

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE3 Three-Phase

Product code : 15834847

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 : B3T  
Rotation<sup>1</sup> : Both (CW and CCW)  
Starting method : Direct On Line  
Approx. weight<sup>3</sup> : 13.5 kg  
Moment of inertia (J) : 0.0008 kgm<sup>2</sup>

Output [kW]	0.75	0.75	0.75	0.75
Poles	2	2	2	2
Frequency [Hz]	50	50	50	60
Rated voltage [V]	220/380	230/400	240/415	460
Rated current [A]	2.94/1.70	2.90/1.67	2.85/1.65	1.48
L. R. Amperes [A]	21.4/12.4	21.8/12.5	22.0/12.7	12.6
LRC [A]	7.3	7.5	7.7	8.5
No load current [A]	1.55/0.900	1.74/1.00	1.90/1.10	0.910
Rated speed [RPM]	2840	2860	2870	3480
Slip [%]	5.33	4.67	4.33	3.33
Rated torque [kgfm]	0.257	0.255	0.255	0.210
Locked rotor torque [%]	280	320	350	400
Breakdown torque [%]	280	320	350	400
Service factor	1.00	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K
Locked rotor time	28s (cold) 16s (hot)	28s (cold) 16s (hot)	27s (cold) 15s (hot)	32s (cold) 18s (hot)
Noise level <sup>2</sup>	59.0 dB(A)	59.0 dB(A)	59.0 dB(A)	62.0 dB(A)
Efficiency (%)	25%	0.000	0.000	0.000
	50%	79.5	78.5	75.5
	75%	80.5	81.5	80.0
	100%	80.7	81.0	81.5
Power Factor	25%	0.00	0.00	0.00
	50%	0.65	0.60	0.58
	75%	0.76	0.72	0.70
	100%	0.83	0.80	0.78

Losses at normative operating points (speed;torque), in percentage of rated output power

Losses (%)	P1 (0,9;1,0)	22.8	22.4	22.4	21.7
	P2 (0,5;1,0)	19.8	19.5	19.5	18.8
	P3 (0,25;1,0)	19.9	19.5	19.5	18.9
	P4 (0,9;0,5)	12.6	12.4	12.4	12.0
	P5 (0,5;0,5)	8.4	8.2	8.2	8.0
	P6 (0,5;0,25)	6.2	6.1	6.1	5.9
	P7 (0,25;0,25)	4.3	4.2	4.2	4.1

Drive end Non drive end  
Bearing type : 6204 ZZ 6203 ZZ  
Sealing : V'Ring V'Ring  
Lubrication interval : - -  
Lubricant amount : - -  
Lubricant type : Mobil Polyrex EM

Foundation loads  
Max. traction : 20 kgf  
Max. compression : 33 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



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

Notes

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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

Space heater information

Voltage: 110 - 127 V

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# TORQUE AND CURRENT VS SPEED CURVE

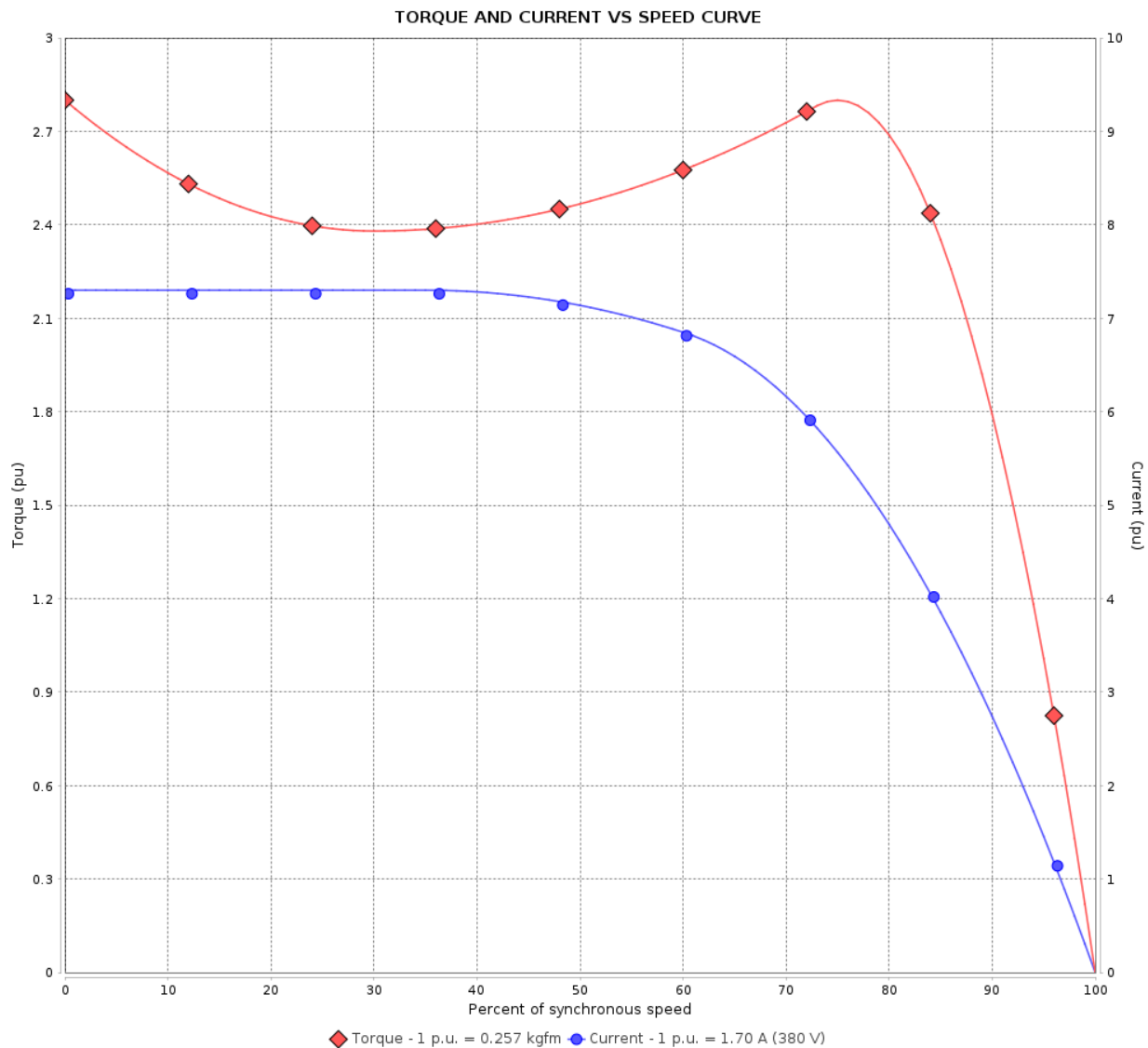
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE3 Three-Phase

Product code : 15834847



Performance : 220/380 V 50 Hz 2P

Rated current : 2.94/1.70 A  
LRC : 7.3  
Rated torque : 0.257 kgfm  
Locked rotor torque : 280 %  
Breakdown torque : 280 %  
Rated speed : 2840 rpm

Moment of inertia (J) : 0.0008 kgm<sup>2</sup>  
Duty cycle : S1  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : N

Locked rotor time : 28s (cold) 16s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

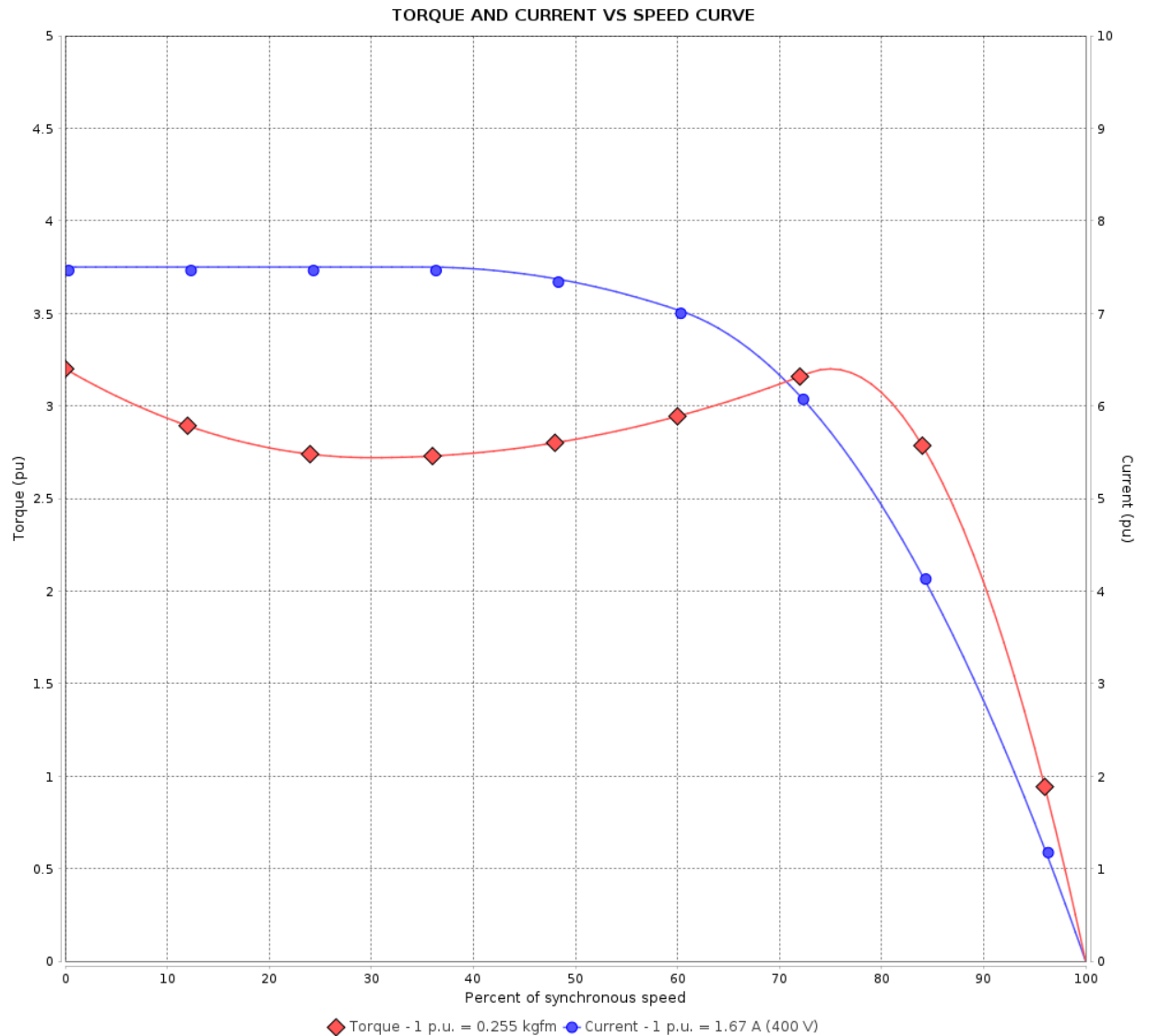
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE3 Three-Phase

Product code : 15834847



Performance : 230/400 V 50 Hz 2P

Rated current : 2.90/1.67 A  
LRC : 7.5  
Rated torque : 0.255 kgfm  
Locked rotor torque : 320 %  
Breakdown torque : 320 %  
Rated speed : 2860 rpm

Moment of inertia (J) : 0.0008 kgm<sup>2</sup>  
Duty cycle : S1  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : N

Locked rotor time : 28s (cold) 16s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

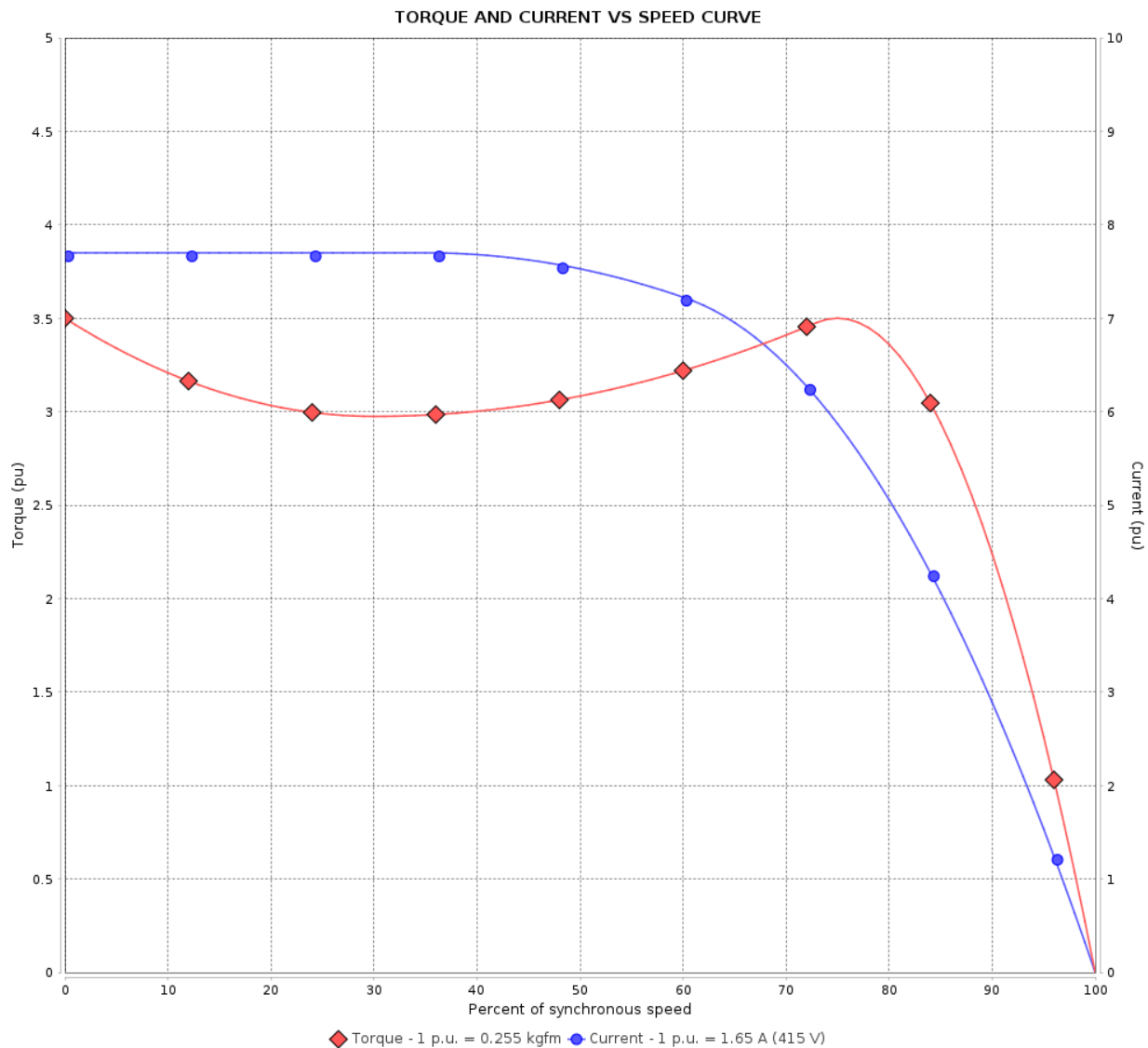
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE3 Three-Phase

Product code : 15834847



Performance : 240/415 V 50 Hz 2P

Rated current : 2.85/1.65 A  
LRC : 7.7  
Rated torque : 0.255 kgfm  
Locked rotor torque : 350 %  
Breakdown torque : 350 %  
Rated speed : 2870 rpm

Moment of inertia (J) : 0.0008 kgm<sup>2</sup>  
Duty cycle : S1  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : N

Locked rotor time : 27s (cold) 15s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

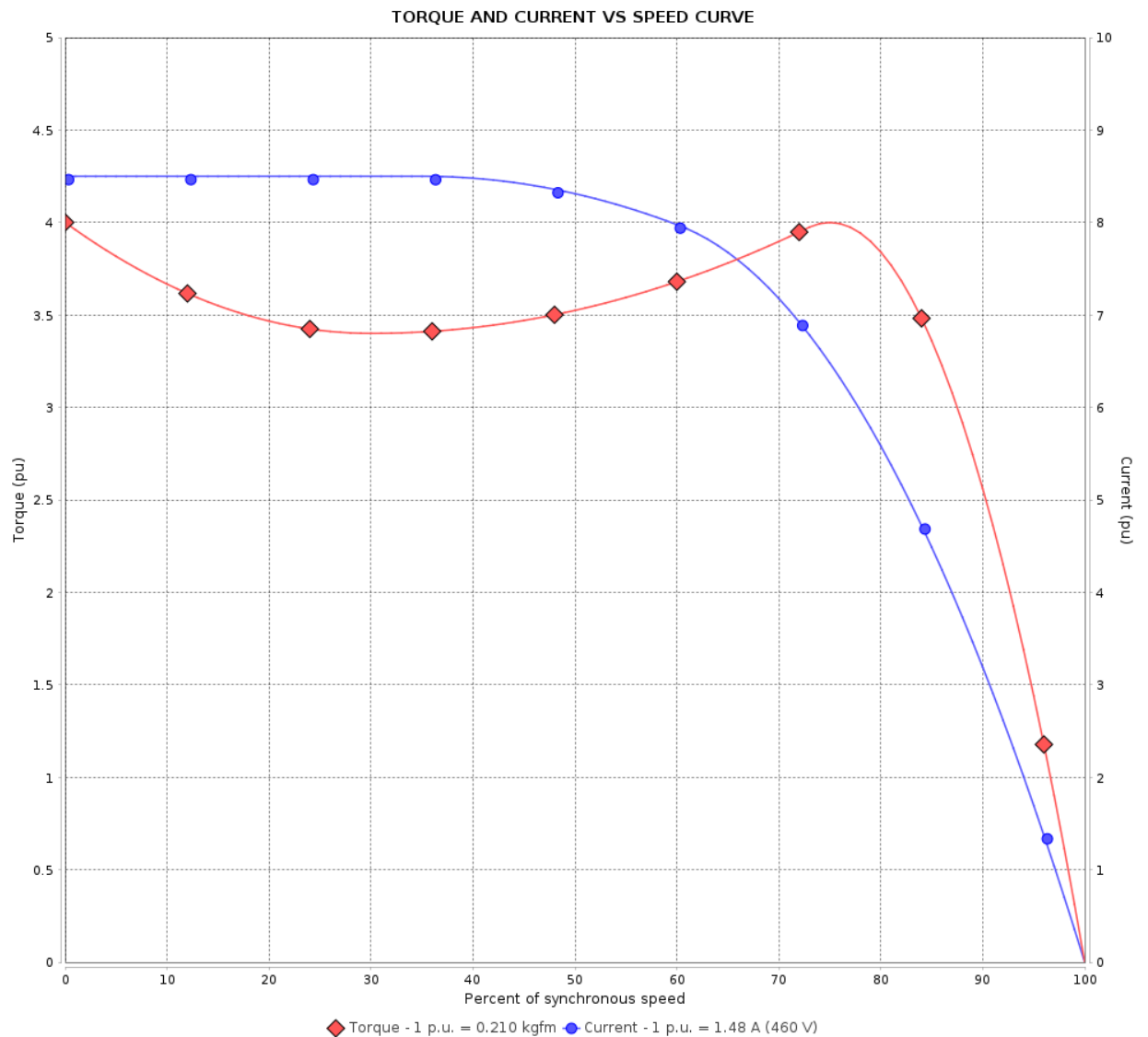
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE3 Three-Phase

Product code : 15834847



Performance : 460 V 60 Hz 2P

Rated current	: 1.48 A	Moment of inertia (J)	: 0.0008 kgm <sup>2</sup>
LRC	: 8.5	Duty cycle	: S1
Rated torque	: 0.210 kgfm	Insulation class	: F
Locked rotor torque	: 400 %	Service factor	: 1.00
Breakdown torque	: 400 %	Temperature rise	: 80 K
Rated speed	: 3480 rpm	Design	: N

Locked rotor time : 32s (cold) 18s (hot)

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# LOAD PERFORMANCE CURVE

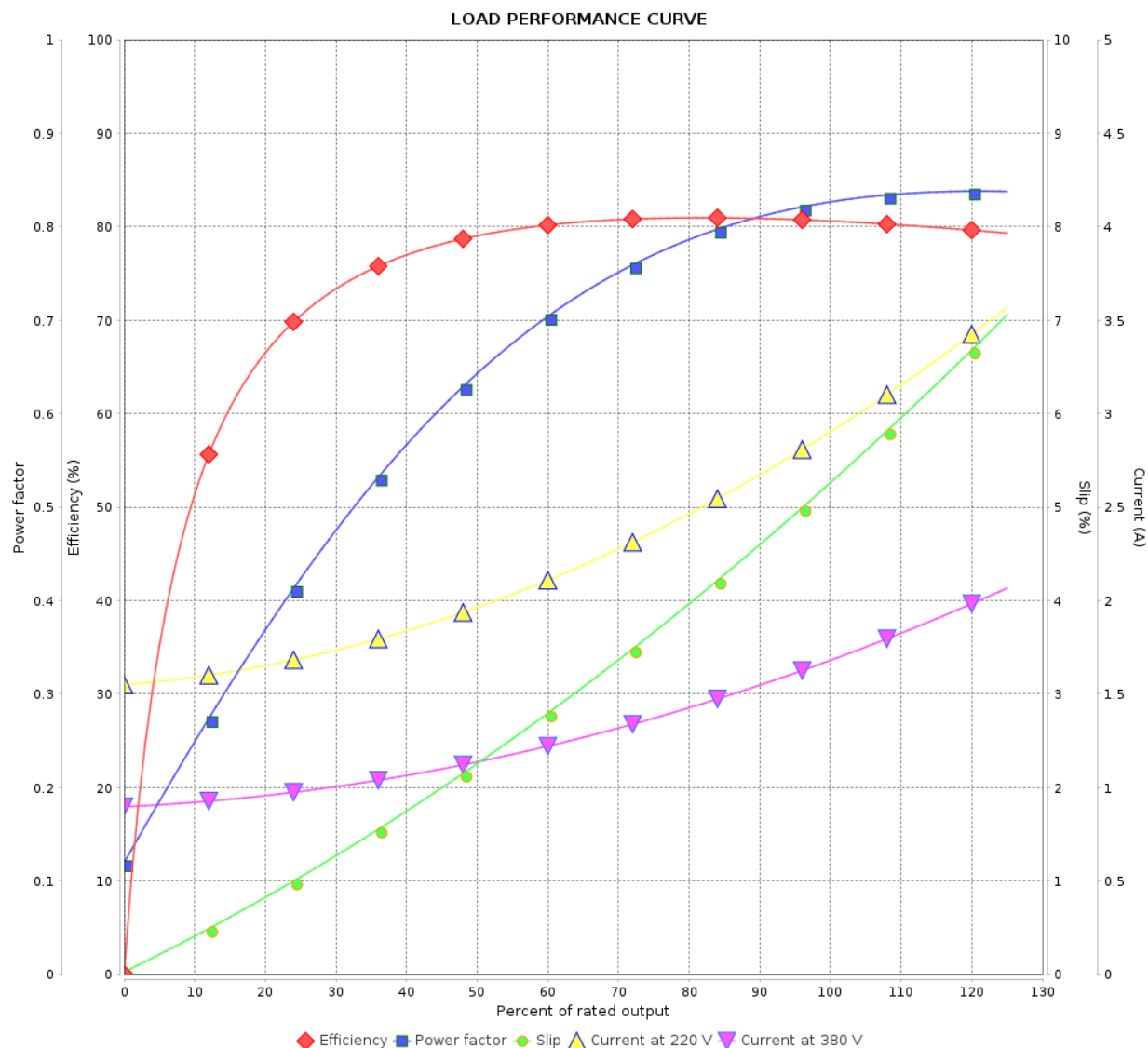
## Three Phase Induction Motor - Squirrel Cage



Customer :

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Product code : 15834847



Performance : 220/380 V 50 Hz 2P

Rated current : 2.94/1.70 A  
LRC : 7.3  
Rated torque : 0.257 kgfm  
Locked rotor torque : 280 %  
Breakdown torque : 280 %  
Rated speed : 2840 rpm

Moment of inertia (J) : 0.0008 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

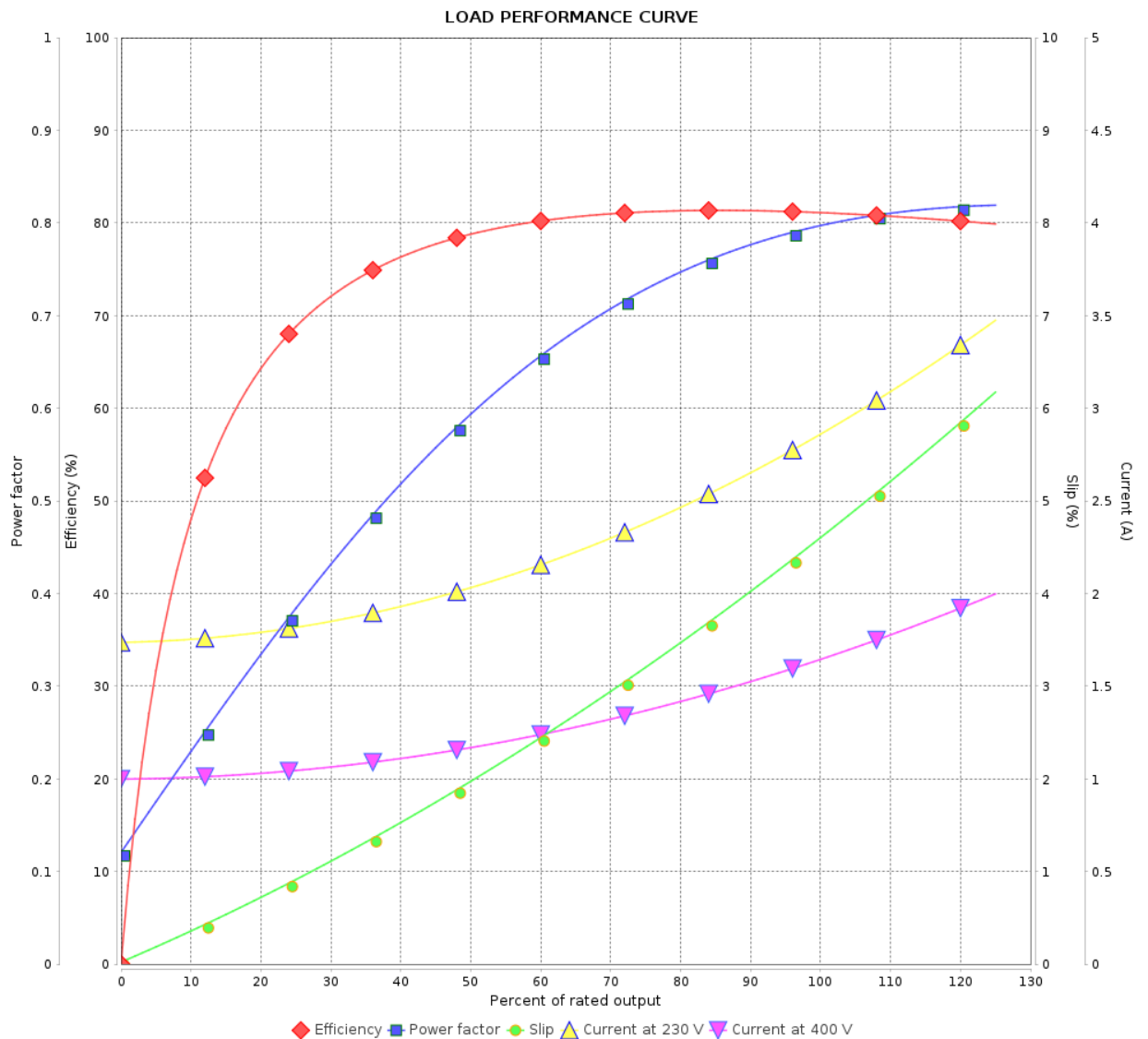
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE3 Three-Phase

Product code : 15834847



Performance : 230/400 V 50 Hz 2P

Rated current : 2.90/1.67 A  
LRC : 7.5  
Rated torque : 0.255 kgfm  
Locked rotor torque : 320 %  
Breakdown torque : 320 %  
Rated speed : 2860 rpm

Moment of inertia (J) : 0.0008 kgm<sup>2</sup>  
Duty cycle : S1  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : N

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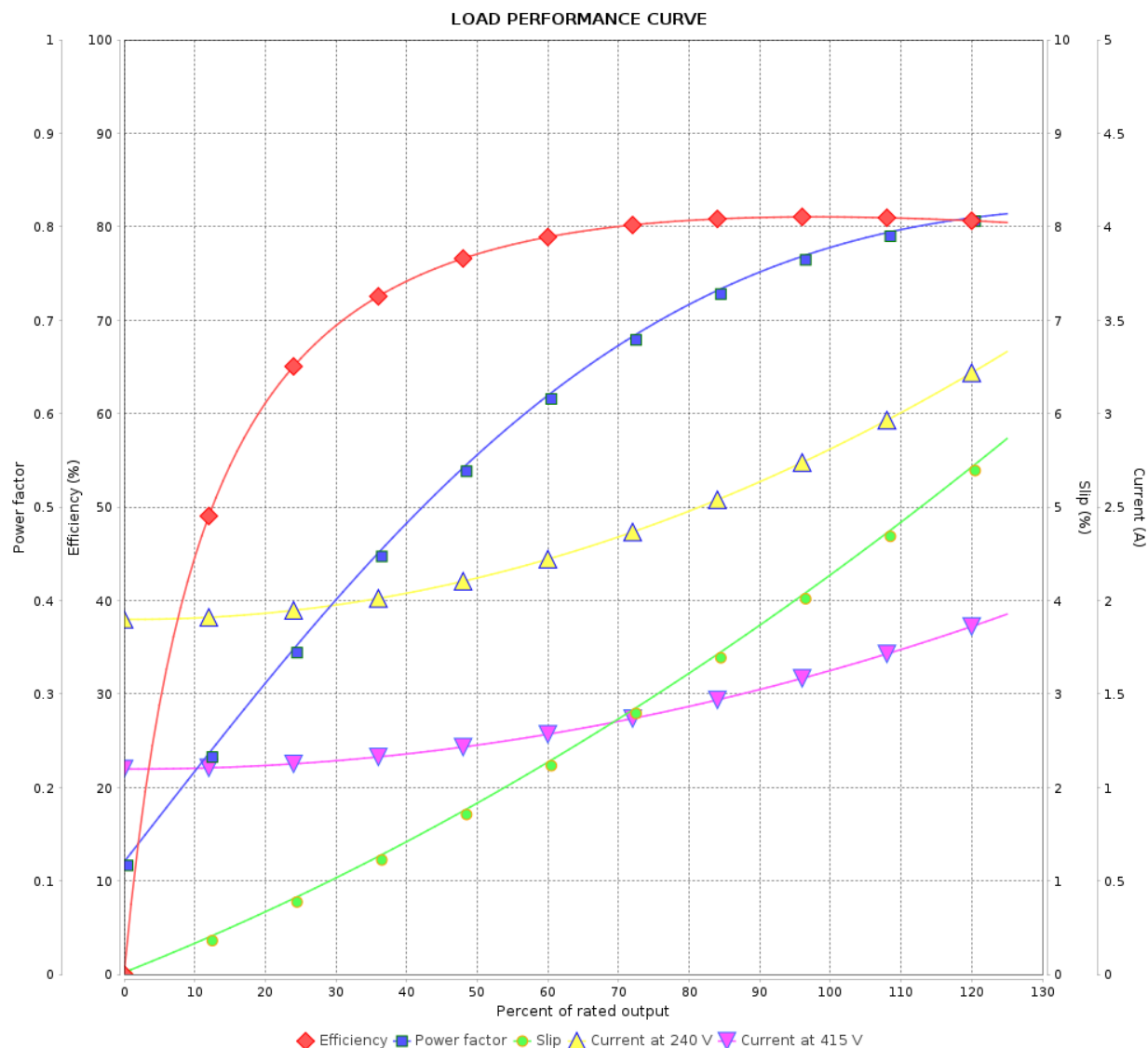
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Breakdown torque : 350 %  
Rated speed : 2870 rpm

Moment of inertia (J) : 0.0008 kgm<sup>2</sup>  
Duty cycle : S1  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : N

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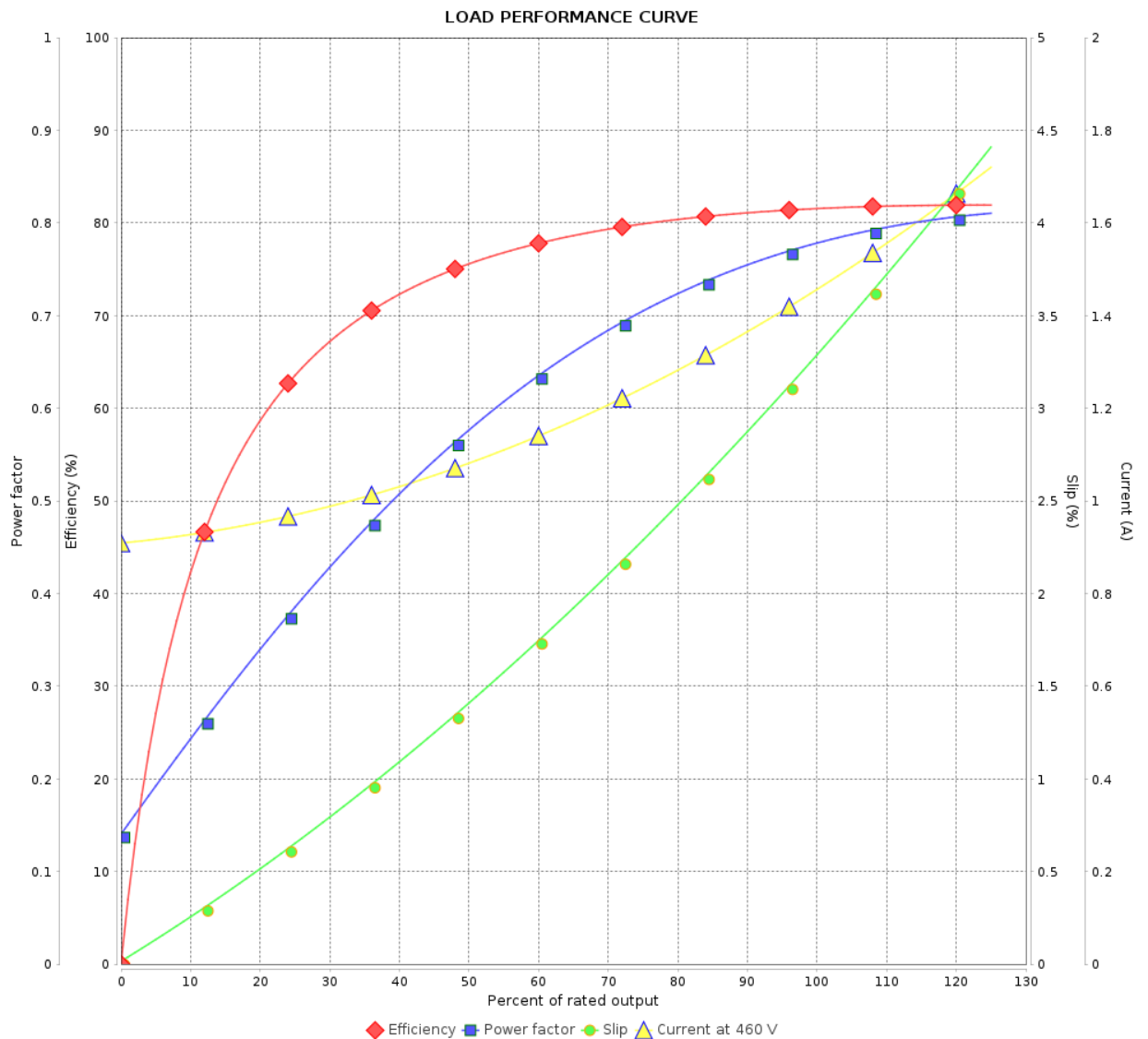
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Product code : 15834847



Performance : 460 V 60 Hz 2P

Rated current	: 1.48 A	Moment of inertia (J)	: 0.0008 kgm <sup>2</sup>
LRC	: 8.5	Duty cycle	: S1
Rated torque	: 0.210 kgfm	Insulation class	: F
Locked rotor torque	: 400 %	Service factor	: 1.00
Breakdown torque	: 400 %	Temperature rise	: 80 K
Rated speed	: 3480 rpm	Design	: N

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# THERMAL LIMIT CURVE

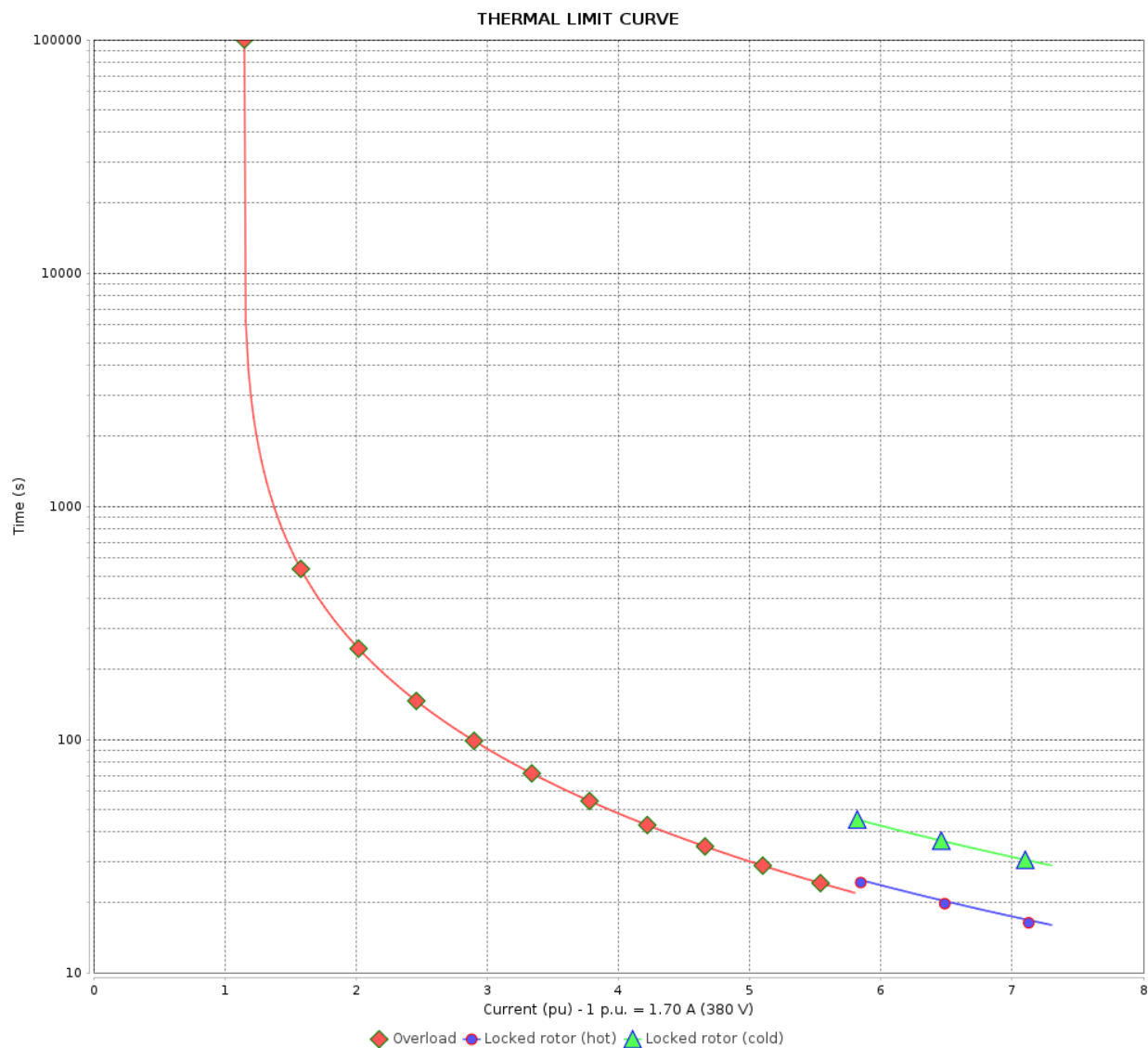
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Rated speed : 2840 rpm

Moment of inertia (J) : 0.0008 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

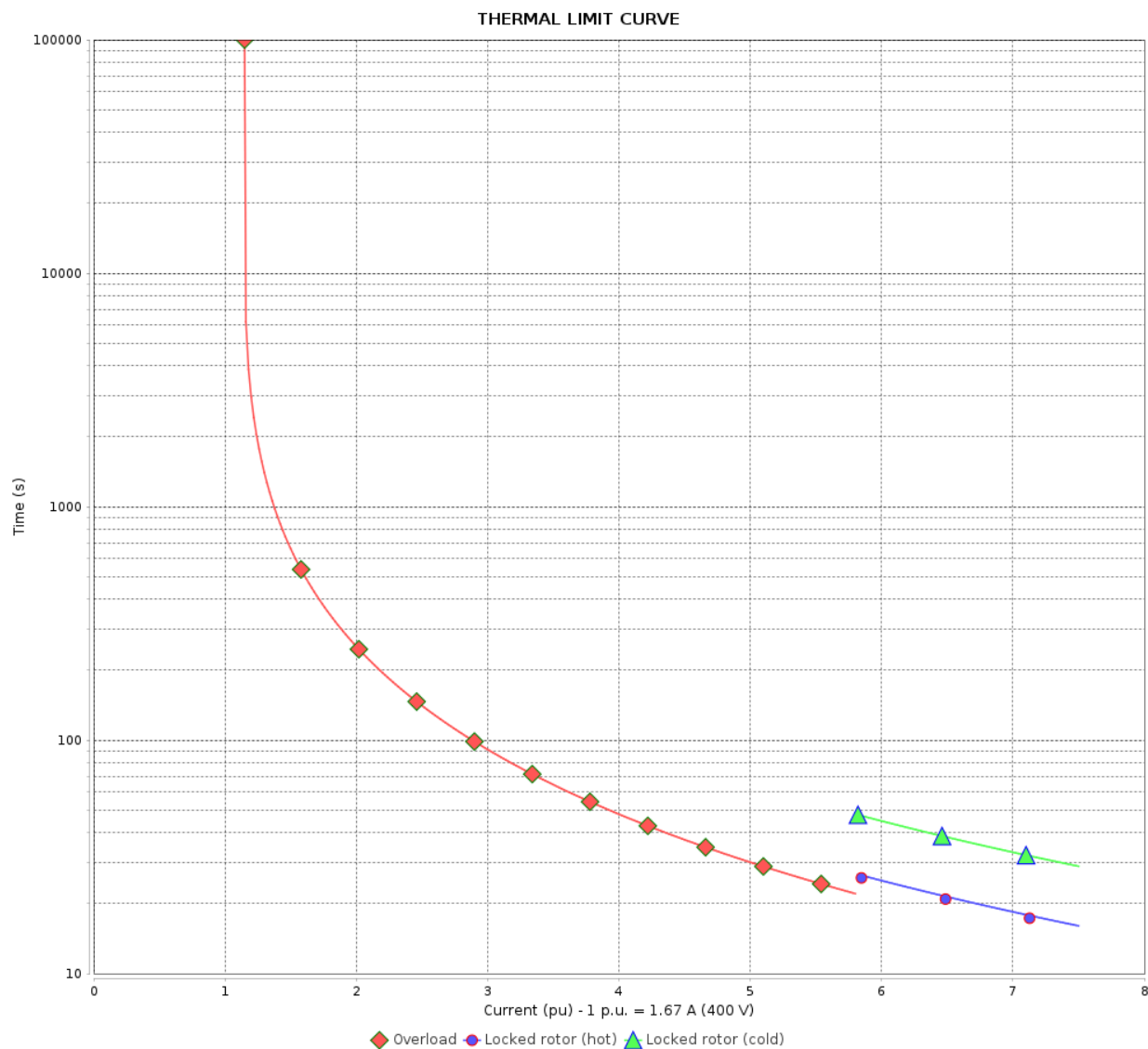
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Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : N

Heating constant

Cooling constant

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# THERMAL LIMIT CURVE

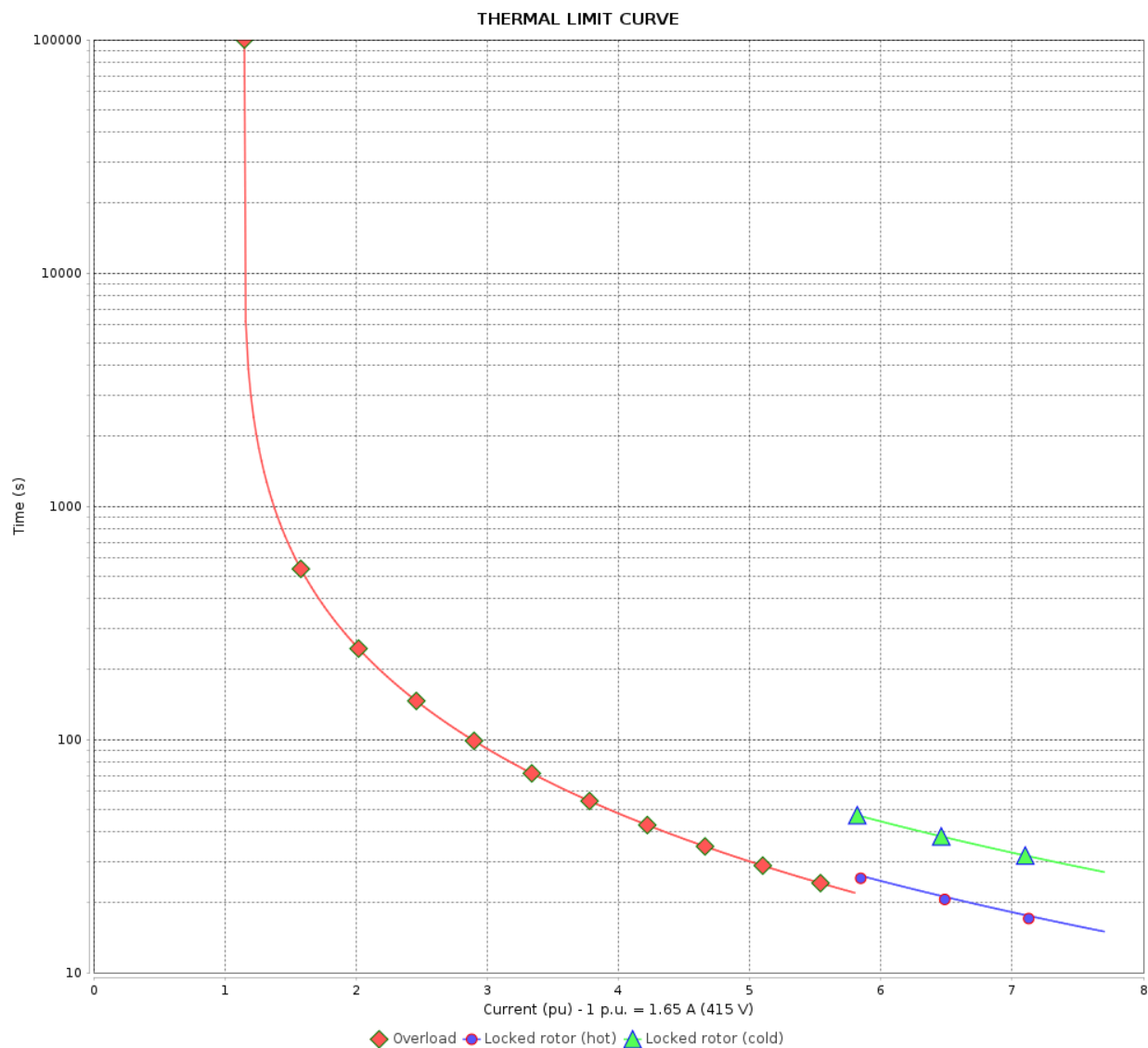
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Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : N

Heating constant

Cooling constant

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# THERMAL LIMIT CURVE

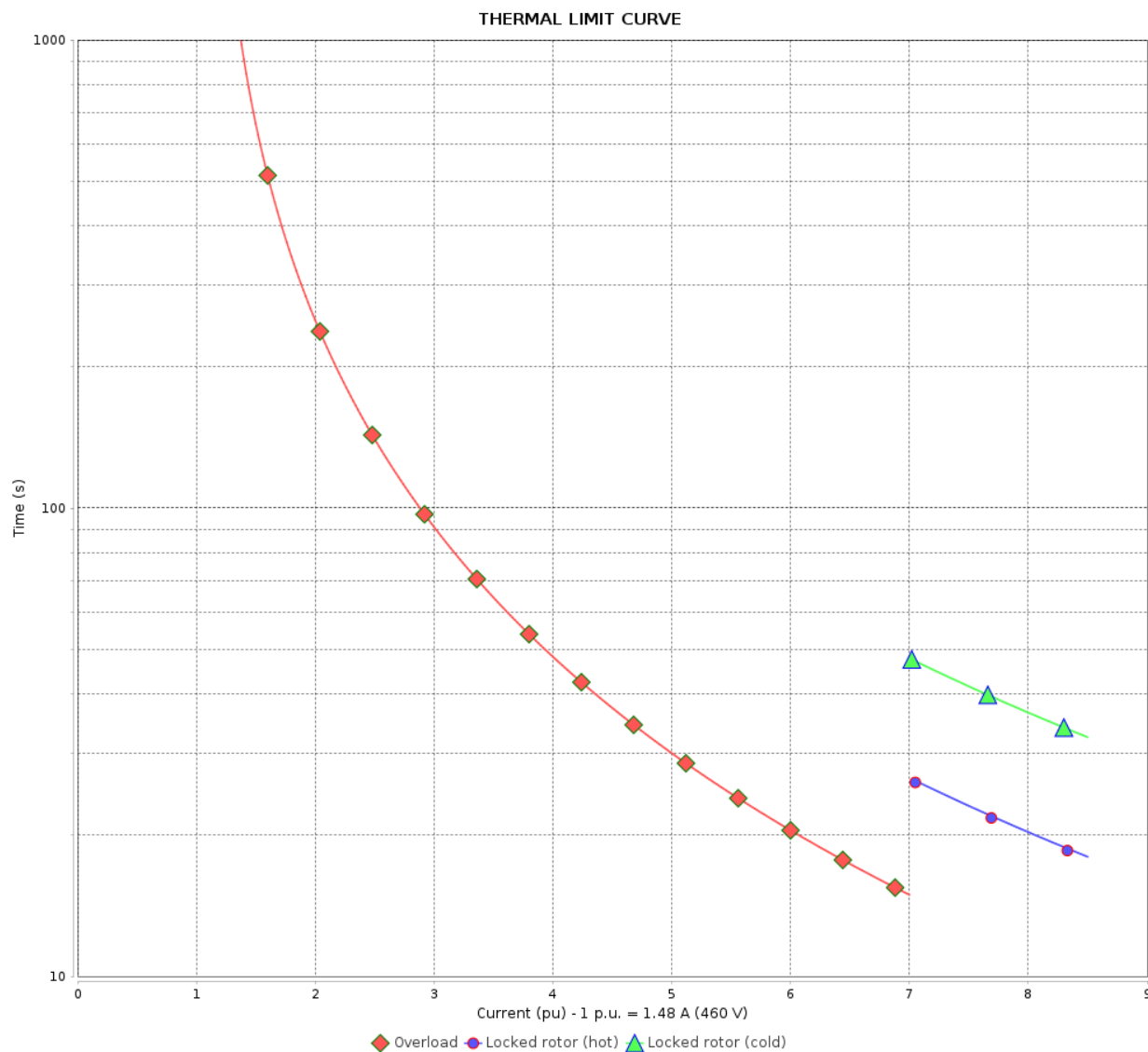
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE3 Three-Phase

Product code : 15834847



Performance : 460 V 60 Hz 2P

Rated current : 1.48 A  
LRC : 8.5  
Rated torque : 0.210 kgfm  
Locked rotor torque : 400 %  
Breakdown torque : 400 %  
Rated speed : 3480 rpm

Moment of inertia (J) : 0.0008 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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# VFD OPERATION CURVE

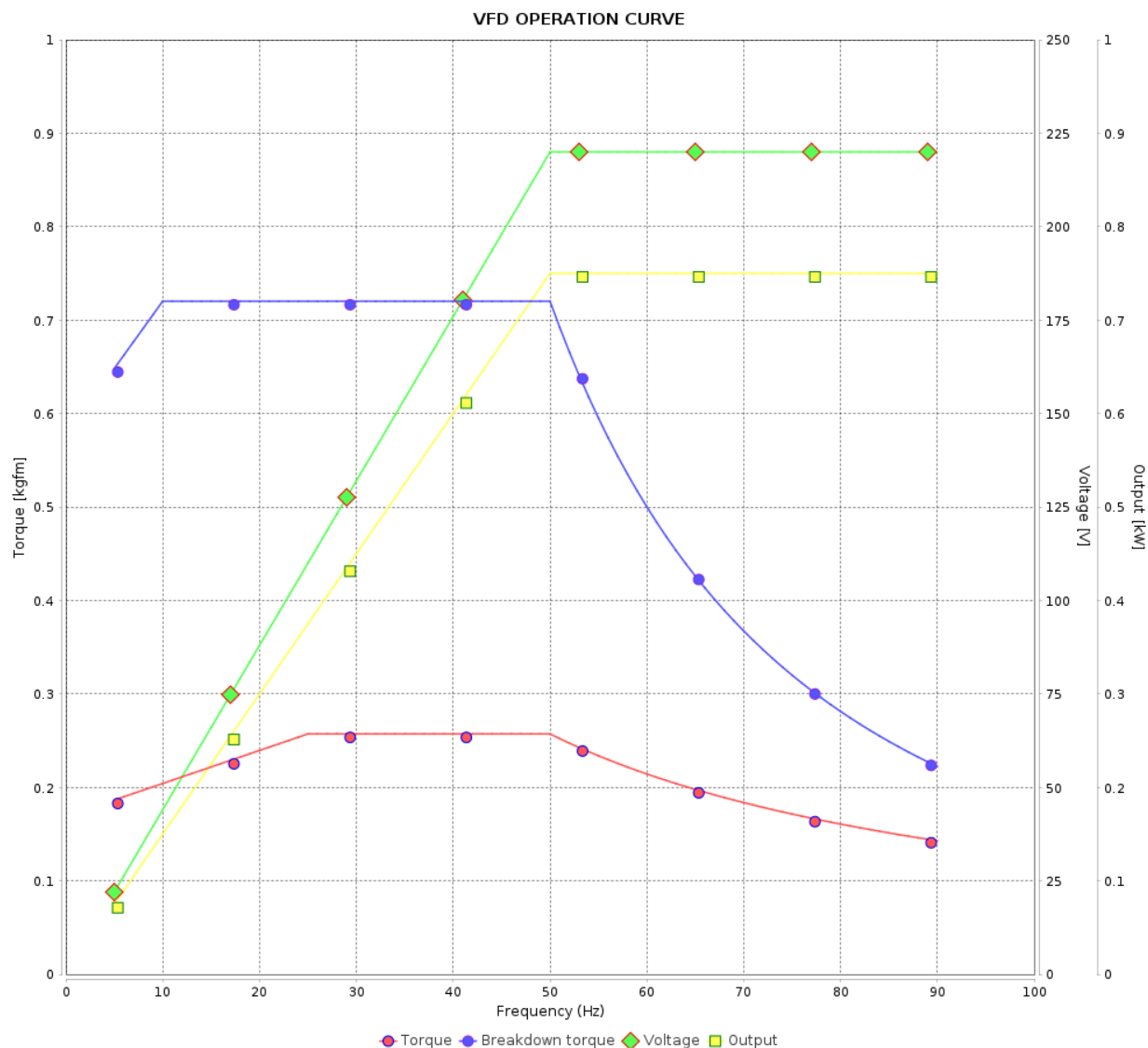
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Breakdown torque : 280 %  
Rated speed : 2840 rpm

Moment of inertia (J) : 0.0008 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

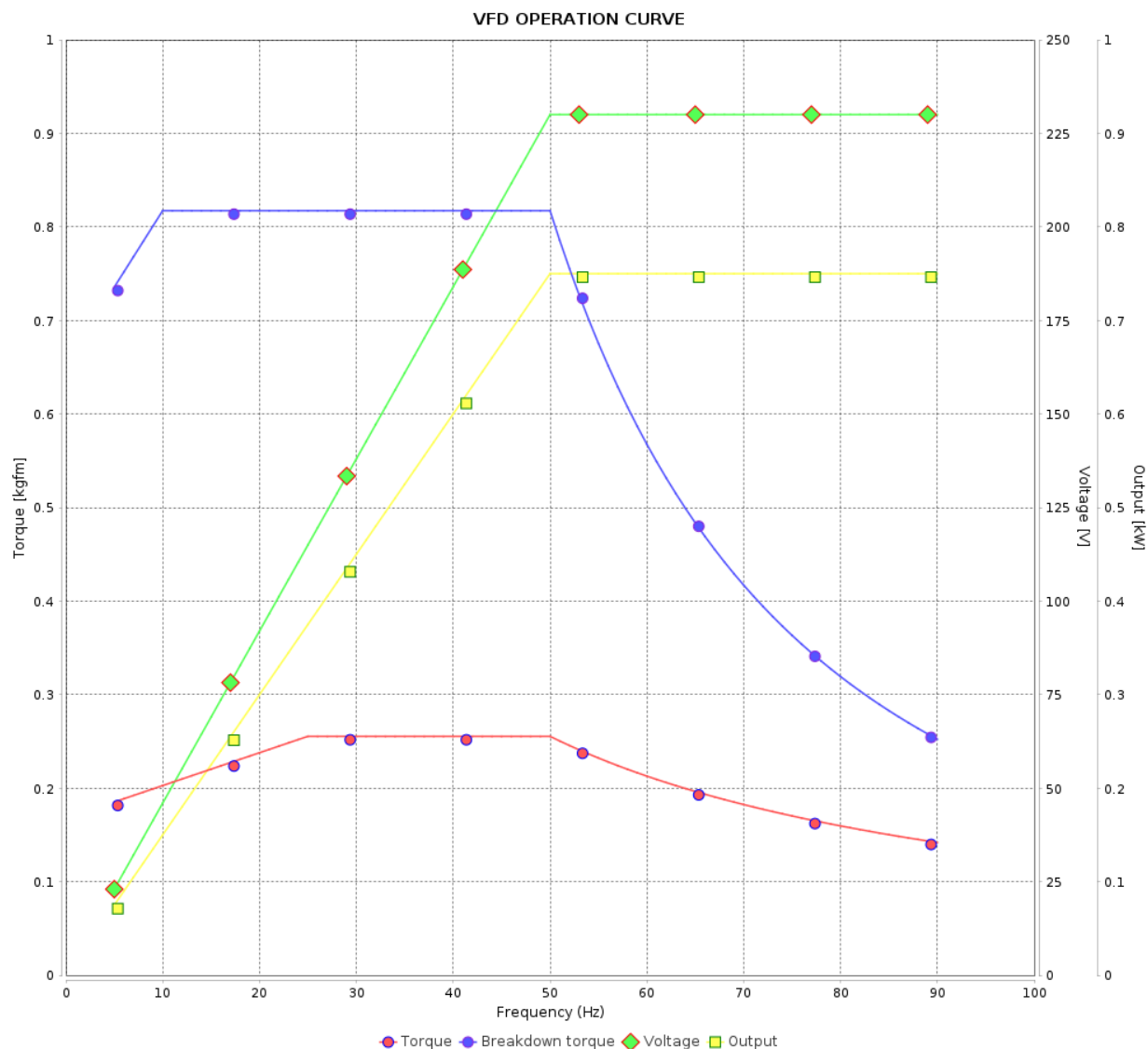
## Three Phase Induction Motor - Squirrel Cage



Customer :

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Product code : 15834847



Performance : 230/400 V 50 Hz 2P

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Breakdown torque : 320 %  
Rated speed : 2860 rpm

Moment of inertia (J) : 0.0008 kgm<sup>2</sup>  
Duty cycle : S1  
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Service factor : 1.00  
Temperature rise : 80 K  
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# VFD OPERATION CURVE

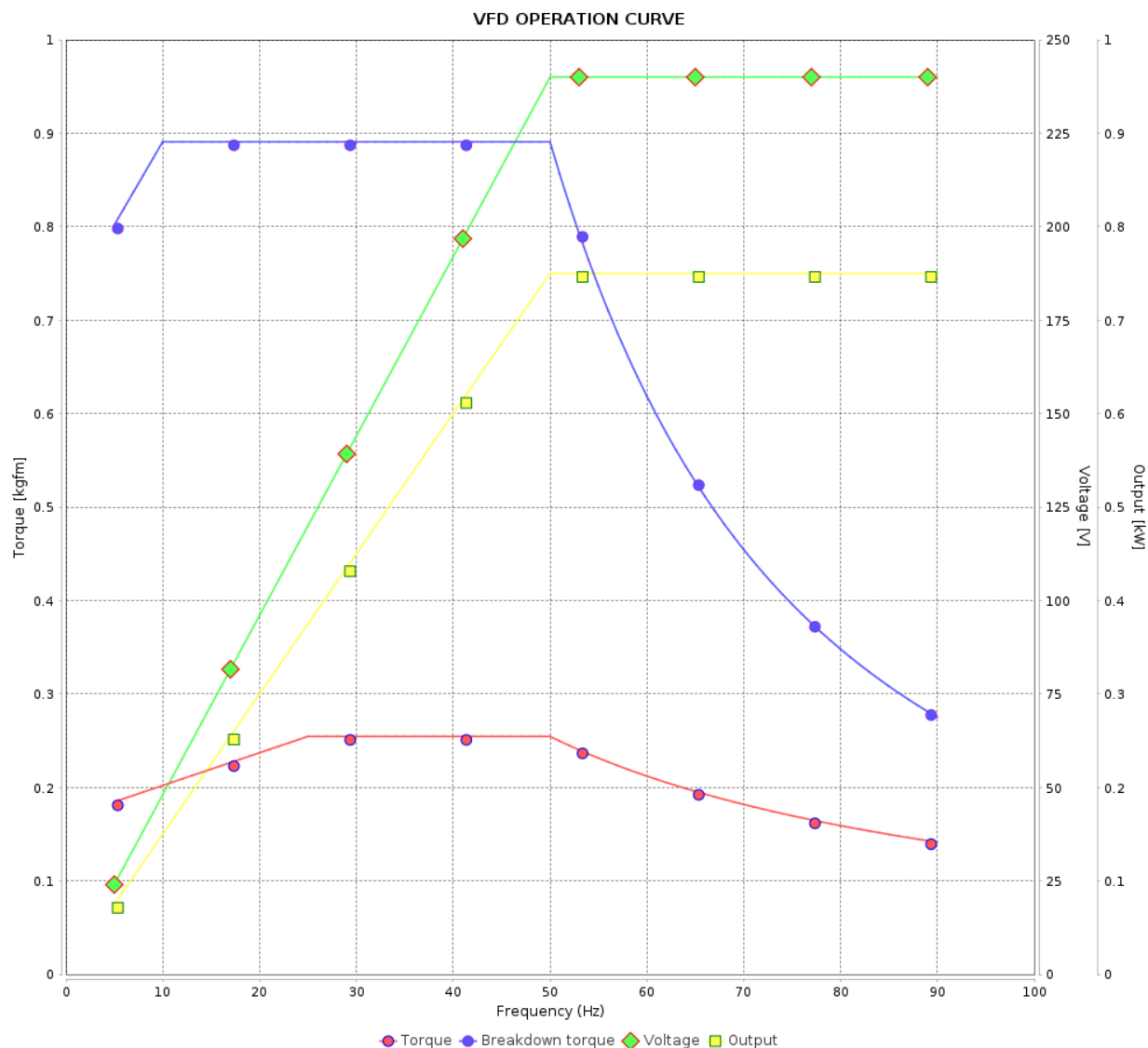
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Moment of inertia (J) : 0.0008 kgm<sup>2</sup>  
Duty cycle : S1  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : N

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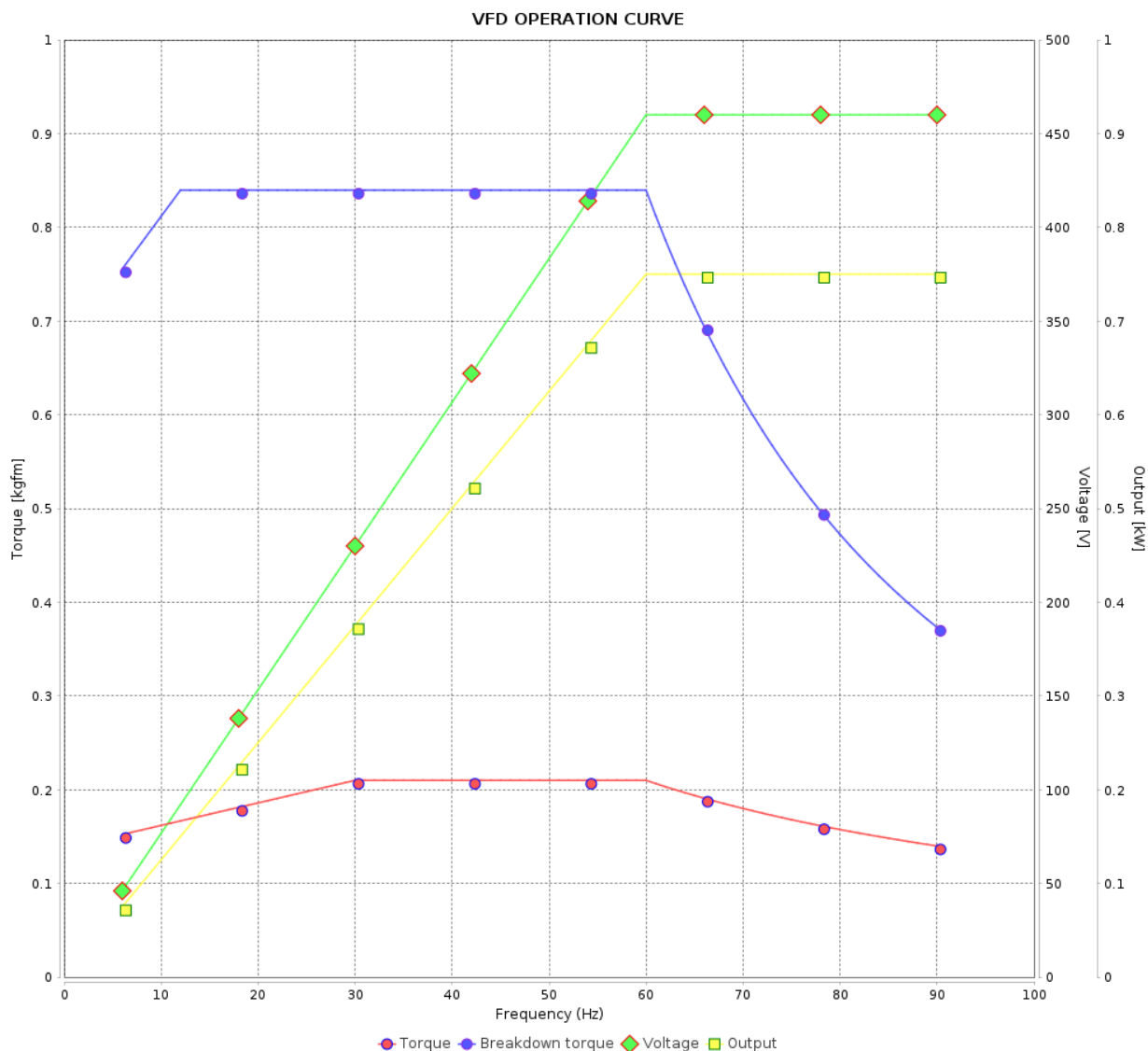
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE3 Three-Phase

Product code : 15834847



Performance : 460 V 60 Hz 2P

Rated current : 1.48 A  
LRC : 8.5  
Rated torque : 0.210 kgfm  
Locked rotor torque : 400 %  
Breakdown torque : 400 %  
Rated speed : 3480 rpm

Moment of inertia (J) : 0.0008 kgm<sup>2</sup>  
Duty cycle : S1  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : N

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