

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer					
Product line		: NEMA Premium Efficiency Three-Phase		Product code : 11679203	
				Catalog # : 50036ET3G586/7S-W22	
Frame		: 586/7TS		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 : 4345 lb	
Protection degree		: IP55		Moment of inertia (J) : 143 sq.ft.lb	
Design		: B			
Output [HP]	500	450	450	450	450
Poles	2	2	2	2	2
Frequency [Hz]	60	50	50	50	50
Rated voltage [V]	460	380	400	415	415
Rated current [A]	530	575	546	530	530
L. R. Amperes [A]	4505	3450	3658	3816	3816
LRC [A]	8.5x(Code J)	6.0x(Code F)	6.7x(Code G)	7.2x(Code G)	7.2x(Code G)
No load current [A]	100	99.0	106	111	111
Rated speed [RPM]	3580	2980	2980	2980	2980
Slip [%]	0.56	0.67	0.67	0.67	0.67
Rated torque [ft.lb]	733	793	793	793	793
Locked rotor torque [%]	220	200	220	240	240
Breakdown torque [%]	240	220	240	260	260
Service factor	1.15	1.00	1.00	1.00	1.00
Temperature rise	80 K	105 K	105 K	105 K	105 K
Locked rotor time	70s (cold) 39s (hot)	54s (cold) 30s (hot)	54s (cold) 30s (hot)	54s (cold) 30s (hot)	54s (cold) 30s (hot)
Noise level ²	84.0 dB(A)	80.0 dB(A)	80.0 dB(A)	80.0 dB(A)	80.0 dB(A)
Efficiency (%)	25%	95.7	95.7	96.1	95.7
	50%	95.8	95.8	95.8	95.8
	75%	96.2	95.8	96.2	96.2
	100%	96.2	95.8	95.8	96.2
Power Factor	25%	0.67	0.69	0.67	0.65
	50%	0.88	0.89	0.88	0.87
	75%	0.90	0.90	0.90	0.89
	100%	0.91	0.91	0.91	0.90
Bearing type		Drive end : 6314 C3	Non drive end : 6314 C3	Foundation loads	
Sealing		Labyrinth	Labyrinth	Max. traction : 2129 lb	
Lubrication interval		4000 h	4000 h	Max. compression : 6474 lb	
Lubricant amount		27 g	27 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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Three Phase Induction Motor - Squirrel Cage



Customer : _____

Space heater information

Voltage: 200 - 240 V

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TORQUE AND CURRENT VS SPEED CURVE



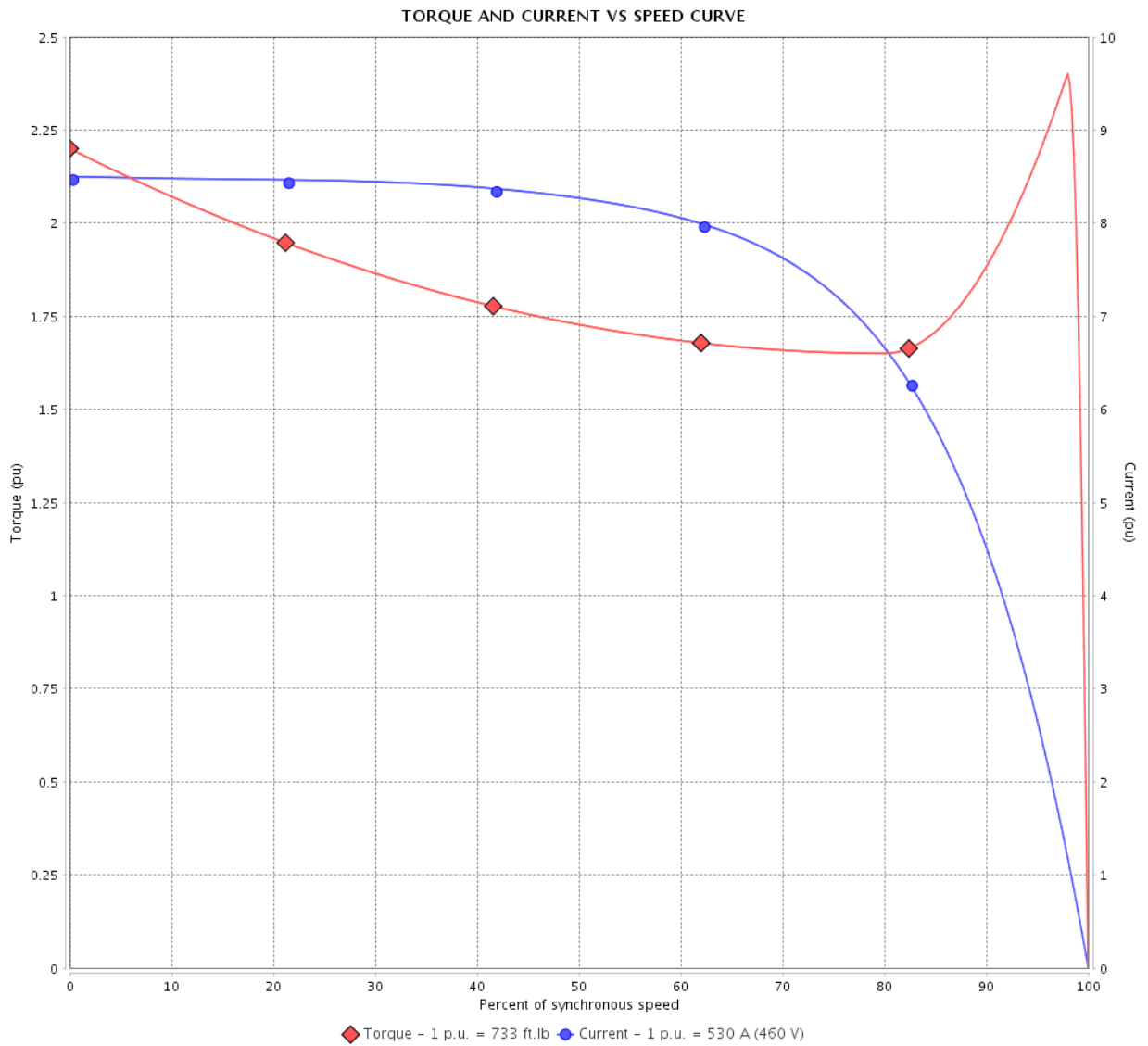
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11679203

Catalog # : 50036ET3G586/7S-W22



Performance : 460 V 60 Hz 2P

Rated current	: 530 A	Moment of inertia (J)	: 143 sq.ft.lb
LRC	: 8.5	Duty cycle	: Cont.(S1)
Rated torque	: 733 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.15
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 3580 rpm	Design	: B

Locked rotor time : 70s (cold) 39s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



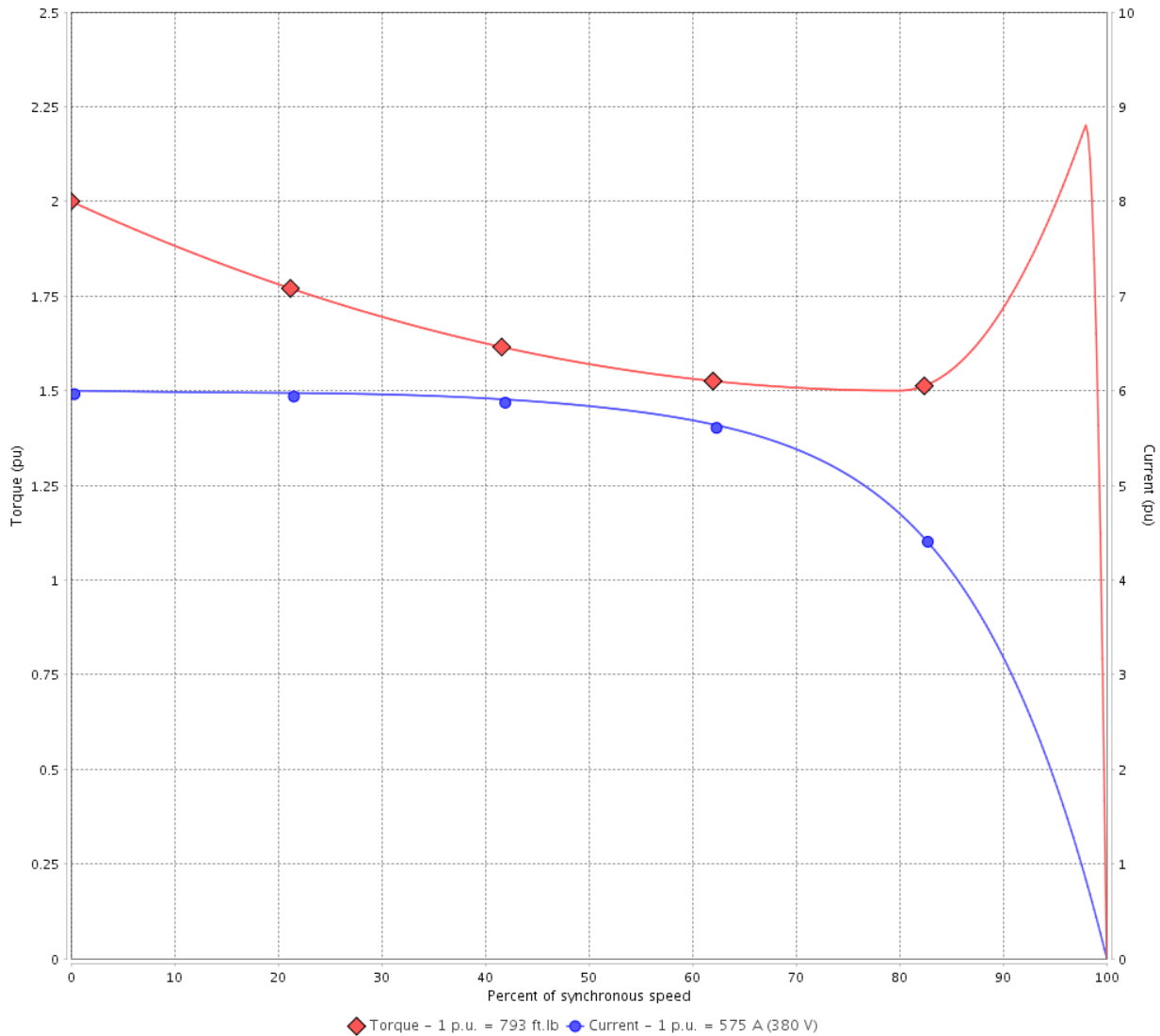
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11679203

Catalog # : 50036ET3G586/7S-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 2P IE3

Rated current	: 575 A	Moment of inertia (J)	: 143 sq.ft.lb
LRC	: 6.0	Duty cycle	: Cont.(S1)
Rated torque	: 793 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 105 K
Rated speed	: 2980 rpm	Design	: B

Locked rotor time : 54s (cold) 30s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



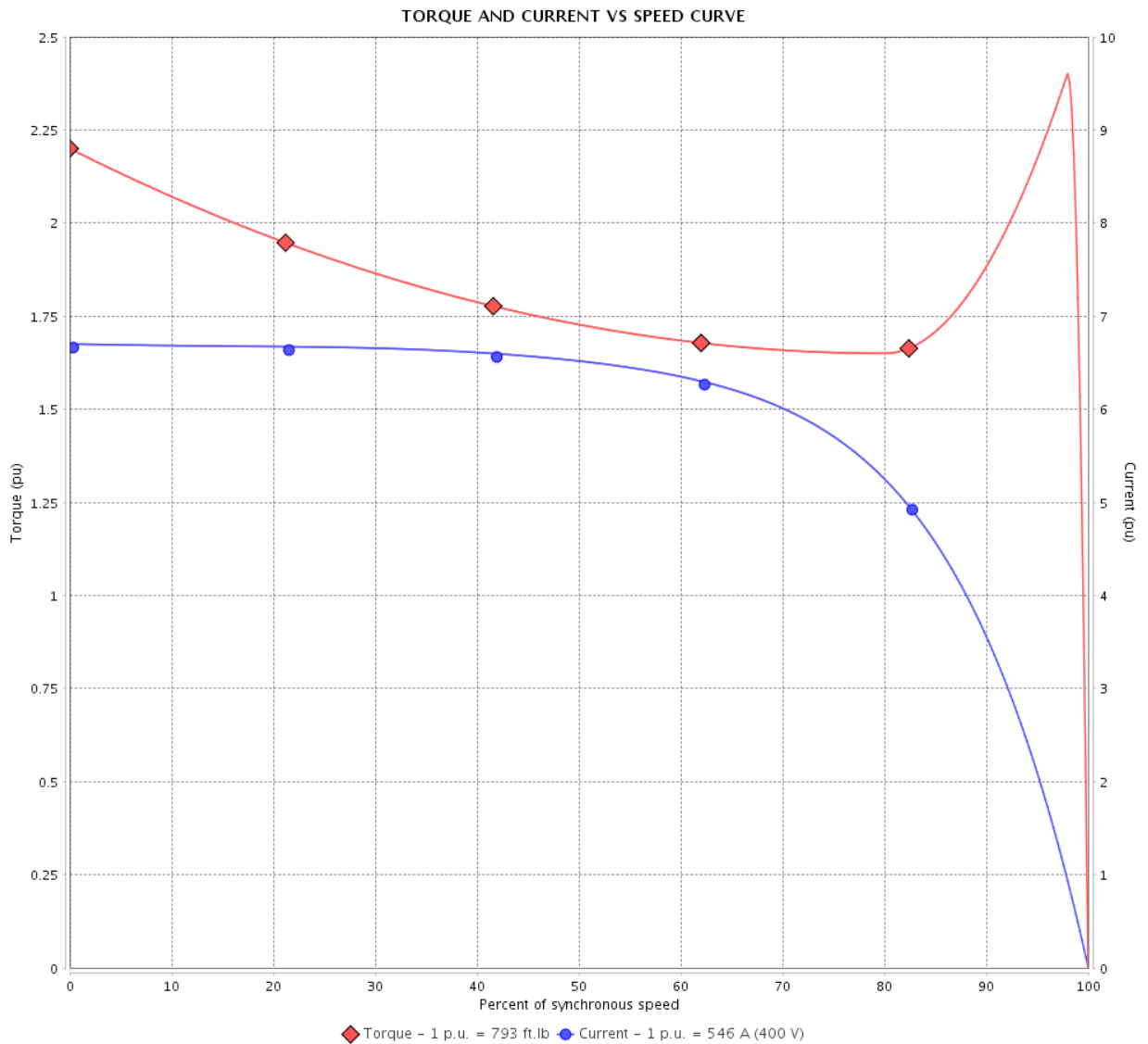
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11679203

Catalog # : 50036ET3G586/7S-W22



Performance : 400 V 50 Hz 2P IE3

Rated current	: 546 A	Moment of inertia (J)	: 143 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 793 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 105 K
Rated speed	: 2980 rpm	Design	: B

Locked rotor time : 54s (cold) 30s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



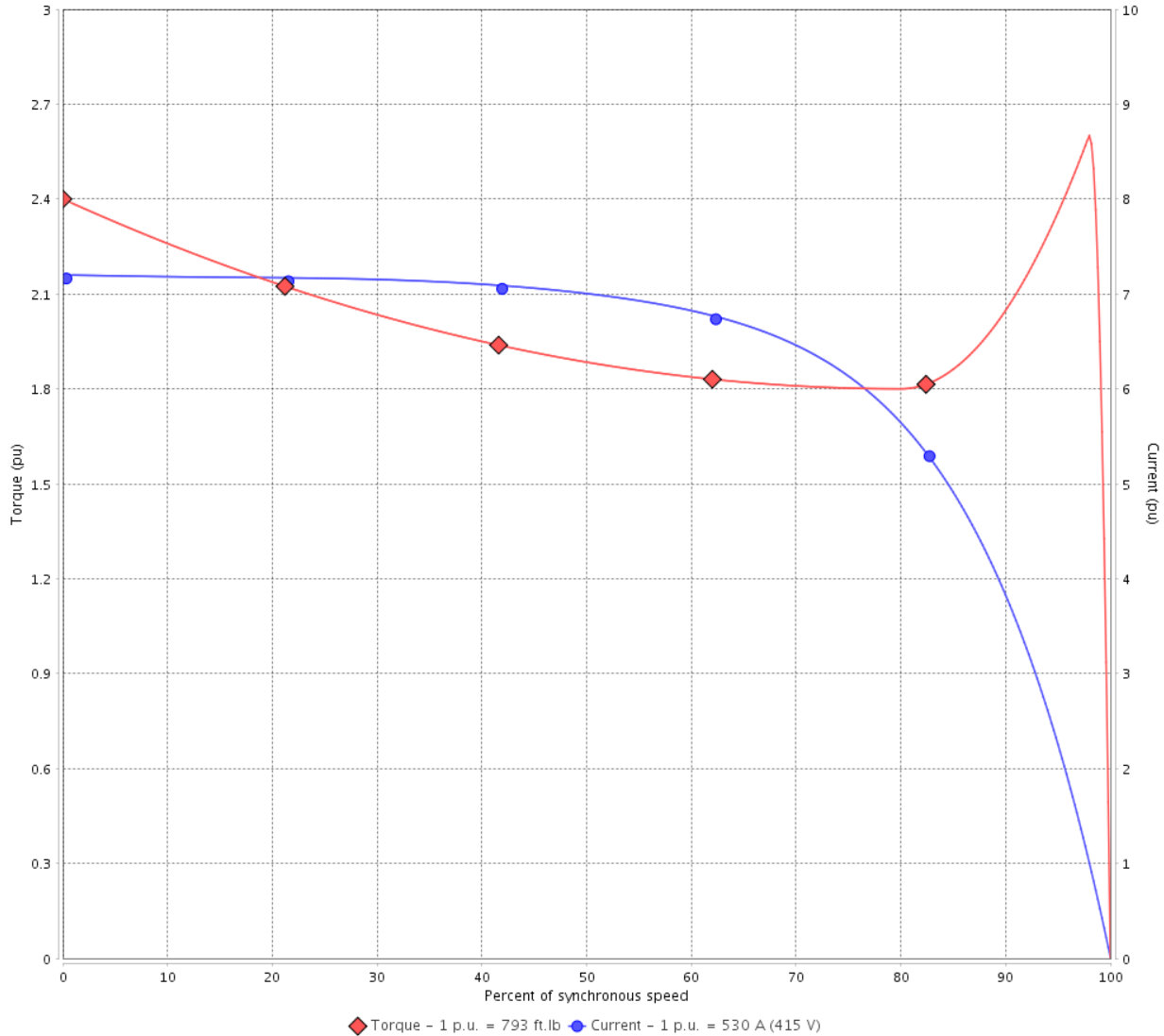
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11679203

Catalog # : 50036ET3G586/7S-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 2P IE3

Rated current	: 530 A	Moment of inertia (J)	: 143 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 793 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 105 K
Rated speed	: 2980 rpm	Design	: B

Locked rotor time : 54s (cold) 30s (hot)

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LOAD PERFORMANCE CURVE

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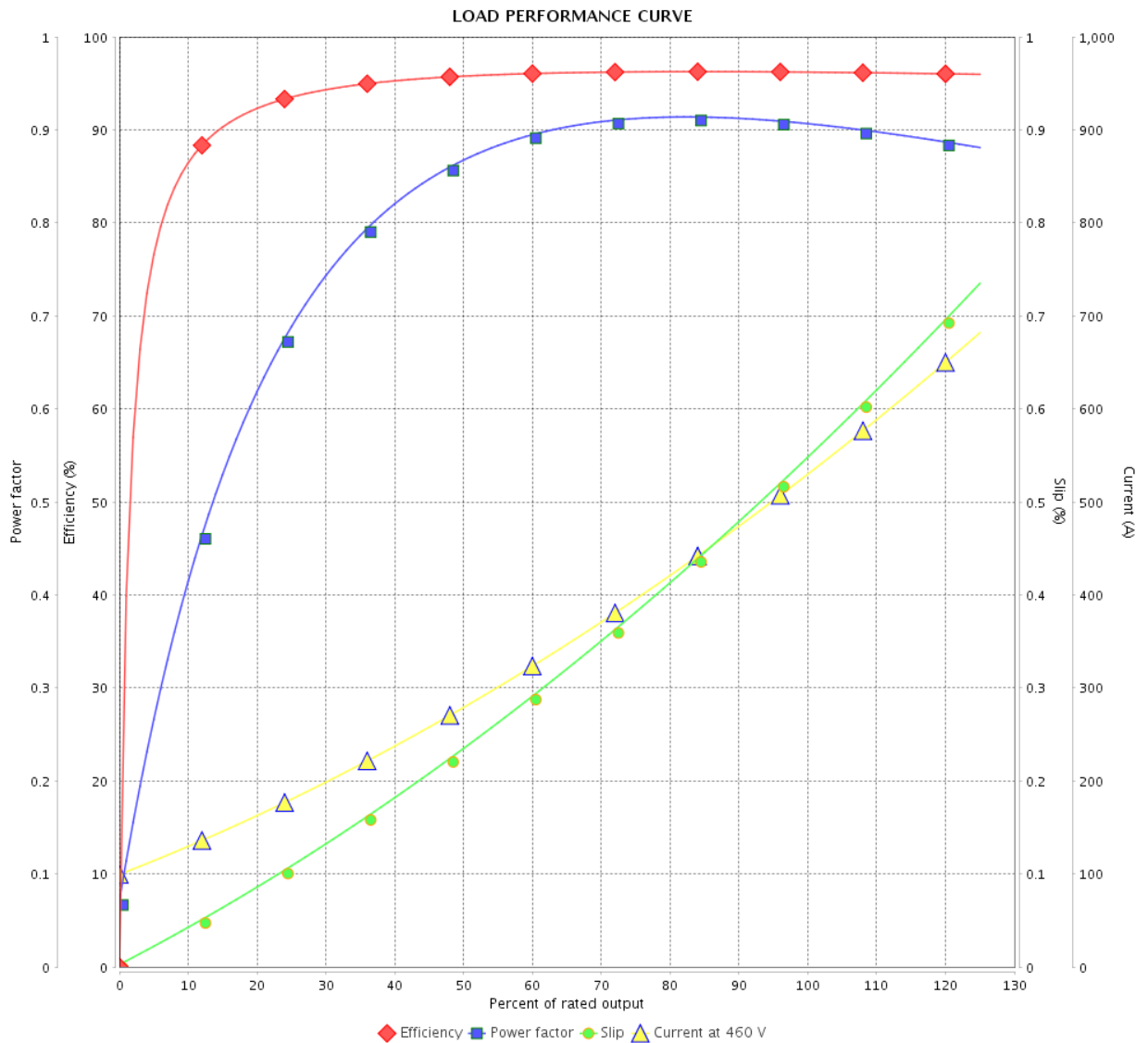


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11679203

Catalog # : 50036ET3G586/7S-W22



Performance : 460 V 60 Hz 2P

Rated current : 530 A
 LRC : 8.5
 Rated torque : 733 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 240 %
 Rated speed : 3580 rpm

Moment of inertia (J) : 143 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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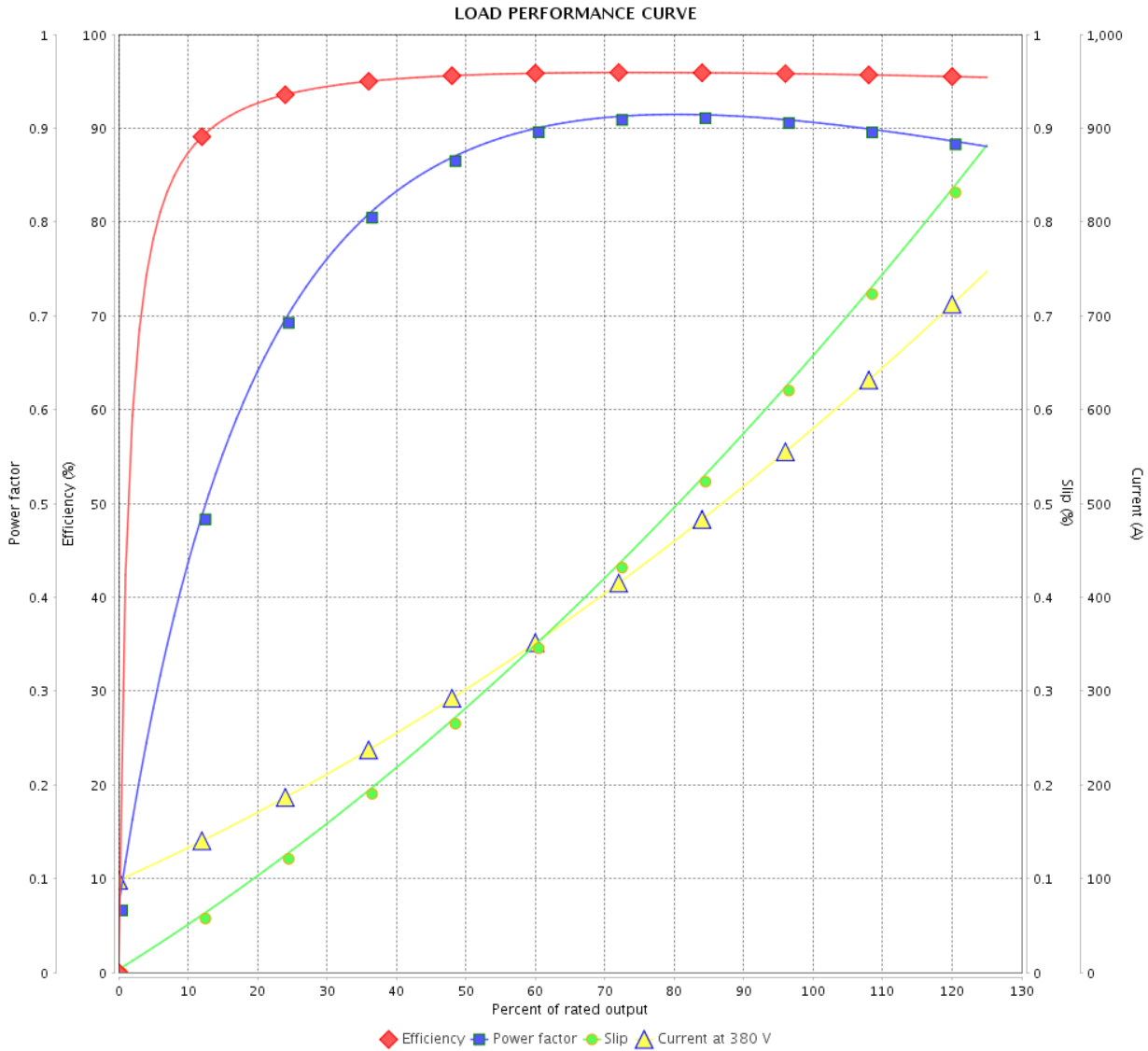


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Product line : NEMA Premium Efficiency Three-Phase

Product code : 11679203

Catalog # : 50036ET3G586/7S-W22



Performance : 380 V 50 Hz 2P IE3

Rated current	: 575 A	Moment of inertia (J)	: 143 sq.ft.lb
LRC	: 6.0	Duty cycle	: Cont.(S1)
Rated torque	: 793 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 105 K
Rated speed	: 2980 rpm	Design	: B

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Three Phase Induction Motor - Squirrel Cage

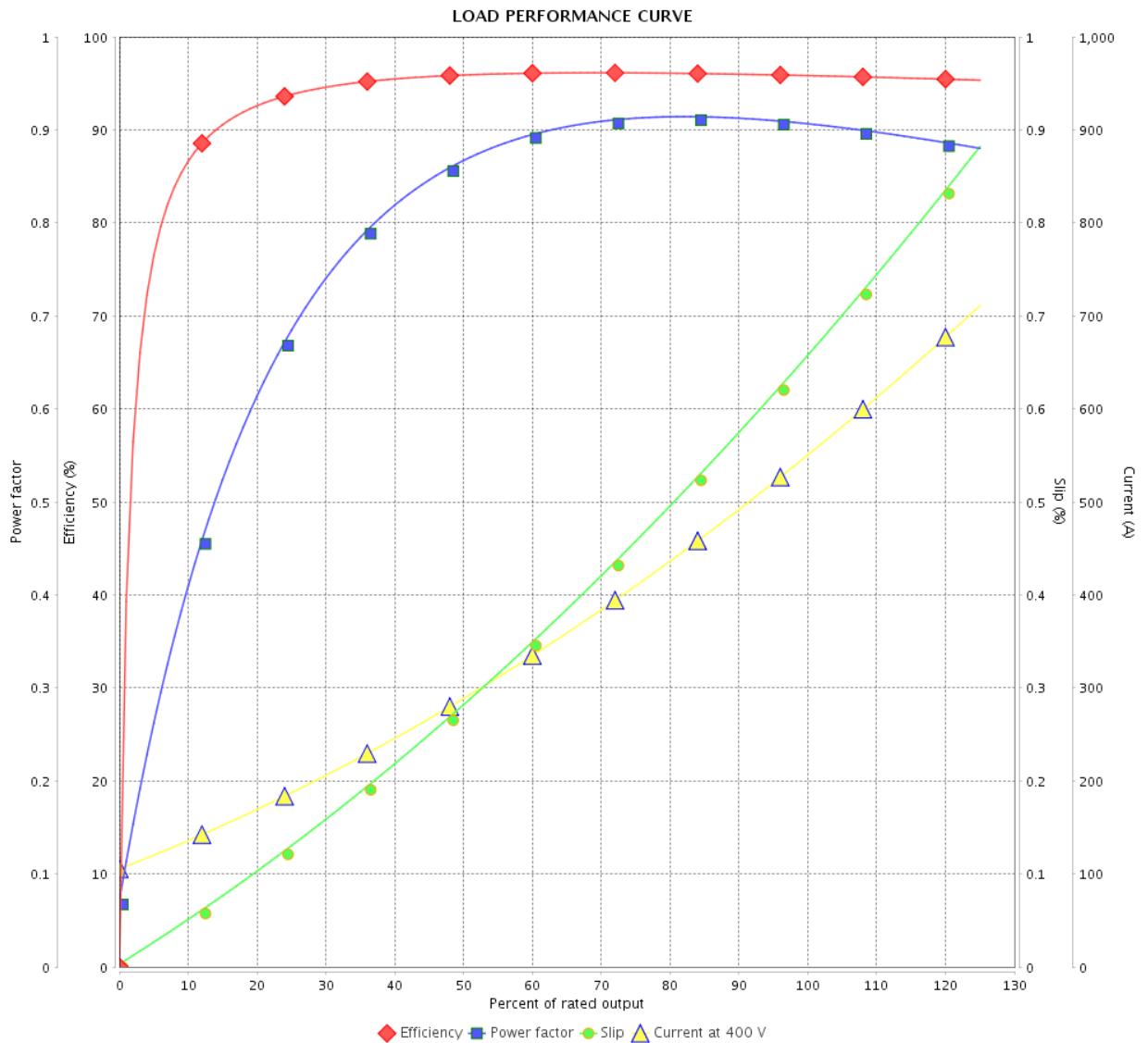


Customer : _____

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11679203

Catalog # : 50036ET3G586/7S-W22



Performance : 400 V 50 Hz 2P IE3

Rated current : 546 A
 LRC : 6.7
 Rated torque : 793 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 240 %
 Rated speed : 2980 rpm

Moment of inertia (J) : 143 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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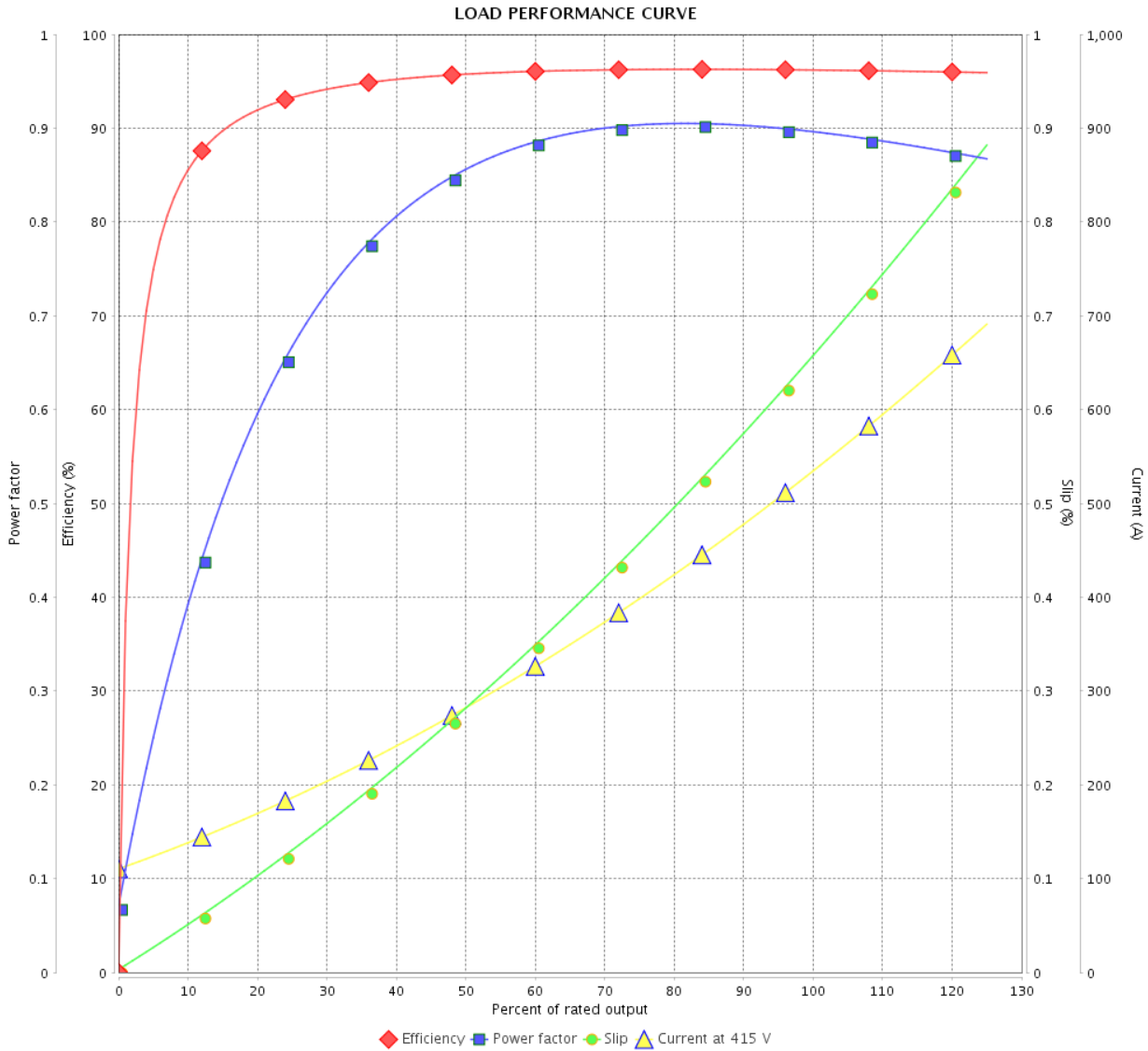


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LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 793 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 105 K
Rated speed	: 2980 rpm	Design	: B

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THERMAL LIMIT CURVE



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Locked rotor torque : 220 %	Service factor : 1.15
Breakdown torque : 240 %	Temperature rise : 80 K
Rated speed : 3580 rpm	Design : B

Heating constant

Cooling constant

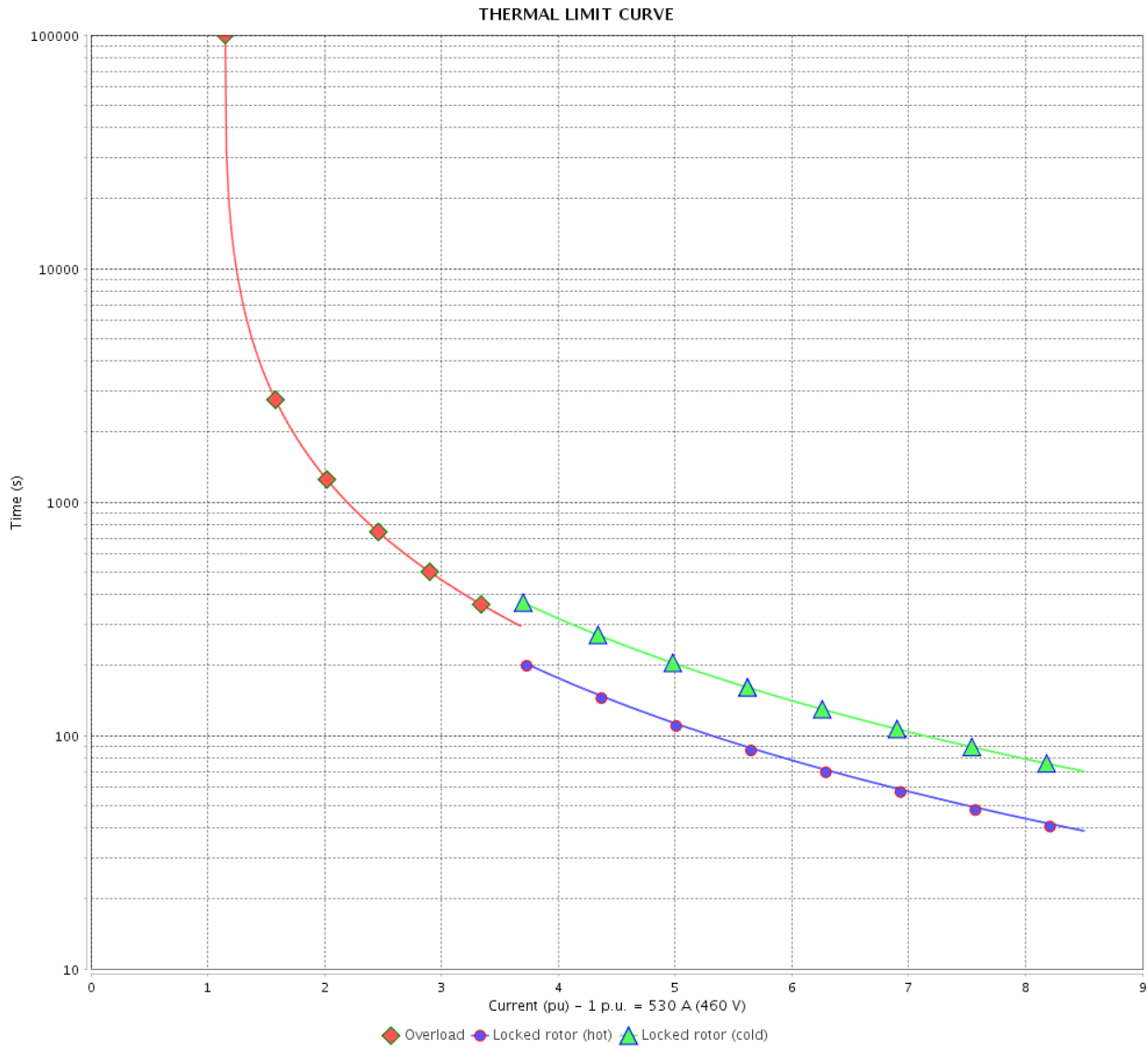
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LRC : 6.0	Duty cycle : Cont.(S1)
Rated torque : 793 ft.lb	Insulation class : F
Locked rotor torque : 200 %	Service factor : 1.00
Breakdown torque : 220 %	Temperature rise : 105 K
Rated speed : 2980 rpm	Design : B

Heating constant

Cooling constant

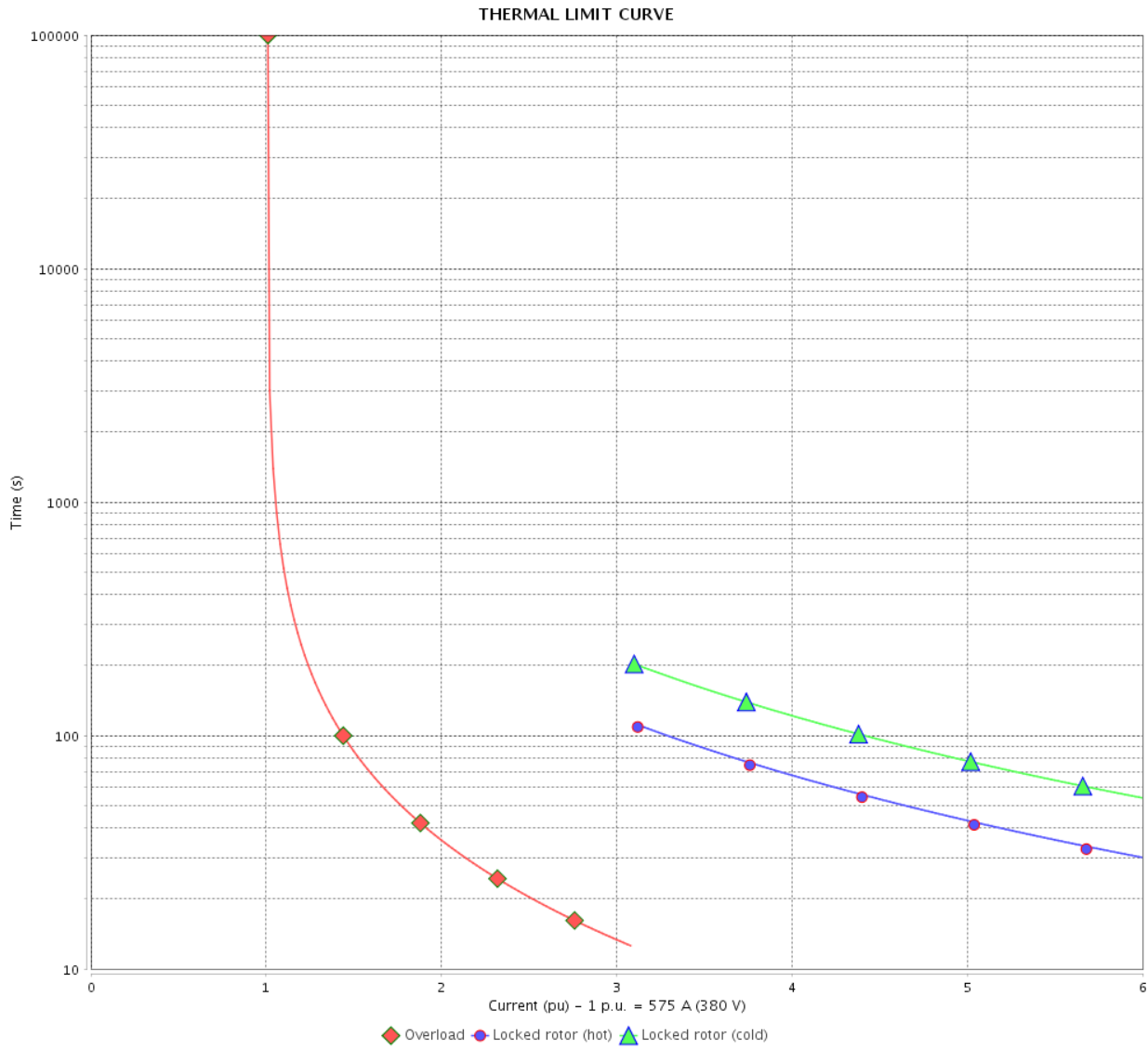
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Customer : _____



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Locked rotor torque : 220 %	Service factor : 1.00
Breakdown torque : 240 %	Temperature rise : 105 K
Rated speed : 2980 rpm	Design : B

Heating constant

Cooling constant

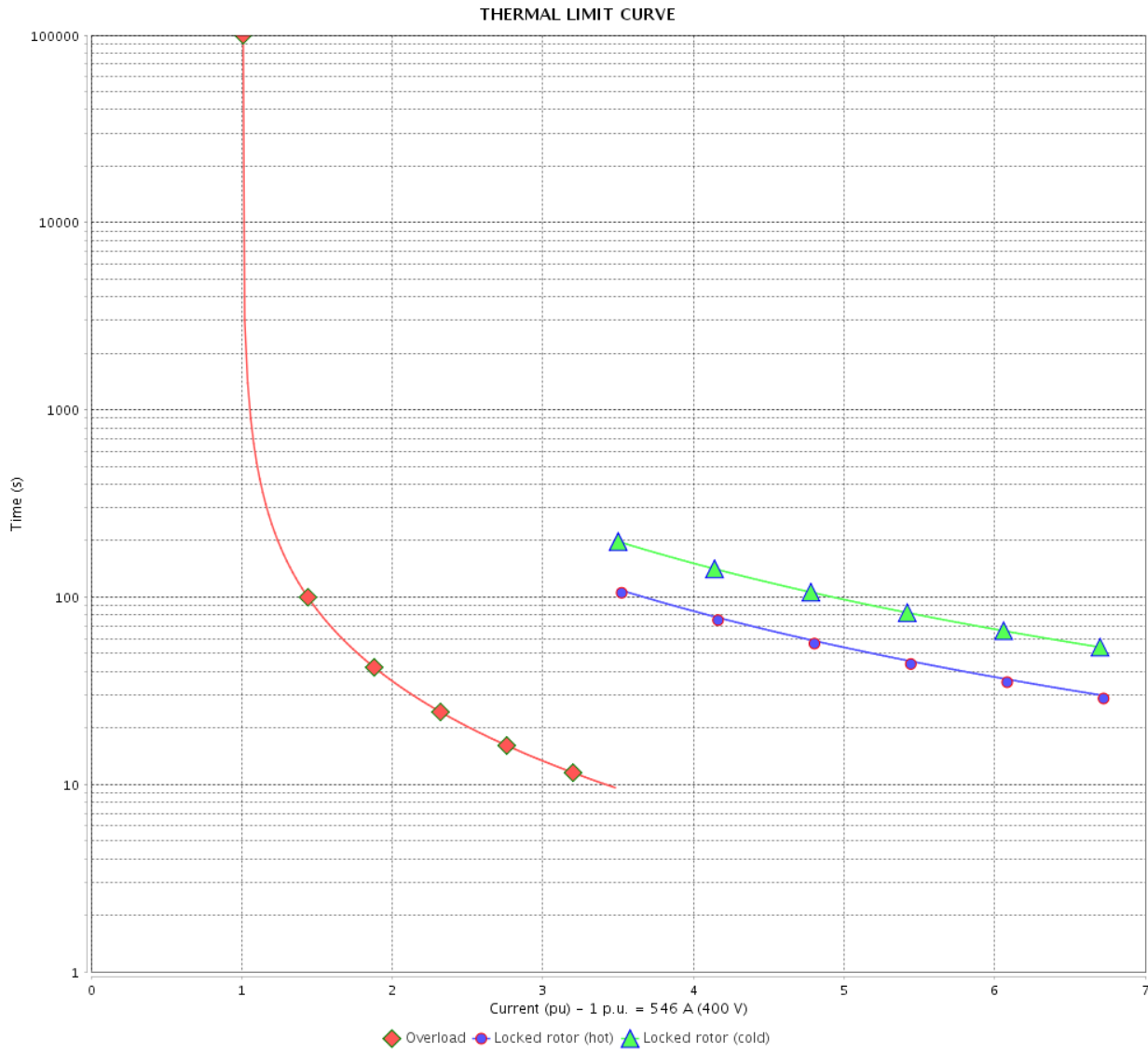
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THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

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 Product code : 11679203
 Catalog # : 50036ET3G586/7S-W22

Performance : 415 V 50 Hz 2P IE3

Rated current : 530 A	Moment of inertia (J) : 143 sq.ft.lb
LRC : 7.2	Duty cycle : Cont.(S1)
Rated torque : 793 ft.lb	Insulation class : F
Locked rotor torque : 240 %	Service factor : 1.00
Breakdown torque : 260 %	Temperature rise : 105 K
Rated speed : 2980 rpm	Design : B

Heating constant

Cooling constant

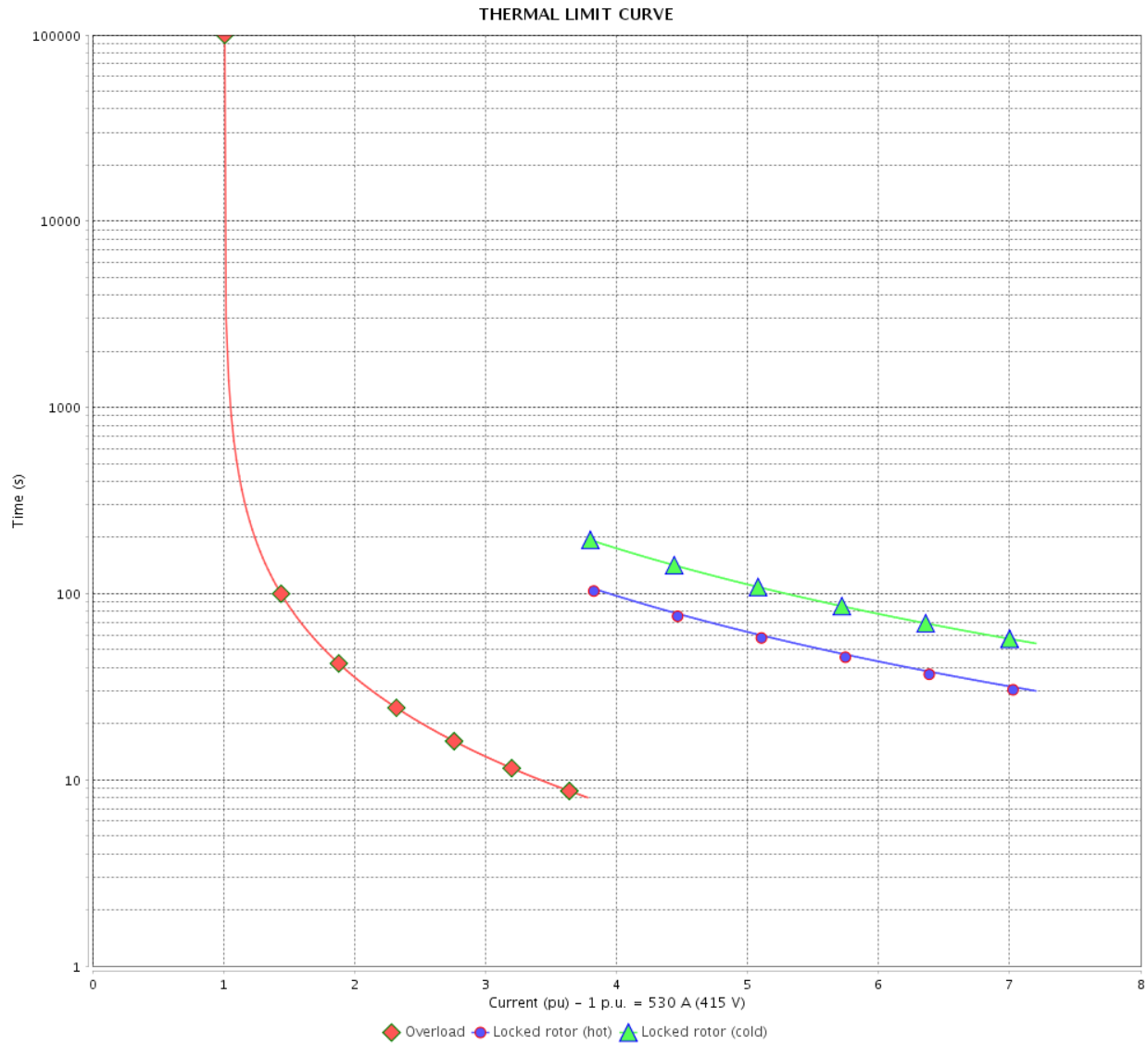
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Customer : _____



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

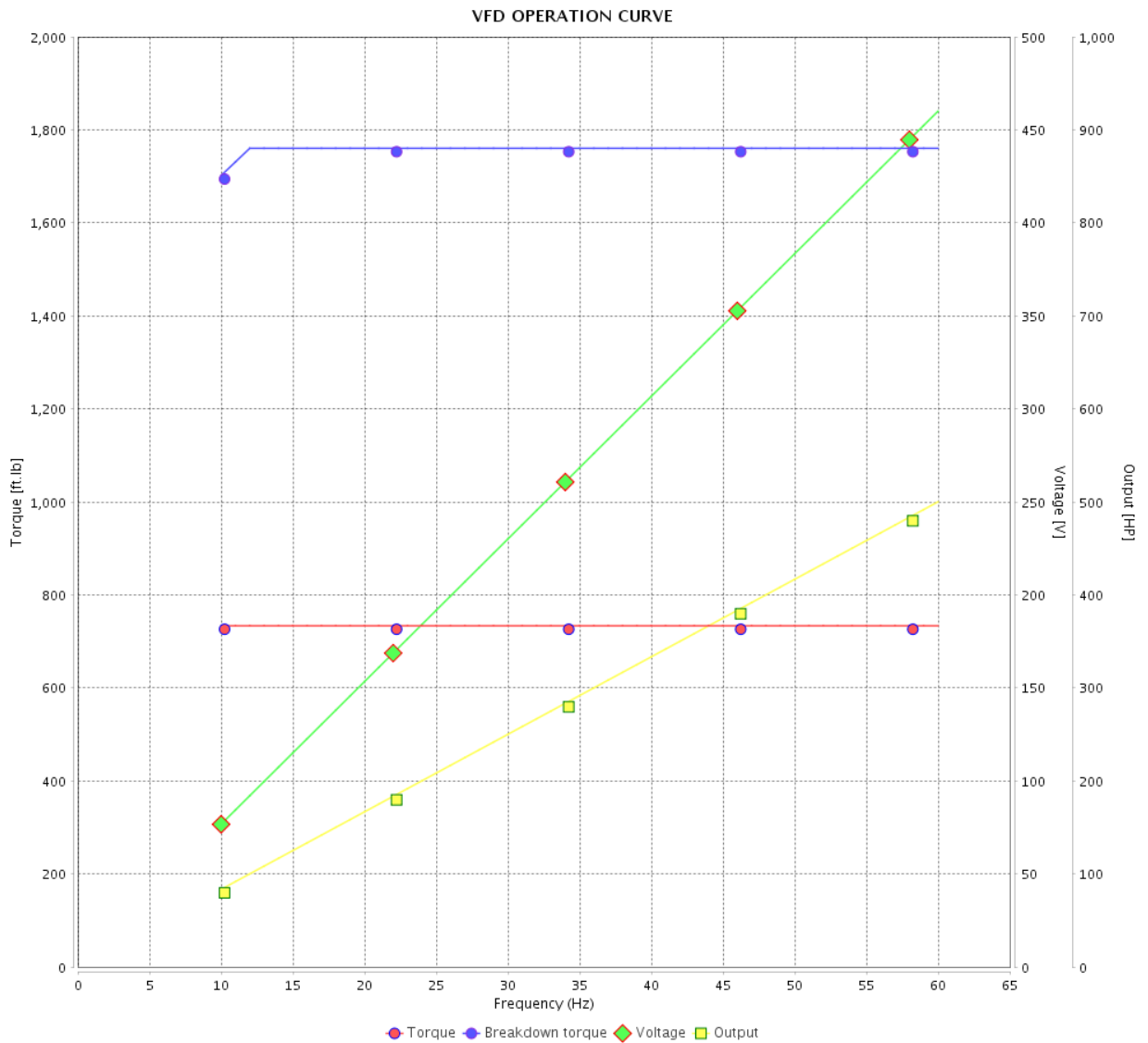


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Product line : NEMA Premium Efficiency Three-Phase

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Catalog # : 50036ET3G586/7S-W22



Performance : 460 V 60 Hz 2P

Rated current : 530 A
 LRC : 8.5
 Rated torque : 733 ft.lb
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 Breakdown torque : 240 %
 Rated speed : 3580 rpm

Moment of inertia (J) : 143 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



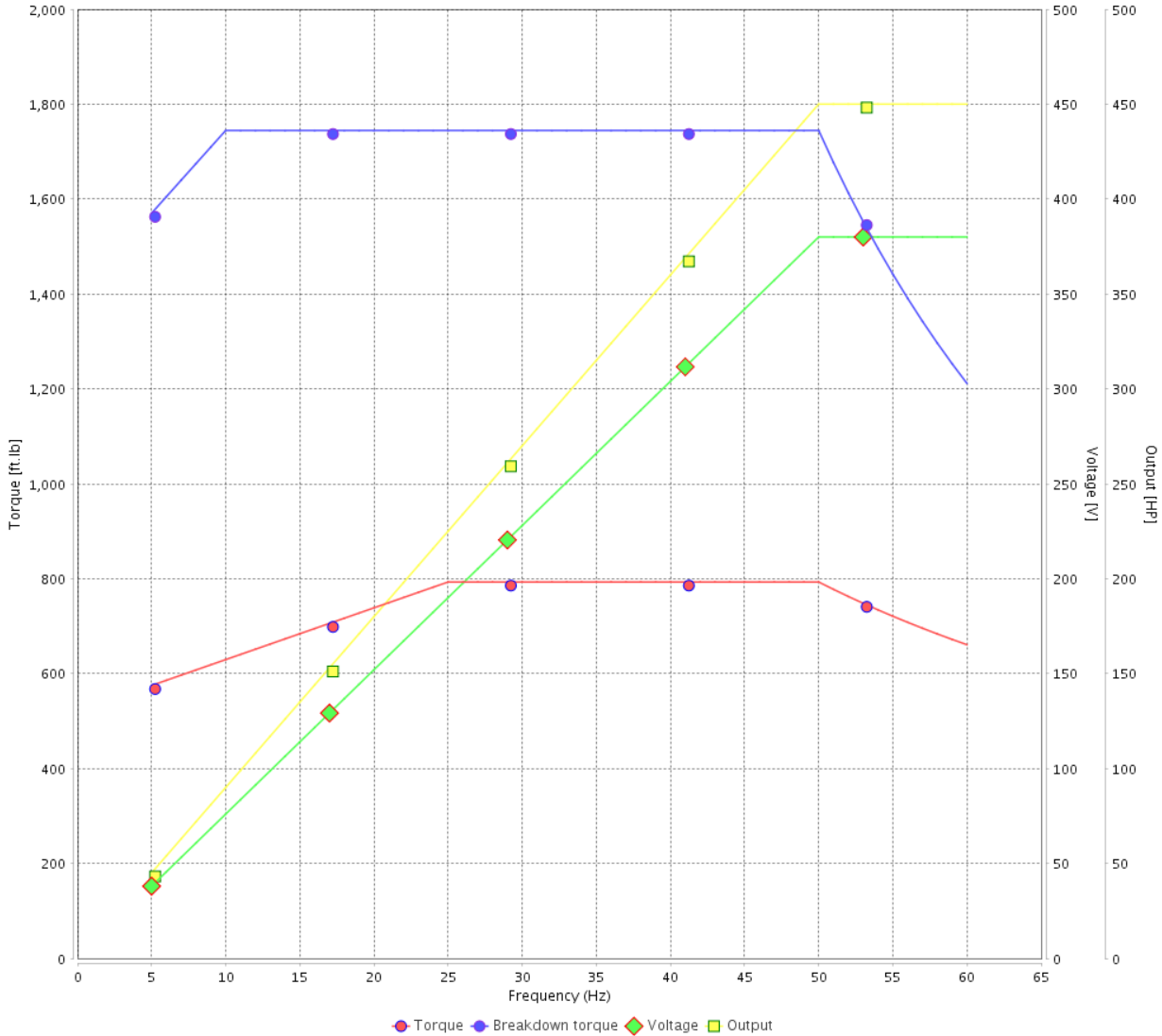
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11679203

Catalog # : 50036ET3G586/7S-W22

VFD OPERATION CURVE



Performance : 380 V 50 Hz 2P IE3

Rated current : 575 A
 LRC : 6.0
 Rated torque : 793 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 220 %
 Rated speed : 2980 rpm

Moment of inertia (J) : 143 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

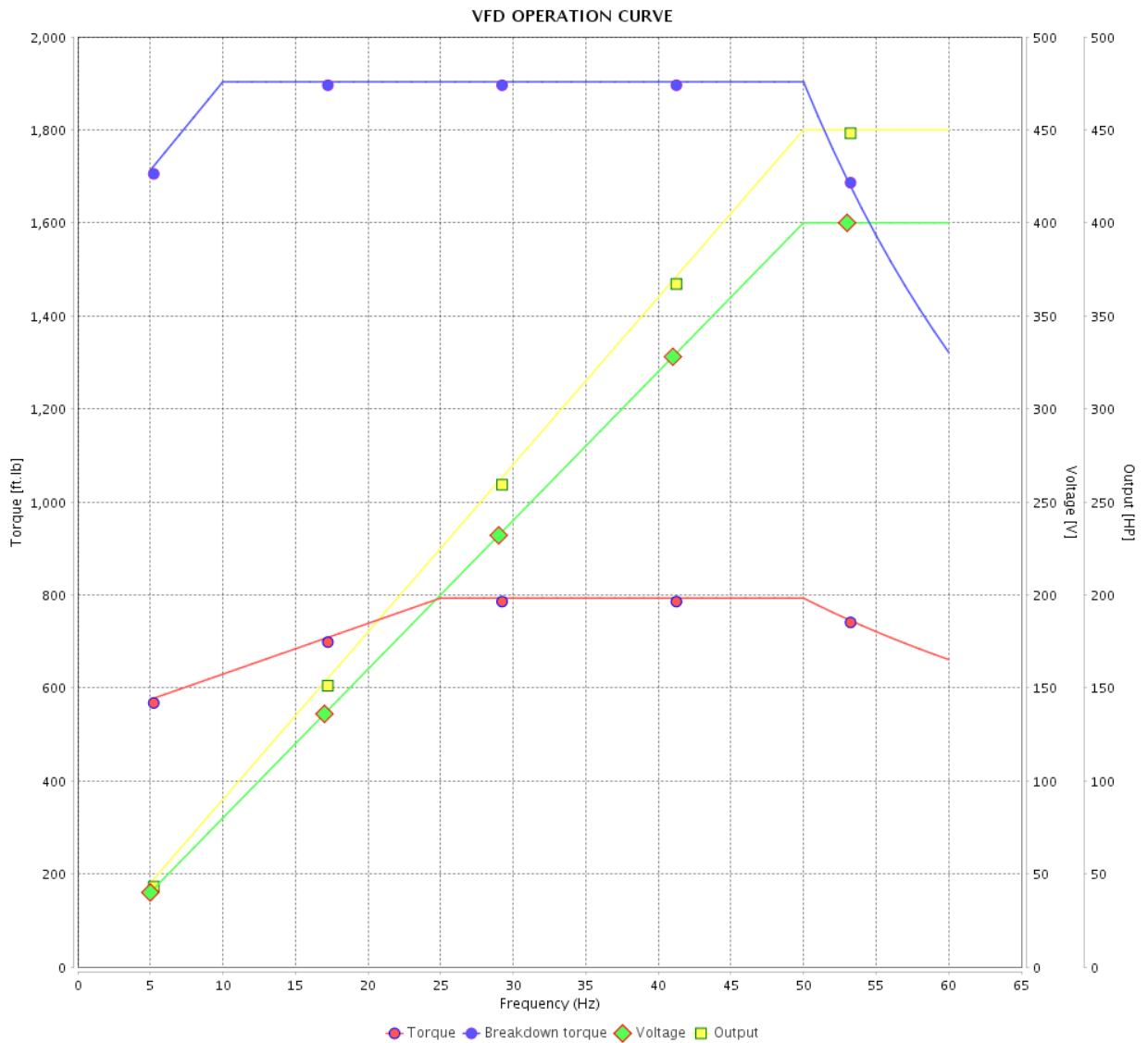


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VFD OPERATION CURVE

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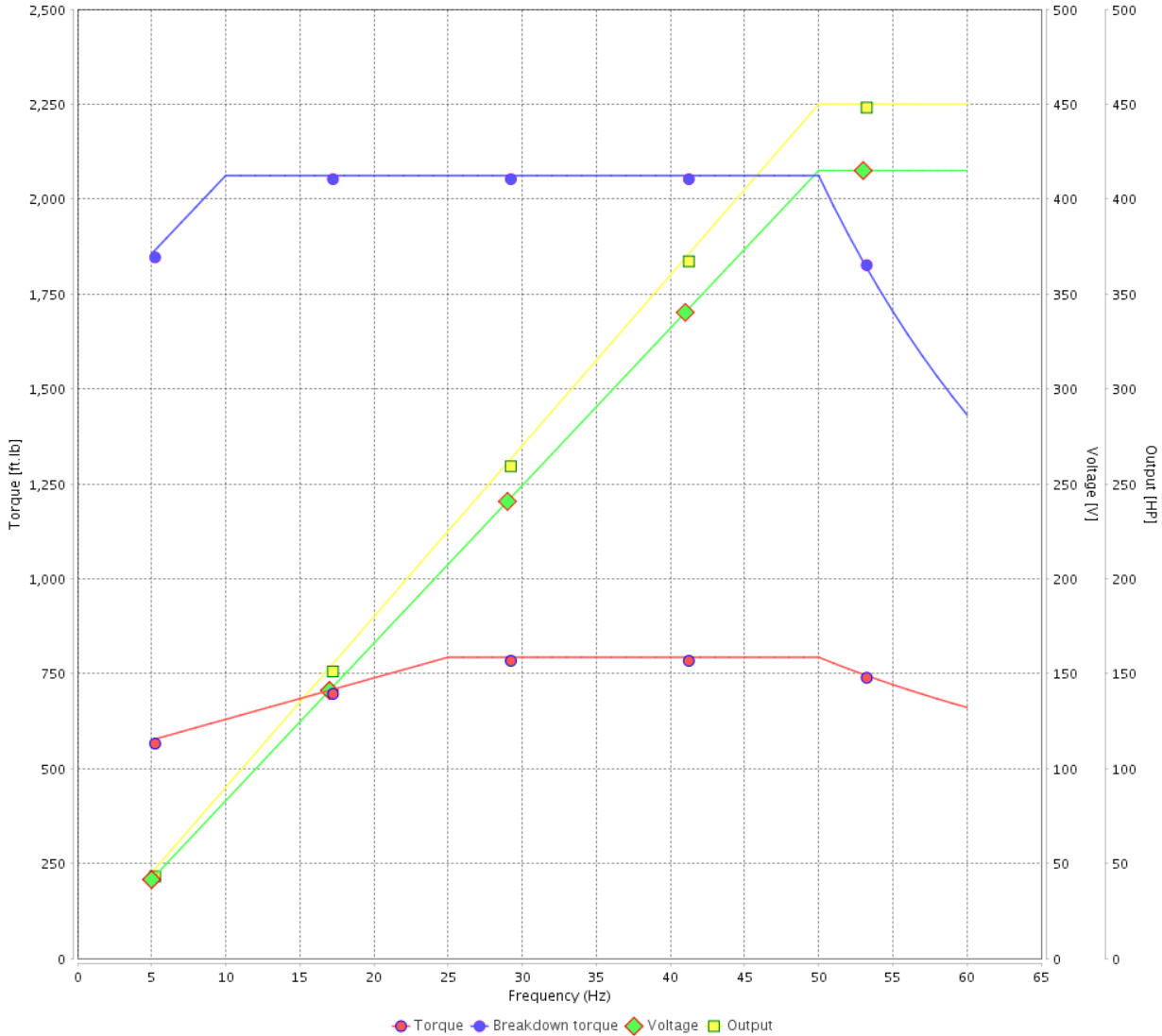
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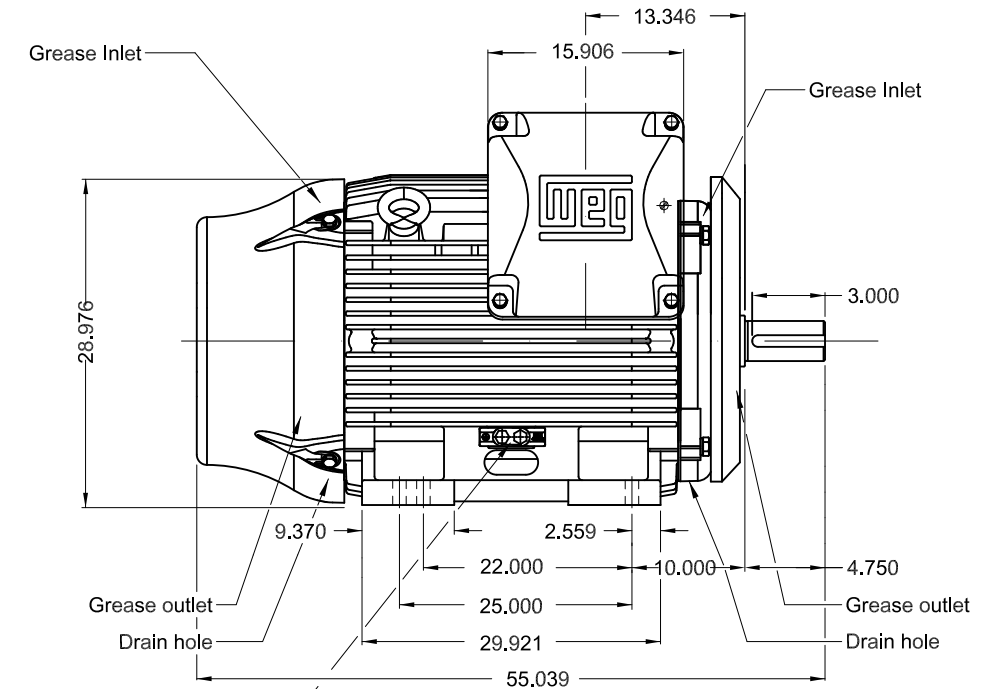
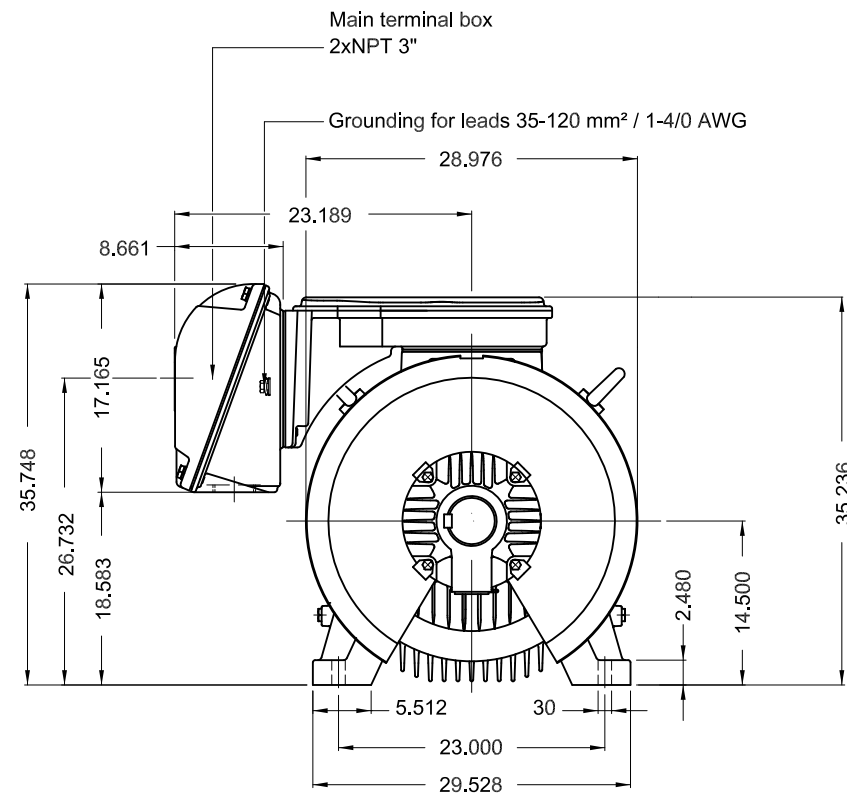
VFD OPERATION CURVE



Performance : 415 V 50 Hz 2P IE3

Rated current	: 530 A	Moment of inertia (J)	: 143 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 793 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 105 K
Rated speed	: 2980 rpm	Design	: B

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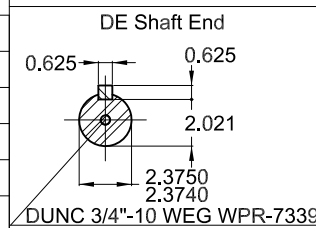


Grounding for leads 25-185 mm² / 3AWG-350MCM

500 HP 02 Poles 60 Hz

A

- Without vertical jackscrews
- NDE endshield with electrically insulated bearing hub
- Drive-End Air Deflector
- Color RAL 5009
- Painting plan 203A
- Mounting B3R(D)



ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWUSER	THREE PH. MOTOR W22 PREM. EFF. FRAME 586/7TS IP55 TEFC					
CHECKED							
RELEASED							
REL DT.	WMO		Jaragua do Sul	Product Engineering	SHEET	1 / 1	

PREVIEW
WDD

