

# 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 <sup>1</sup>	: Both (CW and CCW)	
Rated speed	: 1175 rpm			Noise level <sup>2</sup>	: 59.0 dB(A)	
Slip	: 2.08 %			Starting method	: Direct On Line	
Rated torque	: 89.4 ft.lb			Approx. weight <sup>3</sup>	: 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
			Drive end	Non drive end		
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



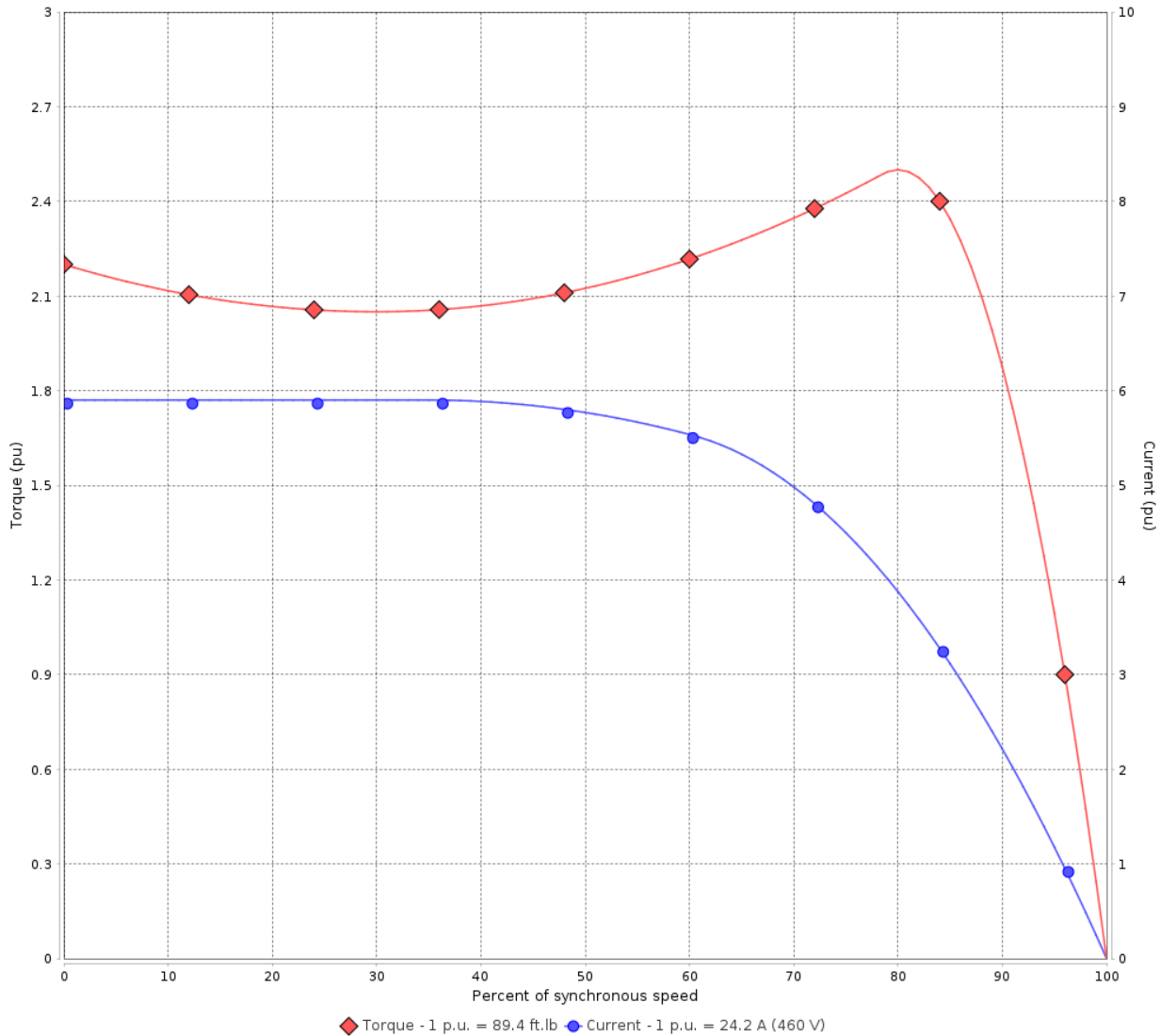
Customer :

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

Product code : 11433397

Catalog # : 02012ST3QIE286TC-W22

TORQUE AND CURRENT VS SPEED CURVE



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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Date	19/09/2024			

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

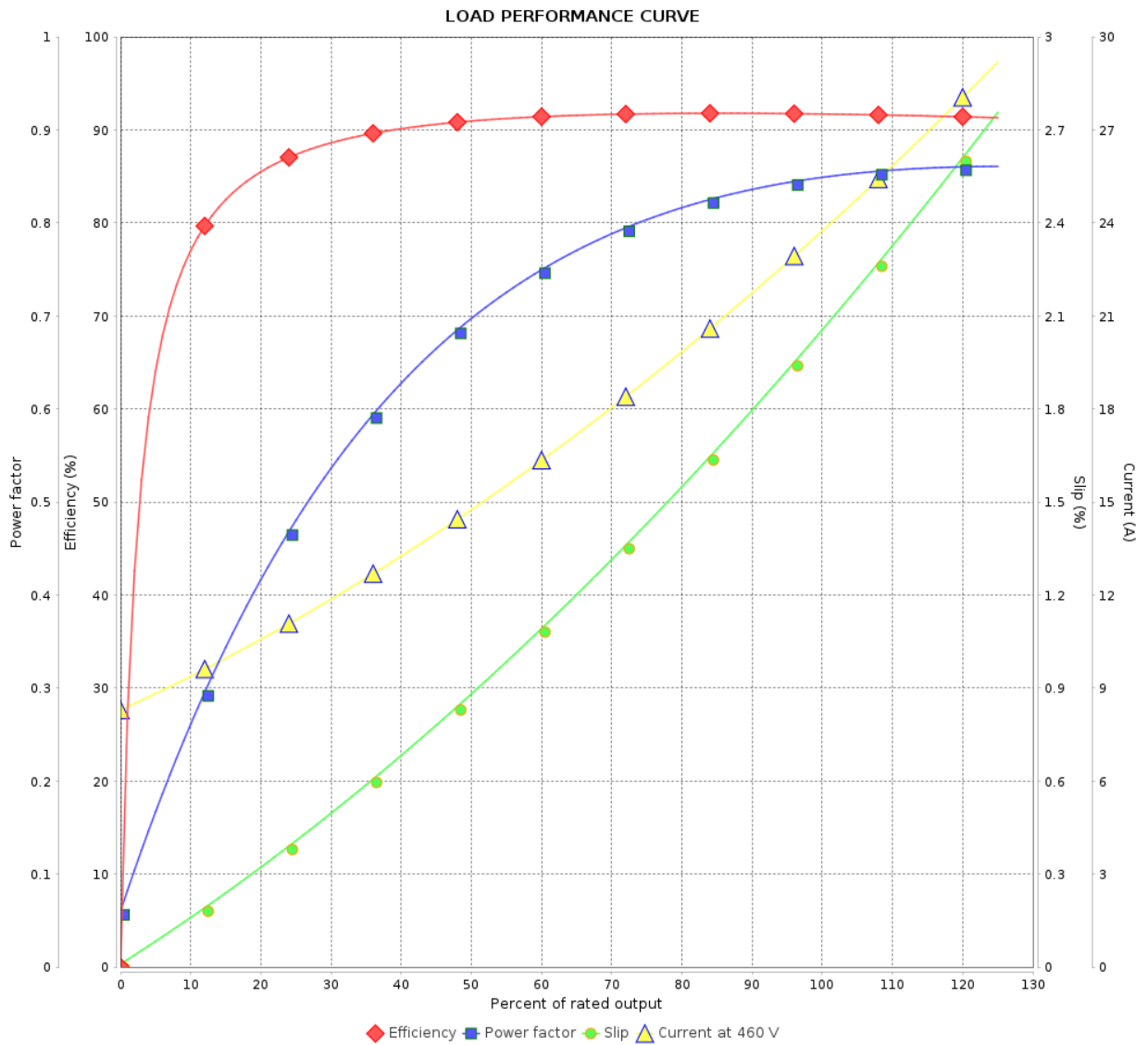


Customer :

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  
 LRC : 5.9  
 Rated torque : 89.4 ft.lb  
 Locked rotor torque : 220 %  
 Breakdown torque : 250 %  
 Rated speed : 1175 rpm

Moment of inertia (J) : 9.16 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

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# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

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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

Heating constant

Cooling constant

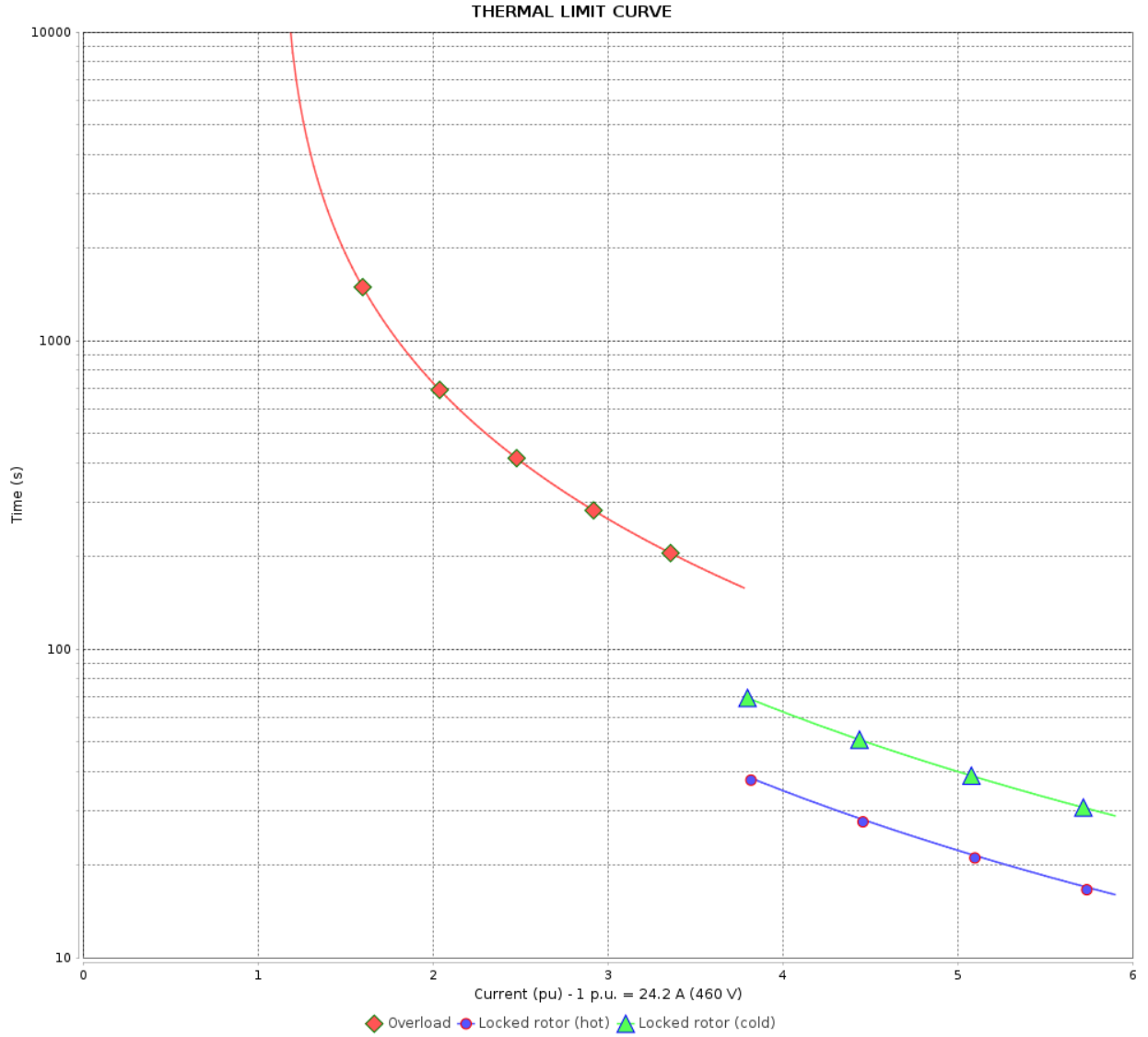
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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Date				

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

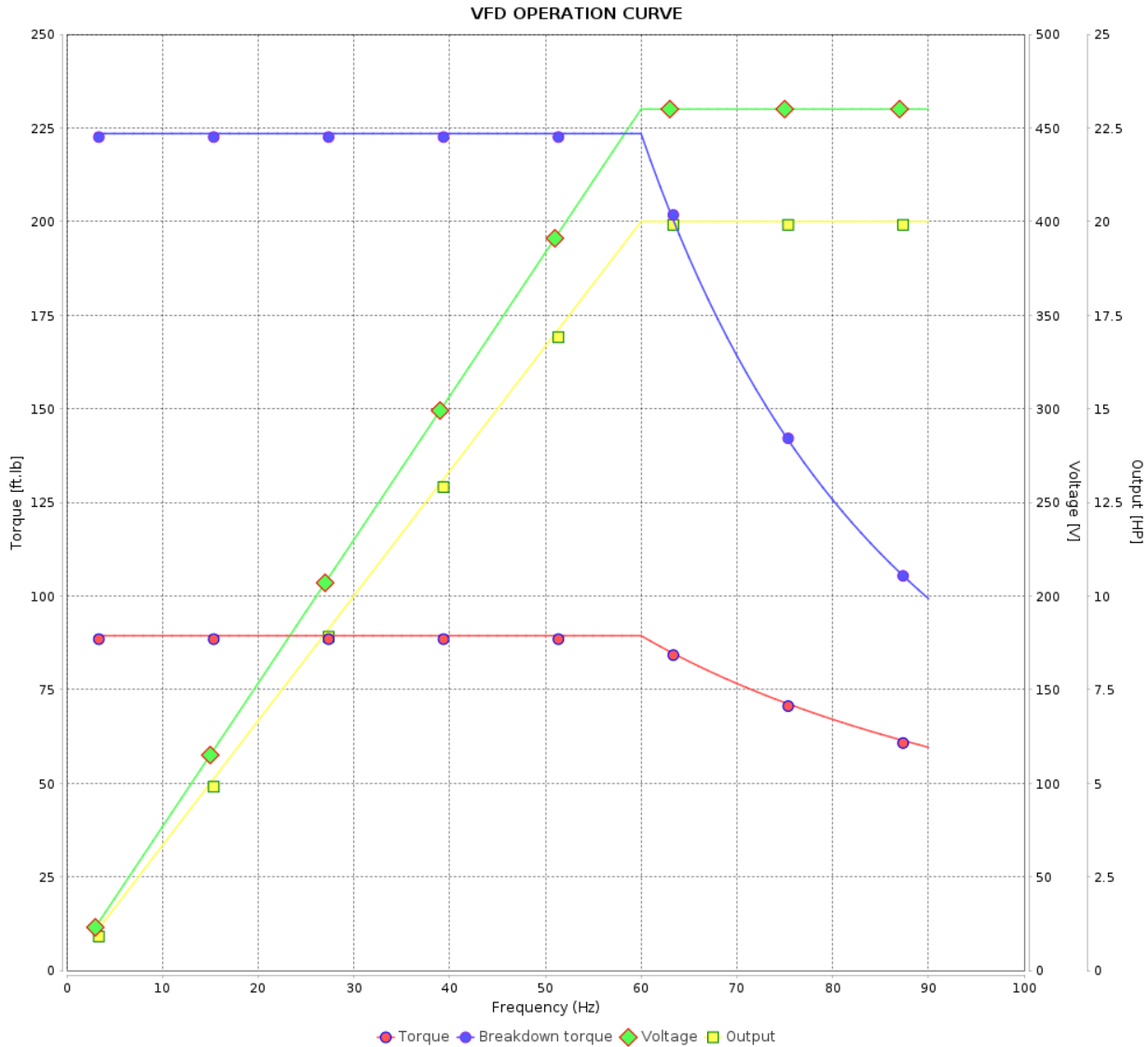


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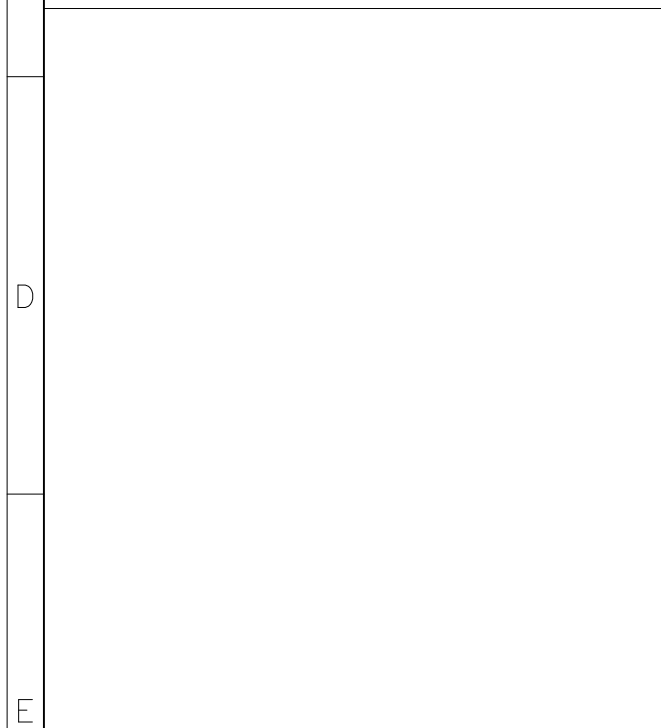
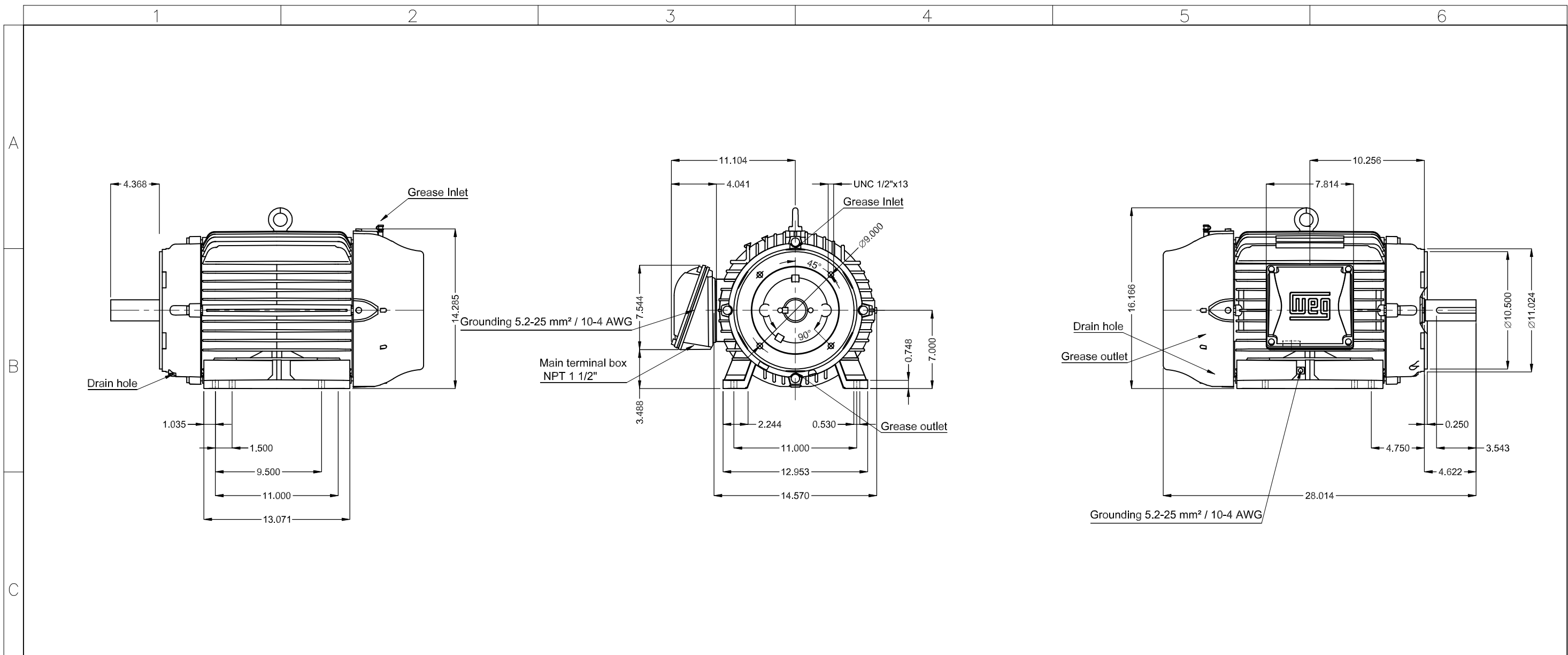


Performance : 460 V 60 Hz 6P

Rated current : 24.2 A  
 LRC : 5.9  
 Rated torque : 89.4 ft.lb  
 Locked rotor torque : 220 %  
 Breakdown torque : 250 %  
 Rated speed : 1175 rpm

Moment of inertia (J) : 9.16 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
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Without vertical jackscrews  
 Grease outlet according to IEEE841  
 Color RAL 5009  
 Painting plan 222E  
 Mounting B34R(D)

20 HP 06 Poles 60 Hz		A	
		Scale 1 : 9	
		HYBRISUSER	
ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED CHECKED RELEASED DATE VER
EXECUTED	HYBRISUSER	THREE PH. MOTOR IEEE 841 W22 NEMA PREM. EFF.	00
CHECKED		FRAME 284/6TC IP56 TEFC	
RELEASED			
REL. DATE			

HYBRISUSER		00	
ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED CHECKED RELEASED DATE VER
EXECUTED	HYBRISUSER	THREE PH. MOTOR IEEE 841 W22 NEMA PREM. EFF.	00
CHECKED		FRAME 284/6TC IP56 TEFC	
RELEASED			
REL. DATE			

PREVIEW  
 WDD 00  
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**NEMA**  
Premium  
W22

MODEL 02012ST3QIE286TC-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 - T4  
For use on PWM: Gr. A, B, C, D and F,  
VT 1000:1, CT 20:1, 1.00SF - T3A

MADE IN BRAZIL  
11433397



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

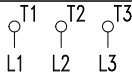
INS cl. F DT80K

NEMA NOM EFF 91.7%

DUTY CONT.

DES B Code G

GUARANT. EFF 90.2%



460V



→ 6311-C3 (18g) 55BC03X30

→ 6211-C3 (11g) 55BC02X30



MOBIL POLYREX EM (20000h)

