

BB 740

Wheel-Type Asphalt Paver

**BITELLI®**

A Caterpillar Company



Cat® 3054 Engine

Gross Power (SAE J1995)	61.5 kW	83.6 hp
Operating Weight	11 500 kg	25,000 lb

(with RB E274 Screed)

Hopper Capacity	5.0 cu m	10 ton
Standard Paving Range	2.50 - 4.75 m	8 ft - 15 ft
Maximum Paving Width	5.60 m	18 ft

(with RB E274 Screed)

Caterpillar® Diesel Engine

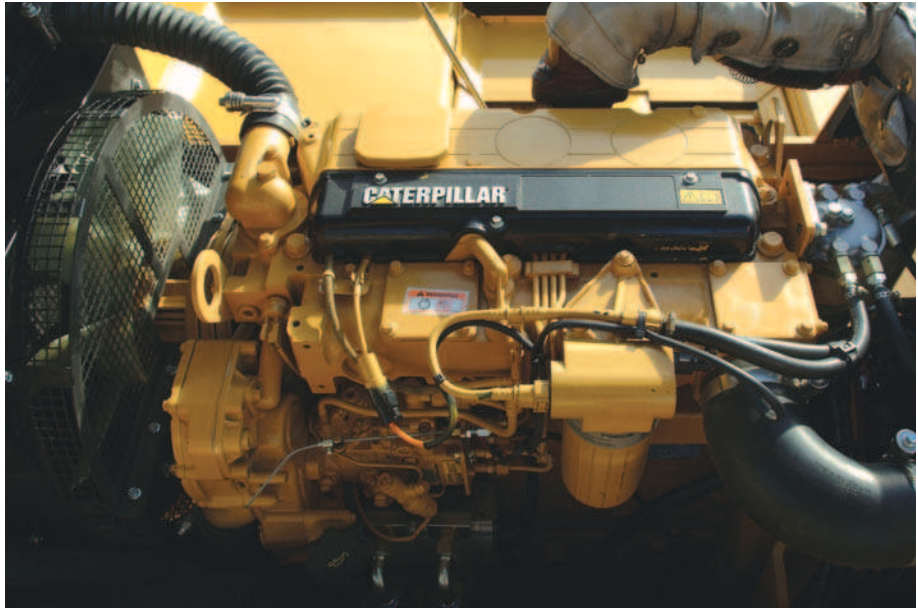
Model 3054 DINA is a high-tech four cylinder diesel engine designed to provide quiet performance, high reliability, easy servicing and excellent fuel economy.

Liquid-cooled system. Engine output to 61.5 kW (83.6 hp) at 2200 rpm.

Small-to-medium bore Caterpillar engine. Offers a superior reliability and optimized maintenance service intervals.

Low transverse-mounted engine. Provides easy access to the hydraulic pumps. Large service panels guarantee easy servicing operations and access to the hydraulic pumps and external engine components.

Meets U.S. Tier 2 and European EU Stage II. Conforms to emission control standards.



Hydrostatic Drive System

Efficient hydraulic drive system combined with two-speed gearbox eliminates chains between diesel engine and final drive components.

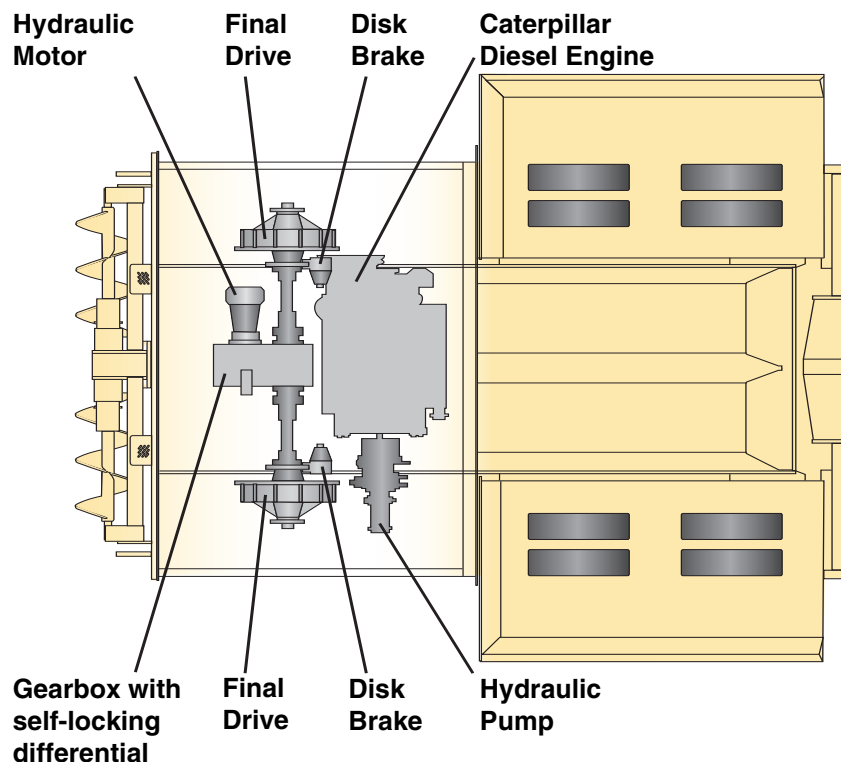
Closed-loop hydrostatic propel system. Provides accurate control of propulsion and low-maintenance operation. New final drives allows great transmission torque capability and superior reliability.

Infinite speed selection. Four speed ranges, two in working mode and two in travel mode, to select the best speed range according to operating modes.

New propel hydraulic motor. It is fitted to the four speed gearbox (two mechanical and two hydraulic) and optimizes torque transmission at low-working speed.

Self-locking differential. Ensures optimum traction in every grip condition of the surface.

Front wheel assist. On request, it provides hydrostatic drive for rear two bogie wheels, according to standard configuration.



Operator's Station

Double operator's station designed for comfort and optimum efficiency.

Sliding operator's console.

Roller mounted, permits operation from either side of machine.

Dual-slide feature. Each seat can be moved from side to side and front to back on the pedestal frame, enhancing visibility and ergonomics.

Two ergonomic operator seats.

Fitted on sliding platforms (on request) can be easily positioned outside the machine frame to further improve visibility.

Lockable vandal cover. Protects console controls.

Low-mounted engine. Provides unobstructed forward visibility.



Control Console

Full instrumentation package allows operator to conveniently monitor all machine functions.

Ergonomic and easy to use.

Fully equipped with warning lights and all main operating and travel controls.

International symbols.

Shown for all controls.

Analog-type gauges.

Assure quick interpretation.

Illuminating warning lights.

Alert operator to:

- High hydraulic oil temperature;
- High engine temperature;
- Low engine oil pressure.

Rear machine controls. Vibration frequency regulators and screed assist operating controls are located at the rear of the machine for ground crew usage.



Handling System

Precise mix delivery through an advanced material handling system.

Left and right feeder/auger units.

Controlled independently of each other.

Two adjustable truck push rollers.

Fitted to the front of the hoppers.

Four paddle sensors.

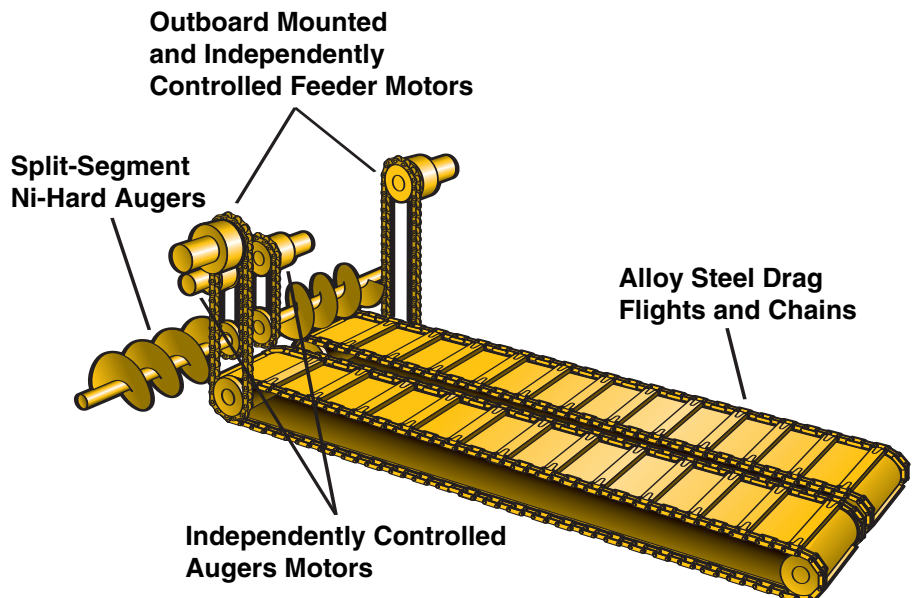
In automatic mode adjust material flow by controlling auger and conveyor rotation.

Wear-resisting steel.

Provides conveyors and hopper bottom plate for long wear life.

Proportional augers speed.

On request, two ultrasonic wave detectors control proportional augers movement and can be adjusted from the screed control boxes.



Fumes extraction

Available on request, promotes reducing asphalt fumes enchanting the operating conditions for the paver operator and screed operator.

A suction system. Provides removing of asphalt fumes from the auger chamber area for better operating conditions.

Optimum visibility. The suction duct at the end of the feeding tunnel and fumes outlet pipe positioned behind the engine exhaust pipe maintains optimum visibility of the hoppers loading area.

Meets mandatory emissions requirements. It is compliant to emissions standards.

Folding pipes. The fumes outlet pipe and the engine exhaust pipe can be folded for easy transportation.



Serviceability

Simplified service means more paving and less maintenance time.

Large swing-open doors and panels.

Provide access to all service areas.

Transverse engine mounting.

Assures ground-level access to hydraulic pumps and external engine components.

Low-mounted engine. Promotes easy access for servicing.

Parking spring-applied/pressure release brakes. Optimum brake performance, long service life and easier serviceability.

Easily removable and hinged footboards at operator's station. Easy access to operating components.

Electrical wiring. Protected by a nylon-braided harness.



RB E274 Screed

Variable width, power extending vibrating screed increases productivity and lowers operating costs.

Model RB E274. Vibrating screed paves from 2.50 m to 4.75 m (8' 2" to 15' 7"). With 2 extensions (0.425 m (16.7") optional) range max is 5.60 m (18' 4"). Smoothing plate vibration frequency from 1000 to 3400 rpm (16.7 to 56.7 Hz).

Two configurations. The RB E274 screed is fitted with heating system in the standard configuration and with electronic ignition and automatic temperature control on request.

Screed Assist. Hydraulic device maintains a constant screed pressure on the bituminous mix, independently from the mix bearing capacity and the paving width.



Engine

Caterpillar 3054 DINA, four cylinder liquid-cooled diesel engine. Meets U.S. Tier 2 and European EU Stage II emission control standards.

Ratings at 2,200 RPM	kW	hp
Gross power (SAE J1995)	61.5	83.6

Dimensions

Bore	105 mm	4.1"
Stroke	127 mm	5.0"
Displacement	4400 cu cm	269 cu in

Drive System

A closed-loop hydrostatic propel system provides accurate control of propulsion. The propel system drives the rear wheels through a variable displacement pump and dual displacement axial piston motor directly splined to a servo-assisted two-speed gearbox.

Available on request is the front wheel assist that ensures hydrostatic drive for rear two bogie wheels.

Four speed ranges

Work (1 st gear)	0-38 mpm	0-125 fpm
Work (2 nd gear)	0-67 mpm	0-220 fpm
Travel (3 rd gear)	0-8.5 kmph	0-5.3 mph
Travel (4 th gear)	0-15 kmph	0-9.3 mph

Steering

Steering efficiency in travel mode with optimized weight distribution on the front axle. The four front steering bogey wheels are fitted to oscillating axle rocker arms that maintain ground contact even on irregular terrain. The wide tread section of the rear tyres assures optimum maneuverability and high tractive performance on all types of terrains and slopes. Bogies are 280 mm (11") wide by 485 mm (19") diameter solid rubber tires.

Inside Turning Radius 3.6 m (11' 8")

Brakes

The hydrostatic drive acts as the service brake and is hydraulically applied via the propel lever on the operator's console panel. The safety and parking brakes, mechanical disk spring-applied system, are controlled by a pushbutton and automatically applied with the machine in "stand-by" mode. New disk brakes with positive proportional effect in combination with hydrostatic and parking braking systems. Meet world most severe homologation tests.

Operator's Station

Two operator's seats, fitted on sliding platforms (on request), can be easily positioned outside the machine frame to further improve visibility. The operator's seats can be slid side-to-side and front-to-back on the pedestal frame. Station has a fully equipped instrument console allowing the operator to conveniently monitor all machine functions.

Operator's Console

Control console with lockable vandal cover includes: steering wheel, left and right hopper raise/lower switches; left and right feeder control switches; reverse auger switch; lights/horn switch; propel forward/reverse control lever; engine ignition pushbutton; parking brake control; screed vibrator control switch; screed lift switch up/down; and fumes extraction control switch.

Operator's console and station also includes: foot brake pedal; manual/automatic switch; working lights on warning light; direction indicator switch; hazard warning light button; fast speed on switch; and emergency stop button.

Instrumentation

Operator's console includes: system warning light for high hydraulic oil temperature, low hydraulic oil level, and low engine oil pressure; fuel level indicator; warning lights test pushbutton; alternator warning light; hourmeter.

Electrical System

The 12-volt electrical system utilizes two 12-volt batteries and a 12-volt, 75-amp alternator. The electrical system is developed to enhance reliability and durability with nylon-braided harness.

Feeders and Augers

Right and left side augers/feeders operate independently of each other. Feeding conveyors and augers, made of anti-wearing material, can be manually operated from the operator's console or from the screed control panels. In automatic mode, four paddle sensors adjust material flow by controlling auger and conveyor rotation.

The augers are reversible and mechanically adjustable in height providing benefits to mat quality and better distribution of material in front of the screed.

On request is proportional augers speed controlled by two ultrasonic wave detectors.

Hopper

Power hopper dumping, controlled from control console. Heavy-duty flashing prevents material spillage.

Capacity

5.0 cu m (10 ton)

Discharge height - at centre
460 mm (18")

Discharge height - at sides
510 mm (20")

Fumes extraction

On request, this suction system removes asphalt fumes from the auger chamber area, enhancing operating conditions, in order to comply with mandatory emissions requirements.

Service Refill Capacities

	Liters	Gallons
Fuel Tank	130	34.3
Hydraulic Oil Tank	120	31.7
Ecological liquid Tank	35	9.2

Weight (approximate)

Tractor with RB E274 Screed
11 500 kg (25,000 lb)

Sound level

Average sound level at the driving position $L_{PA} = 84 \text{ dB (A)}$

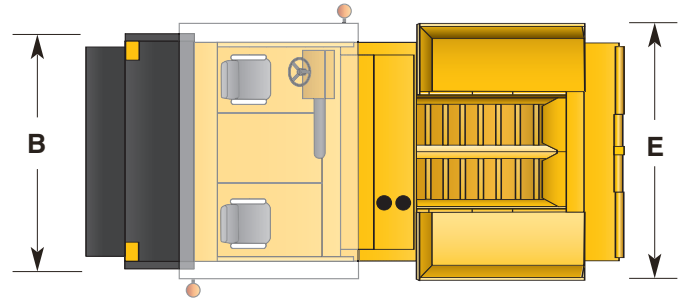
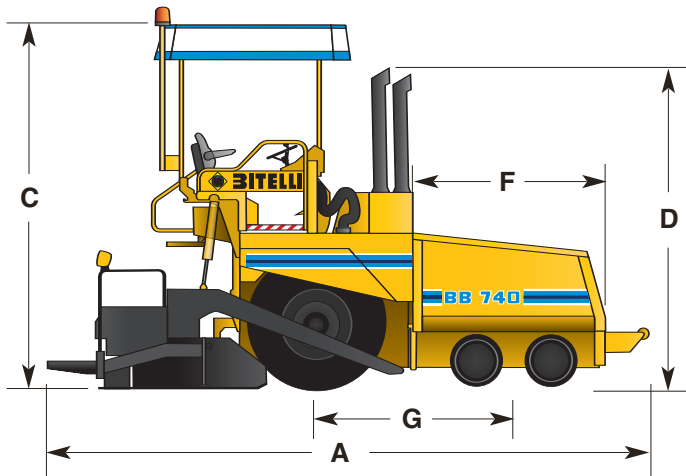
Test conditions with machine stationary on asphalted surface, engine running at 2200 rpm, work functions OFF.

Sound emission in the environment by equipment for use outdoors according to Directive 2000/14/EC.

Sound power level guaranteed for the machine $L_{WA} = 104 \text{ dB (A)}$

Dimensions

A	Overall length	5700 mm (18' 8")
B	Operating width with RB E274 Screed	4750 mm (15' 7")
	with 2 extensions (0.425 m (17") optional)	5600 mm (18' 5")
C	Overall height (with canopy - optional)	3340 mm (11')
D	Transport height (with fumes outlet pipe - optional)	2760 mm (9')
	Transport height (without fumes outlet pipe)	2600 mm (8' 5")
	Transport width (hoppers raised)	2500 mm (8' 2")
E	Hoppers width (hoppers open)	3130 mm (10' 3")
	Hoppers capacity	5 cu m (10 ton)
F	Hoppers depth	1850 mm (6')
G	Wheelbase	1870 mm (6')



Optional Equipment

Folding operator's station canopy. It covers the entire width of the machine. The canopy can be lowered and raised manually facilitating machine transportation.

Sliding operator seats. The two operator seats, fitted on sliding platforms, can be easily positioned outside the machine frame to further improve visibility.

Grade control. Paddle-type grade control with small rigid ski that rides on the pavement surface.

Ultrasound grade control. 5 non-contact ultrasound sensors provide full control for longitudinal grade. The system includes a digital control unit and a multiple ultrasound sensor that detects obstacles or breaks in the reference surface and provides a mean average of the surface on which it is operating.

Combined ultrasound grade control. The system includes a single control unit with a rigid ski in contact with the reference surface and a non-contact ultrasound sensor incorporated for maximum flexibility.

Slope control. Works together with the grade control to provide accurate transverse slope checking of the mat.

Digital slope control. Together with the grade controls provides accurate transverse slope of the mat. The system also includes a remote LCD control that can be fitted to the front of the screed.

6 m (19' 7") (Self-leveling ski for grade control. The self-leveling ski rides on the pavement surface and provide a mean average on the surface on which it is operating.

1 m (3' 3") paving width reduction elements. This feature reduces the paving width to 1 m (3' 3") with RB E274 screed.

450 mm (18") extension boxes. Bolt-on vibrating mechanical extensions for 5.60 m (18' 4") (2 elements) with RB E274 screed.

Burners electronic ignition. One sensor constantly control the temperature of the screed. The RB E274 screed is equipped with electronic ignition and automatic smoothing plate temperature control.

Proportional augers speed. Two ultrasonic wave detectors control proportional augers movement and can be adjusted from the screed control boxes.

Screed controls on console panel. Full screed controls are available on the operator station.

Backup alarm. It is automatically activated when the machine is on reverse mode.

Fumes extraction. A suction system helps remove asphalt fumes from the auger chamber area. The system complies with mandatory emissions requirements.

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Featured machines in photography may include optional equipment.
Materials and specifications are subject to change without notice.

