

# IT62G

Integrated  
Toolcarrier

**CAT**<sup>®</sup>



#### Cat<sup>®</sup> 3126 DITA Diesel Engine

Flywheel Power	149 kW	200 hp
Maximum Flywheel Power	154 kW	207 hp
Bucket Capacities	3.1 to 3.3 m <sup>3</sup>	4.0 to 4.25 yd <sup>3</sup>
Pallet Capacities	1219 to 1524 mm	48 to 60"
Operating Weight	18 314 kg	40,380 lb

## IT62G Integrated Toolcarrier

*State-of-the-art design, engine performance and operator comfort maximize productivity.*

### Engine

- ✓ *Cat 3126 DITA Diesel Engine is built for performance, durability, excellent fuel economy and meets emission regulations. The 3126 has many heavy-duty features normally found on larger displacement engines.*

**pg. 4-5**

### Transmission

- Planetary power shift transmission with automatic shift capability helps provide on-the-go speed and direction changes.
- ✓ *The Electronic Clutch Pressure Controls (ECPC) allow for smoother shifts and transmission neutralization, which let the operator adjust for specific site conditions.*

**pg. 6**

### Linkage and Front Frame

- Durable, articulated frame has a full box-section which absorbs twisting and impact forces to provide a solid foundation for the entire structure. 8-bar linkage, equipped with a quick coupler, provides excellent parallel lift and versatility.

**pg. 8**

### Hydraulics

- ✓ *Enhanced, low-effort operator controls for steering, shifting and bucket loading precisely respond to operator input.*

**pg. 9**

### Operator Station

- ✓ *Ergonomically engineered using advanced virtual reality technology to provide the operator unparalleled comfort, spaciousness and viewing area. Control levers, switches and gauges are positioned to maximize productivity.*

**pg. 10-11**

### Attachments

- ✓ *The IT62G can be equipped with a variety of attachments and buckets. Pallet forks, material handling arm, woodchip bucket and grapple with unloading kickout are available from Caterpillar.*

**pg. 12-13**

### **Performance and comfort you can feel.**

*Caterpillar® design delivers excellent breakout force, fast load and cycle times, precise maneuvering and smoother shifts for optimal performance and comfort.*

### **Reliability you can trust.**

*Proven components, field-tested durability, combined with easy maintenance, ensures reliability over the life of the machine.*

### Serviceability

- ✓ *Easily perform daily maintenance with ground-level access through hinged doors to all major service points. The tilting hood provides unmatched access for larger maintenance jobs.*

**pg. 14**

### Complete Customer Service

In addition to machine selection, your Cat Dealer offers a wide range of services, from purchase options to operator training, maintenance programs and parts support.

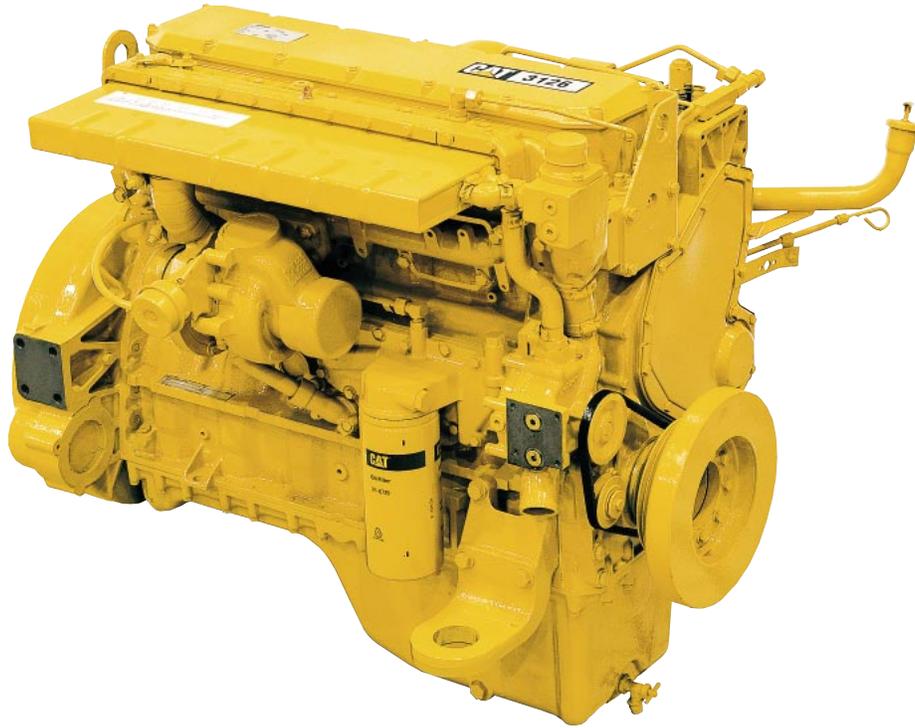
**pg. 15**



✓ *New feature*

## 3126 Engine

*The six-cylinder, direct injection, turbocharged and aftercooled engine is built for power, reliability, low maintenance, excellent fuel economy and low emissions.*



**Powerful performance.** The 3126 DITA Engine develops flywheel power of 149 kW (200 hp), and meets all current and proposed worldwide emissions standards.

- The four-stroke cycle design delivers long power strokes and efficient fuel combustion with low emissions.
- Precisely engineered and stringently tested to maintain a tradition of quality.
- Profit-boosting performance, heavy-duty durability and reliability.
- Built-in serviceability and excellent fuel economy.

**Torque rise.** The unit injected fuel system provides a controlled fuel delivery increase as the engine lugs back from rated speed. This results in increased horsepower above rated power. A combination of increased torque rise and maximum horsepower improves response, provides greater rimpull, more lift force and faster cycle times. The 154 kW (207 hp) maximum flywheel power occurs at 1,950 rpm when power is needed during the working cycle.

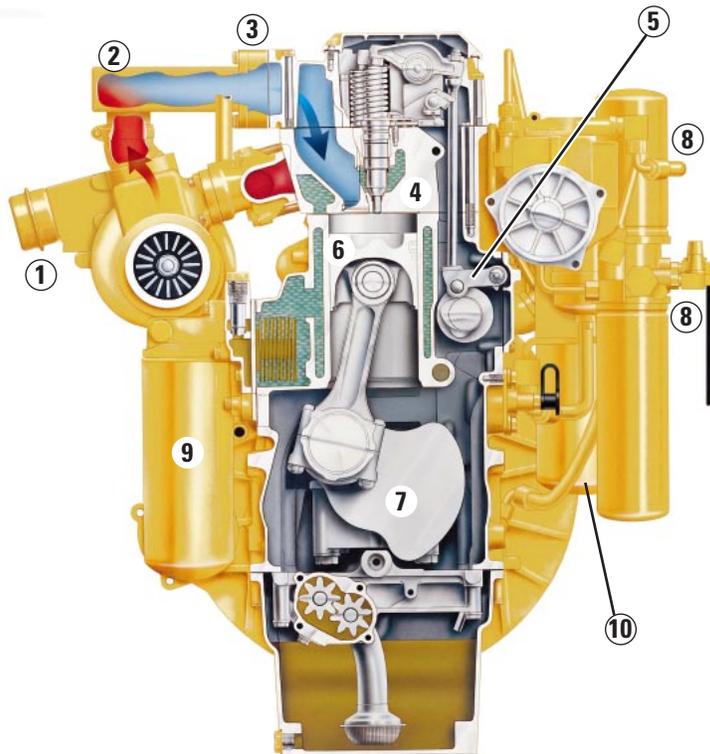
**Turbocharger** enhances performance and engine efficiency, especially at high altitudes by packing more air in the cylinders for excellent combustion.

**Jacket water aftercooler** reduces smoke and emissions by providing a cooler, more efficient combustion. This also extends the life of the piston rings and bore.

**Air intake heating** (optional on some configurations) eases cold starts. When coolant temperature is above 10° C, the air intake heater does not operate. When below 10° C, the length of the heating period automatically adjusts to the temperature.

**Individual, high-pressure unit injectors** atomize fuel efficiently for fast response, increased fuel economy with low emissions. The radius cone injector nozzle provides excellent contact with the cylinder head sleeve to ensure tightness with the combustion chamber.

**Fuel pre-filter and water separator element** combined with two high efficiency micron fuel filters, in series, ensure excellent fuel cleanliness, provide extended injector life, fuel system durability, and protection.



- 1 Turbocharger waste gate valve (quick response)
- 2 Jacket water aftercooler
- 3 Air intake heater\*
- 4 Radius cone injector nozzle
- 5 Camshaft roller followers
- 6 Two-piece piston  
New ceramic coated ring package
- 7 Induction hardened forged crankshaft
- 8 Series fuel filters with ecological drain hoses
- 9 Large spin-on primary oil filter
- 10 By-pass oil filter

\* Optional on some configurations.

**Camshaft roller followers** reduce wear and frictional power losses for durability and fuel economy. Followers and pushrods can be replaced without removing the camshaft.

**Two-piece, articulated pistons** with forged steel crown and forged aluminum skirt provide durability, lower engine sound levels, enhanced fuel efficiency with improved thermal and structural capability. The new Chrome Ceramic Surface (CCS) ring package, specifically developed for high load/high temperature applications, significantly improves ring and bore life.

**Crankshaft** is forged and induction hardened for long-term durability. It has seven main journals and eight counterweights and is dynamically balanced for smooth operation. The crankshaft is completely regrindable. Connecting rods can be removed through the tops of the cylinders for servicing ease.

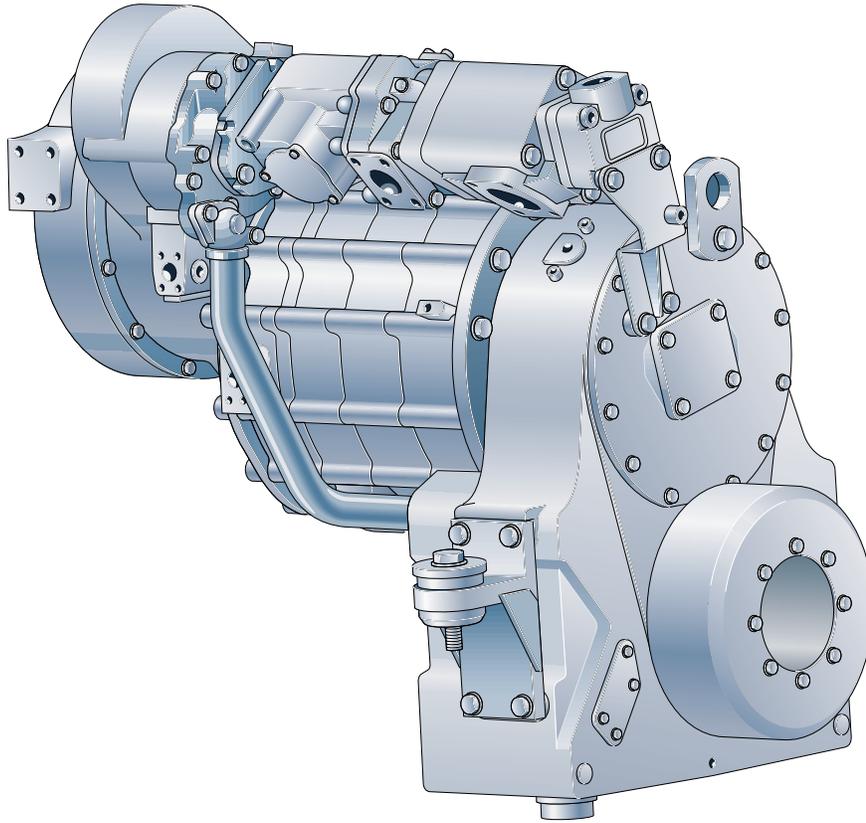
**Deep skirt engine block design** ensures rigidity and reduces vibration.

**Caterpillar engine oil** is formulated to optimize engine life and performance and is strongly recommended for use in Cat diesel engines.

**Factory remanufactured parts.** A large choice of factory remanufactured parts and dealer proposed repair options increase machine availability and reduce total repair costs.

## Transmission

*Caterpillar power train makes dependable performance a standard feature.*



**Power shift transmission with automatic shift capability** is designed, developed and built by Caterpillar. The electronically controlled power shift transmission allows full-power, speed and directional changes. Fully modulated shifts increase component life and productivity and help reduce operator fatigue.

**Caterpillar transmission oil** is balanced to provide optimum friction control for power shift transmissions and brake disc material and at the same time optimize transmission and final drive gear life.

**Electronic Clutch Pressure Control (ECPC)** delivers smoother shifting and extended clutch life. ECPC senses input from both the transmission and the operator controls in the cab to modulate each individual clutch. This results in smoother shifts in both speed and direction. Energy is modulated into the clutches, resulting in extended clutch life.

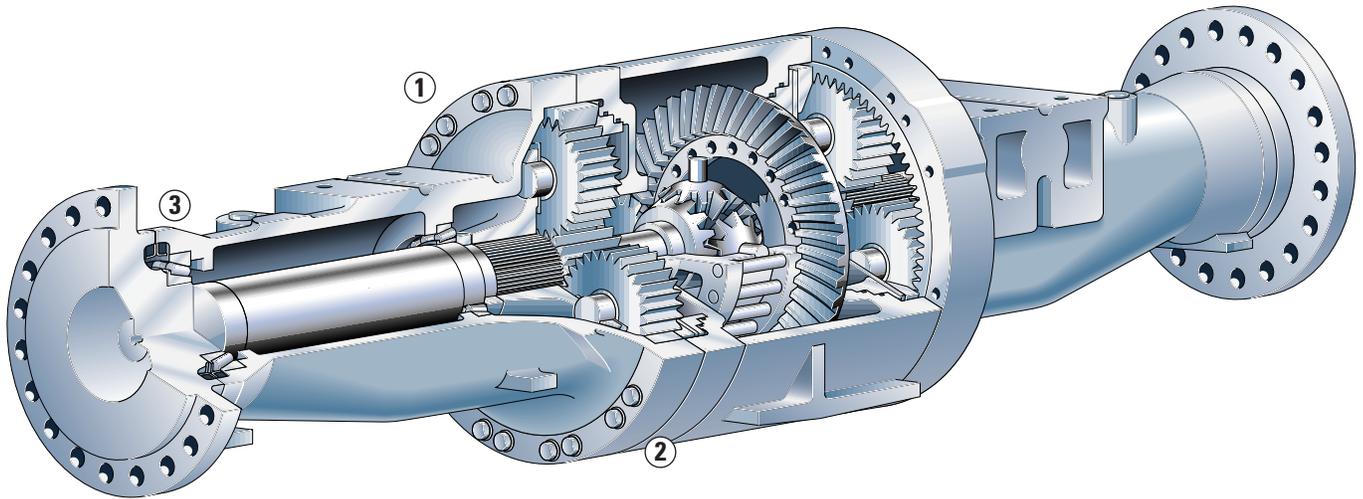
**Transmission neutralizer** allows the operator to disengage the transmission clutches, removing torque from the drive train. With the neutralizer, high engine rpm's are maintained for full hydraulic flow and brake drive-through is prevented. Adjusting the neutralizer for a given application improves machine inching control, reduces brake energy, and improves fuel efficiency.

**Six, proportional electro-hydraulic valves** driving the clutches are identical and are easy to service. Using the Electronic Technician (ET) service tool, the transmission can be easily recalibrated to maintain quick response.

**Easy maintenance** is designed into the transmission. Built-in pressure taps help reduce troubleshooting time for increased machine availability. The daily level check is done from ground level through a well-protected sight gauge. Oil sampling valves allow quick, clean access to the transmission for S•O•S oil analysis.

# Axles

Large, heavy-duty axles protect internal components from the harsh environment and offer excellent serviceability.



**1 Heavy-duty axles and brakes** are designed to last in all kinds of operating conditions. Planetary final drives use full-floating, bronze sleeve bearings in the planet gears. Differential components are larger and more heavy-duty than those used on the F-series machines.

- The differential pinion uses bronze spherical thrust washers for increased durability.
- Oil-disc brakes are adjustment free and fully enclosed to lock out contaminants.
- Oscillating rear axle helps ensure four-wheel ground contact for traction and ability, even on rugged terrain.

**The front axle is rigidly mounted to the front frame** to support the weight of the wheel loader, internal torque loads and external loads applied during breakout.

**The rear axle includes a trunnion, two trunnion supports** and the associated bearings, allowing it to oscillate plus or minus thirteen degrees.

**Either axle can be easily removed for service** by removing the bolts that fasten it to the frame.

**Limited slip differentials** (optional on some configurations) deliver maximum traction on uneven ground and in changing traction conditions such as mud, snow and ice.

**2 The four-piece axle design** contains two axle shaft housings, the center housing, and the intermediate housing. Features and benefits of this design include:

- Inboard brakes are positioned immediately adjacent to the differential and operate on the low torque side of the final drive, requiring less braking force to stop the machine.
- Independent front and rear brake circuits use separate, heavy-duty, piston-type accumulators to ensure dead engine braking.

- Brakes are bathed in axle oil for excellent heat dissipation.
  - Brakes can be serviced without disassembling the final drive.
  - Inboard final drives are positioned immediately after the brakes, near the differential protecting them from exposure to mud, sand and other elements.
  - Larger diameter axle shafts on high torque side of final drive provide greater torsional strength for better performance and durability.
- 3 Patented metal-to-metal, Duo-Cone Seals** between the axle shafts and housings keep lubrication in and dirt out.

## Linkage and Front Frame

*Advanced linkage design provides maximum control.*

The 8-bar linkage provides parallel lift, keeping the load level throughout the entire lift range. Extremely important when using forks, this lets the operator concentrate on placing the load instead of retaining the load. It's simply faster and more efficient. This linkage attaches to a durable, well-proven, full box-section frame which absorbs twisting and impact forces.



## Quick Coupler

*Change attachments quickly from the cab.*

As an integral part of the IT62G, the quick coupler allows most attachments to be changed in under 30 seconds. Use the standard third valve to actuate attachment retaining pins without ever leaving the cab. Use the manual diverter valve to route hydraulic flow to a powered attachment. An optional fourth valve provides additional hydraulic flow for powered attachments.



## Hydraulics

*Well-balanced hydraulics deliver precise, low-effort control and trouble-free operation.*

**Low-effort hydraulic controls** allow the operator to precisely maneuver bucket lift and tilt.

- Pilot control valves reduce operator effort and provide precise attachment control. The IT62G features two return-to-work kickouts that allow for multiple attachments to return to the correct work position. For example, by using a switch in the cab, the operator can select between the correct return-to-dig position for a bucket and the return-to-level position for a set of forks.

**Smooth, efficient steering.** Load sensing steering maximizes machine performance by directing power through the steering system only when needed. When the machine is not steering, more engine power is available to generate rimpull, breakout and lift forces. Load sensing reduces horsepower draw by up to eight percent, resulting in increased fuel economy. Large-bore steering cylinders allow responsive maneuverability.

**Positive-displacement hydraulic pumps** perform with high efficiency and great reliability. For improved serviceability, all hydraulic pumps are mounted on a single pump drive. Increased flow rates provide faster hydraulics and greater lift force, resulting in a better balance between breakout and rimpull.



**Caterpillar XT hoses and couplings** are uniquely designed and tested to work together as a system for superior performance. Hoses are specifically engineered and manufactured for high abrasion resistance, excellent flexibility and easy installation. Caterpillar couplings use O-ring face seals which provide positive sealing for reliable leak-free connections. Reliable components reduce the risk of leaks and blown lines, helping protect the environment.

**Automatic Ride Control** is an optional attachment that helps operators perform better. This system uses a nitrogen oil accumulator in the hydraulic lift circuit that acts like a shock absorber for the bucket. The lift arms and bucket response to movement is dampened over rough ground, reducing fore and aft pitch. A smoother, more comfortable ride gives operators the confidence to travel at higher speeds during load and carry, improving cycle times and load retention.

**Pressure taps** allow quick diagnosis of the hydraulic system.

**Sampling valves** provide easy access to hydraulic oil for analysis.

# Operator Station

*Comfort and control — top-quality operator station helps maximize productivity.*



The IT62G cab is a spacious and comfortable work environment that promotes productive operation. The cab includes improved viewing area, ease of service, ergonomic design and control placement, improved ventilation and generous storage areas.

- 1 Improved viewing** in all directions. Extended windows open the operator's view for remarkable forward and peripheral viewing. View to the bucket corner has also been improved. Bonded glass in the windshield eliminates frame obstructions. The stylish, sloping hood improves the view to the rear of the machine by letting the operator see objects closer to the machine.
- 2 Steering wheel** can be positioned infinitely within the tilt range by the operator.
- 3 Pilot-assisted, hydraulic bucket control** makes low-effort operation possible. Pilot lines are marked and can be easily disconnected at the bottom of the right-hand door. Padded, adjustable wrist rest helps reduce fatigue.
- 4 Quick gear kickdown button** lets the operator downshift easily to a lower gear, saving time, increasing bucket fill factors and lowering cycle times.
- 5 IT62G Monitoring System** provides gauges, tachometer/speedometer and 3-level warning to provide full time monitoring of key functions. The system alerts the operator of immediate or impending problems with engine oil pressure, parking brake, brake oil pressure, charging system, brake oil temperature, hydraulic oil level, hydraulic filter bypass, primary and supplemental steering oil pressures.

- 6 Two position return-to-work kickout switch** allows the operator to choose between return-to-work positions for two different attachments. The operator can select between the return-to-dig position for a bucket and the return-to-level position for a set of forks.
- 7 Dual-pedal braking** lets the left pedal function as a transmission neutralizer and as a brake. The right pedal functions as a regular brake. Initial pedal travel neutralizes the transmission. Further pedal travel engages the service brakes. The point of brake engagement is adjustable depending on application requirements.
- 8 KAB seat** is standard with adjustable fore/aft position seatback angle, lumbar support, bottom cushion height, armrest angle and suspension stiffness. Optional Caterpillar Contour Series seat is 6-way adjustable, providing comfort and support. The seat cushions reduce the pressure on the lower back and thighs, while offering unrestricted arm and leg movement. Air suspension adds to the overall comfort level by smoothing the ride over rough terrain. Seat is equipped with a 76 mm (3 in) retractable seat belt.
- 9 Electronic autoshift control** allows the operator to concentrate on the work, not gear selection. The auto function is achieved using a cab-mounted switch and a rotating gear selector lever on the steering column.
- 10 Ride control switch**
- 11 Transmission neutralizer lockout** lets the operator shut the neutralizer off, allowing the left pedal to work as a brake only. This provides a choice for operators who prefer to operate without a neutralizer or to match application.

**Left, rear-hinged door** provides entrance and exit to operator station. Swing open right-side window provides a secondary exit if needed.

**Generous storage space** includes:

- Lockable compartment for personal items.
- Coat hook.
- Molded compartments for lunchbox, cooler, thermos, cup or can.

**Improved ventilation** for better air flow to the operator and windows. There are twelve louvered vents with two on each door post.

**Radio-ready** means this cab includes a 12-volt converter (5-amp), speakers, antenna, all wiring and brackets for an entertainment radio installation.

**Other options** available for the IT62G operator station:

- Air conditioning that uses blended air for quick temperature changes and R-134a refrigerant which does not contain chlorofluorocarbons. Quick-connect couplings allow easy removal from the cab with no release of refrigerant.
- Sun visor for the front windshield.
- External mirror package.

## Factory Installed Attachments

A wide variety of factory attachment combinations optimize performance and versatility of the IT62G.



**1 Unloading grapple with kickout.** High volume log loading forks are designed for heavy-duty applications: loading and unloading trucks, sorting, decking, feeding the mill and general millyard work.

- **Unloading kickout** is available for forestry applications. This allows an operator to stockpile logs (one to two log diameters) higher and clasp a partial load tight.

**2 Pallet forks.** Fork configurations are as varied as the applications they serve. Available in swinging or solid tines — and in a wide range of lengths and widths. Forks assist with lifting and transporting materials such as: pallets and agricultural products (sugar cane, hay bales, etc.).

**3 Material handling arm.** With adjustable lengths and load capacities, material handling arms provide a boom for placing material from overhead — excellent for lowering pipes and beams into position on construction projects.

**4 Material handling buckets** are designed for excellent performance in stockpile applications. Flat floor design and extra capacity provide loading characteristics that ensure maximum usage of the machine. Bolt-on cutting edges are standard.

**5 Woodchip buckets** are specially designed to load and carry woodchips and similar light materials, such as snow. Bolt-on cutting edges are included in standard. Visibility screens help the operator with loading.



## Attachments

Add versatility to the machine with a wide range of attachments and buckets designed for the IT62G to optimize operation.

①



②



③



④



⑤



⑥



A complete range of attachments and tools is available from your Caterpillar Dealer.

- 1 **Light material/coal buckets\*** are available in special widths.
- 2 **Multi-purpose buckets.\*** Loading, dozing, clamping objects or filtering the discharge of material are easy tasks with multi-purpose buckets.
- 3 **High-dump buckets\*** are ideal for loading stockpiled, light material into high sided trucks, hoppers in waste transfer stations or rehandling fertilizer, coal or grain.

- 4 **Side-dump buckets\*** permit loaders to operate in congested worksites and also dump forward like conventional buckets.
- 5 **Forks.** Logging, millyard and lumber forks are the ideal tools for handling a variety of materials. The different configurations (various tine lengths, top clamps, etc.) are well-matched to the applications and log size.
- 6 **Hydraulic brooms** offer a unique balanced suspension system which eliminates the need for supporting wheels.

#### Other available buckets:

- Sand and gravel.
- Landfill/refuse.

**Snow plows**, hydraulically reversible, angle 35° left or right. This reversing action is ideal for cleaning applications on mountain roads, airports, parking lots, plant facilities, etc.

#### Other attachments:

- **Rakes** are ideal for fast, economical removal of brush, trees, stumps and rocks. (Various clamp options are available.)
- **Tire loaders** are specially designed to feed tires to shredder or load trucks.
- **Hooks** convert any brand or type of pin-on tool or attachment to quick coupler.
- **Manual angle blade** for general purpose dozing angles 25° left or right.

\* All buckets include bolt-on cutting edge.

## Serviceability

*Keep machines up and running with easy-to-perform daily maintenance.*



**Maintenance** has never been more accessible than on G-Series machines. Fast, easy and reduced maintenance means improved uptime and greater value.

- Lockable, ground level service door on right side gives quick access to engine oil fill and dipstick, coolant sight gauge, air filter indicator, rear grease fittings, and main battery disconnect switch.
- 295 liter (78 gallon) fuel tank provides extra capacity for long work days.
- Grouped remote grease fittings allow ground level access for lubricating tilt and steering cylinder pins and rear axle oscillation bearings.
- Caterpillar fluid filters are especially designed to assure maximum component life. The unique design uses non-metallic centertube and molded end-caps, which fully blend with media ensuring no internal leakage.
- Cat high efficiency fuel filters feature cellulose/synthetic blend media that remove more than 98 percent of particles that are two microns or larger, maximizing fuel injector life.
- Caterpillar Radial Seal air filters do not require tools to service, reducing maintenance time. The ultra-high efficiency primary air filter element is coated with a fine layer of fibers that prevent dust particles from entering the filter media. This results in more efficient filtration, extended service intervals, and extended filter life — all contributing to reduced operating costs.
- Caterpillar Extended Life Coolant allows extended change intervals (6,000 hours).
- Caterpillar maintenance-free, high output batteries are designed for high cranking power and maximum protection against vibration.
- Individual Multi-Row Modular core radiator reduces time to repair or replace the radiator.
- The Electronic Technician Service tool provides diagnostics of electro-hydraulics, transmission and optional Payload Control System to allow effective and efficient troubleshooting by service personnel.

**Sloped hood**, electrically activated, tilts up for complete access to the engine, cooling system and other major components. If needed, the hood can be removed quickly and easily by removing three pins and disconnecting a single harness connector. A built-in lifting point facilitates easy lift off.

**Sampling valves** allow quick, clean access to engine, transmission and hydraulic oils, and provide the most representative oil samples for analysis. S•O•S oil analysis enables scheduling of downtime for component repair or replacement before major problems occur.

**Ecology drains** for the engine, transmission, hydraulics, radiator and fuel are factory installed and replace the standard drain plugs. Activating the valve allows fluid to be drained into a container without spillage. Axle oil ecology drains are available as factory-only installed options.

**Caterpillar engine, transmission and hydraulic oils** deliver maximum performance and service life.

**Factory remanufactured parts.** A large choice of factory remanufactured parts and dealer proposed repair options increases machine availability and reduces repair cost.

## Total Customer Support

*Unmatched in the industry.*



**Customer support agreements.** Cat Dealers offer a wide variety of product support agreements. Dealers will work with customers to develop a plan that best meets specific needs. To protect your investment, these plans can cover the entire machine, including attachments.

**Selection.** Make detailed comparisons of the machine being considered before a purchase. How long do components last? What is the cost of preventative maintenance? What is the true cost of lost production? Cat Dealers can give precise answers to these questions.

**Purchase.** Look past initial price. Consider the financing options available as well as day-to-day operating costs. This is also the time to look at dealer services that can be included in the cost of the machine to yield lower equipment owning and operating costs over the long run.

**Operation.** Improving operating techniques can boost profits. Cat Dealers have training videotapes, literature and other ideas to help increase productivity.

**Maintenance.** Choose from a wide range of maintenance services at the time a machine is purchased. Repair option programs guarantee the cost of repairs up front. Diagnostic programs such as S•O•S oil analysis and technical analysis help avoid unscheduled repairs.

**Replacement.** Repair, rebuild or replace? Cat Dealers can help evaluate the cost involved so the right choice can be made.

**Product support.** Cat Dealers utilize a worldwide computer network to find in-stock parts to minimize machine down time. Save money with remanufactured parts. Receive the same warranty and reliability as new products at cost savings of 40 to 70 percent.

# Engine

Four-stroke cycle, six-cylinder 3126 Turbocharged Diesel Engine.

## Ratings\*

	kW	hp
Flywheel		
@ 2,200 rpm	149	200
Maximum flywheel		
@ 1,950 rpm	154	207

The following ratings apply at 2,200 rpm when tested under the specified standard conditions for the specified standard:

Flywheel power	kW	hp	PS
Caterpillar	149	200	—
ISO 9249	149	200	—
SAE J1349	149	200	—
EEC 80/1269	149	200	—
DIN 70020	—	—	208

Maximum torque (net) @ 1,400 rpm	917 N•m	674 lb-ft
Total torque rise		41.2%

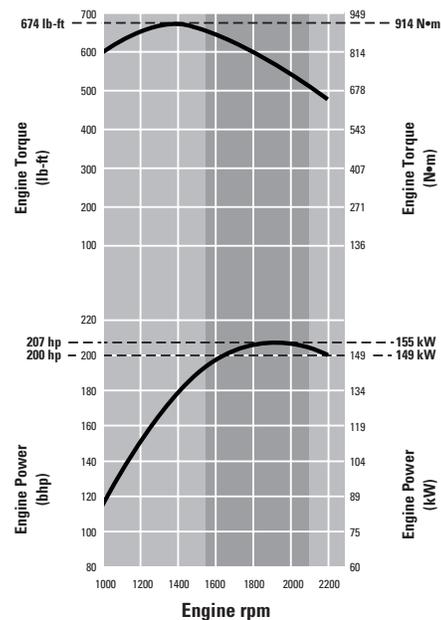
## Dimensions

Bore	110 mm	4.3 in
Stroke	127 mm	5.0 in
Displacement	7.2 liters	439 in <sup>3</sup>

## Exhaust emissions

The 3126 meets the following emissions requirements:

- EU
- US EPA
- Japan MOC



## \*Power rating conditions

- based on standard air conditions of 25° C (77° F) and 99 kPa (29.32 in Hg) dry barometer
- used 35° API gravity fuel having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 30° C (86° F) [ref. a fuel density of 838.9 g/L (7.001 lb/U.S. gal)]
- flywheel power advertised is the power available when the engine is equipped with hydraulic fan drive, alternator, air cleaner, and muffler
- no derating required up to 2300 m (7,500 ft) altitude

## Features

- direct-injection fuel system with individual adjustment-free unit injectors for cylinders
- water jacket aftercooled
- aluminum-alloy skirt and steel crown, 3-ring, 2-piece articulated pistons, cam-ground, tapered and cooled by oil spray
- Chrome Ceramic Surface (CCS) ring package, designed for high load/high temperature application
- induction-hardened, forged crankshaft
- uniflow cylinder head design with two alloy-steel valves per cylinder
- deep-skirted cast cylinder block
- tapered connecting rods
- oscillating roller-followers
- direct-electric 24-volt starting and charging system with two 12-volt, 950 CCA Caterpillar maintenance-free batteries, heavy-duty starter and a 70-amp alternator

## High Torque Rise

The unit-injected fuel system delivers a controlled increase of fuel as the engine lugs back from rated speed. This results in horsepower greater than rated power. The combination of increased torque rise and maximum horsepower improves response, provides greater rimpull, more lift force and faster cycle times. The 154 kW (207 hp) maximum flywheel power occurs at 1,950 rpm when power is needed during the working cycle.

# Transmission

Planetary power shift transmission with automatic shift capability has four speeds forward and four reverse.

## Maximum travel speeds (standard 23.5-R25 XHA L-3 tires)

		km/h	mph
Forward	1	6.9	4.3
	2	12.7	7.9
	3	22.3	13.9
	4	37.0	23.0
Reverse	1	7.6	4.7
	2	13.9	8.7
	3	24.5	15.3
	4	40.5	25.3

## Features

- single control for both speed and direction
- separate control to lock in neutral
- single-stage, single-phase torque converter
- automatic shift capability
- F-37 high energy friction material provides extended clutch life
- externally mounted controls with quick disconnects for easy diagnostic checks
- high contact ratio gears are precision ground for quieter operation
- quick gear kickdown button included with Conventional steering
- Electronic Clutch Pressure Control (ECPC) modulates clutch engagement
- transmission can be recalibrated using Electronic Technician (ET) service tool

# Loader Hydraulic System

Open-centered, interrupted series system with full-flow filtering. System is completely sealed.

## Implement system, vane-type pump

Output at 2,200 rpm and 6900 kPa (1,000 psi) with SAE 10W oil at 66° C (150° F)	292 liters/min	77.2 gpm
Relief valve setting	20 700 kPa	3,000 psi
Cylinders, double acting: lift, bore and stroke	152.4 x 800 mm	6.0 x 31.5"
Two cylinder, double acting: tilt, bore and stroke	177.8 x 540 mm	5.25 x 21.25"

## Pilot system, vane-type pump

Output at 2,200 rpm and 6900 kPa (1,000 psi) with SAE 10W oil at 66° C (150° F)	34 liters/min	9.0 gpm
Working pressure	2600 kPa	375 psi

## Hydraulic cycle time

	seconds
Raise	6.1
Dump	2.1
Lower, empty, float down	2.8
Total	11.0

## Features

- completely enclosed system
- low effort, pilot-operated controls with Conventional steering
- full-flow filtering
- reusable couplings with O-ring face seals
- pilot shutoff valve on Conventional steering
- tilt-out hydraulic oil cooler is standard
- Caterpillar XT hoses
- pressure taps
- Automatic Ride Control System is available

## Axles

Fixed front, oscillating rear ( $\pm 13^\circ$ ).

### Features

- maximum single-wheel rise and fall: 470 mm (19")
- differentials, enclosed brakes and final drives included
- conventional differentials are standard; limited slip differentials are available
- corrosion-resistant alloy steel
- bronze sleeve bearings in the planet gears; bronze spherical thrust washers on differential pinions
- Patented Duo-Cone Seals between axle shaft and housing
- threaded nuts to set bearing pre-load
- uses SAE 30W (oil change interval: 2,000 hours or one year)

## Brakes

Meet the following standards: OSHA, SAE J1473 OCT90, ISO 3450-1996.

### Service brake features

- full-hydraulic actuated, oil-disc brakes
- completely enclosed and sealed
- self adjusting; modulated engagement
- separate circuits for front and rear axles
- dual pedal braking system
- left pedal functions as brake or brake/neutralizer

### Parking brake features

- spring applied, hydraulically actuated, dry drum
- mounted on transmission output

## Final Drives

Planetary final drives consist of ring gears and planetary carrier assemblies.

### Features

- ring gears are pressed in and doweled to axle housings
- carrier assemblies include:
  - planet gears with full-floating bronze sleeve bearings
  - planet shafts
  - retaining pins
  - bearings
  - sun gear shafts
  - planetary carriers

## Tires

Tubeless, nylon, loader-design tires.

- 23.5-25 16 PR (L-2)
- 23.5-25 16 PR (L-3)
- 23.5-R25 XHA (L-3) standard
- 23.5-R25 XTLA (L-2) steel radial
- 23.5-R25 GP-2B (L-2/3) steel radial
- 625/70-R25 (L-3) low profile

**NOTE:** In certain applications (such as load-and-carry work) the loader's productive capabilities might exceed the tires' tonnes-km/h (ton-mph) capabilities. Caterpillar recommends that a tire supplier be consulted to evaluate all conditions before selecting a tire model.

Using low profile tires will affect the following specs:

Width over tires	- 5 mm	-0.1 "
Ground clearance	-70 mm	-2.7 "
Vertical bucket dimension	-70 mm	-2.7 "
Dig depth	+70 mm	+2.7 "
Reach	+70 mm	+2.7 "
Operating weight	-194 kg	-420 lb
Straight tip load	-130 kg	-280 lb
Full turn static tip load	-116 kg	-250 lb
Run out speeds	-7 %	
Rimpull	+9 %	
Departure angle	-3 %	

## Steering

Full hydraulic power steering. Meets SAE J1511 FEB94 and ISO 5010:1992

### Ratings

Minimum turning radius (over tire)	6025 mm (19' 9")
Steering angle, each direction	40°
Hydraulic output at 2,280 rpm and 7000 kPa (1,015 psi)	160 liters/min (42.3 gpm)
Relief valve setting	19 980 kPa (2,897 psi)

### Features

- center-point frame articulation
- load sensing hydraulic steering pump
- front and rear wheels track
- flow-amplified, closed-center, pressure-compensated system
- steering wheel-operated, hand metering unit controls flow to steering cylinders
- full-flow filtering
- adjustable steering column

## Cab

Caterpillar cab and Rollover Protective Structure (ROPS) are standard in North America, Europe and Japan.

### Features

- meets OSHA and MSHA limits for operator and sound exposure with doors and windows closed (according to ANSI/SAE J1166 MAY90)
- ROPS meets the following criteria:
  - SAE J394
  - SAE 1040 APR88
  - ISO 3471-1:1986
  - ISO 3471:1994
- also meets the following criteria for Falling Objects Protective Structure:
  - SAE J231 JAN81
  - ISO 3449:1992 LEVEL II

**NOTE:** When properly installed and maintained, the cab offered by Caterpillar when tested with doors and windows closed according to ANSI/SAE J1166 MAY90, meets OSHA and MSHA requirements for operator sound exposure limits in effect at time of manufacture. The operator sound pressure level is 75 dB(A) when measured per ISO 6396 or 86/662/EEC.

## Bucket Controls

Pilot-operated lift and tilt circuits.

### Lift circuit features

- four positions: raise, hold, lower and float
- mechanically adjustable lift height with automatic kickout

### Tilt circuit features

- three positions: tilt back, hold and dump
- two mechanically adjustable kickouts for return-to-dig bucket positioner and return-to-level position for a set of forks

### Controls

- three lever control (standard)
- wobble stick (optional) combines lift and tilt controls plus lever for third function

## Service Refill Capacities

	Liters	Gallons
Fuel tank (dry fill)	295	78
Cooling system	49	12.9
Crankcase	30	7.9
Transmission	34	9.0
Differentials and final drives		
Front	36	9.5
Rear	36	9.5
Hydraulic system (including tank)	153	40.4
Hydraulic tank	88	23.2

# Operating Specifications

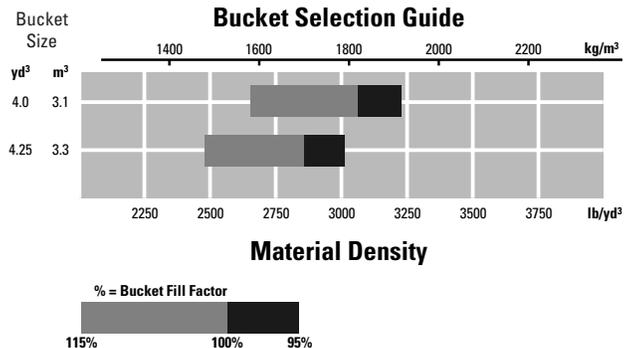
		Material Handling bucket	
		Bolt-on Edge	Bolt-on Edge
Rated bucket capacity	m <sup>3</sup>	3.1	3.3
	yd <sup>3</sup>	4.0	4.25
Struck capacity	m <sup>3</sup>	2.5	2.6
	yd <sup>3</sup>	3.3	3.4
Width	mm	2925	2925
	ft/in	9' 7"	9' 7"
Dump clearance at full lift and 45° discharge**	mm	2840	2810
	ft/in	9' 4"	9' 3"
Reach at full lift and 45° discharge**	mm	1240	1275
	ft/in	4' 1"	4' 2"
Reach at 45° discharge and 2130 mm (7 ft 0 in) clearance	mm	1770	1780
	ft/in	5' 10"	5' 10"
Reach with lift arms horizontal and bucket level	mm	2775	2820
	ft/in	9' 1"	9' 3"
Digging depth	mm	90	90
	in	3.5"	3.5"
Overall length**	mm	8265	8310
	ft/in	27' 1"	27' 3"
Overall height with bucket at full raise	mm	5435	5485
	ft/in	17' 10"	18' 0"
Loader clearance circle with bucket in carry position	m	13 385	13 410
	ft/in	43' 11"	44' 0"
Static tipping load straight*	kg	13 014	12 961
	lb	28,690	28,580
Static tipping load full 40° turn*	kg	11 288	11 226
	lb	24,890	24,750
Breakout force***	kN	130.3	125.5
	lb	29,280	28,210
Operating weight*	kg	18 284	18 314
	lb	40,310	40,380

Specifications and ratings conform to all applicable standards recommended by the Society of Automotive Engineers. SAE Standards J732c govern loader ratings and are denoted in the text by (§).

\* Dimensions are measured to the tip of the bucket teeth to provide accurate clearance data. SAE Standards specifies the cutting edge.

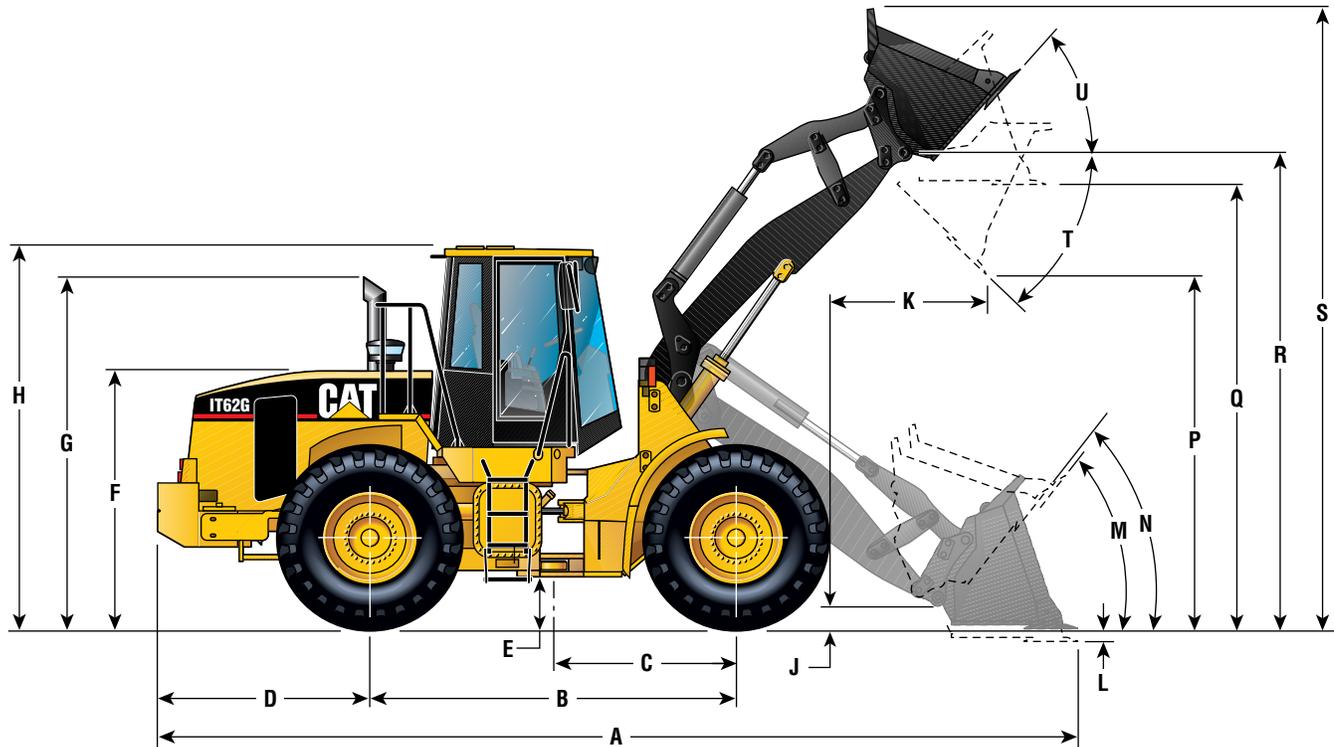
\*\* Static tipping load and operating weight shown are based on standard machine configuration with 23.5-R25 XHA (L-3) tires, air conditioning, crank case guard, power train guard, full fuel tank, lubricants and operator.

\*\*\* Measured 102 mm (4.0"); behind tip of cutting edge with bucket hinge pin as pivot point in accordance with SAE J732c.



# Dimensions – Material Handling Bucket

All dimensions are approximate.



<b>A</b>	8265 mm	27' 1"	<b>H</b>	3375 mm	11' 1"	<b>P</b>	2840 mm	9' 4"
<b>B</b>	3350 mm	11' 0"	<b>J</b>	275 mm	11"	<b>Q</b>	3740 mm	12' 3"
<b>C</b>	1675 mm	5' 6"	<b>K</b>	1240 mm	4' 1"	<b>R</b>	4105 mm	13' 6"
<b>D</b>	1940 mm	6' 4"	<b>L</b>	90 mm	3' 7"	<b>S</b>	5435 mm	17' 10"
<b>E</b>	400 mm	1' 4"	<b>M</b>	44°	<b>T</b>	45°		
<b>F</b>	2255 mm	7' 5"	<b>N</b>	50°	<b>U</b>	58°		
<b>G</b>	3225 mm	10' 7"						

**NOTE:** Dimensions listed are for machines equipped with 23.5-R25 XHA (L-3) tires, 4.0 yd<sup>3</sup> MH bucket.  
\*See Operating Specifications on page 19.

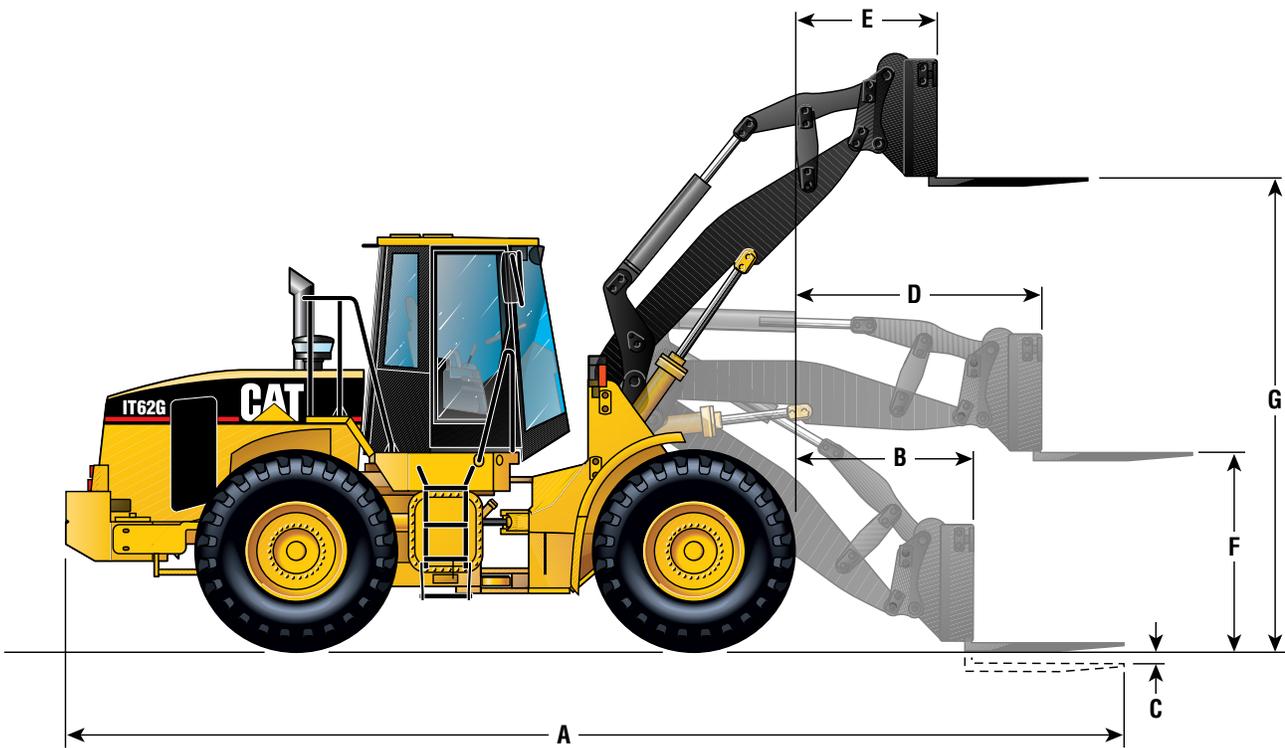
## Supplemental Specifications

	Width over tires		Ground clearance		Change in vertical dimensions		Change in operating weight		Change in articulated static tipping load	
	mm	inches	mm	inches	mm	inches	kg	lb	mm	inches
23.5-25 16 PR (L-2)	2760	109	380	15	-20	-0.8	-408	-900	-300	-660
23.5-25 16 PR (L-3)	2810	111	360	14	-40	-1.7	-300	-660	-221	-480
23.5-R25 XHA (L-3) standard	2890	114	400	16	—	—	—	—	—	—
23.5-R25 XTLA (L-2) steel radial	2890	114	340	13	-60	-2.4	-100	-220	-63	-130
23.5-R25 GP-2B (L-2/3) steel radial	2750	108	380	15	-20	-0.9	-76	-160	-60	-130

**NOTE:** Tire options include tires and rims.

## Dimensions – Pallet Fork

All dimensions are approximate.



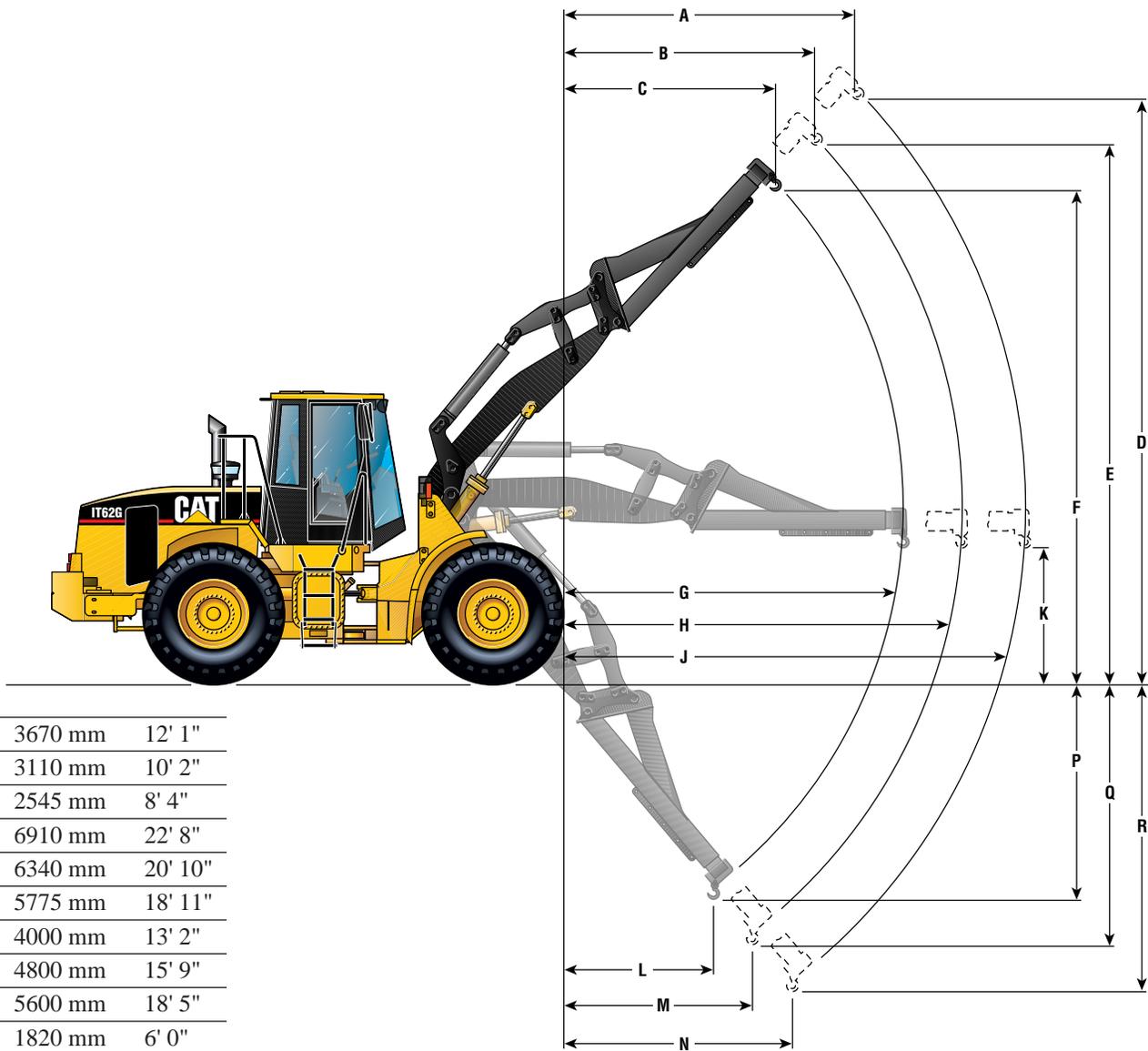
<b>A</b>	8755 mm	28' 9"	<b>E</b>	1115 mm	3' 8"
<b>B</b>	1445 mm	4' 9"	<b>F</b>	1740 mm	5' 8"
<b>C</b>	50 mm	2.0"	<b>G</b>	3790 mm	12' 5"
<b>D</b>	1975 mm	6' 6"			

Fork tine length	1220 mm	48"
Reach with arms horizontal and forks level	3195 mm	10' 6"
Static tipping load with arms and forks level, and 610 mm (24") load center*		
Straight	8928 kg	19,680 lb
Full 40° turn	7753 kg	17,090 lb
Operating weight	17 663 kg	38,940 lb

**NOTE:** Dimensions, static tipping load and operating weight are based on standard machine configuration with \*23.5-R25 XHA (L-3) Michelin tires (728 mm static tire radius) full fuel tank, coolant, lubricants and operator. Machine stability and operating weight are affected by tire size and other attachments.

# Dimensions – Material Handling Arm

All dimensions are approximate.



<b>A</b>	3670 mm	12' 1"
<b>B</b>	3110 mm	10' 2"
<b>C</b>	2545 mm	8' 4"
<b>D</b>	6910 mm	22' 8"
<b>E</b>	6340 mm	20' 10"
<b>F</b>	5775 mm	18' 11"
<b>G</b>	4000 mm	13' 2"
<b>H</b>	4800 mm	15' 9"
<b>J</b>	5600 mm	18' 5"
<b>K</b>	1820 mm	6' 0"
<b>L</b>	2720 mm	8' 11"
<b>M</b>	3355 mm	11' 0"
<b>N</b>	3990 mm	13' 1"
<b>P</b>	1485 mm	4' 10"
<b>Q</b>	1970 mm	6' 6"
<b>R</b>	2460 mm	8' 1"

Handling arm position	Retracted (U)		Mid-position (V)		Extended (W)	
	kg	lb	kg	lb	kg	lb
Operating load 40° articulation	3085	6,800	2626	5,790	2288	5,040
Static tipping load						
Straight	7059	15,560	6017	13,260	5240	11,550
Full 40° turn	6170	13,600	5251	11,570	4576	10,090
Operating weight	17 506	38,600	17 506	38,600	17 506	38,600

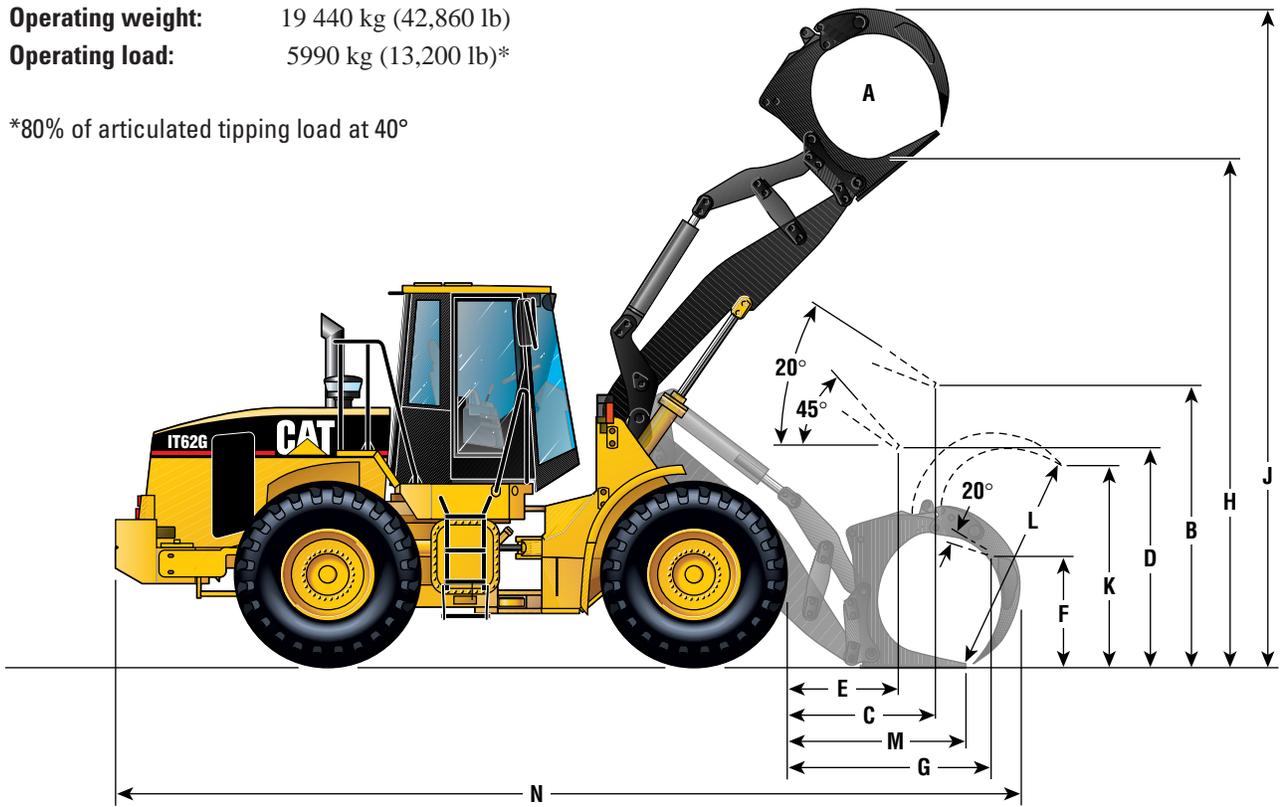
**NOTE:** Dimensions, static tipping load and operating weight are based on standard machine configuration with 23.5-R25 XHA (L-3) Michelin tires, full fuel tank, coolant, lubricants, and operator. Machine stability and operating weight are affected by tire size, tire ballast and other attachments.

# Dimensions – Unloading Grapple with Kickout

All dimensions are approximate.

**Operating weight:** 19 440 kg (42,860 lb)  
**Operating load:** 5990 kg (13,200 lb)\*

\*80% of articulated tipping load at 40°



<b>A</b>	2.4 m <sup>2</sup>	25.8 ft <sup>2</sup>	<b>F</b>	1500 mm	4' 11"	<b>K</b>	2570 mm	8' 5"
<b>B</b>	3550 mm	11' 8"	<b>G</b>	2955 mm	9' 8"	<b>L</b>	2820 mm	9' 3"
<b>C</b>	2105 mm	6' 11"	<b>H</b>	4450 mm	14' 7"	<b>M</b>	2485 mm	8' 2"
<b>D</b>	2955 mm	9' 8"	<b>J</b>	6530 mm	21' 5"	<b>N</b>	9235 mm	30' 4"
<b>E</b>	1730 mm	5' 8"						

**NOTE:** Dimensions, operating load and operating weight are based on standard machine configuration with 23.5-R25 XHA (L-3) Michelin tires, full fuel tank, coolant, lubricants, and operator. Machine stability and operating weight are affected by tire size, tire ballast and other attachments.

# Standard Equipment

Standard equipment may vary. Consult a Caterpillar Dealer for specifics.

## Electrical

Alternator, 70-amp  
Backup alarm  
Batteries, two 12-volt, maintenance free  
Electric starter, heavy-duty  
Ignition key; start/stop switch  
Main disconnect switch  
Six Halogen road/working lights  
Voltage converter, 12-volt, 5-amp

## Operator Environment

Adjustable steering column  
Cigar lighter and ashtray  
Computerized Monitoring System  
Gauges:  
Engine coolant temperature  
Fuel level  
Gear range indicator, digital  
Hydraulic oil temperature  
Speedometer and tachometer  
Transmission oil temperature  
Warning indicators:  
Air intake heater  
Charging system  
Engine oil pressure  
Hydraulic filter bypass  
Hydraulic oil level  
Parking brake  
Primary steering oil pressure  
Service brake oil pressure  
Secondary steering oil pressure  
Dome light, cab  
Heater and defroster  
Horn, electric (steering wheel mounted)

Radio-ready cab for entertainment, includes 5A converter  
Rearview mirrors, inside mounted  
Retractable seat belt, 76 mm (3") wide  
ROPS sound-suppressed, pressurized cab  
Storage:  
Coat hook, cup and thermos holders  
Wet-arm wiper/washers, front and rear, intermittent front wiper

## Power Train

Automatic planetary power shift transmission  
Auto/manual transmission switch  
Electronic clutch pressure control  
Fully automatic speed range control  
Transmission neutralizer on/off switch  
Cat 3126T Diesel Engine  
Air inlet heater  
Direct electric starting system, 24-volt  
Engine air intake precleaner  
Fuel prefilter and water separator  
Fuel priming aid  
Fuel series, two filters, two microns  
Radial seal air filters, primary and secondary  
Turbocharged, waste-gate valve, jacket water aftercooler  
Full-hydraulic, enclosed, wet-disc brakes  
Hydraulic-driven radiator cooling fan  
Multi-row modular radiator

## Other Standard Equipment

8-bar parallel lift linkage  
Adjustable return-to-work kickouts, two  
Automatic lift kickout  
Counterweight with drawbar hitch and pin  
Fenders, front and rear  
Hydraulic oil cooler  
Locking engine enclosures  
Non-metallic, one-piece tilting hood  
Oil sampling valves for engine, transmission, and hydraulic system  
Quick coupler, hydraulic actuated  
Sight gauges:  
Coolant level, hydraulic tank level, transmission level, air cleaner  
Vandalism protection caplocks

## Hydraulics

3rd valve  
Automatic bucket positioner, adjustable  
Caterpillar O-ring face seal couplings  
Caterpillar XT hoses  
Diverter valve  
Hydraulic control of 3rd valve flow to be switched from the quick coupler rods to attachments  
Hydraulic diagnostics connectors, pressure taps  
Load sensing hydraulic steering  
Pilot hydraulic controls

## Antifreeze

Long life coolant -30° C (-20° F)

## Optional Equipment

With approximate changes in operating weights. Optional equipment may vary. Consult a Caterpillar Dealer for specifics.

	kg	lb		kg	lb
Air conditioning	47	104	Light, warning (rotating beacon)	4	9
Attachments and buckets	see pages 12 and 13		Lighting group, four exterior	5.5	12
Axle oil cooler	276	608	Limited Slip Differentials (front and/or rear)	16	35
Caterpillar Contour Series seat with air suspension –	32	71	No SPIN Differential (rear axle only)	0	0
Cooling, high ambient	4	9	Payload Control System	16	35
Ecology drain, axle	—	—	Radio, AM/FM	3.2	7
Ether aid	1	2	Ride Control System	89	196
External mirrors	15.5	34	ROPS canopy	-208	-458
Fender extensions, mud (front and rear)	43	95	Starting receptacle, emergency	3.2	7
Guard			Steering, secondary	47	104
Crankcase	73	161	Sun visor	2.3	5
Power train	65	143	Tool kit	—	—
Heater, engine coolant 110-volt, 220-volt	.5	1	Turn signals	2	4
Hydraulic arrangement			Window group, sliding	2.5	5
Fourth valve	—	—			

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## Notes

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## Notes

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# IT62G Integrated Toolcarrier

AEHQ5313 (12-98)

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