

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W40 JM Pump NEMA Premium Efficiency Three-Phase      Product code : 14483182  
Catalog # : 01012OT3E256JM-W40

Frame : 254/6JM	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> : 271 lb
Protection degree : IP23	Moment of inertia (J) : 3.53 sq.ft.lb
Design : B	

Output [HP]	10	10	10	10
Poles	6	6	6	6
Frequency [Hz]	60	50	50	50
Rated voltage [V]	230/460	380	400	415
Rated current [A]	25.6/12.8	15.0	14.6	14.3
L. R. Amperes [A]	174/87.0	88.5	93.4	94.4
LRC [A]	6.8x(Code H)	5.9x(Code G)	6.4x(Code H)	6.6x(Code H)
No load current [A]	12.2/6.10	6.10	6.50	6.80
Rated speed [RPM]	1180	970	975	975
Slip [%]	1.67	3.00	2.50	2.50
Rated torque [ft.lb]	44.5	54.1	53.9	53.9
Locked rotor torque [%]	229	190	210	229
Breakdown torque [%]	300	229	260	280
Service factor	1.25	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K
Locked rotor time	30s (cold) 17s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)
Noise level <sup>2</sup>	59.0 dB(A)			
Efficiency (%)	25%	89.4	88.3	88.3
	50%	90.2	88.6	88.6
	75%	91.0	89.0	89.0
	100%	91.7	89.1	89.1
Power Factor	25%	0.37	0.44	0.38
	50%	0.62	0.70	0.63
	75%	0.74	0.80	0.76
	100%	0.80	0.85	0.82

	<u>Drive end</u>	<u>Non drive end</u>	Foundation loads
Bearing type :	6309 Z C3	6209 Z C3	Max. traction
Sealing :	Without	Without	Max. compression
	Bearing Seal	Bearing Seal	
Lubrication interval :	20000 h	20000 h	
Lubricant amount :	13 g	9 g	
Lubricant type :	Mobil Polyrex EM		

Notes  
USABLE @208V 28.3A SF 1.15 SFA 32.6A

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				
Date	11/04/2020			

Page 1 / 21  
Revision

# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage

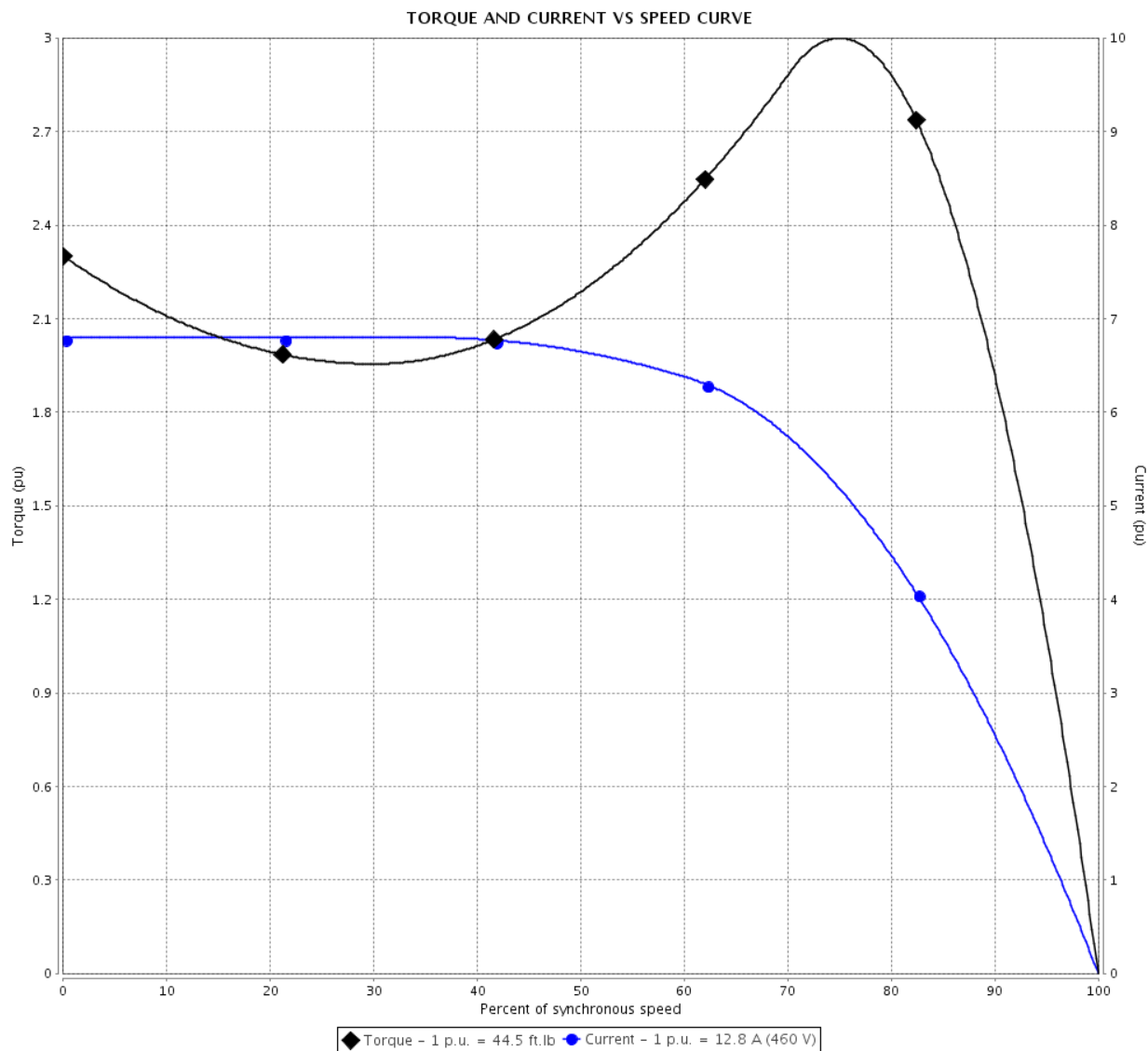


Customer :

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

Product code : 14483182

Catalog # : 010120T3E256JM-W40



Performance : 230/460 V 60 Hz 6P

Rated current : 25.6/12.8 A  
LRC : 6.8  
Rated torque : 44.5 ft.lb  
Locked rotor torque : 229 %  
Breakdown torque : 300 %  
Rated speed : 1180 rpm

Moment of inertia (J) : 3.53 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.25  
Temperature rise : 80 K  
Design : B

Locked rotor time : 30s (cold) 17s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by		<div>Page 2 / 21</div> <div>Revision</div>		
Checked by				
Date	11/04/2020			

# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage

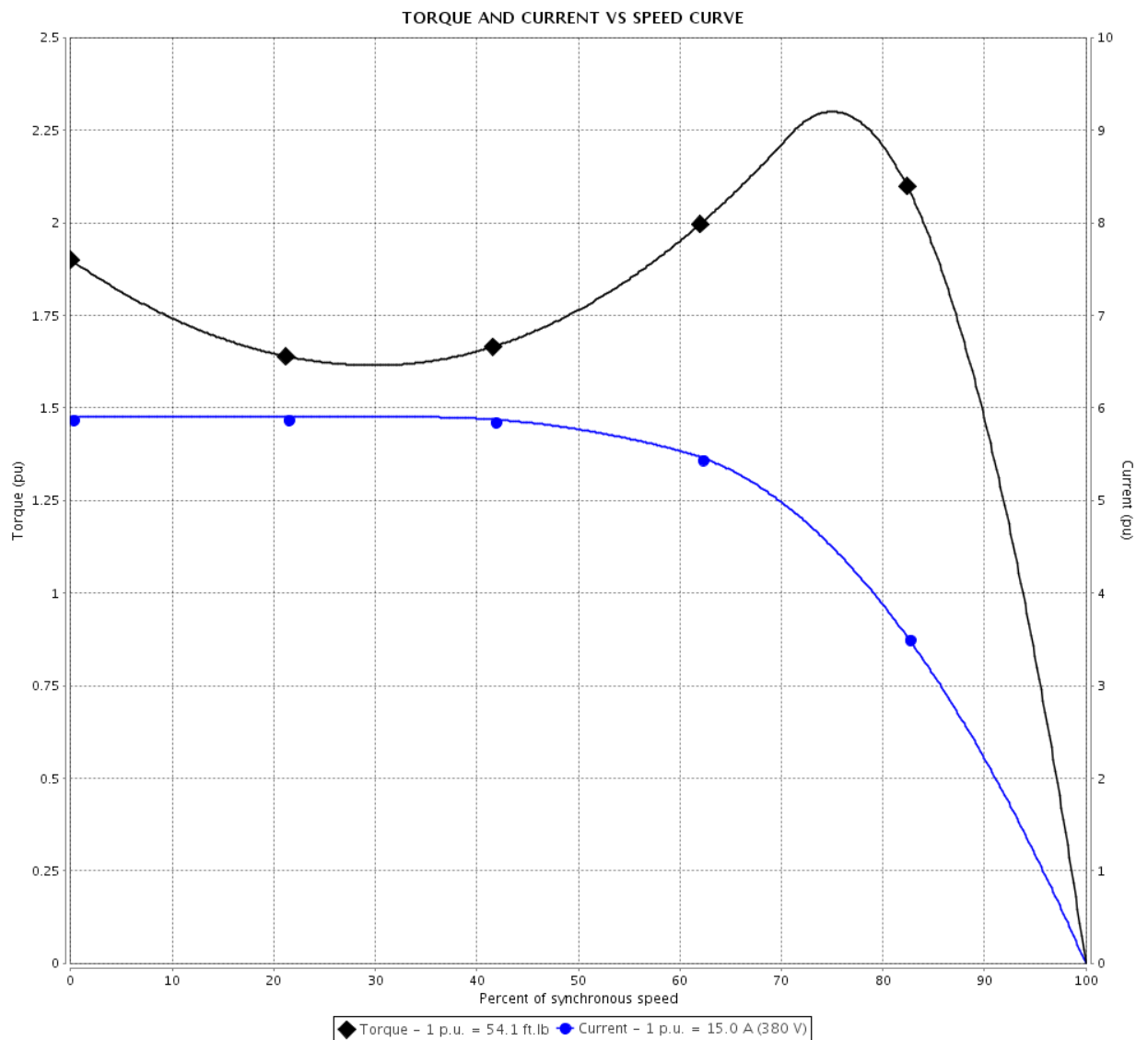


Customer :

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

Product code : 14483182

Catalog # : 01012OT3E256JM-W40



Performance : 380 V 50 Hz 6P IE3

Rated current	: 15.0 A	Moment of inertia (J)	: 3.53 sq.ft.lb
LRC	: 5.9	Duty cycle	: Cont.(S1)
Rated torque	: 54.1 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 970 rpm	Design	: B

Locked rotor time : 25s (cold) 14s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 3 / 21		
Checked by				
Date	11/04/2020			
		Revision		

# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage

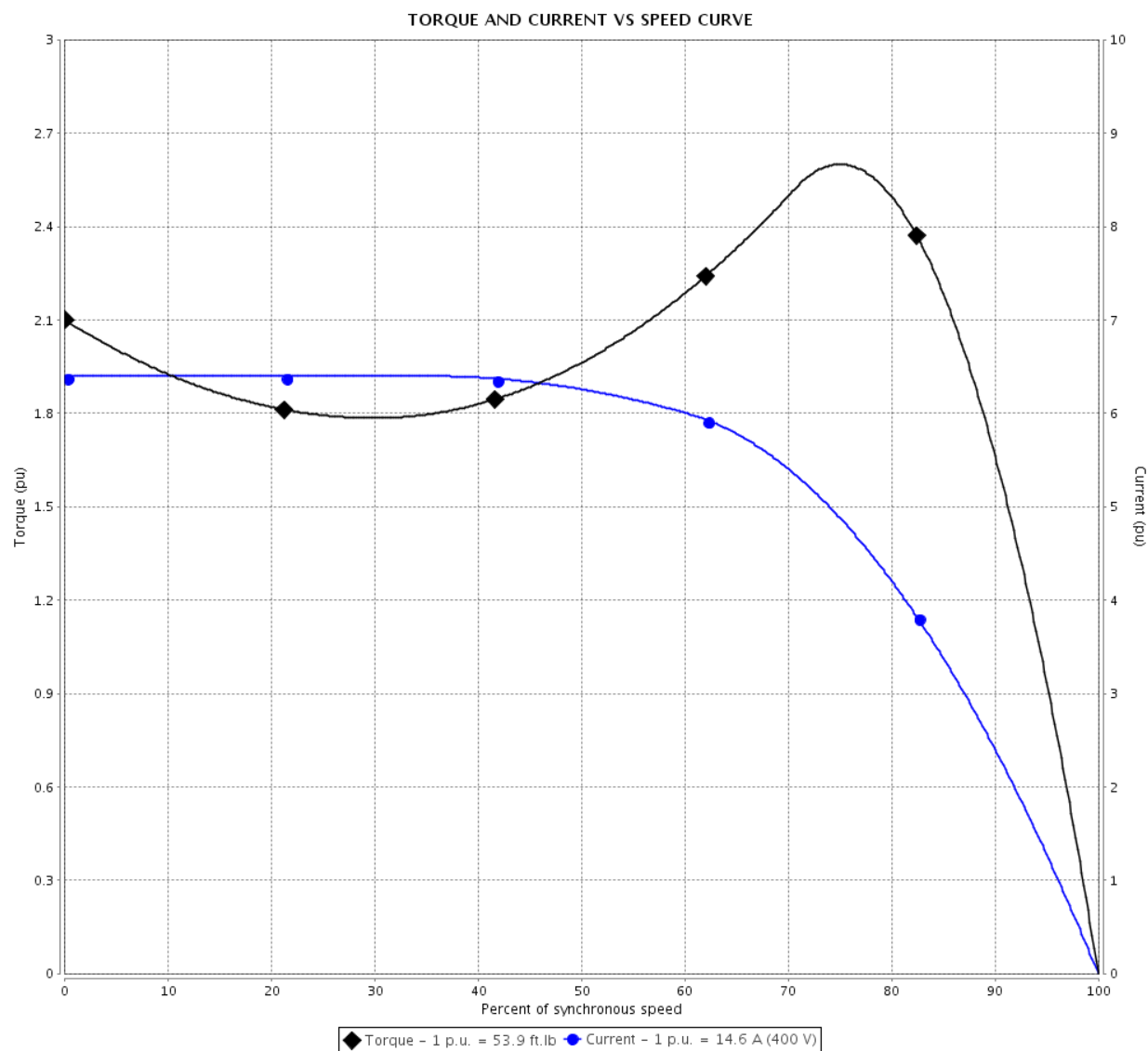


Customer :

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

Product code : 14483182

Catalog # : 010120T3E256JM-W40



Performance : 400 V 50 Hz 6P IE3

Rated current	: 14.6 A	Moment of inertia (J)	: 3.53 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 53.9 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 975 rpm	Design	: B

Locked rotor time : 25s (cold) 14s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by		<div style="display: flex; justify-content: space-between;"> <div>Page 4 / 21</div> <div>Revision</div> </div>		
Checked by				
Date	11/04/2020			

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage

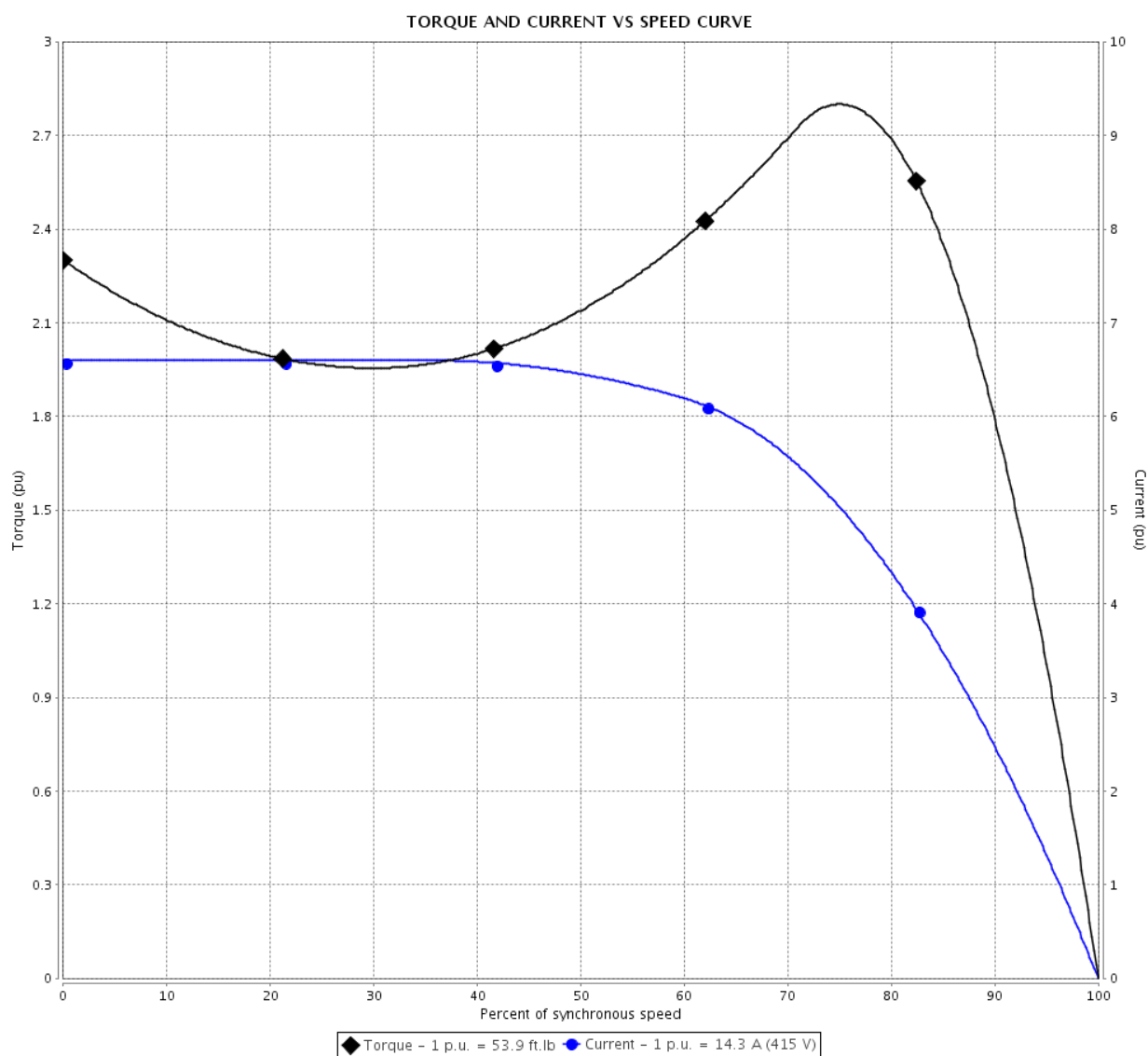


Customer :

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

Product code : 14483182

Catalog # : 01012OT3E256JM-W40



Performance : 415 V 50 Hz 6P IE3

Rated current	: 14.3 A	Moment of inertia (J)	: 3.53 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 53.9 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 975 rpm	Design	: B

Locked rotor time : 25s (cold) 14s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 5 / 21		
Checked by				
Date	11/04/2020			
		Revision		

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

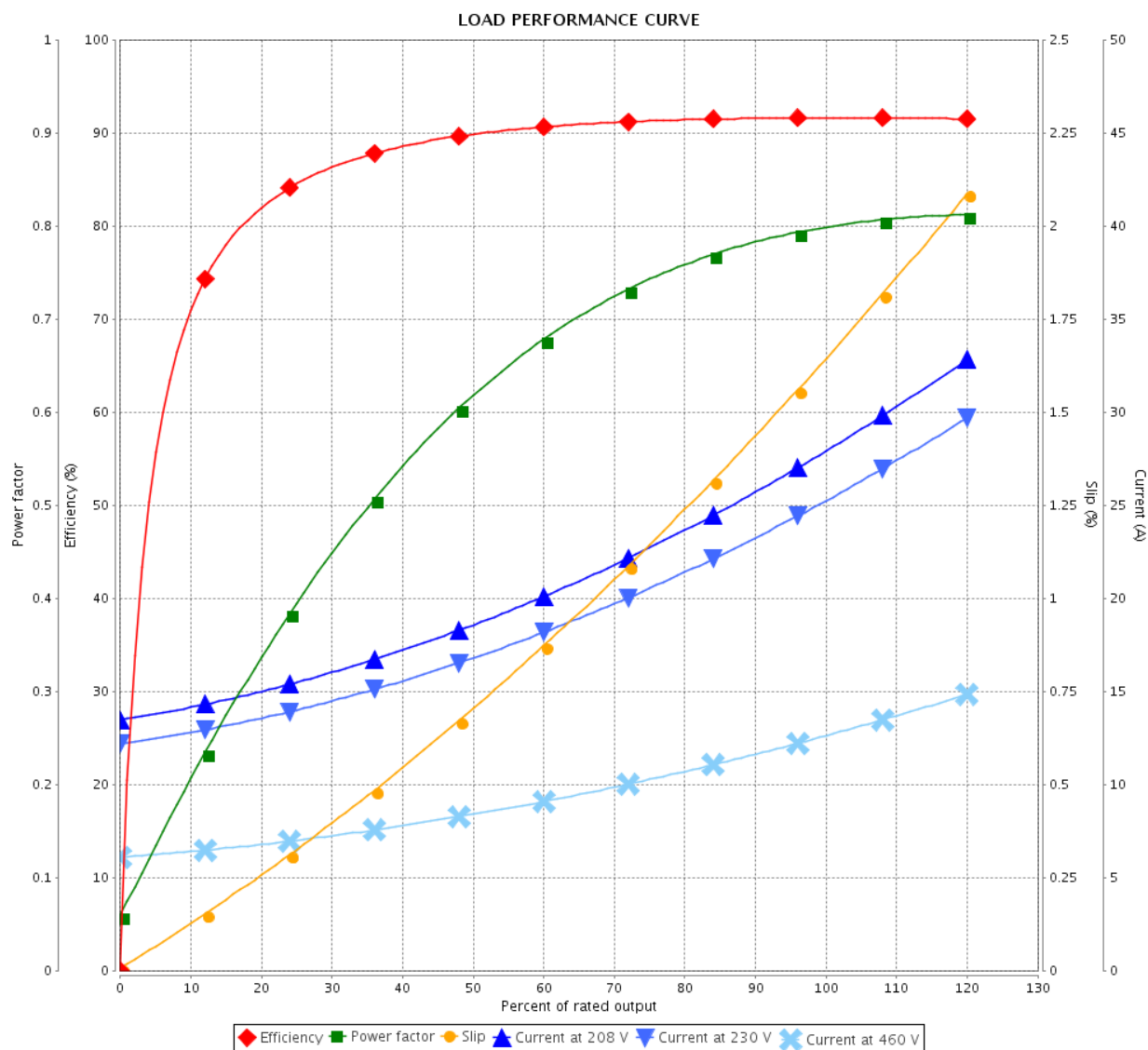


Customer :

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

Product code : 14483182

Catalog # : 010120T3E256JM-W40



Performance : 230/460 V 60 Hz 6P

Rated current : 25.6/12.8 A  
LRC : 6.8  
Rated torque : 44.5 ft.lb  
Locked rotor torque : 229 %  
Breakdown torque : 300 %  
Rated speed : 1180 rpm

Moment of inertia (J) : 3.53 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
Checked by				
Date				
	11/04/2020			Revision

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

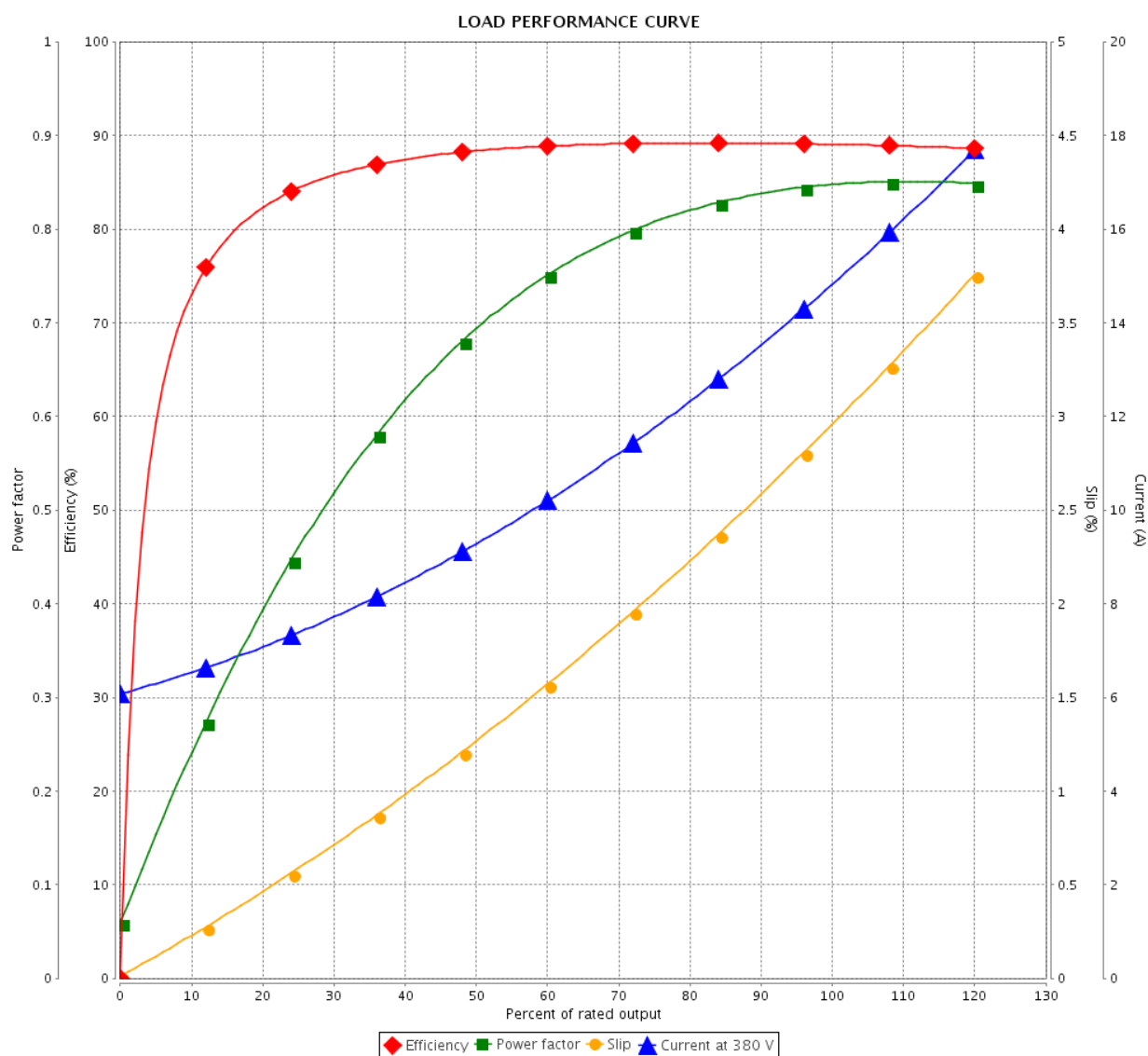


Customer :

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

Product code : 14483182

Catalog # : 01012OT3E256JM-W40



Performance : 380 V 50 Hz 6P IE3

Rated current : 15.0 A  
LRC : 5.9  
Rated torque : 54.1 ft.lb  
Locked rotor torque : 190 %  
Breakdown torque : 229 %  
Rated speed : 970 rpm

Moment of inertia (J) : 3.53 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 7 / 21		
Checked by				
Date	11/04/2020			
		Revision		

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

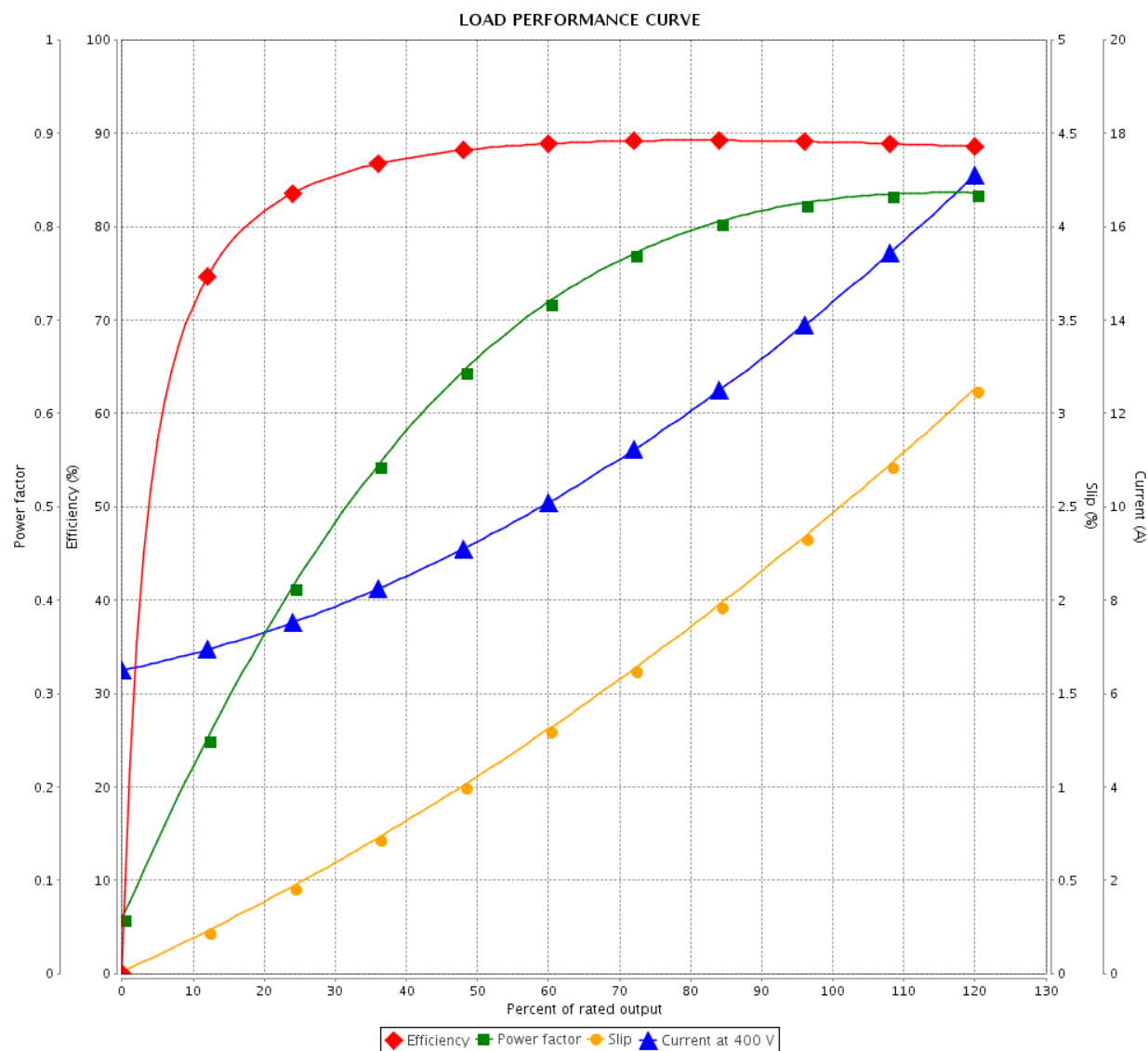


Customer :

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

Product code : 14483182

Catalog # : 010120T3E256JM-W40



Performance : 400 V 50 Hz 6P IE3

Rated current : 14.6 A  
LRC : 6.4  
Rated torque : 53.9 ft.lb  
Locked rotor torque : 210 %  
Breakdown torque : 260 %  
Rated speed : 975 rpm

Moment of inertia (J) : 3.53 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 8 / 21	Revision
Checked by					
Date	11/04/2020				



# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

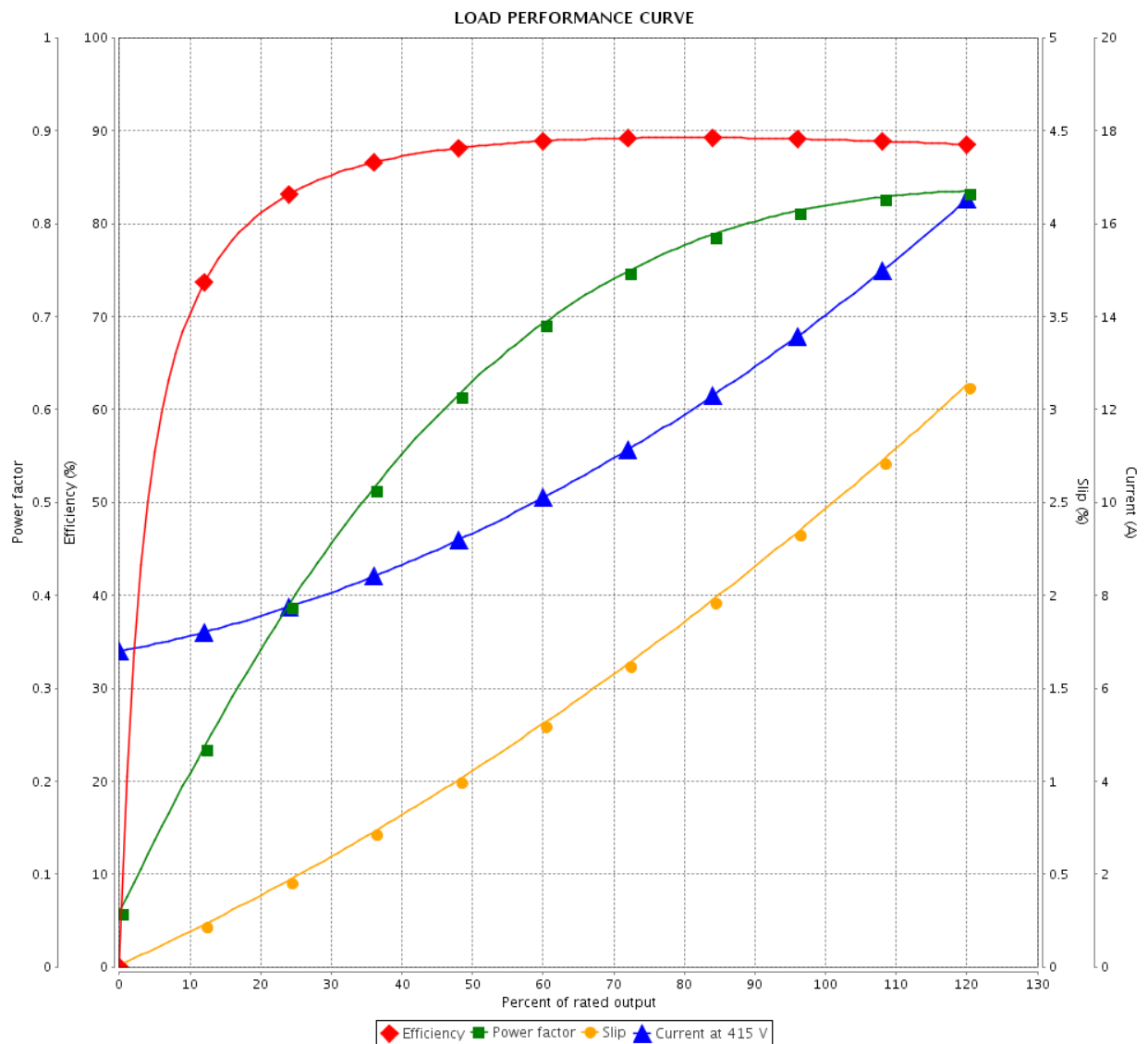


Customer :

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

Product code : 14483182

Catalog # : 01012OT3E256JM-W40



Performance : 415 V 50 Hz 6P IE3

Rated current	: 14.3 A	Moment of inertia (J)	: 3.53 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 53.9 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 975 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 9 / 21		
Checked by				
Date	11/04/2020			
		Revision		

# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer

:

Product line

: W40 JM Pump NEMA Premium  
Efficiency Three-Phase

Product code :

14483182

Catalog # :

01012OT3E256JM-W40

Performance : 230/460 V 60 Hz 6P

Rated current : 25.6/12.8 A  
LRC : 6.8  
Rated torque : 44.5 ft.lb  
Locked rotor torque : 229 %  
Breakdown torque : 300 %  
Rated speed : 1180 rpm

Moment of inertia (J) : 3.53 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.25  
Temperature rise : 80 K  
Design : B

Heating constant

Cooling constant

Rev.

Changes Summary

Performed

Checked

Date

Performed by

Checked by

Date

11/04/2020

Page

10 / 21

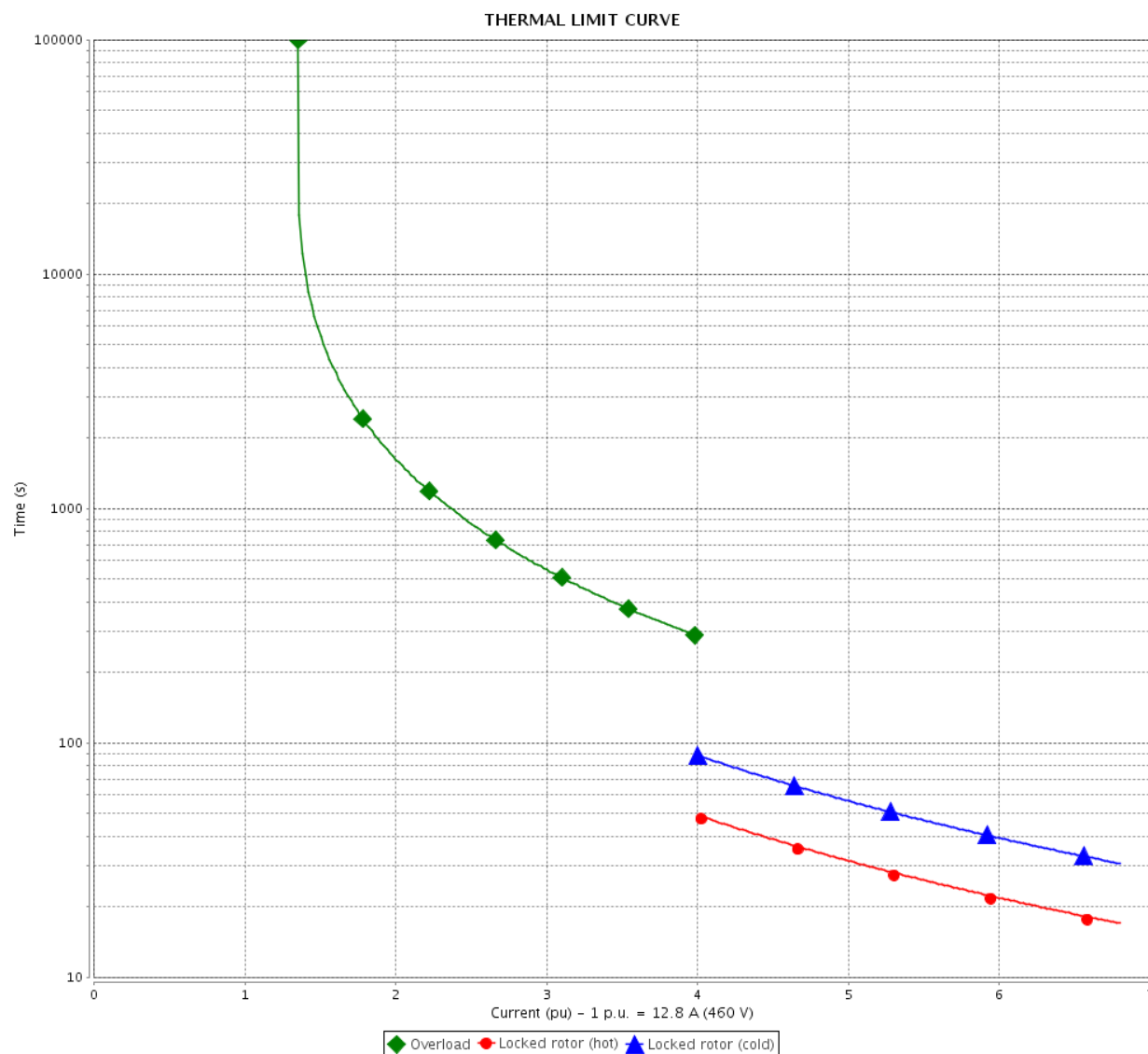
Revision

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page 11 / 21	Revision
Checked by					
Date	11/04/2020				

# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer

:

Product line

: W40 JM Pump NEMA Premium  
Efficiency Three-Phase

Product code :

14483182

Catalog # :

01012OT3E256JM-W40

Performance : 380 V 50 Hz 6P IE3

Rated current

: 15.0 A

LRC

: 5.9

Rated torque

: 54.1 ft.lb

Locked rotor torque

: 190 %

Breakdown torque

: 229 %

Rated speed

: 970 rpm

Moment of inertia (J)

: 3.53 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

Date

11/04/2020

Page

12 / 21

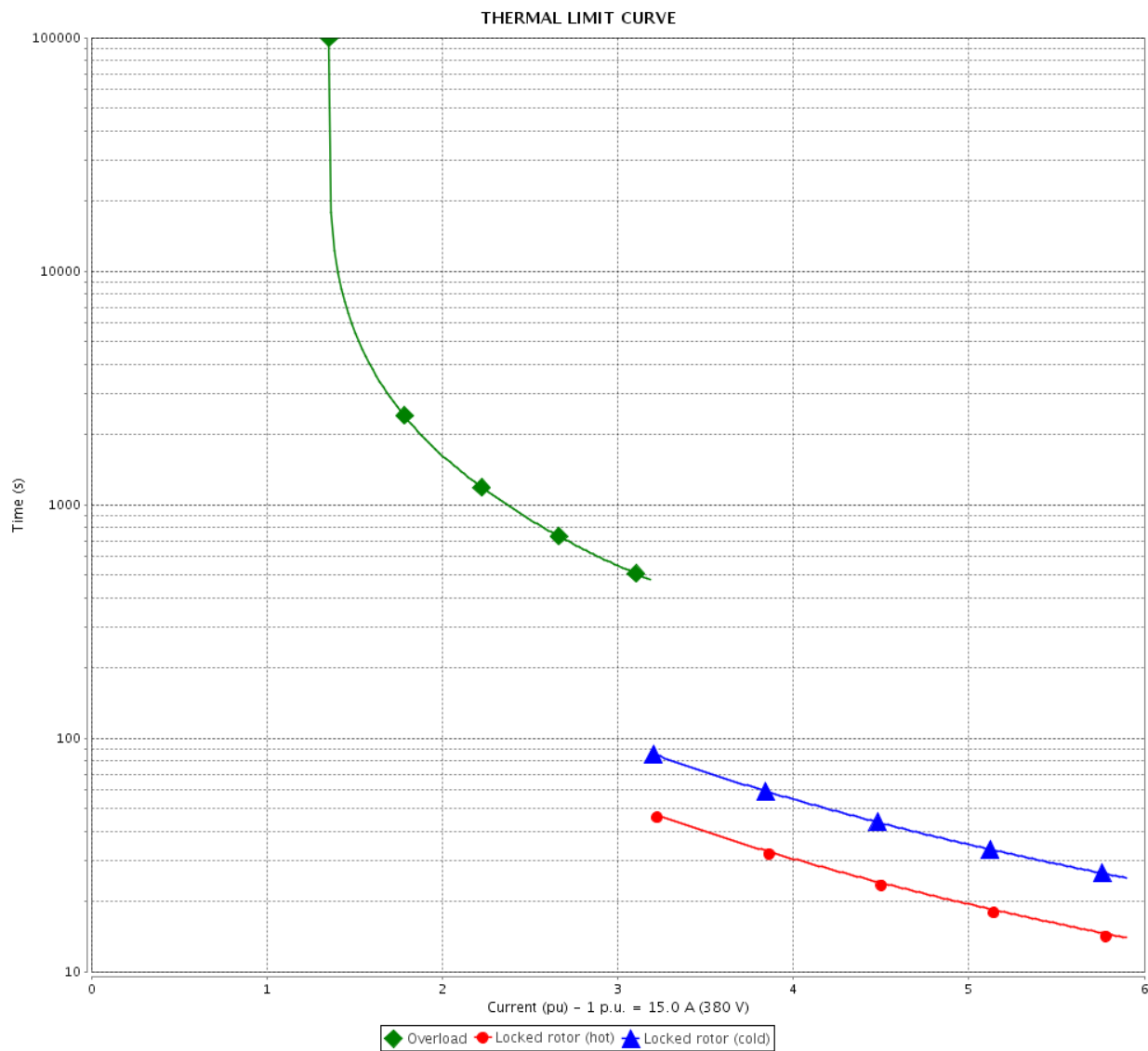
Revision

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary		Performed	Checked	Date
Performed by					Page 13 / 21
Checked by					
Date	11/04/2020				
					Revision

# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 14483182

Catalog # : 01012OT3E256JM-W40

Performance : 400 V 50 Hz 6P IE3

Rated current	: 14.6 A	Moment of inertia (J)	: 3.53 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 53.9 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 975 rpm	Design	: B

Heating constant

Cooling constant

Rev.

Changes Summary

Performed

Checked

Date

Performed by

Checked by

Date

11/04/2020

Page

14 / 21

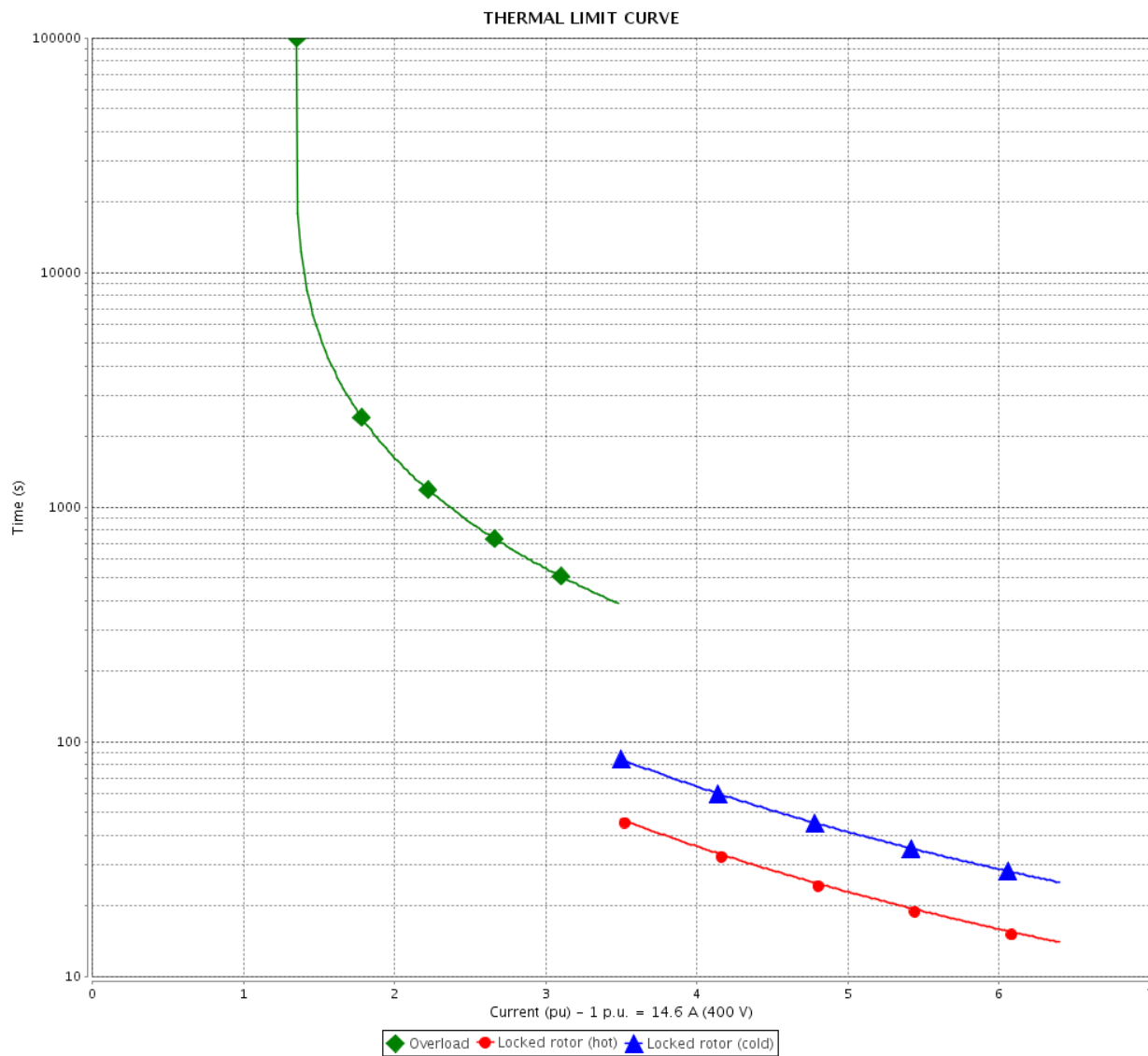
Revision

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary		Performed	Checked	Date
Performed by					
Checked by					
Date	11/04/2020				
			Page 15 / 21	Revision	

# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 14483182

Catalog # : 01012OT3E256JM-W40

Performance : 415 V 50 Hz 6P IE3

Rated current	: 14.3 A	Moment of inertia (J)	: 3.53 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 53.9 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 975 rpm	Design	: B

Heating constant

Cooling constant

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page	Revision
Checked by				16 / 21	
Date	11/04/2020				

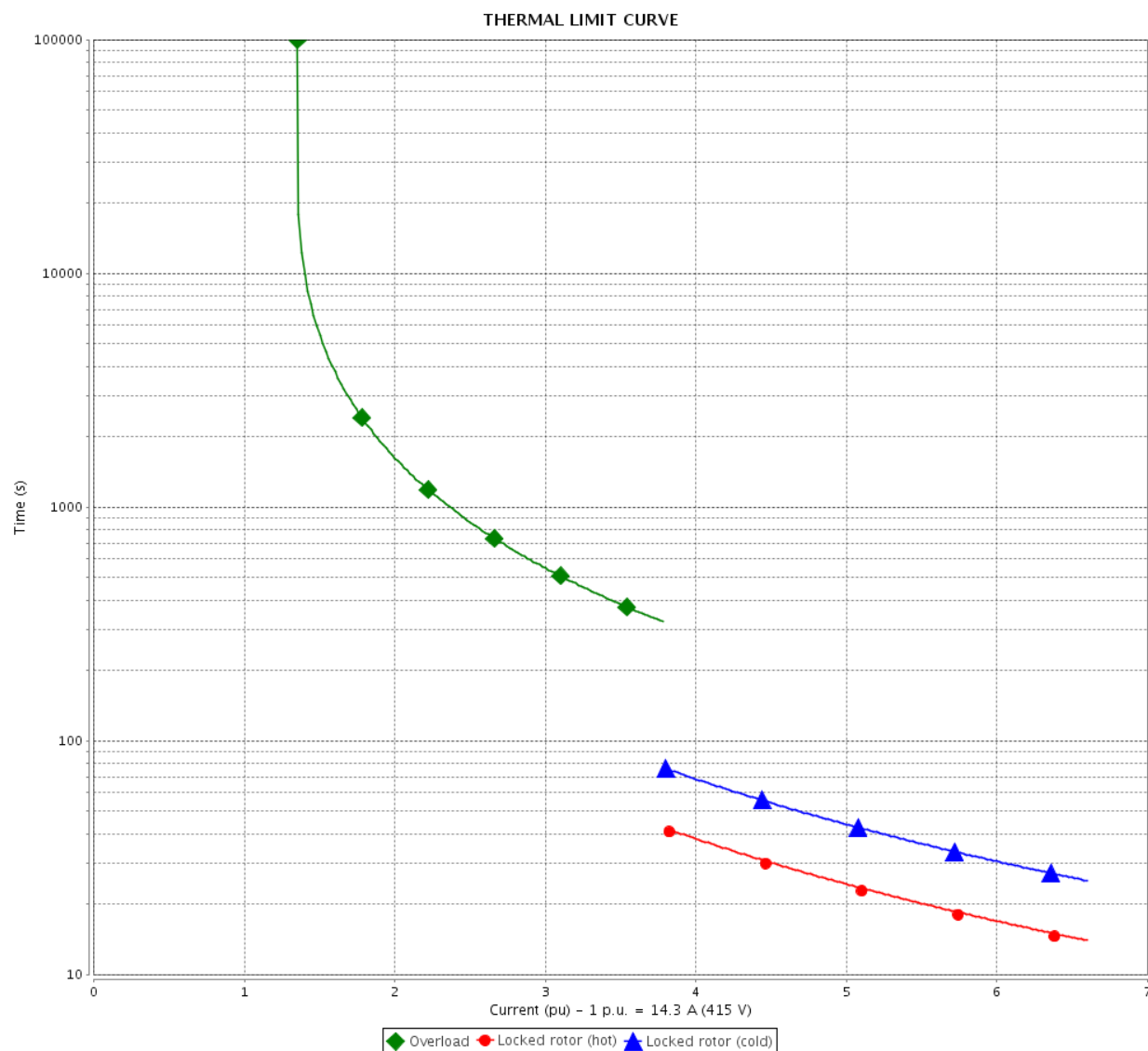


# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page 17 / 21	Revision
Checked by					
Date	11/04/2020				

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

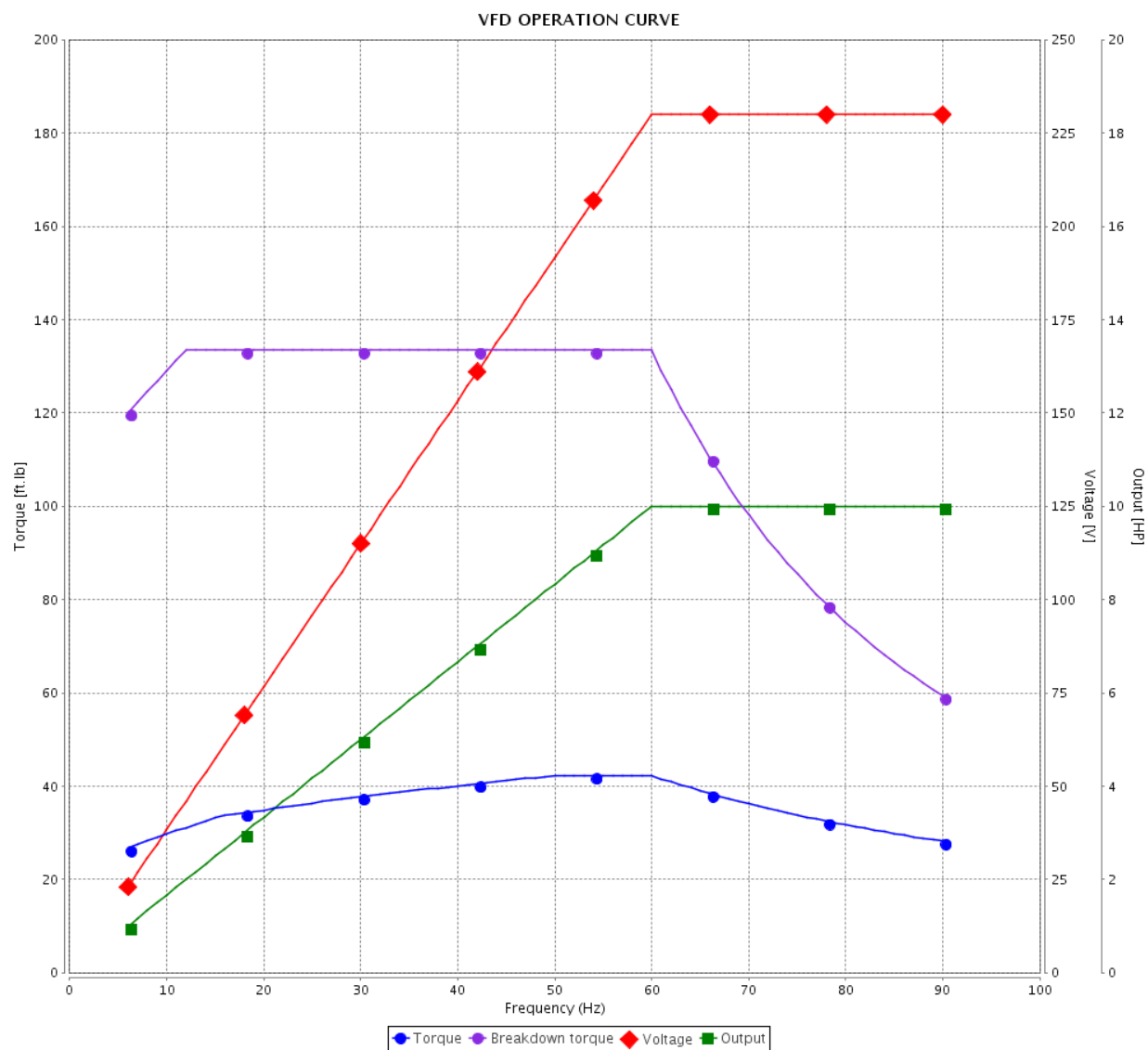


Customer :

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

Product code : 14483182

Catalog # : 010120T3E256JM-W40



Performance : 230/460 V 60 Hz 6P

Rated current : 25.6/12.8 A  
LRC : 6.8  
Rated torque : 44.5 ft.lb  
Locked rotor torque : 229 %  
Breakdown torque : 300 %  
Rated speed : 1180 rpm

Moment of inertia (J) : 3.53 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	11/04/2020				

# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

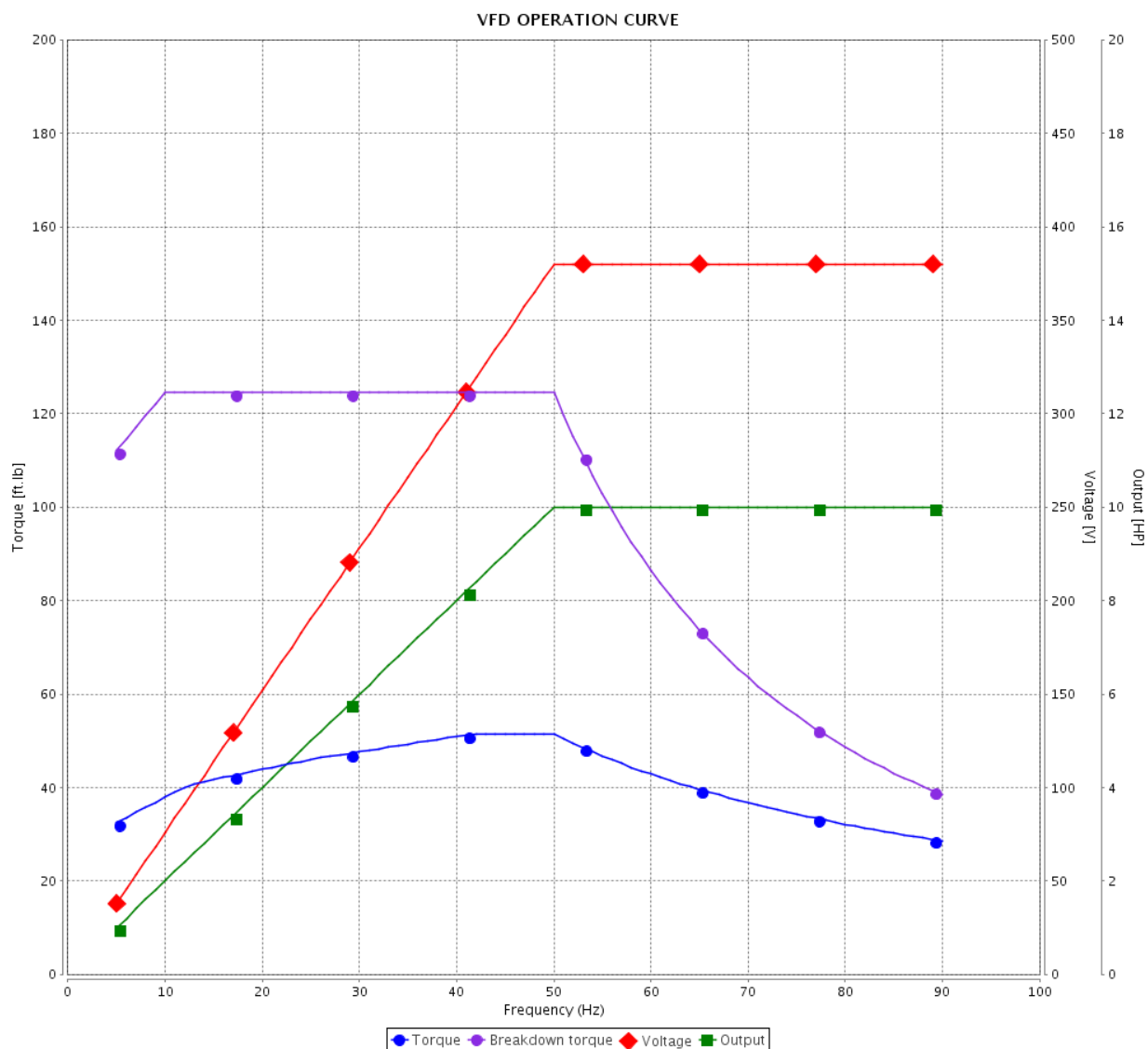


Customer :

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

Product code : 14483182

Catalog # : 01012OT3E256JM-W40



Performance : 380 V 50 Hz 6P IE3

Rated current : 15.0 A  
LRC : 5.9  
Rated torque : 54.1 ft.lb  
Locked rotor torque : 190 %  
Breakdown torque : 229 %  
Rated speed : 970 rpm

Moment of inertia (J) : 3.53 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		
Checked by				
Date	11/04/2020			
		Revision		

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

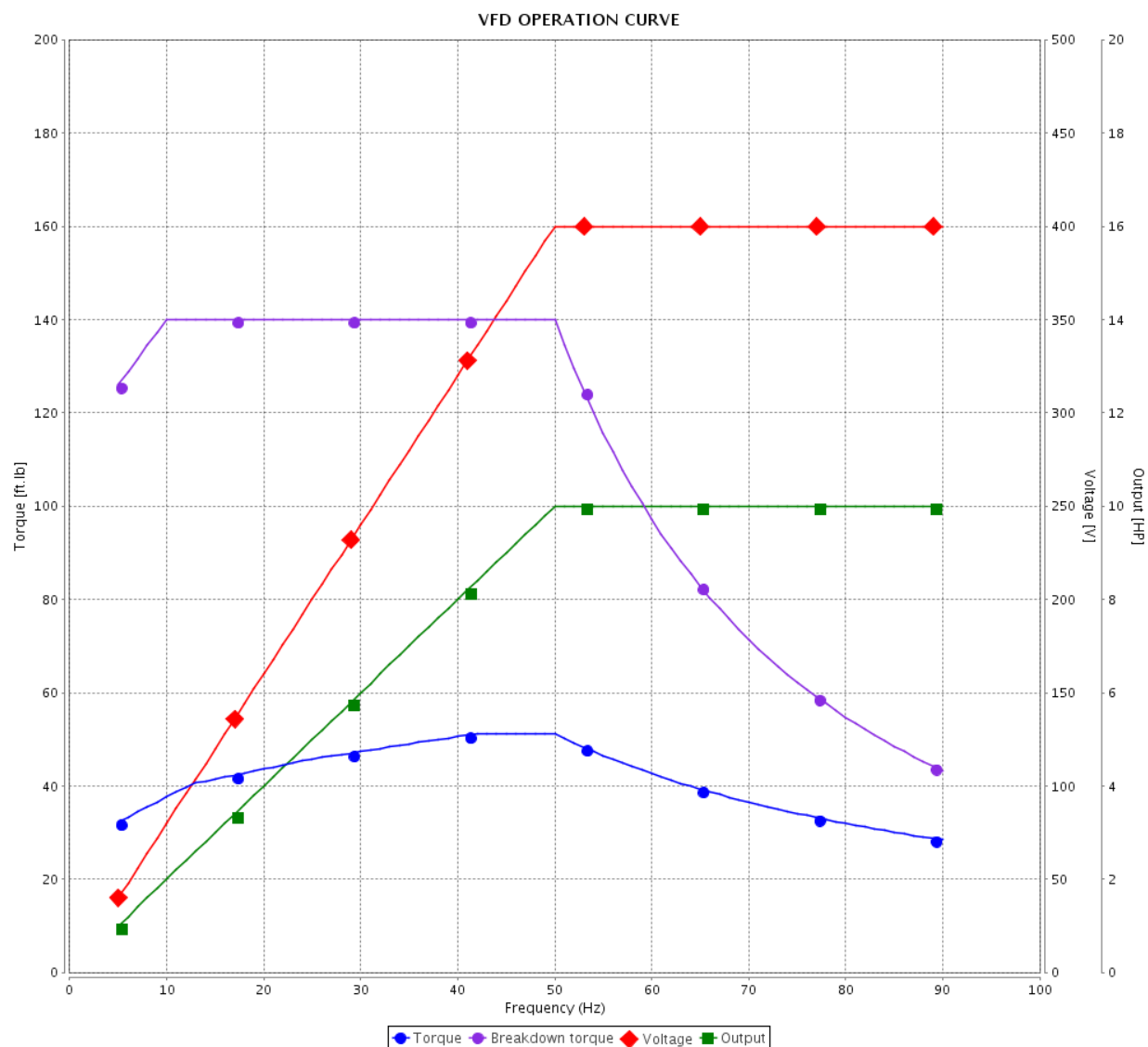


Customer :

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

Product code : 14483182

Catalog # : 010120T3E256JM-W40



Performance : 400 V 50 Hz 6P IE3

Rated current : 14.6 A  
LRC : 6.4  
Rated torque : 53.9 ft.lb  
Locked rotor torque : 210 %  
Breakdown torque : 260 %  
Rated speed : 975 rpm

Moment of inertia (J) : 3.53 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
Checked by				
Date				
	11/04/2020			Revision

# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

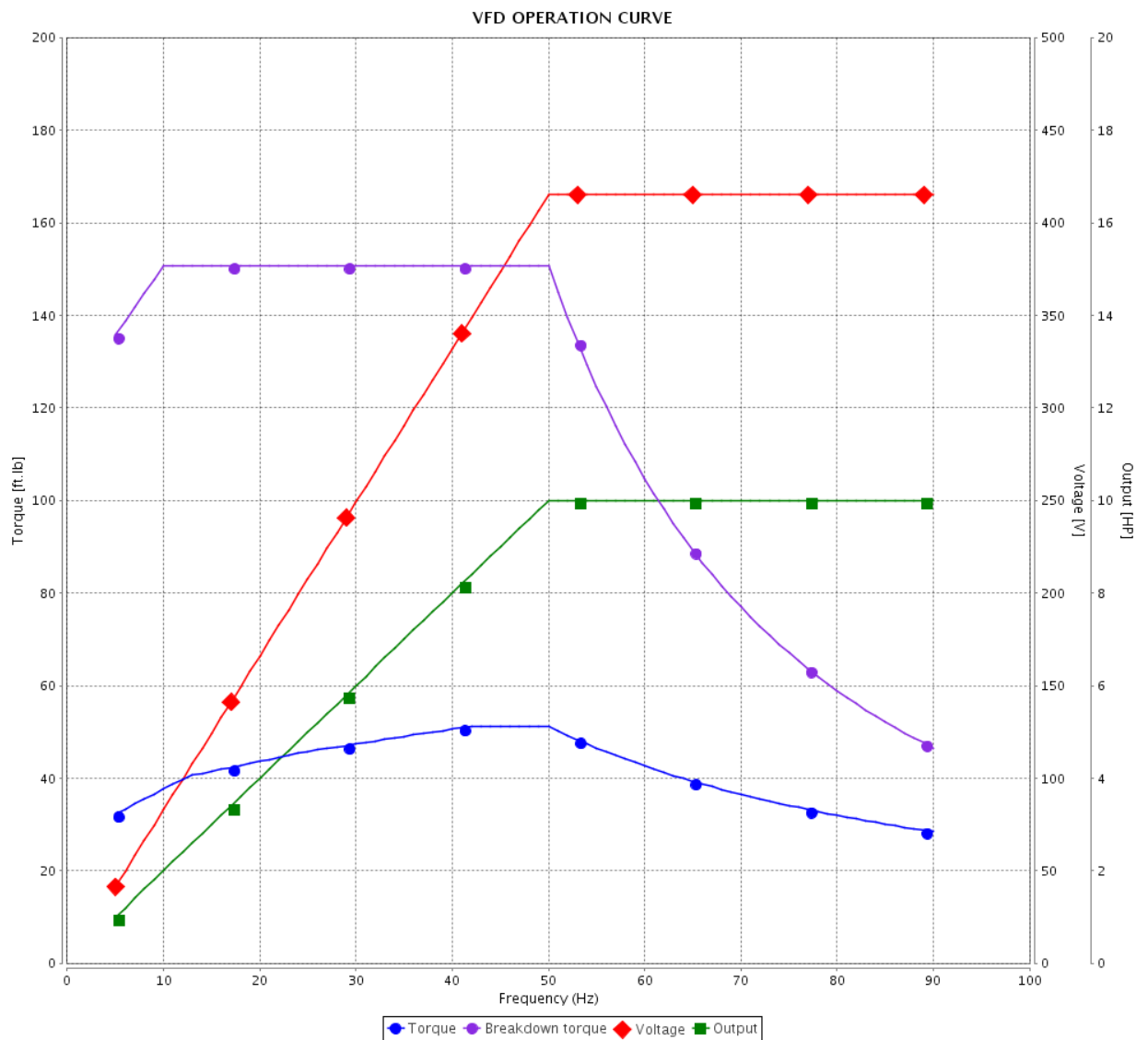


Customer :

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

Product code : 14483182

Catalog # : 01012OT3E256JM-W40



Performance : 415 V 50 Hz 6P IE3

Rated current : 14.3 A  
LRC : 6.6  
Rated torque : 53.9 ft.lb  
Locked rotor torque : 229 %  
Breakdown torque : 280 %  
Rated speed : 975 rpm

Moment of inertia (J) : 3.53 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	11/04/2020			
		Revision		