

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer					
Product line		: NEMA Premium Efficiency Three-Phase	Product code :		12424294
			Catalog # :		02518ST3QIE284TC-W22
Frame		: 284/6TC	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		: 449 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		Drive end : 6311 C3	Non drive end : 6211 C3	Foundation loads	
Sealing		: Inpro/Seal	: Inpro/Seal	Max. traction : 795 lb	
Lubrication interval		: 20000 h	: 20000 h	Max. compression : 1244 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



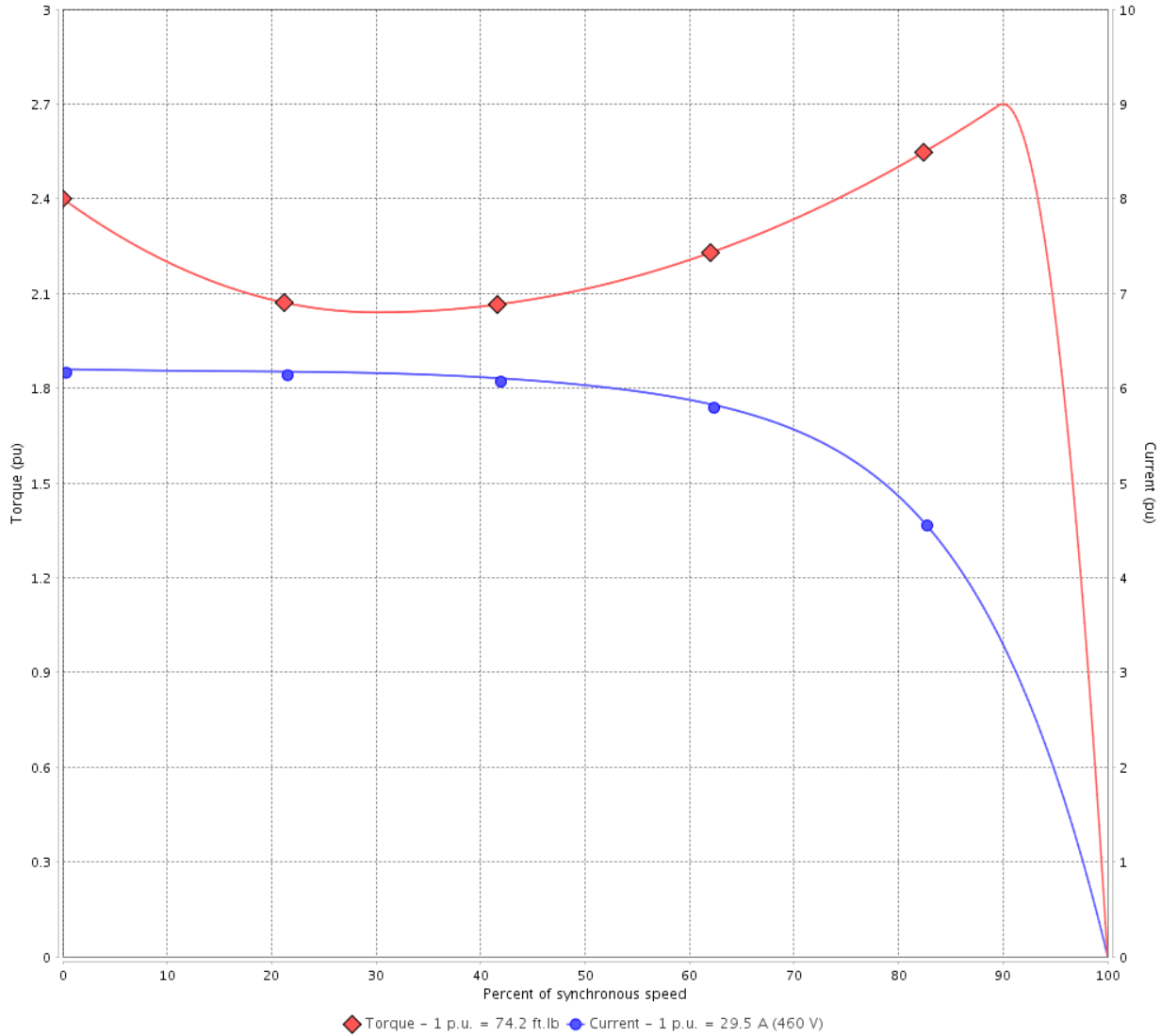
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12424294

Catalog # : 02518ST3QIE284TC-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



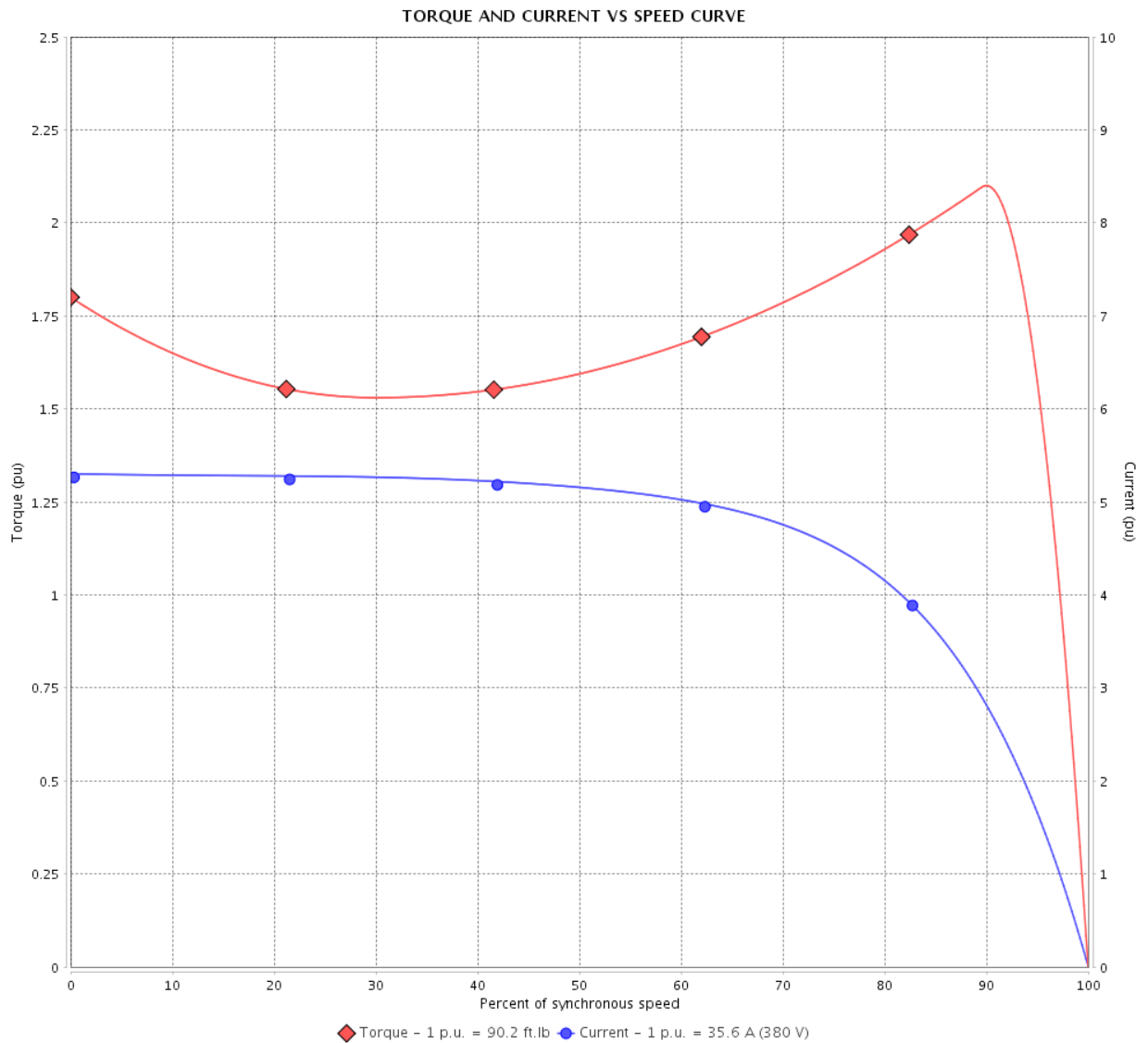
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12424294

Catalog # : 02518ST3QIE284TC-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



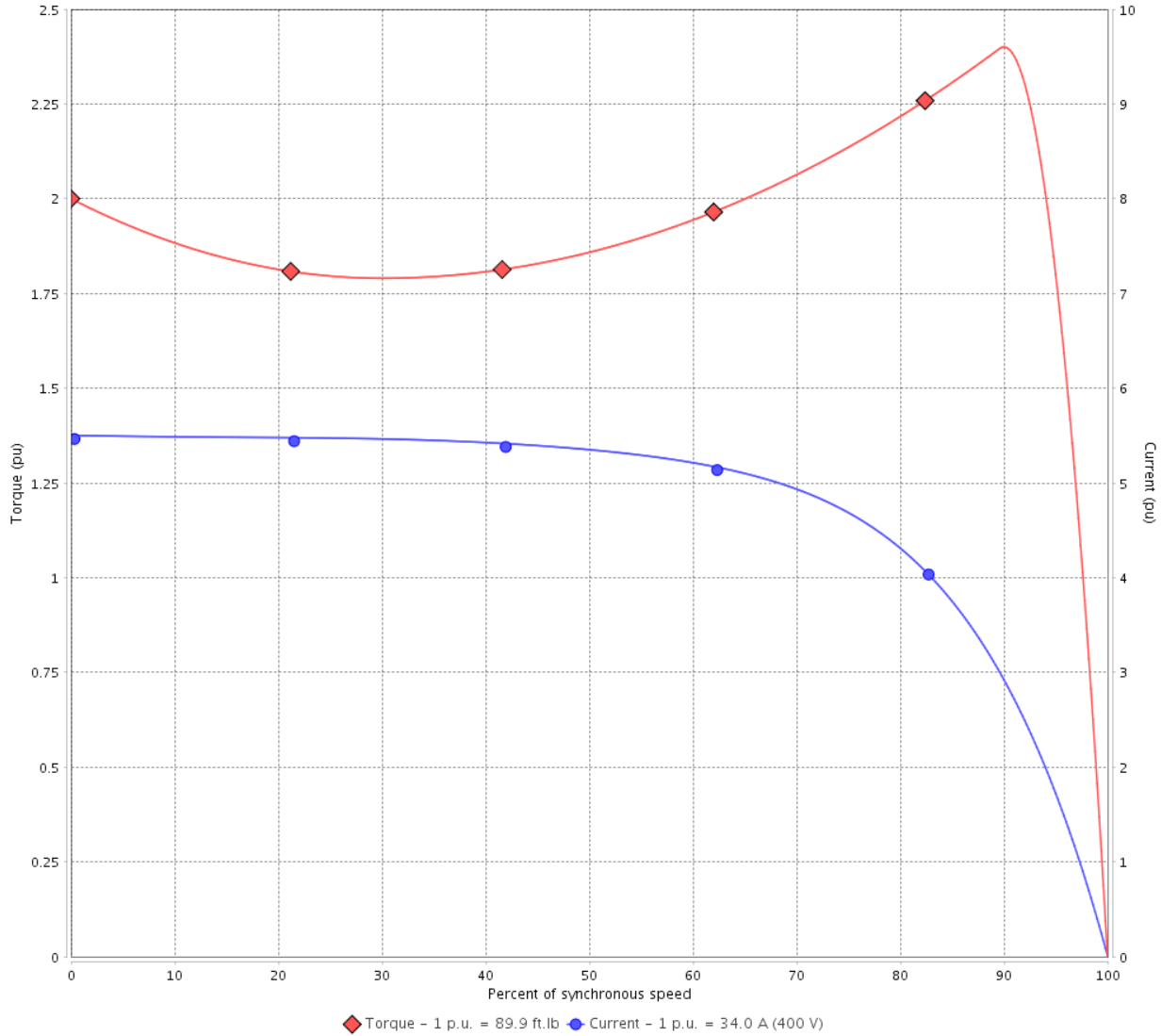
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12424294

Catalog # : 02518ST3QIE284TC-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



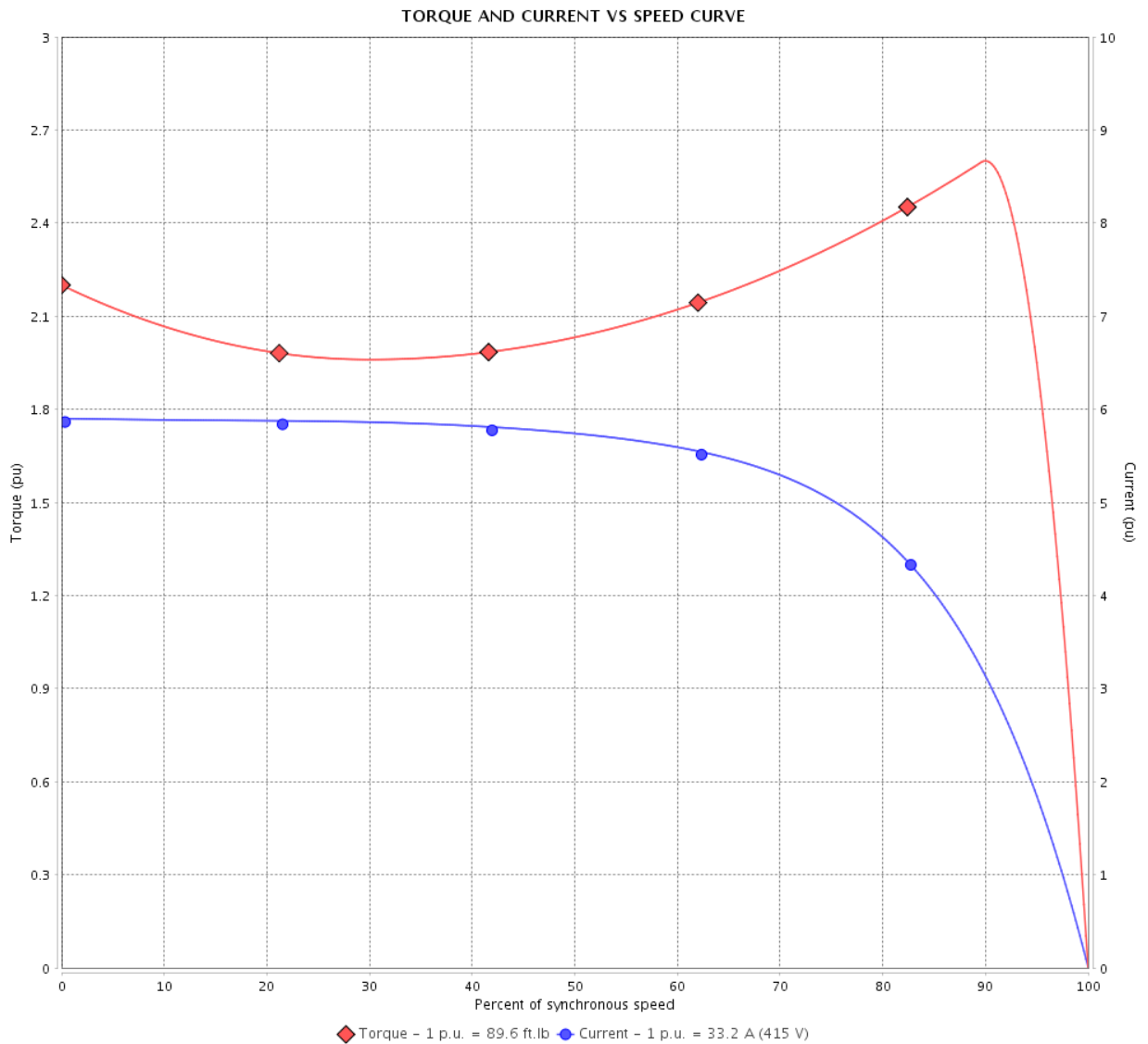
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12424294

Catalog # : 02518ST3QIE284TC-W22



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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Three Phase Induction Motor - Squirrel Cage



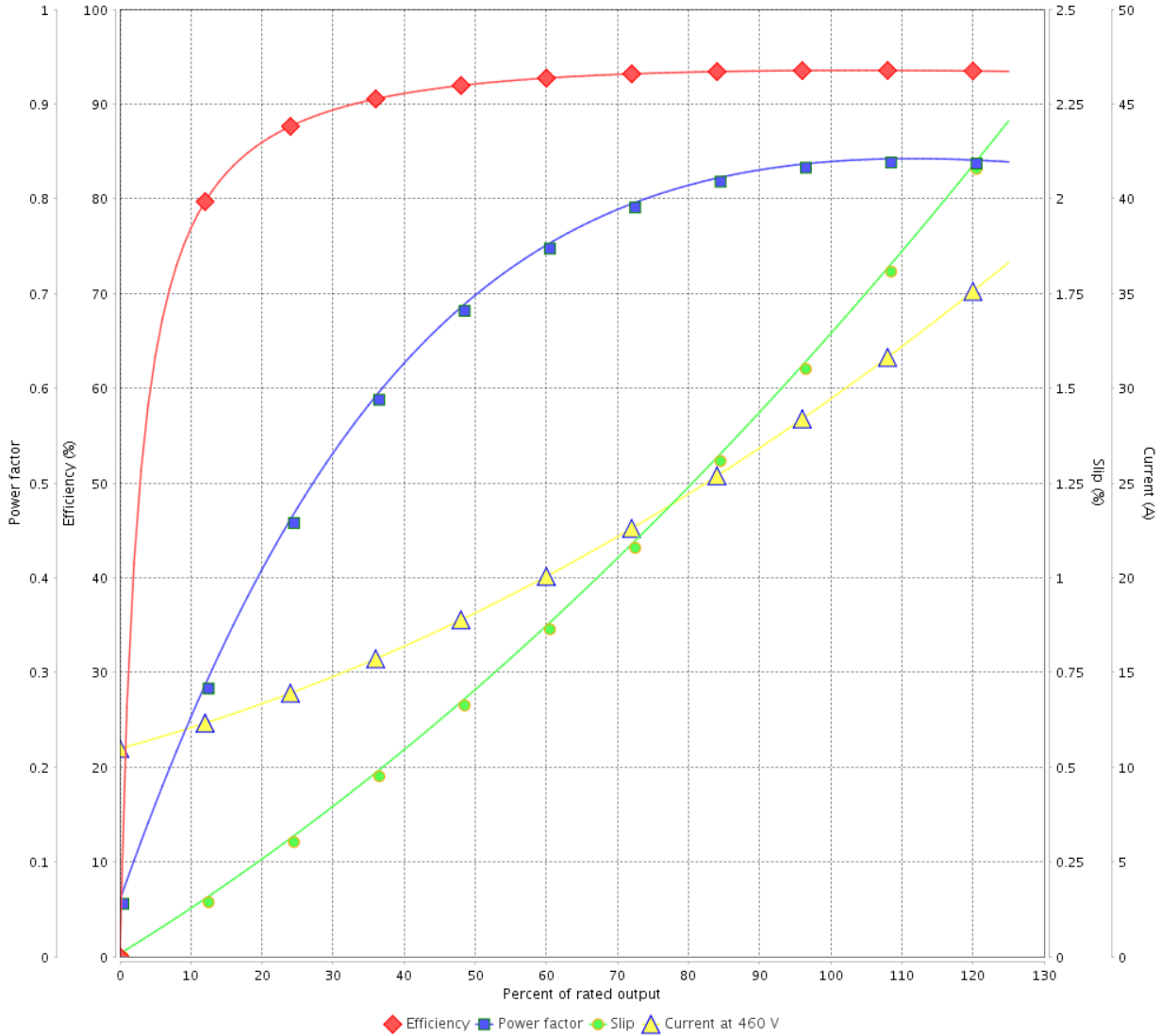
Customer :

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LOAD PERFORMANCE CURVE



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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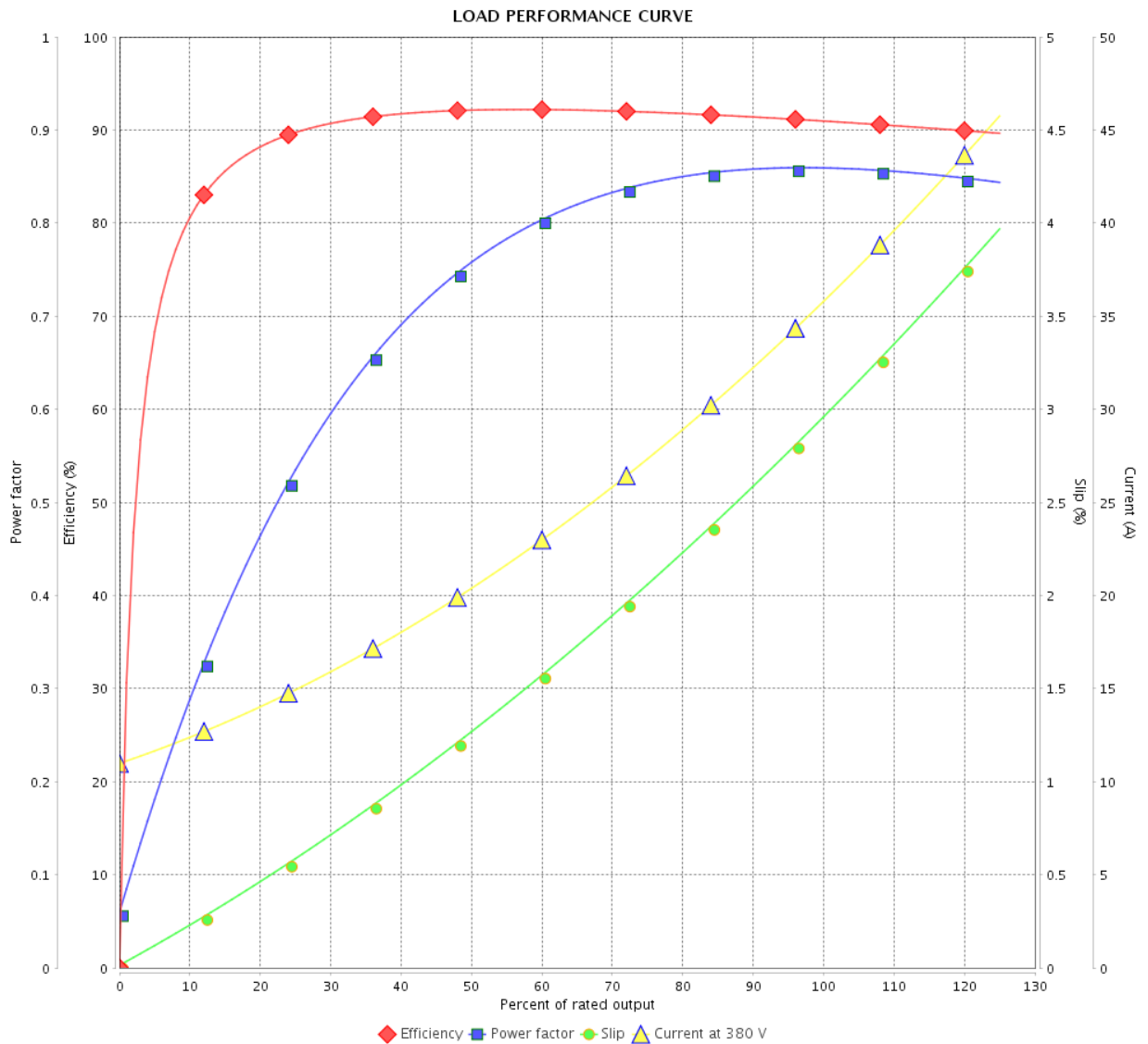


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Performance : 380 V 50 Hz 4P IE2

Rated current : 35.6 A
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 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

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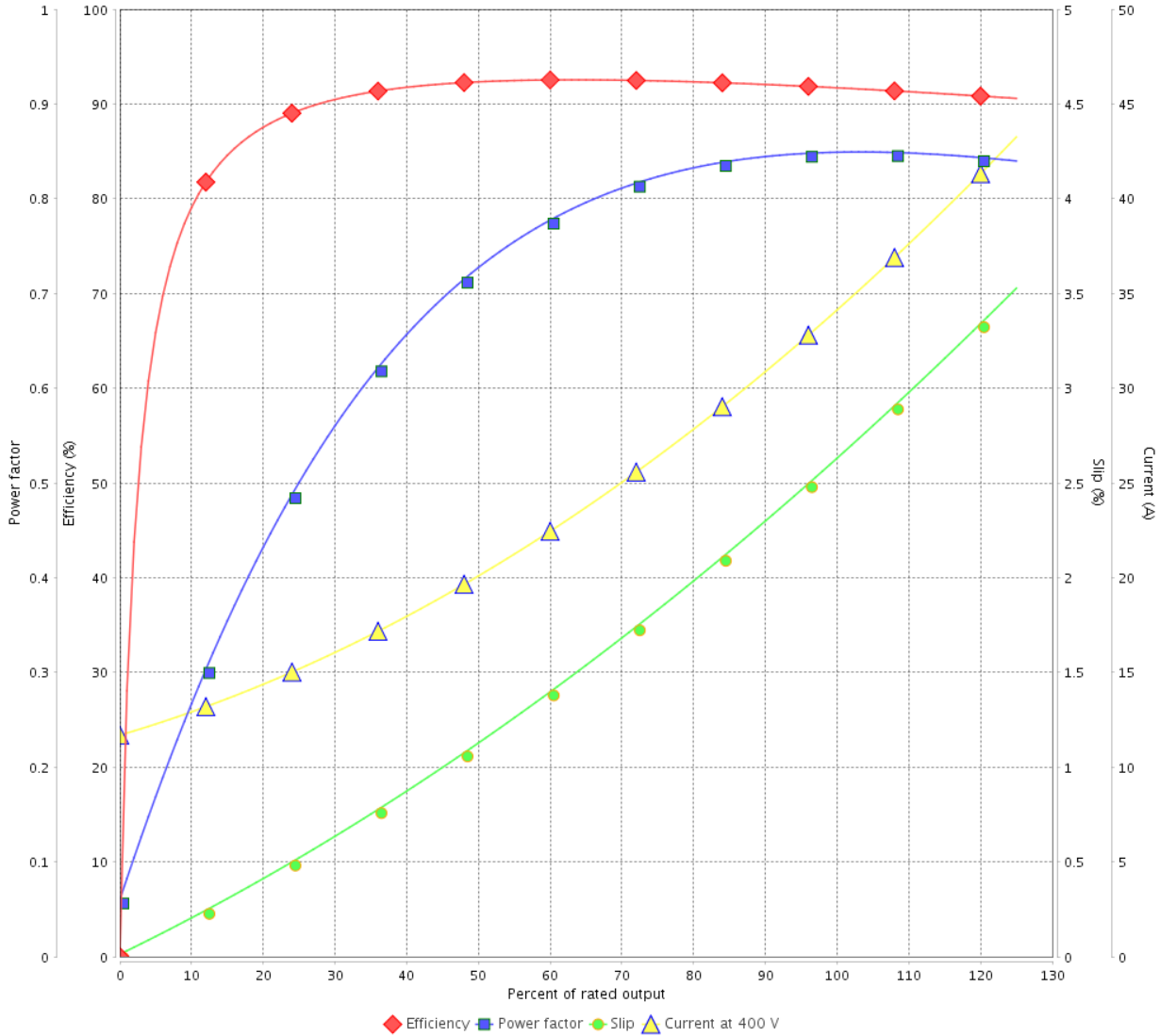
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 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

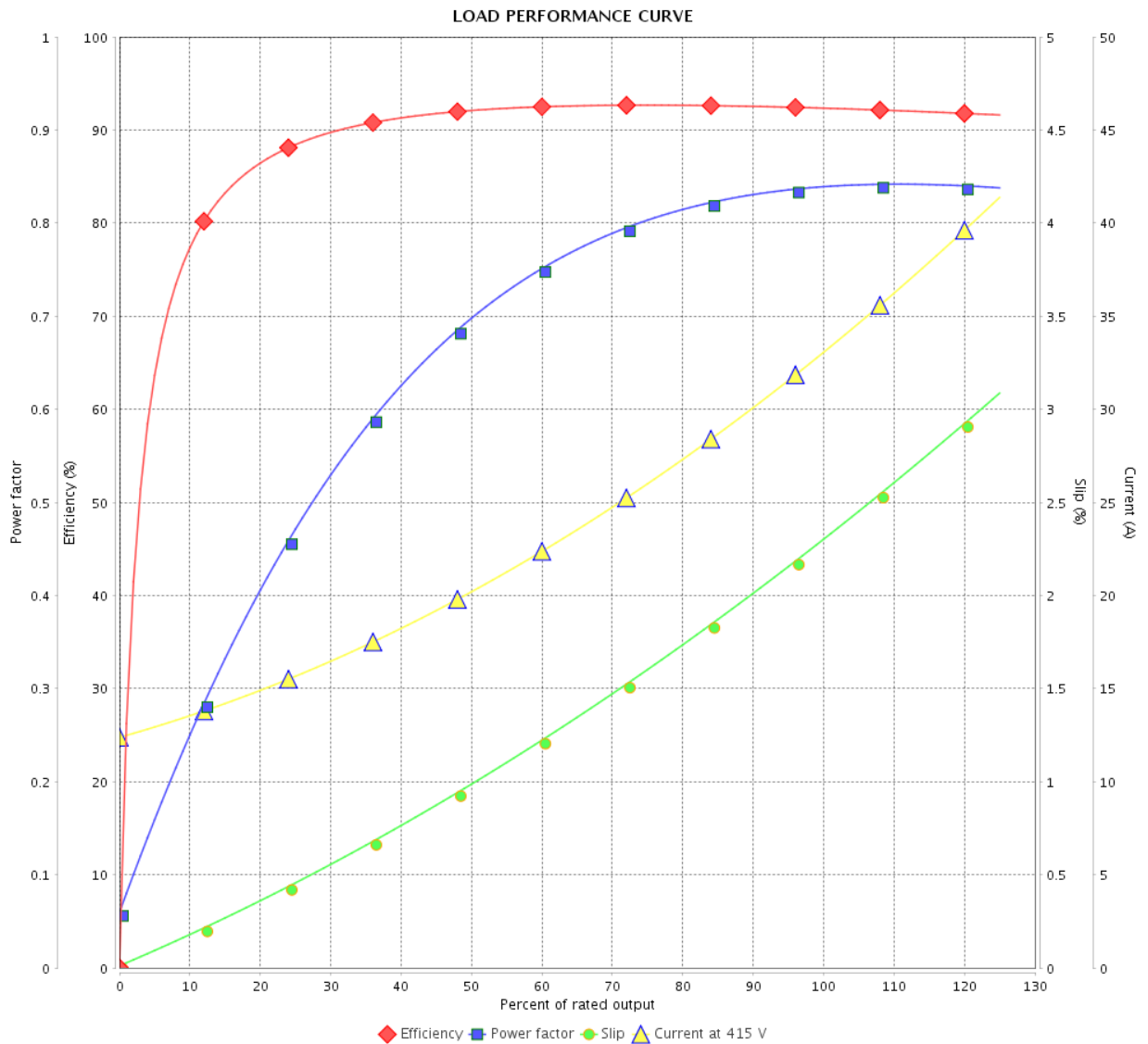


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 Rated torque : 89.6 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 260 %
 Rated speed : 1460 rpm

Moment of inertia (J) : 5.11 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
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THERMAL LIMIT CURVE

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Rated speed	: 1765 rpm	Design	: B

Heating constant

Cooling constant

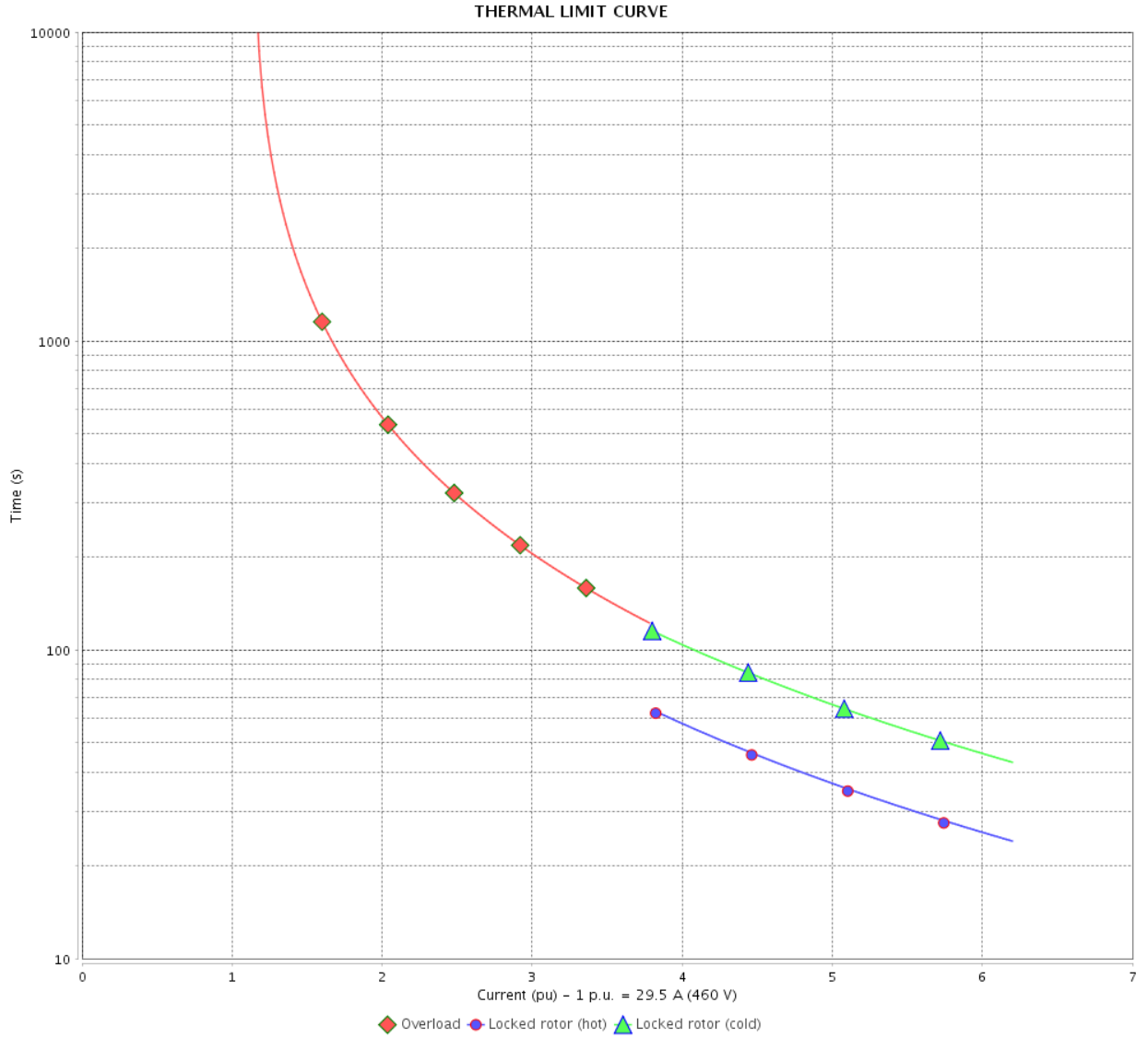
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Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 105 K
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Heating constant

Cooling constant

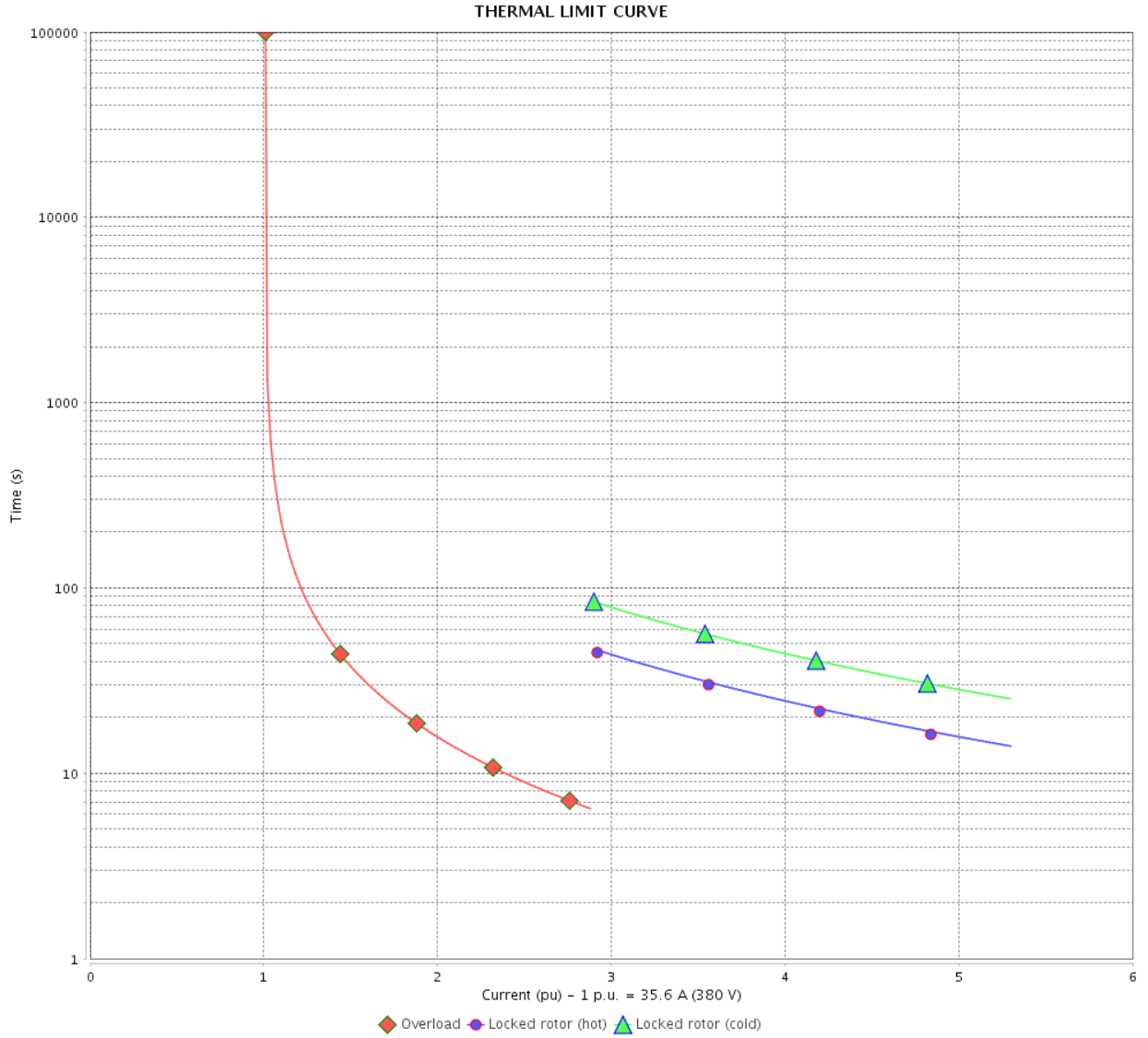
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Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 105 K
Rated speed	: 1455 rpm	Design	: B

Heating constant

Cooling constant

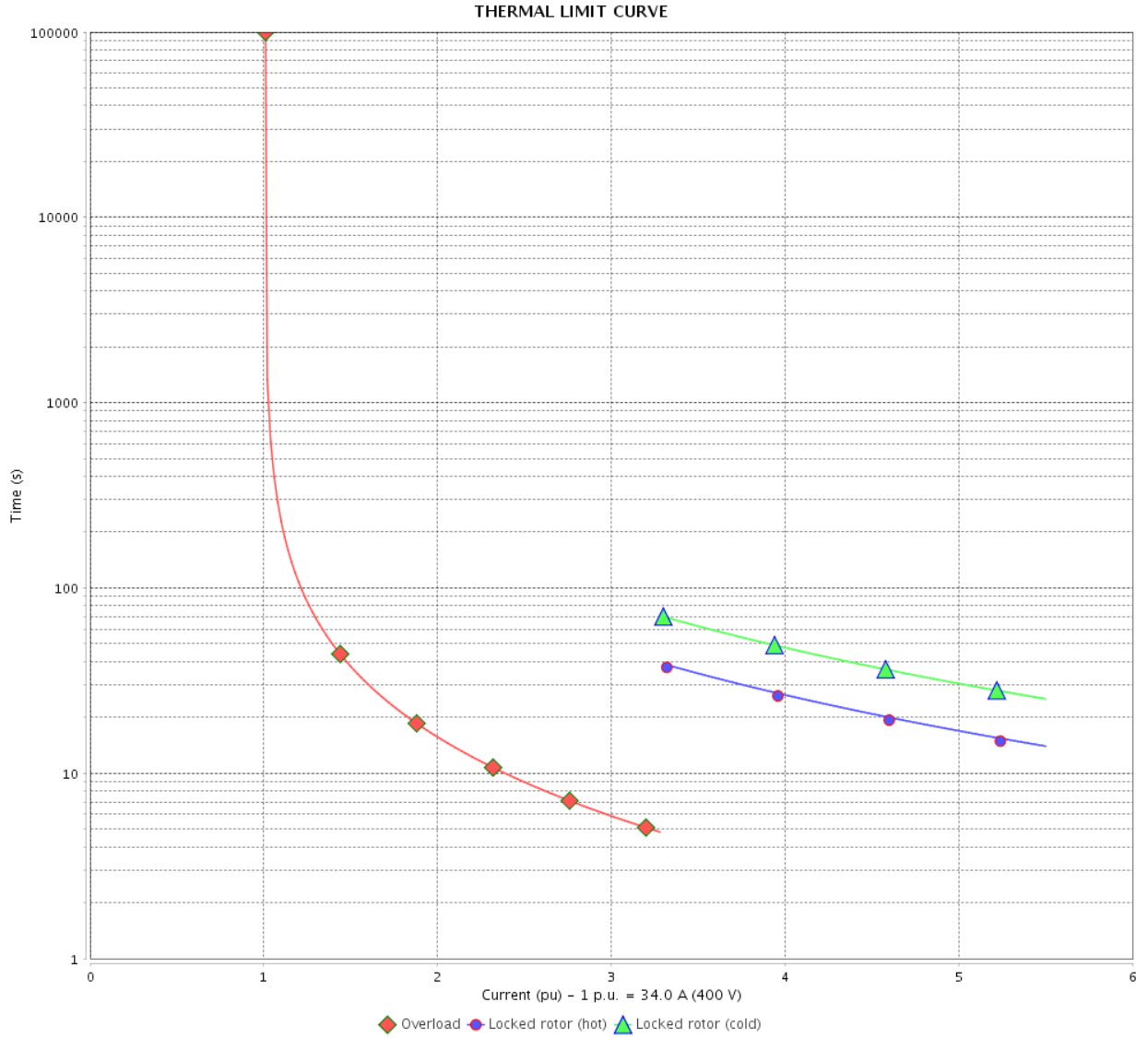
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Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1460 rpm	Design	: B

Heating constant

Cooling constant

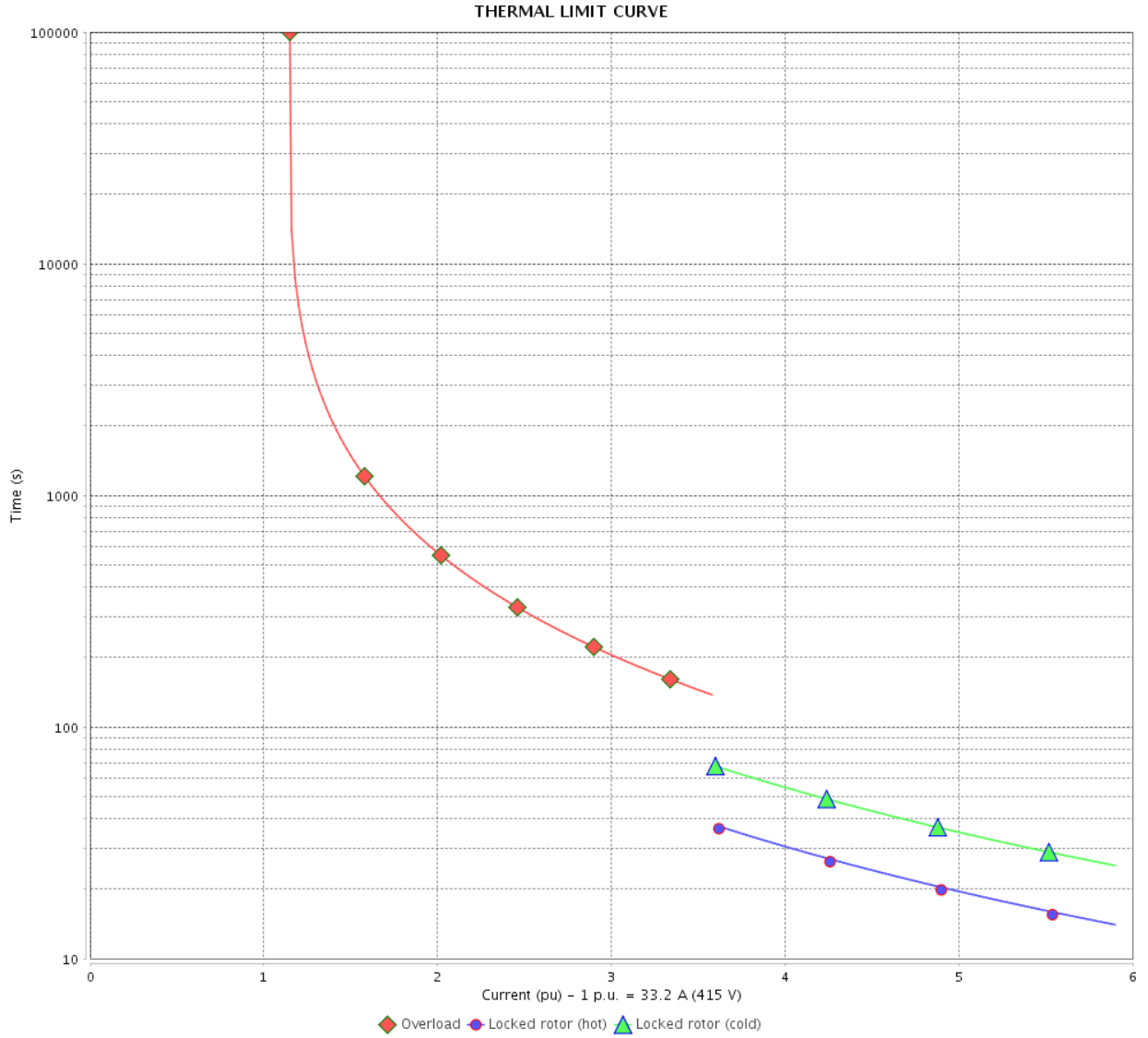
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Performed by				
Checked by			Page	Revision
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

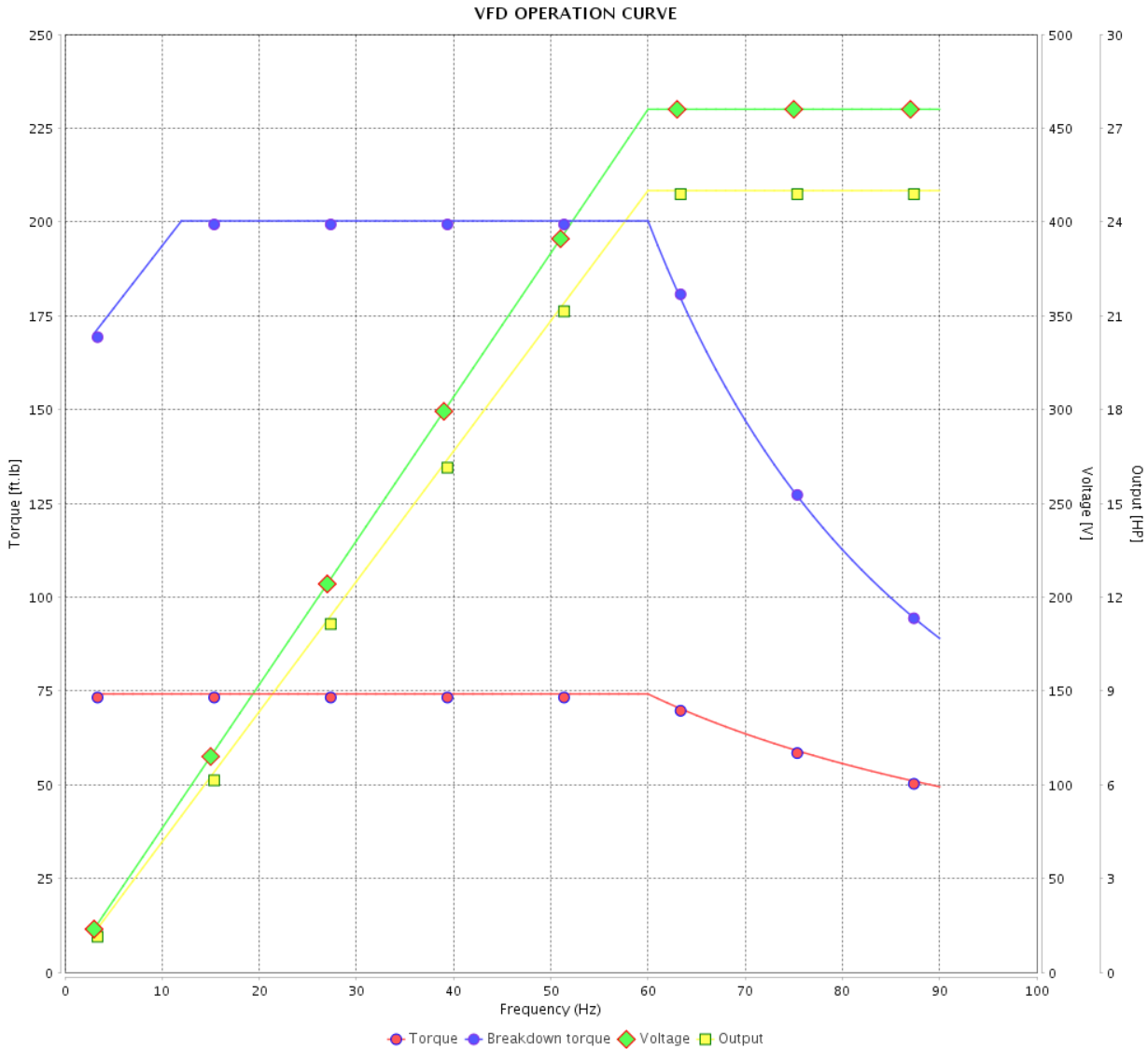


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 Insulation class : F
 Service factor : 1.25
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 Design : B

Rev.	Changes Summary	Performed	Checked	Date
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

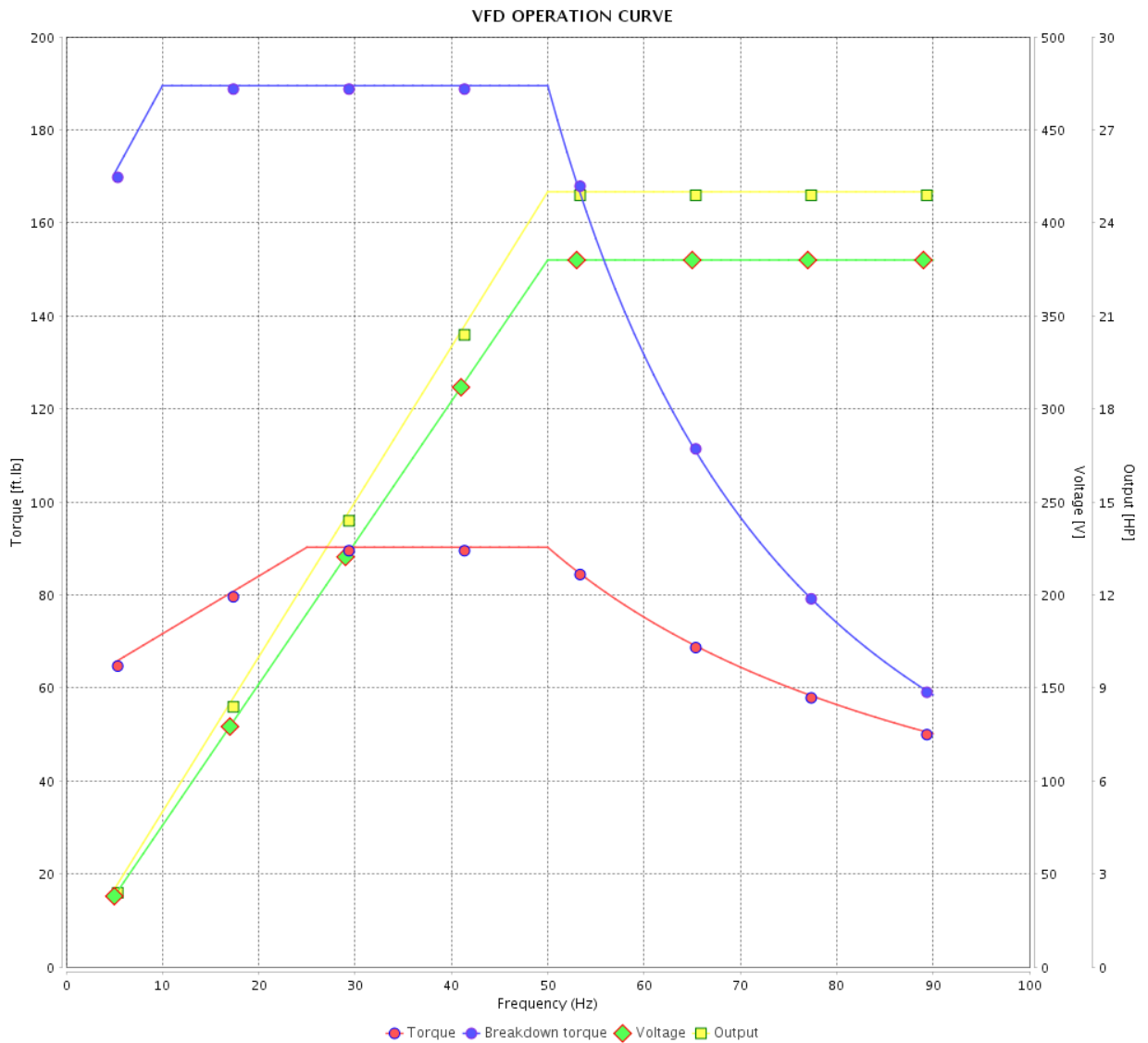


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 Duty cycle : Cont.(S1)
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Rev.	Changes Summary	Performed	Checked	Date
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



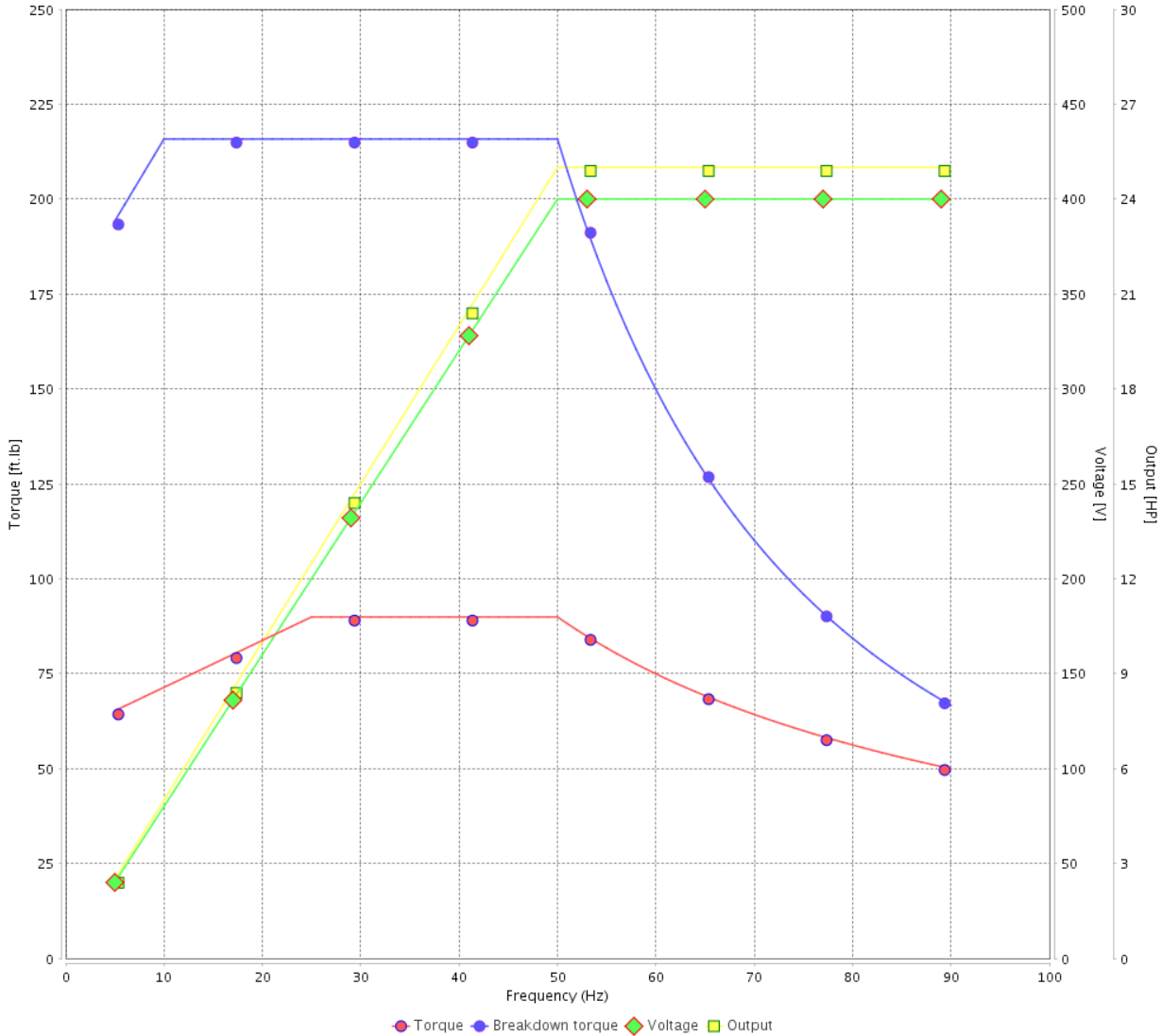
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Rev.	Changes Summary	Performed	Checked	Date
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

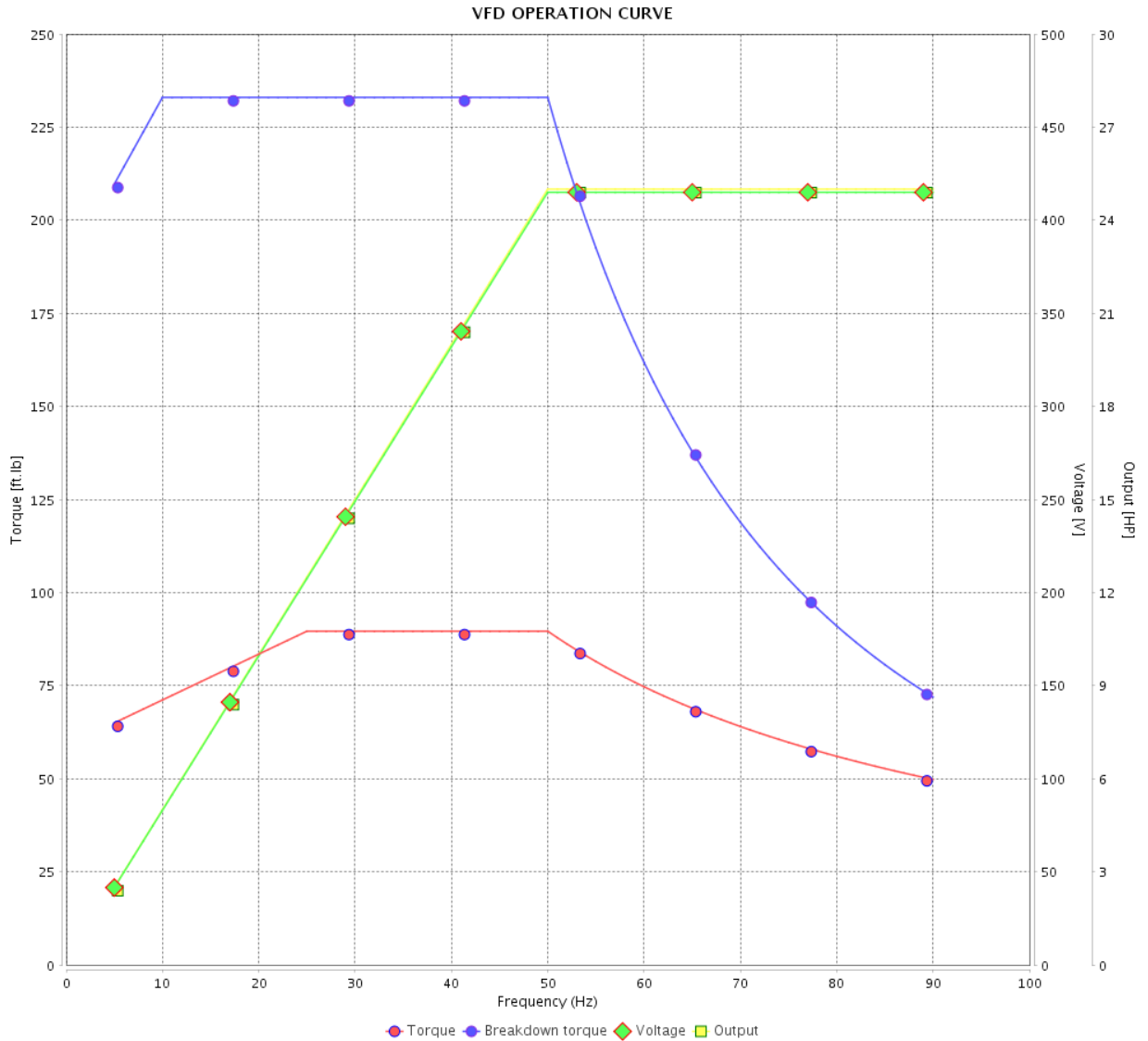


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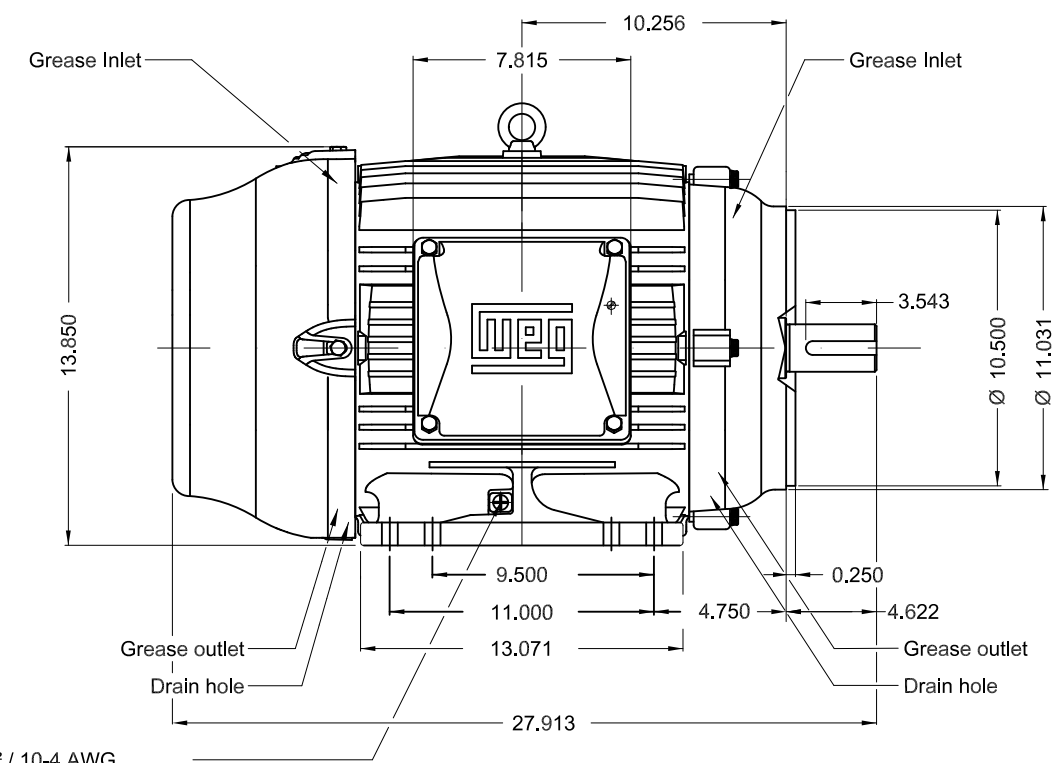
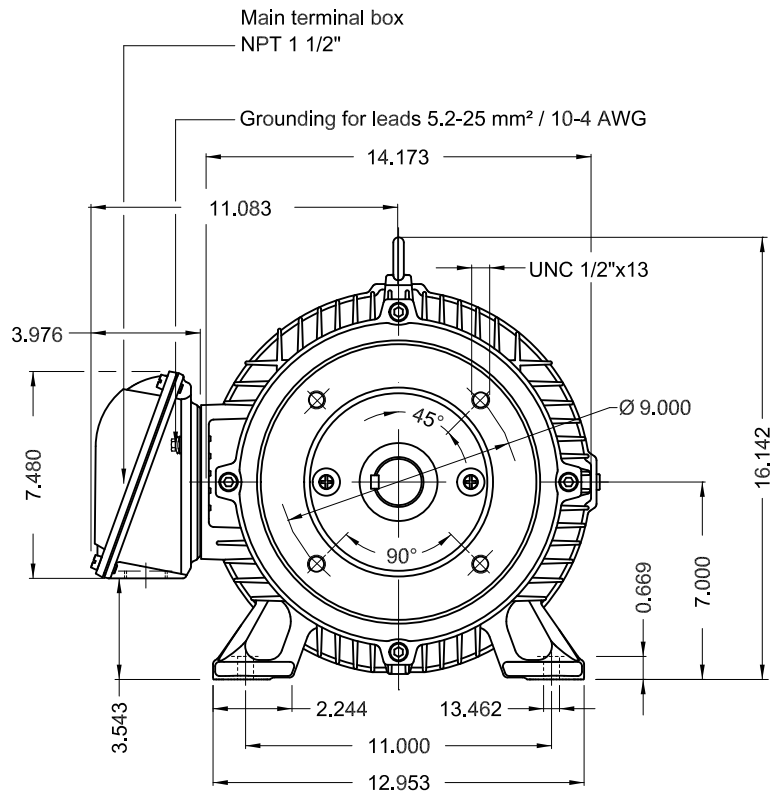
Rev.	Changes Summary	Performed	Checked	Date
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Date				

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A

B

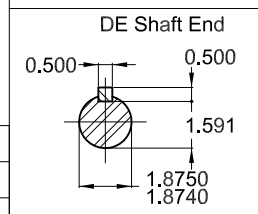
C



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

D

E



Color RAL 5009
 Painting plan 202E
 Mounting B34R(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 284/6TC IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW
 WDD



Dimensions in inches XME A3



NEMA
Premium
W22



FOR SAFE AREA
Mod.TE1BFOXON
CC029A



Class I, Div 2, Gr A, B, C and D - T3
Class I, Zone 2, IIC - T3
Class II, Div 2, Gr F and G - T4
For use on PWM: Gr. A, B, C, D and F,
VT 1000:1, CT 20:1, 1.00SF - T3A

MODEL 02518ST3QIE284TC-W22



Inverter Duty Motor
Severe Duty

MADE IN BRAZIL
12424294

PH3 60Hz Fr. 284/6TC 1000m.a.s.l. IP55 TEFC 418lb

V 460

A 29.5

HP 25

kW 18.5

SF 1.25

SFA 36.9

RPM 1770

PF 0.84

AMB 40°C

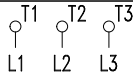
INS cl. F DT80K

NEMA NOM EFF 93.6%

DUTY CONT.

DES B Code G

GUARANT. EFF 92.4%



460V



→ 6311-C3 (18g) 55BC03X30

→ 6211-C3 (11g) 55BC02X30



MOBIL POLYREX EM (20000h)

