

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer		: Astraprom d.o.o.			
Product line		: W22 IE3 Three-Phase		Product code : 12868139	
Frame	: 132M	Cooling method	: IC411 - TEFC		
Insulation class	: F	Mounting	: B5T		
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	: 83.5 kg		
Protection degree	: IP55	Moment of inertia (J)	: 0.0303 kgm ²		
Design	: N				
Output [kW]	9.2	9.2	9.2	9.2	9.2
Poles	2	2	2	2	2
Frequency [Hz]	50	50	50	60	60
Rated voltage [V]	380/660	400/690	415	460	460
Rated current [A]	17.3/9.96	16.6/9.62	16.4	14.9	14.9
L. R. Amperes [A]	135/77.7	141/81.8	148	139	139
LRC [A]	7.8	8.5	9.0	9.3	9.3
No load current [A]	5.20/2.99	5.80/3.36	6.20	5.40	5.40
Rated speed [RPM]	2925	2935	2940	3545	3545
Slip [%]	2.50	2.17	2.00	1.53	1.53
Rated torque [kgfm]	3.06	3.05	3.05	2.53	2.53
Locked rotor torque [%]	250	280	310	330	330
Breakdown torque [%]	310	350	370	400	400
Service factor	1.00	1.00	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K	80 K
Locked rotor time	21s (cold) 0s (hot)	23s (cold) 0s (hot)	23s (cold) 0s (hot)	28s (cold) 0s (hot)	28s (cold) 0s (hot)
Noise level ²	63.0 dB(A)	63.0 dB(A)	63.0 dB(A)	68.0 dB(A)	68.0 dB(A)
Efficiency (%)	25%				
	50%	88.5	88.0	87.5	87.0
	75%	90.0	90.0	89.5	89.5
	100%	90.7	90.7	90.7	90.2
Power Factor	25%				
	50%	0.80	0.76	0.72	0.73
	75%	0.87	0.84	0.82	0.82
	100%	0.89	0.88	0.86	0.86
Losses at normative operating points (speed;torque), in percentage of rated output power					
Losses (%)	P1 (0,9;1,0)	9.9	10.1	9.4	9.7
	P2 (0,5;1,0)	8.5	8.6	8.0	8.3
	P3 (0,25;1,0)	7.7	7.8	7.3	7.5
	P4 (0,9;0,5)	4.5	4.5	4.2	4.4
	P5 (0,5;0,5)	3.1	3.1	2.9	3.0
	P6 (0,5;0,25)	1.9	1.9	1.7	1.8
	P7 (0,25;0,25)	1.2	1.3	1.2	1.2
Bearing type	: Drive end 6308 ZZ	Non drive end 6207 ZZ	Foundation loads		
Sealing	: Oil Seal	Lip Seal	Max. traction	: 145 kgf	
Lubrication interval	: -	-	Max. compression	: 229 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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Customer : Astraprom d.o.o.

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Three Phase Induction Motor - Squirrel Cage

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Thermal protection

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

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TORQUE AND CURRENT VS SPEED CURVE

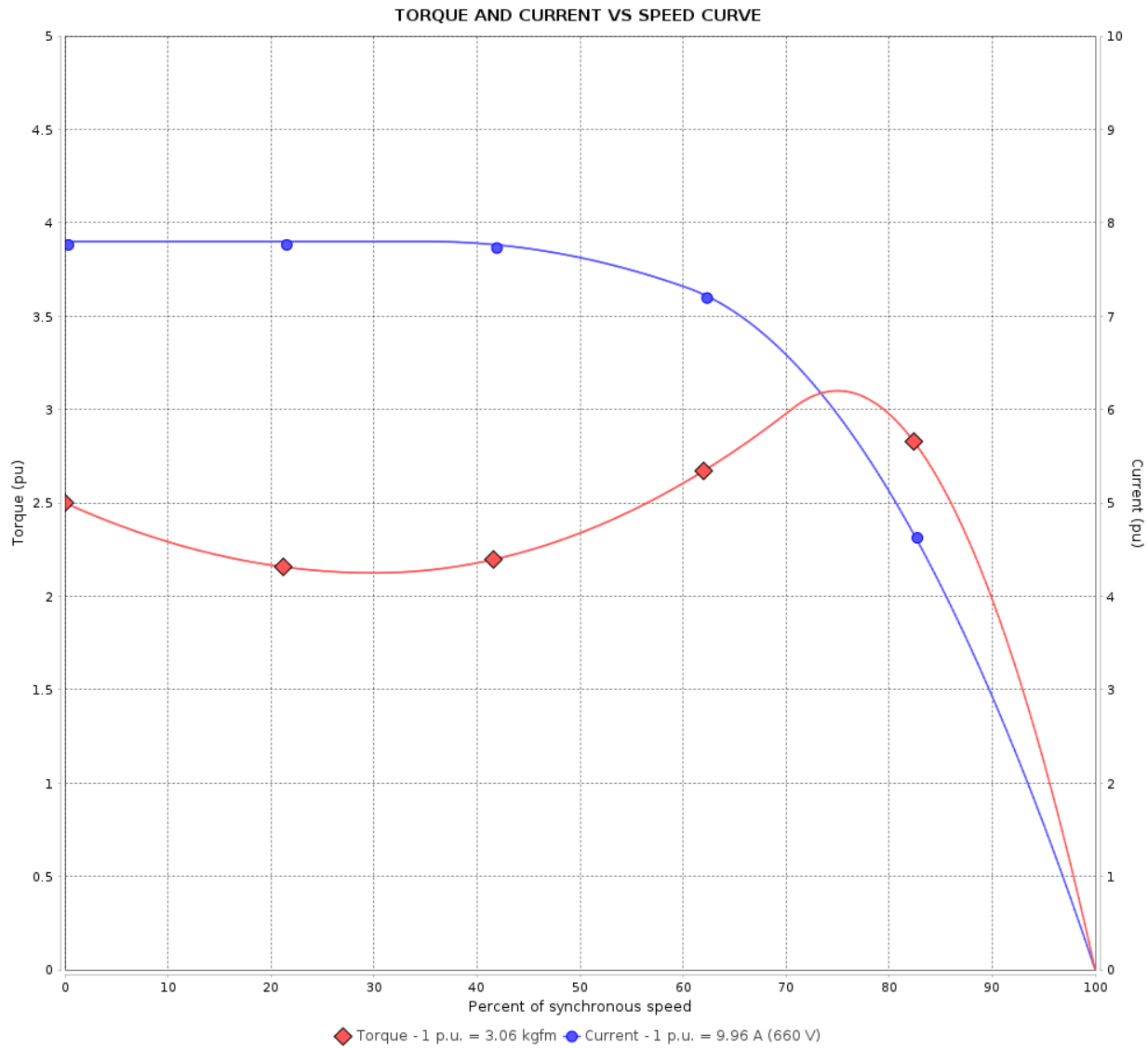
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

Product code : 12868139



Performance : 380/660 V 50 Hz 2P

Rated current	: 17.3/9.96 A	Moment of inertia (J)	: 0.0303 kgm ²
LRC	: 7.8	Duty cycle	: S1
Rated torque	: 3.06 kgfm	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 2925 rpm	Design	: N

Locked rotor time : 21s (cold) 0s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage

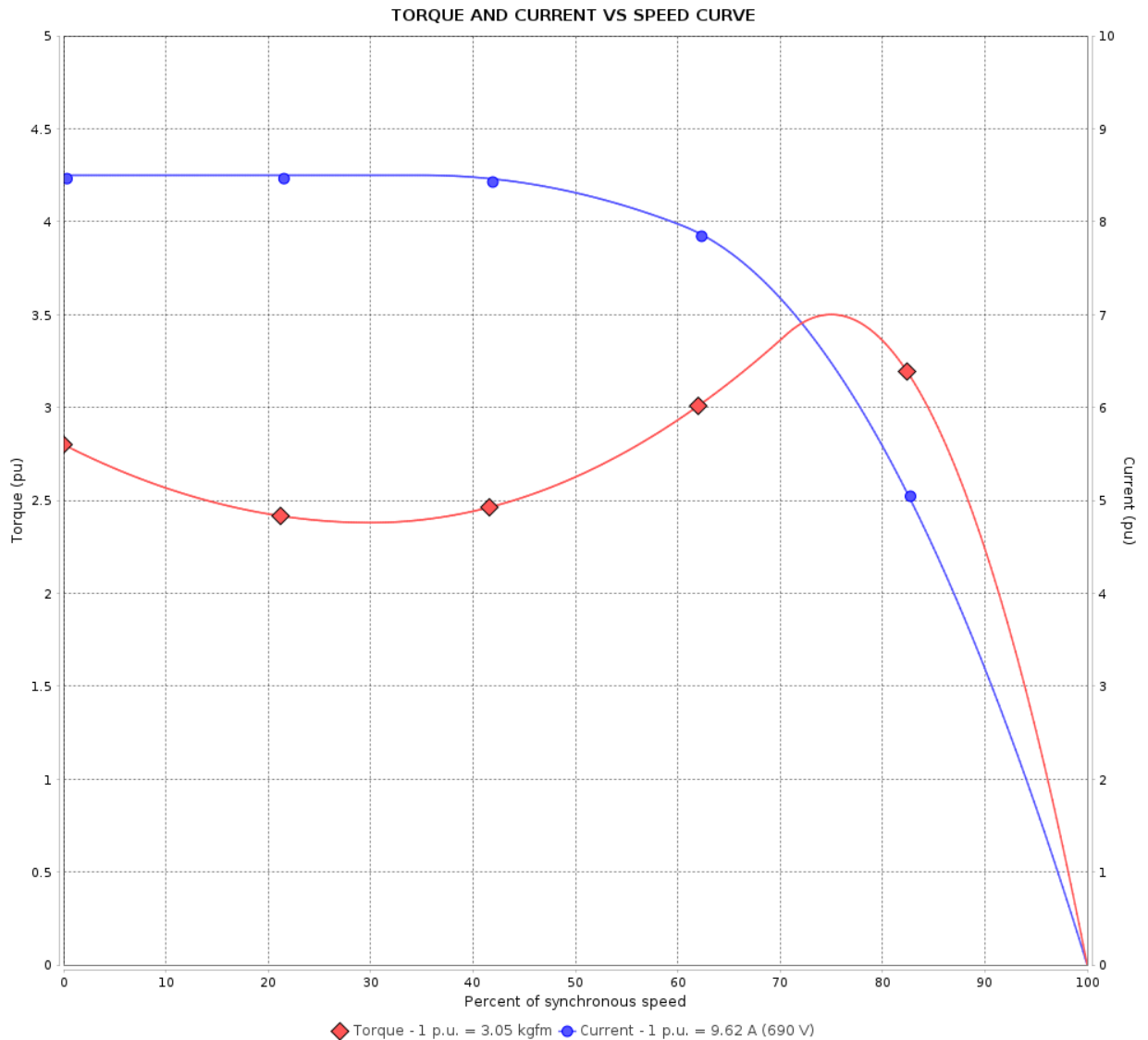


Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

Product code :

12868139



Performance : 400/690 V 50 Hz 2P

Rated current : 16.6/9.62 A
 LRC : 8.5
 Rated torque : 3.05 kgfm
 Locked rotor torque : 280 %
 Breakdown torque : 350 %
 Rated speed : 2935 rpm

Moment of inertia (J) : 0.0303 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

Locked rotor time : 23s (cold) 0s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

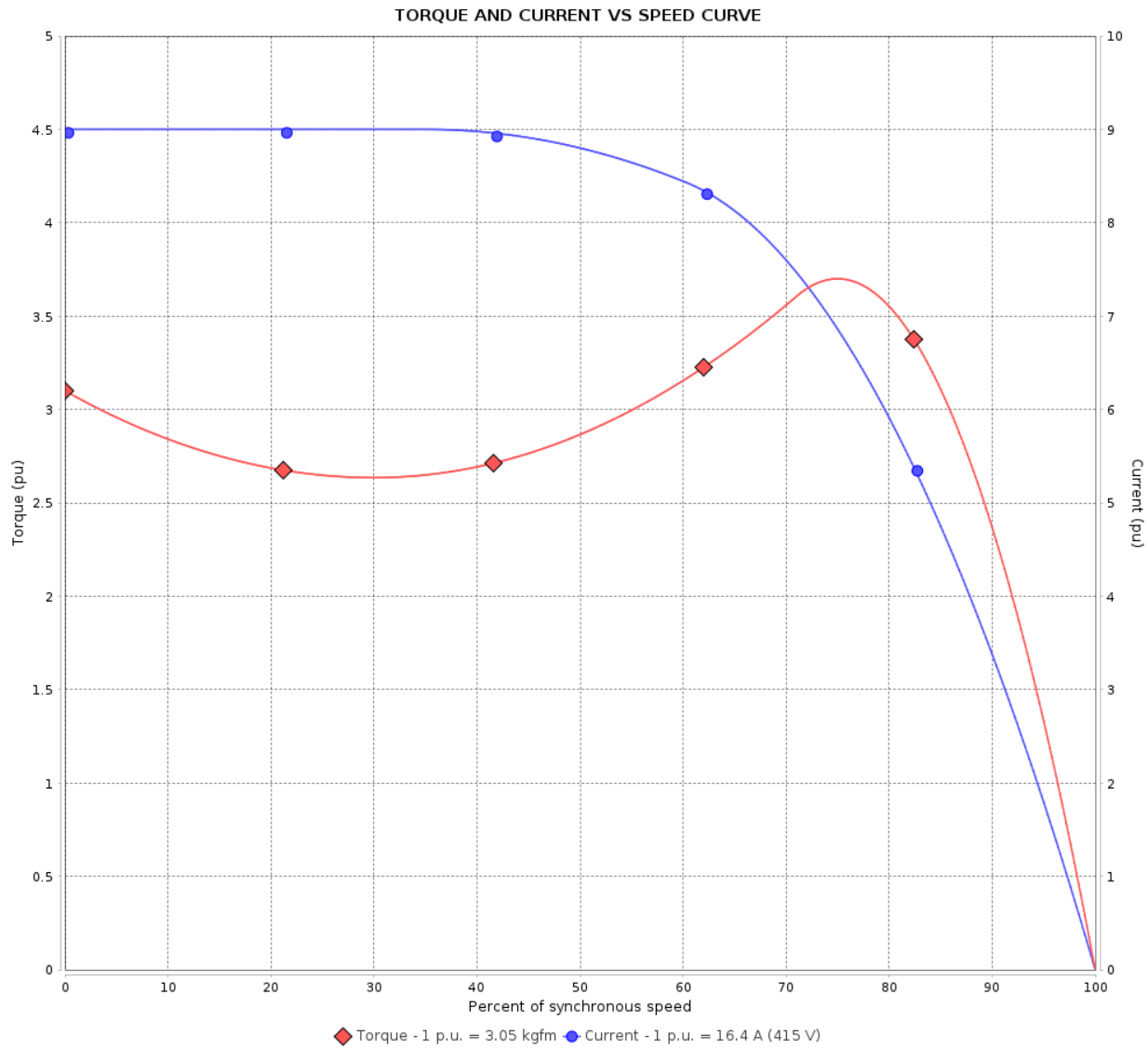
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

Product code : 12868139



Performance : 415 V 50 Hz 2P

Rated current	: 16.4 A	Moment of inertia (J)	: 0.0303 kgm ²
LRC	: 9.0	Duty cycle	: S1
Rated torque	: 3.05 kgfm	Insulation class	: F
Locked rotor torque	: 310 %	Service factor	: 1.00
Breakdown torque	: 370 %	Temperature rise	: 80 K
Rated speed	: 2940 rpm	Design	: N

Locked rotor time : 23s (cold) 0s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

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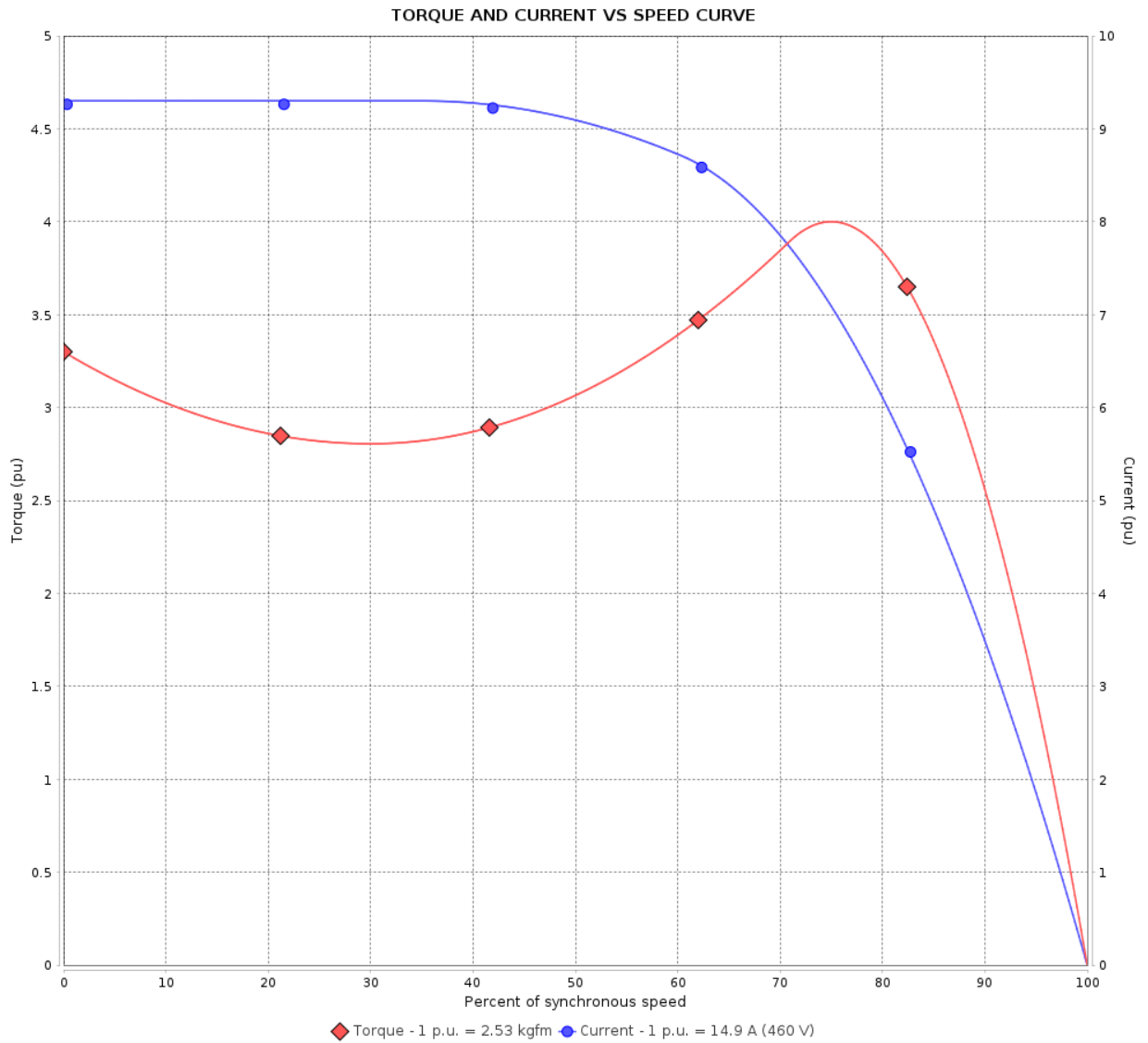


Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

Product code :

12868139



Performance : 460 V 60 Hz 2P

Rated current	: 14.9 A	Moment of inertia (J)	: 0.0303 kgm ²
LRC	: 9.3	Duty cycle	: S1
Rated torque	: 2.53 kgfm	Insulation class	: F
Locked rotor torque	: 330 %	Service factor	: 1.00
Breakdown torque	: 400 %	Temperature rise	: 80 K
Rated speed	: 3545 rpm	Design	: N

Locked rotor time : 28s (cold) 0s (hot)

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LOAD PERFORMANCE CURVE

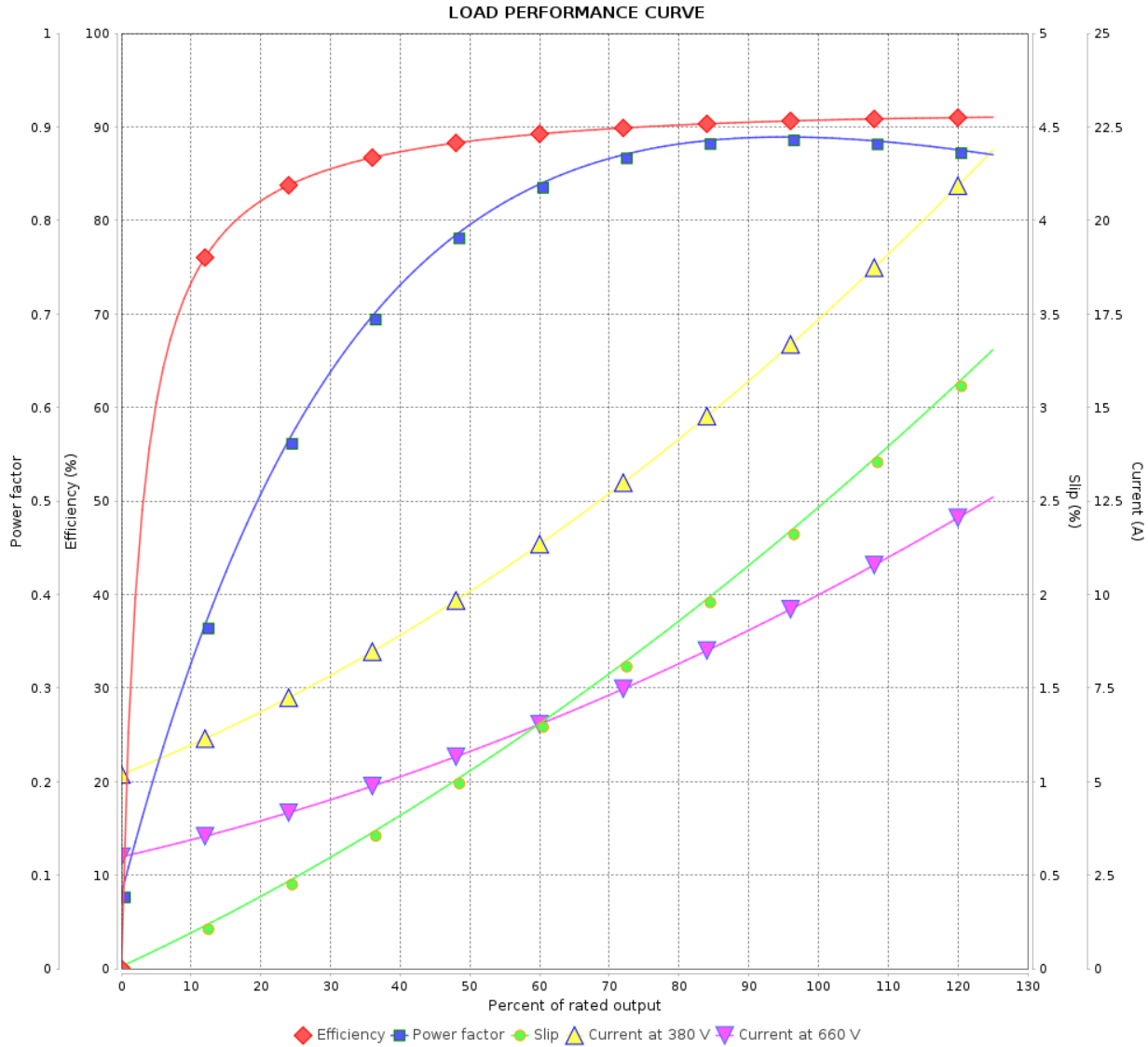
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

Product code : 12868139



Performance : 380/660 V 50 Hz 2P

Rated current : 17.3/9.96 A
 LRC : 7.8
 Rated torque : 3.06 kgfm
 Locked rotor torque : 250 %
 Breakdown torque : 310 %
 Rated speed : 2925 rpm

Moment of inertia (J) : 0.0303 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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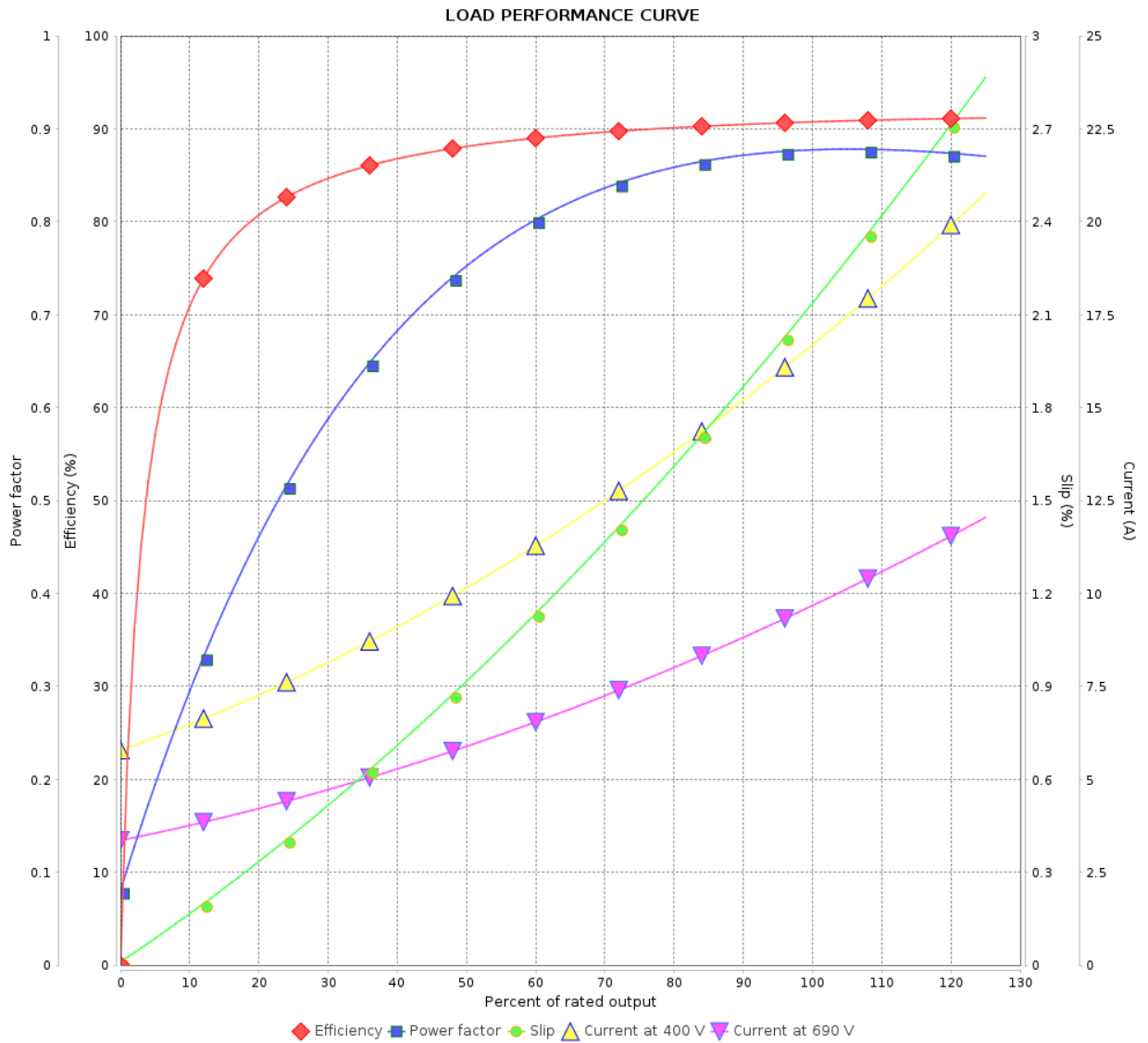
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

Product code : 12868139



Performance : 400/690 V 50 Hz 2P

Rated current : 16.6/9.62 A
 LRC : 8.5
 Rated torque : 3.05 kgfm
 Locked rotor torque : 280 %
 Breakdown torque : 350 %
 Rated speed : 2935 rpm

Moment of inertia (J) : 0.0303 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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LOAD PERFORMANCE CURVE

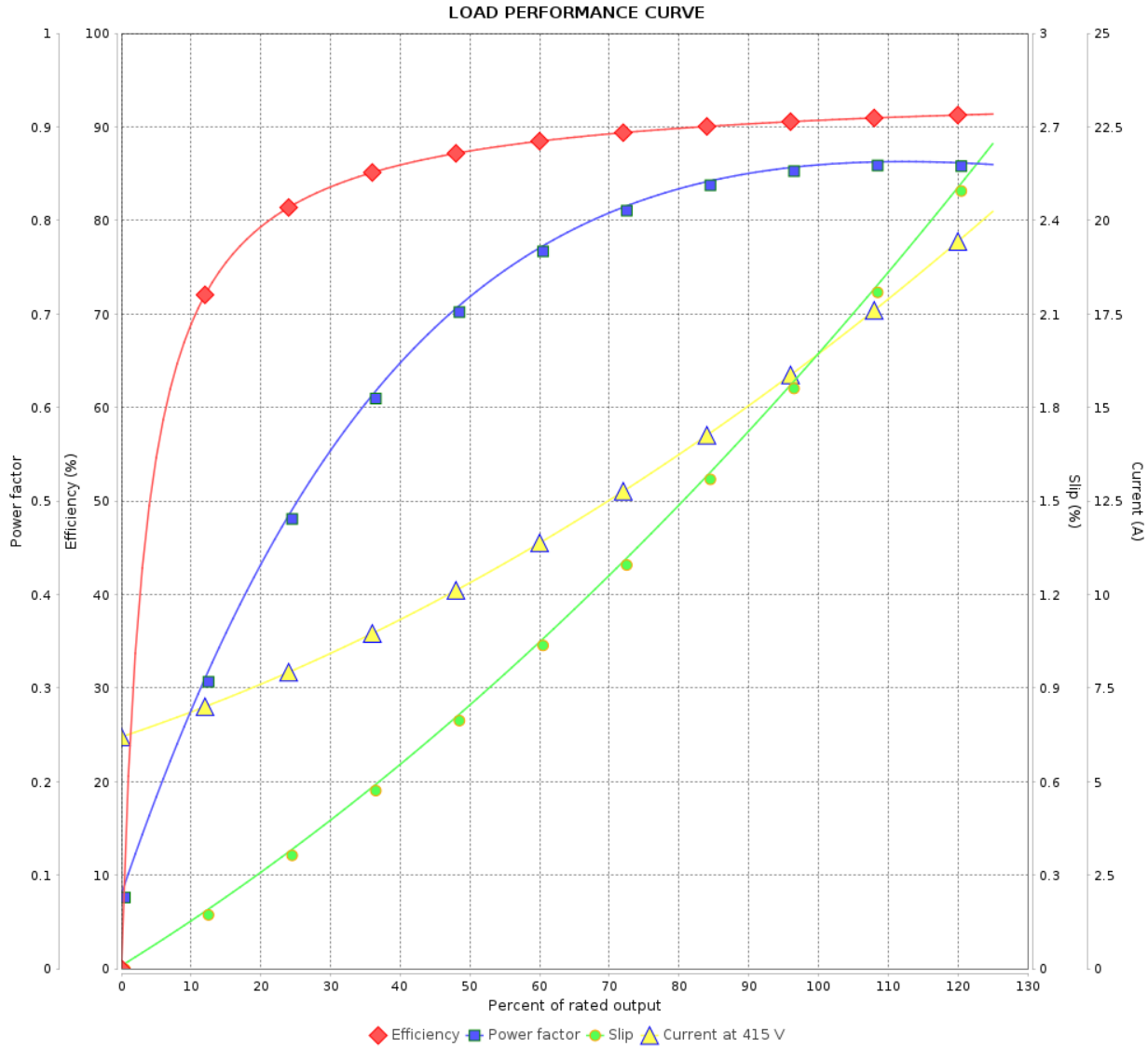
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

Product code : 12868139



Performance : 415 V 50 Hz 2P

Rated current : 16.4 A
 LRC : 9.0
 Rated torque : 3.05 kgfm
 Locked rotor torque : 310 %
 Breakdown torque : 370 %
 Rated speed : 2940 rpm

Moment of inertia (J) : 0.0303 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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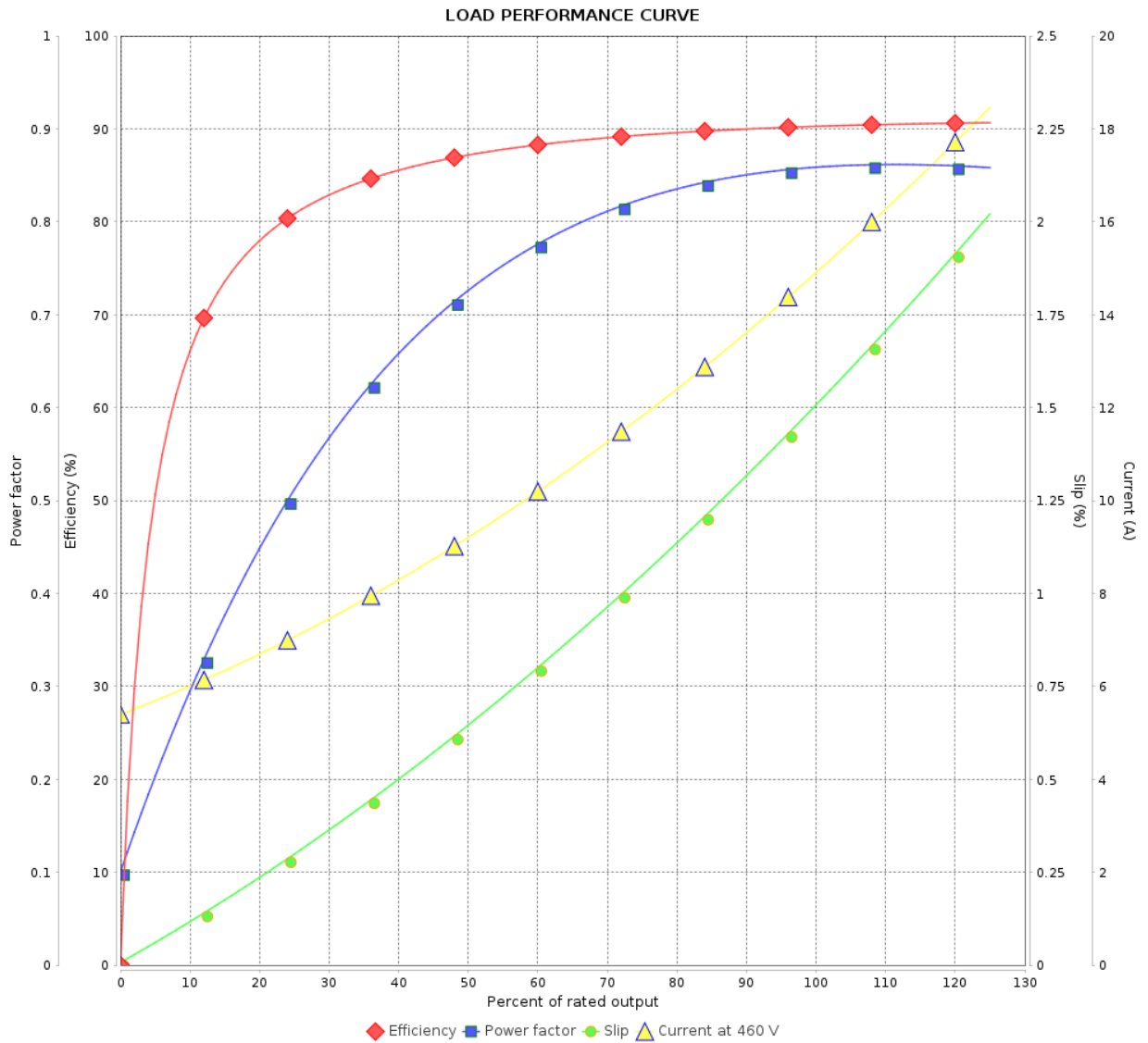
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Moment of inertia (J) : 0.0303 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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THERMAL LIMIT CURVE

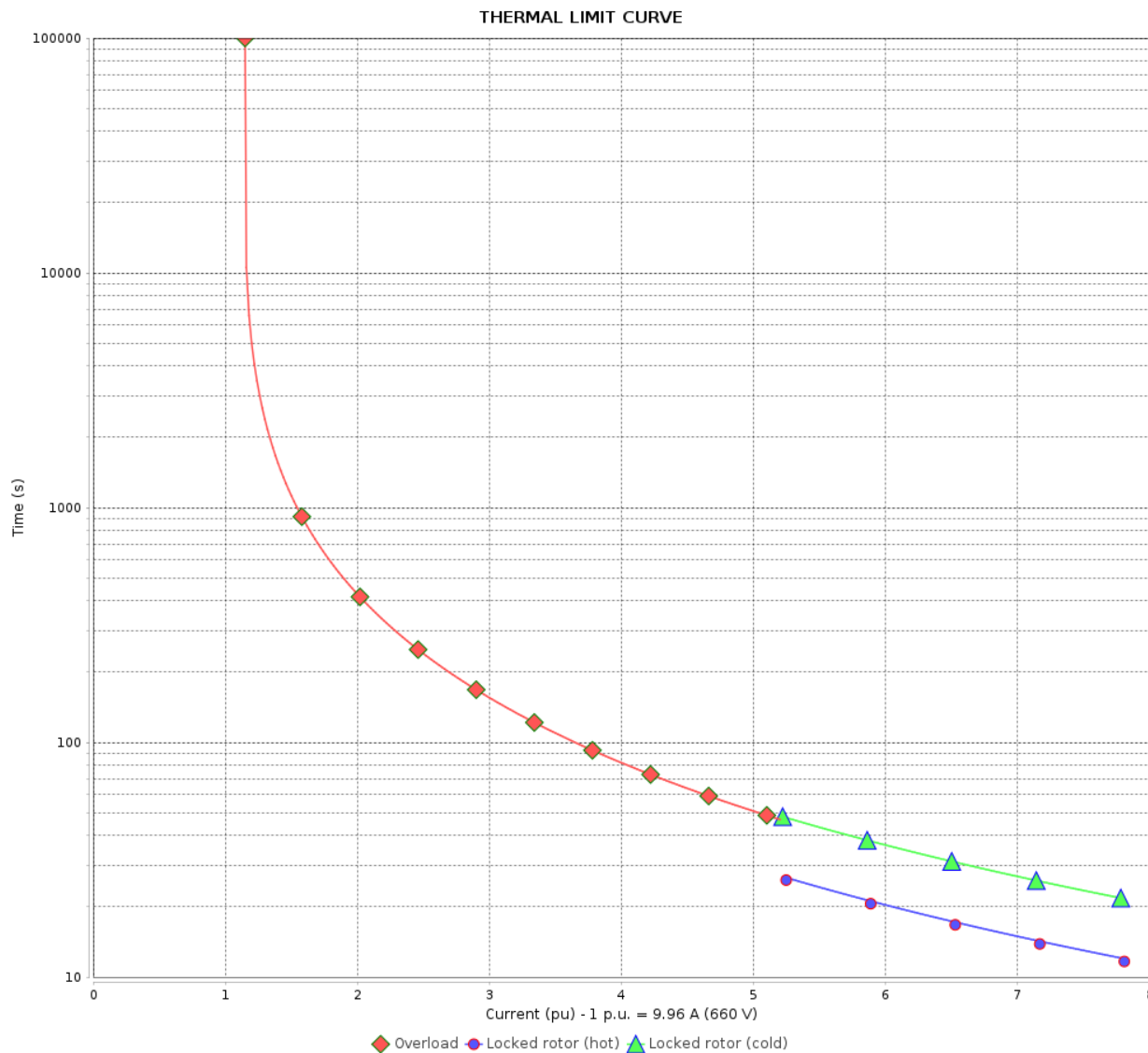
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 Locked rotor torque : 250 %
 Breakdown torque : 310 %
 Rated speed : 2925 rpm

Moment of inertia (J) : 0.0303 kgm²
 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

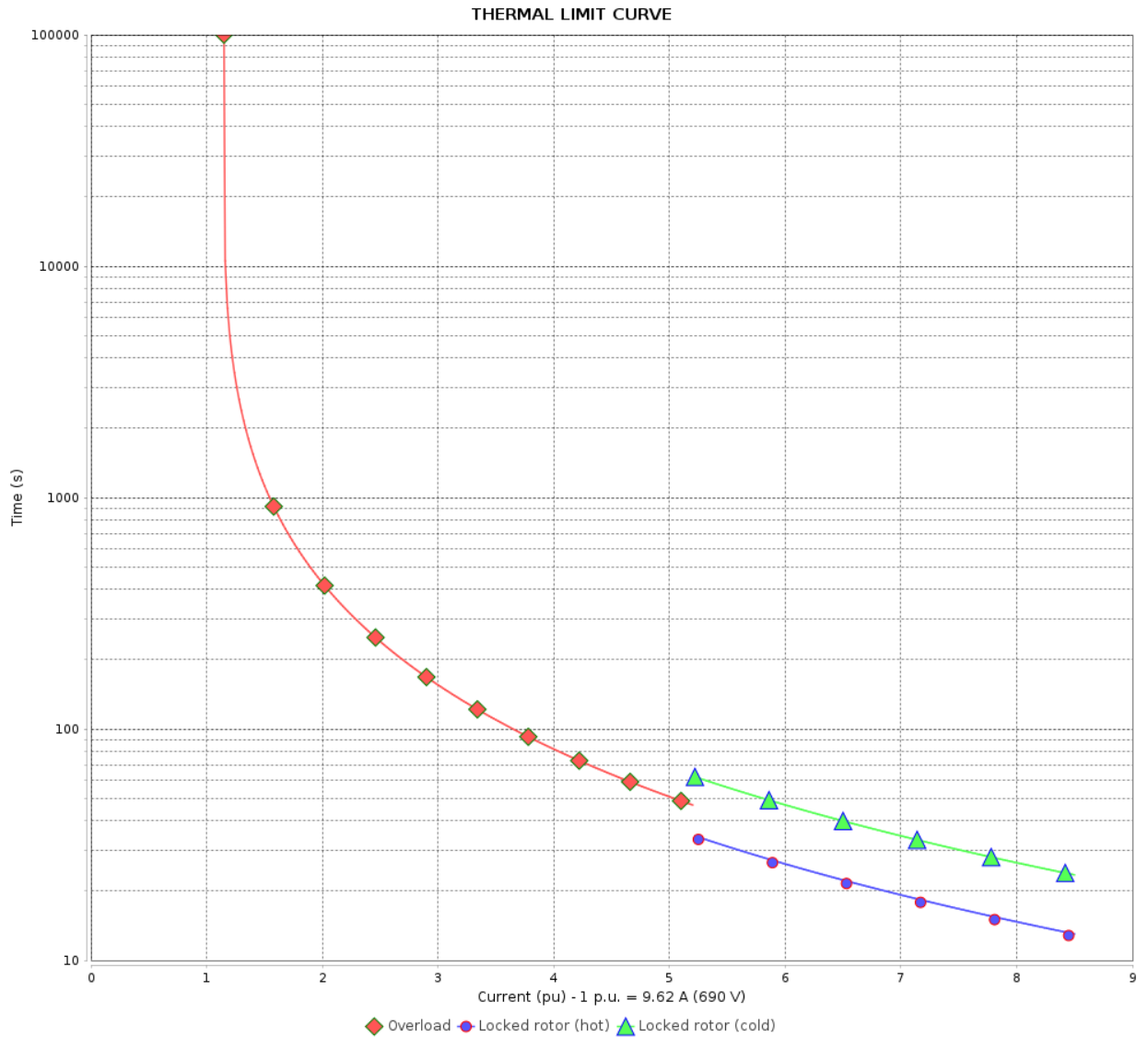
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 Rated torque : 3.05 kgfm
 Locked rotor torque : 280 %
 Breakdown torque : 350 %
 Rated speed : 2935 rpm

Moment of inertia (J) : 0.0303 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

Heating constant
 Cooling constant

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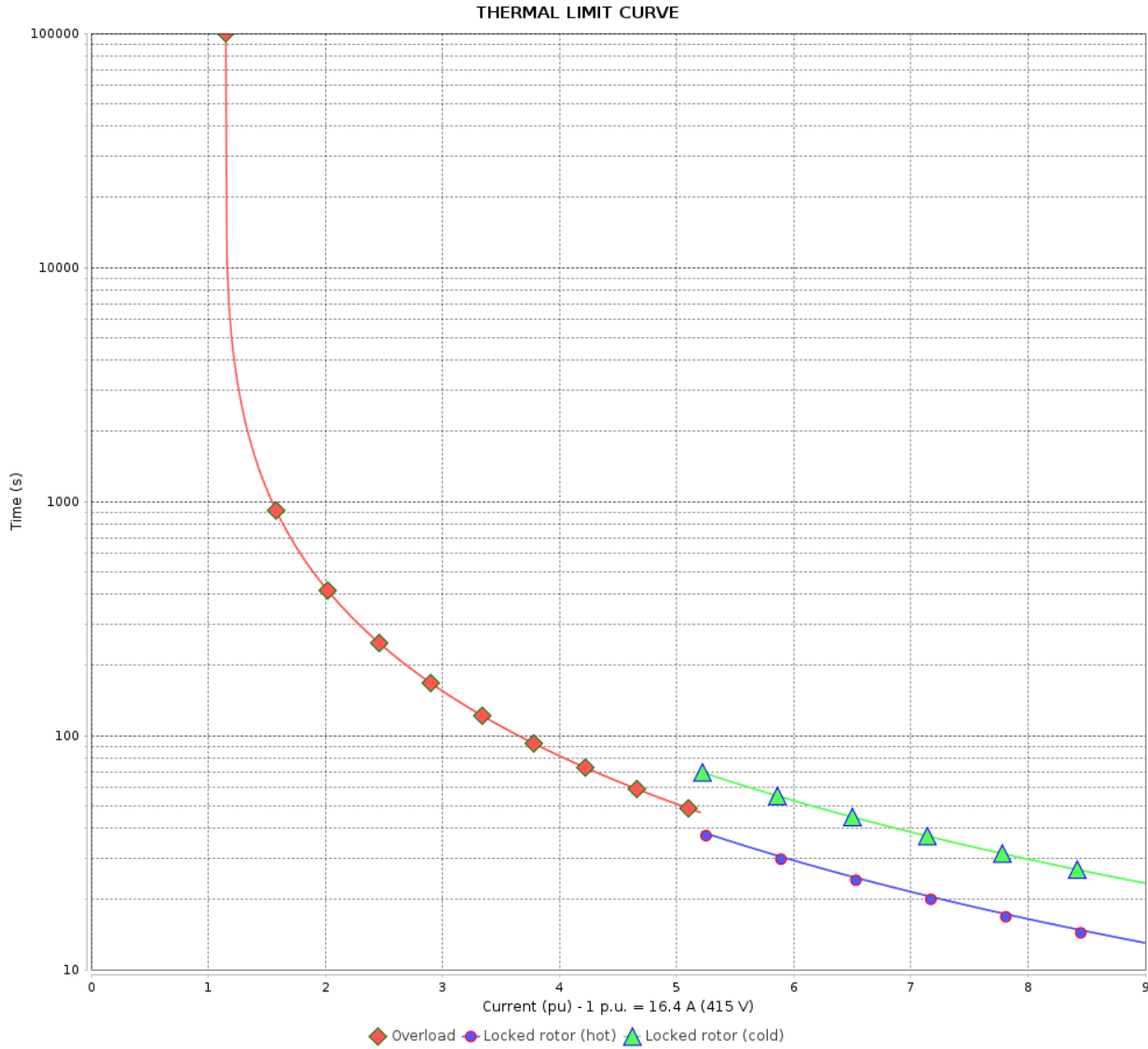
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Customer : Astraprom d.o.o.

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Product code : 12868139



Performance : 415 V 50 Hz 2P

Rated current	: 16.4 A	Moment of inertia (J)	: 0.0303 kgm ²
LRC	: 9.0	Duty cycle	: S1
Rated torque	: 3.05 kgfm	Insulation class	: F
Locked rotor torque	: 310 %	Service factor	: 1.00
Breakdown torque	: 370 %	Temperature rise	: 80 K
Rated speed	: 2940 rpm	Design	: N

Heating constant

Cooling constant

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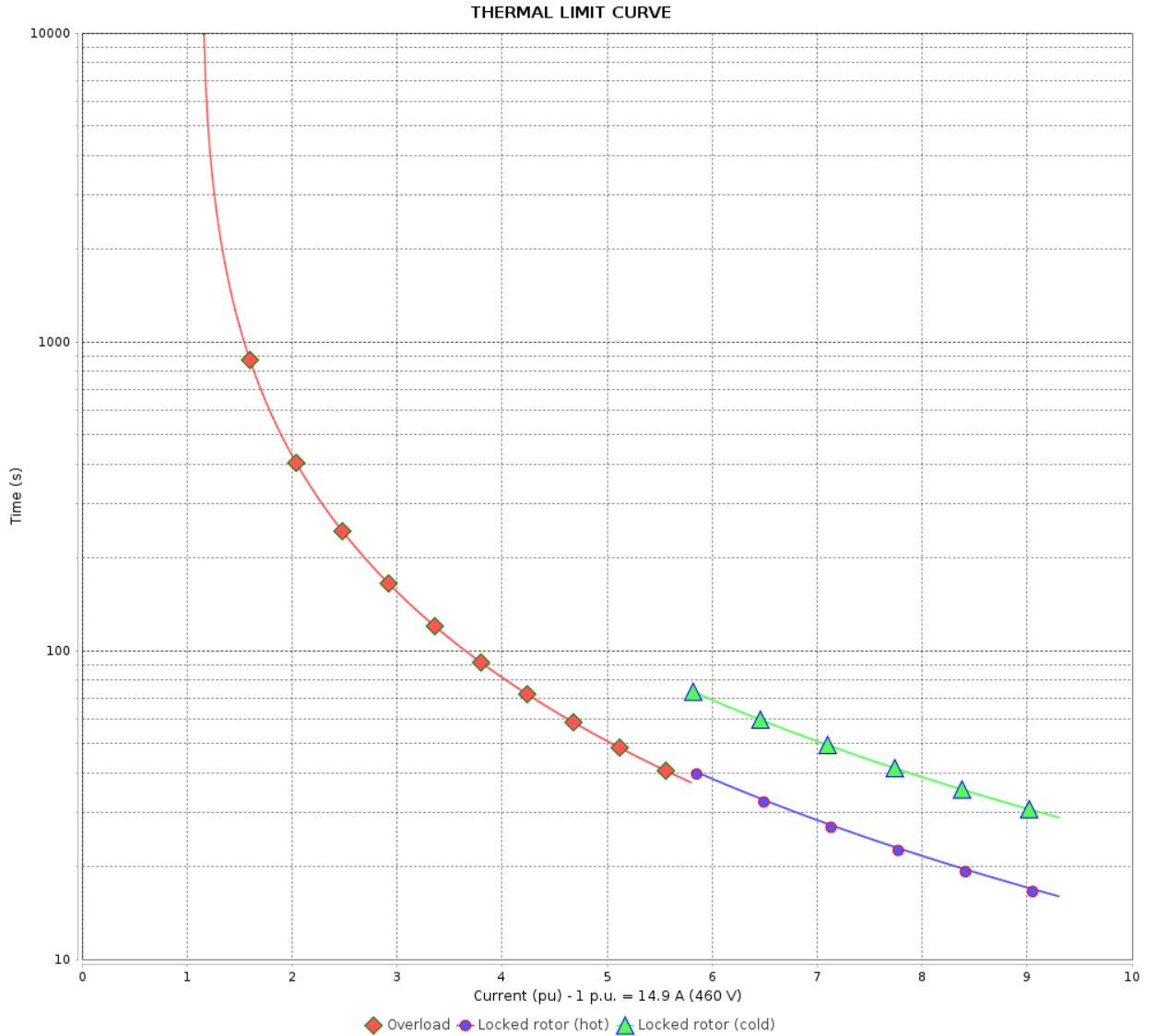
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

Product code : 12868139



Performance : 460 V 60 Hz 2P

Rated current : 14.9 A
 LRC : 9.3
 Rated torque : 2.53 kgfm
 Locked rotor torque : 330 %
 Breakdown torque : 400 %
 Rated speed : 3545 rpm

Moment of inertia (J) : 0.0303 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

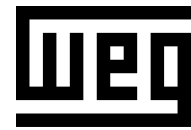
Heating constant

Cooling constant

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VFD OPERATION CURVE

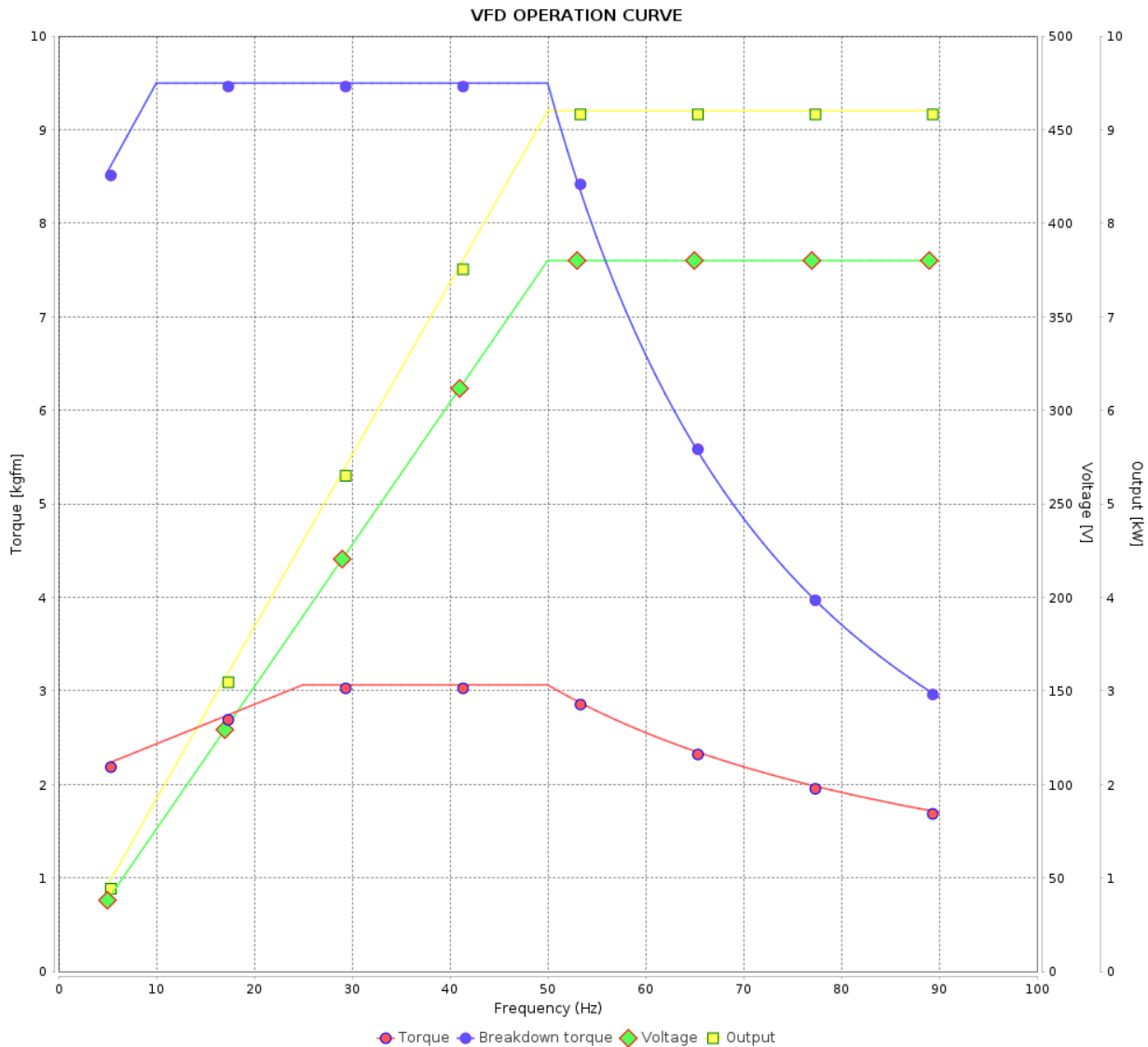
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 LRC : 7.8
 Rated torque : 3.06 kgfm
 Locked rotor torque : 250 %
 Breakdown torque : 310 %
 Rated speed : 2925 rpm

Moment of inertia (J) : 0.0303 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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VFD OPERATION CURVE

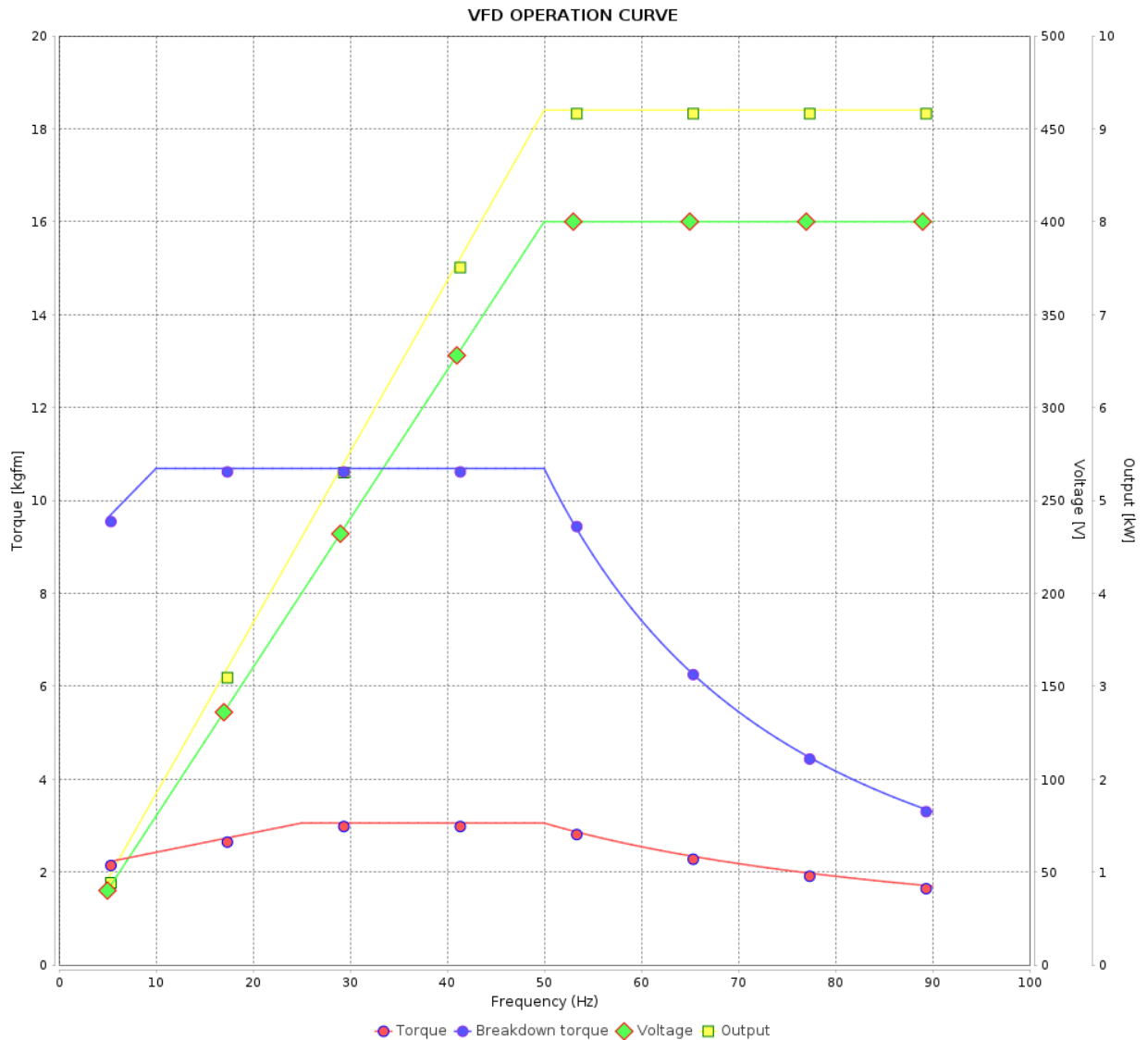
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

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Product code : 12868139



Performance : 400/690 V 50 Hz 2P

Rated current : 16.6/9.62 A
 LRC : 8.5
 Rated torque : 3.05 kgfm
 Locked rotor torque : 280 %
 Breakdown torque : 350 %
 Rated speed : 2935 rpm

Moment of inertia (J) : 0.0303 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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VFD OPERATION CURVE

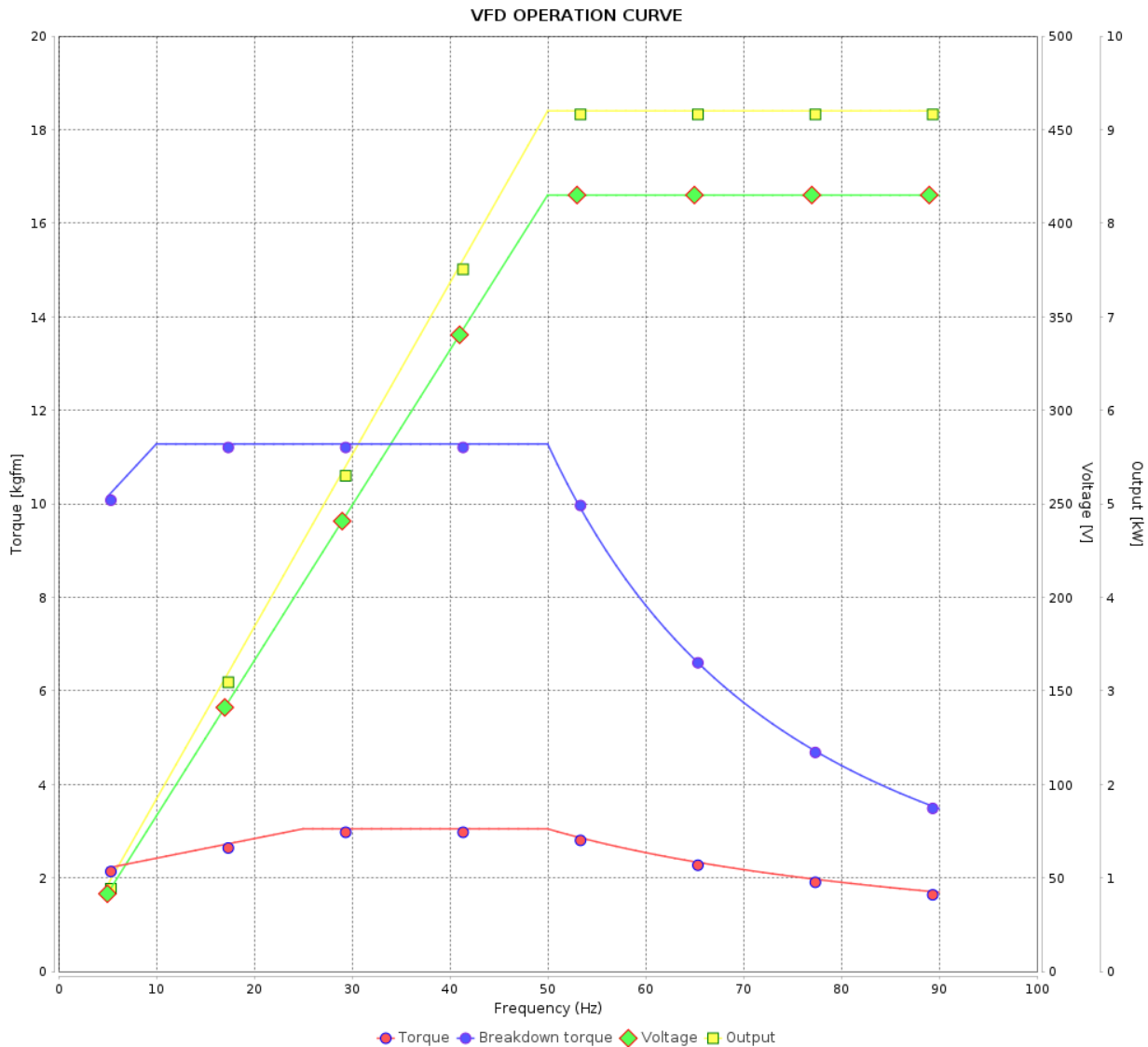
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

Product code : 12868139



Performance : 415 V 50 Hz 2P

Rated current	: 16.4 A	Moment of inertia (J)	: 0.0303 kgm ²
LRC	: 9.0	Duty cycle	: S1
Rated torque	: 3.05 kgfm	Insulation class	: F
Locked rotor torque	: 310 %	Service factor	: 1.00
Breakdown torque	: 370 %	Temperature rise	: 80 K
Rated speed	: 2940 rpm	Design	: N

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VFD OPERATION CURVE

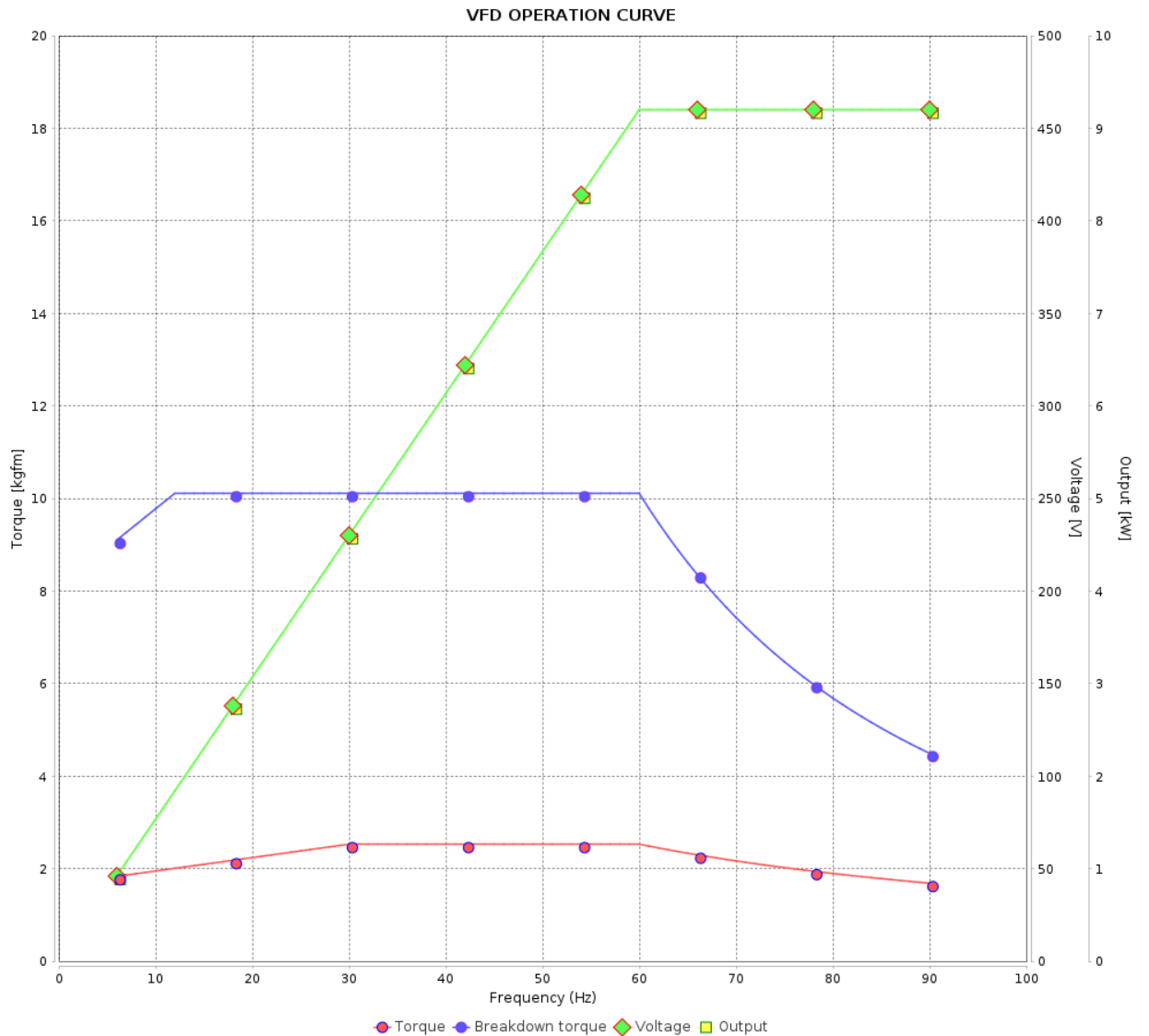
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

Product code : 12868139



Performance : 460 V 60 Hz 2P

Rated current : 14.9 A
 LRC : 9.3
 Rated torque : 2.53 kgfm
 Locked rotor torque : 330 %
 Breakdown torque : 400 %
 Rated speed : 3545 rpm

Moment of inertia (J) : 0.0303 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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