

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer		: Astraprom d.o.o.			
Product line		: IE3 Three-Phase		Product code : 12867466	
Frame	: L100L	Cooling method	: IC411 - TEFC		
Insulation class	: F	Mounting	: B3T		
Duty cycle	: 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	: 40.0 kg		
Protection degree	: IP55	Moment of inertia (J)	: 0.0120 kgm ²		
Design	: N				
Output [kW]	3	3	3	3	
Poles	4	4	4	4	
Frequency [Hz]	50	50	50	60	
Rated voltage [V]	220/380	230/400	240/415	460	
Rated current [A]	10.8/6.26	10.7/6.15	10.5/6.07	5.33	
L. R. Amperes [A]	84.3/48.8	83.4/48.0	87.1/50.4	51.2	
LRC [A]	7.8	7.8	8.3	9.6	
No load current [A]	5.18/3.00	5.74/3.30	6.23/3.60	3.00	
Rated speed [RPM]	1430	1440	1445	1740	
Slip [%]	4.67	4.00	3.67	3.33	
Rated torque [kgfm]	2.04	2.03	2.02	1.68	
Locked rotor torque [%]	350	390	430	459	
Breakdown torque [%]	280	320	360	390	
Service factor	1.00	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	
Noise level ²	53.0 dB(A)	53.0 dB(A)	53.0 dB(A)	54.0 dB(A)	
Efficiency (%)	25%				
	50%	87.7	87.0	86.3	84.0
	75%	88.0	88.0	87.7	86.5
	100%	87.7	88.0	88.1	89.5
Power Factor	25%				
	50%	0.65	0.60	0.56	0.59
	75%	0.77	0.73	0.70	0.71
	100%	0.83	0.80	0.78	0.79
Losses at normative operating points (speed;torque), in percentage of rated output power					
Losses (%)	P1 (0,9;1,0)	13.6	13.3	13.1	11.4
	P2 (0,5;1,0)	12.3	11.9	11.8	10.3
	P3 (0,25;1,0)	11.9	11.6	11.5	10.0
	P4 (0,9;0,5)	5.9	5.8	5.7	4.9
	P5 (0,5;0,5)	4.4	4.3	4.3	3.7
	P6 (0,5;0,25)	2.7	2.7	2.6	2.3
	P7 (0,25;0,25)	2.1	2.0	2.0	1.7
Bearing type	: Drive end 6206 ZZ	Non drive end 6205 ZZ	Foundation loads		
Sealing	: V'Ring	V'Ring	Max. traction	: 143 kgf	
Lubrication interval	: -	-	Max. compression	: 183 kgf	
Lubricant amount	: -	-			
Lubricant type	: Mobil Polyrex EM				
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	11/11/2022			1 / 19	

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Notes

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	11/11/2022		2 / 19	

DATA SHEET



Three Phase Induction Motor - Squirrel Cage

Customer : Astraprom d.o.o.

Thermal protection

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by				Page 3 / 19
Checked by				
Date	11/11/2022			
			Revision	

TORQUE AND CURRENT VS SPEED CURVE

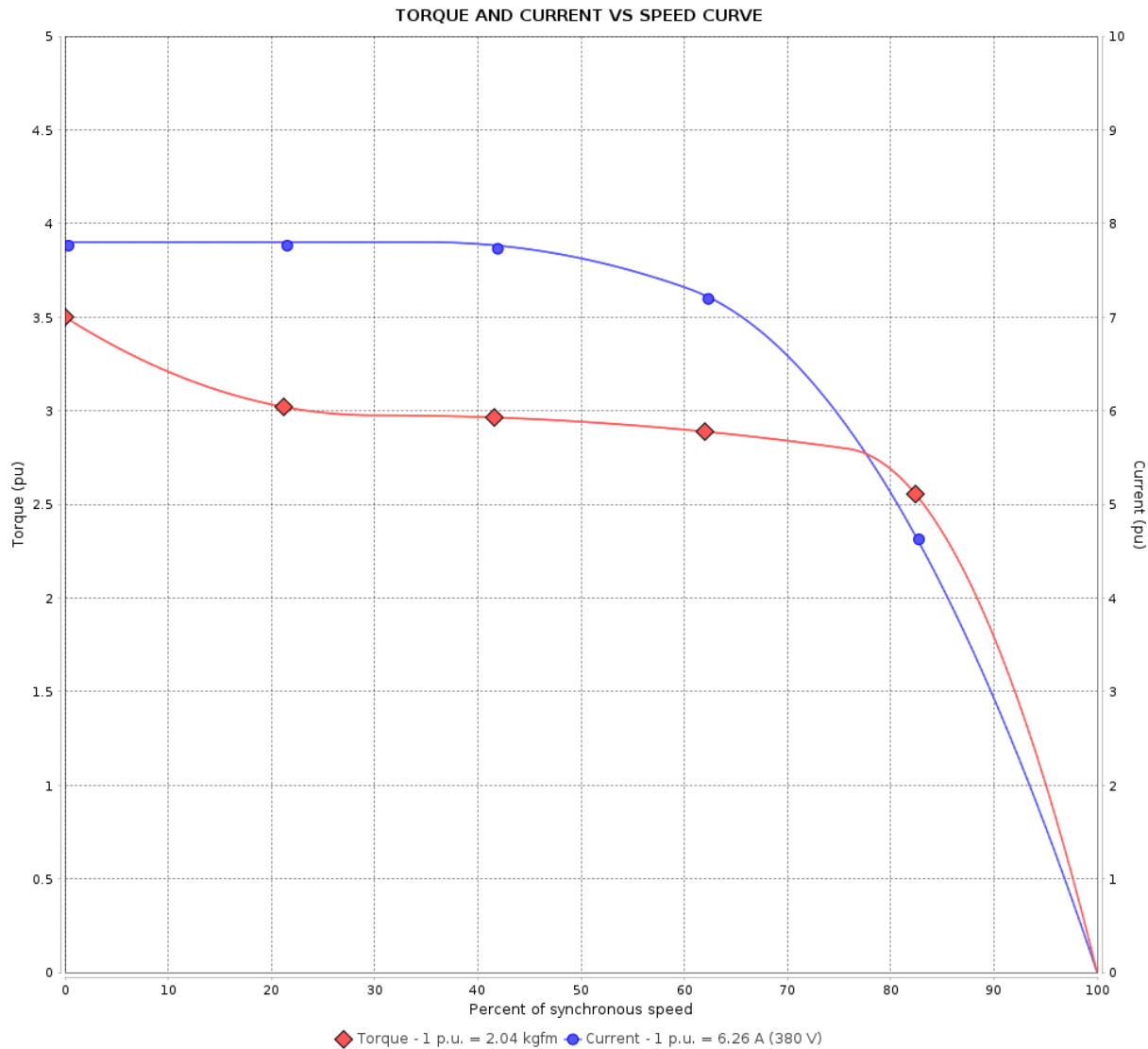
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE3 Three-Phase

Product code : 12867466



Performance : 220/380 V 50 Hz 4P

Rated current	: 10.8/6.26 A	Moment of inertia (J)	: 0.0120 kgm ²
LRC	: 7.8	Duty cycle	: S1
Rated torque	: 2.04 kgfm	Insulation class	: F
Locked rotor torque	: 350 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 1430 rpm	Design	: N

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		4 / 19		
Date	11/11/2022			

TORQUE AND CURRENT VS SPEED CURVE

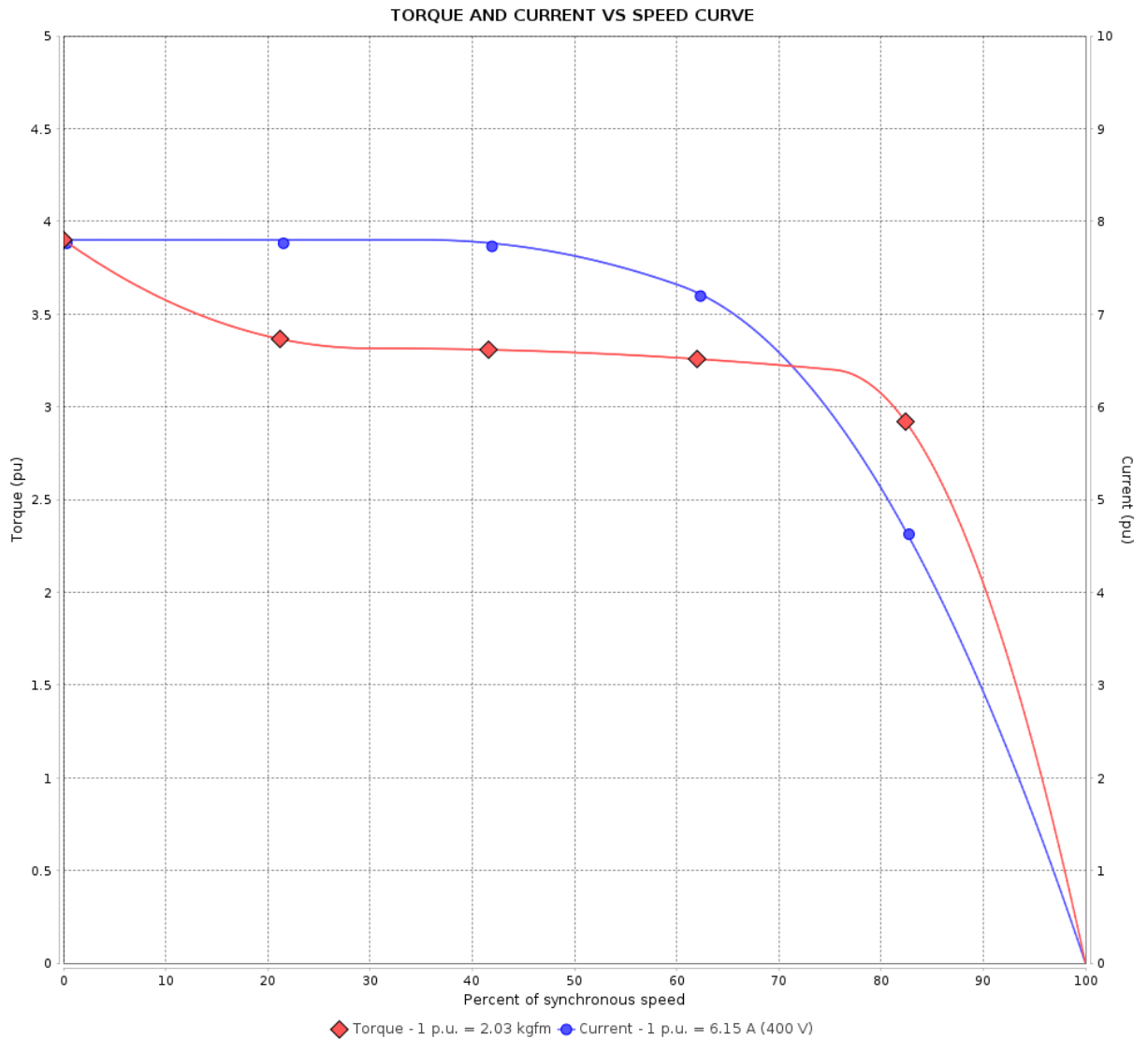


Three Phase Induction Motor - Squirrel Cage

Customer : Astraprom d.o.o.

Product line : IE3 Three-Phase

Product code : 12867466



Performance : 230/400 V 50 Hz 4P

Rated current	: 10.7/6.15 A	Moment of inertia (J)	: 0.0120 kgm ²
LRC	: 7.8	Duty cycle	: S1
Rated torque	: 2.03 kgfm	Insulation class	: F
Locked rotor torque	: 390 %	Service factor	: 1.00
Breakdown torque	: 320 %	Temperature rise	: 80 K
Rated speed	: 1440 rpm	Design	: N

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by			5 / 19	
Date	11/11/2022			

TORQUE AND CURRENT VS SPEED CURVE

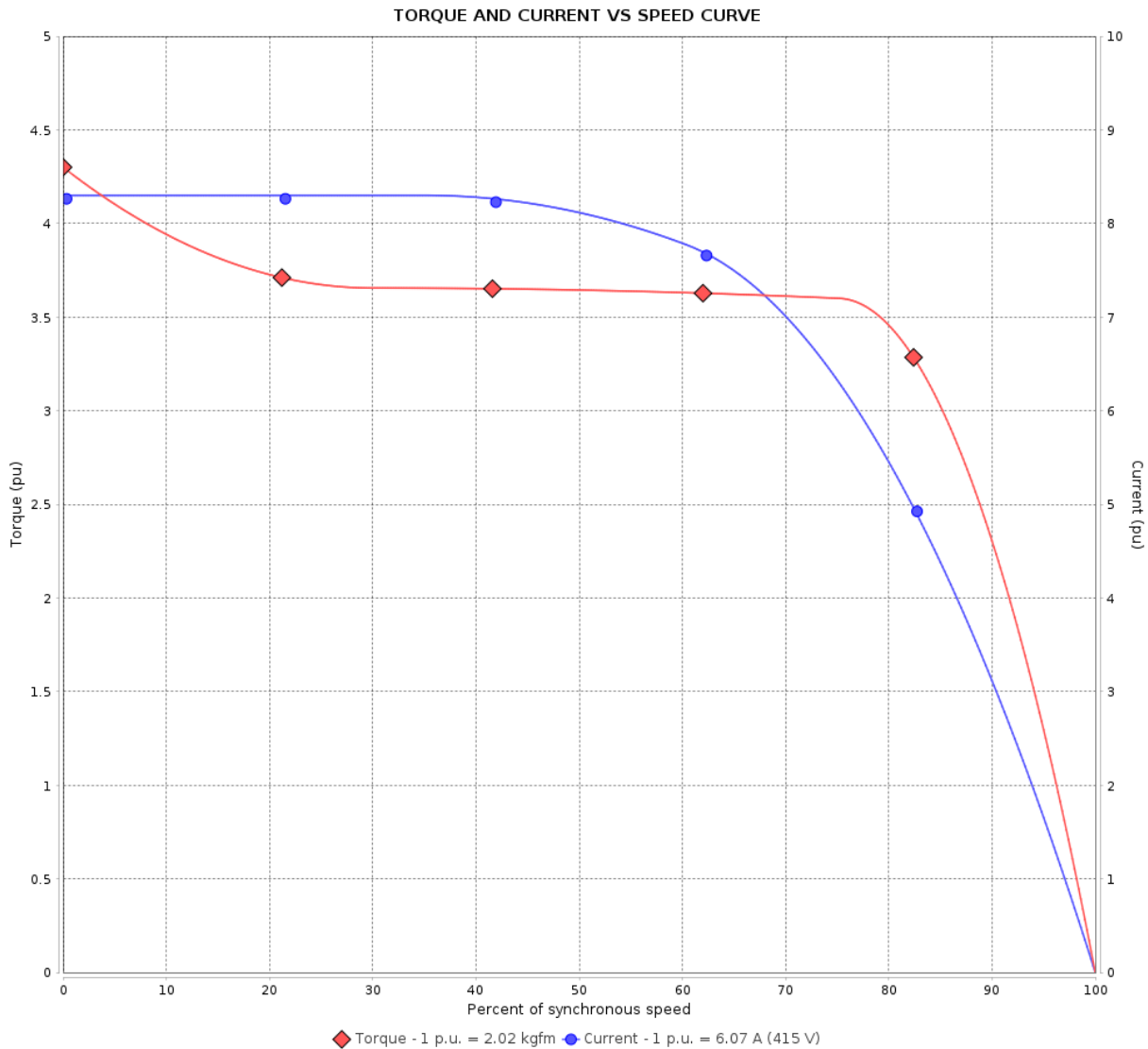
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE3 Three-Phase

Product code : 12867466



Performance : 240/415 V 50 Hz 4P

Rated current	: 10.5/6.07 A	Moment of inertia (J)	: 0.0120 kgm ²
LRC	: 8.3	Duty cycle	: S1
Rated torque	: 2.02 kgfm	Insulation class	: F
Locked rotor torque	: 430 %	Service factor	: 1.00
Breakdown torque	: 360 %	Temperature rise	: 80 K
Rated speed	: 1445 rpm	Design	: N

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 6 / 19	Revision
Checked by				
Date	11/11/2022			

TORQUE AND CURRENT VS SPEED CURVE

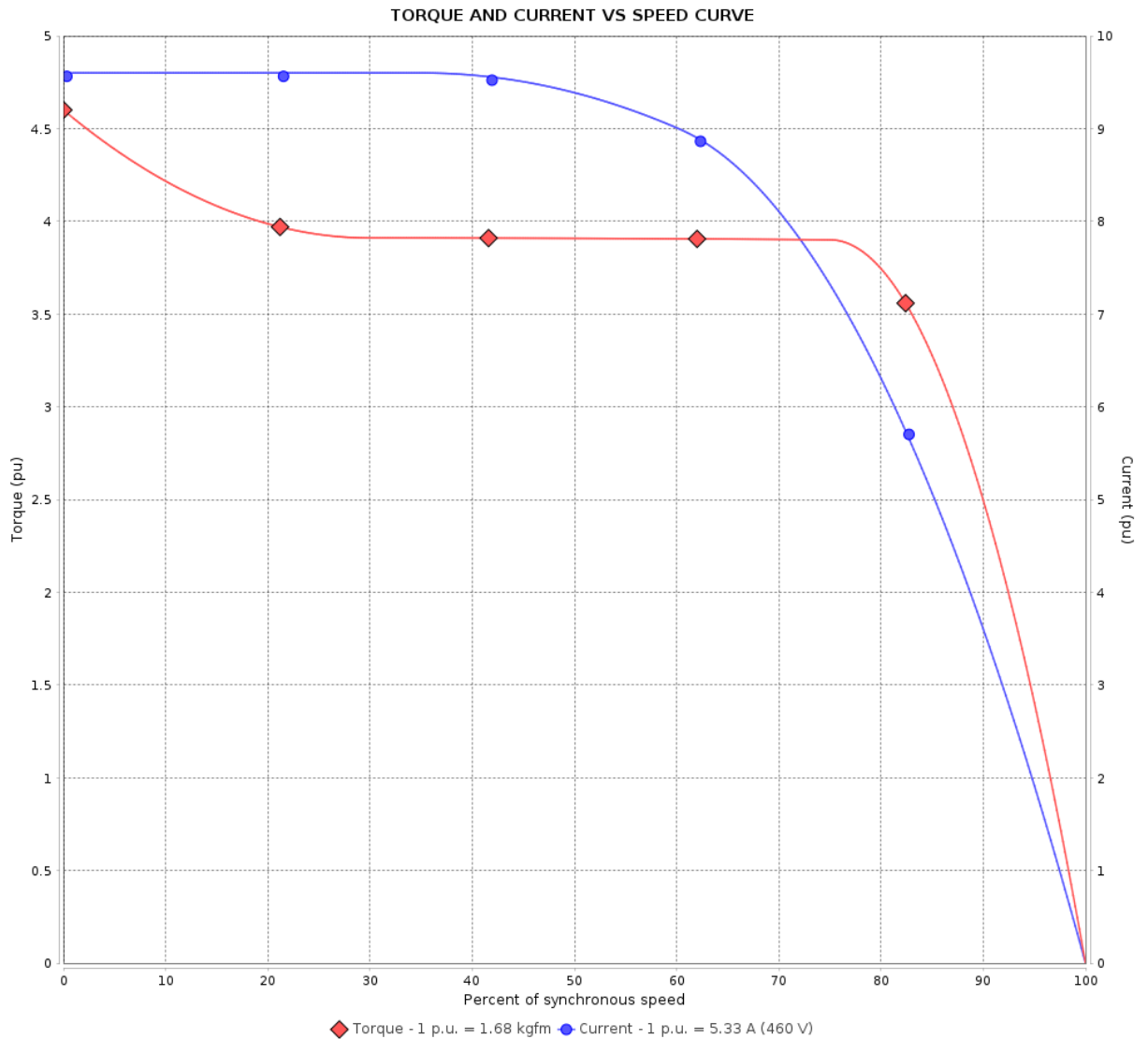


Three Phase Induction Motor - Squirrel Cage

Customer : Astraprom d.o.o.

Product line : IE3 Three-Phase

Product code : 12867466



Performance : 460 V 60 Hz 4P

Rated current	: 5.33 A	Moment of inertia (J)	: 0.0120 kgm ²
LRC	: 9.6	Duty cycle	: S1
Rated torque	: 1.68 kgfm	Insulation class	: F
Locked rotor torque	: 459 %	Service factor	: 1.00
Breakdown torque	: 390 %	Temperature rise	: 80 K
Rated speed	: 1740 rpm	Design	: N

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 7 / 19	Revision
Checked by				
Date	11/11/2022			

LOAD PERFORMANCE CURVE

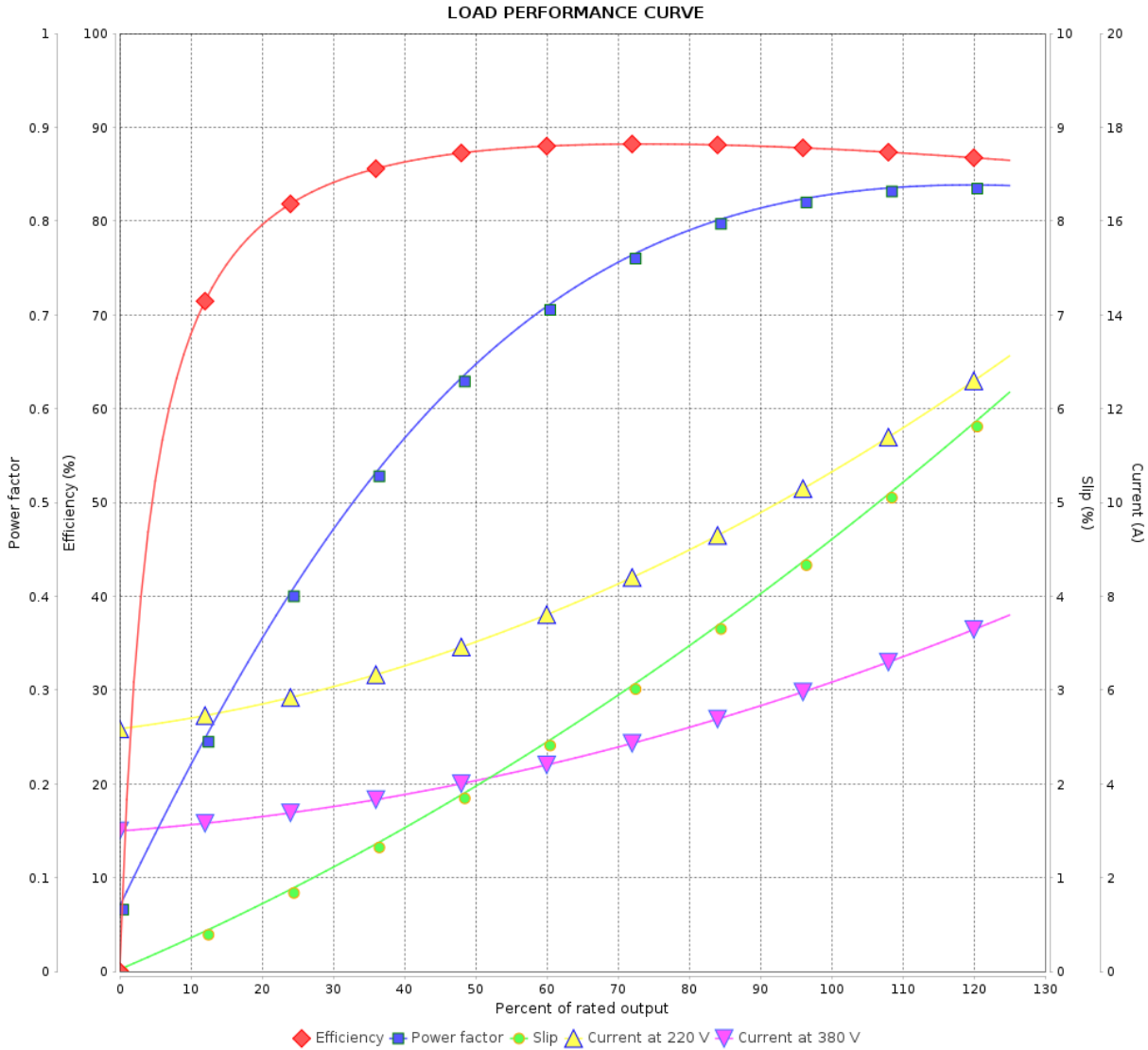
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE3 Three-Phase

Product code : 12867466



Performance : 220/380 V 50 Hz 4P

Rated current : 10.8/6.26 A
 LRC : 7.8
 Rated torque : 2.04 kgfm
 Locked rotor torque : 350 %
 Breakdown torque : 280 %
 Rated speed : 1430 rpm

Moment of inertia (J) : 0.0120 kgm²
 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

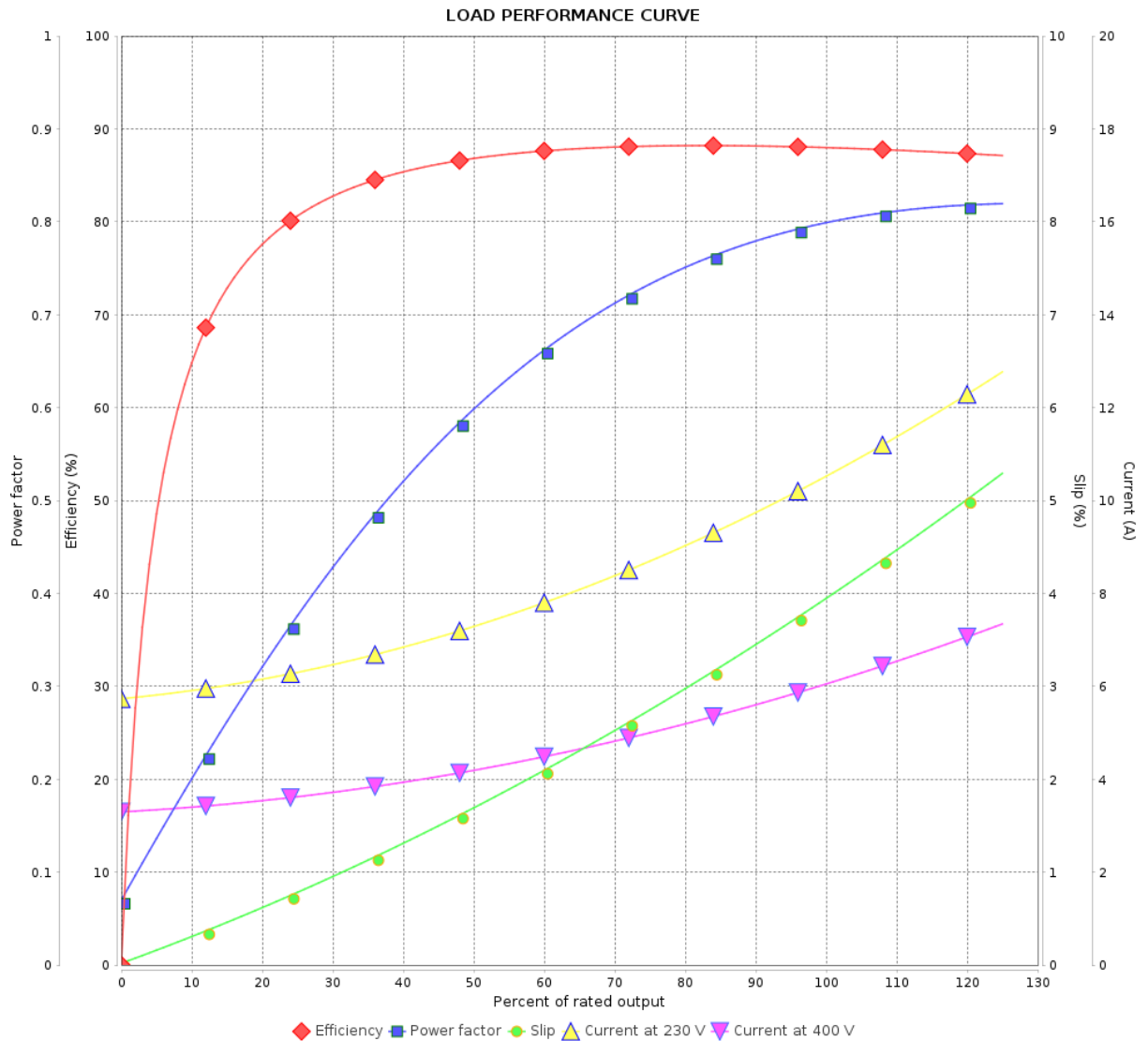
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE3 Three-Phase

Product code : 12867466



Performance : 230/400 V 50 Hz 4P

Rated current : 10.7/6.15 A
 LRC : 7.8
 Rated torque : 2.03 kgfm
 Locked rotor torque : 390 %
 Breakdown torque : 320 %
 Rated speed : 1440 rpm

Moment of inertia (J) : 0.0120 kgm²
 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

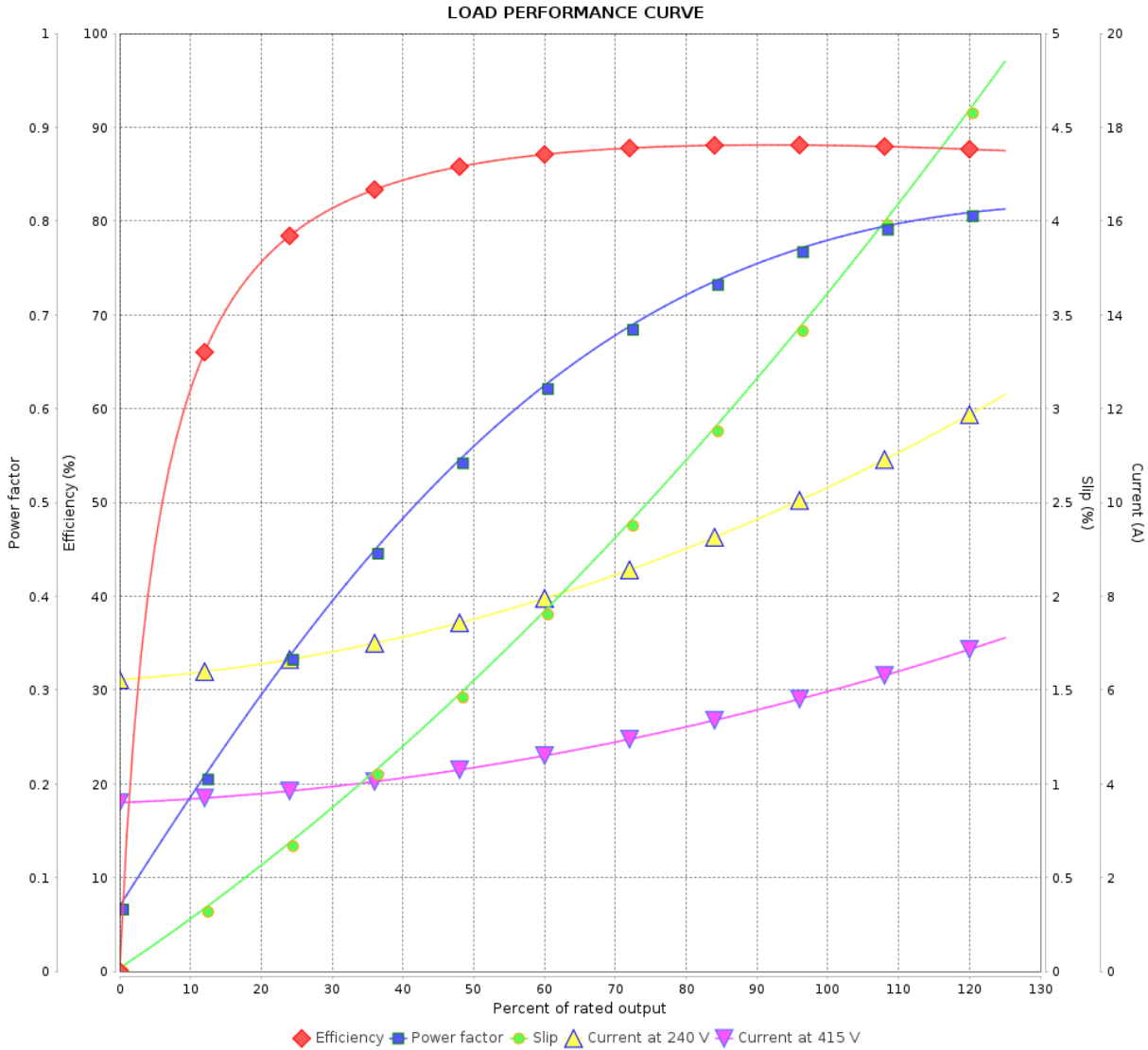
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE3 Three-Phase

Product code : 12867466



Performance : 240/415 V 50 Hz 4P

Rated current : 10.5/6.07 A
 LRC : 8.3
 Rated torque : 2.02 kgfm
 Locked rotor torque : 430 %
 Breakdown torque : 360 %
 Rated speed : 1445 rpm

Moment of inertia (J) : 0.0120 kgm²
 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			10 / 19	
Date	11/11/2022			

LOAD PERFORMANCE CURVE

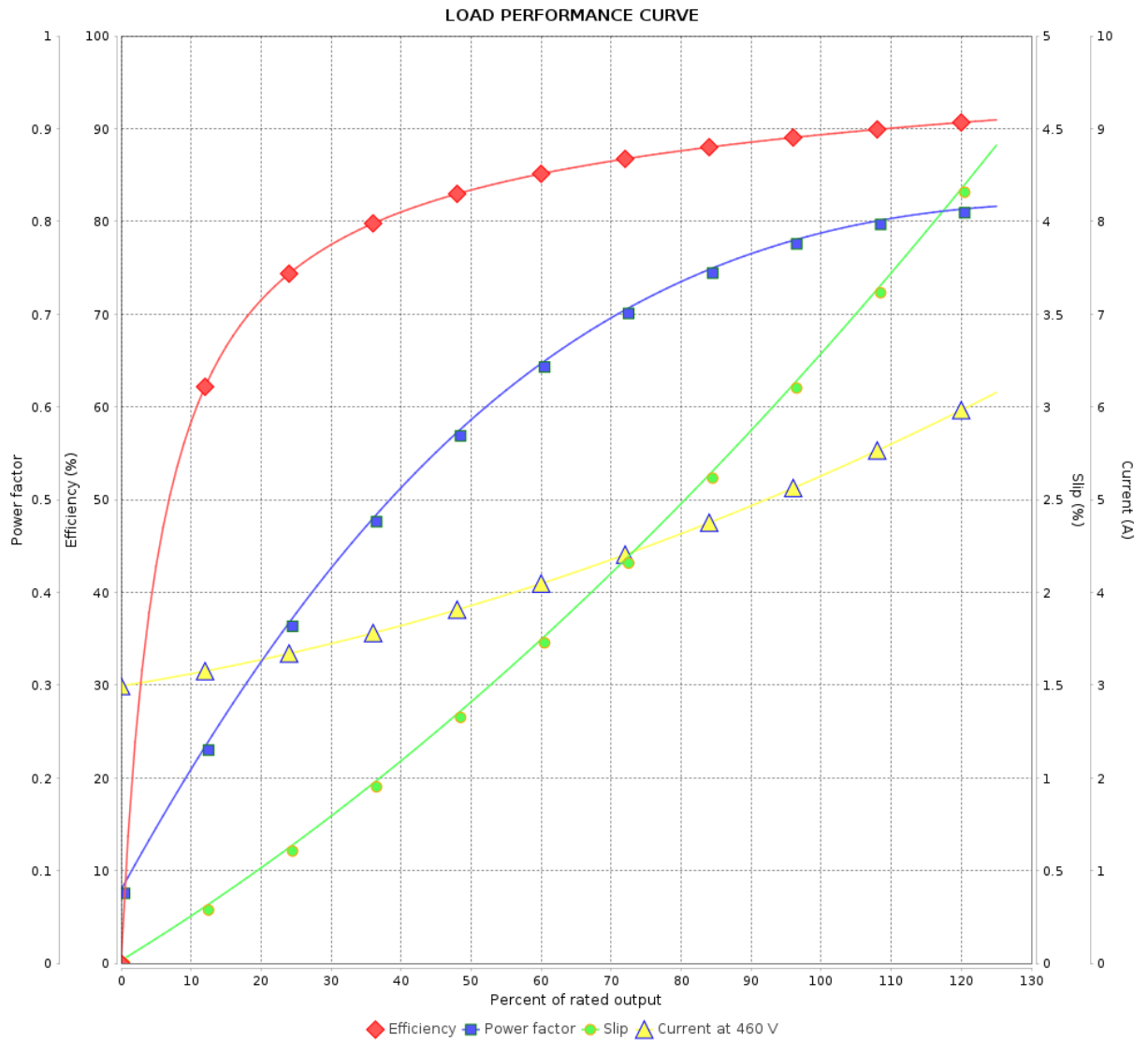
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE3 Three-Phase

Product code : 12867466



Performance : 460 V 60 Hz 4P

Rated current : 5.33 A
 LRC : 9.6
 Rated torque : 1.68 kgfm
 Locked rotor torque : 459 %
 Breakdown torque : 390 %
 Rated speed : 1740 rpm

Moment of inertia (J) : 0.0120 kgm²
 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		11 / 19		
Date		11/11/2022		

THERMAL LIMIT CURVE

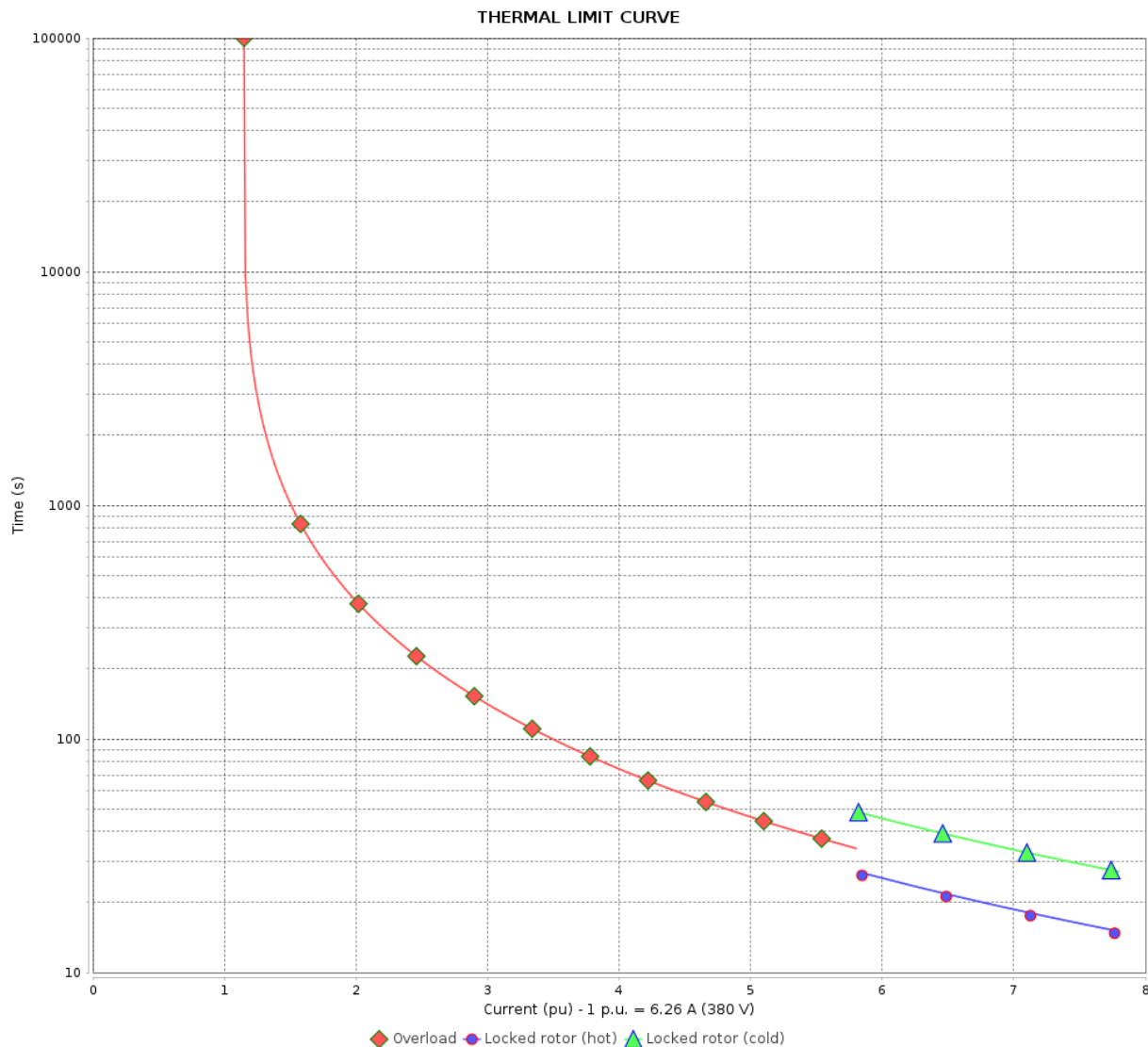
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE3 Three-Phase

Product code : 12867466



Performance : 220/380 V 50 Hz 4P

Rated current : 10.8/6.26 A
 LRC : 7.8
 Rated torque : 2.04 kgfm
 Locked rotor torque : 350 %
 Breakdown torque : 280 %
 Rated speed : 1430 rpm

Moment of inertia (J) : 0.0120 kgm²
 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 / 19	Revision
Checked by				
Date	11/11/2022			

THERMAL LIMIT CURVE

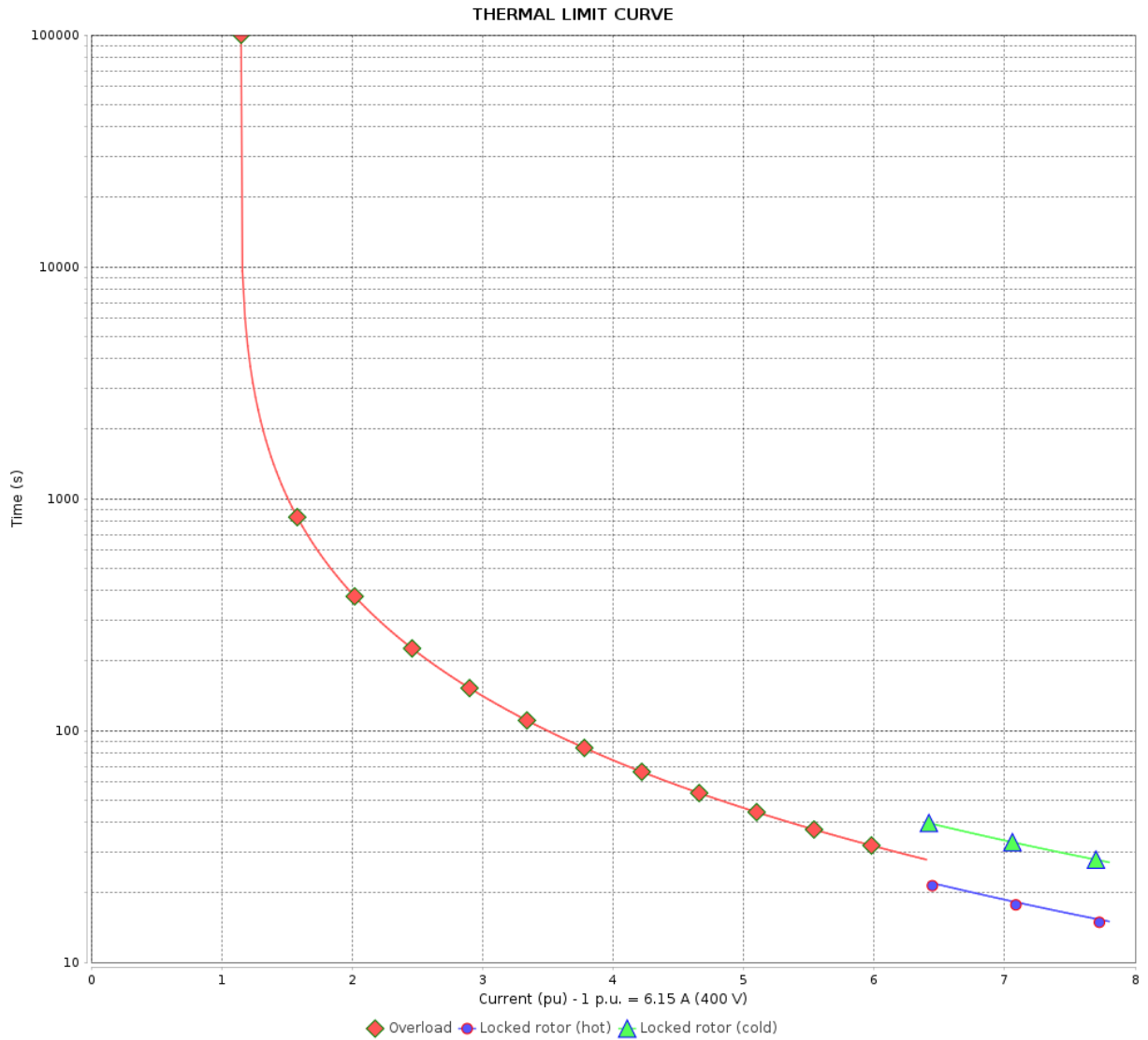
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE3 Three-Phase

Product code : 12867466



Performance : 230/400 V 50 Hz 4P

Rated current : 10.7/6.15 A
 LRC : 7.8
 Rated torque : 2.03 kgfm
 Locked rotor torque : 390 %
 Breakdown torque : 320 %
 Rated speed : 1440 rpm

Moment of inertia (J) : 0.0120 kgm²
 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				
Date				

THERMAL LIMIT CURVE

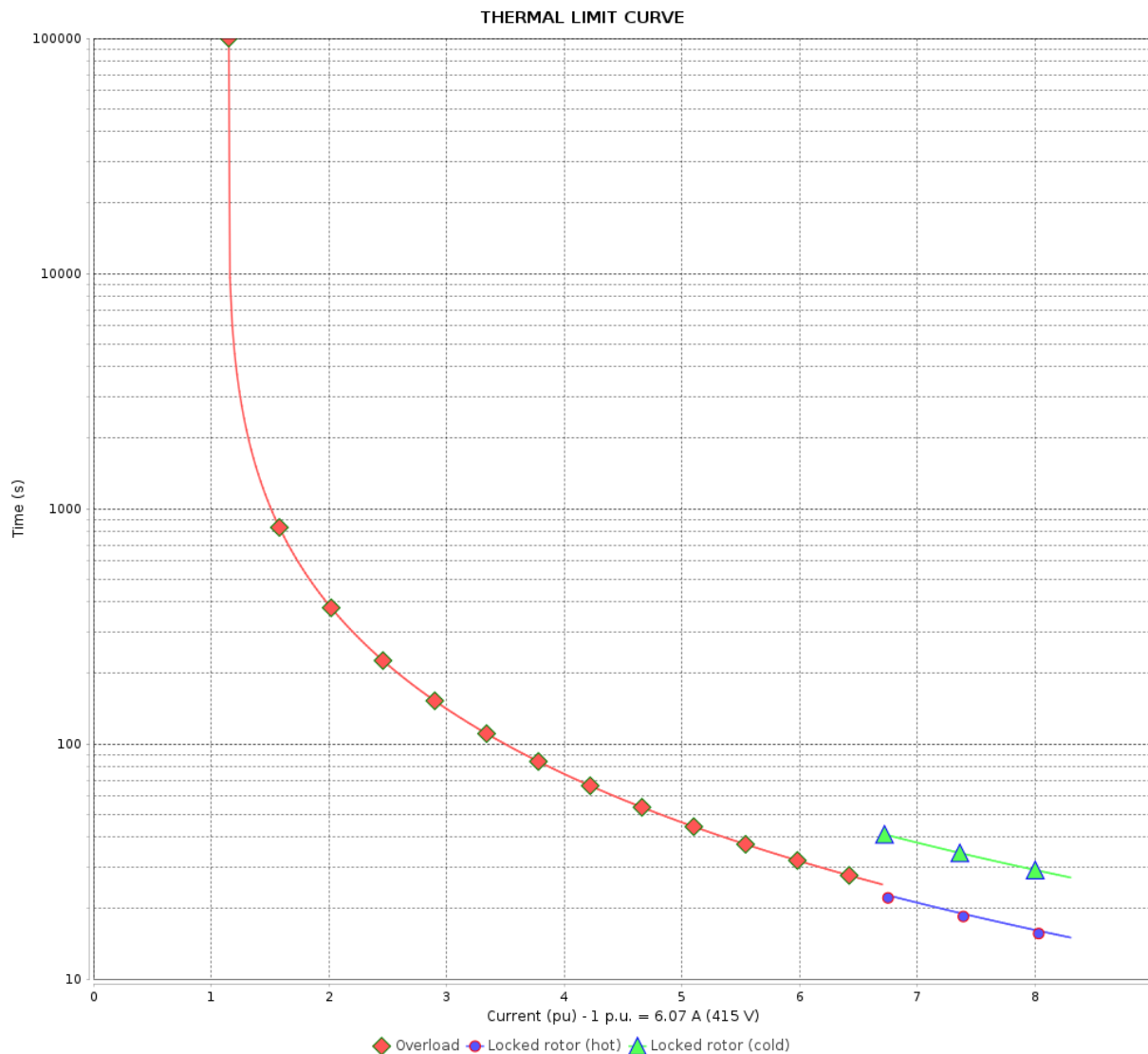
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE3 Three-Phase

Product code : 12867466



Performance : 240/415 V 50 Hz 4P

Rated current : 10.5/6.07 A
 LRC : 8.3
 Rated torque : 2.02 kgfm
 Locked rotor torque : 430 %
 Breakdown torque : 360 %
 Rated speed : 1445 rpm

Moment of inertia (J) : 0.0120 kgm²
 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	
		14 / 19		

THERMAL LIMIT CURVE

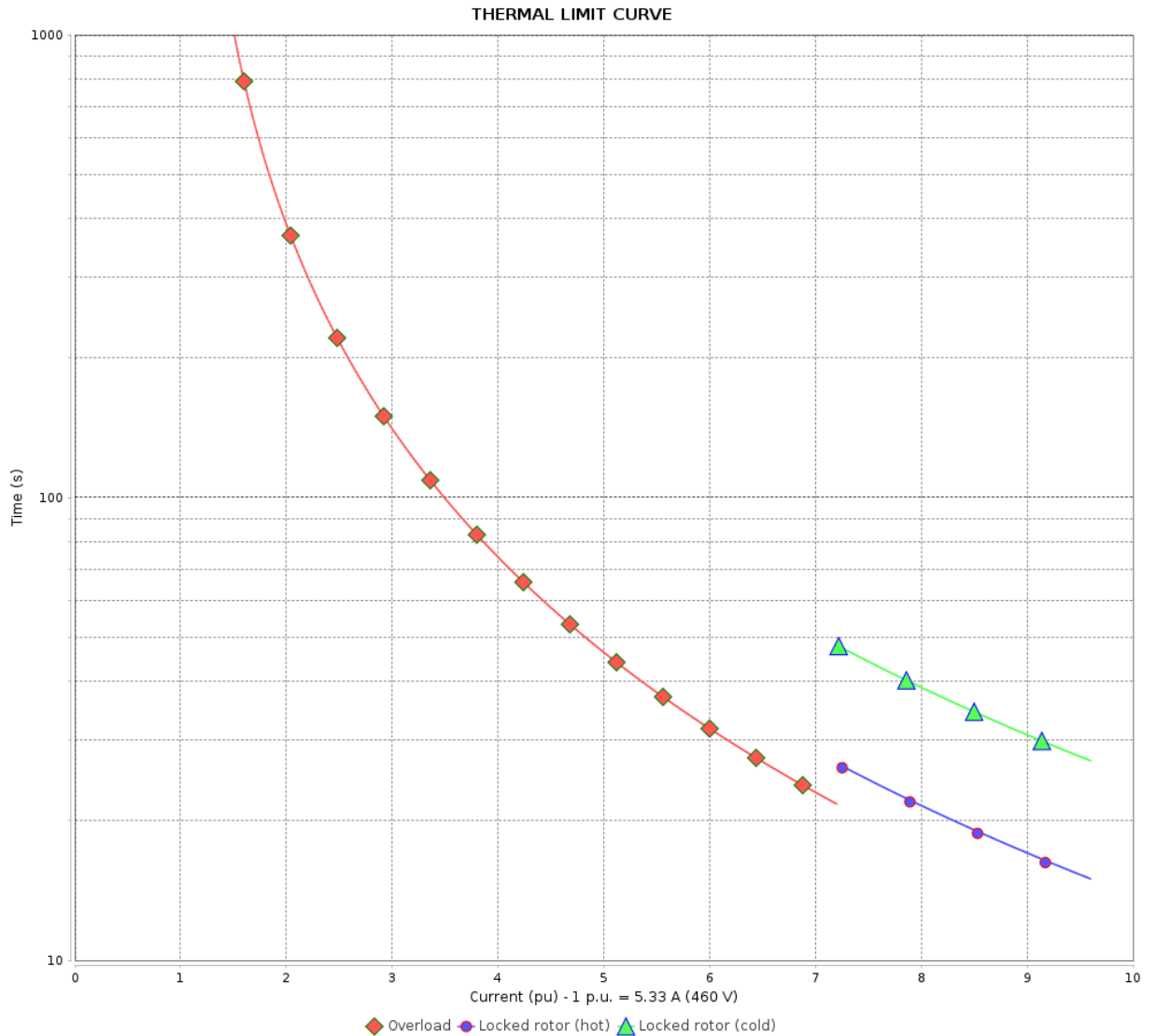
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE3 Three-Phase

Product code : 12867466



Performance : 460 V 60 Hz 4P

Rated current : 5.33 A
 LRC : 9.6
 Rated torque : 1.68 kgfm
 Locked rotor torque : 459 %
 Breakdown torque : 390 %
 Rated speed : 1740 rpm

Moment of inertia (J) : 0.0120 kgm²
 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	
		15 / 19		

VFD OPERATION CURVE

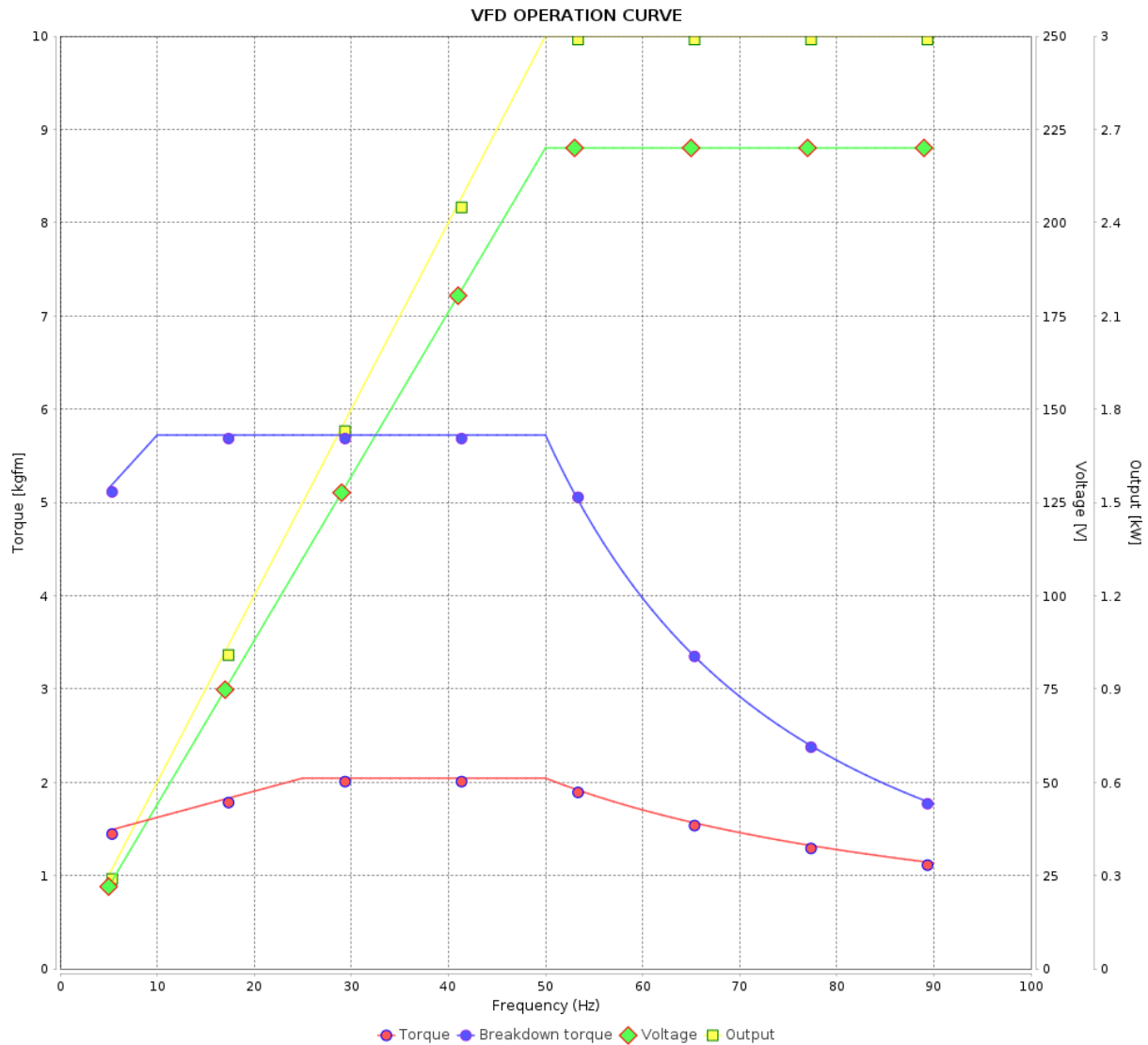
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE3 Three-Phase

Product code : 12867466



Performance : 220/380 V 50 Hz 4P

Rated current : 10.8/6.26 A
 LRC : 7.8
 Rated torque : 2.04 kgfm
 Locked rotor torque : 350 %
 Breakdown torque : 280 %
 Rated speed : 1430 rpm

Moment of inertia (J) : 0.0120 kgm²
 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 16 / 19	Revision
Checked by				
Date	11/11/2022			

VFD OPERATION CURVE

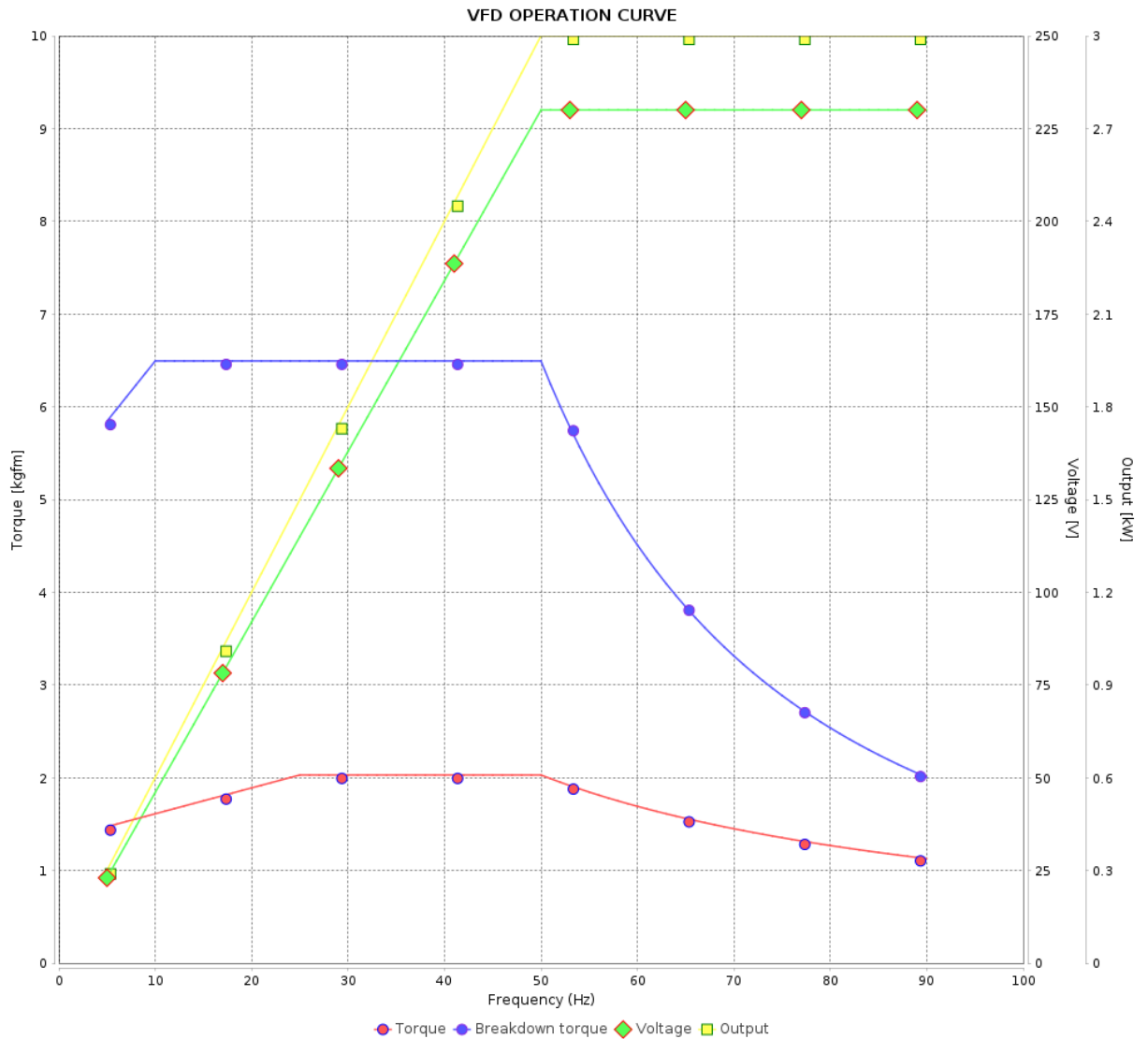
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE3 Three-Phase

Product code : 12867466



Performance : 230/400 V 50 Hz 4P

Rated current : 10.7/6.15 A
 LRC : 7.8
 Rated torque : 2.03 kgfm
 Locked rotor torque : 390 %
 Breakdown torque : 320 %
 Rated speed : 1440 rpm

Moment of inertia (J) : 0.0120 kgm²
 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 17 / 19	Revision
Checked by				
Date	11/11/2022			

VFD OPERATION CURVE

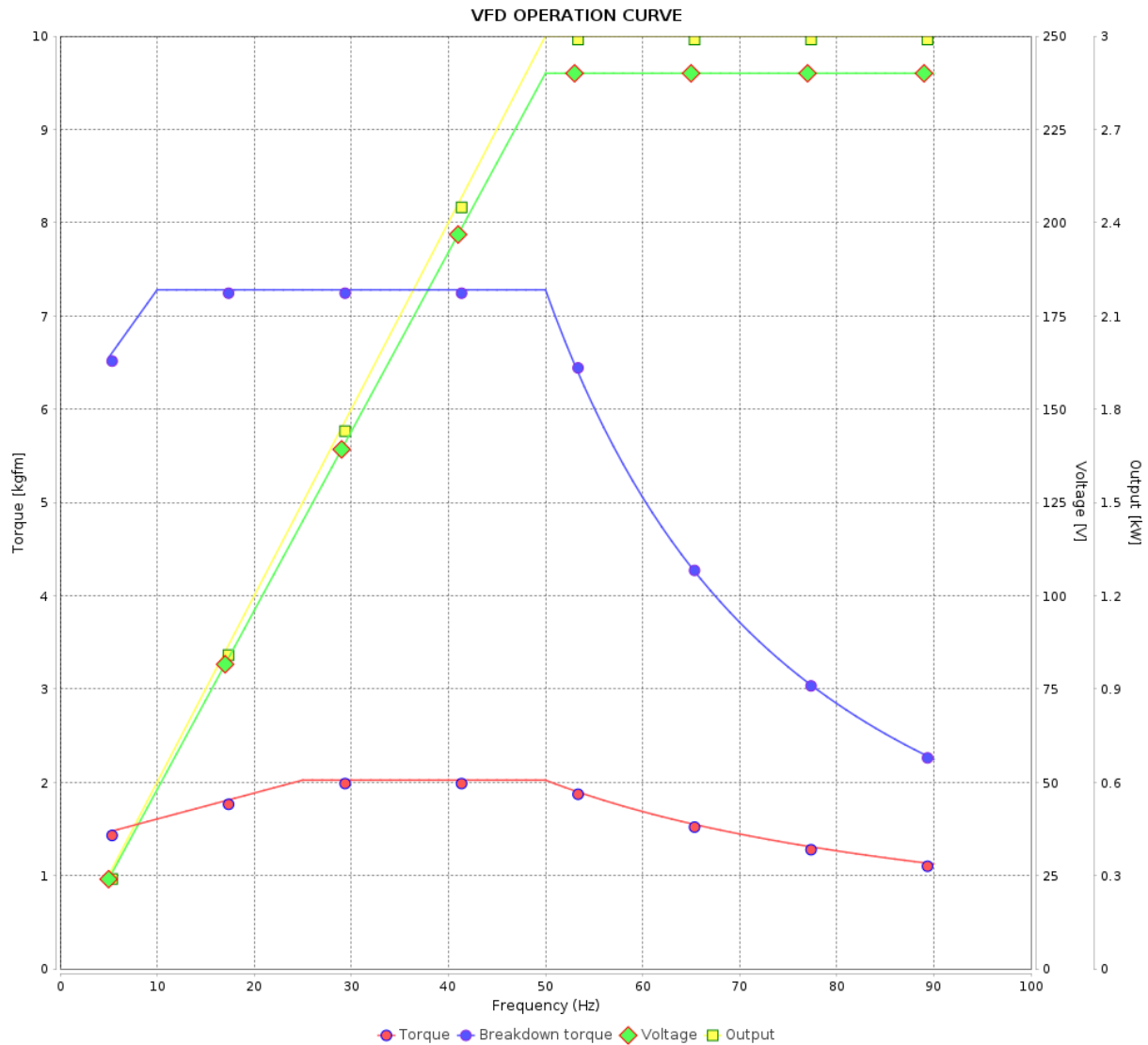
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE3 Three-Phase

Product code : 12867466



Performance : 240/415 V 50 Hz 4P

Rated current : 10.5/6.07 A
 LRC : 8.3
 Rated torque : 2.02 kgfm
 Locked rotor torque : 430 %
 Breakdown torque : 360 %
 Rated speed : 1445 rpm

Moment of inertia (J) : 0.0120 kgm²
 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 18 / 19	Revision
Checked by				
Date	11/11/2022			

VFD OPERATION CURVE

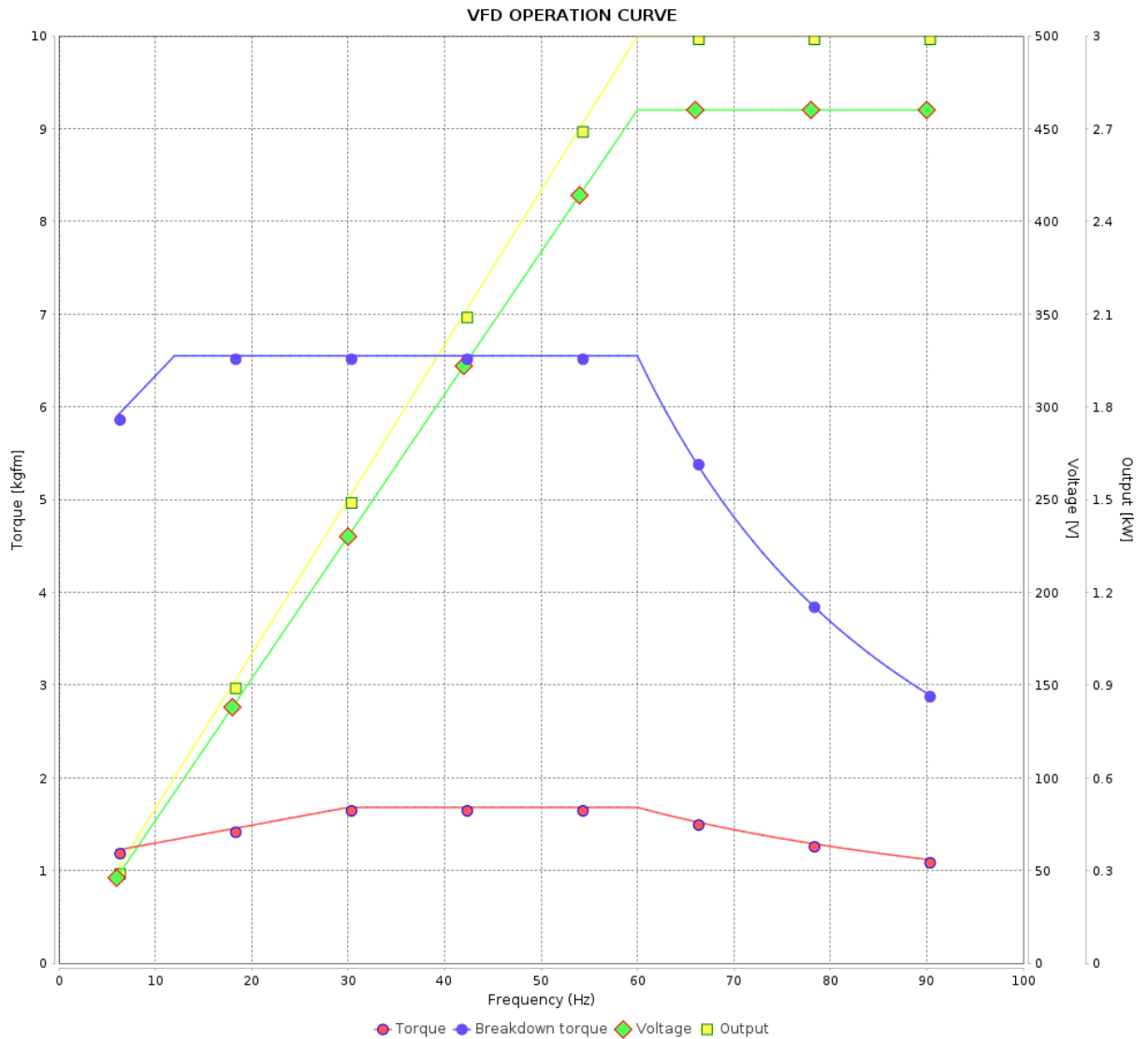
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE3 Three-Phase

Product code : 12867466



Performance : 460 V 60 Hz 4P

Rated current	: 5.33 A	Moment of inertia (J)	: 0.0120 kgm ²
LRC	: 9.6	Duty cycle	: S1
Rated torque	: 1.68 kgfm	Insulation class	: F
Locked rotor torque	: 459 %	Service factor	: 1.00
Breakdown torque	: 390 %	Temperature rise	: 80 K
Rated speed	: 1740 rpm	Design	: N

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 19 / 19	Revision
Checked by				
Date	11/11/2022			