

Key Features

- Designed and manufactured in an ISO9001-certified facility in Statesville, North Carolina, USA.
- Heavy duty mobile generator system designed for prime power operation in rental, construction and special events applications.
- Generator is CSA certified for electrical equipment per C22.2, No. 14.

| Voltage Configuration | Frequency (Hz) | Power Factor | Prime Power Rating | | |
|-----------------------|----------------|--------------|--------------------|-----|-------------|
| | | | kVA | kW | Current (A) |
| 600/346V - 3Ø WYE | 60 | 0.8 | N/A | N/A | N/A |
| 480/277V - 3Ø WYE | 60 | 0.8 | 39 | 31 | 47 |
| 240/139V - 3Ø WYE | 60 | 0.8 | 39 | 31 | 93 |
| 240/120V - 3Ø DELTA | 60 | 0.8 | N/A | N/A | N/A |
| 208/120V - 3Ø WYE | 60 | 0.8 | 39 | 31 | 106 |
| 240/120V - 1Ø ZIG ZAG | 60 | 1.0 | 32 | 32 | 134 |
| 400/230V - 3Ø WYE | 50 | 0.8 | 31 | 25 | 45 |

* Note: Not all listed voltages are available on standard product. Some voltages may require selection of optional features.

Skidbase and Enclosure

- Package foundation is a heavy duty, oilfield-ready skidbase equipped with four-point tie downs.
- The skidbase is a fully bonded, Environmental Containment design, sized to contain at least 110% of total oil and fuel volume, to prevent any leakage of hazardous fluids from the package.
- Ducted air intakes ensure near-zero water ingress into the containment area, even during operation in the heaviest rain conditions.
- The enclosure is constructed from corrosion-resistant galvanealed steel and coated with a 13 stage powder paint process for long life even in harsh environments.
- The enclosure panels are fitted with sound-absorbing acoustical material to help reduce noise for quiet operation in noise sensitive applications such as concerts, events and nighttime construction.
- Wide opening access doors are side hinged, providing easy access to service and maintenance points and are equipped with recessed, pad-lockable handles and safety latches to hold doors open during servicing.
- Package is equipped with a center-point lifting eye for safe, well-balanced hoisting, designed with a 5 x safety factor for the weight of a fully fueled unit with running gear.

Diesel Engine

- Heavy-duty Doosan diesel engine is emissions certified to EPA Tier 4-final standards and provides the optimum mix of performance and fuel economy.
- 49 Horsepower-rated engine meets California emissions regulations without the need to register the unit under the Portable Equipment Registration Program (PERP).
- The Diesel Oxidation Catalyst (DOC) aftertreatment system meet the stringent NOx and particulate limits without the use of a Diesel Particulate Filter (DPF).
- Dual frequency capability allows operation at 50 hertz or 60 hertz with the flip of a switch.
- Electronically controlled engine provides isochronous frequency control and advanced diagnostic monitoring and protection.
- The engine generator assembly is mounted on fail-safe vibration isolators.
- Coolant and oil drains are piped to bulkhead fittings mounted on the enclosure and all filters and maintenance points are easily accessed for safe and easy servicing.
- Engines are globally supported by Doosan Portable Power.

CoolBox Cooling System

- Doosan's CoolBox cooling system brings cool air into the enclosure through ducted inlet panels to ensure low noise levels.
- Cooling air flows through the package by an engine-driven pusher fan which moves airflow from the inlet panels, across the powertrain and through the heat exchangers before being exhausted through the roof outlets in the discharge plenum.
- The CoolBox solution balances performance in high-ambient conditions, low noise levels and minimum water engression with a cost effective package design.
- Doosan generators provide performance at the full prime power rating at ambient temperatures up to 104°F (40°C) without derating.

Alternator

- Marelli Motori alternators feature brushless excitation providing industry leading motor starting kVA and 300% overload capability.
- Mark V automatic voltage regulator provides precision control of voltage level and fast response to load changes.
- Class H insulation with upgraded environmental coating for ultimate resistance to high temperature and humidity.
- Three position Voltage Selector Switch (VSS) to easily configure the units for operation at most common voltages.

Control System

- An array of operator-preferred analog gauges provide at-a-glance monitoring of generator parameters.
- Solid state engine control module provides convenient, microprocessor-controlled startup at the push of a button and protects the generator system from an array of faults while providing the operator with indication of any faults on the LED display.
- Standard Run / Idle selector switch allows operators to start and warm up the generator at low engine speed to prevent excess engine wear when operating in cold climates.
- Engine Diagnostic Trouble Codes (DTCs) are displayed on the LCD screen, providing operators and technicians with a numeric and text explanation of the fault code, minimizing the need for expensive hand-held code scanners.
- Standard remote Auto Start / Stop capability via two wire, closed contact logic, allows for connection to automatic transfer

switchgear and other remote starting devices.

- Industry-leading Voltage Selector Switch (VSS) protection feature prevents switching the VSS while generator is operating.

Power Connections

- All controls and connection points are grouped at the rear of the unit for safety and operator convenience.
- Power cables are connected at an oversized five lug (L1 L2 L3 N PE) terminal board capable of accepting bare end cable or terminated cables.
- Convenience receptacle panel includes individual branch circuit breakers.
- Optional camlock panel includes a panel mounted set of 400A female connectors to further expand connection capabilities.

Fuel System

- Single fuel tank sized for 24 hour runtime at full load is mounted within the skid base, providing double wall protection.
- Fuel tank mounted low in frame and centered to ensure balanced lifting and low center of gravity.
- The fuel filler is located within the containment basin, minimizing possible spillage.
- Standard primary fuel / water separator and fine micron secondary fuel filter keep contaminants out of the system and increase reliability.
- The containment system features a three-inch drain plug for easy cleaning, and the fuel tank is equipped with a drain plug mounted behind the containment plug for easy cleaning.
- Leak-proof fuel vents eliminate the potential for fuel purge during out-of-level conditions during transport and load / unload.
- Low fuel shutdown ensures the engine will not lose prime if it runs out of fuel.

Running Gear

- Integrated running gear system mounts directly to generator skidbase providing an industry-best low center of gravity for safe, stable towing, on-road or off-road.
- Single axle torsion suspension with E-Z-Lube hub assemblies and electric brakes or optional hydraulic surge brakes.
- All models feature high quality, grommet-mount lighting and meet Federal Motor Vehicle Safety Standards for lighting and conspicuity.
- Trailer-to-vehicle connector is a 7-pole "RV"-style plug with a high quality, jacketed wiring harness.
- All units are equipped with a 3-inch pintle eye or optional 2-inch or 2-5/16" ball hitch, heavy duty safety chains and a high quality, heavy-duty jack stand.

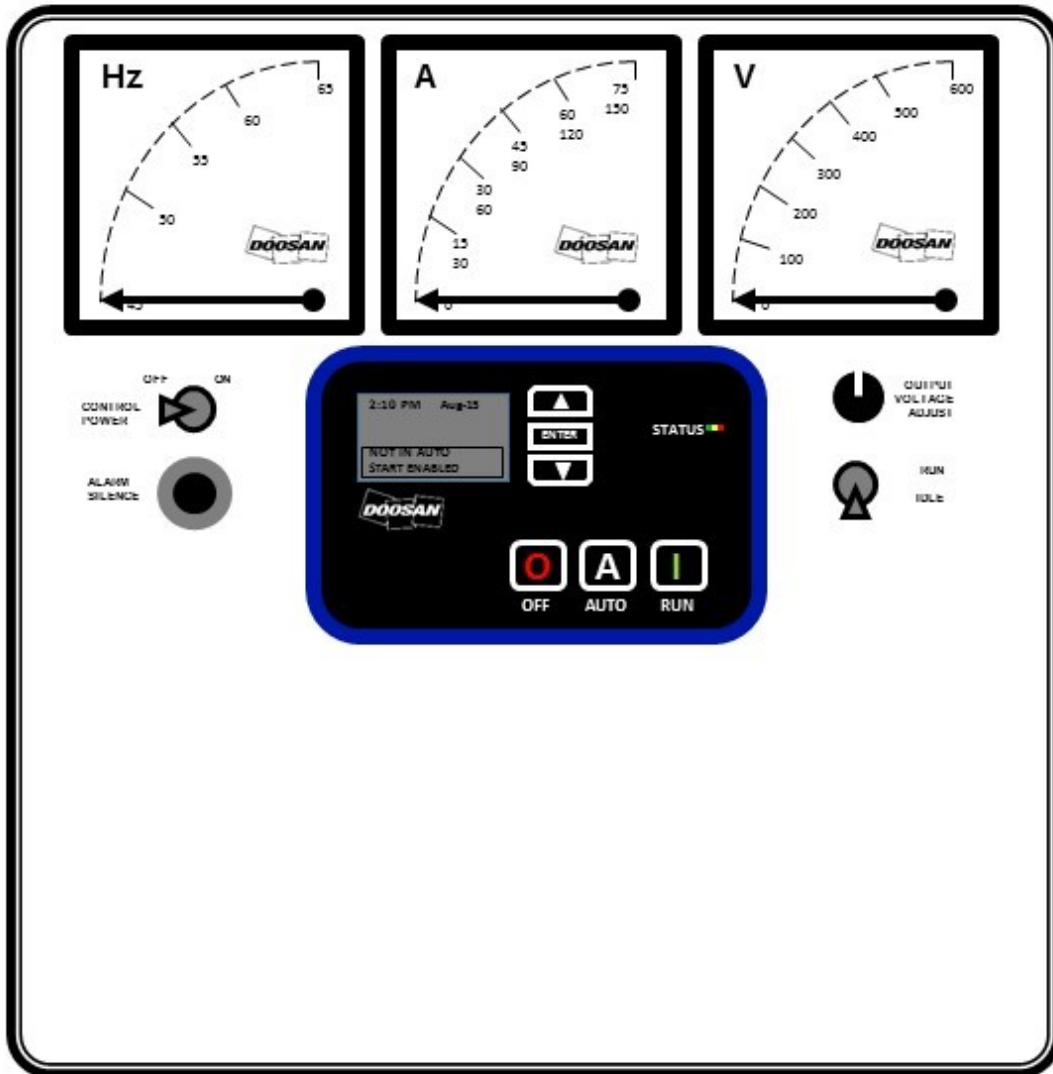
Options

- Doosan models can be equipped with a broad array of optional equipment to meet the need of specific applications. Common selections include:
 - Cold start options including engine coolant heater, battery pad warmers, and heated crankcase breather systems
 - Three-way fuel valve for connection to a remote fuel tank
 - Battery charger
 - Automatic oil level maintainer
 - Running gear options including rear stabilizer jacks, drawbar-mounted tool box and spare tire.

Warranty

- All models are covered by a comprehensive limited warranty:
 - Package: 1 year / 2000 hours
 - Doosan Engine: 3 years / 3000 hours
 - Marelli Alternator: 2 years / 4000 hours

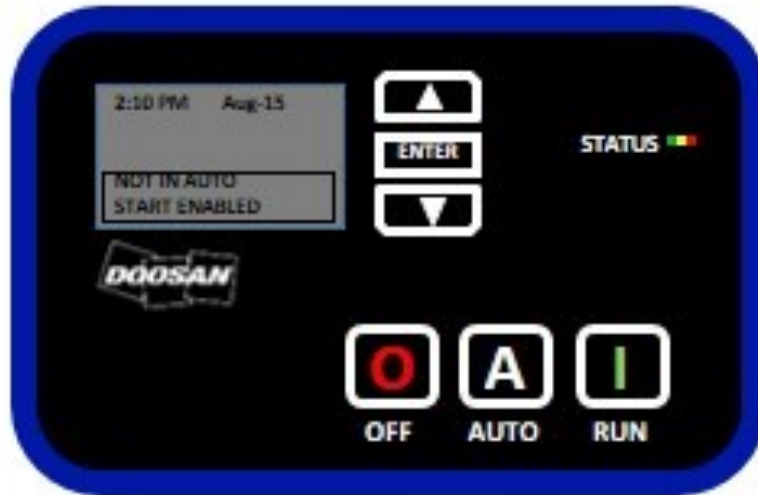
Operator Panel



Operator Panel Features

1. Tachometer: LCD Display
2. Oil Pressure: LCD Display
3. Coolant Temperature: LCD Display
4. Fuel Level: LCD Display
5. Control Power On / Off Switch
6. Alarm Silence Button (optional)
7. Voltage Adjustment Control
8. Run / Idle Control Switch
9. TG410 Controller
10. Frequency-meter: 45-65 Hz scale
11. AC Ammeter: Dual scale: 0-75 A @ 480V / 0-150A @ 208V
12. AC Voltmeter: 0-600 V scale

TG410 Automatic Start Stop Controller



TG410 Genset Controller Features

Functionality

- Automatic shutdowns and warnings
- Manual and remote autostart
- Engine speed adjustment
- Aftertreatment conditioning controls and status icons
Auto / Force / Inhibit
- SAE J1939 electronic engine communication
- Engine Fault Code Annunciation
SPN / FMI / OC
- 150 Event Fault Log
- Isolated RS 485 Modbus communication capable
- NFPA 110 Level 1 capable
- Maintenance counter
- Autostart on low battery capable
- Exerciser clock
- Automatic, inverse time delay overcurrent protection

Form Factor

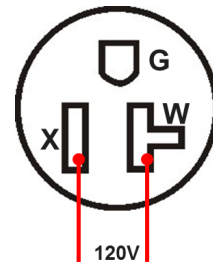
- 6-Button control
- 6-Line LCD Display with user adjustable contrast and temperature compensation from -4°F (-20°C) to 158°F (70°C)
- 1 Multicolor (Red/Yellow/Green) Status LED
- Front Gasket Seal for water ingress prevention to IP65 protection
- Conformal coated circuit board for protection against moisture and contaminants
- Rugged polycarbonate enclosure designed to survive extreme applications and abuse
- Controller functions in ambient conditions ranging from -40°F/C to 158°F (70°C)
- Meets or exceeds SAE J1113-11 with respect to electrical transients
- Meets or exceeds SAE J1455 with respect to vibration, thermal shock and cycling
- Meets or exceeds MIL-STD-461E with respect to electromagnetic compatibility
- Maximum 600V AC, true RMS sensing, +/- 1% full scale accuracy
- Current sensing, +/- 2% full scale accuracy

| | |
|--|--|
| <p>MANUAL RUN . . .</p> <p>Genset Current</p> <p>A: 100 A</p> <p>B: 100 A</p> <p>C: 100 A</p> | <p>MANUAL RUN . . .</p> <p>Genset Voltage</p> <p>A-B: 480.0V</p> <p>B-C: 480.0V</p> <p>C-A: 480.0V</p> |
| <p>MANUAL RUN . . .</p> <p>Oil Pressure 75.0 PSI</p> <p>Fuel Level 95.3%</p> | <p>MANUAL RUN . . .</p> <p>Engine Temp 180.5 F</p> <p>DEF Fluid Level 90.5%</p> |
| <p>MANUAL RUN . . .</p> <p>Engine Speed 1800.0RPM</p> <p>Hold AUTO+ ▼ / ▲</p> <p>To Adjust RPM</p> | <p>MANUAL RUN . . .</p> <p>Regen Status Auto</p> <p>Hold ENTER for 3s to change</p> |
| <p>MANUAL RUN . . .</p> <p>Battery Voltage 13.6 V</p> <p>AC Frequency 60.0 Hz</p> | <p>MANUAL RUN . . .</p> <p>Running Time 8.3 Hours</p> <p>Engine Hours 250.7 Hours</p> |

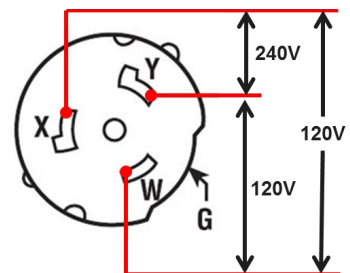
| Engine Data | | | |
|--|-----------------------------------|------------|------------|
| Engine Manufacturer | Doosan | | |
| Model Number | D24 | | |
| Prime Output @ 1800 RPM | 48.8 bhp | 36.4 kWm | |
| Standby Output @ 1800 RPM | 48.8 bhp | 36.4 kWm | |
| Prime Output @ 1500 RPM | 40 bhp | 29.8 kWm | |
| Standby Output @ 1500 RPM | 40 bhp | 29.8 kWm | |
| Engine Type | Four Cycle, Inline | | |
| Engine Control | ECU | | |
| Emissions Certification | EPA Tier 4 Final | | |
| Number of Cylinders | 4 | | |
| Aspiration | Turbocharged / Intercooled / cEGR | | |
| Aftertreatment Technology | Diesel Oxidation Catalyst (DOC) | | |
| Bore × Stroke | 3.54 × 3.7 in | 90 x 94 mm | |
| Displacement | 146 in ³ | 2.392 L | |
| Compression Ratio | 17.0:1 | | |
| Governor Type | Isochronous | | |
| Speed Regulation Accuracy | + / - 0.25% Steady State | | |
| Single Step Load Acceptance | 100% | | |
| Cooling System | 50% Glycol / 50% Water | | |
| Charging Alternator Output | 90A | | |
| DC System Voltage | 12 V | | |
| Battery Size / Output | Group 31 / 700CCA | | |
| Fluid Capacities | | Gal | L |
| Engine Crankcase Lubricant Capacity | | 2.2 | 8.6 |
| Cooling System Capacity | | 2.7 | 10.2 |
| Usable Fuel Cell Capacity | | 110 | 397 |
| Usable DEF Tank Capacity | | N/A | N/A |
| 60Hz Fuel Consumption | Gal / h | L / h | Runtime |
| @ 25% Load | 0.95 | 3.6 | 115.8 |
| @ 50% Load | 1.6 | 6.1 | 68.8 |
| @ 75% Load | 2.4 | 9.1 | 45.8 |
| @ 100% Load | 3.0 | 11.4 | 36.7 |
| DEF Runtime | N/A | | |
| Reference Conditions | | | |
| Rated Ambient Temperature | -20°F—104°F | | -29°C—40°C |
| Minimum Starting Temperature (Standard) | 0°F | | -18°C |
| Minimum Starting Temperature (w/ Cold Start Opt) | -20°F | | -29°C |
| Maximum Altitude | | | |

| Alternator Data | | |
|----------------------------------|--|------|
| Alternator Manufacturer | Marelli Motori | |
| Alternator Model | MJB 200 SA4 | |
| Alternator Type | Four Pole Revolving Field | |
| Number of Leads | 12 | |
| Insulation Class | H | |
| Winding Pitch | 2/3 | |
| Voltage Connection Method | Three Position Voltage Selector Switch | |
| Excitation Method | Brushless w/ Auxiliary Windings | |
| Voltage Regulator Model | Mark V Analog | |
| Voltage Regulation Accuracy | +/-1% | |
| Maximum Unbalance Load | 25% | |
| Total Harmonic Distortion (THD) | <2% @ 0% Load | |
| Telephone Influence Factor (TIF) | <50 | |
| Motor Starting Capability | 480V | 600V |
| SKVA @ 20% Voltage Dip | 30 | N/A |
| SKVA @ 25% Voltage Dip | 41 | N/A |
| SKVA @ 30% Voltage Dip | 52 | N/A |
| SKVA @ 35% Voltage Dip | 65 | N/A |

| Power Connections | |
|---|-----------------|
| Main Circuit Breaker Thermal Trip Rating | 150 A |
| Overcurrent Trip Setpoint (240V-1Ø) | 135 A |
| Overcurrent Trip Setpoint (208V-3Ø & 240V-3Ø) | 118 A |
| Overcurrent Trip Setpoint (240V-3Ø Delta) | N/A |
| Overcurrent Trip Setpoint (480V-3Ø) | 52 A |
| Overcurrent Trip Setpoint (600V-3Ø) | N/A |
| 20A—125V GFCI Duplex (NEMA 5-20R) Receptacles | 2 |
| 50A—125/250V Temp Power (CS6369) Receptacles | 3 |
| 400A-600V Camlock Connectors (Optional) | 1 Set |
| Terminal Board Maximum Cable Size (Bare Wire) | AWG 6—350MCM |
| Terminal Board Maximum Cable Lug Size | 7/16 in (11 mm) |



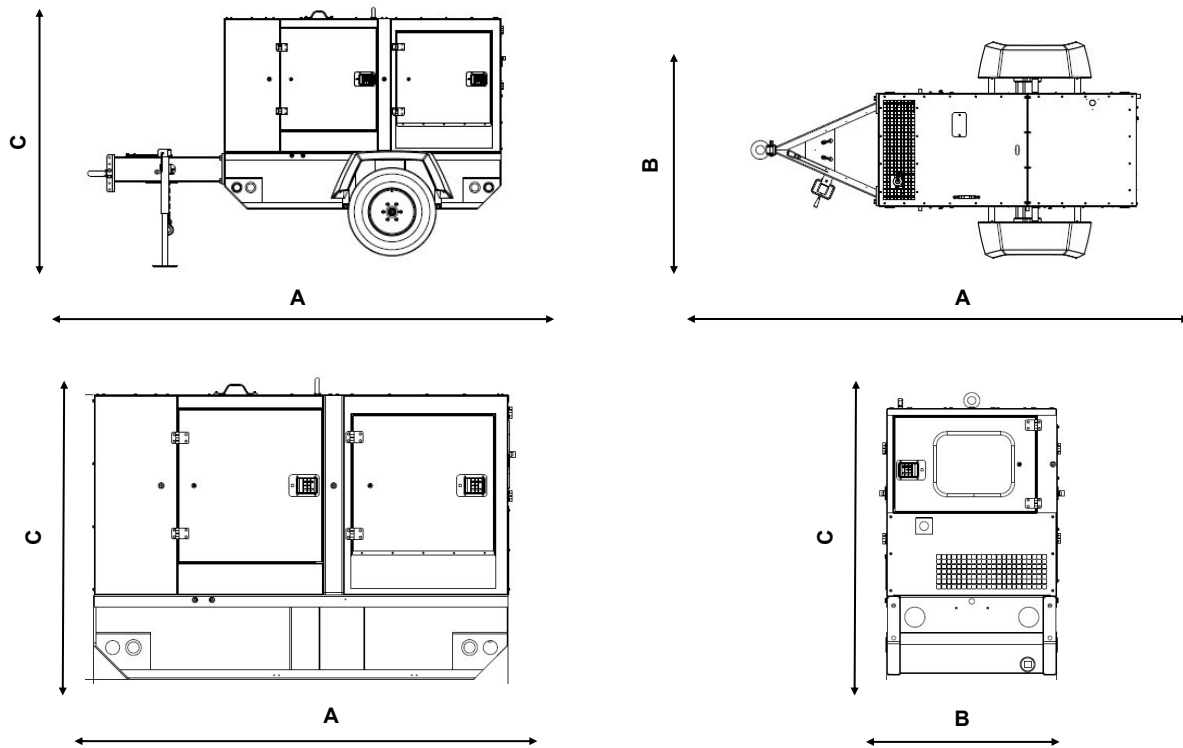
NEMA 5-20R Receptacle



CS6369 Receptacle

| Running Gear | To 49CFR571 requirements | |
|---|--|---------|
| Gross Vehicle Weight Rating (GVWR) | 4230 lb | 1918 kg |
| Gross Axle Weight Rating (GAWR) | 5080 lb | 2304 kg |
| Configuration | Single Axle | |
| Suspension | Torsion | |
| Standard Brake System Configuration | Electric | |
| Optional Brake System Configuration | Hydraulic Surge | |
| Tires | ST225/75D15, Bias Ply | |
| Wheels | 15" x 6", 6 lug on 5.5" bolt circle | |
| Track Width | 59 in | 1499 mm |
| Lighting and Reflectors | Meets Federal/Canada Motor Vehicle Safety Standard 571.108 | |
| Electrical Connection to Towing Vehicle | 7-Pole Round "RV" Blade Connector | |
| Standard Trailer Coupling | 3" (78 mm) Pintle Eye | |
| Optional Trailer Coupling | 2-Inch Ball Coupler or 2-5/16-Inch Ball Coupler | |
| Hitch Height | 5-Position Adjustment 22 in—30 in | |
| Safety Chains | 2 x 5/16" with slip hooks and safety latches | |
| Jack Stand Configuration | Trunion Mount, 5000 lb Capacity | |

| Package Data | With Running Gear | | Skidmount | |
|------------------------------------|-------------------|---------|-----------|---------|
| Length (A) | 130.5 in | 3315 mm | 87 in | 2209 mm |
| Width (B) | 72.8 in | 1849 mm | 38 in | 965 mm |
| Height (C) | 78.4 in | 1992 mm | 63.3 in | 1608 mm |
| Weight (Shipping) | 3080 lb | 1397 kg | 2780 lb | 1260 kg |
| Weight (Ready to Run) | 3870 lb | 1755 kg | 3570 lb | 1619 kg |
| Sound Level @ 23ft (7m), 100% Load | 64 dB(A) | | | |



DOOSAN

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 Due to continuous product improvement, specifications are subject to change without notice
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