

BD475-2

CRAWLER DOZER



Salient Features :

- Outstanding Productivity
- Breakthroughs in fuel economy
- Minimum down time
- Operator comfort



BD475-2

Flywheel horsepower (net) : 634 kW (850 hp) @
2100 rpm

Operating mass : 100,000 kg (with ripper)

BD475-2 CRAWLER DOZER

Salient Features :

Outstanding Productivity

- Stress absorbing undercarriages offer mighty traction.
- A high-potency engine for powerful dozing and ripping.

Breakthroughs in fuel economy

- Automatic lockup torque converter maximizes production while assuring excellent fuel economy.
- The Cummins-QST30 T2 Tier II electronic engine provides maximum fuel conservation.

Minimum down time

- Stress-absorbing undercarriages extend service life.
- Unique modular design makes it easy to remove power train components, without oil spillage.
- Advanced monitoring system helps prevent minor problems from becoming major ones.

Operator comfort

- An extra low machine profile means excellent dynamic stability.
- Large cab window area offers a panoramic view.
- A well-sealed cab provides excellent noise Suppression.

Pilot Operated Hydraulic System

- It offers effortless fine control of blade through joystick.



ENGINE

Make	Cummins
Model	QST30 T2 TIER II
Type	Electronic, Diesel, 4-stroke, water cooled v-type turbo charger with charge air cooler
Flywheel power (net)	634 kW (850 hp) @ 2100 rpm
Maximum torque	4045 Nm (412 kgm) @ 1300 rpm
No. of Cylinders	12
Bore & Stroke	ø140 mm x 165 mm
Displacement	30.5 l (0.0305 m³)
Electricals	
Alternator	24V, 75A
Starting motor	24V, 18kW (9 kW x 2)
Battery	(2 x 12 V, 160 Ah) x 2



TRANSMISSION

Torque Converter	Model	TCS - 52 - 1D	
	Type	3 element, single stage single phase with lockup clutch	
Transmission	Type	Planetary gear,power shift electronically operated hydraulically actuated forced lubrication 3 forward, 3 reverse.	
Final Drive	Type	Spur and planetary gear, double reduction	
	Lubrication	Splash type	
	Total reduction	36.616	
Travel Speeds m/sec (km/h)	Range	Forward	Reverse
	1st	0-0.97 (0-3.5)	0-1.25 (0-4.5)
	2nd	0-1.8 (0-6.5)	0-2.30 (0-8.3)
	3rd	0-3.2 (0-11.6)	0-4.11 (0-14.8)



HYDRAULIC SYSTEM

	Hydraulic pump	Fan Drive Pump
Type	Gear pump	Axial Piston Pump
Capacity @ rated engine rpm	586 l/min	185 l/min
Relief pressure	20.6 MPa (210 kg/cm²)	27.5 MPa (280 kg/cm²)
Fan drive Motor relief pressure		27.5 MPa (280 kg/cm²)
Hydraulic Cylinders		
Type	Double acting piston	
Blade lift	2 Cylinders	
Bore x Stroke	ø 180 mm x 1781 mm	
Blade tilt	1 cylinder	
Bore x Stroke	ø 250 mm x 285 mm	
Ripper lift	2 Cylinders	
Bore x Stroke	ø 250 mm x 645 mm	
Ripper tilt	2 Cylinders	
Bore x Stroke	ø 250 mm x 540 mm	
Pin Puller	1 Cylinder	
Bore x Stroke	ø 60 mm x 180 mm	

STANDARD ACCESSORIES

Decelerator pedal	Dry type air cleaner with turbo pre-cleaner
Tiltable floor frame	710 mm single-grouser
75A Alternator	extreme services shoes
Track roller guards	(Sealed and lubricated tracks)
Sucker type Fan	Fully adjustable operator seat
Hydrostatic fan drive system	Hinged lower guard with front pull hook
Back-up Alarm	Radiator reserve tank
Final Drive case wear guard	Lighting system (including 6 front and 2 rear lights)
Auto priming system	Power Shift transmission
Hydraulic Track Adjusters	Segmented sprockets
Hinged front mask	ROPS Canopy
Fire Extinguisher	Vandalism Protection Kit
Hexagonal cabin with AC	Operator fatigue monitoring system
Auto Lubrication System	Auto Fire Detection and Suppression System

OPTIONAL ATTACHMENTS

- Variable giant ripper
- Working Light for Ripper

VARIABLE GIANT RIPPER

Variable, parallelogram type single shank ripper ideal for digging up rocks digging angle is variable. Digging depth is adjustable in four stages by a hydraulic controlled pin puller.

Additional mass	: 6250 kg
Beam length	: 1477 mm
Max lift above ground	: 1140 mm
Max digging depth	: 1800 mm
Additional ground pressure	: 10.3 kPa



STEERING

Type	Wet, Multiple disc spring loaded, hydraulically released, hand operated, interconnected with steering brake for easy turning.
Min. Turning Radius	4.6 m



FILTRATION

Engine	Venturi spin on type lube oil filter and 2 stage fuel filter with water seperator for fuel line are provided.
Transmission Steering & Brake	Common magnetic oil strainer is provided. One replaceable element by-pass filter is provided for transmission system. One replaceable element type filter is provided for steering & braking
Hydraulic System	Magnetic plug & replaceable element type filter is provided.



UNDER CARRIAGE

Suspension	Oscillation type equalizer bar
Track frame	Cylindrical, high tensile strength steel construction
Track Rollers	8 No. Each side
Carrier Rollers	2 No. Each side
Track Shoes	39 No. Each side
Track Pitch	2770 mm
Grouser Height	105 mm
Shoe width	710mm (standard)
Ground Pressure (Basic Tractor)	124 kPa (1.27kg/cm ²)
Ground contact area	5.943 m ²



DOZER ATTACHMENT

	Semi - U Dozer
Overall length with dozer mm	8660
Blade capacity m ³	25.6
Blade length x height mm	5265 x 2610
Max. lift above ground mm	1630
Max. drop below ground mm	894
Max. tilt adjustment mm	1250
Additional mass	
Dozer Equipment kg	14600
Additional ground pressure kPa (kg/cm ²)	24.1 (0.25)



COOLANT & LUBRICANTS CAPACITY (Refill)

Fuel Tank	1520 ℓ
Cooling System	206 ℓ
Engine Lub. Oil	76 ℓ
Transmission, Torque Converter & Steering	210 ℓ
Final Drive (each side)	75 ℓ
Hydraulic System	
Semi-U Dozer	180 ℓ
Ripper Equipment	130 ℓ



BRAKE

Type	Wet, multiple disc, spring loaded, hydraulically released, foot and hand operated, interconnected with steering clutch.
Parking brake	Hand operated lever.



MASS

Operating mass

(Basic tractor, including semi-U dozer, giant ripper, steel cab, ROPS Canopy, operator, rated capacity of the lubricant, coolant and full fuel tank.)..... 1,00,000 kg

Operating mass

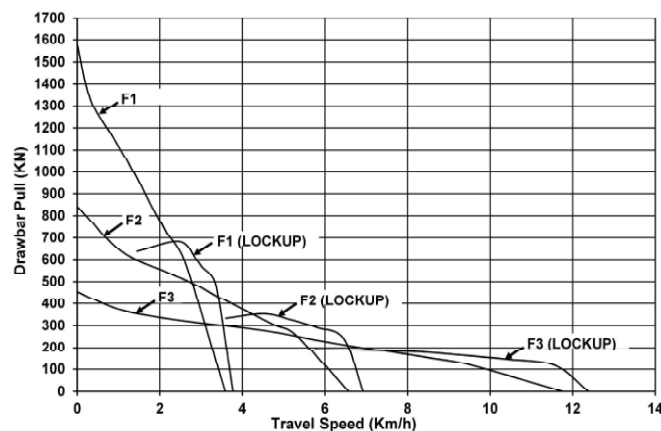
(Standard equipment with semi-U dozer) 91,380 kg

Shipping mass

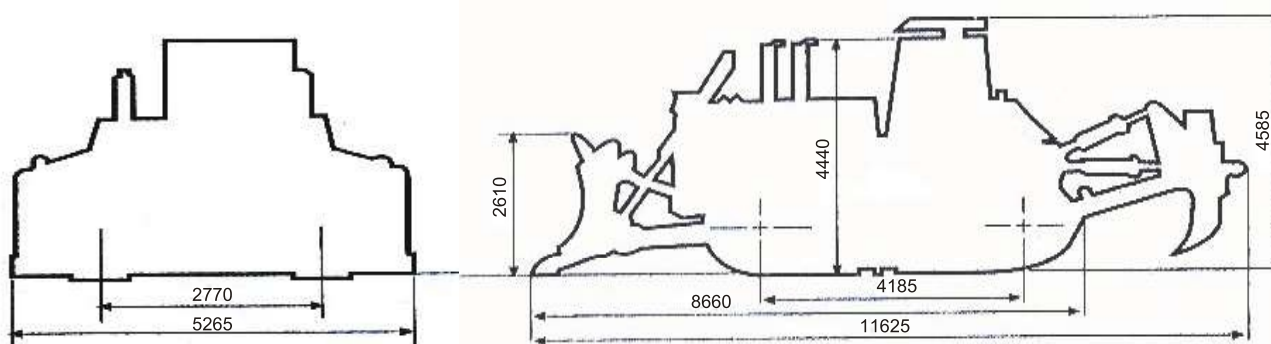
(Basic tractor with lubricating, hydraulic, cooling systems and 10% of fuel tank capacity)..... 75,640 kg



BD475-2 DRAWBAR PULL Vs TRAVEL SPEED



NOTE: Usable pull will depend upon traction and weight of equipped tractor



Material and specifications are subject to change without notice, Illustrations may include optional equipment & accessories

BD475-2 CRAWLER DOZER

TECHNICAL SPECIFICATIONS

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Represented by:

बी ई एम एल लिमिटेड BEML LIMITED

Schedule 'A' Company under Ministry of Defence, Govt. of India

Crawler Dozers From BEML :

BD50

BD65-1

BD80

BD155

BD355

BD475-2

Form No. BD475-2/01/2022