

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :				
Product line	: W40 NEMA Premium Efficiency Three-Phase	Product code :	14494190	
		Catalog # :	02012OT3H286TC-W40	
Frame	: 284/6TC	Locked rotor time	: 27s (cold) 15s (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	: 575 V	Altitude	: 1000 m.a.s.l.	
Rated current	: 19.4 A	Protection degree	: IP23	
L. R. Amperes	: 124 A	Cooling method	: IC01 - ODP	
LRC	: 6.4x(Code G)	Mounting	: F-1	
No load current	: 7.52 A	Rotation <sup>1</sup>	: Both (CW and CCW)	
Rated speed	: 1177 rpm	Noise level <sup>2</sup>	: 59.0 dB(A)	
Slip	: 1.92 %	Starting method	: Direct On Line	
Rated torque	: 89.2 ft.lb	Approx. weight <sup>3</sup>	: 390 lb	
Locked rotor torque	: 229 %			
Breakdown torque	: 260 %			
Insulation class	: F			
Service factor	: 1.25			
Moment of inertia (J)	: 6.89 sq.ft.lb			
Design	: B			
Output	25%    50%    75%    100%	Foundation loads		
Efficiency (%)	91.5    91.7    92.4    92.4	Max. traction		
Power Factor	0.45    0.71    0.80    0.84	Max. compression		
		<u>Drive end</u>	<u>Non drive end</u>	
Bearing type	:	6311 Z C3	6211 Z C3	
Sealing	:	Without Bearing Seal	Without Bearing 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



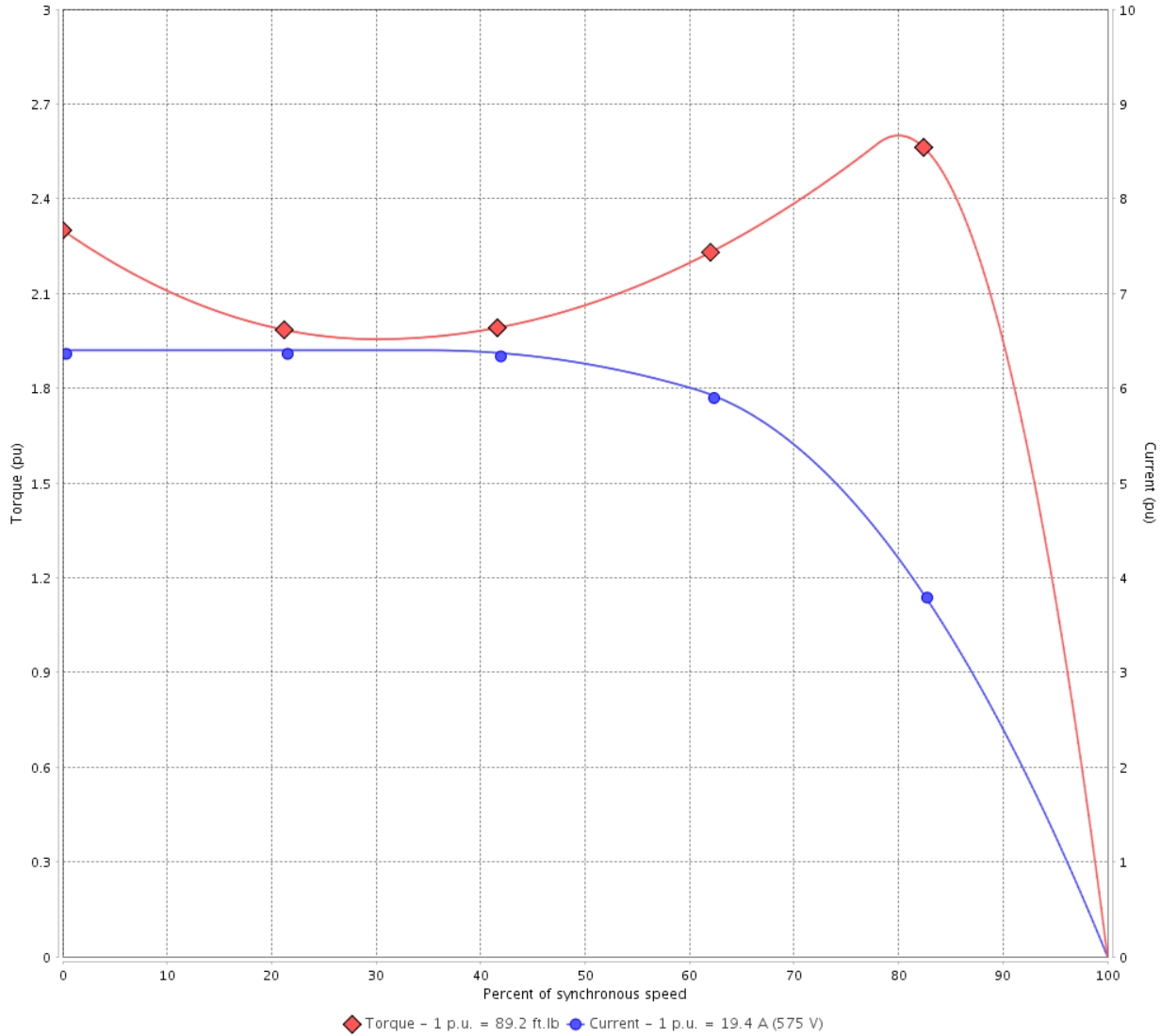
Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14494190

Catalog # : 020120T3H286TC-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 575 V 60 Hz 6P

Rated current	: 19.4 A	Moment of inertia (J)	: 6.89 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 89.2 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.25
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1177 rpm	Design	: B

Locked rotor time : 27s (cold) 15s (hot)

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

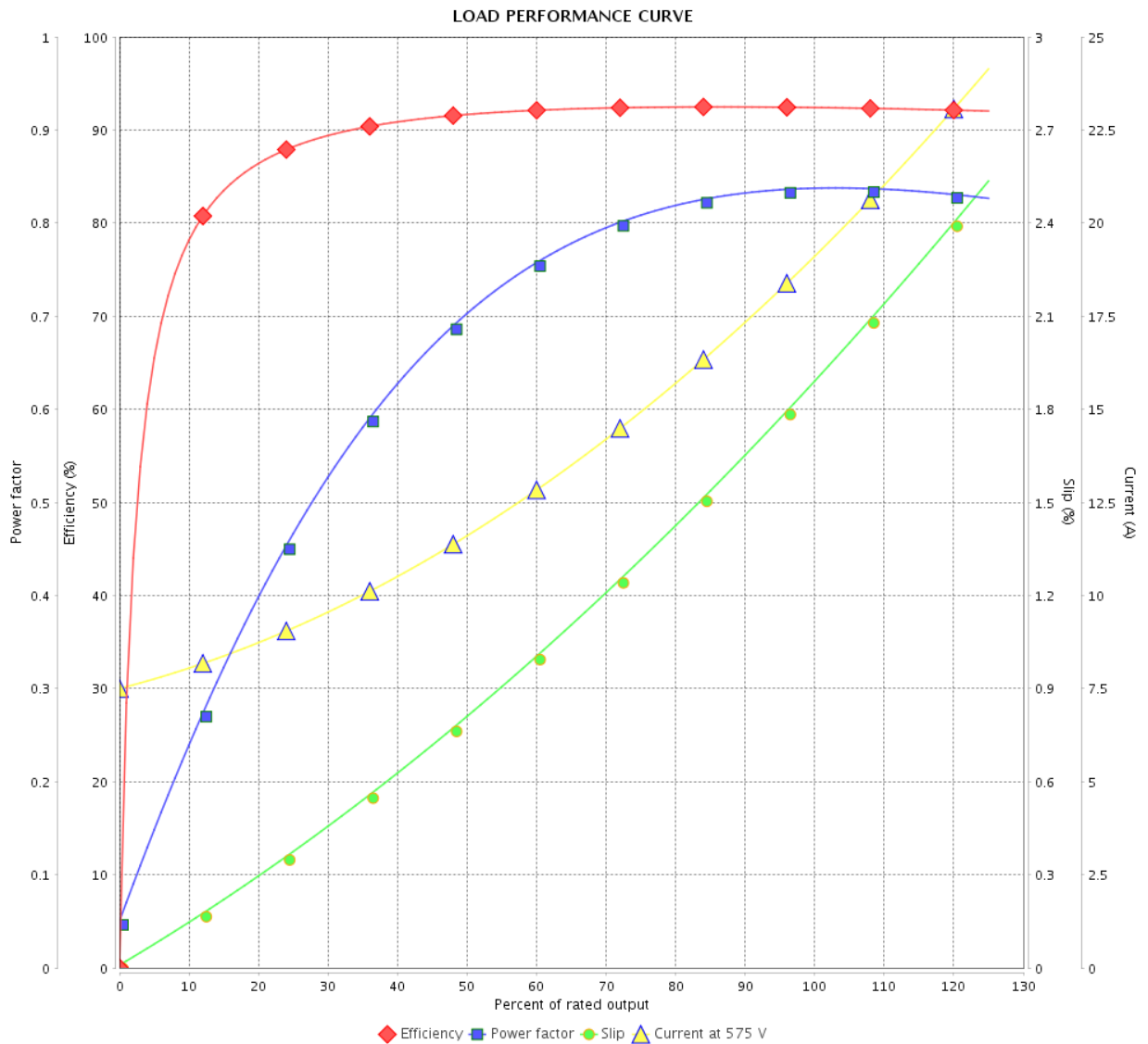


Customer : \_\_\_\_\_

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14494190

Catalog # : 02012OT3H286TC-W40



Performance : 575 V 60 Hz 6P

Rated current : 19.4 A  
 LRC : 6.4  
 Rated torque : 89.2 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 260 %  
 Rated speed : 1177 rpm

Moment of inertia (J) : 6.89 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

Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14494190

Catalog # : 02012OT3H286TC-W40

Performance : 575 V 60 Hz 6P

Rated current : 19.4 A  
LRC : 6.4  
Rated torque : 89.2 ft.lb  
Locked rotor torque : 229 %  
Breakdown torque : 260 %  
Rated speed : 1177 rpm

Moment of inertia (J) : 6.89 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.25  
Temperature rise : 80 K  
Design : B

Heating constant

Cooling constant

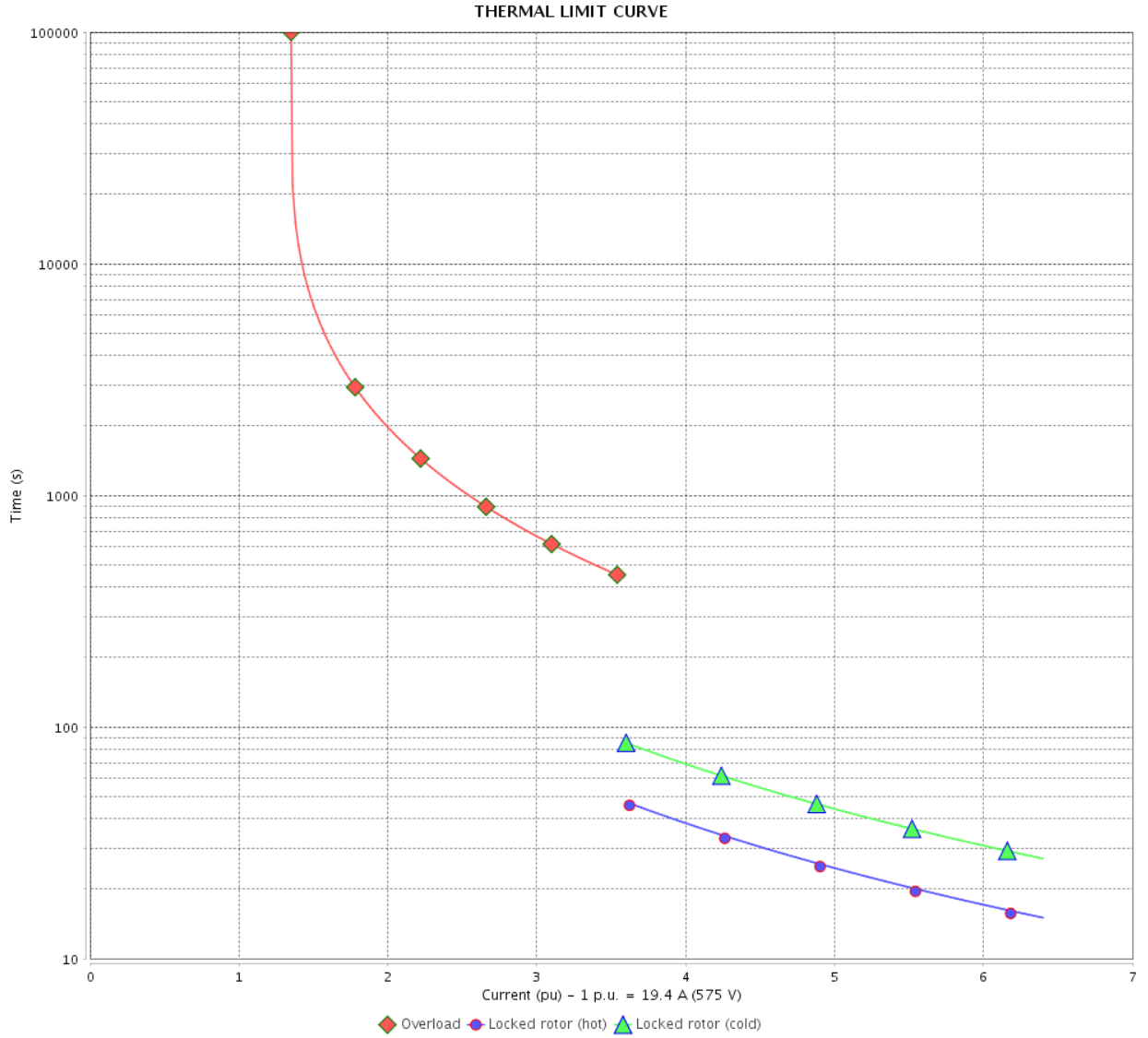
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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Date				

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

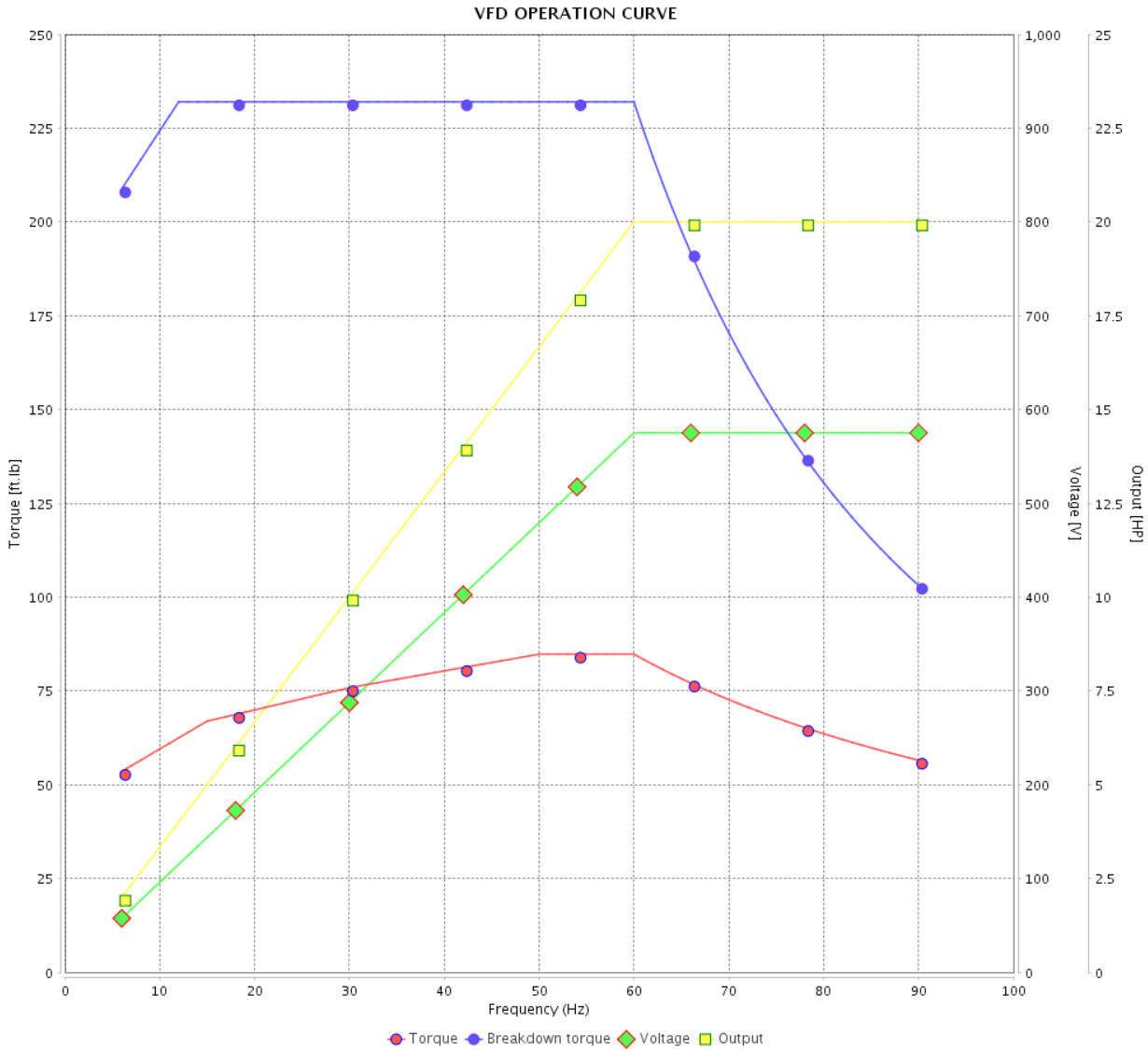


Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14494190

Catalog # : 020120T3H286TC-W40

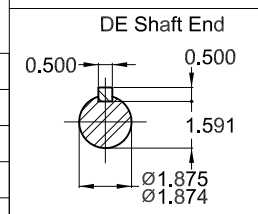
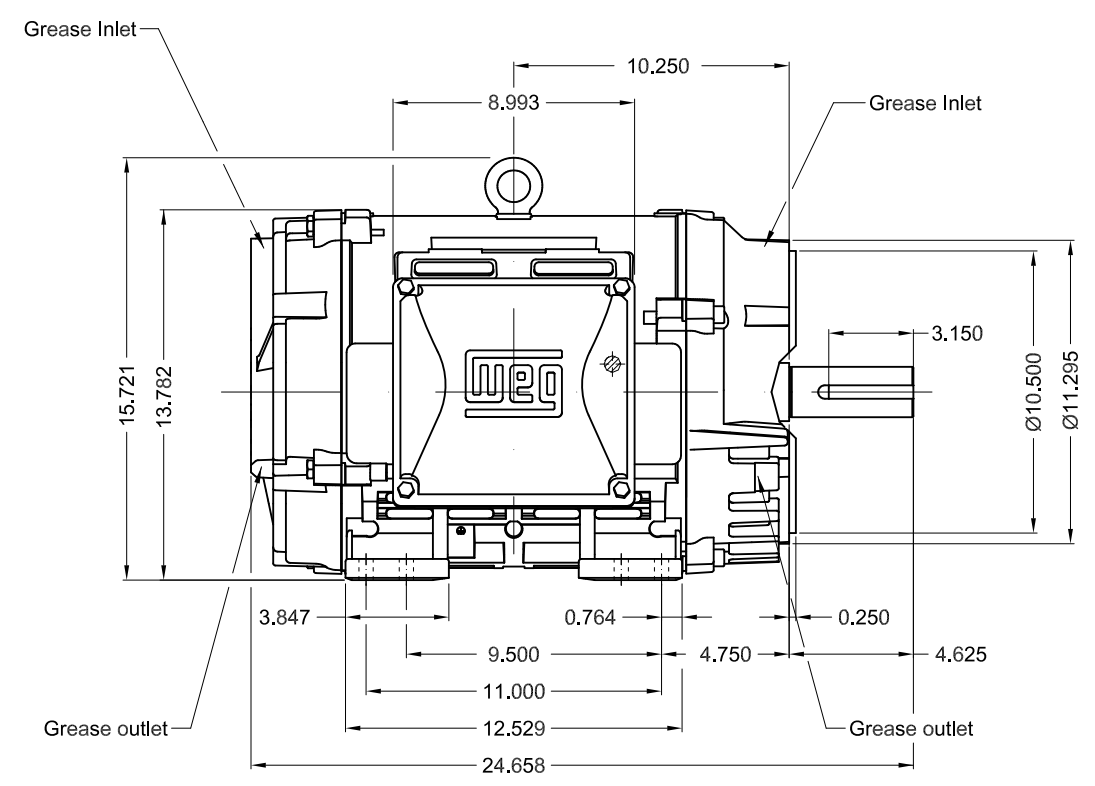
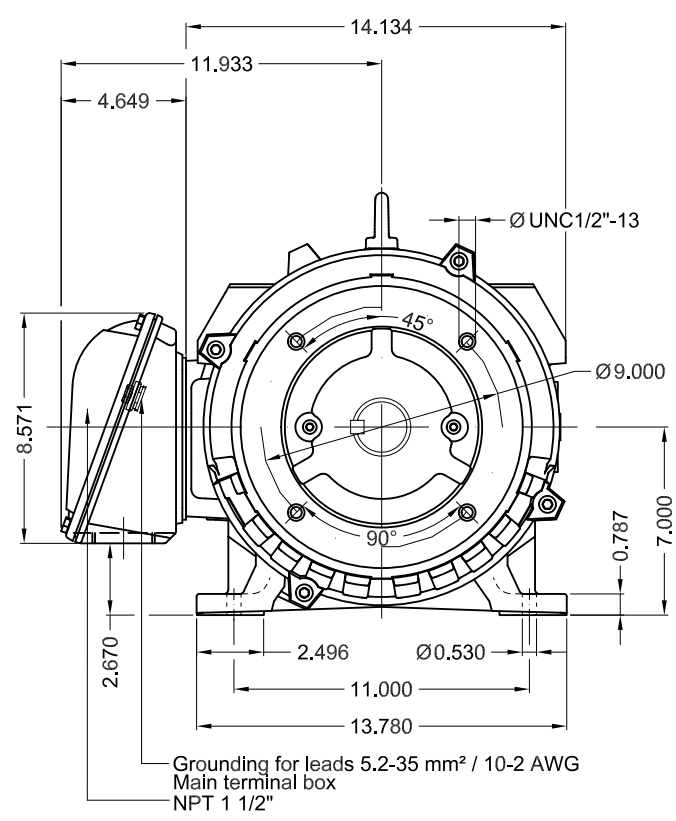


Performance : 575 V 60 Hz 6P

Rated current : 19.4 A  
LRC : 6.4  
Rated torque : 89.2 ft.lb  
Locked rotor torque : 229 %  
Breakdown torque : 260 %  
Rated speed : 1177 rpm

Moment of inertia (J) : 6.89 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.25  
Temperature rise : 80 K  
Design : B

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Bearing cap
Color RAL 5009
Painting plan 203A
Mounting NEMA F-1
Mounting B34R(D)

20 HP 06 Poles 60 Hz A

1:7

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWUSER	THREE PH. MOTOR W40 PREM. EFF.					
CHECKED		FRAME 284/6TC IP23 ODP					
RELEASED							
REL DT.		WMO Jaragua do Sul	Product Engineering	SHEET	1 / 1		

**PREVIEW**  
WDD



MODEL 020120T3H286TC-W40  
MADE IN BRAZIL  
14494190

**WEG** **W40 NEMA**  
**CC029A Premium**  
Inverter Duty Motor

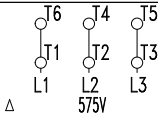


IEC 60034-1  
MOD.T01#FOXON



For use on PWM, VT 1000:1, CT 3:1, 1.0SF

PH 3	FR 284/6TC	HP(kW) 20(15)		Hz 60
V 575		A 19.4		IP23
NEMA NOM EFF		92.4	%	RPM 1177
ENCL ODP	DUTY CONT.		INS. CL. F $\Delta$ T 80 K	
PF 0.84		DES B	CODE G	AMB. 40°C
SF 1.25		SFA 24.3		ALT 1000 m.a.s.l.



→ 6311-Z-C3  
→ 6211-Z-C3

MOBIL POLYREX EM  
18 g 20000 h

390 Lbs