

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	12408385		
		Catalog # :	35012XT3G586/7		
Frame	: 586/7T	Cooling method	: IC411 - TEFC		
Insulation class	: F	Mounting	: F-1		
Duty cycle	: Cont.(S1)	Rotation <sup>1</sup>	: Both (CW and CCW)		
Ambient temperature	: -20°C to +40°C	Starting method	: Direct On Line		
Altitude	: 1000 m.a.s.l.	Approx. weight <sup>2</sup>	: 4385 lb		
Protection degree	: IP55	Moment of inertia (J)	: 328 sq.ft.lb		
Design	: B				
Output [HP]	350	300	300	300	
Poles	6	6	6	6	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	460	380	400	415	
Rated current [A]	421	433	414	410	
L. R. Amperes [A]	2526	2425	2567	2706	
LRC [A]	6.0x(Code G)	5.6x(Code F)	6.2x(Code G)	6.6x(Code H)	
No load current [A]	170	165	175	185	
Rated speed [RPM]	1192	992	993	994	
Slip [%]	0.67	0.80	0.70	0.60	
Rated torque [ft.lb]	1540	1590	1590	1580	
Locked rotor torque [%]	190	180	210	229	
Breakdown torque [%]	210	200	220	240	
Service factor	1.15	1.15	1.15	1.15	
Temperature rise	105 K	105 K	105 K	105 K	
Locked rotor time	52s (cold) 29s (hot)	45s (cold) 25s (hot)	45s (cold) 25s (hot)	45s (cold) 25s (hot)	
Noise level <sup>2</sup>	77.0 dB(A)	73.0 dB(A)	73.0 dB(A)	73.0 dB(A)	
Efficiency (%)	25%	95.3	95.7	95.3	94.6
	50%	95.4	95.4	95.4	95.0
	75%	95.8	95.8	95.8	95.4
	100%	95.8	95.4	95.8	95.8
Power Factor	25%	0.42	0.44	0.40	0.37
	50%	0.67	0.68	0.64	0.61
	75%	0.77	0.78	0.75	0.73
	100%	0.81	0.81	0.80	0.78
Bearing type	: <u>Drive end</u> 6322 C3 <u>Non drive end</u> 6319 C3	Foundation loads			
Sealing	: Viton Oil Seal Viton Seal	Max. traction	: 5744 lb		
		Max. compression	: 10128 lb		
Lubrication interval	: 9212 h 11094 h				
Lubricant amount	: 60 g 45 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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# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

### Thermal protection

ID	Application	Type	Quantity	Sensing Temperature
1	Winding	Thermostat - 2 wires	1 x Phase	155 °C

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# TORQUE AND CURRENT VS SPEED CURVE



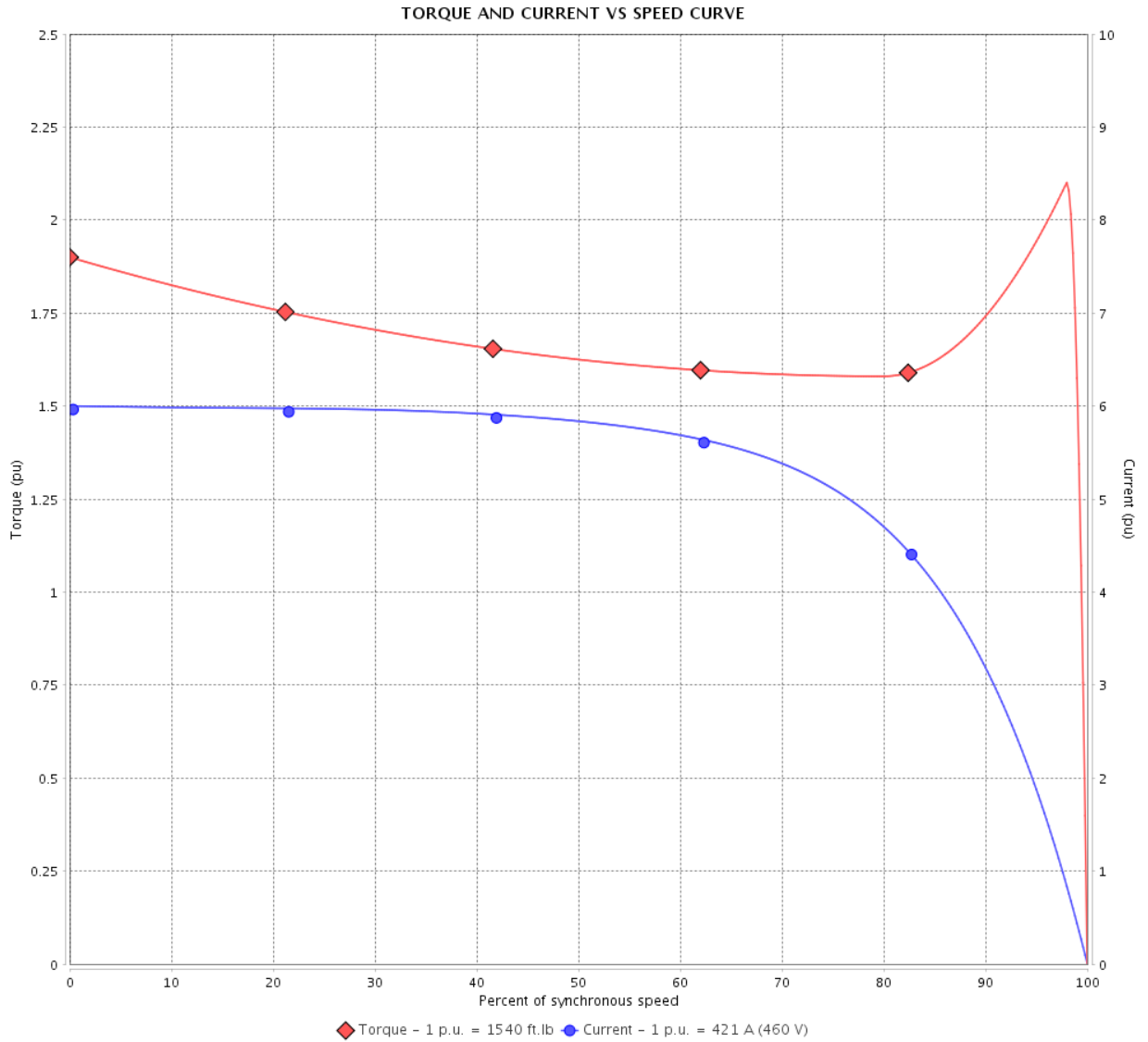
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408385

Catalog # : 35012XT3G586/7



Performance : 460 V 60 Hz 6P

Rated current	: 421 A	Moment of inertia (J)	: 328 sq.ft.lb
LRC	: 6.0	Duty cycle	: Cont.(S1)
Rated torque	: 1540 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.15
Breakdown torque	: 210 %	Temperature rise	: 105 K
Rated speed	: 1192 rpm	Design	: B

Locked rotor time : 52s (cold) 29s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage



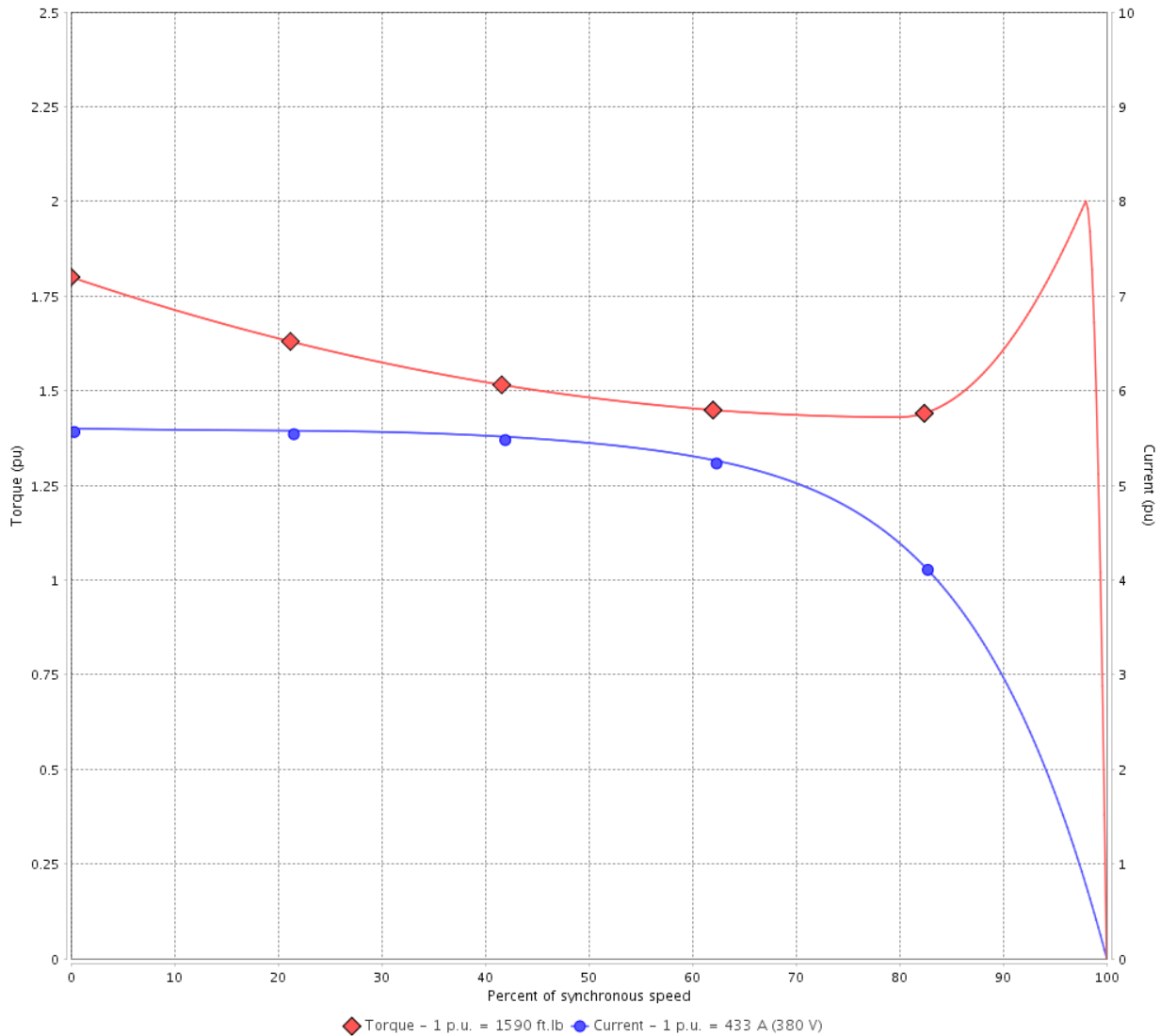
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408385

Catalog # : 35012XT3G586/7

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 6P IE2

Rated current	: 433 A	Moment of inertia (J)	: 328 sq.ft.lb
LRC	: 5.6	Duty cycle	: Cont.(S1)
Rated torque	: 1590 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.15
Breakdown torque	: 200 %	Temperature rise	: 105 K
Rated speed	: 992 rpm	Design	: B

Locked rotor time : 45s (cold) 25s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



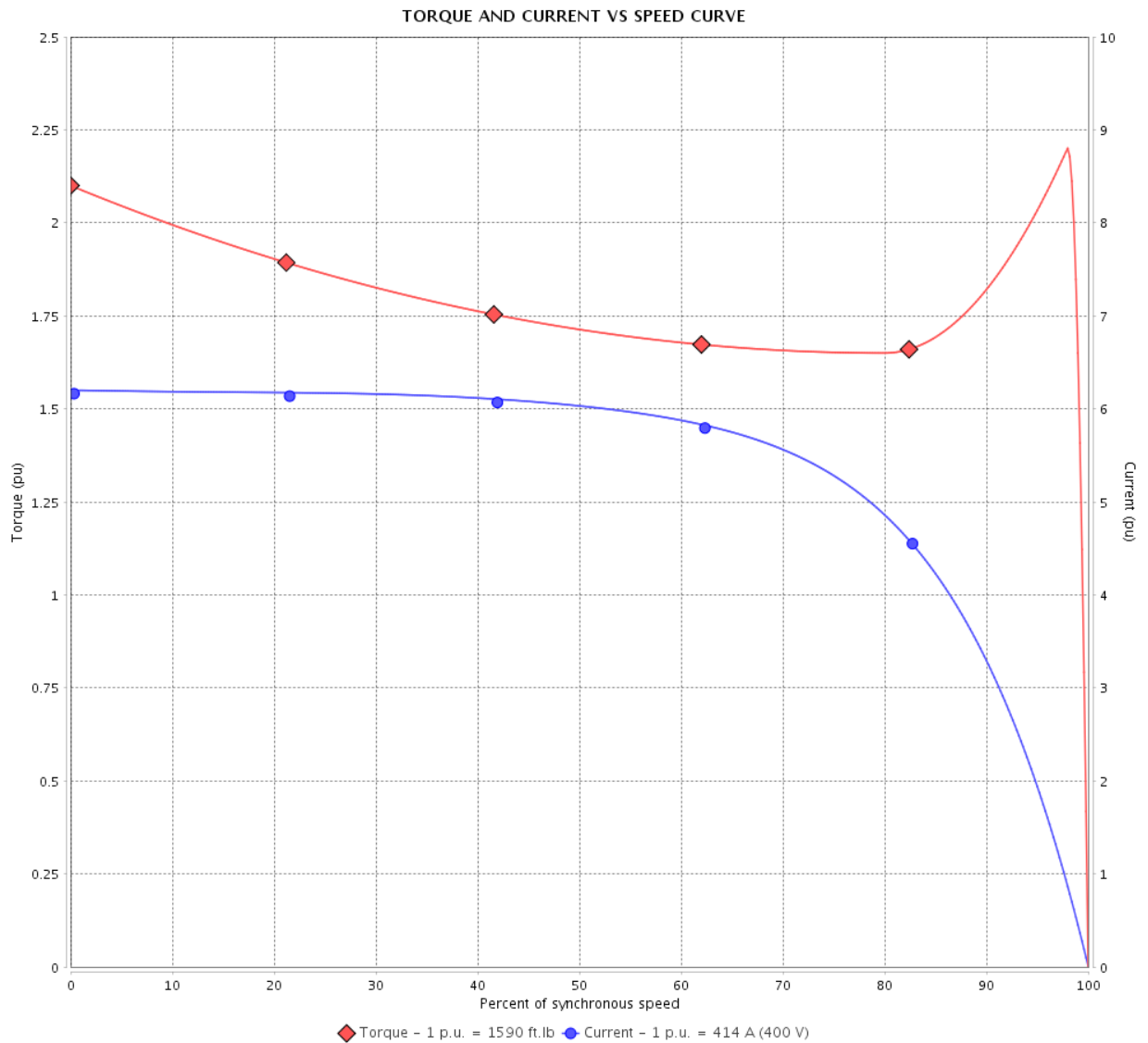
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408385

Catalog # : 35012XT3G586/7



Performance : 400 V 50 Hz 6P IE3

Rated current : 414 A  
 LRC : 6.2  
 Rated torque : 1590 ft.lb  
 Locked rotor torque : 210 %  
 Breakdown torque : 220 %  
 Rated speed : 993 rpm

Moment of inertia (J) : 328 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 105 K  
 Design : B

Locked rotor time : 45s (cold) 25s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



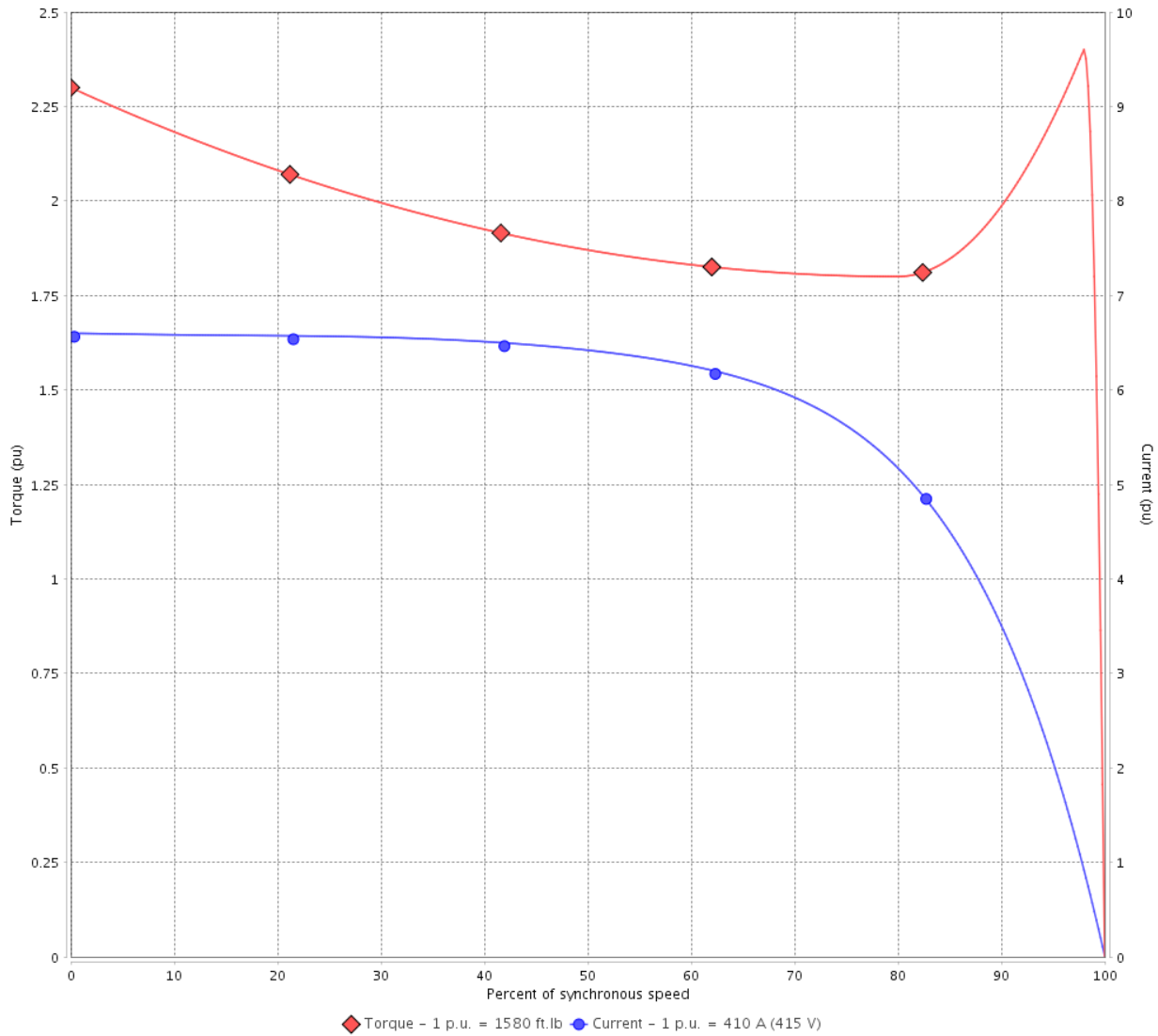
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408385

Catalog # : 35012XT3G586/7

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 6P IE3

Rated current	: 410 A	Moment of inertia (J)	: 328 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 1580 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.15
Breakdown torque	: 240 %	Temperature rise	: 105 K
Rated speed	: 994 rpm	Design	: B

Locked rotor time : 45s (cold) 25s (hot)

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

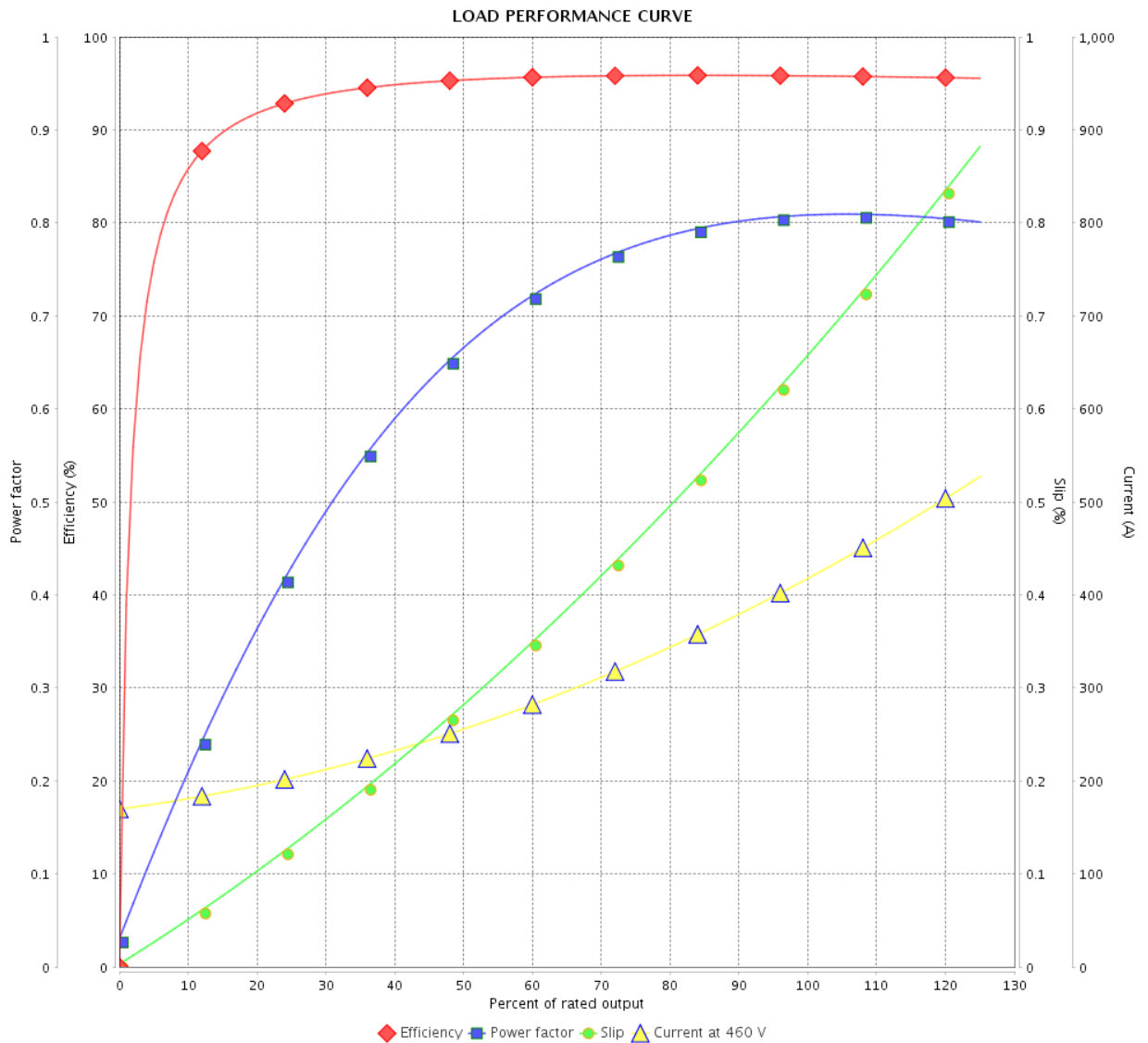


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408385

Catalog # : 35012XT3G586/7



Performance : 460 V 60 Hz 6P

Rated current : 421 A  
 LRC : 6.0  
 Rated torque : 1540 ft.lb  
 Locked rotor torque : 190 %  
 Breakdown torque : 210 %  
 Rated speed : 1192 rpm

Moment of inertia (J) : 328 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 105 K  
 Design : B

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

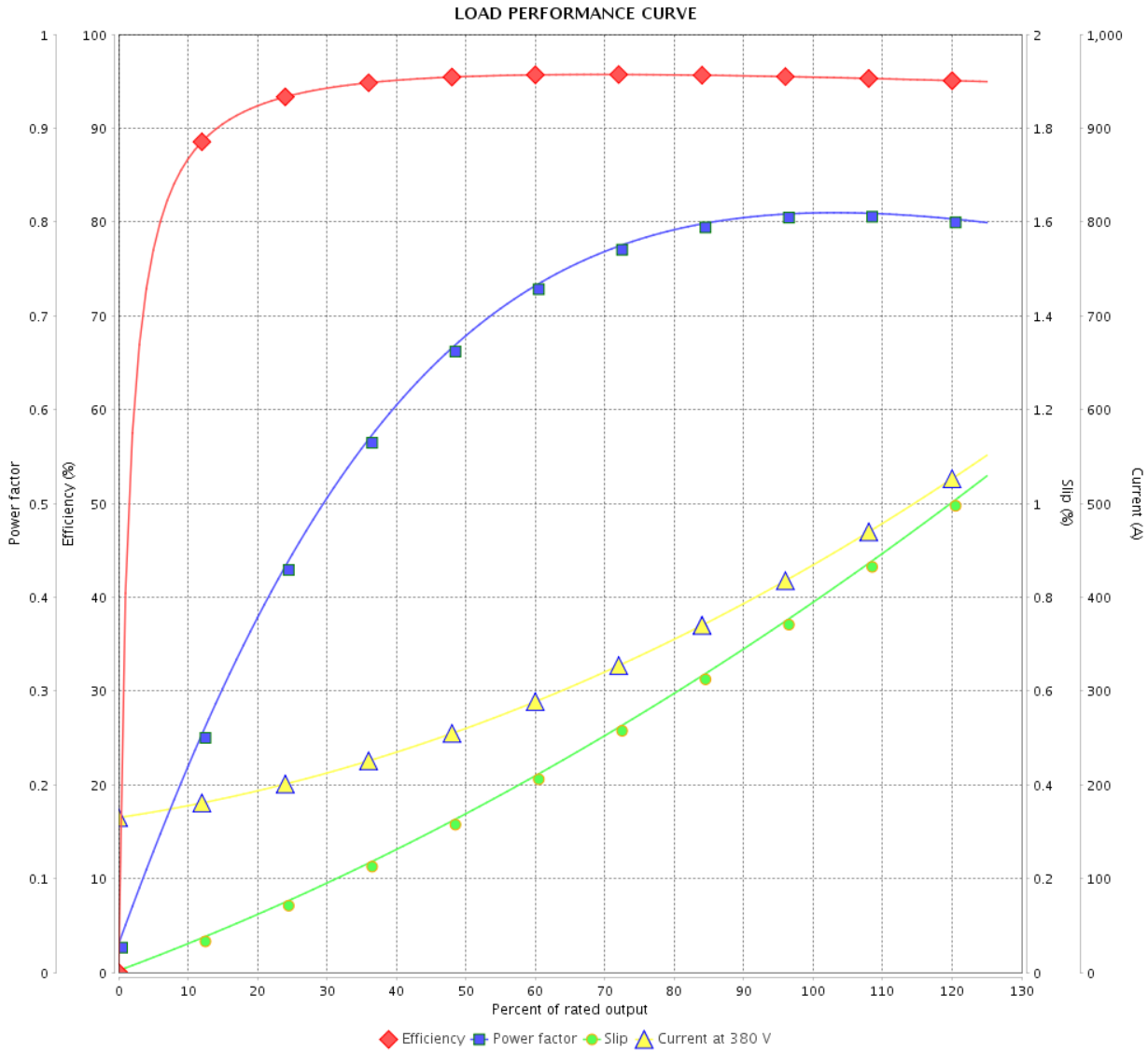


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Product code : 12408385

Catalog # : 35012XT3G586/7



Performance : 380 V 50 Hz 6P IE2

Rated current : 433 A  
 LRC : 5.6  
 Rated torque : 1590 ft.lb  
 Locked rotor torque : 180 %  
 Breakdown torque : 200 %  
 Rated speed : 992 rpm

Moment of inertia (J) : 328 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 105 K  
 Design : B

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

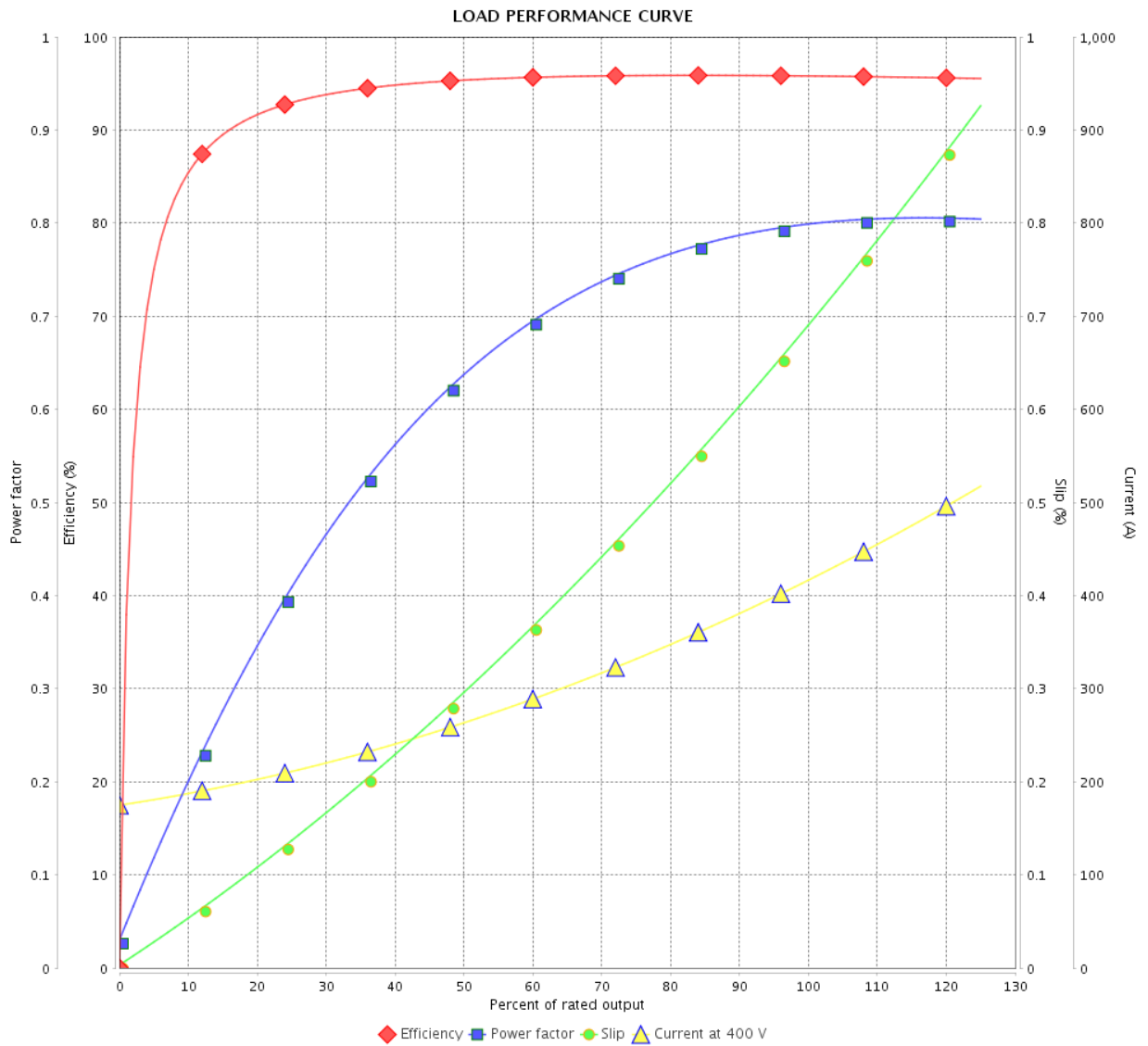


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Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408385

Catalog # : 35012XT3G586/7



Performance : 400 V 50 Hz 6P IE3

Rated current : 414 A  
 LRC : 6.2  
 Rated torque : 1590 ft.lb  
 Locked rotor torque : 210 %  
 Breakdown torque : 220 %  
 Rated speed : 993 rpm

Moment of inertia (J) : 328 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 105 K  
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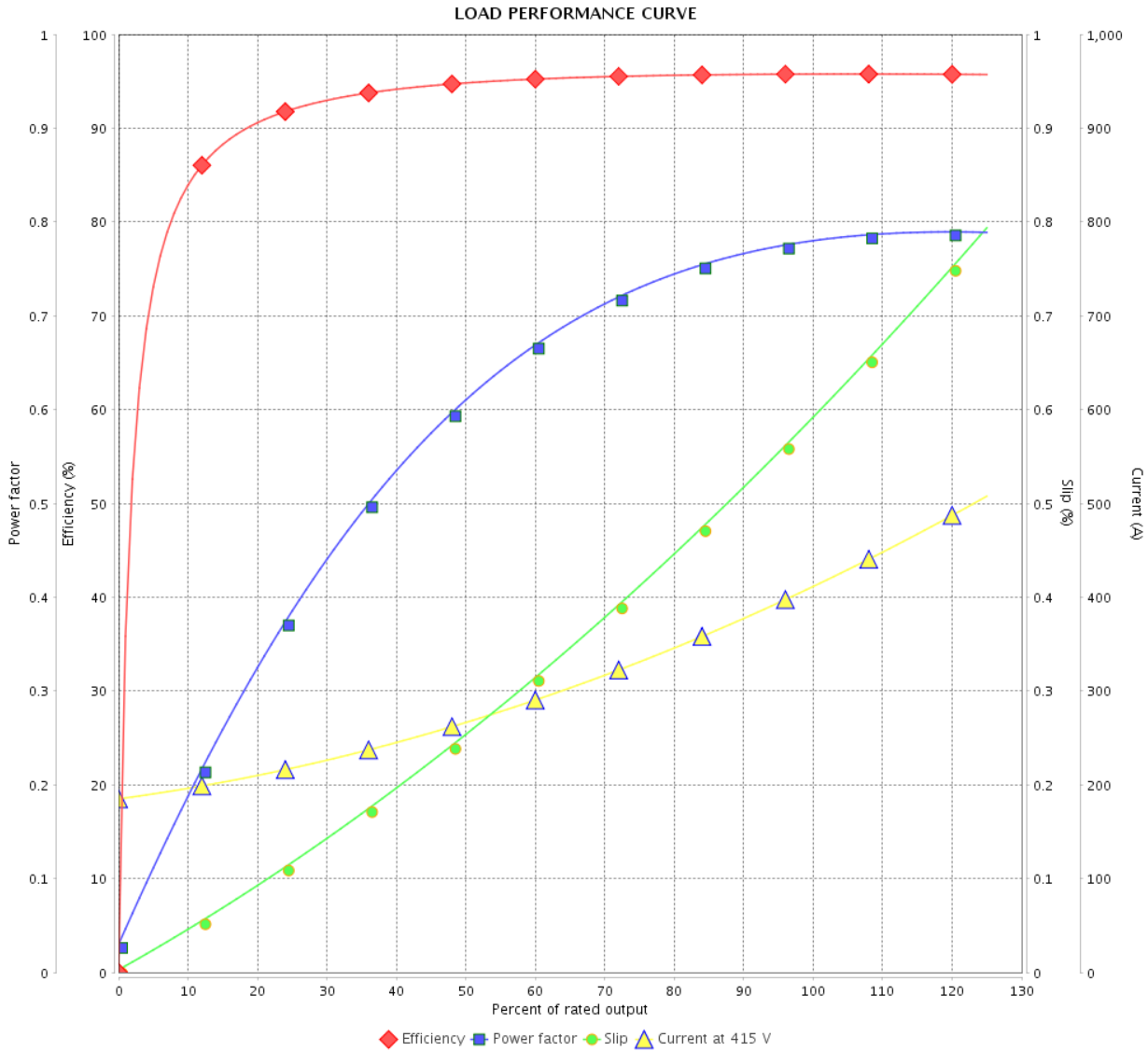


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 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 105 K  
 Design : B

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# THERMAL LIMIT CURVE



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Rated torque : 1540 ft.lb	Insulation class : F
Locked rotor torque : 190 %	Service factor : 1.15
Breakdown torque : 210 %	Temperature rise : 105 K
Rated speed : 1192 rpm	Design : B

Heating constant

Cooling constant

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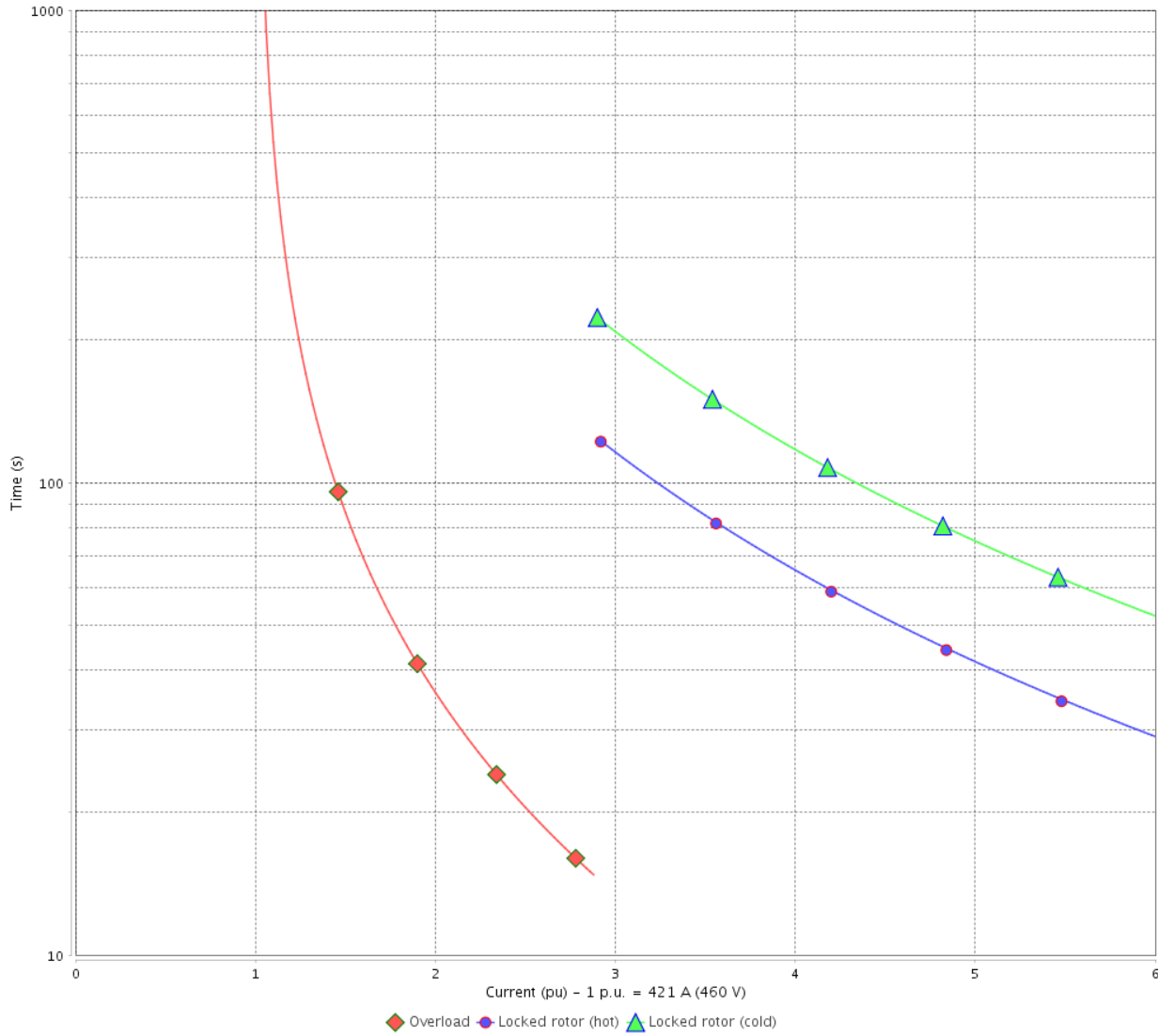
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Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

THERMAL LIMIT CURVE



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Customer :

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Performance : 380 V 50 Hz 6P IE2

Rated current : 433 A	Moment of inertia (J) : 328 sq.ft.lb
LRC : 5.6	Duty cycle : Cont.(S1)
Rated torque : 1590 ft.lb	Insulation class : F
Locked rotor torque : 180 %	Service factor : 1.15
Breakdown torque : 200 %	Temperature rise : 105 K
Rated speed : 992 rpm	Design : B

Heating constant

Cooling constant

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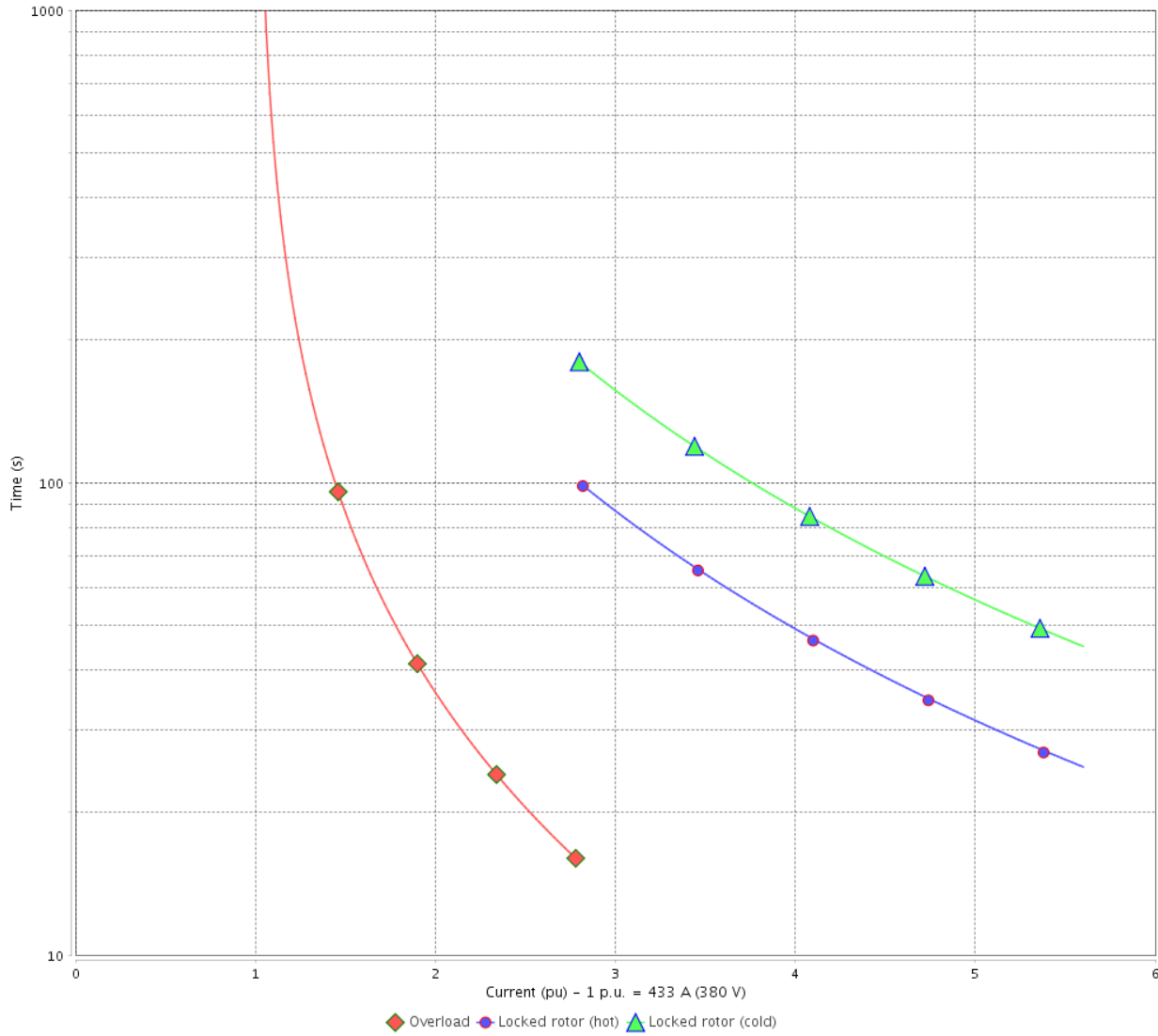
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Three Phase Induction Motor - Squirrel Cage



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THERMAL LIMIT CURVE



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## Three Phase Induction Motor - Squirrel Cage

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 Catalog # : 35012XT3G586/7

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LRC : 6.2	Duty cycle : Cont.(S1)
Rated torque : 1590 ft.lb	Insulation class : F
Locked rotor torque : 210 %	Service factor : 1.15
Breakdown torque : 220 %	Temperature rise : 105 K
Rated speed : 993 rpm	Design : B

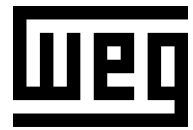
Heating constant

Cooling constant

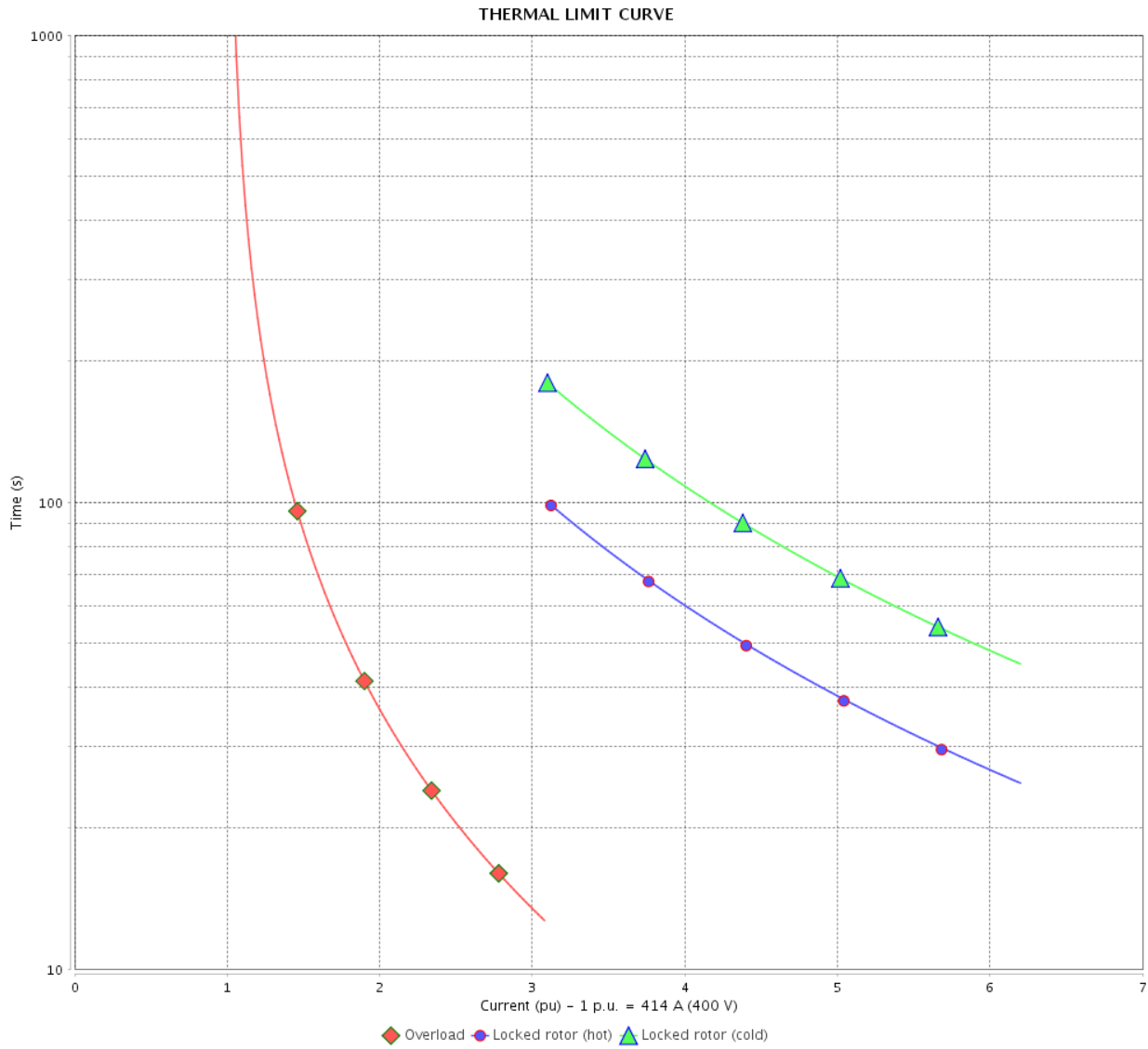
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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Date				



# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
 Product code : 12408385  
 Catalog # : 35012XT3G586/7

Performance : 415 V 50 Hz 6P IE3

Rated current : 410 A	Moment of inertia (J) : 328 sq.ft.lb
LRC : 6.6	Duty cycle : Cont.(S1)
Rated torque : 1580 ft.lb	Insulation class : F
Locked rotor torque : 229 %	Service factor : 1.15
Breakdown torque : 240 %	Temperature rise : 105 K
Rated speed : 994 rpm	Design : B

Heating constant

Cooling constant

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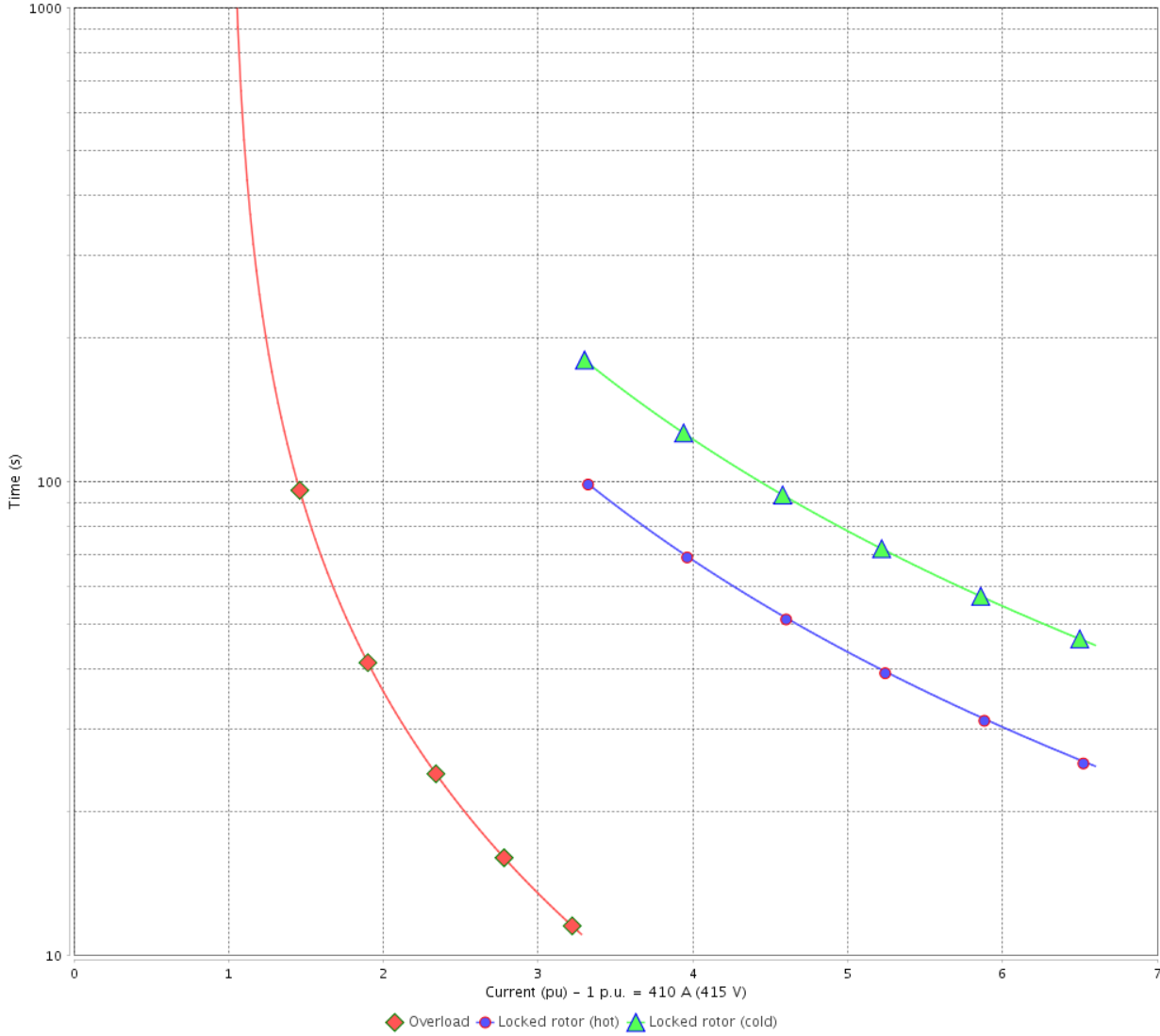
# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

THERMAL LIMIT CURVE



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# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

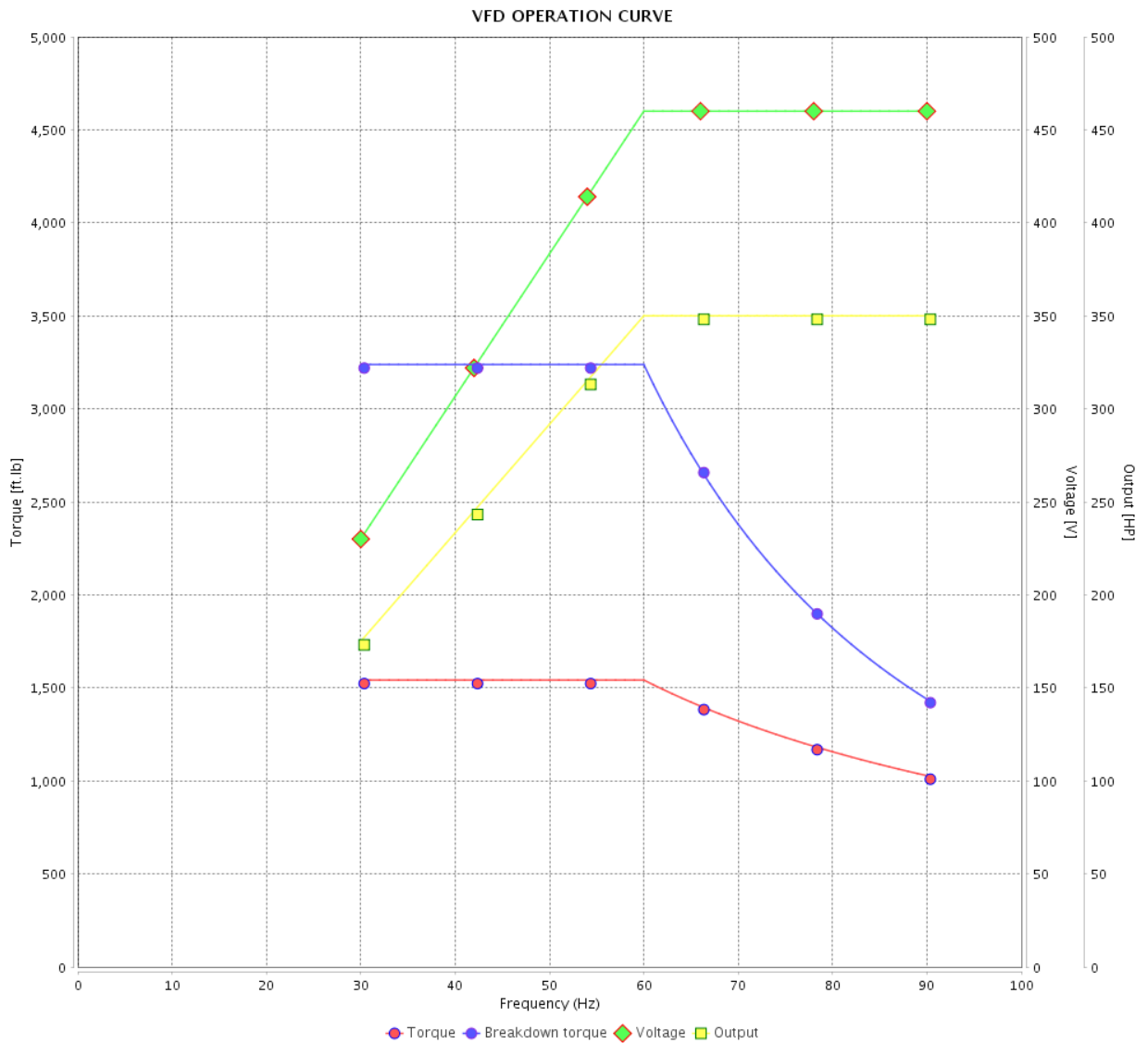


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Performance : 460 V 60 Hz 6P

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 Rated speed : 1192 rpm

Moment of inertia (J) : 328 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 105 K  
 Design : B

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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



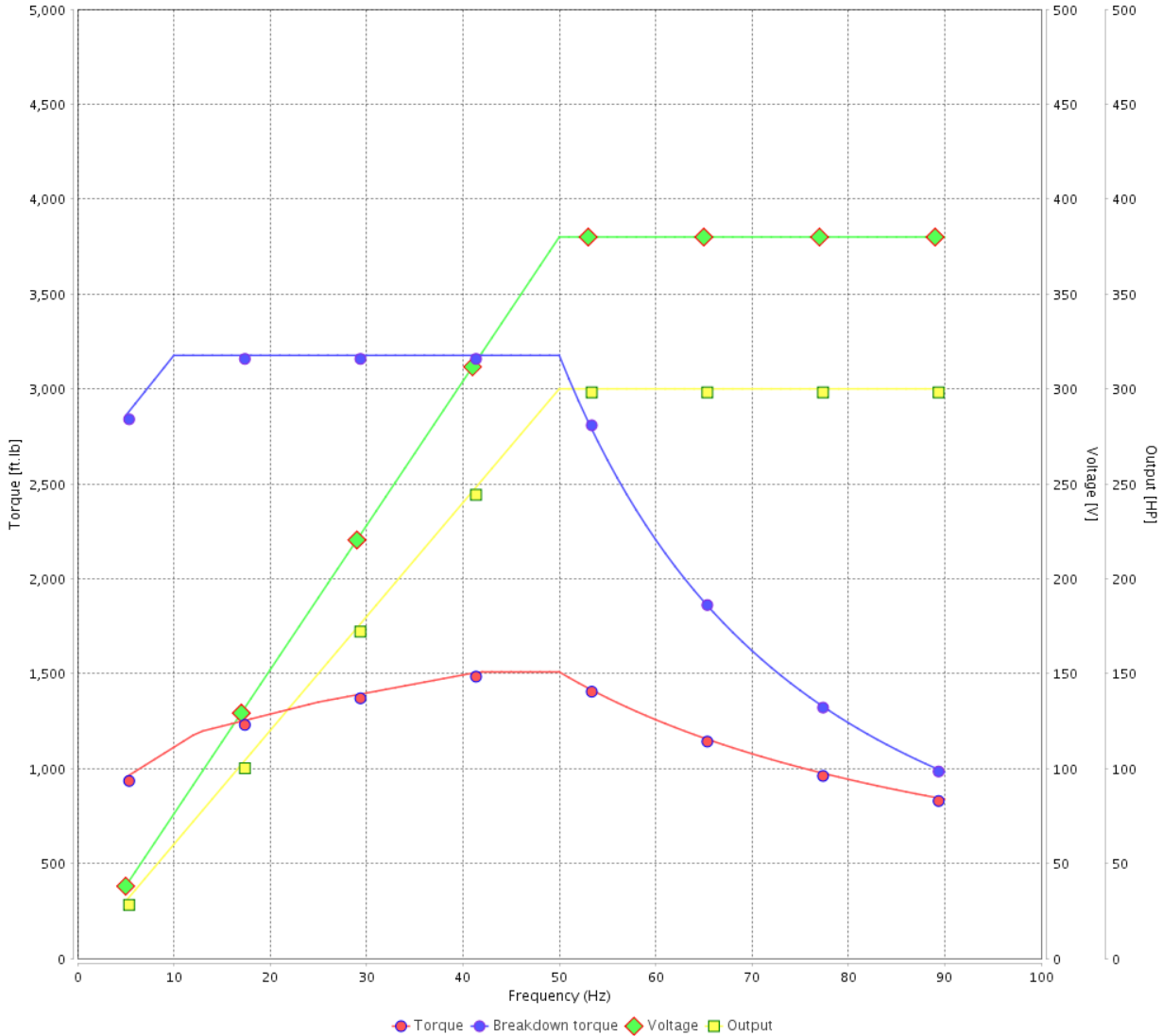
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VFD OPERATION CURVE



Performance : 380 V 50 Hz 6P IE2

Rated current : 433 A  
 LRC : 5.6  
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 Breakdown torque : 200 %  
 Rated speed : 992 rpm

Moment of inertia (J) : 328 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 105 K  
 Design : B

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# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

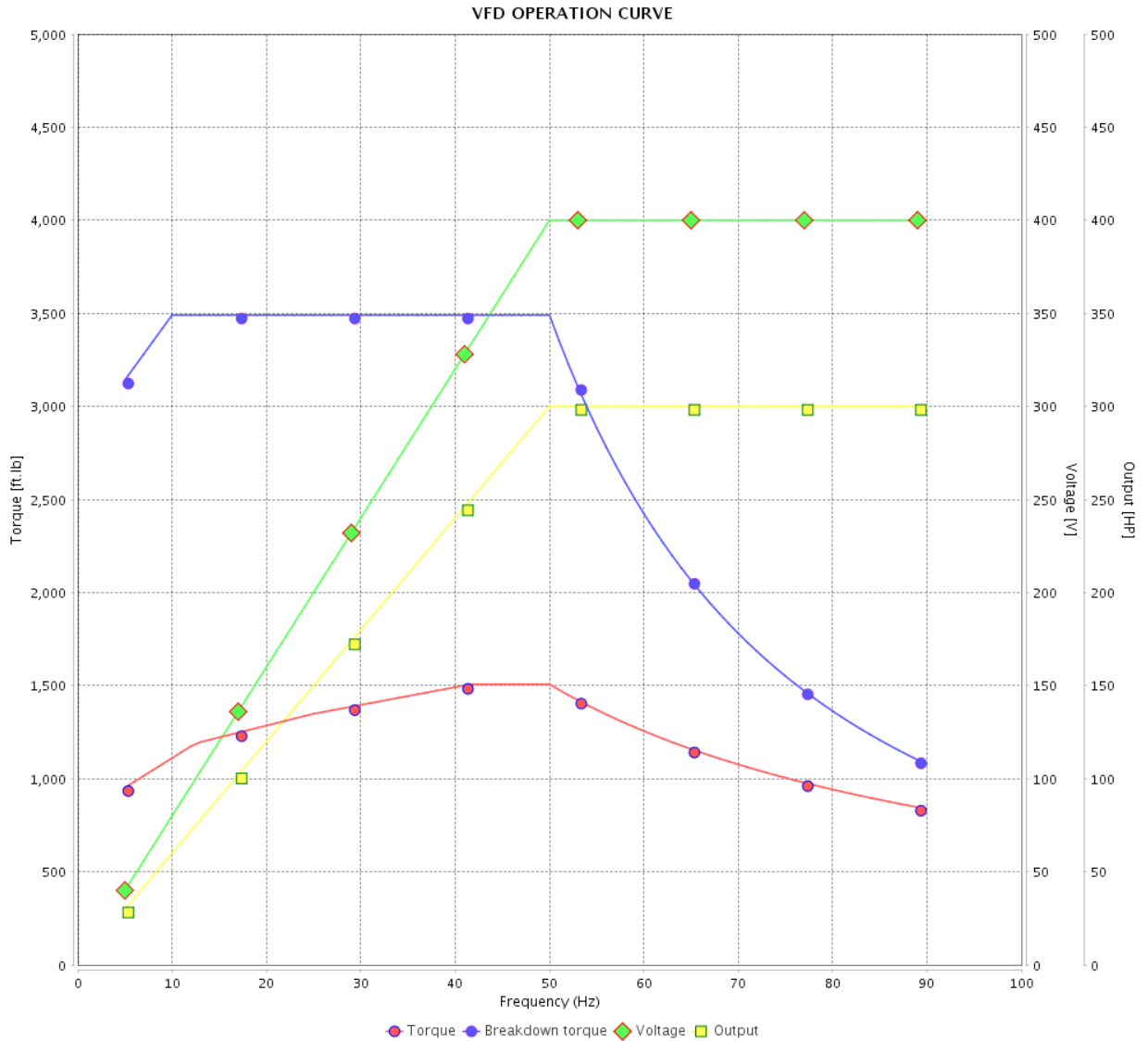


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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



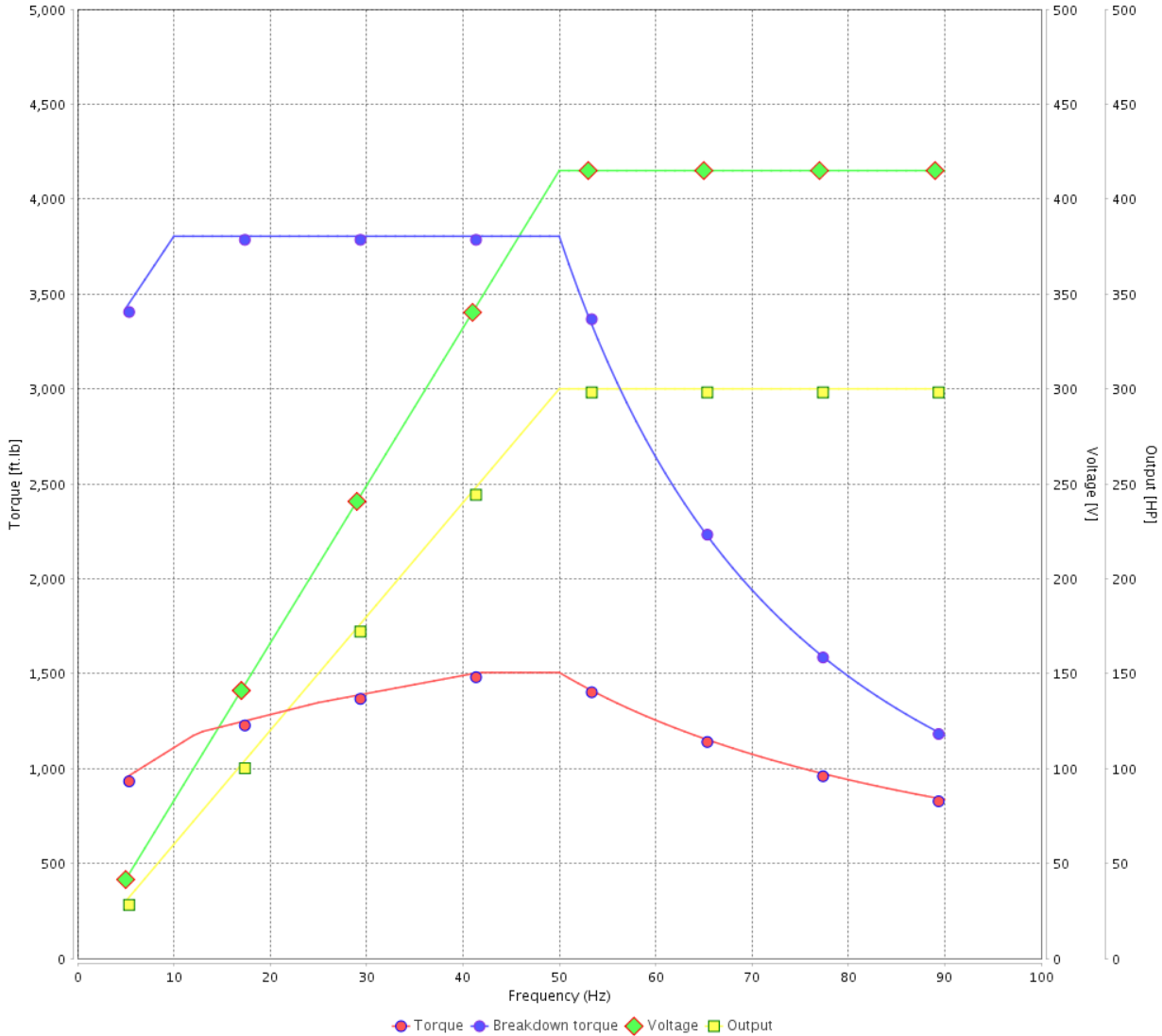
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VFD OPERATION CURVE

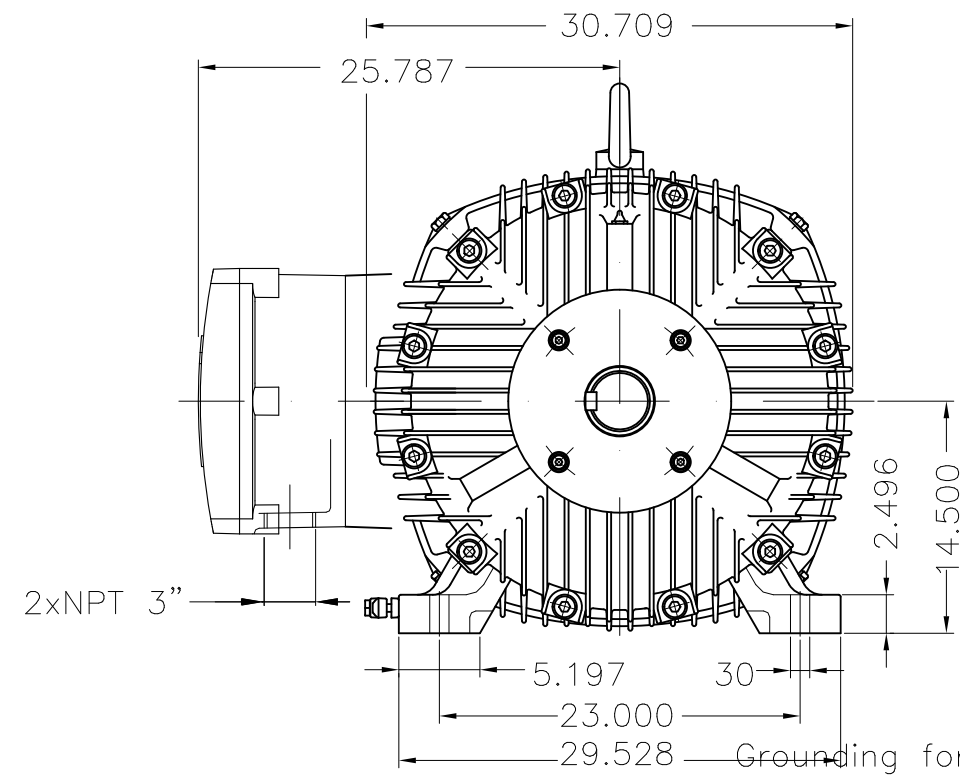


Performance : 415 V 50 Hz 6P IE3

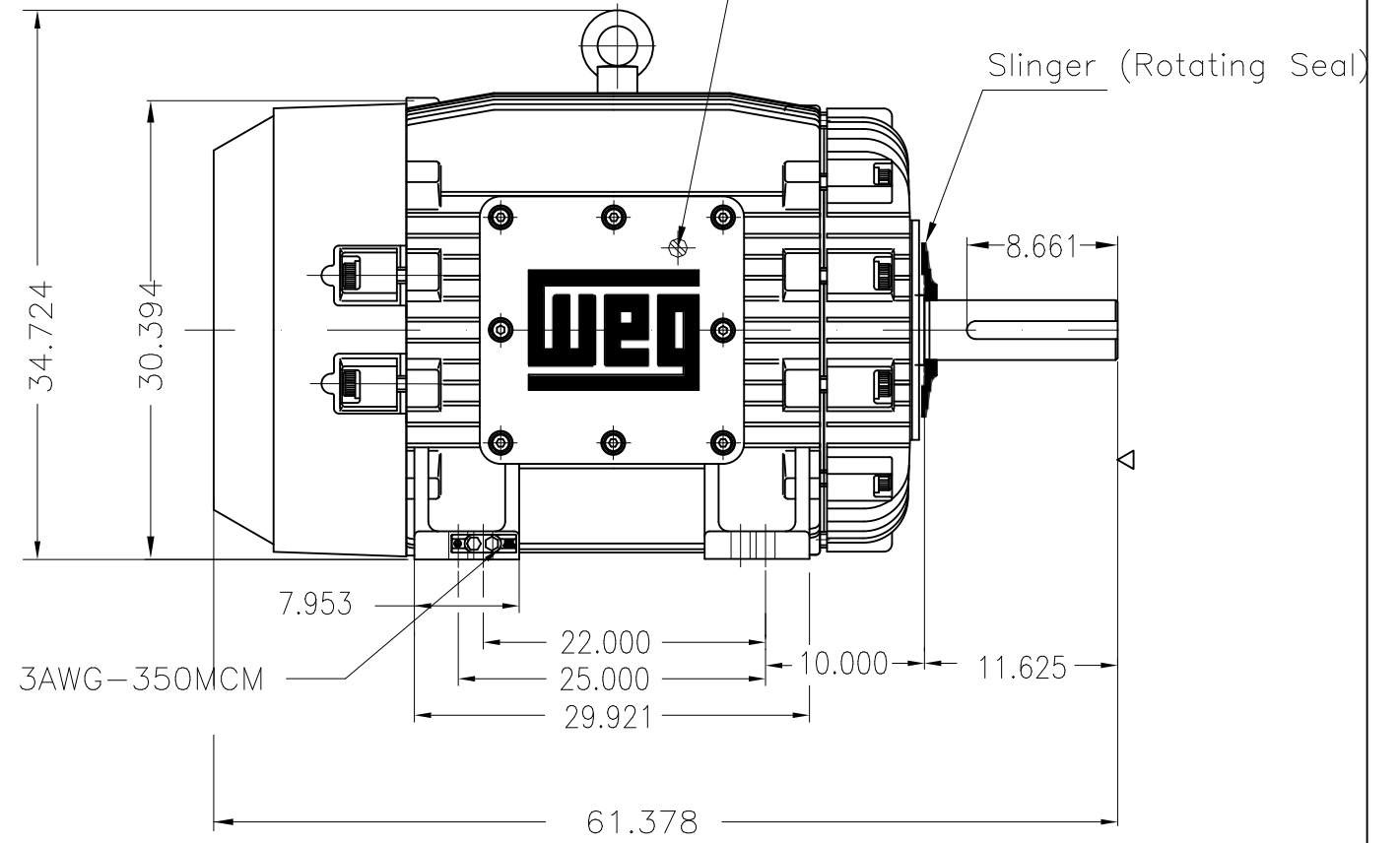
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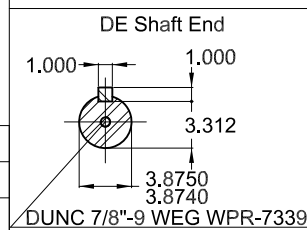
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Grounding for leads 35-120 mm<sup>2</sup> / 1-4/0 AWG



Grounding for leads 25-185 mm<sup>2</sup> / 3AWG-350MCM



Color RAL 5009  
 Painting plan 202P  
 Mounting B3R(D)

350 HP 06 Poles 60 Hz

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR EXPLOSION PROOF PREM. EFF.					
CHECKED		FRAME 586/7T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

**PREVIEW**  
 WDD



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