

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer		: Astraprom d.o.o.			
Product line		: IE2 Three-Phase		Product code : 11692824	
Frame	: 63	Cooling method	: IC411 - TEFC		
Insulation class	: F	Mounting	: B14T		
Duty cycle	: S1	Rotation <sup>1</sup>	: Both (CW and CCW)		
Ambient temperature	: -20°C to +40°C	Starting method	: Direct On Line		
Altitude	: 1000 m.a.s.l.	Approx. weight <sup>3</sup>	: 6.2 kg		
Protection degree	: IP55	Moment of inertia (J)	: 0.0002 kgm <sup>2</sup>		
Design	: N				
Output [kW]	0.25	0.25	0.25	0.25	0.25
Poles	2	2	2	2	2
Frequency [Hz]	50	50	50	50	60
Rated voltage [V]	220/380	230/400	240/415	460	
Rated current [A]	1.20/0.696	1.21/0.694	1.22/0.706	0.607	
L. R. Amperes [A]	5.05/2.92	5.31/3.05	5.62/3.25	3.28	
LRC [A]	4.2	4.4	4.6	5.4	
No load current [A]	0.777/0.450	0.870/0.500	0.968/0.560	0.450	
Rated speed [RPM]	2750	2780	2800	3415	
Slip [%]	8.33	7.33	6.67	5.14	
Rated torque [kgfm]	0.089	0.088	0.087	0.071	
Locked rotor torque [%]	200	220	240	280	
Breakdown torque [%]	200	220	240	290	
Service factor	1.00	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	19s (cold) 11s (hot)	19s (cold) 11s (hot)	19s (cold) 11s (hot)	19s (cold) 11s (hot)	
Noise level <sup>2</sup>	52.0 dB(A)	52.0 dB(A)	52.0 dB(A)	56.0 dB(A)	
Efficiency (%)	25%				
	50%	60.3	58.0	55.9	57.5
	75%	64.1	63.0	61.7	63.0
	100%	65.0	65.0	64.8	68.0
Power Factor	25%				
	50%	0.63	0.57	0.53	0.56
	75%	0.76	0.70	0.66	0.67
	100%	0.84	0.80	0.76	0.76
Losses at normative operating points (speed;torque), in percentage of rated output power					
Losses (%)	P1 (0,9;1,0)	55.0	55.0	55.5	48.1
	P2 (0,5;1,0)	53.5	53.5	53.9	46.7
	P3 (0,25;1,0)	49.3	49.3	49.8	43.1
	P4 (0,9;0,5)	30.7	30.7	30.9	26.8
	P5 (0,5;0,5)	21.8	21.8	22.0	19.0
	P6 (0,5;0,25)	17.2	17.2	17.3	15.0
	P7 (0,25;0,25)	11.6	11.6	11.7	10.2
Bearing type	: Drive end 6201 ZZ	Non drive end 6201 ZZ	Foundation loads		
Sealing	: Lip Seal	Lip Seal	Max. traction	: 5 kgf	
Lubrication interval	: -	-	Max. compression	: 11 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.		
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## Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Notes

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# TORQUE AND CURRENT VS SPEED CURVE

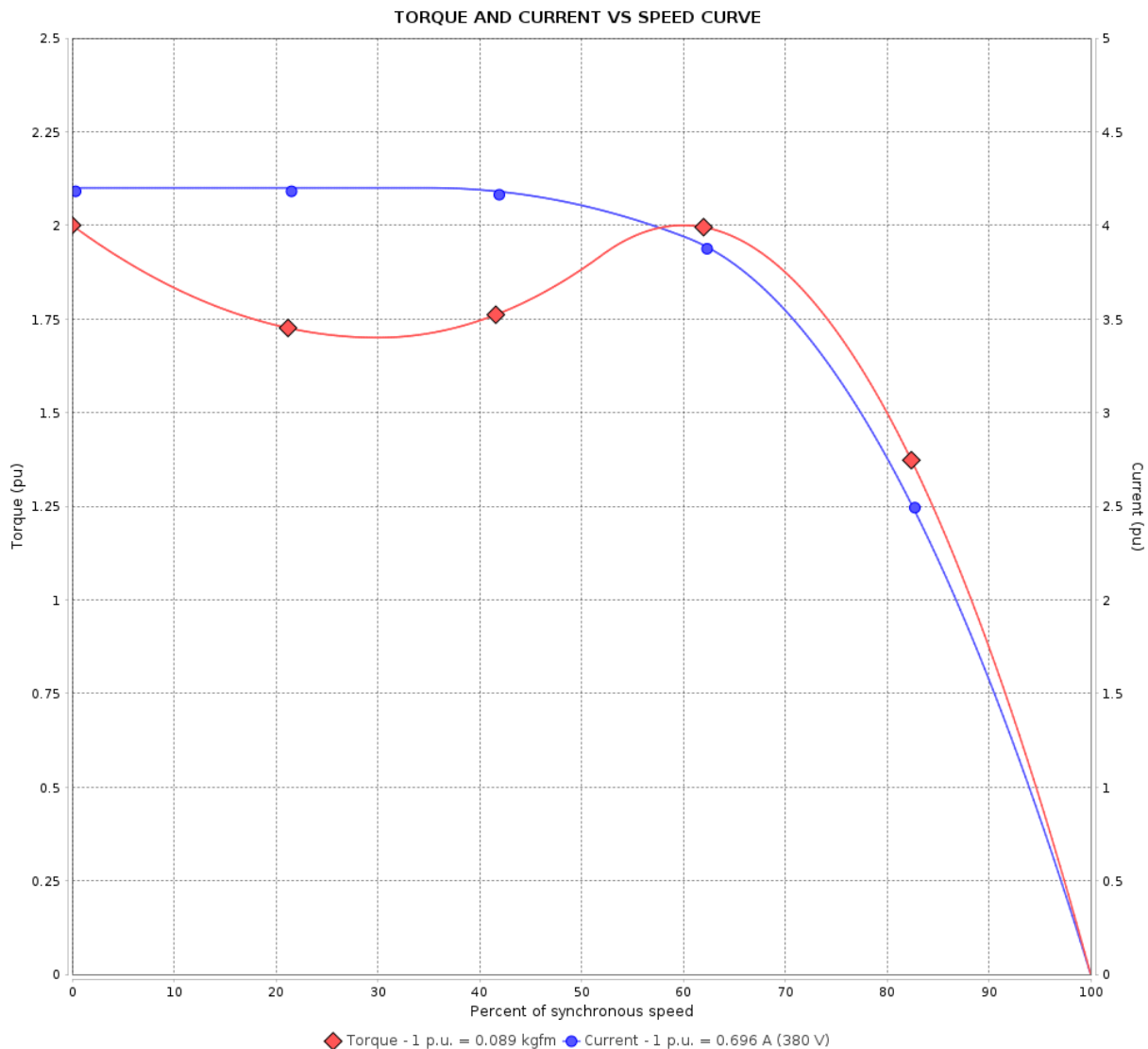


## Three Phase Induction Motor - Squirrel Cage

Customer : Astraprom d.o.o.

Product line : IE2 Three-Phase

Product code : 11692824



Performance : 220/380 V 50 Hz 2P

Rated current	: 1.20/0.696 A	Moment of inertia (J)	: 0.0002 kgm <sup>2</sup>
LRC	: 4.2	Duty cycle	: S1
Rated torque	: 0.089 kgfm	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 80 K
Rated speed	: 2750 rpm	Design	: N

Locked rotor time : 19s (cold) 11s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

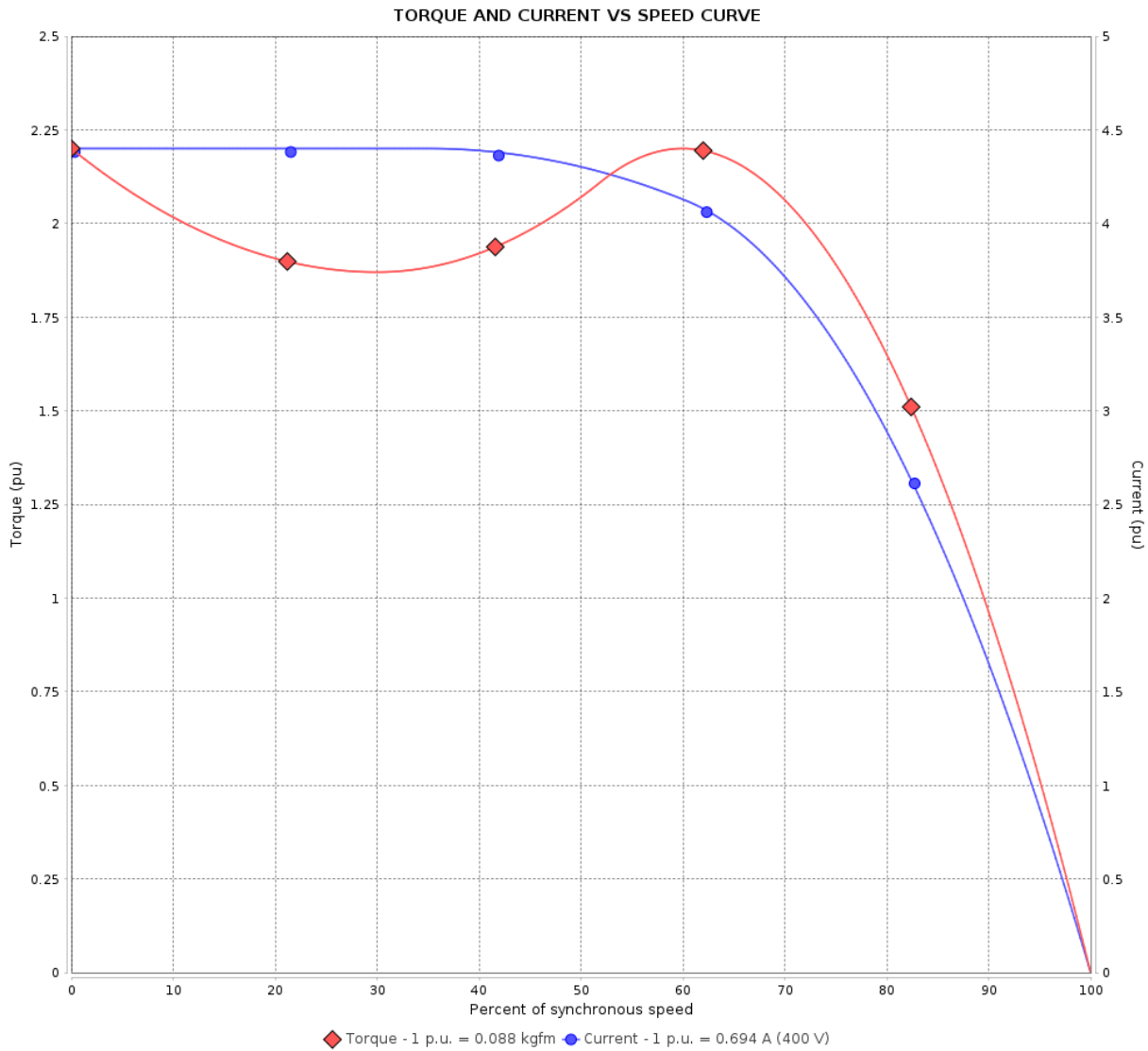
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE2 Three-Phase

Product code : 11692824



Performance : 230/400 V 50 Hz 2P

Rated current	: 1.21/0.694 A	Moment of inertia (J)	: 0.0002 kgm <sup>2</sup>
LRC	: 4.4	Duty cycle	: S1
Rated torque	: 0.088 kgfm	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 80 K
Rated speed	: 2780 rpm	Design	: N

Locked rotor time : 19s (cold) 11s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

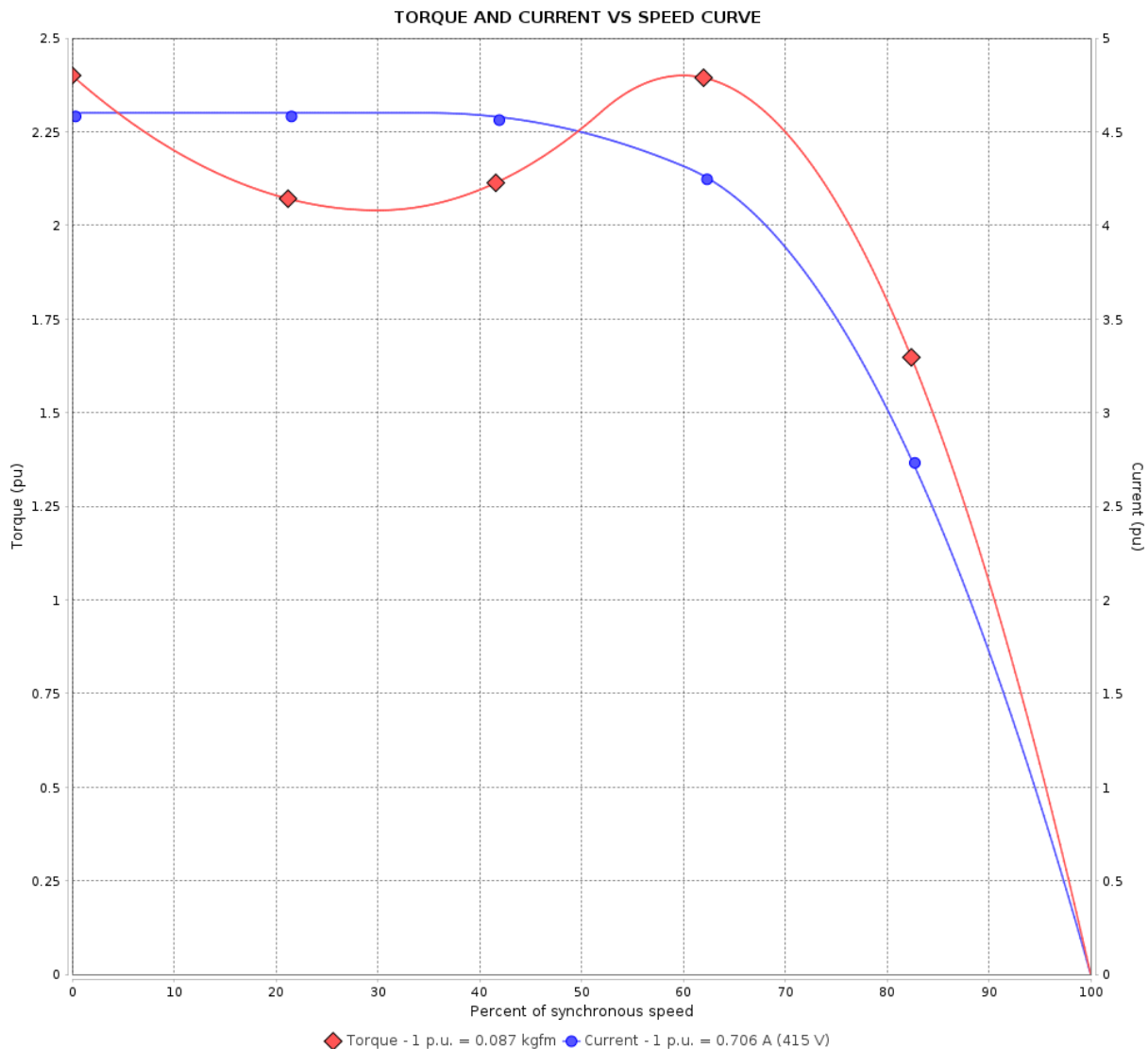


## Three Phase Induction Motor - Squirrel Cage

Customer : Astraprom d.o.o.

Product line : IE2 Three-Phase

Product code : 11692824



Performance : 240/415 V 50 Hz 2P

Rated current	: 1.22/0.706 A	Moment of inertia (J)	: 0.0002 kgm <sup>2</sup>
LRC	: 4.6	Duty cycle	: S1
Rated torque	: 0.087 kgfm	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 2800 rpm	Design	: N

Locked rotor time : 19s (cold) 11s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

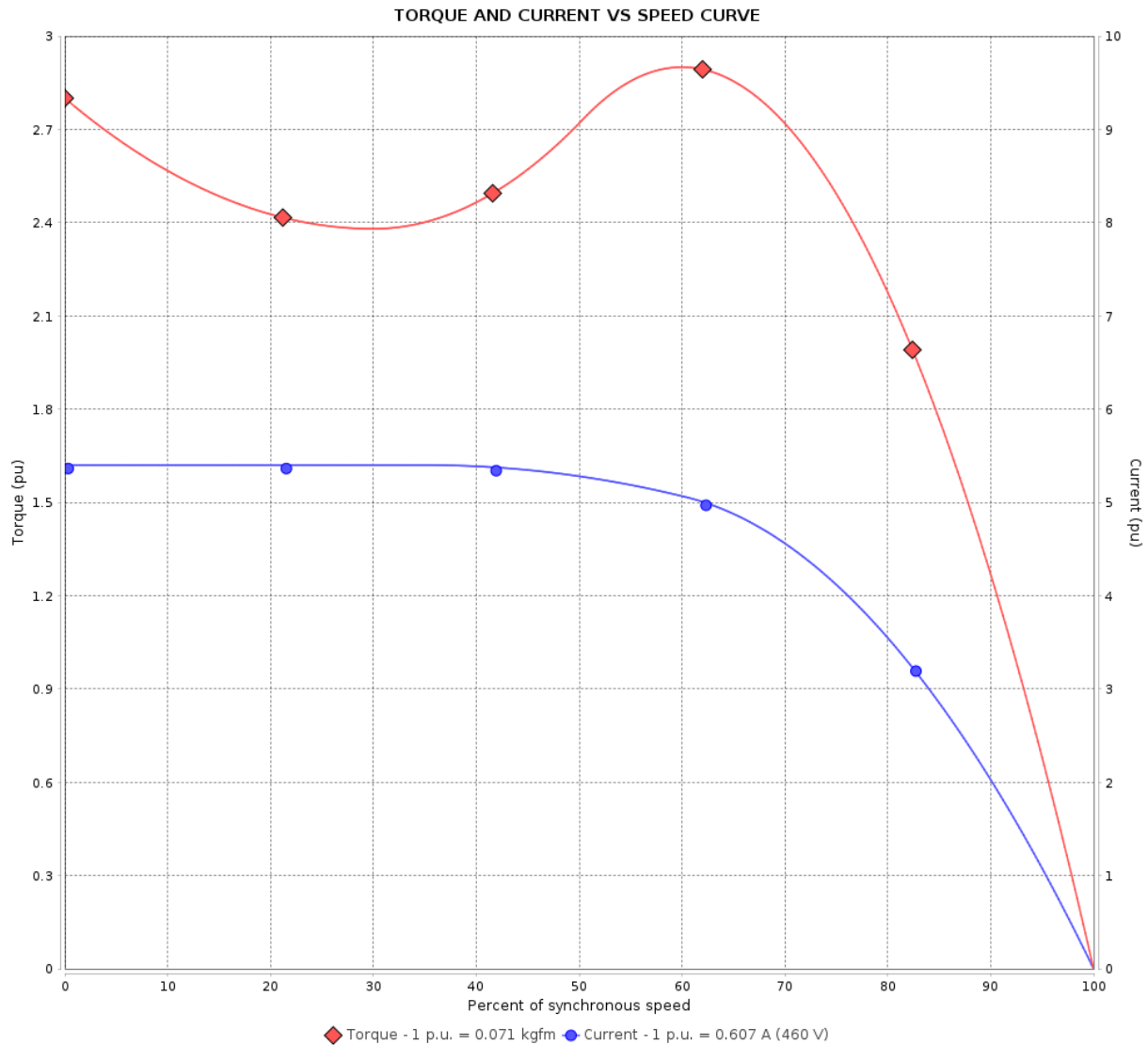
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE2 Three-Phase

Product code : 11692824



Performance : 460 V 60 Hz 2P

Rated current	: 0.607 A	Moment of inertia (J)	: 0.0002 kgm <sup>2</sup>
LRC	: 5.4	Duty cycle	: S1
Rated torque	: 0.071 kgfm	Insulation class	: F
Locked rotor torque	: 280 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 3415 rpm	Design	: N

Locked rotor time : 19s (cold) 11s (hot)

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# LOAD PERFORMANCE CURVE

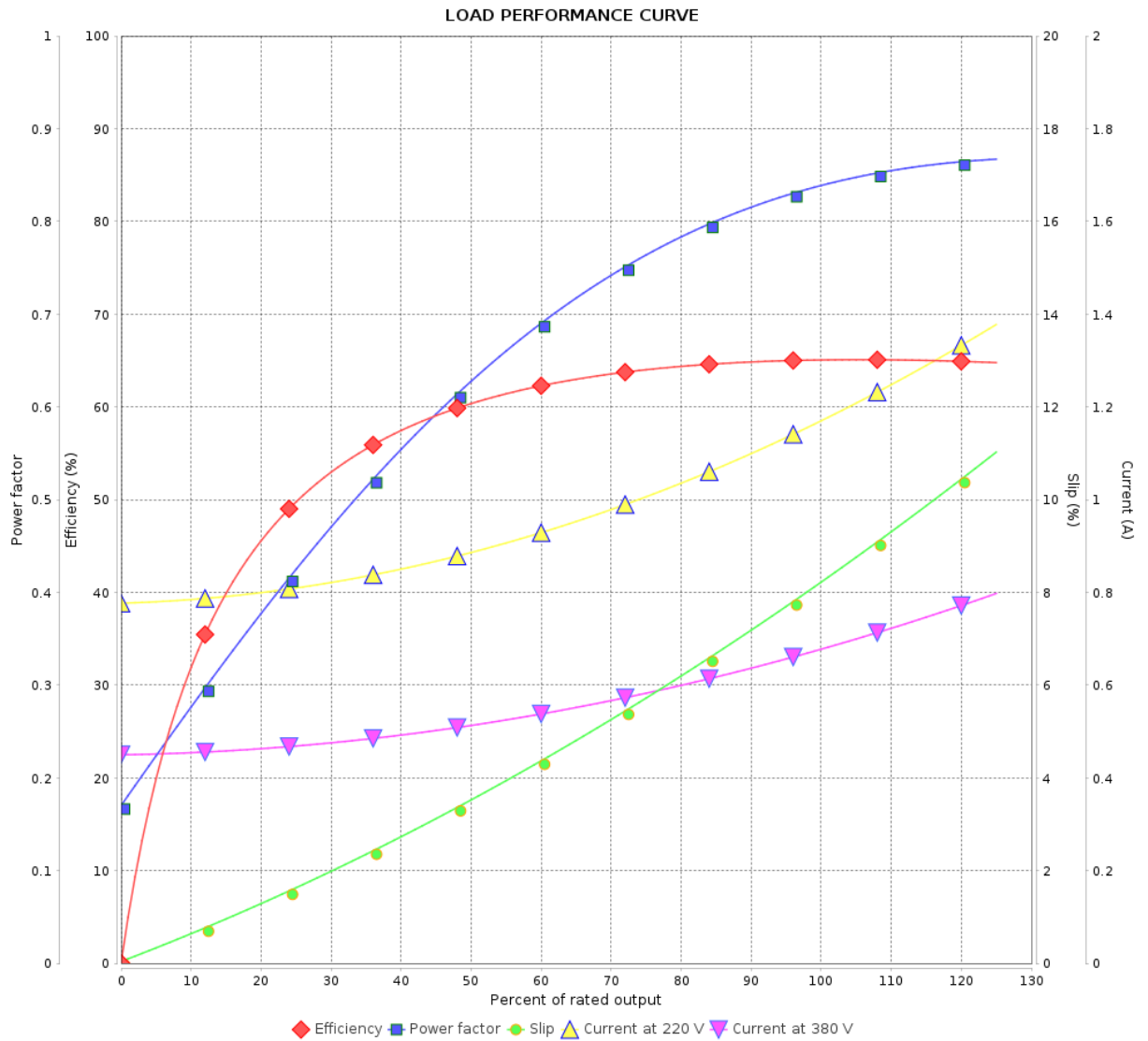
## Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE2 Three-Phase

Product code : 11692824



Performance : 220/380 V 50 Hz 2P

Rated current : 1.20/0.696 A  
 LRC : 4.2  
 Rated torque : 0.089 kgfm  
 Locked rotor torque : 200 %  
 Breakdown torque : 200 %  
 Rated speed : 2750 rpm

Moment of inertia (J) : 0.0002 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

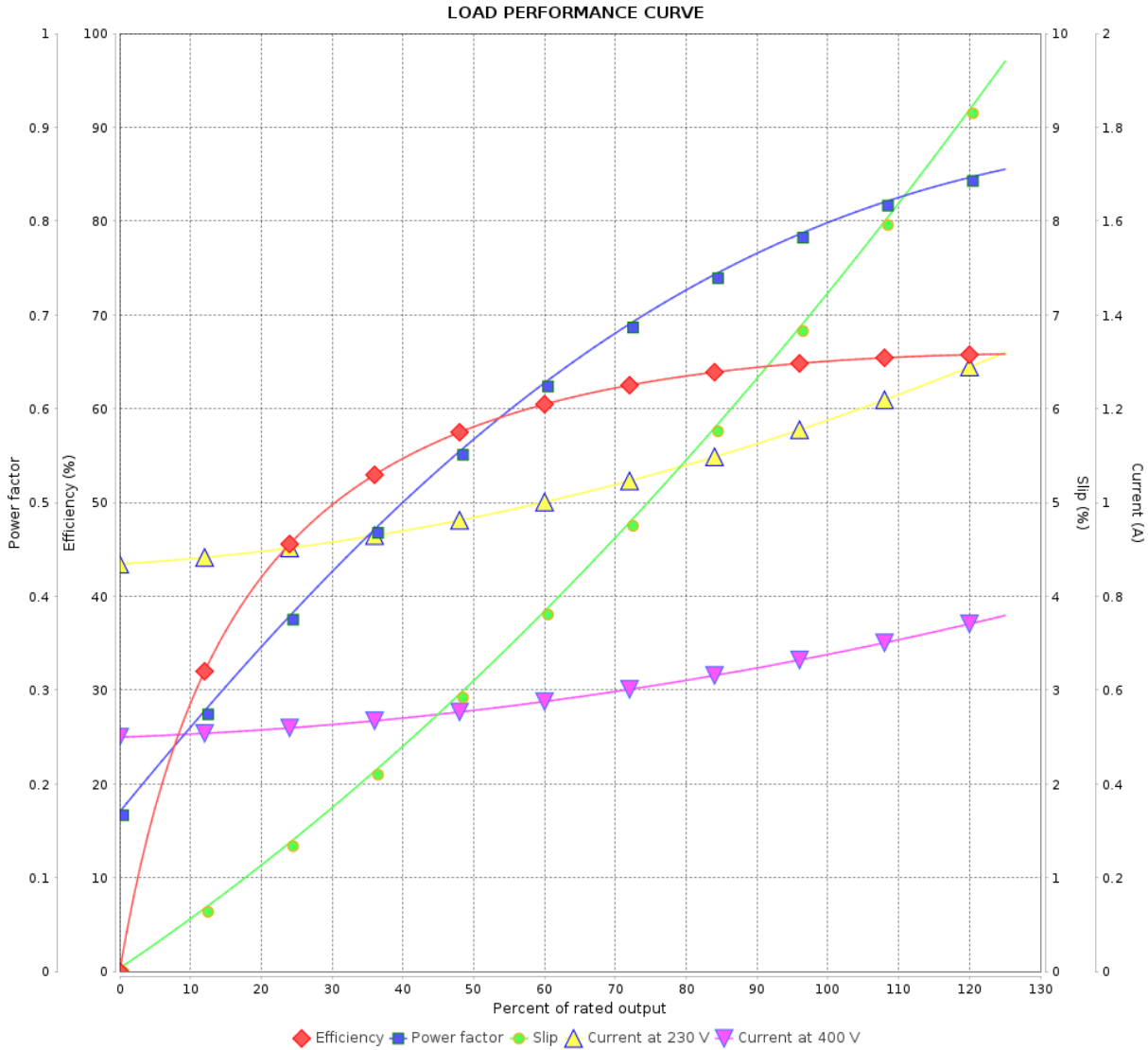
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE2 Three-Phase

Product code : 11692824



Performance : 230/400 V 50 Hz 2P

Rated current : 1.21/0.694 A  
 LRC : 4.4  
 Rated torque : 0.088 kgfm  
 Locked rotor torque : 220 %  
 Breakdown torque : 220 %  
 Rated speed : 2780 rpm

Moment of inertia (J) : 0.0002 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

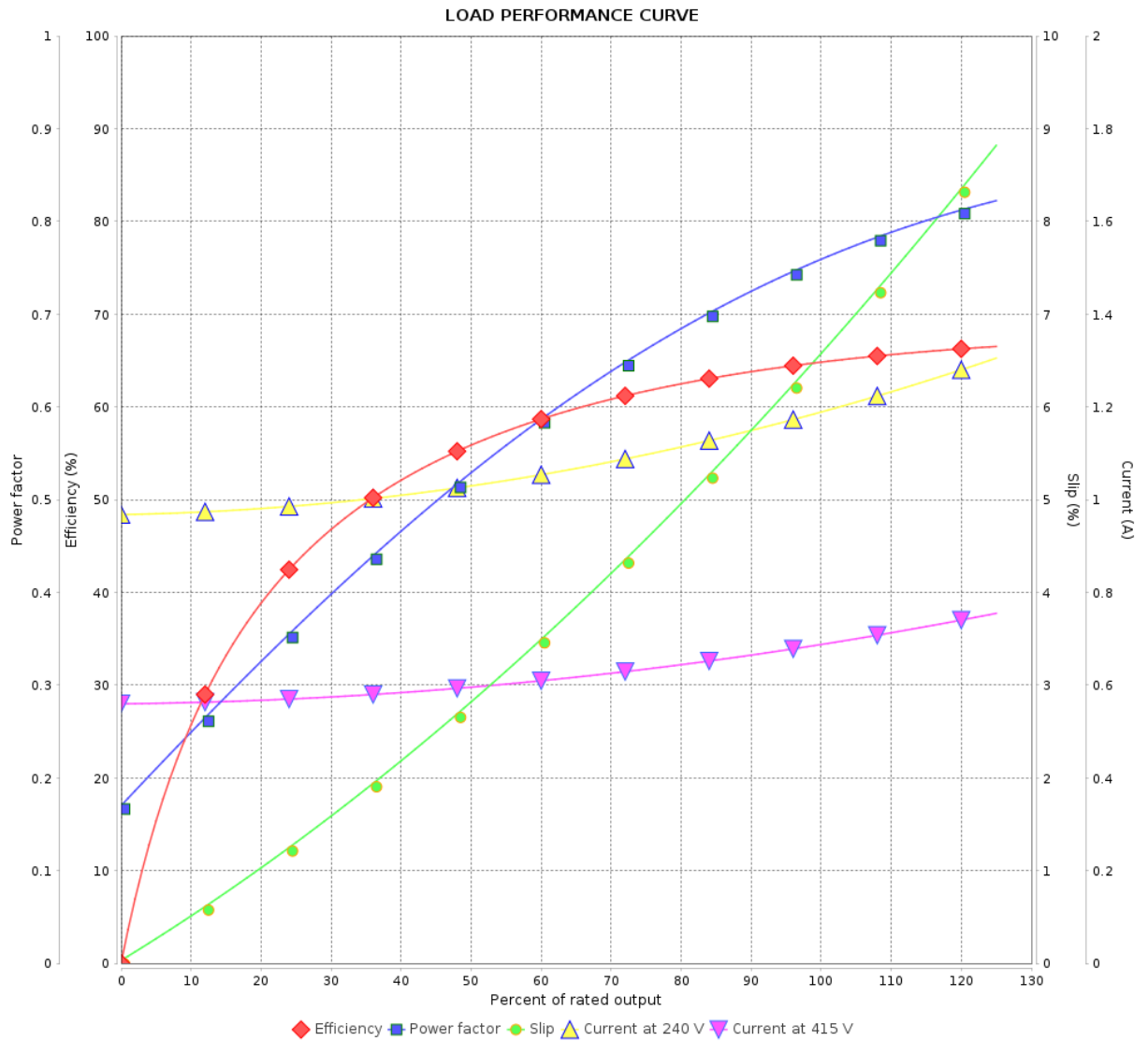
## Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE2 Three-Phase

Product code : 11692824



Performance : 240/415 V 50 Hz 2P

Rated current : 1.22/0.706 A  
 LRC : 4.6  
 Rated torque : 0.087 kgfm  
 Locked rotor torque : 240 %  
 Breakdown torque : 240 %  
 Rated speed : 2800 rpm

Moment of inertia (J) : 0.0002 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

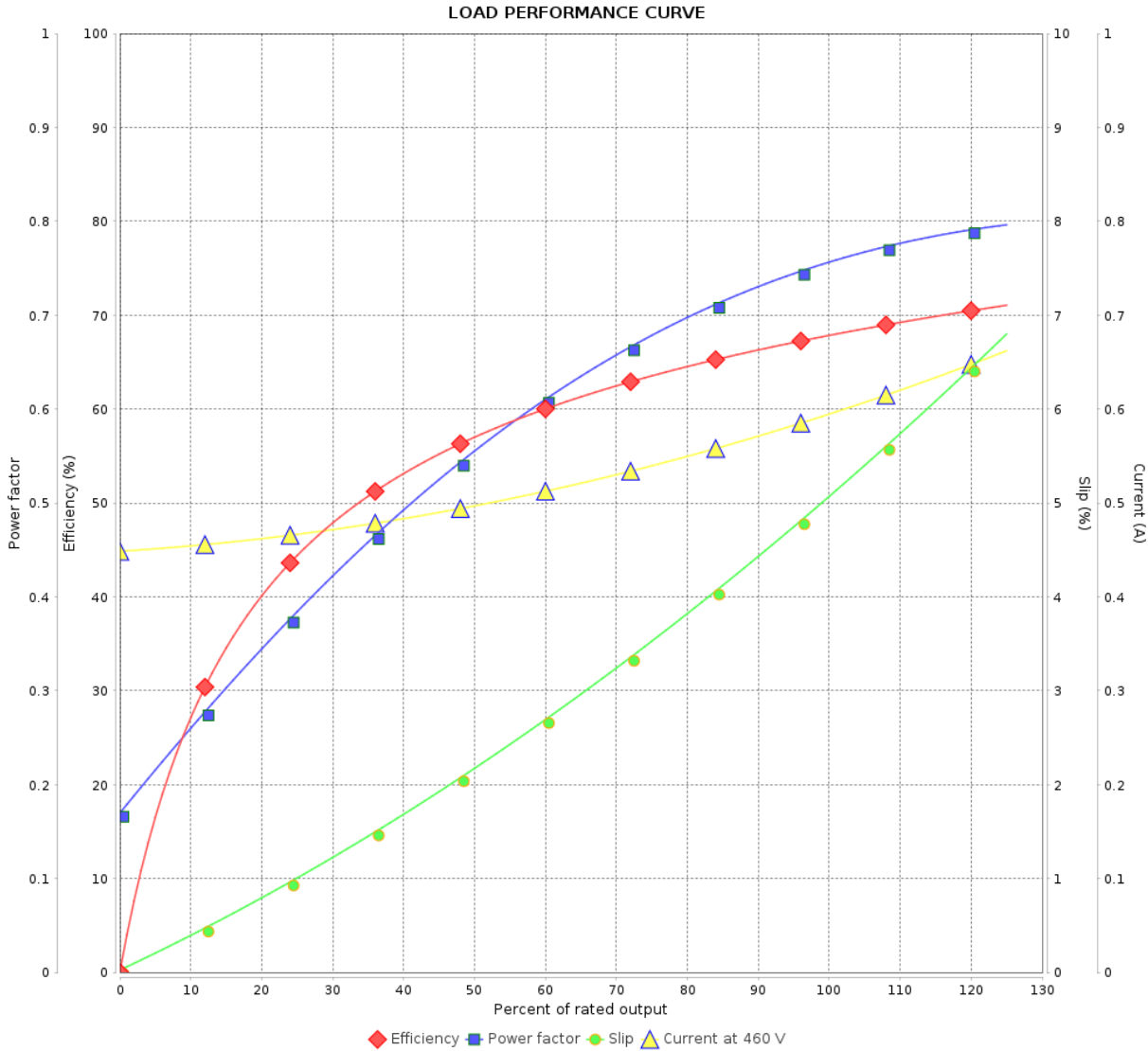
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE2 Three-Phase

Product code : 11692824



Performance : 460 V 60 Hz 2P

Rated current : 0.607 A  
 LRC : 5.4  
 Rated torque : 0.071 kgfm  
 Locked rotor torque : 280 %  
 Breakdown torque : 290 %  
 Rated speed : 3415 rpm

Moment of inertia (J) : 0.0002 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

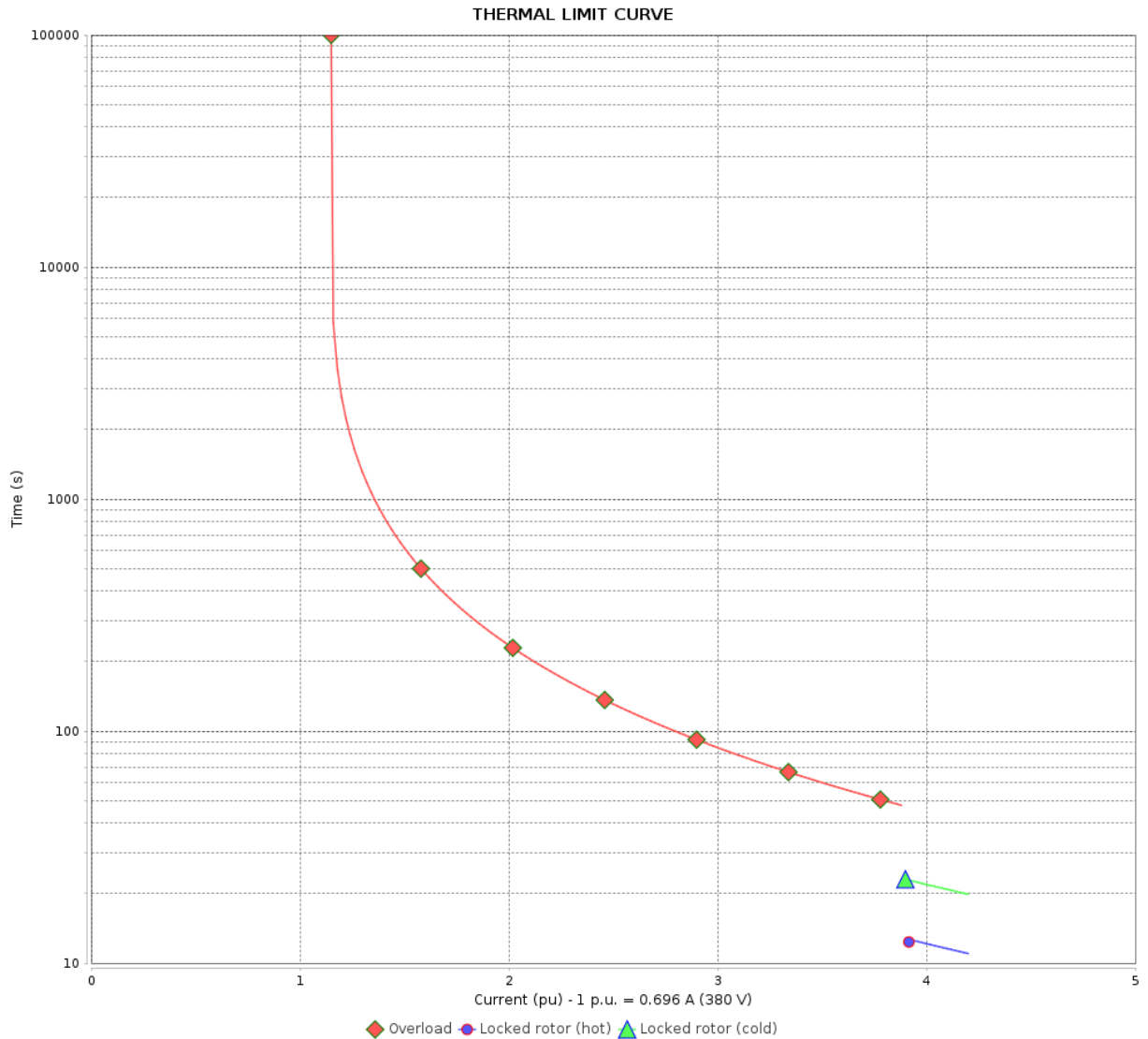
## Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE2 Three-Phase

Product code : 11692824



Performance : 220/380 V 50 Hz 2P

Rated current : 1.20/0.696 A  
 LRC : 4.2  
 Rated torque : 0.089 kgfm  
 Locked rotor torque : 200 %  
 Breakdown torque : 200 %  
 Rated speed : 2750 rpm

Moment of inertia (J) : 0.0002 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

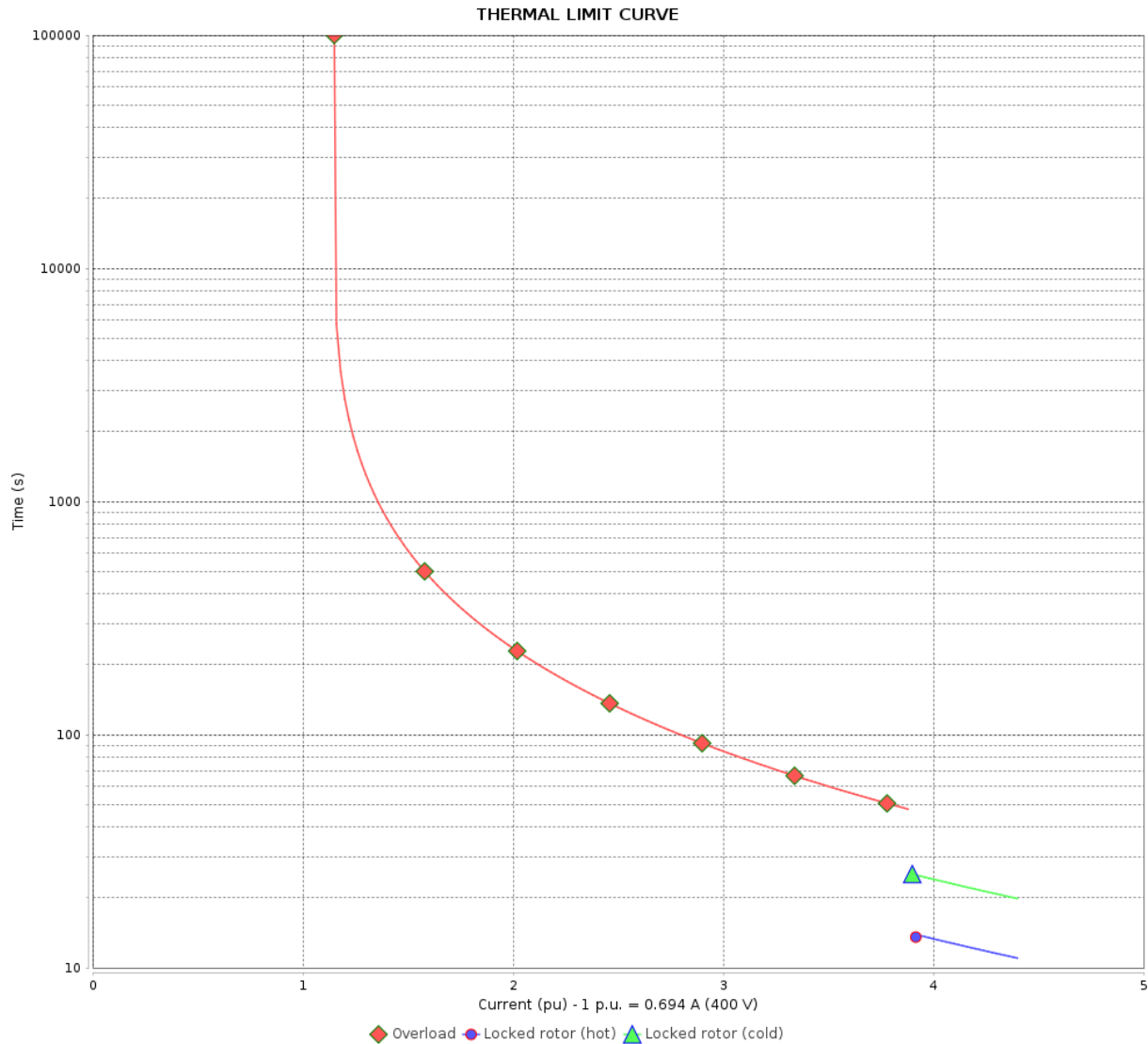
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE2 Three-Phase

Product code : 11692824



Performance : 230/400 V 50 Hz 2P

Rated current	: 1.21/0.694 A	Moment of inertia (J)	: 0.0002 kgm <sup>2</sup>
LRC	: 4.4	Duty cycle	: S1
Rated torque	: 0.088 kgfm	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 80 K
Rated speed	: 2780 rpm	Design	: N

Heating constant

Cooling constant

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# THERMAL LIMIT CURVE

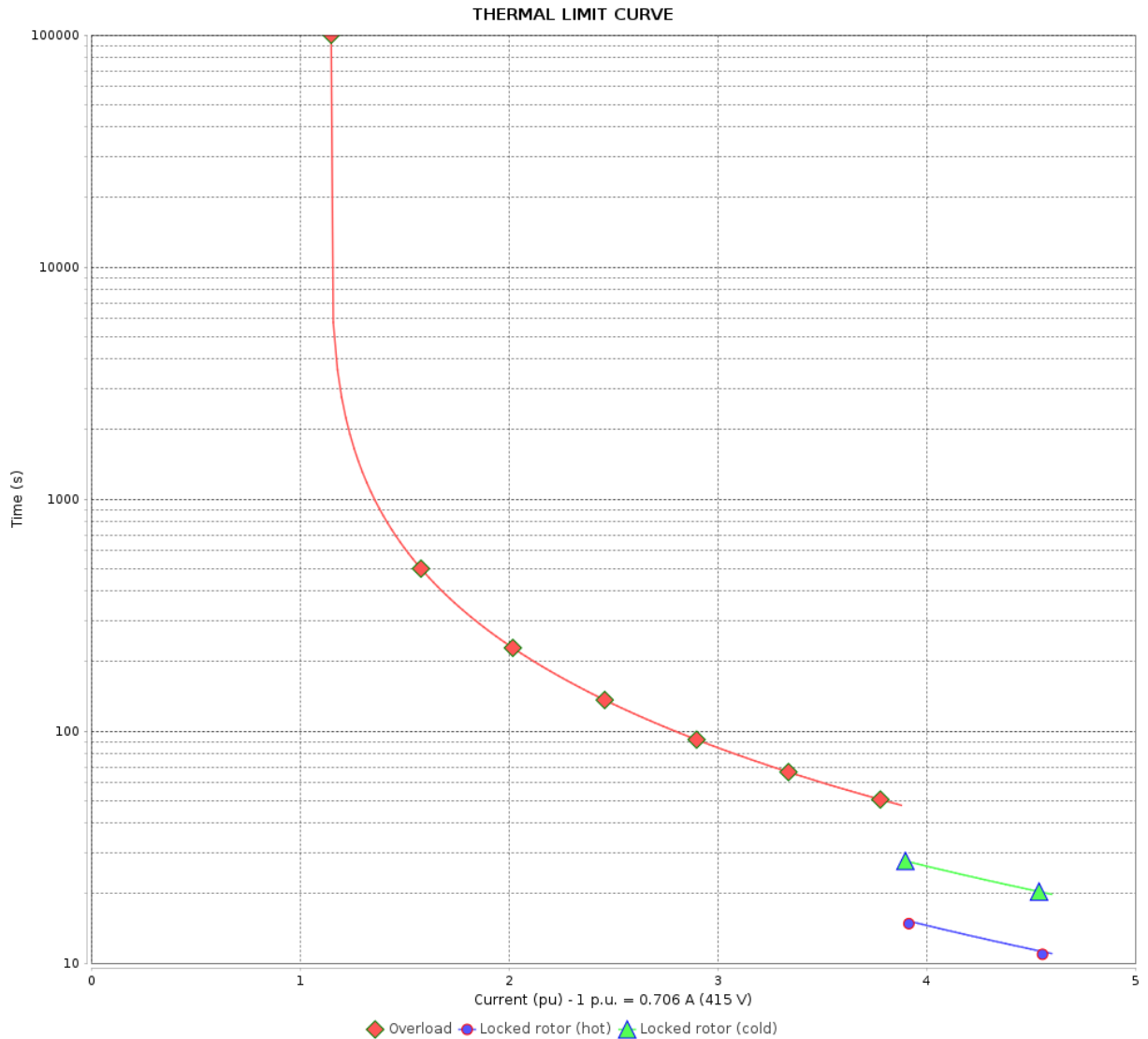
## Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE2 Three-Phase

Product code : 11692824



Performance : 240/415 V 50 Hz 2P

Rated current : 1.22/0.706 A  
 LRC : 4.6  
 Rated torque : 0.087 kgfm  
 Locked rotor torque : 240 %  
 Breakdown torque : 240 %  
 Rated speed : 2800 rpm

Moment of inertia (J) : 0.0002 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

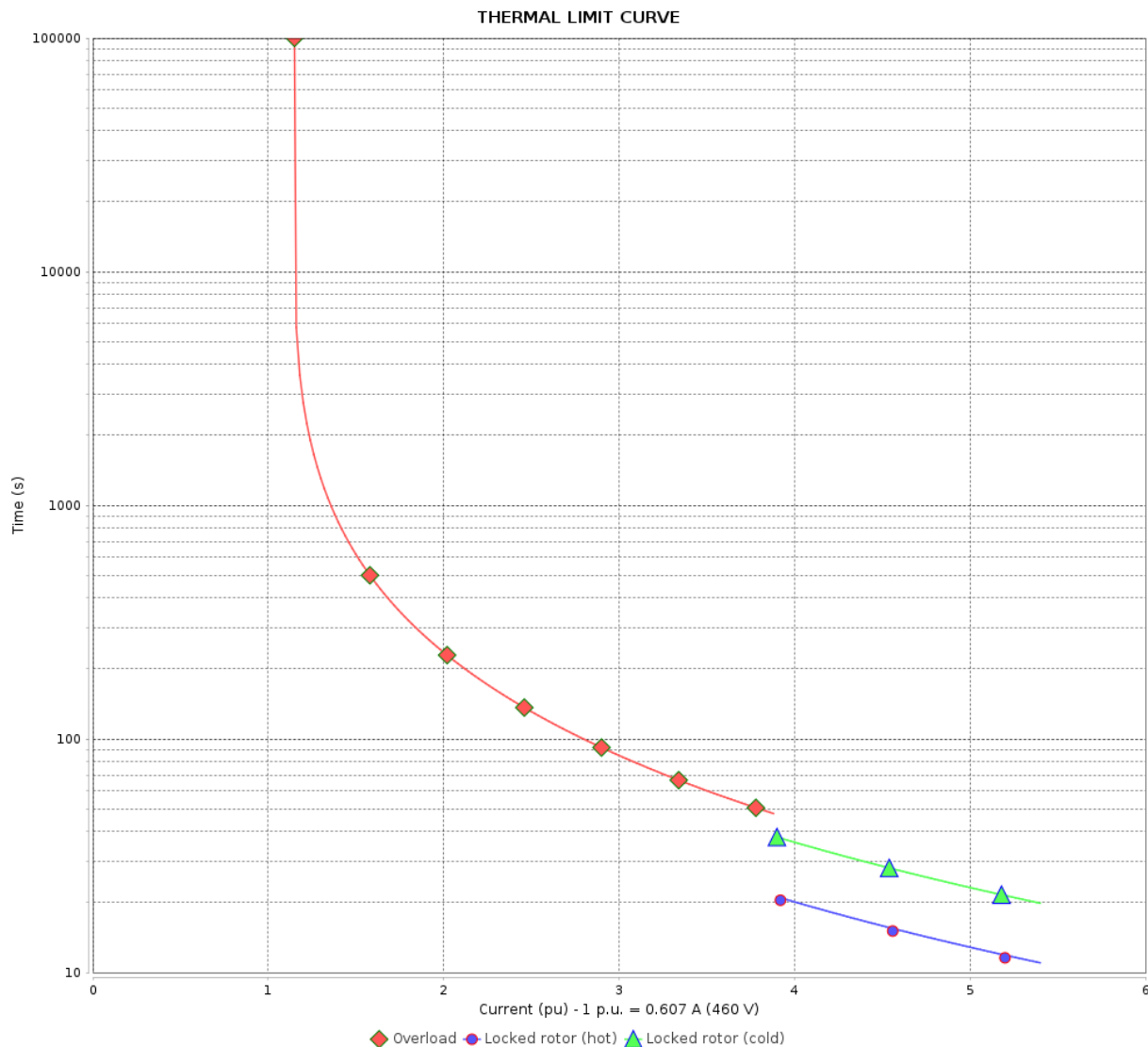
## Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE2 Three-Phase

Product code : 11692824



Performance : 460 V 60 Hz 2P

Rated current	: 0.607 A	Moment of inertia (J)	: 0.0002 kgm <sup>2</sup>
LRC	: 5.4	Duty cycle	: S1
Rated torque	: 0.071 kgfm	Insulation class	: F
Locked rotor torque	: 280 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 3415 rpm	Design	: N

Heating constant

Cooling constant

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# VFD OPERATION CURVE

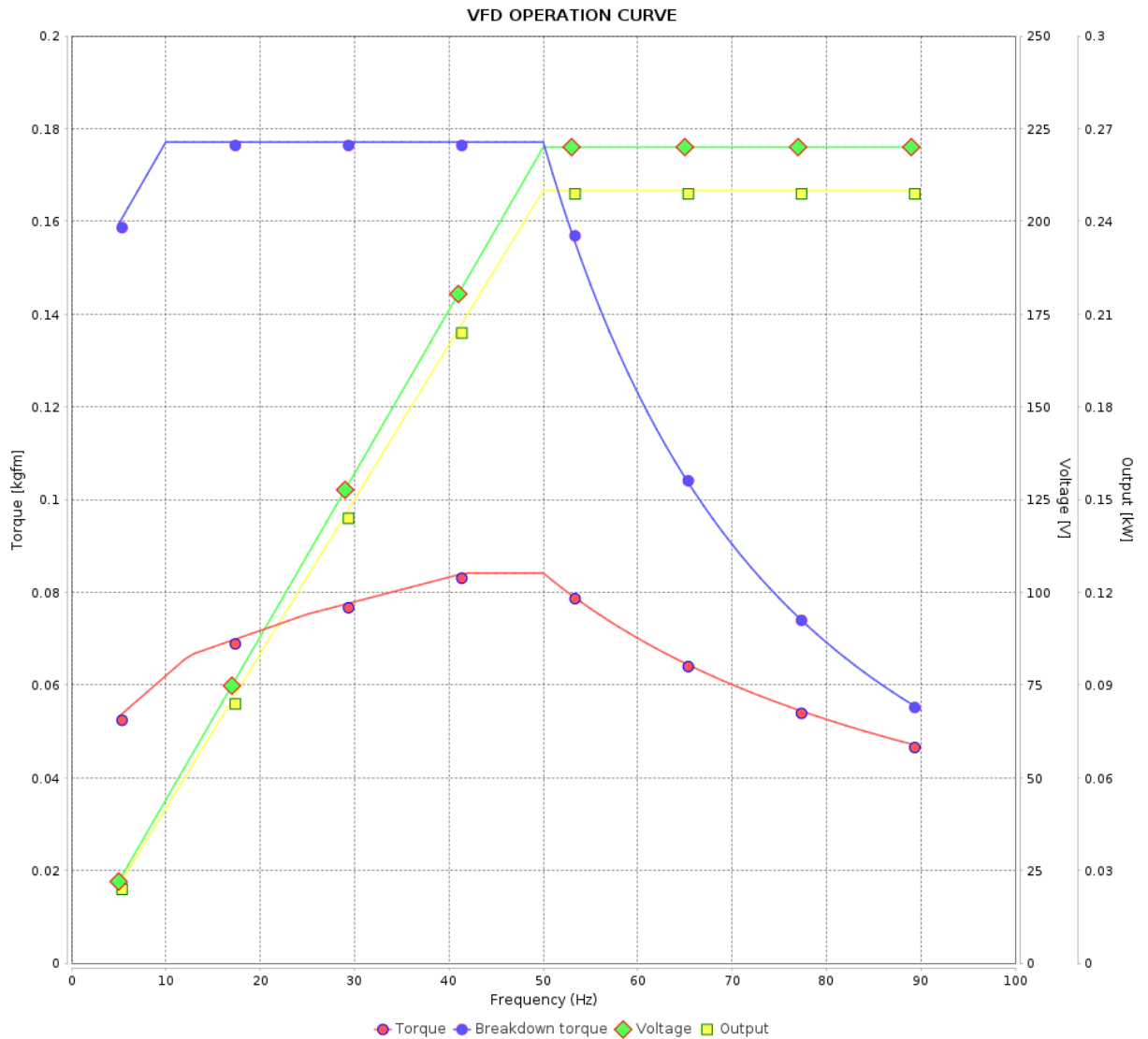
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE2 Three-Phase

Product code : 11692824



Performance : 220/380 V 50 Hz 2P

Rated current : 1.20/0.696 A  
 LRC : 4.2  
 Rated torque : 0.089 kgfm  
 Locked rotor torque : 200 %  
 Breakdown torque : 200 %  
 Rated speed : 2750 rpm

Moment of inertia (J) : 0.0002 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

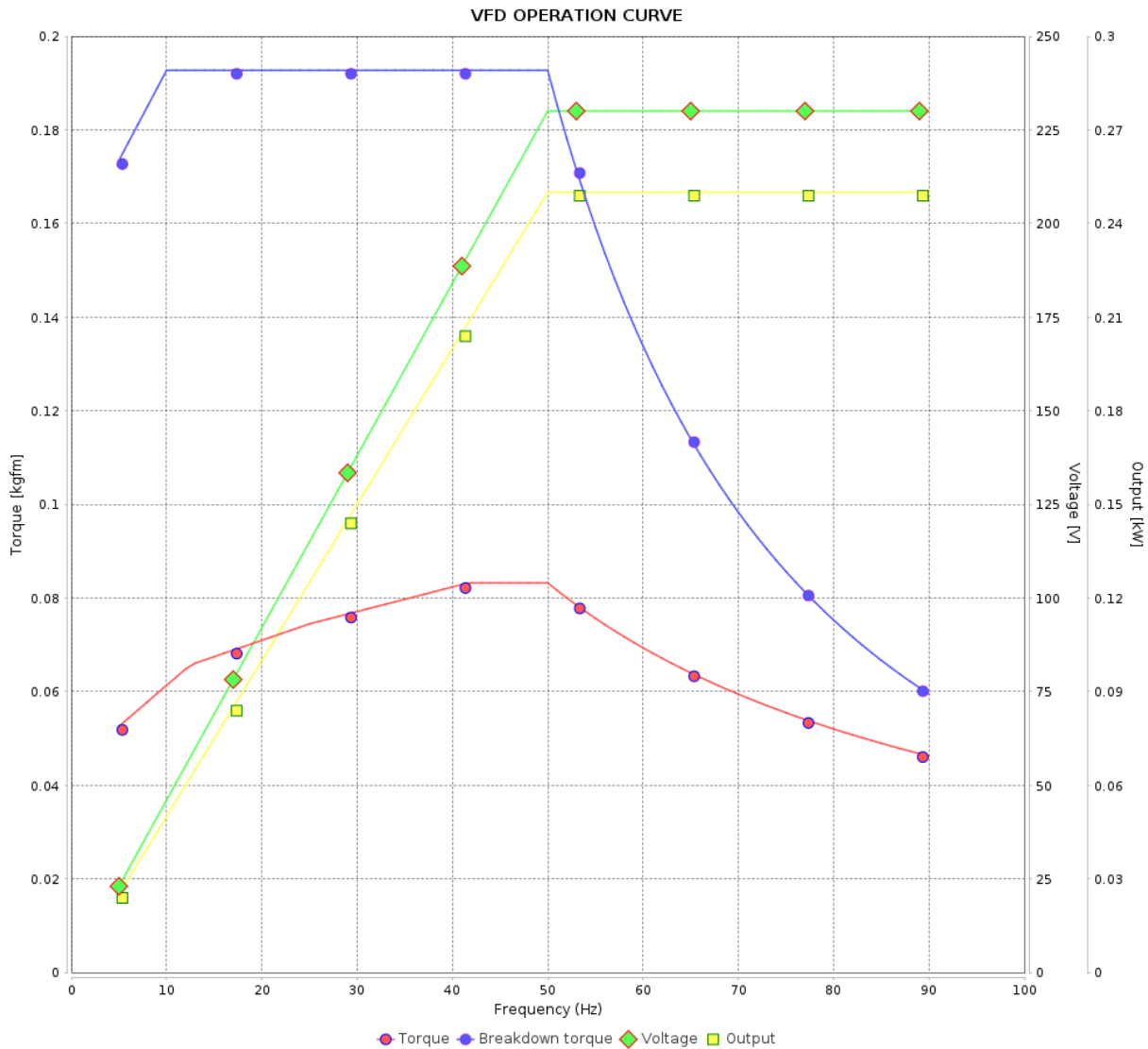
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE2 Three-Phase

Product code : 11692824



Performance : 230/400 V 50 Hz 2P

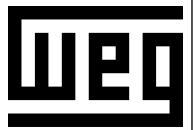
Rated current : 1.21/0.694 A  
 LRC : 4.4  
 Rated torque : 0.088 kgfm  
 Locked rotor torque : 220 %  
 Breakdown torque : 220 %  
 Rated speed : 2780 rpm

Moment of inertia (J) : 0.0002 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

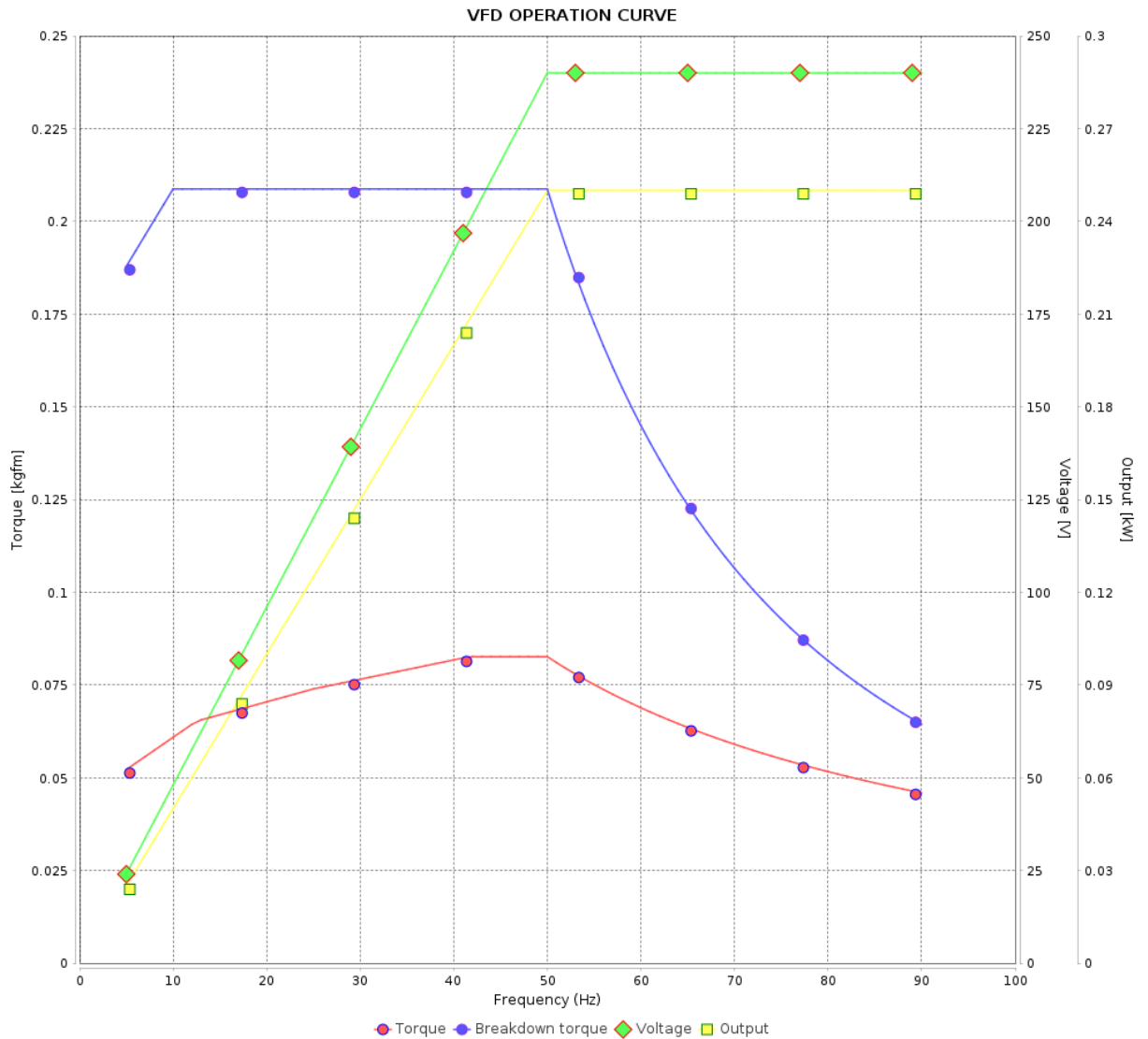
## Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE2 Three-Phase

Product code : 11692824



Performance : 240/415 V 50 Hz 2P

Rated current : 1.22/0.706 A  
 LRC : 4.6  
 Rated torque : 0.087 kgfm  
 Locked rotor torque : 240 %  
 Breakdown torque : 240 %  
 Rated speed : 2800 rpm

Moment of inertia (J) : 0.0002 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

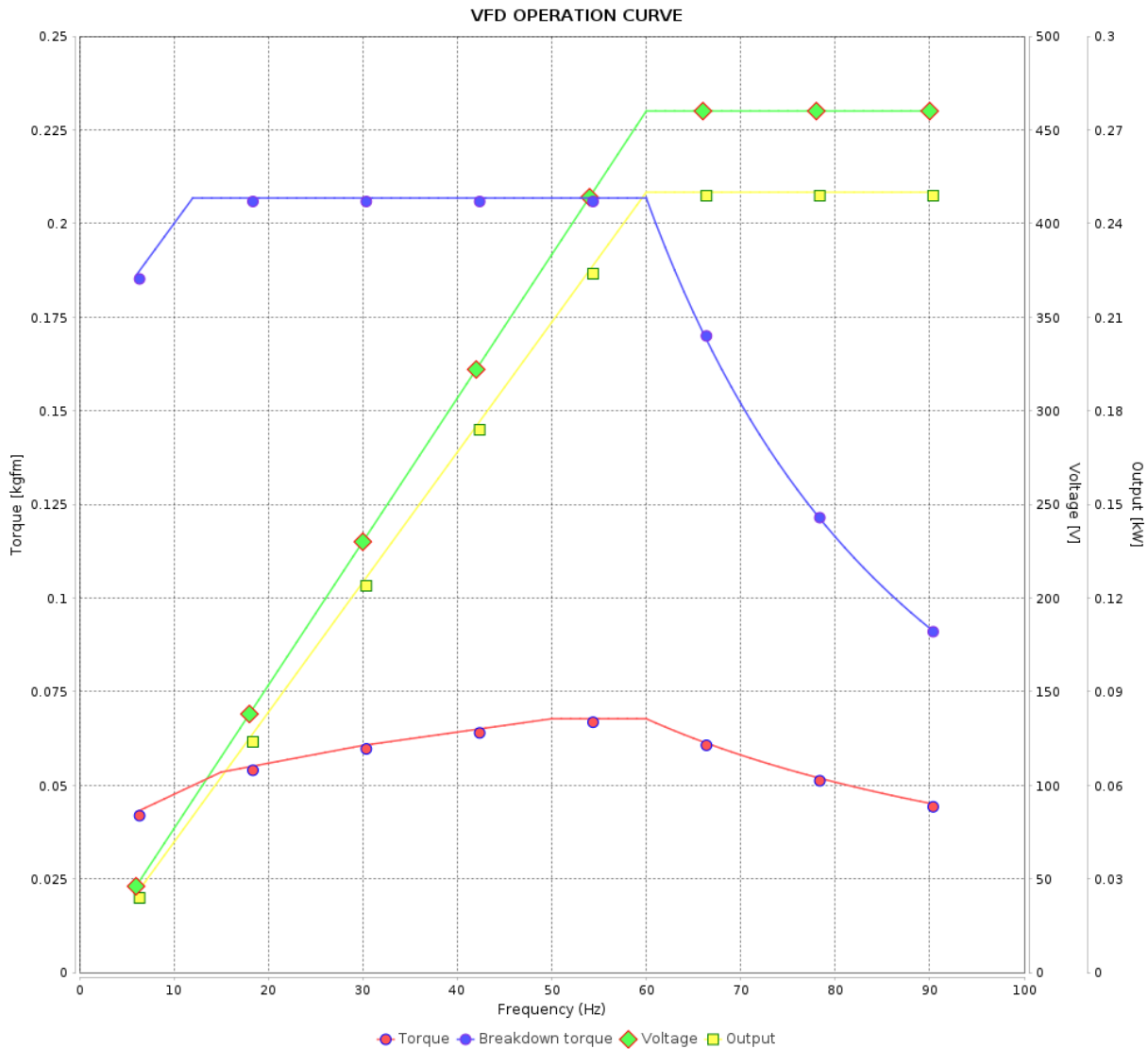
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE2 Three-Phase

Product code : 11692824



Performance : 460 V 60 Hz 2P

Rated current : 0.607 A  
 LRC : 5.4  
 Rated torque : 0.071 kgfm  
 Locked rotor torque : 280 %  
 Breakdown torque : 290 %  
 Rated speed : 3415 rpm

Moment of inertia (J) : 0.0002 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

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