

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: W40 NEMA Premium Efficiency Three-Phase	Product code :	14367175		
		Catalog # :	02518OT3E284T-W40		
Frame	: 284T	Cooling method	: IC01 - ODP		
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	: 350 lb		
Protection degree	: IP23	Moment of inertia (J)	: 3.71 sq.ft.lb		
Design	: B				
Output [HP]	25	20	20	20	
Poles	4	4	4	4	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	59.0/29.5	29.5	28.7	28.0	
L. R. Amperes [A]	372/186	171	192	190	
LRC [A]	6.3x(Code G)	5.8x(Code G)	6.7x(Code H)	6.8x(Code J)	
No load current [A]	22.0/11.0	10.0	11.0	12.0	
Rated speed [RPM]	1765	1465	1470	1475	
Slip [%]	1.94	2.33	2.00	1.67	
Rated torque [ft.lb]	74.2	71.4	71.2	71.2	
Locked rotor torque [%]	250	229	250	270	
Breakdown torque [%]	270	250	290	300	
Service factor	1.25	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	64s (cold) 36s (hot)	70s (cold) 39s (hot)	64s (cold) 36s (hot)	61s (cold) 34s (hot)	
Noise level ²	64.0 dB(A)				
Efficiency (%)	25%	92.8	91.5	91.5	91.5
	50%	93.0	91.7	91.7	91.7
	75%	93.6	92.1	92.1	92.1
	100%	93.6	92.1	92.1	92.1
Power Factor	25%	0.45	0.46	0.42	0.38
	50%	0.69	0.69	0.65	0.62
	75%	0.80	0.79	0.77	0.74
	100%	0.84	0.84	0.82	0.81
Bearing type	: Drive end : 6311 Z C3	Non drive end : 6211 Z C3	Foundation loads		
Sealing	: Without	Without	Max. traction		
	Bearing Seal	Bearing Seal	Max. compression		
Lubrication interval	: 20000 h	20000 h			
Lubricant amount	: 18 g	11 g			
Lubricant type	: Mobil Polyrex EM				
Notes USABLE @208V 65.2A SF 1.15 SFA 75.0A					
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



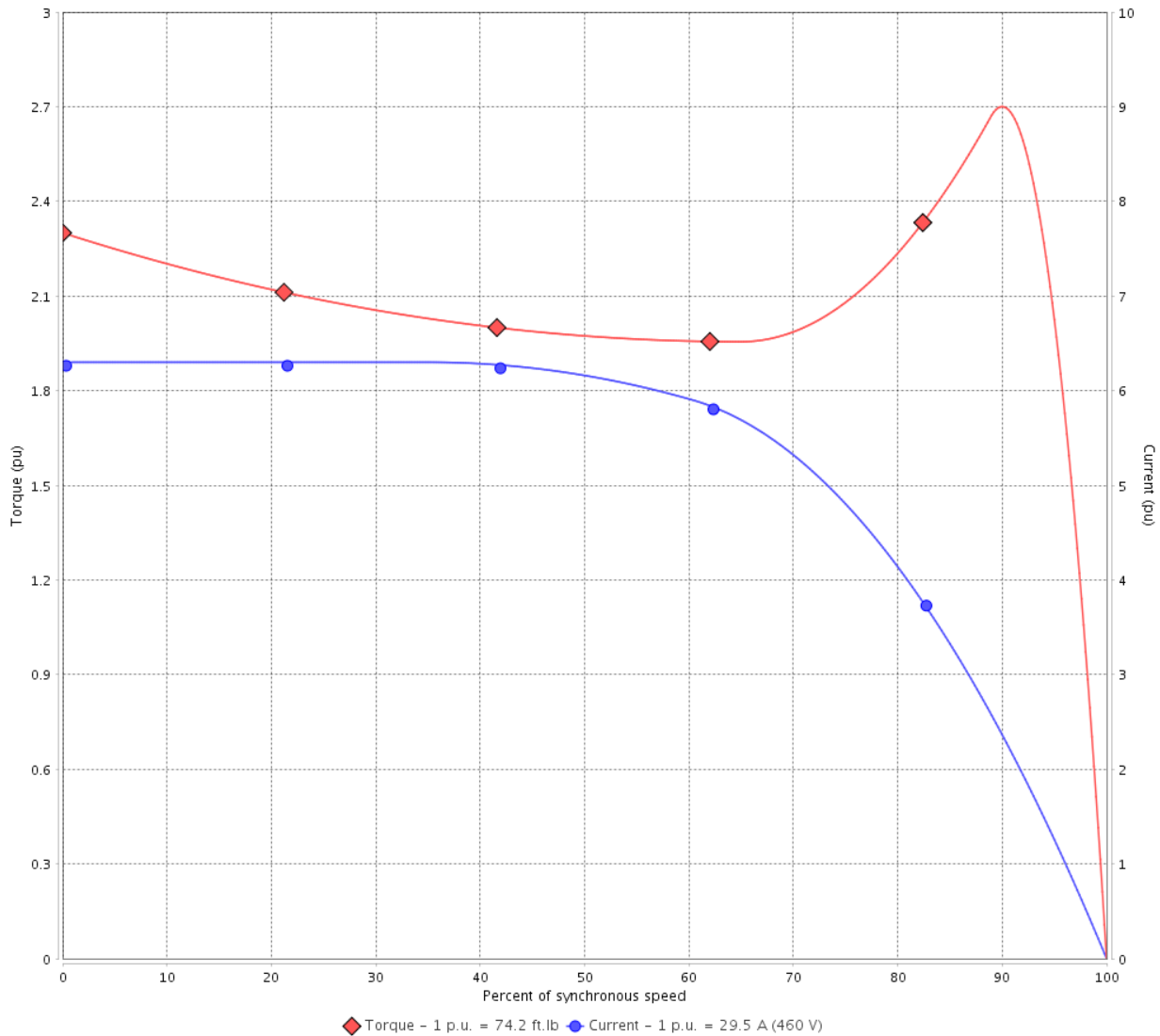
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14367175

Catalog # : 02518OT3E284T-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 4P

Rated current	: 59.0/29.5 A	Moment of inertia (J)	: 3.71 sq.ft.lb
LRC	: 6.3	Duty cycle	: Cont.(S1)
Rated torque	: 74.2 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.25
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1765 rpm	Design	: B

Locked rotor time : 64s (cold) 36s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



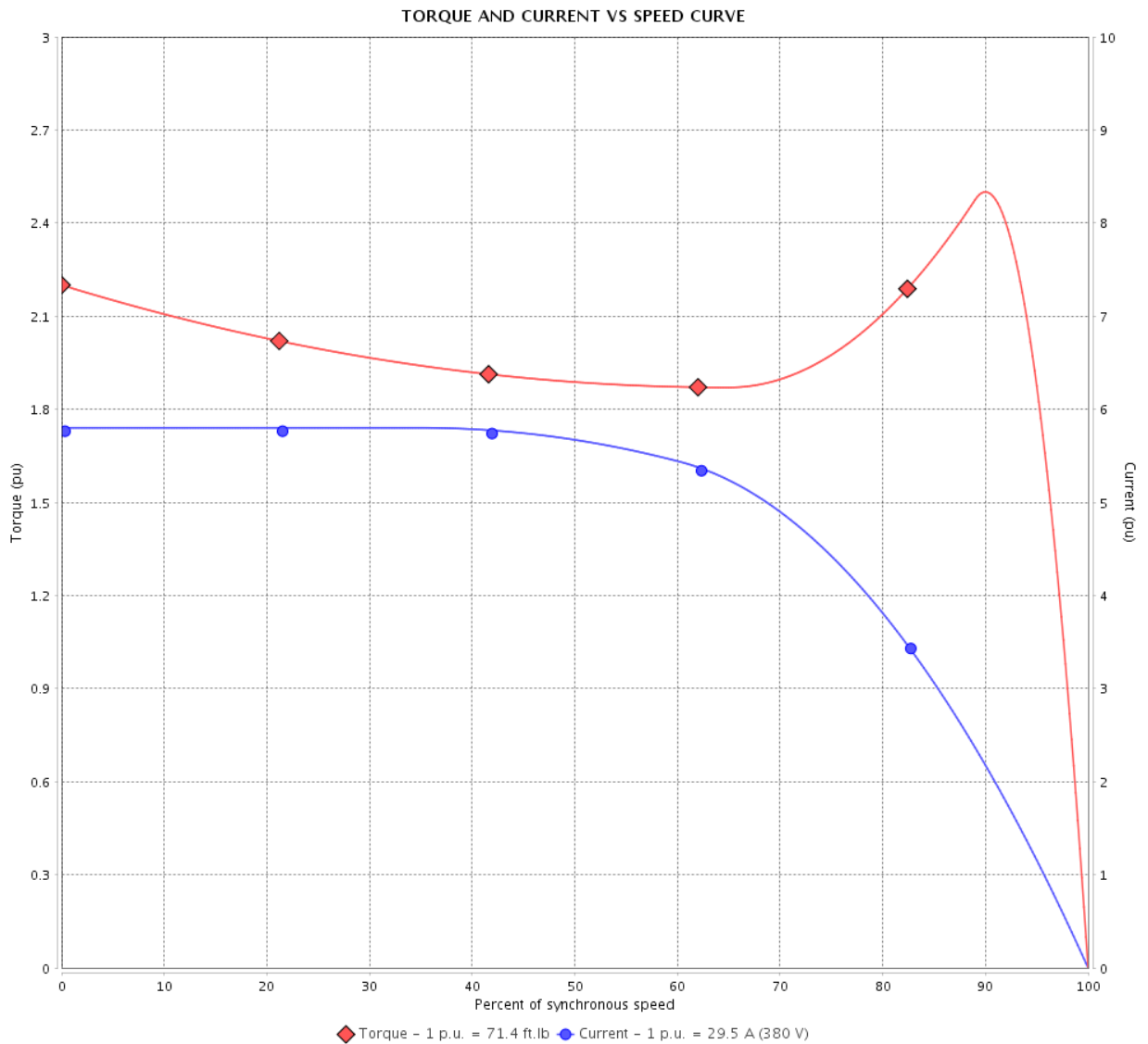
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14367175

Catalog # : 02518OT3E284T-W40



Performance : 380 V 50 Hz 4P IE3

Rated current	: 29.5 A	Moment of inertia (J)	: 3.71 sq.ft.lb
LRC	: 5.8	Duty cycle	: Cont.(S1)
Rated torque	: 71.4 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1465 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



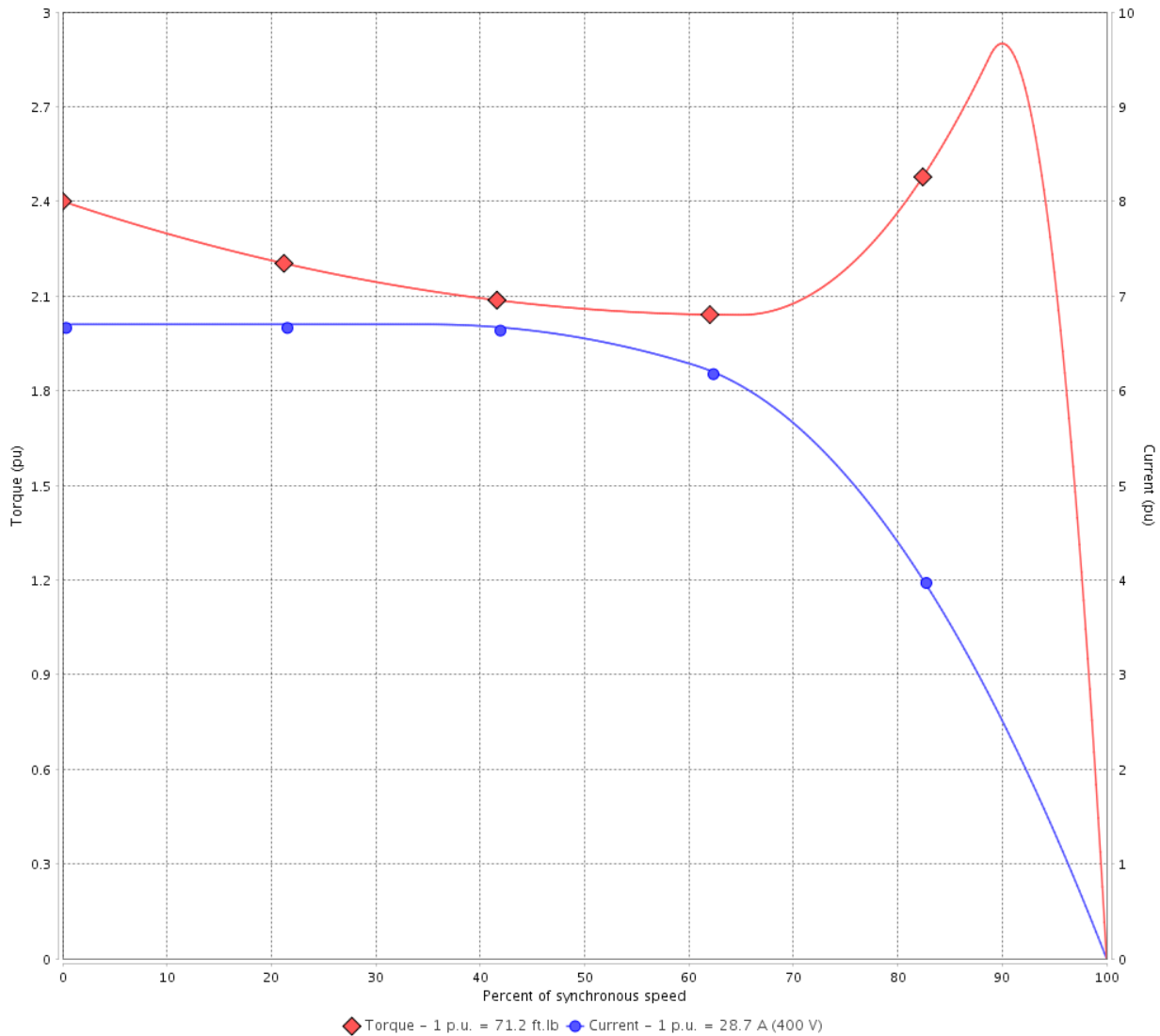
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14367175

Catalog # : 02518OT3E284T-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current	: 28.7 A	Moment of inertia (J)	: 3.71 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 71.2 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 1470 rpm	Design	: B

Locked rotor time : 64s (cold) 36s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



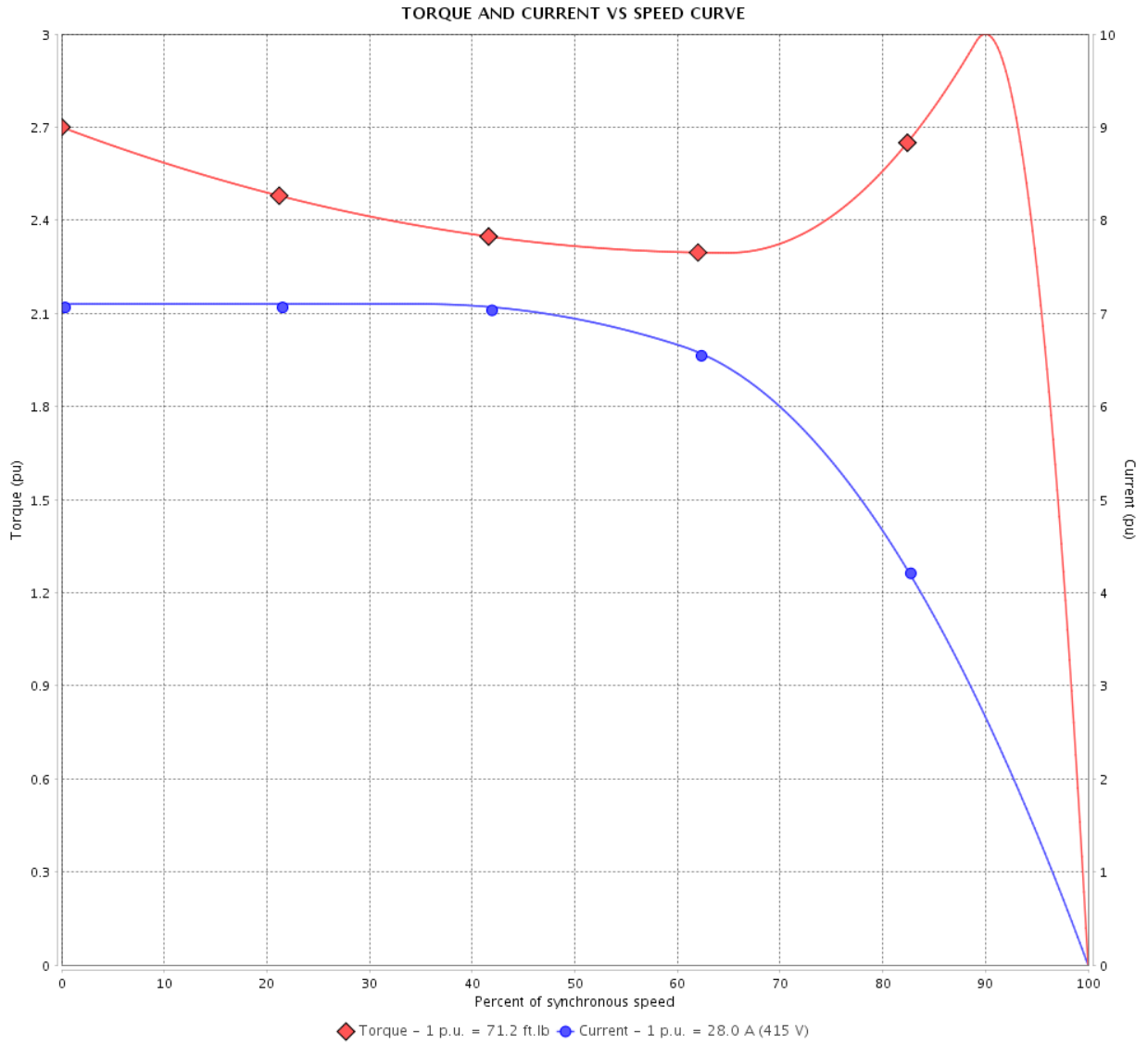
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Product code : 14367175

Catalog # : 02518OT3E284T-W40



Performance : 415 V 50 Hz 4P IE3

Rated current : 28.0 A
LRC : 6.8
Rated torque : 71.2 ft.lb
Locked rotor torque : 270 %
Breakdown torque : 300 %
Rated speed : 1475 rpm

Moment of inertia (J) : 3.71 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : B

Locked rotor time : 61s (cold) 34s (hot)

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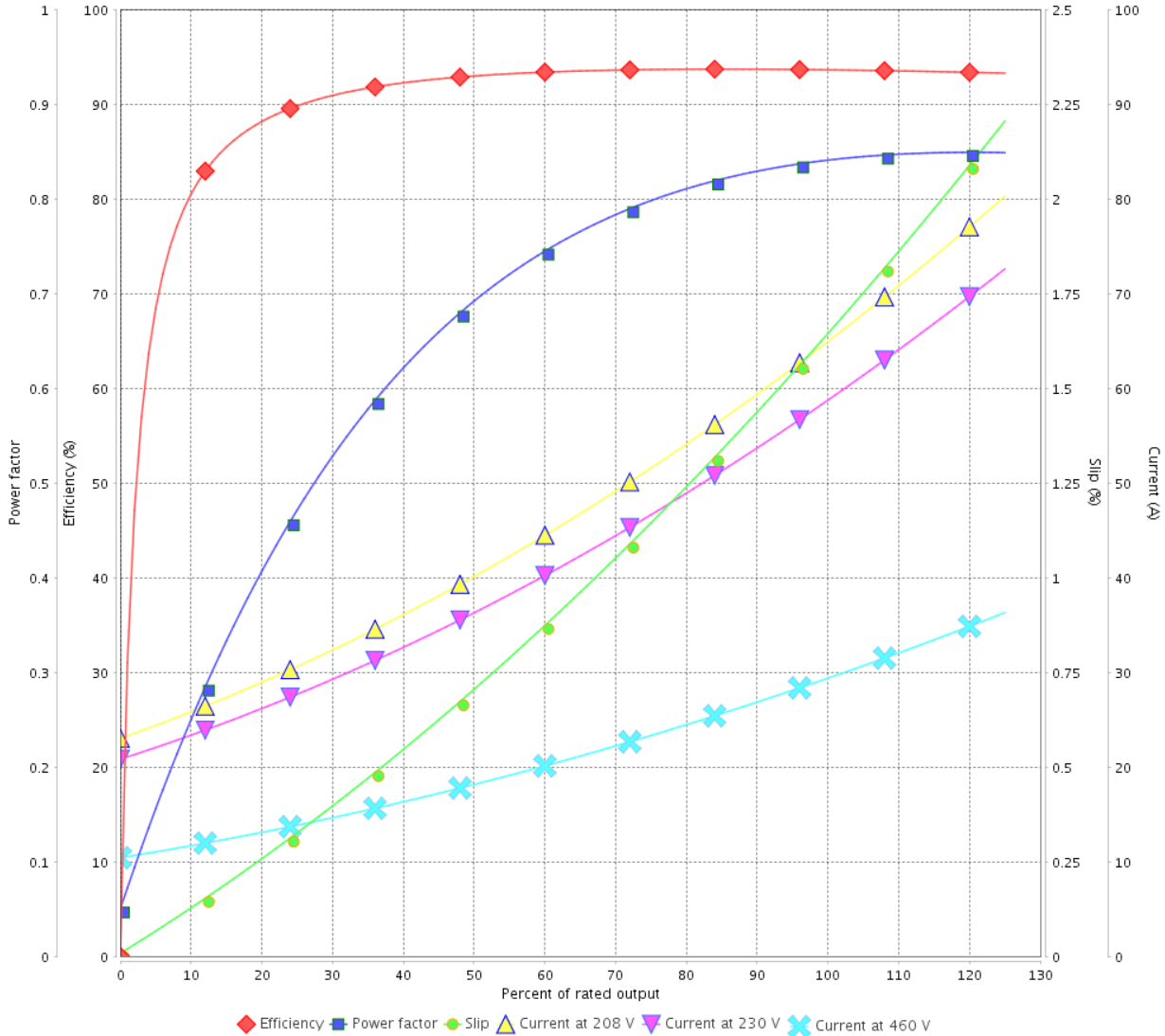
Customer :

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Product code : 14367175

Catalog # : 02518OT3E284T-W40

LOAD PERFORMANCE CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 59.0/29.5 A
 LRC : 6.3
 Rated torque : 74.2 ft.lb
 Locked rotor torque : 250 %
 Breakdown torque : 270 %
 Rated speed : 1765 rpm

Moment of inertia (J) : 3.71 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

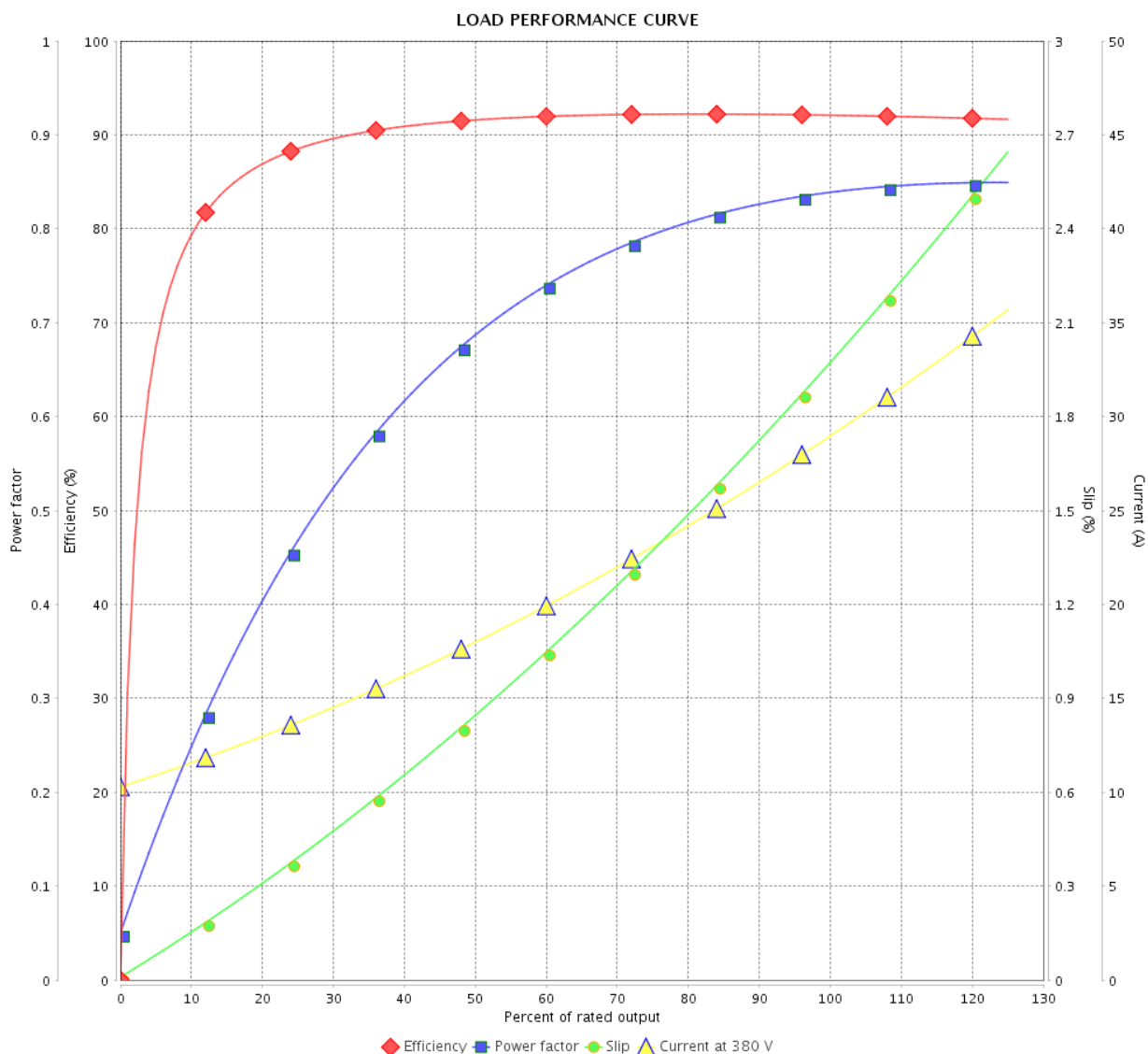


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Catalog # : 02518OT3E284T-W40



Performance : 380 V 50 Hz 4P IE3

Rated current : 29.5 A
 LRC : 5.8
 Rated torque : 71.4 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 250 %
 Rated speed : 1465 rpm

Moment of inertia (J) : 3.71 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



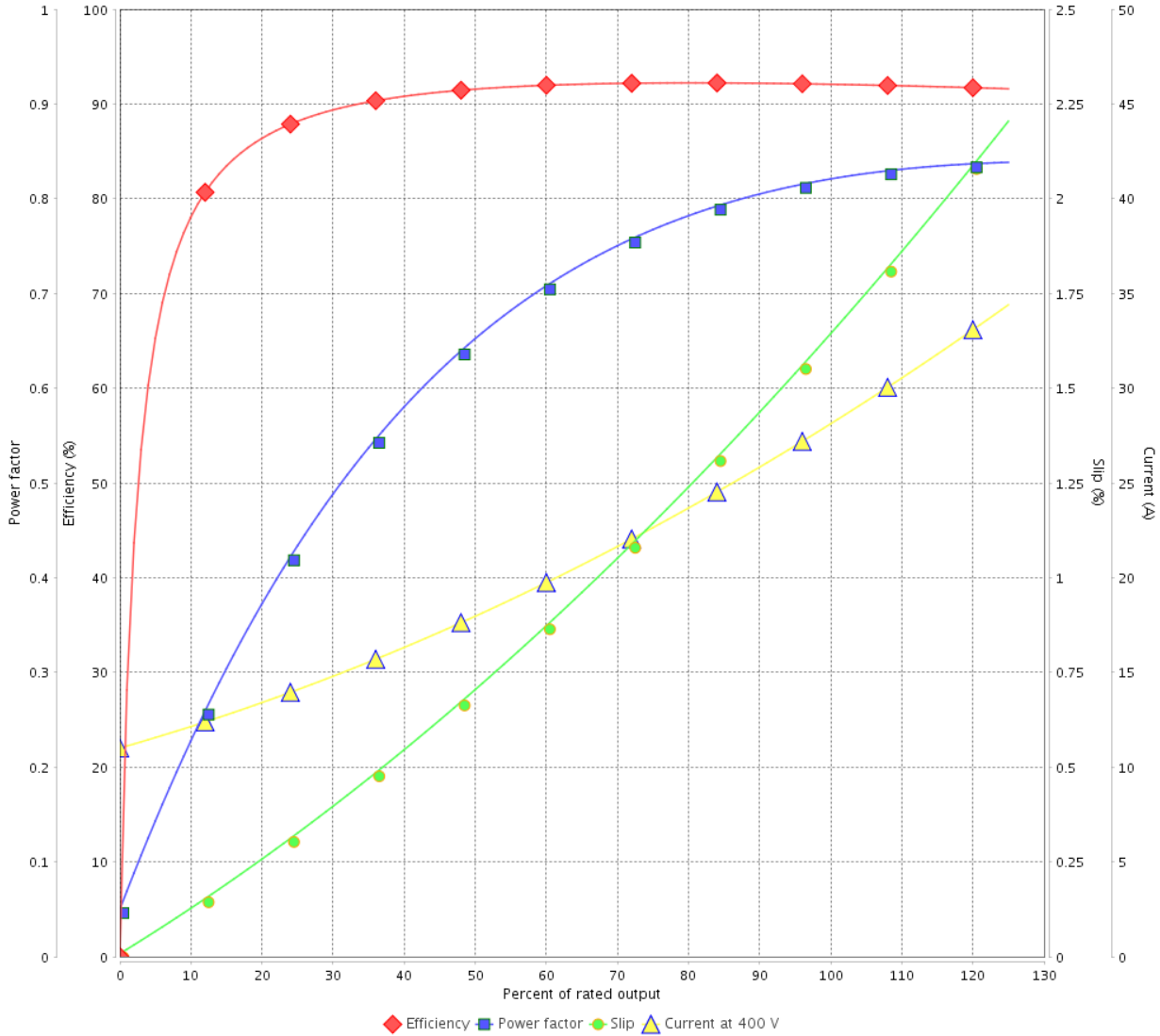
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LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current : 28.7 A
 LRC : 6.7
 Rated torque : 71.2 ft.lb
 Locked rotor torque : 250 %
 Breakdown torque : 290 %
 Rated speed : 1470 rpm

Moment of inertia (J) : 3.71 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

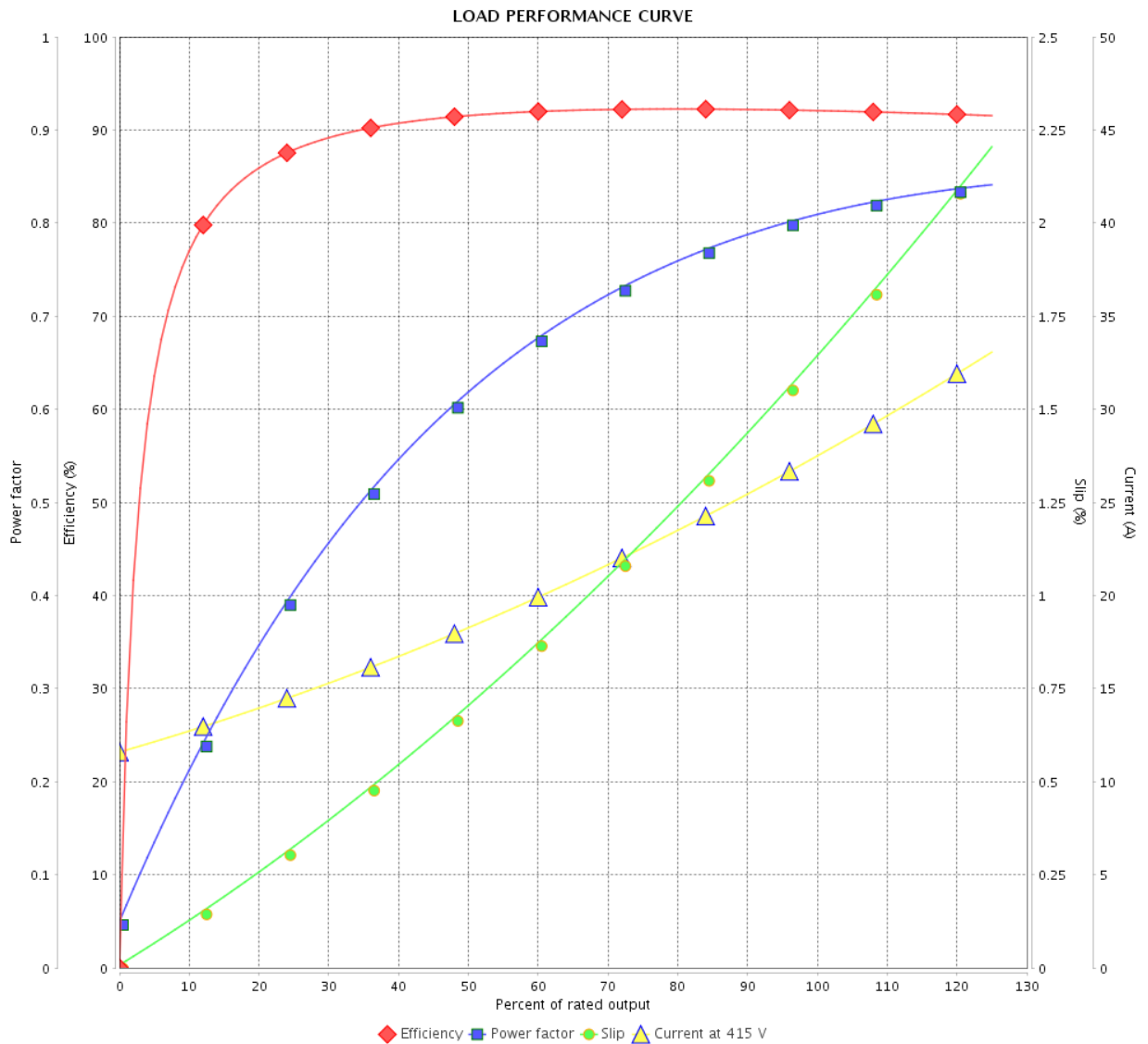


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Performance : 415 V 50 Hz 4P IE3

Rated current : 28.0 A
 LRC : 6.8
 Rated torque : 71.2 ft.lb
 Locked rotor torque : 270 %
 Breakdown torque : 300 %
 Rated speed : 1475 rpm

Moment of inertia (J) : 3.71 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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Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

Heating constant

Cooling constant

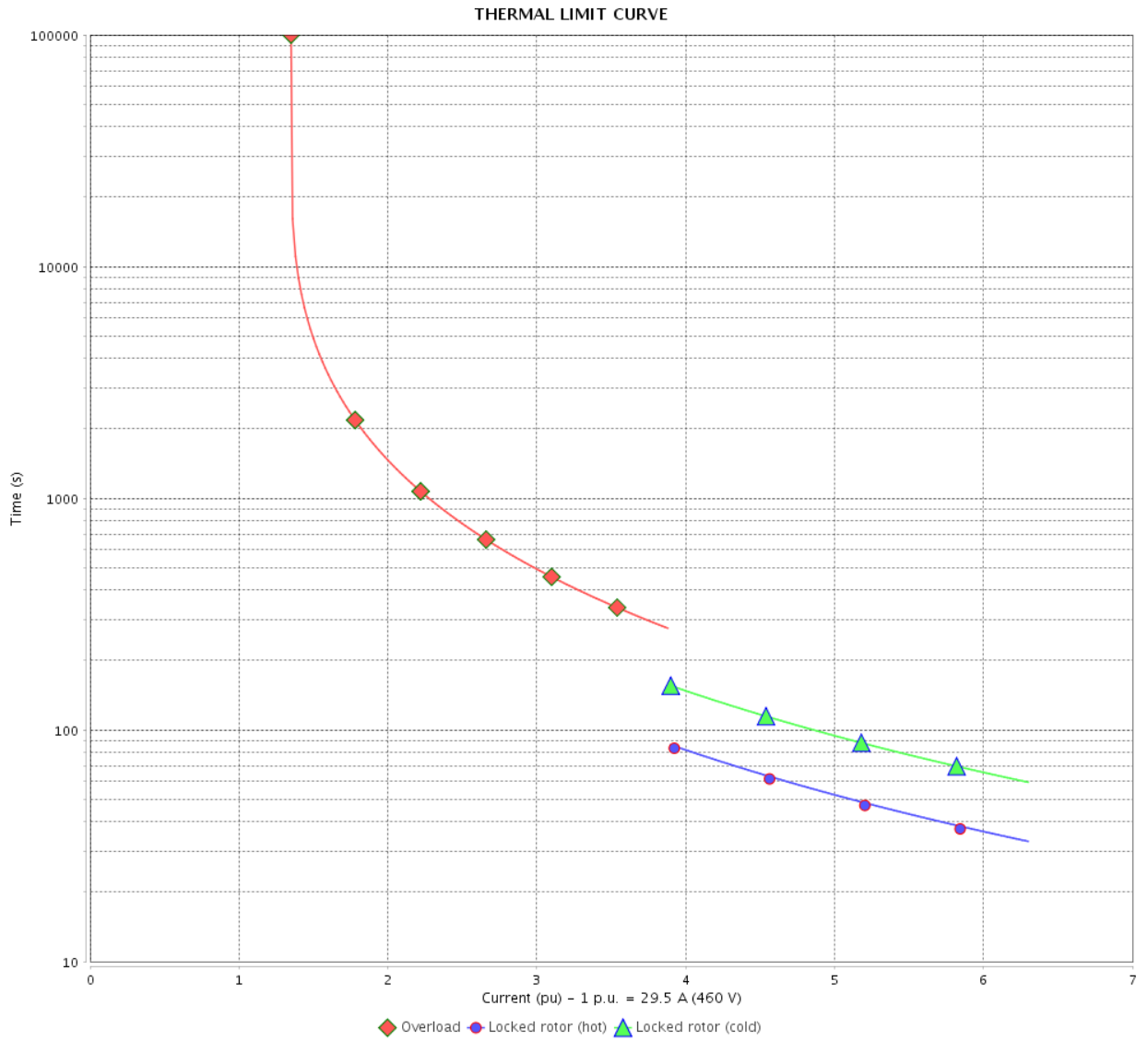
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Rated current	: 29.5 A	Moment of inertia (J)	: 3.71 sq.ft.lb
LRC	: 5.8	Duty cycle	: Cont.(S1)
Rated torque	: 71.4 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1465 rpm	Design	: B

Heating constant

Cooling constant

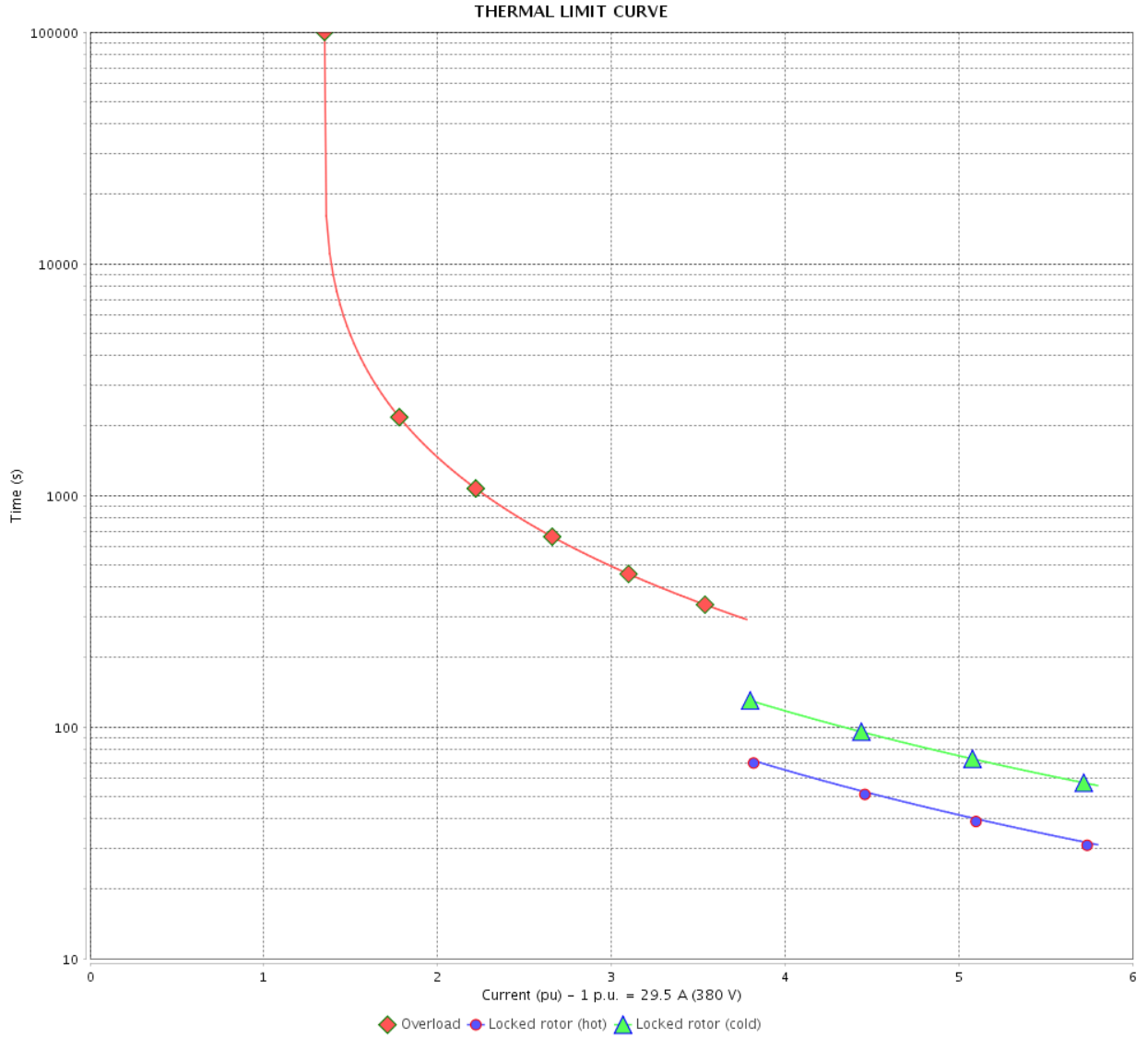
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Performance : 400 V 50 Hz 4P IE3

Rated current	: 28.7 A	Moment of inertia (J)	: 3.71 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 71.2 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 1470 rpm	Design	: B

Heating constant

Cooling constant

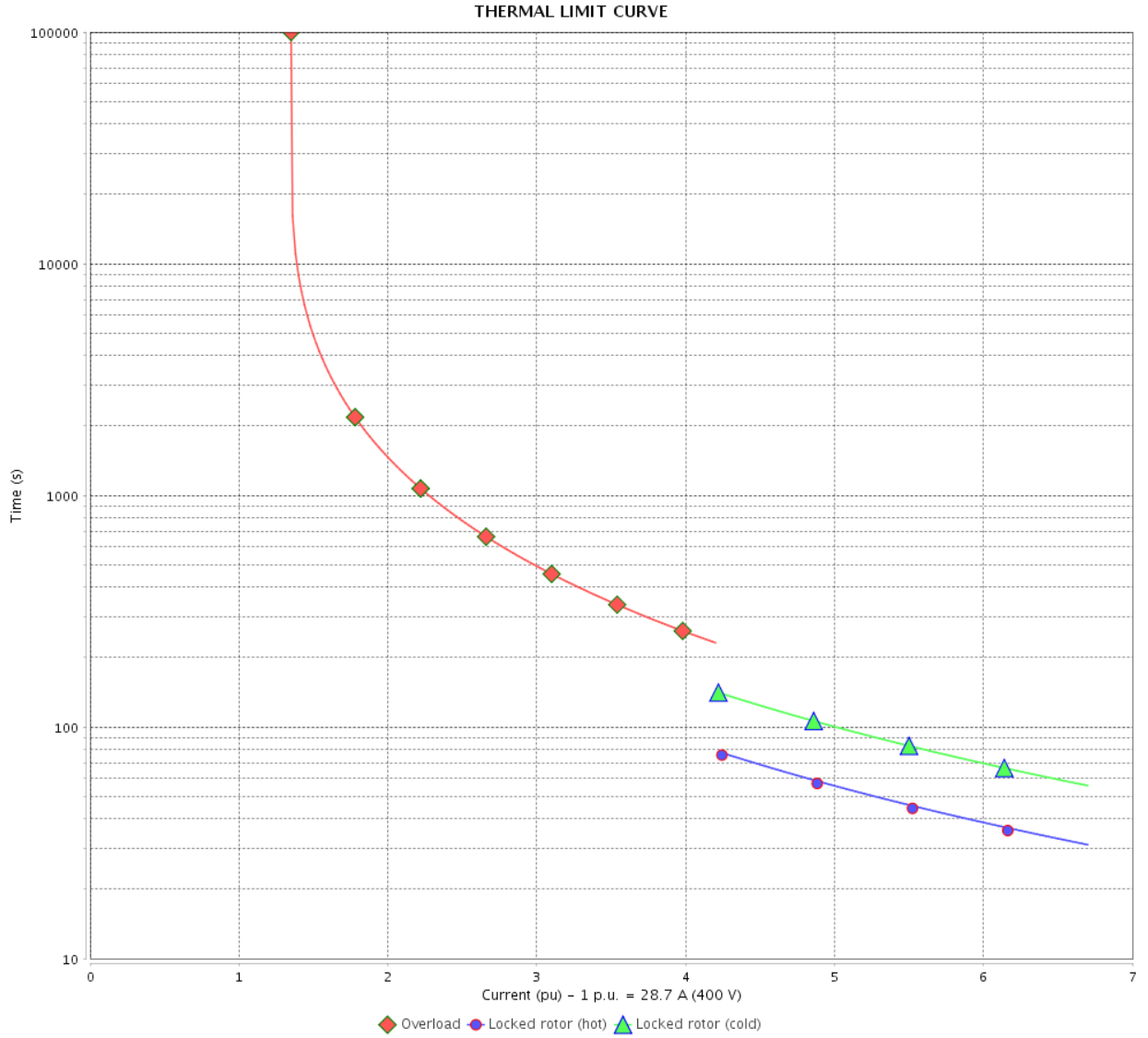
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Three Phase Induction Motor - Squirrel Cage



Customer : _____



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THERMAL LIMIT CURVE



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LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 71.2 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1475 rpm	Design	: B

Heating constant

Cooling constant

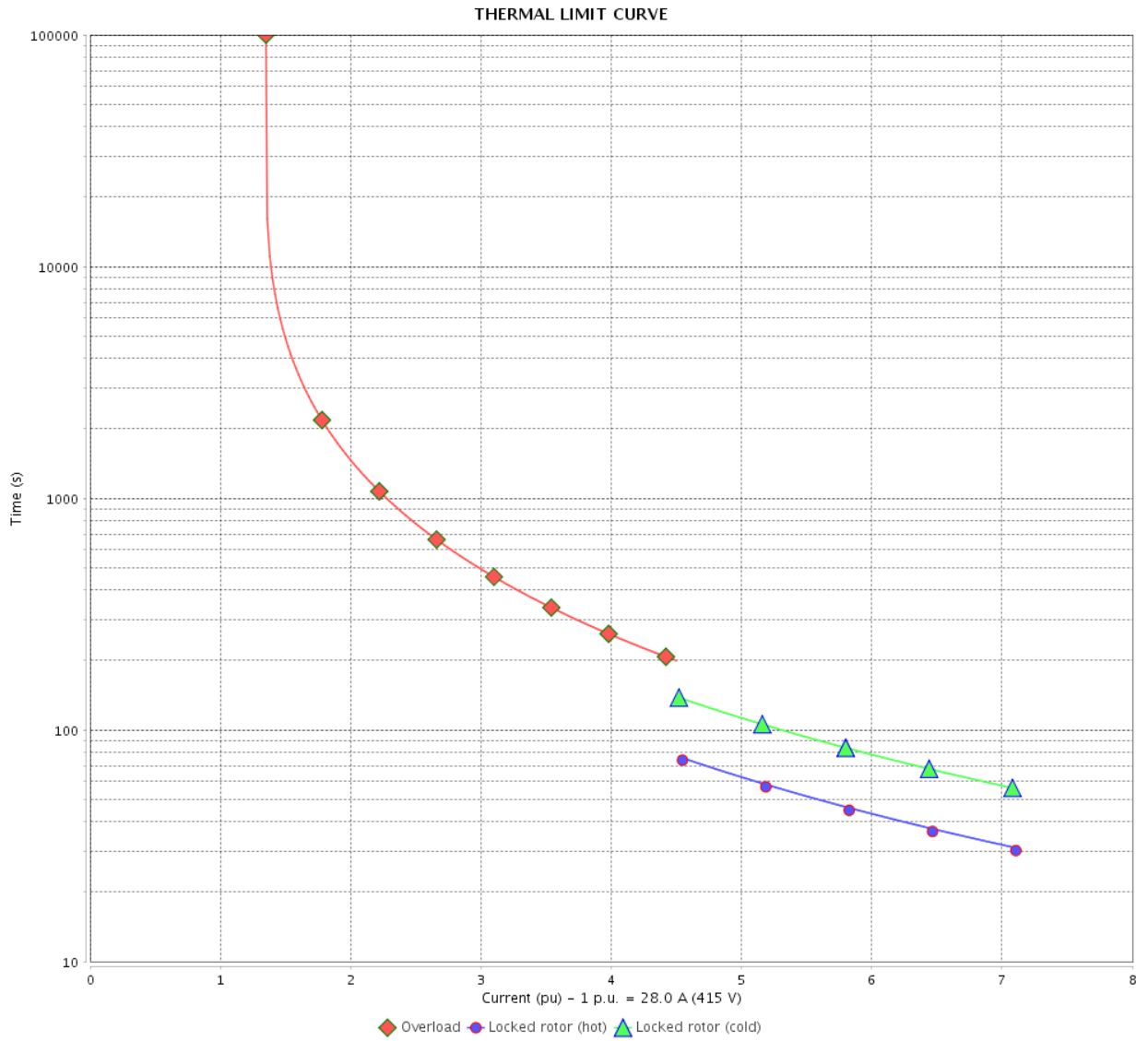
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Three Phase Induction Motor - Squirrel Cage



Customer : _____



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



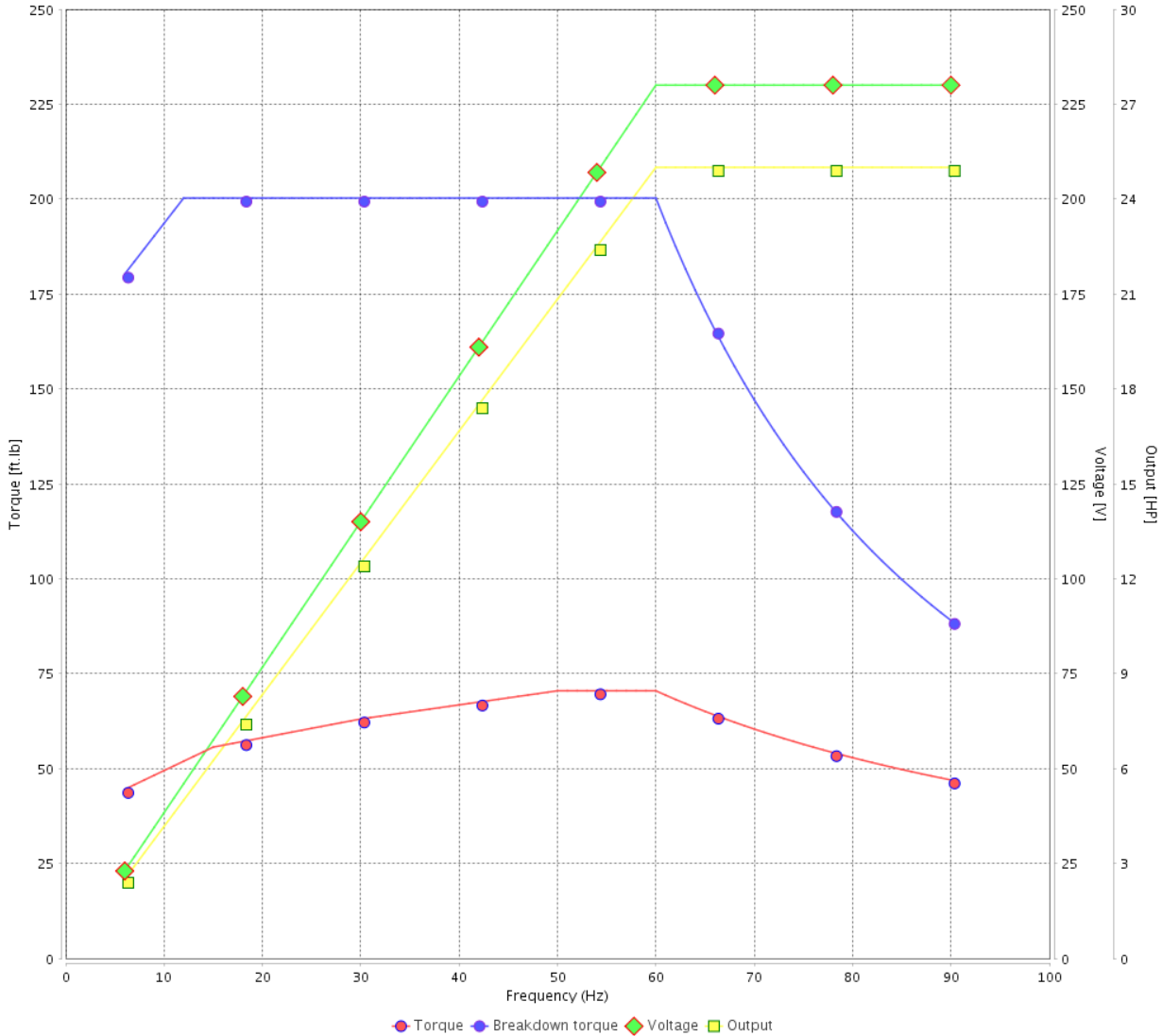
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VFD OPERATION CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 59.0/29.5 A
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 Breakdown torque : 270 %
 Rated speed : 1765 rpm

Moment of inertia (J) : 3.71 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

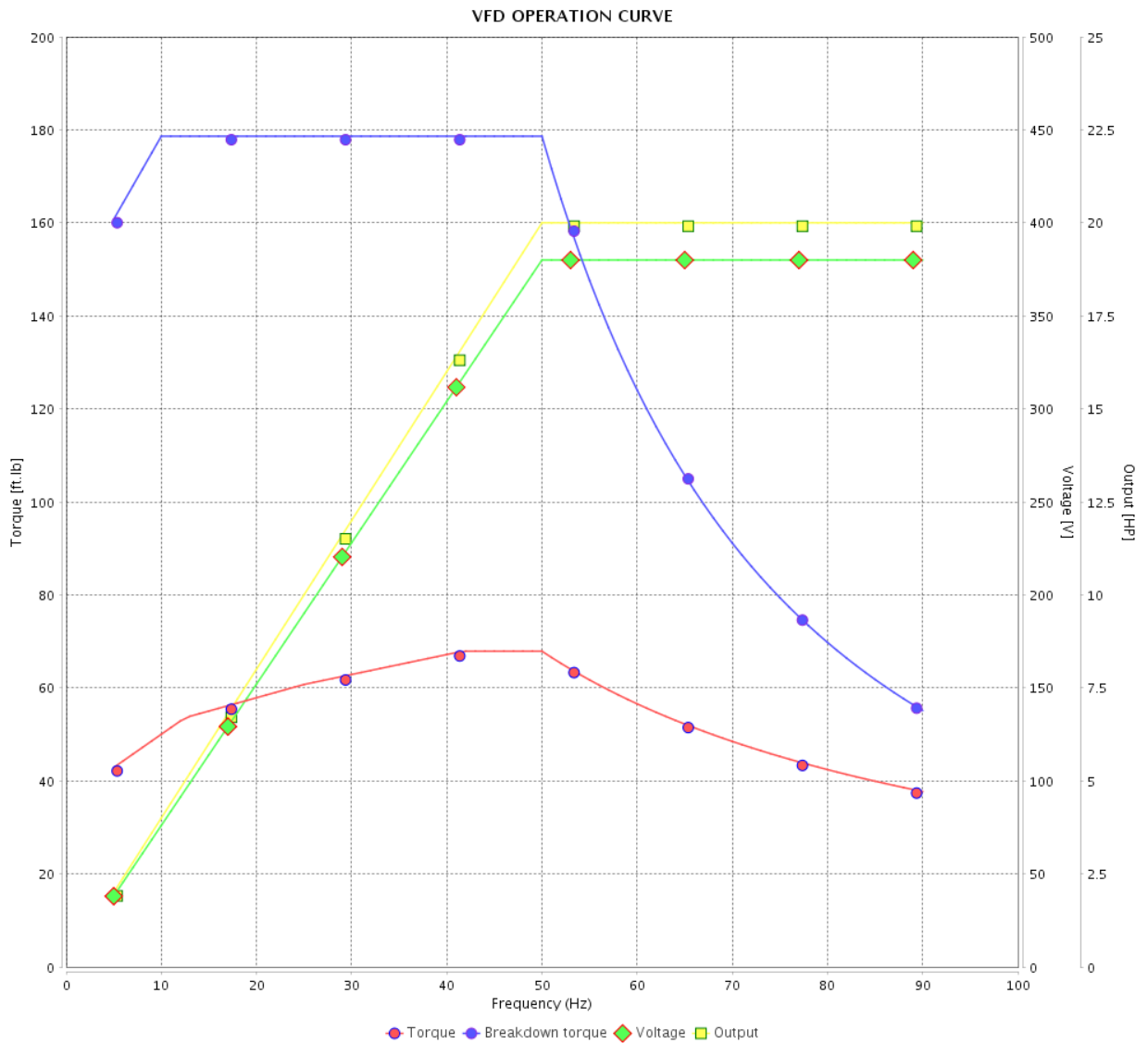


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Three-Phase

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Catalog # : 02518OT3E284T-W40



Performance : 380 V 50 Hz 4P IE3

Rated current : 29.5 A
 LRC : 5.8
 Rated torque : 71.4 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 250 %
 Rated speed : 1465 rpm

Moment of inertia (J) : 3.71 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
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 Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



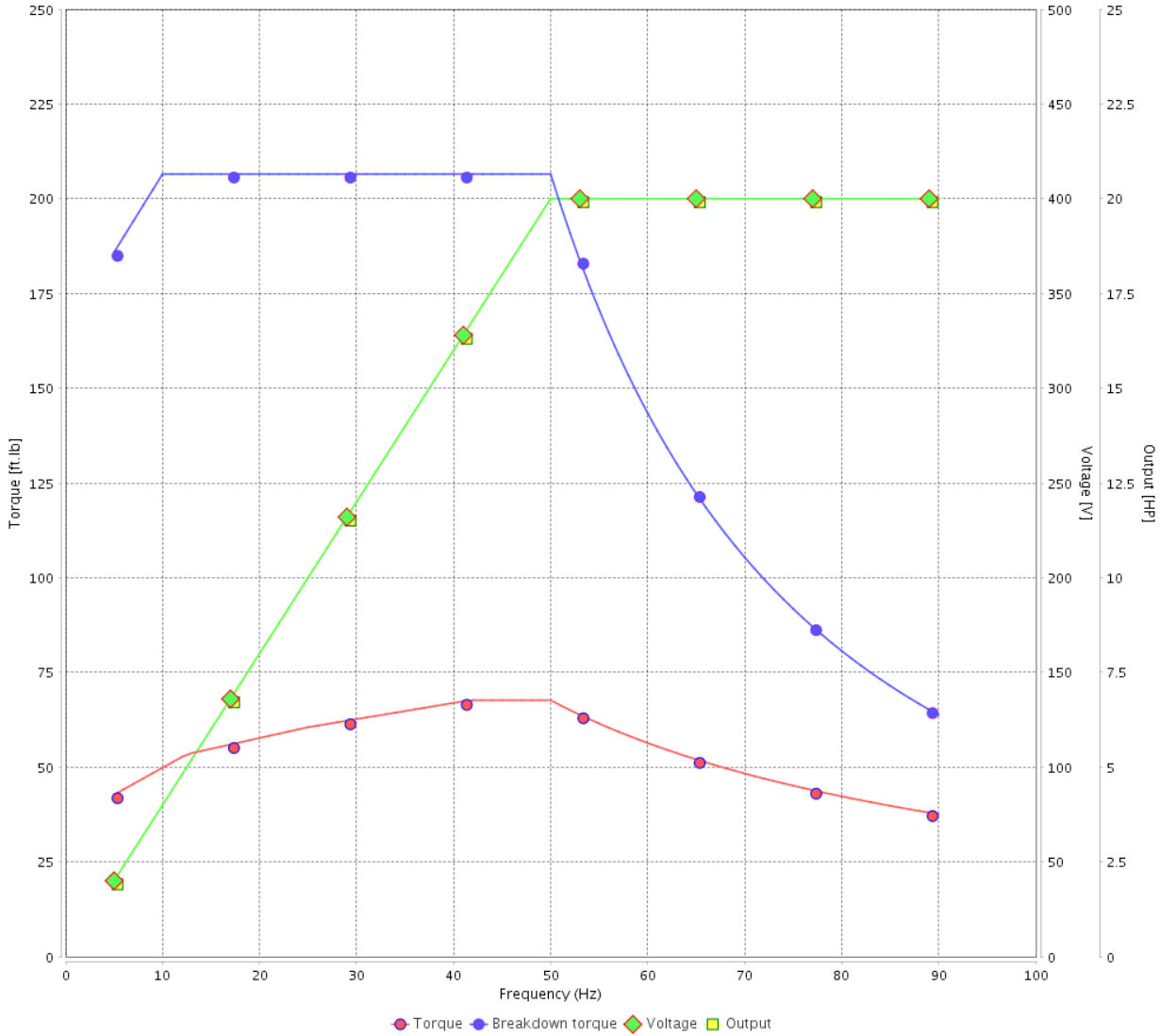
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VFD OPERATION CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current : 28.7 A
 LRC : 6.7
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 Locked rotor torque : 250 %
 Breakdown torque : 290 %
 Rated speed : 1470 rpm

Moment of inertia (J) : 3.71 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
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 Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

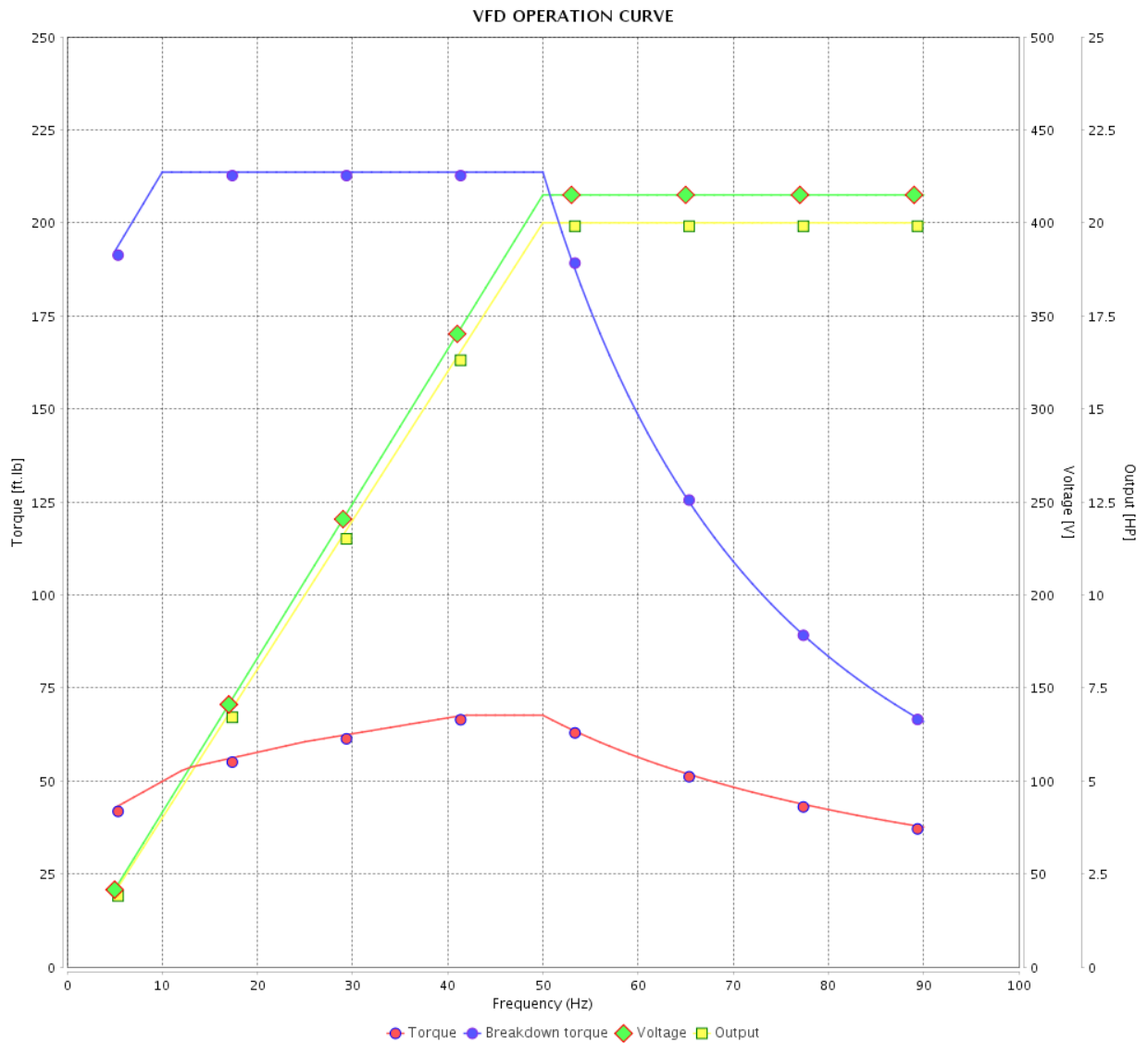


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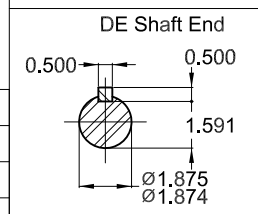
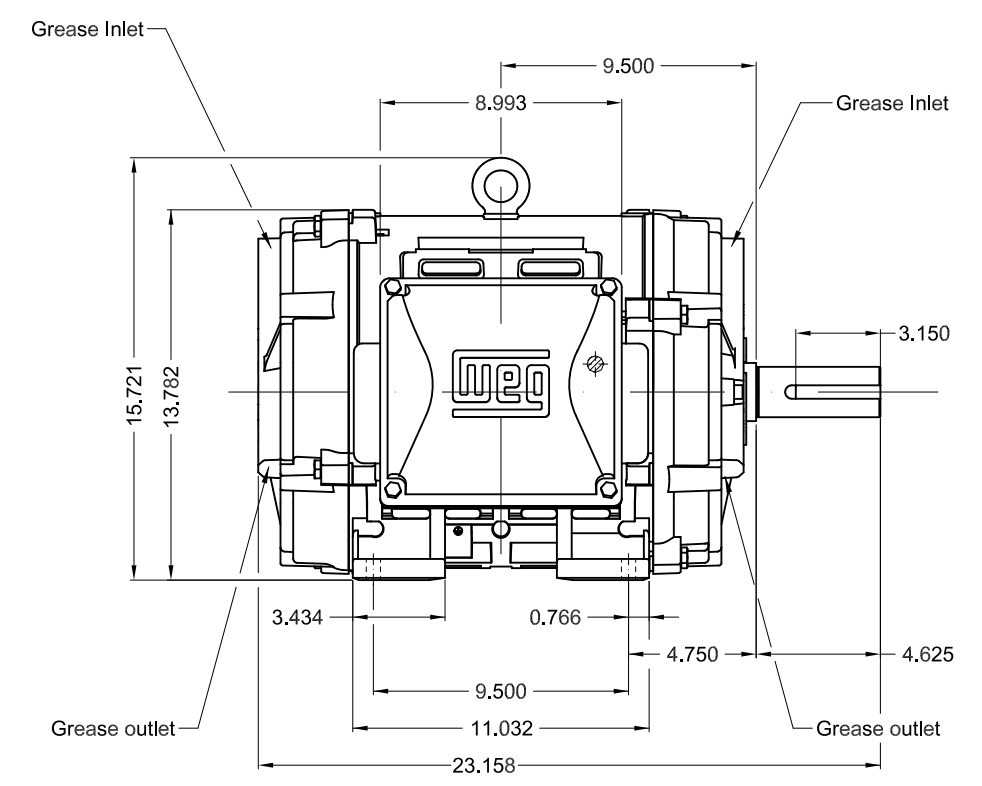
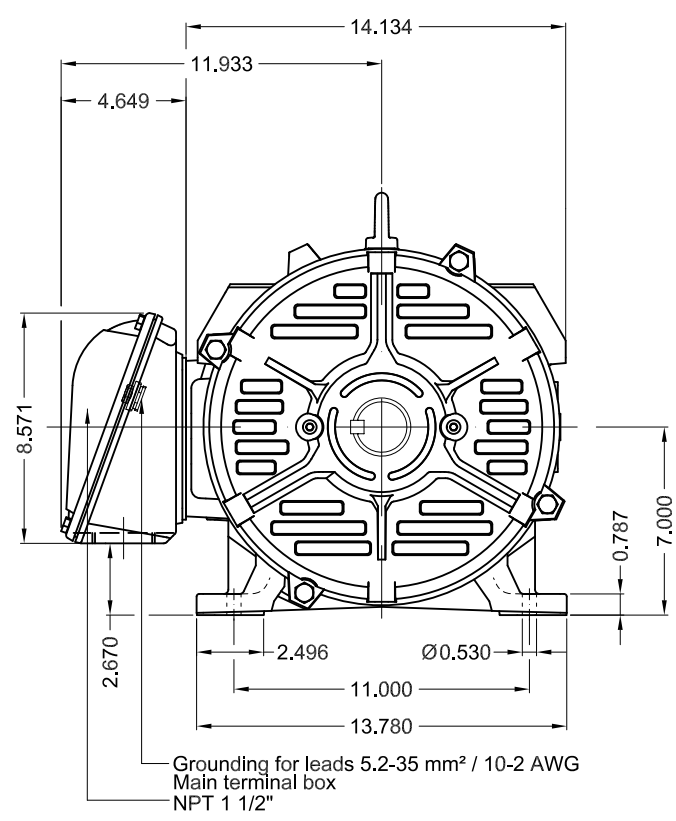


Performance : 415 V 50 Hz 4P IE3

Rated current : 28.0 A
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Rated torque : 71.2 ft.lb
Locked rotor torque : 270 %
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Rated speed : 1475 rpm

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Service factor : 1.00
Temperature rise : 80 K
Design : B

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Color RAL 5009
Painting plan 203A
Mounting NEMA F-1
Mounting B3R(D)

25 HP 04 Poles 60 Hz A

1:7

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR W40 PREM. EFF.					
CHECKED		FRAME 284T IP23 ODP					
RELEASED							
REL DT.		WMO Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW
WDD

