

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W40 JM Pump NEMA Premium Efficiency Three-Phase Product code : 14484722
Catalog # : 04036OT3E286JM-W40

Frame : 284/6JM	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 : 364 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
	<u>Bearing Seal</u>	<u>Bearing Seal</u>	
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

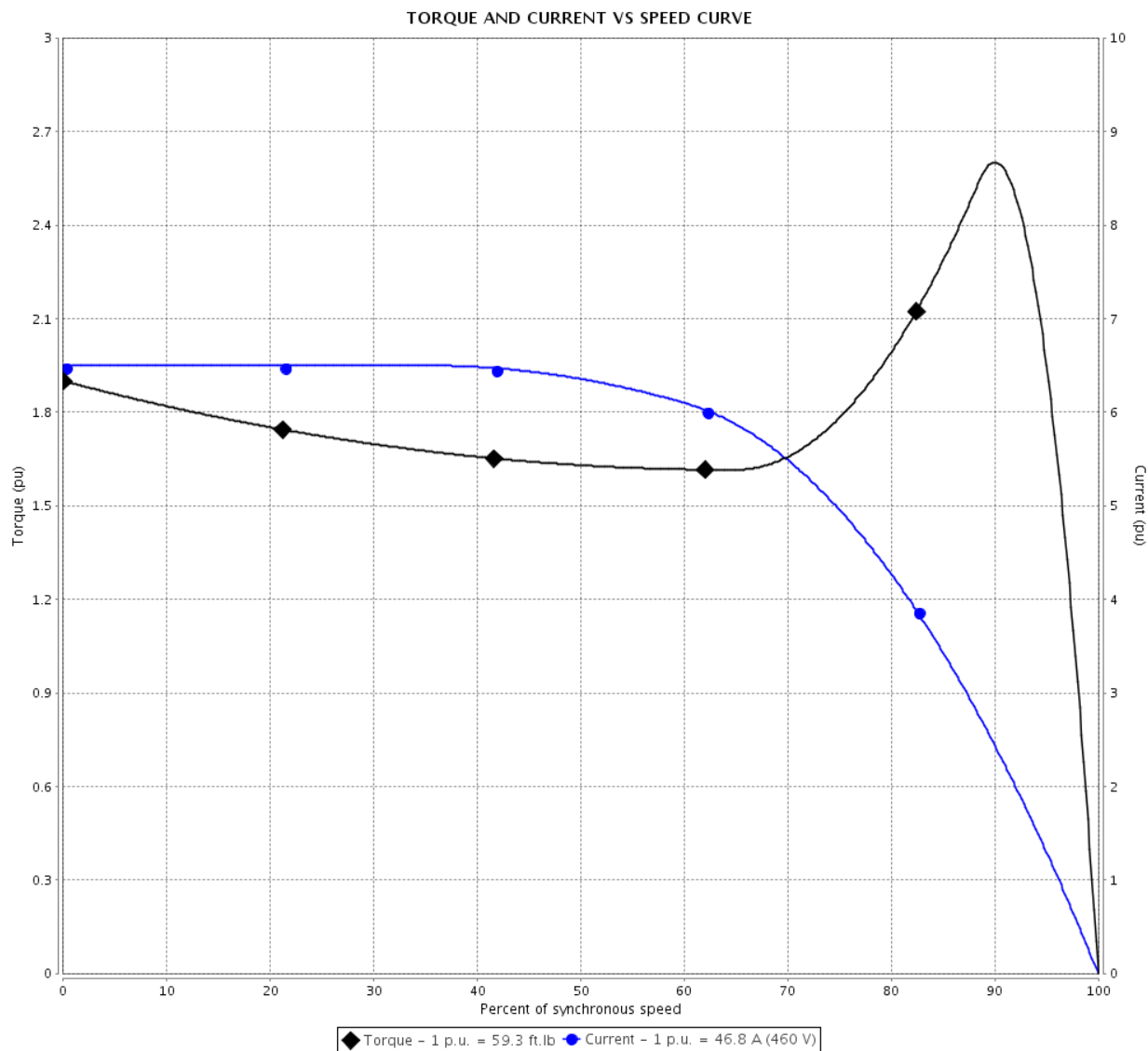


Customer :

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

Product code : 14484722

Catalog # : 04036OT3E286JM-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

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

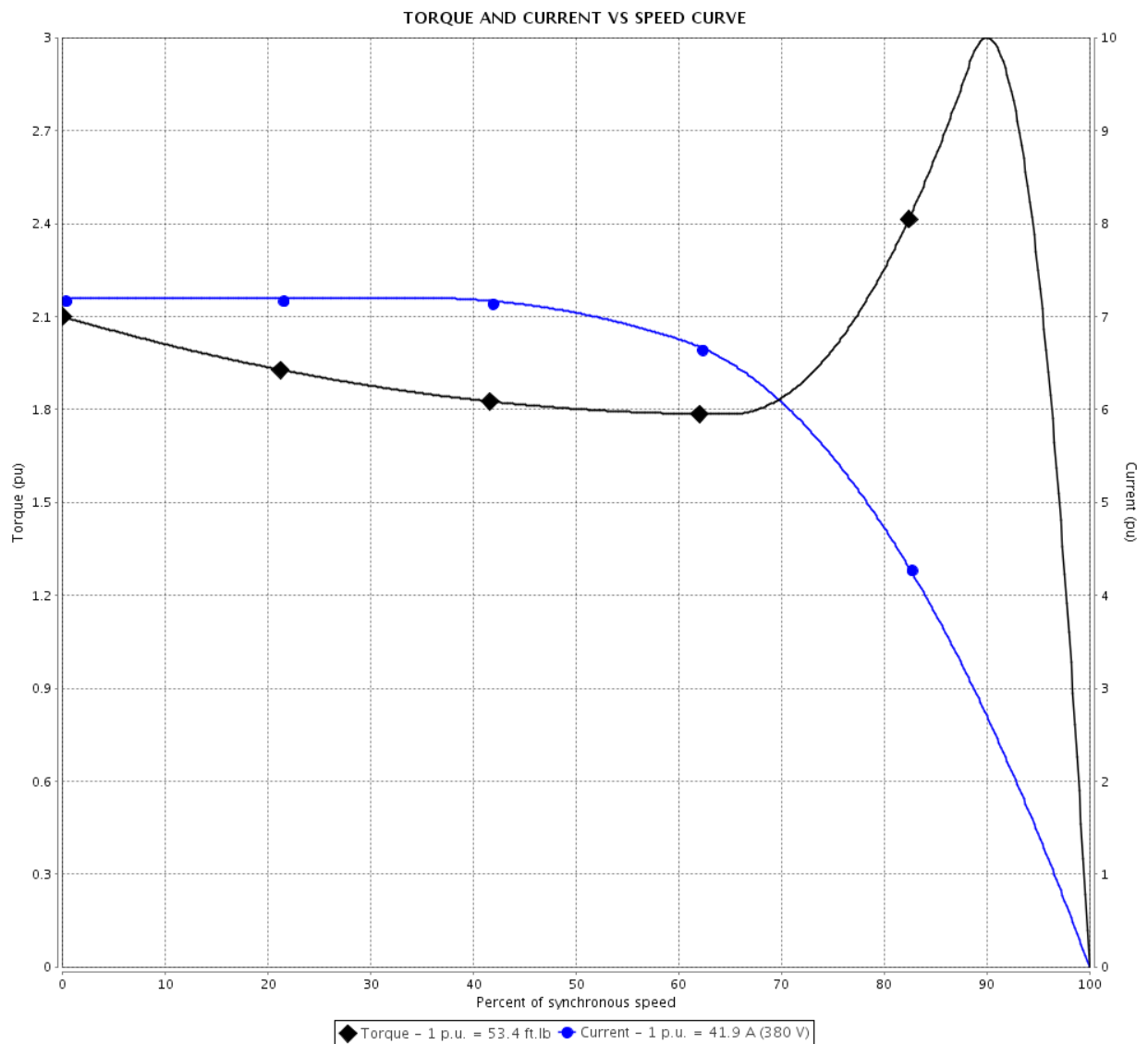


Customer :

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

Product code : 14484722

Catalog # : 04036OT3E286JM-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

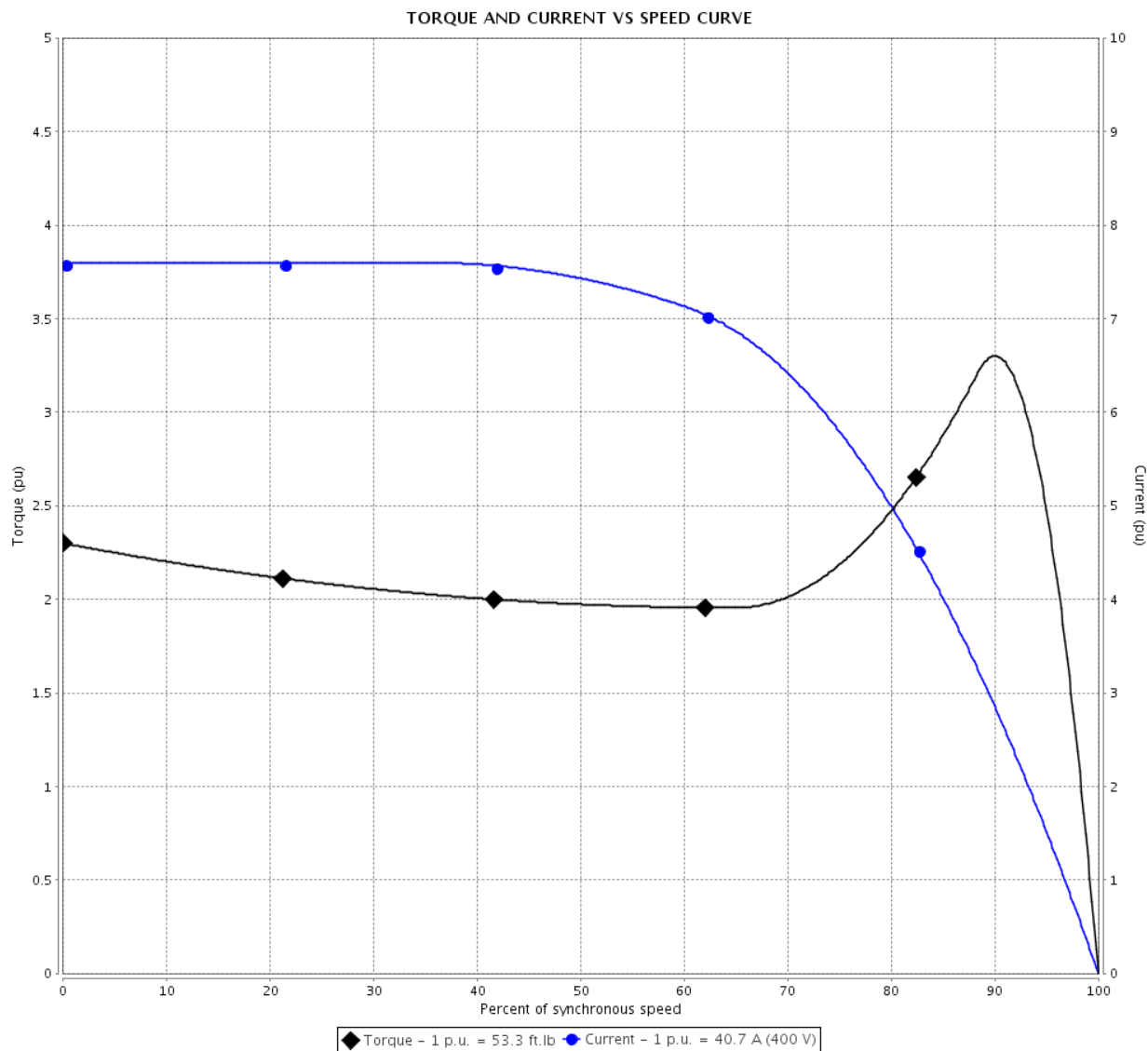


Customer :

Product line : W40 JM Pump NEMA Premium
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Product code : 14484722

Catalog # : 04036OT3E286JM-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

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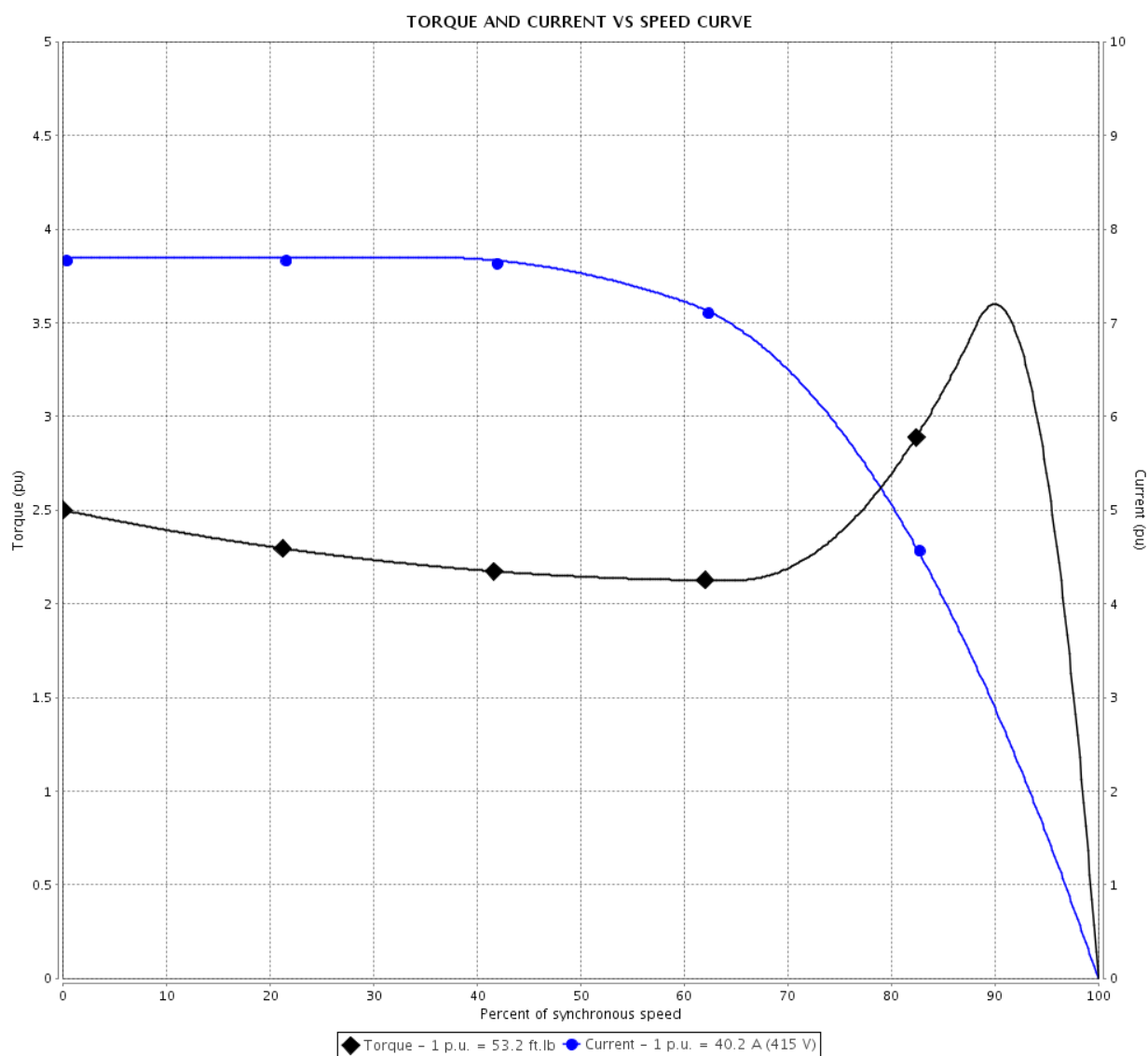


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Performance : 415 V 50 Hz 2P IE3

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

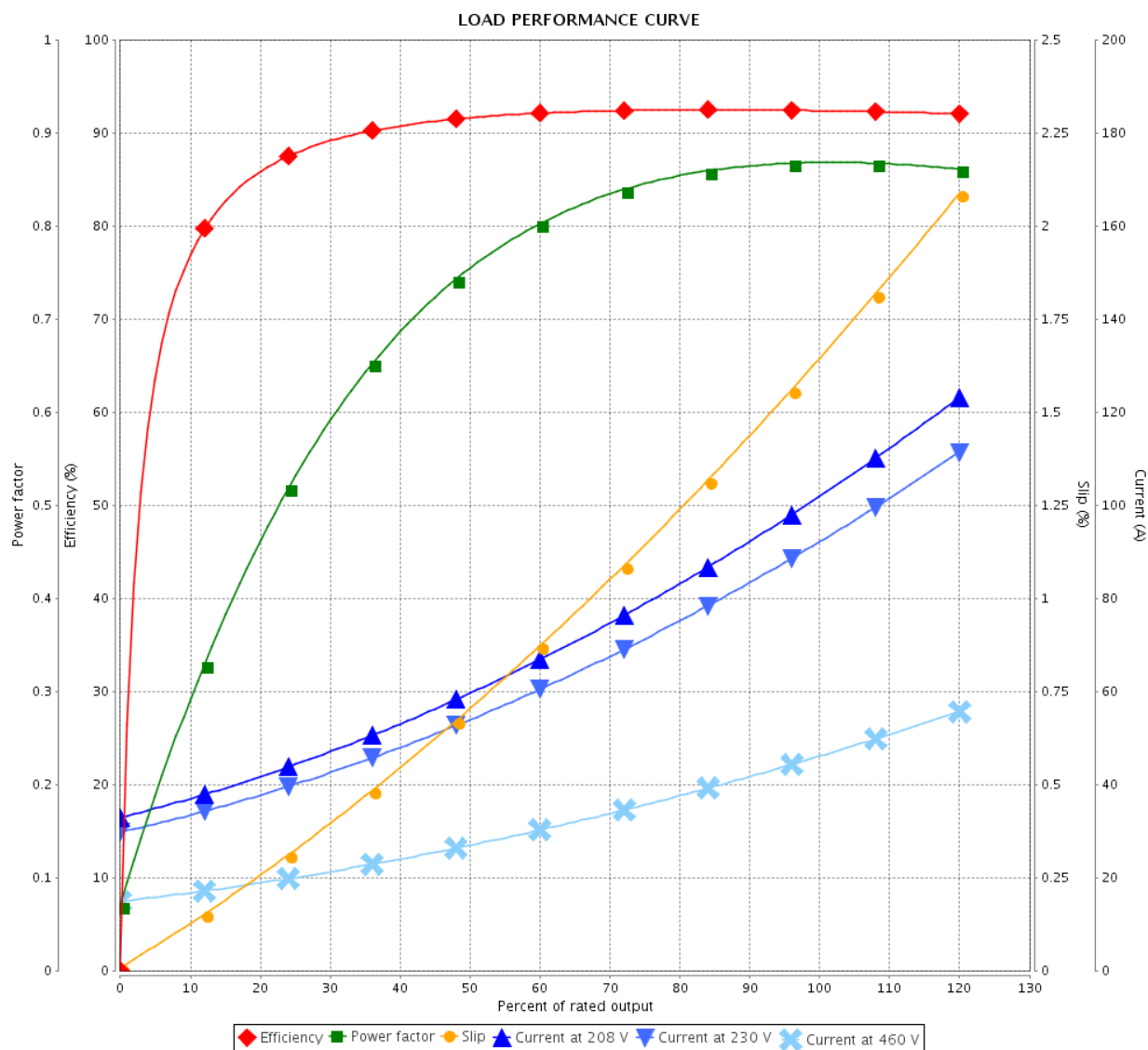


Customer :

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Product code : 14484722

Catalog # : 04036OT3E286JM-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

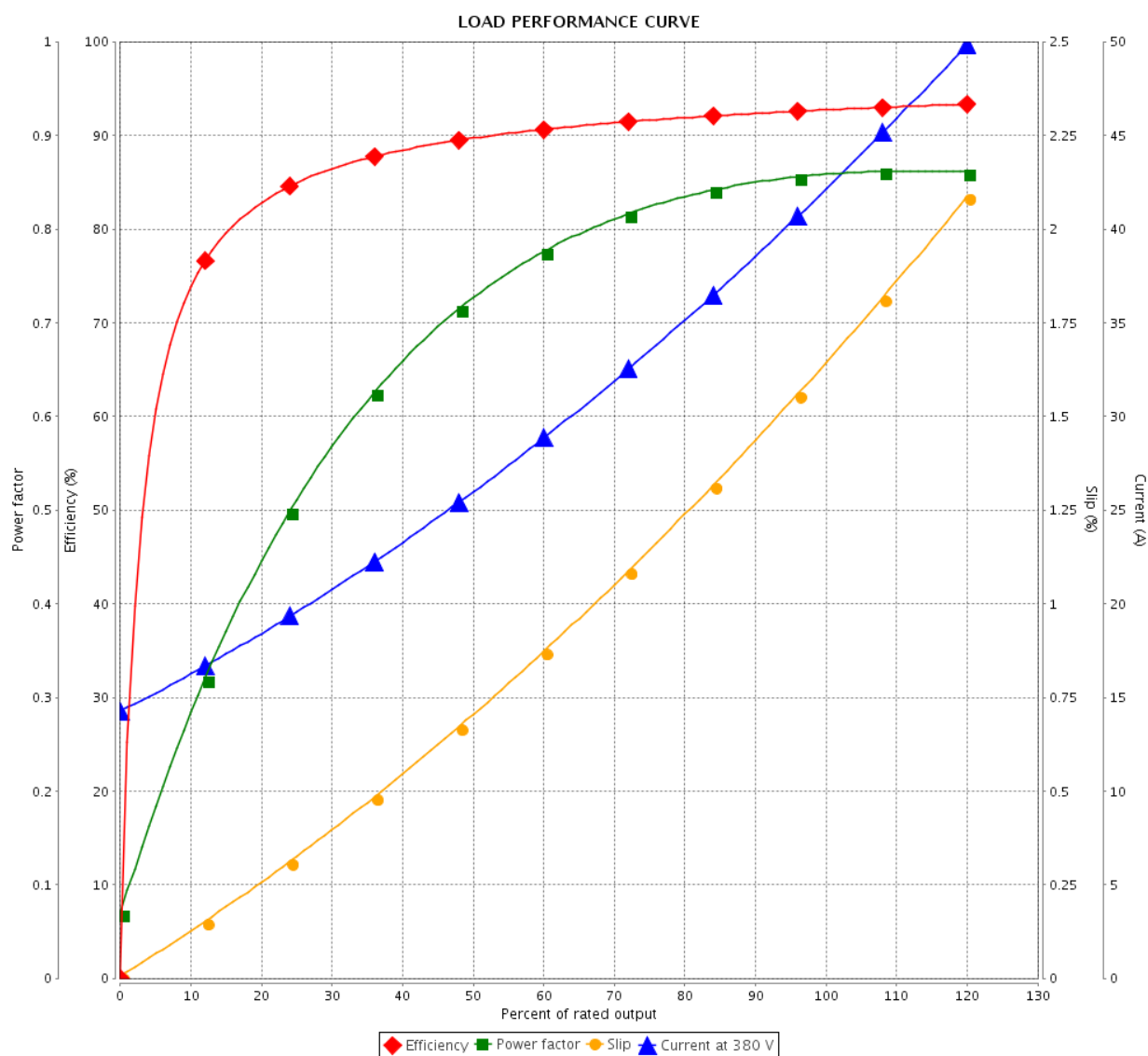


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Catalog # : 04036OT3E286JM-W40



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 Revision		
Checked by				
Date	11/04/2020			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

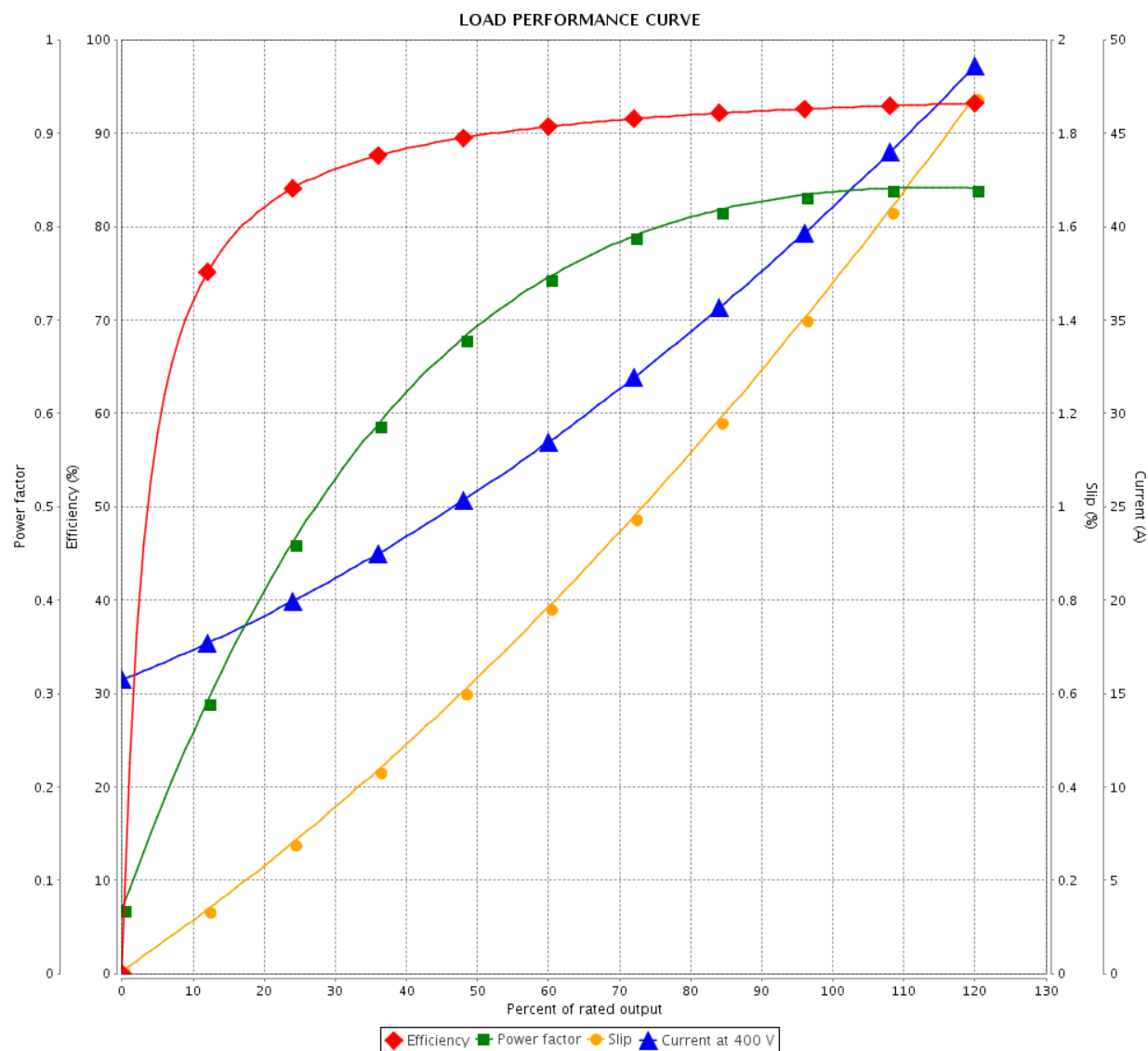


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Product code : 14484722

Catalog # : 04036OT3E286JM-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

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 8 / 21 Revision		
Checked by				
Date	11/04/2020			

LOAD PERFORMANCE CURVE

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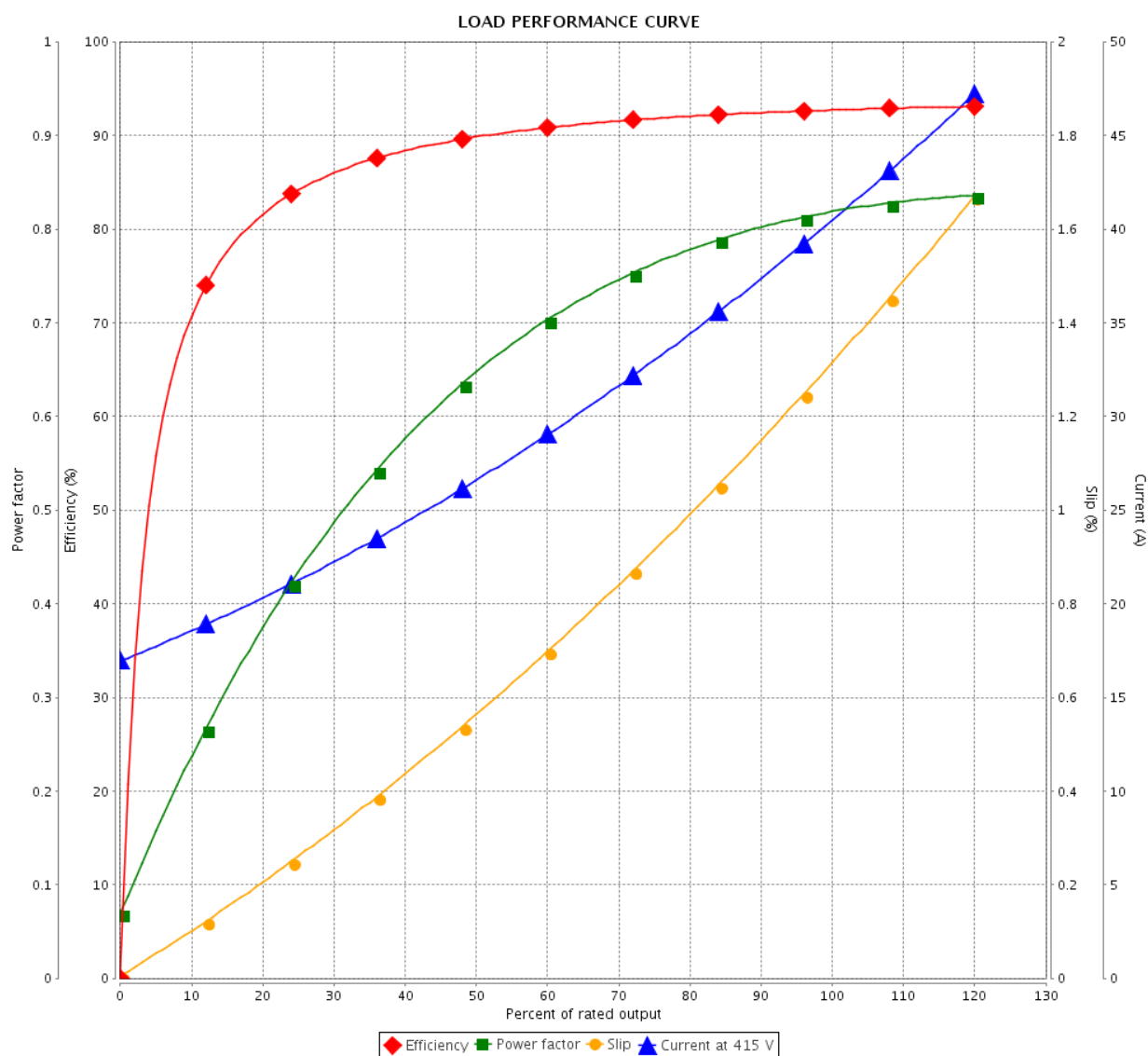


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Product code : 14484722

Catalog # : 04036OT3E286JM-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		
Checked by				
Date	11/04/2020			
			Revision	

THERMAL LIMIT CURVE

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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

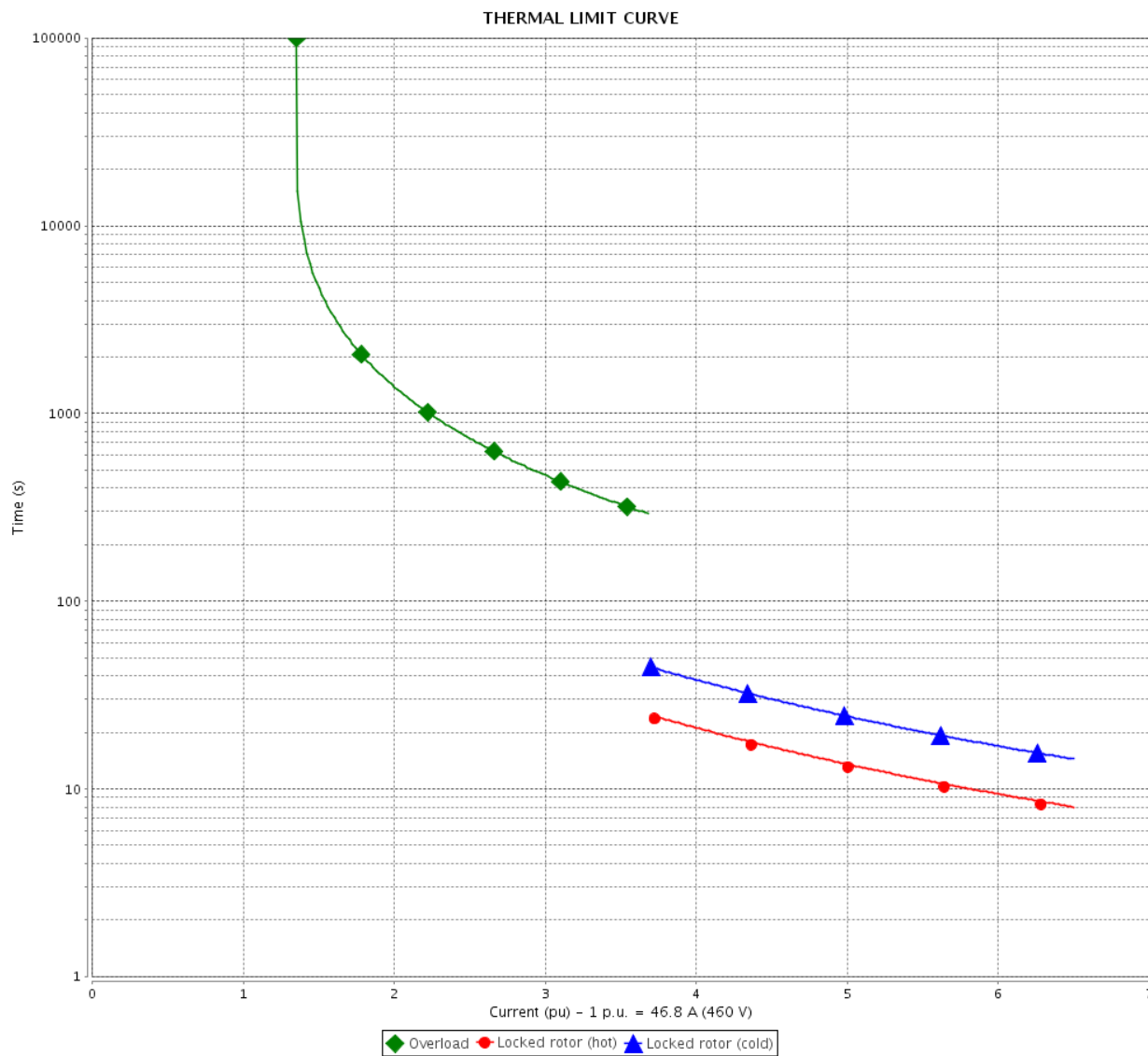
Revision

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			

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Catalog # :

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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

Heating constant

Cooling constant

Rev.

Changes Summary

Performed

Checked

Date

Performed by

Checked by

Date

11/04/2020

Page

12 / 21

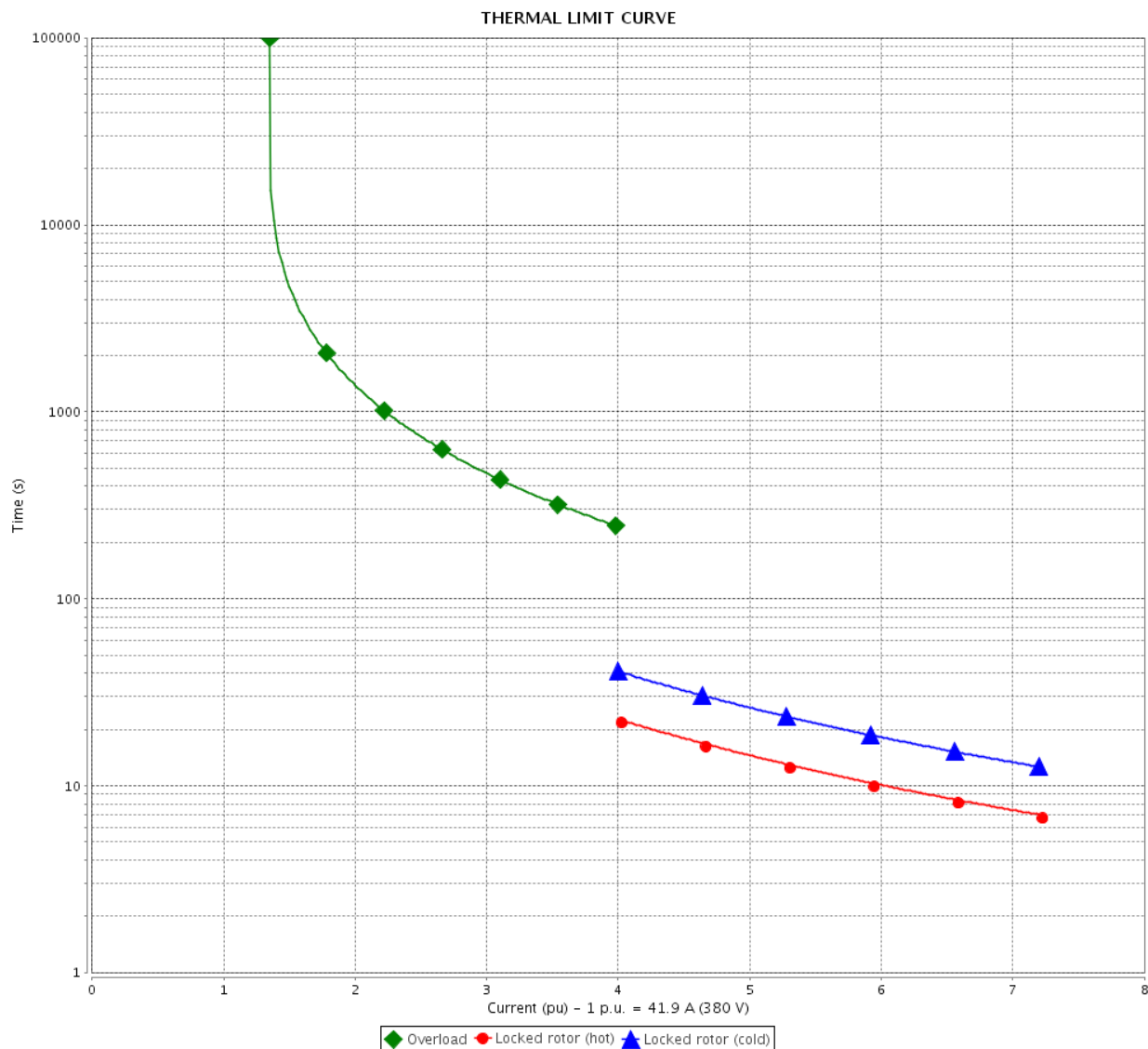
Revision

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

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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

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Heating constant

Cooling constant

Rev.

Changes Summary

Performed

Checked

Date

Performed by

Checked by

Date

11/04/2020

Page

14 / 21

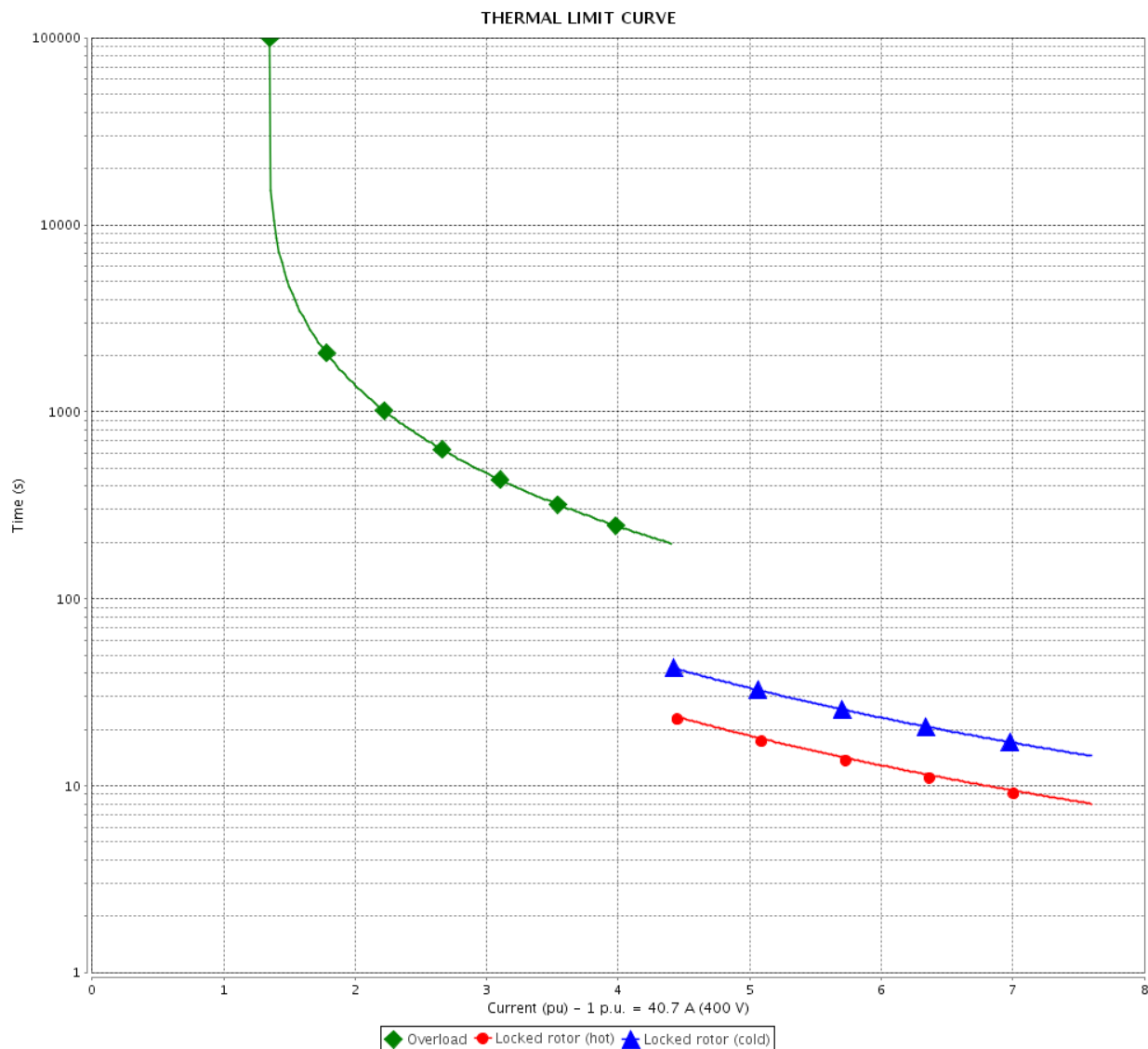
Revision

THERMAL LIMIT CURVE

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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

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Product code : 14484722

Catalog # : 04036OT3E286JM-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

Heating constant

Cooling constant

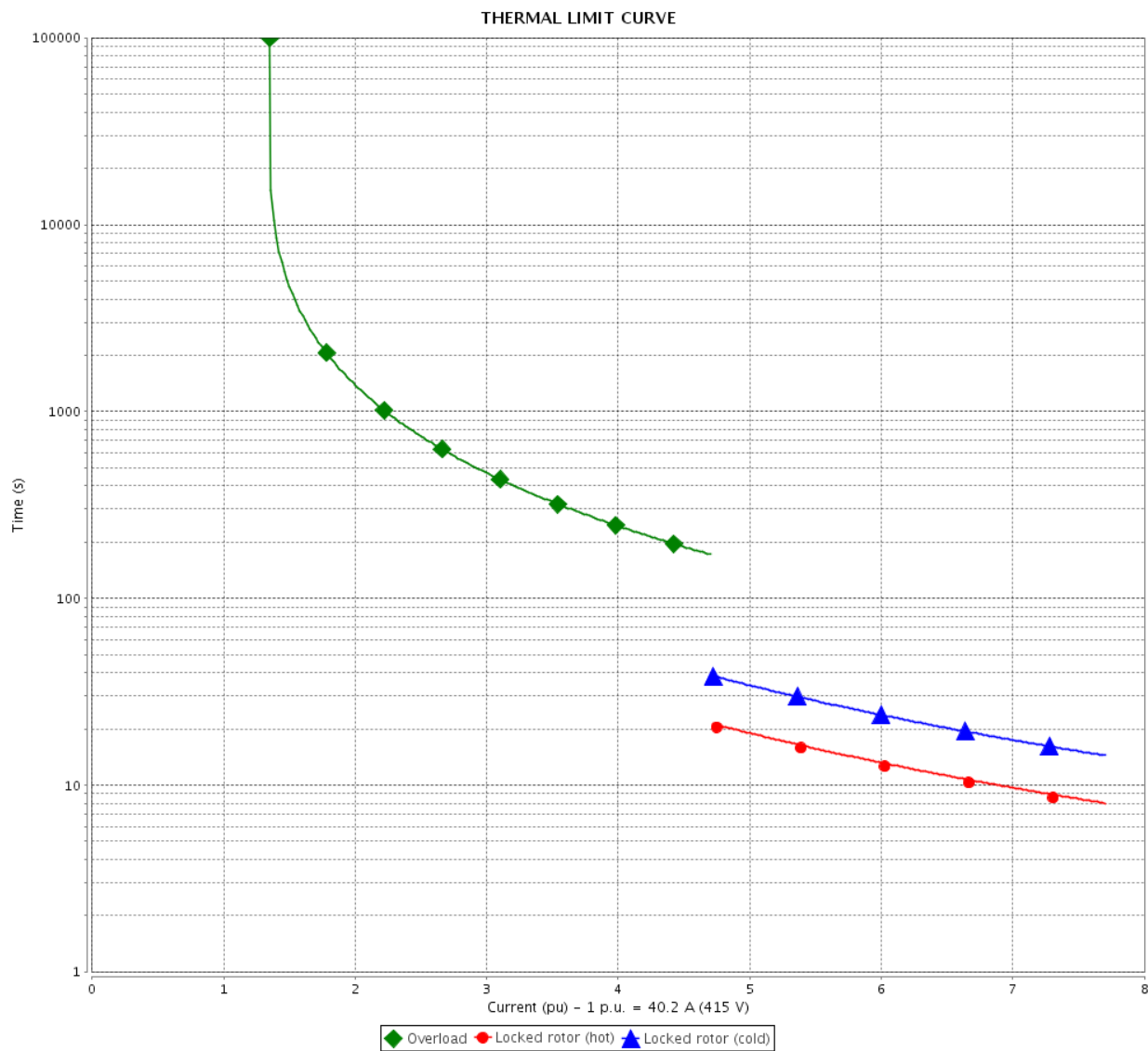
Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page	Revision
Checked by				16 / 21	
Date	11/04/2020				

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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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

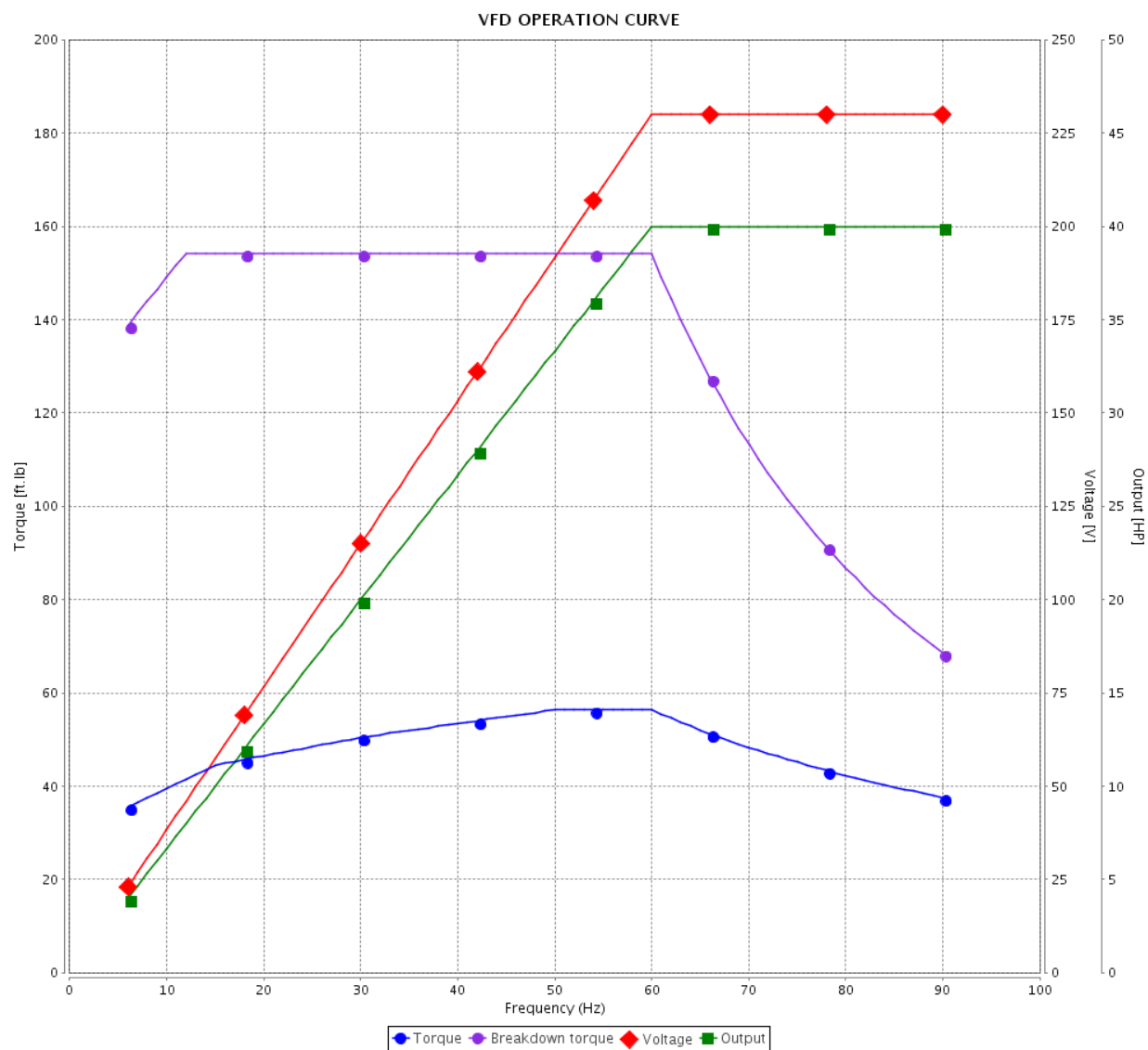


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Breakdown torque : 260 %
Rated speed : 3540 rpm

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 18 / 21 Revision		
Checked by				
Date	11/04/2020			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

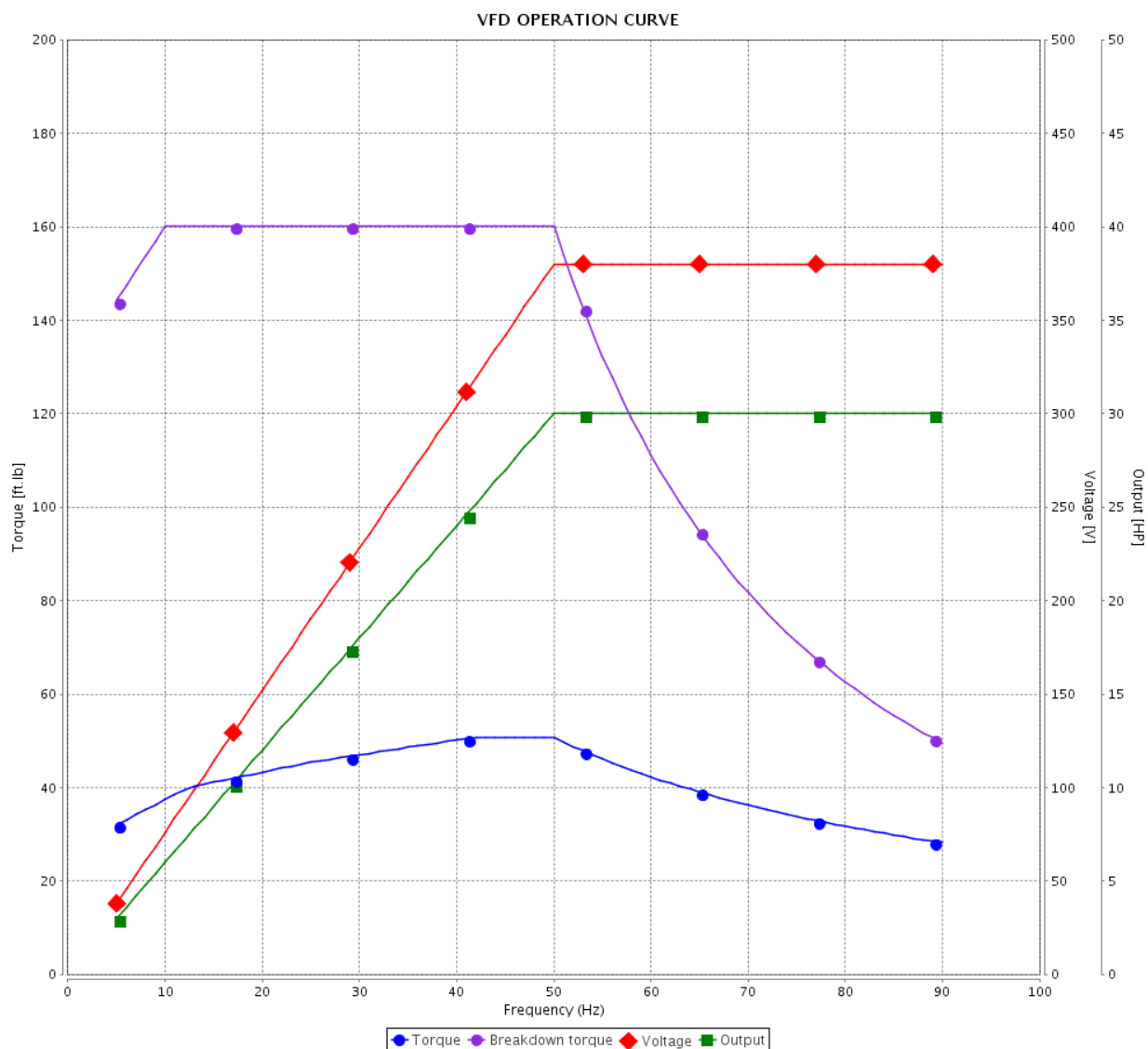


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Performance : 380 V 50 Hz 2P IE3

Rated current : 41.9 A
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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
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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 19 / 21		
Checked by				
Date	11/04/2020			
		Revision		

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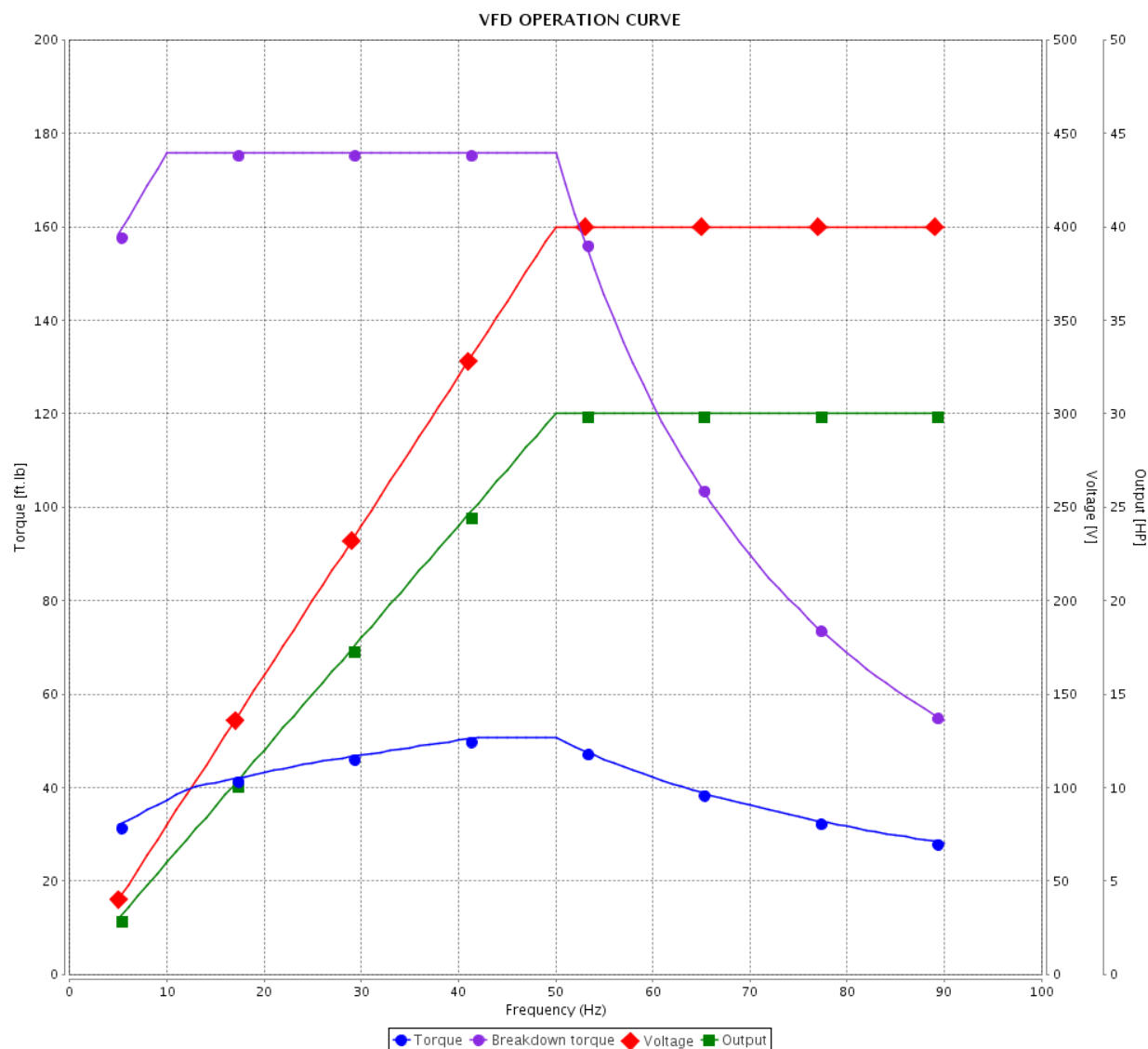


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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 20 / 21Revision		
Checked by				
Date	11/04/2020			

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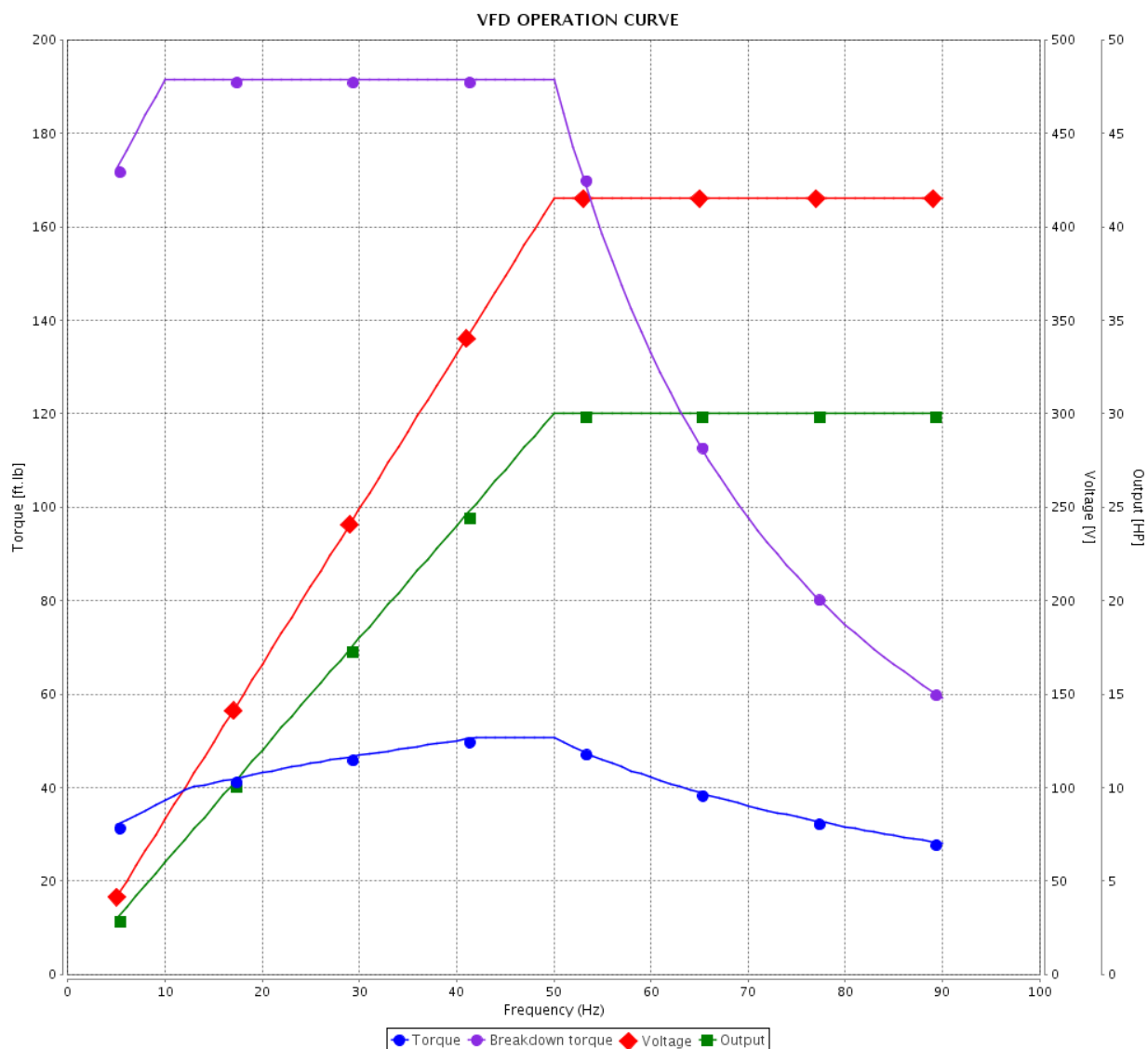


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Breakdown torque : 360 %
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Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 21 / 21		
Checked by				
Date	11/04/2020			
		Revision		