

I. Diesel Generator 100 kVA with Enclosed Soundproof Canopy

1. Main Electrical Characteristics

- Rated power: 100 kVA (80 kW)
- Maximum (standby) power: 110 kW / 137.5 kVA
- Rated voltage: 400/230 V
- Frequency: 50 Hz
- Number of phases: 3
- Power factor: 0.8
- Rated current: ~144–180 A (depending on engine model)

2. Engine

- Type: Diesel, 4-stroke, liquid-cooled
- Cylinders: 4 or 6 (typically inline)
- Speed: up to 1500 rpm
- Starting system: Electric starter (24 V), battery-powered
- Speed governor: Mechanical or electronic

3. Fuel Consumption and Tank Capacity

- Fuel consumption at 75% load: ~15–20 L/h
- Fuel consumption at 100% load: ~22–28 L/h
- Fuel tank capacity: 150–300 liters (integrated into frame under canopy)
- Autonomy: 10–15 hours without refueling

4. Soundproof (Weatherproof) Canopy

- Material: Steel with anti-corrosion coating
- Sound insulation: Internal lining with non-combustible sound-absorbing material
- Features:
 - Lockable service doors
 - Industrial exhaust silencers (noise reduction)
 - Weatherproof design: protection against rain, snow, dust
- Noise level: ~65–75 dBA at 7 meters

5. Alternator (AC Generator)

- Type: Brushless, synchronous
- Voltage regulation: Automatic Voltage Regulator (AVR), accuracy $\pm 1\%$
- Protection class: IP 23
- Fast-acting automatic voltage stabilizer, maintaining output within 2% under normal conditions

- Screen protection
- Power sockets (CEE): one 3-pole

6. Control Panel

- Functions: Digital panel, monitoring engine and generator parameters, protection against overload, low oil pressure, high temperature. Equipped with automatic shutdown if critical parameters are exceeded (low oil pressure, high engine temperature, overspeed).
- Automatic main circuit breaker
- Start/stop button or key
- Emergency stop button
- Instruments:
 - Voltmeter (with selector for phase-to-neutral and phase-to-phase voltages)
 - Ammeter (three instruments, one per phase, or one with selector for sequential phase current reading)
 - Frequency meter
 - Hour counter

Standard Accessories Supplied

- Spare parts catalog, drawings, and generator documentation (installation requirements, electrical connections, grounding, etc.) in Russian or English
- Tool kit, including pipe wrenches for injectors, etc.
- Spare parts for 2000 operating hours within the first two years, including: oil filter, air filter cartridges, complete sets of V-belts, and one full set of cylinder head gaskets

Warranty

Minimum 24 months against faults or manufacturing defects

II. Automatic Transfer Switch (ATS) for 100 kVA Diesel Generator

ATS detects power grid failure and instantly starts the generator, transferring the load to it, ensuring uninterrupted power supply without manual intervention.

III. Automatic Mains Failure (AMF) Panel for 100 kVA Diesel Generator

AMF is a control system that automatically detects grid failures and switches the load to the standby generator, ensuring continuous power supply.