

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line : MULTIMOUNTING	Product code : 13043205				
Frame : 100L 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 : B14T Rotation <sup>1</sup> : Both (CW and CCW) Starting method : Direct On Line Approx. weight <sup>2</sup> : 25.6 kg Moment of inertia (J) : 0.0064 kgm <sup>2</sup>				
Output [kW]	3	3	3	3	
Poles	2	2	2	2	
Frequency [Hz]	50	50	50	60	
Rated voltage [V]	220/380	230/400	240/415	460	
Rated current [A]	10.4/6.02	10.2/5.85	9.98/5.77	5.07	
L. R. Amperes [A]	78.0/45.1	81.4/46.8	84.8/49.0	47.2	
LRC [A]	7.5	8.0	8.5	9.3	
No load current [A]	4.40/2.55	4.96/2.85	5.45/3.15	2.60	
Rated speed [RPM]	2905	2915	2920	3530	
Slip [%]	3.17	2.83	2.67	1.94	
Rated torque [kgfm]	1.01	1.00	1.00	0.828	
Locked rotor torque [%]	220	240	260	290	
Breakdown torque [%]	300	330	360	440	
Service factor	1.00	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	18s (cold) 10s (hot)	16s (cold) 9s (hot)	16s (cold) 9s (hot)	18s (cold) 10s (hot)	
Noise level <sup>2</sup>	67.0 dB(A)	67.0 dB(A)	67.0 dB(A)	71.0 dB(A)	
Efficiency (%)	25%				
	50%	85.5	85.0	84.5	82.5
	75%	86.5	86.5	86.5	86.5
	100%	87.1	87.1	87.2	88.5
Power Factor	25%				
	50%	0.71	0.67	0.64	0.66
	75%	0.82	0.79	0.76	0.77
	100%	0.87	0.85	0.83	0.84
Losses at normative operating points (speed;torque), in percentage of rated output power					
Losses (%)	P1 (0,9;1,0)	14.4	14.4	14.3	12.6
	P2 (0,5;1,0)	12.9	12.9	12.8	11.3
	P3 (0,25;1,0)	12.7	12.7	12.6	11.2
	P4 (0,9;0,5)	7.2	7.2	7.1	6.3
	P5 (0,5;0,5)	5.0	5.0	5.0	4.4
	P6 (0,5;0,25)	3.4	3.4	3.4	3.0
	P7 (0,25;0,25)	2.4	2.4	2.4	2.1
Bearing type : Drive end 6206 ZZ Non drive end 6205 ZZ Sealing : Oil Seal Oil Seal Lubrication interval : - - Lubricant amount : - - Lubricant type : Mobil Polyrex EM	Foundation loads Max. traction : 78 kgf Max. compression : 103 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.				
Rev.	Changes Summary	Performed	Checked	Date	
Performed by					
Checked by			Page	Revision	
Date	17/04/2023		1 / 18		

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



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

Notes

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	17/04/2023		2 / 18	

# TORQUE AND CURRENT VS SPEED CURVE

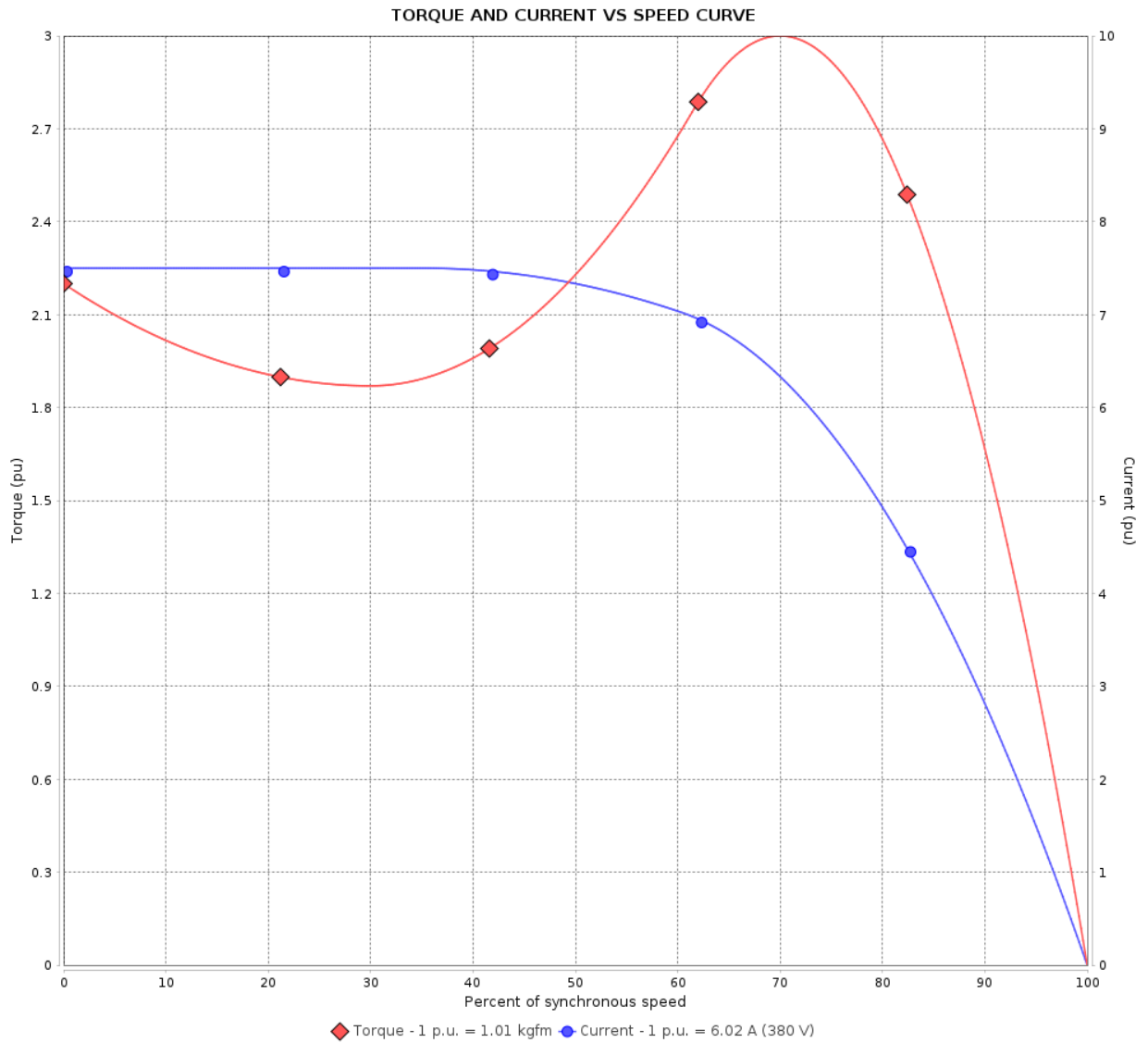
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : MULTIMOUNTING

Product code : 13043205



Performance : 220/380 V 50 Hz 2P

Rated current	: 10.4/6.02 A	Moment of inertia (J)	: 0.0064 kgm <sup>2</sup>
LRC	: 7.5	Duty cycle	: S1
Rated torque	: 1.01 kgfm	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 2905 rpm	Design	: N

Locked rotor time : 18s (cold) 10s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		3 / 18		
Date	17/04/2023			

# TORQUE AND CURRENT VS SPEED CURVE

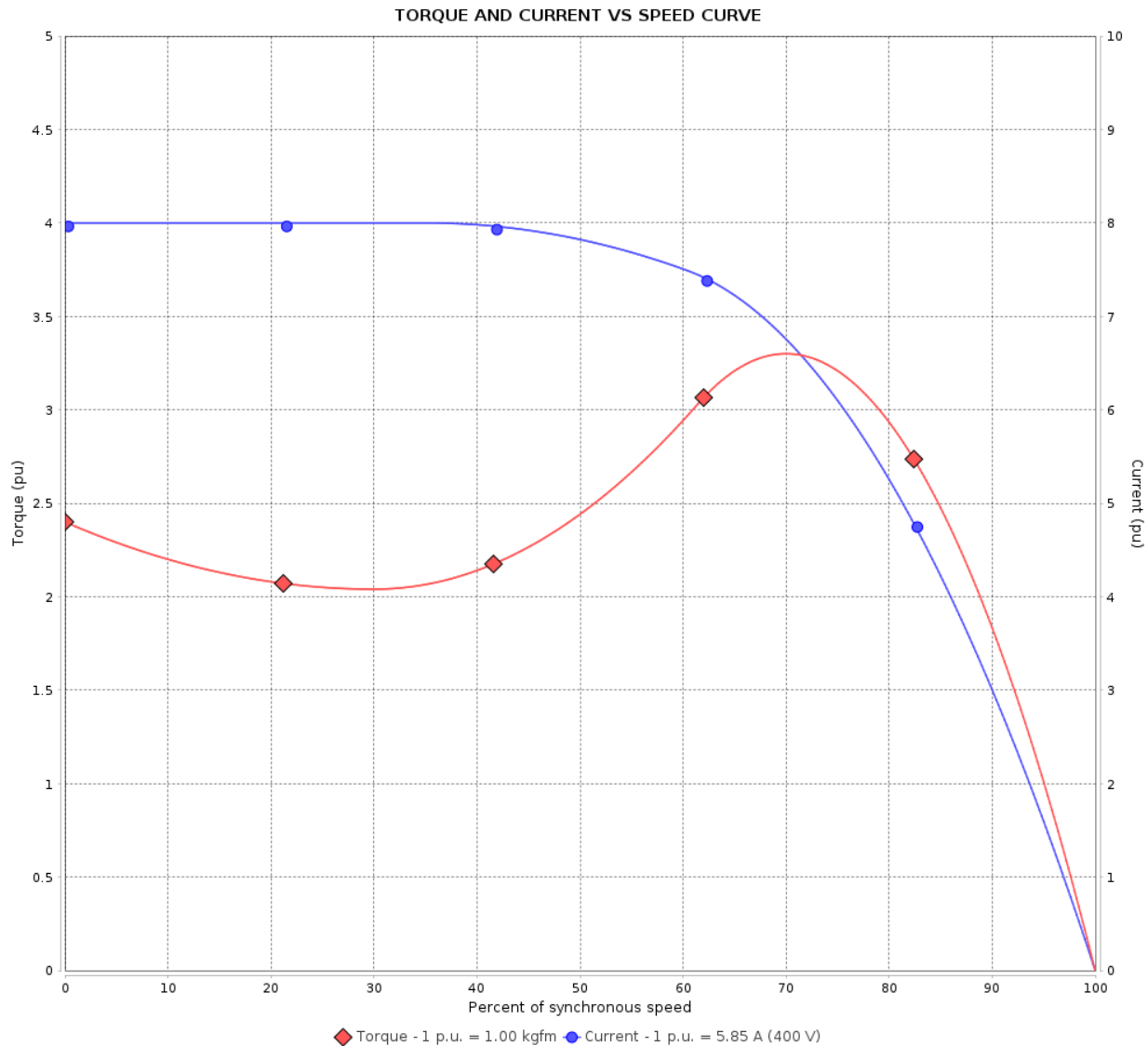
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : MULTIMOUNTING

Product code : 13043205



Performance : 230/400 V 50 Hz 2P

Rated current	: 10.2/5.85 A	Moment of inertia (J)	: 0.0064 kgm <sup>2</sup>
LRC	: 8.0	Duty cycle	: S1
Rated torque	: 1.00 kgfm	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 2915 rpm	Design	: N

Locked rotor time : 16s (cold) 9s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		4 / 18		
Date	17/04/2023			

# TORQUE AND CURRENT VS SPEED CURVE

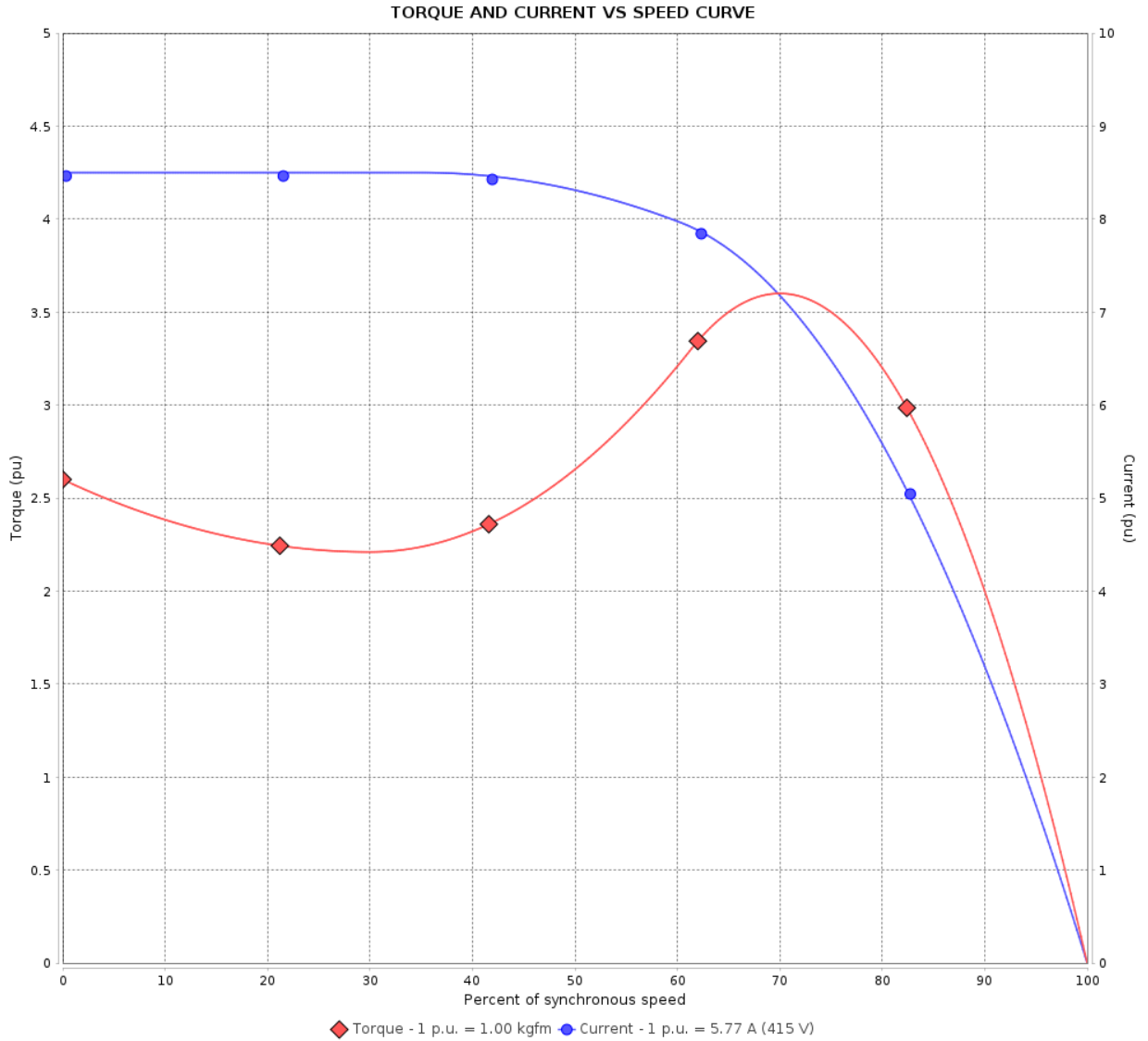
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : MULTIMOUNTING

Product code : 13043205



Performance : 240/415 V 50 Hz 2P

Rated current	: 9.98/5.77 A	Moment of inertia (J)	: 0.0064 kgm <sup>2</sup>
LRC	: 8.5	Duty cycle	: S1
Rated torque	: 1.00 kgfm	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.00
Breakdown torque	: 360 %	Temperature rise	: 80 K
Rated speed	: 2920 rpm	Design	: N

Locked rotor time : 16s (cold) 9s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date	17/04/2023			

# TORQUE AND CURRENT VS SPEED CURVE

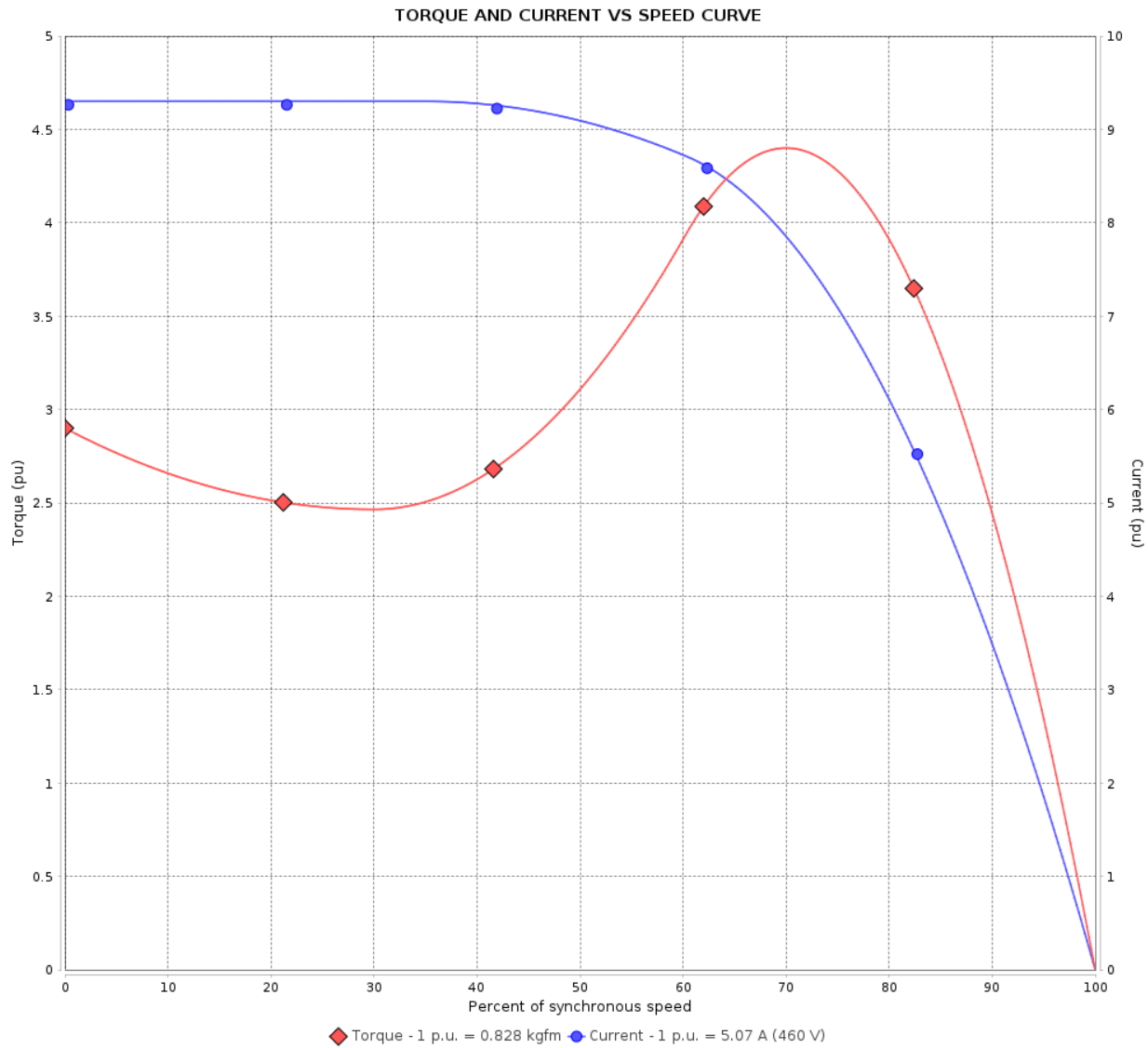
Three Phase Induction Motor - Squirrel Cage



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

Product line : MULTIMOUNTING

Product code : 13043205



Performance : 460 V 60 Hz 2P

Rated current	: 5.07 A	Moment of inertia (J)	: 0.0064 kgm <sup>2</sup>
LRC	: 9.3	Duty cycle	: S1
Rated torque	: 0.828 kgfm	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.00
Breakdown torque	: 440 %	Temperature rise	: 80 K
Rated speed	: 3530 rpm	Design	: N

Locked rotor time : 18s (cold) 10s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 6 / 18	Revision
Checked by				
Date	17/04/2023			

# LOAD PERFORMANCE CURVE

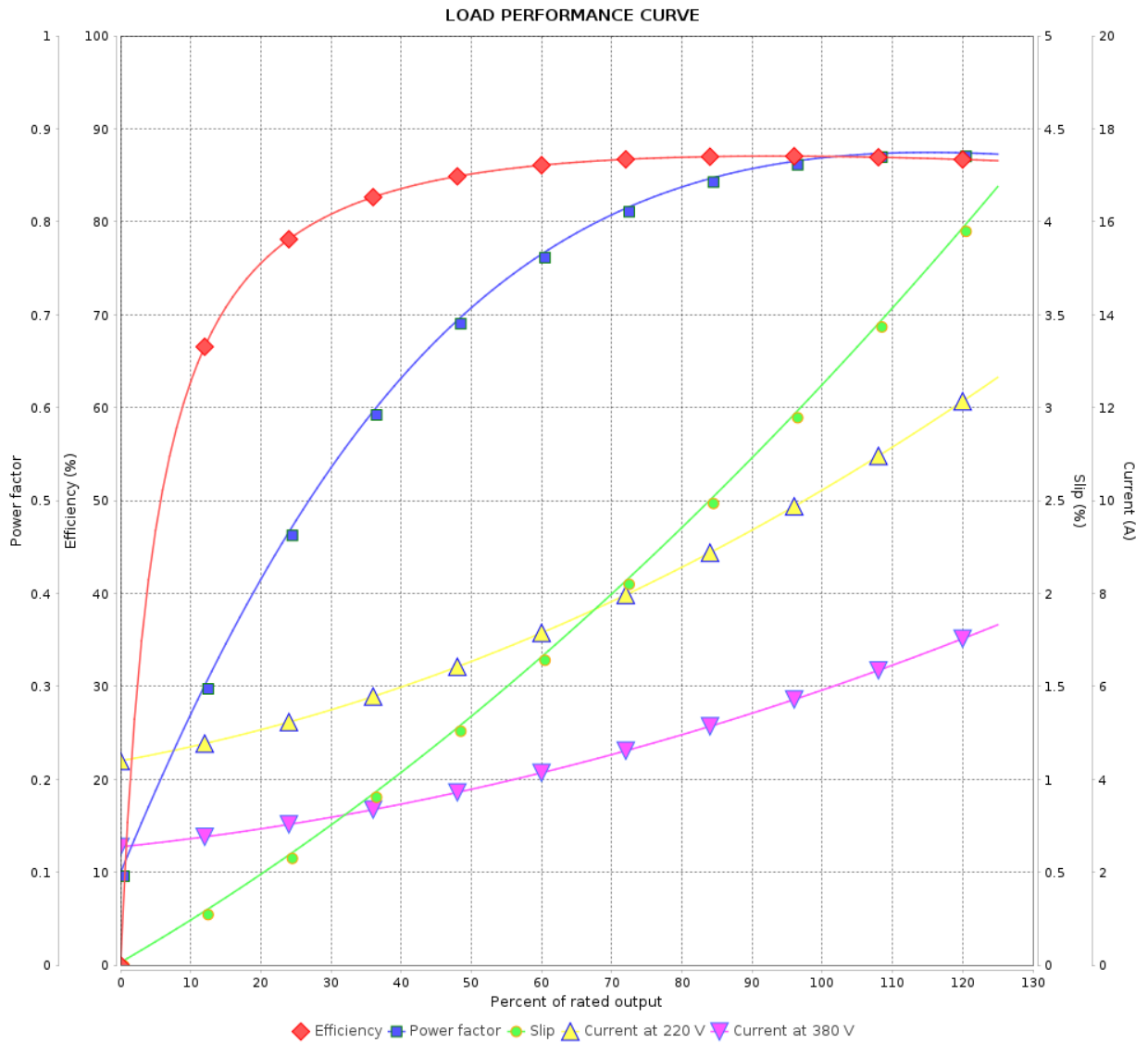
Three Phase Induction Motor - Squirrel Cage



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

Product line : MULTIMOUNTING

Product code : 13043205



Performance : 220/380 V 50 Hz 2P

Rated current : 10.4/6.02 A  
 LRC : 7.5  
 Rated torque : 1.01 kgfm  
 Locked rotor torque : 220 %  
 Breakdown torque : 300 %  
 Rated speed : 2905 rpm

Moment of inertia (J) : 0.0064 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date				

# LOAD PERFORMANCE CURVE

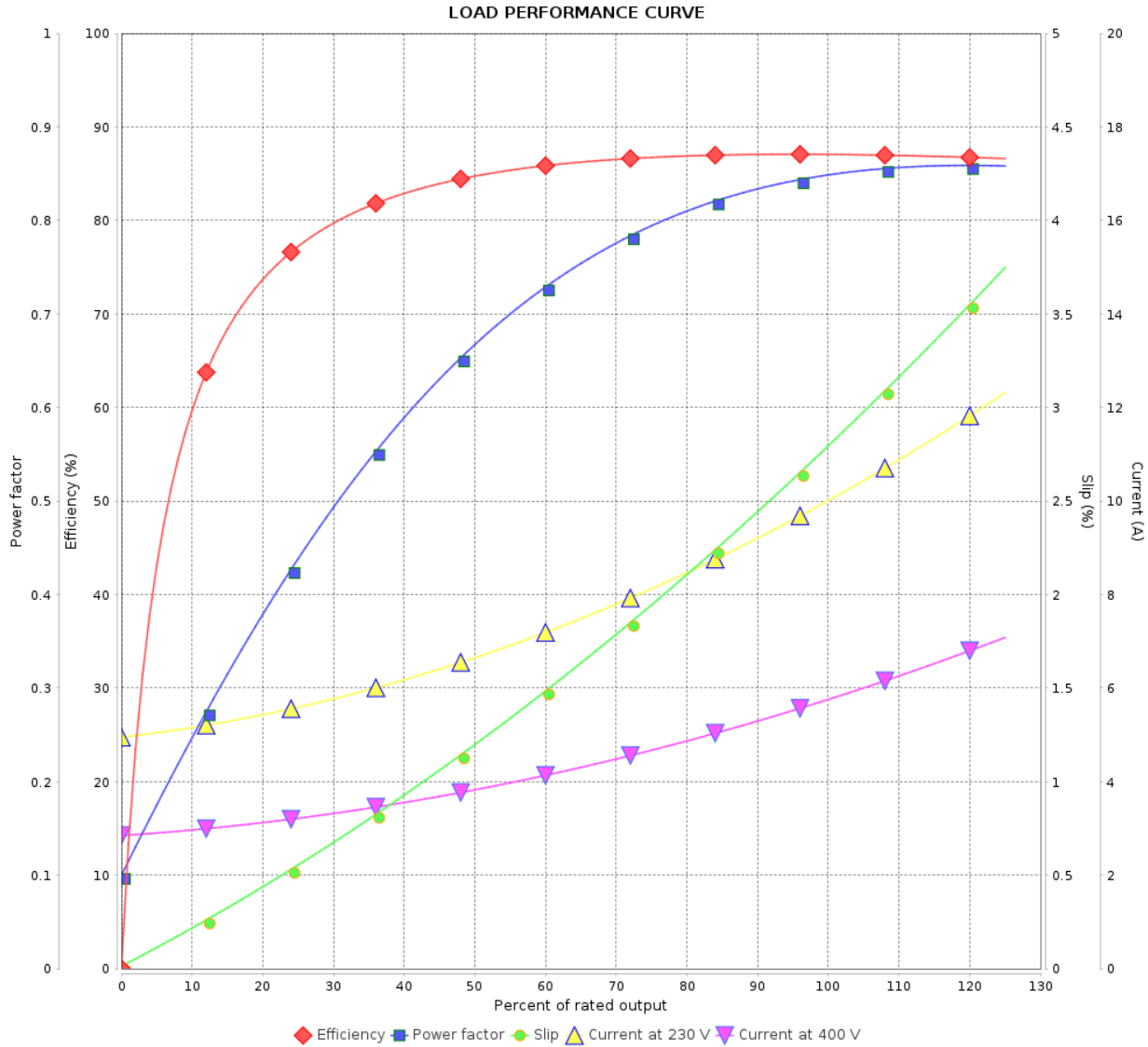
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : MULTIMOUNTING

Product code : 13043205



Performance : 230/400 V 50 Hz 2P

Rated current : 10.2/5.85 A  
 LRC : 8.0  
 Rated torque : 1.00 kgfm  
 Locked rotor torque : 240 %  
 Breakdown torque : 330 %  
 Rated speed : 2915 rpm

Moment of inertia (J) : 0.0064 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date				

# LOAD PERFORMANCE CURVE

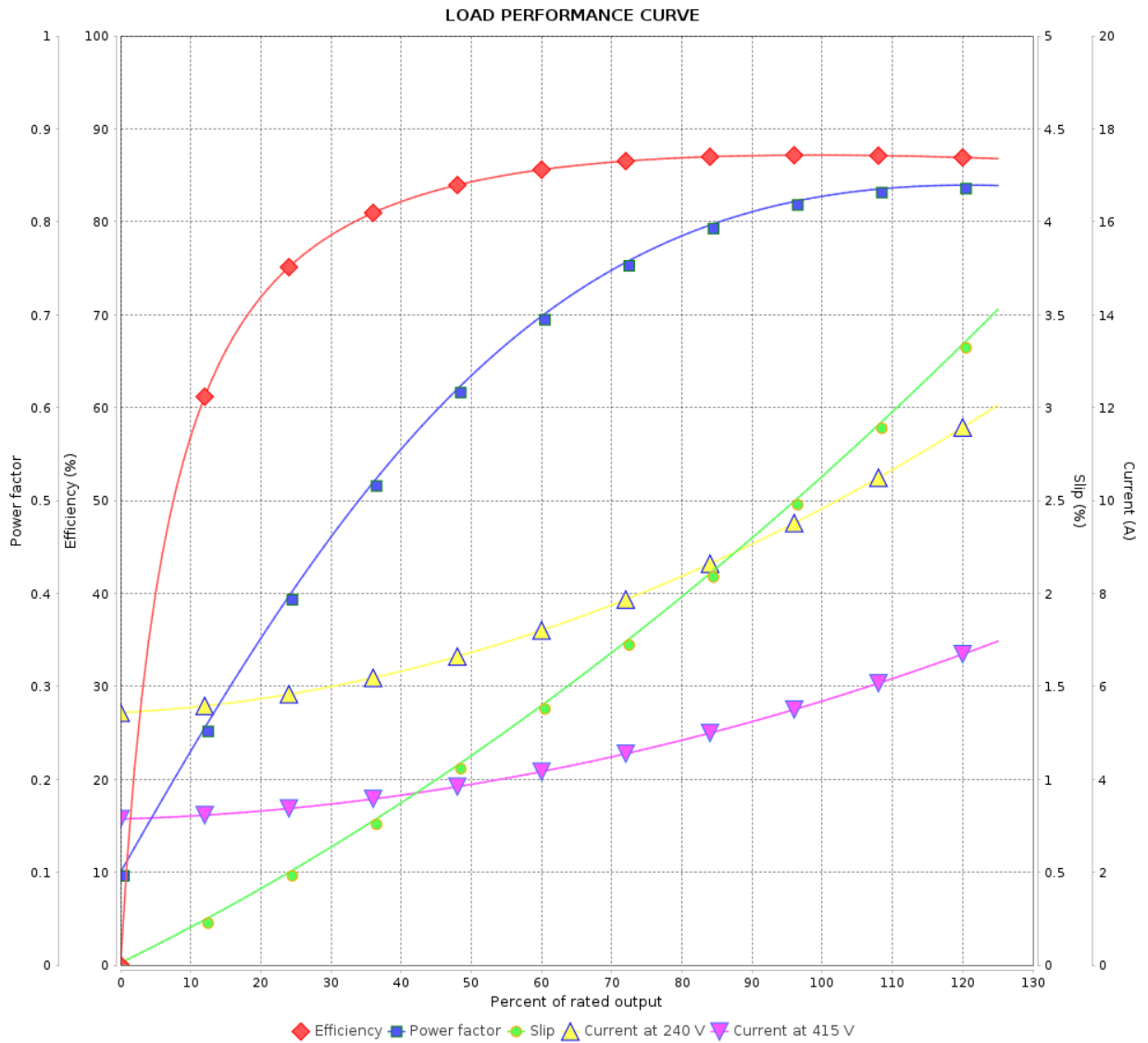
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Customer : \_\_\_\_\_

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Product code : 13043205



Performance : 240/415 V 50 Hz 2P

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 LRC : 8.5  
 Rated torque : 1.00 kgfm  
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 Breakdown torque : 360 %  
 Rated speed : 2920 rpm

Moment of inertia (J) : 0.0064 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date				

# LOAD PERFORMANCE CURVE

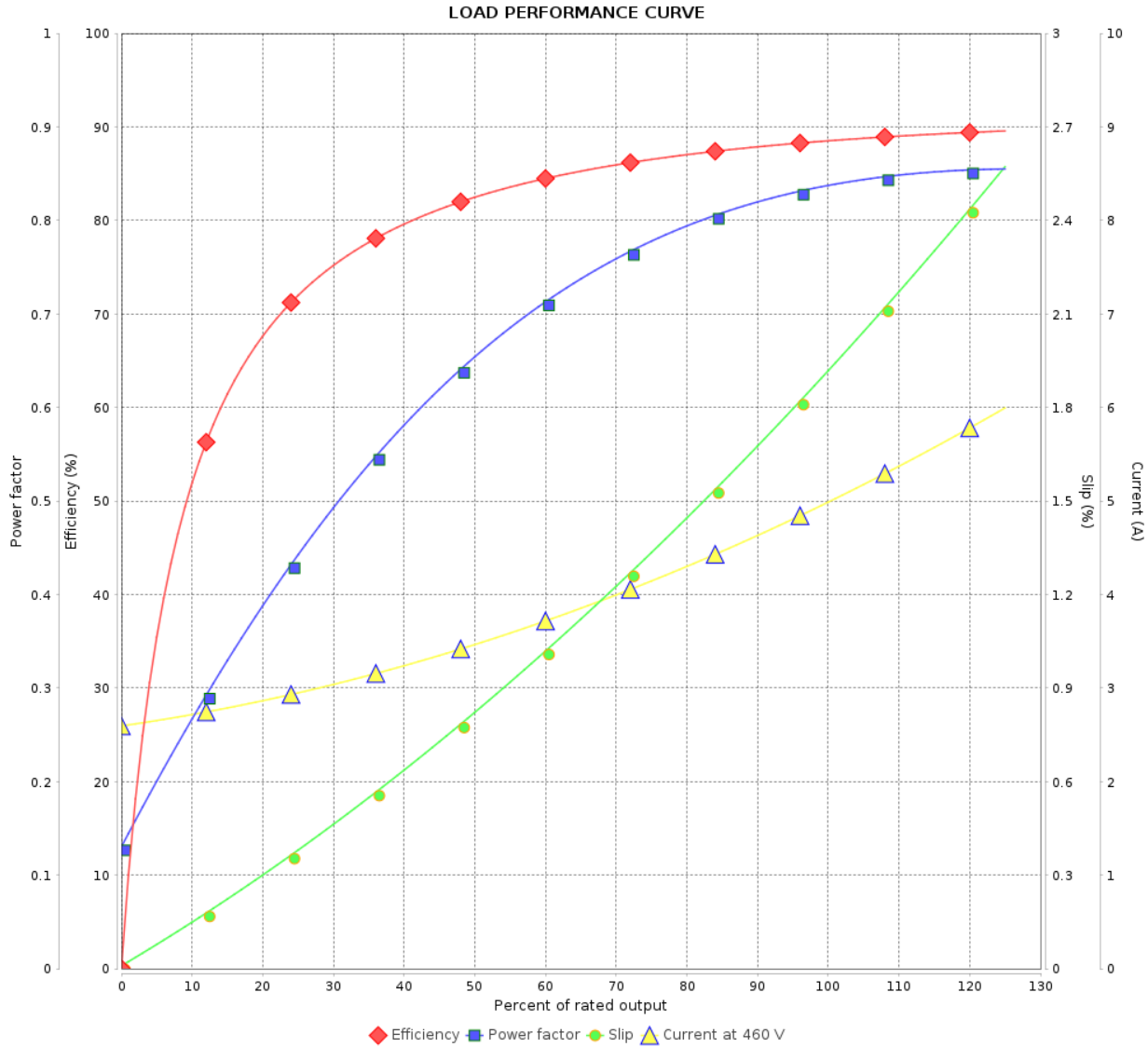
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : MULTIMOUNTING

Product code : 13043205



Performance : 460 V 60 Hz 2P

Rated current : 5.07 A  
 LRC : 9.3  
 Rated torque : 0.828 kgfm  
 Locked rotor torque : 290 %  
 Breakdown torque : 440 %  
 Rated speed : 3530 rpm

Moment of inertia (J) : 0.0064 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 10 / 18	Revision
Checked by				
Date	17/04/2023			

# THERMAL LIMIT CURVE

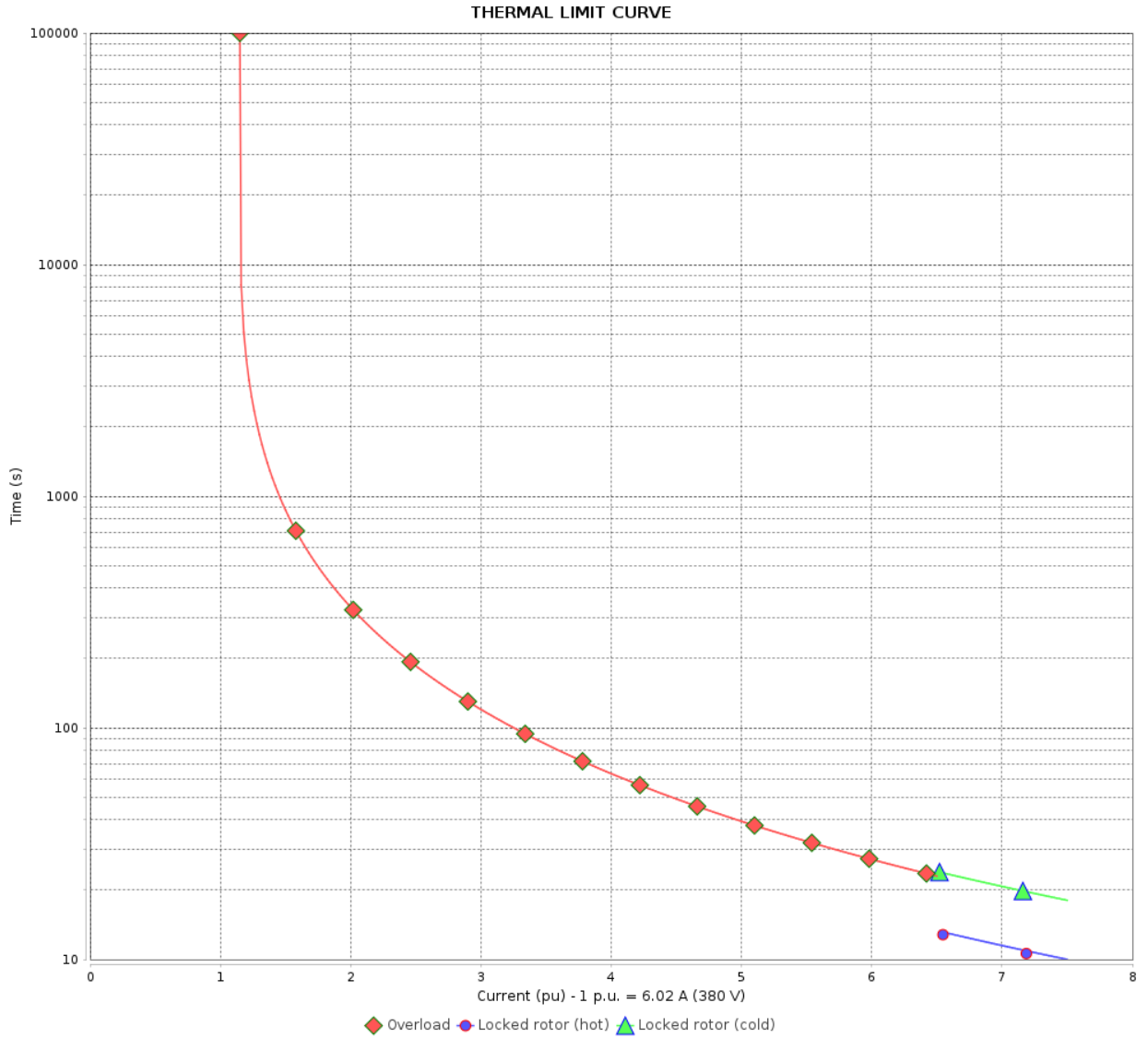
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Performance : 220/380 V 50 Hz 2P

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 LRC : 7.5  
 Rated torque : 1.01 kgfm  
 Locked rotor torque : 220 %  
 Breakdown torque : 300 %  
 Rated speed : 2905 rpm

Moment of inertia (J) : 0.0064 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		11 / 18		
Date		17/04/2023		

# THERMAL LIMIT CURVE

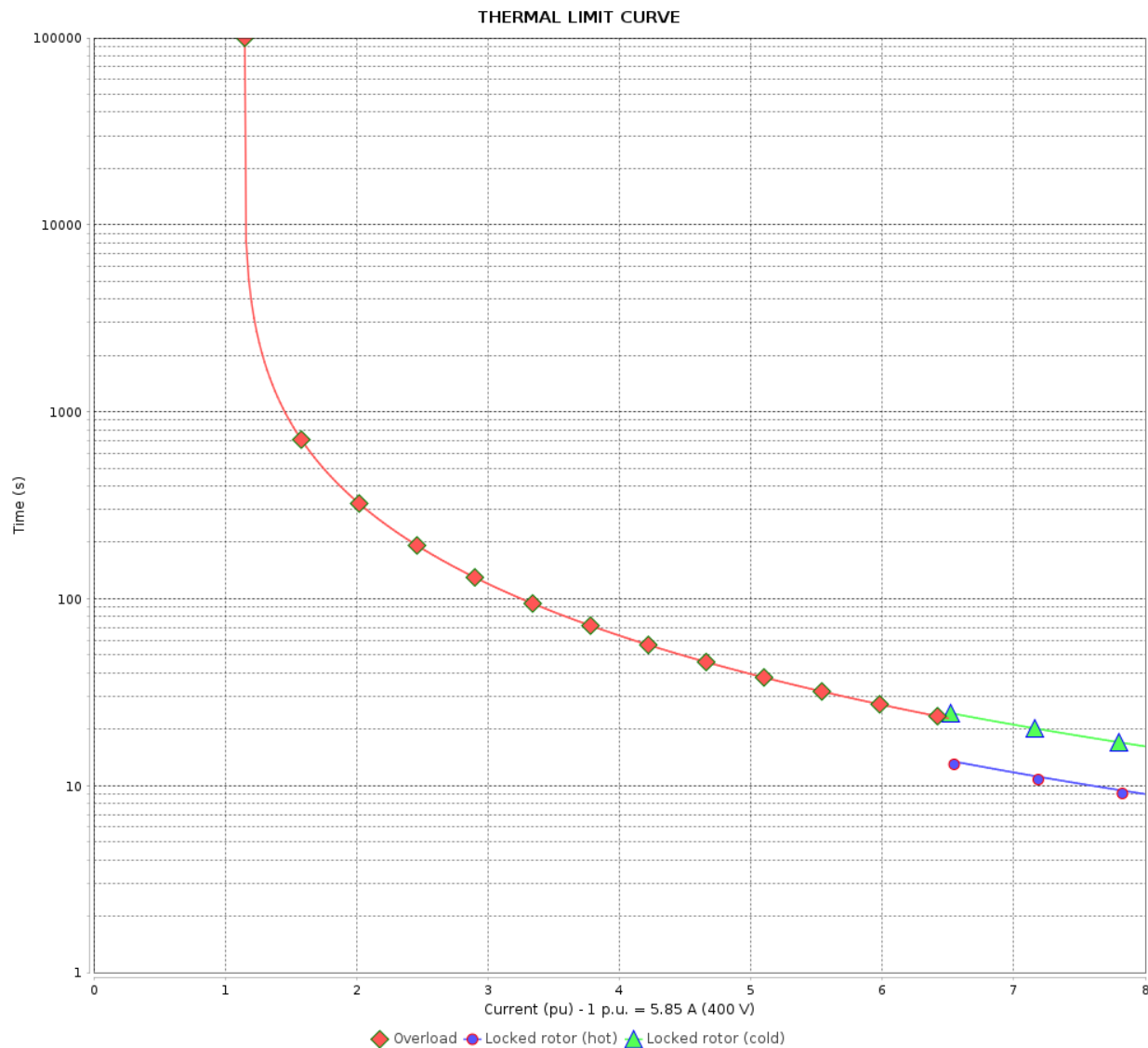
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Product code : 13043205



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 Rated torque : 1.00 kgfm  
 Locked rotor torque : 240 %  
 Breakdown torque : 330 %  
 Rated speed : 2915 rpm

Moment of inertia (J) : 0.0064 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Heating constant  
 Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 12 / 18	Revision
Checked by				
Date	17/04/2023			

# THERMAL LIMIT CURVE

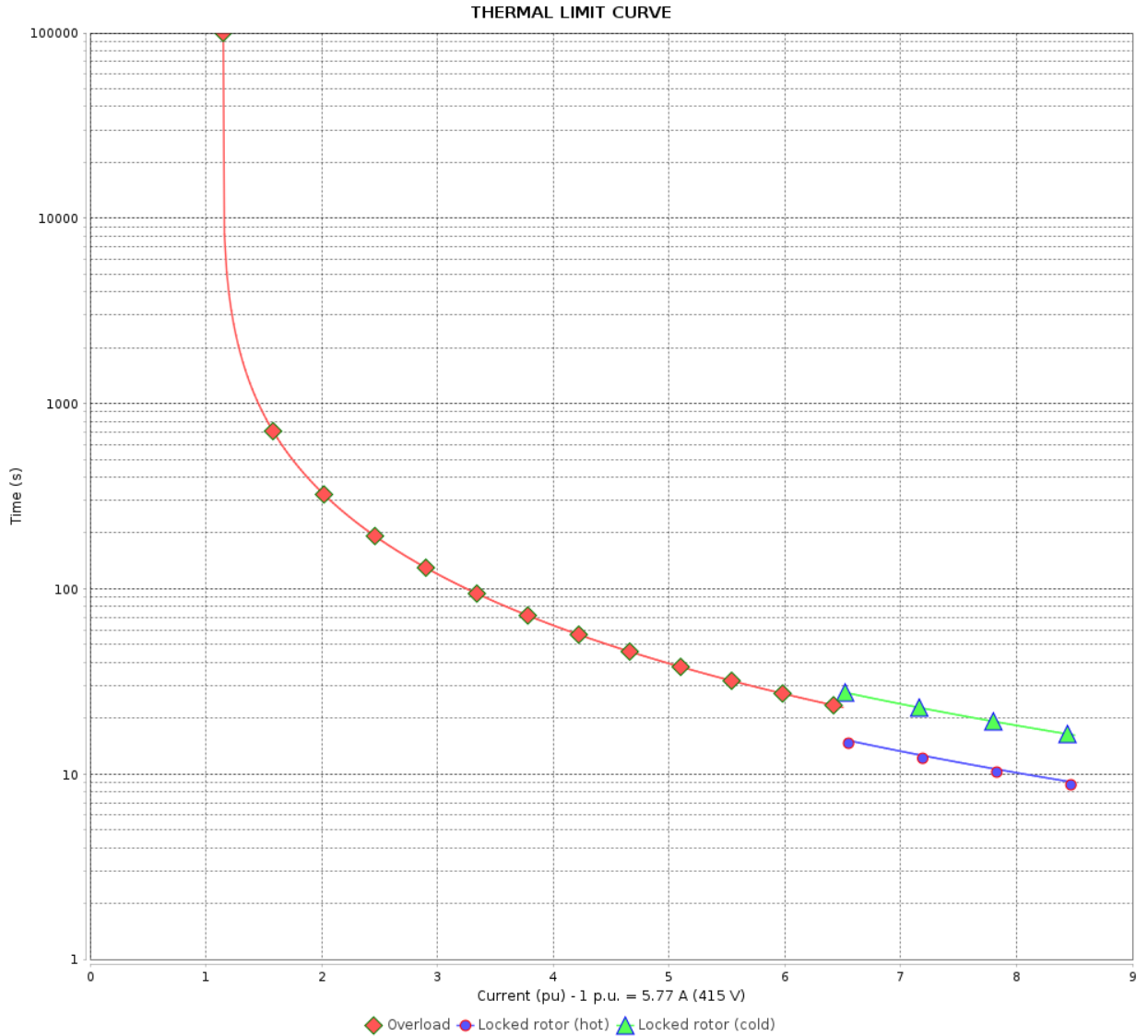
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Product code : 13043205



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Moment of inertia (J) : 0.0064 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date				
		Page	Revision	
		13 / 18		

# THERMAL LIMIT CURVE

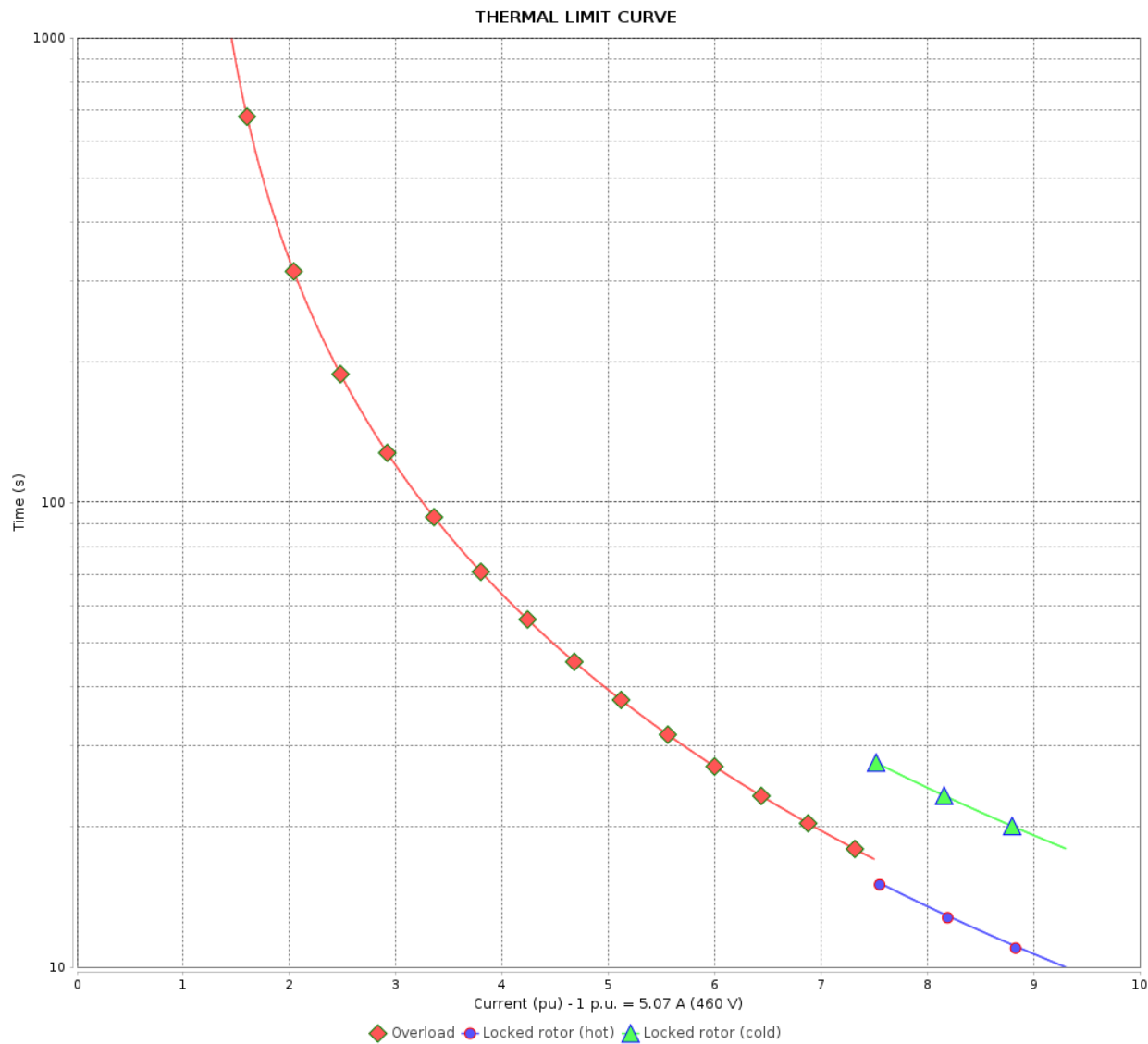
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : MULTIMOUNTING

Product code : 13043205



Performance : 460 V 60 Hz 2P

Rated current	: 5.07 A	Moment of inertia (J)	: 0.0064 kgm <sup>2</sup>
LRC	: 9.3	Duty cycle	: S1
Rated torque	: 0.828 kgfm	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.00
Breakdown torque	: 440 %	Temperature rise	: 80 K
Rated speed	: 3530 rpm	Design	: N

Heating constant  
Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 14 / 18	Revision
Checked by				
Date	17/04/2023			

# VFD OPERATION CURVE

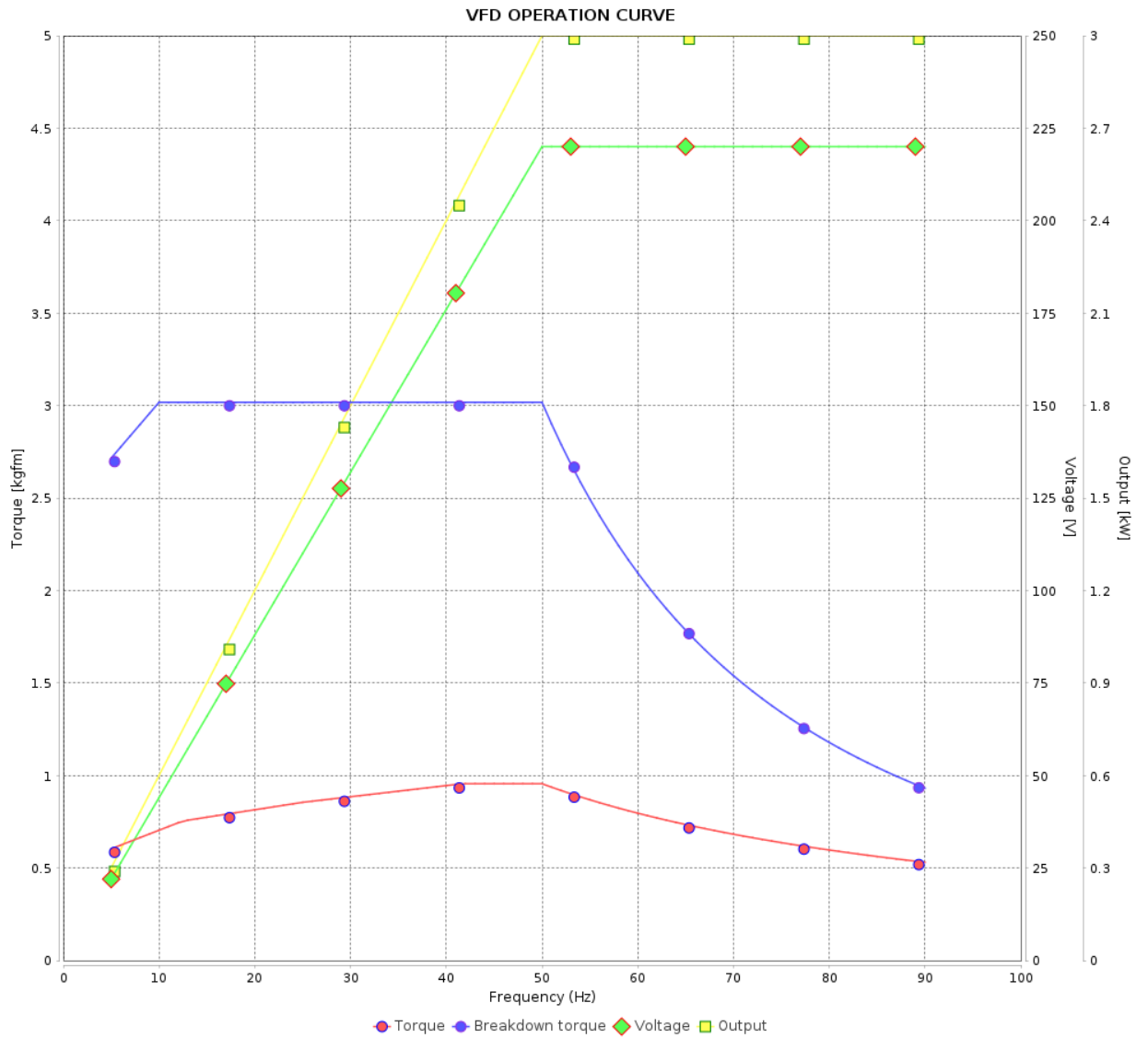
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : MULTIMOUNTING

Product code : 13043205



Performance : 220/380 V 50 Hz 2P

Rated current : 10.4/6.02 A  
 LRC : 7.5  
 Rated torque : 1.01 kgfm  
 Locked rotor torque : 220 %  
 Breakdown torque : 300 %  
 Rated speed : 2905 rpm

Moment of inertia (J) : 0.0064 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 15 / 18	Revision
Checked by				
Date	17/04/2023			

# VFD OPERATION CURVE

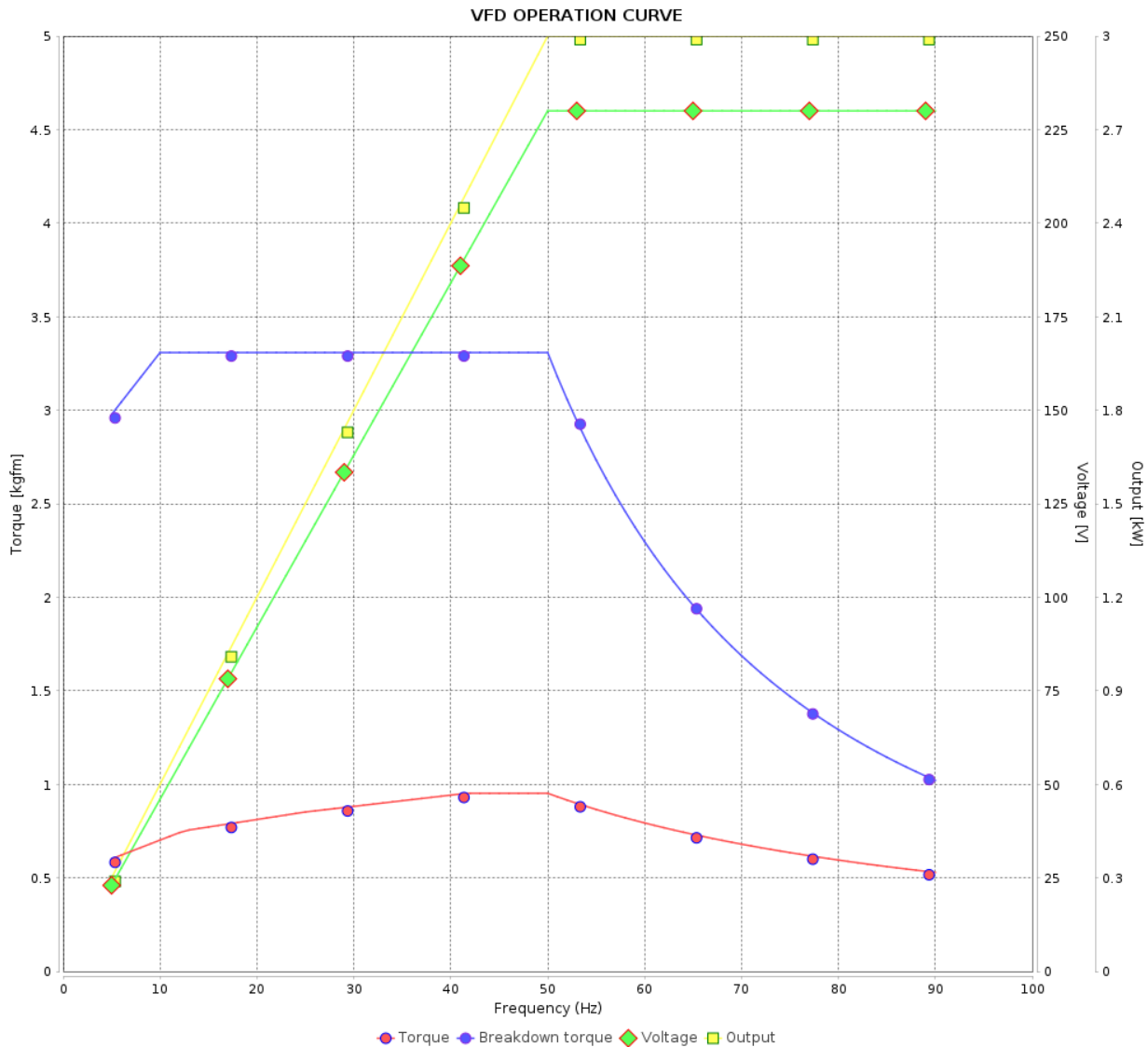
Three Phase Induction Motor - Squirrel Cage



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

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Performance : 230/400 V 50 Hz 2P

Rated current : 10.2/5.85 A  
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 Locked rotor torque : 240 %  
 Breakdown torque : 330 %  
 Rated speed : 2915 rpm

Moment of inertia (J) : 0.0064 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
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Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date				

# VFD OPERATION CURVE

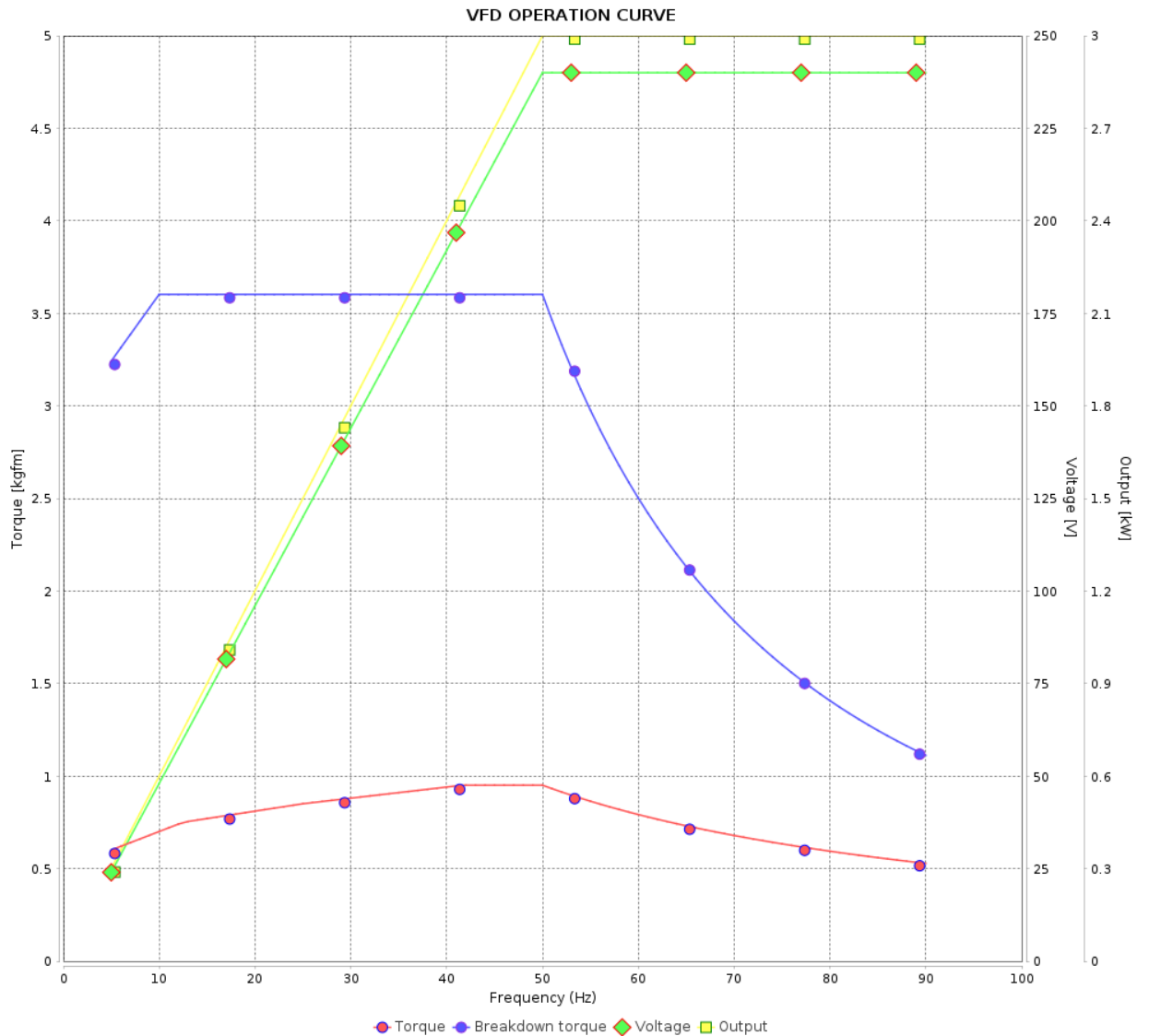
Three Phase Induction Motor - Squirrel Cage



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

Product line : MULTIMOUNTING

Product code : 13043205



Performance : 240/415 V 50 Hz 2P

Rated current : 9.98/5.77 A  
 LRC : 8.5  
 Rated torque : 1.00 kgfm  
 Locked rotor torque : 260 %  
 Breakdown torque : 360 %  
 Rated speed : 2920 rpm

Moment of inertia (J) : 0.0064 kgm<sup>2</sup>  
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 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		17 / 18		
Date	17/04/2023			

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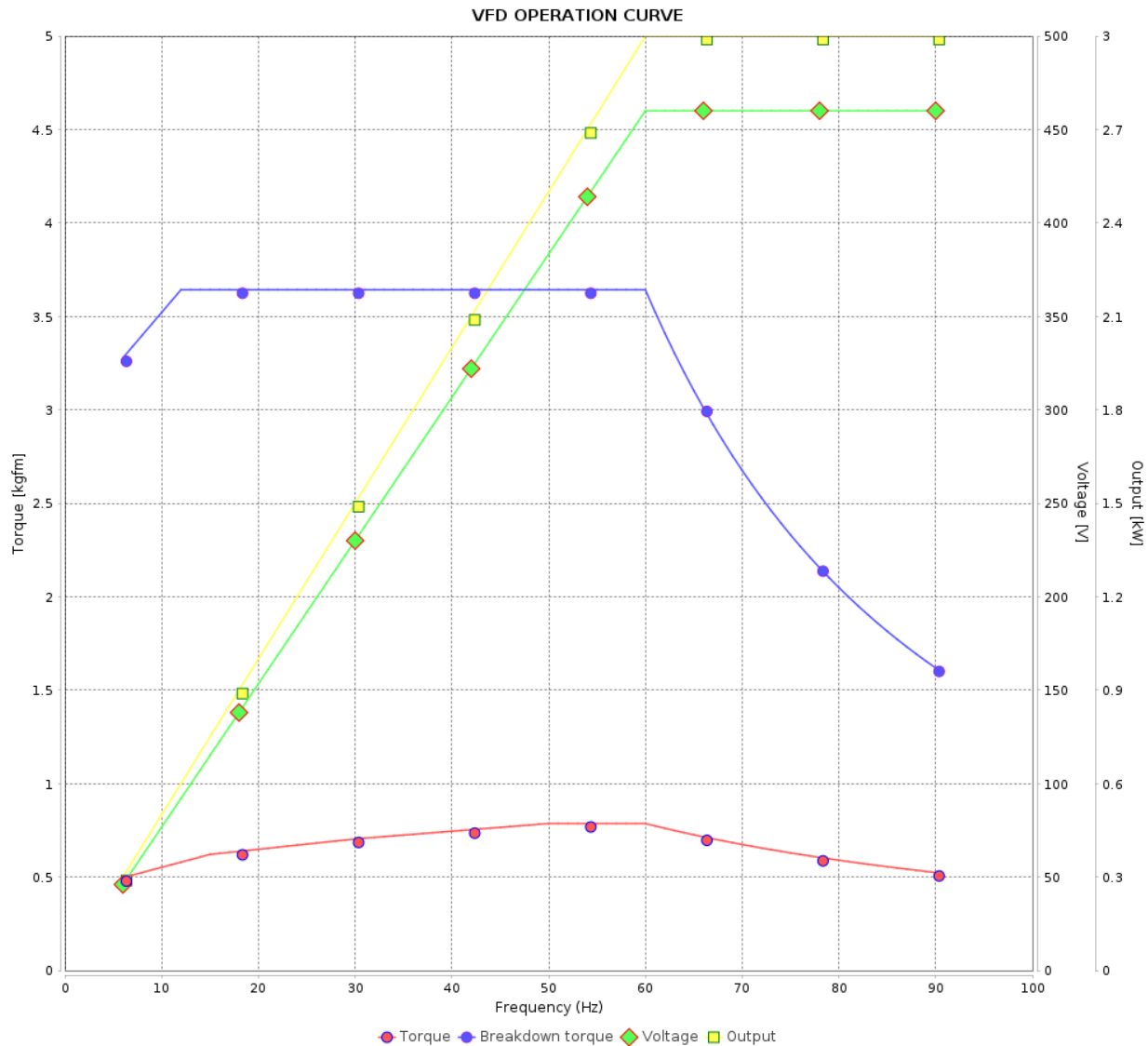
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LRC	: 9.3	Duty cycle	: S1
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Locked rotor torque	: 290 %	Service factor	: 1.00
Breakdown torque	: 440 %	Temperature rise	: 80 K
Rated speed	: 3530 rpm	Design	: N

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 18 / 18	Revision
Checked by				
Date	17/04/2023			