



YANMAR

C50R-5B

CARRIER



	C50R-5B	C50R-5BT
Operating weight	6060 kg	6390 kg
Payload	3800 kg	3500 kg
Engine	4TNV94FHT-NTBC V	

ENGINEERED FOR EXTREMES





COMPACT DESIGN

The C50R-5B features compact dimensions, with a width of 2200 mm and a length ranging from 4540 mm to 4670 mm, making it ideal for navigating tight spaces. Perfect for urban projects, it offers easy transport and storage.



ADVANCED TRANSMISSION SYSTEM

Equipped with an anti-stall transmission, the C50R-5B ensures smooth operation without engine stalling. This improvement enhances productivity in challenging conditions.



HIGH-PERFORMANCE ENGINE

Powered by the latest Y-Harmonizer version of the Yanmar TNV engine, the C50R-5B delivers robust performance. With a cooled EGR and DPF, it meets EN-Standards for environmental compliance.



QUALITY COMPONENTS

Developed in Japan, the C50R-5B uses top-quality components designed for durability. Its robust design ensures reliability in heavy-duty job sites.



OPERATOR'S COMFORT

The fixed seat design increases the operating space, providing a more comfortable and efficient working environment. Other upgrades, such as the joysticks or the improved LCD display, reduce fatigue and ensure efficient operation.



AUTOMATIC ENGINE SPEED CONTROL

The engine speed adjusts automatically to transmission load, optimizing fuel efficiency and performance for various workloads.



EXCEPTIONAL STABILITY

The C50R-5B's undercarriage with hydraulic tensioning and 32 rollers ensures stability and traction, providing safe operation on diverse terrains. A built-in inclinometer further enhances safety by helping the operator maintain control on slopes and uneven ground.

COMPACT POWERHOUSE

The C50R-5B is a remarkably compact carrier for its class, with a width of 2200 mm and a length ranging from 4540 mm to 4650 mm, depending on the configuration. It can transport up to 3800 kg of load (3500kg for turning vessel), making it suitable for small job sites. Its ability to perform a 180° spin-turn enhances maneuverability, allowing for efficient operation in confined spaces. This configuration offers increased machine efficiency and operator productivity.

REVOLUTIONARY TRANSMISSION CONCEPT

Yanmar has significantly enhanced the transmission system, a critical feature for this type of machine. The HST transmission includes an anti-stall feature, allowing for smooth 180° turns without engine stalling. The C50R-5B can execute a 180° spin-turn swiftly, providing improved maneuverability and driving comfort. With an engine output of 88.4 kW (120.2 HP) gross power, the transmission benefits from additional power reserves, further enhancing the C50R-5B's maneuverability.





MAXIMUM STABILITY

The C50R-5B could be nicknamed «The Light-Foot» due to its exceptional undercarriage design. The backbone is composed of a robust box section structure, providing excellent resistance to torsional bending and ensuring maximum durability.

The total mass of the C50R-5B is evenly distributed on the ground via 32 rollers, with a ground pressure of 40.5 kPa when fully loaded. This design significantly enhances all-terrain capabilities, allowing the C50R-5B to operate effectively in challenging ground conditions.

The even weight distribution across the rollers also extends the service life of the tracks.

INNOVATION UNDERCARRIAGE DESIGN

The C50R-5B features a hydraulic auto-tensioning system for the tracks, eliminating maintenance related to track tensioning and reducing total cost of ownership (TCO) and service downtime. To further enhance all-terrain capabilities, track rollers are mounted on free-moving bogeys, effectively absorbing obstacles and improving operator comfort and the longevity of undercarriage components. Rollers and idlers are equipped with sealed tapered roller bearings, known for their durability and maintenance-free operation. The undercarriage width remains at 2200 mm, optimizing turning ability and maneuverability, thereby enhancing driving comfort and productivity.

COMFORT REDEFINED: NEW OPERATOR STATION

SPACIOUS AND MODERN CABIN

Yanmar has focused on enhancing the operator station by updating the design and functionality of the C50R-5B. The cabin offers generous space, particularly for legroom, ensuring maximum comfort for the operator.

Equipped with a standard suspension seat, the C50R-5B provides a smooth ride. Key features include:

- Servo-assisted joysticks for minimal effort and high precision, reducing operator fatigue and increasing safety.
- Parking brake with automatic or manual application for improved safety and control.
- Afterglow function that keeps the room lamp on for a period after the key is turned off, ensuring visibility and convenience.



ADVANCED DIGITAL INTERFACE

The C50R-5B boasts a new electronic instrumentation system, featuring an 5.7" LED monitor that displays critical machine parameters. This advanced interface also visualizes images from the rearview camera, enhancing operator awareness and safety. In the event of a component malfunction, warning icons alert the operator. The system provides information on automatic DPF maintenance, ensuring optimal performance. Additionally, the C50R-5B includes an auto-idle function as standard, reducing fuel consumption and emissions.

ENHANCED OPERATOR ORIENTATION

The C50R-5B introduces significant improvements from its predecessor, including the transition from a rotating seat to a fixed seat design. The fixed seat configuration, as well as the change of boarding and disembarking steps, simplify getting on and off the machine, contributing to improved safety and efficiency.

Key enhancements include:

- Increased monitor size from 4.3 inches to 5.7 inches, providing better visibility and comfort.
- Standard installation of a rearview camera, enhancing safety by improving rear visibility.
- Larger operating space and improved ease of access due to changes in the seat design and step configuration.

These updates reflect Yanmar's commitment to operator comfort and safety, ensuring that the C50R-5B provides a superior working environment.

DYNAMIC YANMAR ENGINE



The C50R-5B is powered by Yanmar's cutting-edge TNV engine, a marvel of modern engineering that delivers 88.4 kW (120.2 HP) of clean, efficient gross power. This engine harnesses the precision of direct injection and a sophisticated common rail system, ensuring optimal fuel combustion and performance. With the integration of Denso's advanced DCU and ECU, the engine's electronic control system offers unparalleled intelligence and adaptability, keeping the C50R-5B at the forefront of innovation.

Yanmar has also expanded the fuel tank capacity by nearly 48%, now holding 121.1 liters, which means longer operation times and fewer interruptions for refueling.

INNOVATIVE EMISSION SOLUTIONS

Meeting stringent EN-Standards, the C50R-5B's engine is equipped with a suite of emission-reducing technologies. Key features include:

- Cooled EGR System: Effectively reduces nitrogen oxides (NOx) for a lower environmental impact.
- Diesel Particulate Filter (DPF): Ensures cleaner exhaust by filtering particulates, with a unique regeneration system to minimize clogging and downtime.
- Selective Catalytic Reduction (SCR): Further purifies emissions, showcasing Yanmar's commitment to environmental stewardship.

Recent enhancements, such as the refined EGR pressure sensor and intake throttle, ensure compliance with the latest EPA/ARB standards, making the C50R-5B both powerful and eco-friendly.

These advancements highlight Yanmar's commitment to delivering engines that are not only powerful and efficient but also environmentally conscious.

VERSATILITY

The C50R-5B is Available in Two Distinct Configurations:

- **Three-Way Vessel Type:** This version features a versatile three-side vessel, allowing the load to be dumped from the rear or either side thanks to the hinged side panels. It boasts an impressive dumping angle to the rear of 65° and a dump clearance of 660 mm, ensuring quick and efficient unloading. The minimum ground clearance is 435 mm, providing stability and maneuverability on uneven terrain. Each side of the vessel can be opened independently, offering flexibility and ease of use on various job sites.
- **180° Turning Vessel Type:** The second configuration includes a turning vessel mounted on a frame that can rotate 180° (90° left, 90° right). This feature enables the C50R-5BTV to dump materials while driving alongside a trench, maintaining a safe distance from the work area. This capability significantly enhances safety and productivity by allowing precise material placement without repositioning the entire machine.

Both configurations are equipped with a mud guard to prevent debris from falling out of the vessel, protecting hydraulic components and the operator area from potential damage. These thoughtful design elements ensure that the C50R-5B is both versatile and reliable, meeting the diverse needs of modern job sites.



SAFETY

The C50R-5B is engineered with safety as a top priority. Its cabin structure meets ROPS (Roll-Over Protective Structure) and FOPS (Falling Object Protective Structure) Level 1 certifications, with a protective grid at the rear for enhanced security.



SAFE SERVICE ACCESS

Maintenance is straightforward and secure, with all service points accessible from ground level. Safety treads and railings provide stable access to the engine compartment, ensuring safety even in slippery conditions.

RELIABILITY

The robust undercarriage and durable steel covers offer optimal protection and extend the machine's service life. Thoughtful routing of hoses further enhances reliability, reducing downtime and maintenance needs. To further enhance protection, an undercover has been integrated for the suction hoses.

These measures enhance the service life and reduce downtime of the machine.

REAR AND SIDE VISIBILITY ON ALL SITUATION

The C50R-5B is designed for excellent visibility, featuring large glass panels and strategically placed mirrors for clear views during operations. A standard rearview camera, in line with EN474 revisions, enhances rear visibility. The Turning Vessel model includes rear cameras and an additional mirror for improved left-side visibility, ensuring comprehensive awareness from the operator's seat.

These features underscore Yanmar's commitment to providing a safe, reliable, and efficient working environment for operators.

EFFORTLESS MAINTENANCE

EASY ACCESS

The C50R-5B is designed with user-friendly maintenance in mind, ensuring that daily checks and servicing are straightforward and efficient. Three easily accessible panels provide quick entry to all major components, including the air filter, A/C compressor, radiator, refueling pump, battery, fuel tank, hydraulic oil tank, alternator, engine oil dipstick, water separator, and coolant level. This thoughtful design minimizes downtime and maximizes productivity.

Key maintenance features include:

- **Hydraulic Oil Tank:** The addition of a new refueling port simplifies the refueling process, eliminating the need to remove the air breather and ensuring a cleaner, more efficient operation.
- **Fuse and Relay Access:** Located in the battery compartment, fuses and relays are easily accessible for quick maintenance.
- **Hydraulic System Enhancements:** A strainer for hydraulic oil changes maintains oil cleanliness, while a filter in the hydraulic connector of the auto-tension valve minimizes contamination routes.

These improvements reflect Yanmar's commitment to reliability and ease of maintenance, ensuring that the C50R-5B remains a dependable choice for operators.



EXTENDED SERVICE INTERVALS

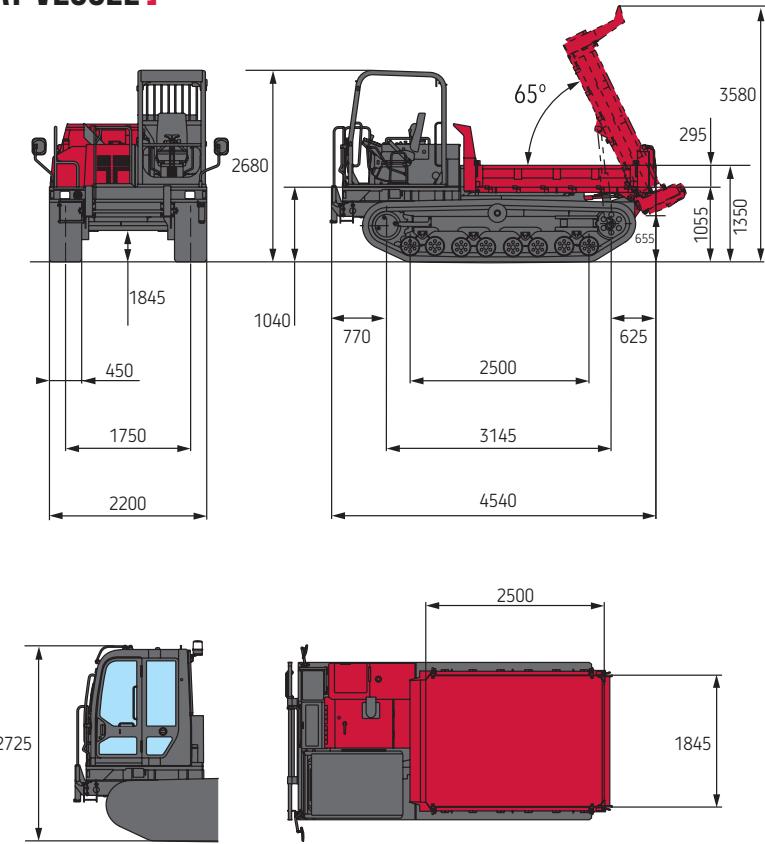
Yanmar carriers are engineered for operational efficiency, allowing for extended service intervals of up to 500 hours. The Diesel Particulate Filter (DPF) system includes a maintenance-free Diesel Oxidation Catalyst (DOC), while the Soot Filter (SF) requires cleaning only every 3000 hours. This design minimizes downtime and enhances productivity.

PREMIUM COMPONENTS

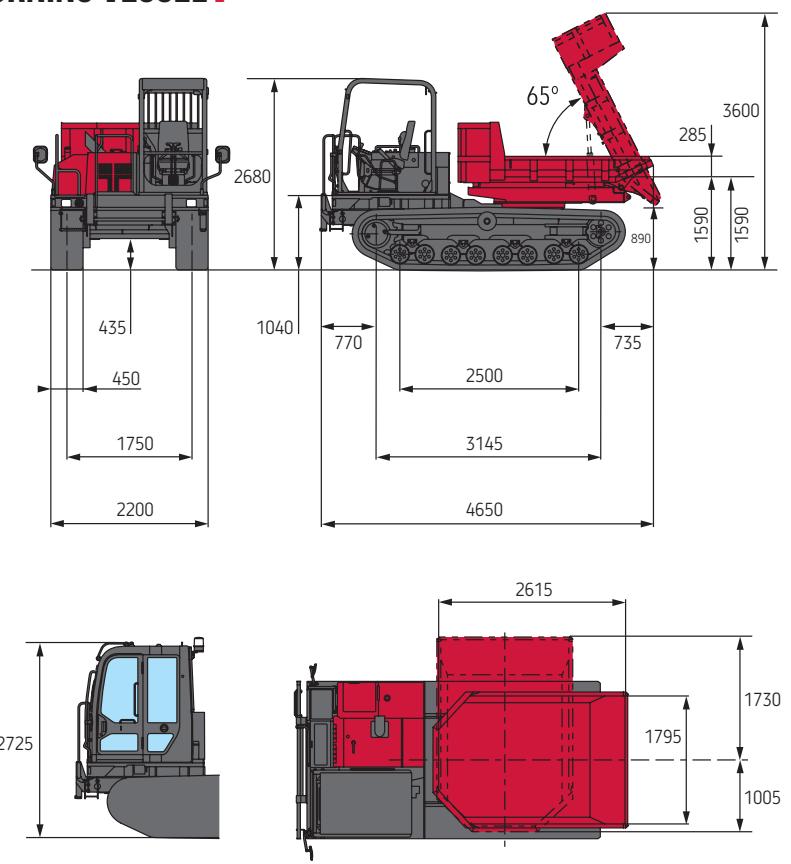
Every component of the C50R-5B has been meticulously designed for reliability, durability, and the capacity to handle demanding tasks.

DIMENSIONS

[C50R-5B THREE-WAY VESSEL]



[C50R-5BTV 180° TURNING VESSEL]



TECHNICAL SPECIFICATIONS

[WEIGHT +/- 2% (EN-STANDARDS)]

	C50R-5B Three-way vessel	C50R-5BTV Turning vessel
Operating weight	6 060 kg	6 390 kg
Transport weight	5 985 kg	6 315 kg
Payload	3 800 kg	3 500 kg

[ENGINE]

	C50R-5B Three-way vessel	C50R-5BTV Turning vessel
Type	Vertical series water-cooled 4-cycle diesel (Direct injection type)	
Power (Net, ISO9249 with FAN)	84.0 kW [114.2 HP]	
Gross power	88.4 kW [120 HP]	
Displacement [ltr.]	3035	
Maximum torque [Nm] at 1700 rpm	378 - 410	

[PERFORMANCE]

	C50R-5B Three-way vessel	C50R-5BTV Turning vessel
Dumping angle	65°	65°
Vessel dimensions (L x w x h)	2500X1845X295 mm	2615X1795X285 mm
Dumping mechanism	1 side (rear)	3 sides
Dump vessel capacity (struck / heaped)	1.4/2.3 m ³	1.2/2.1 m ³
Dump clearance	660 mm	890 mm
Max. travelling speed (forward / reverse)	7.0/9.5 km/h	
Traction force [1 st speed] / [2 nd speed]	72kN / Auto kickdown refer to 1st speed	
Gradeability (climbing ability)	20°"	

[UNDERCARRIAGE]

	C50R-5B Three-way vessel	C50R-5BTV Turning vessel
Track width	450 mm	
Min. ground clearance	435 mm	
Ground pressure (unloaded / loaded)	24.9 [0.25]/40.5 [0.41] kPa	26.2[0.26] / 40.6 [0.41] kPa

[MISCELLANEOUS]

	C50R-5B Three-way vessel	C50R-5BTV Turning vessel
Hydraulic circuit (Total)	75	
Hydraulic tank	43,7 l	
Fuel tank	121,1 l	
Noise Level Lwa	102 dBA	

[MAINTENANCE FREQUENCY]

[Change hydraulic oil filter: 500 hours] [Change fuel filter: 250 hours] [Clean hydraulic oil: 500 hours] [Change hydraulic oil filter: 500 hours]
 [Change hydraulic oil return filter: 500 hours] [Change cooling fluid: 500 hours]



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Yanmar Compact Equipment EMEA

GB_C50R-5B_0725



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