E-series

Wheeled Loading Shovels

L1204E | L1506E | L1706E | L1806E | L2106E | L2606E

JOHN DEERE

FREEPHONE 0800 915 7700
sales@bellequipment.co.uk

BELL

Strategic alliance

Bell's Wheeled Loading Shovels are designed and manufactured by John Deere in the USA to our exacting standards. The Wheeled Loader range offers the highest standard specification available in the market place so you can put them straight to work without the extra expense and time to retrofit systems like reverse fan, ride control, auxiliary hydraulics and health and safety items required on most sites in the UK.

Established in 1999, Bell Equipment Ltd's strategic alliance with John Deere Construction & Forestry has grown to include back-to-back manufacturing and distribution licences. The relationship has also expanded to a proud alliance with regards to technology sharing, manufacture licensing, logistical support and human capital development.

		L1204E	L1506E	L1706E	L1806E	L2106E	L2606E
Rated power	kW (hp)	95 (128)	125 (167)	139 (186)	173 (232)	197 (264)	227 (304)
Bucket capacity	m^3	2.2	2.6	3.2	3.6	3.8	4.7
Tipping load 40° turn	kg	7920	9360	11495	12632	13851	16920
Operating weight	kg	11207	13493	16258	18847	19676	24893

In-built strength

Customers look for components that ensure uptime and low daily operating costs. Running a Bell loader ensures both these with long proven, strong and durable components.

The front chassis features a four plate loader tower, the plates extend from the axle housing to the loader boom pivots, providing a strong, solid base for the loader arm pivot. Lift ram hoses run inside the tower so are provided protection from site debris.

Heavy duty Z-bar loader geometry has strong bucket break-out forces, and few moving parts for easy maintenance and low cost-per-hour figures.

Bell Wheeled Loaders have a low centre of gravity, optimised fore – aft balance for impressive stability and excellent full turn tipping loads. The **standard** ride control system further enhances lateral stability for handling heavy loads when working on rough terrain. Ride control allows faster, safer travel across site whilst maximising material retention in the bucket for maximum production output.

The articulation joint is wide spaced to provide strength and even distribution of loads through the chassis. Both top and bottom pivots have double-tapered roller bearings for durability. Chassis plates in this area are typically heavy to resist loading forces whilst careful hose and electrical routings through the joint are easy to access and service.

Under chassis protection is **standard** on Bell Loaders and both front and rear chassis are fitted with belly plates to protect the high value components from site debris.

PowerTech high pressure common rail engine is renowned for its delivery of high power and high torque. The John Deere engines in these loaders use individually replaceable wet sleeve cylinder liners. The wet sleeve design is more wear resistant and provides better cooling than cast-in-block engines. Wet sleeve liners dissipate engine heat evenly, eliminating hot spots, providing longer life and less downtime. Another benefit to the wet sleeve cylinder liner is the serviceability of the engine. Each cylinder liner can be replaced individually making rebuilds faster, easier, and less costly than rebuilds for cast-in-block engines.

Operators immediately notice the smoothness of shifts through all gears. Smooth shifting is a definite advantage of Bell loaders for operator comfort and maximum traction for high productivity. The ZF Powershift transmission with torque converter is located just inside the articulation area. The transmission provides 4-speeds forward and 3-speeds in reverse. The operator can select either manual, fully or semi-automatic gear changes to suit on site conditions, providing a smooth ride for the operator whilst boosting productivity and cycle times.

John Deere Teammate axles contain inboard planetary final drives and wet disc brakes. Front and rear axle coolers are **standard** on all Bell Loaders, this maintains brake efficiency and axle oil integrity especially for machines working around the clock or in load and carry applications.

All machines have rear axles with conventional differentials and front axles with hydraulic locking differentials as **standard**. The front differential lock is activated via a floor button and to prevent abuse and tyre wear deactivates when the button is released.

The park brake is a multiple wet disc design - spring applied and hydraulically released. The park brake automatically applies when the ignition is OFF, the park brake switch is ON or the engine stops. As it is fully oil immersed it provides a perfect solution for waste sites preventing fire risk from a build of flammable debris around dry disc and calipers commonly used on other marques.

Heavy dust and airborne debris create extra maintenance. The hydraulic-driven, automatically reversing cooling fan as **standard** back-blows the cooling system every 20, 30 or 40 minutes (selectable to site conditions) to expel debris from the pre filter screens and radiator cooling fins. The fan will slow, reverse its direction and blow at full speed for 30 seconds before returning to normal operation.

The Quad-Cool system is a heavy-duty package, designed specifically for construction equipment. The system is **standard** on all models and contains a transmission cooler, front and rear axle coolers, radiator, air-to-air cooler, hydraulic oil cooler and air conditioning condenser. Each radiator is separate so there are no stacked cores, no debris accumulation and no overheating.

Nothing beats the Bell Quad cool system in dusty environments.

Operators can access both faces of every radiator so they are easy to clean. Large air intake areas mean the required volume of cooling air can be achieved with the fan running slowly. The system is less likely to suck in debris and as each intake is protected as **standard** with 3mm mesh screens, large debris is automatically kept clear of the radiators. All Bell Loaders have wide core radiators as **standard**, so any fine dust passes straight through the radiators without blockage and larger debris is ejected from the screens each time the fan reverses.

Operator station

Bell's solid-state electrical system with a centralised Sealed Switch Module and Canbus reduces wires and connections ensuring the system integrity. An added benefit of reducing the size and number of electrical harnesses is the reduction in number and size of the cosmetic trim panels that cover the installations. This significantly improves visibility through larger, uncluttered window apertures.

The Advanced Display Unit digitally displays real time operational information and incorporates the colour screen display for the **standard** reverse camera and load information from the **standard** Embedded Payload System (EPS). Fitted next to the display unit is the audible and visual warning device of the **standard** reverse radar system.

In addition to the reverse camera and radar systems, all machines are fitted as **standard** with twin blue strobe reverse lights, flat and convex exterior mirrors and red and white rear bodywork chevrons to meet Health and Safety requirements. Optional extras include a reverse radar system with automatic brake application.

The **standard** Embedded Payload System weighs each bucket load maximising production when needed.
Automatic or manual bucket load addition can be used, and a unique tip off function means accurate and precise loading.

For extremely dusty environments the **standard** powered cab air pre-cleaner minimises debris ingestion into the cab. The pre-cleaner operates whenever the heater / air conditioning blower runs and improves operator comfort due to a cleaner cab air. The pre-cleaner filters out larger particle debris to extend in-cab air filter life and cleaning intervals.

All machines feature a comfortable deluxe heated, air suspension seat to ensure driver comfort and productivity. Air conditioning, CD player and sound suppression are fitted as **standard**. The ease of operation, comfort and user friendly instruments make for an all round better working environment.

Hydraulic controls are multi-lever (joystick type available as an option) and incorporate a transmission kick down button. The controls are mounted to the seat console so float with the seat suspension for added control and comfort.

Automatic bucket levelling and automatic boom down to pre-determined kick out setting are fitted as **standard** to increase overall operating speed and maximise production output.

A convenient 12 volt socket port powers phones and other electrical devices.

The Sealed Switch Module (SSM) incorporates the key less start security system as **standard**. A numeric pass code activates the ignition allowing the operator to start the machine. The machine owner has the master code and up to 10 operator pass codes can be set. The pass code is punched in using the SSM module and prevents unauthorised operation by non-trained operators.

Key less start with security pass code and Cesar registration is **standard** on all Bell machines to increase plant security and reduce plant insurance policies.


OWNER PIN
ENTER CURRENT OWNER PIN
THEN PRESS
↵
"BACK" TO EXIT WITHOUT CHANGE

Operating costs

Without doubt the **Quad cool** system fitted as **standard** to the wheeled loader range is the **best system available** – no other system can compete when working in areas with dusty environments.

Quad-Cool provides more uptime and less operating costs as cooling efficiency is always maintained. The cooling fan speed is temperature dependant minimizing engine drain so saves fuel and energy as it only turns when it needs to, this also gives fast warm-up times. Cooling air is pre-filtered through a 3mm mesh over all cooling air intakes preventing large debris from being sucked in to the radiators.

Huge air intakes and huge radiator surface areas mean the volume of cooling air required is achieved with low air speed through the radiators. A slower turning fan generates less noise and minimises the amount of debris sucked towards the pre-filtering radiator screens.

All the Quad cool systems are equipped with wide core radiators and automatically reversing cooling fans so any dust is easily ejected when the fan reverses. Single faced radiators offer a clear path for cooling air so remain free of debris even in extremely dusty applications.

Low daily and periodic maintenance costs and operator safety are important to customers. Bell loaders have a distinct advantage over competitors as daily maintenance checks and re-fueling are at ground level. Panels open easily from the ground, giving wide access to the engine dipstick and easy visual check for hydraulic reservoir, coolant, and windshield washer levels. Bell's **standard** cyclonic engine pre-cleaner removes 98% of air borne dust extending the life of the standard air cleaner and improving engine protection. Access to the air cleaner elements and un-loader valve is also easily reached from ground level.

The hydraulic oil filter has a service interval of 4,000 hours to reduce operating costs. For efficient use of engine power all Bell Wheeled Loaders use a variable displacement axial piston pump in a closed centre, load sensing hydraulic system.

Two 12-volt batteries develop 24 volts for the complete machine. The lockable battery box also has a master disconnect switch for anti-theft and technician use. As **standard** this box can be TAG locked for complete safety during machine maintenance.

Solid state electrics and canbus means higher reliability and improved on-board machine condition monitoring. Inside the cab, machine functions are selected via a Sealed Switch Module that protects the switches from moisture and debris. The sealed switches have a much higher cycle life than standard rocker switches increasing electrical integrity and uptime. The Sealed Switch Module has grouped all major operational functions meaning more cab space and visibility.

All electrical connections have sealed plugs and have additional caulking as **standard** to prevent ingress of moisture to ensure system integrity. An in cab load centre simplifies fuse replacement. Fewer relays, connectors and harnesses mean higher reliability.

Auto engine idle and engine shutdown are **standard** features on all Bell loaders. These systems can be set to reduce the engine idle during non productive periods and further more can then shut down the engine over a designated period, making the machine safe, reduces fuel consumption, noise, and excessive wear on the engine, transmission and hydraulics.

John Deere Power tech engines feature wet sleeve liners to dissipate engine heat evenly eliminating hot spots to provide longer life and less downtime.

To reduce tyre spin and increase tyre life, all Bell Wheeled Loading Shovels have as **standard** a traction control system and hydraulically locking front axle differential. The traction control system adjusts the engine torque and wheel rim pull through the driveline to reduce wheel spin on all 4 wheels in slippery conditions. To enhance machine traction further a floor mounted button allows the operator to lock the front axle differential. To prevent abuse the lock disengages once the button is released.

Build your machine to suit the application

General Options

The highest standard specification of any Wheeled Loading Shovel can be further enhanced to meet the demands and rigours of your job site. Bell offers numerous packages to increase production, efficiencies and safety to a new level.

All models are available with optional high lift loader frames to suit truck or hopper heights. The machine maintains bucket break-out forces and good stability through careful selection of suitable attachments.

Bell provide industry leading buckets and attachments, whether pin mounted or quick hitch mounted, General Purpose Bucket, High Tip Bucket, Grapple, Clamp or Forks our bucket designers can individually design a specific solution to your application needs.

All machines have as standard L3 Michelin radial tyres but Bell can offer a wide range of pneumatic, solid or foam filled tyres to lower costs, maximise tyre life and increase production output.

An automatic greasing system lubricates all the various greasing points when they need lubricating ie whenever the machine is operating. A regular supply of fresh grease not only lubricates pivots but pushes dirt away from the pin and bush extending their life.

Waste and recycling

Cab screen guard protects the operator from items that fall over the back of the bucket when the arms are raised

Articulation guards help keep material out of the front and rear chassis

Insulated exhaust manifold, turbo charger and silencer reduces the surface temperature below the ignition point of laying dust

Lift ram and chassis cavity guards protect hose connections on the rams and keep the chassis area under the rams free from debris

Bucket ram guard protects the hoses to the bucket ram

Axle seal guards protect against banding that might otherwise cut the axle seal

Head and tail light guards protect the lenses from site damage

Automatic fire suppression system activates extinguishers in the case of under bonnet fire

All models are available with optional high lift loader frames to suit truck or hopper heights

Port and bulk storage applications

Optional seat belt activation system features a cab roof mounted strobe light to ensure operators use the seat belt at all times.

For heavy duty applications the machines are available Michelin L5 XLDD2A tyres to improve machine stability (other marques are available)

All models are available with optional high lift loader frames to suit truck or hopper heights

Hydraulic quickhitches offer operational flexibility to match the attachment to suit the material being handled, the operator can quickly swap from bucket to pallet forks to pusher blades

Automatic fire suppression system activates extinguishers in the case of under bonnet fire

Insulated exhaust manifold, turbo charger and silencer reduces the surface temperature below the ignition point of laying dust

Build your machine to suit the application

Agricultural applications

A wide range of purpose designed agricultural attachments can be fitted to the hydraulic quickhitch.

4th line auxiliary hydraulics are available for attachments with multiple hydraulic actuators.

Self cleaning, heavy duty agricultural tyres are available to suit the application.

Corrosive environments

The complete machine is sprayed with a hard, heat resistant clear coating, to resist attack from acidic and alkaline materials, protecting the machines paintwork.

Underside of cab access platforms, rear fenders, brake pipes, hose ends, zinc plated items and mechanical fasteners are applied with a thixotropic corrosion protection. The material used is commonly employed to protect the chassis of highway salt spreading trucks.

Latches and hinges are sprayed with cavity wax to protect against corrosion

Radiators, heater and air conditioning matrixes are epoxy coated.

Plastic caps on hydraulic oil and fuel tanks prevent seizure and the keyless start eliminates corrosion associated with copper components in the ignition switches on other marques.

Solid state in cab switch-gear totally seals switches for electrical reliability

Marinised alternators extend component life in corrosive environments

Timber and Biomass

Lift ram and chassis cavity guards protect hose connections on the rams and keep the chassis area under the rams free from debris

Insulated exhaust manifold, turbo charger and silencer ensuring lower surface temperature than the ignition point of laying dust

All models are available with optional high lift loader frames to suit truck or hopper heights

Class leading buckets are available with pin or quickhitch mounting systems for flexibility

To add extra protection in dusty environments an optional automatic fire suppression system activate extinguishers in the case of under bonnet fire

Quarry applications

Optional seat belt activation system features a cab roof mounted strobe light to ensure operators use the seat belt at all times

In lieu of the standard reverse radar system Bell offer a radar with automatic braking when an object is detected

For heavy duty quarry applications the machines are available Michelin L5 XLDD2A tyres (other marques are available)

In quarries or batching plant application where dust and water combine into a grinding paste Bell would advise the fitting of an automatic greasing system to protect pins and bushes from wear.

Class leading buckets and wear parts can be selected to suit your application and materials.

Coal rehandling applications

Optional seat belt activation system features a cab roof mounted strobe light to ensure operators use the seat belt at all times

For heavy duty applications the machines are available Michelin L5 XLDD2A tyres (other marques are available)

Class leading coal buckets, high tip coal buckets and wear parts can be selected to suit your application and materials

Bell Assure

Bell have always recognised the high importance of customer service and for many years has been the industry benchmark for customer support. Our 360-degree package of service provisions that a plant operator could need to add value to their business is called Bell Assure.

Bell Assure is designed to highlight the services and support provided by Bell that go beyond the manufacture and supply of our machines to give full product support. From flexible financing, service and repair & maintenance contracts, to used equipment, parts and plant security we have drawn them to together as a single product to retaining our industry leading after sales tools and support.

To keep your machine running, we are committed to sustaining the best parts availability at the best price in the marketplace. Bell Assure provides over 6500 stocked line items, parts service is available 24 hours a day, 365 days a year with dedicated phone lines, email addresses and staff contact points available. Bell Equipment monitors the same day parts availability with a targeted minimum of 90%. In addition to our stock of new parts we also stock a wide range of remanufactured parts offering “as new” components with the added benefit of significant cost savings.

Bell Assure guarantees superb product support from the moment you take delivery of your machine. We spend time on your site to ensure your operator knows what the machines can do so he gets the most from his new machine. Bell Assure also guarantees multi-level points of contact from our support engineers and factory trained analysts right up to our senior management team ensuring that you get the help you need, when you need it.

Bell Assure product support is dedicated to giving you high reliable back up and support. Full UK service coverage means there’s always a Bell engineer close by for constant technical back up.

Our service contracts and Repair and Maintenance contracts have been designed to give you assurance that your machines are being looked after by people who know them inside out. Bell understands that individual needs may vary so Bell Assure provides contracts that can be tailored to operational requirements.

Ask your Territory Manager about Bell Wheeled loading shovels ***‘Whole life cost options’***

Plant theft poses an ever-increasing risk, Bell Assure places great importance on security so all new machines are protected by Construction Equipment Security And Registration scheme. Together with CESAR, Wheeled Loading Shovels have keyless start with lock out codes for added piece of mind.

Used equipment is as much a part of our business as the manufacture of new machinery. It provides the best tangible testimony of the excellent build quality of our product. Bell Assure provides a simple to use 3 star rating system so you can select the right piece of equipment.

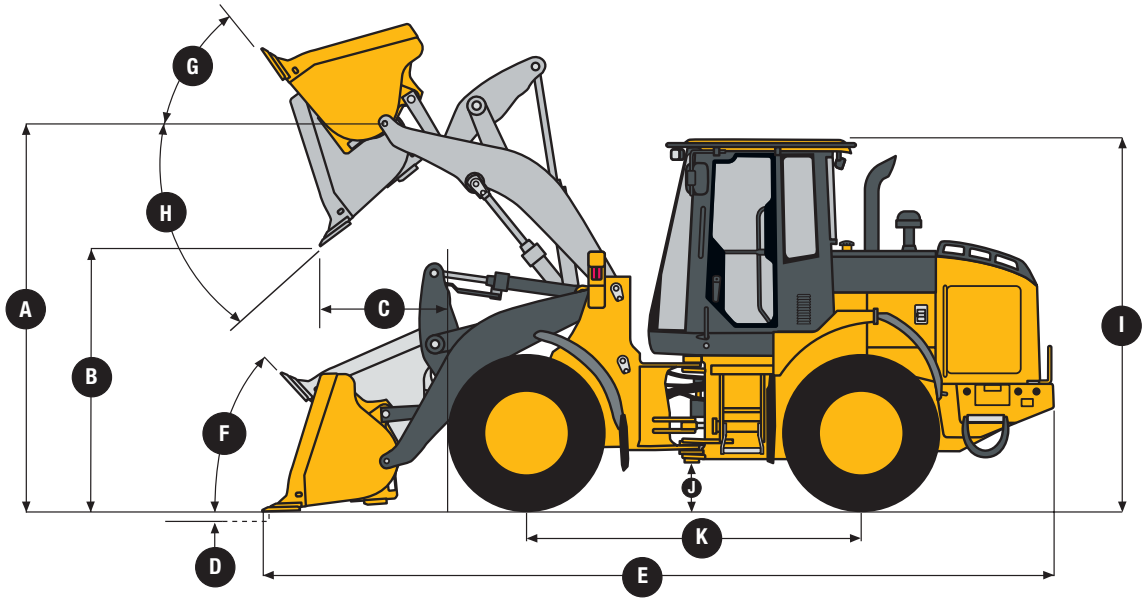
Bell Assure provides the ultimate in flexible financing through our own dedicated finance division, Bell Credit. The various products provide you with flexibility to smooth fluctuations in the economy, currency depreciation, seasonal workload variations and a host of unpredictable industry peaks and troughs.

Industry leading standard specification

- World Class Product, superb pedigree
- Quad cool system
- Fully isolated engine bay
- Full belly guards
- Cyclonic engine air pre-cleaner
- Unique oil immersed park brake
- Heavy duty axles
- Traction control
- Transmission gear/speed limiter
- Full fenders
- Steel bodywork panels
- 100% hydraulically locking front axle differential
- Ground level daily operator checks
- Automatic idle speed reduction and engine shut down
- High specification cab
- Colour rear view camera and reverse radar system
- Embedded weigh load system


Flat and convex exterior mirrors
Keyless start with security code
On board weighing system
Deluxe heated seat with twin armrests
4 forward & 2 rearwards mounted cab work lights
Cyclonic air pre-cleaner
QuadCool system with wide-core radiators
Automatic reverse cooling fan
Blue strobe reverse lights
Reverse radar and camera
Fine mesh air intake screens
Automatic engine idle and engine shutdown
Front & rear belly guards
Ride control
Front & rear axle coolers
Full fender mud guards
4,000 hour hydraulic filter change interval
BELL
L1506E

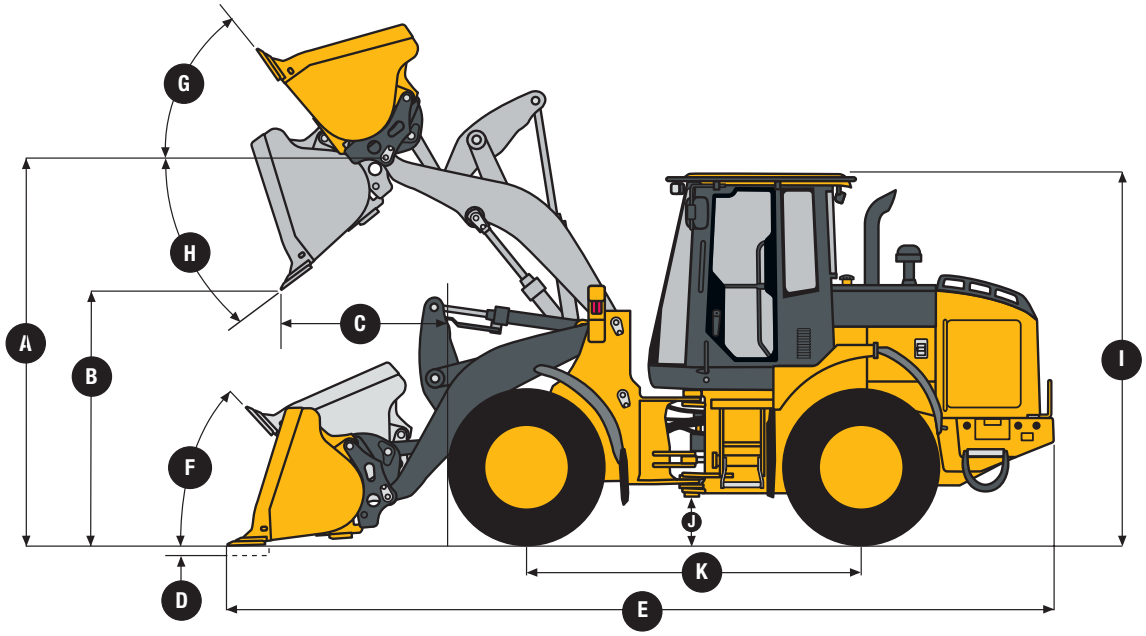
Specifications



STANDARD LENGTH LOADER ARM WITH DIRECT MOUNT GENERAL PURPOSE BUCKET

			L1204E		L1506E		L1706E		L1806E		L2106E		L2606E	
	Capacity heaped	m^3	1.9	2.2	2.3	2.6	2.7	3.2	3.2	3.6	3.6	3.8	4.0	4.7
	Max material density	kg/m^3	2100	1800	2060	1800	2200	1800	2000	1750	1950	1800	2140	1800
	Bucket width	mm	2540	2540	2690	2690	2690	2690	3040	3040	3040	3040	3270	3400
	Bucket weight	kg	870	1022	1029	1120	1148	1659	1735	1900	1822	1986	2517	2720
	Tipping load, straight	kg	9275	9100	10977	10810	13804	13293	14771	14596	16236	16072	19923	19687
	Tipping load, 35° turn	kg	-	-	-	-	-	-	-	-	-	-	17759	17548
	Tipping load, 40° turn	kg	8072	7920	9508	9360	12006	11495	12798	12632	14015	13851	17123	16920
	Breakout force	kg	8212	8212	11000	11000	12820	12820	15378	15378	14398	14398	19416	19416
	Operating weight	kg	11055	11207	12820	13493	15747	16258	18682	18847	19512	19676	24690	24893
A	Bucket hinge pin	mm	3610		3820		3950		4120		4120		4290	
B	Dump height 45°	mm	2670		2760		2860		2910		2840		3040	
C	Reach at dump height	mm	1040		1000		1020		1060		1130		1230	
	Reach at 2.13m dump	mm	1440		1460		1570		1610		1670		1850	
D	Dig depth	mm	105		95		95		106		123		80	
E	Overall length	mm	6860		7430		7760		8100		8310		9010	
F	Ground level roll back	deg	41		42		40		42		41		40	
G	Full height roll back	deg	55		55		50		55		55		55	
H	Max dump angle	deg	50		49		45		50		50		49	
I	Height over cab	mm	3170		3240		3320		3430		3430		3530	
J	Ground clearance	mm	393		400		384		461		461		465	
K	Wheelbase	mm	2760		2930		3090		3260		3260		3460	
	Wheel track	mm	1910		1950		2050		2170		2170		2298	
	Width over tyres	mm	2410		2540		2657		2880		2880		3065	
	Turn radius (centre of outer tyre)	mm	4740		5000		5270		5570		5640		6280	

Loader information is based on a machine with the identified loader arm, ROPS / FOPS cab, Michelin XHA2 tyres, full fuel tank and operator.
This information is affected by changes in tyres and different attachments.

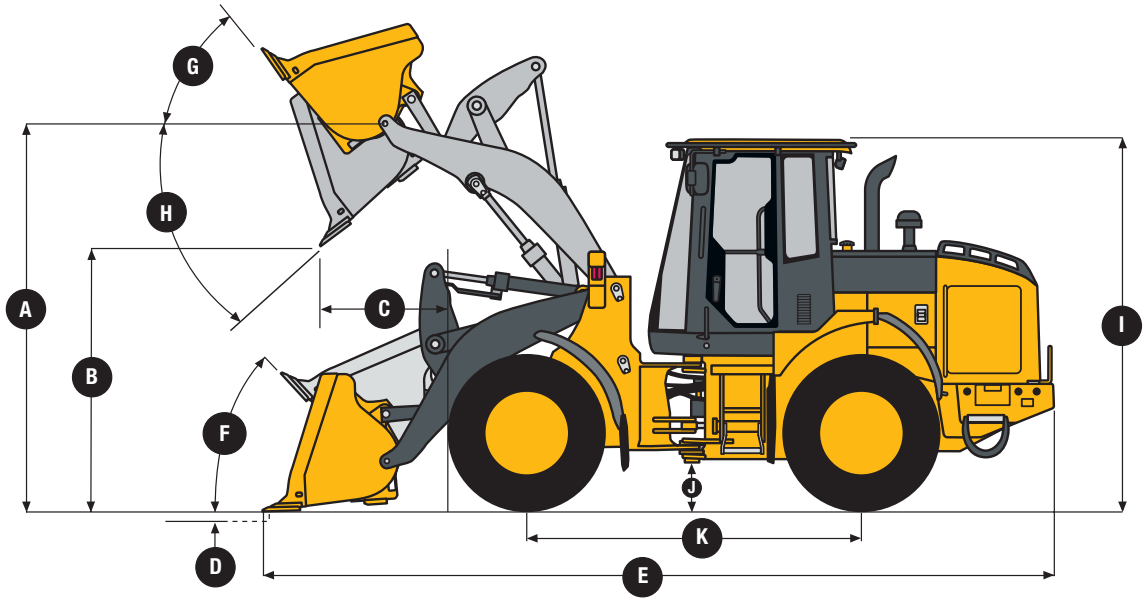


STANDARD LENGTH LOADER ARM WITH QUICKHITCH MOUNT GENERAL PURPOSE BUCKET

			L1204E	L1506E	L1706E	L1806E	L2106E	L2606E
	Capacity heaped	m^3	1.9	2.3	3.0	3.2	3.5	4.2
	Max material density	kg/m^3	1900	1820	1800	1800	1800	1800
	Bucket width	mm	2540	2690	2690	3040	3040	3270
	Bucket weight	kg	870	1028	1148	1735	1822	2600
	Tipping load, straight	kg	8360	9720	12388	13313	14910	17717
	Tipping load, 35° turn	kg	-	-	-	-	-	15972
	Tipping load, 40° turn	kg	7229	8369	10732	11485	12783	15227
	Breakout force	kg	6696	8636	10537	13664	12793	17450
	Operating weight	kg	11434	13171	16116	19069	19517	25528
A	Bucket hinge pin	mm	3610	3820	3960	4120	4070	4290
B	Dump height 45°	mm	2540	2660	2690	2840	2720	2970
C	Reach at dump height	mm	1150	1050	1110	1230	1300	1400
	Reach at 2.13m dump	mm	1470	1460	1560	1750	1790	1990
D	Dig depth	mm	139	138	165	139	192	80
E	Overall length	mm	7050	7570	7980	8480	8510	9180
F	Ground level roll back	deg	42	41	40	41	41	40
G	Full height roll back	deg	55	54	55	55	55	55
H	Max dump angle	deg	42	51	45	45	45	49
I	Height over cab	mm	3170	3240	3320	3430	3380	3530
J	Ground clearance	mm	393	400	384	461	410	465
K	Wheelbase	mm	2760	2930	3090	3260	3260	3460
	Wheel track	mm	1910	1947	2050	2170	2170	2298
	Width over tyres	mm	2415	2540	2657	2875	2880	3065
	Turn radius (centre of outer tyre)	mm	4740	5000	5270	5570	5640	6280

Loader information is based on a machine with the identified loader arm, ROPS / FOPS cab, Michelin XHA2 tyres, full fuel tank and operator.
This information is affected by changes in tyres and different attachments.

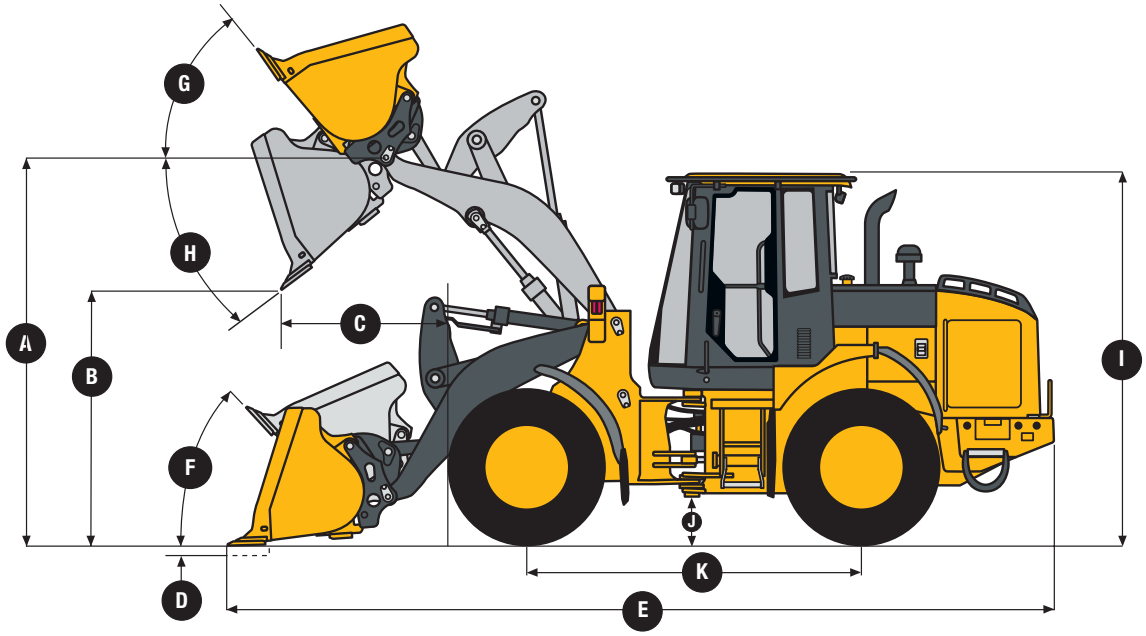
Specifications



HIGH LIFT LOADER ARM WITH DIRECT MOUNT GENERAL PURPOSE BUCKET

			L1204E	L1506E	L1706E	L1806E	L2106E	L2606E
	Capacity heaped	m^3	1.9	2.3	2.7	3.2	3.6	4.0
	Max material density	kg/m^3	1800	1750	1860	1650	1560	1680
	Bucket width	mm	2540	2690	2690	3040	3040	3270
	Bucket weight	kg	870	1029	1148	1735	1822	2517
	Tipping load, straight	kg	7889	9345	11590	12249	13101	15778
	Tipping load, 35° turn	kg	-	-	-	-	-	13984
	Tipping load, 40° turn	kg	6845	8069	10044	10546	11252	13458
	Breakout force	kg	7555	10158	11662	13782	12968	17433
	Operating weight	kg	11168	12894	15948	19091	19739	25241
A	Bucket hinge pin	mm	4000	4170	4300	4540	4540	4890
B	Dump height 45°	mm	3030	3110	3230	3330	3260	3610
C	Reach at dump height	mm	1040	990	1110	1190	1250	1380
	Reach at 2.13m dump	mm	1780	1760	1930	2060	2120	2410
D	Dig depth	mm	105	221	203	200	216	214
E	Overall length	mm	7380	7670	8170	8570	8780	9640
F	Ground level roll back	deg	41	41	36	41	42	41
G	Full height roll back	deg	55	50	49	47	47	53
H	Max dump angle	deg	50	46	46	45	45	39
I	Height over cab	mm	3170	3240	3320	3430	3430	3530
J	Ground clearance	mm	393	400	384	461	461	465
K	Wheelbase	mm	2760	2930	3090	3260	3260	3460
	Wheel track	mm	1910	1947	2050	2170	2170	2298
	Width over tyres	mm	2415	2540	2657	2880	2880	3065
	Turn radius (centre of outer tyre)	mm	4740	5000	5270	5570	5640	6280

Loader information is based on a machine with the identified loader arm, ROPS / FOPS cab, Michelin XHA2 tyres, full fuel tank and operator.
This information is affected by changes in tyres and different attachments.

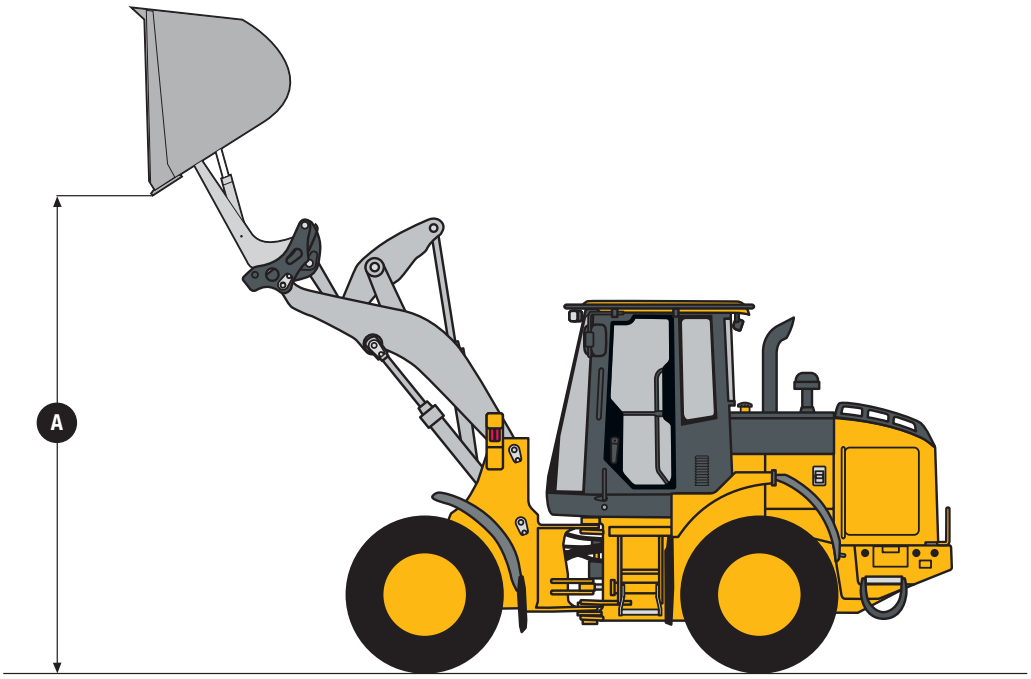


HIGH LIFT LOADER ARM WITH QUICKHITCH MOUNT GENERAL PURPOSE BUCKET

			L1204E	L1506E	L1706E	L1806E	L2106E	L2606E
	Capacity heaped	m^3	1.9	2.3	2.7	3.2	3.5	4.2
	Max material density	kg/m^3	1600	1545	1670	1490	1450	1450
	Bucket width	mm	2540	2690	2690	3040	3040	3270
	Bucket weight	kg	870	1029	1148	1735	1822	2600
	Tipping load, straight	kg	7092	8295	10452	11137	11903	14343
	Tipping load, 35° turn	kg	-	-	-	-	-	11634
	Tipping load, 40° turn	kg	6105	7110	9012	9536	10172	12160
	Breakout force	kg	6146	7964	9686	12242	11519	15485
	Operating weight	kg	11548	13271	16326	19339	19987	25998
A	Bucket hinge pin	mm	4000	4170	4300	4540	4540	4890
B	Dump height 45°	mm	2900	3010	3060	3250	3140	3490
C	Reach at dump height	mm	1150	1050	1200	1290	1350	1480
	Reach at 2.13m dump	mm	1780	1770	1940	2090	2150	2440
D	Dig depth	mm	148	138	269	200	216	214
E	Overall length	mm	7380	7950	8390	8730	8960	9800
F	Ground level roll back	deg	42	41	39	41	42	41
G	Full height roll back	deg	55	54	55	47	47	53
H	Max dump angle	deg	42	51	45	45	45	39
I	Height over cab	mm	3150	3240	3320	3430	3430	3530
J	Ground clearance	mm	393	400	384	461	461	465
K	Wheelbase	mm	2760	2930	3090	3260	3260	3460
	Wheel track	mm	1910	1947	2050	2170	2170	2298
	Width over tyres	mm	2415	2540	2657	2880	2880	3065
	Turn radius (centre of outer tyre)	mm	4740	5000	5270	5570	5640	6280

Loader information is based on a machine with the identified loader arm, ROPS / FOPS cab, Michelin XHA2 tyres, full fuel tank and operator.
This information is affected by changes in tyres and different attachments.

Specifications



STANDARD LENGTH LOADER ARM WITH QUICKHITCH MOUNT HIGH TIP BUCKET

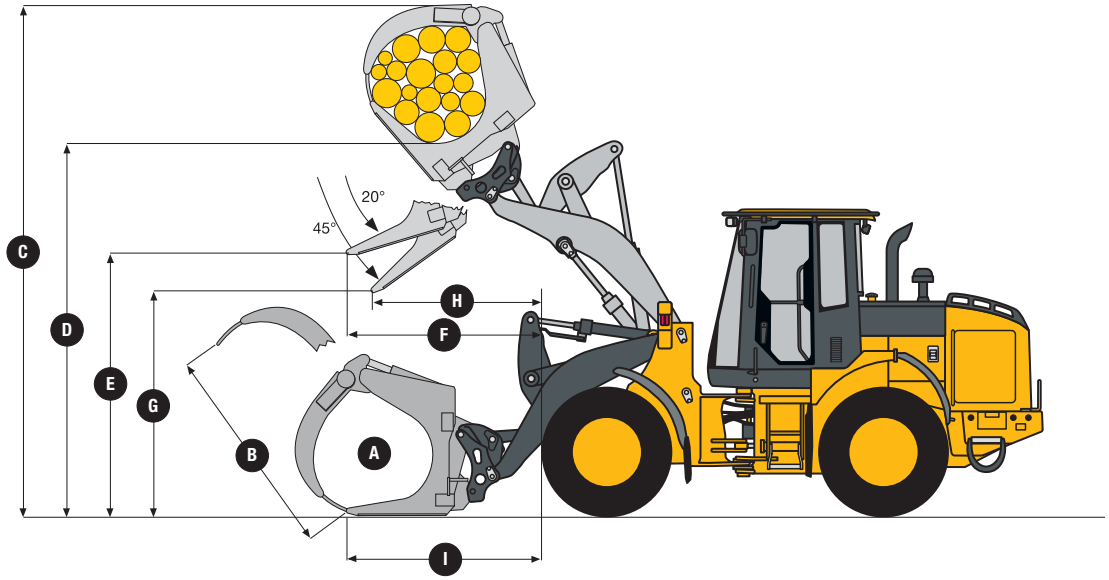
			L1204E	L1506E	L1706E	L1806E	L2106E	L2606E
	Capacity heaped	m^3	3.5	4.0	5.0	5.5	6.0	7.5
	Max material density	kg/m^3	820	825	870	870	865	890
	Bucket width	mm	2750	2850	2850	2850	3000	3400
A	Dump height	mm	4260	4520	4675	4805	4870	5140
	Operating weight	kg	12434	14371	17416	20469	21399	27228

Loader information is based on a machine with the identified loader arm, ROPS / FOPS cab, Michelin XHA2 tyres, full fuel tank and operator. This information is affected by changes in tyres and different attachments. Note Bell will custom design and manufacture high tip buckets to suit the machine, material type and load over height requirements.

HIGH LIFT LOADER ARM WITH QUICKHITCH MOUNT HIGH TIP BUCKET

			L1204E	L1506E	L1706E	L1806E	L2106E	L2606E
	Capacity heaped	m^3	3.5	4.0	5.0	5.5	6.0	7.5
	Max material density	kg/m^3	670	680	700	675	665	640
	Bucket width	mm	2750	2850	2850	2850	3000	3400
A	Dump height	mm	4650	4870	5025	5235	5300	5740
	Operating weight	kg	12548	14711	20086	20739	21487	27698

Loader information is based on a machine with the identified loader arm, ROPS / FOPS cab, Michelin XHA2 tyres, full fuel tank and operator. This information is affected by changes in tyres and different attachments. Note Bell will custom design and manufacture high tip buckets to suit the machine, material type and load over height requirements.



STANDARD LENGTH LOADER ARM WITH QUICKHITCH MOUNT SORTING LOG GRAPPLE

			L1204E	L1506E	L1706E	L1806E	L2106E	L2606E
A	Grapple area	m^2	1.3	1.5	2.0	2.4	2.5	3.1
	Rated operating load	kg	3785	4385	5910	6550	7020	8365
	Grapple width	mm	1660	1660	1660	1660	1660	1800
B	Max opening	mm	2080	2370	2600	2990	3040	3340
C	Max operating height	mm	5730	5880	6120	6700	6700	7210
D	Max manipulation height	mm	4080	4290	4430	4660	4660	4930
E	Max height at 20° tip	mm	3140	3310	3410	3540	3540	3600
F	Reach at max height & 20° tip	mm	1600	1510	1750	1870	1870	2280
G	Max height at 45° tip	mm	2695	2800	2810	2920	2920	2900
H	Reach at max height & 45° tip	mm	1300	1180	1410	1500	1530	1630
I	Reach at ground level	mm	1810	1710	2140	2120	2200	2450

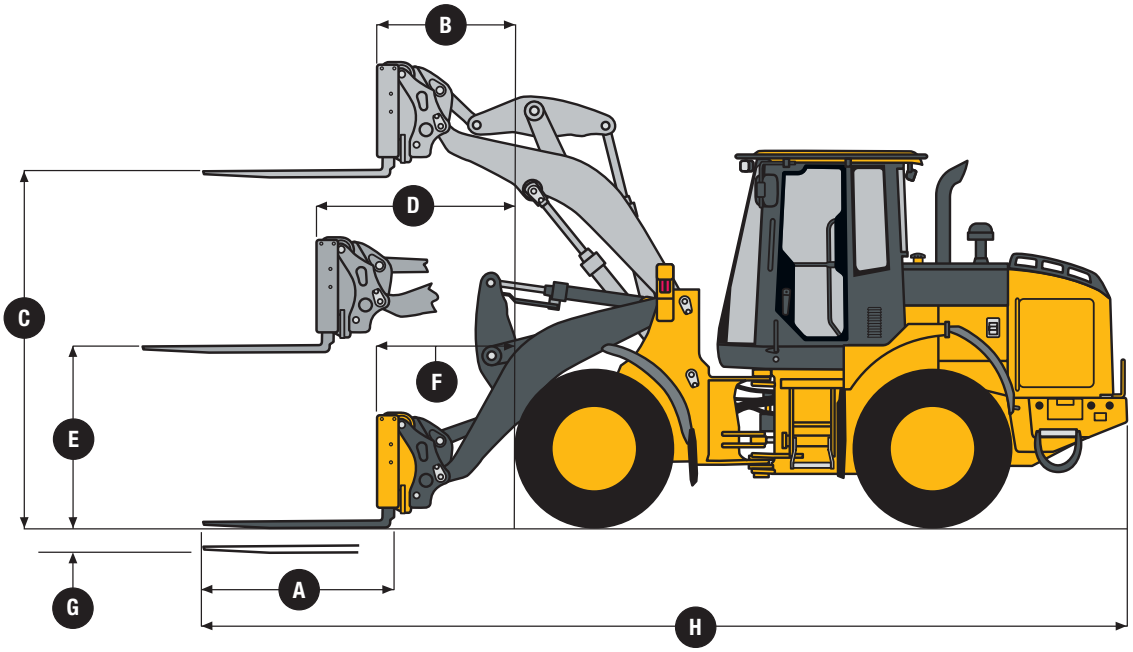
Loader information is based on a machine with the identified loader arm, ROPS / FOPS cab, Michelin XHA2 tyres, full fuel tank and operator. Grapple capacities are based on solid timber density of 800kg/m3 and a log length of 4.8m.This information is affected by changes in tyres and different attachments.

HIGH LIFT LOADER ARM WITH QUICKHITCH MOUNT SORTING LOG GRAPPLE

			L1204E	L1506E	L1706E	L1806E	L2106E	L2606E
A	Grapple area	m^2	1.3	1.5	2.0	2.2	2.4	2.8
	Rated operating load	kg	3200	3726	4900	5200	5600	6676
	Grapple width	mm	1660	1660	1660	1660	1660	1800
B	Max opening	mm	2080	2370	2600	2990	3040	3340
C	Max operating height	mm	6120	6230	6460	7130	7130	7810
D	Max manipulation height	mm	4470	4640	4770	5090	5090	5530
E	Max height at 20° tip	mm	3530	3660	3750	3970	3970	4200
F	Reach at max height & 20° tip	mm	1610	1820	2130	2210	2200	2730
G	Max height at 45° tip	mm	3085	3150	3150	3350	3350	3500
H	Reach at max height & 45° tip	mm	1660	1530	1780	1870	1900	2150
I	Reach at ground level	mm	2140	2040	2550	2580	2660	3070

Loader information is based on a machine with the identified loader arm, ROPS / FOPS cab, Michelin XHA2 tyres, full fuel tank and operator. Grapple capacities are based on solid timber density of 800kg/m3 and a log length of 3.0m.This information is affected by changes in tyres and different attachments.

Specifications



STANDARD LENGTH LOADER ARM WITH QUICKHITCH MOUNT FORK CARRIER AND PALLET FORKS

			L1204E	L1506E	L1706E	L1806E	L2106E	L2606E
A	Tine length	mm	1220	1220	1220	1520	1520	1520
	Payload for smooth surfaces[1]	mm	4315	5286	6734	7050	7591	9052
B	Reach, fully raised	mm	860	750	750	842	832	830
C	Fork height, fully raised	mm	3440	3590	3730	3740	3740	3960
D	Max reach	mm	1570	1540	1580	1730	1730	1650
E	Fork height, max reach	mm	1690	1720	1770	1660	1660	1960
F	Reach, ground level	mm	970	950	960	1260	1260	1280
G	Depth below ground	mm	107	13	23	142	142	30
H	Overall length	mm	7450	7890	8180	8840	9040	9880

1. Fork level, load centred and positioned at 50% tine length. Based on 80% of the full turn tipping load
Loader information is based on a machine with the identified loader arm, ROPS / FOPS cab, Michelin XHA2 tyres, full fuel tank and operator. This information is affected by changes in tyres and different attachments.

HIGH LIFT LOADER ARM WITH QUICKHITCH MOUNT FORK CARRIER AND PALLET FORKS

			L1204E	L1506E	L1706E	L1806E	L2106E	L2606E
A	Tine length	mm	1220	1220	1220	1520	1520	1520
	Payload for smooth surfaces[1]	mm	3863	4745	5920	5992	6452	7694
B	Reach, fully raised	mm	860	750	840	958	948	946
C	Fork height, fully raised	mm	3790	3940	4090	4160	4160	4560
D	Max reach	mm	1840	1800	1920	2130	2130	2250
E	Fork height, max reach	mm	1700	1720	1770	1800	1800	1960
F	Reach, ground level	mm	1310	1280	1400	1720	1720	1740
G	Depth below ground	mm	16	96	123	234	234	164
H	Overall length	mm	7790	8220	8600	9310	9510	10500

1. Fork level, load centred and positioned at 50% tine length. Based on 80% of the full turn tipping load
Loader information is based on a machine with the identified loader arm, ROPS / FOPS cab, Michelin XHA2 tyres, full fuel tank and operator. This information is affected by changes in tyres and different attachments.

ENGINE	L1204E	L1506E	L1706E	L1806E	L2106E	L2606E
John Deere engine	PowerTech	PowerTech	PowerTech	PowerTech	PowerTech	PowerTech
Type	E4045H	E6068H	PVS 6068	PSS 6090	PSS 6090	PSS 6090
Emissions STD	EPA Tier 3 EU Stage 3a	EPA Tier 3 EU Stage 3a	EPA Final Tier 4 EU Stage 4	EPA Final Tier 4 EU Stage 4	EPA Final Tier 4 EU Stage 4	EPA Final Tier 4 EU Stage 4
Cylinders	4	6	6	6	6	6
Displacement (litres)	4.5	6.8	6.8	9.0	9.0	9.0
Net power (kW (hp))	95 (128)	125 (167)	139 (186)	173 (232)	197 (264)	227 (304)
at RPM	2100	2000	1800	1700	1800	1500
Net torque (Nm)	515	673	836	1062	1161	1456
at RPM	1400	1600	1600	1400	1300	1500
Fuel system	High pressure common rail.					
Aspiration	Fixed Turbocharger	Fixed Turbocharger	Variable Geometry Turbocharger	Twin Turbocharged Low Pressure Fixed & Variable Geometry	Twin Turbocharged Low Pressure Fixed & Variable Geometry	Twin Turbocharged Low Pressure Fixed & Variable Geometry
Air cleaner	Cyclonic pre-cleaner and dual dry type main and safety filter, service indicator in cab monitor.					
Cooling fan	Hydraulically driven, temperature dependant, proportionally controlled, automatically reversing.					
Electrics	24 volt with 80 Amp alternator.		24 volt with 130 Amp alternator.			
Batteries	2 x 12 volt, 950 CCA each.					

TRANSMISSION	L1204E	L1506E	L1706E	L1806E	L2106E	L2606E
ZF model	4WG130	4WG160	4WG190	4WG210	4WG210	4WG260
TRAVEL SPEEDS						
Gear 1 fwd/rev kph	7.3 / 7.6	7.2 / 7.2	7.6 / 7.6	7.6 / 7.9	7.4 / 7.9	7.4 / 7.4
Gear 2 fwd/rev kph	12.1 / 13.0	11.9 / 12.6	12.5 / 13.0	12.6 / 12.9	12.2 / 12.9	13.8 / 13.8
Gear 3 fwd/rev kph	23.1 / 25.3	22.8 / 24.1	25.0 / 25.7	24.7 / 24.9	23.7 / 24.9	21.1 / 31.1
Gear 4 fwd kph	36.0	35.7	39.5	36.6	35.4	39.4
Type	Countershaft type powershift.					
Shift control	Electronically controlled, adaptive, load and speed dependent.					
Shift modes	Manual or automatic (1st - 4th or 2nd - 4th), quick shift button for kick down and three adjustable transmission disconnect settings.					

AXLES/BRAKES	
Final drive	Heavy duty planetary.
Differentials	100% Hydraulic locking front with conventional rear.
Rear axle oscillation	24 degrees (L1204E – L1706E), 26 degrees (L1806E – L2606E).
Service brakes	Hydraulic actuated, oil cooled, self-adjusting retractors, multiple wet disc.
Parking brake	Fully enclosed, multiple wet disc, driveshaft mounted, automatic spring on / hydraulically released.

TYRES	L1204E	L1506E	L1706E	L1806E	L2106E	L2606E
Michelin grade / type	L3 / XHA2	L3 / XHA2	L3 / XHA2	L3 / XHA2	L3 / XHA2	L3 / XHA2
Size	17.5R25	20.5R25	20.5R25	23.5R25	23.5R25	26.5R25

Specifications

HYDRAULICS	L1204E	L1506E	L1706E	L1806E	L2106E	L2606E
Max rated flow (lpm)	140	189	223	310	310	515
System pressure (bar)	248	252	248	252	252	227
CYCLE TIMES						
Raise (seconds)	5.6	5.8	5.9	6.4	6.4	5.9
Dump (seconds)	1.0	1.2	1.3	1.6	1.4	1.4
Lower (seconds)	2.4	3.2	2.7	3.0	3.0	2.8
Total (seconds)	9.0	10.2	9.9	11.0	10.8	10.1
Loader controls	3 function valve, multi-lever controls with lift, float, return to dig arm down and bucket level detents.					
Pump	Variable-displacement, load-sensing axial piston pump (twin pump L2606E); closed-centre pressure compensating system.					

CAPACITIES		L1204E	L1506E	L1706E	L1806E	L2106E	L2606E
Fuel tank	litre	242	325	299	397	397	469
Diesel Exhaust Fluid	litre	NA	NA	19	32	32	
Cooling system	litre	19	23	33.8	45.5	45.5	45
Engine including filter	litre	17.5	19	19.5	28	28	34
Trans including filter	litre	18.5	18.5	22	23	24	28
Axles front / rear	litre	22 / 22	17 / 17	22 / 17	22 / 22	22 / 22	46 / 46
Hyd tank and filters	litre	91	91	105	105.2	105.2	159
Park brake	litre	0.3	0.3	0.3	0.6	0.6	0.7

TYRES	Size	Grade	Type	Change in operating weight	Change in vertical dimension	Change in full turn tipping load
L1204E						
Michelin	17.5R25	L5	XLDD2A	+ 272 kg	+ 34 mm	+ 163 kg
Michelin	17.5R25	L5	XMINED2	+ 436 kg	+ 50 mm	+ 261 kg
L1506E						
Michelin	20.5R25	L5	XLDD2A	+ 448 kg	+ 29 mm	+ 268 kg
Michelin	20.5R25	L5	XMINED2	+ 708 kg	+ 43 mm	+ 425 kg
L1706E						
Michelin	20.5R25	L5	XLDD2A	+ 448 kg	+ 29 mm	+ 268 kg
Michelin	20.5R25	L5	XMINED2	+ 708 kg	+ 43 mm	+ 425 kg
L1806E						
Michelin	23.5R25	L5	XLDD2A	+ 580 kg	+ 36 mm	+ 348 kg
Michelin	23.5R25	L5	XMINED2	+ 728 kg	+ 59 mm	+ 437 kg
L2106E						
Michelin	23.5R25	L5	XLDD2A	+ 580 kg	+ 36 mm	+ 348 kg
Michelin	23.5R25	L5	XMINED2	+ 728 kg	+ 59 mm	+ 437 kg
L2606E						
Michelin	26.5R25	L5	XLDD2A	+ 660 kg	+ 38 mm	+ 396 kg
Michelin	26.5R25	L5	XMINED2	+ 1056 kg	+ 58 mm	+ 634 kg

L3, XHA2

L5, XLDD2A

L5, XMINED2

L3, XHA2 is a standard duty treaded tyre for sand / gravel quarries, quarry yard / stockpile loading, asphalt plant and concrete batching plant type work, will give good grip and good wear life.

L5, XLDD2A is a heavy duty treaded tyre use, where the machine is working in rock quarries or where the requirement is for more wear life, more resistance to damage and a generally tough tyre. Stiff side walls give more stability for applications with high lift arms / high tip bucket type work.

L5, XMINED2 is an extra heavy duty, semi-slick tyre for waste / recycling sites where punctures may be an issue. Minimal valleys in the tread mean the tyre is less likely to trap debris in the tread that rotate with the tyre, reducing damage to the machine. The carcass of this tyre is heavily reinforced with steel belts to resist punctures and the side walls have a moulded buttress to deflect material away from the tyre helping to protect the side wall from damage.

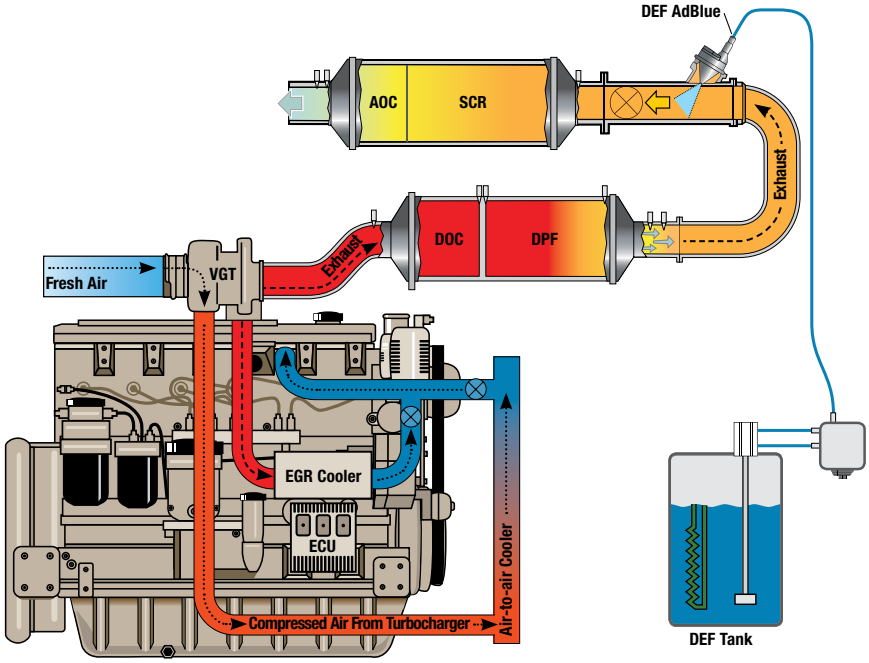
EPA Final Tier 4 / EU Stage 4 technology

Available in the L1706E, L1806E, L2106E and L2606E our EPA Final Tier 4 / EU Stage 4 technology is simple, fuel efficient and fully integrated.

Our engines employ field proven cooled Exhaust Gas Recirculation (EGR) to minimise Nitrogen Oxide production, then we clean the exhaust gasses using a Diesel Oxidation Catalyst (DOC) combined with a Diesel Particulate Filter (DPF). The Diesel Particulate Filter has a porous ceramic honeycomb centre which allows the exhaust gasses to pass through whilst capturing the Particulate Matter (PM or soot).

Finally, to reduce the Nitrogen Oxides (NOx) to the super low levels required to meet FT4 / Stage 4 regulations, the filtered exhaust gasses undergo a chemical reaction with the Diesel Exhaust Fluid (DEF) that is injected into the Selective Catalytic Converter (SCR). This reaction converts the Nitrogen Oxides to harmless Nitrogen and Oxygen.

All this happens **automatically and without impacting on the machines operation**, all the operator needs to do is top up the Diesel Exhaust Fluid tank each time he refuels his machine. DEF usage is between 1% and 3% of diesel fuel consumption.



Soot cleaning

The exhaust filter components are designed for uninterrupted operation using **passive** regeneration. This is a natural cleaning process where engine exhaust temperatures are sufficient to oxidise the particulate matter (soot) trapped inside the exhaust filter. This is an automatic and continuous process during normal engine operating conditions – greater than 30% load factor. This is the most fuel efficient way to clean the diesel particulate filter.

If the machine is working below 30% load factor the conditions for passive regeneration may not be achieved, then particulate matter is removed by **active** regeneration. This is also an automatic process where a small quantity of fuel is injected into the exhaust stream. This causes a reaction within the diesel oxidation catalyst and elevates the exhaust temperature to clean the filter. Active regeneration is a back-up system and does not activate during normal operation.

With passive or active regeneration the process is totally automatic and does not impact on machine operation.

Ash cleaning

Over time, ash does accumulates in the Diesel Particulate Filter and the filter must be replaced. The filter replacement interval on Bell machines is condition based, rather than hour based on most competitor's machinery. The time when this service should actually take place will be flagged by your machine with a dash indicator. In-field performance shows that ash removal may not be required for as long as 15,000 hours. To minimise the operating costs when this time occurs the filter can be replaced via the Bell filter exchange system.

Fast Facts

- **World Class Product, superb pedigree** manufactured in the USA by **John Deere** to Bell's high specification.
- **High specification cab** – ensures operator acceptance
- **Quad cool system** – by far the best cooling system available when working in dusty environments
- **Fully isolated engine bay** – reduces dust build up in the engine
- **Cyclonic engine air pre-cleaner** – designed to give additional protection when working in dusty environments during the drier months
- **Automatic ride control** – activates at speeds above 3.2kph to give boom suspension to smooth out fore / aft machine bounce
- **Quarry health and safety items fitted as standard** – machine is supplied as a complete package, ready for work
- **Ground level daily operator checks and fuel fill point**, located on the same side of the machine – easy checks, no risk from working at height
- **Keyless start** – number coded and Cesar registered for machine security
- **Heavy duty axles with axles coolers as standard** – high capacity axles for the rigors of round the clock working or load & carry applications
- **Steel bodywork panels** – uncommon in the industry today, these resist knocks better than plastic / composite panels and are easily repaired
- **Unique oil immersed park brake** – eliminates risk of fire from build up of grass or straw
- **Full belly guards to front and rear chassis** – protects high value components to ensure durability and reliability
- **Embedded weigh load system** – enables operator to monitor loads
- **Automatic idle speed reduction and engine shut down** – saves fuel in non productive periods
- **100% hydraulically locking front axle differential** – machine achieves high tractive force (pushing power) even when working in slippery conditions
- **Traction control** – allows the operator to match the machine power to the ground conditions for exceptional climbing ability, limits tyre spin to prolong tyre life

Tel: 0800 915 7700
Fax: +44 (0) 1283 712687
Parts Dept: +44 (0) 1283 716777
Fax: +44 (0) 1283 712695
E-mail: general@uk.bellequipment.com
www.bellequipment.co.uk

BELL EQUIPMENT UK LTD
Co. Reg No. 3591436 United Kingdom
A member of the worldwide Bell Equipment Group
Graycar Business Park, Barton Turns
Barton-Under-Needwood, Burton-on-Trent, Staffs DE13 8EN

Strong Reliable Machines
Strong Reliable Support

BELL