DATA SHEET

Three Phase Induction Motor - Squirrel Cage

Customer : Astraprom d.o.o.

Product line : Multimounting IE3 Three-Phase Product code : 13755847

Frame	: 63	Cooling method	: IC411 - TEFC
Insulation class	: F	Mounting	: B5T
Duty cycle	: S1	Rotation¹	: Both (CW and CCW)
Ambient temperature	: -20°C to +40°C	Starting method	: Direct On Line
Altitude	: 1000 m.a.s.l.	Approx. weight³	: 6.6 kg
Protection degree	: IP55	Moment of inertia (J)	: 0.0006 kgm²
Design	: N		

Output [kW]		0.18	0.18	0.18	0.18
Poles		4	4	4	4
Frequency [Hz]		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]		3.79/2.19	4.13/2.37	4.43/2.56	2.57
LRC [A]		4.2	4.6	5.0	5.5
No load current [A]		0.605/0.350	0.661/0.380	0.692/0.400	0.360
Rated speed [RPM]		1365	1380	1395	1705
Slip [%]		9.00	8.00	7.00	5.28
Rated torque [kgfm]		0.128	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 level²		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

		Drive end	Non drive end
Bearing type	:	6201 ZZ	6201 ZZ
Sealing	:	Oil Seal	Oil Seal
Lubrication interval	:	-	-
Lubricant amount	:	-	-
Lubricant type	:	Mobil Polyrex EM	

Foundation loads

Max. traction : 8 kgf

Max. compression : 14 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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DATA SHEET

Three Phase Induction Motor - Squirrel Cage

Customer : Astraprom d.o.o.

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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 ºC

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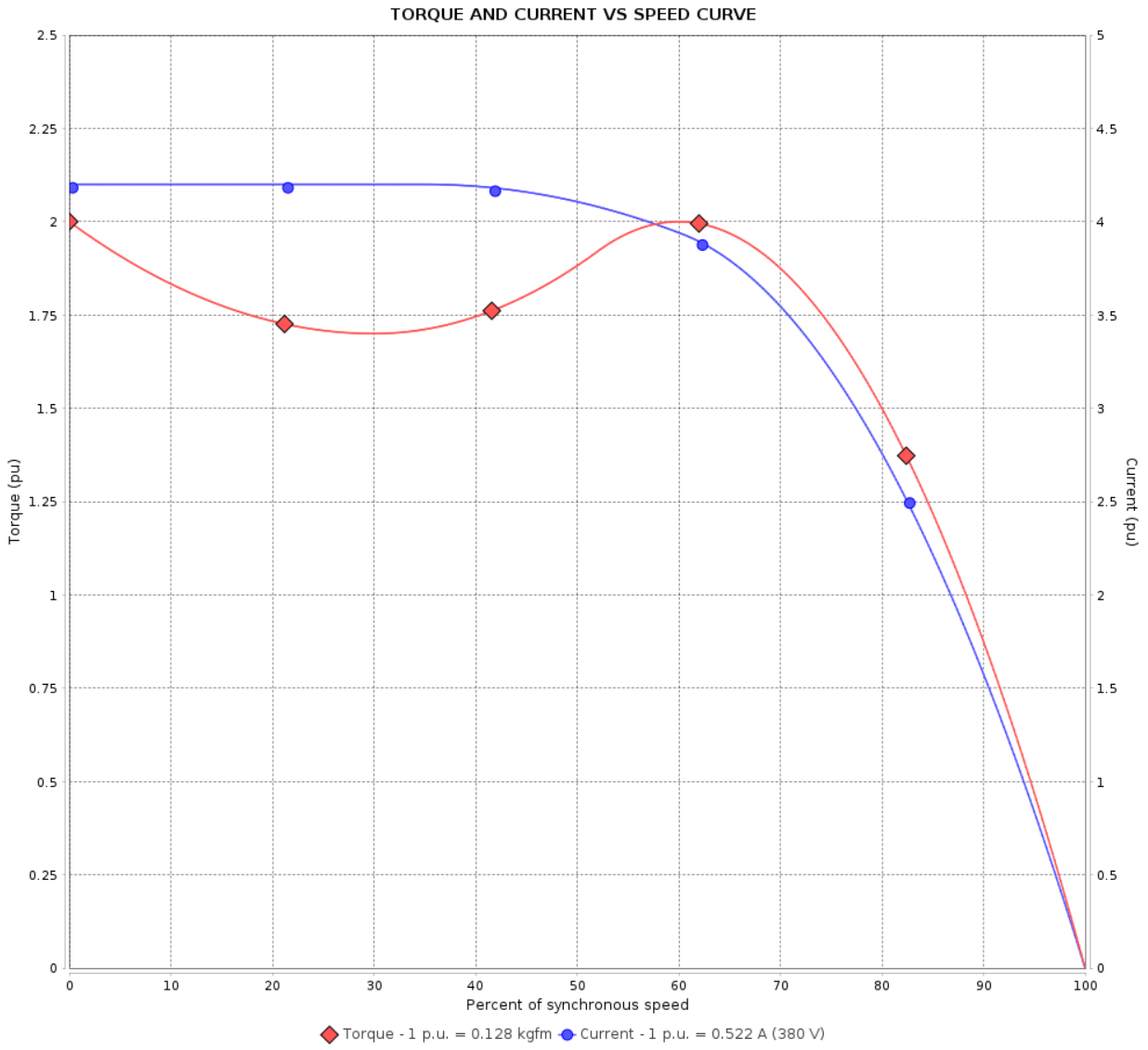
TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage

Customer	: Astraprom d.o.o.
Product line	: Multimounting IE3 Three-Phase
Product code :	13755847



Performance	: 220/380 V 50 Hz 4P

Rated current	: 0.902/0.522 A	Moment of inertia (J)	: 0.0006 kgm²
LRC	: 4.2	Duty cycle	: S1
Rated torque	: 0.128 kgfm	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 80 K
Rated speed	: 1365 rpm	Design	: N

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

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TORQUE AND CURRENT VS SPEED CURVE

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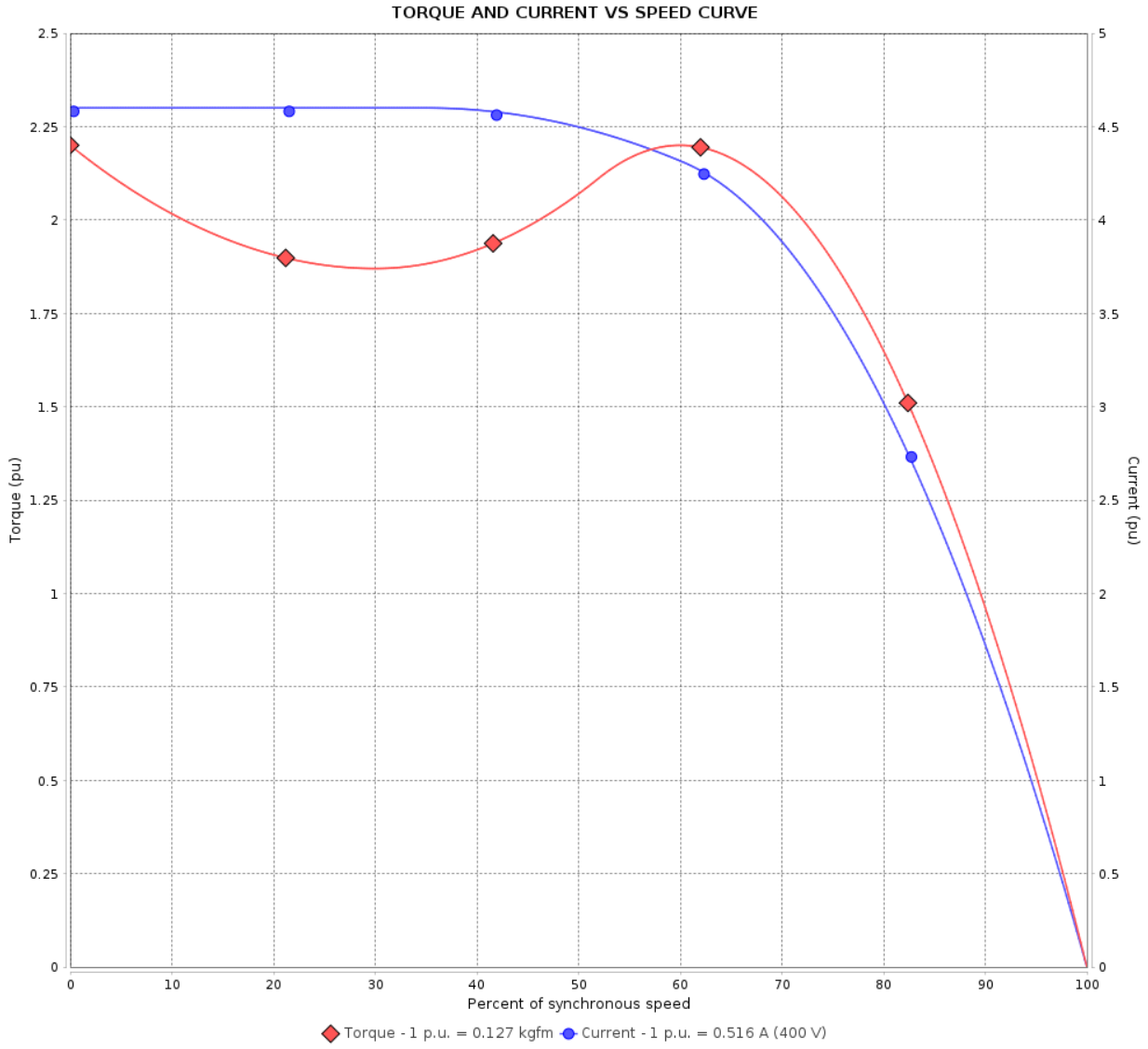

Performance	: 230/400 V 50 Hz 4P

Rated current	: 0.897/0.516 A	Moment of inertia (J)	: 0.0006 kgm²
LRC	: 4.6	Duty cycle	: S1
Rated torque	: 0.127 kgfm	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 80 K
Rated speed	: 1380 rpm	Design	: N

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

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TORQUE AND CURRENT VS SPEED CURVE

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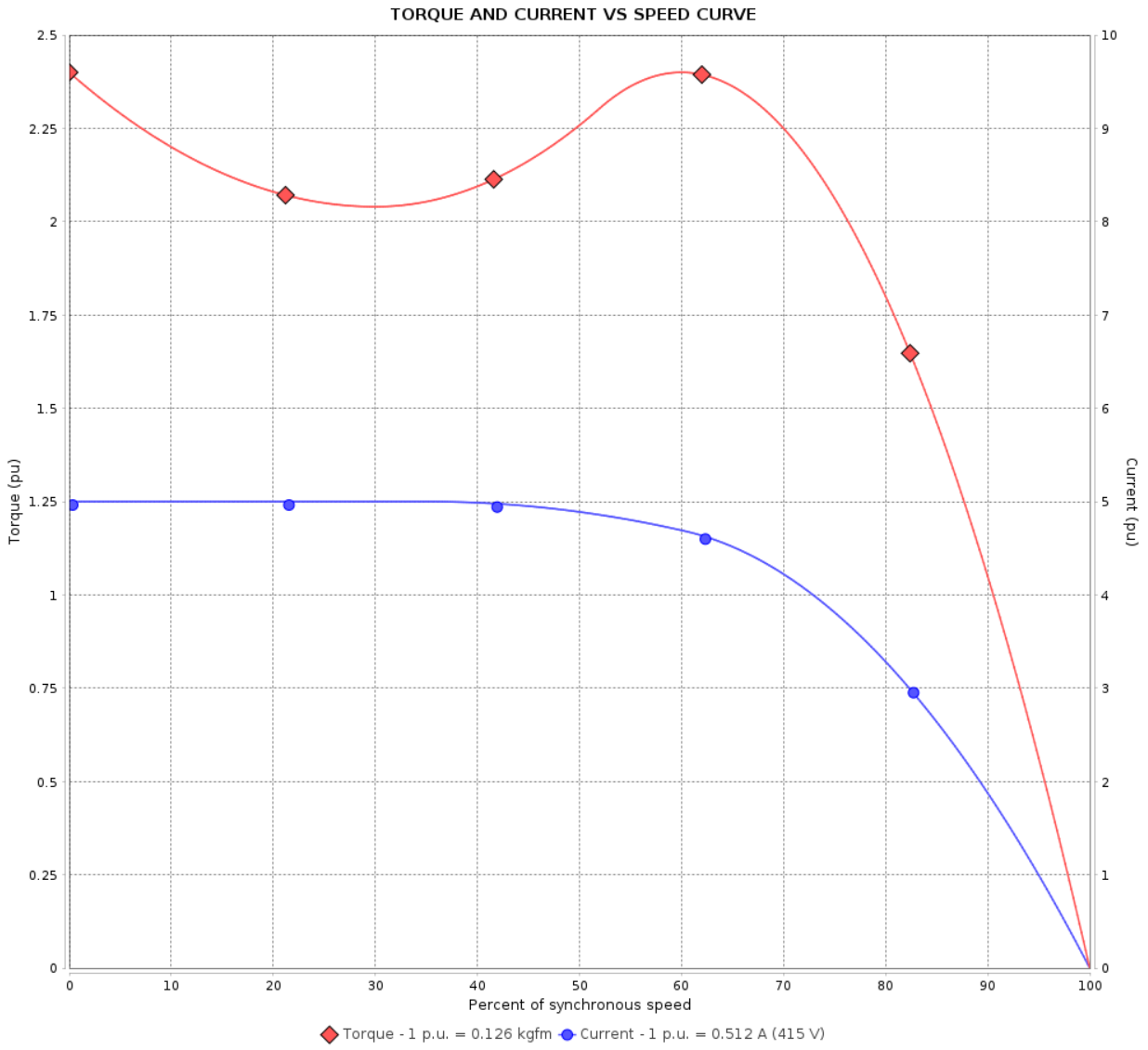

Performance	: 240/415 V 50 Hz 4P		
Rated current	: 0.885/0.512 A	Moment of inertia (J)	: 0.0006 kgm²
LRC	: 5.0	Duty cycle	: S1
Rated torque	: 0.126 kgfm	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1395 rpm	Design	: N
Locked rotor time	: 54s (cold) 30s (hot)		

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TORQUE AND CURRENT VS SPEED CURVE

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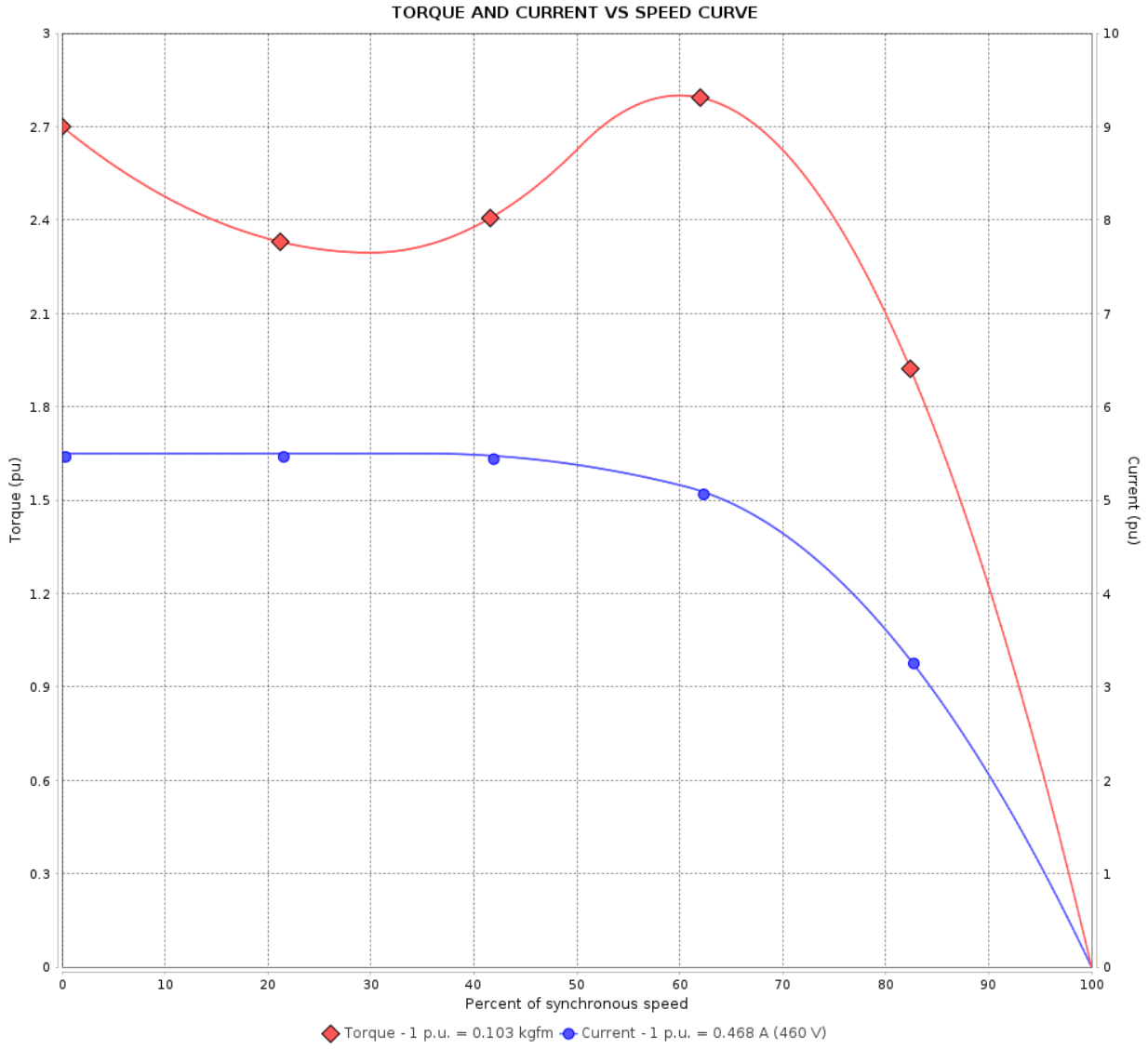

Performance	: 460 V 60 Hz 4P

Rated current	: 0.468 A	Moment of inertia (J)	: 0.0006 kgm²
LRC	: 5.5	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	: 1705 rpm	Design	: N

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

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

Customer	: Astraprom d.o.o.
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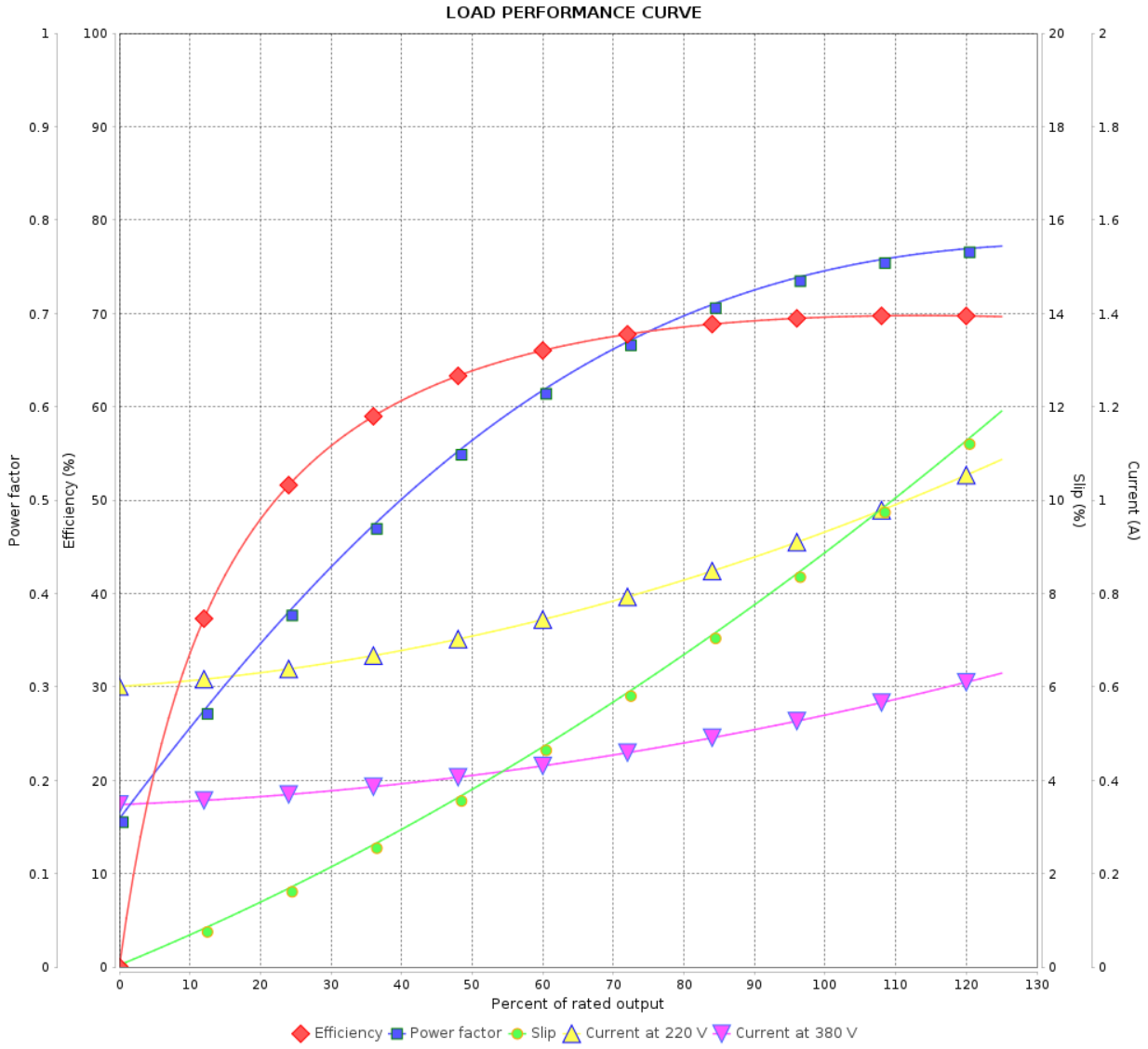

Performance	: 220/380 V 50 Hz 4P		
Rated current	: 0.902/0.522 A	Moment of inertia (J)	: 0.0006 kgm²
LRC	: 4.2	Duty cycle	: S1
Rated torque	: 0.128 kgfm	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 80 K
Rated speed	: 1365 rpm	Design	: N

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LOAD PERFORMANCE CURVE

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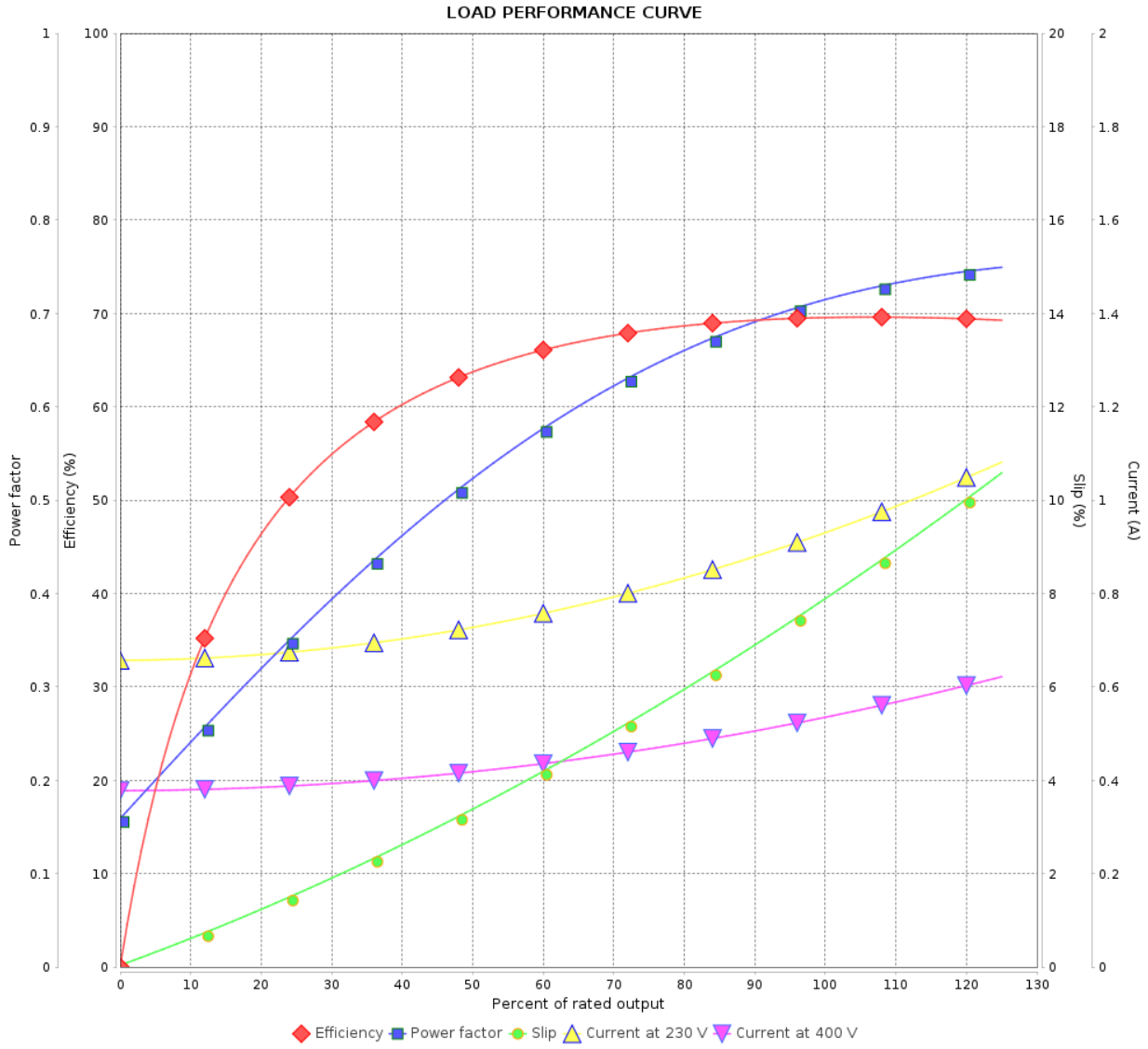

Performance	: 230/400 V 50 Hz 4P

Rated current	: 0.897/0.516 A	Moment of inertia (J)	: 0.0006 kgm²
LRC	: 4.6	Duty cycle	: S1
Rated torque	: 0.127 kgfm	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 80 K
Rated speed	: 1380 rpm	Design	: N

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

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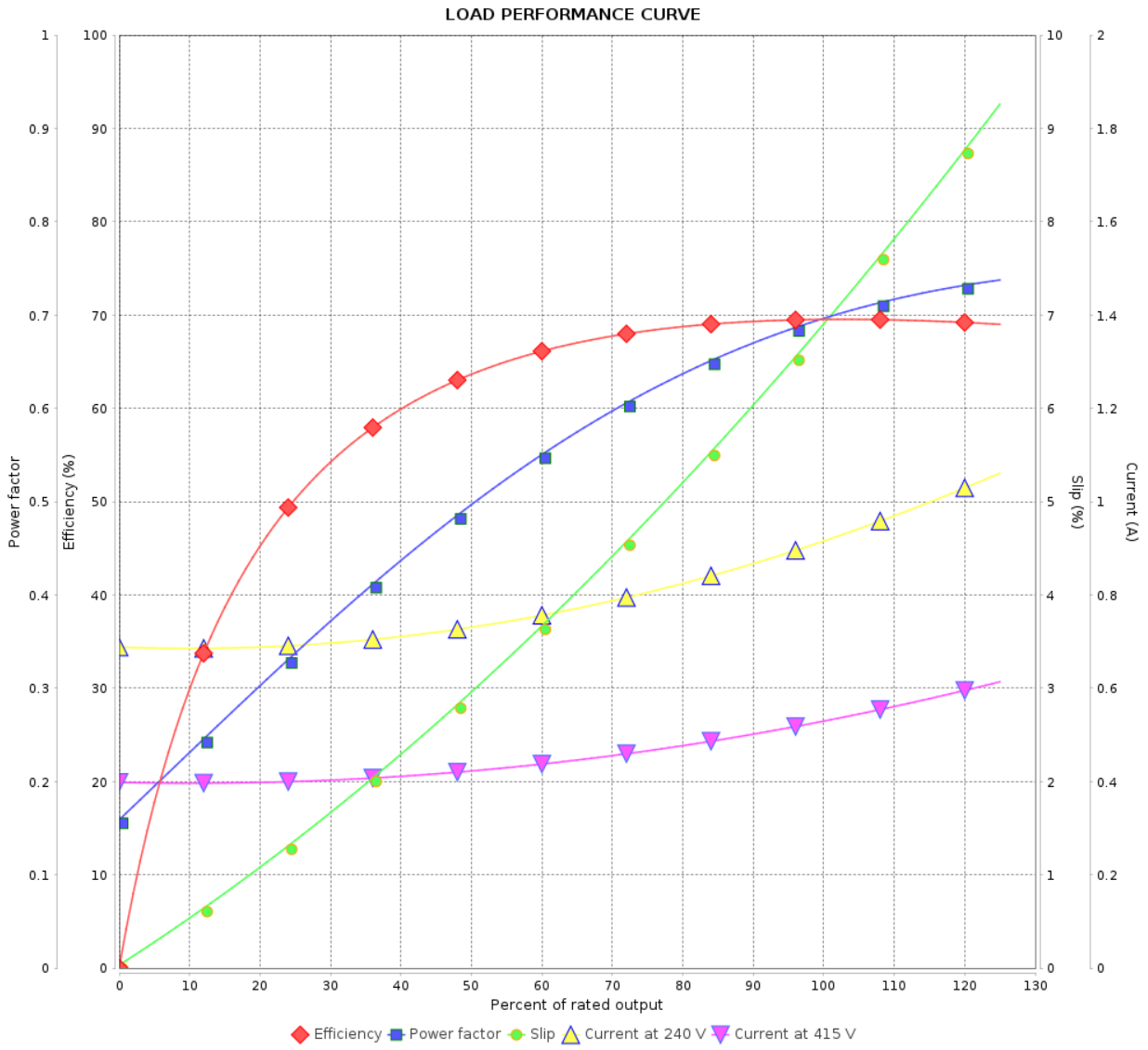

Performance	: 240/415 V 50 Hz 4P		
Rated current	: 0.885/0.512 A	Moment of inertia (J)	: 0.0006 kgm²
LRC	: 5.0	Duty cycle	: S1
Rated torque	: 0.126 kgfm	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1395 rpm	Design	: N

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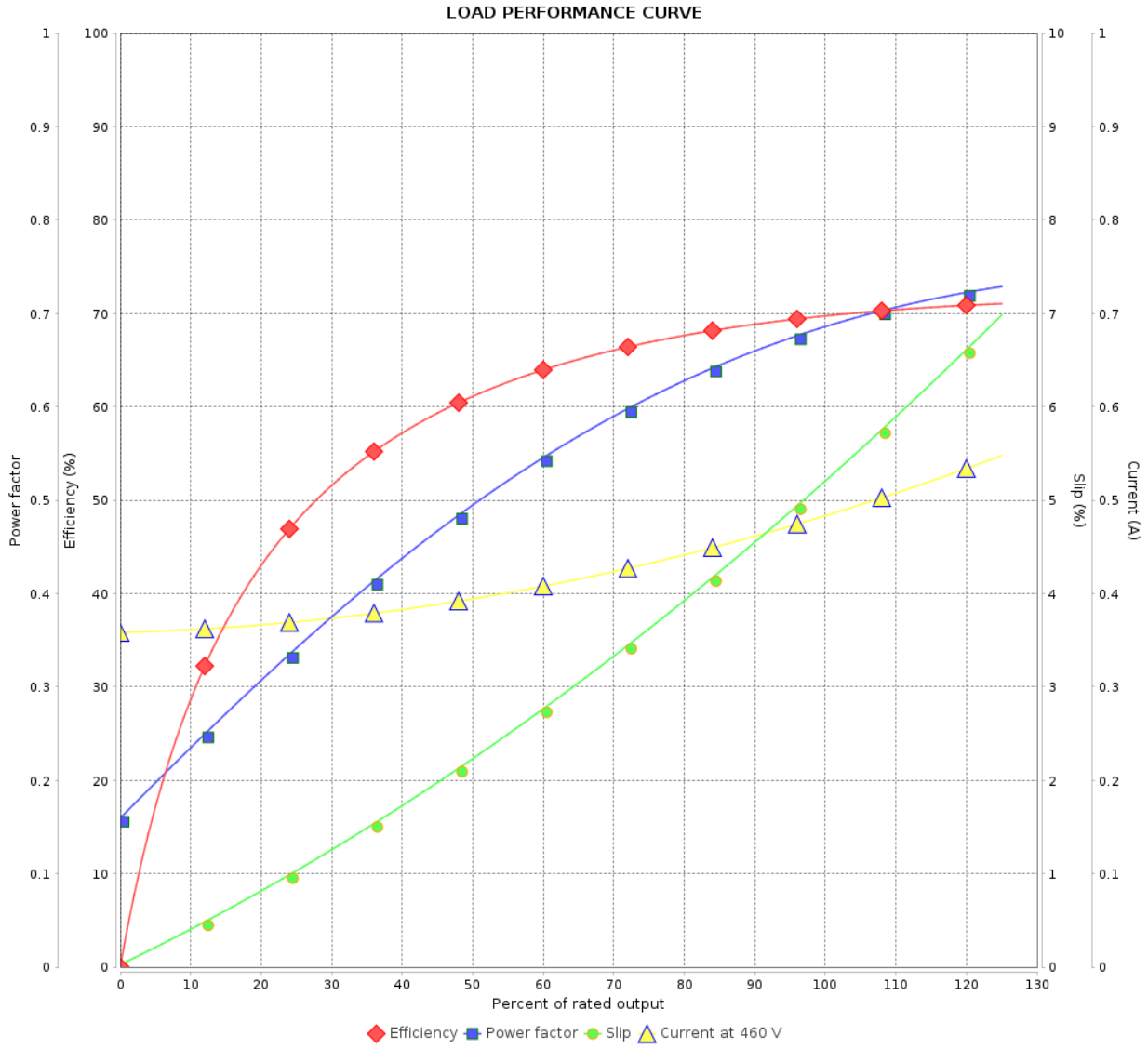

Performance	: 460 V 60 Hz 4P

Rated current	: 0.468 A	Moment of inertia (J)	: 0.0006 kgm²
LRC	: 5.5	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	: 1705 rpm	Design	: N

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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage

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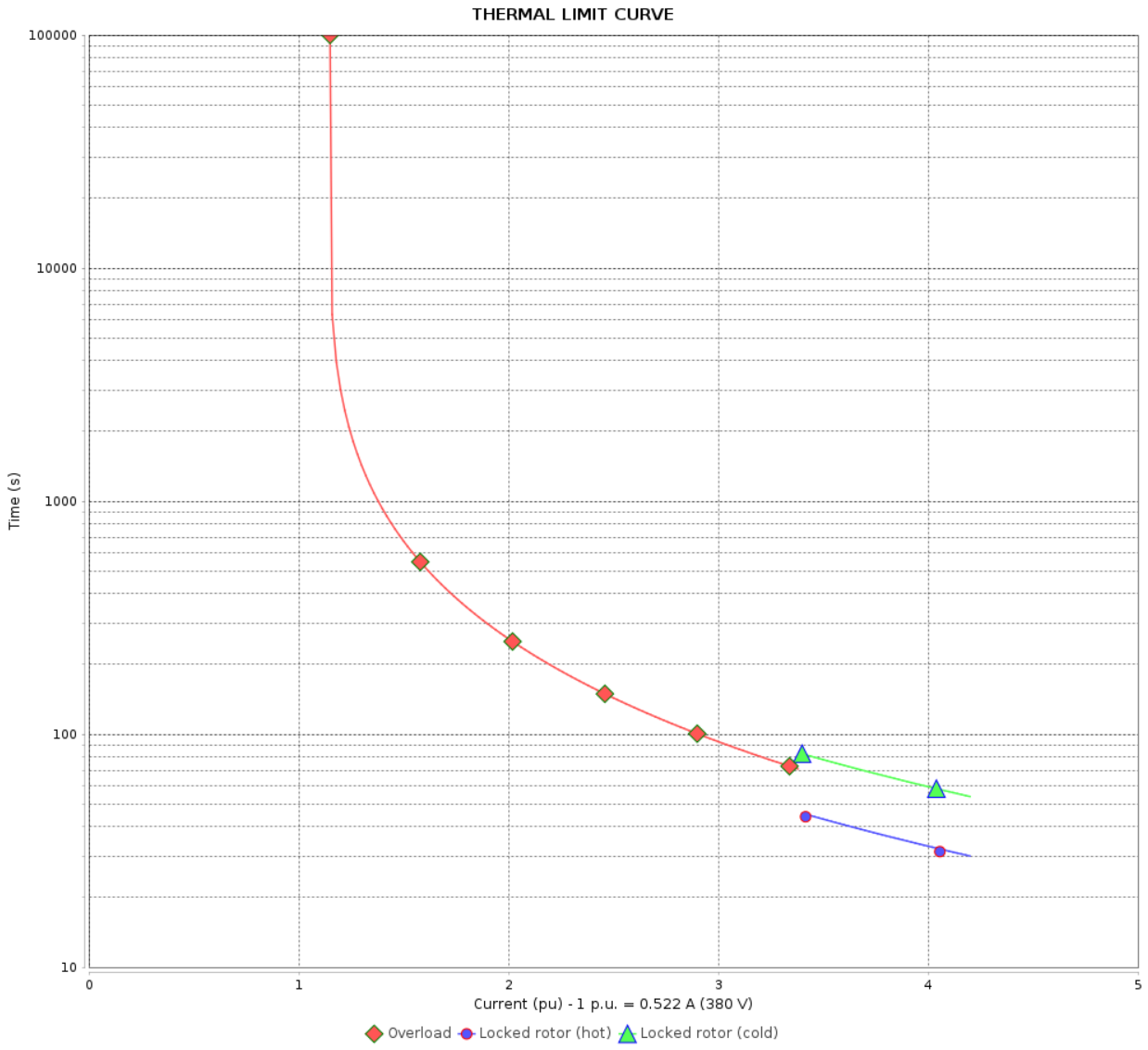

Performance	: 220/380 V 50 Hz 4P		
Rated current	: 0.902/0.522 A	Moment of inertia (J)	: 0.0006 kgm²
LRC	: 4.2	Duty cycle	: S1
Rated torque	: 0.128 kgfm	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 80 K
Rated speed	: 1365 rpm	Design	: N
Heating constant			
Cooling constant			

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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage

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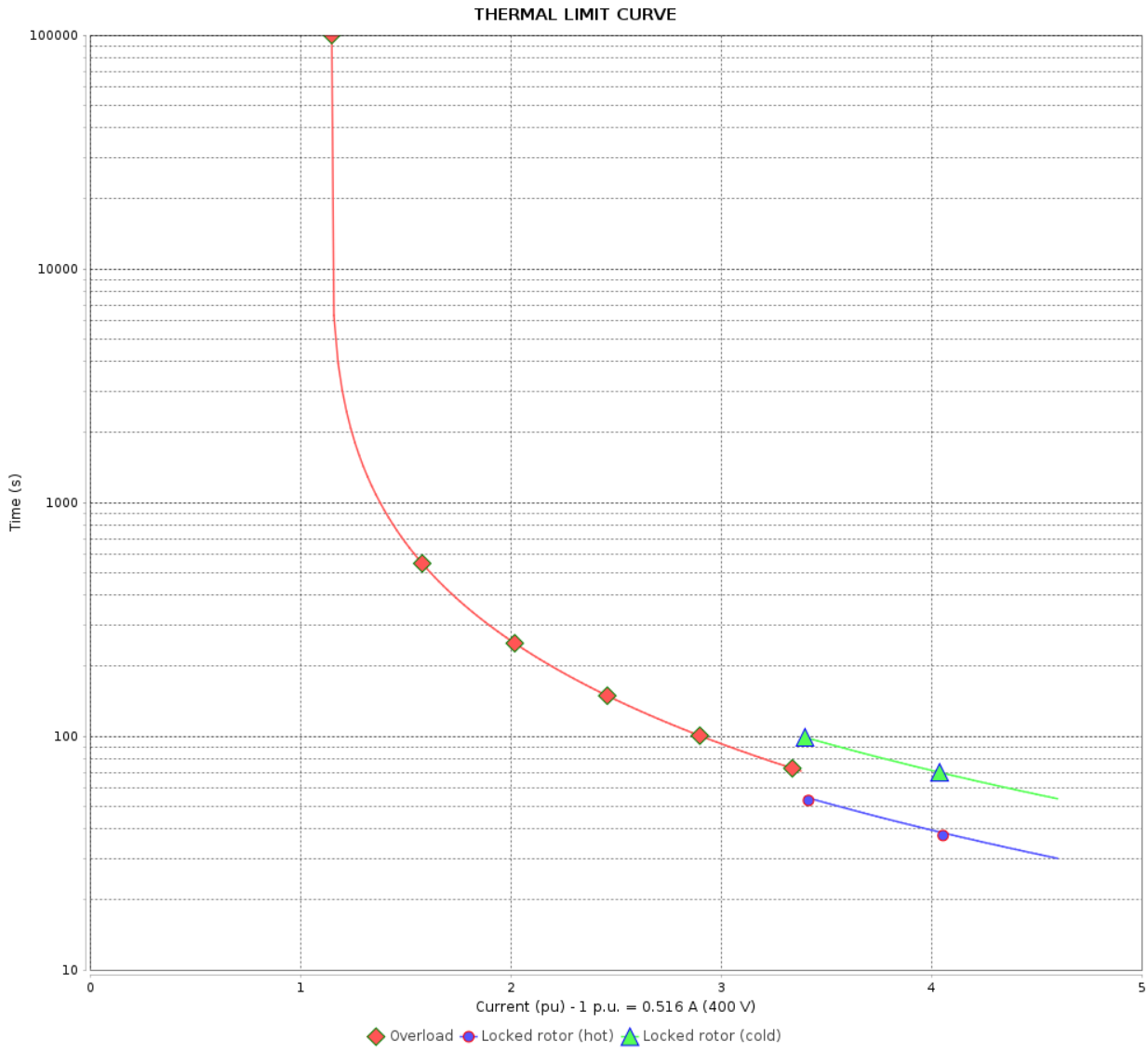

Performance	: 230/400 V 50 Hz 4P		
Rated current	: 0.897/0.516 A	Moment of inertia (J)	: 0.0006 kgm²
LRC	: 4.6	Duty cycle	: S1
Rated torque	: 0.127 kgfm	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 80 K
Rated speed	: 1380 rpm	Design	: N
Heating constant			
Cooling constant			

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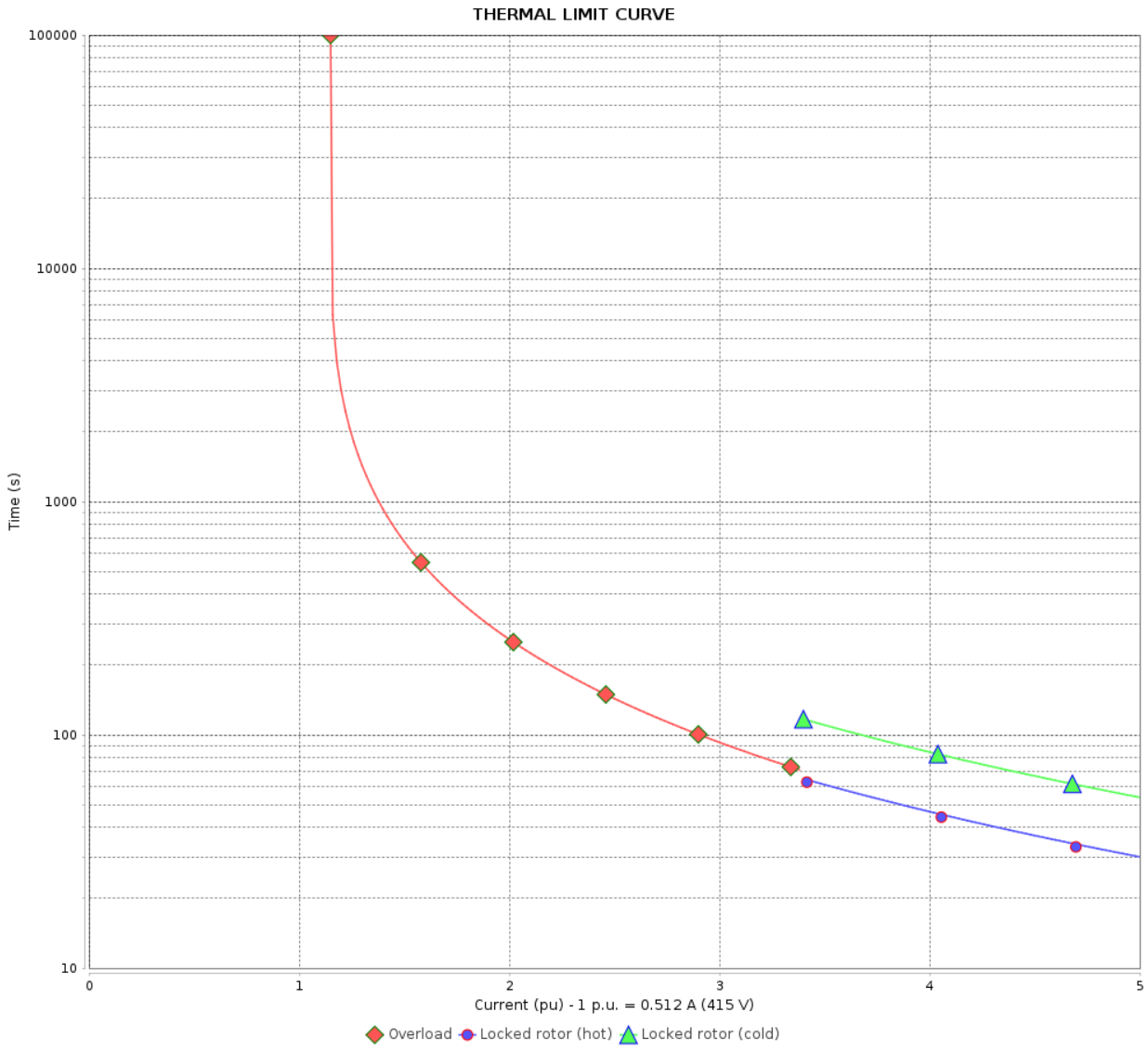

Performance	: 240/415 V 50 Hz 4P		
Rated current	: 0.885/0.512 A	Moment of inertia (J)	: 0.0006 kgm²
LRC	: 5.0	Duty cycle	: S1
Rated torque	: 0.126 kgfm	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1395 rpm	Design	: N
Heating constant			
Cooling constant			

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THERMAL LIMIT CURVE

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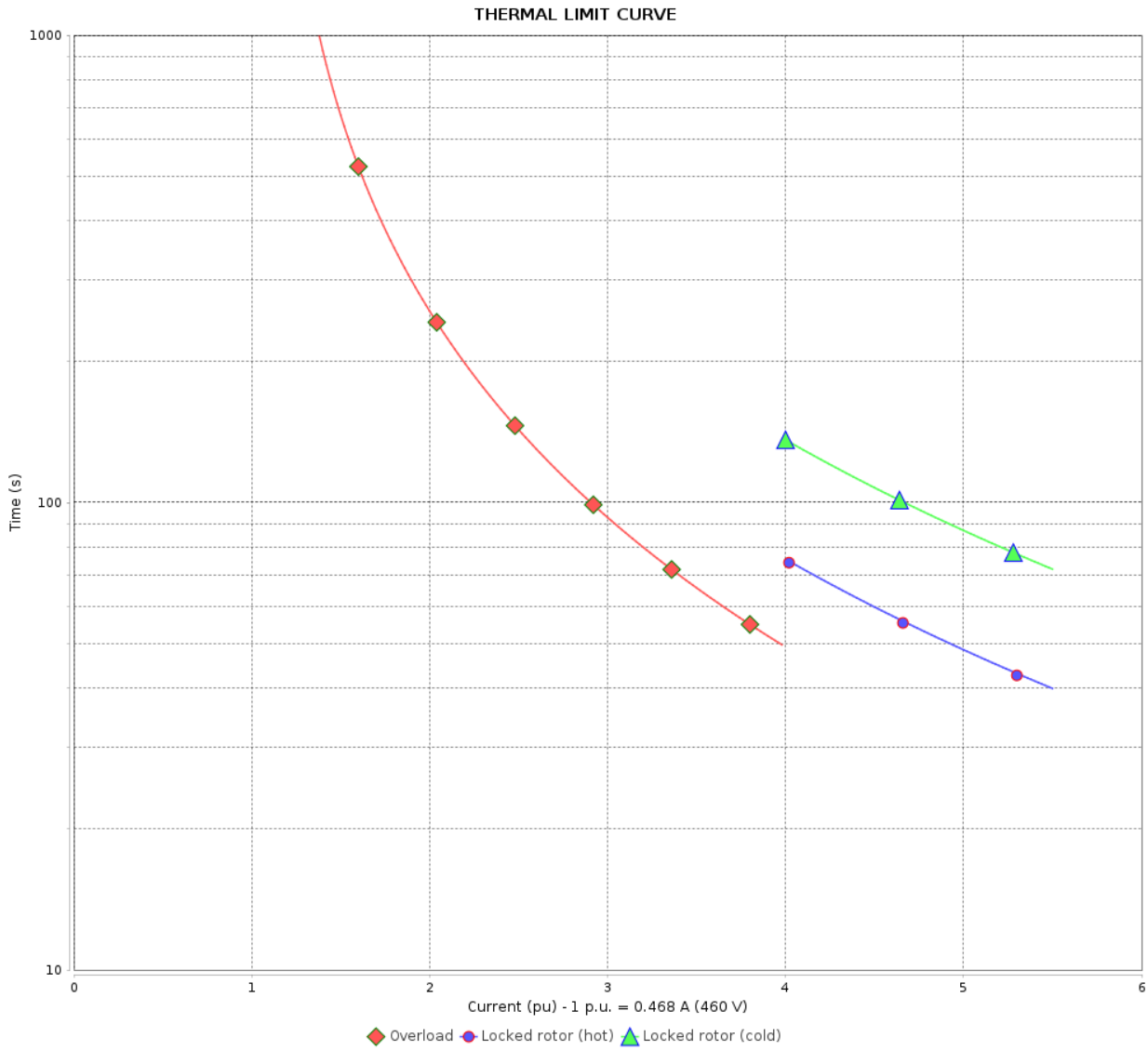

Performance	: 460 V 60 Hz 4P

Rated current	: 0.468 A	Moment of inertia (J)	: 0.0006 kgm²
LRC	: 5.5	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	: 1705 rpm	Design	: N
Heating constant			
Cooling constant			

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

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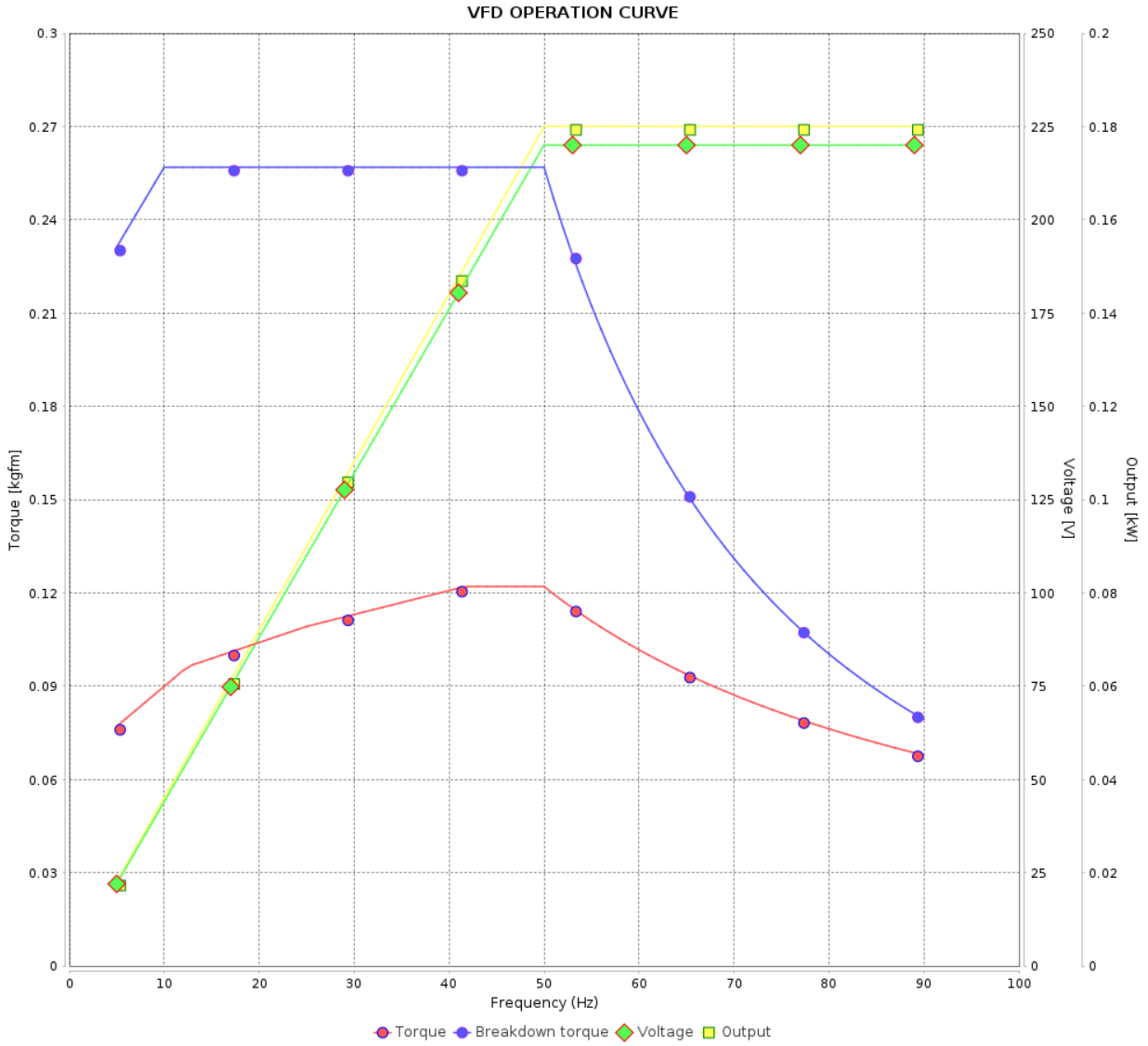

Performance	: 220/380 V 50 Hz 4P		
Rated current	: 0.902/0.522 A	Moment of inertia (J)	: 0.0006 kgm²
LRC	: 4.2	Duty cycle	: S1
Rated torque	: 0.128 kgfm	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 80 K
Rated speed	: 1365 rpm	Design	: N

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

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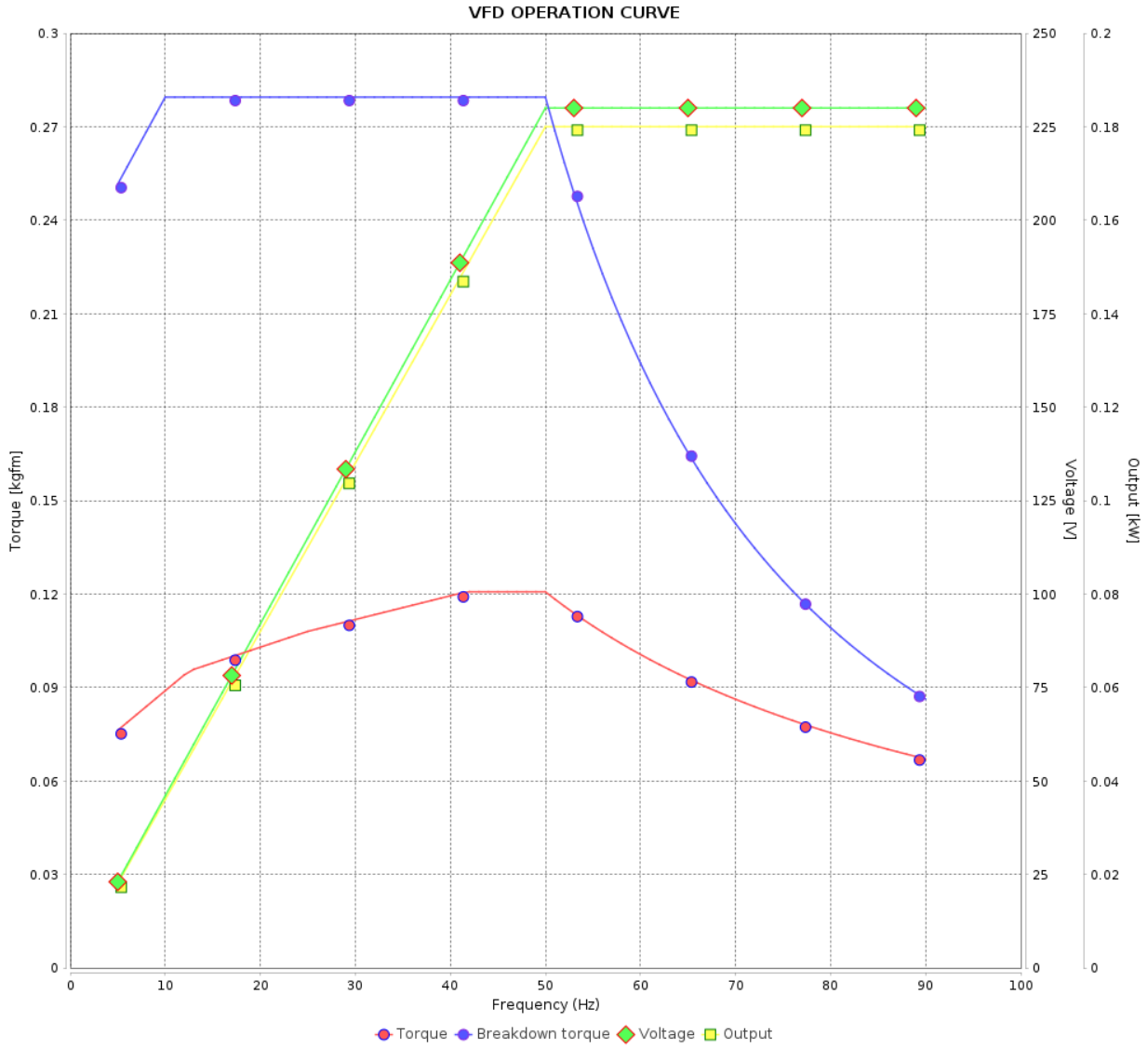

Performance	: 230/400 V 50 Hz 4P		
Rated current	: 0.897/0.516 A	Moment of inertia (J)	: 0.0006 kgm²
LRC	: 4.6	Duty cycle	: S1
Rated torque	: 0.127 kgfm	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 80 K
Rated speed	: 1380 rpm	Design	: N

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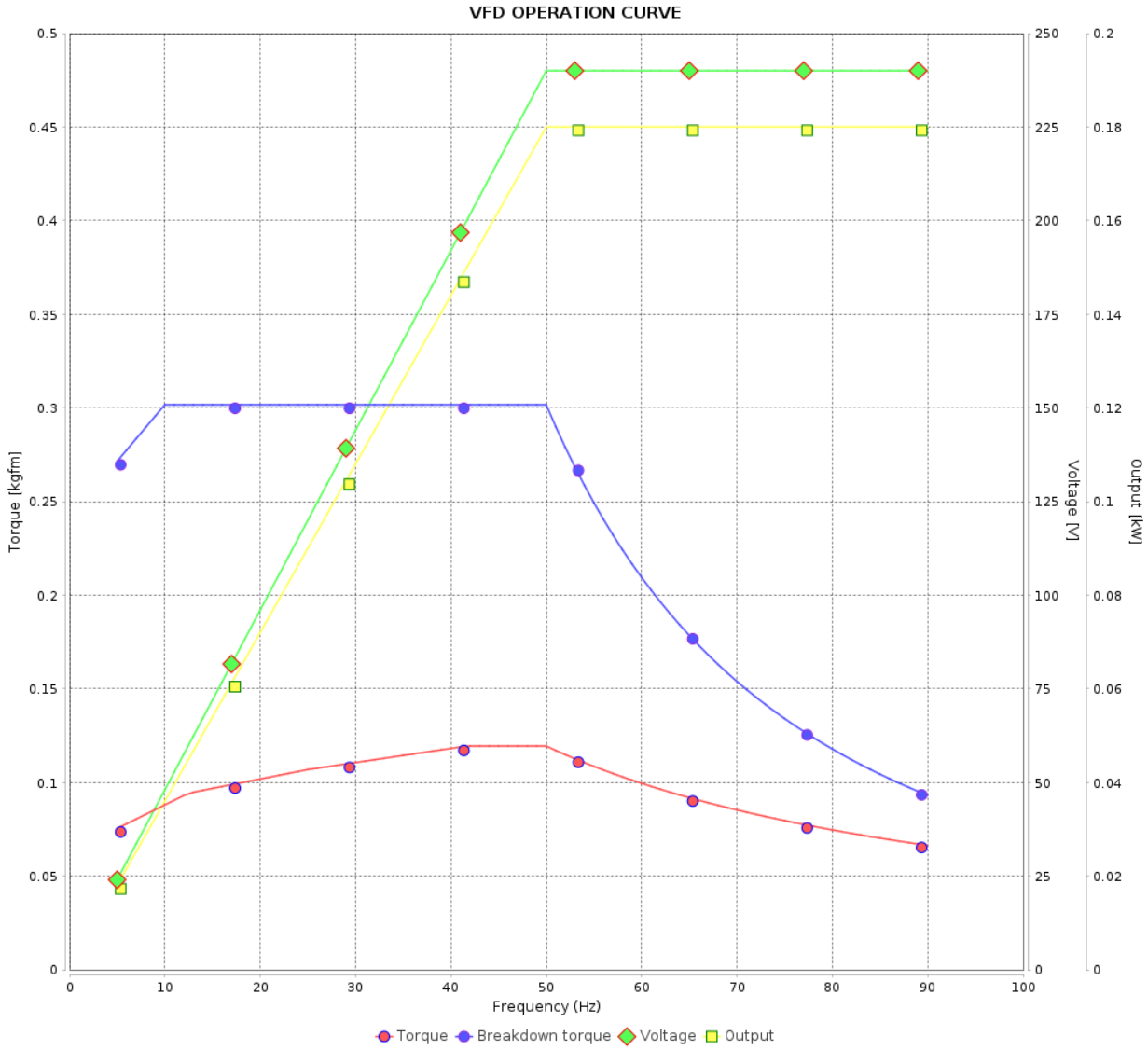

Performance	: 240/415 V 50 Hz 4P		
Rated current	: 0.885/0.512 A	Moment of inertia (J)	: 0.0006 kgm²
LRC	: 5.0	Duty cycle	: S1
Rated torque	: 0.126 kgfm	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1395 rpm	Design	: N

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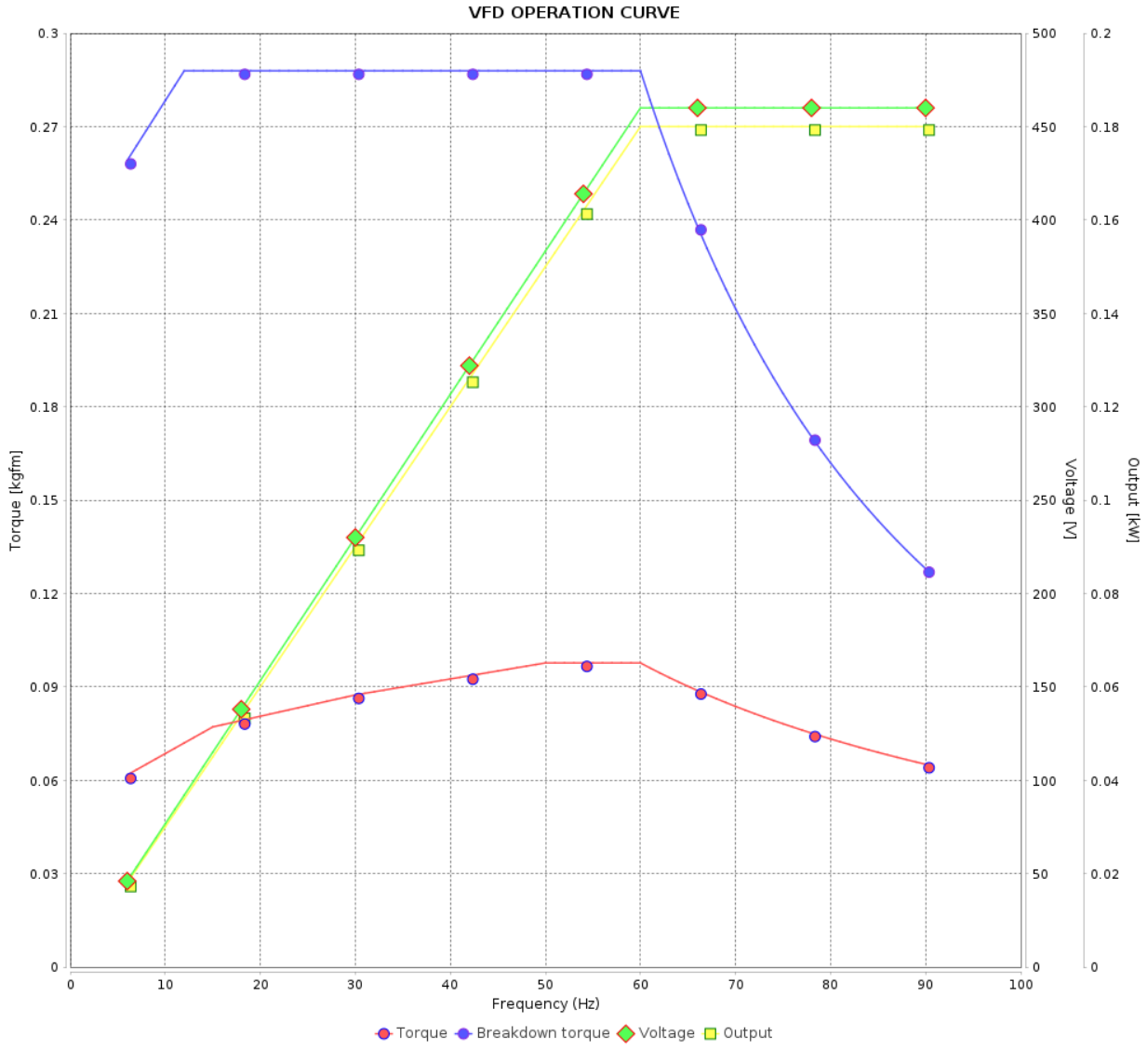

Performance	: 460 V 60 Hz 4P		
Rated current	: 0.468 A	Moment of inertia (J)	: 0.0006 kgm²
LRC	: 5.5	Duty cycle	: S1
Rated torque	: 0.103 kgfm	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 1705 rpm	Design	: N

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