WHOLESALE DIESEL GENERATORS
A DIVISION OF NORTH STAR LOGISTICS LLC
661 Miller's Bluff RD, Surgoinsville, TN 37873
423-220-3500 Ext 2
sales@wholesale-generators.com
www.Wholesale-Generators.com

90kW/288kwh Battery Energy Storage System

Rental/Construction Type | BESS | LFP Battery | Solar Options

General

Model	WDG-90-BESS
Type	Rental/Construction Type
Base	HDG Steel Skid
Inverter Brand	Victron
Solar Integration	Optional

Battery System

LFP Battery	WDG-90-BESS
Battery Chemistry	LFP ($LiFePO_4$)
Nominal Energy Capacity	289.3 kWh
Battery Configuration	18 × 314 Ah, 51.2 VDC
Battery Heating	Integrated
Design Life	10+ Years

Inverter & Output

Inverter System	6 × Victron Quattro 15 kVA
Total Inverter Capacity	90 kVA
AC Output	480 VAC, 3-Phase

Power Connections

Input Plug (PowerAssist)	3Ph, 415 VAC, 5 x 400A Cam-Lock
Input Plug (Charging)	1Ph, 240 VAC, 3 x 400A Cam-Lock
Output Socket	3Ph, 480 VAC, 5 x 400A Cam-Lock
Busbar	Shore Power & Generator Compatible

Optional Solar Add-On

Solar MPPT Controller +$1765	4 x 100A Victron MPPT

Performance

Rated-Load Runtime	Approx. 3.6 Hours @ 72 kW

Controls & Connectivity

System Display	Victron Touch 70
Connectivity	4G Cellular + WiFi Compatible
Mobile Monitoring	Controllable via Smartphone

Enclosure & Construction

Climate Control	2 x 1500W Heating & Cooling Unit
Base	Heavy Duty Hot-Dip Galvanized Skid
Handling	Integrated Forklift Pockets
Protection	Internal & External Anti-Corrosion Powder Coat

Size & Dimensions

Dimensions (L x W x H)	88.58 x 70.87 x 80.71 (in.)
Weight (lbs.)	8,800

Quattro Inverter/Charger 277V

15 kVA

www.victronenergy.com

Quattro
48/15000/200-100/100

Ekrano GX or Cerbo GX
Provides intuitive system control and monitoring and enables access to our free remote monitoring website: the VRM Online Portal.

VRM Portal
Our free remote monitoring website (VRM) will display all your system data in a comprehensive graphical format. System settings can be changed remotely via the portal. Alarms can be received by e-mail or push notification.

VRM app
Monitor and manage your Victron Energy system from your smart phone and tablet. Available for both iOS and Android.

Two AC inputs with integrated transfer switch
The Quattro can be connected to two independent AC sources, for example the public grid and a generator, or two generators. The Quattro will automatically connect to the active source.

Two AC Outputs
The main output has no-break functionality. The Quattro takes over the supply to the connected loads in the event of a grid failure or when shore/generator power is disconnected. This happens so fast (less than 20 milliseconds) that computers and other electronic equipment will continue to operate without disruption.
The second output is live only when AC is available on one of the inputs of the Quattro. Loads that should not discharge the battery, like a water heater for example, can be connected to this output.

Three phase capability
Three units can be configured for three phase output and up to 4 sets of three 15 kVA units can be parallel connected to provide 144 kW / 180 kVA inverter power and 2400 A charging capacity.

PowerControl – Dealing with limited generator, shore side or grid power
A current limit can be set on each AC input. The Quattro will then take account of other AC loads and use whatever is spare for charging, thus preventing the generator or mains supply from being overloaded.

PowerAssist – Boosting shore or generator power
Where peak power is so often required only for a limited period, the Quattro will make sure that insufficient mains or generator power is immediately compensated for by power from the battery. When the load reduces, the spare power is used to recharge the battery.

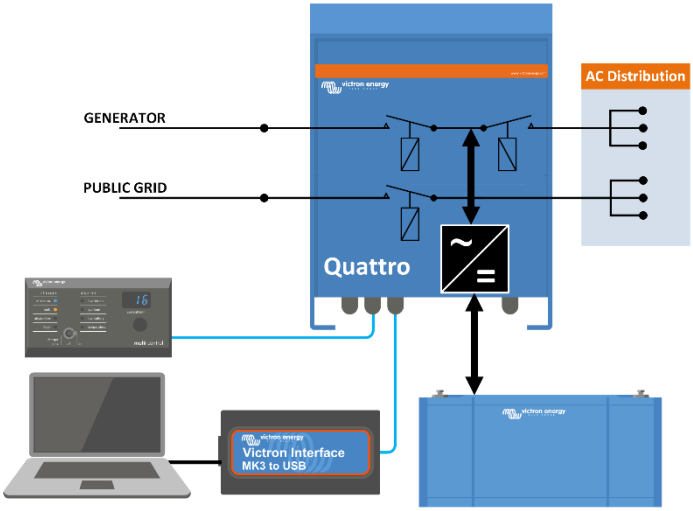
Solar energy: AC power available even during a grid failure
The Quattro can be used in off grid as well as grid connected PV and other alternative energy systems.
Loss of mains detection software is available.

System configuring
- In case of a stand-alone application, if settings must be changed, this can be done in a matter of minutes with a DIP switch setting procedure.
- Parallel and three phase applications can be configured with VE.Bus Quick Configure and VE.Bus System Configurator software.
- Off grid, grid interactive and self-consumption applications, involving grid-tie inverters and/or MPPT Solar Chargers can be configured with Assistants (dedicated software for specific applications).

On-site Monitoring and control
Several options are available: Battery Monitor, Multi Control Panel, Cerbo GX or other GX devices, smartphone or tablet (Bluetooth Smart), laptop or computer (USB or RS232).

Remote Monitoring and control
Cerbo GX, Ekrano GX or other GX devices.
Data can be stored and displayed on our VRM (Victron Remote Management) website, free of charge.

Remote configuring
When connected to the Ethernet, systems with a GlobalLink, Cerbo GX or other GX device can be accessed, and settings can be changed remotely.



Quattro 48/15000/200-100/100 277V

PowerControl / PowerAssist	Yes
Integrated Transfer switch	Yes
AC inputs (2x)	Input voltage range: 240-295 VAC Input frequency: 45 – 65 Hz Power factor: 1
Maximum feed through current	2x 100 A
INVERTER	
Input voltage range	38 – 66 V
Output [1]	Output voltage: 277 VAC ± 2 % Frequency: 60 Hz ± 0,1 %
Cont. output power at 25 °C [3]	15000 VA
Cont. output power at 25 °C	12000 W
Cont. output power at 40 °C	10000 W
Cont. output power at 65 °C	7000 W
Peak power	25000 W
Maximum efficiency	96 %
Zero load power	110 W
Zero load power in AES mode	75 W
Zero load power in Search mode	20 W
CHARGER	
Charge voltage 'absorption' (VDC)	57,6 V
Charge voltage 'float' (VDC)	55,2 V
Storage mode (VDC)	52,8 V
Charge current house battery (A) [4]	200 A
Battery temperature sensor	Yes
GENERAL	
Auxiliary output [5]	50 A
Programmable relay [6]	3x
Protection [2]	a-g
VE.Bus communication port	For parallel and three phase operation, remote monitoring, and system integration
General purpose com. port	2x
Remote on-off	Yes
Common Characteristics	Operating temp.: -40 to +65 ˚C Humidity (non-condensing): max. 95 %
ENCLOSURE	
Enclosure	Material & Colour: aluminium (blue RAL 5012) Protection category: IP21
Battery-connection	Four M8 bolts (2 plus and 2 minus connections)
277 VAC-connection	Bolts M6
Weight (kg)	160 lb 72 kg
Dimensions (hxwxd)	22.6 x 19,2 x 13,6 inch 572 x 488 x 344 mm
STANDARDS	
Safety	EN-IEC 60335-1, EN-IEC 60335-2-29, EN-IEC 62109-1
Emission, Immunity	EN 55014-1, EN 55014-2, EN-IEC 61000-3-2, EN-IEC 61000-3-3, IEC 61000-6-1, IEC 61000-6-2, IEC 61000-6-3

1) Setting range: 230-280 V (below 275 V cont. output power derates linearly with output voltage).
2) Protection key:
a) output short circuit
b) overload
c) battery voltage too high
d) battery voltage too low
e) temperature too high
f) AC on inverter output
g) input voltage ripple too high

3) Non-linear load, crest factor 3:1
4) Up to 25 ˚C ambient
5) Switches off when no external AC source available
6) Programmable relay that can a.o. be set for general alarm, DC under voltage or genset start/stop function
AC rating: 230 V / 4 A
DC rating: 4 A up to 35 VDC, 1 A up to 60 VDC

Digital Multi Control Panel
A convenient and low-cost solution for monitoring and control. With an on/off charger-only switch, full LED readout and a rotary knob to set PowerControl and PowerAssist levels.

VE.Bus Smart Dongle
For monitoring and control via Bluetooth together with the VictronConnect app. It also measures battery voltage and temperature.

Interface MK3-USB
Needed to configure the MultiPlus, Can be used with the VictronConnect app or VE.Configure software. The interface connects to the MultiPlus via an RJ45 UTP cable and plugs into a USB port.

VictronConnect app
Use to monitor or configure the MultiPlus using your phone tablet or PC.

Battery Monitor
To monitor battery state of charge via Bluetooth or the VRM portal.
The BMV 712 Smart has display, while the SmartShunt does not have a display. Both communicate via Bluetooth and have a VE.Direct communication port.

Victron Energy B.V. | De Paal 35 | 1351 JG Almere | The Netherlands
E-mail: sales@victronenergy.com | **www.victronenergy.com**