



TDG-21- YGG-DS



APU System

About APU

- Onboard Power on Demand: How APUs Keep Armored Vehicles Running
- Military vehicles rely on a constant energy source to operate critical systems even when the main engine is off. Auxiliary Power Units (APUs) fill this role, providing electrical power and climate control without needing the engine to run.
- Unlike generators, APUs integrate seamlessly into the vehicle's design. They don't require bulky batteries or separate fuel tanks, offering a space-saving solution. With customizable power outputs ranging from 2 kW to 100 kW, APUs can cater to the specific needs of each vehicle.
- Benefits Beyond Engine Life
- APU technology offers several advantages:
 - Silent Operation: APUs run quietly, minimizing the vehicle's noise signature for discreet operations.
 - Fuel Efficiency: By taking over tasks from the main engine, APUs conserve fuel and extend engine life.
 - Continuous Power: Critical systems like weapon systems, communication equipment, and climate control can function uninterrupted, even during engine maintenance or refueling.
 - Smart Features for Easy Control
 - APUs come equipped with user-friendly IP7 control units. These digital interfaces display vital information like temperature, fuel level, and battery voltage, allowing operators to monitor system health in real-time. Additionally, the control unit offers both automatic and manual starting options for added flexibility.
- In essence, APUs are intelligent systems that ensure military vehicles remain operational and mission-ready, even with the main engine off.



General Specifications

Output Voltage	28 VDC
Engine Power	21 kW
Engine Height	410 mm
APU Dimensions	410 mm , Height 1320 mm Length, 770 mm, Width
Operating Temperature	-30°C - +49 °C
Storage Temperature	-40°C - +60 °C
Integrated Cooling System	Water Cooled
System Weight	420 ±10 Kg

Engine Specifications

Engine Options	<p>a) Engine Brand: Kubota Model: D1105-T</p> <p>b) Engine Brand: Kohler Model: KDI1903M</p> <p>c) Engine Brand: Yanmar Model: 4TNV88(-B)</p>
Engine Type	Water Cooled Vertical Diesel
Intake System	<ul style="list-style-type: none">• Turbo Charge
Cooling	<ul style="list-style-type: none">• Liquid Cooled
Starting	<ul style="list-style-type: none">• Starter Motor
Fuel Type	<ul style="list-style-type: none">• Diesel

Control Panel

- **Technical Specifications**

Control Panel:

- **Location:** Positioned close to the APU for easy user access during maintenance procedures.
- **Error Indicators:** Current error statuses can be observed on the APU in real time.
- **Manual Override Buttons:** Equipped with buttons for immediate intervention in case of issues during automatic APU activation.
- **Protection Class:** Designed according to IP67 standards.
- **Diagnostics:** Allows access to the latest 500 detailed log records for comprehensive system health assessment.
- **Military Standards:** Compliant with MIL-STD-810G and MIL-STD-461E/F standards.

LED Indicators:

- **APU Status:** Indicates the operating status of the APU (on/off, error).
- **Fuel Level:** Displays the fuel level in the tank.
- **Pressure Level:** Shows the pressure level in the system.
- **DC Current:** Indicates the value of DC current flowing through the system.
- **Battery Voltage:** Displays the voltage level of the battery.

Buttons:

- **Start/Stop:** Used to start or stop the APU.
- **Auto/Manual:** Used to select automatic or manual operation of the APU.
- **Reset:** Used to reset error indicators.
- **Additional Features:**
 - **Fault Code Indicator:** Displays codes that identify the source of the fault.
 - **Adjustable Sound Level:** Used to adjust the alarm volume.
 - **Night Mode:** Adjusts the screen brightness for night use.

Remote Controller

Remote Controller :

Functions:

- Remote APU control
- APU data monitoring via the information screen
- Activation/deactivation of the APU system
- Activation/deactivation of the air conditioning system

Indicators:

- APU on/off
- CIT test
- Errors
- Air conditioner on/off

Buttons:

- Power On/Off (APU)
- Air Conditioner On/Off
- CIT Test
- Cancel
- Menu Up/Down
- Emergency Shutdown

Durability:

- MIL-STD-810G and MIL-STD-461E/F compliant for ruggedness
- IP67 rated for dust and water resistance

Technical Specifications:

- **Operating Temperature:** -40°C to +85°C
- **Power Requirements:** 12V - 24V DC
- **Dimensions:** 120mm x 110mm x 60mm
- **Weight:** 630g