

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer					
Product line		: W40 JM Pump NEMA Premium Efficiency Three-Phase		Product code : 14837655	
				Catalog # : 02518OT3E284JMV-W40	
Frame		: 284/6JM		Cooling method : IC01 - ODP	
Insulation class		: F		Mounting : W-6	
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 : 371 lb	
Protection degree		: IP23		Moment of inertia (J) : 3.71 sq.ft.lb	
Design		: B			
Output [HP]	25	20	20	20	20
Poles	4	4	4	4	4
Frequency [Hz]	60	50	50	50	50
Rated voltage [V]	230/460	380	400	415	415
Rated current [A]	59.0/29.5	29.5	28.7	28.0	28.0
L. R. Amperes [A]	389/195	198	192	210	210
LRC [A]	6.6x(Code G)	6.7x(Code G)	6.7x(Code H)	7.5x(Code J)	7.5x(Code J)
No load current [A]	22.0/11.0	12.1	13.1	13.9	13.9
Rated speed [RPM]	1770	1470	1475	1475	1475
Slip [%]	1.67	2.00	1.67	1.67	1.67
Rated torque [ft.lb]	74.2	71.4	71.2	71.2	71.2
Locked rotor torque [%]	270	229	250	270	270
Breakdown torque [%]	280	250	290	300	300
Service factor	1.25	1.00	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K	80 K
Locked rotor time	30s (cold) 17s (hot)	32s (cold) 18s (hot)	37s (cold) 21s (hot)	30s (cold) 17s (hot)	30s (cold) 17s (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	0.43	0.39	0.36
	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



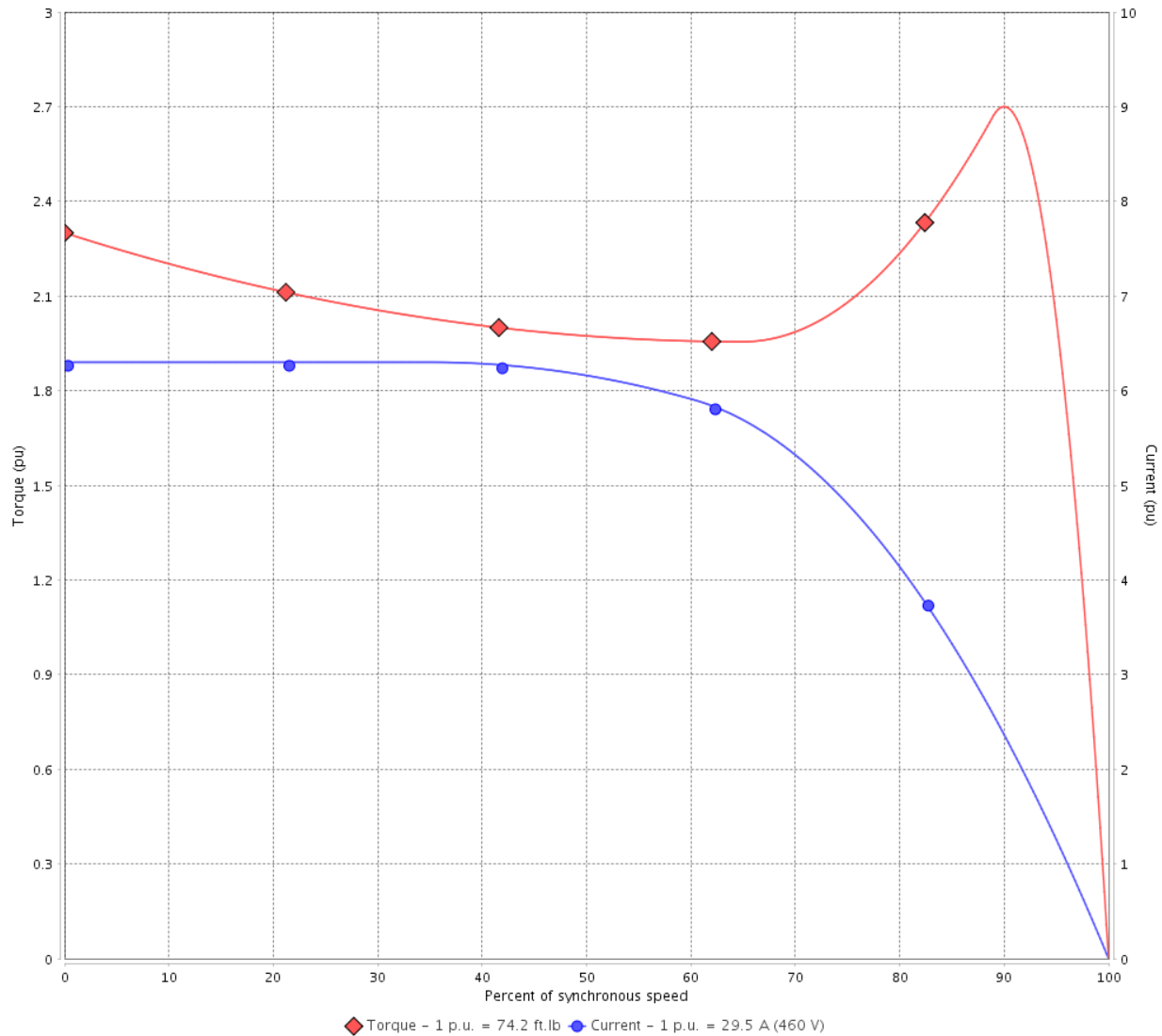
Customer :

Product line : W40 JM Pump NEMA Premium Efficiency Three-Phase

Product code : 14837655

Catalog # : 02518OT3E284JMV-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	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 74.2 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.25
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 1770 rpm	Design	: B

Locked rotor time : 30s (cold) 17s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



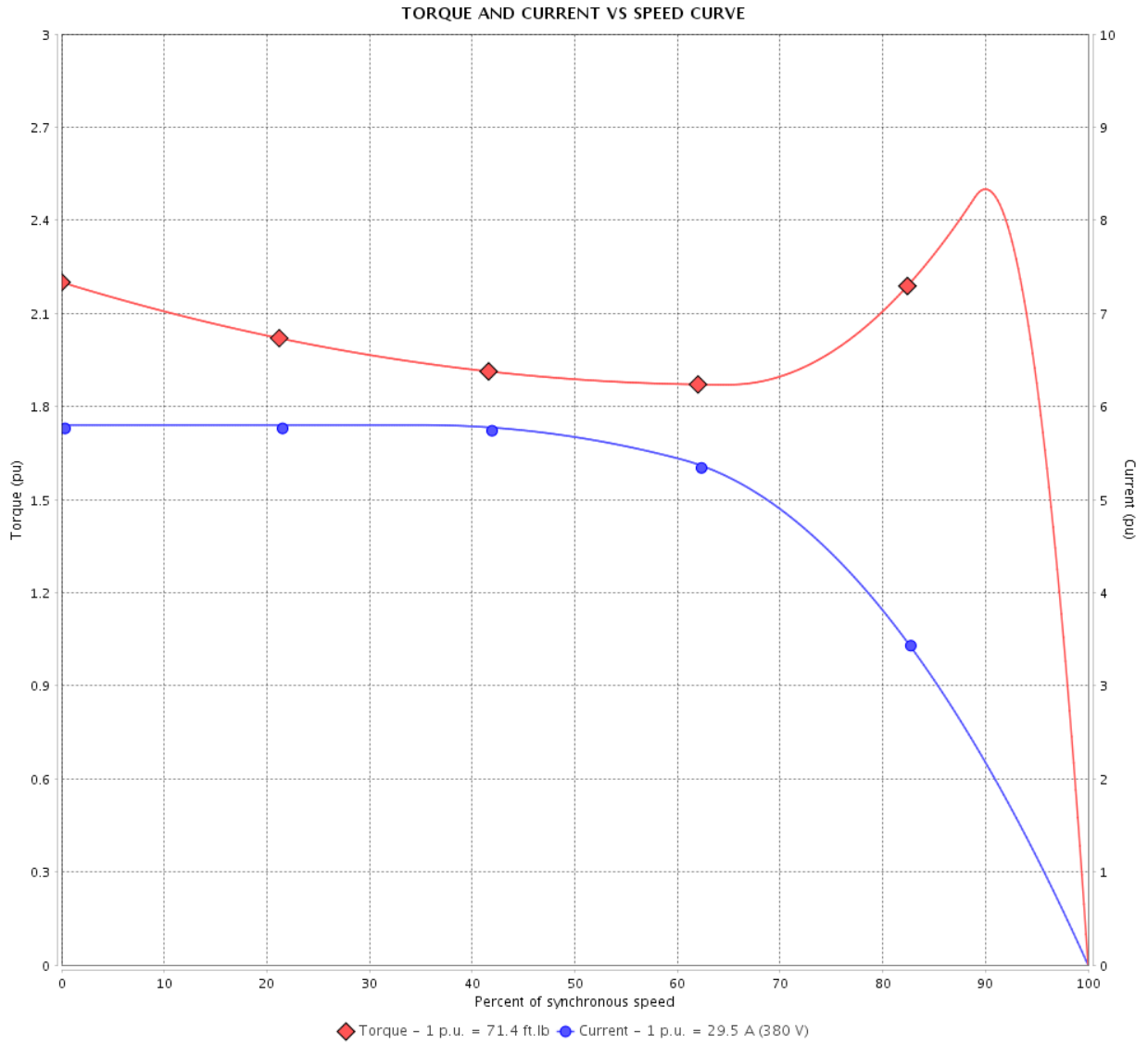
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 JM Pump NEMA Premium Efficiency Three-Phase

Product code : 14837655

Catalog # : 02518OT3E284JMV-W40



Performance : 380 V 50 Hz 4P IE3

Rated current	: 29.5 A	Moment of inertia (J)	: 3.71 sq.ft.lb
LRC	: 6.7	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	: 1470 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



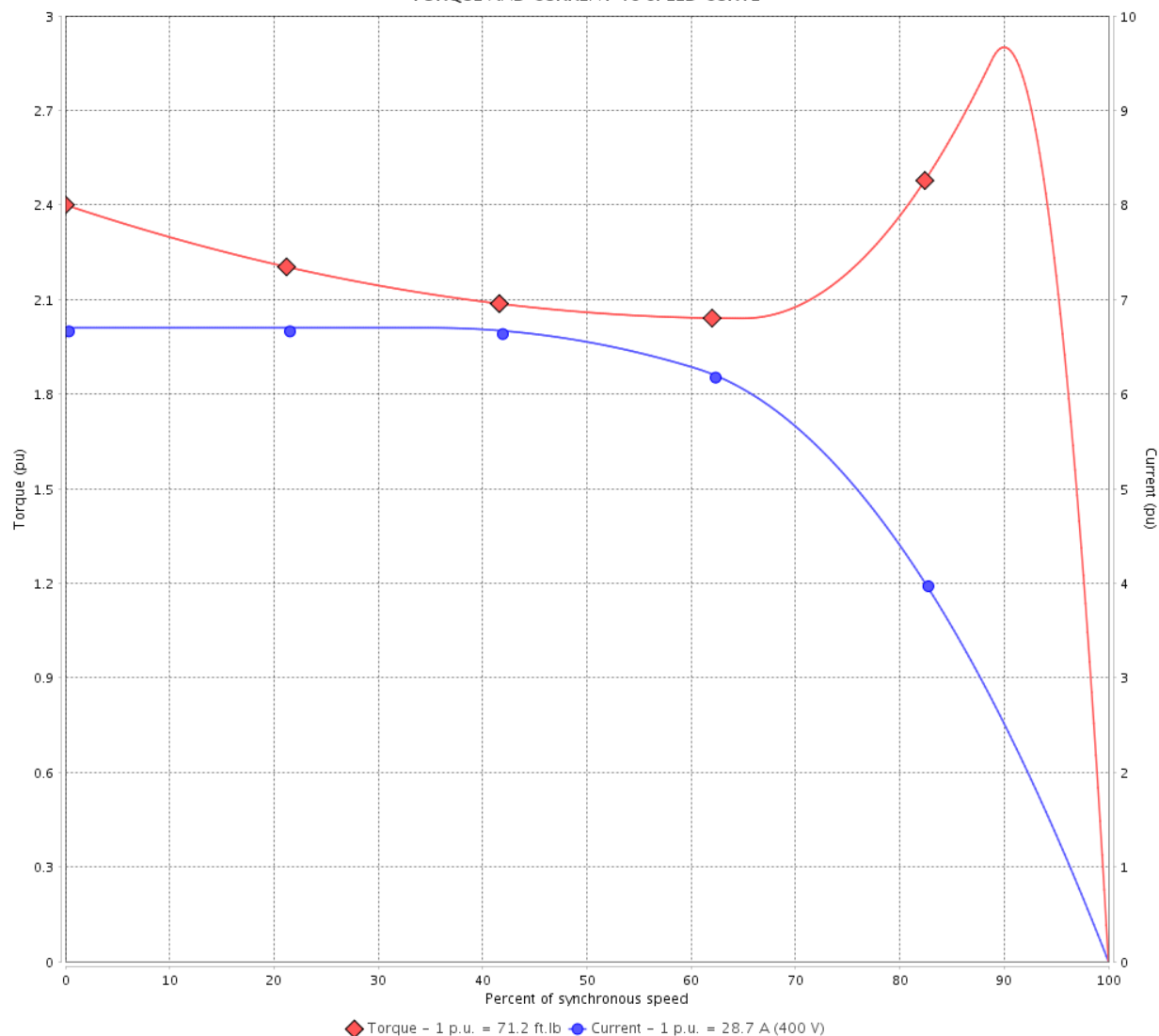
Customer :

Product line : W40 JM Pump NEMA Premium Efficiency Three-Phase

Product code : 14837655

Catalog # : 02518OT3E284JMV-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	: 1475 rpm	Design	: B

Locked rotor time : 37s (cold) 21s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



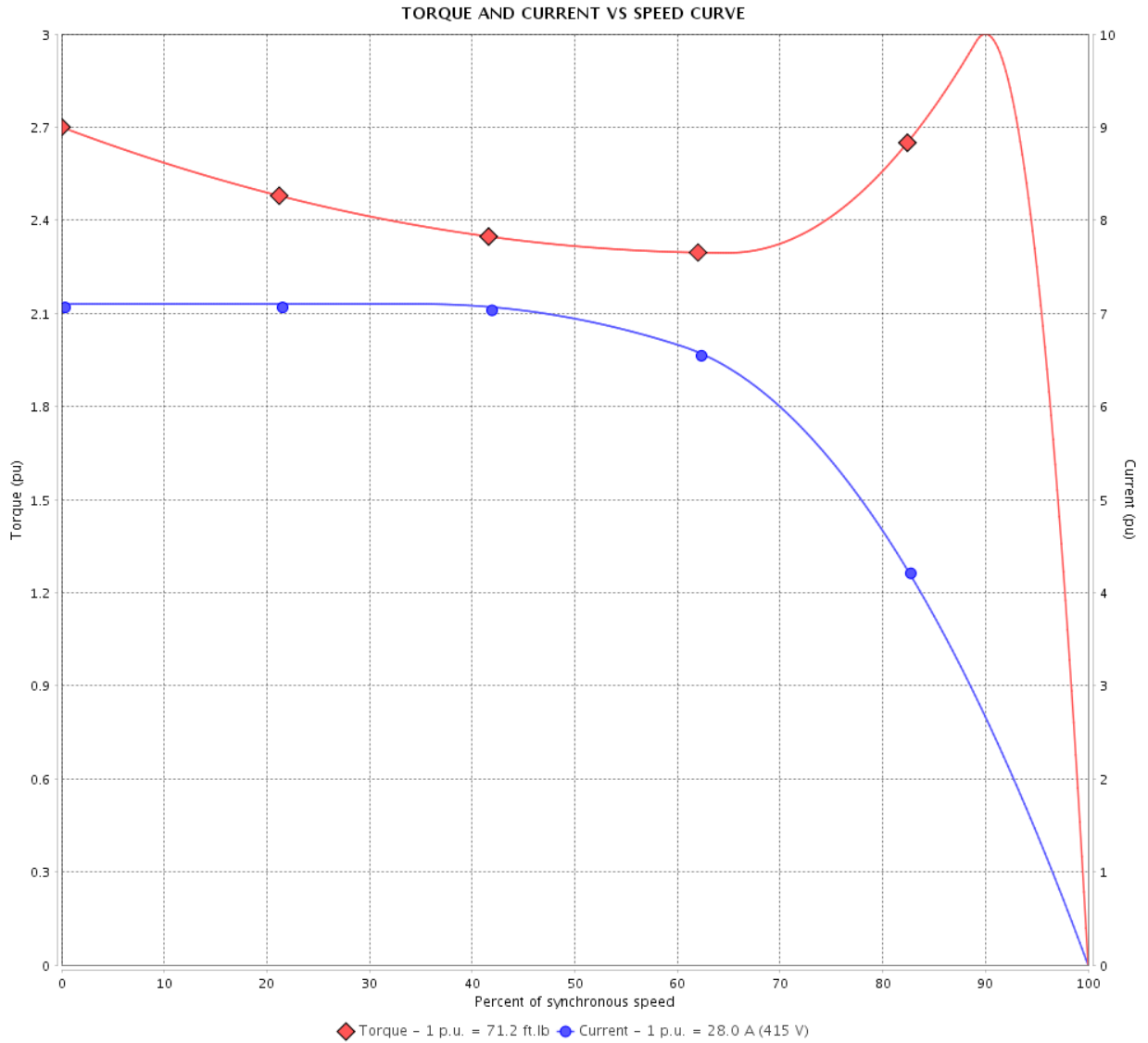
Three Phase Induction Motor - Squirrel Cage

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Product code : 14837655

Catalog # : 02518OT3E284JMV-W40



Performance : 415 V 50 Hz 4P IE3

Rated current	: 28.0 A	Moment of inertia (J)	: 3.71 sq.ft.lb
LRC	: 7.5	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

Locked rotor time : 30s (cold) 17s (hot)

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LOAD PERFORMANCE CURVE

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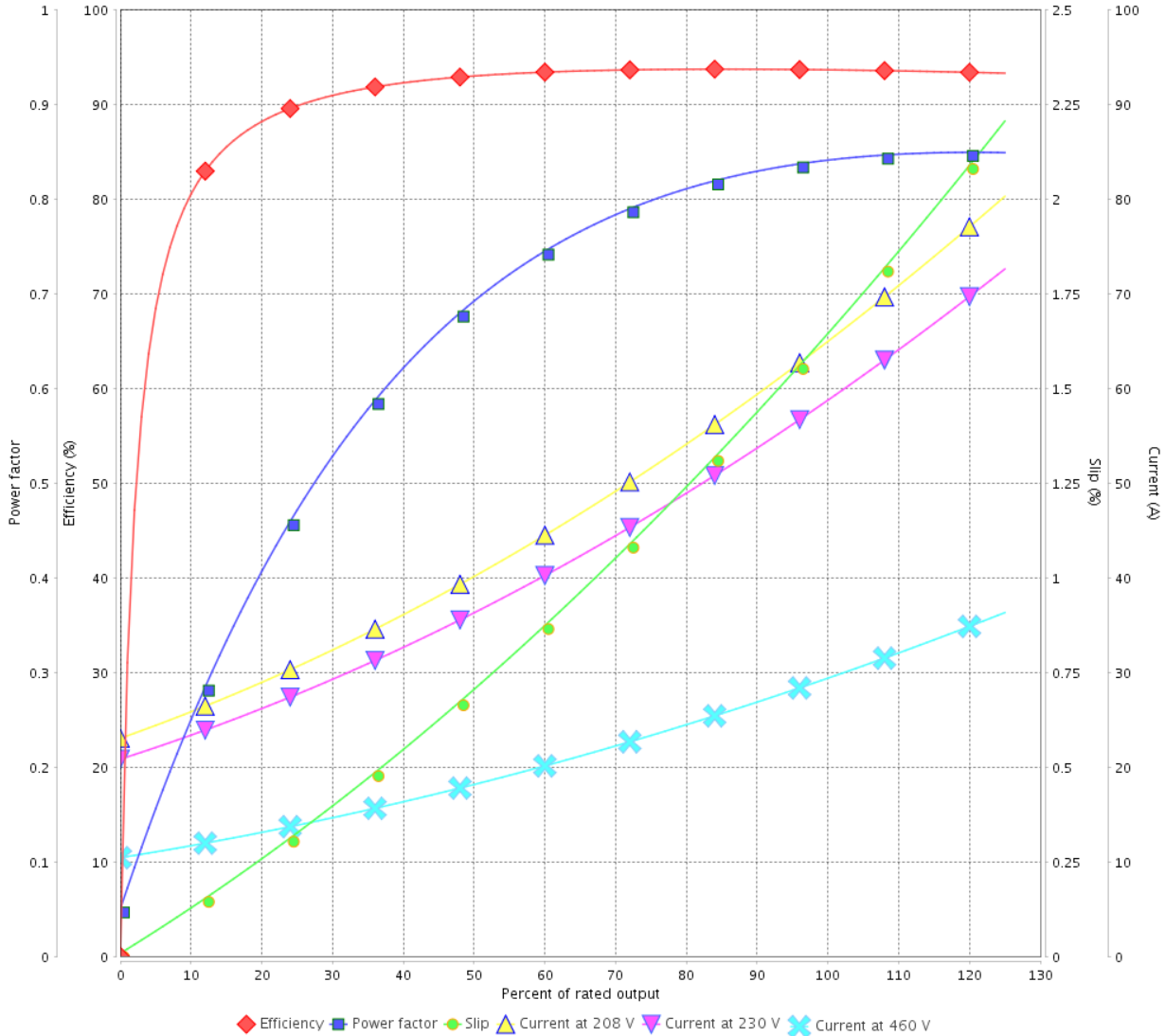
Customer :

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Product code : 14837655

Catalog # : 02518OT3E284JMV-W40

LOAD PERFORMANCE CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 59.0/29.5 A
 LRC : 6.6
 Rated torque : 74.2 ft.lb
 Locked rotor torque : 270 %
 Breakdown torque : 280 %
 Rated speed : 1770 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

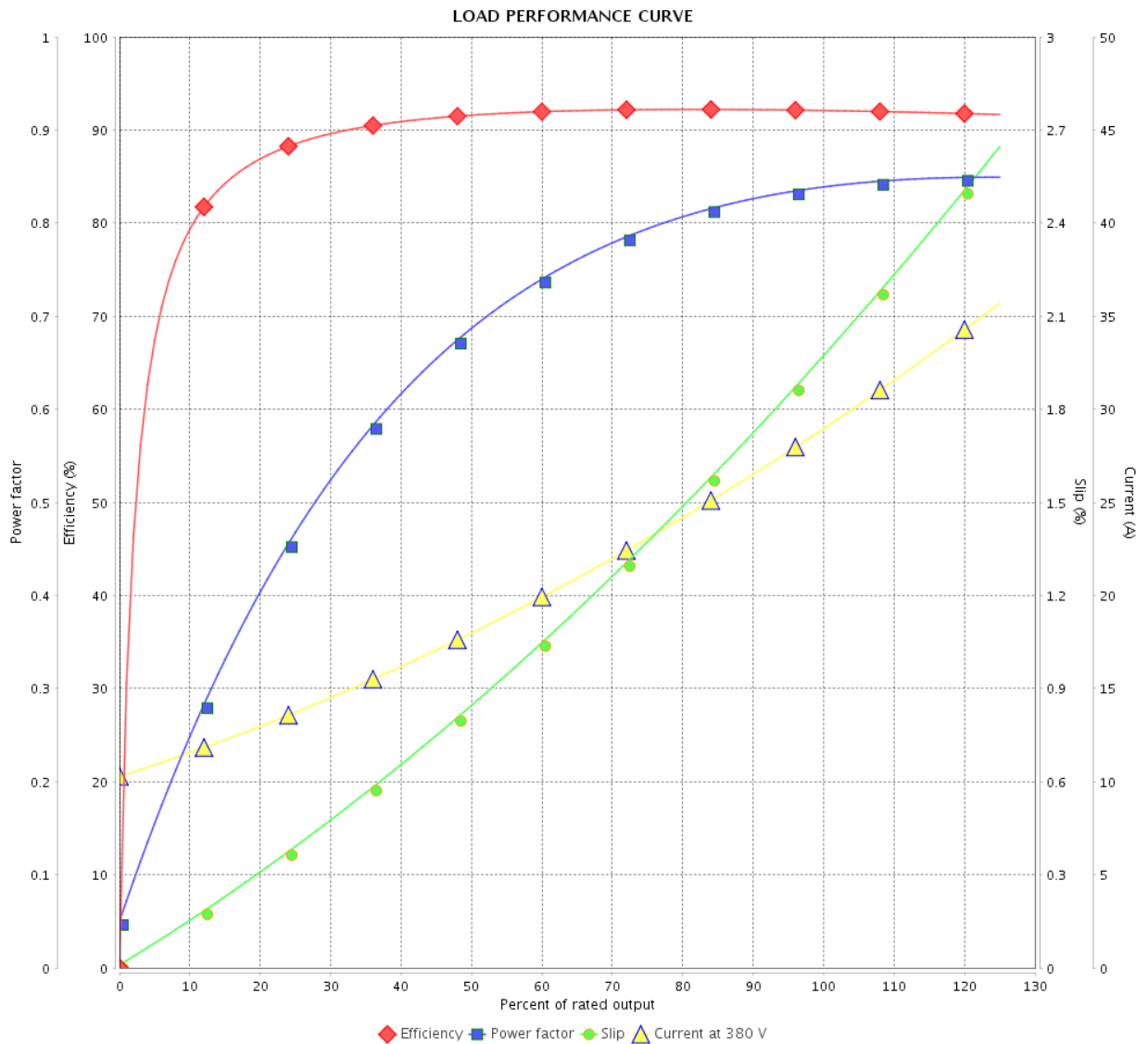


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Catalog # : 02518OT3E284JMV-W40



Performance : 380 V 50 Hz 4P IE3

Rated current : 29.5 A
 LRC : 6.7
 Rated torque : 71.4 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 250 %
 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



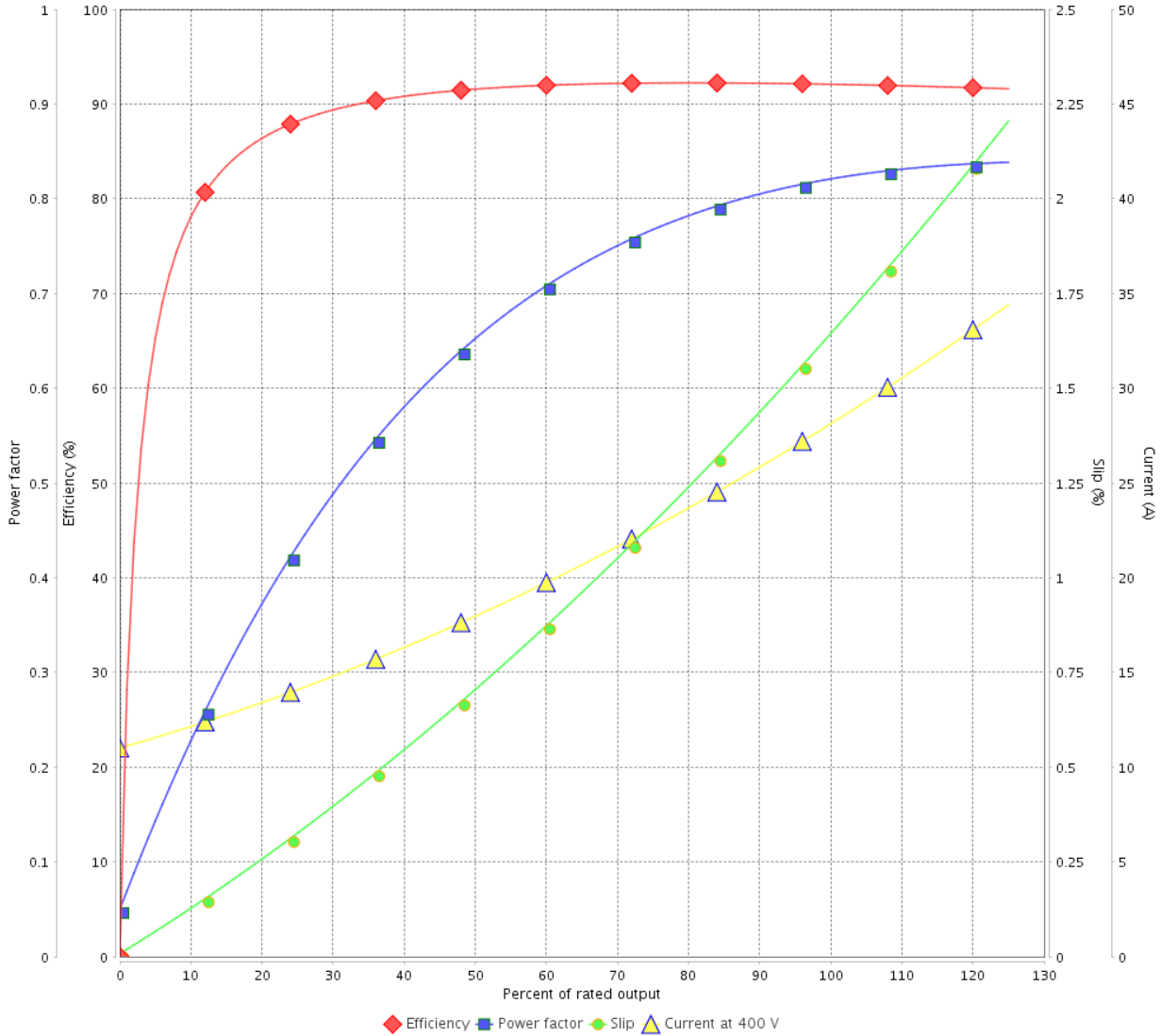
Customer :

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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 : 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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Three Phase Induction Motor - Squirrel Cage

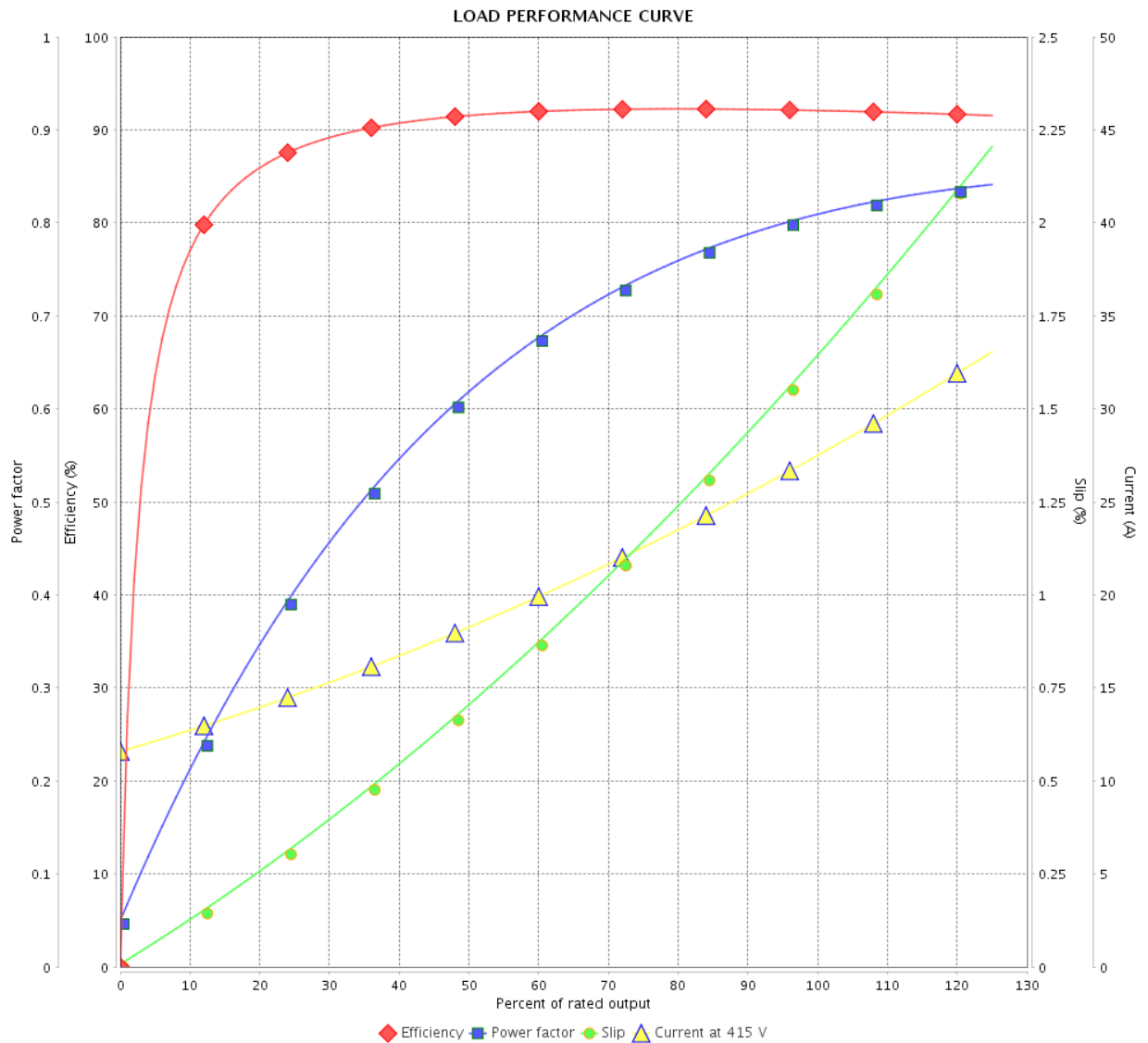


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 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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THERMAL LIMIT CURVE



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Breakdown torque : 280 %
Rated speed : 1770 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

Heating constant

Cooling constant

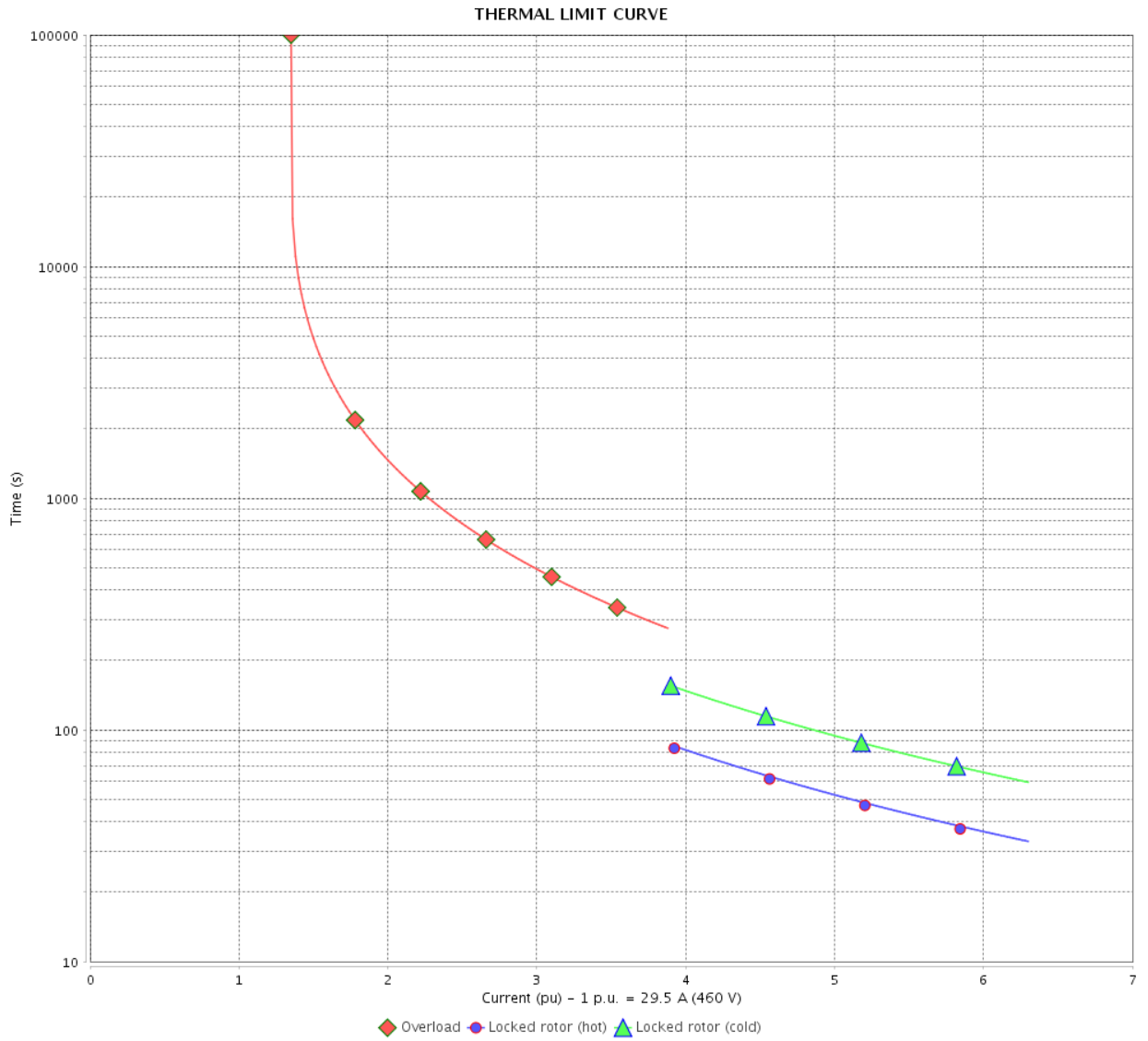
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Three Phase Induction Motor - Squirrel Cage



Customer : _____



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LRC	: 6.7	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	: 1470 rpm	Design	: B

Heating constant

Cooling constant

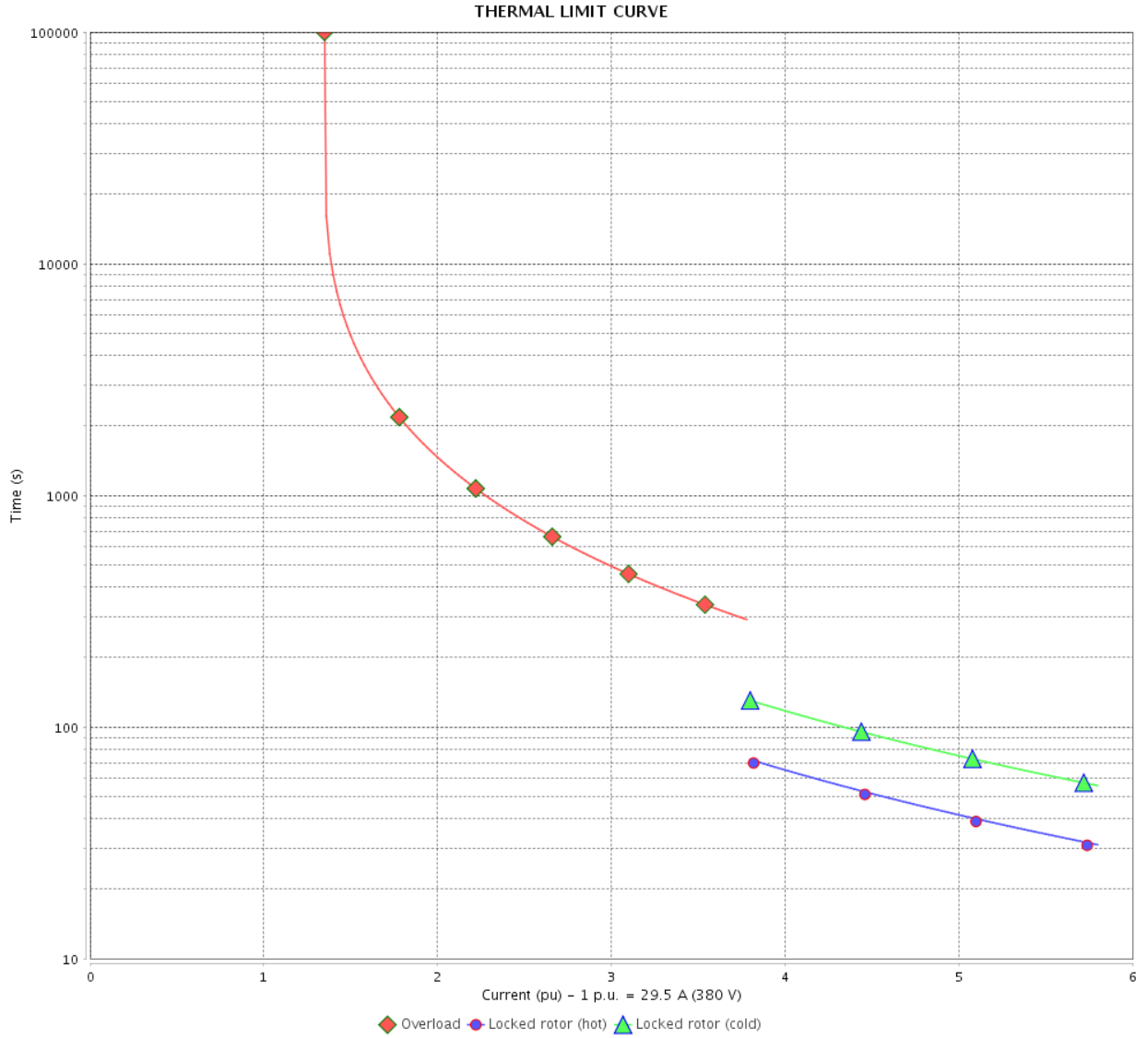
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Performance : 400 V 50 Hz 4P IE3

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	: 1475 rpm	Design	: B

Heating constant

Cooling constant

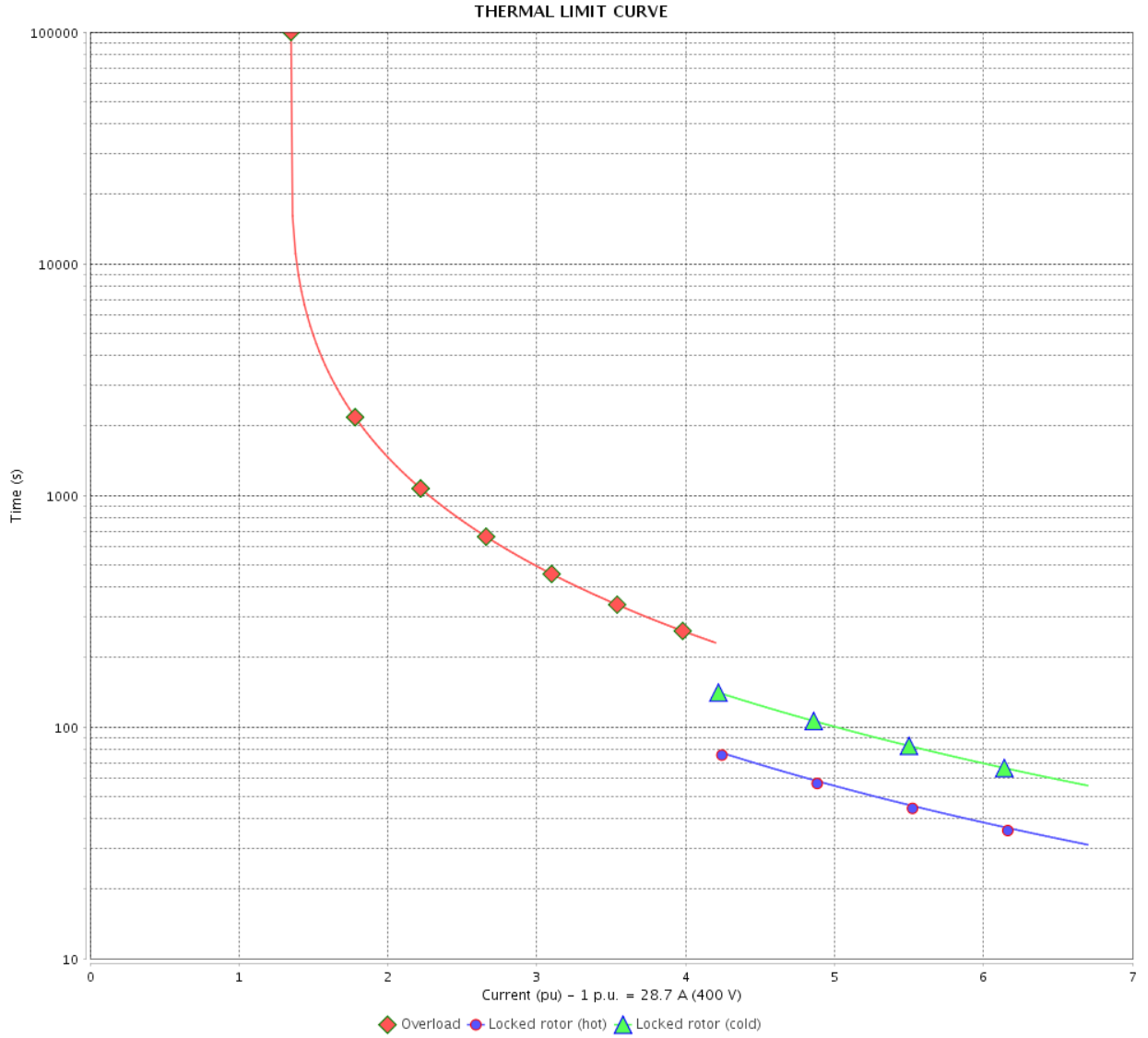
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Performance : 415 V 50 Hz 4P IE3

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LRC	: 7.5	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

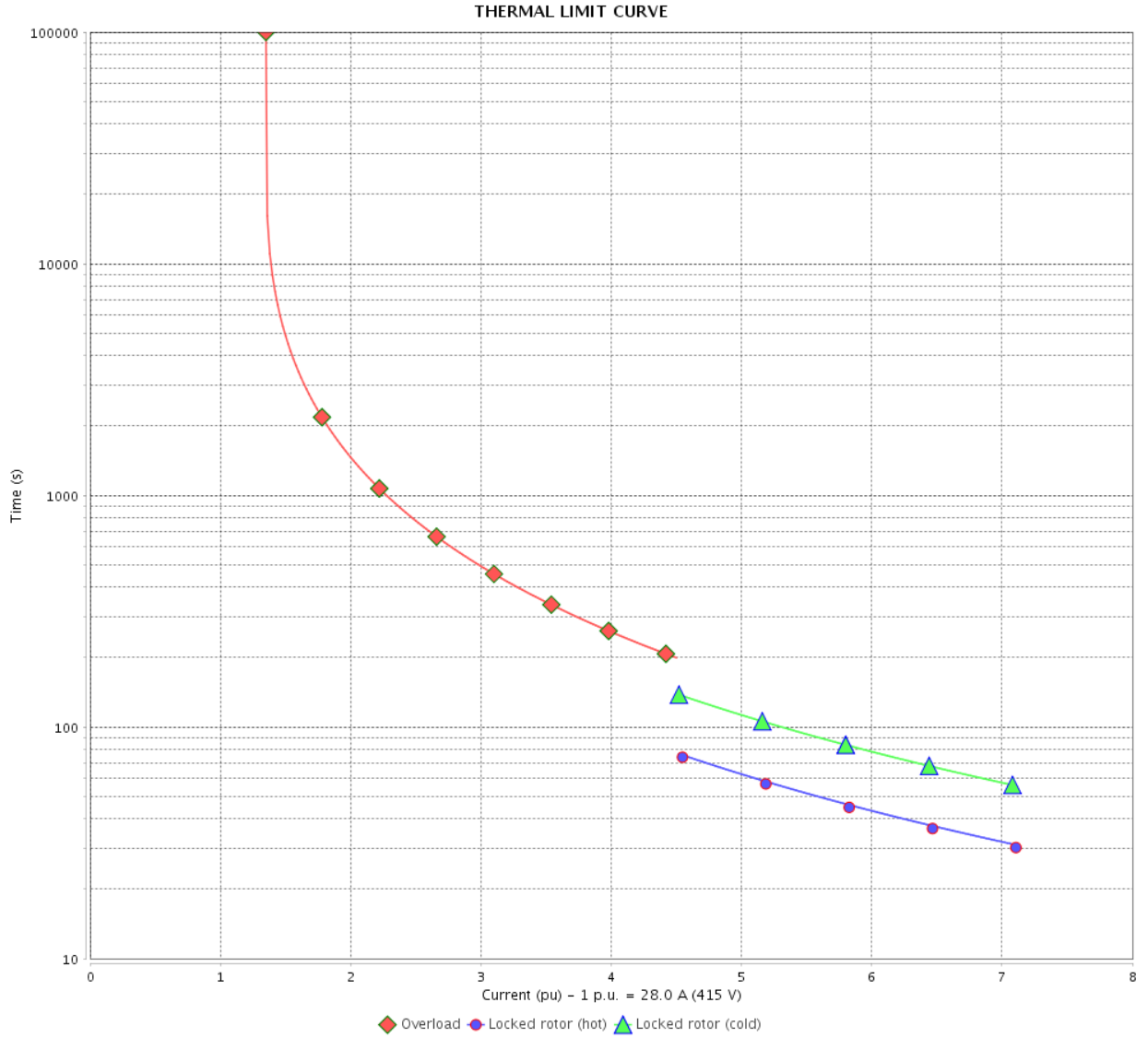
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Three Phase Induction Motor - Squirrel Cage



Customer : _____



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



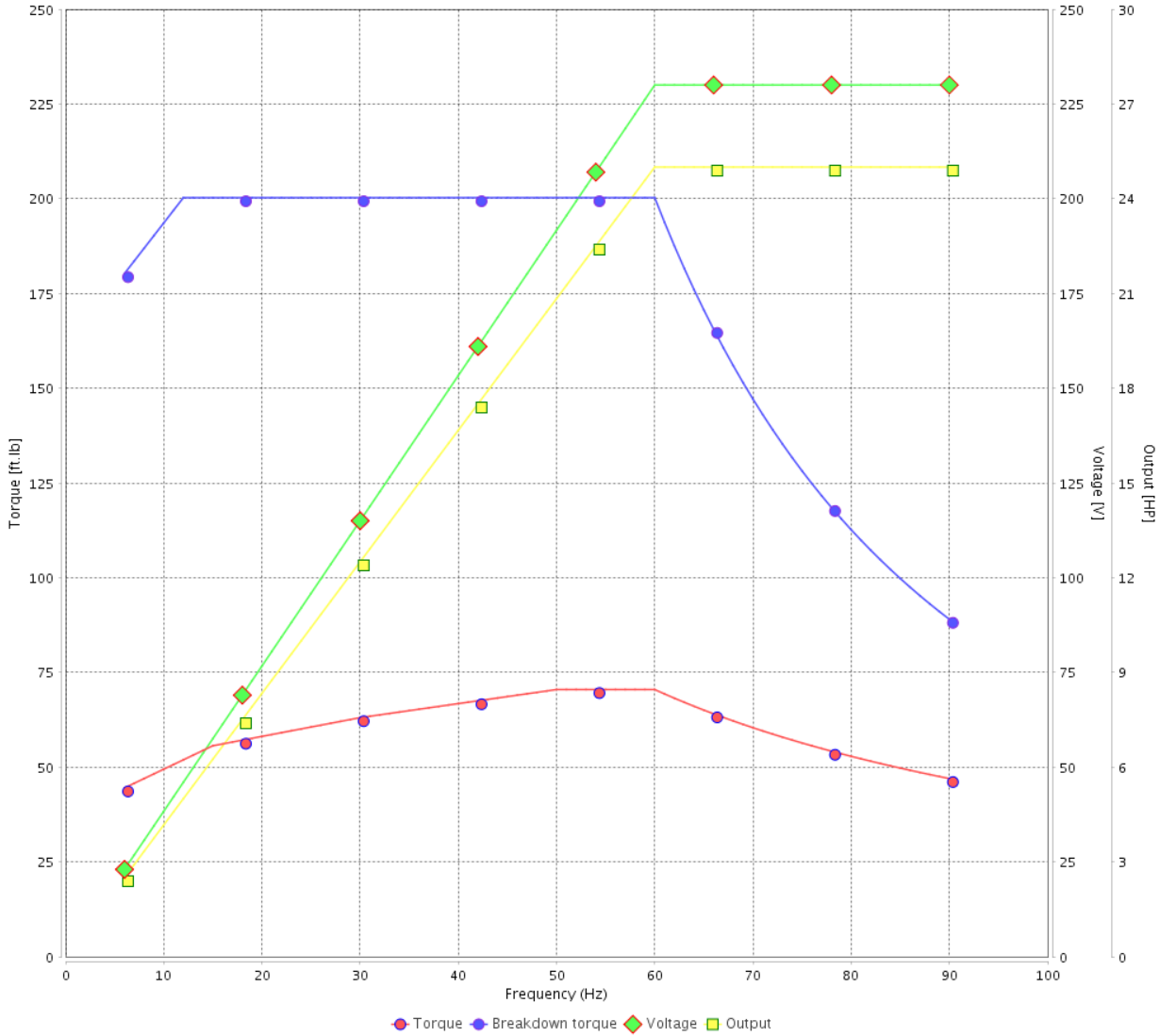
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VFD OPERATION CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 59.0/29.5 A
 LRC : 6.6
 Rated torque : 74.2 ft.lb
 Locked rotor torque : 270 %
 Breakdown torque : 280 %
 Rated speed : 1770 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

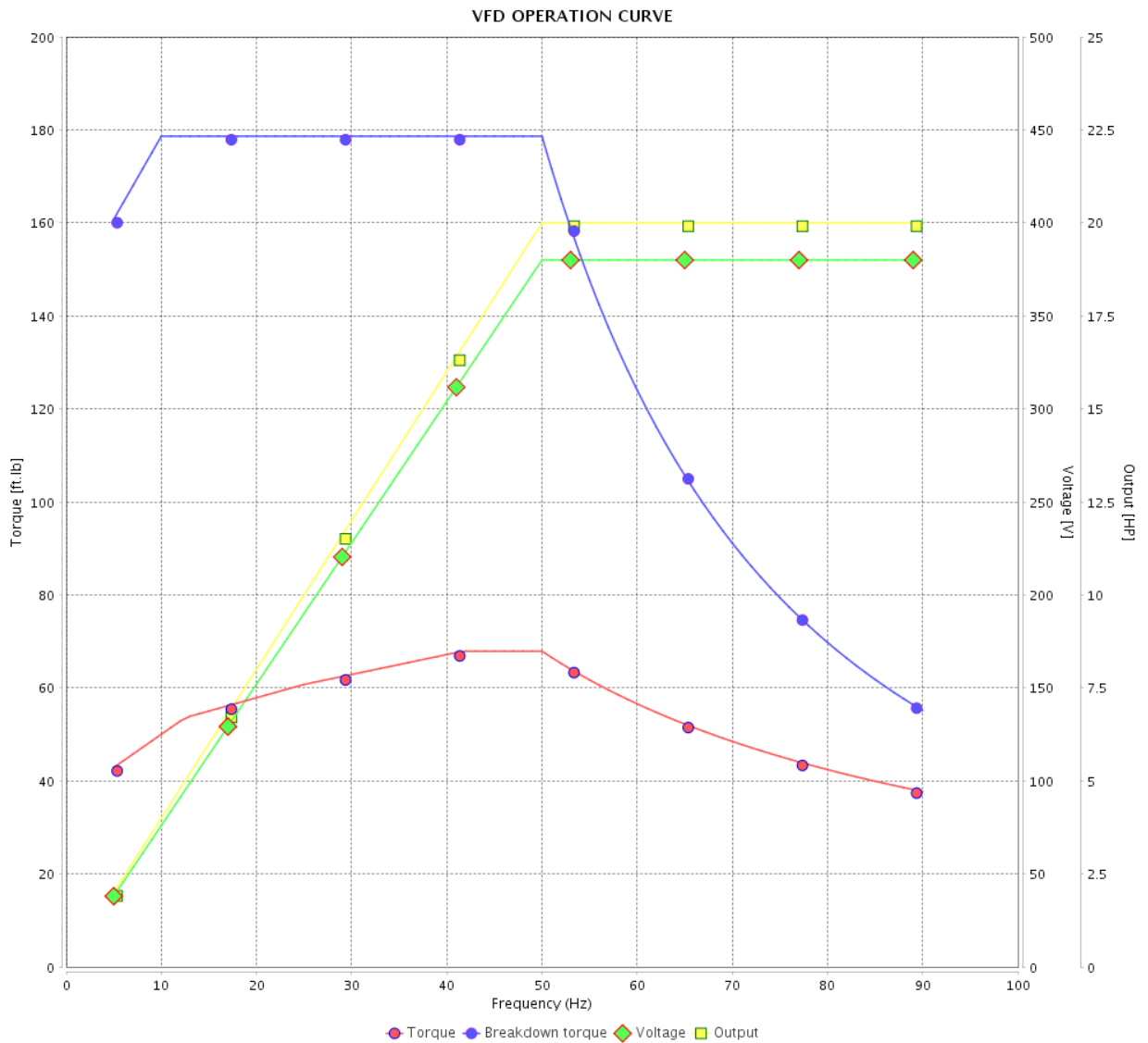


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Moment of inertia (J) : 3.71 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



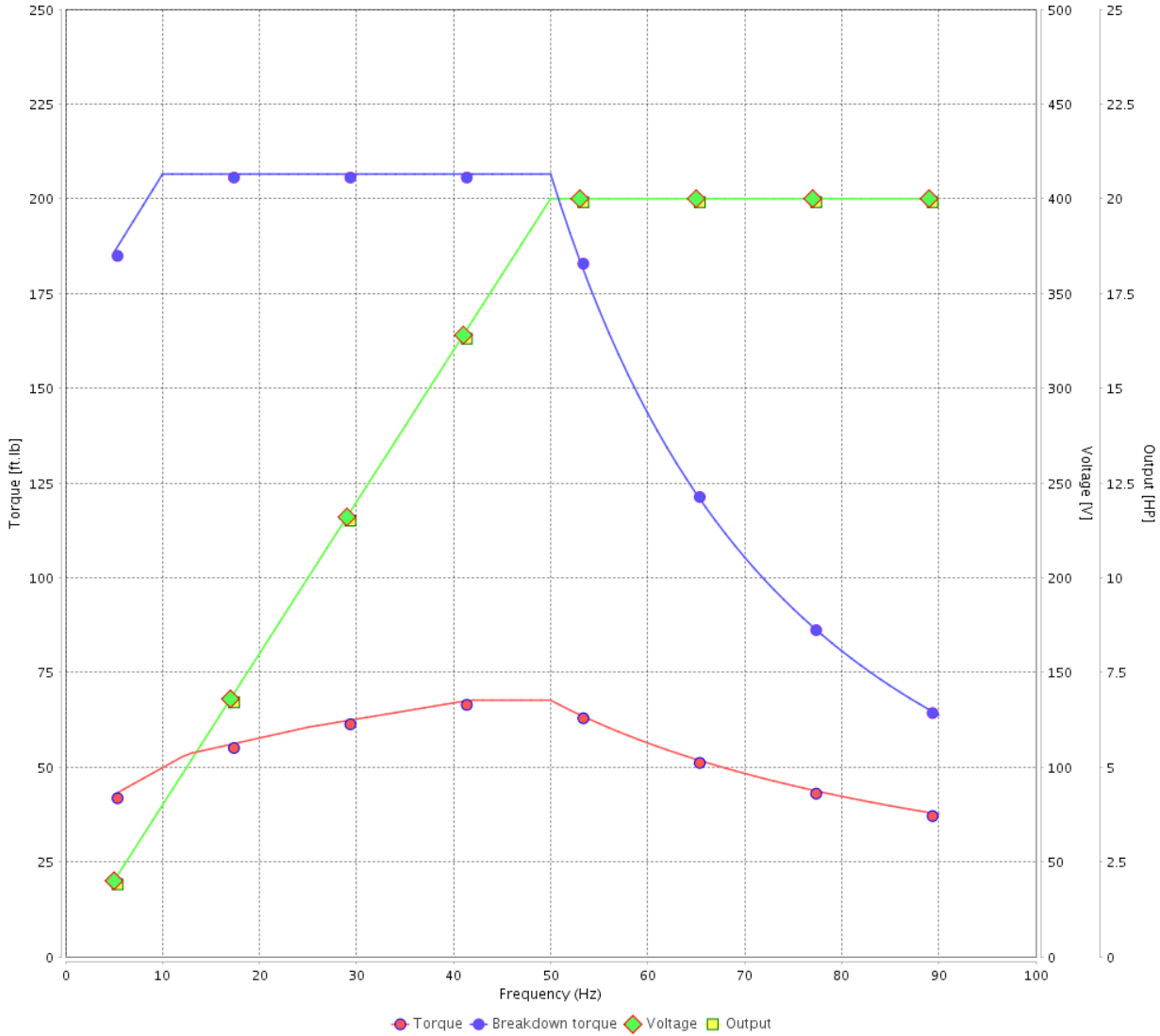
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VFD OPERATION CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current : 28.7 A
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 Service factor : 1.00
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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

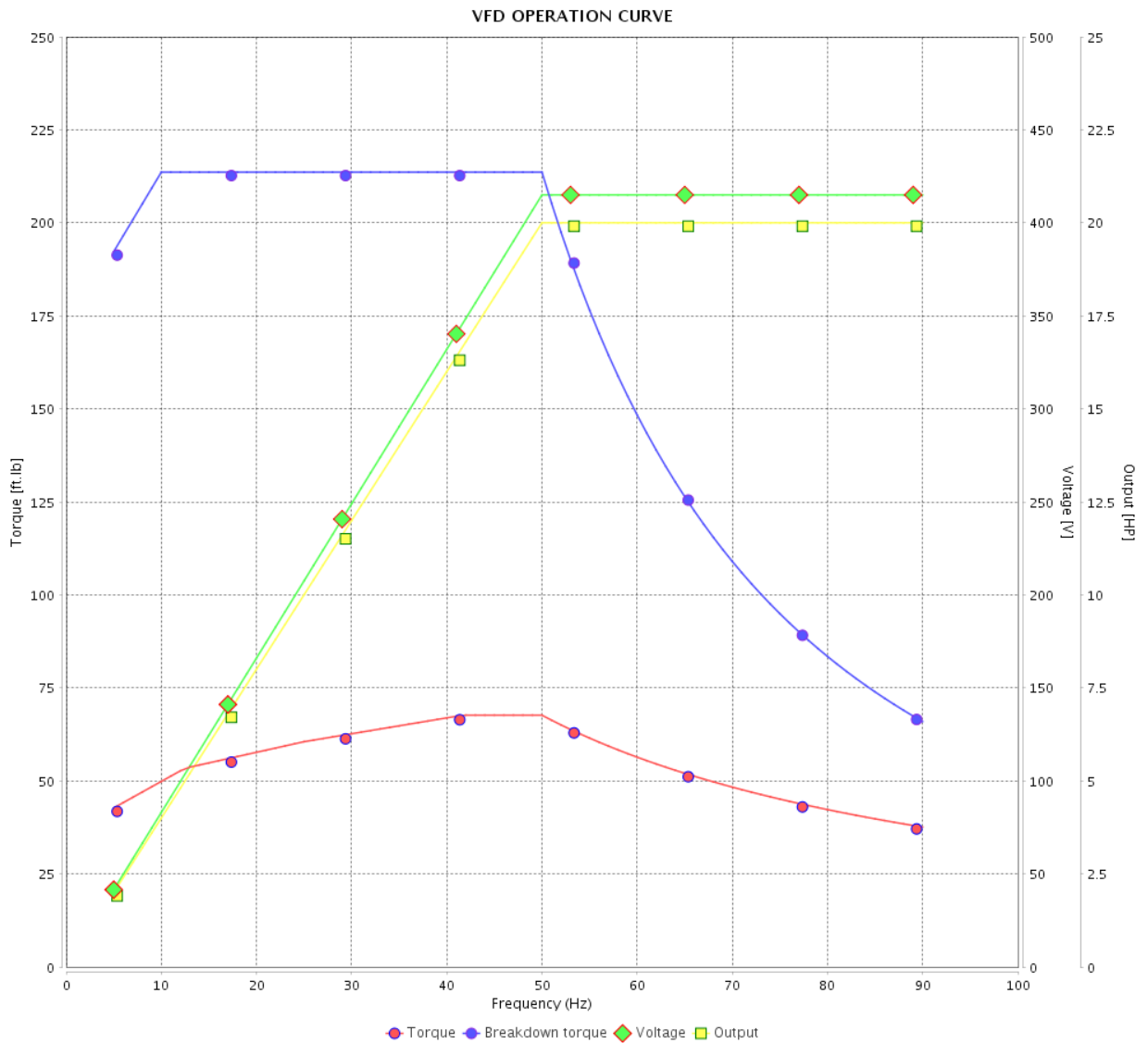


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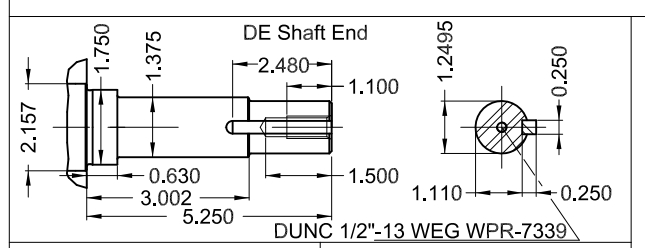
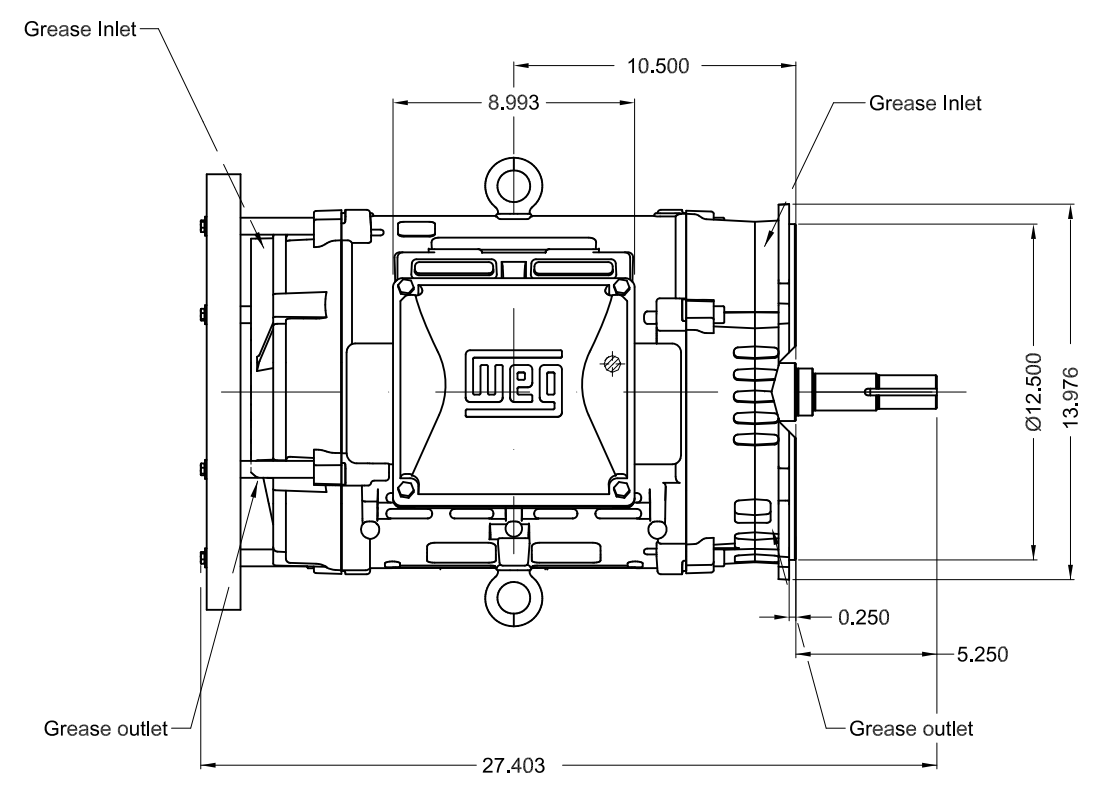
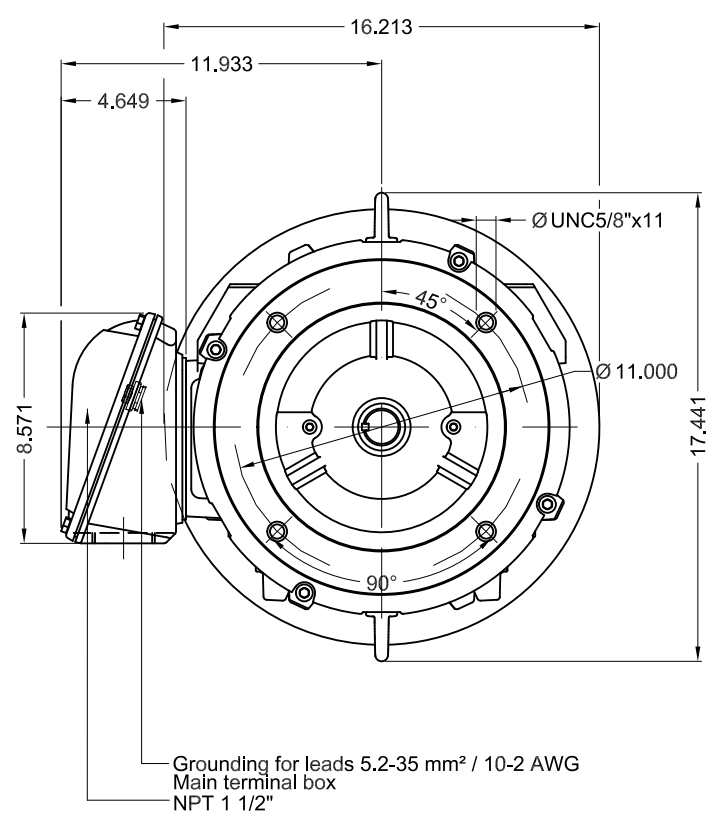


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25 HP 04 Poles 60 Hz A

1:7

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR W40 CLOSE COUPLED PUMP JM TYPE PREM-FT					
CHECKED		FRAME 284/6JM IP23 ODP					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	WDD	SHEET	1 / 1	

Color RAL 5009
 Painting plan 203A
 Mounting NEMA W-6
 Mounting V18

PREVIEW

