

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer		: Astraprom d.o.o.			
Product line		: Multimounting IE3 Three-Phase		Product code : 13760714	
Frame	: 63	Cooling method	: IC411 - TEFC		
Insulation class	: F	Mounting	: B14T		
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 ³	: 6.4 kg		
Protection degree	: IP55	Moment of inertia (J)	: 0.0006 kgm ²		
Design	: N				
Output [kW]	0.18	0.18	0.18	0.18	0.18
Poles	4	4	4	4	4
Frequency [Hz]	50	50	50	50	60
Rated voltage [V]	220/380	230/400	240/415	460	
Rated current [A]	0.902/0.522	0.897/0.516	0.885/0.512	0.468	
L. R. Amperes [A]	3.61/2.09	3.86/2.22	4.07/2.36	2.43	
LRC [A]	4.0	4.3	4.6	5.2	
No load current [A]	0.553/0.320	0.609/0.350	0.674/0.390	0.330	
Rated speed [RPM]	1360	1380	1390	1700	
Slip [%]	9.33	8.00	7.33	5.56	
Rated torque [kgfm]	0.129	0.127	0.126	0.103	
Locked rotor torque [%]	200	220	240	270	
Breakdown torque [%]	200	220	240	280	
Service factor	1.00	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	54s (cold) 30s (hot)	54s (cold) 30s (hot)	54s (cold) 30s (hot)	72s (cold) 40s (hot)	
Noise level ²	44.0 dB(A)	44.0 dB(A)	44.0 dB(A)	48.0 dB(A)	
Efficiency (%)	25%				
	50%	65.0	65.0	65.0	62.0
	75%	67.0	67.0	67.0	66.0
	100%	69.9	69.9	69.9	70.0
Power Factor	25%				
	50%	0.57	0.53	0.50	0.50
	75%	0.67	0.63	0.61	0.60
	100%	0.75	0.72	0.70	0.69
Losses at normative operating points (speed;torque), in percentage of rated output power					
Losses (%)	P1 (0,9;1,0)	45.5	45.5	45.5	45.3
	P2 (0,5;1,0)	47.0	47.0	47.0	46.8
	P3 (0,25;1,0)	41.8	41.8	41.8	41.6
	P4 (0,9;0,5)	24.1	24.1	24.1	24.0
	P5 (0,5;0,5)	18.7	18.7	18.7	18.6
	P6 (0,5;0,25)	14.5	14.5	14.5	14.5
	P7 (0,25;0,25)	10.9	10.9	10.9	10.8
Bearing type	: Drive end 6201 ZZ	Non drive end 6201 ZZ	Foundation loads		
Sealing	: Oil Seal	Oil Seal	Max. traction	: 8 kgf	
Lubrication interval	: -	-	Max. compression	: 14 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	13/10/2023			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	13/10/2023		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	13/10/2023			
			Revision	

TORQUE AND CURRENT VS SPEED CURVE

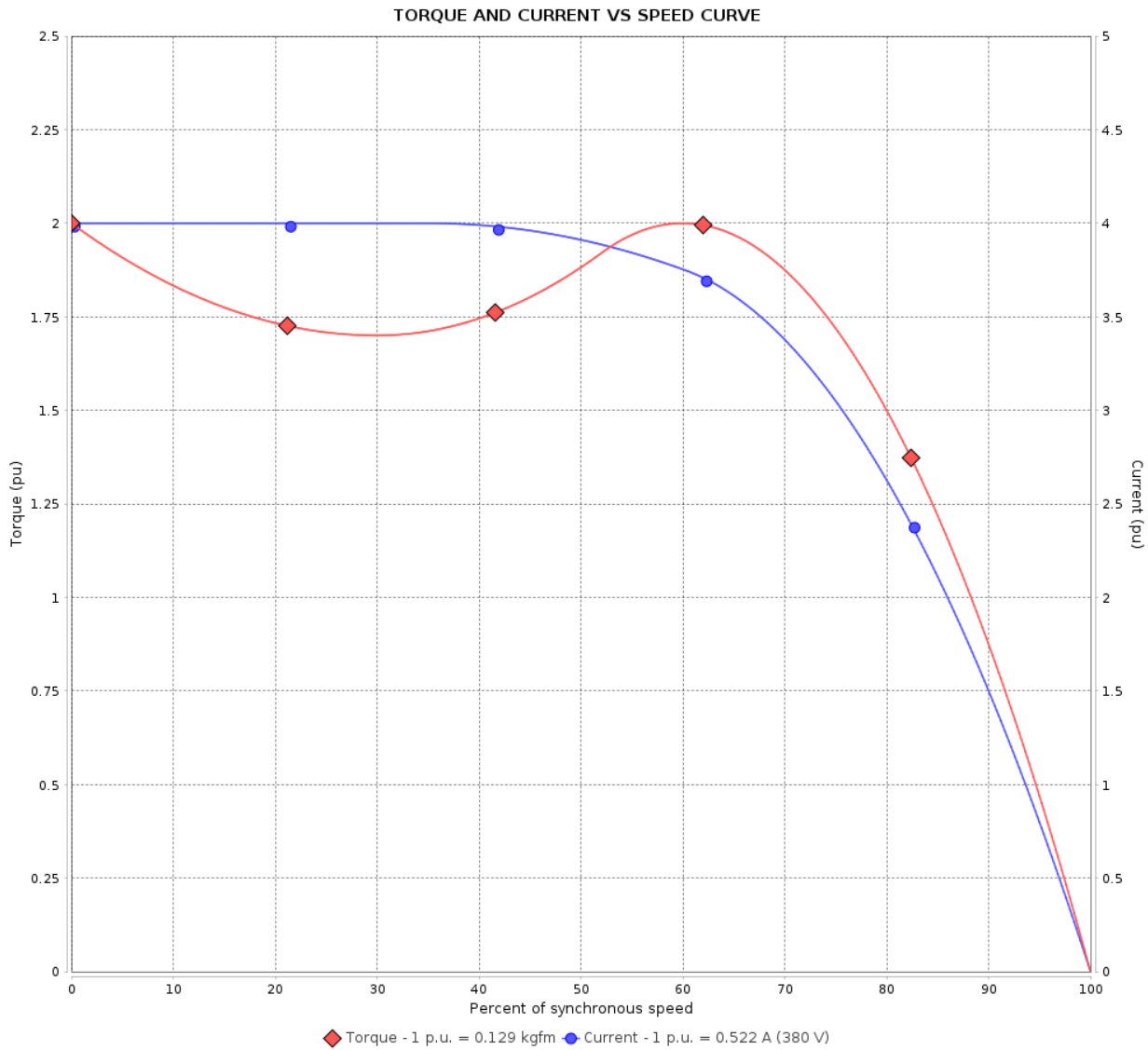
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : Multimounting IE3 Three-Phase

Product code : 13760714



Performance : 220/380 V 50 Hz 4P

Rated current	: 0.902/0.522 A	Moment of inertia (J)	: 0.0006 kgm ²
LRC	: 4.0	Duty cycle	: S1
Rated torque	: 0.129 kgfm	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 80 K
Rated speed	: 1360 rpm	Design	: N

Locked rotor time : 54s (cold) 30s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 19	Revision
Checked by				
Date	13/10/2023			

TORQUE AND CURRENT VS SPEED CURVE



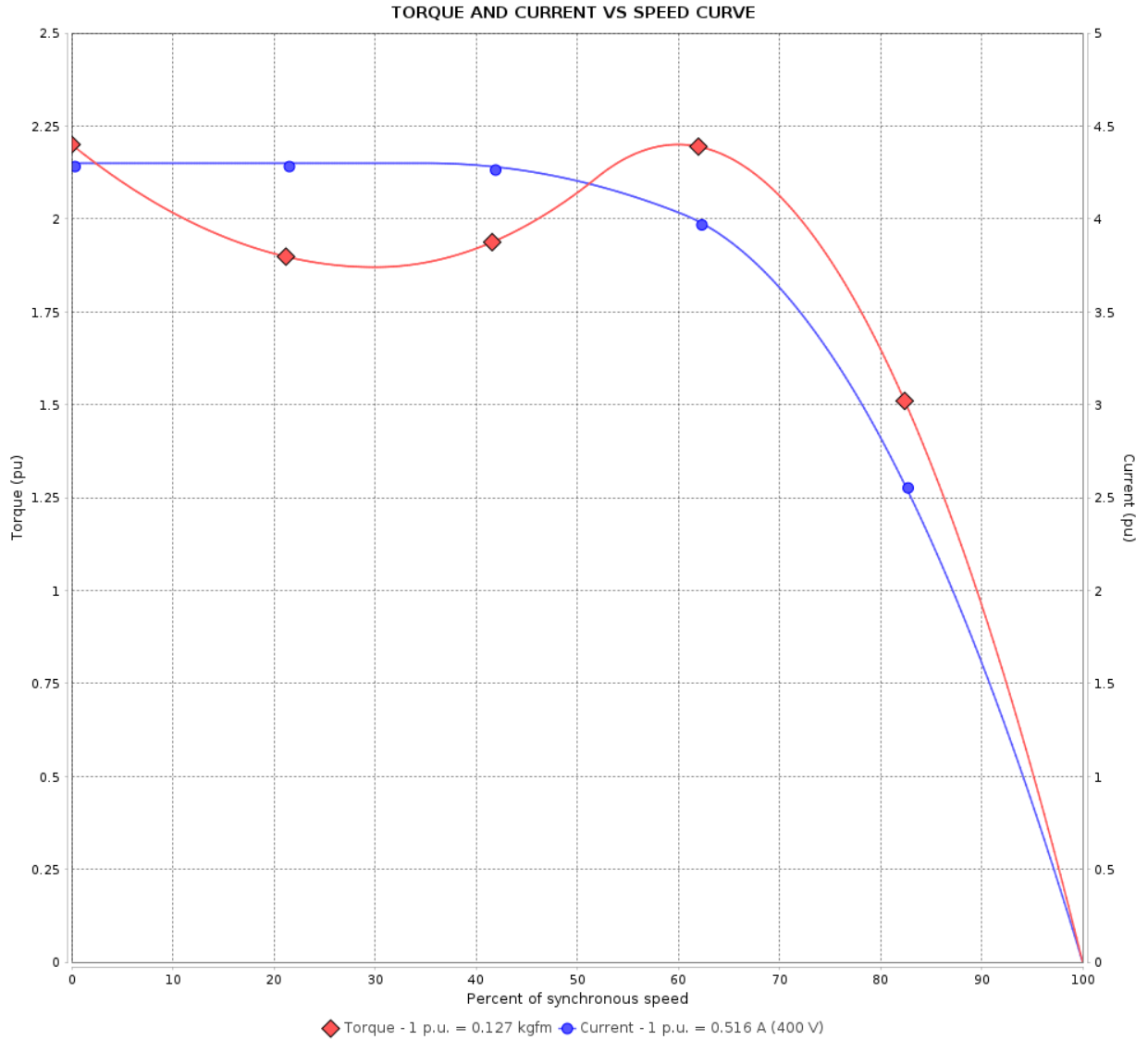
Three Phase Induction Motor - Squirrel Cage

Customer : Astraprom d.o.o.

Product line : Multimounting IE3 Three-Phase

Product code :

13760714



Performance : 230/400 V 50 Hz 4P

Rated current : 0.897/0.516 A
 LRC : 4.3
 Rated torque : 0.127 kgfm
 Locked rotor torque : 220 %
 Breakdown torque : 220 %
 Rated speed : 1380 rpm

Moment of inertia (J) : 0.0006 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

Locked rotor time : 54s (cold) 30s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 5 / 19	Revision
Checked by				
Date	13/10/2023			

TORQUE AND CURRENT VS SPEED CURVE

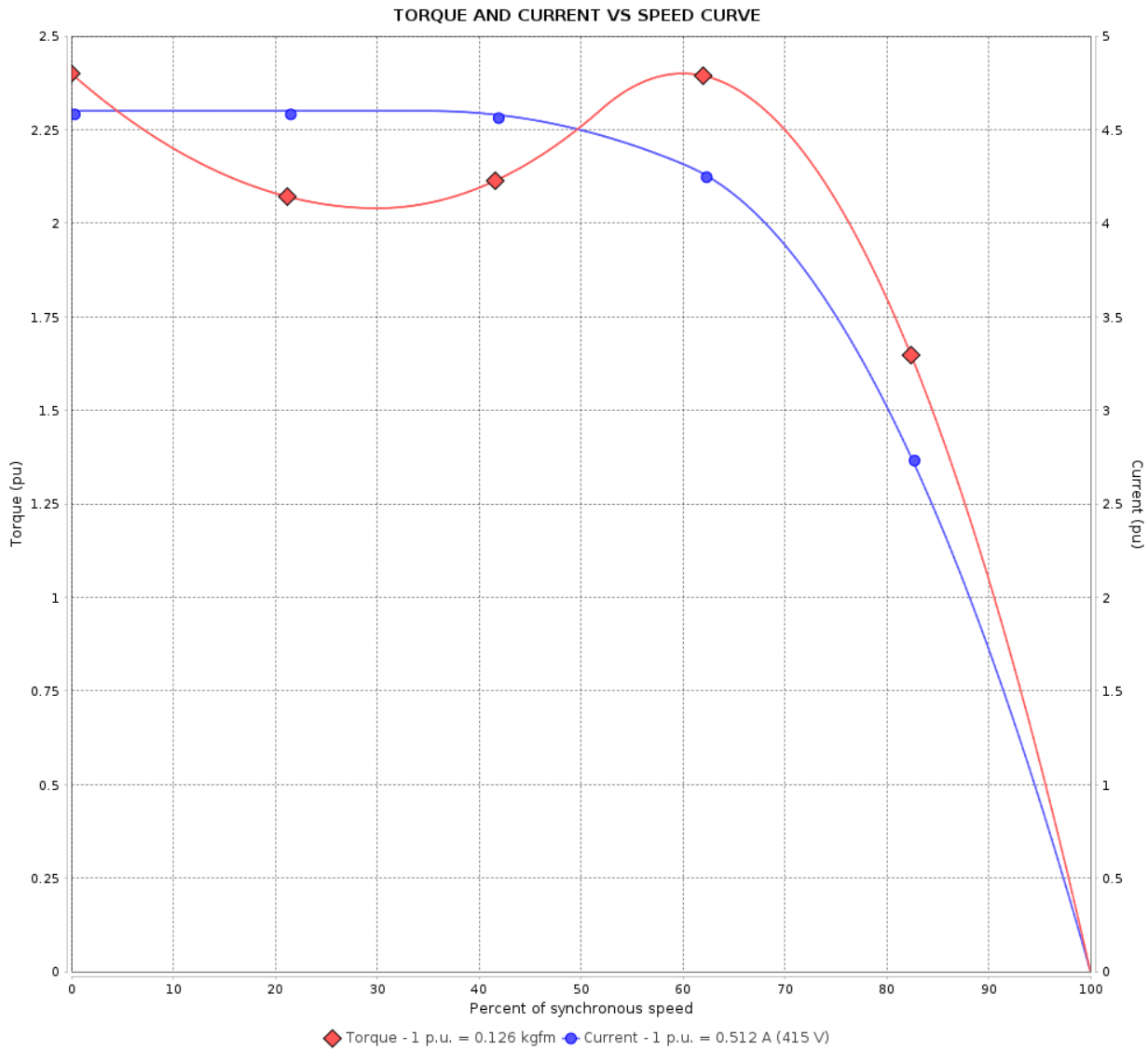
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : Multimounting IE3 Three-Phase

Product code : 13760714



Performance : 240/415 V 50 Hz 4P

Rated current	: 0.885/0.512 A	Moment of inertia (J)	: 0.0006 kgm ²
LRC	: 4.6	Duty cycle	: S1
Rated torque	: 0.126 kgfm	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1390 rpm	Design	: N

Locked rotor time : 54s (cold) 30s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 6 / 19	Revision
Checked by				
Date	13/10/2023			

TORQUE AND CURRENT VS SPEED CURVE

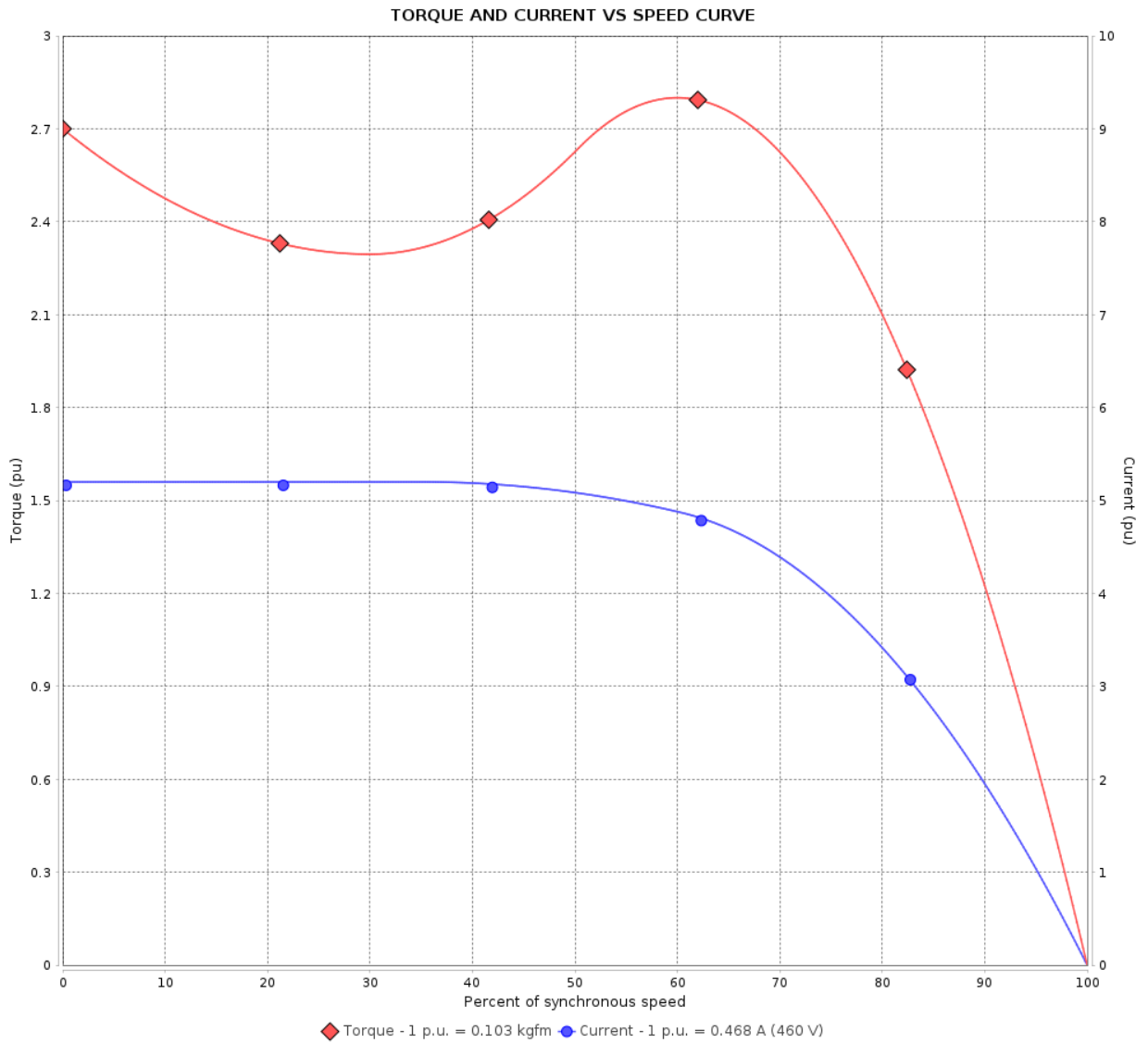
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : Multimounting IE3 Three-Phase

Product code : 13760714



Performance : 460 V 60 Hz 4P

Rated current	: 0.468 A	Moment of inertia (J)	: 0.0006 kgm ²
LRC	: 5.2	Duty cycle	: S1
Rated torque	: 0.103 kgfm	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 1700 rpm	Design	: N

Locked rotor time : 72s (cold) 40s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date	13/10/2023			
			7 / 19	

LOAD PERFORMANCE CURVE

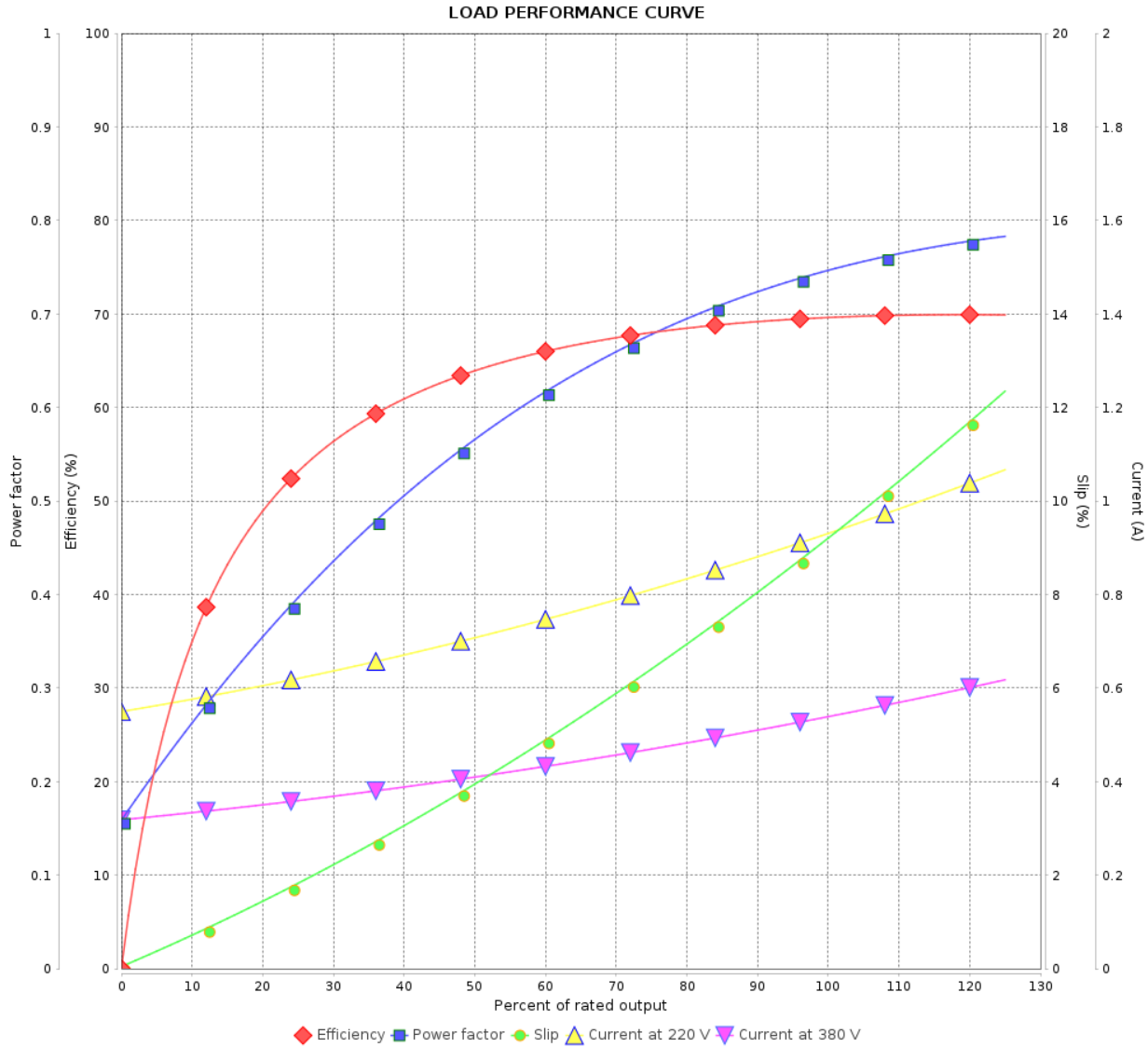
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : Multimounting IE3 Three-Phase

Product code : 13760714



Performance : 220/380 V 50 Hz 4P

Rated current : 0.902/0.522 A
 LRC : 4.0
 Rated torque : 0.129 kgfm
 Locked rotor torque : 200 %
 Breakdown torque : 200 %
 Rated speed : 1360 rpm

Moment of inertia (J) : 0.0006 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 8 / 19	Revision
Checked by				
Date	13/10/2023			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

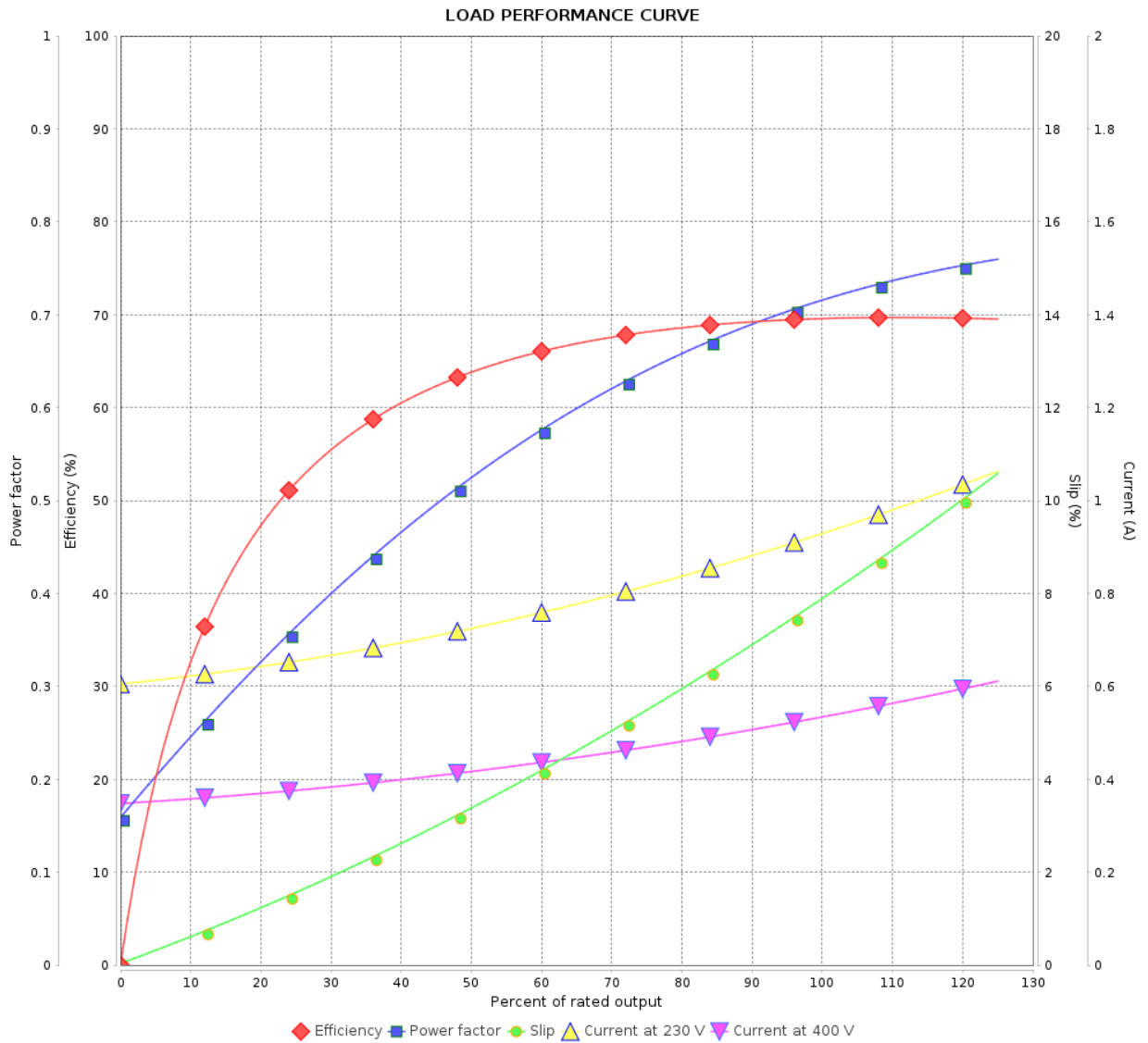


Customer : Astraprom d.o.o.

Product line : Multimounting IE3 Three-Phase

Product code :

13760714



Performance : 230/400 V 50 Hz 4P

Rated current : 0.897/0.516 A
 LRC : 4.3
 Rated torque : 0.127 kgfm
 Locked rotor torque : 220 %
 Breakdown torque : 220 %
 Rated speed : 1380 rpm

Moment of inertia (J) : 0.0006 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

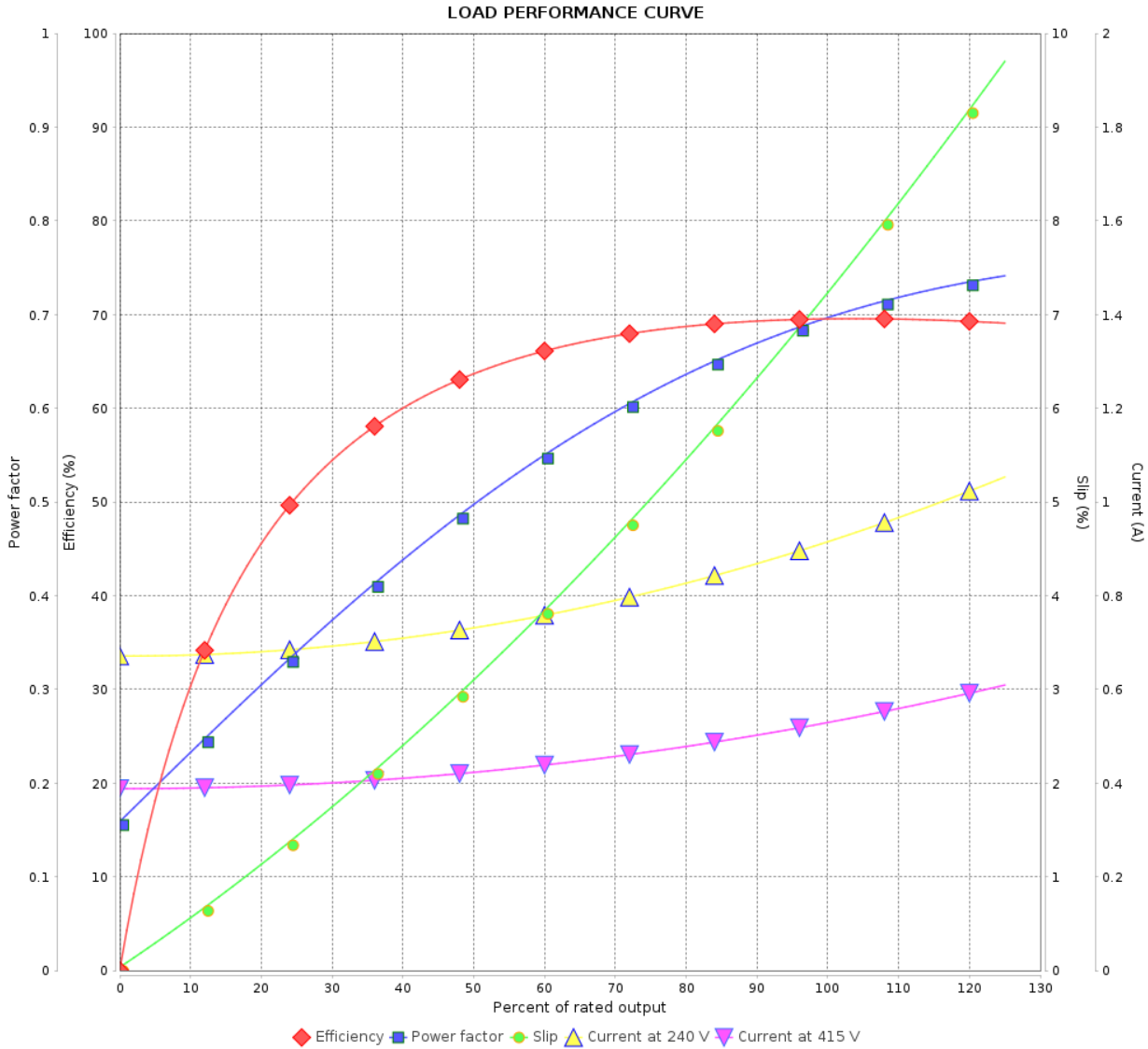
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : Multimounting IE3 Three-Phase

Product code : 13760714



Performance : 240/415 V 50 Hz 4P

Rated current : 0.885/0.512 A
 LRC : 4.6
 Rated torque : 0.126 kgfm
 Locked rotor torque : 240 %
 Breakdown torque : 240 %
 Rated speed : 1390 rpm

Moment of inertia (J) : 0.0006 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 10 / 19	Revision
Checked by				
Date	13/10/2023			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

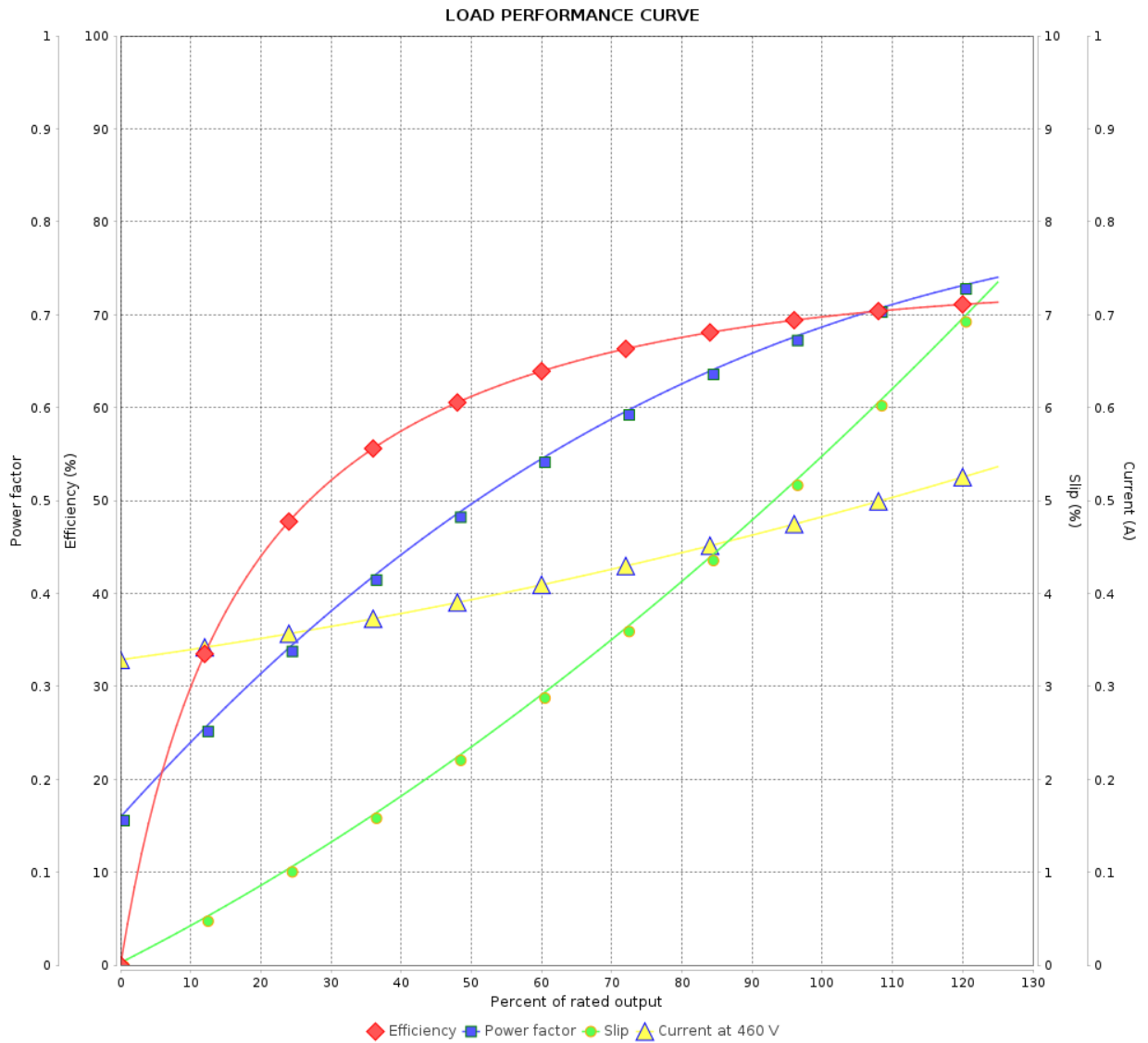


Customer : Astraprom d.o.o.

Product line : Multimounting IE3 Three-Phase

Product code :

13760714



Performance : 460 V 60 Hz 4P

Rated current : 0.468 A
 LRC : 5.2
 Rated torque : 0.103 kgfm
 Locked rotor torque : 270 %
 Breakdown torque : 280 %
 Rated speed : 1700 rpm

Moment of inertia (J) : 0.0006 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 11 / 19	Revision
Checked by				
Date	13/10/2023			

THERMAL LIMIT CURVE

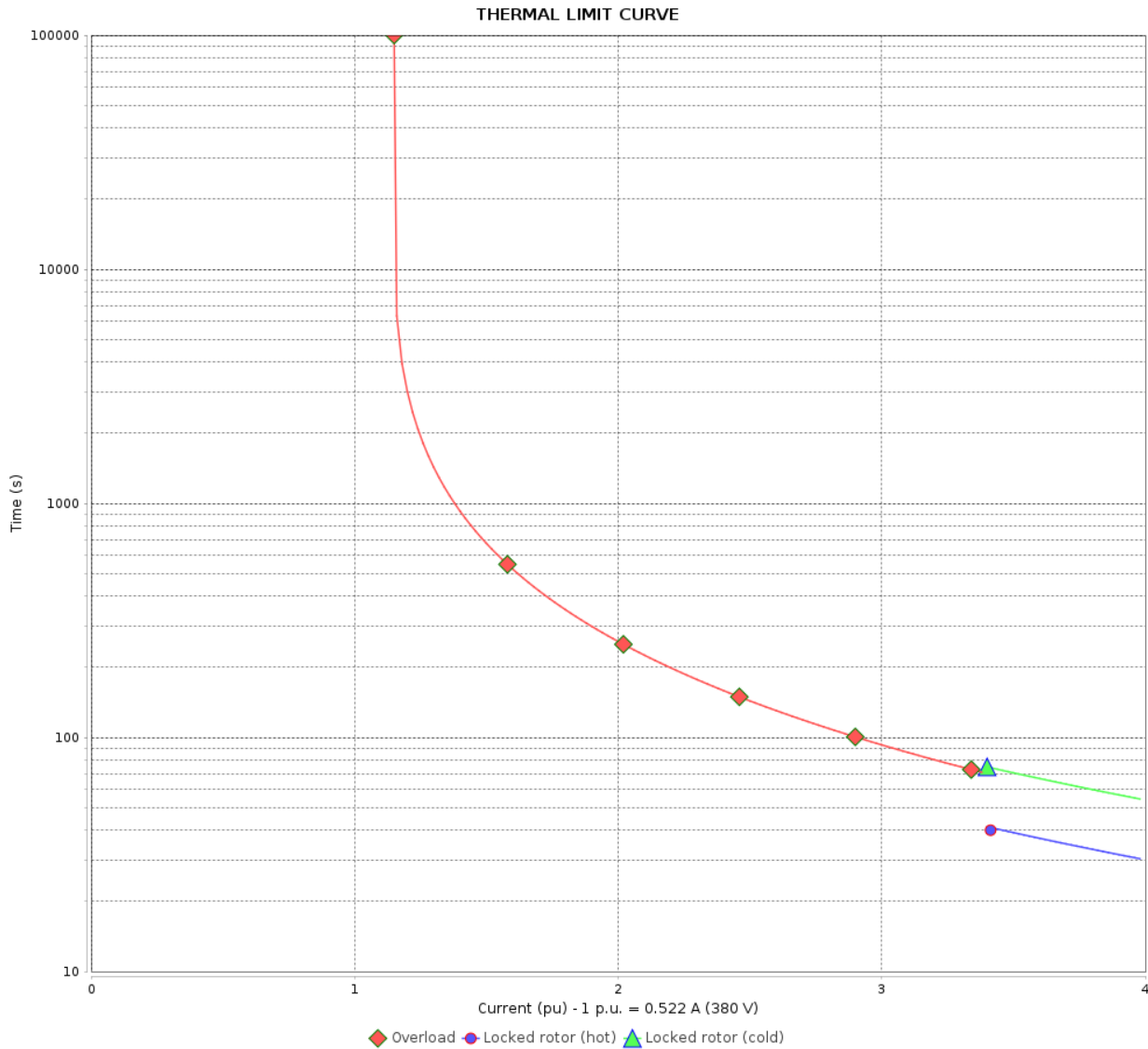
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : Multimounting IE3 Three-Phase

Product code : 13760714



Performance : 220/380 V 50 Hz 4P

Rated current	: 0.902/0.522 A	Moment of inertia (J)	: 0.0006 kgm ²
LRC	: 4.0	Duty cycle	: S1
Rated torque	: 0.129 kgfm	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 80 K
Rated speed	: 1360 rpm	Design	: N

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 12 / 19	Revision
Checked by				
Date	13/10/2023			

THERMAL LIMIT CURVE

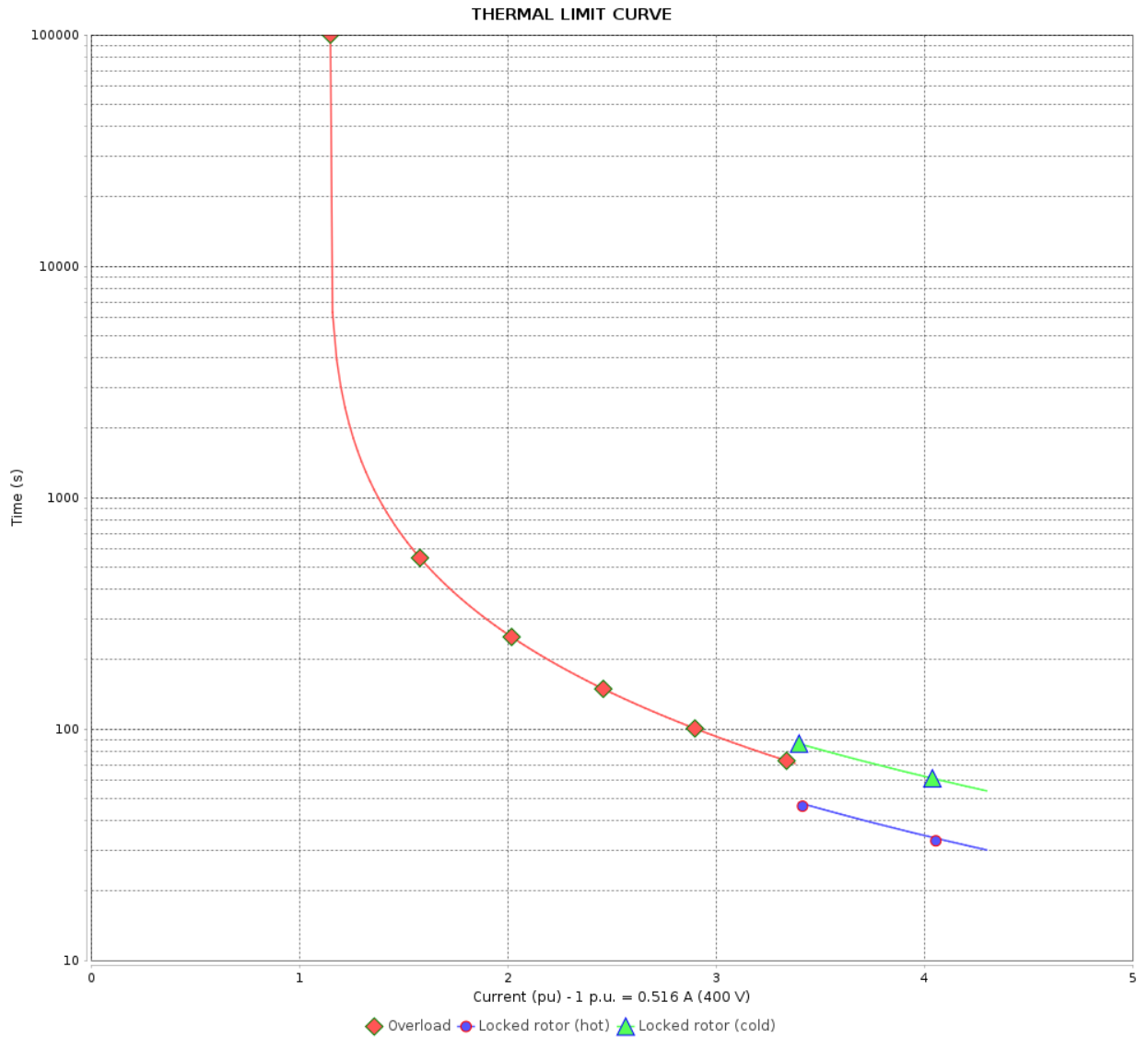
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : Multimounting IE3 Three-Phase

Product code : 13760714



Performance : 230/400 V 50 Hz 4P

Rated current : 0.897/0.516 A
 LRC : 4.3
 Rated torque : 0.127 kgfm
 Locked rotor torque : 220 %
 Breakdown torque : 220 %
 Rated speed : 1380 rpm

Moment of inertia (J) : 0.0006 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	
		13 / 19		

THERMAL LIMIT CURVE

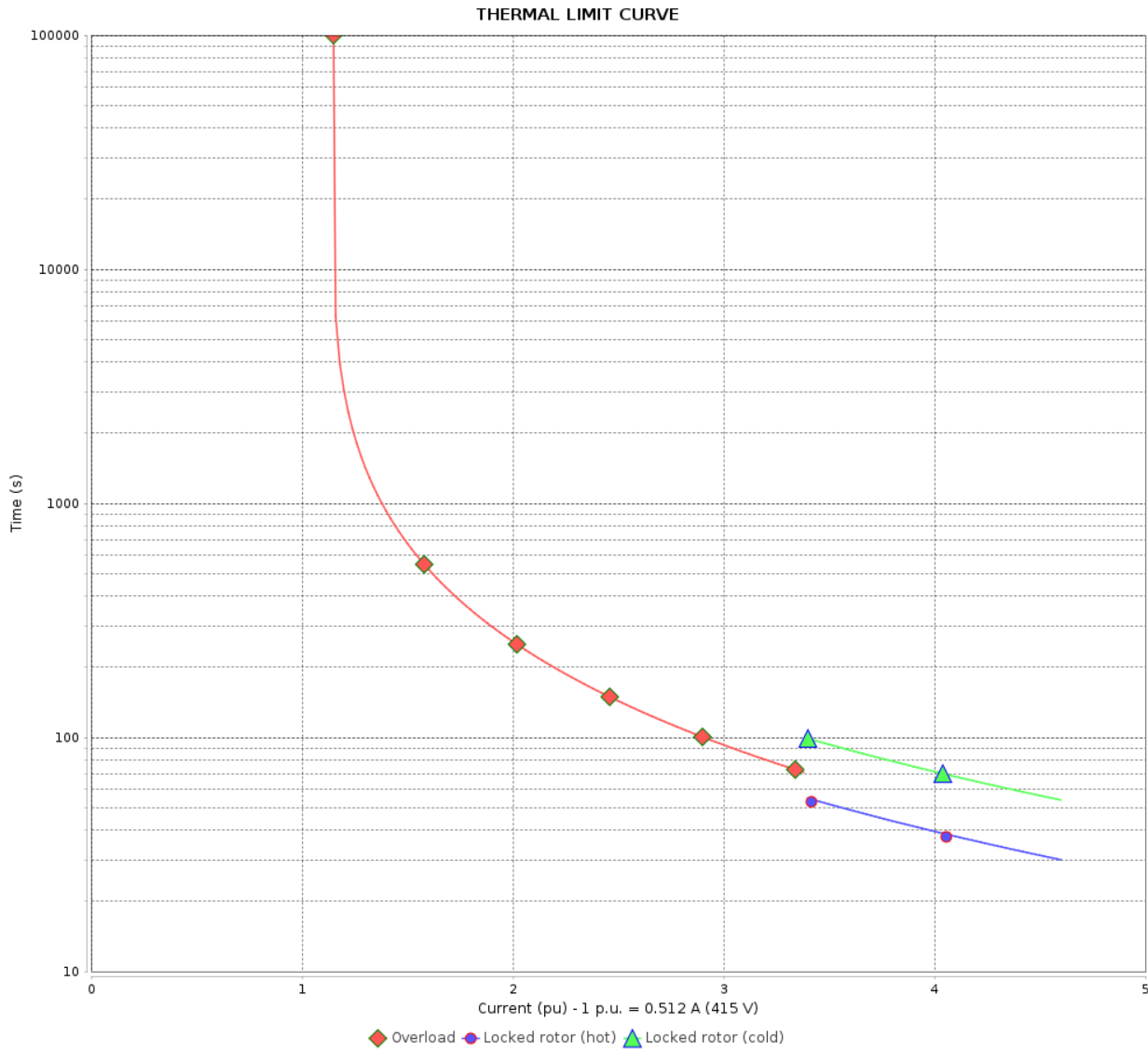
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : Multimounting IE3 Three-Phase

Product code : 13760714



Performance : 240/415 V 50 Hz 4P

Rated current	: 0.885/0.512 A	Moment of inertia (J)	: 0.0006 kgm ²
LRC	: 4.6	Duty cycle	: S1
Rated torque	: 0.126 kgfm	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1390 rpm	Design	: N

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 14 / 19	Revision
Checked by				
Date	13/10/2023			

THERMAL LIMIT CURVE

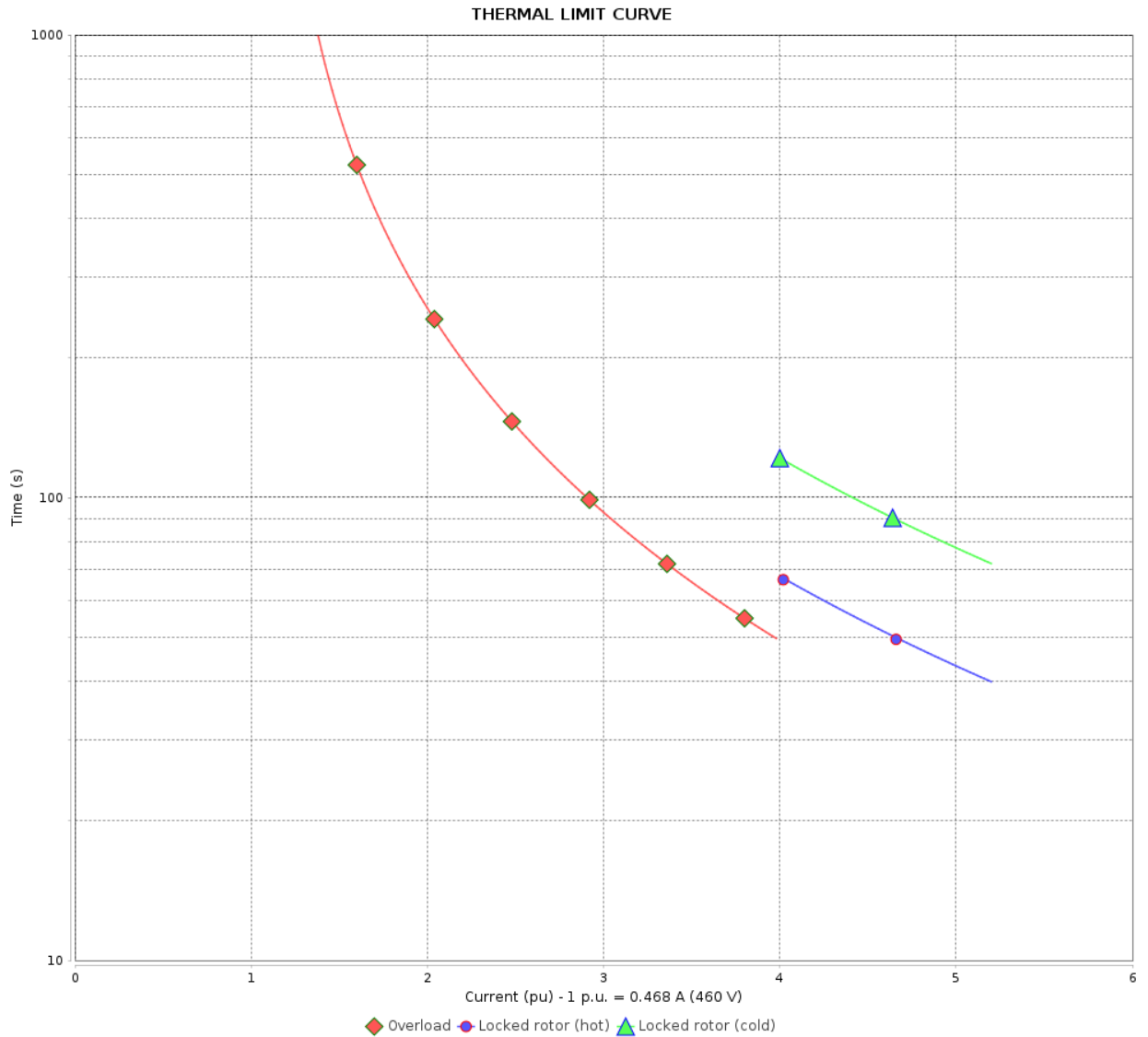
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : Multimounting IE3 Three-Phase

Product code : 13760714



Performance : 460 V 60 Hz 4P

Rated current	: 0.468 A	Moment of inertia (J)	: 0.0006 kgm ²
LRC	: 5.2	Duty cycle	: S1
Rated torque	: 0.103 kgfm	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 1700 rpm	Design	: N

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date	13/10/2023			

VFD OPERATION CURVE

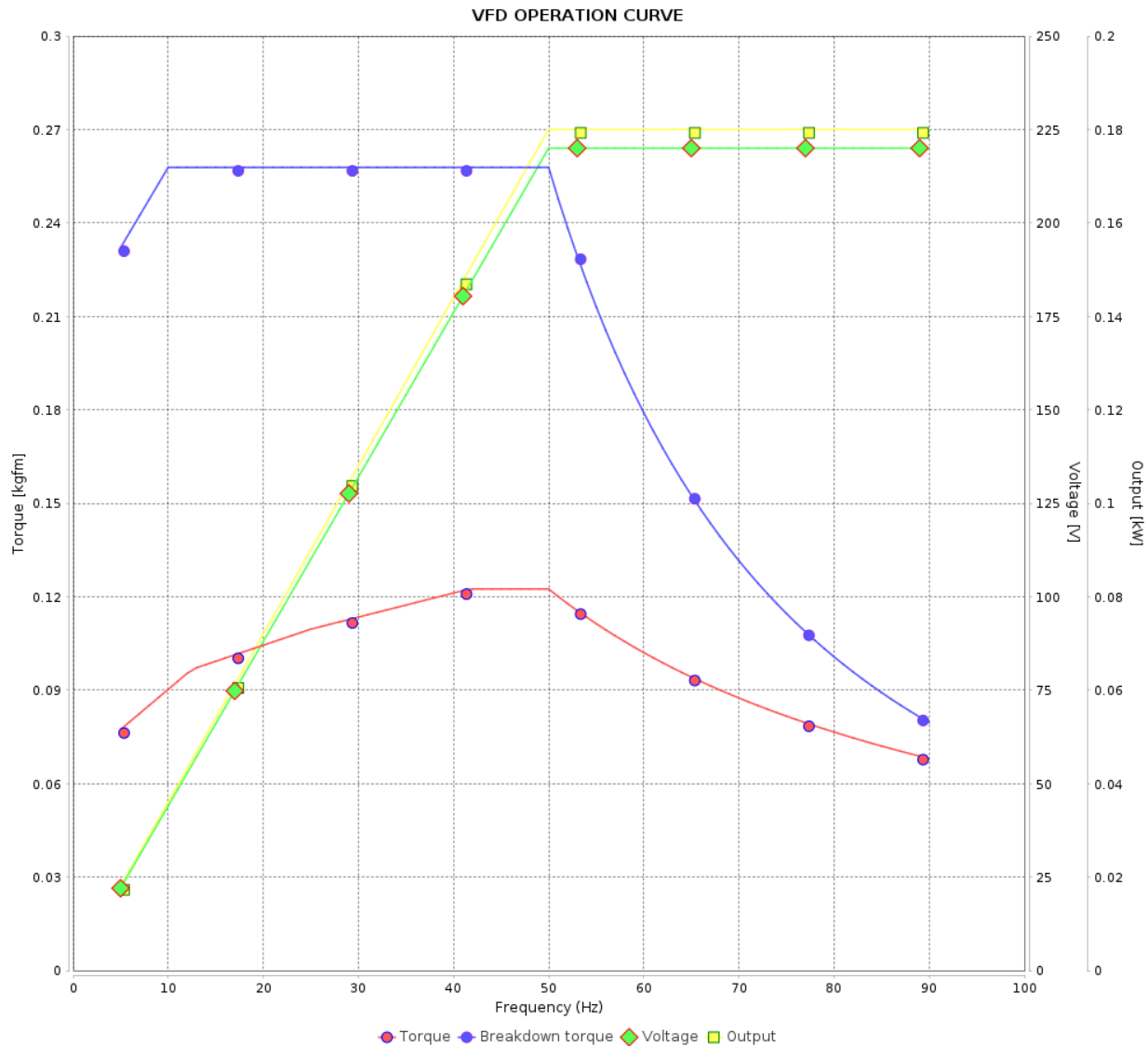
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : Multimounting IE3 Three-Phase

Product code : 13760714



Performance : 220/380 V 50 Hz 4P

Rated current : 0.902/0.522 A
 LRC : 4.0
 Rated torque : 0.129 kgfm
 Locked rotor torque : 200 %
 Breakdown torque : 200 %
 Rated speed : 1360 rpm

Moment of inertia (J) : 0.0006 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	13/10/2023			

VFD OPERATION CURVE

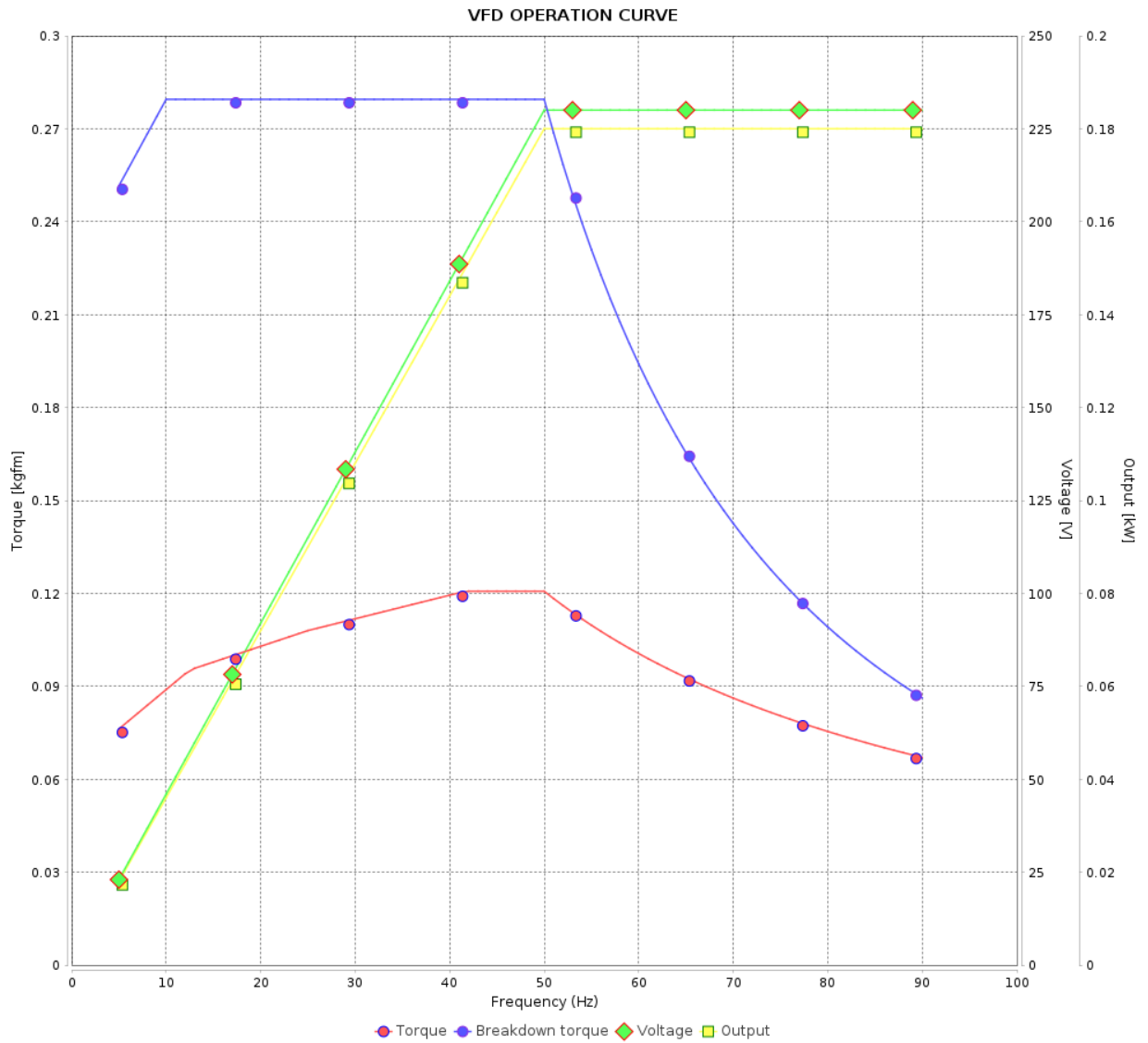
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : Multimounting IE3 Three-Phase

Product code : 13760714



Performance : 230/400 V 50 Hz 4P

Rated current : 0.897/0.516 A
 LRC : 4.3
 Rated torque : 0.127 kgfm
 Locked rotor torque : 220 %
 Breakdown torque : 220 %
 Rated speed : 1380 rpm

Moment of inertia (J) : 0.0006 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	13/10/2023			

VFD OPERATION CURVE

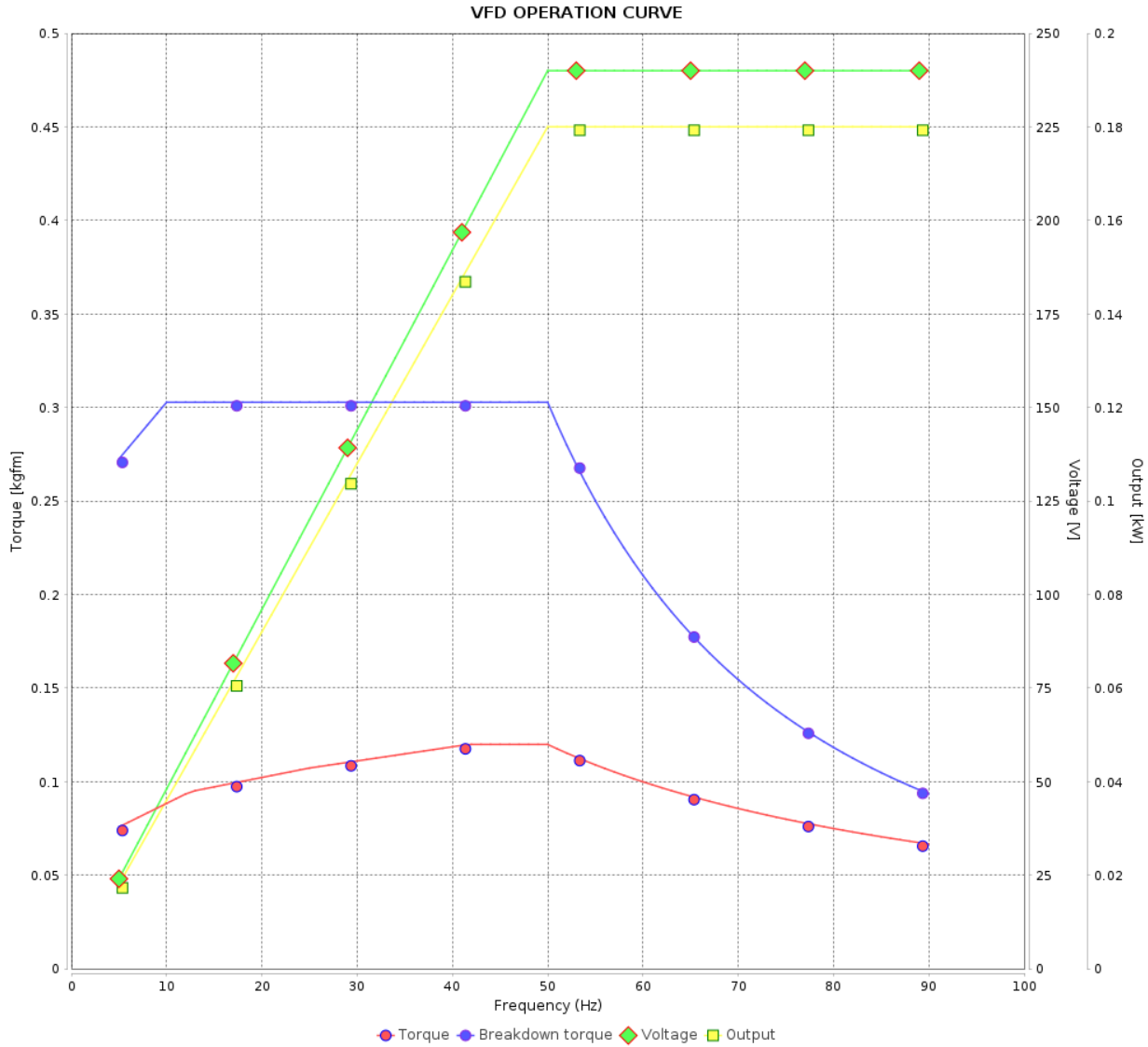
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : Multimounting IE3 Three-Phase

Product code : 13760714



Performance : 240/415 V 50 Hz 4P

Rated current : 0.885/0.512 A
 LRC : 4.6
 Rated torque : 0.126 kgfm
 Locked rotor torque : 240 %
 Breakdown torque : 240 %
 Rated speed : 1390 rpm

Moment of inertia (J) : 0.0006 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	13/10/2023			

VFD OPERATION CURVE

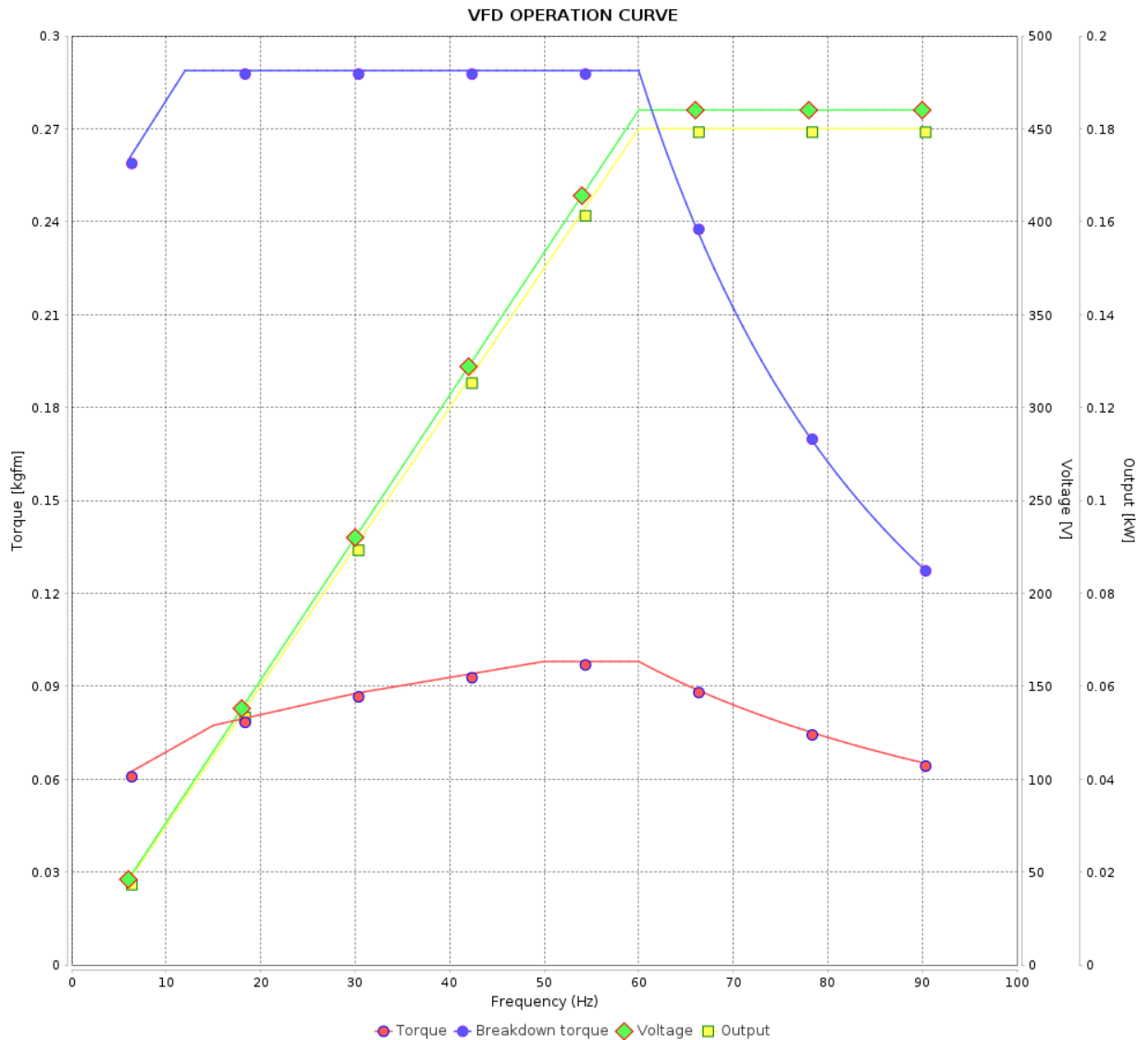
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : Multimounting IE3 Three-Phase

Product code : 13760714



Performance : 460 V 60 Hz 4P

Rated current : 0.468 A
 LRC : 5.2
 Rated torque : 0.103 kgfm
 Locked rotor torque : 270 %
 Breakdown torque : 280 %
 Rated speed : 1700 rpm

Moment of inertia (J) : 0.0006 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		19 / 19		
Date		13/10/2023		