

LAMPIRAN

1. Data Beban 150SS1 Pembangkitan Generator 152-G-501A

150SS1-EE-0102EZ		HORIZONTAL BUS:		
3.3kV, 3PH, 3W, 50Hz, 40kA, 1SEC		NAME PLATE		
ITEM No.	DESCRIPTION	OPERATION MODE ⁴	NAME PLATE RATING [kW]	FLC [A]
151-B-501A-K1-M	AUX BOILER - FORCED DRAFT FAN	S	250	52.6
154-P-507CM	BFW PUMP	S	995	199.7
156-K-501BM	INSTRUMENT AIR COMPRESSOR	I	340	68.8
150SS1-EE-0102EZ-SPARE-1	SPARE MOTOR	SP	340	68.8

150SS1-EE-0103EZ		HORIZONTAL BUS:	
380-220V, 3PH, 4W, 50Hz, 50KA, 1SEC		NAME PLATE	
ITEM No.	DESCRIPTION	OPERATION MODE ⁴	RATED OUTPUT [kW]
150BD2-EE-0103AZ-A	380V STG MCC FOR 152-G-501A	C	101
150BD2-EE-0103BZ-A	380V STG MCC FOR 152-G-501B	S	101
150BD2-EE-0103CZ-A	380V STG MCC FOR 152-G-501C	C	101
150SS1-EE-0131EZ	EMERGENCY MAIN DISTRIBUTION PANEL	C	116
150SS1-EE-0141B-C	AC UPS BYPASS TR.	S	32.2
150BD1-EE-0141A-C	AC UPS BYPASS TR.	S	37.3
160SS1-EE-0103CZ	380V EMERGENCY MCC	-	200
110-P-501BM	CAUSTIC FEED PUMP	S	5.5
110-P-502BM	CAUSTIC SOLUTION TRANSFER PUMP	S	7.5
110-EE-0040A1Z	CATHODIC PROTECTION RECTIFIER FOR 110-T-501	C	0.75
151-MOV-600	MOV FOR MAIN STEAM STOP VALVE	I	1.42
152-P-501AM	LP CONDENSATE TRANSFER PUMP	C	7.5
152-P-502AM	NO.1 CONDENSATE PUMP	C	30
152-P-502CM	NO.1 CONDENSATE PUMP	S	30
152-P-502EM	NO.1 CONDENSATE PUMP	S	30
152-P-503AM	LP CONDENSATE PUMP	I	30
152-EE-0040A1Z	CATHODIC PROTECTION RECTIFIER FOR 152-T-501	C	0.75
154-A-508-P1-M	PH CONTROL CHEMICAL INJECTION PUMP	C	0.4
154-A-509-M1-M	OXYGEN SCAVENGER STORAGE AGITATOR	C	0.4
154-A-509-P1-M	OXYGEN SCAVENGER INJECTION PUMP	I	0.4
154-A-510-P1-M	PHOSPHATE INJECTION PUMP	C	0.4
154-A-510-P3-M	PHOSPHATE INJECTION PUMP	C	0.4
156-K-501BM-P2-M	INSTRUMENT AIR COMPRESSOR STAND BY OIL PUMP	S	1.5
157-EE-0040A1Z	CATHODIC PROTECTION RECTIFIER FOR 157-T-501	C	2.25
157-M-501BM	FUEL OIL TANK AGITATOR	C	7.5
157-P-502BM	FUEL OIL PUMP	C	90
165-EE-0040A1Z	CATHODIC PROTECTION RECTIFIER FOR 165-T-501	C	0.75
165-M-502M	CONFIRMATION PIT AGITATOR	C	0.75
165-P-505BM	H2SO4 TRANSFER PUMP	S	2.2
150SS1-EE-0103EZ-SPARE-1	SPARE	SP	30
150SS1-EE-0103EZ-SPARE-2	SPARE	SP	7.5
150SS1-EE-0103EZ-SPARE-3	SPARE	SP	7.5
150SS1-EE-0103EZ-SPARE-4	SPARE	SP	110
150SS1-EE-0103EZ-SPARE-5	SPARE	SP	1.7

150SS1-EE-0103A

380-220V, 3PH, 4W, 50Hz, 50KA, 1SEC		HORIZONTAL BUS:	
NAME PLATE			
ITEM No.	DESCRIPTION	OPERATION MODE	RATED OUTPUT [kW]
150BD1-HVAC-001A	HVAC FOR CCR-1	S	194.4 ⁴
150SS1-HVAC-001A	HVAC FOR UTILITY S/S FEEDER-1	S	102.5
150SS1-HVAC-002A	HVAC FOR UTILITY LAR FEEDER-1	S	18.9
150SS1-EE-0139A-B	BATTERY CHARGER INCOMER 'B'	C	6.75
150SS1-EE-0141B-B	AC UPS INCOMER 'B'	S	32.2
151-B-501A-LCP	SOOT BLOWER CONTROL PANEL	I	1.8
151-B-501B-LCP	SOOT BLOWER CONTROL PANEL	I	1.8
151-EE-00WOA	WELDING OUTLET	S	50 ⁴
⁴ 152-A-508-IB	OH CRANE FOR STEAM TURBINE GENERATOR	I	17.2
152-A-509-IB	OH CRANE DIESEL ENGINE GENERATOR	I	11.65
152-EE-00WOA, 152-EE-00WOB	WELDING OUTLET	S	50
156-A-502A-EA	DRY PLANT AIR DRYERS ELECTRICAL HEATER	C	133.3
156-A-502A-EB	DRY PLANT AIR DRYERS ELECTRICAL HEATER	C	66.7
156-A-502A-K1-M	BLOWER FOR AIR DRYER	C	37
⁴ 156-A-504-IB	OH CRANE FOR DRY PLANT AIR COMPRESSOR	I	5.81
156-K-502AT-E4	DRY PLANT AIR COMPRESSOR ELECTRICAL LUBE OIL HEATER	C	4.5
156-K-502AT-P2-M	DRY PLANT AIR COMPRESSOR STAND BY OIL PUMP	S	3
157-P-502CM	FUEL OIL PUMP	S	90
157-P-503M	FUEL OIL DRAIN PUMP	I	5.5
165-M-503M	NEUTRALIZATION AGITATOR	C	0.75
165-P-501AM	H2SO4 FEED PUMP	C	0.4
165-P-502AM	SPENT CAUSTIC FEED PUMP	C	0.4
165-P-503AM	NEUTRALIZED BRINE PUMP	C	0.55 ⁴
165-P-504AM	WEAK CAUSTIC FEED PUMP	C	0.4
⁴ 150BD3-EF-501A	EXHAUST FAN	C	11
150SS1-EE-0103A-SPARE-1	SPARE	SP	133.3
150SS1-EE-0103A-SPARE-2	SPARE	SP	128.61
150SS1-EE-0103A-SPARE-3	SPARE	SP	37
150SS1-EE-0103A-SPARE-4	SPARE	SP	18.5

2. Data Motor

INDUCTION MOTOR DATA SHEET										
1	Project Code	15/C00000/2011-S2	Job. No.		PO No.	RFCC-A-ME-PO-P07-01	Doc. No.	RFCC-A-153-ME-DS-P501		
2	Item No.	153-M-501 C	MOTOR MANUFACTURER'S DATA							
3	Service	Driver for Cooling Water Pumps			MFR Name	HHI				
4	No. Required :	Continuous	1	Intermittent	Spare	Frame No.	630			
5	GENERAL					Weight	14000 kg			
6	Plant Name	RFCC Project			MECHANICAL DATA & REQUIREMENTS					
7	Applicable Standard	IEC 60034			Type of Load	Continuous				
8	Technical Specification	Eng Spec Induction Motor (RFCC-C-EL-SP-003)			BHP	1766 kW				
9	MOTOR RATING				Load Torque at Starting (>10% motor FL Torque)	10	%			
10	Output	2000 kW			Load Torque at Full Speed	85.2	%			
11	Sync. Speed	600 rpm			GD2 of Load	700 kgf-m2				
12	Poles	10			Bearing (DE)	Type	Anti-friction	No.	NU1048M+6048C3	
13	Voltage	(NOTE 2)	3.3	kV	+/- 10% (IEC 60034-1)	Bearing (NDE)	Type	Anti-friction	No.	
14	Phase	3 phase			Lubricant	Grease(Gadus S2 V100 2)				
15	Frequency	50 Hz			+/- 5% (IEC 60034-1)	Bearing Insulation	△			
16	SPECIFICATION				Thrust Load (if any)	N/A	kg	Expansion	N/A	Contraction
17	Motor Type	3 Phase, Squirrel Cage Induction Motor			Vibration at No-Load	2.8 mm/s (rms)				
18	Rating (Duty)	2000 kW			CHARACTERISTICS OF MOTOR					
19	Rotation Direction	△ 2 CCW Viewed from DE			Full Load Speed	△ 2 591 rpm				
20	Starting Method	DOL			Load	1/2	3/4	FL		
21	Speed Control	N/A			Current (A)	284.8	367.2	458		
22	Noise (at 1m, at Full Load)	79 dBA at no load			Efficiency (%)	94.5	95.3	95.5		
23	No. of Starts	NOTE 3	Hot	1	Cold	2	PF (%)	65.0	75	80.0
24	Service Factor	1.0			Locked Rotor Current	500 %				
25	CONSTRUCTION				Locked Rotor PF	20 %				
26	Enclosure	Squirrel Cage			Locked Rotor Torque	75 %				
27	Location	Outdoor			Pull-up Torque	70 %				
28	Degree of Protection	IP54			Breakdown Torque	220 %				
29	Mounting Direction	Horizontal			Full Load Torque	3296.1 kg-m				
30	Mounting Base	Baseplate			Rotor GD2	1271.6 kgf-m2				
31	Mounting Form	On Pump Skid			Starting Time	1.6 sec at Un				
32	Cooling Method	IC611, TEAAC				3.1 sec at 80% Un				
33	Explosion Protection	Industrial Type			Allowable Locked Rotor Time	16 sec (Cold)				
34	Insulation Class	F				12 sec (Hot)				
35	Temperature Rise	B			Space Heater Output	△ 2 800 W				
36	Coupling	half coupling			△ 2 △ CABLE ENTRY					
37	Shaft End	With coupling key			Cable type	Cable Size		Entry Type		
38	MOTOR SURFACE				Motor Main	CVWAZV	1C-400sq.mm x 6line	Bottom ISO 6xmM50-p1.5		
39	Finish Color	N 7.0			Space Heater	CVWAZV-S	2C-6sq.mm	Bottom ISO M20-P1.5		
40	Corrosion Proof	as per Eng Spec Induction Motor (RFCC-C-EL-SP-003)			Bearing RTD	N/A	N/A	N/A		
41	ACCESSORIES				Winding RTD	CVWAZV	8T-2.5	Bottom ISO M20-P1.5		
42	Space Heater	Yes	220	V AC	Position of Terminal Box	Against motor nameplate position				
43	Bearing RTD	Qty	N/A	Type	REQUIRED INFORMATION FROM MANUFACTURER					
44	Winding RTD	Qty	2 ea / ph	Type	PT 100		Outline Drawing	Yes		
45	Base for Motor	On Skid mounting			Speed-Torque Curve	Yes				
46	Key for Coupling	Yes			Speed-Current Curve	Yes				
47	Canopy	N/A			Time-Current Heating Curve	Yes				
48	ELECTRICAL PROTECTION				Install, Operation & Maintenance Instructions	Yes				
49	Differential	N/A	CT Ratio	N/A	Recommended Spare Parts List	Yes				
50	Surge Arrestor	N/A			Certified Test Report	Yes				
51	Surge Capacitor	N/A			Complete Name Plate Data	Yes				
52	SPECIAL REQUIREMENTS & NOTES									
53	1. "Yes" means "Required / to be provided", and "No" means "Not Required / Not Applicable".									
54	2. Design motors Rating and Voltage a) motor up to 110 kW : 380V / 3ph / 50 Hz									
55	b) motor above 110 kW: 3300V / 3ph / 50 Hz									
56	3. Motor above than 750 kW shall be suitable for two (2) consecutive starts from rest at ambient conditions and one (1) additional start after 20 minutes running. Time of 45 min at standstill.									
57	These motor shall be capable for six (6) starts in one day without injury to the motor.									
58	(*) indicates data to be filled by Vendor.									

GS E&C Corporation		MOTOR DATA SHEET				
DOC. NO. RFCC-G-ME-VP-154P507-SP012		SHEET		1 of 1		
GS E&C Job No. : 101830	REV. 0	DATE 16-Nov-12	PREPARED J.LEE	CHECKED Y.G.KWON	APPROVED Y.S.JOO	
PROJECT : Cilacap Resid Fluid Catalytic Craking Project	1	11-Dec-12	J.LEE	Y.G.KWON	Y.S.JOO	
CLIENT : PT. Pertamina (Persero)	2	06-Feb-13	J.LEE	Y.G.KWON	Y.S.JOO	
LOCATION : Cilacap, Central JAVA, Indonesia	3					
ITEM NO. : 154-P-507 CM	SERVICE : BFW Pumps					
NOS. REQUIRED : WORKING - / STAND BY 1 / TOTAL 1	DATA SHEET TYPE NO.					
A. GENERAL			C. MANUFACTURER'S DATA (TO BE COMPLETED BY MFR)			
1. LOCATION : <input type="checkbox"/> INDOOR <input checked="" type="checkbox"/> OUTDOOR	1. MANUFACTURER : HHI		FRAME NO. : 400			
2. DESIGN TEMPERATURE : MAX. 40 °C MIN. 10 °C	2. MOTOR TEMPERATURE RISE : 80 °C					
3. RELATIVE HUMIDITY : Max. 100 %	3. LOAD		1/2	3/4	F.L S.F	
4. ALTITUDE (SEA LEVEL) : LESS THAN 3.75 METERS	EFFICIENCY [%]		[95.2]	[95.7]	[95.8] [1.0]	
5. APPLICABLE STANDARDS : IEC 60034 and RFCC-C-EL-SP-003	POWER FACTOR [%]		[85.0]	[89.0]	[91.0] [1.0]	
6. HAZARDOUS CLASS ZONE. GROUP	CURRENT [A]		[107.6]	[153.3]	[199.7] [1.0]	
TEMPERATURE RANGE : <input checked="" type="checkbox"/> NON-HAZARDOUS	4. ACCELERATION TIME (MOTOR & LOAD)		2.1 [SEC]			
B. MOTOR DESIGN DATA			5. FULL-LOAD TORQUE 325.4 [Kg m]			
MOTOR RATING			6. LOCKED ROTOR TORQUE 65 [%]			
NAMEPLATE RATING 995 kW 2 POLES	7. PULL-UP TORQUE 60 [%]		8. BREAK DOWN TORQUE 250 [%]			
RATED VOLTAGE (SEE NOTE 1) 3300 V 3 PHASE 50 HZ	8. BREAK DOWN TORQUE 250 [%]		9. LOCKED ROTOR CURRENT 1298.1 [A] (650%)			
SERVICE FACTOR 1.0 RATED SPEED 2978 RPM	9. LOCKED ROTOR CURRENT 1298.1 [A] (650%)		10. LOCKED ROTOR POWER FACTOR 15 [%]			
MOTOR TYPE			11. PERMISSIBLE LOCKED ROTOR TIME (PLRT) 12 [SEC]			
<input checked="" type="checkbox"/> SQUIRREL CAGE INDUCTION <input type="checkbox"/> WOUND ROTOR	11. PERMISSIBLE LOCKED ROTOR TIME (PLRT) 12 [SEC]		12. TRANSIENT REACTANCE (X'd) 15.6 [%]			
<input type="checkbox"/> SYNCHRONOUS MOTOR <input type="checkbox"/> DC MOTOR	12. TRANSIENT REACTANCE (X'd) 15.6 [%]		13. SUB - TRANSIENT REACTANCE (X'd) 15.6 [%]			
ENCLOSURE TYPE			14. FAN ROTATION <input checked="" type="checkbox"/> UNI-DIRECTIONAL <input type="checkbox"/> REVERSIBLE			
<input checked="" type="checkbox"/> TEAAC (TOTALLY ENCLOSED AIR TO AIR COOLED)	14. FAN ROTATION <input checked="" type="checkbox"/> UNI-DIRECTIONAL <input type="checkbox"/> REVERSIBLE		15. SPACE HEATER <input checked="" type="checkbox"/> REQ'D (220 V) <input type="checkbox"/> NOT REQ'D			
<input type="checkbox"/> FORCED VENTILATED (WITH OUTER FAN & DUCT)	15. SPACE HEATER <input checked="" type="checkbox"/> REQ'D (220 V) <input type="checkbox"/> NOT REQ'D		16. WINDING TEMP. DETECTOR <input type="checkbox"/> REQ'D <input checked="" type="checkbox"/> NOT REQ'D			
<input type="checkbox"/> WATER COOLED <input type="checkbox"/> WEATHER PROTECTED II	16. WINDING TEMP. DETECTOR <input type="checkbox"/> REQ'D <input checked="" type="checkbox"/> NOT REQ'D		BEARING TEMP. DETECTOR <input checked="" type="checkbox"/> REQ'D <input type="checkbox"/> NOT REQ'D			
DEGREE OF PROTECTION : IP55 FOR MOTOR	17. MOTOR NET WEIGHT 5500 [Kg]		VIBRATION DETECTOR <input checked="" type="checkbox"/> REQ'D <input type="checkbox"/> NOT REQ'D			
IP55 FOR MOTOR TERMINAL BOX	18. ROTOR MOMENT OF INERTIA 8.0 [Kg. m ²]		19. BEARING NUMBER : BCF7-75 LUBRICANT : ISO VG 22			
EXPLOSION PROOF CONSTRUCTION			OUTBOARD : SLEEVE INBOARD : SLEEVE			
<input type="checkbox"/> FLAME-PROOF (Exd IIB) <input type="checkbox"/> FLAME-PROOF (Exd IIC)	19. BEARING NUMBER : BCF7-75 LUBRICANT : ISO VG 22		20. TOTAL SHAFT END FLOAT ±3 (TOTAL 6) [mm]			
<input type="checkbox"/> INCREASED SAFETY (Exe) <input type="checkbox"/> NON-SPARKING (Exn)	20. TOTAL SHAFT END FLOAT ±3 (TOTAL 6) [mm]		21. NUMBER OF CONSECUTIVE START 2 HOT 3 COLD			
<input type="checkbox"/> INNER-PRESSURIZED (Exp) <input checked="" type="checkbox"/> WEATHER PROOF (WP)	21. NUMBER OF CONSECUTIVE START 2 HOT 3 COLD					
STARTING CONDITIONS			D. ADDITIONAL INFORMATION FURNISHED BY MANUFACTURER			
<input checked="" type="checkbox"/> FULL VOLTAGE <input type="checkbox"/> Y-Δ STARTING	[<input checked="" type="checkbox"/>] SPEED - TORQUE/CURRENT CURVE		[<input checked="" type="checkbox"/>] TIME - CURRENT HEATING (THERMAL LIMIT) CURVE			
<input type="checkbox"/> SOFT STARTER <input type="checkbox"/> AUTO TR	[<input checked="" type="checkbox"/>] TIME - CURRENT HEATING (THERMAL LIMIT) CURVE		[<input checked="" type="checkbox"/>] MOTOR THERMAL CAPACITY DATA			
<input type="checkbox"/> VOLTAGE DIP PROTECTION <input type="checkbox"/>	[<input checked="" type="checkbox"/>] MOTOR THERMAL CAPACITY DATA		[<input checked="" type="checkbox"/>] INSTALLATION, OPERATION & MAINTENANCE INSTRUCTION			
PROTECTION			[<input checked="" type="checkbox"/>] RECOMMENDED SPART PARTS LIST			
<input type="checkbox"/> DIFFERENTIAL <input type="checkbox"/> SURGE <input type="checkbox"/>	[<input checked="" type="checkbox"/>] RECOMMENDED SPART PARTS LIST		[<input checked="" type="checkbox"/>] DIMENSIONAL OUTLINE DRAWING			
MOUNTING			[<input checked="" type="checkbox"/>] CERTIFIED TEST REPORT & WRITTEN STATEMENT			
<input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/> VERTICAL	[<input checked="" type="checkbox"/>] CERTIFIED TEST REPORT & WRITTEN STATEMENT		[<input checked="" type="checkbox"/>] COMPLETE NAMEPLATE DATA			
<input checked="" type="checkbox"/> FOOT <input type="checkbox"/> FLANGED	[<input checked="" type="checkbox"/>] COMPLETE NAMEPLATE DATA		[]			
DRIVE SYSTEM			MAIN TERMINAL BOX LOCATION VIEWED FROM OPP. DRIVE END			
<input checked="" type="checkbox"/> DIRECT COUPLED <input type="checkbox"/> GEAR UNIT <input type="checkbox"/> V - BELTS	[<input checked="" type="checkbox"/>] DIRECT COUPLED <input type="checkbox"/> GEAR UNIT <input type="checkbox"/> V - BELTS		<input checked="" type="checkbox"/> RIGHT <input type="checkbox"/> LEFT <input type="checkbox"/> TOP OF THE FRAME			
<input type="checkbox"/> MECH. SPEED VARIATOR <input type="checkbox"/>	[<input checked="" type="checkbox"/>] MECH. SPEED VARIATOR <input type="checkbox"/>		CABLE ENTRY			
INSULATION			<input type="checkbox"/> FEMALE THREADED <input type="checkbox"/> CABLE GLAND <input type="checkbox"/>			
INSULATION CLASS : F	INSULATION CLASS : F		<input type="checkbox"/> NPT <input type="checkbox"/> PF <input type="checkbox"/> PG <input checked="" type="checkbox"/> ISO			
TEMPERATURE RISE WITHIN CLASS : B	TEMPERATURE RISE WITHIN CLASS : B		MAIN TERMINAL BOX HUB SIZE : M63, 2X3C-95 sq.mm			
ROTOR TYPE FOR SYNCHRONOUS MOTOR			E. OTHERS			
<input type="checkbox"/> SALIENT POLE REVOLVING FIELD WITH STARTING WINDING	[<input type="checkbox"/>] SALIENT POLE REVOLVING FIELD WITH STARTING WINDING		ROTATION FACING OPP. DRIVE END <input checked="" type="checkbox"/> CW <input type="checkbox"/> CCW			
<input type="checkbox"/> SOLID POLE REVOLVING FIELD	[<input type="checkbox"/>] SOLID POLE REVOLVING FIELD		MAX. SOUND PRESSURE LEVEL 79 dB (@ 1m) at no-load & mean value			
EXCITATION SYSTEM FOR SYNCHRONOUS MOTOR			COLOR FINISHING (MUNSELL NO.) : N-7			
<input type="checkbox"/> BRUSHLESS EXCITATION SYSTEM (WITH A ROTOR ARMATURE TYPE)	[<input type="checkbox"/>] BRUSHLESS EXCITATION SYSTEM (WITH A ROTOR ARMATURE TYPE)		OTHER SPECIAL REQUIREMENT			
<input type="checkbox"/> AC GENERATOR AND ROTARY RECTIFIER	[<input type="checkbox"/>] AC GENERATOR AND ROTARY RECTIFIER		Starting Current Restrict 650 % (compared with rated current)			
F. REMARKS						
1. THE CAPACITY OF MOTOR SHALL BE APPLIED AS FOLLOWS.						
UP TO 110 kW : 3 PHASE 380 V 50 Hz						
ABOVE 111 kW : 3 PHASE 3300 V 50 Hz						
2. Space Heater Rating : 400W						




AC INDUCTION MOTOR DATA SHEET

Model No. or RFQ No. ▲	RFCC-G-ME-PO-K04	Item No. ▲	156-K-501BM	Rev. No.	[2]
Project Name ▲	CILACAP RFCC PJT	Project No.	20124643RMHD50	Quantity	1 set
GENERAL SPECIFICATION			PERFORMANCE DATA		
Frame Size	355	Rated Output	340 kW		
Type	HLE5 352-25E	Number of Poles	2		
Enclosure(Protection)	TEFC (IP 55)	Rotor Type	Squirrel Cage		
Method of Cooling	IC411	Starting Method*	DOL		
Rated Frequency	50 Hz	Rated Voltage	3300 V		
Number of Phases	3	Current	Full Load	68.8 A	
Insulation Class	<input checked="" type="checkbox"/> F <input type="checkbox"/> B <input type="checkbox"/> H	Locked-rotor**	500 %		
Temp. Rise at full load (by resistance method)		Efficiency			
at 1.0 S.F					
80 deg.C (B)			50% Load	94.1 %	
			75% Load	94.8 %	
Motor Location	<input type="checkbox"/> Indoor <input checked="" type="checkbox"/> Outdoor	100% Load	95.0 %		
Altitude	Less than 1000 meter	Power Factor(p.u)			
Relative Humidity	Less than 100 %	50% Load			
Ambient Temp.	40 deg.C (Max.)	75% Load			
Duty Type	Continuous (S1)	100% Load			
Service Factor	1.0	Speed at Full Load ▲			
Mounting	<input checked="" type="checkbox"/> B3 <input type="checkbox"/> B5 <input type="checkbox"/> V1 <input type="checkbox"/>	2960 r.p.m			
Bearing	Type	Anti-friction			
	DE/N-DE	6317C3 / 6317C3			
	Lubricant	Grease(SHELL, Gadus S5 V42P 2.5)			
External Thrust	Not applicable				
Coupling Method	<input checked="" type="checkbox"/> Direct <input type="checkbox"/> V-Belt	Torque			
Shaft Extension	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double	Full Load ▲			
Terminal	Main	<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Cast Iron			
	Box	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Rotation(Viewed from DE) ▲	<input type="checkbox"/> CW <input checked="" type="checkbox"/> CCW <input type="checkbox"/> BI-Direction	Locked-rotor**			
Application	Compressor	60 %			
Area classification	Non-Hazardous	Breakdown**			
Type of Ex-Protection	N/A	210 %			
Applicable Standard	IEC,NEMA	Moment of Inertia (J)			
ACCESSORIES ▲ 1.Space Heater : 1Phase, 220V, 200W		Load			
		Motor			
		Sound Pressure Level (No-load & mean value at 1m from motor)			
		82 dB(A) (max)			
		Vibration			
		2.3mm/sec(rms)			
		Permissible number of consecutive starts			
		Cold 3 times			
		Hot 2 times			
		Paint			
		Munsell No. ▲ N7			
SUBMITTAL DRAWING					
		Outline Dimension Drawing		Motor Weight(Approx.)	
		B3	HM-089000	2820 kg	
REMARK					
SPARE PARTS					
Date	DSND	CHKD	CHKD	APPD	
2012.12.27	D.G.Kang	--	--	J.G.Kim	

Note: Others not mentioned in this data sheet shall be in accordance with maker standard.
 Above technical data are only design values and shall be guaranteed with tolerance of applicable standard.
 Inspection and performance test shall be maker standard, if not mentioned.
 * In case of Inverter-Fed Motor, performance data is based on sine wave tests.
 ** The data are based on rated voltage & frequency, and data are expressed as a percentage of full load value.

3. Data Generator

BASIC DATA		ELECTRICAL DATA	
Date	2012-10-30	Standards	IEC 60034-1
Order no.	410280.01-03	Gen. stator resistance	0.0262 Ohm at 20 °C
Ordered by	Shin Nippon Machinery	Exc. stator resistance	0.0707 Ohm at 20 °C
Destination	Citacop	Gen. rotor resistance	4.7 Ohm at 20 °C
Type	DG165ZL-04	REACTANCES	Unsaturated saturated
Rated voltage	13800 V, 50 Hz	d-axis synchronous	1.81 p.u. 1.51 p.u.
Rated output	19688 kVA, at p.f. 0.80	transient	0.23 p.u. 0.19 p.u.
Speed	1500 rpm	sub transient	0.16 p.u. 0.14 p.u.
Rated current	824 A	q-axis synchronous	0.92 p.u. 0.77 p.u.
Rated temperature	33 °C, water	sub transient	0.24 p.u. 0.20 p.u.
Method of cooling	IC8A1W7	Negative sequence	0.20 p.u. 0.17 p.u.
Degree of protection	IP54	Zero sequence	0.10 p.u.
Mounting arrangement	IM1005	Poter reactance	0.25 p.u.
Insulation class Stator	F, temp rise to B	Leakage reactance	0.10 p.u.
Insulation class Rotor	F, temp rise to B	Short Circuit Ratio	0.59
Insulation class Exciter	F, temp rise to B	TIME CONSTANTS	
Type of excitation	Brushless	d-axis transient short circuit	0.95 sec.
Exciter type	DGBP60/15	d-axis transient open circuit	7.3 sec.
P.M.G.	ND 395/40	d-axis subtransient short circuit	0.03 sec.
Exciter response	2.27 Stator 1/sec Rotor	d-axis subtransient open circuit	0.04 sec.
No load voltage	14 V 23 V	q-axis subtransient short circuit	0.03 sec.
No load current	2.3 A 249 A	q-axis subtransient open circuit	0.12 sec.
Rated voltage	38 V 60 V	armature	0.17 sec.
Rated current	6.2 A 660 A	Short Circuit Conditions	
Short-circuit (300% of rated current for 10 seconds):		3 phase Peak	15487 A
Coiling voltage	72 V 117 V	3 phase RMS	5404 A
Coiling current	11.8 A 1274 A	2 phase Peak	11284 A
Doc. no.	SPE20026,WGN	Steady state	1280 A
			Version 1

	
CURVES	2WGN012401 2WGN012402 2WGN012403 2WGN012404 2WGN012405
Capability	
Efficiency	
No-Load & Short-Circuit	
Output at B-rise	
V-Curves	
MECHANICAL PROPERTIES	
Acceleration time Tj	2.5 sec
Inertia constant H	0.98 kWsec/KVA
Damping factor kd	1.7 MW/Hz
Direction of rotation	CCW
Rolortype	salient poles
Poles are	massive without damperwinding
Shaft extension	flange
LOSSES AT NOMINAL RATING	
Friction and windage losses	71 kW
Core losses	96 kW
Stray load losses	31 kW
Armature IR losses @ 95°C	69 kW
Field IR losses	40 kW
EFFICIENCIES, tolerance on losses acc. IEC 60034	
load	4/4 3/4 1/2 1/4
p.f. 1.00	98.54 98.40 97.98 96.46
p.f. 0.80	98.07 97.91 97.40 95.53

4. Setting Relay Terpasang di Lapangan

