



**YANMAR**

# V7 & V7-HW

COMPACT WHEEL LOADERS



**Operating weight**

4 250 kg – 4 450 kg

**Net Power**

35,5 kW (48,3 HP)

**Bucket capacity**

0,7 – 1,2 m<sup>3</sup>

**Steering**

Articulated steering

# SMALL MACHINES, BIG CAPABILITY



## COMFORTABLE CABIN AND CANOPY

Designed to ensure maximum comfort and productivity for the operator. The performance enhancing environment provides a very pleasant working atmosphere. The control system for the machine uses innovative technology. The machine remains easy to handle, even when used in challenging conditions. This help driver and machine deliver high productivity. The V7 and V7-HW is also available with a comfortable canopy version.



## PARALLEL KINEMATICS

Thanks to its parallel kinematic system, the V7 and V7-HW take loads quickly and precisely without having to constantly adapt the load angle. The linkage system of the parallel kinematics and the quick-hitch are designed for an excellent visibility to the front attachment and fork tines.



## HYDRAULIC QUICK-HITCH SYSTEM

The quick-hitch system allows the attachments to be easily changed from the cabin with a safe two handed operation.



## EASY TO USE

The V7 and V7-HW are fitted with various equipment which enable precise, comfortable and productive control of the machine: Smart control, Fingertip control and multi-function joystick offer optimal handling to the operator for a productive day work.



## MOTOR

Complies with EU Stage V / EPA Tier 4, guaranteeing reduced fuel consumption and emissions. The transversely arranged engine enables easy access for maintenance and creates optimal stability with less dead weight.



## ARTICULATED STEERING

The wheels forward and backward follow the same way. Minimize the damage to the lawns, or pavements. Short turning radius and optimal positioning of pallet forks. Less wear on tires. The attachments can be steered without moving the machine front- or backwards, this is i.e. helping to adjust the forks position in narrow spaces.



## ARTICULATION-OSCILLATION-JOINT

The new articulation-oscillation-joint ensures high tractive forces as the wheels have permanently ground contact, thanks to the  $\pm 10^\circ$  oscillation angle. It also allows to reach a machine height of  $< 2,50$  m which is important for transportation and low road clearance height.



# LOADER CONCEPT

## DIMENSIONS

The V7 and V7-HW have a very compact dimension in all aspects: height, width, length and turning radius. These compact dimensions contribute to the high manoeuvrability of Yanmar wheel loaders. That ensures great transportability possibilities i.e. in a roll-off container or to drive through bridges and tunnels.



## ARTICULATED STEERING WITH FRONT OSCILLATING

When used at a densely built-up location or construction sites with limited space, the articulated steering delivers great manoeuvrability with its 40° steering angle. The articulated steering also allows the bucket to approach the load in a straight line, even at the maximum steering angle. This offers the operator greater flexibility in terms of picking up pallets or setting down loads. The oscillating joint has a wide angle of  $\pm 10^\circ$ , always keeping all 4 wheels in contact with the ground, even when working on uneven ground.

# LIFTING FRAME



## PARALLEL KINEMATICS

The parallel kinematics system allows you to lift a load quickly and precisely without constantly having to adjust the loading angle. While the kinematics system takes care of the stroke angle, the operator is free to concentrate on where exactly to set down the load. The parallel kinematics system optimizes work cycles when loading and unloading the second row on a truck. The clever design ensures the tilt control lever does not collide with the body of the truck.

## HYDRAULIC QUICK HITCH

Replace tools quickly and easily from the cabin using the quick-hitch system thanks to two handed operations. It is easy and very safe to operate and allows quick and smooth change of attachments.



# POWERLINE

## ENGINE

The V7 and V7-HW are fitted with a powerful engine which delivers results in terms of operation and environmental protection. Fewer emissions, more power. Engine: EU Stage V, EPA TIER IV. Adopting European and North American emission levels ensure a significant reduction in particulate emissions compared with previous levels – from 0.4 to 0.025 g/kWh.

### TAKE ADVANTAGE OF THE NEW ENGINE TECHNOLOGY

- + Efficiency really pays off. The engine delivers high torque at a low engine rpm, which saves fuel and reduces the noise level.
- + Fresh air: Significantly fewer particulates are emitted thanks to the advanced exhaust after-treatment. This is achieved by means of improved combustion and injection systems, a diesel oxidation catalyst (DOC) and a diesel particulate filter (DPF).

## HYDROSTATIC TRANSMISSION

Hydrostatic high-pressure transmission, maximum productivity thanks to hydrostatic electro-controlled drive technology – smooth power development without interruption of traction.

## WORKING HYDRAULIC

The working hydraulic (3rd section – standard) work completely independently of the hydraulics for transmission. 3rd Section for operation of hydraulic quick coupler and common work tools. Additional control circuit (4th section – option) for operation of special attachments, which requires hydraulic oil flow (optional). The rear hydraulic is also optional available.



## AUTOMATIC DIFFERENTIAL LOCK

The V7 and V7-HW fits with permanent all-wheel drive and automatic self-locking differentials on the front and rear axles (35% locking effect). Both provide enhanced traction when traveling in a straight line and turning corners – perfect for bucket loading.

## TRAVEL RIDE CONTROL\*

The travel ride control function induces a suspension effect in the boom cylinder thanks to an accumulator. This system improves the drivability of the loader when transporting loads on uneven ground or driving at high travel speed. This feature improves the operator comfort.

\* Option for V7 and V7-HW

## TRACTIVE FORCE

The hydrostatic transmission is characterized by its high power and smooth adjustment. This results for the operator in high rim pull for effective pushing or digging and good travel performance even on steep inclines.

# SMART CONTROL

Smart control is the Yanmar operating system for compact wheel loaders. It has never been easier to tailor a construction machine precisely to the driver and purpose. The 3.5-inch display shows machine and engine data and guides the operator. The display is positioned on the right A-pillar and can be adjusted using a flexible bracket. The new display position of the V7 and V7-HW ensures an even better view to the front attachments and working area.

## YOUR BENEFITS:

- + Intuitive operation that is easy to set for each individual driver
- + 3 operation modes:
  1. Work mode with maximal performance of the machine.
  2. ECO mode with reduced engine rpm to 1 800 rpm to reduce the noise and save fuel.
  3. Cruise control mode\* for selecting the engine speed independently of the driving speed via two potentiometers. This mode is a great support when working with hydraulically driven attachments such as sweepers, brooms or others, as the operator can concentrate on the work and the environment.
- + New display design to enable easy machine monitoring.
- + Keypad with extra-large keys for easy operation.

\*Option for V7 and V7-HW.



## ADJUSTABLE STEERING COLUMN

The adjustable steering column is part of the standard equipment of the machine. It improves the operator comfort and makes it easier to enter and exit the cabin from both sides. The steering column is tiltable and height adjustable.

## INSTRUMENTATION

An additional Keypad allows quick adjustment and selection of the main functions.

# OPERATOR STATION



## ALL-AROUND VISIBILITY (CABIN VERSION)

Visibility is optimized through big windows. The optimal visibility leads to greater safety on jobsites. Front visibility is optimum on the attachment for faster and safer operation.

## LEFT AND RIGHT DOOR

- + Door integration is designed into the machine shape to avoid damages.
- + Left-hand side door with sliding window.
- + Optimal cabin ventilation.
- + Communication possible on both sides.
- + Easy to clean.



## COMFORTABLE & ADJUSTABLE SEAT

Our standard seat with mechanical suspension, adjustable in position and weight, makes it more comfortable for the driver.

## PRECISE FINGERTIP CONTROL

The fingertip control allows the operator to regulate the oil flow with real precision, all the way from « zero » to « full ». The electrical proportional activation of hydraulic functions is simple thanks to a thumbwheel on the joystick. A lot of attention has been paid to an outstanding ergonomic to improve operator comfort.



# PERFORMANCE

## TRAVEL SPEED

Operating in a closed circuit, the hydrostatic travel drive delivers lots of power while keeping fuel consumption low. The V7 and V7-HW loader can achieve up to 20km/h on the road. As an option, the machines are also available in high-speed version with a speed up to 30 km/h.

## BRAKE INCHING PEDAL

By using the inch brake pedal, fine-tuning of the hydraulic performance is possible. The driver can modify the power between the drive and the working hydraulics. It allows to slow down the loader while keeping the engine rpm up. This feature improves the cycle time of digging and loading operations. This inch brake pedal also avoids excessive wear of the tires.





# MAINTENANCE

The large opening offered by the engine hood allows an easy access to all main service items, for an easy and fast maintenance. This contributes to reduce the total cost of ownership (TCO) of the machine. Daily tasks can be performed from ground level to save time.

## BATTERY MAIN SWITCH

Can be accessed while standing next to the cabin/canopy.

## GREASING POINTS

The greasing points are combined and can be greased while standing next to the cabin/canopy.

## SEPARATE BATTERY POLES

Separate battery poles for easy restart thanks to free access under the engine hood.

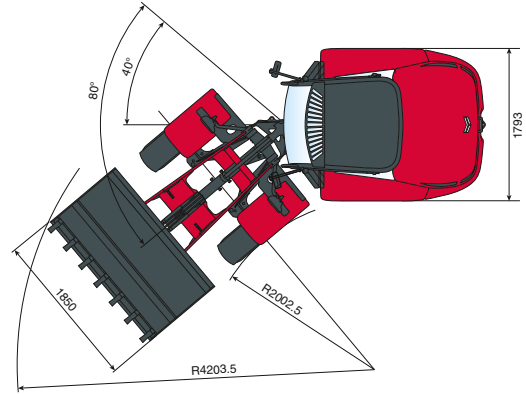
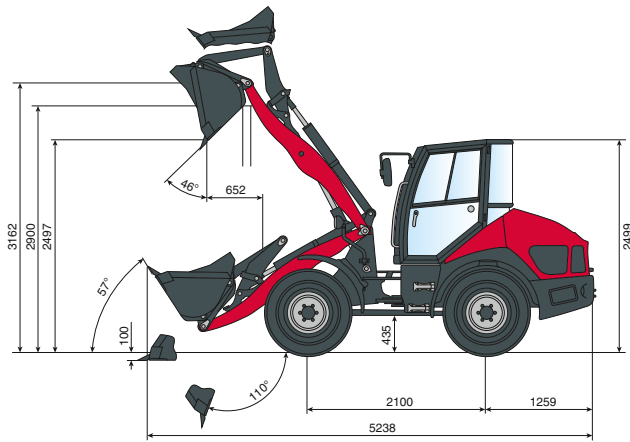
## CAB CABLING

Simple disconnection of electrical lines when dismantling the cab.

# DIMENSIONS

## GENERAL-PURPOSE BUCKET

Capacity (ISO 7546): V7: 0.7 m<sup>3</sup>/V7-HW: 0.8 m<sup>3</sup>  
Max. density of material: 1.8 t/m<sup>3</sup>

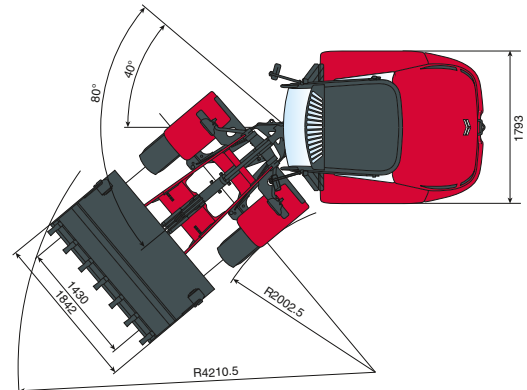
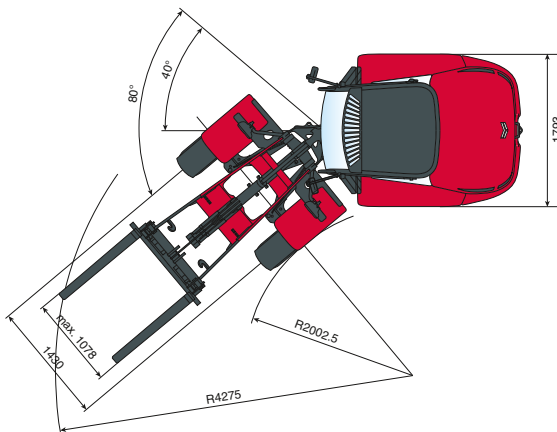
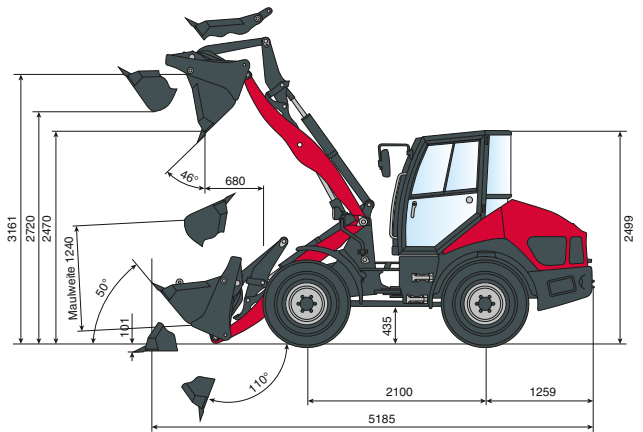
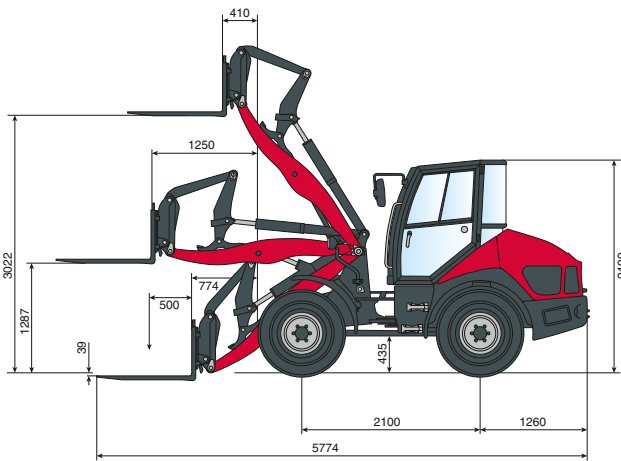


## FORK LIFT ATTACHMENT

Operating load over total lift range: 2,050 (2,250\*) kg  
Operating load in transport position: 2,500\* kg  
\*With rear axle weights.

## MULTI-PURPOSE BUCKET

Capacity (ISO 7546): V7: 0.7 m<sup>3</sup>/V7-HW: 0.8 m<sup>3</sup>  
Max. density of material: 1.5 t/m<sup>3</sup>



# DIMENSIONS

Overall length	5 238 mm
Wheelbase	2 100 mm
Overall height	2 499 mm
Ground clearance	435 mm
Overall width (outside of tires)	1 793 mm
Overall width (bucket)	1 850 mm
Dumping height (w/o teeth)	2 497 mm
Dumping reach (w/o teeth)	652 mm
Max. hinge pin height	3 162 mm
Max. lifting height	3 020 mm
Digging depth	100 mm
Tilt back angle (at traveling position)	Deg. 57°
Dumping angle	Deg. 46°
Articulation angle	Deg. 40°
Turning radius (track circle)	2 002 mm
Turning radius (bucket circle)	4 203 mm

## BUCKET TYPE

	Capacity		Density		Width		Dump height	
	V7	V7-HW	V7	V7-HW	V7	V7-HW	V7	V7-HW
Loading bucket with teeth	0,7 m <sup>3</sup>	0,8 m <sup>3</sup>	1,8 t/m <sup>3</sup>	1,8 t/m <sup>3</sup>	1 850 mm	1 850 mm	2 495 mm	2 495 mm
Loading bucket with bolt-on cutting edge	0,7 m <sup>3</sup>	0,8 m <sup>3</sup>	1,8 t/m <sup>3</sup>	1,8 t/m <sup>3</sup>	1 850 mm	1 850 mm	2 455 mm	2 455 mm
Multi-purpose bucket with teeth	0,7 m <sup>3</sup>	0,8 m <sup>3</sup>	1,5 t/m <sup>3</sup>	1,5 t/m <sup>3</sup>	1 850 mm	1 850 mm	2 470 mm	2 470 mm
Multi-purpose bucket with bolt-on cutting edge	0,7 m <sup>3</sup>	0,8 m <sup>3</sup>	1,5 t/m <sup>3</sup>	1,5 t/m <sup>3</sup>	1 850 mm	1 850 mm	2 440 mm	2 440 mm
High-tip bucket, specific weight 1.2 t/m <sup>3</sup>	0,6 m <sup>3</sup>	0,7 m <sup>3</sup>	1,2 t/m <sup>3</sup>	1,2 t/m <sup>3</sup>	1 850 mm	1 850 mm	3 480 mm	3 480 mm
Light-material bucket with bolt-on cutting edge	1,0 m <sup>3</sup>	1,0 m <sup>3</sup>	1,4 t/m <sup>3</sup>	1,4 t/m <sup>3</sup>	1 850 mm	1 850 mm	2 380 mm	2 380 mm
Light-material bucket with bolt-on cutting edge	-	1,2 m <sup>3</sup>	1,1 t/m <sup>3</sup>	1,1 t/m <sup>3</sup>	1 950 mm	1 950 mm	2 340 mm	2 340 mm
Side-dump bucket, without teeth	0,6 m <sup>3</sup>	0,7 m <sup>3</sup>	1,8 t/m <sup>3</sup>	1,8 t/m <sup>3</sup>	1 850 mm	1 850 mm	2 395 mm	2 395 mm
Stone / quarry bucket, distance between tines 80 mm	0,6 m <sup>3</sup>	0,7 m <sup>3</sup>	1,8 t/m <sup>3</sup>	1,8 t/m <sup>3</sup>	1 850 mm	1 850 mm	2 475 mm	2 475 mm
Bucket with grapple and bolt-on cutting edge	0,7 m <sup>3</sup>	0,95 m <sup>3</sup>	1,2 t/m <sup>3</sup>	1,2 t/m <sup>3</sup>	1 850 mm	2 000 mm	2 400 mm	2 400 mm

# SPECIFICATIONS

## STANDARD EQUIPMENT

### [ ENGINE ]

Manufacturer, model	Yanmar 4TNV86CT
Type	Yanmar diesel engine, exhaust-gas optimised EU Stage V, EPA Tier 4
Combustion	4-stroke cycle, Common Rail injection
Number of cylinders	4 in line
Displacement	2 091 cm <sup>3</sup>
Fuel consumption	233 g/kWh
Net power rating at 2 400 rpm (ISO 14396)	35,5 kW (48,3 HP)
Max. torque	177 Nm at 1 560 rpm
Cooling system	Water

### [ ELECTRICAL SYSTEM ]

Nominal voltage	12 V
Battery	12 V / 77 Ah
Generator	14 V / 80 A
Starter	2,3 kW
Battery main switch accessible from outside.	

### [ HYDRAULIC SYSTEM ]

Pump capacity - pressure	63 l/min - 250 bar
Proportional hydraulic valve four-way control lever (joystick) for the operation of the lift and tilt cylinders with integrated direction-of-travel and speed range button. Hydraulic operated quick coupler incl. 3rd additional control circuit provided as standard.	
Hydraulic cylinders: 1 lifting cylinder, 1 tilt cylinder, 1 steering cylinder, all dual-acting.	
Hydraulically switchable float position by overdriving the pressure point « lower » on the joystick.	
Single, four-way control lever (joystick).	
Controller, direction-of-travel switch and switch for additional control circuit.	

### [ CABIN ]

Rubber-mounted full-vision steel cab, ROPS, FOPS.
Cabin with two doors. Sliding window on left-hand side.
Intermittent wipers and washer (front & rear).
Panoramic safety glass.
Cab heating by engine coolant heat exchanger with 3-speed heater fan.
Windscreen defroster front & rear.
Radio pre-installation.

### [ CANOPY ]

Rubber-mounted full-vision steel canopy, ROPS, FOPS.

### [ LIGHTING ]

Lighting system in compliance with StVZO and European standards. Halogen H7 headlamps in the front and LED rear lights. 2 LED working floodlights in the front as standard. Up to two LED working floodlights in the back as option.

# SPECIFICATIONS

## STANDARD EQUIPMENT

### [ DRIVE TRAIN AND TIRES ]

Front: rigid planetary drive axle, centre-mounted disc brake. Automatic self-locking differential 35%.

Rear: rigid planetary drive axle. Automatic self-locking differential 35%.

Font oscillation angle  $\pm 10^\circ$ .

Service brake hydraulically actuated centre-mounted disc brake, acting in all 4 wheels via 4-wheel drive.

Auxiliary brake hydrostatic through closed-circuit travel drive.

Parking brake mechanically actuated centre-mounted disc brake on front axle.

Tires 340/80-18"

### [ PERFORMANCE ]

	V7	V7-HW
Travel speed	0-20 km/h/0-30 km/h (option)	
Static tipping Load Straight	3 000 kg	3 250 kg
Static tipping Load Full Turn	2 650 kg	2 870 kg
Breakout force (bucket)	41 kN	
Traction force	34 kN	
General purpose bucket (ISO 7546)	0,70 m <sup>3</sup>	0,80 m <sup>3</sup>
Gradeability	28°	
Noise level	LwA = 101 dB(A)/LpA = 78 dB(A)	

### [ VIBRATION VALUES IN COMPLIANCE WITH DIRECTIVE 98/37/EEC & EN474 ]

Effective values of acceleration below for entire body 0.5 m/s<sup>2</sup>

And for upper limbs 2.5 m/s<sup>2</sup>

### [ MAINTENANCE FREQUENCY ]

Change engine sump oil	500h
Change engine oil filter	500h
Change engine fuel filter	1 000h
Change hydraulic oil	1 000h
Change cooling fluid	according to demand (at least all 2 years)

### [ MISCELLANEOUS ]

Multifunction 3,5" display / Smart Control: the driver can adjust the machine exactly to the environment, operation, and individual specific requirements.

# SPECIFICATIONS

## [ OPTIONAL EQUIPMENT ]

### ENGINE

Automatic engine shutdown | Front and rear axle 30 km/h incl. licence plate light | Creep mode, individual selection of travel speed and engine speed.

### HYDRAULIC SYSTEM

4th control circuit, front | 4th control circuit, rear | Continuous flow operation for 3rd and 4th hydraulic control circuit | Pressure relief valve for 3rd control circuit | Travel ride control | Creep mode, individual selection of travel speed and engine speed | Open return, on lift frame | Leak-oil line, on lift frame | Biodegradable hydraulic oil.

### CABIN

Air-conditioning | Seat MSG 285/722, comfort version, fabric, high backrest, heating (12V) | Seat MSG 95, premium version, air-suspended seat, fabric, high backrest, heating (12V), lumbar support | Headrest suitable for comfort and premium version | Arm rest, left, for driver's seat | Radio MP3.

### CANOPY

Seat, imitation leather, mechanical suspension, short backrest | Arm rest, left, for driver's seat | Seat heating for imitation leather seat.

### TIRES

Goodyear EM Powerload 365/70 R18 | Goodyear EM Powerload 405/70 R18 | Michelin Bibload 400/70 R18 | Nokian TRI 2 340/80 R18 | Michelin XMCL 340/80 R18 | Spare tires.

### SAFETY

Orange seat belt with electric seat belt buckle | LED Rotating beacon, yellow | LED working floodlight, rear (2 pieces) | SA-R, SMARTASSIST Remote | Anti-theft device, coded key | Back-up alarm for reverse travel | Safety valves for lift and tilt cylinders | Load warning device, visual and acoustic.

### COUPLERS

Trailer coupling (Rockinger) | Trailer coupling, ball hitch | Socket, front, 13-pole | Socket, rear, 13-pole.

### MISCELLANEOUS

Central lubrication system | Electrical refuelling pump | Outside rear-view mirror, heatable | Turbo II prefilter, mounted on hood.

### SPECIAL PAINT

LIFTING FRAME - Lifting frame and linkage, only 1 RAL colour | FRAME - Front and rear frame, rear counterweight, only 1 RAL colour | HOOD - Cabin covers and engine hood, only 1 RAL colour | RIMS - Rims, only 1 RAL colour for all 4 rims.



**YANMAR**



Yanmar Compact Equipment EMEA

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