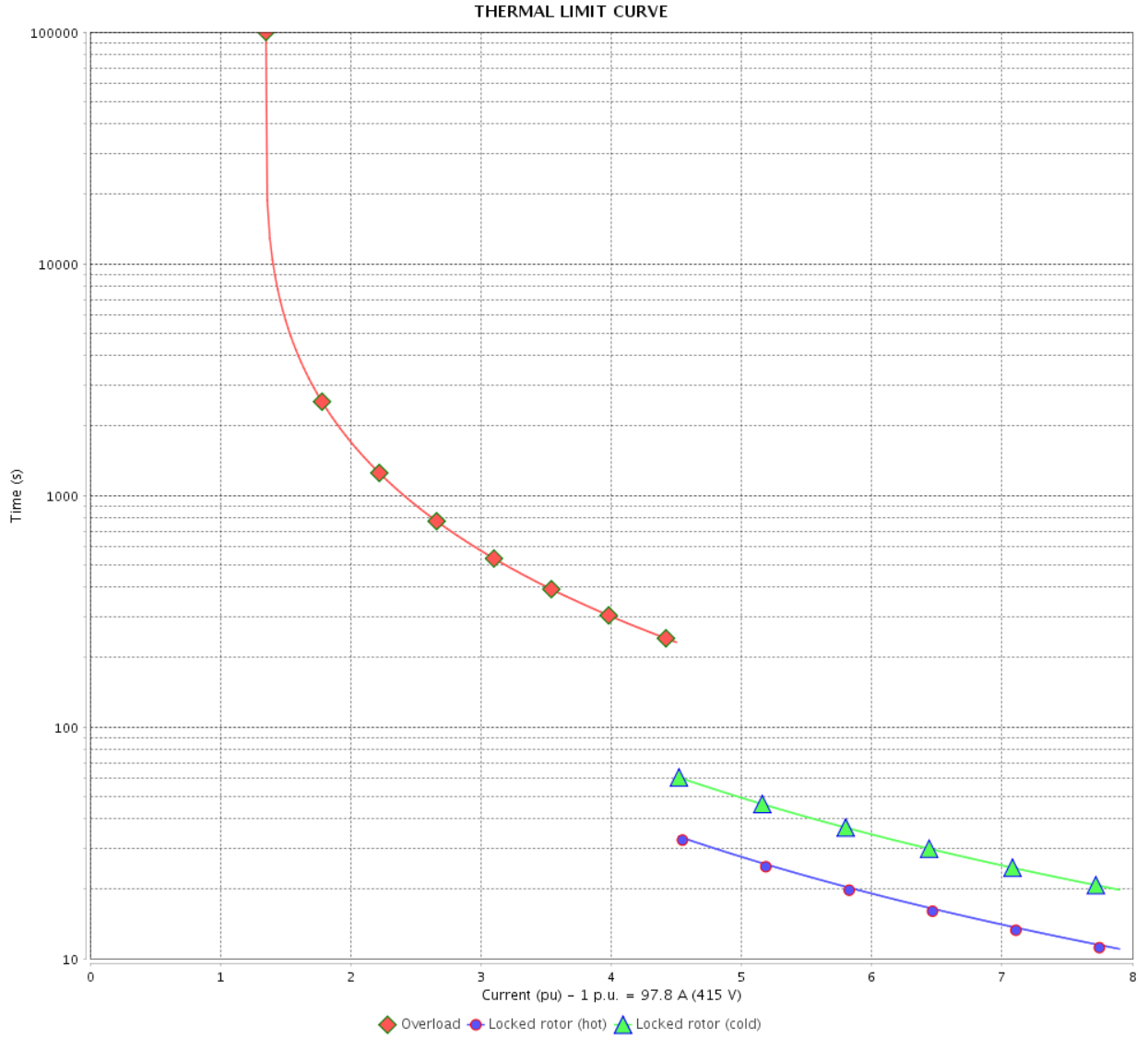


# THERMAL LIMIT CURVE

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



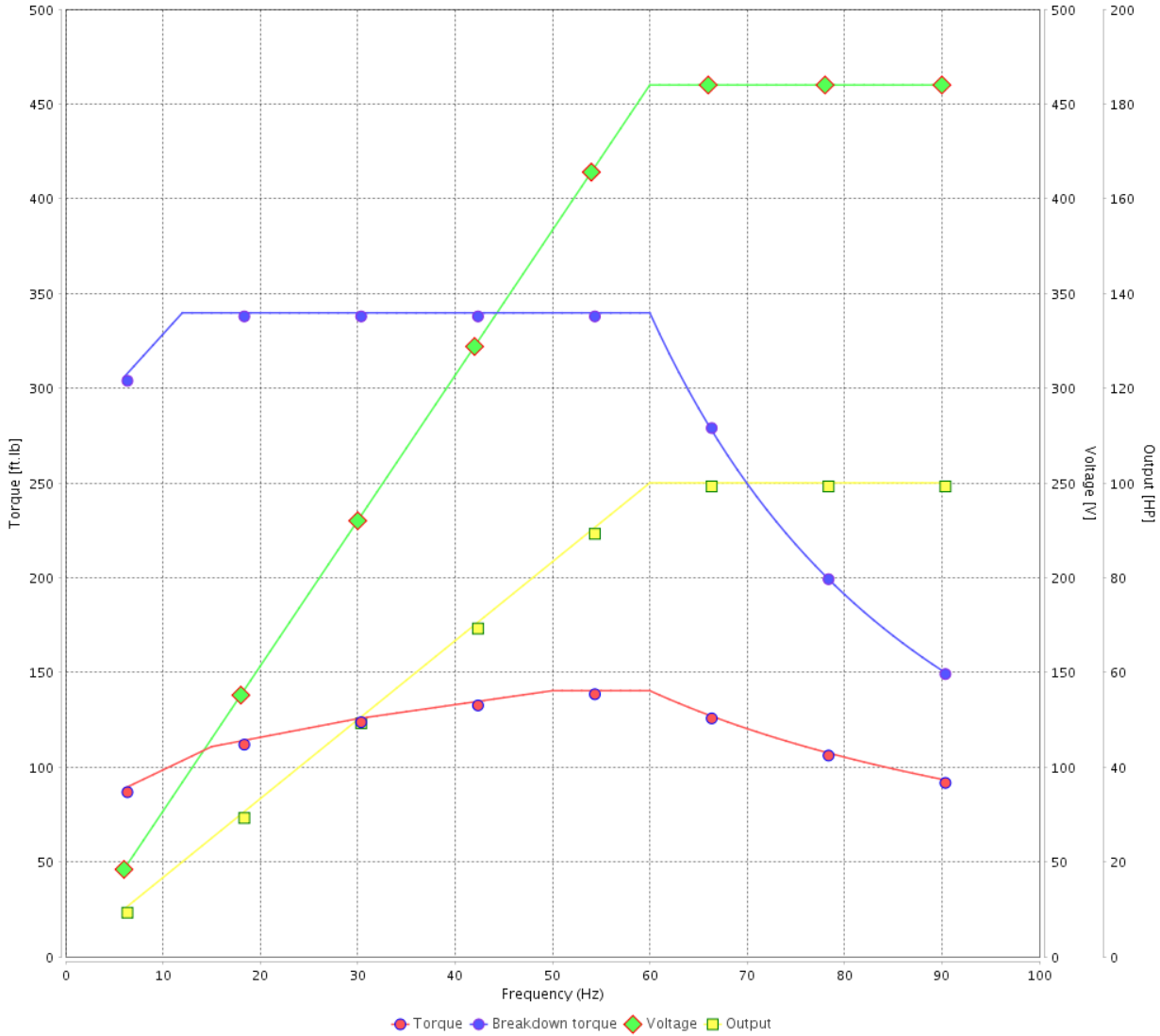
Customer :

Product line : W40 JP Pump NEMA Premium Efficiency Three-Phase

Product code : 14270486

Catalog # : 10036OT3G365JP-W40

VFD OPERATION CURVE



Performance : 460 V 60 Hz 2P

Rated current : 116 A  
 LRC : 6.6  
 Rated torque : 148 ft.lb  
 Locked rotor torque : 180 %  
 Breakdown torque : 229 %  
 Rated speed : 3555 rpm

Moment of inertia (J) : 7.20 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	12/04/2022			

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

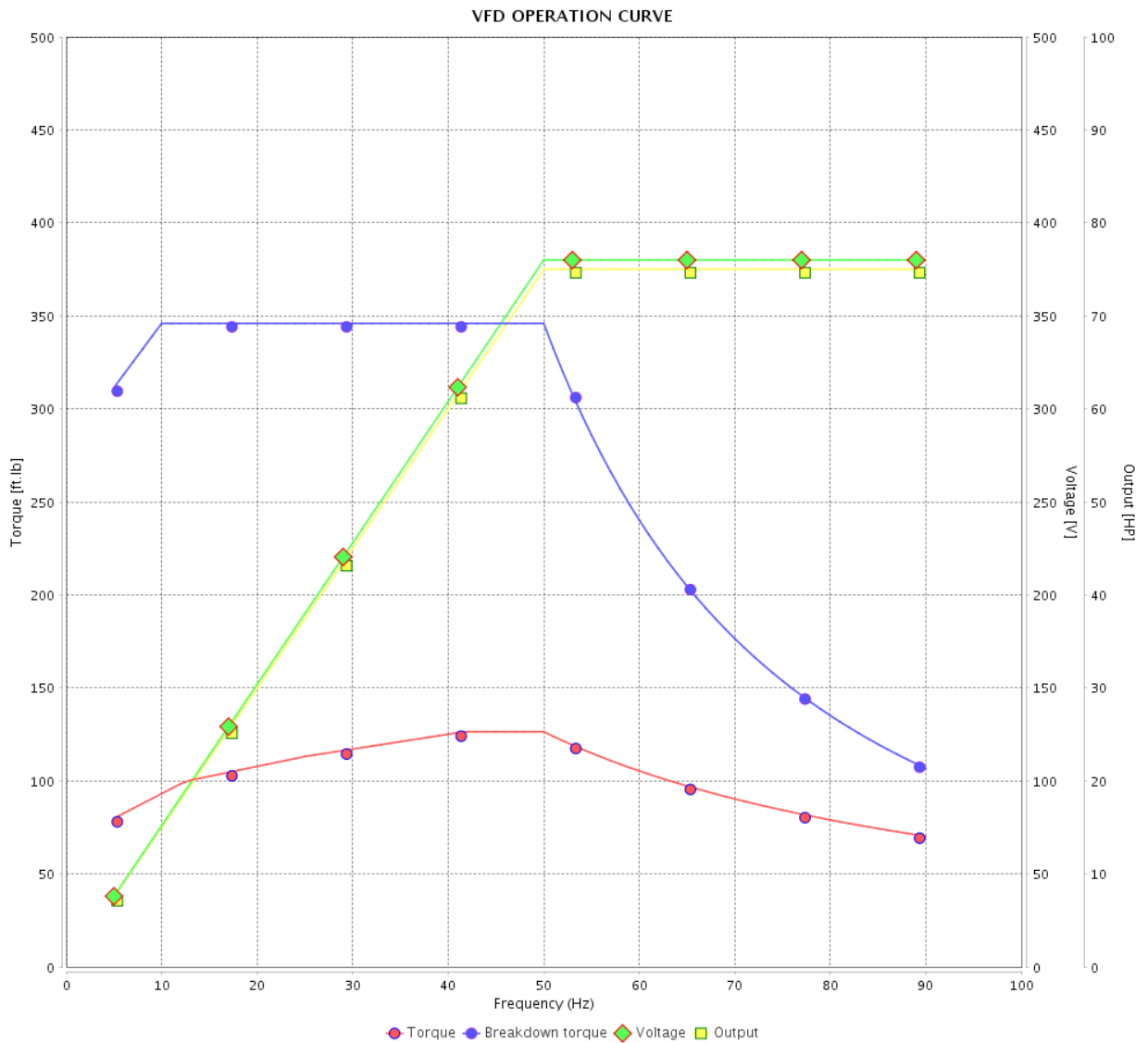


Customer :

Product line : W40 JP Pump NEMA Premium Efficiency Three-Phase

Product code : 14270486

Catalog # : 10036OT3G365JP-W40



Performance : 380 V 50 Hz 2P IE3

Rated current : 103 A  
 LRC : 7.5  
 Rated torque : 133 ft.lb  
 Locked rotor torque : 220 %  
 Breakdown torque : 260 %  
 Rated speed : 2960 rpm

Moment of inertia (J) : 7.20 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 19 / 21	Revision
Checked by				
Date	12/04/2022			

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



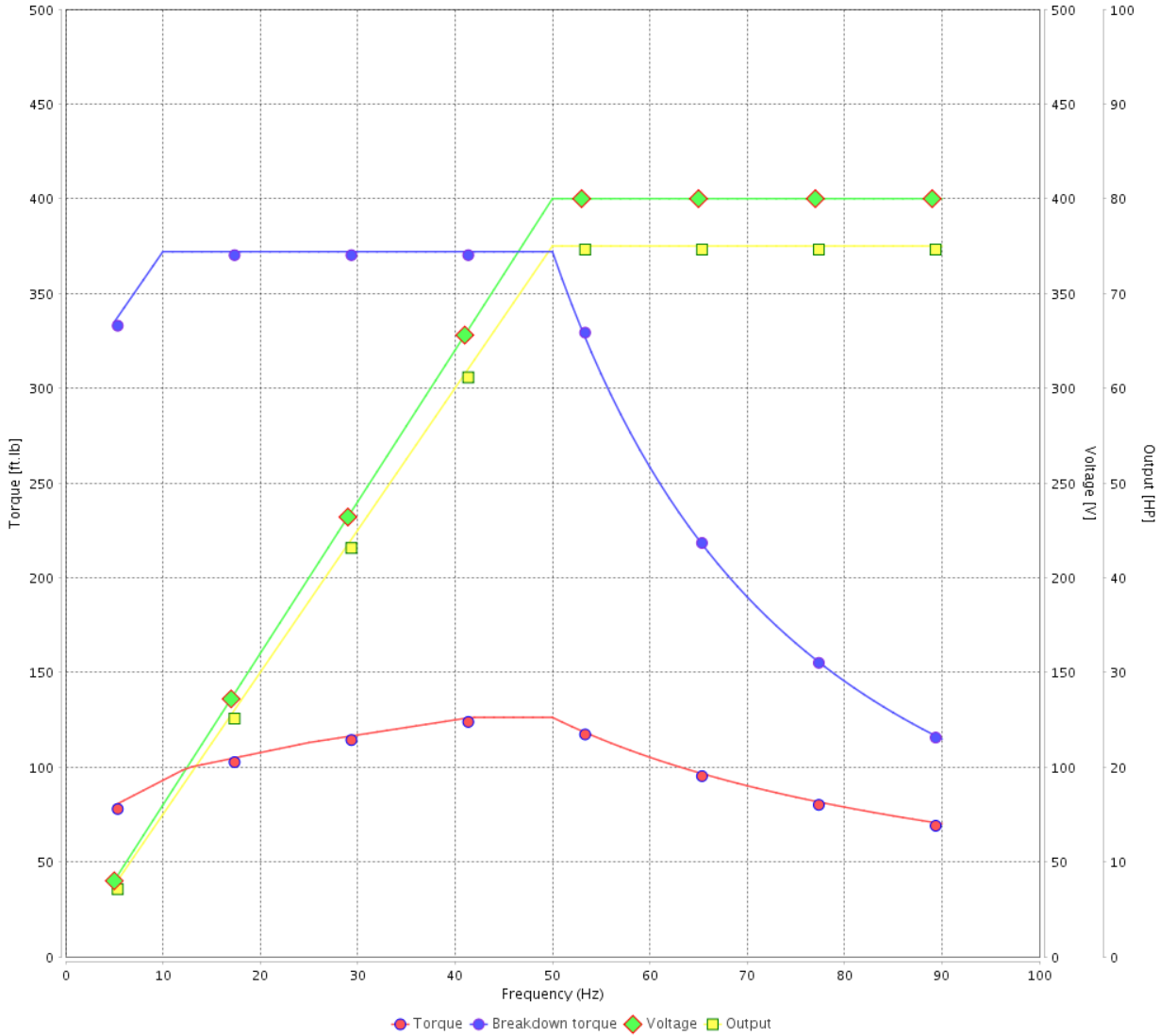
Customer :

Product line : W40 JP Pump NEMA Premium Efficiency Three-Phase

Product code : 14270486

Catalog # : 10036OT3G365JP-W40

VFD OPERATION CURVE



Performance : 400 V 50 Hz 2P IE3

Rated current : 100 A  
 LRC : 8.0  
 Rated torque : 133 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 280 %  
 Rated speed : 2964 rpm

Moment of inertia (J) : 7.20 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 20 / 21	Revision
Checked by				
Date	12/04/2022			

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

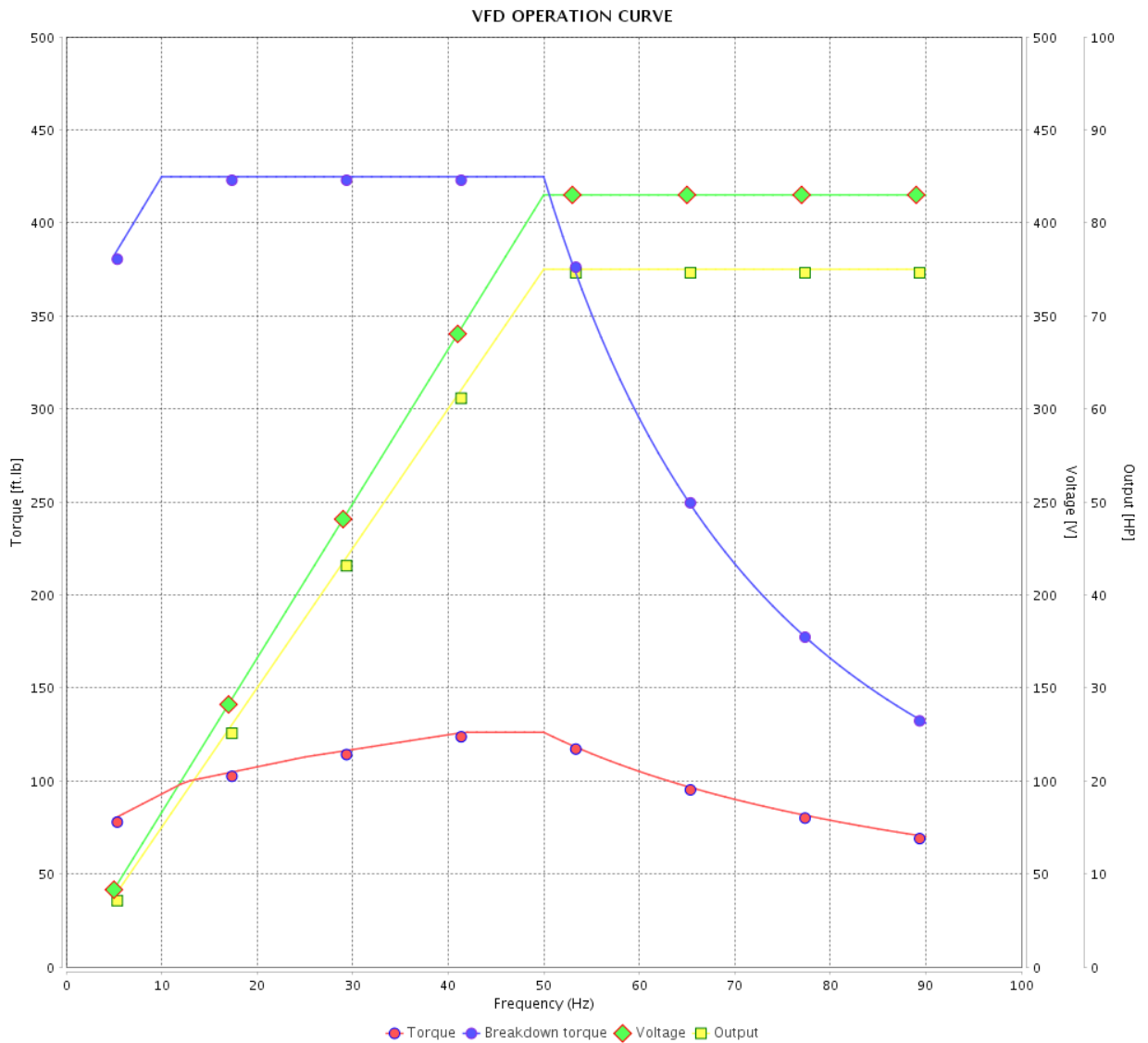


Customer :

Product line : W40 JP Pump NEMA Premium Efficiency Three-Phase

Product code : 14270486

Catalog # : 10036OT3G365JP-W40

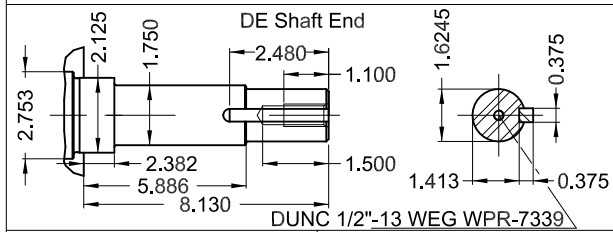
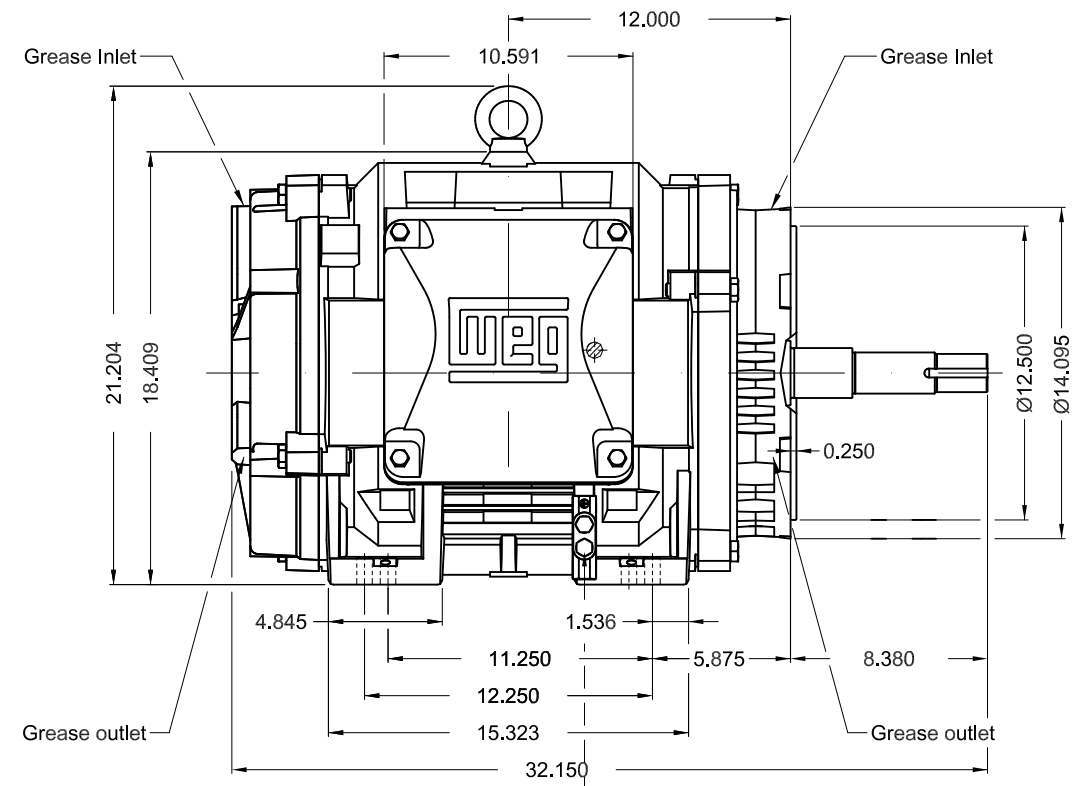
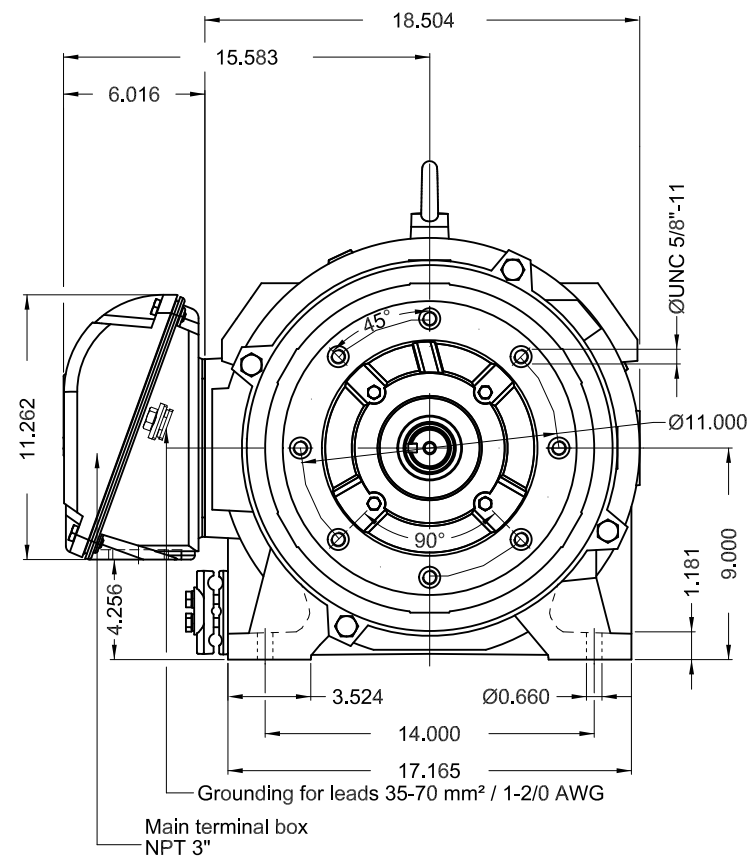


Performance : 415 V 50 Hz 2P IE3

Rated current : 97.8 A  
 LRC : 7.9  
 Rated torque : 133 ft.lb  
 Locked rotor torque : 250 %  
 Breakdown torque : 320 %  
 Rated speed : 2967 rpm

Moment of inertia (J) : 7.20 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 / 21
Checked by				
Date	12/04/2022			



100 HP 02 Poles 60 Hz A

1:8

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWUSER	THREE PH. MOTOR W40 CLOSE COUPLED PUMP JP TYPE PREVIEW					
CHECKED		FRAME 364/5JP IP23 ODP					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

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

**PREVIEW**  
 WDD

