

HBM Machines 7900 ATS Diesel Power Generator

HBM 7900 ATS Diesel Power Generator

User Manual

Model: 7900 ATS | Brand: HBM Machines

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation, maintenance, and troubleshooting of your HBM 7900 ATS Diesel Power Generator. Please read this manual thoroughly before operating the generator to ensure proper use and to prevent injury or damage.

The HBM 7900 ATS Diesel Power Generator is a professional, powerful, and reliable silent diesel generator designed for various applications, including home, office, or construction site backup power. It features an electric start, automatic voltage regulation (AVR), and multiple output options.

2. PRODUCT OVERVIEW

2.1 Generator Components



Figure 2.1: Front-side view of the HBM 7900 ATS Diesel Power Generator, showing the main housing and control panel.



Figure 2.2: Side view of the generator with the access panel open, revealing the internal battery and engine components.

2.2 Control Panel



Figure 2.3: Detailed view of the control panel, featuring the digital display, starter switch, emergency stop, low oil pressure alarm, pre-heater, and various AC outlets (400V, 230V).

The control panel includes:

- **Digital Panel:** Displays operational parameters such as voltage, frequency, and hours.
- **DC 12V 8.3A Output:** For charging 12V batteries.
- **Fuses:** DC 12V 10A fuse for protection.
- **Voltage Selector Switch:** To select between 400V and 230V output.
- **AC SW (Circuit Breakers):** Overload protection for AC outputs.
- **Starter Switch (OFF/ON/START):** For electric starting the engine.
- **Emergency Stop Button:** Immediately shuts down the generator in an emergency.
- **Low Oil Pressure Alarm:** Indicator light for low oil level.
- **Pre-Heater Button:** Assists starting in cold weather.
- **AC400V Outlet (PCE5p 16A):** Three-phase power output.
- **AC230V Outlet (32A):** Single-phase power output.

3. SAFETY INSTRUCTIONS

WARNING: Failure to follow these safety instructions could result in serious injury or death.

3.1 General Safety

- Always operate the generator in a well-ventilated area to prevent carbon monoxide poisoning. Never operate indoors.
- Keep children and pets away from the generator during operation.
- Ensure the generator is placed on a level, stable surface.
- Do not operate the generator in rain or wet conditions.
- Wear appropriate personal protective equipment (PPE) such as gloves and eye protection.

3.2 Electrical Safety

- Never connect the generator directly to a building's electrical system without a proper transfer switch installed by a qualified electrician. Backfeeding can cause electrocution.
- Ensure all electrical connections are secure and free from damage.
- Do not overload the generator. Refer to the specifications for maximum load capacity.
- Use only approved extension cords that are rated for outdoor use and the appropriate amperage.

3.3 Fuel Safety

- Diesel fuel is highly flammable. Store fuel in approved containers in a cool, well-ventilated area, away from ignition sources.
- Never refuel the generator while it is running or hot. Allow the engine to cool down completely.
- Avoid spilling fuel. If spills occur, clean them up immediately.
- Do not smoke near the generator or fuel storage area.

4. SETUP

4.1 Unpacking and Placement

1. Carefully remove the generator from its packaging. Inspect for any shipping damage.
2. Place the generator on a firm, level surface outdoors, at least 1 meter (3 feet) away from buildings and other equipment. Ensure adequate ventilation.
3. Lock the wheels (if applicable) or ensure the generator cannot move during operation.

4.2 Initial Checks

- **Check Engine Oil Level:** The generator is shipped without engine oil. Fill with 15W-40 diesel engine oil to the upper mark on the dipstick. The oil capacity is 1650 ML.
- **Check Fuel Level:** Fill the fuel tank with clean diesel fuel. The fuel tank capacity is 12 liters. Do not overfill.
- **Check Air Filter:** Ensure the air filter is clean and properly installed.
- **Battery Connection:** Connect the battery terminals (if not already connected) ensuring correct polarity (red to positive, black to negative).

5. OPERATING INSTRUCTIONS

5.1 Starting the Generator (Electric Start)

1. Ensure all loads are disconnected from the generator outlets.
2. Turn the main circuit breaker (AC SW) to the 'OFF' position.
3. If operating in cold weather, press and hold the **Pre-Heater Button** for 5-10 seconds.
4. Insert the key into the **Starter Switch** and turn it to the 'ON' position.
5. Turn the key further 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.
6. Once the engine starts, release the key, and it will return to the 'ON' position.
7. Allow the engine to warm up for a few minutes before connecting any loads.

5.2 Connecting Electrical Loads

1. After the generator has warmed up, select the desired voltage (400V or 230V) using the **Voltage Selector Switch**.
2. Plug your electrical devices into the appropriate outlets (AC400V or AC230V).
3. Turn the main circuit breaker (AC SW) to the 'ON' position.
4. Connect loads one by one, starting with the largest load. Do not exceed the generator's rated output.

5.3 Stopping the Generator

1. Disconnect all electrical loads from the generator outlets.
2. Turn the main circuit breaker (AC SW) to the 'OFF' position.
3. Allow the generator to run for a few minutes without load to cool down.
4. Turn the **Starter Switch** key to the 'OFF' position.
5. In an emergency, press the **Emergency Stop Button** to immediately shut down the engine.

6. MAINTENANCE

Regular maintenance is crucial for the longevity and reliable operation of your generator.

6.1 Maintenance Schedule

Item	Before Each Use	Every 50 Hours / Monthly	Every 200 Hours / 6 Months
Engine Oil Level	Check	Change	-
Fuel Level	Check	-	-
Air Filter	Check	Clean	Replace
Fuel Filter	-	-	Replace
Battery	Check terminals	Check charge	-

6.2 Oil Change Procedure

1. Run the engine for a few minutes to warm the oil.
2. Shut down the engine and disconnect the spark plug wire (if applicable) or battery to prevent accidental starting.
3. Place a suitable container under the oil drain plug.

4. Remove the oil drain plug and allow the oil to drain completely.
5. Reinstall the drain plug and refill with 1650 ML of fresh 15W-40 diesel engine oil.
6. Check the oil level with the dipstick; do not overfill.

6.3 Storage

For long-term storage (more than 30 days):

- Drain the fuel tank or add a fuel stabilizer.
- Change the engine oil.
- Clean the air filter.
- Store the generator in a clean, dry, well-ventilated area.
- Disconnect the battery and store it in a cool, dry place, ensuring it is fully charged.

7. TROUBLESHOOTING

This section provides solutions to common operational issues. For problems not listed here, contact qualified service personnel.

Problem	Possible Cause	Solution
Engine does not start	No fuel Low oil level Dead battery Faulty starter switch	Add diesel fuel Add engine oil Charge/replace battery Contact service
No power output	Circuit breaker tripped Overload Faulty outlet AVR malfunction	Reset circuit breaker Reduce load Contact service Contact service
Engine runs rough	Dirty air filter Contaminated fuel Low oil level	Clean/replace air filter Drain and refill fuel Check and add oil
Low oil alarm activates	Low oil level	Check oil level and add oil (engine will stop automatically)

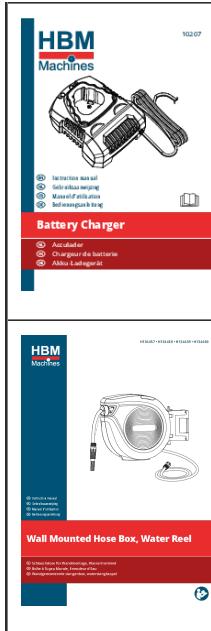
8. SPECIFICATIONS

Feature	Specification
Model	7900 ATS Diesel Power Generator
Engine Type	4-stroke Diesel, 452CC (13 HP, Type D500E)
Cooling System	Air-cooled
Starting System	Electric Start

Feature	Specification
Rated Power (400V)	6.3 kVA
Max Power (400V)	7.0 kVA
Rated Power (230V)	5.0 kVA
Max Power (230V)	5.5 kVA
Output Voltage	1 x 400V (PCE5p 16A), 1 x 230V (32A), 1 x 12V (8.3A) DC
Frequency	50 Hz
Engine Speed	3000 min-1 (RPM)
Fuel Type	Diesel
Fuel Tank Capacity	12 Liters
Oil Type	15W-40
Oil Capacity	1650 ML
Operating Capacity	Approx. 13 hours (at rated load)
Noise Level	96 dB
Dimensions (L x W x H)	92 x 52 x 76 cm
Weight	152 kg
Special Features	Automatic Voltage Regulator (AVR), Low Oil Level Alarm with Auto Stop, Overload Protection, Direct Injection

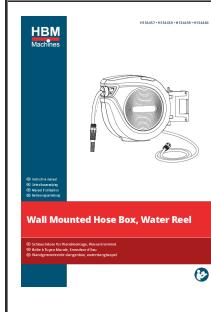
9. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please contact your authorized HBM Machines dealer or the point of purchase. Keep your purchase receipt as proof of purchase for warranty claims. Always refer to the official HBM Machines website or contact customer service for the most up-to-date warranty terms and conditions.



[HBM Machines 10207 Battery Charger Instruction Manual](#)

User manual for the HBM Machines 10207 Battery Charger, providing safety instructions, operation guidelines, specifications, troubleshooting, and warranty information.



[HBM Wall Mounted Hose Box & Water Reel: Installation and User Manual](#)

Comprehensive instruction manual for HBM Wall Mounted Hose Box and Water Reel models H134457, H134458, H134459, and H134460. Covers safety, installation, usage, maintenance, and specifications for garden irrigation.