

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: W22 IEEE 841 NEMA Premium Efficiency Three-Phase	Product code :	16684657		
		Catalog # :	03018ST3QAP286T-W22		
Frame	: 284/6T	Cooling method	: IC411 - TEFC		
Insulation class	: F	Mounting	: W-8		
Duty cycle	: Cont.(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	: 452 lb		
Protection degree	: IP56	Moment of inertia (J)	: 5.85 sq.ft.lb		
Design	: B				
Output [HP]	30	30	30	30	
Poles	4	4	4	4	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	460	380	400	415	
Rated current [A]	35.1	43.1	41.1	39.7	
L. R. Amperes [A]	214	228	247	238	
LRC [A]	6.1x(Code G)	5.3x(Code F)	6.0x(Code G)	6.0x(Code G)	
No load current [A]	12.3	12.2	13.1	13.8	
Rated speed [RPM]	1770	1455	1460	1465	
Slip [%]	1.67	3.00	2.67	2.33	
Rated torque [ft.lb]	89.0	108	108	108	
Locked rotor torque [%]	240	170	190	220	
Breakdown torque [%]	240	200	220	250	
Service factor	1.15	1.00	1.00	1.00	
Temperature rise	80 K	105 K	105 K	105 K	
Locked rotor time	36s (cold) 20s (hot)	23s (cold) 13s (hot)	23s (cold) 13s (hot)	21s (cold) 12s (hot)	
Noise level ²	63.0 dB(A)	61.0 dB(A)	61.0 dB(A)	61.0 dB(A)	
Efficiency (%)	25%	92.3	89.8	90.3	91.0
	50%	93.0	90.0	90.5	91.2
	75%	93.0	90.2	91.0	91.7
	100%	93.6	90.2	91.0	91.7
Power Factor	25%	0.46	0.53	0.50	0.46
	50%	0.70	0.76	0.73	0.70
	75%	0.80	0.83	0.82	0.80
	100%	0.84	0.86	0.85	0.84
Losses at normative operating points (speed;torque), in percentage of rated output power					
Losses (%)	P1 (0,9;1,0)	6.8	6.8	6.8	6.8
	P2 (0,5;1,0)	5.8	5.8	5.8	5.8
	P3 (0,25;1,0)	5.2	5.2	5.2	5.2
	P4 (0,9;0,5)	3.1	3.1	3.1	3.1
	P5 (0,5;0,5)	2.2	2.2	2.2	2.2
	P6 (0,5;0,25)	1.4	1.4	1.4	1.4
	P7 (0,25;0,25)	0.9	0.9	0.9	0.9
Bearing type	: Drive end : NU-311 C3 Non drive end : 6211 C3	Foundation loads			
Sealing	: Inpro/Seal Inpro/Seal	Max. traction : 947 lb			
Lubrication interval	: 12000 h 17000 h	Max. compression : 1398 lb			
Lubricant amount	: 18 g 11 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).			These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in NEMA MG-1.		
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Three Phase Induction Motor - Squirrel Cage



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Notes

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TORQUE AND CURRENT VS SPEED CURVE



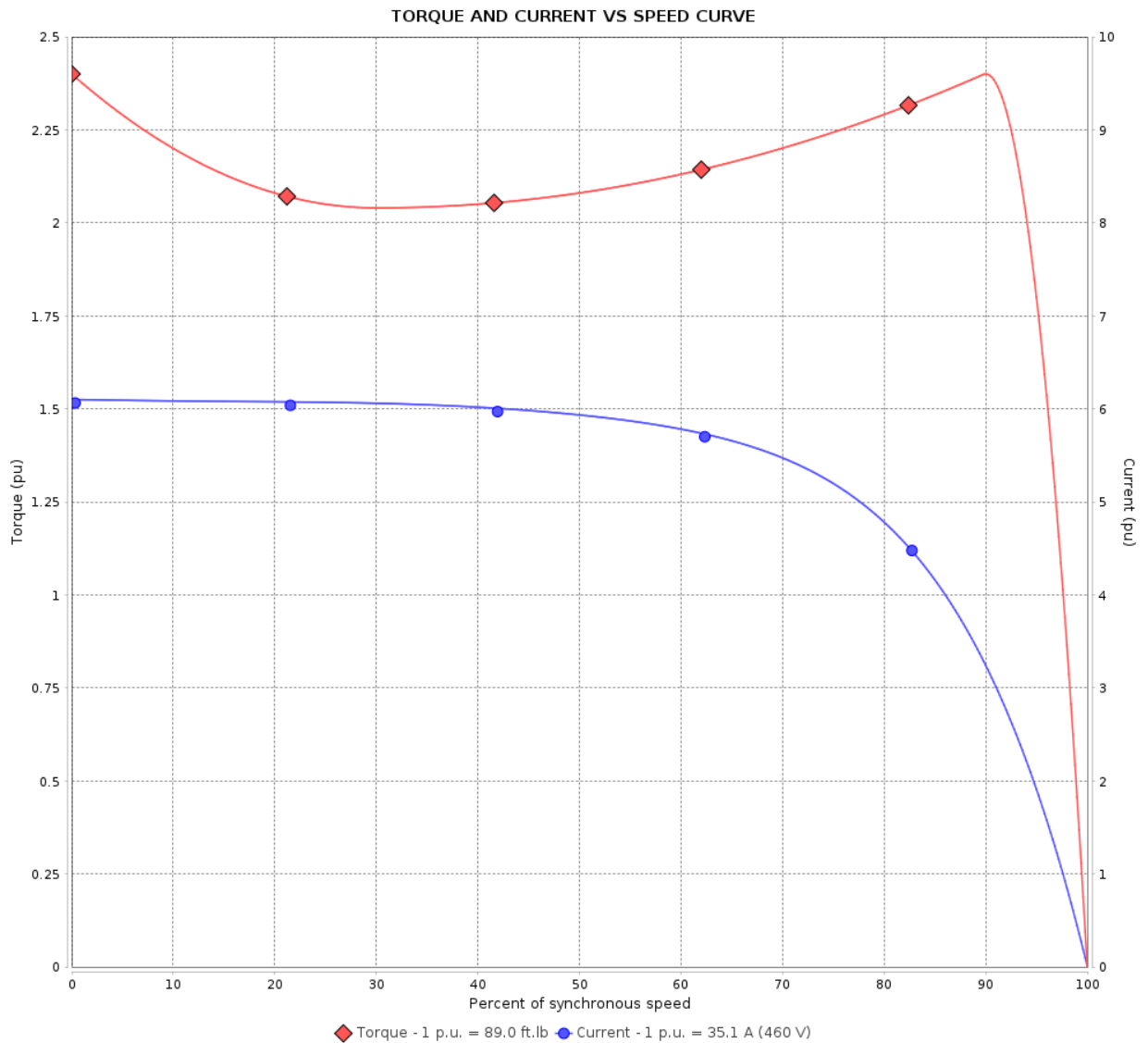
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase

Product code : 16684657

Catalog # : 03018ST3QAP286T-W22



Performance : 460 V 60 Hz 4P

Rated current	: 35.1 A	Moment of inertia (J)	: 5.85 sq.ft.lb
LRC	: 6.1	Duty cycle	: Cont.(S1)
Rated torque	: 89.0 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.15
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1770 rpm	Design	: B

Locked rotor time : 36s (cold) 20s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



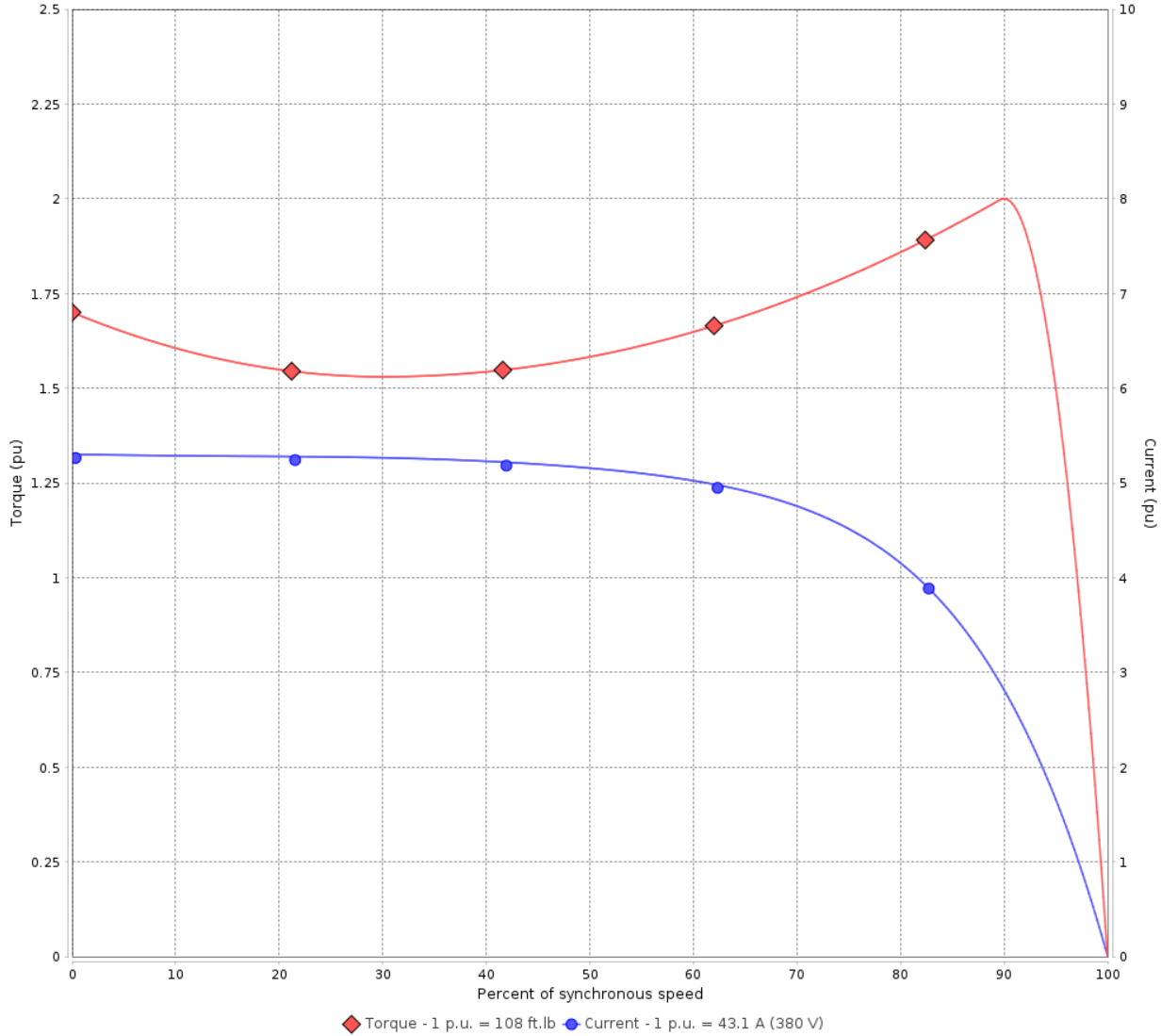
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Three-Phase

Product code : 16684657

Catalog # : 03018ST3QAP286T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 4P IE1

Rated current	: 43.1 A	Moment of inertia (J)	: 5.85 sq.ft.lb
LRC	: 5.3	Duty cycle	: Cont.(S1)
Rated torque	: 108 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 105 K
Rated speed	: 1455 rpm	Design	: B

Locked rotor time : 23s (cold) 13s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



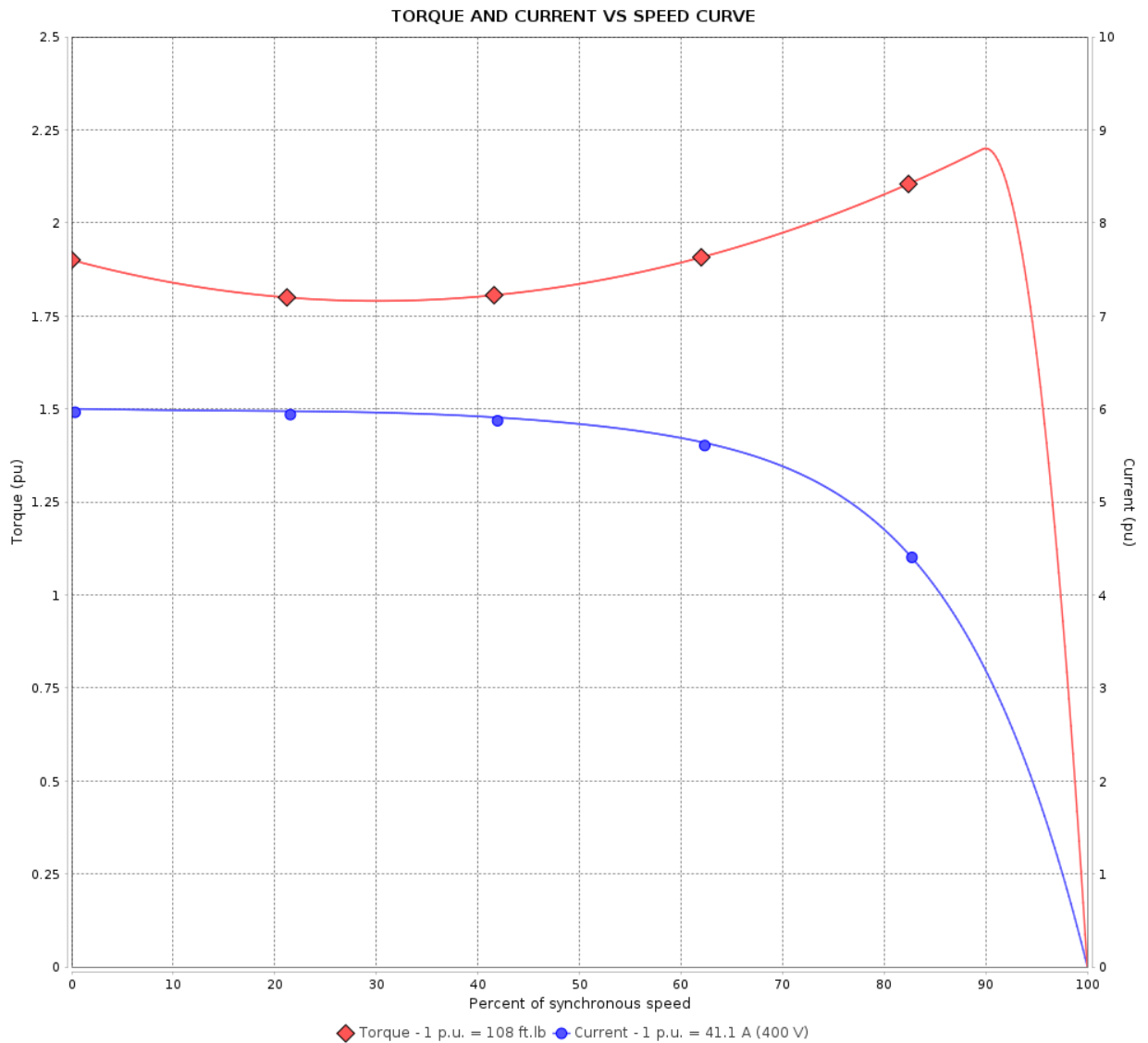
Three Phase Induction Motor - Squirrel Cage

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Performance : 400 V 50 Hz 4P IE1

Rated current	: 41.1 A	Moment of inertia (J)	: 5.85 sq.ft.lb
LRC	: 6.0	Duty cycle	: Cont.(S1)
Rated torque	: 108 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 105 K
Rated speed	: 1460 rpm	Design	: B

Locked rotor time : 23s (cold) 13s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



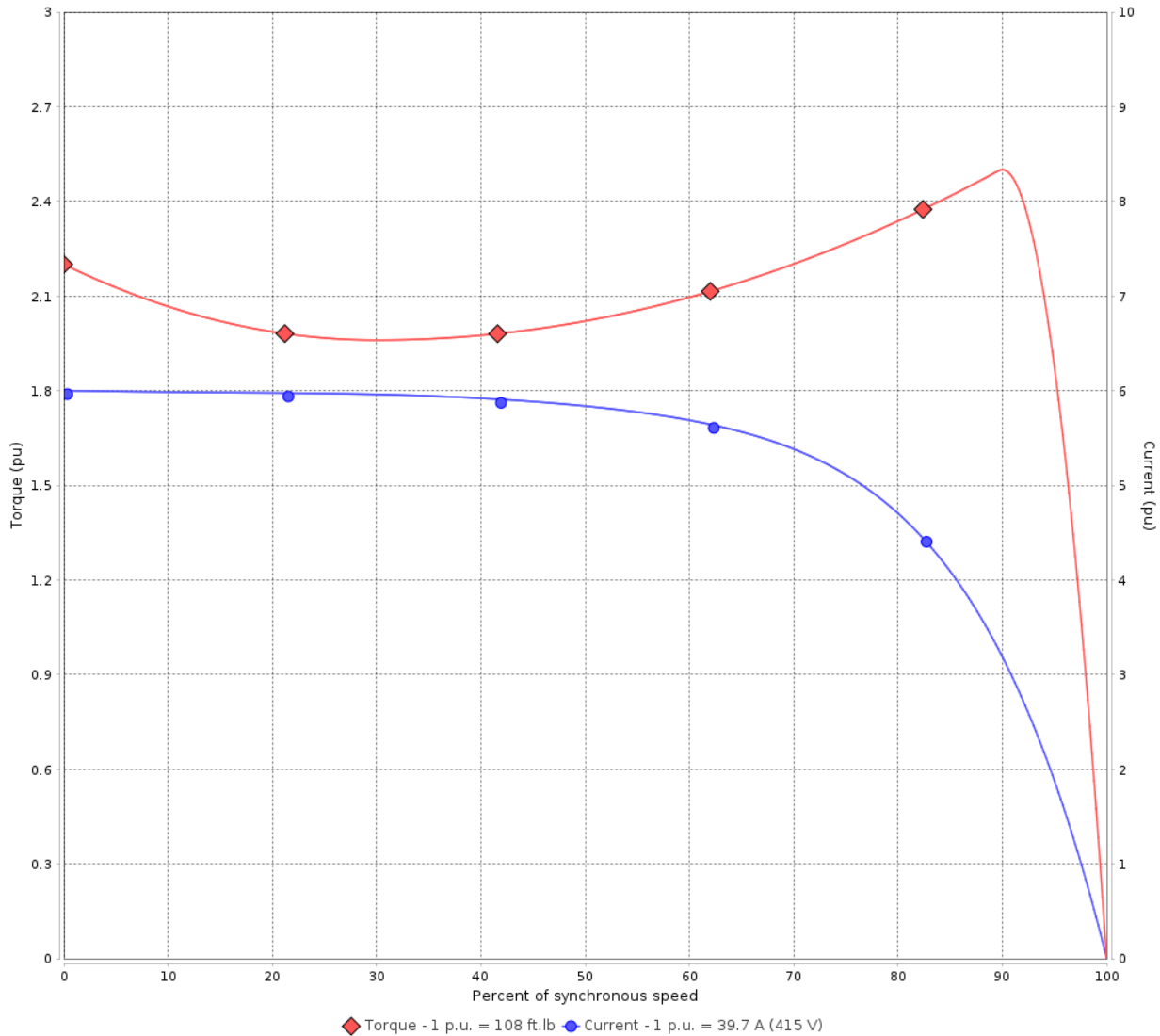
Customer :

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Three-Phase

Product code : 16684657

Catalog # : 03018ST3QAP286T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 4P IE2

Rated current	: 39.7 A	Moment of inertia (J)	: 5.85 sq.ft.lb
LRC	: 6.0	Duty cycle	: Cont.(S1)
Rated torque	: 108 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 105 K
Rated speed	: 1465 rpm	Design	: B

Locked rotor time : 21s (cold) 12s (hot)

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LOAD PERFORMANCE CURVE

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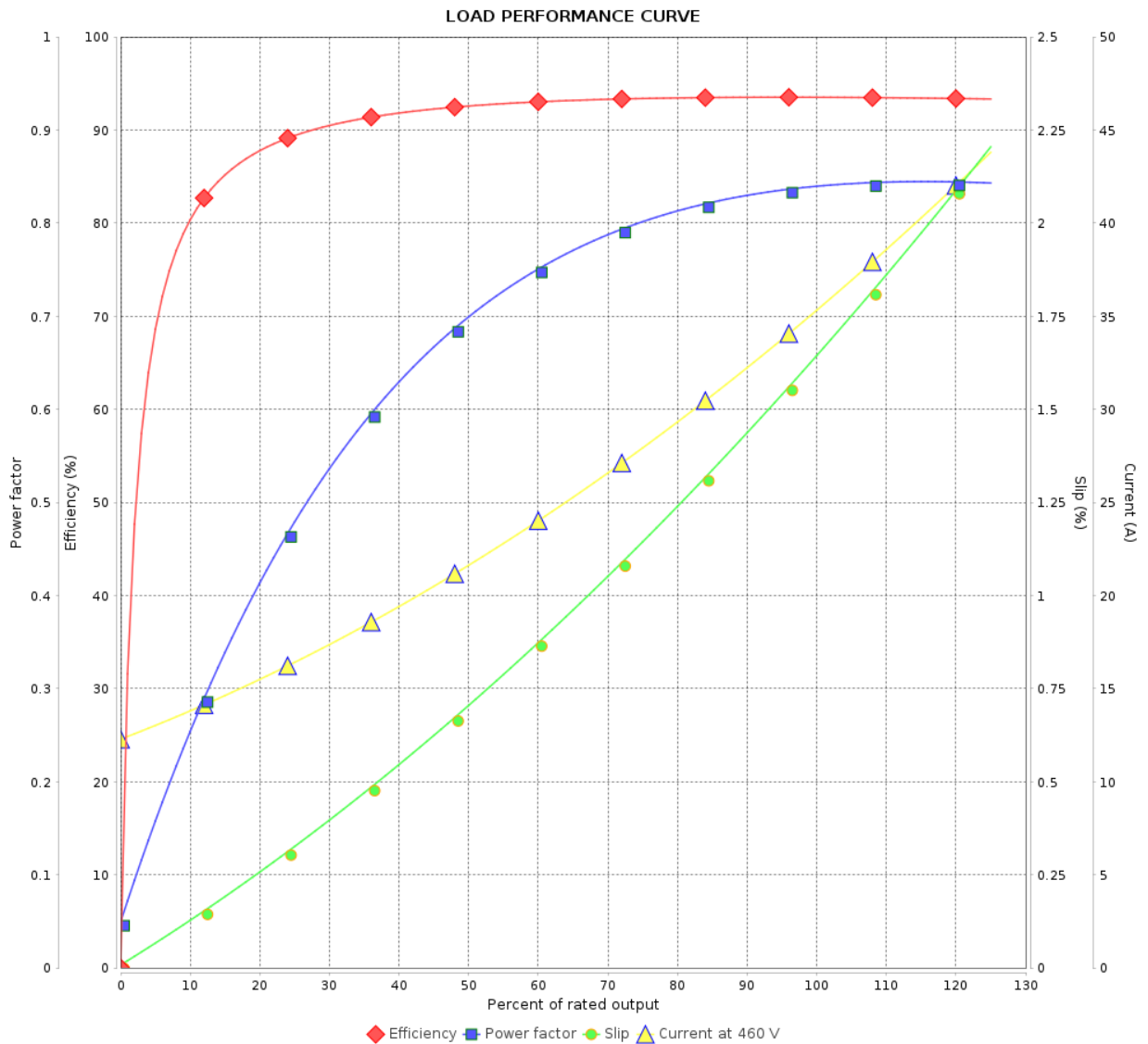


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Performance : 460 V 60 Hz 4P

Rated current : 35.1 A
 LRC : 6.1
 Rated torque : 89.0 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 240 %
 Rated speed : 1770 rpm

Moment of inertia (J) : 5.85 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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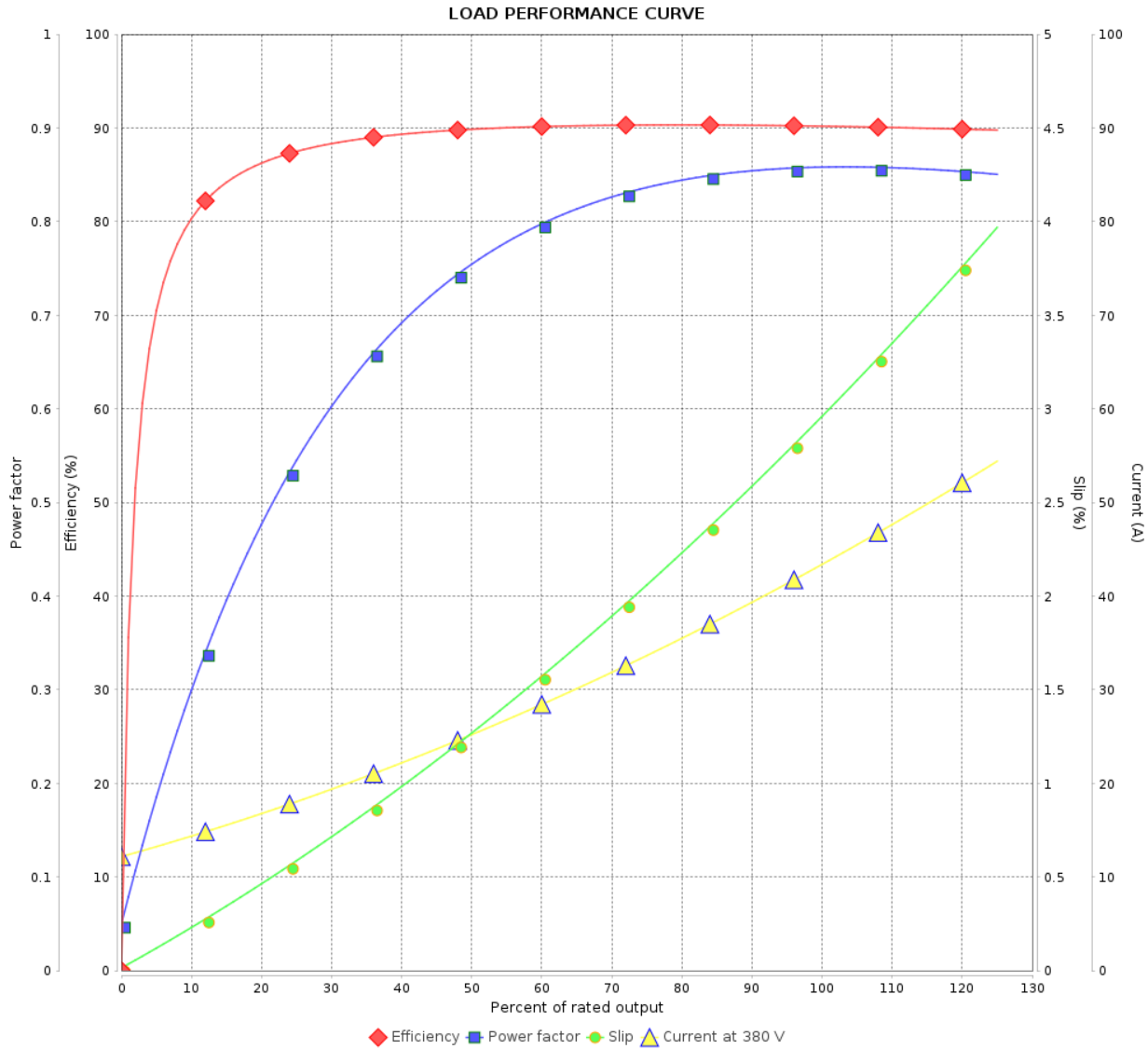


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Performance : 380 V 50 Hz 4P IE1

Rated current : 43.1 A
 LRC : 5.3
 Rated torque : 108 ft.lb
 Locked rotor torque : 170 %
 Breakdown torque : 200 %
 Rated speed : 1455 rpm

Moment of inertia (J) : 5.85 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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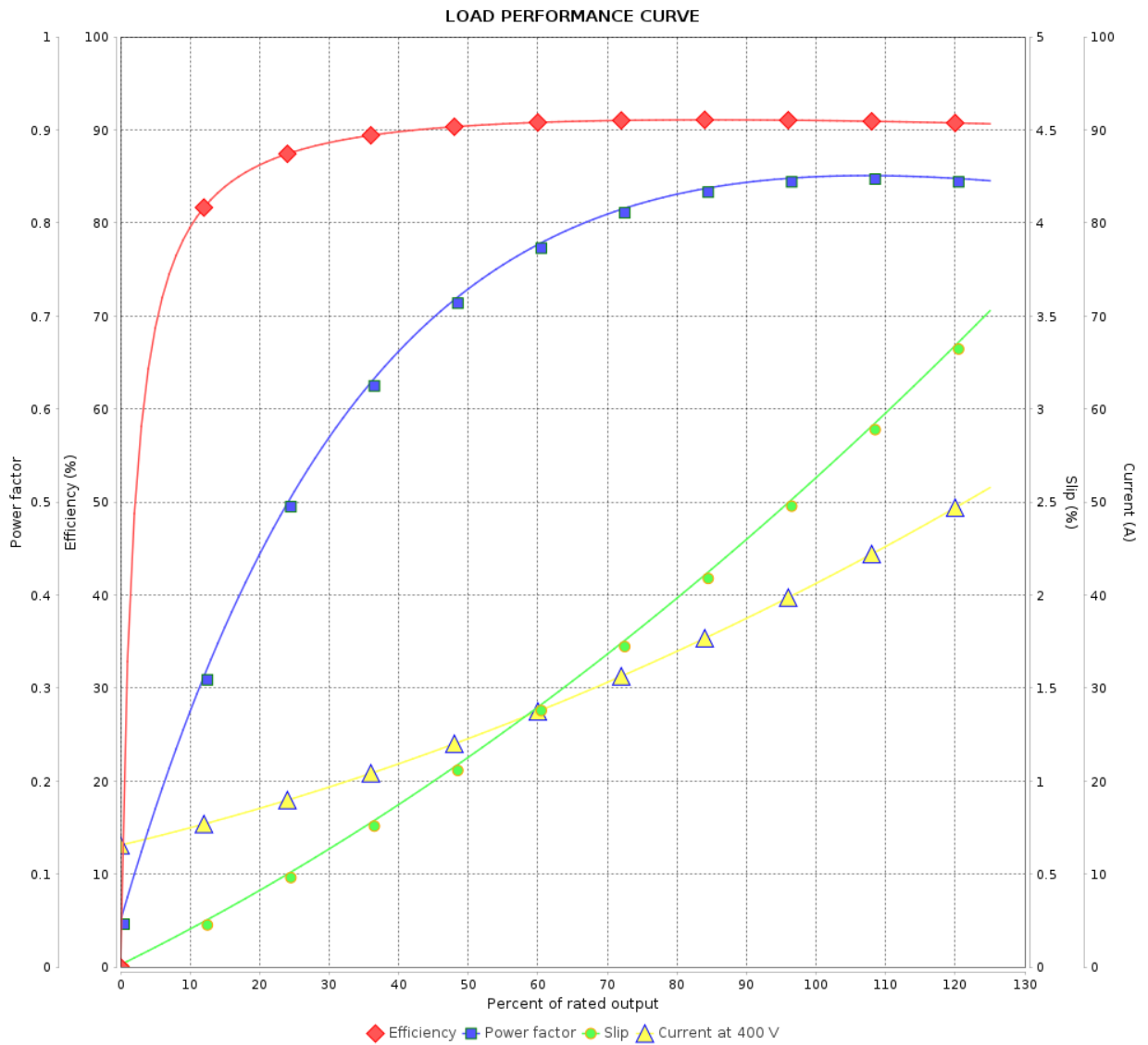


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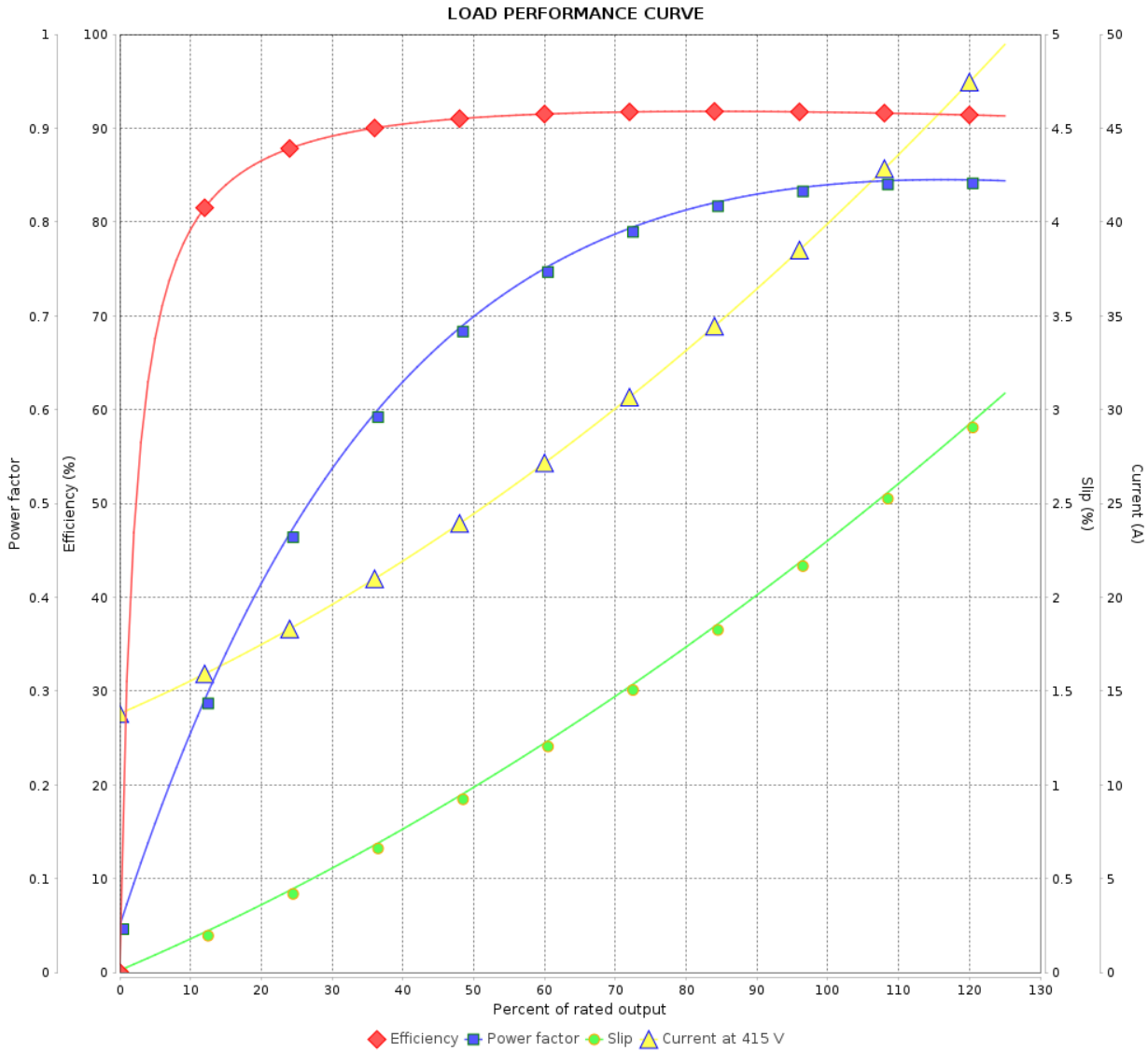


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Performance : 415 V 50 Hz 4P IE2

Rated current : 39.7 A
 LRC : 6.0
 Rated torque : 108 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 250 %
 Rated speed : 1465 rpm

Moment of inertia (J) : 5.85 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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THERMAL LIMIT CURVE



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Heating constant

Cooling constant

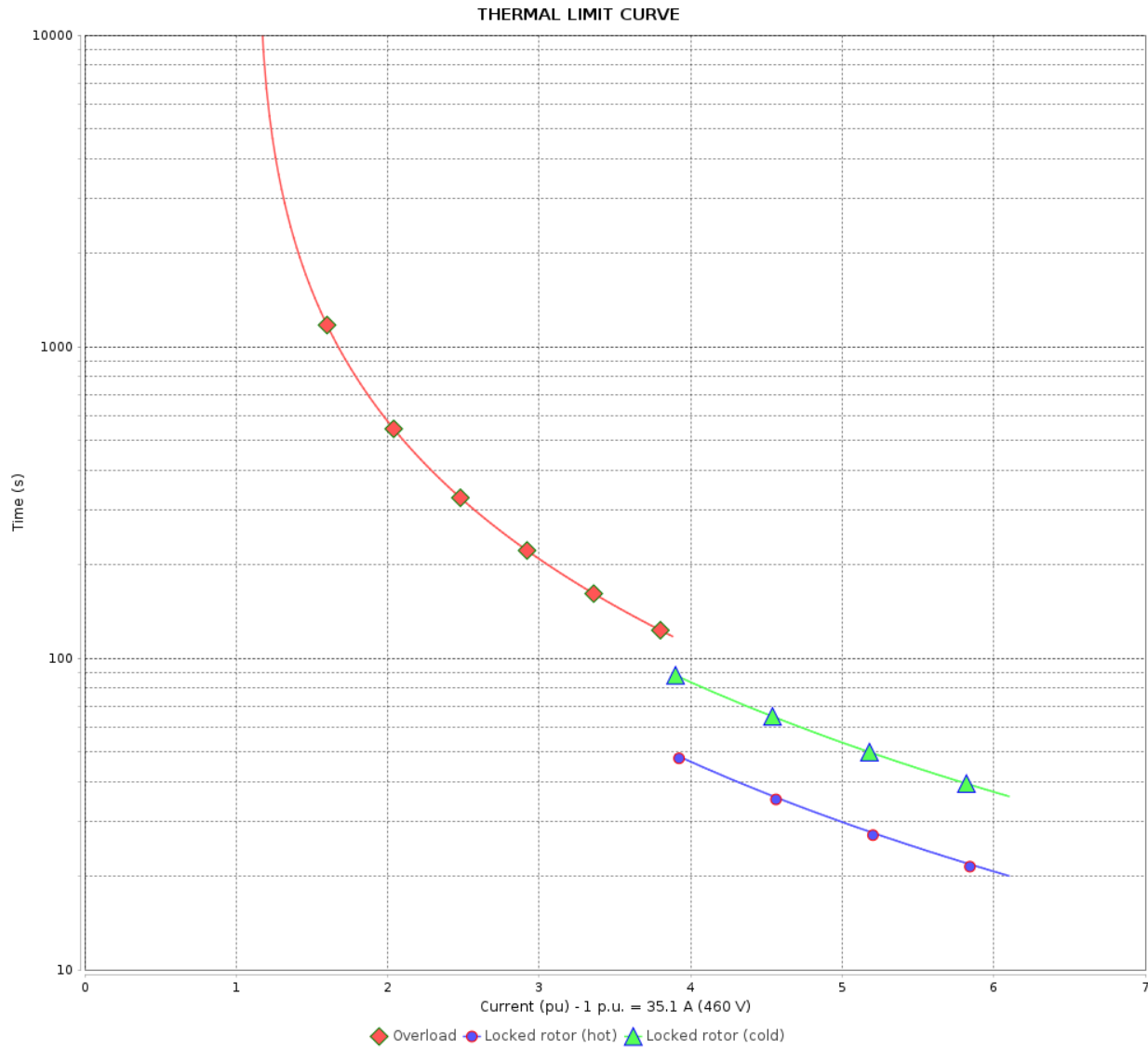
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Locked rotor torque : 170 %	Service factor : 1.00
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Rated speed : 1455 rpm	Design : B

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Cooling constant

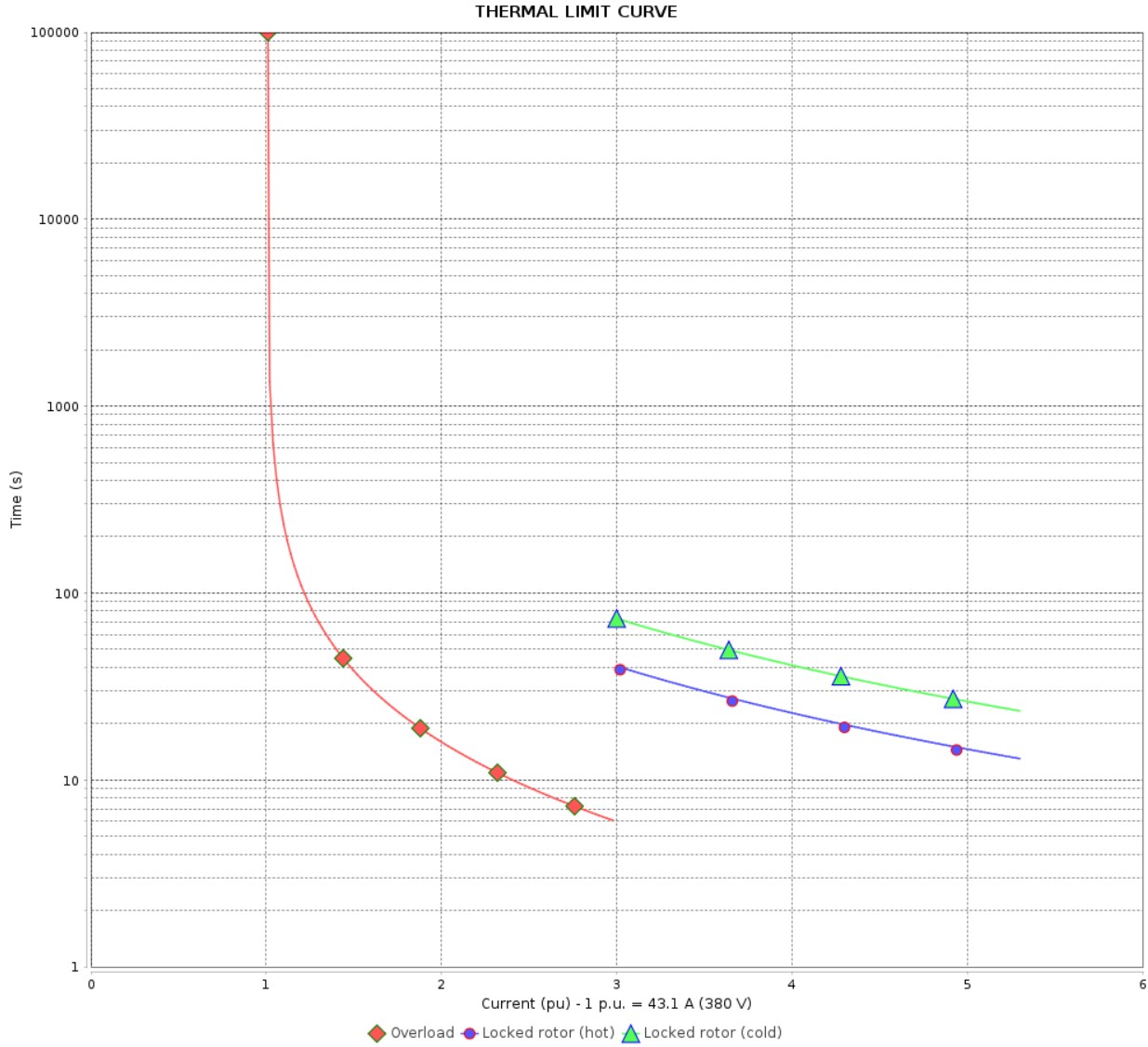
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Cooling constant

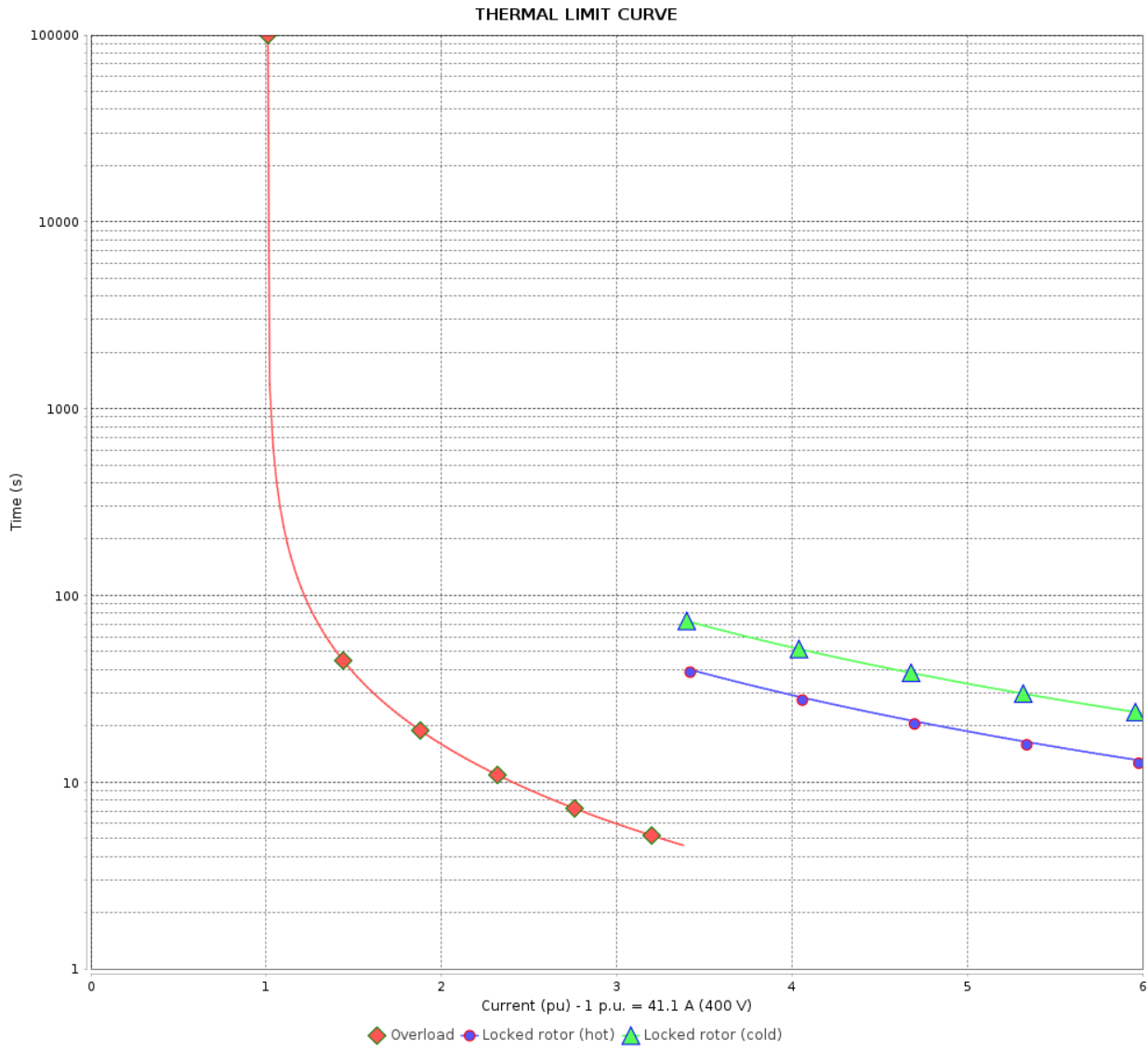
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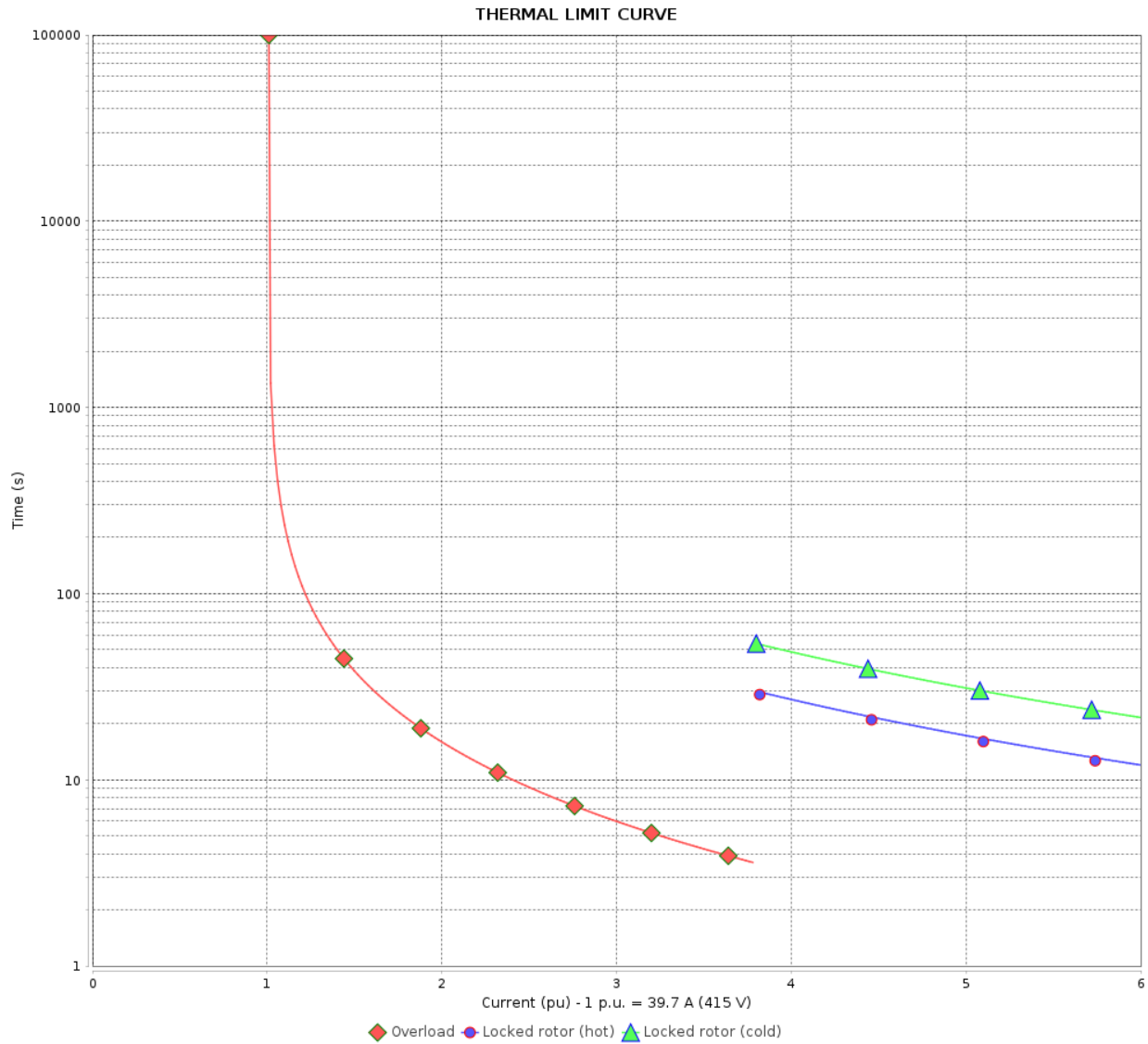
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Three Phase Induction Motor - Squirrel Cage



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

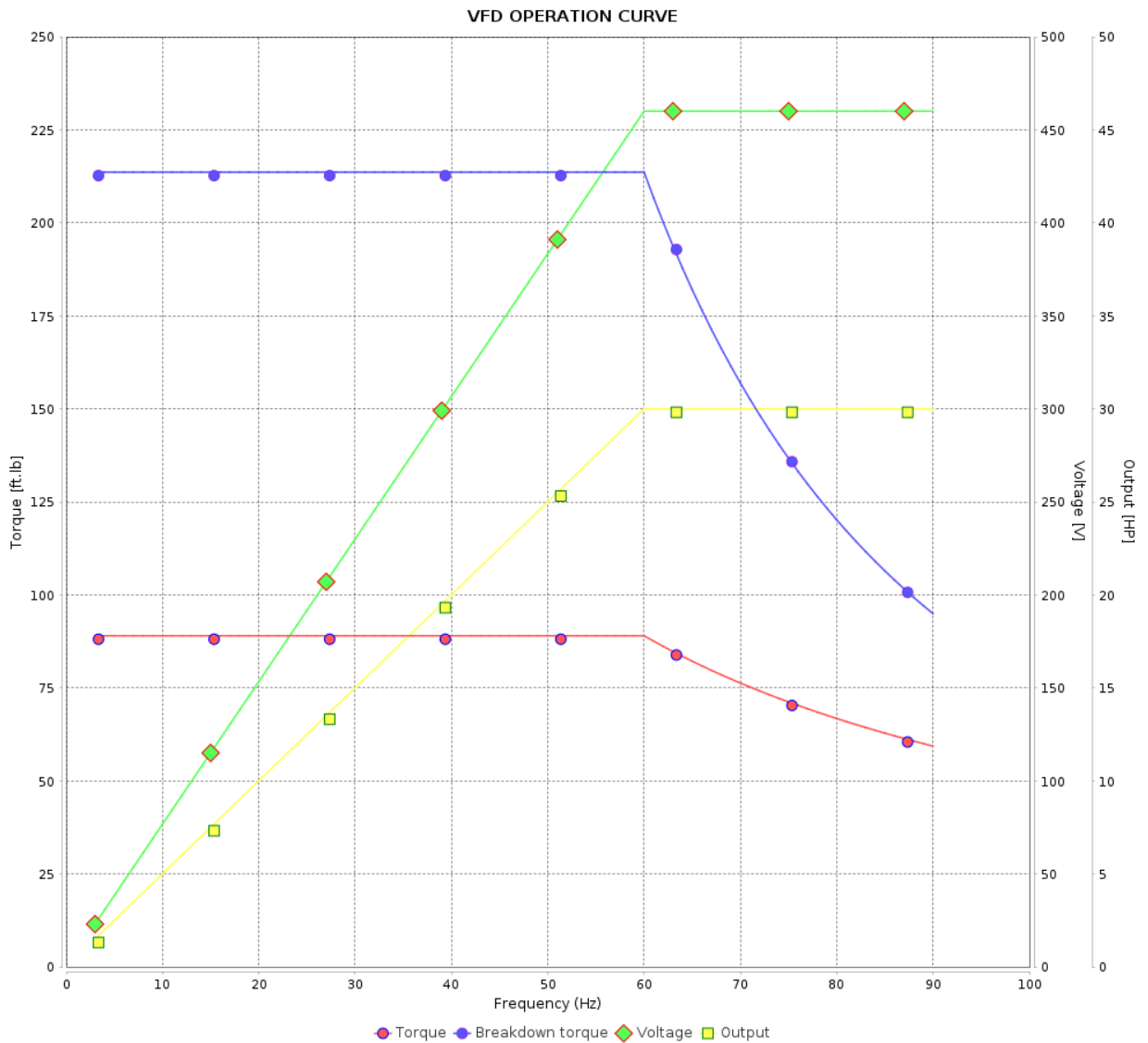


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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

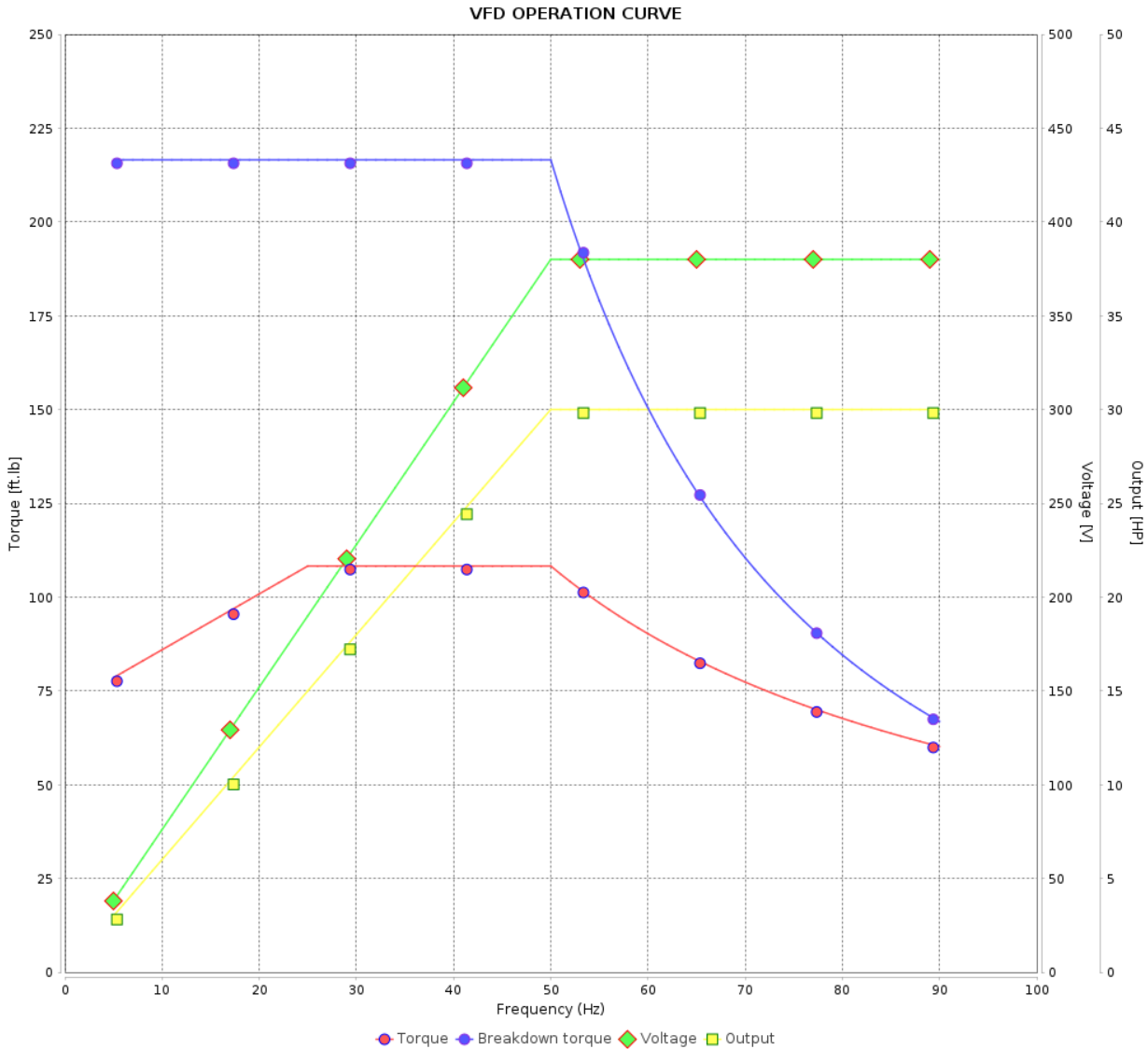


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VFD OPERATION CURVE

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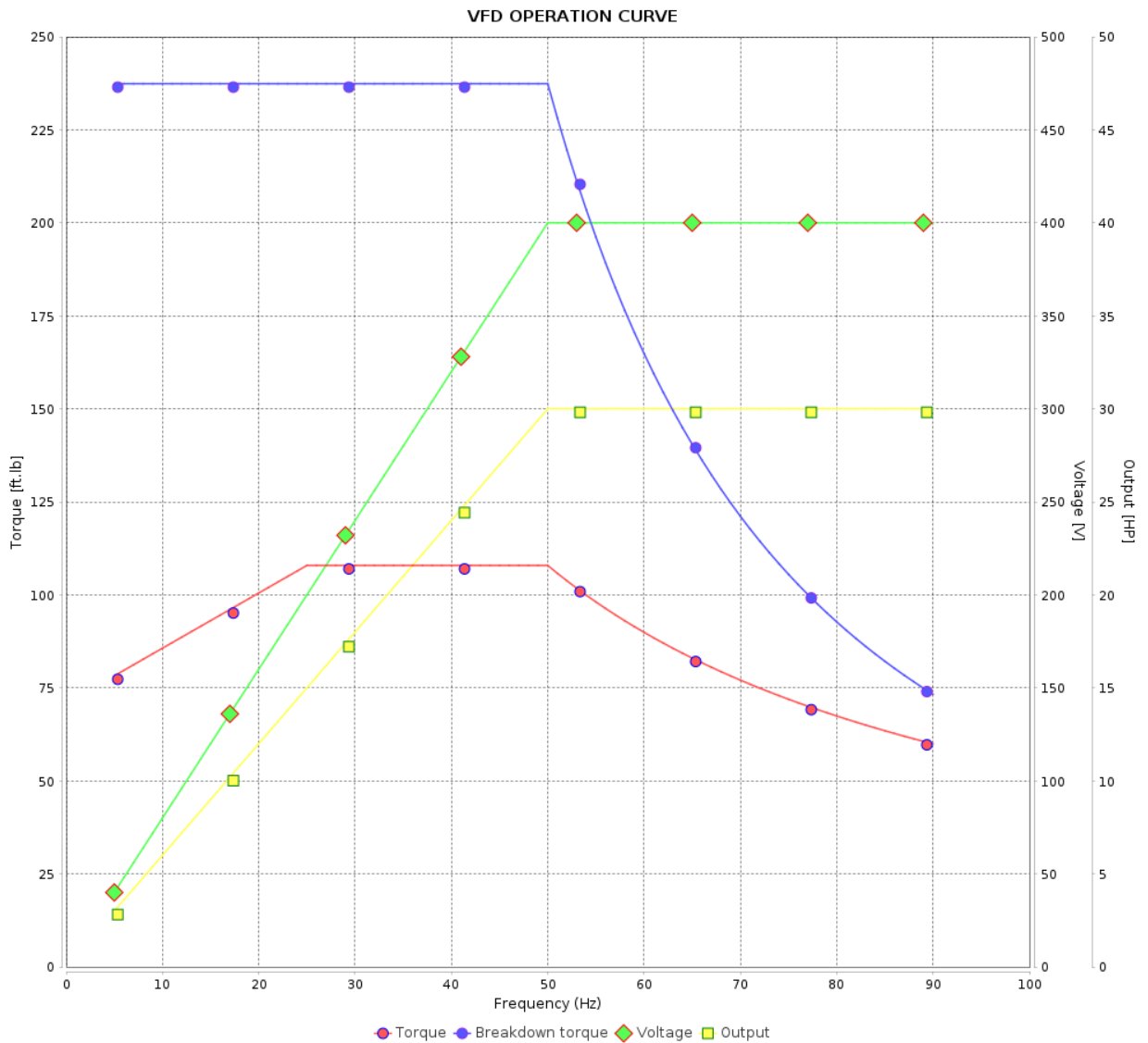


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VFD OPERATION CURVE

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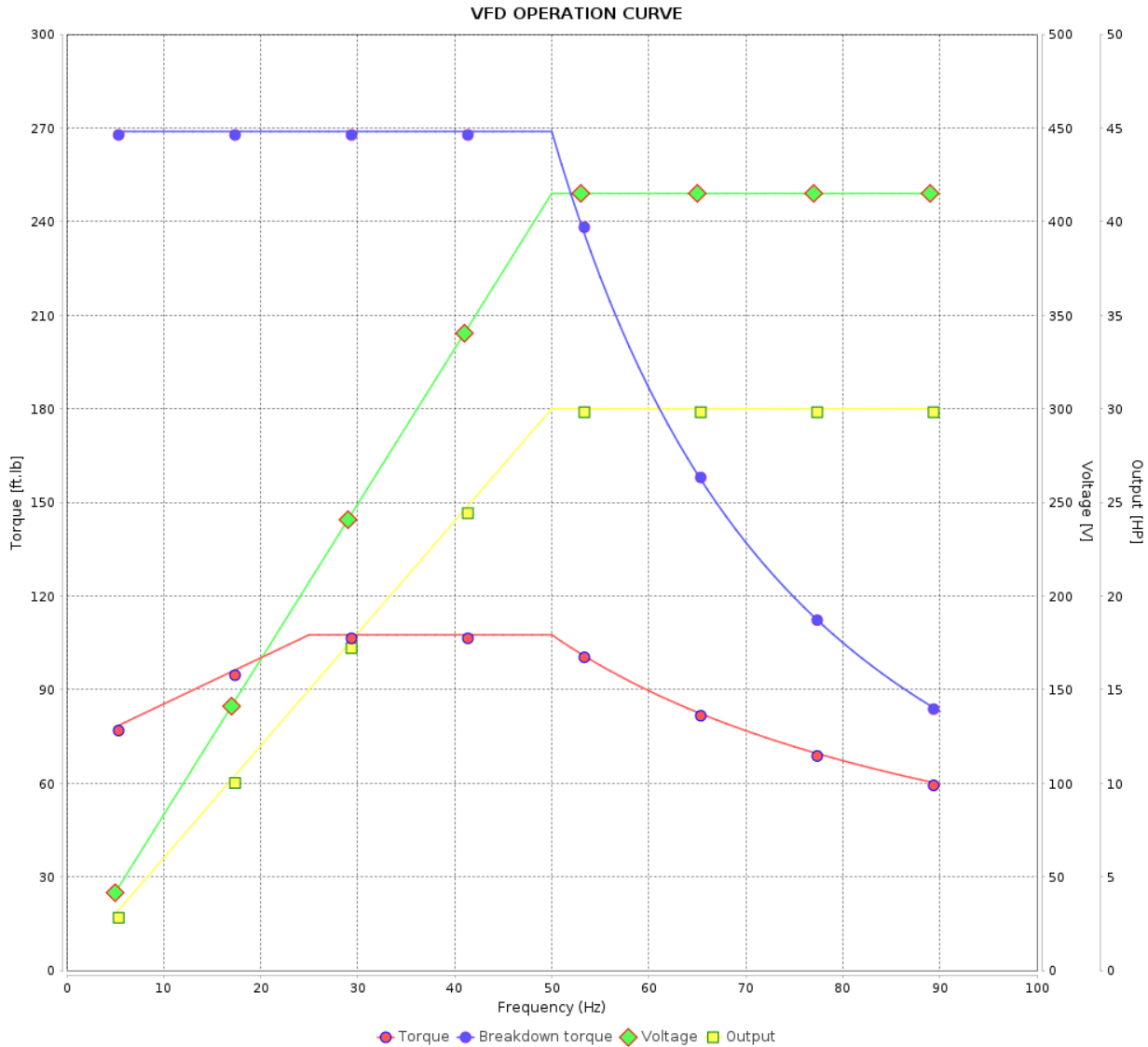


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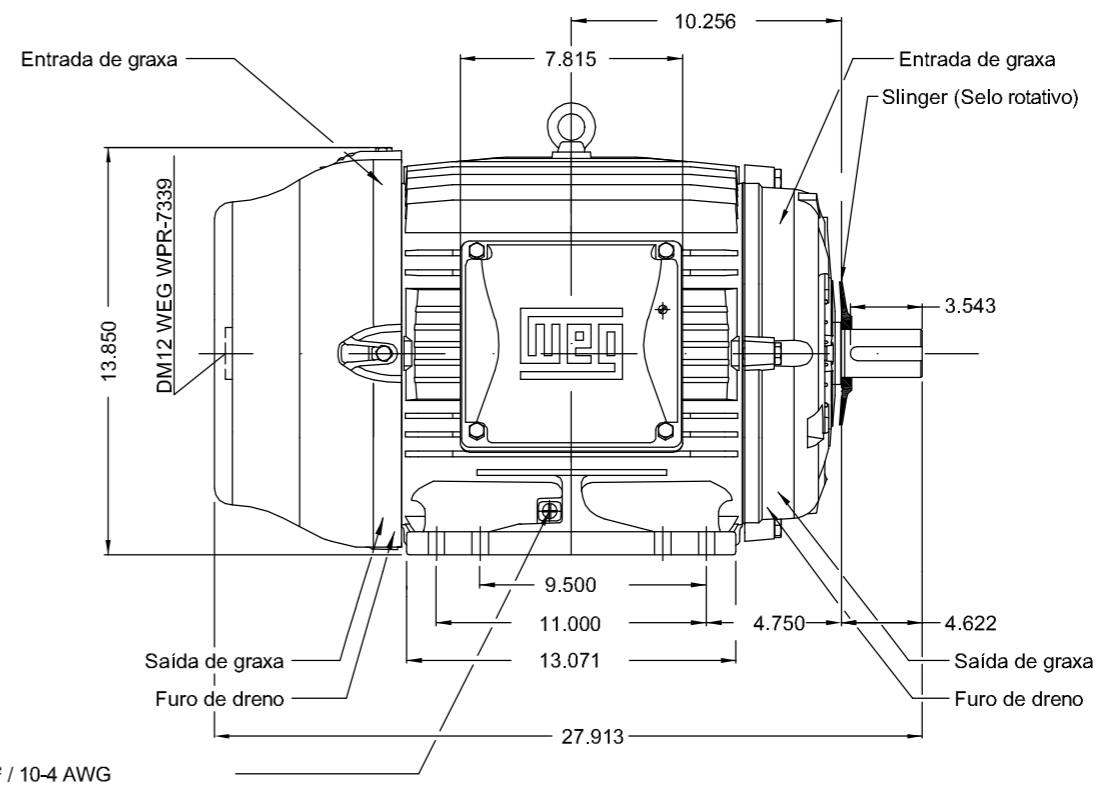
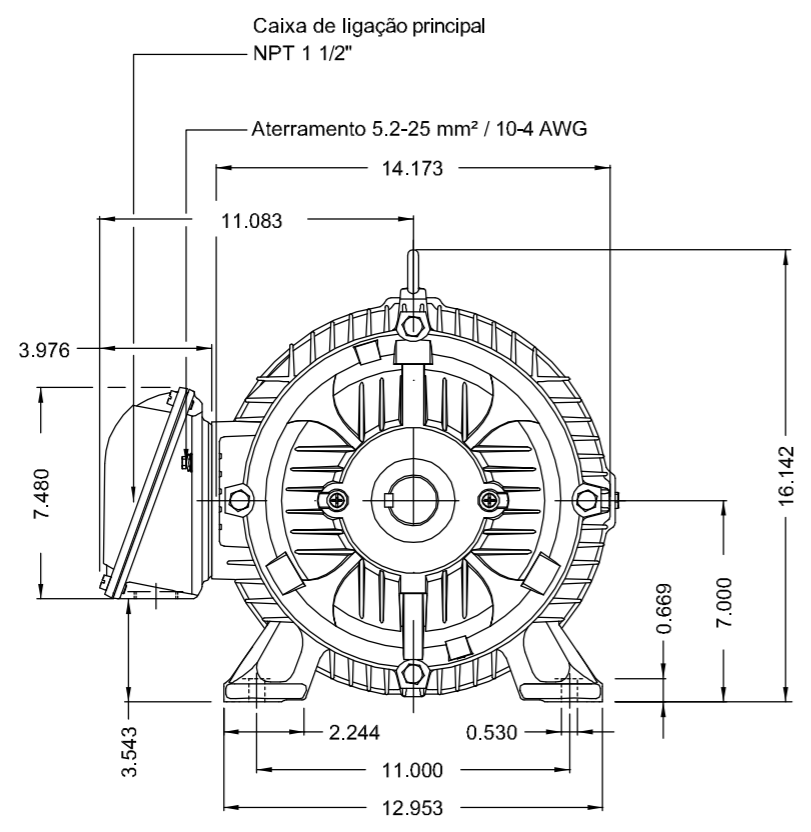
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Locked rotor torque	: 220 %	Service factor	: 1.00
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Rated speed	: 1465 rpm	Design	: B

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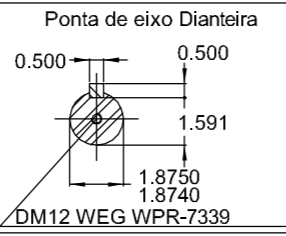


420104067

30 HP 04 Polos 60 Hz

WEC HOUSE ACCOUNT MOTORS

500002215990		ZZ 420270286	JACKSONHM	FRANCINES	FRANCINES	15.09.2022	02
500002208739		PCR 100000146151	RBOECK	FRANCINES	FRANCINES	06.09.2022	01
ECM	LOC	RESUMO MODIFICAÇÃO	EXECUTADO	VERIFICADO	LIBERADO	DATA	VER
EXECUTOR	DANIELAW	MOTOR TRIF. W22 NEMA P. EFF. IEEEE841 CARÇAÇA 284/6T IP56 TEFC	10009780935				
VERIFICADOR	DANIELAW		000	02			
LIBERADOR	MARLONB	DATA LB.	07.06.2022	WMO	JARAGUA DO SUL	Engenharia de Produto	FOLHA 1 / 1



- Placa de identificação com marcação especial
- Saída de graxa conforme IEEE841
- Forma construtiva NEMA W-8
- Forma construtiva V6D

A

B

C

D

E

CÓPIA SEM CONTROLE

Dimensões em polegadas

LIBERADO

A3

ZME



NEMA
Premium
W22



FOR SAFE AREA
Mod.TE1BFOXON
CC029A



Class I, Div 2, Gr A, B, C and D - T3
Class I, Zone 2, IIC - T3
Class II, Div 2, Gr F and G - T4A
For use on PWM: Gr. A, B, C, D and F,
VT 1000:1, CT 20:1, 1.00SF - T3A

MODEL 03018ST3QAP286T-W22

API 661
Inverter Duty Motor
Severe Duty

IEEE
841-2021

PH3 60Hz Fr. 284/6T 1000m.a.s.l. IP56 TEFC 443 lb

V 460 A 35.1

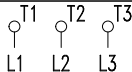
HP 30 kW 22

SF 1.15 SFA 40.4

RPM 1770 PF 0.84

AMB 40°C INS cl. F DT80K NEMA NOM EFF 93.6%

DUTY CONT. DES B Code G GUARANT. EFF 92.4%



460V

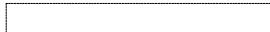


→ NU-311-C3 (18g) 55RU03X30

→ 6211-C3 (11g) 55BC02X30



MOBIL POLYREX EM (12000h)



MADE IN BRAZIL
16684657