

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :				
Product line	: NEMA Premium Efficiency Three-Phase			
Product code :	13500513			
Catalog # :	50012ET3GKD580Z-W22			
Frame : 586/7TZ Output : 500 HP (370 kW) Poles : 6 Frequency : 60 Hz Rated voltage : 460 V Rated current : 603 A L. R. Amperes : 3618 A LRC : 6.0x(Code G) No load current : 240 A Rated speed : 1192 rpm Slip : 0.67 % Rated torque : 2200 ft.lb Locked rotor torque : 200 % Breakdown torque : 210 % Insulation class : F Service factor : 1.15	Locked rotor time : 45s (cold) 25s (hot) Temperature rise : 80 K Duty cycle : Cont.(S1) Ambient temperature : -20°C to +40°C Altitude : 1000 m.a.s.l. Protection degree : IP55 Cooling method : IC411 - TEFC Mounting : F-1 Rotation <sup>1</sup> : Both (CW and CCW) Noise level <sup>2</sup> : 77.0 dB(A) Starting method : Direct On Line Approx. weight <sup>3</sup> : 4403 lb			
Output	25% 50% 75% 100%			
Efficiency (%)	0.000 95.8 96.2 96.2			
Power Factor	0.00 0.66 0.76 0.80			
Foundation loads				
Max. traction	: 7449 lb			
Max. compression	: 11853 lb			
Bearing type	: <u>Drive end</u> NU-324 C3 <u>Non drive end</u> 6319 C3			
Sealing	: Taconite Labyrinth Taconite Labyrinth			
Lubrication interval	: 6000 h 13000 h			
Lubricant amount	: 72 g 45 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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Customer : \_\_\_\_\_

### Thermal protection

ID	Application	Type	Quantity	Sensing Temperature
1	Winding	Thermostat - 2 wires	1 x Phase	155 °C

### Space heater information

Voltage: 200 - 240 V

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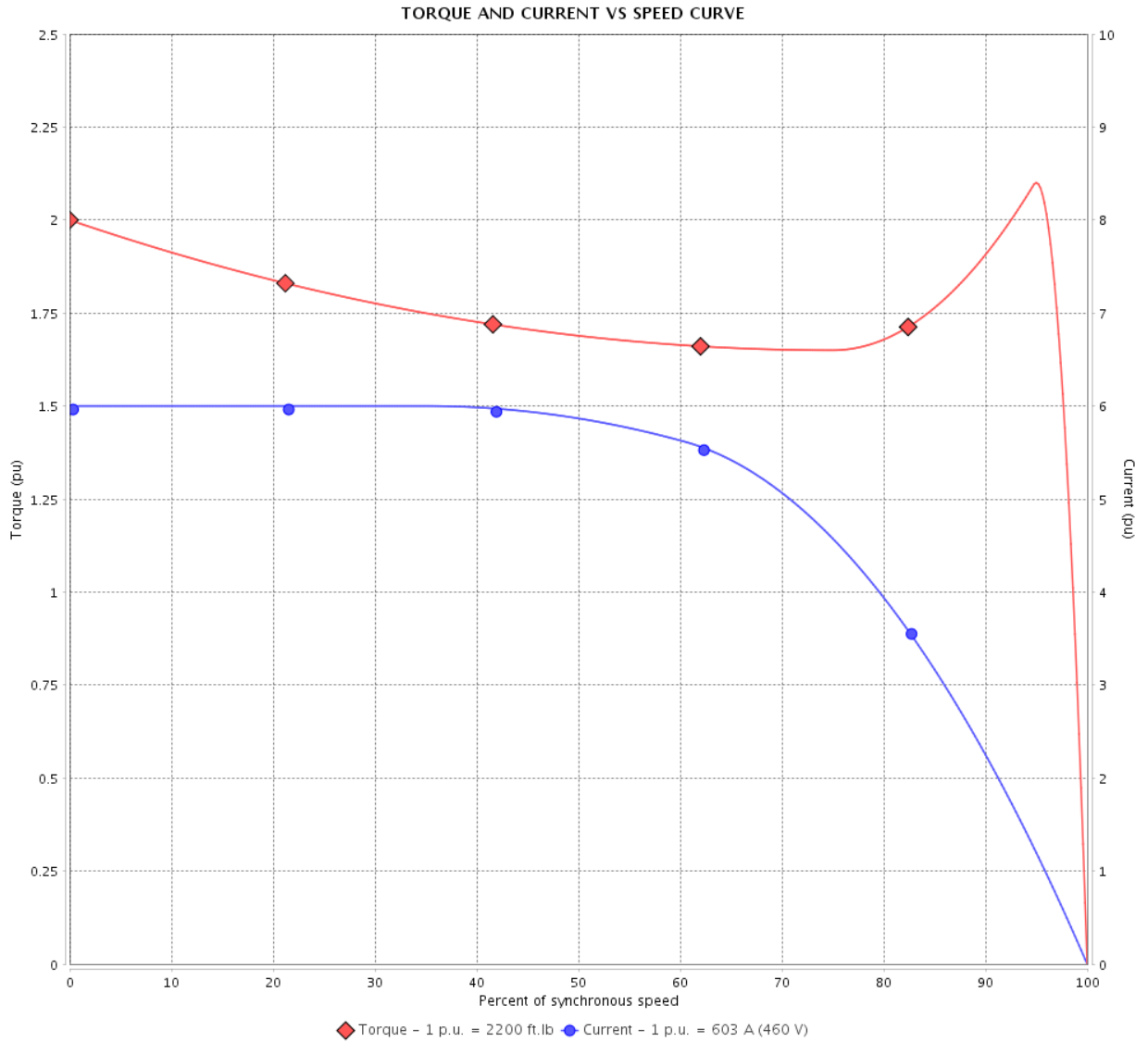
# TORQUE AND CURRENT VS SPEED CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase      Product code : 13500513  
 Catalog # : 50012ET3GKD580Z-W22



Performance : 460 V 60 Hz 6P

Rated current : 603 A	Moment of inertia (J)
LRC : 6.0	Duty cycle : Cont.(S1)
Rated torque : 2200 ft.lb	Insulation class : F
Locked rotor torque : 200 %	Service factor : 1.15
Breakdown torque : 210 %	Temperature rise : 80 K
Rated speed : 1192 rpm	

Locked rotor time : 45s (cold) 25s (hot)

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

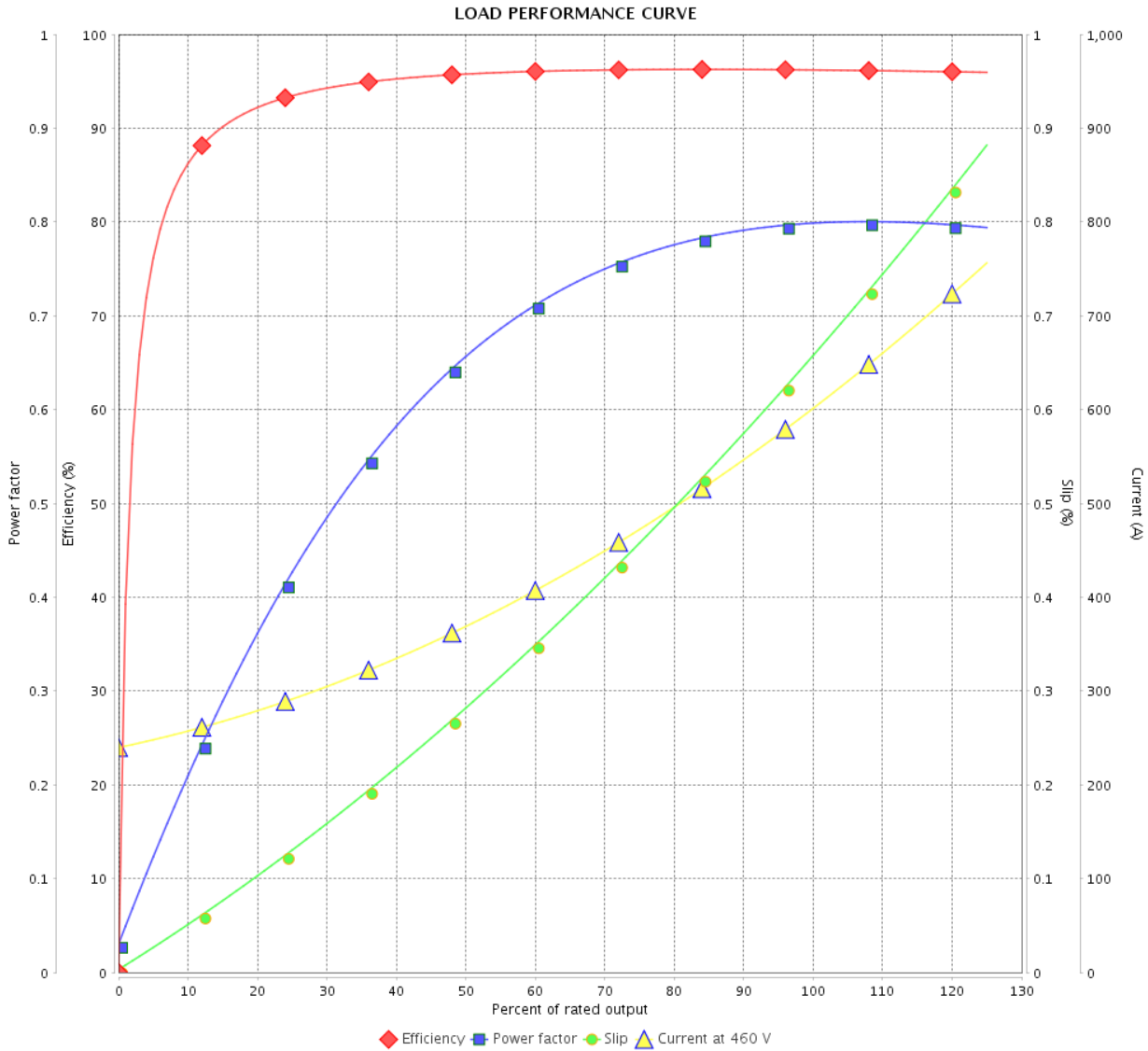


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13500513

Catalog # : 50012ET3GKD580Z-W22



Performance : 460 V 60 Hz 6P

Rated current : 603 A  
 LRC : 6.0  
 Rated torque : 2200 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 210 %  
 Rated speed : 1192 rpm

Moment of inertia (J)  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K

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# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
 Product code : 13500513  
 Catalog # : 50012ET3GKD580Z-W22

Performance : 460 V 60 Hz 6P

Rated current : 603 A	Moment of inertia (J)
LRC : 6.0	Duty cycle : Cont.(S1)
Rated torque : 2200 ft.lb	Insulation class : F
Locked rotor torque : 200 %	Service factor : 1.15
Breakdown torque : 210 %	Temperature rise : 80 K
Rated speed : 1192 rpm	

Heating constant  
 Cooling constant

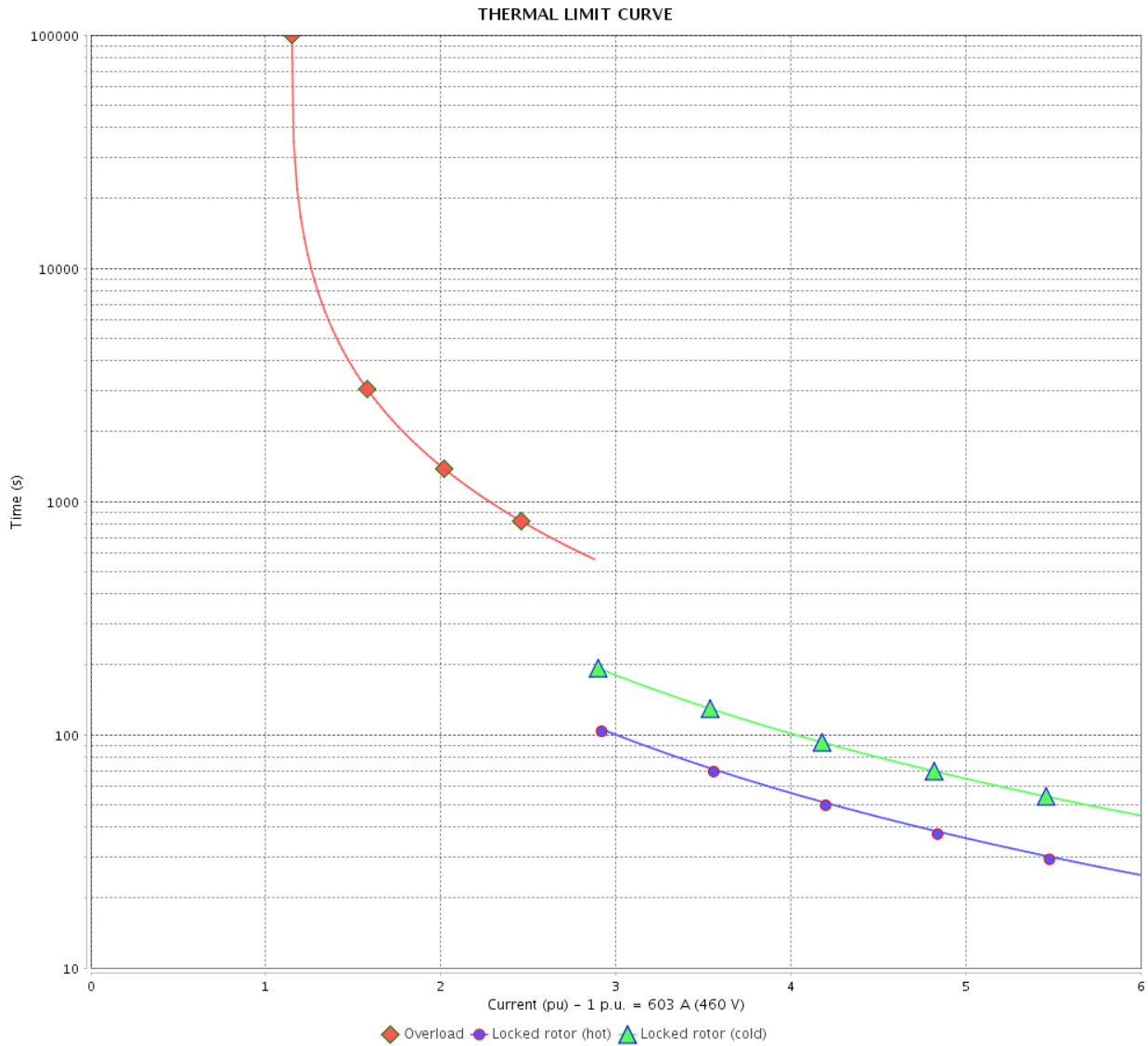
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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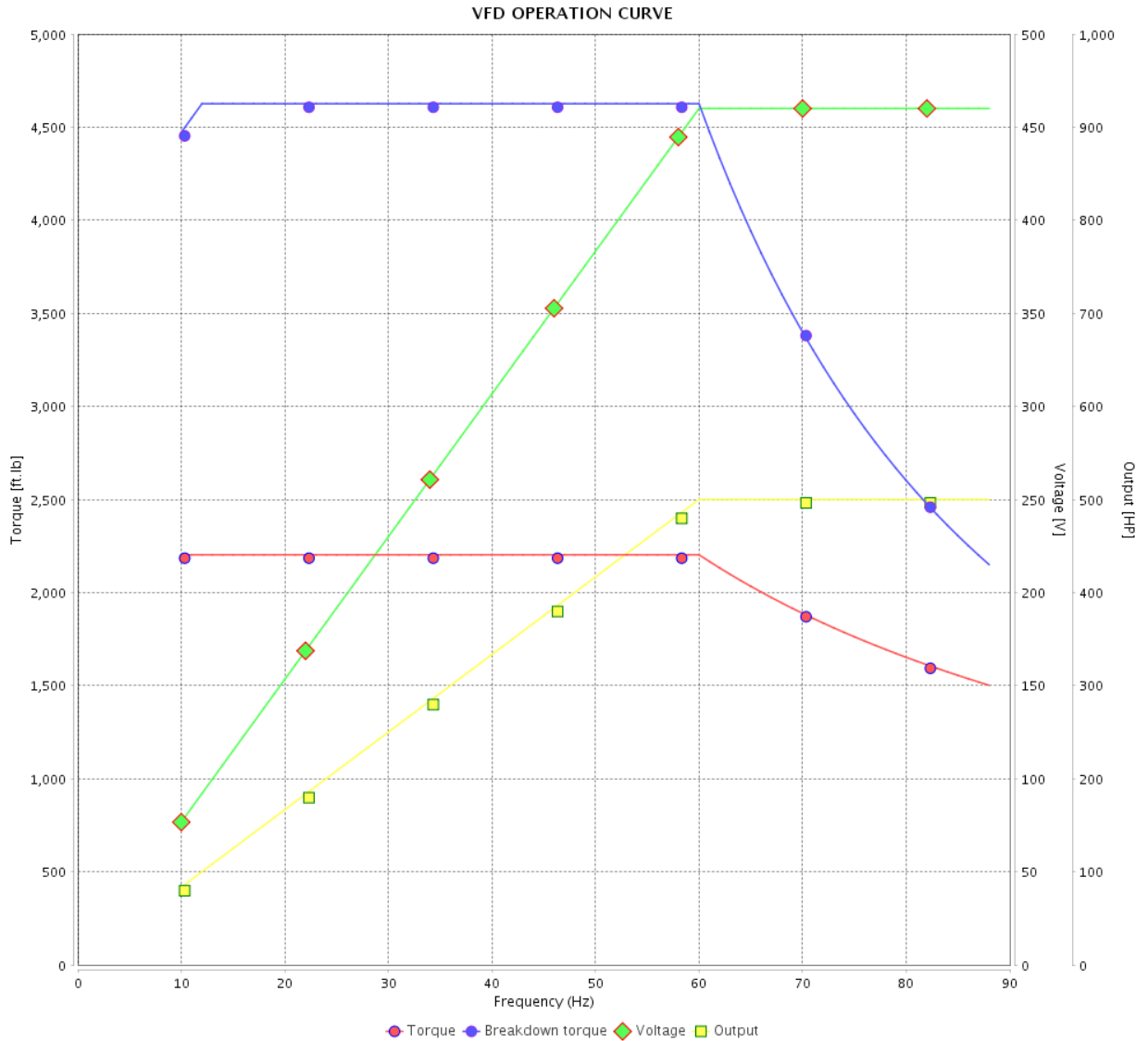
# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase  
 Product code : 13500513  
 Catalog # : 50012ET3GKD580Z-W22



Performance : 460 V 60 Hz 6P

Rated current : 603 A  
 LRC : 6.0  
 Rated torque : 2200 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 210 %  
 Rated speed : 1192 rpm

Moment of inertia (J)  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K

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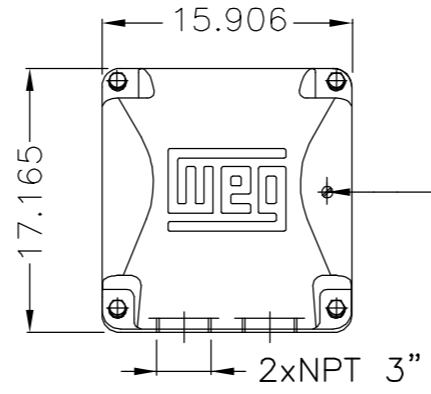
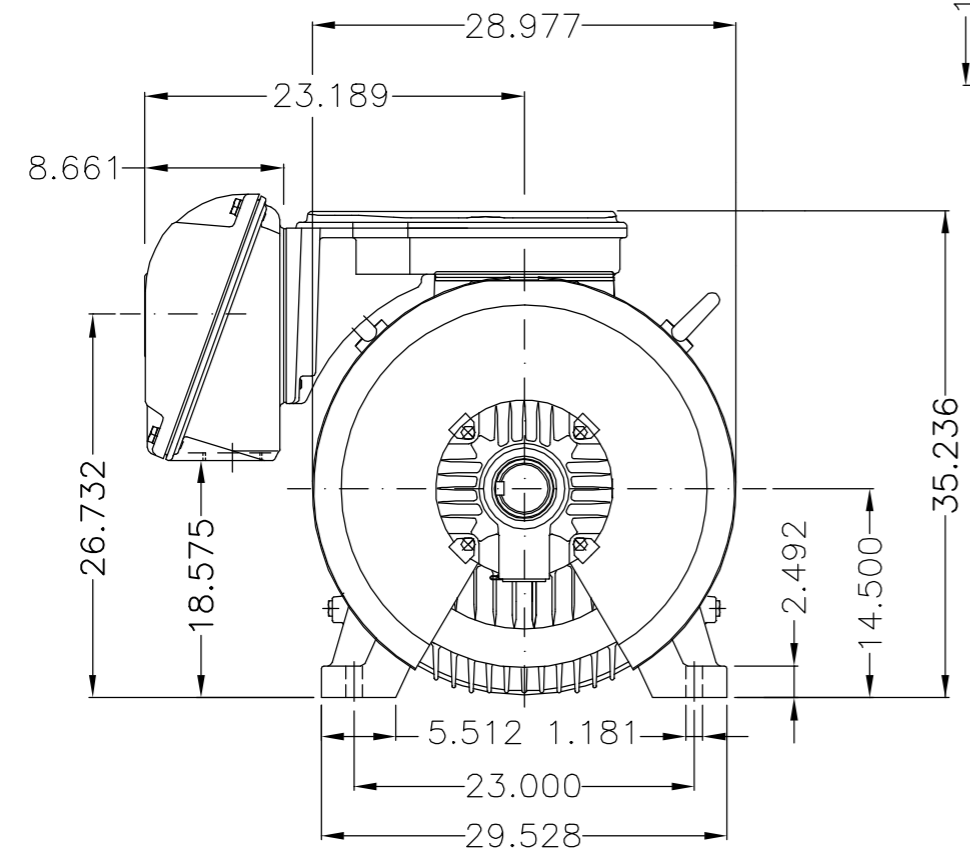
EIXO/SHAFT	
PADRÃO/STANDARD	
OPCIONAL/OPTIONAL	
ESPECIAL/SPECIAL	X

Dimensões em polegada  
Dimensions in inches

**CERTIFIED  
WEG MOTORES**  
Certified document.  
Not subject to changes.

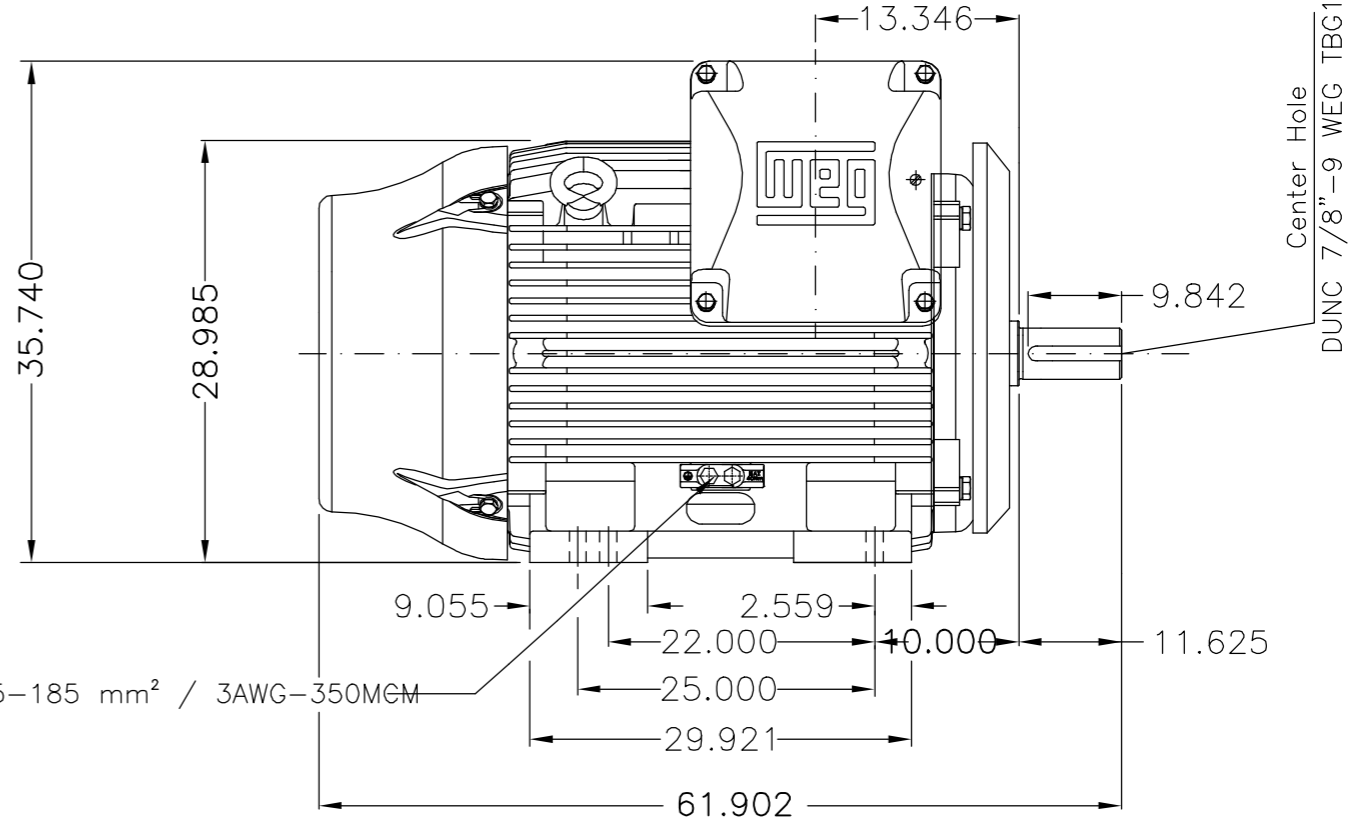
THIS IS AN UPDATED REVISION, THE  
PREVIOUS ONE MUST BE DISREGARDED.

A  
B  
C  
D  
E



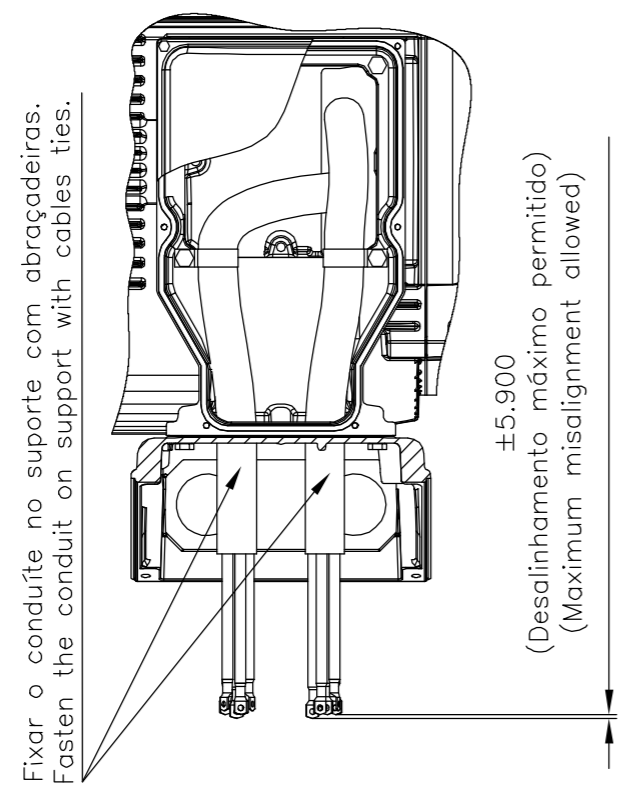
Main terminal box

Grounding for leads 35-120 mm<sup>2</sup> / 1-4/0 AWG



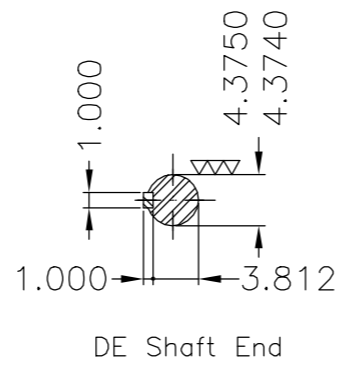
Grounding for leads 25-185 mm<sup>2</sup> / 3AWG-350MCM

Center Hole  
DUNC 7/8"-9 WEG TBG12



Fixar o conduto no suporte com abraçadeiras.  
Fasten the conduit on support with cables ties.

±5.900  
(Desalinhamento máximo permitido)  
(Maximum misalignment allowed)



DE Shaft End

Categoria A / Design A						
Proteção térmica desligamento - termostato 155°C / Thermostats 155°C to trip						
Tampa dianteira especial / Special DE endshield						
Conduite para cabos no interior do suporte da caixa de ligação						
Cables conduit inside terminal box support						
Linha do motor: Crusher Duty / Motor purpose: Crusher Duty						
Rolamento dianteiro de rolos NU-324 / NU-324 DE roller bearing						
Dispositivo de travamento de eixo / Shaft locking device						
Tampa traseira com mancal eletricamente isolado						
NDE endshield with electrically insulated bearing hub						
Defletor de ar dianteiro / Drive-End Air Deflector						
Cor RAL 5009 / Color RAL 5009						
Plano de pintura 203A / Painting plan 203A						
Forma construtiva NEMA F-1 / Mounting NEMA F-1						
Forma construtiva B3D / Mounting B3R(D)						
<b>WEG ELECTRIC CORPORATION - WEC</b>						

414149741/0	MEC
ECM	LOC
EXECUTED	DVEGINI
CHECKED	
RELEASED	NSCHMIDT
REL DT	02.05.2017

500001346215	B2	ADDED DEFLECTOR RETAIL	SAORIN	ERIC	10.08.2017	04
500001331189		ADIC.NOTA CONDUITE/ADD NOTE CONDUIT	MENSOR	EANJOS	05.07.2017	03
EXECUTED	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE VER
THREE PHASE W22 MOTOR - NEMA PREMIUM EFF						
FRAME 586/7TZ IP55 TEFC						
10004909462						
000	04					
REL DT	02.05.2017	WMO	Jaraguá do Sul	Product Engineering	SHEET	1 / 1

500 HP 06 Poles 60Hz 414649158/0

A



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RELEASED

ZME A3



MADE IN BRAZIL  
13500513



**NEMA**  
Premium  
W22



FOR SAFE AREA  
Mod.TE1BFOXON



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 - T3C  
For use on PWM: Gr. A, B, C and D,  
VT 1000:1, CT 6:1, 1.00SF - T2B

MODEL 50012ET3GKD580Z-W22

Inverter Duty Motor  
Severe Duty

PH3 60Hz Fr. 586/7TZ 1000m.a.s.l. IP55 TEFC 4742lb

V 460

A 603

HP 500

kW 370

SF 1.15

SFA 693

RPM 1192

PF 0.80

AMB 40°C

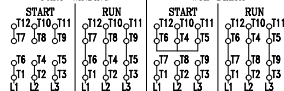
INS cl. F DT80K

NEMA NOM EFF 96.2%

DUTY CONT.

DES - Code G

PART-WINDING



→ NU-324-C3 (72g)

→ 6319-C3 (45g)



MOBIL POLYREX EM (6000h)

