

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE4 Three-Phase

Product code : 12774373

Frame	: 280S/M	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 ³	: 827 kg
Protection degree	: IP55	Moment of inertia (J)	: 3.40 kgm ²
Design	: N		

Output [kW]	90	90
Poles	4	4
Frequency [Hz]	50	60
Rated voltage [V]	400/690	460
Rated current [A]	161/93.3	141
L. R. Amperes [A]	1272/737	1255
LRC [A]	7.9	8.9
No load current [A]	58.0/33.6	55.0
Rated speed [RPM]	1488	1790
Slip [%]	0.80	0.56
Rated torque [kgfm]	58.9	49.0
Locked rotor torque [%]	250	290
Breakdown torque [%]	280	310
Service factor	1.00	1.00
Temperature rise	80 K	80 K
Locked rotor time	61s (cold) 34s (hot)	72s (cold) 40s (hot)
Noise level ²	69.0 dB(A)	73.0 dB(A)
Efficiency (%)	25%	
	50%	95.7
	75%	96.0
	100%	96.1
Power Factor	25%	
	50%	0.72
	75%	0.81
	100%	0.84

Losses at normative operating points (speed;torque), in percentage of rated output power

Losses (%)	P1 (0,9;1,0)	3.9	3.8
	P2 (0,5;1,0)	3.0	2.9
	P3 (0,25;1,0)	2.7	2.6
	P4 (0,9;0,5)	2.1	2.0
	P5 (0,5;0,5)	1.3	1.3
	P6 (0,5;0,25)	0.9	0.9
	P7 (0,25;0,25)	0.6	0.6

	Drive end	Non drive end	Foundation loads
Bearing type	: 6316 C3	6316 C3	Max. traction : 915 kgf
Sealing	: WSeal	WSeal	Max. compression : 1742 kgf
Lubrication interval	: 13000 h	13000 h	
Lubricant amount	: 34 g	34 g	
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				
Date	05/12/2022			
			Page	Revision
			1 / 11	

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Notes

Rev.	Changes Summary		Performed	Checked	Date
Performed by			Page 2 / 11		Revision
Checked by					
Date	05/12/2022				

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	Revision
Checked by				3 / 11	
Date	05/12/2022				

TORQUE AND CURRENT VS SPEED CURVE

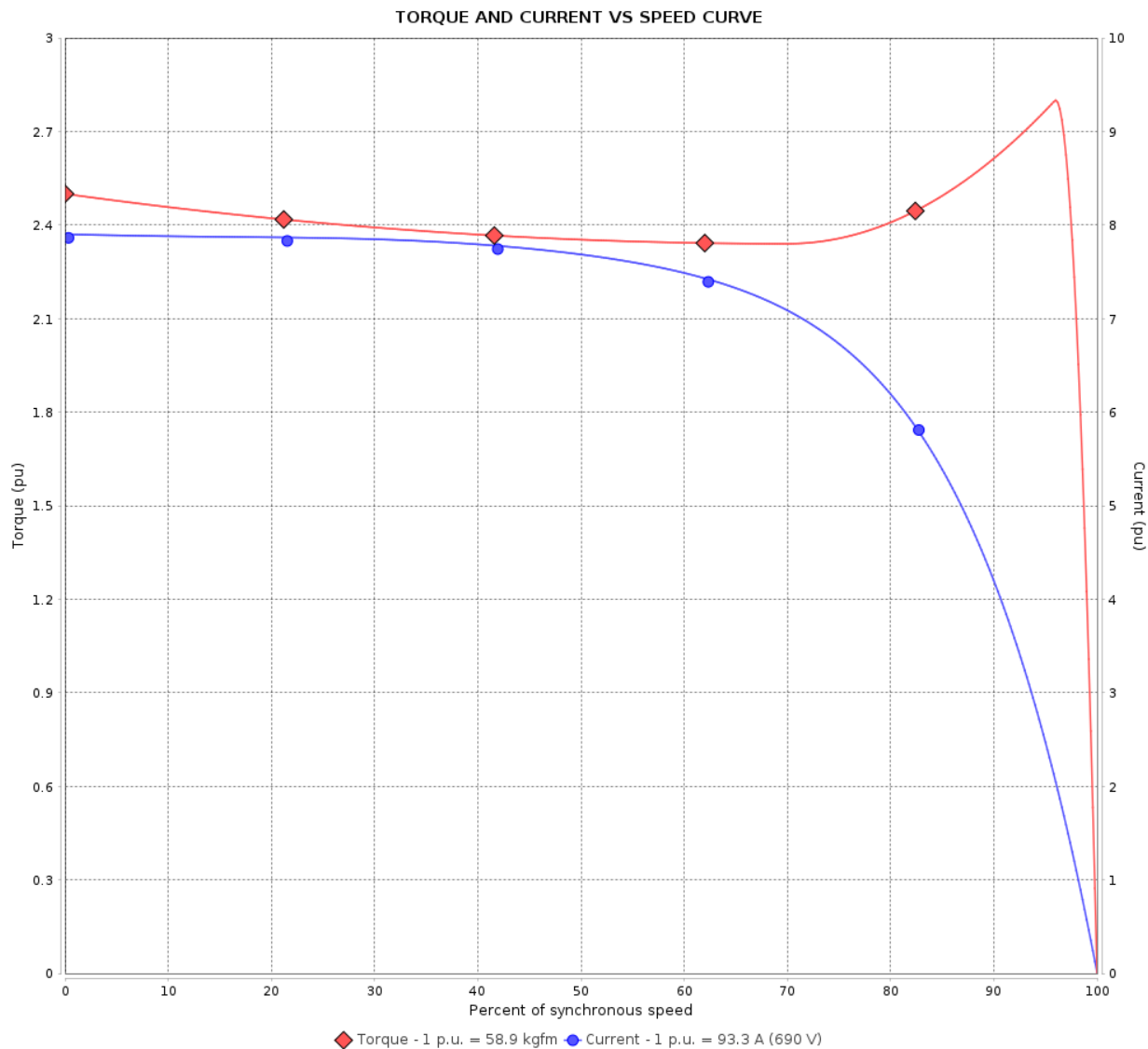
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE4 Three-Phase

Product code : 12774373



Performance : 400/690 V 50 Hz 4P

Rated current : 161/93.3 A
 LRC : 7.9
 Rated torque : 58.9 kgfm
 Locked rotor torque : 250 %
 Breakdown torque : 280 %
 Rated speed : 1488 rpm

Moment of inertia (J) : 3.40 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

Locked rotor time : 61s (cold) 34s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by		<div>Page</div> <div>Revision</div>		
Checked by				
Date	05/12/2022			

TORQUE AND CURRENT VS SPEED CURVE

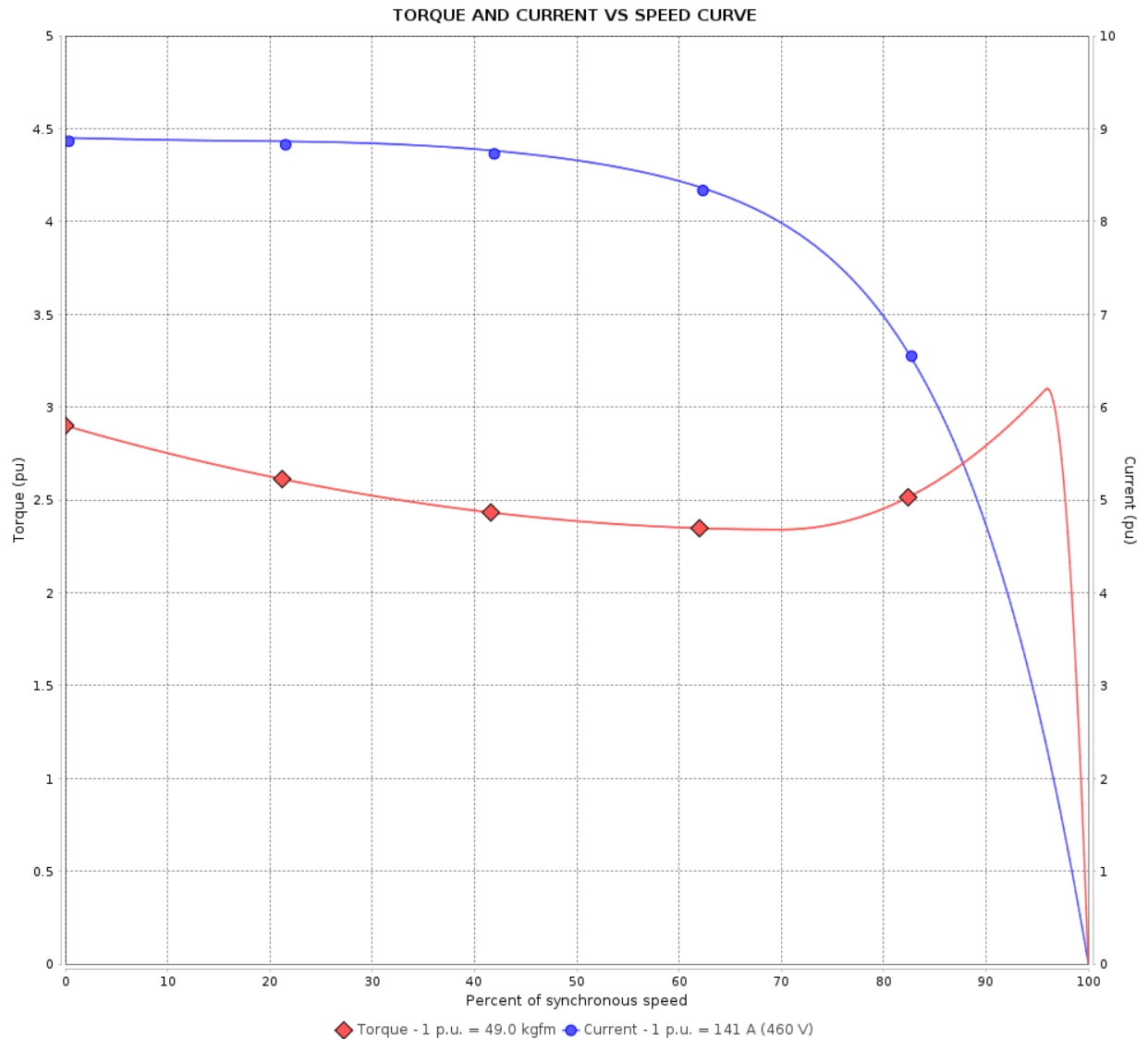
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE4 Three-Phase

Product code : 12774373



Performance : 460 V 60 Hz 4P

Rated current	: 141 A	Moment of inertia (J)	: 3.40 kgm ²
LRC	: 8.9	Duty cycle	: S1
Rated torque	: 49.0 kgfm	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.00
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 1790 rpm	Design	: N

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 5 / 11		
Checked by				
Date	05/12/2022			
		Revision		

This document is exclusive property of WEG S/A. Reprinting is not allowed without written authorization of WEG S/A.

Subject to change without notice

LOAD PERFORMANCE CURVE

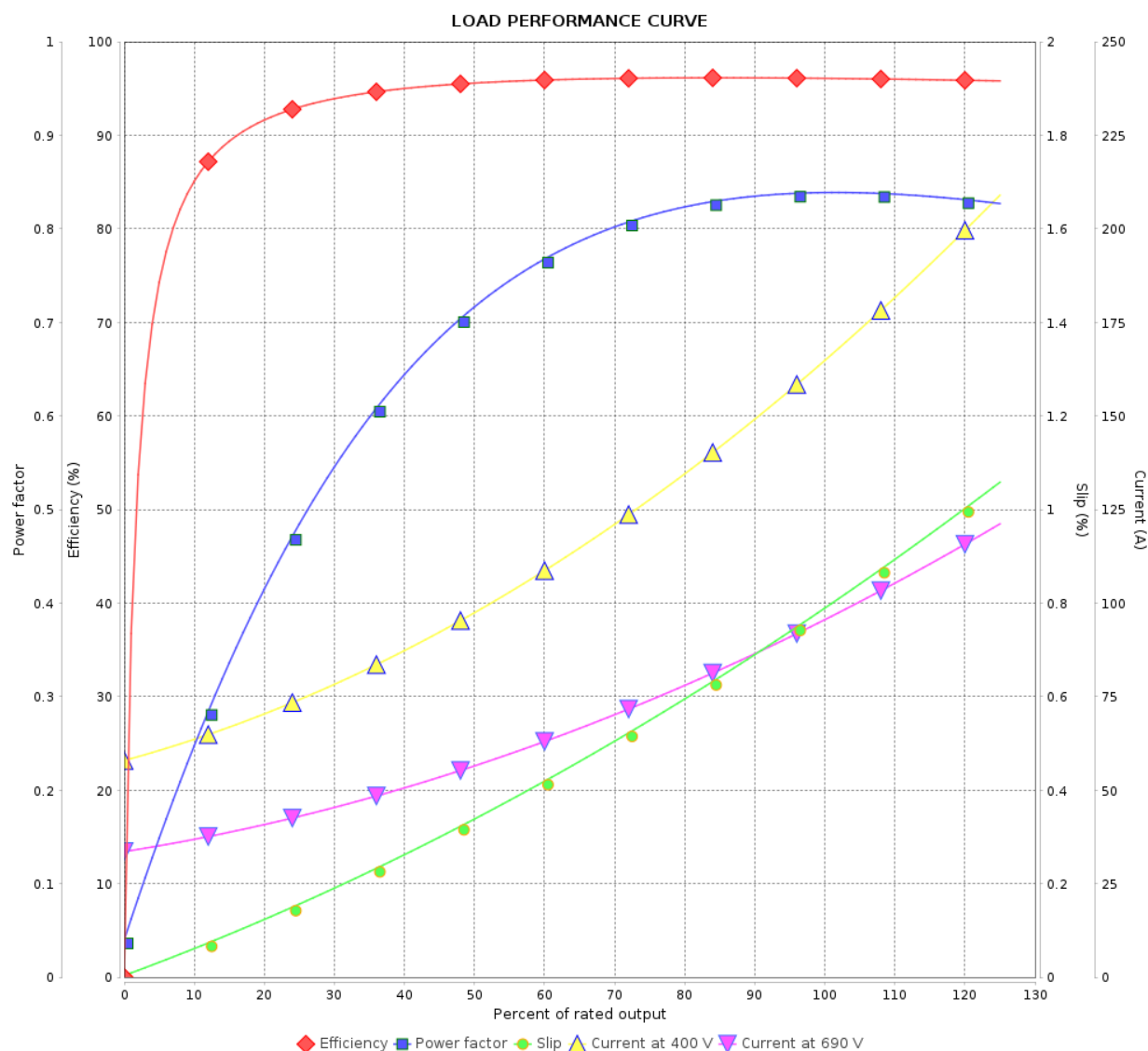
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE4 Three-Phase

Product code : 12774373



Performance : 400/690 V 50 Hz 4P

Rated current : 161/93.3 A
 LRC : 7.9
 Rated torque : 58.9 kgfm
 Locked rotor torque : 250 %
 Breakdown torque : 280 %
 Rated speed : 1488 rpm

Moment of inertia (J) : 3.40 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 6 / 11	Revision
Checked by					
Date	05/12/2022				

LOAD PERFORMANCE CURVE

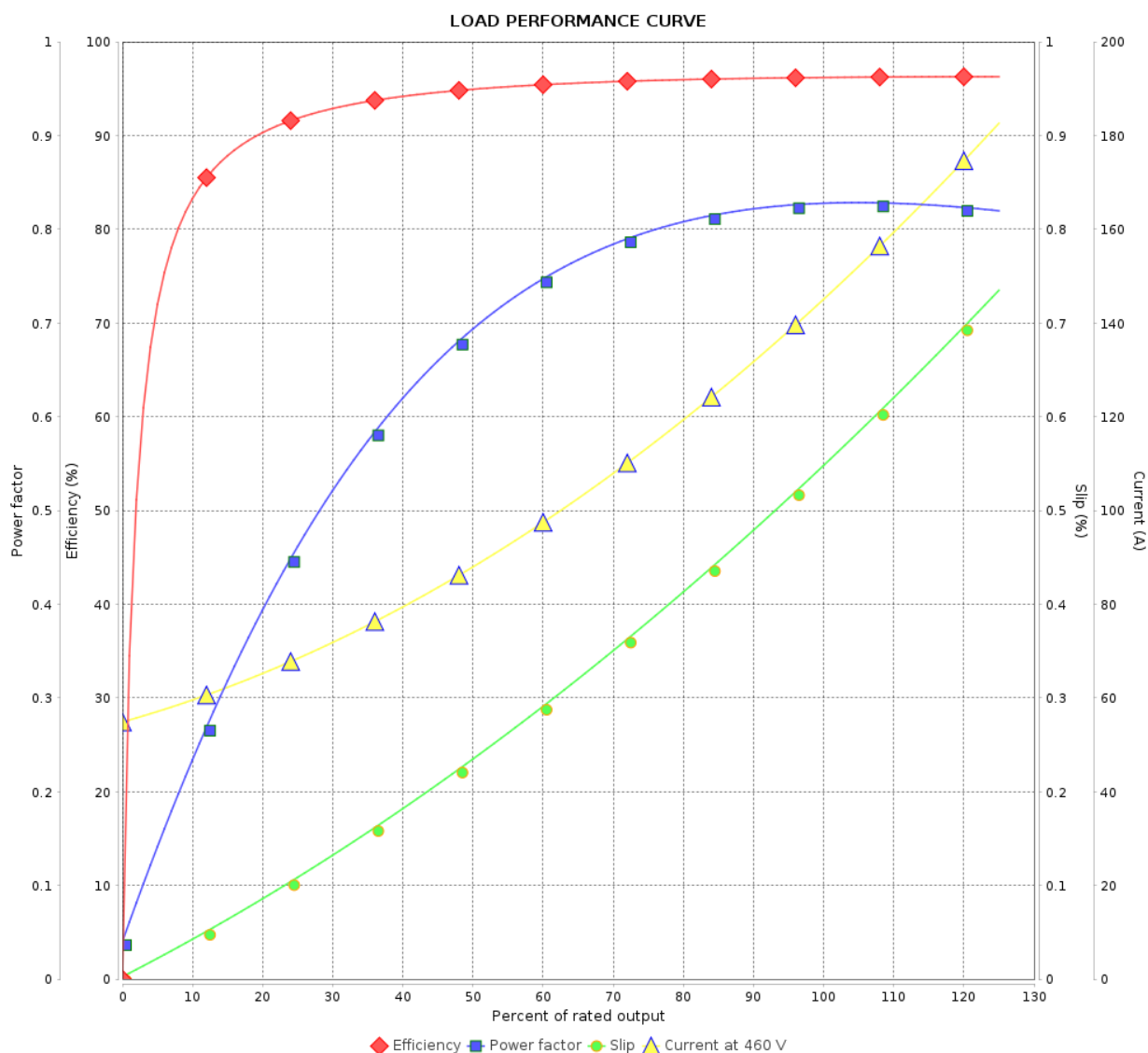
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE4 Three-Phase

Product code : 12774373



Performance : 460 V 60 Hz 4P

Rated current	: 141 A	Moment of inertia (J)	: 3.40 kgm ²
LRC	: 8.9	Duty cycle	: S1
Rated torque	: 49.0 kgfm	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.00
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 1790 rpm	Design	: N

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 7 / 11		
Checked by				
Date	05/12/2022			
		Revision		

THERMAL LIMIT CURVE

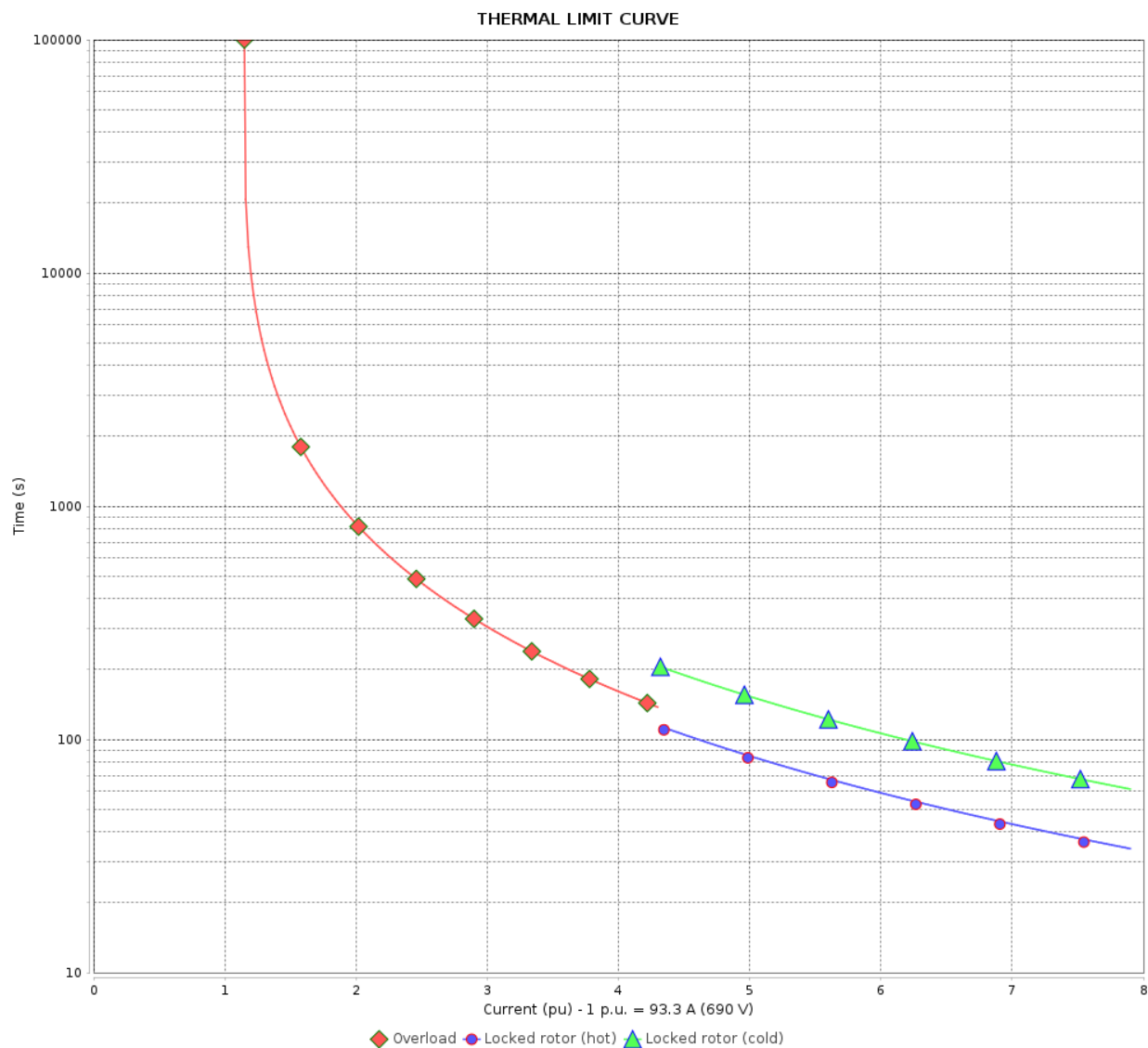
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE4 Three-Phase

Product code : 12774373



Performance : 400/690 V 50 Hz 4P

Rated current : 161/93.3 A
 LRC : 7.9
 Rated torque : 58.9 kgfm
 Locked rotor torque : 250 %
 Breakdown torque : 280 %
 Rated speed : 1488 rpm

Moment of inertia (J) : 3.40 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		<div style="display: flex; justify-content: space-between;"> Page Revision </div>		
Checked by				
Date	05/12/2022			

THERMAL LIMIT CURVE

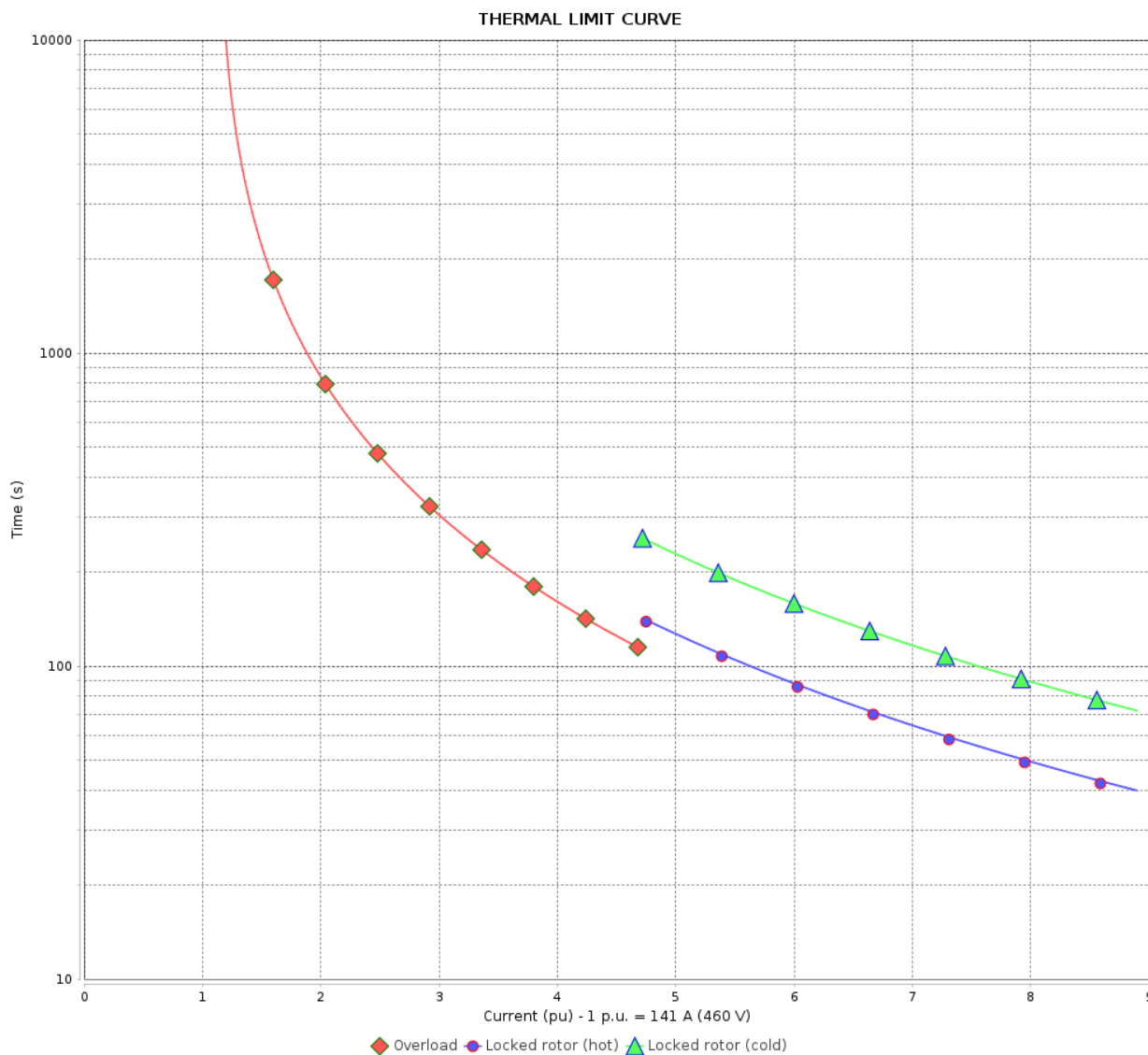
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE4 Three-Phase

Product code : 12774373



Performance : 460 V 60 Hz 4P

Rated current : 141 A
 LRC : 8.9
 Rated torque : 49.0 kgfm
 Locked rotor torque : 290 %
 Breakdown torque : 310 %
 Rated speed : 1790 rpm

Moment of inertia (J) : 3.40 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		<div style="display: flex; justify-content: space-between;"> <div>Page 9 / 11</div> <div>Revision</div> </div>		
Checked by				
Date	05/12/2022			

VFD OPERATION CURVE

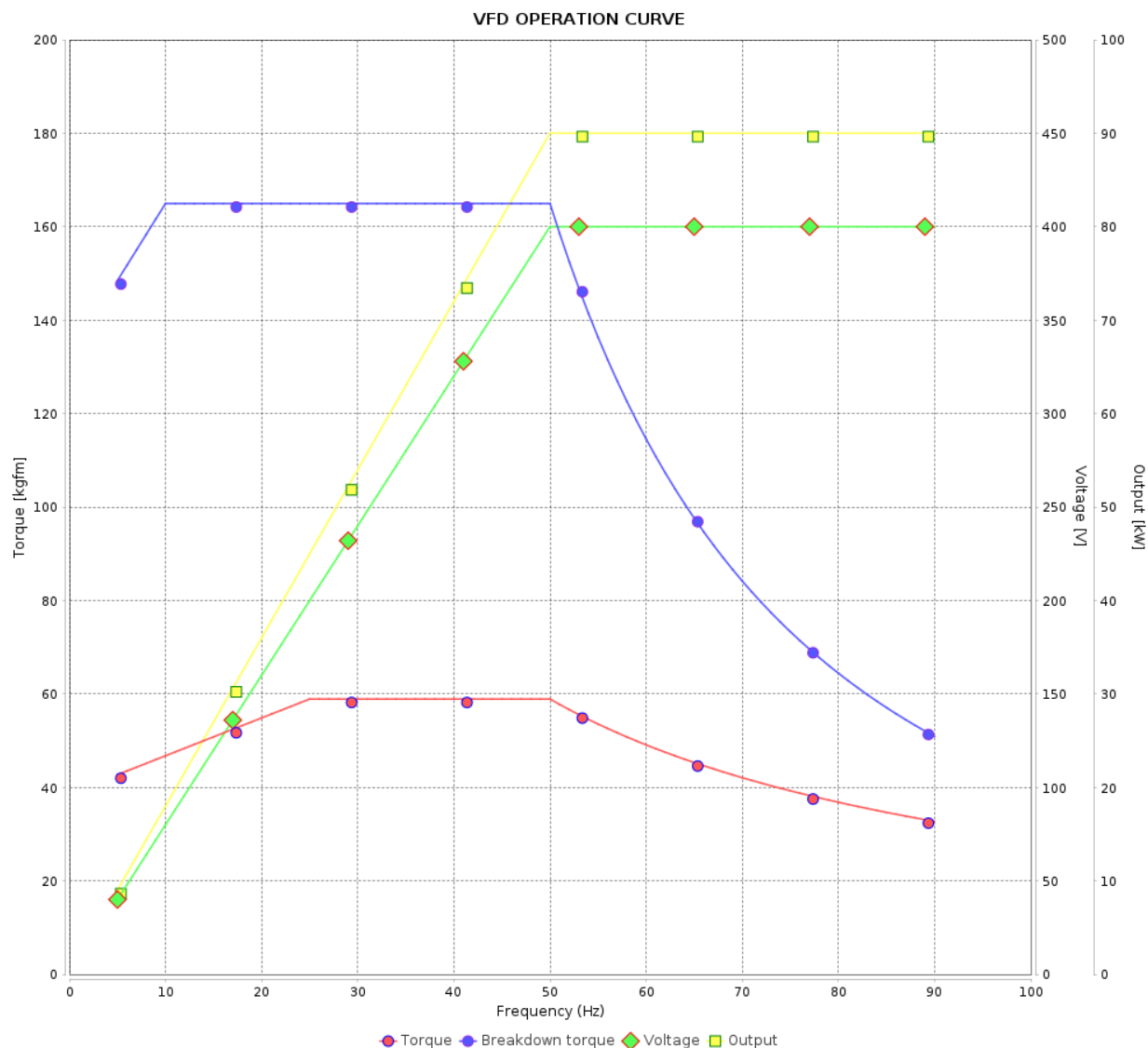
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE4 Three-Phase

Product code : 12774373



Performance : 400/690 V 50 Hz 4P

Rated current : 161/93.3 A
 LRC : 7.9
 Rated torque : 58.9 kgfm
 Locked rotor torque : 250 %
 Breakdown torque : 280 %
 Rated speed : 1488 rpm

Moment of inertia (J) : 3.40 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 / 11	
Date					

VFD OPERATION CURVE

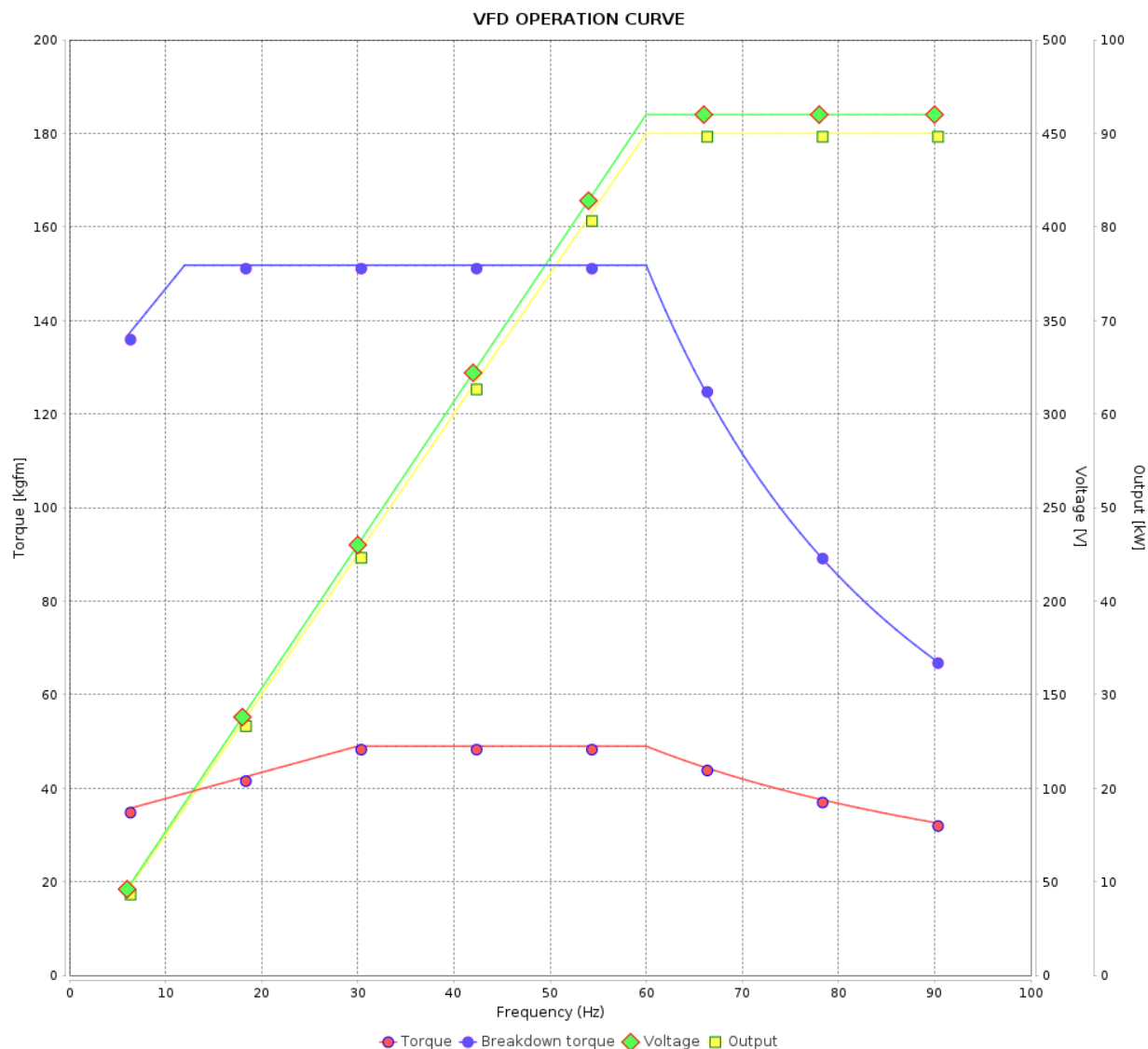
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE4 Three-Phase

Product code : 12774373



Performance : 460 V 60 Hz 4P

Rated current : 141 A
 LRC : 8.9
 Rated torque : 49.0 kgfm
 Locked rotor torque : 290 %
 Breakdown torque : 310 %
 Rated speed : 1790 rpm

Moment of inertia (J) : 3.40 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 / 11Revision		
Checked by				
Date	05/12/2022			