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› VITO VIGD30ST Diesel Generator 30kVA User Manual

## VITO VIGD30ST

# VITO VIGD30ST Diesel Generator 30kVA User Manual

Model: VIGD30ST

## 1. INTRODUCTION

Thank you for choosing the VITO VIGD30ST Diesel Generator. This professional-grade generator is designed to provide reliable and stable power for a wide range of applications, from residential backup to commercial and industrial use. With its robust diesel engine, advanced AVR technology, and ATS compatibility, the VIGD30ST ensures consistent performance and protection for your sensitive electronic devices. This manual provides essential information for the safe and efficient operation, maintenance, and troubleshooting of your generator.



Figure 1: Front view of the VITO VIGD30ST Diesel Generator, showcasing its robust yellow casing and control panel.

## 2. SAFETY INFORMATION

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Operating a generator can be dangerous if proper safety precautions are not followed. Read and understand all safety warnings before operating this equipment.

- **Carbon Monoxide Hazard:** Generators produce carbon monoxide, a colorless, odorless, poisonous gas. Operate the generator **ONLY outdoors and far away from windows, doors, and vents** Never operate indoors or in enclosed spaces.
- **Electrical Shock Hazard:**
  - Do not operate the generator in wet conditions.
  - Ensure the generator is properly grounded before use.
  - Never connect the generator directly to a building's electrical system without a qualified electrician and an approved transfer switch. This can cause backfeed, which is dangerous for utility workers.
- **Fire Hazard:**
  - Diesel fuel is flammable. Store fuel in approved containers and in a well-ventilated area.
  - Do not refuel the generator while it is running or hot. Allow it to cool down.
  - Keep flammable materials away from the generator during operation.
- **Burn Hazard:** Engine components become very hot during operation. Avoid contact with hot surfaces.
- **Noise Hazard:** Wear hearing protection when operating the generator for extended periods.
- **Maintenance Safety:** Disconnect the battery and allow the generator to cool before performing any maintenance.

### 3. PRODUCT FEATURES

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The VITO VIGD30ST Diesel Generator is equipped with advanced features for optimal performance and user convenience:

- **High Power Output:** Provides 30 kVA (24 kW continuous) power, suitable for demanding applications.
- **Dual Voltage Output:** Supports both 230V AC (single-phase) and 400V AC (three-phase) at 50 Hz.
- **Electric Start:** Ensures easy and reliable starting.
- **ATS Compatibility:** Equipped with an ATS port for automatic startup in case of power outages (ATS box not included).
- **Automatic Voltage Regulation (AVR):** Maintains a stable output voltage, protecting sensitive electronics from voltage fluctuations.
- **Extended Autonomy:** Large 80-liter fuel tank provides up to 13 hours of continuous operation.
- **Soundproof Casing:** Industrial-grade soundproofing reduces noise levels significantly to 65 dB(A) at 7 meters.
- **Water-Cooled Engine:** Features a robust 4-cylinder diesel engine with water cooling for enhanced durability and performance.
- **Robust Chassis:** Designed for easy transport and positioning, equipped for towing or lifting with a crane/forklift.

### 4. COMPONENTS AND CONTROLS

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Familiarize yourself with the main components and controls of your VITO VIGD30ST generator.



Figure 2: Close-up view of the generator's control panel and power outlets, including the single-phase (blue) and three-phase (red) receptacles, and the warning label.

- **Control Panel:** Typically includes ignition switch, hour meter, voltage meter, frequency meter, and various indicator lights.
- **Power Outlets:**
  - Single-phase outlet (230V AC)
  - Three-phase outlet (400V AC)
- **ATS Port:** Connection point for an Automatic Transfer Switch.
- **Fuel Tank:** Large capacity tank for diesel fuel.
- **Exhaust System:** Directs engine exhaust away from the unit.
- **Lifting/Towing Points:** Integrated into the chassis for safe handling.
- **Maintenance Access Panels:** Removable panels for engine and component access.



Figure 3: Detail of the generator's sturdy base, highlighting the integrated lifting and towing points for secure transportation.

## 5. SETUP

Proper setup is crucial for safe and efficient operation.

1. **Unpacking and Inspection:** Carefully remove the generator from its packaging. Inspect for any shipping damage. Report any damage to your dealer immediately.
2. **Placement:**
  - Place the generator on a firm, level surface.
  - Ensure adequate ventilation. The generator must be operated outdoors, far from any building openings (windows, doors, vents) to prevent carbon monoxide buildup.
  - Maintain at least 1 meter (3 feet) of clear space around all sides of the generator.
3. **Fueling:**

- Use only clean, fresh diesel fuel.
- Ensure the generator is off and cool before refueling.
- Do not overfill the fuel tank. Leave space for expansion.
- Wipe up any spilled fuel immediately.

#### 4. **Engine Oil:**

- Check the engine oil level using the dipstick.
- Add recommended diesel engine oil if the level is low. Refer to the engine manual for specific oil type and capacity.

#### 5. **Coolant:**

- Check the coolant level in the radiator.
- Top up with appropriate engine coolant if necessary.

6. **Battery Connection:** Connect the battery terminals (if not pre-connected), ensuring correct polarity (positive to positive, negative to negative).

7. **Grounding:** Connect the generator to a proper earth ground using a heavy-gauge wire. This is a critical safety step to prevent electrical shock.

#### 8. **Load Connection:**

- For direct loads, connect appliances or power distribution units to the appropriate 230V or 400V outlets.
- For ATS (Automatic Transfer Switch) operation, connect the generator to the ATS panel according to the ATS manufacturer's instructions.
- Ensure the total load does not exceed the generator's rated capacity.

## 6. OPERATING INSTRUCTIONS

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Follow these steps for safe and effective operation of your generator.

### 6.1. Pre-Start Checks

- Verify fuel level.
- Check engine oil level.
- Confirm coolant level.
- Ensure all electrical loads are disconnected from the generator before starting.
- Check that the generator is properly grounded.

### 6.2. Starting the Generator (Electric Start)

1. Turn the main circuit breaker on the generator to the "OFF" or "OPEN" position.
2. Insert the key into the ignition switch.
3. Turn the key to the "START" position and hold until the engine starts. Do not crank for more than 5 seconds at a time. If the engine does not start, wait 10 seconds before trying again.
4. Once the engine starts, release the key, and it will return to the "RUN" position.
5. Allow the generator to warm up for a few minutes before applying any load.
6. Once stable, turn the main circuit breaker to the "ON" or "CLOSED" position. You can now connect your loads.

### 6.3. Operating the Generator

- **Load Management:** For optimal performance and longevity, distribute the load symmetrically across the phases for three-phase operation. Avoid overloading the generator.
- **Monitoring:** Periodically check the control panel for voltage, frequency, and any warning indicators.
- **Refueling:** Never refuel while the generator is running or hot. Shut down the generator and allow it to cool before adding fuel.

## 6.4. Stopping the Generator

1. Disconnect all electrical loads from the generator.
2. Turn the main circuit breaker to the "OFF" or "OPEN" position.
3. Allow the generator to run for a few minutes without load to cool down.
4. Turn the ignition key to the "OFF" position to shut down the engine.
5. Remove the key for security.

## 7. MAINTENANCE

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Regular maintenance is essential to ensure the longevity and reliable operation of your VITO VIGD30ST generator. Always refer to the engine manufacturer's manual for detailed maintenance schedules and procedures.

### 7.1. Daily/Before Each Use

- Check engine oil level.
- Check fuel level.
- Check coolant level.
- Inspect for any visible leaks (fuel, oil, coolant).
- Check air filter for excessive dirt.

### 7.2. Every 50 Hours or Monthly

- Change engine oil (after first 20 hours, then every 50-100 hours).
- Clean or replace air filter.
- Check battery terminals for corrosion and ensure they are tight.
- Inspect fuel lines and connections.

### 7.3. Every 200 Hours or Annually

- Replace fuel filter.
- Replace oil filter.
- Inspect and clean spark plugs (if applicable, though diesel engines use glow plugs).
- Check valve clearance (professional service recommended).
- Inspect cooling system hoses and radiator.

**Important:** Always disconnect the battery and allow the generator to cool completely before performing any maintenance or inspection.

## 8. TROUBLESHOOTING

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This section provides solutions to common operational issues. For complex problems, contact a qualified service technician.

| Problem                 | Possible Cause              | Solution                                              |
|-------------------------|-----------------------------|-------------------------------------------------------|
| Generator won't start.  | Low fuel level.             | Add fresh diesel fuel.                                |
|                         | Dead or weak battery.       | Charge or replace battery.                            |
|                         | Engine oil level too low.   | Add engine oil to proper level.                       |
|                         | Fuel filter clogged.        | Replace fuel filter.                                  |
|                         | Air in fuel system.         | Bleed the fuel system (refer to engine manual).       |
| No power output.        | Circuit breaker tripped.    | Reset circuit breaker.                                |
|                         | Overload.                   | Reduce connected load.                                |
|                         | Faulty outlet or wiring.    | Inspect connections; contact technician if necessary. |
|                         | AVR malfunction.            | Contact qualified technician.                         |
| Engine runs, but rough. | Stale or contaminated fuel. | Drain old fuel, add fresh.                            |
|                         | Clogged fuel filter.        | Replace fuel filter.                                  |
|                         | Dirty air filter.           | Clean or replace air filter.                          |
| Overheating.            | Low coolant level.          | Check and top up coolant.                             |
|                         | Blocked radiator fins.      | Clean radiator fins.                                  |
|                         | Overload.                   | Reduce load.                                          |

## 9. SPECIFICATIONS

Technical specifications for the VITO VIGD30ST Diesel Generator.

|                        |                                                              |
|------------------------|--------------------------------------------------------------|
| Model Number           | VIGD30ST                                                     |
| Brand                  | VITO                                                         |
| Emergency Power (STP)  | 33 kVA / 26.4 KW                                             |
| Rated Power (PRP)      | 30 kVA / 24 kW                                               |
| Output Voltage         | 230 V AC 50 Hz (Single-phase) / 400 V AC 50 Hz (Three-phase) |
| Rated Output Current   | 43 A                                                         |
| Fuel Type              | Diesel                                                       |
| Engine Displacement    | 3.707 L (4-cylinder)                                         |
| Fuel Tank Capacity     | 80 L                                                         |
| Autonomy               | Up to 13 hours                                               |
| Noise Level            | 65 dB(A) at 7 m                                              |
| Dimensions (L x W x H) | 214 x 85 x 115 cm                                            |
| Weight                 | 950 kg                                                       |
| Start System           | Electric Start, Remote Start, ATS Compatible                 |
| Special Features       | AVR, Soundproof Casing, Water-cooled                         |

# 10. WARRANTY AND SUPPORT

Specific warranty information for the VITO VIGD30ST Diesel Generator is not provided in this manual. Please refer to your purchase documentation, contact your retailer, or visit the official VITO website for detailed warranty terms and conditions. For technical support, spare parts, or service inquiries, please contact the authorized VITO service center or your product dealer. When contacting support, please have your model number (VIGD30ST) and serial number ready.

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## ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

### Name

Anonymous

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### Question

Example: How do I reset this device or fix this error?

### Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question