

GENERAL ELECTRIC DO BRASIL S.A.
DATA SHEET
SYNCHRONOUS MOTORS

Proposition/Item:
S.O. : 270240
Quantity : 1
Rev :
Date : nov/22/85

Motor: HOMESTAKE MINING CB² of load referred to motor speed 3686 kgm²
on Equipment: Ventilating Fan Altitude 1615 m Room Temp 40

SPECS				41. Excitation Brushless (X) Static ()	
Model	271R206			Output	17 kW
Serial Number	270777			Voltage	125 V
Type	TS			Brushless field rated Voltage	460 V 3Ø 60 Hz
Frame Size	8610				
Number of Poles	10				
Output *	3000	HP		ACCESSORIES	
Speed *	720	rpm		1. RTD's for stator	10 at 25 °C Quantity: 6
Voltage *	2400	V		2. RTD's for bearings	100% at 0 °C (2)
Frequency *	60	Hz		3. Bearing Thermostats with two contacts	()
Number of phases	3			4. Bearing Dial Thermometers with two contacts	()
Enclosure	Drip Proof Gurded			5. Space Heater	
Stator connection	Y			Voltage	120 V - nØ of phases 1
Service factor	1.0			Output	2400 W
Duty Cycle	Continue			6. Bearing Vibration Detectors	()
Starting Method	LCI			7. Current Transformer	()
Rotor Type	Salient Pole with Amort.			8. Capacitor + Lightning Arrestor	()
Stator Insulation Class	F VPI			9. Foundation Bolts	()
Stator Temp. Rise: $\Delta t = 85$ °C by	RTD			10. Rigid Base	()
Rotor Insulation Class	F				
Rotor Temp. Rise: $\Delta t = 80$ °C by	Res.				
Rated Current	616	A		TESTS	
Starting Current	NA LCI	%		1. Normal	
Starting Torque	NA LCI	%		a) Winding Resistances	
Pull in Torque	NA LCI	%		b) Insulation Resistances	
Pull out Torque	175	%		c) High Potential	
Type of Coupling	Damping Type			d) Current and Power at no load	
Construction	B3 (IEC 34-7)			e) Magnetization Curve	
Installation Indoor	☒ Outdoor ☐			f) Vibration Measurement	
Hazardous Area	Yes ☐ No ☒			g) Bearing Heat Run	
NEC Class	Div.	Group	Code	h) Short Circuit characteristics	
Type of Bearing	Sleeve			i) Efficiency	
Bearing Lubrication	Oil Ring			2. Special	
End play	12.7	mm		a) Heat Run	()
Number of starts	LCI			b)	
Load (%)	Cos ϕ	Efficiency *2		c)	
100	0.9	0.970		d)	
75	0.9	0.969		e)	
50	0.9	0.964			
Reactances	$x_d = 1.37$	$x_q = 0.90$			
P.U.	$x_d' = 0.35$	$x_q' = 0.17$			
	$x_d'' = 0.16$				
Total Weight	13500	Kg (estimate)		NOTES: *1 Continuous Operating Speed Range	
Rotor CB ²	2300	Kgm ² (estimate)		50 to 110% of base speed. Suitable for 3000HP,	
Dimensions to outline:	1416423M			720 rpm, 60 Hz, 2400V, 1.0 S.F. 0.9 PF	
Direction of rotation from coupling side	CW			3000 HP, 792 rpm, 66 Hz, 2400 V, 1.0 S.F. 0.9 PF	
Minimum Airgap	6.1 mm			2062 HP, 597 rpm, 49.8Hz, 2400 V, 1.0 S.F. 0.95PF	

Prepared by: M. Banno

Approved : *AMB*

Date : nov/22/85

*2 Sinsoidal Wave Value

1157971

64N1

GENERAL  ELECTRIC

SYNCHRONOUS MOTOR

NO. **270777** MODEL **271R206** TYPE **TS** FORM **B3**

RATED **3000** HP $\cos \phi$ **0.9** ROTATION **720** rpm CODE

VOLTS **2400** PHASES **3** FREQUENCY **60** Hz

AMPERES **0.6** INSUL. CLASS **F** SF **1.0**

TEMPERATURE RISE AT { **85** °C STATOR BY **RID**

CONTINUOUS OPERATION { **80** °C ROTOR BY RESISTANCE

EXCITER - VOLTS **125** EXCITATION-AMPERES **11.0**

INSTRUCTIONS

FABRICADO PELA
GENERAL ELECTRIC DO BRASIL S.A.

SETOR DE EQUIPAMENTO PESADO
RODOVIA CAMPINAS-MONTE MOR KM 103 - BAIRRO BOA VISTA - CAMPINAS - S.P.
C.G.C. Nº 33.482.241/0011-45 INDÚSTRIA BRASILEIRA

WARNING

INSTALL AND GROUND THIS MACHINE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND SOUND LOCAL PRACTICES. CONTACT WITH ROTATING OR ELECTRICALLY ENERGIZED PARTS CAN BE HAZARDOUS.

BEFORE STARTING MAINTENANCE PROCEDURES DE-ENERGIZED ALL POWER SOURCES TO THE MACHINE AND ACCESSORY DEVICES. BE CERTAIN THAT EQUIPMENT CONNECTED TO THE SHAFT WILL NOT CAUSE MECHANICAL ROTATION.

FAILURE TO OBSERVE NECESSARY PRECAUTIONS MAY RESULT IN SERIOUS OR FATAL INJURY.

GE - B34A770177-199

SPACE HEATER



1151100-PT. 3

WATTS

-

VOLTS

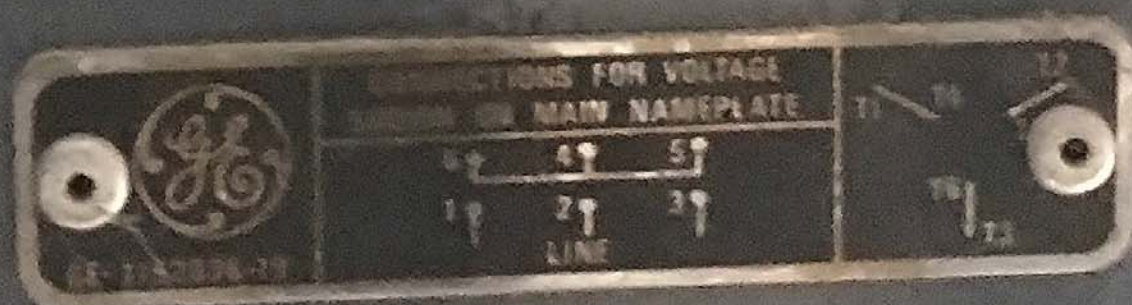
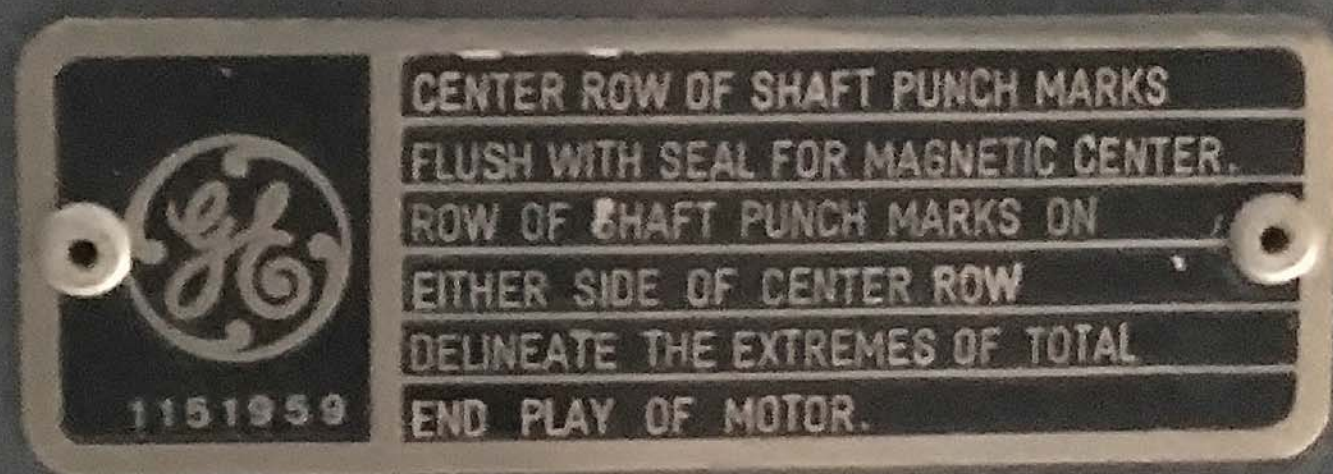
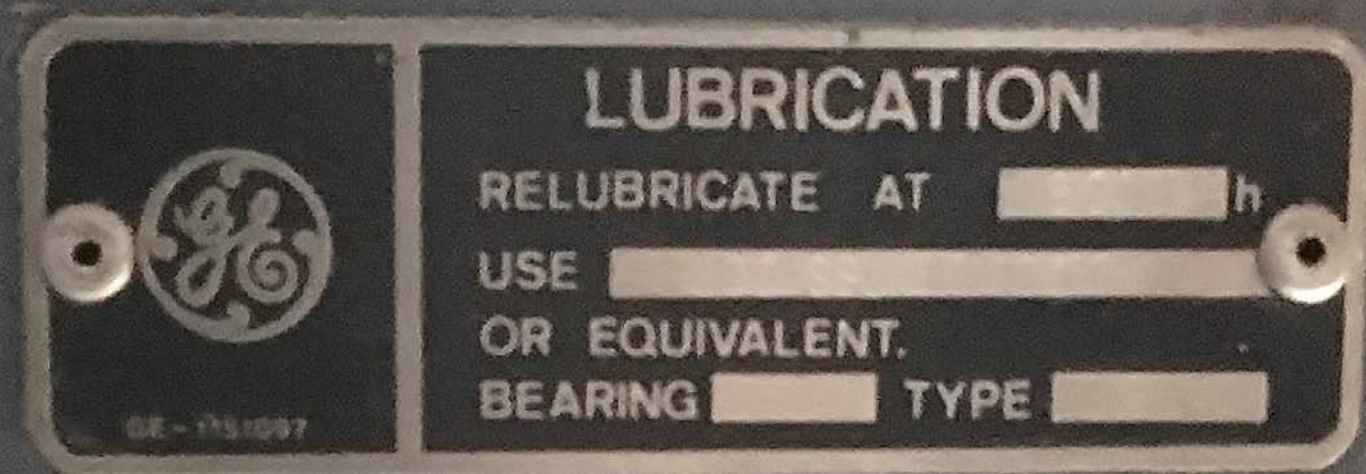
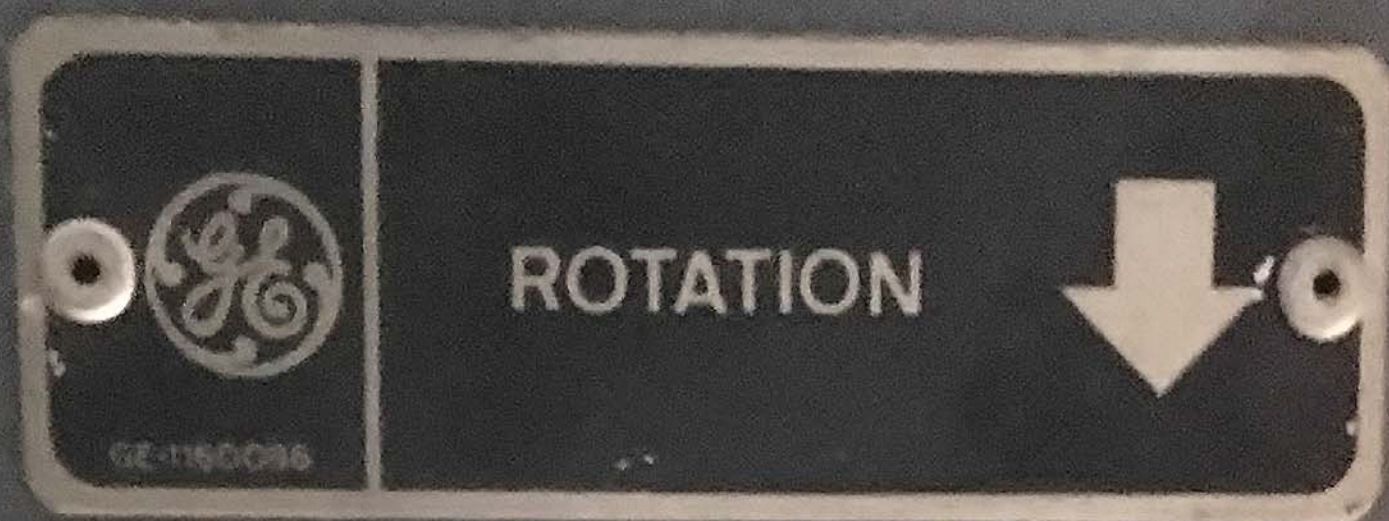
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GE-1160096

ROTATION





BRUSHLESS

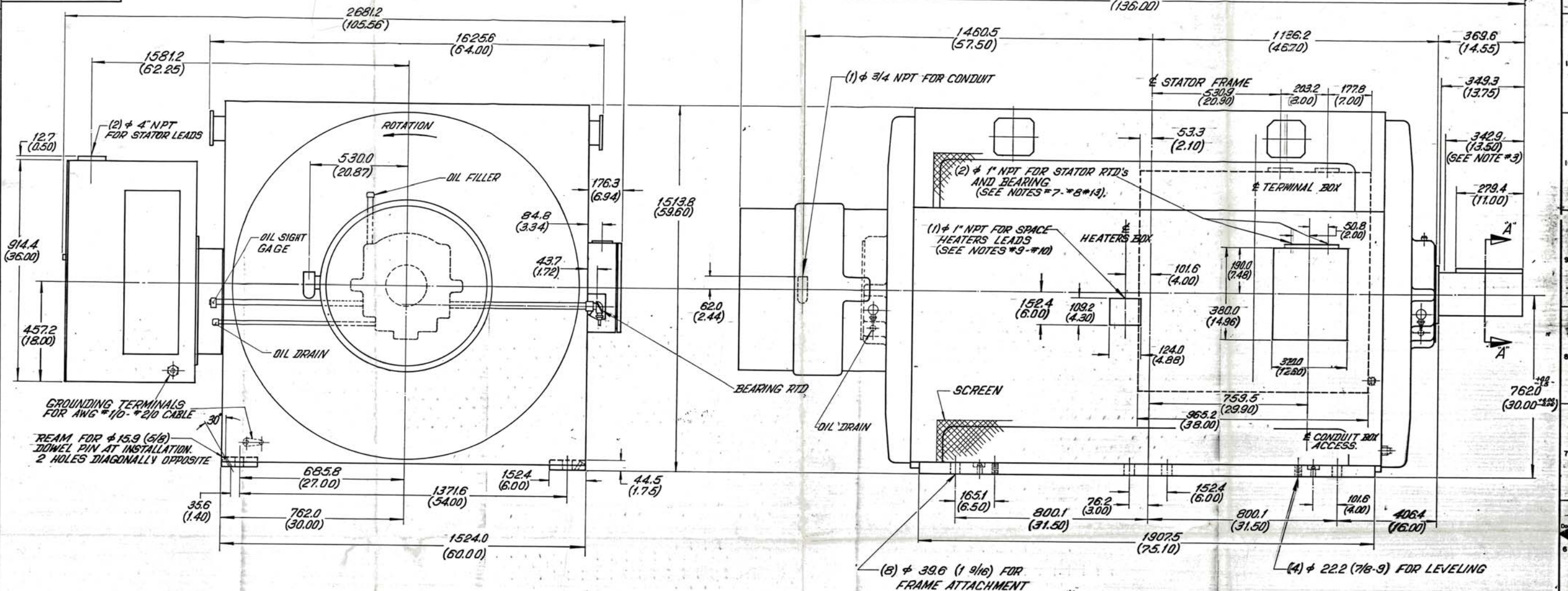
NO. 270777 MODEL 271P23 TYPE 1100
FORM 1-A1 PROTECTION 1000 RATED 17 kW (DC)
VOLTS 100 (DC) AMPERES 100 (DC) CIRCUIT 100
DISCHARGE RESISTOR 100 Ω AT 25°C INSULATION: STATOR 100 ROTOR 100
EXCITATION: RATED AMPERES 100 RATED VOLTS 100
TEMPERATURE RISE { STATOR 80 °C RESISTANCE
ROTOR 80 °C RESISTANCE
INSTRUCTIONS 100

FABRICADO PELA

RODOVIA CAMPINAS-MONTE MOR KM 103-B. BOA VISTA-CAMPINAS S.P.
C.G.C. Nº 33.482.241/0011-45 INDÚSTRIA BRASILEIRA

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1416423M

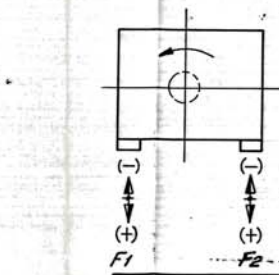


NOTES:

- 1 - THE OPPOSITE DRIVE END BEARING IS INSULATED TO PREVENT CURRENT CIRCULATION THROUGH THE MOTOR SHAFT. ANY DEVICE MOUNTED IN THIS BEARING MUST BE INSULATED.
- 2 - TOTAL ROTOR END PLAY: 12.7 (0.50).
- 3 - THIS DIMENSION REPRESENTS THE LENGTH OF STRAIGHT PART OF SHAFT.
- 4 - DIMENSIONS IN MILLIMETERS AND (INCHES).
- 5 - APPROXIMATE TOTAL MOTOR WEIGHT: 13500 Kg.
- 6 - ROTATION - CCW OPPOSITE DRIVE END.
- 7 - TERMINAL BOARD WITH 12 CONTACTS FOR STATOR RTD'S (WIRE #16) 10 Ω AT 25°C COPPER.
- 8 - TERMINAL BOARD WITH 6 CONTACTS FOR BEARING RTD'S (WIRE #16) 100 Ω AT 0°C PLATINUM.
- 9 - TERMINAL BOARD WITH 2 CONTACTS FOR SPACE HEATERS (WIRE #10).
- 10 - SPACE HEATERS = 2400W-120V-1φ
- 11 - SUITABLE FOR OPERATION AT THE FOLLOWING RATINGS:
 - SINGLE CHANNEL, 6 PULSE RATING
3000HP-720rpm-60Hz-2400V-1.0 S.F- POWER FACTOR 0.90
 - SINGLE CHANNEL, 6 PULSE RATING
3000HP-792rpm-66Hz-2400V-1.0 S.F- POWER FACTOR 0.90
 - SINGLE CHANNEL, 6 PULSE RATING
2062HP-597rpm-49.8Hz-2400V-1.0 S.F- POWER FACTOR 0.95
 - ADJUSTABLE SPEED RANGE 360 - 792 rpm
- 12 - BRUSHLESS EXCITER:
PRIMARY SUPPLY VOLTAGE WILL BE ADJUSTABLE 0 TO 480V-3φ-60Hz (CONTRA-CONNECTED).
- 13 - TERMINAL BOARD WITH 12 CONTACTS FOR BRUSHLESS EXCITER STATOR RTD'S (WIRE #16) 10 Ω AT 25°C COPPER.

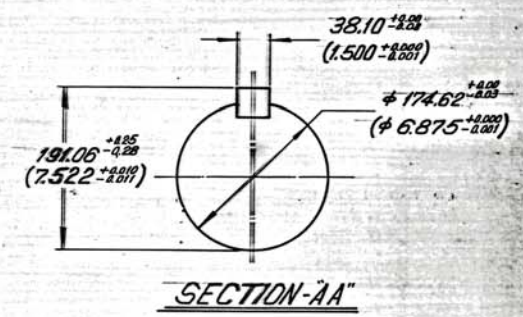
RATING:

TYPE	FRAME	POLES	VOLTAGE	SPEED	POWER	CURRENT	INSULATION	FREQUENCY	P.F.	PROTECTION
TS	8610	10	2400V	720 rpm	3000HP	616 A	CLASS F	60 Hz	0.9	DRIPTPROOF GUARDED



ROTATION	MAXIMUM LOAD ON FOUNDATION IN Kg.			
	DUE TO SHORT CIRCUIT		AT NORMAL OPERATING CONDITIONS	
	F1	F2	F1	F2
C.W.	+25500	-12000	—	—
C.C.W.	-12000	+25500	+2670	+10830

NOTE: REF. CONNECTION DIAGRAM & INSTRUMENTS LISTS UNDER HMC DWG # 9000-71 ORO HONDD FAN



CUSTOMER: HOMESTAKE MINING

HMC DWG # 8962-90 Shr23

DESENHADO	PT	NOME	DESENHO Nº	DESCRIÇÃO, MATERIAL	PESO
DESENHADO	MD-21-85	J.C. GOMES		GENERAL ELECTRIC DO BRASIL S.A.-DEP-CAMPINAS	
VERIFICADO					
APROVADO	MD-22-85			TÍTULO	
ESCALA				SYNCHRONOUS MOTOR OUTLINE	
				PCE. 6600 - DP	
				PCE. L.D. 2712206	
				REF. S.O. 270240	
				1416423M	