

DATA SHEET



Three Phase Induction Motor - Squirrel Cage

Customer :					
Product line	: W22 Fan and Exhaust 400°C 2h IE1 Three-Phase	Product code :	12982668		
Frame	: 80	Cooling method	: IC410 - TEAO		
Insulation class	: H	Mounting	: B30L(D)		
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	: 14.0 kg		
Protection degree	: IP55	Moment of inertia (J)	: 0.0019 kgm ²		
Design	: N				
Output [kW]	0.550	0.550	0.550	0.550	
Poles	4	4	4	4	
Frequency [Hz]	50	50	50	60	
Rated voltage [V]	220/380	230/400	240/415	460	
Rated current [A]	2.49/1.44	2.52/1.45	2.58/1.49	1.30	
L. R. Amperes [A]	11.4/6.62	12.4/7.11	13.4/7.75	7.80	
LRC [A]	4.6	4.9	5.2	6.0	
No load current [A]	1.90/1.10	2.35/1.35	2.51/1.45	1.20	
Rated speed [RPM]	1400	1415	1420	1725	
Slip [%]	6.67	5.67	5.33	4.17	
Rated torque [Nm]	3.75	3.71	3.70	3.05	
Locked rotor torque [%]	200	200	220	250	
Breakdown torque [%]	220	240	260	310	
Service factor	1.00	1.00	1.00	1.15	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	31s (cold) 17s (hot)	31s (cold) 17s (hot)	31s (cold) 17s (hot)	31s (cold) 17s (hot)	
Noise level ²	44.0 dB(A)	44.0 dB(A)	44.0 dB(A)	48.0 dB(A)	
Efficiency (%)	25%				
	50%	68.0	65.0	62.0	65.1
	75%	71.3	70.0	68.4	70.6
	100%	70.9	71.0	70.4	72.8
Power Factor	25%				
	50%	0.58	0.52	0.48	0.49
	75%	0.72	0.67	0.64	0.65
	100%	0.82	0.77	0.73	0.73
Bearing type	: <u>Drive end</u> 6204 Z C3 <u>Non drive end</u> 6203 Z C3	Foundation loads			
Sealing	: V'Ring V'Ring	Max. traction : 233 N			
Lubrication interval	: 20000 h 20000 h	Max. compression : 370 N			
Lubricant amount	: 7 g 5 g				
Lubricant type	: Krytox GPL 225				
Notes					
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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TORQUE AND CURRENT VS SPEED CURVE

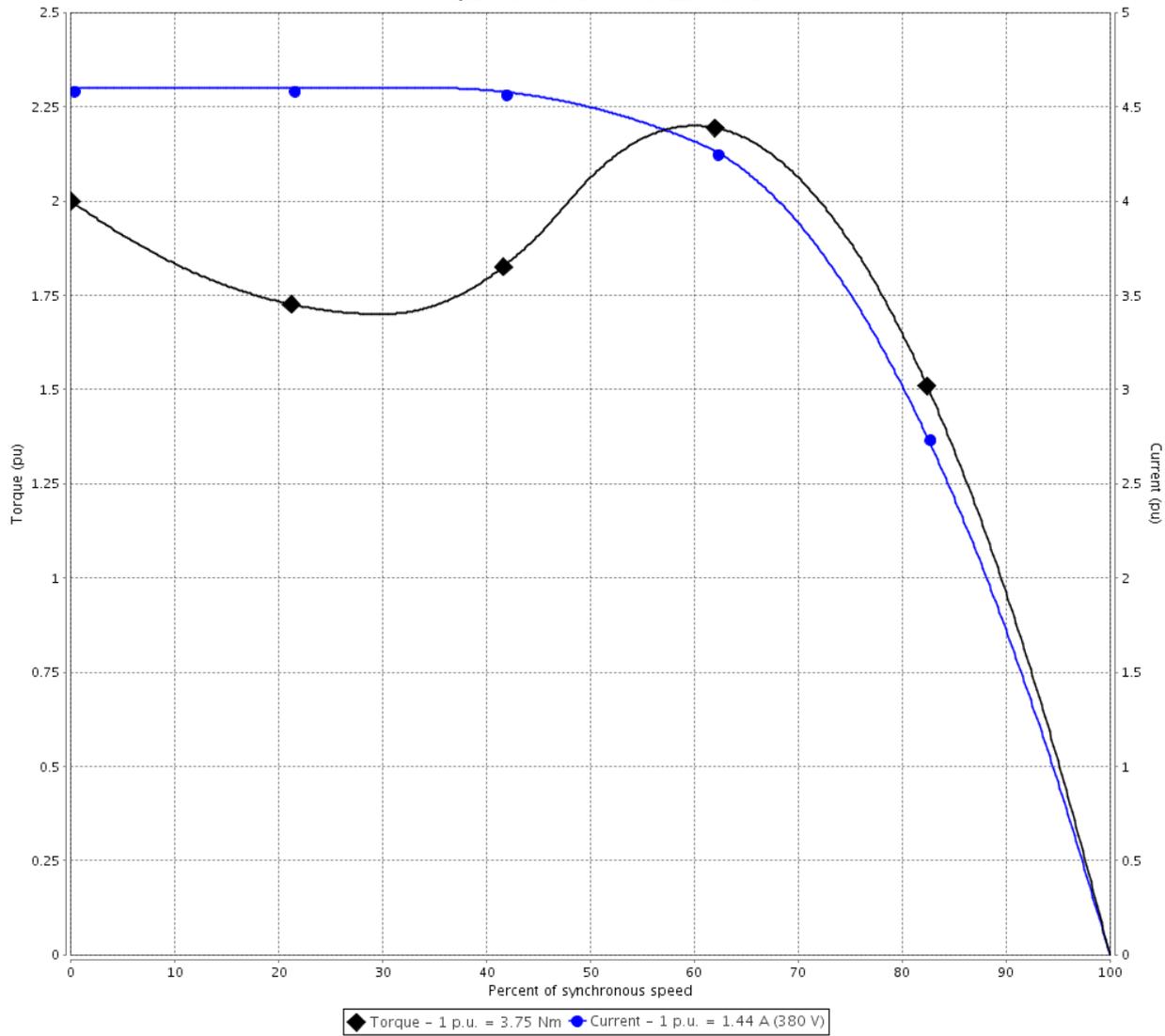
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 Fan and Exhaust 400°C 2h IE1 Three-Phase Product code : 12982668

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/380 V 50 Hz 4P

Rated current	: 2.49/1.44 A	Moment of inertia (J)	: 0.0019 kgm ²
LRC	: 4.6	Duty cycle	: S1
Rated torque	: 3.75 Nm	Insulation class	: H
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 80 K
Rated speed	: 1400 rpm	Design	: N

Locked rotor time : 31s (cold) 17s (hot)

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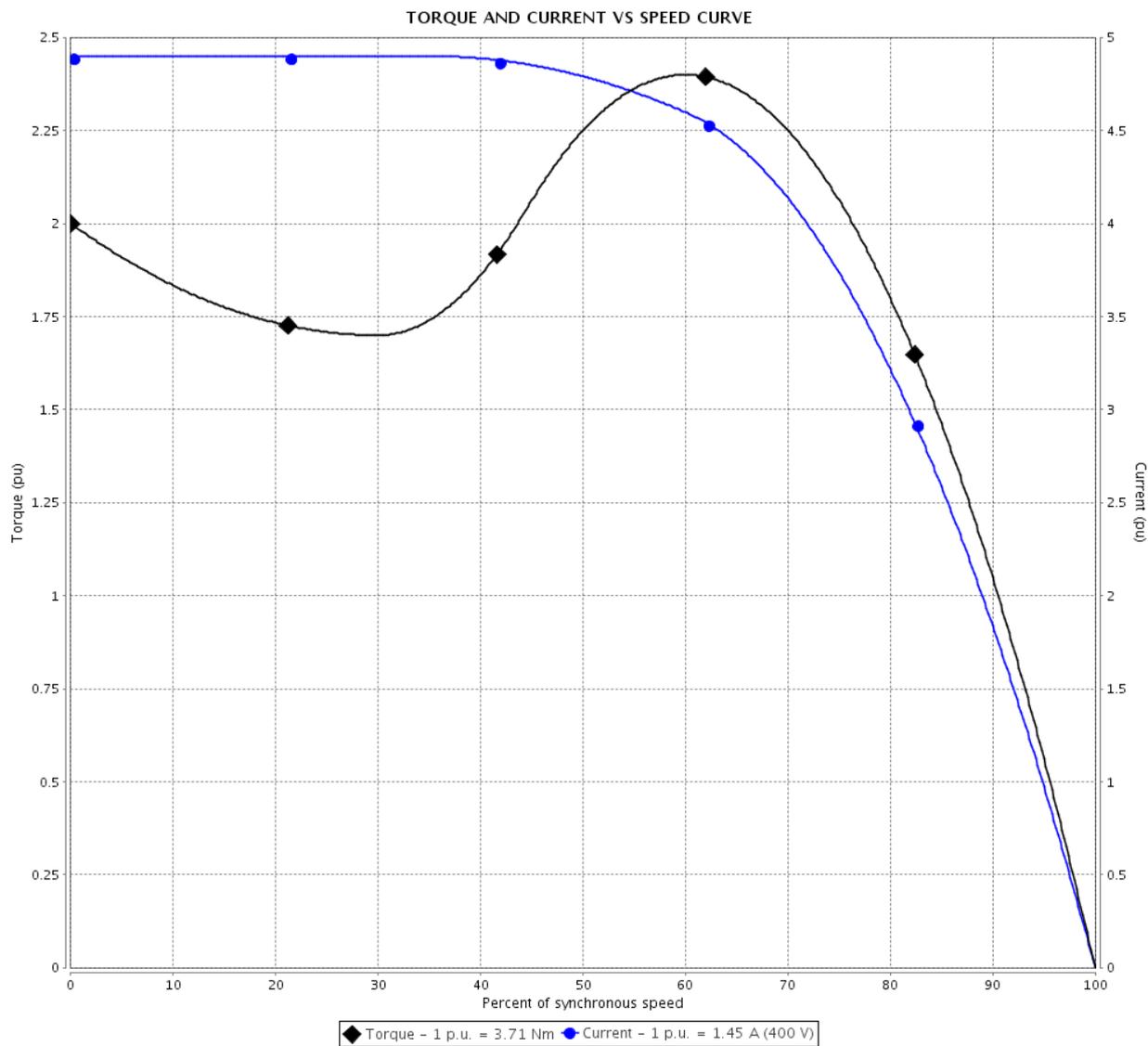
TORQUE AND CURRENT VS SPEED CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W22 Fan and Exhaust 400°C 2h IE1 Three-Phase Product code : 12982668



Performance : 230/400 V 50 Hz 4P

Rated current	: 2.52/1.45 A	Moment of inertia (J)	: 0.0019 kgm ²
LRC	: 4.9	Duty cycle	: S1
Rated torque	: 3.71 Nm	Insulation class	: H
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1415 rpm	Design	: N

Locked rotor time : 31s (cold) 17s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

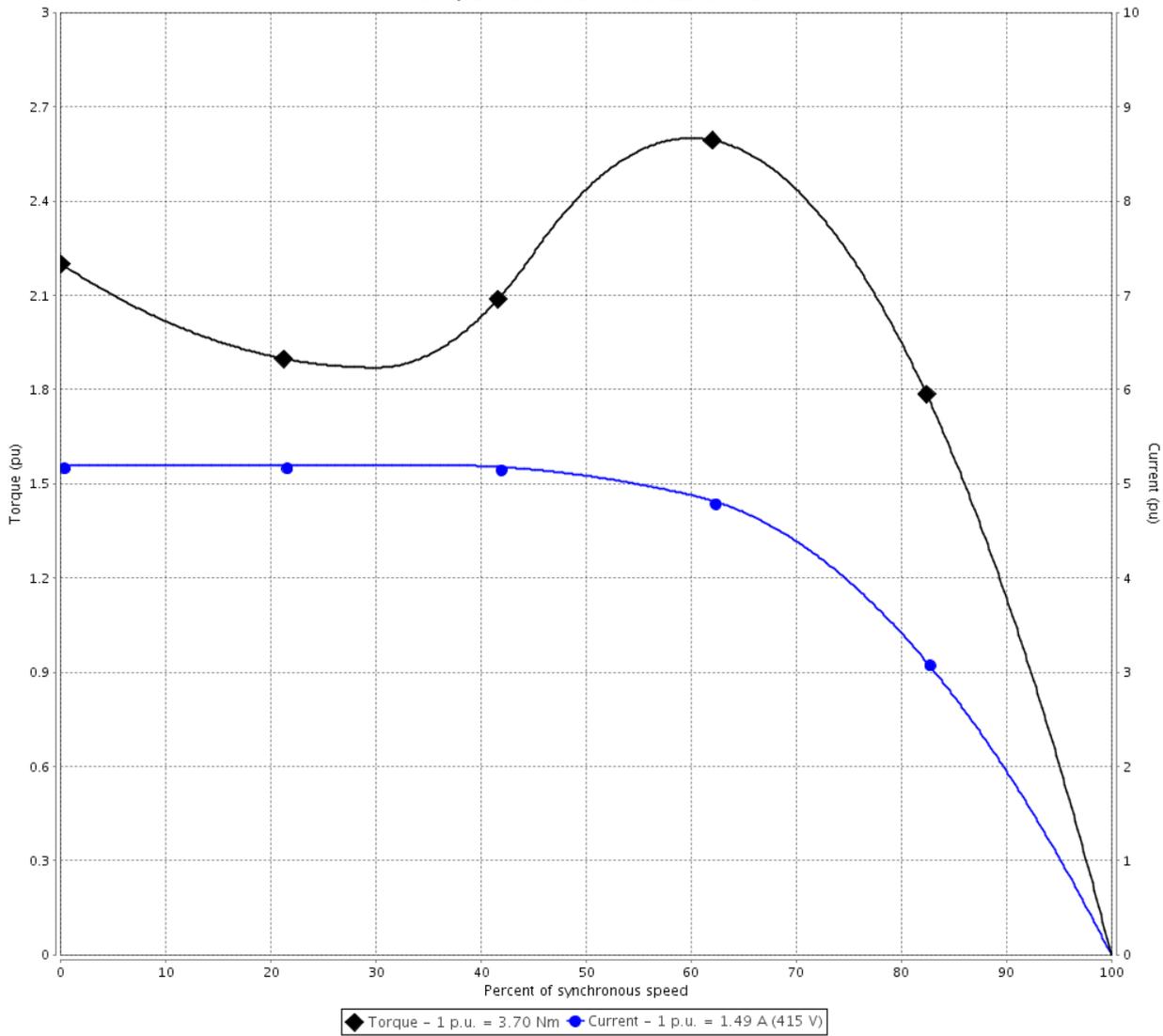
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 Fan and Exhaust 400°C 2h IE1 Three-Phase Product code : 12982668

TORQUE AND CURRENT VS SPEED CURVE



Performance : 240/415 V 50 Hz 4P

Rated current	: 2.58/1.49 A	Moment of inertia (J)	: 0.0019 kgm ²
LRC	: 5.2	Duty cycle	: S1
Rated torque	: 3.70 Nm	Insulation class	: H
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1420 rpm	Design	: N

Locked rotor time : 31s (cold) 17s (hot)

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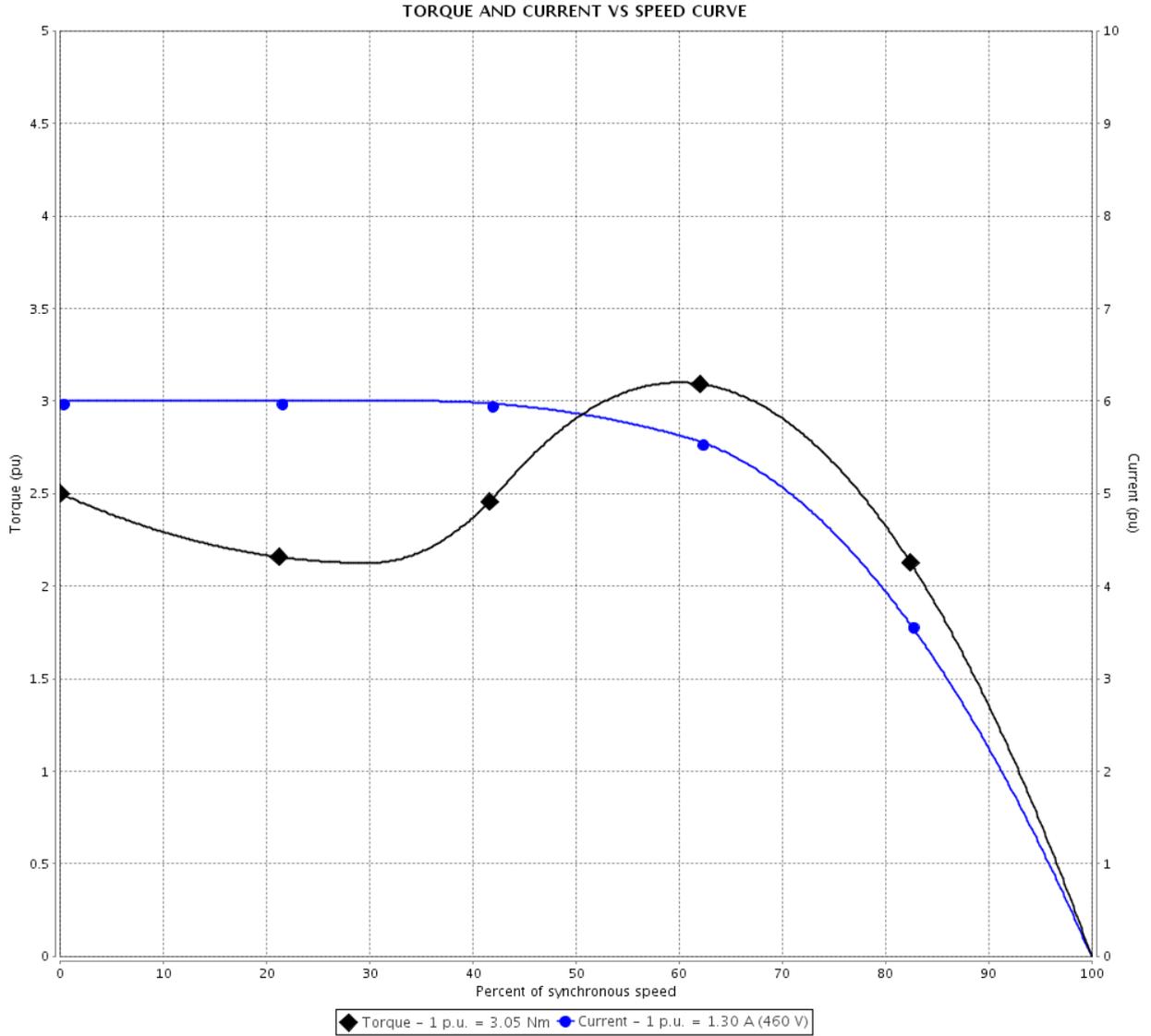
TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 Fan and Exhaust 400°C 2h IE1 Three-Phase Product code : 12982668



Performance : 460 V 60 Hz 4P

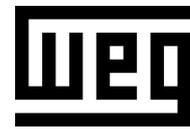
Rated current	: 1.30 A	Moment of inertia (J)	: 0.0019 kgm ²
LRC	: 6.0	Duty cycle	: S1
Rated torque	: 3.05 Nm	Insulation class	: H
Locked rotor torque	: 250 %	Service factor	: 1.15
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 1725 rpm	Design	: N

Locked rotor time : 31s (cold) 17s (hot)

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LOAD PERFORMANCE CURVE

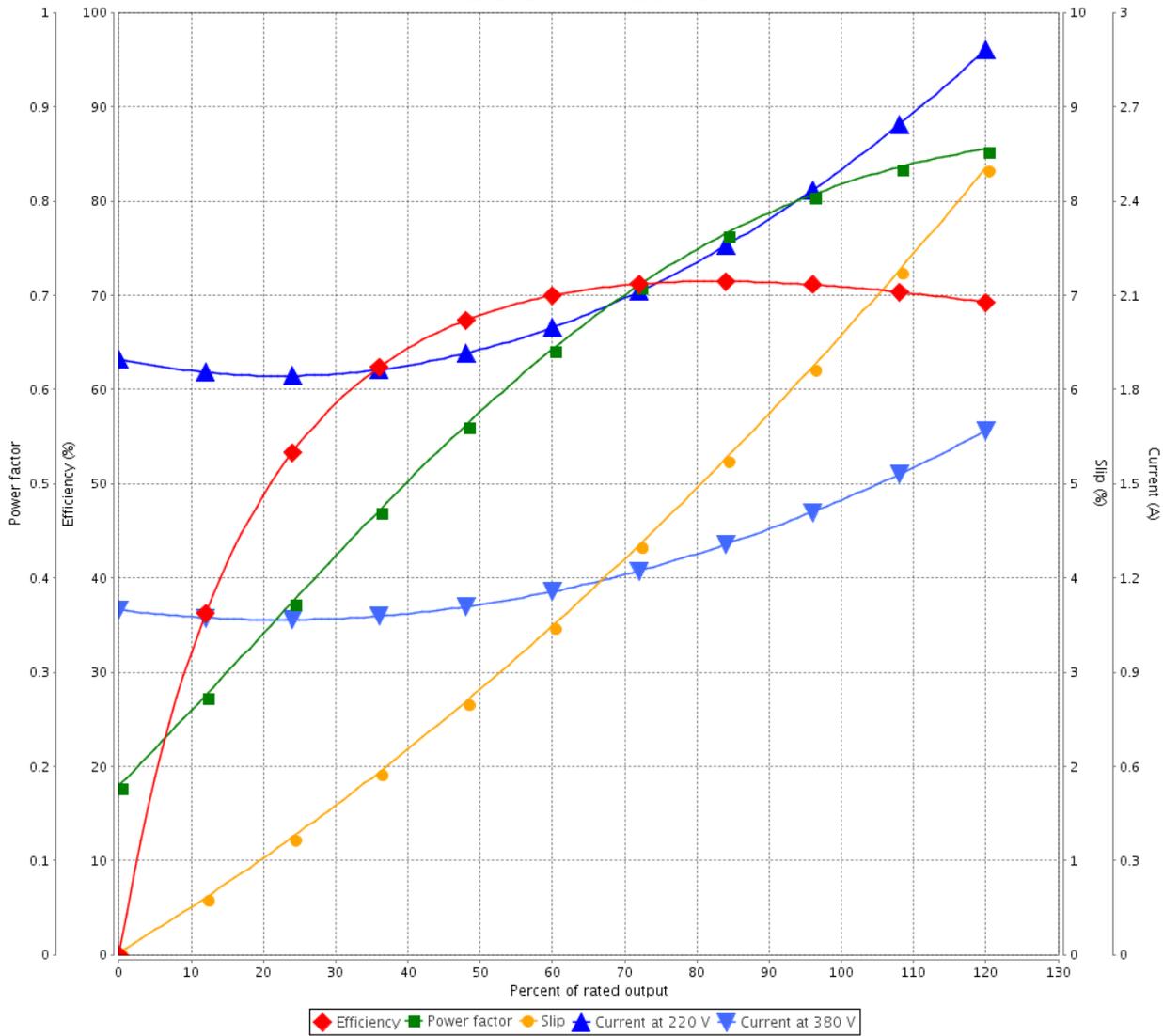
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 Fan and Exhaust 400°C 2h IE1 Three-Phase Product code : 12982668

LOAD PERFORMANCE CURVE



Performance : 220/380 V 50 Hz 4P

Rated current	: 2.49/1.44 A	Moment of inertia (J)	: 0.0019 kgm ²
LRC	: 4.6	Duty cycle	: S1
Rated torque	: 3.75 Nm	Insulation class	: H
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 80 K
Rated speed	: 1400 rpm	Design	: N

Rev.	Changes Summary	Performed	Checked	Date
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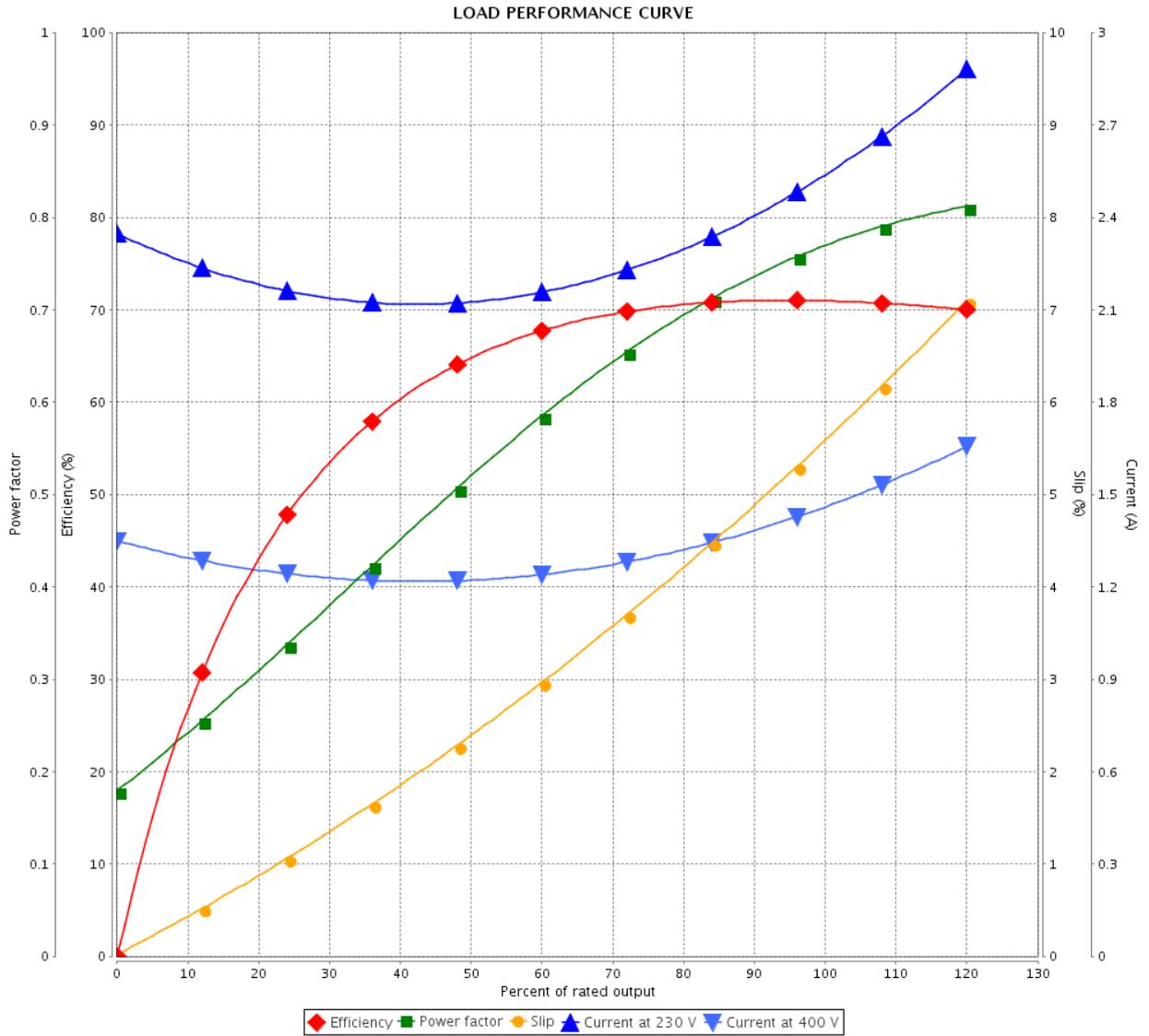
Three Phase Induction Motor - Squirrel Cage



Customer : _____

Product line : W22 Fan and Exhaust 400°C 2h
IE1 Three-Phase

Product code : 12982668



Performance : 230/400 V 50 Hz 4P

Rated current : 2.52/1.45 A
 LRC : 4.9
 Rated torque : 3.71 Nm
 Locked rotor torque : 200 %
 Breakdown torque : 240 %
 Rated speed : 1415 rpm

Moment of inertia (J) : 0.0019 kgm²
 Duty cycle : S1
 Insulation class : H
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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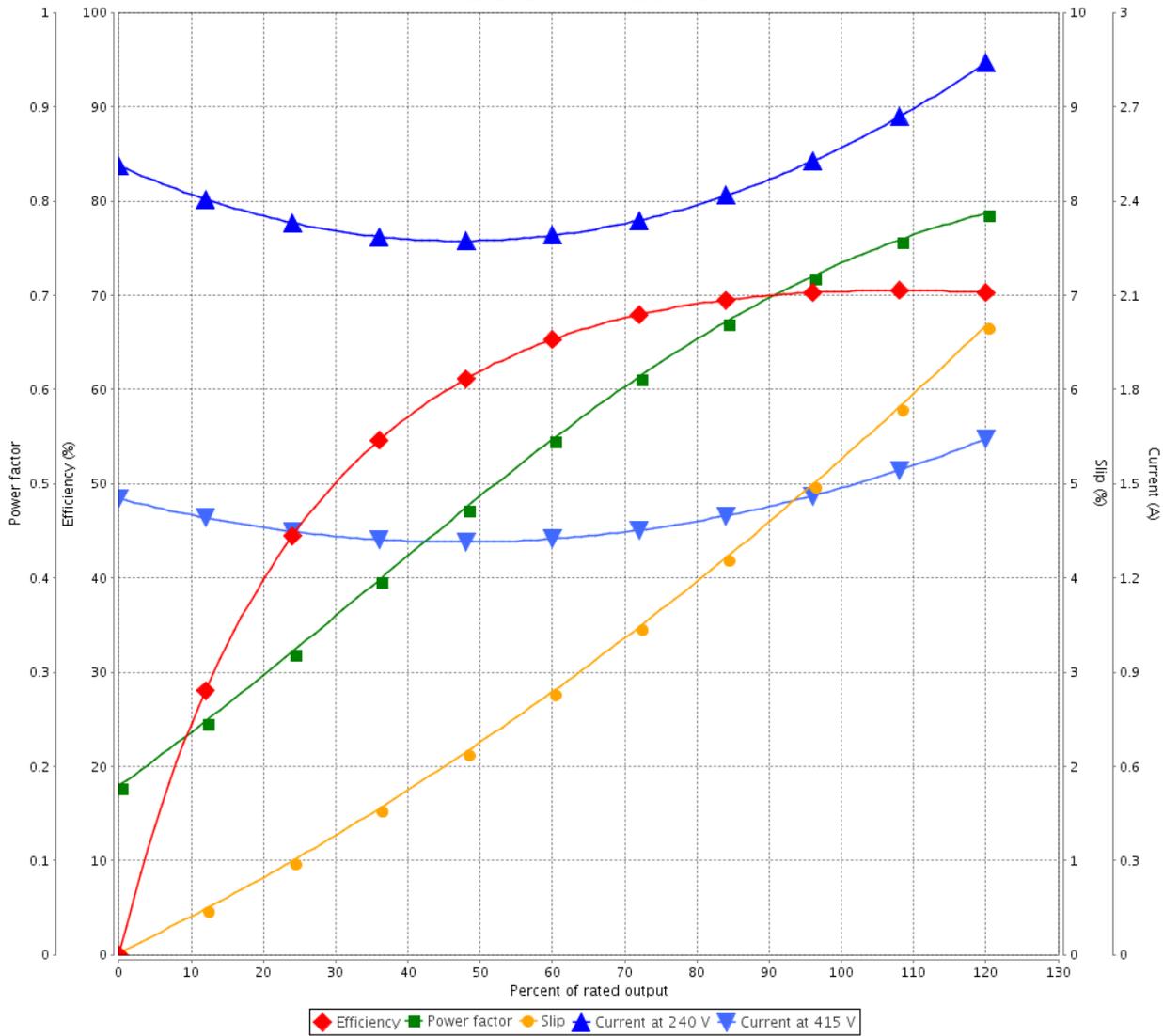
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 Fan and Exhaust 400°C 2h IE1 Three-Phase Product code : 12982668

LOAD PERFORMANCE CURVE



Performance : 240/415 V 50 Hz 4P

Rated current : 2.58/1.49 A
 LRC : 5.2
 Rated torque : 3.70 Nm
 Locked rotor torque : 220 %
 Breakdown torque : 260 %
 Rated speed : 1420 rpm

Moment of inertia (J) : 0.0019 kgm²
 Duty cycle : S1
 Insulation class : H
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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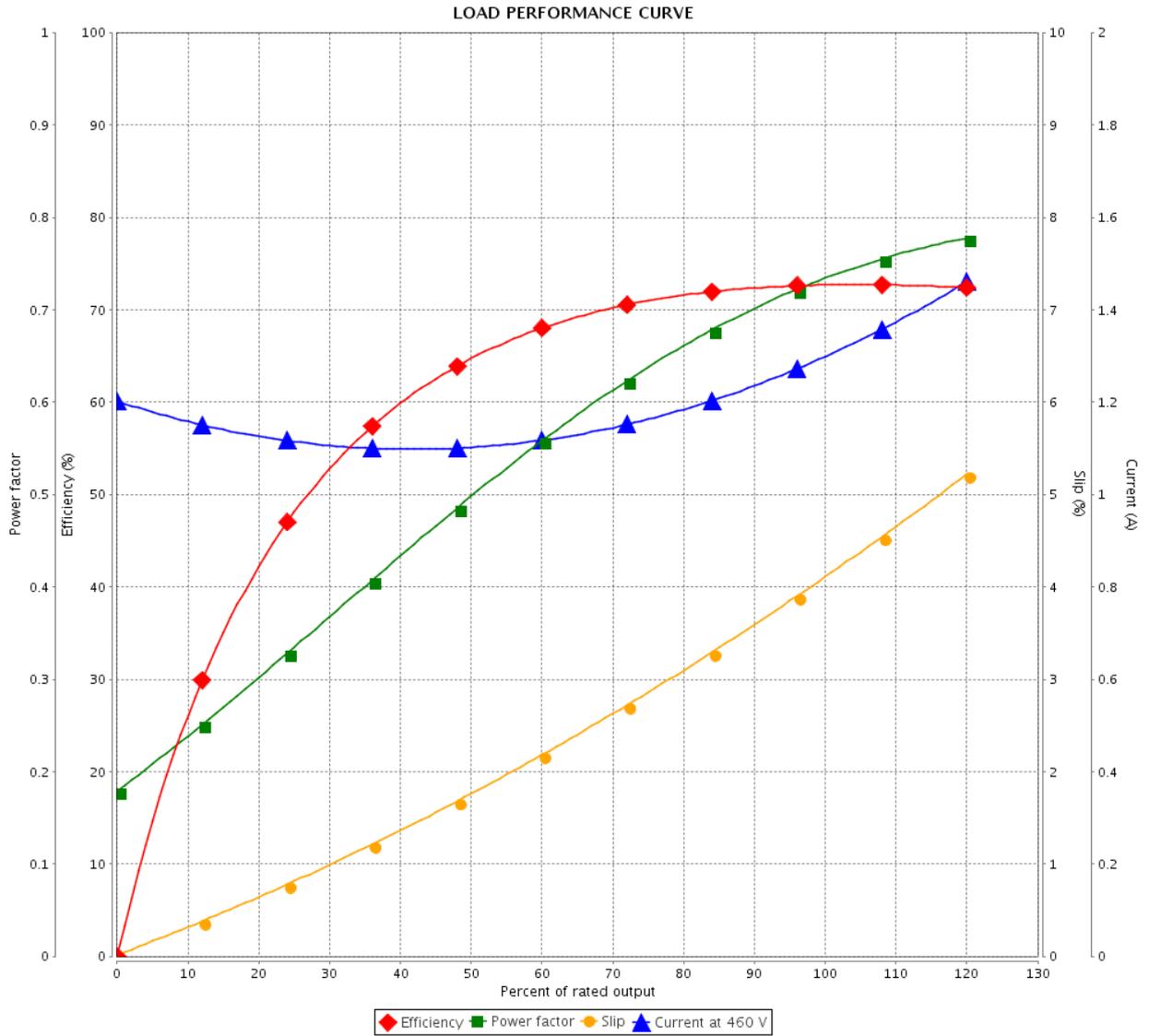
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IE1 Three-Phase

Product code : 12982668



Performance : 460 V 60 Hz 4P

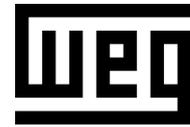
Rated current : 1.30 A
LRC : 6.0
Rated torque : 3.05 Nm
Locked rotor torque : 250 %
Breakdown torque : 310 %
Rated speed : 1725 rpm

Moment of inertia (J) : 0.0019 kgm²
Duty cycle : S1
Insulation class : H
Service factor : 1.15
Temperature rise : 80 K
Design : N

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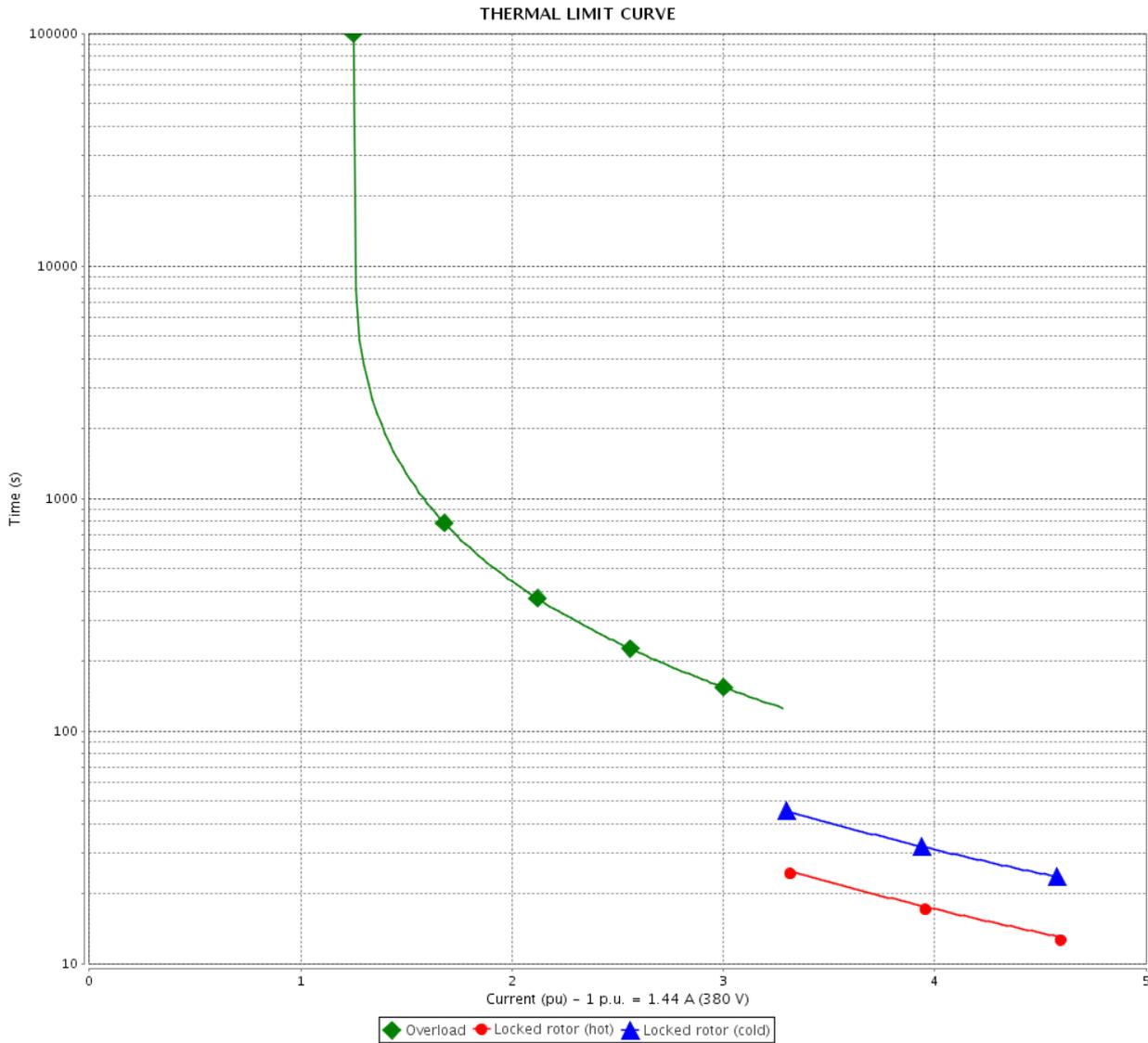
THERMAL LIMIT CURVE

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LRC	: 4.6	Duty cycle	: S1
Rated torque	: 3.75 Nm	Insulation class	: H
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 80 K
Rated speed	: 1400 rpm	Design	: N

Heating constant

Cooling constant

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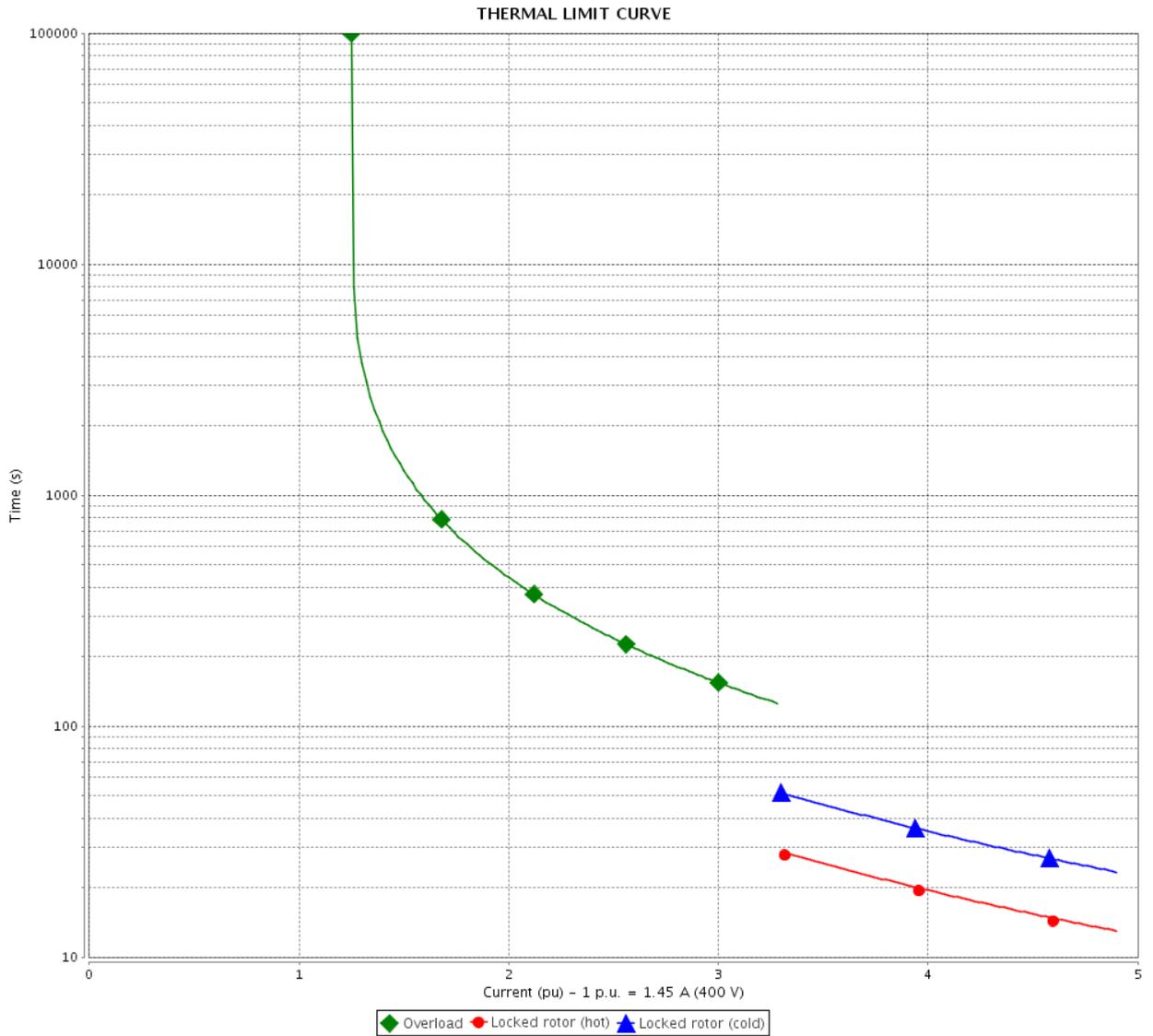
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 LRC : 4.9
 Rated torque : 3.71 Nm
 Locked rotor torque : 200 %
 Breakdown torque : 240 %
 Rated speed : 1415 rpm

Moment of inertia (J) : 0.0019 kgm²
 Duty cycle : S1
 Insulation class : H
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

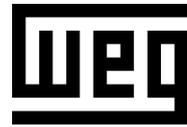
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Cooling constant

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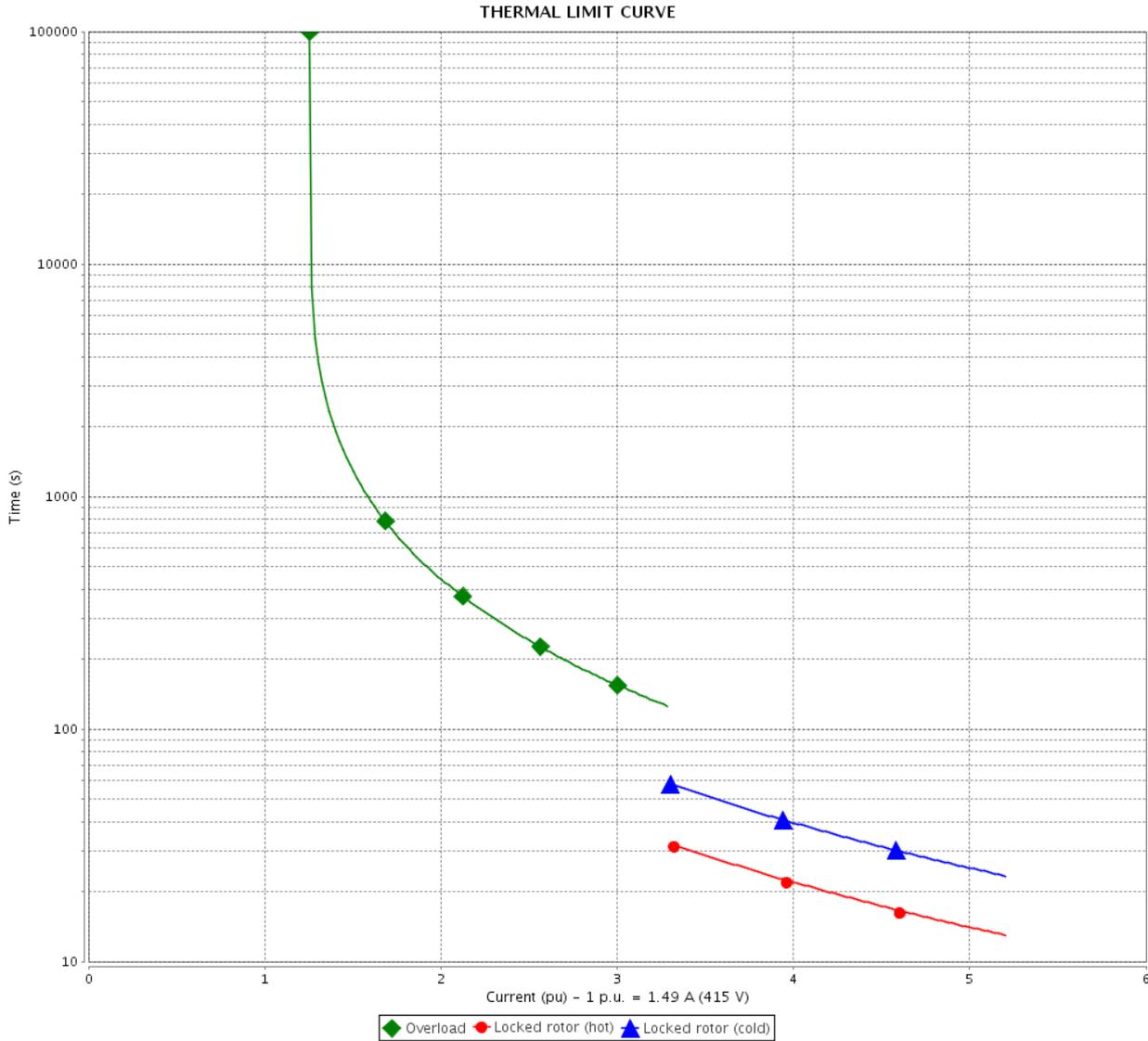
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Rated current	: 2.58/1.49 A	Moment of inertia (J)	: 0.0019 kgm ²
LRC	: 5.2	Duty cycle	: S1
Rated torque	: 3.70 Nm	Insulation class	: H
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1420 rpm	Design	: N

Heating constant

Cooling constant

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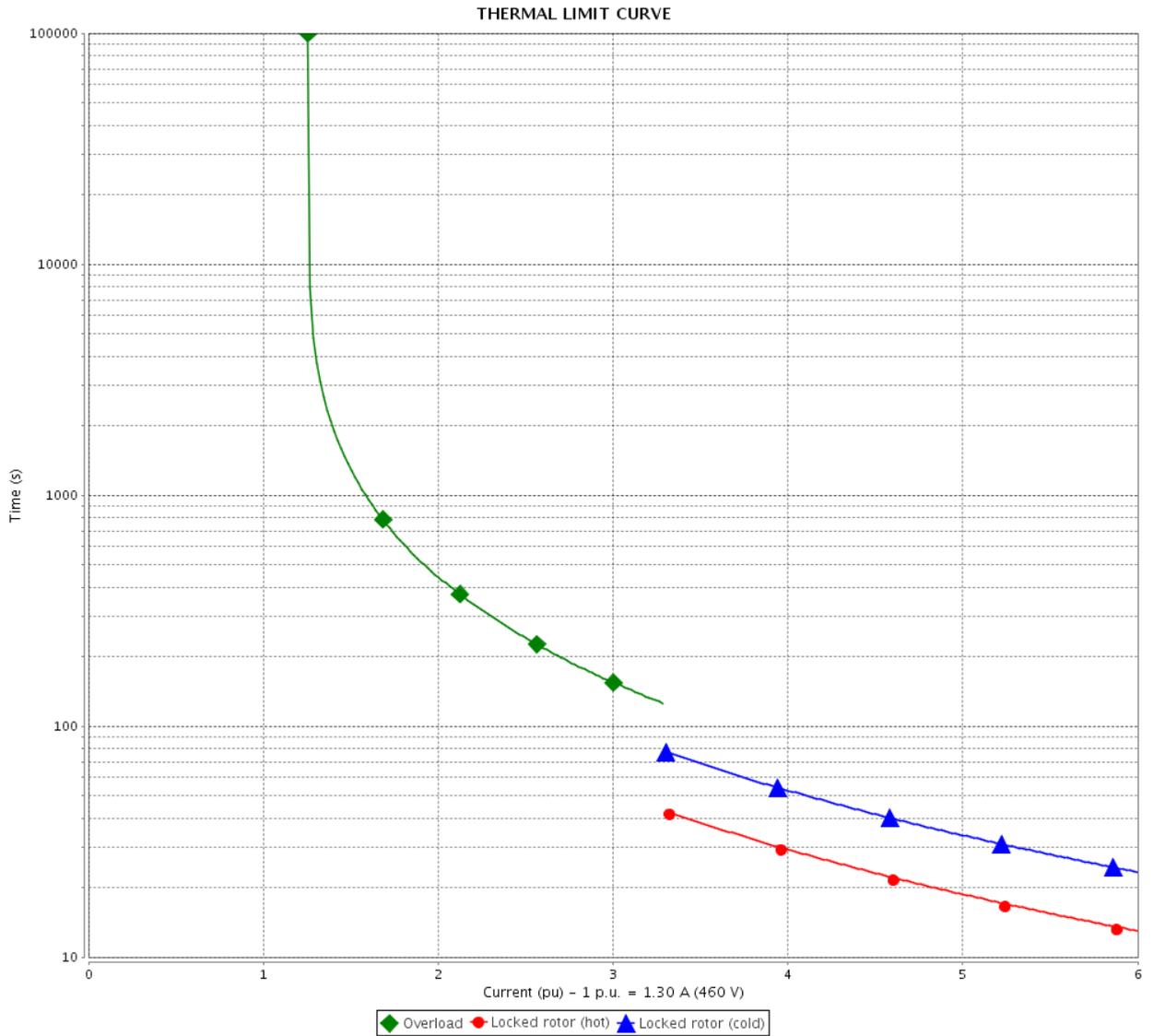
THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____

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Performance : 460 V 60 Hz 4P

Rated current	: 1.30 A	Moment of inertia (J)	: 0.0019 kgm ²
LRC	: 6.0	Duty cycle	: S1
Rated torque	: 3.05 Nm	Insulation class	: H
Locked rotor torque	: 250 %	Service factor	: 1.15
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 1725 rpm	Design	: N

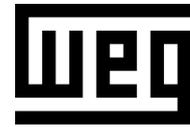
Heating constant

Cooling constant

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Date	20/11/2019			

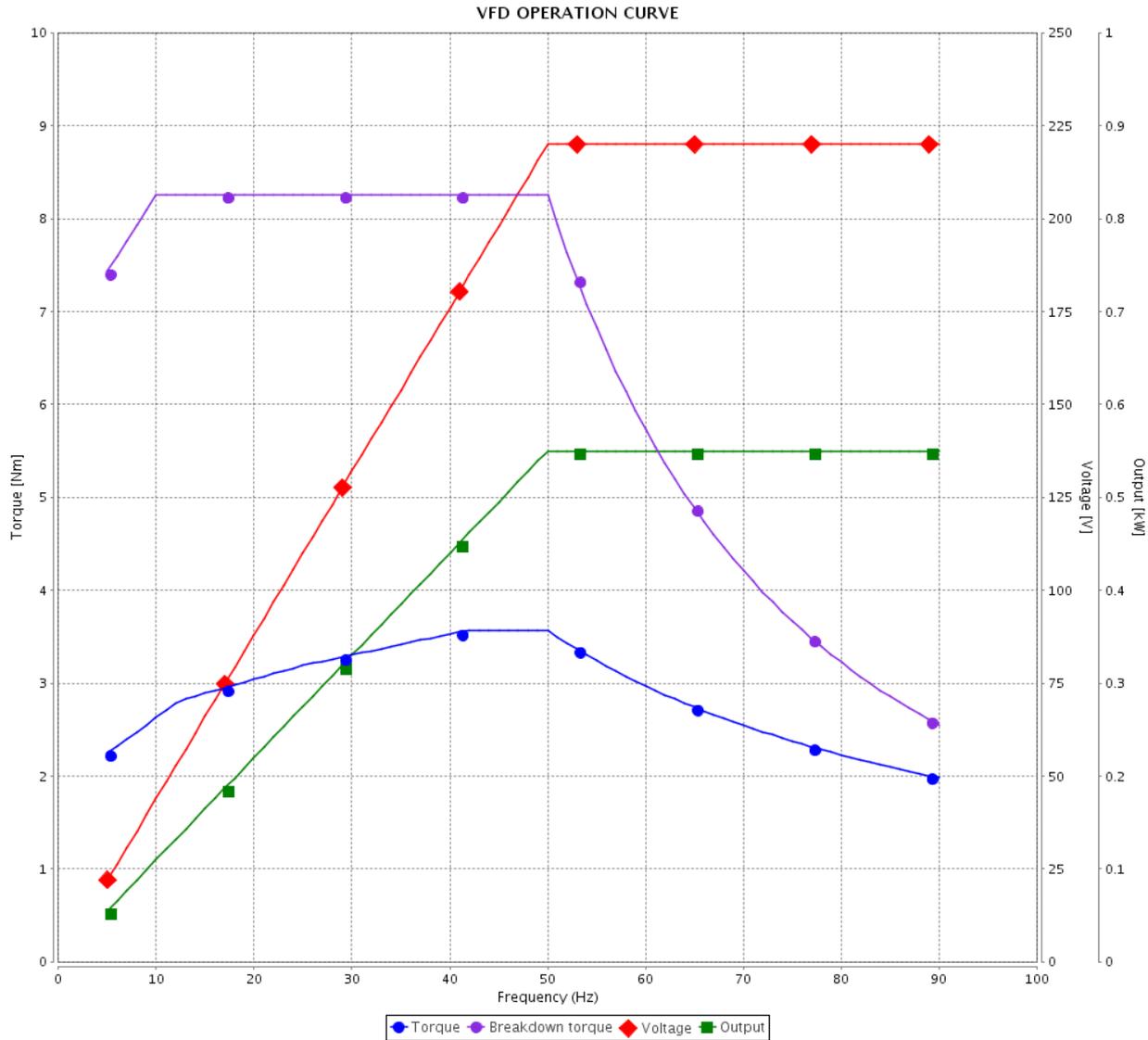
VFD OPERATION CURVE

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Rated current	: 2.49/1.44 A	Moment of inertia (J)	: 0.0019 kgm ²
LRC	: 4.6	Duty cycle	: S1
Rated torque	: 3.75 Nm	Insulation class	: H
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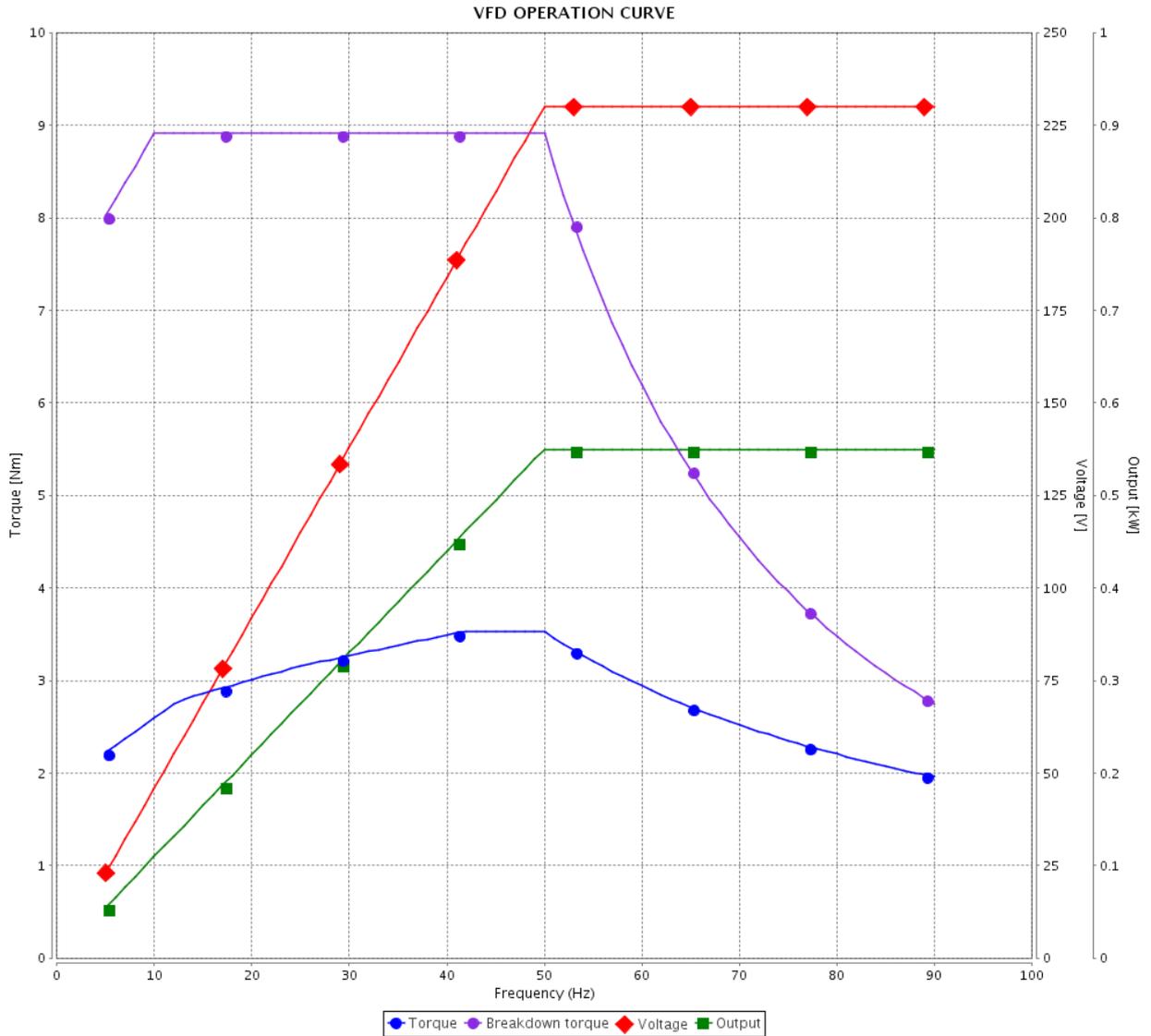
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Performance : 230/400 V 50 Hz 4P

Rated current : 2.52/1.45 A
 LRC : 4.9
 Rated torque : 3.71 Nm
 Locked rotor torque : 200 %
 Breakdown torque : 240 %
 Rated speed : 1415 rpm

Moment of inertia (J) : 0.0019 kgm²
 Duty cycle : S1
 Insulation class : H
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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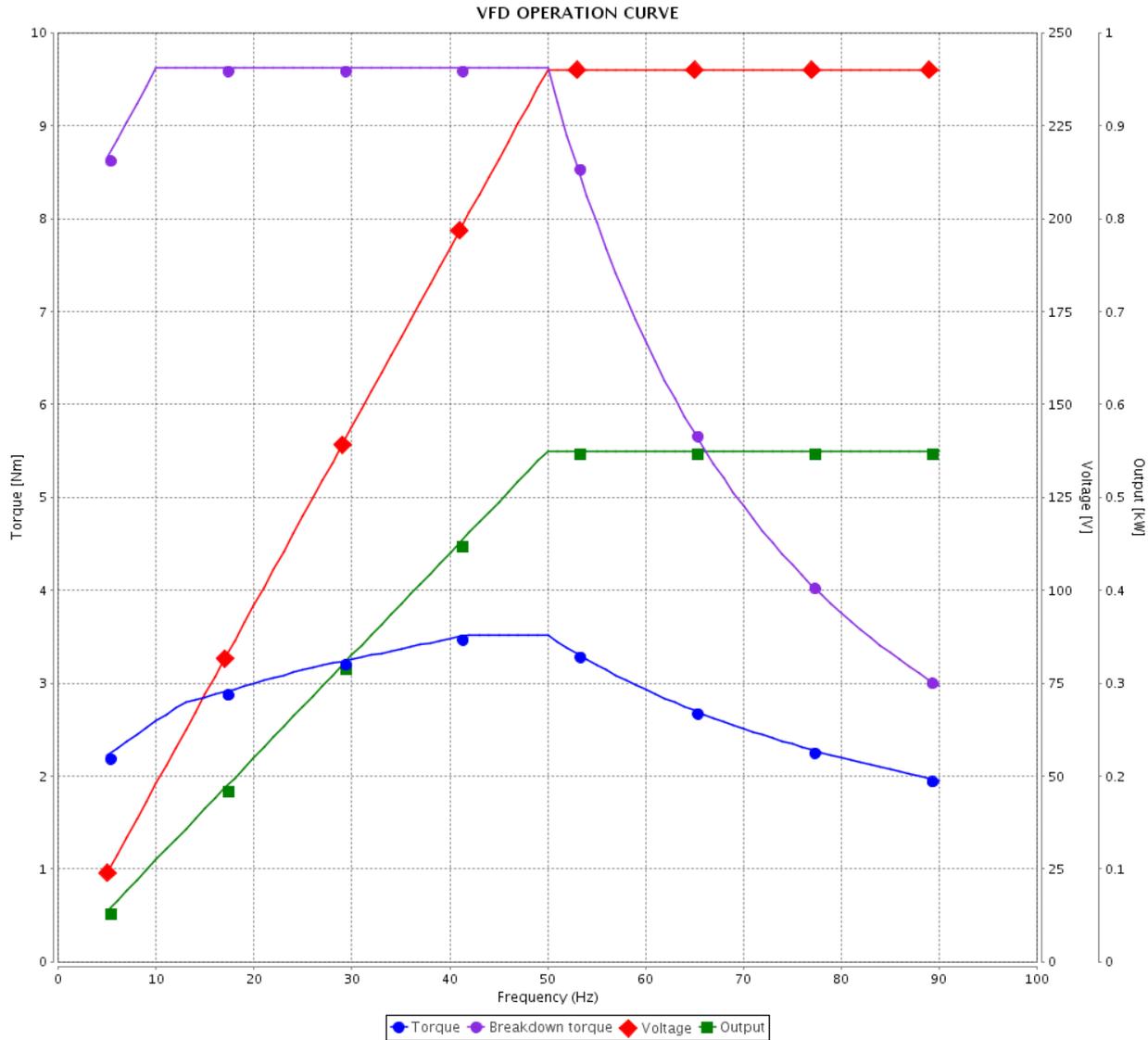
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Performance : 240/415 V 50 Hz 4P

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 Rated torque : 3.70 Nm
 Locked rotor torque : 220 %
 Breakdown torque : 260 %
 Rated speed : 1420 rpm

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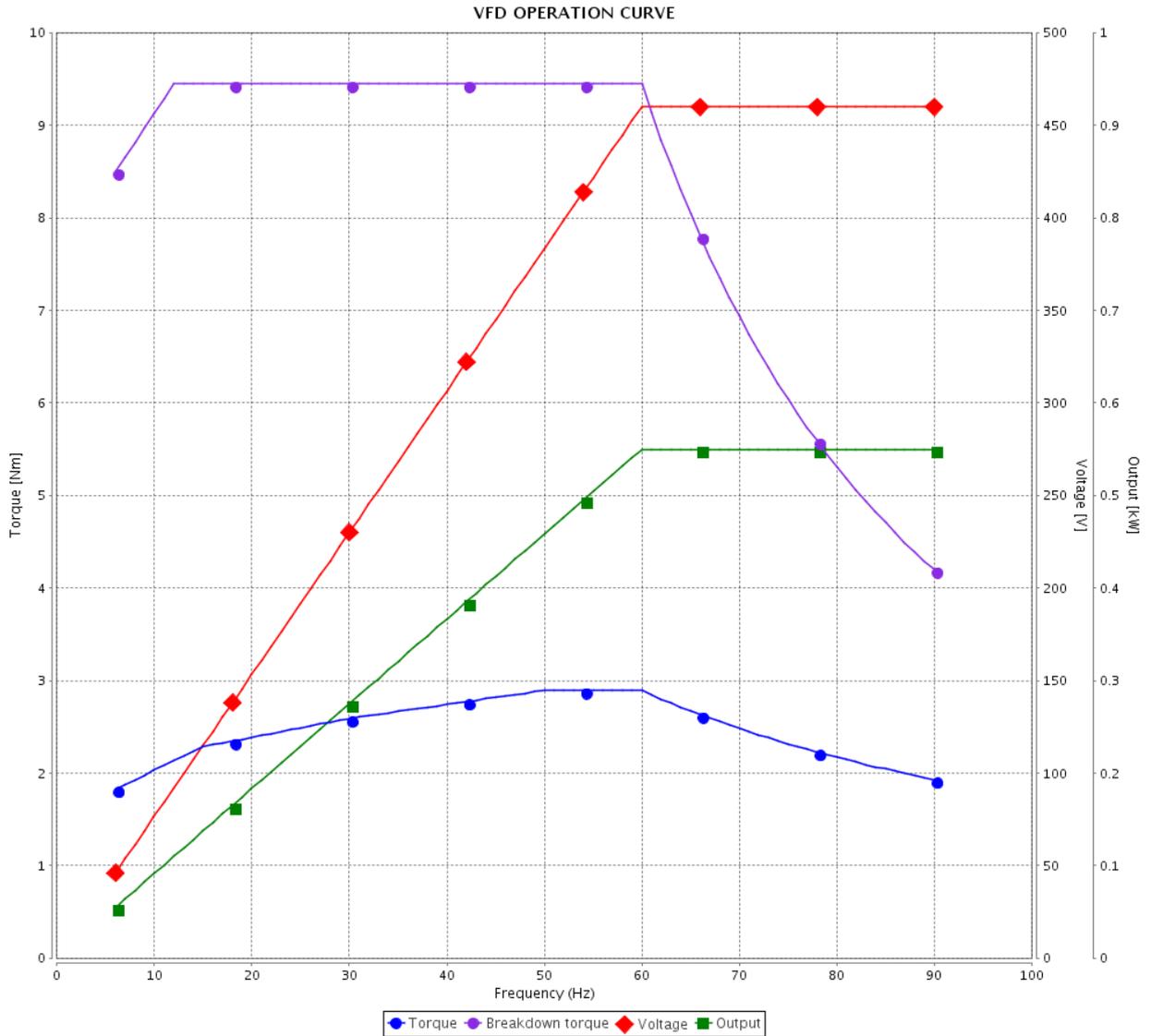
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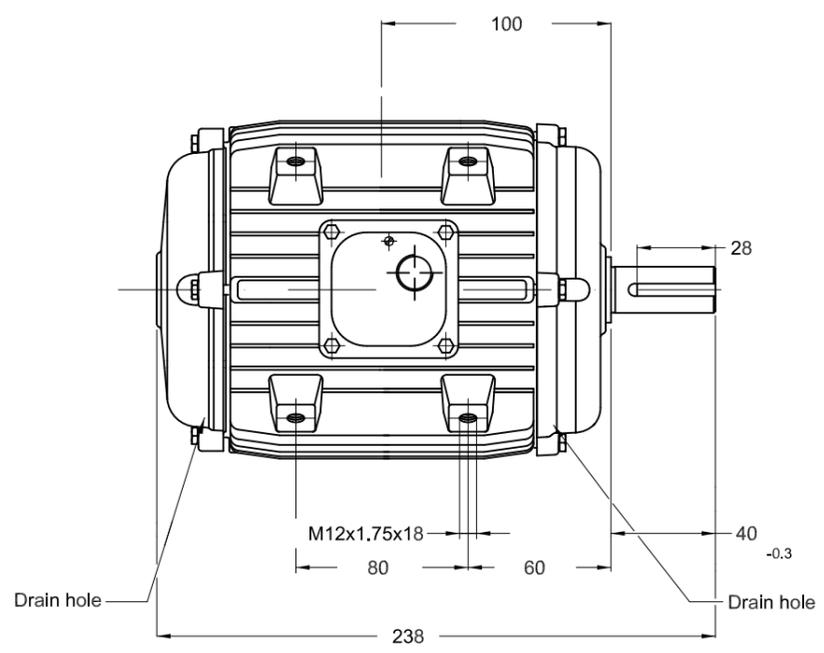
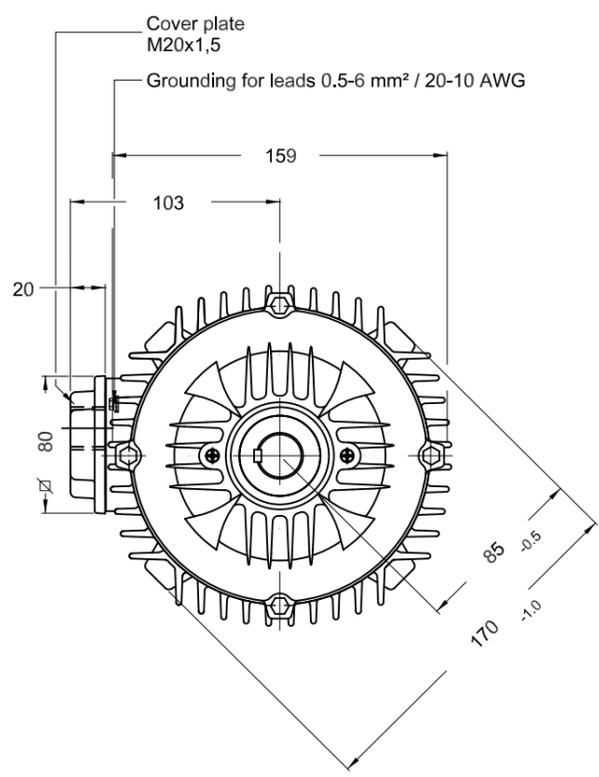
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A

B

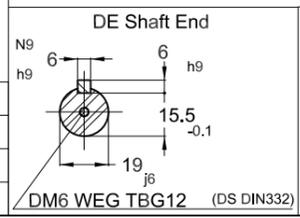
C



D

E

Ambient temperature 400 °C-2 hours (Smoke Extraction)
 Color RAL 9006
 Painting plan 207A
 Mounting B30L(D)



0.55 kW 04 Poles 50 Hz A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PHASE W22 SMOKE EXTRACTION MOTOR					
CHECKED		FRAME 80 IP55 TEAO					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

PREVIEW
 WDD



SHEET 1 / 1