

21F / 121F / 221F / 321F

**CASE**  
CONSTRUCTION



# COMPACT WHEEL LOADER

*F Series*



# ACROSS HISTORY



**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.

**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 is launched.

**2005**

CASE launched the High Travel Speed option.

**2014**

CASE launches Tier 4 Final / EU Stage IIIB compact wheel loaders.

**2019**

CASE introducing Electro Hydraulic Control at the Compact Wheel Loader Range.

**2020**

CASE launches EU Stage V compact wheel loaders.

# 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
- + EU Stage V compliant with EGR Valve (Exhaust Gas Recirculation), Diesel Oxidation Catalyst (DOC) & DPF
- + DPF Regeneration (thermal treatment) triggered by Engine Control Unit only when needed
- + No UREA / AdBlue



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



# PRODUCTIVITY AND PRECISION IN EVERY MISSION

## MILLIMETRIC CONTROL

### *Inch and brake pedal*

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

## OUTSTANDING STABILITY

### *Oscillating rear axle*

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

## 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.

And with the new XR version, which offers a longer loader arm, the hinge pin height is increased by an additional 8%.



# ATTACHMENTS

## GREAT ADAPTABILITY

### HIGH VERSATILITY

Ready for every attachment.

### FAST ATTACHMENT CHANGE OVER

Plug and unplug your attachment in 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:
  - 21F-121F: 67 lpm @ 2500 rpm
  - 221F-321F: 85 lpm @ 2500 rpm
- + Max pressure:
  - 21F Z-Bar: 210 bar
  - 21F XT-321F: 230 bar
- + 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.

## CAB SAFETY

**ROPS and FOPS level 2 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.

## DELUXE CABINE

**For those who want 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.



- 1 10 air vents
- 2 ALL-IN-ONE Joystick
- 3 Adjustable wrist rest
- 4 Tilting adjustment of the steering wheel

# ELECTRO-HYDRAULIC-CONTROL

## ALL YOU NEED AT WORK

### ELECTRO-HYDRAULIC-CONTROL

#### PRODUCTIVITY:

With more than 20 sensors and actuators it improve the machine controllability. Gives the driver the possibility to select different operating modes and make it possible to perform combined movements with bucket and loader arm.

#### COMFORT & RELIABILITY:

The driver can work all day effortlessly, with less shock and smooth machine behavior. It offers the possibility to set aggressiveness for loader arm and bucket movement with the LIFT/TILT CONTROL SETTINGS option and add the new bucket shaking mode which enables the operator to shed material quickly of the bucket, especially when working with sticky soil. (LIFT/TILT CONTROL SETTINGS option required)

#### SERVICEABILITY:

With the new electro hydraulic control the amount of space filled by the former hydraulic hoses increased and make it easier to access the maintenance and service points.

#### ECO & NOISE:

Optimizing machine functions means to increasing efficiency. With higher efficiency of the components (thermal motor, main valve, pumps) you get less fuel consumption, it reduces the vibrations and the noise of the machine.



# MAIN REASONS TO CHOOSE THE F-SERIES

## 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

## COMFORTABLE AND SAFE CAB

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

## EH-CONTROL

- + Work all day effortlessly, with less shock and smooth machine behavior.
- + Do combined movements
- + Bucket shaking mode

## 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

## CAB SAFETY

- + Keeps you protected in case the machine rolls over or a 227 kg object falls from 5 m high (ROPS and FOPS level II).

## LOW EMISSIONS

- + EU Stage V with EGR, DOC & DPF
- + No UREA / AdBlue

## FAST TRAVELLING

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





## **OUTSTANDING STABILITY**

- + Oscillating rear axle
- + Easier levelling on rough terrains

## **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

## **EASY ACCESS**

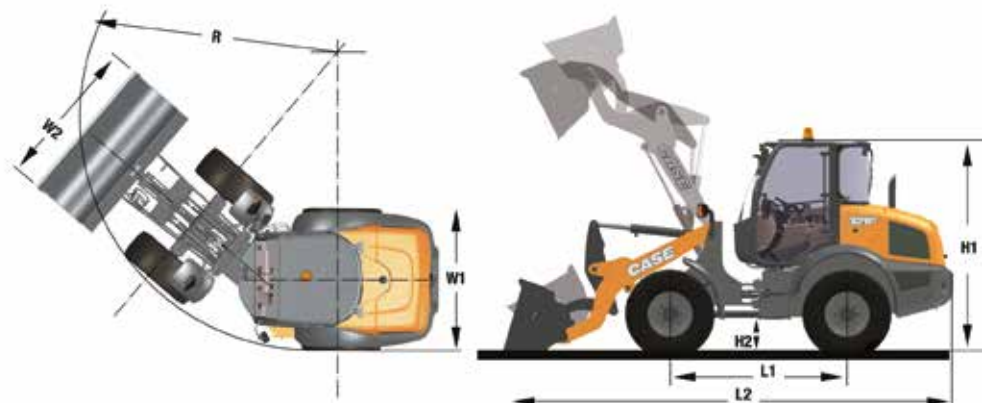
- + Step in and out of the cab in a second.

## **SHORT TURNING RADIUS**

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



# DIMENSIONS AND SPECIFICATIONS



## GENERAL DIMENSIONS

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

## 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 (STD speed version) \_\_\_\_\_ 0-20 km/h

Travel speed range (High speed version) \_\_\_\_\_ 0-14.4 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 1-20 km/h (STD speed version)

1-14.4 km/h (High speed version) 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

21F Z-BAR \_\_\_\_\_ drum type, with protected design.

21F XT - 121F - 221F - 321F \_\_\_\_\_ 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 \_\_\_\_\_ 86 l

Engine oil \_\_\_\_\_ 7 l

Cooling liquid \_\_\_\_\_ 13 l

Total hydraulic oil \_\_\_\_\_ 53 l

Front axle \_\_\_\_\_ 9 l

Rear axle \_\_\_\_\_ 11 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) \_\_\_\_\_ 71 dB

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

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

(2) According to ISO 6396.

(3) According to ISO 8041.

## EMISSIONS

EU Stage 5

## EASY PALLET LOADING

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



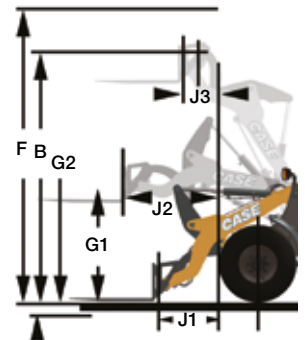
**Z-bar** is the most versatile linkage type. It offers more breakout force thanks to the 2 lifting cylinders and a higher dump height.

**XR** additional to the advantage of the Z-Bar the XR offering a longer loader arm and so a higher hinge pin height.

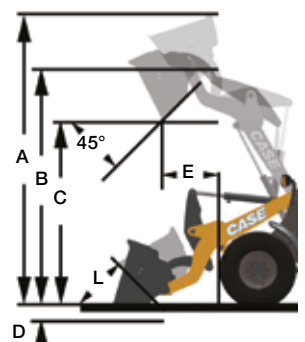
**XT** is the best linkage for pallet handling. Visibility on the pallet is the best with one lifting cylinder only and payload is optimum.

SPECIFICATIONS WITH FORKS		21F		121F		221F		321F	
		Z-BAR	XT	Z-BAR	XT	Z-BAR	Z-BAR	Z-BAR	XR
Tipping load straight	t	2.3	3.0	3.0	3.2	3.1	3.6	3.6	2.8
Tipping load at full turn (40°)	t	2.0	2.6	2.6	2.8	2.7	3.0	3.0	2.4
Payload @80%*	t	1.6	2.1	2.1	2.2	2.2	2.5	2.5	1.9
F Max overall height	m	3.48	3.63	3.53	3.65	3.63	3.73	3.73	4.15
B Hinge pin height	m	3.14	3.11	3.18	3.13	3.29	3.40	3.40	3.70
G2 Max fork height	m	2.90	2.96	2.95	2.97	3.08	3.19	3.19	3.53
G1 Forks height @ max reach	m	1.27	1.34	1.27	1.34	1.34	1.39	1.39	1.46
J1 Reach @ ground level	m	0.94	0.77	1.01	0.80	0.99	0.99	0.99	1.41
J2 Max Reach	m	1.35	1.26	1.41	1.27	1.43	1.43	1.43	1.81
J3 Reach @ max height	m	0.59	0.46	0.63	0.47	0.61	0.61	0.61	0.85
Operating weight with forks	kg	4570	4910	5310	5090	5559	6060	6060	6090

\* 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	Z-BAR	XR
Bucket Volume (SAE)	m <sup>3</sup>	0.7 - 1.0	0.7 - 1.0	0.8 - 1.1	0.8 - 1.1	0.9 - 1.2	1.0 - 1.3	1.0 - 1.3	1.0 - 1.3
Tipping load straight	t	3.5	3.8	4.1	4.1	4.2	4.6	4.6	4.0
Tipping load at full turn (40°)	t	3.0	3.3	3.3	3.5	3.6	3.7	3.7	3.3
Payload @50%	t	1.5	1.6	1.7	1.8	1.8	1.9	1.9	1.6
Breakout Force	daN	4605	4024	5375	3849	6269	6194	6194	6194
L2 Length with bucket	m	5.28	5.23	5.39	5.33	5.62	5.68	5.68	6.11
A Max bucket height	m	3.94	3.94	4.01	4.09	4.18	4.32	4.32	4.51
B Hinge pin height	m	3.14	3.11	3.18	3.13	3.29	3.40	3.40	3.70
C Dump height @45°	m	2.49	2.34	2.52	2.35	2.60	2.69	2.69	2.97
D Dig Depth	cm	6.6	13	12	14	10	8.4	8.4	29.3
E Reach at full height	cm	77	71	83	74	85	85	85	12
Operating weight (std. bucket)	kg	4570	5015	5423	5208	5694	6195	6195	6225
Operating weight (4-in-1 bucket)	kg	4936	5304	5742	5507	6034	6535	6535	6593



# BUILDING A STRONG CASE.

Since 1842, at CASE Construction Equipment we have lived by an unwavering commitment to build practical, intuitive solutions that deliver both efficiency and productivity.

We continually strive to make it easier for our customers to implement emerging technologies and new compliance mandates.

Today, our global scale combined with our local expertise enables us to keep customers' real-world challenges at the center of our product development.

The vast CASE dealers' network is always ready to support and protect your investment and exceed your expectations, while also providing you with the ultimate ownership experience.

Our goal is to build both stronger machines-and stronger communities. At the end of the day, we do what's right for our customers and our communities so that they can count on CASE.

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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

**CASECE.COM**  
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The call is free from a land line.  
Check in advance with your Mobile Operator if you will be charged. Toll free number not available from all calling areas.

