

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer					
Product line		: NEMA Premium Efficiency Three-Phase	Product code :		12424295
			Catalog # :		02518ST3QIE284T-W22
Frame		: 284/6T	Cooling method		: IC411 - TEFC
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		: 432 lb
Protection degree		: IP55	Moment of inertia (J)		: 5.11 sq.ft.lb
Design		: B			
Output [HP]	25	25	25	25	
Poles	4	4	4	4	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	460	380	400	415	
Rated current [A]	29.5	35.6	34.0	33.2	
L. R. Amperes [A]	183	174	187	196	
LRC [A]	6.2x(Code G)	4.9x(Code F)	5.5x(Code F)	5.9x(Code G)	
No load current [A]	10.5	10.4	11.1	11.6	
Rated speed [RPM]	1765	1445	1455	1460	
Slip [%]	1.94	3.67	3.00	2.67	
Rated torque [ft.lb]	74.2	90.2	89.9	89.6	
Locked rotor torque [%]	240	180	210	229	
Breakdown torque [%]	270	210	240	260	
Service factor	1.25	1.00	1.00	1.00	
Temperature rise	80 K	105 K	105 K	80 K	
Locked rotor time	43s (cold) 24s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)	
Noise level ²	63.0 dB(A)	61.0 dB(A)	61.0 dB(A)	61.0 dB(A)	
Efficiency (%)	25%	91.7	92.2	92.2	92.2
	50%	92.4	92.4	92.4	92.4
	75%	93.0	91.7	92.4	92.4
	100%	93.6	91.7	92.4	92.4
Power Factor	25%	0.46	0.53	0.49	0.46
	50%	0.70	0.76	0.73	0.70
	75%	0.80	0.84	0.82	0.80
	100%	0.84	0.86	0.85	0.84
Bearing type		: <u>Drive end</u> 6311 C3 <u>Non drive end</u> 6211 C3	Foundation loads		
Sealing		: Inpro/Seal Inpro/Seal	Max. traction : 803 lb		
Lubrication interval		: 20000 h 20000 h	Max. compression : 1236 lb		
Lubricant amount		: 18 g 11 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.		
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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



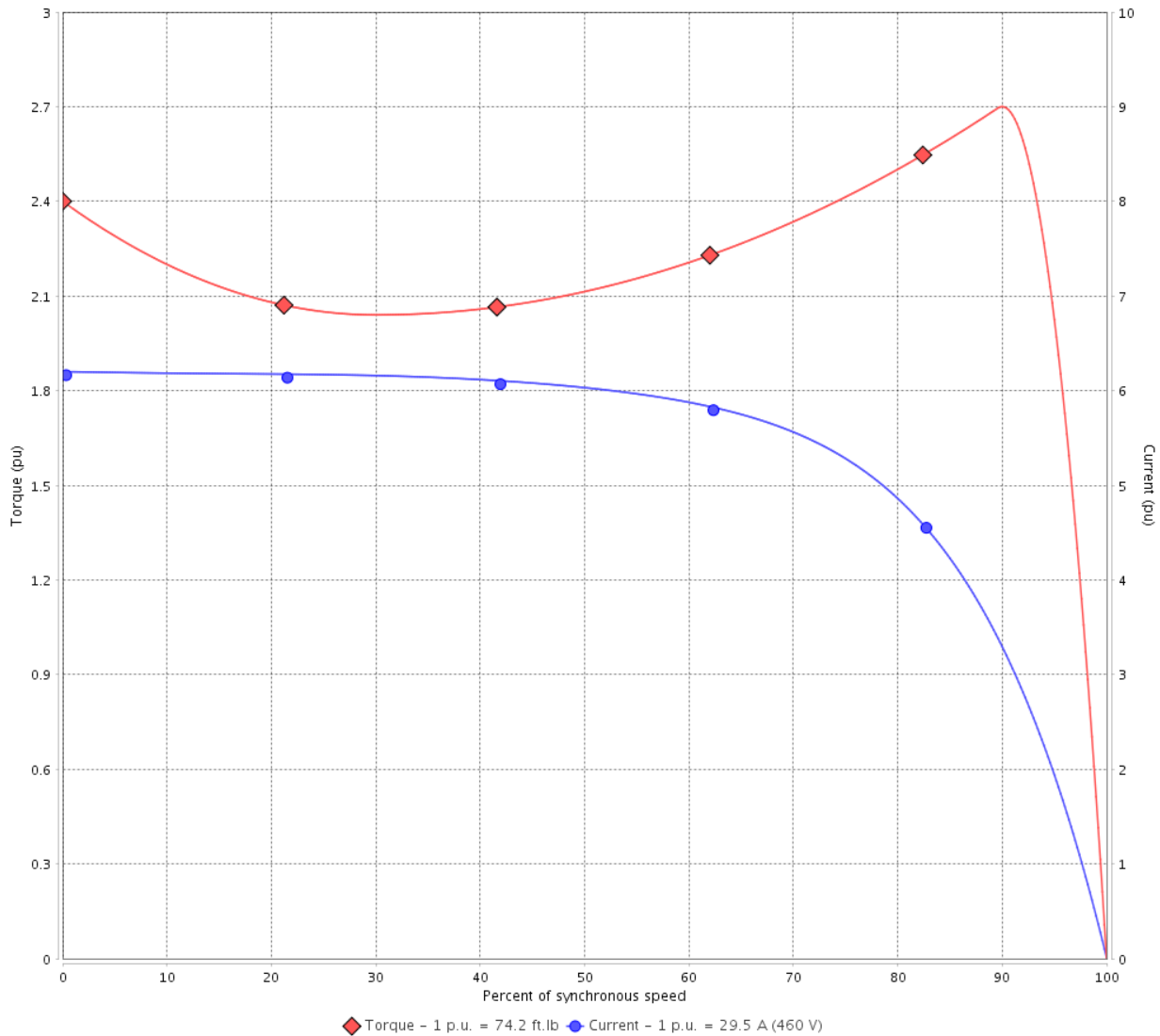
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12424295

Catalog # : 02518ST3QIE284T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 460 V 60 Hz 4P

Rated current	: 29.5 A	Moment of inertia (J)	: 5.11 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 74.2 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.25
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1765 rpm	Design	: B

Locked rotor time : 43s (cold) 24s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



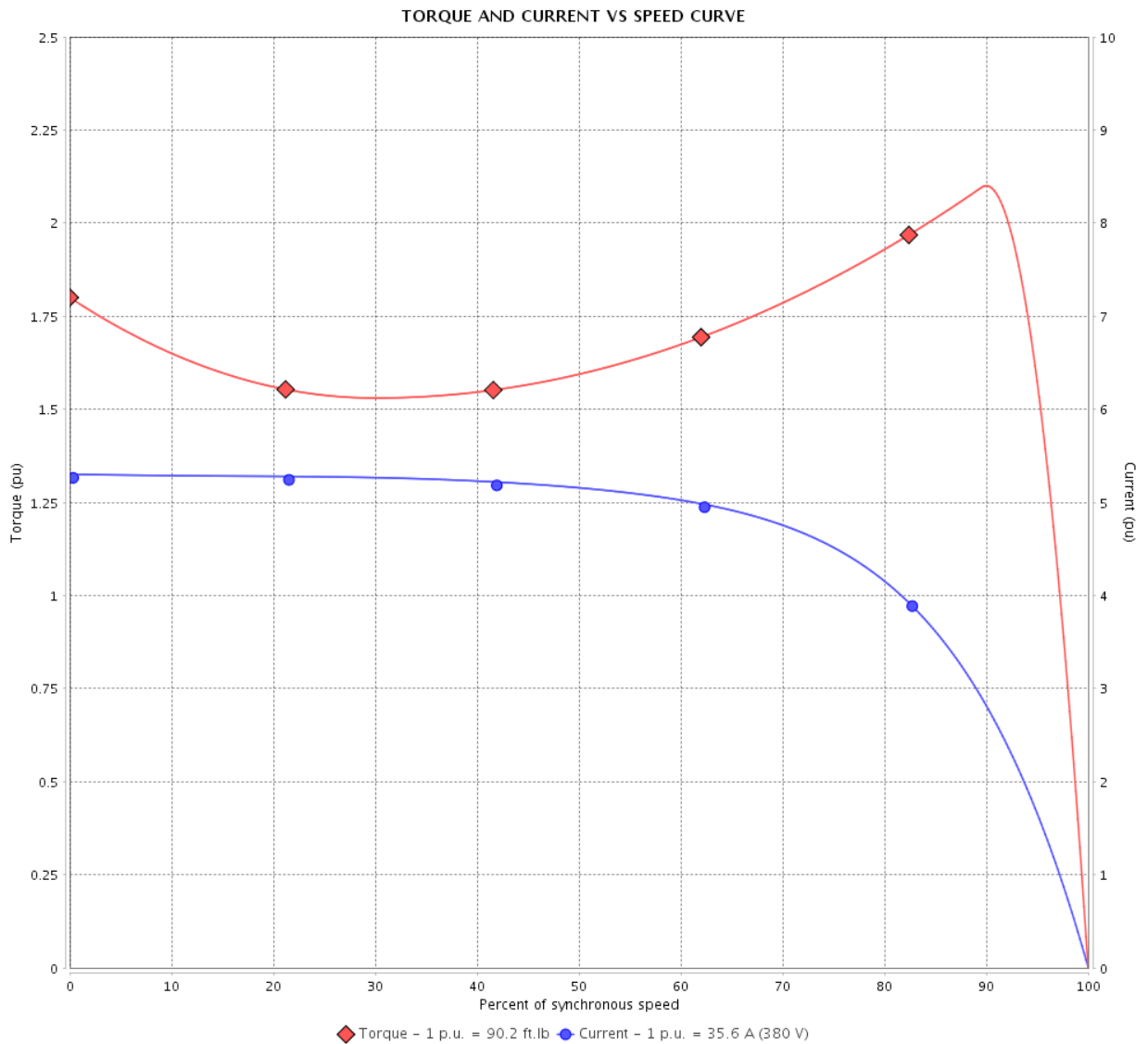
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12424295

Catalog # : 02518ST3QIE284T-W22



Performance : 380 V 50 Hz 4P IE2

Rated current : 35.6 A
 LRC : 4.9
 Rated torque : 90.2 ft.lb
 Locked rotor torque : 180 %
 Breakdown torque : 210 %
 Rated speed : 1445 rpm

Moment of inertia (J) : 5.11 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

Locked rotor time : 32s (cold) 18s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



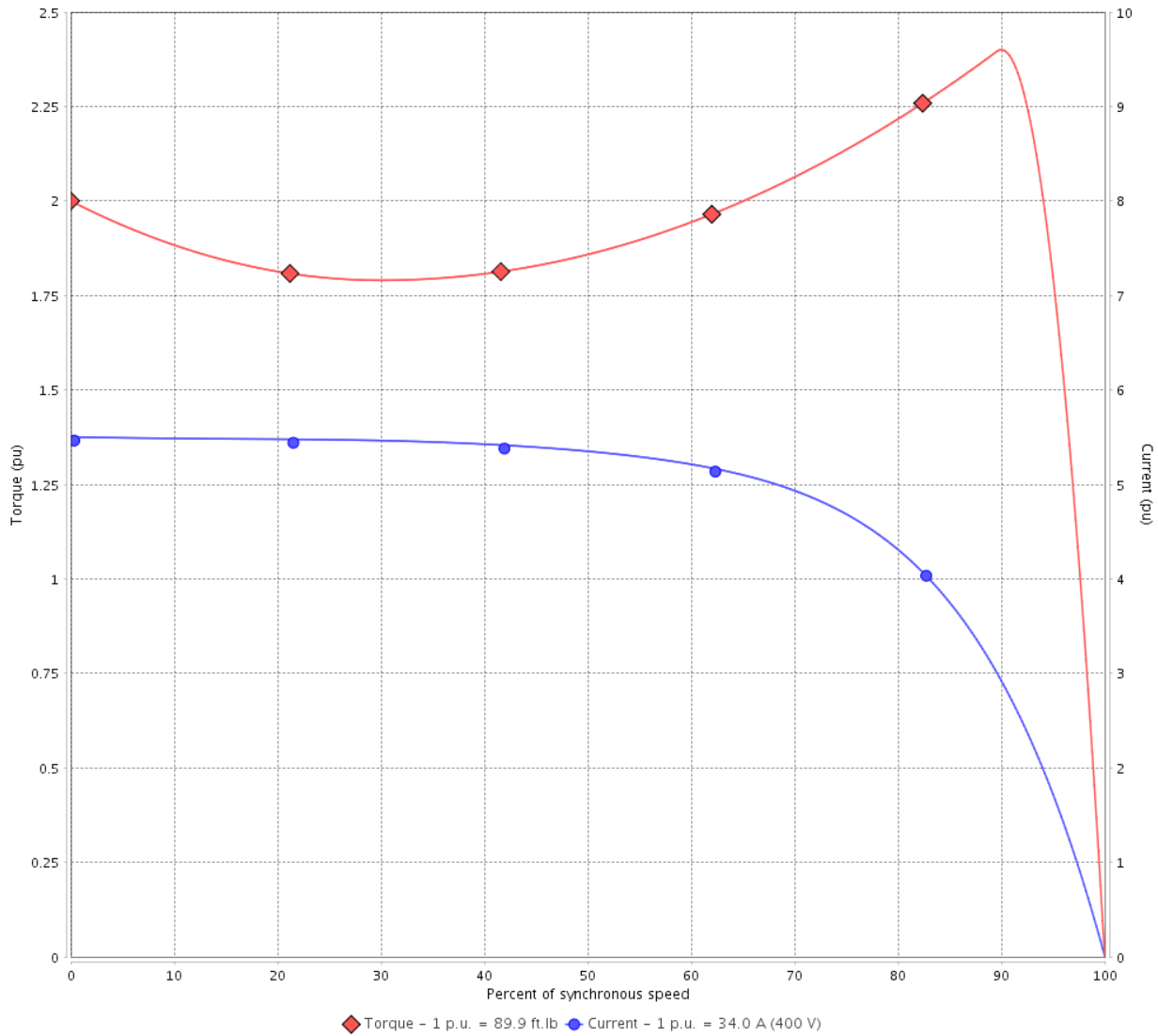
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12424295

Catalog # : 02518ST3QIE284T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 4P IE2

Rated current	: 34.0 A	Moment of inertia (J)	: 5.11 sq.ft.lb
LRC	: 5.5	Duty cycle	: Cont.(S1)
Rated torque	: 89.9 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 105 K
Rated speed	: 1455 rpm	Design	: B

Locked rotor time : 32s (cold) 18s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



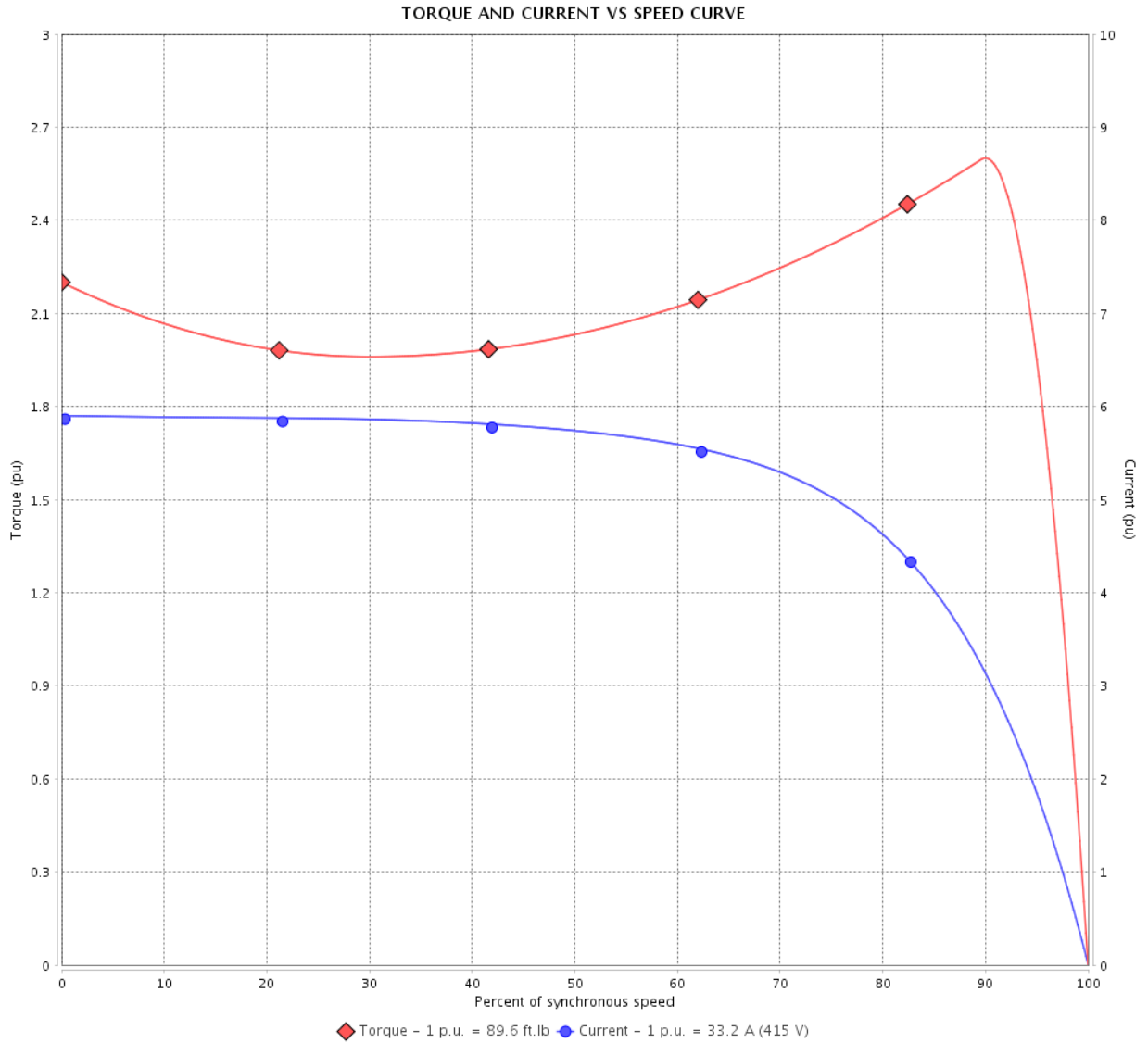
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Performance : 415 V 50 Hz 4P IE2

Rated current	: 33.2 A	Moment of inertia (J)	: 5.11 sq.ft.lb
LRC	: 5.9	Duty cycle	: Cont.(S1)
Rated torque	: 89.6 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1460 rpm	Design	: B

Locked rotor time : 32s (cold) 18s (hot)

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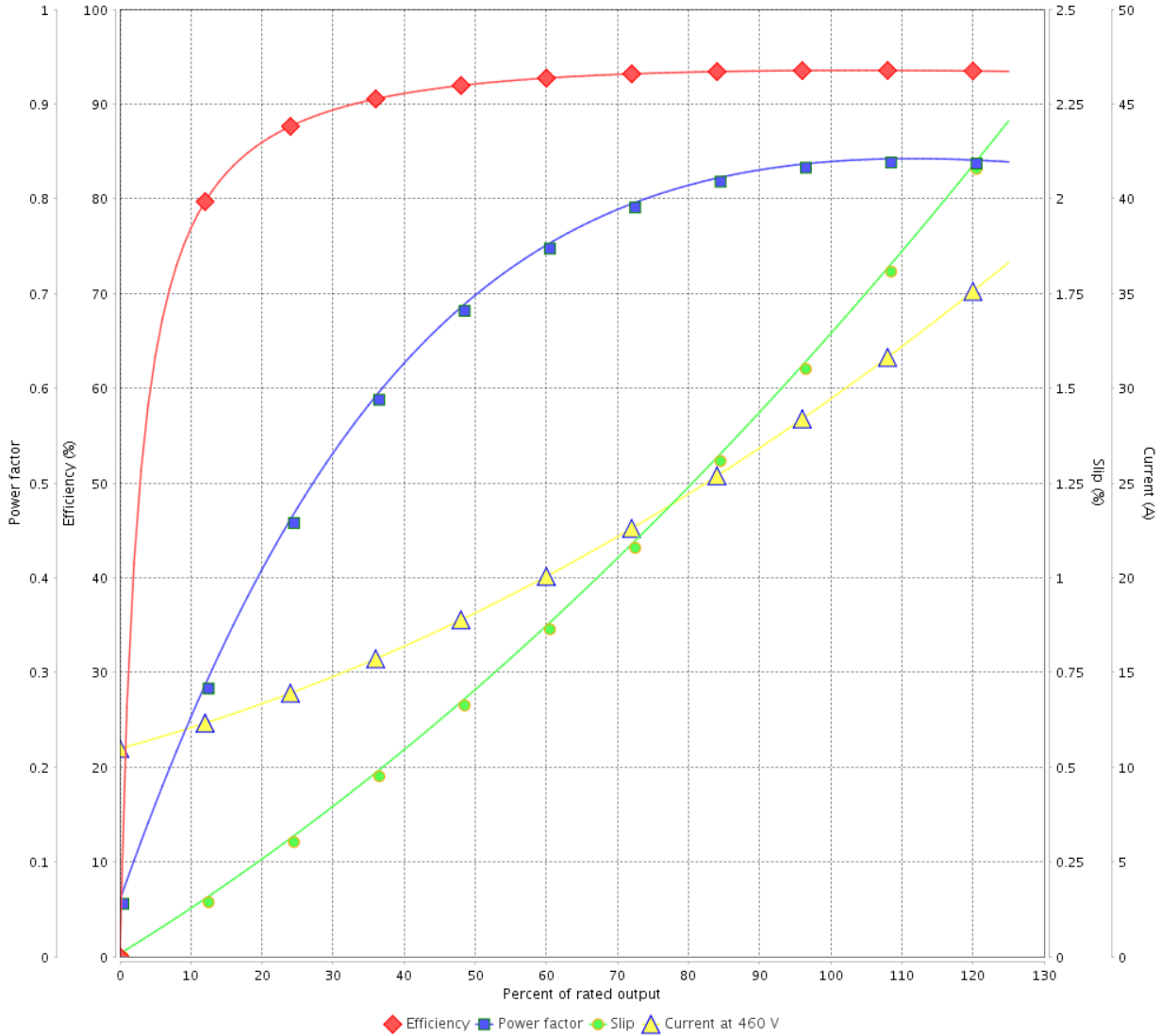
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Performance : 460 V 60 Hz 4P

Rated current : 29.5 A
 LRC : 6.2
 Rated torque : 74.2 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 270 %
 Rated speed : 1765 rpm

Moment of inertia (J) : 5.11 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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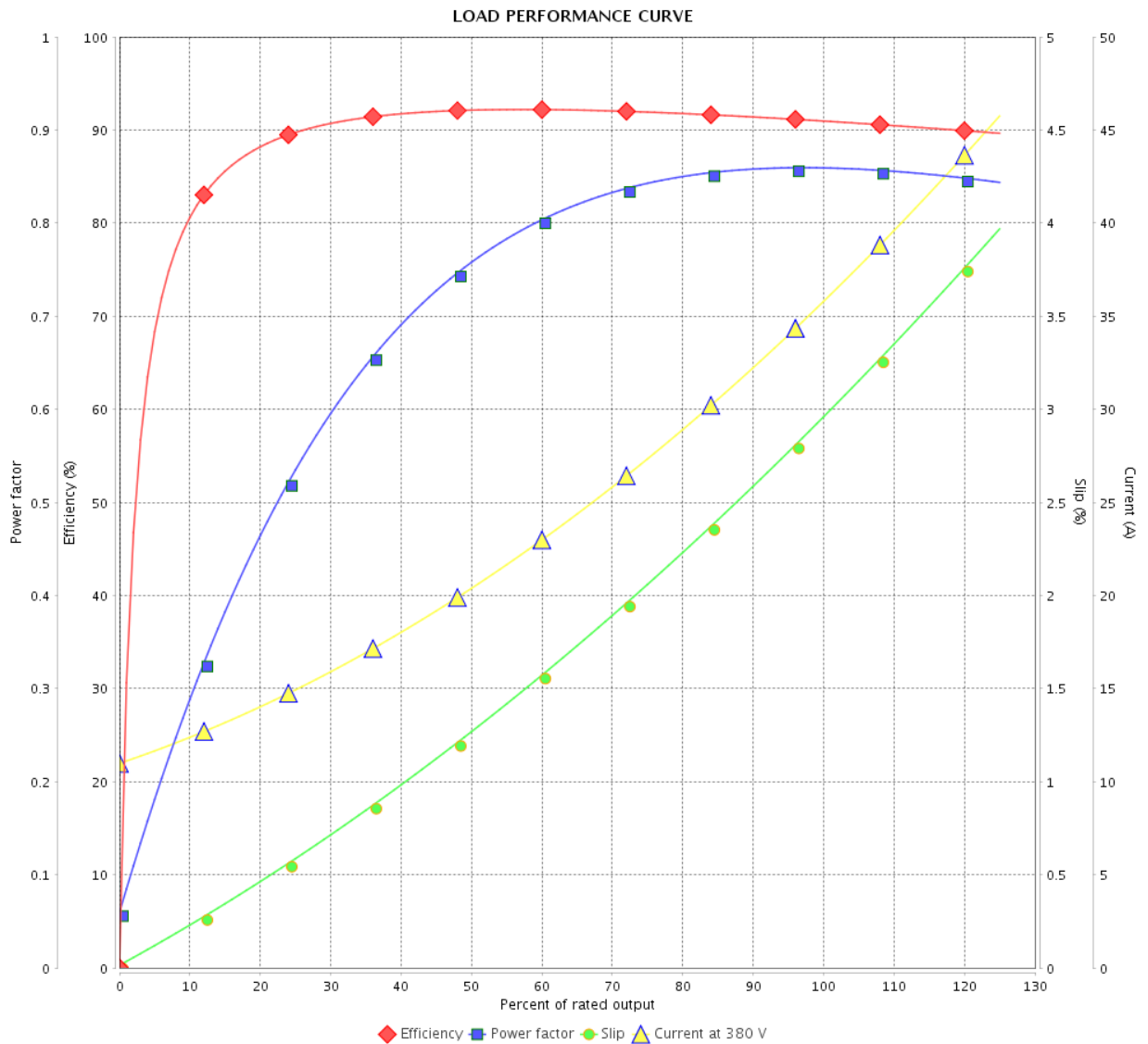


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Performance : 380 V 50 Hz 4P IE2

Rated current : 35.6 A
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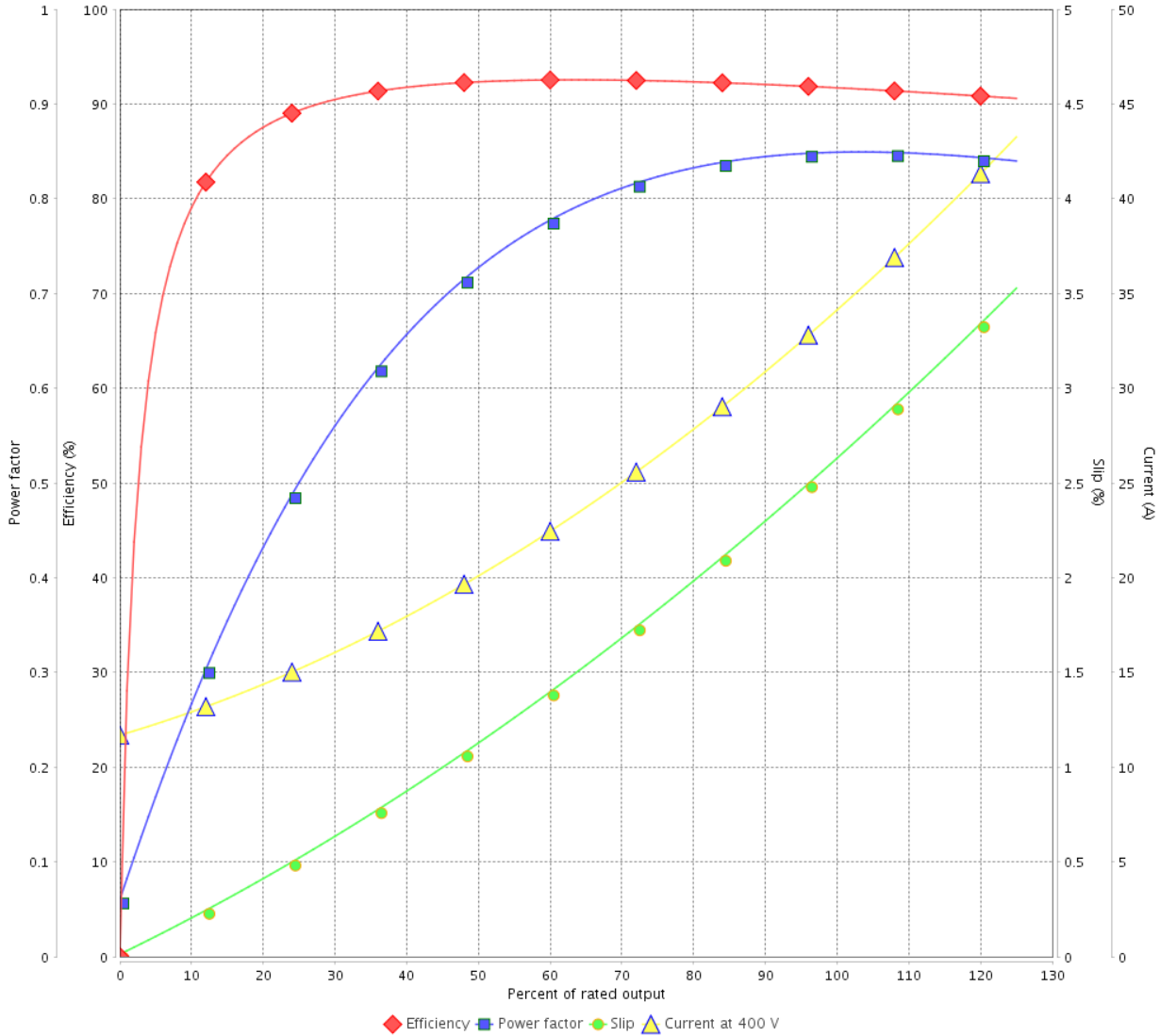
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Performance : 400 V 50 Hz 4P IE2

Rated current : 34.0 A
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 Breakdown torque : 240 %
 Rated speed : 1455 rpm

Moment of inertia (J) : 5.11 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
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 Temperature rise : 105 K
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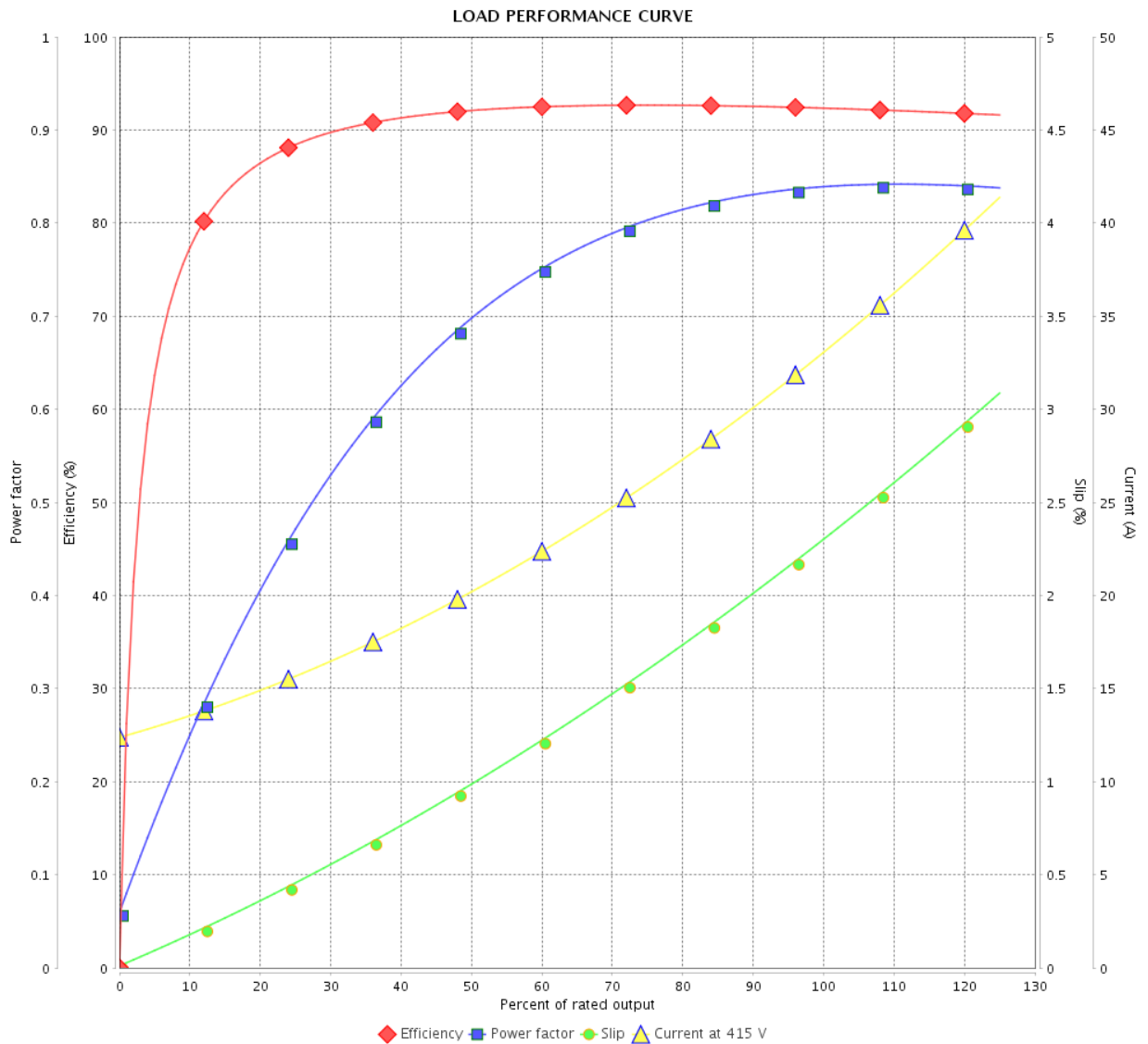


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 LRC : 5.9
 Rated torque : 89.6 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 260 %
 Rated speed : 1460 rpm

Moment of inertia (J) : 5.11 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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Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1765 rpm	Design	: B

Heating constant

Cooling constant

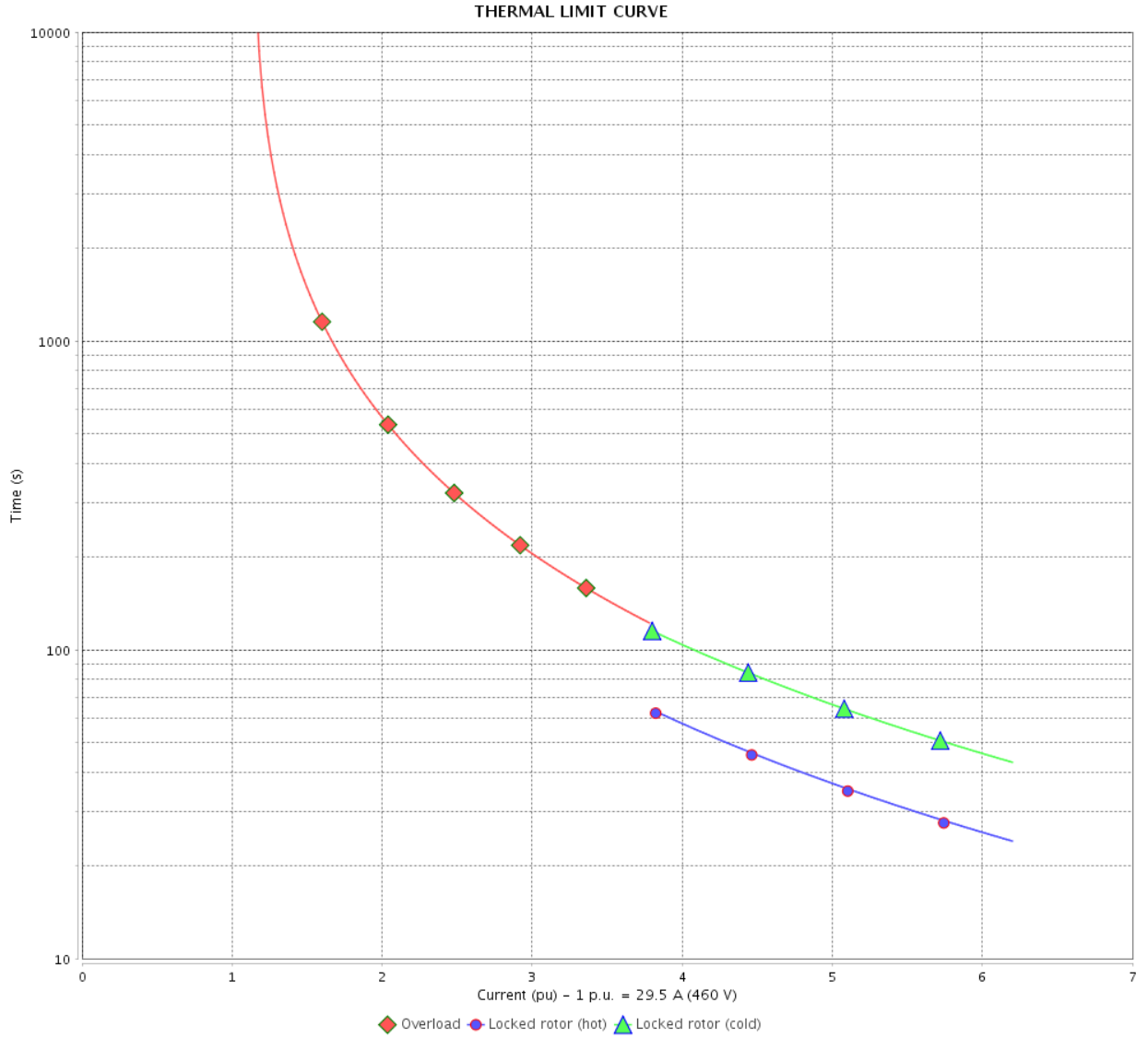
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Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 105 K
Rated speed	: 1445 rpm	Design	: B

Heating constant

Cooling constant

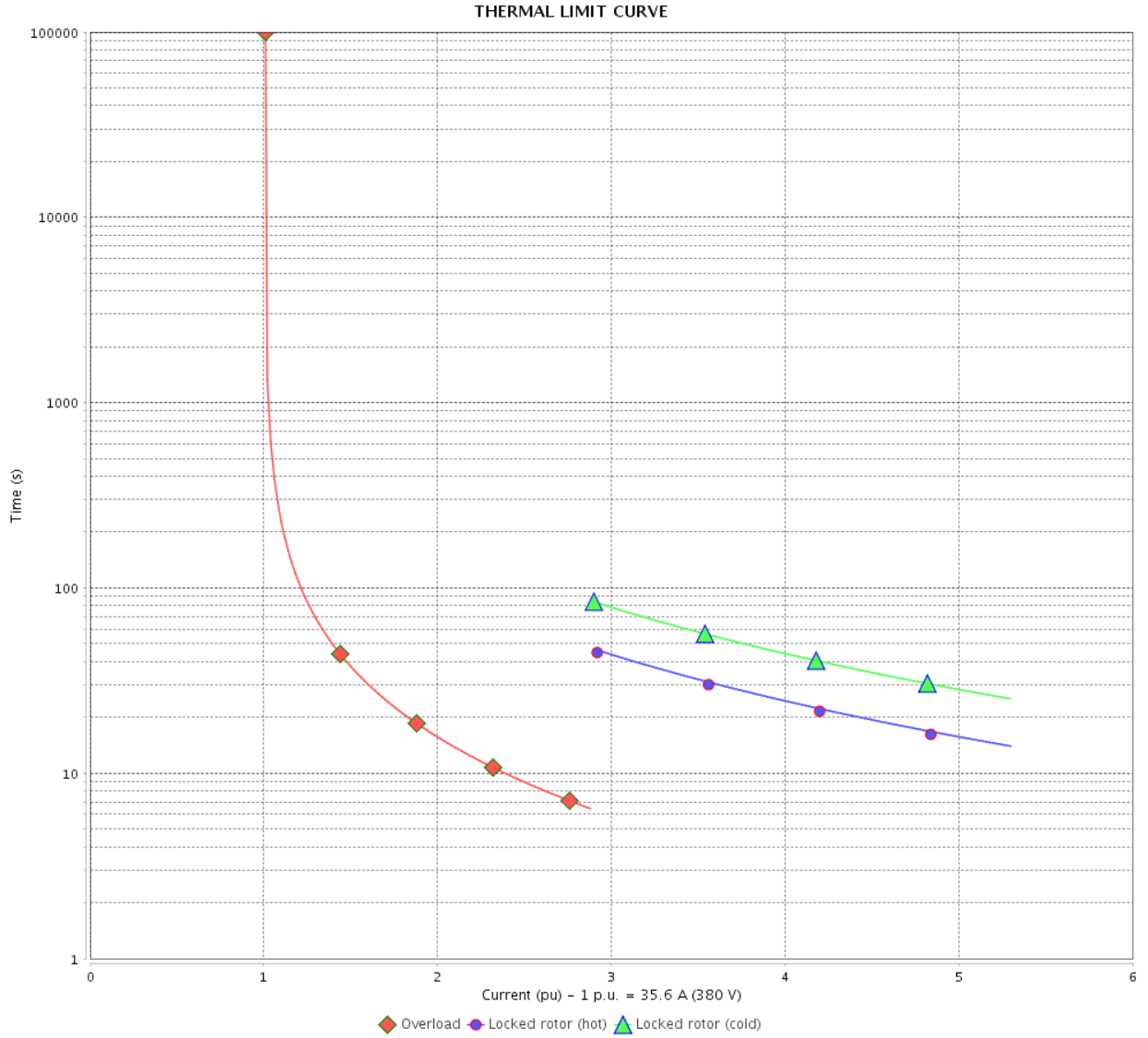
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LRC	: 5.5	Duty cycle	: Cont.(S1)
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Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 105 K
Rated speed	: 1455 rpm	Design	: B

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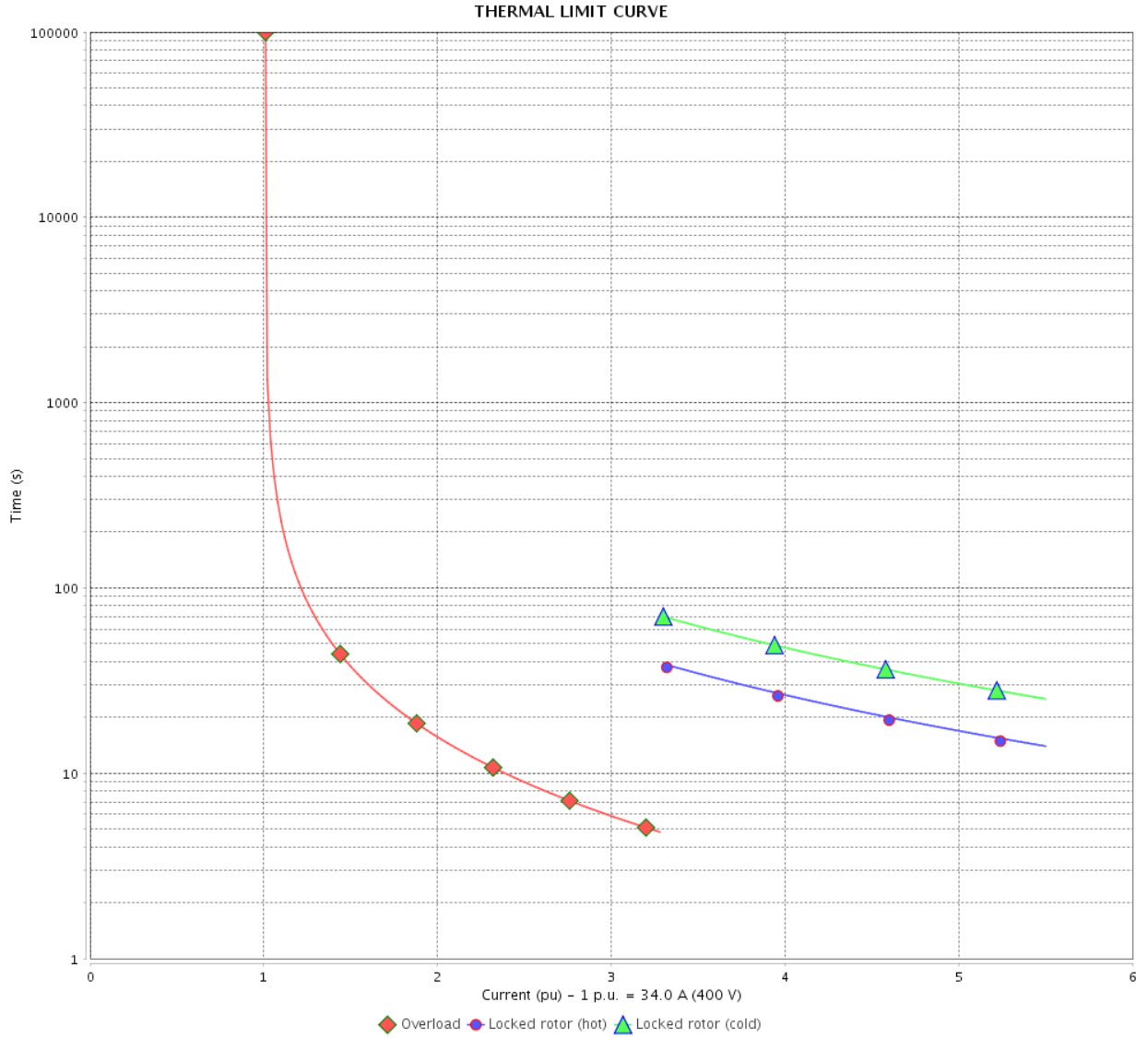
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Rated torque	: 89.6 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1460 rpm	Design	: B

Heating constant

Cooling constant

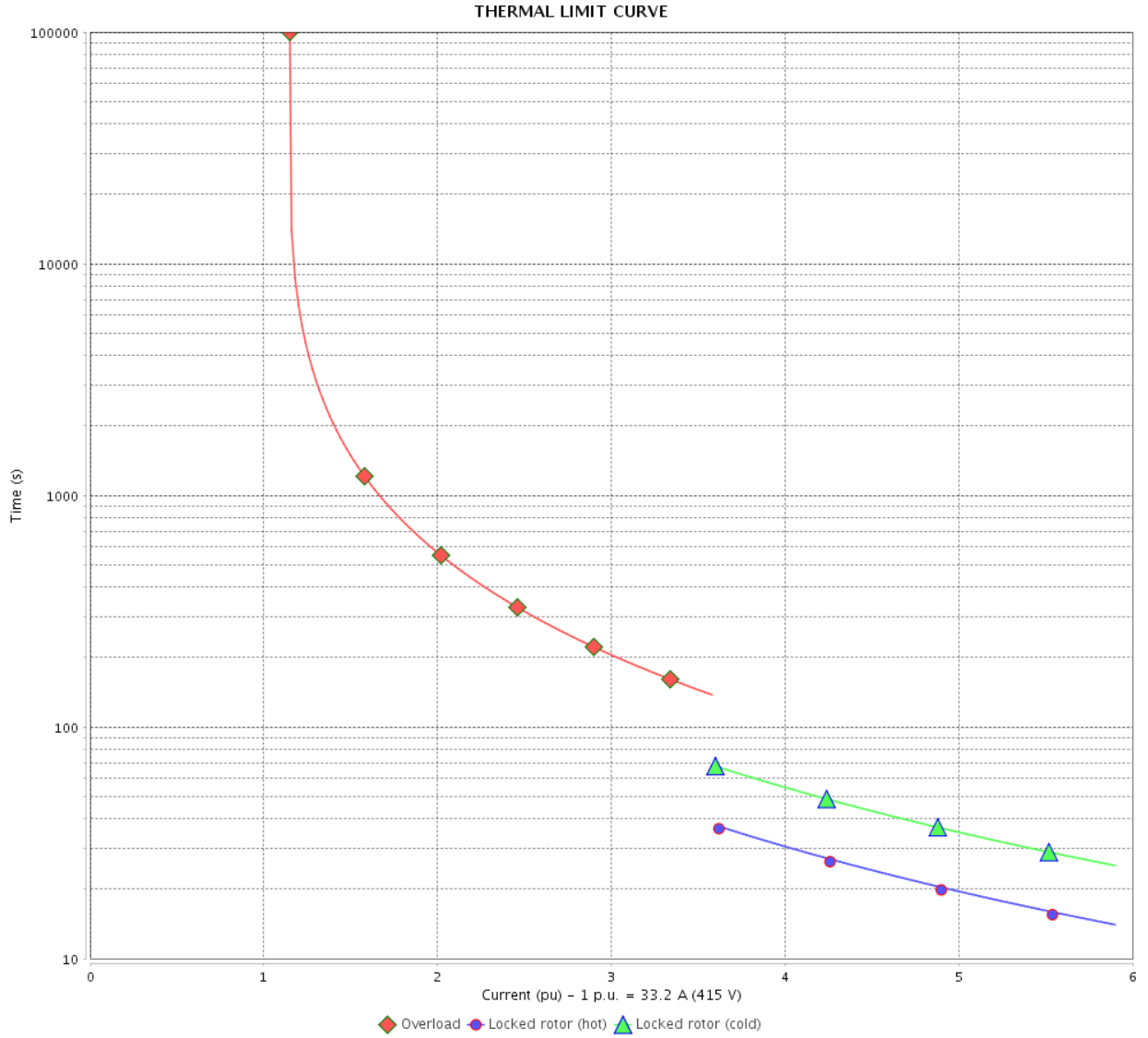
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

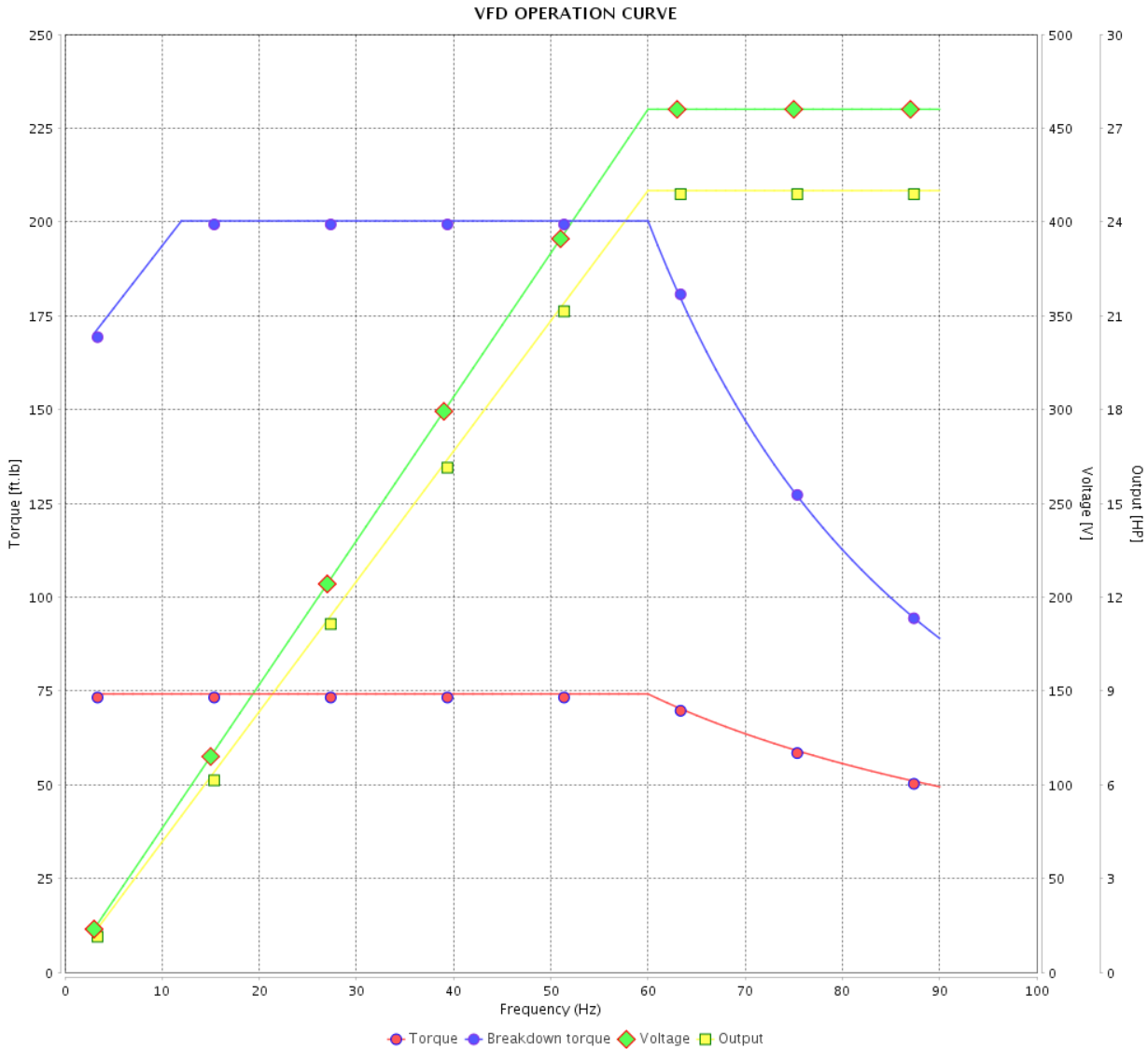


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 Duty cycle : Cont.(S1)
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

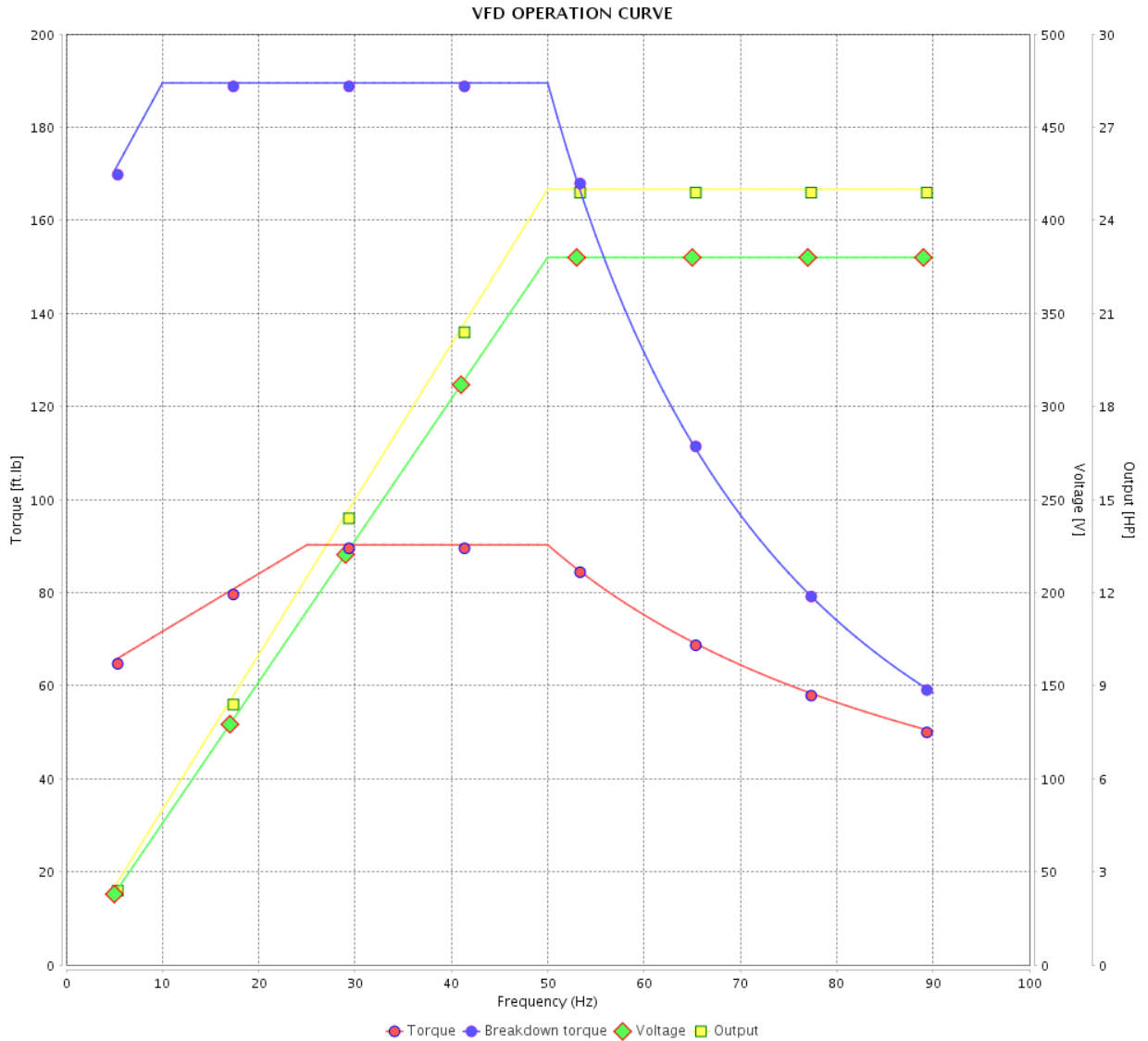


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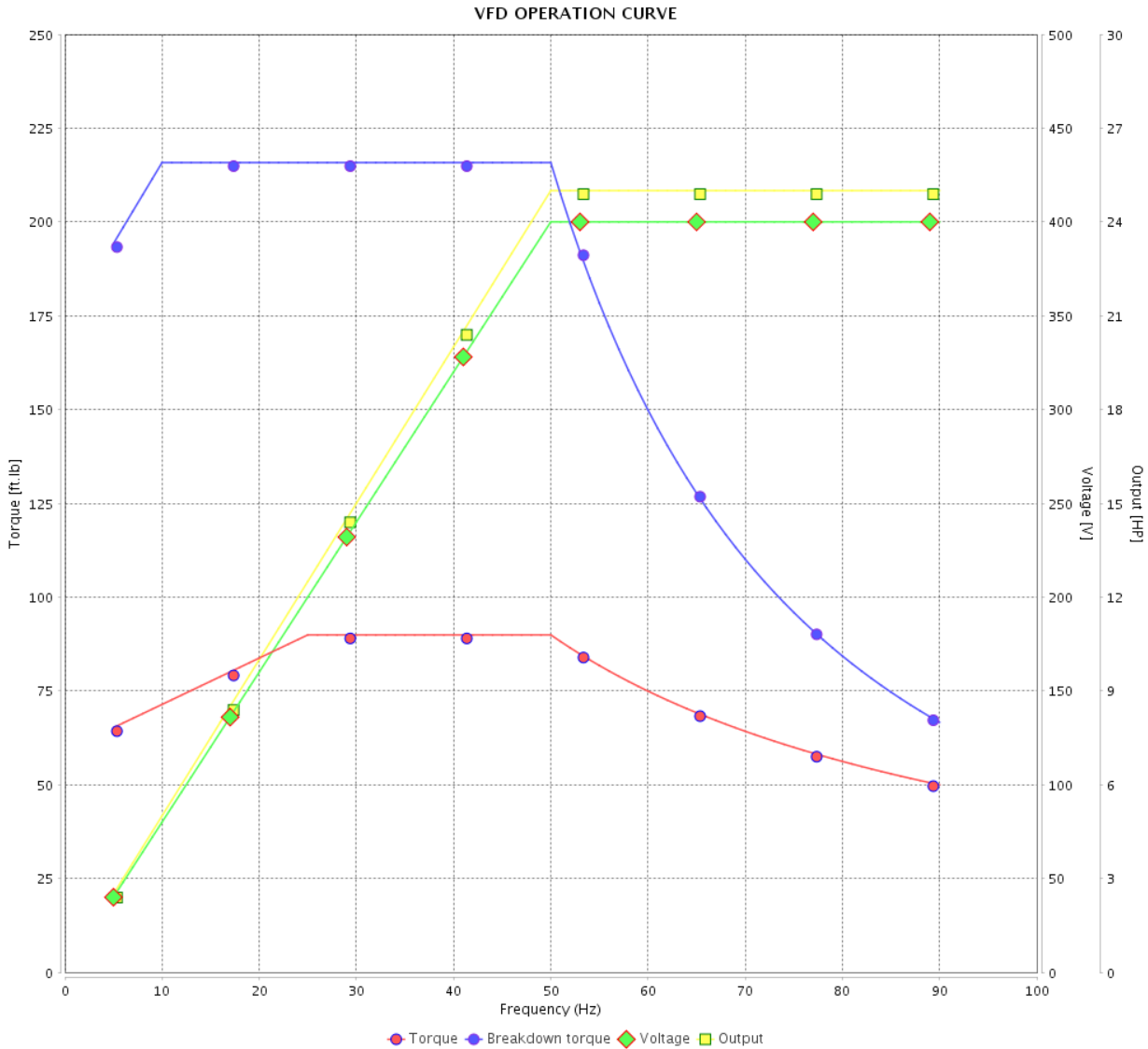


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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

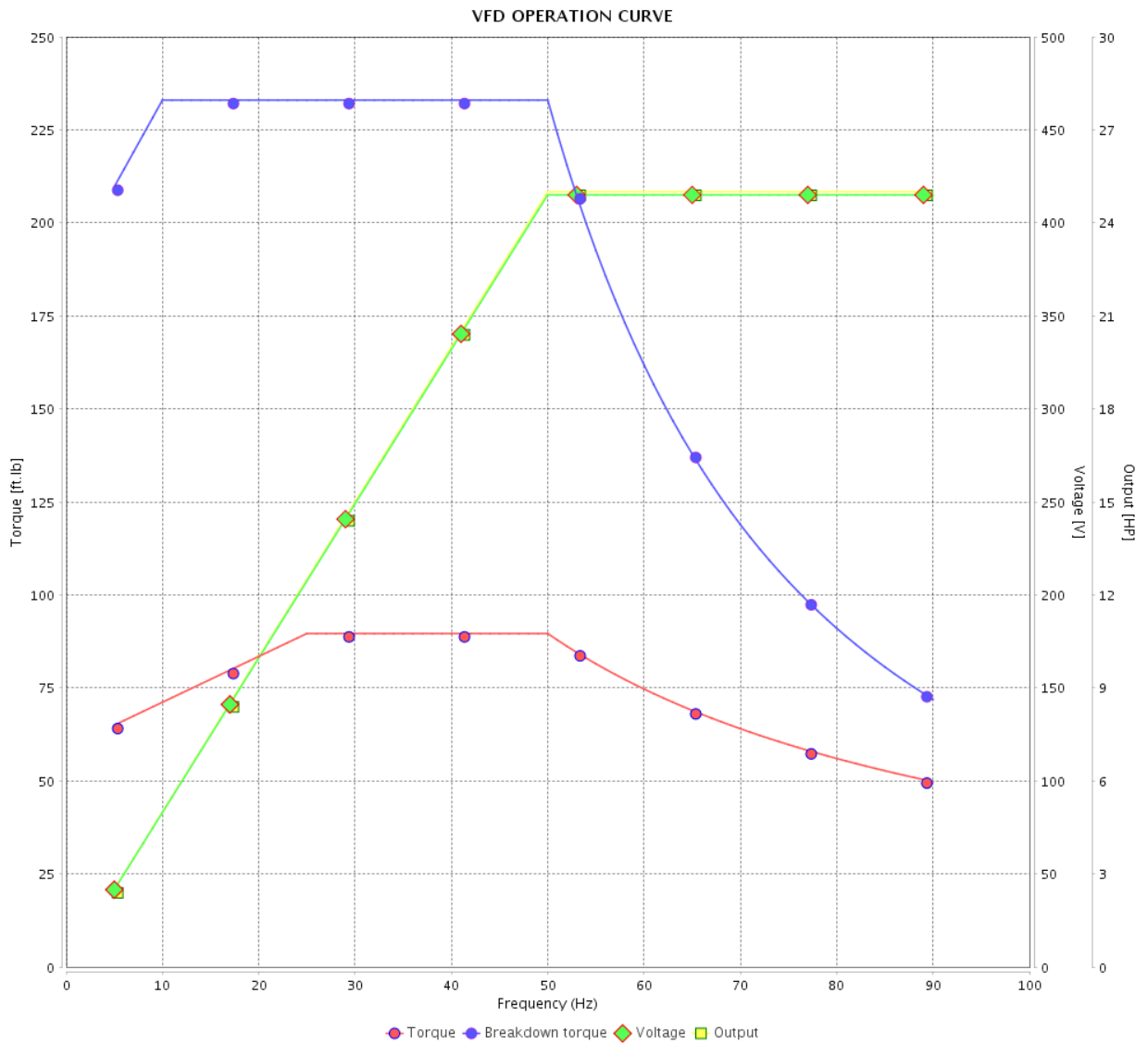


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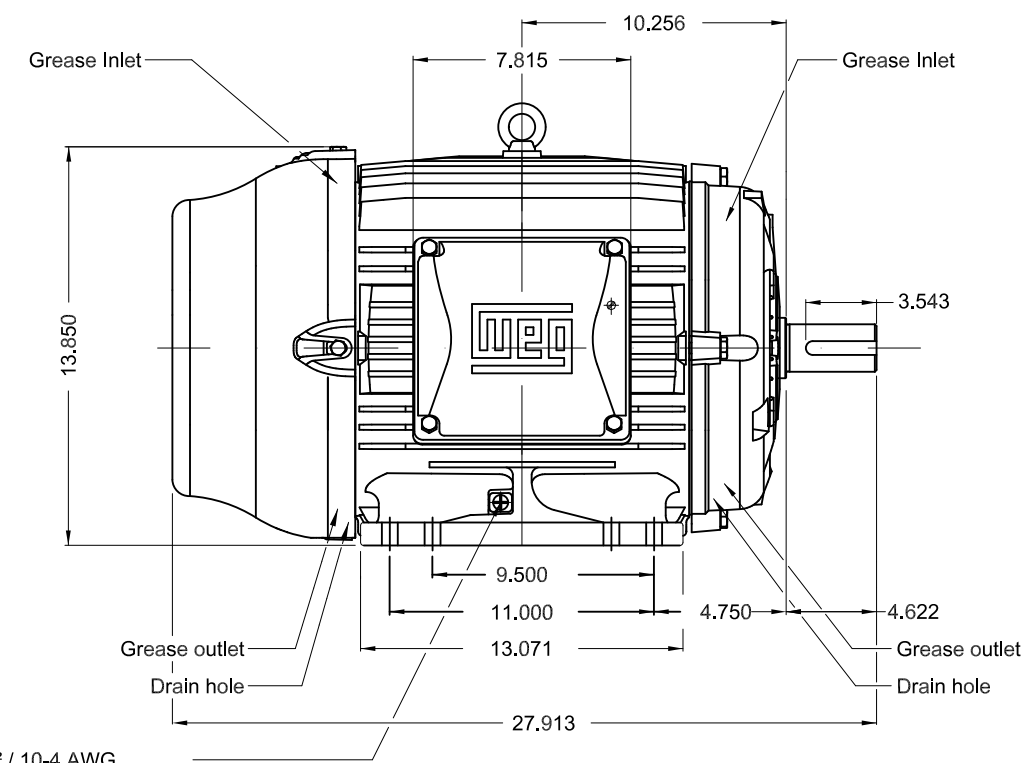
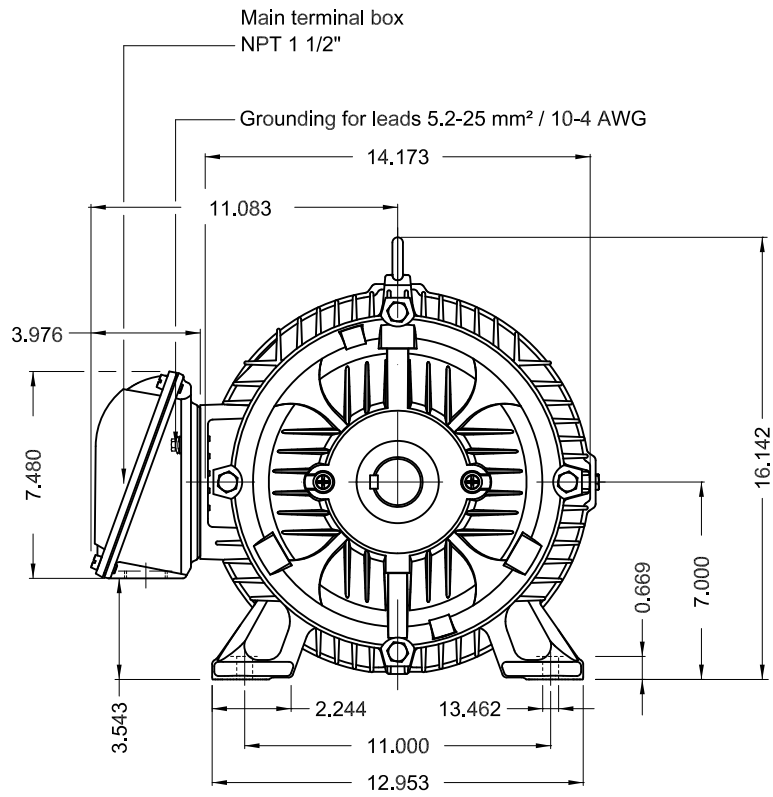
Rev.	Changes Summary	Performed	Checked	Date
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1 2 3 4 5 6

A

B

C

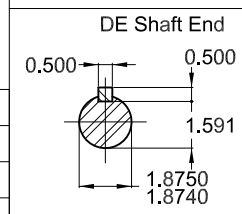


Grounding for leads 5.2-25 mm² / 10-4 AWG

D

E

Without vertical jackscrews
 Color RAL 5009
 Painting plan 202E
 Mounting B3R(D)



25 HP 04 Poles 60 Hz A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR IEEE 841 W22 PREM. EFF.					
CHECKED		FRAME 284/6T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW
 WDD

