

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :				
Product line : IE3 Three-Phase	Product code : 12868144			
Frame : 80 Insulation class : F Duty cycle : S1 Ambient temperature : -20°C to +40°C Altitude : 1000 m.a.s.l. Protection degree : IP55 Design : N	Cooling method : IC411 - TEFC Mounting : B5T Rotation <sup>1</sup> : Both (CW and CCW) Starting method : Direct On Line Approx. weight <sup>2</sup> : 34.0 lb Moment of inertia (J) : 0.0645 sq.ft.lb			
Output [kW]	0.550	0.550	0.550	0.550
Poles	4	4	4	4
Frequency [Hz]	50	50	50	60
Rated voltage [V]	220/380	230/400	240/415	460
Rated current [A]	2.16/1.25	2.14/1.23	2.13/1.23	1.09
L. R. Amperes [A]	13.6/7.88	14.1/8.12	14.7/8.49	8.28
LRC [A]	6.3	6.6	6.9	7.6
No load current [A]	1.11/0.640	1.18/0.680	1.31/0.760	0.640
Rated speed [RPM]	1415	1425	1430	1735
Slip [%]	5.67	5.00	4.67	3.61
Rated torque [ft.lb]	2.74	2.72	2.71	2.23
Locked rotor torque [%]	250	280	310	350
Breakdown torque [%]	250	280	310	350
Service factor	1.00	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K
Locked rotor time	46s (cold) 26s (hot)	43s (cold) 24s (hot)	41s (cold) 23s (hot)	41s (cold) 23s (hot)
Noise level <sup>2</sup>	44.0 dB(A)	44.0 dB(A)	44.0 dB(A)	48.0 dB(A)
Efficiency (%)	25%			
	50%	78.0	77.0	76.0
	75%	79.1	79.0	78.9
	100%	80.8	80.8	80.8
Power Factor	25%			
	50%	0.65	0.61	0.57
	75%	0.77	0.74	0.71
	100%	0.83	0.80	0.77
Losses at normative operating points (speed;torque), in percentage of rated output power				
Losses (%)	P1 (0,9;1,0)	23.7	23.7	23.7
	P2 (0,5;1,0)	22.6	22.6	22.6
	P3 (0,25;1,0)	21.7	21.7	21.7
	P4 (0,9;0,5)	11.4	11.4	11.4
	P5 (0,5;0,5)	8.3	8.3	8.3
	P6 (0,5;0,25)	5.6	5.6	5.6
	P7 (0,25;0,25)	4.1	4.1	4.1
Bearing type : Drive end 6204 ZZ Non drive end 6203 ZZ Sealing : Oil Seal Lip Seal Lubrication interval : - - Lubricant amount : - - Lubricant type : Mobil Polyrex EM	Foundation loads Max. traction : 59 lb Max. compression : 93 lb			
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 IEC 60034-1.		
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## Three Phase Induction Motor - Squirrel Cage



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

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## Three Phase Induction Motor - Squirrel Cage



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

### Thermal protection

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

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# TORQUE AND CURRENT VS SPEED CURVE

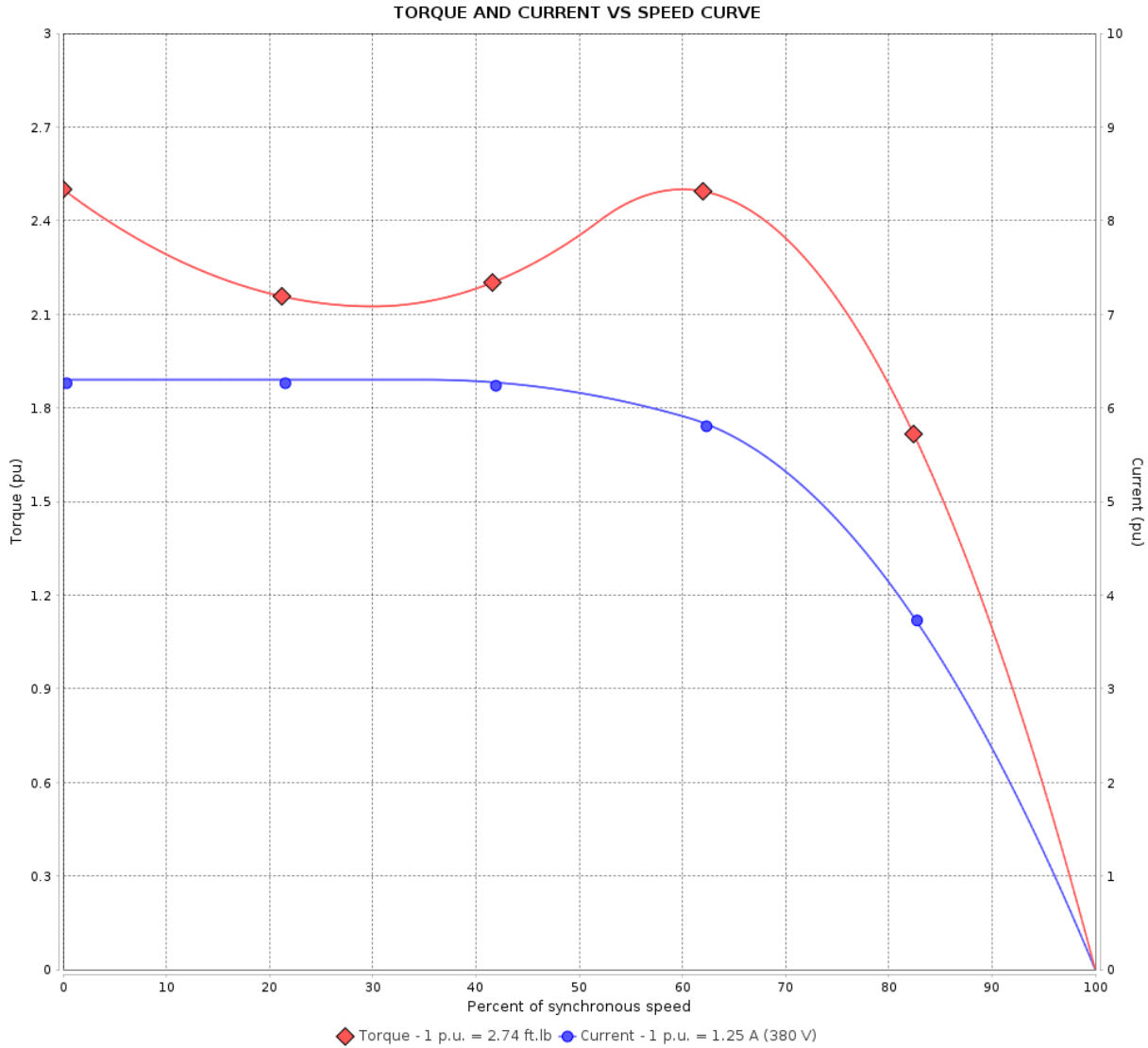
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : IE3 Three-Phase

Product code : 12868144



Performance : 220/380 V 50 Hz 4P

Rated current	: 2.16/1.25 A	Moment of inertia (J)	: 0.0645 sq.ft.lb
LRC	: 6.3	Duty cycle	: S1
Rated torque	: 2.74 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1415 rpm	Design	: N

Locked rotor time : 46s (cold) 26s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

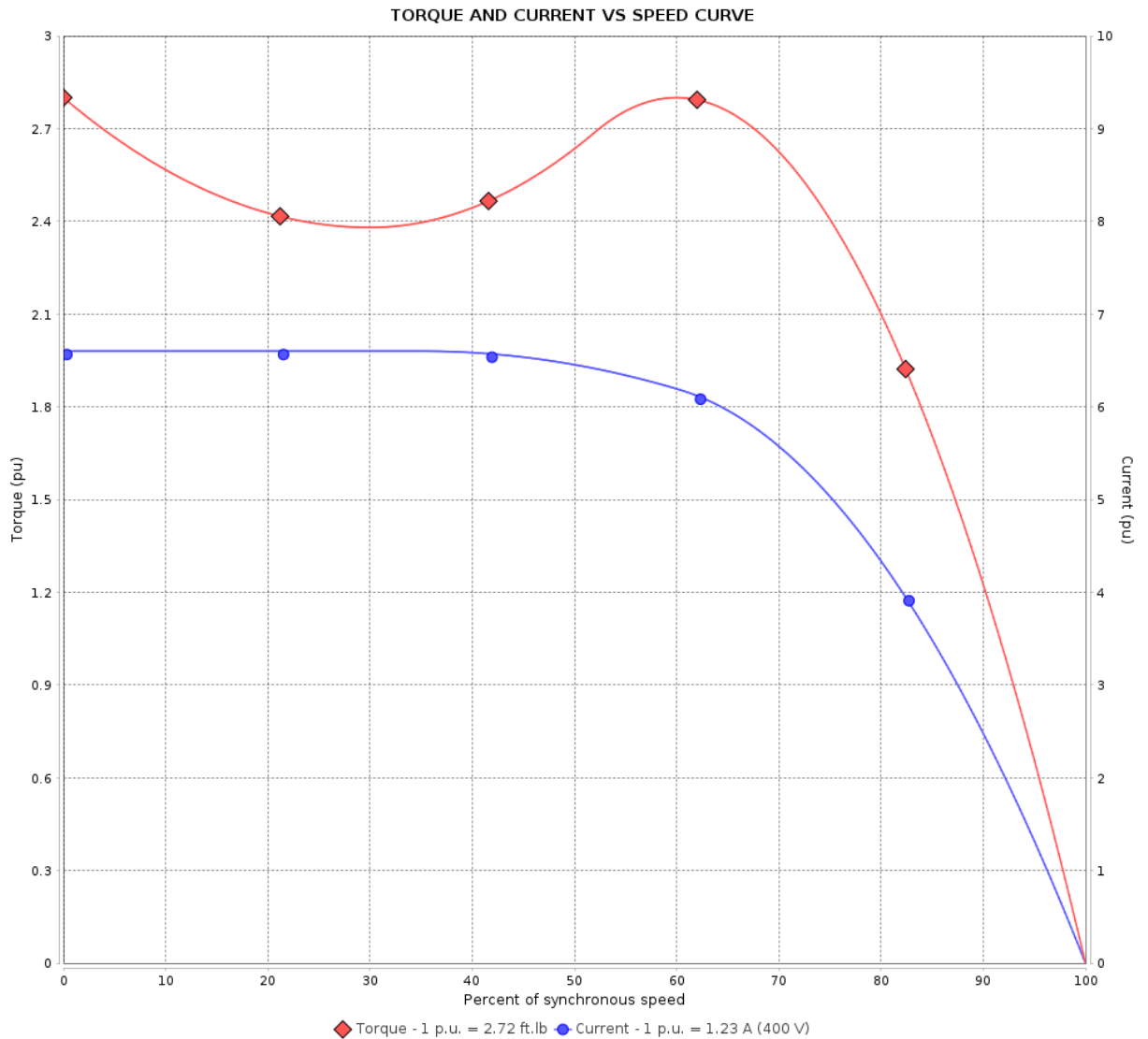


## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : IE3 Three-Phase

Product code : 12868144



Performance : 230/400 V 50 Hz 4P

Rated current	: 2.14/1.23 A	Moment of inertia (J)	: 0.0645 sq.ft.lb
LRC	: 6.6	Duty cycle	: S1
Rated torque	: 2.72 ft.lb	Insulation class	: F
Locked rotor torque	: 280 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 1425 rpm	Design	: N

Locked rotor time : 43s (cold) 24s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

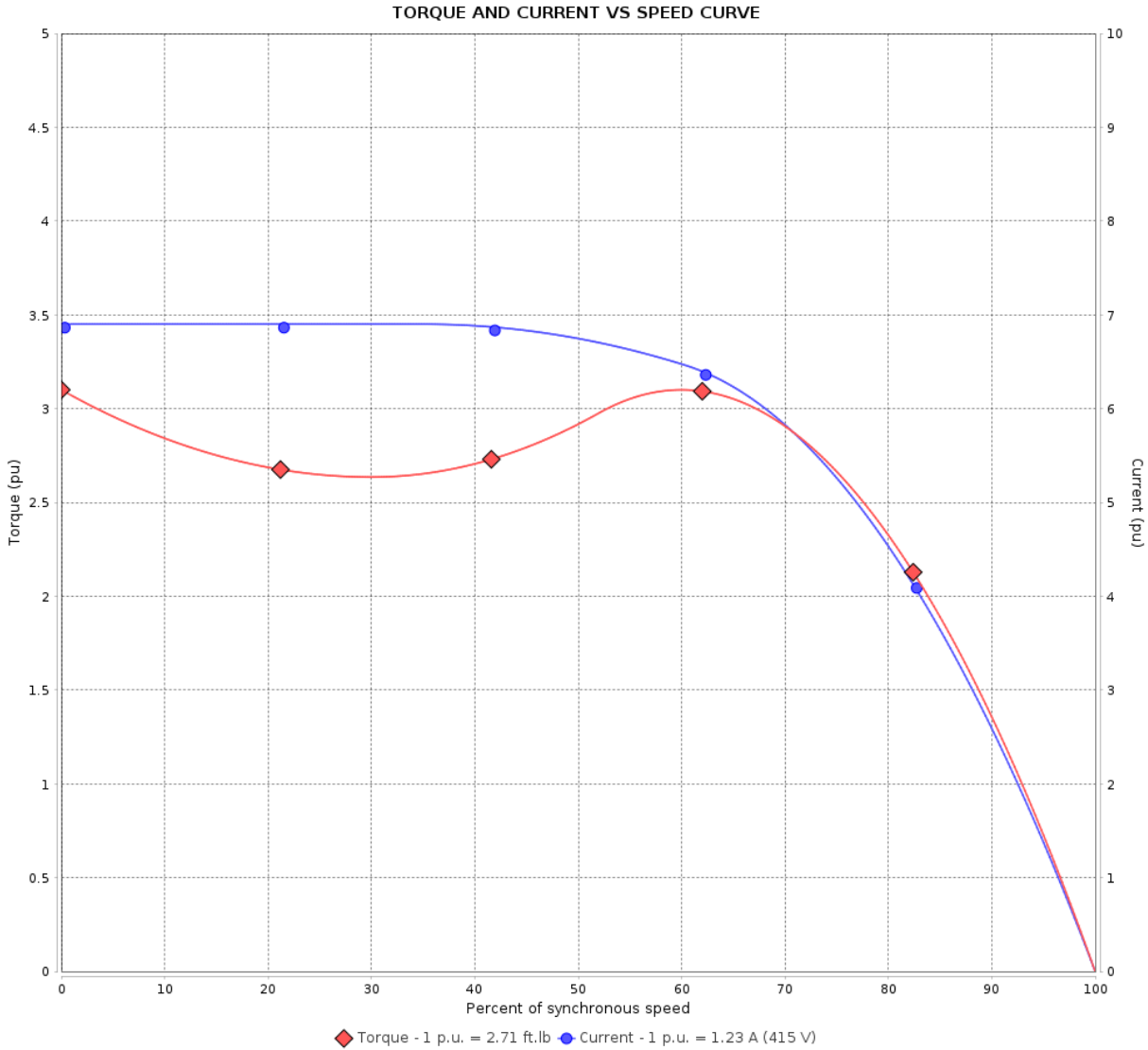
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : IE3 Three-Phase

Product code : 12868144



Performance : 240/415 V 50 Hz 4P

Rated current	: 2.13/1.23 A	Moment of inertia (J)	: 0.0645 sq.ft.lb
LRC	: 6.9	Duty cycle	: S1
Rated torque	: 2.71 ft.lb	Insulation class	: F
Locked rotor torque	: 310 %	Service factor	: 1.00
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 1430 rpm	Design	: N

Locked rotor time : 41s (cold) 23s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

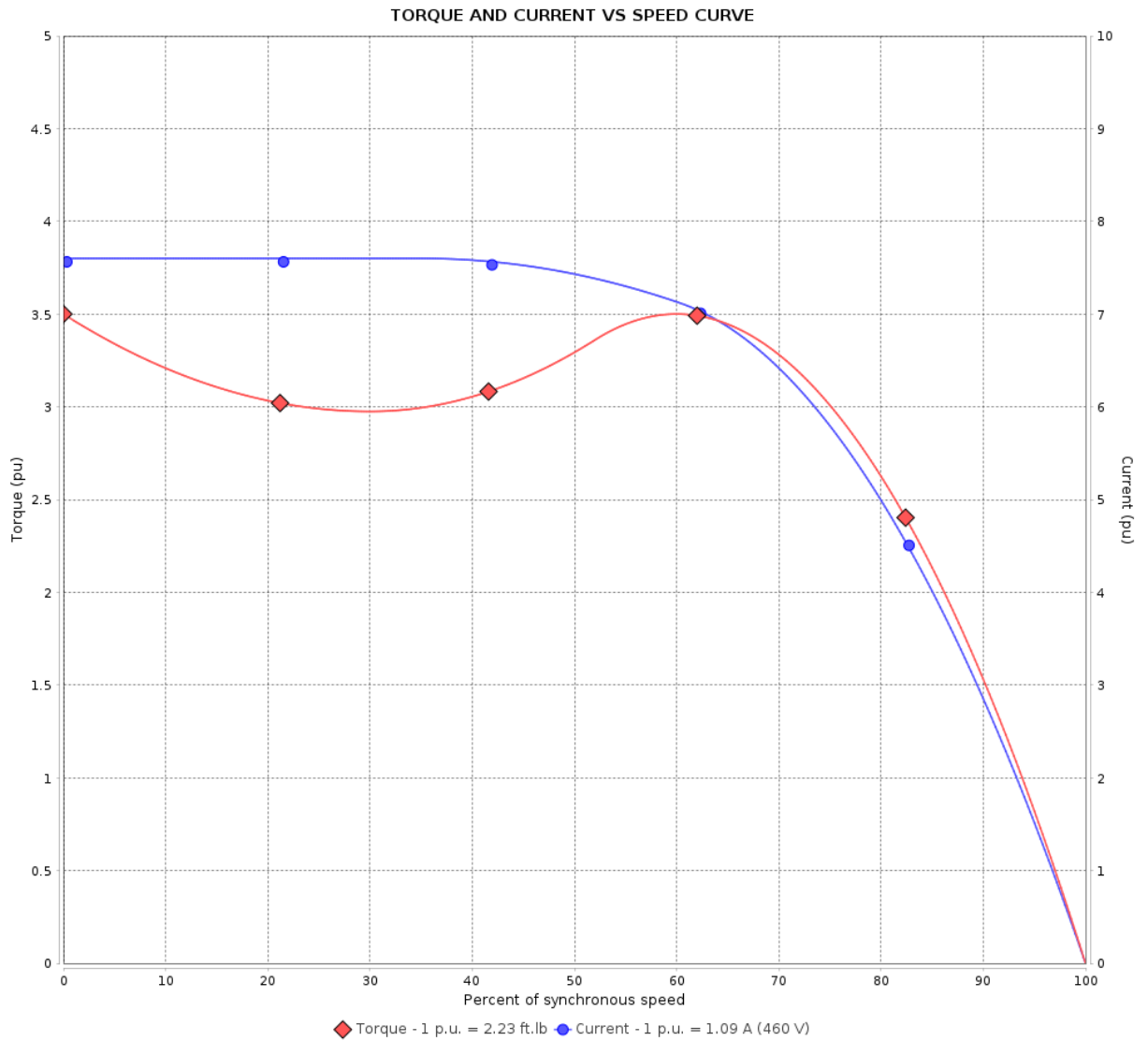
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : IE3 Three-Phase

Product code : 12868144



Performance : 460 V 60 Hz 4P

Rated current	: 1.09 A	Moment of inertia (J)	: 0.0645 sq.ft.lb
LRC	: 7.6	Duty cycle	: S1
Rated torque	: 2.23 ft.lb	Insulation class	: F
Locked rotor torque	: 350 %	Service factor	: 1.00
Breakdown torque	: 350 %	Temperature rise	: 80 K
Rated speed	: 1735 rpm	Design	: N

Locked rotor time : 41s (cold) 23s (hot)

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# LOAD PERFORMANCE CURVE

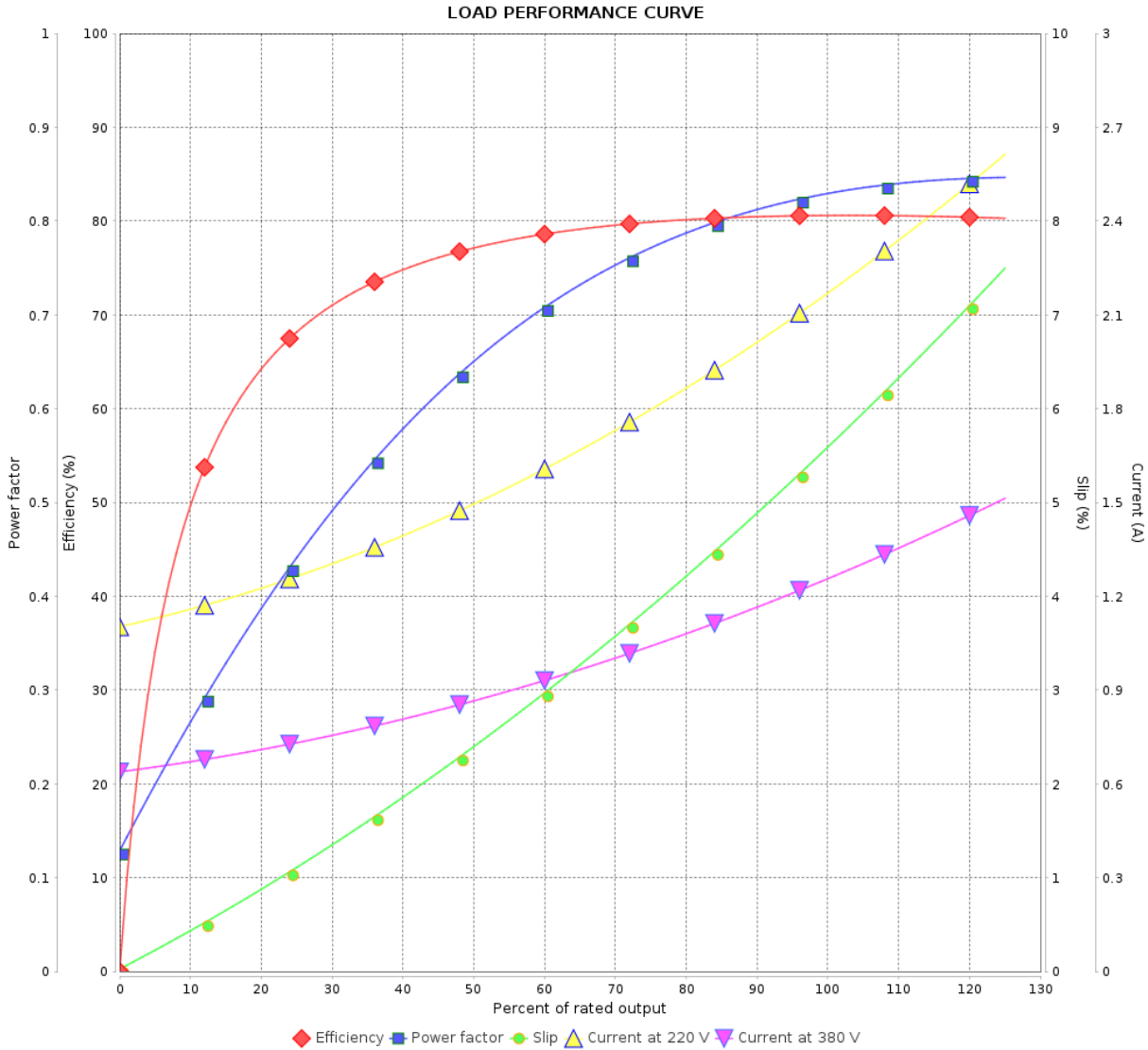
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : IE3 Three-Phase

Product code : 12868144



Performance : 220/380 V 50 Hz 4P

Rated current : 2.16/1.25 A  
 LRC : 6.3  
 Rated torque : 2.74 ft.lb  
 Locked rotor torque : 250 %  
 Breakdown torque : 250 %  
 Rated speed : 1415 rpm

Moment of inertia (J) : 0.0645 sq.ft.lb  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

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# LOAD PERFORMANCE CURVE

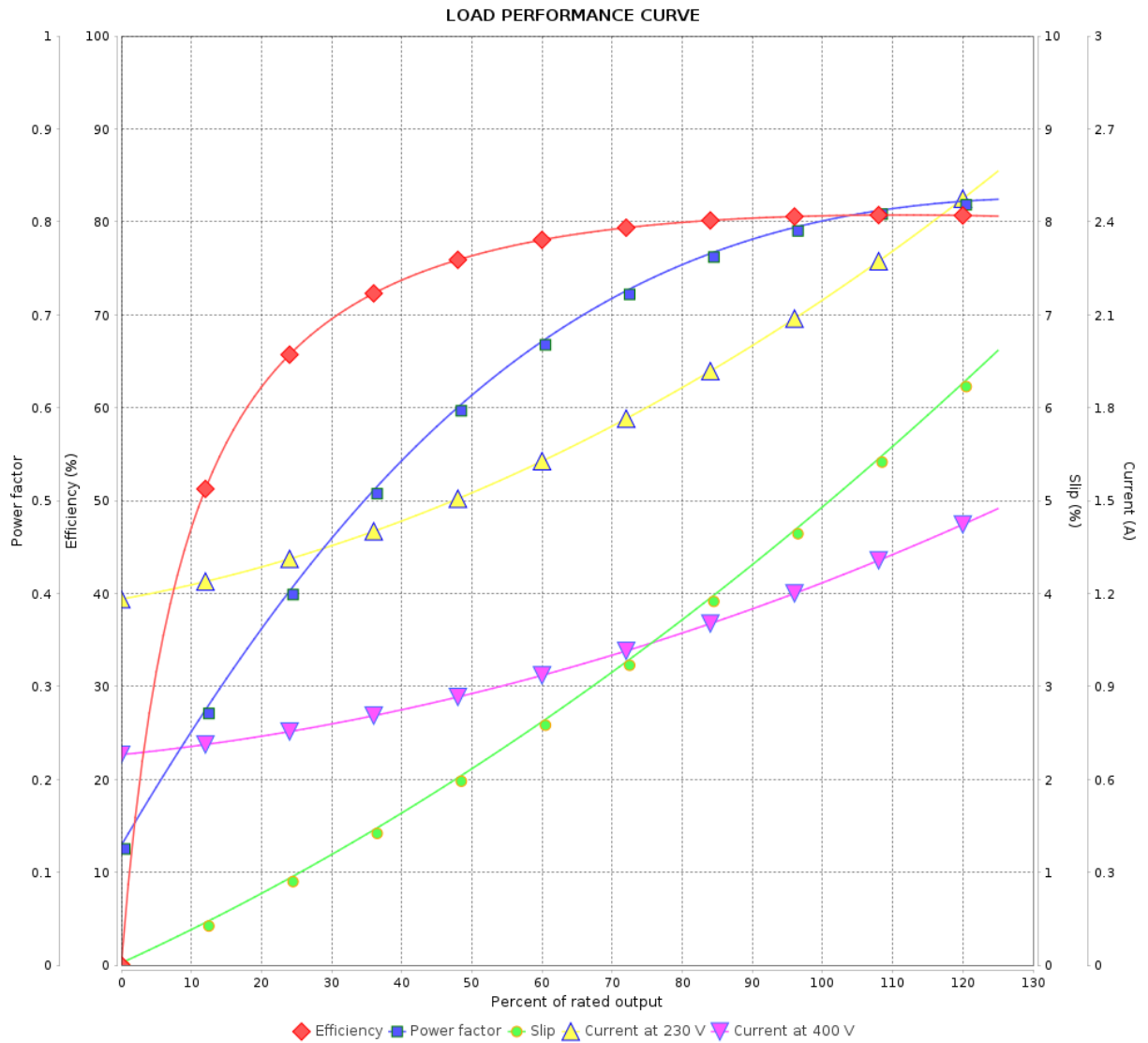
## Three Phase Induction Motor - Squirrel Cage



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

Product line : IE3 Three-Phase

Product code : 12868144



Performance : 230/400 V 50 Hz 4P

Rated current : 2.14/1.23 A  
 LRC : 6.6  
 Rated torque : 2.72 ft.lb  
 Locked rotor torque : 280 %  
 Breakdown torque : 280 %  
 Rated speed : 1425 rpm

Moment of inertia (J) : 0.0645 sq.ft.lb  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

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# LOAD PERFORMANCE CURVE

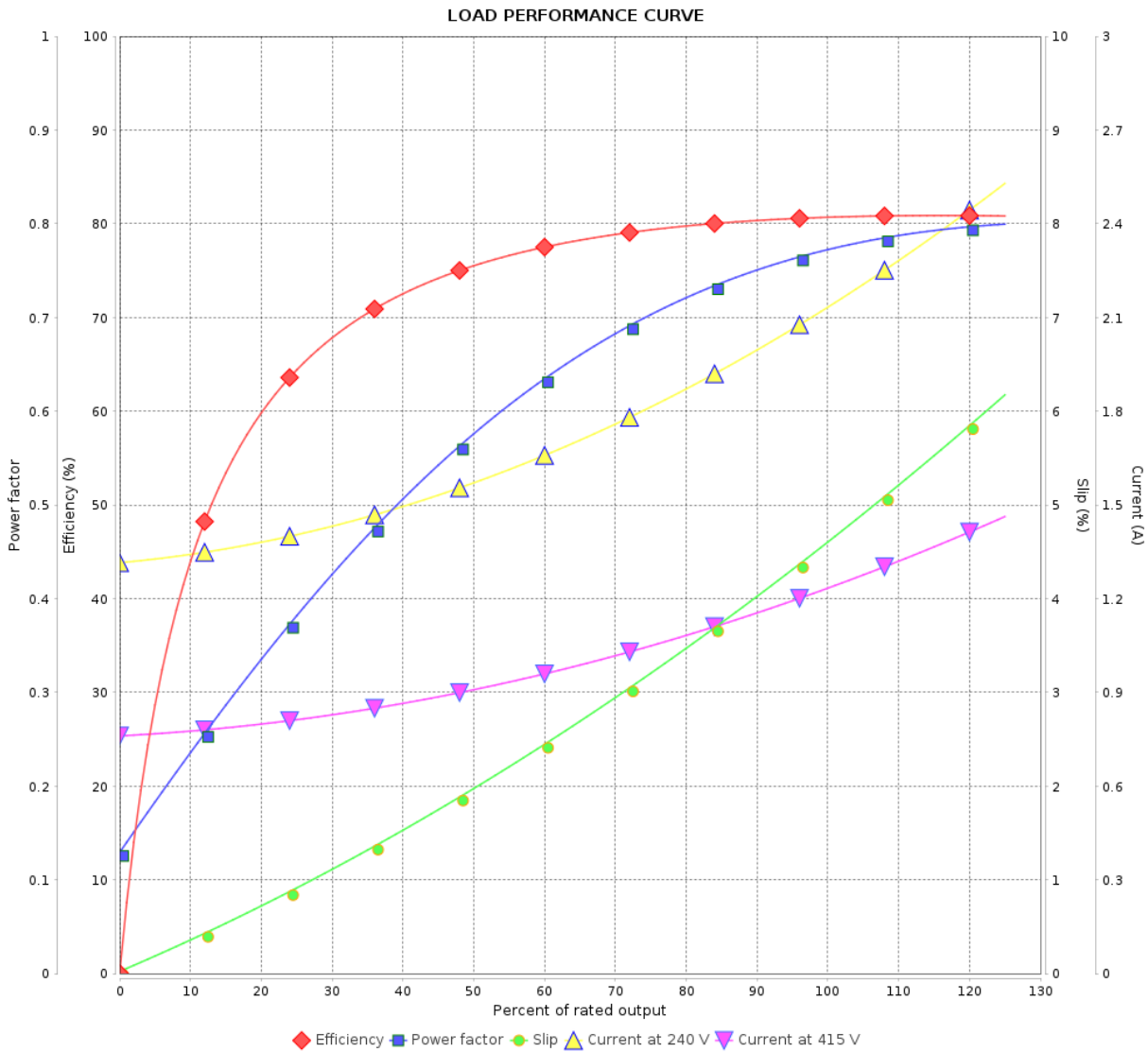
Three Phase Induction Motor - Squirrel Cage



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

Product line : IE3 Three-Phase

Product code : 12868144



Performance : 240/415 V 50 Hz 4P

Rated current : 2.13/1.23 A  
 LRC : 6.9  
 Rated torque : 2.71 ft.lb  
 Locked rotor torque : 310 %  
 Breakdown torque : 310 %  
 Rated speed : 1430 rpm

Moment of inertia (J) : 0.0645 sq.ft.lb  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

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# LOAD PERFORMANCE CURVE

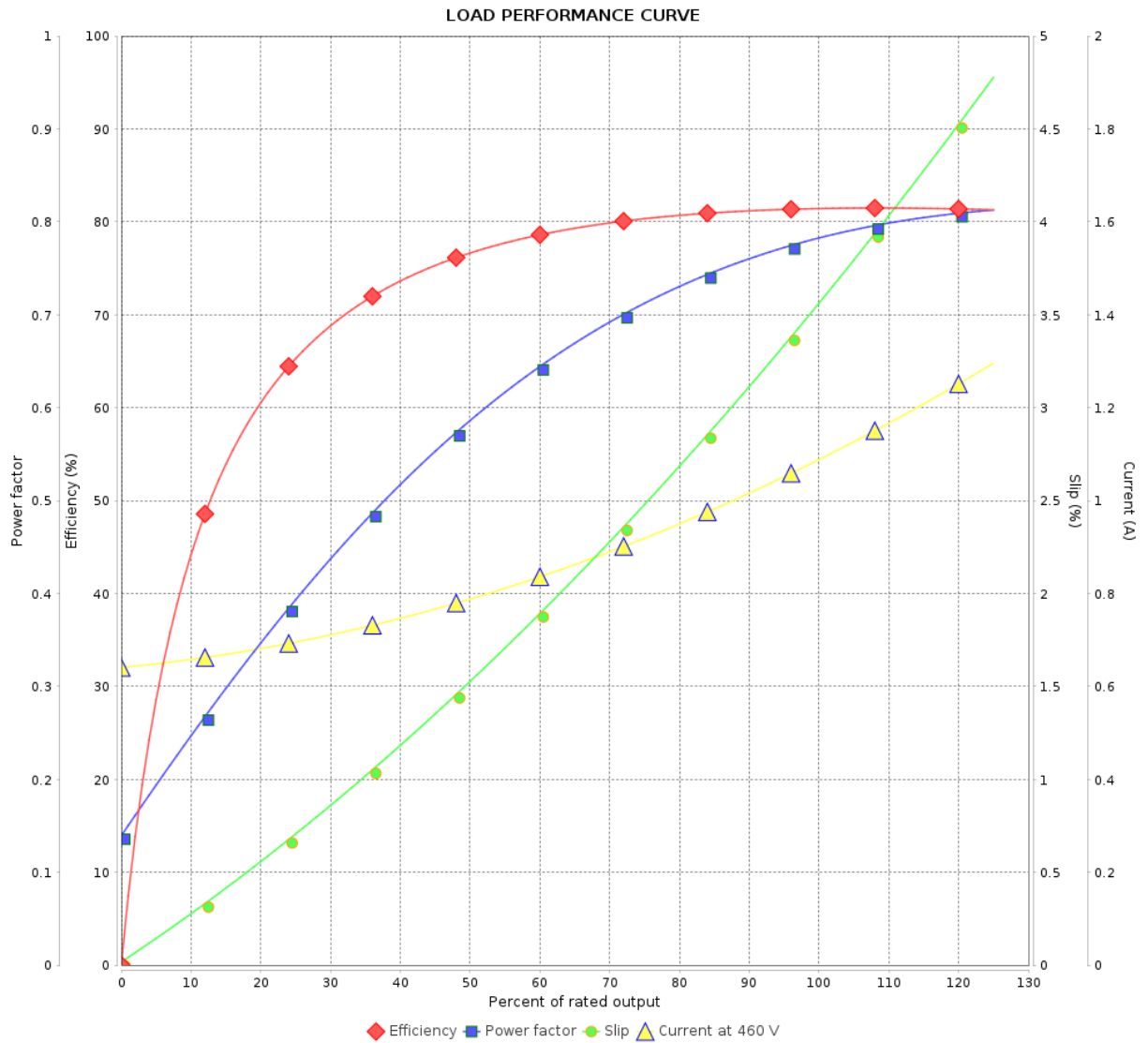
## Three Phase Induction Motor - Squirrel Cage



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

Product line : IE3 Three-Phase

Product code : 12868144



Performance : 460 V 60 Hz 4P

Rated current : 1.09 A  
 LRC : 7.6  
 Rated torque : 2.23 ft.lb  
 Locked rotor torque : 350 %  
 Breakdown torque : 350 %  
 Rated speed : 1735 rpm

Moment of inertia (J) : 0.0645 sq.ft.lb  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

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# THERMAL LIMIT CURVE

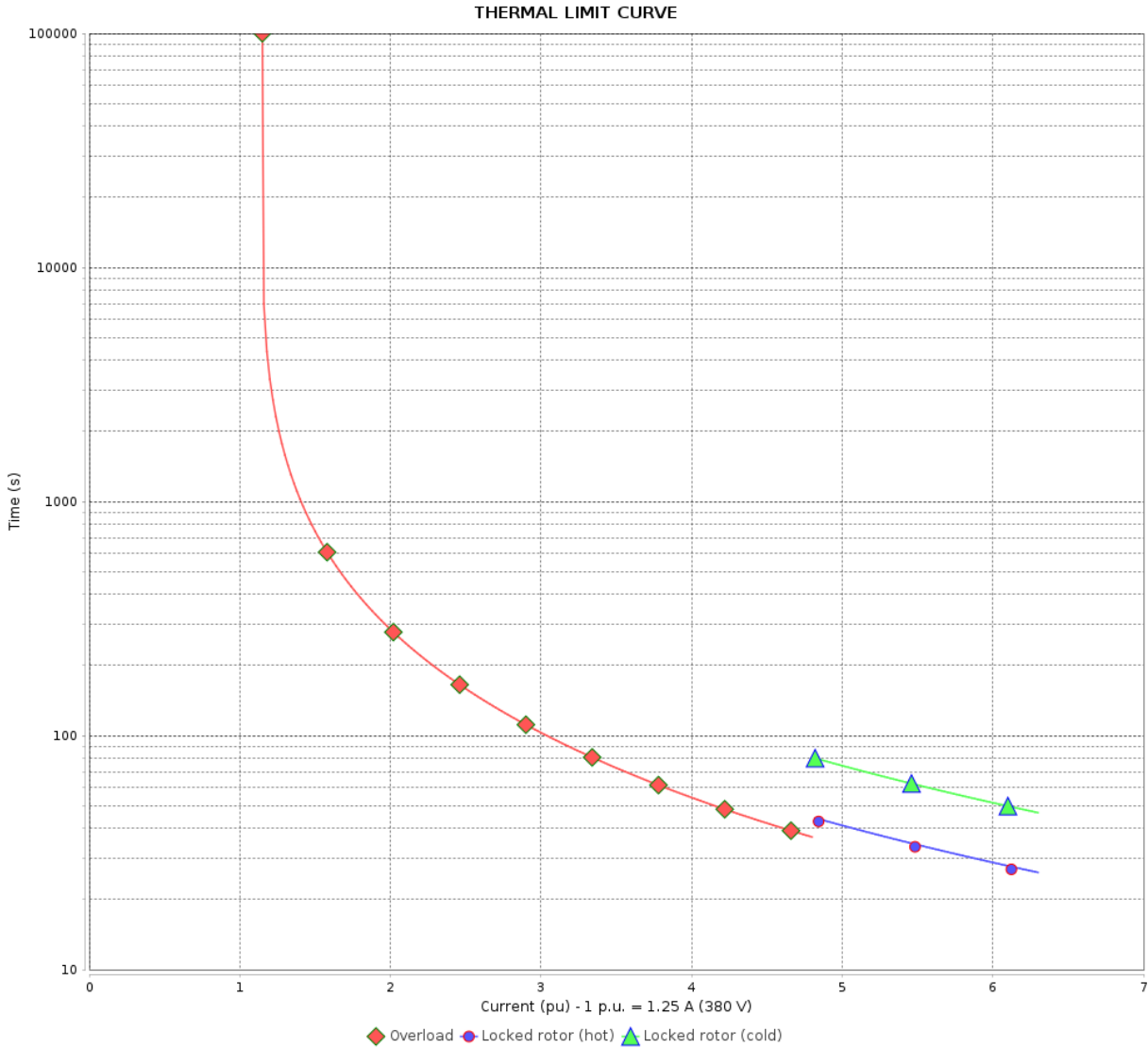
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : IE3 Three-Phase

Product code : 12868144



Performance : 220/380 V 50 Hz 4P

Rated current : 2.16/1.25 A  
 LRC : 6.3  
 Rated torque : 2.74 ft.lb  
 Locked rotor torque : 250 %  
 Breakdown torque : 250 %  
 Rated speed : 1415 rpm

Moment of inertia (J) : 0.0645 sq.ft.lb  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Heating constant

Cooling constant

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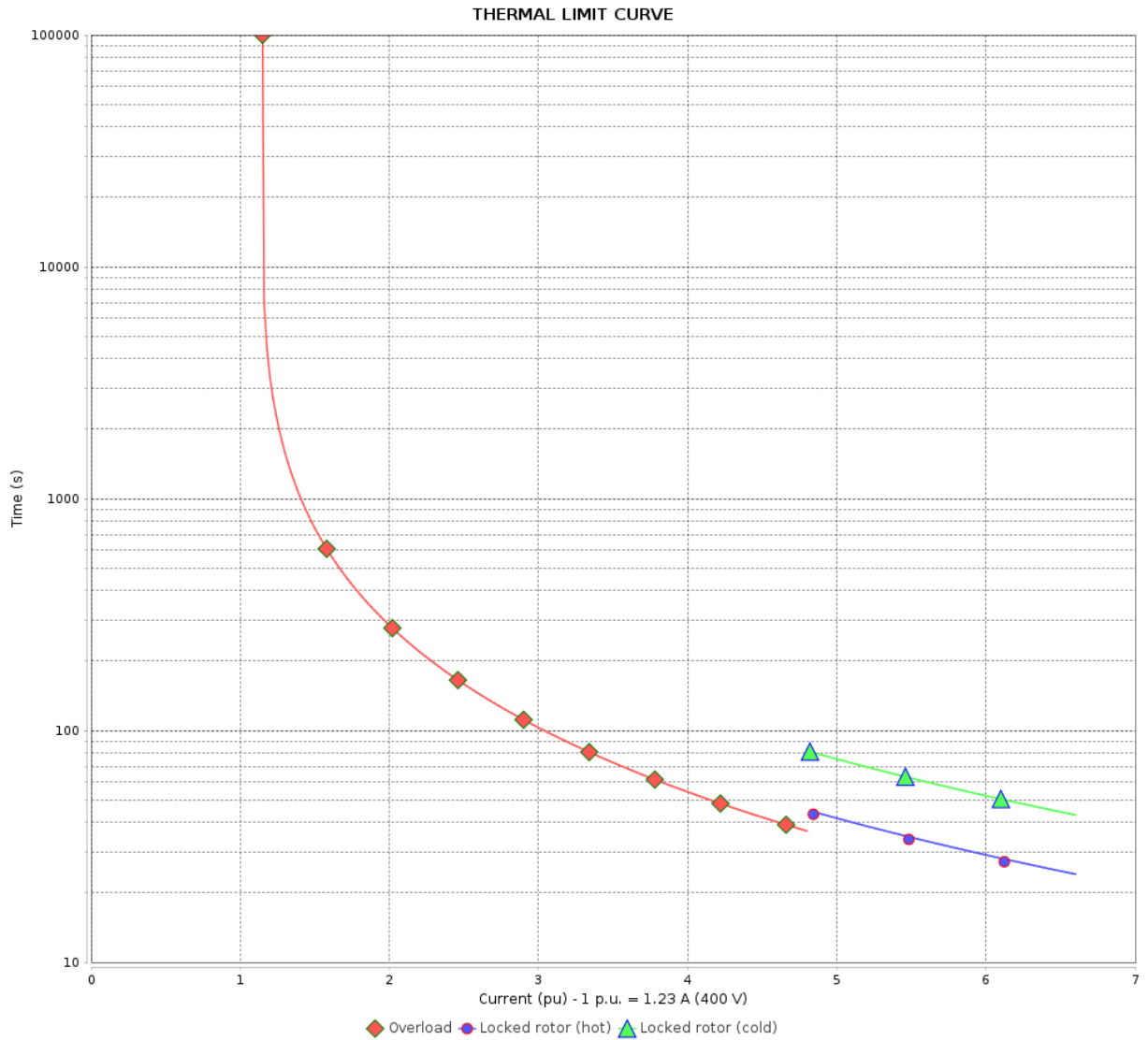
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Product line : IE3 Three-Phase

Product code : 12868144



Performance : 230/400 V 50 Hz 4P

Rated current : 2.14/1.23 A  
 LRC : 6.6  
 Rated torque : 2.72 ft.lb  
 Locked rotor torque : 280 %  
 Breakdown torque : 280 %  
 Rated speed : 1425 rpm

Moment of inertia (J) : 0.0645 sq.ft.lb  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Heating constant

Cooling constant

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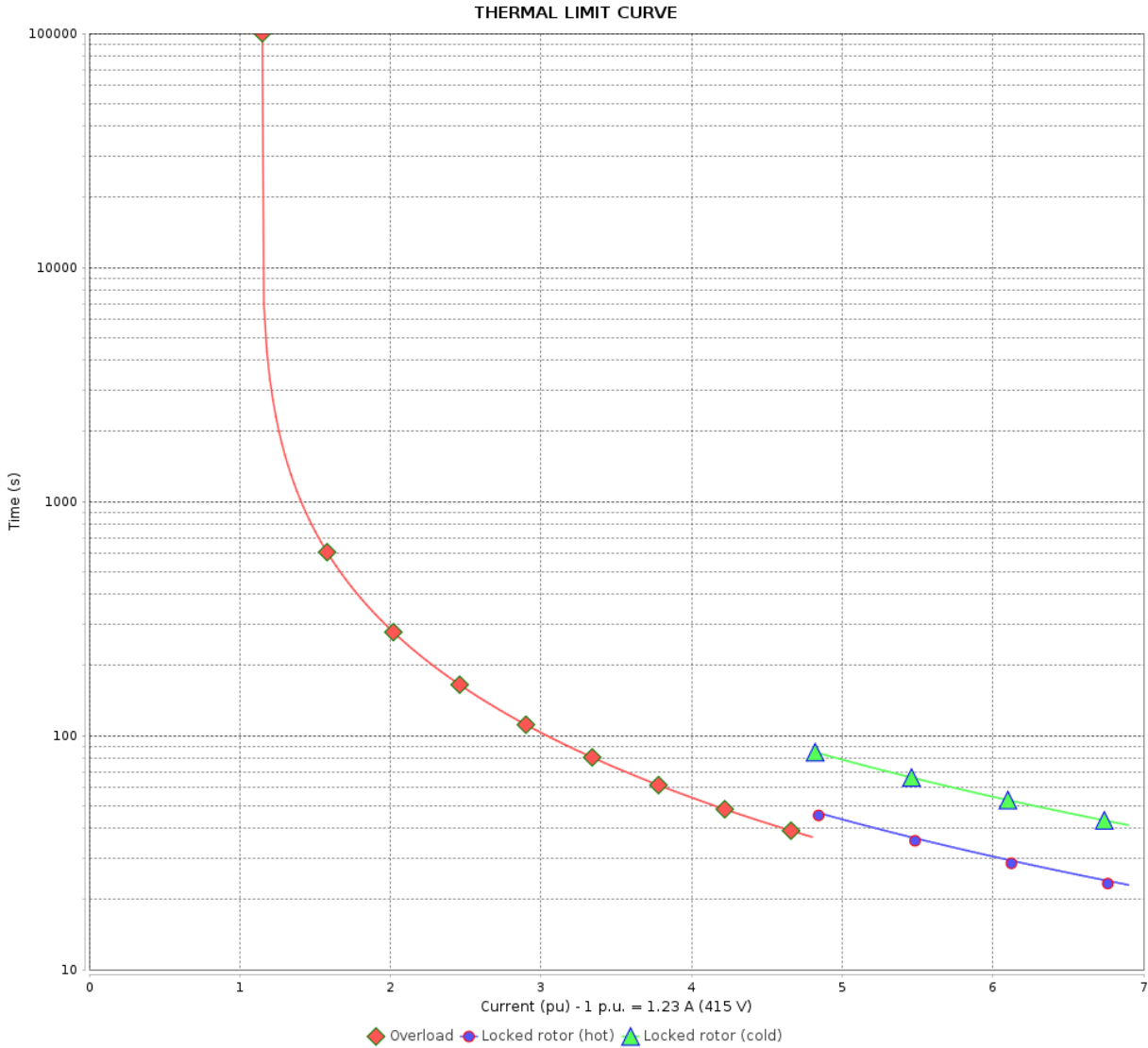
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Customer :

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Product code : 12868144



Performance : 240/415 V 50 Hz 4P

Rated current : 2.13/1.23 A  
 LRC : 6.9  
 Rated torque : 2.71 ft.lb  
 Locked rotor torque : 310 %  
 Breakdown torque : 310 %  
 Rated speed : 1430 rpm

Moment of inertia (J) : 0.0645 sq.ft.lb  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Heating constant

Cooling constant

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# THERMAL LIMIT CURVE

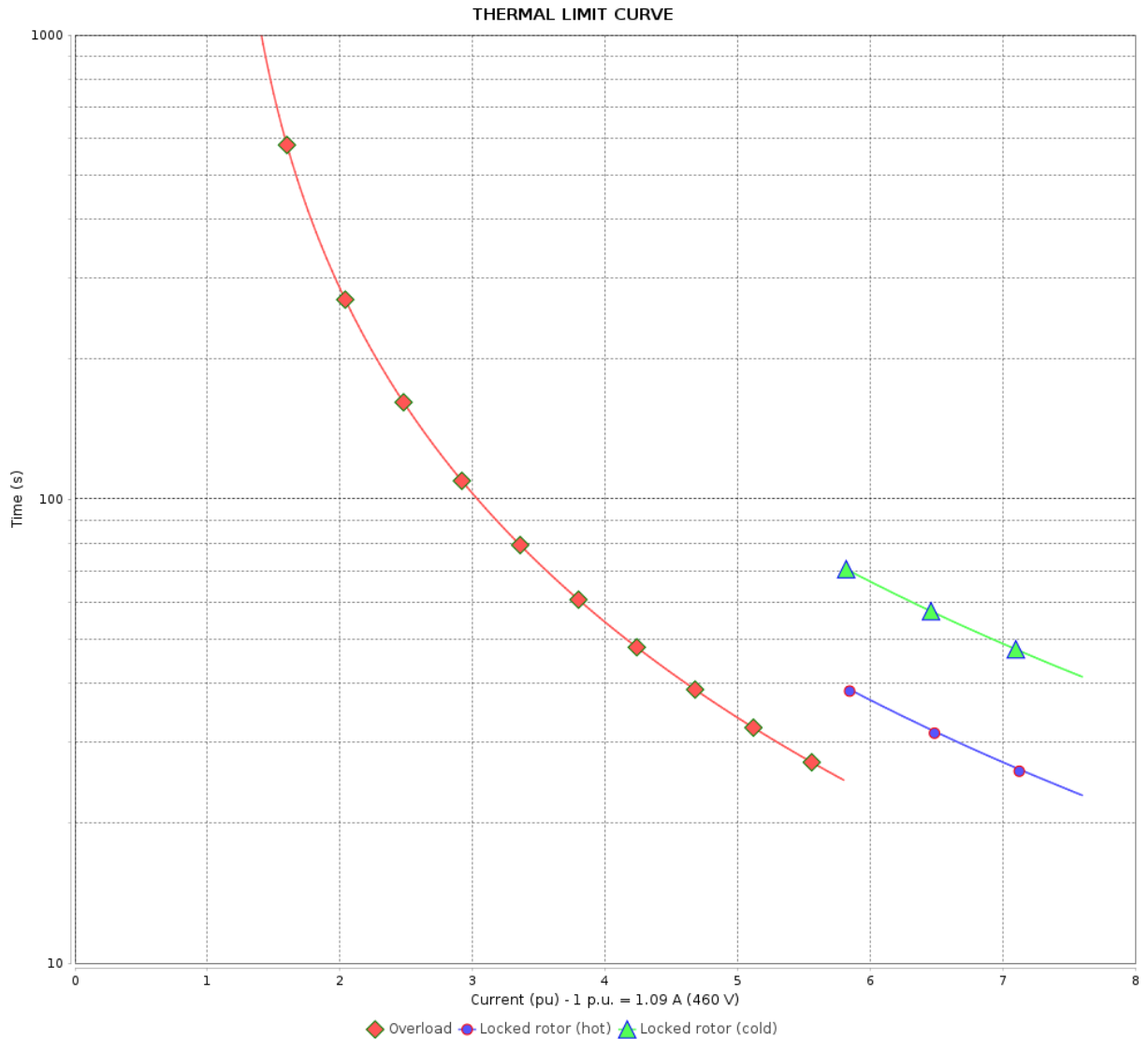
## Three Phase Induction Motor - Squirrel Cage



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

Product line : IE3 Three-Phase

Product code : 12868144



Performance : 460 V 60 Hz 4P

Rated current : 1.09 A  
 LRC : 7.6  
 Rated torque : 2.23 ft.lb  
 Locked rotor torque : 350 %  
 Breakdown torque : 350 %  
 Rated speed : 1735 rpm

Moment of inertia (J) : 0.0645 sq.ft.lb  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Heating constant

Cooling constant

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# VFD OPERATION CURVE

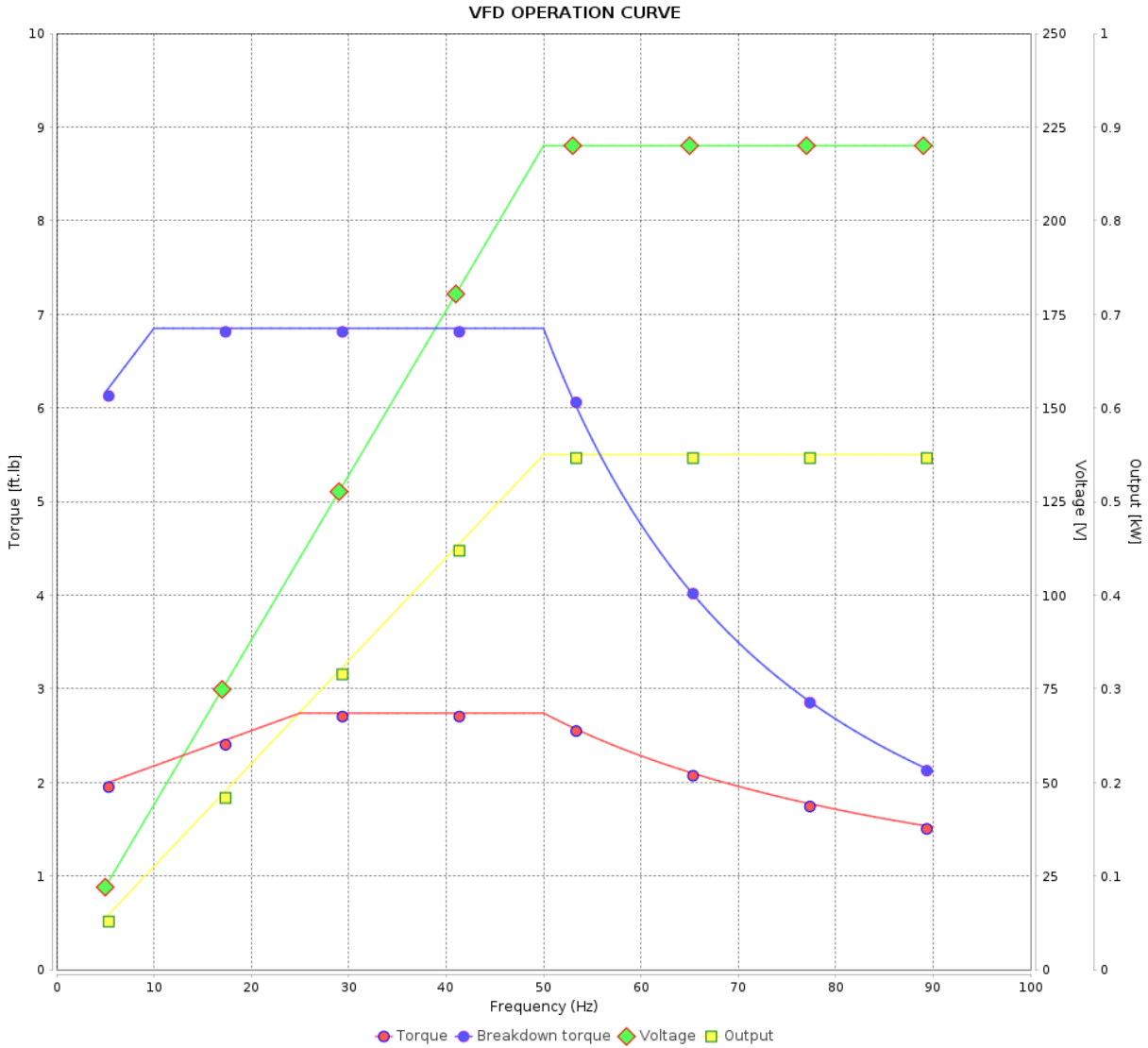
Three Phase Induction Motor - Squirrel Cage



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Performance : 220/380 V 50 Hz 4P

Rated current : 2.16/1.25 A  
 LRC : 6.3  
 Rated torque : 2.74 ft.lb  
 Locked rotor torque : 250 %  
 Breakdown torque : 250 %  
 Rated speed : 1415 rpm

Moment of inertia (J) : 0.0645 sq.ft.lb  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

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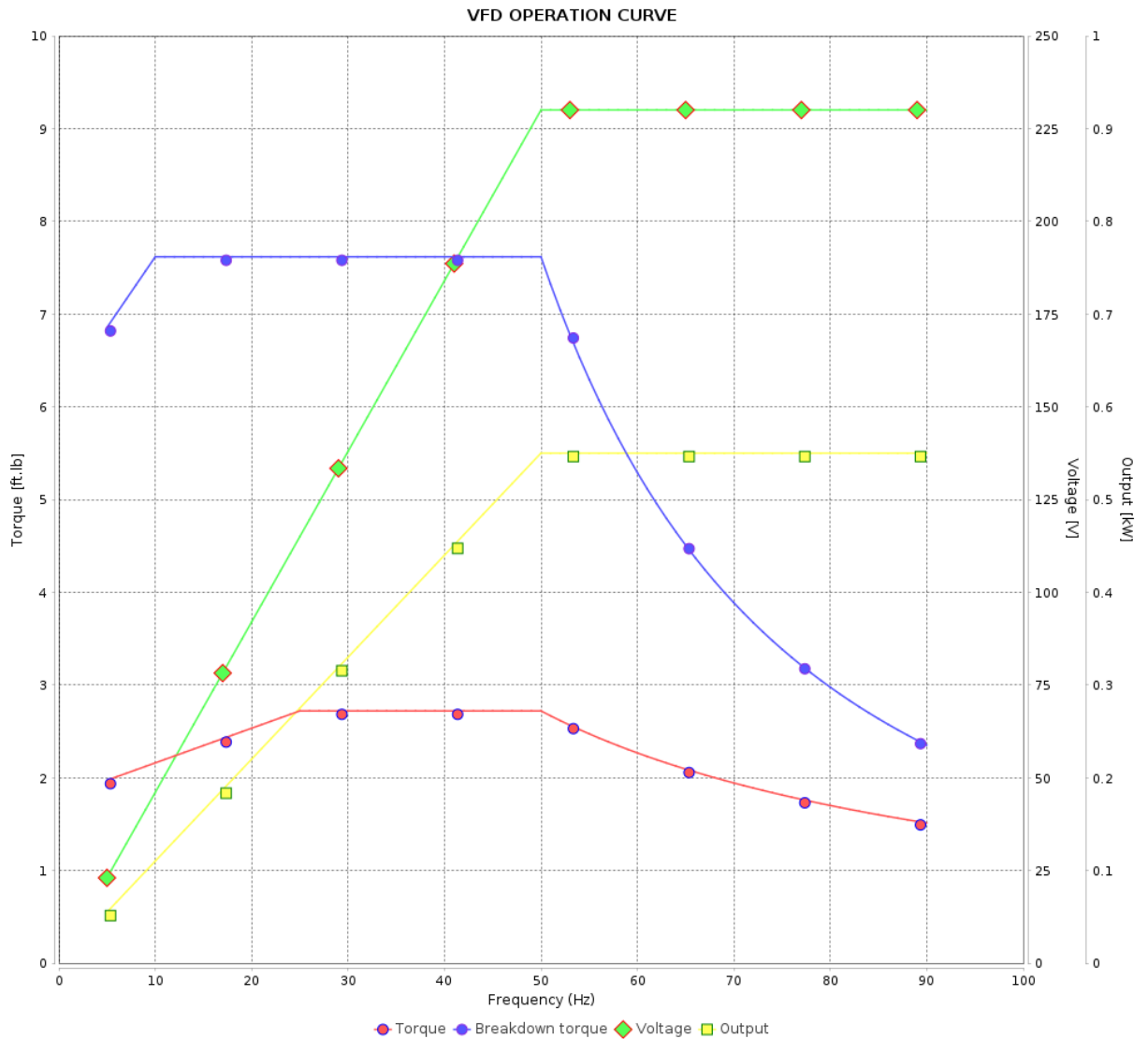
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : IE3 Three-Phase

Product code : 12868144



Performance : 230/400 V 50 Hz 4P

Rated current : 2.14/1.23 A  
 LRC : 6.6  
 Rated torque : 2.72 ft.lb  
 Locked rotor torque : 280 %  
 Breakdown torque : 280 %  
 Rated speed : 1425 rpm

Moment of inertia (J) : 0.0645 sq.ft.lb  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

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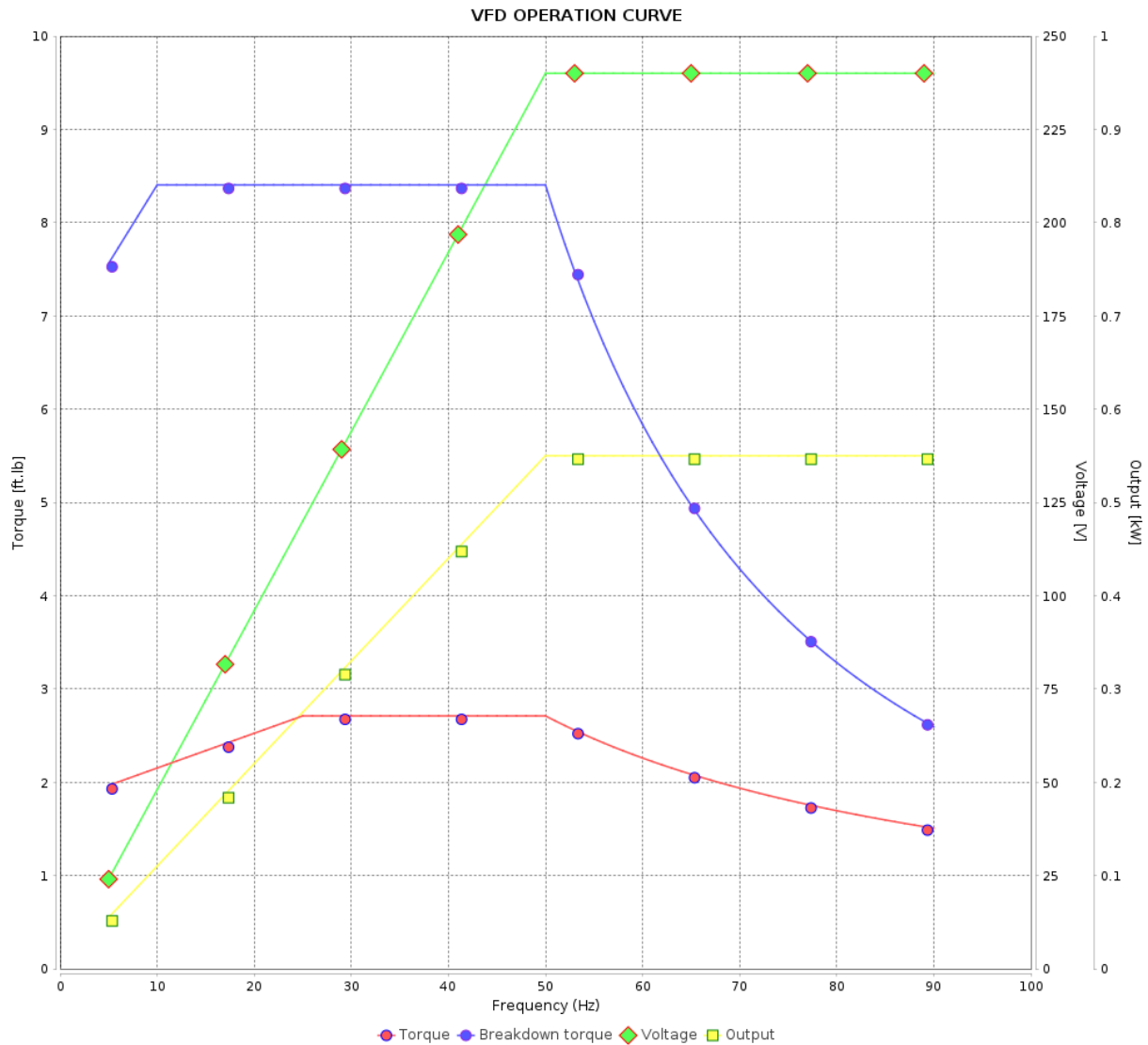
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Customer :

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 Duty cycle : S1  
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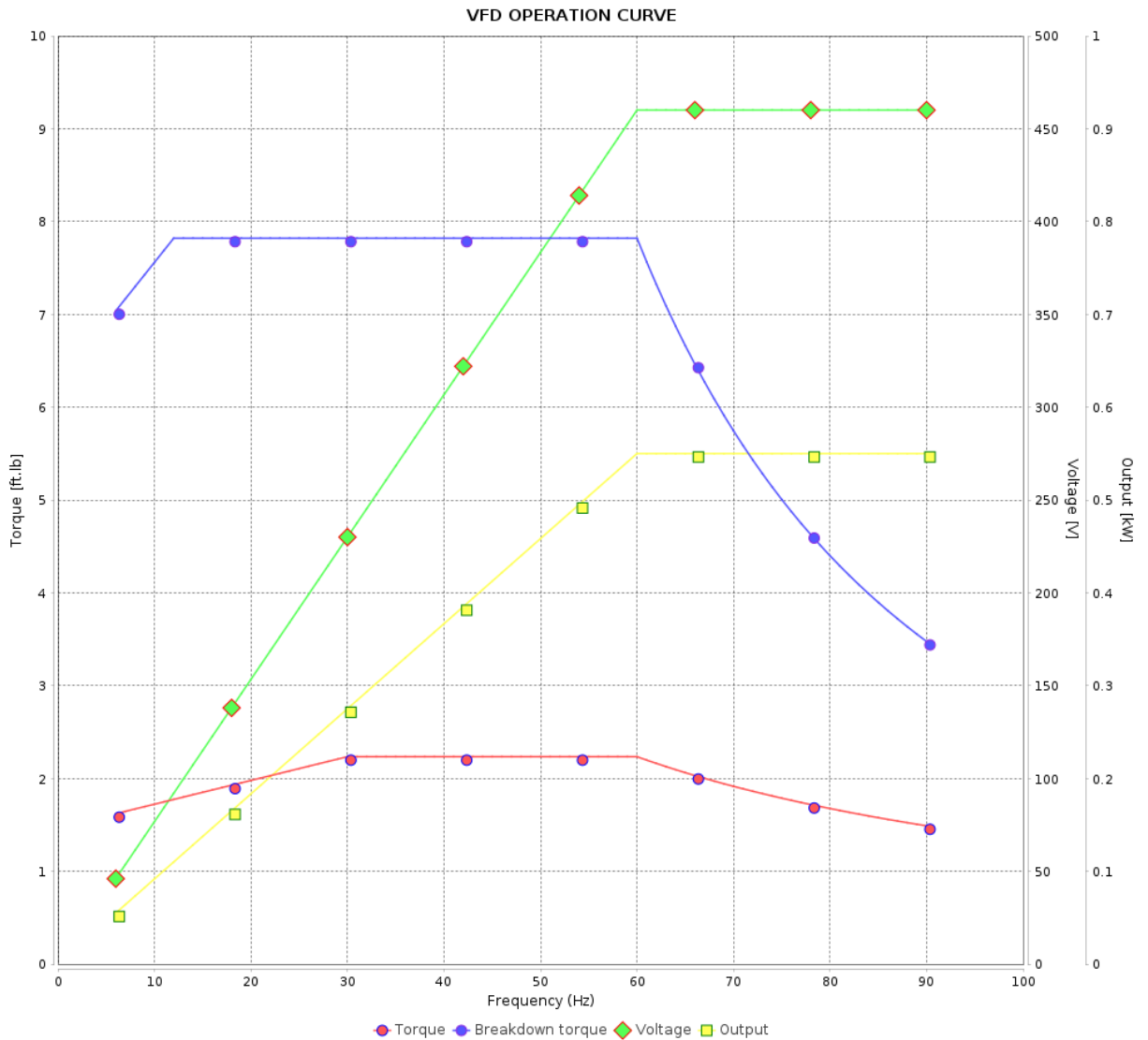
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