

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: W40 JP Pump NEMA Premium Efficiency Three-Phase	Product code :	14836786		
		Catalog # :	05036OT3E324JPV-W40		
Frame	: 324/6JP	Cooling method	: IC01 - ODP		
Insulation class	: F	Mounting	: W-6		
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	: 445 lb		
Protection degree	: IP23	Moment of inertia (J)	: 3.02 sq.ft.lb		
Design	: B				
Output [HP]	50	40	40	40	
Poles	2	2	2	2	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	119/59.4	57.5	56.6	56.6	
L. R. Amperes [A]	748/374	368	374	385	
LRC [A]	6.3x(Code G)	6.4x(Code G)	6.6x(Code H)	6.8x(Code H)	
No load current [A]	45.0/22.5	20.5	24.0	27.0	
Rated speed [RPM]	3560	2960	2965	2965	
Slip [%]	1.11	1.33	1.17	1.17	
Rated torque [ft.lb]	73.8	71.0	70.8	70.8	
Locked rotor torque [%]	200	200	229	240	
Breakdown torque [%]	220	220	240	260	
Service factor	1.25	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	25s (cold) 14s (hot)	19s (cold) 11s (hot)	21s (cold) 12s (hot)	19s (cold) 11s (hot)	
Noise level ²	75.0 dB(A)				
Efficiency (%)	25%	91.5	88.3	88.4	88.5
	50%	91.7	90.0	90.0	90.1
	75%	93.0	91.6	91.7	91.7
	100%	93.0	93.3	93.3	93.3
Power Factor	25%	0.46	0.48	0.42	0.37
	50%	0.72	0.73	0.67	0.60
	75%	0.81	0.82	0.77	0.73
	100%	0.84	0.85	0.82	0.79
Bearing type	: <u>Drive end</u> 6312 Z C3	<u>Non drive end</u> 6211 Z C3	Foundation loads		
Sealing	: Without	Without	Max. traction		
	Bearing Seal	Bearing Seal	Max. compression		
Lubrication interval	: 9829 h	14226 h			
Lubricant amount	: 21 g	11 g			
Lubricant type	: Mobil Polyrex EM				
Notes					
USABLE @208V 130A SF 1.15 SFA 149A					
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.		
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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



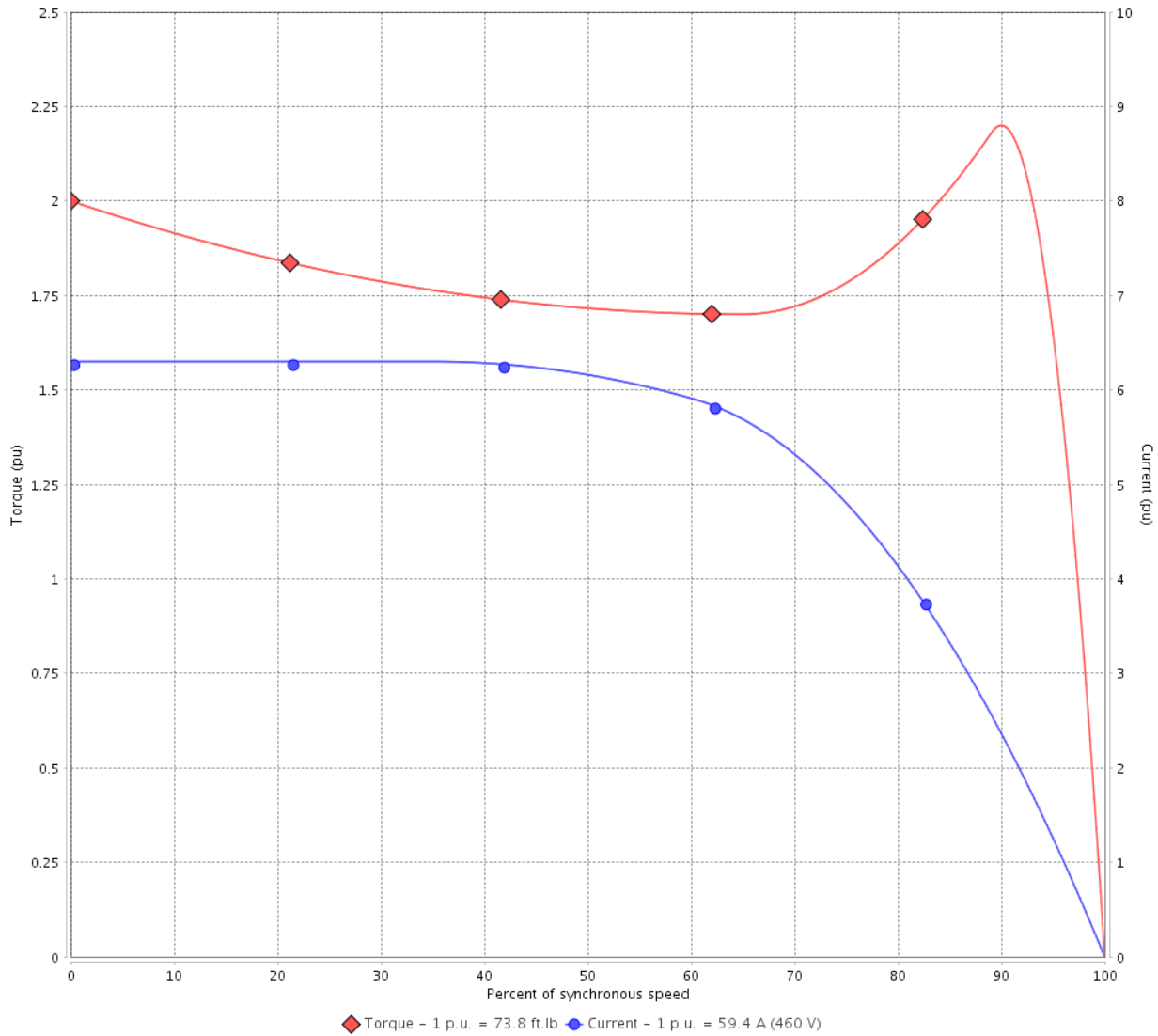
Customer :

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

Product code : 14836786

Catalog # : 05036OT3E324JPV-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 2P

Rated current	: 119/59.4 A	Moment of inertia (J)	: 3.02 sq.ft.lb
LRC	: 6.3	Duty cycle	: Cont.(S1)
Rated torque	: 73.8 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.25
Breakdown torque	: 220 %	Temperature rise	: 80 K
Rated speed	: 3560 rpm	Design	: B

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

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TORQUE AND CURRENT VS SPEED CURVE



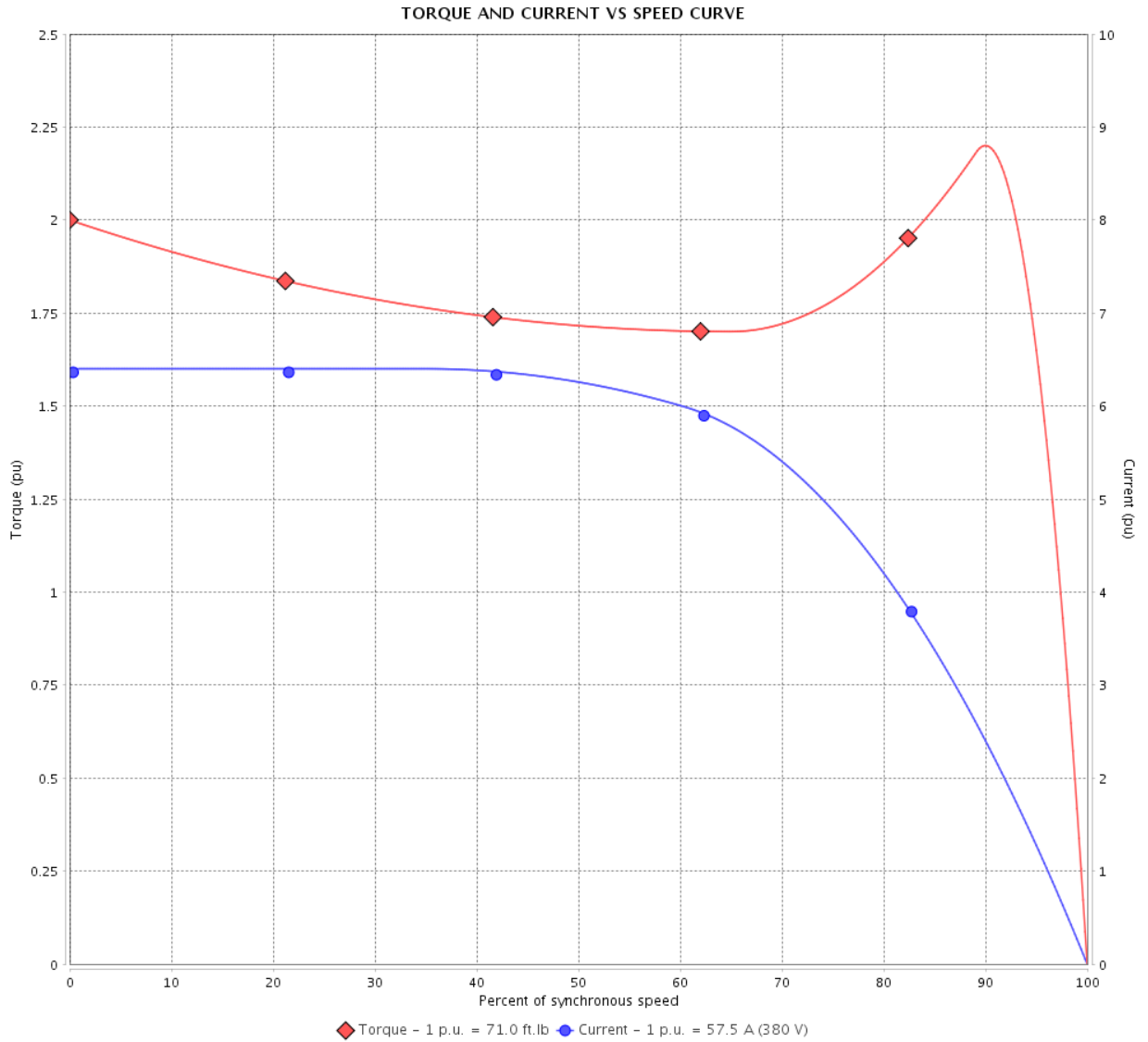
Three Phase Induction Motor - Squirrel Cage

Customer :

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

Product code : 14836786

Catalog # : 05036OT3E324JPV-W40



Performance : 380 V 50 Hz 2P IE3

Rated current : 57.5 A
 LRC : 6.4
 Rated torque : 71.0 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 220 %
 Rated speed : 2960 rpm

Moment of inertia (J) : 3.02 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



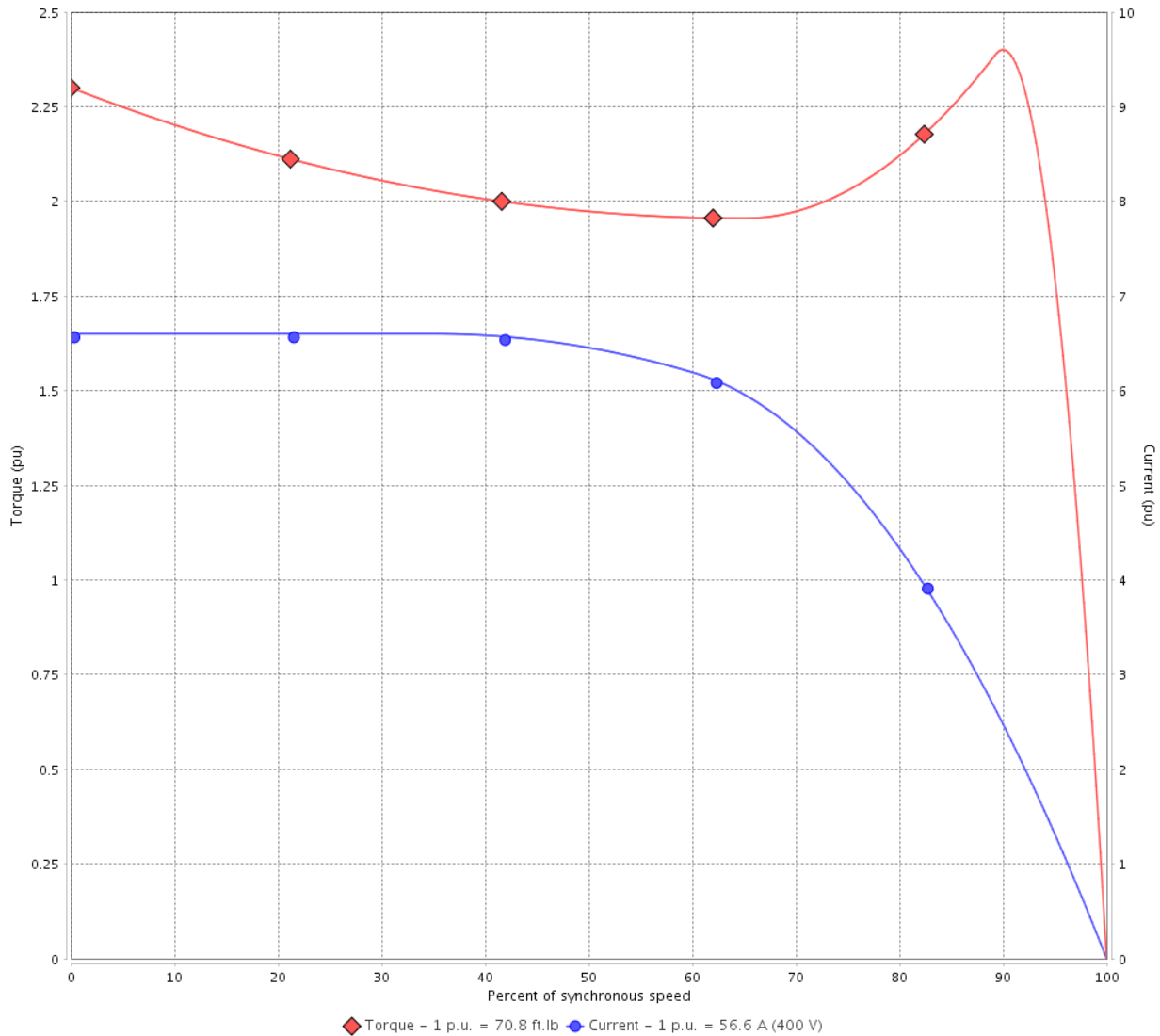
Customer :

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

Product code : 14836786

Catalog # : 05036OT3E324JPV-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 2P IE3

Rated current	: 56.6 A	Moment of inertia (J)	: 3.02 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 70.8 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 2965 rpm	Design	: B

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

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TORQUE AND CURRENT VS SPEED CURVE



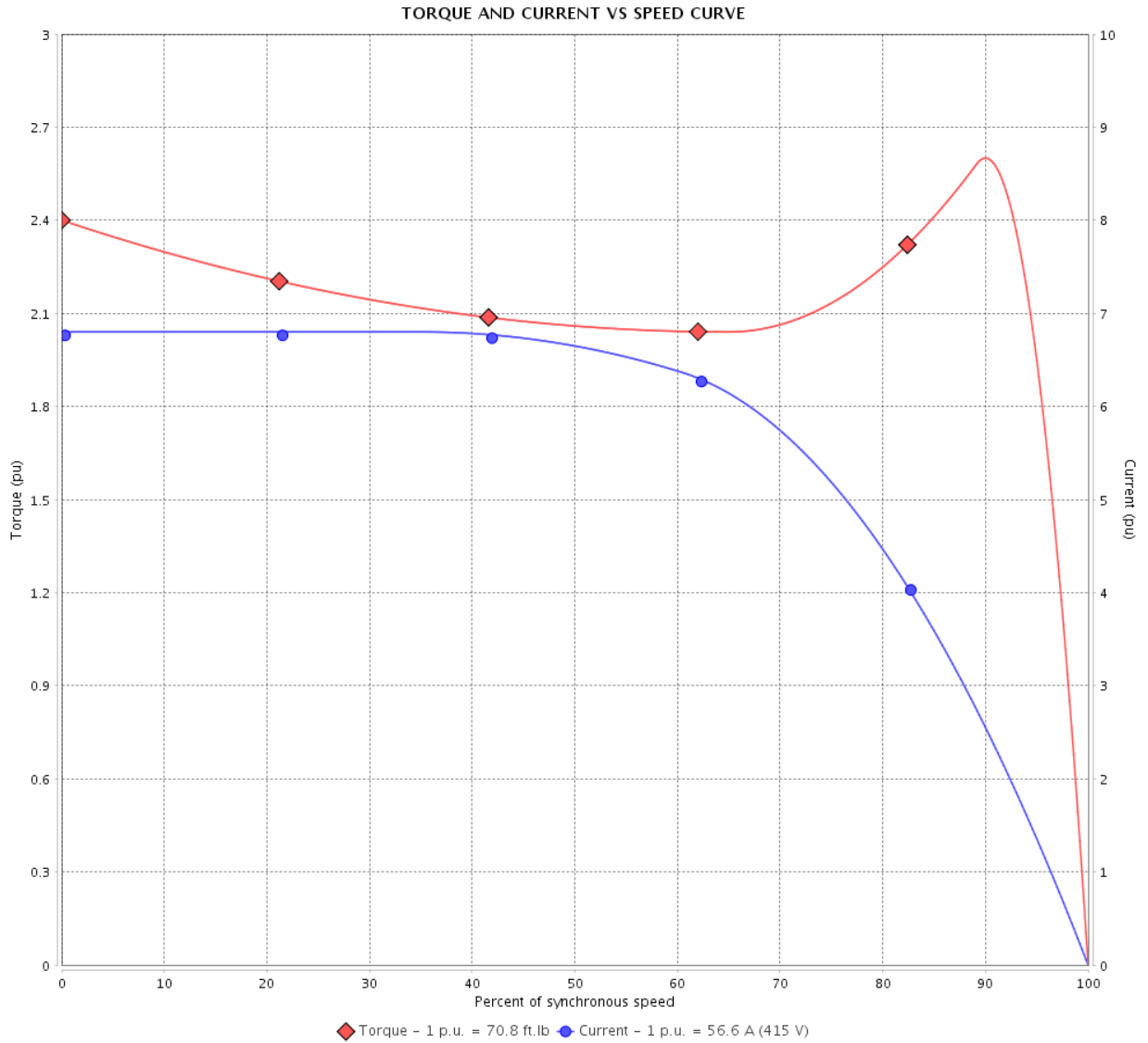
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Product code : 14836786

Catalog # : 05036OT3E324JPV-W40



Performance : 415 V 50 Hz 2P IE3

Rated current : 56.6 A
 LRC : 6.8
 Rated torque : 70.8 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 260 %
 Rated speed : 2965 rpm

Moment of inertia (J) : 3.02 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



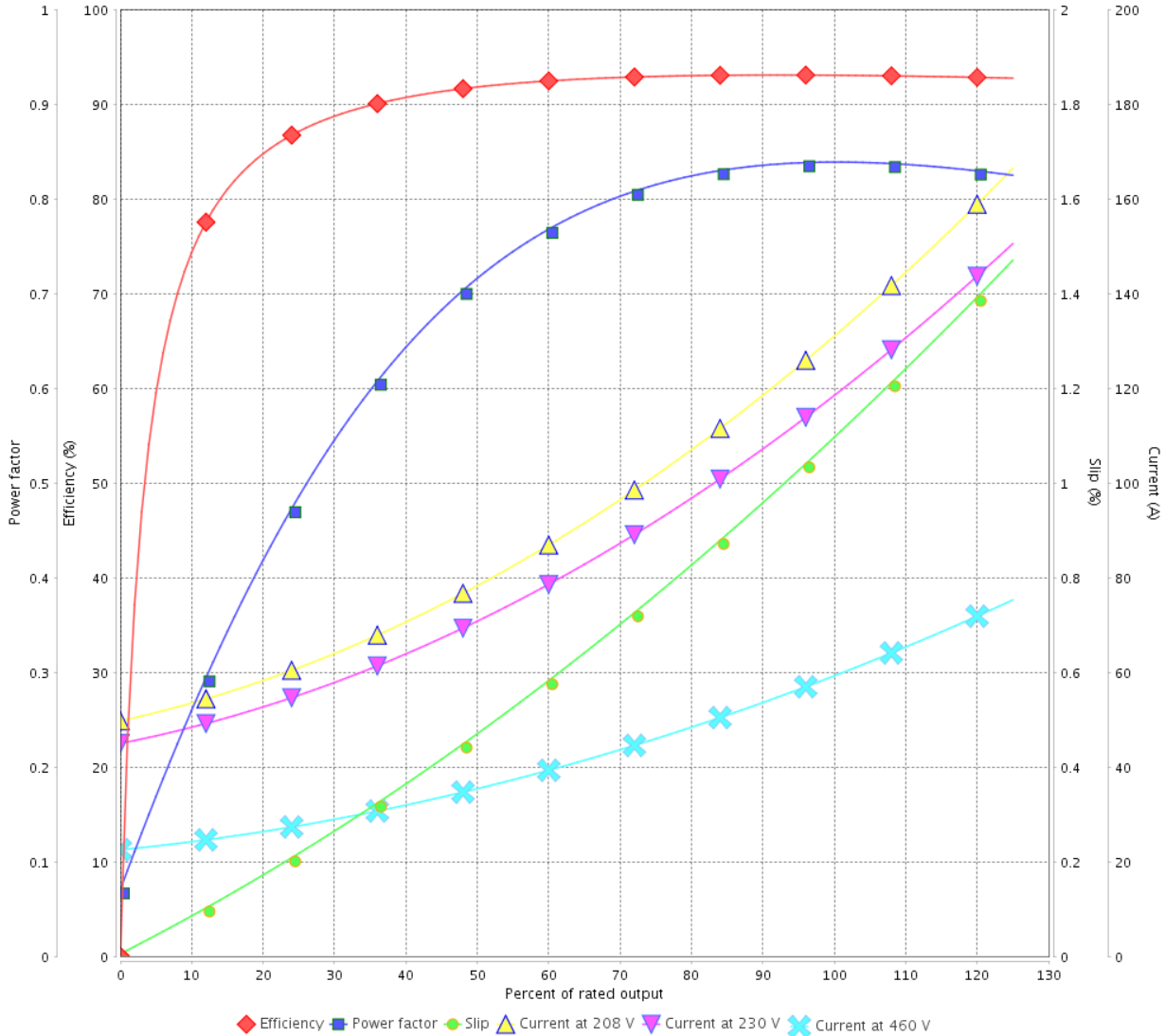
Customer :

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Product code : 14836786

Catalog # : 05036OT3E324JPV-W40

LOAD PERFORMANCE CURVE



Performance : 230/460 V 60 Hz 2P

Rated current : 119/59.4 A
 LRC : 6.3
 Rated torque : 73.8 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 220 %
 Rated speed : 3560 rpm

Moment of inertia (J) : 3.02 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage

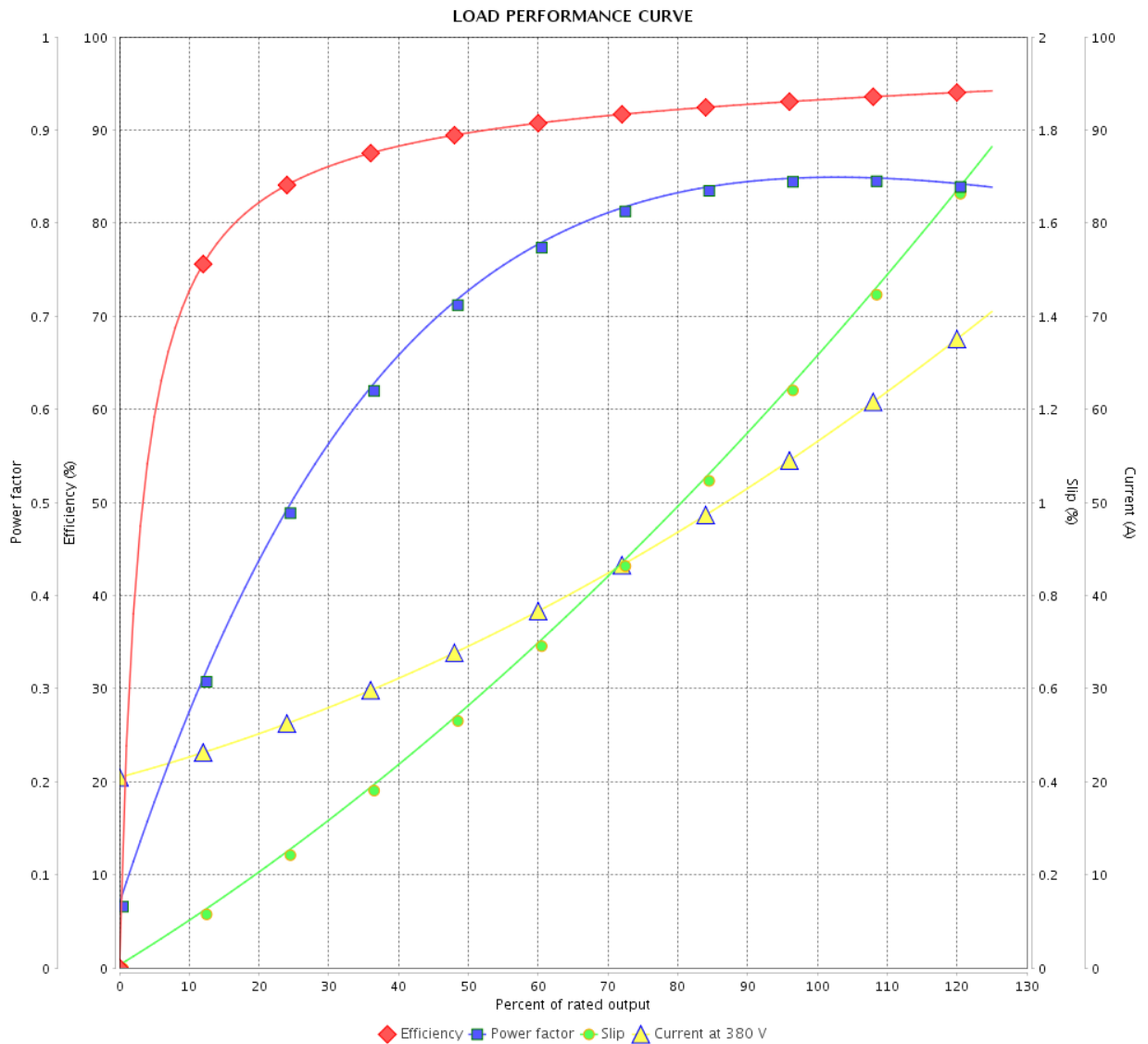


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Performance : 380 V 50 Hz 2P IE3

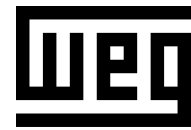
Rated current : 57.5 A
 LRC : 6.4
 Rated torque : 71.0 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 220 %
 Rated speed : 2960 rpm

Moment of inertia (J) : 3.02 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage



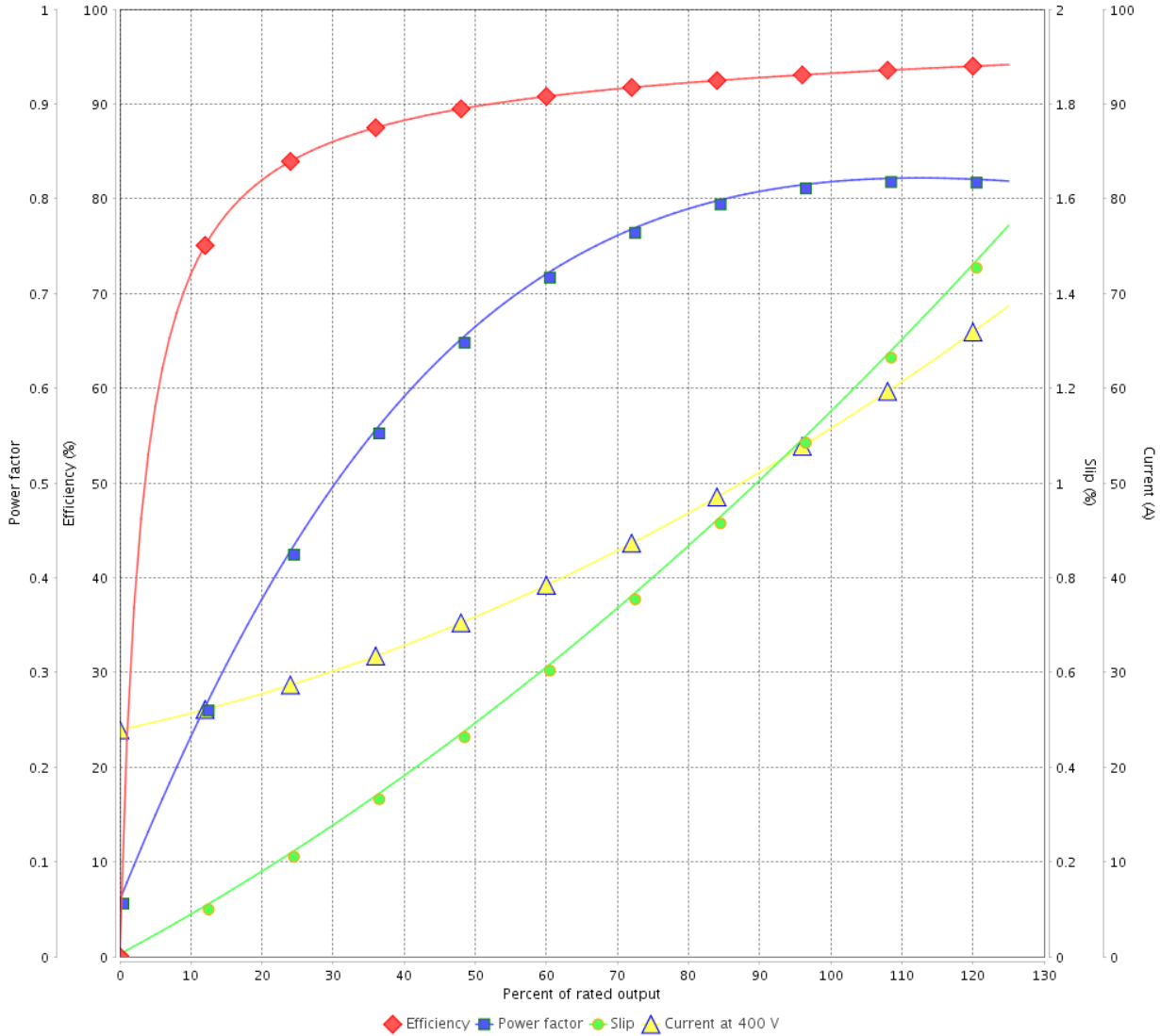
Customer :

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Product code : 14836786

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LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 2P IE3

Rated current : 56.6 A
 LRC : 6.6
 Rated torque : 70.8 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 240 %
 Rated speed : 2965 rpm

Moment of inertia (J) : 3.02 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage

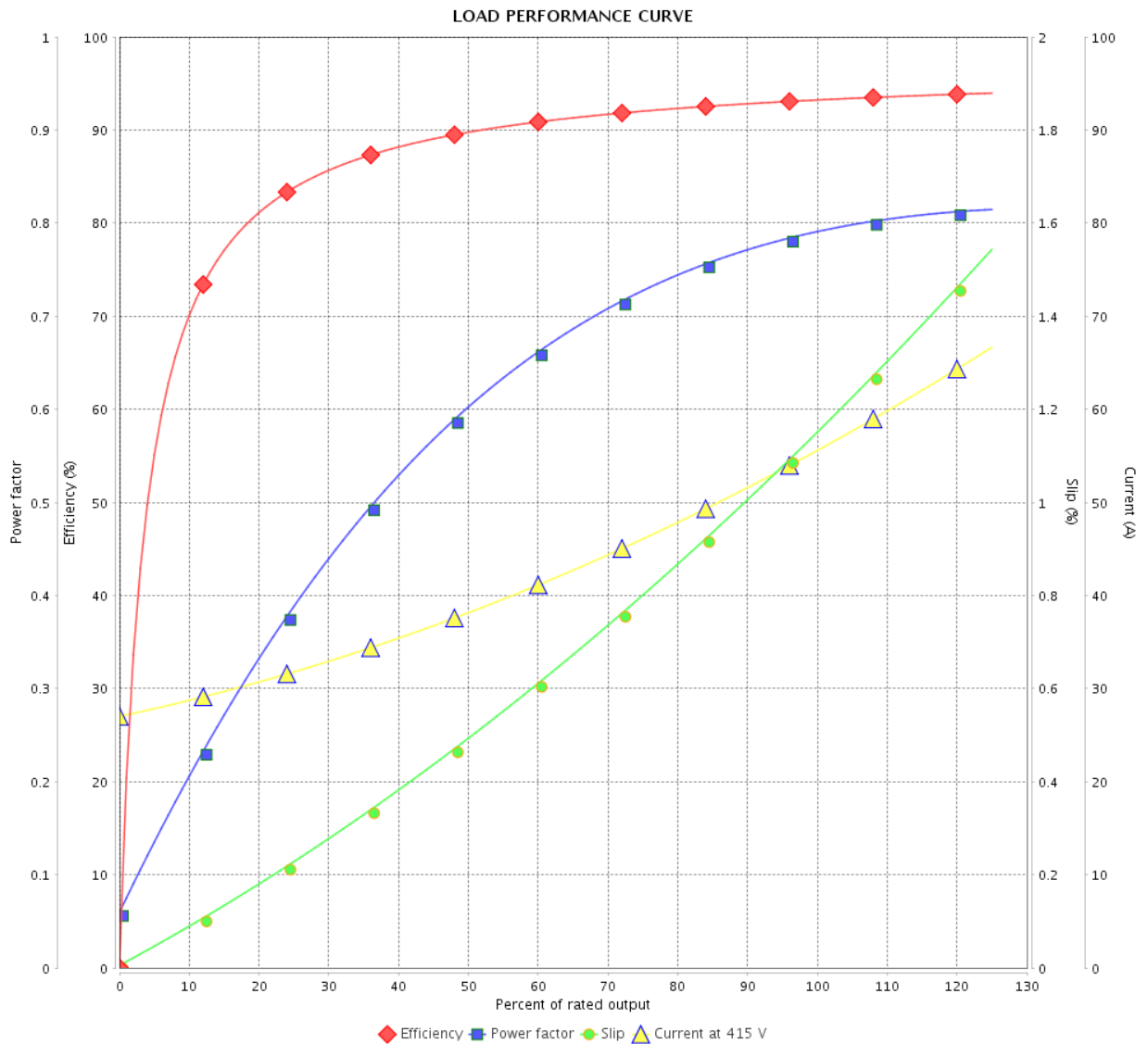


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Catalog # : 05036OT3E324JPV-W40



Performance : 415 V 50 Hz 2P IE3

Rated current : 56.6 A
 LRC : 6.8
 Rated torque : 70.8 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 260 %
 Rated speed : 2965 rpm

Moment of inertia (J) : 3.02 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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THERMAL LIMIT CURVE



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Performance : 230/460 V 60 Hz 2P

Rated current : 119/59.4 A
LRC : 6.3
Rated torque : 73.8 ft.lb
Locked rotor torque : 200 %
Breakdown torque : 220 %
Rated speed : 3560 rpm

Moment of inertia (J) : 3.02 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

Heating constant

Cooling constant

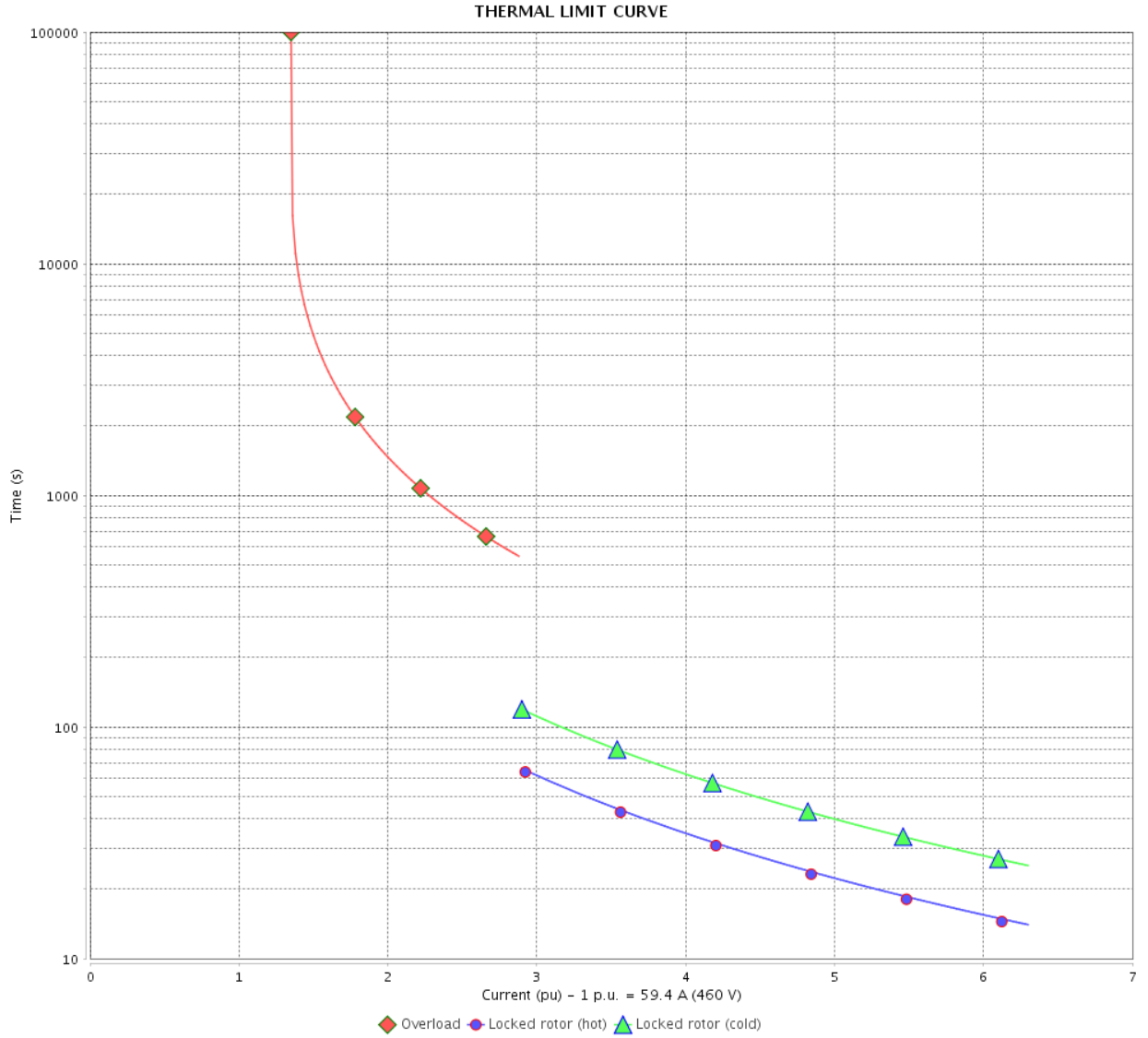
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THERMAL LIMIT CURVE

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Performance : 380 V 50 Hz 2P IE3

Rated current	: 57.5 A	Moment of inertia (J)	: 3.02 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 71.0 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 80 K
Rated speed	: 2960 rpm	Design	: B

Heating constant

Cooling constant

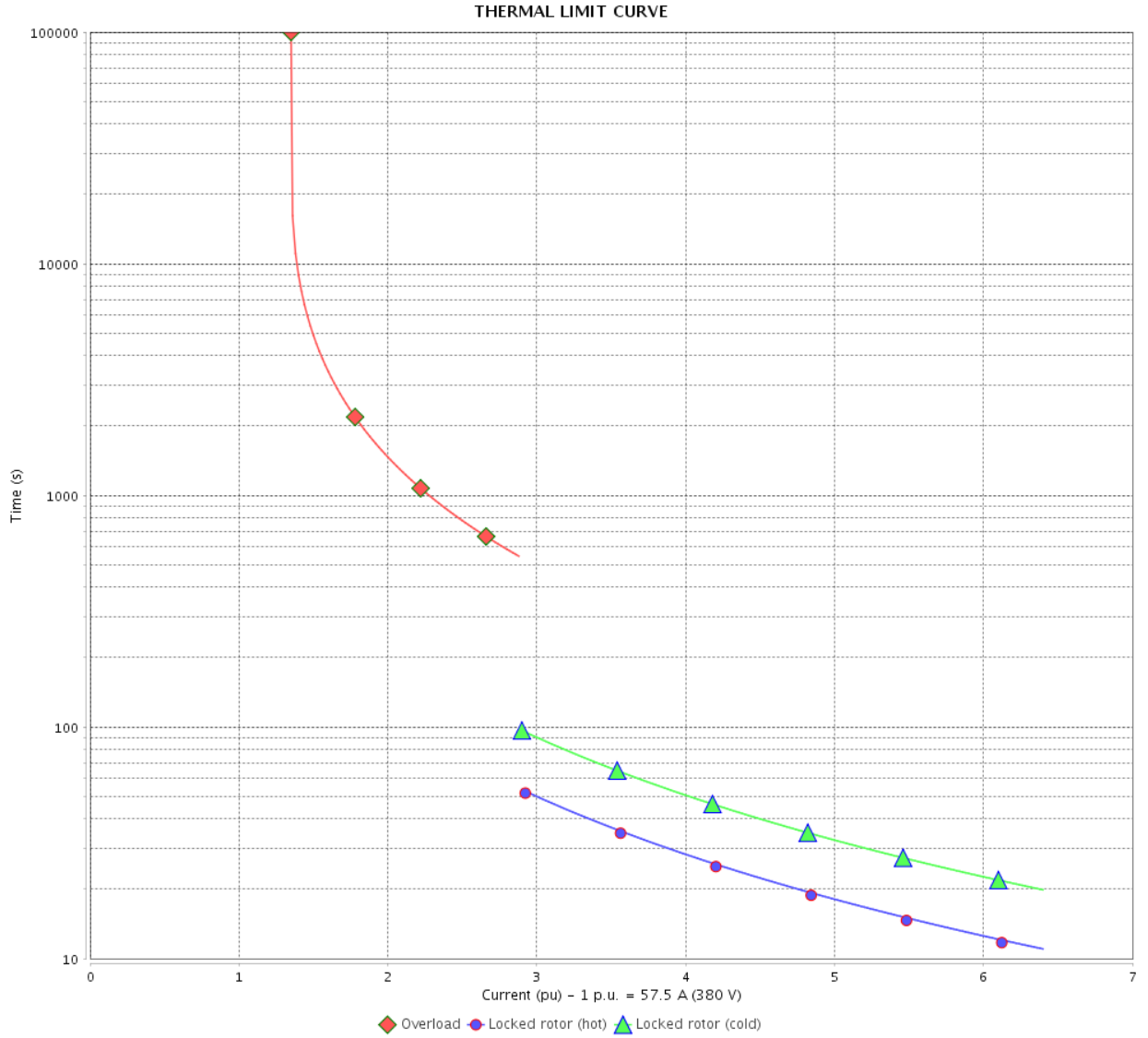
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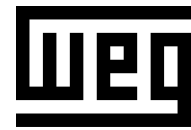


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Efficiency Three-Phase

Product code : 14836786

Catalog # : 05036OT3E324JPV-W40

Performance : 400 V 50 Hz 2P IE3

Rated current	: 56.6 A	Moment of inertia (J)	: 3.02 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 70.8 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 2965 rpm	Design	: B

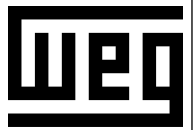
Heating constant

Cooling constant

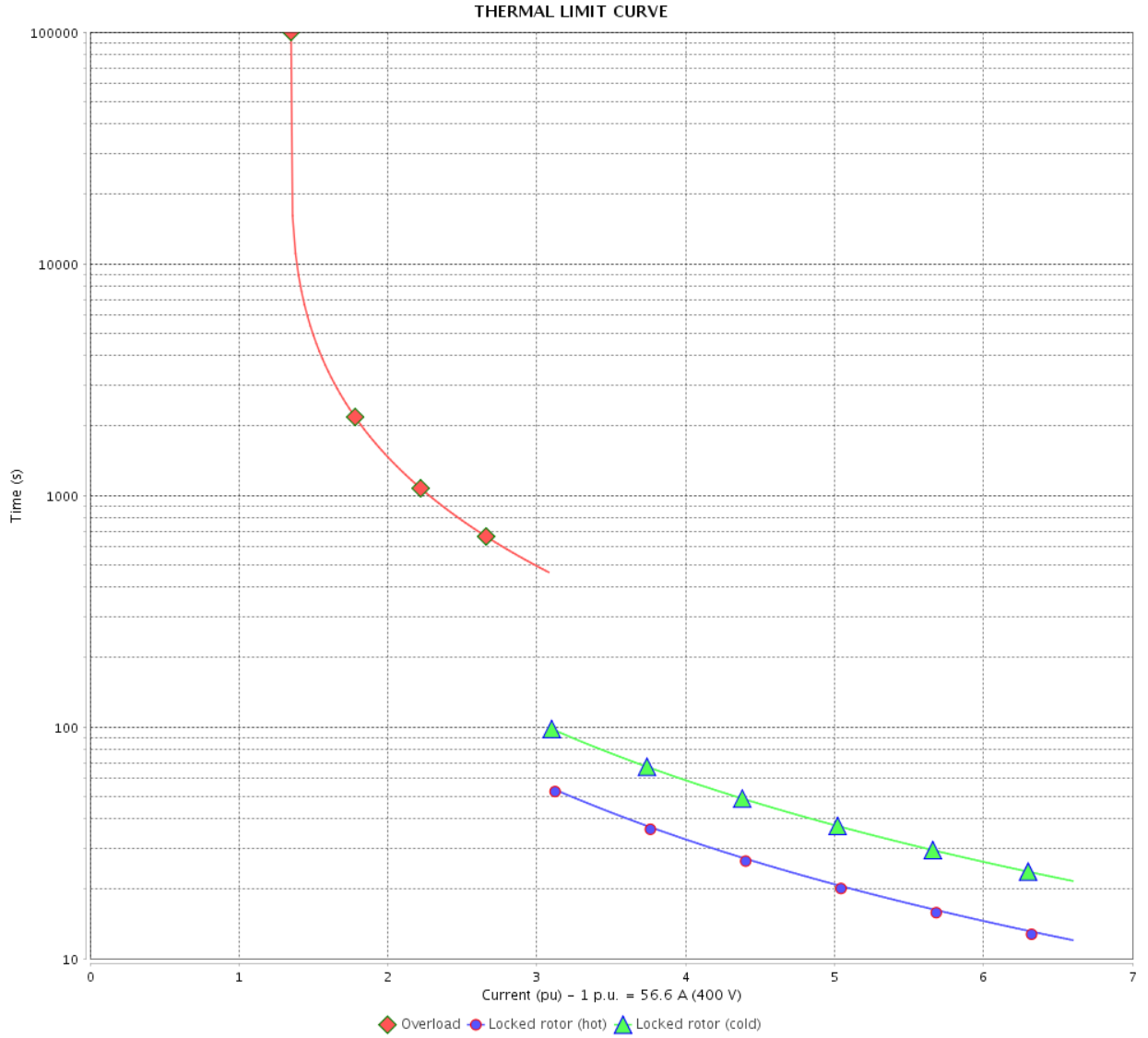
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LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 70.8 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 2965 rpm	Design	: B

Heating constant

Cooling constant

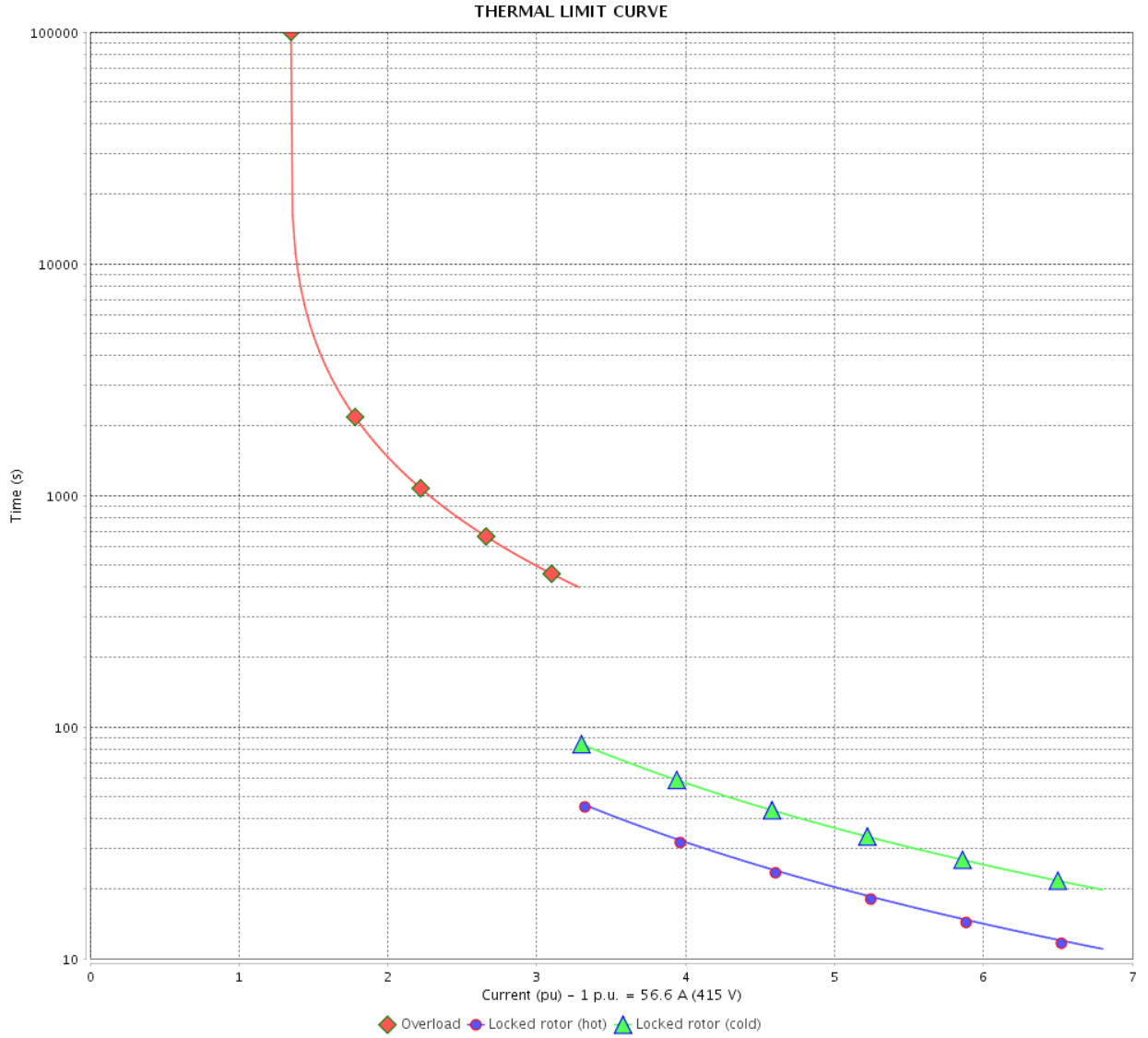
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

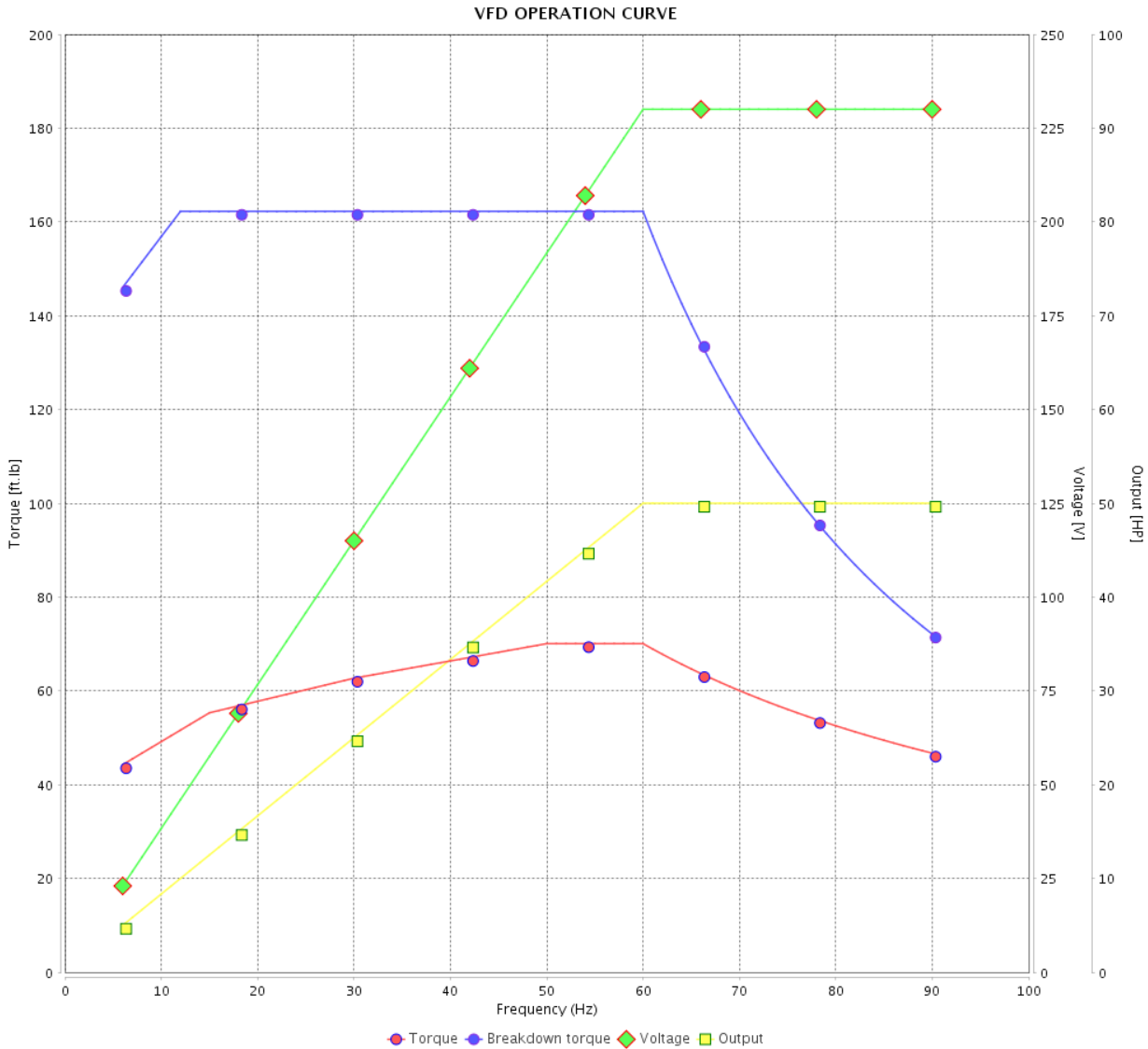


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Product code : 14836786

Catalog # : 05036OT3E324JPV-W40



Performance : 230/460 V 60 Hz 2P

Rated current : 119/59.4 A
 LRC : 6.3
 Rated torque : 73.8 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 220 %
 Rated speed : 3560 rpm

Moment of inertia (J) : 3.02 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

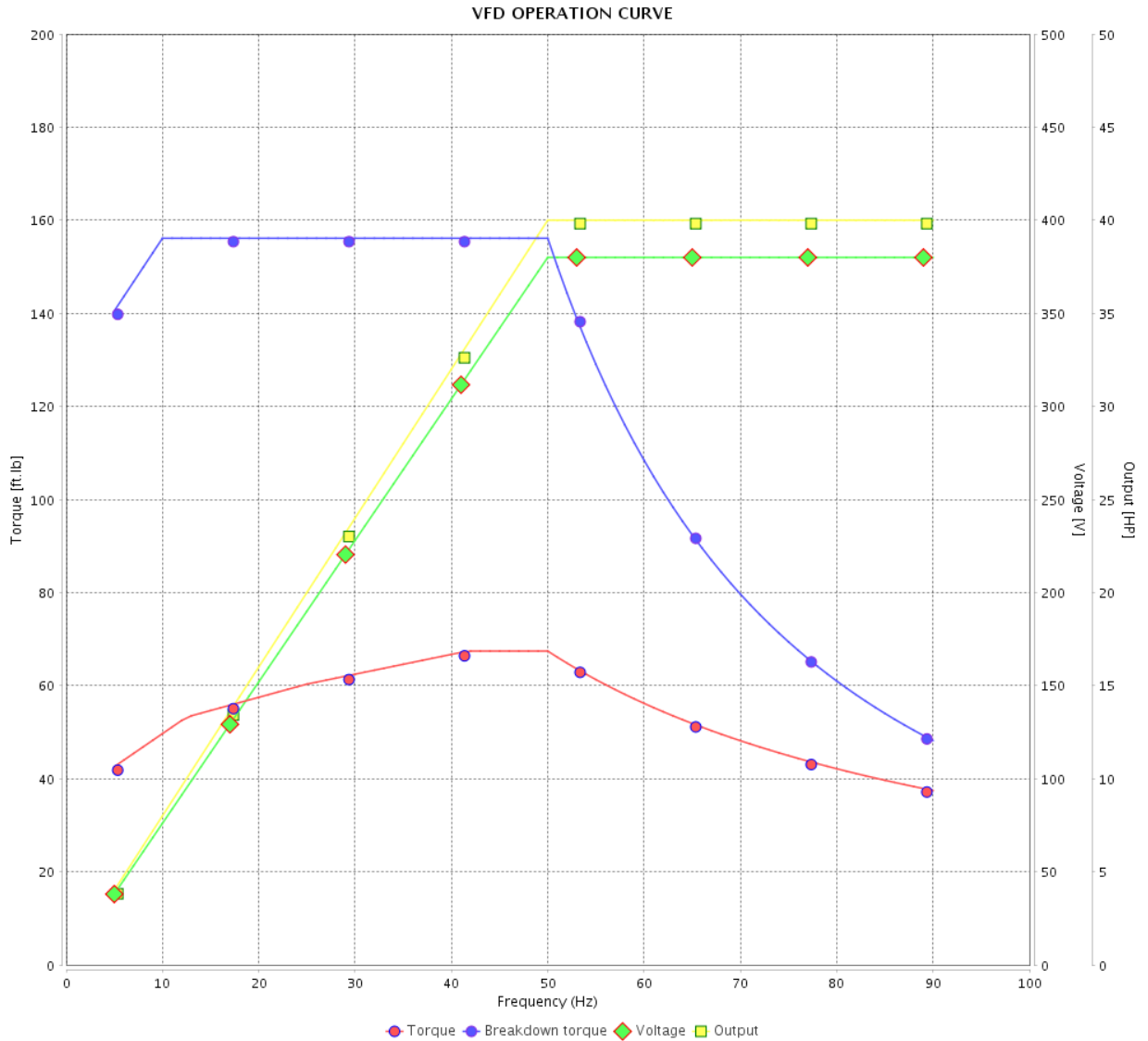


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Performance : 380 V 50 Hz 2P IE3

Rated current : 57.5 A
 LRC : 6.4
 Rated torque : 71.0 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 220 %
 Rated speed : 2960 rpm

Moment of inertia (J) : 3.02 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



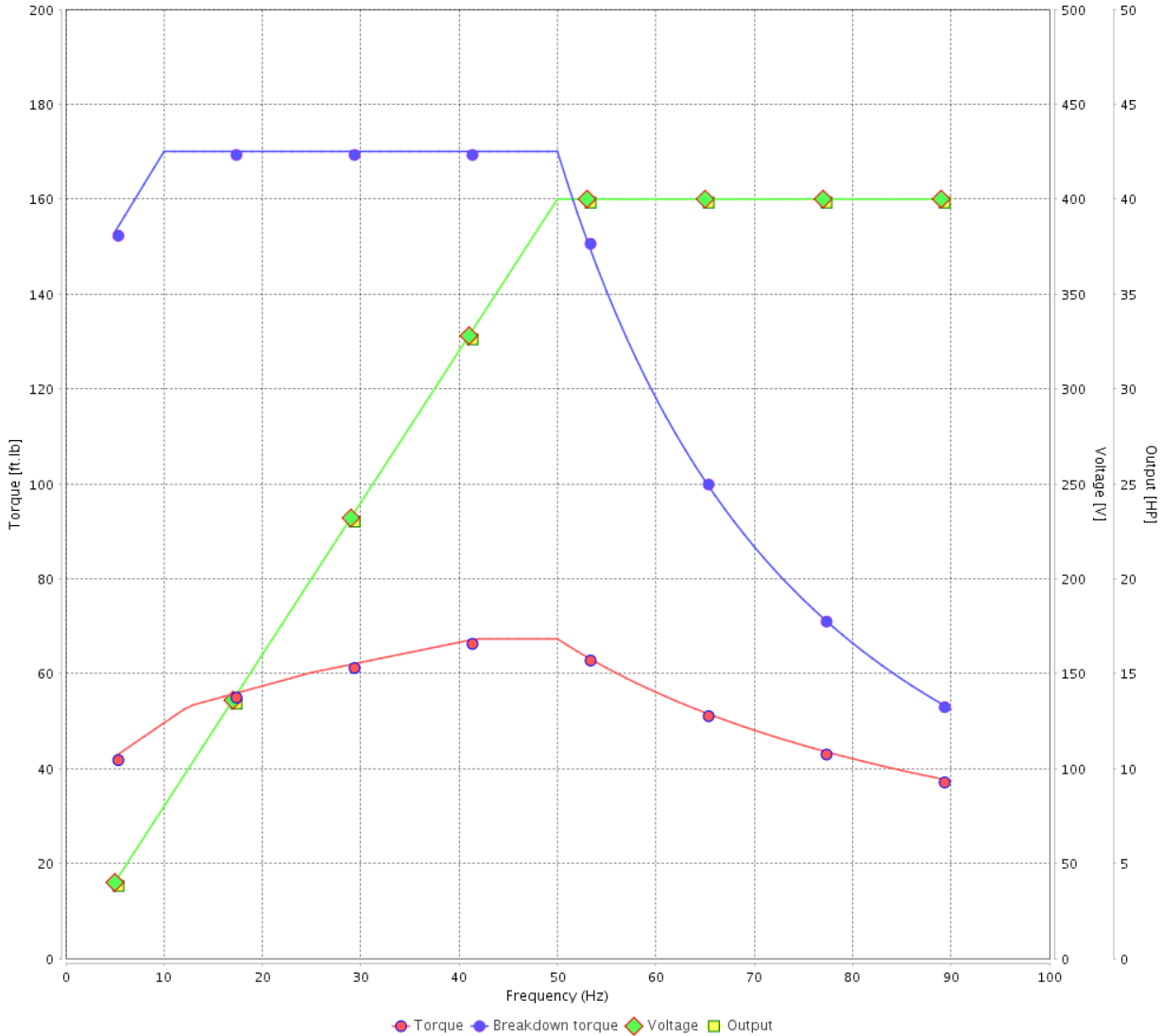
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VFD OPERATION CURVE



Performance : 400 V 50 Hz 2P IE3

Rated current	: 56.6 A	Moment of inertia (J)	: 3.02 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 70.8 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 2965 rpm	Design	: B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

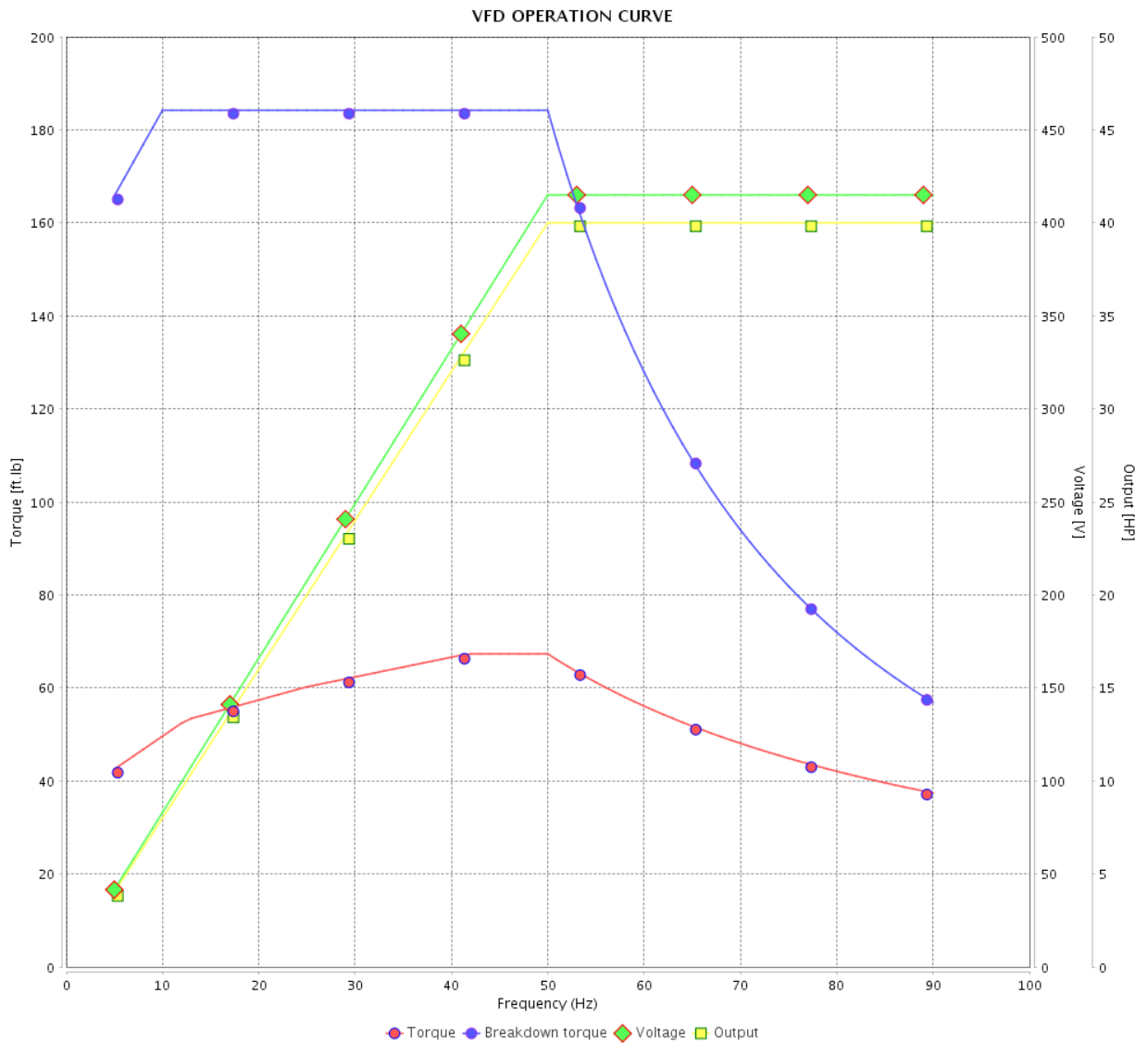


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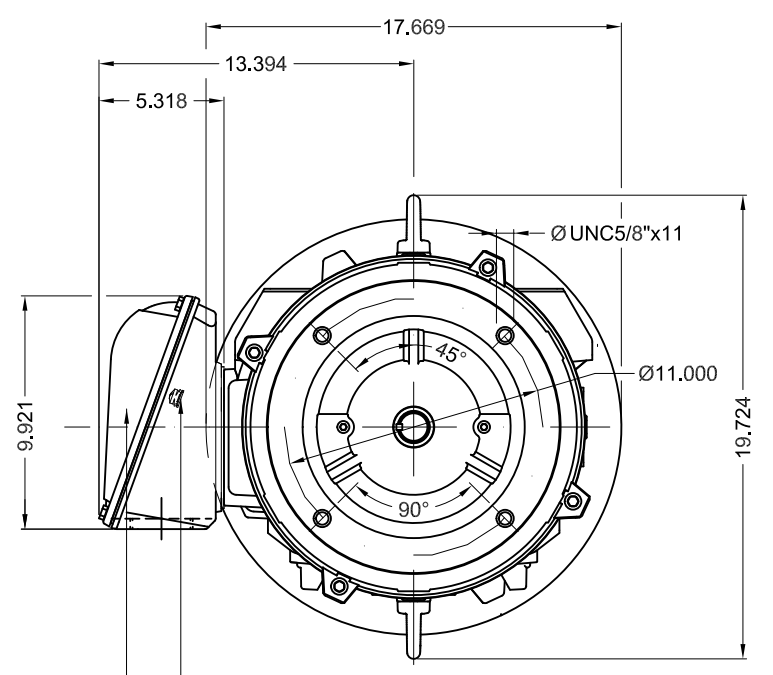


Performance : 415 V 50 Hz 2P IE3

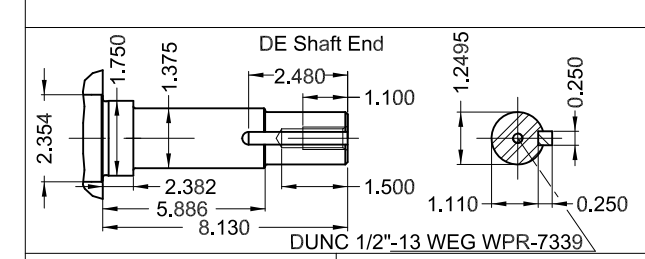
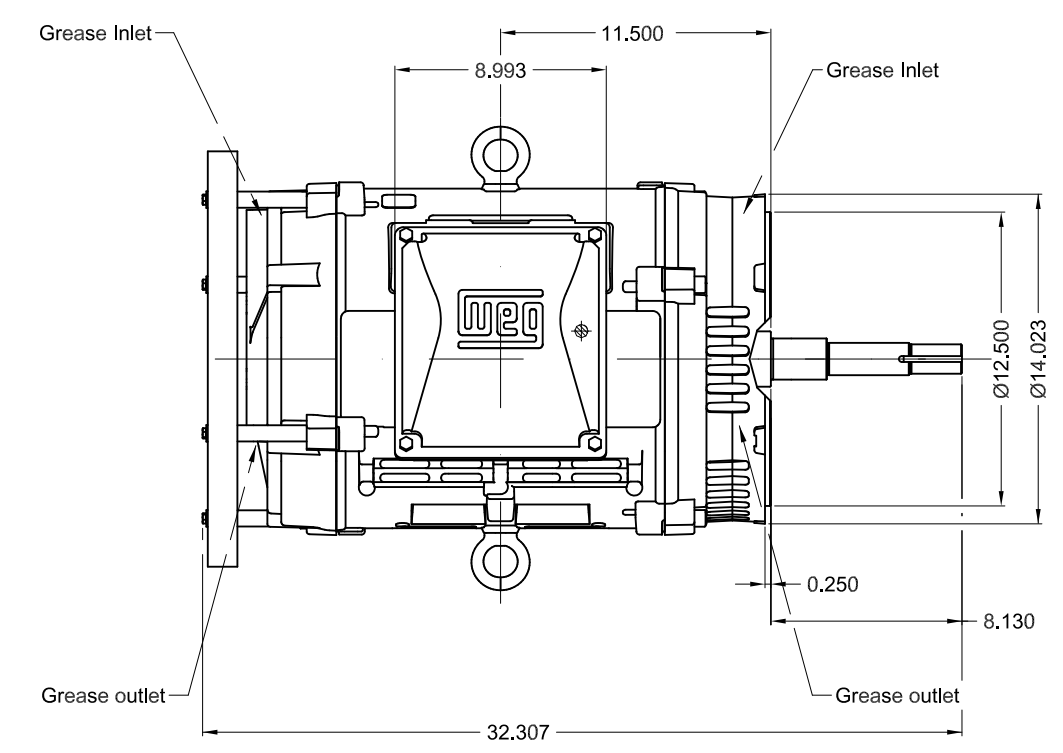
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Grounding for leads 5.2-35 mm² / 10-2 AWG
Main terminal box
NPT 2"



50 HP 02 Poles 60 Hz A

1:8

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR W40 CLOSE COUPLED PUMP JP TYPE PREM. FT.					
CHECKED		FRAME 324/6JP IP23 ODP					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

- Color RAL 5009
- Painting plan 203A
- Mounting NEMA W-6
- Mounting V18

PREVIEW
WDD

