

CASE
CONSTRUCTION



F-SERIES WHEEL LOADERS

1021F | 1121F

TIER 2



FASTER, FUEL EFFICIENT

FASTER, FUEL EFFICIENT

Be ready for the best:

- Advanced Engine Technology
- Cooled Heavy duty axles
- Open Differentials with 100% locking on the front
- Low Maintenance Cooling Design
- Optimized front loader
- Premium Ergonomics



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ADVANCED ENGINE TECHNOLOGY



New generation engine:

The second generation common rail engine Cursor 9 delivers top performance in load response, max torque, power and fuel economy.

The combustion is optimized for maximum efficiency, at high temperatures using 100% fresh, cool air, as the air intake is separated from the exhaust.

The turbocharged engine with an Air-to-Air intercooler relies on a 3-step injection technology to maximize responsiveness and fuel efficiency with reduced engine noise and vibrations.

4 working modes (max, economy, normal and auto) allow you to maximize productivity or fuel efficiency according to your needs.



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More than 10% lower fuel consumption

The high combustion temperature result in optimum engine performance. The second generation common rail engine ensures better engine control at all rpm. The multiple injection technology delivers optimum combustion control.

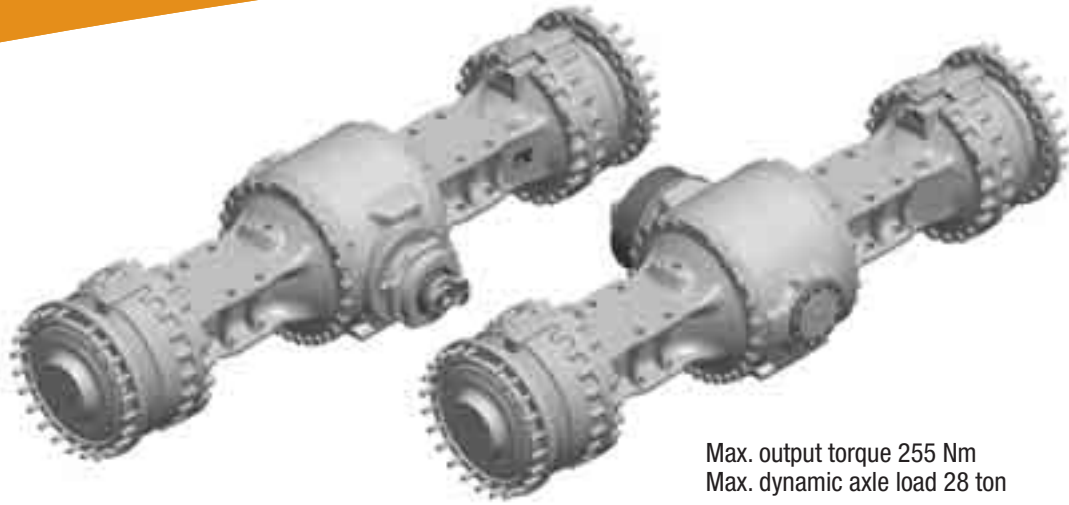
Outstanding flat torque

The second generation common rail engine ensures better engine control at all rpm and the 100% fresh air input further improves engine output. The multiple injection technology ensures optimum combustion control, while the 1600 bar injection delivers best-in-class torque performance.

Lower maintenance costs

The combustion chamber and high pressure injection are optimized to reduce oil dilution. The engine only breathes fresh air, so there is no oil contamination. It also has better fuel compatibility because there is no exhaust gas recirculation.

HEAVY DUTY AXLES WITH HIGH TRACTION DIFFERENTIAL



Max. output torque 255 Nm
Max. dynamic axle load 28 ton

Cooled and Heavy-duty axles

The new heavy-duty axles are tougher, bigger and easier to service with the 3-piece housing design. Moreover the internal oil temperature is kept constant by the oil cooling, resulting in even more reliability.

Open differentials front and rear

With open differentials, no friction is applied to reduce wheel slip, resulting in less wear and lower energy losses.

Front differential with 100% Auto-lock

With 100% Auto-lock, 100% of the available torque goes to the wheel with adherence, a big step up from the 75% of a limited slip differential! There is no slippage between the wheels and no friction in the differential.

The Auto-lock is activated automatically when a front wheel is about to slip, or you can easily do it manually with your left foot.



For a reduced initial investment, the axles are also available with both open differentials without locking. In that configuration the front axle is heavy duty and the rear axle is standard.

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More productivity

100% of available torque is transmitted to the wheels, delivering optimum pushing power. This means that up to 40% more pushing power is transmitted to the wheel than it would be with a limited slip differential.

Greater return on investment

Tyre wear is reduced by 20-30% because there is no slippage between the wheels, fuel consumption is lower because there is no friction in the differential, less maintenance is needed because there is no internal friction with open differentials. The result: better resale value.

Always reliable

The Heavy duty axles are designed to be used in very demanding conditions, with both solid or water-filled tyres, as preferred by different operators. Together with open differentials, they result in superior reliability in all applications.

LOW MAINTENANCE COOLING DESIGN



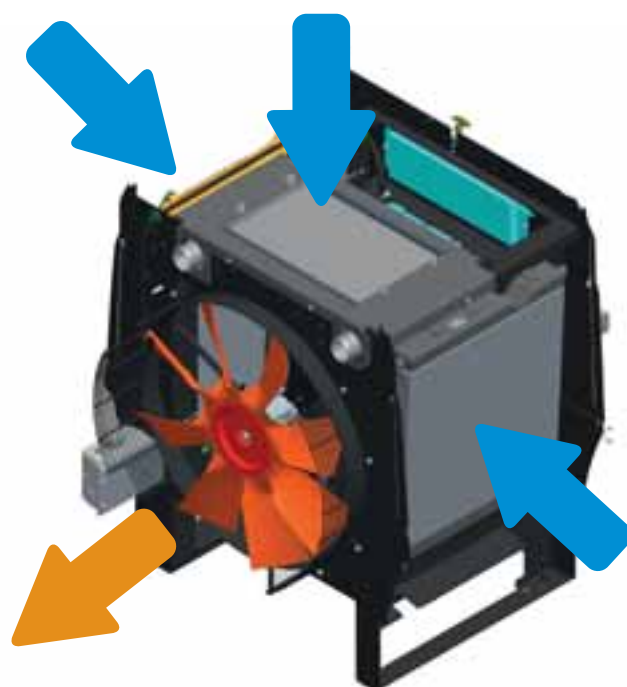
The cooling cube

The unique design, with the five radiators mounted to form a cube instead of overlapping, ensures that each radiator receives fresh air and that clean air enters from the sides and the top, maintaining constant fluid temperatures. The high efficiency of the cooling system lengthens the life of the coolant to 1500 hours.



The standard reversible fan can be activated from the cab and is very effective thanks to the cooling cube.

The low fan speed (just 1200 rpm), results in lower noise and vibration levels in the cab.



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In dusty environments like sand pits or quarries the cleaning of the radiators can be very time consuming: that is not the case with the cooling cube.

Less frequent and easier cleaning

The radiators are easy to clean with the reversible fan, which is activated from the cab. The cube design of the cooling system results in more effective cleaning of the radiators, and additional cleaning can be easily done manually, with separate access to each radiator.

Better cooling needs less maintenance

The efficient cube design also results in a longer life for the cooling fluid, which lasts 500 hours more, so that change intervals are 1500 hours.

Increased reliability

The constant temperature of the fluid maximises its cooling performance and protects the axles, resulting in greater reliability. This is further enhanced by the easy maintenance and longer service intervals.

The better weight distribution means that a smaller counterweight or dead weight is needed, which reduces stress on the axles and the brakes.

FRONT LOADER OPTIMIZED FOR MORE PRODUCTIVITY



18% more thrust with the new torque converter and axles

The new torque converter of the 1021F and 1121F is bigger, and transfers more power to the transmission. When the ground is slippery, the second gear is more appreciated than the too pushy first gear. With 18% increased thrust, loading in second gear is faster.

Flat bottom bucket with 51° roll back angle

The new bucket flat bottom bucket shape has a shorter bottom in order to increase up to 244 kN the breakout force of the machine. The flat bottom makes grading jobs easier and it increases the retention of the material.

The new loader design with 51° roll back increases the bucket filling by about 10%. It also improves significantly the material retention in carry phases.

Lifts the bucket to full height in 6 seconds with the new hydraulic pump

The new hydraulic pump provides more lifting force, so that the lifting of the arm is faster and the cycle time of the loader is shorter.

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Increased bucket filling

Bucket is filled faster with the 18% increased thrust and greater breakout force that comes with the short bottom buckets.

More bucket retention

Higher bucket filling and better bucket retention make your resources more effective!

More productivity with faster cycles

Faster bucket lifting means faster cycles, which results in higher productivity when you need it.

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WELCOME ON BOARD

Protected cab

Our reinforced cab guarantees protection against roll over (ROPS) and falling objects (FOPS)



Low operator vibrations

Engine noise and vibrations are reduced by 3-step injection: pre-, main- and post-injection. To further increase the operator comfort the rear mounted engine is distant from the cab and standard the seat air suspended. Heated seat is optional.



Outstanding all-round visibility

You'll feel more confident and work faster with the great all-round visibility provided by the very low shape of the curved rear hood and the ample glazed surfaces.



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Great temperature control

17 air vents ensure your comfort and prevent the windshields from steaming up.



PREMIUM ERGONOMICS



Hydraulic functions that add to your comfort

To maximise your focus on the job and reduce your stress levels, you can activate the following functions from the ergonomically positioned control panel under your right hand:

- **Auto-shift:** ensures the machine always operates in the most suitable gear according to speed, kick down and engine braking
- **Reverse button on the joystick:** activates front, neutral or reverse
- **Return to dig:** brings back the bucket in the right position for loading again
- **Return to travel:** lowers the boom to carry position, which can be adjusted
- **Auto-lift:** lifts the boom to the max height you have set
- **Auto-Ride Control:** reduces loader arm bounce during travel, maintaining maximum material retention. It activates from 8 km/h
- **Auto-diff lock:** The 100% differential lock can be activated manually with your left foot or automatically for greater focus on the job
- **Auxiliary circuit lever:** For hydraulic attachments such as high tip bucket, you can order the optional auxiliary circuit controlled by a lever next to the joystick for your ease of use.



Joystick steering

Long days of repetitive cycles go faster with joystick steering (optional) because your sitting position is better. The steering wheel is maintained for a better handling. You will appreciate it during transfers on uneven terrains, on a descending slope and in case of emergency



Levers or joystick loader control

Depending on your habits you may prefer the optional 2-lever control to the standard joystick control. The optional 3rd lever controls the attachment auxiliary circuit. It can also be retrofitted as a kit.

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FAST AND EASY MAINTENANCE



One-piece electric hood

The easy-to-open electric hood ensure fast access to the service points. Jumper cables are available as standard for jump starting the engine if the battery is low.

Ground level maintenance design

All service points and radiators are easily accessible at ground level. You can do a fast visual check of the hydraulic and transmission oil levels. The three drains are grouped together on the left side, below the hood and battery switches, so that fluids are easy and quick to replace.

Less maintenance, more uptime

You can maximise the working time with these wheel loaders, with the long service intervals of 1500 hours for the transmission oil and filter, the axle oil and filter, and the coolant.

The cooling cube design enables you to clean very efficiently with the reversible fan as well as manually.

Greater Safety

All the main service points are easily accessible from the ground, so you can carry out your daily maintenance safely and efficiently.

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The air filter is easy to remove and the dust is aspirated and ejected in the exhaust



Grouped drains



Fuel filter and engine oil service points are easily accessible from the left side while the other filters are behind the right stairs

THE DNA OF YOUR 1021F

Productivity (50-meter distance cycle)

Considering: density: 1.8 t/m³, fill factor: 100%, 52 cycles/hour and each hour includes a 5-minute break _____ 230 m³/h or 410 t/h
52 loading cycles/h with standard bucket 4.4 m³ or 7.9 ton

Engine Tier 2

Compliant with Tier 2 (EU stage II regulations)
FPT turbocharged engine F2CFA614C with:

- 100% fresh air combustion
- Air to Air intercooler
- Second generation common rail (1.600 bar)
- Multiple injections similar to multi-jet automotive technology

to achieve best in class load response, max torque and power with the minimum fuel consumption.

6 cylinders - 8.7 liters - common rail

Max power (SAE J1995 / ISO 14396) _ 239 kW / 320 hp @1800 rpm

Maximum torque (SAE J1349) _____ 1479 Nm @1200 rpm

Transmission

All-wheel drive with planetary axles

Kick-down function

4-speed torque converter

4-speed auto Powershift switchable to manual shifting

forward speeds _____ 7-13-19-38 Km/h

reverse speeds _____ 7-13-27 Km/h

Adjustable transmission declutch

Axles and differential

For outstanding traction with 50% longer maintenance intervals and 30% less tire wear:

Cooled ZF Heavy Duty axles with front auto-lock differential 100%

Front _____ Heavy Duty axle + (ZF type MT-L3115-II)

Rear _____ standard axle (ZF type MT-L3105-II)

For standard traction:

Cooled ZF Standard axles with both Open Differentials

Front _____ standard axle (ZF type MT-L3105-II)

Rear _____ standard axle (ZF type MT-L3105-II)

Rear axle total oscillation _____ 26°

Tyres

Tyres _____ 26.5R25

Brakes

Service brake _____ Maintenance free, self-adjusting wet 4-wheel disc brakes

Area _____ 0.74 m²/hub (HD axle) or 0.54 m²/hub (std axle)

Parking brake _____ Disc brake on transmission activated from the cab cluster

Area _____ 82 cm²

Hydraulic

Valves _____ Rexroth Closed-center, load sensing hydraulic system

Main valve with 3 sections

Steering _____ The steering orbitrol hydraulically is actuated with priority valve

Type of pump _____ Tandem Variable displacement pump (352 l/min @2000 rpm)

Automatic hydraulic functions

- Bucket Return-to-dig

- Boom Return-to-travel

- Auto lift (to adjustable height)

Control type _____ Pilot control with single joystick or two levers

Capacities

Fuel tank _____ 459 usable liters

Cooling system _____ 57 liters

Engine oil _____ 26 liters

Hydraulic oil _____ Tank: 134 litres, total system: 250 liters

Axles (including cooling circuit) _____ 68 liters

Transmission oil _____ 45 liters

Cab and controls

For you safety the cab complies to:

protection against falling objects (FOPS) _____ ISO EN3449

protection against roll over (ROPS) _____ ISO EN13510

Noise and vibration

Sound pressure level at operator's station _____ Lpa = 79 dB (A) in compliance with standard ISO 6396:2008

Guaranteed Sound power level _____ Lwa = 108 dB (A) according to European Directive 2000/14/EC

Switchable reverse gear alarm

Vibrations _____ air-cushioned seat MSG 95A/732

Operator 's seat meets the criteria of ISO 7096:2000 representing vertical vibration input under severe but typical operating conditions.

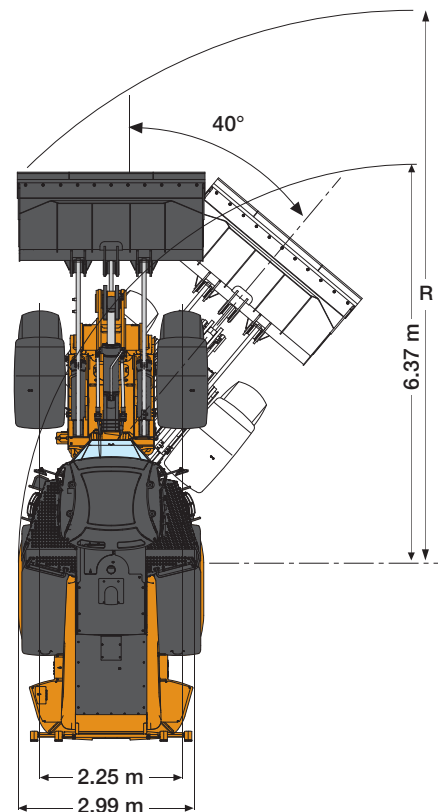
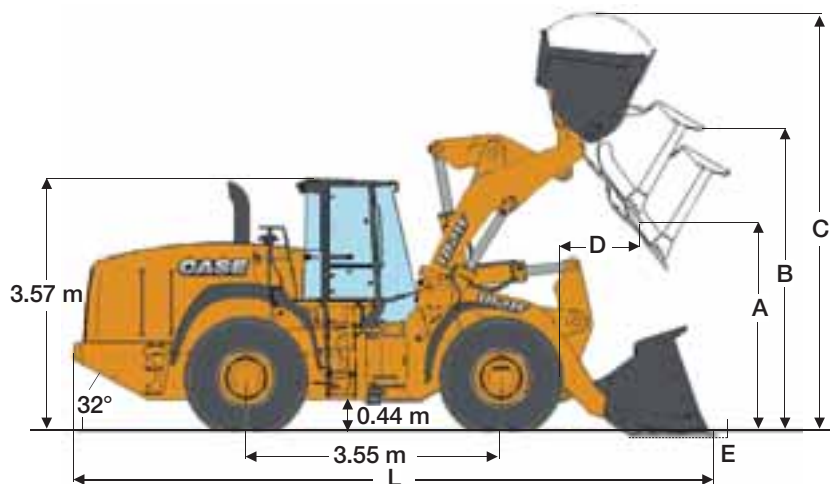
As a result the vibrations transmitted by the machine to the operator body does not exceed 0.5 m/s²

Electrical system

24V Batteries 2 x 12V

Alternator _____ 65A

1021F Specifications



LOADER SPEED

Raising time (loaded)	6.2 sec
Dump time (loaded)	1.3 sec
Lowering time (empty, power down)	2.8 sec
Lowering time (empty, float down)	2.6 sec

1021F	Bucket with bolt on:	Z-BAR				Extra Reach			
		4.4 m ³ Flat Bottom Bucket*		4.2 m ³ bucket		4.4 m ³ Flat Bottom Bucket*		4.2 m ³ bucket	
		edge	teeth	edge	teeth	edge	teeth	edge	teeth
Bucket volume (heaped)	m ³	4.40	4.23	4.20	4.06	4.40	4.23	4.20	4.06
Bucket Payload (SAE)	ton	7.9	8.0	7.9	8.0	6.6	6.8	6.7	6.8
Maximum material density (SAE)	ton/m ³	1.8	1.9	1.9	2.0	1.5	1.6	1.6	1.7
Bucket outside width	m	2.98	2.98	3.20	3.20	2.98	2.98	3.20	3.20
Bucket weight	kg	2480	2321	2286	2268	2480	2321	2286	2268
Tipping load - straight (SAE)	kg	18857	19219	19046	19193	15943	16267	16178	16298
Tipping load - Articulated at 40° (SAE)	kg	15682	16018	15876	16002	13229	13530	13454	13556
Breakout force	kg	19092	20963	20456	21922	19282	21170	17362	17401
Lift capacity from ground	kg	23000	23479	23413	23659	18497	18888	12616	12612
A - Dump height at 45° at full height	m	3.02	2.92	3.08	2.96	3.6	3.5	3.66	3.54
B - Hinge pin height	m	4.24	4.24	4.24	4.24	4.82	4.82	4.83	4.83
C - Overall height	m	5.94	5.94	5.80	5.80	6.52	6.52	6.38	6.38
D - Bucket reach at full height	m	1.33	1.45	1.27	1.4	1.34	1.46	1.28	1.41
E - Dig depth	cm	13	13	13	13	13	13	13	13
L - Overall length with bucket on the ground	m	8.98	9.13	8.89	9.07	9.50	9.65	9.41	9.59
Overall length without bucket	m	6.91	6.91	6.91	6.91	7.37	7.37	7.37	7.37
R - Turning radius to front corner of the bucket	m	7.0	7.1	7.1	7.1	7.3	7.3	7.3	7.4
Bucket rollback in carry position	°	49°	49°	49°	49°	48°	48°	48°	48°
Dump angle at full height	°	53°	53°	53°	53°	50°	50°	50°	50°
Machine operating weight	kg	24593	24434	24399	24381	25882	25723	25688	25670

Note: bucket specification can slightly differ according to plant source. More bucket choice is available, please contact your local dealer.

*4.4m³ flat bottom bucket is available only from Lecce (IT) plant.

THE DNA OF YOUR 1121F

Productivity (50-meter distance cycle)

Considering: density: 1.8 t/m³, fill factor: 100%, 52 cycles/hour and each hour includes a 5-minute break _____ 260 m³/h or 460 t/h
52 loading cycles/h with standard bucket 5.0 m³ or 8.8 ton

Engine Tier 2

Compliant with Tier 2 (EU stage II regulations)
FPT turbocharged engine F2CFA614B with:

- 100% fresh air combustion
 - Air to Air intercooler
 - Second generation common rail (1.600 bar)
 - Multiple injections similar to multi-jet automotive technology to achieve best in class load response, max torque and power with the minimum fuel consumption.
- 6 cylinders - 8.7 liters - common rail
Max power (SAE J1995 / ISO 14396) _ 259kW / 347 hp @1800 rpm
Maximum torque (SAE J1349) _____ 1604 Nm @1100 rpm

Transmission

All-wheel drive with planetary axles
Kick-down function

4-speed torque converter

4-speed auto Powershift switchable to manual shifting
forward speeds _____ 7-12-18-38 Km/h
reverse speeds _____ 7-13-26 Km/h
Adjustable transmission declutch

Axles and differential

For outstanding traction with 50% longer maintenance intervals and 30% less tire wear:

Cooled ZF Heavy Duty axles with front auto-lock differential 100%
Front _____ Heavy Duty + (ZF type MT-L3115-II)
Rear _____ Heavy Duty (ZF type MT-L3115-II)

For standard traction:

Cooled ZF Heavy Duty with both Open Differentials
Front _____ Heavy Duty (ZF type MT-L3115-II)
Rear _____ Heavy Duty (ZF type MT-L3115-II)
Rear axle total oscillation _____ 26°

Tyres

Tyres _____ 26.5R25

Brakes

Service brake _____ Maintenance free, self-adjusting wet 4-wheel disc brakes
Area _____ 0.74 m²/hub

Parking brake _____ Disc brake on transmission activated from the cab cluster

Area _____ 82 cm²

Hydraulic

Valves _____ Rexroth Closed-center, load sensing hydraulic system

Steering _____ The steering orbitrol hydraulically is actuated with priority valve

Type of pump _____ Tandem Variable displacement pump (380 l/min @2000 rpm)

Automatic hydraulic functions

- Bucket Return-to-dig
- Boom Return-to-travel
- Auto lift (to adjustable height)

Control type _____ Pilot control with single joystick or two levers

Capacities

Fuel tank _____ 459 usable liters

Cooling system _____ 57 liters

Engine oil _____ 26 liters

Hydraulic oil _____ Tank: 134 litres, total system: 250 liters

Axles (including cooling circuit) _____ 68 liters

Transmission oil _____ 45 liters

Cab and controls

For you safety the cab complies to:

protection against falling objects (FOPS) _____ ISO EN3449

protection against roll over (ROPS) _____ ISO EN13510

Noise and vibration

Sound pressure level at operator's station _____ Lpa = 79 dB (A) in compliance with standard ISO 6396:2008

Guaranteed Sound power level _____ Lwa = 108 dB (A) according to European Directive 2000/14/EC

Switchable reverse gear alarm

Vibrations _____ air-cushioned seat MSG 95A/732

Operator 's seat meets the criteria of ISO 7096:2000 representing vertical vibration input under severe but typical operating conditions.

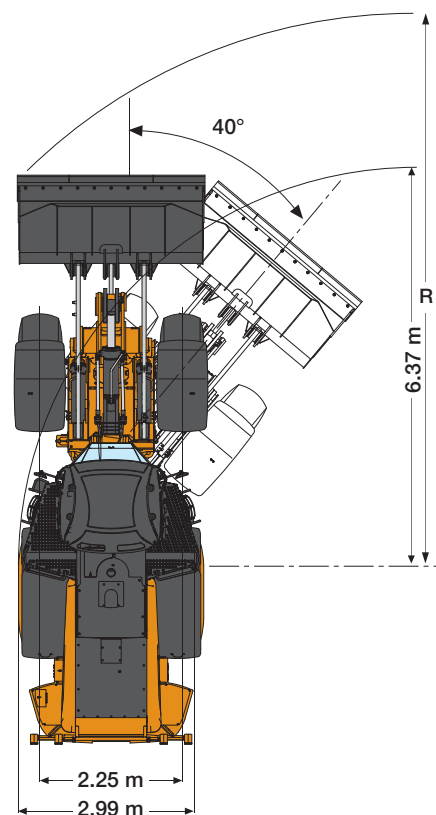
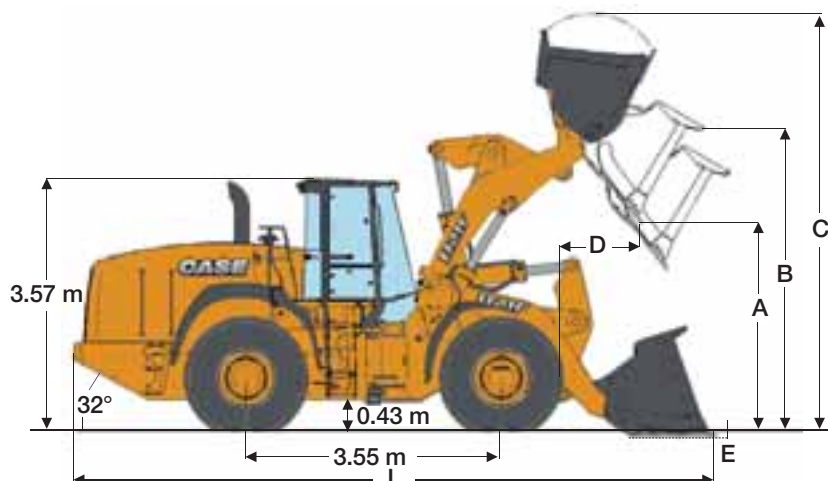
As a result the vibrations transmitted by the machine to the operator body does not exceed 0.5 m/s²

Electrical system

24V Batteries 2 x 12V

Alternator _____ 65A

1121F Specifications



LOADER SPEED

Raising time (loaded)	6.5 sec
Dump time (loaded)	1.4 sec
Lowering time (empty, power down)	2.8 sec
Lowering time (empty, float down)	2.6 sec

1121F	Bucket with bolt on:	Z-BAR						Extra Reach					
		5 m ³ Flat Bottom Bucket*		4.8 m ³ bucket		4.0 m ³ bucket		5 m ³ Flat Bottom Bucket*		4.8 m ³ bucket		4.0 m ³ bucket	
		edge	teeth	edge	teeth	edge	teeth	edge	teeth	edge	teeth	edge	teeth
Bucket volume (heaped)	m ³	5.0	4.8	4.8	4.6	4.0	3.9	5.0	4.8	4.8	4.6	4.0	3.9
Bucket Payload (SAE)	ton	8.7	8.9	8.9	8.9	9.0	9.0	7.6	7.8	7.8	7.8	7.9	7.9
Maximum material density (SAE)	ton/m ³	1.8	1.9	1.9	1.9	2.2	2.2	1.5	1.6	1.6	1.7	2.0	2.1
Bucket outside width	m	3.18	3.18	3.20	3.20	3.20	3.20	3.18	3.18	3.20	3.20	3.20	3.20
Bucket weight	kg	2643	2469	2414	2397	2239	2221	2643	2469	2414	2397	2239	2221
Tipping load - straight (SAE)	kg	20735	21123	20949	21099	21150	21310	18100	18456	18319	18449	18596	18732
Tipping load - Articulated at 40° (SAE)	kg	17495	18857	17713	17843	17923	18062	15286	15620	15506	15616	15765	15881
Breakout force	kg	24269	24443	22661	24151	25542	27431	24508	24682	22883	24387	25790	27698
Lift capacity from ground	kg	25502	25984	25732	25970	26363	26620	21368	21782	21598	21783	22150	22350
A - Dump height at 45° at full height	m	3.09	3.09	3.20	3.09	3.30	3.18	3.51	3.51	3.62	3.5	3.72	3.60
B - Hinge pin height	m	4.44	4.44	4.44	4.44	4.44	4.44	4.86	4.86	4.86	4.86	4.86	4.86
C - Overall height	m	6.20	6.20	6.12	6.12	5.96	5.96	6.62	6.62	6.54	6.54	6.38	6.38
D - Bucket reach at full height	m	1.4	1.4	1.27	1.41	1.16	1.30	1.45	1.45	1.32	1.45	1.20	1.34
E - Dig depth	cm	12	12	12	12	12	12	12	12	12	12	12	12
L - Overall length with bucket on the ground	m	9.83	9.83	9.12	9.30	8.97	9.14	9.70	9.70	9.53	9.71	9.37	9.55
Overall length without bucket	m	7.70	7.70	7.70	7.70	7.70	7.70	8.24	8.24	8.24	8.24	8.24	8.24
R - Turning radius to front corner of the bucket	m	7.2	7.2	7.2	7.2	7.1	7.2	7.4	7.4	7.4	7.4	7.3	7.4
Bucket rollback in carry position	°	51°	51°	51°	51°	51°	51°	49°	49°	49°	49°	49°	49°
Dump angle at full height	°	50°	50°	50°	50°	50°	50°	50°	50°	50°	50°	50°	50°
Machine operating weight	kg	27253	27079	27024	27007	26849	26831	28017	27843	27788	27771	27613	27595

Note: bucket specification can slightly differ according to plant source. More bucket choice is available, please contact your local dealer.

*5m³ flat bottom bucket is available only from Lecce (IT) plant.



Form No. IR2409CCGB - Printed in Italy - MediaCross Firenze - 07/12



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NOTE: Standard and optional fittings can vary according to the demands and specific regulations of each country. The illustrations may include optional rather than standard fittings - consult your Case dealer. Furthermore, CNH reserves the right to modify machine specifications without incurring any obligation relating to such changes.

Conforms to directive 2006/42/EC **CE**



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