



# Cat<sup>®</sup> M323

## Railroad Excavator

***The Cat<sup>®</sup> M323 rail excavator features a modular design with options for short-tail and long-tail configurations. The flexible drive system – tire, rail, or an innovative combination – can be switched between at the touch of a button during operation, to help ensure optimal operation in a wide variety of applications. The next generation rail excavator is purpose built for rail and is the ideal machine to help increase versatility and efficiency.***

### Specially Built for Rail Applications

- Hydrostatic rail wheel drive (9A): Ideal for long distances and for traveling over rail infrastructure such as industrial plants.
- Classic drive with rail axles and tire drive (9C): Perfect for applications requiring high traction and pulling power, such as pulling heavy loads.
- Combination of both drive types (Dual 9A/9C): Combines the advantages of both systems to help offer maximum flexibility for different applications.
- The M323 is extremely mobile and can travel at speeds of up to 25 km/h (15 mph) on the road or 30 km/h (18 mph) on rail.
- With removable additional counterweight, the machine meets both the criteria for rail and road approval, while simultaneously helping increase lifting capacities and excavation performance.
- With the rail-specific Safe Energy Control System (ECS), machine movements can be limited vertically and sideways. Movements begin to slow down as they approach the preset limits. Movements beyond these limits are blocked.
- The short tail design (1575 mm or 5.2 ft) meets the specific requirements for operations around track without significantly compromising the excavator's performance and stability. It is ideal for working in confined spaces.
- The long tail design (2000 mm or 6.6 ft) helps enable smooth operation with high load capacities.
- The adjustable boom offers an optimal combination of reach, digging force, and lifting height below the catenary wire.
- The rated capacity indicator (RCI) and rated capacity limiter (RCL) systems help ensure machine stability in all working positions.
- The cab offers optimal comfort for the driver and passenger, even during long operations, with a sophisticated lighting concept and air conditioning.
- The storage space has been increased by 40% to help transport track-specific accessories.

### High Performance with Lower Fuel Consumption

- The C4.4 engine meets EU Stage V emission standards.
- The engine responds quickly to load changes to help deliver consistently high performance – regardless of operating conditions.
- Designed for maximum efficiency through load-sensing hydraulics to support fast cycle times.
- Eco mode and automatic engine speed control help lower fuel consumption while still delivering consistent performance.
- The powerful and efficient Cat<sup>®</sup> C4.4 engine offers superior durability.
- The on-demand cooling system helps reduce fuel consumption.
- A dedicated swing pump also supports fuel efficiency and allows for fast and smooth combined movements.

### Versatile Solution for Rail Applications

- With standard auxiliary hydraulics, including high-pressure and quick coupler lines and circuits, attachments can be easily changed without the need for additional lines.
- Up to 20 different hydraulic flow and pressure settings can be saved.



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## Safety

- Rollover protective structures (ROPS) for the operator and auxiliary cabs are tested according to ISO 12117-2:2008.
- The Cat M323 meets all applicable safety standards, including EN 15746:2020.
- E-fence technology limits movement when working under power lines or near traffic.
- The cab includes an electric backup horn, emergency button, and machine main power switch.
- Intelligent devices adapted for rail and road, such as a seatbelt warning indicator, automatic swing lock, and safety lever, help enhance jobsite safety.
- Long handrails and access steps with anti-skid plates help provide easy and safe entry into the cab.
- Large glass areas, wide-angle mirrors, a large roof hatch, rear and side-view cameras, and powerful LED work lights help provide great all-around visibility.
- The standard integrated PIN code helps prevent unauthorized use and make theft more difficult.

## Maintenance

- Routine maintenance components such as fuel and engine oil filters, and fluid access points are accessible from ground level.
- The automatic lubrication system on the uppercarriage and a small number of lubrication points on the undercarriage help reduce maintenance times.
- The axial fan and all radiators are located in a single unit. The radiators are designed for easy cleaning and can be unlocked and tilted without tools.

## Technology

- Increase production and minimize operating costs with help from Cat® technology solutions.
- VisionLink™ technology provides a wireless connection to your jobsite and provides machine location, operating hours, fuel consumption, idle time, and event codes.
- The easy-to-read, high-resolution LCD monitor keeps you up-to-date with important machine information.

## Unmatched Comfort

- A high-resolution LCD monitor helps provide quick access to frequently used functions.
- Sensitivity can be adjusted using joysticks on both road and rail.
- Adjustable seats, armrests, steering column, joystick controls, buttons, and thumbwheels help enable a unique operator experience.
- The ergonomically designed cab features easy-to-reach controls, all located in front of you.

## Standard and Optional Equipment

Standard and optional equipment may vary. Consult your Cat dealer for details.

|                                                                      | Standard | Optional |                                                                                                              | Standard | Optional |
|----------------------------------------------------------------------|----------|----------|--------------------------------------------------------------------------------------------------------------|----------|----------|
| <b>BOOM AND STICK</b>                                                |          |          | <b>SAFETY AND SECURITY</b>                                                                                   |          |          |
| 5.2 m (17'1") VA boom, 2.0 m (6'7") stick                            | ✓        |          | Emergency stop button                                                                                        | ✓        |          |
| <b>UNDERCARRIAGE AND STRUCTURES</b>                                  |          |          | Safety decals for rail certification                                                                         | ✓        |          |
| Long or Short radius counterweight                                   | ✓        |          | Insulated or Non insulated wheels                                                                            | ✓        |          |
| Removeable counterweight for road regulation                         | ✓        |          | Rail suspensions for 9A transmission                                                                         | ✓        |          |
| Hydrostatic (9A), Friction (9C) or combined (9A and 9C) transmission | ✓        |          | Air braking system for rail cars or trailers                                                                 |          | ✓        |
| Road and Rail travel speed                                           | ✓        |          | ROPS cab for operator and rail agent                                                                         | ✓        |          |
| Access step                                                          | ✓        |          | Stick lowering control valve (SLCV) and boom lowering control valve (BLCV) including overload warning device | ✓        |          |
| Rail wheel Stone shield protection and Work Tools (WT) support       |          | ✓        | Bucket lowering control valve (BLCV)                                                                         | ✓        |          |
| Towing coupler (manual or automatic)                                 |          | ✓        | Safe ECS monitor – Set the limit/monitor the load                                                            | ✓        |          |
| Rail coupler                                                         |          | ✓        | Ground area proximity light                                                                                  |          | ✓        |
| Rail towing bar                                                      |          | ✓        | People detect system                                                                                         |          | ✓        |
| Lifting points                                                       | ✓        |          | Bird view camera                                                                                             |          | ✓        |
| Tie-down points                                                      | ✓        |          | Access light                                                                                                 |          | ✓        |
| Tires                                                                | ✓        |          | <b>CAB</b>                                                                                                   |          |          |
| Tire pressure monitoring                                             |          | ✓        | Premium or Deluxe cab                                                                                        | ✓        |          |
| Tire inflator, blow gun                                              |          | ✓        | Travel pedal (1-way or 2-way)                                                                                | ✓        |          |
| 1M track gauge kit                                                   |          | ✓        | <b>ENGINE</b>                                                                                                |          |          |
| <b>HYDRAULIC SYSTEM</b>                                              |          |          | Cat C4.4 Twin Turbo                                                                                          | ✓        |          |
| Joystick with sliders and push buttons                               | ✓        |          | Altitude 3000 m (9,842 ft) capability without derating                                                       | ✓        |          |
| Adjustable hydraulic sensitivity                                     | ✓        |          | Mechanical air compressor                                                                                    | ✓        |          |
| Dedicated swing pump                                                 | ✓        |          | <b>ELECTRICAL SYSTEM</b>                                                                                     |          |          |
| Pump for the drive and implement                                     | ✓        |          | Rescue pump                                                                                                  | ✓        |          |
| Programmable flow and pressure for up to 20 attachments              | ✓        |          | Camera, Rear and Right Hand (RH) side                                                                        | ✓        |          |
| 1× High Pressure Line (HP) and 1× Medium Pressure Line (MP)          | ✓        |          | 9 working lights (1800 LM or 4200 LM)                                                                        | ✓        |          |
| Drain line                                                           |          | ✓        | 5 working lights (1800 LM or 4200 LM)                                                                        |          | ✓        |
| Return line 25.4 mm (1")                                             |          | ✓        | Wiper                                                                                                        | ✓        |          |
| 2nd HP                                                               |          | ✓        | Refueling pump                                                                                               |          | ✓        |
| Bio hydraulic oil                                                    |          | ✓        | UIC certified rail lights                                                                                    |          | ✓        |
| Bio oil micro-filtration unit                                        |          | ✓        | Speed Road and Rail (country regulation)                                                                     | ✓        |          |
| <b>SERVICE AND MAINTENANCE</b>                                       |          |          | Travel alarm                                                                                                 |          | ✓        |
| Ground-level fuel and engine oil filters and fluid taps              | ✓        |          | Beacon                                                                                                       |          | ✓        |
| Ground-level fuel refueling                                          | ✓        |          | Electric plug at the stick-end (permanent and switch actuated)                                               |          | ✓        |
| Centralized lubrication for undercarriage                            | ✓        |          | Electrical plug at the lower frame                                                                           |          | ✓        |
| Auto-lubrication system                                              | ✓        |          | Anti theft system                                                                                            |          | ✓        |
| Inspection light                                                     |          | ✓        | Product Link™ (Global System for Mobile [GSM] or satellite)                                                  | ✓        |          |

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## Engine

|                               |                   |           |
|-------------------------------|-------------------|-----------|
| Engine Model                  | Cat C4.4          |           |
| Net Power – ISO 9249          | 129 kW/<br>176 PS | 174 hp    |
| Engine Power – ISO 14396      | 134 kW/<br>183 PS | 180 hp    |
| Bore                          | 105 mm            | 4 in      |
| Stroke                        | 127 mm            | 5 in      |
| Displacement                  | 4.4 L             | 269 in³   |
| Maximum Torque at 1,400 rpm   | 815 N·m           | 601 lb-ft |
| Number of Cylinders – In Line | 4                 |           |

- Meets EU Stage V emission standards.
- Rated speed 1,700 rpm
- Net power advertised is the power available at the flywheel when engine is equipped with air cleaner, Clean Emission Module (CEM) exhaust gas aftertreatment, alternator, and cooling fan running at intermediate speed.
- Recommended for use up to 3000 m (9,842 ft) altitude with engine power derate above 3000 m (9,842 ft).

## Drive

|                                                                       |         |            |
|-----------------------------------------------------------------------|---------|------------|
| Maximum Travel Speed – Road Mode<br>(depending of country regulation) | 25 km/h | 16 mph     |
| Maximum Travel Speed – Rail Mode<br>(depending of country regulation) |         |            |
| 9A                                                                    | 25 km/h | 16 mph     |
| 9C                                                                    | 30 km/h | 19 mph     |
| Drawbar Pull – Road Mode                                              | 104 kN  | 23,380 lbf |
| Drawbar Pull – Rail Mode                                              |         |            |
| 9A                                                                    | 45 kN   | 10,116 lbf |
| 9C (Nominal)                                                          | 45 kN   | 10,116 lbf |
| 9C (Heavy Grip Mode)                                                  | 100 kN  | 22,481 lbf |

## Swing Mechanism

|                            |          |               |
|----------------------------|----------|---------------|
| Maximum Swing Speed        | 9 rpm    |               |
| Maximum Swing Torque       | 52 kN·m  | 38,400 lbf-ft |
| Maximum Swing Brake Torque | 124 kN·m | 91,500 lbf-ft |

## Undercarriage

|                                                 |        |        |
|-------------------------------------------------|--------|--------|
| Road Ground Clearance (same for 9C rail travel) | 437 mm | 1.4 ft |
| Rail Ground Clearance (9A rail travel)          | 637 mm | 2.1 ft |

## Service Refill Capacities

|                                 |       |          |
|---------------------------------|-------|----------|
| Fuel Tank Capacity              | 240 L | 63.4 gal |
| Diesel Exhaust Fluid (DEF) Tank | 19 L  | 5.0 gal  |

## Weights

|                   |                          |                          |
|-------------------|--------------------------|--------------------------|
| Operating Weights | 21 700 kg –<br>24 300 kg | 47,840 lb –<br>53,572 lb |
|-------------------|--------------------------|--------------------------|

Operating weight includes full fuel tank, operator, and pneumatic tires.  
Weight varies based on configuration.

## Hydraulic System

|               |       |        |
|---------------|-------|--------|
| Tank Capacity | 120 L | 32 gal |
| System        | 270 L | 71 gal |

### Maximum Pressure – Implement Circuit

|                |            |           |
|----------------|------------|-----------|
| Normal         | 35 000 kPa | 5,076 psi |
| Heavy Lift     | 37 000 kPa | 5,366 psi |
| Travel Circuit | 35 000 kPa | 5,076 psi |

### Maximum Pressure – Auxiliary (AUX) Circuit

|                                 |            |           |
|---------------------------------|------------|-----------|
| High Pressure – AUX#1 and AUX#2 | 35 000 kPa | 5,076 psi |
| Medium Pressure – AUX#3         | 17 000 kPa | 2,465 psi |

|                 |            |          |
|-----------------|------------|----------|
| Swing Mechanism | 39 500 kPa | 5,729 ps |
|-----------------|------------|----------|

### Maximum Flow

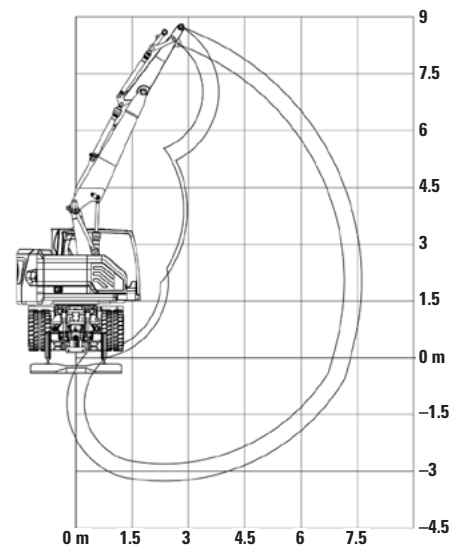
|                          |           |            |
|--------------------------|-----------|------------|
| Implement/Travel Circuit | 306 L/min | 81 gal/min |
|--------------------------|-----------|------------|

### Auxiliary Circuit

|                                 |           |            |
|---------------------------------|-----------|------------|
| High Pressure – AUX#1 and AUX#2 | 250 L/min | 66 gal/min |
| Medium Pressure – AUX#3         | 55 L/min  | 14 gal/min |
| Swing Mechanism                 | 95 L/min  | 25 gal/min |

## Working Ranges

| Boom Type                  | VA Boom |            |
|----------------------------|---------|------------|
| Stick Length               | 2000 mm | 6'11"      |
| Bucket Digging Force (ISO) | 117 kN  | 26,303 lbf |
| Stick Digging Force (ISO)  | 83 kN   | 18,659 lbf |



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Materials and specifications are subject to change without notice. Featured machines in photos may include additional equipment.  
See your Cat dealer for available options.

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