

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W40 JP Pump NEMA Premium Efficiency Three-Phase Product code : 14487052
Catalog # : 04036OT3E286JP-W40

Frame : 284/6JP	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 : 366 lb
Protection degree : IP23	Moment of inertia (J) : 2.02 sq.ft.lb
Design : B	

Output [HP]	40	30	30	30
Poles	2	2	2	2
Frequency [Hz]	60	50	50	50
Rated voltage [V]	230/460	380	400	415
Rated current [A]	93.6/46.8	41.9	40.7	40.2
L. R. Amperes [A]	608/304	302	309	310
LRC [A]	6.5x(Code G)	7.2x(Code H)	7.6x(Code J)	7.7x(Code J)
No load current [A]	29.8/14.9	14.3	15.8	17.0
Rated speed [RPM]	3540	2950	2955	2960
Slip [%]	1.67	1.67	1.50	1.33
Rated torque [ft.lb]	59.3	53.4	53.3	53.2
Locked rotor torque [%]	190	210	229	250
Breakdown torque [%]	260	300	330	360
Service factor	1.25	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K
Locked rotor time	14s (cold) 8s (hot)	12s (cold) 7s (hot)	14s (cold) 8s (hot)	14s (cold) 8s (hot)
Noise level ²	73.0 dB(A)			
Efficiency (%)	25%	91.5	88.6	88.7
	50%	91.7	90.0	90.1
	75%	92.4	91.4	91.4
	100%	92.4	92.8	92.8
Power Factor	25%	0.51	0.49	0.45
	50%	0.76	0.73	0.70
	75%	0.84	0.82	0.79
	100%	0.87	0.86	0.84

	<u>Drive end</u>	<u>Non drive end</u>	Foundation loads
Bearing type :	6311 Z C3	6211 Z C3	Max. traction
Sealing :	Without	Without	Max. compression
	Bearing Seal	Bearing Seal	
Lubrication interval :	20000 h	20000 h	
Lubricant amount :	18 g	11 g	
Lubricant type :	Mobil Polyrex EM		

Notes

USABLE @208V 104A SF 1.15 SFA 119A

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

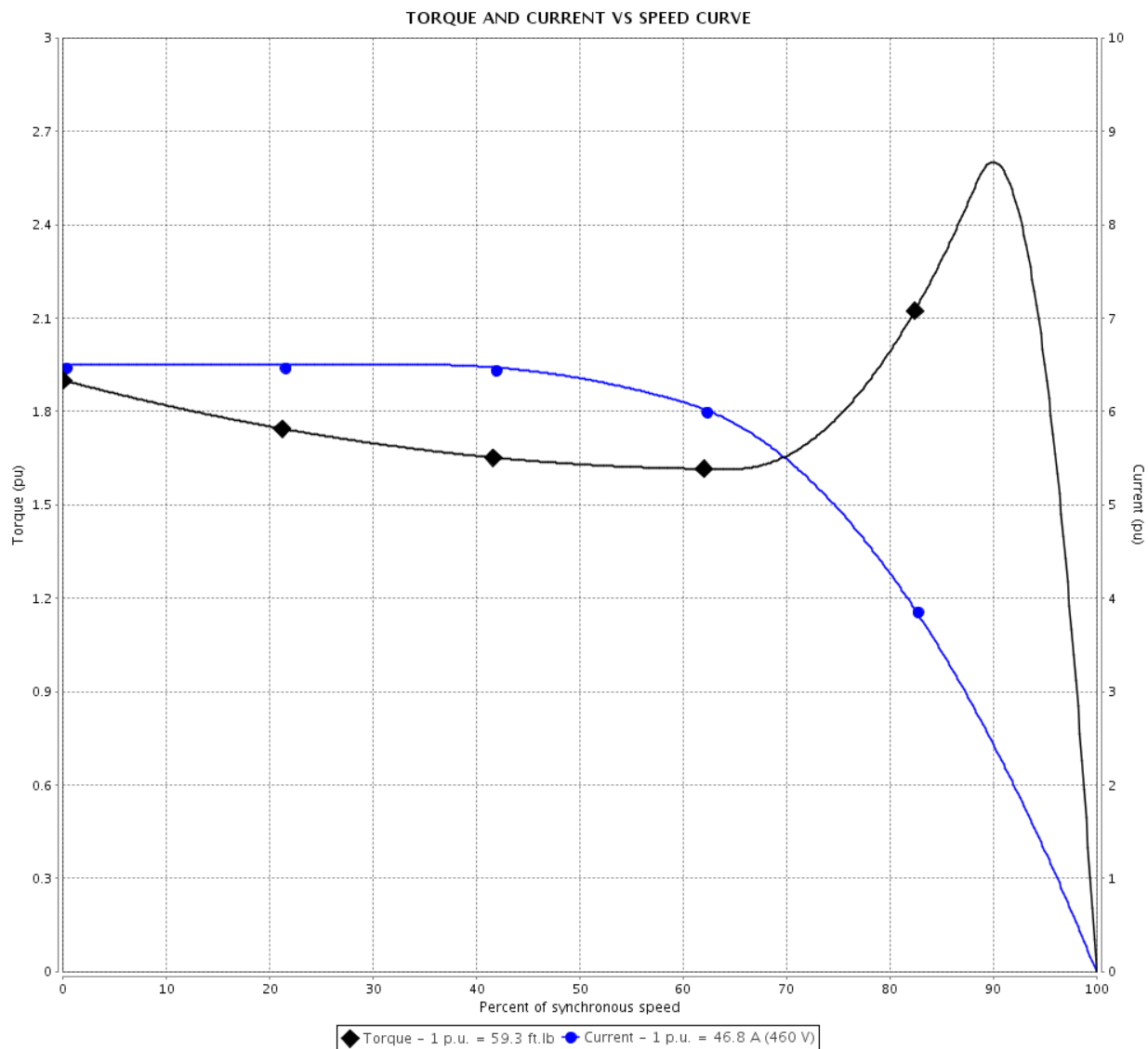


Customer :

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

Product code : 14487052

Catalog # : 04036OT3E286JP-W40



Performance : 230/460 V 60 Hz 2P

Rated current	: 93.6/46.8 A	Moment of inertia (J)	: 2.02 sq.ft.lb
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 59.3 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.25
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 3540 rpm	Design	: B

Locked rotor time : 14s (cold) 8s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by		<div style="display: flex; justify-content: space-between;"> <div>Page 2 / 21</div> <div>Revision</div> </div>		
Checked by				
Date	11/04/2020			

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage

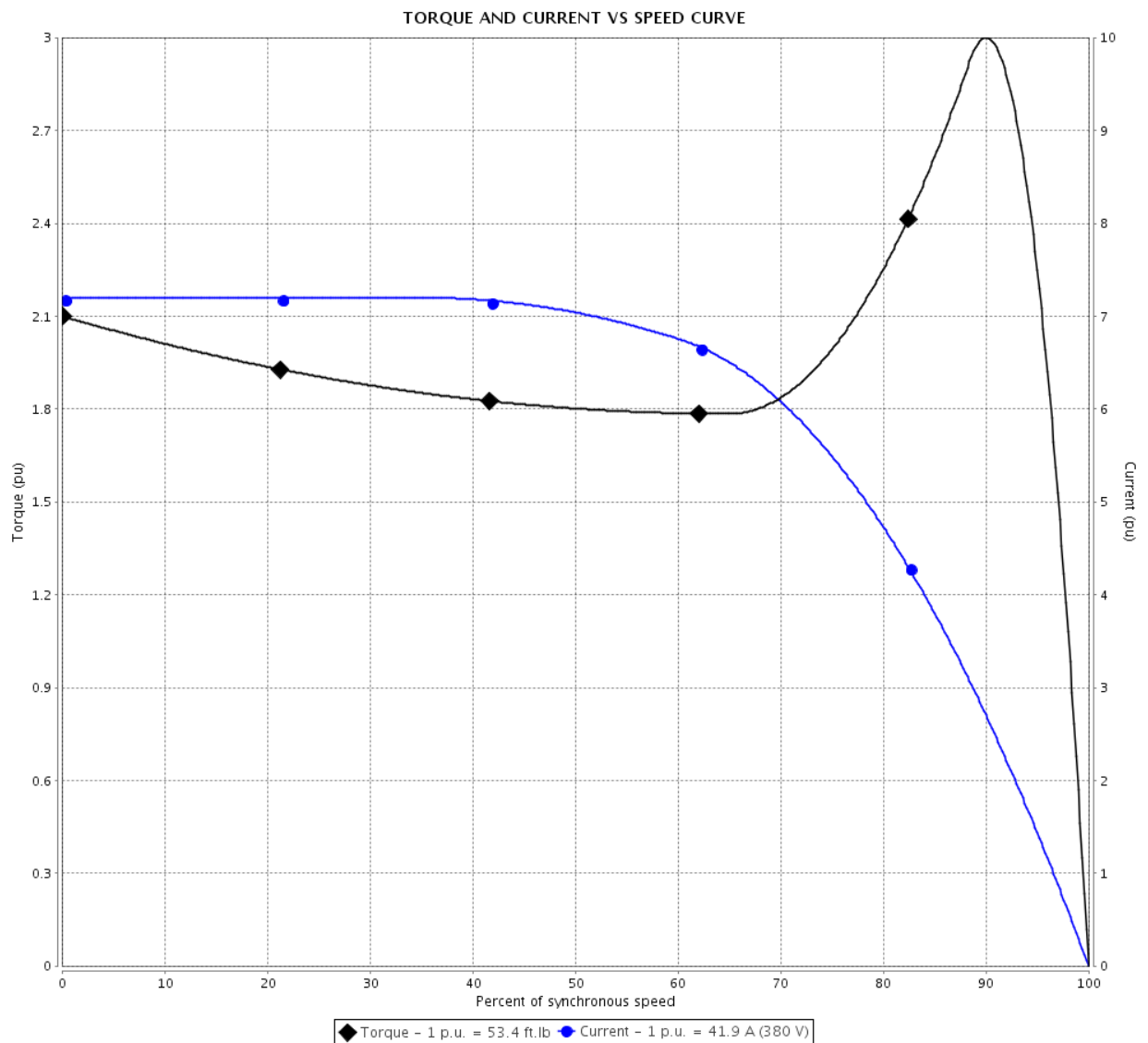


Customer :

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

Product code : 14487052

Catalog # : 04036OT3E286JP-W40



Performance : 380 V 50 Hz 2P IE3

Rated current	: 41.9 A	Moment of inertia (J)	: 2.02 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 53.4 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 2950 rpm	Design	: B

Locked rotor time : 12s (cold) 7s (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

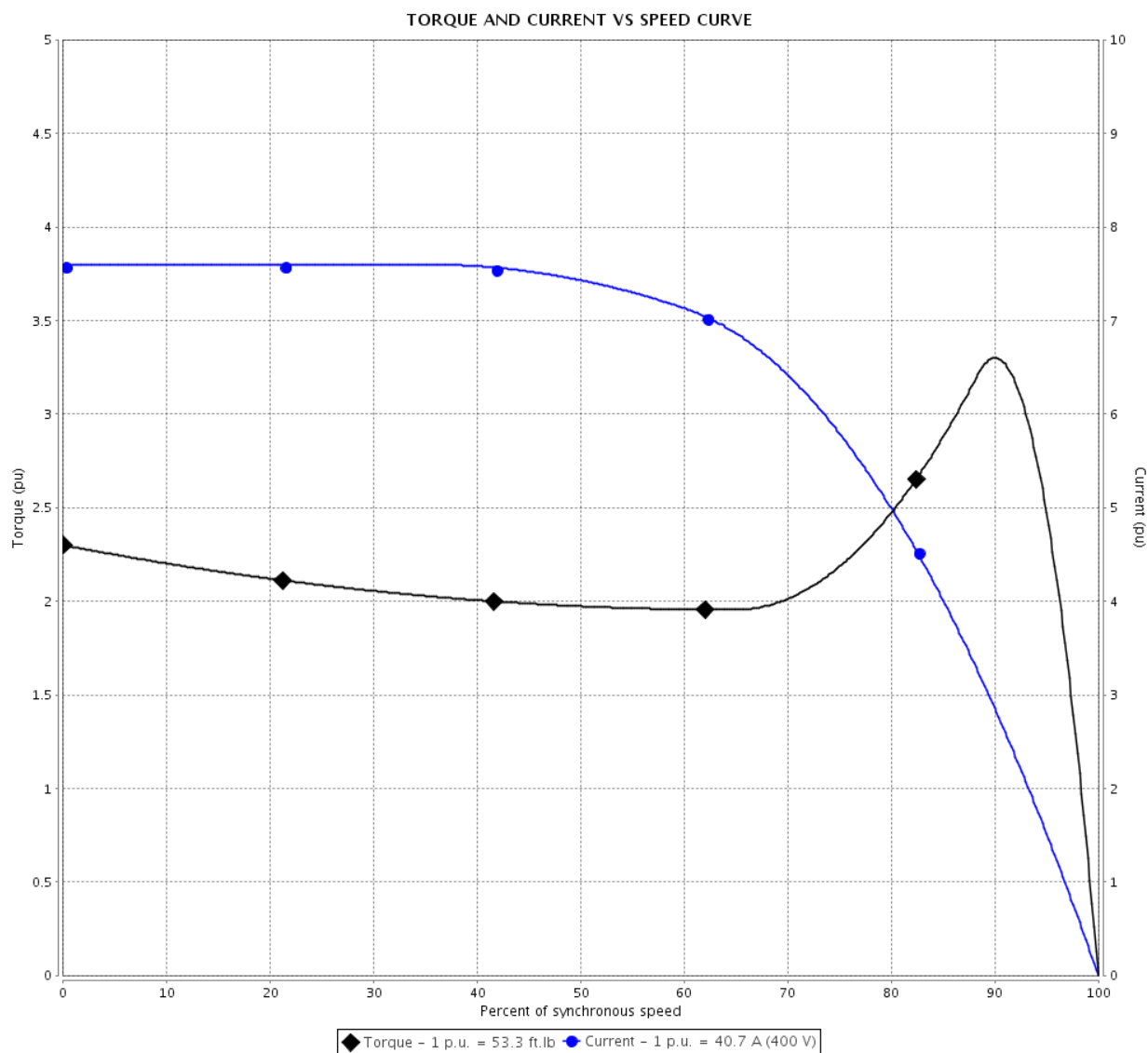


Customer :

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

Product code : 14487052

Catalog # : 04036OT3E286JP-W40



Performance : 400 V 50 Hz 2P IE3

Rated current	: 40.7 A	Moment of inertia (J)	: 2.02 sq.ft.lb
LRC	: 7.6	Duty cycle	: Cont.(S1)
Rated torque	: 53.3 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 2955 rpm	Design	: B

Locked rotor time : 14s (cold) 8s (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

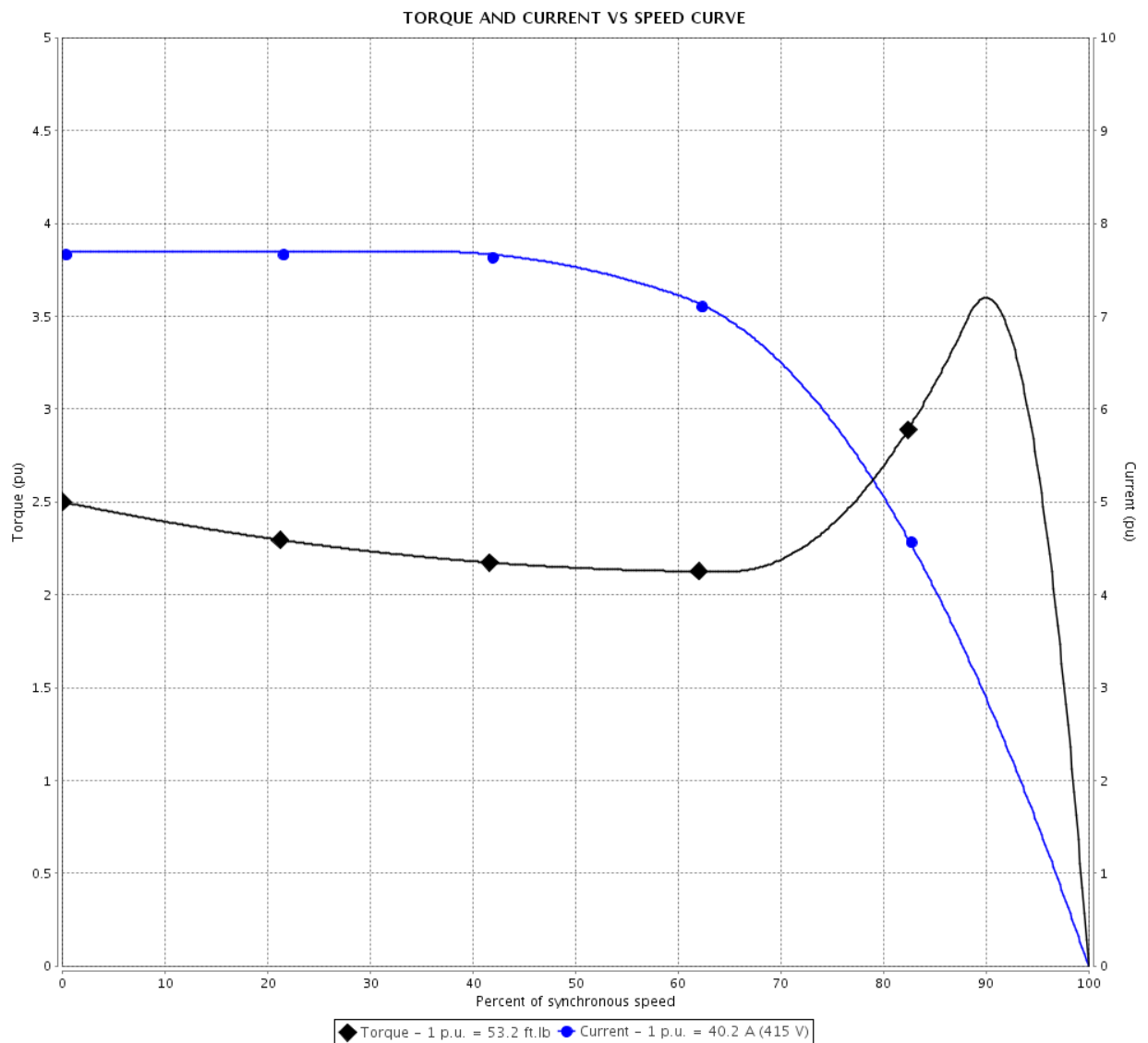


Customer :

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

Product code : 14487052

Catalog # : 04036OT3E286JP-W40



Performance : 415 V 50 Hz 2P IE3

Rated current	: 40.2 A	Moment of inertia (J)	: 2.02 sq.ft.lb
LRC	: 7.7	Duty cycle	: Cont.(S1)
Rated torque	: 53.2 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 360 %	Temperature rise	: 80 K
Rated speed	: 2960 rpm	Design	: B

Locked rotor time : 14s (cold) 8s (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

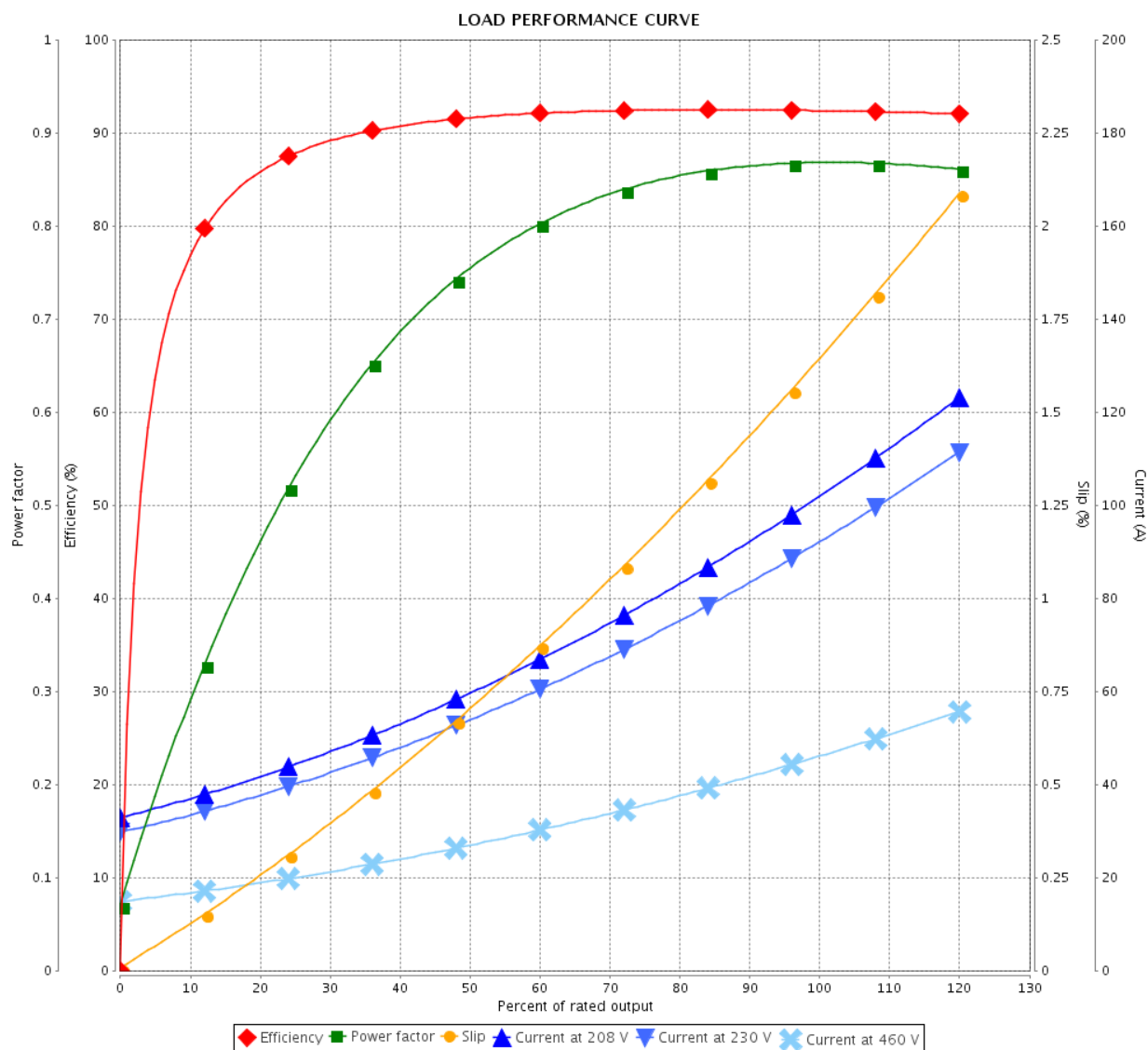


Customer :

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

Product code : 14487052

Catalog # : 04036OT3E286JP-W40



Performance : 230/460 V 60 Hz 2P

Rated current : 93.6/46.8 A
LRC : 6.5
Rated torque : 59.3 ft.lb
Locked rotor torque : 190 %
Breakdown torque : 260 %
Rated speed : 3540 rpm

Moment of inertia (J) : 2.02 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					

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

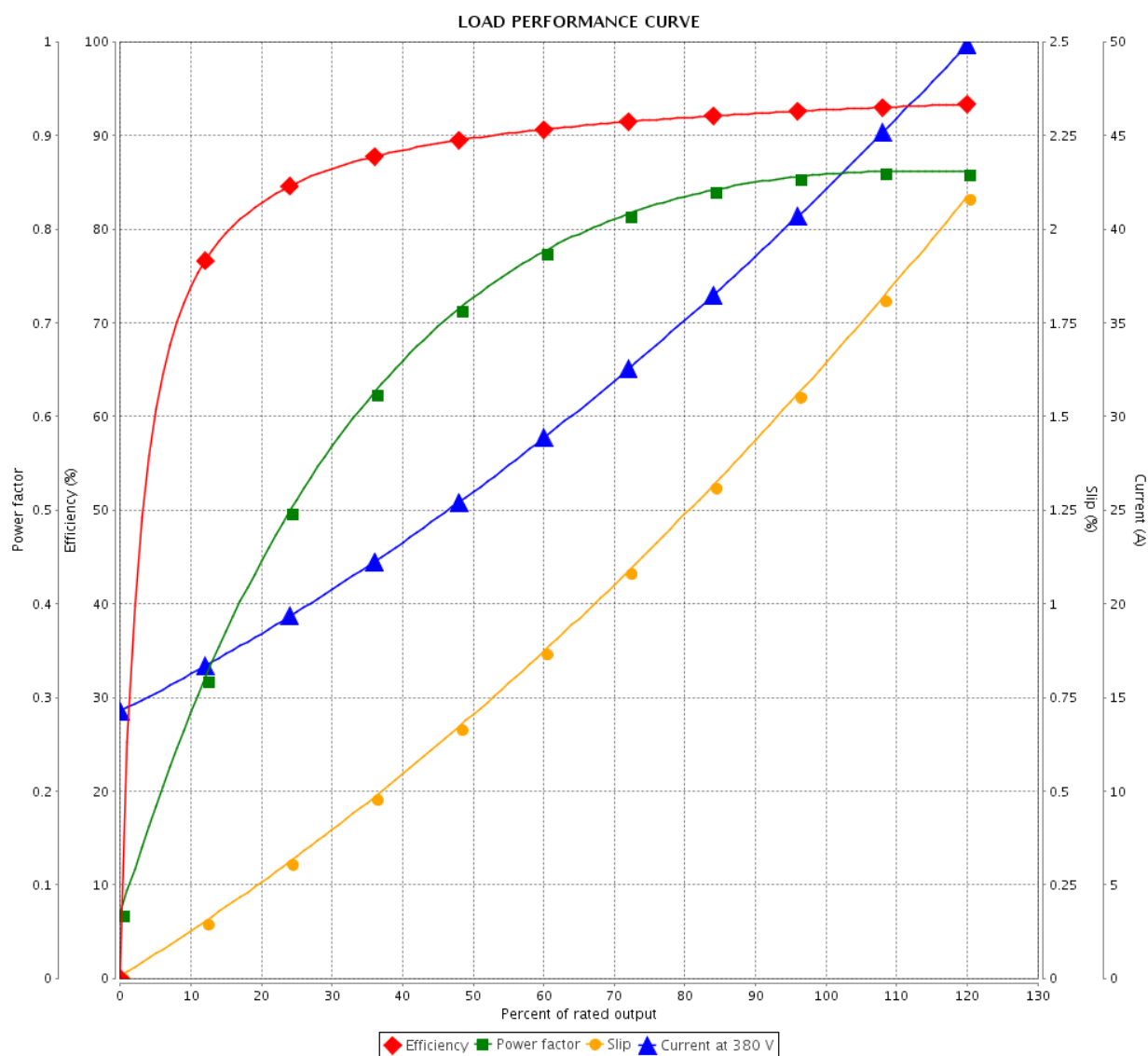


Customer :

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

Product code : 14487052

Catalog # : 04036OT3E286JP-W40



Performance : 380 V 50 Hz 2P IE3

Rated current : 41.9 A
LRC : 7.2
Rated torque : 53.4 ft.lb
Locked rotor torque : 210 %
Breakdown torque : 300 %
Rated speed : 2950 rpm

Moment of inertia (J) : 2.02 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

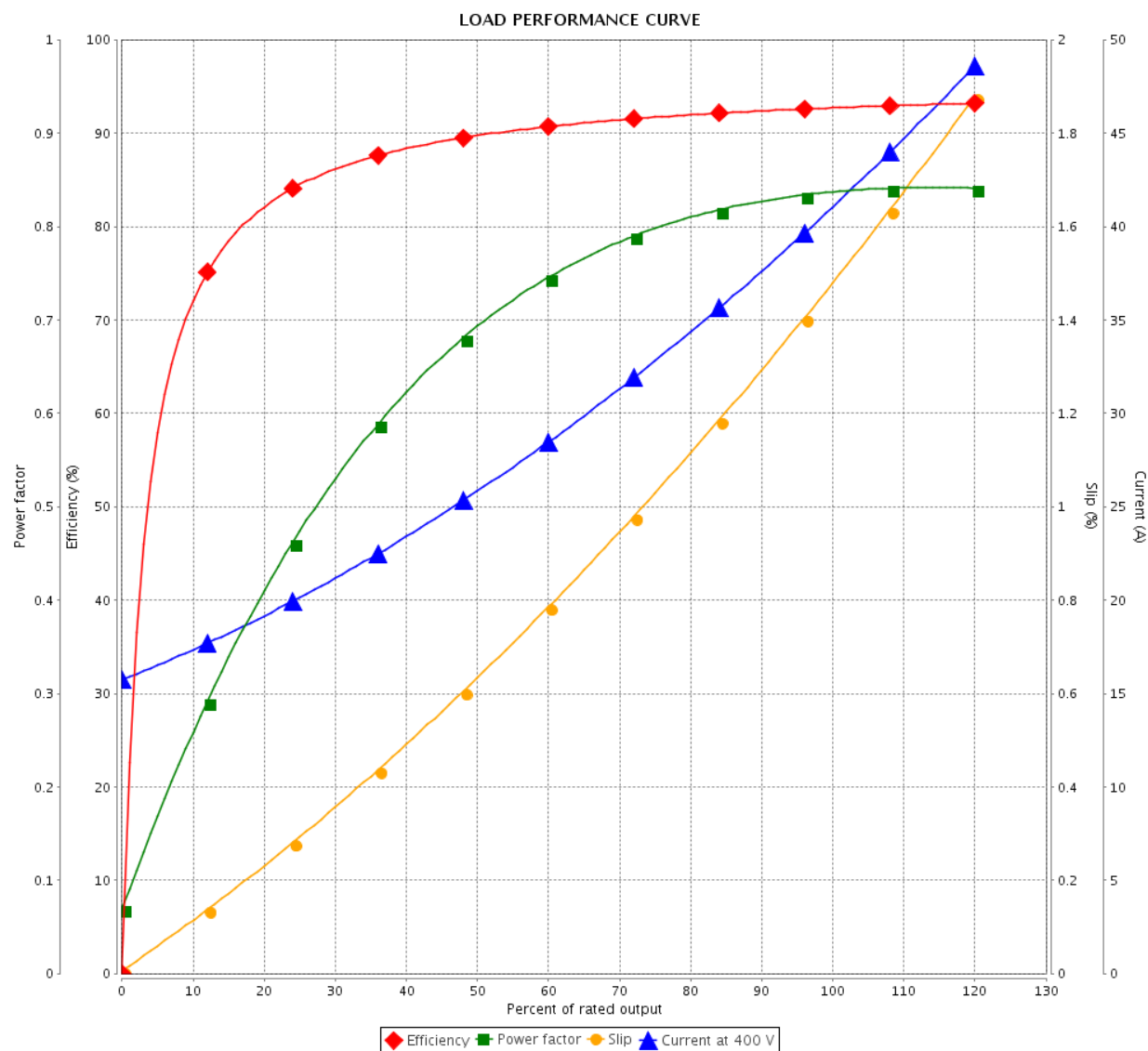


Customer :

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

Product code : 14487052

Catalog # : 04036OT3E286JP-W40



Performance : 400 V 50 Hz 2P IE3

Rated current : 40.7 A
LRC : 7.6
Rated torque : 53.3 ft.lb
Locked rotor torque : 229 %
Breakdown torque : 330 %
Rated speed : 2955 rpm

Moment of inertia (J) : 2.02 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 / 21Revision	
Checked by					
Date	11/04/2020				

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

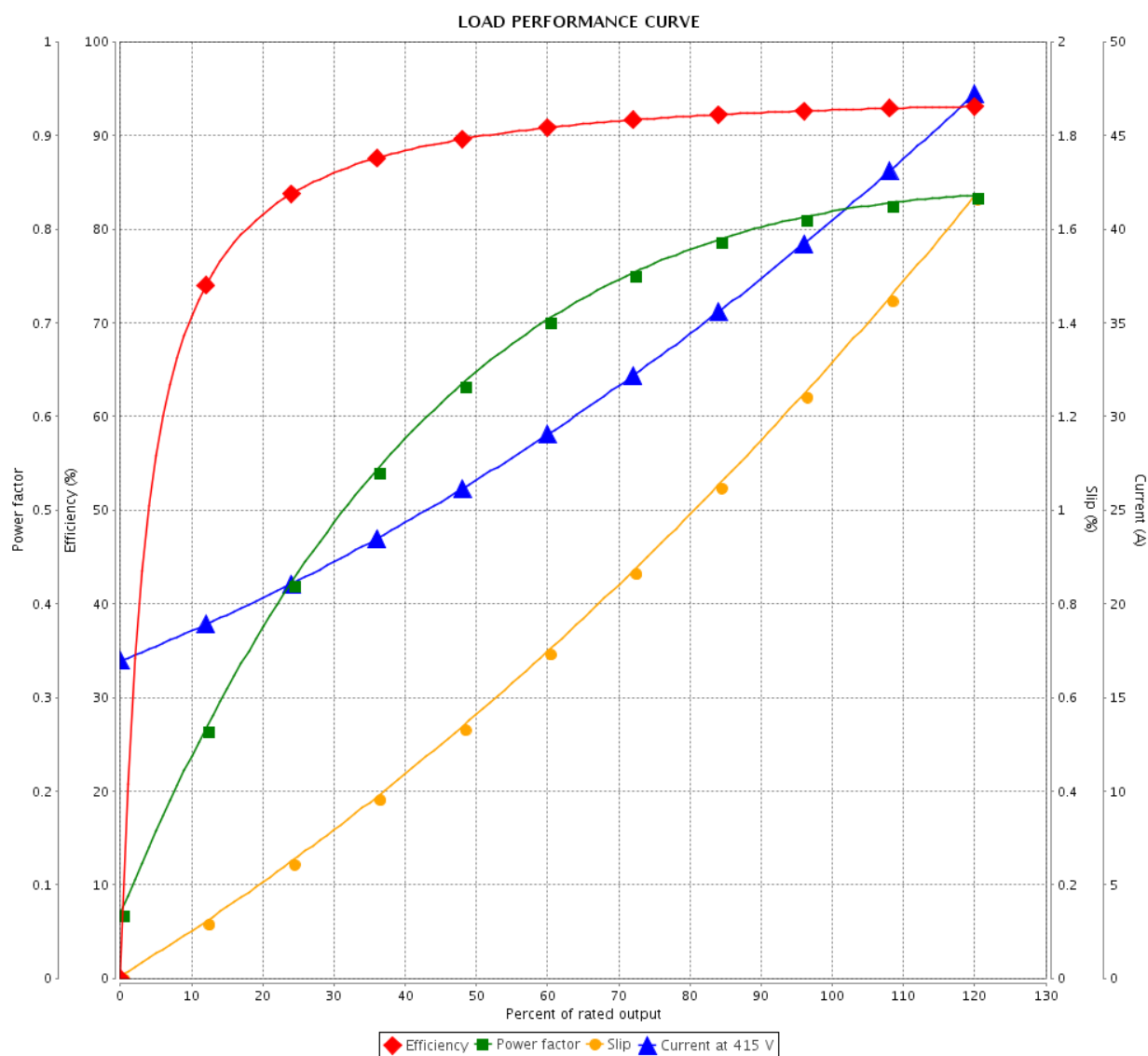


Customer :

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

Product code : 14487052

Catalog # : 04036OT3E286JP-W40



Performance : 415 V 50 Hz 2P IE3

Rated current : 40.2 A
LRC : 7.7
Rated torque : 53.2 ft.lb
Locked rotor torque : 250 %
Breakdown torque : 360 %
Rated speed : 2960 rpm

Moment of inertia (J) : 2.02 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 9 / 21 Revision		
Checked by				
Date	11/04/2020			

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer

:

Product line

: W40 JP Pump NEMA Premium
Efficiency Three-Phase

Product code :

14487052

Catalog # :

04036OT3E286JP-W40

Performance : 230/460 V 60 Hz 2P

Rated current : 93.6/46.8 A
LRC : 6.5
Rated torque : 59.3 ft.lb
Locked rotor torque : 190 %
Breakdown torque : 260 %
Rated speed : 3540 rpm

Moment of inertia (J) : 2.02 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

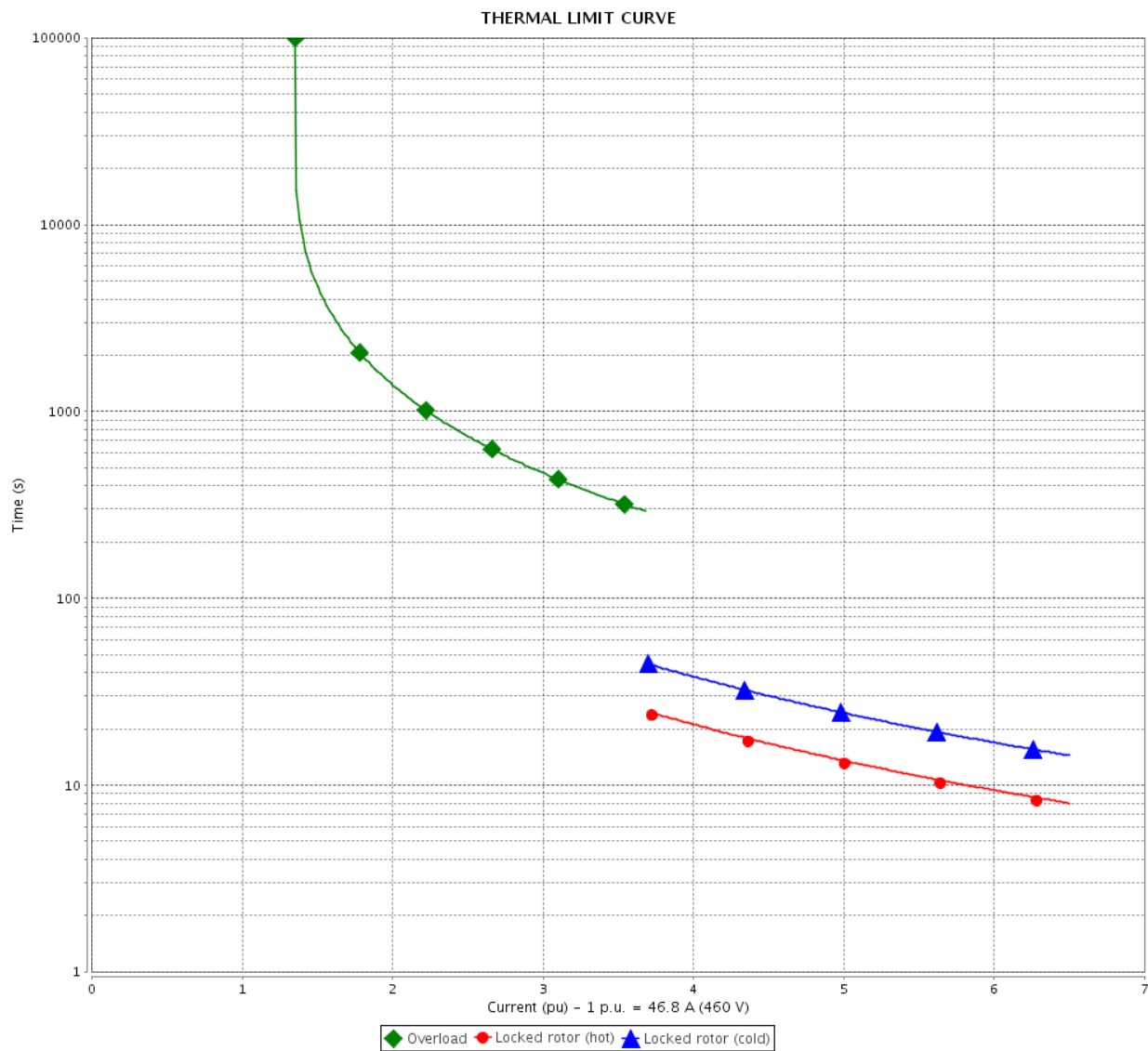
Revision

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 14487052

Catalog # : 04036OT3E286JP-W40

Performance : 380 V 50 Hz 2P IE3

Rated current	: 41.9 A	Moment of inertia (J)	: 2.02 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 53.4 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 2950 rpm	Design	: B

Heating constant

Cooling constant

Rev.

Changes Summary

Performed

Checked

Date

Performed by

Checked by

Date

11/04/2020

Page

12 / 21

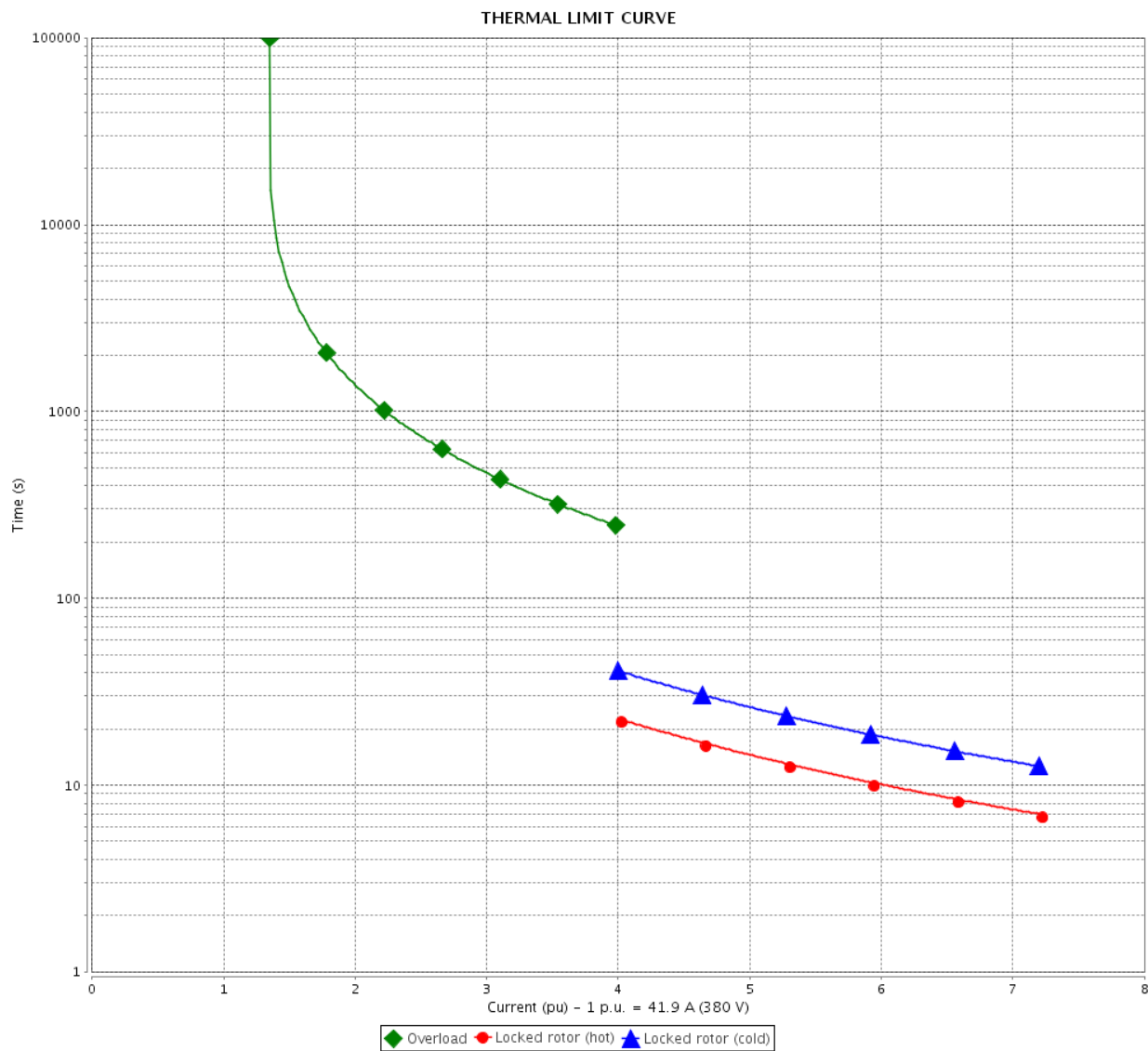
Revision

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 14487052

Catalog # : 04036OT3E286JP-W40

Performance : 400 V 50 Hz 2P IE3

Rated current	: 40.7 A	Moment of inertia (J)	: 2.02 sq.ft.lb
LRC	: 7.6	Duty cycle	: Cont.(S1)
Rated torque	: 53.3 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 2955 rpm	Design	: B

Heating constant

Cooling constant

Rev.

Changes Summary

Performed

Checked

Date

Performed by

Checked by

Date

11/04/2020

Page

14 / 21

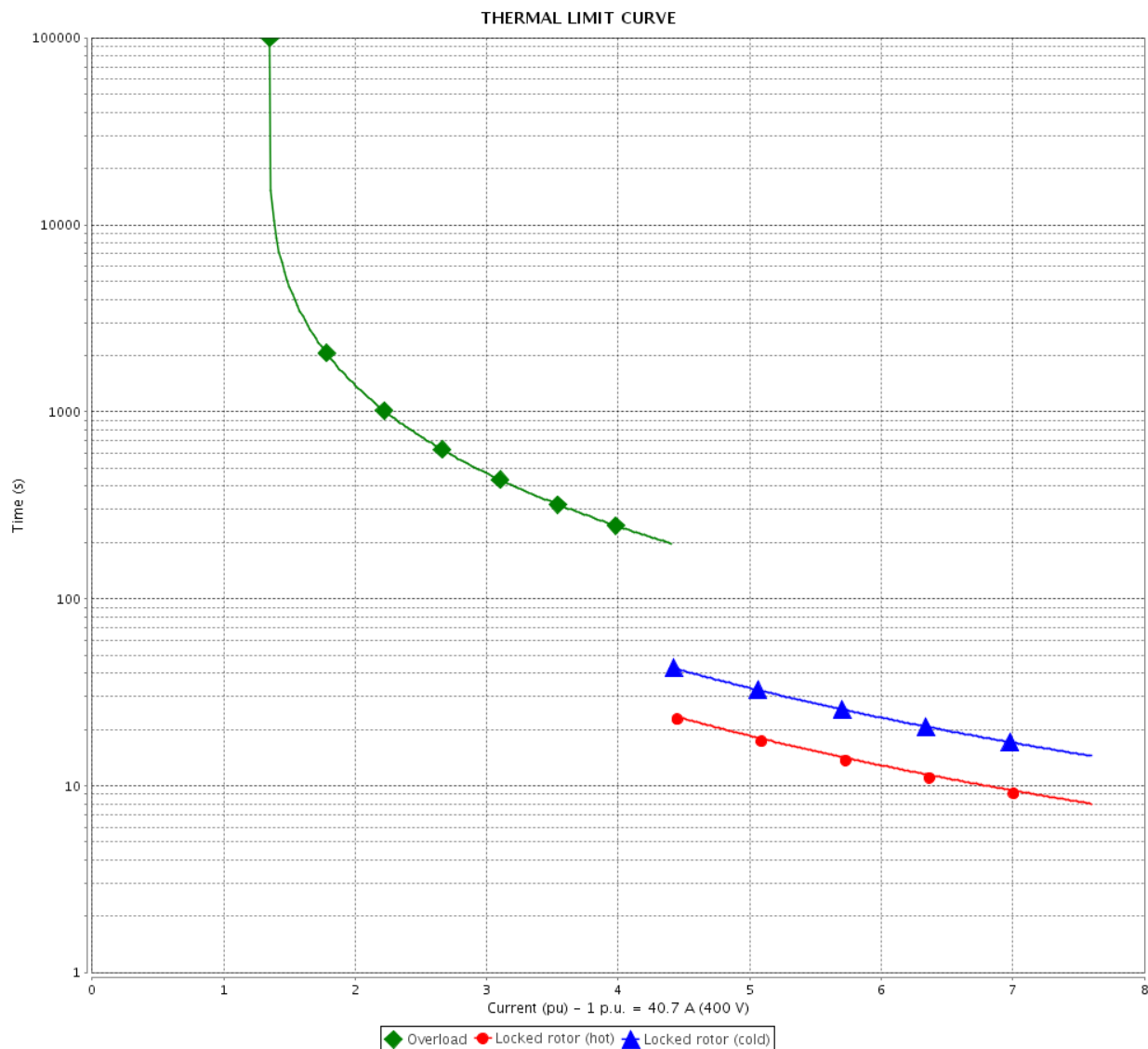
Revision

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer

:

Product line

: W40 JP Pump NEMA Premium
Efficiency Three-Phase

Product code :

14487052

Catalog # :

04036OT3E286JP-W40

Performance : 415 V 50 Hz 2P IE3

Rated current

: 40.2 A

LRC

: 7.7

Rated torque

: 53.2 ft.lb

Locked rotor torque

: 250 %

Breakdown torque

: 360 %

Rated speed

: 2960 rpm

Moment of inertia (J)

: 2.02 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

16 / 21

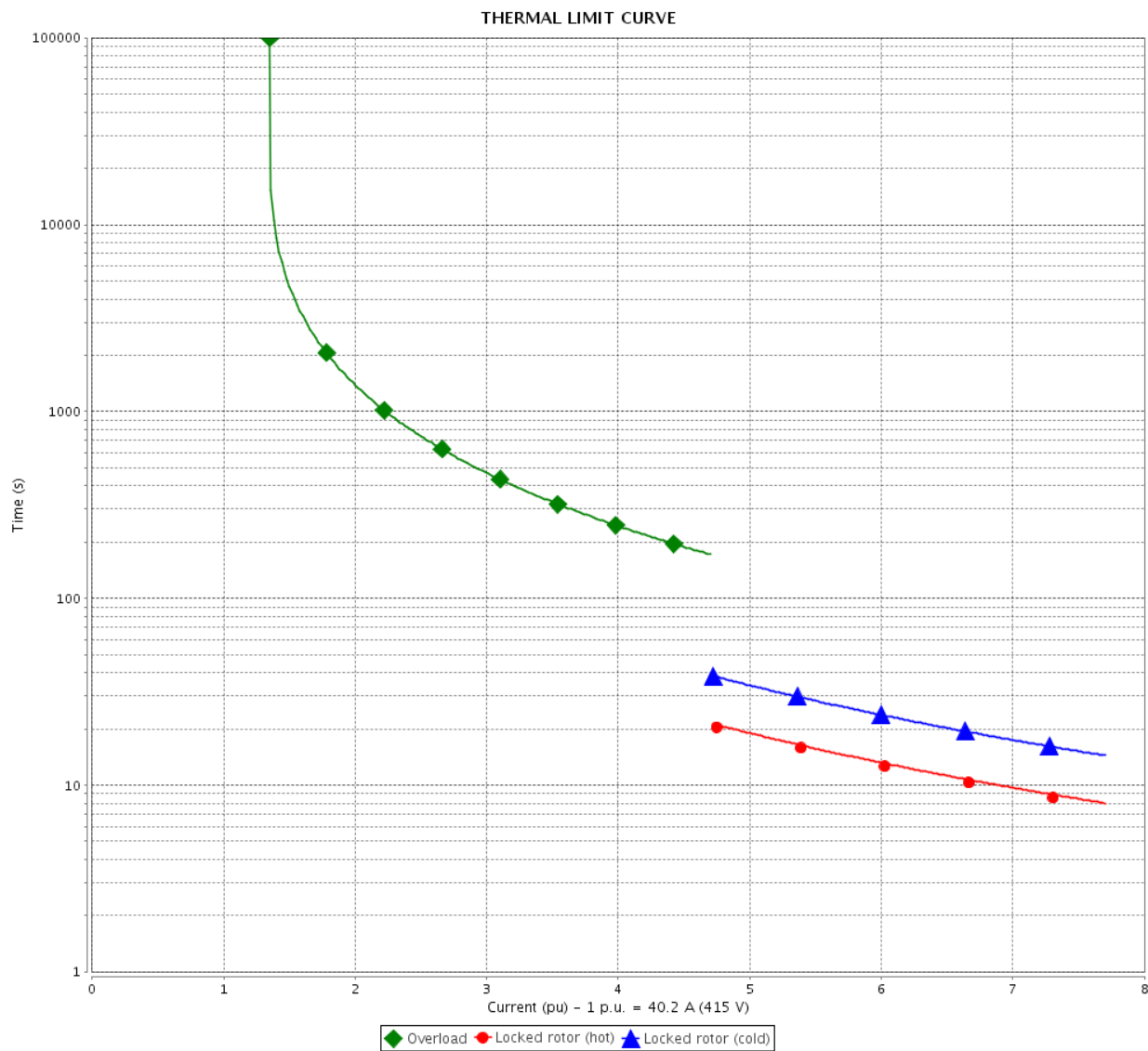
Revision

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

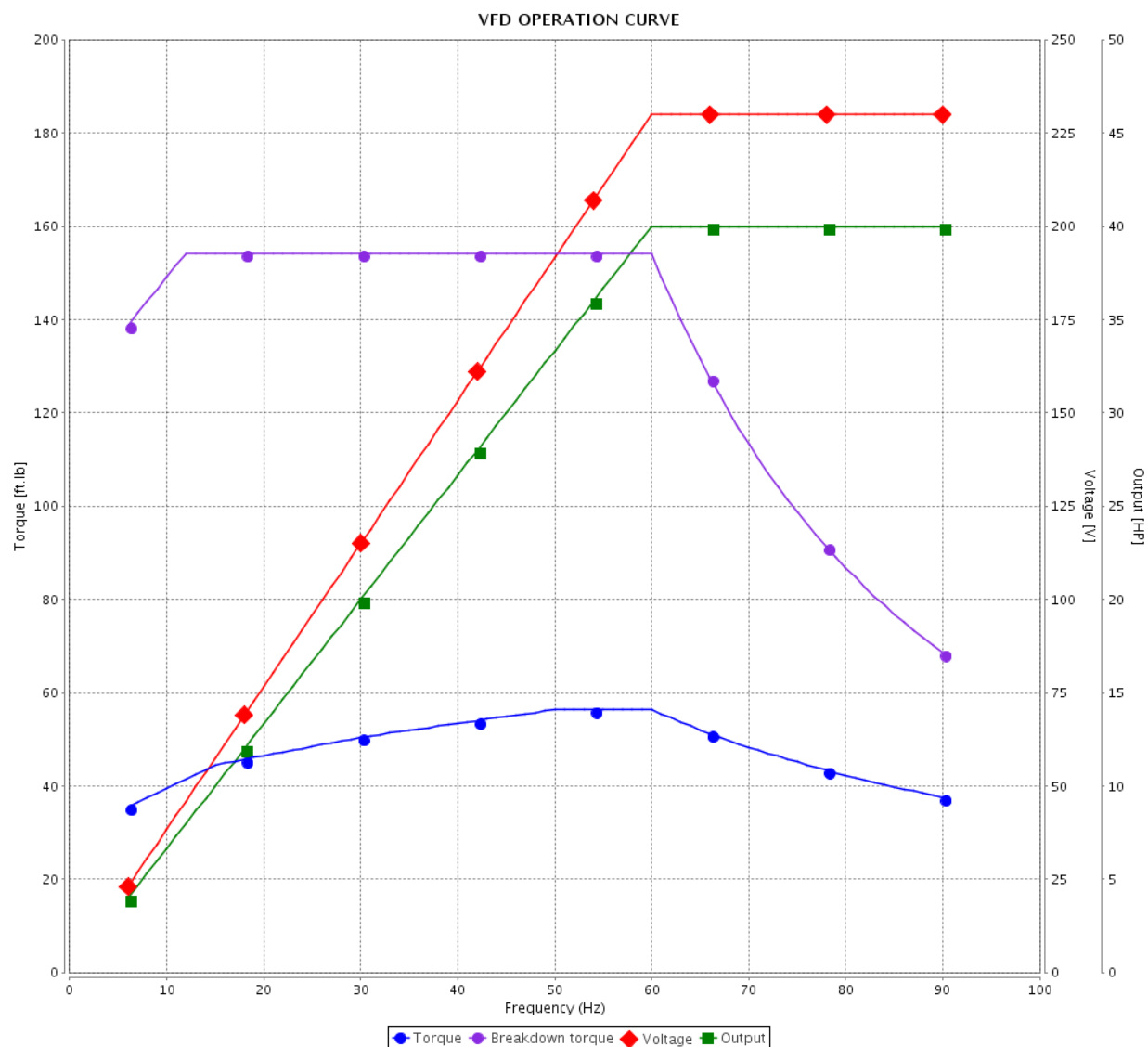


Customer :

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

Product code : 14487052

Catalog # : 04036OT3E286JP-W40



Performance : 230/460 V 60 Hz 2P

Rated current : 93.6/46.8 A
LRC : 6.5
Rated torque : 59.3 ft.lb
Locked rotor torque : 190 %
Breakdown torque : 260 %
Rated speed : 3540 rpm

Moment of inertia (J) : 2.02 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		<div>Page 18 / 21</div> <div>Revision</div>		
Checked by				
Date	11/04/2020			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

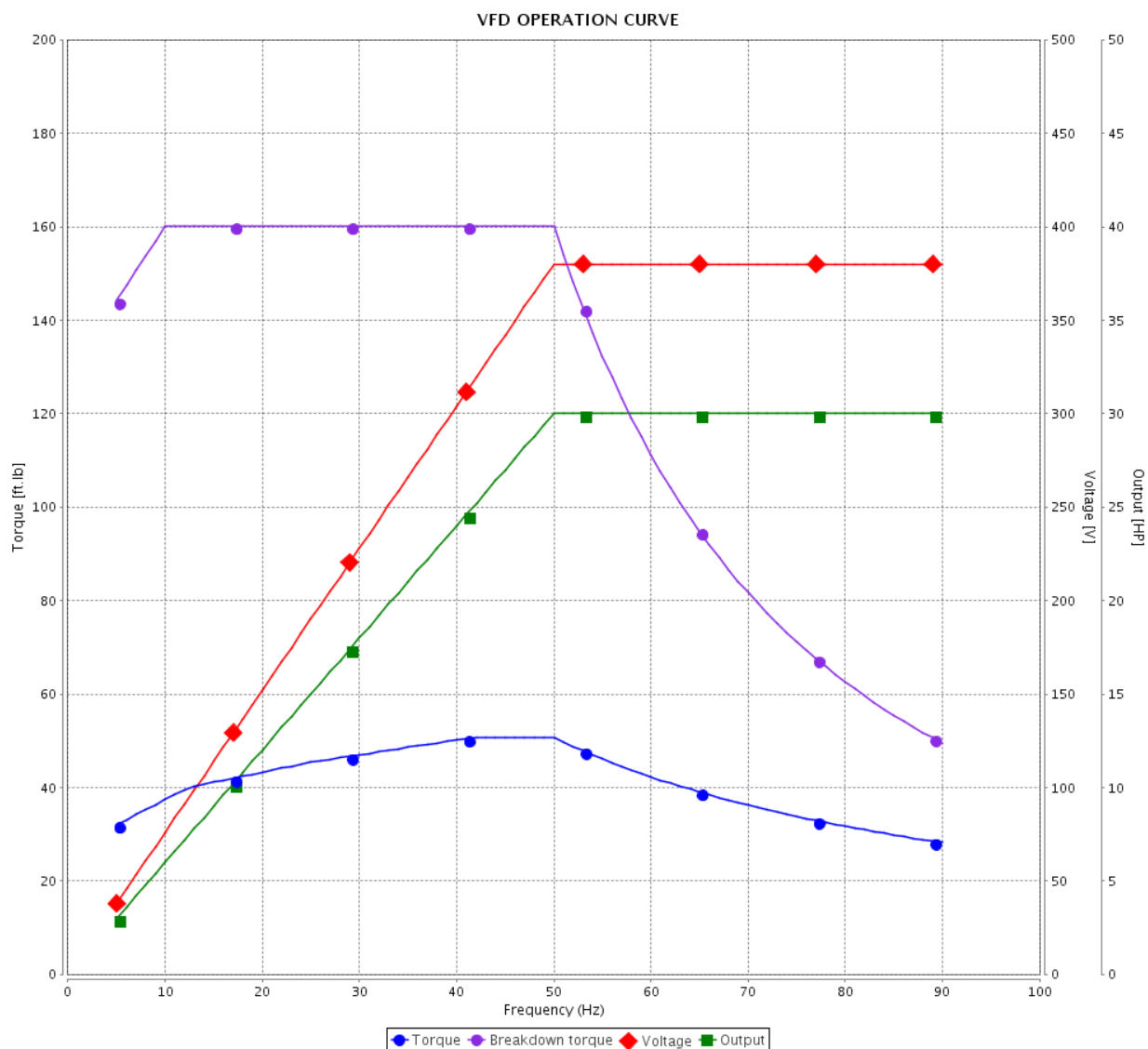


Customer :

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

Product code : 14487052

Catalog # : 04036OT3E286JP-W40



Performance : 380 V 50 Hz 2P IE3

Rated current : 41.9 A
LRC : 7.2
Rated torque : 53.4 ft.lb
Locked rotor torque : 210 %
Breakdown torque : 300 %
Rated speed : 2950 rpm

Moment of inertia (J) : 2.02 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

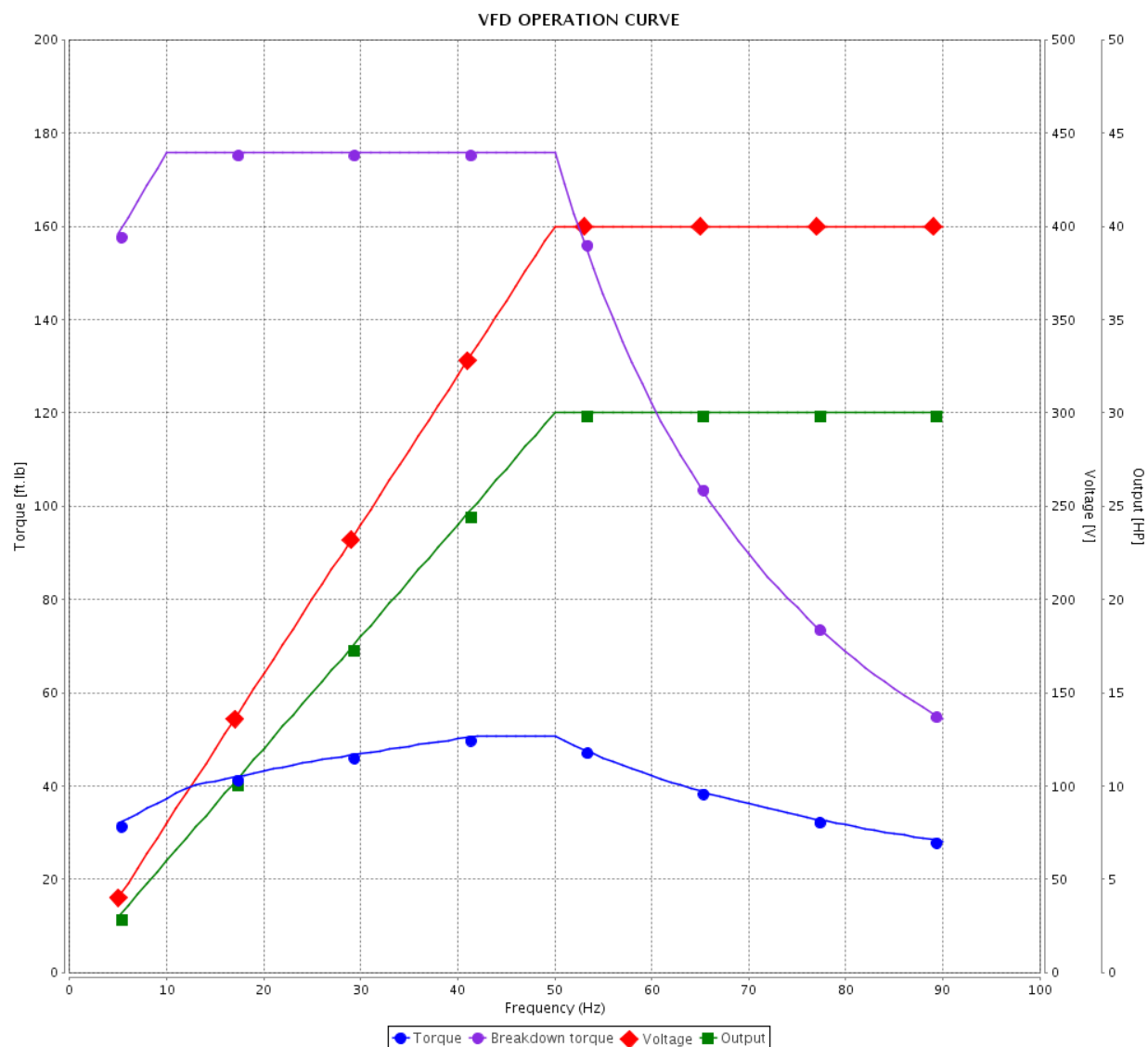


Customer :

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

Product code : 14487052

Catalog # : 04036OT3E286JP-W40



Performance : 400 V 50 Hz 2P IE3

Rated current : 40.7 A
LRC : 7.6
Rated torque : 53.3 ft.lb
Locked rotor torque : 229 %
Breakdown torque : 330 %
Rated speed : 2955 rpm

Moment of inertia (J) : 2.02 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 / 21Revision		
Checked by				
Date	11/04/2020			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

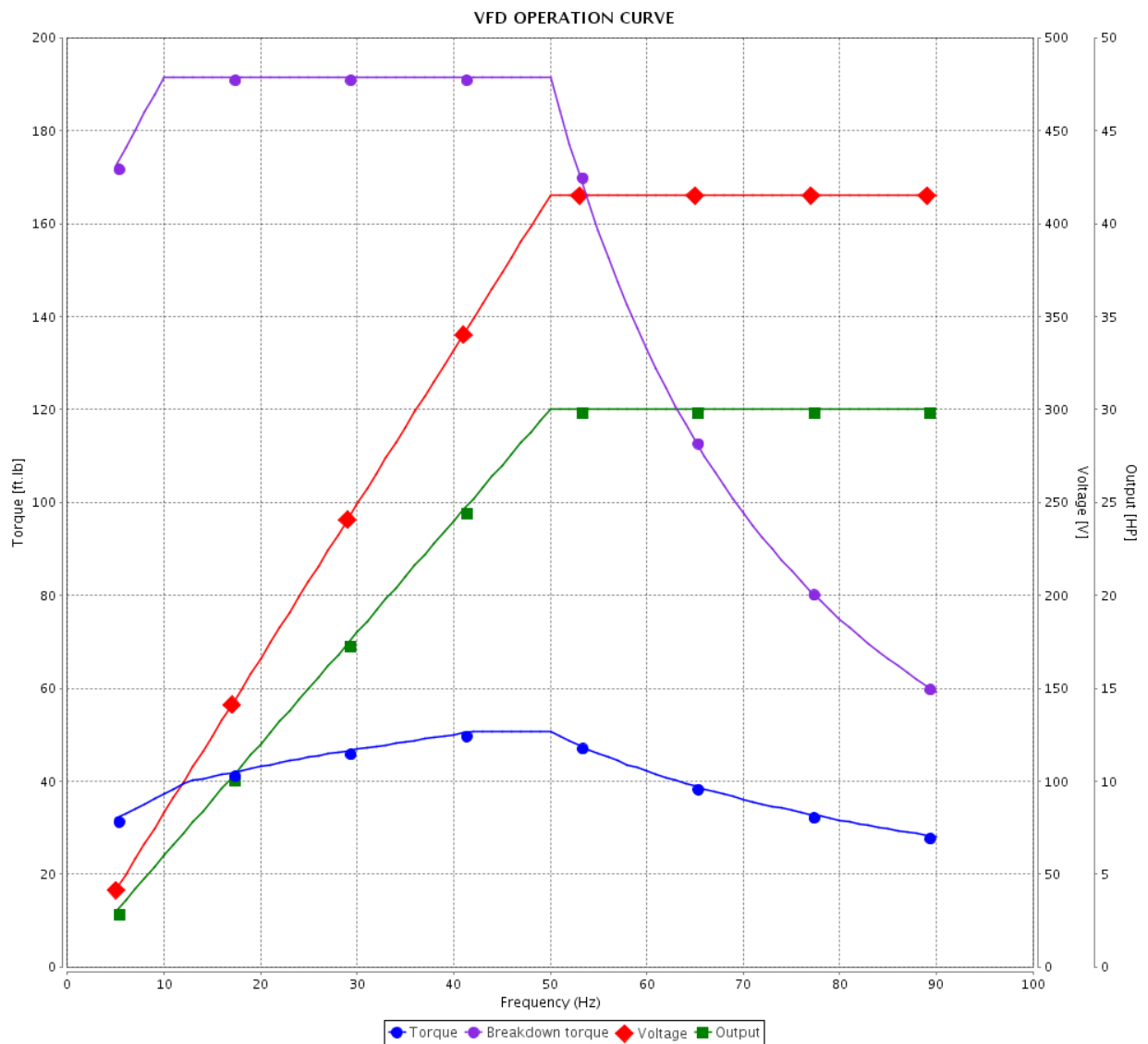


Customer :

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

Product code : 14487052

Catalog # : 04036OT3E286JP-W40



Performance : 415 V 50 Hz 2P IE3

Rated current : 40.2 A
LRC : 7.7
Rated torque : 53.2 ft.lb
Locked rotor torque : 250 %
Breakdown torque : 360 %
Rated speed : 2960 rpm

Moment of inertia (J) : 2.02 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		