

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 13780982
Catalog # : HT020504NPW22284T

Frame	: 284T	Locked rotor time	: 48s (cold) 27s (hot)
Output	: 20 HP (15 kW)	Temperature rise	: 80 K
Poles	: 4	Duty cycle	: Cont.(S1)
Frequency	: 60 Hz	Ambient temperature	: -20°C to +40°C
Rated voltage	: 575 V	Altitude	: 1000 m.a.s.l.
Rated current	: 19.3 A	Protection degree	: IP55
L. R. Amperes	: 116 A	Cooling method	: IC411 - TEFC
LRC	: 6.0x(Code G)	Mounting	: F-1
No load current	: 6.16 A	Rotation ¹	: Both (CW and CCW)
Rated speed	: 1770 rpm	Noise level ²	: 63.0 dB(A)
Slip	: 1.67 %	Starting method	: Direct On Line
Rated torque	: 59.3 ft.lb	Approx. weight ³	: 370 lb
Locked rotor torque	: 200 %		
Breakdown torque	: 240 %		
Insulation class	: F		
Service factor	: 1.25		
Moment of inertia (J)	: 5.11 sq.ft.lb		
Design	: B		

Output	50%	75%	100%	Foundation loads	
Efficiency (%)	92.4	93.0	93.0	Max. traction	: 430 lb
Power Factor	0.70	0.80	0.84	Max. compression	: 811 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)
7.4	6.3	5.6	3.3	2.3	1.4	0.9

	Drive end	Non drive end
Bearing type	: 6311 C3	: 6211 C3
Sealing	: V'Ring	: V'Ring
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

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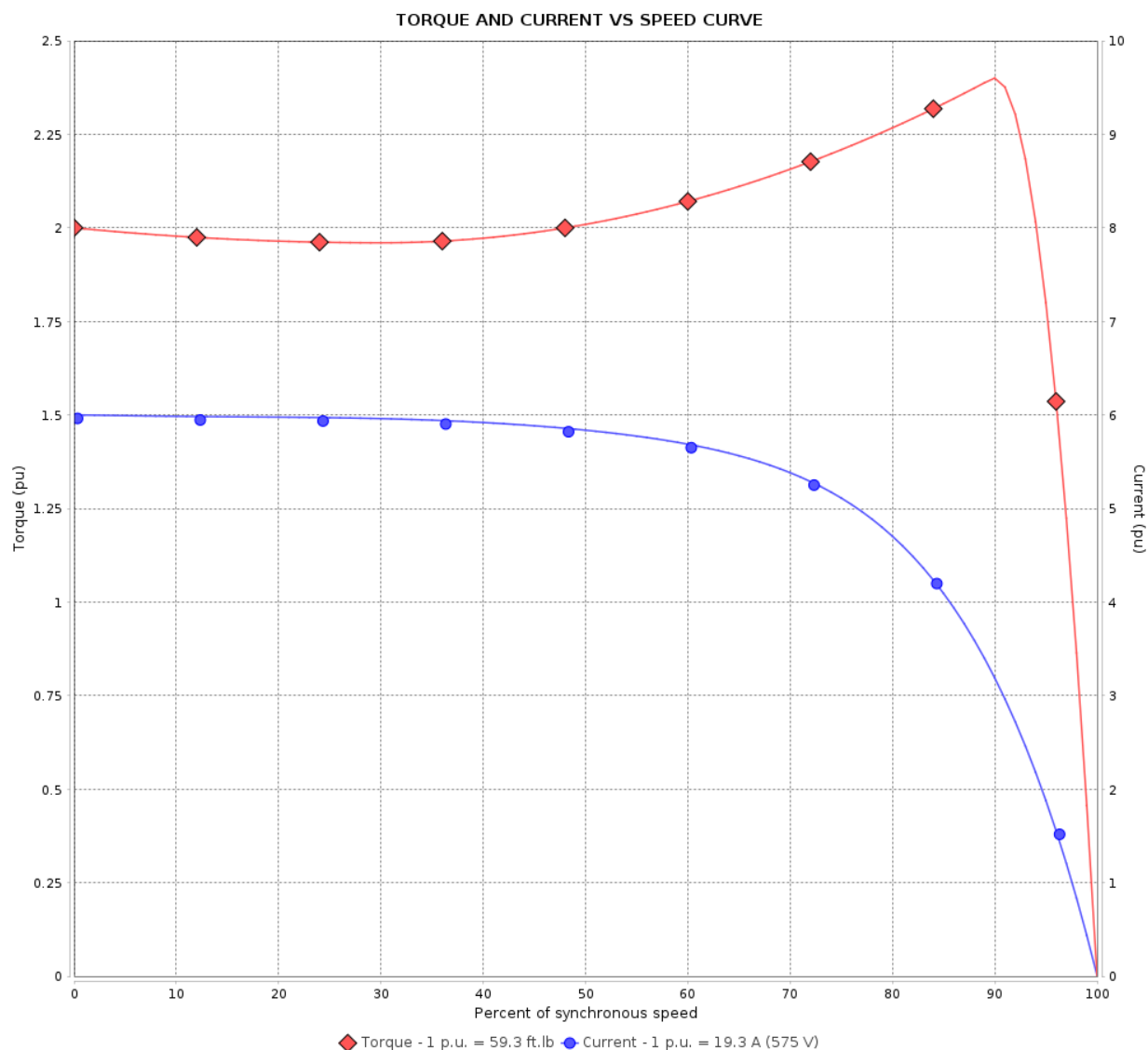


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Performance : 575 V 60 Hz 4P

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LRC : 6.0
Rated torque : 59.3 ft.lb
Locked rotor torque : 200 %
Breakdown torque : 240 %
Rated speed : 1770 rpm

Moment of inertia (J) : 5.11 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

Locked rotor time : 48s (cold) 27s (hot)

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LOAD PERFORMANCE CURVE

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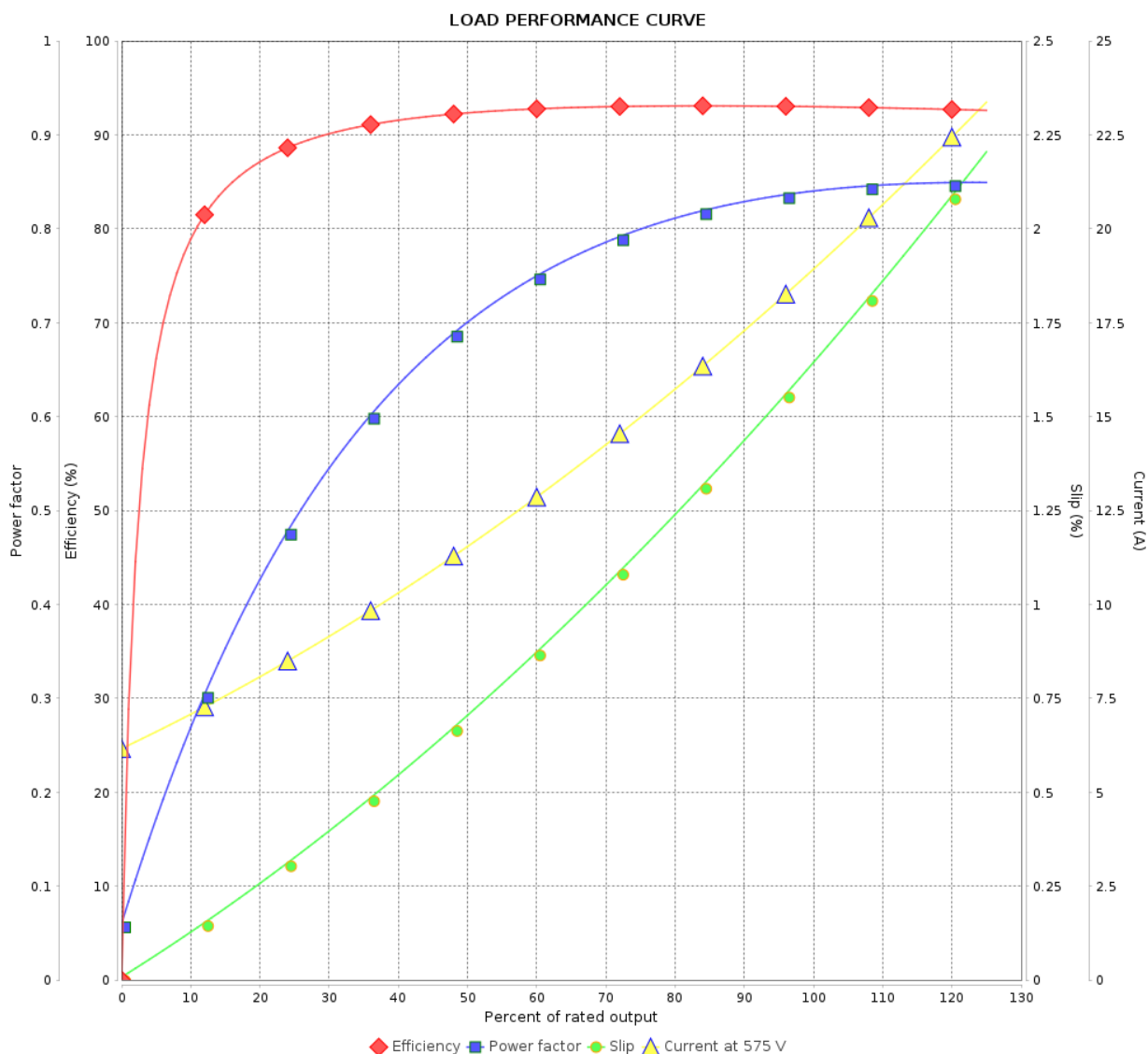


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THERMAL LIMIT CURVE

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Rated torque	: 59.3 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.25
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1770 rpm	Design	: B

Heating constant

Cooling constant

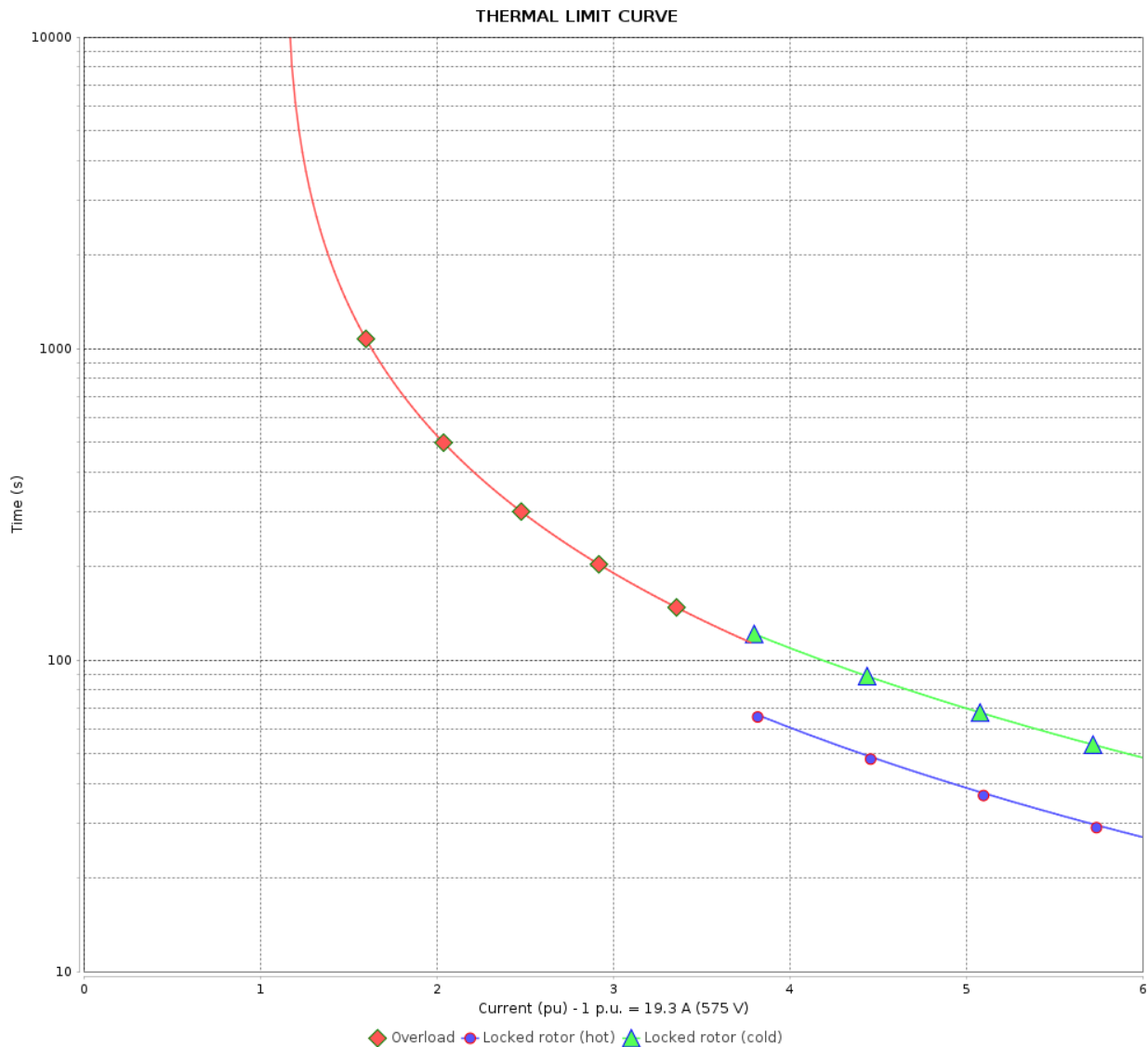
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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VFD OPERATION CURVE

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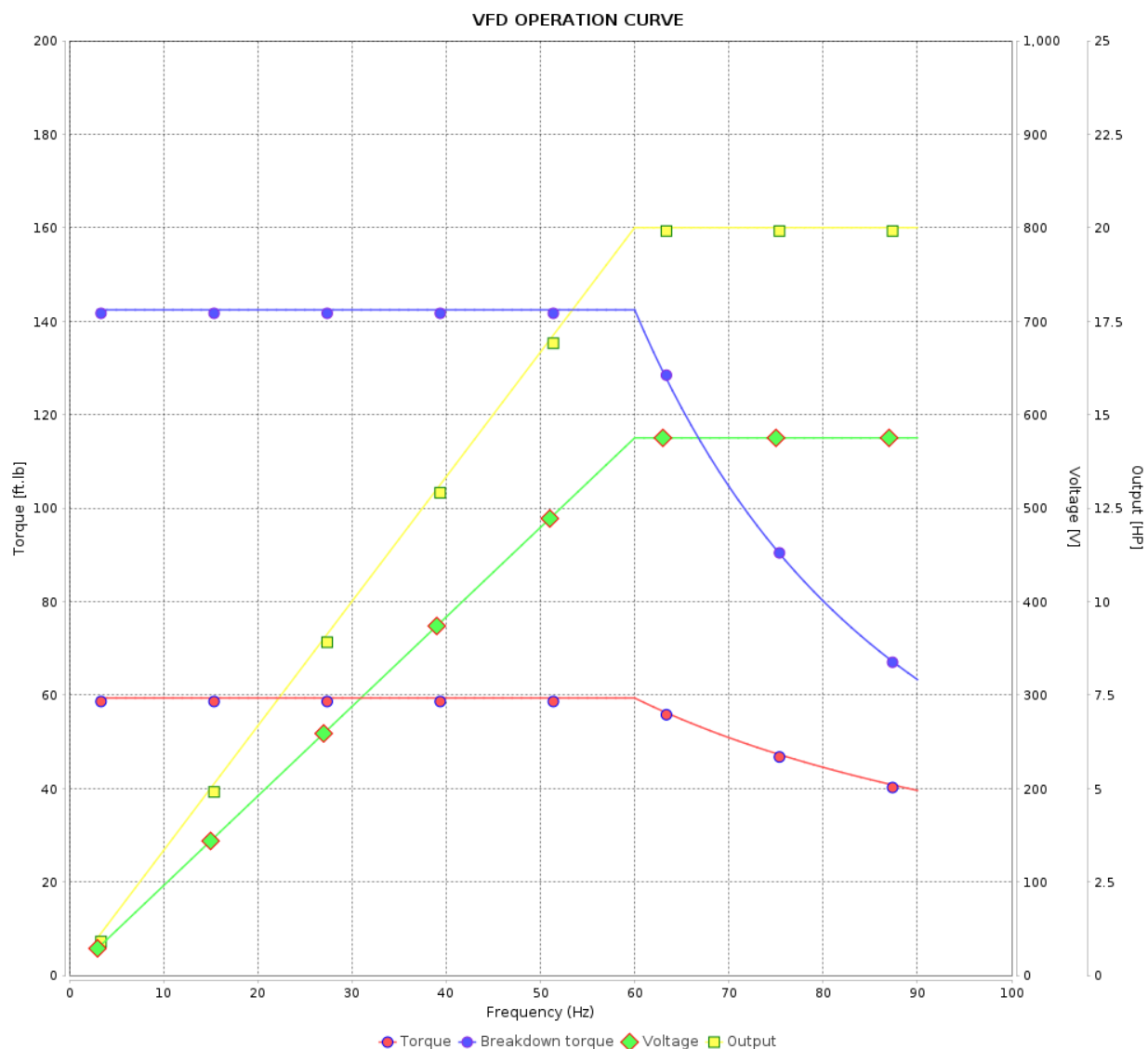


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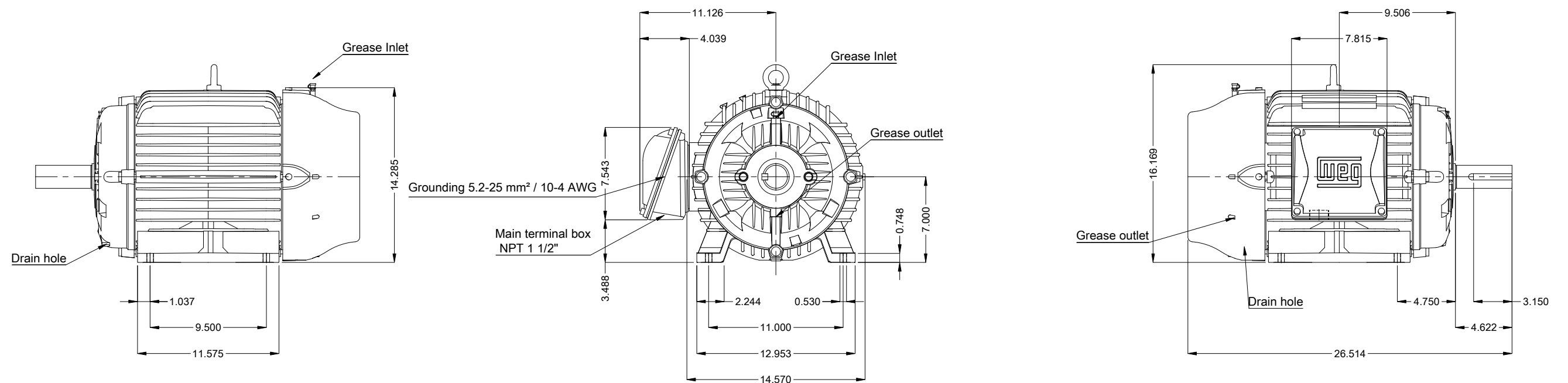


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20 HP 04 Poles 60 Hz										A
						Scale 1 : 9				
						HYBRISUSER				00
ECM		LOC	SUMMARY OF MODIFICATIONS			EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	HYBRISUSER		THREE PH. MOTOR W22 NEMA PREM. EFF. FRAME 284T IP55 TEFC				PREVIEW WDD 00			
CHECKED										
RELEASED										
REL. DATE										
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