Plop
CLEAN WATER, GLOBAL HOME

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PLOP PHANTOM® Aura Version QA

Q1: How much wastewater can this system treat per day?

A: The standard treatment capacity is 0.5 tons/day (500 liters/day), making it ideal for single-family homes, small homestays, and similar applications. For larger water demands, multiple units can be operated in parallel.

Q2: What types of wastewater can it treat?

A: It is specifically designed for rural domestic wastewater, including both “blackwater” (toilet wastewater) and “greywater” (laundry, bathing, and kitchen wastewater).

Q3: What effluent standards can the treated water achieve?

A: The effluent quality stably meets corresponding local discharge standards. Key indicators are: COD ≤50 mg/L, BOD ≤20 mg/L, Ammonia Nitrogen ≤8 mg/L, and SS ≤20 mg/L. The treated water can be reused for irrigation, landscaping, and similar purposes.

Q4: What is the core treatment process?

A: The system adopts an integrated process of “M^2B^2R Biochemical Treatment + High-Efficiency Filtration + Advanced Oxidation.” Its

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proprietary M2B2R (Media Moving Oxidation Biofilm Bioreactor) technology incorporates aerobic granular sludge and biological phosphorus removal for highly efficient treatment.

Q5: What about power consumption? Is it really possible to achieve zero electricity cost?

A: Yes. The “Resource Version” comes standard with solar photovoltaic panels and an energy storage system. In sunny regions outside of winter, the system can basically achieve self-sufficient operation with zero electricity cost.

Q6: Will the system freeze or fail in extremely cold winters?

A: No. The equipment is equipped with an advanced heating and insulation system using carbon fiber heating films, aerogel insulation layers, and recycled heat from the air pump. It can maintain microbial activity and pipeline operation even at temperatures as low as -40°C.

Q7: Is daily operation complicated? Does it require dedicated personnel?

A: Not at all. The system supports fully unattended operation. Through the “Plop Qianlima Smart System,” it can automatically adjust operating

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parameters based on water quality and flow while enabling remote monitoring and alarm notifications via mobile phone or computer.

Q8: What are the dimensions and weight? Is installation convenient?

A: The unit is compact (≤706 × 850 × 1130 mm) and weighs only about 91 kg. It adopts a modular above-ground installation design, and an installation manual is included for quick and simple setup.

Q9: Is a septic tank required for installation?

A: Yes. The system must be used together with a septic tank. The septic tank provides buffering, sedimentation, and anaerobic pretreatment functions and is an essential front-end component. Wastewater is pumped from the septic tank into the treatment unit using a submersible pump.

Q10: Is the operating noise loud?

A: No. The system uses a low-noise design, with operating noise below 40 dB, ensuring it does not interfere with daily life.

Q11: What materials are available, and what is their service life?

A: Two material options are available: high-strength PP plastic and 304 stainless steel. The PP version has a design life of 10 years, while the stainless steel version is designed for 20 years of service.

Q12: Does the system require regular sludge cleaning?

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A: The system automatically returns generated sludge to the first chamber of the septic tank every 10–30 days. Compared with traditional septic tanks, the frequency of manual sludge removal is greatly reduced (for example, from 10 times per year to only 2–3 times).

Q13: Does the core filtration material need replacement? How long does it last?

A: The filtration zone uses polyurethane sponge as a high-efficiency filter material, with a service life of 5–10 years depending on influent quality and treatment volume.

Q14: What happens in case of power outages or equipment faults?

A: The system supports automatic restart and self-recovery bacterial cultivation after power restoration. Meanwhile, the smart platform sends fault alarms, allowing engineers to remotely diagnose and resolve most issues.

Q15: Can the treated water be stored for backup use?

A: Yes. The equipment includes a clean water tank and can also overflow treated water into a larger storage tank. However, storage is recommended for no more than 3 days to avoid bacterial growth affecting water quality.

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Q16: How is disinfection carried out?

A: The system uses ozone catalytic oxidation for advanced treatment and disinfection, effectively removing COD, ammonia nitrogen, E. coli, and viruses without leaving chemical residues.

Q17: What are the influent water quality requirements?

A: The system has strong adaptability. Designed influent parameters are: COD ≤800 mg/L, BOD ≤500 mg/L, Ammonia Nitrogen ≤50 mg/L, and SS ≤250 mg/L, making it well-suited to fluctuations in rural wastewater quality and volume.

Q18: What is the power consumption?

A: The installed power is only 40W. In cold regions without solar support, daily electricity consumption is about 0.2–1 kWh. In warm regions with solar energy, daily consumption can be as low as 0.2 kWh or even zero.

Q19: What smart functions are included?

A: Standard smart features include a cloud platform, mobile APP remote control, real-time water clarity image analysis, fault alarms, and automatic operating mode adjustment.

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20. Q: Can the system handle large surge flows such as bathtub drainage?

A: Yes. The front-end septic tank provides primary buffering capacity to handle sudden large discharges. The system also incorporates overflow and recirculation designs to ensure stable operation.