

Yanmar Vio 40 Specifications

yanmar vio 40 specifications are highly sought after by agricultural professionals, construction workers, and equipment enthusiasts seeking a versatile and reliable compact excavator. The Yanmar VIO 40 is renowned for its robust performance, innovative features, and advanced engineering that make it a standout choice in its class. Whether you're considering it for heavy-duty construction tasks, landscaping, or utility work, understanding the detailed specifications of this machine is crucial for making an informed decision. In this comprehensive guide, we will delve into the key specifications, features, and performance metrics of the Yanmar VIO 40, offering insights that help you evaluate its suitability for your specific needs.

Overview of the Yanmar VIO 40

The Yanmar VIO 40 is a compact excavator designed to deliver maximum productivity within a small footprint. Its impressive lifting capacity, advanced hydraulic system, and user-friendly controls make it a favorite among operators who require precision and power in confined spaces. The machine combines durability with efficiency, ensuring long-term operational reliability.

Engine Specifications

Engine Type and Power

The Yanmar VIO 40 typically features a Yanmar 3TNV88 engine, a reliable and efficient diesel engine known for its performance and fuel economy. Key engine specifications include:

1. **Engine Model:** Yanmar 3TNV88
2. **Displacement:** 1.124 liters (1124 cc)
3. **Gross Power:** approximately 37.2 horsepower (HP) or 27.8 kilowatts (kW) @ 2,600 rpm

4. **Net Power:** Around 36 HP (26.8 kW)
5. **Fuel Tank Capacity:** approximately 30 liters (7.9 gallons)

This engine is known for its durability, low emissions, and fuel efficiency, making it suitable for prolonged operation without excessive fuel consumption.

Engine Performance & Emissions

The engine complies with modern emission standards, such as Tier 4 Final or Stage IIIB, depending on the market. The engine's design ensures smooth operation with minimal vibrations, contributing to operator comfort and machine longevity.

Hydraulic System and Operating Capacity

Hydraulic Pump and Flow Rate

The VIO 40 is equipped with a high-capacity hydraulic system that provides precise control and powerful operation. Typical specifications include:

1. **Hydraulic Pump:** Variable displacement piston pump
2. **Hydraulic Flow Rate:** Approximately 18-22 liters per minute (L/min)
3. **Operating Pressure:** About 200-250 bar (2900-3625 psi)

This hydraulic setup allows for quick cycle times, efficient digging, and smooth operation of attachments.

Operating Weight and Capacity

The VIO 40 boasts an operating weight of around 4,000 to 4,200 kilograms (8,818 to 9,270 pounds), depending on configuration and attachments. Its maximum digging depth, reach, and lifting capacity include:

1. **Maximum Digging Depth:** approximately 2.8 meters (9.2 feet)
2. **Maximum Reach at Ground Level:** about 4.5 meters (14.8 feet)
3. **Bucket Capacity:** Ranges from 0.07 to 0.2 cubic meters, suitable for various job requirements

These capabilities enable the VIO 40 to handle a variety of tasks with efficiency and precision.

Cab and Operator Comfort

Cab Design and Features

The Yanmar VIO 40's cab is designed with operator comfort and safety in mind. Features include:

1. Ergonomic seat with adjustable settings
2. Climate-controlled environment (heater and optional air conditioning)
3. Large windows for excellent visibility
4. Intuitive control layout for ease of operation

Control Systems and Safety Features

The machine incorporates advanced control systems such as:

1. Joystick controls with proportional operation
2. Hydraulic flow locks for attachment safety
3. Emergency stop button
4. Backup alarms and lights for site safety

These features contribute to a safer and more comfortable working environment for operators.

Dimensions and Transportation

Physical Dimensions

The key dimensions of the Yanmar VIO 40 are:

1. **Overall Length:** approximately 5.2 meters (17.1 feet)
2. **Overall Width:** about 1.8 meters (5.9 feet)
3. **Overall Height:** around 2.4 meters (7.9 feet)

Transport and Mobility

Thanks to its compact size and manageable weight, the VIO 40 can be easily transported using standard trailers. Its design includes features like foldable boom and retractable tracks, which facilitate quick setup and relocation on job sites.

Attachments and Versatility

Standard and Optional Attachments

The VIO 40 is compatible with a wide range of attachments, enhancing its versatility:

1. Buckets (various sizes and types)
2. Hydraulic breakers
3. Aspiration arms
4. Augers
5. Grapples

Attachment Control and Compatibility

The machine is equipped with hydraulic quick couplers for swift attachment changes and precise control systems that ensure safe and efficient operation of various tools.

Additional Features and Technologies

Fuel Efficiency and Environmental Impact

Yanmar VIO 40 incorporates fuel-saving technologies such as automatic engine shutoff and optimized hydraulic flow, reducing operational costs and environmental footprint.

Maintenance and Serviceability

Designed with ease of maintenance in mind, the VIO 40 features:

1. Accessible engine compartments
2. Standard diagnostic ports
3. Extended service intervals to minimize downtime

Conclusion

The Yanmar VIO 40's specifications highlight its position as a compact, powerful, and efficient excavator suitable for various demanding tasks. Its robust engine, advanced hydraulic system, operator-friendly features, and versatility with attachments make it a valuable asset for construction, landscaping, and utility projects. When evaluating this machine for your operations, consider its specifications in relation to your project requirements, site conditions, and operational preferences to ensure optimal performance and long-term value. Whether you are upgrading your fleet or investing in your first compact excavator, understanding the detailed specifications of the Yanmar VIO 40 helps you make an informed decision, ensuring that you choose a machine that meets your

needs today and provides reliable service for years to come.

Yanmar VIO 40 Specifications: An In-Depth Look at a Compact yet Powerful Excavator The construction and landscaping industries continually seek equipment that balances performance, versatility, and efficiency. Among the standout models in the compact excavator segment is the Yanmar VIO 40, renowned for its robust design, advanced features, and reliable performance. Whether you're a contractor, landscaper, or rental company, understanding the detailed specifications of this machine can help determine if it aligns with your operational needs. In this article, we delve into the comprehensive Yanmar VIO 40 specifications, exploring its engine, dimensions, hydraulic system, operational capabilities, and more, providing a thorough overview to inform your purchasing or operational decisions.

Overview of the Yanmar VIO 40

The Yanmar VIO 40 is a compact excavator designed to deliver powerful digging performance within a manageable footprint. Its design prioritizes operator comfort, ease of maintenance, and fuel efficiency, making it a popular choice in urban construction, utility work, and landscaping projects. Its robust build and advanced features enable it to perform efficiently across various terrains and job types.

Engine Specifications

A critical component of any excavator is its engine, dictating power output, fuel efficiency, and environmental compliance.

Engine Model and Type

- Model: Yanmar 3TNV88 - Type: 3-cylinder diesel engine, turbocharged and water-cooled

Performance Metrics

- Gross Power: Approximately 27.2 horsepower (20.3 kW) - Net Power: Around 24.4 horsepower (18.2 kW) - Displacement: 1.123 liters (68.5 cubic inches)

Fuel Efficiency and Emissions

- The engine is engineered for optimal fuel consumption, with a high-pressure common rail system ensuring efficient combustion. - Meets Tier 4 Final emissions standards (or equivalent, depending on the market), incorporating after-treatment systems such as a diesel particulate filter (DPF) and selective catalytic reduction (SCR). The engine's design emphasizes durability and ease of maintenance, with accessible filters and service points, ensuring minimal downtime during routine checks.

Dimensions and Operating Weight

Understanding the size and weight of the VIO 40 is vital for transport, site access, and stability considerations.

Physical Dimensions

- Overall Length: Approximately 4.4 meters (14.4 feet) - Width (with standard tracks): About 1.7 meters (5.6 feet) - Height (to the top of the cab): Roughly 2.5 meters (8.2 feet) - Track Gauge: 1.2 meters (3.9 feet)

Operating Weight

- Approximate Operating Weight: 4,000 kilograms (8,818 pounds) This weight classifies the VIO 40 as a compact excavator that can maneuver through tight spaces while still providing substantial digging power.

Hydraulic System Capabilities

Hydraulics are the backbone of excavator performance, influencing digging force, lifting capacity, and the responsiveness of attachments.

Hydraulic Pump and Flow Rate

- Equipped with a load-sensing variable displacement piston pump. - Flow Rate: Approximately 20 liters per minute, ensuring responsive control and smooth operation.

Hydraulic Cylinders and Attachments

- Multiple high-strength cylinders for boom, arm, and swing functions. - Hydraulic system designed to support various attachments, including buckets, breakers, and augers.

Hydraulic Pressure

- Max operating pressure around 20 MPa (2900 psi), providing ample force for demanding tasks. This hydraulic setup ensures precise control, efficient operation, and the ability to handle a wide range of attachments for diverse applications.

Performance and Operational Capabilities

The VIO 40's specifications translate into tangible performance metrics that impact productivity.

Digging Depth and Reach

- Maximum Digging Depth: Approximately 2.8 meters (9.2 feet) - Maximum Reach at Ground Level: About 4.2 meters (13.8 feet)

Dumping Height

- Around 2.8 meters (9.2 feet), enabling material to be discharged into trucks or piles efficiently.

Lifting and Breakout Force

- Bucket Breakout Force: Approximately 3.5 tonnes (34.3 kN) - Arm Lifting Capacity: Suitable for lifting loads up to 1 tonne at full extension.

Speed and Mobility

- Travel Speed: Up to 4 km/h (2.5 mph) in standard mode - Transportability: Designed for easy trailer loading, facilitating quick relocation between sites. The combination of these capabilities makes the VIO 40 versatile for various tasks, from trenching and excavation to lifting and material handling.

Operator Comfort and Control Features

A machine's specifications extend beyond raw numbers to include operator-centric features that enhance productivity and safety.

Cab and Controls

- Ergonomically designed cab with adjustable seat and intuitive controls. - Optional air conditioning and sound insulation for operator comfort during long shifts. - Modern joystick controls with proportional hydraulic functions enable precise movements.

Visibility and Safety

- Large windows and optional rearview camera improve visibility. - Emergency stop buttons and safety alarms integrated into control systems.

Monitoring Systems

- Digital displays provide real-time data on fuel consumption, engine temperature, and hydraulic pressure. - Maintenance alerts help operators stay ahead of service needs.

Maintenance and Durability

The longevity and reliability of the VIO 40 are supported by its design features.

Service Accessibility

- Hinged panels and easily reachable filters facilitate routine checks. - Durable undercarriage components designed for long service life.

Filtration and Lubrication

- High-quality filters for engine oil, hydraulic fluid, and air intake. - Extended drain intervals reduce downtime and operational costs.

Build Quality and Materials

- Heavy-duty steel components and corrosion-resistant coatings enhance durability. - Robust undercarriage and boom construction withstand demanding working conditions.

Additional Features and Technologies

Modern compact excavators often incorporate advanced features to improve operation and efficiency.

Electronic Control Systems

- Integrated ECU (Electronic Control Unit) optimizes engine and hydraulic performance. - Diagnostic ports facilitate quick troubleshooting.

Attachments and Compatibility

- Quick coupler systems allow for rapid attachment changes. - Compatibility with a broad range of accessories expands operational versatility.

Environmental Considerations

- Low noise emissions for operations in noise-sensitive areas. - Fuel-efficient engine design reduces carbon footprint.

Market Variations and Compliance

The specifications outlined are generally representative but may vary based on regional standards or optional configurations. The Yanmar VIO 40 typically complies with local emissions regulations, including Tier 4 Final standards in North America or Stage IIIB in Europe, depending on the market.

Conclusion: Is the Yanmar VIO 40 Right for Your Projects?

The Yanmar VIO 40 offers a compelling package of power, efficiency, and operator comfort in a compact form factor. Its specifications demonstrate a machine capable of handling a wide array of tasks, from precise trenching to lifting and site clearing. With a well-designed hydraulic system, durable construction, and modern features, it stands as a reliable choice for those seeking a versatile excavator that does not compromise on performance. Whether you're managing urban construction sites, landscaping projects, or utility installations, understanding these detailed specifications helps in assessing how the VIO 40 can meet your

operational demands. Proper maintenance and operator training will further maximize its lifespan and productivity, making it a valuable asset in your machinery fleet. In summary, the Yanmar VIO 40's specifications reflect a thoughtfully engineered excavator that balances power, efficiency, and ease of use—an ideal solution for professionals seeking a dependable compact excavator for a variety of applications.

Questions & Answers About yanmar vio 40 specifications

No	Question	Answer
1	What is the engine type and power output of the Yanmar VIO 40?	The Yanmar VIO 40 is equipped with a 3-cylinder, 1.0L diesel engine producing approximately 40 horsepower.
2	What is the maximum operating capacity of the Yanmar VIO 40 mini excavator?	The Yanmar VIO 40 has a maximum operating capacity of around 0.4 cubic meters, suitable for small to medium construction tasks.
3	What are the dimensions and weight of the Yanmar VIO 40?	The Yanmar VIO 40 measures approximately 4.0 meters in length, 1.7 meters in width, 2.5 meters in height, and weighs around 4,200 kg.
4	What is the bucket capacity and digging depth of the Yanmar VIO 40?	It features a bucket capacity of about 0.2 cubic meters and a maximum digging depth of approximately 2.6 meters.
5	Does the Yanmar VIO 40 have advanced control systems?	Yes, it is equipped with modern hydraulic control systems and options for joystick or pedal controls for precise operation.
6	What type of undercarriage does the Yanmar VIO 40 use?	It features a robust rubber or steel track undercarriage, providing stability and versatility on various terrains.
7	What are the fuel efficiency features of the Yanmar VIO 40?	The VIO 40 is designed with fuel-efficient engines and hydraulic systems to minimize fuel consumption during operation.
8	What safety features are included in the Yanmar VIO 40?	It includes safety features such as overload warning systems, emergency stop functions, and ergonomic operator cabins for safe operation.

9	Is the Yanmar VIO 40 suitable for urban construction projects?	Yes, its compact size, precise control, and efficient performance make it ideal for urban and confined space construction environments.
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