

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :				
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	12502805	
		Catalog # :	01518OT3E254T-S	
Frame	: 254/6T	Cooling method	: IC01 - ODP	
Insulation class	: F	Mounting	: F-1	
Duty cycle	: Cont.(S1)	Rotation <sup>1</sup>	: Both (CW and CCW)	
Ambient temperature	: -20°C to +40°C	Starting method	: Direct On Line	
Altitude	: 1000 m.a.s.l.	Approx. weight <sup>2</sup>	: 189 lb	
Design	: B	Moment of inertia (J)	: 1.82 sq.ft.lb	
Output [HP]	15	15	15	
Poles	4	4	4	
Frequency [Hz]	60	50	50	
Rated voltage [V]	230/460	190/380	220/415	
Rated current [A]	37.2/18.6	43.8/21.9	40.0/21.2	
L. R. Amperes [A]	249/125	237/118	236/125	
LRC [A]	6.7x(Code H)	5.4x(Code F)	5.9x(Code G)	
No load current [A]	19.0/9.50	17.3/8.67	18.3/9.68	
Rated speed [RPM]	1775	1465	1470	
Slip [%]	1.39	2.33	2.00	
Rated torque [ft.lb]	44.4	53.8	53.6	
Locked rotor torque [%]	240	170	200	
Breakdown torque [%]	300	220	250	
Service factor	1.15	1.15	1.15	
Temperature rise	80 K	80 K	80 K	
Locked rotor time	30s (cold) 17s (hot)	0s (cold) 0s (hot)	0s (cold) 0s (hot)	
Noise level <sup>2</sup>	64.0 dB(A)	62.0 dB(A)	62.0 dB(A)	
Efficiency (%)	25%	91.0	91.4	
	50%	91.7	90.8	
	75%	92.4	91.1	
	100%	93.0	90.2	
Power Factor	25%	0.36	0.40	
	50%	0.62	0.66	
	75%	0.73	0.78	
	100%	0.80	0.83	
Bearing type	: <u>Drive end</u> 6309 Z C3 <u>Non drive end</u> 6208 Z C3	Foundation loads		
Sealing	: Without Without Bearing Seal Bearing Seal	Max. traction	: 548 lb	
Lubrication interval	: 20000 h 20000 h	Max. compression	: 737 lb	
Lubricant amount	: 13 g 8 g			
Lubricant type	: Mobil Polyrex EM			
Notes USABLE @208V 41.1A SF 1.00 SFA 41.1A				
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 NEMA MG-1.		
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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



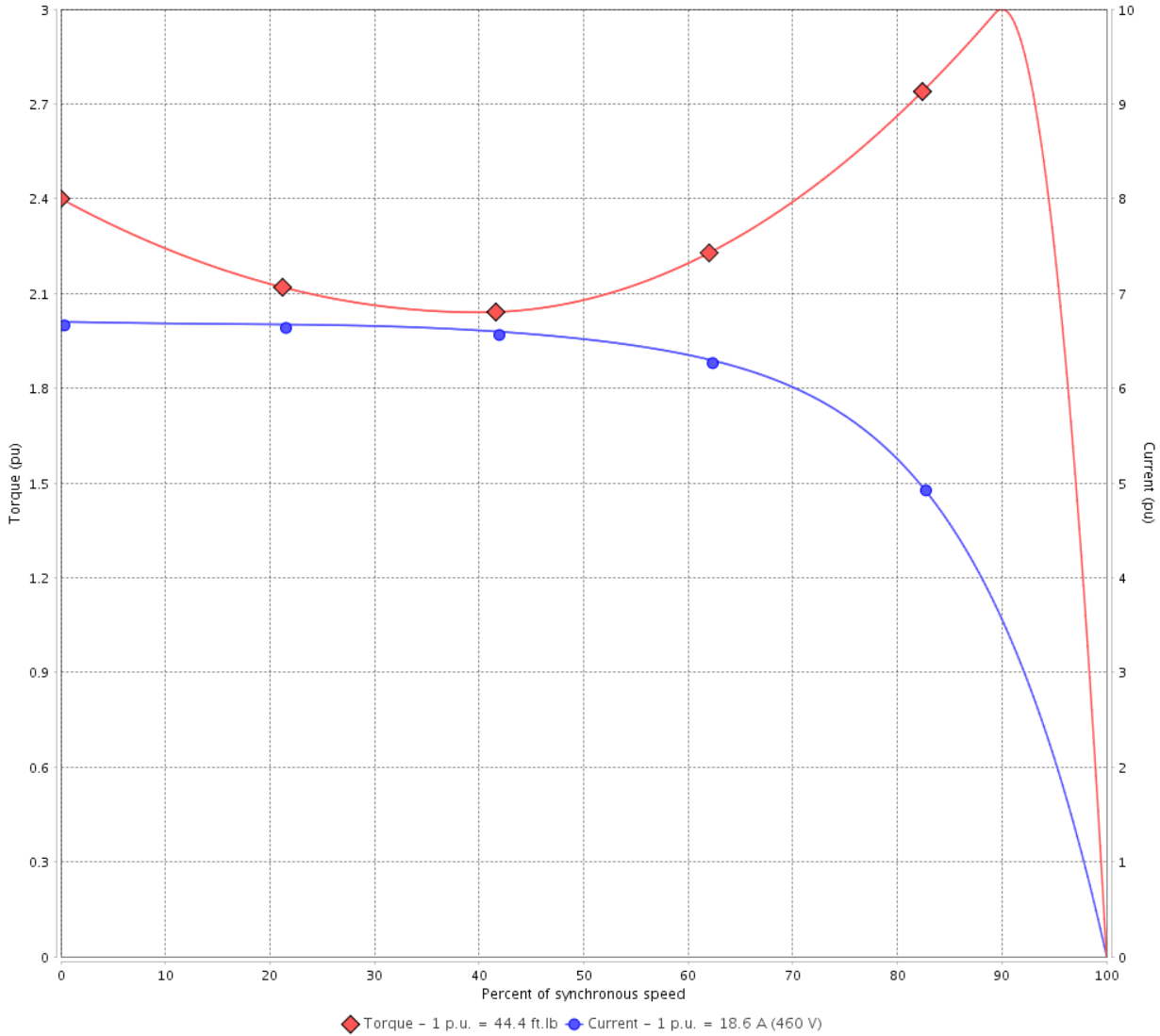
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12502805

Catalog # : 01518OT3E254T-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 4P

Rated current	: 37.2/18.6 A	Moment of inertia (J)	: 1.82 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 44.4 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.15
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1775 rpm	Design	: B

Locked rotor time : 30s (cold) 17s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



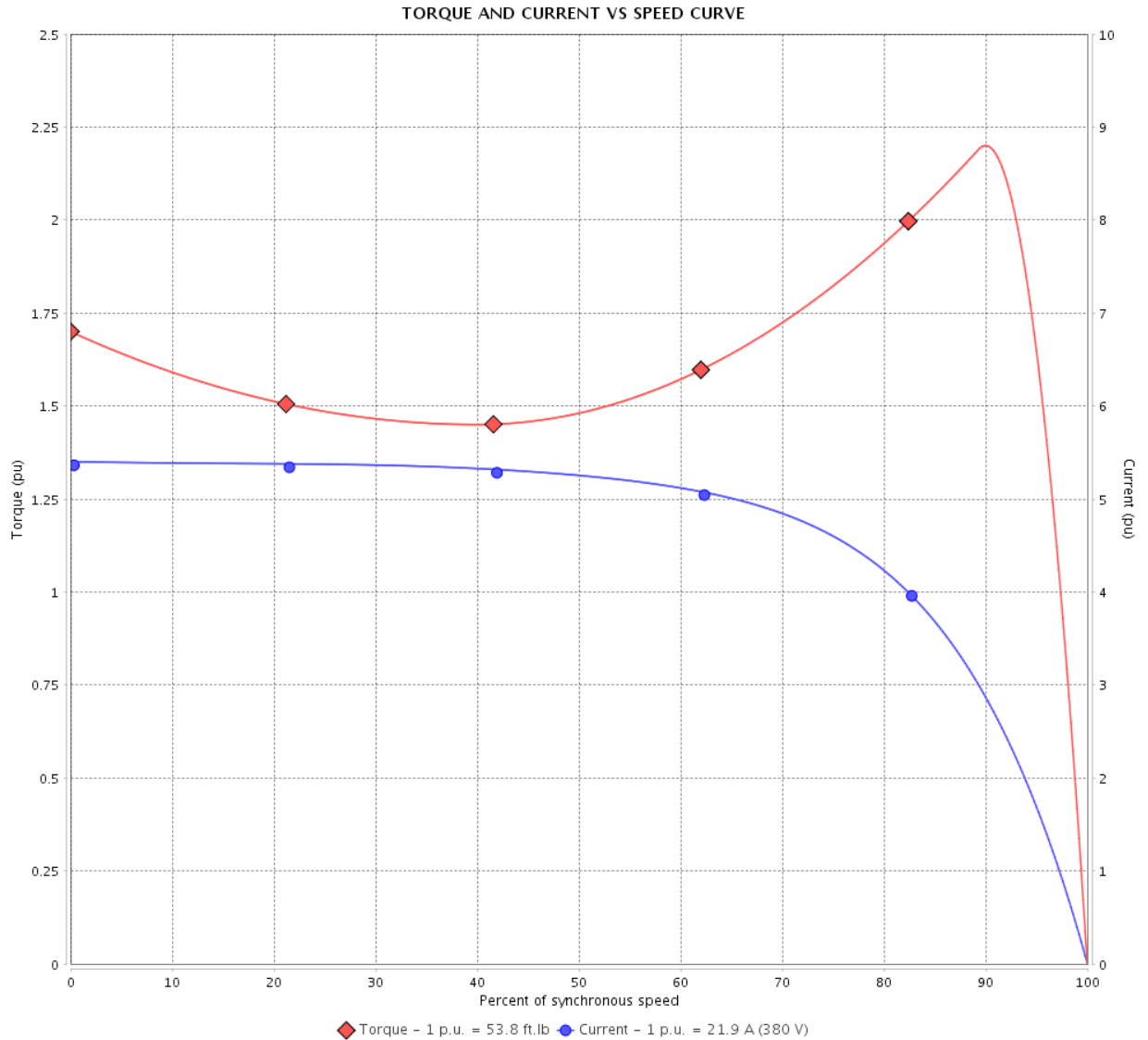
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12502805

Catalog # : 01518OT3E254T-S



Performance : 190/380 V 50 Hz 4P

Rated current : 43.8/21.9 A  
 LRC : 5.4  
 Rated torque : 53.8 ft.lb  
 Locked rotor torque : 170 %  
 Breakdown torque : 220 %  
 Rated speed : 1465 rpm

Moment of inertia (J) : 1.82 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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

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# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage



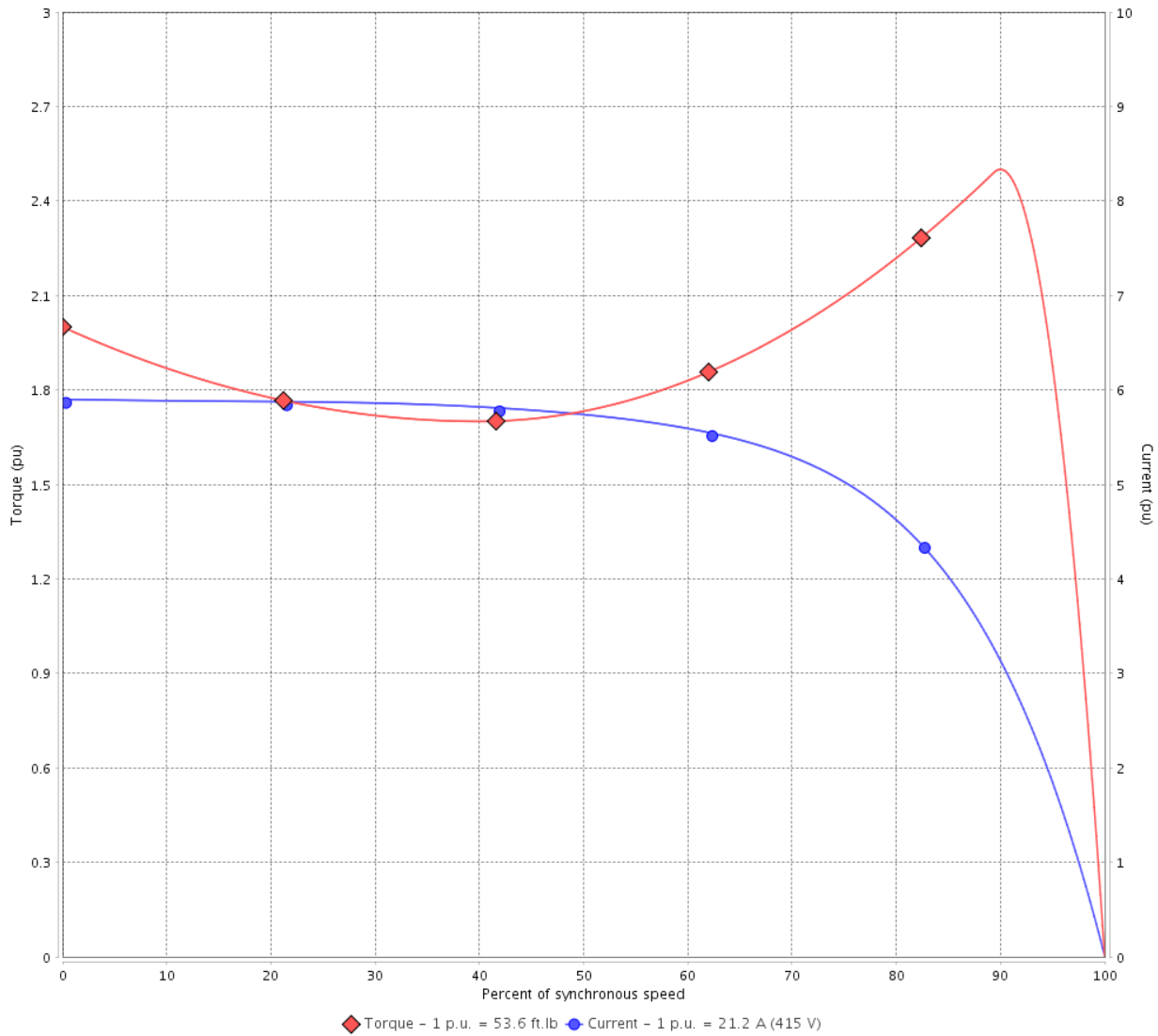
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12502805

Catalog # : 01518OT3E254T-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 4P

Rated current	: 40.0/21.2 A	Moment of inertia (J)	: 1.82 sq.ft.lb
LRC	: 5.9	Duty cycle	: Cont.(S1)
Rated torque	: 53.6 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.15
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1470 rpm	Design	: B

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

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

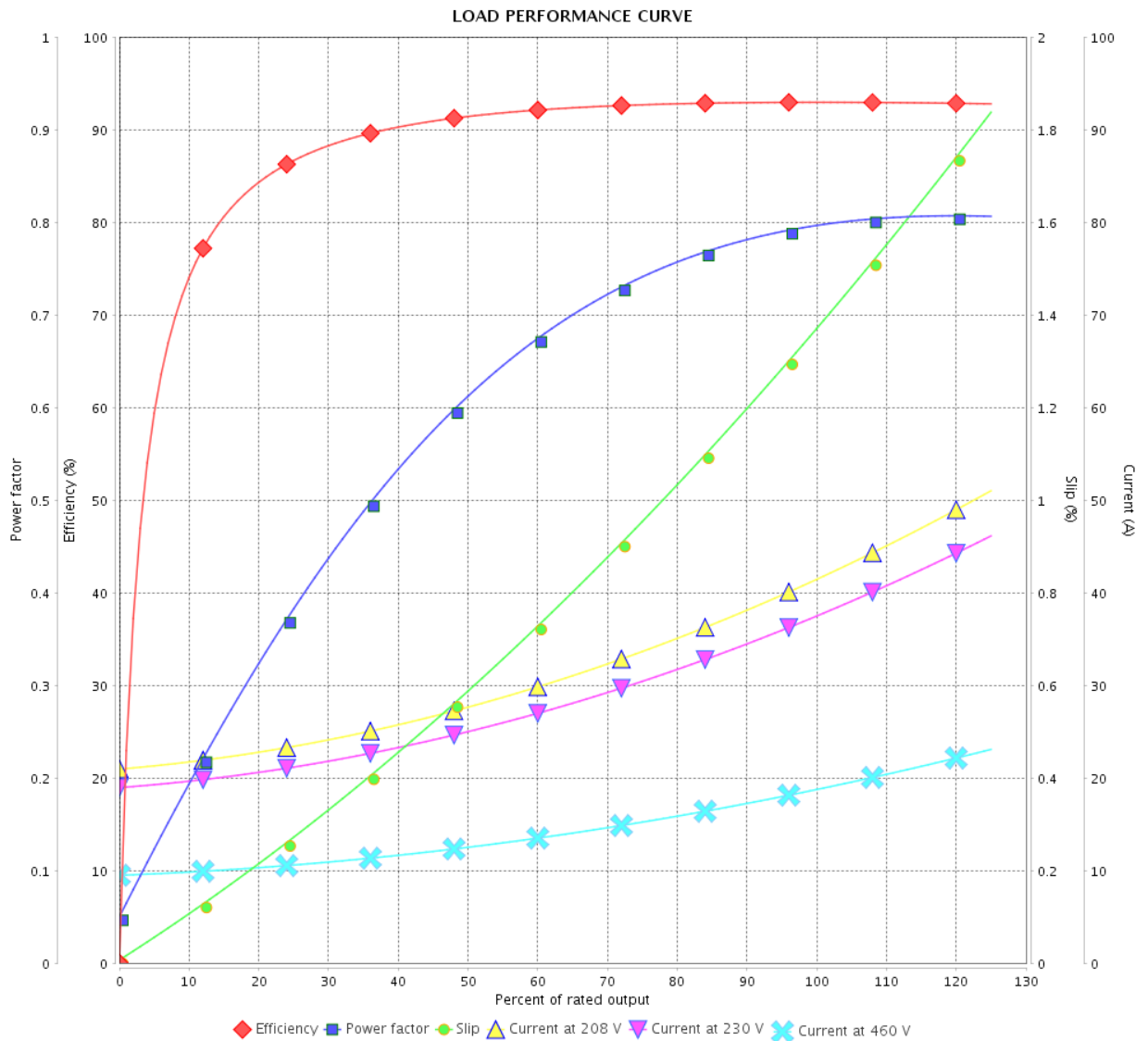


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12502805

Catalog # : 01518OT3E254T-S



Performance : 230/460 V 60 Hz 4P

Rated current : 37.2/18.6 A  
 LRC : 6.7  
 Rated torque : 44.4 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 300 %  
 Rated speed : 1775 rpm

Moment of inertia (J) : 1.82 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



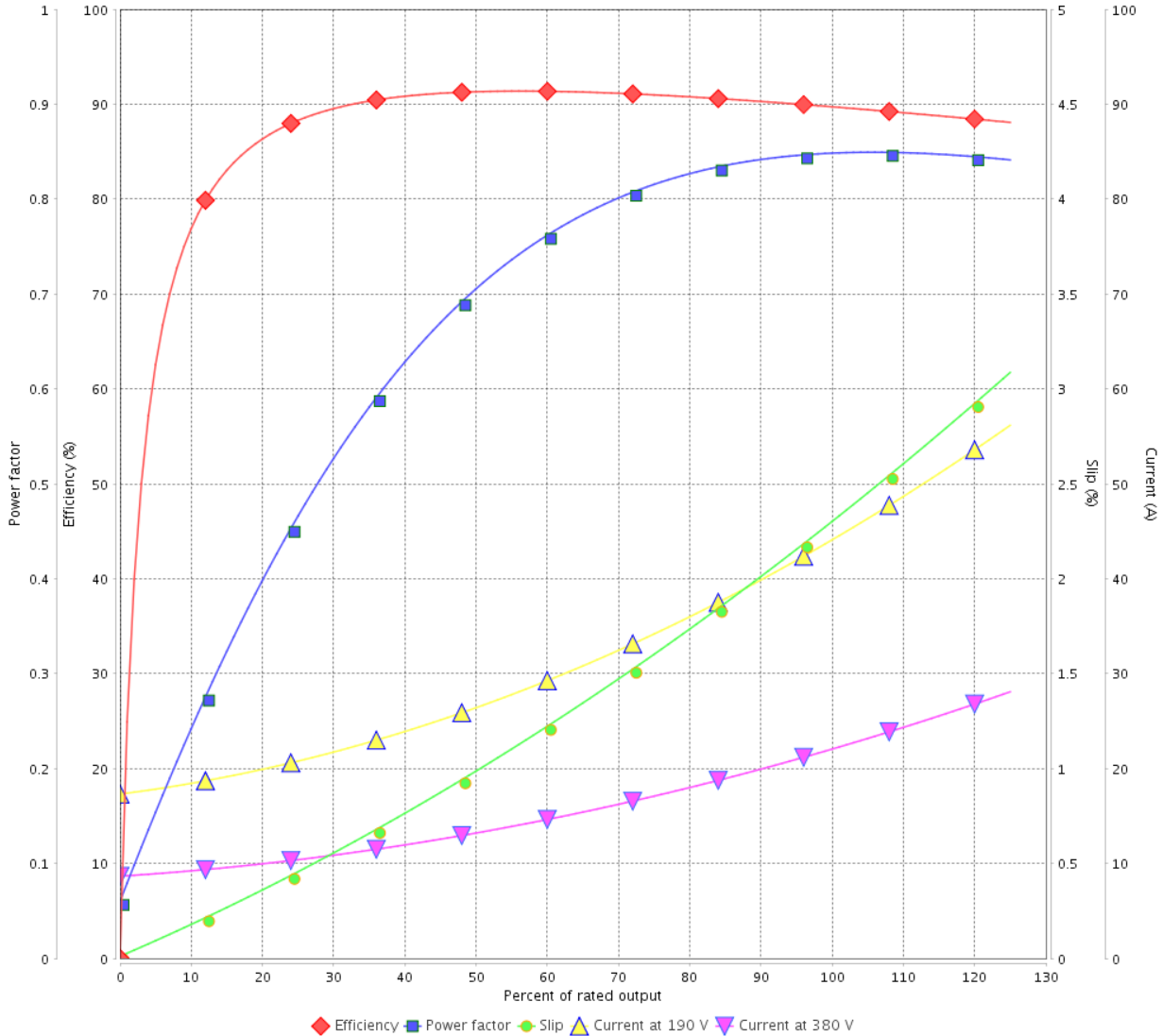
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Product code : 12502805

Catalog # : 01518OT3E254T-S

LOAD PERFORMANCE CURVE



Performance : 190/380 V 50 Hz 4P

Rated current : 43.8/21.9 A  
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 Locked rotor torque : 170 %  
 Breakdown torque : 220 %  
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Moment of inertia (J) : 1.82 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
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 Design : B

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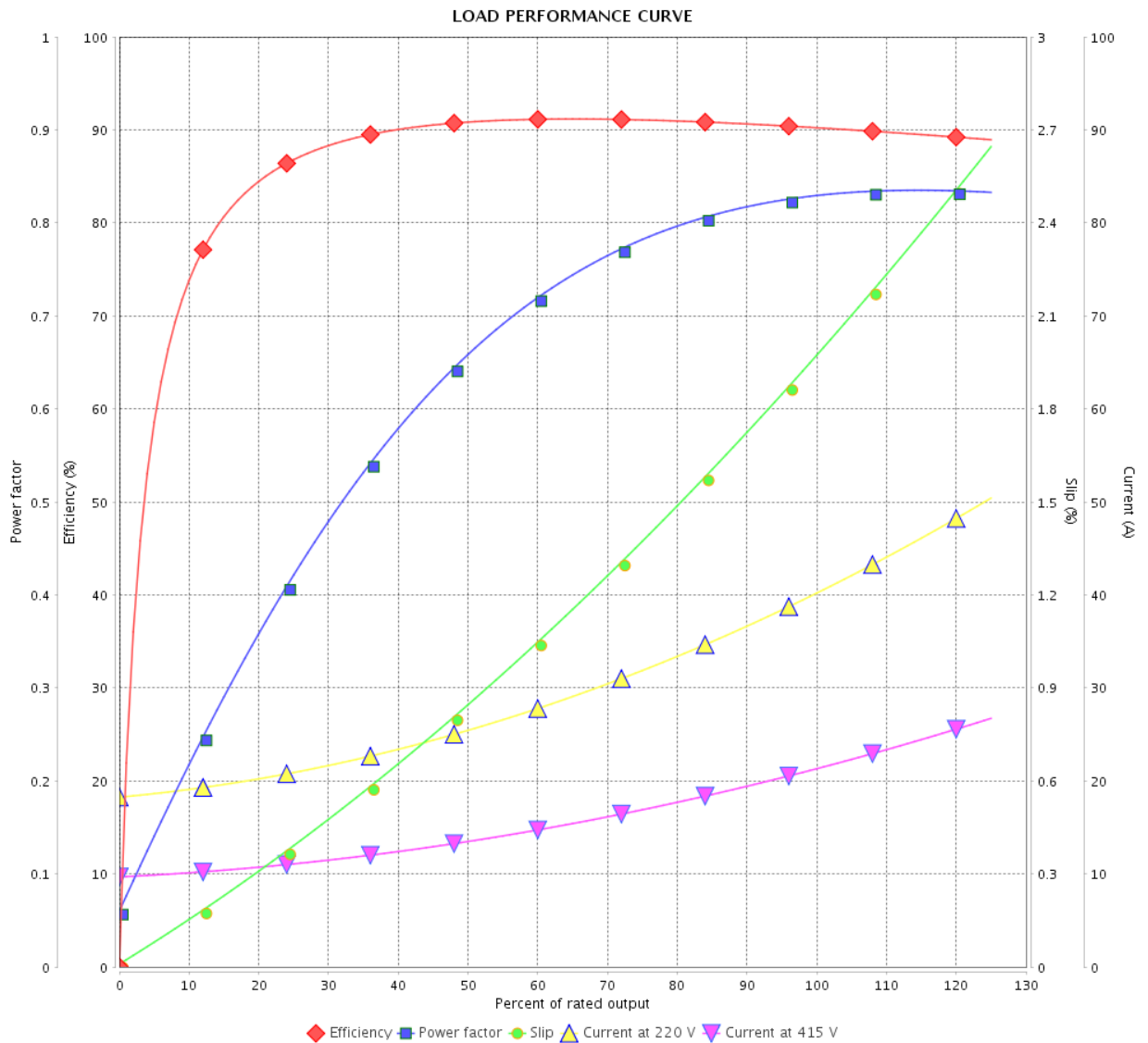


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Catalog # : 01518OT3E254T-S



Performance : 220/415 V 50 Hz 4P

Rated current : 40.0/21.2 A  
 LRC : 5.9  
 Rated torque : 53.6 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 250 %  
 Rated speed : 1470 rpm

Moment of inertia (J) : 1.82 sq.ft.lb  
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 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

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LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 44.4 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.15
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1775 rpm	Design	: B

Heating constant

Cooling constant

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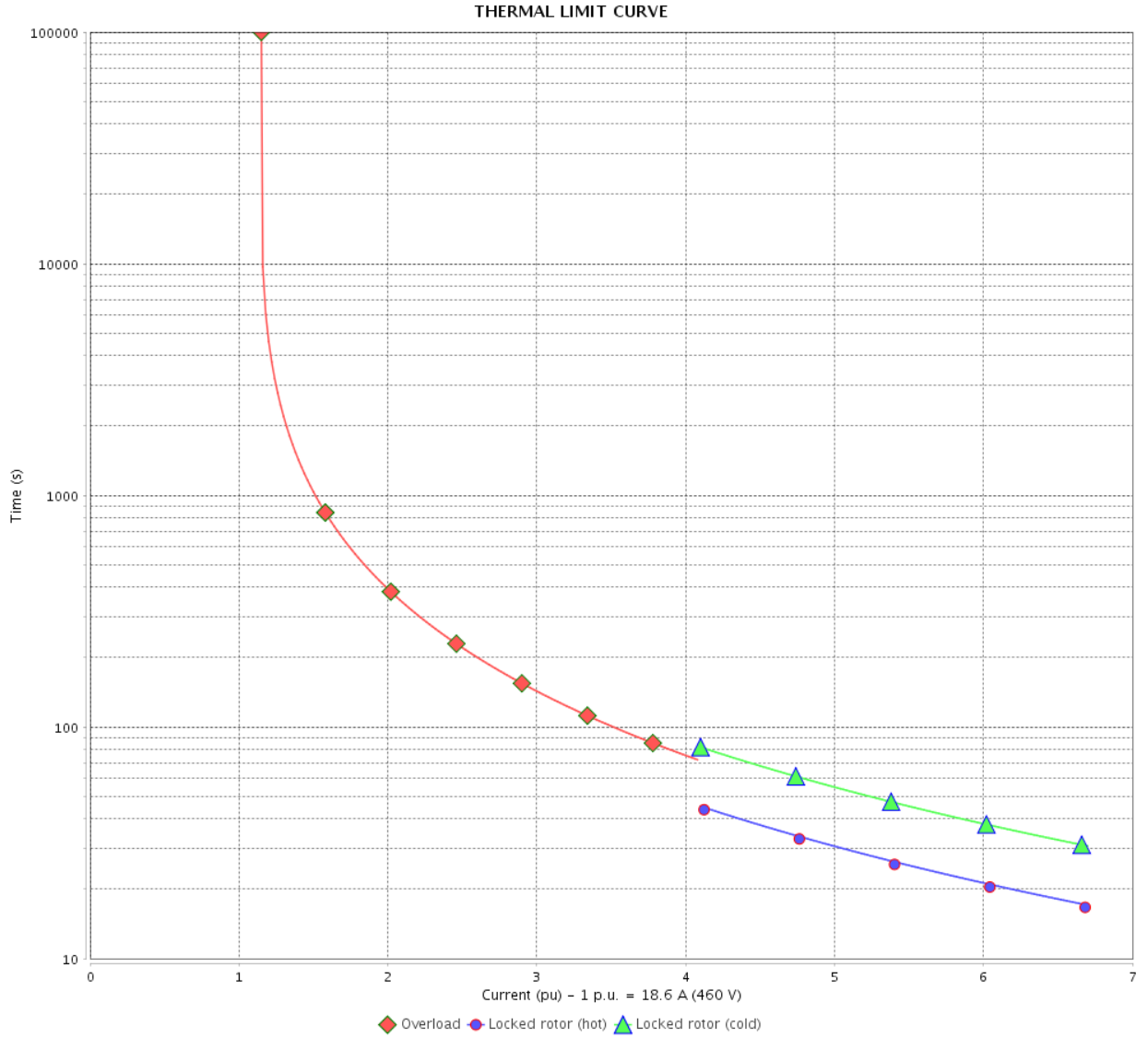


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Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_



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# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

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Performance : 190/380 V 50 Hz 4P

Rated current	: 43.8/21.9 A	Moment of inertia (J)	: 1.82 sq.ft.lb
LRC	: 5.4	Duty cycle	: Cont.(S1)
Rated torque	: 53.8 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.15
Breakdown torque	: 220 %	Temperature rise	: 80 K
Rated speed	: 1465 rpm	Design	: B

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Cooling constant

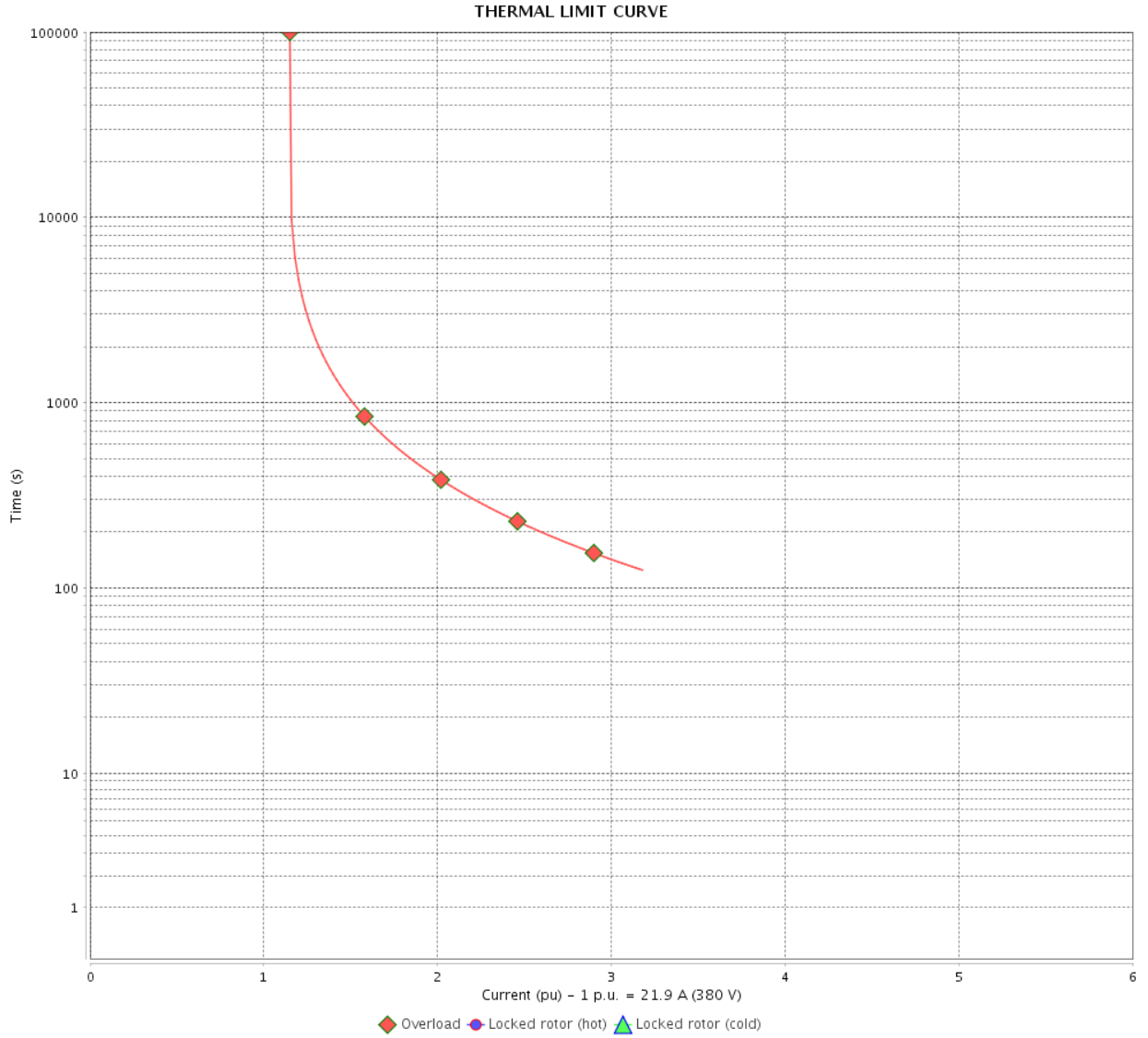
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LRC	: 5.9	Duty cycle	: Cont.(S1)
Rated torque	: 53.6 ft.lb	Insulation class	: F
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Rated speed	: 1470 rpm	Design	: B

Heating constant

Cooling constant

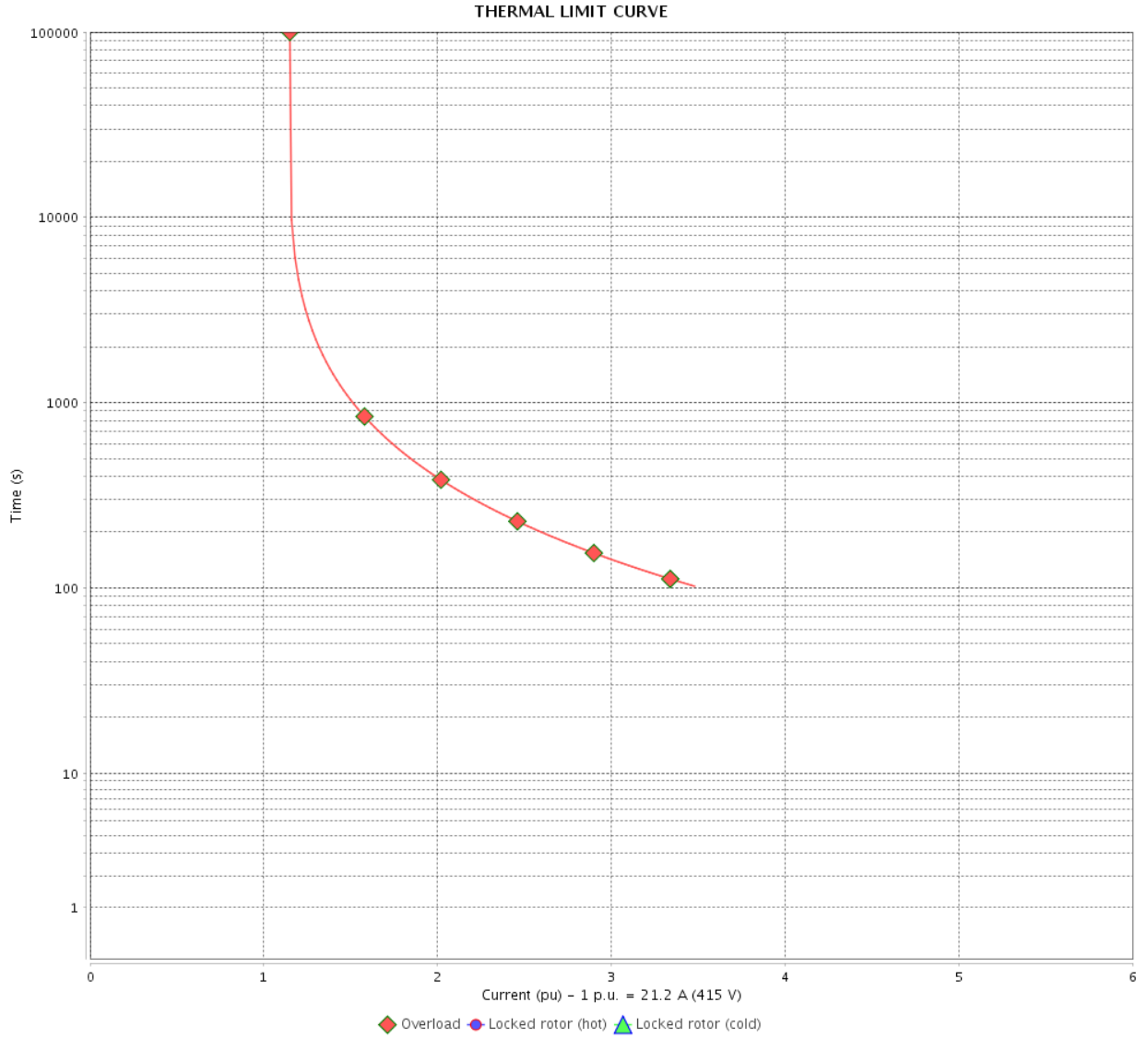
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# VFD OPERATION CURVE

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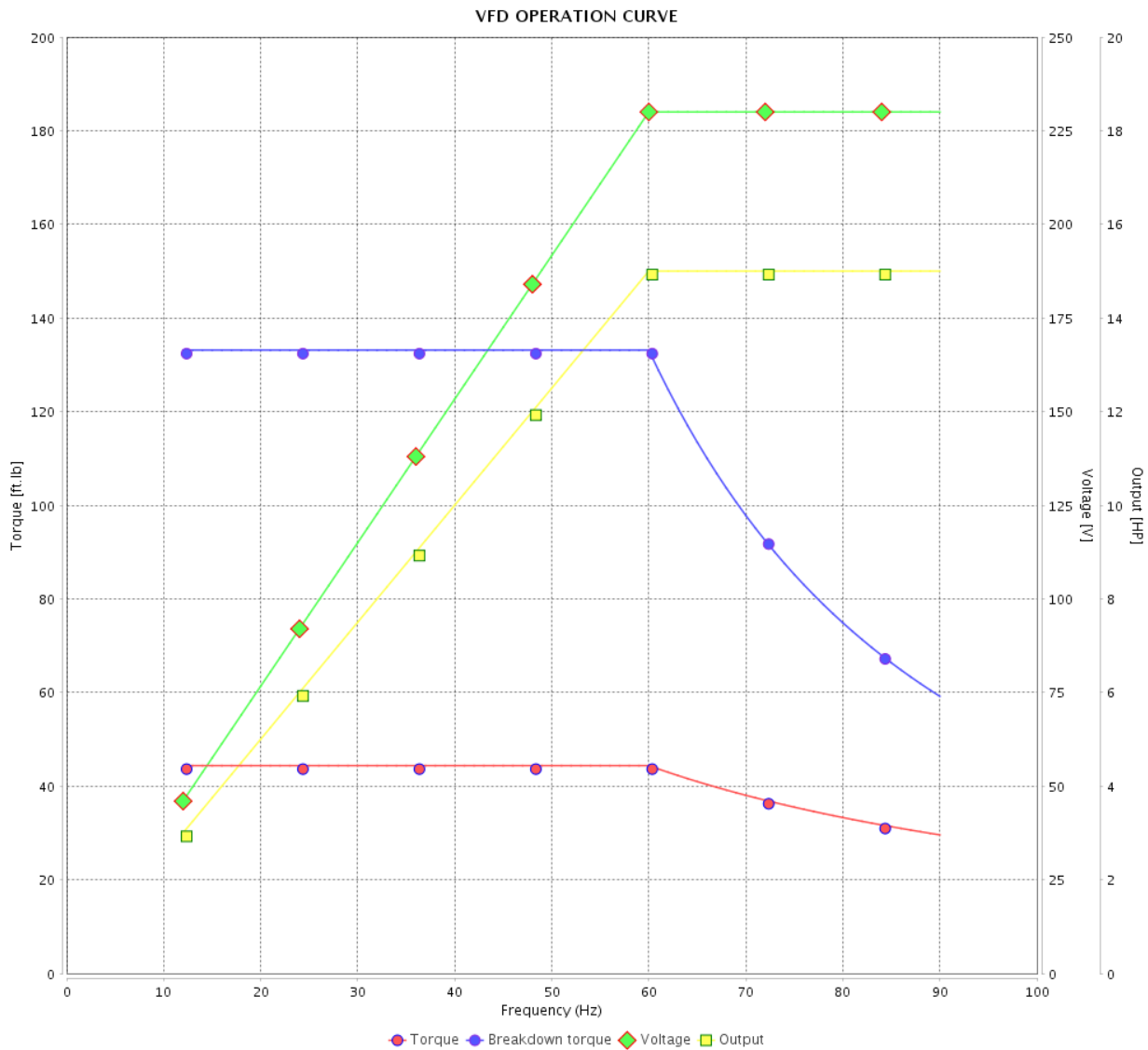


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Moment of inertia (J) : 1.82 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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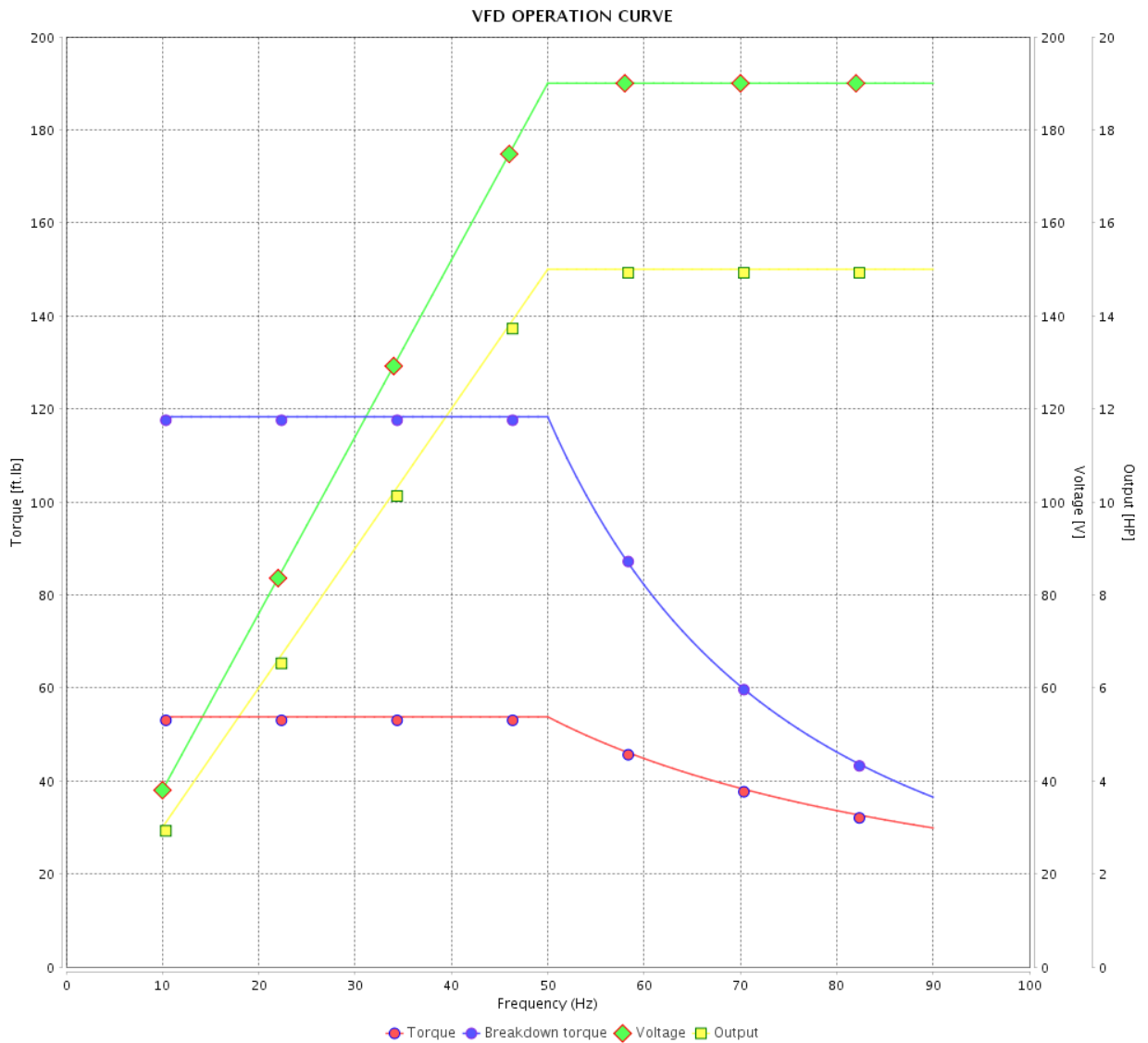


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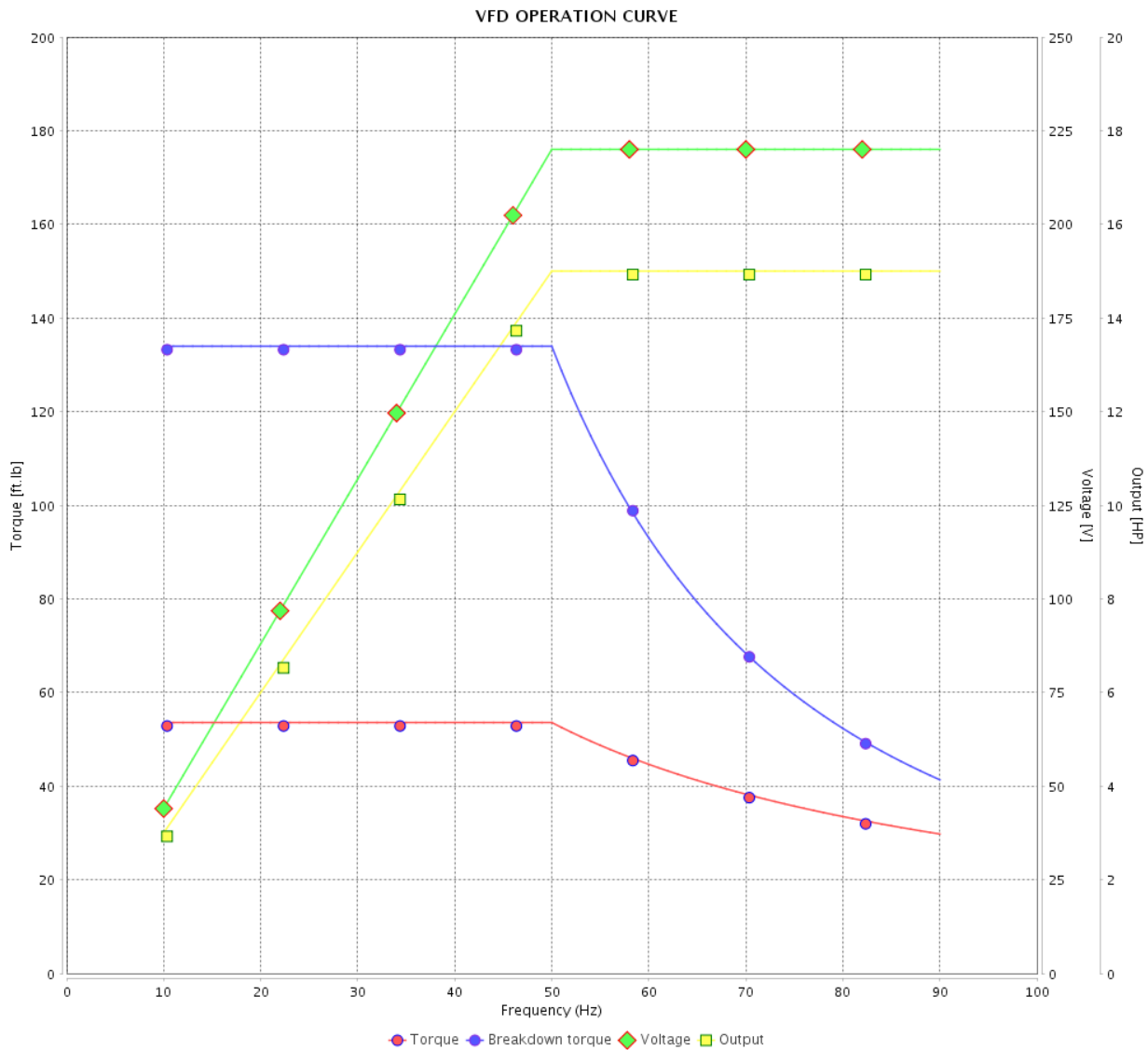


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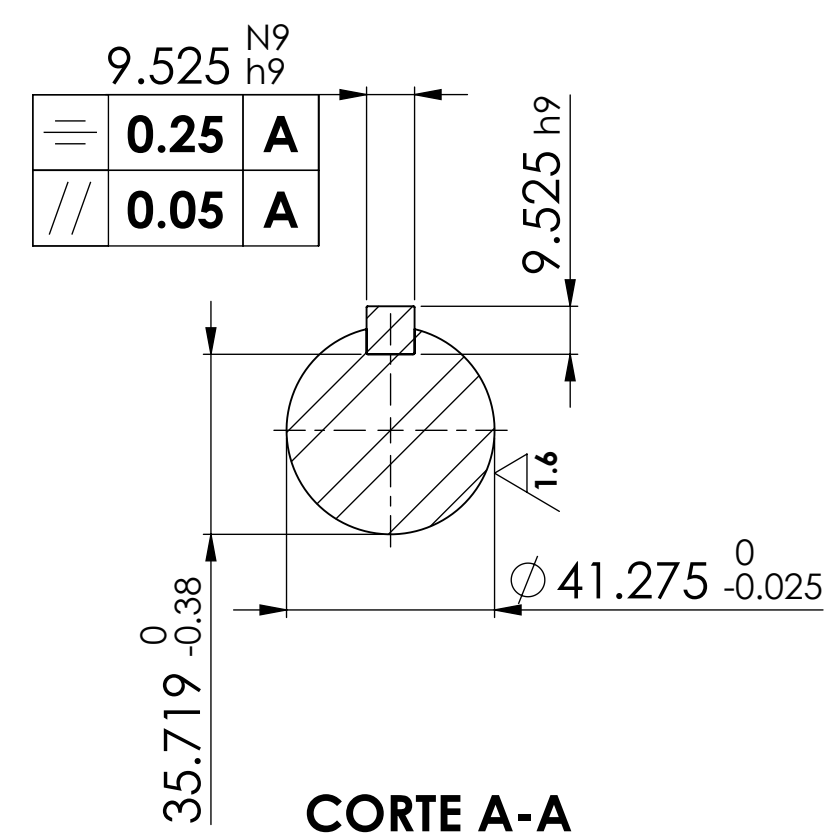
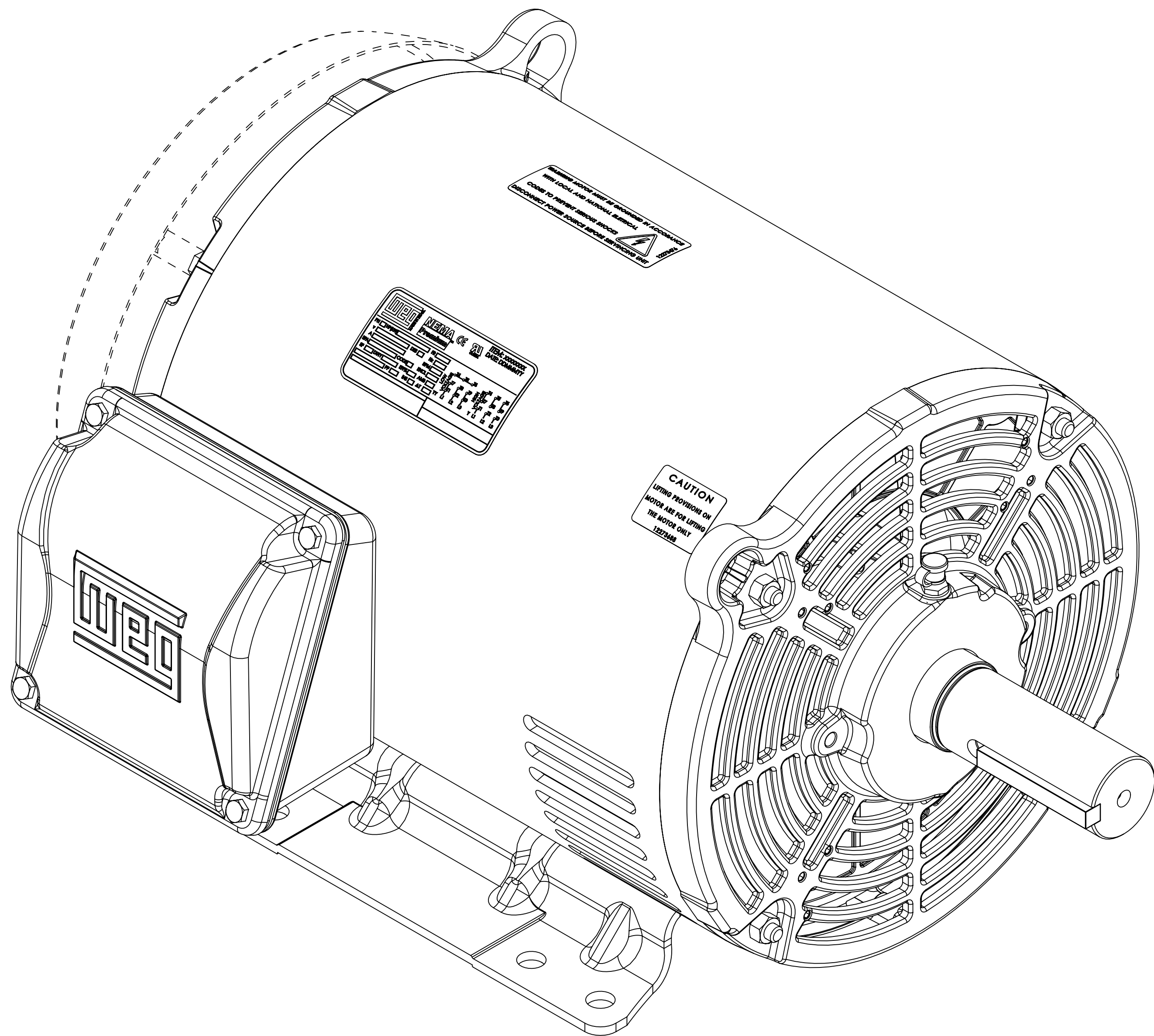
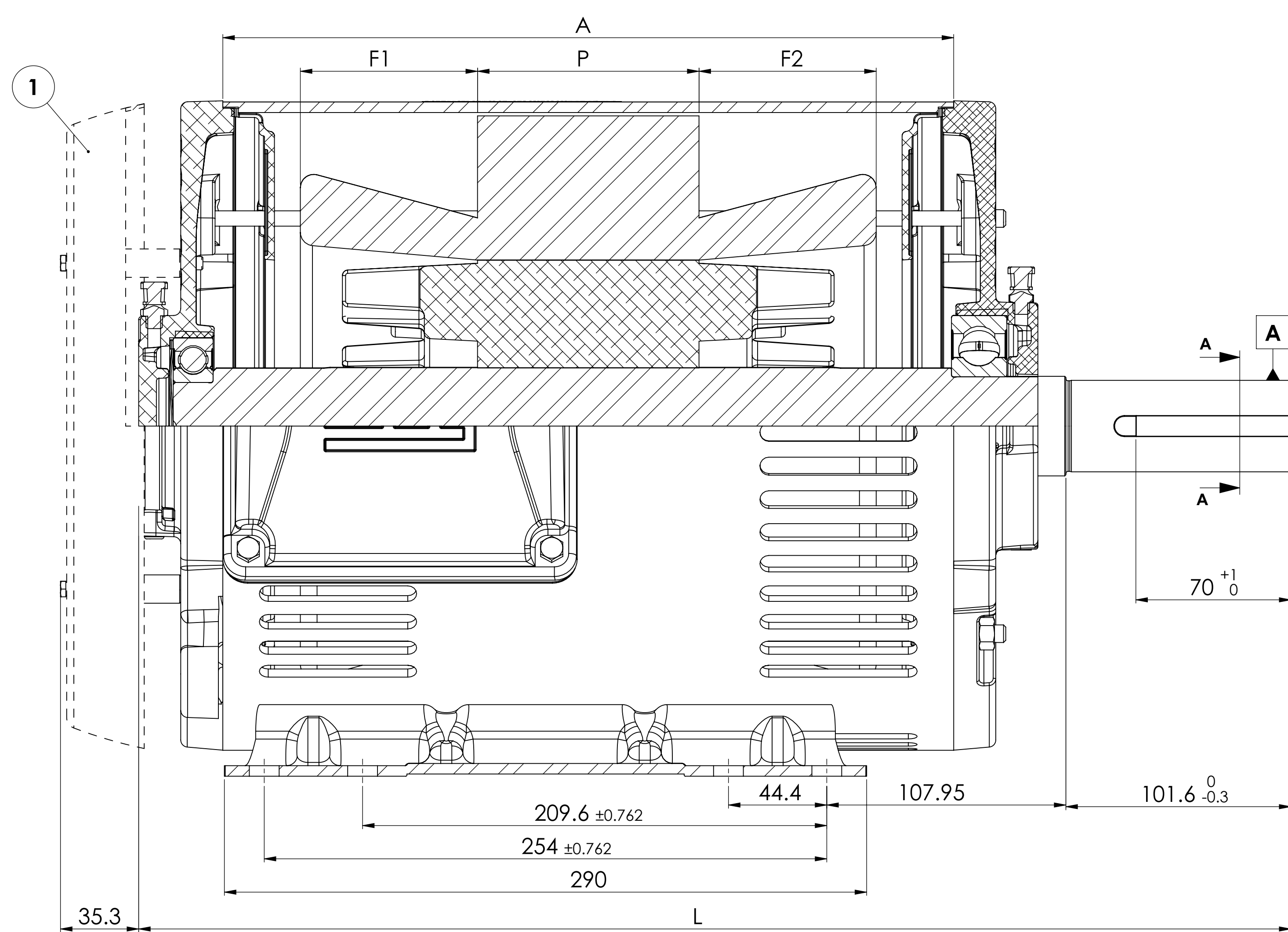
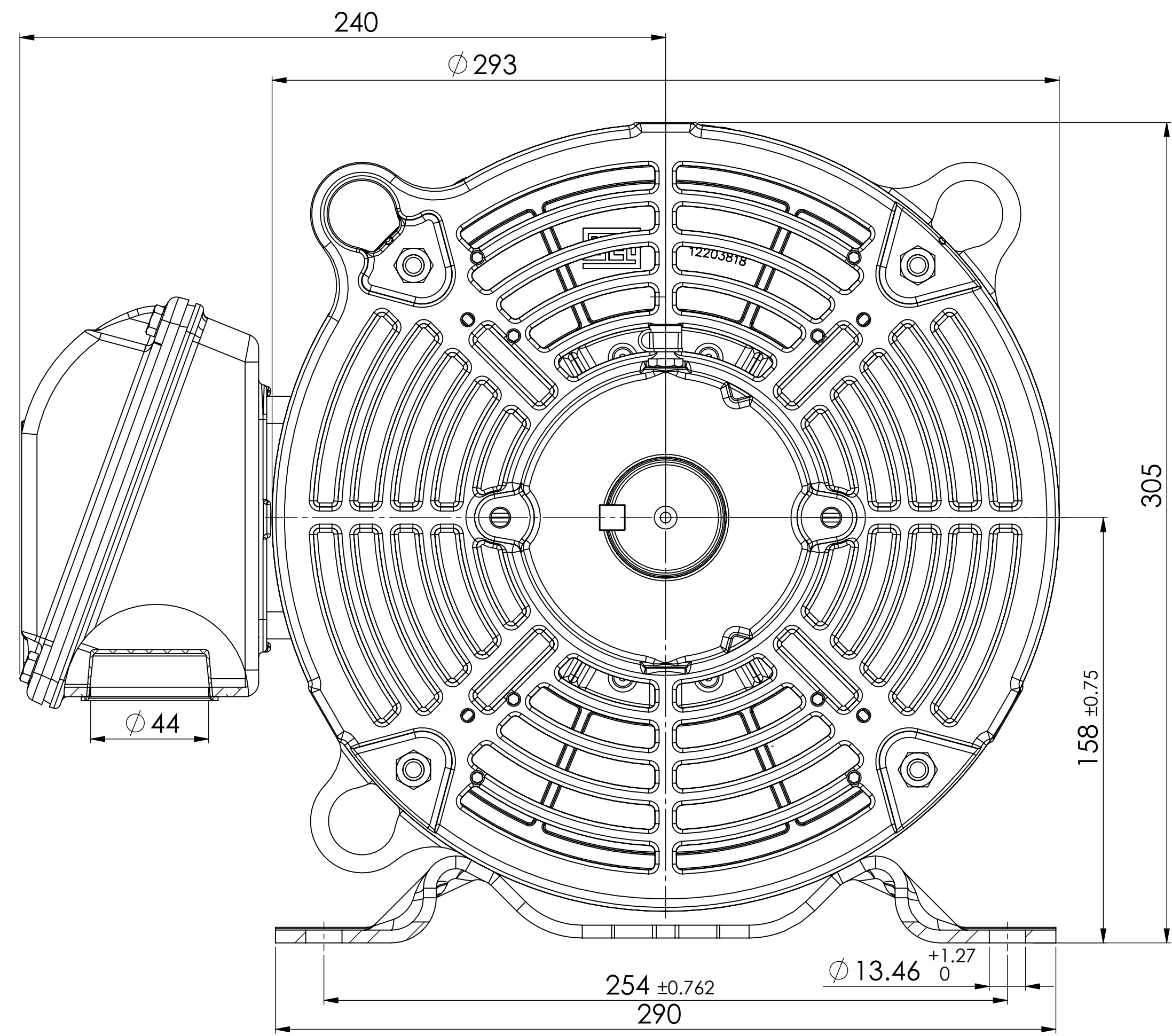
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CORTE A-A

Cabeça de Bobina	F1	F2
II	80	80
IV - VI	65	65

Cotas / Carcaça	330
A	330
P	80-150
L	520

1. SOMENTE QUANDO INDICADO NA LISTA TÉCNICA DO MOTOR

MASSA BRUTA/GROSS WEIGHT	MASSA LÍQUIDA/NET WEIGHT	ESCALA/SCALE	1:5
500001081712	REVISÃO NORMA CABEÇA BOBINA	JROPELATO	JHONATANP
500000886238	ALT. CONF. CLAIM 413416105	PMAUERBERG	ALISSON
ECM	LOC	RESUMO DE MODIFICAÇÕES	VERIFICADO
		SUMMARY OF MODIFICATIONS	CHECKED
EXEC	RAFAELLOPES	DIMENSIONAL 254 GDP TPA NORMAL	LIBERADO
VERIFICADO	JTOGNERI		RELEASED
LIBERADO	24.04.2013		000
DT LIBER/REL DT	24.04.2013	WMO	JARAGUÁ DO SUL
		DESENVOLVIMENTO DE PRODUTO	FOLHETO
			1 / 1

**NEMA  
Premium**

MADE IN MEXICO

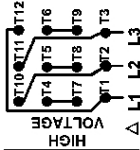
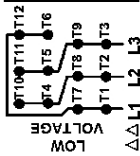
**MAT: 12502805 CC029A**  
**W01.T00IC0X0N**  
**MODEL 015180T3E254T-S**  
**22APR2022 S/N:**

PH 3	Hz 60	HP 15
FR 254/6T		KW 11
DUTY CONT.		V 230/460
ALT 1000 m.a.s.l.		A 37.2/18.6
INS CL F AT 80K		SFA 42.8/21.4
AMB 40°C	DES B	SF 1.15
ENCL ODP	CODE H	PF 0.80
USABLE @ 208V 41.1A		RPM 1775
SF1.00		NEMA NOM. EFF 93.0%

**ALTERNATE RATING: 15HP 50Hz 190-220/380-415V SF1.15**  
**43.8-39.4/21.9-20.9A 1465RPM EFF 89.7% (IE1) IEC 60034-1**

Inverter duty motor For 80Hz use on VPWM 1000:1 VT, 5:1 CT

DE 6309-Z-C3 ODE 6208-Z-C3 MOBIL POLYREX EM 20000h



T1-BLU T2-WHT  
 T3-ORG T4-YEL  
 T5-BLK T6-GRY  
 T7-PNK T8-RED  
 T9-BRK RED  
 T10-CURRY  
 T11-GRN T12-VLT

INTERCHANGE ANY TWO LINE WIRES TO REVERSE THE ROTATION



**WARNING:** Motor must be grounded in accordance with local and national electrical codes to prevent serious electrical shocks. Disconnect power source before servicing unit.



**AVERTISSEMENT:** Le moteur doit être mis à la terre conformément aux codes électriques locaux et nationaux afin d'éviter tout choc électrique grave. Déconnectez l'alimentation avant l'entretien de la machine.

