

Engineering Advantages of YONGDELI's China-Designed Tracked Amphibious Dredgers



Qingzhou, Shandong Mar 3, 2026 ([Issuewire.com](https://www.issuewire.com)) - As global demand grows for flexible dredging solutions capable of operating in wetlands, shallow waters, and challenging terrain, contractors and mining operators are increasingly turning to specialized amphibious equipment. The [Tracked amphibious dredging machine designed in China](#) has rapidly gained international attention for its ability to bridge the operational gap between land-based excavators and conventional floating dredgers. Among the manufacturers advancing this technology, Qingzhou Yongli Mining And Dredging Machinery Co., Ltd. (YONGDELI) stands out with its independently engineered tracked amphibious dredgers built for reliability, adaptability, and high productivity in complex environments.

Based in Qingzhou City, Shandong Province—historically recognized as one of China's ancient nine states—YONGDELI has developed into a professional manufacturer and supplier integrating scientific research, product development, engineering design, precision manufacturing, installation, commissioning, and personnel allocation services. This vertically integrated capability enables the company to deliver complete dredging and mining solutions tailored to real-world project conditions.

Meeting the Need for Versatile Dredging Equipment

Traditional dredging equipment often struggles in environments such as marshlands, riverbanks, tailings ponds, and flood-prone zones where water depth and ground stability vary constantly. Contractors working in these areas require machinery that can:

- Travel across soft or waterlogged ground
- Transition smoothly between land and water
- Maintain stability in shallow or uneven terrain
- Deliver consistent dredging performance
- Reduce mobilization and infrastructure costs

Tracked amphibious dredgers have emerged as an optimal solution, and YONGDELI has invested heavily in independent engineering to enhance performance in these demanding scenarios.

Independent Engineering Focus

YONGDELI's tracked amphibious dredgers are not simple adaptations of conventional excavators. Instead, they are purpose-built systems engineered specifically for amphibious operations. The company's R&D team has refined the structural design, hydraulic system, and buoyancy configuration to ensure balanced performance across diverse working environments.

As a recognized High and New Technology Enterprise, YONGDELI supports its innovation pipeline with more than 30 invention and utility model patents granted by the China National Intellectual Property Administration. This continuous engineering investment forms the technical foundation of its amphibious product line.

Key Engineering Advantages of YONGDELI's Tracked Amphibious Dredgers1. Optimized Amphibious Mobility System

At the core of YONGDELI's design is a robust tracked undercarriage combined with integrated pontoons. This configuration enables the machine to:

- Walk on soft ground and marsh surfaces
- Float and maneuver in shallow water
- Maintain low ground pressure
- Reduce the risk of sinking or immobilization

The wide-track design improves traction and weight distribution, allowing operators to work confidently in environments where traditional equipment would struggle.

2. High-Stability Structural Design

Operational stability is critical in amphibious dredging. YONGDELI engineers have reinforced the main frame and optimized weight balance to enhance machine steadiness during digging and swinging operations.

Key stability features include:

- Reinforced steel structure for heavy-duty applications

- Carefully calculated center of gravity
- Buoyancy modules matched to machine weight
- Anti-roll design considerations

This engineering approach helps maintain safe and efficient operation even in partially submerged or uneven working conditions.

3. Powerful and Efficient Hydraulic Performance

Productivity in dredging applications depends heavily on hydraulic efficiency. YONGDELI's tracked amphibious dredgers are equipped with high-performance hydraulic systems designed to deliver strong digging force and smooth multi-function operation.

Advantages include:

- Stable hydraulic output under continuous load
- Responsive control for precision dredging
- Energy-efficient system design
- Compatibility with multiple working attachments

These capabilities allow the equipment to handle tasks such as silt removal, channel cleaning, pond excavation, and environmental remediation with consistent performance.

4. Modular Customization Capability

Recognizing that project conditions vary widely across regions, YONGDELI offers flexible customization options. The company works closely with customers to configure machines based on:

- Working water depth
- Soil and sediment characteristics
- Required dredging capacity
- Transportation and mobilization constraints
- Optional attachments and accessories

This modular engineering approach ensures that each tracked amphibious dredger is aligned with the customer's specific operational requirements rather than relying on a one-size-fits-all model.

5. Multi-Application Adaptability

YONGDELI's amphibious dredgers are designed for a broad range of applications, including:

- River and canal dredging
- Wetland restoration
- Tailings pond maintenance
- Flood control projects
- Aquaculture pond cleaning
- Environmental remediation work

The machines can be equipped with different front-end tools, enhancing their versatility and improving return on investment for equipment owners.

Comprehensive Manufacturing and Quality Assurance

Beyond engineering design, YONGDELI emphasizes strict manufacturing control and international-standard quality management. The company holds the Class III Grade Three shipbuilding production license issued by CCS China Classification Society and operates under an ISO9001:2015-certified quality management system.

Yongli series products have also passed inspections by globally recognized testing organizations such as SGS and BV. These certifications demonstrate the company's commitment to building equipment that meets international performance and safety expectations.

Broad Product Ecosystem

While amphibious dredgers are a flagship solution, YONGDELI maintains a comprehensive portfolio covering both dredging vessels and mining equipment. Its dredging lineup includes cutter suction dredgers, bucket wheel dredgers, jet suction dredgers, siphon sand dredgers, drilling suction sand dredgers, bucket chain sand dredgers, backhoe dredgers, multifunctional work boats, self-suction and self-unloading barges, transport barges, and sand sieving and washing equipment.

On the mining side, the company supplies floating production platforms, various gold and diamond dredgers, land-use washing plants, and integrated mineral processing lines for both water-based and land-based operations. This breadth allows customers to source complete project solutions from a single manufacturer.

Global Service and After-Sales Support

YONGDELI complements its engineering strength with a comprehensive service system designed to support international customers throughout the equipment lifecycle. The company provides:

- Pre-sale technical consultation
- Installation and commissioning guidance
- Operator training
- Spare parts supply
- Remote technical support
- Personnel allocation services when required

This full-service approach helps customers shorten project startup time and maintain stable long-term operation.

Looking Ahead

As infrastructure development, environmental dredging, and resource extraction projects continue to expand worldwide, demand for versatile amphibious equipment is expected to remain strong. Contractors are increasingly prioritizing machines that combine mobility, durability, and customization flexibility.

With its independently developed technology, strong certification framework, and integrated manufacturing capabilities, Qingzhou Yongli Mining And Dredging Machinery Co., Ltd. is well positioned to support global customers seeking reliable tracked amphibious dredging solutions.

The company remains committed to the principles of integrity, mutual benefit, and common development, and welcomes domestic and international partners to visit for factory inspection and business cooperation.

For more information, visit: www.yonglidredger.com



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