

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :				
Product line : IE3 Three-Phase	Product code : 13152153			
Frame : L112M 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 : B3T Rotation <sup>1</sup> : Both (CW and CCW) Starting method : Direct On Line Approx. weight <sup>2</sup> : 52.2 kg Moment of inertia (J) : 0.0101 kgm <sup>2</sup>			
Output [kW]	5.5			
Poles	2			
Frequency [Hz]	50			
Rated voltage [V]	380/660			
Rated current [A]	10.6/6.13			
L. R. Amperes [A]	81.6/47.2			
LRC [A]	7.7			
No load current [A]	3.63/2.09			
Rated speed [RPM]	2880			
Slip [%]	4.00			
Rated torque [kgfm]	1.86			
Locked rotor torque [%]	280			
Breakdown torque [%]	350			
Service factor	1.00			
Temperature rise	80 K			
Locked rotor time	39s (cold) 22s (hot)			
Noise level <sup>2</sup>	64.0 dB(A)			
Efficiency (%)	25%	0.000		
	50%	87.0		
	75%	89.1		
	100%	89.2		
Power Factor	25%	0.00		
	50%	0.77		
	75%	0.86		
	100%	0.88		
Losses at normative operating points (speed;torque), in percentage of rated output power				
Losses (%)	P1 (0,9;1,0)	11.6		
	P2 (0,5;1,0)	9.7		
	P3 (0,25;1,0)	9.2		
	P4 (0,9;0,5)	5.9		
	P5 (0,5;0,5)	3.9		
	P6 (0,5;0,25)	2.6		
	P7 (0,25;0,25)	1.8		
Bearing type : Drive end 6307 ZZ Non drive end 6206 ZZ Sealing : V'Ring V'Ring Lubrication interval : 0 h 0 h Lubricant amount : 0 g 0 g Lubricant type : Mobil Polyrex EM	Foundation loads Max. traction : 128 kgf Max. compression : 180 kgf			
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



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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

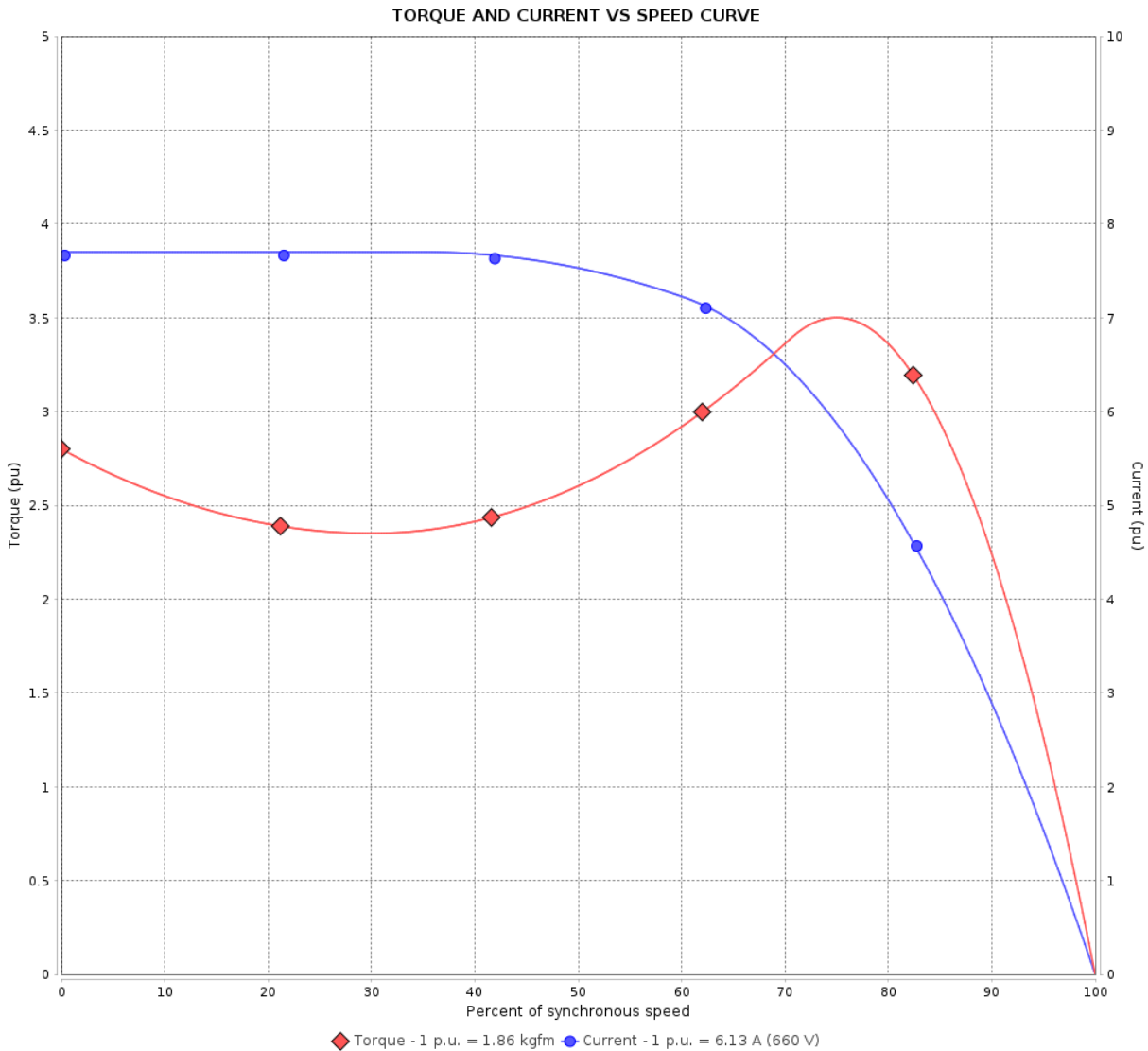
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : IE3 Three-Phase

Product code : 13152153



Performance : 380/660 V 50 Hz 2P

Rated current	: 10.6/6.13 A	Moment of inertia (J)	: 0.0101 kgm <sup>2</sup>
LRC	: 7.7	Duty cycle	: S1
Rated torque	: 1.86 kgfm	Insulation class	: F
Locked rotor torque	: 280 %	Service factor	: 1.00
Breakdown torque	: 350 %	Temperature rise	: 80 K
Rated speed	: 2880 rpm	Design	: N

Locked rotor time : 39s (cold) 22s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

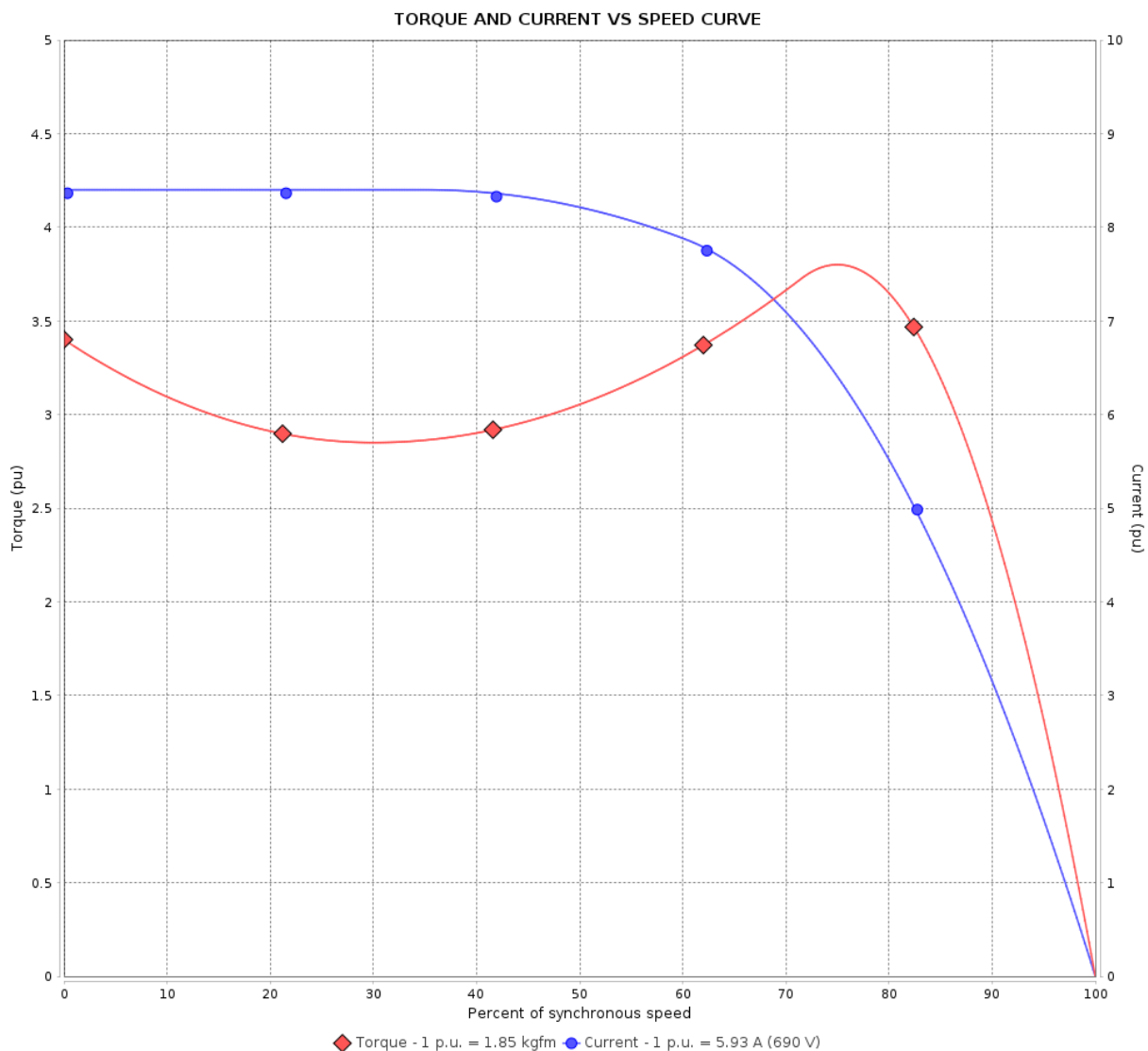


## Three Phase Induction Motor - Squirrel Cage

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

Product line : IE3 Three-Phase

Product code : 13152153



Performance : 400/690 V 50 Hz 2P

Rated current	: 10.2/5.93 A	Moment of inertia (J)	: 0.0101 kgm <sup>2</sup>
LRC	: 8.4	Duty cycle	: S1
Rated torque	: 1.85 kgfm	Insulation class	: F
Locked rotor torque	: 340 %	Service factor	: 1.00
Breakdown torque	: 380 %	Temperature rise	: 80 K
Rated speed	: 2895 rpm	Design	: N

Locked rotor time : 39s (cold) 22s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

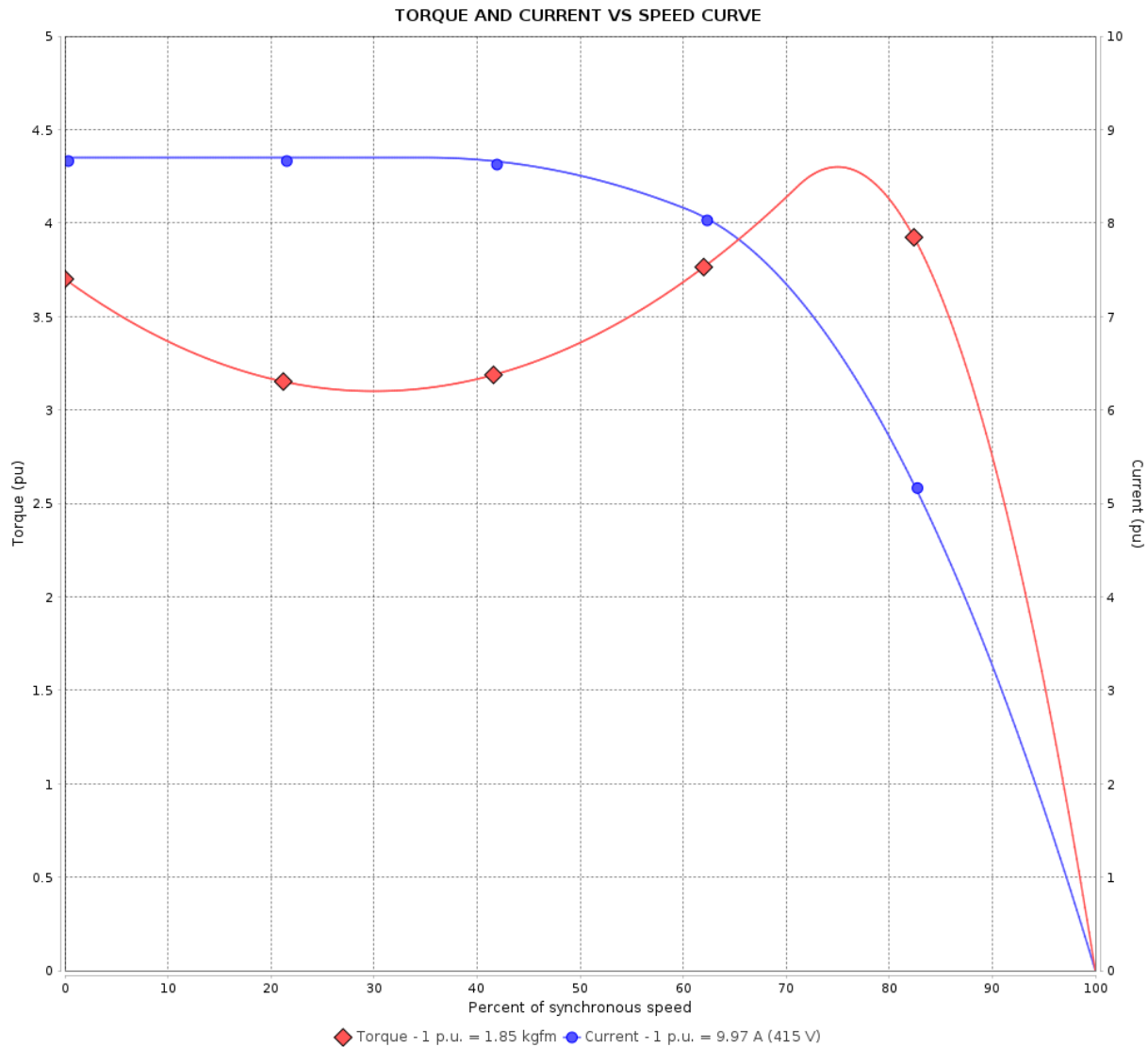
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : IE3 Three-Phase

Product code : 13152153



Performance : 415 V 50 Hz 2P

Rated current	: 9.97 A	Moment of inertia (J)	: 0.0101 kgm <sup>2</sup>
LRC	: 8.7	Duty cycle	: S1
Rated torque	: 1.85 kgfm	Insulation class	: F
Locked rotor torque	: 370 %	Service factor	: 1.00
Breakdown torque	: 430 %	Temperature rise	: 80 K
Rated speed	: 2900 rpm	Design	: N

Locked rotor time : 39s (cold) 22s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

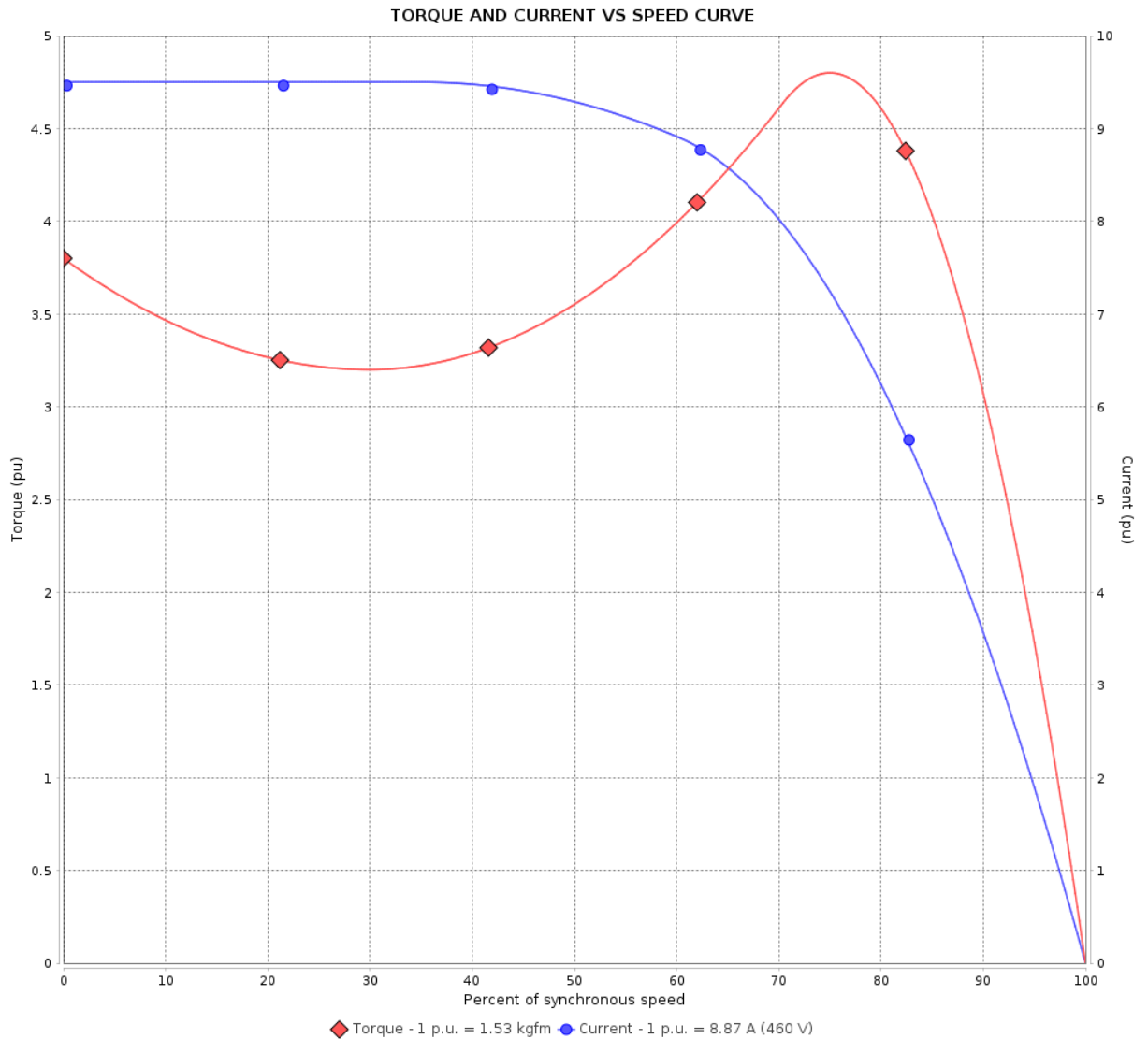
Three Phase Induction Motor - Squirrel Cage



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

Product line : IE3 Three-Phase

Product code : 13152153



Performance : 460 V 60 Hz 2P

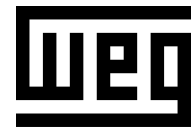
Rated current	: 8.87 A	Moment of inertia (J)	: 0.0101 kgm <sup>2</sup>
LRC	: 9.5	Duty cycle	: S1
Rated torque	: 1.53 kgfm	Insulation class	: F
Locked rotor torque	: 380 %	Service factor	: 1.00
Breakdown torque	: 480 %	Temperature rise	: 80 K
Rated speed	: 3500 rpm	Design	: N

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

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# LOAD PERFORMANCE CURVE

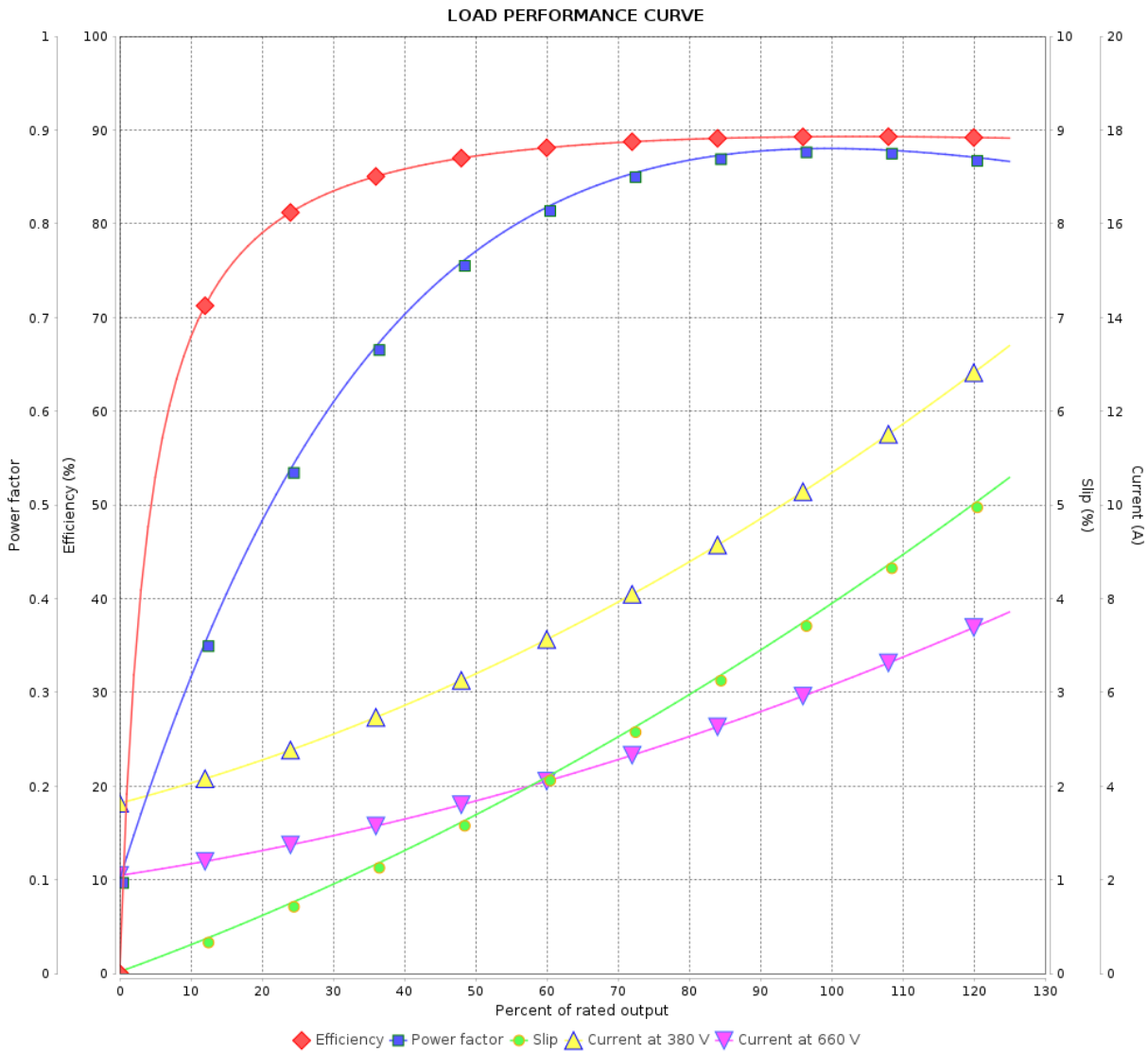
Three Phase Induction Motor - Squirrel Cage



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

Product line : IE3 Three-Phase

Product code : 13152153



Performance : 380/660 V 50 Hz 2P

Rated current : 10.6/6.13 A  
 LRC : 7.7  
 Rated torque : 1.86 kgfm  
 Locked rotor torque : 280 %  
 Breakdown torque : 350 %  
 Rated speed : 2880 rpm

Moment of inertia (J) : 0.0101 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

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# LOAD PERFORMANCE CURVE

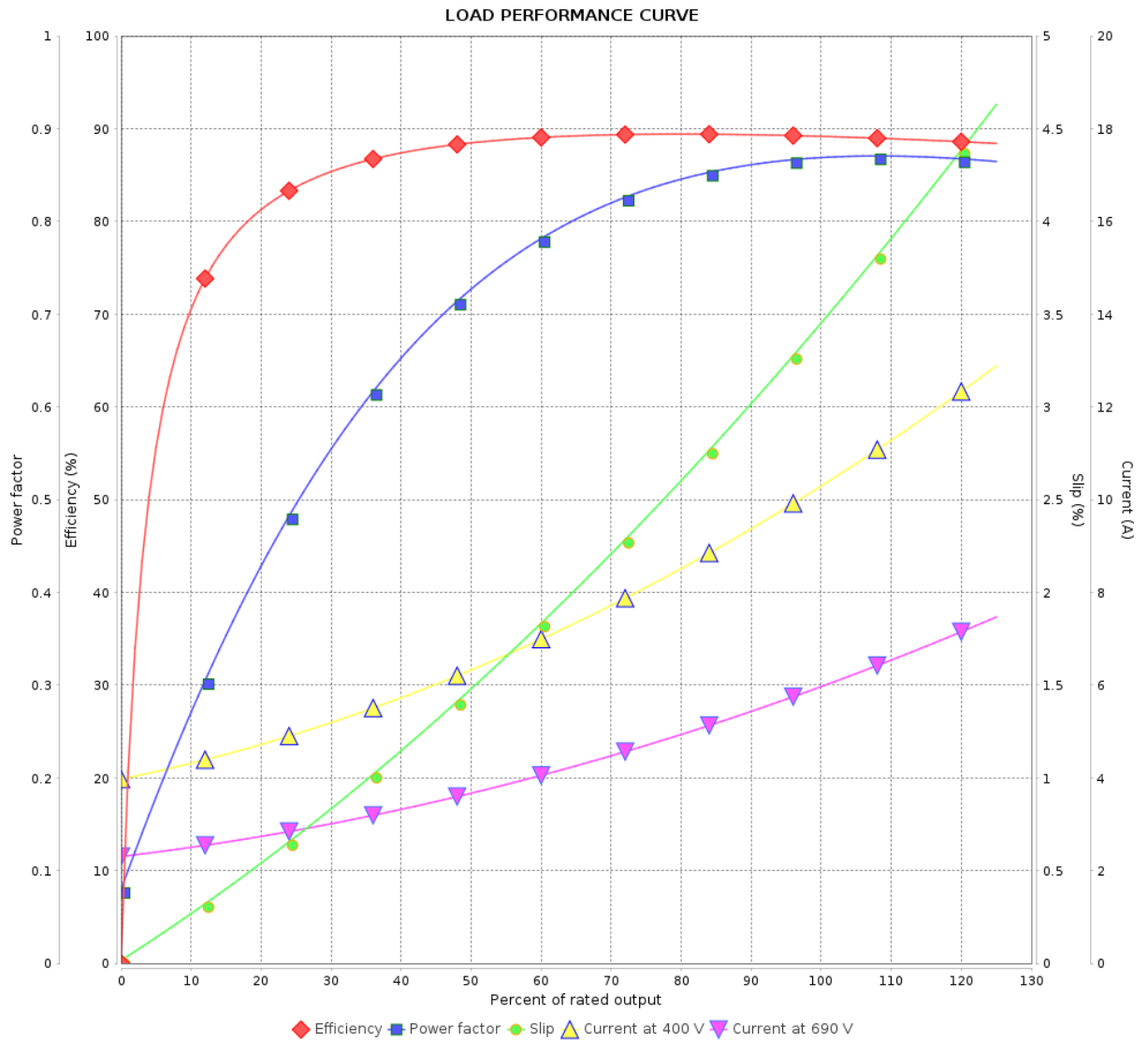
Three Phase Induction Motor - Squirrel Cage



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

Product line : IE3 Three-Phase

Product code : 13152153



Performance : 400/690 V 50 Hz 2P

Rated current : 10.2/5.93 A  
 LRC : 8.4  
 Rated torque : 1.85 kgfm  
 Locked rotor torque : 340 %  
 Breakdown torque : 380 %  
 Rated speed : 2895 rpm

Moment of inertia (J) : 0.0101 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

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# LOAD PERFORMANCE CURVE

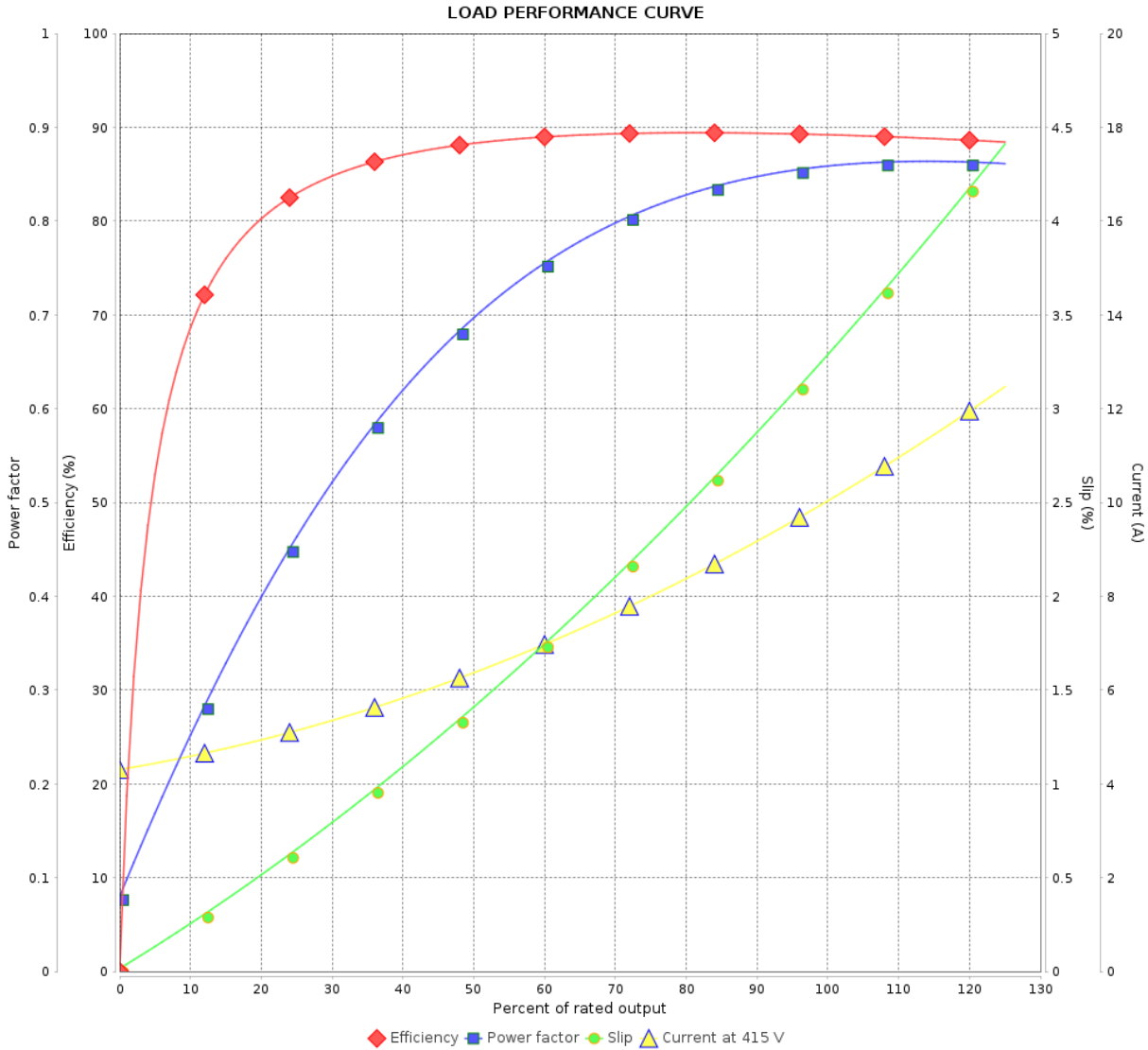
Three Phase Induction Motor - Squirrel Cage



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

Product line : IE3 Three-Phase

Product code : 13152153



Performance : 415 V 50 Hz 2P

Rated current : 9.97 A  
 LRC : 8.7  
 Rated torque : 1.85 kgfm  
 Locked rotor torque : 370 %  
 Breakdown torque : 430 %  
 Rated speed : 2900 rpm

Moment of inertia (J) : 0.0101 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

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# LOAD PERFORMANCE CURVE

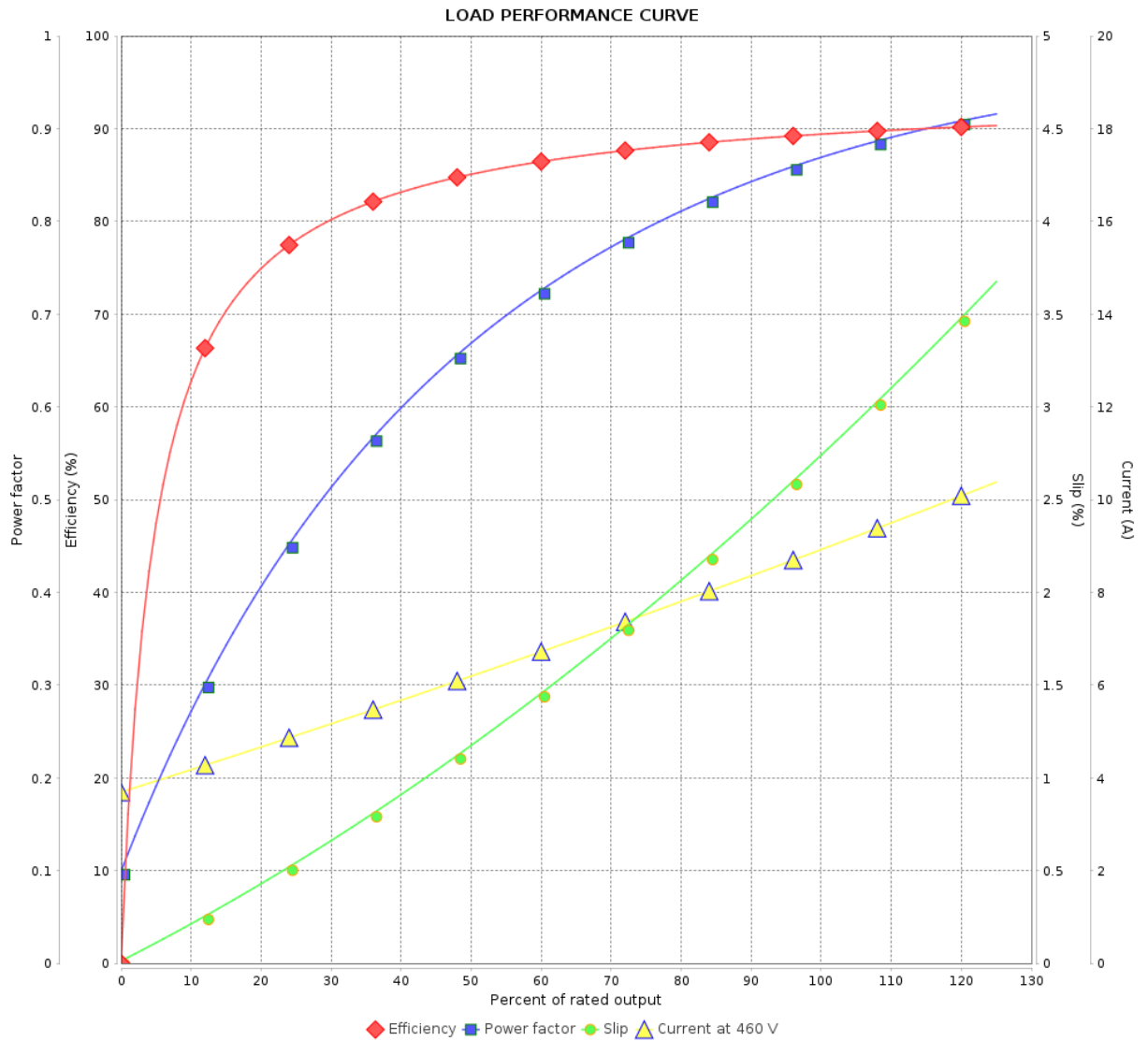
Three Phase Induction Motor - Squirrel Cage



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

Product line : IE3 Three-Phase

Product code : 13152153



Performance : 460 V 60 Hz 2P

Rated current : 8.87 A  
 LRC : 9.5  
 Rated torque : 1.53 kgfm  
 Locked rotor torque : 380 %  
 Breakdown torque : 480 %  
 Rated speed : 3500 rpm

Moment of inertia (J) : 0.0101 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

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# THERMAL LIMIT CURVE

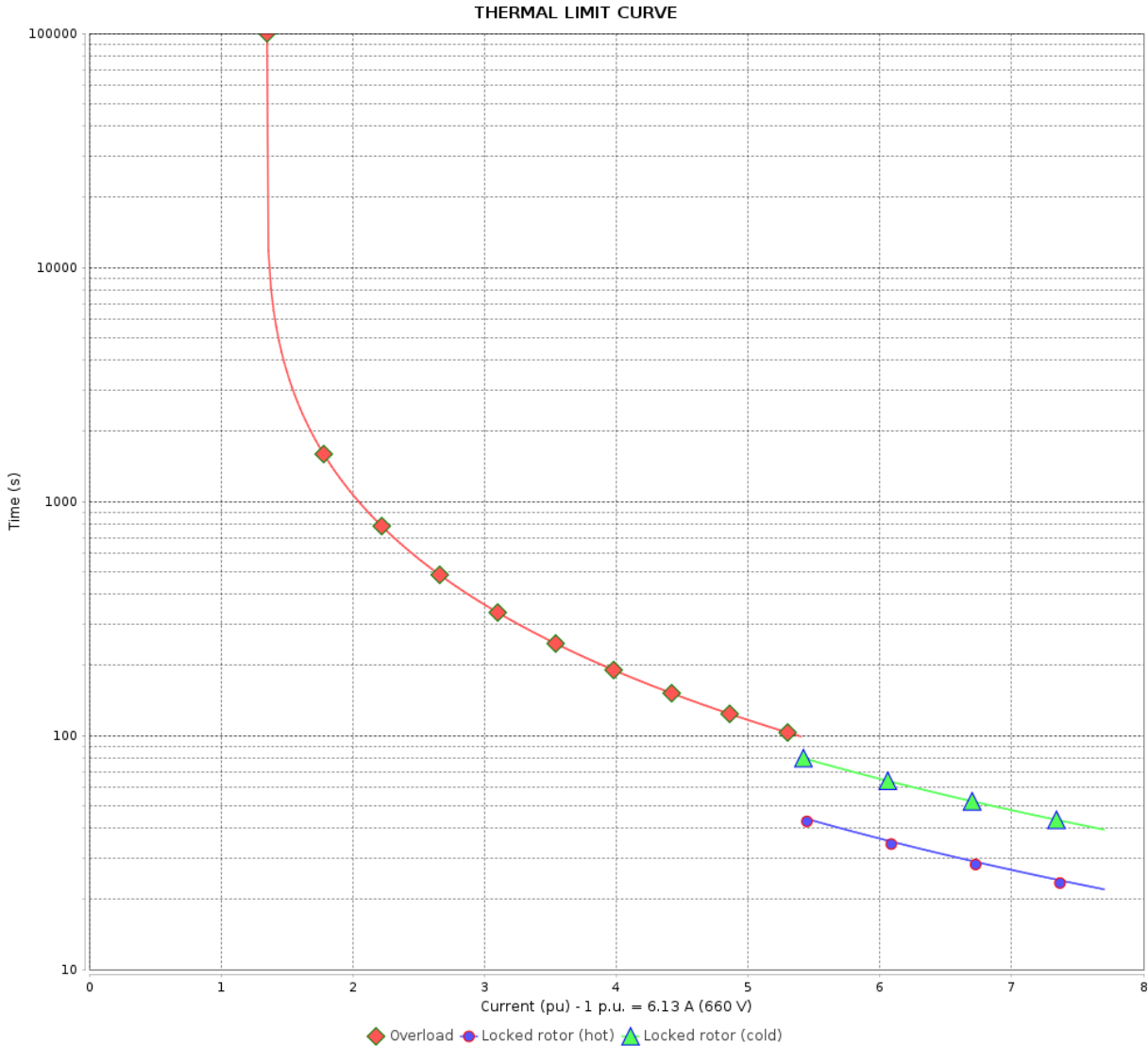
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : IE3 Three-Phase

Product code : 13152153



Performance : 380/660 V 50 Hz 2P

Rated current : 10.6/6.13 A  
 LRC : 7.7  
 Rated torque : 1.86 kgfm  
 Locked rotor torque : 280 %  
 Breakdown torque : 350 %  
 Rated speed : 2880 rpm

Moment of inertia (J) : 0.0101 kgm<sup>2</sup>  
 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

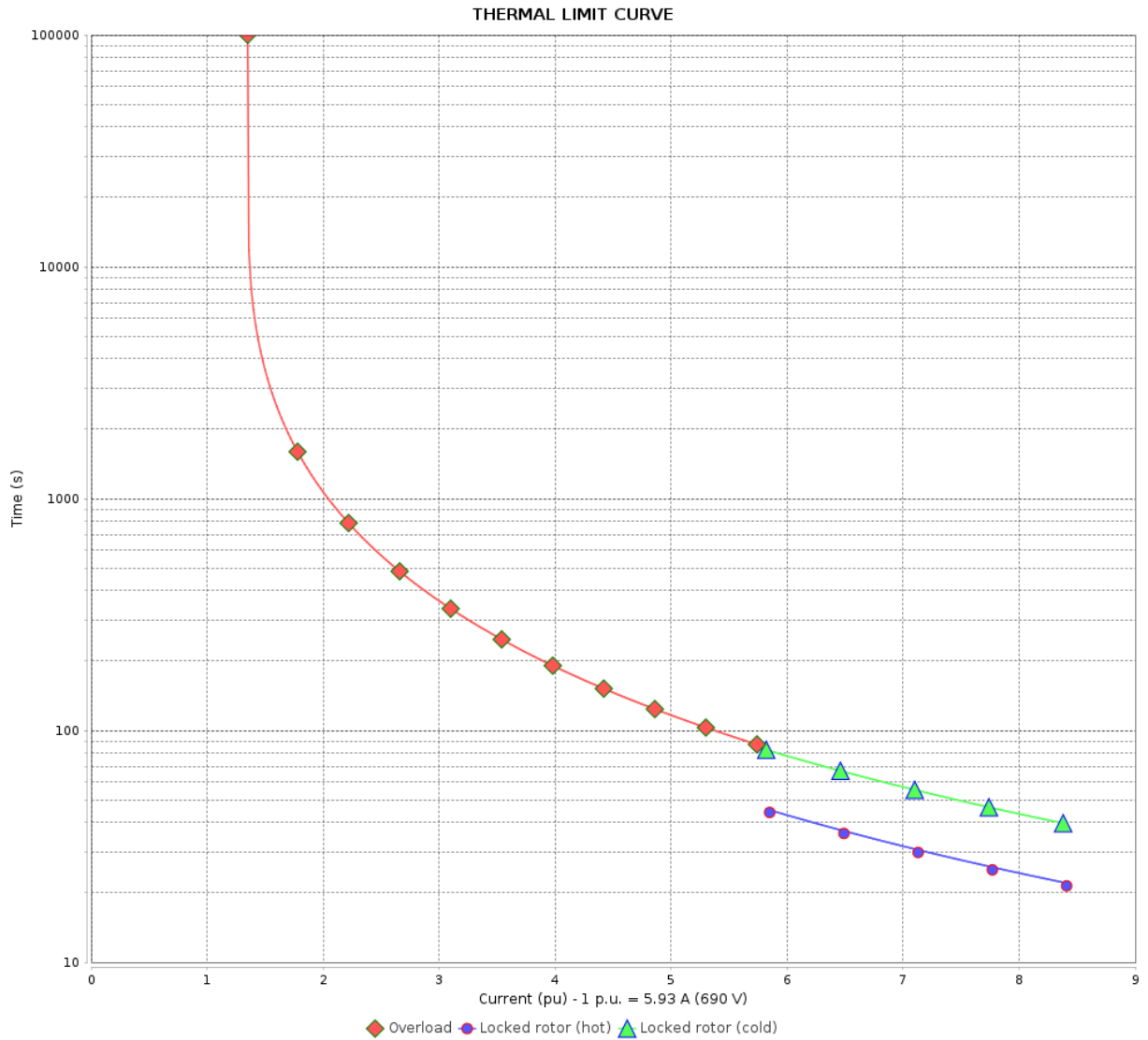
Three Phase Induction Motor - Squirrel Cage



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

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Product code : 13152153



Performance : 400/690 V 50 Hz 2P

Rated current : 10.2/5.93 A  
 LRC : 8.4  
 Rated torque : 1.85 kgfm  
 Locked rotor torque : 340 %  
 Breakdown torque : 380 %  
 Rated speed : 2895 rpm

Moment of inertia (J) : 0.0101 kgm<sup>2</sup>  
 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

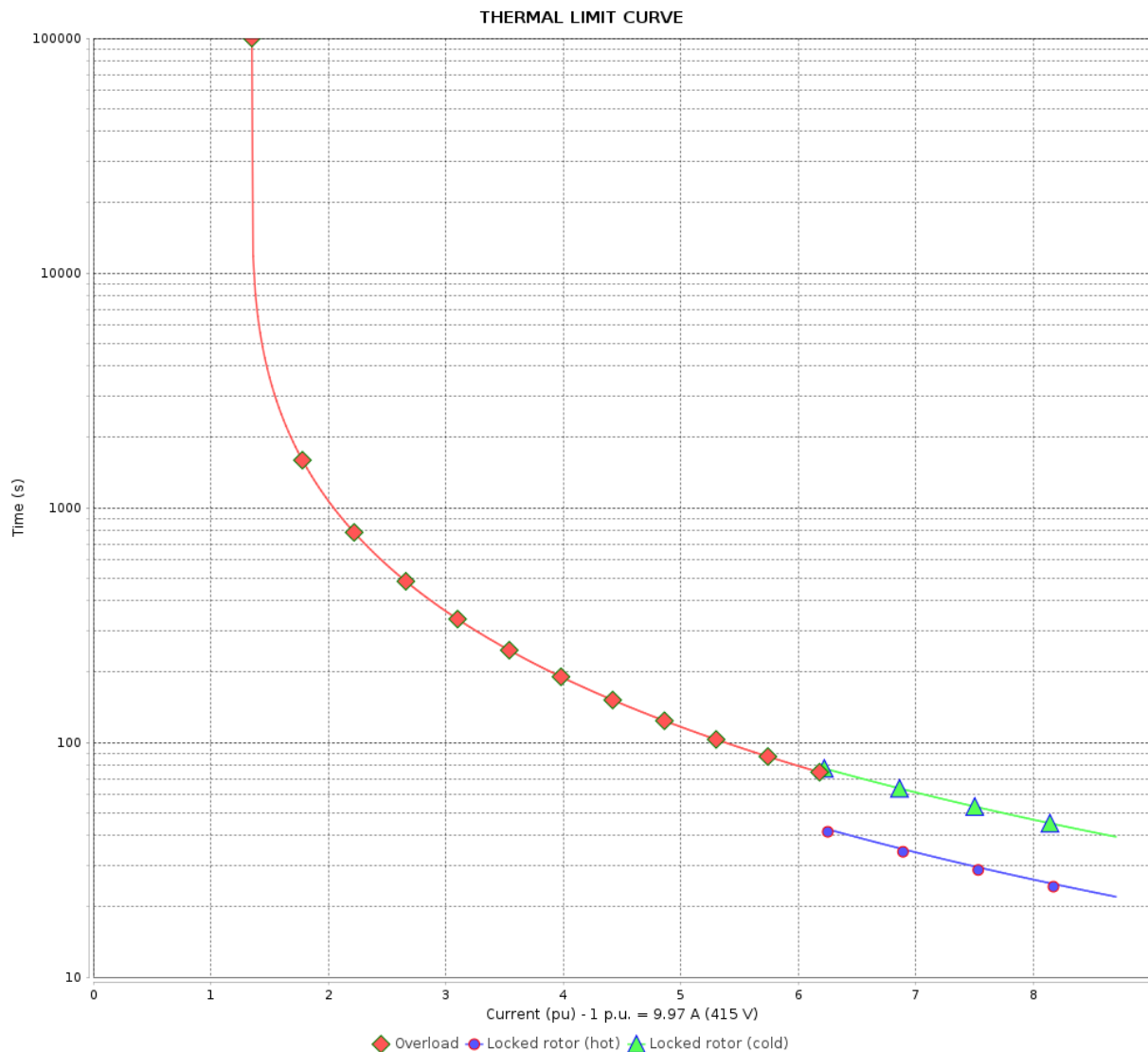
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Customer :

Product line : IE3 Three-Phase

Product code : 13152153



Performance : 415 V 50 Hz 2P

Rated current	: 9.97 A	Moment of inertia (J)	: 0.0101 kgm <sup>2</sup>
LRC	: 8.7	Duty cycle	: S1
Rated torque	: 1.85 kgfm	Insulation class	: F
Locked rotor torque	: 370 %	Service factor	: 1.00
Breakdown torque	: 430 %	Temperature rise	: 80 K
Rated speed	: 2900 rpm	Design	: N

Heating constant  
Cooling constant

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# THERMAL LIMIT CURVE

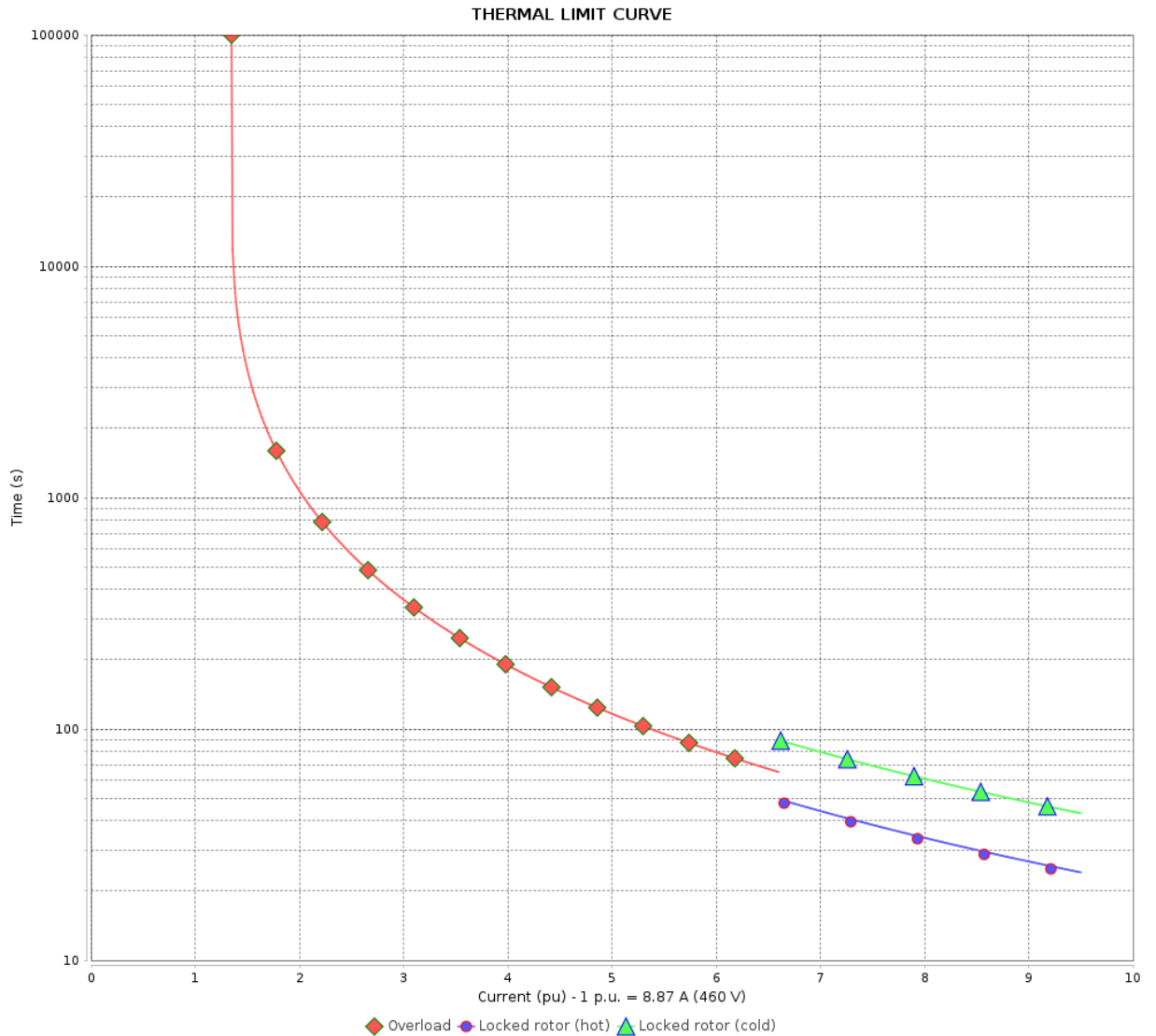
## Three Phase Induction Motor - Squirrel Cage



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

Product line : IE3 Three-Phase

Product code : 13152153



Performance : 460 V 60 Hz 2P

Rated current	: 8.87 A	Moment of inertia (J)	: 0.0101 kgm <sup>2</sup>
LRC	: 9.5	Duty cycle	: S1
Rated torque	: 1.53 kgfm	Insulation class	: F
Locked rotor torque	: 380 %	Service factor	: 1.00
Breakdown torque	: 480 %	Temperature rise	: 80 K
Rated speed	: 3500 rpm	Design	: N

Heating constant

Cooling constant

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# VFD OPERATION CURVE

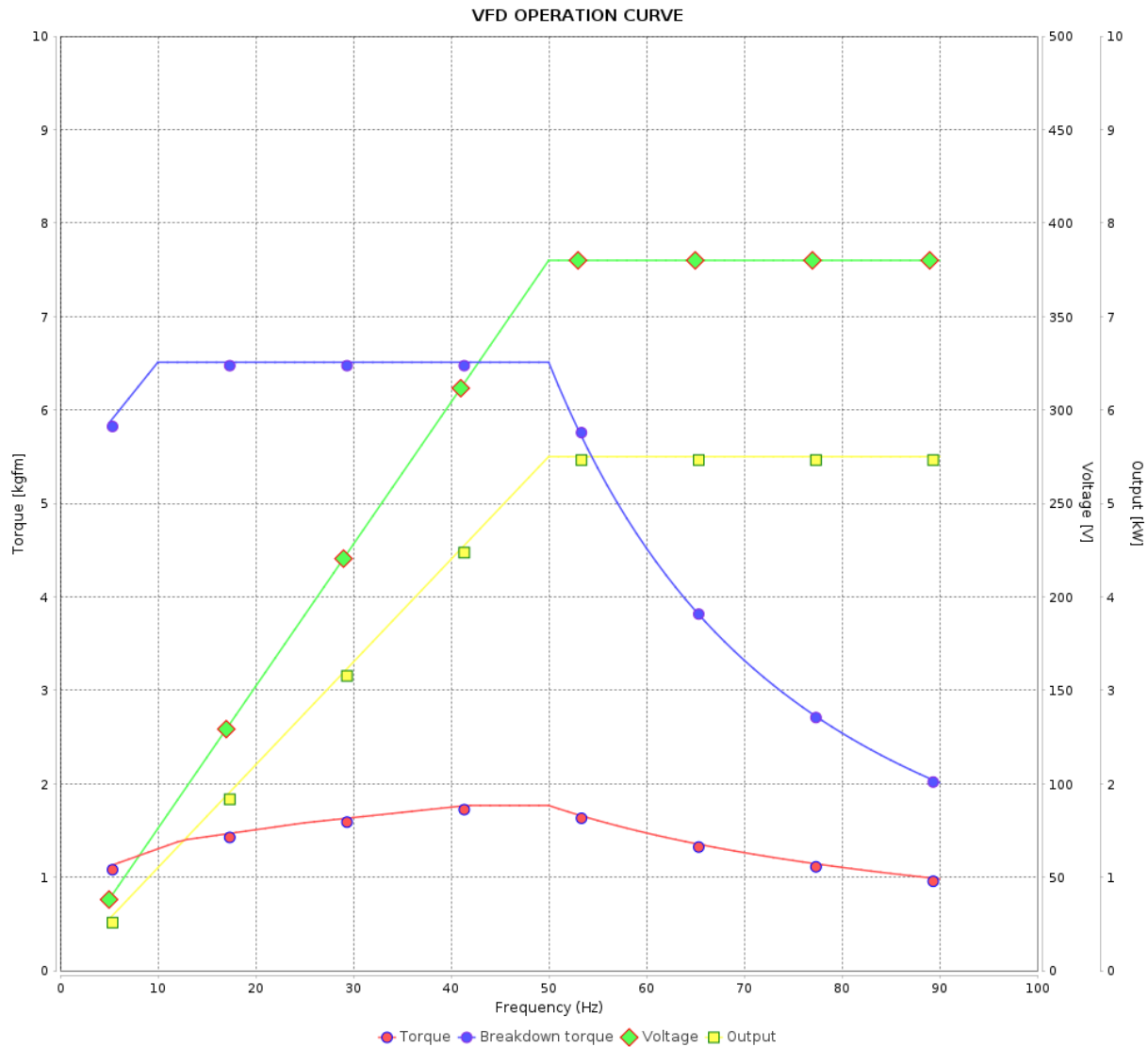
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : IE3 Three-Phase

Product code : 13152153



Performance : 380/660 V 50 Hz 2P

Rated current : 10.6/6.13 A  
 LRC : 7.7  
 Rated torque : 1.86 kgfm  
 Locked rotor torque : 280 %  
 Breakdown torque : 350 %  
 Rated speed : 2880 rpm

Moment of inertia (J) : 0.0101 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

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# VFD OPERATION CURVE

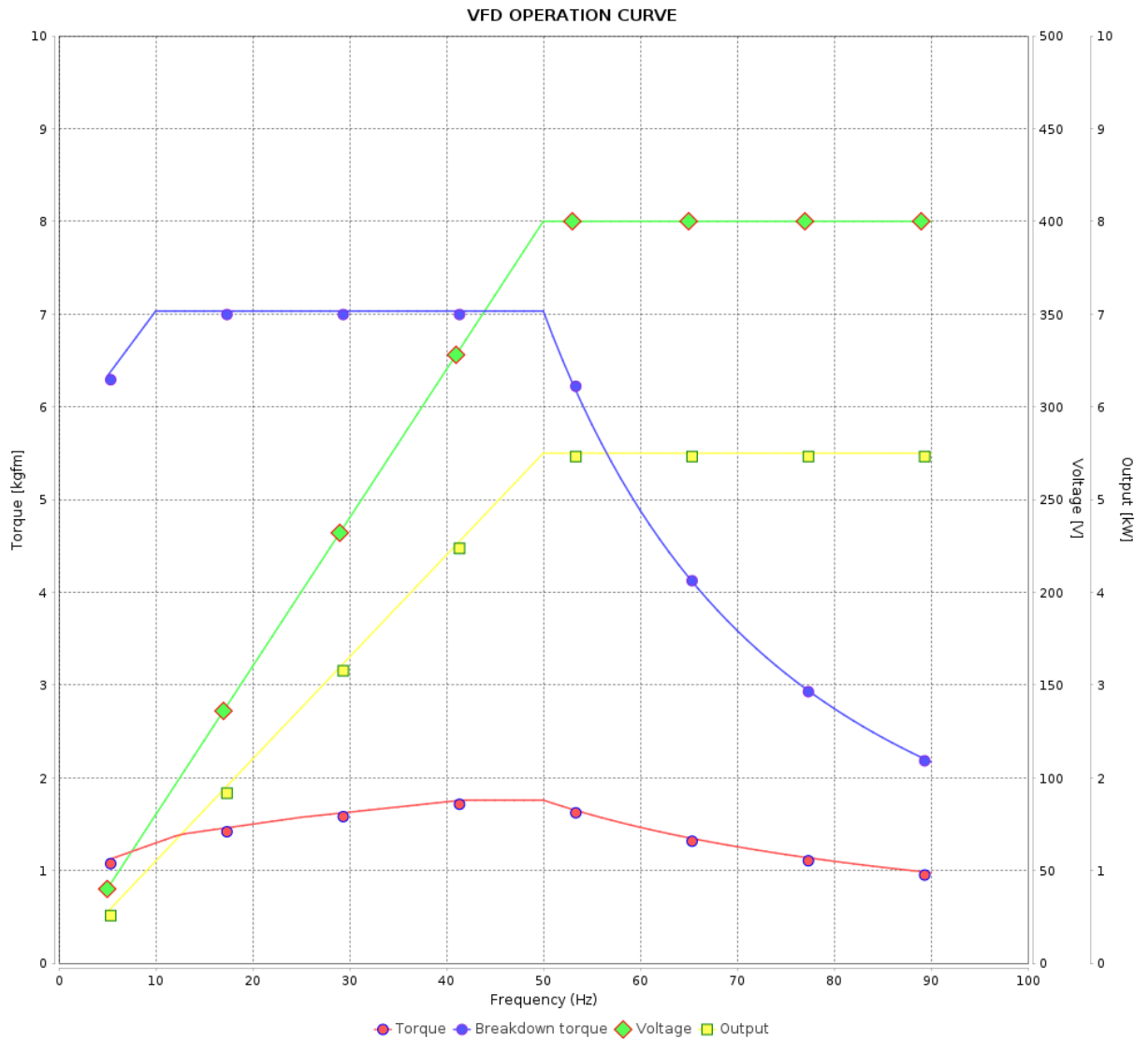
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 Rated speed : 2895 rpm

Moment of inertia (J) : 0.0101 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

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# VFD OPERATION CURVE

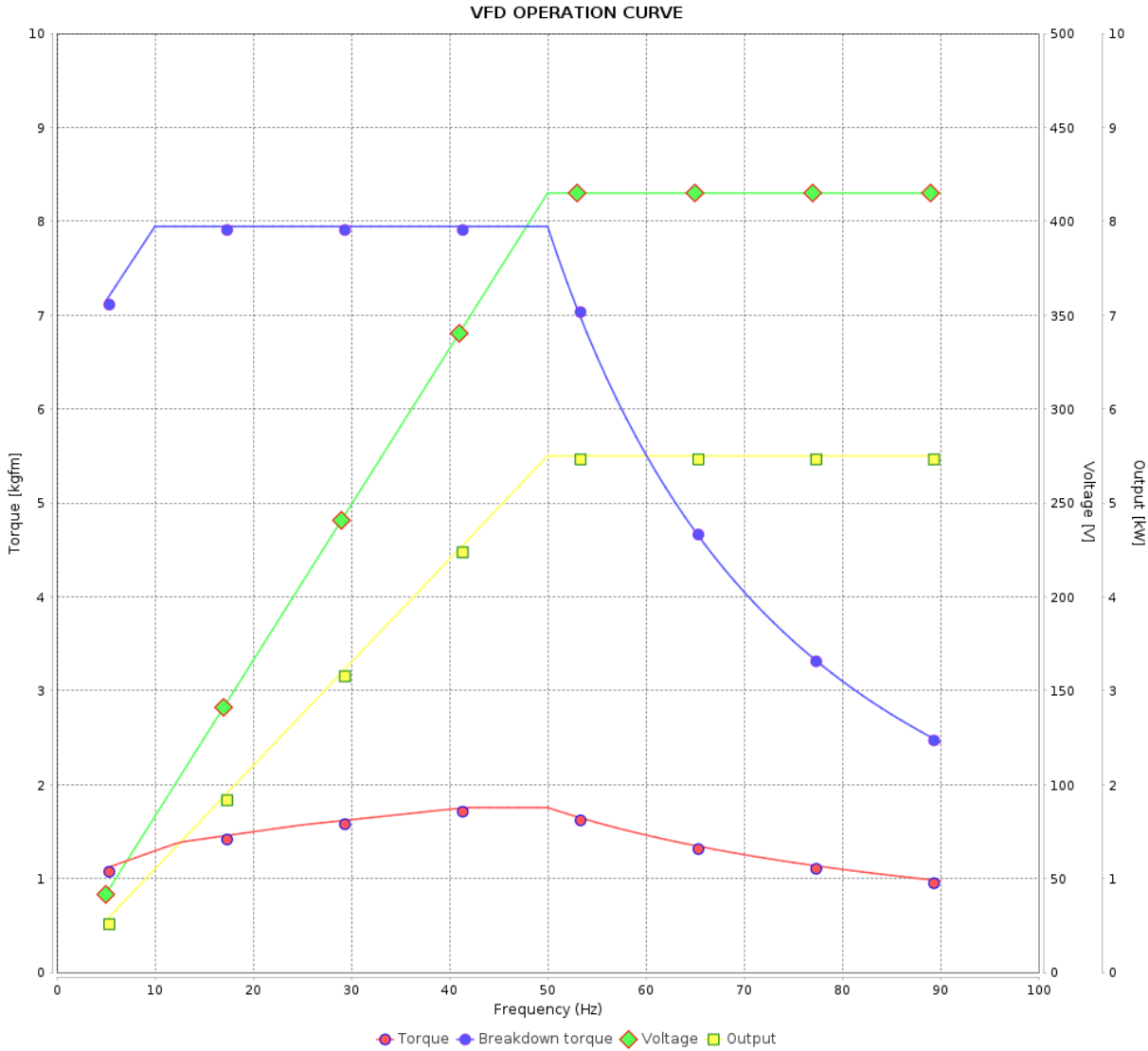
Three Phase Induction Motor - Squirrel Cage



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

Product line : IE3 Three-Phase

Product code : 13152153



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Moment of inertia (J) : 0.0101 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

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# VFD OPERATION CURVE

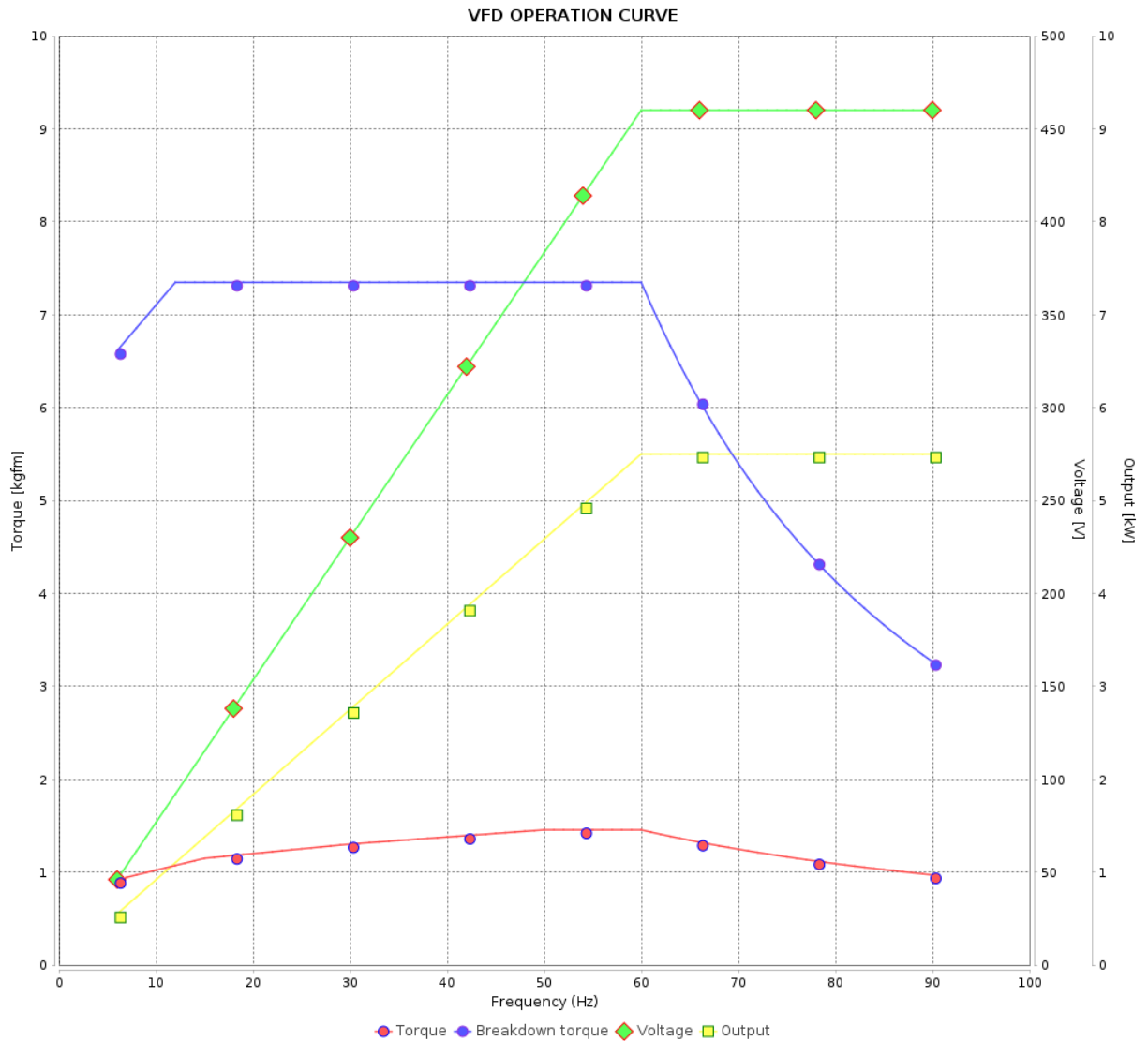
## Three Phase Induction Motor - Squirrel Cage



Customer :

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