

**M-SERIES CRAWLER DOZERS  
2050M**

**CASE**  
CONSTRUCTION



**TECHNOLOGY  
THAT PAYS**

CaseCE.com

**EXPERTS FOR THE REAL WORLD  
SINCE 1842**

# **CASE CRAWLER DOZERS**

## **MISSION**



## **EXPERTS FOR THE REAL WORLD**

### **SINCE 1842**

**1842** CASE is founded.

**1946** Allis-Chalmers is the first manufacturer to introduce a torque converter on Dozers. In the 30s, they had invented permanently lubricated track rollers and sealed and lubricated tracks.

**1951** First CASE Dozer made in cooperation with ATC and promoted under Terratrack brand.

**1956** CASE acquires ATC and is the first manufacturer to introduce tracks counter rotation on the 1000 Series Terratrack Dozer.

**1974** FIAT acquires Allis-Chalmers and in the 70's introduced the exclusive **EQUISTATIC** geometry on bulldozer machines. In the late 90s, CASE launched its exclusive **CASE EXTENDED LIFE TRACK** undercarriage.

**2008** CASE introduced the **DUAL PATH** hydrostatic transmission on the K-Series.

**2013** CASE is the first to introduce SCR technology on the M-Series dozer.

**2014** CASE started to build L-Series Dozers in Belo Horizonte plant.



# **BOOST YOUR PRODUCTIVITY**

## **POWER AND EFFICIENCY**

**Drawbar pulling leadership:** The hydrostatic transmission and the common rail engine deliver the best-in-class pulling capacity and controllability. All the working parameters can be customized by the driver for excellent machine controllability and faster cycle times.

**Productivity boosting electronics:** The new cab controls offer a wide choice of electronic settings and automated functions that make the driver's job easier. Together with the **lowest noise level** in the market, they minimise fatigue on long working days.

**Customise your dozer:** The M-Series offers a wider choice of attachments such as blades, tracks, rippers, or winches. You can easily specify the configuration that perfectly meets your needs.

**Quick maintenance:** The fully openable side panels enable you to service the M-Series from the ground, while the wide belly plates provide perfect accessibility for extraordinary maintenance.

## **NEXT GENERATION ENGINE**

The state-of-the-art common rail engine delivers top performance in load response, max torque, power and fuel economy. The combustion is optimised for maximum efficiency, occurring at high temperatures and 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 well-proven **multi injection technology** to maximize torque back-up and fuel efficiency with reduced engine noise and vibrations.



## **NEVER ENDING POWER**

The powerful FPT Industrial engine ensures high torque back-up under load. When the tractive effort grows and the rpm tends to drop, the engine power grows up to 16% till 1800 rpm. The result is constant performance and higher pulling capacity. In addition, the ability to work with high torque at lower engine rpm reduces engine wear.



# **DRAWBAR PULLING LEADERSHIP**

## **DUAL PATH HYDROSTATIC TRANSMISSION**

The innovative Hydrostatic Transmission offers the Best-in-Class Pulling capacity coupled with excellent maneuverability. The triple reduction final drives ensure high torque on the ground, reducing the working pressure of the entire system and improving its overall efficiency.



## **“V” SHAPE COOLING PACKAGE**

The cooling package of the 2050M has been redesigned and fitted with a hydrostatic reversible fan. In the new design, the radiators are mounted with no overlap, so that each radiator receives fresh air, maintaining constant fluid temperatures. The hydrostatic fan continuously adapts its speed to match the real cooling demand, reducing power absorption. The reversing mode reduces maintenance needs and lengthens cleaning intervals.

## **CASE EXTENDED LIFE TRACK**

The CASE Extended Life Track(CELT), standard on the 2050M is built with a single piece Sprocket ring with a special Tooth profile & open shoes. This feature substantially improves durability, especially in highly abrasive conditions.





## **PRODUCTIVITY**

# **BOOSTING ELECTRONICS**



### **AGILE AND STRONG**

*The operator has full control of the massive power of the M-Series Dozer. The electrohydraulic joystick allows to customize the reversing and steering sensitivity for faster and more efficient cycles. The decelerator pedal can be used either to reduce the travel speed only or travel and engine speed.*



### **AUTOMATIC BLADE FUNCTIONS**

*The advanced electronics functions enable the operator to specific functions in addition to the standard blade movements. The onboard computer can be set directly from the joystick; the blade reaction can be set choosing from 3 levels of sensitivity; the grading button immediately reduces the speed of the blade by 50% for more accurate soil contour; the shaking mode enables the operator to shed material quickly, especially when working with sticky soil.*



### **UNMATCHED VISIBILITY**

*The M-Series cab is engineered for operator performance, comfort and safety. The new positioning, further forward on the machine, ensures complete blade visibility. The operator can work with confidence and more productively in every operation. The air suspended seat is easy to adjust, providing every operator with a perfect working position. The powerful air conditioning system combined with the best-in-class noise level provide an excellent working environment, reducing operator stress during long working days.*

# **CUSTOMIZE YOUR DOZER**

## **FULLY INTEGRATED BLADE CONTROL**

The M-Series is ready to work with the **most common blade controls** available in the market. The machine can be prepared in the factory for a specific configuration, ensuring perfect wire layout, visibility and component integration, guaranteeing that the high standard of reliability of every CASE product is maintained.



## **READY FOR EVERY TASK**

A wide offering of implements and equipment can be installed in the new CASE Dozers such as 3 shank parallel ripper.

“Semi-U blade” with 2050M is offered for Indian market. All CASE dozers offer the patented «Equistatic» system that increases the tilting capability, while reducing the efforts on the pushbeams, increasing the overall frame reliability and reducing the overall wear of components.





**EASY ACCESS**

**WITH THE TILTABLE SEAT**





## **SIMPLE AND EASY**

The hydrostatic transmission brings less complexity and lower maintenance requirements than a traditional one. Belly plates on the bottom of the machine provide excellent access to controls and transmission components. The final drive installation on the main dozer frame enables dismounting while leaving the hydrostatic components in place. The transmission can even be reached through the cab floor, so it can be serviced directly on the job site.



## **FAST REFUELING**

The refilling points (Fuel /Hydraulic Oil) are conveniently placed on the rear of the cab in a well-protected place. The daily maintenance can be done quickly, thanks to dedicated steps that make the access easier and safer.



## **GROUND ACCESS FOR SERVICING**

The new single piece main frame enables you to service the main controls easily from the ground, simply opening the wide lateral shieldings. Oil levels, battery status, electric components, filters and the emergency cut-off switch are rationally grouped and clearly identified with colour coding.

With the M-Series, you can quickly get ready for your working day.





# M-SERIES

## CRAWLER DOZERS

### ENGINE

Model.....	FPT Industrial Engine F4HE96848*J101
Cylinders.....	6
Displacement.....	6,7 L
Fuel injection.....	Direct common rail
Fuel filter.....	Scr-on, with screen
Air intake.....	Cross-flow
Cooling.....	Liquid
Engine speeds.....	RPM
High idle - no load.....	2200 +/- 50
Rated - full load.....	2200
Low idle.....	800 +/- 25

### Horsepower SAE J1349

Net.....	214 hp (160 kW) @ 2200 rpm
Gross.....	232 hp (173 kW) @ 2200 rpm

### Engine lubrication

Pump.....	Deep sump plate cooler w/ pressurized under-piston nozzles
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### Pump operating angle ratings

Side-to-side.....	35°
Fore and aft.....	45°

### Radiator

Core area.....	0.33 m²
Rows of tubes.....	2

### TRANSMISSION COOLING

Type.....	Oil to air
Core size.....	0.31 m²

### ELECTRICAL SYSTEM

Alternator.....	120 amps
Batteries(2).....	12 Volt, low maintenance 1000 cold-cranking amps @ -18° C

### POWER TRAIN

#### Dual path hydrostatic

Pump.....	Variable axial piston
Motor.....	Variable bent axial piston
Max. drawbar pull.....	360 kN
Transmission.....	Single lever control electronic straight tracking
Oil filter.....	4 micron, spin-on, replaceable

### Travel speeds

Forward.....	0 - 9.3 km/h
Reverse.....	0 - 9.3 km/h
Parking brakes heavy-duty (spring applied hydraulically released)	
Steering brakes.....	Hydrostatic
Final drive.....	2 helical gear reductions to planetary
Ratio.....	48.75:1

### BLADE

Variable blade pitch - adjustable.....	55° +/- 5°
Lift speed - per second.....	483 mm
Cutting edge.....	Reversible, replaceable
Width (dozer HSU).....	200 mm
Thickness.....	20 m

### RIPPER

Max. penetration.....	581 mm
Width.....	2159 mm
Cut width.....	1938 mm
Max. ground clearance.....	518 mm
Max. number of shanks.....	3
Tooth spacing w/3 teeth.....	930 mm
Hydraulic cylinder.....	Double-acting
Diameter.....	133.4 mm
Stroke.....	597 mm
Rod.....	70 mm

### OPERATOR ENVIRONMENT

ROPS/FOPS cab - pneumatically suspended seat - w/back adjustment - seat belt - arm rests - foot rests - tool storage area - headliner floor mat - tilting seat platform - noise level 78dbA.

### Warning lights

Air filter - alternator - diagnostic fault indicator - engine coolant temperature - engine oil pressure - hydraulic filter - low fuel level - park brake engaged - service soon indicator - transmission filter - transmission charge pressure.

### Gauges

Battery voltage - digital hour meter/tachometer diagnostic/service reminder - fuel level - transmission oil temperature - transmission speed indicator - water temperature.

### Audible warnings

Engine coolant temperature - engine oil pressure - low fuel level - transmission charge pressure - transmission/hydraulic temperature.

### HYDRAULICS

Pump Flow@2200 RPM.....	153 L/ min
Max. pressure.....	248 bar

#### Lift cylinder Dozer

Bore diameter.....	82.6 mm
Rod diameter.....	50.8 mm
Stroke.....	1000 mm

#### Tilt cylinder Dozer

Bore diameter.....	114.3 mm
Rod diameter.....	63.5 mm
Stroke.....	126 mm

### TRACK AND SHOE OPTIONS

#### XLT(EXTRA LONG TRACKS)

610mm.....	closed grousers and CLT
610mm.....	open grousers and CELT

### TRACK ON GROUND

#### Shoe area

610mm.....	39979 cm²
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### SERVICE CAPACITY

Fuel tank.....	405 L
Engine oil w/filter.....	16.4 L
Engine oil w/o filter.....	15.6 L
Engine cooling system.....	30.28 L
Hydraulic reservoir.....	210 L
Final drive - per side.....	25 L
Track rollers - each.....	0.275 L
Front idlers - each.....	0.225 L
Carrier rollers - each.....	0.334 L

### OPERATING WEIGHT

#### Operating weight includes:

Cab.....	Front pull hook
Full fuel tank.....	Rear retrieval hitch
Hydraulics tanks.....	Track guides
Operator.....	170 lb (77 kg)
CLT chain.....	Horn
Lights.....	Track shoe
C- frame.....	Blade width as noted

#### WEIGHT (KG)

Extra Long Tracks.....	20592 kg Semi-U
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### ADD-ON WEIGHTS

#### WEIGHT (KG)

Drawbar.....	66
Ripper(3 shank).....	1355
Winch.....	2500

### CELT CHAIN-PER TRACK

#### WEIGHT (KG)

24" (610 mm).....	1789
Additional weights vs CLT- per track.....	43
Center rock guard.....	306
Sweeps.....	63

### UNDERCARRIAGE

Track adjustment.....	Grease injection
Frame.....	Oscillating equalizer beam suspension and pivot shaft

### Track link pitch

CLT track.....	202.8 mm
CELT track.....	202.8 mm
Track shoe height.....	73 mm
Pin diameter.....	44.5 mm

### Bushing Diameter

CLT track.....	72.7 mm
CELT track.....	93 mm

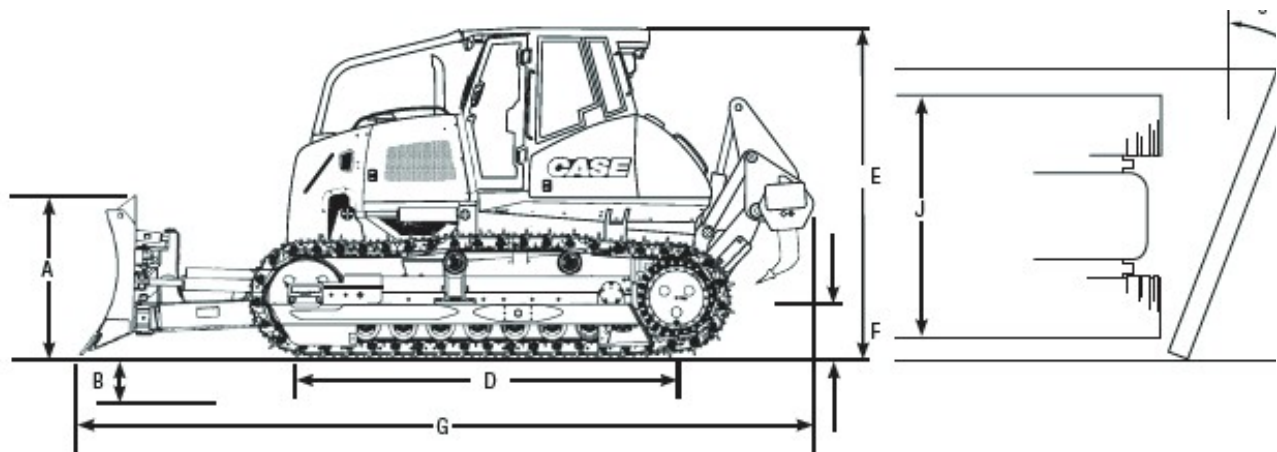
### Track shoes per side

CLT/CELT track.....	45
Track rollers per side.....	8
Carrier rollers per side.....	2
Track roller rail diameter.....	187.6 mm

# M-SERIES CRAWLER DOZERS

## SPEC SHEETS

### GENERAL DIMENSIONS



Line drawings are for illustrative purpose only and may not be exact representation of unit.

#### XLT (extra-long track)

TRACKS	
Track gauge	1940 mm
Max. shoe width	610 mm
D.Track on ground	3251 mm
Area of track of ground	4.0 m <sup>2</sup>
Ground pressure	0.51 kg/cm <sup>2</sup>
DIMENSIONS	
E.Height to top of cab	3103 mm
F. Ground clearance	362 mm
G.Length	
Blade straight with drawbar	5902 mm PAT 5387 mm Semi-U
Blade straight with ripper	7383 mm PAT 6869 mm Semi-U
BLADE DIMENSIONS	
Blade Capacity SAE J1265	5.60m <sup>3</sup>
Undercarriage available	XLT
H.Blade width	3426 mm
Blade width in transport position	3426 mm
A.Blade height	1425 mm
Max. Tilt	+/- 433 mm
Max. Pitch	+/- 5°
C. Max. Angle	-
B. Digging depth	583 mm
Max. Lift above ground	1244 mm
M.Cast reach	438 mm
N. Cut reach	438 mm
J. Over track	2550 mm width 610 mm shoes

NOTE: Ground clearance and overall height dimensions are with the grousers fully penetrated. Add 52.5 mm if unit is on solid surface.



# **STANDARD** **AND OPTIONAL**

## **STANDARD**

### **ENGINE**

FPT Industrial engine NEF Family Integral engine oil cooling  
Fuel filter  
Dual element radial seat air cleaner  
120 amp alternator  
2 x 12 V batteries  
Engine side panels

### **BLADE**

50°- 60° variable pitch with Integral Adjustment Tool, Single Lever, Electro-Hydraulic control for blade lift, angle, or tilt "Equistatic" device for dozer version

### **POWER TRAIN**

Dual path infinitely variable, single-lever controlled Hydrostatic drive with Electronic Straight Tracking and Counter-rotation  
Forward/reverse ratio control  
3 pre-selectable steering sensitivities  
3 reversing sensitivities  
3 blades sensitivities  
Blade Shaking Mode  
Fine grading mode  
Triple reduction final drive: helical gear/planetary  
Decelerator with hydrostatic drive retardation  
Automatic spring applied parking brake

### **UNDERCARRIAGE**

Hydraulic track adjusters  
Case Extended Life Track (CELT) Chain  
Permanently lubricated (track and carrier rollers/idlers)  
Track adjuster guard  
Track guides - front and rear

### **OPERATOR ENVIRONMENT**

Cab with heater, A/C, defroster, windshield wiper and lights  
Seat belt  
76 mm Internal mirror

### **OTHER**

Reverse gear warning  
Horn  
Lights: 2 in front and 1 in rear  
Master disconnect switch  
Mirror  
Rear transmission guard

## **OPTIONAL**

### **REAR MOUNTED EQUIPMENT**

Ripper - 5 positions with 3 shanks  
Rear tow hook  
Rear drawbar

### **HYDRAULICS**

4 spool hydraulic valve for field-installed ripper  
3 spool hydraulic valve without plugs for field-installed ripper  
3 spool hydraulic valve with plugs

### **GUARDS**

CAB canopy brush guard  
Center rockguard  
Sweeps

### **SCREENS**

Cab rear screen  
Radiator brush screen

### **OPERATOR ENVIRONMENT**

Environmental drain  
Grid heater  
Additional work lights  
Front pull hook  
Rear view mirror  
Rear wiper for cab

Standard and optional equipment shown may vary by country.

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