

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase Product code : 11433397
Catalog # : 02012ST3QIE286TC-W22

Frame	: 284/6TC	Locked rotor time	: 28s (cold) 16s (hot)
Output	: 20 HP (15 kW)	Temperature rise	: 80 K
Poles	: 6	Duty cycle	: Cont.(S1)
Frequency	: 60 Hz	Ambient temperature	: -20°C to +40°C
Rated voltage	: 460 V	Altitude	: 1000 m.a.s.l.
Rated current	: 24.2 A	Protection degree	: IP56
L. R. Amperes	: 143 A	Cooling method	: IC411 - TEFC
LRC	: 5.9x(Code G)	Mounting	: F-1
No load current	: 8.30 A	Rotation ¹	: Both (CW and CCW)
Rated speed	: 1175 rpm	Noise level ²	: 59.0 dB(A)
Slip	: 2.08 %	Starting method	: Direct On Line
Rated torque	: 89.4 ft.lb	Approx. weight ³	: 455 lb
Locked rotor torque	: 220 %		
Breakdown torque	: 250 %		
Insulation class	: F		
Service factor	: 1.25		
Moment of inertia (J)	: 9.16 sq.ft.lb		
Design	: B		

Output	25%	50%	75%	100%	Foundation loads	
Efficiency (%)	90.8	91.0	91.7	91.7	Max. traction	: 853 lb
Power Factor	0.46	0.70	0.80	0.85	Max. compression	: 1308 lb

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

P1 (0,9;1,0)	P2 (0,5;1,0)	P3 (0,25;1,0)	P4 (0,9;0,5)	P5 (0,5;0,5)	P6 (0,5;0,25)	P7 (0,25;0,25)
9.9	8.5	7.9	5.2	3.7	2.6	1.8

		<u>Drive end</u>	<u>Non drive end</u>
Bearing type	:	6311 C3	6211 C3
Sealing	:	Inpro/Seal	Inpro/Seal
Lubrication interval	:	20000 h	20000 h
Lubricant amount	:	18 g	11 g
Lubricant type	:	Mobil Polyrex EM	

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 NEMA MG-1.

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage

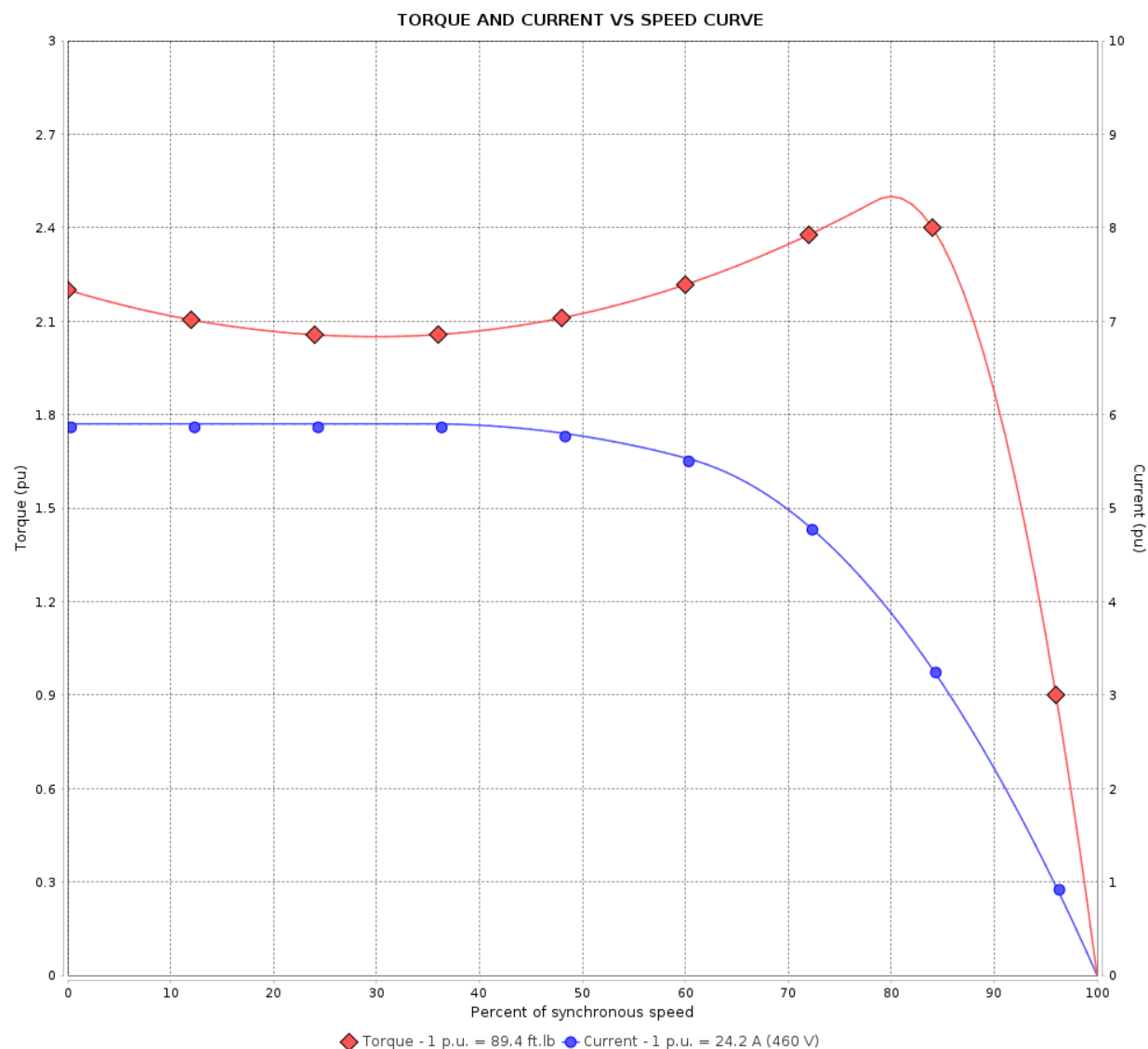


Customer :

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

Product code : 11433397

Catalog # : 02012ST3QIE286TC-W22



Performance : 460 V 60 Hz 6P

Rated current	: 24.2 A	Moment of inertia (J)	: 9.16 sq.ft.lb
LRC	: 5.9	Duty cycle	: Cont.(S1)
Rated torque	: 89.4 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.25
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1175 rpm	Design	: B

Locked rotor time : 28s (cold) 16s (hot)

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

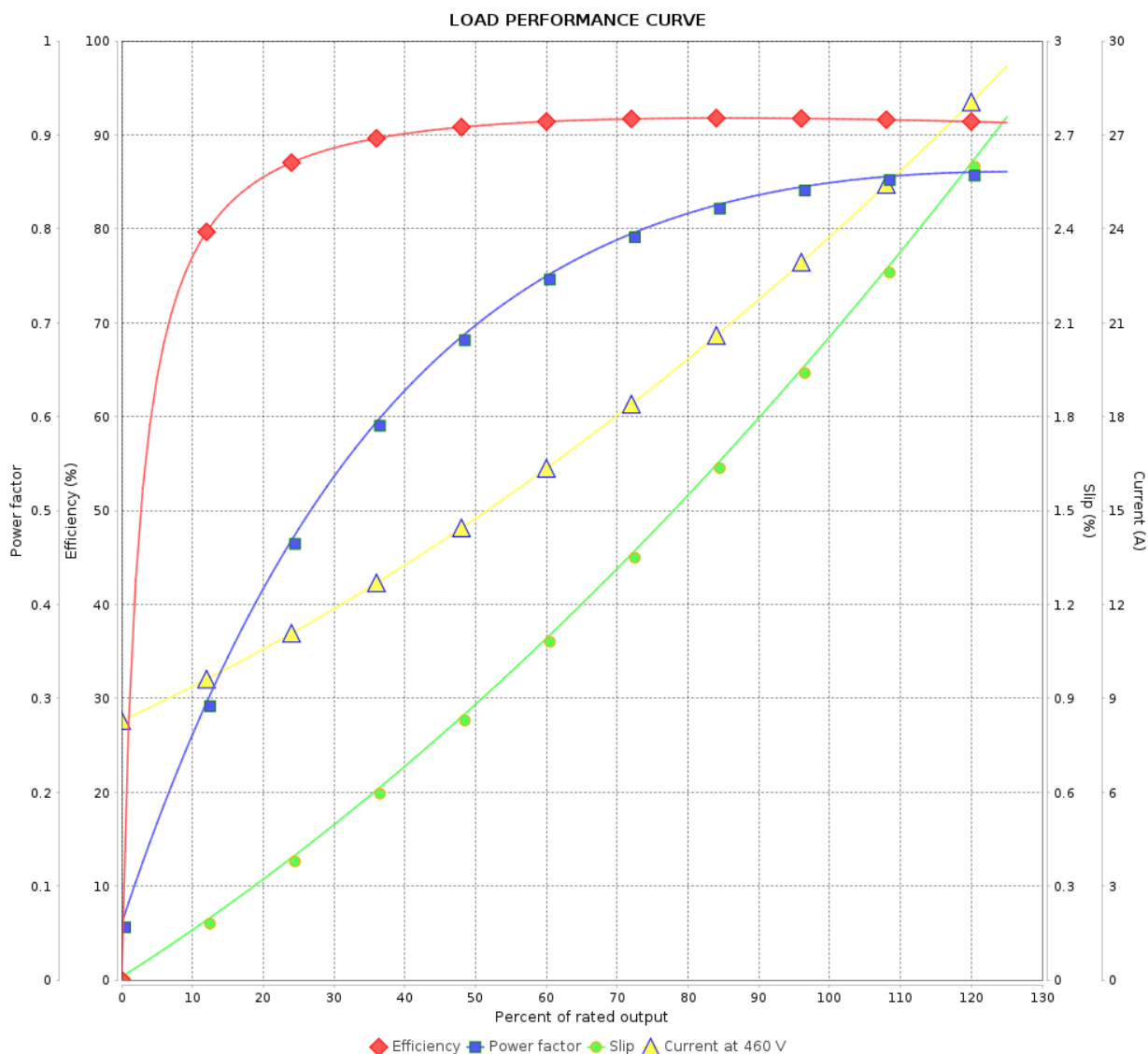


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THERMAL LIMIT CURVE

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Locked rotor torque	: 220 %	Service factor	: 1.25
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1175 rpm	Design	: B

Heating constant

Cooling constant

Rev.

Changes Summary

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Date

Performed by

Checked by

Date

19/09/2024

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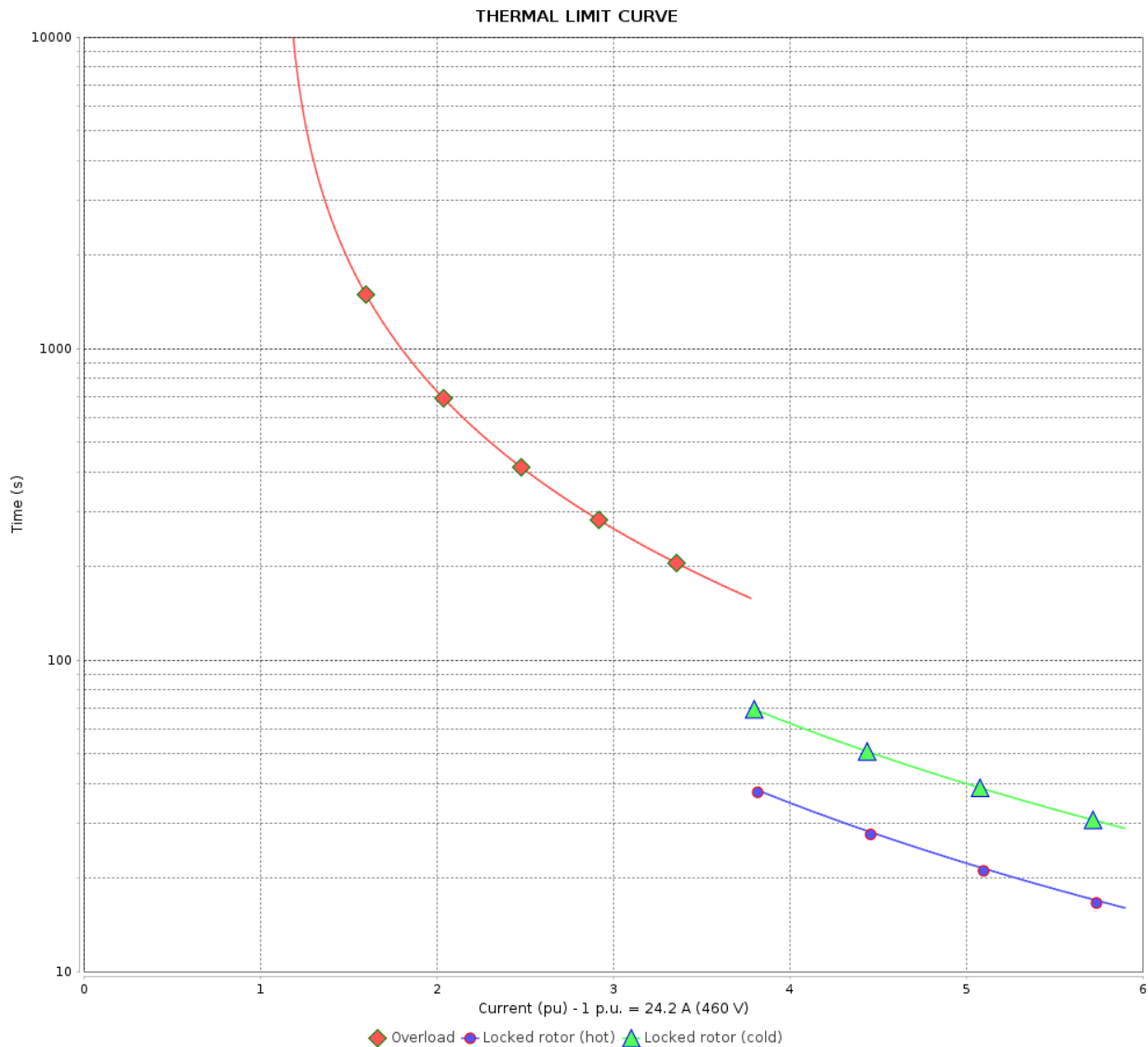
Revision

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

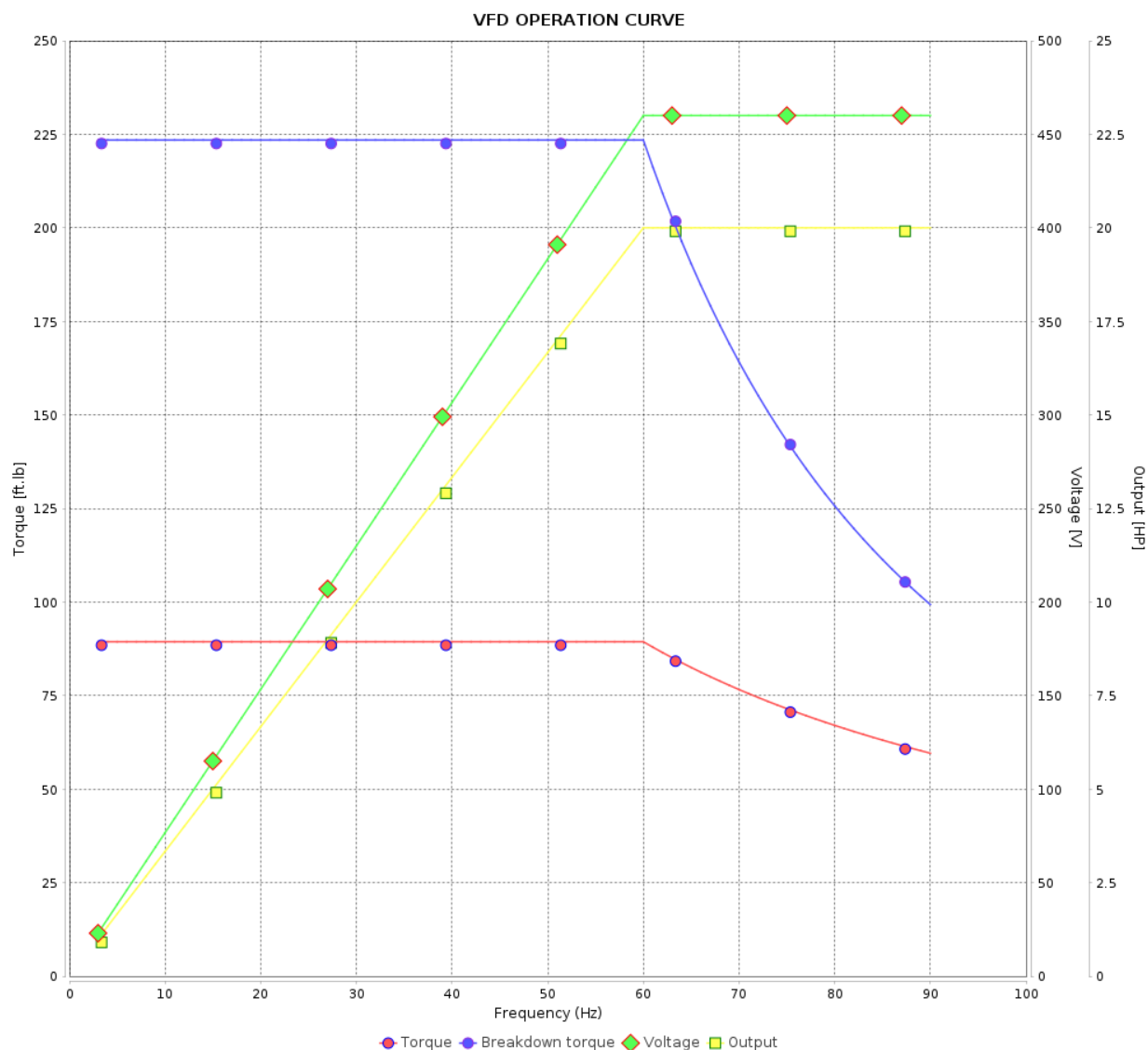


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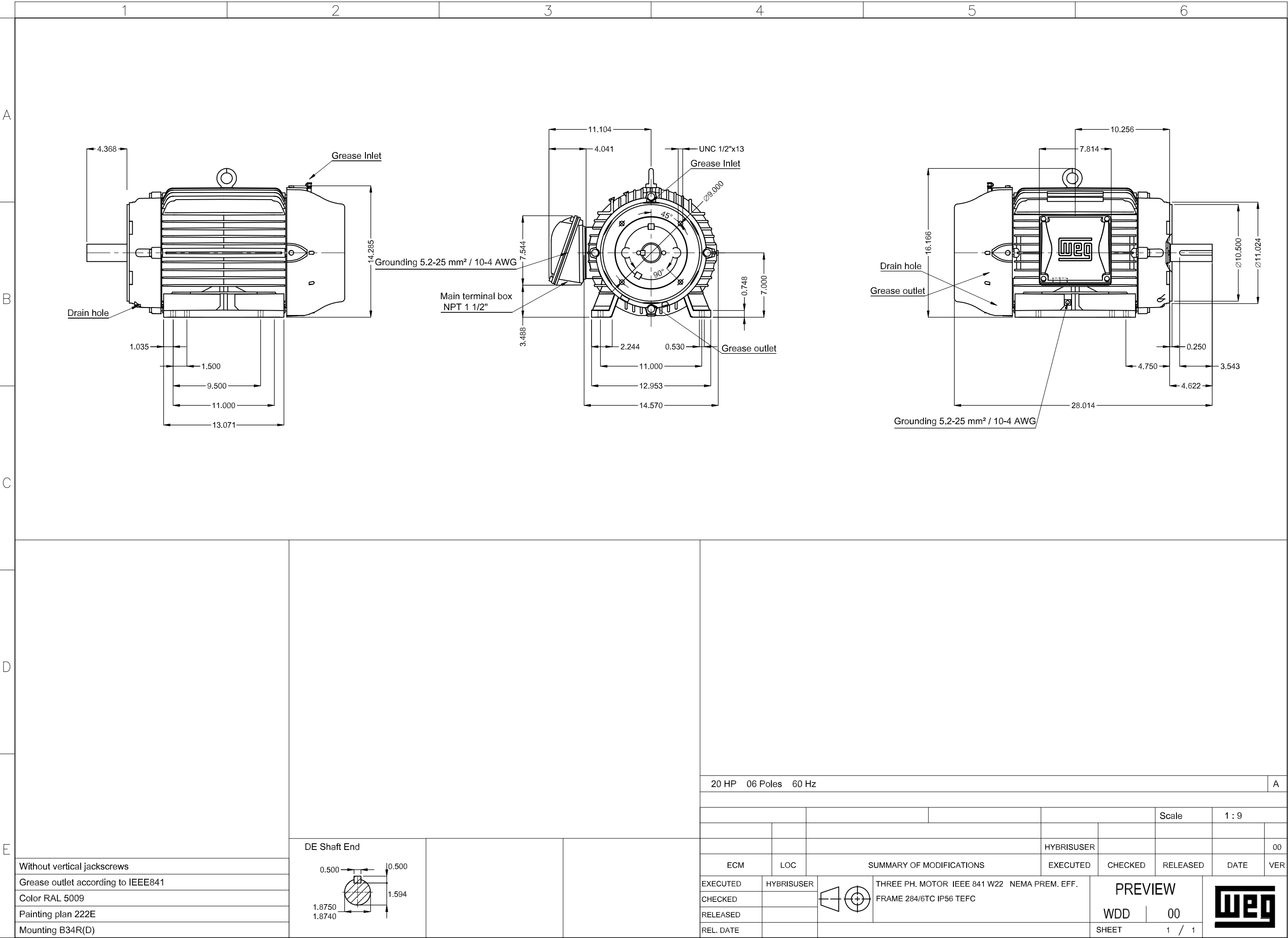


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MADE IN BRAZIL
11433397



NEMA
Premium
W22

MODEL 02012ST3QIE286TC-W22



Inverter Duty Motor
Severe Duty

PH3 60Hz Fr. 284/6TC 1000m.a.s.l. IP56 TEFC 449lb

V 460

A 24.2

HP 20

kW 15

SF 1.25

SFA 30.3

RPM 1175

PF 0.85

AMB 40°C

INS cl. F DT80K

NEMA NOM EFF 91.7%

DUTY CONT.

DES B Code G

GUARANT. EFF 90.2%



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 - T4
For use on PWM: Gr. A, B, C, D and F,
VT 1000:1, CT 20:1, 1.00SF - T3A

T1 T2 T3
L1 L2 L3

460V



→ 6311-C3 (18g) 55BC03X30

→ 6211-C3 (11g) 55BC02X30



MOBIL POLYREX EM (20000h)

