

**F-SERIES COMPACT WHEEL LOADERS  
21F | 121F | 221F | 321F**

**CASE**  
CONSTRUCTION



**TIER 4  
FINAL**

**PERFECT IN  
EVERY MISSION**

[www.casece.com](http://www.casece.com)

**EXPERTS FOR THE REAL WORLD  
SINCE 1842**

# HERITAGE

## A TRADITION OF INDUSTRY FIRSTS



## EXPERTS FOR THE REAL WORLD SINCE 1842

**1842** Case is founded.

**1869** First Case portable steam engine - road construction is born.

**1957** The first factory - integrated loader/backhoe in the world: a Case industry first.

**1958** The first Case 4-WD wheel loader, the W9.

**1992** Case expands its wheel loader range with 21B, 121B, 221B and 321B models.

**1998** Ride control on loader backhoes and skid steer loaders: another Case first.

**2001** The exclusive Cooling Cube in Case wheel loaders means clean engine, reliability and massive bucket payloads.

**2005** The E-Series compliant with EU Stage IIIA / Tier 3 regulations and with High Travel Speed option is launched.

**2014** Case launches Tier 4 Final / EU Stage IIIB compact wheel loaders.

**2015** Case extends its European product line-up with the new grader range.

# ENGINE PERFECT IN EVERY MISSION



## LOW EMISSIONS

### FPT, in-house advanced engine technology

Case equipment features the advanced in-house engine technology developed by sister company FPT Industrial that pioneered low emissions, high efficiency solutions for on- and off-road applications. With a broad portfolio of technologies and products, FPT brings to Case customers the competitive advantage of powertrain technologies that reliably delivers high performance with low operating costs – proven technologies from a global engine manufacturer that produces as many as 600,000 engines a year.

- 3.4 liter 4-cylinder Turbocharged Multiple Injection High Pressure Common Rail Engine with Waste Gate for optimum turbo pressure stability
- Tier 4 final / EU Stage IIIB compliant using **Maintenance Free** Technology:
  - The DOC produces NO<sub>2</sub> by the oxidation of NO
  - Particulate Matters (PM) are trapped in the PM-Catalyst. The reaction with NO<sub>2</sub> convert PM's into carbon dioxide (CO<sub>2</sub>) and pure nitrogen (N) passively.



Model	21F	121F	221F	321F
Power	58 hp / 43	64 hp / 48 kW	74 hp / 55 kW	74 hp / 55 kW
Torque	245 N.m	261 N.m	316 N.m	316 N.m

# F-SERIES COMPACT WHEEL LOADERS



## OUTSTANDING STABILITY

### Oscillating rear axle

The combination of the articulated joint and the rear oscillating axle reduces maximum cab oscillation by 50% or more.



## MILLIMETRIC CONTROL

### Inch and brake pedal

It progressively disengages the transmission during the decelerating phase and progressively engages the brakes.

# PRODUCTIVITY AND PRECISION IN EVERY MISSION



## HIGH PAYLOAD

Handle heavier pallets



## LOW CAB PROFILE

Take the shortest path

No waste of time with the reduced cab height:

- 21F and 121F: 2.46 m
- 221F: 2.63 m
- 321F: 2.68 m

You can always take the shortest path from point A to point B - in indoor jobs or when transporting on a truck.



## SUPERIOR DUMP HEIGHT

Centred and higher loading

The superior hinge pin height and the Case “banana” arms make it easy to load at the centre of the trailer without touching the edge with the arms.

# MAIN REASONS TO CHOOSE THE F-SERIES



## COMFORTABLE AND SAFE CAB

- 10 air vents ensure perfect climate control in all seasons
- Control all functions from the joystick



## HIGH VERSATILITY

Easy asphalt planing, snow blowing, brooming, compacting and much more with:

- 1 or 2 auxiliary hydraulic circuit
- Creep speed: max flow at constant low speed
- High flow option on 221F and 321F
- The wide offering of Case attachments



## FAST ATTACHMENT CHANGE OVER

- Hydraulic coupler controlled from the all-in-one joystick
- Depressurized push-pull connectors



## AUTO-RIDE CONTROL

Ride Control, activated only when needed, over 7 km/h prevents arm bouncing.



## HIGH PAYLOAD

- From 1,9 t up to 2,5 t tipping load
- Auto-Ride Control optimizes bucket retention



## SHORT TURNING RADIUS

Makes your day-to-day job easier when working in tight spaces.





## LOW CAB PROFILE

Easy transport on truck,  
quick access to the cab

- 21F and 121F: 2.46 m
- 221F: 2.63 m
- 321F: 2.68 m



## CAB SAFETY

Keeps you protected in case the  
machine rolls over or a 200 kg  
object falls from 5 m high  
(ROPS and FOPS level II).



## LOW EMISSIONS

- EU Stage IIIB / Tier 4 final  
compliant
- No particulate filter
- No fuel injectors in the exhaust



## FAST TRAVELLING

- Engage Turtle/Rabbit speed under load
- 221F and 321F are available in High  
Travel Speed (HTS) version: 33 km/h



## EASY ACCESS

Step in and out of the cab in a second.



## OUTSTANDING STABILITY

- Oscillating rear axle
- Easier levelling on rough terrains

# ATTACHMENTS

## GREAT ADAPTABILITY



### HIGH VERSATILITY

Ready for every attachment



### FAST ATTACHMENT CHANGE OVER

Plug and unplug your attachment in a few seconds

With the depressurized push-pull connectors you will never need hand tools to swap your attachments

#### Front electrical socket

For multi-functioning or special attachments

#### Standard flow or high flow

- Standard Flow (Max pressure: 230 bar):
  - 21F-121F: 67 lpm @ 2500 rpm
  - 221F-321F: 85 lpm @ 2500 rpm
- The High Flow package is available on 221F-321F:
  - 130 lpm @ 2500 rpm

High Flow option always comes as part of a package including Creep Speed, Front electrical socket and Return Depressurized Drain.



# COMFORT AND SAFETY IN ALL WORK CONDITIONS



## COMFORT CAB

Work around the clock



*ALL-IN-ONE Joystick*

*Adjustable wrist rest*

*10 air vents*

*Tilting adjustment of the steering wheel*



## CAB SAFETY

Cab structure: ROPS and FOPS level 2 come as standard

Designed to protect the operator in case the machine rolls over or a 227 kg rock falls from 5 meters height on the roof.



## EASY ACCESS

Easy entrance

With low cab floor and wide steps.

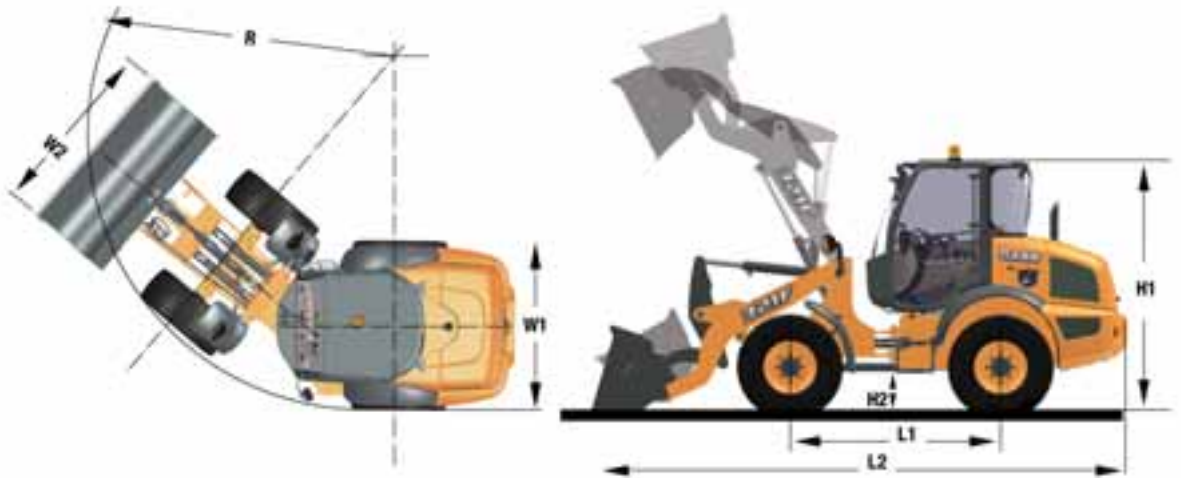
### If you want even more

The Deluxe Option includes an additional storage compartment under you left hand, storage spaces around the seat and height adjustment of the steering wheel.

# F-SERIES

## COMPACT WHEEL LOADERS

### GENERAL DIMENSIONS



	21F	121F	221F	321F
H1	2.46 m	2.46 m	2.63 m	2.68 m
H2	45 cm	45 cm	44 cm	49 cm
W1	1.74 m	1.74 m	1.80 m	1.86 m
W2	1.90 m	2.05 m	2.05 m	2.10 m
L1	2.08 m	2.08 m	2.22 m	2.23 m
R	3.72 m	3.72 m	3.99 m	3.99 m

### TRANSMISSION

Hydrostatic 4-wheel Drive Transmission \_\_\_\_\_ Travel speed is proportional to the pressure on the throttle.

#### Speed with standard tyres

Operating speed range \_\_\_\_\_ 0–5 km/h

Travel speed range \_\_\_\_\_ 0–20 km/h

Optional High Travel Speed \_\_\_\_\_ 33 km/h

(upon request on 221F and 321F)

#### “Inch & Brake” Pedal

Power transfer from the transmission to the bucket hydraulics at constant rpm. Optimum speed control at low speed.

#### Optional Creep Speed (upon request on 221F and 321F):

Set and adjust travel speed in the 1–5 km/h range, adjust engine rpm for hand-free asphalt planing, snow blowing, brooming.

### DIFFERENTIAL CHOICE

Limited slip front & rear (all models) or Front & rear open diff (21F & 121F) or open with 100% lock on front and rear differentials (221F & 321F)

### TYRES

#### Standard

21F/121F \_\_\_\_\_ 12.5–18

221F \_\_\_\_\_ 12.5–20

321F \_\_\_\_\_ 14.5–20

More special tyres upon request

### BRAKES

Standard brakes \_\_\_\_\_ disc brake.

Located in hubs for 221F/321F, centre mounted for 21F/121F

Parking brakes \_\_\_\_\_ disc brake on transmission shaft

### STEERING

Fully hydraulic center pivot steering.  
Front and rear wheels follow the same track.  
Steering angle of 40° to each side.  
Emergency steering function.

### ELECTRICAL SYSTEM

Voltage \_\_\_\_\_ 12 V  
Battery \_\_\_\_\_ 95 A.h  
Alternator \_\_\_\_\_ 120 A.h

### CAPACITIES

Diesel \_\_\_\_\_ 87 l  
Engine oil \_\_\_\_\_ 7 l  
Cooling liquid \_\_\_\_\_ 16 l  
Total hydraulic oil \_\_\_\_\_ 57 l  
Front axle \_\_\_\_\_ 9 l  
Rear axle \_\_\_\_\_ 12 l

### HYDRAULICS

Gear pump for loading and steering hydraulics  
Priority valve favouring steering hydraulics  
3rd or 4th functions are proportionally controlled by the All-in-one Joystick with , Flow memory button as standard.

#### Standard Flow

21F-121F \_\_\_\_\_ 67 lpm @ 2500 rpm

221F-321F \_\_\_\_\_ 85 lpm @ 2500 rpm

#### High Flow package

available upon request on

221F-321F \_\_\_\_\_ 130 lpm @ 2500 rpm

### NOISE AND VIBRATIONS

External - Guaranteed acoustic power-level LWA (1) \_\_\_\_\_ 101 dB

Cab interior - Sound Pressure Level (2) 21F - 121F: \_\_\_\_\_ 71 dB

221F - 321F: \_\_\_\_\_ 72 dB

Hand- / arm- / body -vibration (3) \_\_\_\_\_ < 2.5 / 0.5 m/s<sup>2</sup>

(1) According to 2000/14/EG & annexes.

(2) According to ISO 6396.

(3) According to ISO 8041

### EMISSIONS

Nox + HC \_\_\_\_\_ 4.5 g/kW/h

CO \_\_\_\_\_ 0.10 g/kW/h

PM \_\_\_\_\_ 0.02 g/kW/h

## EASY PALLET LOADING

Linkage: Mechanical self-levelling on XT and Z-bar

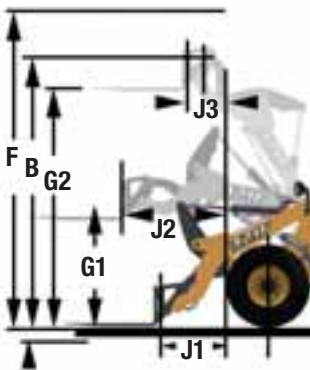


**Z-bar** is the most versatile linkage type. It offers more breakout force thanks to the 2 lifting cylinders and a higher dump height.



**XT** is the best linkage for pallet handling. Visibility on the pallet is the best with one lifting cylinder only and payload is optimum

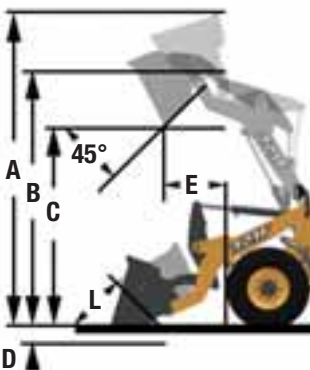
## SPECIFICATIONS WITH FORKS



	21F		121F		221F	321F
	Z-BAR	XT	Z-BAR	XT	Z-BAR	Z-BAR
Tipping load straight	2.8 t	3.0 t	3.0 t	3.2 t	3.1 t	3.6 t
Tipping load at full turn (40°)	2.4 t	2.6 t	2.6 t	2.8 t	2.7 t	3.0 t
Payload @80%*	1.9 t	2.1 t	2.1 t	2.2 t	2.2 t	2.5 t
F Max overall height	3.48 m	3.63 m	3.53 m	3.65 m	3.63 m	3.73 m
B Hinge pin height	3.14 m	3.11 m	3.18 m	3.13 m	3.29 m	3.40 m
G2 Max fork height	2.90 m	2.96 m	2.95 m	2.97 m	3.08 m	3.19 m
G1 Forks height @ max reach	1.27 m	1.34 m	1.27 m	1.34 m	1.34 m	1.39 m
J1 Reach @ ground level	0.94 m	0.77 m	1.01 m	0.80 m	0.99 m	0.99 cm
J2 Max Reach	1.35 m	1.26 m	1.41 m	1.27 m	1.43 m	1.43 cm
J3 Reach @ max height	0.59 m	0.46 m	0.63 m	0.47 m	0.61 m	0.61 m
Operating weight with forks	5020 kg	4910 kg	5310 kg	5090 kg	5559 kg	6060 kg

\* on even ground, according to ISO 8313 and EN 474-3

## SPECIFICATIONS WITH BUCKET



	21F		121F		221F	321F
	Z-BAR	XT	Z-BAR	XT	Z-BAR	Z-BAR
Bucket Volume (SAE)	0.7-1.0 m <sup>3</sup>		0.9 -1.1 m <sup>3</sup>		1.0 - 1.2 m <sup>3</sup>	1.1 - 1.2 m <sup>3</sup>
Tipping load straight	3.9 t	3.8 t	4.1 t	4.1 t	4.2 t	4.6 t
Tipping load at full turn (40°)	3.2 t	3.3 t	3.3 t	3.5 t	3.6 t	3.7 t
Payload @50%	1.6 t	1.6 t	1.7 t	1.8 t	1.8 t	1.9 t
Breakout Force	5925 daN	4024 daN	5375 daN	3849 daN	6269 daN	6194 daN
L2 Length with bucket	5.28 m	5.23 m	5.39 m	5.33 m	5.62 m	5.68 m
A Max bucket height	3.14 m	3.94 m	3.18 m	4.09 m	3.29 m	3.40 m
B Hinge pin height	3.14 m	3.11 m	3.18 m	3.13 m	3.29 m	3.40 m
C Dump height @45°	2.49 m	2.34 m	2.52 m	2.35 m	2.60 m	2.69 m
D Dig Depth	7.3 cm	13 cm	12 cm	14 cm	10 cm	8.4 cm
E Reach at full height	77 cm	71 cm	83 cm	74 cm	85 cm	85 cm
Operating weight (std. bucket)	5115 kg	5015 kg	5423 kg	5208 kg	5694 kg	6195 kg
Operating weight (4-in-1 bucket)	5414 kg	5304 kg	5742 kg	5507 kg	6034 kg	6535 kg

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CONSTRUCTION



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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  
Industrial reserves the right to modify  
machine specifications without  
incurring any obligation relating to such  
changes.

Conforms to directive 2006/42/EC

**CASE** Customer  
Assistance  
**00800-2273-7373**

The call is free from a land line.  
Check in advance with your Mobile Operator  
if you will be charged.

