

SUPPLEMENTAL/BID BULLETIN NO. 1

SUPPLY AND DELIVERY OF SEVENTY ONE (71) UNITS GENERATOR SETS WITH AUTOMATIC TRANSFER SWITCH (ATS) FOR PORT MANAGEMENT OFFICES

TO

All Prospective Bidders

Members, HO-BAC-PGCS

Others Concerned

Relative to the Bid Documents issued by the BAC-PGCS for the Supply and Delivery of Seventy One (71) Units Generator Sets with Automatic Transfer Switch (ATS) for Port Management Offices (BAC-PGCS-10-2019), please be informed of the following amendments, to wit:

"TITLE OF THE PROJECT

SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF SEVENTY-ONE (71) UNITS GENERATOR SETS WITH AUTOMATIC TRANSFER SWITCH (ATS) FOR PORT MANAGEMENT OFFICES

BID DATA SHEET

ITB Clause

XXX XXX XXX XXX

5.4 For this purpose, a similar contact means Supply, Delivery and Installation of Generator Sets.

TERMS OF REFERENCE

See attached Terms of Reference

SECTION VI. SCHEDULE OF REQUIREMENTS

The delivery schedule expressed as weeks/months stipulates hereafter a delivery date which is the date of delivery to the project site.

Item Number	Description	Qty. (units)	Delivery Period
1	Generator Sets with Automatic Transfer Switch (ATS)	71	Within ninety (90) calendar days from the receipt of the Notice to Proceed-Delivery at Warehouse within Metro Manila - (for inspection of Head Office representatives). Within thirty (30) calendar days after inspection and acceptance by Head Office representatives- Delivery, Installation and Commissioning at the PMOs.

SECTION VII. TECHNICAL SPECIFICATIONS:

See attached Technical Specifications."

Issued this 01st day of February 2019

THE BIDS AND AWARDS COMMITTEE:

Ву

MARK JON S. PALOMAR Chairperson, HO-BAC-PGCS

SUPPLY, DELIVERY, INSTALLATION, AND COMMISSIONING OF SEVENTY-ONE (71) UNITS GENERATOR SETS WITH AUTOMATIC TRANSFER SWITCH (ATS) FOR PORT MANAGEMENT OFFICES

TERMS OF REFERENCE

I. SCOPE OF WORK

- 1. Supply and delivery of the brand new generator sets and ATS.
- 2. Mobilization of manpower, equipment and technical supervisions.
- 3. Installation of the equipment at the designated deployment ports.
- 4. Testing and commissioning of the equipment per port or terminal.

II. DEPLOYMENT

	РМО	Capacity	Qty.	Deployment
1 PMO Bataan	30KVA	1	TMO Casiguran	
	WO Bataan	60KVA	1	TMO Capinpin
2	PMO NCR North	220KVA	1	PMO NCR North
		1000KVA	1	Baseport
		85KVA	1	TMO Pasig
3	PMO NCR South	55KVA	1	PTB Pasig
ļ		50KVA	1	VRMU (Customs)
4	PMO MarQuez	250KVA	1	Baseport
_		300KVA	6	1- Baseport and 5 TMOs, namely:
		00/0/4	2	Bulalacao
5 PMO N		90KVA		Lubang
	PMO Mindoro		4	Roxas
		45012) (A		San Jose
		150KVA	*	Abra de llog
				Puerto Galera

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		108KVA	1	Baseport
		75KVA	1	TMO Coron
6	PMO Palawan	45 KVA	5	 TMO El Nido TMO Brooke's Point TMO Cuyo TMO Buliluyan TMO Taytay
7	PMO Masbate	250KVA	1_	Baseport
8	PMO Panay/Guimaras	10KVA	1	Baseport
		10KVA	1	TMO Sibunag
		500KVA	1_	Baseport
9	PMO Negros Occ/Banago/Bacolod/B	100KVA	2	TMO Danao TMO San Carlos
	redco	50KVA	2	TMO Hinoba-an,TMO Bredco
		150KVA	2	Baseport
1	PMO Negros	100KVA	1	TMO Siquijor
	Oriental/Siquijor	80KVA	3	TMO TandayagTMO LarenaTMO Guihulngan
		750KVA	2	Tagbilaran (Baseport)TMO Jagna
	PMO Bohol	250KVA	1	TMO Tubigon
11			1	TMO Ubay
''		125KVA	1_	TMO Talibon
		IZONVA	1	TMO Getafe
			1	TMO Loon
			1_	TMO Tapal
12	PMO Eastern	10 KVA	1	Port of San Jose
12	Leyte/Samar	150 KVA	1	Port of Maguino-o
		150KVA	1	Baseport
13	PMO Western Leyte/Biliran	75KVA	5	 TMO Baybay TMO Hilongos TMO Maasin TMO Palompon TMO Naval

14	PMO Misamiz/CDO	300 KVA	3	BaseportTMO CamiguinTMO Balbagon
15	Lanao del Norte/Iligan	50 KVA	1	TMO Tubod
16	16 PMO Misamis	300 KVA	1	Baseport
	Occidental/Ozamiz	75 KVA	1	TMO Plaridel
17	PMO Surigao	30KVA	3	 Hayanggabon Port Del Carmen Port Cantilan Port
		175KVA	1	Baseport
18	PMO Socsargen	150KVA	2	TMO SarangganiTMO Sultan Kudarat
19	PMO Zamboanga	853 KVA	1	Baseport
20	PMO Zamboanga del Norte	500KVA	1	Baseport
	TOTAL NO. OF UNITS 71			

III. A. TECHNICAL SPECIFICATIONS - GENERATOR SETS

1. PMO – BATAAN

A. One (1) unit of 30 KVA Generator Set for TMO-CASIGURAN

Generator Set Specification		
Number of cylinders	4	
Cylinder arrangement	In-Line	
Aspiration	Naturally Aspirated	
Prime Rating Power (kW/kVA)	21.6kW/27kVA	
Standby Rating Power (kW/kVA)	24kW/30kVA	

Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	8.6/H
Fuel Tank Capacity	85L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited

B. One (1) unit of 60KVA Generator Set for TMO-CAPINPIN

Number of cylinders	4
Cylinder arrangement	In-Line
Aspiration	Turbocharged after-water cooling
Prime Rating Power (kW/kVA)	44KW/54kVA

Standby Rating Power (kW/kVA)	48kW/60kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	15.9L/H
Fuel Tank Capacity	120L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited

2. PMO-NCR NORTH

A. One (1) unit of 220 KVA Generator Set (Baseport)

Number of cylinders	6
Cylinder arrangement	In-Line
Aspiration	Turbocharged after-water cooling

Prime Rating Power (kW/kVA)	160kW/200kVA
Standby Rating Power (kW/kVA)	176kW/220kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	49L/H
Fuel Tank Capacity	350L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited

3. PMO-NCR SOUTH

A. One (1) unit of 1000KVA Generator Set (Baseport)

Number of cylinders	12
Cylinder arrangement	V-Type
Aspiration	Turbocharged after-water cooling
Prime Rating Power (kW/kVA)	727kW/909kVA
Standby Rating Power (kW/kVA)	800kW/1000kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	204L/H
Fuel Tank Capacity	1200L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self- excited

B. One (1) unit of 85 KVA Generator Set (TMO-Pasig)

Number of cylinders	4
Cylinder arrangement	In-Line
Aspiration	Turbocharged after-water cooling
Prime Rating Power (kW/kVA)	61kW/77kVA
Standby Rating Power (kW/kVA)	68kW/85kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	15.9L/H
Fuel Tank Capacity	150L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited

C. One (1) unit of 55 KVA Generator Set (PTB-Pasig)

Number of cylinders	4
Cylinder arrangement	In-Line
Aspiration	Turbocharged after-water cooling
Prime Rating Power (kW/kVA)	40kW/50kVA
Standby Rating Power (kW/kVA)	44kW/55kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	15.9L/H
Fuel Tank Capacity	120L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited
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D. One (1) Unit 50kVA Generator Set VRMU (Customs)

Number of cylinders	4
Cylinder arrangement	In-Line
Aspiration	Turbocharged after-water cooling
Prime Rating Power (kW/kVA)	36kW/45kVA
Standby Rating Power (kW/kVA)	40kW/50kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	15.9L/H
Fuel Tank Capacity	85L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited

4. PMO-MARQUEZ

A. One (1) unit of 250kVA Generator Set (Baseport)

6
In-Line
Turbocharged after-water cooling
182kW/227kVA
200kW/250kVA
Digital
Electronic
Water Cooling Cycle
3
1800
230Vac
60hZ
0.8
59L/H
350L
Class H
24V
Single bearing, Brushless, Self-excited

5. PMO-MINDORO

A. Six (6) units 300kVA Generator Set (1-Baseport, 5-TMOs)

Number of cylinders	6
Cylinder arrangement	In-Line
Aspiration	Turbocharged after-water cooling
Prime Rating Power (kW/kVA)	218kW/273kVA
Standby Rating Power (kW/kVA)	240kW/300kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	62L/H
Fuel Tank Capacity	480L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excite

B. Two (2) units 90kVA Generator Set (TMO-Bulalacao, Lubang)

Number of cylinders	4
Cylinder arrangement	In-Line
Aspiration	Turbocharged after-water cooling
` Prime Rating Power (kW/kVA)	65kW/82kVA
Standby Rating Power (kW/kVA)	72kW/90kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	20.1L/H
Fuel Tank Capacity	150L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited

C. Four (4) units 150kVA Generator Set (TMO-Roxas, SanJose, Abra de Ilog, Puerto Galera)

6
In-Line
Turbocharged after-water cooling
109KW/136kVA
120kW/150kVA
Digital
Electronic
Water Cooling Cycle
3
1800
230Vac
60hZ
0.8
34L/H
250L
Class H
24V
Single bearing, Brushless, Self-excited

6. PMO-PALAWAN

A. One (1) unit 108kVA Generator Set (Baseport)

Number of cylinders	6
Cylinder arrangement	In-Line
Aspiration	Turbocharged after-water cooling
Prime Rating Power (kW/kVA)	78kW/98kVA
Standby Rating Power (kW/kVA)	86kW/108kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	29.7L/H
Fuel Tank Capacity	210L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited

B. One (1) unit 75kVA Generator Set (TMO-Coron)

Number of cylinders	4
Cylinder arrangement	In-Line
Aspiration	Turbocharged after-water cooling
Prime Rating Power (kW/kVA)	54kW/68kVA
Standby Rating Power (kW/kVA)	60kW/75kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	15.9L/H
Fuel Tank Capacity	120L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited

C. Five (5) units 45kVA Generator Set (TMO-El Nido, Brooke's Point, Cuyo, Buliluyan and Taytay)

Number of cylinders	4
Cylinder arrangement	In-Line
Aspiration	Turbocharged after-water cooling
Prime Rating Power (kW/kVA)	32kW/41kVA
Standby Rating Power (kW/kVA)	36kW/45kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	10.7 <i>L</i> /H
Fuel Tank Capacity	85L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited

7. PMO-MASBATE

A. One (1) unit 250kVA Generator Set (Baseport)

Number of cylinders	6
Cylinder arrangement	In-Line
Aspiration	Turbocharged after-water cooling
Prime Rating Power (kW/kVA)	182kW/227kVA
Standby Rating Power (kW/kVA)	200kW/250kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	59L/H
Fuel Tank Capacity	350L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited

8. PMO-PANAY/GUIMARAS

A. One (1) unit 10kVA Generator Set (Baseport)

Number of cylinders	4
Cylinder arrangement	In-Line
Aspiration	Naturally Aspirated
Prime Rating Power (kW/kVA)	7.2kW/9kVA
Standby Rating Power (kW/kVA)	8kW/10kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	8.6L/H
Fuel Tank Capacity	85L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited

B. One (1) unit 10kVA Generator Set (TMO-Sibunag)

Number of cylinders	4
Cylinder arrangement	In-Line
Aspiration	Naturally Aspirated
Prime Rating Power (kW/kVA)	7.2kW/9kVA
Standby Rating Power (kW/kVA)	8kW/10kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	8.6L/H
Fuel Tank Capacity	85L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited

9. PMO-Negros Occ./Banago/Bacolod/Bredco

A. One (1) unit 500kVA Generator Set (Baseport)

Number of cylinders	6
Cylinder arrangement	In-Line
Aspiration	Turbocharged after-water cooling
Prime Rating Power (kW/kVA)	363kW/454kVA
Standby Rating Power (kW/kVA)	400kW/500kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	104L/H
Fuel Tank Capacity	850L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited

B. Two (2) units 100kVA Generator Set (TMO-Danao, San Carlos)

Number of cylinders	4
Cylinder arrangement	In Line
Aspiration	Turbocharged after-water cooling
Prime Rating Power (kW/kVA)	73kW/91kVA
Standby Rating Power (kW/kVA)	80kW/100kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	20.1L/H
Fuel Tank Capacity	150L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited

C. Two (2) units 50kVA Generator Set (TMO-Bredco, Hinoba-an)

·
after-water cooling
Cycle
, Brushless, Self-excited

10. PMO-NEGROS ORIENTAL/SIQUIJOR

A. Two (2) units 150kVA Generator Set (Baseport)

Number of cylinders	6
Cylinder arrangement	In-Line
Aspiration	Turbocharged after-water cooling
Prime Rating Power (kW/kVA)	109kW/136kVA
Standby Rating Power (kW/kVA)	120kW/150kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	34L/H
Fuel Tank Capacity	250L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited

B. One (1) unit 100kVA Generator Set (TMO-Siquijor)

4
In-Line
Turbocharged after-water cooling
73kW/91kVA
80kW/100kVA
Digital
Electronic
Water Cooling Cycle
3 .
1800
230Vac
60hZ
0.8
20.1L/H
150L
Class H
24V
Single bearing, Brushless, Self-excited

C. Three (3) units 80kVA Generator Set (TMO-Tandayag, Larena, Guihulngan)

In-Line
Turbocharged after-water cooling
58kW/72kVA
64kW/80kVA
Digital
Electronic
Water Cooling Cycle
3
1800
230Vac
60hZ
0.8
15.9L/H
150L
Class H
24V
Single bearing, Brushless, Self-excited

11. PMO-BOHOL

A. Two (2) units 750kVA Generator Set (TMO-Tagbilaran and Jagna)

Number of cylinders	6
Cylinder arrangement	In-Line
Aspiration	Turbocharged after-water cooling
Prime Rating Power (kW/kVA)	545kW/682kVA
Standby Rating Power (kW/kVA)	600kW/750kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	140L/H
Fuel Tank Capacity	1200L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited

B. One (1) unit 250kVA Generator Set (TMO-Tubigon)

Number of cylinders	6
Cylinder arrangement	In-Line
Aspiration	Turbocharged after-water cooling
Prime Rating Power (kW/kVA)	182kW/227kVA
Standby Rating Power (kW/kVA)	200kW/250kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	59L/H
Fuel Tank Capacity	350L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited

C. Five (5) units 125kVA Generator Set (TMO-Ubay, Talibon, Getafe, Tapal, Loon)

6
In-Line
Turbocharged after-water cooling
91kW/113kVA
100kW/125kVA
Digital
Electronic
Water Cooling Cycle
3
1800
230Vac
60hZ
0.8
29.7L/H
210L
Class H
24V
Single bearing, Brushless, Self-excited

12. PMO-EASTERN LEYTE/SAMAR

A. One (1) unit 10kVA Generator Set (Port of San Jose)

4
In-Line
Naturally Aspirated
7.2kW/9.1kVA
8kW/10kVA
Digital
Electronic
Water Cooling Cycle
3
1800
230Vac
60hZ
0.8
8.6L/H
85L
Class H
24V
Single bearing, Brushless, Self-excited

B. One (1) unit 150kVA Generator Set (Port of Maguino-o)

Number of cylinders	6
Cylinder arrangement	In-Line
Aspiration	Turbocharged after-water cooling
Prime Rating Power (kW/kVA)	109kW/136kVA
Standby Rating Power (kW/kVA)	120kW/150kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	34L/H
Fuel Tank Capacity	250L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited

13. PMO-WESTERN LEYTE/BILIRAN

A. One (1) unit 150kVA Generator Set (Baseport)

Number of cylinders	6
Cylinder arrangement	In-Line
Aspiration	Turbocharged after-water cooling
Prime Rating Power (kW/kVA)	109kW/136kVA
Standby Rating Power (kW/kVA)	120kW/150kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	34L/H
Fuel Tank Capacity	250L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited

B. Five (5) units 75kVA Generator Set (TMO- Baybay, Hilongos, Maasin, Palompon and Naval)

Number of cylinders	4
Cylinder arrangement	In-Line
Aspiration	Turbocharged after-water cooling
Prime Rating Power (kW/kVA)	54kW/68kVA
Standby Rating Power (kW/kVA)	60kW/75kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	1
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	15.9L/H
Fuel Tank Capacity	120L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited

14. PMO-MISAMIS/CDO

A. Three (3) units 300kVA Generator Set (Baseport, Camiguin, TMO-Balbagon)

Number of cylinders	6
Cylinder arrangement	In-Line
Aspiration	Turbocharged after-water cooling
Prime Rating Power (kW/kVA)	218kW/272kVA
Standby Rating Power (kW/kVA)	240kW/300kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	62L/H
Fuel Tank Capacity	480L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited

15. PMO-LANAO DEL NORTE/ILIGAN

A. One (1) unit 50kVA Generator Set (TMO-Tubod)

4
In-Line
Turbocharged after-water cooling
36kW/45kVA
40kW/50kVA
Digital
Electronic
Water Cooling Cycle
3
1800
230Vac
60hZ
0.8
15.9L/H
85L
Class H
24V
Single bearing, Brushless, Self-excited

16. PMO-MISAMIS OCCIDENTAL/OZAMIZ

A. One (1) unit 300kVA Generator Set (Baseport)

Number of cylinders	6
Cylinder arrangement	In-Line
Aspiration	Turbocharged after-water cooling
Prime Rating Power (kW/kVA)	218kW/273kVA
Standby Rating Power (kW/kVA)	240kW/300kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	62L/H
Fuel Tank Capacity	480L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited

B. One (1) unit 75kVA Generator Set (TMO-Plaridel)

harged after-water cooling
58kVA
75kVA
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Cooling Cycle
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pearing, Brushless, Self-excited
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17. PMO-SURIGAO

A. Three (3) units of 30 KVA Generator Set (TMO-Hayanggabon, Del Carmen, Cantilan)

Number of cylinders	4
Cylinder arrangement	In Line
Aspiration	Naturally Aspirated
Prime Rating Power (kW/kVA)	21.6kW/27kVA
Standby Rating Power (kW/kVA)	24kW/30kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	8.6/H
Fuel Tank Capacity	85L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited

18. PMO-SOCSARGEN

A. One (1) unit of 175 KVA Generator Set (Baseport)

Number of cylinders	6
Cylinder arrangement	In Line
Aspiration	Turbocharged after-water cooling
Prime Rating Power (kW/kVA)	127kW/159kVA
Standby Rating Power (kW/kVA)	140kW/175kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	38L/H
Fuel Tank Capacity	300L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited

B. Two (2) units 150kVA Generator Set (TMO-Saranggani, Sultan Kudarat)

Number of cylinders	6
Cylinder arrangement	In-Line
Aspiration	Turbocharged after-water cooling
Prime Rating Power (kW/kVA)	109kW/136kVA
Standby Rating Power (kW/kVA)	120kW/150kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	34L/H
Fuel Tank Capacity	250L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited

19. PMO-Zamboanga

A. One (1) unit 853kVA Generator Set (Baseport)

Number of cylinders	12
Cylinder arrangement	V-Type
Aspiration	Turbocharged after-water cooling
Prime Rating Power (kW/kVA)	620kW/775kVA
Standby Rating Power (kW/kVA)	682kW/853kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	154L/H
Fuel Tank Capacity	1200L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited

20. PMO-ZAMBOANGA DEL NORTE

A. One (1) unit 500kVA Generator Set (Baseport)

Number of cylinders	6
Cylinder arrangement	In-Line
Aspiration	Turbocharged after-water cooling
Prime Rating Power (kW/kVA)	363kW/454kVA
Standby Rating Power (kW/kVA)	400kW/500kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	104L/H
Fuel Tank Capacity	850L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited

KVA	SOUND LEVEL
10 - 30	72dBA@7m
45 - 300	75dBA@7m
500 - 1000	85dBA@7m

All generator set units = 3 phase, except for PMO Western Leyte/Biliran ports (single phase).

III. B. TECHNICAL SPECIFICATIONS - AUTOMATIC TRANSFER SWTICH

- 1. 220-480 volts, 1-3 phase, wall-mounted/free standing with NEMA enclosure equal to the capacity of the generator set.
- 2. Transfer Switched Based on Molded-Case-Switch Components

IV. OTHER REQUIREMENTS

1. ISO Compliance.

ISO 9001:2015 and ISO 14001-2015 standard.

2. Delivery.

- a.) Within ninety (90) calendar days from the receipt of the Notice to Proceed Delivery at Warehouse within Metro Manila (for inspection of Head Office representatives).
- b.) Within thirty (30) calendar days after inspection and acceptance by Head Office representatives Delivery, Installation and Commissioning at the PMOs

3. Payment.

- a.) 80% of contract cost After inspection and acceptance by Head Office.
- b.) 20% of contract cost After inspection and acceptance by the PMOs.

4. Maintenance.

The supplier shall provide quarterly preventive maintenance service within 2-year warranty period.

5. Repairs.

Repair services shall be available during office hours. Response time shall be within twenty-four (24) hours from notice by PPA.

6. Provisions.

- a.) Set of Tools, Operating and Parts Manual
- b.) Initial diesel in tank for testing, upon delivery of Genset
- c.) Cables during installation: At least ten (10) meters wiring/cables per unit (if distance of unit to main breaker exceeds 10 meters, PPA will shoulder cost of excess).

7. Warranty Certificates:

- a.1.) One (1) year warranty for manufacturing defects from the date of receipt of the Certificate of Acceptance.
- a.2.) Two (2) years warranty for parts and services from the date of receipt of the Certificate of Acceptance.
- 8. Other Documentary Requirements. Duly authenticated copies of the following documents must be submitted. Documents coming from abroad must be duly authenticated/consularized by the appropriate foreign office.
 - a.) Certificate of Manufacturer
 - b.) Certificate of Product Origin
 - c.) Certificate of Distributorship with (2) years validity from date of bidding (in line with PPA required Warranty)
 - d.) Certificate of Factory Coupling 60 days fresh from Manufacturing
 - e.) Certificates ISO 9001:2015 and ISO 14001:2015
 - f.) Certificate Original Equipment Manufacturer(OEM) of Generator Set Engine
 - g.) Certificate Original Equipment Manufacturer(OEM) of Generator Set Controller

- h.) Certificate -Original Equipment Manufacturer(OEM) of Generator Set Alternator
- i.) Certificate of Availability of Authorized Service Center (in the Philippines)

These documents shall have a validity of at least two(2) years from date of opening of bids (in line with PPA required Warranty).

The original copy of these documents with Red Ribbon shall be attached and submitted during bid opening.

9. Testing. The equipment shall be tested (on/off and running for at least 10 minutes).

V. APPROVED BUDGET FOR THE CONTRACT (ABC)

The ABC for this project is in the amount of Four Hundred Five Million Pesos (P405,000,000.00)

Technical Specifications

Item	Specification	Statement of
		Compliance
		Bidders must state
1		here either "Comply"
		or "Not Comply"
		against each of the
		individual parameters
		of each Specification stating the
		corresponding
		performance
		parameter of the
1		equipment offered.
		Statements of
		"Comply" or "Not
		Comply" must be
		supported by
		evidence in a Bidders
		Bid and cross-
		referenced to that
		evidence. Evidence
		shall be in the form
		of manufacturer's un-
		amended sales
		literature,
		unconditional
		statements of
		specification and
		compliance issued by
		the manufacturer,
		samples, independent
		test data etc., as appropriate. A
		appropriate. A statement that is not
		supported by
		evidence or is
		subsequently found
		to be contradicted by
		the evidence
		presented will render
		the Bid under
		evaluation liable for
		rejection. A

		statement either in the Bidders statement of compliance or the supporting evidence that is found to be false either during Bid evaluation, post-qualification or the execution of the Contract may be regarded as fraudulent and render the Bidder or supplier liable for prosecution subject to the provisions of ITB Clause 3.1(a)(ii)
		and/or GCC Clause
		2.1(a)(ii).
One (1) unit of 30 KVA	Generator Set for TMO-CA	ASIGURAN
Number of cylinders	4	
Cylinder arrangement	In-Line	
Aspiration	Naturally Aspirated	
Prime Rating Power (kW/kVA)	21.6kW/27kVA	
Standby Rating Power (kW/kVA)	24kW/30kVA	
Control Panel	Digital	
Speed governor	Electronic	
Cooling system	Water Cooling Cycle	
Phase	3	
Rpm	1800	
Volts	230Vac	
Frequency	60hZ	
Power Factor	0.8	
Fuel consumption at 100% load (L/H)	8.6/H	
Fuel Tank Capacity	85L	
Insulation	Class H	
Starter motor	24V	
Exciter type	Single bearing, Brushless, Self-excited	
One (1) unit of 60KV	A Generator Set for TMO-0	CAPINPIN
Number of cylinders	4	
Cylinder arrangement	In-Line	
Aspiration	Turbocharged after- water cooling	
Prime Rating Power (kW/kVA)	44KW/54kVA	

Control Panel Digital Speed governor Electronic Cooling system Water Cooling Cycle Phase 3 Rpm 1800 Volts 230Vac Frequency 60hZ Power Factor 0.8 Fuel consumption at 15,9L/H 100% load (L/H) Fuel Tank Capacity 120L Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit of 220 KVA Generator Set (PMO-NCR North, Baseport) Number of cylinders 6 Cylinder arrangement In-Line Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital Speed governor Electronic Cooling system Water Cooling Cycle Phase 3 Rpm 1800 Volts 230Vac Frequency 60hZ Power Factor 0.8 Fuel consumption at 49L/H 100% load (L/H) Fuel Tank Capacity 350L Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit of 1000KVA Generator Set (PMO-NCR North, Baseport) Number of cylinders (PMO-NCR North, Baseport) Coylinder arrangement V-Type Single bearing, Brushless, Self-excited One (1) unit of 1000KVA Generator Set (PMO-NCR South, Baseport) Number of cylinders 12 Cylinder arrangement V-Type Aspiration Rating Power (R00kW/1000kVA) Standby Rating Power (R00kW/1000kVA)	Standby Rating Power (kW/kVA)	48kW/60kVA		
Speed governor Electronic	Control Panel	Digital		
Cooling system Water Cooling Cycle	Speed governor			
Rpm 1800 Volts 230Vac Frequency 60hZ Power Factor 0.8 Fuel consumption at 15.9L/H 100% load (L/H) Fuel Tank Capacity 120L Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit of 220 KVA Generator Set (PMO-NCR North, Baseport) Number of cylinders 6 Cylinder arrangement In-Line Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power 160kW/220kVA (kW/kVA) Control Panel Digital Speed governor Electronic Cooling system Water Cooling Cycle Phase 3 Rpm 1800 Volts 230Vac Frequency 60hZ Power Factor 0.8 Fuel consumption at 100% load (L/H) Fuel Tank Capacity 350L Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit of 1000KVA Generator Set (PMO-NCR South, Baseport) Number of cylinders 12 Cylinder arrangement V-Type Aspiration Turbocharged afterwater cooling Prime Rating Power (V-Type Aspiration Turbocharged afterwater cooling Prime Rating Power (V-Type Type Type) Prime Rating Power (V-Type Type Type) Prime Rating Power (KW/kVA)		Water Cooling Cycle		
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Power Factor 0.8 Fuel consumption at 15.9L/H 100% load (L/H) Fuel Tank Capacity 120L Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit of 220 KVA Generator Set (PMO-NCR North, Baseport) Number of cylinders 6 Cylinder arrangement In-Line Aspiration Turbocharged after-water cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital Speed governor Electronic Cooling system Water Cooling Cycle Phase 3 Rpm 1800 Volts 230Vac Frequency 60hZ Power Factor 0.8 Fuel consumption at 100% load (L/H) Fuel Tank Capacity 350L Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit of 1000KVA Generator Set (PMO-NCR South, Baseport) Number of cylinders 12 Cylinder arrangement V-Type Aspiration Turbocharged after-water cooling Prime Rating Power (kW/kVA)	Volts	230Vac		
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Exciter type Single bearing, Brushless, Self-excited One (1) unit of 220 KVA Generator Set (PMO-NCR North, Baseport) Number of cylinders Cylinder arrangement Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital Speed governor Cooling system Water Cooling Cycle Phase Rpm 1800 Volts 230Vac Frequency 60hZ Power Factor 0.8 Fuel consumption at 100% load (L/H) Fuel Tank Capacity Insulation Starter motor Exciter type Single bearing, Brushless, Self-excited One (1) unit of 1000KVA Generator Set (PMO-NCR South, Baseport) Number of cylinders Cylinder arrangement V-Type Aspiration Prime Rating Power (kW/kV909kVA Reference Frequency Single bearing, Brushless, Self-excited Cylinder arrangement V-Type Aspiration Prime Rating Power (kW/kVA)				
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Speed governor Electronic Cooling system Water Cooling Cycle Phase 3 Rpm 1800 Volts 230Vac Frequency 60hZ Power Factor 0.8 Fuel consumption at 100% load (L/H) Fuel Tank Capacity 350L Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit of 1000KVA Generator Set (PMO-NCR South, Baseport) Number of cylinders 12 Cylinder arrangement V-Type Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA)		176kW/220kVA		
Cooling system Phase Rpm 1800 Volts 230Vac Frequency 60hZ Power Factor 0.8 Fuel consumption at 100% load (L/H) Fuel Tank Capacity Insulation Starter motor Exciter type Single Brushless, Self-excited One (1) unit of 1000KVA Generator Set (PMO-NCR South, Baseport) Number of cylinders Cylinder arrangement V-Type Aspiration Prime Rating Power (kW/kVA)	Control Panel			
Phase 3 Rpm 1800 Volts 230Vac Frequency 60hZ Power Factor 0.8 Fuel consumption at 49L/H 100% load (L/H) Fuel Tank Capacity 350L Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit of 1000KVA Generator Set (PMO-NCR South, Baseport) Number of cylinders 12 Cylinder arrangement V-Type Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA)	Speed governor			
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Volts 230Vac Frequency 60hZ Power Factor 0.8 Fuel consumption at 49L/H 100% load (L/H) Fuel Tank Capacity 350L Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit of 1000KVA Generator Set (PMO-NCR South, Baseport) Number of cylinders 12 Cylinder arrangement V-Type Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA)	Phase			
Frequency Power Factor Fuel consumption at 49L/H 100% load (L/H) Fuel Tank Capacity Insulation Starter motor Exciter type Single bearing, Brushless, Self-excited One (1) unit of 1000KVA Generator Set (PMO-NCR South, Baseport) Number of cylinders Cylinder arrangement Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA)	Rpm	1800		
Power Factor Fuel consumption at 100% load (L/H) Fuel Tank Capacity Insulation Starter motor Exciter type Single bearing, Brushless, Self-excited One (1) unit of 1000KVA Generator Set (PMO-NCR South, Baseport) Number of cylinders Cylinder arrangement V-Type Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA)	Volts	230Vac		
Fuel consumption at 100% load (L/H) Fuel Tank Capacity 350L Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit of 1000KVA Generator Set (PMO-NCR South, Baseport) Number of cylinders 12 Cylinder arrangement V-Type Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA)	Frequency	60hZ		
100% load (L/H) Fuel Tank Capacity Insulation Class H Starter motor Exciter type Single bearing, Brushless, Self-excited One (1) unit of 1000KVA Generator Set (PMO-NCR South, Baseport) Number of cylinders Cylinder arrangement V-Type Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA)	Power Factor			
Fuel Tank Capacity 350L Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit of 1000KVA Generator Set (PMO-NCR South, Baseport) Number of cylinders 12 Cylinder arrangement V-Type Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA)		49L/H		
Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit of 1000KVA Generator Set (PMO-NCR South, Baseport) Number of cylinders 12 Cylinder arrangement V-Type Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA)				
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Exciter type Single bearing, Brushless, Self-excited One (1) unit of 1000KVA Generator Set (PMO-NCR South, Baseport) Number of cylinders Cylinder arrangement Aspiration Prime Rating Power (kW/kVA) Single bearing, Brushless, Self-excited V-MO-NCR South, Baseport) 12 Cylinder arrangement Turbocharged afterwater cooling 727kW/909kVA				
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One (1) unit of 1000KVA Generator Set (PMO-NCR South, Baseport) Number of cylinders 12 Cylinder arrangement Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Turbocharged afterwater cooling	Exciter type	J		
Number of cylinders Cylinder arrangement V-Type Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) 727kW/909kVA	One (1) unit of 1000KVA G			
Cylinder arrangement V-Type Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Cylinder arrangement V-Type Turbocharged afterwater cooling				
Aspiration Turbocharged afterwater cooling Prime Rating Power 727kW/909kVA (kW/kVA)		V-Type		
Prime Rating Power 727kW/909kVA (kW/kVA)				
Prime Rating Power 727kW/909kVA (kW/kVA)	'			
	1 1			
Juliany Fairing Committee	Standby Rating Power	800kW/1000kVA		

1	(kW/kVA)	
	Control Panel	Digital
+	Speed governor	Electronic
	Cooling system	Water Cooling Cycle
	Phase	3
		1800
	Rpm Volts	230Vac
	· · · · ·	
	Frequency	60hZ
	Power Factor	0.8
	Fuel consumption at	204L/H
	100% load (L/H)	
	Fuel Tank Capacity	1200L
	Insulation	Class H
	Starter motor	24V
	Exciter type	Single bearing,
	•	Brushless, Self-excited
	One (1) unit of 85	KVA Generator Set (TMO-Pasig)
	Number of cylinders	4
	Cylinder arrangement	In-Line
	Aspiration	Turbocharged after-
	Aspiration	water cooling
	Prime Rating Power	
	(kW/kVA)	O IRVV// / RVA
	Standby Rating Power (kW/kVA)	68kW/85kVA
	Control Panel	Digital
	Speed governor	Electronic
	Cooling system	Water Cooling Cycle
	Phase	3
		1800
	Rpm Volts	230Vac
	Frequency	60hZ
	Power Factor	0.8
	Fuel consumption at	15.9L/H
	100% load (L/H)	450
	Fuel Tank Capacity	150L
	Insulation	Class H
	Starter motor	24V
	Exciter type	Single bearing, Brushless, Self-excited
1	One (1) unit of 55	KVA Generator Set (PTB-Pasig)
Ţ	Number of cylinders	4
	Cylinder arrangement	In-Line
	Aspiration	Turbocharged after-
		water cooling
	Prime Rating Power (kW/kVA)	40kW/50kVA
	Standby Rating Power (kW/kVA)	44kW/55kVA

Control Panel		Digital	~	
Speed governor	E	lectronic	-	
Cooling system		Vater Cooling (Cycle	
Phase	3		· ·	
Rpm	1	800		
Volts	2	30Vac		
Frequency	6	0hZ		
Power Factor	O	0.8		
Fuel consumpti	on at 1	5.9L/H	-	
100% load (L/H)	Ì			
Fuel Tank Capac	ity 1	20L		
Insulation		Class H		
Starter motor	2	24V		
Exciter type	5	Single	bearing,	
]]		Brushless, Self-		
One (1) Uni		Generator Set \		stoms)
Number of cylind				
Cylinder arrange		n-Line		
Aspiration		Turbocharged	after-	
		vater cooling	;	
Prime Rating		86kW/45kVA		
(kW/kVA)				
Standby Rating	Power 4	l0kW/50kVA		-
(kW/kVA)				
Control Panel		Digital		
Speed governor		Electronic		
Cooling system	V	Water Cooling (Cycle	
Phase	3			
Rpm	1	1800		
Volts	2	230Vac		
Frequency	6	30hZ		
Power Factor).8		
Fuel consumpti		15.9L/H		
100% load (L/H)				
Fuel Tank Capac	city 8	35L		
Insulation		Class H		
Starter motor		24V		
Exciter type		Single	bearing,	
	1	Brushless, Self		
One (1) unit of 25				ez, Baseport)
Number of cylind				
Cylinder arrange		n-Line		
Aspiration		Furbocharged	after-	
	I .	water cooling		
Prime Rating		182kW/227kVA	<u> </u>	
(kW/kVA)				
Standby Rating	Power 2	200kW/250kVA	\	
(kW/kVA)	_ , -			
Control Panel		Digital		
1				· · · · · · · · · · · · · · · · · · ·

Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at	
100% load (L/H)	00011
Fuel Tank Capacity	350L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing,
Exolicity po	Brushless, Self-excited
Six (6) units 300kVA Generate	or Set (PMO-Mindoro, 1-Baseport, 5-TMOs)
Number of cylinders	6
Cylinder arrangement	In-Line
Aspiration	Turbocharged after-
	water cooling
Prime Rating Power	
(kW/kVA)	
Standby Rating Power	240kW/300kVA
(kW/kVA)	
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at	62L/H
100% load (L/H)	
Fuel Tank Capacity	480L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing,
	Brushless, Self-excited
Two (2) units 90kVA Ge	enerator Set (TMO-Bulalacao,Lubang)
Number of cylinders	4
Cylinder arrangement	In-Line
Aspiration	Turbocharged after-
	water cooling
` Prime Rating Power (kW/kVA)	65kW/82kVA
Standby Rating Power (kW/kVA)	72kW/90kVA
Control Panel	Digital
Speed governor	Electronic

Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	20.1L/H
Fuel Tank Capacity	150L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing,
	Brushless, Self-excited
Four (4) units 150kVA Genera	itor Set (TMO-Roxas, SanJose, Abra de llog,
(,,	Puerto Galera)
Number of cylinders	6
Cylinder arrangement	In-Line
Aspiration	Turbocharged after-
	water cooling
Prime Rating Power	109KW/136kVA
(kW/kVA)	
Standby Rating Power (kW/kVA)	120kW/150kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at	
100% load (L/H)	
Fuel Tank Capacity	250L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited
One (1) unit 108kVA Ge	enerator Set (PMO-Palawan, Baseport)
Number of cylinders	6
Cylinder arrangement	In-Line
Aspiration	Turbocharged after- water cooling
Prime Rating Power (kW/kVA)	
Standby Rating Power (kW/kVA)	
Control Panel	Digital
Speed governor	Electronic

Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption a	it 29.7L/H
100% load (L/H)	
Fuel Tank Capacity	210L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing,
	Brushless, Self-excited
	kVA Generator Set (TMO-Coron)
Number of cylinders	4
Cylinder arrangement	In-Line
Aspiration	Turbocharged after-
	water cooling
Prime Rating Powe (kW/kVA)	
Standby Rating Powe (kW/kVA)	r 60kW/75kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption a 100% load (L/H)	t 15.9L/H
Fuel Tank Capacity	120L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	ator Set (TMO-El Nido, Brooke's Point, Cuyo, uliluyan and Taytay)
Number of cylinders	4
Cylinder arrangement	In-Line
Aspiration	Turbocharged after- water cooling
Prime Rating Powe (kW/kVA)	
Standby Rating Powe (kW/kVA)	
Control Panel	Digital
Speed governor	Electronic

	Water Cooling Cycle
Cooling system Phase	3
	1800
	230Vac
	60hZ
	0.8
100% load (L/H)	
	85L
	Class H
	24V
Exciter type	Single bearing, Brushless, Self-excited
One (1) unit 250kVA Ge	nerator Set (PMO-Masbate, Baseport)
	6
	In-Line
	Turbocharged after-
vohiranou	water cooling
Prime Pating Power	
(kW/kVA)	
Standby Rating Power (kW/kVA)	200kW/250kVA
Control Panel	Digital
Speed governor	Electronic
	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at	59L/H
	350L
Insulation	Class H
	24V
Exciter type	Single bearing,
	Brushless, Self-excited
	tor Set (PMO-Panay/Guimaras, Baseport)
Number of cylinders	4
Cylinder arrangement	In-Line
Aspiration	Naturally Aspirated
Prime Rating Power (kW/kVA)	7.2kW/9kVA
Standby Rating Power (kW/kVA)	8kW/10kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
	Volts Frequency Power Factor Fuel consumption at 100% load (L/H) Fuel Tank Capacity Insulation Starter motor Exciter type One (1) unit 250kVA Ge Number of cylinders Cylinder arrangement Aspiration Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Speed governor Cooling system Phase Rpm Volts Frequency Power Factor Fuel consumption at 100% load (L/H) Fuel Tank Capacity Insulation Starter motor Exciter type 10 (1) unit 10kVA General Number of cylinders Cylinder arrangement Aspiration Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel

Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	8.6L/H
Fuel Tank Capacity	85L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited
One (1) unit 10kV	A Generator Set (TMO-Sibunag)
Number of cylinders	4
Cylinder arrangement	In-Line
Aspiration	Naturally Aspirated
Prime Rating Power	7.2kW/9kVA
(kW/kVA)	
Standby Rating Power (kW/kVA)	8kW/10kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	8.6L/H
Fuel Tank Capacity	85L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing,
	Brushless, Self-excited
	VA Generator Set (PMO-Negros
	/Bacolod/Bredco, Baseport)
Number of cylinders	6
Cylinder arrangement	In-Line
Aspiration	Turbocharged after- water cooling
Prime Rating Power (kW/kVA)	363kW/454kVA
Standby Rating Power (kW/kVA)	400kW/500kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800

	Valta	220\/aa	
	Volts	230Vac 60hZ	
	Frequency Power Factor	0.8	
		104L/H	
	Fuel consumption at	104L/F1	
	100% load (L/H)	850L	
	Fuel Tank Capacity Insulation	Class H	
	Starter motor	24V	
	Exciter type	Single bearing, Brushless, Self-excited	
<u> </u>	Two (2) units 100k\/A G	enerator Set (TMO-Danao	San Carlos)
	Number of cylinders	4	, Jan Janus)
	Cylinder arrangement	In Line	
-	Aspiration	Turbocharged after-	
	Aspiration	water cooling	
	Prime Rating Power		
	(kW/kVA)		
	Standby Rating Power (kW/kVA)		,
	Control Panel	Digital	
	Speed governor	Electronic	
	Cooling system	Water Cooling Cycle	
	Phase	3	
	Rpm	1800	
	Volts	230Vac	
	Frequency	60hZ	
	Power Factor	0.8	
	Fuel consumption at 100% load (L/H)	20.1L/H	
	Fuel Tank Capacity	150L	
	Insulation	Class H	
	Starter motor	24V	
	Exciter type	Single bearing,	
1	·/F -	Brushless, Self-excited	
	Two (2) units 50kVA Ge	enerator Set (TMO-Bredco	,Hinoba-an)
T	Number of cylinders	4	
	Cylinder arrangement	In-Line	
	Aspiration	Turbocharged after-	
	Prime Rating Power	water cooling 36kW/45kVA	
	(kW/kVA)		
	Standby Rating Power (kW/kVA)	40kW/50kVA	
	Control Panel	Digital	
	Speed governor	Electronic	
	Cooling system	Water Cooling Cycle	
	Phase	3	
	Rpm	1800	
	Volts	230Vac	

Frequency	60hZ
Power Factor	0.8
Fuel consumption at	
100% load (L/H)	10.0011
100% 1000 (271)	85L
Fuel Tank Capacity	
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing,
	Brushless, Self-excited
Two (2) units 150kVA Generat	or Set (PMO-NEGROS ORIENTAL/SIQUIJOR,
	Baseport)
Number of cylinders	6
Cylinder arrangement	In-Line
Aspiration	Turbocharged after-
	water cooling
Prime Rating Power	109kW/136kVA
(kW/kVA)	
Standby Rating Power	120kW/150kVA
(kW/kVA)	
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at	
100% load (L/H)	
Fuel Tank Capacity	250L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing,
	Brushless, Self-excited
One (1) unit 100k	VA Generator Set (TMO-Siquijor)
Number of cylinders	4
Cylinder arrangement	In-Line
Aspiration	Turbocharged after-
	water cooling
Prime Rating Power	73kW/91kVA
(kW/kVA)	
Standby Rating Power	80kW/100kVA
(kW/kVA)	
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800

Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at	1
100% load (L/H)	
Fuel Tank Capacity	150L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing,
]	Brushless, Self-excited
Three (3) units 80kVA Genera	tor Set (TMO-Tandayag, Larena, Guihulngan)
Number of cylinders	4
Cylinder arrangement	In-Line
Aspiration	Turbocharged after-
	water cooling
Prime Rating Power	58kW/72kVA
(kW/kVA)	
Standby Rating Power	64kW/80kVA
(kW/kVA)	
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at	15.9L/H
100% load (L/H)	i i
Fuel Tank Capacity	150L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing,
	Brushless, Self-excited
Two (2) units 750kVA Gene	rator Set (PMO-Bohol, TMO-Tagbilaran and
	Jagna)
Number of cylinders	6
Cylinder arrangement	In-Line
Aspiration	Turbocharged after-
	water cooling
Prime Rating Power	545kW/682kVA
(kW/kVA)	000114/750114
Standby Rating Power	600kW/750kVA
(kW/kVA)	D. 11.1
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800

V	olts	230Vac		
F	requency	60hZ		
Р	ower Factor	0.8		
F	uel consumption at	140L/H		
10	00% load (L/Ĥ)			
F	uel Tank Capacity	1200L		
In	sulation	Class H		
S	tarter motor	24V		
E	xciter type	_	bearing,	
		Brushless, Self-		
	One (1) unit 250k		t (TMO-Ti	ubigon)
	umber of cylinders	6		
	ylinder arrangement	In-Line		
A	spiration	Turbocharged water cooling	after-	
P	rime Rating Power			
	:W/kVA)			
	tandby Rating Power	200kW/250kVA		
C	ontrol Panel	Digital		
S	peed governor	Electronic		
	ooling system	Water Cooling C	ycle	
	hase	3		
R	pm	1800		
	olts	230Vac		
Fı	requency	60hZ		
	ower Factor	0.8		
	uel consumption at 00% load (L/H)	59L/H		
F	uel Tank Capacity	350L		
În	sulation	Class H		
S	tarter motor	24V		
E	xciter type		bearing,	
		Brushless, Self-e		
Five (5) units 125kVA Genera		ay, Talibo	on, Getafe, Tapal,
		Loon)		
	umber of cylinders	6		
	ylinder arrangement	In-Line		
A	spiration	Turbocharged water cooling	after-	
1	rime Rating Power W/kVA)	91kW/113kVA		
S	tandby Rating Power W/kVA)	100kW/125kVA		
	ontrol Panel	Digital		
Si	peed governor	Electronic		
	ooling system	Water Cooling C	ycle	
 	hase	3		
R	pm	1800		

Volts	230Vac	
Frequency	60hZ	
Power Factor	0.8	
	29.7L/H	
100% load (L/H)		
Fuel Tank Capacity	210L	
Insulation	Class H	
Starter motor	24V	
Exciter type	Single bearing,	
	Brushless, Self-excited	
One (1) unit 10kVA Generator	Set (PMO-Eastern Leyte/Samar, Po	rt of San
	Jose)	
Number of cylinders	4	
Cylinder arrangement	In-Line	
Aspiration	Naturally Aspirated	
Prime Rating Power (kW/kVA)	7.2kW/9.1kVA	
Standby Rating Power (kW/kVA)	8kW/10kVA	
Control Panel	Digital	
Speed governor	Electronic	
Cooling system	Water Cooling Cycle	
Phase	3	
Rpm	1800	
Volts	230Vac	
Frequency	60hZ	
Power Factor	0.8	
Fuel consumption at	8.6L/H	
100% load (L/H)		
	85L	į
Fuel Tank Capacity		
Insulation	Class H	
Starter motor	24V	-
Exciter type	Single bearing,	
One (4) unit 450(2)(4	Brushless, Self-excited	
One (1) unit 150kVA	Generator Set (Port of Maguino-o) 6	
Number of cylinders	In-Line	<u> </u>
Cylinder arrangement Aspiration		
Ashiranon	Turbocharged after- water cooling	
Prime Rating Power	109kW/136kVA	
(kW/kVA)		
Standby Rating Power (kW/kVA)	120kW/150kVA	
Control Panel	Digital	
Speed governor	Electronic	
Cooling system	Water Cooling Cycle	
Phase	3	
Rpm	1800	
TAPITI	1000	

Volts	230Vac
Frequency	60hZ
Power Factor	0.8
	at 34L/H
100% load (L/H)	
	250L
Fuel Tank Capacity	
Insulation	Class H
Starter motor	24V
Number of cylinders	6
	erator Set (PMO-WESTERN LEYTE/BILIRAN,
	Baseport)
Number of cylinders	6
Cylinder arrangement	
Aspiration	Turbocharged after-
	water cooling
Prime Rating Power	er 109kW/136kVA
(kW/kVA)_	
Standby Rating Power	er 120kW/150kVA
(kW/kVA)	
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	0.8
Power Factor	
Fuel consumption : 100% load (L/H)	3447
Fuel Tank Capacity	250L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing,
Exolicity be	Brushless, Self-excited
Five (5) units 75kVA Gene	erator Set (TMOs Baybay, Hilongos, Maasin,
1110 (0) 411110 1011111 00111	Palompon, Naval)
Number of cylinders	4
Cylinder arrangement	In-Line
Aspiration	Turbocharged after-
'	water cooling
Prime Rating Power	er 54kW/68kVA
(kW/kVA)	
Standby Rating Power	er 60kW/75kVA
(kW/kVA)	
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	1

Rpm				
Frequency 60hZ				
	-			
Fuel consumption at 15.9L/H				
100% load (L/H)				
Fuel Tank Capacity 120L				
Insulation Class H				
Starter motor 24V				
Exciter type Single bearing,				
Brushless, Self-excited				
Three (3) units 300kVA Generator Set (PMO-Misamis/CDO,				
Baseport,Camiguin,TMO-Balbagon)				
Number of cylinders 6				
Cylinder arrangement In-Line				
Aspiration Turbocharged after-				
water cooling				
Prime Rating Power 218kW/272kVA (kW/kVA)				
Standby Rating Power 240kW/300kVA (kW/kVA)				
Control Panel Digital				
Speed governor Electronic				
Cooling system Water Cooling Cycle				
Phase 3				
Rpm 1800				
Volts 230Vac				
Frequency 60hZ				
Power Factor 0.8				
Fuel consumption at 62L/H 100% load (L/H)				
Fuel Tank Capacity 480L				
Insulation Class H				
Starter motor 24V				
Exciter type Single bearing,				
Brushless, Self-excited	TMO			
One (1) unit 50kVA Generator Set (PMO-Lanao del Norte/Iligan, TMO-Tubod)				
Number of cylinders 4				
Cylinder arrangement In-Line				
Aspiration Turbocharged afterwater cooling				
Prime Rating Power 36kW/45kVA (kW/kVA)				
Standby Rating Power 40kW/50kVA (kW/kVA)				
Control Panel Digital				
Speed governor Electronic				
Cooling system Water Cooling Cycle				

Volts Frequency 60hZ	Dnm		1800		
Frequency Power Factor Power Fa	Rpm				
Power Factor 0.8 Fuel consumption at 15.9L/H 100% load (L/H) Fuel Tank Capacity Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit 300kVA Generator Set (PMO-MISAMIS OCCIDENTAL/OZAMIZ, Baseport) Number of cylinders 6 Cylinder arrangement In-Line Aspiration Turbocharged after-water cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital Speed governor Electronic Cooling system Water Cooling Cycle Phase 3 Rpm 1800 Volts 230Vac Frequency 60hZ Power Factor 0.8 Fuel consumption at 100% load (L/H) Fuel Tank Capacity 480L Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit 75kVA Generator Set (TMO-Plaridel) Number of cylinders 4 Cylinder arrangement In-Line Aspiration Turbocharged after-water cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital					
Fuel consumption at 100% load (L/H) Fuel Tank Capacity Insulation Starter motor Exciter type Single bearing, Brushless, Self-excited One (1) unit 300kVA Generator Set (PMO-MISAMIS OCCIDENTAL/OZAMIZ, Baseport) Number of cylinders Cylinder arrangement Aspiration In-Line Aspiration Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Speed governor Cooling system Water Cooling Cycle Phase Rpm 1800 Volts 230Vac Frequency 60hZ Power Factor 0.8 Fuel consumption at 100% load (L/H) Fuel Tank Capacity Insulation Starter motor Exciter type Single bearing, Brushless, Self-excited One (1) unit 75kVA Generator Set (TMO-Plaridel) Number of cylinders 4 Cylinder arrangement In-Line Aspiration Volts Aspiration Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Sta					
100% load (L/H) 85L					
Fuel Tank Capacity Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit 300kVA Generator Set (PMO-MISAMIS OCCIDENTAL/OZAMIZ, Baseport) Number of cylinders 6	•	on at	15.3611		
Fuel Tank Capacity Insulation Starter motor Starter motor Exciter type Single bearing, Brushless, Self-excited One (1) unit 300kVA Generator Set (PMO-MISAMIS OCCIDENTAL/OZAMIZ, Baseport) Number of cylinders Cylinder arrangement Aspiration In-Line Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital Speed governor Cooling system Vater Cooling Cycle Phase Rpm 1800 Volts 230Vac Frequency Frequency Frequency Fuel consumption at 100% load (L/H) Fuel Tank Capacity Exciter type Single bearing, Brushless, Self-excited One (1) unit 75kVA Generator Set (TMO-Plaridel) Number of cylinders Cylinder arrangement Aspiration Volta Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital	100 % load (E/11)	1	851		
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Exciter type Single Brushless, Self-excited One (1) unit 300kVA Generator Set (PMO-MISAMIS OCCIDENTAL/OZAMIZ, Baseport) Number of cylinders Cylinder arrangement In-Line Aspiration Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Speed governor Cooling system Phase Sarpm Spm Spm Spm Spm Spm Spm Spm Spm Spm S					
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Cylinder arrangement			Baseport)		
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Control Panel Digital Speed governor Electronic Cooling system Water Cooling Cycle Phase 3 Rpm 1800 Volts 230Vac Frequency 60hZ Power Factor 0.8 Fuel consumption at 100% load (L/H) Fuel Tank Capacity 480L Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit 75kVA Generator Set (TMO-Plaridel) Number of cylinders 4 Cylinder arrangement In-Line Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital		Power	240kW/300kVA		
Speed governor Electronic Cooling system Water Cooling Cycle Phase 3 Rpm 1800 Volts 230Vac Frequency 60hZ Power Factor 0.8 Fuel consumption at 100% load (L/H) Fuel Tank Capacity 480L Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit 75kVA Generator Set (TMO-Plaridel) Number of cylinders 4 Cylinder arrangement In-Line Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital			Digital		
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Power Factor Fuel consumption at 100% load (L/H) Fuel Tank Capacity 480L Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit 75kVA Generator Set (TMO-Plaridel) Number of cylinders 4 Cylinder arrangement In-Line Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/KVA) Control Panel Digital	4		230Vac		
Power Factor 0.8 Fuel consumption at 100% load (L/H) Fuel Tank Capacity 480L Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit 75kVA Generator Set (TMO-Plaridel) Number of cylinders 4 Cylinder arrangement In-Line Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/r5kVA) Control Panel Digital	Frequency		60hZ		
100% load (L/H) Fuel Tank Capacity 480L Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit 75kVA Generator Set (TMO-Plaridel) Number of cylinders 4 Cylinder arrangement In-Line Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital			0.8		
Fuel Tank Capacity 480L Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit 75kVA Generator Set (TMO-Plaridel) Number of cylinders 4 Cylinder arrangement In-Line Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital	Fuel consumption	on at	62L/H		
Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit 75kVA Generator Set (TMO-Plaridel) Number of cylinders 4 Cylinder arrangement In-Line Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital	100% load (L/H)				
Starter motor Exciter type Single bearing, Brushless, Self-excited One (1) unit 75kVA Generator Set (TMO-Plaridel) Number of cylinders Cylinder arrangement Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital	Fuel Tank Capac				<u>-</u> .
Exciter type Single bearing, Brushless, Self-excited One (1) unit 75kVA Generator Set (TMO-Plaridel) Number of cylinders Cylinder arrangement Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Single bearing, Brushless, Self-excited Turbo-Plaridel) 60kW-Plaridel	Insulation				
One (1) unit 75kVA Generator Set (TMO-Plaridel) Number of cylinders 4 Cylinder arrangement In-Line Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital	Starter motor				
One (1) unit 75kVA Generator Set (TMO-Plaridel) Number of cylinders 4 Cylinder arrangement In-Line Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital	Exciter type		•	•	
Number of cylinders Cylinder arrangement Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital					
Cylinder arrangement In-Line Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital			····	(TMO-Pla	aridel)
Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital					
water cooling Prime Rating Power 54kW/58kVA (kW/kVA) Standby Rating Power 60kW/75kVA (kW/kVA) Control Panel Digital				<u> </u>	
Prime Rating Power (kW/kVA) Standby Rating Power (60kW/75kVA (kW/kVA) Control Panel Digital	Aspiration		•	atter-	
Standby Rating Power 60kW/75kVA (kW/kVA) Control Panel Digital					
Control Panel Digital	, ,	Power	60kW/75kVA		
			Digital		
Speed governor Electronic			Electronic		
Cooling system Water Cooling Cycle			Water Cooling C	Cycle	

Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	
Fuel Tank Capacity	120L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited
Three (3) units of 30 KVA Ger Cant	nerator Set TMO-Hayanggabon,Del Carmen, tilan (PMO-Surigao)
Number of cylinders	4
Cylinder arrangement	In Line
Aspiration	Naturally Aspirated
Prime Rating Power (kW/kVA)	
Standby Rating Power (kW/kVA)	24kW/30kVA
Control Panel	Digital
Speed governor	Electronic
Cooling system	Water Cooling Cycle
Phase	3
Rpm	1800
Volts	230Vac
Frequency	60hZ
Power Factor	0.8
Fuel consumption at 100% load (L/H)	8.6/H
Fuel Tank Capacity	85L
Insulation	Class H
Starter motor	24V
Exciter type	Single bearing, Brushless, Self-excited
Number of cylinders	4
	enerator Set (PMO-Socsargen, Baseport)
Number of cylinders	6
Cylinder arrangement	In Line
Aspiration	Turbocharged after- water cooling
Prime Rating Power (kW/kVA)	127kW/159kVA
Standby Rating Power (kW/kVA)	140kW/175kVA

Cooling system Water Cooling Cycle Phase 3 Rpm 1800 Volts 230Vac Frequency 60hZ Power Factor 0.8 Fuel consumption at 100% load (L/H) Fuel Tank Capacity 300L Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited Two (2) units 150kVA Generator Set (TMO-Saranggani, Sultan Kudarat) Number of cylinders 6 Cylinder arrangement In-Line Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power 120kW/150kVA (kW/kVA) Control Panel Digital Speed governor Electronic Cooling system Water Cooling Cycle Phase 3 Rpm 1800 Volts 230Vac Frequency 60hZ Power Factor 0.8 Fuel consumption at 100% load (L/H) Fuel Tank Capacity 120kW/150kVA Exciter type Single bearing, Brushless, Self-excited One (1) unit 853kVA Generator Set (PMO-Zamboanga, Baseport) Number of cylinders 12 Cylinder arrangement V-Type Aspiration Power (kW/kVA) Standby Rating Power (Electronic		Speed governor	Electronic	
Phase 3 Rpm 1800 Volts 230Vac Frequency 60hZ Power Factor 0.8 Fuel consumption at 100% load (L/H) Fuel Tank Capacity 300L Insulation Starter motor 24V Exciter type Single bearing, Brushless, Self-excited Standard arrangement Standard a				
Volts				
Volts		Rpm	1800	
Power Factor C.8			230Vac	
Power Factor Case		Frequency	60hZ	
100% load (L/H) Fuel Tank Capacity Insulation Starter motor Starter motor Exciter type Single Single Brushless, Self-excited Two (2) units 150kVA Generator Set (TMO-Saranggani,Sultan Kudarat) Number of cylinders Cylinder arrangement Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital Speed governor Cooling system Vater Cooling Cycle Phase Rpm 1800 Volts 230Vac Frequency BohZ Power Factor 0.8 Fuel consumption at 34L/H 100% load (L/H) Fuel Tank Capacity Exciter type Single Single Searing, Brushless, Self-excited One (1) unit 853kVA Generator Set (PMO-Zamboanga, Baseport) Number of cylinders V-Type Aspiration Prime Rating Power (kW/kVA) Standby Rating Power			0.8	
100% load (L/H) Fuel Tank Capacity 300L Insulation Class H Starter motor 24V Exciter type Single Brushless, Self-excited Number of cylinders 6 Cylinder arrangement In-Line Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Control Panel Digital Speed governor Electronic Cooling system Water Cooling Cycle Phase 3 Rpm 1800 Volts 230Vac Frequency 60hZ Power Factor 0.8 Fuel consumption at 100% load (L/H) Fuel Tank Capacity 250L Insulation Class H Starter motor 24V Exciter type Single Brushless, Self-excited One (1) unit 853kVA Generator Set (PMO-Zamboanga, Baseport) Number of cylinders 12 Cylinder arrangement V-Type Aspiration Class Control Panel Digital Control Panel Digital Cylinder arrangement V-Type Aspiration Turbocharged Aspiration Turbocharged Aspiration Turbocharged Aspiration Turbocharged Aspiration Turbocharged Aspiration Colond Colo		Fuel consumption at	38L/H	
Fuel Tank Capacity 300L Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited Two (2) units 150kVA Generator Set (TMO-Saranggani,Sultan Kudarat) Number of cylinders 6 Cylinder arrangement In-Line Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital Speed governor Electronic Cooling system Water Cooling Cycle Phase 3 Rpm 1800 Volts 230Vac Frequency 60hZ Power Factor 0.8 Fuel consumption at 34L/H 100% load (L/H) Fuel Tank Capacity 250L Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit 853kVA Generator Set (PMO-Zamboanga, Baseport) Number of cylinders 12 Cylinder arrangement V-Type Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (620kW/775kVA (kW/kVA) Control Panel Digital				
Starter motor Exciter type Single bearing, Brushless, Self-excited Number of cylinders Cylinder arrangement Aspiration Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital Speed governor Cooling system Volts Prequency Power Factor Fuel consumption at 100% load (L/H) Fuel Tank Capacity Insulation Starter motor Starter ye Aspiration Starter gower Starter ye Single bearing, Brushless, Self-excited One (1) unit 853kVA Generator Set (PMO-Zamboanga, Baseport) Number of cylinders (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital Speed governor Electronic Cooling Cycle Phase 3 Rpm 1800 Volts 230Vac Frequency 60hZ Power Factor 0.8 Fuel consumption at 34L/H 100% load (L/H) Fuel Tank Capacity Single bearing, Brushless, Self-excited One (1) unit 853kVA Generator Set (PMO-Zamboanga, Baseport) Number of cylinders 12 Cylinder arrangement V-Type Aspiration Turbocharged after- water cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital			300L	
Exciter type Single Brushless, Self-excited Two (2) units 150kVA Generator Set (TMO-Saranggani, Sultan Kudarat) Number of cylinders Cylinder arrangement Aspiration Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital Speed governor Cooling system Phase Phase Rpm 1800 Volts 230Vac Frequency Fower Factor Fuel consumption at 100% load (L/H) Fuel Tank Capacity Exciter type Single bearing, Brushless, Self-excited One (1) unit 853kVA Generator Set (PMO-Zamboanga, Baseport) Number of cylinders Cylinder arrangement V-Type Aspiration Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Standby Rating Power (60kZ) Cylinder arrangement Turbocharged after-water cooling Prime Rating Power (kW/kVA) Standby Rating Power (62kW/853kVA) Control Panel Digital		Insulation	Class H	
Two (2) units 150kVA Generator Set (TMO-Saranggani, Sultan Kudarat) Number of cylinders 6		Starter motor	24V	
Two (2) units 150kVA Generator Set (TMO-Saranggani, Sultan Kudarat) Number of cylinders 6		Exciter type		
Number of cylinders Cylinder arrangement Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital Speed governor Cooling system Phase Rpm 1800 Volts 230Vac Frequency Frequency Fower Factor Power Factor Starter motor Starter motor Starter motor Exciter type Single Starter motor Starter motor Starter arrangement Aspiration Virbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital Digital Speed governor Electronic Cooling Cycle Phase 3 Rpm 1800 Volts 230Vac Frequency 60hZ Power Factor 0.8 Fuel consumption at 34L/H 100% load (L/H) Fuel Tank Capacity Single Bearing, Brushless, Self-excited One (1) unit 853kVA Generator Set (PMO-Zamboanga, Baseport) Number of cylinders 12 Cylinder arrangement V-Type Aspiration Furbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital	Two	(2) units 150kVA Genera		,Sultan Kudarat)
Cylinder arrangement In-Line Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital Speed governor Electronic Cooling system Water Cooling Cycle Phase 3 Rpm 1800 Volts 230Vac Frequency 60hZ Power Factor 0.8 Fuel consumption at 100% load (L/H) Fuel Tank Capacity 250L Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit 853kVA Generator Set (PMO-Zamboanga, Baseport) Number of cylinders 12 Cylinder arrangement V-Type Aspiration Turbocharged afterwater Cooling Prime Rating Power (kW/kVA) Standby Rating Power (682kW/853kVA (kW/kVA) Control Panel Digital				
Aspiration Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Speed governor Cooling system Phase Rpm 1800 Volts Power Factor Frequency Power Factor Starter motor Starter motor Exciter type Single Sin			In-Line	
Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital Speed governor Electronic Cooling system Water Cooling Cycle Phase 3 Rpm 1800 Volts 230Vac Frequency 60hZ Power Factor 0.8 Fuel consumption at 100% load (L/H) Fuel Tank Capacity 250L Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit 853kVA Generator Set (PMO-Zamboanga, Baseport) Number of cylinders 12 Cylinder arrangement V-Type Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital			Turbocharged after-	
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Standby Rating Power (kW/kVA) Control Panel Digital Speed governor Electronic Cooling system Water Cooling Cycle Phase 3 Rpm 1800 Volts 230Vac Frequency 60hZ Power Factor 0.8 Fuel consumption at 100% load (L/H) Fuel Tank Capacity 250L Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit 853kVA Generator Set (PMO-Zamboanga, Baseport) Number of cylinders 12 Cylinder arrangement V-Type Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (682kW/853kVA (kW/kVA) Control Panel Digital		•	109kW/136kVA	
Control Panel Digital Speed governor Electronic Cooling system Water Cooling Cycle Phase 3 Rpm 1800 Volts 230Vac Frequency 60hZ Power Factor 0.8 Fuel consumption at 100% load (L/H) Fuel Tank Capacity 250L Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit 853kVA Generator Set (PMO-Zamboanga, Baseport) Number of cylinders 12 Cylinder arrangement V-Type Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power 682kW/853kVA (kW/kVA) Control Panel Digital		Standby Rating Power	120kW/150kVA	
Speed governor Electronic Cooling system Water Cooling Cycle Phase 3 Rpm 1800 Volts 230Vac Frequency 60hZ Power Factor 0.8 Fuel consumption at 100% load (L/H) Fuel Tank Capacity 250L Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit 853kVA Generator Set (PMO-Zamboanga, Baseport) Number of cylinders 12 Cylinder arrangement V-Type Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (620kW/775kVA (kW/kVA) Control Panel Digital		· /	Digital	
Cooling system Phase Rpm 1800 Volts 230Vac Frequency 60hZ Power Factor 0.8 Fuel consumption at 100% load (L/H) Fuel Tank Capacity Exciter type Single bearing, Brushless, Self-excited One (1) unit 853kVA Generator Set (PMO-Zamboanga, Baseport) Number of cylinders Cylinder arrangement Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Wolts 230Vac 230Vac 60hZ 24V Exciter bye Single bearing, Brushless, Self-excited Paspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kS53kVA) Control Panel Digital	-	Speed governor		
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Volts 230Vac Frequency 60hZ Power Factor 0.8 Fuel consumption at 100% load (L/H) Fuel Tank Capacity 250L Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit 853kVA Generator Set (PMO-Zamboanga, Baseport) Number of cylinders 12 Cylinder arrangement V-Type Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital				
Volts 230Vac Frequency 60hZ Power Factor 0.8 Fuel consumption at 100% load (L/H) Fuel Tank Capacity 250L Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit 853kVA Generator Set (PMO-Zamboanga, Baseport) Number of cylinders 12 Cylinder arrangement V-Type Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital		Rpm	1800	
Power Factor Fuel consumption at 34L/H 100% load (L/H) Fuel Tank Capacity Insulation Starter motor Exciter type Single bearing, Brushless, Self-excited One (1) unit 853kVA Generator Set (PMO-Zamboanga, Baseport) Number of cylinders Cylinder arrangement V-Type Aspiration Prime Rating Power (kW/kVA) Standby Rating Power (682kW/853kVA Control Panel Digital			230Vac	
Power Factor 0.8 Fuel consumption at 34L/H 100% load (L/H) Fuel Tank Capacity 250L Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit 853kVA Generator Set (PMO-Zamboanga, Baseport) Number of cylinders 12 Cylinder arrangement V-Type Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power 682kW/853kVA (kW/kVA) Control Panel Digital		Frequency	60hZ	
100% load (L/H) Fuel Tank Capacity Insulation Class H Starter motor Exciter type Single bearing, Brushless, Self-excited One (1) unit 853kVA Generator Set (PMO-Zamboanga, Baseport) Number of cylinders Cylinder arrangement V-Type Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital			0.8	
Fuel Tank Capacity 250L Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit 853kVA Generator Set (PMO-Zamboanga, Baseport) Number of cylinders 12 Cylinder arrangement V-Type Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital		•	34L/H	
Insulation Class H Starter motor 24V Exciter type Single bearing, Brushless, Self-excited One (1) unit 853kVA Generator Set (PMO-Zamboanga, Baseport) Number of cylinders 12 Cylinder arrangement V-Type Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (620kW/775kVA (kW/kVA) Control Panel Digital		Fuel Tank Capacity	250L	
Exciter type Single bearing, Brushless, Self-excited One (1) unit 853kVA Generator Set (PMO-Zamboanga, Baseport) Number of cylinders Cylinder arrangement Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Single bearing, Brushless, Self-excited Digital			Class H	
One (1) unit 853kVA Generator Set (PMO-Zamboanga, Baseport) Number of cylinders Cylinder arrangement Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital		Starter motor	24V	
One (1) unit 853kVA Generator Set (PMO-Zamboanga, Baseport) Number of cylinders 12 Cylinder arrangement Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital		Exciter type	Single bearing,	
Number of cylinders Cylinder arrangement V-Type Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital				
Cylinder arrangement V-Type Aspiration Turbocharged afterwater cooling Prime Rating Power (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital	(ga, Baseport)
Aspiration Turbocharged afterwater cooling Prime Rating Power 620kW/775kVA (kW/kVA) Standby Rating Power (kW/kVA) Control Panel Digital				
water cooling Prime Rating Power 620kW/775kVA (kW/kVA) Standby Rating Power 682kW/853kVA (kW/kVA) Control Panel Digital				
(kW/kVA) Standby Rating Power 682kW/853kVA (kW/kVA) Control Panel Digital		Aspiration		
(kW/kVA) Control Panel Digital				
			682kW/853kVA	
Speed governor Electronic		Control Panel		
		Speed governor	Electronic	

Cooli	ng system	Water Cooling Cycle	
Phas		3	
Rpm		1800	
Volts	<u>"</u>	230Vac	
Frequ	iency	60hZ	
	er Factor	0.8	
Fuel	consumption at	154L/H	
	load (L/H)		
	,	1200L	
Fuel	Tank Capacity		
Insula		Class H	
Starte	er motor	24V	. <u> </u>
Excite	er type	Single bearing,	
		Brushless, Self-excited	
One (1) unit	500kVA Generator	Set (PMO-Zamboanga de	el Norte, Baseport)
	per of cylinders	6	
	der arrangement	In-Line	
Aspir		Turbocharged after-	
		water cooling	
Prime	Rating Power	363kW/454kVA	
(kW/k	(VA)		
Stand	by Rating Power	400kW/500kVA	
(kW/k	(VA)		
Contr	ol Panel	Digital	
Spee	d governor	Electronic	
	ng system	Water Cooling Cycle	
Phas		3	
Rpm		1800	
Volts		230Vac	
Frequ	iency	60hZ	
	r Factor	0.8	
Fuel	consumption at	104L/H	
100%	load (L/H)		
	•	850L	
Fuel	Tank Capacity		
Insula	ation	Class H	
Starte	er motor	24V	
Excite	er type	Single bearing,	
	·	Brushless, Self-excited	
AUTOMATIC TRANSFER SWITCH			
		1-3 phase, wall-	
	mounted/free standing with NEMA		
	enclosure equal to the capacity of the		
	generator set.		
		ched Based on Molded-	
	Case-Switch Components		