GTR Solar Power

WAAREE/ESS
YOUR POWER INSURANCE

Call: +91 7989743663

LITHIUM TECHNOLOGY BASED ENERGY SOLUTION

For DG set, Microgrid, Minigrid & Solar Home System

Genset Vs Lithium Battery

DG Set Rating (KVA)	Average CPH / Day 50% Load	Genset Running In Hrs / day	Diesel Cost / Lt	Total no. of working Hrs / Anum	Total Running Cost for 10 Yrs	Maintenance cost for 10 Yrs	Cost of Genset	Total Cost in 10 Yrs	Inverter Rating in KW	BESS in KWHR	Total Cost For Inverter + Lithium Battery	Savings	ROI*
20	1	5	95	365	1733750	1733750	230000	3697500	20	20	1375200	2322300	3.7
30	2	5	95	365	3467500	3467500	300000	7235000	28	30	2128500	5106500	2.9
40	2.5	5	95	365	4334375	4334375	330000	8998750	40	40	2838000	6160750	3.2
60	3	5	95	365	5201250	5201250	550000	10952500	56	60	4257000	6695500	3.9
75	3.5	5	95	365	6068125	6068125	550000	12686250	78	75	5471250	7215000	4.3
100	4.5	5	95	365	7801875	7801875	600000	16203750	100	100	7095000	9108750	4.4
125	5	5	95	365	8668750	8668750	640000	17977500	120	125	8718750	9258750	4.8
150	6	5	95	365	10402500	10402500	790000	21595000	160	150	10342500	11252500	4.8
200	8	5	95	365	13870000	13870000	875000	28615000	200	200	14190000	14425000	5.0
300	12	5	95	365	20805000	20805000	950000	42560000	280	300	21285000	21275000	5.0

* T &C Apply

BESS
LITHIUM BATTERIES
Single Phase DG Replacement Solutions

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Technical Specifications

Sr No	Characteristics					
		Diesel Generator Parameters				
1	Single Phase Diesel Generator Rating (KVA)	5 KVA	5/10 KVA	5/10 KVA	5/10 KVA	5/10/15 KVA
2	Maximum Load on DG Set (100% Loading)	4 KW	4/8 KW	4/8 KW	4/8 KW	4/8/12 KW
3	Generator Maximum Run Time Per Stretch (Hours)	3 Hours	4/2 Hours	5/2.5 Hours	6/3 Hours	7/3.5/2 Hours
		Waaree ESS Lithium Battery				
4	Battery Chemistry	LFP				
5	Cell model	3.2V 86Ah Prismatic				
6	Module Rating	51.2V/86Ah				
7	Battery Rated Voltage (V)	51.2 V				
8	Battery Rated capacity (Ah)	344 Ah	430 Ah	516 Ah	602 Ah	688 AH
9	Battery Rated Energy (KWh)	17.61 KWh	22.01 KWh	26.42 KWh	30.82 KWh	35.22 KWh
10	Battery Usable Energy (KWh) @ 80% DOD	14.09 KWh	17.61 KWh	21.13 KWh	24.65 KWh	28.18 KWh
11	Charging Voltage (V)	56.5 V ± 1V				
12	Discharging Voltage (V)	47 V ± 1V				
13	Nominal Charge Current (Continuous A)	120 A	150 A	180 A	210 A	240 A
14	Nominal Discharge Current (Continuous A)	160 A	200 A	240 A	280 A	320 A
15	Peak Charge Current (Intermittent A)	160 A	200 A	240 A	280 A	320 A
16	Peak Discharge Current (Intermittent A)	320 A	400 A	480 A	560 A	640 A
17	Operating Voltage Range (V)	47 V to 56.5V ±1V				
18	Operating Temperature (°C)	Discharge 0 to 55 °C , Charge 0 to 45 °C				
19	Storage time	1 month @ 0-40°C, 1-3 month @ 18-35°C, Charge once a month				
20	Cycle Life	3500 Cycle @25°C, 80% DoD, @ 0.3C Charge and 0.5C Discharge				
		Protection Features				
21	Over Temperature Protection (°C)	60±2 °C				
22	Under Temperature Protection (°C)	Minus 5±2 °C				
		Mechanical Characteristics - Module				
23	Individual Battery Module Tentative Dimension (WXHXD), ±5 MM	(442 x 175* x 520) ± 2 mm * Height mentioned is for one module and will be proprtional as per modules in parallel				
24	Battery Modules Approximate Weight (Kg)	180 ± 10 Kg	225 ± 10 Kg	270 ± 10 Kg	315 ± 10 Kg	260 ± 10 Kg
		General Specifications - Inverter				
25	Studer Single Phase Hybrid Inverter Model	Studer Xtender XTM 4000-48				
26	Studer Single Phase Hybrid Inverter Grid Input	Single Phase				
27	Studer Single Phase Hybrid Inverter Grid Output	Single Phase				
28	Number of Inverters installed in parallel	1	2	2	2	3
29	Load Continuous @ 25°C	7.0 KVA				
30	Load 30 min. @ 25°C	8.0 KVA				
		General Specifications - Solar Charge Controller (Optional)				
31	Studer Solar Charge Controller Model (Optional)	Studer Variotrack VT-65				
32	Minimum Number of Solar Charge Controllers (Optional)	1	2	2	3	3
33	Minimum Solar Capacity KWp (Optional)	4 kWp	8 kWp	8 kWp	12 kWp	12 kWp
		CAN, LAN Connectivity & Devices				
34	Connectivity & Devices	X-COM CAN, X-COM 232I , N-PORT, Ethernet Connection				
35	Graphic Design View					

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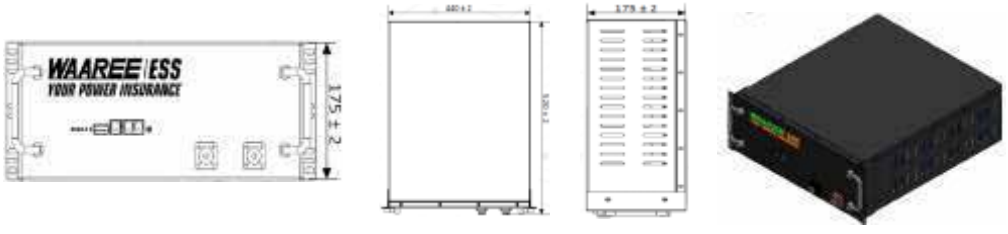
BESS
LITHIUM BATTERIES
Three Phase DG Replacement Solutions

GTR Solar Power

Technical Specifications

Sr No	Characteristics				
		Diesel Generator Parameters			
1	Three Phase Diesel Generator Rating (KVA)	15 KVA	15/20 KVA	15/20 KVA	15/20 KVA
2	Maximum Load on DG Set (100% Loading)	12 KW	12/16 KW	12/16 KW	12/16 KW
3	Generator Maximum Run Time Per Stretch (Hours)	1.5 Hours	2/1.5 Hours	3/2.5 Hours	4/3 Hours
		Waaree ESS Lithium Battery			
4	Battery Chemistry	LFP			
5	Cell model	3.2V 86Ah Prismatic			
6	Module Rating	51.2V/86Ah			
7	Battery Rated Voltage (V)	51.2 V			
8	Battery Rated capacity (Ah)	516 Ah	602 Ah	1032 Ah	1204 Ah
9	Battery Rated Energy (KWh)	26.42 KWh	30.82 KWh	52.84 KWh	61.64 KWh
10	Battery Usable Energy (KWh) @ 80% DOD	21.13 KWh	24.65 KWh	42.27 KWh	49.31 KWh
11	Charging Voltage (V)	56.5 V ± 1V			
12	Discharging Voltage (V)	47 V ± 1V			
13	Nominal Charge Current (Continuous A)	180 A	210 A	360 A	420 A
14	Nominal Discharge Current (Continuous A)	240 A	280 A	480 A	960 A
15	Peak Charge Current (Intermittent A)	240 A	280 A	480 A	960 A
16	Peak Discharge Current (Intermittent A)	480 A	560 A	960 A	1020 A
17	Operating Voltage Range (V)	47 V to 56.5V ±1V			
18	Operating Temperature (°C)	Discharge 0 to 55 °C , Charge 0 to 45 °C			
19	Storage time	1 month @ 0-40°C, 1-3 month @ 18-35°C, Charge once a month			
20	Cycle Life	3500 Cycle @25°C, 80% DoD, @ 0.3C Charge and 0.5C Discharge			
		Protection Features			
21	Over Temperature Protection (°C)	60±2 °C			
22	Under Temperature Protection (°C)	Minus 5±2 °C			
		Mechanical Characteristics - Module			
23	Individual Battery Module Tentative Dimension (WXHXD), ±5 MM	(442 x 175* x 520) ± 2 mm * Height mentioned is for one module and will be proprtional as per modules in parallel			
24	Battery Modules Approximate Weight (Kg)	270 ± 10 Kg	315 ± 10 Kg	540 ± 10 Kg	630 ± 10 Kg
		General Specifications - Inverter			
25	Studer Single Phase Hybrid Inverter Model	Studer Xtender XTM 4000-48			
26	Studer Single Phase Hybrid Inverter Grid Input	Single Phase to each inverter in parallel per phase			
27	Studer Single Phase Hybrid Inverter Grid Output	Single Phase from each inverter parallel per phase			
28	Number of Inverters installed in parallel	3	3	6	6
29	Load Continuous @ 25°C	10.5 KVA		21.0 KVA	
30	Load 30 min. @ 25°C	12.0 KVA		24.0 KVA	
		General Specifications - Solar Charge Controller (Optional)			
31	Studer Solar Charge Controller Model (Optional)	Studer Variotrack VT-65			
32	Minimum Number of Solar Charge Controllers (Optional)	2	2	4	4
33	Minimum Solar Capacity KWp (Optional)	8 kWp	8 kWp	16 kWp	16 kWp
		CAN, LAN Connectivity & Devices			
34	Connectivity & Devices	X-COM CAN, X-COM 232I , N-PORT, Ethernet Connection			
35	Graphic Design View				

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* T&C Apply

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Why Customer Should go for Waaree Solution

- Highly Energy Efficient System
- Fast Charging Battery
- Communication Interface
- Energy Conservation
- Long Life
- Maintenance Free Battery
- Compact Size

GTR Solar Power

#SBI Complex, Chuttugunta Circle, Guntur 522004, Andhra Pradesh
info@gtrsolarpower.com
Call: +91 7989743663