

# Dozer

850J



- Gross Power: 152 kW
- Net Torque: 915 Nm
- Operating Weight: 20 800 kg

**BELL**

# Technical Data - 850J Dozer

## ENGINE

### Type

John Deere PowerTech Plus™ PVX 6068 with variable-geometry turbocharger, exhaust gas recirculation, and air-to-air aftercooler; certified to EPA Tier 2 emissions.

### Gross Power

143 kW SAE @ 1,800 rpm

### Net Power

152 kW SAE @ 1,800 rpm

### Cylinders

6

### Displacement

6.8 l

### Maximum Net Torque

915 Nm @ 1,500 rpm

### Lubrication

Pressure system with full-flow spin-on filter and oil-to-water cooler.

### Air Cleaner

Dual-stage dry type with tangential unloader.

### Electrical System

24 volt with 80 amp alternator (cab)

### Batteries (two 12 volt)

950 cold-cranking amps, 190 min reserve capacity

### Cooling Fan

Automatic Reversing Cooling Fan

### Cooling Fan Filter, Return Oil

10 micron

## TRANSMISSION

Automatic, dual-path, hydrostatic drive; load-sensing feature automatically adjusts speed and power to match changing load conditions; each individually controlled track is powered by a variable displacement piston pump and motor combination; travel speeds (forward and reverse) infinite to 10 km/h (0 to 6.3 mph); ground-speed selection buttons on single-lever steering and direction control; independently selectable reverse speed ratios 80%, 100%, 115%, or 130% of forward ground speed; decelerator pedal controls ground speed to stop

### Type

Dual-path hydrostatic

### System Relief Pressure

45 850 kPa (6,650 psi)

### Filter, Charge Oil

10 micron

### Cooling

Oil-to-air

### Travel Speeds (forward and reverse)

0–10 km/h (0–6.3 mph) or 11 km/h (6.8 mph) max (optional)

## FINAL DRIVES

Double-reduction, planetary final drives transfer torque loads over three gear sets; mounted independently of track frames and dozer push frames for isolation from shock loads.

### Total Ratio

44.7483:1

### Drawbar Pull

Maximum  
344 kN

@ 1.9 km/h (1.2 mph)  
167 kN

@ 3.2 km/h (2.0 mph)  
120 kN

## STEERING

Single-lever steering, speed, direction control, and counterrotation; full power turns and infinitely variable track speeds provide unlimited maneuverability and optimum control; hydrostatic steering eliminates steering clutches and brakes.

## BRAKES

Hydrostatic (dynamic) braking stops machine when the direction/steering control lever is moved to neutral or the decelerator is depressed to the end of travel.

### Type

Hydraulic

## AUTOMATIC PARKING BRAKE

Exclusive safety feature engages wet, multiple-disc brakes whenever the engine stops, whenever the decelerator is depressed to the end of travel, or whenever the park lock lever is placed in the start or neutral positions and motion is detected; machine cannot be driven with brake applied, reducing wear out or need for adjustment.

### Type

Spring-applied, hydraulic release

## HYDRAULIC SYSTEM

### System Type

Load sense

### System Relief Pressure

3,625 psi

### Differential Pressure

275 psi

### Pump Type

Piston

### Pump (74 cc)

174 l/min

### Maximum Flow @ Unloaded High Idle

163 l/min

### Filter, Return Oil

10 micron

### Blade Type

Outside dozer Semi-U

## Control

T-bar hydraulic-pilot two-function joystick, (with push button angle function for PAT)

## Cylinders

Heat-treated, chrome plated, polished cylinder rods with hardened steel (replaceable bushings) pivot pins

## Cooling

Convective oil sump

## CAPACITIES

### Fuel Tank with Lockable Cap

371 l

### Cooling System with Recovery

Tank

35 l

### Engine Lubrication, Including

Filter

26.5 l

### Final Drive - 1st Reduction

8.0 l

### Final Drive - 2nd Reduction

16.3 l

### Hydraulic System Reservoir

105.6 l

### Hydrostatic System Reservoir

105.6 l

## UNDERCARRIAGE

Seven-roller track frame with front and rear track guides and sprocket guard; John Deere Dura-Trax™ features deep-heat-treated, sealed, and lubricated track links and through-hardened, sealed, and lubricated rollers for maximum wear resistance; sprockets are segmented; extreme-duty shoes stands; full length rock guard

### Blade Type

Outside dozer Semi-U

### Chain

Sealed and Lubricated

### Grouser Width

610 mm

### Shoes

(each side) 40

### Ground Contact Area

33 755 cm<sup>2</sup>

### Ground Pressure

52.5 kPa

### Length of Track on Ground

2 770 mm

### Track Gauge, Standard

1 880 mm

### Oscillation at Front Roller

±114 mm

### Track Rollers

(each side) 7

## Track Pitch

203 mm

## SAE OPERATING WEIGHTS

Base weights were computed for units with standard equipment, rollover protective structures, full fuel tanks, and 79 kg (175 lb) operators.

## Blade Type

Outside dozer

## Base Weight (incl. ripper)

20 252 kg

## BLADE WEIGHTS

Includes push beams, trunnion mounts, straight end bits, C-frames, angle and tilt cylinders where applicable.

## Semi-U

1326 kg

## Push Beam Assemblies for Straight or Semi-U Blades (without blade)

1672 kg\*

\*Included in SAE operating weights

## BLADE CAPACITIES

### Blade Type

Outside dozer

## Semi-U

3251 mm (128 in)/  
5.57 m<sup>3</sup> (7.29 cu.yd)

## OPTIONAL/SPECIAL EQUIPMENT

### Blade Type

Outside Dozer

## Tracks

Dura-Trax™ Lubricated Chain with Split Master Link, Single-Bar Grousers, and Extended Life Undercarriage

**560 mm (22 in) Extreme Duty**  
in base

**610 mm (24 in) Extreme Duty**  
307 kg

### Final Drive Seal Guard

70 kg

### Retrieval Hitch\*

52 kg

### Drawbar, Extended Rigid

130 kg

### Heavy-Duty Grille

39 kg

### Front and Door Screens

79 kg

### Rear Screen

34 kg

### Side Screens

54 kg

### Condenser Guard

55 kg

**Limb Risers**  
272 kg

**Blade Brush Guard**  
87 kg

**Front Counterweight**  
397 kg

\*Included in SAE operating weight.

**Lift-Cylinder Guards**  
80 kg

**Tank Guard**  
323 kg

**Rear Counterweight**  
449 kg

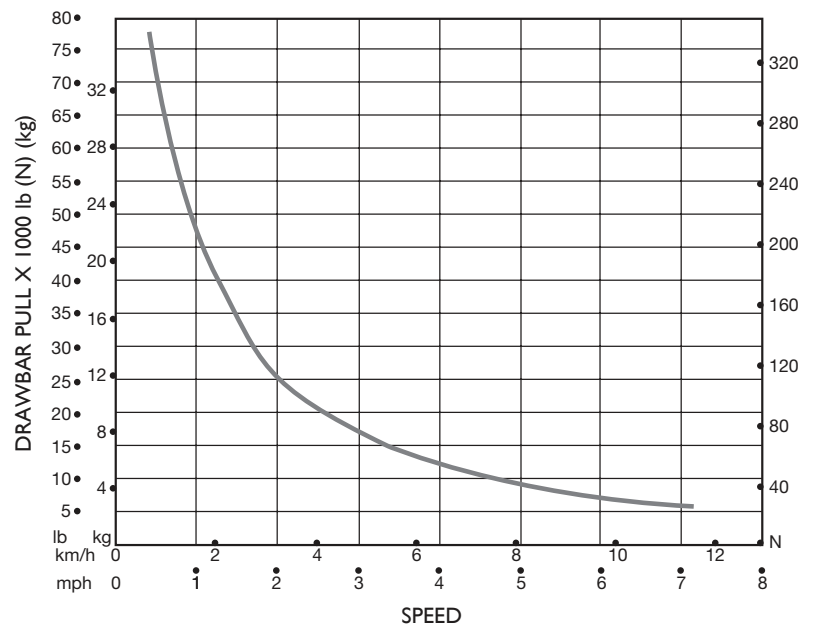
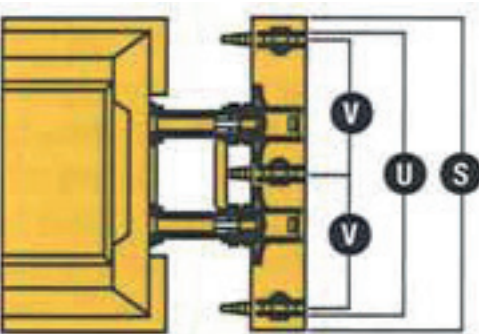
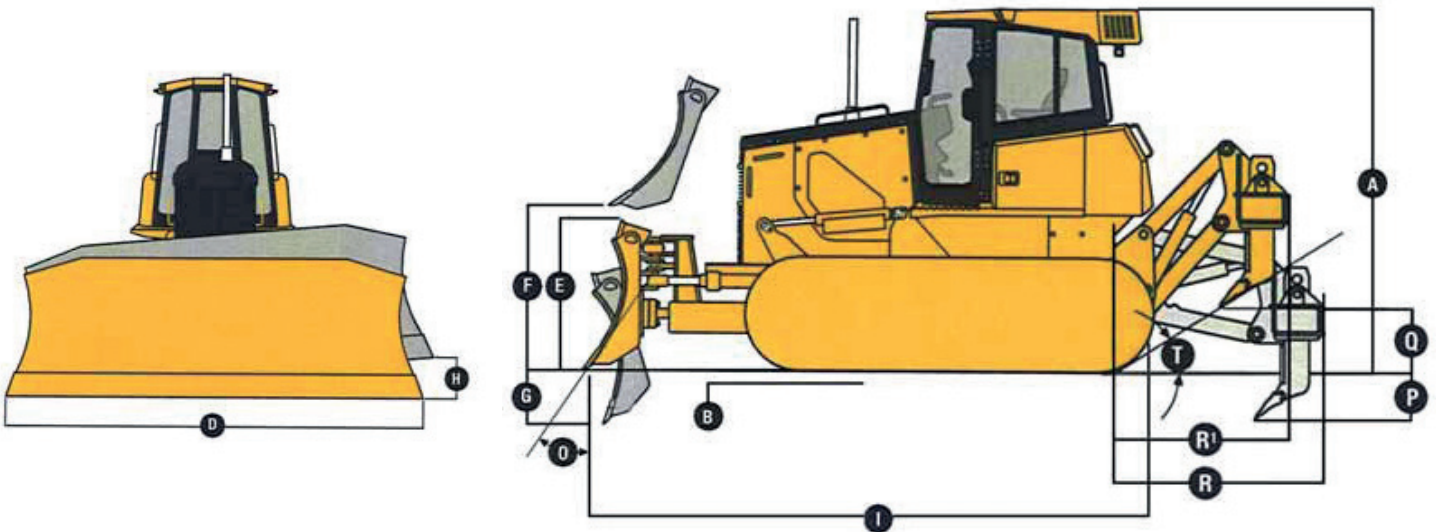
## Dimensions & Parallelogram Ripper

### Blade Type

A	Overall Height to Roof	3180 mm
	Overall Height to Exhaust Stack	3190 mm
B	Tread Depth with Single-Bar Grouser	65 mm
	Moderate Duty	72 mm
	Extreme Duty	72 mm
D	Blade Width	3251 mm
E	Blade Height	1422 mm
F	Blade Lift Height	1150 mm
G	Blade Digging Depth	600 mm
H	Blade Tilt (uses tilt jack)	753 mm
I	Overall Length with Blade*	5377 mm
	*Optional extended drawbar adds	241.5 mm

### Hydraulic Pitch Adjustment and ESCO Ripper Tips

Weight	2032 kg	
P	Maximum penetration	724 mm
Q	Maximum clearance under tip	610 mm
R	Overall length, lowered position	1625 mm
R1	Overall length, raised position	1525 mm
S	Overall beam width	2400 mm
T	Slope angle (full raise)	24 degrees
U	Ripping width	2145 mm
V	Distance between shanks	1040 mm



CRAWLER SPEED VS GROUND PULL - Usable pull will depend on traction and weight of tractor



All dimensions are shown in millimetres, unless otherwise stated between brackets.  
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